STAT Analysis Corporation
2242 West Harrison St., Suite 200, Chicago, IL 60612-3766
Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com
Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001;AIHA 101160; NVLAP LabCode 101202-

August 02, 2013

Natural Resource Technology, Inc.
23713 W. Paul Road
Suite D
Pewaukee, WI 53072
Telephone: (262) 523-9000
Fax: (262) 523-9001

RE: 69420, Peoples Gas - Willow Street / Hawthorne Ave STAT Project No: 13060604

Dear Sarah Meyer:

STAT Analysis received 1 sample for the referenced project on 6/18/2013 6:00:00 PM. The analytical results are presented in the following report.

This report is revised to reflect changes made after the initial report was issued.

All analyses were performed in accordance with the requirements of 35 IAC part 186 / NELAC standards. Analyses were performed in accordance with methods as referenced on the analytical report. Those analytical results expressed on a dry weight basis are also noted on the analytical report.

All analyses were performed within established holding time criteria, and all Quality Control criteria met EPA or laboratory specifications except when noted in the Case Narrative or Analytical Report. If required, an estimate of uncertainty for the analyses can be provided. A listing of accredited methods/parameters can also be provided.

Thank you for the opportunity to serve you and I look forward to working with you in the future. If you have any questions regarding the enclosed materials, please contact me at (312) 733-0551.

Sincerely,

Eileen M. LaPierre

Eileen LaPierre
Project Manager

The information contained in this report and any attachments is confidential information intended only for the use of the individual or entities named above. The results of this report relate only to the samples tested. If you have received this report in error, please notify us immediately by phone. This report shall not be reproduced, except in its entirety, unless written approval has been obtained from the laboratory. This analytical report shall become property of the Customer upon payment in full. Otherwise, STAT will be under no obligation to support, defend or discuss the analytical report.

STAT Analysis Corporation

Date: August 02, 2013

Client: Natural Resource Technology, Inc.
Project: 69420, Peoples Gas - Willow Street / Hawthorne Ave
Lab Order: 13060604

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
13060604-001A	061813076		6/18/2013 2:50:00 PM	6/18/2013
13060604-001B	061813076		6/18/2013 2:50:00 PM	6/18/2013
13060604-001C	061813076		6/18/2013 2:50:00 PM	6/18/2013

Analytical Results

Client: NRT, Inc.
Project: 69420, Peoples Gas - Willow Street / Hawthorne Ave
Lab Order: 13060604
Date Received: June 18, 2013

STAT Analysis Corporation
2242 West Harrison St., Suite 200, Chicago, IL 60612-3766
Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com
Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Date Reported: August 02, 2013
Date Printed: August 02, 2013

Client: Natural Resource Technology, Inc.
Lab Order: 13060604
Project: 69420, Peoples Gas - Willow Street / Hawthorne A
Lab ID: 13060604-001

Client Sample ID: 061813076
Collection Date 6/18/2013 2:50:00 PM
Matrix: Water

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Metals by ICP/MS	**SW6020 (SW3005A)**			Prep Date: **6/20/2013**		Analyst: **JG**
Antimony	ND	0.006		mg/L	2	6/21/2013
Arsenic	ND	0.004		mg/L	2	6/21/2013
Beryllium	ND	0.002		mg/L	2	6/24/2013
Copper	ND	0.01		mg/L	2	6/21/2013
Lead	0.01	0.002		mg/L	2	6/21/2013
Semivolatile Organic Compounds by GC/MS	**SW8270C-SIM (SW3510C)**			Prep Date: **6/19/2013**		Analyst: **DM**
Acenaphthene	ND	0.001		mg/L	1	6/21/2013
Acenaphthylene	ND	0.001		mg/L	1	6/21/2013
Anthracene	ND	0.001		mg/L	1	6/21/2013
Benz(a)anthracene	ND	0.0001		mg/L	1	6/21/2013
Benzo(a)pyrene	ND	0.0001		mg/L	1	6/21/2013
Benzo(b)fluoranthene	ND	0.0001		mg/L	1	6/21/2013
Benzo(g,h,i)perylene	ND	0.001		mg/L	1	6/21/2013
Benzo(k)fluoranthene	ND	0.0001		mg/L	1	6/21/2013
Chrysene	ND	0.0001		mg/L	1	6/21/2013
Dibenz(a,h)anthracene	ND	0.0001		mg/L	1	6/21/2013
Fluoranthene	ND	0.001		mg/L	1	6/21/2013
Fluorene	ND	0.001		mg/L	1	6/21/2013
Indeno(1,2,3-cd)pyrene	ND	0.0001		mg/L	1	6/21/2013
Naphthalene	ND	0.001		mg/L	1	6/21/2013
Phenanthrene	ND	0.001		mg/L	1	6/21/2013
Pyrene	ND	0.001		mg/L	1	6/21/2013
2-Methylnaphthalene	ND	0.001		mg/L	1	6/21/2013
Volatile Organic Compounds by GC/MS	**SW8260B (SW5030B)**			Prep Date:		Analyst: **ERP**
1,2,4-Trimethylbenzene	ND	0.005		mg/L	1	6/21/2013
1,3,5-Trimethylbenzene	ND	0.005		mg/L	1	6/21/2013
Benzene	ND	0.001		mg/L	1	6/21/2013
Ethylbenzene	ND	0.001		mg/L	1	6/21/2013
Toluene	ND	0.005		mg/L	1	6/21/2013
Xylenes, Total	ND	0.015		mg/L	1	6/21/2013

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
HT - Sample received past holding time
* - Non-accredited parameter
RL - Reporting / Quantitation Limit for the analysis
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
H - Holding time exceeded

Burns & McDonnell SINCE 1898

Request for Chemical Analysis and Chain of Custody Record

Page 1 of 1

Burns & McDonnell Engineering
1431 Opus Place
Downers Grove, Illinois 60515
Phone: (630) 724-3200 Fax: (630) 724-3201
Attention: Sarah Meyer
Report to: Smeyer@naturalrt.com

Laboratory: STAT Analysis
Address: 2242 West Harrison #200
City/State/ZIP: Chicago, IL 60612
Telephone: (312) 733-0551

Document Control No.: 69420-089-2013
Lab. Reference No. or Episode No.: 1360604

Project Number: 69420
Site Name: Peoples Gas - Willow Street / Hawthorne Ave OU

	Sample Number			Sample Event		Sample Depth (in feet)		Sample Collected		Sample Type / Matrix			Number of Containers	Parameter/Method Code: PVOCs*	PAHs*	Metals*				Remarks
	Group or SWMU Name	Sample Point	Sample Designator	Round	Year	From	To	Date	Time	Liquid	Solid	Gas								
001	061813076	—	—	—		—		6/13/13	1450	X			5	X	X	X				
002	061813077	—	—	—		—		Laboratory Prepared		X			2	X						

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6/18/13

JM

Sampler (signature):

Sampler (signature):

Custody Seal Number: 69420-061813-001, 69420-061813-002

* See site specific analyte list and special reporting limits

Special Instructions: 10 Day TAT

Relinquished By (signature)	Date/Time	Received By (signature)	Date/Time
1.	6/18/13 1200	6/18/13 1700	
2.	6/18/13 1800		6/18/13 1800

Ice Present in Container: Yes [X] No [ ]

Temperature Upon Receipt: 3.1°C

Laboratory Comments:

061301 Form WCD-KC1-CHI

STAT Analysis Corporation

Sample Receipt Checklist

Client Name NRT

Date and Time Received: 6/18/2013 6:00:00 PM

Work Order Number 13060604

Received by: TJW

Checklist completed by: [signature] Signature 6/18/13 Date

Reviewed by: [initials] Initials 6/20/2013 Date

Matrix: Carrier name STAT Analysis

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shippping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels/containers?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container or Temp Blank temperature in compliance?	Yes ☑	No ☐	Temperature 3.1 °C
Water - VOA vials have zero headspace?	No VOA vials submitted ☐	Yes ☑	No ☐
Water - Samples pH checked?	Yes ☑	No ☐	Checked by: [signature]
Water - Samples properly preserved?	Yes ☑	No ☐	pH Adjusted? No

Any No response must be detailed in the comments section below.

Comments: Three Chain of Custodies were submitted in one cooler: 069420-085-2013 (Lab order 13060602), 069420-087-2013 (13060603) and 069420-089-2013 (13060604). One trip blank set labeled 06813077 was submitted but listed on each COC. The trip blank was logged in lab order 13060602 and assigned lab sample ID 13060602-002. Please refer to report for lab order 13060602 for trip blank data

Client / Person contacted: SARAH MEYER Date contacted: 06/20/2013 Contacted by: QC VIA EMAIL

Response:

Volatile Organic Compounds

SW846 8260B

Quality Control Data

Client: NRT, Inc.
Project: 69420, Peoples Gas - Willow Street / Hawthorne Ave
Lab Order: 13060604
Date Received: June 18, 2013

STAT **Analysis Corporation**

CLIENT: Natural Resource Technology, Inc.
Work Order: 13060604
Project: 69420, Peoples Gas - Willow Street / Hawthorne Ave
Test No: SW8260B **Matrix:** W

QC SUMMARY REPORT
SURROGATE RECOVERIES

Sample ID	BR4FBZ	BZMED8	DBFM	DCA12D4				
VBLK062113-7	93.6	101	98.1	109				
VLCS062113-7	97.5	105	103	101				
VLCSD062113-7	98.7	103	103	104				
TBLK062013	94.4	102	98.3	108				
13060604-001A	95.0	99.1	103	99.9				

Acronym		Surrogate	QC Limits
BR4FBZ	=	4-Bromofluorobenzene	86-115
BZMED8	=	Toluene-d8	88-110
DBFM	=	Dibromofluoromethane	86-118
DCA12D4	=	1,2-Dichloroethane-d4	80-120

*** Surrogate recovery outside acceptance limit**

INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: STAT Analysis SDG No.: 13060604

Lab Code: _____

Lab File ID (Standard): 06211302.D Date Analyzed: 6/21/2013

Instrument ID: VOA-7 Time Analyzed: 11:13

GC Column: ID: (mm) Heated Purge: (Y/N) N

	IS1 (PFB) AREA #	RT #	IS2 (DFB) AREA #	RT #	IS3 (CLB) AREA #	RT #	IS4 (DCB) AREA #	RT #
12 HOUR STD	1246655	5.382	2023400	6.399	1119391	10.490	1024376	13.854
UPPER LIMIT	2493310	5.882	4046800	6.899	2238782	10.990	2048752	14.354
LOWER LIMIT	623328	4.882	1011700	5.899	559696	9.990	512188	13.354
SAMPLE NO.								
01 VBLK062113-7	1222612	5.39	1985718	6.41	1103905	10.49	993186	13.86
02 VLCS062113-7	1207711	5.39	1931195	6.40	1095520	10.49	1059629	13.85
03 VLCSD062113-7	1222866	5.39	2002170	6.41	1121821	10.49	1049326	13.85
04 061813076	1232314	5.39	2044068	6.40	1119354	10.49	1013883	13.86

IS1 (PFB) = Pentafluorobenzene
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CLB) = Chlorobenzene-d5
IS4 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

Volatile Organic Compounds

SW846 8260B

Initial Calibration

Client: NRT, Inc.
Project: 69420, Peoples Gas - Willow Street / Hawthorne Ave
Lab Order: 13060604
Date Received: June 18, 2013

ATTACHMENT 1: DATA REVIEW CHECKLIST - ICAL

GC/MS Volatiles SOP 4000, EPA 8260B

First Level Reviewer: Petra Svacha Review Date: 06/10/2013

Second Level Reviewer: Alfred Tadalan Review Date: 07/01/2013

Analysis date: 06/09/2013 Batch Start Time: 1:08 pm Instrument: VOA-7
ICAL Data File #s: 06091303.D to 06091307.D, 06091310.D, 06091311.D 06091313.D

Page 1 of 1 Initial Calibration (ICAL)

Item	Aspect	1st Yes	Level No	2nd Yes	Level No	Comments: record routine corrective actions here	CAR # /QER #
1	Tune meets criteria	✔		✔			
2	# of Stds 7 (minimum = 5)	✔		✔			
3	All Stds in tune period: 12hr All Stds. Sequenced w/in 36 hrs.	✔		✔			
4	Acceptance criteria met for: SPCCs: =0.1, =0.3 CCCs: = 30% RSD %RSD = 15% avg RF used r = 0.99 linear regression used RRT ± 0.06 RT units	✔ ✔ ✔ ✔ ✔ ✔		✔ ✔ ✔ ✔ ✔ ✔			
5	Calibration updated: RF RT Mid-level used for int stds Correct data files used	✔		✔			
6	RL = low std = 1 µg/L RL = _____ µg/L for (list)	✔		✔		*See following sheet	
7	High std = 300 µg/L High std = _____µg/L for	✔		✔		*See following sheet	
8	ICV acceptable for: CCCs: = 20%D SPCC's: =0.1, =0.3 RT: ± 30 seconds Int stds: -50% to +100% Other compounds	✔		✔			
9	Manual Integration acceptable: List files	✔		✔			
10	Tune & QC Solns ID recorded	✔		✔			
11	All other information recorded	✔		✔			

Additional Comments:

Standards:

1,4-Dioxane	67-9-200
VOC-BFB	67-9-211
VOC-EH	67-9-208
VOC-F-LIST	67-9-206
VOC-GAS	67-9-213
VOC-MOR	67-9-207
VOC-VCX	67-9-212
LCS1	67-9-214
LCS2	67-9-215
IS/SUR	67-9-199

COMPOUND	LOW STANDARD	HIGH STANDARD
Isobutyl Alcohol	20	6000
Isopropyl Alcohol	20	6000
n-Butanol	20	6000
1,4-Dioxane	10	3000
Xylenes-Total	3	900
Acetone	2	600
Carbon Disulfide	2	600
Vinyl Acetate	2	600
2-Butanone	2	600
2-Hexanone	2	600
4-methyl-2-pentanone	2	600
4-chloroethyl vinyl ether	2	600

ATTACHMENT 2: DATA REVIEW CHECKLIST – BATCH DATA

GC/MS Volatiles SOP 4000, EPA 8260B

First Level Reviewer: Petra Svacha Review Date: 06/11/2013

Second Level Reviewer: Alfred Tadalan Review Date: 07/01/2013

Analysis date: 06/10/2013 Batch Start Time: 7:41 am Instrument: VOA-7

Page 1 of 1 Continuing Calibration Verification (CCV) and Batch Data

Item	Aspect	1st Yes	Level No	2nd Yes	Level No	Comments: record routine corrective actions here	CAR # QER#
1	Tune meets criteria	✔		✔			
2	All Analyses in tune period 12hr	✔		✔			
3	CCV Acceptance criteria met: SPCCs: =0.1, =0.3 CCCs: = 20%D RT: ± 30 seconds Int stds: -50% to +100% Correct ICAL RFs used	✔ ✔ ✔ ✔ ✔ ✔		✔ ✔ ✔ ✔ ✔ ✔			
4	Method Blank < RL False pos/neg checked Surrogates acceptable	✔ ✔ ✔		✔ ✔ ✔			
5	LCS/LCSD recovery acceptable Surrogates acceptable	✔ ✔	✔	✔ ✔	✔	1,1,2,2-Tetrachloroethane: 65% (ILCS)	
6	MS/MSD recov/RPD acceptable Surrogates acceptable					N/A	
7	Test Samples: Correct IDs Surrogates acceptable False pos/neg checked RL, Units Results within curve Dilutions performed	✔ ✔ ✔ ✔ ✔ ✔		✔ ✔ ✔ ✔ ✔ ✔			
8	MB, LCS/LCSD, MS/MSD per batch of 20 samples	✔		✔			
9	Manual Integration acceptable: List files	✔		✔		See folder	
10	Int Stds Check (optional)	✔		✔			
11	Tune & QC Solns ID recorded	✔		✔			
12	All other information recorded	✔		✔			
13	LIMS transcription correct	✔		✔			
14	Analysis within holding time	✔		✔			
15	All samples preserved pH =2	✔		✔			
16	All samples stored properly	✔		✔			
17	Corrections properly recorded	✔		✔			

Additional Comments:

Standards:

1,4-Dioxane	67-9-200
VOC-BFB	67-9-211
VOC-EH	67-9-208
VOC-F-LIST	67-9-206
VOC-GAS	67-9-213
VOC-MOR	67-9-207
VOC-VCX	67-9-212
LCS1	67-9-214
LCS2	67-9-215
IS/SUR	67-9-199

Injection Log

Directory: C:\msdchem\1\DATA\VOA7\060913

Line	Vial	FileName	Multiplier	SampleName		Misc Info		Injected
1	100	06091301.D	1.	TUNE BFB060913-7		BFB_624		9 Jun 2013 13:08
2	2	06091303.D	1.	ICAL VSTD001		VOC_W+		9 Jun 2013 14:01
3	3	06091304.D	1.	ICAL VSTD005		VOC_W+		9 Jun 2013 14:36
4	4	06091305.D	1.	ICAL VSTD010		VOC_W+		9 Jun 2013 15:11
5	5	06091306.D	1.	ICAL VSTD020		VOC_W+		9 Jun 2013 15:46
6	6	06091307.D	1.	ICAL VSTD050		VOC_W+		9 Jun 2013 16:21
7	7	06101308.D	1.	TUNE BFB061013-7		BFB_624		10 Jun 2013 07:41
8	8	06101309.D	1.	ICAL VSTD100		VOC_W+		10 Jun 2013 08:00
9	9	06101310.D	1.	ICAL VSTD200		VOC_W+		10 Jun 2013 08:35
10	10	06101311.D	1.	ICAL VSTD300		VOC_W+		10 Jun 2013 09:10
11	12	06101313.D	1.	ICAL VSTD100r		VOC_W+		10 Jun 2013 10:20
12	14	06101315.D	1.	LCS VLCS061013-7		VOC_W+		10 Jun 2013 11:31
13	15	06101316.D	1.	LCSD VLCSD061013-7		VOC_W+		10 Jun 2013 12:14
14	17	06101318.D	1.	MBLK VBLK061013-7		VOC_W+		10 Jun 2013 13:24
15	18	06101319.D	1.	SAMP 13060079-027A		VOC_W	5mL	10 Jun 2013 13:59
16	19	06101320.D	1.	MBLK ZBLK060613-7	1:10	VOC_TCLP+	5mL	10 Jun 2013 14:34
17	20	06101321.D	1.	SAMP 13060095-001B	1:10	VOC_TCLP	5mL	10 Jun 2013 15:09
18		06101322.D	1.					
19	1	BLANK1.D	1.			VOC_W+		9 Jun 2013 13:26
20	11	BLANK2.D	1.			VOC_W+		10 Jun 2013 09:45
21	13	BLANK3.D	1.			VOC_W+		10 Jun 2013 10:55
22	16	BLANK4.D	1.			VOC_W+		10 Jun 2013 12:49

Response Factor Report VOA7

Method Path : C:\msdchem\1\DATA\VOA7\060913\
Method File : W7060913.M
Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominMon Jun 10 14:34:29 2013
Last Update : Mon Jun 10 14:33:33 2013
Response Via : Initial Calibration

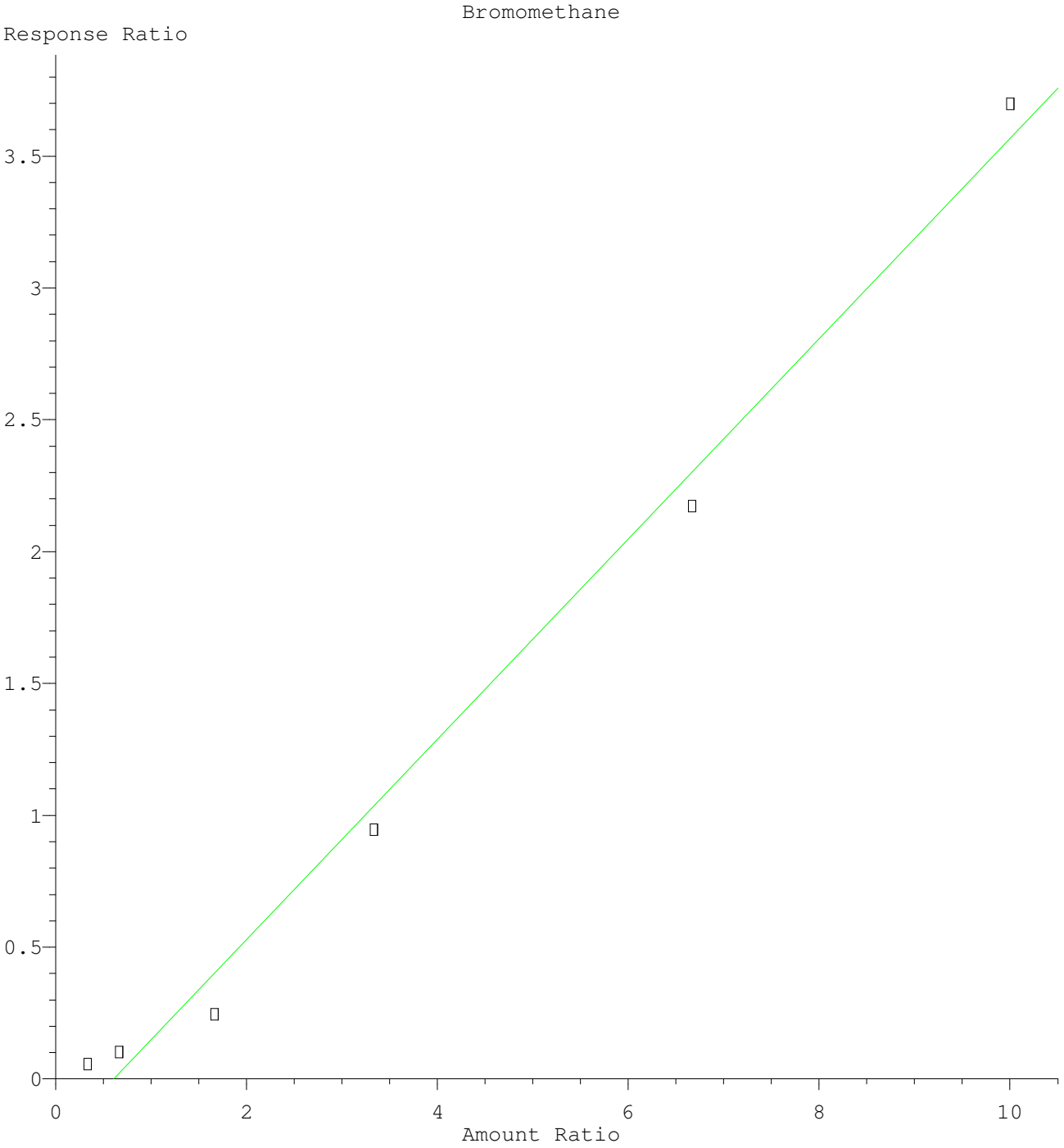
Calibration Files
1 =06091303.D 5 =06091304.D 10 =06091305.D 20 =06091306.D 50 =06091307.D 100 =061013
300 =06101311.D

		Compound	1	5	10	20	50	100	200	300	Avg	%RSD
1)	I	Pentafluorobenzene	----------ISTD----------									
2)	M	Dichlorodifluo...	0.601	0.577	0.524	0.521	0.515	0.555	0.523	0.524	0.542	5.83
3)	TPM	Chloromethane	0.376	0.487	0.412	0.405	0.407	0.432	0.412	0.421	0.419	7.57
4)	TCM	Vinyl chloride	0.479	0.540	0.476	0.523	0.523	0.552	0.529	0.543	0.521	5.45
5)	M	1,3-Butadiene		0.340	0.358	0.357	0.358	0.367	0.358	0.359	0.357	2.30
6)	TM	Bromomethane			0.169	0.152	0.147	0.283	0.326	0.370	0.241	40.47*
7)	TM	Chloroethane	0.304	0.264	0.249	0.254	0.256	0.258	0.252	0.309	0.268	8.89
8)	M	Trichlorofluor...	0.522	0.642	0.565	0.563	0.579	0.598	0.594	0.608	0.584	6.12
9)	M	Isopropyl Alcohol	0.031	0.032	0.029	0.030	0.031	0.033	0.035	0.036	0.032	7.85
10)	M	Ethyl Ether		0.348	0.334	0.323	0.321	0.337	0.332	0.347	0.335	3.16
11)	M	Acrolein		0.072	0.062	0.067	0.066	0.074			0.068	6.74
12)	TM	Acetone		0.159	0.163	0.157	0.142	0.151	0.159	0.165	0.156	4.87
13)	M	Freon-TF		0.216	0.256	0.241	0.259	0.282	0.252	0.267	0.253	8.28
14)	TCM	1,1-Dichloroet...	0.345	0.323	0.333	0.310	0.319	0.328	0.323	0.345	0.328	3.74
15)	TM	Methylene Chlo...	0.493	0.436	0.406	0.396	0.401	0.407	0.398	0.413	0.419	7.76
16)	TM	Carbon disulfide	1.071	1.142	1.235	1.266	1.270	1.322	1.254	1.270	1.229	6.65
17)	M	Acrylonitrile		0.163	0.182	0.188	0.183	0.191	0.193	0.202	0.186	6.47
18)	TM	MTBE	1.177	1.183	1.181	1.181	1.198	1.246	1.222	1.286	1.209	3.25
19)	M	Hexane		0.329	0.365	0.322	0.351	0.378	0.292	0.301	0.334	9.65
20)	TM	trans-1,2-Dich...	0.429	0.427	0.380	0.366	0.385	0.402	0.381	0.404	0.397	5.76
21)	M	Vinyl acetate	0.896	0.783	0.838	0.887	0.811	1.004			0.870	9.05
22)	TPM	1,1-Dichloroet...		0.714	0.629	0.632	0.654	0.670	0.658	0.682	0.663	4.45
23)	TM	2-Butanone		0.061	0.068	0.061	0.060	0.065	0.062	0.063	0.063	4.63
24)	M	2,2-Dichloropr...	0.665	0.638	0.561	0.527	0.550	0.613			0.592	9.23
25)	TM	cis-1,2-Dichlo...	0.473	0.452	0.417	0.416	0.416	0.432	0.420	0.436	0.433	4.74
26)	M	Ethyl Acetate		0.091	0.075	0.072	0.063	0.065	0.065	0.063	0.071	14.27
27)	TCM	Chloroform	0.755	0.624	0.608	0.630	0.613	0.639	0.626	0.645	0.642	7.31
28)	M	Bromochloromet...		0.187	0.178	0.188	0.169	0.161	0.163	0.163	0.173	6.65
29)	S	Dibromofluorom...	0.433	0.430	0.436	0.432	0.429	0.441	0.442	0.453	0.437	1.87
30)	M	Isobutyl alcohol		0.017	0.019	0.018	0.019	0.022	0.022	0.024	0.020	11.77
31)	I	1,4-Difluorobenzene	----------ISTD----------									
32)	S	1,2-Dichloroet...	0.066	0.067	0.072	0.071	0.066	0.069	0.071	0.070	0.069	3.45
33)	TM	Carbon Tetrach...	0.292	0.268	0.236	0.235	0.244	0.274	0.260	0.278	0.261	8.00
34)	TM	1,2-Dichloroet...	0.346	0.334	0.301	0.325	0.326	0.331	0.339	0.340	0.330	4.18
35)	TM	1,1,1-Trichlor...	0.380	0.333	0.309	0.308	0.326	0.340	0.337	0.342	0.334	6.83
36)	M	1,1-Dichloropr...	0.100	0.119	0.102	0.108	0.109	0.116	0.114	0.117	0.110	6.34
37)	M	1-Butanol		0.006	0.007	0.007	0.007	0.008	0.009	0.009	0.008	14.18
38)	TM	Benzene	1.028	1.001	0.912	0.952	0.958	0.991	0.990	0.975	0.976	3.60
39)	TM	Trichloroethene	0.256	0.244	0.217	0.222	0.232	0.237	0.277	0.287	0.246	10.23
40)	TCM	1,2-Dichloropr...	0.253	0.227	0.229	0.226	0.237	0.238	0.245	0.246	0.238	4.13
41)	M	1,4-Dioxane		0.004	0.004	0.004	0.003	0.004	0.004	0.004	0.004	4.50
42)	TM	Bromodichlorom...	0.329	0.306	0.265	0.289	0.291	0.305	0.315	0.317	0.302	6.62
43)	M	Dibromomethane	0.171	0.150	0.135	0.138	0.141	0.145	0.147	0.150	0.147	7.41
44)	M	2-Nitropropane		0.073	0.059	0.054	0.057	0.065	0.067	0.068	0.063	10.82
45)	M	2-Chloroethylv...		0.124	0.120	0.126	0.131	0.137	0.146	0.144	0.133	7.64
46)	T	4-Methyl-2-pen...	0.263	0.274	0.259	0.276	0.275	0.288	0.301	0.294	0.279	5.25
47)	TM	cis-1,3-Dichlo...	0.446	0.385	0.362	0.390	0.400	0.419	0.386	0.386	0.397	6.41
48)	S	Toluene-d8	1.214	1.208	1.233	1.215	1.212	1.233	1.270	1.226	1.226	1.65
49)	TCM	Toluene	0.645	0.634	0.566	0.596	0.612	0.632	0.631	0.632	0.619	4.25
50)	I	Chlorobenzene-d5	----------ISTD----------									
51)	TM	trans-1,3-Dich...	0.640	0.641	0.548	0.589	0.595	0.638	0.577	0.616	0.606	5.62
52)	TM	2-Hexanone	0.372	0.410	0.329	0.341	0.345	0.354	0.369	0.377	0.362	7.04
53)	TM	1,1,2-Trichlor...	0.323	0.353	0.333	0.315	0.306	0.322	0.328	0.351	0.329	5.01

54)	M	1,3-Dichloropr...	0.700	0.734	0.655	0.667	0.688	0.693	0.698	0.732	0.696	3.95
55)	TM	Tetrachloroethene	0.336	0.327	0.285	0.285	0.295	0.317	0.303	0.315	0.308	6.08
56)	TM	Dibromochlorom...	0.325	0.406	0.322	0.345	0.365	0.406	0.416	0.450	0.379	12.37
57)	M	1,2-Dibromoethane	0.365	0.408	0.362	0.386	0.400	0.412	0.409	0.436	0.397	6.32
58)	TPM	Chlorobenzene	1.149	1.165	1.010	1.052	1.053	1.081	1.087	1.140	1.092	4.98
59)	TCM	Ethylbenzene	2.201	2.098	1.844	1.947	1.935	1.997	1.987	2.078	2.011	5.54
60)	M	1,1,1,2-Tetrac...	0.379	0.364	0.310	0.337	0.354	0.376	0.391	0.419	0.366	9.19
61)	TM,	L1Xylene	0.794	0.770	0.675	0.700	0.724	0.749	0.746	0.786	0.743	5.60
62)	TM,	L1Xylene (2)	0.802	0.782	0.659	0.677	0.673	0.705	0.710	0.753	0.720	7.38
63)	TM,	L1Xylenes, Total	0.797	0.774	0.670	0.692	0.707	0.734	0.734	0.775	0.735	6.05
64)	TM	Styrene	1.286	1.372	1.189	1.305	1.294	1.347	1.367	1.440	1.325	5.65
65)	M	Isopropylbenzene	1.718	1.734	1.527	1.568	1.565	1.630	1.617	1.682	1.630	4.65
66)	TPM	Bromoform		0.250	0.240	0.235	0.255	0.296	0.321		0.266	12.94
67)	TPM	1,1,2,2-Tetrac...	0.612	0.551	0.554	0.522	0.523	0.571	0.475	0.481	0.536	8.53
68)	S	Bromofluoroben...	0.724	0.760	0.752	0.747	0.718	0.734	0.758	0.783	0.747	2.84
69)	I	1,4-Dichlorobenzen...	----------ISTD----------									
70)	M	1,2,3-Trichlor...	0.422	0.455	0.469	0.460	0.451	0.465	0.479	0.470	0.459	3.81
71)	M	n-Propylbenzene	1.989	1.955	1.821	1.819	1.860	1.904	1.830	1.779	1.870	3.92
72)	M	Bromobenzene	0.531	0.525	0.483	0.496	0.493	0.512	0.500	0.503	0.505	3.20
73)	M	1,3,5-Trimethy...	1.667	1.558	1.430	1.472	1.468	1.503	1.476	1.448	1.503	5.10
74)	M	2-Chlorotoluene	1.359	1.360	1.240	1.308	1.280	1.309	1.282	1.249	1.298	3.45
75)	M	4-Chlorotoluene	1.470	1.472	1.399	1.416	1.468	1.477	1.443	1.427	1.447	2.05
76)	M	tert-Butylbenzene	1.079	1.055	0.971	0.917	1.035	1.058	1.027	1.002	1.018	5.21
77)	M	1-Ethyl-2-meth...	1.868	1.673	1.777	1.772	1.847	1.875	1.834	1.794	1.805	3.68
78)	M	1,2,4-Trimethy...	1.583	1.478	1.449	1.459	1.442	1.494	1.452	1.450	1.476	3.16
79)	M	sec-Butylbenzene	1.679	1.558	1.434	1.422	1.475	1.499	1.430	1.398	1.487	6.23
80)	M	p-Isopropyltol...	1.285	1.232	1.210	1.212	1.210	1.234	1.199	1.192	1.222	2.40
81)	M	1,3-Dichlorobe...	0.892	0.878	0.785	0.806	0.806	0.820	0.812	0.792	0.824	4.77
82)	M	1,4-Dichlorobe...	0.910	0.916	0.904	0.897	0.902	0.931	0.920	0.911	0.912	1.19
83)	M	n-Butylbenzene	1.126	1.072	1.011	1.033	1.061	1.112	1.049	1.038	1.063	3.70
84)	M	1,2-Dichlorobe...	0.770	0.799	0.756	0.783	0.789	0.809	0.807	0.797	0.789	2.34
85)	M	1,2-Dibromo-3-...		0.087	0.091	0.085	0.089	0.098	0.099	0.100	0.093	6.82
86)	M	1,2,4-Trichlor...	0.404	0.339	0.370	0.353	0.356	0.390	0.391	0.398	0.375	6.37
87)	M	Hexachlorbutad...		0.207	0.171	0.166	0.170	0.184	0.168	0.165	0.176	8.53
88)	M	Naphthalene	0.737	0.896	0.925	0.898	0.881	1.001	1.015	1.056	0.926	10.79
89)	M	1,2,3-Trichlor...	0.320	0.299	0.294	0.310	0.303	0.351	0.341	0.346	0.320	7.06

(#) = Out of Range (*) = Linear Regression Used SPCC's & CCC's out = 0

W7060913.M Mon Jun 10 14:34:55 2013



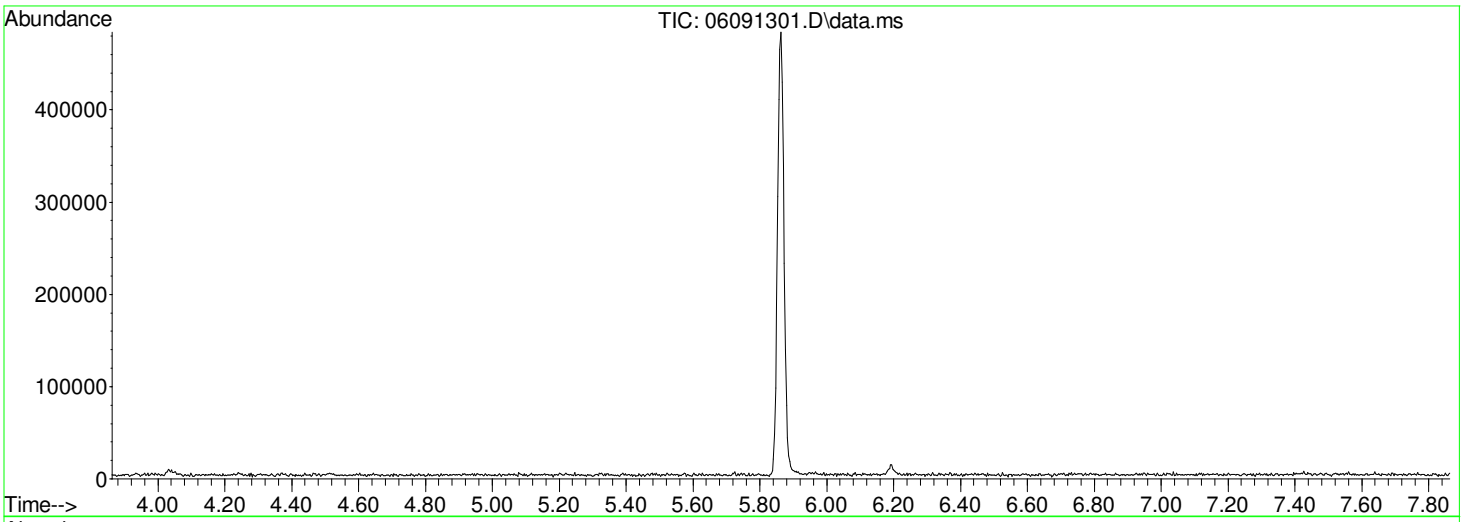
Resp Ratio = 3.80e-001 * Amt - 2.33e-001
Coef of Det (r^2) = 0.991 Curve Fit: Linear

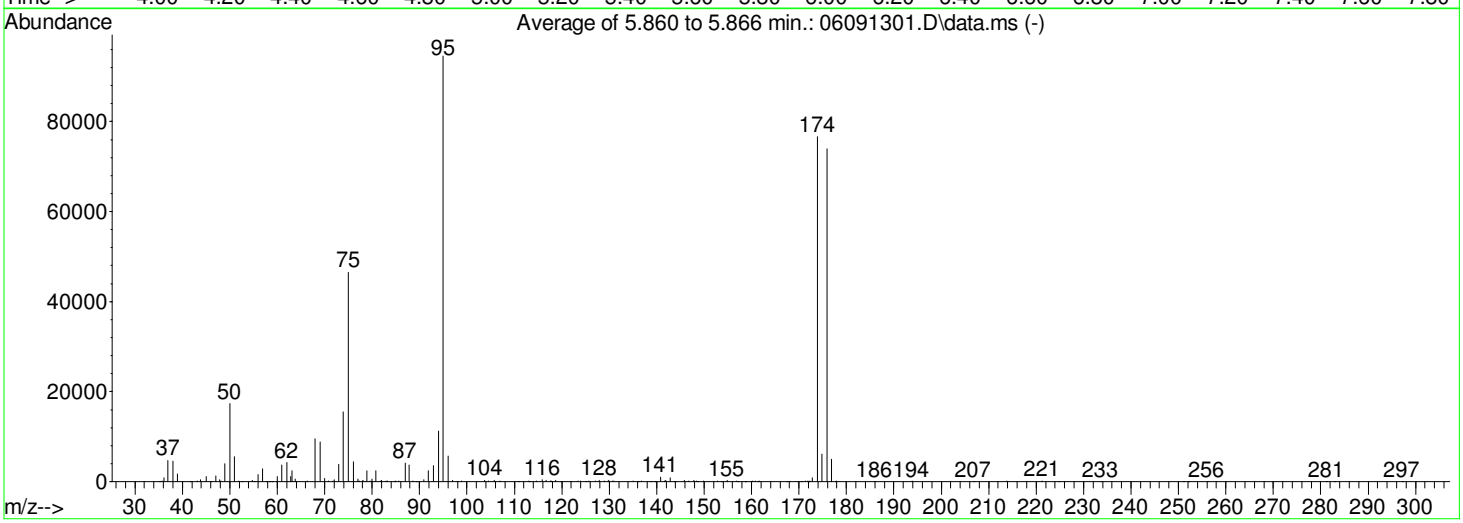
Method Name: C:\msdchem\1\DATA\VOA7\060913\W7060913.M
Calibration Table Last Updated: Mon Jun 10 14:34:29 2013

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091301.D
Acq On : 9 Jun 2013 1:08 pm
Operator : PS
Sample : TUNE BFB060913-7
Misc : BFB_624
ALS Vial : 100 Sample Multiplier: 1
InstName : VOA7

Integration File: events.e

Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
Last Update : Mon Jun 10 14:33:33 2013





AutoFind: Scans 1019, 1020, 1021; Background Corrected with Scan 1009

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	18.3	17320	PASS
75	95	30	60	49.2	46509	PASS
95	95	100	100	100.0	94525	PASS
96	95	5	9	6.0	5628	PASS
173	174	0.00	2	1.1	820	PASS
174	95	50	100	81.0	76608	PASS
175	174	5	9	7.9	6067	PASS
176	174	95	101	96.5	73923	PASS
177	176	5	9	6.8	5034	PASS

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091303.D
Acq On : 9 Jun 2013 2:01 pm Operator: PS
Sample : ICAL VSTD001 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 2

Quant Time: Jun 10 14:33:22 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Mon Jun 10 14:20:54 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	5.387	168	1905937	30.00	ug/L	0.00
31) 1,4-Difluorobenzene	6.404	114	3160494	30.00	ug/L	0.00
50) Chlorobenzene-d5	10.491	82	1791676	30.00	ug/L	0.00
69) 1,4-Dichlorobenzene-d4	13.854	152	1621926	30.00	ug/L	0.00
System Monitoring Compounds						
29) Dibromofluoromethane	5.264	113	824702	29.71	ug/L	0.00
Spiked Amount 30.000	Range 86 - 118		Recovery = 99.03%			
32) 1,2-Dichloroethane-d4	5.729	102	208240	28.64	ug/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 95.47%			
48) Toluene-d8	8.468	98	3838319	29.71	ug/L	0.00
Spiked Amount 30.000	Range 88 - 110		Recovery = 99.03%			
68) Bromofluorobenzene	12.195	174	1297767	29.07	ug/L	0.00
Spiked Amount 30.000	Range 86 - 115		Recovery = 96.90%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.214	85	38162m	1.12	ug/L	
3) Chloromethane	1.347	50	23913	0.87	ug/L #	41
4) Vinyl chloride	1.426	62	30428	0.92	ug/L #	44
7) Chloroethane	1.749	64	19295	1.15	ug/L #	44
8) Trichlorofluoromethane	1.954	101	33158	0.89	ug/L #	19
14) 1,1-Dichloroethene	2.392	96	21927	1.05	ug/L #	46
15) Methylene Chloride	2.863	84	31323	1.17	ug/L #	62
16) Carbon disulfide	2.585	76	136087	1.74	ug/L #	76
18) MTBE	3.190	73	74770	0.97	ug/L #	53
21) Vinyl acetate	3.812	43	113815	2.07	ug/L #	75
24) 2,2-Dichloropropane	4.526	77	42254	1.13	ug/L #	57
25) cis-1,2-Dichloroethene	4.549	96	30025	1.11	ug/L #	11
27) Chloroform	5.039	83	47936	1.17	ug/L #	79
28) Bromochloromethane	4.882	128	16518m	1.50	ug/L	
33) Carbon Tetrachloride	5.503	117	30765m	1.14	ug/L	
34) 1,2-Dichloroethane	5.851	62	36483	1.05	ug/L #	46
35) 1,1,1-Trichloroethane	5.262	97	40038	1.15	ug/L #	24
36) 1,1-Dichloropropene	5.506	110	10537m	0.89	ug/L	
38) Benzene	5.800	78	108249	1.05	ug/L #	1
39) Trichloroethene	6.731	95	26927m	0.79	ug/L	
40) 1,2-Dichloropropane	7.040	63	26653m	1.08	ug/L	
42) Bromodichloromethane	7.472	83	34637	1.09	ug/L #	25
43) Dibromomethane	7.207	93	17975m	1.19	ug/L	
46) 4-Methyl-2-pentanone	8.369	43	55393	1.86	ug/L #	88
47) cis-1,3-Dichloropropene	8.108	75	46947	1.12	ug/L #	69
49) Toluene	8.563	92	67974	1.04	ug/L	90
51) trans-1,3-Dichloropropene	8.910	75	38211	1.06	ug/L #	73
52) 2-Hexanone	9.570	43	44436	2.07	ug/L #	26
53) 1,1,2-Trichloroethane	9.152	83	19318m	0.97	ug/L	
54) 1,3-Dichloropropane	9.375	76	41800	1.01	ug/L	86
55) Tetrachloroethene	9.313	164	20047m	1.10	ug/L	
56) Dibromochloromethane	9.686	129	19400m	0.84	ug/L	
57) 1,2-Dibromoethane	9.811	107	21807m	0.92	ug/L	
58) Chlorobenzene	10.536	112	68613	1.05	ug/L #	80
59) Ethylbenzene	10.722	91	131460	1.10	ug/L #	44
60) 1,1,1,2-Tetrachloroethane	10.663	131	22661m	1.04	ug/L	
61) Xylene	10.905	106	94858	2.14	ug/L	96
62) Xylene (2)	11.461	106	47921m	1.15	ug/L	
63) Xylenes, Total	10.905	106	142780m	3.28	ug/L #	
64) Styrene	11.489	104	76825	1.00	ug/L	83
65) Isopropylbenzene	12.008	105	102603	1.05	ug/L	94

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091303.D
Acq On : 9 Jun 2013 2:01 pm Operator: PS
Sample : ICAL VSTD001 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 2

Quant Time: Jun 10 14:33:22 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Mon Jun 10 14:20:54 2013
Response via : Initial Calibration

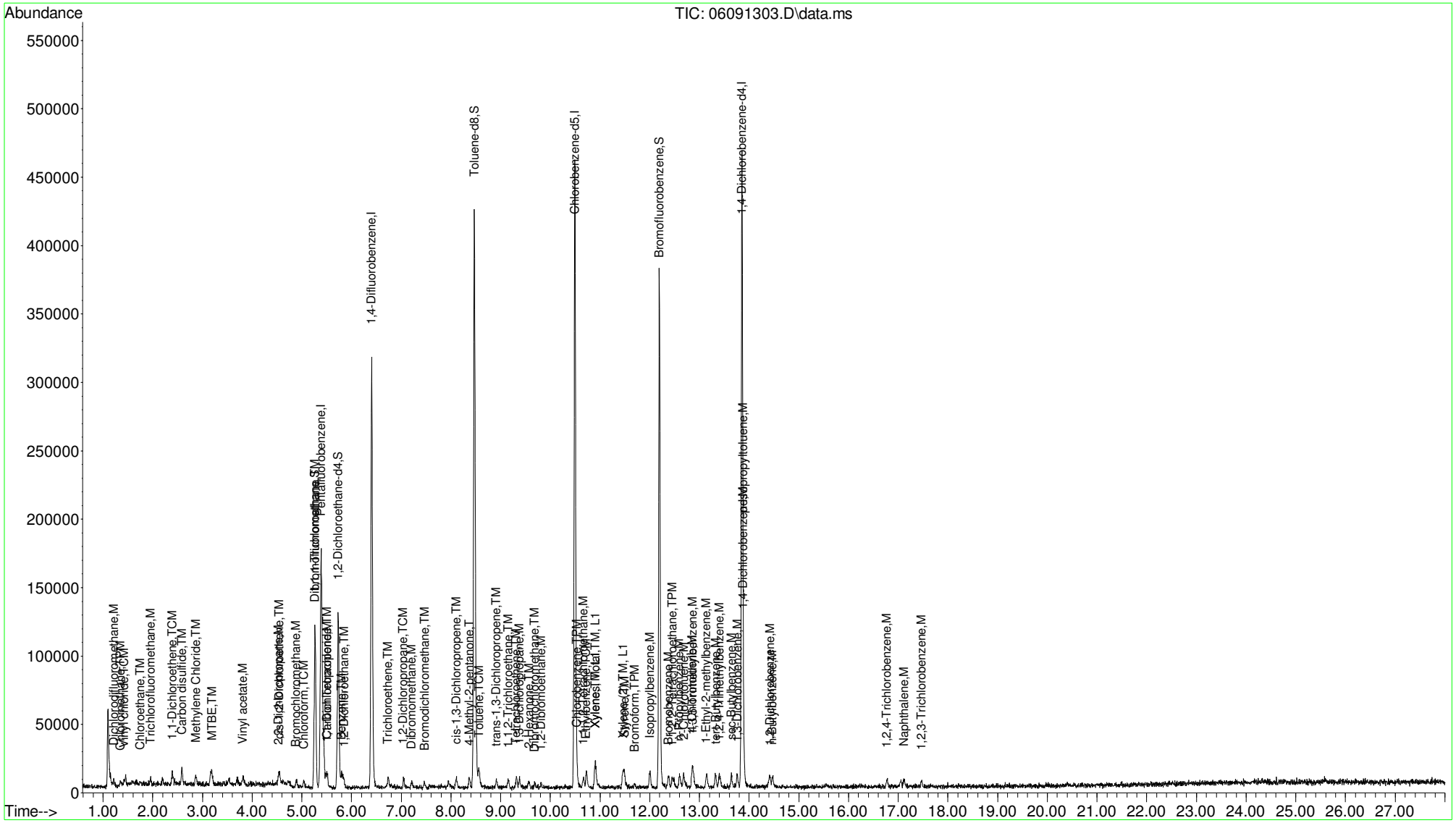
	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
66)	Bromoform	11.699	173	15131	0.91 ug/L #	36
67)	1,1,2,2-Tetrachloroethane	12.453	83	36528	1.13 ug/L #	87
71)	n-Propylbenzene	12.597	91	107521	1.06 ug/L	99
72)	Bromobenzene	12.378	156	28696	1.05 ug/L #	88
73)	1,3,5-Trimethylbenzene	12.865	105	90138	1.18 ug/L	98
74)	2-Chlorotoluene	12.684	91	73470	1.04 ug/L	89
75)	4-Chlorotoluene	12.856	91	79463m	1.03 ug/L	
76)	tert-Butylbenzene	13.330	119	58349	1.07 ug/L #	25
77)	1-Ethyl-2-methylbenzene	13.136	105	100992m	1.05 ug/L	
78)	1,2,4-Trimethylbenzene	13.399	105	85573	1.09 ug/L #	85
79)	sec-Butylbenzene	13.644	105	90750	1.13 ug/L #	56
80)	p-Isopropyltoluene	13.876	119	69465	1.05 ug/L #	50
81)	1,3-Dichlorobenzene	13.763	146	48209m	1.13 ug/L	
82)	1,4-Dichlorobenzene	13.884	146	49211	0.99 ug/L #	24
83)	n-Butylbenzene	14.468	91	60882	1.05 ug/L #	82
84)	1,2-Dichlorobenzene	14.422	146	41618	0.98 ug/L #	48
86)	1,2,4-Trichlorobenzene	16.773	180	21843m	1.08 ug/L	
88)	Naphthalene	17.116	128	39821	0.77 ug/L #	76
89)	1,2,3-Trichlorobenzene	17.469	180	17274	1.00 ug/L #	21

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091303.D
Acq On : 9 Jun 2013 2:01 pm Operator: PS
Sample : ICAL VSTD001 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 2

Quant Time: Jun 10 14:33:22 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Mon Jun 10 14:20:54 2013
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091303.D
Acq On : 9 Jun 2013 2:01 pm Operator: PS
Sample : ICAL VSTD001 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 2

Quant Time: Jun 10 14:15:26 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Mon Jun 10 11:55:54 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	5.387	168	1905886	30.00	ug/L	0.00
31) 1,4-Difluorobenzene	6.404	114	3161234	30.00	ug/L	0.00
50) Chlorobenzene-d5	10.491	82	1787079	30.00	ug/L	0.00
69) 1,4-Dichlorobenzene-d4	13.854	152	1621822	30.00	ug/L	0.00
System Monitoring Compounds						
29) Dibromofluoromethane	5.264	113	824702	0.00	ug/L	0.00
Spiked Amount 30.000	Range 86 - 118		Recovery = 0.00%#			
32) 1,2-Dichloroethane-d4	5.729	102	208130	0.00	ug/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 0.00%#			
48) Toluene-d8	8.468	98	3837298	0.00	ug/L	0.00
Spiked Amount 30.000	Range 88 - 110		Recovery = 0.00%#			
68) Bromofluorobenzene	12.195	174	1301095	0.00	ug/L	0.00
Spiked Amount 30.000	Range 86 - 115		Recovery = 0.00%#			

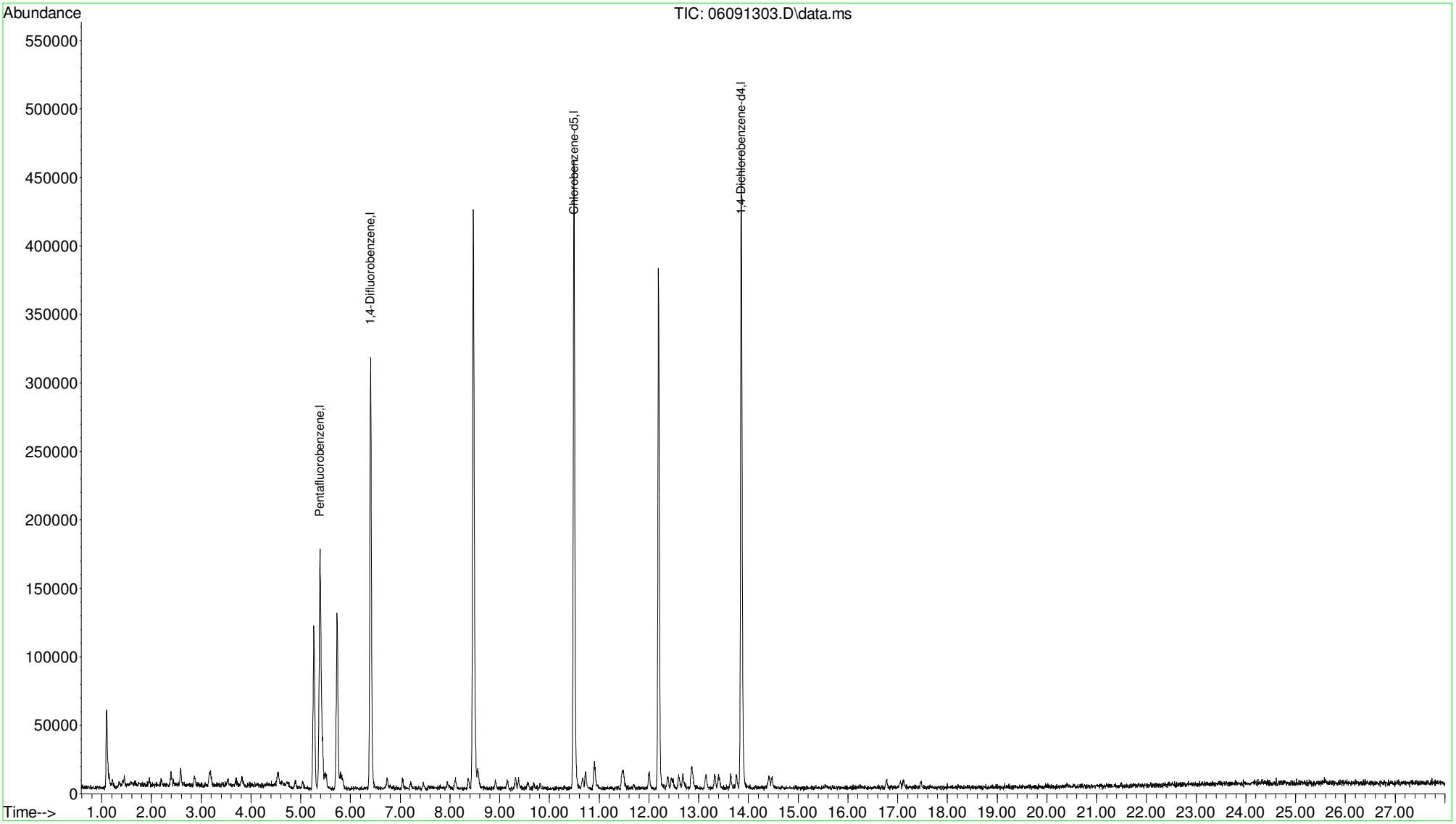
Target Compounds Qvalue

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091303.D
Acq On : 9 Jun 2013 2:01 pm Operator: PS
Sample : ICAL VSTD001 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 2

Quant Time: Jun 10 14:15:26 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Mon Jun 10 11:55:54 2013
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091303.D
Acq On : 9 Jun 2013 2:01 pm Operator: PS
Sample : ICAL VSTD001 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 2

Quant Time: Jun 10 14:28:23 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Mon Jun 10 14:20:54 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	5.387	168	1905937	30.00	ug/L	0.00
31) 1,4-Difluorobenzene	6.404	114	3160494	30.00	ug/L	0.00
50) Chlorobenzene-d5	10.491	82	1791676	30.00	ug/L	0.00
69) 1,4-Dichlorobenzene-d4	13.854	152	1621926	30.00	ug/L	0.00
System Monitoring Compounds						
29) Dibromofluoromethane	5.264	113	824702	29.71	ug/L	0.00
Spiked Amount 30.000	Range 86 - 118		Recovery = 99.03%			
32) 1,2-Dichloroethane-d4	5.729	102	208240	28.64	ug/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 95.47%			
48) Toluene-d8	8.468	98	3838319	29.71	ug/L	0.00
Spiked Amount 30.000	Range 88 - 110		Recovery = 99.03%			
68) Bromofluorobenzene	12.195	174	1297767	29.07	ug/L	0.00
Spiked Amount 30.000	Range 86 - 115		Recovery = 96.90%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.216	85	15689	0.46	ug/L #	27
3) Chloromethane	1.347	50	23913	0.87	ug/L #	41
4) Vinyl chloride	1.426	62	30428	0.92	ug/L #	44
7) Chloroethane	1.749	64	19295	1.15	ug/L #	44
8) Trichlorofluoromethane	1.954	101	33158	0.89	ug/L #	19
9) Isopropyl Alcohol	2.596	45	31461	15.53	ug/L #	61
14) 1,1-Dichloroethene	2.392	96	21927	1.05	ug/L #	46
15) Methylene Chloride	2.863	84	31323	1.17	ug/L #	62
16) Carbon disulfide	2.585	76	136087	1.74	ug/L #	76
18) MTBE	3.190	73	74770	0.97	ug/L #	53
21) Vinyl acetate	3.812	43	113815	2.07	ug/L #	75
24) 2,2-Dichloropropane	4.526	77	42254	1.13	ug/L #	57
25) cis-1,2-Dichloroethene	4.549	96	30025	1.11	ug/L #	11
27) Chloroform	5.039	83	47936	1.17	ug/L #	79
33) Carbon Tetrachloride	5.390	117	167786	6.21	ug/L #	12
34) 1,2-Dichloroethane	5.851	62	36483	1.05	ug/L #	46
35) 1,1,1-Trichloroethane	5.262	97	40038	1.15	ug/L #	24
36) 1,1-Dichloropropene	5.269	110	17446	1.48	ug/L #	1
37) 1-Butanol	6.397	56	48913	60.63	ug/L #	17
38) Benzene	5.800	78	108249	1.05	ug/L #	1
39) Trichloroethene	6.407	95	93591	2.73	ug/L #	7
40) 1,2-Dichloropropane	7.052	63	24104	0.98	ug/L #	88
42) Bromodichloromethane	7.472	83	34637	1.09	ug/L #	25
46) 4-Methyl-2-pentanone	8.369	43	55393	1.86	ug/L #	88
47) cis-1,3-Dichloropropene	8.108	75	46947	1.12	ug/L #	69
49) Toluene	8.563	92	67974	1.04	ug/L	90
51) trans-1,3-Dichloropropene	8.910	75	38211	1.06	ug/L #	73
52) 2-Hexanone	9.570	43	44436	2.07	ug/L #	26
54) 1,3-Dichloropropane	9.375	76	41800	1.01	ug/L	86
58) Chlorobenzene	10.536	112	68613	1.05	ug/L #	80
59) Ethylbenzene	10.722	91	131460	1.10	ug/L #	44
61) Xylene	10.905	106	94858	2.14	ug/L	96
62) Xylene (2)	11.461	106	38871	0.93	ug/L	85
63) Xylenes, Total	10.905	106	133730m	3.07	ug/L #	
64) Styrene	11.489	104	76825	1.00	ug/L	83
65) Isopropylbenzene	12.008	105	102603	1.05	ug/L	94
66) Bromoform	11.699	173	15131	0.91	ug/L #	36
67) 1,1,2,2-Tetrachloroethane	12.453	83	36528	1.13	ug/L #	87
70) 1,2,3-Trichloropropane	12.194	75	816564	6.58	ug/L #	42
71) n-Propylbenzene	12.597	91	107521	1.06	ug/L	99
72) Bromobenzene	12.378	156	28696	1.05	ug/L #	88

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091303.D
Acq On : 9 Jun 2013 2:01 pm Operator: PS
Sample : ICAL VSTD001 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 2

Quant Time: Jun 10 14:28:23 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Mon Jun 10 14:20:54 2013
Response via : Initial Calibration

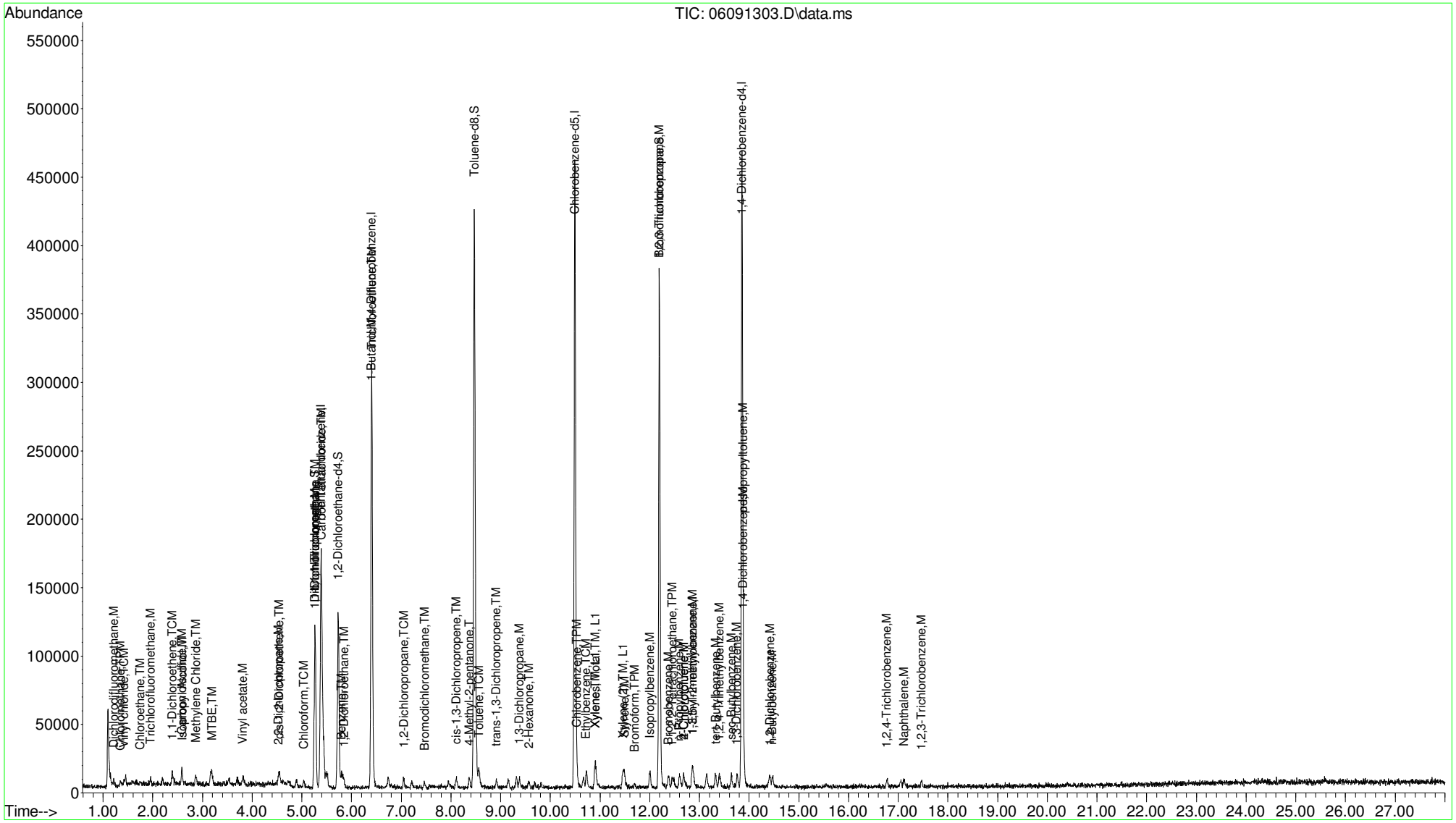
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
73) 1,3,5-Trimethylbenzene	12.865	105	90138	1.18 ug/L	98
74) 2-Chlorotoluene	12.684	91	73470	1.04 ug/L	89
75) 4-Chlorotoluene	12.684	91	73106	0.94 ug/L	88
76) tert-Butylbenzene	13.330	119	58349	1.07 ug/L #	25
77) 1-Ethyl-2-methylbenzene	12.865	105	88756	0.92 ug/L	71
78) 1,2,4-Trimethylbenzene	13.399	105	85573	1.09 ug/L #	85
79) sec-Butylbenzene	13.644	105	90750	1.13 ug/L #	56
80) p-Isopropyltoluene	13.876	119	69465	1.05 ug/L #	50
81) 1,3-Dichlorobenzene	13.749	146	16403	0.39 ug/L #	25
82) 1,4-Dichlorobenzene	13.884	146	49211	0.99 ug/L #	24
83) n-Butylbenzene	14.468	91	60882	1.05 ug/L #	82
84) 1,2-Dichlorobenzene	14.422	146	41618	0.98 ug/L #	48
86) 1,2,4-Trichlorobenzene	16.774	180	20237	1.00 ug/L #	12
88) Naphthalene	17.116	128	39821	0.77 ug/L #	76
89) 1,2,3-Trichlorobenzene	17.469	180	17274	1.00 ug/L #	21

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091303.D
Acq On : 9 Jun 2013 2:01 pm Operator: PS
Sample : ICAL VSTD001 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 2

Quant Time: Jun 10 14:28:23 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Mon Jun 10 14:20:54 2013
Response via : Initial Calibration

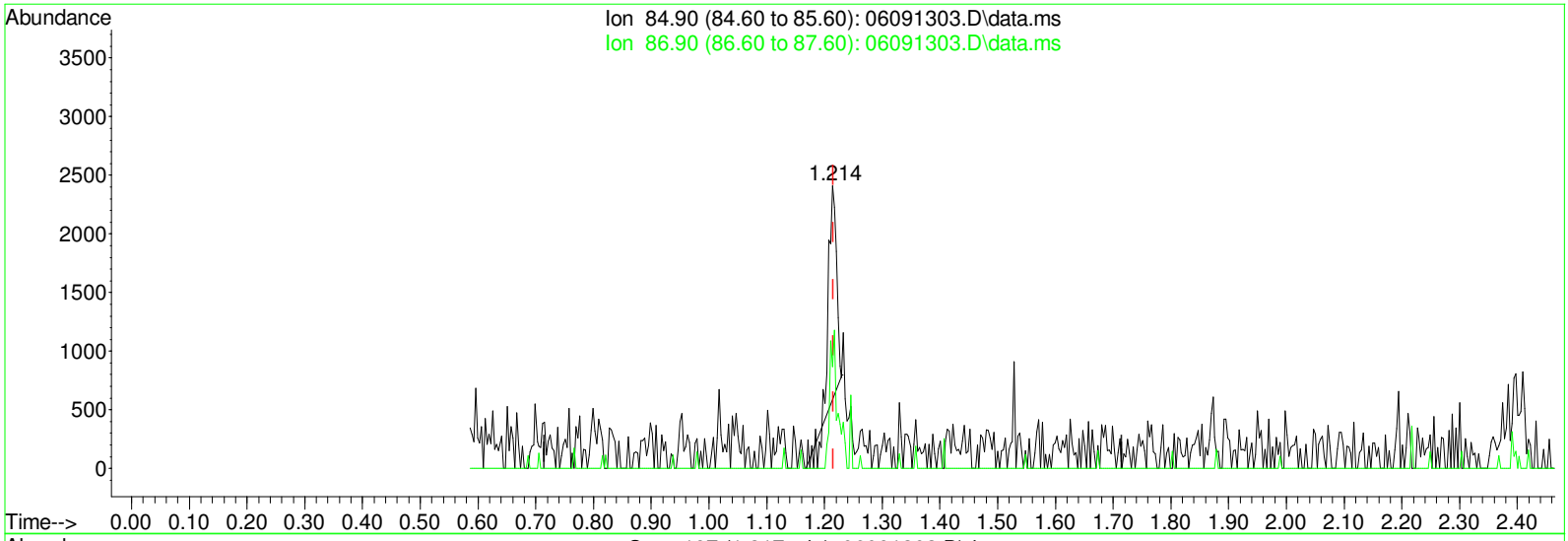


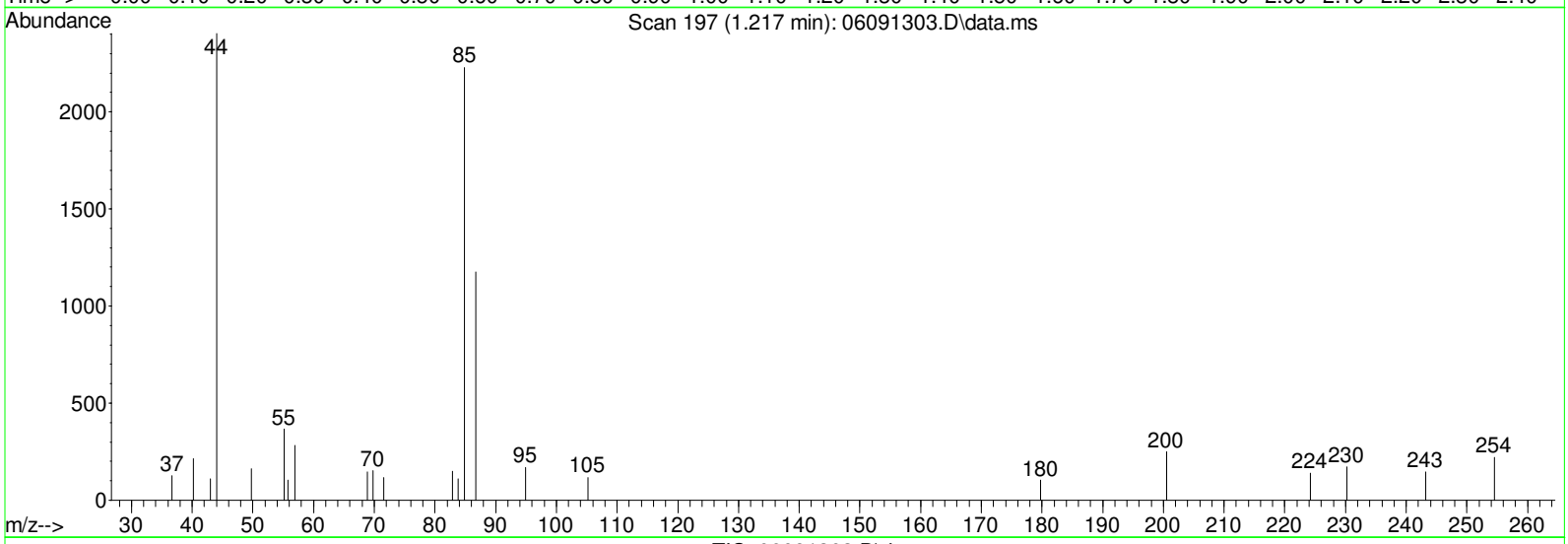
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091303.D
Acq On : 9 Jun 2013 2:01 pm
Sample : ICAL VSTD001
Misc : VOC_W+
ALS Vial : 2

Operator: PS
Inst : VOA7
Multiplr: 1.00

Quant Time: Jun 10 14:28:23 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Mon Jun 10 14:20:54 2013
Response via : Initial Calibration





TIC: 06091303.D\data.ms

(2) Dichlorodifluoromethane (M)

1.216min (+0.001) 0.46 ug/L

response 15689

Ion	Exp%	Act%
84.90	100	100
86.90	31.20	71.37#
0.00	0.00	0.00
0.00	0.00	0.00

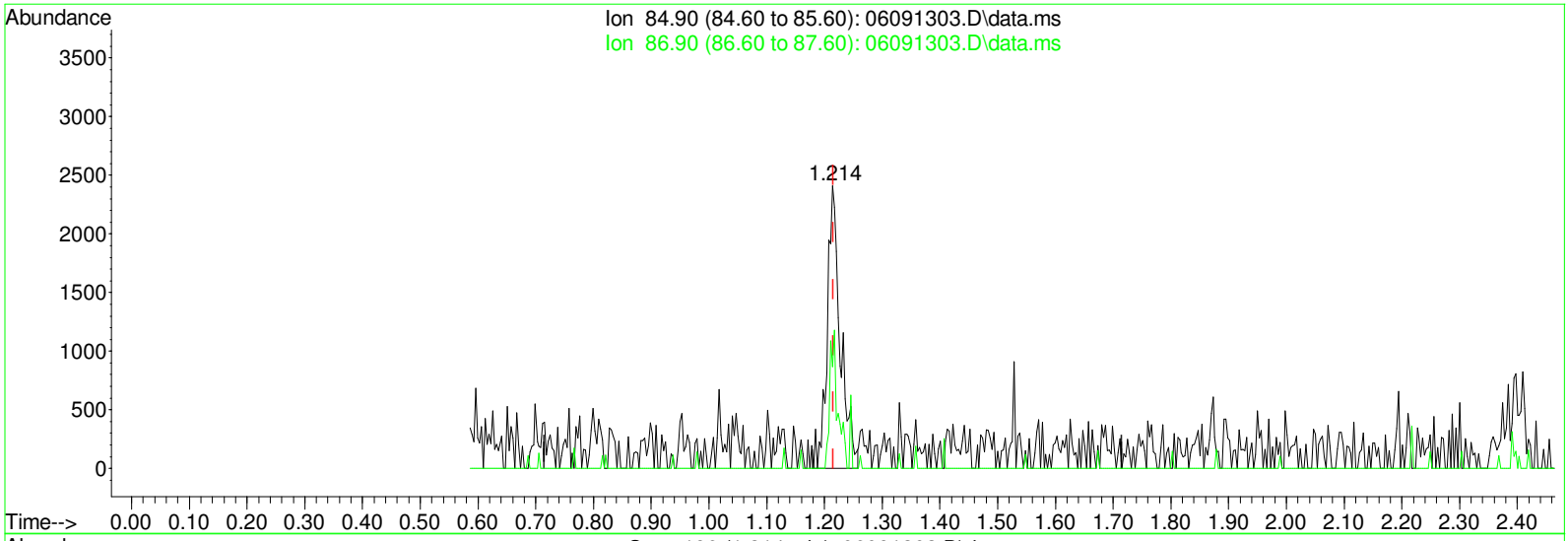
BEFORE

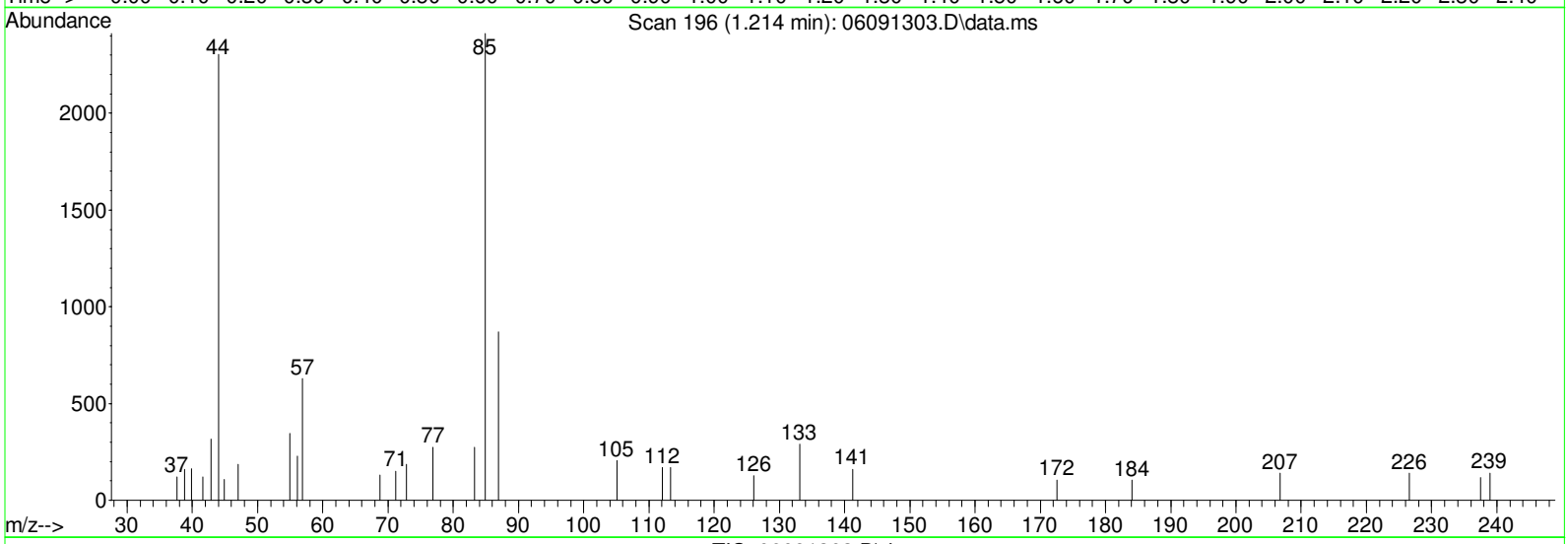
By Alfred at 3:25:08 PM, 7/3/2013

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091303.D
Acq On : 9 Jun 2013 2:01 pm Operator: PS
Sample : ICAL VSTD001 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 2

Quant Time: Jun 10 14:28:23 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Mon Jun 10 14:20:54 2013
Response via : Initial Calibration





TIC: 06091303.D\data.ms

(2) Dichlorodifluoromethane (M)

1.214min (-0.001) 1.12 ug/L m

response 38162

Ion	Exp%	Act%
84.90	100	100
86.90	31.20	29.34
0.00	0.00	0.00
0.00	0.00	0.00

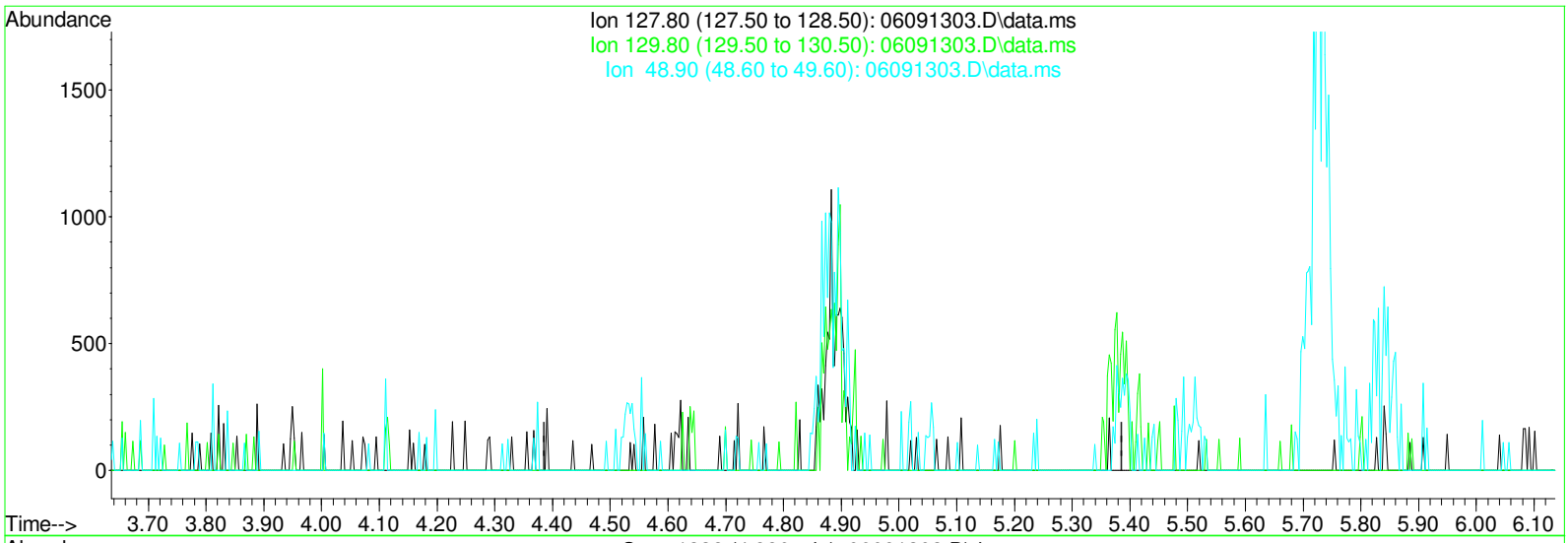
AFTER M3

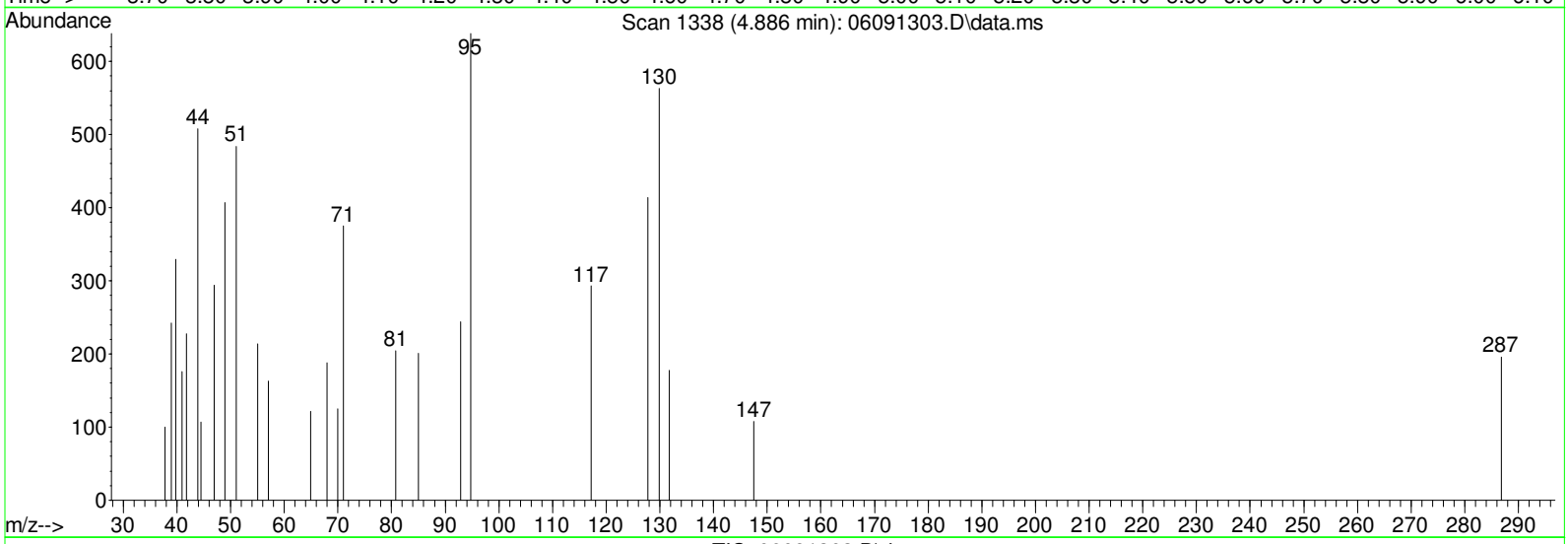
By Alfred at 3:25:15 PM, 7/3/2013

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091303.D
Acq On : 9 Jun 2013 2:01 pm Operator: PS
Sample : ICAL VSTD001 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 2

Quant Time: Jun 10 14:28:23 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Mon Jun 10 14:20:54 2013
Response via : Initial Calibration





TIC: 06091303.D\data.ms

(28) Bromochloromethane (M)

4.886min (-4.886) 0.00 ug/L

response 0

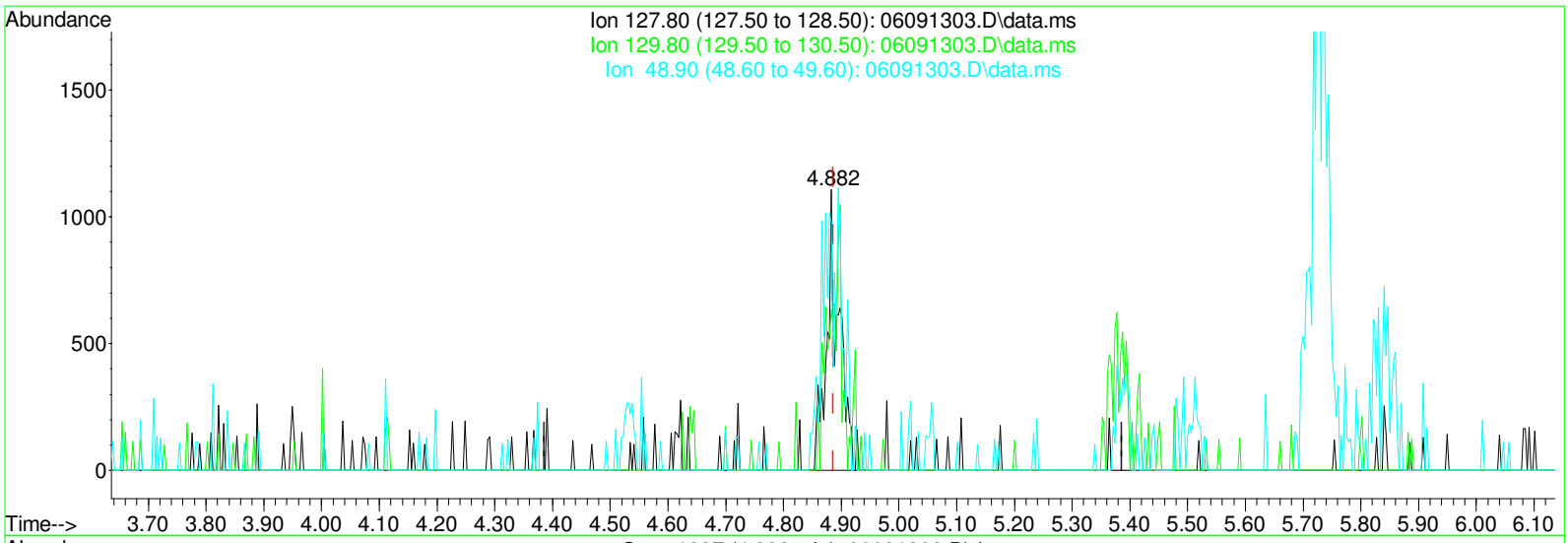
Ion	Exp%	Act%
127.80	100	0.00
129.80	129.70	0.00#
48.90	199.30	0.00#
0.00	0.00	0.00

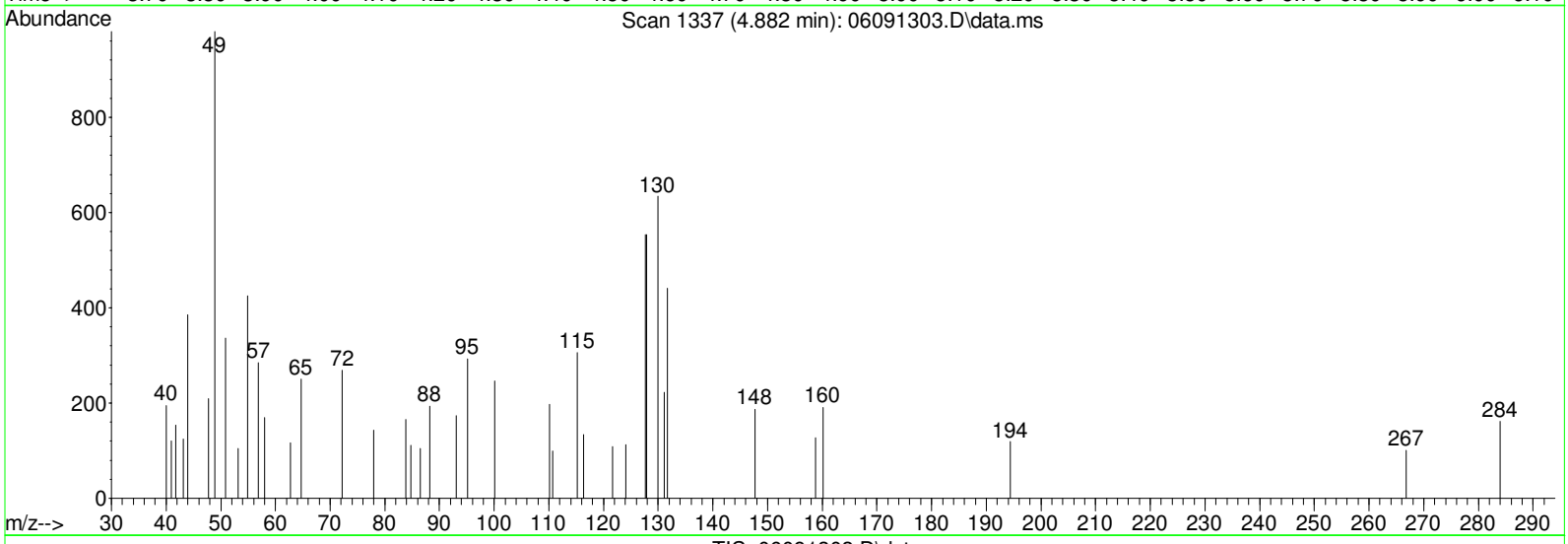
BEFORE
By Alfred at 3:25:20 PM, 7/3/2013

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091303.D
Acq On : 9 Jun 2013 2:01 pm Operator: PS
Sample : ICAL VSTD001 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 2

Quant Time: Jun 10 14:28:23 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Mon Jun 10 14:20:54 2013
Response via : Initial Calibration





TIC: 06091303.D\data.ms

AFTER M1
By Alfred at 3:25:26 PM, 7/3/2013

(28) Bromochloromethane (M)

4.882min (-0.004) 1.50 ug/L m

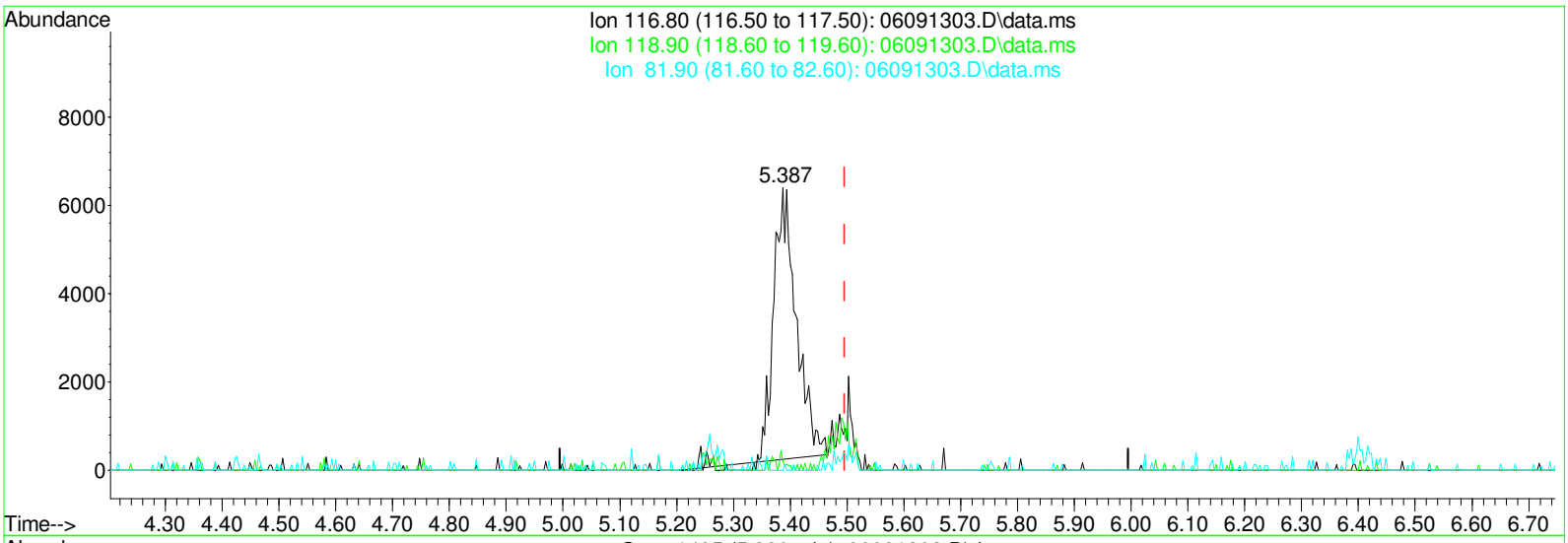
response 16518

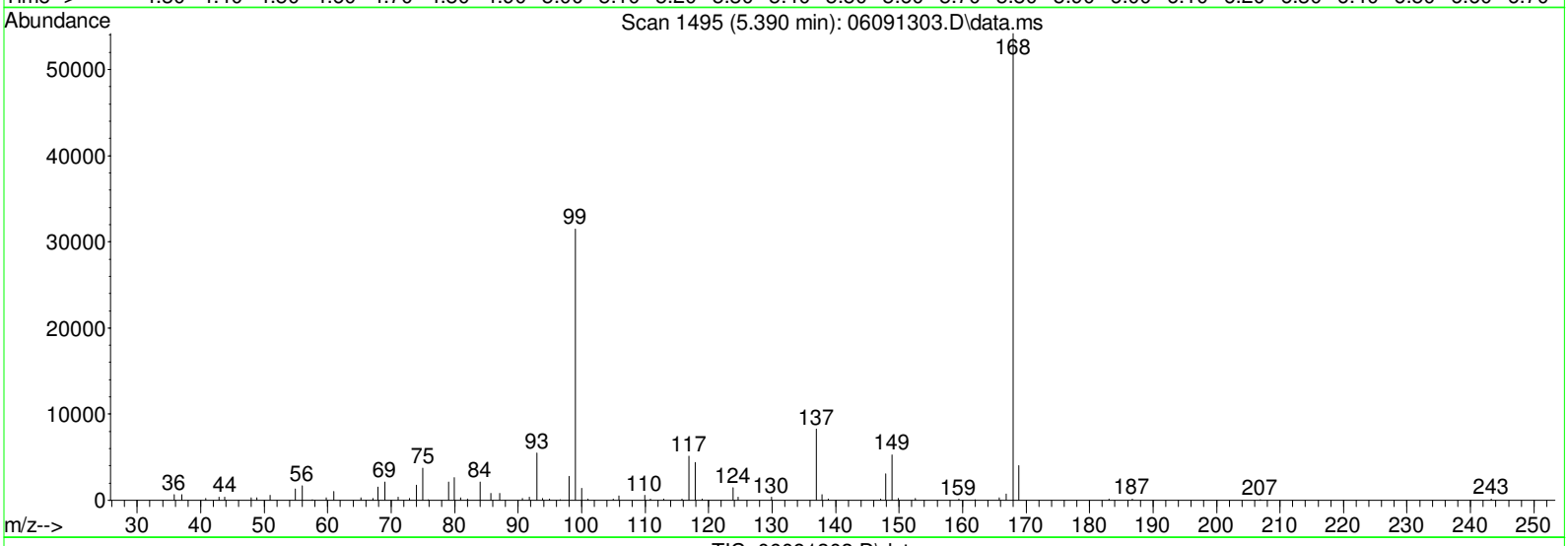
Ion	Exp%	Act%
127.80	100	100
129.80	129.70	104.71
48.90	199.30	149.85#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091303.D
Acq On : 9 Jun 2013 2:01 pm Operator: PS
Sample : ICAL VSTD001 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 2

Quant Time: Jun 10 14:28:23 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Mon Jun 10 14:20:54 2013
Response via : Initial Calibration





TIC: 06091303.D\data.ms

(33) Carbon Tetrachloride (TM)

5.390min (-0.106) 6.21 ug/L

response 167786

Ion	Exp%	Act%
116.80	100	100
118.90	96.60	0.00#
81.90	27.90	0.00#
0.00	0.00	0.00

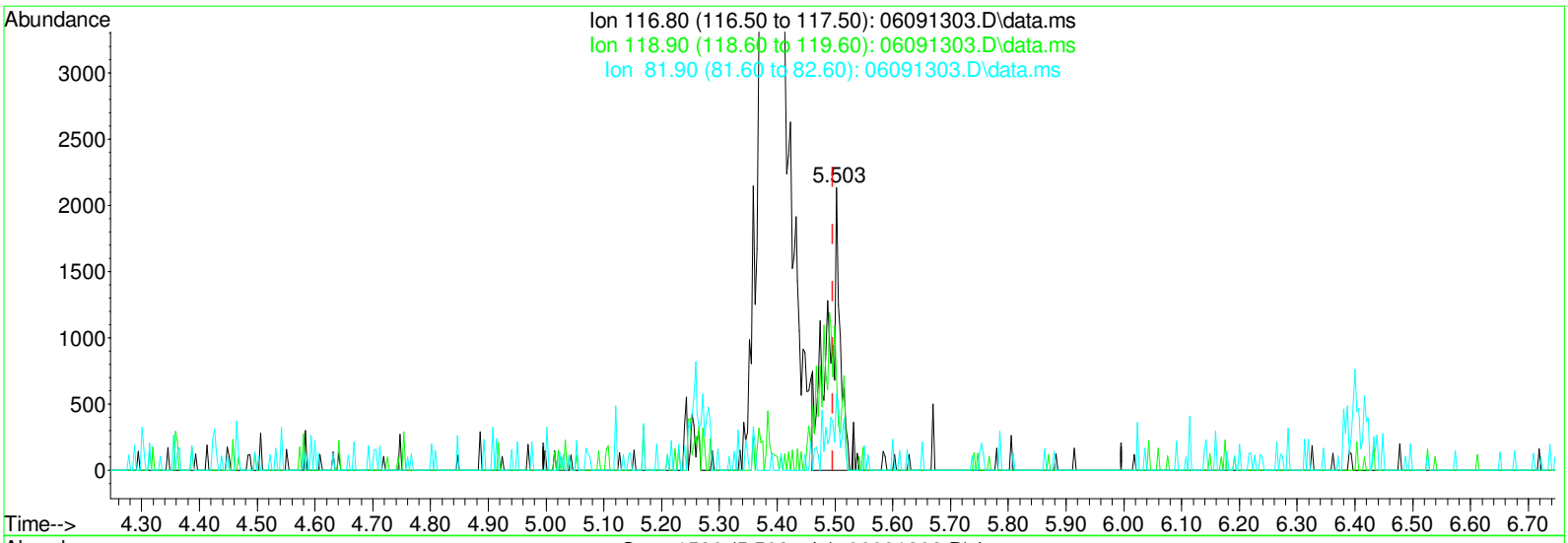
BEFORE

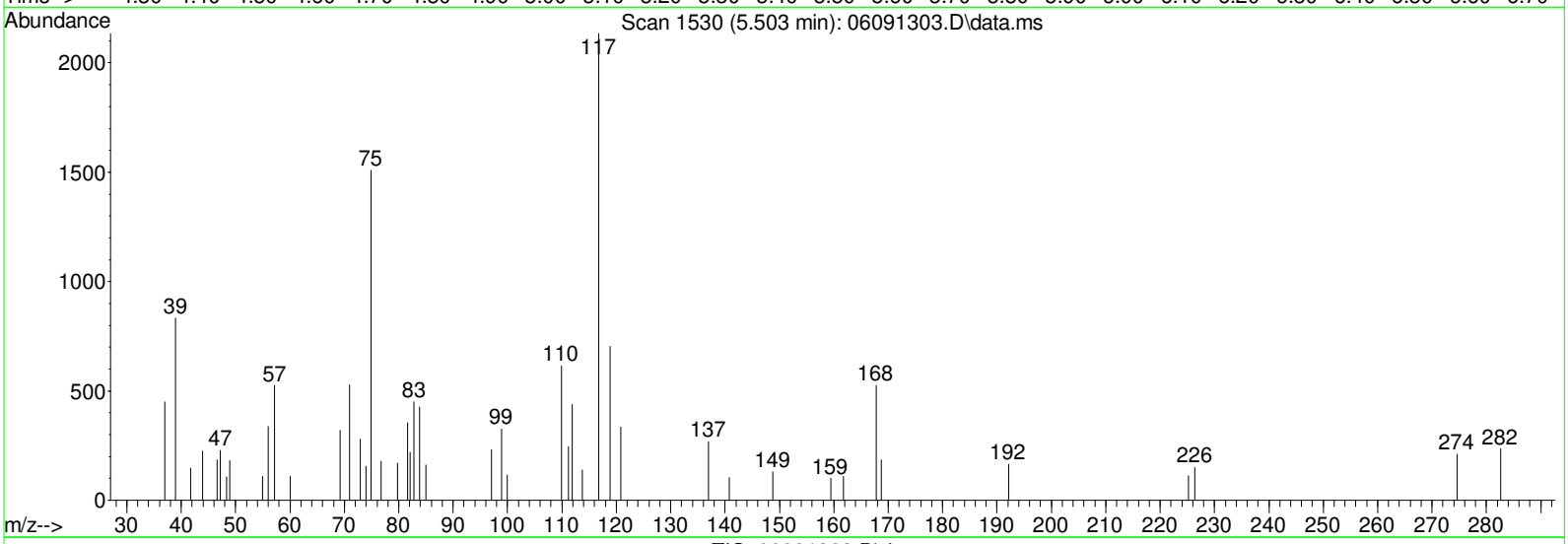
By Alfred at 3:25:32 PM, 7/3/2013

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091303.D
Acq On : 9 Jun 2013 2:01 pm Operator: PS
Sample : ICAL VSTD001 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 2

Quant Time: Jun 10 14:28:23 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Mon Jun 10 14:20:54 2013
Response via : Initial Calibration





TIC: 06091303.D\data.ms

(33) Carbon Tetrachloride (TM)

5.503min (+0.007) 1.14 ug/L m

response 30765

Ion	Exp%	Act%
116.80	100	100
118.90	96.60	82.69
81.90	27.90	27.56
0.00	0.00	0.00

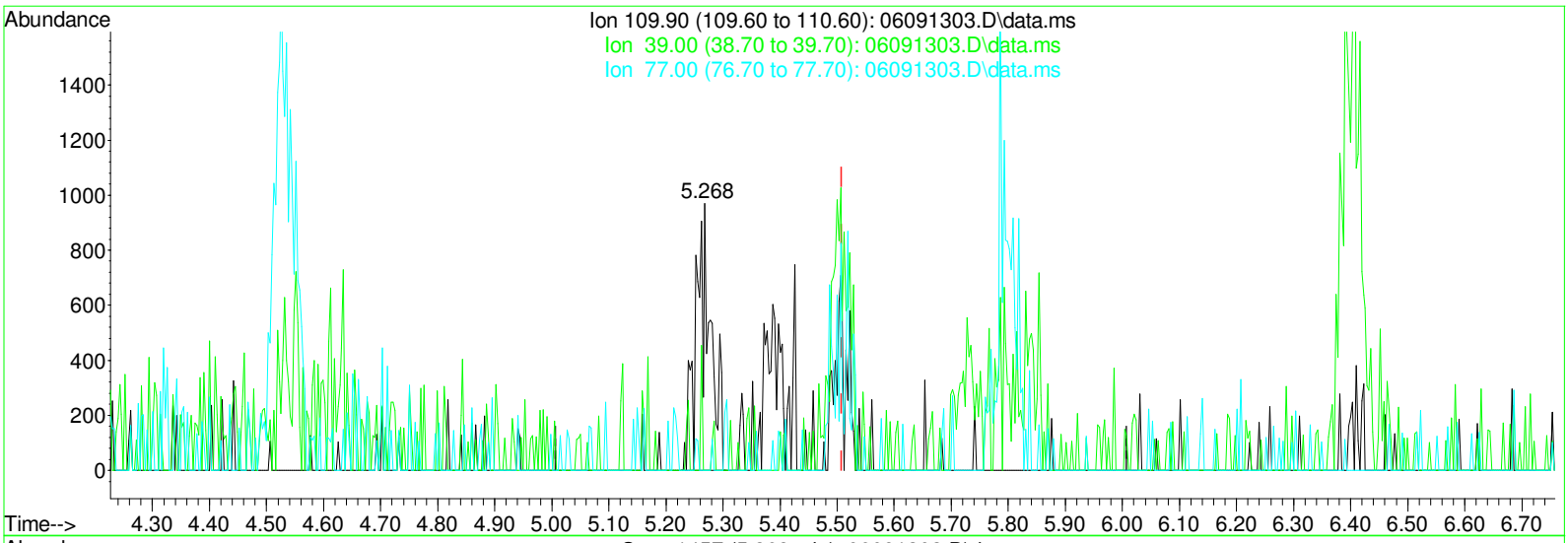
AFTER M2

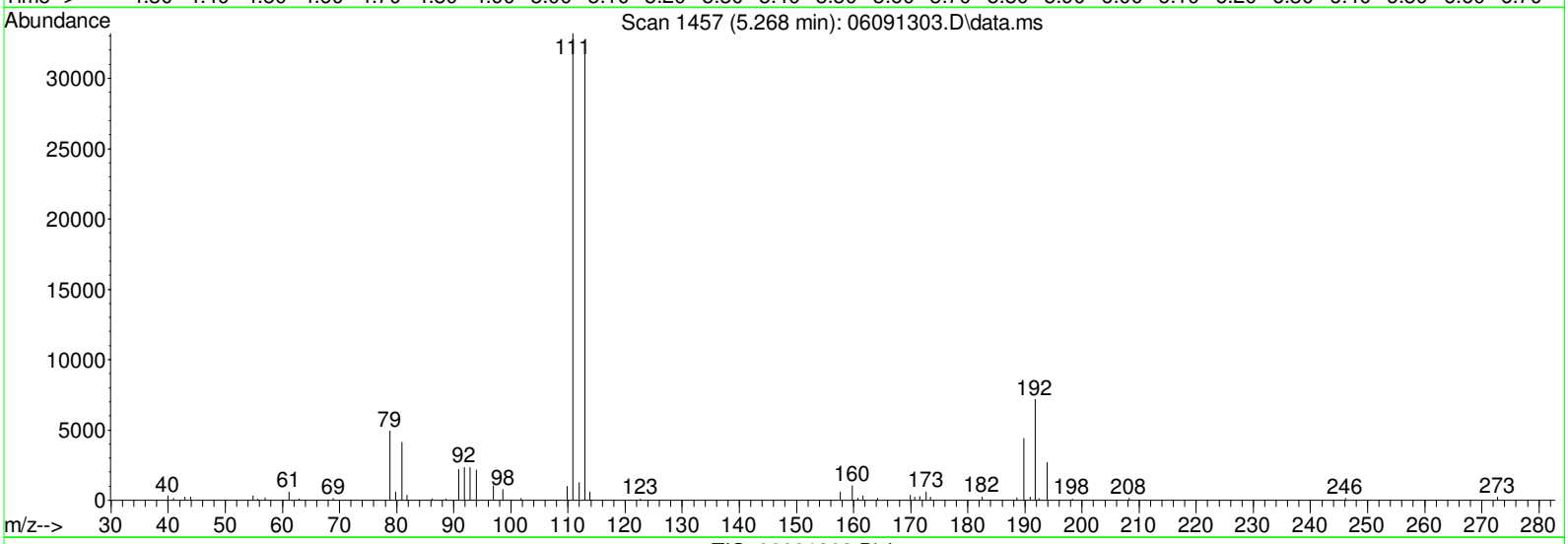
By Alfred at 3:25:40 PM, 7/3/2013

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091303.D
Acq On : 9 Jun 2013 2:01 pm Operator: PS
Sample : ICAL VSTD001 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 2

Quant Time: Jun 10 14:28:23 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Mon Jun 10 14:20:54 2013
Response via : Initial Calibration





TIC: 06091303.D\data.ms

(36) 1,1-Dichloropropene (M)

5.269min (-0.239) 1.48 ug/L

response 17446

Ion	Exp%	Act%
109.90	100	100
39.00	167.20	0.00#
77.00	86.00	0.00#
0.00	0.00	0.00

BEFORE

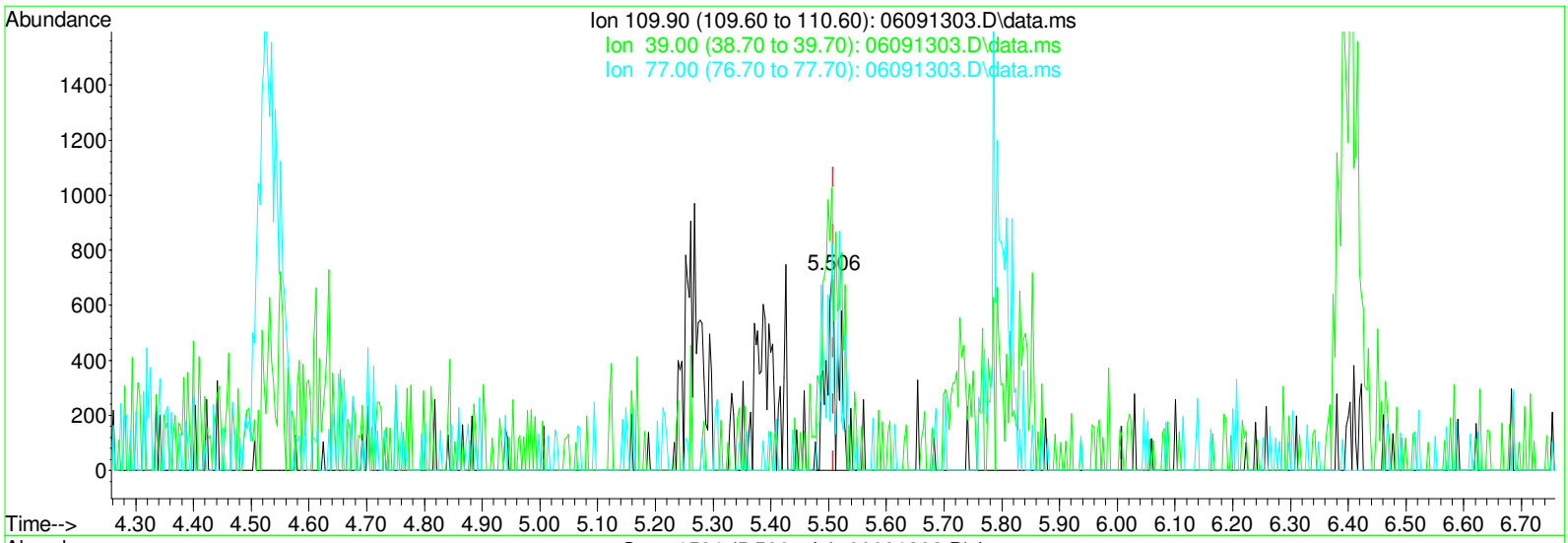
By Alfred at 3:25:47 PM, 7/3/2013

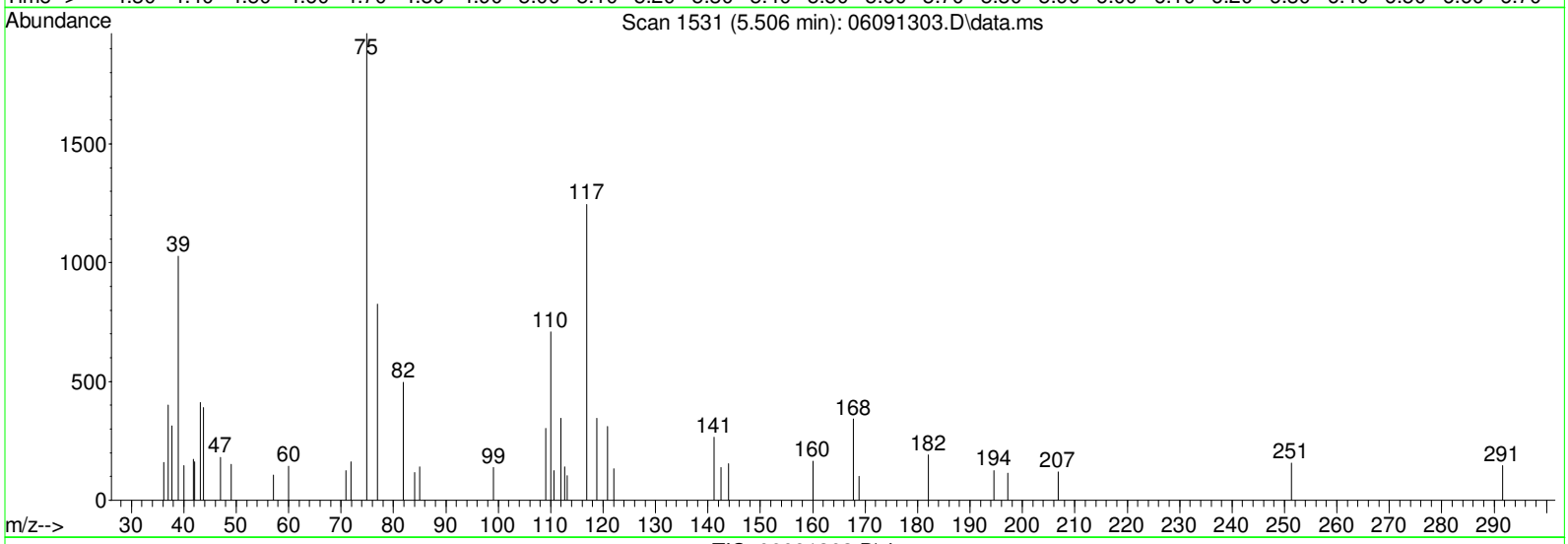
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091303.D
Acq On : 9 Jun 2013 2:01 pm
Sample : ICAL VSTD001
Misc : VOC_W+
ALS Vial : 2

Operator: PS
Inst : VOA7
Multiplr: 1.00

Quant Time: Jun 10 14:28:23 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Mon Jun 10 14:20:54 2013
Response via : Initial Calibration





TIC: 06091303.D\data.ms

(36) 1,1-Dichloropropene (M)

5.506min (-0.002) 0.89 ug/L m

response 10537

Ion	Exp%	Act%
109.90	100	100
39.00	167.20	207.10
77.00	86.00	122.12#
0.00	0.00	0.00

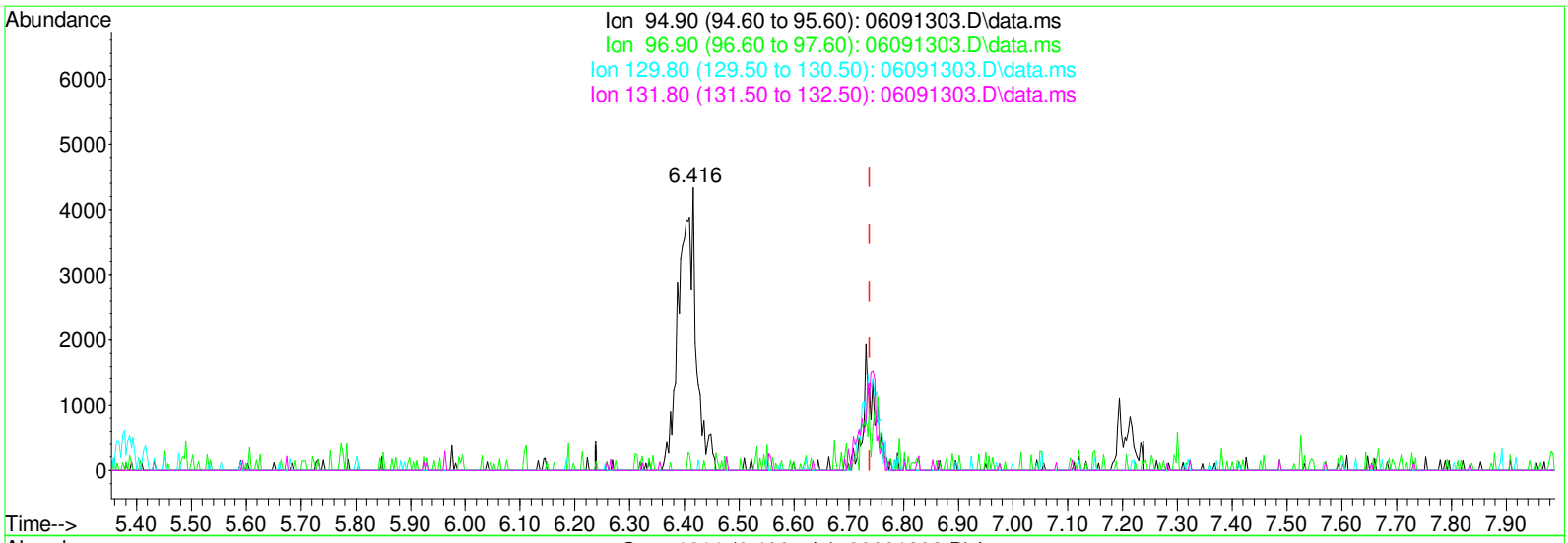
AFTER M2

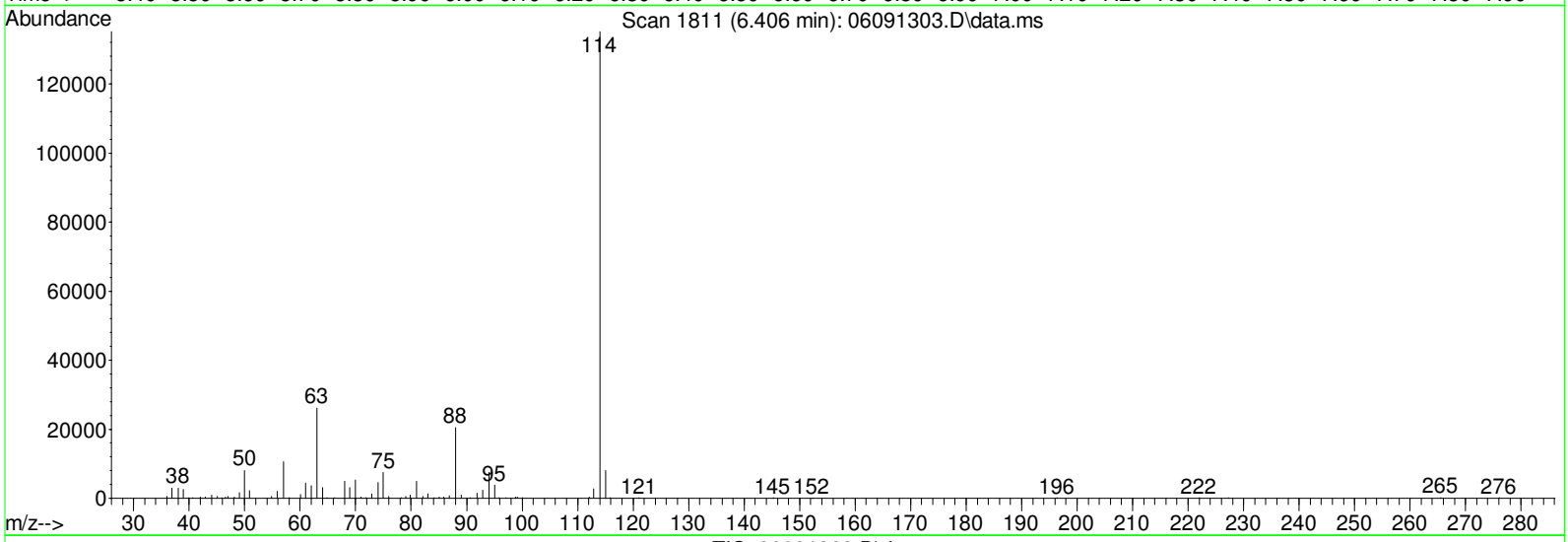
By Alfred at 3:25:54 PM, 7/3/2013

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091303.D
Acq On : 9 Jun 2013 2:01 pm Operator: PS
Sample : ICAL VSTD001 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 2

Quant Time: Jun 10 14:28:23 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Mon Jun 10 14:20:54 2013
Response via : Initial Calibration





TIC: 06091303.D\data.ms

BEFORE

By Alfred at 3:26:00 PM, 7/3/2013

(39) Trichloroethene (TM)

6.407min (-0.332) 2.73 ug/L

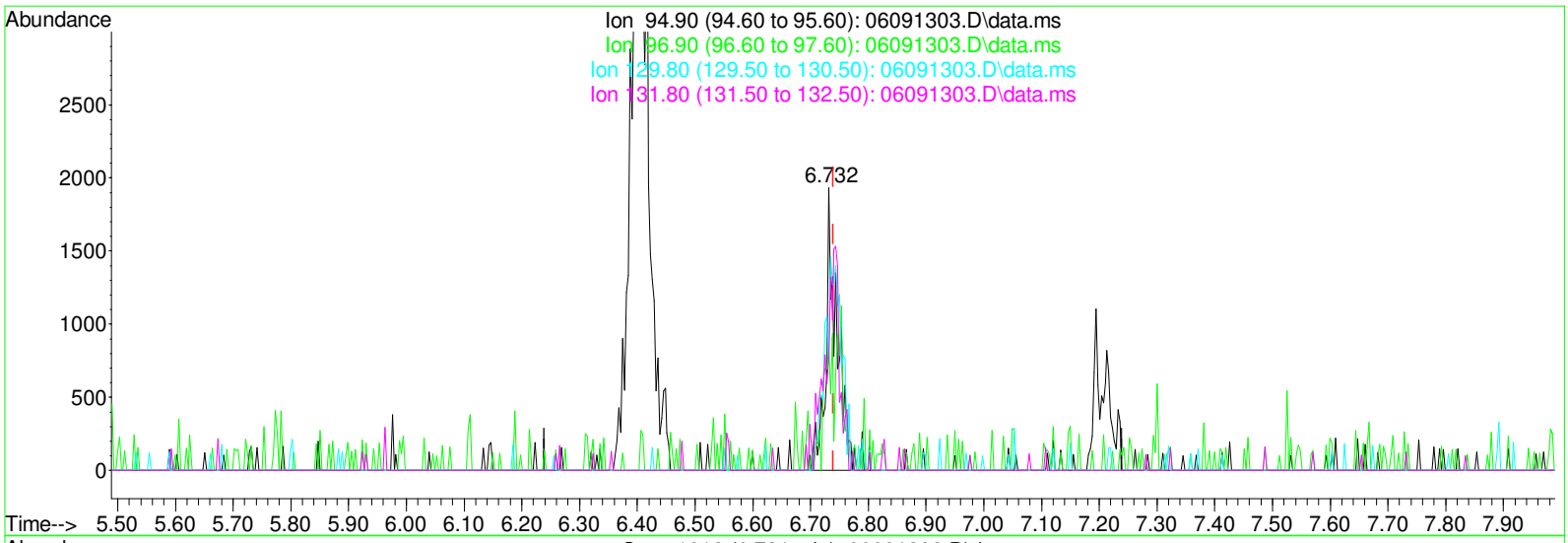
response 93591

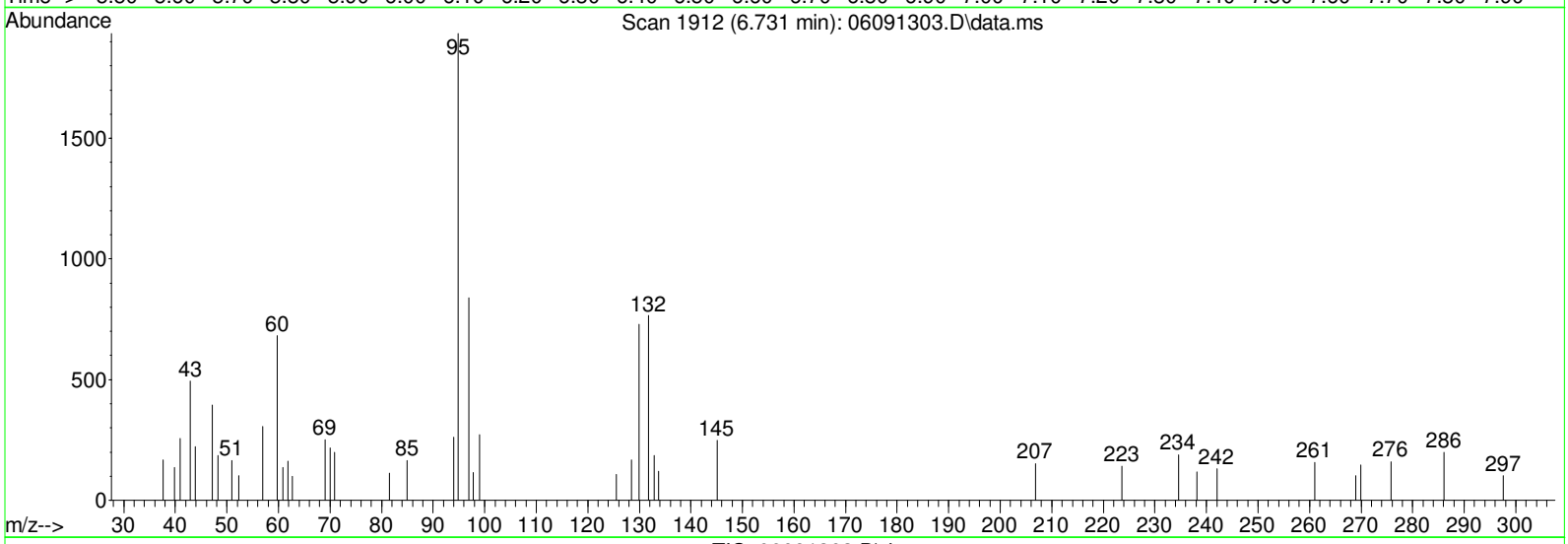
Ion	Exp%	Act%
94.90	100	100
96.90	61.80	0.00#
129.80	96.40	0.00#
131.80	93.10	0.00#

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091303.D
Acq On : 9 Jun 2013 2:01 pm Operator: PS
Sample : ICAL VSTD001 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 2

Quant Time: Jun 10 14:28:23 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Mon Jun 10 14:20:54 2013
Response via : Initial Calibration





TIC: 06091303.D\data.ms

(39) Trichloroethene (TM)

6.731min (-0.008) 0.79 ug/L m

response 26927

Ion	Exp%	Act%
94.90	100	100
96.90	61.80	75.89
129.80	96.40	110.04
131.80	93.10	102.58

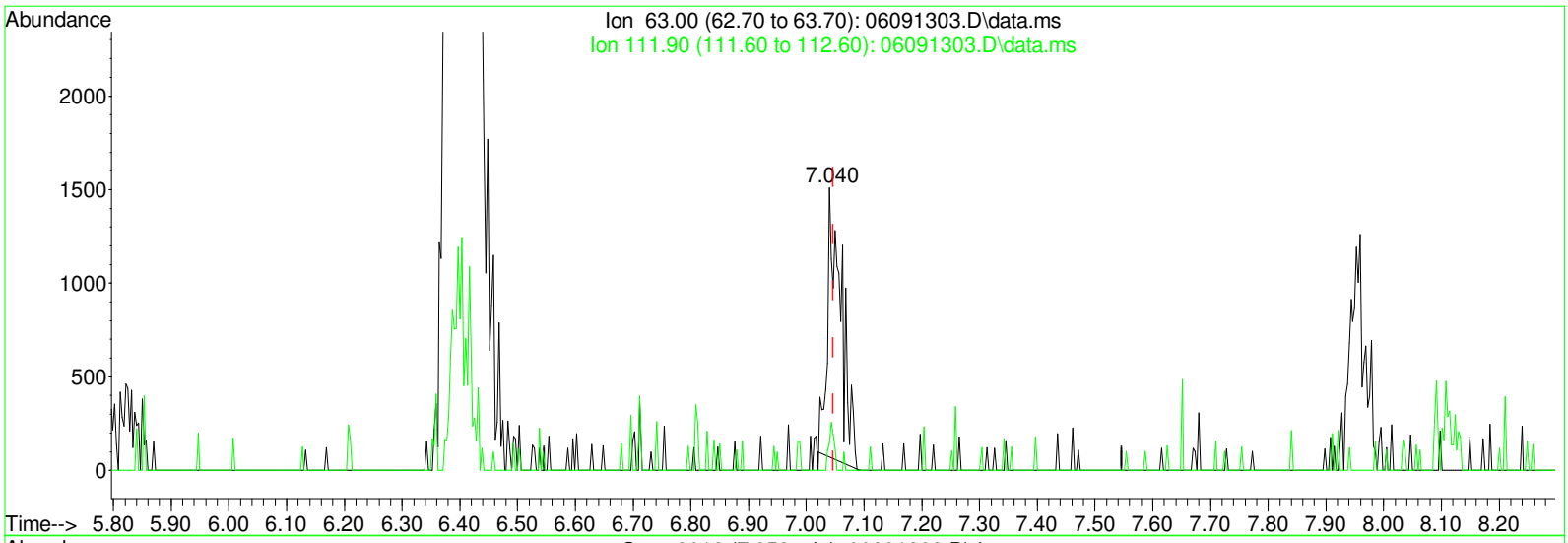
AFTER M2

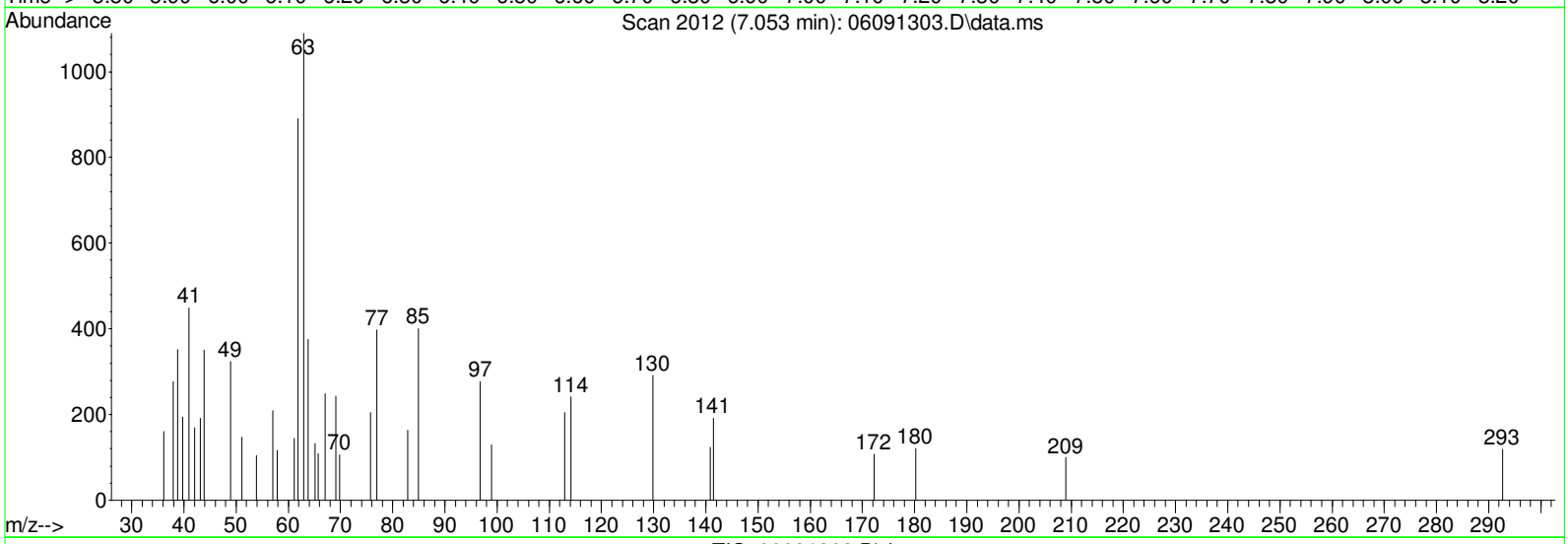
By Alfred at 3:26:07 PM, 7/3/2013

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091303.D
Acq On : 9 Jun 2013 2:01 pm Operator: PS
Sample : ICAL VSTD001 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 2

Quant Time: Jun 10 14:28:23 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Mon Jun 10 14:20:54 2013
Response via : Initial Calibration





TIC: 06091303.D\data.ms

(40) 1,2-Dichloropropane (TCM)

7.052min (+0.005) 0.98 ug/L

response 24104

Ion	Exp%	Act%
63.00	100	100
111.90	4.10	0.00
0.00	0.00	0.00
0.00	0.00	0.00

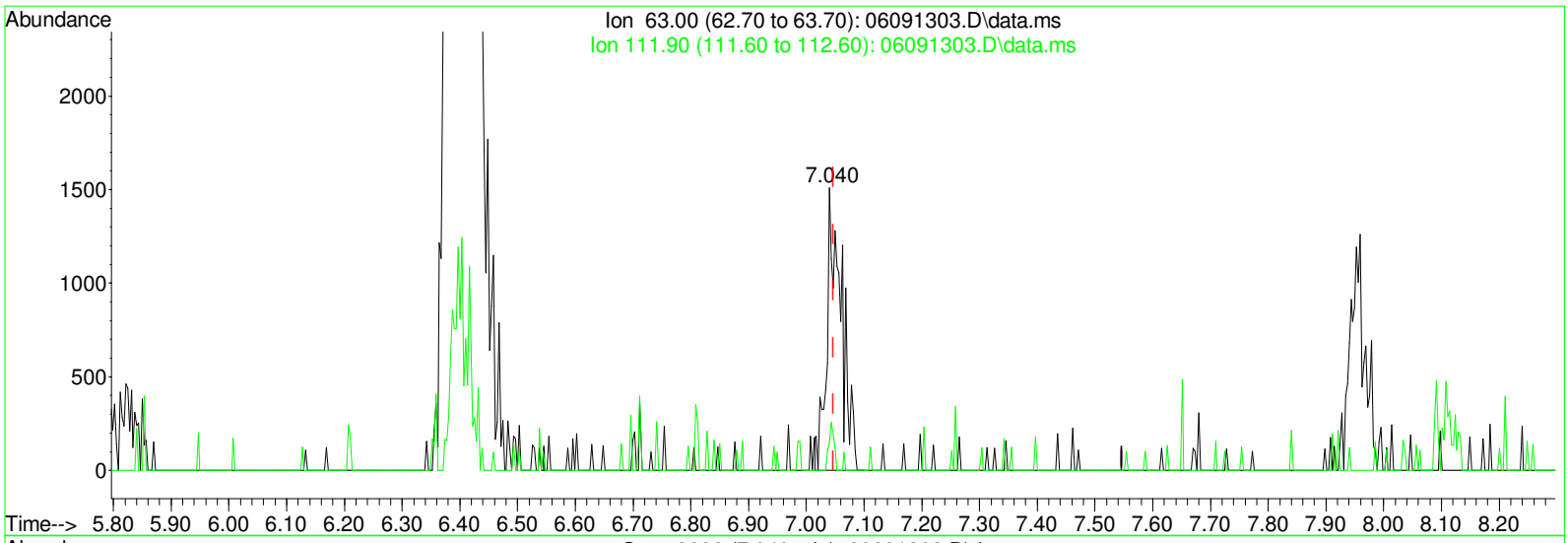
BEFORE

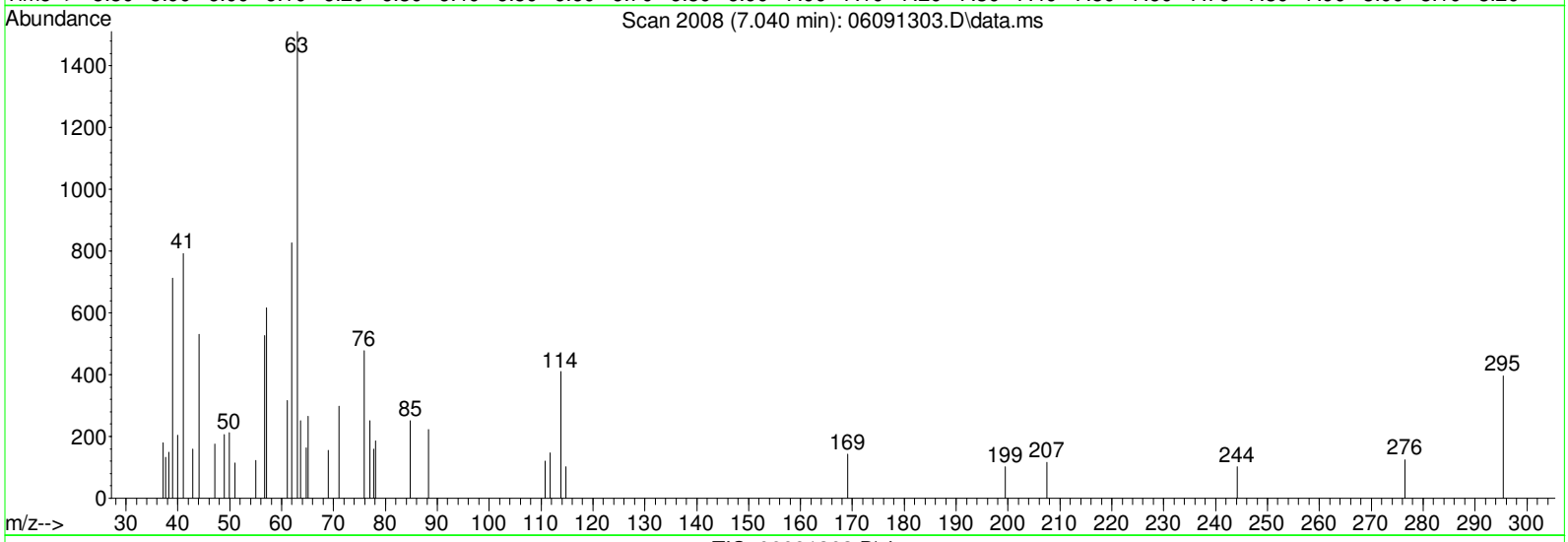
By Alfred at 3:27:09 PM, 7/3/2013

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091303.D
Acq On : 9 Jun 2013 2:01 pm Operator: PS
Sample : ICAL VSTD001 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 2

Quant Time: Jun 10 14:28:23 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Mon Jun 10 14:20:54 2013
Response via : Initial Calibration





TIC: 06091303.D\data.ms

(40) 1,2-Dichloropropane (TCM)

7.040min (-0.007) 1.08 ug/L m

response 26653

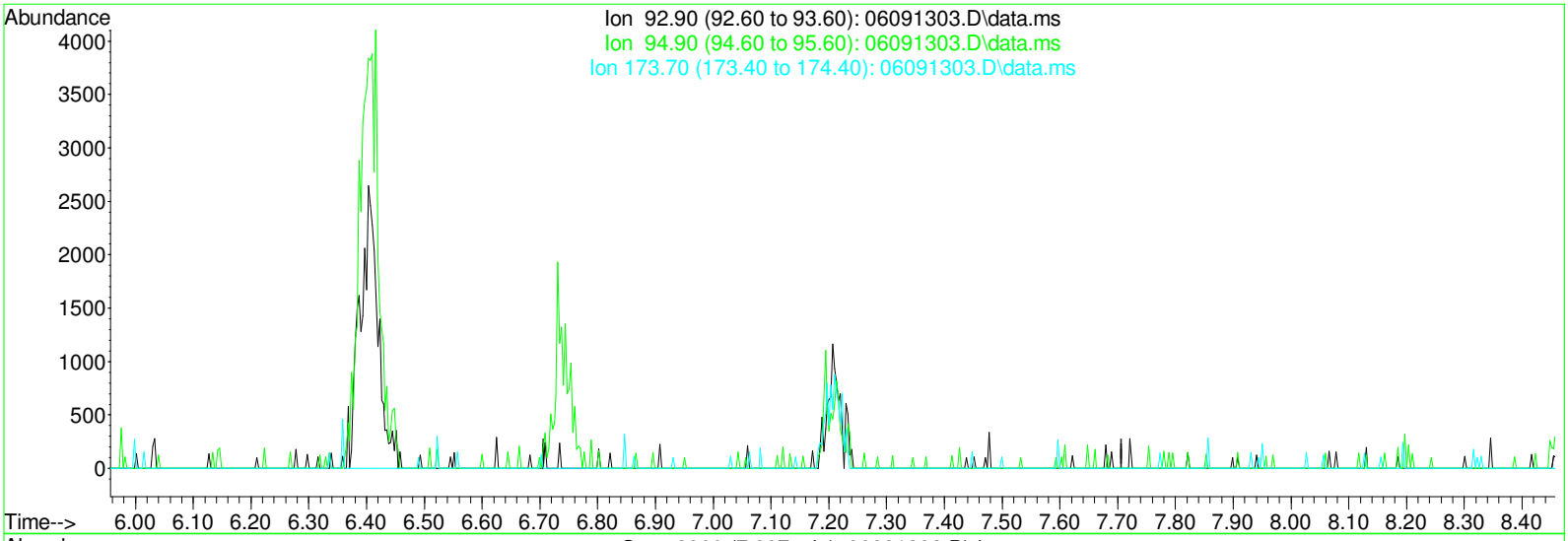
Ion	Exp%	Act%
63.00	100	100
111.90	4.10	5.98
0.00	0.00	0.00
0.00	0.00	0.00

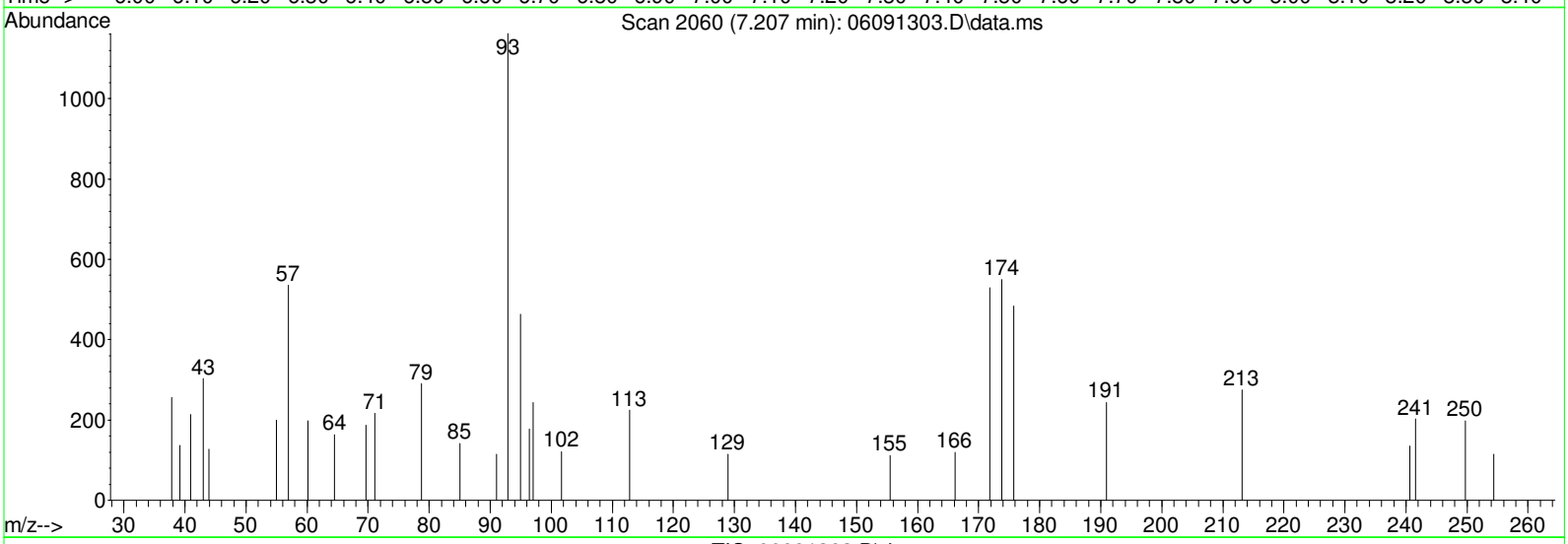
AFTER M3
By Alfred at 3:27:15 PM, 7/3/2013

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091303.D
Acq On : 9 Jun 2013 2:01 pm Operator: PS
Sample : ICAL VSTD001 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 2

Quant Time: Jun 10 14:28:23 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Mon Jun 10 14:20:54 2013
Response via : Initial Calibration





TIC: 06091303.D\data.ms

BEFORE
By Alfred at 3:27:21 PM, 7/3/2013

(43) Dibromomethane (M)

7.207min (-7.207) 0.00 ug/L

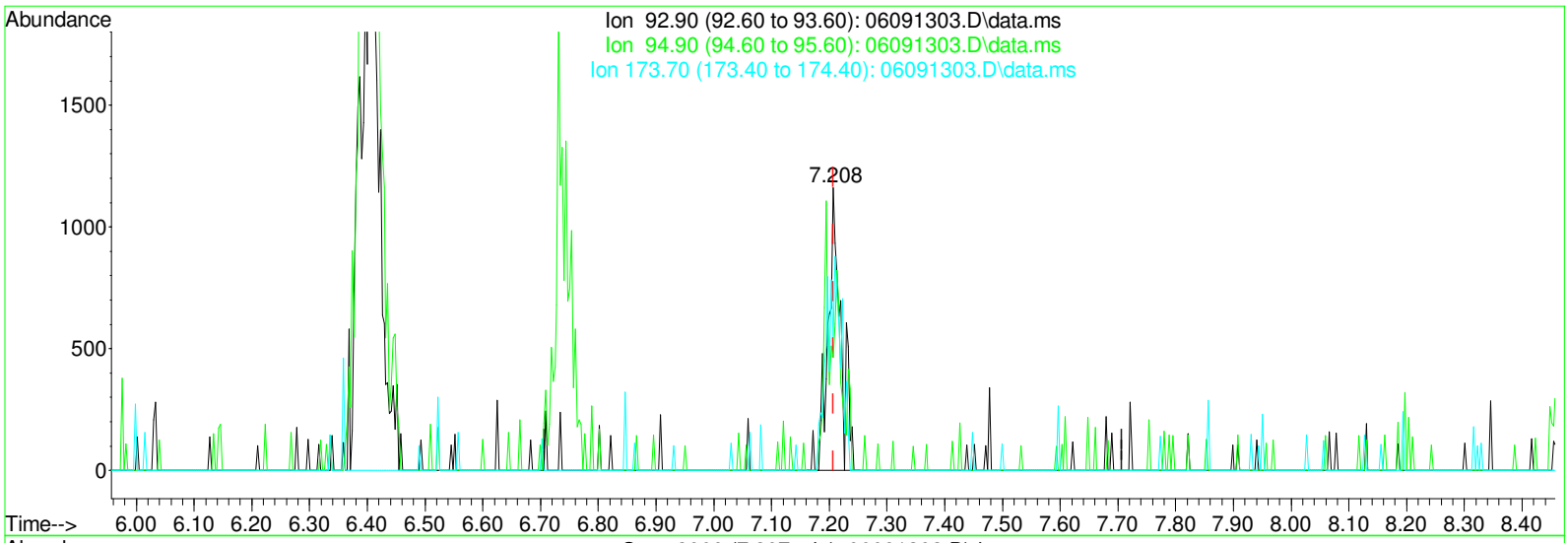
response 0

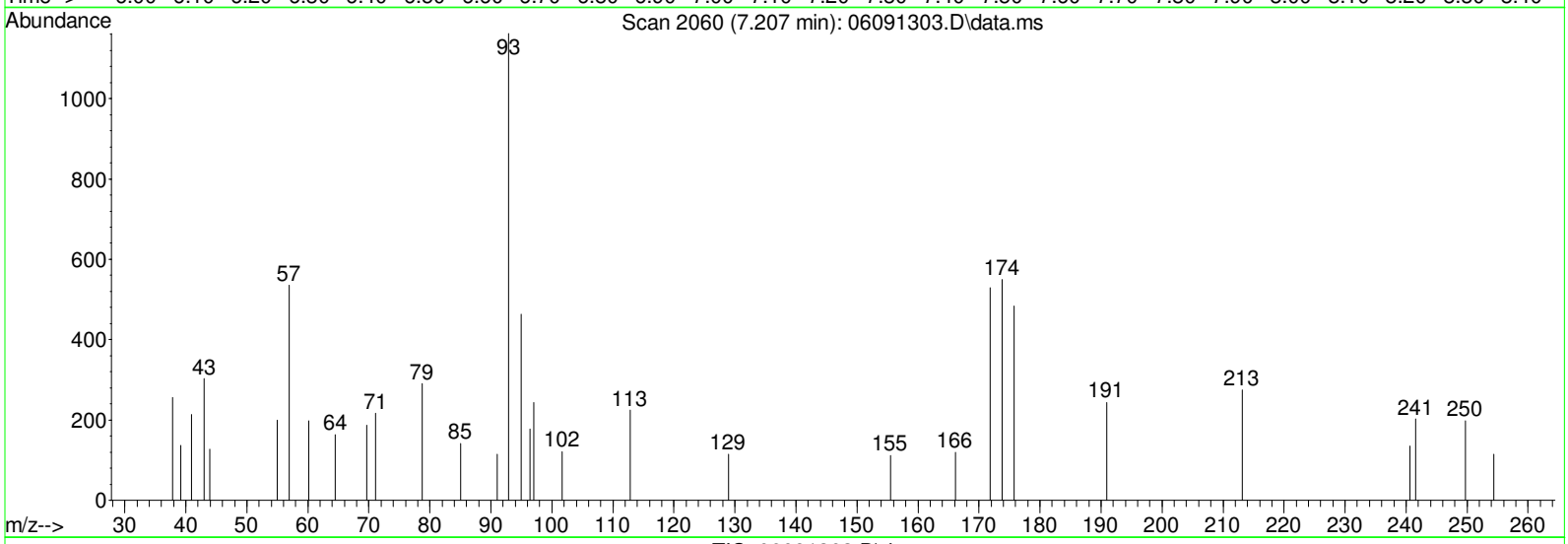
Ion	Exp%	Act%
92.90	100	0.00
94.90	87.00	0.00#
173.70	99.50	0.00#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091303.D
Acq On : 9 Jun 2013 2:01 pm Operator: PS
Sample : ICAL VSTD001 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 2

Quant Time: Jun 10 14:28:23 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Mon Jun 10 14:20:54 2013
Response via : Initial Calibration





TIC: 06091303.D\data.ms

AFTER M1
By Alfred at 3:27:27 PM, 7/3/2013

(43) Dibromomethane (M)

7.207min (+0.000) 1.19 ug/L m

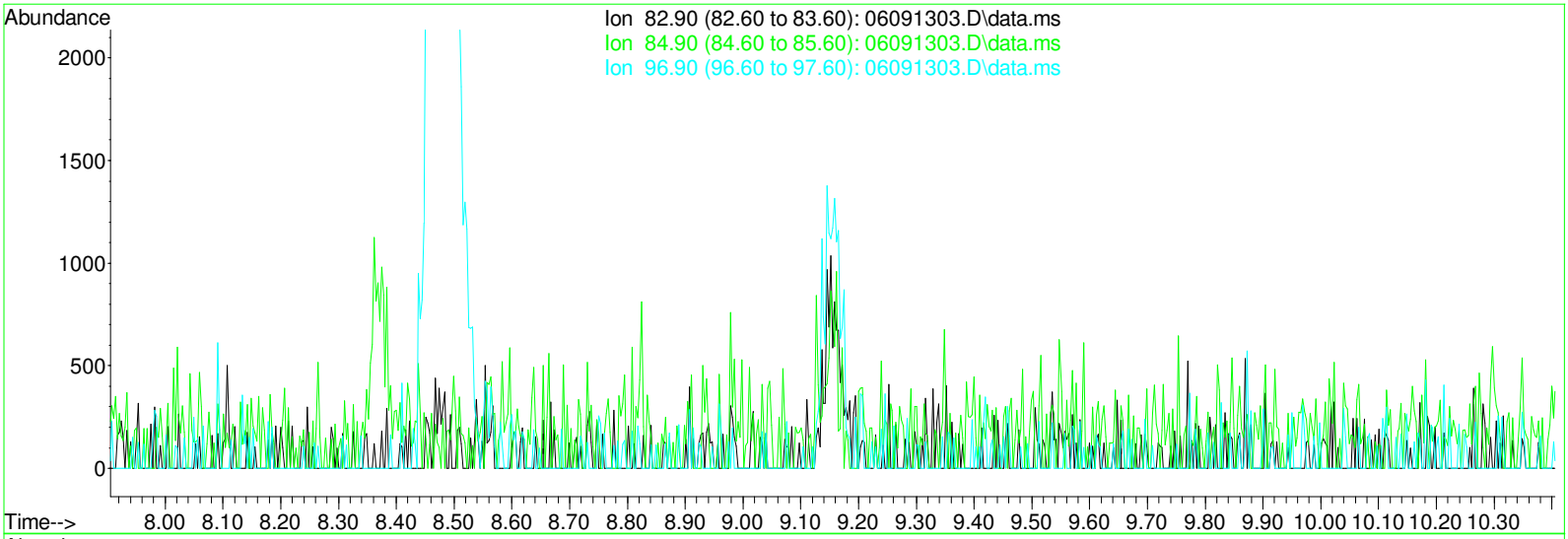
response 17975

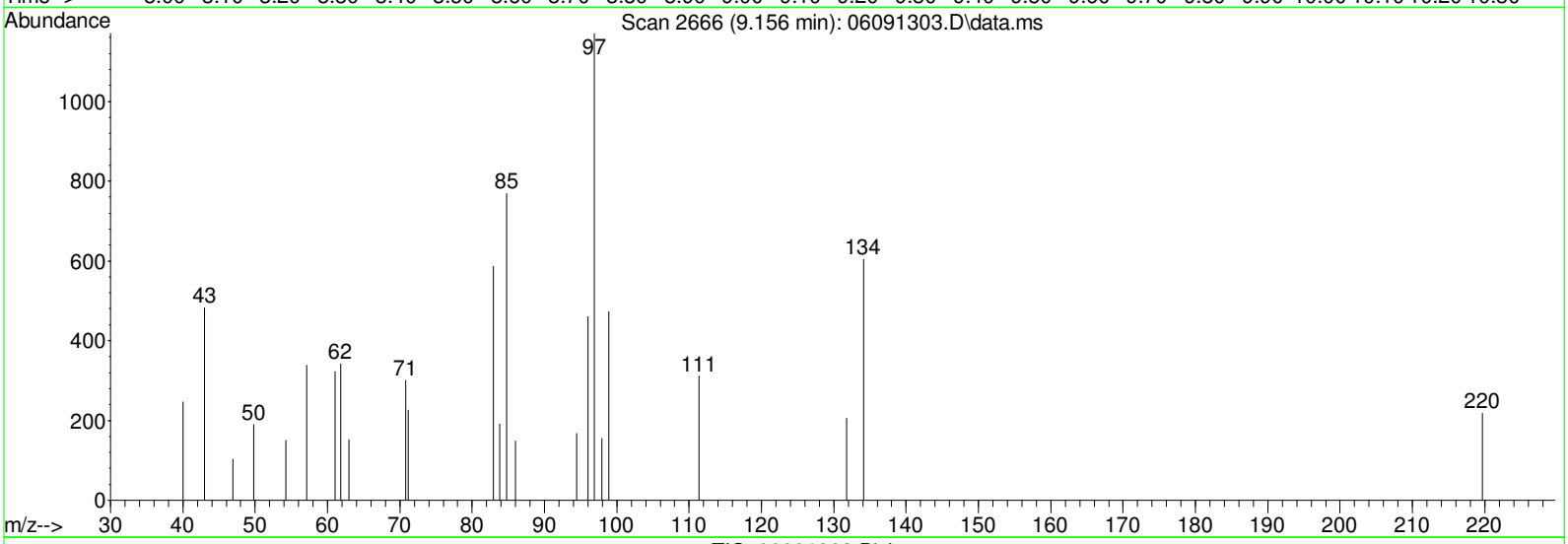
Ion	Exp%	Act%
92.90	100	100
94.90	87.00	86.21
173.70	99.50	87.27
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091303.D
Acq On : 9 Jun 2013 2:01 pm Operator: PS
Sample : ICAL VSTD001 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 2

Quant Time: Jun 10 14:28:23 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Mon Jun 10 14:20:54 2013
Response via : Initial Calibration





TIC: 06091303.D\data.ms

(53) 1,1,2-Trichloroethane (TM)

9.155min (-9.155) 0.00 ug/L

response 0

Ion	Exp%	Act%
82.90	100	0.00
84.90	62.70	0.00#
96.90	117.90	0.00#
0.00	0.00	0.00

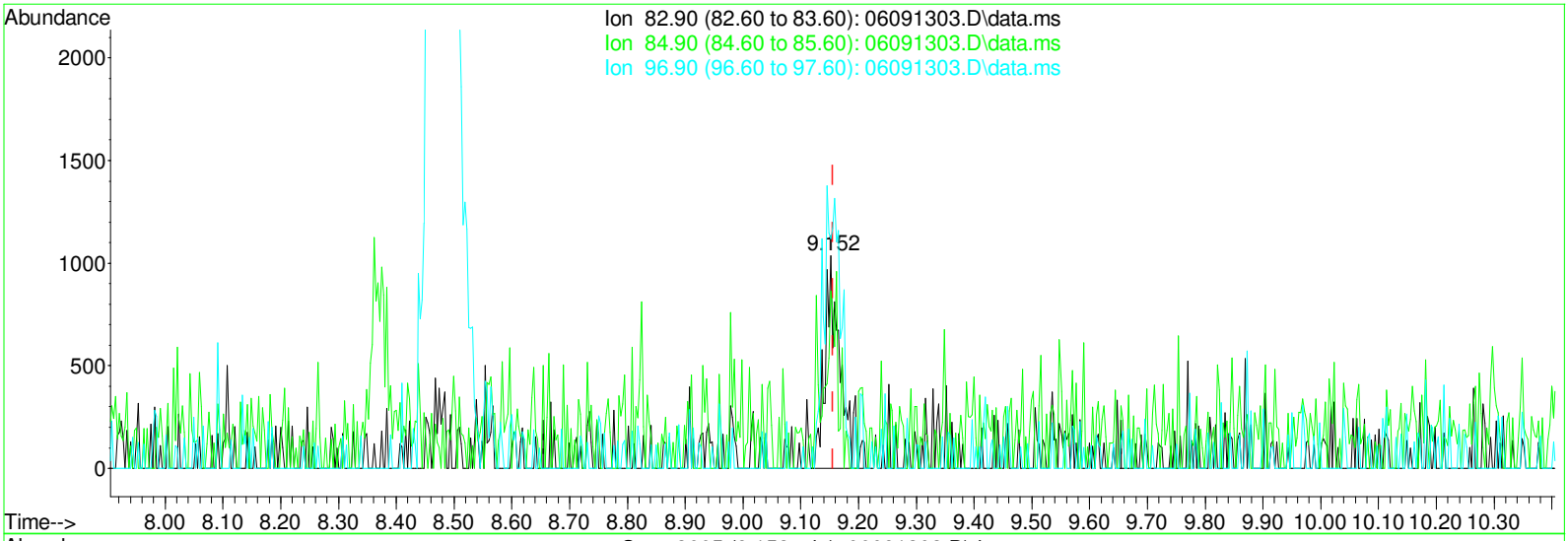
BEFORE
By Alfred at 3:41:14 PM, 7/3/2013

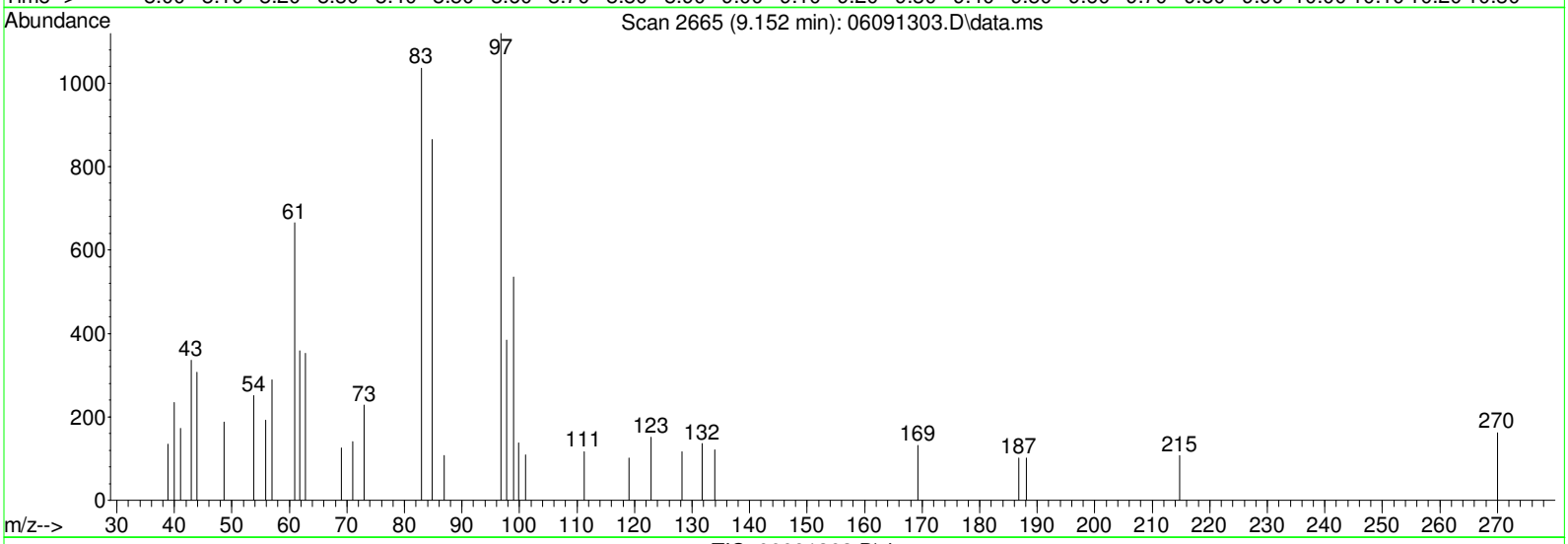
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091303.D
Acq On : 9 Jun 2013 2:01 pm
Sample : ICAL VSTD001
Misc : VOC_W+
ALS Vial : 2

Operator: PS
Inst : VOA7
Multiplr: 1.00

Quant Time: Jun 10 14:28:23 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Mon Jun 10 14:20:54 2013
Response via : Initial Calibration





TIC: 06091303.D\data.ms

(53) 1,1,2-Trichloroethane (TM)

9.152min (-0.003) 0.97 ug/L m

response 19318

Ion	Exp%	Act%
82.90	100	100
84.90	62.70	85.06#
96.90	117.90	144.52
0.00	0.00	0.00

AFTER M1

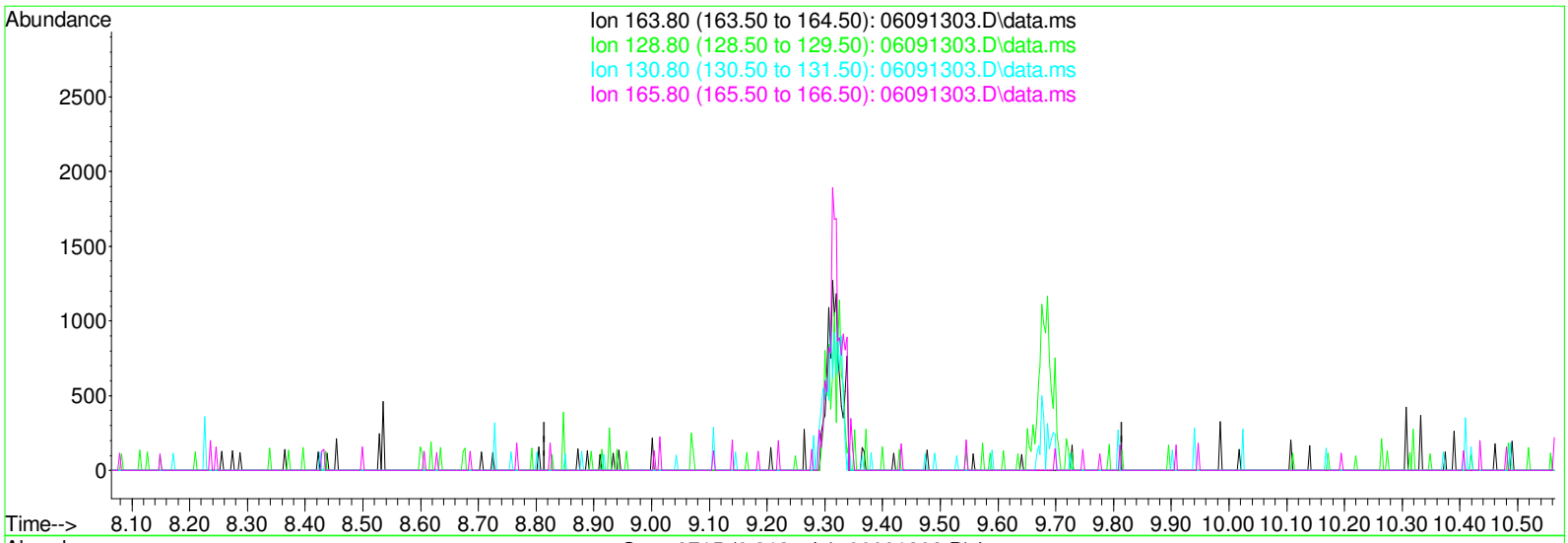
By Alfred at 3:41:20 PM, 7/3/2013

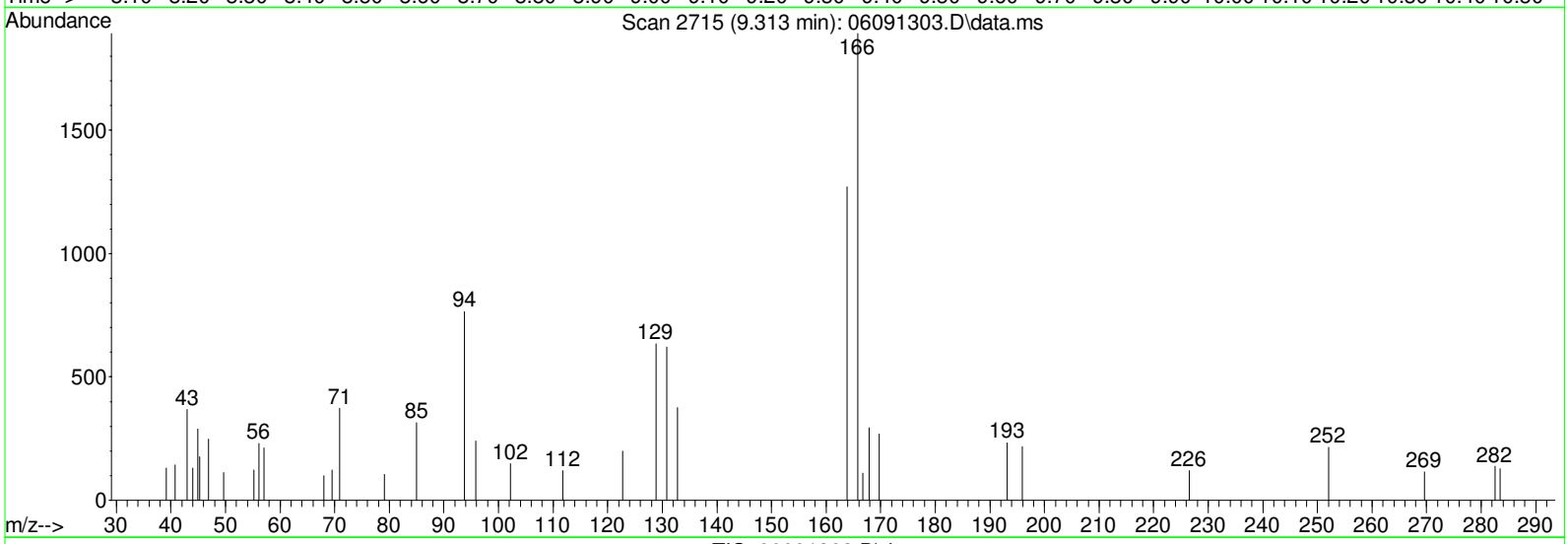
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091303.D
Acq On : 9 Jun 2013 2:01 pm
Sample : ICAL VSTD001
Misc : VOC_W+
ALS Vial : 2

Operator: PS
Inst : VOA7
Multiplr: 1.00

Quant Time: Jun 10 14:28:23 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Mon Jun 10 14:20:54 2013
Response via : Initial Calibration





TIC: 06091303.D\data.ms

(55) Tetrachloroethene (TM)

9.315min (-9.315) 0.00 ug/L

response 0

Ion	Exp%	Act%
163.80	100	0.00
128.80	96.00	0.00#
130.80	90.00	0.00#
165.80	125.20	0.00#

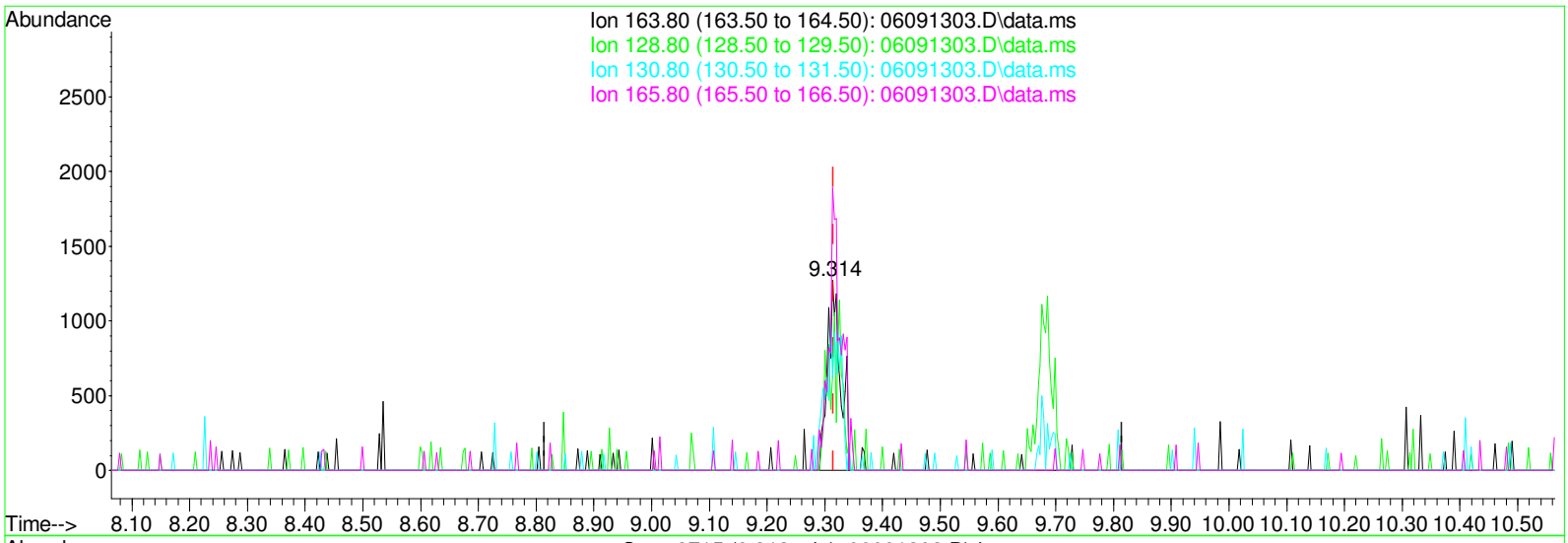
BEFORE

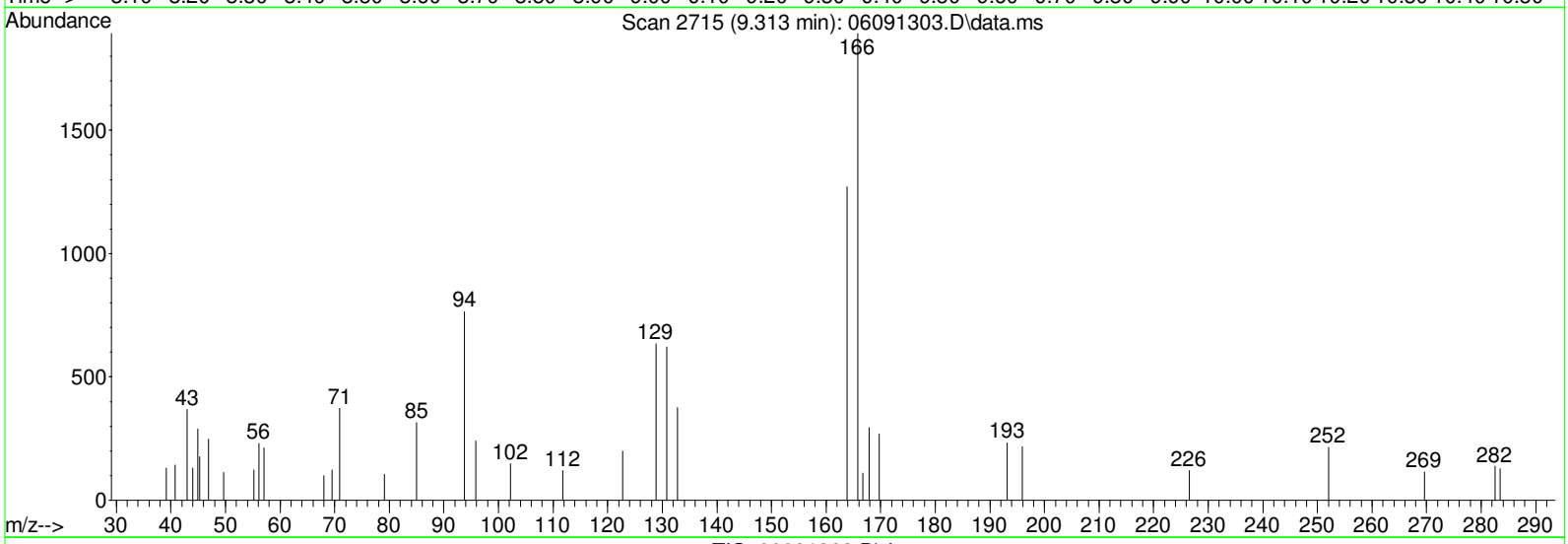
By Alfred at 3:41:27 PM, 7/3/2013

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091303.D
Acq On : 9 Jun 2013 2:01 pm
Operator: PS
Sample : ICAL VSTD001
Inst : VOA7
Misc : VOC_W+
Multiplr: 1.00
ALS Vial : 2

Quant Time: Jun 10 14:28:23 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Mon Jun 10 14:20:54 2013
Response via : Initial Calibration





TIC: 06091303.D\data.ms

(55) Tetrachloroethene (TM)

9.313min (-0.001) 1.10 ug/L m

response 20047

Ion	Exp%	Act%
163.80	100	100
128.80	96.00	85.74
130.80	90.00	92.52
165.80	125.20	138.93

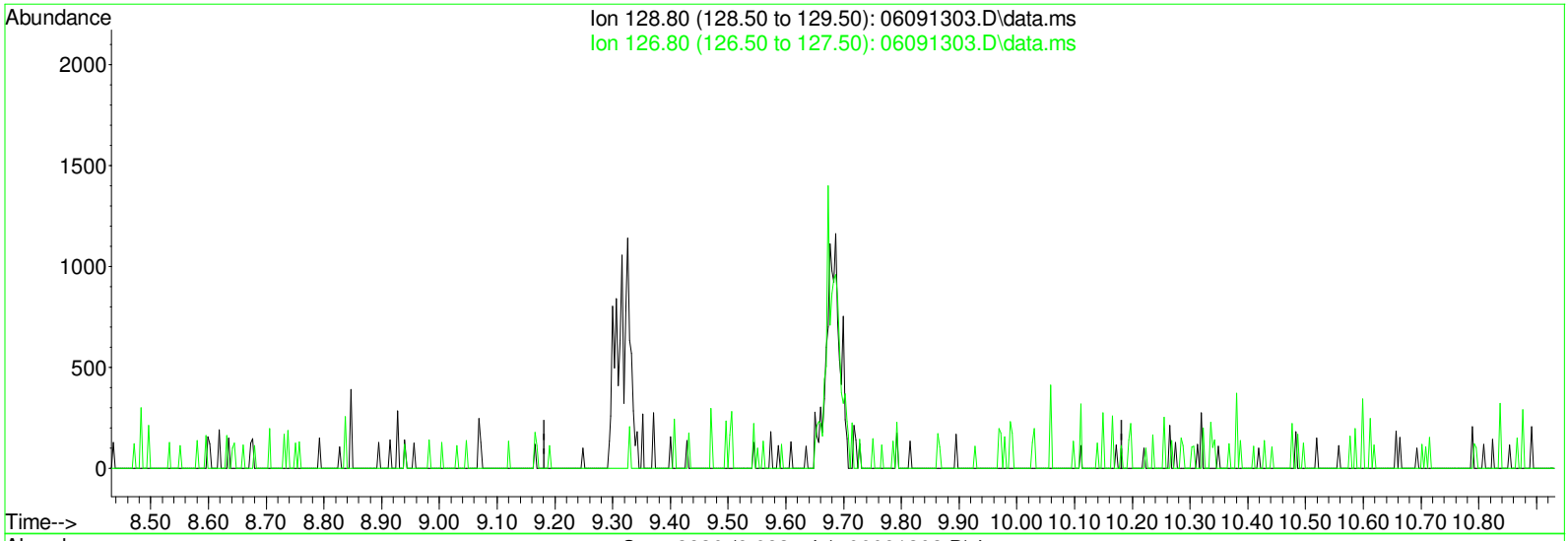
AFTER M1
By Alfred at 3:41:32 PM, 7/3/2013

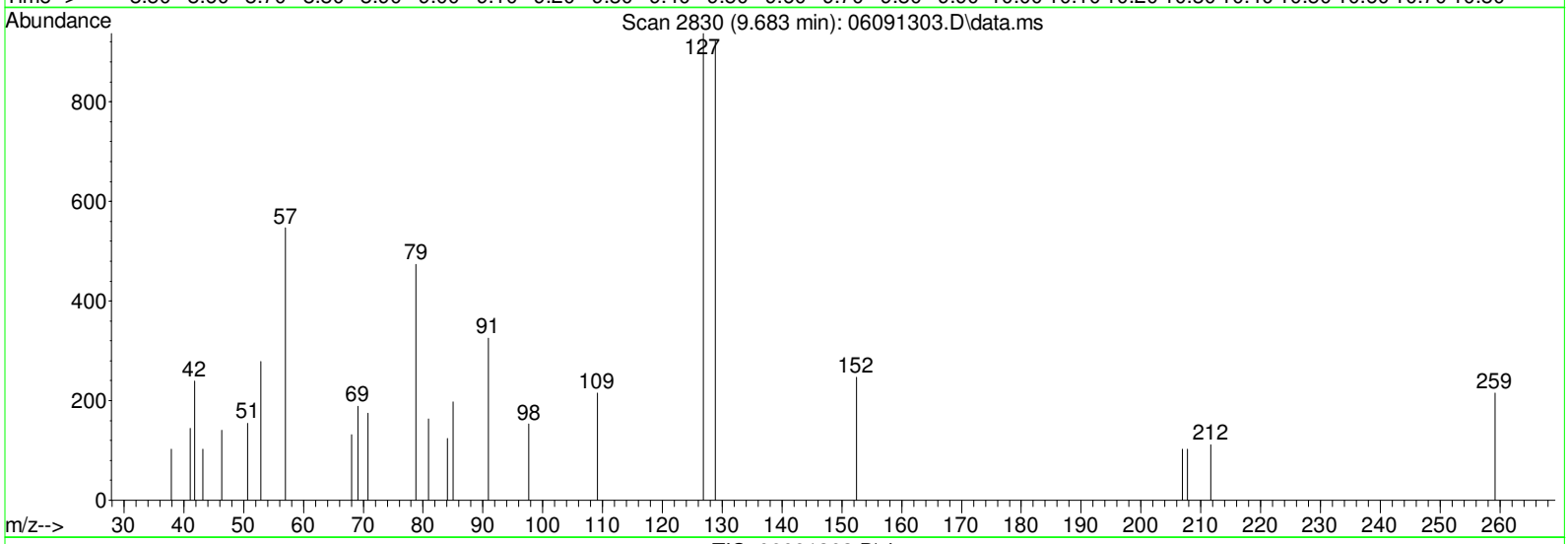
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091303.D
Acq On : 9 Jun 2013 2:01 pm
Sample : ICAL VSTD001
Misc : VOC_W+
ALS Vial : 2

Operator: PS
Inst : VOA7
Multiplr: 1.00

Quant Time: Jun 10 14:28:23 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Mon Jun 10 14:20:54 2013
Response via : Initial Calibration





TIC: 06091303.D\data.ms

(56) Dibromochloromethane (TM)

9.682min (-9.682) 0.00 ug/L

response 0

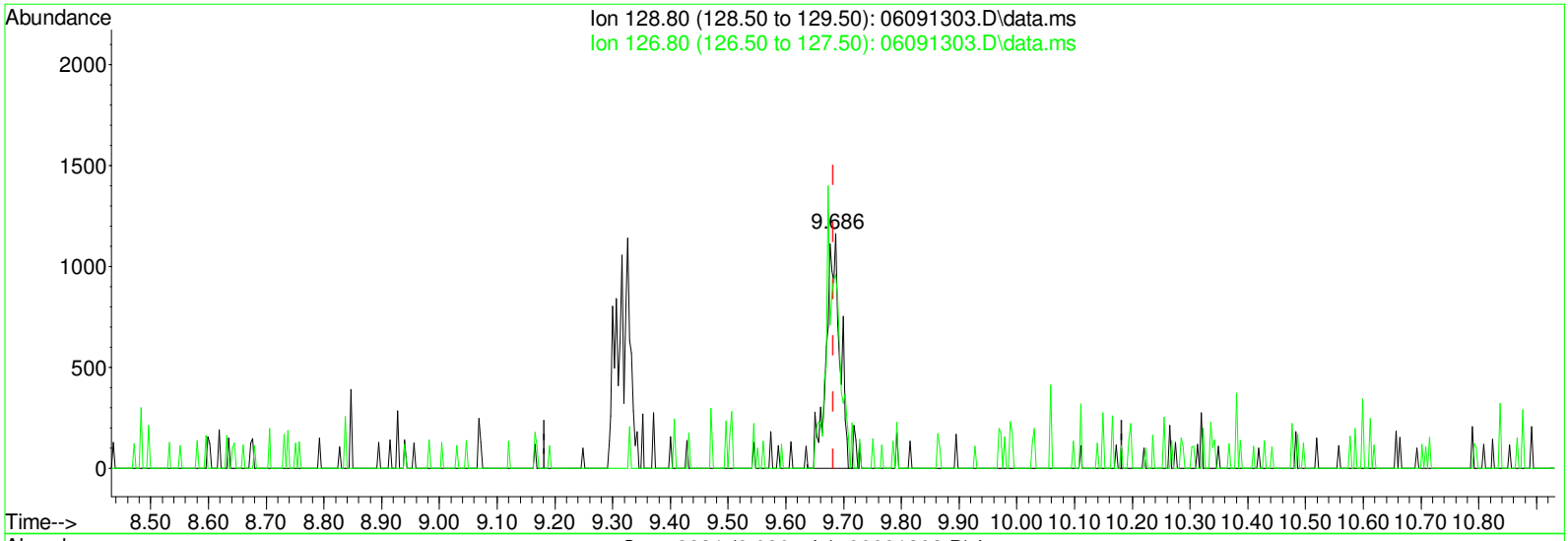
Ion	Exp%	Act%
128.80	100	0.00
126.80	76.30	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

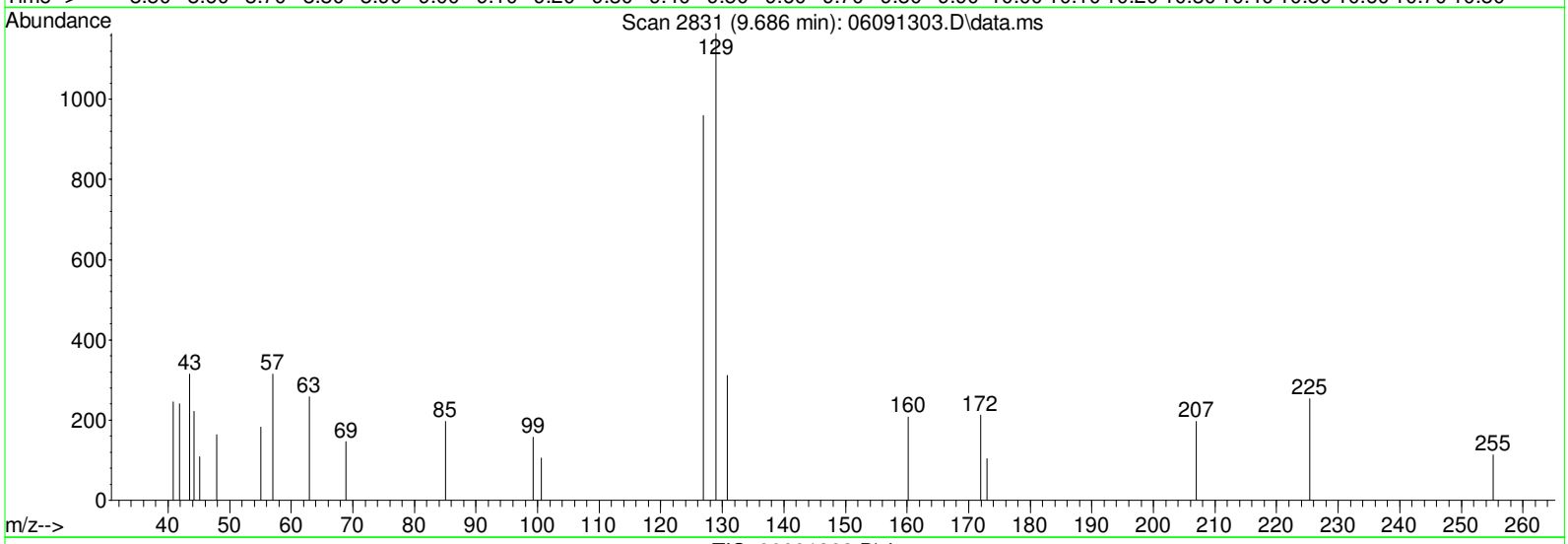
BEFORE
By Alfred at 3:41:42 PM, 7/3/2013

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091303.D
Acq On : 9 Jun 2013 2:01 pm Operator: PS
Sample : ICAL VSTD001 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 2

Quant Time: Jun 10 14:28:23 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Mon Jun 10 14:20:54 2013
Response via : Initial Calibration





TIC: 06091303.D\data.ms

(56) Dibromochloromethane (TM)

9.686min (+0.004) 0.84 ug/L m

response 19400

Ion	Exp%	Act%
128.80	100	100
126.80	76.30	99.86#
0.00	0.00	0.00
0.00	0.00	0.00

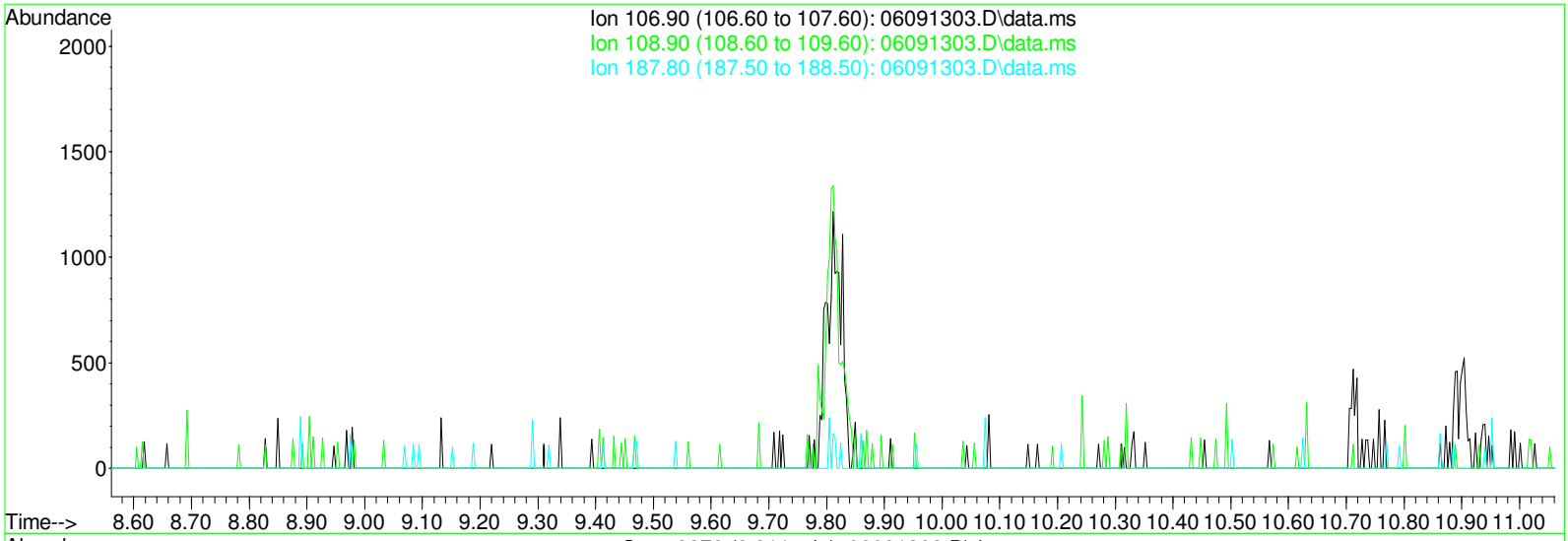
AFTER M1

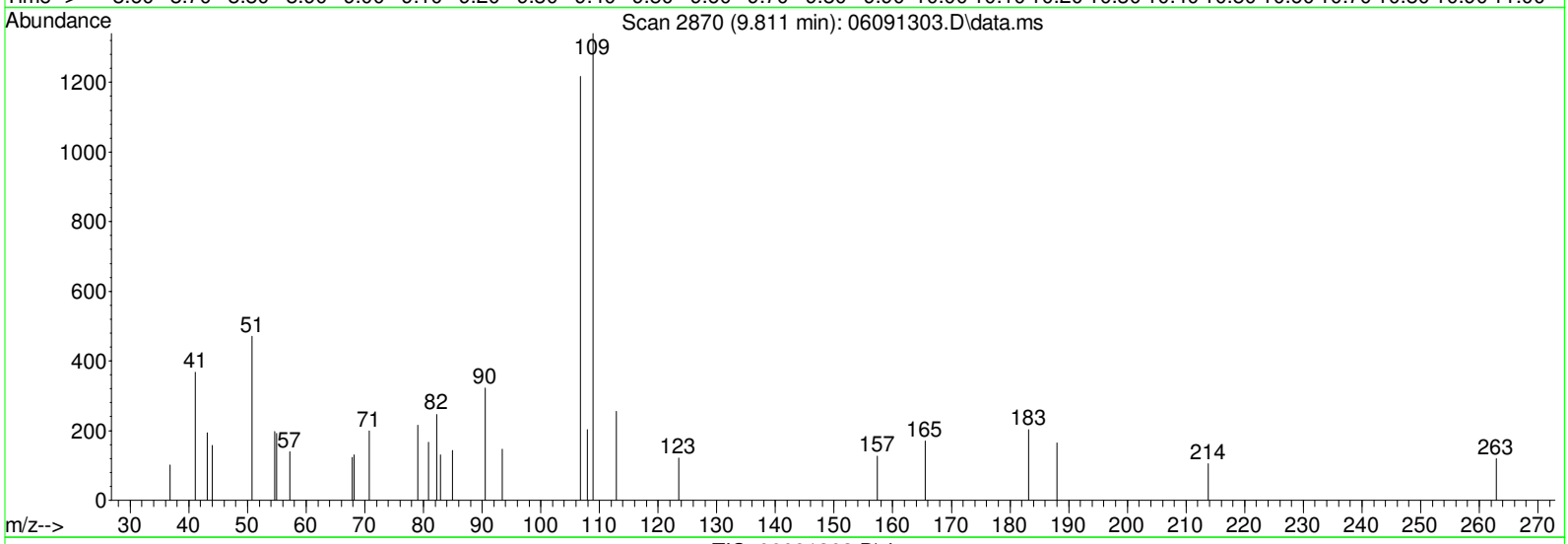
By Alfred at 3:41:48 PM, 7/3/2013

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091303.D
Acq On : 9 Jun 2013 2:01 pm Operator: PS
Sample : ICAL VSTD001 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 2

Quant Time: Jun 10 14:28:23 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Mon Jun 10 14:20:54 2013
Response via : Initial Calibration





TIC: 06091303.D\data.ms

(57) 1,2-Dibromoethane (M)

9.811min (-9.811) 0.00 ug/L

response 0

Ion	Exp%	Act%
106.90	100	0.00
108.90	93.00	0.00#
187.80	3.40	0.00
0.00	0.00	0.00

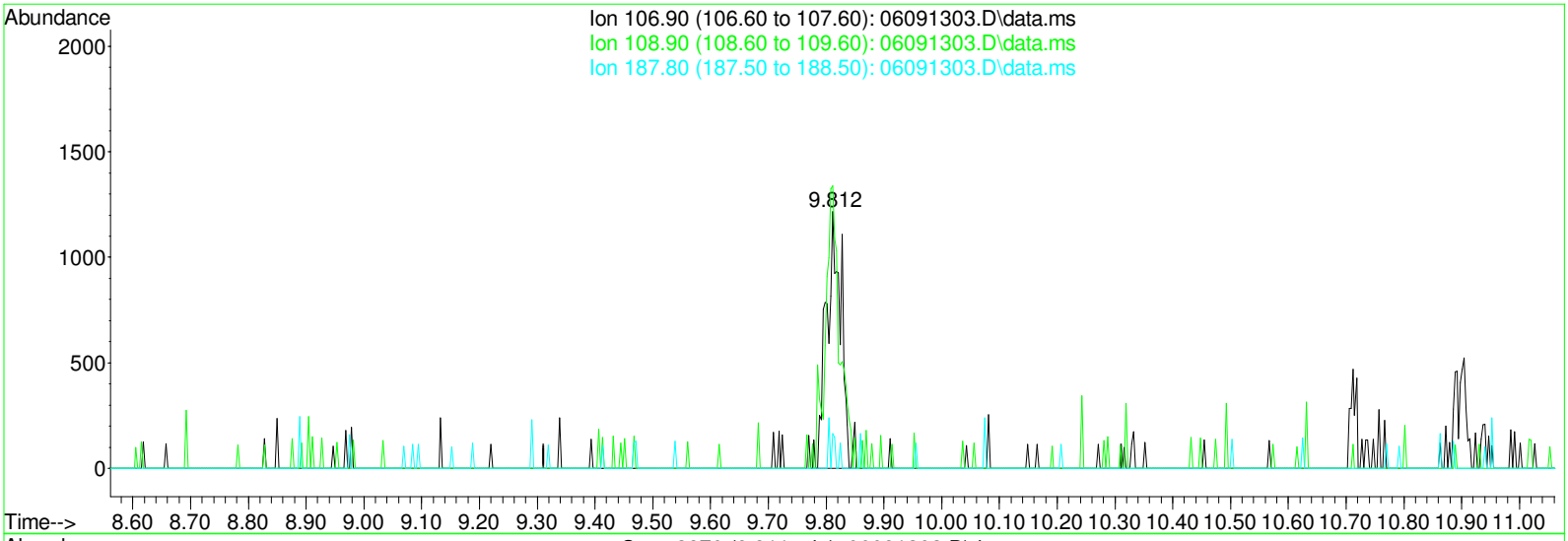
BEFORE

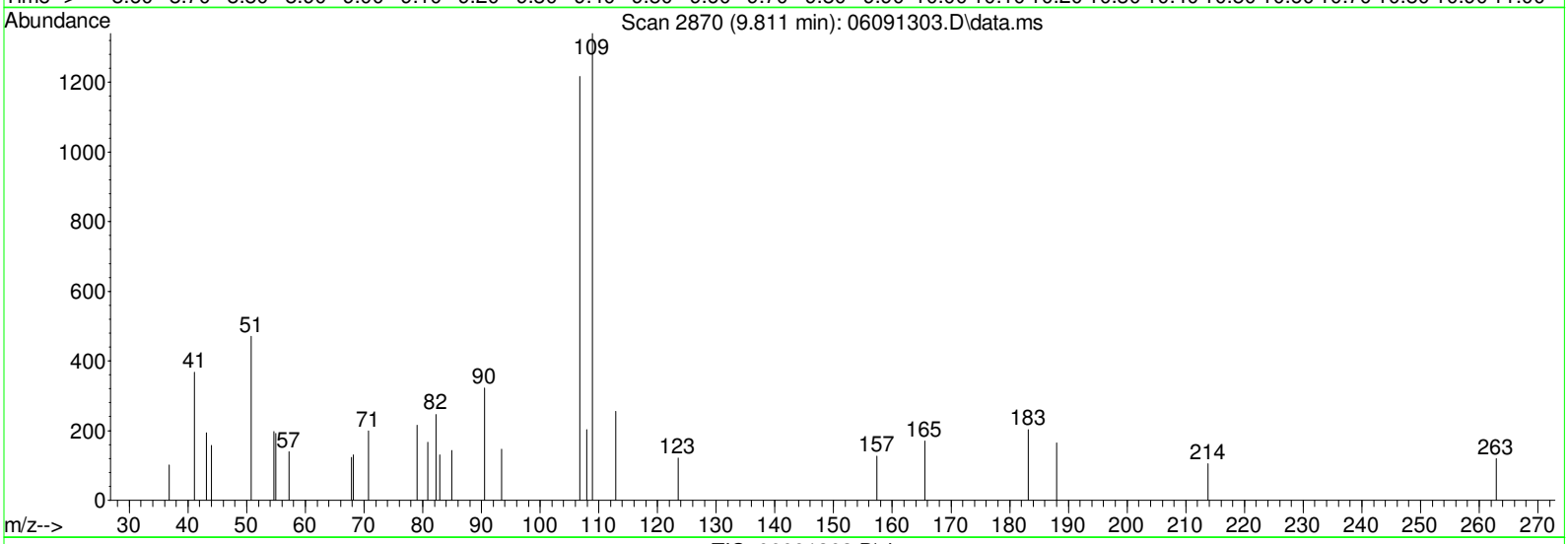
By Alfred at 3:41:54 PM, 7/3/2013

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091303.D
Acq On : 9 Jun 2013 2:01 pm Operator: PS
Sample : ICAL VSTD001 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 2

Quant Time: Jun 10 14:28:23 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Mon Jun 10 14:20:54 2013
Response via : Initial Calibration





TIC: 06091303.D\data.ms

(57) 1,2-Dibromoethane (M)

9.811min (-0.000) 0.92 ug/L m

response 21807

Ion	Exp%	Act%
106.90	100	100
108.90	93.00	0.00#
187.80	3.40	0.00
0.00	0.00	0.00

AFTER M1

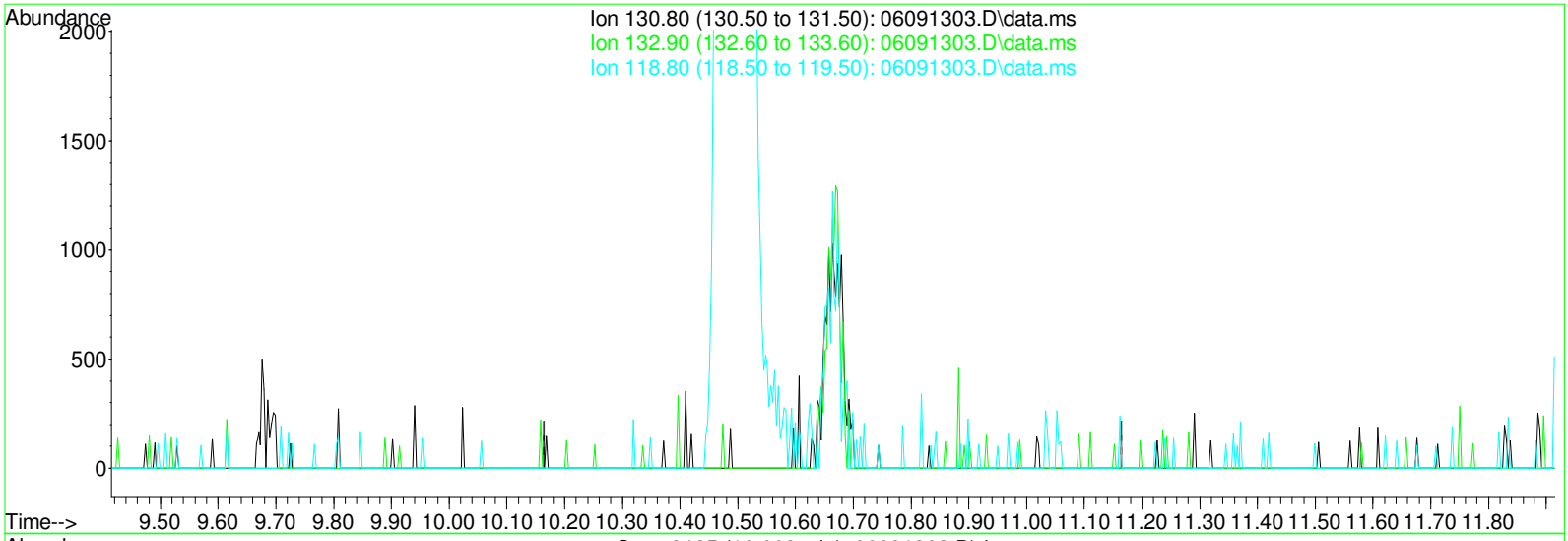
By Alfred at 3:42:00 PM, 7/3/2013

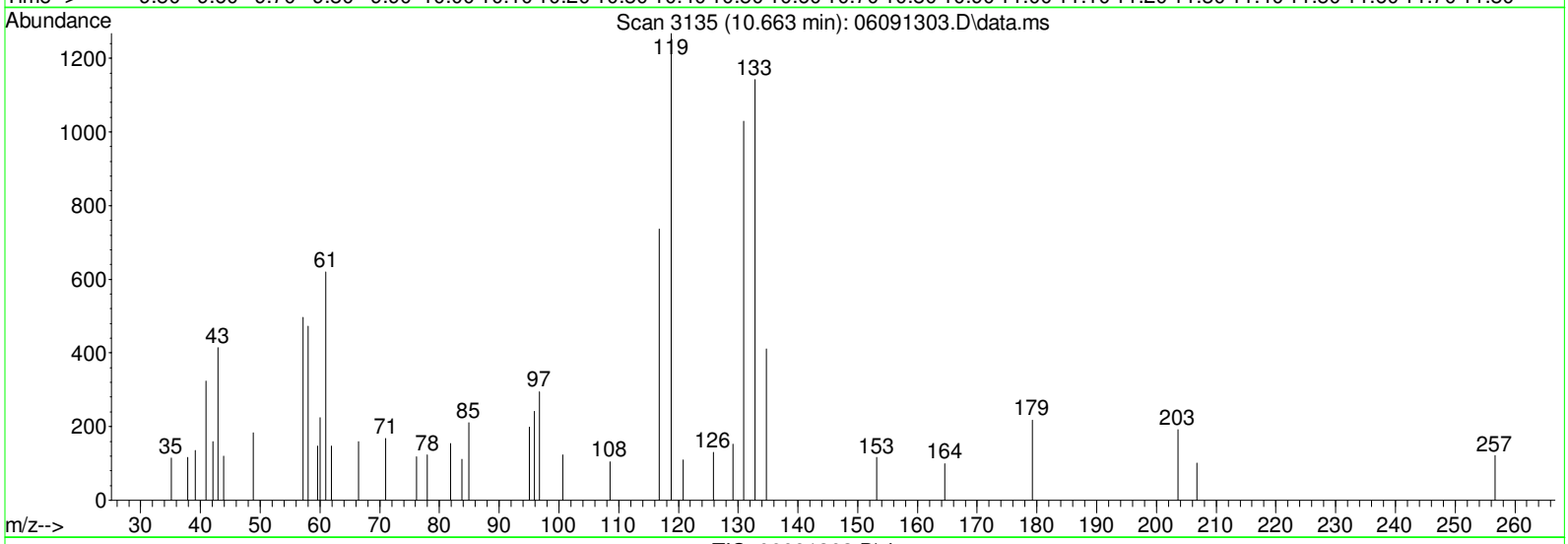
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091303.D
Acq On : 9 Jun 2013 2:01 pm
Sample : ICAL VSTD001
Misc : VOC_W+
ALS Vial : 2

Operator: PS
Inst : VOA7
Multiplr: 1.00

Quant Time: Jun 10 14:28:23 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Mon Jun 10 14:20:54 2013
Response via : Initial Calibration





TIC: 06091303.D\data.ms

(60) 1,1,1,2-Tetrachloroethane (M)

10.665min (-10.665) 0.00 ug/L

response 0

Ion	Exp%	Act%
130.80	100	0.00
132.90	93.10	0.00#
118.80	61.00	0.00#
0.00	0.00	0.00

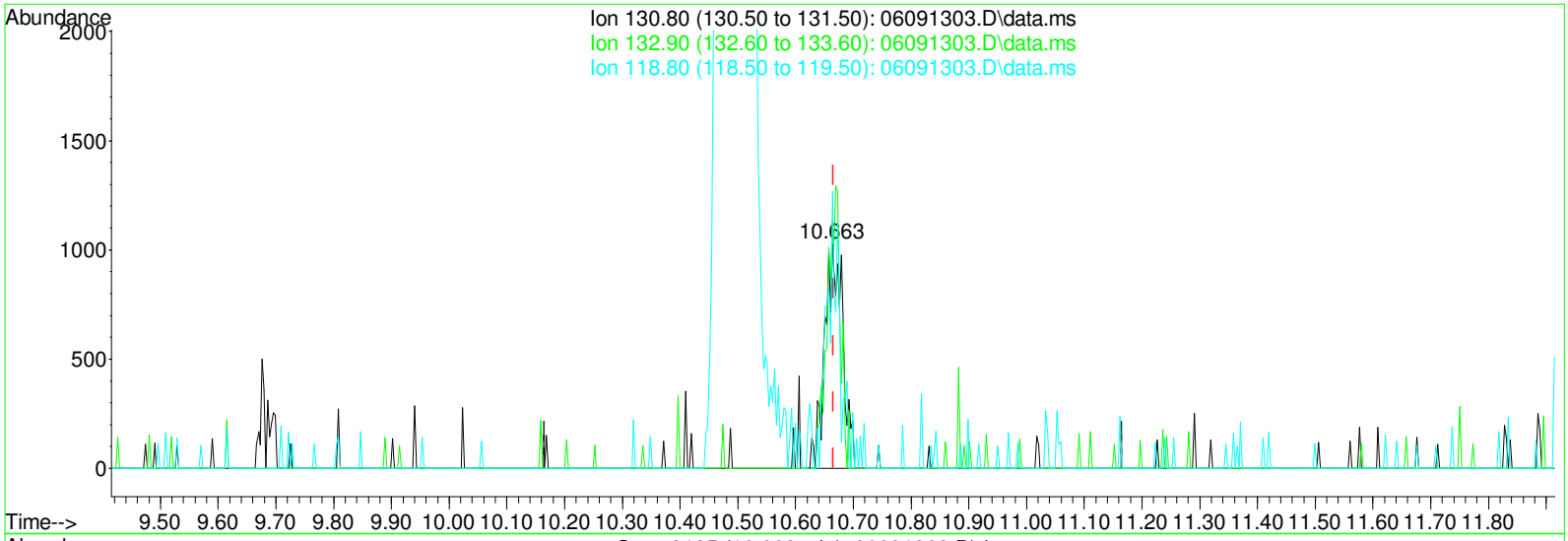
BEFORE
By Alfred at 3:42:05 PM, 7/3/2013

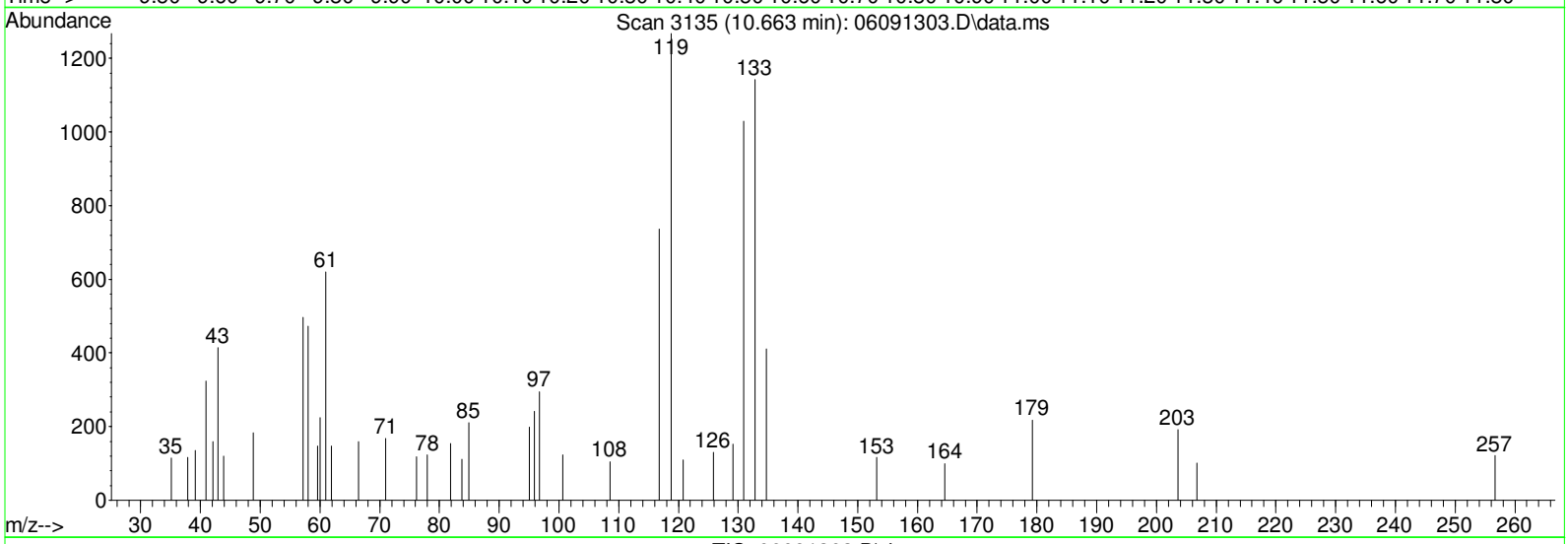
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091303.D
Acq On : 9 Jun 2013 2:01 pm
Sample : ICAL VSTD001
Misc : VOC_W+
ALS Vial : 2

Operator: PS
Inst : VOA7
Multiplr: 1.00

Quant Time: Jun 10 14:28:23 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Mon Jun 10 14:20:54 2013
Response via : Initial Calibration





TIC: 06091303.D\data.ms

(60) 1,1,1,2-Tetrachloroethane (M)

10.663min (-0.002) 1.04 ug/L m

response 22661

Ion	Exp%	Act%
130.80	100	100
132.90	93.10	93.17
118.80	61.00	84.86#
0.00	0.00	0.00

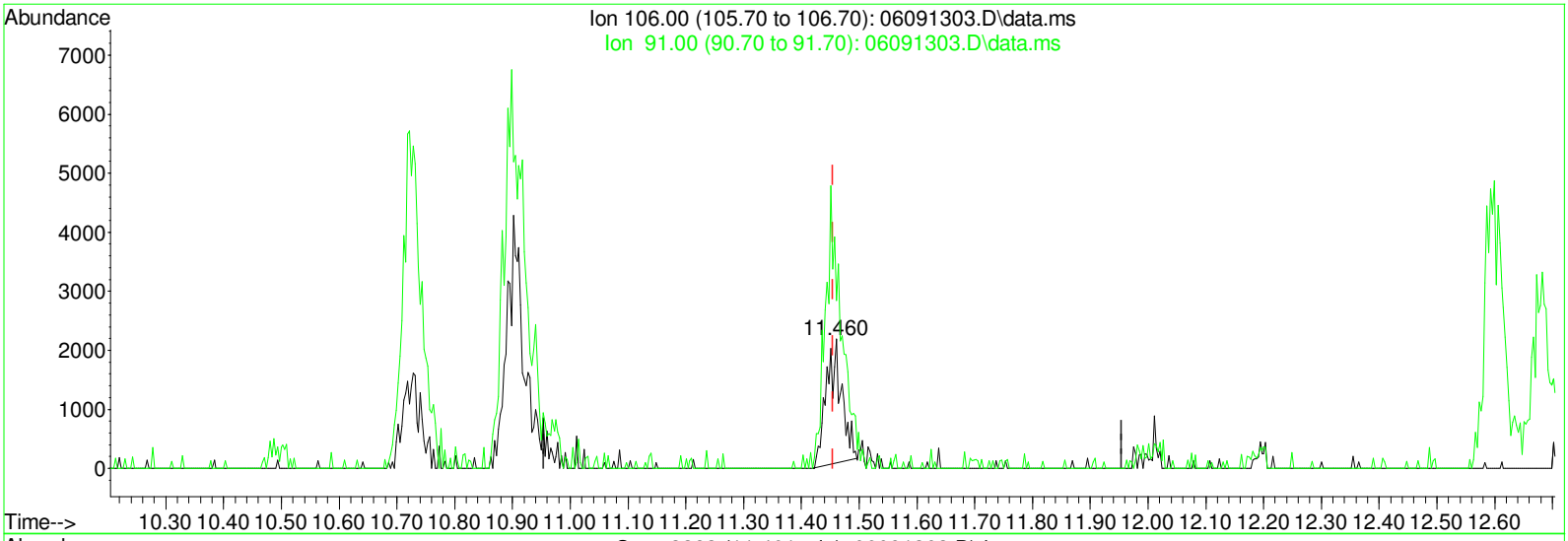
AFTER M1
By Alfred at 3:42:11 PM, 7/3/2013

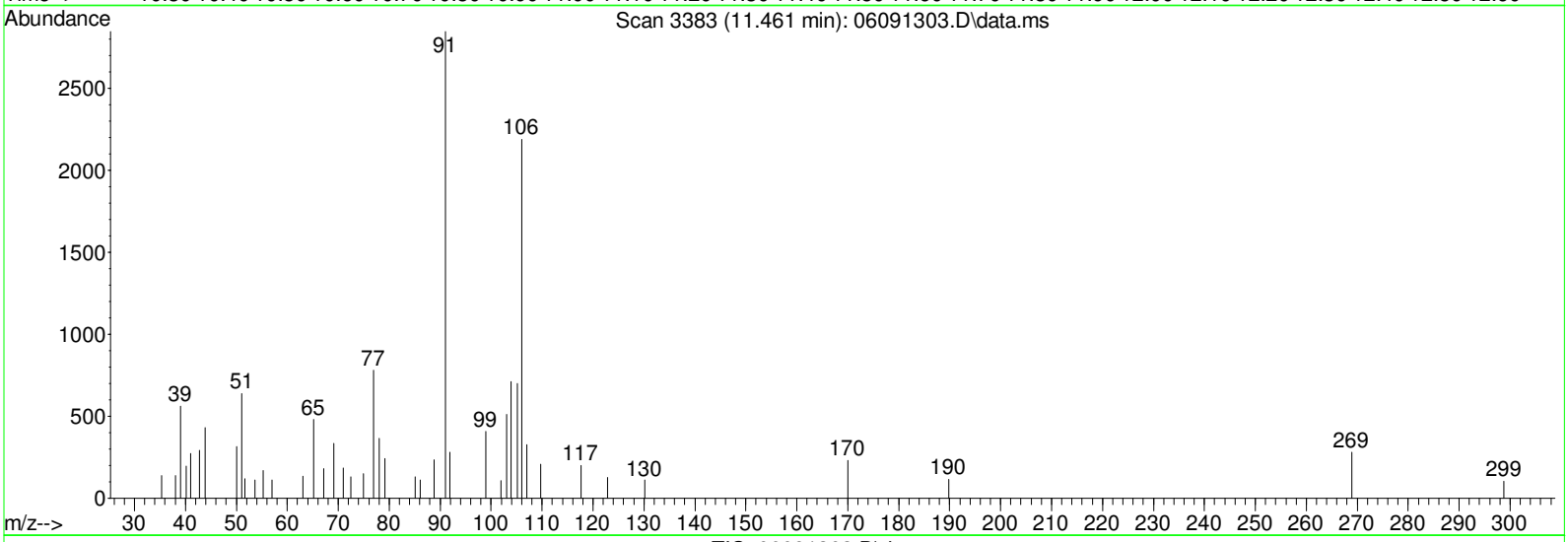
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091303.D
Acq On : 9 Jun 2013 2:01 pm
Sample : ICAL VSTD001
Misc : VOC_W+
ALS Vial : 2

Operator: PS
Inst : VOA7
Multiplr: 1.00

Quant Time: Jun 10 14:28:23 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Mon Jun 10 14:20:54 2013
Response via : Initial Calibration





TIC: 06091303.D\data.ms

(62) Xylene (2) (TM, L1)

11.461min (+0.007) 0.93 ug/L

response 38871

Ion	Exp%	Act%
106.00	100	100
91.00	221.60	245.38
0.00	0.00	0.00
0.00	0.00	0.00

BEFORE

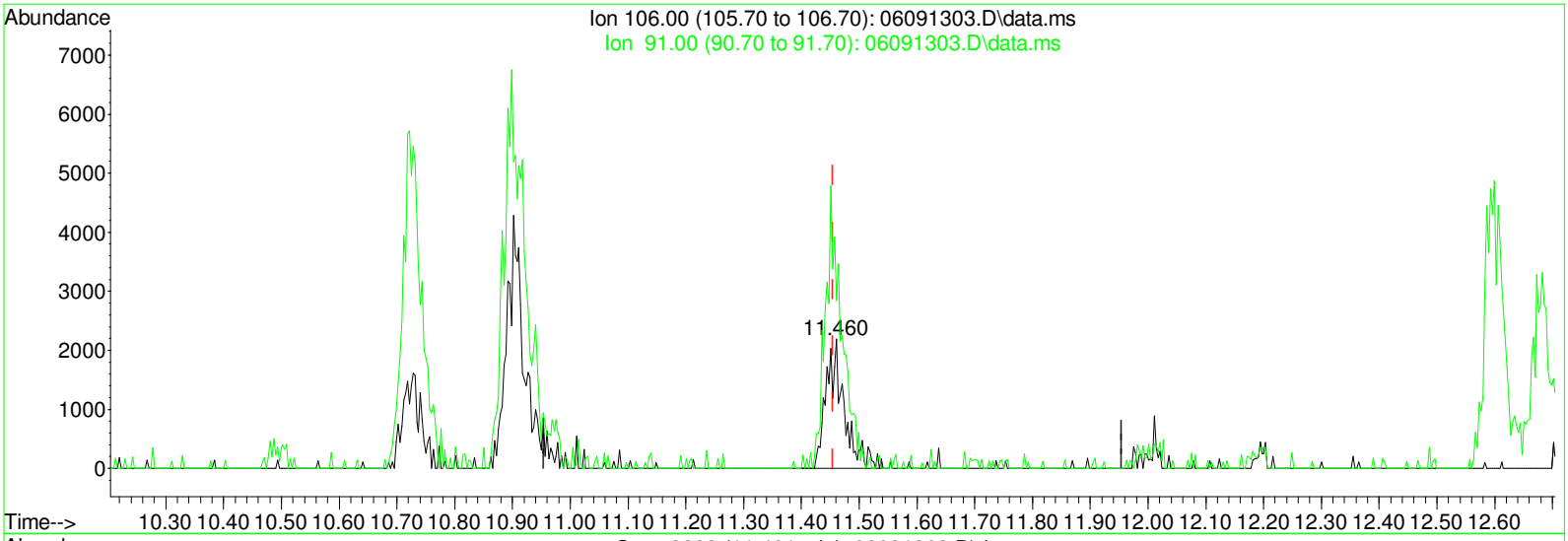
By Alfred at 3:42:18 PM, 7/3/2013

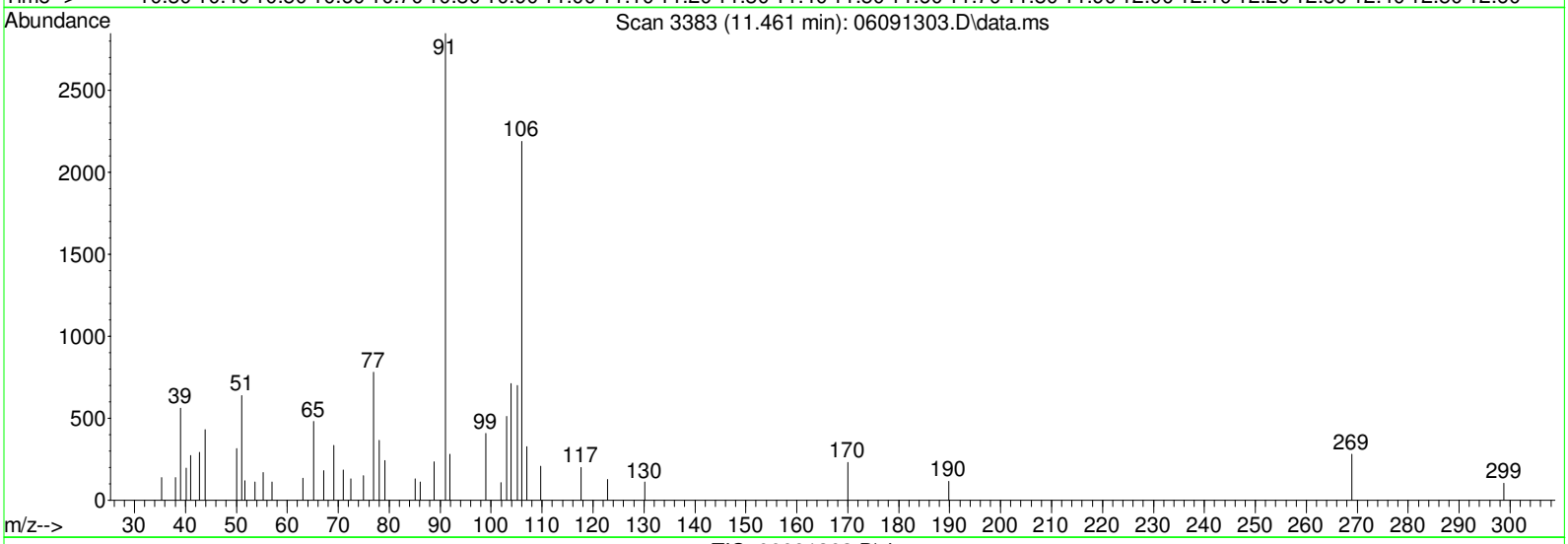
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091303.D
Acq On : 9 Jun 2013 2:01 pm
Sample : ICAL VSTD001
Misc : VOC_W+
ALS Vial : 2

Operator: PS
Inst : VOA7
Multiplr: 1.00

Quant Time: Jun 10 14:28:23 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Mon Jun 10 14:20:54 2013
Response via : Initial Calibration





TIC: 06091303.D\data.ms

AFTER M3
By Alfred at 3:42:26 PM, 7/3/2013

(62) Xylene (2) (TM, L1)

11.461min (+0.007) 1.15 ug/L m

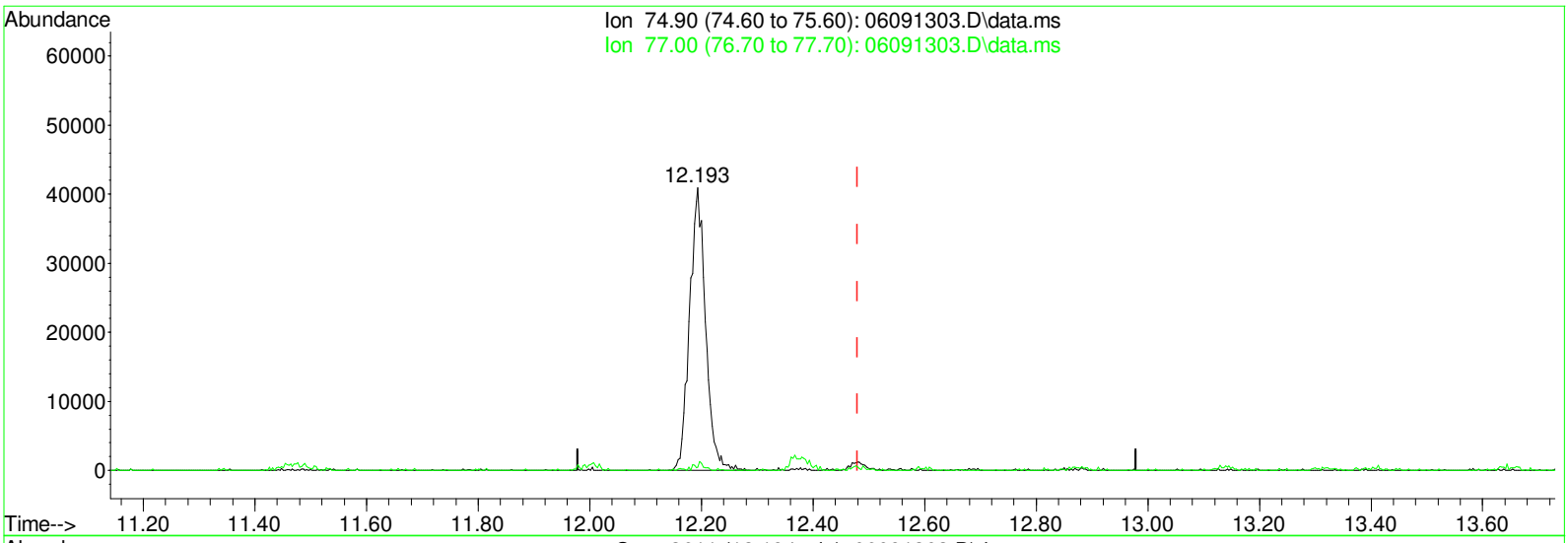
response 47921

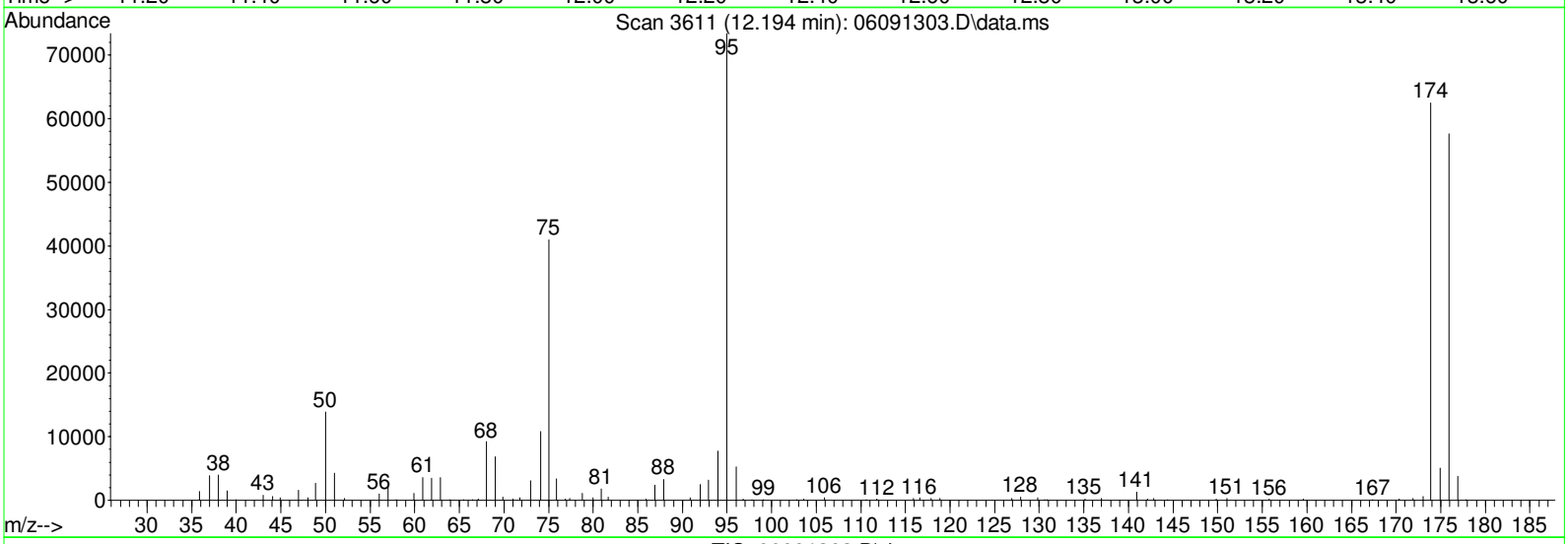
Ion	Exp%	Act%
106.00	100	100
91.00	221.60	199.04
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091303.D
Acq On : 9 Jun 2013 2:01 pm Operator: PS
Sample : ICAL VSTD001 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 2

Quant Time: Jun 10 14:28:23 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Mon Jun 10 14:20:54 2013
Response via : Initial Calibration





TIC: 06091303.D\data.ms

(70) 1,2,3-Trichloropropane (M)

12.194min (-0.285) 6.58 ug/L

response 816564

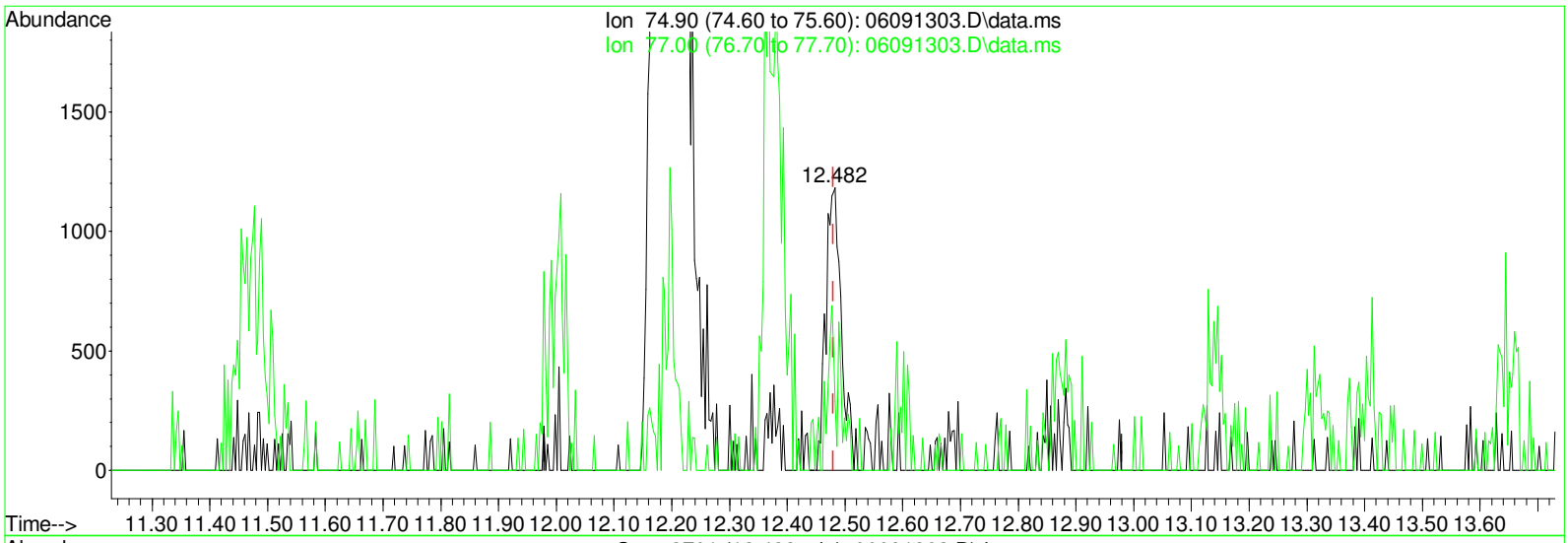
Ion	Exp%	Act%
74.90	100	100
77.00	32.60	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

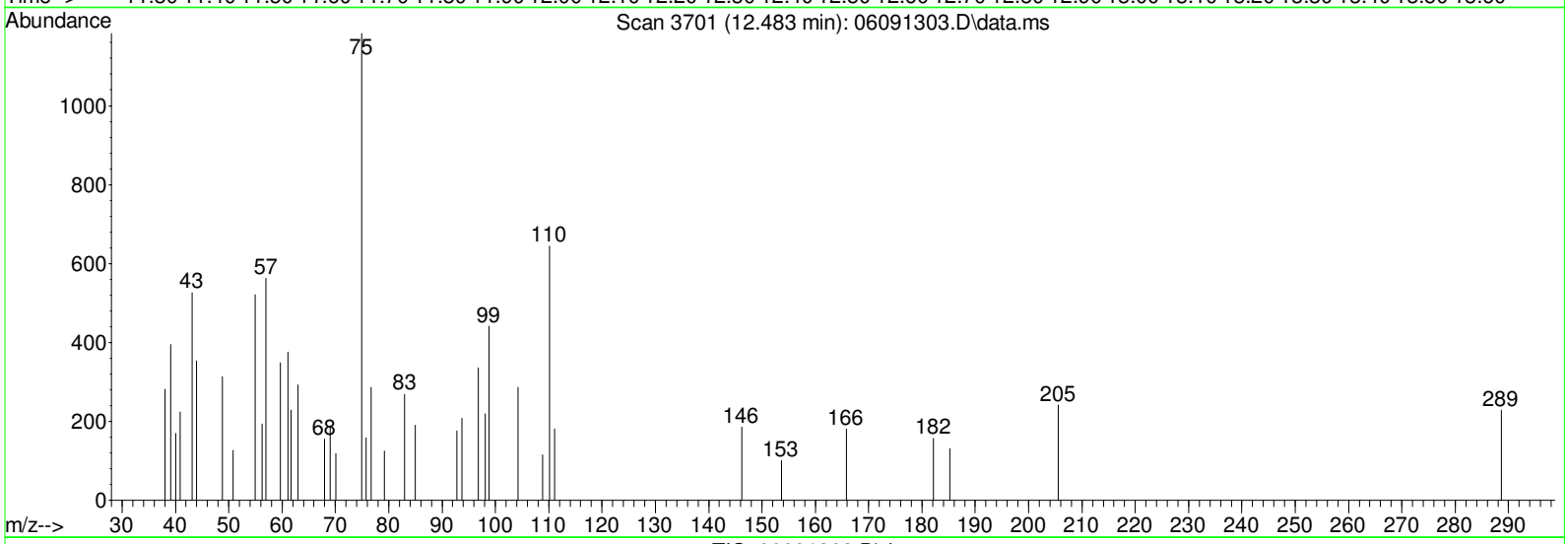
BEFORE
By Alfred at 3:42:35 PM, 7/3/2013

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091303.D
Acq On : 9 Jun 2013 2:01 pm Operator: PS
Sample : ICAL VSTD001 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 2

Quant Time: Jun 10 14:28:23 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Mon Jun 10 14:20:54 2013
Response via : Initial Calibration





TIC: 06091303.D\data.ms

(70) 1,2,3-Trichloropropane (M)

12.483min (+0.004) 0.18 ug/L m

response 22788

Ion	Exp%	Act%
74.90	100	100
77.00	32.60	44.54
0.00	0.00	0.00
0.00	0.00	0.00

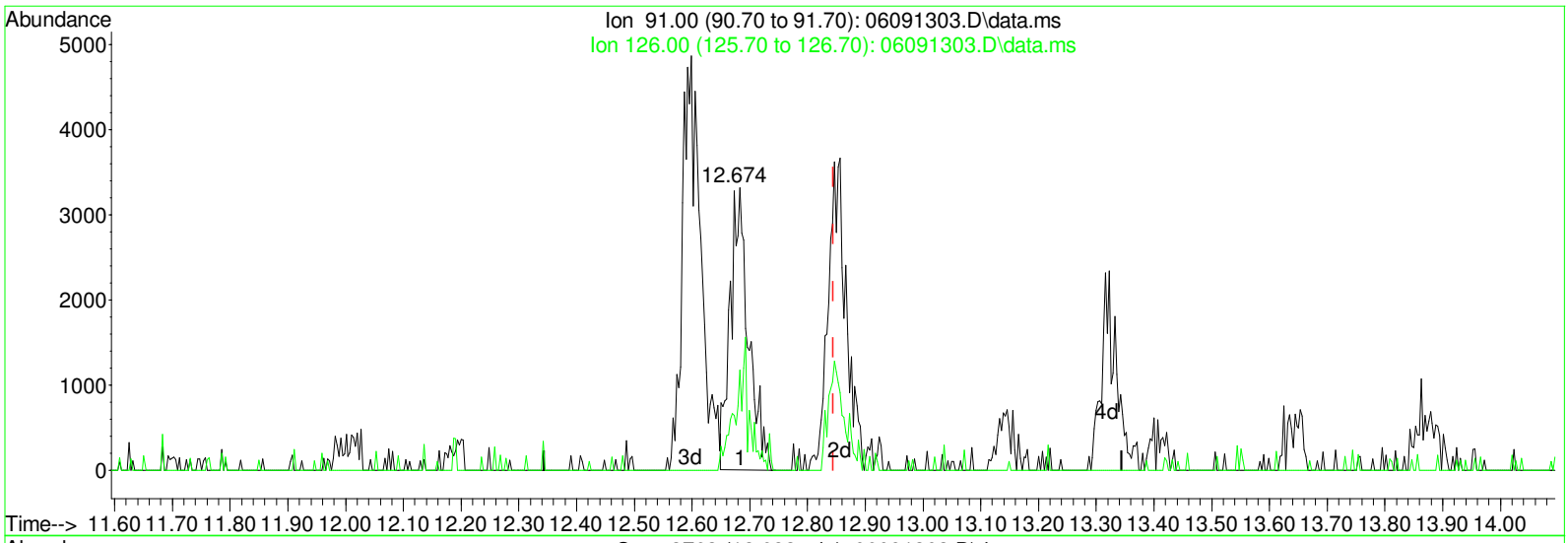
AFTER M2

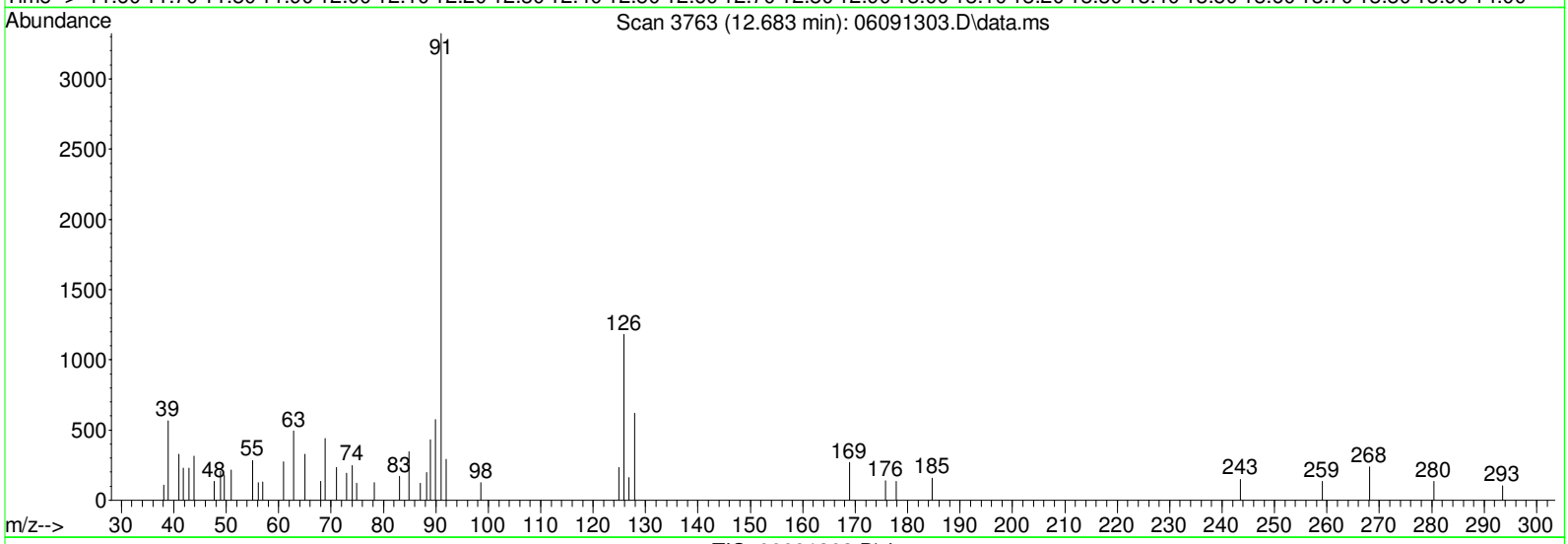
By Alfred at 3:42:43 PM, 7/3/2013

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091303.D
Acq On : 9 Jun 2013 2:01 pm Operator: PS
Sample : ICAL VSTD001 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 2

Quant Time: Jun 10 14:28:23 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Mon Jun 10 14:20:54 2013
Response via : Initial Calibration





TIC: 06091303.D\data.ms

(75) 4-Chlorotoluene (M)

12.684min (-0.160) 0.94 ug/L

response 73106

Ion	Exp%	Act%
91.00	100	100
126.00	28.60	35.11
0.00	0.00	0.00
0.00	0.00	0.00

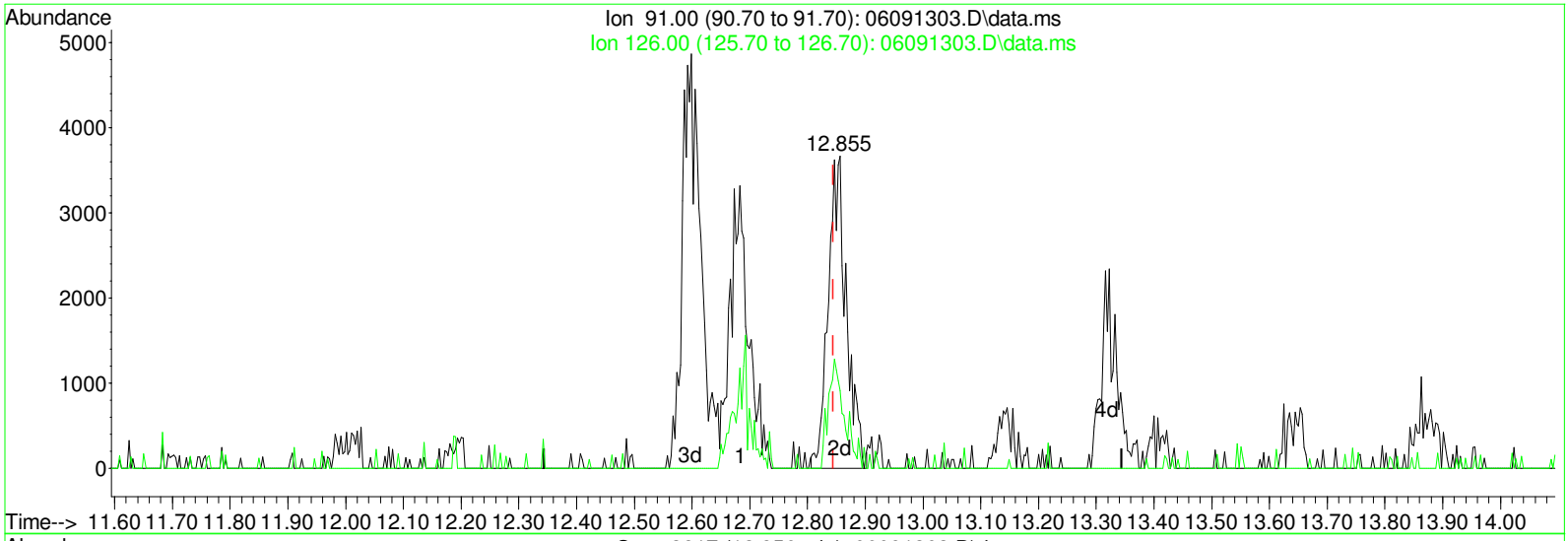
BEFORE

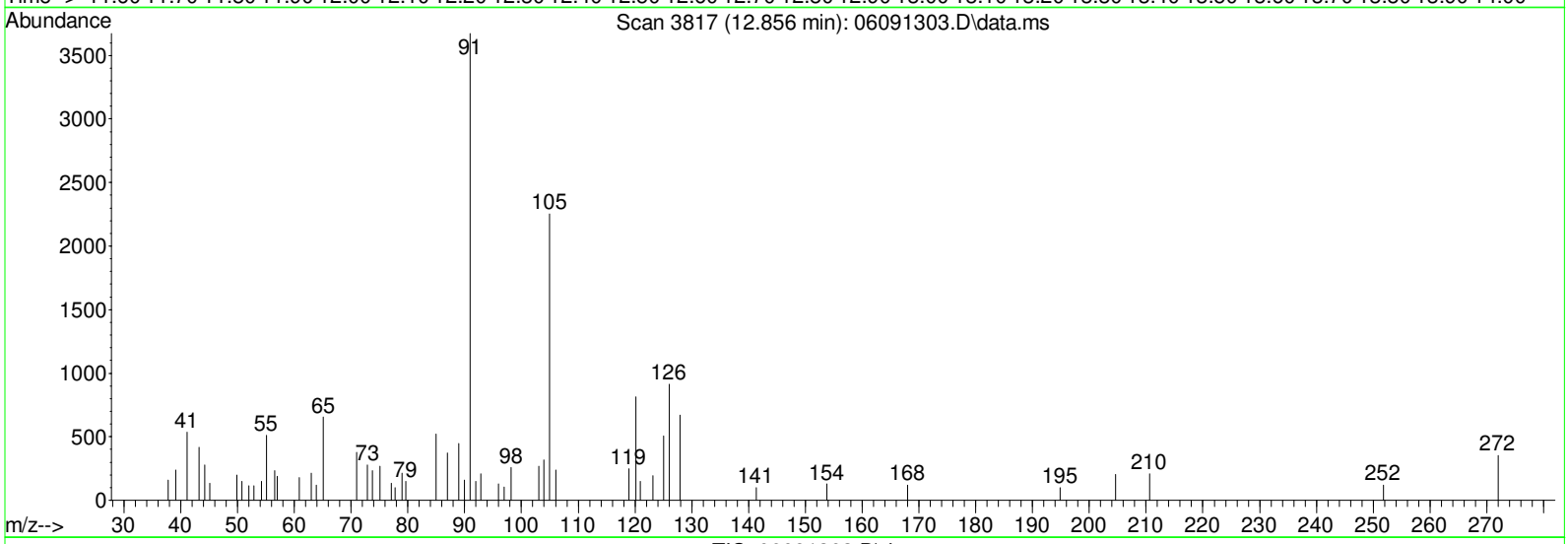
By Alfred at 3:43:17 PM, 7/3/2013

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091303.D
Acq On : 9 Jun 2013 2:01 pm Operator: PS
Sample : ICAL VSTD001 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 2

Quant Time: Jun 10 14:28:23 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Mon Jun 10 14:20:54 2013
Response via : Initial Calibration





TIC: 06091303.D\data.ms

(75) 4-Chlorotoluene (M)

12.856min (+0.012) 1.03 ug/L m

response 79463

Ion	Exp%	Act%
91.00	100	100
126.00	28.60	32.30
0.00	0.00	0.00
0.00	0.00	0.00

AFTER M2

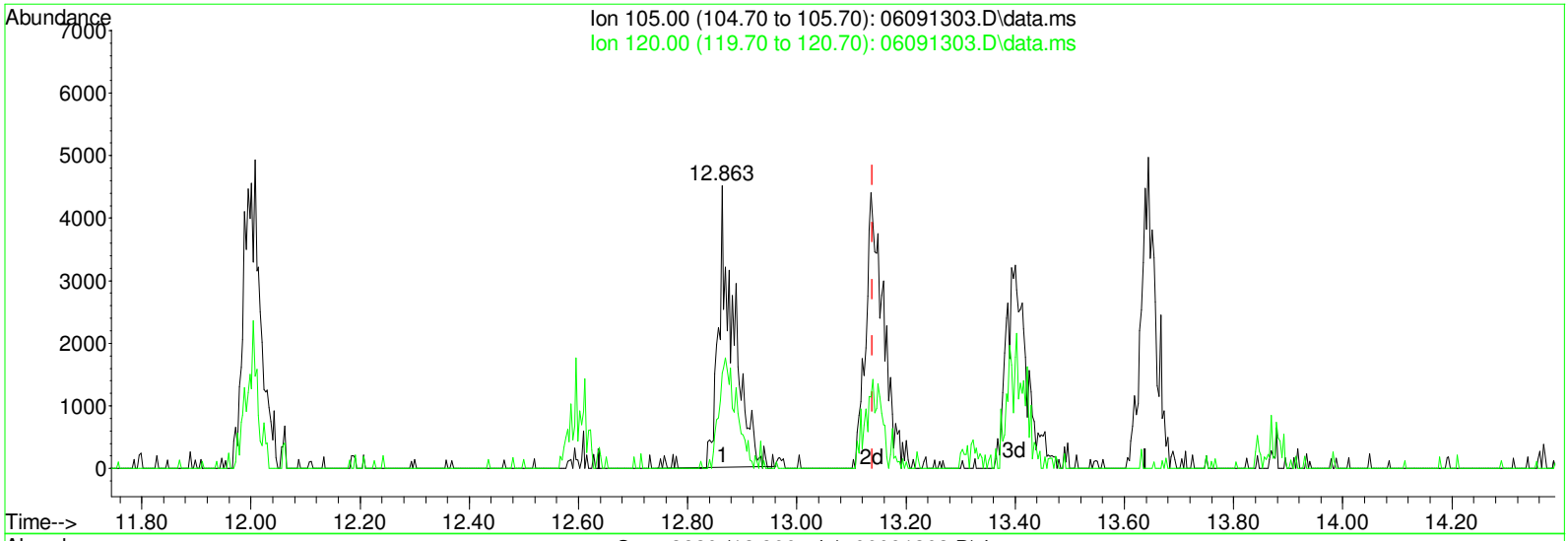
By Alfred at 3:43:25 PM, 7/3/2013

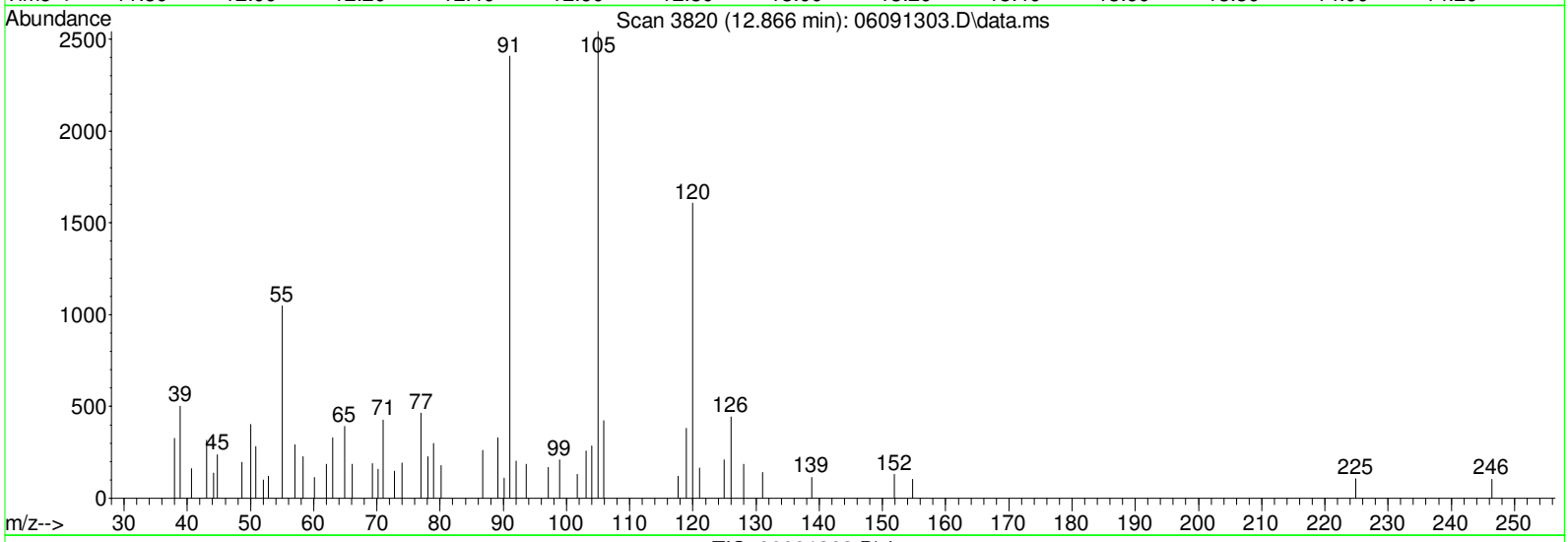
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091303.D
Acq On : 9 Jun 2013 2:01 pm
Sample : ICAL VSTD001
Misc : VOC_W+
ALS Vial : 2

Operator: PS
Inst : VOA7
Multiplr: 1.00

Quant Time: Jun 10 14:28:23 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Mon Jun 10 14:20:54 2013
Response via : Initial Calibration





TIC: 06091303.D\data.ms

(77) 1-Ethyl-2-methylbenzene (M)

12.865min (-0.274) 0.92 ug/L

response 88756

Ion	Exp%	Act%
105.00	100	100
120.00	30.30	46.10
0.00	0.00	0.00
0.00	0.00	0.00

BEFORE

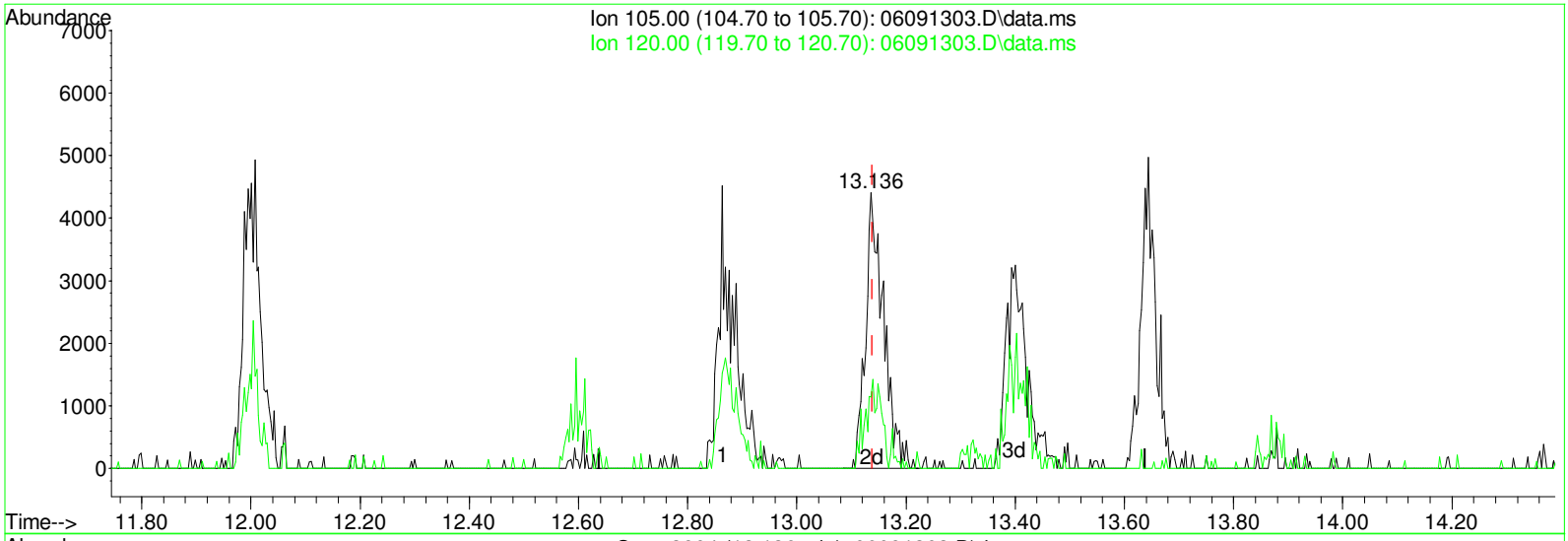
By Alfred at 3:43:30 PM, 7/3/2013

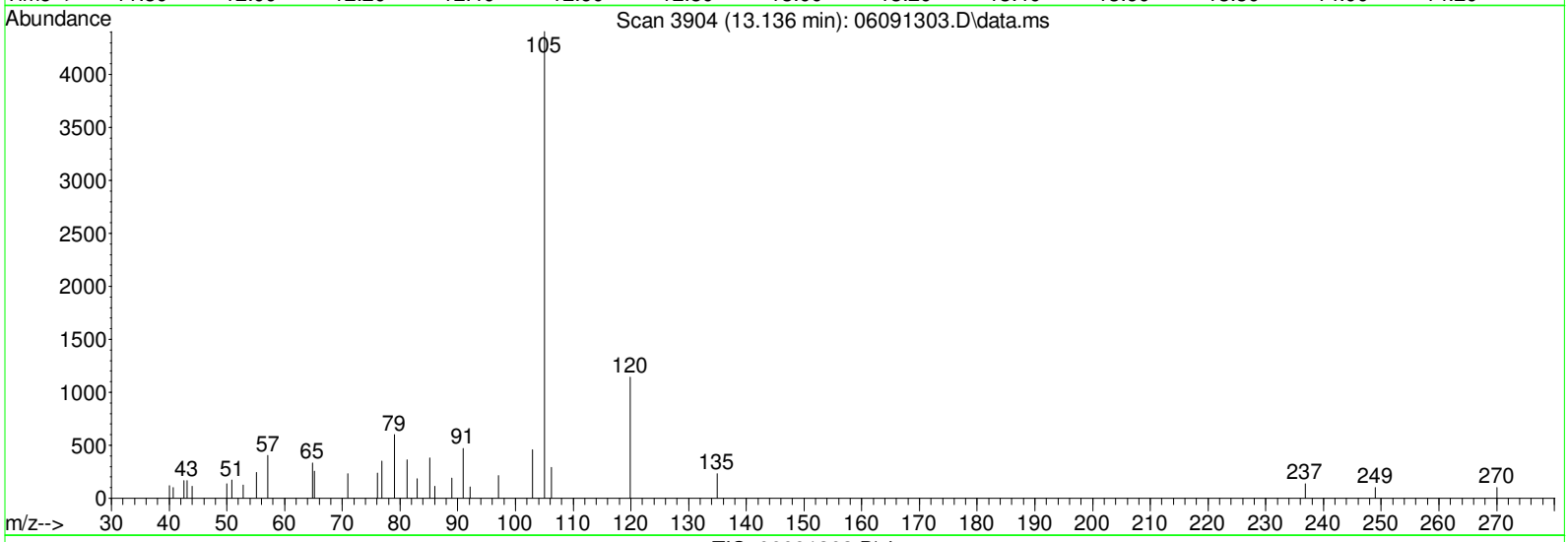
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091303.D
Acq On : 9 Jun 2013 2:01 pm
Sample : ICAL VSTD001
Misc : VOC_W+
ALS Vial : 2

Operator: PS
Inst : VOA7
Multiplr: 1.00

Quant Time: Jun 10 14:28:23 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Mon Jun 10 14:20:54 2013
Response via : Initial Calibration





TIC: 06091303.D\data.ms

AFTER M2
By Alfred at 3:43:46 PM, 7/3/2013

(77) 1-Ethyl-2-methylbenzene (M)

13.136min (-0.003) 1.05 ug/L m

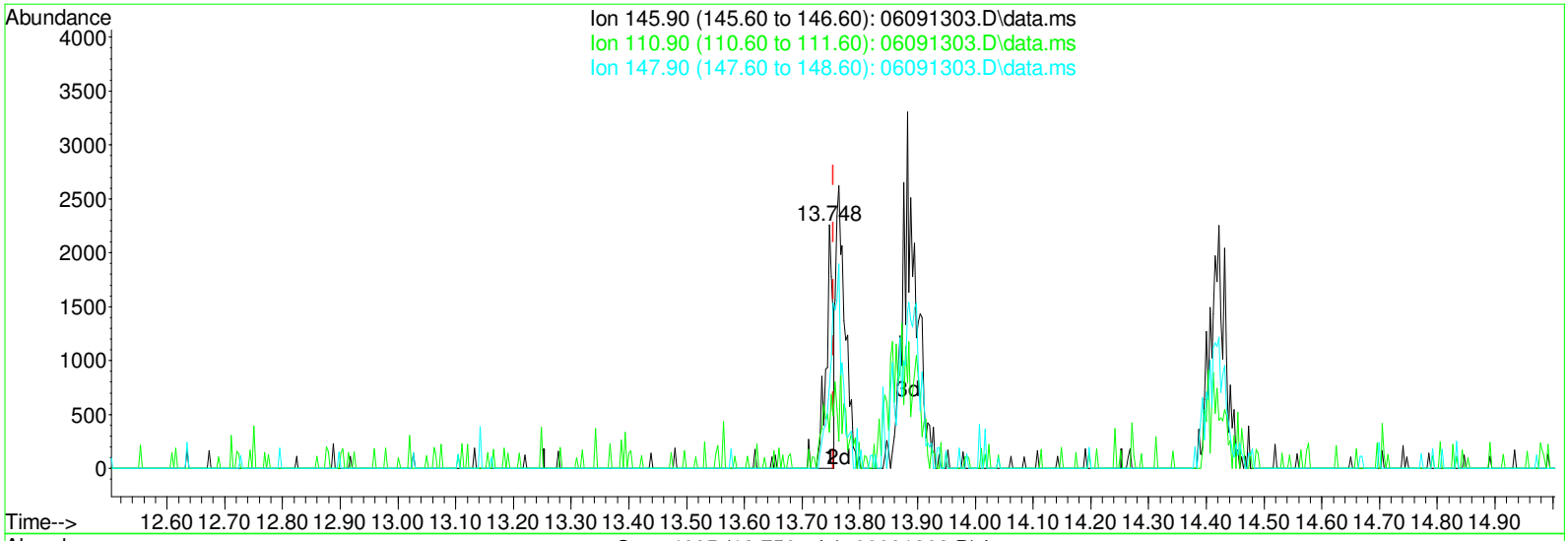
response 100992

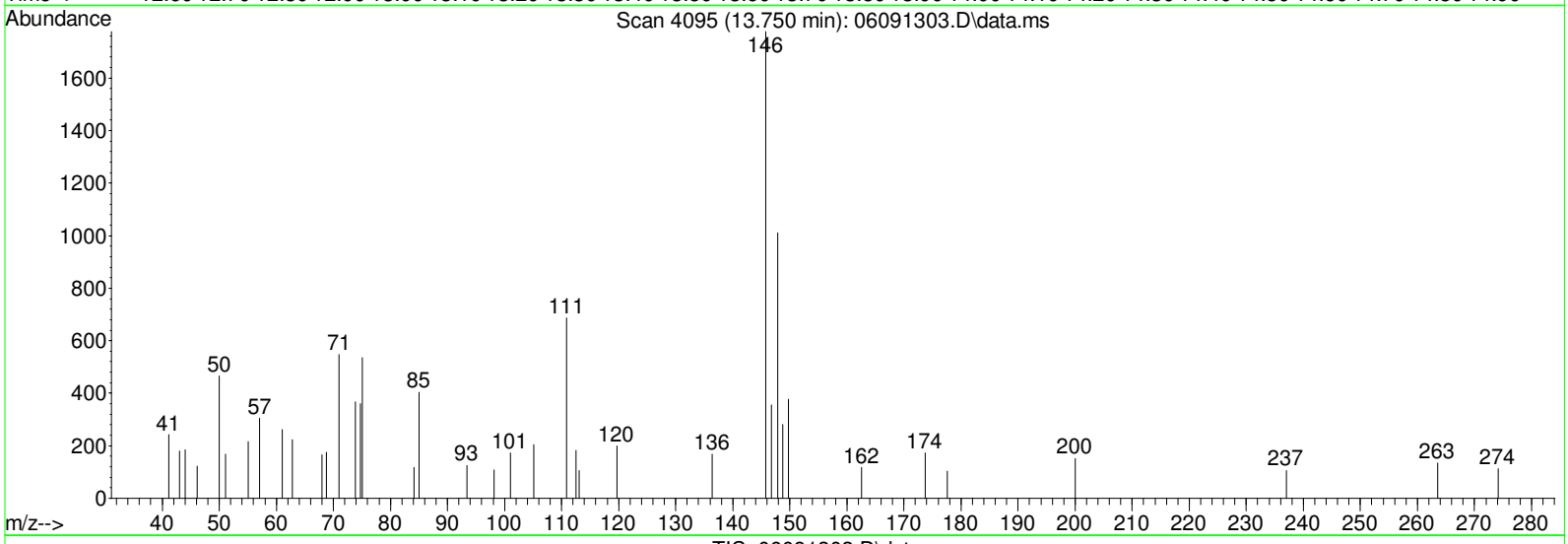
Ion	Exp%	Act%
105.00	100	100
120.00	30.30	40.52
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091303.D
Acq On : 9 Jun 2013 2:01 pm
Operator: PS
Sample : ICAL VSTD001
Inst : VOA7
Misc : VOC_W+
Multiplr: 1.00
ALS Vial : 2

Quant Time: Jun 10 14:28:23 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Mon Jun 10 14:20:54 2013
Response via : Initial Calibration





TIC: 06091303.D\data.ms

BEFORE
By Alfred at 3:43:54 PM, 7/3/2013

(81) 1,3-Dichlorobenzene (M)

13.749min (-0.005) 0.39 ug/L

response 16403

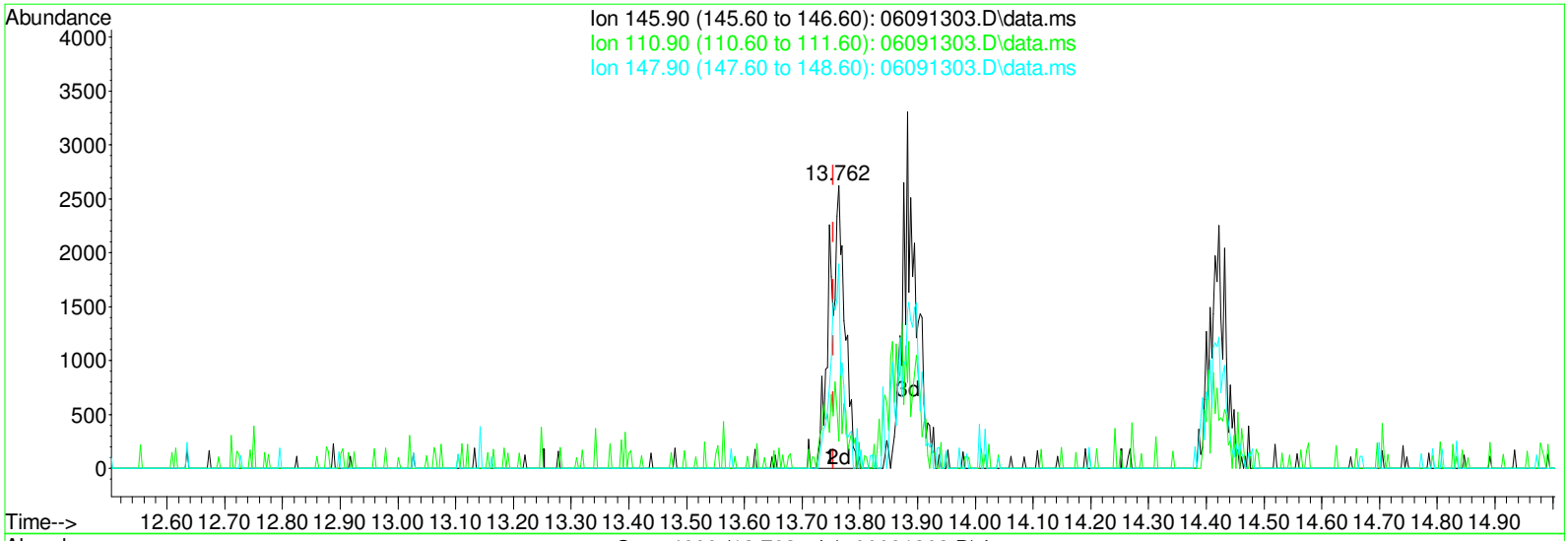
Ion	Exp%	Act%
145.90	100	100
110.90	41.30	0.00#
147.90	62.60	0.00#
0.00	0.00	0.00

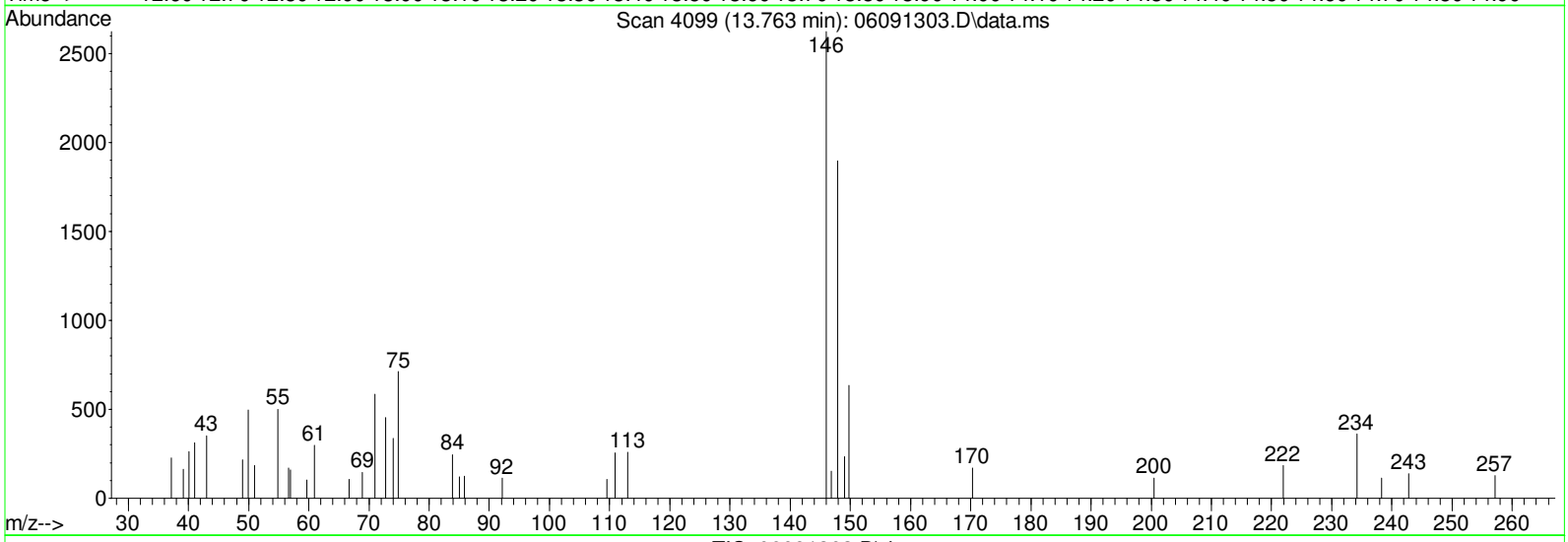
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091303.D
Acq On : 9 Jun 2013 2:01 pm
Sample : ICAL VSTD001
Misc : VOC_W+
ALS Vial : 2

Operator: PS
Inst : VOA7
Multiplr: 1.00

Quant Time: Jun 10 14:28:23 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Mon Jun 10 14:20:54 2013
Response via : Initial Calibration





TIC: 06091303.D\data.ms

(81) 1,3-Dichlorobenzene (M)

13.763min (+0.009) 1.13 ug/L m

response 48209

Ion	Exp%	Act%
145.90	100	100
110.90	41.30	0.00#
147.90	62.60	0.00#
0.00	0.00	0.00

AFTER M3

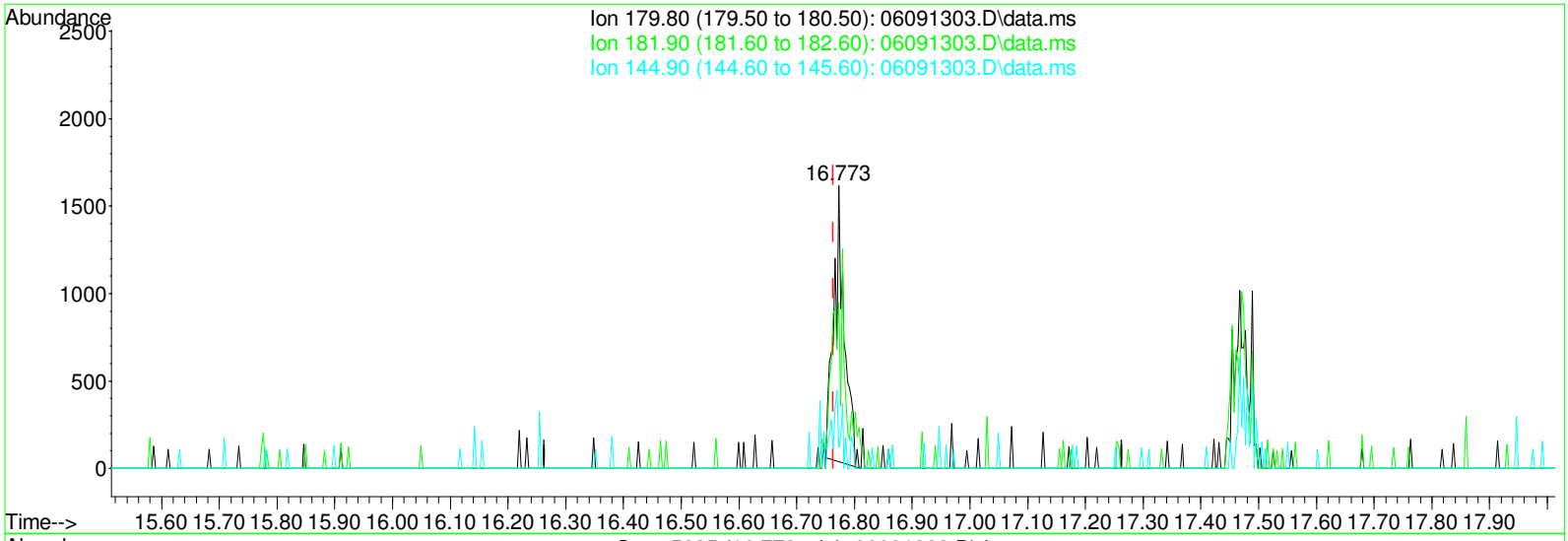
By Alfred at 3:43:58 PM, 7/3/2013

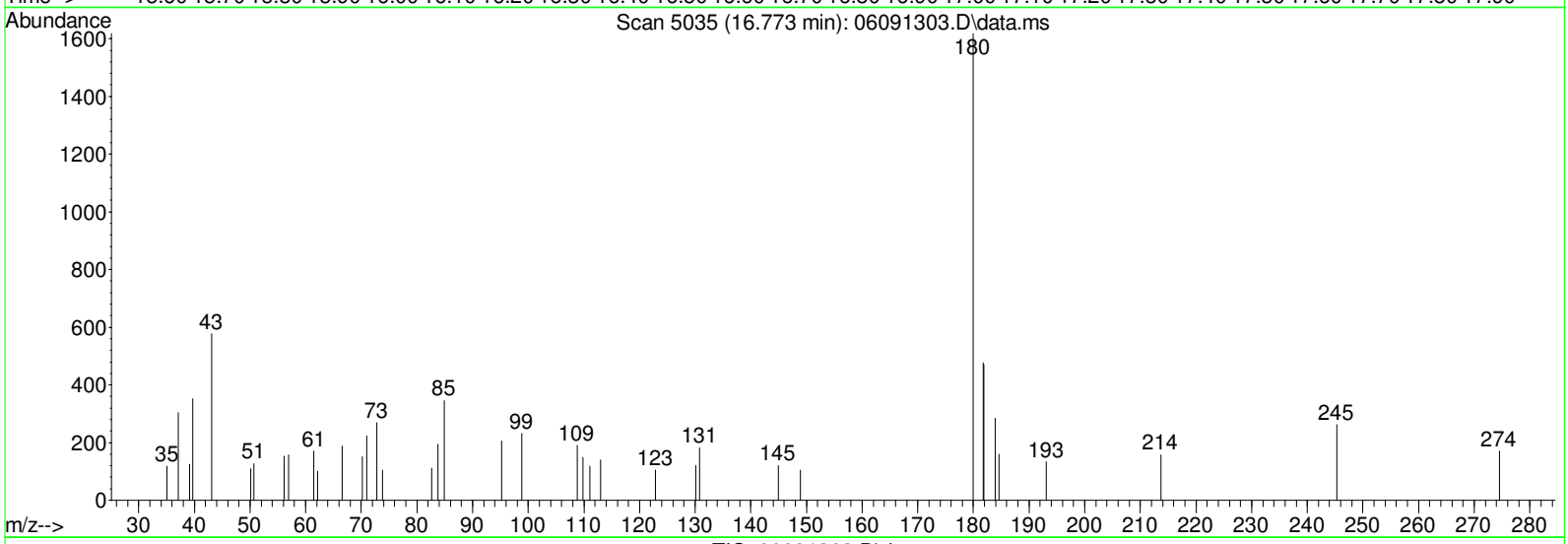
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091303.D
Acq On : 9 Jun 2013 2:01 pm
Sample : ICAL VSTD001
Misc : VOC_W+
ALS Vial : 2

Operator: PS
Inst : VOA7
Multiplr: 1.00

Quant Time: Jun 10 14:28:23 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Mon Jun 10 14:20:54 2013
Response via : Initial Calibration





TIC: 06091303.D\data.ms

(86) 1,2,4-Trichlorobenzene (M)

16.774min (+0.011) 1.00 ug/L

response 20237

Ion	Exp%	Act%
179.80	100	100
181.90	95.80	0.00#
144.90	30.20	0.00#
0.00	0.00	0.00

BEFORE

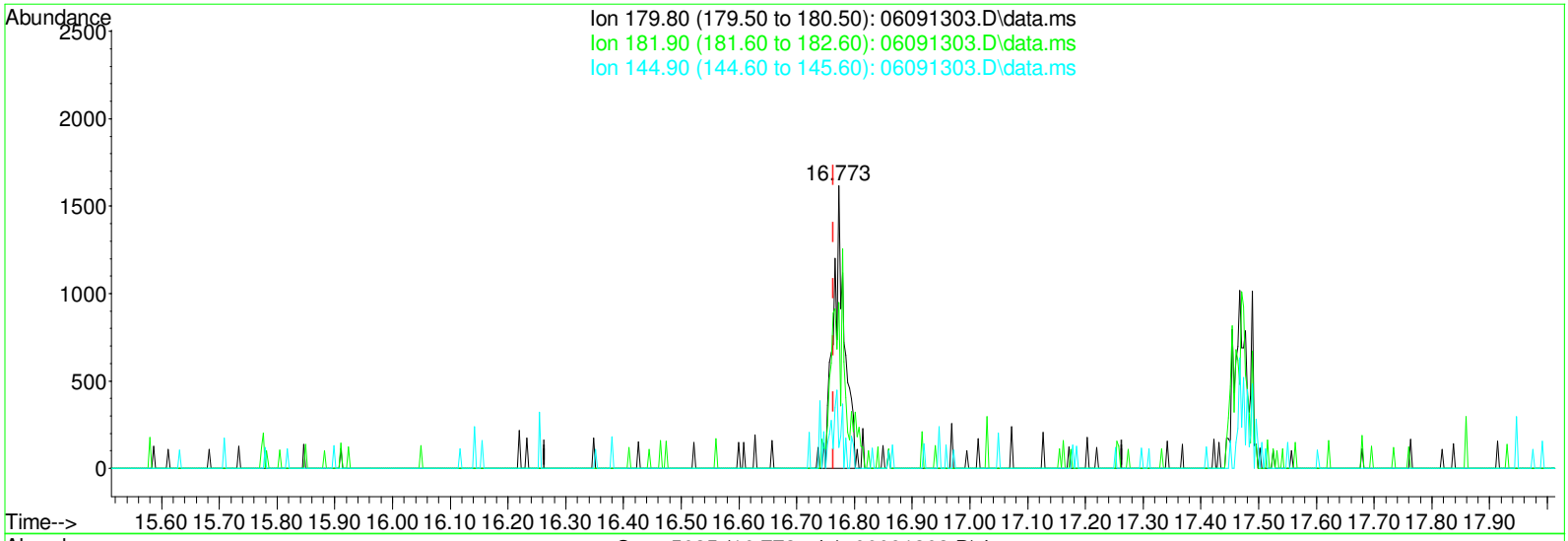
By Alfred at 3:44:04 PM, 7/3/2013

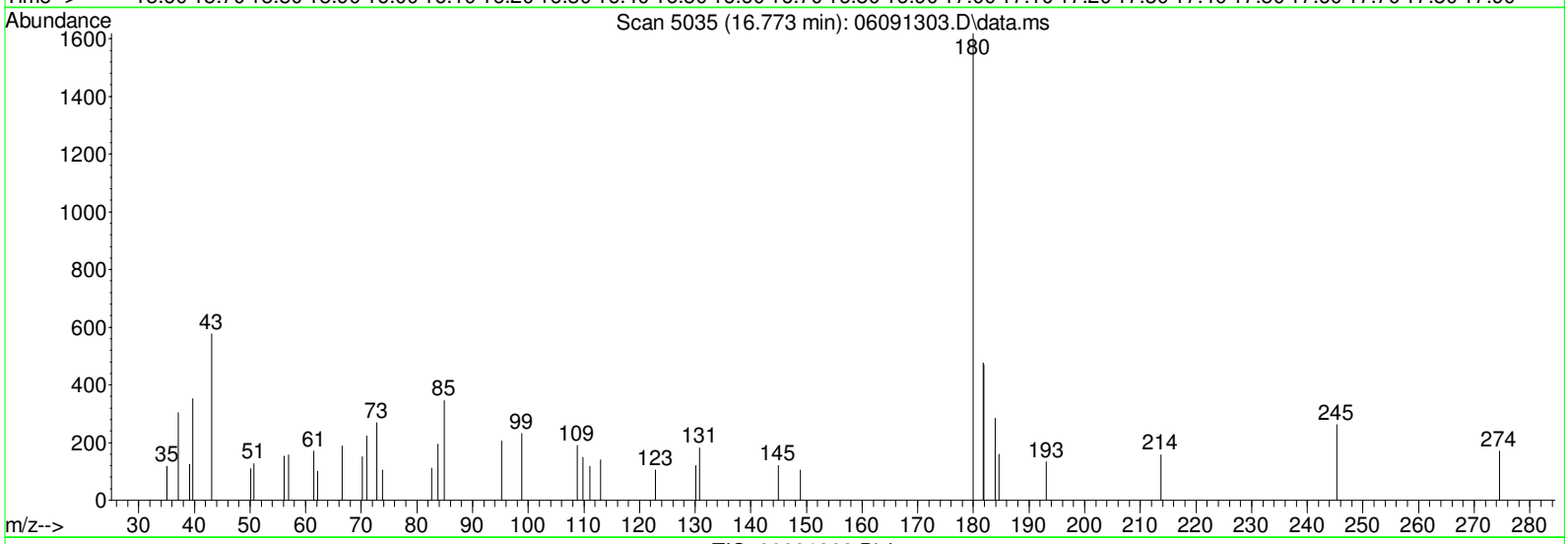
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091303.D
Acq On : 9 Jun 2013 2:01 pm
Sample : ICAL VSTD001
Misc : VOC_W+
ALS Vial : 2

Operator: PS
Inst : VOA7
Multiplr: 1.00

Quant Time: Jun 10 14:28:23 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Mon Jun 10 14:20:54 2013
Response via : Initial Calibration





TIC: 06091303.D\data.ms

(86) 1,2,4-Trichlorobenzene (M)

16.773min (+0.009) 1.08 ug/L m

response 21843

Ion	Exp%	Act%
179.80	100	100
181.90	95.80	0.00#
144.90	30.20	0.00#
0.00	0.00	0.00

AFTER M3

By Alfred at 3:44:09 PM, 7/3/2013

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091304.D
Acq On : 9 Jun 2013 2:36 pm Operator: PS
Sample : ICAL VSTD005 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 3

Quant Time: Jun 10 14:09:02 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	5.389	168	1866040	30.00	ug/L	0.00
31) 1,4-Difluorobenzene	6.401	114	3107741	30.00	ug/L	0.00
50) Chlorobenzene-d5	10.492	82	1695922	30.00	ug/L	0.00
69) 1,4-Dichlorobenzene-d4	13.856	152	1637236	30.00	ug/L	0.00
System Monitoring Compounds						
29) Dibromofluoromethane	5.263	113	803040	26.87	ug/L	0.00
Spiked Amount 30.000	Range 86 - 118		Recovery = 89.57%			
32) 1,2-Dichloroethane-d4	5.729	102	209681	27.17	ug/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 90.57%			
48) Toluene-d8	8.467	98	3753706	29.61	ug/L	-0.01
Spiked Amount 30.000	Range 88 - 110		Recovery = 98.70%			
68) Bromofluorobenzene	12.193	174	1288189	33.62	ug/L	0.00
Spiked Amount 30.000	Range 86 - 115		Recovery = 112.07%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.214	85	179406m	6.76	ug/L	
3) Chloromethane	1.349	50	151451	5.93	ug/L	97
4) Vinyl chloride	1.423	62	167850	5.51	ug/L	96
5) 1,3-Butadiene	1.450	39	105659	4.43	ug/L	90
6) Bromomethane	1.669	96	47246	13.46	ug/L	97
7) Chloroethane	1.747	64	82086m	5.67	ug/L	
8) Trichlorofluoromethane	1.947	101	199738	4.99	ug/L	97
9) Isopropyl Alcohol	2.585	45	198852	86.09	ug/L #	61
10) Ethyl Ether	2.190	59	108143	5.04	ug/L	97
11) Acrolein	2.288	56	22377m	5.20	ug/L	
12) Acetone	2.438	43	98654	8.57	ug/L	96
13) Freon-TF	2.400	151	67026	4.67	ug/L #	19
14) 1,1-Dichloroethene	2.389	96	100364	5.64	ug/L	85
15) Methylene Chloride	2.867	84	135529	5.58	ug/L	83
16) Carbon disulfide	2.584	76	710038	9.49	ug/L	96
17) Acrylonitrile	3.141	53	50820	4.06	ug/L #	65
18) MTBE	3.188	73	367988	4.79	ug/L	96
19) Hexane	3.528	57	102299	4.98	ug/L	96
20) trans-1,2-Dichloroethene	3.175	96	132757	5.88	ug/L	87
21) Vinyl acetate	3.812	43	486793	9.69	ug/L	97
22) 1,1-Dichloroethane	3.701	63	221908	5.14	ug/L	92
23) 2-Butanone	4.593	72	37657m	9.56	ug/L	
24) 2,2-Dichloropropane	4.537	77	198505	5.62	ug/L	79
25) cis-1,2-Dichloroethene	4.547	96	140584	5.38	ug/L	91
26) Ethyl Acetate	4.731	45	28163m	6.07	ug/L	
27) Chloroform	5.032	83	194012	4.48	ug/L	88
28) Bromochloromethane	4.881	128	58240	5.59	ug/L #	84
30) Isobutyl alcohol	5.836	43	106917	66.54	ug/L #	86
33) Carbon Tetrachloride	5.493	117	138897	4.62	ug/L	90
34) 1,2-Dichloroethane	5.842	62	173057	4.88	ug/L #	90
35) 1,1,1-Trichloroethane	5.264	97	172481	4.81	ug/L #	47
36) 1,1-Dichloropropene	5.509	110	61497	5.50	ug/L	92
37) 1-Butanol	6.802	56	64686	72.16	ug/L #	47
38) Benzene	5.794	78	518622	5.05	ug/L #	10
39) Trichloroethene	6.731	95	126465m	4.96	ug/L	
40) 1,2-Dichloropropane	7.047	63	117527	4.50	ug/L	90
41) 1,4-Dioxane	7.284	88	20025	54.08	ug/L #	23
42) Bromodichloromethane	7.467	83	158638	4.92	ug/L #	91
43) Dibromomethane	7.204	93	77547	5.27	ug/L #	50
44) 2-Nitropropane	7.802	41	37627	4.98	ug/L #	2
45) 2-Chloroethylvinyl ether	7.949	63	128514	7.70	ug/L	96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091304.D
Acq On : 9 Jun 2013 2:36 pm Operator: PS
Sample : ICAL VSTD005 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 3

Quant Time: Jun 10 14:09:02 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration

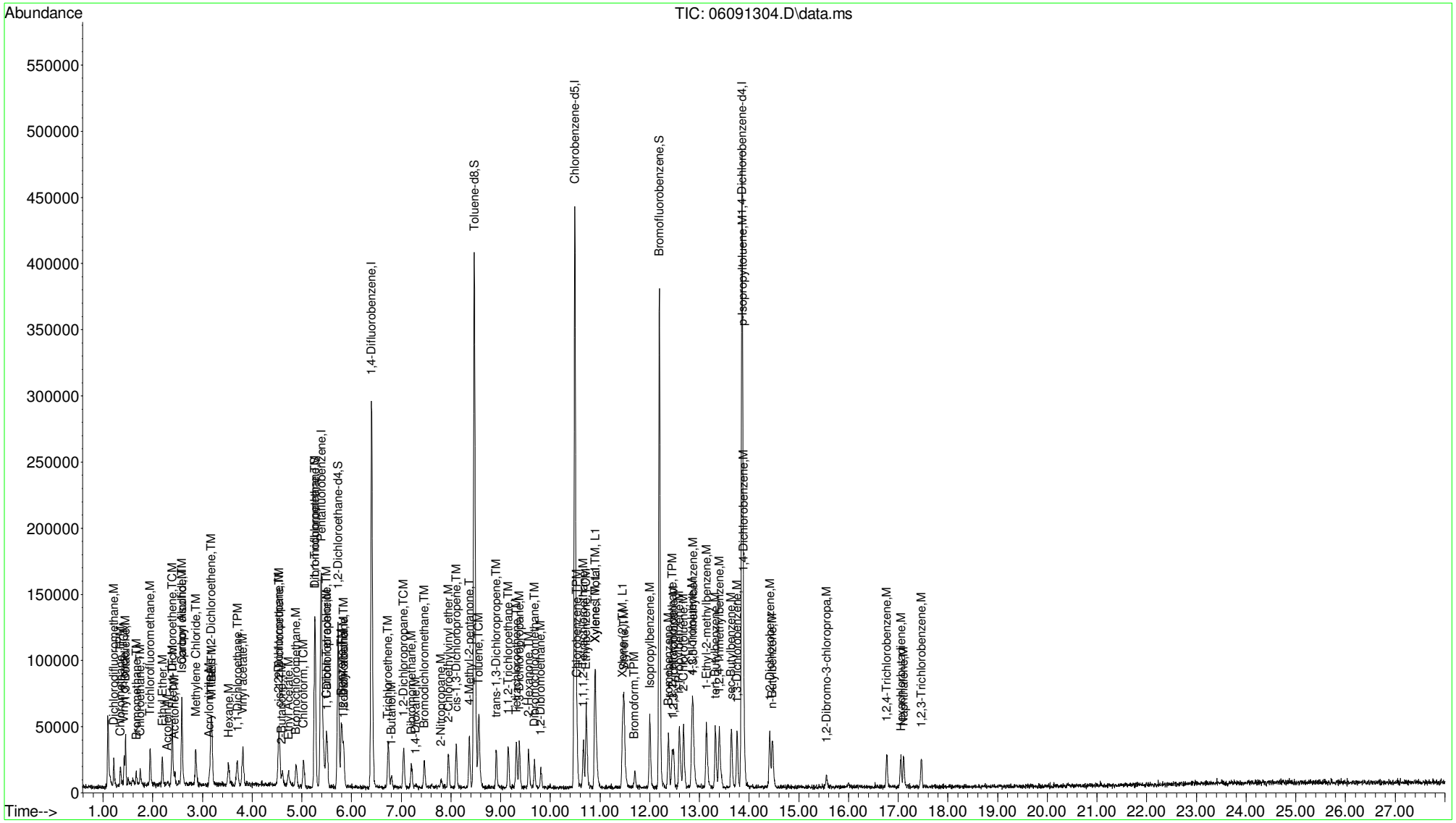
	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
46)	4-Methyl-2-pentanone	8.368	43	284223	8.71 ug/L	87
47)	cis-1,3-Dichloropropene	8.105	75	199401	4.72 ug/L	94
49)	Toluene	8.554	92	328574m	5.03 ug/L	
51)	trans-1,3-Dichloropropene	8.912	75	181250	4.95 ug/L	97
52)	2-Hexanone	9.561	43	231848m	10.60 ug/L	
53)	1,1,2-Trichloroethane	9.149	83	99834m	5.28 ug/L	
54)	1,3-Dichloropropane	9.374	76	207422	5.07 ug/L	95
55)	Tetrachloroethene	9.315	164	92375	5.85 ug/L	95
56)	Dibromochloromethane	9.680	129	114856	4.82 ug/L #	60
57)	1,2-Dibromoethane	9.807	107	115455	5.12 ug/L #	60
58)	Chlorobenzene	10.534	112	329158	5.49 ug/L	97
59)	Ethylbenzene	10.722	91	592909	5.19 ug/L	94
60)	1,1,1,2-Tetrachloroethane	10.664	131	103009m	4.64 ug/L	
61)	Xylene	10.903	106	435511	10.43 ug/L	99
62)	Xylene (2)	11.458	106	220954	5.51 ug/L	89
63)	Xylenes, Total	10.903	106	656465m	15.93 ug/L #	
64)	Styrene	11.485	104	387790	5.20 ug/L	100
65)	Isopropylbenzene	12.000	105	489982	5.47 ug/L	98
66)	Bromoform	11.693	173	70762	4.57 ug/L #	91
67)	1,1,2,2-Tetrachloroethane	12.452	83	155702	5.01 ug/L #	91
70)	1,2,3-Trichloropropane	12.480	75	124206m	4.22 ug/L	
71)	n-Propylbenzene	12.595	91	533531	4.88 ug/L	92
72)	Bromobenzene	12.376	156	143160	5.05 ug/L #	93
73)	1,3,5-Trimethylbenzene	12.869	105	425010	4.81 ug/L	99
74)	2-Chlorotoluene	12.678	91	370991	4.77 ug/L	97
75)	4-Chlorotoluene	12.849	91	401699	4.47 ug/L	92
76)	tert-Butylbenzene	13.320	119	287826	4.75 ug/L	90
77)	1-Ethyl-2-methylbenzene	13.140	105	456480	4.30 ug/L	98
78)	1,2,4-Trimethylbenzene	13.399	105	403366	4.38 ug/L	97
79)	sec-Butylbenzene	13.639	105	425092	4.99 ug/L	99
80)	p-Isopropyltoluene	13.870	119	336285	4.69 ug/L	89
81)	1,3-Dichlorobenzene	13.759	146	239583	5.26 ug/L	97
82)	1,4-Dichlorobenzene	13.886	146	249924	4.77 ug/L	94
83)	n-Butylbenzene	14.467	91	292475	4.50 ug/L	97
84)	1,2-Dichlorobenzene	14.417	146	217956	4.82 ug/L	97
85)	1,2-Dibromo-3-chloropropa	15.560	75	23875m	3.76 ug/L	
86)	1,2,4-Trichlorobenzene	16.767	180	92439	4.38 ug/L	95
87)	Hexachlorbutadiene	17.058	225	56389	6.31 ug/L #	78
88)	Naphthalene	17.105	128	244612	4.09 ug/L #	76
89)	1,2,3-Trichlorobenzene	17.471	180	81571	4.55 ug/L	96

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091304.D
Acq On : 9 Jun 2013 2:36 pm Operator: PS
Sample : ICAL VSTD005 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 3

Quant Time: Jun 10 14:09:02 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091304.D
Acq On : 9 Jun 2013 2:36 pm Operator: PS
Sample : ICAL VSTD005 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 3

Quant Time: Jun 10 14:05:55 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	5.389	168	1866040	30.00	ug/L	0.00
31) 1,4-Difluorobenzene	6.401	114	3107741	30.00	ug/L	0.00
50) Chlorobenzene-d5	10.492	82	1695922	30.00	ug/L	0.00
69) 1,4-Dichlorobenzene-d4	13.856	152	1637236	30.00	ug/L	0.00
System Monitoring Compounds						
29) Dibromofluoromethane	5.263	113	803040	26.87	ug/L	0.00
Spiked Amount 30.000	Range 86 - 118		Recovery = 89.57%			
32) 1,2-Dichloroethane-d4	5.729	102	209681	27.17	ug/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 90.57%			
48) Toluene-d8	8.467	98	3753706	29.61	ug/L	-0.01
Spiked Amount 30.000	Range 88 - 110		Recovery = 98.70%			
68) Bromofluorobenzene	12.193	174	1288189	33.62	ug/L	0.00
Spiked Amount 30.000	Range 86 - 115		Recovery = 112.07%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.215	85	149827	5.65	ug/L	94
3) Chloromethane	1.349	50	151451	5.93	ug/L	97
4) Vinyl chloride	1.423	62	167850	5.51	ug/L	96
5) 1,3-Butadiene	1.450	39	105659	4.43	ug/L	90
6) Bromomethane	1.669	96	47246	13.46	ug/L	97
7) Chloroethane	1.748	64	78017	5.39	ug/L	90
8) Trichlorofluoromethane	1.947	101	199738	4.99	ug/L	97
9) Isopropyl Alcohol	2.585	45	198852	86.09	ug/L #	61
10) Ethyl Ether	2.190	59	108143	5.04	ug/L	97
11) Acrolein	2.290	56	20218	4.70	ug/L #	10
12) Acetone	2.438	43	98654	8.57	ug/L	96
13) Freon-TF	2.400	151	67026	4.67	ug/L #	19
14) 1,1-Dichloroethene	2.389	96	100364	5.64	ug/L	85
15) Methylene Chloride	2.867	84	135529	5.58	ug/L	83
16) Carbon disulfide	2.584	76	710038	9.49	ug/L	96
17) Acrylonitrile	3.141	53	50820	4.06	ug/L #	65
18) MTBE	3.188	73	367988	4.79	ug/L	96
19) Hexane	3.528	57	102299	4.98	ug/L	96
20) trans-1,2-Dichloroethene	3.175	96	132757	5.88	ug/L	87
21) Vinyl acetate	3.812	43	486793	9.69	ug/L	97
22) 1,1-Dichloroethane	3.701	63	221908	5.14	ug/L	92
24) 2,2-Dichloropropane	4.537	77	198505	5.62	ug/L	79
25) cis-1,2-Dichloroethene	4.547	96	140584	5.38	ug/L	91
27) Chloroform	5.032	83	194012	4.48	ug/L	88
28) Bromochloromethane	4.881	128	58240	5.59	ug/L #	84
30) Isobutyl alcohol	5.836	43	106917	66.54	ug/L #	86
33) Carbon Tetrachloride	5.493	117	138897	4.62	ug/L	90
34) 1,2-Dichloroethane	5.842	62	173057	4.88	ug/L #	90
35) 1,1,1-Trichloroethane	5.264	97	172481	4.81	ug/L #	47
36) 1,1-Dichloropropene	5.509	110	61497	5.50	ug/L	92
37) 1-Butanol	6.802	56	64686	72.16	ug/L #	47
38) Benzene	5.794	78	518622	5.05	ug/L #	10
39) Trichloroethene	6.733	95	121299	4.75	ug/L	89
40) 1,2-Dichloropropane	7.047	63	117527	4.50	ug/L	90
41) 1,4-Dioxane	7.284	88	20025	54.08	ug/L #	23
42) Bromodichloromethane	7.467	83	158638	4.92	ug/L #	91
43) Dibromomethane	7.204	93	77547	5.27	ug/L #	50
44) 2-Nitropropane	7.802	41	37627	4.98	ug/L #	2
45) 2-Chloroethylvinyl ether	7.949	63	128514	7.70	ug/L	96
46) 4-Methyl-2-pentanone	8.368	43	284223	8.71	ug/L	87
47) cis-1,3-Dichloropropene	8.105	75	199401	4.72	ug/L	94

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091304.D
Acq On : 9 Jun 2013 2:36 pm Operator: PS
Sample : ICAL VSTD005 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 3

Quant Time: Jun 10 14:05:55 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration

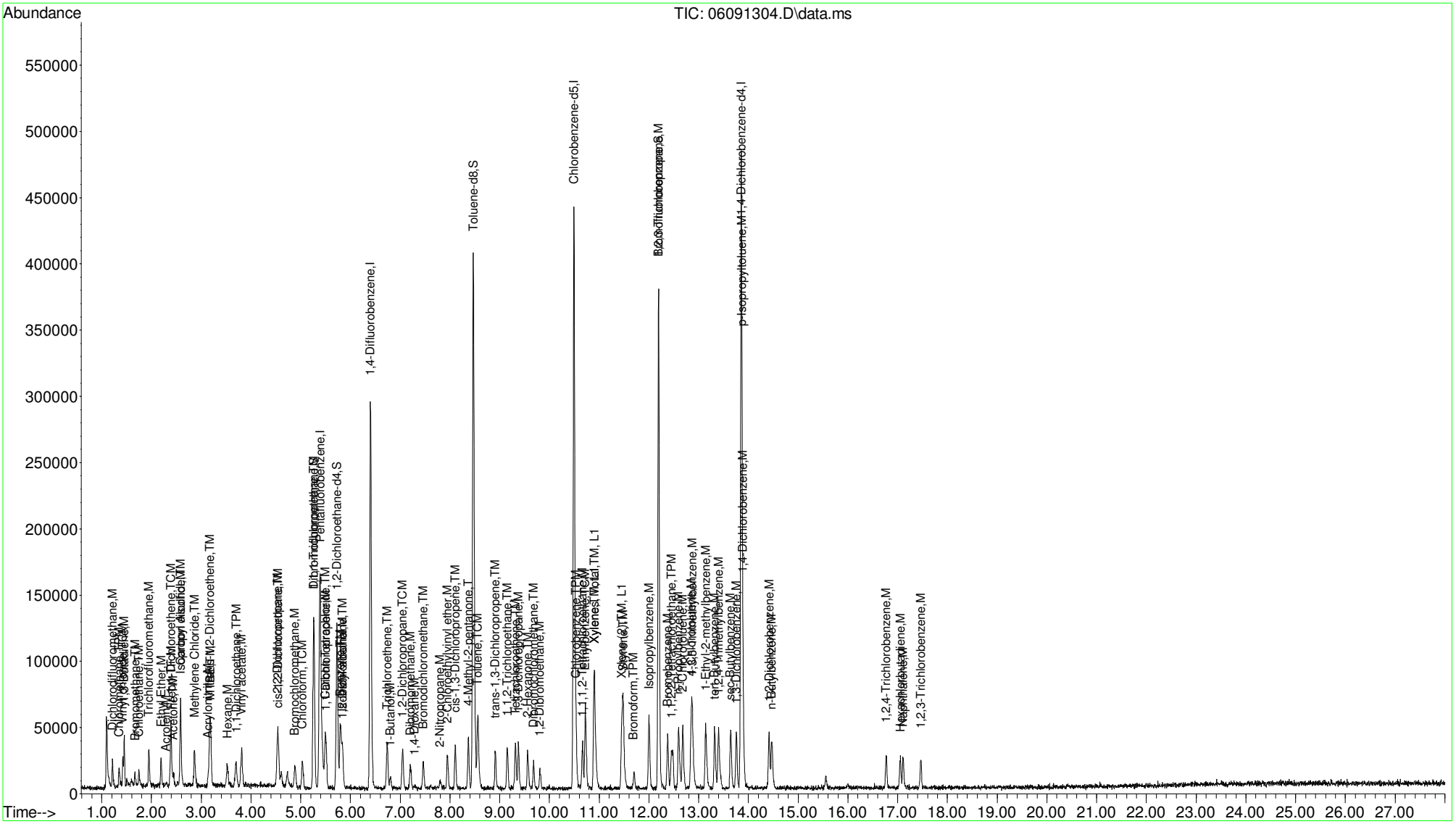
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
49) Toluene	8.555	92	149313	2.29 ug/L #	1
51) trans-1,3-Dichloropropene	8.912	75	181250	4.95 ug/L	97
52) 2-Hexanone	9.562	43	214133	9.79 ug/L	94
53) 1,1,2-Trichloroethane	9.152	83	93669	4.95 ug/L	92
54) 1,3-Dichloropropane	9.374	76	207422	5.07 ug/L	95
55) Tetrachloroethene	9.315	164	92375	5.85 ug/L	95
56) Dibromochloromethane	9.680	129	114856	4.82 ug/L #	60
57) 1,2-Dibromoethane	9.807	107	115455	5.12 ug/L #	60
58) Chlorobenzene	10.534	112	329158	5.49 ug/L	97
59) Ethylbenzene	10.722	91	592909	5.19 ug/L	94
60) 1,1,1,2-Tetrachloroethane	10.666	131	99983	4.50 ug/L #	66
61) Xylene	10.903	106	435511	10.43 ug/L	99
62) Xylene (2)	11.458	106	220954	5.51 ug/L	89
63) Xylenes, Total	10.903	106	656465m	15.93 ug/L #	
64) Styrene	11.485	104	387790	5.20 ug/L	100
65) Isopropylbenzene	12.000	105	489982	5.47 ug/L	98
66) Bromoform	11.693	173	70762	4.57 ug/L #	91
67) 1,1,2,2-Tetrachloroethane	12.452	83	155702	5.01 ug/L #	91
70) 1,2,3-Trichloropropane	12.193	75	825680	28.08 ug/L #	42
71) n-Propylbenzene	12.595	91	533531	4.88 ug/L	92
72) Bromobenzene	12.376	156	143160	5.05 ug/L #	93
73) 1,3,5-Trimethylbenzene	12.869	105	425010	4.81 ug/L	99
74) 2-Chlorotoluene	12.678	91	370991	4.77 ug/L	97
75) 4-Chlorotoluene	12.849	91	401699	4.47 ug/L	92
76) tert-Butylbenzene	13.320	119	287826	4.75 ug/L	90
77) 1-Ethyl-2-methylbenzene	13.140	105	456480	4.30 ug/L	98
78) 1,2,4-Trimethylbenzene	13.399	105	403366	4.38 ug/L	97
79) sec-Butylbenzene	13.639	105	425092	4.99 ug/L	99
80) p-Isopropyltoluene	13.870	119	336285	4.69 ug/L	89
81) 1,3-Dichlorobenzene	13.759	146	239583	5.26 ug/L	97
82) 1,4-Dichlorobenzene	13.886	146	249924	4.77 ug/L	94
83) n-Butylbenzene	14.467	91	292475	4.50 ug/L	97
84) 1,2-Dichlorobenzene	14.417	146	217956	4.82 ug/L	97
86) 1,2,4-Trichlorobenzene	16.767	180	92439	4.38 ug/L	95
87) Hexachlorbutadiene	17.058	225	56389	6.31 ug/L #	78
88) Naphthalene	17.105	128	244612	4.09 ug/L #	76
89) 1,2,3-Trichlorobenzene	17.471	180	81571	4.55 ug/L	96

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091304.D
Acq On : 9 Jun 2013 2:36 pm Operator: PS
Sample : ICAL VSTD005 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 3

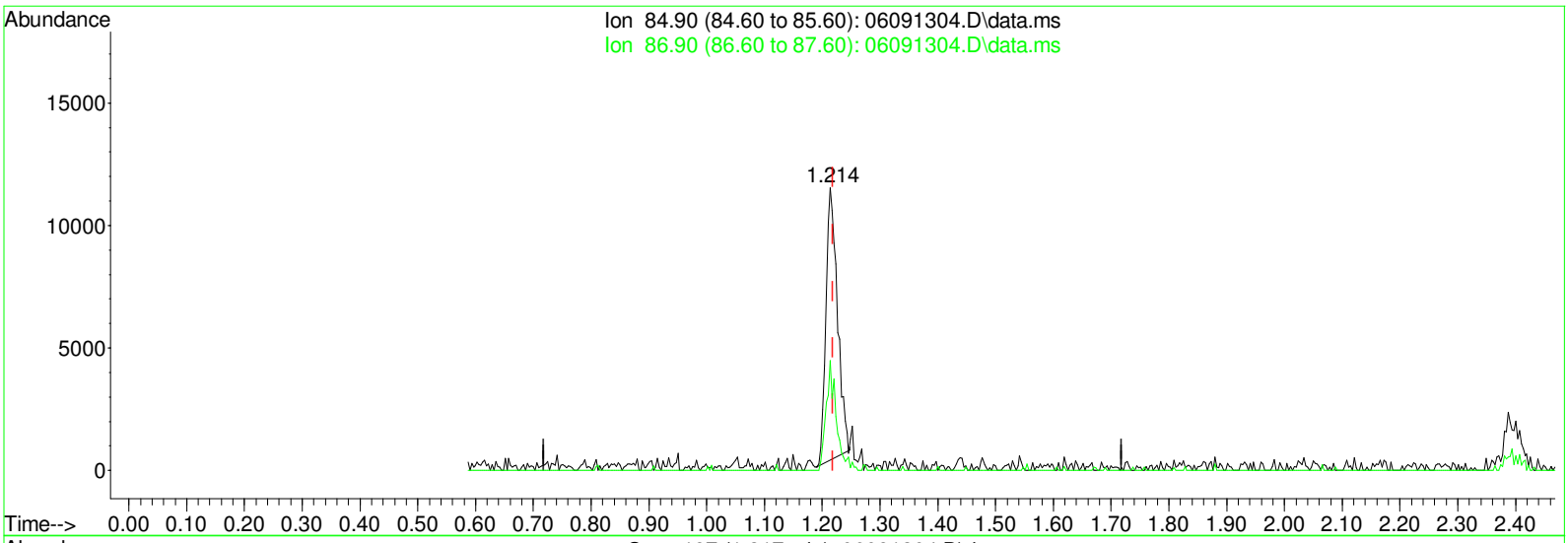
Quant Time: Jun 10 14:05:55 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration

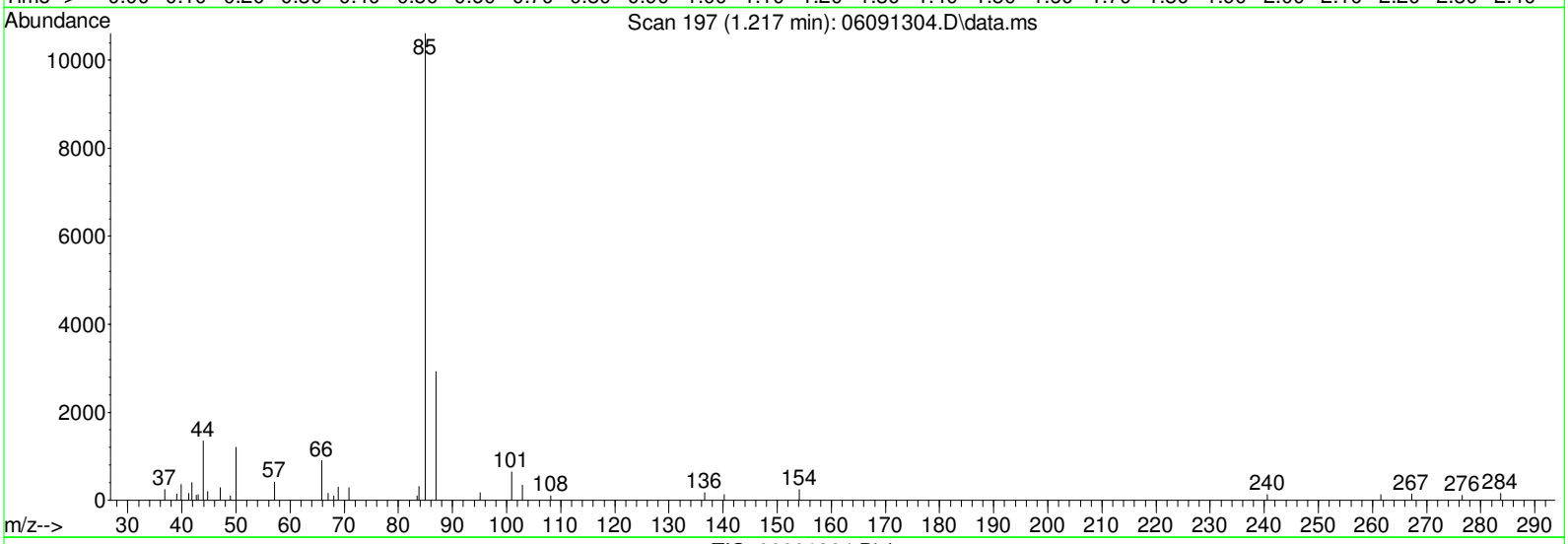


Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091304.D
Acq On : 9 Jun 2013 2:36 pm
Operator: PS
Sample : ICAL VSTD005
Inst : VOA7
Misc : VOC_W+
Multiplr: 1.00
ALS Vial : 3

Quant Time: Jun 10 14:05:55 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration





TIC: 06091304.D\data.ms

BEFORE
By Alfred at 3:44:20 PM, 7/3/2013

(2) Dichlorodifluoromethane (M)

1.215min (-0.003) 5.65 ug/L

response 149827

Ion	Exp%	Act%
84.90	100	100
86.90	31.20	34.46
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091304.D
Acq On : 9 Jun 2013 2:36 pm Operator: PS
Sample : ICAL VSTD005 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 3

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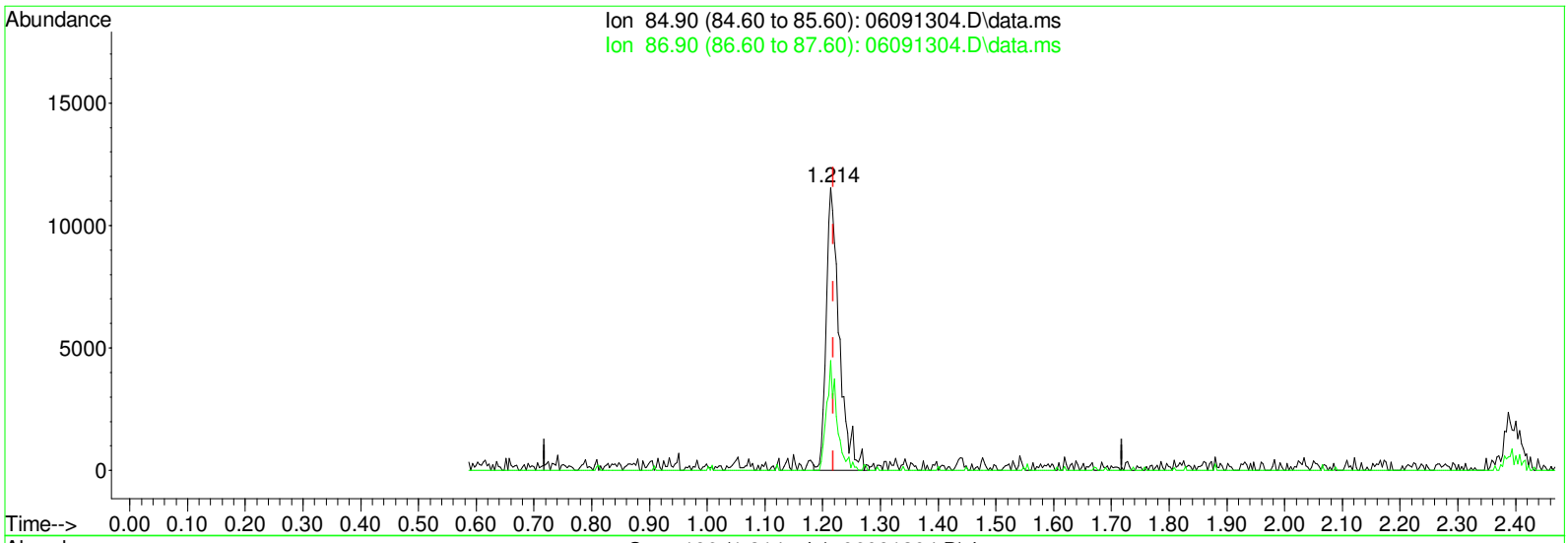
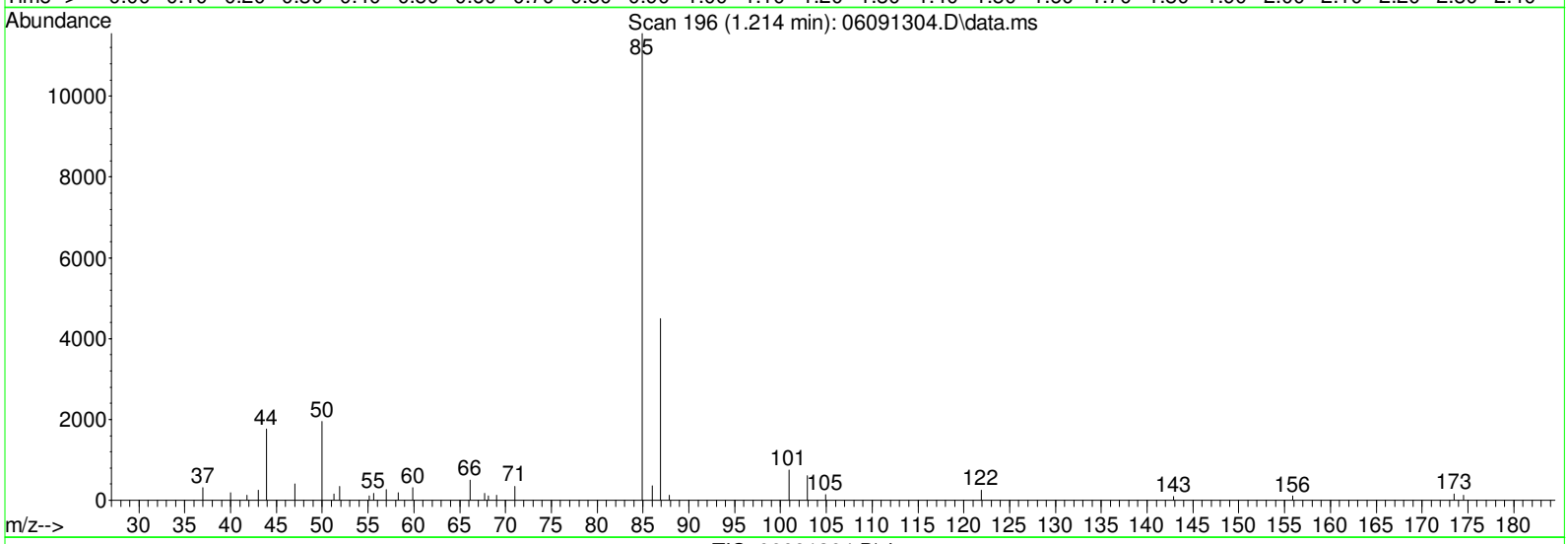
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration





TIC: 06091304.D\data.ms

AFTER M3
By Alfred at 3:44:25 PM, 7/3/2013

(2) Dichlorodifluoromethane (M)

1.214min (-0.004) 6.76 ug/L m

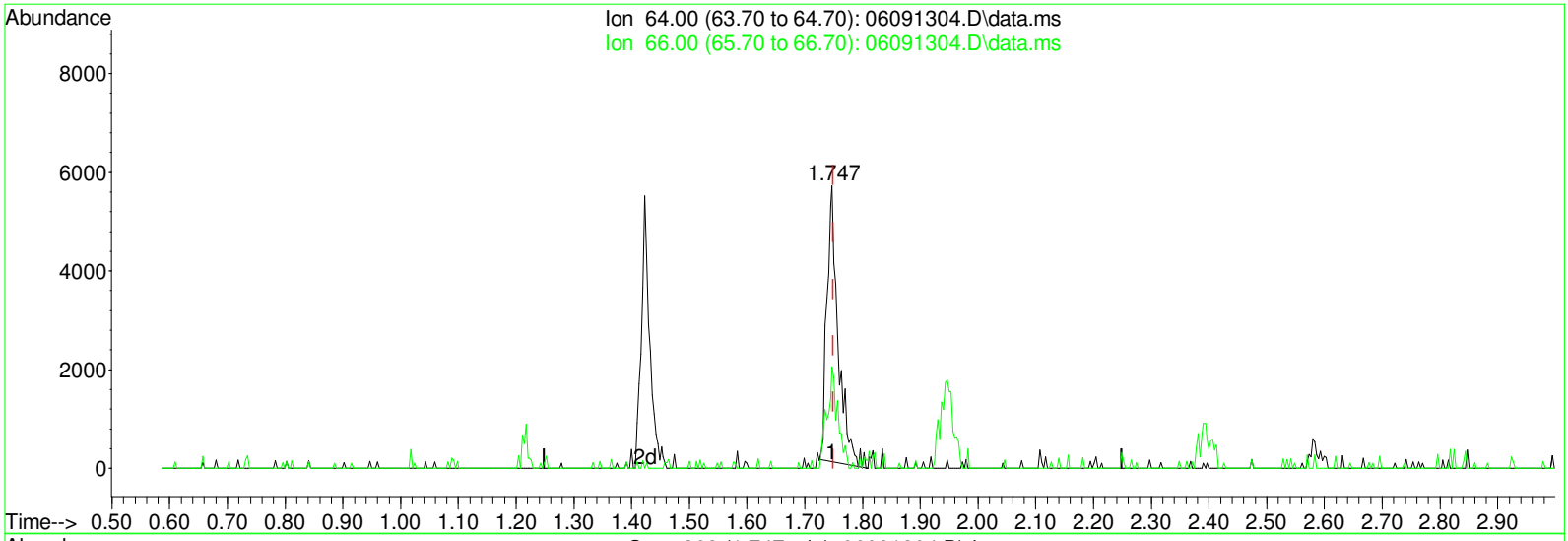
response 179406

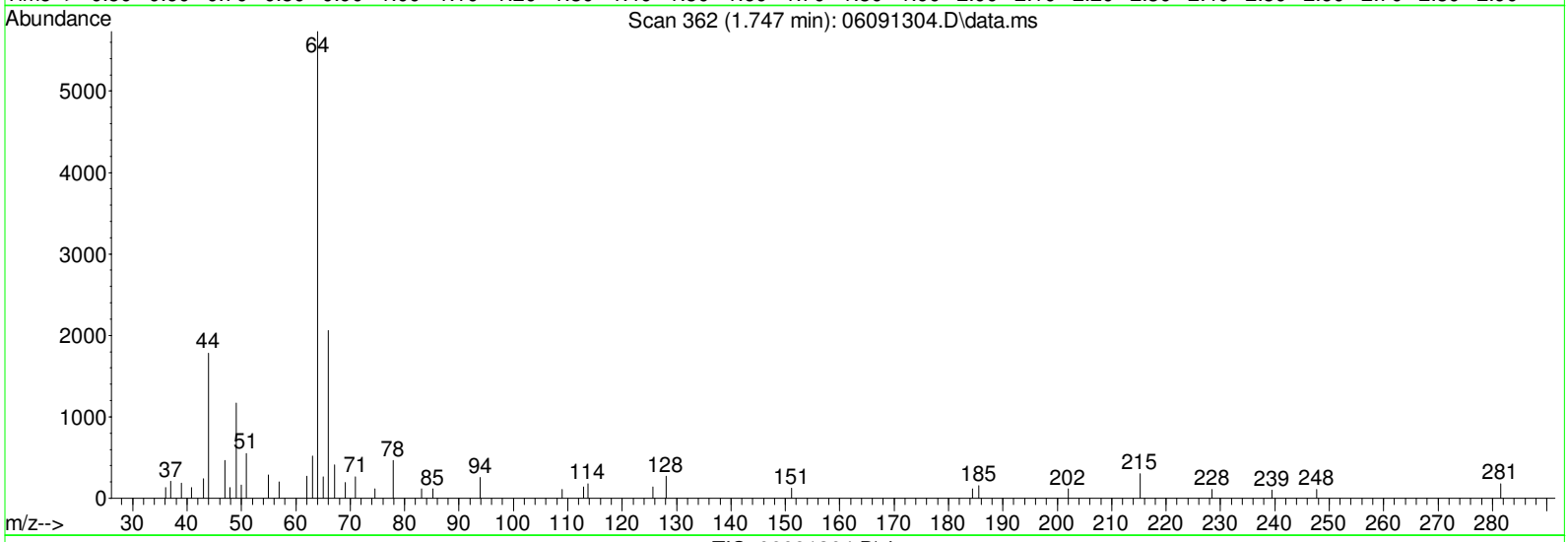
Ion	Exp%	Act%
84.90	100	100
86.90	31.20	28.78
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091304.D
Acq On : 9 Jun 2013 2:36 pm Operator: PS
Sample : ICAL VSTD005 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 3

Quant Time: Jun 10 14:05:55 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration





TIC: 06091304.D\data.ms

(7) Chloroethane (TM)

1.748min (-0.001) 5.39 ug/L

response 78017

Ion	Exp%	Act%
64.00	100	100
66.00	30.60	35.84
0.00	0.00	0.00
0.00	0.00	0.00

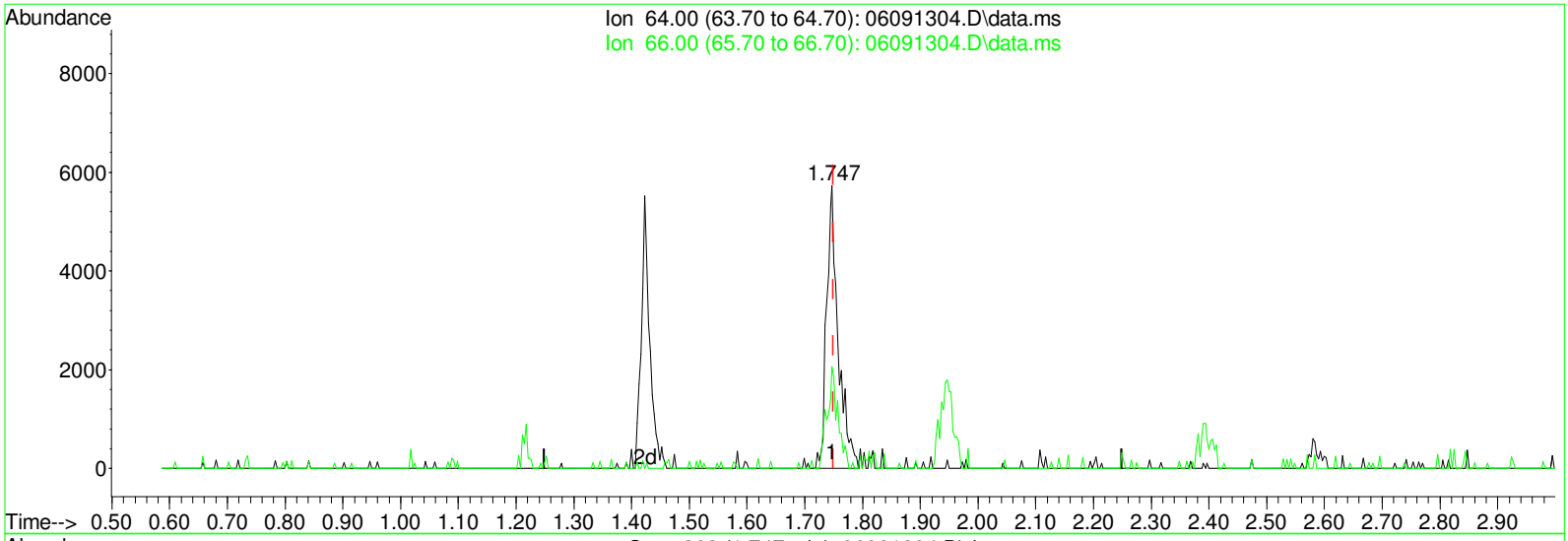
BEFORE

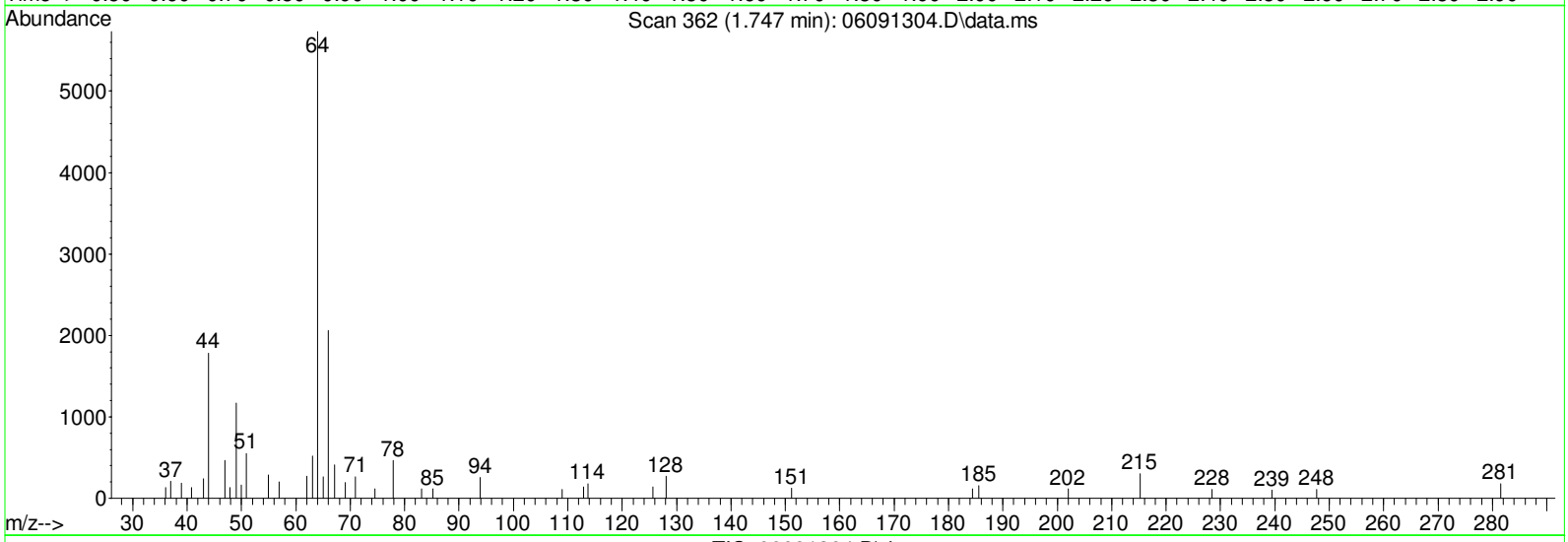
By Alfred at 3:44:31 PM, 7/3/2013

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091304.D
Acq On : 9 Jun 2013 2:36 pm Operator: PS
Sample : ICAL VSTD005 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 3

Quant Time: Jun 10 14:05:55 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration





TIC: 06091304.D\data.ms

(7) Chloroethane (TM)

1.747min (-0.002) 5.67 ug/L m

response 82086

Ion	Exp%	Act%
64.00	100	100
66.00	30.60	34.06
0.00	0.00	0.00
0.00	0.00	0.00

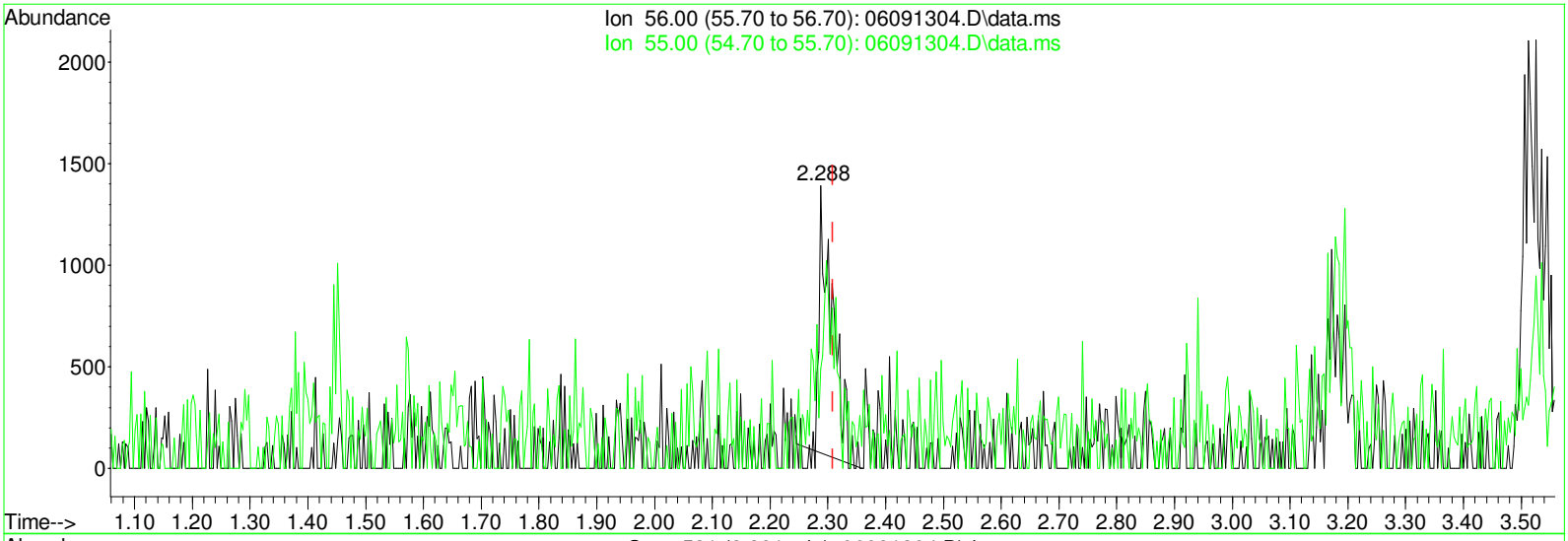
AFTER M3
By Alfred at 3:44:37 PM, 7/3/2013

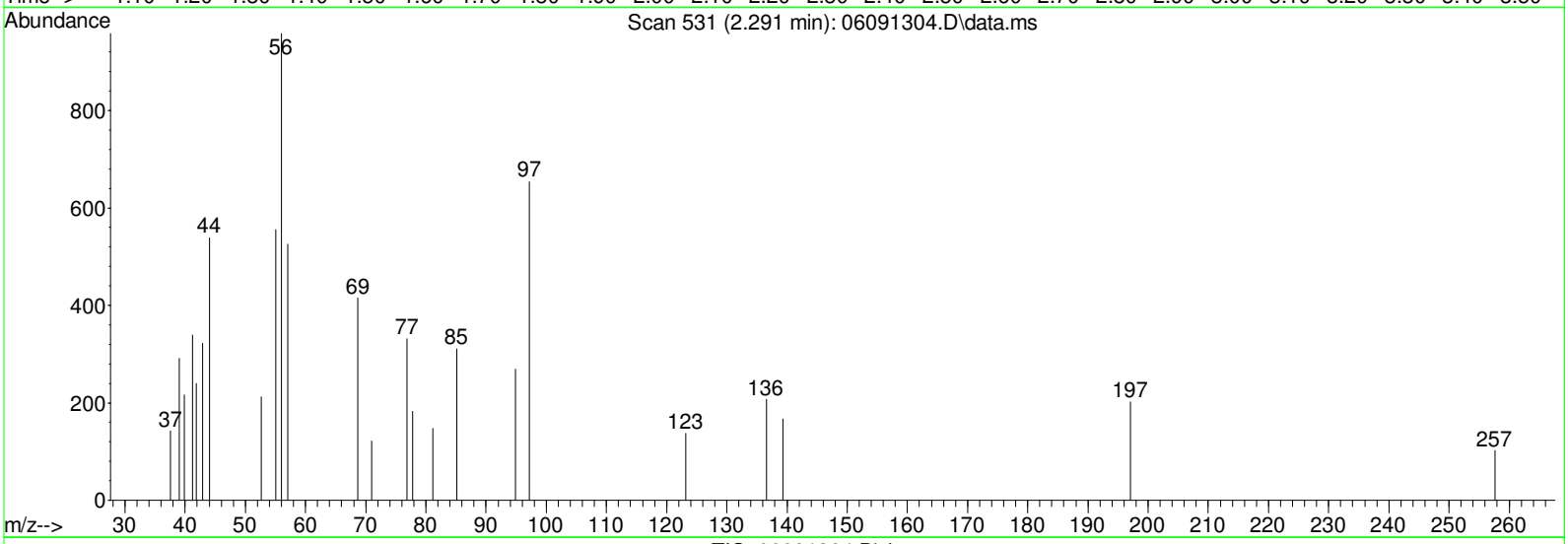
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091304.D
Acq On : 9 Jun 2013 2:36 pm
Sample : ICAL VSTD005
Misc : VOC_W+
ALS Vial : 3

Operator: PS
Inst : VOA7
Multiplr: 1.00

Quant Time: Jun 10 14:05:55 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration





TIC: 06091304.D\data.ms

(11) Acrolein (M)

2.290min (-0.018) 4.70 ug/L

response 20218

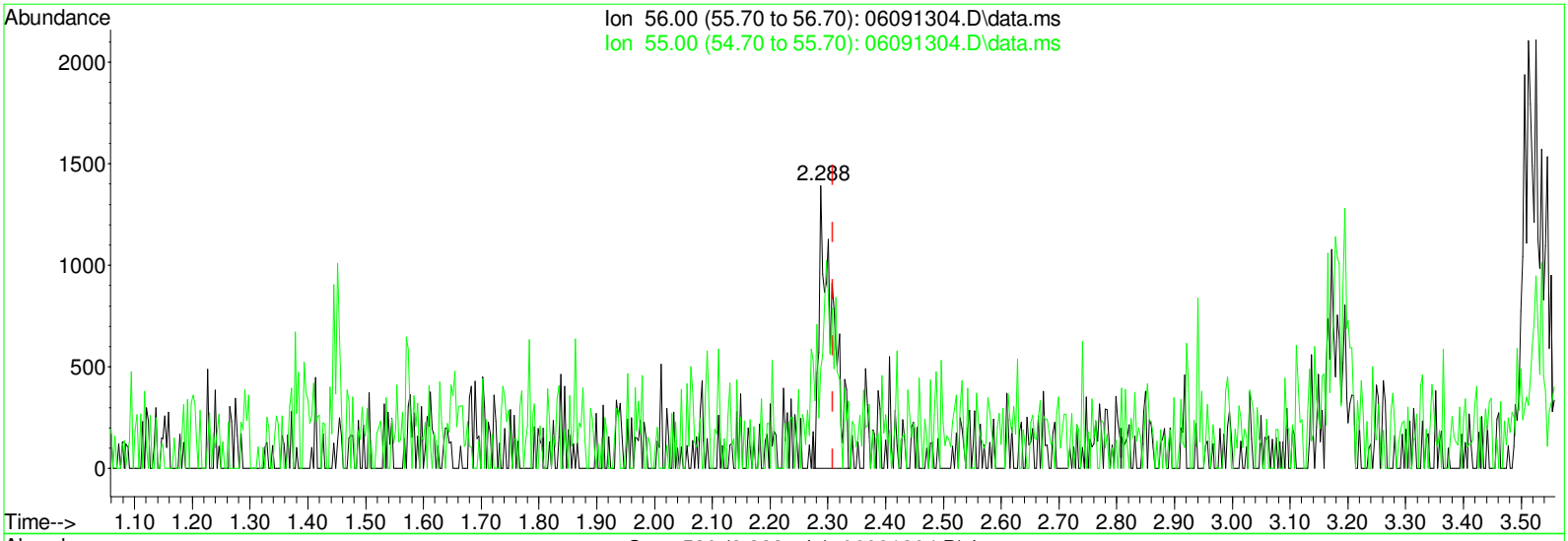
Ion	Exp%	Act%
56.00	100	100
55.00	79.20	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

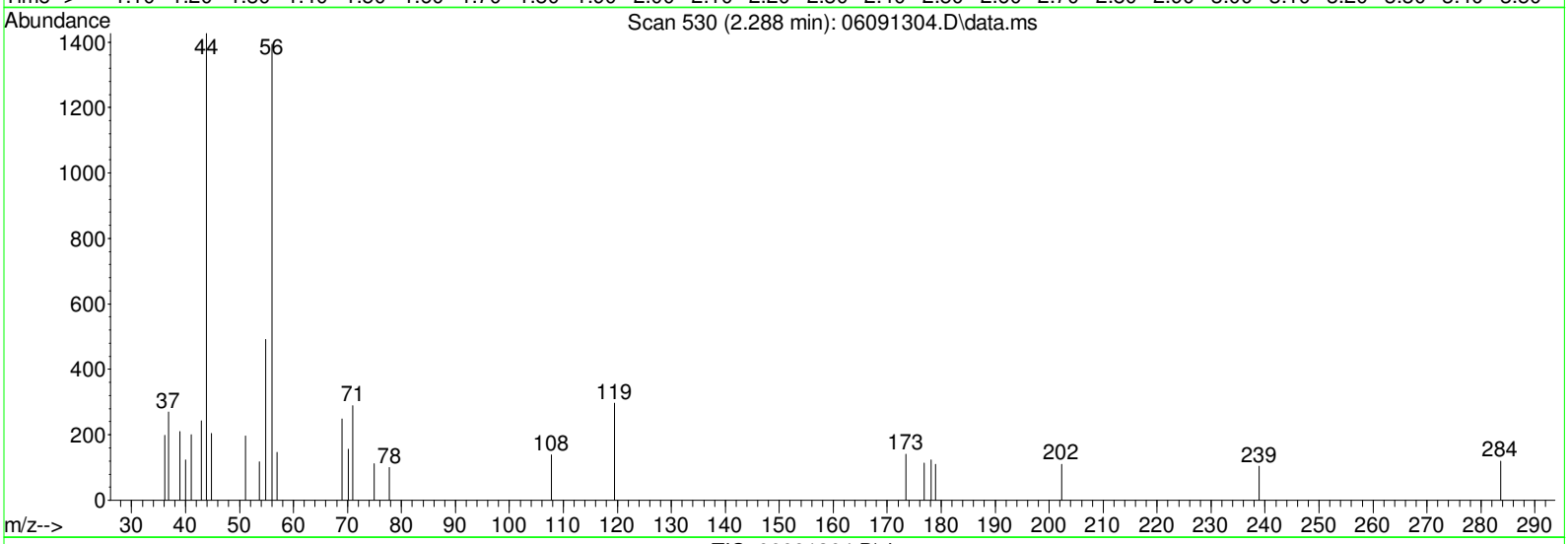
BEFORE
By Alfred at 3:44:41 PM, 7/3/2013

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091304.D
Acq On : 9 Jun 2013 2:36 pm
Operator: PS
Sample : ICAL VSTD005
Inst : VOA7
Misc : VOC_W+
Multiplr: 1.00
ALS Vial : 3

Quant Time: Jun 10 14:05:55 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration





TIC: 06091304.D\data.ms

(11) Acrolein (M)

2.288min (-0.021) 5.20 ug/L m

response 22377

Ion	Exp%	Act%
56.00	100	100
55.00	79.20	89.84
0.00	0.00	0.00
0.00	0.00	0.00

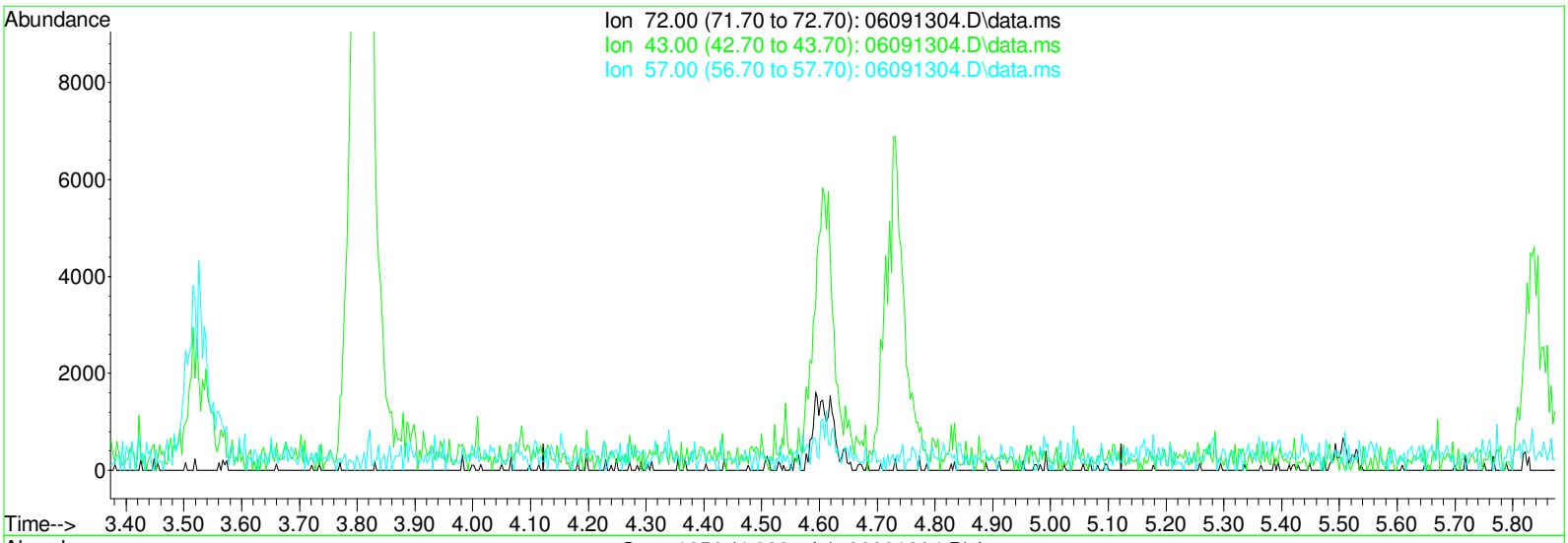
AFTER M3

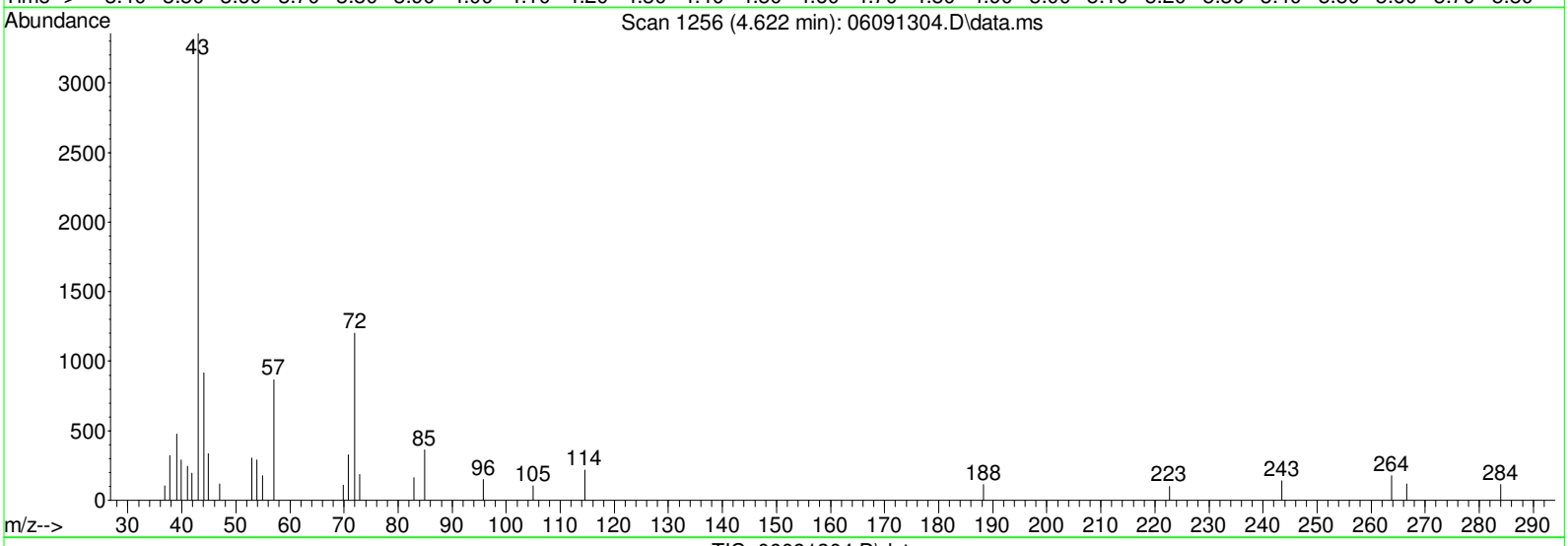
By Alfred at 3:44:46 PM, 7/3/2013

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091304.D
Acq On : 9 Jun 2013 2:36 pm
Operator: PS
Sample : ICAL VSTD005
Inst : VOA7
Misc : VOC_W+
Multiplr: 1.00
ALS Vial : 3

Quant Time: Jun 10 14:05:55 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration





TIC: 06091304.D\data.ms

(23) 2-Butanone (TM)

4.623min (-4.623) 0.00 ug/L

response 0

Ion	Exp%	Act%
72.00	100	0.00
43.00	437.50	0.00#
57.00	37.10	0.00#
0.00	0.00	0.00

BEFORE

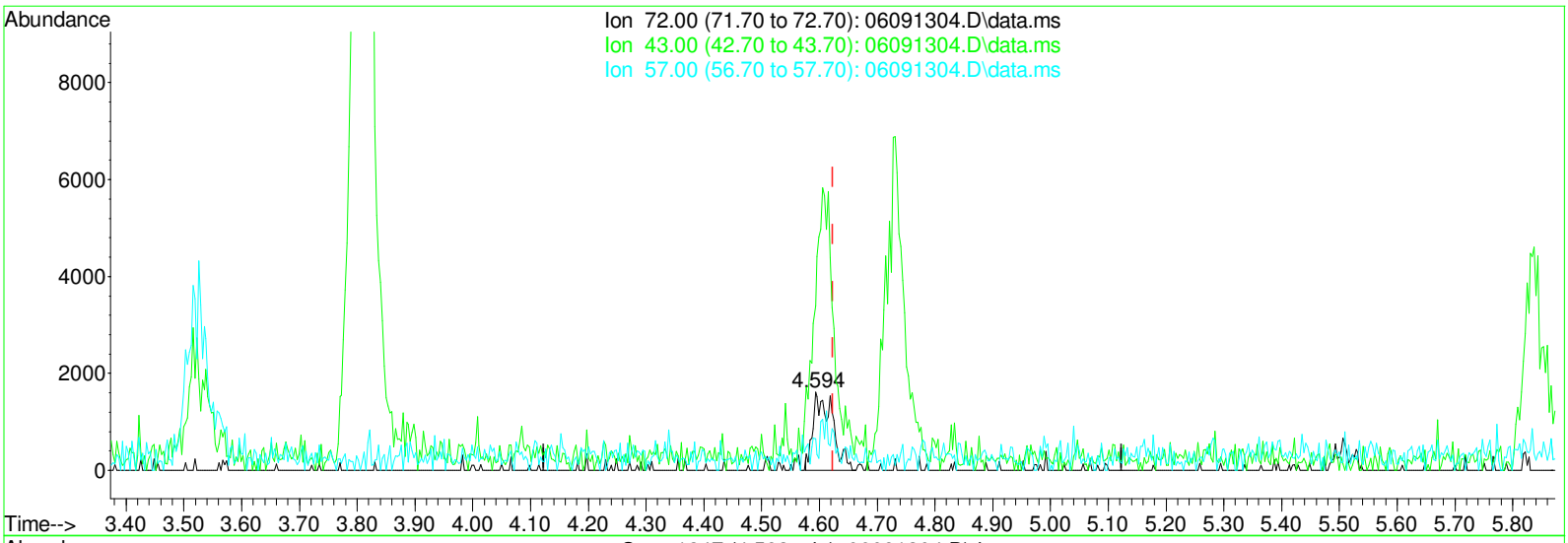
By Alfred at 3:44:55 PM, 7/3/2013

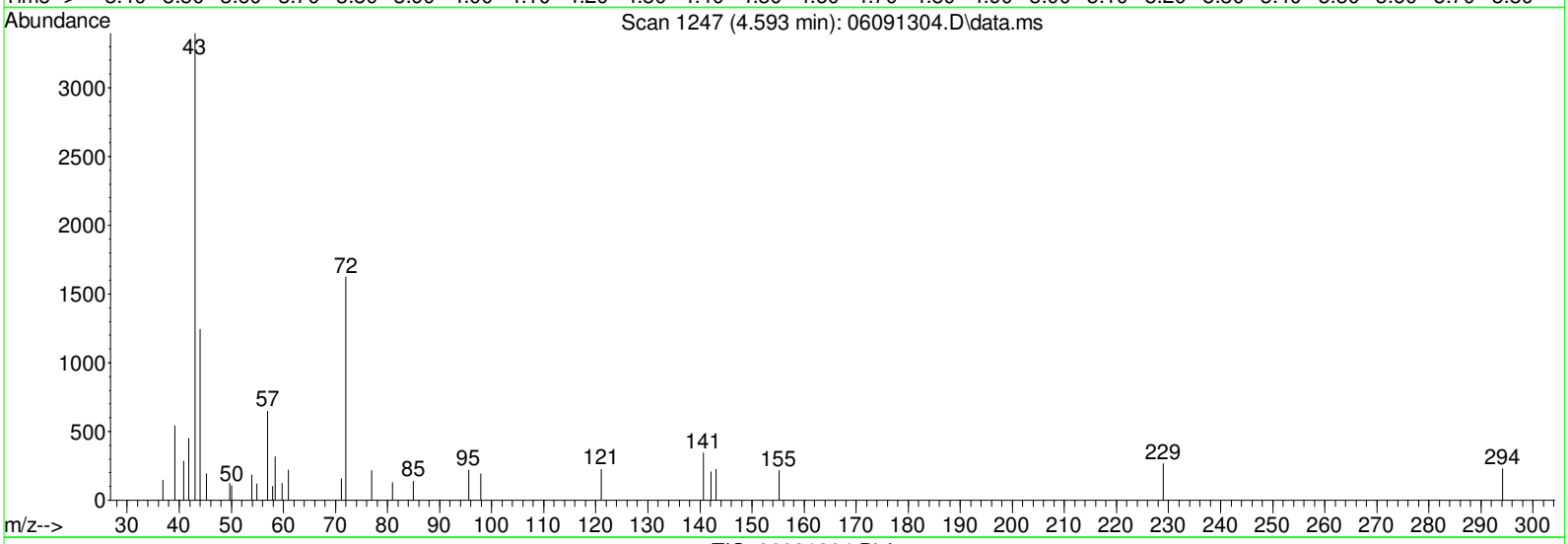
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091304.D
Acq On : 9 Jun 2013 2:36 pm
Sample : ICAL VSTD005
Misc : VOC_W+
ALS Vial : 3

Operator: PS
Inst : VOA7
Multiplr: 1.00

Quant Time: Jun 10 14:05:55 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration





TIC: 06091304.D\data.ms

(23) 2-Butanone (TM)

4.593min (-0.030) 9.56 ug/L m

response 37657

Ion	Exp%	Act%
72.00	100	100
43.00	437.50	393.37
57.00	37.10	74.49#
0.00	0.00	0.00

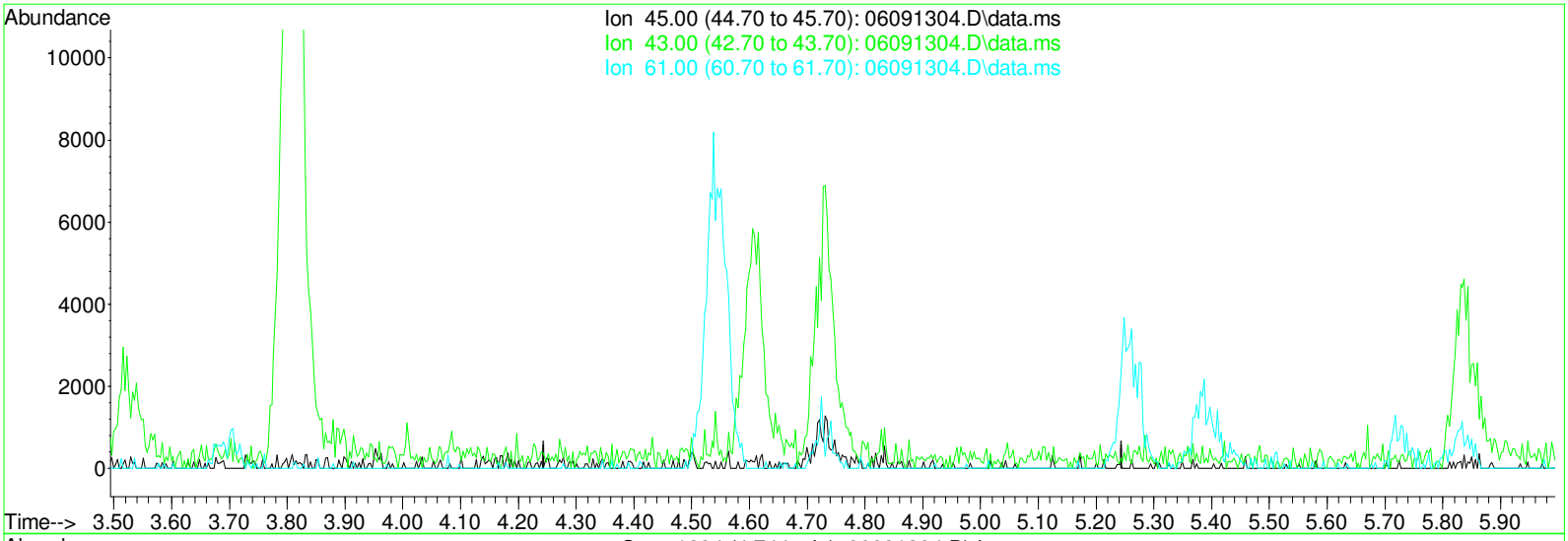
AFTER M1

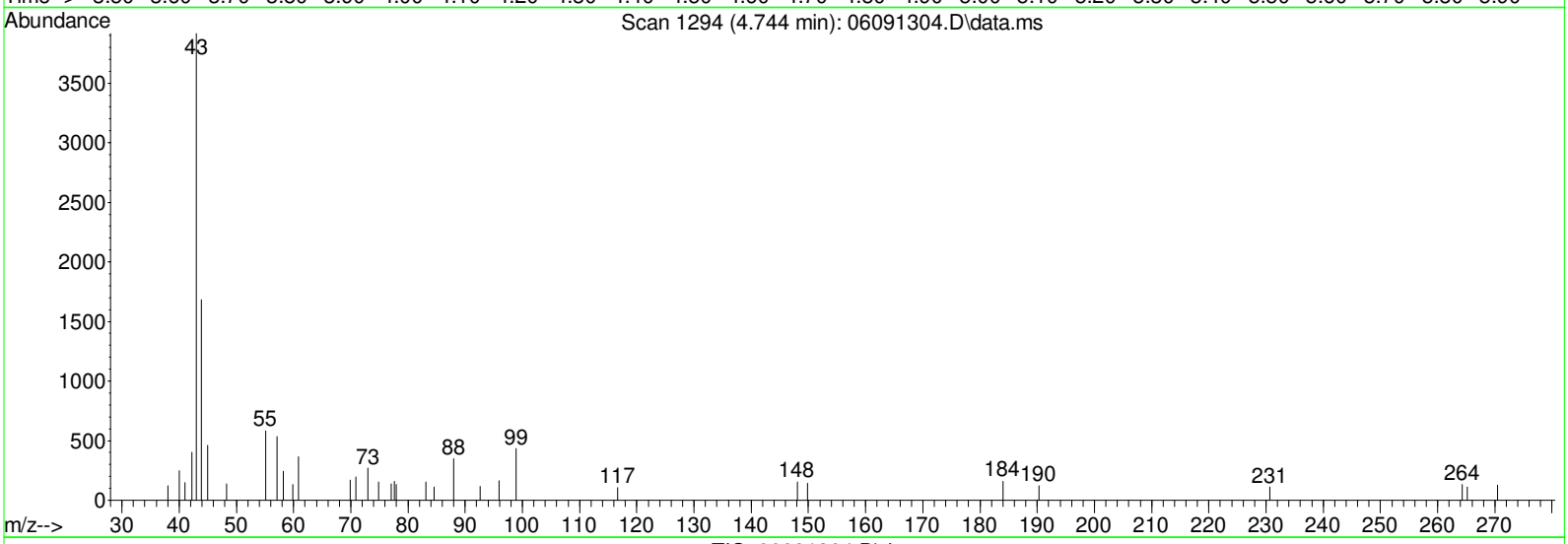
By Alfred at 3:45:00 PM, 7/3/2013

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091304.D
Acq On : 9 Jun 2013 2:36 pm
Operator: PS
Sample : ICAL VSTD005
Inst : VOA7
Misc : VOC_W+
Multiplr: 1.00
ALS Vial : 3

Quant Time: Jun 10 14:05:55 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration





TIC: 06091304.D\data.ms

BEFORE

By Alfred at 3:45:05 PM, 7/3/2013

(26) Ethyl Acetate (M)

4.744min (-4.744) 0.00 ug/L

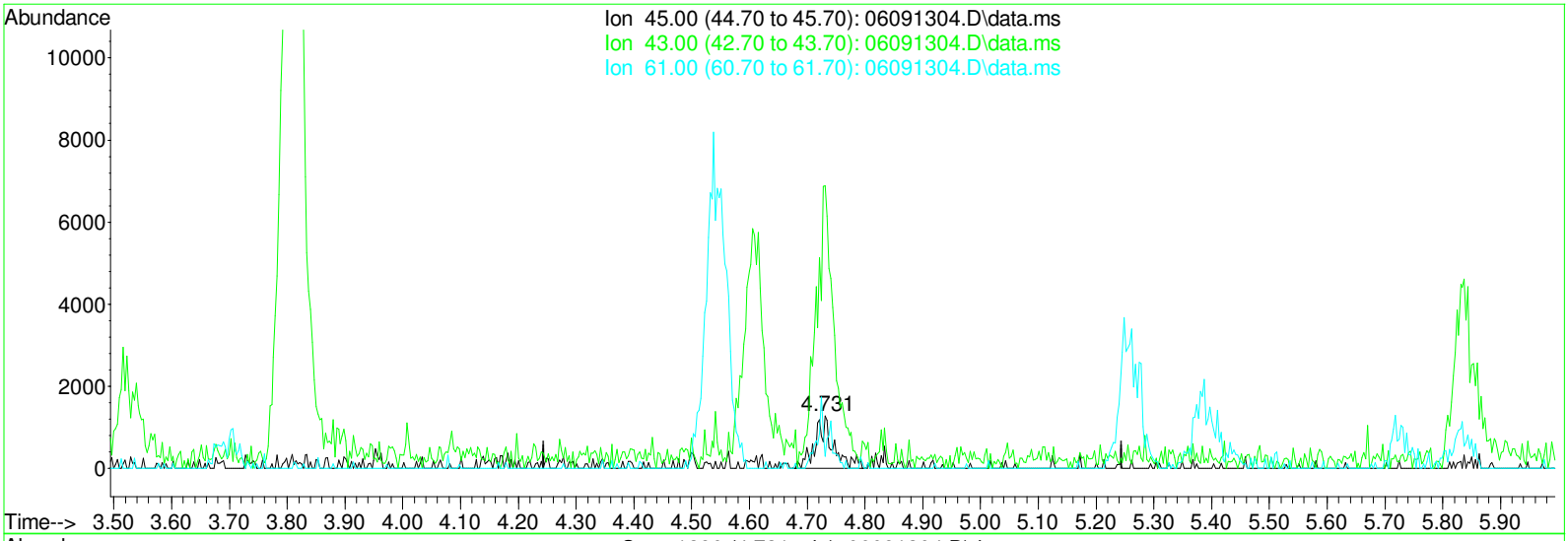
response 0

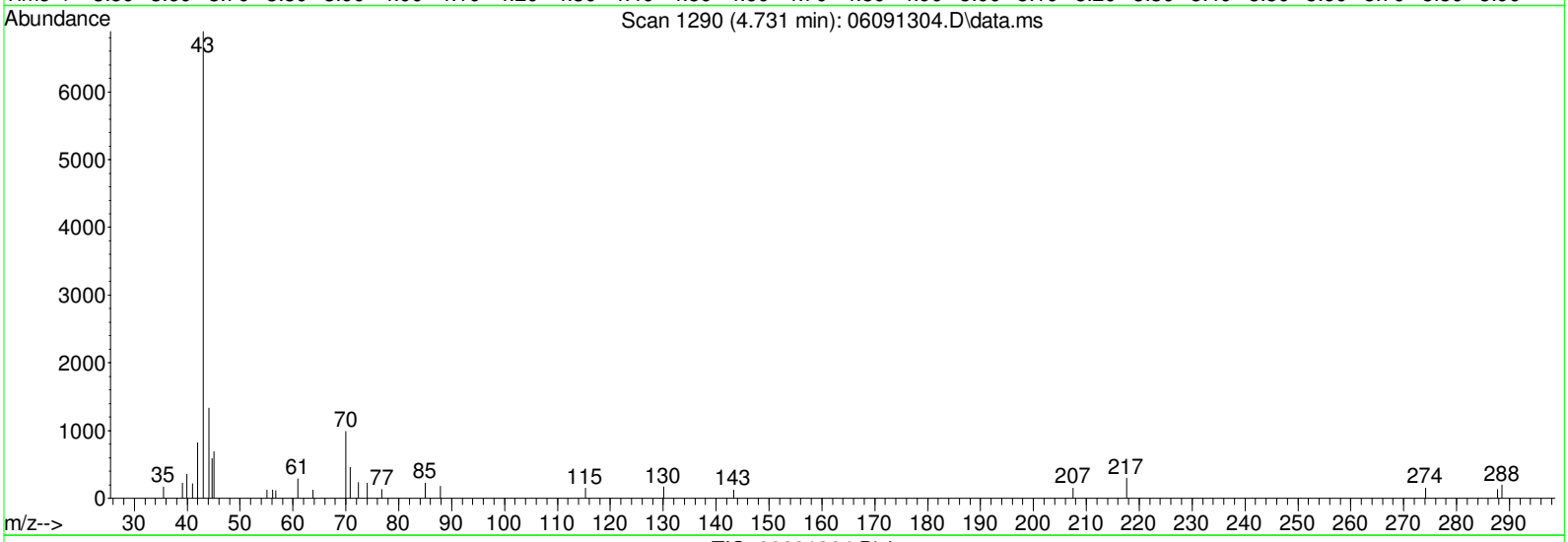
Ion	Exp%	Act%
45.00	100	0.00
43.00	714.10	0.00#
61.00	99.90	0.00#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091304.D
Acq On : 9 Jun 2013 2:36 pm
Operator: PS
Sample : ICAL VSTD005
Inst : VOA7
Misc : VOC_W+
Multiplr: 1.00
ALS Vial : 3

Quant Time: Jun 10 14:05:55 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration





TIC: 06091304.D\data.ms

(26) Ethyl Acetate (M)

4.731min (-0.013) 6.07 ug/L m

response 28163

Ion	Exp%	Act%
45.00	100	100
43.00	714.10	0.00#
61.00	99.90	0.00#
0.00	0.00	0.00

AFTER M1

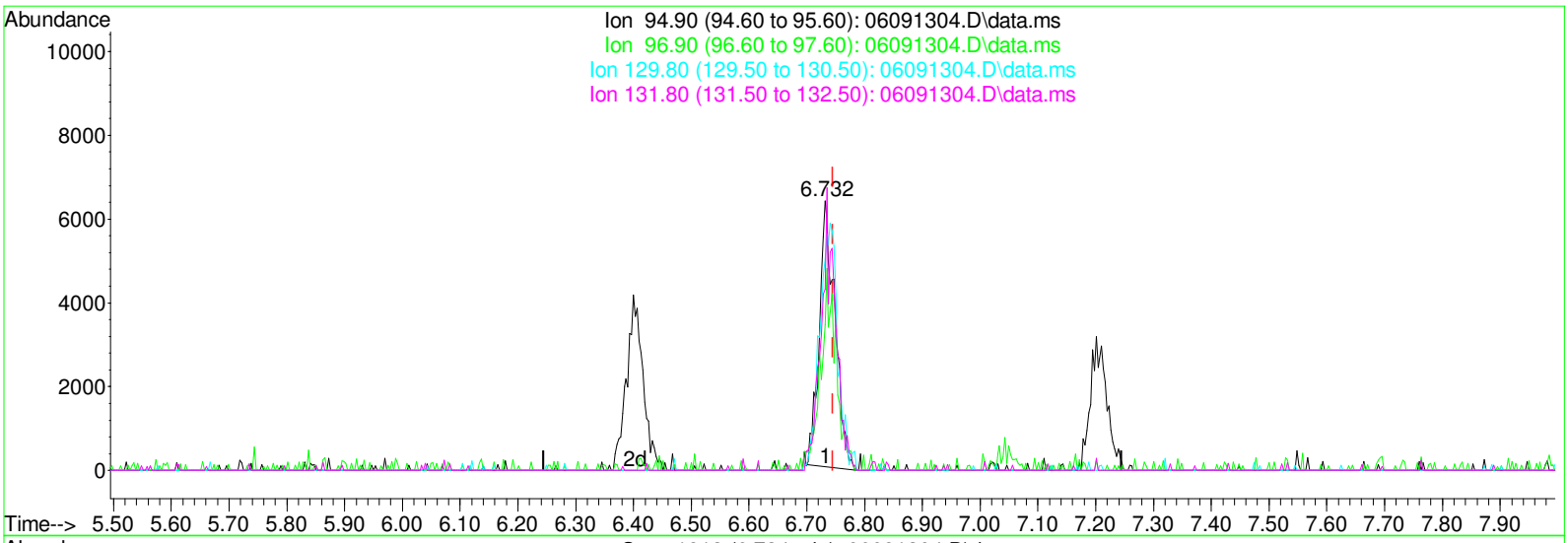
By Alfred at 3:45:12 PM, 7/3/2013

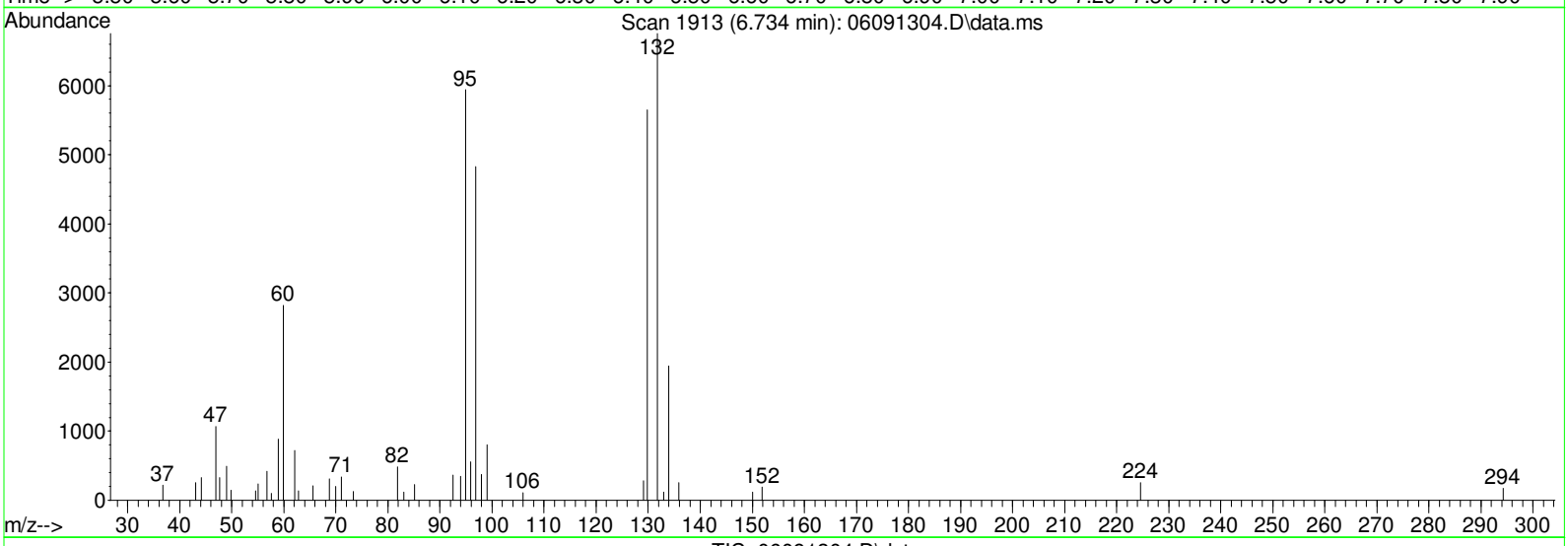
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091304.D
Acq On : 9 Jun 2013 2:36 pm
Sample : ICAL VSTD005
Misc : VOC_W+
ALS Vial : 3

Operator: PS
Inst : VOA7
Multiplr: 1.00

Quant Time: Jun 10 14:05:55 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration





TIC: 06091304.D\data.ms

(39) Trichloroethene (TM)

6.733min (-0.012) 4.75 ug/L

response 121299

Ion	Exp%	Act%
94.90	100	100
96.90	61.80	77.16
129.80	96.40	107.28
131.80	93.10	97.38

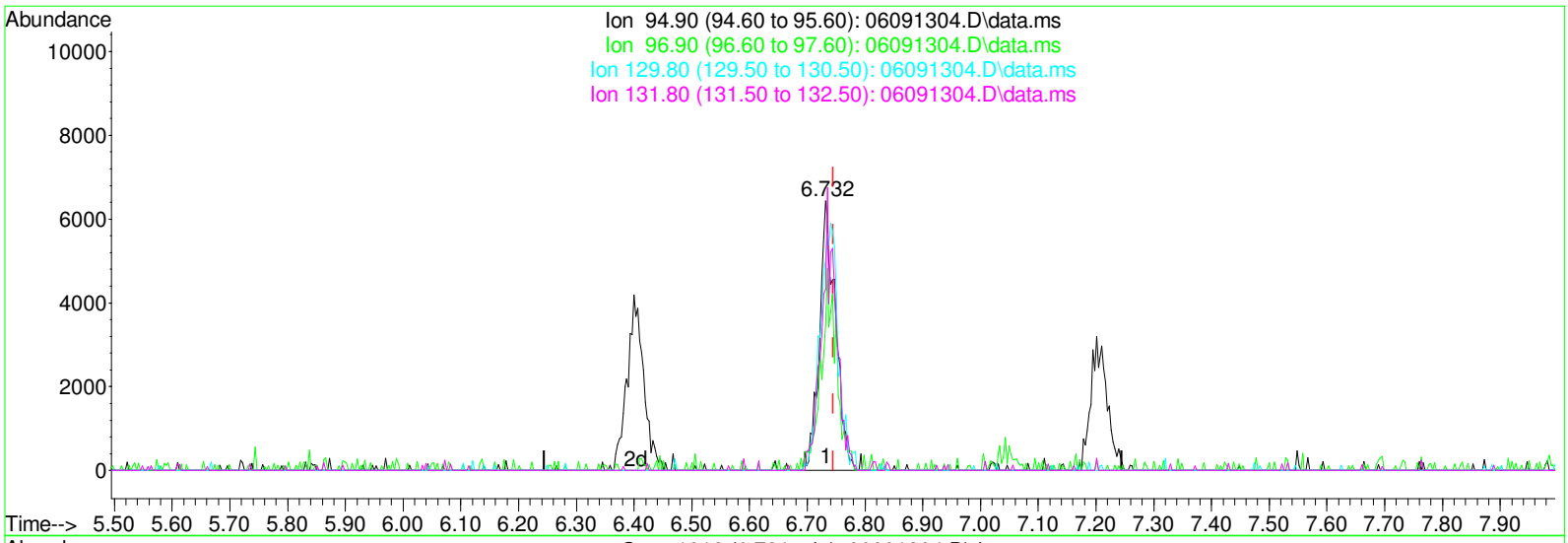
BEFORE

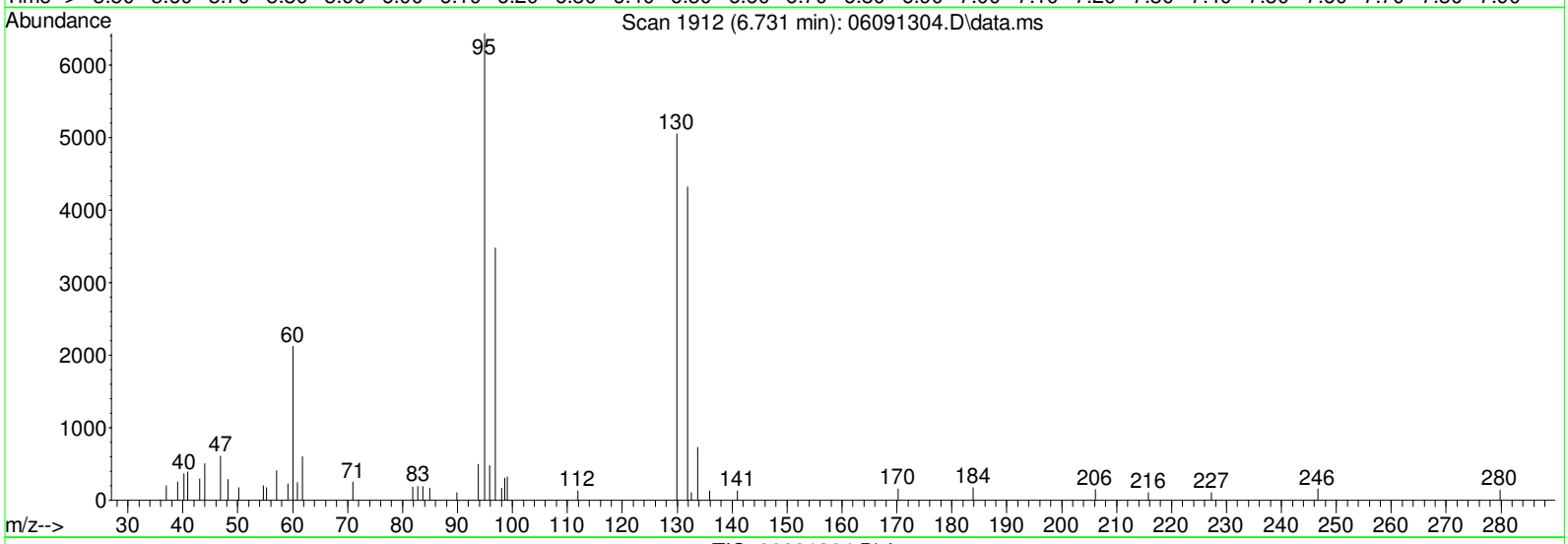
By Alfred at 3:45:17 PM, 7/3/2013

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091304.D
Acq On : 9 Jun 2013 2:36 pm Operator: PS
Sample : ICAL VSTD005 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 3

Quant Time: Jun 10 14:05:55 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration





TIC: 06091304.D\data.ms

(39) Trichloroethene (TM)

6.731min (-0.014) 4.96 ug/L m

response 126465

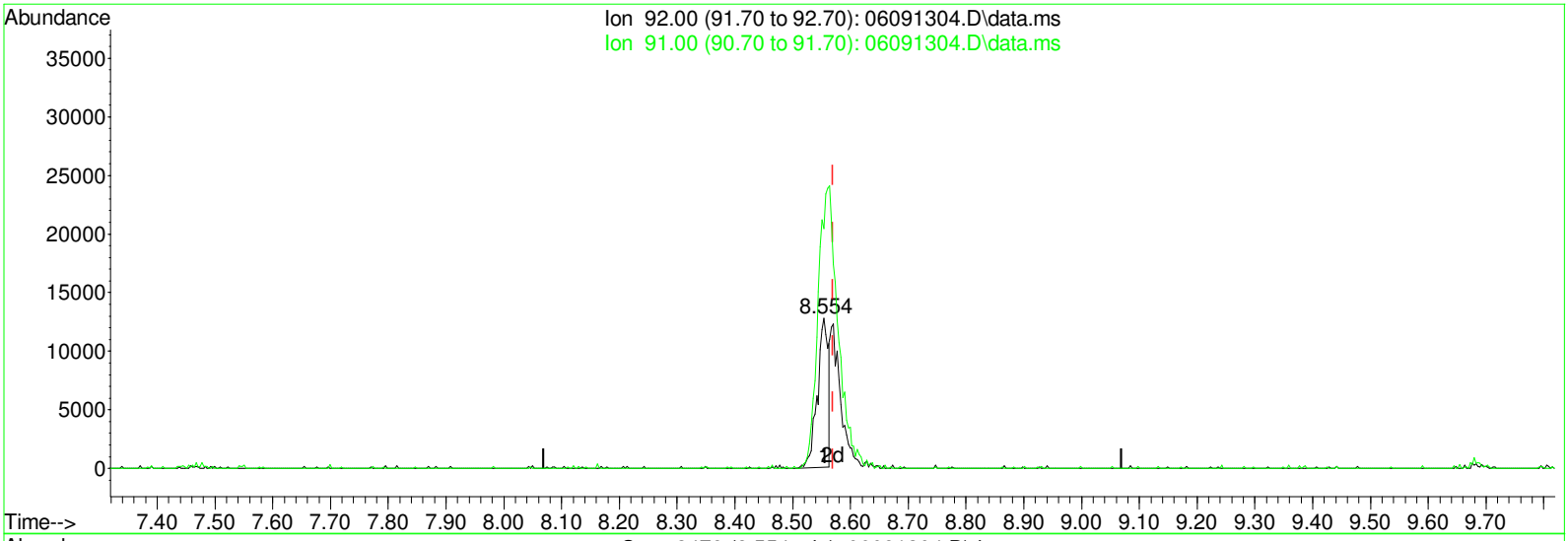
Ion	Exp%	Act%
94.90	100	100
96.90	61.80	74.01
129.80	96.40	102.90
131.80	93.10	93.40

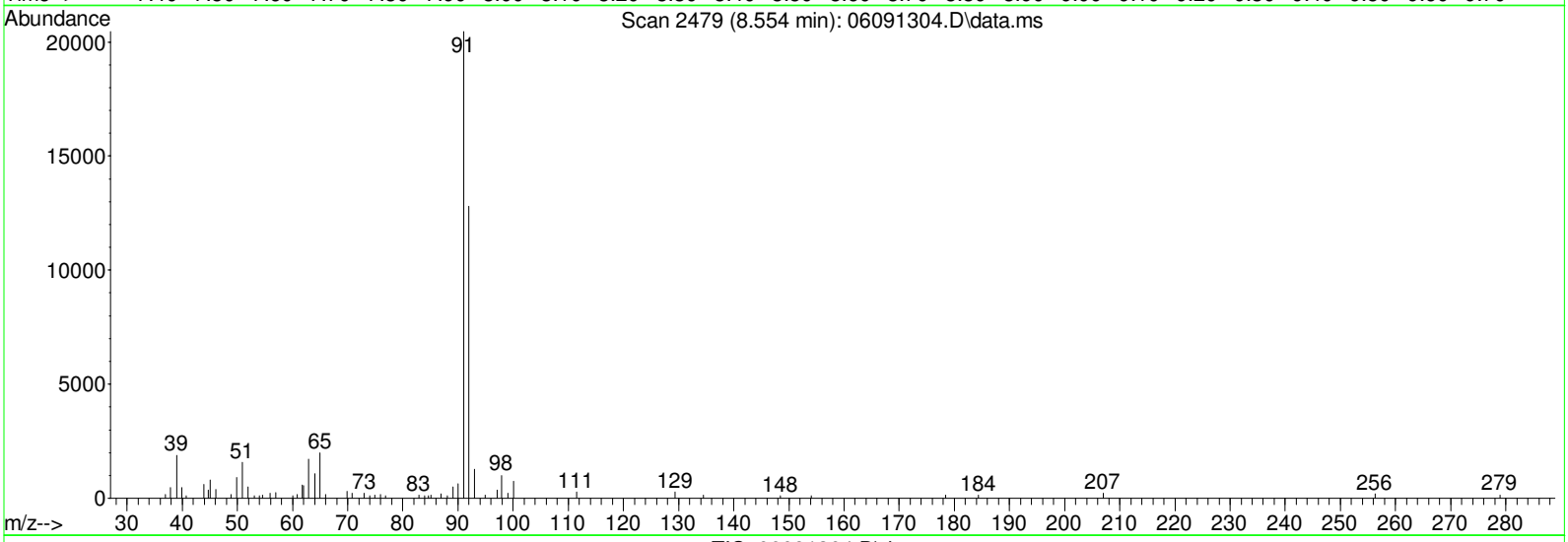
AFTER M3
By Alfred at 3:45:23 PM, 7/3/2013

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091304.D
Acq On : 9 Jun 2013 2:36 pm Operator: PS
Sample : ICAL VSTD005 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 3

Quant Time: Jun 10 14:05:55 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration





TIC: 06091304.D\data.ms

BEFORE

By Alfred at 3:45:26 PM, 7/3/2013

(49) Toluene (TCM)

8.555min (-0.014) 2.29 ug/L

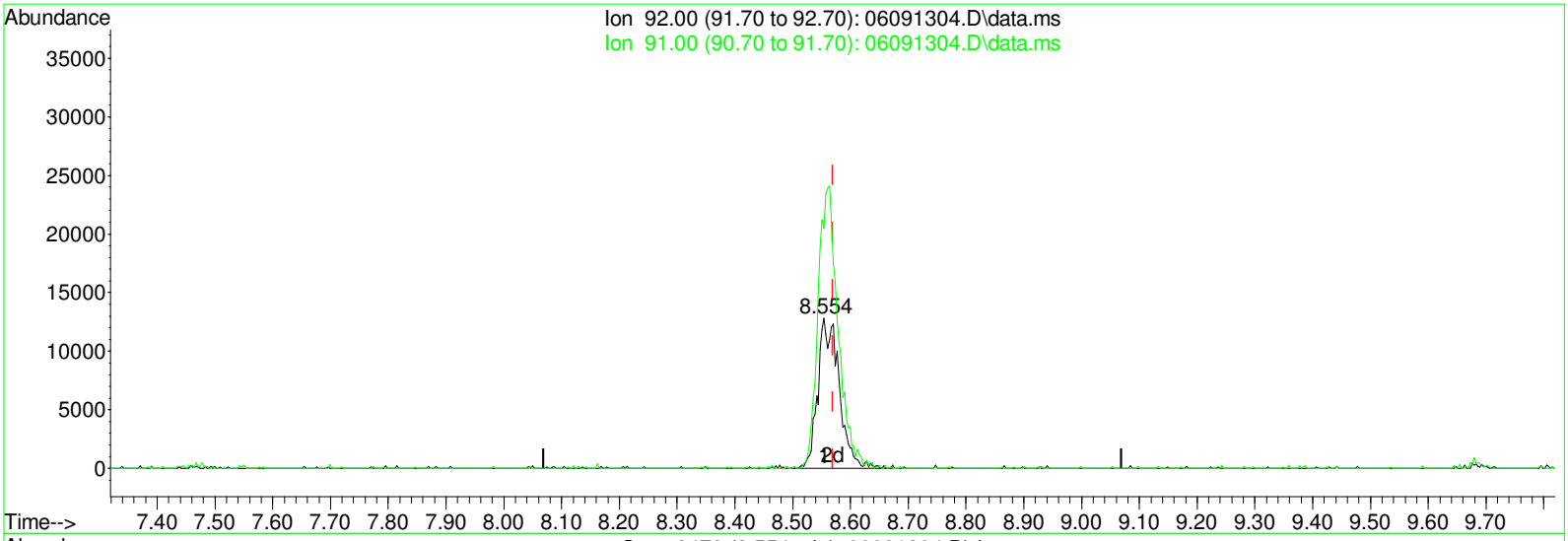
response 149313

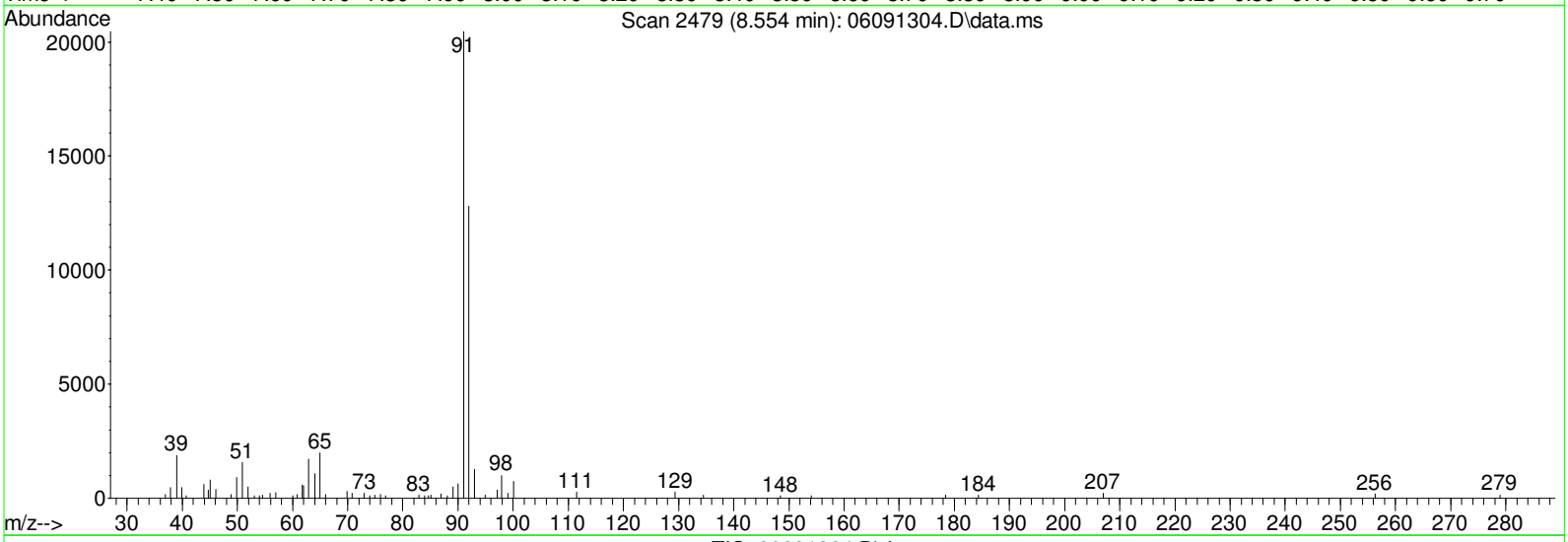
Ion	Exp%	Act%
92.00	100	100
91.00	175.10	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091304.D
Acq On : 9 Jun 2013 2:36 pm Operator: PS
Sample : ICAL VSTD005 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 3

Quant Time: Jun 10 14:05:55 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration





TIC: 06091304.D\data.ms

AFTER M3
By Alfred at 3:45:32 PM, 7/3/2013

(49) Toluene (TCM)

8.554min (-0.015) 5.03 ug/L m

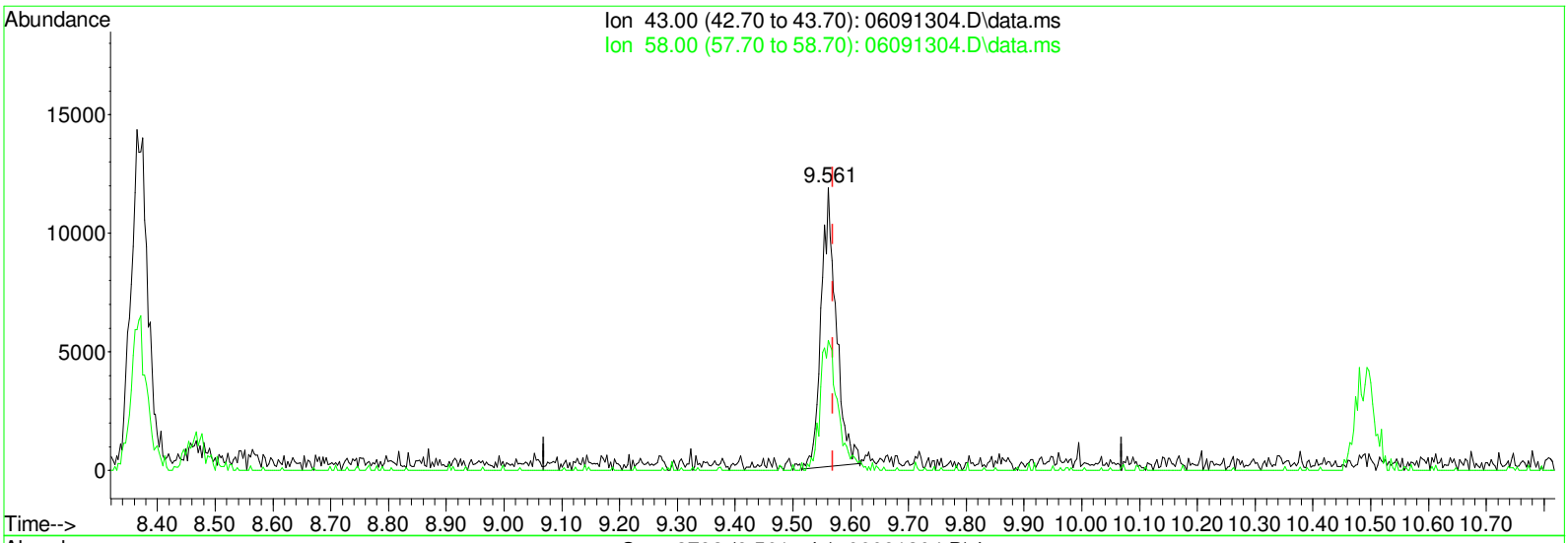
response 328574

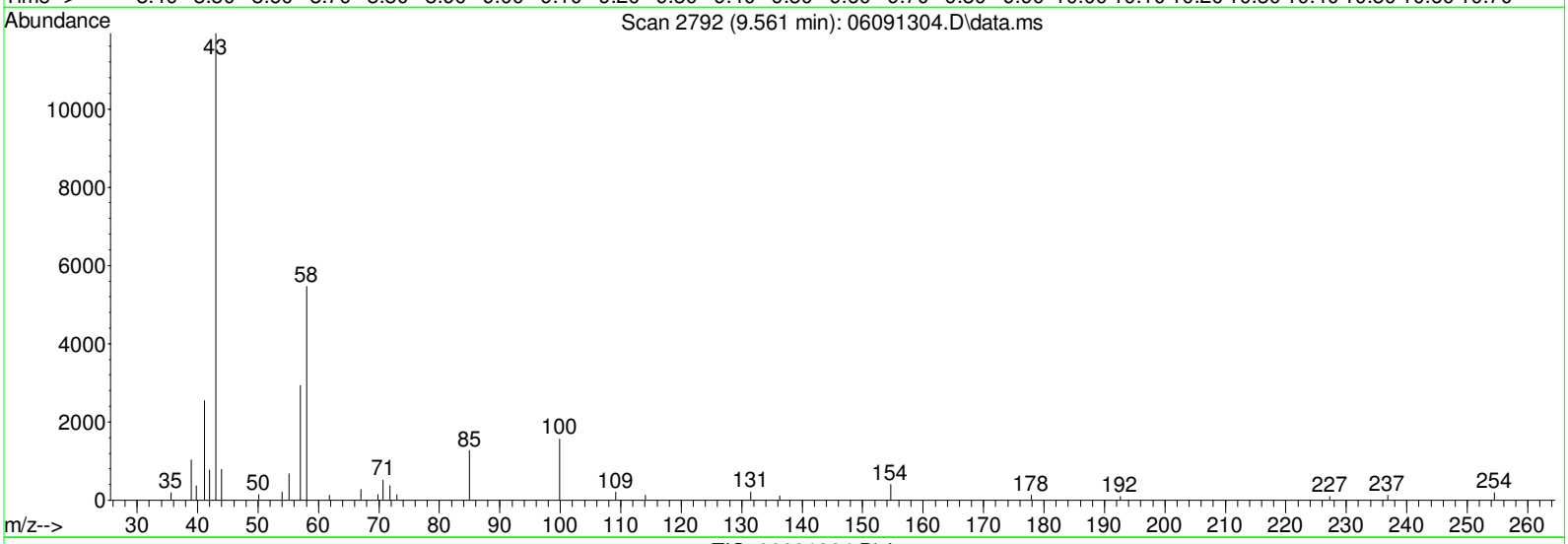
Ion	Exp%	Act%
92.00	100	100
91.00	175.10	177.22
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091304.D
Acq On : 9 Jun 2013 2:36 pm Operator: PS
Sample : ICAL VSTD005 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 3

Quant Time: Jun 10 14:05:55 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration





TIC: 06091304.D\data.ms

(52) 2-Hexanone (TM)

9.562min (-0.007) 9.79 ug/L

response 214133

Ion	Exp%	Act%
43.00	100	100
58.00	52.00	56.24
0.00	0.00	0.00
0.00	0.00	0.00

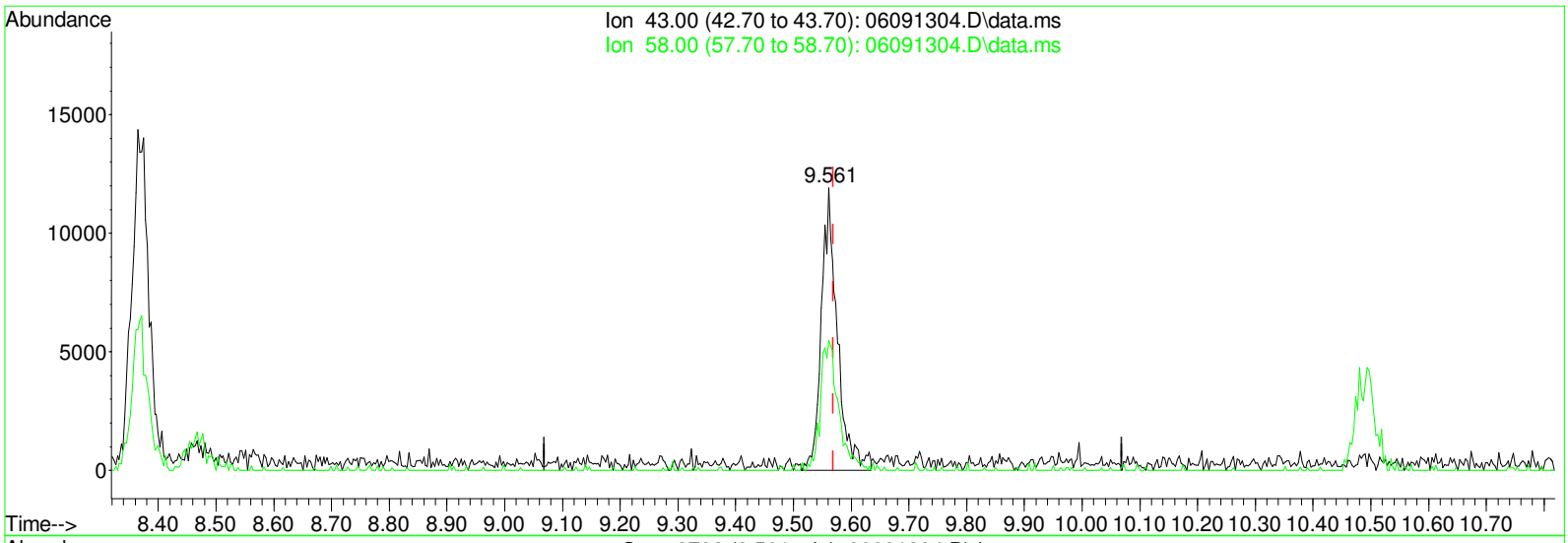
BEFORE

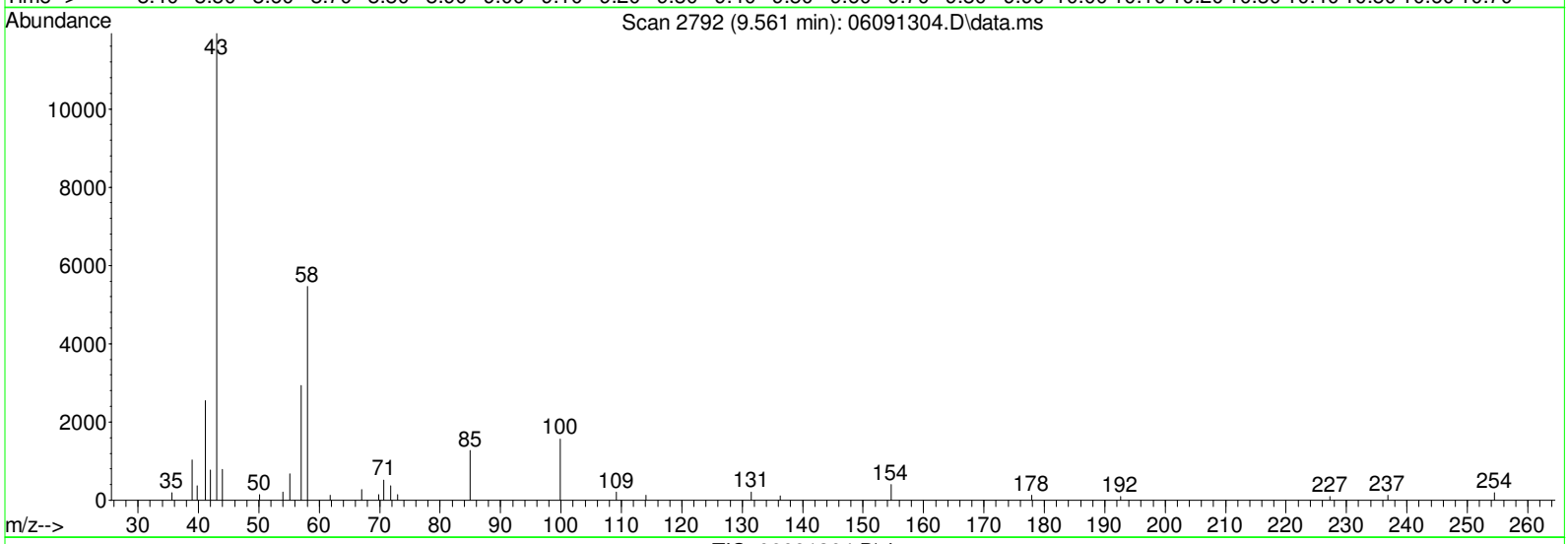
By Alfred at 3:45:40 PM, 7/3/2013

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091304.D
Acq On : 9 Jun 2013 2:36 pm Operator: PS
Sample : ICAL VSTD005 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 3

Quant Time: Jun 10 14:05:55 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration





TIC: 06091304.D\data.ms

(52) 2-Hexanone (TM)

9.561min (-0.008) 10.60 ug/L m

response 231848

Ion	Exp%	Act%
43.00	100	100
58.00	52.00	51.94
0.00	0.00	0.00
0.00	0.00	0.00

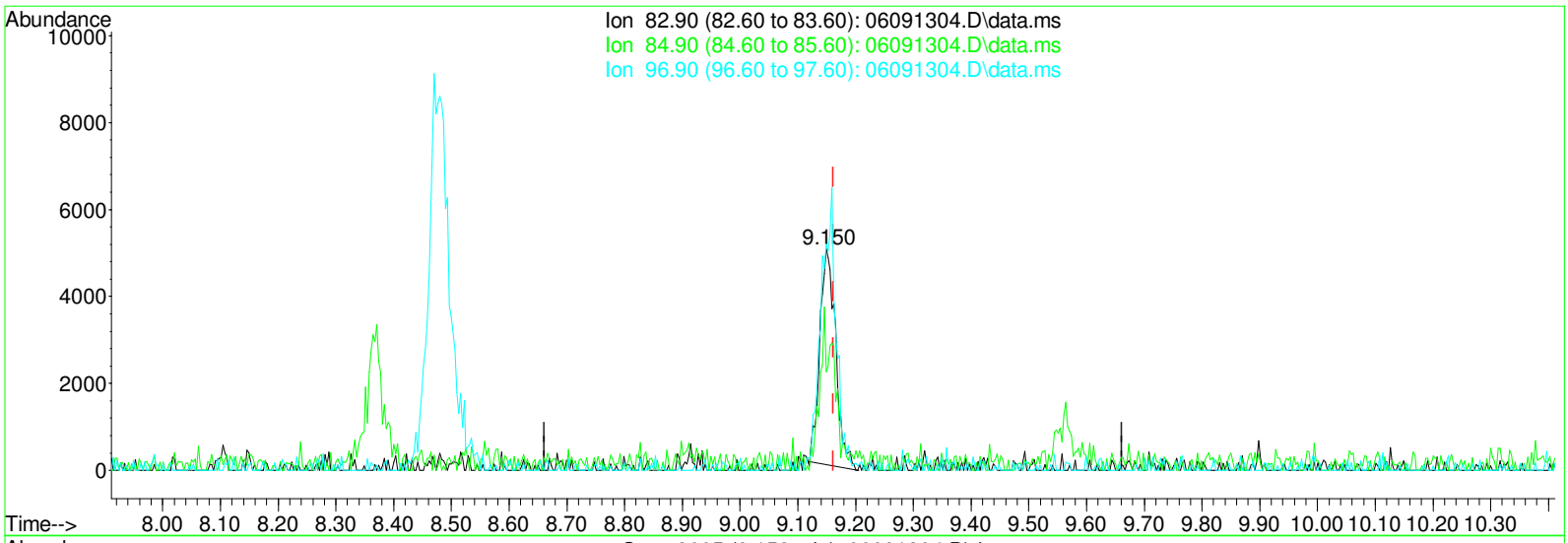
AFTER M3

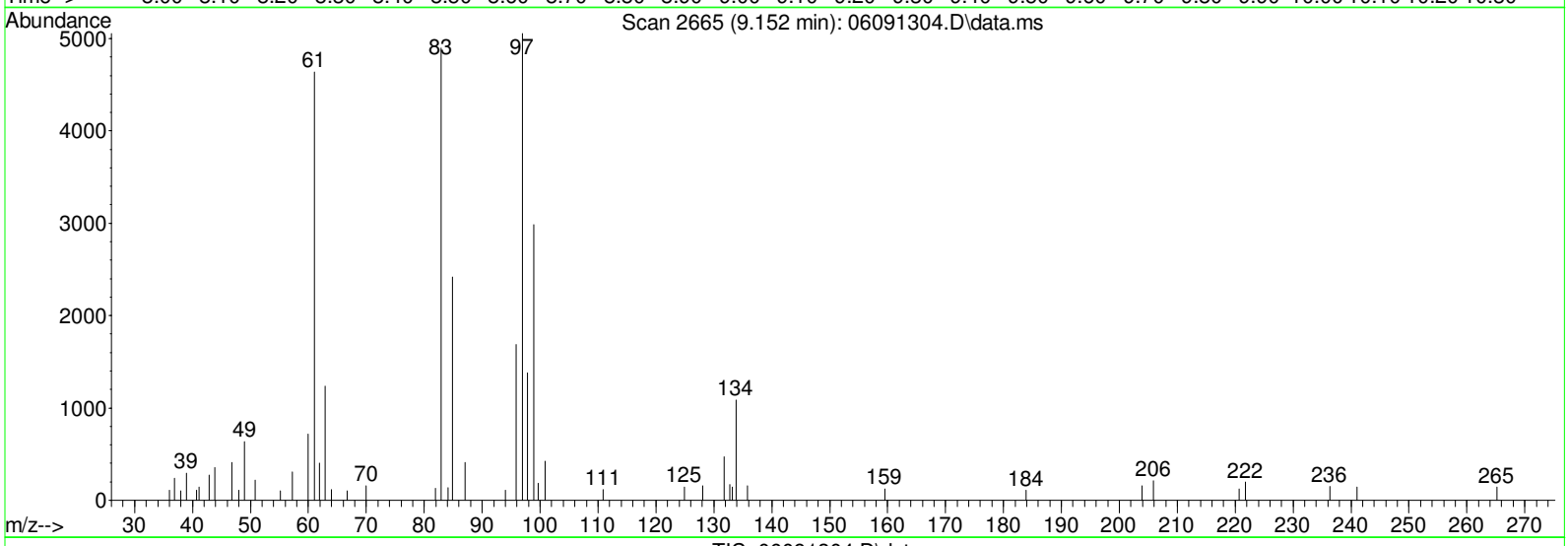
By Alfred at 3:45:45 PM, 7/3/2013

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091304.D
Acq On : 9 Jun 2013 2:36 pm
Operator: PS
Sample : ICAL VSTD005
Inst : VOA7
Misc : VOC_W+
Multiplr: 1.00
ALS Vial : 3

Quant Time: Jun 10 14:05:55 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration





TIC: 06091304.D\data.ms

BEFORE
By Alfred at 3:45:49 PM, 7/3/2013

(53) 1,1,2-Trichloroethane (TM)

9.152min (-0.009) 4.95 ug/L

response 93669

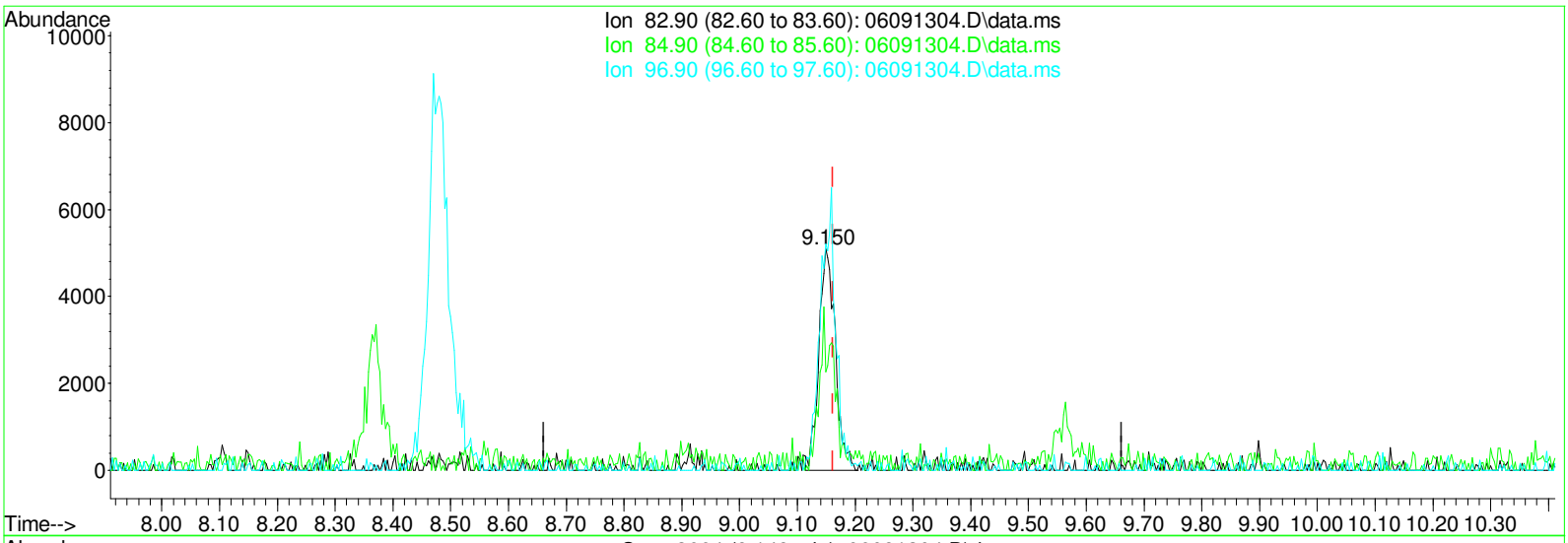
Ion	Exp%	Act%
82.90	100	100
84.90	62.70	68.96
96.90	117.90	127.21
0.00	0.00	0.00

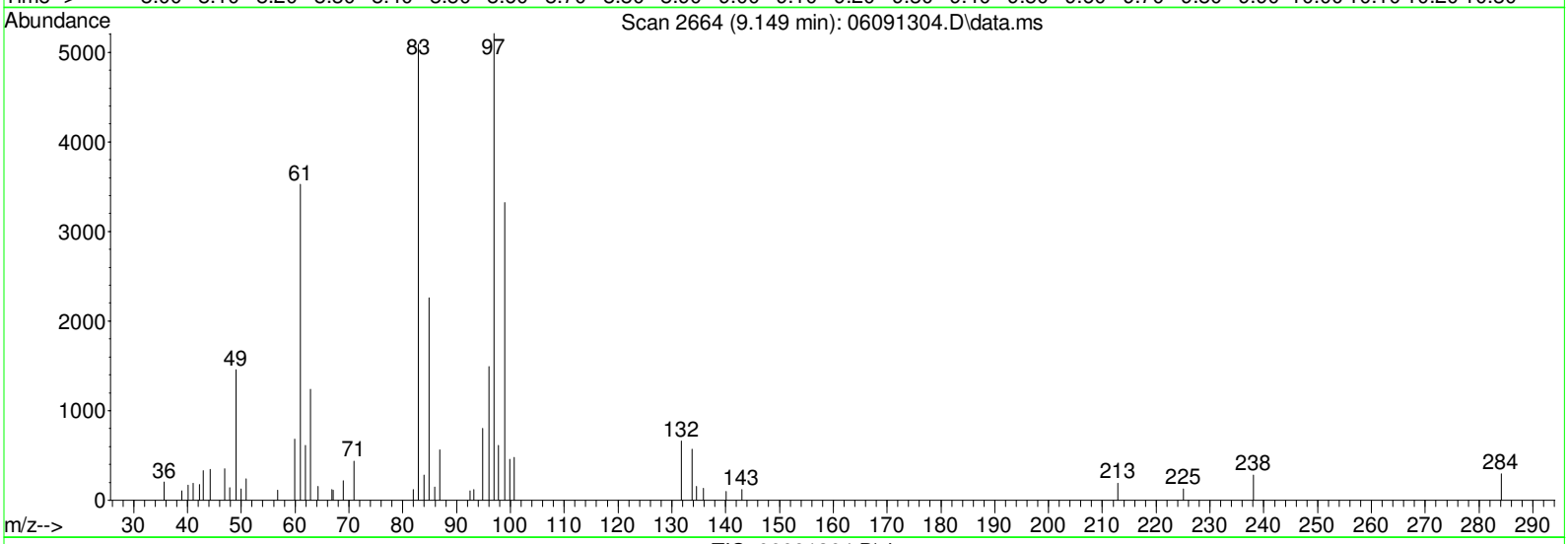
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091304.D
Acq On : 9 Jun 2013 2:36 pm
Sample : ICAL VSTD005
Misc : VOC_W+
ALS Vial : 3

Operator: PS
Inst : VOA7
Multiplr: 1.00

Quant Time: Jun 10 14:05:55 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration





TIC: 06091304.D\data.ms

AFTER M3
By Alfred at 3:45:53 PM, 7/3/2013

(53) 1,1,2-Trichloroethane (TM)

9.149min (-0.012) 5.28 ug/L m

response 99834

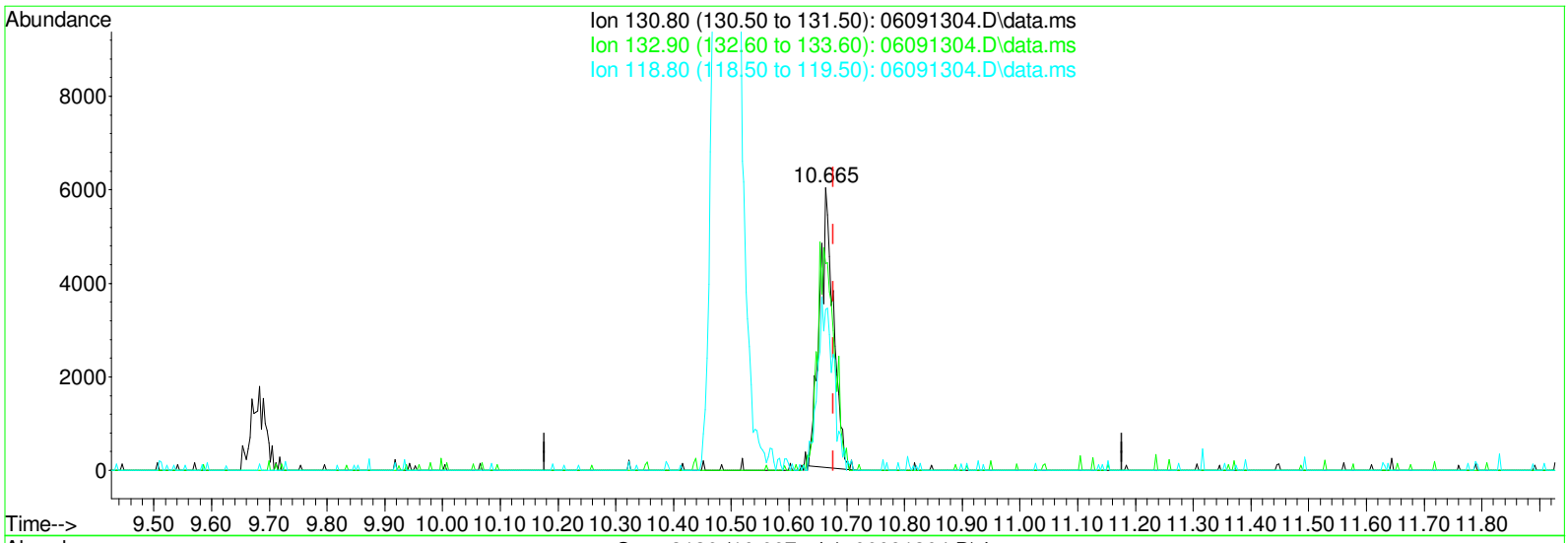
Ion	Exp%	Act%
82.90	100	100
84.90	62.70	64.70
96.90	117.90	119.36
0.00	0.00	0.00

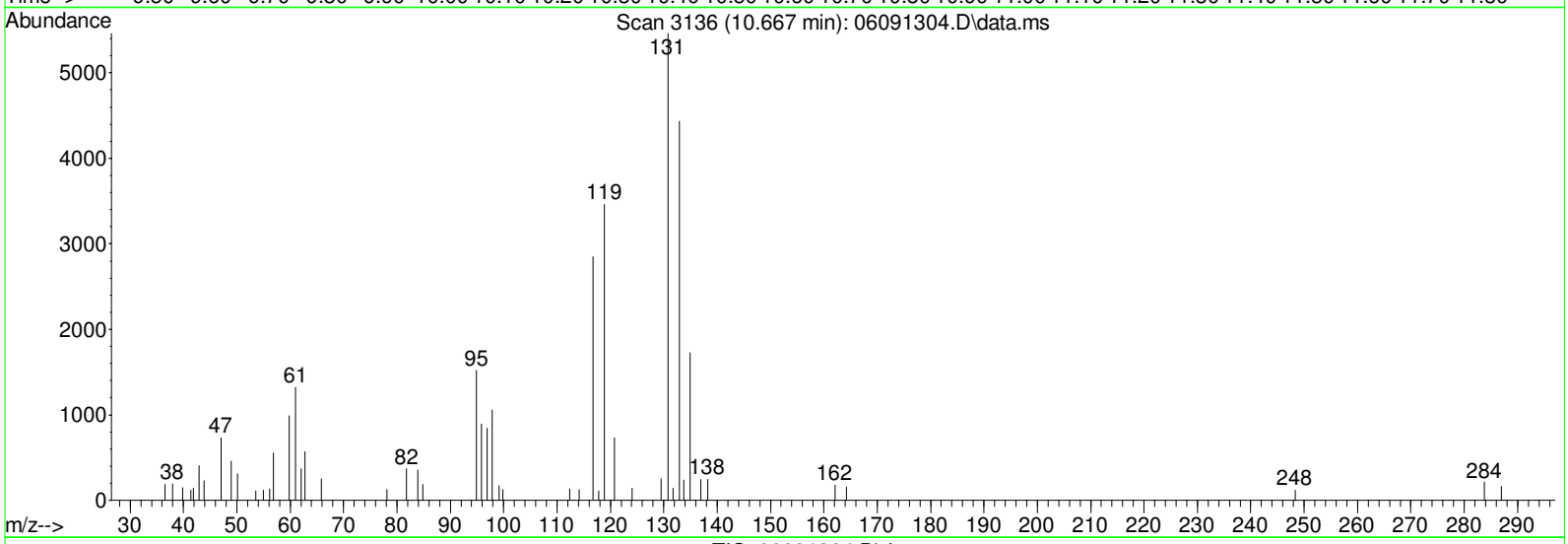
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091304.D
Acq On : 9 Jun 2013 2:36 pm
Sample : ICAL VSTD005
Misc : VOC_W+
ALS Vial : 3

Operator: PS
Inst : VOA7
Multiplr: 1.00

Quant Time: Jun 10 14:05:55 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration





TIC: 06091304.D\data.ms

(60) 1,1,1,2-Tetrachloroethane (M)

10.666min (-0.010) 4.50 ug/L

response 99983

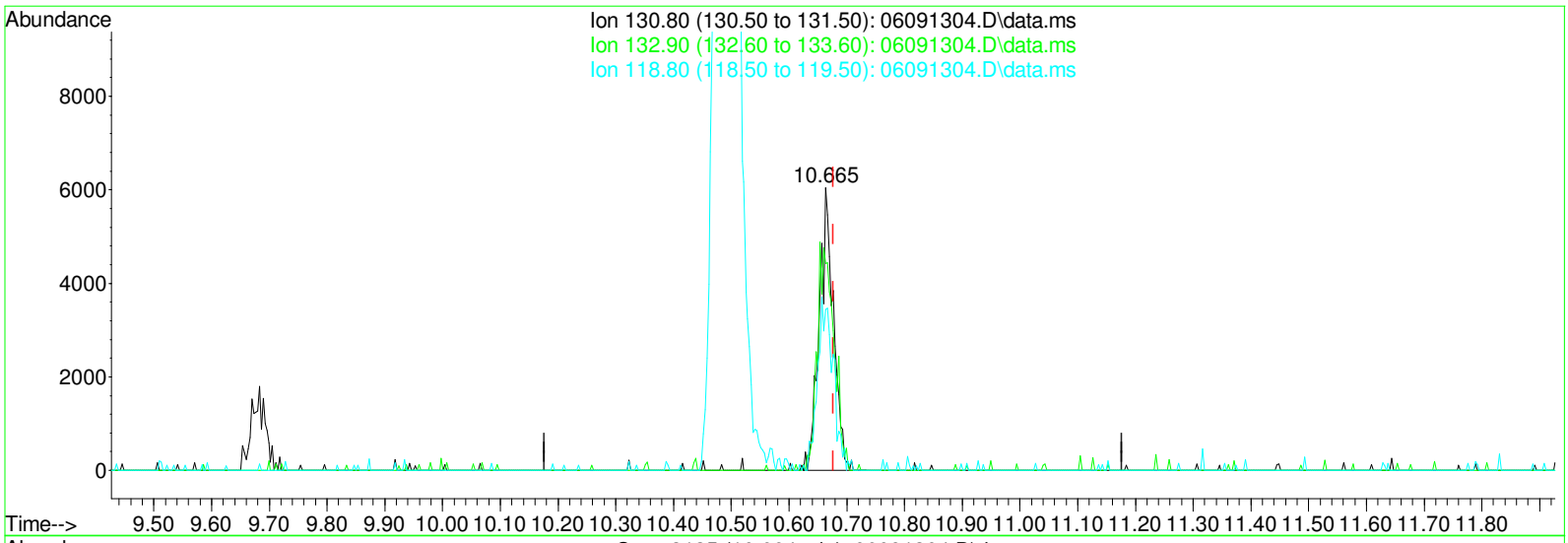
Ion	Exp%	Act%
130.80	100	100
132.90	93.10	96.44
118.80	61.00	0.00#
0.00	0.00	0.00

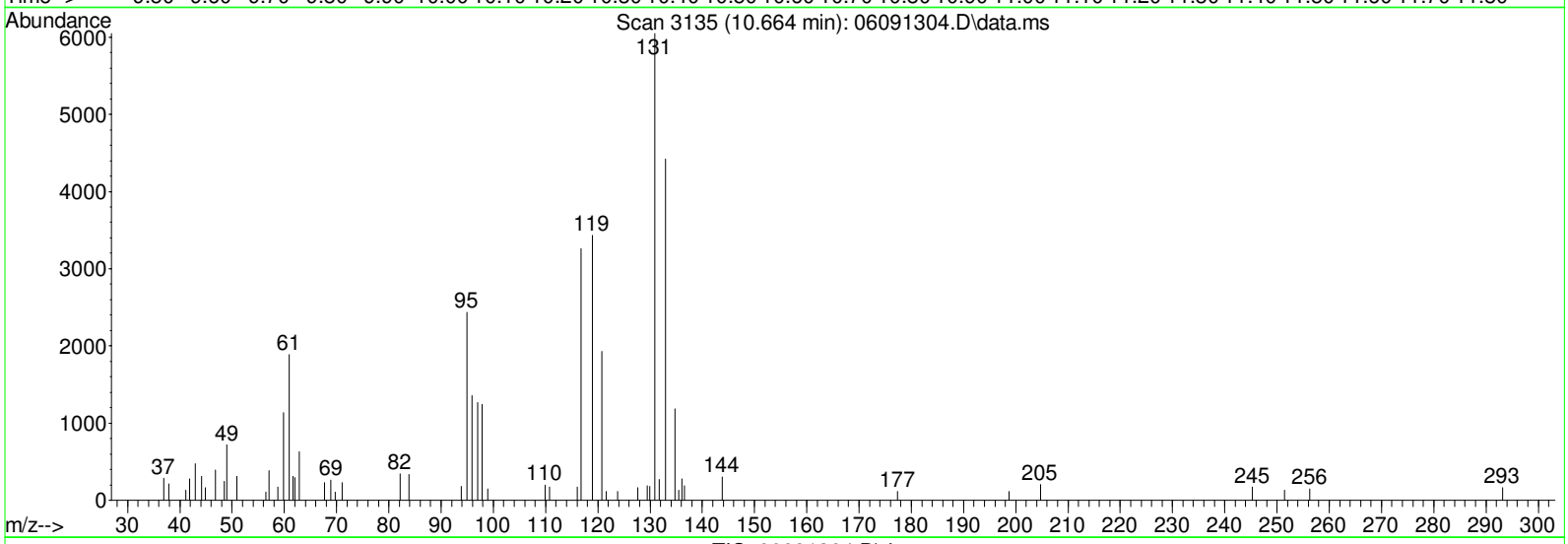
BEFORE
By Alfred at 3:45:58 PM, 7/3/2013

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091304.D
Acq On : 9 Jun 2013 2:36 pm
Operator: PS
Sample : ICAL VSTD005
Inst : VOA7
Misc : VOC_W+
Multiplr: 1.00
ALS Vial : 3

Quant Time: Jun 10 14:05:55 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration





TIC: 06091304.D\data.ms

(60) 1,1,1,2-Tetrachloroethane (M)

10.664min (-0.013) 4.64 ug/L m

response 103009

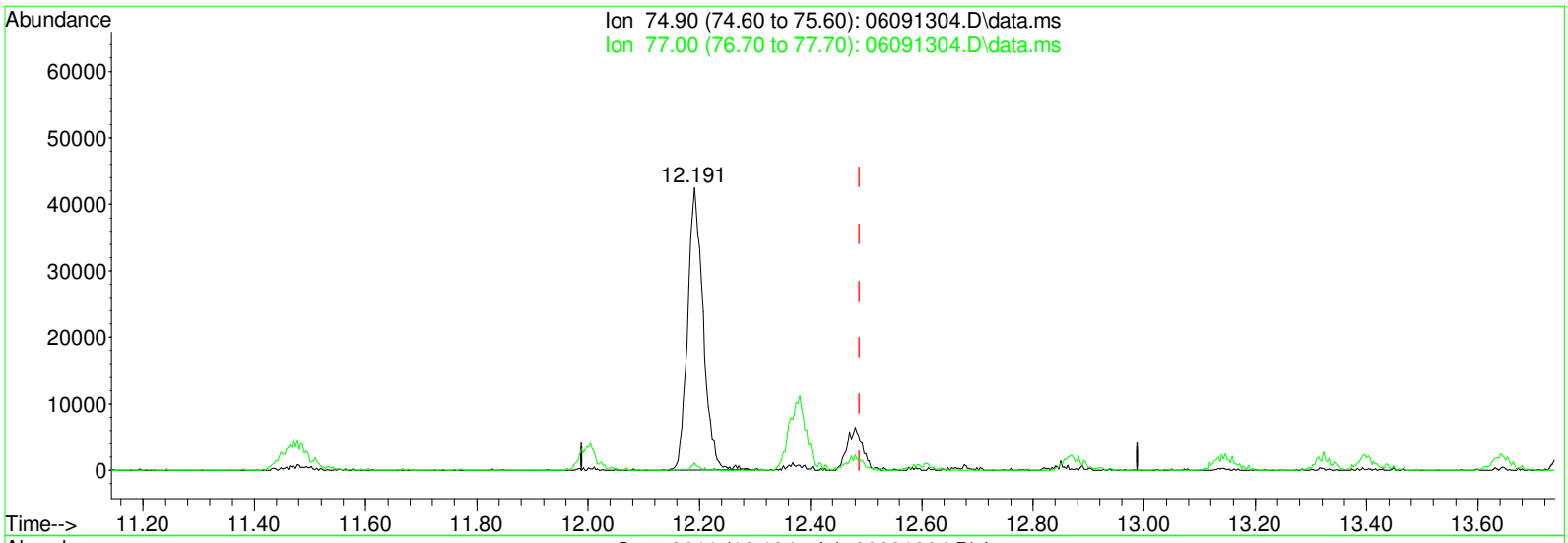
Ion	Exp%	Act%
130.80	100	100
132.90	93.10	93.61
118.80	61.00	0.00#
0.00	0.00	0.00

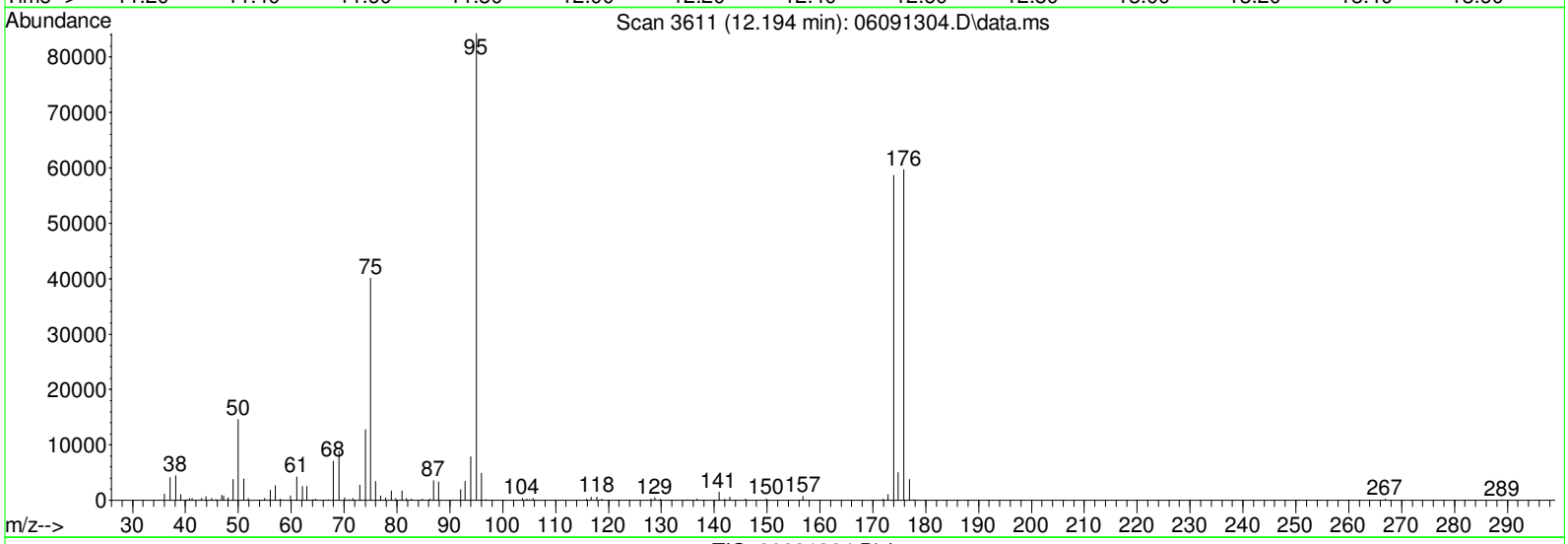
AFTER M3
By Alfred at 3:46:03 PM, 7/3/2013

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091304.D
Acq On : 9 Jun 2013 2:36 pm Operator: PS
Sample : ICAL VSTD005 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 3

Quant Time: Jun 10 14:05:55 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration





TIC: 06091304.D\data.ms

(70) 1,2,3-Trichloropropane (M)

12.193min (-0.296) 28.08 ug/L

response 825680

Ion	Exp%	Act%
74.90	100	100
77.00	32.60	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

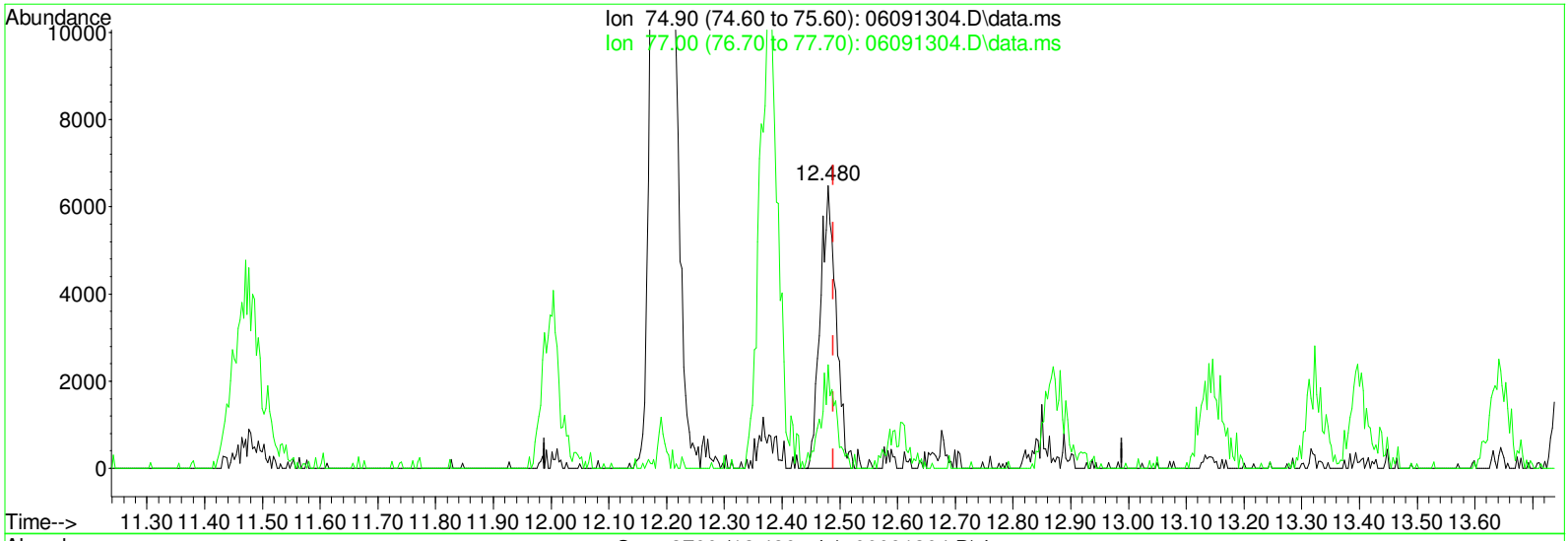
BEFORE
By Alfred at 3:46:07 PM, 7/3/2013

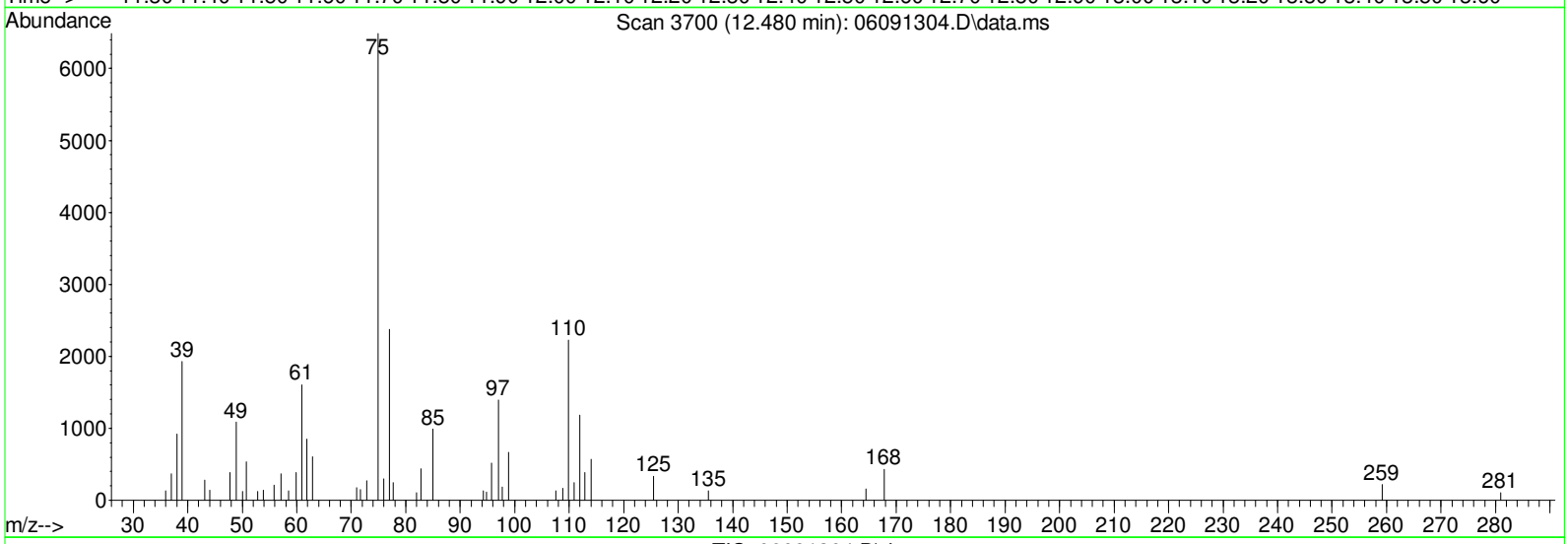
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091304.D
Acq On : 9 Jun 2013 2:36 pm
Sample : ICAL VSTD005
Misc : VOC_W+
ALS Vial : 3

Operator: PS
Inst : VOA7
Multiplr: 1.00

Quant Time: Jun 10 14:05:55 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration





TIC: 06091304.D\data.ms

(70) 1,2,3-Trichloropropane (M)

12.480min (-0.008) 4.22 ug/L m

response 124206

Ion	Exp%	Act%
74.90	100	100
77.00	32.60	33.13
0.00	0.00	0.00
0.00	0.00	0.00

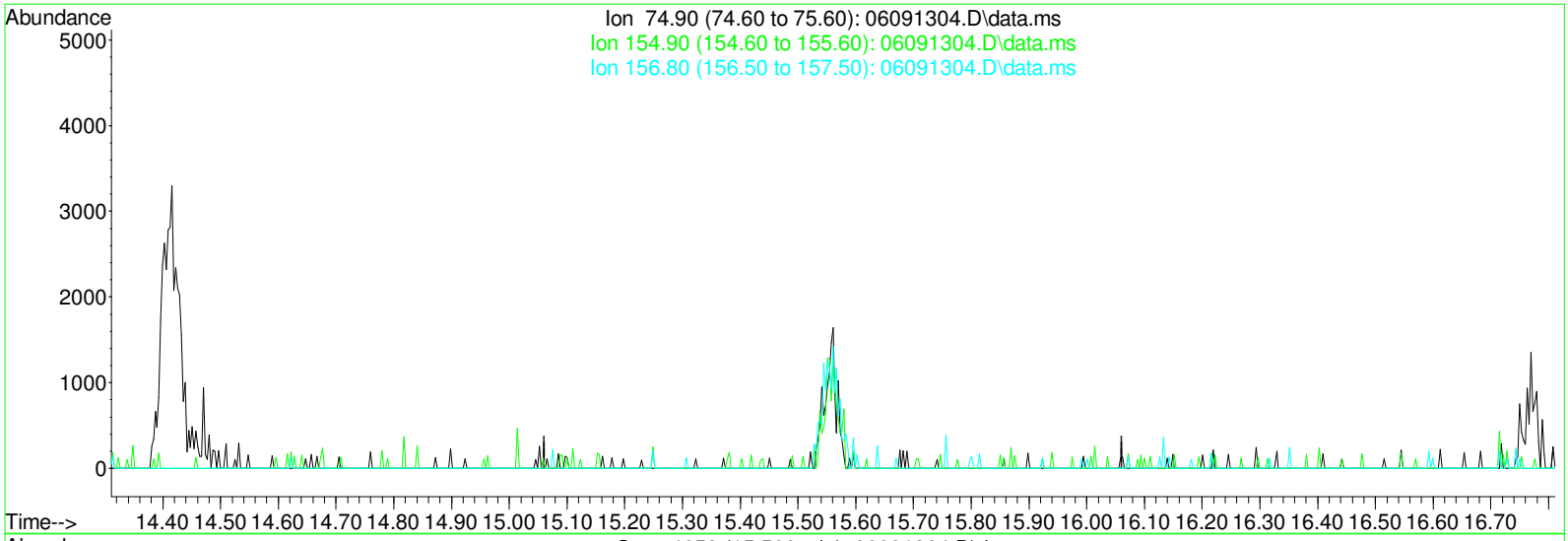
AFTER M2

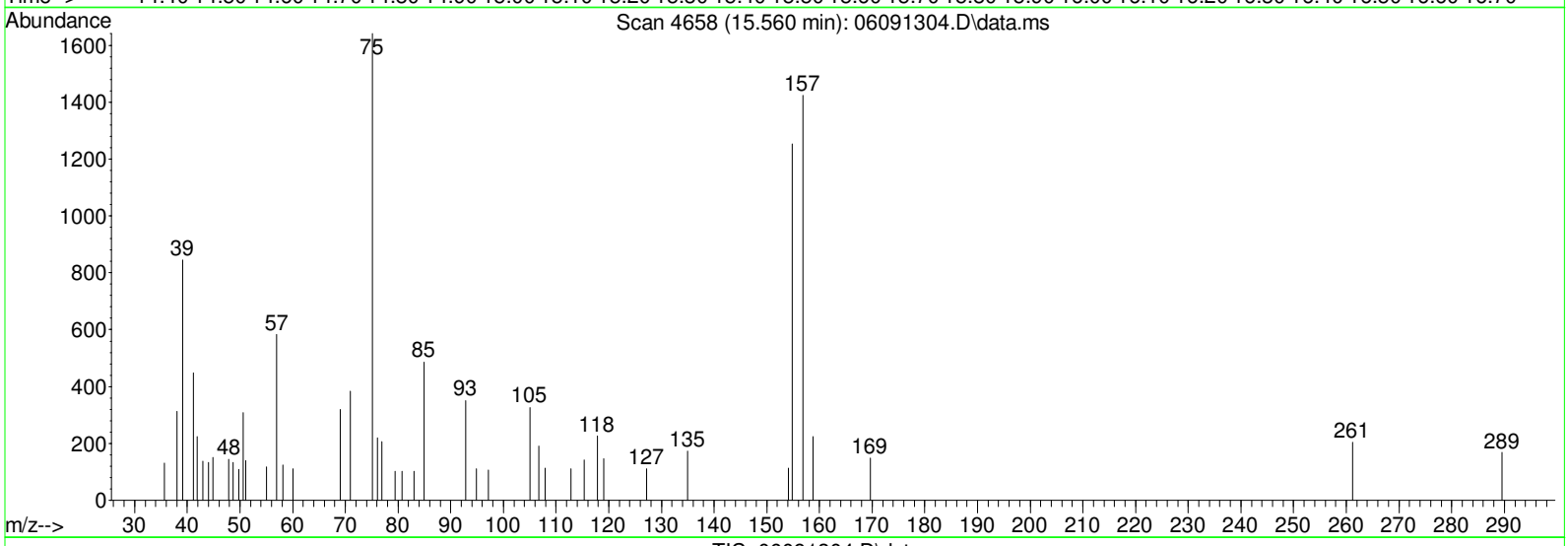
By Alfred at 3:46:12 PM, 7/3/2013

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091304.D
Acq On : 9 Jun 2013 2:36 pm Operator: PS
Sample : ICAL VSTD005 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 3

Quant Time: Jun 10 14:05:55 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration





TIC: 06091304.D\data.ms

(85) 1,2-Dibromo-3-chloropropa (M)

15.561min (-15.561) 0.00 ug/L

response 0

Ion	Exp%	Act%
74.90	100	0.00
154.90	74.30	0.00#
156.80	95.90	0.00#
0.00	0.00	0.00

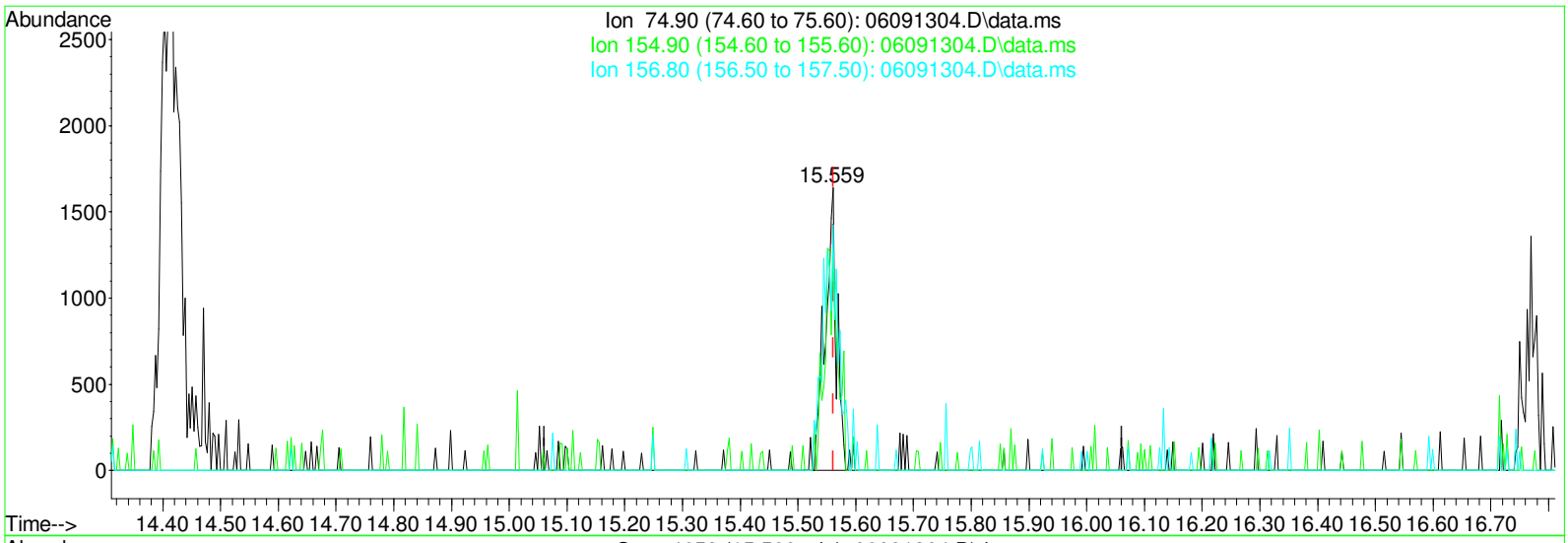
BEFORE

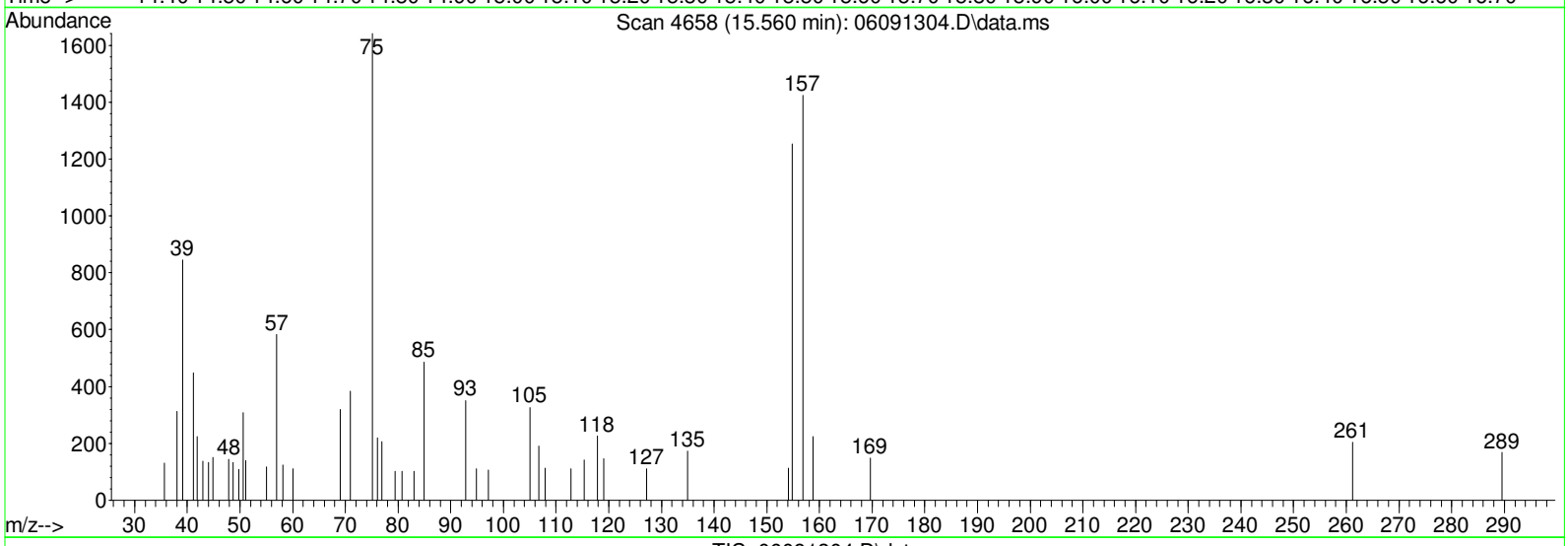
By Alfred at 3:46:17 PM, 7/3/2013

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091304.D
Acq On : 9 Jun 2013 2:36 pm
Operator: PS
Sample : ICAL VSTD005
Inst : VOA7
Misc : VOC_W+
Multiplr: 1.00
ALS Vial : 3

Quant Time: Jun 10 14:05:55 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration





TIC: 06091304.D\data.ms

(85) 1,2-Dibromo-3-chloropropa (M)

15.560min (-0.000) 3.76 ug/L m

response 23875

Ion	Exp%	Act%
74.90	100	100
154.90	74.30	91.89
156.80	95.90	115.77
0.00	0.00	0.00

AFTER M1

By Alfred at 3:46:23 PM, 7/3/2013

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091305.D
Acq On : 9 Jun 2013 3:11 pm Operator: PS
Sample : ICAL VSTD010 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 4

Quant Time: Jun 10 14:11:05 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	5.389	168	1875814	30.00	ug/L	0.00
31) 1,4-Difluorobenzene	6.403	114	3146934	30.00	ug/L	0.00
50) Chlorobenzene-d5	10.492	82	1783482	30.00	ug/L	0.00
69) 1,4-Dichlorobenzene-d4	13.855	152	1668218	30.00	ug/L	0.00
System Monitoring Compounds						
29) Dibromofluoromethane	5.263	113	817213	27.21	ug/L	0.00
Spiked Amount 30.000	Range 86 - 118		Recovery = 90.70%			
32) 1,2-Dichloroethane-d4	5.726	102	226695	29.01	ug/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 96.70%			
48) Toluene-d8	8.469	98	3880675	30.23	ug/L	0.00
Spiked Amount 30.000	Range 88 - 110		Recovery = 100.77%			
68) Bromofluorobenzene	12.194	174	1341834	33.30	ug/L	0.00
Spiked Amount 30.000	Range 86 - 115		Recovery = 111.00%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.217	85	327619m	12.29	ug/L	
3) Chloromethane	1.352	50	257911m	10.04	ug/L	
4) Vinyl chloride	1.424	62	297782	9.73	ug/L	94
5) 1,3-Butadiene	1.453	39	223707	9.34	ug/L	91
6) Bromomethane	1.670	96	105430m	18.61	ug/L	
7) Chloroethane	1.748	64	155990	10.72	ug/L	90
8) Trichlorofluoromethane	1.947	101	353198	8.78	ug/L	100
9) Isopropyl Alcohol	2.589	45	357874	154.13	ug/L #	94
10) Ethyl Ether	2.192	59	208745	9.67	ug/L	95
11) Acrolein	2.300	56	38889	8.99	ug/L #	10
12) Acetone	2.439	43	203320	17.58	ug/L	99
13) Freon-TF	2.394	151	159797	11.07	ug/L #	37
14) 1,1-Dichloroethene	2.390	96	207946	11.62	ug/L	81
15) Methylene Chloride	2.867	84	253937	10.40	ug/L	87
16) Carbon disulfide	2.584	76	1544844	20.54	ug/L	96
17) Acrylonitrile	3.149	53	113790m	9.05	ug/L	
18) MTBE	3.188	73	738466	9.56	ug/L	100
19) Hexane	3.519	57	228452	11.06	ug/L	96
20) trans-1,2-Dichloroethene	3.170	96	237679	10.47	ug/L	92
21) Vinyl acetate	3.810	43	1047980	20.76	ug/L	94
22) 1,1-Dichloroethane	3.701	63	393292	9.06	ug/L	96
23) 2-Butanone	4.608	72	85587	21.63	ug/L #	83
24) 2,2-Dichloropropane	4.535	77	350745	9.88	ug/L	96
25) cis-1,2-Dichloroethene	4.546	96	260727	9.92	ug/L	92
26) Ethyl Acetate	4.729	45	47000	10.08	ug/L #	73
27) Chloroform	5.034	83	379926	8.73	ug/L	96
28) Bromochloromethane	4.889	128	111018	10.59	ug/L #	89
30) Isobutyl alcohol	5.835	43	241062	149.25	ug/L	98
33) Carbon Tetrachloride	5.496	117	247326	8.13	ug/L	95
34) 1,2-Dichloroethane	5.837	62	316127m	8.80	ug/L	
35) 1,1,1-Trichloroethane	5.258	97	323677	8.91	ug/L	97
36) 1,1-Dichloropropene	5.509	110	106853	9.44	ug/L	91
37) 1-Butanol	6.799	56	151287	166.66	ug/L	92
38) Benzene	5.795	78	957101	9.21	ug/L	99
39) Trichloroethene	6.739	95	227432	8.80	ug/L	94
40) 1,2-Dichloropropane	7.043	63	240497m	9.09	ug/L	
41) 1,4-Dioxane	7.290	88	38421	102.47	ug/L #	72
42) Bromodichloromethane	7.460	83	277946	8.51	ug/L	98
43) Dibromomethane	7.206	93	142030	9.53	ug/L	94
44) 2-Nitropropane	7.807	41	61434	8.02	ug/L #	2
45) 2-Chloroethylvinyl ether	7.953	63	252313m	14.92	ug/L	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091305.D
Acq On : 9 Jun 2013 3:11 pm Operator: PS
Sample : ICAL VSTD010 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 4

Quant Time: Jun 10 14:11:05 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration

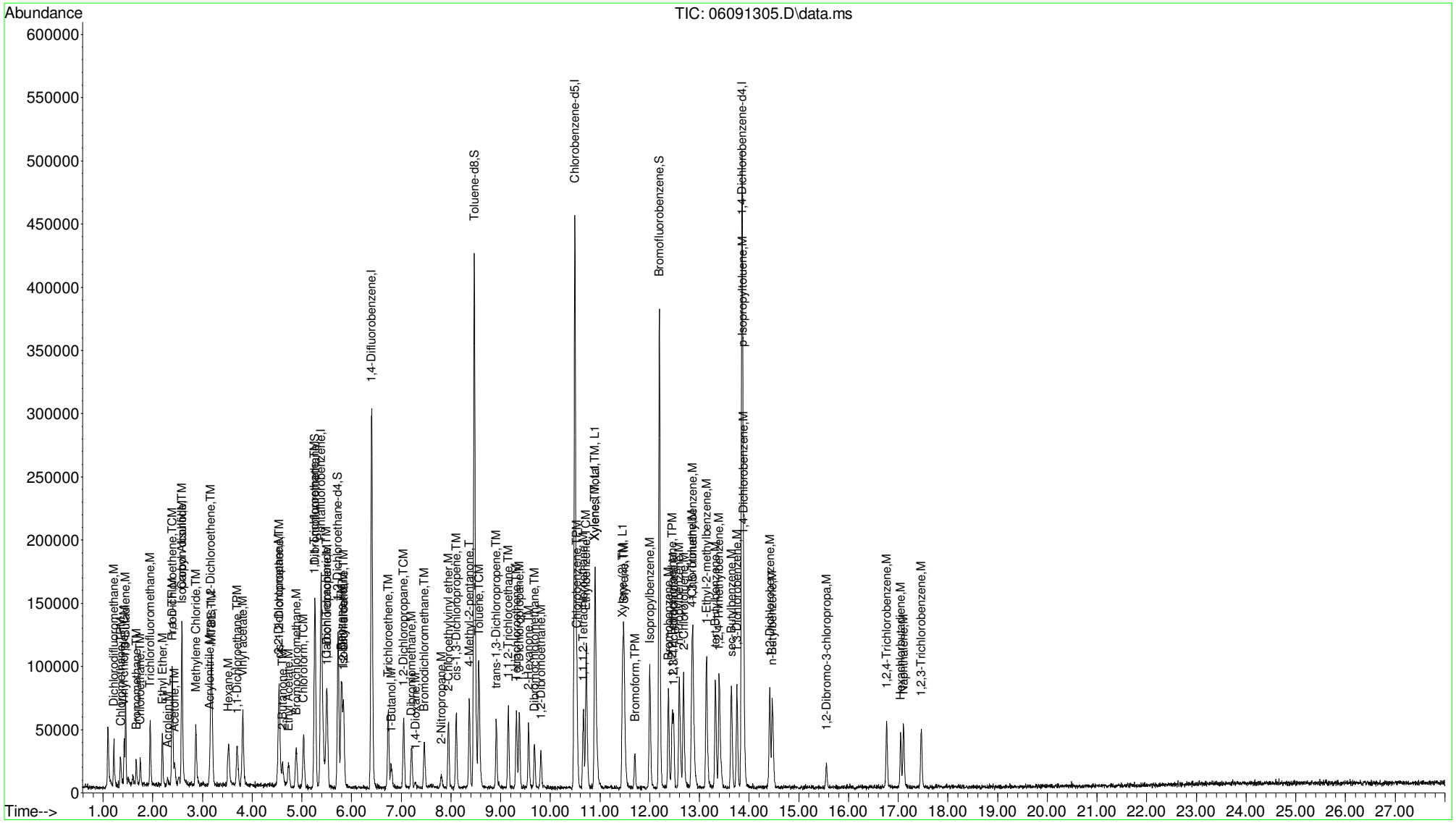
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
46) 4-Methyl-2-pentanone	8.367	43	544263	16.47 ug/L	92
47) cis-1,3-Dichloropropene	8.109	75	379963	8.89 ug/L	93
49) Toluene	8.564	92	593663	8.97 ug/L	98
51) trans-1,3-Dichloropropene	8.911	75	325928	8.46 ug/L	97
52) 2-Hexanone	9.559	43	391416	17.02 ug/L	96
53) 1,1,2-Trichloroethane	9.151	83	197726	9.95 ug/L	94
54) 1,3-Dichloropropane	9.374	76	389570	9.05 ug/L	96
55) Tetrachloroethene	9.318	164	169659	10.22 ug/L	98
56) Dibromochloromethane	9.679	129	191166	7.63 ug/L	86
57) 1,2-Dibromoethane	9.810	107	215268	9.07 ug/L #	99
58) Chlorobenzene	10.533	112	600676	9.52 ug/L	100
59) Ethylbenzene	10.723	91	1096057	9.13 ug/L	96
60) 1,1,1,2-Tetrachloroethane	10.666	131	184073	7.88 ug/L #	62
61) Xylene	10.900	106	802438	18.27 ug/L	94
62) Xylene (2)	11.454	106	391932	9.29 ug/L	93
63) Xylenes, Total	10.900	106	1194370m	27.55 ug/L #	
64) Styrene	11.481	104	706588	9.02 ug/L	96
65) Isopropylbenzene	12.004	105	907503	9.64 ug/L	98
66) Bromoform	11.702	173	142924	8.79 ug/L #	94
67) 1,1,2,2-Tetrachloroethane	12.455	83	329300	10.07 ug/L	99
70) 1,2,3-Trichloropropane	12.482	75	260785	8.70 ug/L #	42
71) n-Propylbenzene	12.596	91	1012335	9.08 ug/L	99
72) Bromobenzene	12.375	156	268622	9.30 ug/L #	91
73) 1,3,5-Trimethylbenzene	12.867	105	795357	8.84 ug/L	98
74) 2-Chlorotoluene	12.682	91	689610	8.71 ug/L	95
75) 4-Chlorotoluene	12.850	91	778026	8.49 ug/L	94
76) tert-Butylbenzene	13.319	119	539799	8.73 ug/L	95
77) 1-Ethyl-2-methylbenzene	13.143	105	988031	9.14 ug/L	99
78) 1,2,4-Trimethylbenzene	13.396	105	805505	8.59 ug/L	99
79) sec-Butylbenzene	13.643	105	797200	9.19 ug/L	99
80) p-Isopropyltoluene	13.873	119	672597	9.20 ug/L	99
81) 1,3-Dichlorobenzene	13.754	146	436630	9.40 ug/L	99
82) 1,4-Dichlorobenzene	13.888	146	502950	9.43 ug/L	98
83) n-Butylbenzene	14.465	91	562456	8.50 ug/L	96
84) 1,2-Dichlorobenzene	14.416	146	420317	9.13 ug/L	98
85) 1,2-Dibromo-3-chloropropa	15.554	75	50769m	7.84 ug/L	
86) 1,2,4-Trichlorobenzene	16.767	180	205818	9.57 ug/L	94
87) Hexachlorbutadiene	17.051	225	94843	10.42 ug/L	95
88) Naphthalene	17.106	128	514402	8.44 ug/L	97
89) 1,2,3-Trichlorobenzene	17.465	180	163262	8.93 ug/L	97

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091305.D
Acq On : 9 Jun 2013 3:11 pm Operator: PS
Sample : ICAL VSTD010 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 4

Quant Time: Jun 10 14:11:05 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091305.D
Acq On : 9 Jun 2013 3:11 pm Operator: PS
Sample : ICAL VSTD010 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 4

Quant Time: Jun 10 14:09:11 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	5.389	168	1875814	30.00	ug/L	0.00
31) 1,4-Difluorobenzene	6.403	114	3146934	30.00	ug/L	0.00
50) Chlorobenzene-d5	10.492	82	1783482	30.00	ug/L	0.00
69) 1,4-Dichlorobenzene-d4	13.855	152	1668218	30.00	ug/L	0.00
System Monitoring Compounds						
29) Dibromofluoromethane	5.263	113	817213	27.21	ug/L	0.00
Spiked Amount 30.000	Range 86 - 118		Recovery = 90.70%			
32) 1,2-Dichloroethane-d4	5.726	102	226695	29.01	ug/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 96.70%			
48) Toluene-d8	8.469	98	3880675	30.23	ug/L	0.00
Spiked Amount 30.000	Range 88 - 110		Recovery = 100.77%			
68) Bromofluorobenzene	12.194	174	1341834	33.30	ug/L	0.00
Spiked Amount 30.000	Range 86 - 115		Recovery = 111.00%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.217	85	293749	11.02	ug/L	91
3) Chloromethane	1.347	50	250364	9.74	ug/L	70
4) Vinyl chloride	1.424	62	297782	9.73	ug/L	94
5) 1,3-Butadiene	1.453	39	223707	9.34	ug/L	91
6) Bromomethane	1.671	96	96061	17.78	ug/L	96
7) Chloroethane	1.748	64	155990	10.72	ug/L	90
8) Trichlorofluoromethane	1.947	101	353198	8.78	ug/L	100
9) Isopropyl Alcohol	2.589	45	357874	154.13	ug/L #	94
10) Ethyl Ether	2.192	59	208745	9.67	ug/L	95
11) Acrolein	2.300	56	38889	8.99	ug/L #	10
12) Acetone	2.439	43	203320	17.58	ug/L	99
13) Freon-TF	2.394	151	159797	11.07	ug/L #	37
14) 1,1-Dichloroethene	2.390	96	207946	11.62	ug/L	81
15) Methylene Chloride	2.867	84	253937	10.40	ug/L	87
16) Carbon disulfide	2.584	76	1544844	20.54	ug/L	96
17) Acrylonitrile	3.144	53	98811	7.86	ug/L	86
18) MTBE	3.188	73	738466	9.56	ug/L	100
19) Hexane	3.519	57	228452	11.06	ug/L	96
20) trans-1,2-Dichloroethene	3.170	96	237679	10.47	ug/L	92
21) Vinyl acetate	3.810	43	1047980	20.76	ug/L	94
22) 1,1-Dichloroethane	3.701	63	393292	9.06	ug/L	96
23) 2-Butanone	4.608	72	85587	21.63	ug/L #	83
24) 2,2-Dichloropropane	4.535	77	350745	9.88	ug/L	96
25) cis-1,2-Dichloroethene	4.546	96	260727	9.92	ug/L	92
26) Ethyl Acetate	4.729	45	47000	10.08	ug/L #	73
27) Chloroform	5.034	83	379926	8.73	ug/L	96
28) Bromochloromethane	4.889	128	111018	10.59	ug/L #	89
30) Isobutyl alcohol	5.835	43	241062	149.25	ug/L	98
33) Carbon Tetrachloride	5.496	117	247326	8.13	ug/L	95
34) 1,2-Dichloroethane	5.839	62	299717	8.35	ug/L #	95
35) 1,1,1-Trichloroethane	5.258	97	323677	8.91	ug/L	97
36) 1,1-Dichloropropene	5.509	110	106853	9.44	ug/L	91
37) 1-Butanol	6.799	56	151287	166.66	ug/L	92
38) Benzene	5.795	78	957101	9.21	ug/L	99
39) Trichloroethene	6.739	95	227432	8.80	ug/L	94
40) 1,2-Dichloropropane	7.047	63	239117	9.04	ug/L #	88
41) 1,4-Dioxane	7.290	88	38421	102.47	ug/L #	72
42) Bromodichloromethane	7.460	83	277946	8.51	ug/L	98
43) Dibromomethane	7.206	93	142030	9.53	ug/L	94
44) 2-Nitropropane	7.807	41	61434	8.02	ug/L #	2
45) 2-Chloroethylvinyl ether	7.953	63	148374	8.77	ug/L #	42

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091305.D
Acq On : 9 Jun 2013 3:11 pm Operator: PS
Sample : ICAL VSTD010 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 4

Quant Time: Jun 10 14:09:11 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration

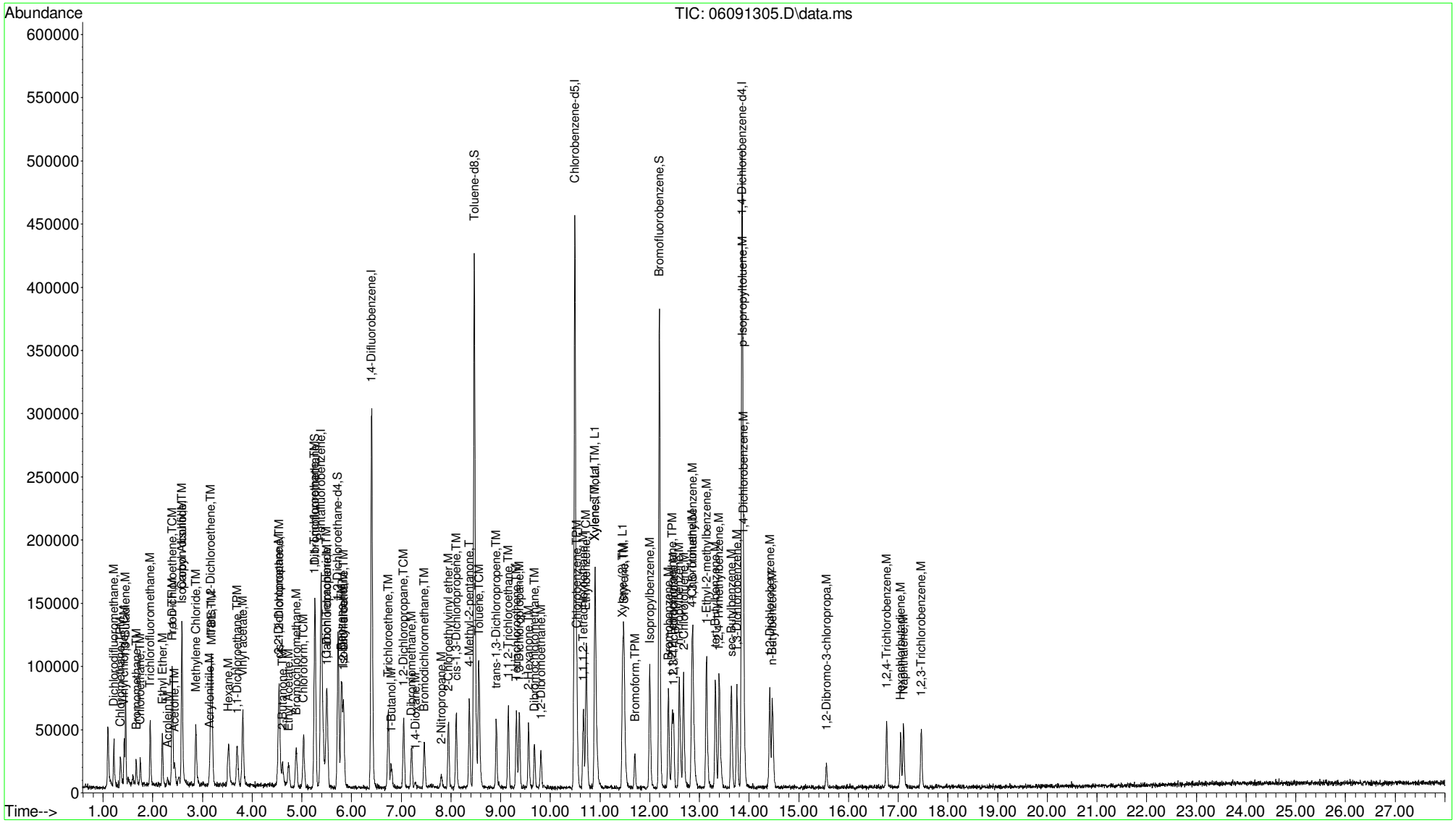
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
46) 4-Methyl-2-pentanone	8.367	43	544263	16.47 ug/L	92
47) cis-1,3-Dichloropropene	8.109	75	379963	8.89 ug/L	93
49) Toluene	8.564	92	593663	8.97 ug/L	98
51) trans-1,3-Dichloropropene	8.911	75	325928	8.46 ug/L	97
52) 2-Hexanone	9.559	43	391416	17.02 ug/L	96
53) 1,1,2-Trichloroethane	9.151	83	197726	9.95 ug/L	94
54) 1,3-Dichloropropane	9.374	76	389570	9.05 ug/L	96
55) Tetrachloroethene	9.318	164	169659	10.22 ug/L	98
56) Dibromochloromethane	9.679	129	191166	7.63 ug/L	86
57) 1,2-Dibromoethane	9.810	107	215268	9.07 ug/L #	99
58) Chlorobenzene	10.533	112	600676	9.52 ug/L	100
59) Ethylbenzene	10.723	91	1096057	9.13 ug/L	96
60) 1,1,1,2-Tetrachloroethane	10.666	131	184073	7.88 ug/L #	62
61) Xylene	10.900	106	802438	18.27 ug/L	94
62) Xylene (2)	11.454	106	391932	9.29 ug/L	93
63) Xylenes, Total	10.900	106	1194370m	27.55 ug/L #	
64) Styrene	11.481	104	706588	9.02 ug/L	96
65) Isopropylbenzene	12.004	105	907503	9.64 ug/L	98
66) Bromoform	11.702	173	142924	8.79 ug/L #	94
67) 1,1,2,2-Tetrachloroethane	12.455	83	329300	10.07 ug/L	99
70) 1,2,3-Trichloropropane	12.482	75	260785	8.70 ug/L #	42
71) n-Propylbenzene	12.596	91	1012335	9.08 ug/L	99
72) Bromobenzene	12.375	156	268622	9.30 ug/L #	91
73) 1,3,5-Trimethylbenzene	12.867	105	795357	8.84 ug/L	98
74) 2-Chlorotoluene	12.682	91	689610	8.71 ug/L	95
75) 4-Chlorotoluene	12.850	91	778026	8.49 ug/L	94
76) tert-Butylbenzene	13.319	119	539799	8.73 ug/L	95
77) 1-Ethyl-2-methylbenzene	13.143	105	988031	9.14 ug/L	99
78) 1,2,4-Trimethylbenzene	13.396	105	805505	8.59 ug/L	99
79) sec-Butylbenzene	13.643	105	797200	9.19 ug/L	99
80) p-Isopropyltoluene	13.873	119	672597	9.20 ug/L	99
81) 1,3-Dichlorobenzene	13.754	146	436630	9.40 ug/L	99
82) 1,4-Dichlorobenzene	13.888	146	502950	9.43 ug/L	98
83) n-Butylbenzene	14.465	91	562456	8.50 ug/L	96
84) 1,2-Dichlorobenzene	14.416	146	420317	9.13 ug/L	98
85) 1,2-Dibromo-3-chloropropa	15.556	75	34310	5.30 ug/L #	38
86) 1,2,4-Trichlorobenzene	16.767	180	205818	9.57 ug/L	94
87) Hexachlorbutadiene	17.051	225	94843	10.42 ug/L	95
88) Naphthalene	17.106	128	514402	8.44 ug/L	97
89) 1,2,3-Trichlorobenzene	17.465	180	163262	8.93 ug/L	97

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091305.D
Acq On : 9 Jun 2013 3:11 pm Operator: PS
Sample : ICAL VSTD010 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 4

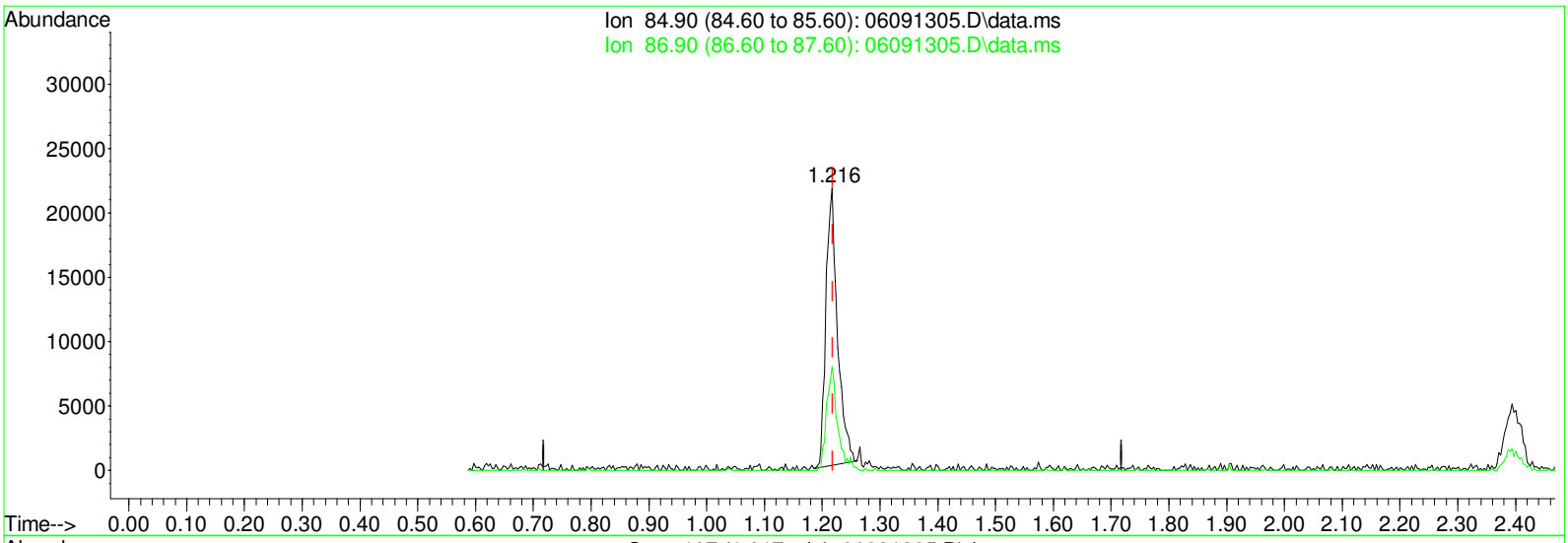
Quant Time: Jun 10 14:09:11 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration

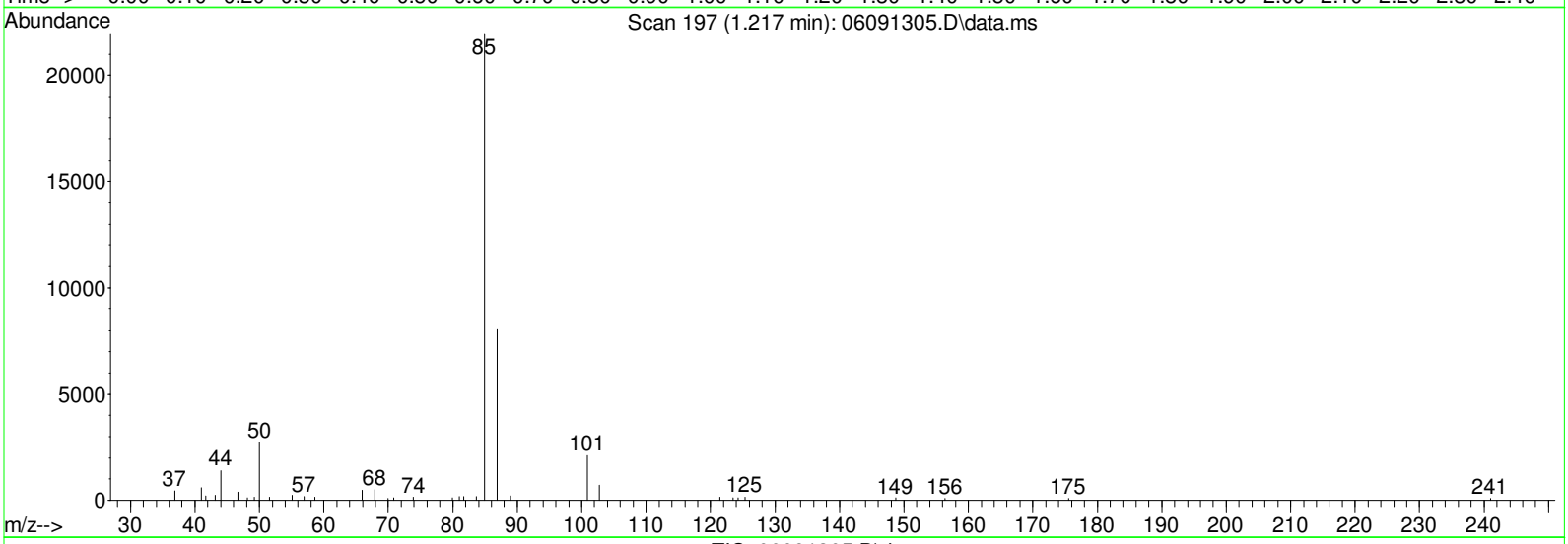


Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091305.D
Acq On : 9 Jun 2013 3:11 pm Operator: PS
Sample : ICAL VSTD010 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 4

Quant Time: Jun 10 14:09:11 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration





TIC: 06091305.D\data.ms

(2) Dichlorodifluoromethane (M)

1.217min (-0.001) 11.02 ug/L

response 293749

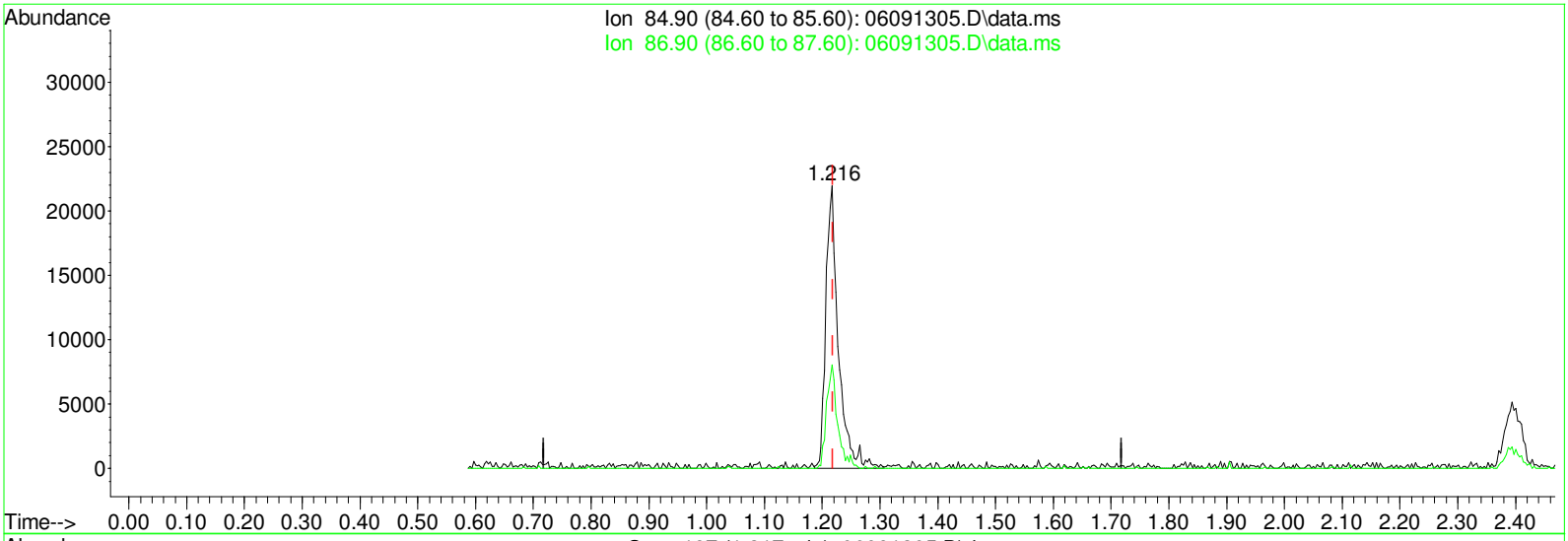
Ion	Exp%	Act%
84.90	100	100
86.90	31.20	36.04
0.00	0.00	0.00
0.00	0.00	0.00

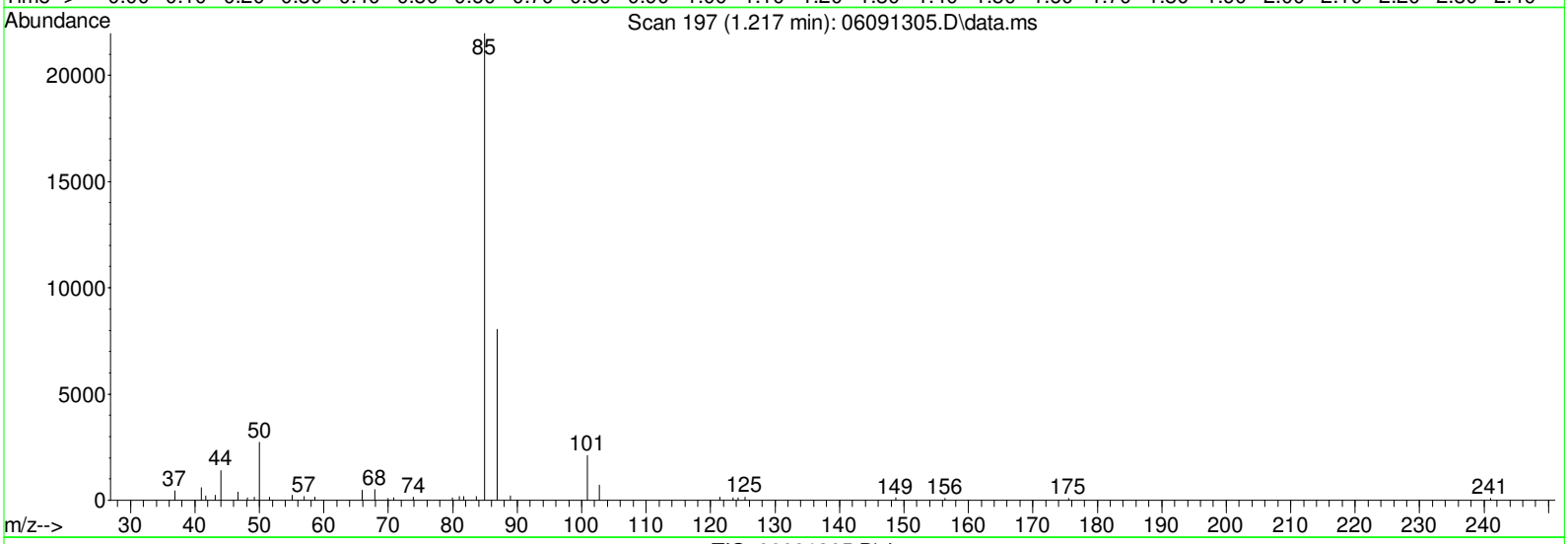
BEFORE
By Alfred at 3:46:36 PM, 7/3/2013

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091305.D
Acq On : 9 Jun 2013 3:11 pm Operator: PS
Sample : ICAL VSTD010 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 4

Quant Time: Jun 10 14:09:11 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration





TIC: 06091305.D\data.ms

(2) Dichlorodifluoromethane (M)

1.217min (-0.001) 12.29 ug/L m

response 327619

Ion	Exp%	Act%
84.90	100	100
86.90	31.20	32.32
0.00	0.00	0.00
0.00	0.00	0.00

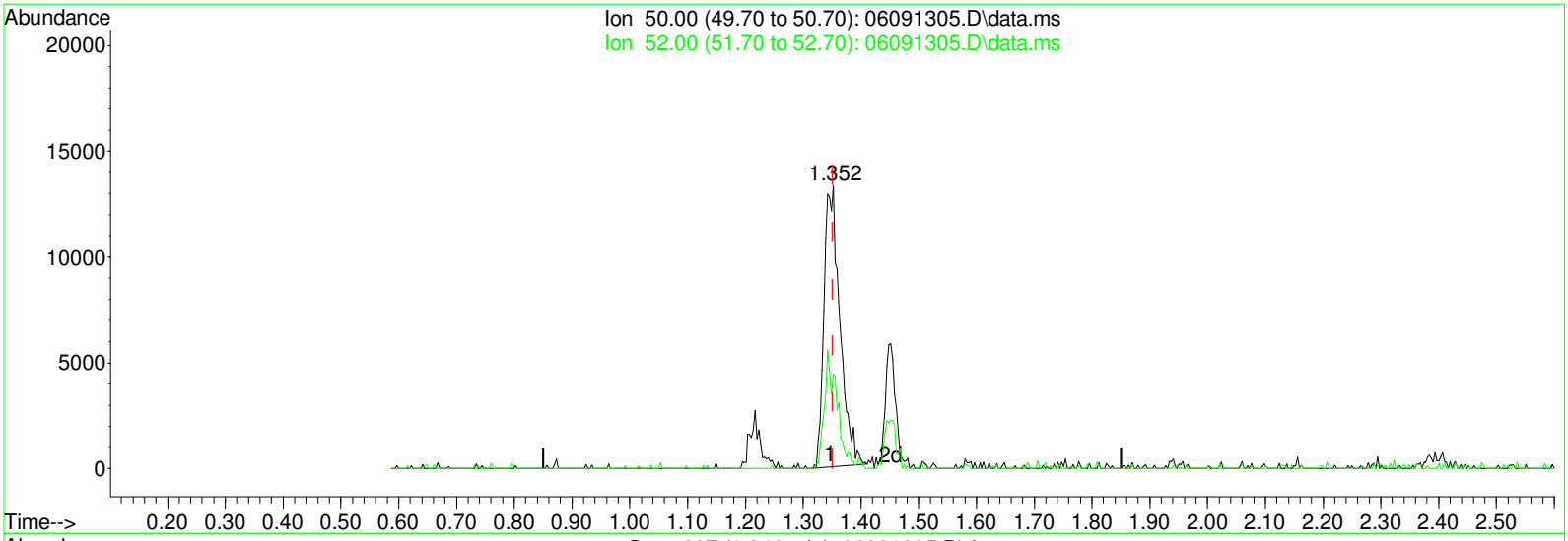
AFTER M3

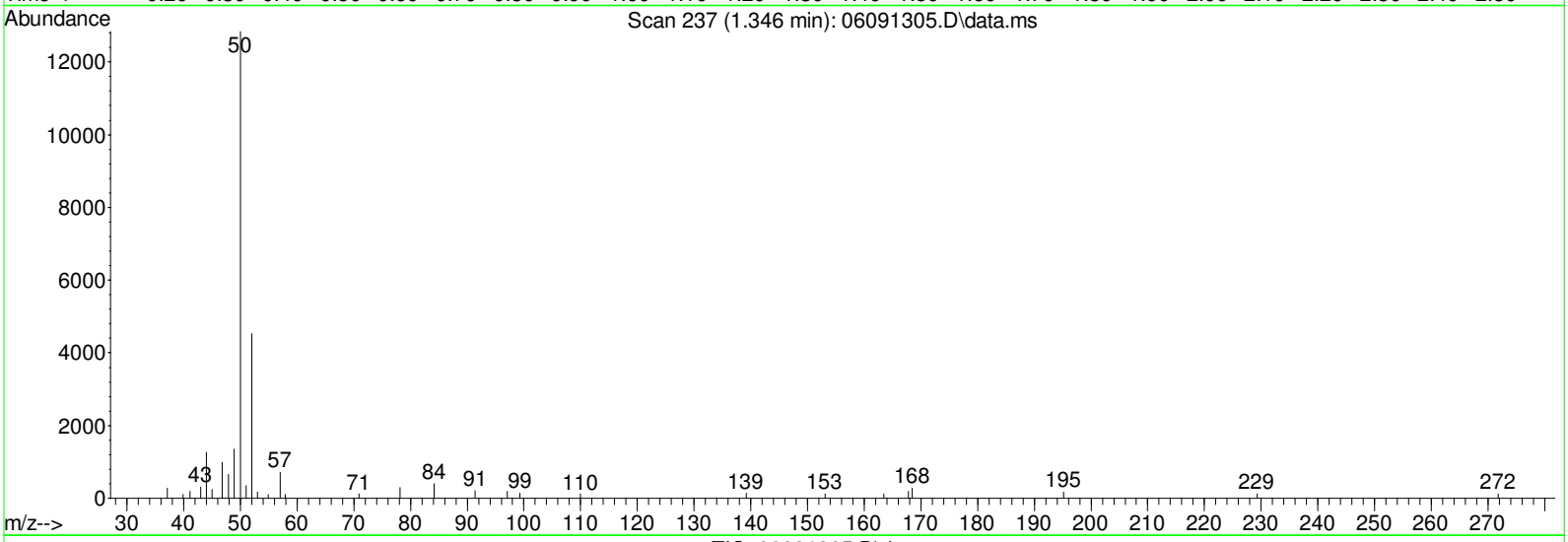
By Alfred at 3:46:40 PM, 7/3/2013

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091305.D
Acq On : 9 Jun 2013 3:11 pm Operator: PS
Sample : ICAL VSTD010 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 4

Quant Time: Jun 10 14:09:11 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration





TIC: 06091305.D\data.ms

(3) Chloromethane (TPM)

1.347min (-0.004) 9.74 ug/L

response 250364

Ion	Exp%	Act%
50.00	100	100
52.00	33.90	16.54
0.00	0.00	0.00
0.00	0.00	0.00

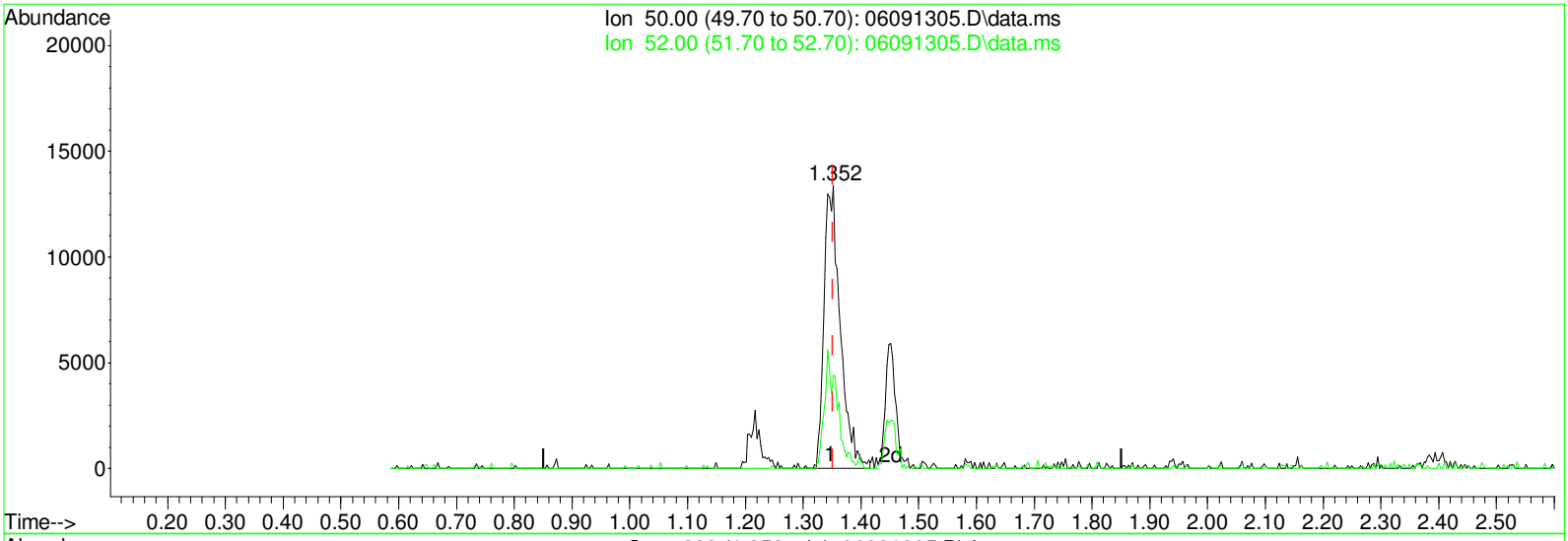
BEFORE

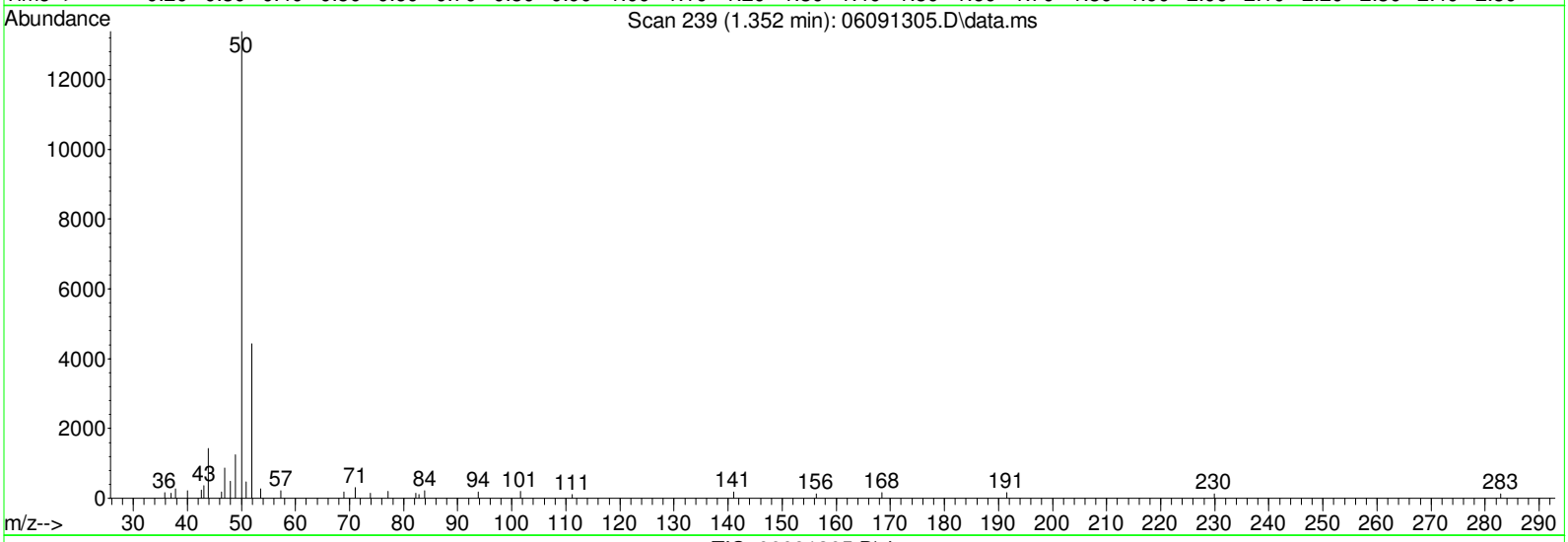
By Alfred at 3:46:45 PM, 7/3/2013

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091305.D
Acq On : 9 Jun 2013 3:11 pm Operator: PS
Sample : ICAL VSTD010 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 4

Quant Time: Jun 10 14:09:11 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration





TIC: 06091305.D\data.ms

(3) Chloromethane (TPM)

1.352min (+0.001) 10.04 ug/L m

response 257911

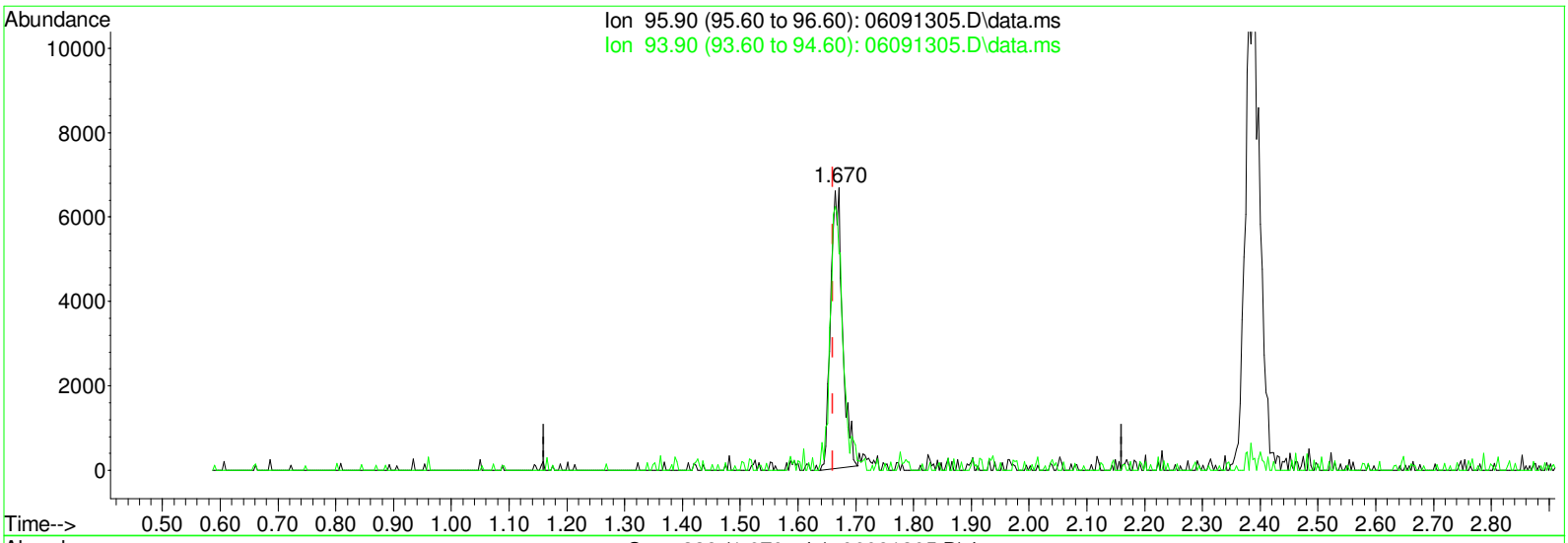
Ion	Exp%	Act%
50.00	100	100
52.00	33.90	16.06
0.00	0.00	0.00
0.00	0.00	0.00

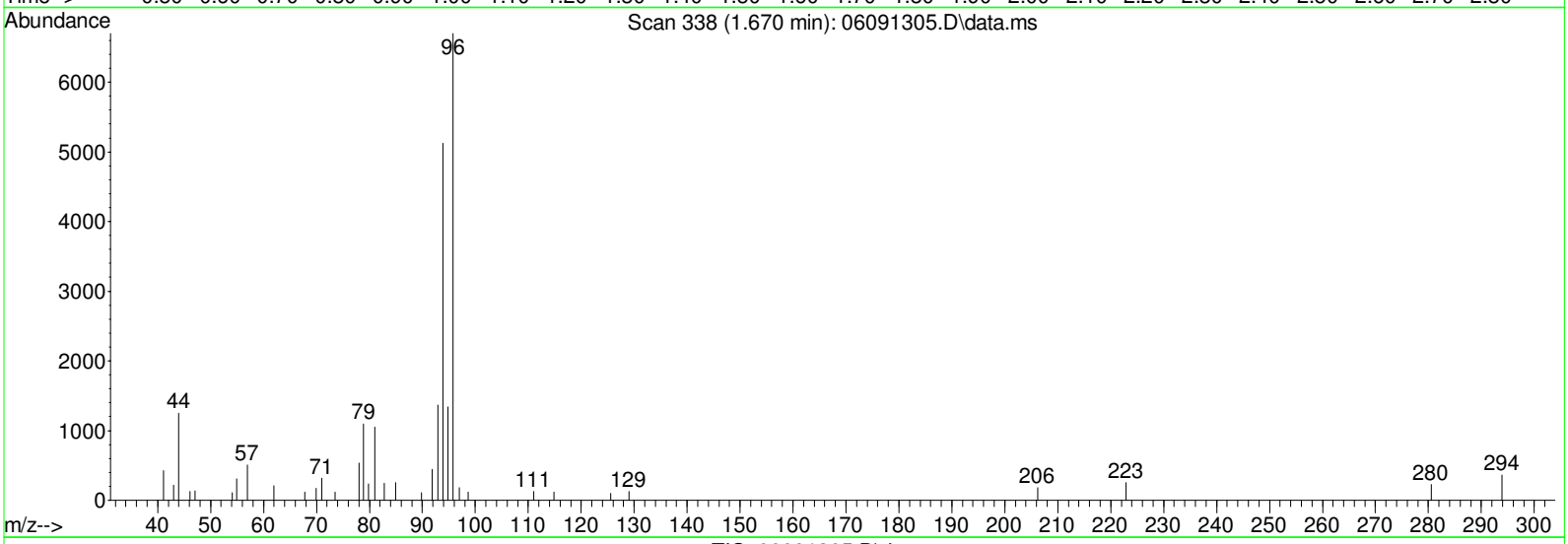
AFTER M3
By Alfred at 3:46:50 PM, 7/3/2013

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091305.D
Acq On : 9 Jun 2013 3:11 pm Operator: PS
Sample : ICAL VSTD010 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 4

Quant Time: Jun 10 14:09:11 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration





TIC: 06091305.D\data.ms

(6) Bromomethane (TM)

1.671min (+0.011) 17.78 ug/L

response 96061

Ion	Exp%	Act%
95.90	100	100
93.90	98.20	102.13
0.00	0.00	0.00
0.00	0.00	0.00

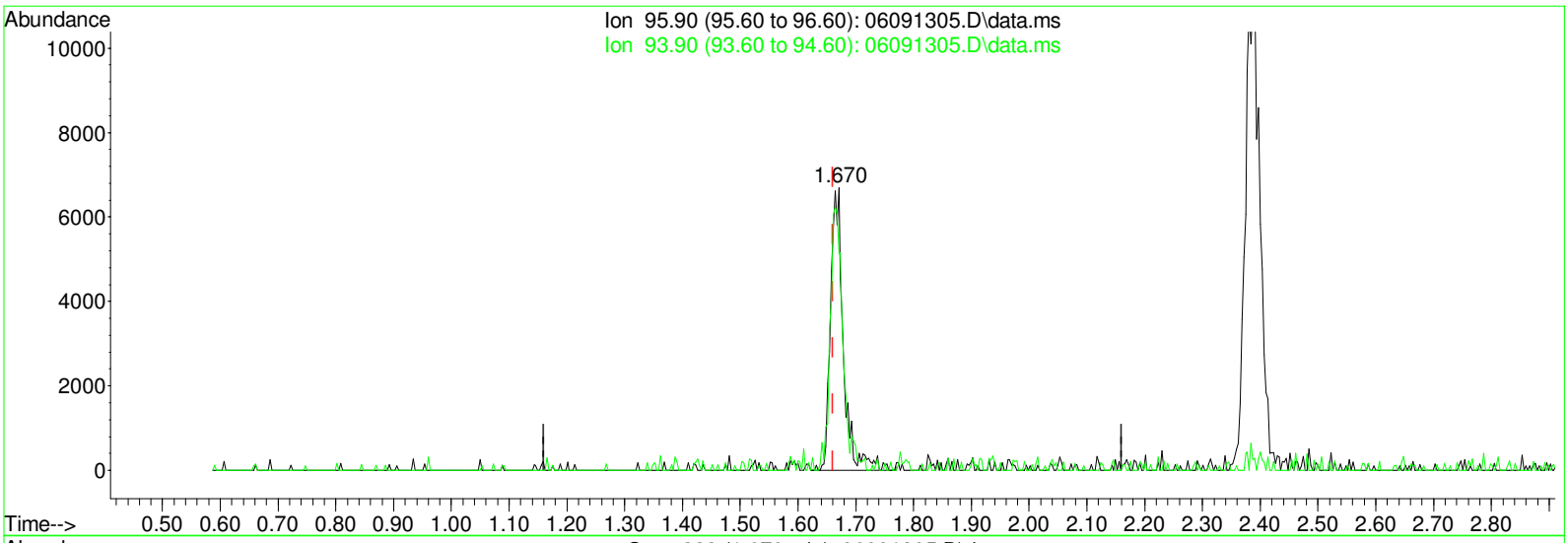
BEFORE

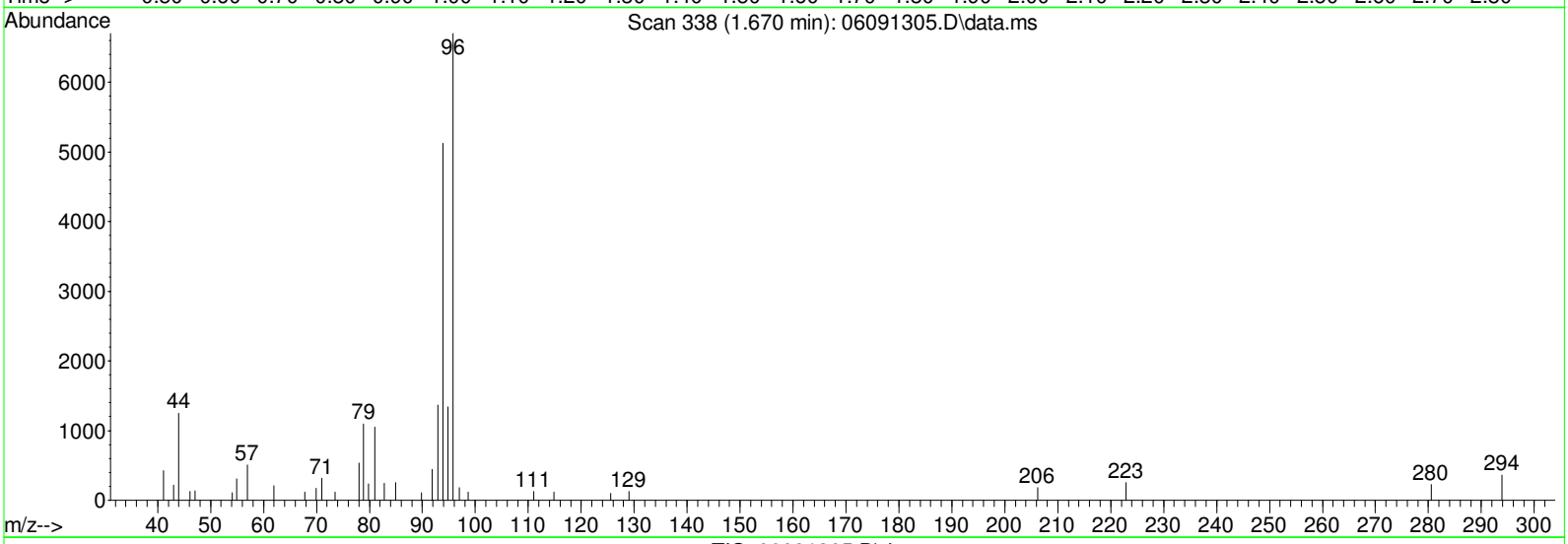
By Alfred at 3:46:55 PM, 7/3/2013

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091305.D
Acq On : 9 Jun 2013 3:11 pm Operator: PS
Sample : ICAL VSTD010 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 4

Quant Time: Jun 10 14:09:11 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration





TIC: 06091305.D\data.ms

(6) Bromomethane (TM)

1.670min (+0.010) 18.61 ug/L m

response 105430

Ion	Exp%	Act%
95.90	100	100
93.90	98.20	93.05
0.00	0.00	0.00
0.00	0.00	0.00

AFTER M3

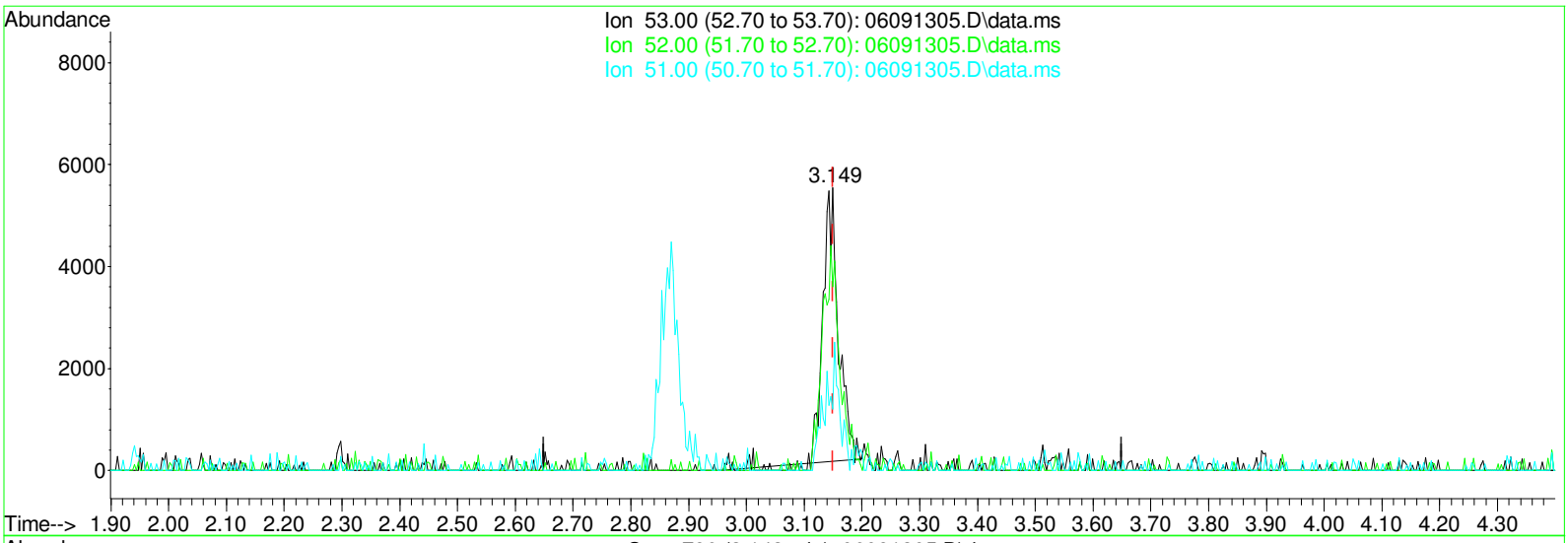
By Alfred at 3:47:01 PM, 7/3/2013

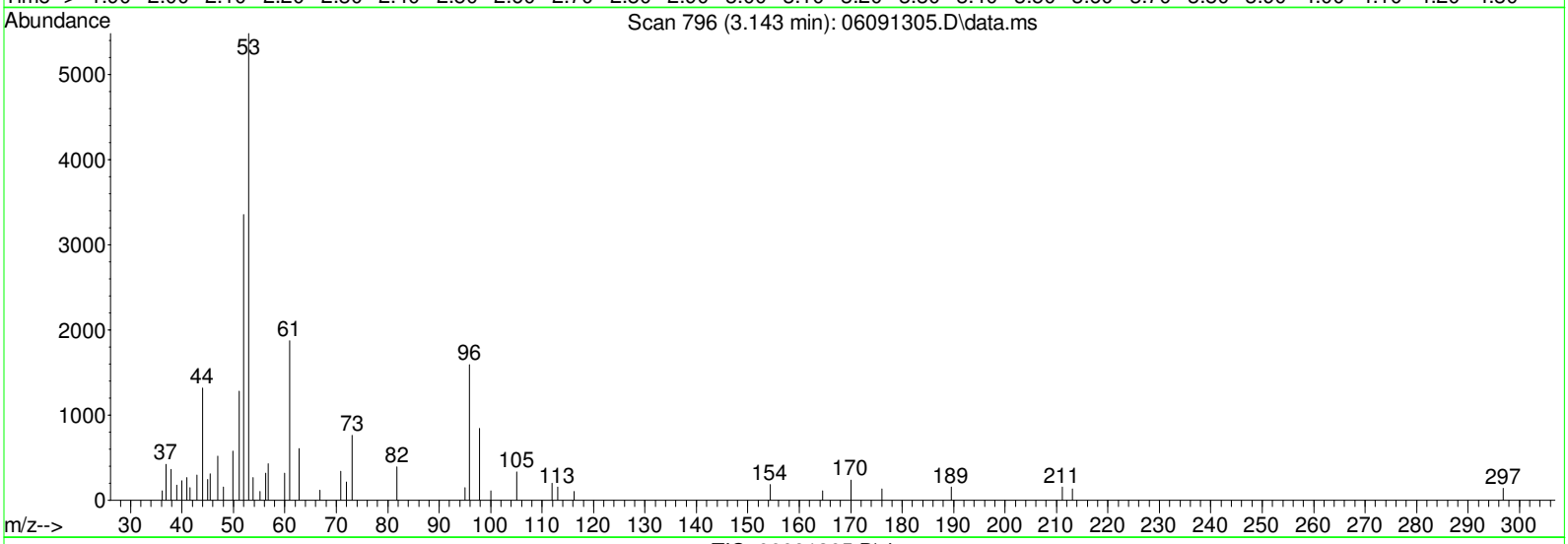
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091305.D
Acq On : 9 Jun 2013 3:11 pm
Sample : ICAL VSTD010
Misc : VOC_W+
ALS Vial : 4

Operator: PS
Inst : VOA7
Multiplr: 1.00

Quant Time: Jun 10 14:09:11 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration





TIC: 06091305.D\data.ms

BEFORE
By Alfred at 3:47:06 PM, 7/3/2013

(17) Acrylonitrile (M)

3.144min (-0.005) 7.86 ug/L

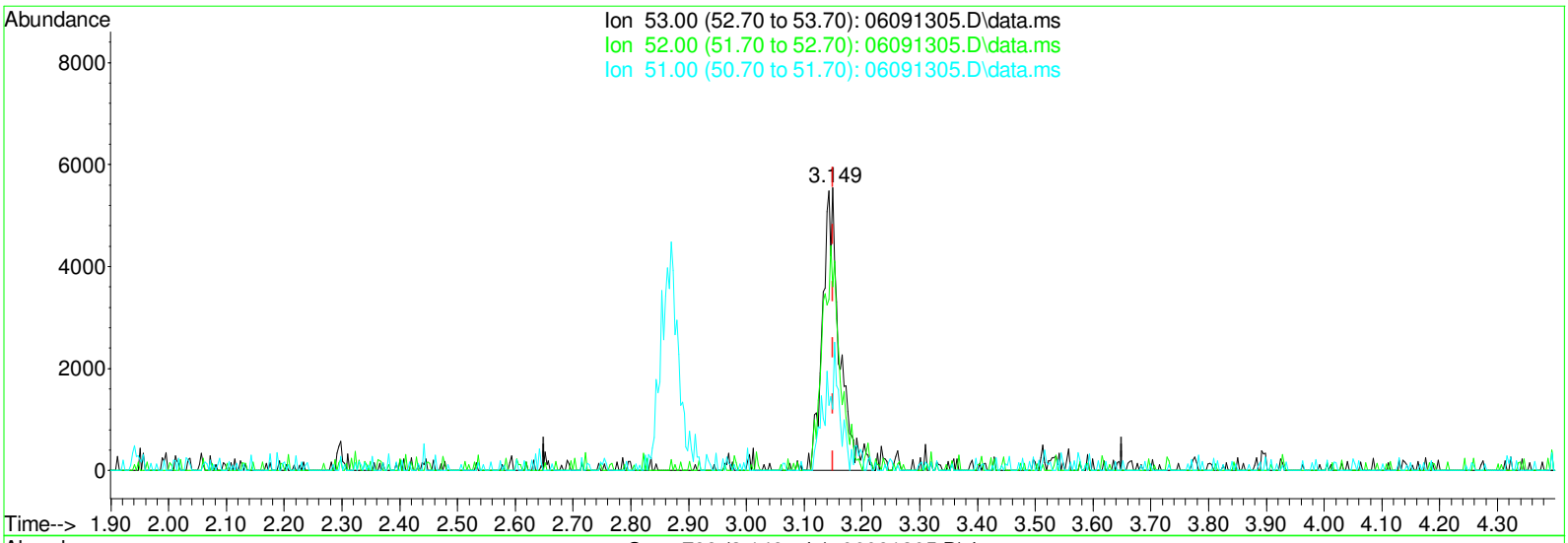
response 98811

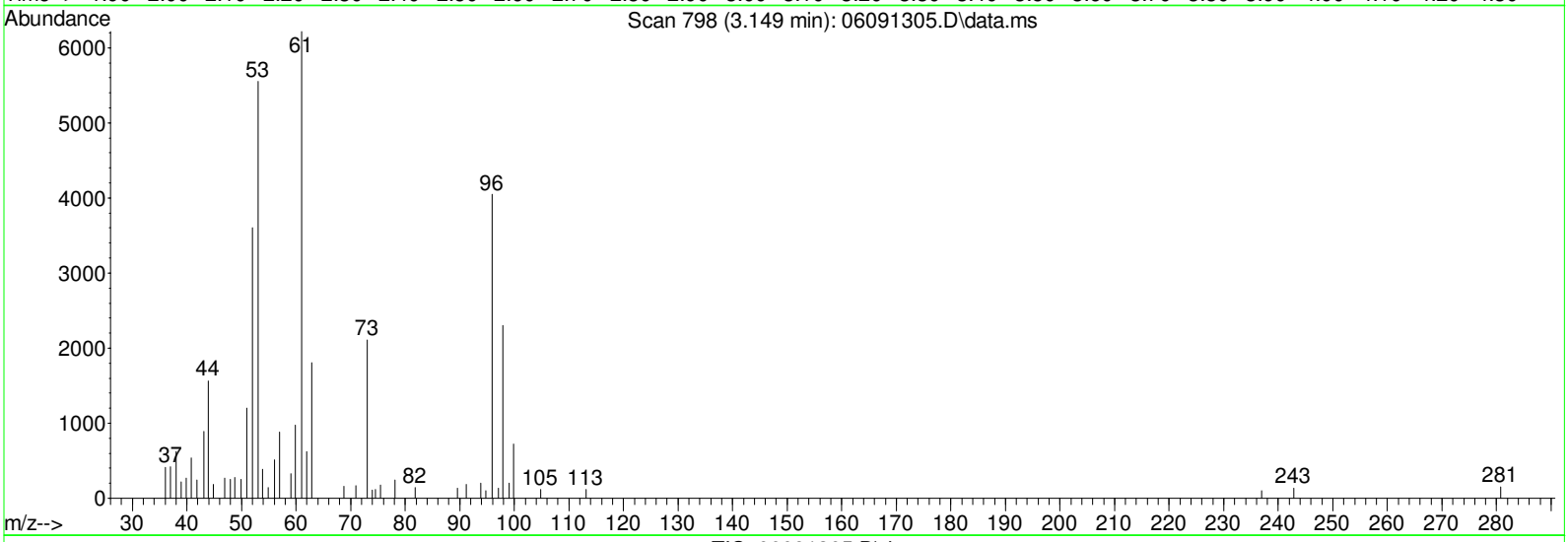
Ion	Exp%	Act%
53.00	100	100
52.00	78.60	92.68
51.00	36.80	42.30
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091305.D
Acq On : 9 Jun 2013 3:11 pm Operator: PS
Sample : ICAL VSTD010 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 4

Quant Time: Jun 10 14:09:11 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration





TIC: 06091305.D\data.ms

(17) Acrylonitrile (M)

3.149min (+0.000) 9.05 ug/L m

response 113790

Ion	Exp%	Act%
53.00	100	100
52.00	78.60	80.48
51.00	36.80	36.73
0.00	0.00	0.00

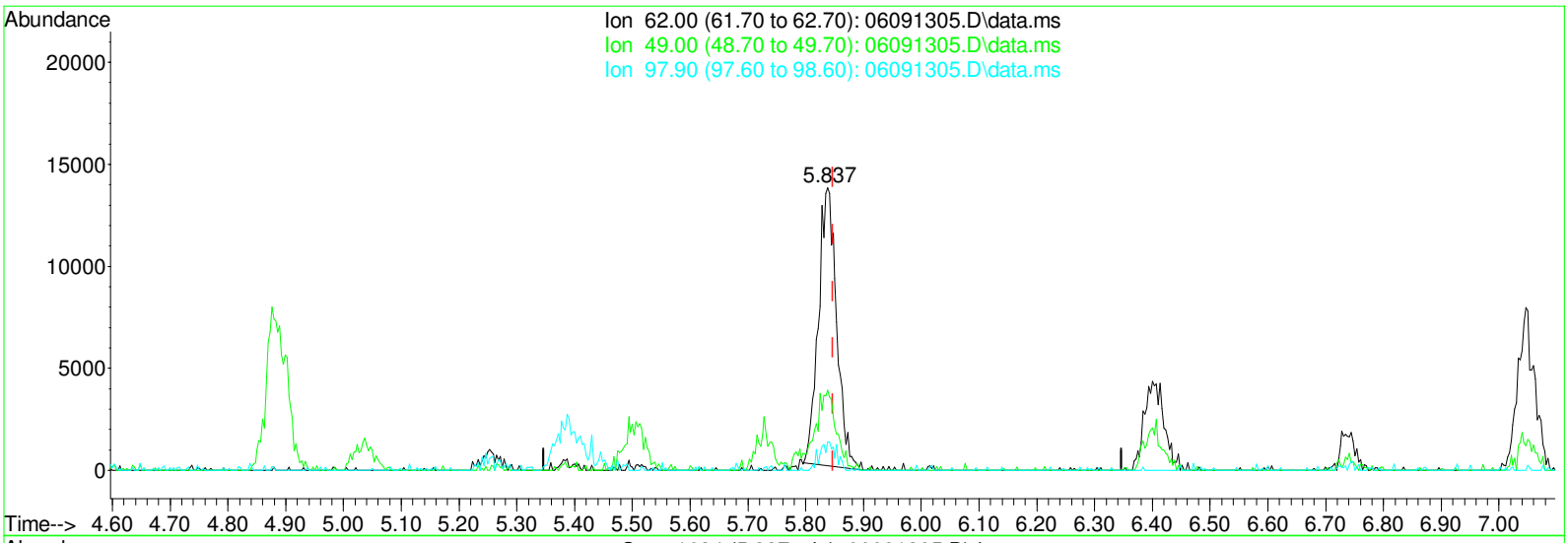
AFTER M3
By Alfred at 3:47:10 PM, 7/3/2013

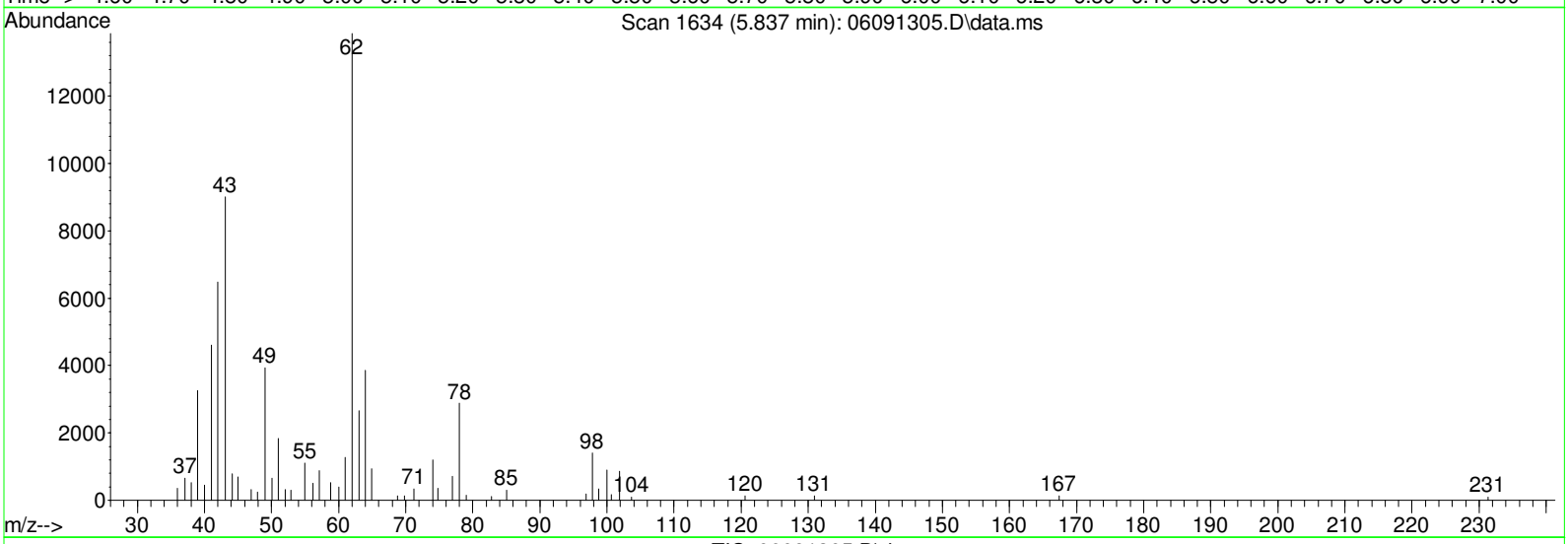
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091305.D
Acq On : 9 Jun 2013 3:11 pm
Sample : ICAL VSTD010
Misc : VOC_W+
ALS Vial : 4

Operator: PS
Inst : VOA7
Multiplr: 1.00

Quant Time: Jun 10 14:09:11 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration





TIC: 06091305.D\data.ms

(34) 1,2-Dichloroethane (TM)

5.839min (-0.008) 8.35 ug/L

response 299717

Ion	Exp%	Act%
62.00	100	100
49.00	36.10	35.99
97.90	8.50	0.00
0.00	0.00	0.00

BEFORE

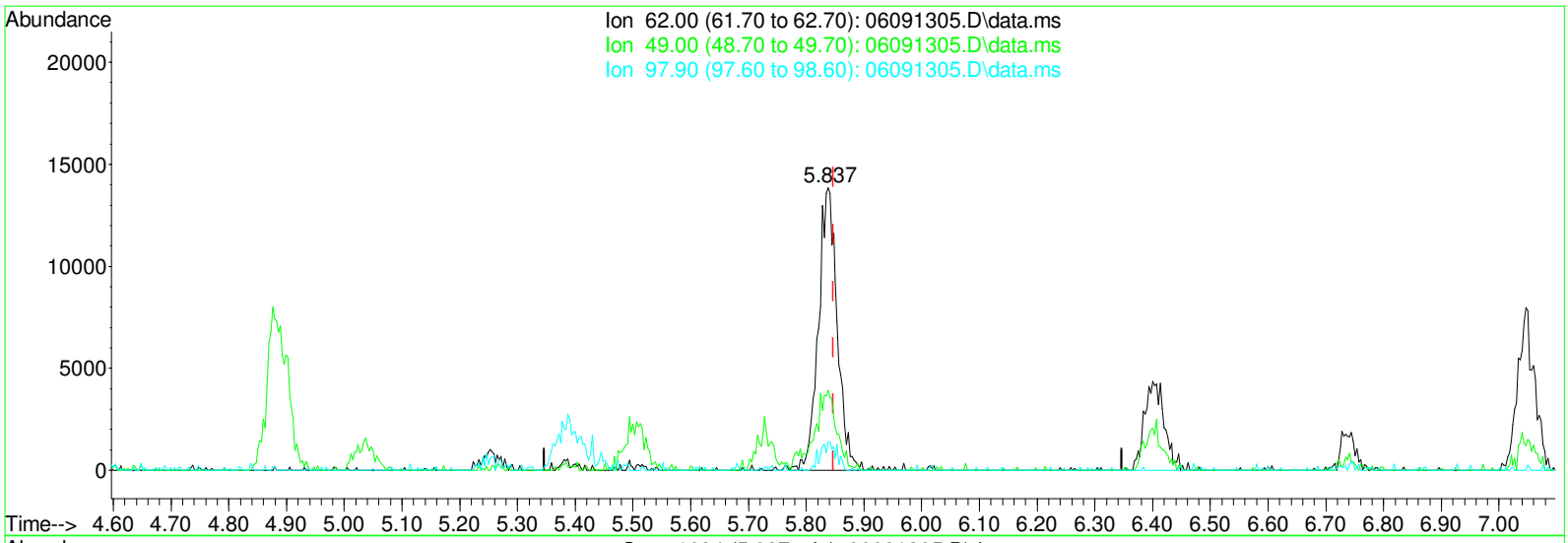
By Alfred at 3:47:17 PM, 7/3/2013

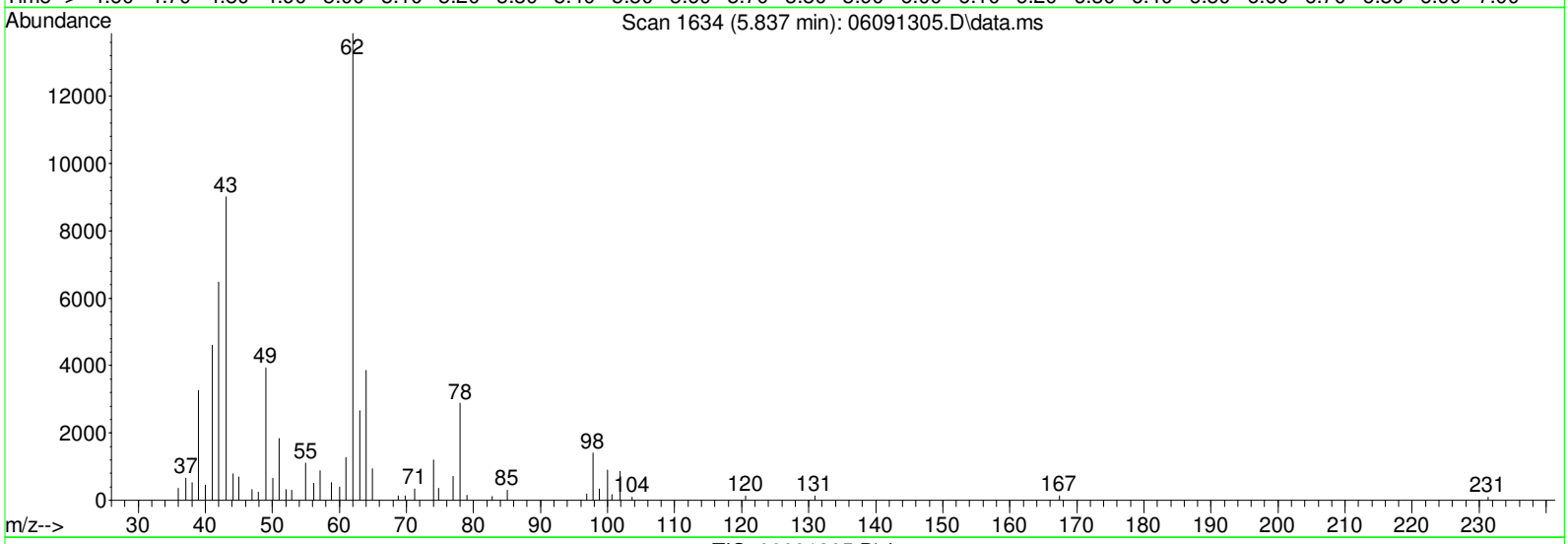
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091305.D
Acq On : 9 Jun 2013 3:11 pm
Sample : ICAL VSTD010
Misc : VOC_W+
ALS Vial : 4

Operator: PS
Inst : VOA7
Multiplr: 1.00

Quant Time: Jun 10 14:09:11 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration





TIC: 06091305.D\data.ms

(34) 1,2-Dichloroethane (TM)

5.837min (-0.009) 8.80 ug/L m

response 316127

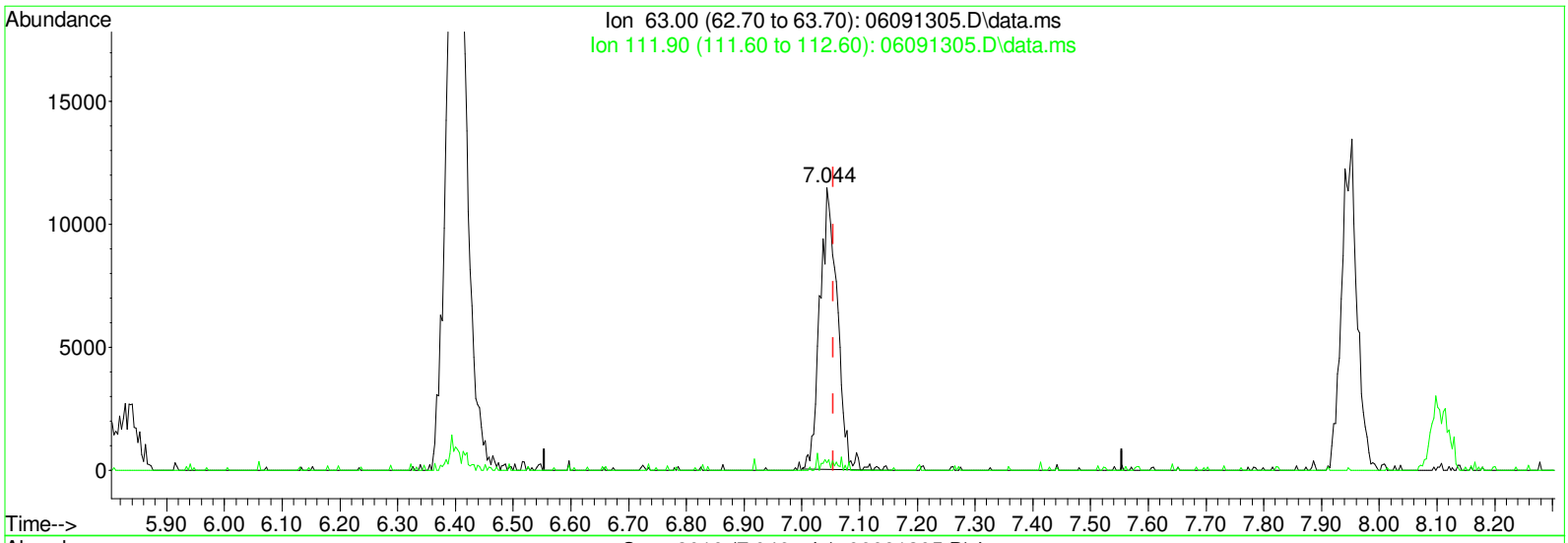
Ion	Exp%	Act%
62.00	100	100
49.00	36.10	34.13
97.90	8.50	0.00
0.00	0.00	0.00

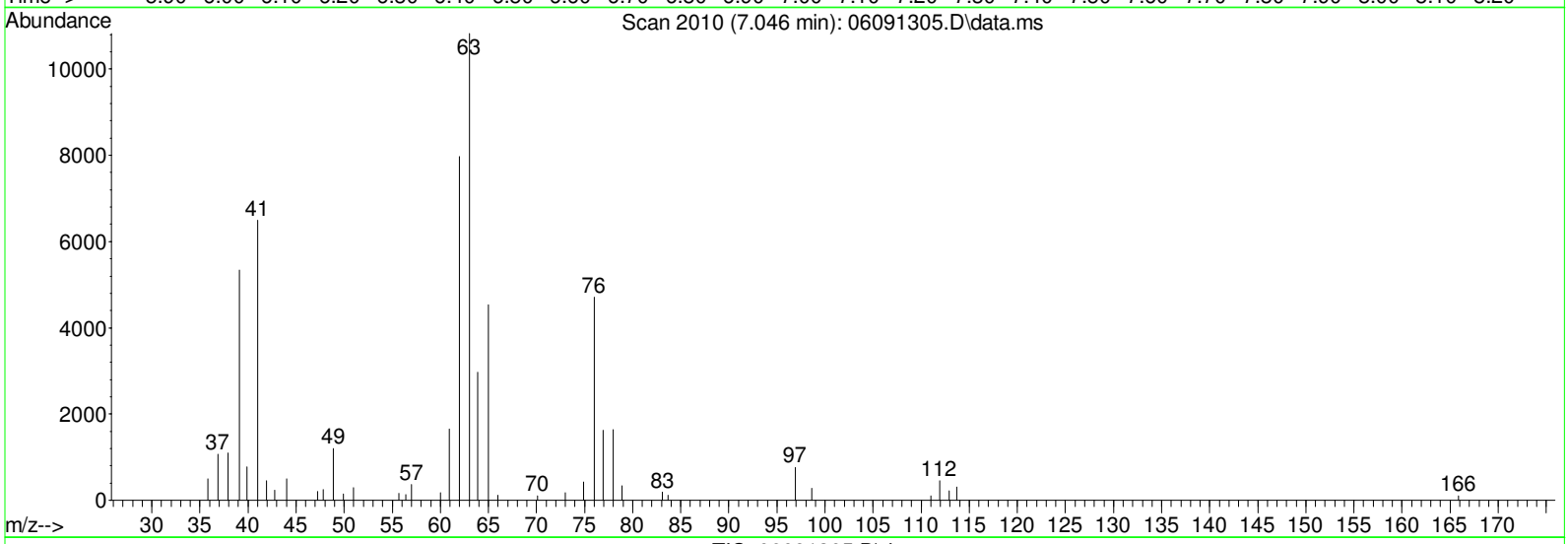
AFTER M3
By Alfred at 3:47:21 PM, 7/3/2013

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091305.D
Acq On : 9 Jun 2013 3:11 pm Operator: PS
Sample : ICAL VSTD010 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 4

Quant Time: Jun 10 14:09:11 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration





TIC: 06091305.D\data.ms

(40) 1,2-Dichloropropane (TCM)

7.047min (-0.008) 9.04 ug/L

response 239117

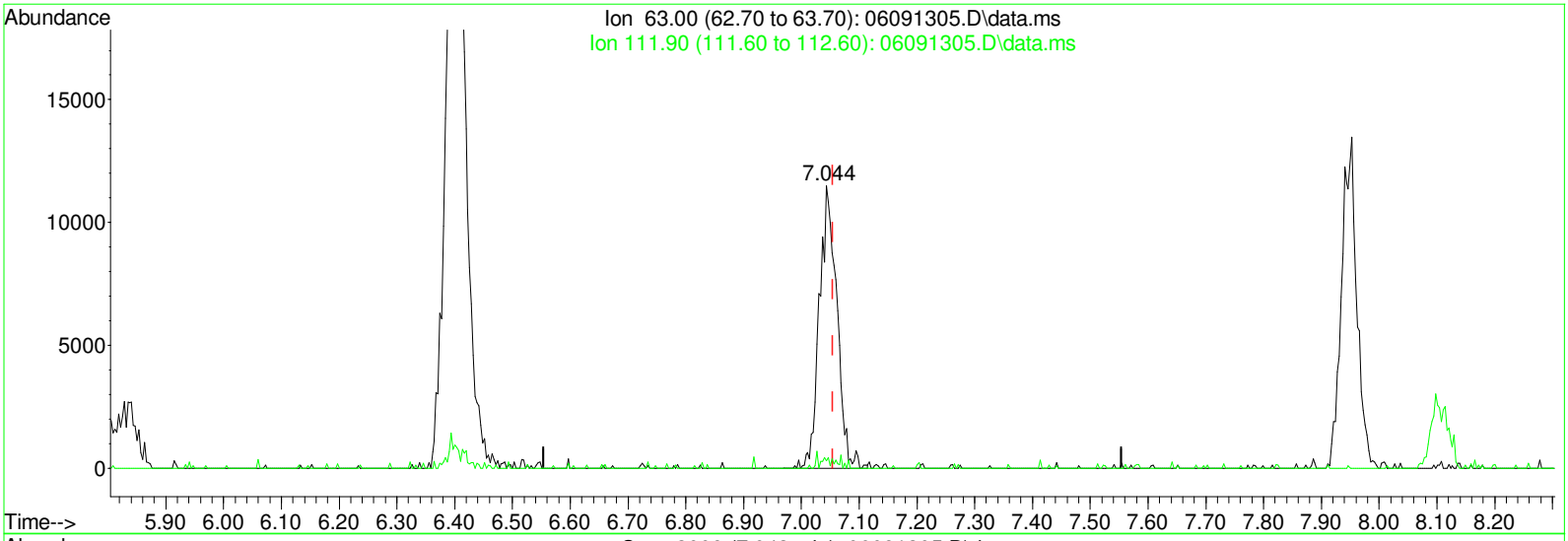
Ion	Exp%	Act%
63.00	100	100
111.90	4.10	0.00
0.00	0.00	0.00
0.00	0.00	0.00

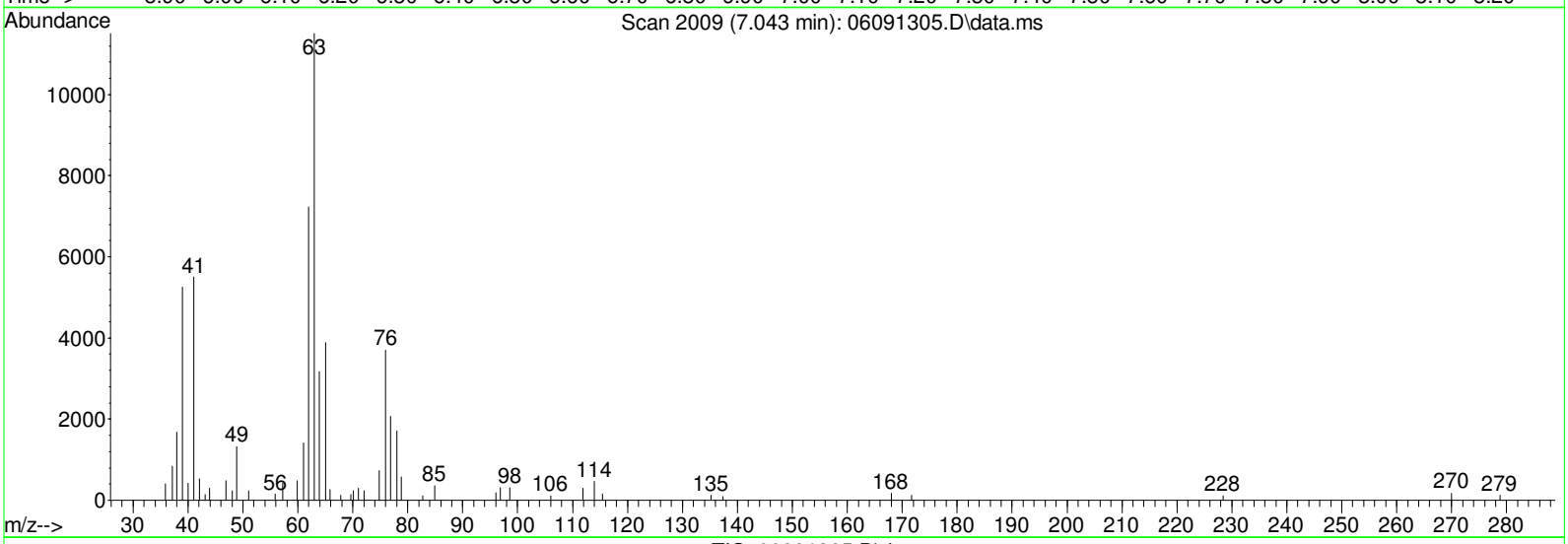
BEFORE
By Alfred at 3:47:39 PM, 7/3/2013

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091305.D
Acq On : 9 Jun 2013 3:11 pm Operator: PS
Sample : ICAL VSTD010 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 4

Quant Time: Jun 10 14:09:11 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration





TIC: 06091305.D\data.ms

AFTER M3
By Alfred at 3:47:43 PM, 7/3/2013

(40) 1,2-Dichloropropane (TCM)

7.043min (-0.011) 9.09 ug/L m

response 240497

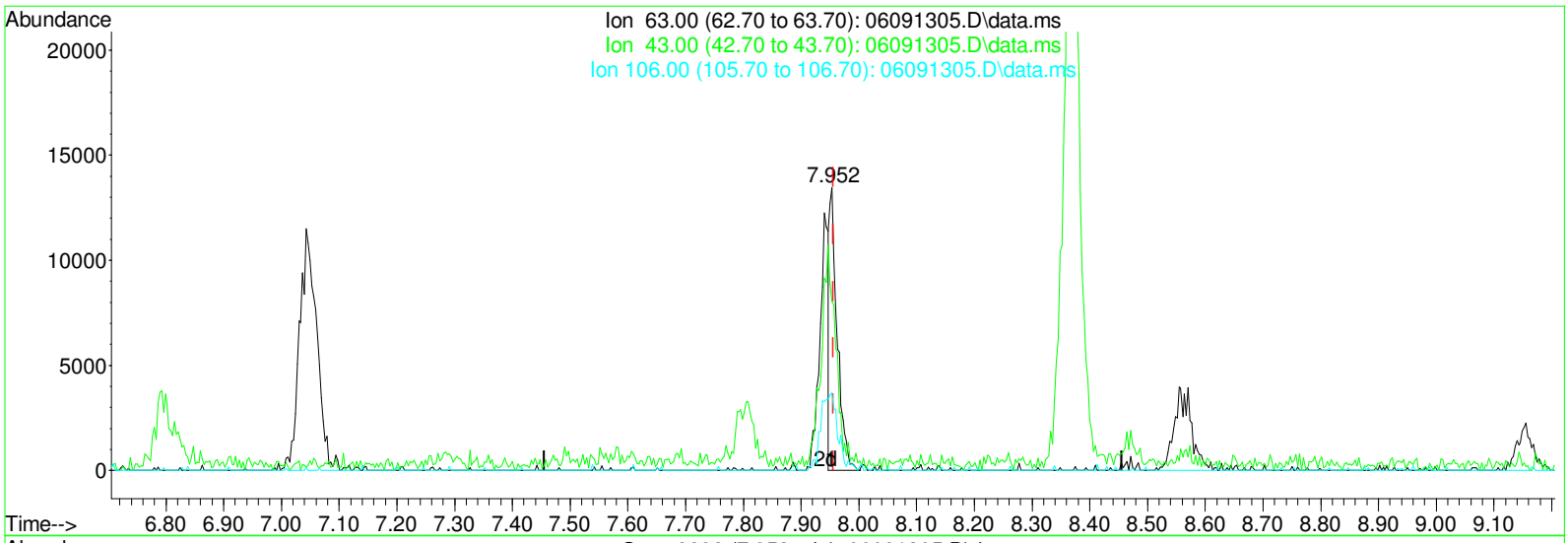
Ion	Exp%	Act%
63.00	100	100
111.90	4.10	0.00
0.00	0.00	0.00
0.00	0.00	0.00

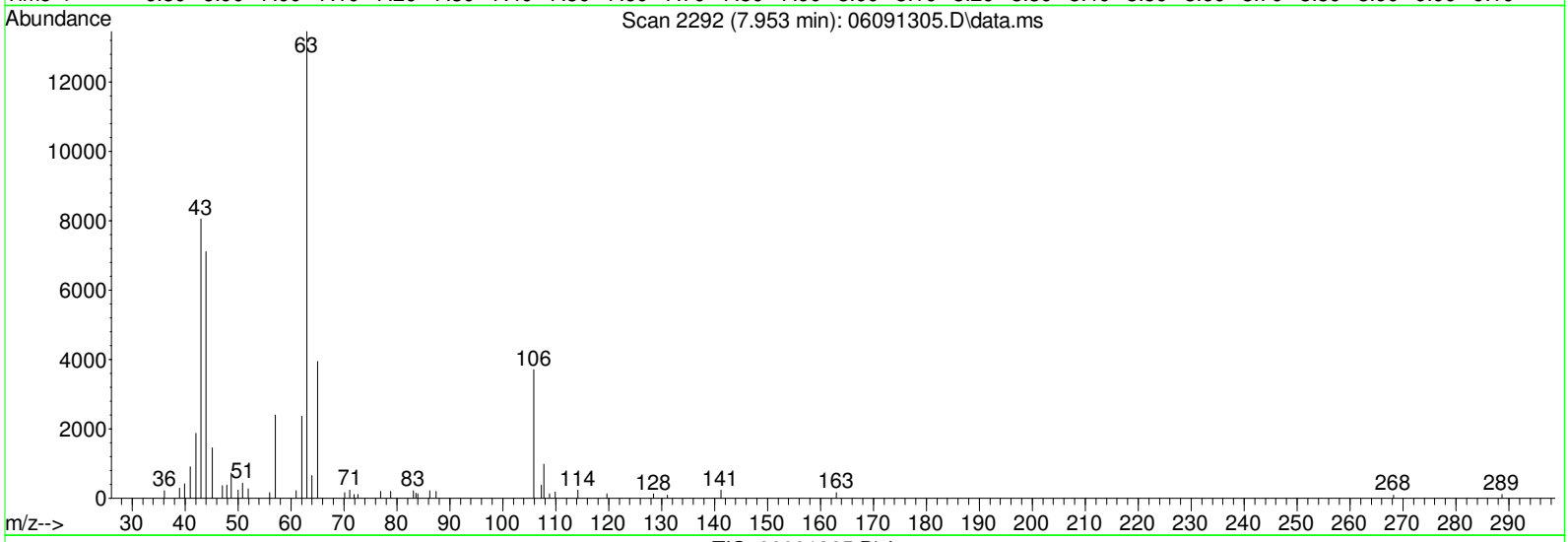
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091305.D
Acq On : 9 Jun 2013 3:11 pm
Sample : ICAL VSTD010
Misc : VOC_W+
ALS Vial : 4

Operator: PS
Inst : VOA7
Multiplr: 1.00

Quant Time: Jun 10 14:09:11 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration





TIC: 06091305.D\data.ms

(45) 2-Chloroethylvinyl ether (M)

7.953min (-0.002) 8.77 ug/L

response 148374

Ion	Exp%	Act%
63.00	100	100
43.00	72.70	124.64#
106.00	26.70	51.36#
0.00	0.00	0.00

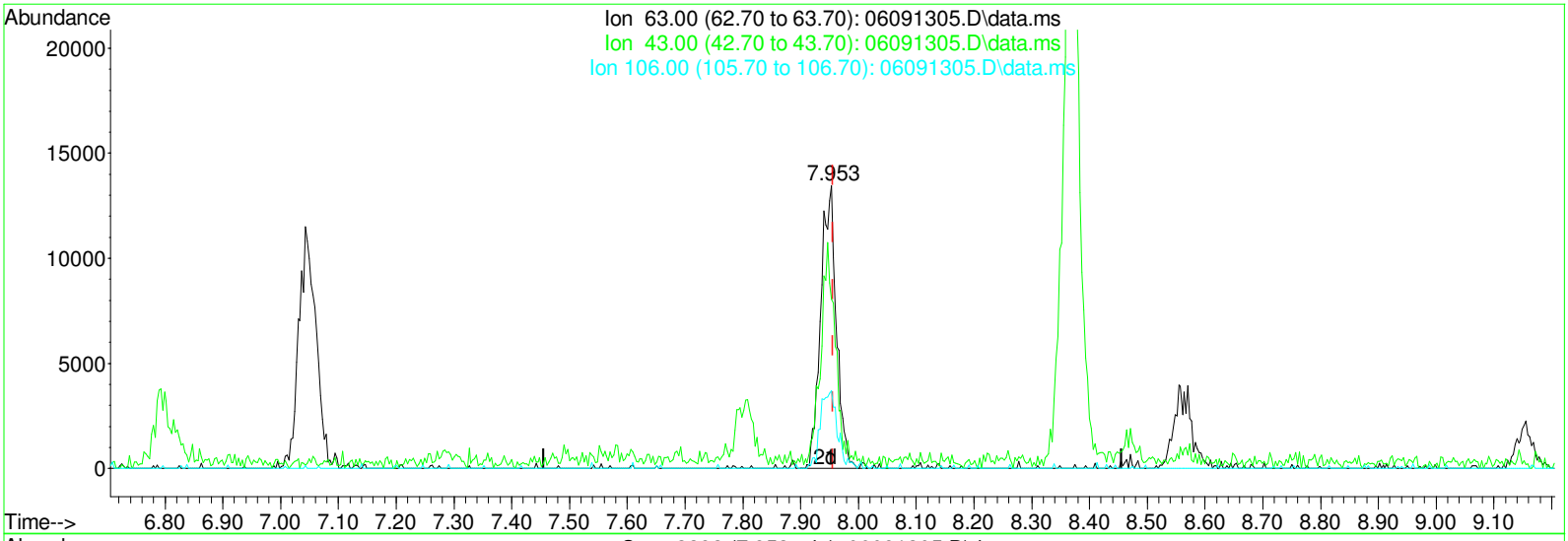
BEFORE
By Alfred at 3:47:47 PM, 7/3/2013

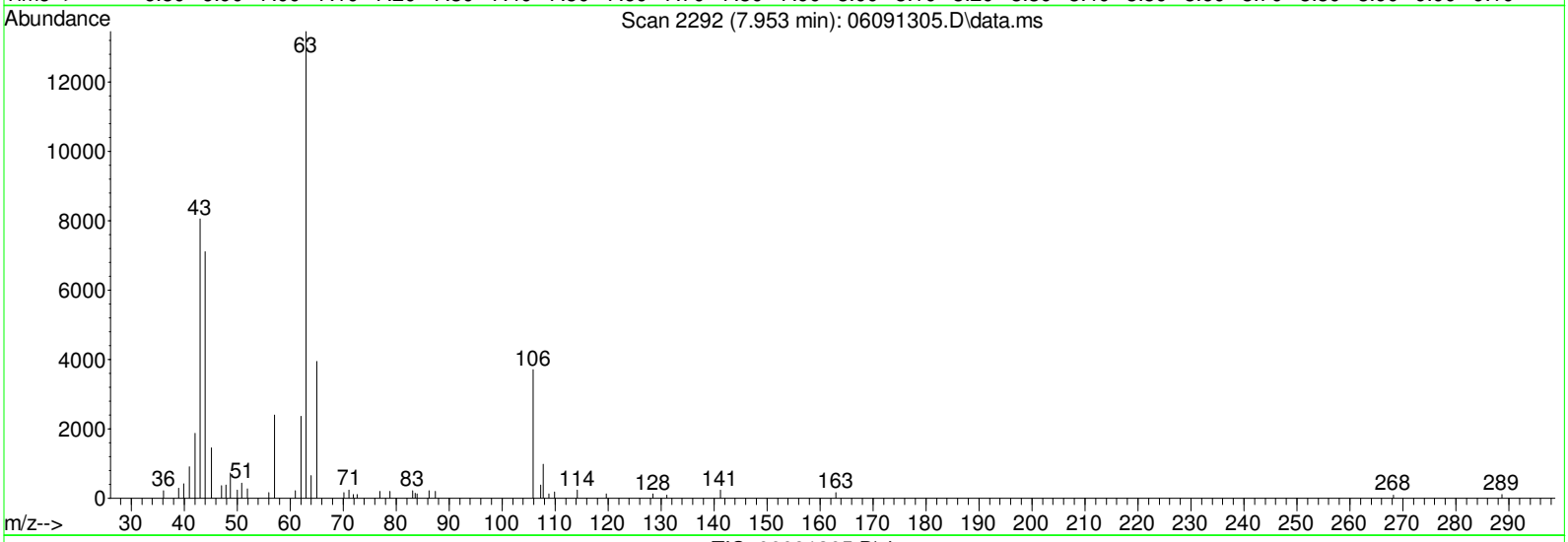
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091305.D
Acq On : 9 Jun 2013 3:11 pm
Sample : ICAL VSTD010
Misc : VOC_W+
ALS Vial : 4

Operator: PS
Inst : VOA7
Multiplr: 1.00

Quant Time: Jun 10 14:09:11 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration





TIC: 06091305.D\data.ms

AFTER M3
By Alfred at 3:47:53 PM, 7/3/2013

(45) 2-Chloroethylvinyl ether (M)

7.953min (-0.002) 14.92 ug/L m

response 252313

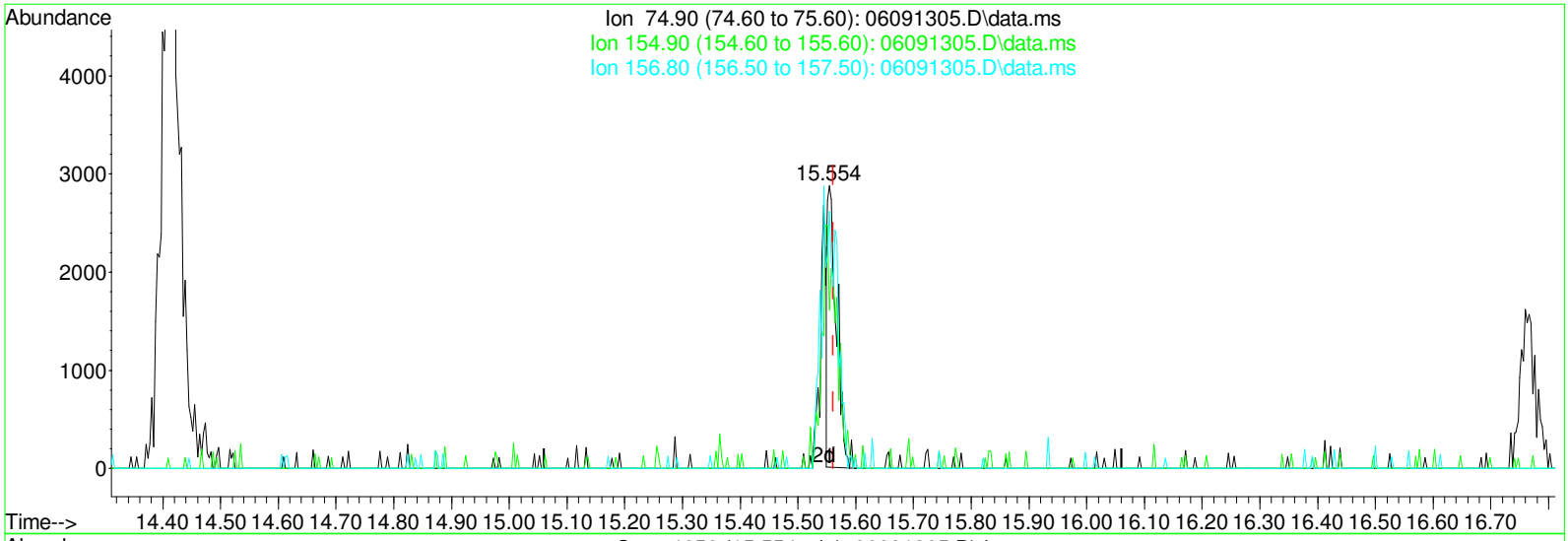
Ion	Exp%	Act%
63.00	100	100
43.00	72.70	73.30
106.00	26.70	30.20
0.00	0.00	0.00

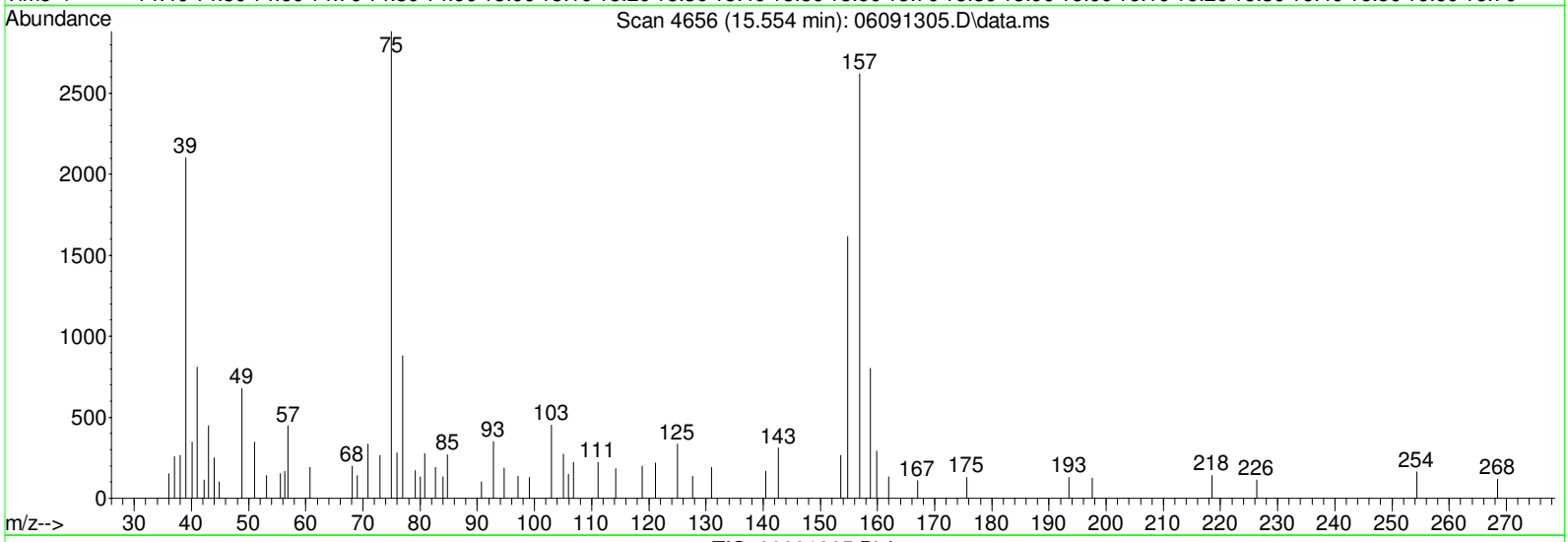
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091305.D
Acq On : 9 Jun 2013 3:11 pm
Sample : ICAL VSTD010
Misc : VOC_W+
ALS Vial : 4

Operator: PS
Inst : VOA7
Multiplr: 1.00

Quant Time: Jun 10 14:09:11 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration





TIC: 06091305.D\data.ms

(85) 1,2-Dibromo-3-chloropropa (M)

15.556min (-0.005) 5.30 ug/L

response 34310

Ion	Exp%	Act%
74.90	100	100
154.90	74.30	127.70#
156.80	95.90	155.35#
0.00	0.00	0.00

BEFORE

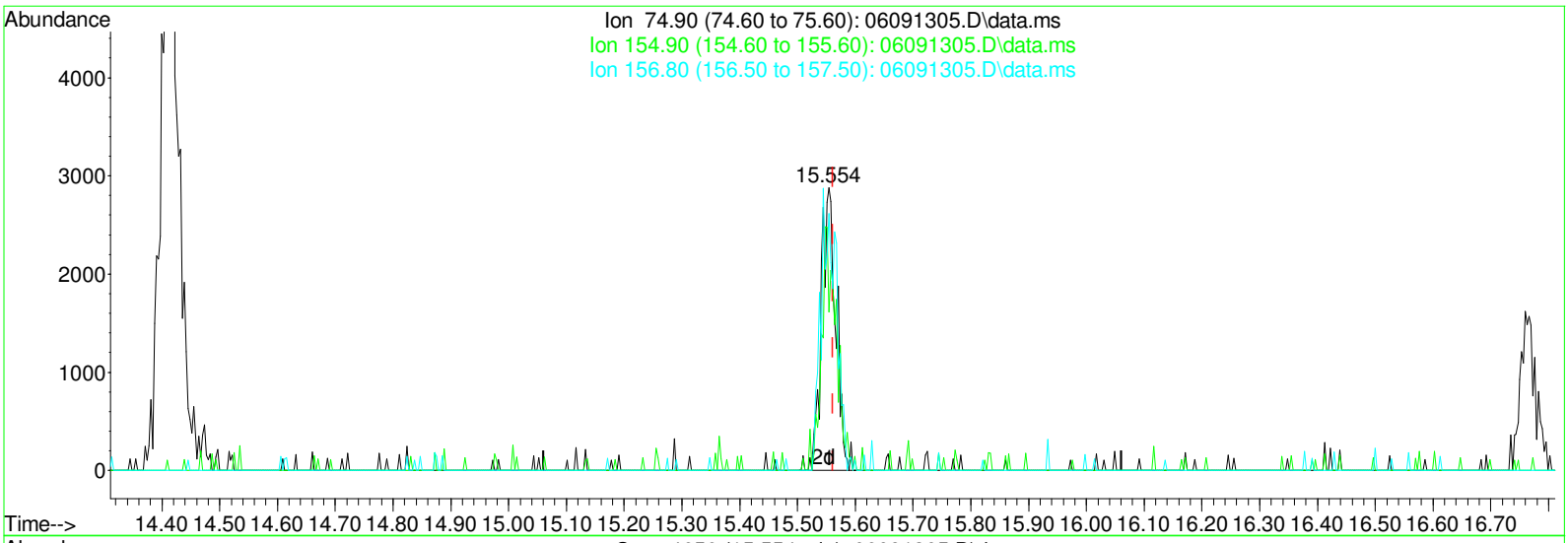
By Alfred at 3:47:57 PM, 7/3/2013

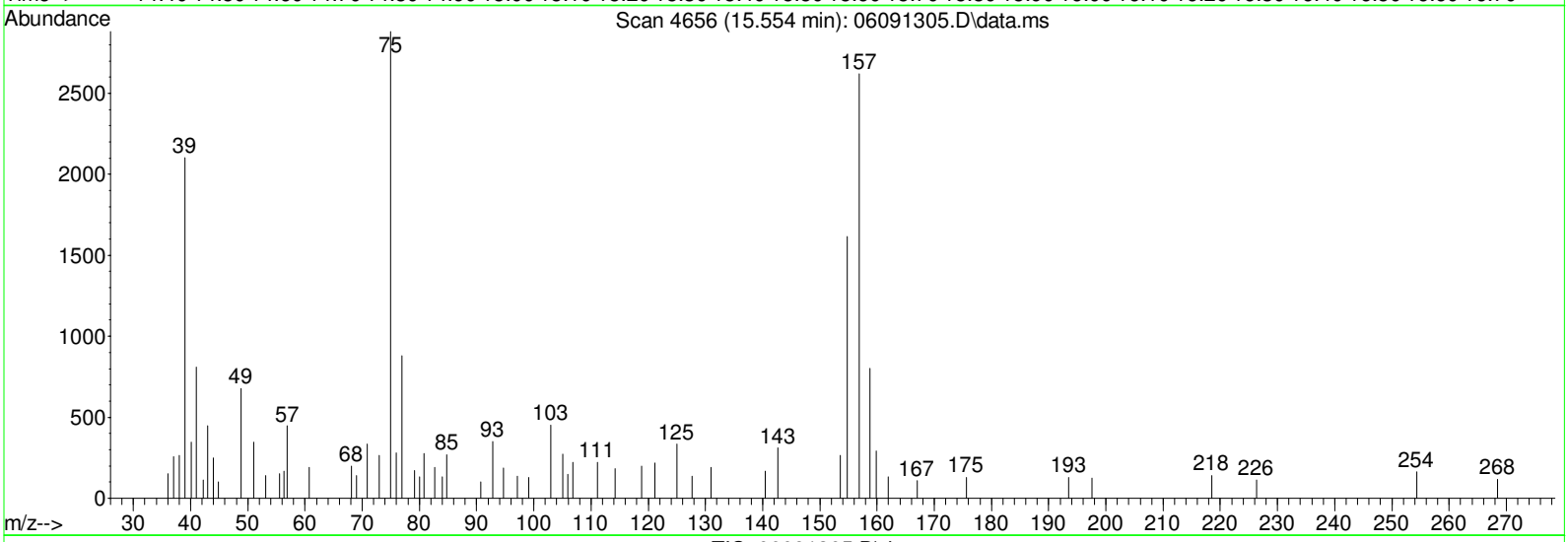
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091305.D
Acq On : 9 Jun 2013 3:11 pm
Sample : ICAL VSTD010
Misc : VOC_W+
ALS Vial : 4

Operator: PS
Inst : VOA7
Multiplr: 1.00

Quant Time: Jun 10 14:09:11 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration





TIC: 06091305.D\data.ms

(85) 1,2-Dibromo-3-chloropropa (M)

15.554min (-0.007) 7.84 ug/L m

response 50769

Ion	Exp%	Act%
74.90	100	100
154.90	74.30	86.30
156.80	95.90	104.99
0.00	0.00	0.00

AFTER M3

By Alfred at 3:48:01 PM, 7/3/2013

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091306.D
Acq On : 9 Jun 2013 3:46 pm Operator: PS
Sample : ICAL VSTD020 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 5

Quant Time: Jun 10 14:12:19 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	5.389	168	1863786	30.00	ug/L	0.00
31) 1,4-Difluorobenzene	6.403	114	3094962	30.00	ug/L	0.00
50) Chlorobenzene-d5	10.491	82	1758893	30.00	ug/L	0.00
69) 1,4-Dichlorobenzene-d4	13.854	152	1638326	30.00	ug/L	0.00
System Monitoring Compounds						
29) Dibromofluoromethane	5.263	113	804278	26.95	ug/L	0.00
Spiked Amount 30.000	Range 86 - 118		Recovery = 89.83%			
32) 1,2-Dichloroethane-d4	5.729	102	218914	28.48	ug/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 94.93%			
48) Toluene-d8	8.469	98	3760022	29.78	ug/L	0.00
Spiked Amount 30.000	Range 88 - 110		Recovery = 99.27%			
68) Bromofluorobenzene	12.192	174	1313495	33.05	ug/L	0.00
Spiked Amount 30.000	Range 86 - 115		Recovery = 110.17%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.217	85	646883	24.42	ug/L	99
3) Chloromethane	1.346	50	502893	19.70	ug/L	98
4) Vinyl chloride	1.425	62	649733	21.37	ug/L	93
5) 1,3-Butadiene	1.452	39	443169	18.61	ug/L	87
6) Bromomethane	1.667	96	188926m	26.15	ug/L	
7) Chloroethane	1.747	64	315640	21.82	ug/L	97
8) Trichlorofluoromethane	1.949	101	700125	17.52	ug/L	97
9) Isopropyl Alcohol	2.589	45	733724	318.04	ug/L #	97
10) Ethyl Ether	2.194	59	401349	18.71	ug/L	96
11) Acrolein	2.300	56	82860	19.27	ug/L	92
12) Acetone	2.442	43	389520	33.90	ug/L	93
13) Freon-TF	2.395	151	299038	20.84	ug/L	92
14) 1,1-Dichloroethene	2.385	96	385262	21.67	ug/L	92
15) Methylene Chloride	2.868	84	492149	20.29	ug/L	89
16) Carbon disulfide	2.585	76	3147165	42.11	ug/L	99
17) Acrylonitrile	3.145	53	234005	18.73	ug/L	97
18) MTBE	3.185	73	1467929	19.12	ug/L	99
19) Hexane	3.524	57	400473	19.51	ug/L	99
20) trans-1,2-Dichloroethene	3.170	96	454350	20.14	ug/L	95
21) Vinyl acetate	3.808	43	2203933	43.94	ug/L	94
22) 1,1-Dichloroethane	3.701	63	784936	18.20	ug/L	95
23) 2-Butanone	4.613	72	151142	38.44	ug/L	79
24) 2,2-Dichloropropane	4.527	77	654239	18.56	ug/L	91
25) cis-1,2-Dichloroethene	4.545	96	516861	19.79	ug/L	94
26) Ethyl Acetate	4.730	45	89977	19.41	ug/L #	68
27) Chloroform	5.037	83	783150	18.11	ug/L	96
28) Bromochloromethane	4.886	128	233786	22.45	ug/L #	83
30) Isobutyl alcohol	5.839	43	453965	282.88	ug/L	96
33) Carbon Tetrachloride	5.493	117	485563	16.22	ug/L	98
34) 1,2-Dichloroethane	5.836	62	669588	18.96	ug/L	95
35) 1,1,1-Trichloroethane	5.260	97	634493	17.76	ug/L	97
36) 1,1-Dichloropropene	5.505	110	222186	19.95	ug/L	99
37) 1-Butanol	6.794	56	282649	316.59	ug/L	94
38) Benzene	5.798	78	1964058	19.21	ug/L	98
39) Trichloroethene	6.738	95	458290	18.04	ug/L	96
40) 1,2-Dichloropropane	7.049	63	466974	17.95	ug/L #	88
41) 1,4-Dioxane	7.279	88	73312	198.81	ug/L #	23
42) Bromodichloromethane	7.467	83	595966	18.56	ug/L	99
43) Dibromomethane	7.208	93	285062	19.45	ug/L	96
44) 2-Nitropropane	7.804	41	110732	14.71	ug/L #	80
45) 2-Chloroethylvinyl ether	7.947	63	518330	31.17	ug/L	93

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091306.D
Acq On : 9 Jun 2013 3:46 pm Operator: PS
Sample : ICAL VSTD020 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 5

Quant Time: Jun 10 14:12:19 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration

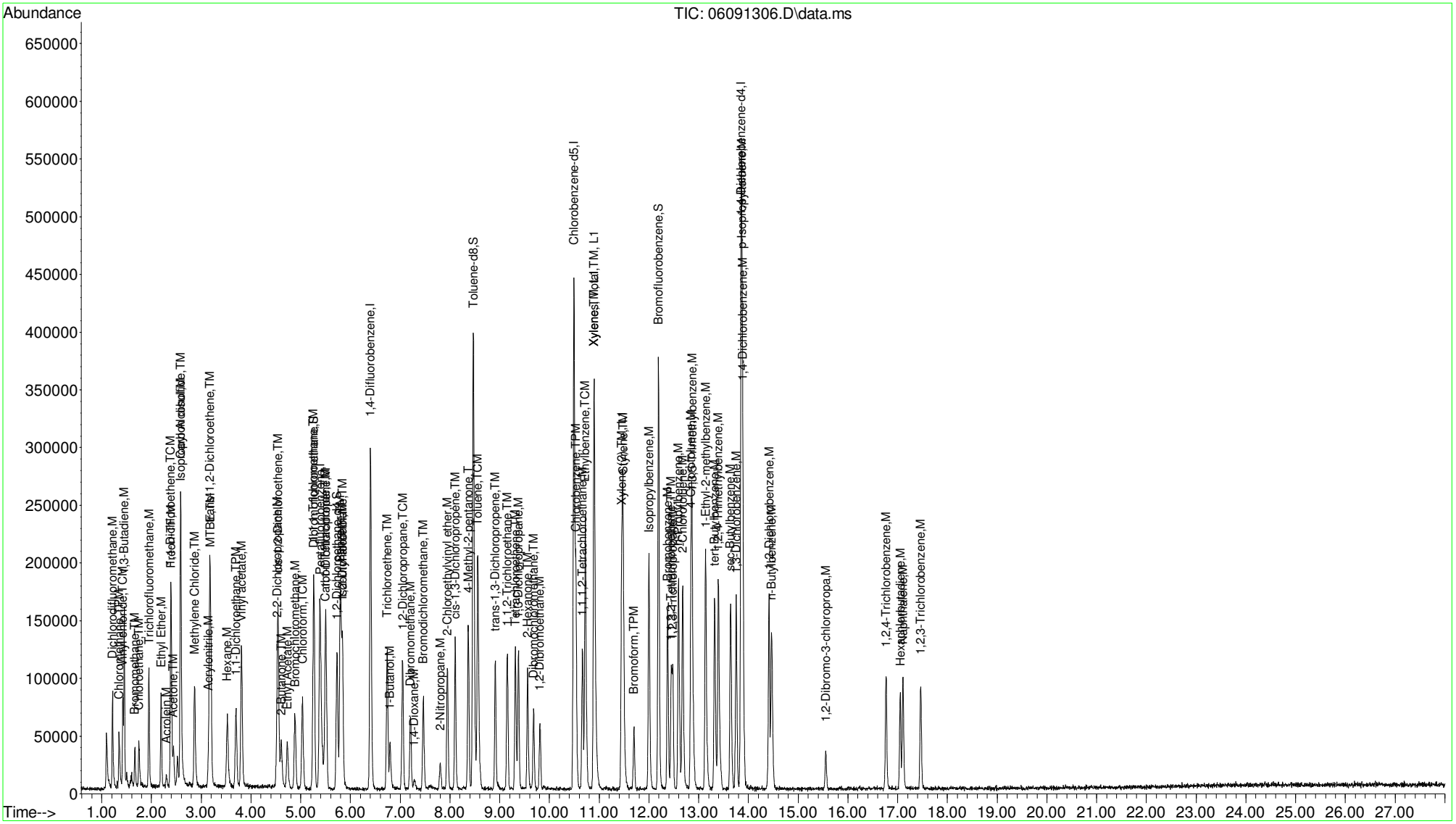
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
46) 4-Methyl-2-pentanone	8.369	43	1140318	35.09 ug/L	98
47) cis-1,3-Dichloropropene	8.106	75	804285	19.14 ug/L	98
49) Toluene	8.559	92	1229242	18.89 ug/L	100
51) trans-1,3-Dichloropropene	8.909	75	690301	18.18 ug/L	97
52) 2-Hexanone	9.560	43	799779	35.26 ug/L	97
53) 1,1,2-Trichloroethane	9.148	83	369311	18.84 ug/L	99
54) 1,3-Dichloropropane	9.378	76	782379	18.43 ug/L	99
55) Tetrachloroethene	9.315	164	334705	20.45 ug/L	97
56) Dibromochloromethane	9.682	129	404275	16.36 ug/L	95
57) 1,2-Dibromoethane	9.810	107	452570	19.34 ug/L #	99
58) Chlorobenzene	10.532	112	1233335	19.82 ug/L	99
59) Ethylbenzene	10.723	91	2282744	19.28 ug/L	100
60) 1,1,1,2-Tetrachloroethane	10.661	131	394980	17.15 ug/L	96
61) Xylene	10.899	106	1641144	37.89 ug/L	98
62) Xylene (2)	11.452	106	793763	19.07 ug/L	93
63) Xylenes, Total	10.899	106	2434906m	56.95 ug/L #	
64) Styrene	11.479	104	1530388	19.80 ug/L	96
65) Isopropylbenzene	12.000	105	1838809	19.80 ug/L	100
66) Bromoform	11.699	173	275153	17.15 ug/L	95
67) 1,1,2,2-Tetrachloroethane	12.448	83	611699	18.97 ug/L	100
70) 1,2,3-Trichloropropane	12.483	75	502037	17.06 ug/L	100
71) n-Propylbenzene	12.596	91	1986888	18.15 ug/L	98
72) Bromobenzene	12.376	156	541834	19.10 ug/L	95
73) 1,3,5-Trimethylbenzene	12.868	105	1608083	18.20 ug/L	100
74) 2-Chlorotoluene	12.679	91	1428835	18.37 ug/L	100
75) 4-Chlorotoluene	12.843	91	1546946	17.20 ug/L	94
76) tert-Butylbenzene	13.319	119	1002041	16.51 ug/L	95
77) 1-Ethyl-2-methylbenzene	13.138	105	1935774	18.24 ug/L	98
78) 1,2,4-Trimethylbenzene	13.394	105	1593939	17.31 ug/L	99
79) sec-Butylbenzene	13.640	105	1553089	18.23 ug/L	99
80) p-Isopropyltoluene	13.873	119	1324115	18.44 ug/L	100
81) 1,3-Dichlorobenzene	13.755	146	880403	19.30 ug/L	98
82) 1,4-Dichlorobenzene	13.885	146	979992	18.70 ug/L	97
83) n-Butylbenzene	14.465	91	1127895	17.35 ug/L	97
84) 1,2-Dichlorobenzene	14.415	146	854999	18.91 ug/L	95
85) 1,2-Dibromo-3-chloropropa	15.553	75	92425	14.54 ug/L	85
86) 1,2,4-Trichlorobenzene	16.768	180	385920	18.26 ug/L	98
87) Hexachlorbutadiene	17.056	225	181301	20.29 ug/L #	85
88) Naphthalene	17.106	128	980746	16.38 ug/L	98
89) 1,2,3-Trichlorobenzene	17.462	180	338632	18.86 ug/L	96

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091306.D
Acq On : 9 Jun 2013 3:46 pm Operator: PS
Sample : ICAL VSTD020 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 5

Quant Time: Jun 10 14:12:19 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091306.D
Acq On : 9 Jun 2013 3:46 pm Operator: PS
Sample : ICAL VSTD020 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 5

Quant Time: Jun 10 14:11:14 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	5.389	168	1863786	30.00	ug/L	0.00
31) 1,4-Difluorobenzene	6.403	114	3094962	30.00	ug/L	0.00
50) Chlorobenzene-d5	10.491	82	1758893	30.00	ug/L	0.00
69) 1,4-Dichlorobenzene-d4	13.854	152	1638326	30.00	ug/L	0.00
System Monitoring Compounds						
29) Dibromofluoromethane	5.263	113	804278	26.95	ug/L	0.00
Spiked Amount 30.000	Range 86 - 118		Recovery = 89.83%			
32) 1,2-Dichloroethane-d4	5.729	102	218914	28.48	ug/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 94.93%			
48) Toluene-d8	8.469	98	3760022	29.78	ug/L	0.00
Spiked Amount 30.000	Range 88 - 110		Recovery = 99.27%			
68) Bromofluorobenzene	12.192	174	1313495	33.05	ug/L	0.00
Spiked Amount 30.000	Range 86 - 115		Recovery = 110.17%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.217	85	646883	24.42	ug/L	99
3) Chloromethane	1.346	50	502893	19.70	ug/L	98
4) Vinyl chloride	1.425	62	649733	21.37	ug/L	93
5) 1,3-Butadiene	1.452	39	443169	18.61	ug/L	87
6) Bromomethane	1.668	96	175664	24.96	ug/L	99
7) Chloroethane	1.747	64	315640	21.82	ug/L	97
8) Trichlorofluoromethane	1.949	101	700125	17.52	ug/L	97
9) Isopropyl Alcohol	2.589	45	733724	318.04	ug/L #	97
10) Ethyl Ether	2.194	59	401349	18.71	ug/L	96
11) Acrolein	2.300	56	82860	19.27	ug/L	92
12) Acetone	2.442	43	389520	33.90	ug/L	93
13) Freon-TF	2.395	151	299038	20.84	ug/L	92
14) 1,1-Dichloroethene	2.385	96	385262	21.67	ug/L	92
15) Methylene Chloride	2.868	84	492149	20.29	ug/L	89
16) Carbon disulfide	2.585	76	3147165	42.11	ug/L	99
17) Acrylonitrile	3.145	53	234005	18.73	ug/L	97
18) MTBE	3.185	73	1467929	19.12	ug/L	99
19) Hexane	3.524	57	400473	19.51	ug/L	99
20) trans-1,2-Dichloroethene	3.170	96	454350	20.14	ug/L	95
21) Vinyl acetate	3.808	43	2203933	43.94	ug/L	94
22) 1,1-Dichloroethane	3.701	63	784936	18.20	ug/L	95
23) 2-Butanone	4.613	72	151142	38.44	ug/L	79
24) 2,2-Dichloropropane	4.527	77	654239	18.56	ug/L	91
25) cis-1,2-Dichloroethene	4.545	96	516861	19.79	ug/L	94
26) Ethyl Acetate	4.730	45	89977	19.41	ug/L #	68
27) Chloroform	5.037	83	783150	18.11	ug/L	96
28) Bromochloromethane	4.886	128	233786	22.45	ug/L #	83
30) Isobutyl alcohol	5.839	43	453965	282.88	ug/L	96
33) Carbon Tetrachloride	5.493	117	485563	16.22	ug/L	98
34) 1,2-Dichloroethane	5.836	62	669588	18.96	ug/L	95
35) 1,1,1-Trichloroethane	5.260	97	634493	17.76	ug/L	97
36) 1,1-Dichloropropene	5.505	110	222186	19.95	ug/L	99
37) 1-Butanol	6.794	56	282649	316.59	ug/L	94
38) Benzene	5.798	78	1964058	19.21	ug/L	98
39) Trichloroethene	6.738	95	458290	18.04	ug/L	96
40) 1,2-Dichloropropane	7.049	63	466974	17.95	ug/L #	88
41) 1,4-Dioxane	7.279	88	73312	198.81	ug/L #	23
42) Bromodichloromethane	7.467	83	595966	18.56	ug/L	99
43) Dibromomethane	7.208	93	285062	19.45	ug/L	96
44) 2-Nitropropane	7.804	41	110732	14.71	ug/L #	80
45) 2-Chloroethylvinyl ether	7.947	63	518330	31.17	ug/L	93

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091306.D
Acq On : 9 Jun 2013 3:46 pm Operator: PS
Sample : ICAL VSTD020 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 5

Quant Time: Jun 10 14:11:14 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration

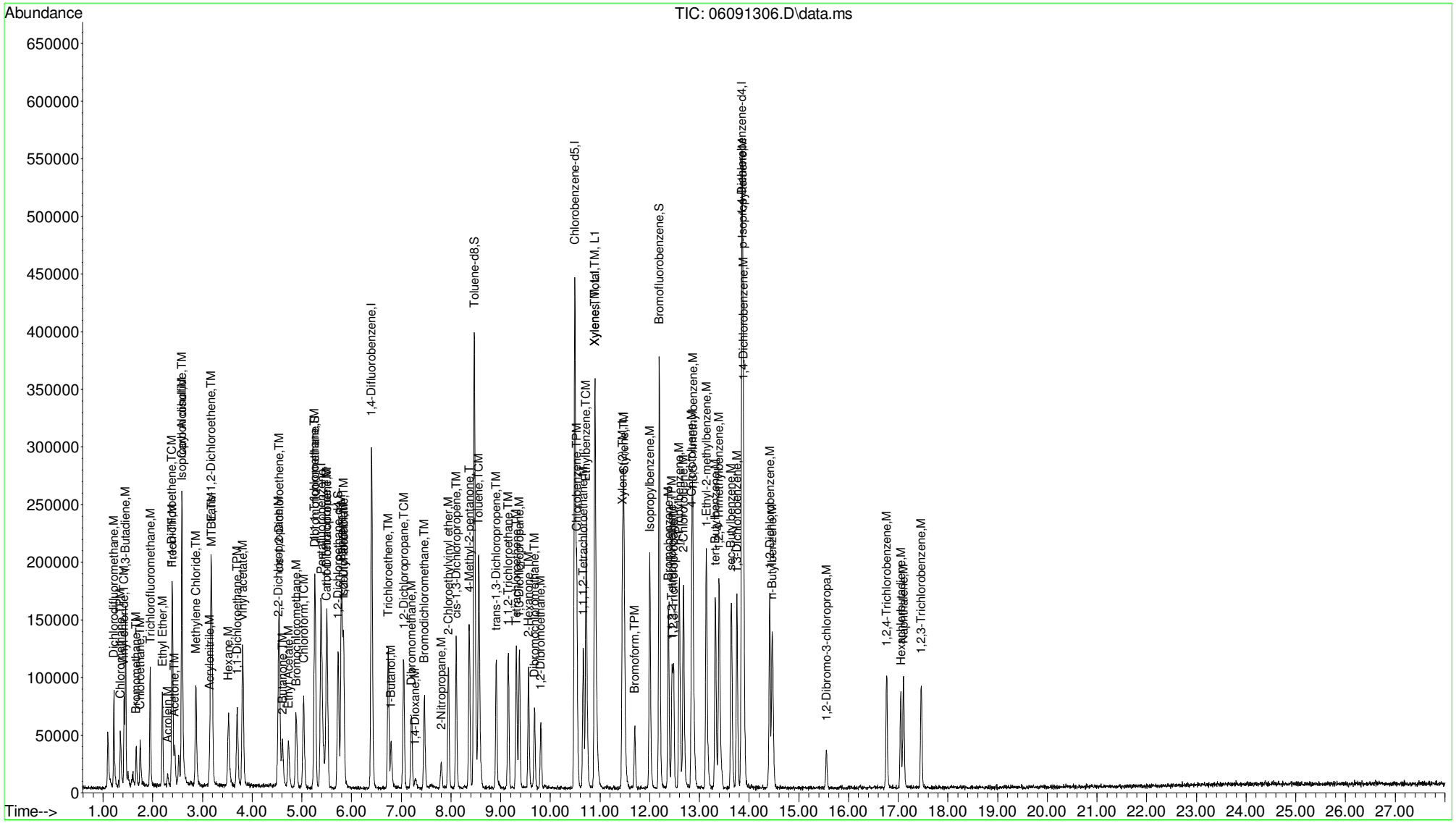
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
46) 4-Methyl-2-pentanone	8.369	43	1140318	35.09 ug/L	98
47) cis-1,3-Dichloropropene	8.106	75	804285	19.14 ug/L	98
49) Toluene	8.559	92	1229242	18.89 ug/L	100
51) trans-1,3-Dichloropropene	8.909	75	690301	18.18 ug/L	97
52) 2-Hexanone	9.560	43	799779	35.26 ug/L	97
53) 1,1,2-Trichloroethane	9.148	83	369311	18.84 ug/L	99
54) 1,3-Dichloropropane	9.378	76	782379	18.43 ug/L	99
55) Tetrachloroethene	9.315	164	334705	20.45 ug/L	97
56) Dibromochloromethane	9.682	129	404275	16.36 ug/L	95
57) 1,2-Dibromoethane	9.810	107	452570	19.34 ug/L #	99
58) Chlorobenzene	10.532	112	1233335	19.82 ug/L	99
59) Ethylbenzene	10.723	91	2282744	19.28 ug/L	100
60) 1,1,1,2-Tetrachloroethane	10.661	131	394980	17.15 ug/L	96
61) Xylene	10.899	106	1641144	37.89 ug/L	98
62) Xylene (2)	11.452	106	793763	19.07 ug/L	93
63) Xylenes, Total	10.899	106	2434906m	56.95 ug/L #	
64) Styrene	11.479	104	1530388	19.80 ug/L	96
65) Isopropylbenzene	12.000	105	1838809	19.80 ug/L	100
66) Bromoform	11.699	173	275153	17.15 ug/L	95
67) 1,1,2,2-Tetrachloroethane	12.448	83	611699	18.97 ug/L	100
70) 1,2,3-Trichloropropane	12.483	75	502037	17.06 ug/L	100
71) n-Propylbenzene	12.596	91	1986888	18.15 ug/L	98
72) Bromobenzene	12.376	156	541834	19.10 ug/L	95
73) 1,3,5-Trimethylbenzene	12.868	105	1608083	18.20 ug/L	100
74) 2-Chlorotoluene	12.679	91	1428835	18.37 ug/L	100
75) 4-Chlorotoluene	12.843	91	1546946	17.20 ug/L	94
76) tert-Butylbenzene	13.319	119	1002041	16.51 ug/L	95
77) 1-Ethyl-2-methylbenzene	13.138	105	1935774	18.24 ug/L	98
78) 1,2,4-Trimethylbenzene	13.394	105	1593939	17.31 ug/L	99
79) sec-Butylbenzene	13.640	105	1553089	18.23 ug/L	99
80) p-Isopropyltoluene	13.873	119	1324115	18.44 ug/L	100
81) 1,3-Dichlorobenzene	13.755	146	880403	19.30 ug/L	98
82) 1,4-Dichlorobenzene	13.885	146	979992	18.70 ug/L	97
83) n-Butylbenzene	14.465	91	1127895	17.35 ug/L	97
84) 1,2-Dichlorobenzene	14.415	146	854999	18.91 ug/L	95
85) 1,2-Dibromo-3-chloropropa	15.553	75	92425	14.54 ug/L	85
86) 1,2,4-Trichlorobenzene	16.768	180	385920	18.26 ug/L	98
87) Hexachlorbutadiene	17.056	225	181301	20.29 ug/L #	85
88) Naphthalene	17.106	128	980746	16.38 ug/L	98
89) 1,2,3-Trichlorobenzene	17.462	180	338632	18.86 ug/L	96

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091306.D
Acq On : 9 Jun 2013 3:46 pm Operator: PS
Sample : ICAL VSTD020 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 5

Quant Time: Jun 10 14:11:14 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration

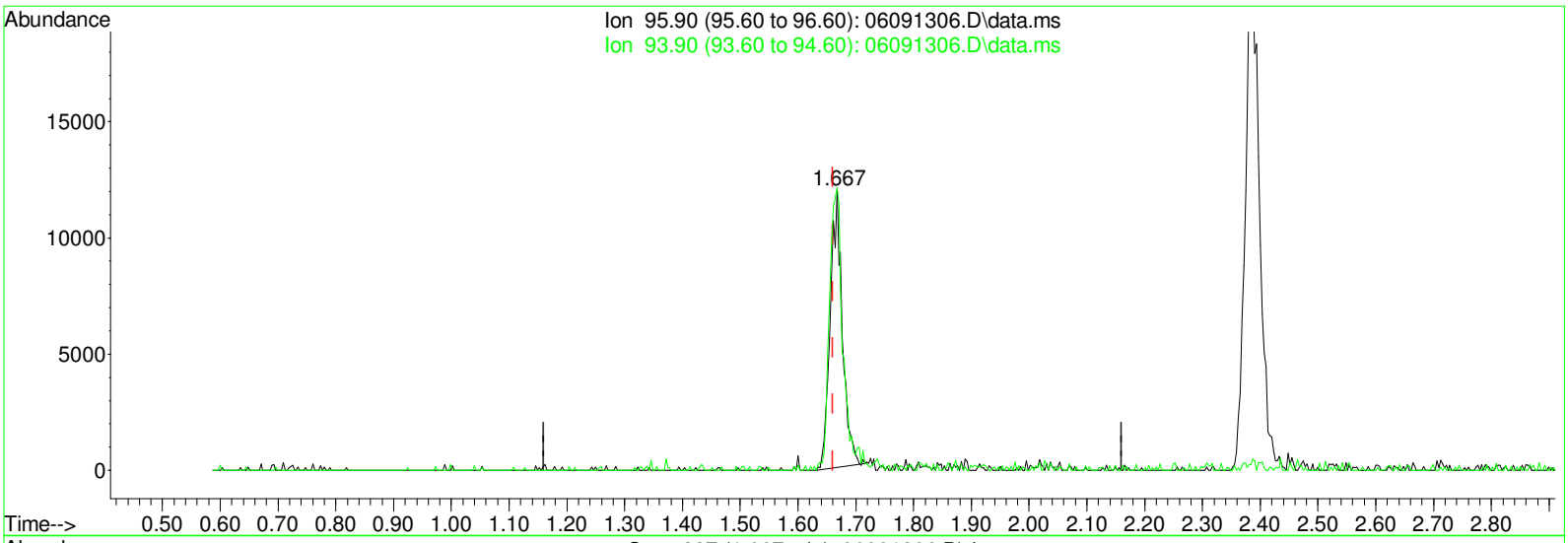


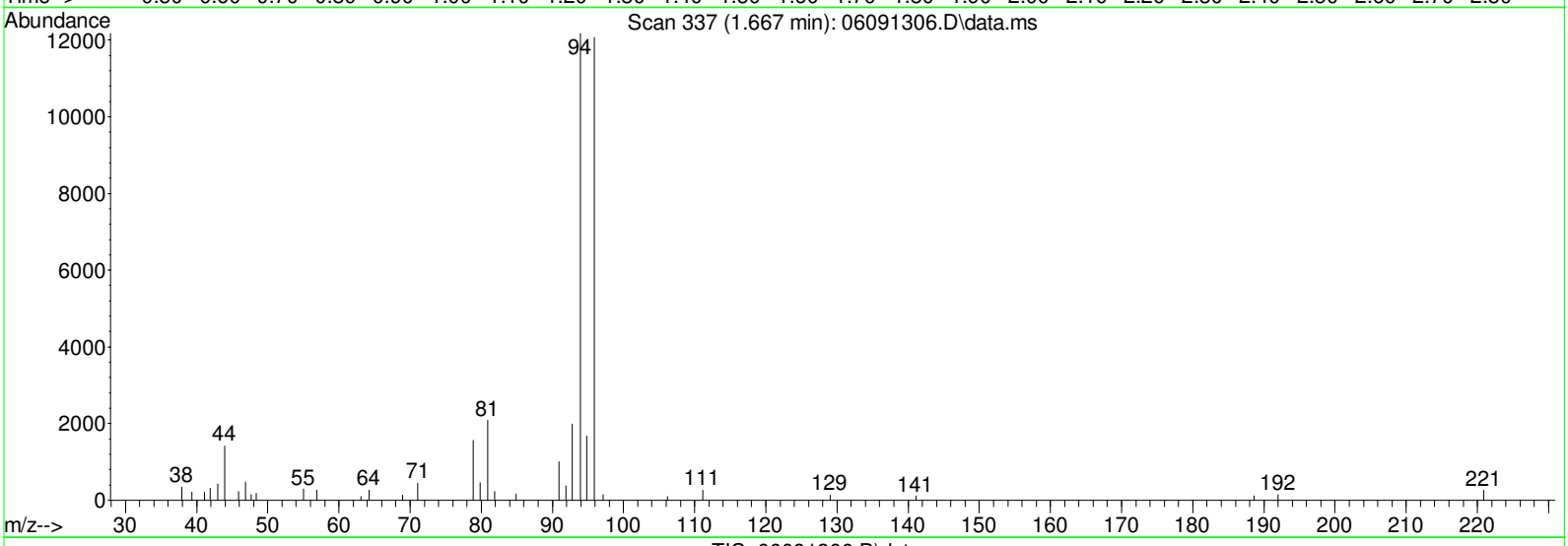
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091306.D
Acq On : 9 Jun 2013 3:46 pm
Sample : ICAL VSTD020
Misc : VOC_W+
ALS Vial : 5

Operator: PS
Inst : VOA7
Multiplr: 1.00

Quant Time: Jun 10 14:11:14 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration





TIC: 06091306.D\data.ms

(6) Bromomethane (TM)

1.668min (+0.008) 24.96 ug/L

response 175664

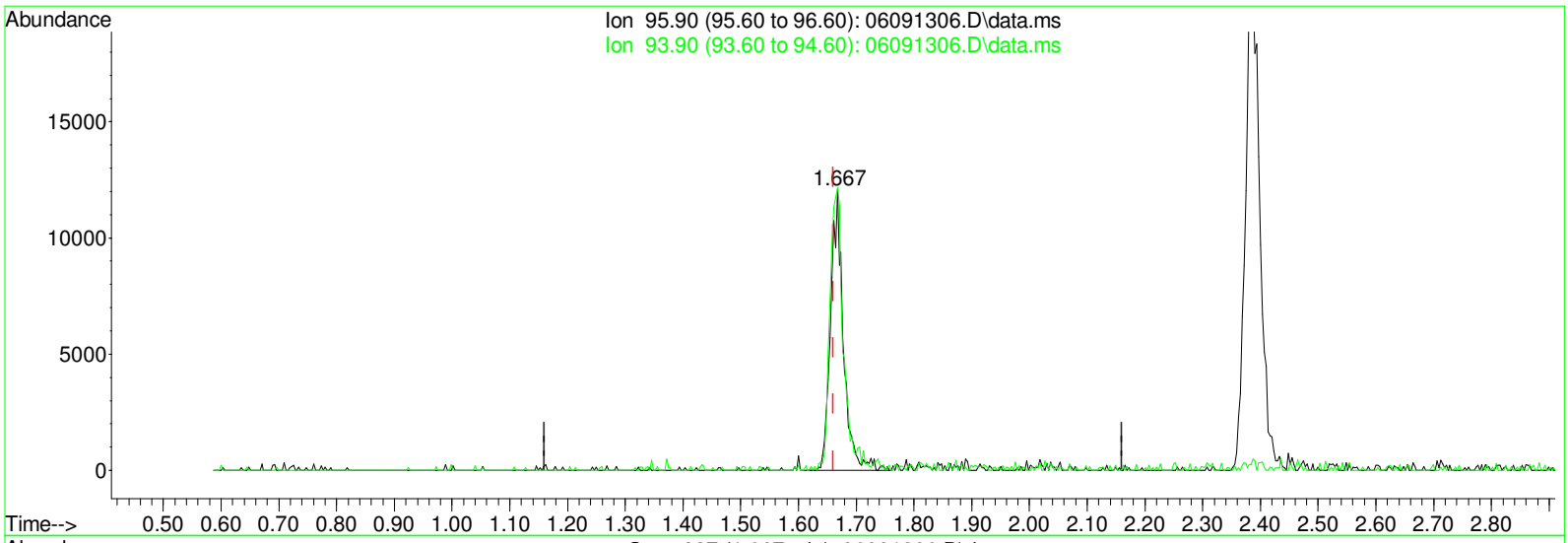
Ion	Exp%	Act%
95.90	100	100
93.90	98.20	99.23
0.00	0.00	0.00
0.00	0.00	0.00

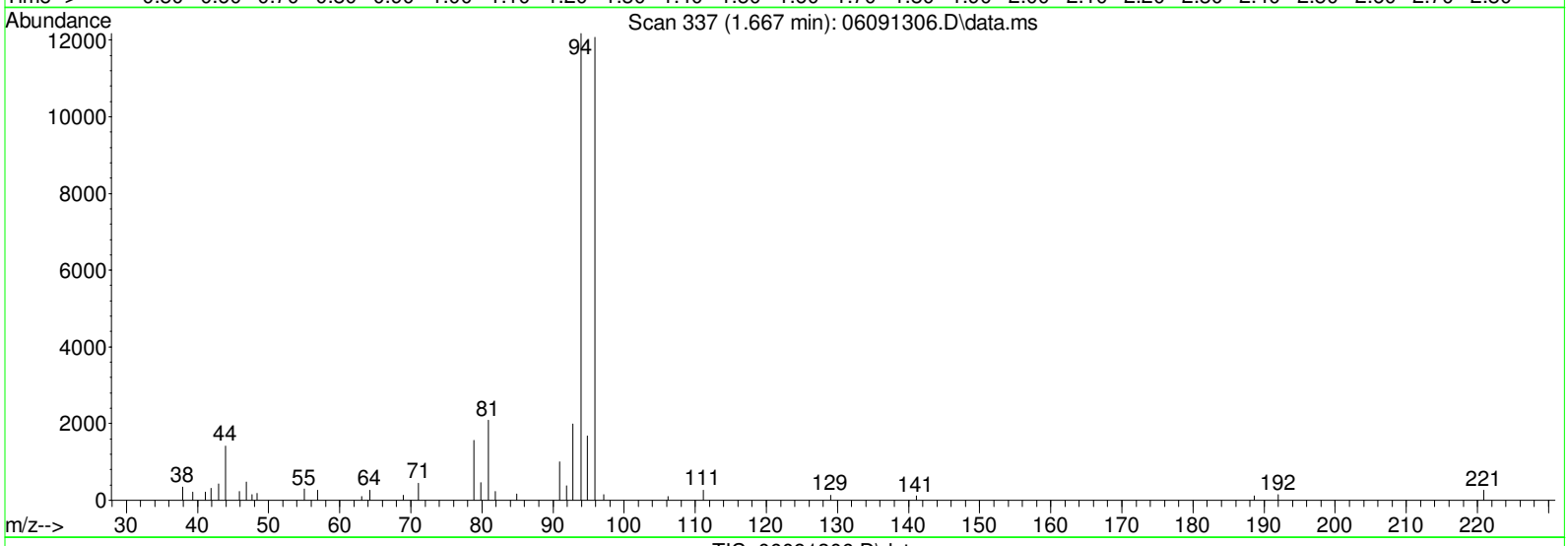
BEFORE
By Alfred at 3:48:13 PM, 7/3/2013

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091306.D
Acq On : 9 Jun 2013 3:46 pm Operator: PS
Sample : ICAL VSTD020 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 5

Quant Time: Jun 10 14:11:14 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration





TIC: 06091306.D\data.ms

(6) Bromomethane (TM)

1.667min (+0.007) 26.15 ug/L m

response 188926

Ion	Exp%	Act%
95.90	100	100
93.90	98.20	92.27
0.00	0.00	0.00
0.00	0.00	0.00

AFTER M3
By Alfred at 3:48:18 PM, 7/3/2013

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091307.D
Acq On : 9 Jun 2013 4:21 pm Operator: PS
Sample : ICAL VSTD050 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 6

Quant Time: Jun 10 14:12:28 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	5.390	168	1920231	30.00	ug/L	0.00
31) 1,4-Difluorobenzene	6.402	114	3148649	30.00	ug/L	0.00
50) Chlorobenzene-d5	10.492	82	1816949	30.00	ug/L	0.00
69) 1,4-Dichlorobenzene-d4	13.854	152	1676446	30.00	ug/L	0.00
System Monitoring Compounds						
29) Dibromofluoromethane	5.266	113	823910	26.79	ug/L	0.00
Spiked Amount 30.000	Range 86 - 118		Recovery = 89.30%			
32) 1,2-Dichloroethane-d4	5.727	102	207500	26.54	ug/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 88.47%			
48) Toluene-d8	8.469	98	3814666	29.70	ug/L	0.00
Spiked Amount 30.000	Range 88 - 110		Recovery = 99.00%			
68) Bromofluorobenzene	12.195	174	1304790	31.78	ug/L	0.00
Spiked Amount 30.000	Range 86 - 115		Recovery = 105.93%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.216	85	1648206	60.39	ug/L	100
3) Chloromethane	1.348	50	1301333	49.48	ug/L	95
4) Vinyl chloride	1.426	62	1674064	53.44	ug/L	98
5) 1,3-Butadiene	1.451	39	1146721	46.75	ug/L	88
6) Bromomethane	1.662	96	469891	50.05	ug/L	88
7) Chloroethane	1.743	64	818554	54.93	ug/L	97
8) Trichlorofluoromethane	1.946	101	1851838	44.99	ug/L	98
9) Isopropyl Alcohol	2.594	45	1952730	821.55	ug/L #	95
10) Ethyl Ether	2.192	59	1026556	46.45	ug/L	92
11) Acrolein	2.299	56	212790	48.04	ug/L	84
12) Acetone	2.444	43	910325	76.89	ug/L	96
13) Freon-TF	2.397	151	829666	56.13	ug/L	93
14) 1,1-Dichloroethene	2.388	96	1022446	55.83	ug/L	90
15) Methylene Chloride	2.865	84	1282262	51.31	ug/L	87
16) Carbon disulfide	2.585	76	8128957	105.56	ug/L	100
17) Acrylonitrile	3.145	53	586356	45.56	ug/L	97
18) MTBE	3.189	73	3834022	48.48	ug/L	99
19) Hexane	3.525	57	1124235	53.16	ug/L	93
20) trans-1,2-Dichloroethene	3.167	96	1231494	52.99	ug/L	91
21) Vinyl acetate	3.810	43	5192184	100.47	ug/L	95
22) 1,1-Dichloroethane	3.696	63	2092381	47.09	ug/L	98
23) 2-Butanone	4.609	72	387230	95.58	ug/L #	71
24) 2,2-Dichloropropane	4.532	77	1759614	48.44	ug/L	98
25) cis-1,2-Dichloroethene	4.544	96	1331864	49.51	ug/L	94
26) Ethyl Acetate	4.734	45	200357	41.96	ug/L #	81
27) Chloroform	5.034	83	1961996	44.04	ug/L	98
28) Bromochloromethane	4.886	128	542287	50.55	ug/L #	88
30) Isobutyl alcohol	5.841	43	1211330	732.62	ug/L	98
33) Carbon Tetrachloride	5.496	117	1282657	42.12	ug/L	98
34) 1,2-Dichloroethane	5.838	62	1712684	47.67	ug/L	96
35) 1,1,1-Trichloroethane	5.263	97	1709898	47.05	ug/L	96
36) 1,1-Dichloropropene	5.509	110	569849	50.30	ug/L	91
37) 1-Butanol	6.795	56	741686	816.59	ug/L	95
38) Benzene	5.798	78	5027654	48.35	ug/L	99
39) Trichloroethene	6.739	95	1215838	47.04	ug/L	96
40) 1,2-Dichloropropane	7.046	63	1242886	46.96	ug/L	99
41) 1,4-Dioxane	7.285	88	181976	485.06	ug/L	89
42) Bromodichloromethane	7.463	83	1525512	46.70	ug/L	98
43) Dibromomethane	7.207	93	737491	49.45	ug/L	96
44) 2-Nitropropane	7.799	41	298462	38.96	ug/L #	76
45) 2-Chloroethylvinyl ether	7.949	63	1376986	81.39	ug/L	94

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091307.D
Acq On : 9 Jun 2013 4:21 pm Operator: PS
Sample : ICAL VSTD050 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 6

Quant Time: Jun 10 14:12:28 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration

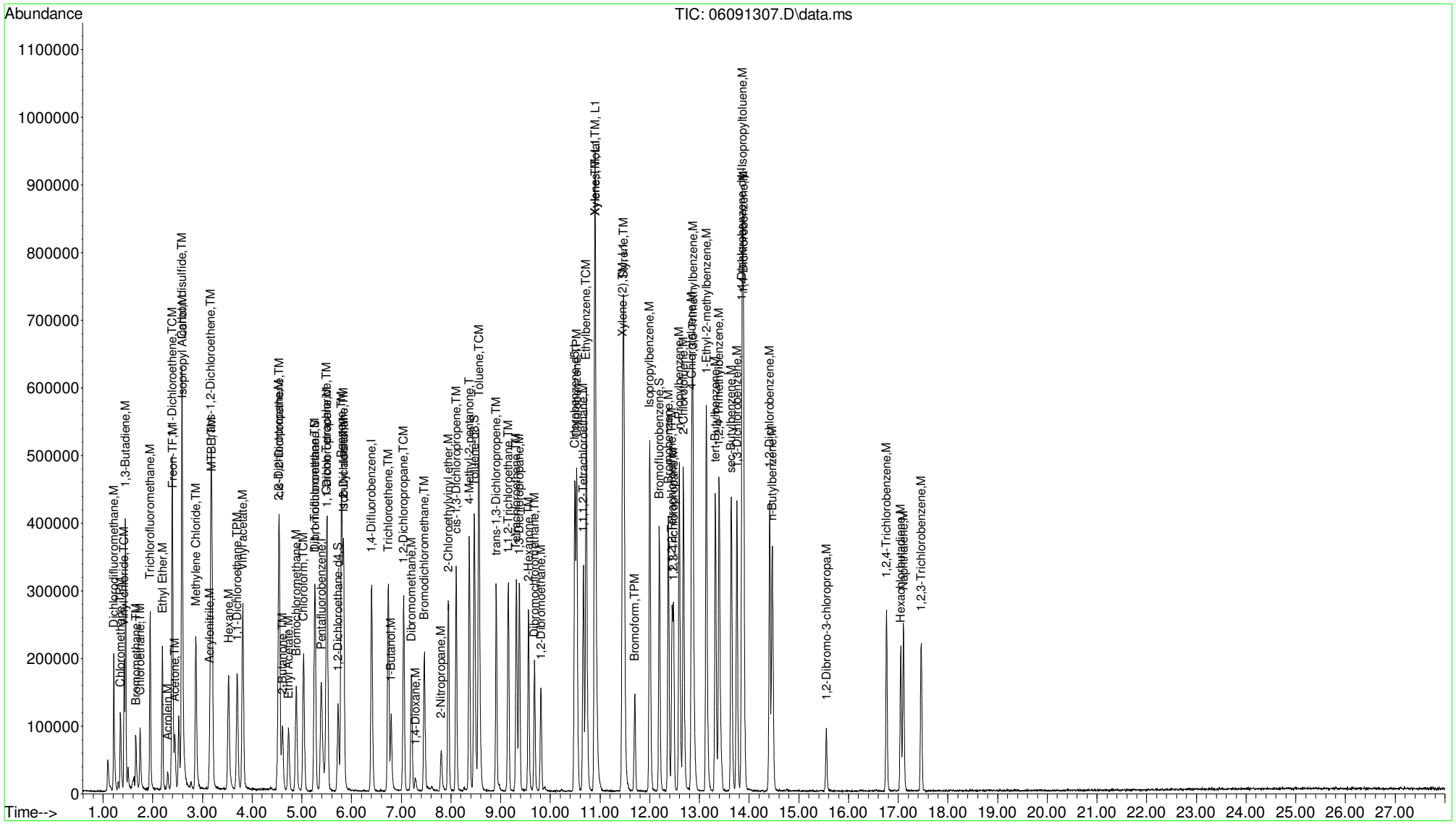
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
46) 4-Methyl-2-pentanone	8.369	43	2890198	87.42 ug/L	97
47) cis-1,3-Dichloropropene	8.105	75	2096970	49.04 ug/L	96
49) Toluene	8.561	92	3209075	48.49 ug/L	98
51) trans-1,3-Dichloropropene	8.911	75	1802355	45.94 ug/L	96
52) 2-Hexanone	9.560	43	2088755	89.15 ug/L	98
53) 1,1,2-Trichloroethane	9.155	83	925490	45.69 ug/L	95
54) 1,3-Dichloropropane	9.376	76	2082076	47.47 ug/L	99
55) Tetrachloroethene	9.315	164	894172	52.89 ug/L	97
56) Dibromochloromethane	9.682	129	1106630	43.36 ug/L	96
57) 1,2-Dibromoethane	9.811	107	1209808	50.05 ug/L	99
58) Chlorobenzene	10.531	112	3189768	49.62 ug/L	97
59) Ethylbenzene	10.722	91	5859174	47.89 ug/L	98
60) 1,1,1,2-Tetrachloroethane	10.665	131	1071564	45.04 ug/L	97
61) Xylene	10.900	106	4383698	97.97 ug/L	99
62) Xylene (2)	11.454	106	2038765	47.41 ug/L	95
63) Xylenes, Total	10.900	106	6422463m	145.43 ug/L #	
64) Styrene	11.478	104	3918355	49.09 ug/L	96
65) Isopropylbenzene	11.999	105	4738854	49.39 ug/L	98
66) Bromoform	11.699	173	771311	46.54 ug/L	98
67) 1,1,2,2-Tetrachloroethane	12.449	83	1582427	47.50 ug/L	99
70) 1,2,3-Trichloropropane	12.480	75	1260416	41.86 ug/L	100
71) n-Propylbenzene	12.594	91	5197736	46.39 ug/L	98
72) Bromobenzene	12.373	156	1377157	47.45 ug/L	94
73) 1,3,5-Trimethylbenzene	12.869	105	4103041	45.38 ug/L	97
74) 2-Chlorotoluene	12.678	91	3577659	44.94 ug/L	97
75) 4-Chlorotoluene	12.844	91	4101609	44.56 ug/L	97
76) tert-Butylbenzene	13.322	119	2890945	46.55 ug/L	97
77) 1-Ethyl-2-methylbenzene	13.139	105	5160955	47.51 ug/L	100
78) 1,2,4-Trimethylbenzene	13.396	105	4027667	42.74 ug/L	98
79) sec-Butylbenzene	13.641	105	4122041	47.29 ug/L	98
80) p-Isopropyltoluene	13.871	119	3380499	46.00 ug/L	99
81) 1,3-Dichlorobenzene	13.754	146	2253103	48.27 ug/L	97
82) 1,4-Dichlorobenzene	13.889	146	2521080	47.02 ug/L	97
83) n-Butylbenzene	14.465	91	2965112	44.59 ug/L	99
84) 1,2-Dichlorobenzene	14.413	146	2204046	47.64 ug/L	97
85) 1,2-Dibromo-3-chloropropa	15.553	75	247314	38.02 ug/L	85
86) 1,2,4-Trichlorobenzene	16.763	180	994351	45.99 ug/L	99
87) Hexachlorbutadiene	17.052	225	474813	51.92 ug/L	96
88) Naphthalene	17.104	128	2462946	40.21 ug/L	98
89) 1,2,3-Trichlorobenzene	17.462	180	847480	46.12 ug/L	97

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091307.D
Acq On : 9 Jun 2013 4:21 pm Operator: PS
Sample : ICAL VSTD050 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 6

Quant Time: Jun 10 14:12:28 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091307.D
Acq On : 9 Jun 2013 4:21 pm Operator: PS
Sample : ICAL VSTD050 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 6

Quant Time: Jun 10 14:12:28 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	5.390	168	1920231	30.00	ug/L	0.00
31) 1,4-Difluorobenzene	6.402	114	3148649	30.00	ug/L	0.00
50) Chlorobenzene-d5	10.492	82	1816949	30.00	ug/L	0.00
69) 1,4-Dichlorobenzene-d4	13.854	152	1676446	30.00	ug/L	0.00
System Monitoring Compounds						
29) Dibromofluoromethane	5.266	113	823910	26.79	ug/L	0.00
Spiked Amount 30.000	Range 86 - 118		Recovery = 89.30%			
32) 1,2-Dichloroethane-d4	5.727	102	207500	26.54	ug/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 88.47%			
48) Toluene-d8	8.469	98	3814666	29.70	ug/L	0.00
Spiked Amount 30.000	Range 88 - 110		Recovery = 99.00%			
68) Bromofluorobenzene	12.195	174	1304790	31.78	ug/L	0.00
Spiked Amount 30.000	Range 86 - 115		Recovery = 105.93%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.216	85	1648206	60.39	ug/L	100
3) Chloromethane	1.348	50	1301333	49.48	ug/L	95
4) Vinyl chloride	1.426	62	1674064	53.44	ug/L	98
5) 1,3-Butadiene	1.451	39	1146721	46.75	ug/L	88
6) Bromomethane	1.662	96	469891	50.05	ug/L	88
7) Chloroethane	1.743	64	818554	54.93	ug/L	97
8) Trichlorofluoromethane	1.946	101	1851838	44.99	ug/L	98
9) Isopropyl Alcohol	2.594	45	1952730	821.55	ug/L #	95
10) Ethyl Ether	2.192	59	1026556	46.45	ug/L	92
11) Acrolein	2.299	56	212790	48.04	ug/L	84
12) Acetone	2.444	43	910325	76.89	ug/L	96
13) Freon-TF	2.397	151	829666	56.13	ug/L	93
14) 1,1-Dichloroethene	2.388	96	1022446	55.83	ug/L	90
15) Methylene Chloride	2.865	84	1282262	51.31	ug/L	87
16) Carbon disulfide	2.585	76	8128957	105.56	ug/L	100
17) Acrylonitrile	3.145	53	586356	45.56	ug/L	97
18) MTBE	3.189	73	3834022	48.48	ug/L	99
19) Hexane	3.525	57	1124235	53.16	ug/L	93
20) trans-1,2-Dichloroethene	3.167	96	1231494	52.99	ug/L	91
21) Vinyl acetate	3.810	43	5192184	100.47	ug/L	95
22) 1,1-Dichloroethane	3.696	63	2092381	47.09	ug/L	98
23) 2-Butanone	4.609	72	387230	95.58	ug/L #	71
24) 2,2-Dichloropropane	4.532	77	1759614	48.44	ug/L	98
25) cis-1,2-Dichloroethene	4.544	96	1331864	49.51	ug/L	94
26) Ethyl Acetate	4.734	45	200357	41.96	ug/L #	81
27) Chloroform	5.034	83	1961996	44.04	ug/L	98
28) Bromochloromethane	4.886	128	542287	50.55	ug/L #	88
30) Isobutyl alcohol	5.841	43	1211330	732.62	ug/L	98
33) Carbon Tetrachloride	5.496	117	1282657	42.12	ug/L	98
34) 1,2-Dichloroethane	5.838	62	1712684	47.67	ug/L	96
35) 1,1,1-Trichloroethane	5.263	97	1709898	47.05	ug/L	96
36) 1,1-Dichloropropene	5.509	110	569849	50.30	ug/L	91
37) 1-Butanol	6.795	56	741686	816.59	ug/L	95
38) Benzene	5.798	78	5027654	48.35	ug/L	99
39) Trichloroethene	6.739	95	1215838	47.04	ug/L	96
40) 1,2-Dichloropropane	7.046	63	1242886	46.96	ug/L	99
41) 1,4-Dioxane	7.285	88	181976	485.06	ug/L	89
42) Bromodichloromethane	7.463	83	1525512	46.70	ug/L	98
43) Dibromomethane	7.207	93	737491	49.45	ug/L	96
44) 2-Nitropropane	7.799	41	298462	38.96	ug/L #	76
45) 2-Chloroethylvinyl ether	7.949	63	1376986	81.39	ug/L	94

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091307.D
Acq On : 9 Jun 2013 4:21 pm Operator: PS
Sample : ICAL VSTD050 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 6

Quant Time: Jun 10 14:12:28 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration

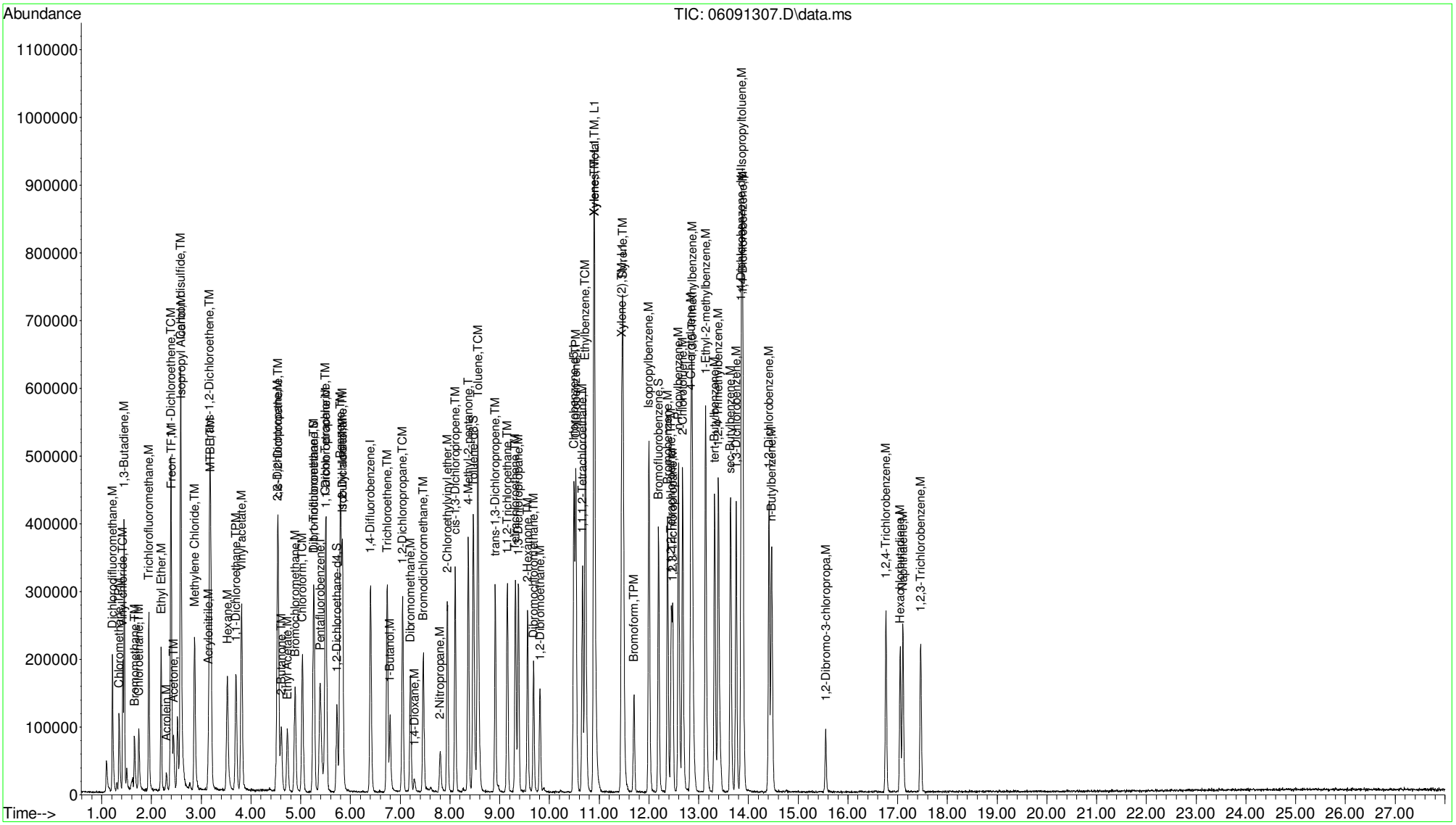
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
46) 4-Methyl-2-pentanone	8.369	43	2890198	87.42 ug/L	97
47) cis-1,3-Dichloropropene	8.105	75	2096970	49.04 ug/L	96
49) Toluene	8.561	92	3209075	48.49 ug/L	98
51) trans-1,3-Dichloropropene	8.911	75	1802355	45.94 ug/L	96
52) 2-Hexanone	9.560	43	2088755	89.15 ug/L	98
53) 1,1,2-Trichloroethane	9.155	83	925490	45.69 ug/L	95
54) 1,3-Dichloropropane	9.376	76	2082076	47.47 ug/L	99
55) Tetrachloroethene	9.315	164	894172	52.89 ug/L	97
56) Dibromochloromethane	9.682	129	1106630	43.36 ug/L	96
57) 1,2-Dibromoethane	9.811	107	1209808	50.05 ug/L	99
58) Chlorobenzene	10.531	112	3189768	49.62 ug/L	97
59) Ethylbenzene	10.722	91	5859174	47.89 ug/L	98
60) 1,1,1,2-Tetrachloroethane	10.665	131	1071564	45.04 ug/L	97
61) Xylene	10.900	106	4383698	97.97 ug/L	99
62) Xylene (2)	11.454	106	2038765	47.41 ug/L	95
63) Xylenes, Total	10.900	106	6422463m	145.43 ug/L #	
64) Styrene	11.478	104	3918355	49.09 ug/L	96
65) Isopropylbenzene	11.999	105	4738854	49.39 ug/L	98
66) Bromoform	11.699	173	771311	46.54 ug/L	98
67) 1,1,2,2-Tetrachloroethane	12.449	83	1582427	47.50 ug/L	99
70) 1,2,3-Trichloropropane	12.480	75	1260416	41.86 ug/L	100
71) n-Propylbenzene	12.594	91	5197736	46.39 ug/L	98
72) Bromobenzene	12.373	156	1377157	47.45 ug/L	94
73) 1,3,5-Trimethylbenzene	12.869	105	4103041	45.38 ug/L	97
74) 2-Chlorotoluene	12.678	91	3577659	44.94 ug/L	97
75) 4-Chlorotoluene	12.844	91	4101609	44.56 ug/L	97
76) tert-Butylbenzene	13.322	119	2890945	46.55 ug/L	97
77) 1-Ethyl-2-methylbenzene	13.139	105	5160955	47.51 ug/L	100
78) 1,2,4-Trimethylbenzene	13.396	105	4027667	42.74 ug/L	98
79) sec-Butylbenzene	13.641	105	4122041	47.29 ug/L	98
80) p-Isopropyltoluene	13.871	119	3380499	46.00 ug/L	99
81) 1,3-Dichlorobenzene	13.754	146	2253103	48.27 ug/L	97
82) 1,4-Dichlorobenzene	13.889	146	2521080	47.02 ug/L	97
83) n-Butylbenzene	14.465	91	2965112	44.59 ug/L	99
84) 1,2-Dichlorobenzene	14.413	146	2204046	47.64 ug/L	97
85) 1,2-Dibromo-3-chloropropa	15.553	75	247314	38.02 ug/L	85
86) 1,2,4-Trichlorobenzene	16.763	180	994351	45.99 ug/L	99
87) Hexachlorbutadiene	17.052	225	474813	51.92 ug/L	96
88) Naphthalene	17.104	128	2462946	40.21 ug/L	98
89) 1,2,3-Trichlorobenzene	17.462	180	847480	46.12 ug/L	97

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06091307.D
Acq On : 9 Jun 2013 4:21 pm Operator: PS
Sample : ICAL VSTD050 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 6

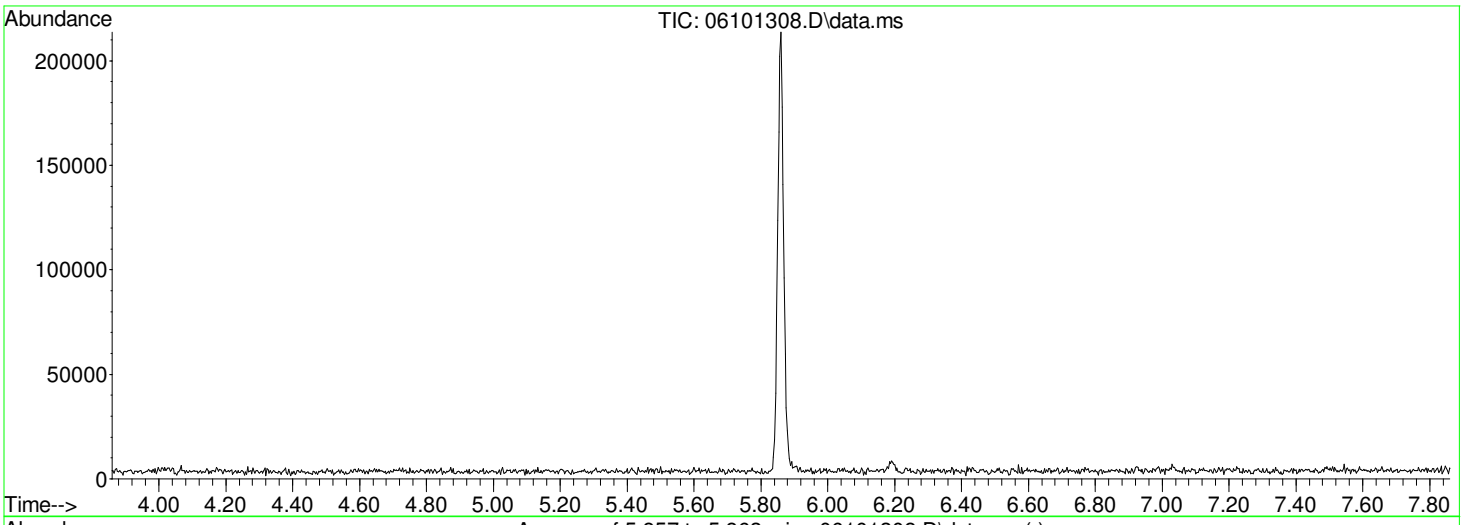
Quant Time: Jun 10 14:12:28 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration

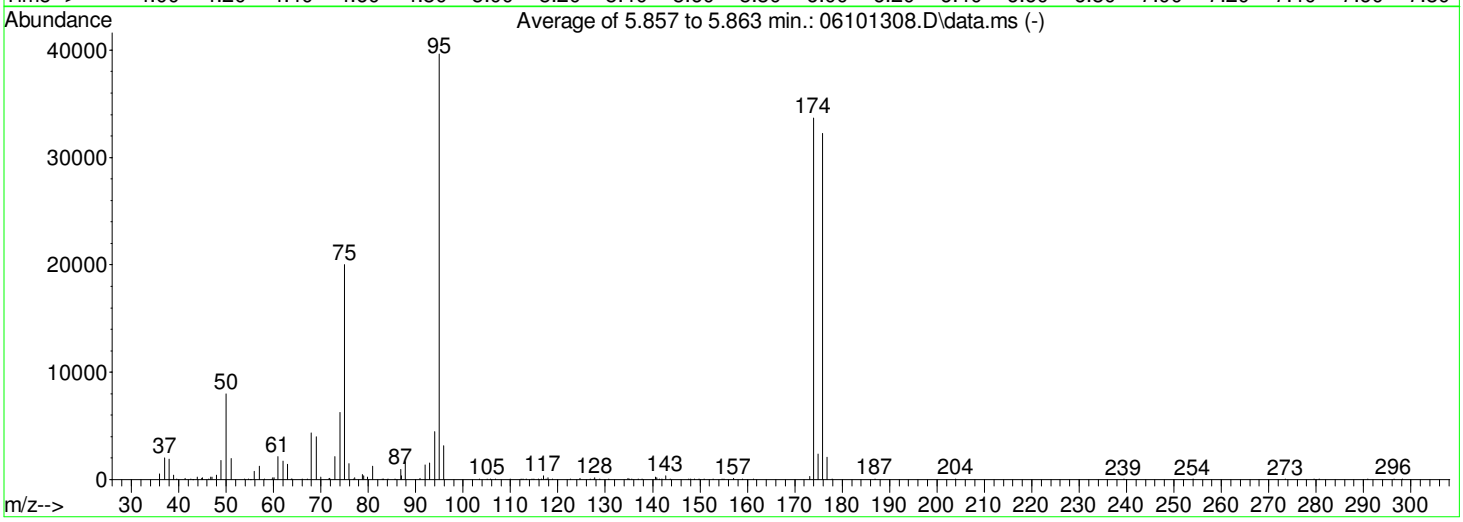


Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06101308.D
Acq On : 10 Jun 2013 7:41 am
Operator : PS
Sample : TUNE BFB061013-7
Misc : BFB_624
ALS Vial : 7 Sample Multiplier: 1
InstName : VOA7

Integration File: events.e

Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
Last Update : Mon Jun 10 11:55:54 2013





AutoFind: Scans 1018, 1019, 1020; Background Corrected with Scan 1009

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	20.1	7980	PASS
75	95	30	60	50.5	20003	PASS
95	95	100	100	100.0	39624	PASS
96	95	5	9	7.9	3150	PASS
173	174	0.00	2	0.9	288	PASS
174	95	50	100	85.0	33688	PASS
175	174	5	9	7.0	2370	PASS
176	174	95	101	95.8	32259	PASS
177	176	5	9	6.5	2107	PASS

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06101309.D
Acq On : 10 Jun 2013 8:00 am Operator: PS
Sample : ICAL VSTD100 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 8

Quant Time: Jun 10 14:13:17 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	5.441	168	1972849	30.00	ug/L	0.05
31) 1,4-Difluorobenzene	6.416	114	3211083	30.00	ug/L	0.00
50) Chlorobenzene-d5	10.503	82	1861648	30.00	ug/L	0.00
69) 1,4-Dichlorobenzene-d4	13.864	152	1625856	30.00	ug/L	0.00
System Monitoring Compounds						
29) Dibromofluoromethane	5.265	113	766776	24.27	ug/L	0.00
Spiked Amount 30.000	Range 86 - 118		Recovery = 80.90%#			
32) 1,2-Dichloroethane-d4	5.726	102	202975	25.45	ug/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 84.83%			
48) Toluene-d8	8.491	98	3991170	30.46	ug/L	0.01
Spiked Amount 30.000	Range 88 - 110		Recovery = 101.53%			
68) Bromofluorobenzene	12.206	174	1344590	31.96	ug/L	0.00
Spiked Amount 30.000	Range 86 - 115		Recovery = 106.53%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.219	85	3313428	118.16	ug/L	99
3) Chloromethane	1.346	50	2468232	91.35	ug/L	96
4) Vinyl chloride	1.429	62	3221798	100.11	ug/L	99
5) 1,3-Butadiene	1.459	39	1752712	69.54	ug/L	100
6) Bromomethane	1.655	96	1344836	122.91	ug/L	97
7) Chloroethane	1.744	64	1579544	103.18	ug/L	97
8) Trichlorofluoromethane	1.951	101	3681330	87.05	ug/L	99
9) Isopropyl Alcohol	2.604	45	3731145	1527.90	ug/L #	96
10) Ethyl Ether	2.194	59	1914485	84.32	ug/L	94
11) Acrolein	2.308	56	447346	98.30	ug/L	82
12) Acetone	2.448	43	1872245	153.92	ug/L	99
13) Freon-TF	2.397	151	1580173	104.05	ug/L	93
14) 1,1-Dichloroethene	2.389	96	1907198	101.37	ug/L	93
15) Methylene Chloride	2.868	84	2533313	98.66	ug/L	88
16) Carbon disulfide	2.591	76	16671918	210.73	ug/L	99
17) Acrylonitrile	3.153	53	1193162	90.23	ug/L	98
18) MTBE	3.188	73	7291922	89.74	ug/L	99
19) Hexane	3.539	57	2358912	108.56	ug/L	95
20) trans-1,2-Dichloroethene	3.170	96	2252472	94.34	ug/L	92
21) Vinyl acetate	3.811	43	8669492	163.29	ug/L	93
22) 1,1-Dichloroethane	3.698	63	3870550	84.79	ug/L	98
23) 2-Butanone	4.609	72	697813	167.64	ug/L #	75
24) 2,2-Dichloropropane	4.534	77	3202417	85.81	ug/L	97
25) cis-1,2-Dichloroethene	4.546	96	2517708	91.09	ug/L	93
26) Ethyl Acetate	4.734	45	368461	75.10	ug/L	96
27) Chloroform	5.034	83	3593776	78.52	ug/L	97
28) Bromochloromethane	4.891	128	872376	79.14	ug/L #	84
30) Isobutyl alcohol	5.841	43	2247054	1322.79	ug/L	98
33) Carbon Tetrachloride	5.494	117	2666478	85.87	ug/L	95
34) 1,2-Dichloroethane	5.838	62	3199223	87.32	ug/L	98
35) 1,1,1-Trichloroethane	5.260	97	3222316	86.95	ug/L	96
36) 1,1-Dichloropropene	5.510	110	1155097	99.99	ug/L	95
37) 1-Butanol	6.798	56	1454712	1570.48	ug/L	95
38) Benzene	5.806	78	10244962	96.60	ug/L	100
39) Trichloroethene	6.740	95	2421106	91.85	ug/L	94
40) 1,2-Dichloropropane	7.048	63	2408374	89.23	ug/L	99
41) 1,4-Dioxane	7.280	88	394524	1031.17	ug/L	90
42) Bromodichloromethane	7.463	83	2941867	88.32	ug/L	98
43) Dibromomethane	7.204	93	1377969	90.60	ug/L	96
44) 2-Nitropropane	7.804	41	617831	79.09	ug/L #	83
45) 2-Chloroethylvinyl ether	7.951	63	1879092	108.91	ug/L	95

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06101309.D
Acq On : 10 Jun 2013 8:00 am Operator: PS
Sample : ICAL VSTD100 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 8

Quant Time: Jun 10 14:13:17 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration

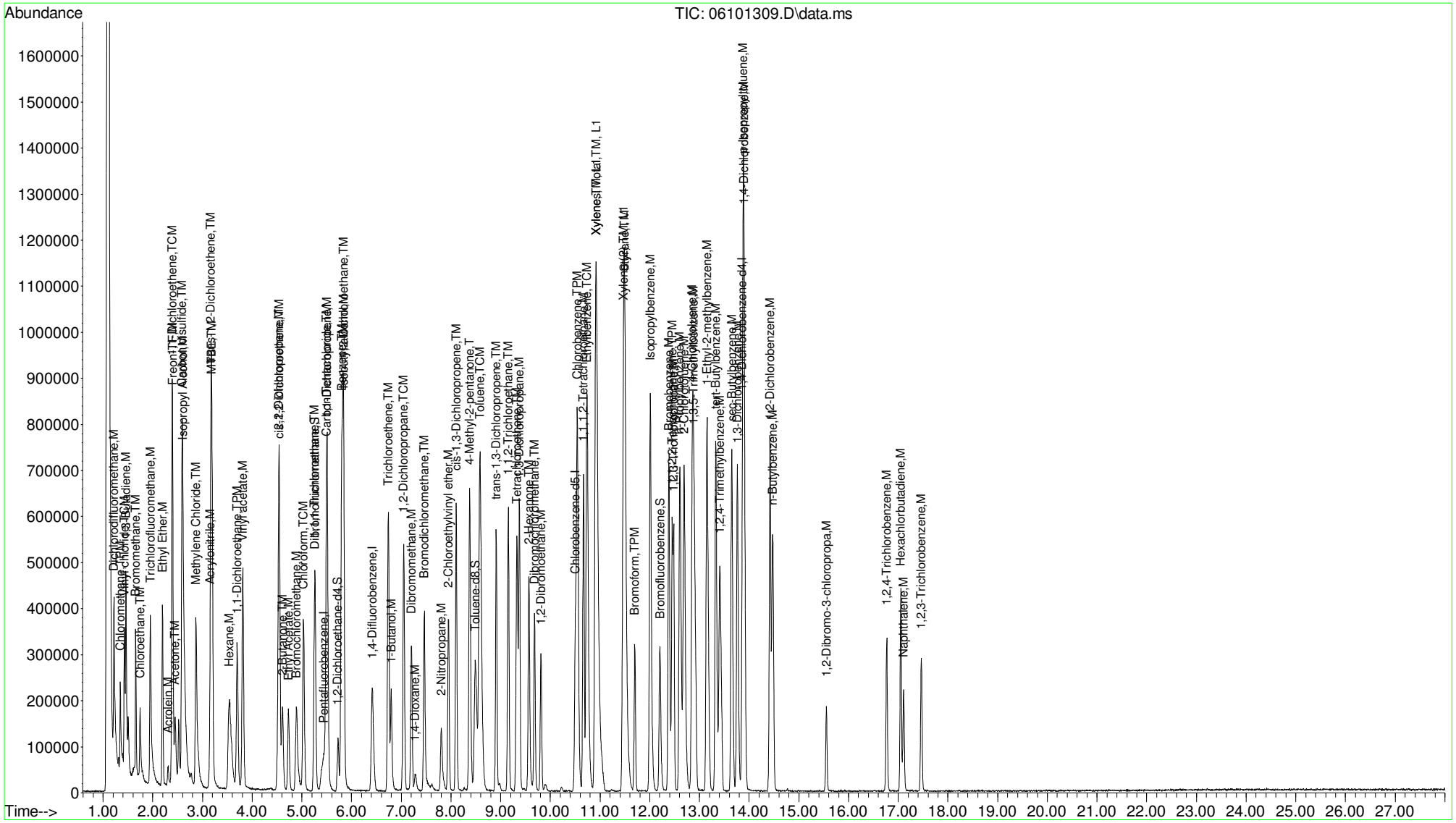
	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
46)	4-Methyl-2-pentanone	8.375	43	6032839	178.92 ug/L	98
47)	cis-1,3-Dichloropropene	8.105	75	3964464	90.91 ug/L	97
49)	Toluene	8.585	92	6785274	100.53 ug/L	99
51)	trans-1,3-Dichloropropene	8.911	75	3490476	86.84 ug/L	95
52)	2-Hexanone	9.567	43	4231374	176.26 ug/L	95
53)	1,1,2-Trichloroethane	9.154	83	1872891	90.25 ug/L	97
54)	1,3-Dichloropropane	9.377	76	4059808	90.34 ug/L	98
55)	Tetrachloroethene	9.325	164	1947719	112.43 ug/L	97
56)	Dibromochloromethane	9.682	129	2308628	88.29 ug/L	99
57)	1,2-Dibromoethane	9.812	107	2336739	94.35 ug/L	97
58)	Chlorobenzene	10.543	112	6704091	101.78 ug/L	97
59)	Ethylbenzene	10.738	91	12354022	98.56 ug/L	98
60)	1,1,1,2-Tetrachloroethane	10.666	131	2298237	94.27 ug/L	97
61)	Xylene	10.920	106	9055096	197.52 ug/L	99
62)	Xylene (2)	11.472	106	4264442	96.79 ug/L	95
63)	Xylenes, Total	10.920	106	13319538m	294.36 ug/L #	
64)	Styrene	11.497	104	8109846	99.16 ug/L	97
65)	Isopropylbenzene	12.012	105	9944964	101.16 ug/L	99
66)	Bromoform	11.699	173	1735456	102.21 ug/L	99
67)	1,1,2,2-Tetrachloroethane	12.451	83	3301577	96.72 ug/L	99
70)	1,2,3-Trichloropropane	12.482	75	2703423	92.57 ug/L	100
71)	n-Propylbenzene	12.607	91	10197311	93.84 ug/L	95
72)	Bromobenzene	12.384	156	2953747	104.94 ug/L	92
73)	1,3,5-Trimethylbenzene	12.885	105	6531885	74.50 ug/L	96
74)	2-Chlorotoluene	12.691	91	7895798	102.28 ug/L	100
75)	4-Chlorotoluene	12.855	91	8076975	90.47 ug/L	96
76)	tert-Butylbenzene	13.330	119	5399265	89.64 ug/L	95
77)	1-Ethyl-2-methylbenzene	13.153	105	9984313	94.78 ug/L	99
78)	1,2,4-Trimethylbenzene	13.411	105	5831124	63.80 ug/L	99
79)	sec-Butylbenzene	13.650	105	8253616	97.63 ug/L	100
80)	p-Isopropyltoluene	13.880	119	6258306	87.81 ug/L	99
81)	1,3-Dichlorobenzene	13.762	146	4623915	102.14 ug/L	98
82)	1,4-Dichlorobenzene	13.898	146	5028736	96.70 ug/L	98
83)	n-Butylbenzene	14.473	91	4906780	76.08 ug/L	99
84)	1,2-Dichlorobenzene	14.422	146	4556668	101.56 ug/L	97
85)	1,2-Dibromo-3-chloropropa	15.556	75	503909	79.87 ug/L	77
86)	1,2,4-Trichlorobenzene	16.769	180	1262614	60.21 ug/L	99
87)	Hexachlorbutadiene	17.051	225	1017249	114.69 ug/L	96
88)	Naphthalene	17.108	128	2248054	37.84 ug/L	98
89)	1,2,3-Trichlorobenzene	17.464	180	1098051	61.62 ug/L	98

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06101309.D
Acq On : 10 Jun 2013 8:00 am Operator: PS
Sample : ICAL VSTD100 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 8

Quant Time: Jun 10 14:13:17 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06101310.D
Acq On : 10 Jun 2013 8:35 am Operator: PS
Sample : ICAL VSTD200 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 9

Quant Time: Jun 10 14:13:22 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	5.387	168	1875536	30.00	ug/L	0.00
31) 1,4-Difluorobenzene	6.402	114	2992296	30.00	ug/L	0.00
50) Chlorobenzene-d5	10.490	82	1770662	30.00	ug/L	0.00
69) 1,4-Dichlorobenzene-d4	13.855	152	1708070	30.00	ug/L	# 0.00
System Monitoring Compounds						
29) Dibromofluoromethane	5.261	113	828357	27.58	ug/L	0.00
Spiked Amount 30.000	Range 86 - 118		Recovery = 91.93%			
32) 1,2-Dichloroethane-d4	5.726	102	212966	28.66	ug/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 95.53%			
48) Toluene-d8	8.470	98	3800922	31.13	ug/L	0.00
Spiked Amount 30.000	Range 88 - 110		Recovery = 103.77%			
68) Bromofluorobenzene	12.194	174	1341764	33.54	ug/L	0.00
Spiked Amount 30.000	Range 86 - 115		Recovery = 111.80%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.216	85	6542417	245.42	ug/L	97
3) Chloromethane	1.345	50	5154485	200.66	ug/L	96
4) Vinyl chloride	1.425	62	6612806	216.14	ug/L	98
5) 1,3-Butadiene	1.452	39	4472387	186.66	ug/L	92
6) Bromomethane	1.650	96	4074859	371.52	ug/L	91
7) Chloroethane	1.723	64	3150837	216.49	ug/L	94
8) Trichlorofluoromethane	1.937	101	7430703	184.82	ug/L	99
9) Isopropyl Alcohol	2.634	45	8717405	3754.98	ug/L #	95
10) Ethyl Ether	2.191	59	4155724	192.53	ug/L	93
11) Acrolein	2.300	56	548064	126.68	ug/L	87
12) Acetone	2.448	43	3988214	344.89	ug/L	97
13) Freon-TF	2.389	151	3147325	218.01	ug/L	94
14) 1,1-Dichloroethene	2.381	96	4032433	225.44	ug/L	89
15) Methylene Chloride	2.862	84	4981927	204.10	ug/L	88
16) Carbon disulfide	2.579	76	31354202	416.87	ug/L	99
17) Acrylonitrile	3.147	53	2414585	192.08	ug/L	99
18) MTBE	3.188	73	15276346	197.76	ug/L	99
19) Hexane	3.518	57	3648444	176.62	ug/L	94
20) trans-1,2-Dichloroethene	3.165	96	4767354	210.02	ug/L	91
21) Vinyl acetate	3.809	43	5526548	109.49	ug/L	96
22) 1,1-Dichloroethane	3.694	63	8228684	189.62	ug/L	99
23) 2-Butanone	4.615	72	1541442	389.53	ug/L #	70
24) 2,2-Dichloropropane	4.529	77	3987100	112.37	ug/L	97
25) cis-1,2-Dichloroethene	4.544	96	5252454	199.89	ug/L	90
26) Ethyl Acetate	4.735	45	809219	173.50	ug/L	92
27) Chloroform	5.032	83	7822680	179.77	ug/L	99
28) Bromochloromethane	4.889	128	2041598	194.83	ug/L #	85
30) Isobutyl alcohol	5.872	43	5594748	3464.38	ug/L	97
33) Carbon Tetrachloride	5.490	117	5189716	179.34	ug/L	98
34) 1,2-Dichloroethane	5.839	62	6767316	198.21	ug/L	97
35) 1,1,1-Trichloroethane	5.257	97	6724599	194.72	ug/L	97
36) 1,1-Dichloropropene	5.505	110	2275777	211.40	ug/L	96
37) 1-Butanol	6.821	56	3558646	4122.75	ug/L	96
38) Benzene	5.798	78	19753691	199.89	ug/L	100
39) Trichloroethene	6.737	95	5532737	225.24	ug/L	95
40) 1,2-Dichloropropane	7.047	63	4885098	194.24	ug/L	100
41) 1,4-Dioxane	7.291	88	764770	2145.03	ug/L	83
42) Bromodichloromethane	7.464	83	6277714	202.24	ug/L	99
43) Dibromomethane	7.205	93	2937175	207.23	ug/L	95
44) 2-Nitropropane	7.806	41	1331131	182.85	ug/L	93
45) 2-Chloroethylvinyl ether	7.950	63	5832067	362.73	ug/L	94

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06101310.D
Acq On : 10 Jun 2013 8:35 am Operator: PS
Sample : ICAL VSTD200 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 9

Quant Time: Jun 10 14:13:22 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration

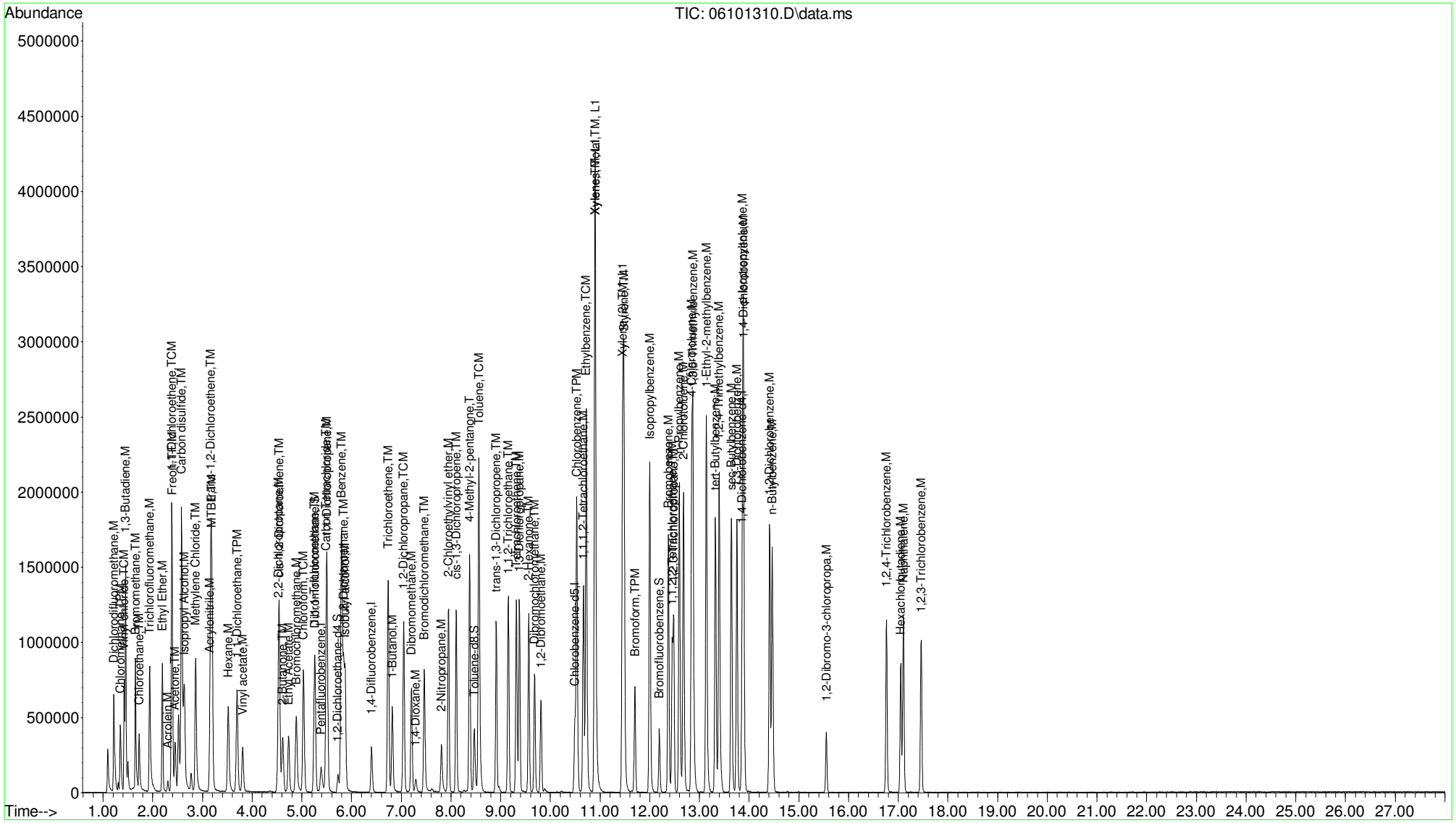
	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
46)	4-Methyl-2-pentanone	8.375	43	12027053	382.78 ug/L	96
47)	cis-1,3-Dichloropropene	8.107	75	7696208	189.40 ug/L	96
49)	Toluene	8.561	92	12596360	200.26 ug/L	100
51)	trans-1,3-Dichloropropene	8.911	75	6811385	178.16 ug/L	96
52)	2-Hexanone	9.565	43	8704286	381.22 ug/L	96
53)	1,1,2-Trichloroethane	9.154	83	3868947	196.02 ug/L	99
54)	1,3-Dichloropropane	9.378	76	8237444	192.73 ug/L	98
55)	Tetrachloroethene	9.316	164	3577683	217.13 ug/L	97
56)	Dibromochloromethane	9.683	129	4911269	197.47 ug/L	99
57)	1,2-Dibromoethane	9.811	107	4832501	205.15 ug/L	98
58)	Chlorobenzene	10.531	112	12836686	204.90 ug/L	97
59)	Ethylbenzene	10.723	91	23450772	196.70 ug/L	97
60)	1,1,1,2-Tetrachloroethane	10.665	131	4610854	198.86 ug/L	97
61)	Xylene	10.900	106	17612481	403.92 ug/L	99
62)	Xylene (2)	11.454	106	8385527	200.11 ug/L	94
63)	Xylenes, Total	10.900	106	25998008m	604.08 ug/L #	
64)	Styrene	11.480	104	16136715	207.43 ug/L	97
65)	Isopropylbenzene	12.000	105	19089082	204.15 ug/L	99
66)	Bromoform	11.701	173	3786418	234.45 ug/L	98
67)	1,1,2,2-Tetrachloroethane	12.452	83	5611434	172.84 ug/L	100
70)	1,2,3-Trichloropropane	12.481	75	5452412	177.72 ug/L	100
71)	n-Propylbenzene	12.595	91	20837532	182.53 ug/L	98
72)	Bromobenzene	12.376	156	5695354	192.60 ug/L	95
73)	1,3,5-Trimethylbenzene	12.869	105	16812061	182.51 ug/L	97
74)	2-Chlorotoluene	12.680	91	14594978	179.95 ug/L	97
75)	4-Chlorotoluene	12.844	91	16433602	175.22 ug/L	97
76)	tert-Butylbenzene	13.322	119	11689221	184.72 ug/L	97
77)	1-Ethyl-2-methylbenzene	13.140	105	20889343	188.76 ug/L	98
78)	1,2,4-Trimethylbenzene	13.397	105	16537310	172.24 ug/L	98
79)	sec-Butylbenzene	13.643	105	16289104	183.41 ug/L	99
80)	p-Isopropyltoluene	13.872	119	13648134	182.28 ug/L	100
81)	1,3-Dichlorobenzene	13.753	146	9248865	194.48 ug/L	97
82)	1,4-Dichlorobenzene	13.888	146	10478373	191.79 ug/L	97
83)	n-Butylbenzene	14.465	91	11949459	176.36 ug/L	99
84)	1,2-Dichlorobenzene	14.413	146	9193483	195.04 ug/L	97
85)	1,2-Dibromo-3-chloropropa	15.553	75	1125206	169.76 ug/L	83
86)	1,2,4-Trichlorobenzene	16.763	180	4452100	202.09 ug/L	99
87)	Hexachlorbutadiene	17.051	225	1915440	205.57 ug/L	98
88)	Naphthalene	17.104	128	11560278	185.24 ug/L	98
89)	1,2,3-Trichlorobenzene	17.463	180	3881032	207.31 ug/L	96

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06101310.D
Acq On : 10 Jun 2013 8:35 am Operator: PS
Sample : ICAL VSTD200 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 9

Quant Time: Jun 10 14:13:22 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06101310.D
Acq On : 10 Jun 2013 8:35 am Operator: PS
Sample : ICAL VSTD200 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 9

Quant Time: Jun 10 14:13:22 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene	5.387	168	1875536	30.00	ug/L		0.00
31) 1,4-Difluorobenzene	6.402	114	2992296	30.00	ug/L		0.00
50) Chlorobenzene-d5	10.490	82	1770662	30.00	ug/L		0.00
69) 1,4-Dichlorobenzene-d4	13.855	152	1708070	30.00	ug/L	#	0.00
System Monitoring Compounds							
29) Dibromofluoromethane	5.261	113	828357	27.58	ug/L		0.00
Spiked Amount 30.000	Range 86 - 118		Recovery = 91.93%				
32) 1,2-Dichloroethane-d4	5.726	102	212966	28.66	ug/L		0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 95.53%				
48) Toluene-d8	8.470	98	3800922	31.13	ug/L		0.00
Spiked Amount 30.000	Range 88 - 110		Recovery = 103.77%				
68) Bromofluorobenzene	12.194	174	1341764	33.54	ug/L		0.00
Spiked Amount 30.000	Range 86 - 115		Recovery = 111.80%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.216	85	6542417	245.42	ug/L		97
3) Chloromethane	1.345	50	5154485	200.66	ug/L		96
4) Vinyl chloride	1.425	62	6612806	216.14	ug/L		98
5) 1,3-Butadiene	1.452	39	4472387	186.66	ug/L		92
6) Bromomethane	1.650	96	4074859	371.52	ug/L		91
7) Chloroethane	1.723	64	3150837	216.49	ug/L		94
8) Trichlorofluoromethane	1.937	101	7430703	184.82	ug/L		99
9) Isopropyl Alcohol	2.634	45	8717405	3754.98	ug/L	#	95
10) Ethyl Ether	2.191	59	4155724	192.53	ug/L		93
11) Acrolein	2.300	56	548064	126.68	ug/L		87
12) Acetone	2.448	43	3988214	344.89	ug/L		97
13) Freon-TF	2.389	151	3147325	218.01	ug/L		94
14) 1,1-Dichloroethene	2.381	96	4032433	225.44	ug/L		89
15) Methylene Chloride	2.862	84	4981927	204.10	ug/L		88
16) Carbon disulfide	2.579	76	31354202	416.87	ug/L		99
17) Acrylonitrile	3.147	53	2414585	192.08	ug/L		99
18) MTBE	3.188	73	15276346	197.76	ug/L		99
19) Hexane	3.518	57	3648444	176.62	ug/L		94
20) trans-1,2-Dichloroethene	3.165	96	4767354	210.02	ug/L		91
21) Vinyl acetate	3.809	43	5526548	109.49	ug/L		96
22) 1,1-Dichloroethane	3.694	63	8228684	189.62	ug/L		99
23) 2-Butanone	4.615	72	1541442	389.53	ug/L	#	70
24) 2,2-Dichloropropane	4.529	77	3987100	112.37	ug/L		97
25) cis-1,2-Dichloroethene	4.544	96	5252454	199.89	ug/L		90
26) Ethyl Acetate	4.735	45	809219	173.50	ug/L		92
27) Chloroform	5.032	83	7822680	179.77	ug/L		99
28) Bromochloromethane	4.889	128	2041598	194.83	ug/L	#	85
30) Isobutyl alcohol	5.872	43	5594748	3464.38	ug/L		97
33) Carbon Tetrachloride	5.490	117	5189716	179.34	ug/L		98
34) 1,2-Dichloroethane	5.839	62	6767316	198.21	ug/L		97
35) 1,1,1-Trichloroethane	5.257	97	6724599	194.72	ug/L		97
36) 1,1-Dichloropropene	5.505	110	2275777	211.40	ug/L		96
37) 1-Butanol	6.821	56	3558646	4122.75	ug/L		96
38) Benzene	5.798	78	19753691	199.89	ug/L		100
39) Trichloroethene	6.737	95	5532737	225.24	ug/L		95
40) 1,2-Dichloropropane	7.047	63	4885098	194.24	ug/L		100
41) 1,4-Dioxane	7.291	88	764770	2145.03	ug/L		83
42) Bromodichloromethane	7.464	83	6277714	202.24	ug/L		99
43) Dibromomethane	7.205	93	2937175	207.23	ug/L		95
44) 2-Nitropropane	7.806	41	1331131	182.85	ug/L		93
45) 2-Chloroethylvinyl ether	7.950	63	5832067	362.73	ug/L		94

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06101310.D
Acq On : 10 Jun 2013 8:35 am Operator: PS
Sample : ICAL VSTD200 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 9

Quant Time: Jun 10 14:13:22 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration

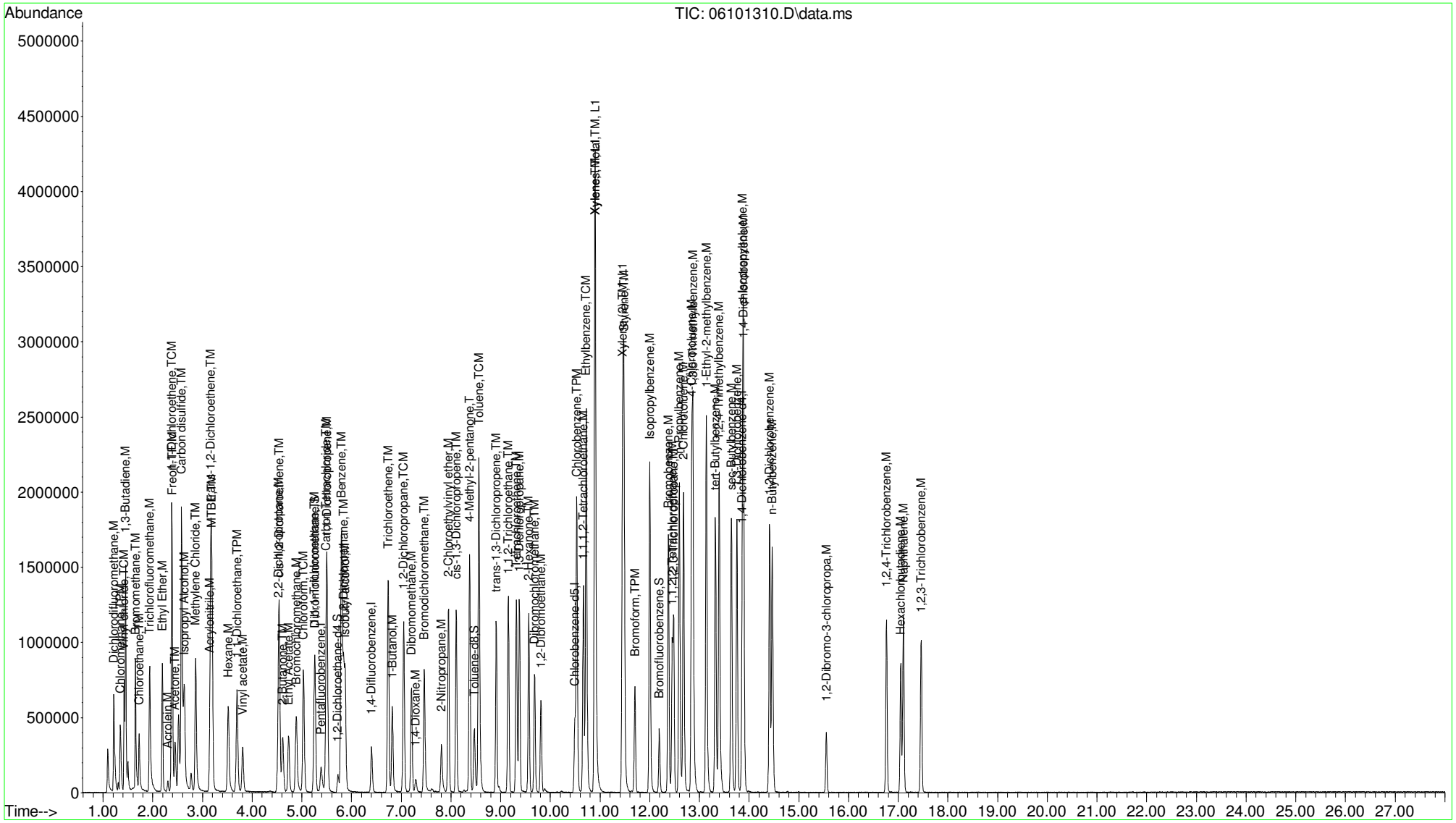
	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
46)	4-Methyl-2-pentanone	8.375	43	12027053	382.78 ug/L	96
47)	cis-1,3-Dichloropropene	8.107	75	7696208	189.40 ug/L	96
49)	Toluene	8.561	92	12596360	200.26 ug/L	100
51)	trans-1,3-Dichloropropene	8.911	75	6811385	178.16 ug/L	96
52)	2-Hexanone	9.565	43	8704286	381.22 ug/L	96
53)	1,1,2-Trichloroethane	9.154	83	3868947	196.02 ug/L	99
54)	1,3-Dichloropropane	9.378	76	8237444	192.73 ug/L	98
55)	Tetrachloroethene	9.316	164	3577683	217.13 ug/L	97
56)	Dibromochloromethane	9.683	129	4911269	197.47 ug/L	99
57)	1,2-Dibromoethane	9.811	107	4832501	205.15 ug/L	98
58)	Chlorobenzene	10.531	112	12836686	204.90 ug/L	97
59)	Ethylbenzene	10.723	91	23450772	196.70 ug/L	97
60)	1,1,1,2-Tetrachloroethane	10.665	131	4610854	198.86 ug/L	97
61)	Xylene	10.900	106	17612481	403.92 ug/L	99
62)	Xylene (2)	11.454	106	8385527	200.11 ug/L	94
63)	Xylenes, Total	10.900	106	25998008m	604.08 ug/L #	
64)	Styrene	11.480	104	16136715	207.43 ug/L	97
65)	Isopropylbenzene	12.000	105	19089082	204.15 ug/L	99
66)	Bromoform	11.701	173	3786418	234.45 ug/L	98
67)	1,1,2,2-Tetrachloroethane	12.452	83	5611434	172.84 ug/L	100
70)	1,2,3-Trichloropropane	12.481	75	5452412	177.72 ug/L	100
71)	n-Propylbenzene	12.595	91	20837532	182.53 ug/L	98
72)	Bromobenzene	12.376	156	5695354	192.60 ug/L	95
73)	1,3,5-Trimethylbenzene	12.869	105	16812061	182.51 ug/L	97
74)	2-Chlorotoluene	12.680	91	14594978	179.95 ug/L	97
75)	4-Chlorotoluene	12.844	91	16433602	175.22 ug/L	97
76)	tert-Butylbenzene	13.322	119	11689221	184.72 ug/L	97
77)	1-Ethyl-2-methylbenzene	13.140	105	20889343	188.76 ug/L	98
78)	1,2,4-Trimethylbenzene	13.397	105	16537310	172.24 ug/L	98
79)	sec-Butylbenzene	13.643	105	16289104	183.41 ug/L	99
80)	p-Isopropyltoluene	13.872	119	13648134	182.28 ug/L	100
81)	1,3-Dichlorobenzene	13.753	146	9248865	194.48 ug/L	97
82)	1,4-Dichlorobenzene	13.888	146	10478373	191.79 ug/L	97
83)	n-Butylbenzene	14.465	91	11949459	176.36 ug/L	99
84)	1,2-Dichlorobenzene	14.413	146	9193483	195.04 ug/L	97
85)	1,2-Dibromo-3-chloropropa	15.553	75	1125206	169.76 ug/L	83
86)	1,2,4-Trichlorobenzene	16.763	180	4452100	202.09 ug/L	99
87)	Hexachlorbutadiene	17.051	225	1915440	205.57 ug/L	98
88)	Naphthalene	17.104	128	11560278	185.24 ug/L	98
89)	1,2,3-Trichlorobenzene	17.463	180	3881032	207.31 ug/L	96

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06101310.D
Acq On : 10 Jun 2013 8:35 am Operator: PS
Sample : ICAL VSTD200 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 9

Quant Time: Jun 10 14:13:22 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06101311.D
Acq On : 10 Jun 2013 9:10 am Operator: PS
Sample : ICAL VSTD300 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 10

Quant Time: Jun 10 14:14:10 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	5.387	168	1848786	30.00	ug/L	0.00
31) 1,4-Difluorobenzene	6.401	114	3064874	30.00	ug/L	0.00
50) Chlorobenzene-d5	10.494	82	1730648	30.00	ug/L	0.00
69) 1,4-Dichlorobenzene-d4	13.856	152	1790983	30.00	ug/L	# 0.00
System Monitoring Compounds						
29) Dibromofluoromethane	5.260	113	838398	28.32	ug/L	-0.01
Spiked Amount 30.000	Range 86 - 118		Recovery = 94.40%			
32) 1,2-Dichloroethane-d4	5.727	102	214662	28.20	ug/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 94.00%			
48) Toluene-d8	8.471	98	3757766	30.05	ug/L	0.00
Spiked Amount 30.000	Range 88 - 110		Recovery = 100.17%			
68) Bromofluorobenzene	12.195	174	1355626	34.67	ug/L	0.00
Spiked Amount 30.000	Range 86 - 115		Recovery = 115.57%#			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.217	85	9696388	368.99	ug/L	98
3) Chloromethane	1.344	50	7790360	307.65	ug/L	98
4) Vinyl chloride	1.426	62	10029916	332.58	ug/L	98
5) 1,3-Butadiene	1.452	39	6642849	281.26	ug/L	89
6) Bromomethane	1.647	96	6835761	625.77	ug/L	95
7) Chloroethane	1.717	64	5705112	397.67	ug/L	97
8) Trichlorofluoromethane	1.928	101	11243955	283.71	ug/L	98
9) Isopropyl Alcohol	2.657	45	13254918	5792.10	ug/L #	95
10) Ethyl Ether	2.192	59	6419802	301.73	ug/L	94
11) Acrolein	2.301	56	855033	200.50	ug/L	89
12) Acetone	2.452	43	6086500	533.96	ug/L	96
13) Freon-TF	2.383	151	4943183	347.35	ug/L	92
14) 1,1-Dichloroethene	2.377	96	6379220	361.81	ug/L	91
15) Methylene Chloride	2.859	84	7642532	317.63	ug/L	88
16) Carbon disulfide	2.573	76	46961075	633.40	ug/L	98
17) Acrylonitrile	3.150	53	3735649	301.47	ug/L	99
18) MTBE	3.188	73	23776677	312.25	ug/L	99
19) Hexane	3.514	57	5572765	273.68	ug/L	93
20) trans-1,2-Dichloroethene	3.162	96	7475138	334.08	ug/L	91
21) Vinyl acetate	3.808	43	5441124	109.36	ug/L	94
22) 1,1-Dichloroethane	3.692	63	12616194	294.94	ug/L	98
23) 2-Butanone	4.618	72	2338323	599.46	ug/L #	73
24) 2,2-Dichloropropane	4.528	77	6158651	176.09	ug/L	97
25) cis-1,2-Dichloroethene	4.540	96	8065200	311.38	ug/L	91
26) Ethyl Acetate	4.737	45	1167100	253.85	ug/L	99
27) Chloroform	5.032	83	11930034	278.13	ug/L	99
28) Bromochloromethane	4.886	128	3014298	291.82	ug/L #	87
30) Isobutyl alcohol	5.886	43	8735712	5487.60	ug/L	99
33) Carbon Tetrachloride	5.491	117	8519030	287.42	ug/L	99
34) 1,2-Dichloroethane	5.837	62	10432122	298.32	ug/L	97
35) 1,1,1-Trichloroethane	5.258	97	10484671	296.41	ug/L	98
36) 1,1-Dichloropropene	5.504	110	3584589	325.09	ug/L	97
37) 1-Butanol	6.832	56	5536275	6261.99	ug/L	96
38) Benzene	5.796	78	29887028	295.26	ug/L	99
39) Trichloroethene	6.735	95	8792990	349.48	ug/L	95
40) 1,2-Dichloropropane	7.049	63	7543761	292.84	ug/L	99
41) 1,4-Dioxane	7.299	88	1197550	3279.36	ug/L	87
42) Bromodichloromethane	7.464	83	9713804	305.53	ug/L	99
43) Dibromomethane	7.205	93	4593278	316.40	ug/L	95
44) 2-Nitropropane	7.810	41	2082105	279.24	ug/L	93
45) 2-Chloroethylvinyl ether	7.952	63	8837803	536.66	ug/L	94

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06101311.D
Acq On : 10 Jun 2013 9:10 am Operator: PS
Sample : ICAL VSTD300 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 10

Quant Time: Jun 10 14:14:10 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration

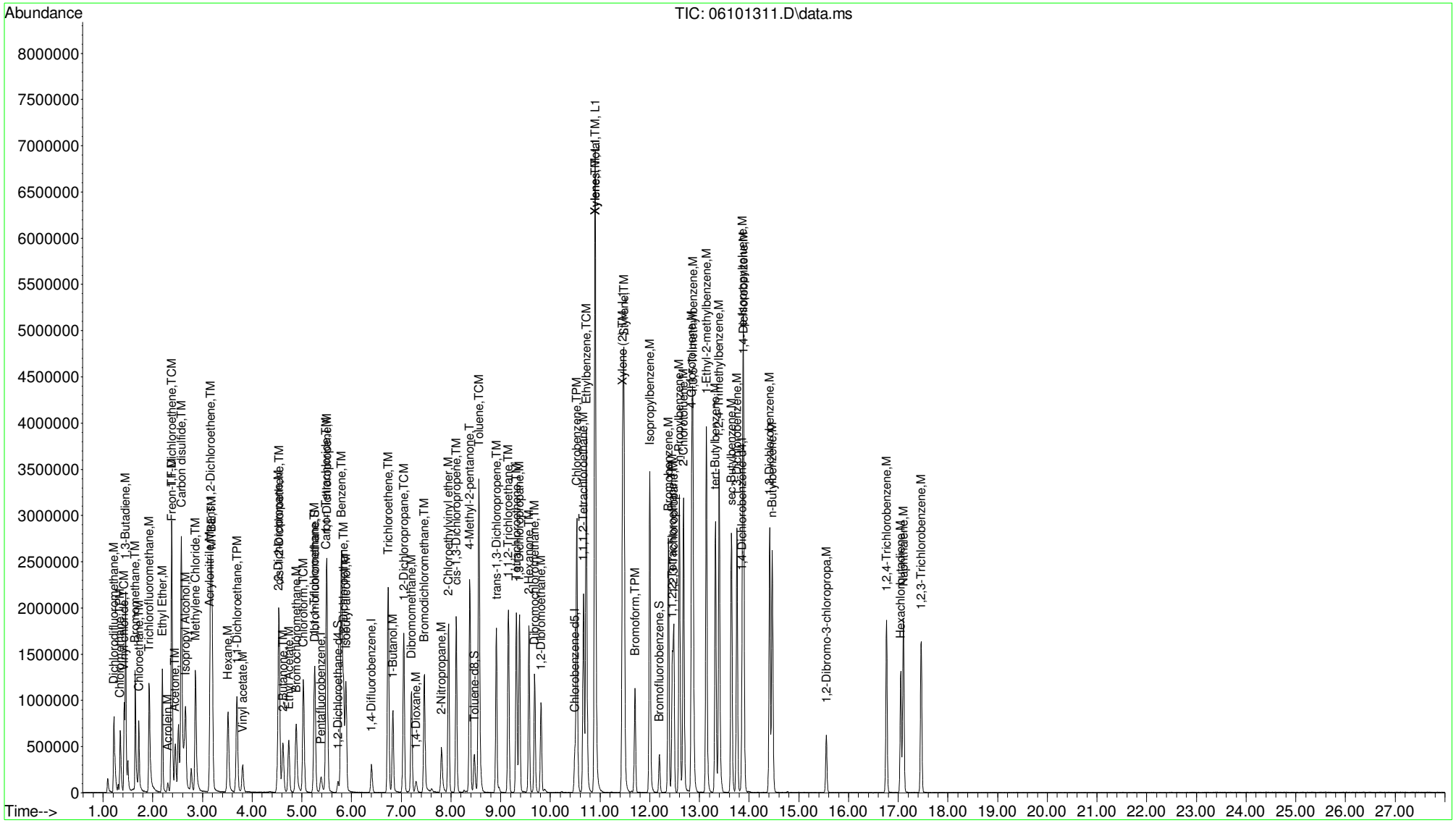
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
46) 4-Methyl-2-pentanone	8.380	43	18040871	560.58 ug/L	96
47) cis-1,3-Dichloropropene	8.107	75	11821957	284.04 ug/L	97
49) Toluene	8.561	92	19379858	300.82 ug/L	98
51) trans-1,3-Dichloropropene	8.913	75	10654587	285.13 ug/L	97
52) 2-Hexanone	9.569	43	13042830	584.44 ug/L	94
53) 1,1,2-Trichloroethane	9.155	83	6071106	314.70 ug/L	99
54) 1,3-Dichloropropane	9.379	76	12661412	303.08 ug/L	98
55) Tetrachloroethene	9.316	164	5449369	338.38 ug/L	97
56) Dibromochloromethane	9.686	129	7782370	320.14 ug/L	99
57) 1,2-Dibromoethane	9.812	107	7548270	327.85 ug/L	100
58) Chlorobenzene	10.533	112	19737618	322.34 ug/L	97
59) Ethylbenzene	10.723	91	35956481	308.57 ug/L	97
60) 1,1,1,2-Tetrachloroethane	10.668	131	7260038	320.35 ug/L	96
61) Xylene	10.901	106	27203262	638.30 ug/L	98
62) Xylene (2)	11.454	106	13036853	318.30 ug/L	93
63) Xylenes, Total	10.901	106	40240115m	956.62 ug/L #	
64) Styrene	11.481	104	24927193	327.84 ug/L	96
65) Isopropylbenzene	12.001	105	29116164	318.59 ug/L	98
66) Bromoform	11.703	173	6057169	383.73 ug/L	98
67) 1,1,2,2-Tetrachloroethane	12.453	83	8317073	262.10 ug/L	100
70) 1,2,3-Trichloropropane	12.484	75	8424881	261.89 ug/L	99
71) n-Propylbenzene	12.597	91	31864590	266.21 ug/L	98
72) Bromobenzene	12.376	156	9002010	290.33 ug/L	92
73) 1,3,5-Trimethylbenzene	12.869	105	25928922	268.46 ug/L	97
74) 2-Chlorotoluene	12.680	91	22371548	263.07 ug/L	97
75) 4-Chlorotoluene	12.845	91	25552896	259.83 ug/L	97
76) tert-Butylbenzene	13.323	119	17941682	270.40 ug/L	98
77) 1-Ethyl-2-methylbenzene	13.139	105	32131167	276.90 ug/L	98
78) 1,2,4-Trimethylbenzene	13.397	105	25963370	257.89 ug/L	99
79) sec-Butylbenzene	13.643	105	25041933	268.91 ug/L	99
80) p-Isopropyltoluene	13.873	119	21351564	271.97 ug/L	98
81) 1,3-Dichlorobenzene	13.754	146	14182902	284.42 ug/L	97
82) 1,4-Dichlorobenzene	13.889	146	16310210	284.71 ug/L	97
83) n-Butylbenzene	14.466	91	18592011	261.69 ug/L	98
84) 1,2-Dichlorobenzene	14.414	146	14279988	288.93 ug/L	97
85) 1,2-Dibromo-3-chloropropa	15.553	75	1796610	258.51 ug/L	81
86) 1,2,4-Trichlorobenzene	16.765	180	7123848	308.40 ug/L	99
87) Hexachlorbutadiene	17.052	225	2959936	302.96 ug/L	97
88) Naphthalene	17.103	128	18906459	288.93 ug/L	98
89) 1,2,3-Trichlorobenzene	17.462	180	6202352	315.96 ug/L	96

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06101311.D
Acq On : 10 Jun 2013 9:10 am Operator: PS
Sample : ICAL VSTD300 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 10

Quant Time: Jun 10 14:14:10 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06101311.D
Acq On : 10 Jun 2013 9:10 am Operator: PS
Sample : ICAL VSTD300 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 10

Quant Time: Jun 10 14:14:10 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	5.387	168	1848786	30.00	ug/L	0.00
31) 1,4-Difluorobenzene	6.401	114	3064874	30.00	ug/L	0.00
50) Chlorobenzene-d5	10.494	82	1730648	30.00	ug/L	0.00
69) 1,4-Dichlorobenzene-d4	13.856	152	1790983	30.00	ug/L	# 0.00
System Monitoring Compounds						
29) Dibromofluoromethane	5.260	113	838398	28.32	ug/L	-0.01
Spiked Amount 30.000	Range 86 - 118		Recovery = 94.40%			
32) 1,2-Dichloroethane-d4	5.727	102	214662	28.20	ug/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 94.00%			
48) Toluene-d8	8.471	98	3757766	30.05	ug/L	0.00
Spiked Amount 30.000	Range 88 - 110		Recovery = 100.17%			
68) Bromofluorobenzene	12.195	174	1355626	34.67	ug/L	0.00
Spiked Amount 30.000	Range 86 - 115		Recovery = 115.57%#			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.217	85	9696388	368.99	ug/L	98
3) Chloromethane	1.344	50	7790360	307.65	ug/L	98
4) Vinyl chloride	1.426	62	10029916	332.58	ug/L	98
5) 1,3-Butadiene	1.452	39	6642849	281.26	ug/L	89
6) Bromomethane	1.647	96	6835761	625.77	ug/L	95
7) Chloroethane	1.717	64	5705112	397.67	ug/L	97
8) Trichlorofluoromethane	1.928	101	11243955	283.71	ug/L	98
9) Isopropyl Alcohol	2.657	45	13254918	5792.10	ug/L #	95
10) Ethyl Ether	2.192	59	6419802	301.73	ug/L	94
11) Acrolein	2.301	56	855033	200.50	ug/L	89
12) Acetone	2.452	43	6086500	533.96	ug/L	96
13) Freon-TF	2.383	151	4943183	347.35	ug/L	92
14) 1,1-Dichloroethene	2.377	96	6379220	361.81	ug/L	91
15) Methylene Chloride	2.859	84	7642532	317.63	ug/L	88
16) Carbon disulfide	2.573	76	46961075	633.40	ug/L	98
17) Acrylonitrile	3.150	53	3735649	301.47	ug/L	99
18) MTBE	3.188	73	23776677	312.25	ug/L	99
19) Hexane	3.514	57	5572765	273.68	ug/L	93
20) trans-1,2-Dichloroethene	3.162	96	7475138	334.08	ug/L	91
21) Vinyl acetate	3.808	43	5441124	109.36	ug/L	94
22) 1,1-Dichloroethane	3.692	63	12616194	294.94	ug/L	98
23) 2-Butanone	4.618	72	2338323	599.46	ug/L #	73
24) 2,2-Dichloropropane	4.528	77	6158651	176.09	ug/L	97
25) cis-1,2-Dichloroethene	4.540	96	8065200	311.38	ug/L	91
26) Ethyl Acetate	4.737	45	1167100	253.85	ug/L	99
27) Chloroform	5.032	83	11930034	278.13	ug/L	99
28) Bromochloromethane	4.886	128	3014298	291.82	ug/L #	87
30) Isobutyl alcohol	5.886	43	8735712	5487.60	ug/L	99
33) Carbon Tetrachloride	5.491	117	8519030	287.42	ug/L	99
34) 1,2-Dichloroethane	5.837	62	10432122	298.32	ug/L	97
35) 1,1,1-Trichloroethane	5.258	97	10484671	296.41	ug/L	98
36) 1,1-Dichloropropene	5.504	110	3584589	325.09	ug/L	97
37) 1-Butanol	6.832	56	5536275	6261.99	ug/L	96
38) Benzene	5.796	78	29887028	295.26	ug/L	99
39) Trichloroethene	6.735	95	8792990	349.48	ug/L	95
40) 1,2-Dichloropropane	7.049	63	7543761	292.84	ug/L	99
41) 1,4-Dioxane	7.299	88	1197550	3279.36	ug/L	87
42) Bromodichloromethane	7.464	83	9713804	305.53	ug/L	99
43) Dibromomethane	7.205	93	4593278	316.40	ug/L	95
44) 2-Nitropropane	7.810	41	2082105	279.24	ug/L	93
45) 2-Chloroethylvinyl ether	7.952	63	8837803	536.66	ug/L	94

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06101311.D
Acq On : 10 Jun 2013 9:10 am Operator: PS
Sample : ICAL VSTD300 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 10

Quant Time: Jun 10 14:14:10 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration

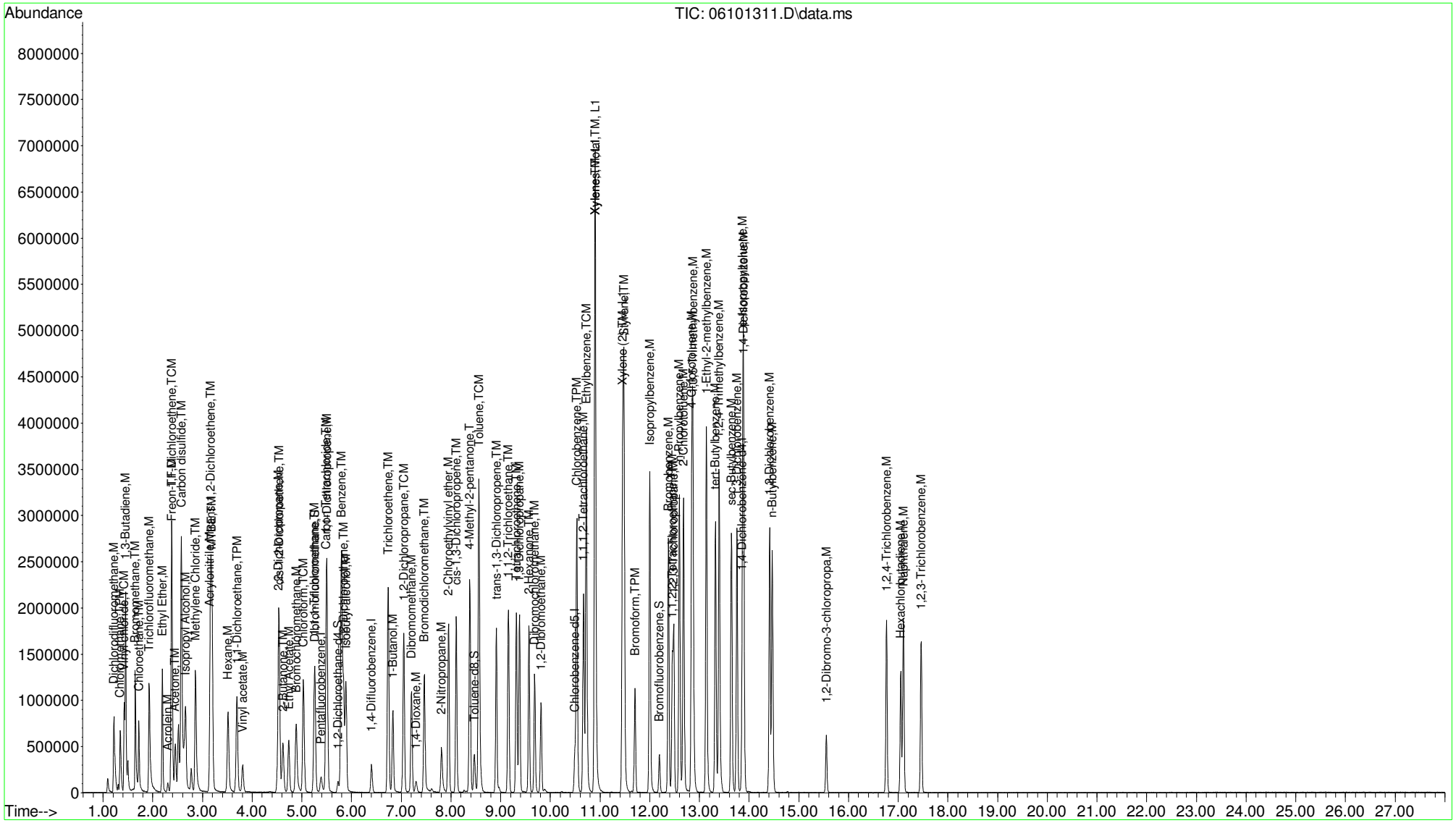
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
46) 4-Methyl-2-pentanone	8.380	43	18040871	560.58 ug/L	96
47) cis-1,3-Dichloropropene	8.107	75	11821957	284.04 ug/L	97
49) Toluene	8.561	92	19379858	300.82 ug/L	98
51) trans-1,3-Dichloropropene	8.913	75	10654587	285.13 ug/L	97
52) 2-Hexanone	9.569	43	13042830	584.44 ug/L	94
53) 1,1,2-Trichloroethane	9.155	83	6071106	314.70 ug/L	99
54) 1,3-Dichloropropane	9.379	76	12661412	303.08 ug/L	98
55) Tetrachloroethene	9.316	164	5449369	338.38 ug/L	97
56) Dibromochloromethane	9.686	129	7782370	320.14 ug/L	99
57) 1,2-Dibromoethane	9.812	107	7548270	327.85 ug/L	100
58) Chlorobenzene	10.533	112	19737618	322.34 ug/L	97
59) Ethylbenzene	10.723	91	35956481	308.57 ug/L	97
60) 1,1,1,2-Tetrachloroethane	10.668	131	7260038	320.35 ug/L	96
61) Xylene	10.901	106	27203262	638.30 ug/L	98
62) Xylene (2)	11.454	106	13036853	318.30 ug/L	93
63) Xylenes, Total	10.901	106	40240115m	956.62 ug/L #	
64) Styrene	11.481	104	24927193	327.84 ug/L	96
65) Isopropylbenzene	12.001	105	29116164	318.59 ug/L	98
66) Bromoform	11.703	173	6057169	383.73 ug/L	98
67) 1,1,2,2-Tetrachloroethane	12.453	83	8317073	262.10 ug/L	100
70) 1,2,3-Trichloropropane	12.484	75	8424881	261.89 ug/L	99
71) n-Propylbenzene	12.597	91	31864590	266.21 ug/L	98
72) Bromobenzene	12.376	156	9002010	290.33 ug/L	92
73) 1,3,5-Trimethylbenzene	12.869	105	25928922	268.46 ug/L	97
74) 2-Chlorotoluene	12.680	91	22371548	263.07 ug/L	97
75) 4-Chlorotoluene	12.845	91	25552896	259.83 ug/L	97
76) tert-Butylbenzene	13.323	119	17941682	270.40 ug/L	98
77) 1-Ethyl-2-methylbenzene	13.139	105	32131167	276.90 ug/L	98
78) 1,2,4-Trimethylbenzene	13.397	105	25963370	257.89 ug/L	99
79) sec-Butylbenzene	13.643	105	25041933	268.91 ug/L	99
80) p-Isopropyltoluene	13.873	119	21351564	271.97 ug/L	98
81) 1,3-Dichlorobenzene	13.754	146	14182902	284.42 ug/L	97
82) 1,4-Dichlorobenzene	13.889	146	16310210	284.71 ug/L	97
83) n-Butylbenzene	14.466	91	18592011	261.69 ug/L	98
84) 1,2-Dichlorobenzene	14.414	146	14279988	288.93 ug/L	97
85) 1,2-Dibromo-3-chloropropa	15.553	75	1796610	258.51 ug/L	81
86) 1,2,4-Trichlorobenzene	16.765	180	7123848	308.40 ug/L	99
87) Hexachlorbutadiene	17.052	225	2959936	302.96 ug/L	97
88) Naphthalene	17.103	128	18906459	288.93 ug/L	98
89) 1,2,3-Trichlorobenzene	17.462	180	6202352	315.96 ug/L	96

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06101311.D
Acq On : 10 Jun 2013 9:10 am Operator: PS
Sample : ICAL VSTD300 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 10

Quant Time: Jun 10 14:14:10 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06101313.D
Acq On : 10 Jun 2013 10:20 am Operator: PS
Sample : ICAL VSTD100r Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 12

Quant Time: Jun 10 14:14:46 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	5.385	168	1863990	30.00	ug/L	-0.01
31) 1,4-Difluorobenzene	6.401	114	3064181	30.00	ug/L	0.00
50) Chlorobenzene-d5	10.491	82	1796570	30.00	ug/L	0.00
69) 1,4-Dichlorobenzene-d4	13.855	152	1688750	30.00	ug/L	0.00
System Monitoring Compounds						
29) Dibromofluoromethane	5.261	113	821633	27.53	ug/L	-0.01
Spiked Amount 30.000	Range 86 - 118		Recovery = 91.77%			
32) 1,2-Dichloroethane-d4	5.727	102	211238	27.76	ug/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 92.53%			
48) Toluene-d8	8.469	98	3777900	30.22	ug/L	0.00
Spiked Amount 30.000	Range 88 - 110		Recovery = 100.73%			
68) Bromofluorobenzene	12.194	174	1318053	32.47	ug/L	0.00
Spiked Amount 30.000	Range 86 - 115		Recovery = 108.23%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.215	85	3449268	130.19	ug/L	98
3) Chloromethane	1.346	50	2682150	105.06	ug/L	98
4) Vinyl chloride	1.424	62	3431208	112.85	ug/L	99
5) 1,3-Butadiene	1.452	39	2279909	95.74	ug/L	89
6) Bromomethane	1.650	96	1759485	166.64	ug/L	93
7) Chloroethane	1.738	64	1604911	110.96	ug/L	100
8) Trichlorofluoromethane	1.944	101	3713289	92.93	ug/L	96
9) Isopropyl Alcohol	2.602	45	4062652	1760.81	ug/L #	98
10) Ethyl Ether	2.190	59	2094630	97.64	ug/L	95
11) Acrolein	2.300	56	457301	106.36	ug/L #	75
12) Acetone	2.443	43	1878351	163.44	ug/L	96
13) Freon-TF	2.393	151	1750564	122.01	ug/L	91
14) 1,1-Dichloroethene	2.384	96	2039593	114.73	ug/L	90
15) Methylene Chloride	2.863	84	2527655	104.19	ug/L	88
16) Carbon disulfide	2.582	76	16430043	219.80	ug/L	99
17) Acrylonitrile	3.143	53	1184641	94.82	ug/L	99
18) MTBE	3.185	73	7740907	100.83	ug/L	99
19) Hexane	3.521	57	2349687	114.45	ug/L	92
20) trans-1,2-Dichloroethene	3.166	96	2496396	110.66	ug/L	90
21) Vinyl acetate	3.808	43	12473137	248.65	ug/L	93
22) 1,1-Dichloroethane	3.695	63	4164637	96.57	ug/L	98
23) 2-Butanone	4.609	72	802230	203.98	ug/L #	67
24) 2,2-Dichloropropane	4.530	77	3806434	107.95	ug/L	97
25) cis-1,2-Dichloroethene	4.544	96	2682011	102.70	ug/L	95
26) Ethyl Acetate	4.730	45	403907	87.14	ug/L	99
27) Chloroform	5.032	83	3971436	91.83	ug/L	97
28) Bromochloromethane	4.886	128	1003114	96.32	ug/L #	88
30) Isobutyl alcohol	5.851	43	2691757	1677.12	ug/L	98
33) Carbon Tetrachloride	5.492	117	2803683	94.61	ug/L	99
34) 1,2-Dichloroethane	5.836	62	3378016	96.62	ug/L	98
35) 1,1,1-Trichloroethane	5.259	97	3473642	98.22	ug/L	97
36) 1,1-Dichloropropene	5.504	110	1180120	107.05	ug/L	94
37) 1-Butanol	6.804	56	1692506	1914.80	ug/L	94
38) Benzene	5.797	78	10117950	99.98	ug/L	99
39) Trichloroethene	6.737	95	2424049	96.37	ug/L	95
40) 1,2-Dichloropropane	7.048	63	2430036	94.35	ug/L	99
41) 1,4-Dioxane	7.288	88	386765	1059.35	ug/L	86
42) Bromodichloromethane	7.463	83	3113584	97.95	ug/L	99
43) Dibromomethane	7.206	93	1482818	102.17	ug/L	96
44) 2-Nitropropane	7.803	41	662865	88.92	ug/L #	80
45) 2-Chloroethylvinyl ether	7.947	63	2804463	170.34	ug/L	93

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06101313.D
Acq On : 10 Jun 2013 10:20 am Operator: PS
Sample : ICAL VSTD100r Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 12

Quant Time: Jun 10 14:14:46 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration

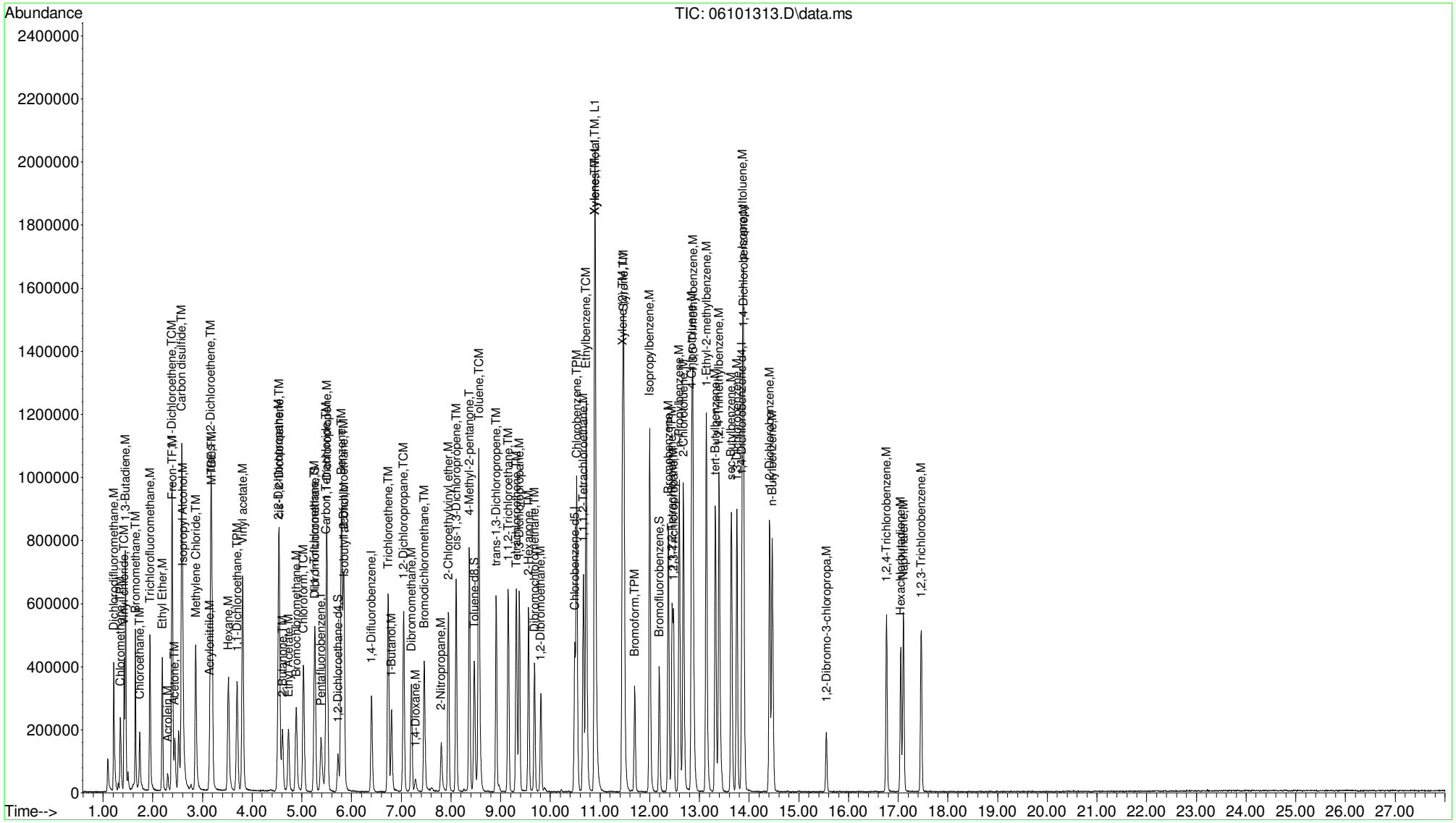
	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
46)	4-Methyl-2-pentanone	8.371	43	5878201	182.69 ug/L	97
47)	cis-1,3-Dichloropropene	8.105	75	4283848	102.95 ug/L	97
49)	Toluene	8.560	92	6453828	100.20 ug/L	100
51)	trans-1,3-Dichloropropene	8.910	75	3822051	98.53 ug/L	96
52)	2-Hexanone	9.560	43	4241730	183.10 ug/L	95
53)	1,1,2-Trichloroethane	9.152	83	1928149	96.28 ug/L	99
54)	1,3-Dichloropropane	9.376	76	4149949	95.70 ug/L	99
55)	Tetrachloroethene	9.318	164	1899146	113.60 ug/L	96
56)	Dibromochloromethane	9.682	129	2429210	96.26 ug/L	99
57)	1,2-Dibromoethane	9.810	107	2469232	103.31 ug/L	100
58)	Chlorobenzene	10.531	112	6475698	101.88 ug/L	97
59)	Ethylbenzene	10.720	91	11959695	98.87 ug/L	97
60)	1,1,1,2-Tetrachloroethane	10.664	131	2254190	95.82 ug/L	96
61)	Xylene	10.898	106	8970795	202.77 ug/L	99
62)	Xylene (2)	11.453	106	4219278	99.23 ug/L	94
63)	Xylenes, Total	10.898	106	13190073m	302.06 ug/L #	
64)	Styrene	11.478	104	8068640	102.23 ug/L	96
65)	Isopropylbenzene	11.999	105	9761365	102.89 ug/L	98
66)	Bromoform	11.698	173	1775552	108.36 ug/L	98
67)	1,1,2,2-Tetrachloroethane	12.449	83	3420690	103.84 ug/L	98
70)	1,2,3-Trichloropropane	12.479	75	2618375	86.32 ug/L	100
71)	n-Propylbenzene	12.594	91	10718016	94.96 ug/L	98
72)	Bromobenzene	12.374	156	2881798	98.57 ug/L	93
73)	1,3,5-Trimethylbenzene	12.868	105	8459863	92.89 ug/L	96
74)	2-Chlorotoluene	12.678	91	7369944	91.91 ug/L	97
75)	4-Chlorotoluene	12.844	91	8315635	89.68 ug/L	96
76)	tert-Butylbenzene	13.322	119	5954757	95.18 ug/L	93
77)	1-Ethyl-2-methylbenzene	13.139	105	10553477	96.45 ug/L	100
78)	1,2,4-Trimethylbenzene	13.396	105	8409025	88.58 ug/L	99
79)	sec-Butylbenzene	13.642	105	8435870	96.07 ug/L	100
80)	p-Isopropyltoluene	13.872	119	6947311	93.85 ug/L	99
81)	1,3-Dichlorobenzene	13.753	146	4618661	98.23 ug/L	98
82)	1,4-Dichlorobenzene	13.887	146	5242547	97.05 ug/L	97
83)	n-Butylbenzene	14.466	91	6257311	93.41 ug/L	99
84)	1,2-Dichlorobenzene	14.413	146	4551809	97.67 ug/L	97
85)	1,2-Dibromo-3-chloropropa	15.554	75	554107	84.55 ug/L	86
86)	1,2,4-Trichlorobenzene	16.764	180	2192703	100.67 ug/L	98
87)	Hexachlorbutadiene	17.053	225	1036658	112.53 ug/L	96
88)	Naphthalene	17.104	128	5636129	91.35 ug/L	98
89)	1,2,3-Trichlorobenzene	17.462	180	1974078	106.65 ug/L	97

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06101313.D
Acq On : 10 Jun 2013 10:20 am Operator: PS
Sample : ICAL VSTD100r Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 12

Quant Time: Jun 10 14:14:46 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06101313.D
Acq On : 10 Jun 2013 10:20 am Operator: PS
Sample : ICAL VSTD100r Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 12

Quant Time: Jun 10 14:14:46 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	5.385	168	1863990	30.00	ug/L	-0.01
31) 1,4-Difluorobenzene	6.401	114	3064181	30.00	ug/L	0.00
50) Chlorobenzene-d5	10.491	82	1796570	30.00	ug/L	0.00
69) 1,4-Dichlorobenzene-d4	13.855	152	1688750	30.00	ug/L	0.00
System Monitoring Compounds						
29) Dibromofluoromethane	5.261	113	821633	27.53	ug/L	-0.01
Spiked Amount 30.000	Range 86 - 118		Recovery = 91.77%			
32) 1,2-Dichloroethane-d4	5.727	102	211238	27.76	ug/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 92.53%			
48) Toluene-d8	8.469	98	3777900	30.22	ug/L	0.00
Spiked Amount 30.000	Range 88 - 110		Recovery = 100.73%			
68) Bromofluorobenzene	12.194	174	1318053	32.47	ug/L	0.00
Spiked Amount 30.000	Range 86 - 115		Recovery = 108.23%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.215	85	3449268	130.19	ug/L	98
3) Chloromethane	1.346	50	2682150	105.06	ug/L	98
4) Vinyl chloride	1.424	62	3431208	112.85	ug/L	99
5) 1,3-Butadiene	1.452	39	2279909	95.74	ug/L	89
6) Bromomethane	1.650	96	1759485	166.64	ug/L	93
7) Chloroethane	1.738	64	1604911	110.96	ug/L	100
8) Trichlorofluoromethane	1.944	101	3713289	92.93	ug/L	96
9) Isopropyl Alcohol	2.602	45	4062652	1760.81	ug/L #	98
10) Ethyl Ether	2.190	59	2094630	97.64	ug/L	95
11) Acrolein	2.300	56	457301	106.36	ug/L #	75
12) Acetone	2.443	43	1878351	163.44	ug/L	96
13) Freon-TF	2.393	151	1750564	122.01	ug/L	91
14) 1,1-Dichloroethene	2.384	96	2039593	114.73	ug/L	90
15) Methylene Chloride	2.863	84	2527655	104.19	ug/L	88
16) Carbon disulfide	2.582	76	16430043	219.80	ug/L	99
17) Acrylonitrile	3.143	53	1184641	94.82	ug/L	99
18) MTBE	3.185	73	7740907	100.83	ug/L	99
19) Hexane	3.521	57	2349687	114.45	ug/L	92
20) trans-1,2-Dichloroethene	3.166	96	2496396	110.66	ug/L	90
21) Vinyl acetate	3.808	43	12473137	248.65	ug/L	93
22) 1,1-Dichloroethane	3.695	63	4164637	96.57	ug/L	98
23) 2-Butanone	4.609	72	802230	203.98	ug/L #	67
24) 2,2-Dichloropropane	4.530	77	3806434	107.95	ug/L	97
25) cis-1,2-Dichloroethene	4.544	96	2682011	102.70	ug/L	95
26) Ethyl Acetate	4.730	45	403907	87.14	ug/L	99
27) Chloroform	5.032	83	3971436	91.83	ug/L	97
28) Bromochloromethane	4.886	128	1003114	96.32	ug/L #	88
30) Isobutyl alcohol	5.851	43	2691757	1677.12	ug/L	98
33) Carbon Tetrachloride	5.492	117	2803683	94.61	ug/L	99
34) 1,2-Dichloroethane	5.836	62	3378016	96.62	ug/L	98
35) 1,1,1-Trichloroethane	5.259	97	3473642	98.22	ug/L	97
36) 1,1-Dichloropropene	5.504	110	1180120	107.05	ug/L	94
37) 1-Butanol	6.804	56	1692506	1914.80	ug/L	94
38) Benzene	5.797	78	10117950	99.98	ug/L	99
39) Trichloroethene	6.737	95	2424049	96.37	ug/L	95
40) 1,2-Dichloropropane	7.048	63	2430036	94.35	ug/L	99
41) 1,4-Dioxane	7.288	88	386765	1059.35	ug/L	86
42) Bromodichloromethane	7.463	83	3113584	97.95	ug/L	99
43) Dibromomethane	7.206	93	1482818	102.17	ug/L	96
44) 2-Nitropropane	7.803	41	662865	88.92	ug/L #	80
45) 2-Chloroethylvinyl ether	7.947	63	2804463	170.34	ug/L	93

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06101313.D
Acq On : 10 Jun 2013 10:20 am Operator: PS
Sample : ICAL VSTD100r Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 12

Quant Time: Jun 10 14:14:46 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration

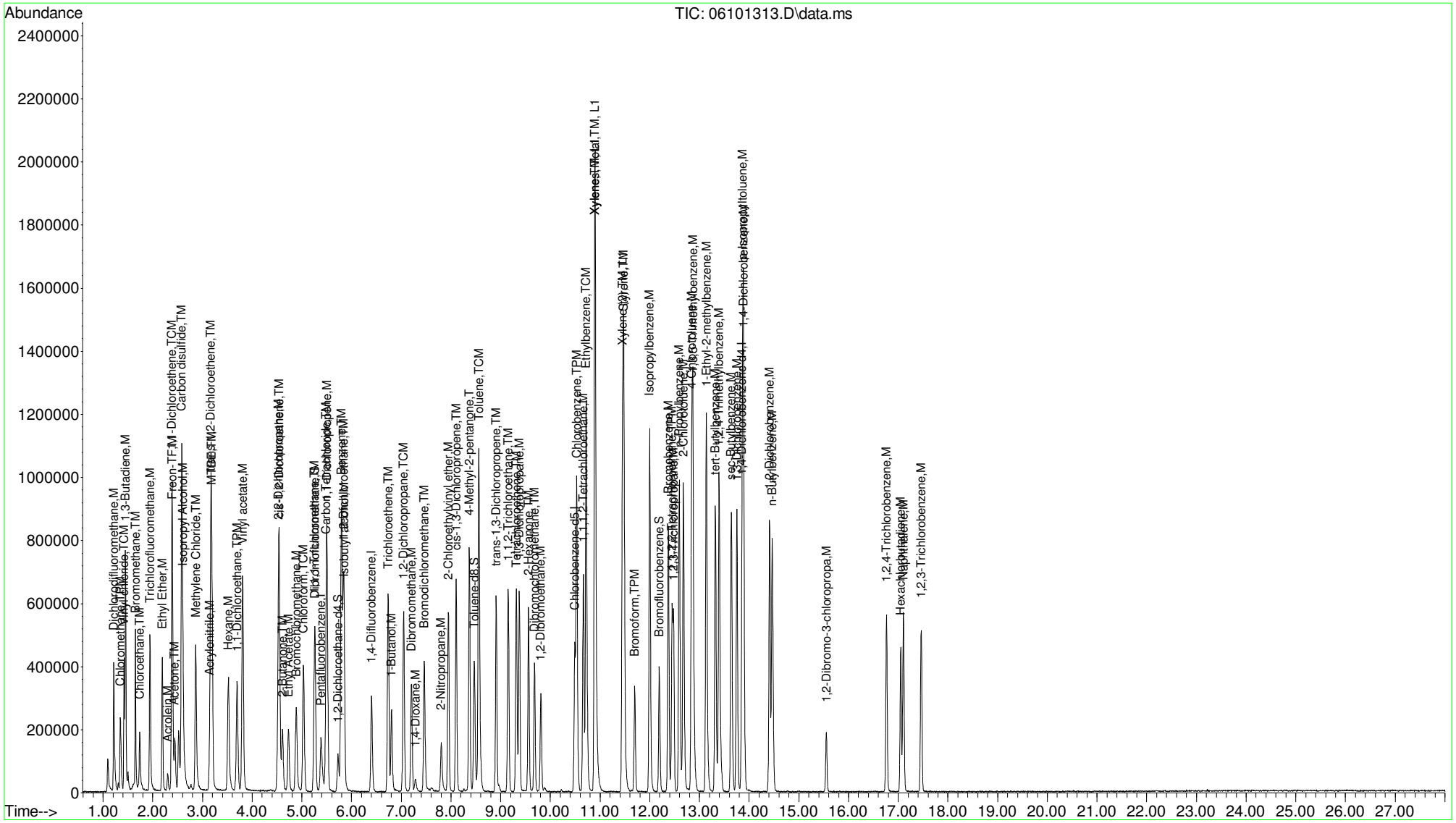
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
46) 4-Methyl-2-pentanone	8.371	43	5878201	182.69 ug/L	97
47) cis-1,3-Dichloropropene	8.105	75	4283848	102.95 ug/L	97
49) Toluene	8.560	92	6453828	100.20 ug/L	100
51) trans-1,3-Dichloropropene	8.910	75	3822051	98.53 ug/L	96
52) 2-Hexanone	9.560	43	4241730	183.10 ug/L	95
53) 1,1,2-Trichloroethane	9.152	83	1928149	96.28 ug/L	99
54) 1,3-Dichloropropane	9.376	76	4149949	95.70 ug/L	99
55) Tetrachloroethene	9.318	164	1899146	113.60 ug/L	96
56) Dibromochloromethane	9.682	129	2429210	96.26 ug/L	99
57) 1,2-Dibromoethane	9.810	107	2469232	103.31 ug/L	100
58) Chlorobenzene	10.531	112	6475698	101.88 ug/L	97
59) Ethylbenzene	10.720	91	11959695	98.87 ug/L	97
60) 1,1,1,2-Tetrachloroethane	10.664	131	2254190	95.82 ug/L	96
61) Xylene	10.898	106	8970795	202.77 ug/L	99
62) Xylene (2)	11.453	106	4219278	99.23 ug/L	94
63) Xylenes, Total	10.898	106	13190073m	302.06 ug/L #	
64) Styrene	11.478	104	8068640	102.23 ug/L	96
65) Isopropylbenzene	11.999	105	9761365	102.89 ug/L	98
66) Bromoform	11.698	173	1775552	108.36 ug/L	98
67) 1,1,2,2-Tetrachloroethane	12.449	83	3420690	103.84 ug/L	98
70) 1,2,3-Trichloropropane	12.479	75	2618375	86.32 ug/L	100
71) n-Propylbenzene	12.594	91	10718016	94.96 ug/L	98
72) Bromobenzene	12.374	156	2881798	98.57 ug/L	93
73) 1,3,5-Trimethylbenzene	12.868	105	8459863	92.89 ug/L	96
74) 2-Chlorotoluene	12.678	91	7369944	91.91 ug/L	97
75) 4-Chlorotoluene	12.844	91	8315635	89.68 ug/L	96
76) tert-Butylbenzene	13.322	119	5954757	95.18 ug/L	93
77) 1-Ethyl-2-methylbenzene	13.139	105	10553477	96.45 ug/L	100
78) 1,2,4-Trimethylbenzene	13.396	105	8409025	88.58 ug/L	99
79) sec-Butylbenzene	13.642	105	8435870	96.07 ug/L	100
80) p-Isopropyltoluene	13.872	119	6947311	93.85 ug/L	99
81) 1,3-Dichlorobenzene	13.753	146	4618661	98.23 ug/L	98
82) 1,4-Dichlorobenzene	13.887	146	5242547	97.05 ug/L	97
83) n-Butylbenzene	14.466	91	6257311	93.41 ug/L	99
84) 1,2-Dichlorobenzene	14.413	146	4551809	97.67 ug/L	97
85) 1,2-Dibromo-3-chloropropa	15.554	75	554107	84.55 ug/L	86
86) 1,2,4-Trichlorobenzene	16.764	180	2192703	100.67 ug/L	98
87) Hexachlorbutadiene	17.053	225	1036658	112.53 ug/L	96
88) Naphthalene	17.104	128	5636129	91.35 ug/L	98
89) 1,2,3-Trichlorobenzene	17.462	180	1974078	106.65 ug/L	97

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06101313.D
Acq On : 10 Jun 2013 10:20 am Operator: PS
Sample : ICAL VSTD100r Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 12

Quant Time: Jun 10 14:14:46 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7051613.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominFri May 17 13:21:38 2013
QLast Update : Fri May 17 13:21:38 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06101315.D
Acq On : 10 Jun 2013 11:31 am Operator: PS
Sample : LCS VLCS061013-7 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 14

Quant Time: Jun 10 14:36:22 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7060913.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominMon Jun 10 14:34:29 2013
QLast Update : Mon Jun 10 14:34:29 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	5.387	168	1823933	30.00	ug/L	0.00
31) 1,4-Difluorobenzene	6.404	114	3020692	30.00	ug/L	0.00
50) Chlorobenzene-d5	10.492	82	1723677	30.00	ug/L	0.00
69) 1,4-Dichlorobenzene-d4	13.855	152	1653935	30.00	ug/L	0.00
System Monitoring Compounds						
29) Dibromofluoromethane	5.263	113	791703	29.80	ug/L	0.00
Spiked Amount 30.000	Range 86 - 118		Recovery = 99.33%			
32) 1,2-Dichloroethane-d4	5.732	102	206240	29.68	ug/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 98.93%			
48) Toluene-d8	8.469	98	3746282	30.34	ug/L	0.00
Spiked Amount 30.000	Range 88 - 110		Recovery = 101.13%			
68) Bromofluorobenzene	12.193	174	1328879	30.96	ug/L	0.00
Spiked Amount 30.000	Range 86 - 115		Recovery = 103.20%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.216	85	695642	21.09	ug/L	98
3) Chloromethane	1.349	50	642217	25.21	ug/L	96
4) Vinyl chloride	1.422	62	637369	20.14	ug/L	99
5) 1,3-Butadiene	1.452	39	310787	14.33	ug/L	86
6) Bromomethane	1.664	96	135726	24.25	ug/L	99
7) Chloroethane	1.746	64	361073	22.14	ug/L	95
8) Trichlorofluoromethane	1.949	101	710221	20.01	ug/L	99
9) Isopropyl Alcohol	2.593	45	768874	396.52	ug/L #	97
10) Ethyl Ether	2.193	59	410712	20.19	ug/L	94
11) Acrolein	2.304	56	59046m	14.24	ug/L	
12) Acetone	2.440	43	401378	42.19	ug/L	92
13) Freon-TF	2.395	151	310088	20.15	ug/L	95
14) 1,1-Dichloroethene	2.388	96	395394	19.81	ug/L	91
15) Methylene Chloride	2.867	84	484379	19.02	ug/L	87
16) Carbon disulfide	2.584	76	2719906	36.41	ug/L	97
17) Acrylonitrile	3.145	53	448740	39.66	ug/L	97
18) MTBE	3.183	73	1552062	21.11	ug/L	99
19) Hexane	3.522	57	381269	18.77	ug/L	99
20) trans-1,2-Dichloroethene	3.173	96	480542	19.92	ug/L	93
21) Vinyl acetate	3.529	43	227415	4.30	ug/L	49
22) 1,1-Dichloroethane	3.700	63	835147	20.73	ug/L	98
23) 2-Butanone	4.613	72	142689	37.36	ug/L	79
24) 2,2-Dichloropropane	4.533	77	371983	10.33	ug/L	96
25) cis-1,2-Dichloroethene	4.547	96	521264	19.81	ug/L	89
26) Ethyl Acetate	4.734	45	69546	16.22	ug/L #	84
27) Chloroform	5.033	83	797577	20.42	ug/L	97
28) Bromochloromethane	4.886	128	235302	22.39	ug/L #	84
30) Isobutyl alcohol	5.839	43	564981	460.31	ug/L	98
33) Carbon Tetrachloride	5.494	117	531877	20.24	ug/L	97
34) 1,2-Dichloroethane	5.836	62	676966	20.35	ug/L	96
35) 1,1,1-Trichloroethane	5.261	97	700655	20.82	ug/L	97
36) 1,1-Dichloropropene	5.505	110	258309	23.23	ug/L	96
37) 1-Butanol	6.800	56	297982	386.43	ug/L	98
38) Benzene	5.797	78	2017871	20.54	ug/L	99
39) Trichloroethene	6.738	95	644489	25.97	ug/L	97
40) 1,2-Dichloropropane	7.046	63	488027	20.39	ug/L #	88
41) 1,4-Dioxane	7.285	88	79202	211.15	ug/L	92
42) Bromodichloromethane	7.464	83	618068	20.33	ug/L	99
43) Dibromomethane	7.205	93	293443	19.81	ug/L	95
44) 2-Nitropropane	7.805	41	108070	17.02	ug/L #	70
45) 2-Chloroethylvinyl ether	7.948	63	527108	39.46	ug/L	93

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06101315.D
Acq On : 10 Jun 2013 11:31 am Operator: PS
Sample : LCS VLCS061013-7 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 14

Quant Time: Jun 10 14:36:22 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7060913.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominMon Jun 10 14:34:29 2013
QLast Update : Mon Jun 10 14:34:29 2013
Response via : Initial Calibration

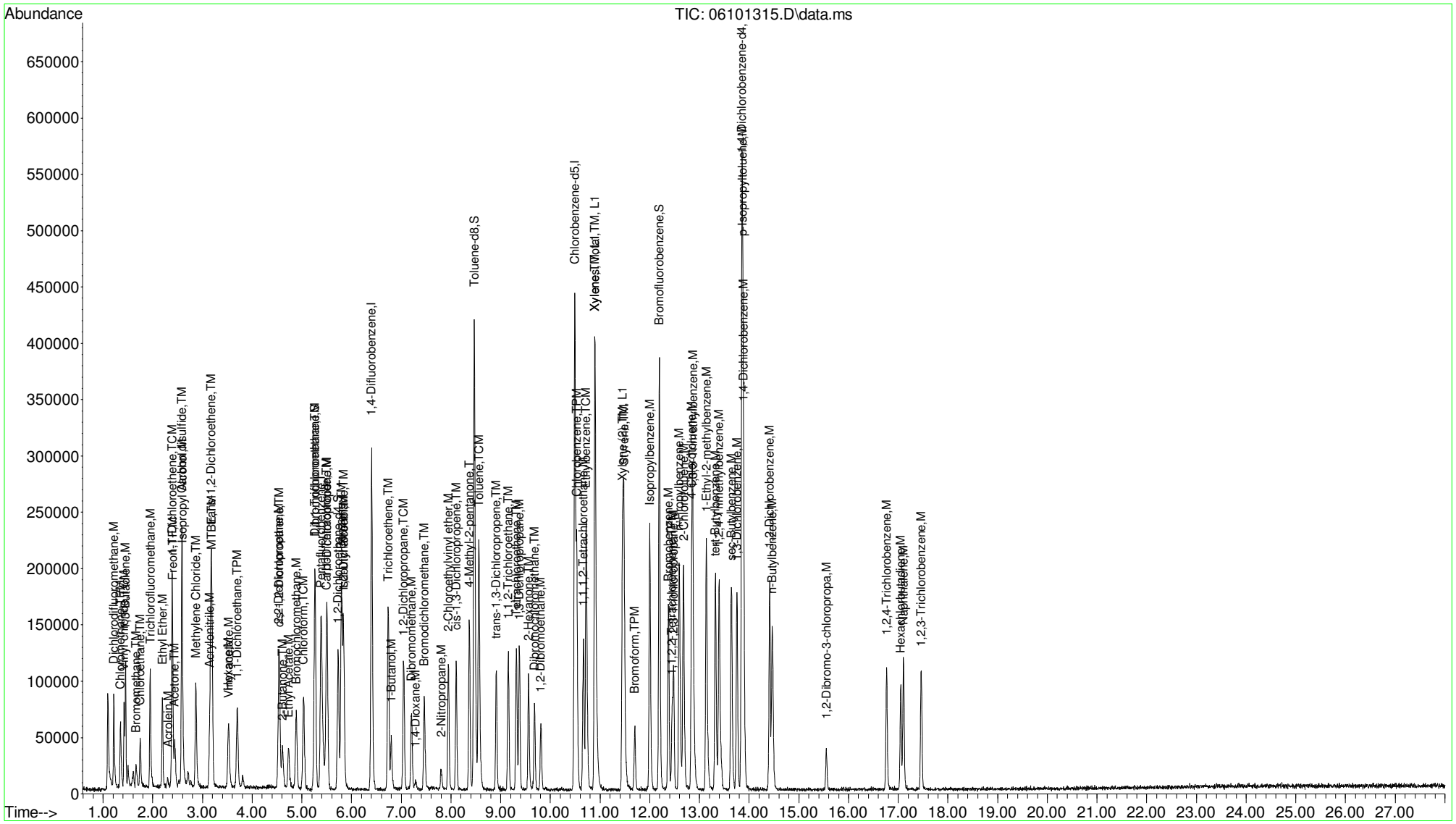
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
46) 4-Methyl-2-pentanone	8.369	43	1160190	41.30 ug/L	97
47) cis-1,3-Dichloropropene	8.106	75	695125	17.41 ug/L	95
49) Toluene	8.560	92	1328930	21.34 ug/L	99
51) trans-1,3-Dichloropropene	8.911	75	637380	18.32 ug/L	94
52) 2-Hexanone	9.562	43	771613	37.09 ug/L	93
53) 1,1,2-Trichloroethane	9.152	83	381516	20.20 ug/L	98
54) 1,3-Dichloropropane	9.379	76	801682	20.05 ug/L	99
55) Tetrachloroethene	9.317	164	348949	19.72 ug/L	95
56) Dibromochloromethane	9.682	129	457601	21.00 ug/L	96
57) 1,2-Dibromoethane	9.809	107	469908	20.58 ug/L	98
58) Chlorobenzene	10.530	112	1394749	22.22 ug/L	99
59) Ethylbenzene	10.721	91	2456882	21.27 ug/L	98
60) 1,1,1,2-Tetrachloroethane	10.664	131	427627	20.32 ug/L	94
61) Xylene	10.897	106	1845798	43.24 ug/L	98
62) Xylene (2)	11.450	106	903258	21.83 ug/L	95
63) Xylenes, Total	10.897	106	2749056m	65.06 ug/L #	
64) Styrene	11.480	104	1498084	19.68 ug/L	98
65) Isopropylbenzene	12.000	105	2093722	22.36 ug/L	100
66) Bromoform	11.700	173	300985	19.68 ug/L	98
67) 1,1,2,2-Tetrachloroethane	12.449	83	397908	12.92 ug/L	97
70) 1,2,3-Trichloropropane	12.480	75	494686	19.56 ug/L #	42
71) n-Propylbenzene	12.596	91	2316981	22.48 ug/L	98
72) Bromobenzene	12.376	156	576595	20.70 ug/L	88
73) 1,3,5-Trimethylbenzene	12.868	105	1653147	19.95 ug/L	97
74) 2-Chlorotoluene	12.681	91	1594743	22.28 ug/L	97
75) 4-Chlorotoluene	12.845	91	1768002	22.17 ug/L	97
76) tert-Butylbenzene	13.321	119	1164812	20.76 ug/L	95
77) 1-Ethyl-2-methylbenzene	13.139	105	2049761	20.60 ug/L	99
78) 1,2,4-Trimethylbenzene	13.396	105	1649524	20.27 ug/L	98
79) sec-Butylbenzene	13.643	105	1797888	21.93 ug/L	100
80) p-Isopropyltoluene	13.873	119	1431772	21.26 ug/L	98
81) 1,3-Dichlorobenzene	13.753	146	971189	21.38 ug/L	98
82) 1,4-Dichlorobenzene	13.889	146	1031450	20.52 ug/L	96
83) n-Butylbenzene	14.465	91	1173827	20.03 ug/L	98
84) 1,2-Dichlorobenzene	14.413	146	951682	21.89 ug/L	98
85) 1,2-Dibromo-3-chloropropa	15.555	75	99584	19.47 ug/L	81
86) 1,2,4-Trichlorobenzene	16.767	180	413145	19.98 ug/L	99
87) Hexachlorbutadiene	17.052	225	207177	21.37 ug/L	97
88) Naphthalene	17.105	128	1152084	22.56 ug/L	94
89) 1,2,3-Trichlorobenzene	17.463	180	390667	22.12 ug/L	97

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06101315.D
Acq On : 10 Jun 2013 11:31 am Operator: PS
Sample : LCS VLCS061013-7 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 14

Quant Time: Jun 10 14:36:22 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7060913.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominMon Jun 10 14:34:29 2013
QLast Update : Mon Jun 10 14:34:29 2013
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06101315.D
Acq On : 10 Jun 2013 11:31 am Operator: PS
Sample : LCS VLCS061013-7 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 14

Quant Time: Jun 10 14:35:58 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7060913.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominMon Jun 10 14:34:29 2013
QLast Update : Mon Jun 10 14:34:29 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	5.387	168	1823933	30.00	ug/L	0.00
31) 1,4-Difluorobenzene	6.404	114	3020692	30.00	ug/L	0.00
50) Chlorobenzene-d5	10.492	82	1723677	30.00	ug/L	0.00
69) 1,4-Dichlorobenzene-d4	13.855	152	1653935	30.00	ug/L	0.00
System Monitoring Compounds						
29) Dibromofluoromethane	5.263	113	791703	29.80	ug/L	0.00
Spiked Amount 30.000	Range 86 - 118		Recovery = 99.33%			
32) 1,2-Dichloroethane-d4	5.732	102	206240	29.68	ug/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 98.93%			
48) Toluene-d8	8.469	98	3746282	30.34	ug/L	0.00
Spiked Amount 30.000	Range 88 - 110		Recovery = 101.13%			
68) Bromofluorobenzene	12.193	174	1328879	30.96	ug/L	0.00
Spiked Amount 30.000	Range 86 - 115		Recovery = 103.20%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.216	85	695642	21.09	ug/L	98
3) Chloromethane	1.349	50	642217	25.21	ug/L	96
4) Vinyl chloride	1.422	62	637369	20.14	ug/L	99
5) 1,3-Butadiene	1.452	39	310787	14.33	ug/L	86
6) Bromomethane	1.664	96	135726	24.25	ug/L	99
7) Chloroethane	1.746	64	361073	22.14	ug/L	95
8) Trichlorofluoromethane	1.949	101	710221	20.01	ug/L	99
9) Isopropyl Alcohol	2.593	45	768874	396.52	ug/L #	97
10) Ethyl Ether	2.193	59	410712	20.19	ug/L	94
11) Acrolein	2.303	56	53579	12.92	ug/L #	76
12) Acetone	2.440	43	401378	42.19	ug/L	92
13) Freon-TF	2.395	151	310088	20.15	ug/L	95
14) 1,1-Dichloroethene	2.388	96	395394	19.81	ug/L	91
15) Methylene Chloride	2.867	84	484379	19.02	ug/L	87
16) Carbon disulfide	2.584	76	2719906	36.41	ug/L	97
17) Acrylonitrile	3.145	53	448740	39.66	ug/L	97
18) MTBE	3.183	73	1552062	21.11	ug/L	99
19) Hexane	3.522	57	381269	18.77	ug/L	99
20) trans-1,2-Dichloroethene	3.173	96	480542	19.92	ug/L	93
21) Vinyl acetate	3.529	43	227415	4.30	ug/L	49
22) 1,1-Dichloroethane	3.700	63	835147	20.73	ug/L	98
23) 2-Butanone	4.613	72	142689	37.36	ug/L	79
24) 2,2-Dichloropropane	4.533	77	371983	10.33	ug/L	96
25) cis-1,2-Dichloroethene	4.547	96	521264	19.81	ug/L	89
26) Ethyl Acetate	4.734	45	69546	16.22	ug/L #	84
27) Chloroform	5.033	83	797577	20.42	ug/L	97
28) Bromochloromethane	4.886	128	235302	22.39	ug/L #	84
30) Isobutyl alcohol	5.839	43	564981	460.31	ug/L	98
33) Carbon Tetrachloride	5.494	117	531877	20.24	ug/L	97
34) 1,2-Dichloroethane	5.836	62	676966	20.35	ug/L	96
35) 1,1,1-Trichloroethane	5.261	97	700655	20.82	ug/L	97
36) 1,1-Dichloropropene	5.505	110	258309	23.23	ug/L	96
37) 1-Butanol	6.800	56	297982	386.43	ug/L	98
38) Benzene	5.797	78	2017871	20.54	ug/L	99
39) Trichloroethene	6.738	95	644489	25.97	ug/L	97
40) 1,2-Dichloropropane	7.046	63	488027	20.39	ug/L #	88
41) 1,4-Dioxane	7.285	88	79202	211.15	ug/L	92
42) Bromodichloromethane	7.464	83	618068	20.33	ug/L	99
43) Dibromomethane	7.205	93	293443	19.81	ug/L	95
44) 2-Nitropropane	7.805	41	108070	17.02	ug/L #	70
45) 2-Chloroethylvinyl ether	7.948	63	527108	39.46	ug/L	93

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06101315.D
Acq On : 10 Jun 2013 11:31 am Operator: PS
Sample : LCS VLCS061013-7 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 14

Quant Time: Jun 10 14:35:58 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7060913.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominMon Jun 10 14:34:29 2013
QLast Update : Mon Jun 10 14:34:29 2013
Response via : Initial Calibration

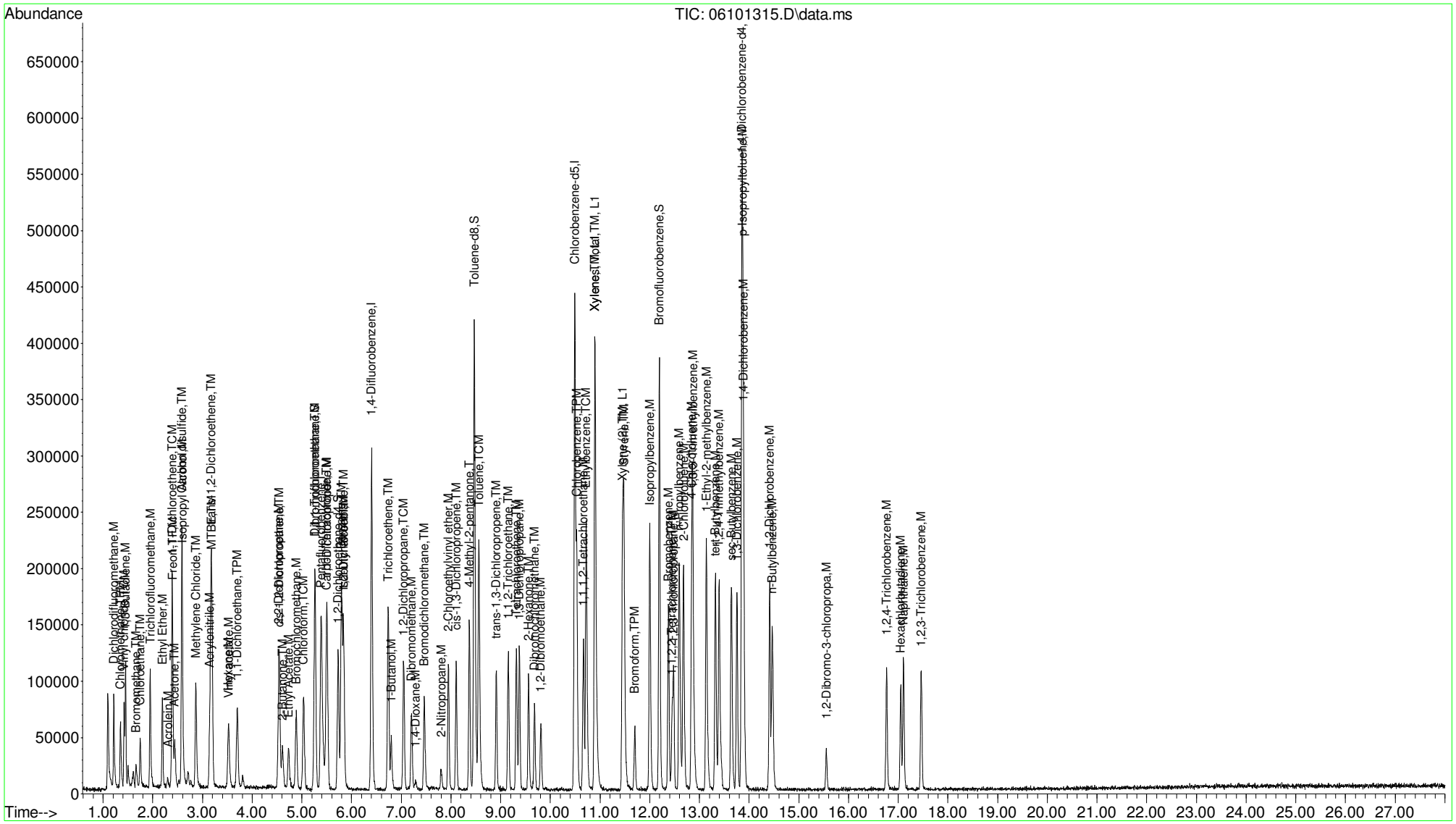
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
46) 4-Methyl-2-pentanone	8.369	43	1160190	41.30 ug/L	97
47) cis-1,3-Dichloropropene	8.106	75	695125	17.41 ug/L	95
49) Toluene	8.560	92	1328930	21.34 ug/L	99
51) trans-1,3-Dichloropropene	8.911	75	637380	18.32 ug/L	94
52) 2-Hexanone	9.562	43	771613	37.09 ug/L	93
53) 1,1,2-Trichloroethane	9.152	83	381516	20.20 ug/L	98
54) 1,3-Dichloropropane	9.379	76	801682	20.05 ug/L	99
55) Tetrachloroethene	9.317	164	348949	19.72 ug/L	95
56) Dibromochloromethane	9.682	129	457601	21.00 ug/L	96
57) 1,2-Dibromoethane	9.809	107	469908	20.58 ug/L	98
58) Chlorobenzene	10.530	112	1394749	22.22 ug/L	99
59) Ethylbenzene	10.721	91	2456882	21.27 ug/L	98
60) 1,1,1,2-Tetrachloroethane	10.664	131	427627	20.32 ug/L	94
61) Xylene	10.897	106	1845798	43.24 ug/L	98
62) Xylene (2)	11.450	106	903258	21.83 ug/L	95
63) Xylenes, Total	10.897	106	2749056m	65.06 ug/L #	
64) Styrene	11.480	104	1498084	19.68 ug/L	98
65) Isopropylbenzene	12.000	105	2093722	22.36 ug/L	100
66) Bromoform	11.700	173	300985	19.68 ug/L	98
67) 1,1,2,2-Tetrachloroethane	12.449	83	397908	12.92 ug/L	97
70) 1,2,3-Trichloropropane	12.480	75	494686	19.56 ug/L #	42
71) n-Propylbenzene	12.596	91	2316981	22.48 ug/L	98
72) Bromobenzene	12.376	156	576595	20.70 ug/L	88
73) 1,3,5-Trimethylbenzene	12.868	105	1653147	19.95 ug/L	97
74) 2-Chlorotoluene	12.681	91	1594743	22.28 ug/L	97
75) 4-Chlorotoluene	12.845	91	1768002	22.17 ug/L	97
76) tert-Butylbenzene	13.321	119	1164812	20.76 ug/L	95
77) 1-Ethyl-2-methylbenzene	13.139	105	2049761	20.60 ug/L	99
78) 1,2,4-Trimethylbenzene	13.396	105	1649524	20.27 ug/L	98
79) sec-Butylbenzene	13.643	105	1797888	21.93 ug/L	100
80) p-Isopropyltoluene	13.873	119	1431772	21.26 ug/L	98
81) 1,3-Dichlorobenzene	13.753	146	971189	21.38 ug/L	98
82) 1,4-Dichlorobenzene	13.889	146	1031450	20.52 ug/L	96
83) n-Butylbenzene	14.465	91	1173827	20.03 ug/L	98
84) 1,2-Dichlorobenzene	14.413	146	951682	21.89 ug/L	98
85) 1,2-Dibromo-3-chloropropa	15.555	75	99584	19.47 ug/L	81
86) 1,2,4-Trichlorobenzene	16.767	180	413145	19.98 ug/L	99
87) Hexachlorbutadiene	17.052	225	207177	21.37 ug/L	97
88) Naphthalene	17.105	128	1152084	22.56 ug/L	94
89) 1,2,3-Trichlorobenzene	17.463	180	390667	22.12 ug/L	97

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06101315.D
Acq On : 10 Jun 2013 11:31 am Operator: PS
Sample : LCS VLCS061013-7 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 14

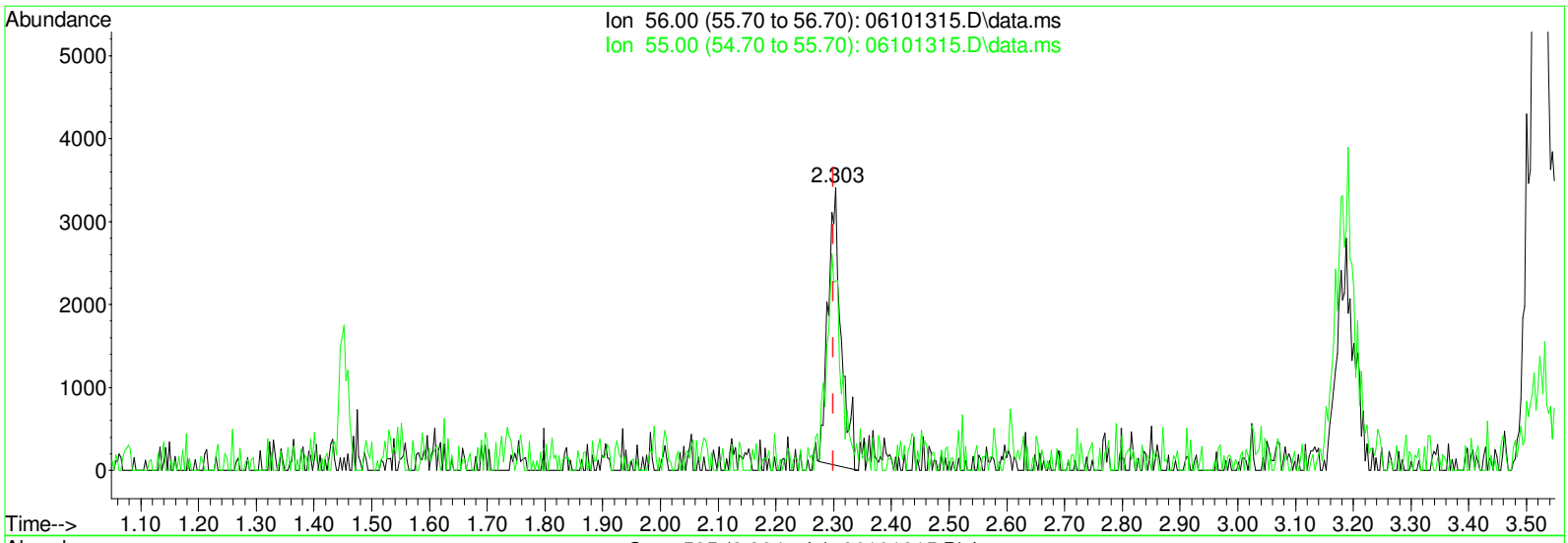
Quant Time: Jun 10 14:35:58 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7060913.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominMon Jun 10 14:34:29 2013
QLast Update : Mon Jun 10 14:34:29 2013
Response via : Initial Calibration

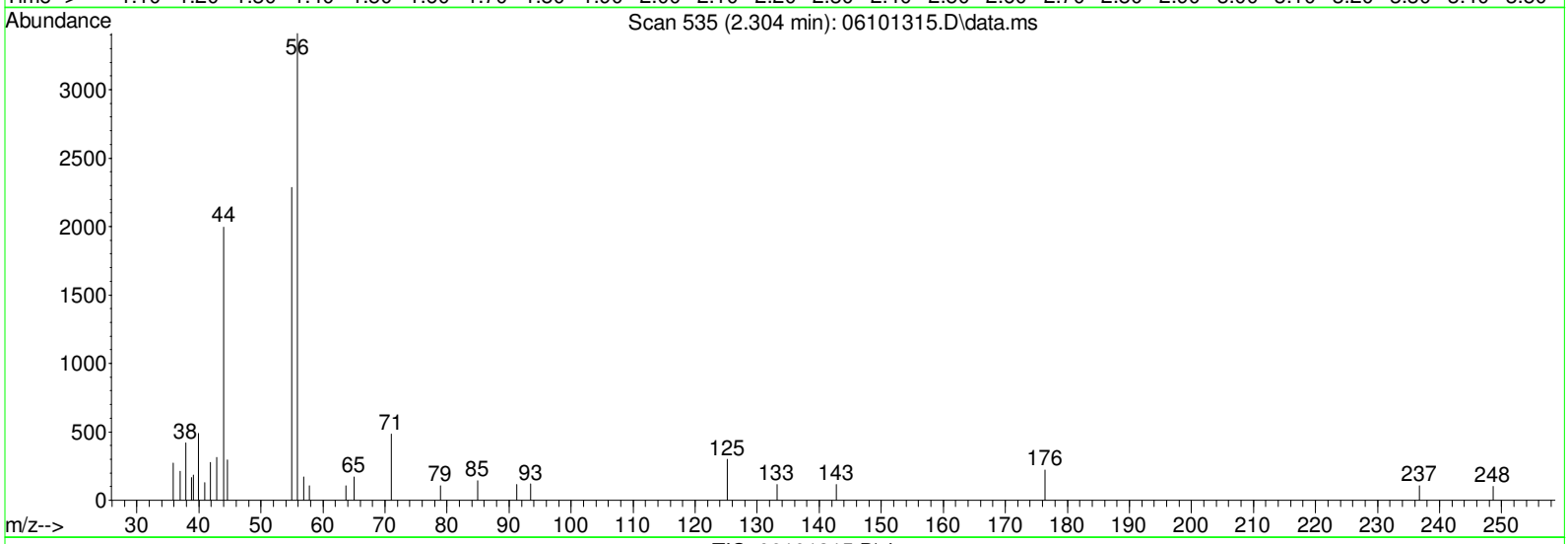


Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06101315.D
Acq On : 10 Jun 2013 11:31 am
Operator: PS
Sample : LCS VLCS061013-7
Inst : VOA7
Misc : VOC_W+
Multiplr: 1.00
ALS Vial : 14

Quant Time: Jun 10 14:35:58 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7060913.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominMon Jun 10 14:34:29 2013
QLast Update : Mon Jun 10 14:34:29 2013
Response via : Initial Calibration





TIC: 06101315.D\data.ms

(11) Acrolein (M)

2.303min (+0.004) 12.92 ug/L

response 53579

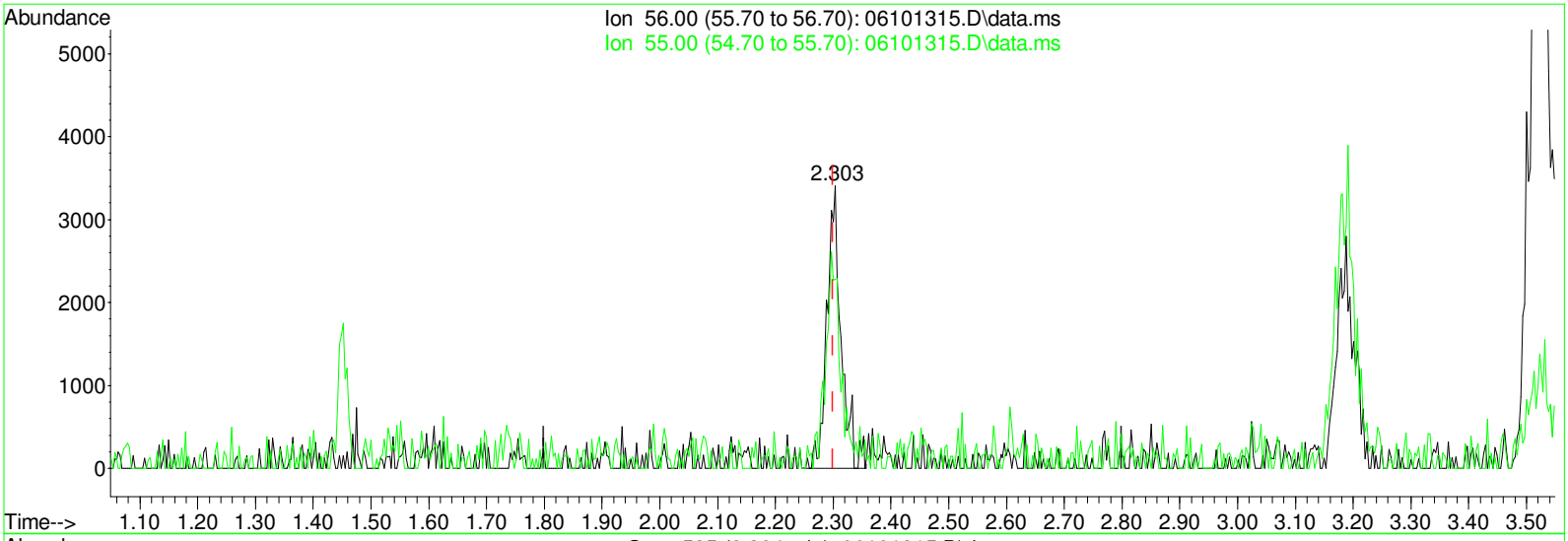
Ion	Exp%	Act%
56.00	100	100
55.00	79.20	100.14#
0.00	0.00	0.00
0.00	0.00	0.00

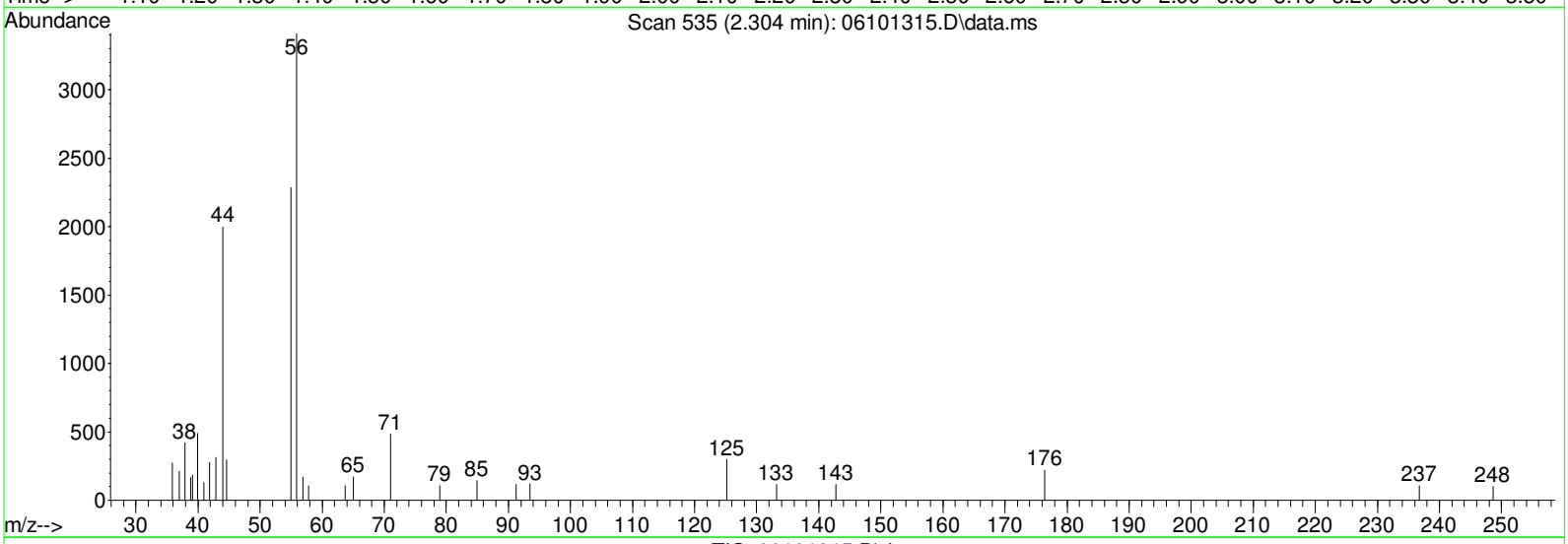
BEFORE
By Alfred at 3:48:53 PM, 7/3/2013

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06101315.D
Acq On : 10 Jun 2013 11:31 am
Operator: PS
Sample : LCS VLCS061013-7
Inst : VOA7
Misc : VOC_W+
Multiplr: 1.00
ALS Vial : 14

Quant Time: Jun 10 14:35:58 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7060913.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominMon Jun 10 14:34:29 2013
QLast Update : Mon Jun 10 14:34:29 2013
Response via : Initial Calibration





TIC: 06101315.D\data.ms

(11) Acrolein (M)

2.304min (+0.005) 14.24 ug/L m

response 59046

Ion	Exp%	Act%
56.00	100	100
55.00	79.20	90.87
0.00	0.00	0.00
0.00	0.00	0.00

AFTER M3

By Alfred at 3:48:57 PM, 7/3/2013

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06101316.D
Acq On : 10 Jun 2013 12:14 pm Operator: PS
Sample : LCSD VLCSD061013-7 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 15

Quant Time: Jun 10 14:36:55 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7060913.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominMon Jun 10 14:34:29 2013
QLast Update : Mon Jun 10 14:34:29 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	5.388	168	1908114	30.00	ug/L	0.00
31) 1,4-Difluorobenzene	6.402	114	3073509	30.00	ug/L	0.00
50) Chlorobenzene-d5	10.490	82	1802080	30.00	ug/L	0.00
69) 1,4-Dichlorobenzene-d4	13.856	152	1674982	30.00	ug/L	0.00
System Monitoring Compounds						
29) Dibromofluoromethane	5.257	113	823838	29.65	ug/L	0.00
Spiked Amount 30.000	Range 86 - 118		Recovery = 98.83%			
32) 1,2-Dichloroethane-d4	5.723	102	224482	31.75	ug/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 105.83%			
48) Toluene-d8	8.469	98	3846802	30.62	ug/L	0.00
Spiked Amount 30.000	Range 88 - 110		Recovery = 102.07%			
68) Bromofluorobenzene	12.195	174	1348471	30.05	ug/L	0.00
Spiked Amount 30.000	Range 86 - 115		Recovery = 100.17%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.215	85	727663	21.09	ug/L	98
3) Chloromethane	1.348	50	680004	25.51	ug/L	98
4) Vinyl chloride	1.421	62	671485	20.28	ug/L	100
5) 1,3-Butadiene	1.451	39	354718	15.64	ug/L	91
6) Bromomethane	1.666	96	147344	24.48	ug/L	93
7) Chloroethane	1.744	64	378317	22.18	ug/L	98
8) Trichlorofluoromethane	1.946	101	778214	20.95	ug/L	99
9) Isopropyl Alcohol	2.587	45	725911	357.85	ug/L #	98
10) Ethyl Ether	2.189	59	392938	18.46	ug/L	95
11) Acrolein	2.301	56	60012	13.84	ug/L	96
12) Acetone	2.439	43	396188	39.81	ug/L	99
13) Freon-TF	2.395	151	326167	20.26	ug/L	95
14) 1,1-Dichloroethene	2.382	96	421846	20.21	ug/L	90
15) Methylene Chloride	2.859	84	504176	18.93	ug/L	85
16) Carbon disulfide	2.582	76	2936121	37.57	ug/L	99
17) Acrylonitrile	3.139	53	447819	37.83	ug/L	95
18) MTBE	3.184	73	1538029	20.00	ug/L	99
19) Hexane	3.521	57	424260	19.96	ug/L	87
20) trans-1,2-Dichloroethene	3.163	96	513491	20.35	ug/L	90
21) Vinyl acetate	3.812	43	396925	7.18	ug/L	87
22) 1,1-Dichloroethane	3.692	63	877876	20.83	ug/L	97
23) 2-Butanone	4.601	72	142722	35.72	ug/L #	1
24) 2,2-Dichloropropane	4.530	77	371473	9.86	ug/L	93
25) cis-1,2-Dichloroethene	4.541	96	554463	20.15	ug/L	91
26) Ethyl Acetate	4.719	45	80606	17.97	ug/L #	75
27) Chloroform	5.029	83	836770	20.48	ug/L	99
28) Bromochloromethane	4.887	128	238317	21.67	ug/L #	90
30) Isobutyl alcohol	5.837	43	541977	422.08	ug/L #	93
33) Carbon Tetrachloride	5.496	117	570800	21.34	ug/L	97
34) 1,2-Dichloroethane	5.834	62	710472	20.99	ug/L	96
35) 1,1,1-Trichloroethane	5.256	97	756206	22.08	ug/L	95
36) 1,1-Dichloropropene	5.504	110	248968	22.01	ug/L	93
37) 1-Butanol	6.794	56	296231	377.56	ug/L	93
38) Benzene	5.794	78	2096705	20.97	ug/L	99
39) Trichloroethene	6.733	95	616239	24.40	ug/L	96
40) 1,2-Dichloropropane	7.048	63	509591	20.93	ug/L	98
41) 1,4-Dioxane	7.280	88	83791	219.54	ug/L	91
42) Bromodichloromethane	7.461	83	633223	20.47	ug/L	98
43) Dibromomethane	7.206	93	289222	19.19	ug/L	92
44) 2-Nitropropane	7.806	41	112552	17.43	ug/L #	2
45) 2-Chloroethylvinyl ether	7.946	63	536142	39.44	ug/L	91

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06101316.D
Acq On : 10 Jun 2013 12:14 pm Operator: PS
Sample : LCSD VLCSD061013-7 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 15

Quant Time: Jun 10 14:36:55 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7060913.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominMon Jun 10 14:34:29 2013
QLast Update : Mon Jun 10 14:34:29 2013
Response via : Initial Calibration

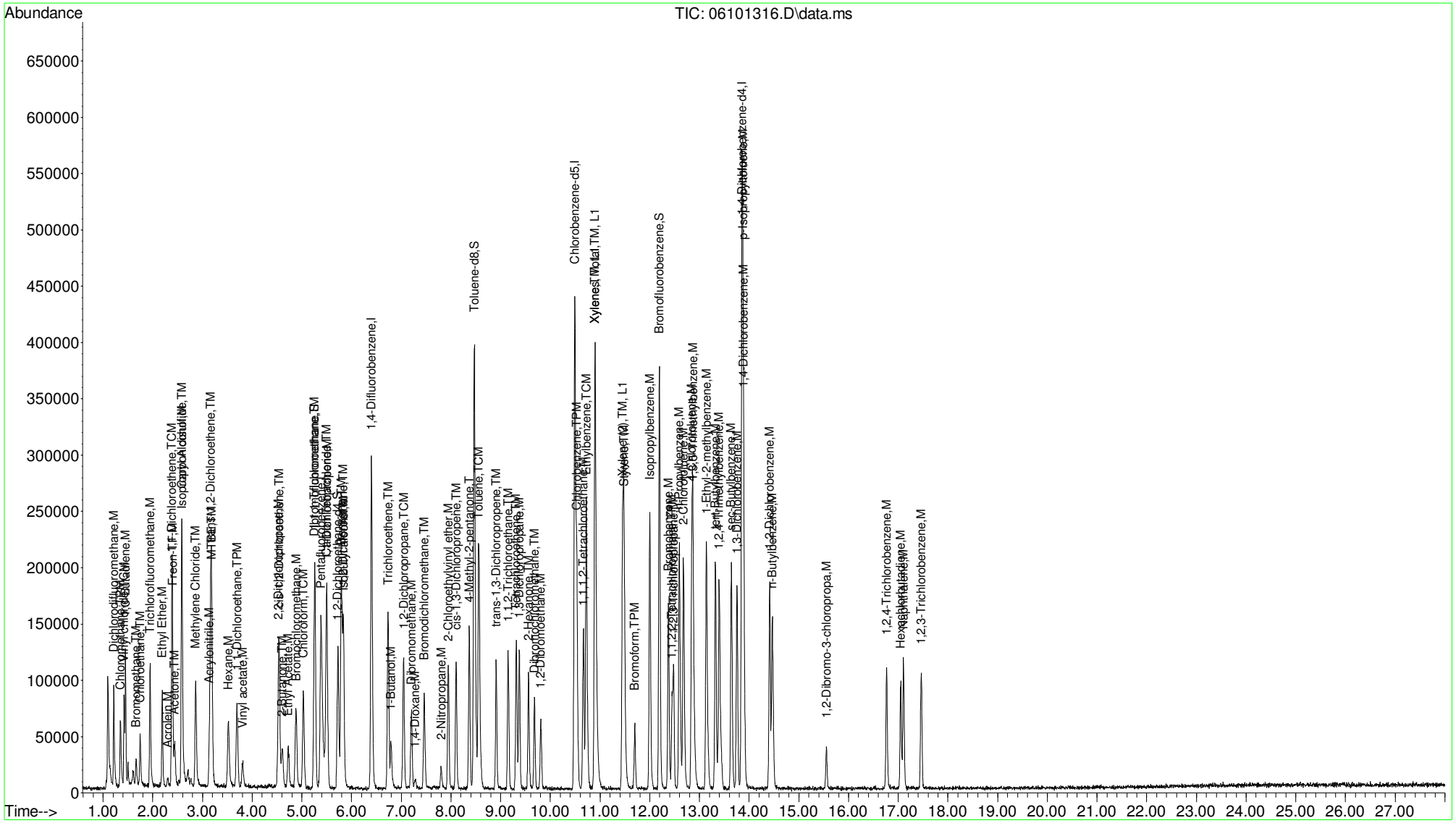
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
46) 4-Methyl-2-pentanone	8.366	43	1108408	38.78 ug/L	97
47) cis-1,3-Dichloropropene	8.104	75	716966	17.64 ug/L	93
49) Toluene	8.558	92	1377259	21.73 ug/L	100
51) trans-1,3-Dichloropropene	8.909	75	680386	18.71 ug/L	98
52) 2-Hexanone	9.560	43	785884	36.13 ug/L	100
53) 1,1,2-Trichloroethane	9.150	83	379000	19.19 ug/L	100
54) 1,3-Dichloropropane	9.375	76	795314	19.03 ug/L	98
55) Tetrachloroethene	9.313	164	368504	19.92 ug/L	97
56) Dibromochloromethane	9.683	129	461722	20.27 ug/L	98
57) 1,2-Dibromoethane	9.807	107	485068	20.32 ug/L #	99
58) Chlorobenzene	10.532	112	1440637	21.96 ug/L	98
59) Ethylbenzene	10.723	91	2563082	21.22 ug/L	99
60) 1,1,1,2-Tetrachloroethane	10.666	131	447717	20.35 ug/L	97
61) Xylene	10.898	106	1961191	43.94 ug/L	99
62) Xylene (2)	11.453	106	945207	21.85 ug/L	95
63) Xylenes, Total	10.898	106	2906398m	65.79 ug/L #	
64) Styrene	11.483	104	1523252	19.14 ug/L	98
65) Isopropylbenzene	12.000	105	2217245	22.64 ug/L	100
66) Bromoform	11.699	173	297494	18.60 ug/L	97
67) 1,1,2,2-Tetrachloroethane	12.449	83	461491	14.33 ug/L	98
70) 1,2,3-Trichloropropane	12.480	75	509763	19.90 ug/L #	42
71) n-Propylbenzene	12.595	91	2425590	23.24 ug/L	97
72) Bromobenzene	12.376	156	588876	20.87 ug/L	94
73) 1,3,5-Trimethylbenzene	12.870	105	1720442	20.50 ug/L	98
74) 2-Chlorotoluene	12.678	91	1648384	22.74 ug/L	98
75) 4-Chlorotoluene	12.848	91	1793940	22.21 ug/L	97
76) tert-Butylbenzene	13.320	119	1346446	23.69 ug/L	92
77) 1-Ethyl-2-methylbenzene	13.142	105	2115446	20.99 ug/L	99
78) 1,2,4-Trimethylbenzene	13.396	105	1665121	20.21 ug/L	94
79) sec-Butylbenzene	13.642	105	1872341	22.55 ug/L	99
80) p-Isopropyltoluene	13.874	119	1522352	22.32 ug/L	99
81) 1,3-Dichlorobenzene	13.756	146	1001025	21.76 ug/L	98
82) 1,4-Dichlorobenzene	13.890	146	1042774	20.49 ug/L	99
83) n-Butylbenzene	14.465	91	1201314	20.25 ug/L	99
84) 1,2-Dichlorobenzene	14.413	146	967746	21.98 ug/L	97
85) 1,2-Dibromo-3-chloropropa	15.556	75	105706	20.40 ug/L	81
86) 1,2,4-Trichlorobenzene	16.766	180	433887	20.72 ug/L	98
87) Hexachlorbutadiene	17.051	225	212474	21.64 ug/L	97
88) Naphthalene	17.106	128	1166016	22.55 ug/L	98
89) 1,2,3-Trichlorobenzene	17.465	180	396213	22.15 ug/L	97

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06101316.D
Acq On : 10 Jun 2013 12:14 pm Operator: PS
Sample : LCSD VLCSD061013-7 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 15

Quant Time: Jun 10 14:36:55 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7060913.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominMon Jun 10 14:34:29 2013
QLast Update : Mon Jun 10 14:34:29 2013
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06101316.D
Acq On : 10 Jun 2013 12:14 pm Operator: PS
Sample : LCSD VLCSD061013-7 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 15

Quant Time: Jun 10 14:36:55 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7060913.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominMon Jun 10 14:34:29 2013
QLast Update : Mon Jun 10 14:34:29 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	5.388	168	1908114	30.00	ug/L	0.00
31) 1,4-Difluorobenzene	6.402	114	3073509	30.00	ug/L	0.00
50) Chlorobenzene-d5	10.490	82	1802080	30.00	ug/L	0.00
69) 1,4-Dichlorobenzene-d4	13.856	152	1674982	30.00	ug/L	0.00
System Monitoring Compounds						
29) Dibromofluoromethane	5.257	113	823838	29.65	ug/L	0.00
Spiked Amount 30.000	Range 86 - 118		Recovery = 98.83%			
32) 1,2-Dichloroethane-d4	5.723	102	224482	31.75	ug/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 105.83%			
48) Toluene-d8	8.469	98	3846802	30.62	ug/L	0.00
Spiked Amount 30.000	Range 88 - 110		Recovery = 102.07%			
68) Bromofluorobenzene	12.195	174	1348471	30.05	ug/L	0.00
Spiked Amount 30.000	Range 86 - 115		Recovery = 100.17%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.215	85	727663	21.09	ug/L	98
3) Chloromethane	1.348	50	680004	25.51	ug/L	98
4) Vinyl chloride	1.421	62	671485	20.28	ug/L	100
5) 1,3-Butadiene	1.451	39	354718	15.64	ug/L	91
6) Bromomethane	1.666	96	147344	24.48	ug/L	93
7) Chloroethane	1.744	64	378317	22.18	ug/L	98
8) Trichlorofluoromethane	1.946	101	778214	20.95	ug/L	99
9) Isopropyl Alcohol	2.587	45	725911	357.85	ug/L #	98
10) Ethyl Ether	2.189	59	392938	18.46	ug/L	95
11) Acrolein	2.301	56	60012	13.84	ug/L	96
12) Acetone	2.439	43	396188	39.81	ug/L	99
13) Freon-TF	2.395	151	326167	20.26	ug/L	95
14) 1,1-Dichloroethene	2.382	96	421846	20.21	ug/L	90
15) Methylene Chloride	2.859	84	504176	18.93	ug/L	85
16) Carbon disulfide	2.582	76	2936121	37.57	ug/L	99
17) Acrylonitrile	3.139	53	447819	37.83	ug/L	95
18) MTBE	3.184	73	1538029	20.00	ug/L	99
19) Hexane	3.521	57	424260	19.96	ug/L	87
20) trans-1,2-Dichloroethene	3.163	96	513491	20.35	ug/L	90
21) Vinyl acetate	3.812	43	396925	7.18	ug/L	87
22) 1,1-Dichloroethane	3.692	63	877876	20.83	ug/L	97
23) 2-Butanone	4.601	72	142722	35.72	ug/L #	1
24) 2,2-Dichloropropane	4.530	77	371473	9.86	ug/L	93
25) cis-1,2-Dichloroethene	4.541	96	554463	20.15	ug/L	91
26) Ethyl Acetate	4.719	45	80606	17.97	ug/L #	75
27) Chloroform	5.029	83	836770	20.48	ug/L	99
28) Bromochloromethane	4.887	128	238317	21.67	ug/L #	90
30) Isobutyl alcohol	5.837	43	541977	422.08	ug/L #	93
33) Carbon Tetrachloride	5.496	117	570800	21.34	ug/L	97
34) 1,2-Dichloroethane	5.834	62	710472	20.99	ug/L	96
35) 1,1,1-Trichloroethane	5.256	97	756206	22.08	ug/L	95
36) 1,1-Dichloropropene	5.504	110	248968	22.01	ug/L	93
37) 1-Butanol	6.794	56	296231	377.56	ug/L	93
38) Benzene	5.794	78	2096705	20.97	ug/L	99
39) Trichloroethene	6.733	95	616239	24.40	ug/L	96
40) 1,2-Dichloropropane	7.048	63	509591	20.93	ug/L	98
41) 1,4-Dioxane	7.280	88	83791	219.54	ug/L	91
42) Bromodichloromethane	7.461	83	633223	20.47	ug/L	98
43) Dibromomethane	7.206	93	289222	19.19	ug/L	92
44) 2-Nitropropane	7.806	41	112552	17.43	ug/L #	2
45) 2-Chloroethylvinyl ether	7.946	63	536142	39.44	ug/L	91

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06101316.D
Acq On : 10 Jun 2013 12:14 pm Operator: PS
Sample : LCSD VLCSD061013-7 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 15

Quant Time: Jun 10 14:36:55 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7060913.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominMon Jun 10 14:34:29 2013
QLast Update : Mon Jun 10 14:34:29 2013
Response via : Initial Calibration

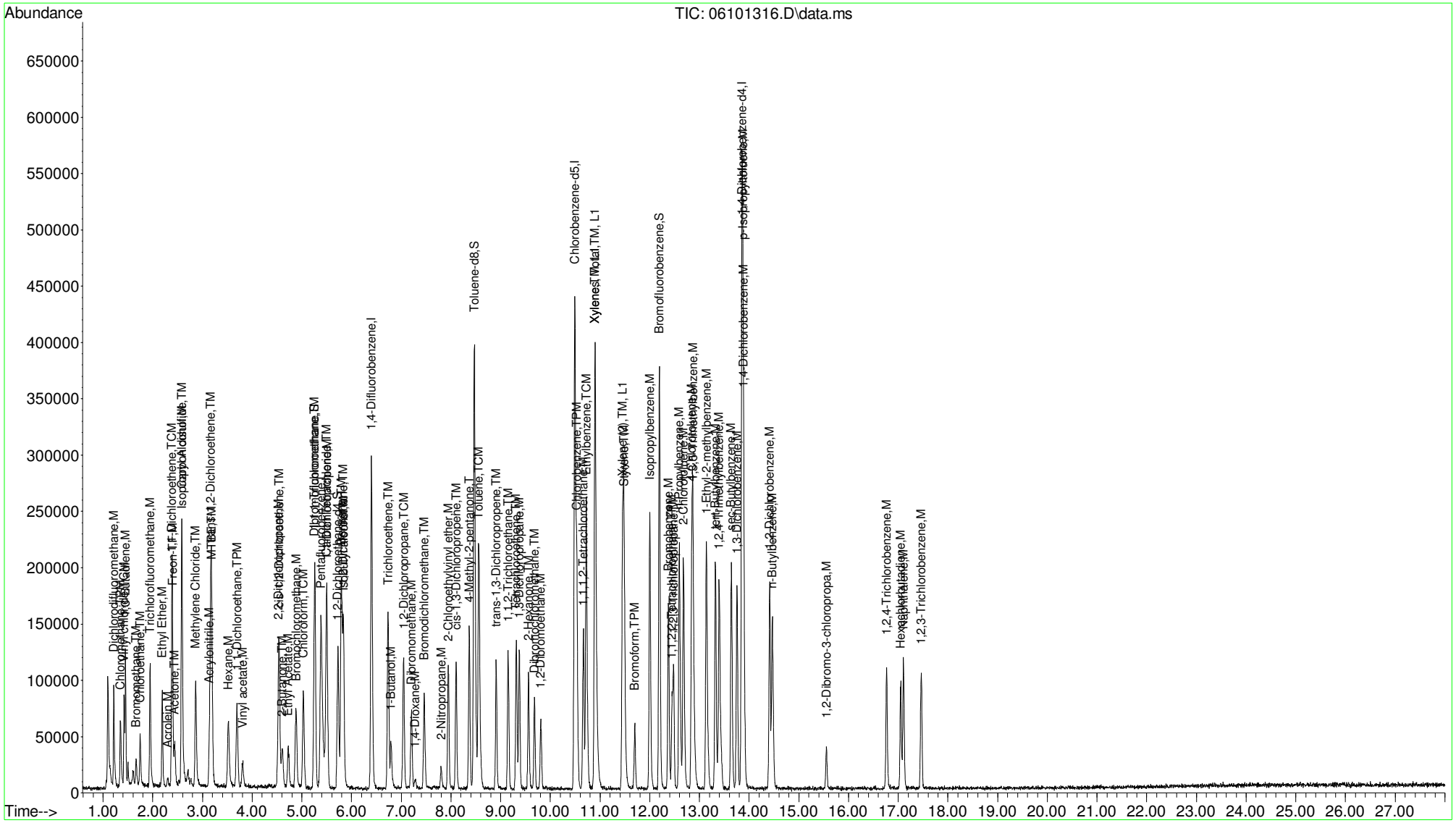
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
46) 4-Methyl-2-pentanone	8.366	43	1108408	38.78 ug/L	97
47) cis-1,3-Dichloropropene	8.104	75	716966	17.64 ug/L	93
49) Toluene	8.558	92	1377259	21.73 ug/L	100
51) trans-1,3-Dichloropropene	8.909	75	680386	18.71 ug/L	98
52) 2-Hexanone	9.560	43	785884	36.13 ug/L	100
53) 1,1,2-Trichloroethane	9.150	83	379000	19.19 ug/L	100
54) 1,3-Dichloropropane	9.375	76	795314	19.03 ug/L	98
55) Tetrachloroethene	9.313	164	368504	19.92 ug/L	97
56) Dibromochloromethane	9.683	129	461722	20.27 ug/L	98
57) 1,2-Dibromoethane	9.807	107	485068	20.32 ug/L #	99
58) Chlorobenzene	10.532	112	1440637	21.96 ug/L	98
59) Ethylbenzene	10.723	91	2563082	21.22 ug/L	99
60) 1,1,1,2-Tetrachloroethane	10.666	131	447717	20.35 ug/L	97
61) Xylene	10.898	106	1961191	43.94 ug/L	99
62) Xylene (2)	11.453	106	945207	21.85 ug/L	95
63) Xylenes, Total	10.898	106	2906398m	65.79 ug/L #	
64) Styrene	11.483	104	1523252	19.14 ug/L	98
65) Isopropylbenzene	12.000	105	2217245	22.64 ug/L	100
66) Bromoform	11.699	173	297494	18.60 ug/L	97
67) 1,1,2,2-Tetrachloroethane	12.449	83	461491	14.33 ug/L	98
70) 1,2,3-Trichloropropane	12.480	75	509763	19.90 ug/L #	42
71) n-Propylbenzene	12.595	91	2425590	23.24 ug/L	97
72) Bromobenzene	12.376	156	588876	20.87 ug/L	94
73) 1,3,5-Trimethylbenzene	12.870	105	1720442	20.50 ug/L	98
74) 2-Chlorotoluene	12.678	91	1648384	22.74 ug/L	98
75) 4-Chlorotoluene	12.848	91	1793940	22.21 ug/L	97
76) tert-Butylbenzene	13.320	119	1346446	23.69 ug/L	92
77) 1-Ethyl-2-methylbenzene	13.142	105	2115446	20.99 ug/L	99
78) 1,2,4-Trimethylbenzene	13.396	105	1665121	20.21 ug/L	94
79) sec-Butylbenzene	13.642	105	1872341	22.55 ug/L	99
80) p-Isopropyltoluene	13.874	119	1522352	22.32 ug/L	99
81) 1,3-Dichlorobenzene	13.756	146	1001025	21.76 ug/L	98
82) 1,4-Dichlorobenzene	13.890	146	1042774	20.49 ug/L	99
83) n-Butylbenzene	14.465	91	1201314	20.25 ug/L	99
84) 1,2-Dichlorobenzene	14.413	146	967746	21.98 ug/L	97
85) 1,2-Dibromo-3-chloropropa	15.556	75	105706	20.40 ug/L	81
86) 1,2,4-Trichlorobenzene	16.766	180	433887	20.72 ug/L	98
87) Hexachlorbutadiene	17.051	225	212474	21.64 ug/L	97
88) Naphthalene	17.106	128	1166016	22.55 ug/L	98
89) 1,2,3-Trichlorobenzene	17.465	180	396213	22.15 ug/L	97

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06101316.D
Acq On : 10 Jun 2013 12:14 pm Operator: PS
Sample : LCSD VLCSD061013-7 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 15

Quant Time: Jun 10 14:36:55 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7060913.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominMon Jun 10 14:34:29 2013
QLast Update : Mon Jun 10 14:34:29 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06101318.D
Acq On : 10 Jun 2013 1:24 pm Operator: PS
Sample : MBLK VBLK061013-7 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 17

Quant Time: Jun 10 14:37:35 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7060913.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominMon Jun 10 14:34:29 2013
QLast Update : Mon Jun 10 14:34:29 2013
Response via : Initial Calibration

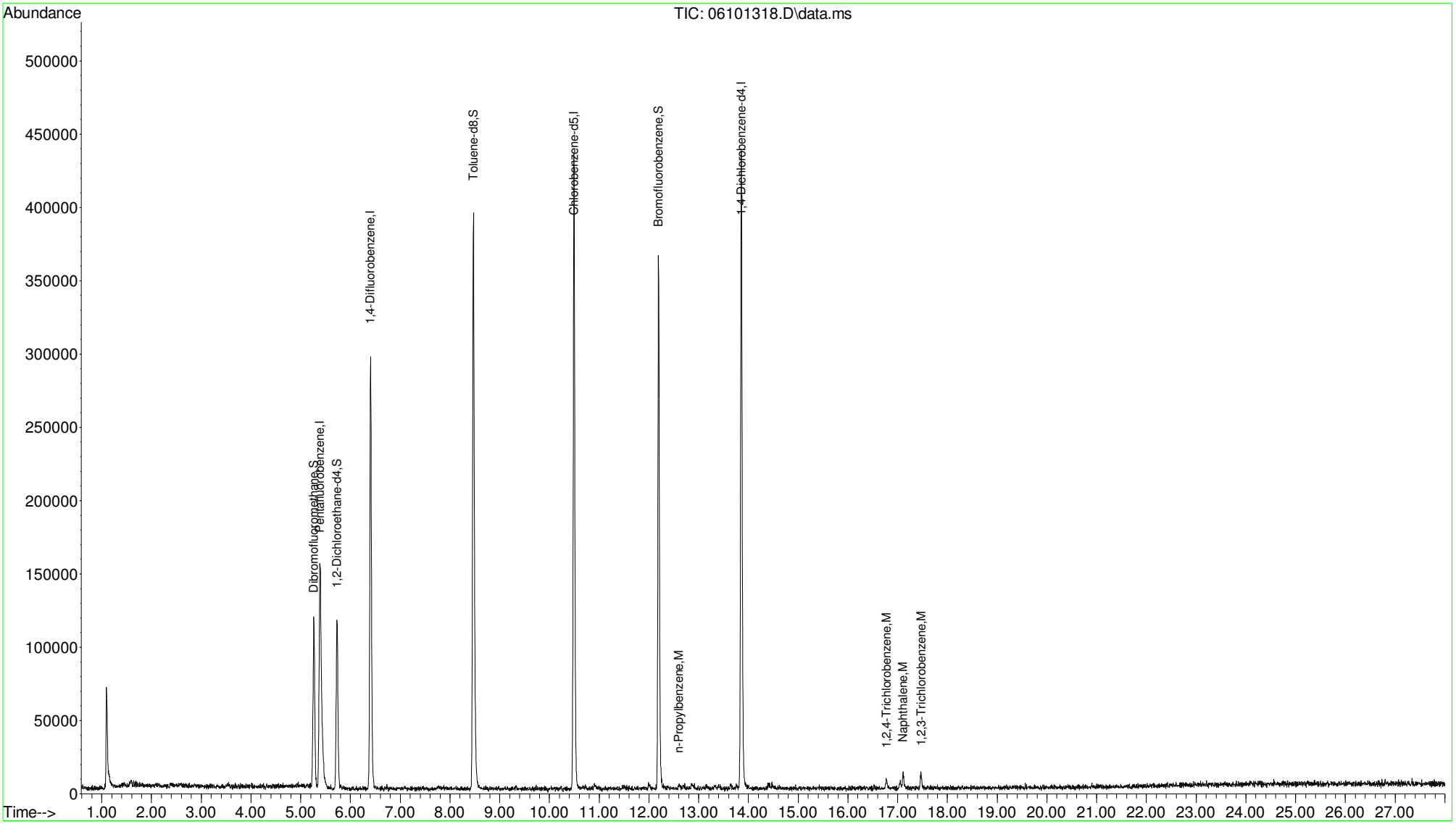
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	5.388	168	1833235	30.00	ug/L	0.00
31) 1,4-Difluorobenzene	6.404	114	3066023	30.00	ug/L	0.00
50) Chlorobenzene-d5	10.493	82	1735292	30.00	ug/L	0.00
69) 1,4-Dichlorobenzene-d4	13.856	152	1599754	30.00	ug/L	0.00
System Monitoring Compounds						
29) Dibromofluoromethane	5.261	113	829290	31.06	ug/L	0.00
Spiked Amount 30.000	Range 86 - 118		Recovery = 103.53%			
32) 1,2-Dichloroethane-d4	5.727	102	216057	30.63	ug/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 102.10%			
48) Toluene-d8	8.471	98	3711771	29.61	ug/L	0.00
Spiked Amount 30.000	Range 88 - 110		Recovery = 98.70%			
68) Bromofluorobenzene	12.195	174	1284652	29.73	ug/L	0.00
Spiked Amount 30.000	Range 86 - 115		Recovery = 99.10%			
Target Compounds						Qvalue
71) n-Propylbenzene	12.605	91	26008	0.26	ug/L #	53
86) 1,2,4-Trichlorobenzene	16.779	180	14652	0.73	ug/L #	12
88) Naphthalene	17.104	128	112502	2.28	ug/L #	76
89) 1,2,3-Trichlorobenzene	17.474	180	37726	2.21	ug/L #	83

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06101318.D
Acq On : 10 Jun 2013 1:24 pm Operator: PS
Sample : MBLK VBLK061013-7 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 17

Quant Time: Jun 10 14:37:35 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7060913.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominMon Jun 10 14:34:29 2013
QLast Update : Mon Jun 10 14:34:29 2013
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06101318.D
Acq On : 10 Jun 2013 1:24 pm Operator: PS
Sample : MBLK VBLK061013-7 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 17

Quant Time: Jun 10 14:37:13 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7060913.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominMon Jun 10 14:34:29 2013
QLast Update : Mon Jun 10 14:34:29 2013
Response via : Initial Calibration

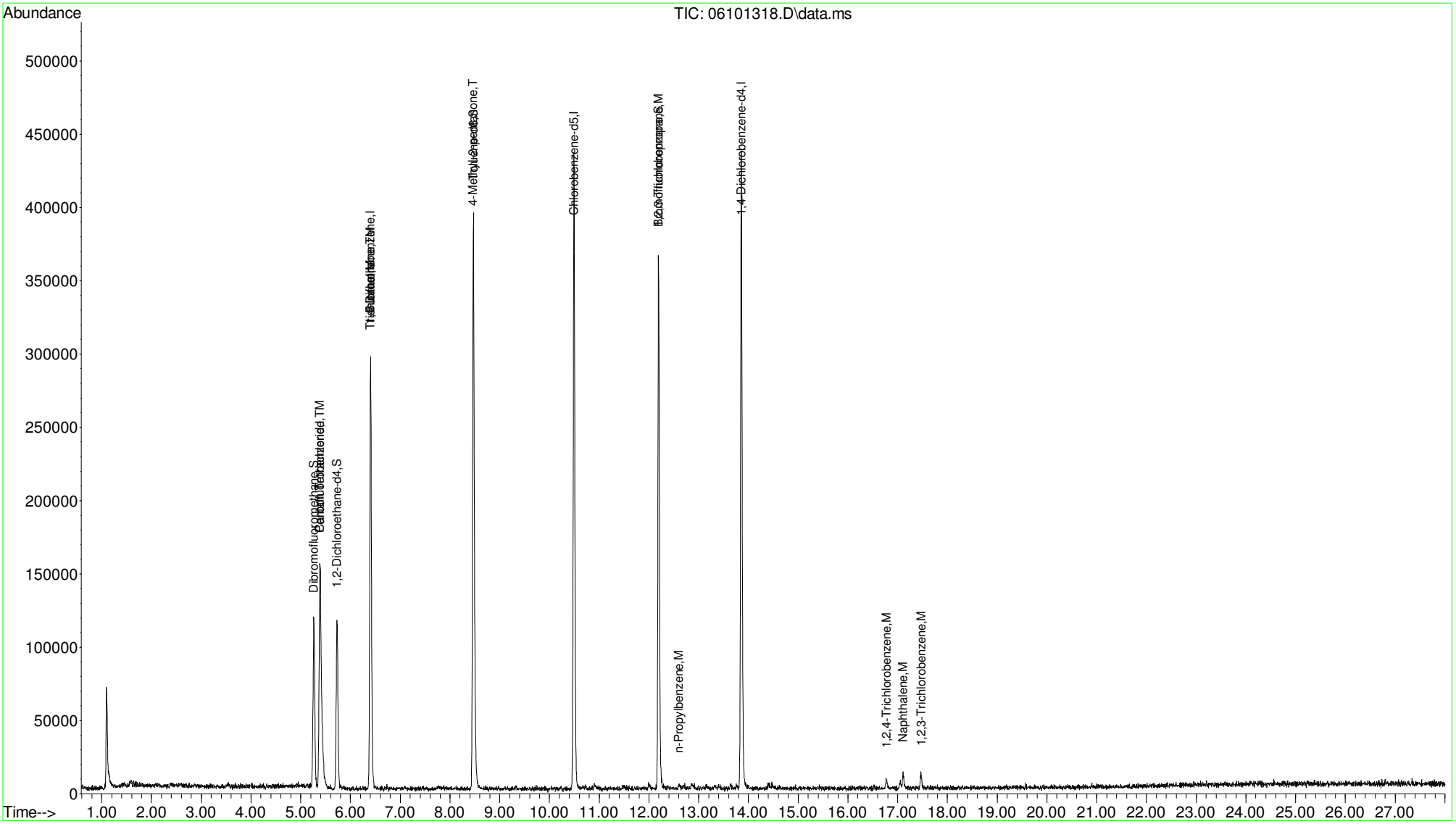
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	5.388	168	1833235	30.00	ug/L	0.00
31) 1,4-Difluorobenzene	6.404	114	3066023	30.00	ug/L	0.00
50) Chlorobenzene-d5	10.493	82	1735292	30.00	ug/L	0.00
69) 1,4-Dichlorobenzene-d4	13.856	152	1599754	30.00	ug/L	0.00
System Monitoring Compounds						
29) Dibromofluoromethane	5.261	113	829290	31.06	ug/L	0.00
Spiked Amount 30.000	Range 86 - 118		Recovery = 103.53%			
32) 1,2-Dichloroethane-d4	5.727	102	216057	30.63	ug/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 102.10%			
48) Toluene-d8	8.471	98	3711771	29.61	ug/L	0.00
Spiked Amount 30.000	Range 88 - 110		Recovery = 98.70%			
68) Bromofluorobenzene	12.195	174	1284652	29.73	ug/L	0.00
Spiked Amount 30.000	Range 86 - 115		Recovery = 99.10%			
Target Compounds						Qvalue
33) Carbon Tetrachloride	5.388	117	173460	6.50	ug/L #	12
37) 1-Butanol	6.402	56	63428	81.04	ug/L #	17
39) Trichloroethene	6.401	95	87944	3.49	ug/L #	7
46) 4-Methyl-2-pentanone	8.466	43	22227	0.78	ug/L #	1
70) 1,2,3-Trichloropropane	12.193	75	798662	32.64	ug/L #	42
71) n-Propylbenzene	12.605	91	26008	0.26	ug/L #	53
86) 1,2,4-Trichlorobenzene	16.779	180	14652	0.73	ug/L #	12
88) Naphthalene	17.104	128	112502	2.28	ug/L #	76
89) 1,2,3-Trichlorobenzene	17.474	180	37726	2.21	ug/L #	83

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\060913\
Data File : 06101318.D
Acq On : 10 Jun 2013 1:24 pm Operator: PS
Sample : MBLK VBLK061013-7 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 17

Quant Time: Jun 10 14:37:13 2013
Quant Method : C:\msdchem\1\DATA\VOA7\060913\W7060913.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominMon Jun 10 14:34:29 2013
QLast Update : Mon Jun 10 14:34:29 2013
Response via : Initial Calibration



STAT Analysis Corporation

Volatile Organic Compounds

SW846 8260B

Run 1

Client: NRT, Inc.
Project: 69420, Peoples Gas - Willow Street / Hawthorne Ave
Lab Order: 13060604
Date Received: June 18, 2013

CLIENT: Natural Resource Technology, Inc.
Work Order: 13060604
Project: 69420, Peoples Gas - Willow Street / Hawthorne Ave

ANALYTICAL QC SUMMARY REPORT

Run ID: **VOA-7_130621A**

Sample ID: **BFB062113-7** SampType: **TUNE** TestCode: **BFB_624** Units: Prep Date: Run ID: **VOA-7_130621A**
Client ID: **ZZZZZ** Batch ID: **R90366** TestNo: **BFB_Tune** Analysis Date: **06/21/13 10:28** SeqNo: **2437486**

Mass	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
50	19.6	0	100	0	19.6	15	40	0	0		
75	46.7	0	100	0	46.7	30	60	0	0		
95	100	0	100	0	100	100	100	0	0		
96	5.8	0	100	0	5.8	5	9	0	0		
173	1	0	100	0	1	0	2	0	0		
174	76.3	0	100	0	76.3	50	100	0	0		
175	7.8	0	100	0	7.8	5	9	0	0		
176	98.8	0	100	0	98.8	95	101	0	0		
177	7.3	0	100	0	7.3	5	9	0	0		

Sample ID: **VSTD020** SampType: **CCV** TestCode: **VOC_W+** Units: **mg/L** Prep Date: Run ID: **VOA-7_130621A**
Client ID: **ZZZZZ** Batch ID: **R90366** TestNo: **SW8260B** Analysis Date: **06/21/13 11:13** SeqNo: **2437487**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	0.01743	0.0050	0.02	0	87.2	80	120	0	0		
1,2,4-Trimethylbenzene	0.02006	0.0050	0.02	0	100			0	0		
1,2-Dichloropropane	0.01855	0.0050	0.02	0	92.8	80	120	0	0		
1,3,5-Trimethylbenzene	0.02049	0.0050	0.02	0	102			0	0		
Benzene	0.01826	0.0010	0.02	0	91.3			0	0		
Chloroform	0.01963	0.0050	0.02	0	98.2	80	120	0	0		
Ethylbenzene	0.0194	0.0010	0.02	0	97	80	120	0	0		
Toluene	0.01843	0.0050	0.02	0	92.2	80	120	0	0		
Vinyl chloride	0.01801	0.0020	0.02	0	90	80	120	0	0		
Xylenes, Total	0.05708	0.015	0.06	0	95.1			0	0		

Sample ID: **VBLK062113-7** SampType: **MBLK** TestCode: **VOC_W+** Units: **mg/L** Prep Date: Run ID: **VOA-7_130621A**
Client ID: **ZZZZZ** Batch ID: **R90366** TestNo: **SW8260B** Analysis Date: **06/21/13 12:25** SeqNo: **2437488**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Natural Resource Technology, Inc.
Work Order: 13060604
Project: 69420, Peoples Gas - Willow Street / Hawthorne Ave

ANALYTICAL QC SUMMARY REPORT

Run ID: **VOA-7_130621A**

Sample ID: **VBLK062113-7** SampType: **MBLK** TestCode: **VOC_W+** Units: **mg/L** Prep Date: Run ID: **VOA-7_130621A**
Client ID: **ZZZZZ** Batch ID: **R90366** TestNo: **SW8260B** Analysis Date: **06/21/13 12:25** SeqNo: **2437488**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trimethylbenzene	ND	0.0050									
1,3,5-Trimethylbenzene	ND	0.0050									
Benzene	ND	0.0010									
Ethylbenzene	ND	0.0010									
Toluene	ND	0.0050									
Xylenes, Total	ND	0.015									

Sample ID: **VLCS062113-7** SampType: **LCS** TestCode: **VOC_W+** Units: **mg/L** Prep Date: Run ID: **VOA-7_130621A**
Client ID: **ZZZZZ** Batch ID: **R90366** TestNo: **SW8260B** Analysis Date: **06/21/13 13:01** SeqNo: **2437489**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trimethylbenzene	0.02119	0.0050	0.02	0	106	70	130	0	0		
1,3,5-Trimethylbenzene	0.02038	0.0050	0.02	0	102	70	130	0	0		
Benzene	0.02034	0.0010	0.02	0	102	70	130	0	0		
Ethylbenzene	0.02165	0.0010	0.02	0	108	70	130	0	0		
Toluene	0.02107	0.0050	0.02	0	105	70	130	0	0		
Xylenes, Total	0.06661	0.015	0.06	0	111	70	130	0	0		

Sample ID: **VLCSD062113-7** SampType: **LCSD** TestCode: **VOC_W+** Units: **mg/L** Prep Date: Run ID: **VOA-7_130621A**
Client ID: **ZZZZZ** Batch ID: **R90366** TestNo: **SW8260B** Analysis Date: **06/21/13 13:36** SeqNo: **2437490**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trimethylbenzene	0.02071	0.0050	0.02	0	104	70	130	0.02119	2.29	20	
1,3,5-Trimethylbenzene	0.02056	0.0050	0.02	0	103	70	130	0.02038	0.879	20	
Benzene	0.01836	0.0010	0.02	0	91.8	70	130	0.02034	10.2	20	
Ethylbenzene	0.02038	0.0010	0.02	0	102	70	130	0.02165	6.04	20	
Toluene	0.01907	0.0050	0.02	0	95.4	70	130	0.02107	9.97	20	
Xylenes, Total	0.0635	0.015	0.06	0	106	70	130	0.06661	4.78	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

ATTACHMENT 2: DATA REVIEW CHECKLIST – BATCH DATA

GC/MS Volatiles SOP 4000, EPA 8260B

First Level Reviewer: Edward Panahon Review Date: 06/21/2013

Second Level Reviewer: Petra Svacha Review Date: 06/23/2013

Analysis date: 06/21/2013 Batch Start Time: 10:28 am Instrument: VOA-7

Page 1 of 1 Continuing Calibration Verification (CCV) and Batch Data

Item	Aspect	1st Level Yes	1st Level No	2nd Level Yes	2nd Level No	Comments: record routine corrective actions here	CAR # QER#
1	Tune meets criteria	✓					
2	All Analyses in tune period 12hr	✓					
3	CCV Acceptance criteria met: SPCCs: =0.1, =0.3 CCCs: = 20%D RT: ± 30 seconds Int stds: -50% to +100% Correct ICAL RFs used	✓ ✓ ✓ ✓ ✓ ✓					
4	Method Blank < RL False pos/neg checked Surrogates acceptable	✓ ✓ ✓					
5	LCS/LCSD recovery acceptable Surrogates acceptable	✓ ✓					
6	MS/MSD recov/RPD acceptable Surrogates acceptable					N/A	
7	Test Samples: Correct IDs Surrogates acceptable False pos/neg checked RL, Units Results within curve Dilutions performed	✓ ✓ ✓ ✓ ✓					
8	MB, LCS/LCSD, MS/MSD per batch of 20 samples	✓					
9	Manual Integration acceptable: List files	✓				06211309.D, 06211311.D	
10	Int Stds Check (optional)	✓					
11	Tune & QC Solns ID recorded	✓					
12	All other information recorded	✓					
13	LIMS transcription correct	✓					
14	Analysis within holding time	✓					
15	All samples preserved pH =2	✓					
16	All samples stored properly	✓					
17	Corrections properly recorded	✓					

Additional Comments:

Standards:

1,4-Dioxane	67-9-220
VOC-BFB	67-9-221
VOC-EH	67-9-208
VOC-F-LIST	67-9-206
VOC-GAS	67-9-213
VOC-MOR	67-9-207
VOC-VCX	67-9-212
LCS1	67-9-214
LCS2	67-9-215
IS/SUR	67-9-199

Injection Log

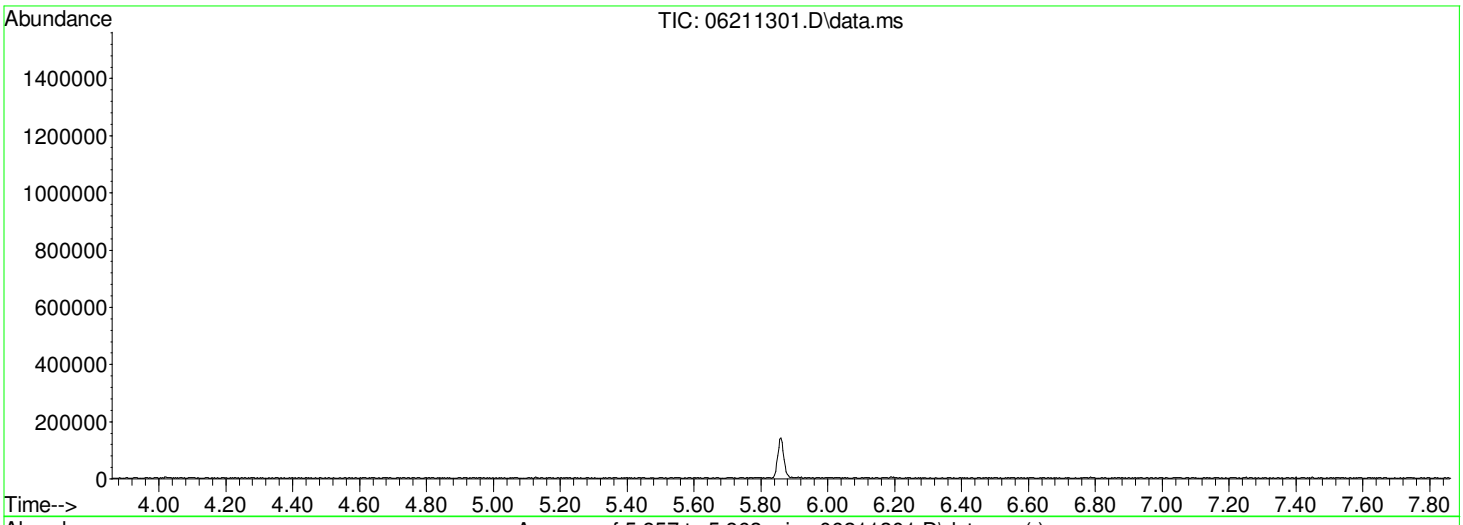
Directory: C:\msdchem\1\DATA\VOA7\062113

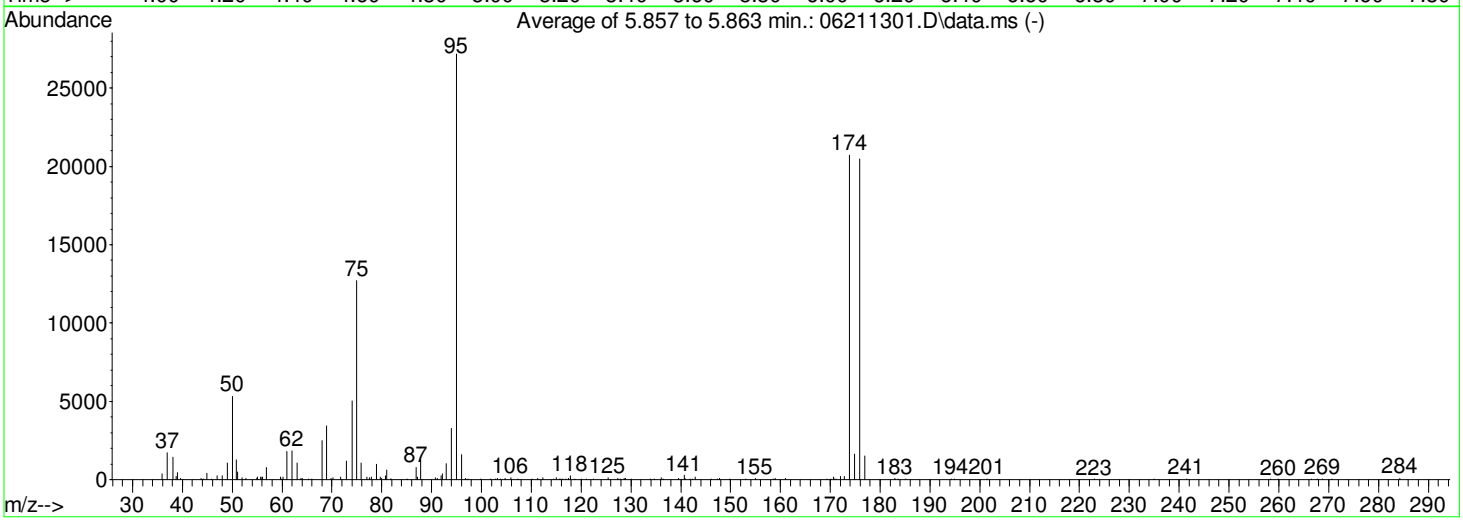
Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	100	06211301.D	1.	TUNE BFB062113-7	BFB_624	21 Jun 2013 10:28
2	1	06211302.D	1.	CCV VSTD020	VOC_W+	21 Jun 2013 11:13
3	3	06211304.D	1.	MBLK VBLK062113-7	VOC_W+	21 Jun 2013 12:25
4	4	06211305.D	1.	LCS VLCS062113-7	VOC_W+	21 Jun 2013 13:01
5	5	06211306.D	1.	LCSD VLCSD062113-7	VOC_W+	21 Jun 2013 13:36
6	6	06211307.D	1.	MBLK TBLK062013 1:10	VOC_TCLP 0.5mL	21 Jun 2013 14:27
7	7	06211308.D	1.	SAMP 13060701-001A 1:10	VOC_TCLP+ 0.5mL	21 Jun 2013 15:02
8	8	06211309.D	1.	SAMP 13060602-001A	VOC_W+ 5mL	21 Jun 2013 15:48
9	9	06211310.D	1.	SAMP 13060602-002A	VOC_W+ 5mL	21 Jun 2013 16:23
10	10	06211311.D	1.	SAMP 13060603-001A	VOC_W+ 5mL	21 Jun 2013 16:58
11	11	06211312.D	1.	SAMP 13060604-001A	VOC_W+ 5mL	21 Jun 2013 17:34
12	12	06211313.D	1.	SAMP 13060663-001A	VOC_W+ 5mL	21 Jun 2013 18:09
13	13	06211314.D	1.	SAMP 13060663-002A	VOC_W+ 5mL	21 Jun 2013 18:44
14	14	06211315.D	1.	SAMP 13060663-003A	VOC_W+ 5mL	21 Jun 2013 19:19
15	15	06211316.D	1.	SAMP 13060663-004A	VOC_W+ 5mL	21 Jun 2013 19:54
16	16	06211317.D	1.	SAMP 13060663-005A	VOC_W+ 5mL	21 Jun 2013 20:29
17		06211318.D	1.			
18	2	BLANK1.D	1.		VOC_W+	21 Jun 2013 11:49

Data Path : C:\msdchem\1\DATA\VOA7\062113\
Data File : 06211301.D
Acq On : 21 Jun 2013 10:28 am
Operator : PS
Sample : TUNE BFB062113-7
Misc : BFB_624
ALS Vial : 100 Sample Multiplier: 1
InstName : VOA7

Integration File: events.e

Method : C:\msdchem\1\DATA\VOA7\062013\W7060913.M
Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominMon Jun 10 14:34:29 2013
Last Update : Mon Jun 10 14:33:33 2013





AutoFind: Scans 1018, 1019, 1020; Background Corrected with Scan 1009

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	19.6	5320	PASS
75	95	30	60	46.7	12693	PASS
95	95	100	100	100.0	27168	PASS
96	95	5	9	5.8	1578	PASS
173	174	0.00	2	1.0	198	PASS
174	95	50	100	76.3	20731	PASS
175	174	5	9	7.8	1624	PASS
176	174	95	101	98.8	20485	PASS
177	176	5	9	7.3	1498	PASS

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\VOA7\062113\
Data File : 06211302.D
Acq On : 21 Jun 2013 11:13 am Operator: PS
Sample : CCV VSTD020 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 1

Quant Time: Jun 21 11:41:18 2013
Quant Method : C:\MSDCHEM\1\DATA\VOA7\062113\W7060913.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominMon Jun 10 14:34:29 2013
QLast Update : Mon Jun 10 14:34:29 2013
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 100% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene	1.000	1.000	0.0	67	0.00
2	M	Dichlorodifluoromethane	0.542	0.455	16.1	58	0.00
3	TPM	Chloromethane	0.419	0.391	6.7	65	0.00
4	TCM	Vinyl chloride	0.521	0.469	10.0	60	0.00
5	M	1,3-Butadiene	0.357	0.316	11.5	59	0.00
6	TM	Bromomethane	0.241	0.187	22.4	82	0.00
7	TM	Chloroethane	0.268	0.243	9.3	64	0.00
8	M	Trichlorofluoromethane	0.584	0.533	8.7	63	0.00
9	M	Isopropyl Alcohol	0.032	0.037	-15.6	83	0.00
10	M	Ethyl Ether	0.335	0.313	6.6	65	0.00
11	M	Acrolein	0.068	0.069	-1.5	69	0.00
12	TM	Acetone	0.156	0.215	-37.8	92	0.00
13	M	Freon-TF	0.253	0.218	13.8	61	-0.01
14	TCM	1,1-Dichloroethene	0.328	0.286	12.8	62	0.00
15	TM	Methylene Chloride	0.419	0.398	5.0	67	0.00
16	TM	Carbon disulfide	1.229	1.102	10.3	58	0.00
17	M	Acrylonitrile	0.186	0.192	-3.2	68	0.00
18	TM	MTBE	1.209	1.249	-3.3	71	0.00
19	M	Hexane	0.334	0.286	14.4	59	0.00
20	TM	trans-1,2-Dichloroethene	0.397	0.373	6.0	68	0.00
21	M	Vinyl acetate	0.870	0.430	50.6	32#	0.00
22	TPM	1,1-Dichloroethane	0.663	0.610	8.0	65	0.00
23	TM	2-Butanone	0.063	0.073	-15.9	81	0.00
24	M	2,2-Dichloropropane	0.592	0.501	15.4	64	0.00
25	TM	cis-1,2-Dichloroethene	0.433	0.388	10.4	62	0.00
26	M	Ethyl Acetate	0.071	0.074	-4.2	68	-0.01
27	TCM	Chloroform	0.642	0.630	1.9	67	0.00
28	M	Bromochloromethane	0.173	0.179	-3.5	64	0.00
29	S	Dibromofluoromethane	0.437	0.459	-5.0	71	0.00
30	M	Isobutyl alcohol	0.020	0.024	-20.0	90	-0.01
31	I	1,4-Difluorobenzene	1.000	1.000	0.0	65	0.00
32	S	1,2-Dichloroethane-d4	0.069	0.075	-8.7	69	0.00
33	TM	Carbon Tetrachloride	0.261	0.233	10.7	65	0.00
34	TM	1,2-Dichloroethane	0.330	0.336	-1.8	68	0.00
35	TM	1,1,1-Trichloroethane	0.334	0.312	6.6	66	-0.01
36	M	1,1-Dichloropropene	0.110	0.094	14.5	57	0.00
37	M	1-Butanol	0.008	0.009	-12.5	82	0.00
38	TM	Benzene	0.976	0.891	8.7	61	0.00
39	TM	Trichloroethene	0.246	0.231	6.1	68	0.00
40	TCM	1,2-Dichloropropane	0.238	0.220	7.6	64	0.00
41	M	1,4-Dioxane	0.004	0.004	0.0	75	0.00
42	TM	Bromodichloromethane	0.302	0.298	1.3	67	0.00
43	M	Dibromomethane	0.147	0.145	1.4	69	0.00
44	M	2-Nitropropane	0.063	0.088	-39.7	107	0.00
45	M	2-Chloroethylvinyl ether	0.133	0.092	30.8	48#	0.00
46	T	4-Methyl-2-pentanone	0.279	0.320	-14.7	76	0.00
47	TM	cis-1,3-Dichloropropene	0.397	0.375	5.5	63	0.00
48	S	Toluene-d8	1.226	1.248	-1.8	67	0.00
49	TCM	Toluene	0.619	0.570	7.9	63	0.00
50	I	Chlorobenzene-d5	1.000	1.000	0.0	64	0.00
51	TM	trans-1,3-Dichloropropene	0.606	0.602	0.7	65	0.00
52	TM	2-Hexanone	0.362	0.413	-14.1	77	0.00

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\VOA7\062113\
Data File : 06211302.D
Acq On : 21 Jun 2013 11:13 am Operator: PS
Sample : CCV VSTD020 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 1

Quant Time: Jun 21 11:41:18 2013
Quant Method : C:\MSDCHEM\1\DATA\VOA7\062113\W7060913.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominMon Jun 10 14:34:29 2013
QLast Update : Mon Jun 10 14:34:29 2013
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 100% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
53 TM	1,1,2-Trichloroethane	0.329	0.325	1.2	66	0.00
54 M	1,3-Dichloropropane	0.696	0.710	-2.0	68	0.00
55 TM	Tetrachloroethene	0.308	0.302	1.9	67	0.00
56 TM	Dibromochloromethane	0.379	0.391	-3.2	72	0.00
57 M	1,2-Dibromoethane	0.397	0.426	-7.3	70	0.00
58 TPM	Chlorobenzene	1.092	1.066	2.4	65	0.00
59 TCM	Ethylbenzene	2.011	1.951	3.0	64	0.00
60 M	1,1,1,2-Tetrachloroethane	0.366	0.369	-0.8	70	0.00
61 TM, L1	Xylene	0.743	0.710	4.4	65	0.00
62 TM, L1	Xylene (2)	0.720	0.679	5.7	64	0.00
63 TM, L1	Xylenes, Total	0.735	0.700	4.8	64	0.00
64 TM	Styrene	1.325	1.306	1.4	64	0.00
65 M	Isopropylbenzene	1.630	1.560	4.3	63	0.00
66 TPM	Bromoform	0.266	0.263	1.1	71	0.00
67 TPM	1,1,2,2-Tetrachloroethane	0.536	0.543	-1.3	66	0.00
68 S	Bromofluorobenzene	0.747	0.709	5.1	60	0.00
69 I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	63	0.00
70 M	1,2,3-Trichloropropane	0.459	0.521	-13.5	71	0.00
71 M	n-Propylbenzene	1.870	1.911	-2.2	66	0.00
72 M	Bromobenzene	0.505	0.516	-2.2	65	0.00
73 M	1,3,5-Trimethylbenzene	1.503	1.540	-2.5	65	0.00
74 M	2-Chlorotoluene	1.298	1.301	-0.2	62	0.00
75 M	4-Chlorotoluene	1.447	1.493	-3.2	66	0.00
76 M	tert-Butylbenzene	1.018	0.931	8.5	63	0.00
77 M	1-Ethyl-2-methylbenzene	1.805	1.968	-9.0	69	0.00
78 M	1,2,4-Trimethylbenzene	1.476	1.480	-0.3	63	0.00
79 M	sec-Butylbenzene	1.487	1.507	-1.3	66	0.00
80 M	p-Isopropyltoluene	1.222	1.174	3.9	61	0.00
81 M	1,3-Dichlorobenzene	0.824	0.843	-2.3	65	0.00
82 M	1,4-Dichlorobenzene	0.912	0.959	-5.2	67	0.00
83 M	n-Butylbenzene	1.063	1.066	-0.3	65	0.00
84 M	1,2-Dichlorobenzene	0.789	0.843	-6.8	67	0.00
85 M	1,2-Dibromo-3-chloropropa	0.093	0.111	-19.4	82	0.00
86 M	1,2,4-Trichlorobenzene	0.375	0.409	-9.1	72	0.00
87 M	Hexachlorbutadiene	0.176	0.169	4.0	64	0.00
88 M	Naphthalene	0.926	1.190	-28.5	83	0.00
89 M	1,2,3-Trichlorobenzene	0.320	0.358	-11.9	72	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\062113\
Data File : 06211302.D
Acq On : 21 Jun 2013 11:13 am Operator: PS
Sample : CCV VSTD020 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 1

Quant Time: Jun 21 11:41:18 2013
Quant Method : C:\MSDCHEM\1\DATA\VOA7\062113\W7060913.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominMon Jun 10 14:34:29 2013
QLast Update : Mon Jun 10 14:34:29 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	5.382	168	1246655	30.00	ug/L	0.00
31) 1,4-Difluorobenzene	6.399	114	2023400	30.00	ug/L	0.00
50) Chlorobenzene-d5	10.490	82	1119391	30.00	ug/L	0.00
69) 1,4-Dichlorobenzene-d4	13.854	152	1024376	30.00	ug/L	0.00
System Monitoring Compounds						
29) Dibromofluoromethane	5.263	113	571861	31.50	ug/L	0.00
Spiked Amount 30.000	Range 86 - 118		Recovery = 105.00%			
32) 1,2-Dichloroethane-d4	5.722	102	151627	32.57	ug/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 108.57%			
48) Toluene-d8	8.465	98	2525568	30.53	ug/L	0.00
Spiked Amount 30.000	Range 88 - 110		Recovery = 101.77%			
68) Bromofluorobenzene	12.191	174	793871	28.48	ug/L	0.00
Spiked Amount 30.000	Range 86 - 115		Recovery = 94.93%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.215	85	378111	16.77	ug/L	93
3) Chloromethane	1.351	50	324858	18.65	ug/L	97
4) Vinyl chloride	1.423	62	389535	18.01	ug/L	99
5) 1,3-Butadiene	1.449	39	262364	17.70	ug/L	90
6) Bromomethane	1.663	96	155696	28.24	ug/L	99
7) Chloroethane	1.742	64	201981	18.12	ug/L	98
8) Trichlorofluoromethane	1.945	101	442864	18.25	ug/L	92
9) Isopropyl Alcohol	2.586	45	610975	461.00	ug/L #	94
10) Ethyl Ether	2.188	59	260524	18.74	ug/L	91
11) Acrolein	2.292	56	56945	20.10	ug/L	96
12) Acetone	2.437	43	358151	55.08	ug/L	97
13) Freon-TF	2.382	151	181386	17.24	ug/L	97
14) 1,1-Dichloroethene	2.384	96	237775	17.43	ug/L	95
15) Methylene Chloride	2.858	84	330366	18.98	ug/L	88
16) Carbon disulfide	2.580	76	1832489	35.89	ug/L	97
17) Acrylonitrile	3.139	53	159215	20.59	ug/L	99
18) MTBE	3.182	73	1037830	20.65	ug/L	99
19) Hexane	3.515	57	237654	17.11	ug/L	95
20) trans-1,2-Dichloroethene	3.164	96	310146	18.81	ug/L	90
21) Vinyl acetate	3.803	43	714482	19.77	ug/L	93
22) 1,1-Dichloroethane	3.689	63	507270	18.42	ug/L	97
23) 2-Butanone	4.600	72	122013	46.74	ug/L #	65
24) 2,2-Dichloropropane	4.531	77	415989	16.90	ug/L #	38
25) cis-1,2-Dichloroethene	4.543	96	322599	17.94	ug/L	99
26) Ethyl Acetate	4.720	45	61304	20.92	ug/L #	77
27) Chloroform	5.030	83	523930	19.63	ug/L	94
28) Bromochloromethane	4.882	128	148777	20.71	ug/L #	86
30) Isobutyl alcohol	5.831	43	406598	484.67	ug/L	94
33) Carbon Tetrachloride	5.492	117	314524	17.86	ug/L	96
34) 1,2-Dichloroethane	5.836	62	452776	20.32	ug/L	94
35) 1,1,1-Trichloroethane	5.252	97	420977	18.67	ug/L	96
36) 1,1-Dichloropropene	5.505	110	126592	17.00	ug/L	79
37) 1-Butanol	6.794	56	232941	450.97	ug/L	89
38) Benzene	5.793	78	1202198	18.26	ug/L	97
39) Trichloroethene	6.735	95	312011	18.77	ug/L	97
40) 1,2-Dichloropropane	7.044	63	297304	18.55	ug/L	98
41) 1,4-Dioxane	7.287	88	55232	219.82	ug/L	82
42) Bromodichloromethane	7.456	83	401469	19.71	ug/L	99
43) Dibromomethane	7.204	93	196077	19.76	ug/L	96
44) 2-Nitropropane	7.806	41	118887	27.96	ug/L #	79
45) 2-Chloroethylvinyl ether	7.946	63	247997	27.71	ug/L	94

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\062113\
Data File : 06211302.D
Acq On : 21 Jun 2013 11:13 am Operator: PS
Sample : CCV VSTD020 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 1

Quant Time: Jun 21 11:41:18 2013
Quant Method : C:\MSDCHEM\1\DATA\VOA7\062113\W7060913.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominMon Jun 10 14:34:29 2013
QLast Update : Mon Jun 10 14:34:29 2013
Response via : Initial Calibration

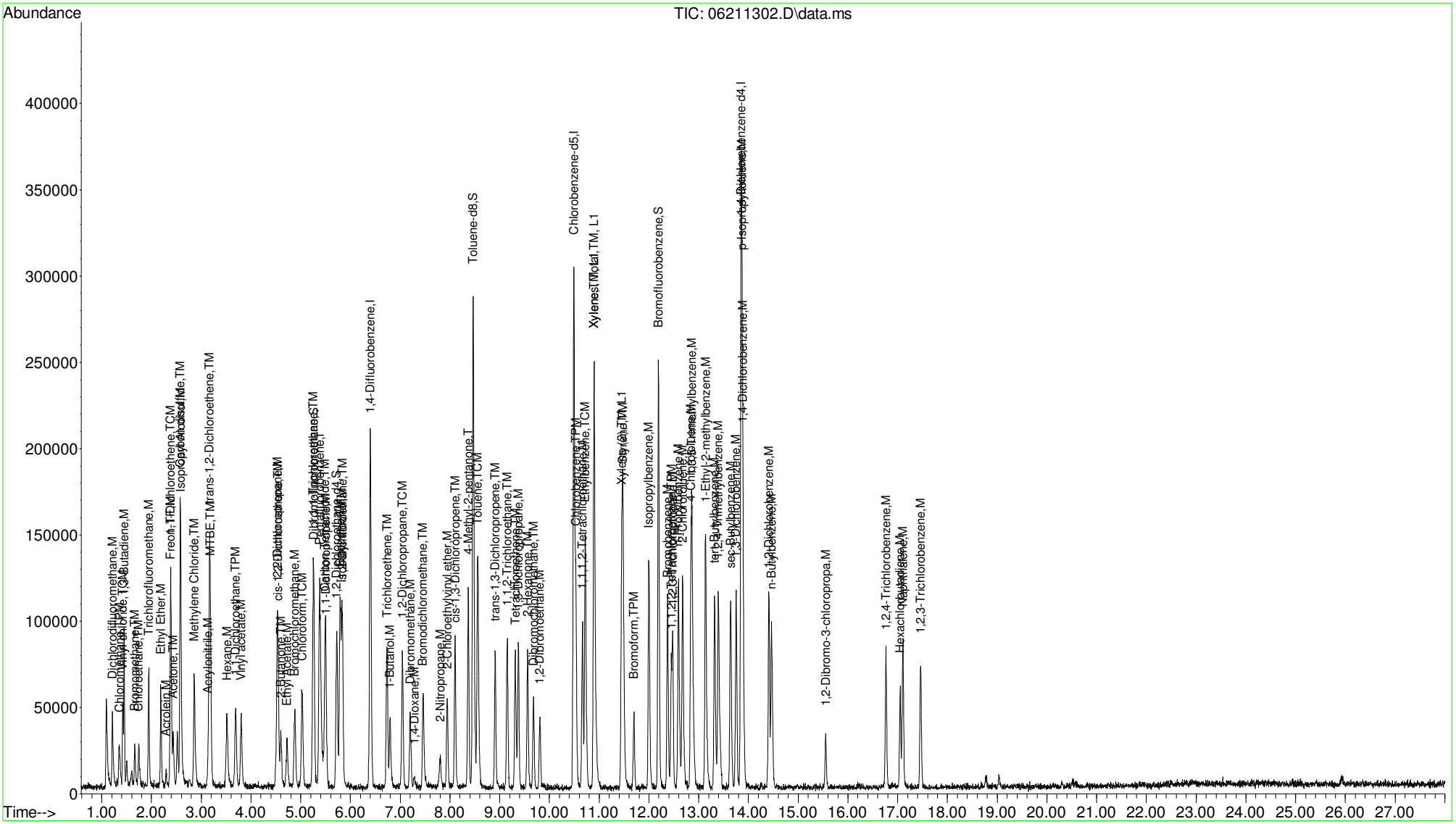
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
46) 4-Methyl-2-pentanone	8.366	43	862246	45.82 ug/L	98
47) cis-1,3-Dichloropropene	8.106	75	506438	18.93 ug/L	89
49) Toluene	8.556	92	768779	18.43 ug/L	99
51) trans-1,3-Dichloropropene	8.908	75	448945	19.87 ug/L	92
52) 2-Hexanone	9.560	43	616608	45.64 ug/L	97
53) 1,1,2-Trichloroethane	9.152	83	242479	19.76 ug/L	95
54) 1,3-Dichloropropane	9.373	76	530076	20.42 ug/L	99
55) Tetrachloroethene	9.317	164	225414	19.62 ug/L	91
56) Dibromochloromethane	9.679	129	292045	20.64 ug/L	96
57) 1,2-Dibromoethane	9.806	107	317839	21.44 ug/L #	98
58) Chlorobenzene	10.529	112	795862	19.53 ug/L	96
59) Ethylbenzene	10.721	91	1455851	19.40 ug/L	98
60) 1,1,1,2-Tetrachloroethane	10.664	131	275615	20.16 ug/L	95
61) Xylene	10.899	106	1059286	38.21 ug/L	100
62) Xylene (2)	11.455	106	506864	18.86 ug/L	93
63) Xylenes, Total	10.899	106	1566150m	57.08 ug/L #	
64) Styrene	11.478	104	974910	19.72 ug/L	97
65) Isopropylbenzene	11.999	105	1164126	19.14 ug/L	99
66) Bromoform	11.700	173	196335	19.76 ug/L	90
67) 1,1,2,2-Tetrachloroethane	12.450	83	404975	20.25 ug/L	98
70) 1,2,3-Trichloropropane	12.477	75	356008	22.72 ug/L #	42
71) n-Propylbenzene	12.594	91	1305098	20.44 ug/L	97
72) Bromobenzene	12.377	156	352238	20.42 ug/L	94
73) 1,3,5-Trimethylbenzene	12.868	105	1051547	20.49 ug/L	99
74) 2-Chlorotoluene	12.677	91	888808	20.05 ug/L	96
75) 4-Chlorotoluene	12.844	91	1019404	20.64 ug/L	95
76) tert-Butylbenzene	13.319	119	636073	18.30 ug/L	97
77) 1-Ethyl-2-methylbenzene	13.140	105	1343946	21.80 ug/L	98
78) 1,2,4-Trimethylbenzene	13.395	105	1010827	20.06 ug/L	97
79) sec-Butylbenzene	13.643	105	1029335	20.27 ug/L	98
80) p-Isopropyltoluene	13.871	119	801970	19.22 ug/L	96
81) 1,3-Dichlorobenzene	13.751	146	575745	20.46 ug/L	98
82) 1,4-Dichlorobenzene	13.887	146	654885	21.04 ug/L	98
83) n-Butylbenzene	14.465	91	727751	20.05 ug/L	99
84) 1,2-Dichlorobenzene	14.412	146	576014	21.39 ug/L	97
85) 1,2-Dibromo-3-chloropropa	15.553	75	76123	24.03 ug/L	82
86) 1,2,4-Trichlorobenzene	16.765	180	279473	21.82 ug/L	86
87) Hexachlorbutadiene	17.052	225	115510	19.24 ug/L #	78
88) Naphthalene	17.107	128	812732	25.70 ug/L	98
89) 1,2,3-Trichlorobenzene	17.460	180	244553	22.35 ug/L	99

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\062113\
Data File : 06211302.D
Acq On : 21 Jun 2013 11:13 am Operator: PS
Sample : CCV VSTD020 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 1

Quant Time: Jun 21 11:41:18 2013
Quant Method : C:\MSDCHEM\1\DATA\VOA7\062113\W7060913.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominMon Jun 10 14:34:29 2013
QLast Update : Mon Jun 10 14:34:29 2013
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\062113\
Data File : 06211302.D
Acq On : 21 Jun 2013 11:13 am Operator: PS
Sample : CCV VSTD020 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 1

Quant Time: Jun 21 11:41:18 2013
Quant Method : C:\MSDCHEM\1\DATA\VOA7\062113\W7060913.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominMon Jun 10 14:34:29 2013
QLast Update : Mon Jun 10 14:34:29 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	5.382	168	1246655	30.00	ug/L	0.00
31) 1,4-Difluorobenzene	6.399	114	2023400	30.00	ug/L	0.00
50) Chlorobenzene-d5	10.490	82	1119391	30.00	ug/L	0.00
69) 1,4-Dichlorobenzene-d4	13.854	152	1024376	30.00	ug/L	0.00
System Monitoring Compounds						
29) Dibromofluoromethane	5.263	113	571861	31.50	ug/L	0.00
Spiked Amount 30.000	Range 86 - 118		Recovery = 105.00%			
32) 1,2-Dichloroethane-d4	5.722	102	151627	32.57	ug/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 108.57%			
48) Toluene-d8	8.465	98	2525568	30.53	ug/L	0.00
Spiked Amount 30.000	Range 88 - 110		Recovery = 101.77%			
68) Bromofluorobenzene	12.191	174	793871	28.48	ug/L	0.00
Spiked Amount 30.000	Range 86 - 115		Recovery = 94.93%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.215	85	378111	16.77	ug/L	93
3) Chloromethane	1.351	50	324858	18.65	ug/L	97
4) Vinyl chloride	1.423	62	389535	18.01	ug/L	99
5) 1,3-Butadiene	1.449	39	262364	17.70	ug/L	90
6) Bromomethane	1.663	96	155696	28.24	ug/L	99
7) Chloroethane	1.742	64	201981	18.12	ug/L	98
8) Trichlorofluoromethane	1.945	101	442864	18.25	ug/L	92
9) Isopropyl Alcohol	2.586	45	610975	461.00	ug/L #	94
10) Ethyl Ether	2.188	59	260524	18.74	ug/L	91
11) Acrolein	2.292	56	56945	20.10	ug/L	96
12) Acetone	2.437	43	358151	55.08	ug/L	97
13) Freon-TF	2.382	151	181386	17.24	ug/L	97
14) 1,1-Dichloroethene	2.384	96	237775	17.43	ug/L	95
15) Methylene Chloride	2.858	84	330366	18.98	ug/L	88
16) Carbon disulfide	2.580	76	1832489	35.89	ug/L	97
17) Acrylonitrile	3.139	53	159215	20.59	ug/L	99
18) MTBE	3.182	73	1037830	20.65	ug/L	99
19) Hexane	3.515	57	237654	17.11	ug/L	95
20) trans-1,2-Dichloroethene	3.164	96	310146	18.81	ug/L	90
21) Vinyl acetate	3.803	43	714482	19.77	ug/L	93
22) 1,1-Dichloroethane	3.689	63	507270	18.42	ug/L	97
23) 2-Butanone	4.600	72	122013	46.74	ug/L #	65
24) 2,2-Dichloropropane	4.531	77	415989	16.90	ug/L #	38
25) cis-1,2-Dichloroethene	4.543	96	322599	17.94	ug/L	99
26) Ethyl Acetate	4.720	45	61304	20.92	ug/L #	77
27) Chloroform	5.030	83	523930	19.63	ug/L	94
28) Bromochloromethane	4.882	128	148777	20.71	ug/L #	86
30) Isobutyl alcohol	5.831	43	406598	484.67	ug/L	94
33) Carbon Tetrachloride	5.492	117	314524	17.86	ug/L	96
34) 1,2-Dichloroethane	5.836	62	452776	20.32	ug/L	94
35) 1,1,1-Trichloroethane	5.252	97	420977	18.67	ug/L	96
36) 1,1-Dichloropropene	5.505	110	126592	17.00	ug/L	79
37) 1-Butanol	6.794	56	232941	450.97	ug/L	89
38) Benzene	5.793	78	1202198	18.26	ug/L	97
39) Trichloroethene	6.735	95	312011	18.77	ug/L	97
40) 1,2-Dichloropropane	7.044	63	297304	18.55	ug/L	98
41) 1,4-Dioxane	7.287	88	55232	219.82	ug/L	82
42) Bromodichloromethane	7.456	83	401469	19.71	ug/L	99
43) Dibromomethane	7.204	93	196077	19.76	ug/L	96
44) 2-Nitropropane	7.806	41	118887	27.96	ug/L #	79
45) 2-Chloroethylvinyl ether	7.946	63	247997	27.71	ug/L	94

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\062113\
Data File : 06211302.D
Acq On : 21 Jun 2013 11:13 am Operator: PS
Sample : CCV VSTD020 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 1

Quant Time: Jun 21 11:41:18 2013
Quant Method : C:\MSDCHEM\1\DATA\VOA7\062113\W7060913.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominMon Jun 10 14:34:29 2013
QLast Update : Mon Jun 10 14:34:29 2013
Response via : Initial Calibration

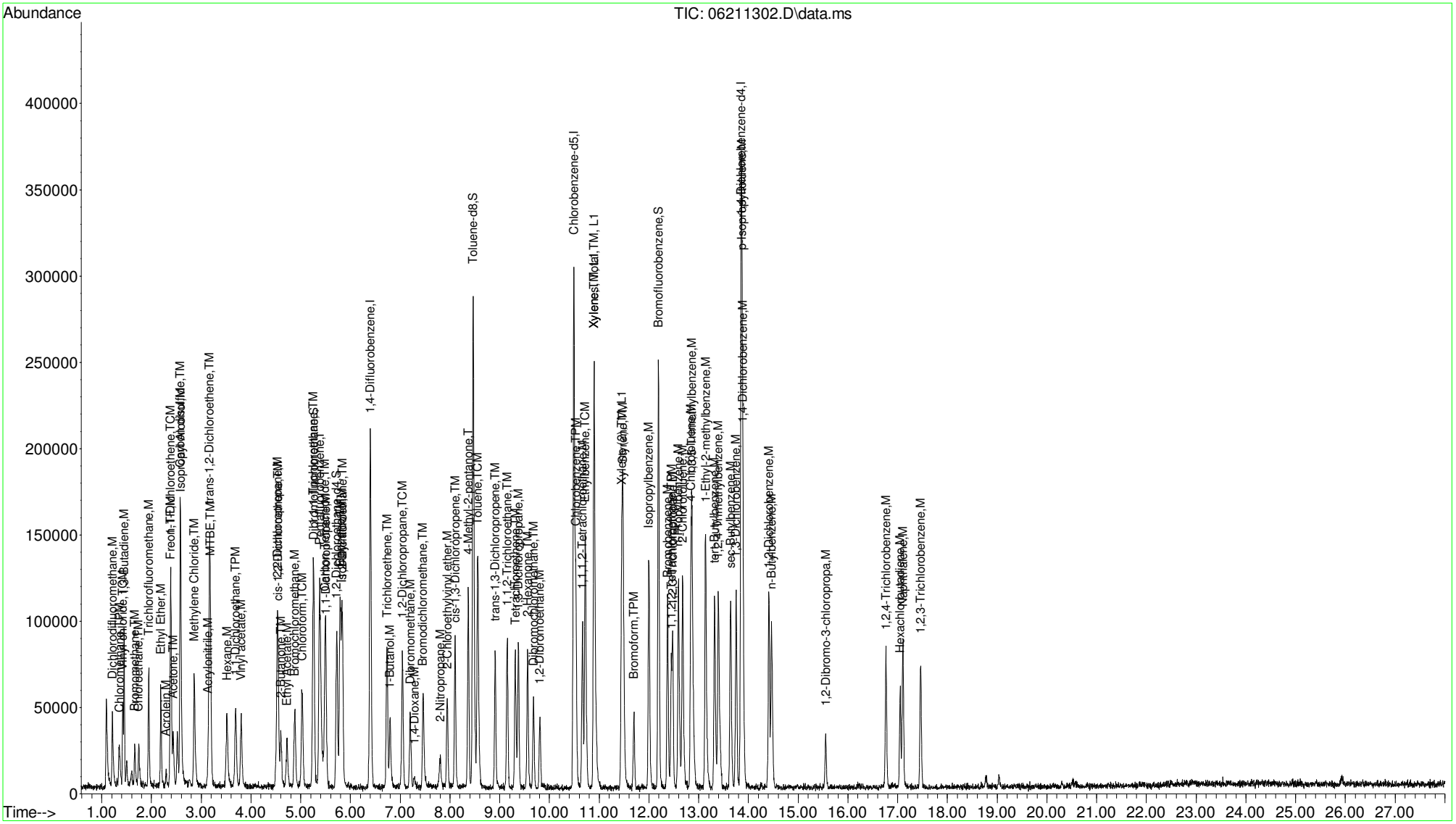
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
46) 4-Methyl-2-pentanone	8.366	43	862246	45.82 ug/L	98
47) cis-1,3-Dichloropropene	8.106	75	506438	18.93 ug/L	89
49) Toluene	8.556	92	768779	18.43 ug/L	99
51) trans-1,3-Dichloropropene	8.908	75	448945	19.87 ug/L	92
52) 2-Hexanone	9.560	43	616608	45.64 ug/L	97
53) 1,1,2-Trichloroethane	9.152	83	242479	19.76 ug/L	95
54) 1,3-Dichloropropane	9.373	76	530076	20.42 ug/L	99
55) Tetrachloroethene	9.317	164	225414	19.62 ug/L	91
56) Dibromochloromethane	9.679	129	292045	20.64 ug/L	96
57) 1,2-Dibromoethane	9.806	107	317839	21.44 ug/L #	98
58) Chlorobenzene	10.529	112	795862	19.53 ug/L	96
59) Ethylbenzene	10.721	91	1455851	19.40 ug/L	98
60) 1,1,1,2-Tetrachloroethane	10.664	131	275615	20.16 ug/L	95
61) Xylene	10.899	106	1059286	38.21 ug/L	100
62) Xylene (2)	11.455	106	506864	18.86 ug/L	93
63) Xylenes, Total	10.899	106	1566150m	57.08 ug/L #	
64) Styrene	11.478	104	974910	19.72 ug/L	97
65) Isopropylbenzene	11.999	105	1164126	19.14 ug/L	99
66) Bromoform	11.700	173	196335	19.76 ug/L	90
67) 1,1,2,2-Tetrachloroethane	12.450	83	404975	20.25 ug/L	98
70) 1,2,3-Trichloropropane	12.477	75	356008	22.72 ug/L #	42
71) n-Propylbenzene	12.594	91	1305098	20.44 ug/L	97
72) Bromobenzene	12.377	156	352238	20.42 ug/L	94
73) 1,3,5-Trimethylbenzene	12.868	105	1051547	20.49 ug/L	99
74) 2-Chlorotoluene	12.677	91	888808	20.05 ug/L	96
75) 4-Chlorotoluene	12.844	91	1019404	20.64 ug/L	95
76) tert-Butylbenzene	13.319	119	636073	18.30 ug/L	97
77) 1-Ethyl-2-methylbenzene	13.140	105	1343946	21.80 ug/L	98
78) 1,2,4-Trimethylbenzene	13.395	105	1010827	20.06 ug/L	97
79) sec-Butylbenzene	13.643	105	1029335	20.27 ug/L	98
80) p-Isopropyltoluene	13.871	119	801970	19.22 ug/L	96
81) 1,3-Dichlorobenzene	13.751	146	575745	20.46 ug/L	98
82) 1,4-Dichlorobenzene	13.887	146	654885	21.04 ug/L	98
83) n-Butylbenzene	14.465	91	727751	20.05 ug/L	99
84) 1,2-Dichlorobenzene	14.412	146	576014	21.39 ug/L	97
85) 1,2-Dibromo-3-chloropropa	15.553	75	76123	24.03 ug/L	82
86) 1,2,4-Trichlorobenzene	16.765	180	279473	21.82 ug/L	86
87) Hexachlorbutadiene	17.052	225	115510	19.24 ug/L #	78
88) Naphthalene	17.107	128	812732	25.70 ug/L	98
89) 1,2,3-Trichlorobenzene	17.460	180	244553	22.35 ug/L	99

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\062113\
Data File : 06211302.D
Acq On : 21 Jun 2013 11:13 am Operator: PS
Sample : CCV VSTD020 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 1

Quant Time: Jun 21 11:41:18 2013
Quant Method : C:\MSDCHEM\1\DATA\VOA7\062113\W7060913.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominMon Jun 10 14:34:29 2013
QLast Update : Mon Jun 10 14:34:29 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\062113\
Data File : 06211304.D
Acq On : 21 Jun 2013 12:25 pm Operator: PS
Sample : MBLK VBLK062113-7 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 3

Quant Time: Jun 21 15:15:01 2013
Quant Method : C:\msdchem\1\DATA\VOA7\062013\W7060913.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominMon Jun 10 14:34:29 2013
QLast Update : Mon Jun 10 14:34:29 2013
Response via : Initial Calibration

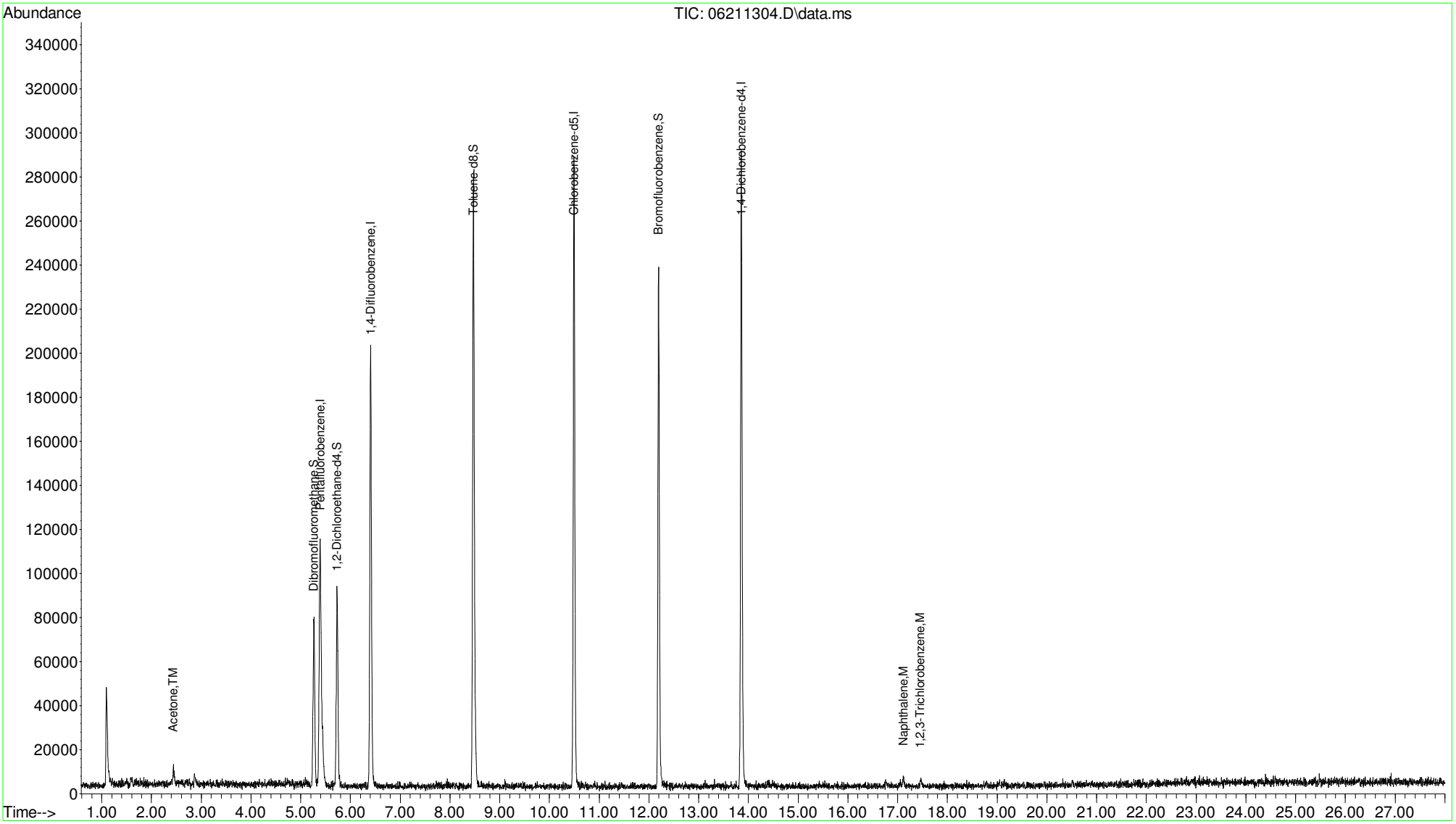
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	5.391	168	1222612	30.00	ug/L	0.00
31) 1,4-Difluorobenzene	6.406	114	1985718	30.00	ug/L	0.00
50) Chlorobenzene-d5	10.491	82	1103905	30.00	ug/L	0.00
69) 1,4-Dichlorobenzene-d4	13.855	152	993186	30.00	ug/L	# 0.00
System Monitoring Compounds						
29) Dibromofluoromethane	5.265	113	523830	29.42	ug/L	0.00
Spiked Amount 30.000	Range 86 - 118		Recovery = 98.07%			
32) 1,2-Dichloroethane-d4	5.734	102	149856	32.80	ug/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 109.33%			
48) Toluene-d8	8.472	98	2464691	30.36	ug/L	0.00
Spiked Amount 30.000	Range 88 - 110		Recovery = 101.20%			
68) Bromofluorobenzene	12.194	174	771905	28.08	ug/L	0.00
Spiked Amount 30.000	Range 86 - 115		Recovery = 93.60%			
Target Compounds						Qvalue
12) Acetone	2.440	43	86055	13.49	ug/L	72
88) Naphthalene	17.117	128	31622	1.03	ug/L #	76
89) 1,2,3-Trichlorobenzene	17.453	180	3213	0.30	ug/L #	11

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\062113\
Data File : 06211304.D
Acq On : 21 Jun 2013 12:25 pm Operator: PS
Sample : MBLK VBLK062113-7 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 3

Quant Time: Jun 21 15:15:01 2013
Quant Method : C:\msdchem\1\DATA\VOA7\062013\W7060913.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominMon Jun 10 14:34:29 2013
QLast Update : Mon Jun 10 14:34:29 2013
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\062113\
Data File : 06211304.D
Acq On : 21 Jun 2013 12:25 pm Operator: PS
Sample : MBLK VBLK062113-7 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 3

Quant Time: Jun 21 13:58:05 2013
Quant Method : C:\msdchem\1\DATA\VOA7\062013\W7060913.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominMon Jun 10 14:34:29 2013
QLast Update : Mon Jun 10 14:34:29 2013
Response via : Initial Calibration

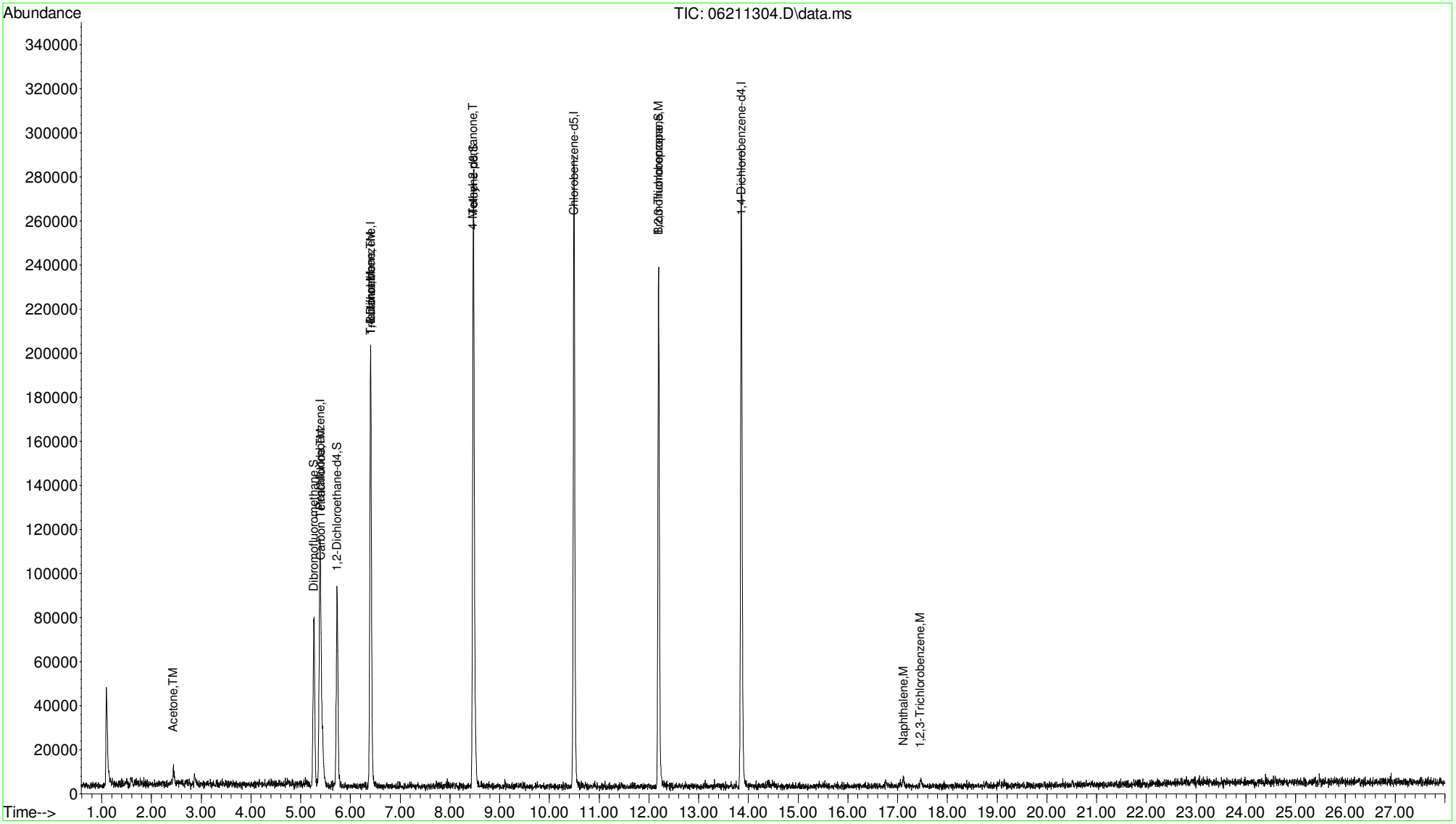
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	5.391	168	1222612	30.00	ug/L	0.00
31) 1,4-Difluorobenzene	6.406	114	1985718	30.00	ug/L	0.00
50) Chlorobenzene-d5	10.491	82	1103905	30.00	ug/L	0.00
69) 1,4-Dichlorobenzene-d4	13.855	152	993186	30.00	ug/L	# 0.00
System Monitoring Compounds						
29) Dibromofluoromethane	5.265	113	523830	29.42	ug/L	0.00
Spiked Amount 30.000	Range 86 - 118		Recovery = 98.07%			
32) 1,2-Dichloroethane-d4	5.734	102	149856	32.80	ug/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 109.33%			
48) Toluene-d8	8.472	98	2464691	30.36	ug/L	0.00
Spiked Amount 30.000	Range 88 - 110		Recovery = 101.20%			
68) Bromofluorobenzene	12.194	174	771905	28.08	ug/L	0.00
Spiked Amount 30.000	Range 86 - 115		Recovery = 93.60%			
Target Compounds						Qvalue
12) Acetone	2.440	43	86055	13.49	ug/L	72
33) Carbon Tetrachloride	5.401	117	58304	3.37	ug/L #	12
37) 1-Butanol	6.407	56	56407	111.28	ug/L #	17
39) Trichloroethene	6.408	95	53682	3.29	ug/L #	7
46) 4-Methyl-2-pentanone	8.462	43	21203	1.15	ug/L #	1
70) 1,2,3-Trichloropropane	12.193	75	529447	34.85	ug/L #	42
88) Naphthalene	17.117	128	31622	1.03	ug/L #	76
89) 1,2,3-Trichlorobenzene	17.453	180	3213	0.30	ug/L #	11

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\062113\
Data File : 06211304.D
Acq On : 21 Jun 2013 12:25 pm Operator: PS
Sample : MBLK VBLK062113-7 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 3

Quant Time: Jun 21 13:58:05 2013
Quant Method : C:\msdchem\1\DATA\VOA7\062013\W7060913.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominMon Jun 10 14:34:29 2013
QLast Update : Mon Jun 10 14:34:29 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\062113\
Data File : 06211305.D
Acq On : 21 Jun 2013 1:01 pm Operator: PS
Sample : LCS VLCS062113-7 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 4

Quant Time: Jun 21 13:28:40 2013
Quant Method : C:\MSDCHEM\1\DATA\VOA7\062113\W7060913.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominMon Jun 10 14:34:29 2013
QLast Update : Mon Jun 10 14:34:29 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	5.387	168	1207711	30.00	ug/L	0.00
31) 1,4-Difluorobenzene	6.404	114	1931195	30.00	ug/L	0.00
50) Chlorobenzene-d5	10.492	82	1095520	30.00	ug/L	0.00
69) 1,4-Dichlorobenzene-d4	13.853	152	1059629	30.00	ug/L	0.00
System Monitoring Compounds						
29) Dibromofluoromethane	5.260	113	545979	31.04	ug/L	0.00
Spiked Amount 30.000	Range 86 - 118		Recovery = 103.47%			
32) 1,2-Dichloroethane-d4	5.724	102	134629	30.30	ug/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 101.00%			
48) Toluene-d8	8.472	98	2493751	31.59	ug/L	0.00
Spiked Amount 30.000	Range 88 - 110		Recovery = 105.30%			
68) Bromofluorobenzene	12.195	174	798004	29.25	ug/L	0.00
Spiked Amount 30.000	Range 86 - 115		Recovery = 97.50%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.216	85	425062	19.46	ug/L	93
3) Chloromethane	1.349	50	416776	24.70	ug/L	93
4) Vinyl chloride	1.423	62	396986	18.94	ug/L	96
5) 1,3-Butadiene	1.448	39	226290	15.76	ug/L	89
6) Bromomethane	1.664	96	152701	28.36	ug/L	95
7) Chloroethane	1.745	64	242344	22.44	ug/L	98
8) Trichlorofluoromethane	1.945	101	455451	19.38	ug/L	100
9) Isopropyl Alcohol	2.594	45	581382	452.81	ug/L #	93
10) Ethyl Ether	2.192	59	277748	20.62	ug/L	93
11) Acrolein	2.305	56	62612	22.81	ug/L #	13
12) Acetone	2.442	43	393001	62.38	ug/L	98
13) Freon-TF	2.392	151	216519	21.25	ug/L	97
14) 1,1-Dichloroethene	2.389	96	261262	19.77	ug/L #	1
15) Methylene Chloride	2.864	84	316359	18.76	ug/L	95
16) Carbon disulfide	2.585	76	1719668	34.76	ug/L	98
17) Acrylonitrile	3.141	53	302022	40.31	ug/L	91
18) MTBE	3.188	73	1019482	20.94	ug/L	97
19) Hexane	3.522	57	309400	23.00	ug/L	94
20) trans-1,2-Dichloroethene	3.167	96	301676	18.89	ug/L	91
21) Vinyl acetate	3.807	43	706734	20.19	ug/L	93
22) 1,1-Dichloroethane	3.700	63	535416	20.07	ug/L	94
23) 2-Butanone	4.609	72	115531	45.68	ug/L #	63
24) 2,2-Dichloropropane	4.538	77	455906	19.12	ug/L	89
25) cis-1,2-Dichloroethene	4.542	96	354722	20.36	ug/L	89
26) Ethyl Acetate	4.736	45	37799	13.32	ug/L #	4
27) Chloroform	5.032	83	533193	20.62	ug/L	96
28) Bromochloromethane	4.885	128	160279	23.03	ug/L #	85
30) Isobutyl alcohol	5.843	43	423388	520.95	ug/L	99
33) Carbon Tetrachloride	5.494	117	356783	21.23	ug/L	96
34) 1,2-Dichloroethane	5.835	62	435312	20.47	ug/L	97
35) 1,1,1-Trichloroethane	5.263	97	470977	21.89	ug/L	95
36) 1,1-Dichloropropene	5.507	110	145431	20.46	ug/L	83
37) 1-Butanol	6.802	56	207631	421.17	ug/L	90
38) Benzene	5.798	78	1277797	20.34	ug/L	77
39) Trichloroethene	6.739	95	328884	20.73	ug/L	99
40) 1,2-Dichloropropane	7.050	63	308132	20.14	ug/L #	88
41) 1,4-Dioxane	7.282	88	38968	162.50	ug/L #	44
42) Bromodichloromethane	7.464	83	397068	20.42	ug/L	96
43) Dibromomethane	7.207	93	189316	19.99	ug/L	97
44) 2-Nitropropane	7.806	41	109289	26.93	ug/L #	77
45) 2-Chloroethylvinyl ether	7.946	63	270685	31.69	ug/L	92

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\062113\
Data File : 06211305.D
Acq On : 21 Jun 2013 1:01 pm Operator: PS
Sample : LCS VLCS062113-7 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 4

Quant Time: Jun 21 13:28:40 2013
Quant Method : C:\MSDCHEM\1\DATA\VOA7\062113\W7060913.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominMon Jun 10 14:34:29 2013
QLast Update : Mon Jun 10 14:34:29 2013
Response via : Initial Calibration

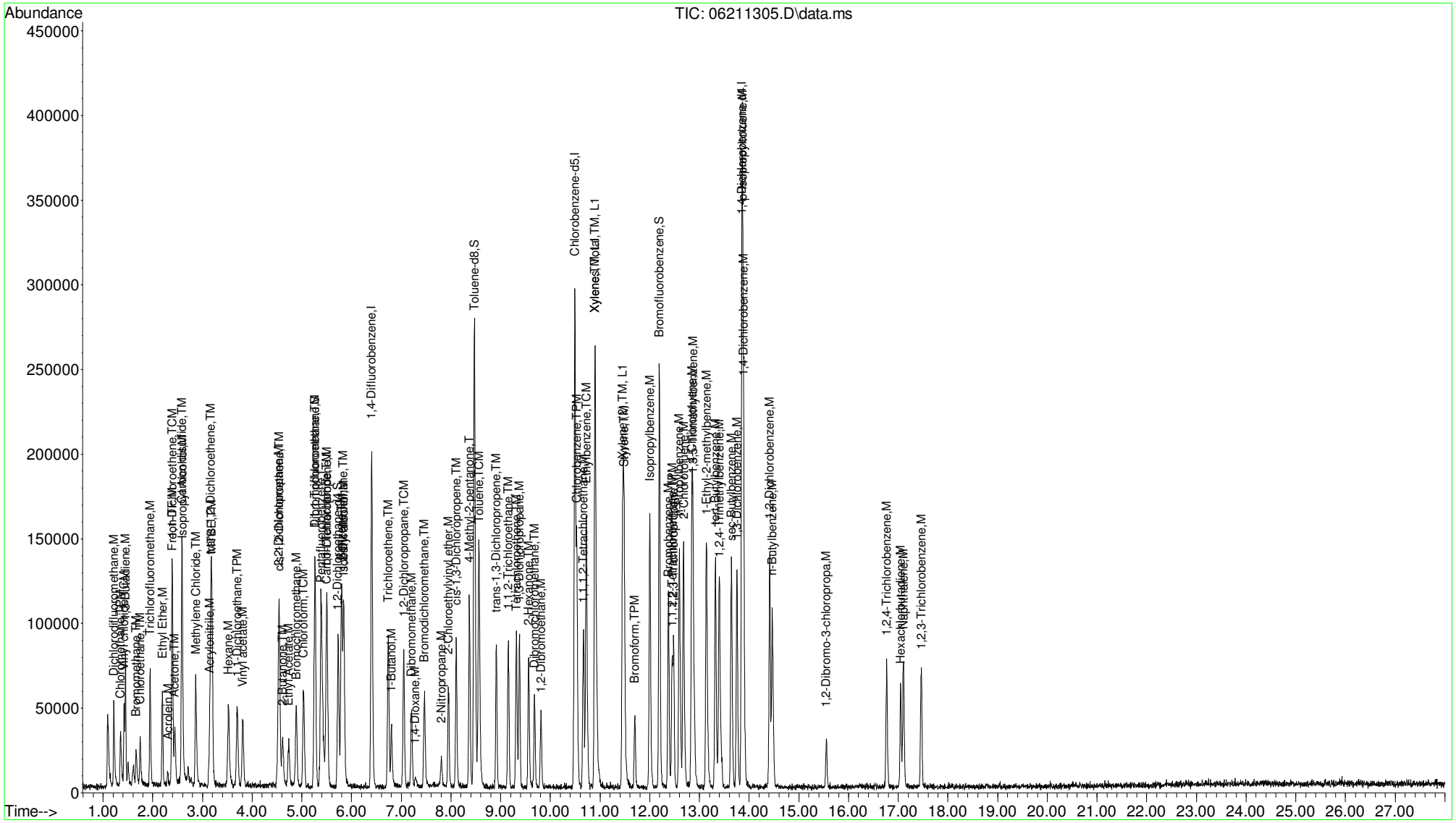
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
46) 4-Methyl-2-pentanone	8.369	43	823936	45.88 ug/L	99
47) cis-1,3-Dichloropropene	8.105	75	508845	19.93 ug/L	90
49) Toluene	8.566	92	838868	21.07 ug/L	98
51) trans-1,3-Dichloropropene	8.911	75	472286	21.36 ug/L	90
52) 2-Hexanone	9.560	43	600375	45.40 ug/L	99
53) 1,1,2-Trichloroethane	9.155	83	251956	20.98 ug/L	99
54) 1,3-Dichloropropane	9.378	76	528825	20.81 ug/L	98
55) Tetrachloroethene	9.319	164	243363	21.64 ug/L	97
56) Dibromochloromethane	9.683	129	305552	22.06 ug/L	98
57) 1,2-Dibromoethane	9.813	107	320614	22.09 ug/L #	99
58) Chlorobenzene	10.533	112	894457	22.42 ug/L	98
59) Ethylbenzene	10.725	91	1589957	21.65 ug/L	98
60) 1,1,1,2-Tetrachloroethane	10.667	131	297018	22.20 ug/L	99
61) Xylene	10.899	106	1190231	43.87 ug/L	99
62) Xylene (2)	11.456	106	598521	22.76 ug/L	95
63) Xylenes, Total	10.899	106	1788752m	66.61 ug/L #	
64) Styrene	11.483	104	989189	20.44 ug/L	97
65) Isopropylbenzene	12.001	105	1385766	23.28 ug/L	98
66) Bromoform	11.699	173	200377	20.61 ug/L	94
67) 1,1,2,2-Tetrachloroethane	12.450	83	402338	20.56 ug/L	99
70) 1,2,3-Trichloropropane	12.478	75	380793	23.50 ug/L #	42
71) n-Propylbenzene	12.596	91	1563142	23.67 ug/L	99
72) Bromobenzene	12.379	156	398002	22.30 ug/L	85
73) 1,3,5-Trimethylbenzene	12.868	105	1081968	20.38 ug/L	100
74) 2-Chlorotoluene	12.682	91	1081922	23.59 ug/L	98
75) 4-Chlorotoluene	12.848	91	1214077	23.76 ug/L	97
76) tert-Butylbenzene	13.322	119	801816	22.30 ug/L	94
77) 1-Ethyl-2-methylbenzene	13.143	105	1355687	21.26 ug/L	100
78) 1,2,4-Trimethylbenzene	13.401	105	1104418	21.19 ug/L	98
79) sec-Butylbenzene	13.643	105	1219629	23.22 ug/L	99
80) p-Isopropyltoluene	13.873	119	964728	22.36 ug/L	100
81) 1,3-Dichlorobenzene	13.755	146	665101	22.85 ug/L	96
82) 1,4-Dichlorobenzene	13.888	146	704468	21.88 ug/L	98
83) n-Butylbenzene	14.465	91	798312	21.27 ug/L	97
84) 1,2-Dichlorobenzene	14.413	146	661180	23.74 ug/L	94
85) 1,2-Dibromo-3-chloropropa	15.552	75	76719	23.41 ug/L	87
86) 1,2,4-Trichlorobenzene	16.769	180	272331	20.56 ug/L	97
87) Hexachlorbutadiene	17.048	225	135356	21.80 ug/L	91
88) Naphthalene	17.107	128	774524	23.68 ug/L	100
89) 1,2,3-Trichlorobenzene	17.465	180	244150	21.57 ug/L	98

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\062113\
Data File : 06211305.D
Acq On : 21 Jun 2013 1:01 pm Operator: PS
Sample : LCS VLCS062113-7 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 4

Quant Time: Jun 21 13:28:40 2013
Quant Method : C:\MSDCHEM\1\DATA\VOA7\062113\W7060913.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominMon Jun 10 14:34:29 2013
QLast Update : Mon Jun 10 14:34:29 2013
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\062113\
Data File : 06211305.D
Acq On : 21 Jun 2013 1:01 pm Operator: PS
Sample : LCS VLCS062113-7 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 4

Quant Time: Jun 21 13:28:40 2013
Quant Method : C:\MSDCHEM\1\DATA\VOA7\062113\W7060913.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominMon Jun 10 14:34:29 2013
QLast Update : Mon Jun 10 14:34:29 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	5.387	168	1207711	30.00	ug/L	0.00
31) 1,4-Difluorobenzene	6.404	114	1931195	30.00	ug/L	0.00
50) Chlorobenzene-d5	10.492	82	1095520	30.00	ug/L	0.00
69) 1,4-Dichlorobenzene-d4	13.853	152	1059629	30.00	ug/L	0.00
System Monitoring Compounds						
29) Dibromofluoromethane	5.260	113	545979	31.04	ug/L	0.00
Spiked Amount 30.000	Range 86 - 118		Recovery = 103.47%			
32) 1,2-Dichloroethane-d4	5.724	102	134629	30.30	ug/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 101.00%			
48) Toluene-d8	8.472	98	2493751	31.59	ug/L	0.00
Spiked Amount 30.000	Range 88 - 110		Recovery = 105.30%			
68) Bromofluorobenzene	12.195	174	798004	29.25	ug/L	0.00
Spiked Amount 30.000	Range 86 - 115		Recovery = 97.50%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.216	85	425062	19.46	ug/L	93
3) Chloromethane	1.349	50	416776	24.70	ug/L	93
4) Vinyl chloride	1.423	62	396986	18.94	ug/L	96
5) 1,3-Butadiene	1.448	39	226290	15.76	ug/L	89
6) Bromomethane	1.664	96	152701	28.36	ug/L	95
7) Chloroethane	1.745	64	242344	22.44	ug/L	98
8) Trichlorofluoromethane	1.945	101	455451	19.38	ug/L	100
9) Isopropyl Alcohol	2.594	45	581382	452.81	ug/L #	93
10) Ethyl Ether	2.192	59	277748	20.62	ug/L	93
11) Acrolein	2.305	56	62612	22.81	ug/L #	13
12) Acetone	2.442	43	393001	62.38	ug/L	98
13) Freon-TF	2.392	151	216519	21.25	ug/L	97
14) 1,1-Dichloroethene	2.389	96	261262	19.77	ug/L #	1
15) Methylene Chloride	2.864	84	316359	18.76	ug/L	95
16) Carbon disulfide	2.585	76	1719668	34.76	ug/L	98
17) Acrylonitrile	3.141	53	302022	40.31	ug/L	91
18) MTBE	3.188	73	1019482	20.94	ug/L	97
19) Hexane	3.522	57	309400	23.00	ug/L	94
20) trans-1,2-Dichloroethene	3.167	96	301676	18.89	ug/L	91
21) Vinyl acetate	3.807	43	706734	20.19	ug/L	93
22) 1,1-Dichloroethane	3.700	63	535416	20.07	ug/L	94
23) 2-Butanone	4.609	72	115531	45.68	ug/L #	63
24) 2,2-Dichloropropane	4.538	77	455906	19.12	ug/L	89
25) cis-1,2-Dichloroethene	4.542	96	354722	20.36	ug/L	89
26) Ethyl Acetate	4.736	45	37799	13.32	ug/L #	4
27) Chloroform	5.032	83	533193	20.62	ug/L	96
28) Bromochloromethane	4.885	128	160279	23.03	ug/L #	85
30) Isobutyl alcohol	5.843	43	423388	520.95	ug/L	99
33) Carbon Tetrachloride	5.494	117	356783	21.23	ug/L	96
34) 1,2-Dichloroethane	5.835	62	435312	20.47	ug/L	97
35) 1,1,1-Trichloroethane	5.263	97	470977	21.89	ug/L	95
36) 1,1-Dichloropropene	5.507	110	145431	20.46	ug/L	83
37) 1-Butanol	6.802	56	207631	421.17	ug/L	90
38) Benzene	5.798	78	1277797	20.34	ug/L	77
39) Trichloroethene	6.739	95	328884	20.73	ug/L	99
40) 1,2-Dichloropropane	7.050	63	308132	20.14	ug/L #	88
41) 1,4-Dioxane	7.282	88	38968	162.50	ug/L #	44
42) Bromodichloromethane	7.464	83	397068	20.42	ug/L	96
43) Dibromomethane	7.207	93	189316	19.99	ug/L	97
44) 2-Nitropropane	7.806	41	109289	26.93	ug/L #	77
45) 2-Chloroethylvinyl ether	7.946	63	270685	31.69	ug/L	92

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\062113\
Data File : 06211305.D
Acq On : 21 Jun 2013 1:01 pm Operator: PS
Sample : LCS VLCS062113-7 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 4

Quant Time: Jun 21 13:28:40 2013
Quant Method : C:\MSDCHEM\1\DATA\VOA7\062113\W7060913.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominMon Jun 10 14:34:29 2013
QLast Update : Mon Jun 10 14:34:29 2013
Response via : Initial Calibration

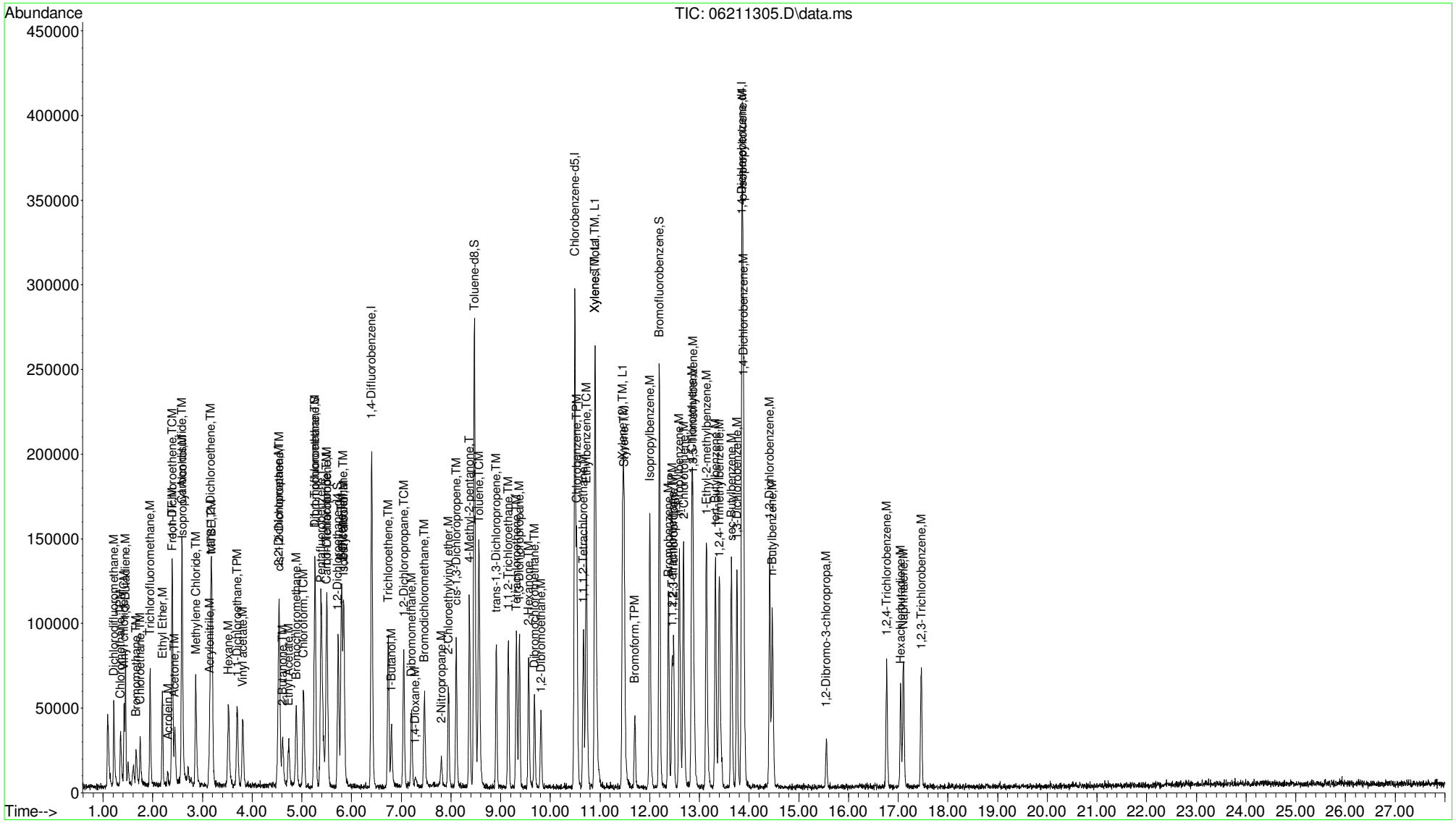
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
46) 4-Methyl-2-pentanone	8.369	43	823936	45.88 ug/L	99
47) cis-1,3-Dichloropropene	8.105	75	508845	19.93 ug/L	90
49) Toluene	8.566	92	838868	21.07 ug/L	98
51) trans-1,3-Dichloropropene	8.911	75	472286	21.36 ug/L	90
52) 2-Hexanone	9.560	43	600375	45.40 ug/L	99
53) 1,1,2-Trichloroethane	9.155	83	251956	20.98 ug/L	99
54) 1,3-Dichloropropane	9.378	76	528825	20.81 ug/L	98
55) Tetrachloroethene	9.319	164	243363	21.64 ug/L	97
56) Dibromochloromethane	9.683	129	305552	22.06 ug/L	98
57) 1,2-Dibromoethane	9.813	107	320614	22.09 ug/L #	99
58) Chlorobenzene	10.533	112	894457	22.42 ug/L	98
59) Ethylbenzene	10.725	91	1589957	21.65 ug/L	98
60) 1,1,1,2-Tetrachloroethane	10.667	131	297018	22.20 ug/L	99
61) Xylene	10.899	106	1190231	43.87 ug/L	99
62) Xylene (2)	11.456	106	598521	22.76 ug/L	95
63) Xylenes, Total	10.899	106	1788752m	66.61 ug/L #	
64) Styrene	11.483	104	989189	20.44 ug/L	97
65) Isopropylbenzene	12.001	105	1385766	23.28 ug/L	98
66) Bromoform	11.699	173	200377	20.61 ug/L	94
67) 1,1,2,2-Tetrachloroethane	12.450	83	402338	20.56 ug/L	99
70) 1,2,3-Trichloropropane	12.478	75	380793	23.50 ug/L #	42
71) n-Propylbenzene	12.596	91	1563142	23.67 ug/L	99
72) Bromobenzene	12.379	156	398002	22.30 ug/L	85
73) 1,3,5-Trimethylbenzene	12.868	105	1081968	20.38 ug/L	100
74) 2-Chlorotoluene	12.682	91	1081922	23.59 ug/L	98
75) 4-Chlorotoluene	12.848	91	1214077	23.76 ug/L	97
76) tert-Butylbenzene	13.322	119	801816	22.30 ug/L	94
77) 1-Ethyl-2-methylbenzene	13.143	105	1355687	21.26 ug/L	100
78) 1,2,4-Trimethylbenzene	13.401	105	1104418	21.19 ug/L	98
79) sec-Butylbenzene	13.643	105	1219629	23.22 ug/L	99
80) p-Isopropyltoluene	13.873	119	964728	22.36 ug/L	100
81) 1,3-Dichlorobenzene	13.755	146	665101	22.85 ug/L	96
82) 1,4-Dichlorobenzene	13.888	146	704468	21.88 ug/L	98
83) n-Butylbenzene	14.465	91	798312	21.27 ug/L	97
84) 1,2-Dichlorobenzene	14.413	146	661180	23.74 ug/L	94
85) 1,2-Dibromo-3-chloropropa	15.552	75	76719	23.41 ug/L	87
86) 1,2,4-Trichlorobenzene	16.769	180	272331	20.56 ug/L	97
87) Hexachlorbutadiene	17.048	225	135356	21.80 ug/L	91
88) Naphthalene	17.107	128	774524	23.68 ug/L	100
89) 1,2,3-Trichlorobenzene	17.465	180	244150	21.57 ug/L	98

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\062113\
Data File : 06211305.D
Acq On : 21 Jun 2013 1:01 pm Operator: PS
Sample : LCS VLCS062113-7 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 4

Quant Time: Jun 21 13:28:40 2013
Quant Method : C:\MSDCHEM\1\DATA\VOA7\062113\W7060913.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominMon Jun 10 14:34:29 2013
QLast Update : Mon Jun 10 14:34:29 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\062113\
Data File : 06211306.D
Acq On : 21 Jun 2013 1:36 pm Operator: PS
Sample : LCSD VLCSD062113-7 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 5

Quant Time: Jun 21 14:04:08 2013
Quant Method : C:\MSDCHEM\1\DATA\VOA7\062113\W7060913.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominMon Jun 10 14:34:29 2013
QLast Update : Mon Jun 10 14:34:29 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Pentafluorobenzene	5.386	168	1222866	30.00 ug/L	0.00
31) 1,4-Difluorobenzene	6.405	114	2002170	30.00 ug/L	0.00
50) Chlorobenzene-d5	10.492	82	1121821	30.00 ug/L	0.00
69) 1,4-Dichlorobenzene-d4	13.854	152	1049326	30.00 ug/L	0.00
System Monitoring Compounds					
29) Dibromofluoromethane	5.262	113	548416	30.79 ug/L	0.00
Spiked Amount 30.000	Range 86 - 118		Recovery = 102.63%		
32) 1,2-Dichloroethane-d4	5.727	102	144220	31.31 ug/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 104.37%		
48) Toluene-d8	8.472	98	2536814	30.99 ug/L	0.00
Spiked Amount 30.000	Range 88 - 110		Recovery = 103.30%		
68) Bromofluorobenzene	12.194	174	827367	29.62 ug/L	0.00
Spiked Amount 30.000	Range 86 - 115		Recovery = 98.73%		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.217	85	419409	18.97 ug/L	99
3) Chloromethane	1.351	50	390558	22.86 ug/L	93
4) Vinyl chloride	1.424	62	398470	18.78 ug/L	99
5) 1,3-Butadiene	1.451	39	211512	14.55 ug/L	91
6) Bromomethane	1.664	96	148644	27.98 ug/L	84
7) Chloroethane	1.745	64	221800	20.29 ug/L	84
8) Trichlorofluoromethane	1.945	101	444926	18.69 ug/L	98
9) Isopropyl Alcohol	2.592	45	566489	435.74 ug/L #	89
10) Ethyl Ether	2.193	59	260794	19.12 ug/L	93
11) Acrolein	2.305	56	54098	19.46 ug/L	90
12) Acetone	2.440	43	365756	57.34 ug/L	97
13) Freon-TF	2.396	151	196715	19.07 ug/L	91
14) 1,1-Dichloroethene	2.386	96	241799	18.07 ug/L	96
15) Methylene Chloride	2.864	84	316513	18.54 ug/L	91
16) Carbon disulfide	2.586	76	1655535	33.05 ug/L	100
17) Acrylonitrile	3.145	53	304698	40.16 ug/L	95
18) MTBE	3.190	73	988279	20.05 ug/L	98
19) Hexane	3.525	57	285708	20.97 ug/L	96
20) trans-1,2-Dichloroethene	3.171	96	294493	18.21 ug/L	93
21) Vinyl acetate	3.810	43	468245	13.21 ug/L	96
22) 1,1-Dichloroethane	3.699	63	511000	18.92 ug/L	97
23) 2-Butanone	4.613	72	106129	41.45 ug/L #	71
24) 2,2-Dichloropropane	4.534	77	430104	17.82 ug/L	88
25) cis-1,2-Dichloroethene	4.546	96	312742	17.73 ug/L	97
26) Ethyl Acetate	4.733	45	55241	19.22 ug/L #	72
27) Chloroform	5.032	83	522132	19.94 ug/L	97
28) Bromochloromethane	4.892	128	150848	21.41 ug/L #	84
30) Isobutyl alcohol	5.841	43	385033	467.89 ug/L	95
33) Carbon Tetrachloride	5.498	117	339738	19.50 ug/L	99
34) 1,2-Dichloroethane	5.839	62	453489	20.57 ug/L #	95
35) 1,1,1-Trichloroethane	5.263	97	425571	19.08 ug/L	93
36) 1,1-Dichloropropene	5.510	110	145009	19.68 ug/L	90
37) 1-Butanol	6.800	56	227201	444.53 ug/L	98
38) Benzene	5.798	78	1195474	18.36 ug/L	94
39) Trichloroethene	6.733	95	336318	20.44 ug/L	95
40) 1,2-Dichloropropane	7.048	63	308505	19.45 ug/L #	88
41) 1,4-Dioxane	7.283	88	56377	226.76 ug/L	98
42) Bromodichloromethane	7.463	83	409166	20.30 ug/L	98
43) Dibromomethane	7.205	93	191913	19.55 ug/L	98
44) 2-Nitropropane	7.803	41	104560	24.85 ug/L #	85
45) 2-Chloroethylvinyl ether	7.950	63	256732	28.99 ug/L	94

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\062113\
Data File : 06211306.D
Acq On : 21 Jun 2013 1:36 pm Operator: PS
Sample : LCSD VLCSD062113-7 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 5

Quant Time: Jun 21 14:04:08 2013
Quant Method : C:\MSDCHEM\1\DATA\VOA7\062113\W7060913.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominMon Jun 10 14:34:29 2013
QLast Update : Mon Jun 10 14:34:29 2013
Response via : Initial Calibration

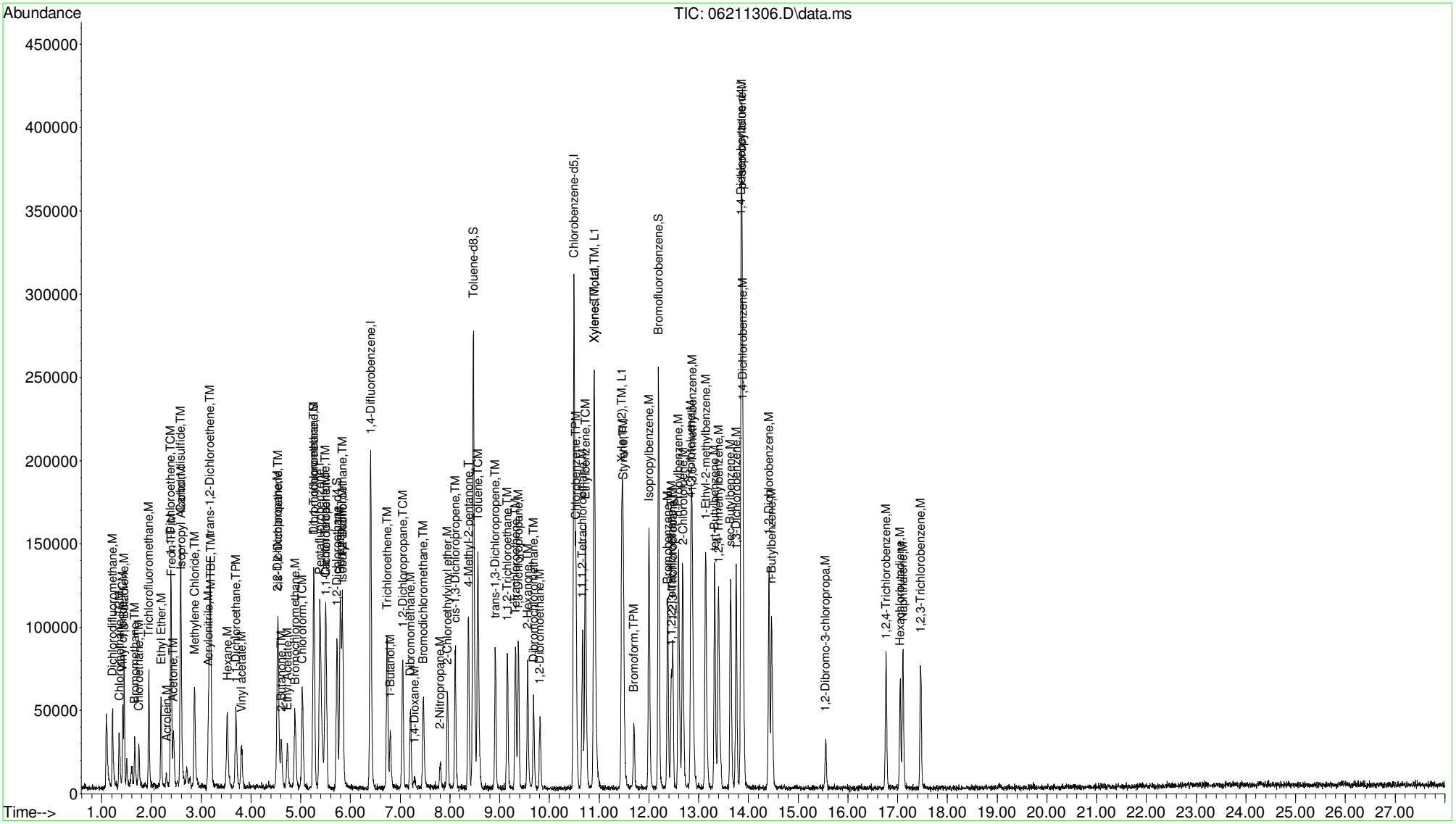
	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
46)	4-Methyl-2-pentanone	8.375	43	793068	42.59 ug/L	99
47)	cis-1,3-Dichloropropene	8.103	75	495128	18.70 ug/L	89
49)	Toluene	8.565	92	787192	19.07 ug/L	95
51)	trans-1,3-Dichloropropene	8.912	75	472088	20.85 ug/L	92
52)	2-Hexanone	9.560	43	579312	42.78 ug/L	97
53)	1,1,2-Trichloroethane	9.155	83	260151	21.16 ug/L	99
54)	1,3-Dichloropropane	9.379	76	517870	19.90 ug/L	96
55)	Tetrachloroethene	9.315	164	234901	20.40 ug/L	97
56)	Dibromochloromethane	9.681	129	312000	22.00 ug/L	97
57)	1,2-Dibromoethane	9.809	107	313572	21.10 ug/L #	93
58)	Chlorobenzene	10.530	112	889276	21.77 ug/L	98
59)	Ethylbenzene	10.724	91	1532658	20.38 ug/L	99
60)	1,1,1,2-Tetrachloroethane	10.664	131	282002	20.59 ug/L	91
61)	Xylene	10.900	106	1158163	41.69 ug/L	98
62)	Xylene (2)	11.454	106	588034	21.83 ug/L	95
63)	Xylenes, Total	10.900	106	1746198m	63.50 ug/L #	
64)	Styrene	11.480	104	952330	19.22 ug/L	98
65)	Isopropylbenzene	12.001	105	1332196	21.86 ug/L	97
66)	Bromoform	11.700	173	201222	20.21 ug/L #	96
67)	1,1,2,2-Tetrachloroethane	12.450	83	362590	18.09 ug/L	96
70)	1,2,3-Trichloropropane	12.481	75	350482	21.84 ug/L #	42
71)	n-Propylbenzene	12.596	91	1566292	23.95 ug/L	99
72)	Bromobenzene	12.376	156	374419	21.19 ug/L #	92
73)	1,3,5-Trimethylbenzene	12.871	105	1080846	20.56 ug/L	97
74)	2-Chlorotoluene	12.682	91	1017253	22.40 ug/L	98
75)	4-Chlorotoluene	12.843	91	1197696	23.67 ug/L	97
76)	tert-Butylbenzene	13.323	119	830834	23.34 ug/L	95
77)	1-Ethyl-2-methylbenzene	13.139	105	1348235	21.35 ug/L	99
78)	1,2,4-Trimethylbenzene	13.401	105	1069021	20.71 ug/L	99
79)	sec-Butylbenzene	13.642	105	1155141	22.21 ug/L	98
80)	p-Isopropyltoluene	13.871	119	961710	22.50 ug/L	99
81)	1,3-Dichlorobenzene	13.755	146	655762	22.75 ug/L	98
82)	1,4-Dichlorobenzene	13.888	146	709742	22.26 ug/L	98
83)	n-Butylbenzene	14.465	91	776950	20.90 ug/L	99
84)	1,2-Dichlorobenzene	14.412	146	634399	23.00 ug/L	95
85)	1,2-Dibromo-3-chloropropa	15.548	75	77100	23.76 ug/L #	16
86)	1,2,4-Trichlorobenzene	16.769	180	273913	20.88 ug/L	97
87)	Hexachlorbutadiene	17.050	225	130140	21.16 ug/L	97
88)	Naphthalene	17.104	128	820831	25.34 ug/L	99
89)	1,2,3-Trichlorobenzene	17.459	180	244142	21.79 ug/L	99

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\062113\
Data File : 06211306.D
Acq On : 21 Jun 2013 1:36 pm Operator: PS
Sample : LCSD VLCSD062113-7 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 5

Quant Time: Jun 21 14:04:08 2013
Quant Method : C:\MSDCHEM\1\DATA\VOA7\062113\W7060913.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominMon Jun 10 14:34:29 2013
QLast Update : Mon Jun 10 14:34:29 2013
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\062113\
Data File : 06211306.D
Acq On : 21 Jun 2013 1:36 pm Operator: PS
Sample : LCSD VLCSD062113-7 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 5

Quant Time: Jun 21 14:04:08 2013
Quant Method : C:\MSDCHEM\1\DATA\VOA7\062113\W7060913.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominMon Jun 10 14:34:29 2013
QLast Update : Mon Jun 10 14:34:29 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Pentafluorobenzene	5.386	168	1222866	30.00 ug/L	0.00
31) 1,4-Difluorobenzene	6.405	114	2002170	30.00 ug/L	0.00
50) Chlorobenzene-d5	10.492	82	1121821	30.00 ug/L	0.00
69) 1,4-Dichlorobenzene-d4	13.854	152	1049326	30.00 ug/L	0.00
System Monitoring Compounds					
29) Dibromofluoromethane	5.262	113	548416	30.79 ug/L	0.00
Spiked Amount 30.000	Range 86 - 118		Recovery = 102.63%		
32) 1,2-Dichloroethane-d4	5.727	102	144220	31.31 ug/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 104.37%		
48) Toluene-d8	8.472	98	2536814	30.99 ug/L	0.00
Spiked Amount 30.000	Range 88 - 110		Recovery = 103.30%		
68) Bromofluorobenzene	12.194	174	827367	29.62 ug/L	0.00
Spiked Amount 30.000	Range 86 - 115		Recovery = 98.73%		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.217	85	419409	18.97 ug/L	99
3) Chloromethane	1.351	50	390558	22.86 ug/L	93
4) Vinyl chloride	1.424	62	398470	18.78 ug/L	99
5) 1,3-Butadiene	1.451	39	211512	14.55 ug/L	91
6) Bromomethane	1.664	96	148644	27.98 ug/L	84
7) Chloroethane	1.745	64	221800	20.29 ug/L	84
8) Trichlorofluoromethane	1.945	101	444926	18.69 ug/L	98
9) Isopropyl Alcohol	2.592	45	566489	435.74 ug/L #	89
10) Ethyl Ether	2.193	59	260794	19.12 ug/L	93
11) Acrolein	2.305	56	54098	19.46 ug/L	90
12) Acetone	2.440	43	365756	57.34 ug/L	97
13) Freon-TF	2.396	151	196715	19.07 ug/L	91
14) 1,1-Dichloroethene	2.386	96	241799	18.07 ug/L	96
15) Methylene Chloride	2.864	84	316513	18.54 ug/L	91
16) Carbon disulfide	2.586	76	1655535	33.05 ug/L	100
17) Acrylonitrile	3.145	53	304698	40.16 ug/L	95
18) MTBE	3.190	73	988279	20.05 ug/L	98
19) Hexane	3.525	57	285708	20.97 ug/L	96
20) trans-1,2-Dichloroethene	3.171	96	294493	18.21 ug/L	93
21) Vinyl acetate	3.810	43	468245	13.21 ug/L	96
22) 1,1-Dichloroethane	3.699	63	511000	18.92 ug/L	97
23) 2-Butanone	4.613	72	106129	41.45 ug/L #	71
24) 2,2-Dichloropropane	4.534	77	430104	17.82 ug/L	88
25) cis-1,2-Dichloroethene	4.546	96	312742	17.73 ug/L	97
26) Ethyl Acetate	4.733	45	55241	19.22 ug/L #	72
27) Chloroform	5.032	83	522132	19.94 ug/L	97
28) Bromochloromethane	4.892	128	150848	21.41 ug/L #	84
30) Isobutyl alcohol	5.841	43	385033	467.89 ug/L	95
33) Carbon Tetrachloride	5.498	117	339738	19.50 ug/L	99
34) 1,2-Dichloroethane	5.839	62	453489	20.57 ug/L #	95
35) 1,1,1-Trichloroethane	5.263	97	425571	19.08 ug/L	93
36) 1,1-Dichloropropene	5.510	110	145009	19.68 ug/L	90
37) 1-Butanol	6.800	56	227201	444.53 ug/L	98
38) Benzene	5.798	78	1195474	18.36 ug/L	94
39) Trichloroethene	6.733	95	336318	20.44 ug/L	95
40) 1,2-Dichloropropane	7.048	63	308505	19.45 ug/L #	88
41) 1,4-Dioxane	7.283	88	56377	226.76 ug/L	98
42) Bromodichloromethane	7.463	83	409166	20.30 ug/L	98
43) Dibromomethane	7.205	93	191913	19.55 ug/L	98
44) 2-Nitropropane	7.803	41	104560	24.85 ug/L #	85
45) 2-Chloroethylvinyl ether	7.950	63	256732	28.99 ug/L	94

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\062113\
Data File : 06211306.D
Acq On : 21 Jun 2013 1:36 pm Operator: PS
Sample : LCSD VLCSD062113-7 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 5

Quant Time: Jun 21 14:04:08 2013
Quant Method : C:\MSDCHEM\1\DATA\VOA7\062113\W7060913.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominMon Jun 10 14:34:29 2013
QLast Update : Mon Jun 10 14:34:29 2013
Response via : Initial Calibration

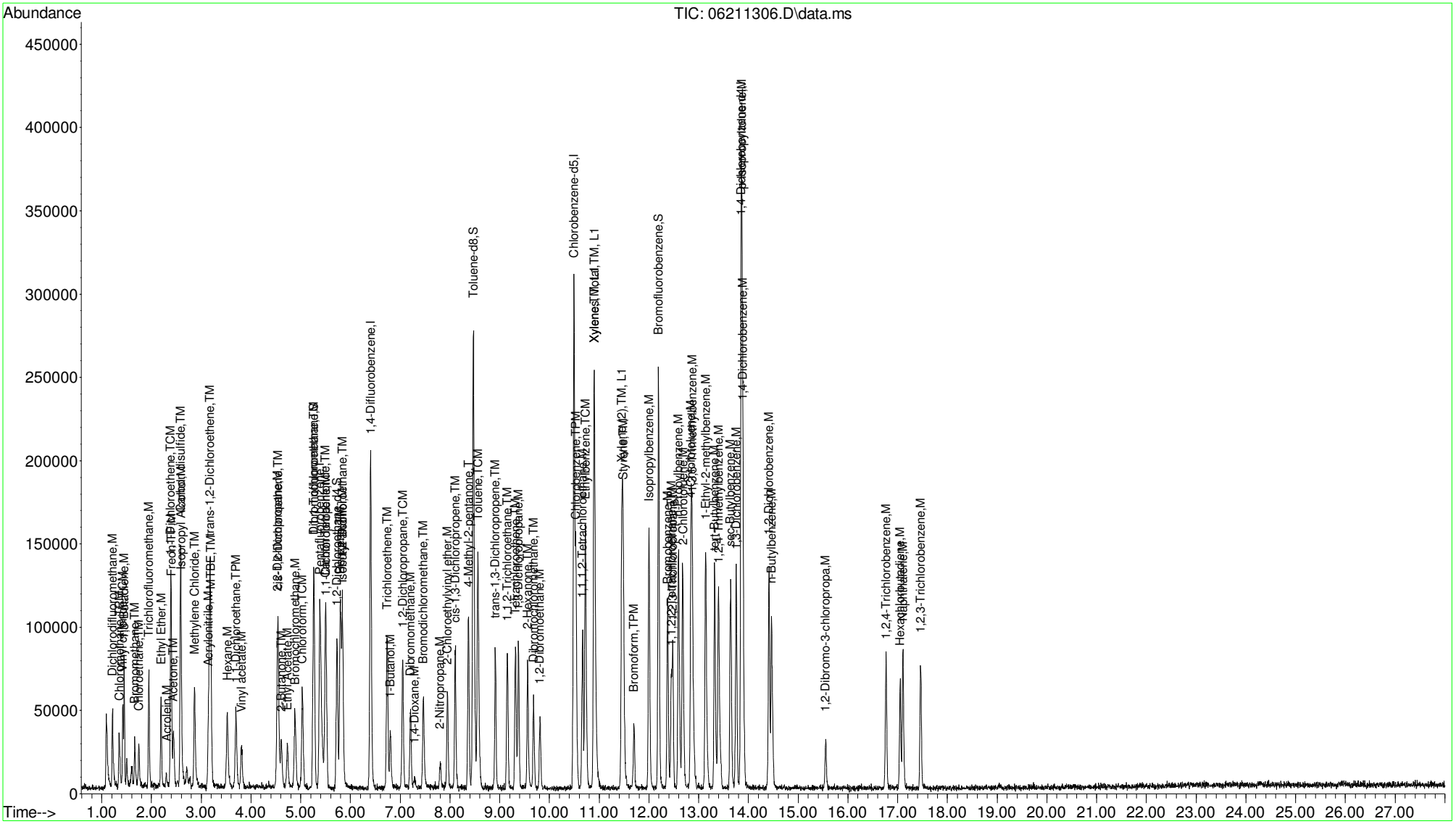
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
46) 4-Methyl-2-pentanone	8.375	43	793068	42.59 ug/L	99
47) cis-1,3-Dichloropropene	8.103	75	495128	18.70 ug/L	89
49) Toluene	8.565	92	787192	19.07 ug/L	95
51) trans-1,3-Dichloropropene	8.912	75	472088	20.85 ug/L	92
52) 2-Hexanone	9.560	43	579312	42.78 ug/L	97
53) 1,1,2-Trichloroethane	9.155	83	260151	21.16 ug/L	99
54) 1,3-Dichloropropane	9.379	76	517870	19.90 ug/L	96
55) Tetrachloroethene	9.315	164	234901	20.40 ug/L	97
56) Dibromochloromethane	9.681	129	312000	22.00 ug/L	97
57) 1,2-Dibromoethane	9.809	107	313572	21.10 ug/L #	93
58) Chlorobenzene	10.530	112	889276	21.77 ug/L	98
59) Ethylbenzene	10.724	91	1532658	20.38 ug/L	99
60) 1,1,1,2-Tetrachloroethane	10.664	131	282002	20.59 ug/L	91
61) Xylene	10.900	106	1158163	41.69 ug/L	98
62) Xylene (2)	11.454	106	588034	21.83 ug/L	95
63) Xylenes, Total	10.900	106	1746198m	63.50 ug/L #	
64) Styrene	11.480	104	952330	19.22 ug/L	98
65) Isopropylbenzene	12.001	105	1332196	21.86 ug/L	97
66) Bromoform	11.700	173	201222	20.21 ug/L #	96
67) 1,1,2,2-Tetrachloroethane	12.450	83	362590	18.09 ug/L	96
70) 1,2,3-Trichloropropane	12.481	75	350482	21.84 ug/L #	42
71) n-Propylbenzene	12.596	91	1566292	23.95 ug/L	99
72) Bromobenzene	12.376	156	374419	21.19 ug/L #	92
73) 1,3,5-Trimethylbenzene	12.871	105	1080846	20.56 ug/L	97
74) 2-Chlorotoluene	12.682	91	1017253	22.40 ug/L	98
75) 4-Chlorotoluene	12.843	91	1197696	23.67 ug/L	97
76) tert-Butylbenzene	13.323	119	830834	23.34 ug/L	95
77) 1-Ethyl-2-methylbenzene	13.139	105	1348235	21.35 ug/L	99
78) 1,2,4-Trimethylbenzene	13.401	105	1069021	20.71 ug/L	99
79) sec-Butylbenzene	13.642	105	1155141	22.21 ug/L	98
80) p-Isopropyltoluene	13.871	119	961710	22.50 ug/L	99
81) 1,3-Dichlorobenzene	13.755	146	655762	22.75 ug/L	98
82) 1,4-Dichlorobenzene	13.888	146	709742	22.26 ug/L	98
83) n-Butylbenzene	14.465	91	776950	20.90 ug/L	99
84) 1,2-Dichlorobenzene	14.412	146	634399	23.00 ug/L	95
85) 1,2-Dibromo-3-chloropropa	15.548	75	77100	23.76 ug/L #	16
86) 1,2,4-Trichlorobenzene	16.769	180	273913	20.88 ug/L	97
87) Hexachlorbutadiene	17.050	225	130140	21.16 ug/L	97
88) Naphthalene	17.104	128	820831	25.34 ug/L	99
89) 1,2,3-Trichlorobenzene	17.459	180	244142	21.79 ug/L	99

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\062113\
Data File : 06211306.D
Acq On : 21 Jun 2013 1:36 pm Operator: PS
Sample : LCSD VLCSD062113-7 Inst : VOA7
Misc : VOC_W+ Multiplr: 1.00
ALS Vial : 5

Quant Time: Jun 21 14:04:08 2013
Quant Method : C:\MSDCHEM\1\DATA\VOA7\062113\W7060913.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominMon Jun 10 14:34:29 2013
QLast Update : Mon Jun 10 14:34:29 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\062113\
Data File : 06211312.D
Acq On : 21 Jun 2013 5:34 pm Operator: PS
Sample : SAMP 13060604-001A Inst : VOA7
Misc : VOC_W+ 5mL Multiplr: 1.00
ALS Vial : 11

Quant Time: Jun 23 09:58:00 2013
Quant Method : C:\msdchem\1\DATA\VOA7\062113\W7060913.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominMon Jun 10 14:34:29 2013
QLast Update : Mon Jun 10 14:34:29 2013
Response via : Initial Calibration

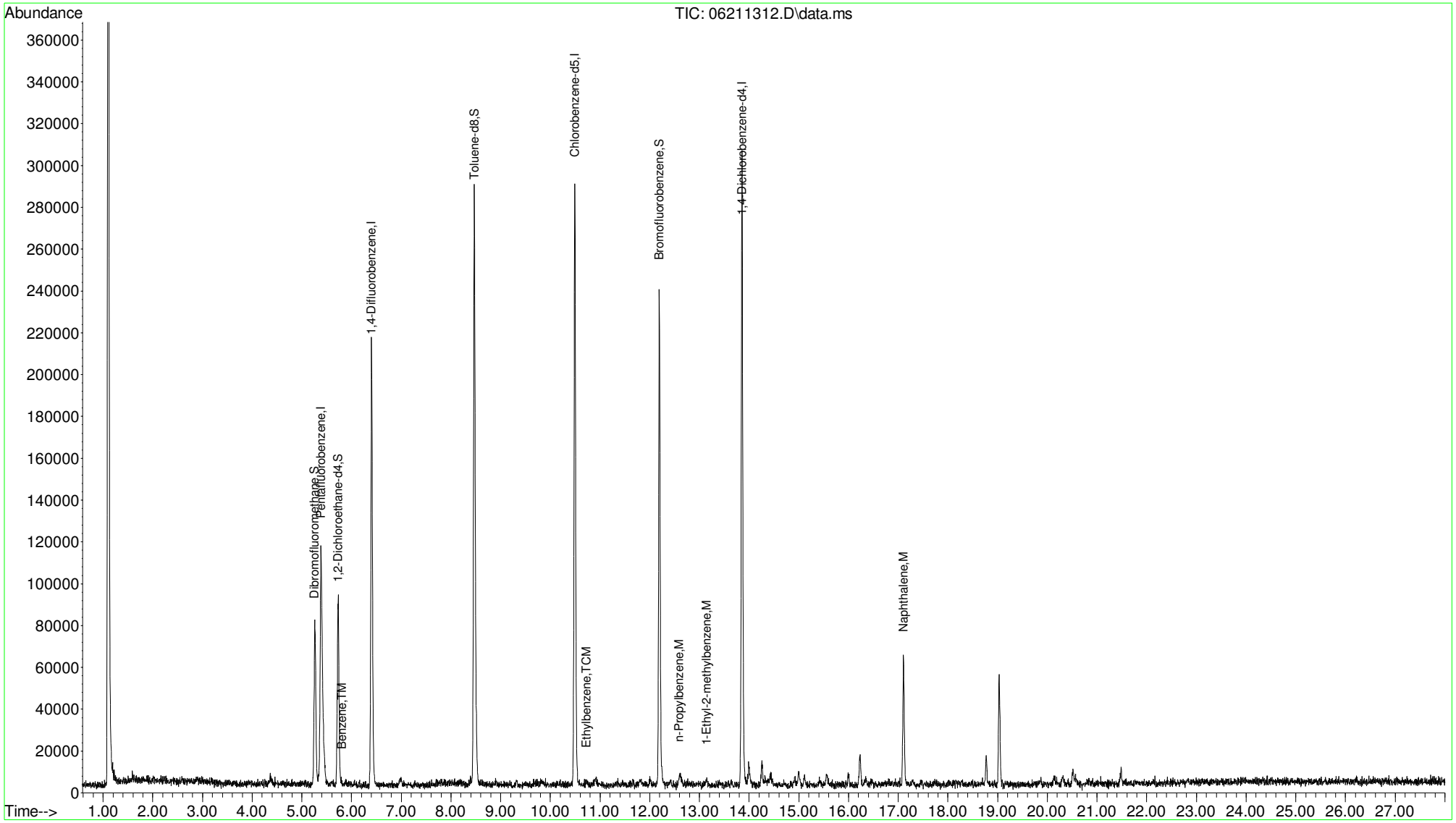
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	5.387	168	1232314	30.00	ug/L	0.00
31) 1,4-Difluorobenzene	6.402	114	2044068	30.00	ug/L	0.00
50) Chlorobenzene-d5	10.493	82	1119354	30.00	ug/L	0.00
69) 1,4-Dichlorobenzene-d4	13.858	152	1013883	30.00	ug/L	# 0.00
System Monitoring Compounds						
29) Dibromofluoromethane	5.260	113	554121	30.88	ug/L	0.00
Spiked Amount 30.000	Range 86 - 118		Recovery = 102.93%			
32) 1,2-Dichloroethane-d4	5.734	102	140998	29.98	ug/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 99.93%			
48) Toluene-d8	8.470	98	2483958	29.73	ug/L	0.00
Spiked Amount 30.000	Range 88 - 110		Recovery = 99.10%			
68) Bromofluorobenzene	12.195	174	794614	28.51	ug/L	0.00
Spiked Amount 30.000	Range 86 - 115		Recovery = 95.03%			
Target Compounds						Qvalue
38) Benzene	5.810	78	19374	0.29	ug/L #	1
59) Ethylbenzene	10.726	91	21290	0.28	ug/L #	44
71) n-Propylbenzene	12.597	91	50256	0.80	ug/L #	53
77) 1-Ethyl-2-methylbenzene	13.145	105	21850	0.36	ug/L #	44
88) Naphthalene	17.107	128	604588	19.31	ug/L	100

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\062113\
Data File : 06211312.D
Acq On : 21 Jun 2013 5:34 pm Operator: PS
Sample : SAMP 13060604-001A Inst : VOA7
Misc : VOC_W+ 5mL Multiplr: 1.00
ALS Vial : 11

Quant Time: Jun 23 09:58:00 2013
Quant Method : C:\msdchem\1\DATA\VOA7\062113\W7060913.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominMon Jun 10 14:34:29 2013
QLast Update : Mon Jun 10 14:34:29 2013
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\062113\
Data File : 06211312.D
Acq On : 21 Jun 2013 5:34 pm Operator: PS
Sample : SAMP 13060604-001A Inst : VOA7
Misc : VOC_W+ 5mL Multiplr: 1.00
ALS Vial : 11

Quant Time: Jun 23 09:57:30 2013
Quant Method : C:\msdchem\1\DATA\VOA7\062113\W7060913.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominMon Jun 10 14:34:29 2013
QLast Update : Mon Jun 10 14:34:29 2013
Response via : Initial Calibration

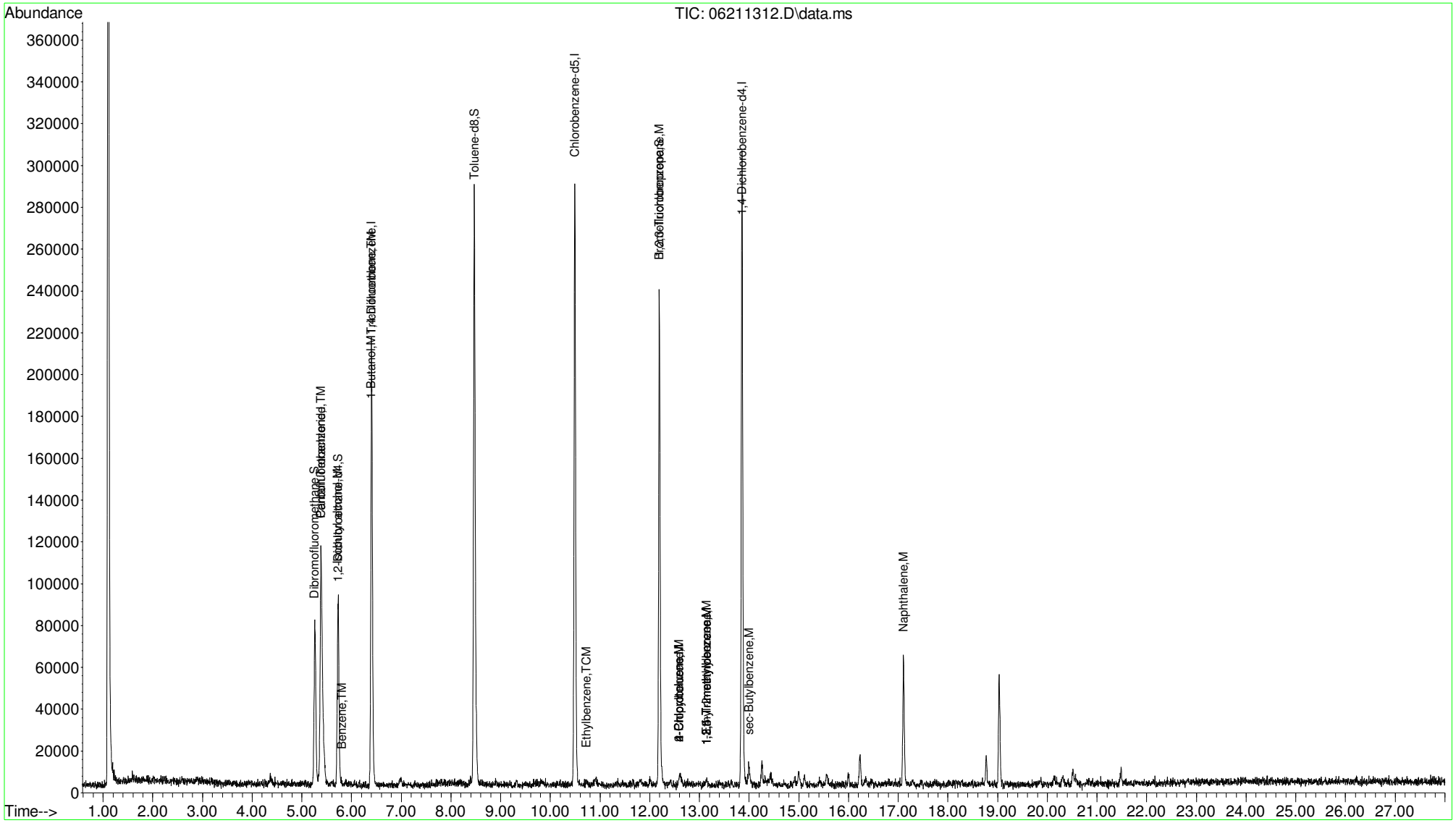
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	5.387	168	1232314	30.00	ug/L	0.00
31) 1,4-Difluorobenzene	6.402	114	2044068	30.00	ug/L	0.00
50) Chlorobenzene-d5	10.493	82	1119354	30.00	ug/L	0.00
69) 1,4-Dichlorobenzene-d4	13.858	152	1013883	30.00	ug/L	# 0.00
System Monitoring Compounds						
29) Dibromofluoromethane	5.260	113	554121	30.88	ug/L	0.00
Spiked Amount 30.000	Range 86 - 118		Recovery = 102.93%			
32) 1,2-Dichloroethane-d4	5.734	102	140998	29.98	ug/L	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 99.93%			
48) Toluene-d8	8.470	98	2483958	29.73	ug/L	0.00
Spiked Amount 30.000	Range 88 - 110		Recovery = 99.10%			
68) Bromofluorobenzene	12.195	174	794614	28.51	ug/L	0.00
Spiked Amount 30.000	Range 86 - 115		Recovery = 95.03%			
Target Compounds						Qvalue
30) Isobutyl alcohol	5.725	43	7089	8.55	ug/L #	21
33) Carbon Tetrachloride	5.386	117	30530	1.72	ug/L #	12
37) 1-Butanol	6.395	56	47193	90.44	ug/L #	17
38) Benzene	5.810	78	19374	0.29	ug/L #	1
39) Trichloroethene	6.404	95	50603	3.01	ug/L #	7
59) Ethylbenzene	10.726	91	21290	0.28	ug/L #	44
70) 1,2,3-Trichloropropane	12.191	75	525566	33.89	ug/L #	42
71) n-Propylbenzene	12.597	91	50256	0.80	ug/L #	53
73) 1,3,5-Trimethylbenzene	13.145	105	21781	0.43	ug/L #	30
74) 2-Chlorotoluene	12.597	91	44702	1.02	ug/L #	43
75) 4-Chlorotoluene	12.597	91	50266	1.03	ug/L #	46
77) 1-Ethyl-2-methylbenzene	13.145	105	21850	0.36	ug/L #	44
78) 1,2,4-Trimethylbenzene	13.145	105	32842	0.66	ug/L #	39
79) sec-Butylbenzene	13.997	105	80382	1.60	ug/L #	56
88) Naphthalene	17.107	128	604588	19.31	ug/L	100

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\VOA7\062113\
Data File : 06211312.D
Acq On : 21 Jun 2013 5:34 pm Operator: PS
Sample : SAMP 13060604-001A Inst : VOA7
Misc : VOC_W+ 5mL Multiplr: 1.00
ALS Vial : 11

Quant Time: Jun 23 09:57:30 2013
Quant Method : C:\msdchem\1\DATA\VOA7\062113\W7060913.M
Quant Title : VOC-7 Water-8260B/624 J&W 20m x 180um x 1um nominMon Jun 10 14:34:29 2013
QLast Update : Mon Jun 10 14:34:29 2013
Response via : Initial Calibration



STAT Analysis Corporation

Semi-Volatile Organic Compounds (SVOCs)

SW846 8270C

Quality Control Data

Client: NRT, Inc.
Project: 69420, Peoples Gas - Willow Street / Hawthorne Ave
Lab Order: 13060604
Date Received: June 18, 2013

STAT **Analysis Corporation**

CLIENT: Natural Resource Technology, Inc.
Work Order: 13060604
Project: 69420, Peoples Gas - Willow Street / Hawthorne Ave
Test No: SW8270C-SIM **Matrix:** W

QC SUMMARY REPORT
SURROGATE RECOVERIES

Sample ID	DCBZ12D4	NO2BZD5	PHEN2F	PHEND14				
13060604-001B	59.0	68.4	68.6	72.6				
MB-69946-PNA	80.0	94.6	89.6	89.0				
LCS-69946-PNA	72.8	82.8	83.0	81.8				
LCSD-69946-PNA	69.4	79.0	77.4	80.2				

Acronym		Surrogate	QC Limits
DCBZ12D4	=	1,2-Dichlorobenzene-d4	16-110
NO2BZD5	=	Nitrobenzene-d5	35-114
PHEN2F	=	2-Fluorobiphenyl	43-116
PHEND14	=	4-Terphenyl-d14	33-141

*** Surrogate recovery outside acceptance limit**

STAT **Analysis Corporation**

PREP BATCH REPORT

Prep Start Date: **6/19/2013 9:34:13 A**
Prep End Date:

Prep Factor Units: **mL / L**

Prep Batch **69946** Prep Code: **3510_PNA** Technician: **VCC**

Sample ID	Matrix	pH	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
MB-69946-PNA			1	0	0	1	1.000	6/19/2013	6/20/2013
LCS-69946-PNA			1	0	0	1	1.000	6/19/2013	6/20/2013
LCSD-69946-PNA			1	0	0	1	1.000	6/19/2013	6/20/2013
13060561-001B	Water		1	0	0	1	1.000	6/19/2013	6/20/2013
13060561-002B	Water		1	0	0	1	1.000	6/19/2013	6/20/2013
13060561-003B	Water		1	0	0	1	1.000	6/19/2013	6/20/2013
13060561-004B	Water		1	0	0	1	1.000	6/19/2013	6/20/2013
13060561-005B	Water		1	0	0	1	1.000	6/19/2013	6/20/2013
13060561-006B	Water		1	0	0	1	1.000	6/19/2013	6/20/2013
13060561-007B	Water		1	0	0	1	1.000	6/19/2013	6/20/2013
13060602-001B	Water		1	0	0	1	1.000	6/19/2013	6/20/2013
13060603-001B	Water		1	0	0	1	1.000	6/19/2013	6/20/2013
13060604-001B	Water		1	0	0	1	1.000	6/19/2013	6/20/2013

INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: STAT Analysis SDG No.: 13060604

Lab Code: _____

Lab File ID (Standard): 06211303.D Date Analyzed: 6/21/2013

Instrument ID: SVOC-7 Time Analyzed: 10:21

GC Column: ID: (mm)

	IS1 (DCB) AREA #	RT #	IS2 (NPT) AREA #	RT #	IS3 (ANT) AREA #	RT #	IS4 (PHN) AREA #	RT #
12 HOUR STD	43185	4.434	129172	5.493	87528	6.959	177672	8.168
UPPER LIMIT	86370	4.934	258344	5.993	175056	7.459	355344	8.668
LOWER LIMIT	21593	3.934	64586	4.993	43764	6.459	88836	7.668
SAMPLE NO.								
01 061813076	41505	4.43	133268	5.49	93057	6.95	186403	8.17
02 MB-69946-PNA	36146	4.43	117034	5.49	82820	6.96	167564	8.17
03 LCS-69946-PNA	40469	4.43	124495	5.49	86207	6.96	179847	8.17
04 LCSD-69946-PNA	38347	4.43	122117	5.49	83618	6.96	176854	8.17

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10
IS4 (PHN) = Phenanthrene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: STAT Analysis SDG No.: 13060604

Lab Code: _____

Lab File ID (Standard): 06211303.D Date Analyzed: 6/21/2013

Instrument ID: SVOC-7 Time Analyzed: 10:21

GC Column: ID: (mm)

		IS5 (CRY) AREA #	RT #	IS6 (PRY) AREA #	RT #				
	12 HOUR STD	218075	10.409	185121	11.650				
	UPPER LIMIT	436150	10.909	370242	12.150				
	LOWER LIMIT	109038	9.909	92561	11.150				
	SAMPLE NO.								
01	061813076	230269	10.41	174589	11.67				
02	MB-69946-PNA	195600	10.41	124294	11.66				
03	LCS-69946-PNA	219598	10.41	154832	11.65				
04	LCSD-69946-PNA	207470	10.41	143450	11.66				

IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

Semi-Volatile Organic Compounds (SVOCs)

SW846 8270C

Initial Calibration

Client: NRT, Inc.
Project: 69420, Peoples Gas - Willow Street / Hawthorne Ave
Lab Order: 13060604
Date Received: June 18, 2013

ATTACHMENT 4: DATA REVIEW CHECKLIST – BATCH DATA

SemiVolatiles SOP 4020, EPA 8270C

First Level Reviewer: DMarisca Review Date: 6/27/13

Second Level Reviewer: M Pendleton Review Date: 6/27/13

Analysis date: 6/5/13 Batch Start Time: 1311 Instrument: 5000-7

Page 1 of 1 Continuing Calibration Verification (CCV) and Batch Data

Item	Aspect	1st Yes	Level No	2nd Yes	Level No	Comments: record routine corrective actions here	CAR # QER#
1	Tune meets criteria	✓		✓			
2	All Analyses in tune period 12hr	✓		✓			
3	CCV Acceptance criteria met: SPCCs: =0.05 CCCs: = 20%D RT: ± 30 seconds Int stds: -50% to +100% Correct ICAL RFs used	✓ ✓ ✓ ✓ ✓ ✓		✓ ✓ ✓ ✓ ✓ ✓			
4	Method Blank < RL False pos/neg checked Surrogates acceptable	✓ ✓ ✓		✓ ✓ ✓			
5	LCS/LCSD recovery acceptable Surrogates acceptable	✓ ✓		✓ ✓			
6	MS/MSD recov/RPD acceptable Surrogates acceptable	✓ ✓		✓ ✓			
7	Test Samples: Correct IDs Surrogates acceptable False pos/neg checked RL, Units Results within curve Dilutions performed	✓ ✓ ✓ ✓ ✓ ✓		✓ ✓ ✓ ✓ ✓ ✓			
8	MB, LCS/LCSD, MS/MSD per batch of 20 samples	✓		✓			
9	Manual Integration acceptable: List files	✓		✓		see attachment	
10	Int Stds Check (optional)	✓		✓			
11	Tune & QC Solns ID recorded	✓		✓		58-39-516, 5-41	
12	All other information recorded	✓		✓			
13	LIMS transcription correct	✓		✓			
14	Analysis within holding time	✓		✓			
15	All samples correct pH	NA		NA			
16	Autosampler tray checked	✓		✓			
17	Corrections properly recorded	✓		✓			

Additional Comments:

ATTACHMENT 3: DATA REVIEW CHECKLIST - ICAL

SemiVolatiles SOP 4020, EPA 8270C

First Level Reviewer: J Marisceal Review Date: 6/27/13

Second Level Reviewer: M Pendleton Review Date: 6/27/13

Analysis date: 6/5/13 Batch Start Time: 1011 Instrument: SVOC-7

ICAL Data File #s: 06051303 - 06051308

Page 1 of 1 Initial Calibration (ICAL)

Item	Aspect	1st Yes	Level No	2nd Yes	Level No	Comments: record routine corrective actions here	CAR # / QER #
1	Tune meets criteria	✓		✓			
2	# of Stds 8 (minimum = 5)	✓		✓			
3	All Stds in tune period: 12hr All Stds. Sequenced w/in 36 hrs.	✓ ✓		✓ ✓			
4	Acceptance criteria met for: SPCCs: =0.05 CCCs: = 30 % RSD %RSD = 15% avg RF used r = 0.99 linear regression used RRT ± 0.06 RT units	✓ ✓ ✓ ✓ ✓		✓ ✓ ✓ ✓ ✓ ✓			
5	Calibration updated: RF RT Mid-level used for int stds Correct data files used	✓ ✓ ✓ ✓		✓ ✓ ✓ ✓ ✓			
6	RL = low std = 1 µg/mL RL = 1 µg/mL for (list)	✓		✓			
7	High std = 120 µg/mL High std = 120 µg/mL for (list)	✓		✓			
8	ICV acceptable for: CCCs: = 20%D RT: ± 30 seconds Int stds: -50% to +100% Other compounds	✓ ✓ ✓ ✓		✓ ✓ ✓ ✓ ✓			
9	Manual Integration acceptable: List files	✓		✓		see attachments	
10	Tune & QC Solns ID recorded	✓		✓		558-565, 516, 544-559	
11	All other information recorded	✓		✓			

Additional Comments:

Injection Log

Instrument Name: SVOC-7
Data Directory: C:\msdchem\1\data\060513\

Line	Vial	FileName	Mult	SampleName	Misc Info	Injected
1	20	06041320.D	1.	SAMP 13051144-008A	TO_13A	4 Jun 2013 6:19 pm
2	1	06051301.D	1.	SOLVENT BLANK	SOLVENT BLANK	5 Jun 2013 9:49 am
3	2	06051302.D	1.	TUNE DFTPP-1	DFTPP_D	5 Jun 2013 10:11 am
4	3	06051303.D	1.	ICAL 0.1 SSTD	PNA_QC	5 Jun 2013 10:34 am
5	4	06051304.D	1.	ICAL 0.5 SSTD	PNA_QC	5 Jun 2013 10:56 am
6	5	06051305.D	1.	ICAL 1.0 SSTD	PNA_QC	5 Jun 2013 11:18 am
7	6	06051306.D	1.	ICAL 5.0 SSTD	PNA_QC	5 Jun 2013 11:41 am
8	7	06051307.D	1.	ICAL 7.5.0 SSTD	PNA_QC	5 Jun 2013 12:03 pm
9	8	06051308.D	1.	ICAL 10.0 SSTD	PNA_QC	5 Jun 2013 12:26 pm
10	9	06051309.D	1.	ICV 5.0 SSTD	PNA_QC	5 Jun 2013 12:48 pm
11	2	06051310.D	1.	TUNE DFTPP-1	DFTPP_D	5 Jun 2013 1:11 pm
12	6	06051311.D	1.	CCV 5.0 SSTD	PNA_QC	5 Jun 2013 1:33 pm
13	10	06051312.D	1.	SAMP 13051132-004B	PNA_WATER+	5 Jun 2013 1:56 pm
14	11	06051313.D	1.	SAMP 13051132-005B	PNA_WATER+	5 Jun 2013 2:18 pm
15	12	06051314.D	1.	SAMP 13051094-006B	PNA_WATER+	5 Jun 2013 2:40 pm
16	13	06051315.D	1.	SAMP 13051094-007B	PNA_WATER+	5 Jun 2013 3:03 pm
17	14	06051316.D	1.	SAMP 13051179-002B	PNA_WATER+	5 Jun 2013 3:25 pm
18	15	06051317.D	1.	SAMP 13051179-003B	PNA_WATER+	5 Jun 2013 3:48 pm
19	16	06051318.D	1.	MBLK MB-69597-PNA	PNA_WATER+	5 Jun 2013 4:10 pm
20	17	06051319.D	1.	SAMP 13051132-004B	PNA_WATER+	5 Jun 2013 4:33 pm
21	18	06051320.D	1.	SAMP 13051132-004B	PNA_WATER+	5 Jun 2013 4:55 pm
22	19	06051321.D	1.	LCS LCS-69597-PNA	PNA_WATER+	5 Jun 2013 5:17 pm
23	20	06051322.D	1.	MS 13051179-003BMS	PNA_WATER+	5 Jun 2013 5:40 pm
24	21	06051323.D	1.	MSD 13051179-003BMSD	PNA_WATER+	5 Jun 2013 6:02 pm
25	22	06051324.D	1.	SAMP 13051179-001B	PNA_WATER+	5 Jun 2013 6:24 pm
26	23	06051325.D	1.	SAMP 13051179-004B	PNA_WATER+	5 Jun 2013 6:47 pm
27	24	06051326.D	1.	MS 13051179-004BMS	PNA_WATER+	5 Jun 2013 7:09 pm
28	25	06051327.D	1.	MSD 13051179-004BMSD	PNA_WATER+	5 Jun 2013 7:31 pm
29	26	06051328.D	1.	SAMP 13051179-005B	PNA_WATER+	5 Jun 2013 7:54 pm
30	27	06051329.D	1.	SAMP 13051179-006B	PNA_WATER+	5 Jun 2013 8:16 pm
31	28	06051330.D	1.	SAMP 13051179-007B	PNA_WATER+	5 Jun 2013 8:38 pm
32	29	06051331.D	1.	SAMP 13051179-008B	PNA_WATER+	5 Jun 2013 9:01 pm
33	30	06051332.D	1.	SAMP 13051132-004B	PNA_WATER+	5 Jun 2013 9:23 pm

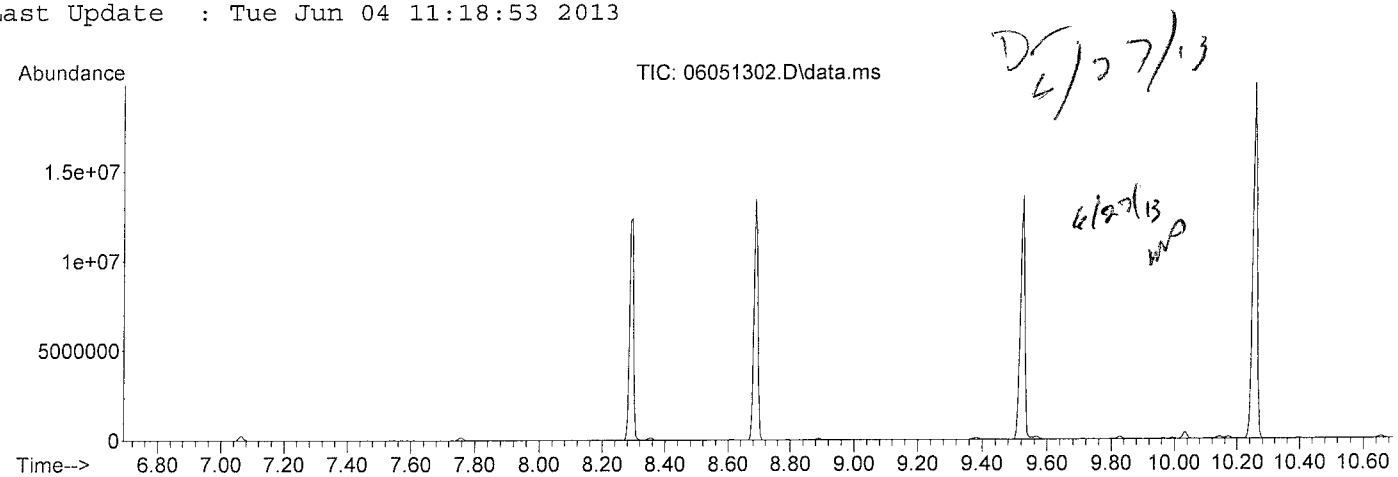
D 6/27/13

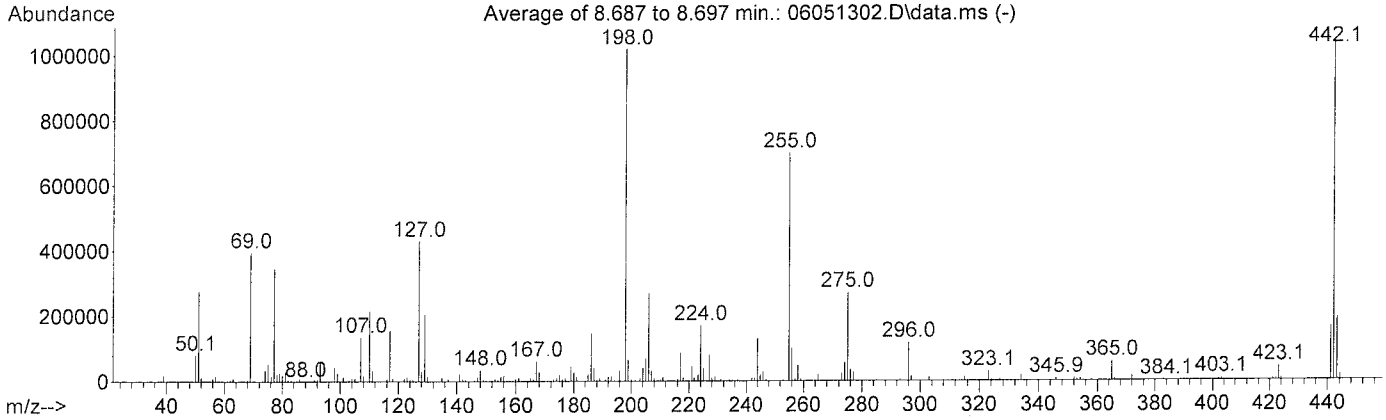
6/27/13 WP

Data Path : C:\msdchem\1\data\060513\
Data File : 06051302.D
Acq On : 5 Jun 2013 10:11 am
Operator : DM
Sample : TUNE DFTPP-1
Misc : DFTPP_D 58-39-516
ALS Vial : 2 Sample Multiplier: 1
InstName : SVOC-7

Integration File: events.e

Method : C:\msdchem\1\data\060513\dftpp.M
Title : DFTPP Tune
Last Update : Tue Jun 04 11:18:53 2013





Spectrum Information: Average of 8.687 to 8.697 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	442	10	80	26.6	277168	PASS
68	69	0.00	2	1.6	6387	PASS
69	198	0.00	100	38.8	396696	PASS
70	69	0.00	2	0.5	1896	PASS
127	442	10	80	41.4	431579	PASS
197	198	0.00	2	0.0	0	PASS
198	442	50	100	98.0	1021611	PASS
199	198	5	9	6.8	69160	PASS
275	442	10	60	26.1	271848	PASS
365	198	1	100	5.9	60232	PASS
441	442	0.01	24	15.9	165941	PASS
442	442	50	100	100.0	1041963	PASS
443	442	15	24	18.6	193701	PASS

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\060513\
Data File : 06051302.D
Acq On : 5 Jun 2013 10:11 am
Operator : DM
Sample : TUNE DFTPP-1
Misc : DFTPP_D 58-39-516
ALS Vial : 2 Sample Multiplier: 1
InstName : SVOC-7

Quant Time: Jun 05 15:48:21 2013
Quant Method : C:\msdchem\1\data\060513\dftpp.M
Quant Title : DFTPP Tune
QLast Update : Wed Jun 05 15:47:55 2013
Response via : Initial Calibration

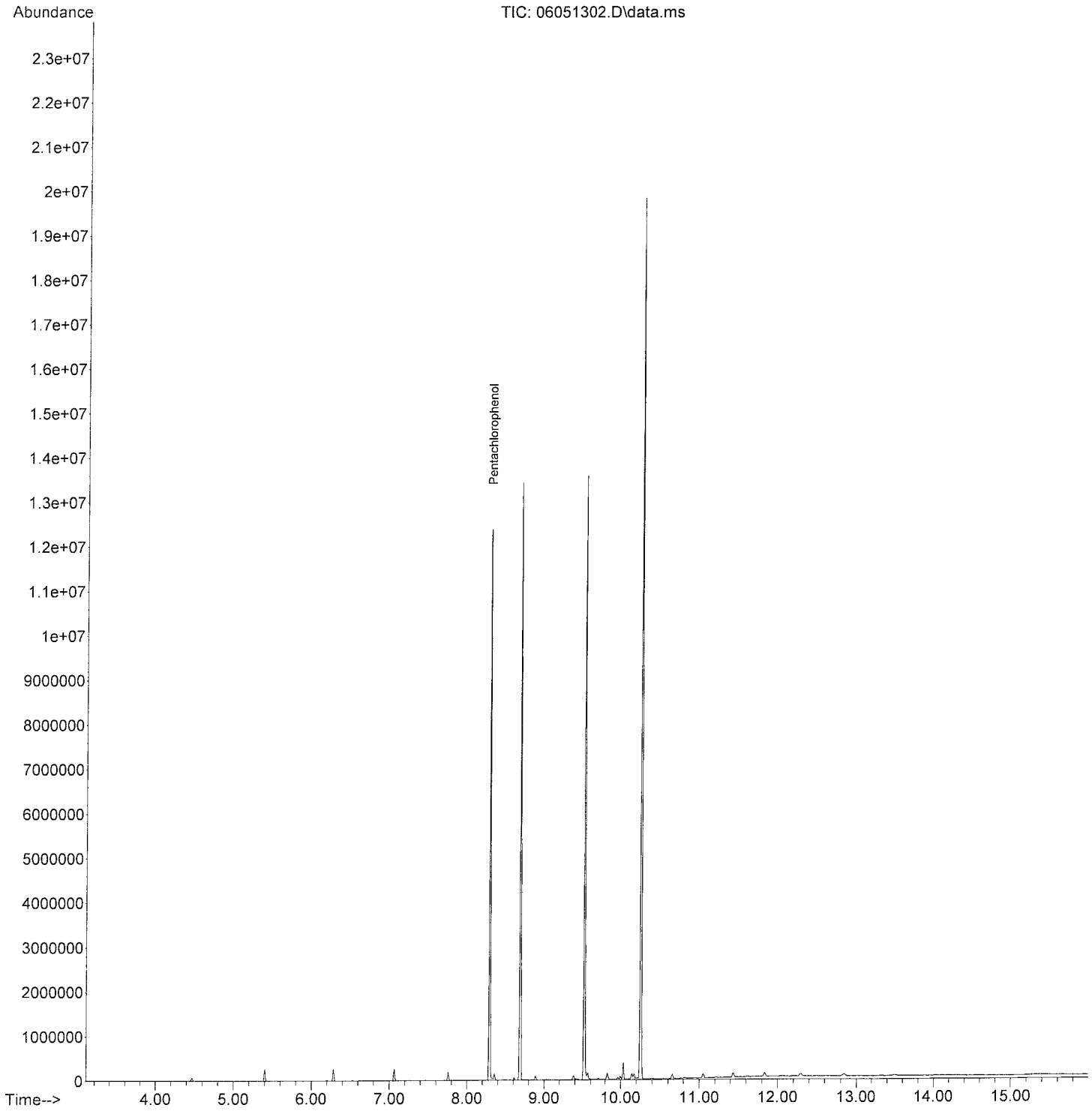
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
2) DFTPP	8.691	198	12865210	0.00	area	# 0.00
6) DDT	10.258	235	35163375	0.00	area	0.00
Target Compounds						Qvalue
1) Pentachlorophenol	8.297	266	14608271	424.82	area	99
3) Benzidine	9.527	184	52943152	N.D.		
4) DDE	0.000		0	N.D. d		
5) DDD	10.035	235	635788	N.D.		

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\060513\
Data File : 06051302.D
Acq On : 5 Jun 2013 10:11 am
Operator : DM
Sample : TUNE DFTPP-1
Misc : DFTPP_D 58-39-516
ALS Vial : 2 Sample Multiplier: 1
InstName : SVOC-7

Quant Time: Jun 05 15:48:21 2013
Quant Method : C:\msdchem\1\data\060513\dftpp.M
Quant Title : DFTPP Tune
QLast Update : Wed Jun 05 15:47:55 2013
Response via : Initial Calibration



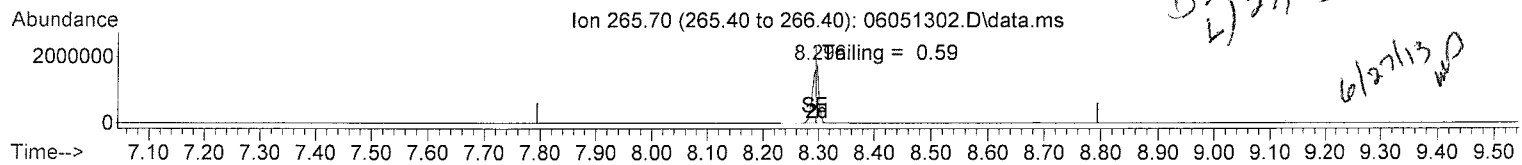
Quantitation Report (Qedit)

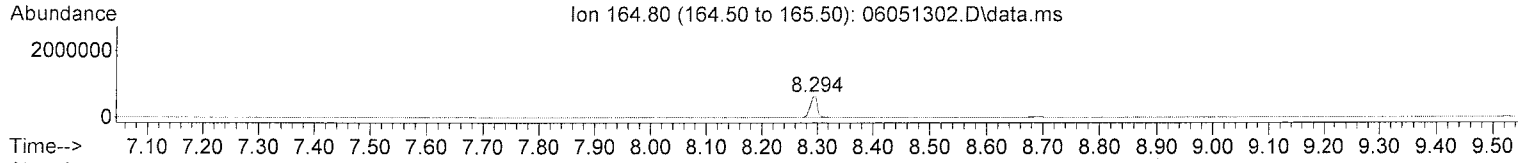
Data Path : C:\msdchem\1\data\060513\
Data File : 06051302.D
Acq On : 5 Jun 2013 10:11 am
Operator : DM
Sample : TUNE DFTPP-1
Misc : DFTPP_D 58-39-516
ALS Vial : 2 Sample Multiplier: 1
InstName : SVOC-7

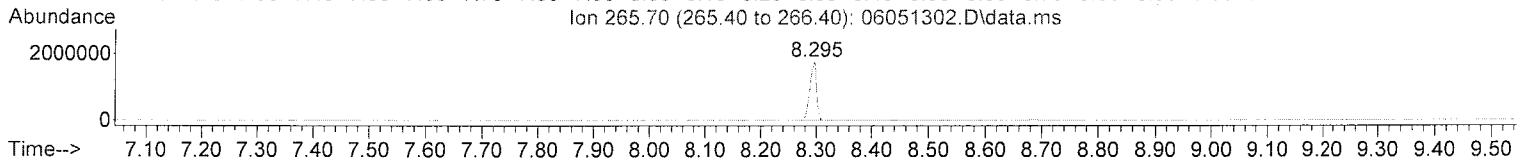
Quant Time: Jun 05 15:48:07 2013
Quant Method : C:\msdchem\1\data\060513\dftpp.M
Quant Title : DFTPP Tune
QLast Update : Wed Jun 05 15:47:55 2013
Response via : Initial Calibration

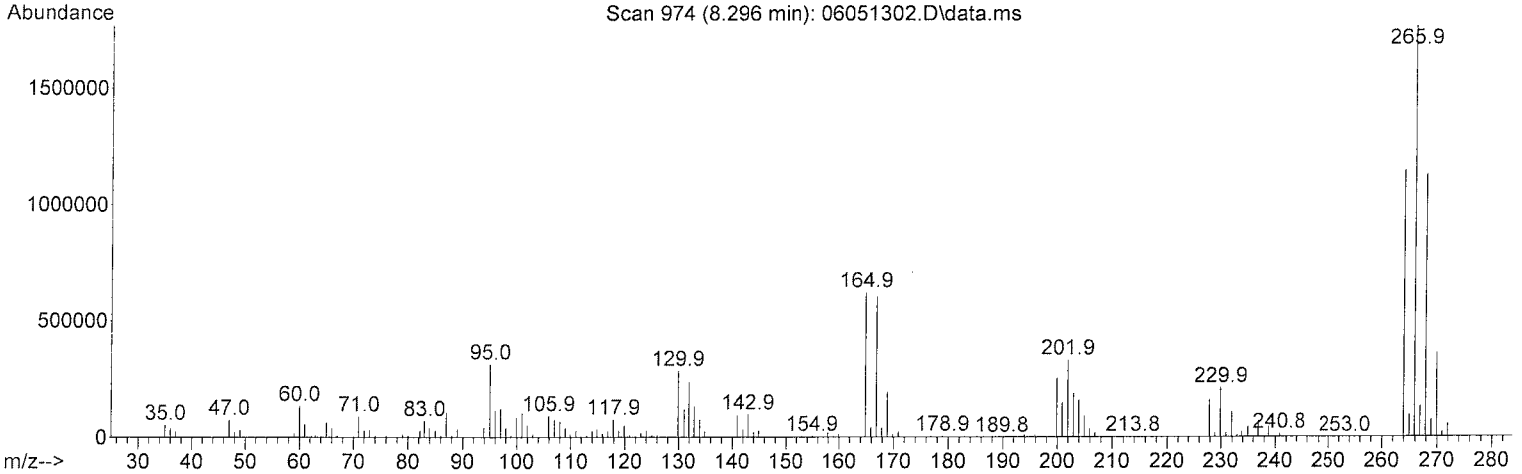
D 6/27/13

6/27/13 WD









TIC: 06051302.D\data.ms

(1) Pentachlorophenol

8.297min (+ 0.002) 424.82 area

response 14608271

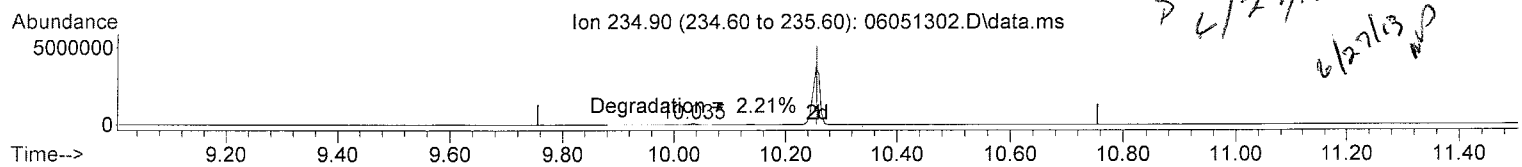
Ion	Exp%	Act%
265.70	100.00	100.00
164.80	35.20	38.41
265.70	100.00	100.00
0.00	0.00	0.00

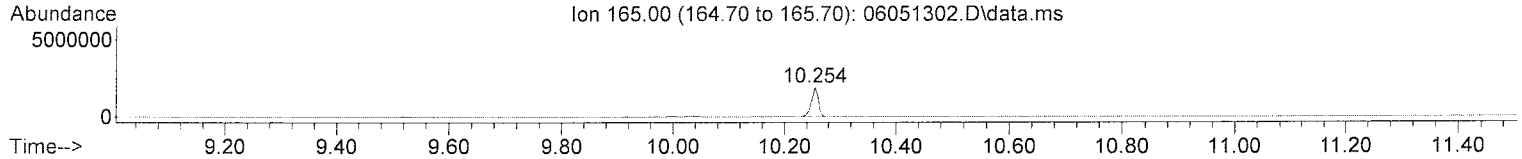
Quantitation Report (Qedit)

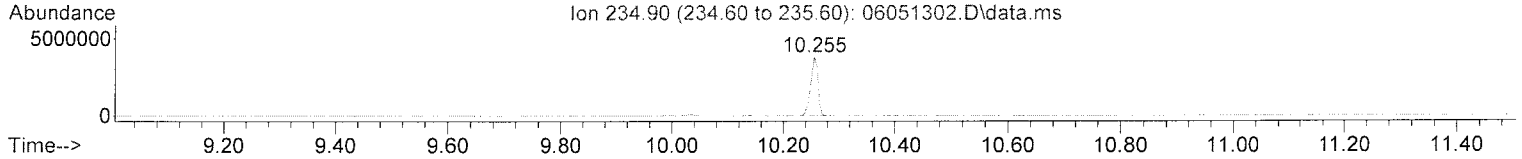
Data Path : C:\msdchem\1\data\060513\
Data File : 06051302.D
Acq On : 5 Jun 2013 10:11 am
Operator : DM
Sample : TUNE DFTPP-1
Misc : DFTPP_D 58-39-516
ALS Vial : 2 Sample Multiplier: 1
InstName : SVOC-7

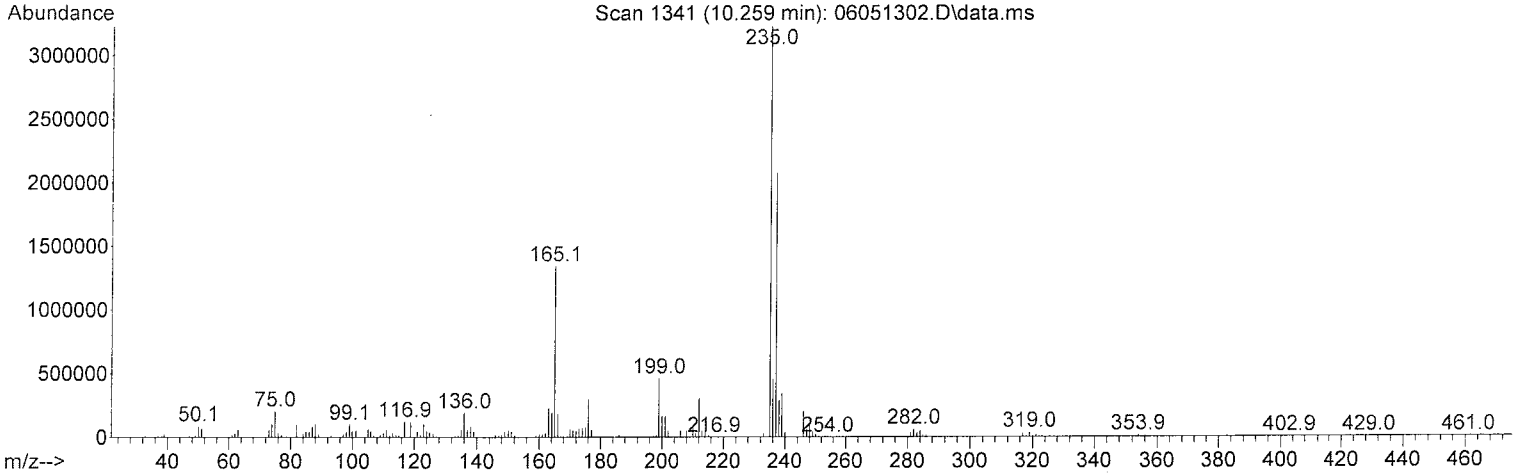
Quant Time: Jun 05 15:48:07 2013
Quant Method : C:\msdchem\1\data\060513\dftpp.M
Quant Title : DFTPP Tune
QLast Update : Wed Jun 05 15:47:55 2013
Response via : Initial Calibration

D 6/27/13
6/27/13 MP









TIC: 06051302.D\data.ms

(6) DDT

10.258min (+ 0.002) 0.00 area

response 35163375

Ion	Exp%	Act%
234.90	100.00	100.00
165.00	49.40	46.90
234.90	100.00	100.00
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\060513\
Data File : 06051302.D
Acq On : 5 Jun 2013 10:11 am
Operator : DM
Sample : TUNE DFTPP-1
Misc : DFTPP_D 58-39-516
ALS Vial : 2 Sample Multiplier: 1
InstName : SVOC-7

Quant Time: Jun 05 15:48:07 2013
Quant Method : C:\msdchem\1\data\060513\dftpp.M
Quant Title : DFTPP Tune
QLast Update : Wed Jun 05 15:47:55 2013
Response via : Initial Calibration

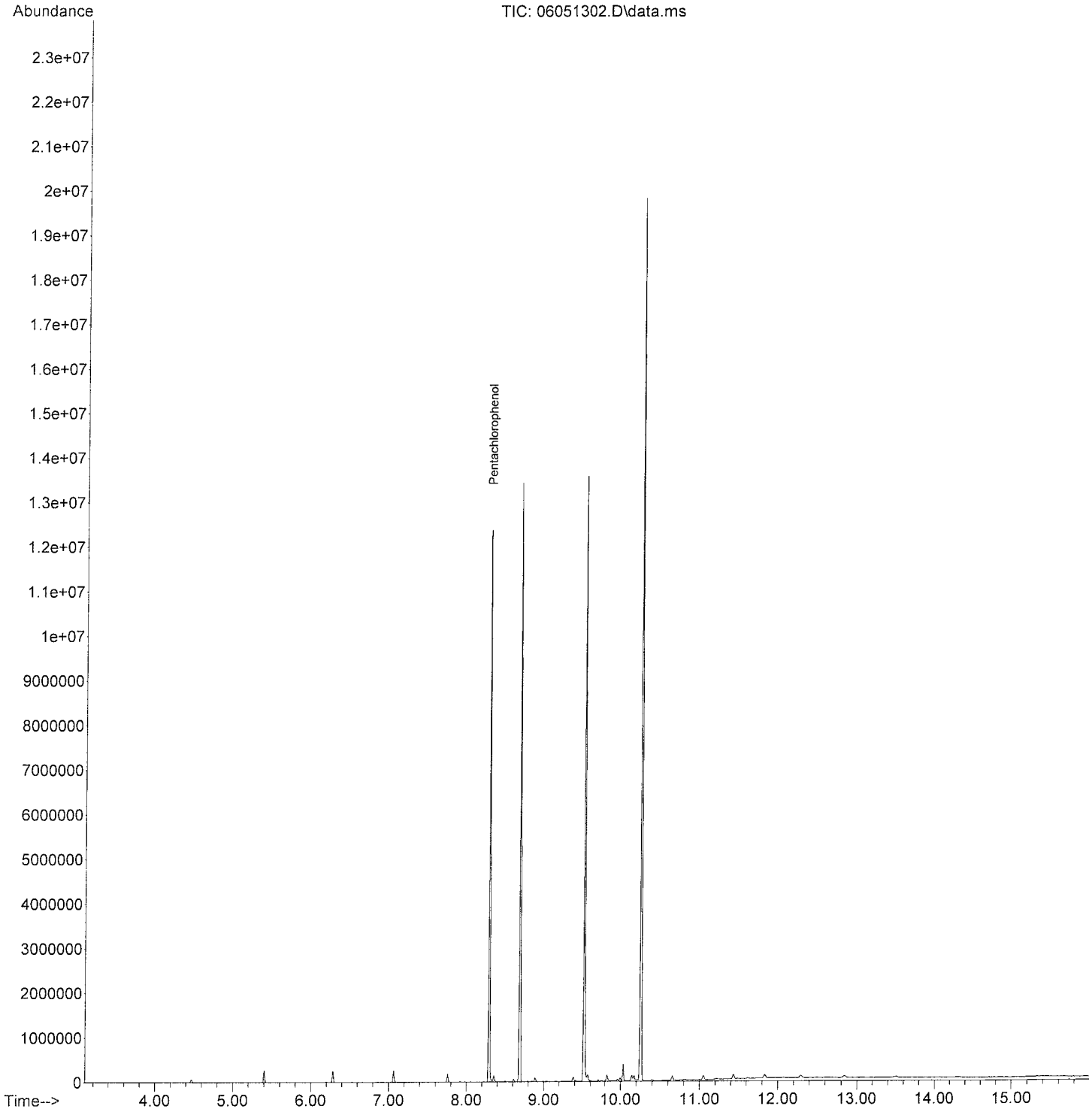
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
2) DFTPP	8.691	198	12865210	0.00	area	# 0.00
6) DDT	10.258	235	35163375	0.00	area	0.00
Target Compounds						Qvalue
1) Pentachlorophenol	8.297	266	14608271	424.82	area	99
3) Benzidine	9.527	184	52943152	N.D.		
4) DDE	10.036	235	638184	N.D.		
5) DDD	10.035	235	635788	N.D.		

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\060513\
Data File : 06051302.D
Acq On : 5 Jun 2013 10:11 am
Operator : DM
Sample : TUNE DFTPP-1
Misc : DFTPP_D 58-39-516
ALS Vial : 2 Sample Multiplier: 1
InstName : SVOC-7

Quant Time: Jun 05 15:48:07 2013
Quant Method : C:\msdchem\1\data\060513\dftpp.M
Quant Title : DFTPP Tune
QLast Update : Wed Jun 05 15:47:55 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\060513\
Data File : 06051303.D
Acq On : 5 Jun 2013 10:34 am
Operator : DM
Sample : ICAL 0.1 SSTD
Misc : PNA_QC 58-39-544
ALS Vial : 3 Sample Multiplier: 1
InstName : SVOC-7

Quant Time: Jun 05 15:50:50 2013
Quant Method : C:\msdchem\1\data\060513\PNA0523.M
Quant Title : SOP 4020 EPA 8270C
QLast Update : Wed Jun 05 15:49:07 2013
Response via : Initial Calibration

D 6/27/13 6/27/13

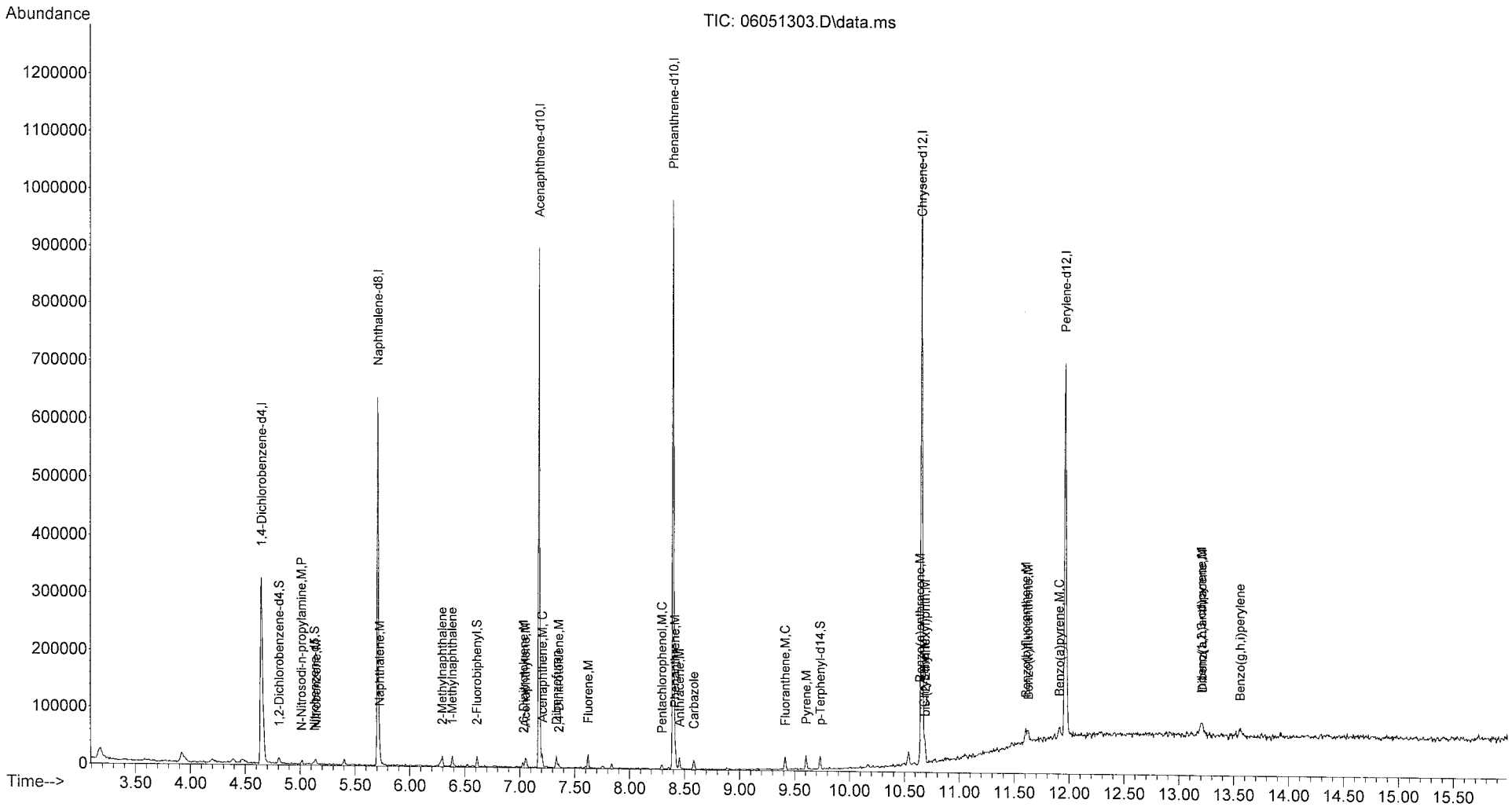
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.649	152	73304	4.00	ngs	0.00
6) Naphthalene-d8	5.708	136	237633	4.00	ngs	0.00
13) Acenaphthene-d10	7.179	164	162254	4.00	ngs	0.00
19) Phenanthrene-d10	8.398	188	322107	4.00	ngs	0.00
26) Chrysene-d12	10.661	240	370673	4.00	ngs	0.00
33) Perylene-d12	11.971	264	292970	4.00	ngs	0.00
System Monitoring Compounds						
2) 1,2-Dichlorobenzene-d4	4.809	152	2296	0.10	ngs	0.00
Spiked Amount 50.000	Range 16 - 110		Recovery	=	0.20%#	
4) Nitrobenzene-d5	5.130	82	1967m	0.07	ngs	0.00
Spiked Amount 50.000	Range 35 - 114		Recovery	=	0.14%#	
10) 2-Fluorobiphenyl	6.612	172	5974	0.08	ngs	0.01
Spiked Amount 50.000	Range 43 - 116		Recovery	=	0.16%#	
25) p-Terphenyl-d14	9.735	244	8126	0.09	ngs	0.00
Spiked Amount 50.000	Range 33 - 141		Recovery	=	0.18%#	
Target Compounds						Qvalue
3) N-Nitrosodi-n-propylamine	5.012	70	1054m	0.07	ngs	
5) Nitrobenzene	5.146	77	2196	0.07	ngs #	30
7) Naphthalene	5.724	128	6903	0.09	ngs #	69
8) 2-Methylnaphthalene	6.296	142	4059	0.08	ngs #	74
9) 1-Methylnaphthalene	6.387	142	4025	0.09	ngs #	88
11) Acenaphthylene	7.050	152	6544	0.08	ngs #	63
12) 2,6-Dinitrotoluene	7.034	165	1274m	0.09	ngs	
14) Acenaphthene	7.205	153	4639	0.09	ngs	88
15) Dibenzofuran	7.334	168	7676	0.08	ngs	99
16) 2,4-Dinitrotoluene	7.355	165	979m	0.05	ngs	
17) Fluorene	7.623	166	5772	0.09	ngs #	93
18) Pentachlorophenol	8.297	266	1157m	0.11	ngs	
20) Phenanthrene	8.414	178	9827	0.10	ngs #	64
21) Anthracene	8.457	178	7979	0.08	ngs #	61
22) Carbazole	8.585	167	6365	0.06	ngs #	59
23) Fluoranthene	9.414	202	9708	0.08	ngs #	79
24) Pyrene	9.607	202	11115	0.09	ngs #	80
27) Benzo(a)anthracene	10.645	228	10282m	0.09	ngs	
28) Chrysene	10.682	228	10387	0.09	ngs	97
29) bis-(2-Ethylhexyl)phth	10.693	149	7264	0.08	ngs #	56
30) Benzo(b)fluoranthene	11.607	252	10151	0.08	ngs #	89
31) Benzo(k)fluoranthene	11.629	252	9183m	0.09	ngs	
32) Benzo(a)pyrene	11.912	252	8508	0.08	ngs #	74
34) Indeno(1,2,3-cd)pyrene	13.207	276	9637	0.09	ngs #	74
35) Dibenz(a,h)anthracene	13.212	278	8985	0.11	ngs #	82
36) Benzo(g,h,i)perylene	13.560	276	8826	0.10	ngs #	54

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\060513\
Data File : 06051303.D
Acq On : 5 Jun 2013 10:34 am
Operator : DM
Sample : ICAL 0.1 SSTD
Misc : PNA_QC 58-39-544
ALS Vial : 3 Sample Multiplier: 1
InstName : SVOC-7

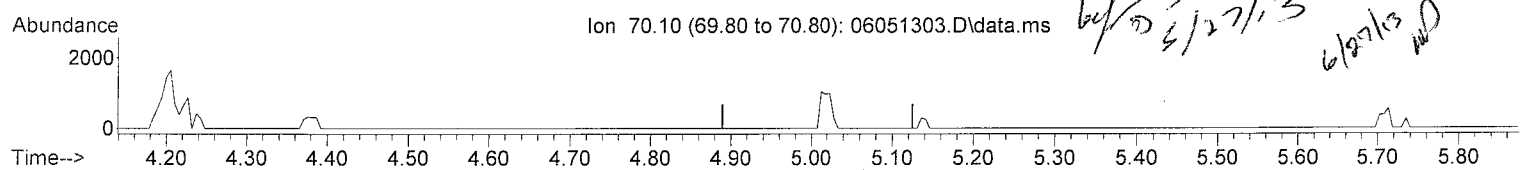
Quant Time: Jun 05 15:50:50 2013
Quant Method : C:\msdchem\1\data\060513\PNA0523.M
Quant Title : SOP 4020 EPA 8270C
QLast Update : Wed Jun 05 15:49:07 2013
Response via : Initial Calibration

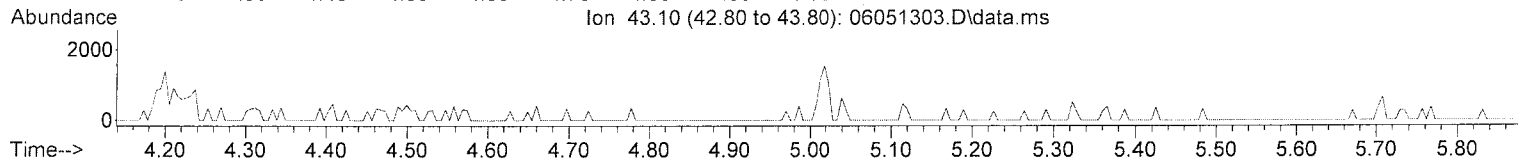


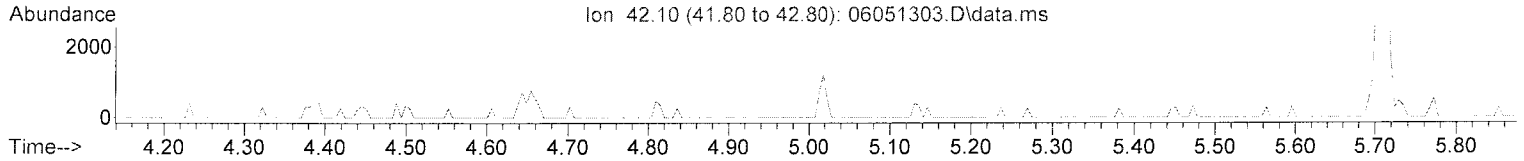
Quantitation Report (Qedit)

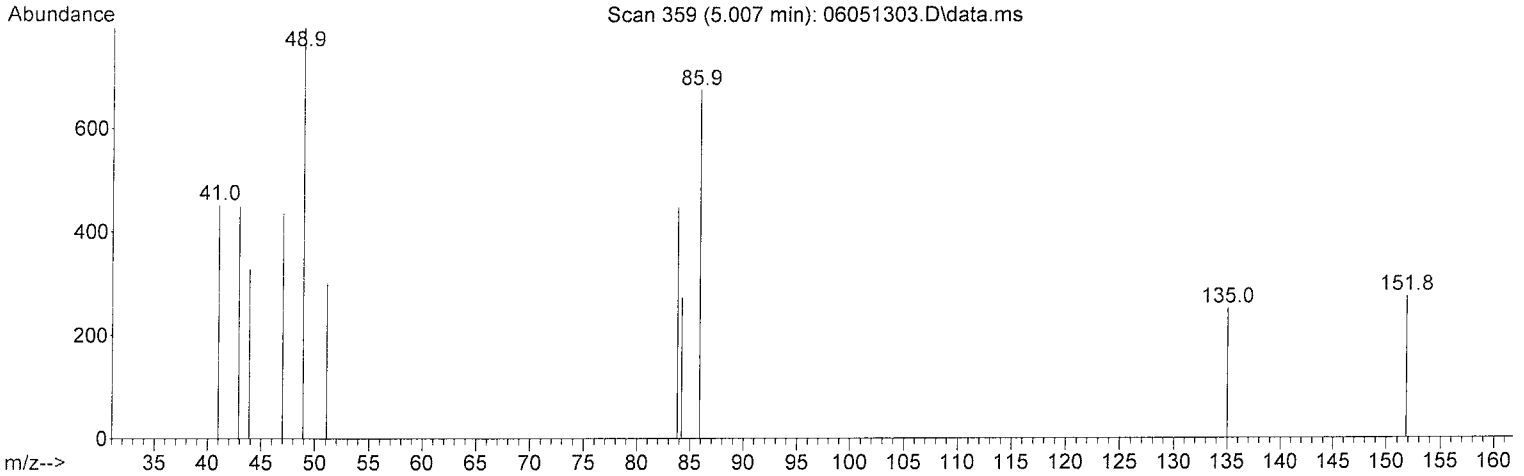
Data Path : C:\msdchem\1\data\060513\
Data File : 06051303.D
Acq On : 5 Jun 2013 10:34 am
Operator : DM
Sample : ICAL 0.1 SSTD
Misc : PNA_QC 58-39-544
ALS Vial : 3 Sample Multiplier: 1
InstName : SVOC-7

Quant Time: Jun 05 15:49:24 2013
Quant Method : C:\msdchem\1\data\060513\PNA0523.M
Quant Title : SOP 4020 EPA 8270C
QLast Update : Wed Jun 05 15:49:07 2013
Response via : Initial Calibration









TIC: 06051303.D\data.ms

(3) N-Nitrosodi-n-propylamine (M,P)

5.007min (-5.007) 0.00 ngs

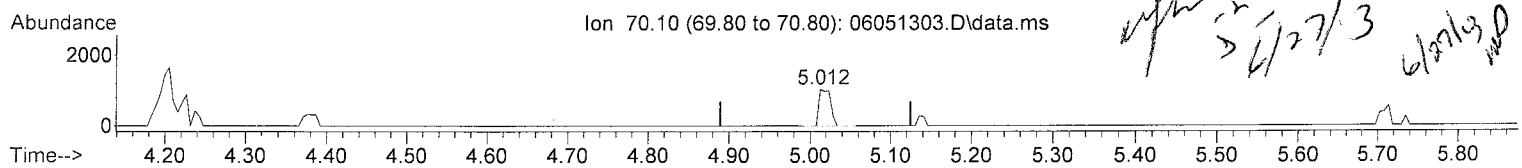
response 0

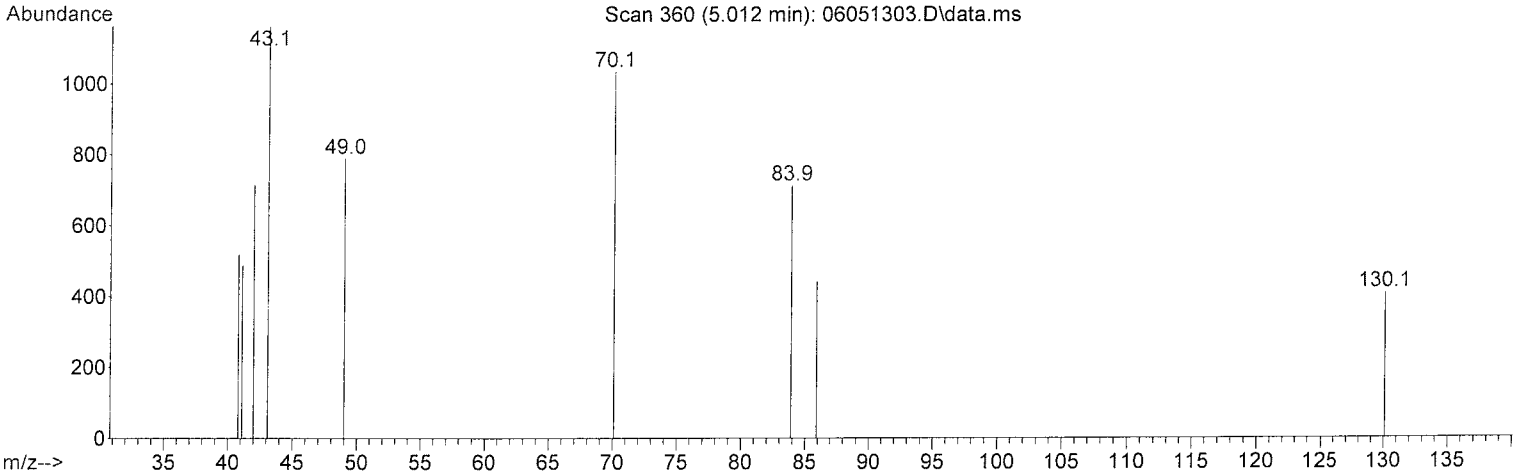
Ion	Exp%	Act%
70.10	100.00	0.00
43.10	84.50	0.00#
42.10	58.90	0.00#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\060513\
Data File : 06051303.D
Acq On : 5 Jun 2013 10:34 am
Operator : DM
Sample : ICAL 0.1 SSTD
Misc : PNA_QC 58-39-544
ALS Vial : 3 Sample Multiplier: 1
InstName : SVOC-7

Quant Time: Jun 05 15:49:24 2013
Quant Method : C:\msdchem\1\data\060513\PNA0523.M
Quant Title : SOP 4020 EPA 8270C
QLast Update : Wed Jun 05 15:49:07 2013
Response via : Initial Calibration





TIC: 06051303.D\data.ms

(3) N-Nitrosodi-n-propylamine (M,P)

5.012min (+ 0.005) 0.07 ngs m

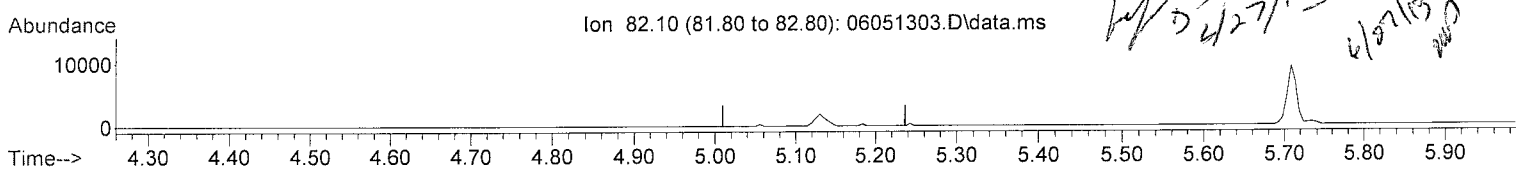
response 1054

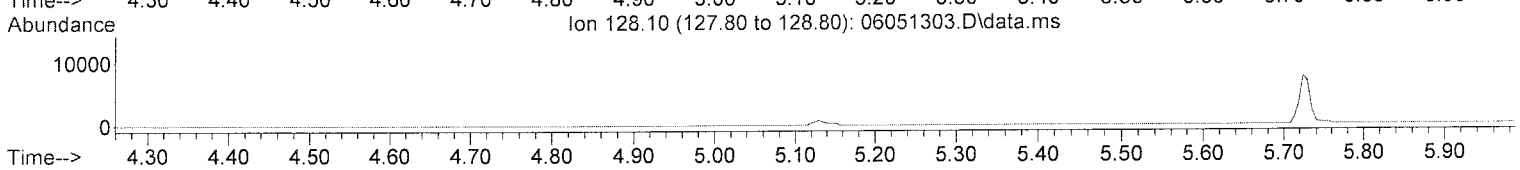
Ion	Exp%	Act%
70.10	100.00	100.00
43.10	84.50	0.00#
42.10	58.90	0.00#
0.00	0.00	0.00

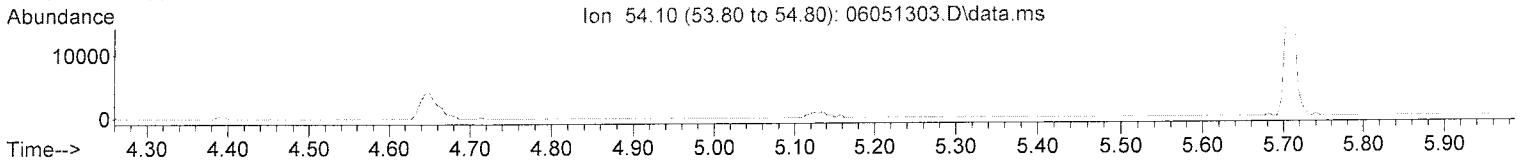
Quantitation Report (Qedit)

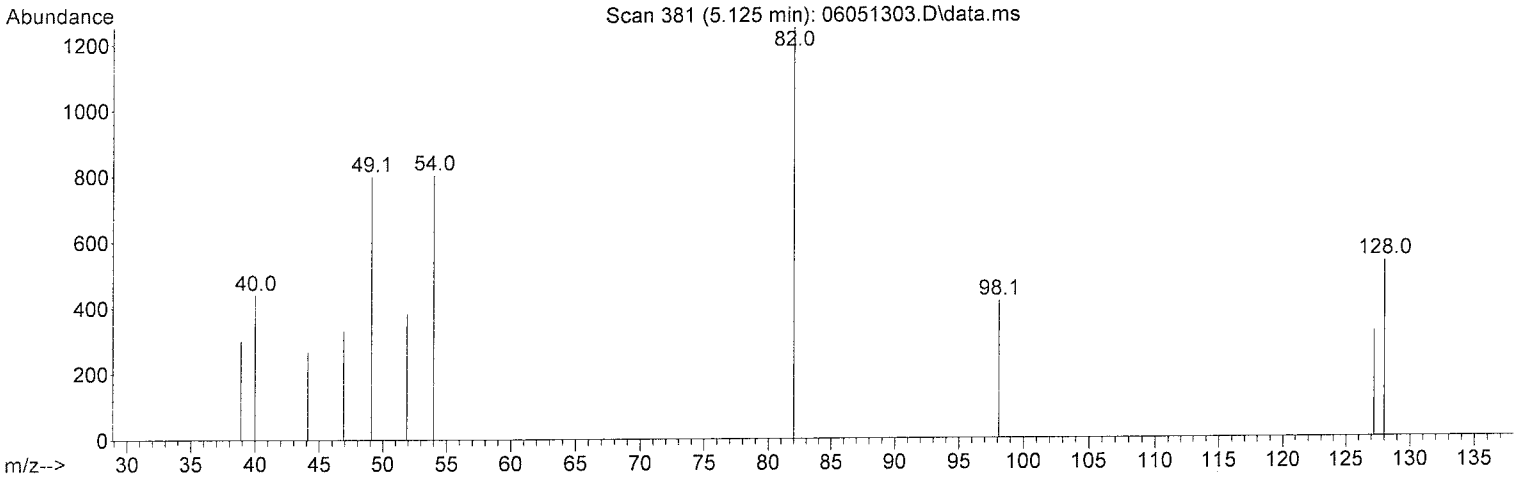
Data Path : C:\msdchem\1\data\060513\
Data File : 06051303.D
Acq On : 5 Jun 2013 10:34 am
Operator : DM
Sample : ICAL 0.1 SSTD
Misc : PNA_QC 58-39-544
ALS Vial : 3 Sample Multiplier: 1
InstName : SVOC-7

Quant Time: Jun 05 15:49:24 2013
Quant Method : C:\msdchem\1\data\060513\PNA0523.M
Quant Title : SOP 4020 EPA 8270C
QLast Update : Wed Jun 05 15:49:07 2013
Response via : Initial Calibration









TIC: 06051303.D\data.ms

(4) Nitrobenzene-d5 (S)

5.123min (-5.123) 0.00 ngs

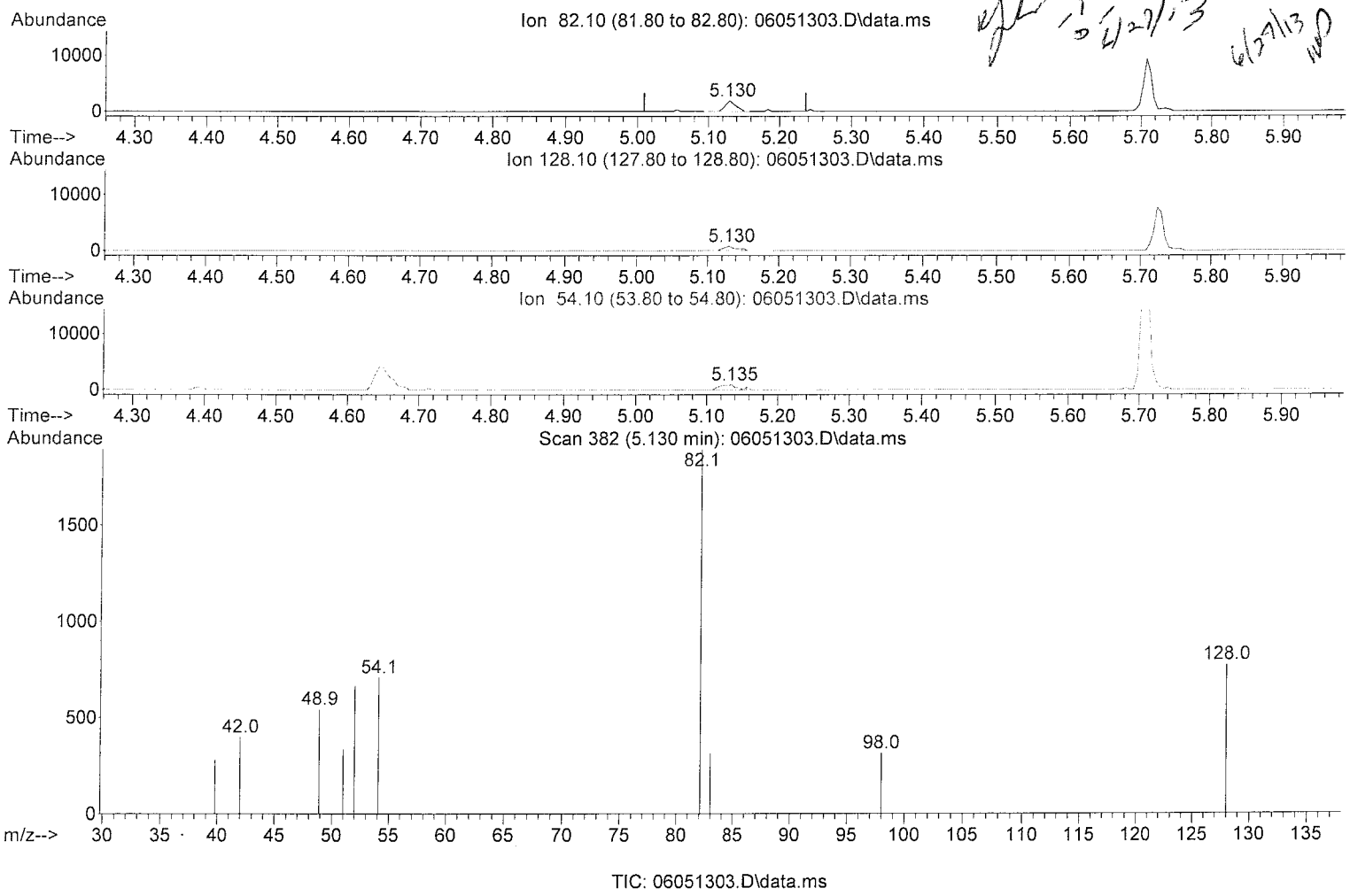
response 0

Ion	Exp%	Act%
82.10	100.00	0.00
128.10	42.60	0.00#
54.10	49.70	0.00#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\060513\
Data File : 06051303.D
Acq On : 5 Jun 2013 10:34 am
Operator : DM
Sample : ICAL 0.1 SSTD
Misc : PNA_QC 58-39-544
ALS Vial : 3 Sample Multiplier: 1
InstName : SVOC-7

Quant Time: Jun 05 15:49:24 2013
Quant Method : C:\msdchem\1\data\060513\PNA0523.M
Quant Title : SOP 4020 EPA 8270C
QLast Update : Wed Jun 05 15:49:07 2013
Response via : Initial Calibration



(4) Nitrobenzene-d5 (S)

5.130min (+ 0.007) 0.07 ngs m

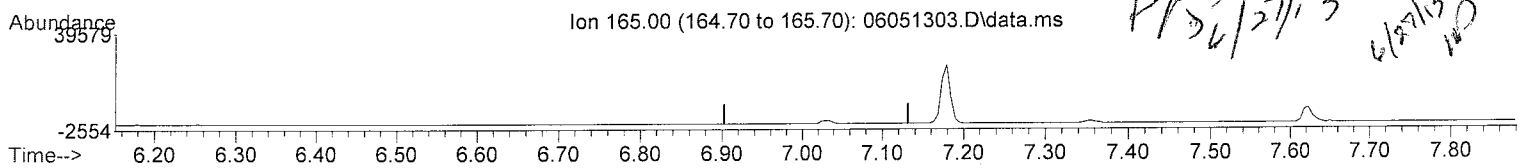
response 1967

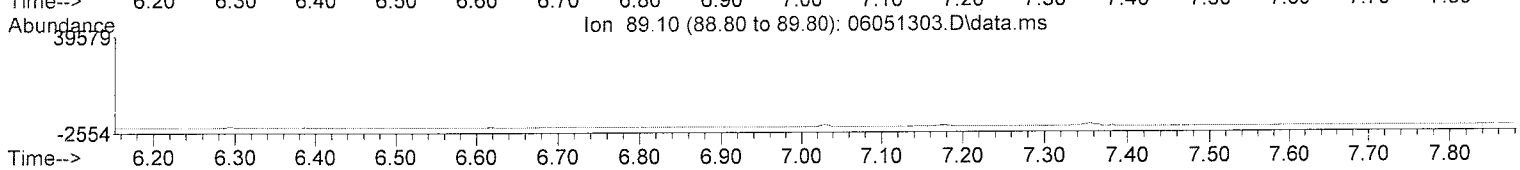
Ion	Exp%	Act%
82.10	100.00	100.00
128.10	42.60	50.43
54.10	49.70	73.21#
0.00	0.00	0.00

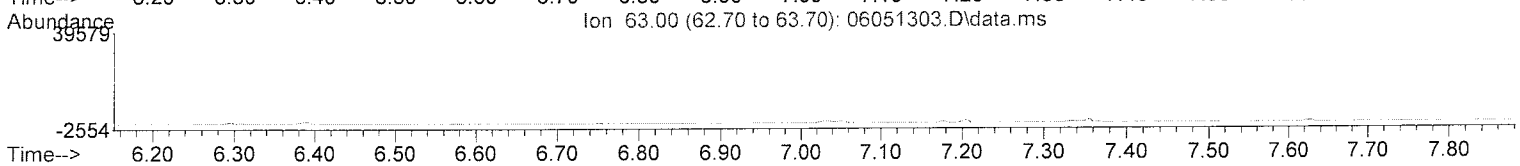
Quantitation Report (Qedit)

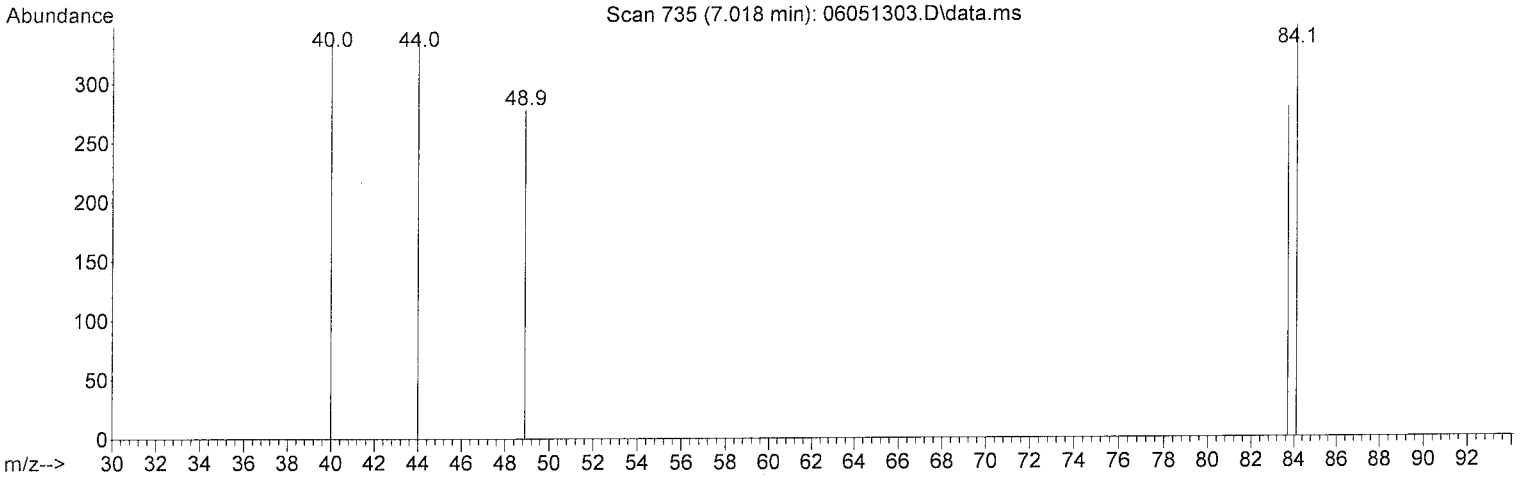
Data Path : C:\msdchem\1\data\060513\
Data File : 06051303.D
Acq On : 5 Jun 2013 10:34 am
Operator : DM
Sample : ICAL 0.1 SSTD
Misc : PNA_QC 58-39-544
ALS Vial : 3 Sample Multiplier: 1
InstName : SVOC-7

Quant Time: Jun 05 15:49:24 2013
Quant Method : C:\msdchem\1\data\060513\PNA0523.M
Quant Title : SOP 4020 EPA 8270C
QLast Update : Wed Jun 05 15:49:07 2013
Response via : Initial Calibration









TIC: 06051303.D\data.ms

(12) 2,6-Dinitrotoluene (M)

7.017min (-7.017) 0.00 ngs

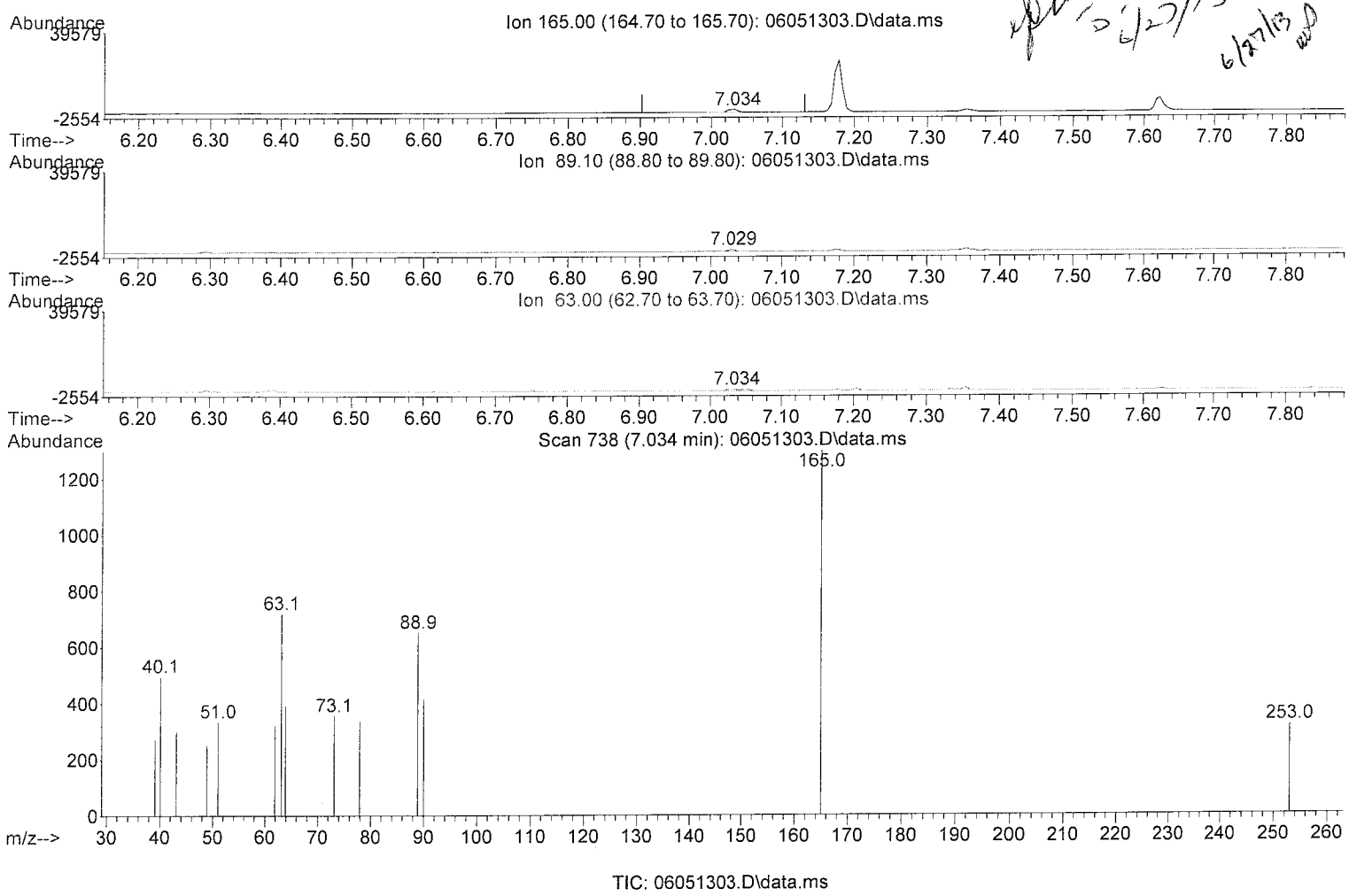
response 0

Ion	Exp%	Act%
165.00	100.00	0.00
89.10	57.50	0.00#
63.00	56.50	0.00#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\060513\
Data File : 06051303.D
Acq On : 5 Jun 2013 10:34 am
Operator : DM
Sample : ICAL 0.1 SSTD
Misc : PNA_QC 58-39-544
ALS Vial : 3 Sample Multiplier: 1
InstName : SVOC-7

Quant Time: Jun 05 15:49:24 2013
Quant Method : C:\msdchem\1\data\060513\PNA0523.M
Quant Title : SOP 4020 EPA 8270C
QLast Update : Wed Jun 05 15:49:07 2013
Response via : Initial Calibration



(12) 2,6-Dinitrotoluene (M)

7.034min (+ 0.017) 0.09 ngs m

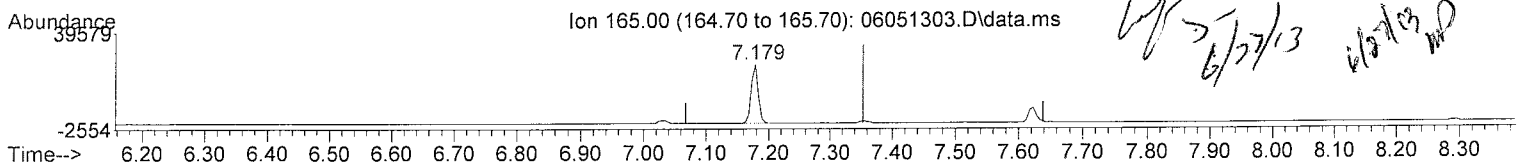
response 1274

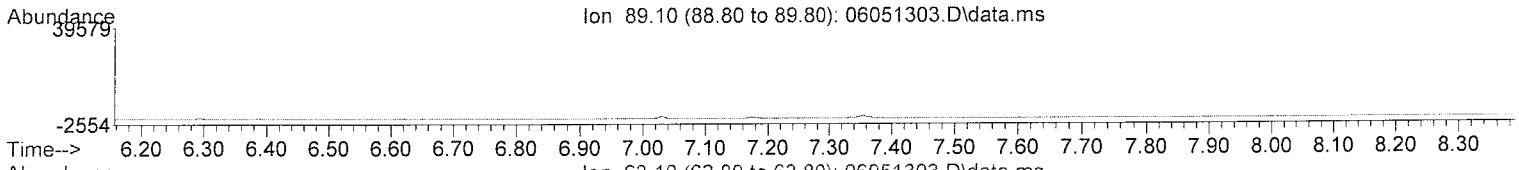
Ion	Exp%	Act%
165.00	100.00	100.00
89.10	57.50	49.53
63.00	56.50	95.13#
0.00	0.00	0.00

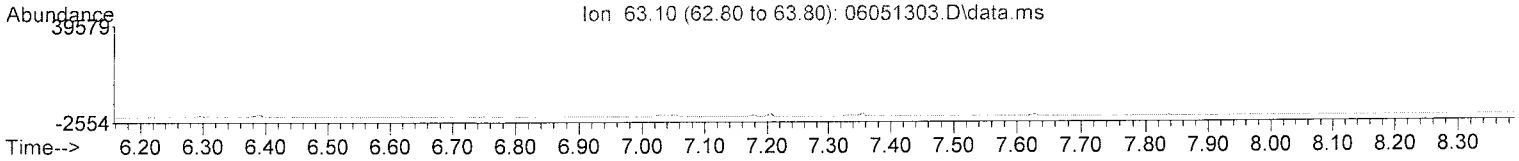
Quantitation Report (Qedit)

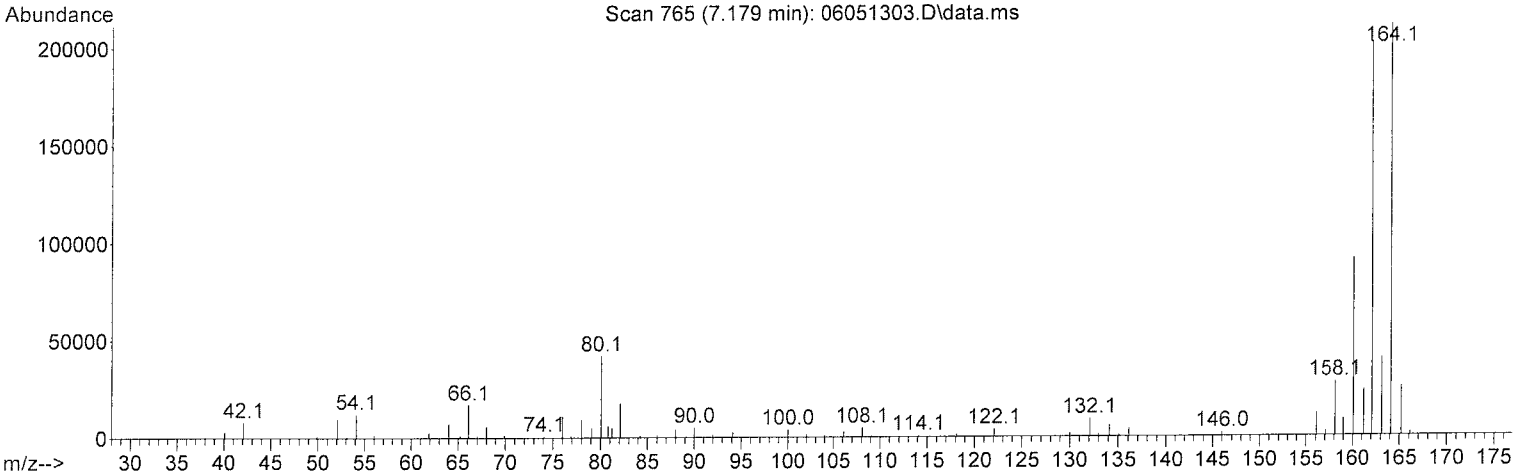
Data Path : C:\msdchem\1\data\060513\
Data File : 06051303.D
Acq On : 5 Jun 2013 10:34 am
Operator : DM
Sample : ICAL 0.1 SSTD
Misc : PNA_QC 58-39-544
ALS Vial : 3 Sample Multiplier: 1
InstName : SVOC-7

Quant Time: Jun 05 15:49:24 2013
Quant Method : C:\msdchem\1\data\060513\PNA0523.M
Quant Title : SOP 4020 EPA 8270C
QLast Update : Wed Jun 05 15:49:07 2013
Response via : Initial Calibration









TIC: 06051303.D\data.ms

(16) 2,4-Dinitrotoluene (M)

7.179min (-0.175) 1.13 ngs

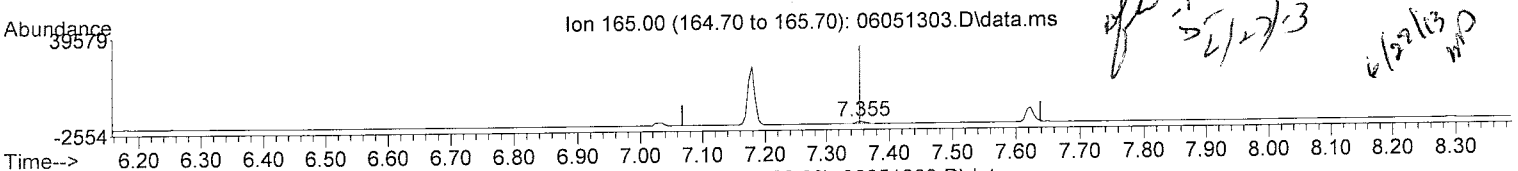
response 20309

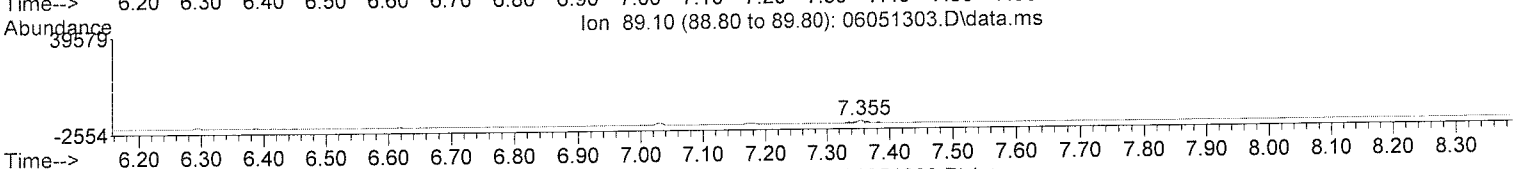
Ion	Exp%	Act%
165.00	100.00	100.00
89.10	86.00	0.00#
63.10	40.80	0.00#
0.00	0.00	0.00

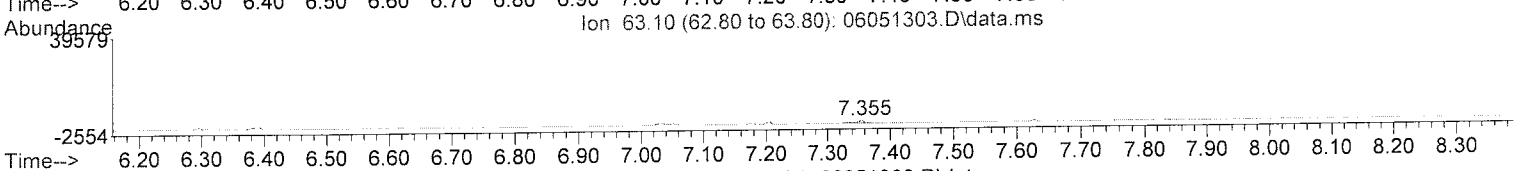
Quantitation Report (Qedit)

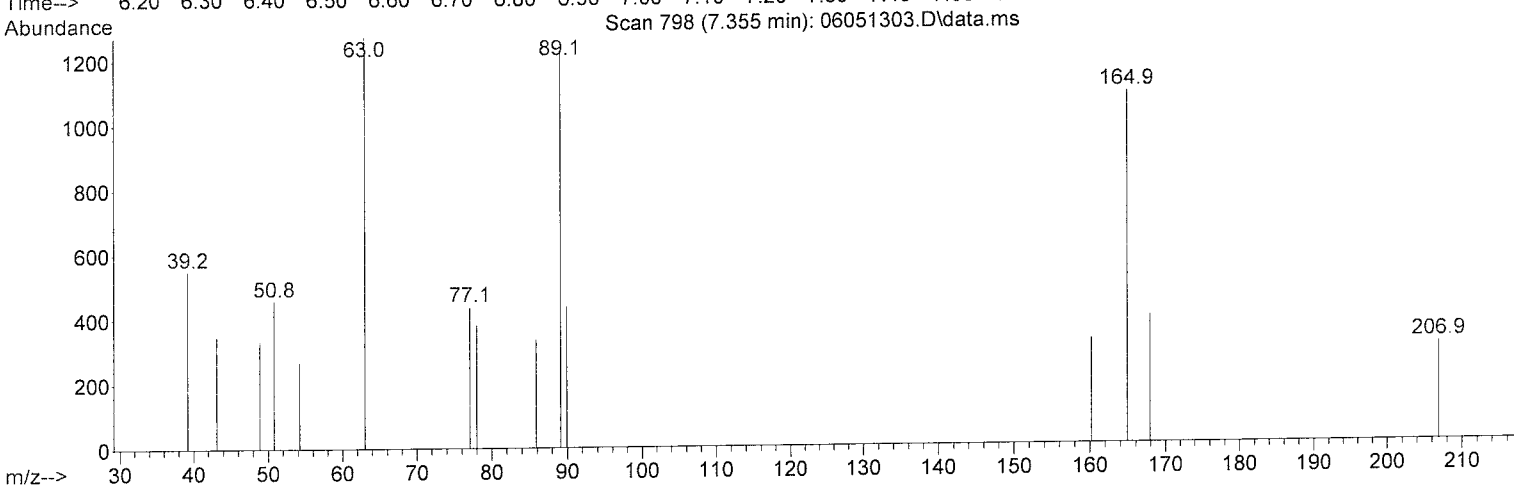
Data Path : C:\msdchem\1\data\060513\
Data File : 06051303.D
Acq On : 5 Jun 2013 10:34 am
Operator : DM
Sample : ICAL 0.1 SSTD
Misc : PNA_QC 58-39-544
ALS Vial : 3 Sample Multiplier: 1
InstName : SVOC-7

Quant Time: Jun 05 15:49:24 2013
Quant Method : C:\msdchem\1\data\060513\PNA0523.M
Quant Title : SOP 4020 EPA 8270C
QLast Update : Wed Jun 05 15:49:07 2013
Response via : Initial Calibration









TIC: 06051303.D\data.ms

(16) 2,4-Dinitrotoluene (M)

7.355min (+ 0.002) 0.05 ngs m

response 979

Ion	Exp%	Act%
165.00	100.00	100.00
89.10	86.00	145.76#
63.10	40.80	120.02#
0.00	0.00	0.00

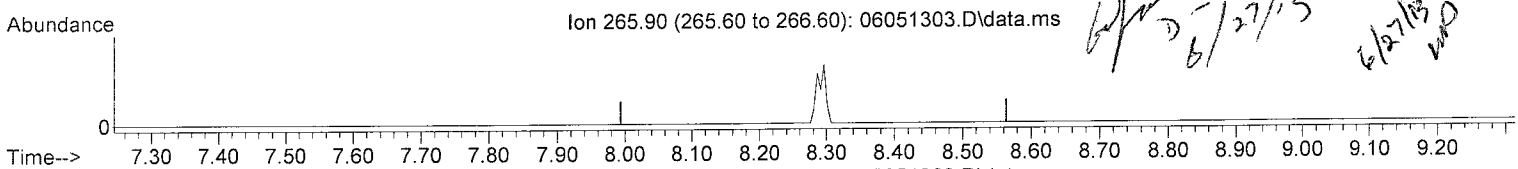
Quantitation Report (Qedit)

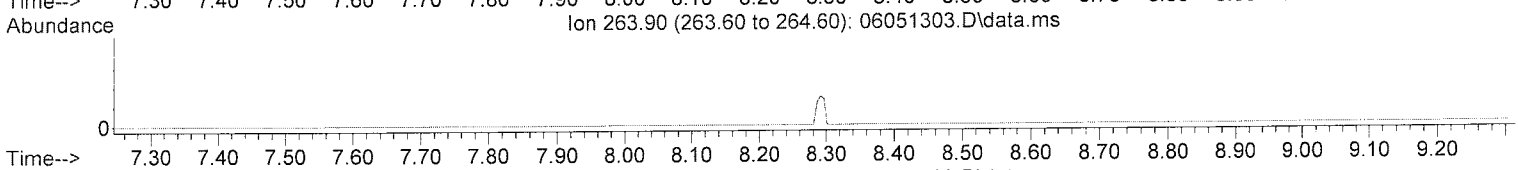
Data Path : C:\msdchem\1\data\060513\
Data File : 06051303.D
Acq On : 5 Jun 2013 10:34 am
Operator : DM
Sample : ICAL 0.1 SSTD
Misc : PNA_QC 58-39-544
ALS Vial : 3 Sample Multiplier: 1
InstName : SVOC-7

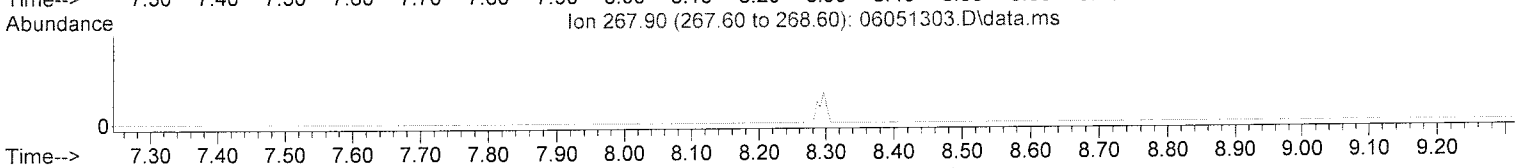
Quant Time: Jun 05 15:49:24 2013
Quant Method : C:\msdchem\1\data\060513\PNA0523.M
Quant Title : SOP 4020 EPA 8270C
QLast Update : Wed Jun 05 15:49:07 2013
Response via : Initial Calibration

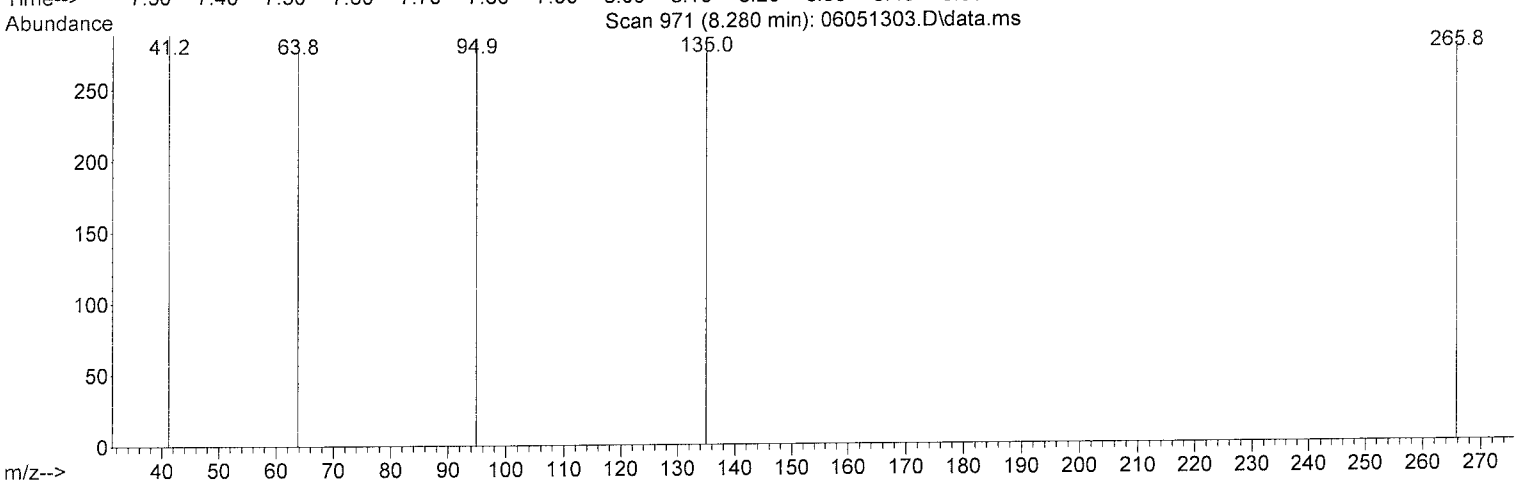
6/27/13

6/27/13









TIC: 06051303.D\data.ms

(18) Pentachlorophenol (M,C)

8.279min (-8.279) 0.00 ngs

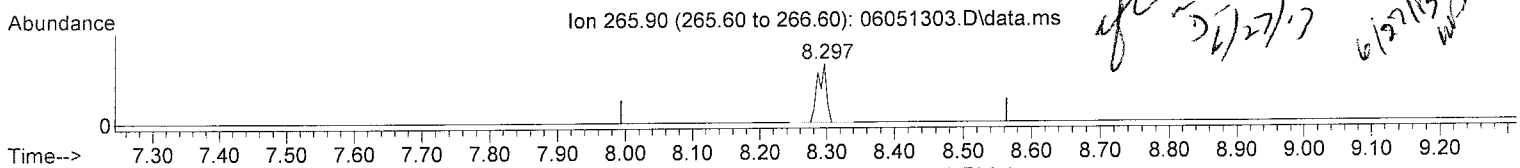
response 0

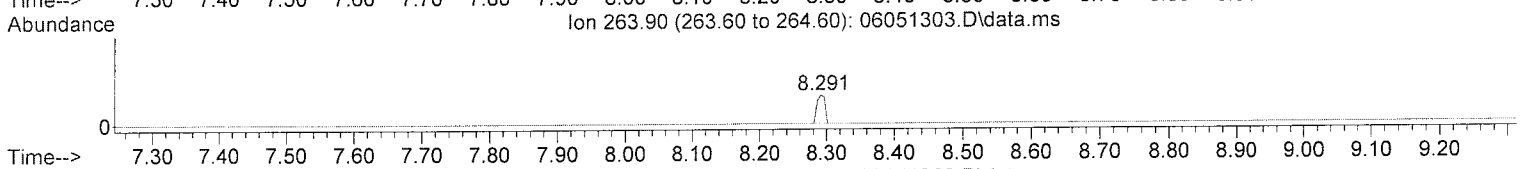
Ion	Exp%	Act%
265.90	100.00	0.00
263.90	61.40	0.00#
267.90	58.60	0.00#
0.00	0.00	0.00

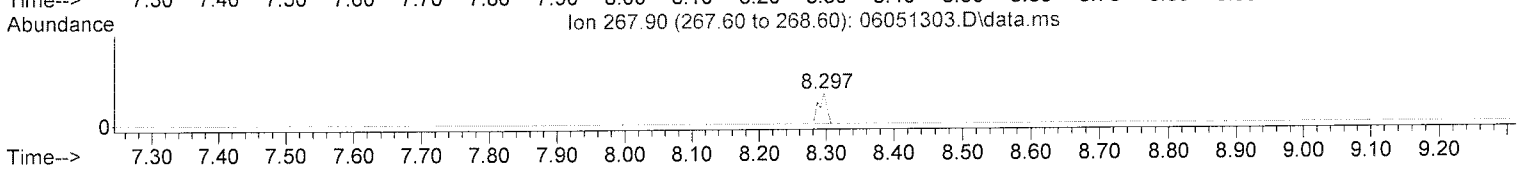
Quantitation Report (Qedit)

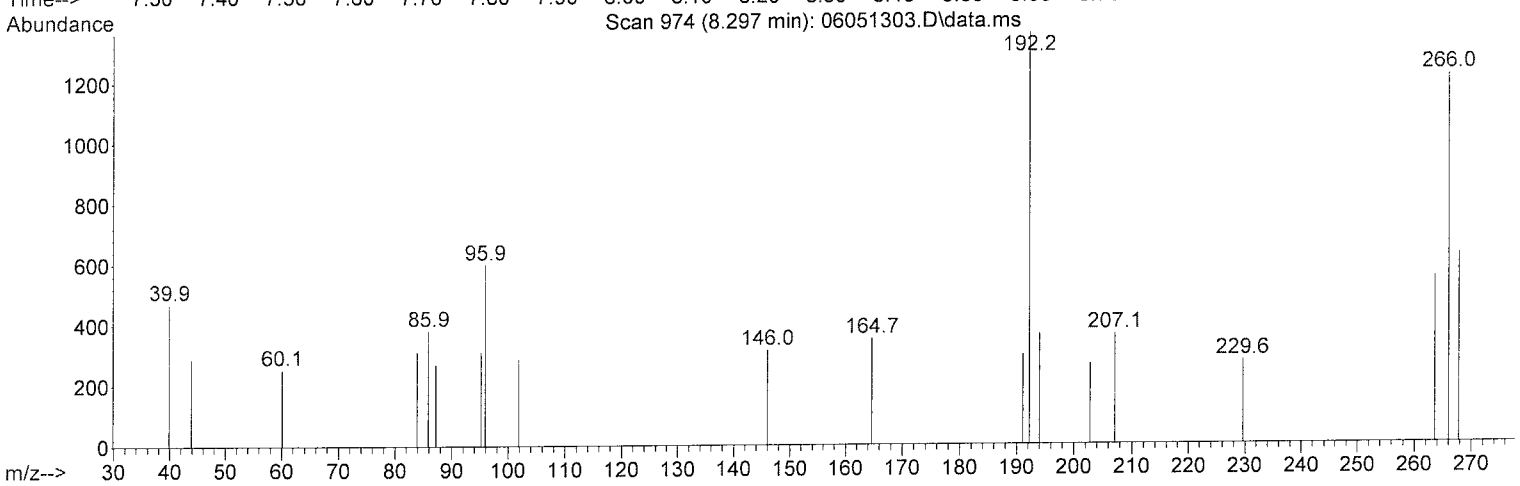
Data Path : C:\msdchem\1\data\060513\
Data File : 06051303.D
Acq On : 5 Jun 2013 10:34 am
Operator : DM
Sample : ICAL 0.1 SSTD
Misc : PNA_QC 58-39-544
ALS Vial : 3 Sample Multiplier: 1
InstName : SVOC-7

Quant Time: Jun 05 15:49:24 2013
Quant Method : C:\msdchem\1\data\060513\PNA0523.M
Quant Title : SOP 4020 EPA 8270C
QLast Update : Wed Jun 05 15:49:07 2013
Response via : Initial Calibration









TIC: 06051303.D\data.ms

(18) Pentachlorophenol (M,C)

8.297min (+ 0.018) 0.11 ngs m

response 1157

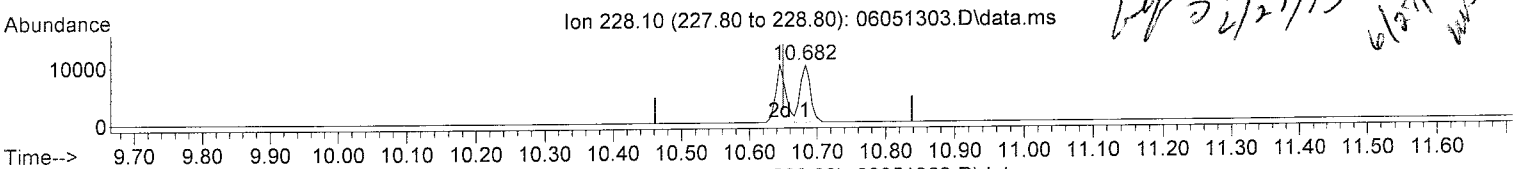
Ion	Exp%	Act%
265.90	100.00	100.00
263.90	61.40	44.77
267.90	58.60	46.67
0.00	0.00	0.00

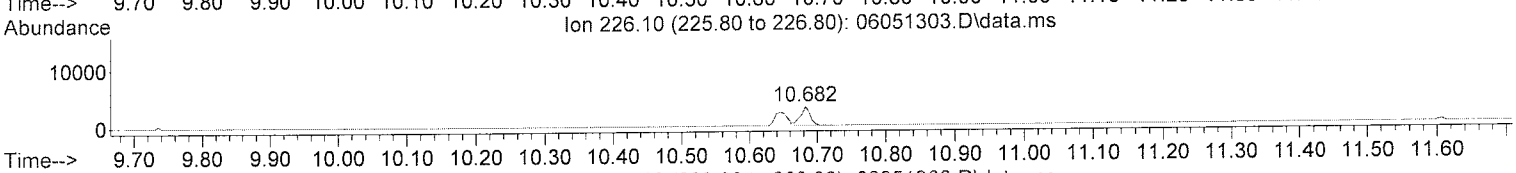
Quantitation Report (Qedit)

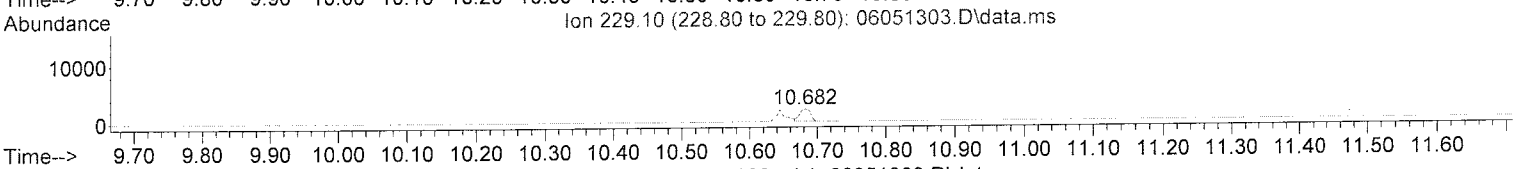
Data Path : C:\msdchem\1\data\060513\
Data File : 06051303.D
Acq On : 5 Jun 2013 10:34 am
Operator : DM
Sample : ICAL 0.1 SSTD
Misc : PNA_QC 58-39-544
ALS Vial : 3 Sample Multiplier: 1
InstName : SVOC-7

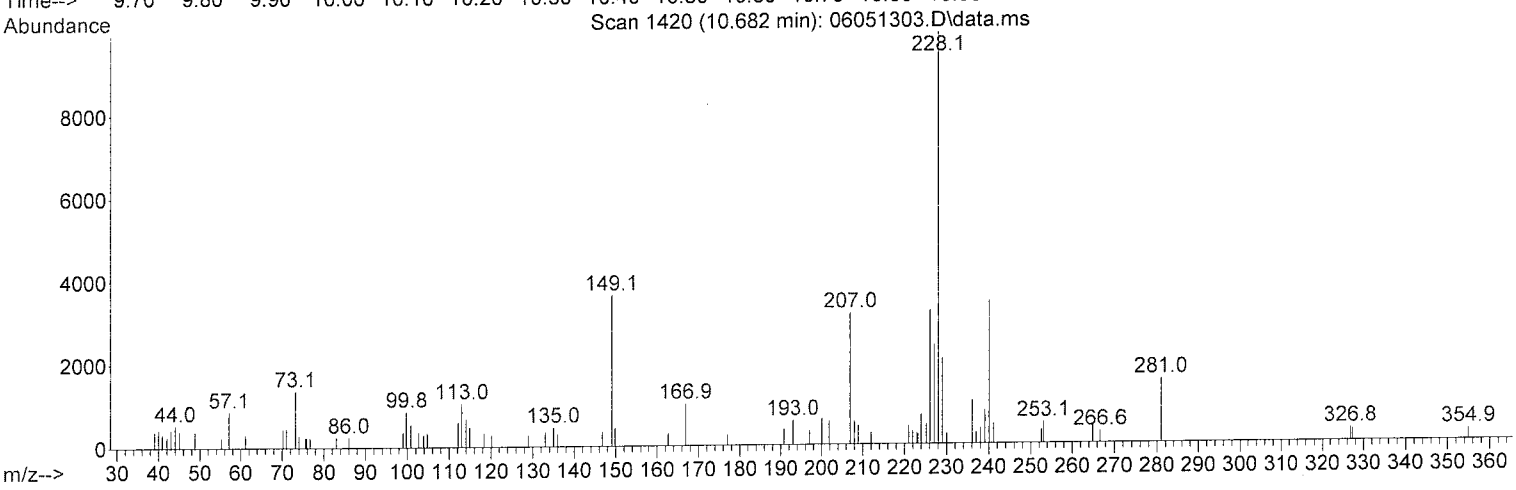
Quant Time: Jun 05 15:49:24 2013
Quant Method : C:\msdchem\1\data\060513\PNA0523.M
Quant Title : SOP 4020 EPA 8270C
QLast Update : Wed Jun 05 15:49:07 2013
Response via : Initial Calibration

6/27/13 6/27/13 WD









TIC: 06051303.D\data.ms

(27) Benzo(a)anthracene (M)

10.682min (+ 0.032) 0.09 ngs

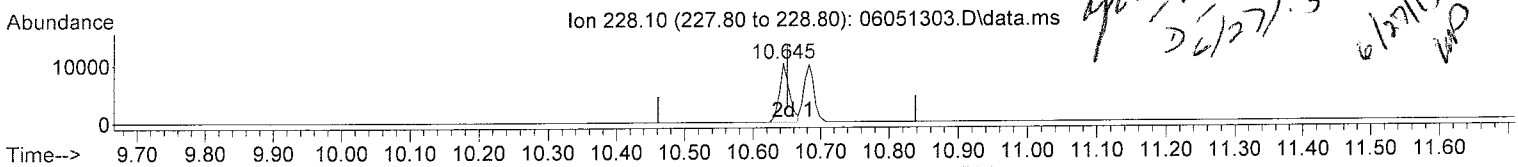
response 10387

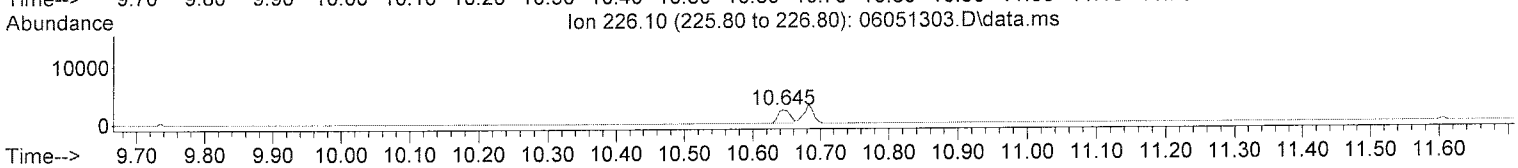
Ion	Exp%	Act%
228.10	100.00	100.00
226.10	27.10	30.37
229.10	19.70	21.80
0.00	0.00	0.00

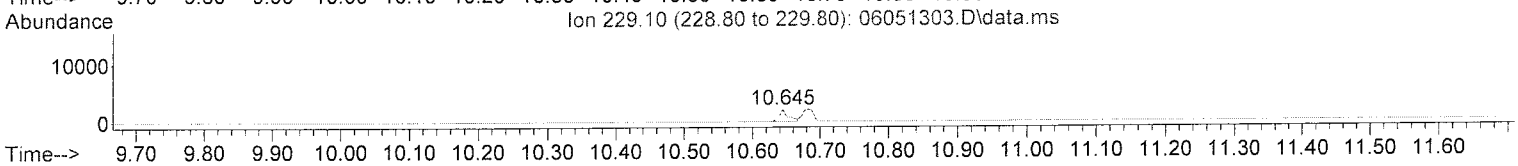
Quantitation Report (Qedit)

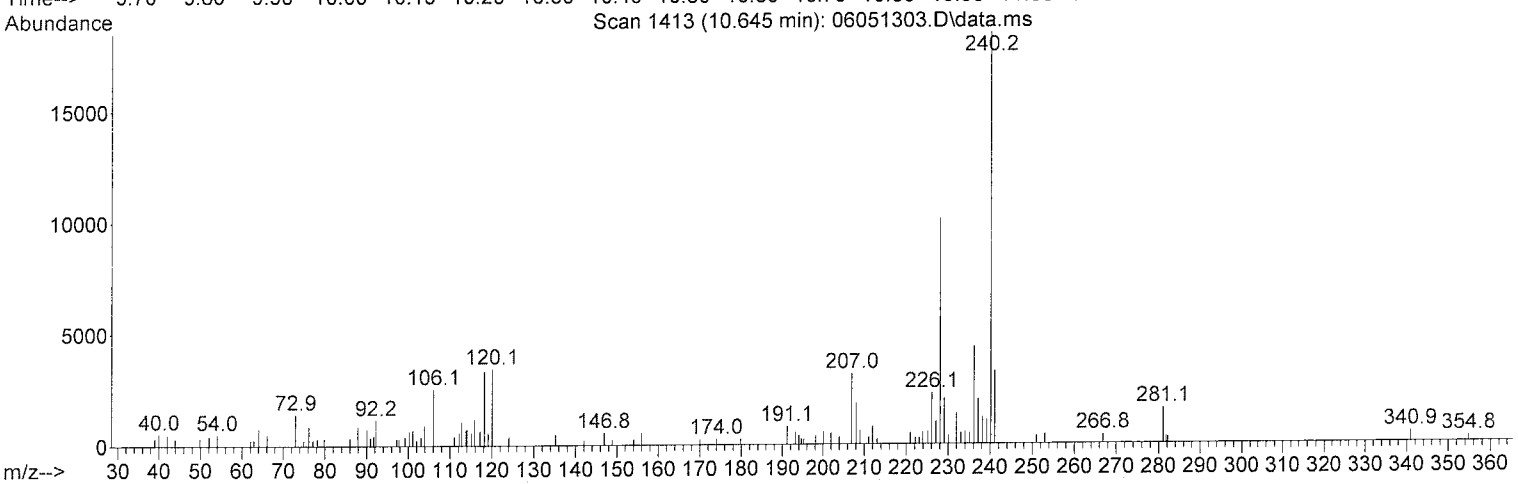
Data Path : C:\msdchem\1\data\060513\
Data File : 06051303.D
Acq On : 5 Jun 2013 10:34 am
Operator : DM
Sample : ICAL 0.1 SSTD
Misc : PNA_QC 58-39-544
ALS Vial : 3 Sample Multiplier: 1
InstName : SVOC-7

Quant Time: Jun 05 15:49:24 2013
Quant Method : C:\msdchem\1\data\060513\PNA0523.M
Quant Title : SOP 4020 EPA 8270C
QLast Update : Wed Jun 05 15:49:07 2013
Response via : Initial Calibration









TIC: 06051303.D\data.ms

(27) Benzo(a)anthracene (M)

10.645min (-0.005) 0.09 ngs m

response 10282

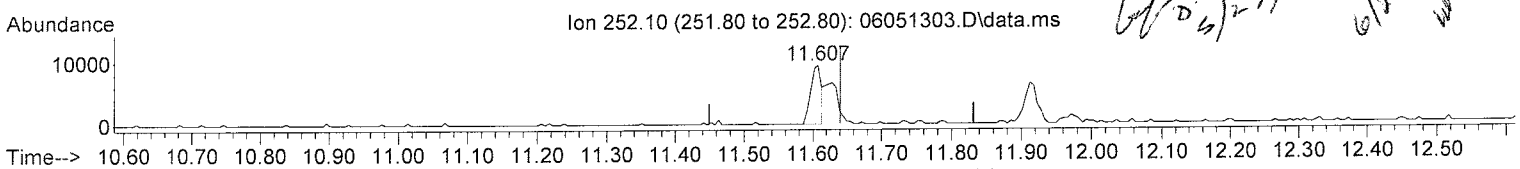
Ion	Exp%	Act%
228.10	100.00	100.00
226.10	27.10	27.56
229.10	19.70	17.54
0.00	0.00	0.00

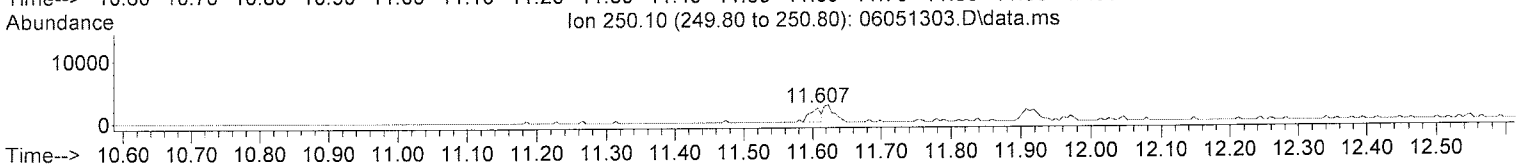
Quantitation Report (Qedit)

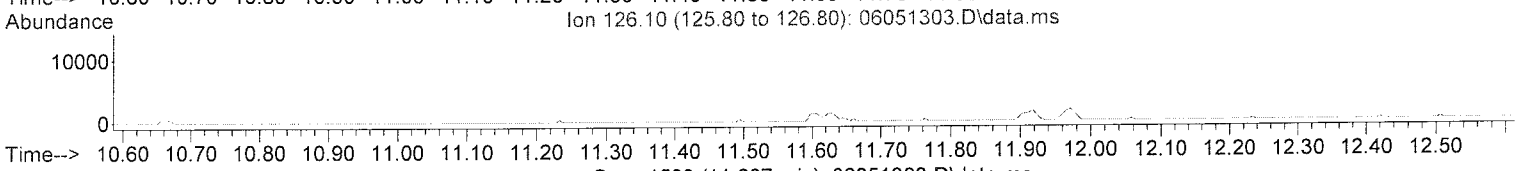
Data Path : C:\msdchem\1\data\060513\
Data File : 06051303.D
Acq On : 5 Jun 2013 10:34 am
Operator : DM
Sample : ICAL 0.1 SSTD
Misc : PNA_QC 58-39-544
ALS Vial : 3 Sample Multiplier: 1
InstName : SVOC-7

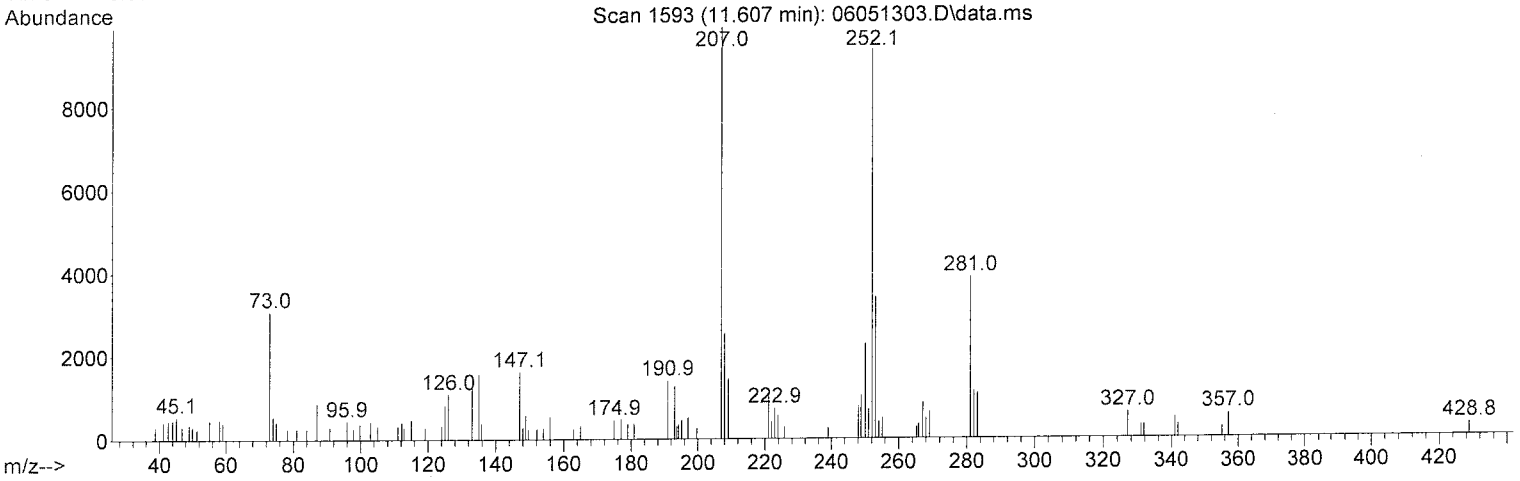
Quant Time: Jun 05 15:49:24 2013
Quant Method : C:\msdchem\1\data\060513\PNA0523.M
Quant Title : SOP 4020 EPA 8270C
QLast Update : Wed Jun 05 15:49:07 2013
Response via : Initial Calibration

6/27/13 WD









TIC: 06051303.D\data.ms

(31) Benzo(k)fluoranthene (M)

11.607min (-0.033) 0.10 ngs

response 10151

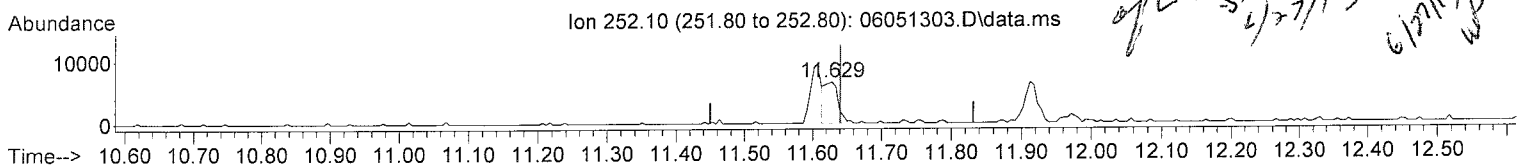
Ion	Exp%	Act%
252.10	100.00	100.00
250.10	23.30	24.99
126.10	15.60	0.00#
0.00	0.00	0.00

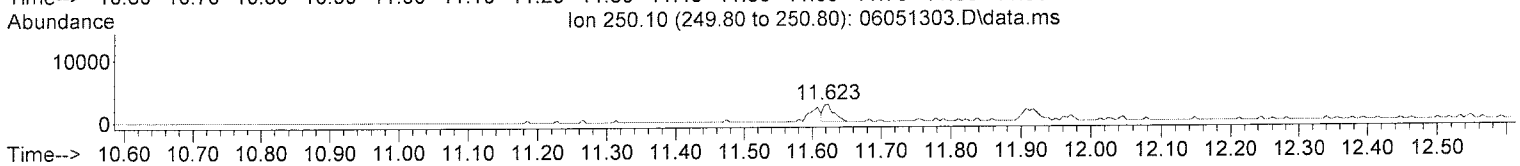
Quantitation Report (Qedit)

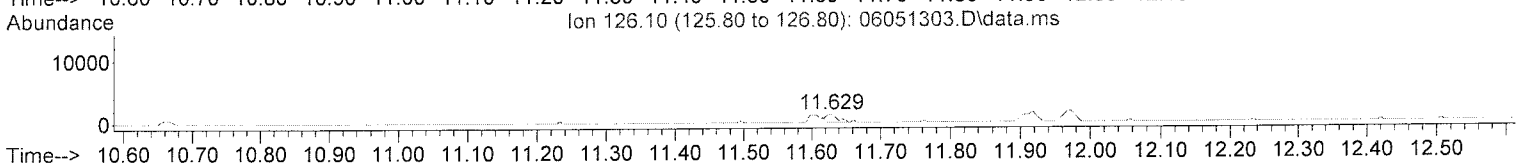
Data Path : C:\msdchem\1\data\060513\
Data File : 06051303.D
Acq On : 5 Jun 2013 10:34 am
Operator : DM
Sample : ICAL 0.1 SSTD
Misc : PNA_QC 58-39-544
ALS Vial : 3 Sample Multiplier: 1
InstName : SVOC-7

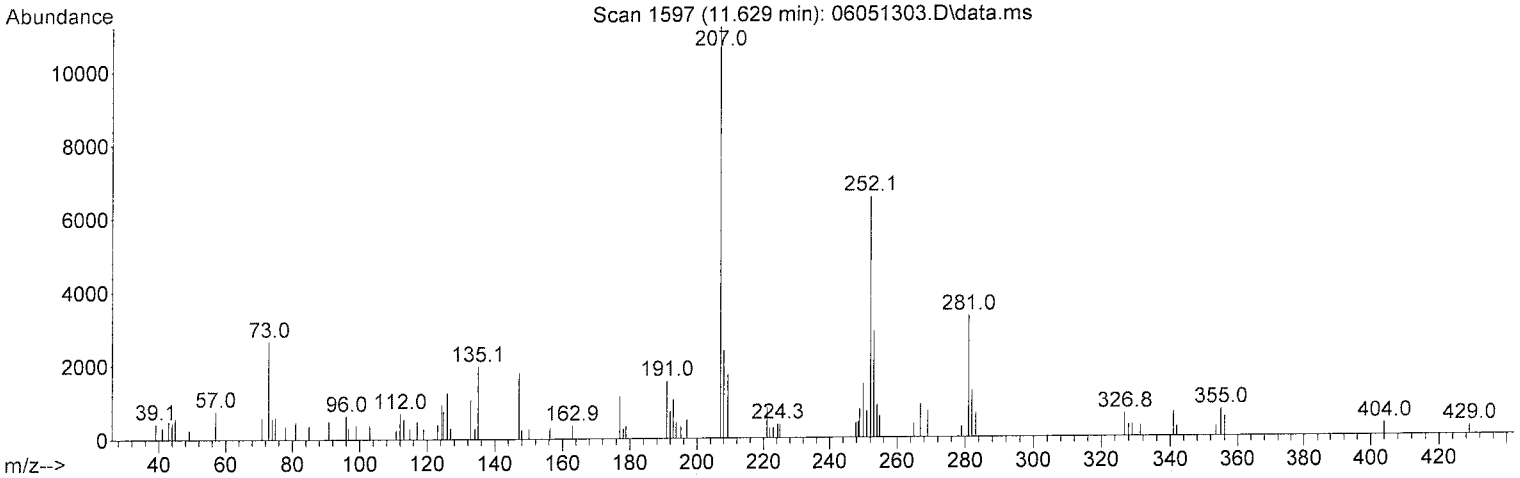
Quant Time: Jun 05 15:49:24 2013
Quant Method : C:\msdchem\1\data\060513\PNA0523.M
Quant Title : SOP 4020 EPA 8270C
QLast Update : Wed Jun 05 15:49:07 2013
Response via : Initial Calibration

6/27/13 6/27/13 WB









TIC: 06051303.D\data.ms

(31) Benzo(k)fluoranthene (M)

11.629min (-0.012) 0.09 ngs m

response 9183

Ion	Exp%	Act%
252.10	100.00	100.00
250.10	23.30	32.04#
126.10	15.60	15.20
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\060513\
Data File : 06051303.D
Acq On : 5 Jun 2013 10:34 am
Operator : DM
Sample : ICAL 0.1 SSTD
Misc : PNA_QC 58-39-544
ALS Vial : 3 Sample Multiplier: 1
InstName : SVOC-7

Quant Time: Jun 05 15:49:24 2013
Quant Method : C:\msdchem\1\data\060513\PNA0523.M
Quant Title : SOP 4020 EPA 8270C
QLast Update : Wed Jun 05 15:49:07 2013
Response via : Initial Calibration

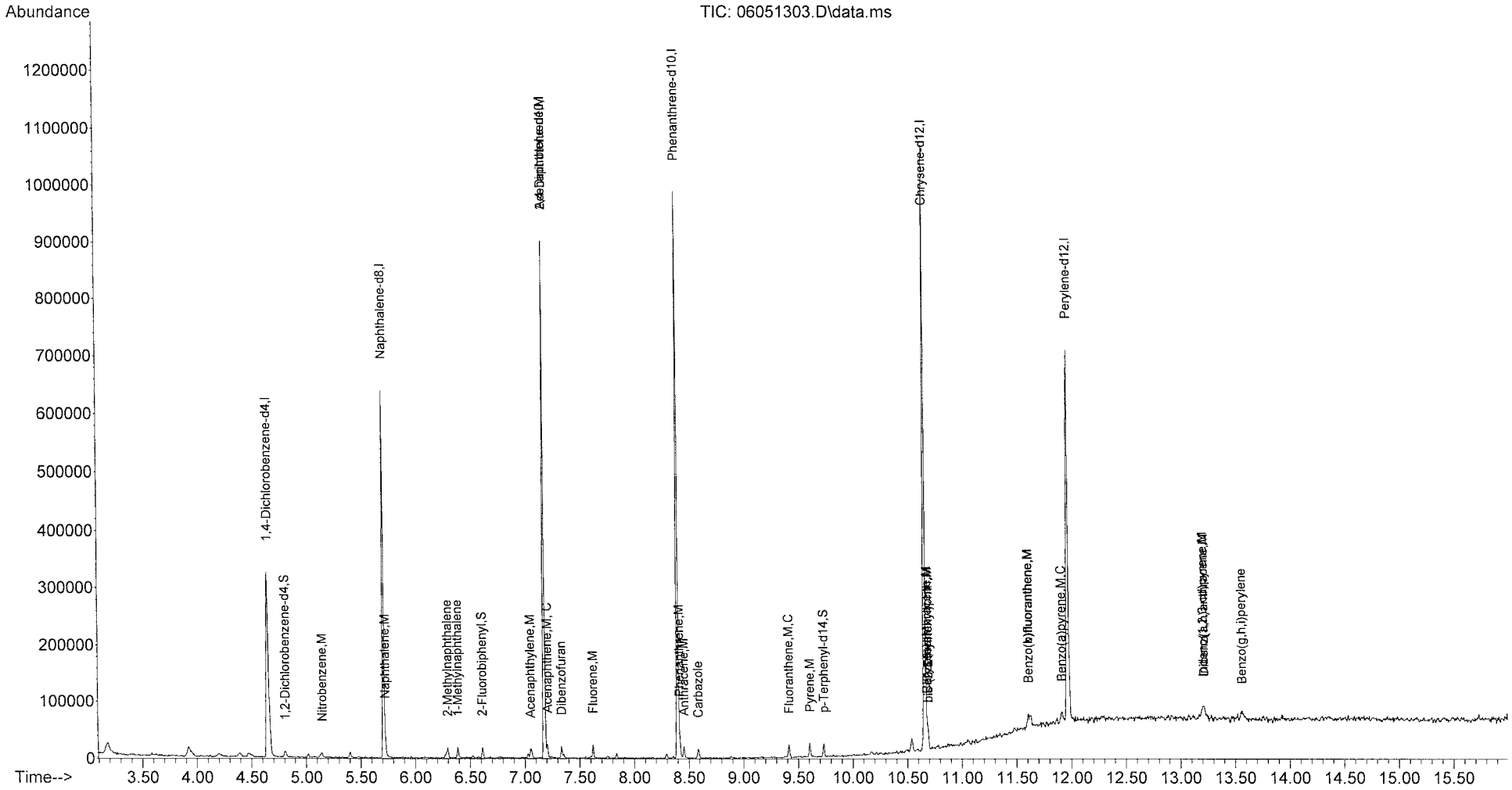
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 1,4-Dichlorobenzene-d4	4.649	152	73304	4.00	ngs		0.00
6) Naphthalene-d8	5.708	136	237633	4.00	ngs		0.00
13) Acenaphthene-d10	7.179	164	162254	4.00	ngs		0.00
19) Phenanthrene-d10	8.398	188	322107	4.00	ngs		0.00
26) Chrysene-d12	10.661	240	370673	4.00	ngs		0.00
33) Perylene-d12	11.971	264	292970	4.00	ngs		0.00
System Monitoring Compounds							
2) 1,2-Dichlorobenzene-d4	4.809	152	2296	0.10	ngs		0.00
Spiked Amount 50.000	Range 16 - 110		Recovery	=	0.20%#		
4) Nitrobenzene-d5	0.000	82	0	0.00	ngs		
Spiked Amount 50.000	Range 35 - 114		Recovery	=	0.00%#		
10) 2-Fluorobiphenyl	6.612	172	5974	0.08	ngs		0.01
Spiked Amount 50.000	Range 43 - 116		Recovery	=	0.16%#		
25) p-Terphenyl-d14	9.735	244	8126	0.09	ngs		0.00
Spiked Amount 50.000	Range 33 - 141		Recovery	=	0.18%#		
Target Compounds							Qvalue
5) Nitrobenzene	5.146	77	2196	0.07	ngs	#	30
7) Naphthalene	5.724	128	6903	0.09	ngs	#	69
8) 2-Methylnaphthalene	6.296	142	4059	0.08	ngs	#	74
9) 1-Methylnaphthalene	6.387	142	4025	0.09	ngs	#	88
11) Acenaphthylene	7.050	152	6544	0.08	ngs	#	63
14) Acenaphthene	7.205	153	4639	0.09	ngs		88
15) Dibenzofuran	7.334	168	7676	0.08	ngs		99
16) 2,4-Dinitrotoluene	7.179	165	20309	1.13	ngs	#	15
17) Fluorene	7.623	166	5772	0.09	ngs	#	93
20) Phenanthrene	8.414	178	9827	0.10	ngs	#	64
21) Anthracene	8.457	178	7979	0.08	ngs	#	61
22) Carbazole	8.585	167	6365	0.06	ngs	#	59
23) Fluoranthene	9.414	202	9708	0.08	ngs	#	79
24) Pyrene	9.607	202	11115	0.09	ngs	#	80
27) Benzo(a)anthracene	10.682	228	10387	0.09	ngs		94
28) Chrysene	10.682	228	10387	0.09	ngs		97
29) bis-(2-Ethylhexyl)phth	10.693	149	7264	0.08	ngs	#	56
30) Benzo(b)fluoranthene	11.607	252	10151	0.08	ngs	#	89
31) Benzo(k)fluoranthene	11.607	252	10151	0.10	ngs	#	83
32) Benzo(a)pyrene	11.912	252	8508	0.08	ngs	#	74
34) Indeno(1,2,3-cd)pyrene	13.207	276	9637	0.09	ngs	#	74
35) Dibenz(a,h)anthracene	13.212	278	8985	0.11	ngs	#	82
36) Benzo(g,h,i)perylene	13.560	276	8826	0.10	ngs	#	54

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\060513\
Data File : 06051303.D
Acq On : 5 Jun 2013 10:34 am
Operator : DM
Sample : ICAL 0.1 SSTD
Misc : PNA_QC 58-39-544
ALS Vial : 3 Sample Multiplier: 1
InstName : SVOC-7

Quant Time: Jun 05 15:49:24 2013
Quant Method : C:\msdchem\1\data\060513\PNA0523.M
Quant Title : SOP 4020 EPA 8270C
QLast Update : Wed Jun 05 15:49:07 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\060513\
Data File : 06051304.D
Acq On : 5 Jun 2013 10:56 am
Operator : DM
Sample : ICAL 0.5 SSTD
Misc : PNA_QC 58-39-543
ALS Vial : 4 Sample Multiplier: 1
InstName : SVOC-7

Quant Time: Jun 05 15:51:22 2013
Quant Method : C:\msdchem\1\data\060513\PNA0523.M
Quant Title : SOP 4020 EPA 8270C
QLast Update : Wed Jun 05 15:51:11 2013
Response via : Initial Calibration

D 6/27/13 6/27/13

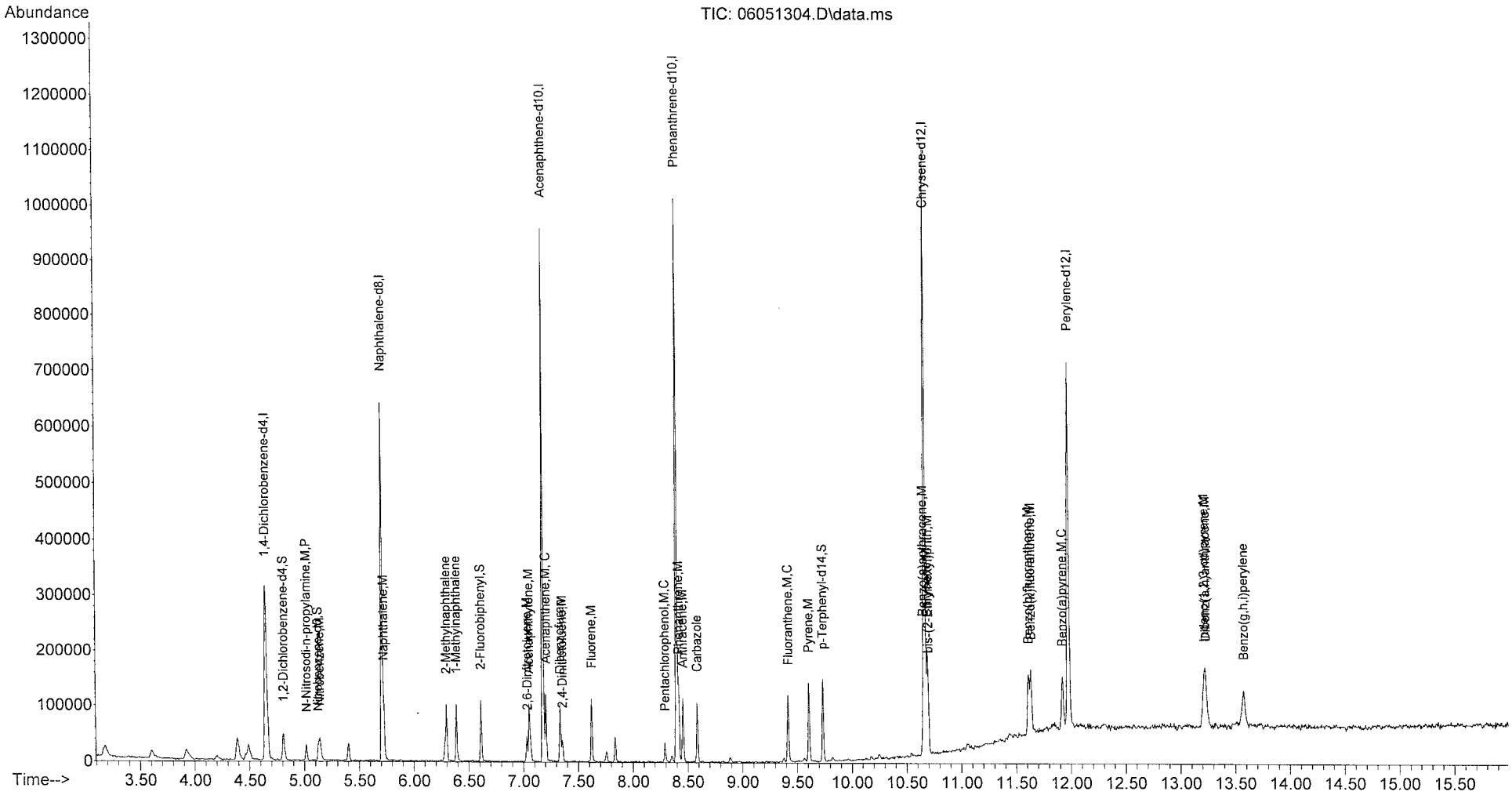
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 1,4-Dichlorobenzene-d4	4.643	152	75596	4.00	ngs		0.00
6) Naphthalene-d8	5.708	136	244818	4.00	ngs		0.00
13) Acenaphthene-d10	7.179	164	169959	4.00	ngs		0.00
19) Phenanthrene-d10	8.398	188	326520	4.00	ngs		0.00
26) Chrysene-d12	10.666	240	376038	4.00	ngs		0.00
33) Perylene-d12	11.976	264	304668	4.00	ngs		0.00
System Monitoring Compounds							
2) 1,2-Dichlorobenzene-d4	4.809	152	11174	0.49	ngs		0.00
Spiked Amount 50.000	Range 16 - 110		Recovery	=	0.98%#		
4) Nitrobenzene-d5	5.125	82	11316	0.41	ngs		0.00
Spiked Amount 50.000	Range 35 - 114		Recovery	=	0.82%#		
10) 2-Fluorobiphenyl	6.612	172	30411	0.44	ngs		0.01
Spiked Amount 50.000	Range 43 - 116		Recovery	=	0.88%#		
25) p-Terphenyl-d14	9.735	244	41404	0.47	ngs		0.00
Spiked Amount 50.000	Range 33 - 141		Recovery	=	0.94%#		
Target Compounds							Qvalue
3) N-Nitrosodi-n-propylamine	5.018	70	6201	0.42	ngs		95
5) Nitrobenzene	5.141	77	11931	0.41	ngs		86
7) Naphthalene	5.724	128	33578	0.46	ngs		99
8) 2-Methylnaphthalene	6.296	142	22777	0.48	ngs		93
9) 1-Methylnaphthalene	6.387	142	21177	0.48	ngs		99
11) Acenaphthylene	7.050	152	36688	0.47	ngs		98
12) 2,6-Dinitrotoluene	7.034	165	4855	0.35	ngs		86
14) Acenaphthene	7.205	153	25200	0.47	ngs		99
15) Dibenzofuran	7.334	168	35859	0.39	ngs		98
16) 2,4-Dinitrotoluene	7.355	165	6237	0.36	ngs		91
17) Fluorene	7.623	166	27666	0.43	ngs		92
18) Pentachlorophenol	8.291	266	4045	0.37	ngs		95
20) Phenanthrene	8.420	178	46340	0.47	ngs		97
21) Anthracene	8.457	178	42181	0.45	ngs		99
22) Carbazole	8.585	167	35914	0.38	ngs		97
23) Fluoranthene	9.420	202	52354	0.45	ngs		98
24) Pyrene	9.607	202	56087	0.46	ngs		100
27) Benzo(a)anthracene	10.650	228	50407	0.45	ngs		97
28) Chrysene	10.687	228	50675	0.46	ngs		98
29) bis-(2-Ethylhexyl)phth	10.698	149	32683	0.37	ngs	#	98
30) Benzo(b)fluoranthene	11.613	252	53737	0.44	ngs		98
31) Benzo(k)fluoranthene	11.634	252	43335	0.44	ngs		99
32) Benzo(a)pyrene	11.923	252	45477	0.46	ngs		99
34) Indeno(1,2,3-cd)pyrene	13.217	276	54492	0.51	ngs		96
35) Dibenz(a,h)anthracene	13.228	278	43668	0.51	ngs		99
36) Benzo(g,h,i)perylene	13.576	276	48276	0.52	ngs	#	71

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\060513\
Data File : 06051304.D
Acq On : 5 Jun 2013 10:56 am
Operator : DM
Sample : ICAL 0.5 SSTD
Misc : PNA_QC 58-39-543
ALS Vial : 4 Sample Multiplier: 1
InstName : SVOC-7

Quant Time: Jun 05 15:51:22 2013
Quant Method : C:\msdchem\1\data\060513\PNA0523.M
Quant Title : SOP 4020 EPA 8270C
QLast Update : Wed Jun 05 15:51:11 2013
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\060513\
Data File : 06051304.D
Acq On : 5 Jun 2013 10:56 am
Operator : DM
Sample : ICAL 0.5 SSTD
Misc : PNA_QC 58-39-543
ALS Vial : 4 Sample Multiplier: 1
InstName : SVOC-7

Quant Time: Jun 05 15:51:22 2013
Quant Method : C:\msdchem\1\data\060513\PNA0523.M
Quant Title : SOP 4020 EPA 8270C
QLast Update : Wed Jun 05 15:51:11 2013
Response via : Initial Calibration

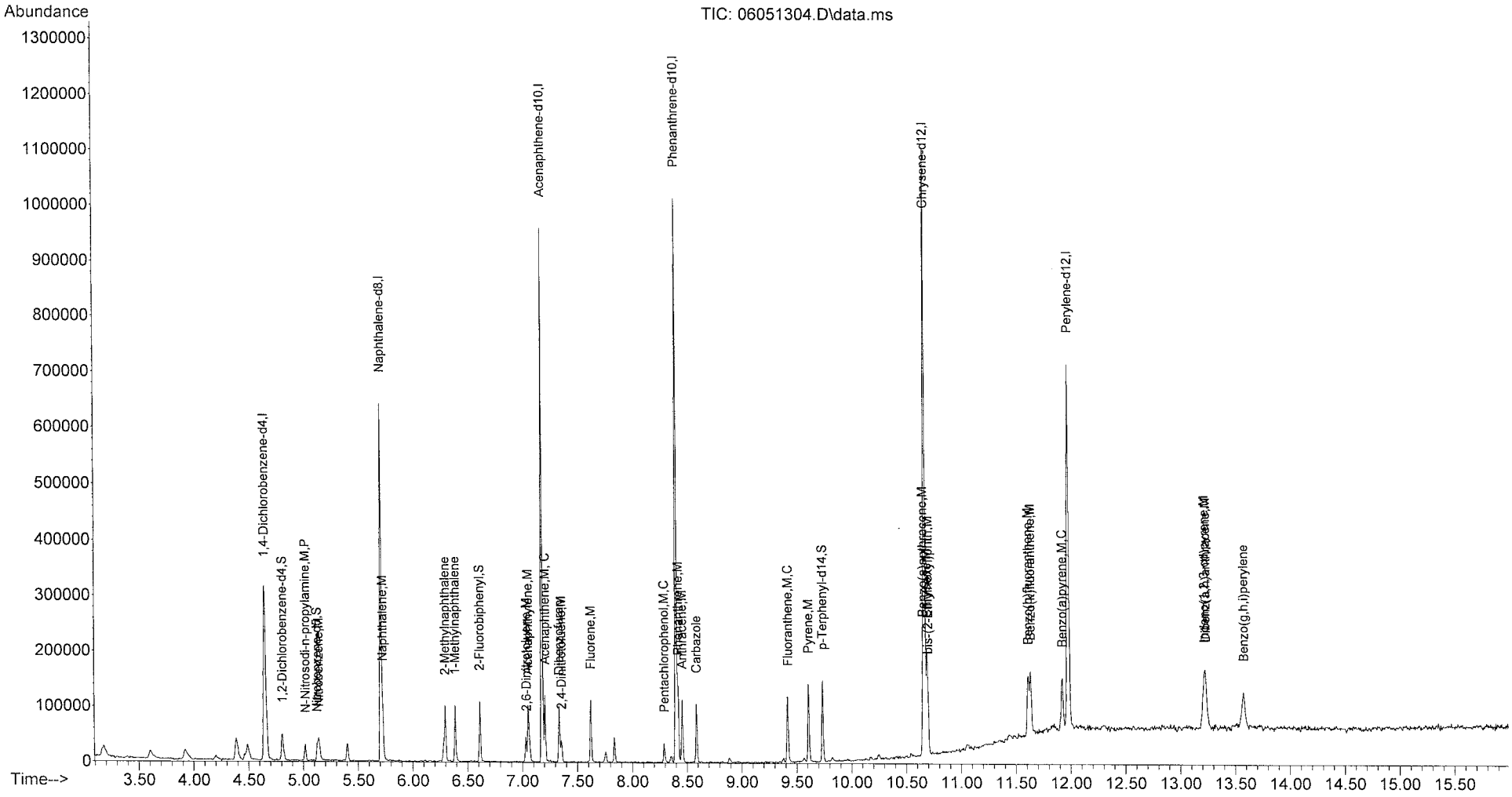
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 1,4-Dichlorobenzene-d4	4.643	152	75596	4.00	ngs		0.00
6) Naphthalene-d8	5.708	136	244818	4.00	ngs		0.00
13) Acenaphthene-d10	7.179	164	169959	4.00	ngs		0.00
19) Phenanthrene-d10	8.398	188	326520	4.00	ngs		0.00
26) Chrysene-d12	10.666	240	376038	4.00	ngs		0.00
33) Perylene-d12	11.976	264	304668	4.00	ngs		0.00
System Monitoring Compounds							
2) 1,2-Dichlorobenzene-d4	4.809	152	11174	0.49	ngs		0.00
Spiked Amount 50.000	Range 16 - 110		Recovery	=	0.98%#		
4) Nitrobenzene-d5	5.125	82	11316	0.41	ngs		0.00
Spiked Amount 50.000	Range 35 - 114		Recovery	=	0.82%#		
10) 2-Fluorobiphenyl	6.612	172	30411	0.44	ngs		0.01
Spiked Amount 50.000	Range 43 - 116		Recovery	=	0.88%#		
25) p-Terphenyl-d14	9.735	244	41404	0.47	ngs		0.00
Spiked Amount 50.000	Range 33 - 141		Recovery	=	0.94%#		
Target Compounds							Qvalue
3) N-Nitrosodi-n-propylamine	5.018	70	6201	0.42	ngs		95
5) Nitrobenzene	5.141	77	11931	0.41	ngs		86
7) Naphthalene	5.724	128	33578	0.46	ngs		99
8) 2-Methylnaphthalene	6.296	142	22777	0.48	ngs		93
9) 1-Methylnaphthalene	6.387	142	21177	0.48	ngs		99
11) Acenaphthylene	7.050	152	36688	0.47	ngs		98
12) 2,6-Dinitrotoluene	7.034	165	4855	0.35	ngs		86
14) Acenaphthene	7.205	153	25200	0.47	ngs		99
15) Dibenzofuran	7.334	168	35859	0.39	ngs		98
16) 2,4-Dinitrotoluene	7.355	165	6237	0.36	ngs		91
17) Fluorene	7.623	166	27666	0.43	ngs		92
18) Pentachlorophenol	8.291	266	4045	0.37	ngs		95
20) Phenanthrene	8.420	178	46340	0.47	ngs		97
21) Anthracene	8.457	178	42181	0.45	ngs		99
22) Carbazole	8.585	167	35914	0.38	ngs		97
23) Fluoranthene	9.420	202	52354	0.45	ngs		98
24) Pyrene	9.607	202	56087	0.46	ngs		100
27) Benzo(a)anthracene	10.650	228	50407	0.45	ngs		97
28) Chrysene	10.687	228	50675	0.46	ngs		98
29) bis-(2-Ethylhexyl)phth	10.698	149	32683	0.37	ngs	#	98
30) Benzo(b)fluoranthene	11.613	252	53737	0.44	ngs		98
31) Benzo(k)fluoranthene	11.634	252	43335	0.44	ngs		99
32) Benzo(a)pyrene	11.923	252	45477	0.46	ngs		99
34) Indeno(1,2,3-cd)pyrene	13.217	276	54492	0.51	ngs		96
35) Dibenz(a,h)anthracene	13.228	278	43668	0.51	ngs		99
36) Benzo(g,h,i)perylene	13.576	276	48276	0.52	ngs	#	71

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\060513\
Data File : 06051304.D
Acq On : 5 Jun 2013 10:56 am
Operator : DM
Sample : ICAL 0.5 SSTD
Misc : PNA_QC 58-39-543
ALS Vial : 4 Sample Multiplier: 1
InstName : SVOC-7

Quant Time: Jun 05 15:51:22 2013
Quant Method : C:\msdchem\1\data\060513\PNA0523.M
Quant Title : SOP 4020 EPA 8270C
QLast Update : Wed Jun 05 15:51:11 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\060513\
Data File : 06051305.D
Acq On : 5 Jun 2013 11:18 am
Operator : DM
Sample : ICAL 1.0 SSTD
Misc : PNA_QC 58-39-542
ALS Vial : 5 Sample Multiplier: 1
InstName : SVOC-7

Quant Time: Jun 05 15:52:50 2013
Quant Method : C:\msdchem\1\data\060513\PNA0523.M
Quant Title : SOP 4020 EPA 8270C
QLast Update : Wed Jun 05 15:52:03 2013
Response via : Initial Calibration

D 6/27/13 6/27/13 WP

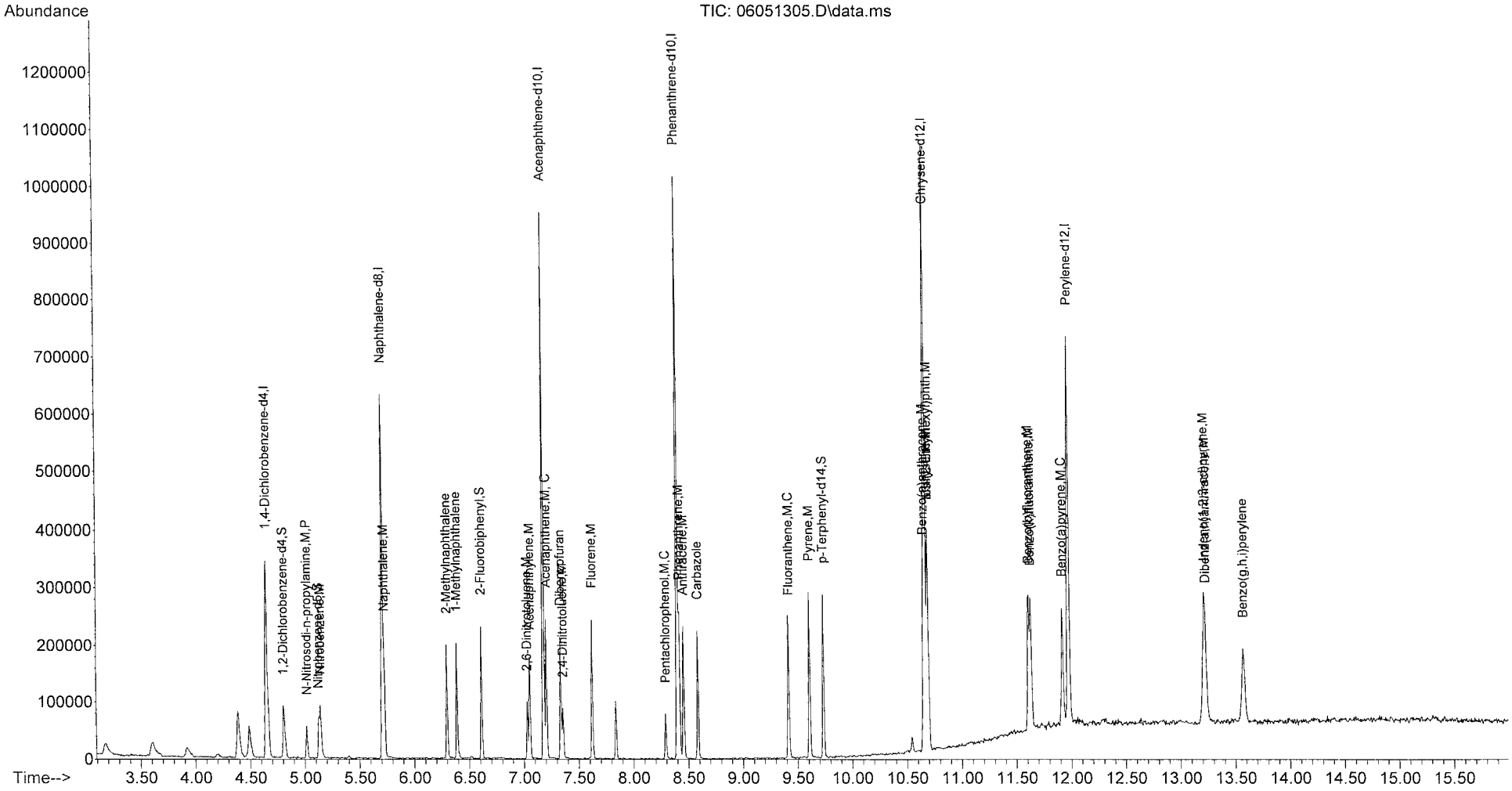
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.649	152	76130	4.00	ngs	0.00
6) Naphthalene-d8	5.708	136	247467	4.00	ngs	0.00
13) Acenaphthene-d10	7.178	164	170948	4.00	ngs	0.00
19) Phenanthrene-d10	8.398	188	339884	4.00	ngs	0.00
26) Chrysene-d12	10.666	240	388476	4.00	ngs	0.00
33) Perylene-d12	11.976	264	313179	4.00	ngs	0.00
System Monitoring Compounds						
2) 1,2-Dichlorobenzene-d4	4.804	152	20002	0.89	ngs	0.00
Spiked Amount 50.000	Range 16 - 110		Recovery	=	1.78%#	
4) Nitrobenzene-d5	5.125	82	22188	0.85	ngs	0.00
Spiked Amount 50.000	Range 35 - 114		Recovery	=	1.70%#	
10) 2-Fluorobiphenyl	6.611	172	61158	0.91	ngs	0.01
Spiked Amount 50.000	Range 43 - 116		Recovery	=	1.82%#	
25) p-Terphenyl-d14	9.735	244	79649	0.89	ngs	0.00
Spiked Amount 50.000	Range 33 - 141		Recovery	=	1.78%#	
Target Compounds						Qvalue
3) N-Nitrosodi-n-propylamine	5.018	70	12384	0.87	ngs	98
5) Nitrobenzene	5.141	77	23609	0.86	ngs	87
7) Naphthalene	5.724	128	67027	0.94	ngs	98
8) 2-Methylnaphthalene	6.296	142	43548	0.93	ngs	96
9) 1-Methylnaphthalene	6.387	142	42100	0.96	ngs	97
11) Acenaphthylene	7.055	152	70342	0.90	ngs	96
12) 2,6-Dinitrotoluene	7.029	165	11356	0.87	ngs	92
14) Acenaphthene	7.205	153	49342	0.94	ngs	96
15) Dibenzofuran	7.334	168	71486	0.81	ngs	93
16) 2,4-Dinitrotoluene	7.355	165	13879	0.84	ngs	80
17) Fluorene	7.622	166	58324	0.93	ngs	98
18) Pentachlorophenol	8.291	266	8495	0.78	ngs	91
20) Phenanthrene	8.419	178	91265	0.90	ngs	99
21) Anthracene	8.457	178	86020	0.91	ngs	98
22) Carbazole	8.585	167	80618	0.86	ngs	99
23) Fluoranthene	9.419	202	102620	0.87	ngs	99
24) Pyrene	9.607	202	115842	0.92	ngs	99
27) Benzo(a)anthracene	10.650	228	101490	0.89	ngs	99
28) Chrysene	10.687	228	103852	0.94	ngs	100
29) bis-(2-Ethylhexyl)phth	10.692	149	65128	0.75	ngs	98
30) Benzo(b)fluoranthene	11.612	252	123428m	1.01	ngs	
31) Benzo(k)fluoranthene	11.628	252	84276	0.85	ngs	97
32) Benzo(a)pyrene	11.917	252	95553	0.95	ngs	100
34) Indeno(1,2,3-cd)pyrene	13.217	276	111815m	1.03	ngs	
35) Dibenz(a,h)anthracene	13.228	278	88757	1.01	ngs	94
36) Benzo(g,h,i)perylene	13.570	276	100010	1.05	ngs	97

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\060513\
Data File : 06051305.D
Acq On : 5 Jun 2013 11:18 am
Operator : DM
Sample : ICAL 1.0 SSTD
Misc : PNA_QC 58-39-542
ALS Vial : 5 Sample Multiplier: 1
InstName : SVOC-7

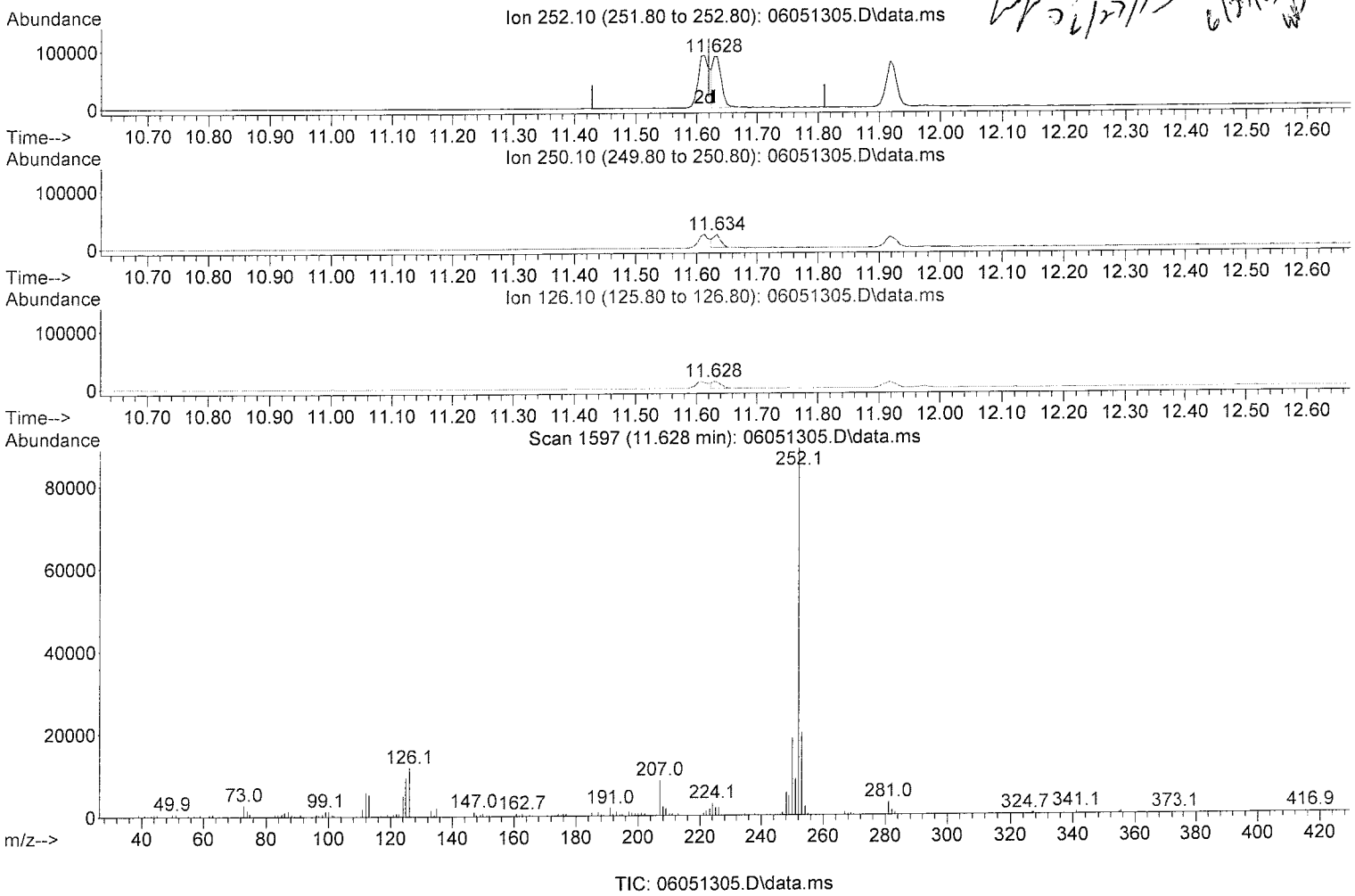
Quant Time: Jun 05 15:52:50 2013
Quant Method : C:\msdchem\1\data\060513\PNA0523.M
Quant Title : SOP 4020 EPA 8270C
QLast Update : Wed Jun 05 15:52:03 2013
Response via : Initial Calibration



Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\060513\
Data File : 06051305.D
Acq On : 5 Jun 2013 11:18 am
Operator : DM
Sample : ICAL 1.0 SSTD
Misc : PNA_QC 58-39-542
ALS Vial : 5 Sample Multiplier: 1
InstName : SVOC-7

Quant Time: Jun 05 15:52:14 2013
Quant Method : C:\msdchem\1\data\060513\PNA0523.M
Quant Title : SOP 4020 EPA 8270C
QLast Update : Wed Jun 05 15:52:03 2013
Response via : Initial Calibration



(30) Benzo(b)fluoranthene (M)

11.628min (+ 0.009) 0.69 ngs

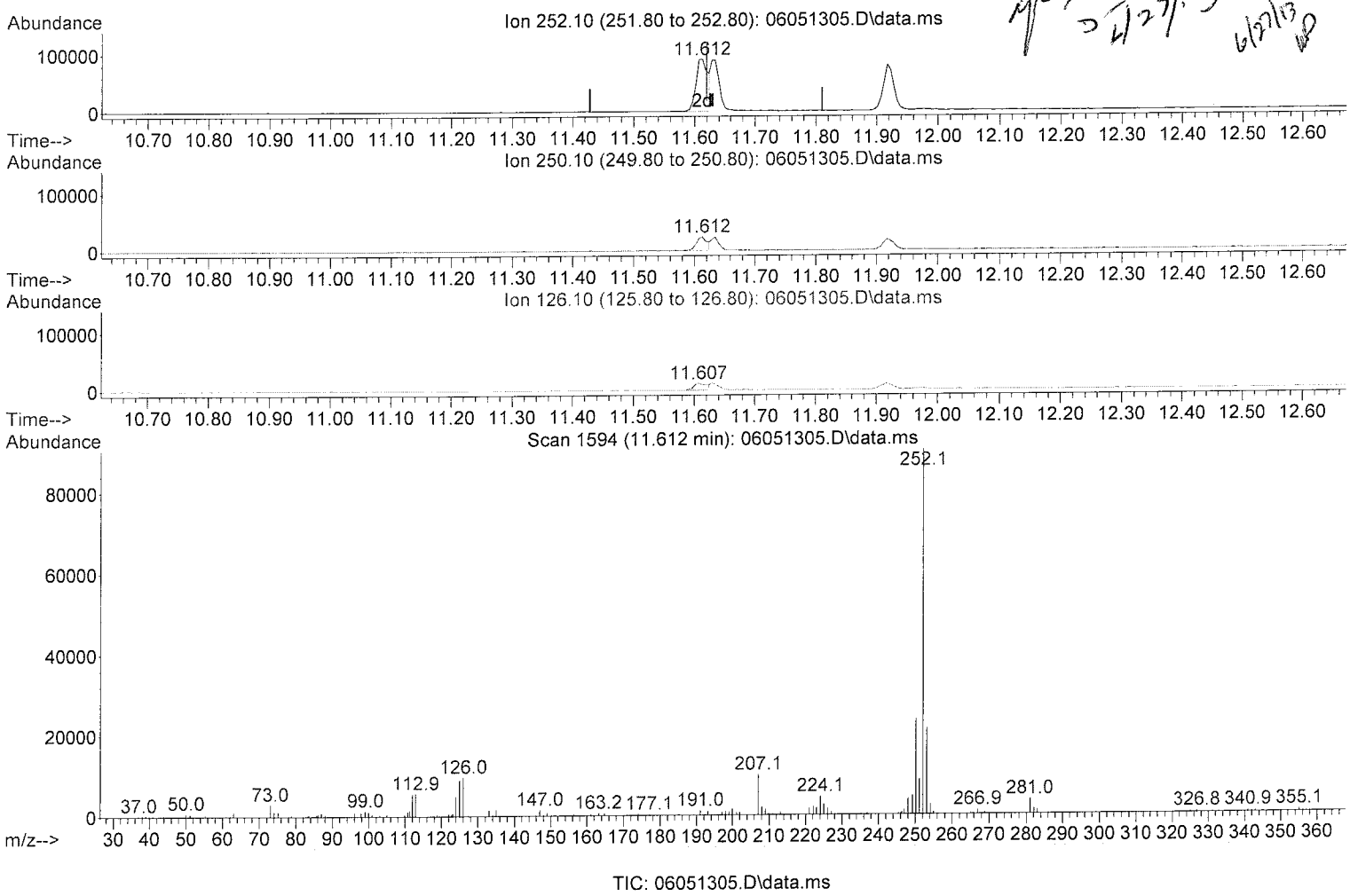
response 84276

Ion	Exp%	Act%
252.10	100.00	100.00
250.10	23.60	22.70
126.10	11.10	13.18
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\060513\
Data File : 06051305.D
Acq On : 5 Jun 2013 11:18 am
Operator : DM
Sample : ICAL 1.0 SSTD
Misc : PNA_QC 58-39-542
ALS Vial : 5 Sample Multiplier: 1
InstName : SVOC-7

Quant Time: Jun 05 15:52:14 2013
Quant Method : C:\msdchem\1\data\060513\PNA0523.M
Quant Title : SOP 4020 EPA 8270C
QLast Update : Wed Jun 05 15:52:03 2013
Response via : Initial Calibration



(30) Benzo(b)fluoranthene (M)

11.612min (-0.007) 1.01 ngs m

response 123428

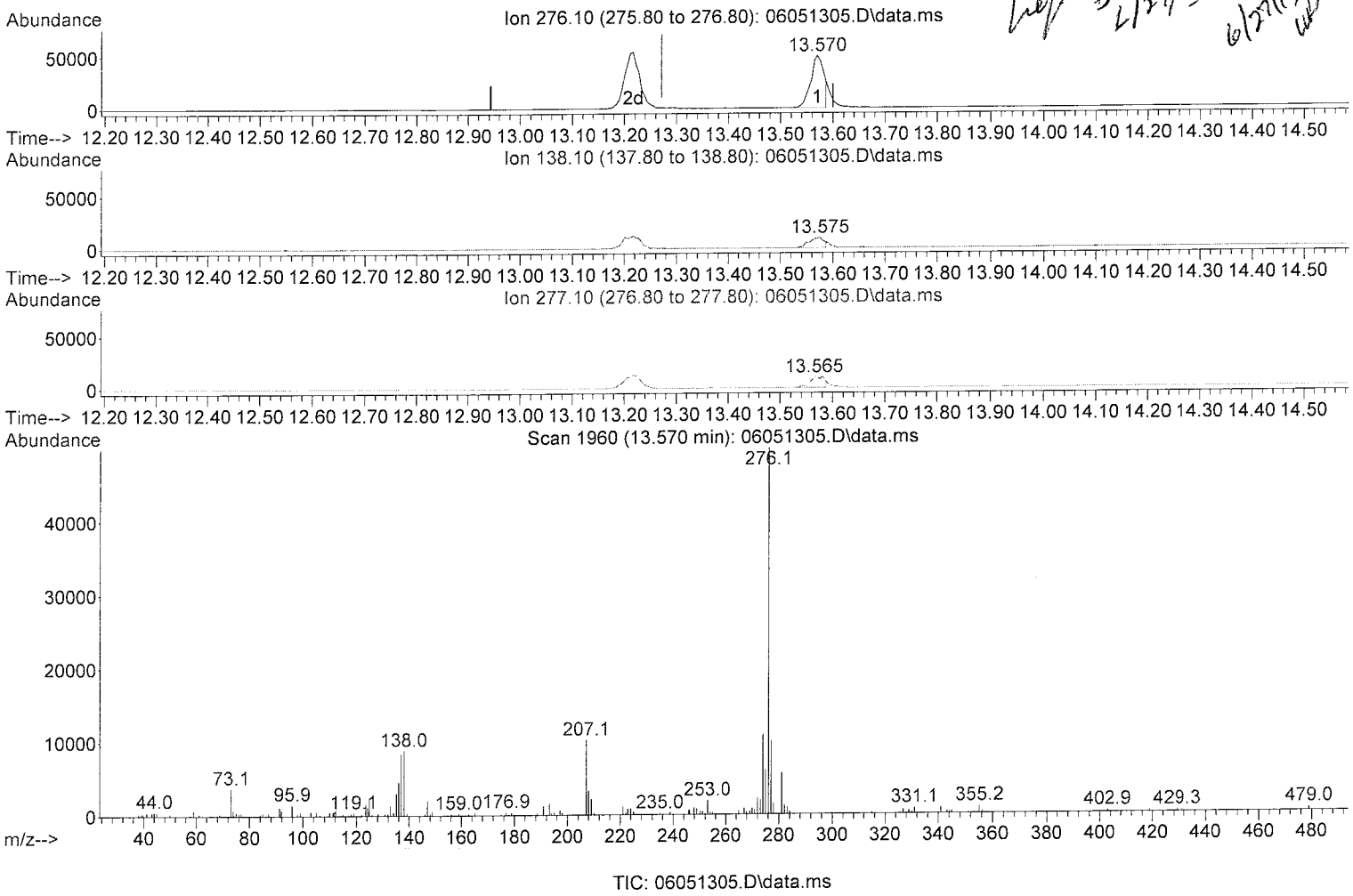
Ion	Exp%	Act%
252.10	100.00	100.00
250.10	23.60	23.35
126.10	11.10	13.85
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\060513\
Data File : 06051305.D
Acq On : 5 Jun 2013 11:18 am
Operator : DM
Sample : ICAL 1.0 SSTD
Misc : PNA_QC 58-39-542
ALS Vial : 5 Sample Multiplier: 1
InstName : SVOC-7

Quant Time: Jun 05 15:52:14 2013
Quant Method : C:\msdchem\1\data\060513\PNA0523.M
Quant Title : SOP 4020 EPA 8270C
QLast Update : Wed Jun 05 15:52:03 2013
Response via : Initial Calibration

6/27/13 6/27/13



TIC: 06051305.D\data.ms

(34) Indeno(1,2,3-cd)pyrene (M)

13.570min (+ 0.298) 0.80 ngs

response 86774

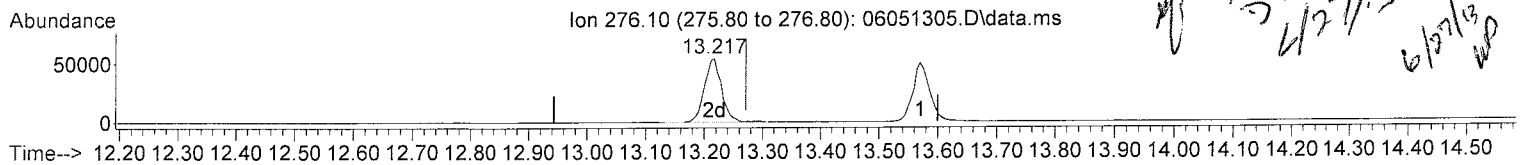
Ion	Exp%	Act%
276.10	100.00	100.00
138.10	25.10	21.30
277.10	25.70	22.40
0.00	0.00	0.00

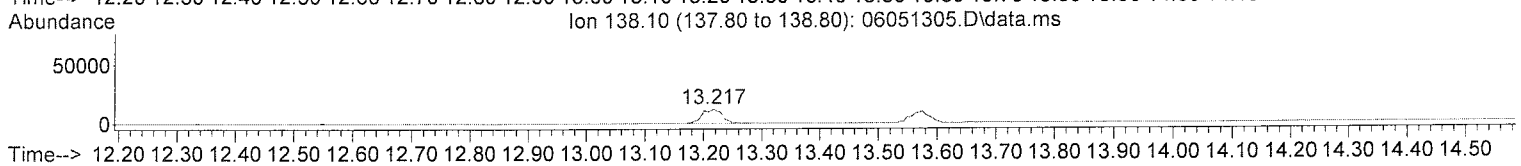
Quantitation Report (Qedit)

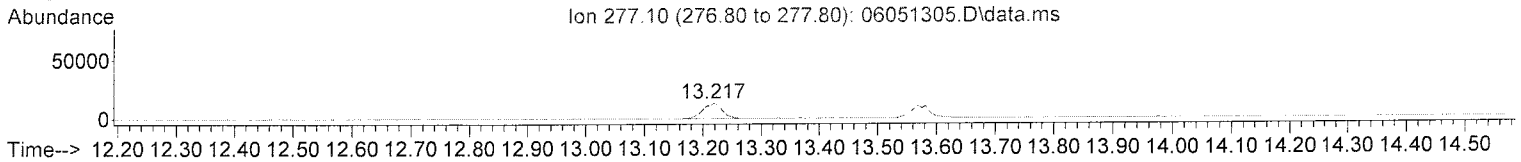
Data Path : C:\msdchem\1\data\060513\
Data File : 06051305.D
Acq On : 5 Jun 2013 11:18 am
Operator : DM
Sample : ICAL 1.0 SSTD
Misc : PNA_QC 58-39-542
ALS Vial : 5 Sample Multiplier: 1
InstName : SVOC-7

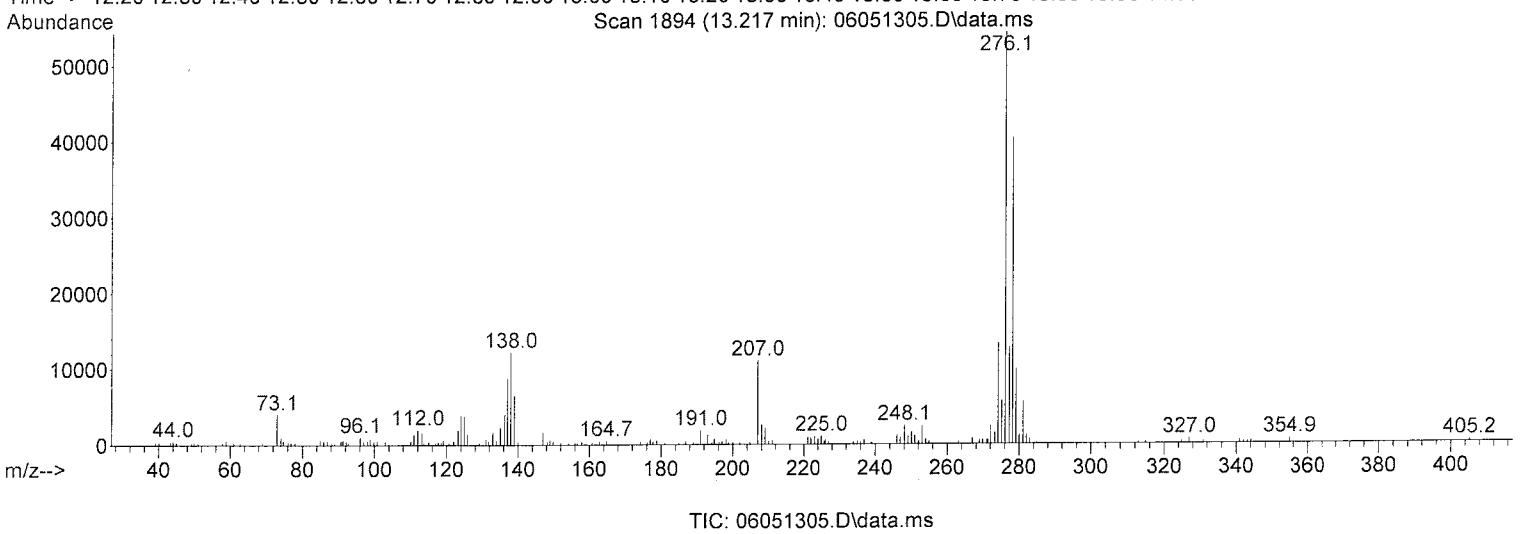
Quant Time: Jun 05 15:52:14 2013
Quant Method : C:\msdchem\1\data\060513\PNA0523.M
Quant Title : SOP 4020 EPA 8270C
QLast Update : Wed Jun 05 15:52:03 2013
Response via : Initial Calibration

6/27/13 6/27/13









TIC: 06051305.D\data.ms

(34) Indeno(1,2,3-cd)pyrene (M)

13.217min (-0.055) 1.03 ngs m

response 111815

Ion	Exp%	Act%
276.10	100.00	100.00
138.10	25.10	25.33
277.10	25.70	26.15
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\060513\
Data File : 06051305.D
Acq On : 5 Jun 2013 11:18 am
Operator : DM
Sample : ICAL 1.0 SSTD
Misc : PNA_QC 58-39-542
ALS Vial : 5 Sample Multiplier: 1
InstName : SVOC-7

Quant Time: Jun 05 15:52:14 2013
Quant Method : C:\msdchem\1\data\060513\PNA0523.M
Quant Title : SOP 4020 EPA 8270C
QLast Update : Wed Jun 05 15:52:03 2013
Response via : Initial Calibration

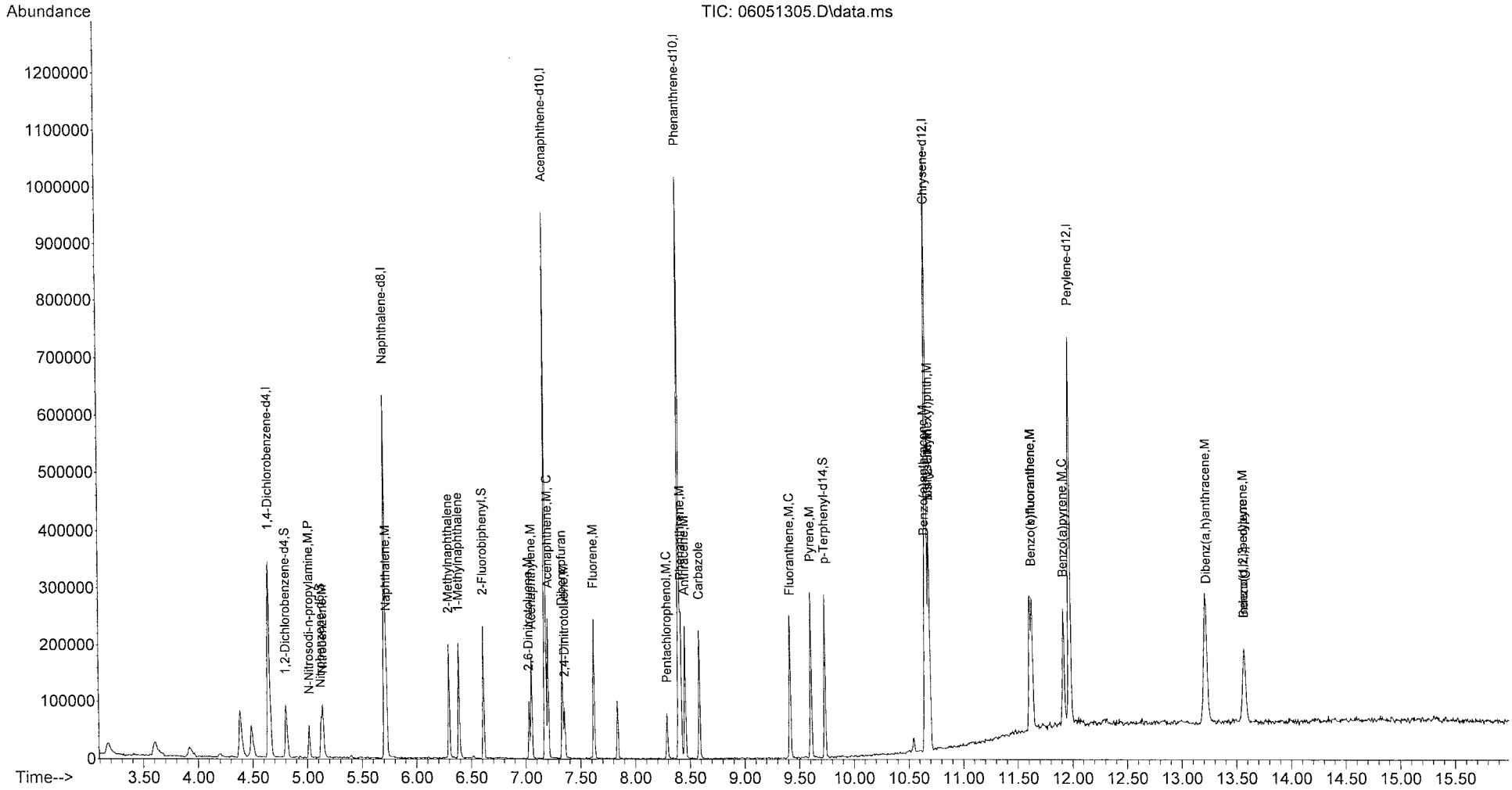
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.649	152	76130	4.00	ngs	0.00
6) Naphthalene-d8	5.708	136	247467	4.00	ngs	0.00
13) Acenaphthene-d10	7.178	164	170948	4.00	ngs	0.00
19) Phenanthrene-d10	8.398	188	339884	4.00	ngs	0.00
26) Chrysene-d12	10.666	240	388476	4.00	ngs	0.00
33) Perylene-d12	11.976	264	313179	4.00	ngs	0.00
System Monitoring Compounds						
2) 1,2-Dichlorobenzene-d4	4.804	152	20002	0.89	ngs	0.00
Spiked Amount 50.000	Range 16 - 110		Recovery	=	1.78%#	
4) Nitrobenzene-d5	5.125	82	22188	0.85	ngs	0.00
Spiked Amount 50.000	Range 35 - 114		Recovery	=	1.70%#	
10) 2-Fluorobiphenyl	6.611	172	61158	0.91	ngs	0.01
Spiked Amount 50.000	Range 43 - 116		Recovery	=	1.82%#	
25) p-Terphenyl-d14	9.735	244	79649	0.89	ngs	0.00
Spiked Amount 50.000	Range 33 - 141		Recovery	=	1.78%#	
Target Compounds						Qvalue
3) N-Nitrosodi-n-propylamine	5.018	70	12384	0.87	ngs	98
5) Nitrobenzene	5.141	77	23609	0.86	ngs	87
7) Naphthalene	5.724	128	67027	0.94	ngs	98
8) 2-Methylnaphthalene	6.296	142	43548	0.93	ngs	96
9) 1-Methylnaphthalene	6.387	142	42100	0.96	ngs	97
11) Acenaphthylene	7.055	152	70342	0.90	ngs	96
12) 2,6-Dinitrotoluene	7.029	165	11356	0.87	ngs	92
14) Acenaphthene	7.205	153	49342	0.94	ngs	96
15) Dibenzofuran	7.334	168	71486	0.81	ngs	93
16) 2,4-Dinitrotoluene	7.355	165	13879	0.84	ngs	80
17) Fluorene	7.622	166	58324	0.93	ngs	98
18) Pentachlorophenol	8.291	266	8495	0.78	ngs	91
20) Phenanthrene	8.419	178	91265	0.90	ngs	99
21) Anthracene	8.457	178	86020	0.91	ngs	98
22) Carbazole	8.585	167	80618	0.86	ngs	99
23) Fluoranthene	9.419	202	102620	0.87	ngs	99
24) Pyrene	9.607	202	115842	0.92	ngs	99
27) Benzo(a)anthracene	10.650	228	101490	0.89	ngs	99
28) Chrysene	10.687	228	103852	0.94	ngs	100
29) bis-(2-Ethylhexyl)phth	10.692	149	65128	0.75	ngs	98
30) Benzo(b)fluoranthene	11.628	252	84276	0.69	ngs	97
31) Benzo(k)fluoranthene	11.628	252	84276	0.85	ngs	97
32) Benzo(a)pyrene	11.917	252	95553	0.95	ngs	100
34) Indeno(1,2,3-cd)pyrene	13.570	276	86774	0.80	ngs	93
35) Dibenz(a,h)anthracene	13.228	278	88757	1.01	ngs	94
36) Benzo(g,h,i)perylene	13.570	276	100010	1.05	ngs	97

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\060513\
Data File : 06051305.D
Acq On : 5 Jun 2013 11:18 am
Operator : DM
Sample : ICAL 1.0 SSTD
Misc : PNA_QC 58-39-542
ALS Vial : 5 Sample Multiplier: 1
InstName : SVOC-7

Quant Time: Jun 05 15:52:14 2013
Quant Method : C:\msdchem\1\data\060513\PNA0523.M
Quant Title : SOP 4020 EPA 8270C
QLast Update : Wed Jun 05 15:52:03 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\060513\
Data File : 06051306.D
Acq On : 5 Jun 2013 11:41 am
Operator : DM
Sample : ICAL 5.0 SSTD
Misc : PNA_QC 58-39-541
ALS Vial : 6 Sample Multiplier: 1
InstName : SVOC-7

Quant Time: Jun 05 15:54:01 2013
Quant Method : C:\msdchem\1\data\060513\PNA0523.M
Quant Title : SOP 4020 EPA 8270C
QLast Update : Wed Jun 05 15:53:21 2013
Response via : Initial Calibration

D 6/27/13 6/27/13

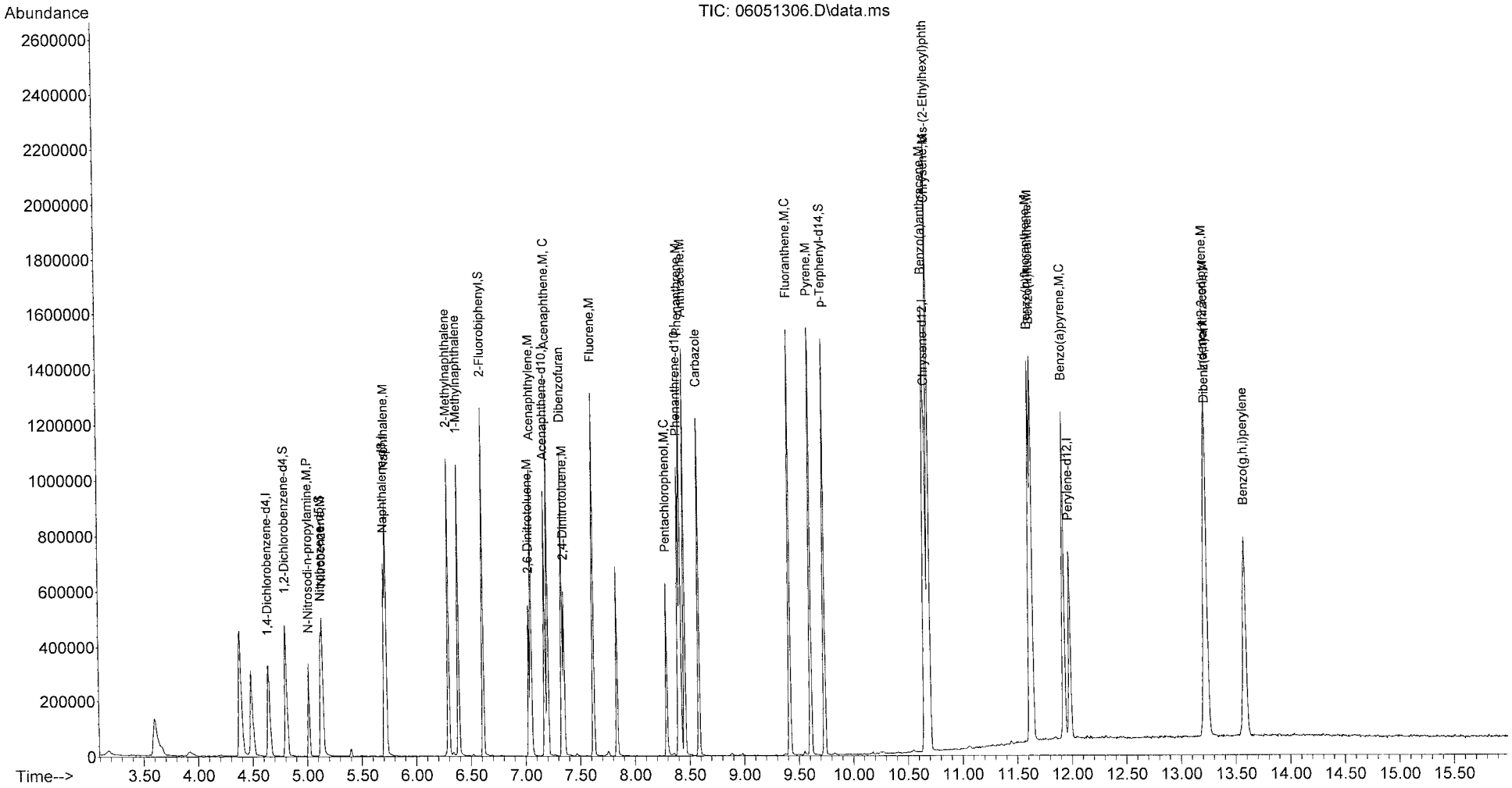
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	4.643	152	78367	4.00 ngs	0.00
6) Naphthalene-d8	5.708	136	258909	4.00 ngs	0.00
13) Acenaphthene-d10	7.179	164	175043	4.00 ngs	0.00
19) Phenanthrene-d10	8.398	188	345499	4.00 ngs	0.00
26) Chrysene-d12	10.671	240	406900	4.00 ngs	0.01
33) Perylene-d12	11.982	264	324472	4.00 ngs	0.01
System Monitoring Compounds					
2) 1,2-Dichlorobenzene-d4	4.804	152	102909	4.68 ngs	0.00
Spiked Amount 50.000	Range 16 - 110		Recovery	= 9.36%#	
4) Nitrobenzene-d5	5.130	82	139681	5.55 ngs	0.00
Spiked Amount 50.000	Range 35 - 114		Recovery	= 11.10%#	
10) 2-Fluorobiphenyl	6.612	172	326410	4.86 ngs	0.01
Spiked Amount 50.000	Range 43 - 116		Recovery	= 9.72%#	
25) p-Terphenyl-d14	9.735	244	446472	5.16 ngs	0.00
Spiked Amount 50.000	Range 33 - 141		Recovery	= 10.32%#	
Target Compounds					Qvalue
3) N-Nitrosodi-n-propylamine	5.018	70	68333	4.94 ngs	92
5) Nitrobenzene	5.141	77	132282	4.98 ngs	96
7) Naphthalene	5.724	128	354410	4.97 ngs	99
8) 2-Methylnaphthalene	6.296	142	247691	5.28 ngs	99
9) 1-Methylnaphthalene	6.387	142	218657	4.93 ngs	96
11) Acenaphthylene	7.056	152	417960	5.36 ngs	99
12) 2,6-Dinitrotoluene	7.034	165	65870	5.02 ngs	94
14) Acenaphthene	7.205	153	273506	5.26 ngs	97
15) Dibenzofuran	7.334	168	404156	4.79 ngs	99
16) 2,4-Dinitrotoluene	7.355	165	86486	5.45 ngs	88
17) Fluorene	7.622	166	314332	5.08 ngs	98
18) Pentachlorophenol	8.291	266	63608	5.76 ngs	94
20) Phenanthrene	8.419	178	501472	5.08 ngs	99
21) Anthracene	8.457	178	485006	5.27 ngs	99
22) Carbazole	8.585	167	435978	4.90 ngs	99
23) Fluoranthene	9.420	202	606029	5.35 ngs	100
24) Pyrene	9.607	202	640336	5.22 ngs	99
27) Benzo(a)anthracene	10.655	228	591621	5.20 ngs	99
28) Chrysene	10.693	228	580224	5.23 ngs	99
29) bis-(2-Ethylhexyl)phth	10.698	149	406205	4.80 ngs	97
30) Benzo(b)fluoranthene	11.618	252	619834m	5.03 ngs	
31) Benzo(k)fluoranthene	11.639	252	584332	5.93 ngs	96
32) Benzo(a)pyrene	11.928	252	558623	5.50 ngs	99
34) Indeno(1,2,3-cd)pyrene	13.228	276	651116	5.86 ngs	99
35) Dibenz(a,h)anthracene	13.239	278	522698	5.77 ngs	97
36) Benzo(g,h,i)perylene	13.586	276	556008	5.71 ngs	99

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\060513\
Data File : 06051306.D
Acq On : 5 Jun 2013 11:41 am
Operator : DM
Sample : ICAL 5.0 SSTD
Misc : PNA_QC 58-39-541
ALS Vial : 6 Sample Multiplier: 1
InstName : SVOC-7

Quant Time: Jun 05 15:54:01 2013
Quant Method : C:\msdchem\1\data\060513\PNA0523.M
Quant Title : SOP 4020 EPA 8270C
QLast Update : Wed Jun 05 15:53:21 2013
Response via : Initial Calibration

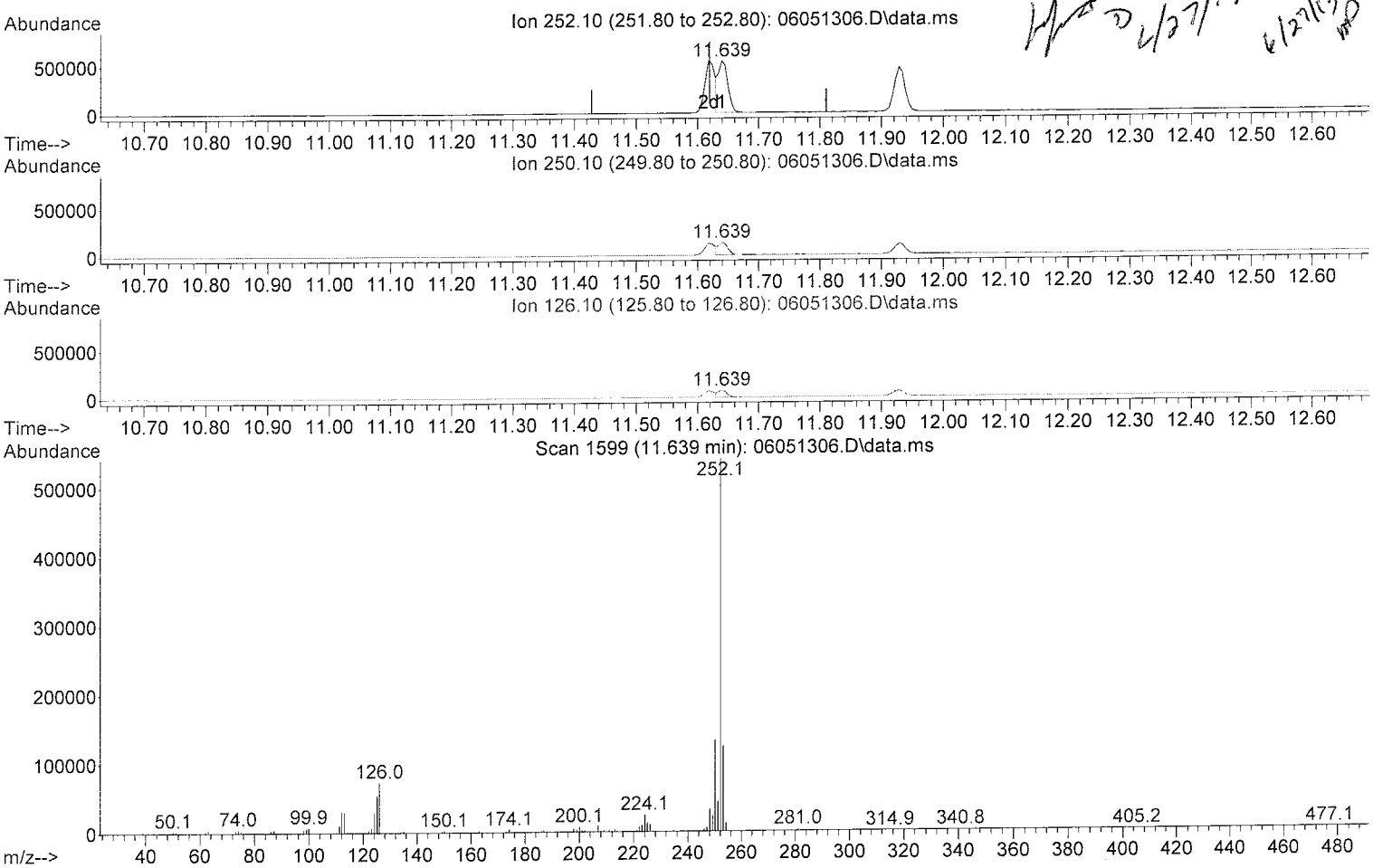


Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\060513\
Data File : 06051306.D
Acq On : 5 Jun 2013 11:41 am
Operator : DM
Sample : ICAL 5.0 SSTD
Misc : PNA_QC 58-39-541
ALS Vial : 6 Sample Multiplier: 1
InstName : SVOC-7

Quant Time: Jun 05 15:53:35 2013
Quant Method : C:\msdchem\1\data\060513\PNA0523.M
Quant Title : SOP 4020 EPA 8270C
QLast Update : Wed Jun 05 15:53:21 2013
Response via : Initial Calibration

6/27/13 6/27/13



TIC: 06051306.D\data.ms

(30) Benzo(b)fluoranthene (M)

11.639min (+ 0.020) 4.74 ngs

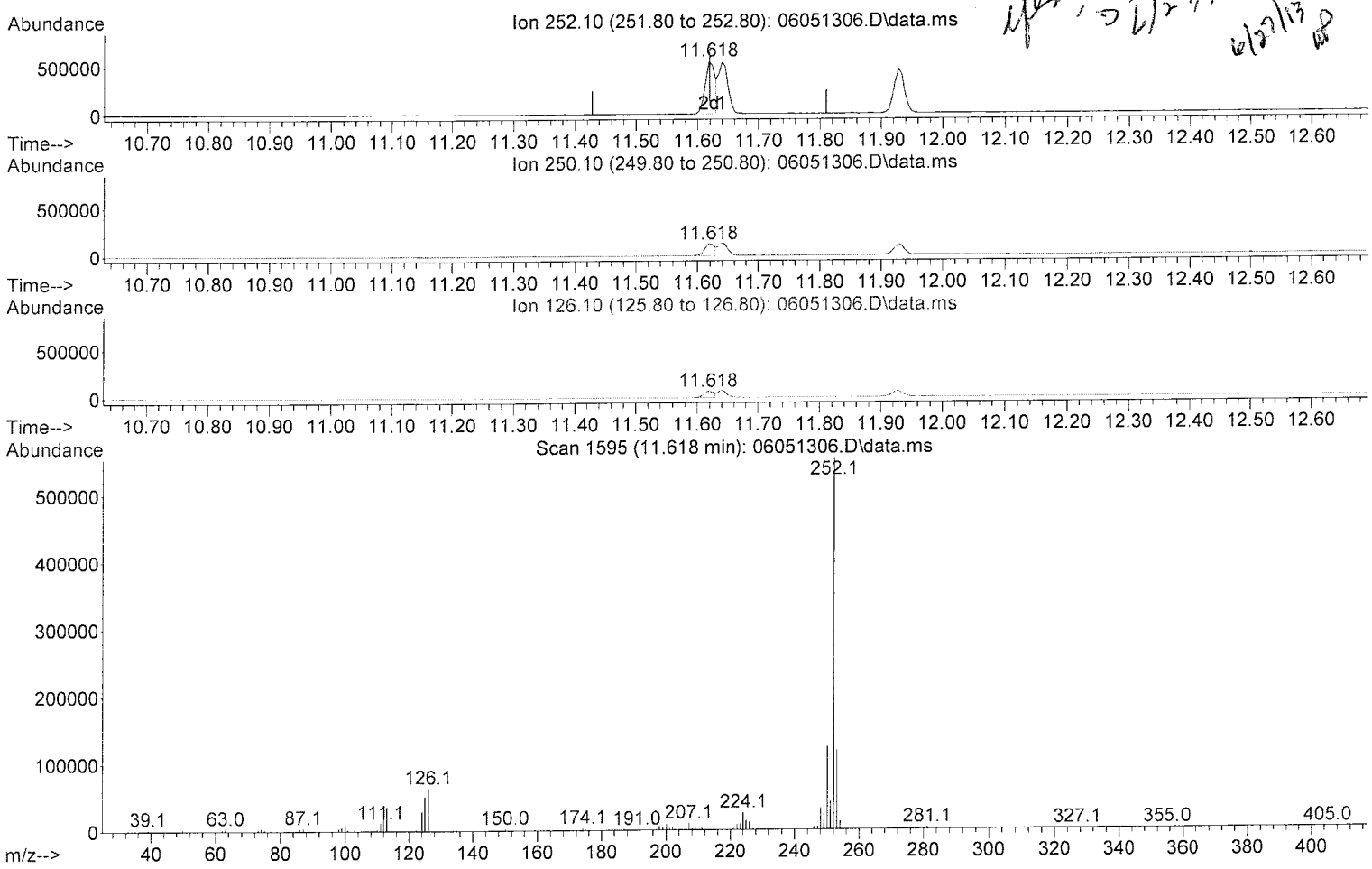
response 584332

Ion	Exp%	Act%
252.10	100.00	100.00
250.10	23.60	23.50
126.10	11.10	12.02
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\060513\
Data File : 06051306.D
Acq On : 5 Jun 2013 11:41 am
Operator : DM
Sample : ICAL 5.0 SSTD
Misc : PNA_QC 58-39-541
ALS Vial : 6 Sample Multiplier: 1
InstName : SVOC-7

Quant Time: Jun 05 15:53:35 2013
Quant Method : C:\msdchem\1\data\060513\PNA0523.M
Quant Title : SOP 4020 EPA 8270C
QLast Update : Wed Jun 05 15:53:21 2013
Response via : Initial Calibration



(30) Benzo(b)fluoranthene (M)

11.618min (-0.002) 5.03 ngs m

response 619834

Ion	Exp%	Act%
252.10	100.00	100.00
250.10	23.60	22.89
126.10	11.10	12.37
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\060513\
Data File : 06051306.D
Acq On : 5 Jun 2013 11:41 am
Operator : DM
Sample : ICAL 5.0 SSTD
Misc : PNA_QC 58-39-541
ALS Vial : 6 Sample Multiplier: 1
InstName : SVOC-7

Quant Time: Jun 05 15:53:35 2013
Quant Method : C:\msdchem\1\data\060513\PNA0523.M
Quant Title : SOP 4020 EPA 8270C
QLast Update : Wed Jun 05 15:53:21 2013
Response via : Initial Calibration

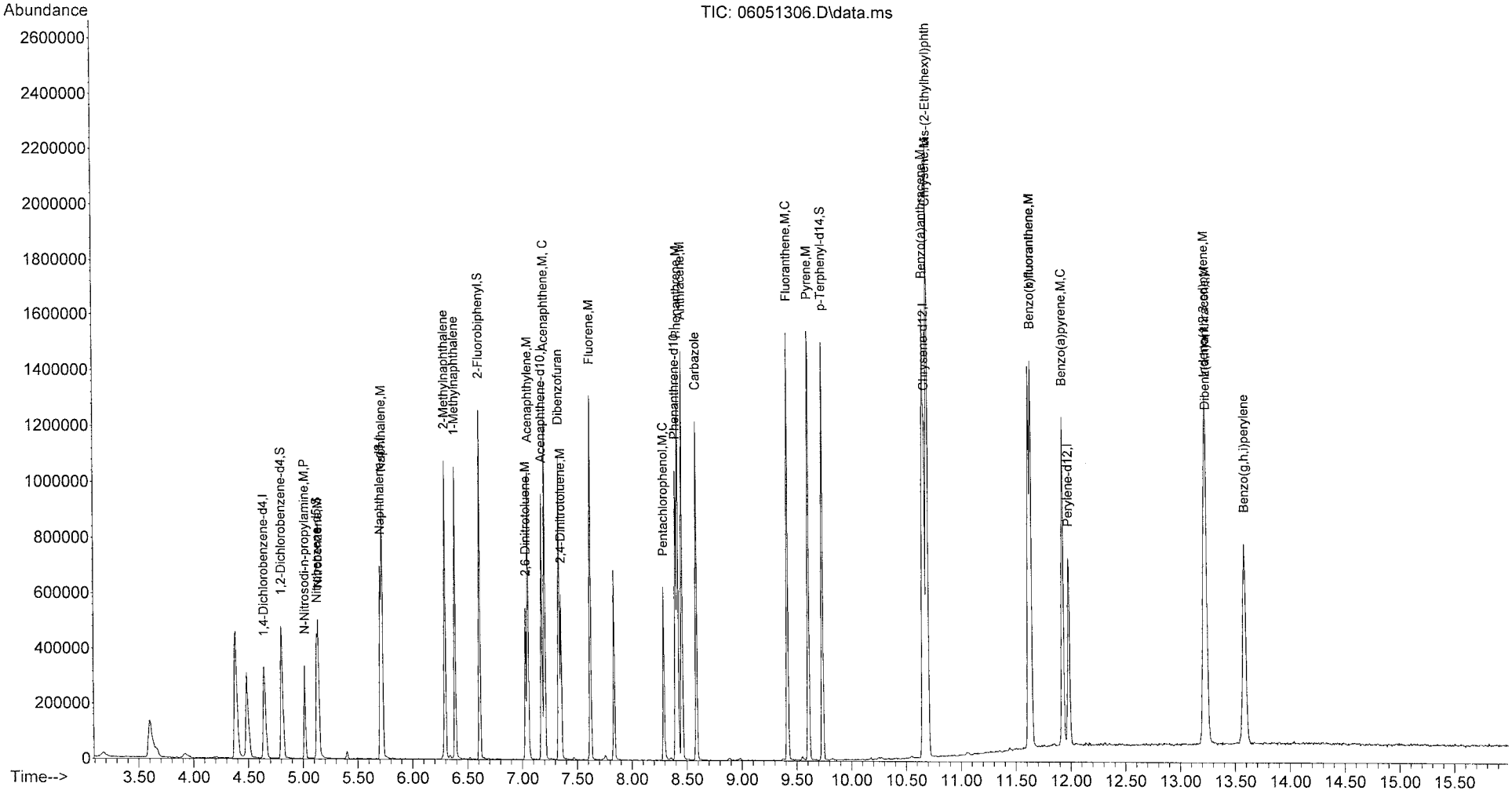
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.643	152	78367	4.00	ngs	0.00
6) Naphthalene-d8	5.708	136	258909	4.00	ngs	0.00
13) Acenaphthene-d10	7.179	164	175043	4.00	ngs	0.00
19) Phenanthrene-d10	8.398	188	345499	4.00	ngs	0.00
26) Chrysene-d12	10.671	240	406900	4.00	ngs	0.01
33) Perylene-d12	11.982	264	324472	4.00	ngs	0.01
System Monitoring Compounds						
2) 1,2-Dichlorobenzene-d4	4.804	152	102909	4.68	ngs	0.00
Spiked Amount 50.000	Range 16 - 110		Recovery	=	9.36%#	
4) Nitrobenzene-d5	5.130	82	139681	5.55	ngs	0.00
Spiked Amount 50.000	Range 35 - 114		Recovery	=	11.10%#	
10) 2-Fluorobiphenyl	6.612	172	326410	4.86	ngs	0.01
Spiked Amount 50.000	Range 43 - 116		Recovery	=	9.72%#	
25) p-Terphenyl-d14	9.735	244	446472	5.16	ngs	0.00
Spiked Amount 50.000	Range 33 - 141		Recovery	=	10.32%#	
Target Compounds						Qvalue
3) N-Nitrosodi-n-propylamine	5.018	70	68333	4.94	ngs	92
5) Nitrobenzene	5.141	77	132282	4.98	ngs	96
7) Naphthalene	5.724	128	354410	4.97	ngs	99
8) 2-Methylnaphthalene	6.296	142	247691	5.28	ngs	99
9) 1-Methylnaphthalene	6.387	142	218657	4.93	ngs	96
11) Acenaphthylene	7.056	152	417960	5.36	ngs	99
12) 2,6-Dinitrotoluene	7.034	165	65870	5.02	ngs	94
14) Acenaphthene	7.205	153	273506	5.26	ngs	97
15) Dibenzofuran	7.334	168	404156	4.79	ngs	99
16) 2,4-Dinitrotoluene	7.355	165	86486	5.45	ngs	88
17) Fluorene	7.622	166	314332	5.08	ngs	98
18) Pentachlorophenol	8.291	266	63608	5.76	ngs	94
20) Phenanthrene	8.419	178	501472	5.08	ngs	99
21) Anthracene	8.457	178	485006	5.27	ngs	99
22) Carbazole	8.585	167	435978	4.90	ngs	99
23) Fluoranthene	9.420	202	606029	5.35	ngs	100
24) Pyrene	9.607	202	640336	5.22	ngs	99
27) Benzo(a)anthracene	10.655	228	591621	5.20	ngs	99
28) Chrysene	10.693	228	580224	5.23	ngs	99
29) bis-(2-Ethylhexyl)phth	10.698	149	406205	4.80	ngs	97
30) Benzo(b)fluoranthene	11.639	252	584332	4.74	ngs	99
31) Benzo(k)fluoranthene	11.639	252	584332	5.93	ngs	96
32) Benzo(a)pyrene	11.928	252	558623	5.50	ngs	99
34) Indeno(1,2,3-cd)pyrene	13.228	276	651116	5.86	ngs	99
35) Dibenz(a,h)anthracene	13.239	278	522698	5.77	ngs	97
36) Benzo(g,h,i)perylene	13.586	276	556008	5.71	ngs	99

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\060513\
Data File : 06051306.D
Acq On : 5 Jun 2013 11:41 am
Operator : DM
Sample : ICAL 5.0 SSTD
Misc : PNA_QC 58-39-541
ALS Vial : 6 Sample Multiplier: 1
InstName : SVOC-7

Quant Time: Jun 05 15:53:35 2013
Quant Method : C:\msdchem\1\data\060513\PNA0523.M
Quant Title : SOP 4020 EPA 8270C
QLast Update : Wed Jun 05 15:53:21 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\060513\
Data File : 06051307.D
Acq On : 5 Jun 2013 12:03 pm
Operator : DM
Sample : ICAL 7.5.0 SSTD
Misc : PNA_QC 58-39-540
ALS Vial : 7 Sample Multiplier: 1
InstName : SVOC-7

Quant Time: Jun 05 15:54:32 2013
Quant Method : C:\msdchem\1\data\060513\PNA0523.M
Quant Title : SOP 4020 EPA 8270C
QLast Update : Wed Jun 05 15:54:21 2013
Response via : Initial Calibration

D 6/27/13 6/27/13 MP

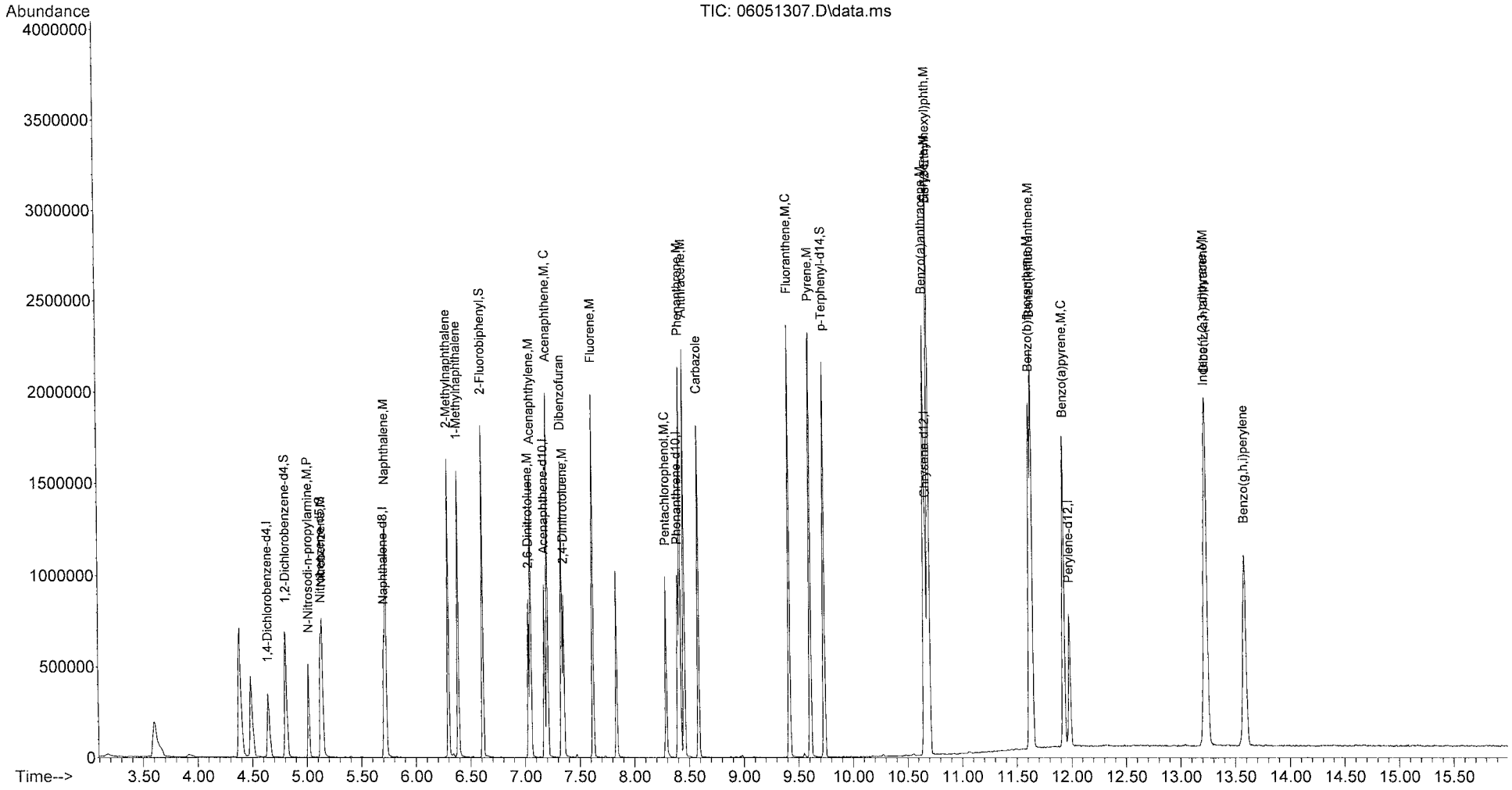
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	4.643	152	79249	4.00 ngs	0.00
6) Naphthalene-d8	5.708	136	260731	4.00 ngs	0.00
13) Acenaphthene-d10	7.179	164	171898	4.00 ngs	0.00
19) Phenanthrene-d10	8.398	188	346807	4.00 ngs	0.00
26) Chrysene-d12	10.671	240	399597	4.00 ngs	0.00
33) Perylene-d12	11.982	264	329130	4.00 ngs	0.00
System Monitoring Compounds					
2) 1,2-Dichlorobenzene-d4	4.809	152	152505	6.90 ngs	0.00
Spiked Amount 50.000	Range 16 - 110		Recovery	= 13.80%#	
4) Nitrobenzene-d5	5.130	82	214176	8.45 ngs	0.00
Spiked Amount 50.000	Range 35 - 114		Recovery	= 16.90%#	
10) 2-Fluorobiphenyl	6.612	172	492366	7.36 ngs	0.00
Spiked Amount 50.000	Range 43 - 116		Recovery	= 14.72%#	
25) p-Terphenyl-d14	9.735	244	679282	7.79 ngs	0.00
Spiked Amount 50.000	Range 33 - 141		Recovery	= 15.58%#	
Target Compounds					Qvalue
3) N-Nitrosodi-n-propylamine	5.018	70	102698	7.52 ngs	98
5) Nitrobenzene	5.141	77	199715	7.61 ngs	98
7) Naphthalene	5.724	128	539900	7.51 ngs	99
8) 2-Methylnaphthalene	6.296	142	367628	7.72 ngs	99
9) 1-Methylnaphthalene	6.387	142	339970	7.64 ngs	99
11) Acenaphthylene	7.056	152	620781	7.88 ngs	99
12) 2,6-Dinitrotoluene	7.034	165	98900	7.59 ngs	97
14) Acenaphthene	7.205	153	409470	7.97 ngs	98
15) Dibenzofuran	7.334	168	578992	7.17 ngs	96
16) 2,4-Dinitrotoluene	7.355	165	129434	8.50 ngs	95
17) Fluorene	7.622	166	475320	7.85 ngs	99
18) Pentachlorophenol	8.291	266	101651	9.26 ngs	97
20) Phenanthrene	8.419	178	740330	7.44 ngs	99
21) Anthracene	8.457	178	741717	8.01 ngs	98
22) Carbazole	8.585	167	670145	7.74 ngs	99
23) Fluoranthene	9.420	202	919435	8.07 ngs	99
24) Pyrene	9.612	202	970244	7.86 ngs	99
27) Benzo(a)anthracene	10.655	228	896560	8.03 ngs	100
28) Chrysene	10.693	228	848805	7.73 ngs	98
29) bis-(2-Ethylhexyl)phth	10.698	149	626090	7.74 ngs	98
30) Benzo(b)fluoranthene	11.623	252	896245	7.46 ngs	99
31) Benzo(k)fluoranthene	11.639	252	920221	9.27 ngs	100
32) Benzo(a)pyrene	11.934	252	846797	8.41 ngs	99
34) Indeno(1,2,3-cd)pyrene	13.228	276	976150	8.40 ngs	100
35) Dibenz(a,h)anthracene	13.239	278	789295	8.31 ngs	99
36) Benzo(g,h,i)perylene	13.586	276	841490	8.28 ngs	97

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\060513\
Data File : 06051307.D
Acq On : 5 Jun 2013 12:03 pm
Operator : DM
Sample : ICAL 7.5.0 SSTD
Misc : PNA_QC 58-39-540
ALS Vial : 7 Sample Multiplier: 1
InstName : SVOC-7

Quant Time: Jun 05 15:54:32 2013
Quant Method : C:\msdchem\1\data\060513\PNA0523.M
Quant Title : SOP 4020 EPA 8270C
QLast Update : Wed Jun 05 15:54:21 2013
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\060513\
Data File : 06051307.D
Acq On : 5 Jun 2013 12:03 pm
Operator : DM
Sample : ICAL 7.5.0 SSTD
Misc : PNA_QC 58-39-540
ALS Vial : 7 Sample Multiplier: 1
InstName : SVOC-7

Quant Time: Jun 05 15:54:32 2013
Quant Method : C:\msdchem\1\data\060513\PNA0523.M
Quant Title : SOP 4020 EPA 8270C
QLast Update : Wed Jun 05 15:54:21 2013
Response via : Initial Calibration

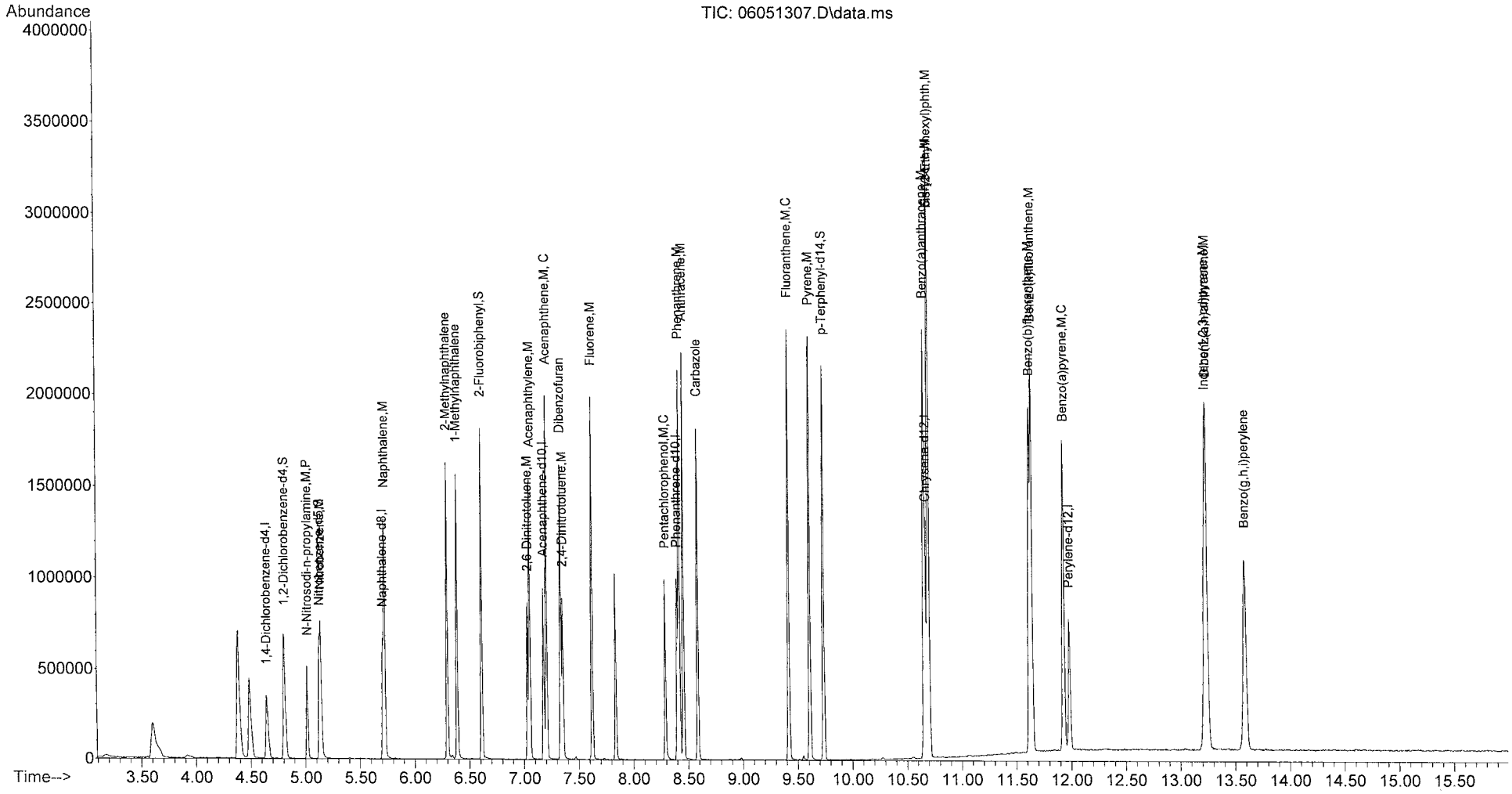
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.643	152	79249	4.00	ngs	0.00
6) Naphthalene-d8	5.708	136	260731	4.00	ngs	0.00
13) Acenaphthene-d10	7.179	164	171898	4.00	ngs	0.00
19) Phenanthrene-d10	8.398	188	346807	4.00	ngs	0.00
26) Chrysene-d12	10.671	240	399597	4.00	ngs	0.00
33) Perylene-d12	11.982	264	329130	4.00	ngs	0.00
System Monitoring Compounds						
2) 1,2-Dichlorobenzene-d4	4.809	152	152505	6.90	ngs	0.00
Spiked Amount 50.000	Range 16 - 110		Recovery	=	13.80%#	
4) Nitrobenzene-d5	5.130	82	214176	8.45	ngs	0.00
Spiked Amount 50.000	Range 35 - 114		Recovery	=	16.90%#	
10) 2-Fluorobiphenyl	6.612	172	492366	7.36	ngs	0.00
Spiked Amount 50.000	Range 43 - 116		Recovery	=	14.72%#	
25) p-Terphenyl-d14	9.735	244	679282	7.79	ngs	0.00
Spiked Amount 50.000	Range 33 - 141		Recovery	=	15.58%#	
Target Compounds						Qvalue
3) N-Nitrosodi-n-propylamine	5.018	70	102698	7.52	ngs	98
5) Nitrobenzene	5.141	77	199715	7.61	ngs	98
7) Naphthalene	5.724	128	539900	7.51	ngs	99
8) 2-Methylnaphthalene	6.296	142	367628	7.72	ngs	99
9) 1-Methylnaphthalene	6.387	142	339970	7.64	ngs	99
11) Acenaphthylene	7.056	152	620781	7.88	ngs	99
12) 2,6-Dinitrotoluene	7.034	165	98900	7.59	ngs	97
14) Acenaphthene	7.205	153	409470	7.97	ngs	98
15) Dibenzofuran	7.334	168	578992	7.17	ngs	96
16) 2,4-Dinitrotoluene	7.355	165	129434	8.50	ngs	95
17) Fluorene	7.622	166	475320	7.85	ngs	99
18) Pentachlorophenol	8.291	266	101651	9.26	ngs	97
20) Phenanthrene	8.419	178	740330	7.44	ngs	99
21) Anthracene	8.457	178	741717	8.01	ngs	98
22) Carbazole	8.585	167	670145	7.74	ngs	99
23) Fluoranthene	9.420	202	919435	8.07	ngs	99
24) Pyrene	9.612	202	970244	7.86	ngs	99
27) Benzo(a)anthracene	10.655	228	896560	8.03	ngs	100
28) Chrysene	10.693	228	848805	7.73	ngs	98
29) bis-(2-Ethylhexyl)phth	10.698	149	626090	7.74	ngs	98
30) Benzo(b)fluoranthene	11.623	252	896245	7.46	ngs	99
31) Benzo(k)fluoranthene	11.639	252	920221	9.27	ngs	100
32) Benzo(a)pyrene	11.934	252	846797	8.41	ngs	99
34) Indeno(1,2,3-cd)pyrene	13.228	276	976150	8.40	ngs	100
35) Dibenz(a,h)anthracene	13.239	278	789295	8.31	ngs	99
36) Benzo(g,h,i)perylene	13.586	276	841490	8.28	ngs	97

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\060513\
Data File : 06051307.D
Acq On : 5 Jun 2013 12:03 pm
Operator : DM
Sample : ICAL 7.5.0 SSTD
Misc : PNA_QC 58-39-540
ALS Vial : 7 Sample Multiplier: 1
InstName : SVOC-7

Quant Time: Jun 05 15:54:32 2013
Quant Method : C:\msdchem\1\data\060513\PNA0523.M
Quant Title : SOP 4020 EPA 8270C
QLast Update : Wed Jun 05 15:54:21 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\060513\
Data File : 06051308.D
Acq On : 5 Jun 2013 12:26 pm
Operator : DM
Sample : ICAL 10.0 SSTD
Misc : PNA_QC 58-39-539
ALS Vial : 8 Sample Multiplier: 1
InstName : SVOC-7

Quant Time: Jun 05 15:55:22 2013
Quant Method : C:\msdchem\1\data\060513\PNA0523.M
Quant Title : SOP 4020 EPA 8270C
QLast Update : Wed Jun 05 15:55:06 2013
Response via : Initial Calibration

6/27/13 6/28/13

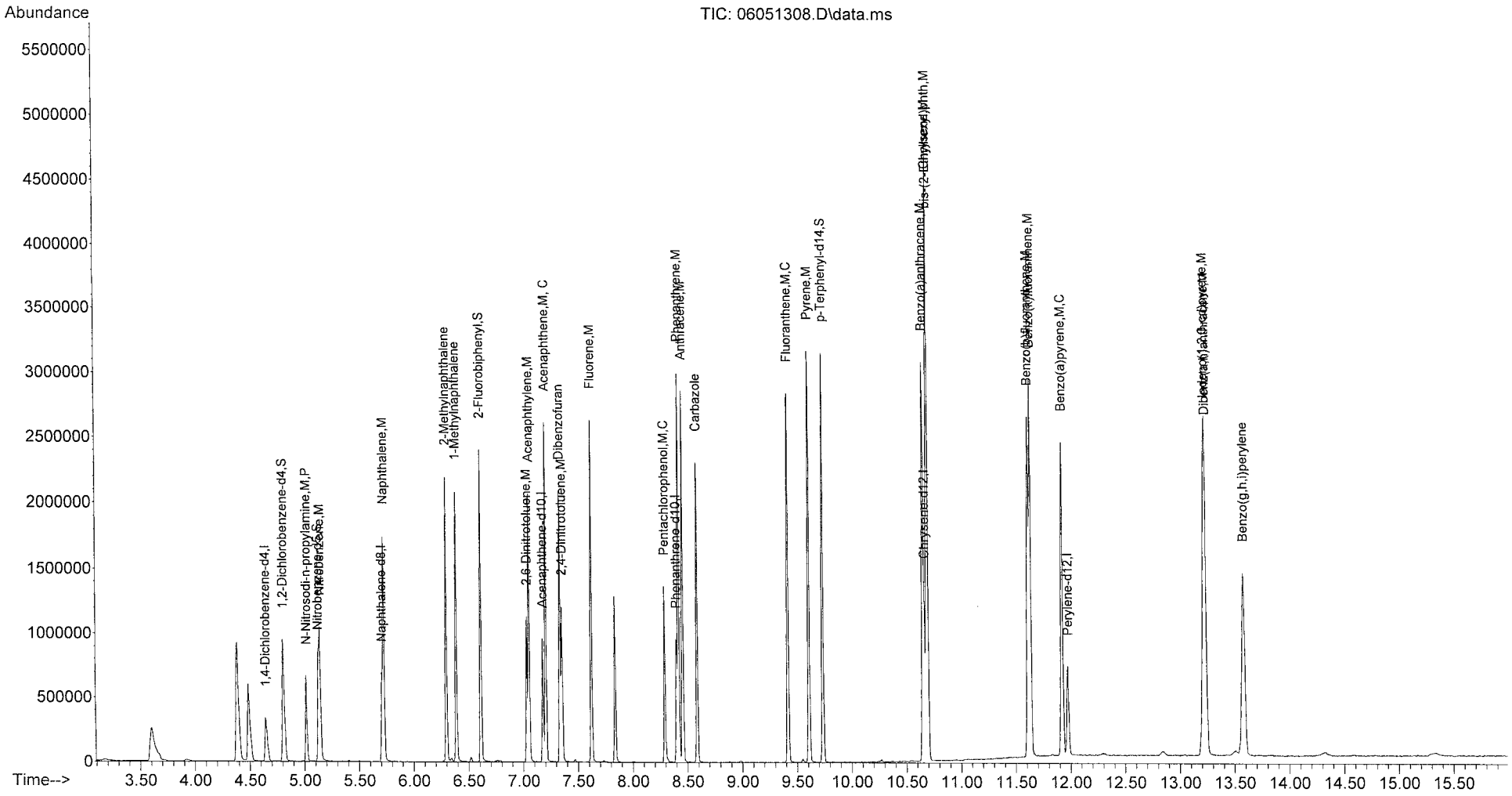
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	4.643	152	80717	4.00 ngs	0.00
6) Naphthalene-d8	5.708	136	256892	4.00 ngs	0.00
13) Acenaphthene-d10	7.179	164	174576	4.00 ngs	0.00
19) Phenanthrene-d10	8.398	188	343854	4.00 ngs	0.00
26) Chrysene-d12	10.666	240	394943	4.00 ngs	0.00
33) Perylene-d12	11.976	264	315431	4.00 ngs	0.00
System Monitoring Compounds					
2) 1,2-Dichlorobenzene-d4	4.804	152	203990	9.10 ngs	0.00
Spiked Amount 50.000	Range 16 - 110		Recovery = 18.20%		
4) Nitrobenzene-d5	5.125	82	282285	10.88 ngs	0.00
Spiked Amount 50.000	Range 35 - 114		Recovery = 21.76%#		
10) 2-Fluorobiphenyl	6.612	172	666632	10.17 ngs	0.00
Spiked Amount 50.000	Range 43 - 116		Recovery = 20.34%#		
25) p-Terphenyl-d14	9.735	244	898136	10.27 ngs	0.00
Spiked Amount 50.000	Range 33 - 141		Recovery = 20.54%#		
Target Compounds					Qvalue
3) N-Nitrosodi-n-propylamine	5.018	70	138378	10.16 ngs	98
5) Nitrobenzene	5.141	77	270263	10.22 ngs	99
7) Naphthalene	5.724	128	698735	9.79 ngs	98
8) 2-Methylnaphthalene	6.296	142	490511	10.39 ngs	99
9) 1-Methylnaphthalene	6.387	142	440895	9.98 ngs	99
11) Acenaphthylene	7.056	152	843207	10.78 ngs	100
12) 2,6-Dinitrotoluene	7.034	165	133584	10.49 ngs	95
14) Acenaphthene	7.205	153	540785	10.23 ngs	98
15) Dibenzofuran	7.334	168	779247	9.68 ngs	98
16) 2,4-Dinitrotoluene	7.355	165	173959	11.35 ngs	99
17) Fluorene	7.622	166	638028	10.28 ngs	99
18) Pentachlorophenol	8.291	266	138605	12.04 ngs	98
20) Phenanthrene	8.419	178	991581	10.01 ngs	99
21) Anthracene	8.457	178	987727	10.65 ngs	99
22) Carbazole	8.585	167	877258	10.38 ngs	98
23) Fluoranthene	9.420	202	1203133	10.54 ngs	100
24) Pyrene	9.607	202	1277522	10.34 ngs	99
27) Benzo(a)anthracene	10.650	228	1190932	10.68 ngs	99
28) Chrysene	10.687	228	1131910	10.31 ngs	99
29) bis-(2-Ethylhexyl)phth	10.693	149	834589	10.62 ngs	100
30) Benzo(b)fluoranthene	11.613	252	1251364	10.54 ngs	99
31) Benzo(k)fluoranthene	11.634	252	1156158	11.39 ngs	99
32) Benzo(a)pyrene	11.923	252	1124849	11.10 ngs	99
34) Indeno(1,2,3-cd)pyrene	13.222	276	1308315	11.40 ngs	99
35) Dibenz(a,h)anthracene	13.233	278	1055635	11.22 ngs	98
36) Benzo(g,h,i)perylene	13.581	276	1104462	10.99 ngs	98

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\060513\
Data File : 06051308.D
Acq On : 5 Jun 2013 12:26 pm
Operator : DM
Sample : ICAL 10.0 SSTD
Misc : PNA_QC 58-39-539
ALS Vial : 8 Sample Multiplier: 1
InstName : SVOC-7

Quant Time: Jun 05 15:55:22 2013
Quant Method : C:\msdchem\1\data\060513\PNA0523.M
Quant Title : SOP 4020 EPA 8270C
QLast Update : Wed Jun 05 15:55:06 2013
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\060513\
Data File : 06051308.D
Acq On : 5 Jun 2013 12:26 pm
Operator : DM
Sample : ICAL 10.0 SSTD
Misc : PNA_QC 58-39-539
ALS Vial : 8 Sample Multiplier: 1
InstName : SVOC-7

Quant Time: Jun 05 15:55:22 2013
Quant Method : C:\msdchem\1\data\060513\PNA0523.M
Quant Title : SOP 4020 EPA 8270C
QLast Update : Wed Jun 05 15:55:06 2013
Response via : Initial Calibration

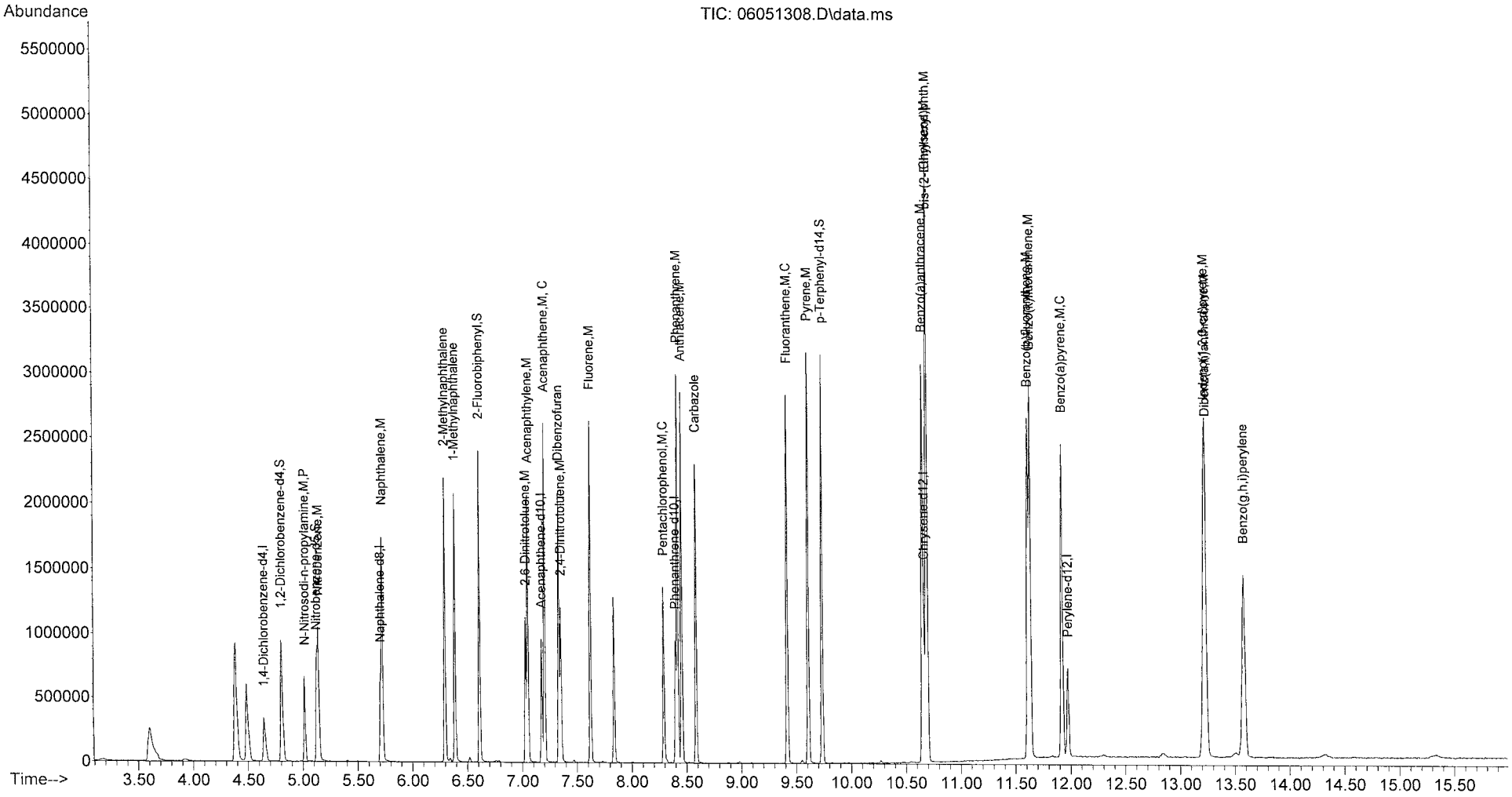
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.643	152	80717	4.00	ngs	0.00
6) Naphthalene-d8	5.708	136	256892	4.00	ngs	0.00
13) Acenaphthene-d10	7.179	164	174576	4.00	ngs	0.00
19) Phenanthrene-d10	8.398	188	343854	4.00	ngs	0.00
26) Chrysene-d12	10.666	240	394943	4.00	ngs	0.00
33) Perylene-d12	11.976	264	315431	4.00	ngs	0.00
System Monitoring Compounds						
2) 1,2-Dichlorobenzene-d4	4.804	152	203990	9.10	ngs	0.00
Spiked Amount 50.000	Range 16 - 110		Recovery = 18.20%			
4) Nitrobenzene-d5	5.125	82	282285	10.88	ngs	0.00
Spiked Amount 50.000	Range 35 - 114		Recovery = 21.76%#			
10) 2-Fluorobiphenyl	6.612	172	666632	10.17	ngs	0.00
Spiked Amount 50.000	Range 43 - 116		Recovery = 20.34%#			
25) p-Terphenyl-d14	9.735	244	898136	10.27	ngs	0.00
Spiked Amount 50.000	Range 33 - 141		Recovery = 20.54%#			
Target Compounds						Qvalue
3) N-Nitrosodi-n-propylamine	5.018	70	138378	10.16	ngs	98
5) Nitrobenzene	5.141	77	270263	10.22	ngs	99
7) Naphthalene	5.724	128	698735	9.79	ngs	98
8) 2-Methylnaphthalene	6.296	142	490511	10.39	ngs	99
9) 1-Methylnaphthalene	6.387	142	440895	9.98	ngs	99
11) Acenaphthylene	7.056	152	843207	10.78	ngs	100
12) 2,6-Dinitrotoluene	7.034	165	133584	10.49	ngs	95
14) Acenaphthene	7.205	153	540785	10.23	ngs	98
15) Dibenzofuran	7.334	168	779247	9.68	ngs	98
16) 2,4-Dinitrotoluene	7.355	165	173959	11.35	ngs	99
17) Fluorene	7.622	166	638028	10.28	ngs	99
18) Pentachlorophenol	8.291	266	138605	12.04	ngs	98
20) Phenanthrene	8.419	178	991581	10.01	ngs	99
21) Anthracene	8.457	178	987727	10.65	ngs	99
22) Carbazole	8.585	167	877258	10.38	ngs	98
23) Fluoranthene	9.420	202	1203133	10.54	ngs	100
24) Pyrene	9.607	202	1277522	10.34	ngs	99
27) Benzo(a)anthracene	10.650	228	1190932	10.68	ngs	99
28) Chrysene	10.687	228	1131910	10.31	ngs	99
29) bis-(2-Ethylhexyl)phth	10.693	149	834589	10.62	ngs	100
30) Benzo(b)fluoranthene	11.613	252	1251364	10.54	ngs	99
31) Benzo(k)fluoranthene	11.634	252	1156158	11.39	ngs	99
32) Benzo(a)pyrene	11.923	252	1124849	11.10	ngs	99
34) Indeno(1,2,3-cd)pyrene	13.222	276	1308315	11.40	ngs	99
35) Dibenz(a,h)anthracene	13.233	278	1055635	11.22	ngs	98
36) Benzo(g,h,i)perylene	13.581	276	1104462	10.99	ngs	98

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

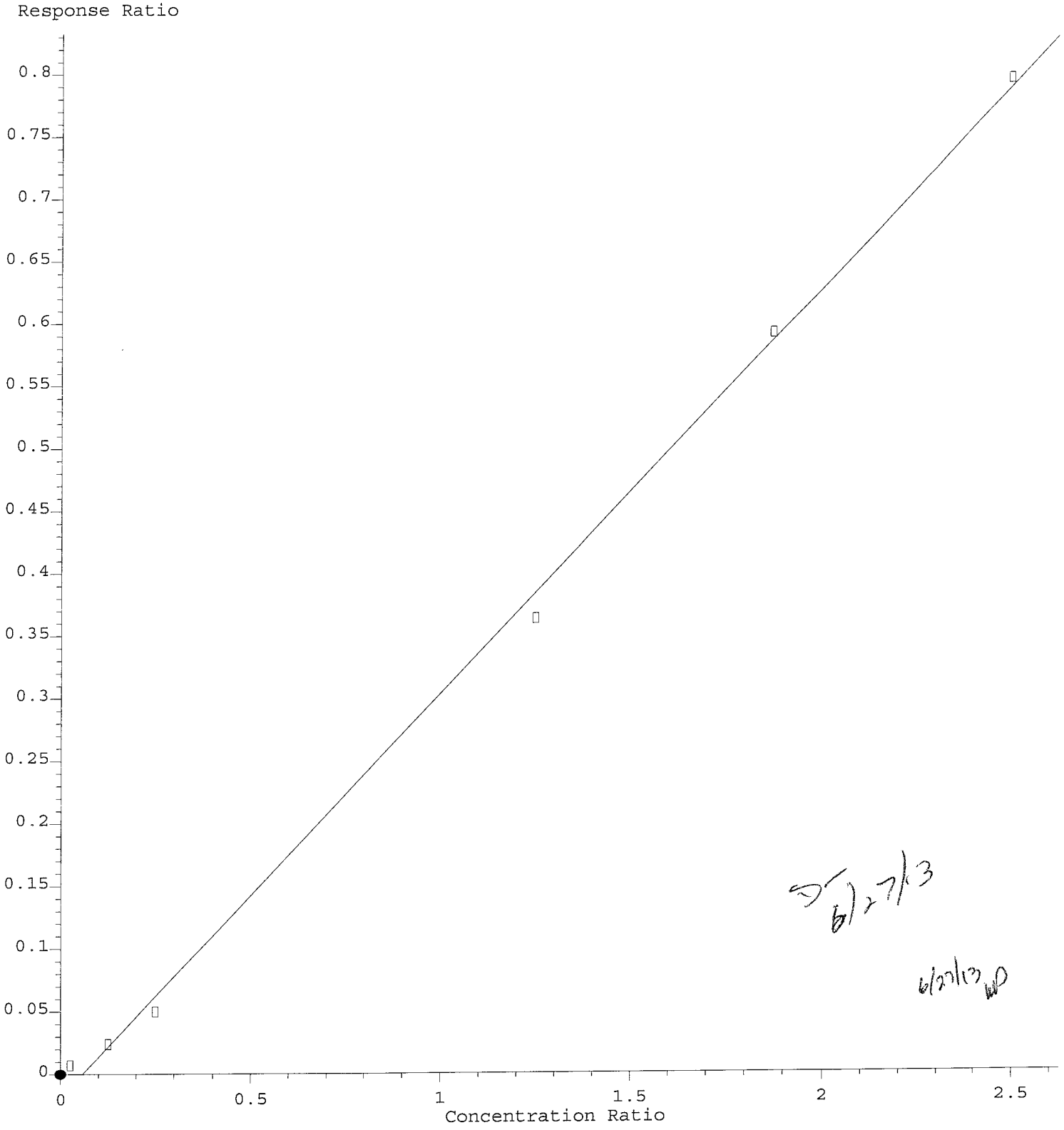
Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\060513\
Data File : 06051308.D
Acq On : 5 Jun 2013 12:26 pm
Operator : DM
Sample : ICAL 10.0 SSTD
Misc : PNA_QC 58-39-539
ALS Vial : 8 Sample Multiplier: 1
InstName : SVOC-7

Quant Time: Jun 05 15:55:22 2013
Quant Method : C:\msdchem\1\data\060513\PNA0523.M
Quant Title : SOP 4020 EPA 8270C
QLast Update : Wed Jun 05 15:55:06 2013
Response via : Initial Calibration



Pentachlorophenol



6/27/13

6/27/13 WD

Response = 3.22e-001 * Amt - 1.88e-002
Coef of Det (r^2) = 0.998 Curve Fit: Linear
Method Name: C:\msdchem\1\data\060513\PNA0605.M
Calibration Table Last Updated: Wed Jun 05 15:56:30 2013

Method Path : C:\msdchem\1\data\060513\
Method File : PNA0605.M
Title : SOP 4020 EPA 8270C
Last Update : Wed Jun 05 15:57:59 2013
Response Via : Initial Calibration

Calibration Files
0.1 =06051303.D 0.5 =06051304.D 1.0 =06051305.D 5.0 =06051306.D 7.5 =06051307.D
10 =06051308.D

		Compound	0.1	0.5	1.0	5.0	7.5	10	Avg	%RSD
1)	I	1,4-Dichlorobenzen...	----------ISTD----------							
2)	S	1,2-Dichlorobe...	1.253	1.182	1.051	1.051	1.026	1.011	1.096	8.97
3)	M,P	N-Nitrosodi-n-...	0.575	0.656	0.651	0.698	0.691	0.686	0.659	6.90
4)	S	Nitrobenzene-d5	1.073	1.198	1.166	1.426	1.441	1.399	1.284	12.26
5)	M	Nitrobenzene	1.198	1.263	1.240	1.350	1.344	1.339	1.289	4.98
6)	I	Naphthalene-d8	----------ISTD----------							
7)	M	Naphthalene	1.162	1.097	1.083	1.095	1.104	1.088	1.105	2.61
8)		2-Methylnaphth...	0.683	0.744	0.704	0.765	0.752	0.764	0.735	4.62
9)		1-Methylnaphth...	0.678	0.692	0.680	0.676	0.695	0.687	0.685	1.17
10)	S	2-Fluorobiphenyl	1.006	0.994	0.989	1.009	1.007	1.038	1.007	1.71
11)	M	Acenaphthylene	1.102	1.199	1.137	1.291	1.270	1.313	1.219	7.11
12)	M	2,6-Dinitrotol...	0.214	0.159	0.184	0.204	0.202	0.208	0.195	10.57
13)	I	Acenaphthene-d10	----------ISTD----------							
14)	M, C	Acenaphthene	1.144	1.186	1.155	1.250	1.270	1.239	1.207	4.40
15)		Dibenzofuran	1.892	1.688	1.673	1.847	1.796	1.785	1.780	4.86
16)	M	2,4-Dinitrotol...	0.241	0.294	0.325	0.395	0.402	0.399	0.343	19.52
17)	M	Fluorene	1.423	1.302	1.365	1.437	1.475	1.462	1.411	4.64
18)	M,C	Pentachlorophenol	0.285	0.190	0.199	0.291	0.315	0.318	0.266	21.45
19)	I	Phenanthrene-d10	----------ISTD----------							
20)	M	Phenanthrene	1.220	1.135	1.074	1.161	1.139	1.153	1.147	4.12
21)	M	Anthracene	0.991	1.033	1.012	1.123	1.141	1.149	1.075	6.56
22)		Carbazole	0.790	0.880	0.949	1.010	1.031	1.021	0.947	10.06
23)	M,C	Fluoranthene	1.206	1.283	1.208	1.403	1.414	1.400	1.319	7.52
24)	M	Pyrene	1.380	1.374	1.363	1.483	1.492	1.486	1.430	4.40
25)	S	p-Terphenyl-d14	1.009	1.014	0.937	1.034	1.045	1.045	1.014	3.99
26)	I	Chrysene-d12	----------ISTD----------							
27)	M	Benzo(a)anthra...	1.110	1.072	1.045	1.163	1.197	1.206	1.132	5.90
28)	M	Chrysene	1.121	1.078	1.069	1.141	1.133	1.146	1.115	2.96
29)	M	bis-(2-Ethylhe...	0.784	0.695	0.671	0.799	0.836	0.845	0.772	9.42
30)	M	Benzo(b)fluora...	1.095	1.143	1.271	1.219	1.196	1.267	1.199	5.79
31)	M	Benzo(k)fluora...	0.991	0.922	0.868	1.149	1.228	1.171	1.055	14.01
32)	M,C	Benzo(a)pyrene	0.918	0.967	0.984	1.098	1.130	1.139	1.040	9.09
33)	I	Perylene-d12	----------ISTD----------							
34)	M	Indeno(1,2,3-c...	1.316	1.431	1.428	1.605	1.582	1.659	1.503	8.77
35)	M	Dibenz(a,h)ant...	1.227	1.147	1.134	1.289	1.279	1.339	1.236	6.65
36)		Benzo(g,h,i)pe...	1.205	1.268	1.277	1.371	1.364	1.401	1.314	5.75

(#) = Out of Range

D 6/27/13

6/27/13 MD

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\060513\
Data File : 06051309.D
Acq On : 5 Jun 2013 12:48 pm
Operator : DM
Sample : ICV 5.0 SSTD
Misc : PNA_QC 58-39-545
ALS Vial : 9 Sample Multiplier: 1
InstName : SVOC-7

Quant Time: Jun 05 15:59:03 2013
Quant Method : C:\msdchem\1\data\060513\PNA0605.M
Quant Title : SOP 4020 EPA 8270C
QLast Update : Wed Jun 05 15:57:59 2013
Response via : Initial Calibration

D 6/27/13 6/27/13 P

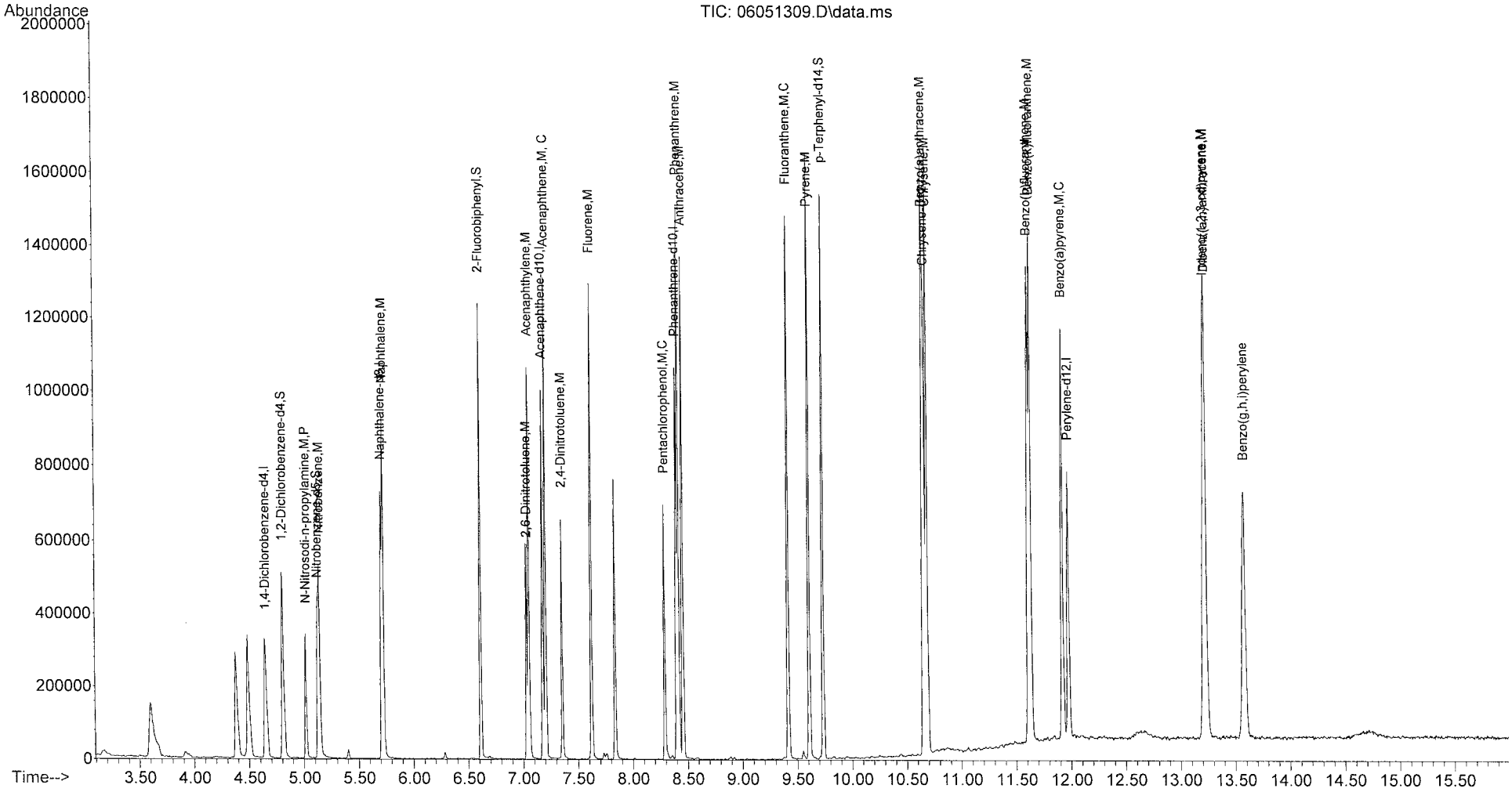
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.649	152	81308	4.00	ngs	0.00
6) Naphthalene-d8	5.708	136	267075	4.00	ngs	0.00
13) Acenaphthene-d10	7.179	164	180565	4.00	ngs	0.00
19) Phenanthrene-d10	8.398	188	355263	4.00	ngs	0.00
26) Chrysene-d12	10.666	240	410838	4.00	ngs	0.00
33) Perylene-d12	11.976	264	325034	4.00	ngs	0.00
System Monitoring Compounds						
2) 1,2-Dichlorobenzene-d4	4.804	152	111012	4.98	ngs	0.00
Spiked Amount 50.000	Range 16 - 110		Recovery	=	9.96%#	
4) Nitrobenzene-d5	5.125	82	141276	5.41	ngs	0.00
Spiked Amount 50.000	Range 35 - 114		Recovery	=	10.82%#	
10) 2-Fluorobiphenyl	6.612	172	331257	4.93	ngs	0.00
Spiked Amount 50.000	Range 43 - 116		Recovery	=	9.86%#	
25) p-Terphenyl-d14	9.735	244	434507	4.82	ngs	0.00
Spiked Amount 50.000	Range 33 - 141		Recovery	=	9.64%#	
Target Compounds						Qvalue
3) N-Nitrosodi-n-propylamine	5.018	70	72261	5.39	ngs	97
5) Nitrobenzene	5.141	77	135587	5.17	ngs	98
7) Naphthalene	5.724	128	366413	4.97	ngs	99
11) Acenaphthylene	7.050	152	420634	5.17	ngs	98
12) 2,6-Dinitrotoluene	7.034	165	70729	5.43	ngs	95
14) Acenaphthene	7.205	153	269747	4.95	ngs	98
16) 2,4-Dinitrotoluene	7.355	165	90244	5.84	ngs	95
17) Fluorene	7.623	166	323857	5.09	ngs	97
18) Pentachlorophenol	8.291	266	73572	5.29	ngs	99
20) Phenanthrene	8.420	178	512596	5.03	ngs	100
21) Anthracene	8.457	178	506119	5.30	ngs	98
23) Fluoranthene	9.420	202	612020	5.23	ngs	99
24) Pyrene	9.607	202	637614	5.02	ngs	99
27) Benzo(a)anthracene	10.650	228	604344	5.20	ngs	99
28) Chrysene	10.687	228	582908	5.09	ngs	99
30) Benzo(b)fluoranthene	11.613	252	626870	5.09	ngs	99
31) Benzo(k)fluoranthene	11.634	252	533070	4.92	ngs	100
32) Benzo(a)pyrene	11.923	252	500681	4.69	ngs	99
34) Indeno(1,2,3-cd)pyrene	13.217	276	618922	5.07	ngs	99
35) Dibenz(a,h)anthracene	13.228	278	523155	5.21	ngs	97
36) Benzo(g,h,i)perylene	13.581	276	557220	5.22	ngs	99

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\060513\
Data File : 06051309.D
Acq On : 5 Jun 2013 12:48 pm
Operator : DM
Sample : ICV 5.0 SSTD
Misc : PNA_QC 58-39-545
ALS Vial : 9 Sample Multiplier: 1
InstName : SVOC-7

Quant Time: Jun 05 15:59:03 2013
Quant Method : C:\msdchem\1\data\060513\PNA0605.M
Quant Title : SOP 4020 EPA 8270C
QLast Update : Wed Jun 05 15:57:59 2013
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\060513\
Data File : 06051309.D
Acq On : 5 Jun 2013 12:48 pm
Operator : DM
Sample : ICV 5.0 SSTD
Misc : PNA_QC 58-39-545
ALS Vial : 9 Sample Multiplier: 1
InstName : SVOC-7

Quant Time: Jun 05 15:58:33 2013
Quant Method : C:\msdchem\1\data\060513\PNA0605.M
Quant Title : SOP 4020 EPA 8270C
QLast Update : Wed Jun 05 15:57:59 2013
Response via : Initial Calibration

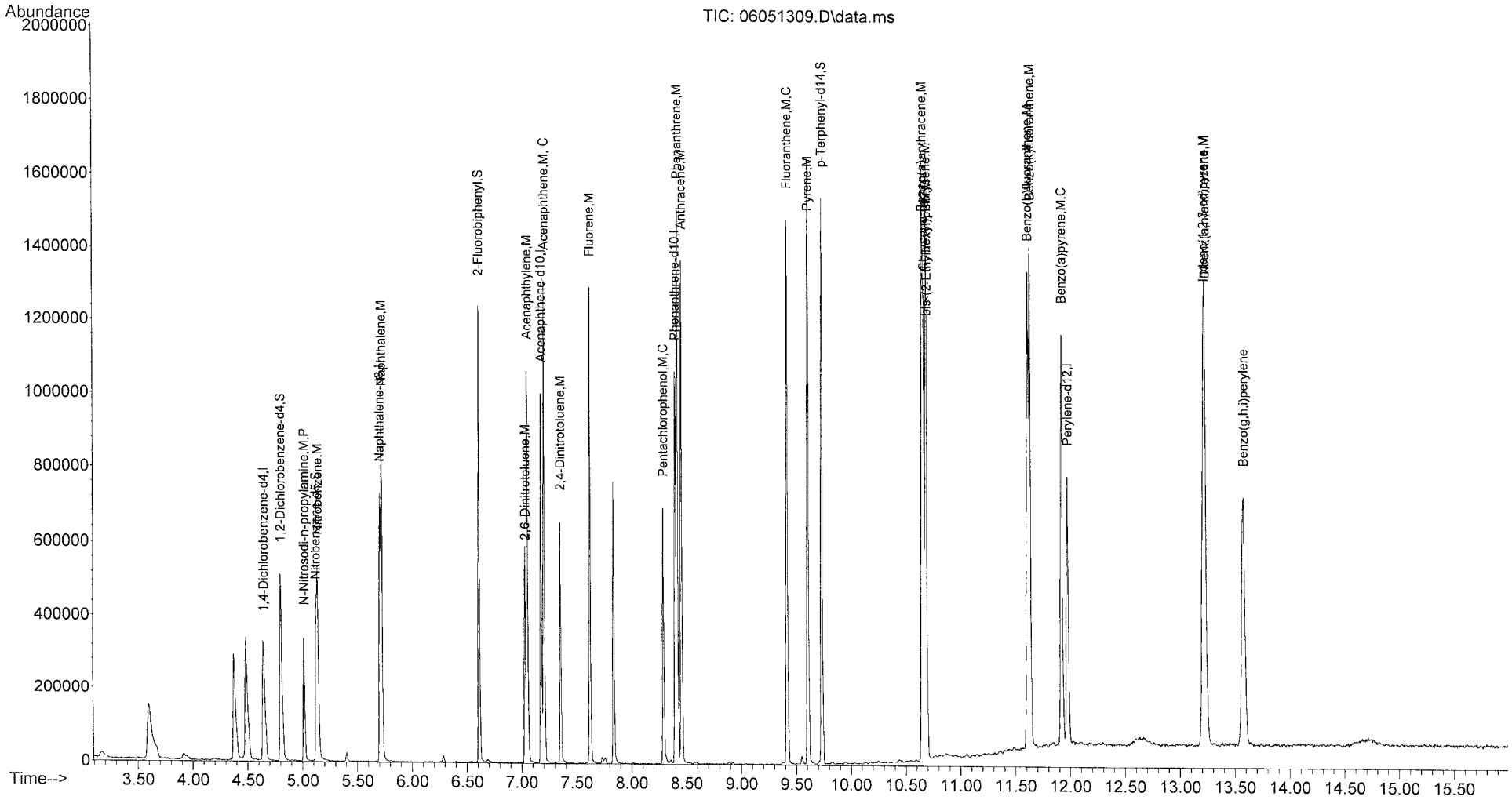
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.649	152	81308	4.00	ngs	0.00
6) Naphthalene-d8	5.708	136	267075	4.00	ngs	0.00
13) Acenaphthene-d10	7.179	164	180565	4.00	ngs	0.00
19) Phenanthrene-d10	8.398	188	355263	4.00	ngs	0.00
26) Chrysene-d12	10.666	240	410838	4.00	ngs	0.00
33) Perylene-d12	11.976	264	325034	4.00	ngs	0.00
System Monitoring Compounds						
2) 1,2-Dichlorobenzene-d4	4.804	152	111012	4.98	ngs	0.00
Spiked Amount 50.000	Range 16 - 110		Recovery	=	9.96%#	
4) Nitrobenzene-d5	5.125	82	141276	5.41	ngs	0.00
Spiked Amount 50.000	Range 35 - 114		Recovery	=	10.82%#	
10) 2-Fluorobiphenyl	6.612	172	331257	4.93	ngs	0.00
Spiked Amount 50.000	Range 43 - 116		Recovery	=	9.86%#	
25) p-Terphenyl-d14	9.735	244	434507	4.82	ngs	0.00
Spiked Amount 50.000	Range 33 - 141		Recovery	=	9.64%#	
Target Compounds						Qvalue
3) N-Nitrosodi-n-propylamine	5.018	70	72261	5.39	ngs	97
5) Nitrobenzene	5.141	77	135587	5.17	ngs	98
7) Naphthalene	5.724	128	366413	4.97	ngs	99
11) Acenaphthylene	7.050	152	420634	5.17	ngs	98
12) 2,6-Dinitrotoluene	7.034	165	70729	5.43	ngs	95
14) Acenaphthene	7.205	153	269747	4.95	ngs	98
16) 2,4-Dinitrotoluene	7.355	165	90244	5.84	ngs	95
17) Fluorene	7.623	166	323857	5.09	ngs	97
18) Pentachlorophenol	8.291	266	73572	5.29	ngs	99
20) Phenanthrene	8.420	178	512596	5.03	ngs	100
21) Anthracene	8.457	178	506119	5.30	ngs	98
23) Fluoranthene	9.420	202	612020	5.23	ngs	99
24) Pyrene	9.607	202	637614	5.02	ngs	99
27) Benzo(a)anthracene	10.650	228	604344	5.20	ngs	99
28) Chrysene	10.687	228	582908	5.09	ngs	99
29) bis-(2-Ethylhexyl)phth	10.693	149	4303	0.05	ngs #	58
30) Benzo(b)fluoranthene	11.613	252	626870	5.09	ngs	99
31) Benzo(k)fluoranthene	11.634	252	533070	4.92	ngs	100
32) Benzo(a)pyrene	11.923	252	500681	4.69	ngs	99
34) Indeno(1,2,3-cd)pyrene	13.217	276	618922	5.07	ngs	99
35) Dibenz(a,h)anthracene	13.228	278	523155	5.21	ngs	97
36) Benzo(g,h,i)perylene	13.581	276	557220	5.22	ngs	99

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\060513\
Data File : 06051309.D
Acq On : 5 Jun 2013 12:48 pm
Operator : DM
Sample : ICV 5.0 SSTD
Misc : PNA_QC 58-39-545
ALS Vial : 9 Sample Multiplier: 1
InstName : SVOC-7

Quant Time: Jun 05 15:58:33 2013
Quant Method : C:\msdchem\1\data\060513\PNA0605.M
Quant Title : SOP 4020 EPA 8270C
QLast Update : Wed Jun 05 15:57:59 2013
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\data\060513\
Data File : 06051309.D
Acq On : 5 Jun 2013 12:48 pm
Operator : DM
Sample : ICV 5.0 SSTD
Misc : PNA_QC 58-39-545
ALS Vial : 9 Sample Multiplier: 1
InstName : SVOC-7

Quant Time: Jun 05 15:59:03 2013
Quant Method : C:\msdchem\1\data\060513\PNA0605.M
Quant Title : SOP 4020 EPA 8270C
QLast Update : Wed Jun 05 15:57:59 2013
Response via : Initial Calibration

D 6/27/13 6/27/13

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4	4.000	4.000	0.0	104	0.00
2	S	1,2-Dichlorobenzene-d4	5.000	4.984	0.3	108	0.00
3	M,P	N-Nitrosodi-n-propylamine	5.000	5.391	-7.8	106	0.00
4	S	Nitrobenzene-d5	5.000	5.414	-8.3	101	0.00
5	M	Nitrobenzene	5.000	5.174	-3.5	102	0.00
6	I	Naphthalene-d8	4.000	4.000	0.0	103	0.00
7	M	Naphthalene	5.000	4.966	0.7	103	0.00
8		2-Methylnaphthalene	5.000	0.000	100.0#	0	-6.30#
9		1-Methylnaphthalene	5.000	0.000	100.0#	0	-6.39#
10	S	2-Fluorobiphenyl	5.000	4.927	1.5	101	0.00
11	M	Acenaphthylene	5.000	5.170	-3.4	101	0.00
12	M	2,6-Dinitrotoluene	5.000	5.430	-8.6	107	0.00
13	I	Acenaphthene-d10	4.000	4.000	0.0	103	0.00
14	M, C	Acenaphthene	5.000	4.950	1.0	99	0.00
15		Dibenzofuran	5.000	0.000	100.0#	0	-7.33#
16	M	2,4-Dinitrotoluene	5.000	5.837	-16.7	104	0.00
17	M	Fluorene	5.000	5.086	-1.7	103	0.00
18	M,C	Pentachlorophenol	5.000	5.290	-5.8	116	0.00
19	I	Phenanthrene-d10	4.000	4.000	0.0	103	0.00
20	M	Phenanthrene	5.000	5.031	-0.6	102	0.00
21	M	Anthracene	5.000	5.301	-6.0	104	0.00
22		Carbazole	5.000	0.000	100.0#	0	-8.59#
23	M,C	Fluoranthene	5.000	5.225	-4.5	101	0.00
24	M	Pyrene	5.000	5.021	-0.4	100	0.00
25	S	p-Terphenyl-d14	5.000	4.825	3.5	97	0.00
26	I	Chrysene-d12	4.000	4.000	0.0	101	0.00
27	M	Benzo(a)anthracene	5.000	5.197	-3.9	102	0.00
28	M	Chrysene	5.000	5.091	-1.8	100	0.00
29	M	bis-(2-Ethylhexyl)phth	5.000	0.000	100.0#	0	-10.70#
30	M	Benzo(b)fluoranthene	5.000	5.092	-1.8	101	0.00
31	M	Benzo(k)fluoranthene	5.000	4.921	1.6	91	0.00
32	M,C	Benzo(a)pyrene	5.000	4.689	6.2	90	0.00
33	I	Perylene-d12	4.000	4.000	0.0	100	0.00
34	M	Indeno(1,2,3-cd)pyrene	5.000	5.066	-1.3	95	-0.01
35	M	Dibenz(a,h)anthracene	5.000	5.211	-4.2	100	-0.01
36		Benzo(g,h,i)perylene	5.000	5.218	-4.4	100	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

STAT Analysis Corporation

Semi-Volatile Organic Compounds (SVOCs)

SW846 8270C

Run 1

Client: NRT, Inc.
Project: 69420, Peoples Gas - Willow Street / Hawthorne Ave
Lab Order: 13060604
Date Received: June 18, 2013

CLIENT: Natural Resource Technology, Inc.
Work Order: 13060604
Project: 69420, Peoples Gas - Willow Street / Hawthorne Ave

ANALYTICAL QC SUMMARY REPORT

Run ID: **SVOC-7_130621A**

Sample ID: **DFTPP-1** SampType: **TUNE** TestCode: **DFTPP_D** Units: Prep Date: Run ID: **SVOC-7_130621A**
Client ID: **ZZZZZ** Batch ID: **R90361** TestNo: **DFTPP_Tune** Analysis Date: **06/21/13 9:59** SeqNo: **2437385**

Mass	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
51	30.4	0	100	0	30.4	10	80	0	0		
68	1.4	0	100	0	1.4	0	2	0	0		
69	42.5	0	100	0	42.5	0	100	0	0		
70	0.5	0	100	0	0.5	0	2	0	0		
127	39.6	0	100	0	39.6	10	80	0	0		
197	0	0	100	0	0	0	2	0	0		
198	90.8	0	100	0	90.8	50	100	0	0		
199	6.9	0	100	0	6.9	5	9	0	0		
275	24.8	0	100	0	24.8	10	60	0	0		
365	6.4	0	100	0	6.4	1	100	0	0		
441	16	0	100	0	16	0.01	24	0	0		
442	100	0	100	0	100	50	100	0	0		
443	19.1	0	100	0	19.1	15	24	0	0		

Sample ID: **5.0 SSTD** SampType: **CCV** TestCode: **PNA_QC** Units: **µg/mL** Prep Date: Run ID: **SVOC-7_130621A**
Client ID: **ZZZZZ** Batch ID: **R90361** TestNo: **SW8270C-SI** Analysis Date: **06/21/13 10:21** SeqNo: **2437386**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2-Methylnaphthalene	4.95	0.10	5	0	99	80	120	0	0		
Acenaphthene	5.03	0.10	5	0	101	80	120	0	0		
Acenaphthylene	5.32	0.10	5	0	106	80	120	0	0		
Anthracene	5.32	0.10	5	0	106	80	120	0	0		
Benz(a)anthracene	5.3	0.10	5	0	106	80	120	0	0		
Benzo(a)pyrene	5.58	0.10	5	0	112	80	120	0	0		
Benzo(b)fluoranthene	5.53	0.10	5	0	111	80	120	0	0		
Benzo(g,h,i)perylene	5.38	0.10	5	0	108	80	120	0	0		
Benzo(k)fluoranthene	5.33	0.10	5	0	107	80	120	0	0		
Chrysene	5.08	0.10	5	0	102	80	120	0	0		
Dibenz(a,h)anthracene	5.42	0.10	5	0	108	80	120	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Natural Resource Technology, Inc.
Work Order: 13060604
Project: 69420, Peoples Gas - Willow Street / Hawthorne Ave

ANALYTICAL QC SUMMARY REPORT

Run ID: **SVOC-7_130621A**

Sample ID: **5.0 SSTD** SampType: **CCV** TestCode: **PNA_QC** Units: **µg/mL** Prep Date: Run ID: **SVOC-7_130621A**
Client ID: **ZZZZZ** Batch ID: **R90361** TestNo: **SW8270C-SI** Analysis Date: **06/21/13 10:21** SeqNo: **2437386**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoranthene	5.37	0.10	5	0	107	80	120	0	0		
Fluorene	5.18	0.10	5	0	104	80	120	0	0		
Indeno(1,2,3-cd)pyrene	5.49	0.10	5	0	110	80	120	0	0		
Naphthalene	4.71	0.10	5	0	94.2	80	120	0	0		
Phenanthrene	4.99	0.10	5	0	99.8	80	120	0	0		
Pyrene	5.22	0.10	5	0	104	80	120	0	0		

Sample ID: **MB-69946-PNA** SampType: **MBLK** TestCode: **PNA_WATER** Units: **mg/L** Prep Date: **6/19/2013** Run ID: **SVOC-7_130621A**
Client ID: **ZZZZZ** Batch ID: **69946** TestNo: **SW8270C-SI** Analysis Date: **06/21/13 15:38** SeqNo: **2437691**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	ND	0.0010									
Acenaphthylene	ND	0.0010									
Anthracene	ND	0.0010									
Benz(a)anthracene	ND	0.00010									
Benzo(a)pyrene	ND	0.00010									
Benzo(b)fluoranthene	ND	0.00010									
Benzo(g,h,i)perylene	ND	0.0010									
Benzo(k)fluoranthene	ND	0.00010									
Chrysene	ND	0.00010									
Dibenz(a,h)anthracene	ND	0.00010									
Fluoranthene	ND	0.0010									
Fluorene	ND	0.0010									
Indeno(1,2,3-cd)pyrene	ND	0.00010									
2-Methylnaphthalene	ND	0.0010									
Naphthalene	ND	0.0010									
Phenanthrene	ND	0.0010									
Pyrene	ND	0.0010									

Qualifiers:
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J - Analyte detected below quantitation limits
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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Natural Resource Technology, Inc.
Work Order: 13060604
Project: 69420, Peoples Gas - Willow Street / Hawthorne Ave

ANALYTICAL QC SUMMARY REPORT

Run ID: **SVOC-7_130621A**

Sample ID: **LCS-69946-PNA** SampType: **LCS** TestCode: **PNA_WATER** Units: **mg/L** Prep Date: **6/19/2013** Run ID: **SVOC-7_130621A**
Client ID: **ZZZZZ** Batch ID: **69946** TestNo: **SW8270C-SI** Analysis Date: **06/21/13 16:01** SeqNo: **2439185**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	0.00408	0.0010	0.005	0	81.6	50	125	0	0		
Acenaphthylene	0.00386	0.0010	0.005	0	77.2	50	125	0	0		
Anthracene	0.004	0.0010	0.005	0	80	50	125	0	0		
Benz(a)anthracene	0.00391	0.00010	0.005	0	78.2	50	125	0	0		
Benzo(a)pyrene	0.00395	0.00010	0.005	0	79	50	125	0	0		
Benzo(b)fluoranthene	0.00422	0.00010	0.005	0	84.4	50	125	0	0		
Benzo(g,h,i)perylene	0.00467	0.0010	0.005	0	93.4	50	125	0	0		
Benzo(k)fluoranthene	0.00432	0.00010	0.005	0	86.4	50	125	0	0		
Chrysene	0.00406	0.00010	0.005	0	81.2	50	125	0	0		
Dibenz(a,h)anthracene	0.00498	0.00010	0.005	0	99.6	50	125	0	0		
Fluoranthene	0.0042	0.0010	0.005	0	84	50	125	0	0		
Fluorene	0.0042	0.0010	0.005	0	84	50	125	0	0		
Indeno(1,2,3-cd)pyrene	0.00508	0.00010	0.005	0	102	50	125	0	0		
2-Methylnaphthalene	0.0047	0.0010	0.005	0	94	50	125	0	0		
Naphthalene	0.00386	0.0010	0.005	0	77.2	50	125	0	0		
Phenanthrene	0.00384	0.0010	0.005	0	76.8	50	125	0	0		
Pyrene	0.00417	0.0010	0.005	0	83.4	50	125	0	0		

Sample ID: **LCSD-69946-PNA** SampType: **LCSD** TestCode: **PNA_WATER** Units: **mg/L** Prep Date: **6/19/2013** Run ID: **SVOC-7_130621A**
Client ID: **ZZZZZ** Batch ID: **69946** TestNo: **SW8270C-SI** Analysis Date: **06/21/13 16:23** SeqNo: **2439187**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	0.00376	0.0010	0.005	0	75.2	50	125	0.00408	8.16	25	
Acenaphthylene	0.00382	0.0010	0.005	0	76.4	50	125	0.00386	1.04	25	
Anthracene	0.00398	0.0010	0.005	0	79.6	50	125	0.004	0.501	25	
Benz(a)anthracene	0.00392	0.00010	0.005	0	78.4	50	125	0.00391	0.255	25	
Benzo(a)pyrene	0.00392	0.00010	0.005	0	78.4	50	125	0.00395	0.762	25	
Benzo(b)fluoranthene	0.00434	0.00010	0.005	0	86.8	50	125	0.00422	2.80	25	
Benzo(g,h,i)perylene	0.00484	0.0010	0.005	0	96.8	50	125	0.00467	3.58	25	
Benzo(k)fluoranthene	0.00414	0.00010	0.005	0	82.8	50	125	0.00432	4.26	25	
Chrysene	0.00419	0.00010	0.005	0	83.8	50	125	0.00406	3.15	25	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Natural Resource Technology, Inc.
Work Order: 13060604
Project: 69420, Peoples Gas - Willow Street / Hawthorne Ave

ANALYTICAL QC SUMMARY REPORT

Run ID: **SVOC-7_130621A**

Sample ID: **LCSD-69946-PNA** SampType: **LCSD** TestCode: **PNA_WATER** Units: **mg/L** Prep Date: **6/19/2013** Run ID: **SVOC-7_130621A**
Client ID: **ZZZZZ** Batch ID: **69946** TestNo: **SW8270C-SI** Analysis Date: **06/21/13 16:23** SeqNo: **2439187**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dibenz(a,h)anthracene	0.00505	0.00010	0.005	0	101	50	125	0.00498	1.40	25	
Fluoranthene	0.00408	0.0010	0.005	0	81.6	50	125	0.0042	2.90	25	
Fluorene	0.00401	0.0010	0.005	0	80.2	50	125	0.0042	4.63	25	
Indeno(1,2,3-cd)pyrene	0.00507	0.00010	0.005	0	101	50	125	0.00508	0.197	25	
2-Methylnaphthalene	0.00436	0.0010	0.005	0	87.2	50	125	0.0047	7.51	25	
Naphthalene	0.00352	0.0010	0.005	0	70.4	50	125	0.00386	9.21	25	
Phenanthrene	0.00376	0.0010	0.005	0	75.2	50	125	0.00384	2.11	25	
Pyrene	0.00404	0.0010	0.005	0	80.8	50	125	0.00417	3.17	25	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

ATTACHMENT 4: DATA REVIEW CHECKLIST – BATCH DATA

SemiVolatiles SOP 4020, EPA 8270C

First Level Reviewer: D Mariscal Review Date: 7/11/13

Second Level Reviewer: M Pendleton Review Date: 7/11/13

Analysis date: 6/21/13 Batch Start Time: 0959 Instrument: SVOC-7

Page 1 of 1 Continuing Calibration Verification (CCV) and Batch Data

Item	Aspect	1st Yes	Level No	2nd Yes	Level No	Comments: record routine corrective actions here	CAR # QER#
1	Tune meets criteria	✓		✓			
2	All Analyses in tune period 12hr	✓		✓			
3	CCV Acceptance criteria met: SPCCs: =0.05 CCCs: = 20%D RT: ± 30 seconds Int stds: -50% to +100% Correct ICAL RFs used	✓ ✓ ✓ ✓ ✓ ✓		✓ ✓ ✓ ✓ ✓ ✓			
4	Method Blank < RL False pos/neg checked Surrogates acceptable	✓ ✓ ✓		✓ ✓ ✓			
5	LCS/LCSD recovery acceptable Surrogates acceptable	✓ ✓		✓ ✓			
6	MS/MSD recov/RPD acceptable Surrogates acceptable	✓		✓			
7	Test Samples: Correct IDs Surrogates acceptable False pos/neg checked RL, Units Results within curve Dilutions performed	✓ ✓ ✓ ✓ ✓ ✓		✓ ✓ ✓ ✓ ✓			
8	MB, LCS/LCSD, MS/MSD per batch of 20 samples	✓		✓			
9	Manual Integration acceptable: List files	✓		✓			
10	Int Stds Check (optional)	✓		✓			
11	Tune & QC Solns ID recorded	✓		✓		58-40-062, 58-39-546	
12	All other information recorded	✓		✓			
13	LIMS transcription correct	✓		✓			
14	Analysis within holding time	✓		✓			
15	All samples correct pH	NA		NA			
16	Autosampler tray checked	✓		✓			
17	Corrections properly recorded	✓		✓			

Additional Comments:

Injection Log

Instrument Name: SVOC-7
Data Directory: C:\msdchem\1\data\062113\

Line	Vial	FileName	Mult	SampleName	Misc Info	Injected
1	17	06201317.D	1.	SAMP 13060452-001B	TRIS	20 Jun 2013 8:34 pm
2	1	06211301.D	1.	SOLVENT BLANK	SOLVENT BLANK	21 Jun 2013 9:37 am
3	2	06211302.D	1.	TUNE DFTPP-1	DFTPP_D	21 Jun 2013 9:59 am
4	3	06211303.D	1.	CCV 5.0 SSTD	PNA_QC	21 Jun 2013 10:21 am
5	4	06211304.D	1.	CCV 100.0 SSTD	TRIS	21 Jun 2013 10:43 am
6	5	06211305.D	1.	SAMP 13060561-001B	PNA_WATER	21 Jun 2013 11:09 am
7	6	06211306.D	1.	SAMP 13060561-002B	PNA_WATER	21 Jun 2013 11:32 am
8	7	06211307.D	1.	SAMP 13060561-003B	PNA_WATER	21 Jun 2013 11:54 am
9	8	06211308.D	1.	SAMP 13060561-004B	PNA_WATER	21 Jun 2013 12:17 pm
10	9	06211309.D	1.	SAMP 13060561-005B	PNA_WATER	21 Jun 2013 12:39 pm
11	10	06211310.D	1.	SAMP 13060561-006B	PNA_WATER	21 Jun 2013 1:02 pm
12	11	06211311.D	1.	SAMP 13060561-007B	PNA_WATER	21 Jun 2013 1:24 pm
13	12	06211312.D	1.	SAMP 13060602-001B	PNA_WATER+	21 Jun 2013 1:46 pm
14	13	06211313.D	1.	SAMP 13060603-001B	PNA_WATER+	21 Jun 2013 2:09 pm
15	14	06211314.D	1.	SAMP 13060604-001B	PNA_WATER+	21 Jun 2013 2:31 pm
16	15	06211315.D	1.	SAMP 13060561-002B	PNA_WATER	21 Jun 2013 2:53 pm
17	16	06211316.D	1.	SAMP 13060561-003B	PNA_WATER	21 Jun 2013 3:16 pm
18	17	06211317.D	1.	MBLK MB-69946-PNA	PNA_WATER+	21 Jun 2013 3:38 pm
19	18	06211318.D	1.	LCS LCS-69946-PNA	PNA_WATER+	21 Jun 2013 4:01 pm
20	19	06211319.D	1.	LCSD LCSD-69946-PNA	PNA_WATER+	21 Jun 2013 4:23 pm
21	20	06211320.D	1.	SAMP 13060603-001B	PNA_WATER+	21 Jun 2013 4:45 pm
22	21	06211321.D	1.	SAMP 13060603-001B	PNA_WATER+	21 Jun 2013 5:08 pm
23	22	06211322.D	1.	MBLK MB-70000-TRIS	TRIS	21 Jun 2013 5:30 pm
24	23	06211323.D	1.	MBLK MB-70029-TRIS	TRIS	21 Jun 2013 5:52 pm
25	24	06211324.D	1.	LCS LCS-70000-TRIS	TRIS	21 Jun 2013 6:15 pm
26	25	06211325.D	1.	LCSD LCSD-70000-TRIS	TRIS	21 Jun 2013 6:37 pm
27	26	06211326.D	1.	LCS LCS-70029-TRIS	TRIS	21 Jun 2013 6:59 pm
28	27	06211327.D	1.	LCSD LCSD-70029-TRIS	TRIS	21 Jun 2013 7:21 pm
29	28	06211328.D	1.	SAMP 13051049-001A	TRIS	21 Jun 2013 7:44 pm
30	29	06211329.D	1.	SAMP 13051049-002A	TRIS	21 Jun 2013 8:06 pm
31	30	06211330.D	1.	SAMP 13060452-001A	TRIS	21 Jun 2013 8:28 pm

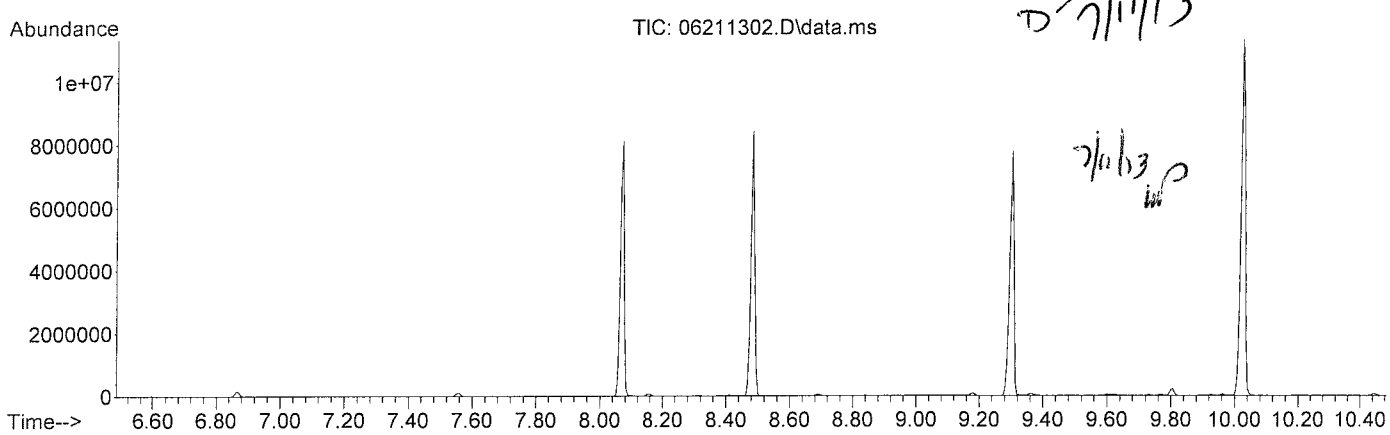
D 7/11/13

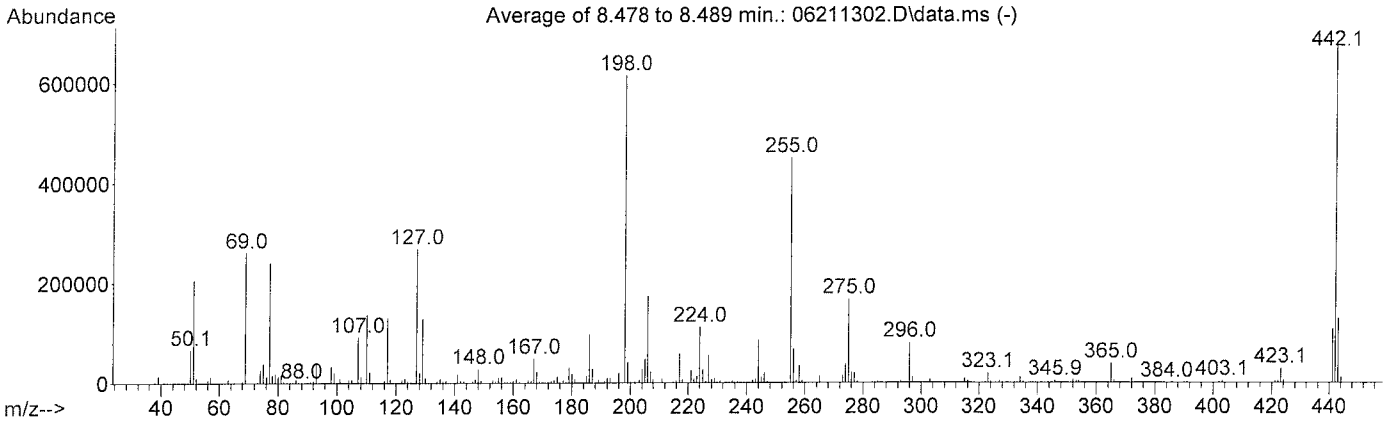
7/11/13

Data Path : C:\msdchem\1\data\062113\
Data File : 06211302.D
Acq On : 21 Jun 2013 9:59 am
Operator : DM
Sample : TUNE DFTPP-1
Misc : DFTPP_D 58-40-002
ALS Vial : 2 Sample Multiplier: 1
InstName : SVOC-7

Integration File: events.e

Method : C:\msdchem\1\data\062113\dftpp.M
Title : DFTPP Tune
Last Update : Thu Jun 20 14:53:23 2013





Spectrum Information: Average of 8.478 to 8.489 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	442	10	80	30.4	206448	PASS
68	69	0.00	2	1.4	3685	PASS
69	198	0.00	100	42.5	261675	PASS
70	69	0.00	2	0.5	1325	PASS
127	442	10	80	39.6	268992	PASS
197	198	0.00	2	0.0	0	PASS
198	442	50	100	90.8	616128	PASS
199	198	5	9	6.9	42800	PASS
275	442	10	60	24.8	168173	PASS
365	198	1	100	6.4	39597	PASS
441	442	0.01	24	16.0	108837	PASS
442	442	50	100	100.0	678421	PASS
443	442	15	24	19.1	129805	PASS

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\062113\
Data File : 06211302.D
Acq On : 21 Jun 2013 9:59 am
Operator : DM
Sample : TUNE DFTPP-1
Misc : DFTPP_D 58-40-002
ALS Vial : 2 Sample Multiplier: 1
InstName : SVOC-7

Quant Time: Jun 21 14:16:11 2013
Quant Method : C:\msdchem\1\data\062113\dftpp.M
Quant Title : DFTPP Tune
QLast Update : Fri Jun 21 14:15:46 2013
Response via : Initial Calibration

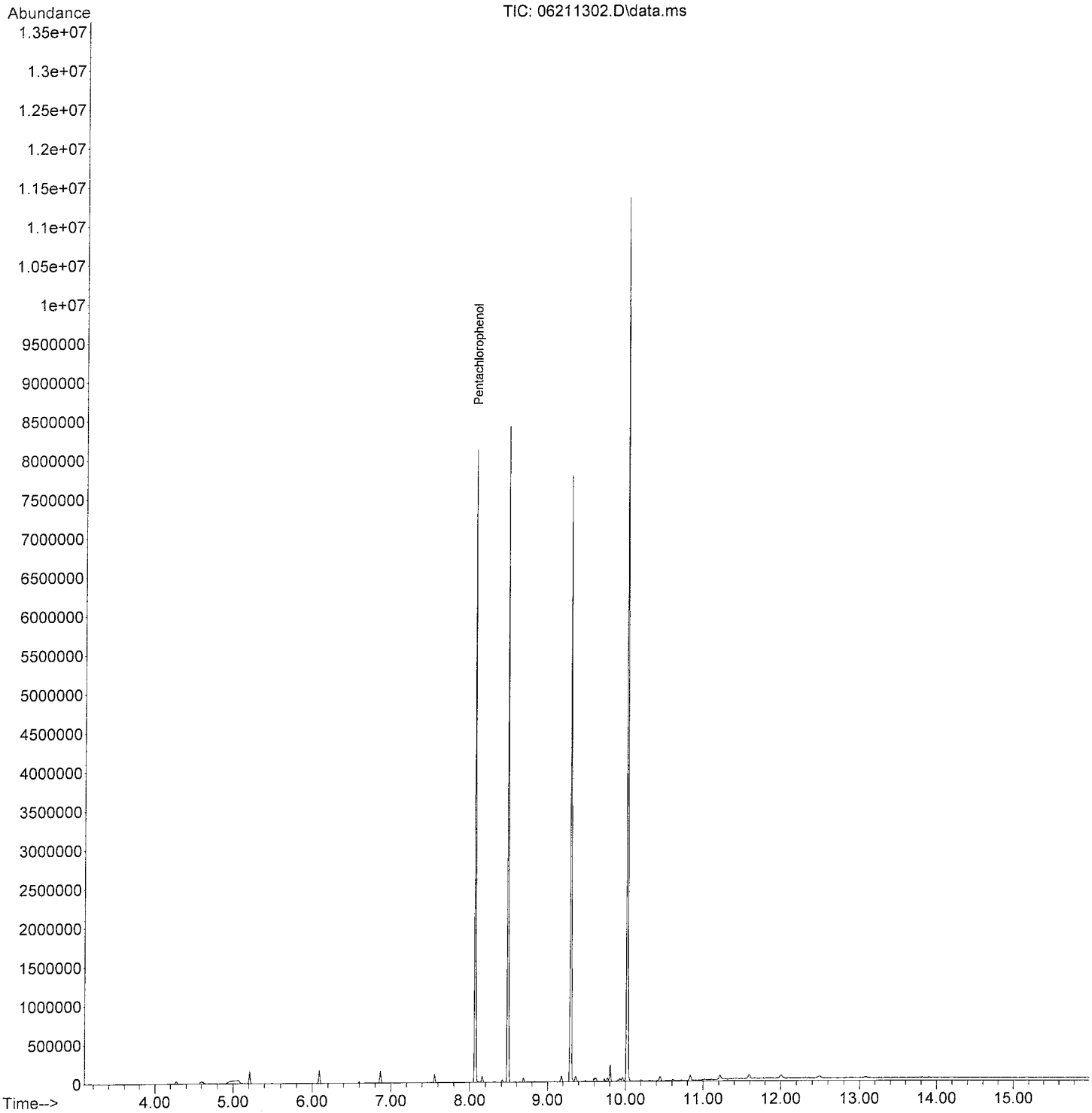
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
2) DFTPP	8.486	198	6932979	0.00	area	0.00
6) DDT	10.028	235	19688282	0.00	area	0.00
Target Compounds						Qvalue
1) Pentachlorophenol	8.073	266	8625793	250.84	area	99
3) Benzidine	9.304	184	28914306	N.D.		
4) DDE	0.000		0	N.D.	d	
5) DDD	9.806	235	350887	N.D.		

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\062113\
Data File : 06211302.D
Acq On : 21 Jun 2013 9:59 am
Operator : DM
Sample : TUNE DFTPP-1
Misc : DFTPP_D 58-40-002
ALS Vial : 2 Sample Multiplier: 1
InstName : SVOC-7

Quant Time: Jun 21 14:16:11 2013
Quant Method : C:\msdchem\1\data\062113\dftpp.M
Quant Title : DFTPP Tune
QLast Update : Fri Jun 21 14:15:46 2013
Response via : Initial Calibration

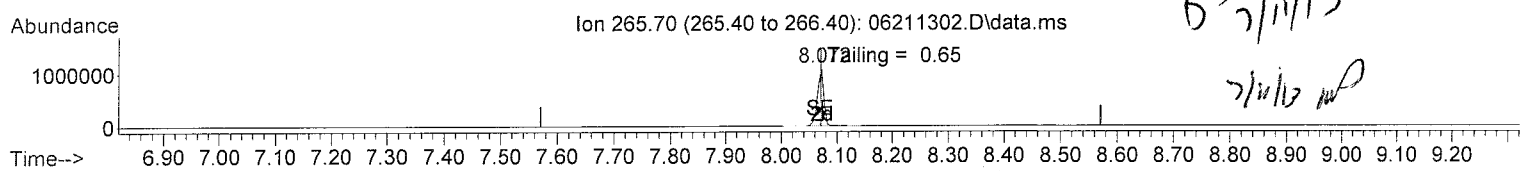


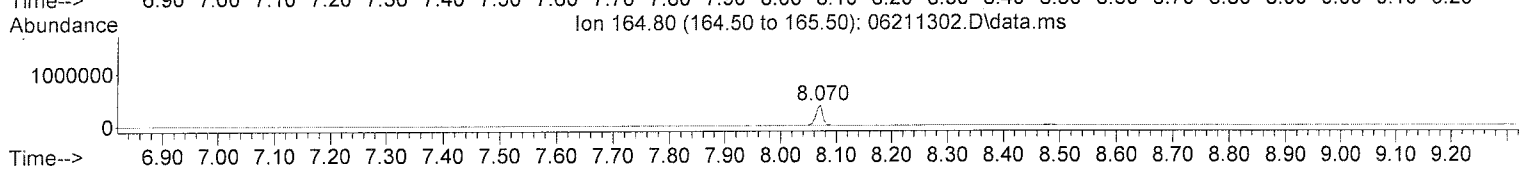
Quantitation Report (Qedit)

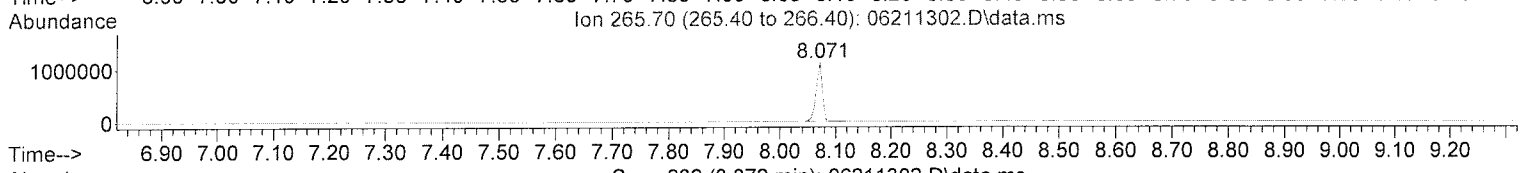
Data Path : C:\msdchem\1\data\062113\
Data File : 06211302.D
Acq On : 21 Jun 2013 9:59 am
Operator : DM
Sample : TUNE DFTPP-1
Misc : DFTPP_D 58-40-002
ALS Vial : 2 Sample Multiplier: 1
InstName : SVOC-7

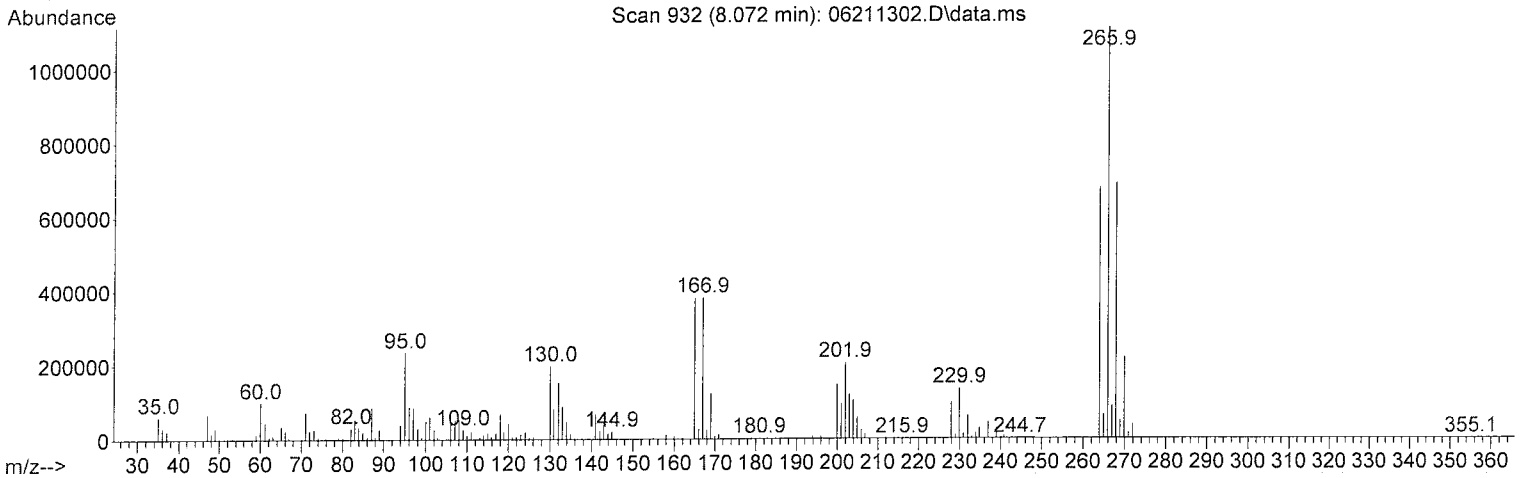
Quant Time: Jun 21 14:15:57 2013
Quant Method : C:\msdchem\1\data\062113\dftpp.M
Quant Title : DFTPP Tune
QLast Update : Fri Jun 21 14:15:46 2013
Response via : Initial Calibration

D 7/11/13
7/11/13









TIC: 06211302.D\data.ms

(1) Pentachlorophenol

8.073min (+ 0.002) 250.84 area

response 8625793

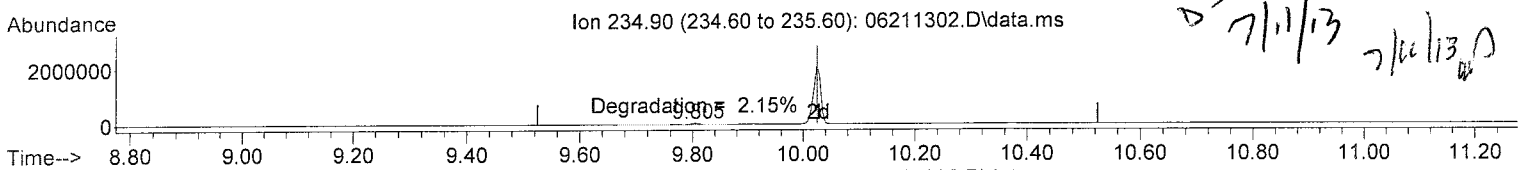
Ion	Exp%	Act%
265.70	100.00	100.00
164.80	34.30	36.82
265.70	100.00	100.00
0.00	0.00	0.00

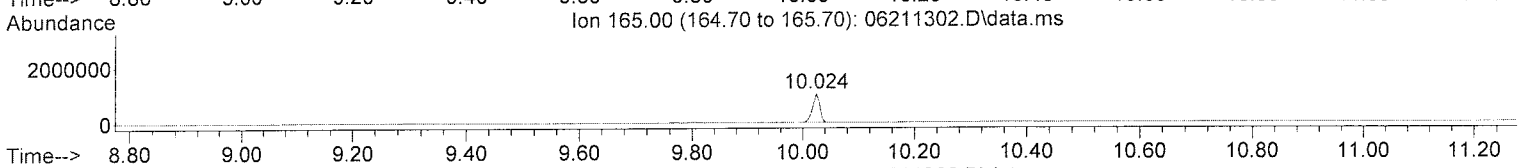
Quantitation Report (Qedit)

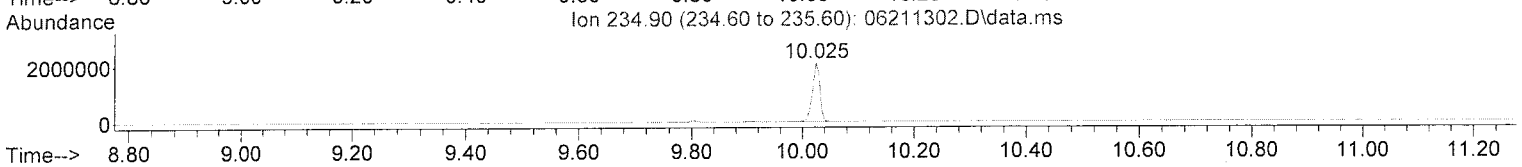
Data Path : C:\msdchem\1\data\062113\
Data File : 06211302.D
Acq On : 21 Jun 2013 9:59 am
Operator : DM
Sample : TUNE DFTPP-1
Misc : DFTPP_D 58-40-002
ALS Vial : 2 Sample Multiplier: 1
InstName : SVOC-7

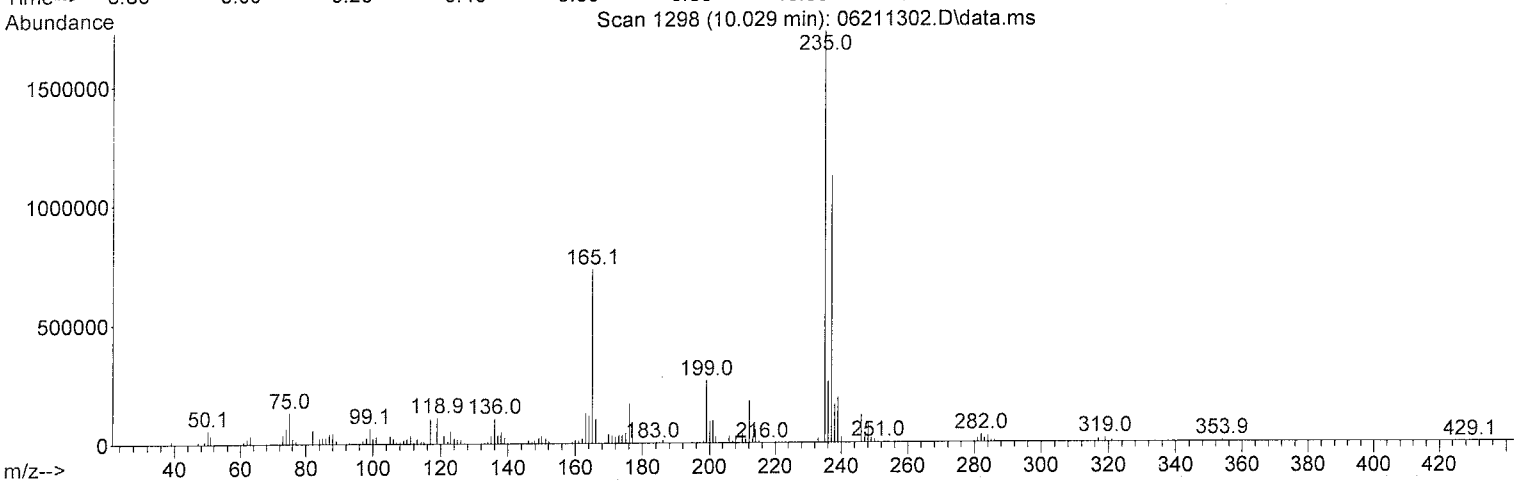
Quant Time: Jun 21 14:15:57 2013
Quant Method : C:\msdchem\1\data\062113\dftpp.M
Quant Title : DFTPP Tune
QLast Update : Fri Jun 21 14:15:46 2013
Response via : Initial Calibration

D 7/11/13 7/11/13









TIC: 06211302.D\data.ms

(6) DDT

10.028min (+ 0.002) 0.00 area

response 19688282

Ion	Exp%	Act%
234.90	100.00	100.00
165.00	49.10	47.45
234.90	100.00	100.00
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\062113\
Data File : 06211302.D
Acq On : 21 Jun 2013 9:59 am
Operator : DM
Sample : TUNE DFTPP-1
Misc : DFTPP_D 58-40-002
ALS Vial : 2 Sample Multiplier: 1
InstName : SVOC-7

Quant Time: Jun 21 14:15:57 2013
Quant Method : C:\msdchem\1\data\062113\dftpp.M
Quant Title : DFTPP Tune
QLast Update : Fri Jun 21 14:15:46 2013
Response via : Initial Calibration

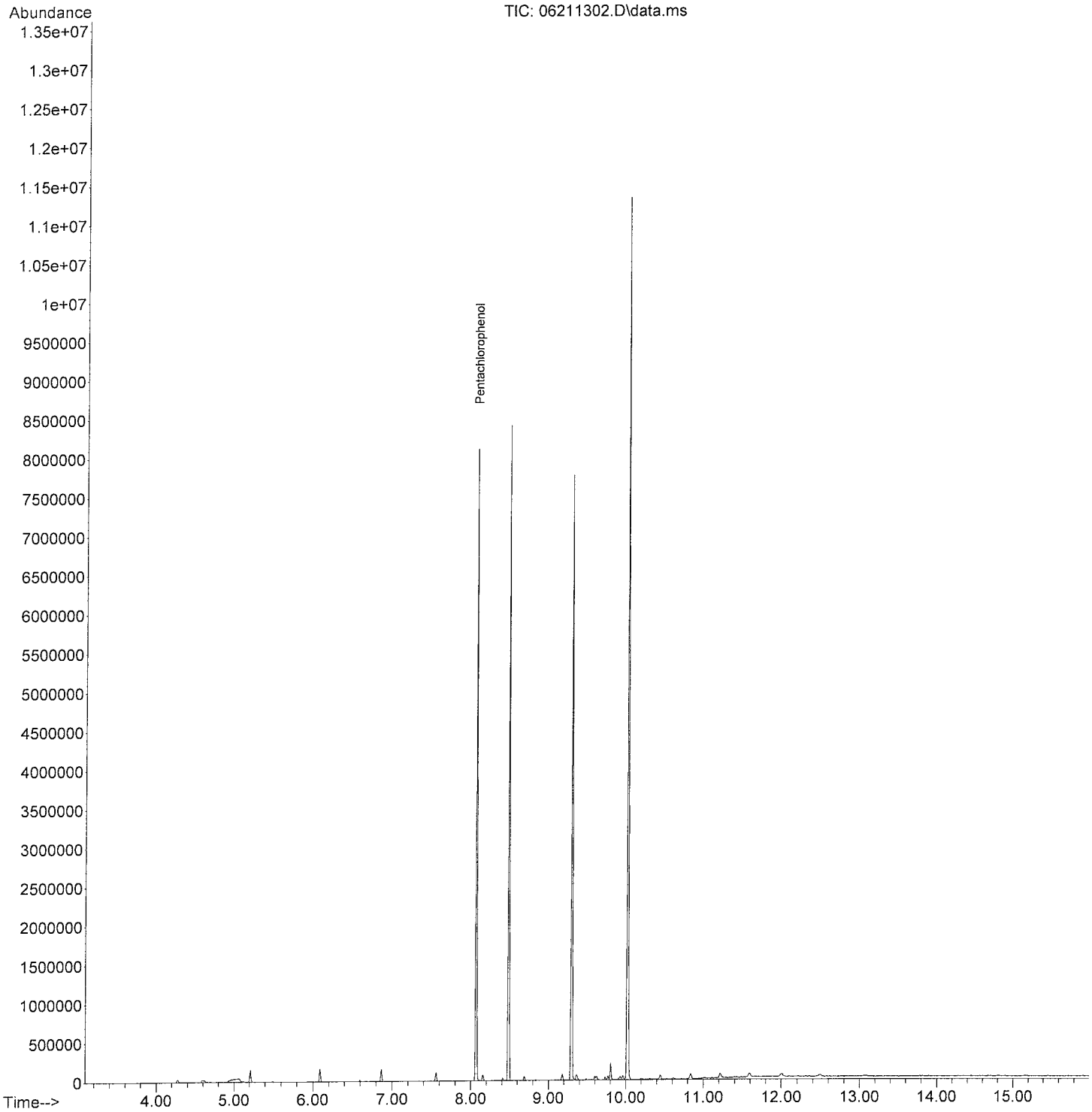
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
2) DFTPP	8.486	198	6932979	0.00	area	0.00
6) DDT	10.028	235	19688282	0.00	area	0.00
Target Compounds						Qvalue
1) Pentachlorophenol	8.073	266	8625793	250.84	area	99
3) Benzidine	9.304	184	28914306	N.D.		
4) DDE	9.806	235	350887	N.D.		
5) DDD	9.806	235	350887	N.D.		

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\062113\
Data File : 06211302.D
Acq On : 21 Jun 2013 9:59 am
Operator : DM
Sample : TUNE DFTPP-1
Misc : DFTPP_D 58-40-002
ALS Vial : 2 Sample Multiplier: 1
InstName : SVOC-7

Quant Time: Jun 21 14:15:57 2013
Quant Method : C:\msdchem\1\data\062113\dftpp.M
Quant Title : DFTPP Tune
QLast Update : Fri Jun 21 14:15:46 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\062113\
Data File : 06211303.D
Acq On : 21 Jun 2013 10:21 am
Operator : DM
Sample : CCV 5.0 SSTD
Misc : PNA_QC 58-39-546
ALS Vial : 3 Sample Multiplier: 1
InstName : SVOC-7

Quant Time: Jun 21 14:17:31 2013
Quant Method : C:\msdchem\1\data\062113\PNA0605.M
Quant Title : SOP 4020 EPA 8270C
QLast Update : Wed Jun 19 11:53:52 2013
Response via : Initial Calibration

D 7/11/13 7/11/13

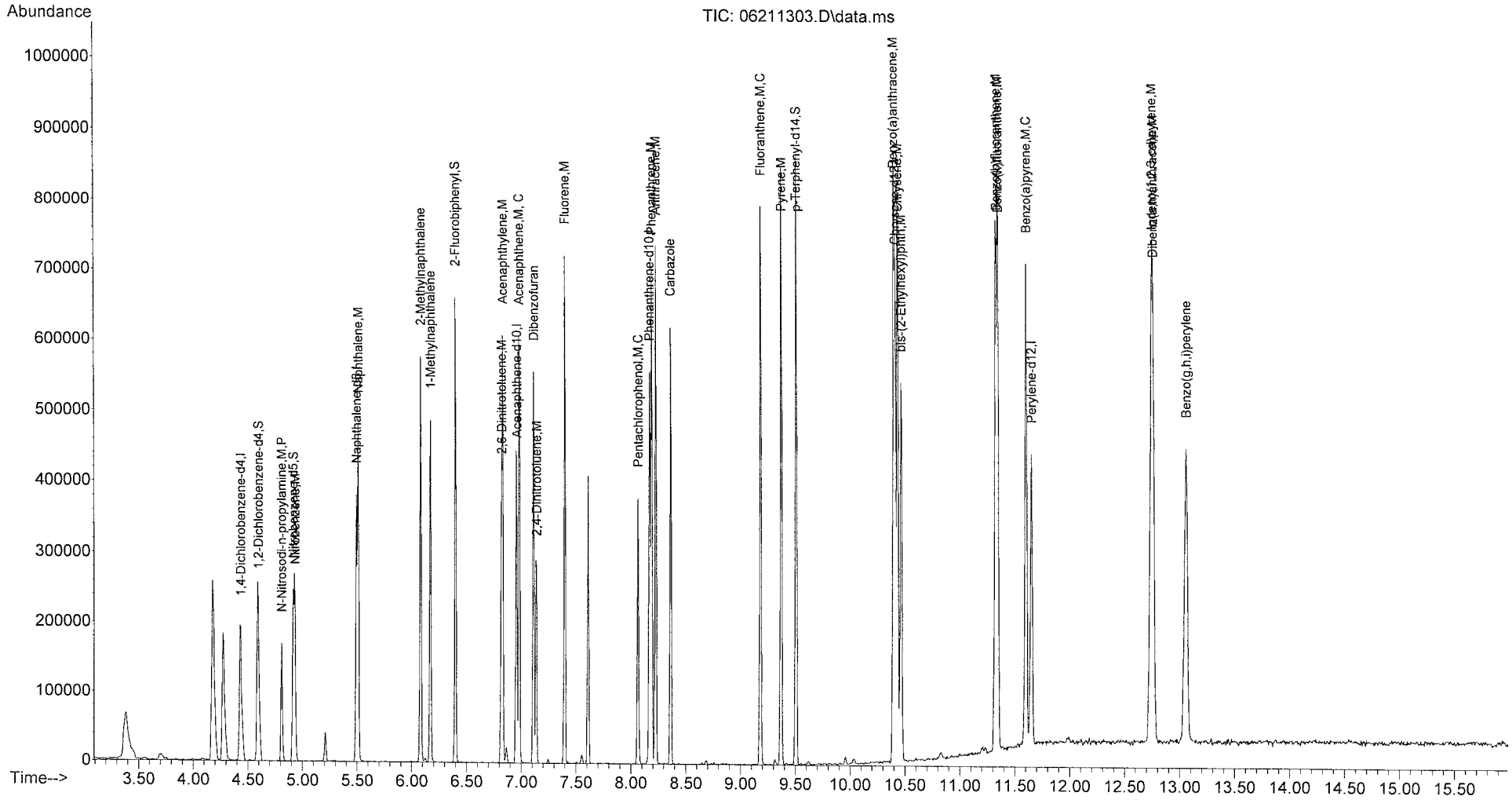
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	4.434	152	43185	4.00 ngs	0.00
6) Naphthalene-d8	5.493	136	129172	4.00 ngs	0.00
13) Acenaphthene-d10	6.959	164	87528	4.00 ngs	0.00
19) Phenanthrene-d10	8.168	188	177672	4.00 ngs	0.00
26) Chrysene-d12	10.409	240	218075	4.00 ngs	0.00
33) Perylene-d12	11.650	264	185121	4.00 ngs	0.00
System Monitoring Compounds					
2) 1,2-Dichlorobenzene-d4	4.595	152	52174	4.41 ngs	0.00
Spiked Amount 50.000	Range 16 - 110		Recovery	= 8.82%#	
4) Nitrobenzene-d5	4.916	82	66806	4.82 ngs	0.00
Spiked Amount 50.000	Range 35 - 114		Recovery	= 9.64%#	
10) 2-Fluorobiphenyl	6.397	172	169717	5.22 ngs	0.02
Spiked Amount 50.000	Range 43 - 116		Recovery	= 10.44%#	
25) p-Terphenyl-d14	9.505	244	248070	5.51 ngs	0.02
Spiked Amount 50.000	Range 33 - 141		Recovery	= 11.02%#	
Target Compounds					Qvalue
3) N-Nitrosodi-n-propylamine	4.809	70	30986	4.35 ngs	88
5) Nitrobenzene	4.932	77	63897	4.59 ngs	94
7) Naphthalene	5.510	128	168077	4.71 ngs	99
8) 2-Methylnaphthalene	6.082	142	117441	4.95 ngs	96
9) 1-Methylnaphthalene	6.173	142	109682	4.96 ngs	97
11) Acenaphthylene	6.831	152	209275	5.32 ngs	98
12) 2,6-Dinitrotoluene	6.820	165	31954	5.07 ngs #	66
14) Acenaphthene	6.980	153	132830	5.03 ngs	98
15) Dibenzofuran	7.114	168	195162	5.01 ngs	97
16) 2,4-Dinitrotoluene	7.141	165	43027	5.74 ngs	94
17) Fluorene	7.398	166	159969	5.18 ngs	99
18) Pentachlorophenol	8.066	266	42476	6.26 ngs	98
20) Phenanthrene	8.189	178	254376	4.99 ngs	100
21) Anthracene	8.227	178	254040	5.32 ngs	99
22) Carbazole	8.360	167	226080	5.38 ngs	99
23) Fluoranthene	9.184	202	314292	5.37 ngs	99
24) Pyrene	9.371	202	331680	5.22 ngs	99
27) Benzo(a)anthracene	10.393	228	327033	5.30 ngs	99
28) Chrysene	10.430	228	308666	5.08 ngs	99
29) bis-(2-Ethylhexyl)phth	10.462	149	218354	5.19 ngs	97
30) Benzo(b)fluoranthene	11.329	252	361623m	5.53 ngs	
31) Benzo(k)fluoranthene	11.345	252	306540	5.33 ngs	98
32) Benzo(a)pyrene	11.602	252	316225	5.58 ngs	96
34) Indeno(1,2,3-cd)pyrene	12.746	276	382052	5.49 ngs	97
35) Dibenz(a,h)anthracene	12.757	278	310111	5.42 ngs	99
36) Benzo(g,h,i)perylene	13.056	276	327447	5.38 ngs	93

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\062113\
Data File : 06211303.D
Acq On : 21 Jun 2013 10:21 am
Operator : DM
Sample : CCV 5.0 SSTD
Misc : PNA_QC 58-39-546
ALS Vial : 3 Sample Multiplier: 1
InstName : SVOC-7

Quant Time: Jun 21 14:17:31 2013
Quant Method : C:\msdchem\1\data\062113\PNA0605.M
Quant Title : SOP 4020 EPA 8270C
QLast Update : Wed Jun 19 11:53:52 2013
Response via : Initial Calibration



Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\062113\
Data File : 06211303.D
Acq On : 21 Jun 2013 10:21 am
Operator : DM
Sample : CCV 5.0 SSTD
Misc : PNA_QC 58-39-546
ALS Vial : 3 Sample Multiplier: 1
InstName : SVOC-7

Quant Time: Jun 21 14:17:02 2013
Quant Method : C:\msdchem\1\data\062113\PNA0605.M
Quant Title : SOP 4020 EPA 8270C
QLast Update : Wed Jun 19 11:53:52 2013
Response via : Initial Calibration

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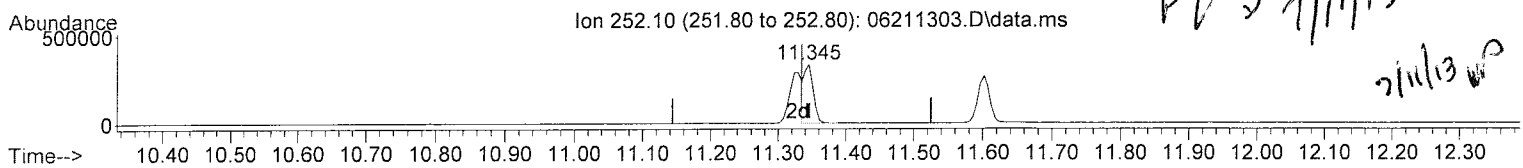
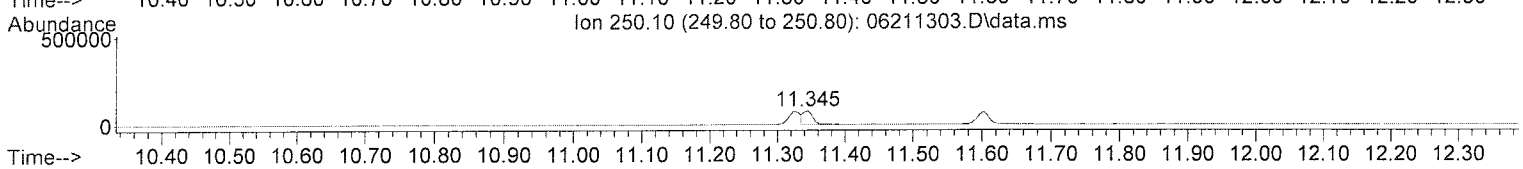
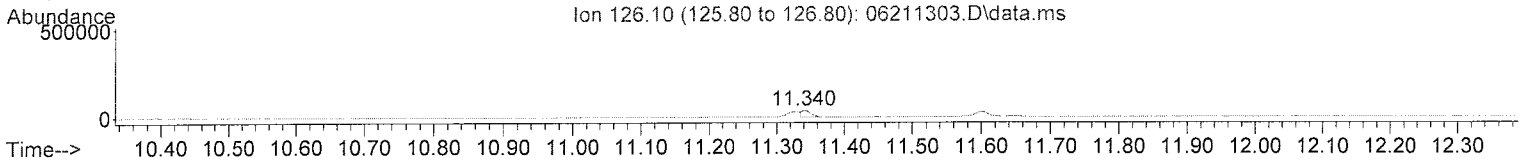
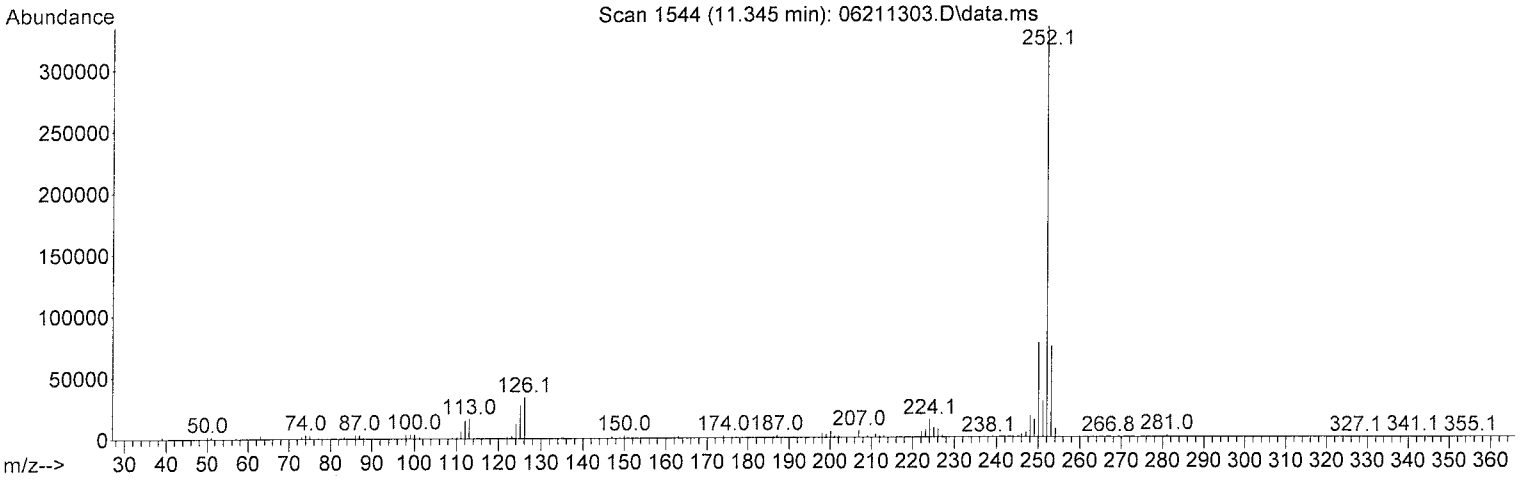
7/11/13









TIC: 06211303.D\data.ms

(30) Benzo(b)fluoranthene (M)

11.345min (+ 0.010) 4.69 ngs

response 306540

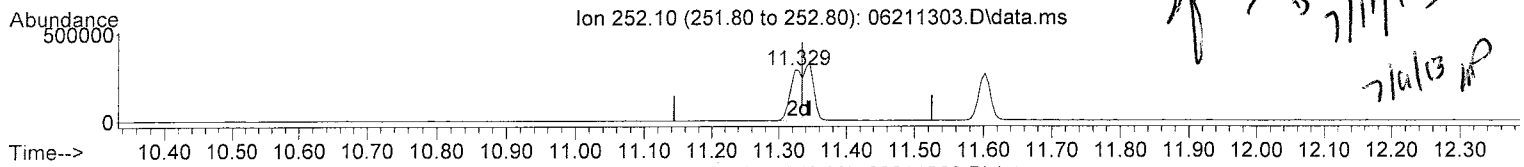
Ion	Exp%	Act%
252.10	100.00	100.00
250.10	22.90	23.76
126.10	12.40	10.11
0.00	0.00	0.00

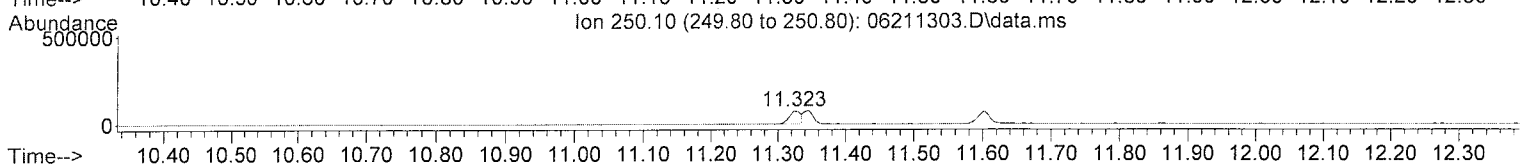
Quantitation Report (Qedit)

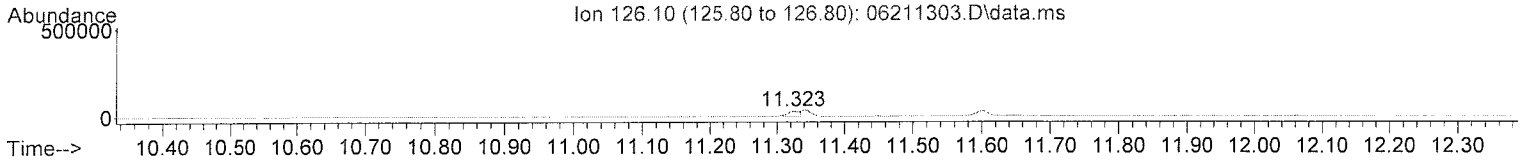
Data Path : C:\msdchem\1\data\062113\
Data File : 06211303.D
Acq On : 21 Jun 2013 10:21 am
Operator : DM
Sample : CCV 5.0 SSTD
Misc : PNA_QC 58-39-546
ALS Vial : 3 Sample Multiplier: 1
InstName : SVOC-7

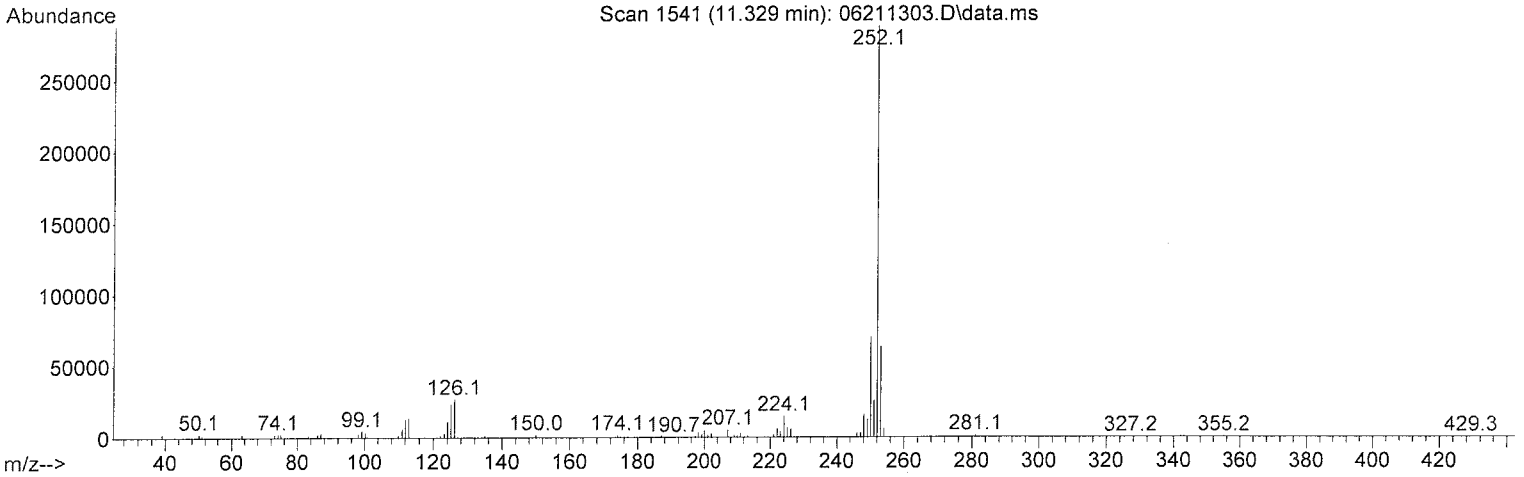
Quant Time: Jun 21 14:17:02 2013
Quant Method : C:\msdchem\1\data\062113\PNA0605.M
Quant Title : SOP 4020 EPA 8270C
QLast Update : Wed Jun 19 11:53:52 2013
Response via : Initial Calibration

7/11/13
7/11/13









TIC: 06211303.D\data.ms

(30) Benzo(b)fluoranthene (M)

11.329min (-0.006) 5.53 ngs m

response 361623

Ion	Exp%	Act%
252.10	100.00	100.00
250.10	22.90	24.71
126.10	12.40	10.28
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\062113\
Data File : 06211303.D
Acq On : 21 Jun 2013 10:21 am
Operator : DM
Sample : CCV 5.0 SSTD
Misc : PNA_QC 58-39-546
ALS Vial : 3 Sample Multiplier: 1
InstName : SVOC-7

Quant Time: Jun 21 14:17:02 2013
Quant Method : C:\msdchem\1\data\062113\PNA0605.M
Quant Title : SOP 4020 EPA 8270C
QLast Update : Wed Jun 19 11:53:52 2013
Response via : Initial Calibration

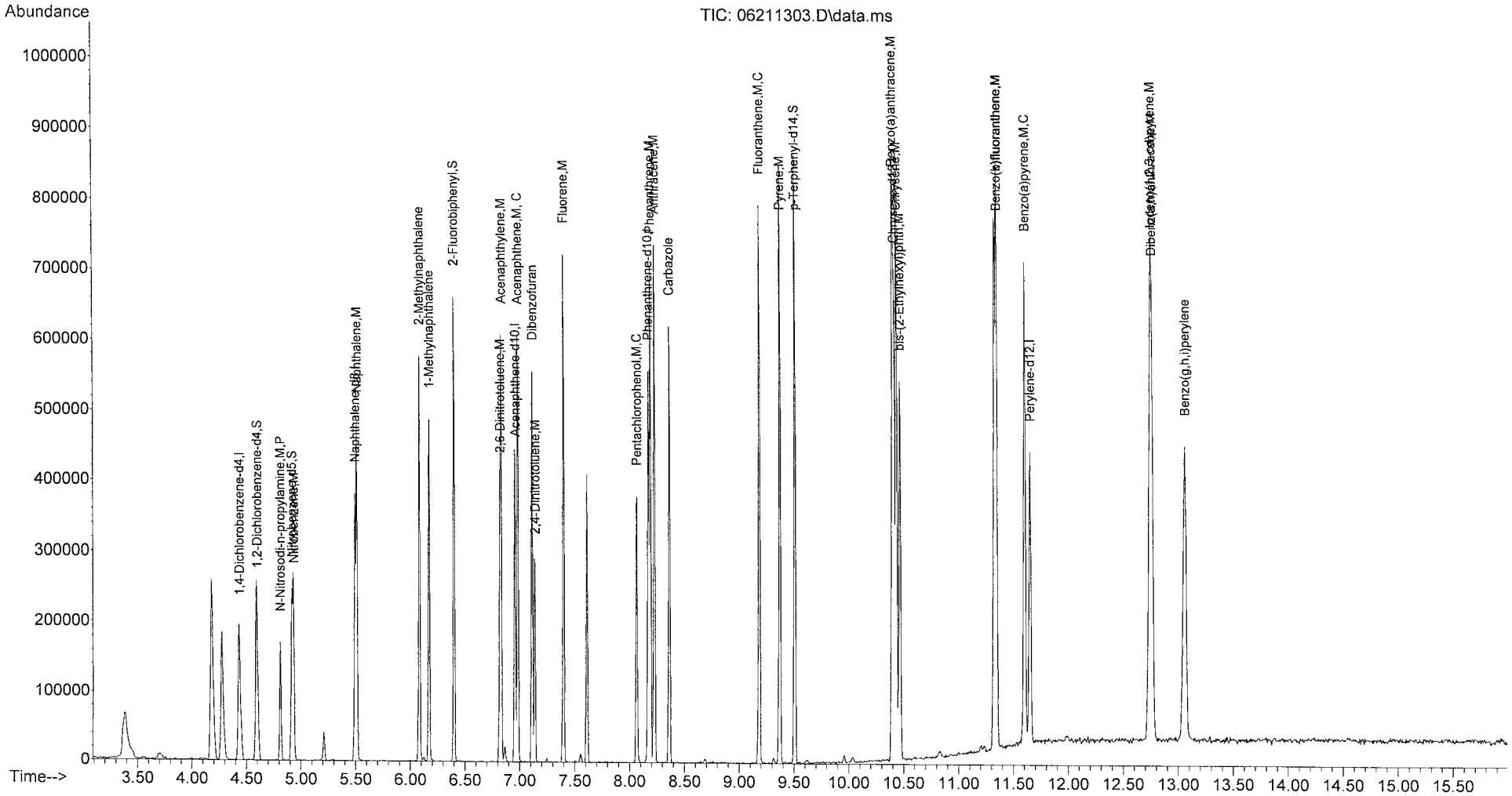
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 1,4-Dichlorobenzene-d4	4.434	152	43185	4.00	ngs		0.00
6) Naphthalene-d8	5.493	136	129172	4.00	ngs		0.00
13) Acenaphthene-d10	6.959	164	87528	4.00	ngs		0.00
19) Phenanthrene-d10	8.168	188	177672	4.00	ngs		0.00
26) Chrysene-d12	10.409	240	218075	4.00	ngs		0.00
33) Perylene-d12	11.650	264	185121	4.00	ngs		0.00
System Monitoring Compounds							
2) 1,2-Dichlorobenzene-d4	4.595	152	52174	4.41	ngs		0.00
Spiked Amount 50.000	Range 16 - 110		Recovery	=	8.82%#		
4) Nitrobenzene-d5	4.916	82	66806	4.82	ngs		0.00
Spiked Amount 50.000	Range 35 - 114		Recovery	=	9.64%#		
10) 2-Fluorobiphenyl	6.397	172	169717	5.22	ngs		0.02
Spiked Amount 50.000	Range 43 - 116		Recovery	=	10.44%#		
25) p-Terphenyl-d14	9.505	244	248070	5.51	ngs		0.02
Spiked Amount 50.000	Range 33 - 141		Recovery	=	11.02%#		
Target Compounds							Qvalue
3) N-Nitrosodi-n-propylamine	4.809	70	30986	4.35	ngs		88
5) Nitrobenzene	4.932	77	63897	4.59	ngs		94
7) Naphthalene	5.510	128	168077	4.71	ngs		99
8) 2-Methylnaphthalene	6.082	142	117441	4.95	ngs		96
9) 1-Methylnaphthalene	6.173	142	109682	4.96	ngs		97
11) Acenaphthylene	6.831	152	209275	5.32	ngs		98
12) 2,6-Dinitrotoluene	6.820	165	31954	5.07	ngs	#	66
14) Acenaphthene	6.980	153	132830	5.03	ngs		98
15) Dibenzofuran	7.114	168	195162	5.01	ngs		97
16) 2,4-Dinitrotoluene	7.141	165	43027	5.74	ngs		94
17) Fluorene	7.398	166	159969	5.18	ngs		99
18) Pentachlorophenol	8.066	266	42476	6.26	ngs		98
20) Phenanthrene	8.189	178	254376	4.99	ngs		100
21) Anthracene	8.227	178	254040	5.32	ngs		99
22) Carbazole	8.360	167	226080	5.38	ngs		99
23) Fluoranthene	9.184	202	314292	5.37	ngs		99
24) Pyrene	9.371	202	331680	5.22	ngs		99
27) Benzo(a)anthracene	10.393	228	327033	5.30	ngs		99
28) Chrysene	10.430	228	308666	5.08	ngs		99
29) bis-(2-Ethylhexyl)phth	10.462	149	218354	5.19	ngs		97
30) Benzo(b)fluoranthene	11.345	252	306540	4.69	ngs		97
31) Benzo(k)fluoranthene	11.345	252	306540	5.33	ngs		98
32) Benzo(a)pyrene	11.602	252	316225	5.58	ngs		96
34) Indeno(1,2,3-cd)pyrene	12.746	276	382052	5.49	ngs		97
35) Dibenz(a,h)anthracene	12.757	278	310111	5.42	ngs		99
36) Benzo(g,h,i)perylene	13.056	276	327447	5.38	ngs		93

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\062113\
Data File : 06211303.D
Acq On : 21 Jun 2013 10:21 am
Operator : DM
Sample : CCV 5.0 SSTD
Misc : PNA_QC 58-39-546
ALS Vial : 3 Sample Multiplier: 1
InstName : SVOC-7

Quant Time: Jun 21 14:17:02 2013
Quant Method : C:\msdchem\1\data\062113\PNA0605.M
Quant Title : SOP 4020 EPA 8270C
QLast Update : Wed Jun 19 11:53:52 2013
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\data\062113\
Data File : 06211303.D
Acq On : 21 Jun 2013 10:21 am
Operator : DM
Sample : CCV 5.0 SSTD
Misc : PNA_QC 58-39-546
ALS Vial : 3 Sample Multiplier: 1
InstName : SVOC-7

Quant Time: Jun 21 14:17:31 2013
Quant Method : C:\msdchem\1\data\062113\PNA0605.M
Quant Title : SOP 4020 EPA 8270C
QLast Update : Wed Jun 19 11:53:52 2013
Response via : Initial Calibration

7/11/13 7/11/13

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4	4.000	4.000	0.0	55	0.00
2	S	1,2-Dichlorobenzene-d4	5.000	4.411	11.8	51	0.00
3	M,P	N-Nitrosodi-n-propylamine	5.000	4.352	13.0	45	0.00
4	S	Nitrobenzene-d5	5.000	4.820	3.6	48	0.00
5	M	Nitrobenzene	5.000	4.591	8.2	48	0.01
6	I	Naphthalene-d8	4.000	4.000	0.0	50	0.00
7	M	Naphthalene	5.000	4.710	5.8	47	0.00
8		2-Methylnaphthalene	5.000	4.945	1.1	47	0.01
9		1-Methylnaphthalene	5.000	4.961	0.8	50	0.01
10	S	2-Fluorobiphenyl	5.000	5.219	-4.4	52	0.02
11	M	Acenaphthylene	5.000	5.318	-6.4	50	0.02
12	M	2,6-Dinitrotoluene	5.000	5.072	-1.4	49	0.02
13	I	Acenaphthene-d10	4.000	4.000	0.0	50	0.00
14	M, C	Acenaphthene	5.000	5.028	-0.6	49	0.00
15		Dibenzofuran	5.000	5.010	-0.2	48	0.00
16	M	2,4-Dinitrotoluene	5.000	5.741	-14.8	50	0.00
17	M	Fluorene	5.000	5.183	-3.7	51	0.00
18	M,C	Pentachlorophenol	5.000	6.256	-25.1#	67	0.00
19	I	Phenanthrene-d10	4.000	4.000	0.0	51	0.00
20	M	Phenanthrene	5.000	4.992	0.2	51	0.00
21	M	Anthracene	5.000	5.321	-6.4	52	0.00
22		Carbazole	5.000	5.377	-7.5	52	0.00
23	M,C	Fluoranthene	5.000	5.365	-7.3	52	0.02
24	M	Pyrene	5.000	5.223	-4.5	52	0.02
25	S	p-Terphenyl-d14	5.000	5.508	-10.2	56	0.02
26	I	Chrysene-d12	4.000	4.000	0.0	54	0.00
27	M	Benzo(a)anthracene	5.000	5.298	-6.0	55	0.00
28	M	Chrysene	5.000	5.079	-1.6	53	0.00
29	M	bis-(2-Ethylhexyl)phth	5.000	5.191	-3.8	54	0.01
30	M	Benzo(b)fluoranthene	5.000	5.534	-10.7	58	0.00
31	M	Benzo(k)fluoranthene	5.000	5.331	-6.6	52	-0.01
32	M,C	Benzo(a)pyrene	5.000	5.580	-11.6	57	-0.02
33	I	Perylene-d12	4.000	4.000	0.0	57	0.00
34	M	Indeno(1,2,3-cd)pyrene	5.000	5.491	-9.8	59	-0.04
35	M	Dibenz(a,h)anthracene	5.000	5.423	-8.5	59	-0.04
36		Benzo(g,h,i)perylene	5.000	5.384	-7.7	59	-0.06

(#) = Out of Range SPCC's out = 0 CCC's out = 1

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\062113\
Data File : 06211314.D
Acq On : 21 Jun 2013 2:31 pm
Operator : DM
Sample : SAMP 13060604-001B
Misc : PNA_WATER+
ALS Vial : 14 Sample Multiplier: 1
InstName : SVOC-7

Quant Time: Jun 21 15:13:36 2013
Quant Method : C:\msdchem\1\data\062113\PNA0605.M
Quant Title : SOP 4020 EPA 8270C
QLast Update : Fri Jun 21 14:17:51 2013
Response via : Initial Calibration

7/11/13

7/11/13

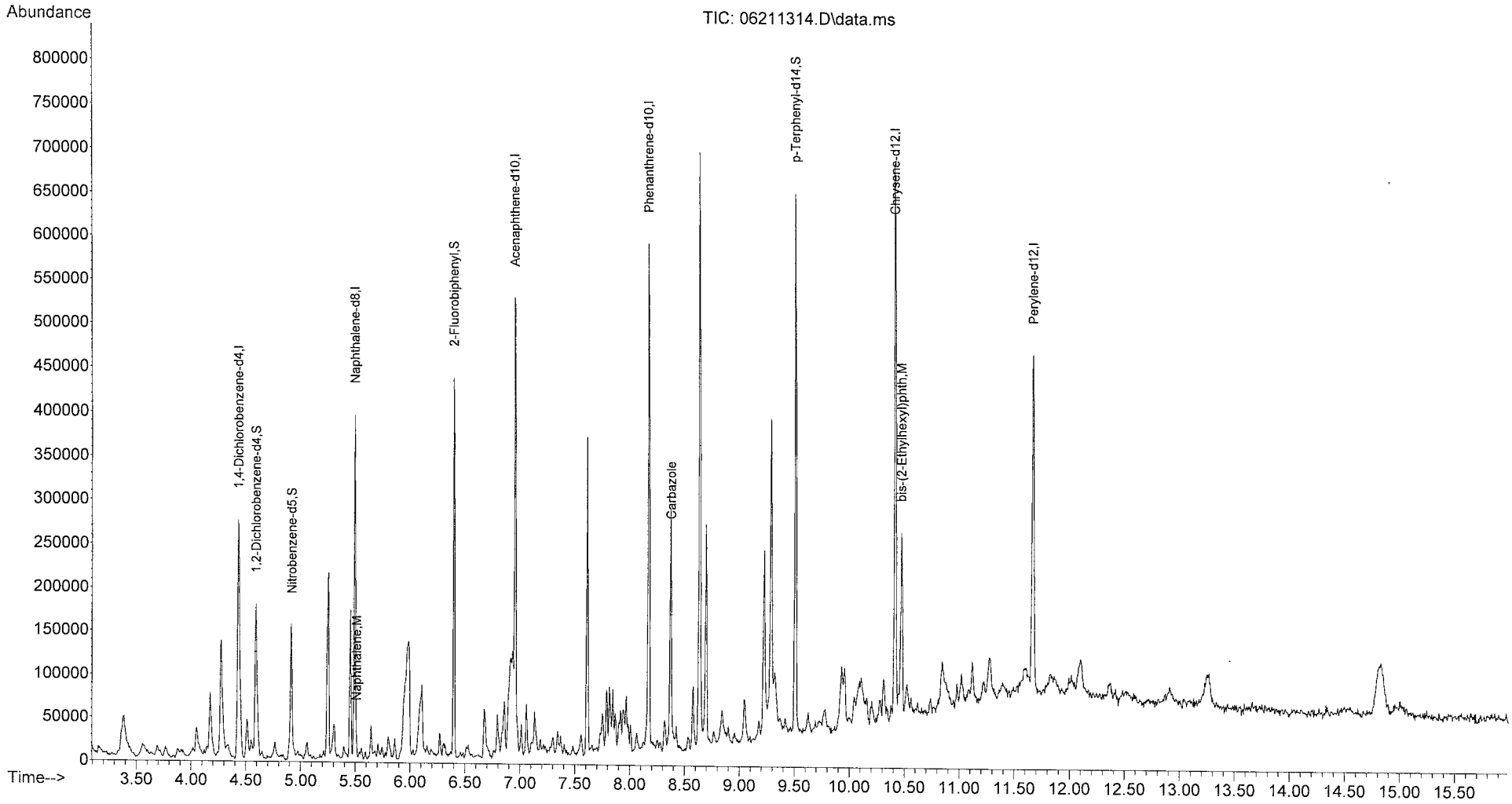
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	4.429	152	41505	4.00 ngs	# 0.00
6) Naphthalene-d8	5.494	136	133268	4.00 ngs	0.00
13) Acenaphthene-d10	6.954	164	93057	4.00 ngs	0.00
19) Phenanthrene-d10	8.173	188	186403	4.00 ngs	0.00
26) Chrysene-d12	10.414	240	230269	4.00 ngs	0.00
33) Perylene-d12	11.671	264	174589	4.00 ngs	0.02
System Monitoring Compounds					
2) 1,2-Dichlorobenzene-d4	4.590	152	33496	2.95 ngs	0.00
Spiked Amount 50.000	Range 16 - 110		Recovery	= 5.90%#	
4) Nitrobenzene-d5	4.916	82	45570	3.42 ngs	0.00
Spiked Amount 50.000	Range 35 - 114		Recovery	= 6.84%#	
10) 2-Fluorobiphenyl	6.398	172	115156	3.43 ngs	0.00
Spiked Amount 50.000	Range 43 - 116		Recovery	= 6.86%#	
25) p-Terphenyl-d14	9.511	244	171614	3.63 ngs	0.00
Spiked Amount 50.000	Range 33 - 141		Recovery	= 7.26%#	
Target Compounds					Qvalue
7) Naphthalene	5.510	128	2345	0.06 ngs	# 69
22) Carbazole	8.377	167	2255	0.05 ngs	# 58
29) bis-(2-Ethylhexyl)phth	10.473	149	85860	1.93 ngs	98

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\062113\
Data File : 06211314.D
Acq On : 21 Jun 2013 2:31 pm
Operator : DM
Sample : SAMP 13060604-001B
Misc : PNA_WATER+
ALS Vial : 14 Sample Multiplier: 1
InstName : SVOC-7

Quant Time: Jun 21 15:13:36 2013
Quant Method : C:\msdchem\1\data\062113\PNA0605.M
Quant Title : SOP 4020 EPA 8270C
QLast Update : Fri Jun 21 14:17:51 2013
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\062113\
Data File : 06211314.D
Acq On : 21 Jun 2013 2:31 pm
Operator : DM
Sample : SAMP 13060604-001B
Misc : PNA_WATER+
ALS Vial : 14 Sample Multiplier: 1
InstName : SVOC-7

Quant Time: Jun 21 15:13:12 2013
Quant Method : C:\msdchem\1\data\062113\PNA0605.M
Quant Title : SOP 4020 EPA 8270C
QLast Update : Fri Jun 21 14:17:51 2013
Response via : Initial Calibration

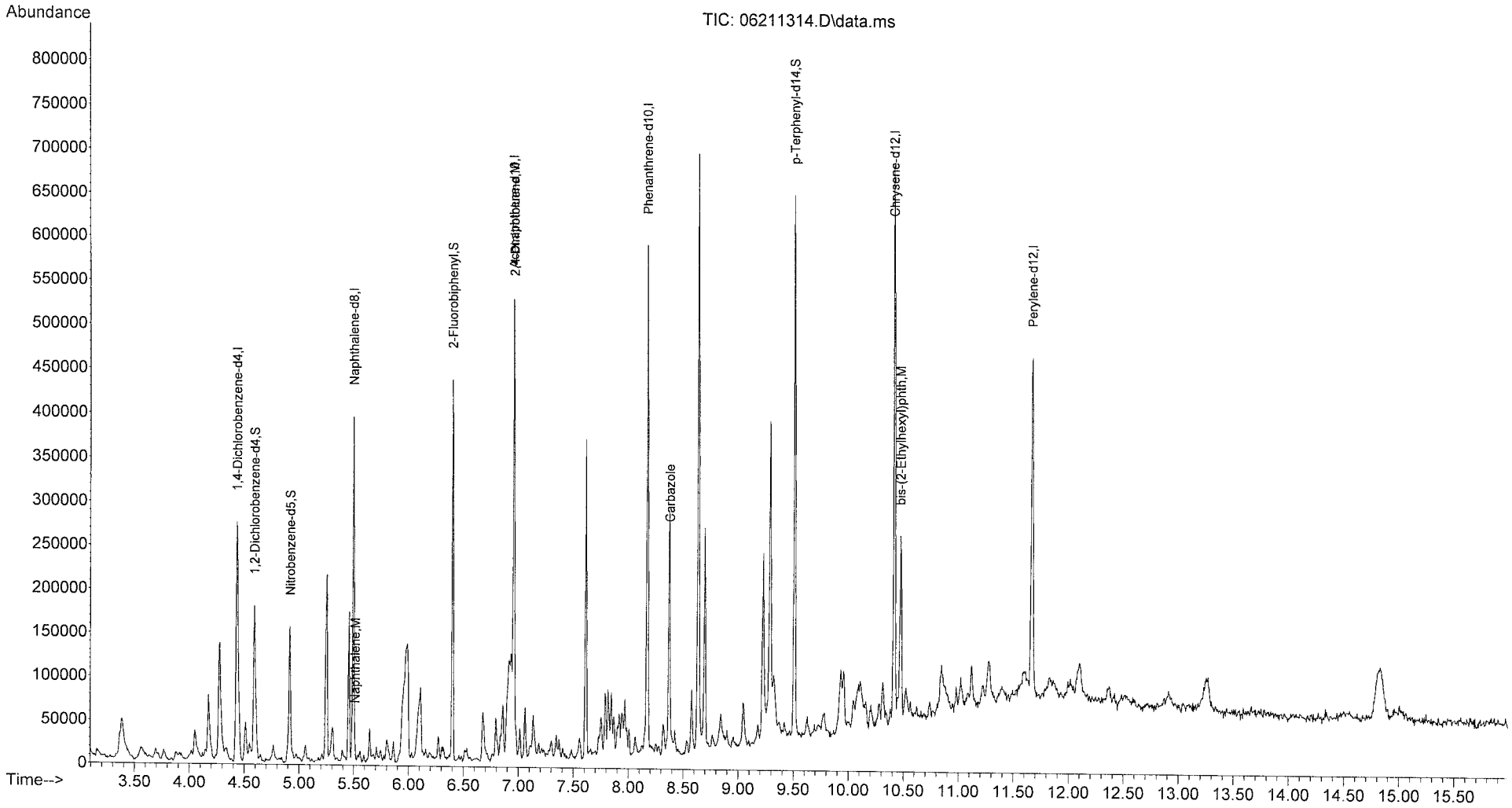
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.429	152	41505	4.00	ngs	# 0.00
6) Naphthalene-d8	5.494	136	133268	4.00	ngs	0.00
13) Acenaphthene-d10	6.954	164	93057	4.00	ngs	0.00
19) Phenanthrene-d10	8.173	188	186403	4.00	ngs	0.00
26) Chrysene-d12	10.414	240	230269	4.00	ngs	0.00
33) Perylene-d12	11.671	264	174589	4.00	ngs	0.02
System Monitoring Compounds						
2) 1,2-Dichlorobenzene-d4	4.590	152	33496	2.95	ngs	0.00
Spiked Amount 50.000	Range 16 - 110		Recovery = 5.90%#			
4) Nitrobenzene-d5	4.916	82	45570	3.42	ngs	0.00
Spiked Amount 50.000	Range 35 - 114		Recovery = 6.84%#			
10) 2-Fluorobiphenyl	6.398	172	115156	3.43	ngs	0.00
Spiked Amount 50.000	Range 43 - 116		Recovery = 6.86%#			
25) p-Terphenyl-d14	9.511	244	171614	3.63	ngs	0.00
Spiked Amount 50.000	Range 33 - 141		Recovery = 7.26%#			
Target Compounds						Qvalue
7) Naphthalene	5.510	128	2345	0.06	ngs	# 69
16) 2,4-Dinitrotoluene	6.959	165	13522	1.70	ngs	# 46
22) Carbazole	8.377	167	2255	0.05	ngs	# 58
29) bis-(2-Ethylhexyl)phth	10.473	149	85860	1.93	ngs	98

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\062113\
Data File : 06211314.D
Acq On : 21 Jun 2013 2:31 pm
Operator : DM
Sample : SAMP 13060604-001B
Misc : PNA_WATER+
ALS Vial : 14 Sample Multiplier: 1
InstName : SVOC-7

Quant Time: Jun 21 15:13:12 2013
Quant Method : C:\msdchem\1\data\062113\PNA0605.M
Quant Title : SOP 4020 EPA 8270C
QLast Update : Fri Jun 21 14:17:51 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\062113\
Data File : 06211317.D
Acq On : 21 Jun 2013 3:38 pm
Operator : DM
Sample : MBLK MB-69946-PNA
Misc : PNA_WATER+
ALS Vial : 17 Sample Multiplier: 1
InstName : SVOC-7

Quant Time: Jun 21 16:05:49 2013
Quant Method : C:\msdchem\1\data\062113\PNA0605.M
Quant Title : SOP 4020 EPA 8270C
QLast Update : Fri Jun 21 14:17:51 2013
Response via : Initial Calibration

D 7/11/13
7/11/13

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.435	152	36146	4.00	ngs	# 0.00
6) Naphthalene-d8	5.494	136	117034	4.00	ngs	0.00
13) Acenaphthene-d10	6.959	164	82820	4.00	ngs	0.00
19) Phenanthrene-d10	8.173	188	167564	4.00	ngs	0.00
26) Chrysene-d12	10.409	240	195600	4.00	ngs	0.00
33) Perylene-d12	11.661	264	124294	4.00	ngs	0.01
System Monitoring Compounds						
2) 1,2-Dichlorobenzene-d4	4.595	152	39631	4.00	ngs	0.00
Spiked Amount 50.000	Range 16 - 110		Recovery	=	8.00%#	
4) Nitrobenzene-d5	4.916	82	54883	4.73	ngs	0.00
Spiked Amount 50.000	Range 35 - 114		Recovery	=	9.46%#	
10) 2-Fluorobiphenyl	6.398	172	132080	4.48	ngs	0.00
Spiked Amount 50.000	Range 43 - 116		Recovery	=	8.96%#	
25) p-Terphenyl-d14	9.511	244	188963	4.45	ngs	0.00
Spiked Amount 50.000	Range 33 - 141		Recovery	=	8.90%#	

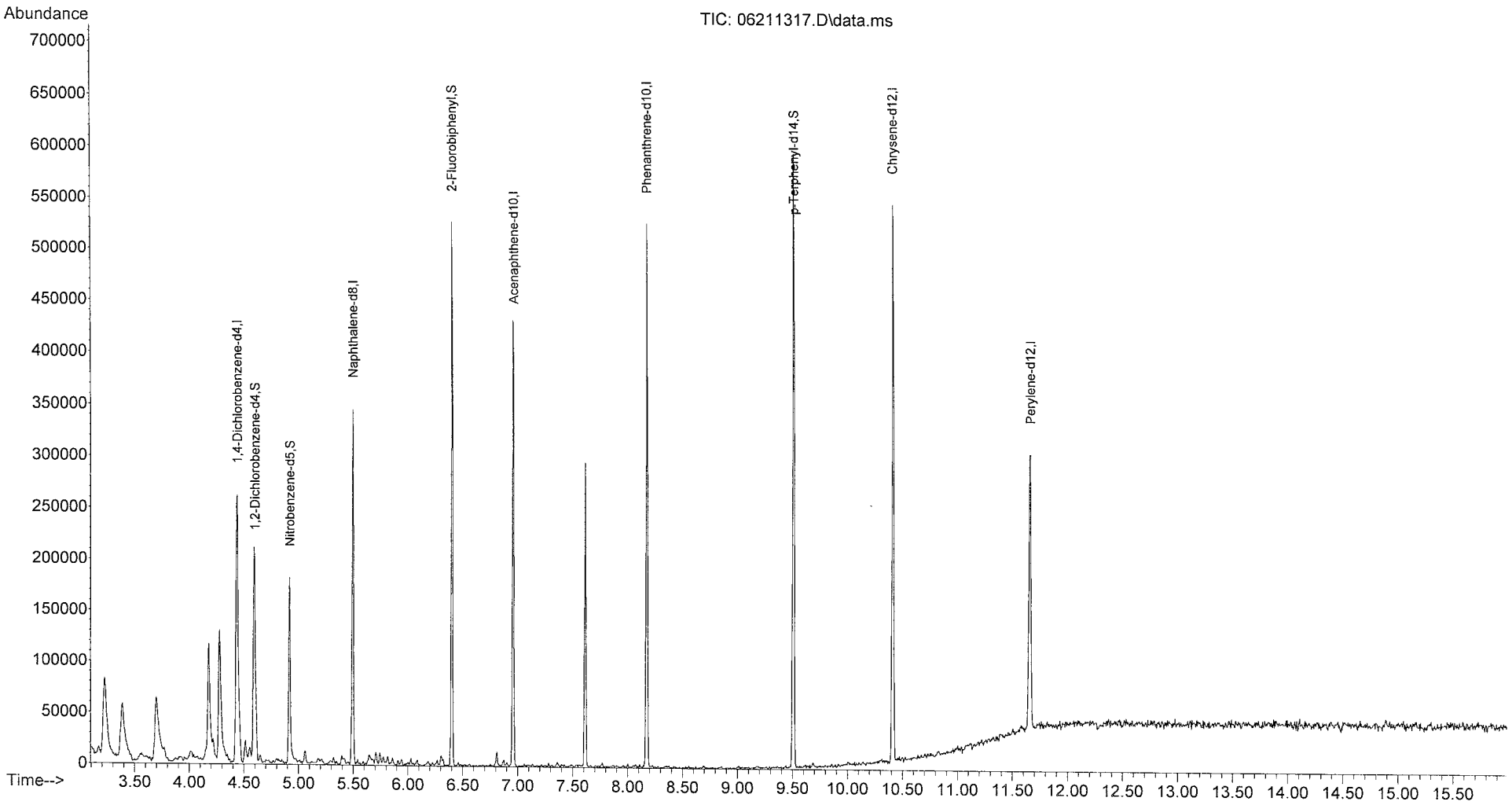
Target Compounds Qvalue

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\062113\
Data File : 06211317.D
Acq On : 21 Jun 2013 3:38 pm
Operator : DM
Sample : MBLK MB-69946-PNA
Misc : PNA_WATER+
ALS Vial : 17 Sample Multiplier: 1
InstName : SVOC-7

Quant Time: Jun 21 16:05:49 2013
Quant Method : C:\msdchem\1\data\062113\PNA0605.M
Quant Title : SOP 4020 EPA 8270C
QLast Update : Fri Jun 21 14:17:51 2013
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\062113\
Data File : 06211317.D
Acq On : 21 Jun 2013 3:38 pm
Operator : DM
Sample : MBLK MB-69946-PNA
Misc : PNA_WATER+
ALS Vial : 17 Sample Multiplier: 1
InstName : SVOC-7

Quant Time: Jun 21 16:05:37 2013
Quant Method : C:\msdchem\1\data\062113\PNA0605.M
Quant Title : SOP 4020 EPA 8270C
QLast Update : Fri Jun 21 14:17:51 2013
Response via : Initial Calibration

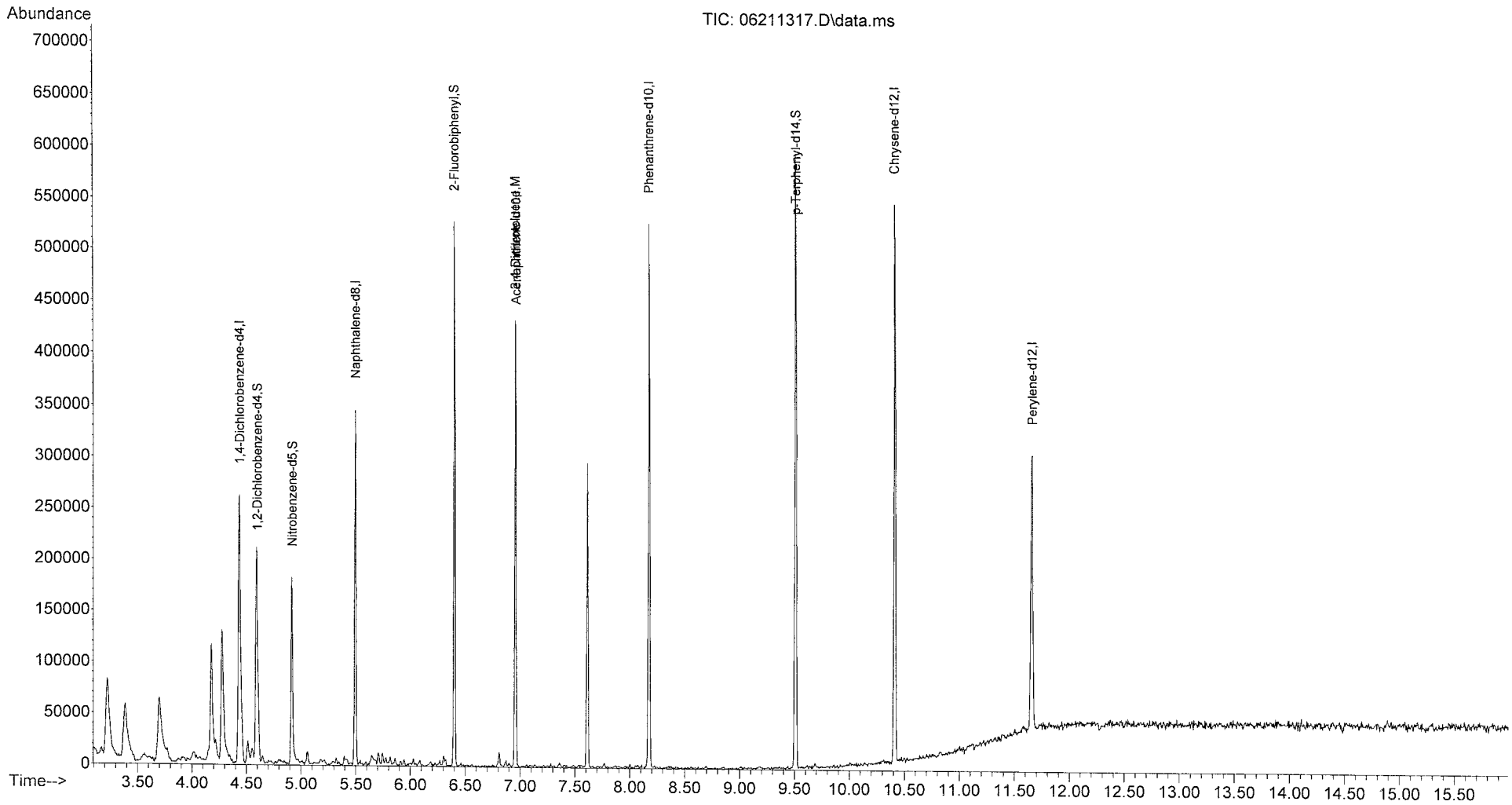
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.435	152	36146	4.00	ngs	# 0.00
6) Naphthalene-d8	5.494	136	117034	4.00	ngs	0.00
13) Acenaphthene-d10	6.959	164	82820	4.00	ngs	0.00
19) Phenanthrene-d10	8.173	188	167564	4.00	ngs	0.00
26) Chrysene-d12	10.409	240	195600	4.00	ngs	0.00
33) Perylene-d12	11.661	264	124294	4.00	ngs	0.01
System Monitoring Compounds						
2) 1,2-Dichlorobenzene-d4	4.595	152	39631	4.00	ngs	0.00
Spiked Amount 50.000	Range 16 - 110		Recovery	=	8.00%#	
4) Nitrobenzene-d5	4.916	82	54883	4.73	ngs	0.00
Spiked Amount 50.000	Range 35 - 114		Recovery	=	9.46%#	
10) 2-Fluorobiphenyl	6.398	172	132080	4.48	ngs	0.00
Spiked Amount 50.000	Range 43 - 116		Recovery	=	8.96%#	
25) p-Terphenyl-d14	9.511	244	188963	4.45	ngs	0.00
Spiked Amount 50.000	Range 33 - 141		Recovery	=	8.90%#	
Target Compounds						Qvalue
16) 2,4-Dinitrotoluene	6.954	165	10866	1.53	ngs	# 20

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\062113\
Data File : 06211317.D
Acq On : 21 Jun 2013 3:38 pm
Operator : DM
Sample : MBLK MB-69946-PNA
Misc : PNA_WATER+
ALS Vial : 17 Sample Multiplier: 1
InstName : SVOC-7

Quant Time: Jun 21 16:05:37 2013
Quant Method : C:\msdchem\1\data\062113\PNA0605.M
Quant Title : SOP 4020 EPA 8270C
QLast Update : Fri Jun 21 14:17:51 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\062113\
Data File : 06211318.D
Acq On : 21 Jun 2013 4:01 pm
Operator : DM
Sample : LCS LCS-69946-PNA
Misc : PNA_WATER+
ALS Vial : 18 Sample Multiplier: 1
InstName : SVOC-7

Quant Time: Jun 24 14:51:10 2013
Quant Method : C:\msdchem\1\data\062113\PNA0605.M
Quant Title : SOP 4020 EPA 8270C
QLast Update : Fri Jun 21 14:17:51 2013
Response via : Initial Calibration

D 7/11/13

7/10/13 MP

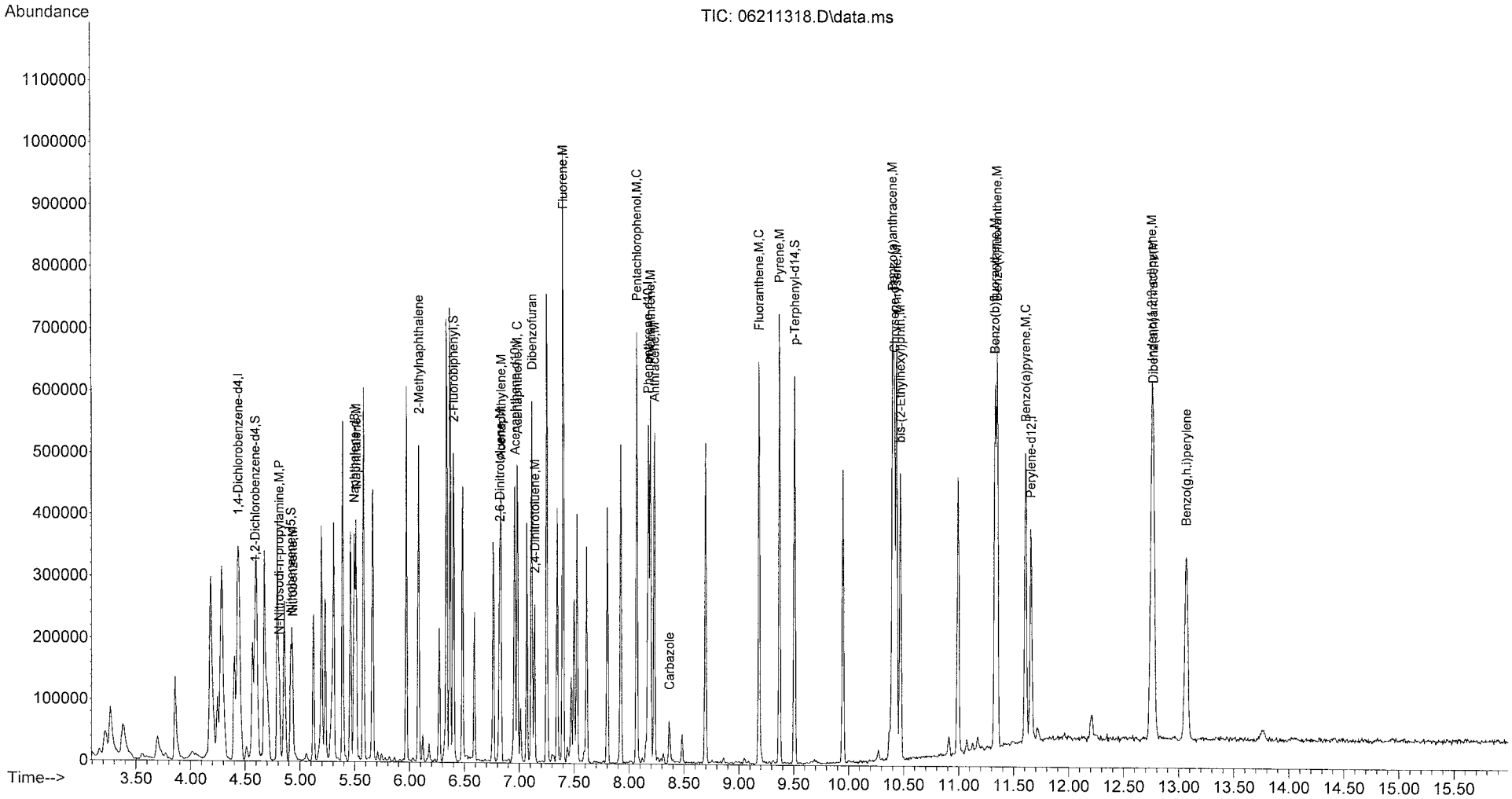
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.435	152	40469	4.00	ngs	0.00
6) Naphthalene-d8	5.494	136	124495	4.00	ngs	0.00
13) Acenaphthene-d10	6.959	164	86207	4.00	ngs	0.00
19) Phenanthrene-d10	8.173	188	179847	4.00	ngs	0.00
26) Chrysene-d12	10.414	240	219598	4.00	ngs	0.00
33) Perylene-d12	11.655	264	154832	4.00	ngs	0.00
System Monitoring Compounds						
2) 1,2-Dichlorobenzene-d4	4.590	152	40346	3.64	ngs	0.00
Spiked Amount 50.000	Range 16 - 110		Recovery	=	7.28%#	
4) Nitrobenzene-d5	4.916	82	53786	4.14	ngs	0.00
Spiked Amount 50.000	Range 35 - 114		Recovery	=	8.28%#	
10) 2-Fluorobiphenyl	6.398	172	130146	4.15	ngs	0.00
Spiked Amount 50.000	Range 43 - 116		Recovery	=	8.30%#	
25) p-Terphenyl-d14	9.511	244	186422	4.09	ngs	0.00
Spiked Amount 50.000	Range 33 - 141		Recovery	=	8.18%#	
Target Compounds						Qvalue
3) N-Nitrosodi-n-propylamine	4.809	70	23466	3.52	ngs	84
5) Nitrobenzene	4.932	77	49798	3.82	ngs	92
7) Naphthalene	5.510	128	132923	3.86	ngs	98
8) 2-Methylnaphthalene	6.082	142	107601	4.70	ngs	96
11) Acenaphthylene	6.831	152	146479	3.86	ngs	96
12) 2,6-Dinitrotoluene	6.820	165	26892	4.43	ngs #	68
14) Acenaphthene	6.981	153	106087	4.08	ngs	98
15) Dibenzofuran	7.114	168	181086	4.72	ngs	95
16) 2,4-Dinitrotoluene	7.141	165	34937	4.73	ngs	87
17) Fluorene	7.398	166	127827	4.20	ngs	99
18) Pentachlorophenol	8.072	266	73535	10.82	ngs	97
20) Phenanthrene	8.195	178	197858	3.84	ngs	98
21) Anthracene	8.232	178	193401	4.00	ngs	99
22) Carbazole	8.366	167	27837	0.65	ngs	93
23) Fluoranthene	9.184	202	248856	4.20	ngs	99
24) Pyrene	9.371	202	268257	4.17	ngs	98
27) Benzo(a)anthracene	10.398	228	242776	3.91	ngs	100
28) Chrysene	10.436	228	248334	4.06	ngs	99
29) bis-(2-Ethylhexyl)phth	10.468	149	186406	4.40	ngs	100
30) Benzo(b)fluoranthene	11.329	252	277943	4.22	ngs	99
31) Benzo(k)fluoranthene	11.350	252	250416	4.32	ngs	98
32) Benzo(a)pyrene	11.607	252	225450	3.95	ngs	96
34) Indeno(1,2,3-cd)pyrene	12.757	276	295762	5.08	ngs	95
35) Dibenz(a,h)anthracene	12.768	278	238181	4.98	ngs	98
36) Benzo(g,h,i)perylene	13.067	276	237571	4.67	ngs	94

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\062113\
Data File : 06211318.D
Acq On : 21 Jun 2013 4:01 pm
Operator : DM
Sample : LCS LCS-69946-PNA
Misc : PNA_WATER+
ALS Vial : 18 Sample Multiplier: 1
InstName : SVOC-7

Quant Time: Jun 24 14:51:10 2013
Quant Method : C:\msdchem\1\data\062113\PNA0605.M
Quant Title : SOP 4020 EPA 8270C
QLast Update : Fri Jun 21 14:17:51 2013
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\062113\
Data File : 06211318.D
Acq On : 21 Jun 2013 4:01 pm
Operator : DM
Sample : LCS LCS-69946-PNA
Misc : PNA_WATER+
ALS Vial : 18 Sample Multiplier: 1
InstName : SVOC-7

Quant Time: Jun 24 14:51:10 2013
Quant Method : C:\msdchem\1\data\062113\PNA0605.M
Quant Title : SOP 4020 EPA 8270C
QLast Update : Fri Jun 21 14:17:51 2013
Response via : Initial Calibration

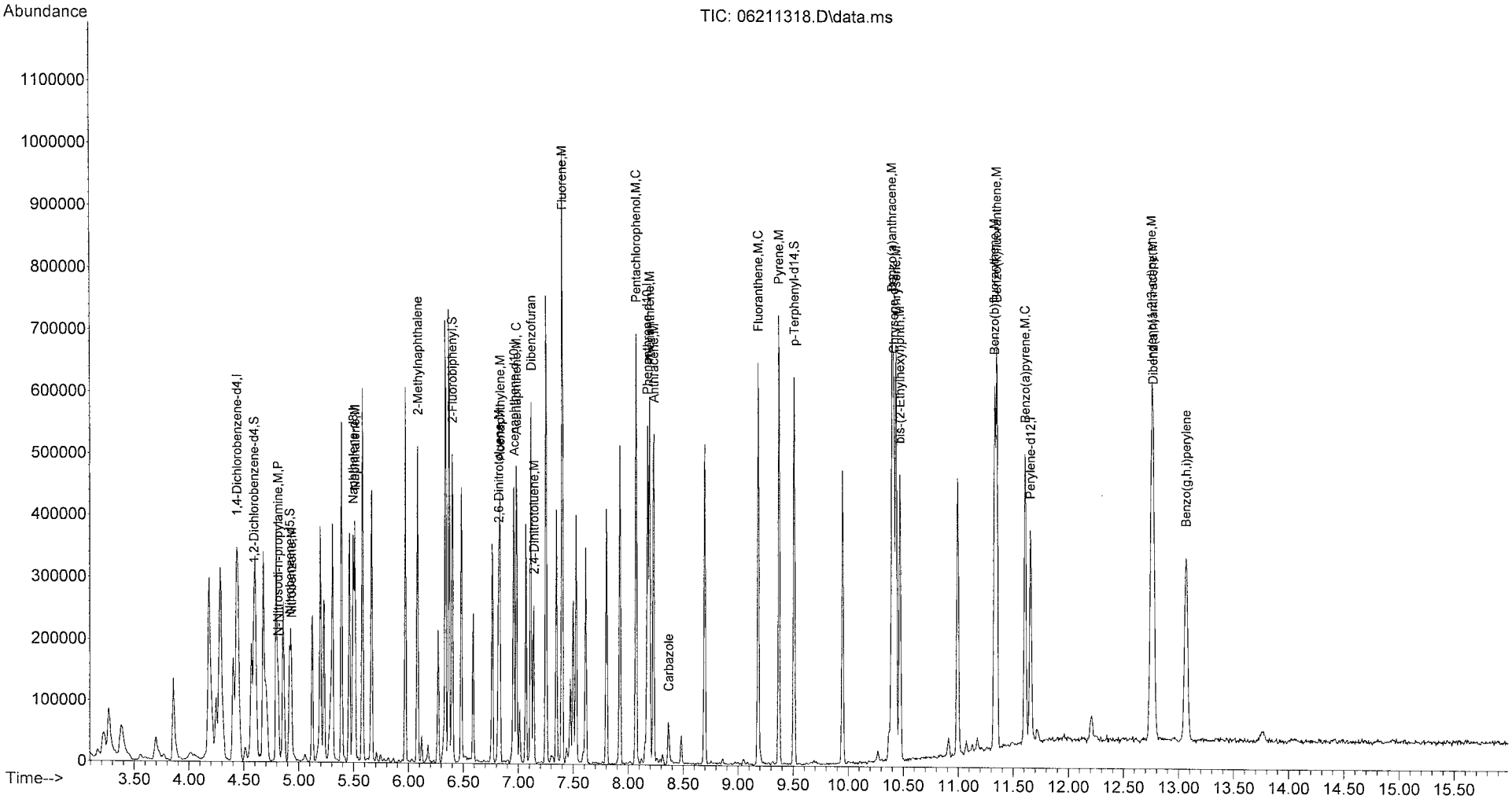
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 1,4-Dichlorobenzene-d4	4.435	152	40469	4.00	ngs		0.00
6) Naphthalene-d8	5.494	136	124495	4.00	ngs		0.00
13) Acenaphthene-d10	6.959	164	86207	4.00	ngs		0.00
19) Phenanthrene-d10	8.173	188	179847	4.00	ngs		0.00
26) Chrysene-d12	10.414	240	219598	4.00	ngs		0.00
33) Perylene-d12	11.655	264	154832	4.00	ngs		0.00
System Monitoring Compounds							
2) 1,2-Dichlorobenzene-d4	4.590	152	40346	3.64	ngs		0.00
Spiked Amount 50.000	Range 16 - 110		Recovery = 7.28%#				
4) Nitrobenzene-d5	4.916	82	53786	4.14	ngs		0.00
Spiked Amount 50.000	Range 35 - 114		Recovery = 8.28%#				
10) 2-Fluorobiphenyl	6.398	172	130146	4.15	ngs		0.00
Spiked Amount 50.000	Range 43 - 116		Recovery = 8.30%#				
25) p-Terphenyl-d14	9.511	244	186422	4.09	ngs		0.00
Spiked Amount 50.000	Range 33 - 141		Recovery = 8.18%#				
Target Compounds							Qvalue
3) N-Nitrosodi-n-propylamine	4.809	70	23466	3.52	ngs		84
5) Nitrobenzene	4.932	77	49798	3.82	ngs		92
7) Naphthalene	5.510	128	132923	3.86	ngs		98
8) 2-Methylnaphthalene	6.082	142	107601	4.70	ngs		96
11) Acenaphthylene	6.831	152	146479	3.86	ngs		96
12) 2,6-Dinitrotoluene	6.820	165	26892	4.43	ngs	#	68
14) Acenaphthene	6.981	153	106087	4.08	ngs		98
15) Dibenzofuran	7.114	168	181086	4.72	ngs		95
16) 2,4-Dinitrotoluene	7.141	165	34937	4.73	ngs		87
17) Fluorene	7.398	166	127827	4.20	ngs		99
18) Pentachlorophenol	8.072	266	73535	10.82	ngs		97
20) Phenanthrene	8.195	178	197858	3.84	ngs		98
21) Anthracene	8.232	178	193401	4.00	ngs		99
22) Carbazole	8.366	167	27837	0.65	ngs		93
23) Fluoranthene	9.184	202	248856	4.20	ngs		99
24) Pyrene	9.371	202	268257	4.17	ngs		98
27) Benzo(a)anthracene	10.398	228	242776	3.91	ngs		100
28) Chrysene	10.436	228	248334	4.06	ngs		99
29) bis-(2-Ethylhexyl)phth	10.468	149	186406	4.40	ngs		100
30) Benzo(b)fluoranthene	11.329	252	277943	4.22	ngs		99
31) Benzo(k)fluoranthene	11.350	252	250416	4.32	ngs		98
32) Benzo(a)pyrene	11.607	252	225450	3.95	ngs		96
34) Indeno(1,2,3-cd)pyrene	12.757	276	295762	5.08	ngs		95
35) Dibenz(a,h)anthracene	12.768	278	238181	4.98	ngs		98
36) Benzo(g,h,i)perylene	13.067	276	237571	4.67	ngs		94

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\062113\
Data File : 06211318.D
Acq On : 21 Jun 2013 4:01 pm
Operator : DM
Sample : LCS LCS-69946-PNA
Misc : PNA_WATER+
ALS Vial : 18 Sample Multiplier: 1
InstName : SVOC-7

Quant Time: Jun 24 14:51:10 2013
Quant Method : C:\msdchem\1\data\062113\PNA0605.M
Quant Title : SOP 4020 EPA 8270C
QLast Update : Fri Jun 21 14:17:51 2013
Response via : Initial Calibration



PNA0605.M Mon Jun 24 14:51:11 2013

Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\062113\
Data File : 06211319.D
Acq On : 21 Jun 2013 4:23 pm
Operator : DM
Sample : LCSD LCSD-69946-PNA
Misc : PNA_WATER+
ALS Vial : 19 Sample Multiplier: 1
InstName : SVOC-7

Quant Time: Jun 24 14:51:42 2013
Quant Method : C:\msdchem\1\data\062113\PNA0605.M
Quant Title : SOP 4020 EPA 8270C
QLast Update : Fri Jun 21 14:17:51 2013
Response via : Initial Calibration

D 7/11/13

7/11/13 D

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 1,4-Dichlorobenzene-d4	4.435	152	38347	4.00	ngs	#	0.00
6) Naphthalene-d8	5.494	136	122117	4.00	ngs		0.00
13) Acenaphthene-d10	6.959	164	83618	4.00	ngs		0.00
19) Phenanthrene-d10	8.173	188	176854	4.00	ngs		0.00
26) Chrysene-d12	10.415	240	207470	4.00	ngs		0.00
33) Perylene-d12	11.661	264	143450	4.00	ngs		0.01
System Monitoring Compounds							
2) 1,2-Dichlorobenzene-d4	4.590	152	36479	3.47	ngs		0.00
Spiked Amount 50.000	Range 16 - 110		Recovery	=	6.94%#		
4) Nitrobenzene-d5	4.916	82	48599	3.95	ngs		0.00
Spiked Amount 50.000	Range 35 - 114		Recovery	=	7.90%#		
10) 2-Fluorobiphenyl	6.398	172	119094	3.87	ngs		0.00
Spiked Amount 50.000	Range 43 - 116		Recovery	=	7.74%#		
25) p-Terphenyl-d14	9.505	244	179706	4.01	ngs		0.00
Spiked Amount 50.000	Range 33 - 141		Recovery	=	8.02%#		
Target Compounds							Qvalue
3) N-Nitrosodi-n-propylamine	4.809	70	21876	3.46	ngs		84
5) Nitrobenzene	4.927	77	45937	3.72	ngs		95
7) Naphthalene	5.510	128	118824	3.52	ngs		99
8) 2-Methylnaphthalene	6.082	142	97793	4.36	ngs		97
11) Acenaphthylene	6.831	152	142221	3.82	ngs		98
12) 2,6-Dinitrotoluene	6.820	165	26061	4.38	ngs	#	64
14) Acenaphthene	6.981	153	94903	3.76	ngs		98
15) Dibenzofuran	7.114	168	172881	4.65	ngs		98
16) 2,4-Dinitrotoluene	7.141	165	33375	4.66	ngs		95
17) Fluorene	7.398	166	118156	4.01	ngs		97
18) Pentachlorophenol	8.072	266	69473	10.54	ngs		98
20) Phenanthrene	8.195	178	190686	3.76	ngs		99
21) Anthracene	8.227	178	188966	3.98	ngs		99
22) Carbazole	8.366	167	27126	0.65	ngs	#	86
23) Fluoranthene	9.184	202	237860	4.08	ngs		98
24) Pyrene	9.372	202	255291	4.04	ngs		98
27) Benzo(a)anthracene	10.398	228	230171	3.92	ngs		100
28) Chrysene	10.436	228	242420	4.19	ngs		98
29) bis-(2-Ethylhexyl)phth	10.468	149	169339	4.23	ngs		100
30) Benzo(b)fluoranthene	11.329	252	270016	4.34	ngs		97
31) Benzo(k)fluoranthene	11.351	252	226688	4.14	ngs		99
32) Benzo(a)pyrene	11.607	252	211563	3.92	ngs		95
34) Indeno(1,2,3-cd)pyrene	12.757	276	273453	5.07	ngs		97
35) Dibenz(a,h)anthracene	12.768	278	223574	5.05	ngs		98
36) Benzo(g,h,i)perylene	13.067	276	228335	4.84	ngs		94

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

Quantitation Report (QT Reviewed)

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Data File : 06211319.D
Acq On : 21 Jun 2013 4:23 pm
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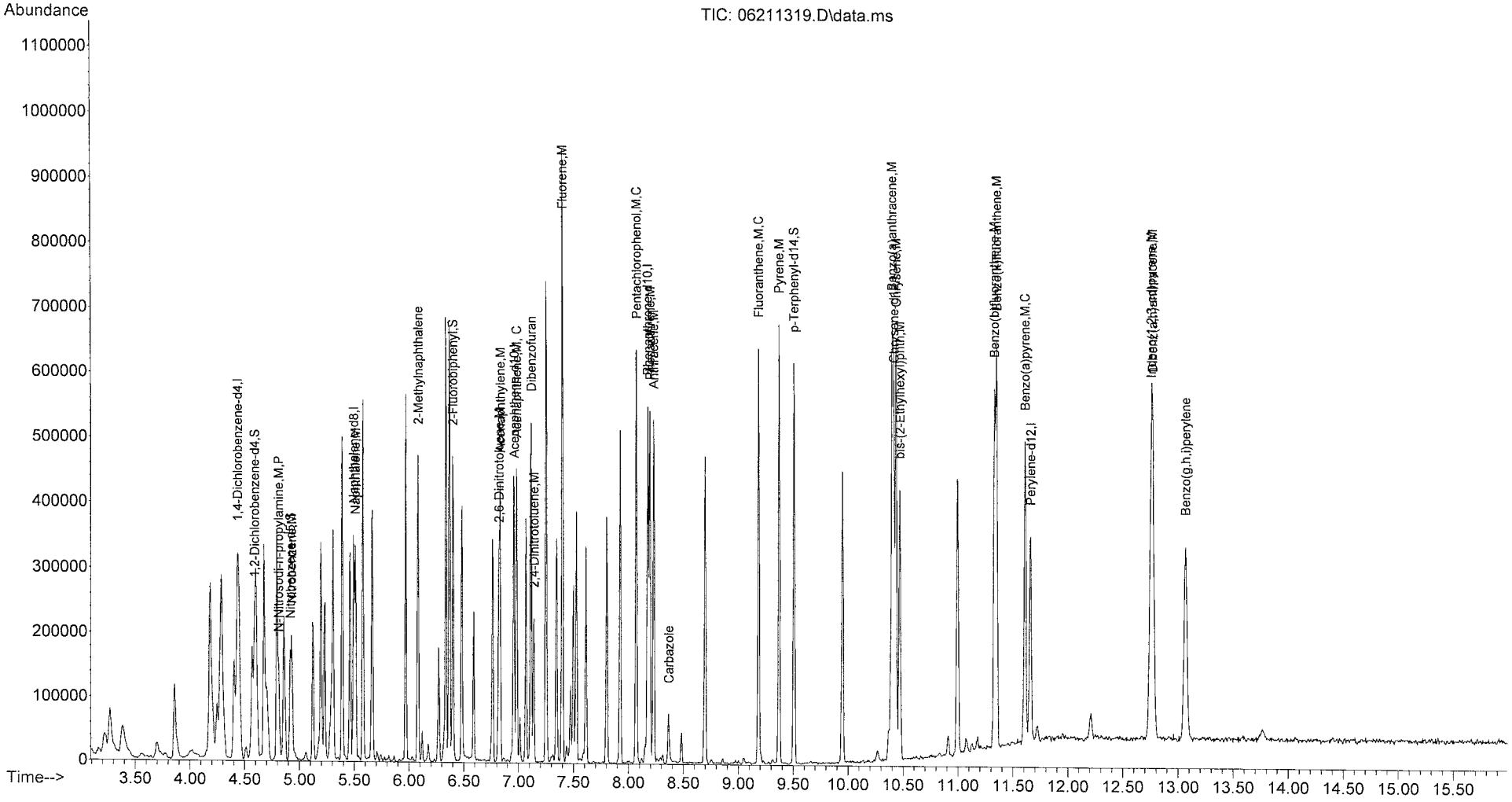
Sample : LCSD LCSD-69946-PNA
Misc : PNA_WATER+
ALS Vial : 19 Sample Multiplier: 1
InstName : SVOC-7

Quant Time: Jun 24 14:51:42 2013
Quant Method : C:\msdchem\1\data\062113\PNA0605.M
Quant Title : SOP 4020 EPA 8270C
QLast Update : Fri Jun 21 14:17:51 2013
Response via : Initial Calibration



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2) 1,2-Dichlorobenzene-d4	4.590	152	36479	3.47	ngs		0.00
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21) Anthracene	8.227	178	188966	3.98	ngs		99
22) Carbazole	8.366	167	27126	0.65	ngs	#	86
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24) Pyrene	9.372	202	255291	4.04	ngs		98
27) Benzo(a)anthracene	10.398	228	230171	3.92	ngs		100
28) Chrysene	10.436	228	242420	4.19	ngs		98
29) bis-(2-Ethylhexyl)phth	10.468	149	169339	4.23	ngs		100
30) Benzo(b)fluoranthene	11.329	252	270016	4.34	ngs		97
31) Benzo(k)fluoranthene	11.351	252	226688	4.14	ngs		99
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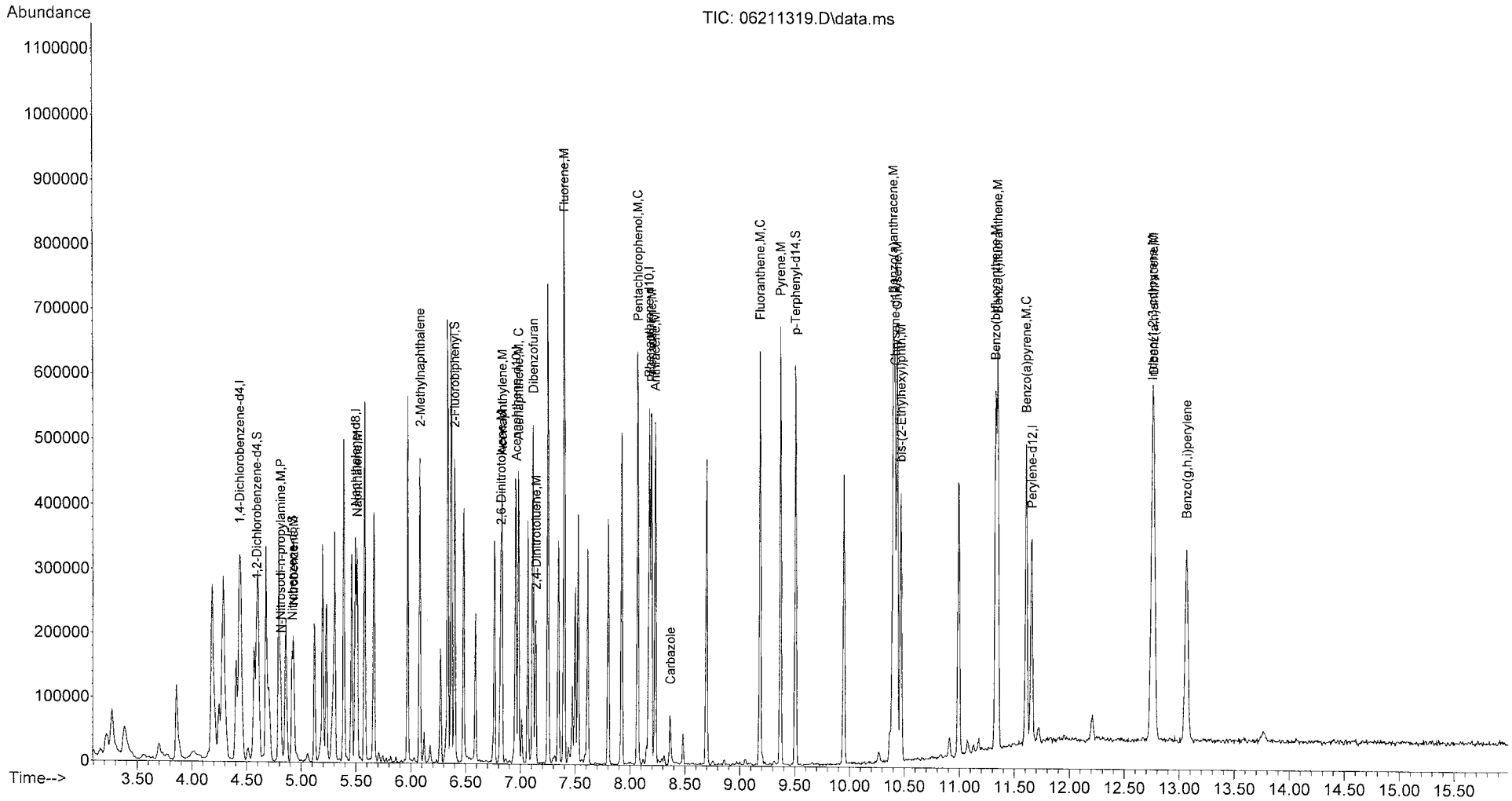
Acq On : 21 Jun 2013 4:23 pm
Operator : DM
Sample : LCSD LCSD-69946-PNA
Misc : PNA_WATER+
ALS Vial : 19 Sample Multiplier: 1
InstName : SVOC-7

Quant Time: Jun 24 14:51:42 2013
Quant Method : C:\msdchem\1\data\062113\PNA0605.M
Quant Title : SOP 4020 EPA 8270C
QLast Update : Fri Jun 21 14:17:51 2013
Response via : Initial Calibration



STAT Analysis Corporation

Metals

SW846 6020

Quality Control Data

Client: NRT, Inc.
Project: 69420, Peoples Gas - Willow Street / Hawthorne Ave
Lab Order: 13060604
Date Received: June 18, 2013

STAT **Analysis Corporation**

PREP BATCH REPORT

Prep Start Date: **6/20/2013 10:05:41**
Prep End Date: **6/20/2013 12:10:00**

Prep Batch **69988** Prep Code: **M_W_PREP** Technician: **VA**

Prep Factor Units: **mL / mL**

Sample ID	Matrix	pH	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
IMBW1 6/20/13			50	0	0	50	1.000	6/20/2013	6/20/2013
ILCSW1 6/20/13			50	0	0	50	1.000	6/20/2013	6/20/2013
13060511-043C	Water		50	0	0	50	1.000	6/20/2013	6/20/2013
13060511-044C	Water		50	0	0	50	1.000	6/20/2013	6/20/2013
13060511-044CMS	Water		50	0	0	50	1.000	6/20/2013	6/20/2013
13060511-044CMSD	Water		50	0	0	50	1.000	6/20/2013	6/20/2013
13060511-045C	Water		50	0	0	50	1.000	6/20/2013	6/20/2013
13060511-046C	Water		50	0	0	50	1.000	6/20/2013	6/20/2013
13060511-047C	Water		50	0	0	50	1.000	6/20/2013	6/20/2013
13060511-048C	Water		50	0	0	50	1.000	6/20/2013	6/20/2013
13060511-049C	Water		50	0	0	50	1.000	6/20/2013	6/20/2013
13060511-050C	Water		50	0	0	50	1.000	6/20/2013	6/20/2013
13060511-051C	Water		50	0	0	50	1.000	6/20/2013	6/20/2013
13060511-052C	Water		50	0	0	50	1.000	6/20/2013	6/20/2013
13060515-001A	Liquid		10	0	0	50	5.000	6/20/2013	6/20/2013
13060515-002A	Liquid		10	0	0	50	5.000	6/20/2013	6/20/2013
13060515-004A	Liquid		10	0	0	50	5.000	6/20/2013	6/20/2013
13060515-005A	Liquid		10	0	0	50	5.000	6/20/2013	6/20/2013
13060530-002C	Water		50	0	0	50	1.000	6/20/2013	6/20/2013
13060602-001C	Water		50	0	0	50	1.000	6/20/2013	6/20/2013
13060603-001C	Water		50	0	0	50	1.000	6/20/2013	6/20/2013
13060604-001C	Water		50	0	0	50	1.000	6/20/2013	6/20/2013
13060657-001B	Water		50	0	0	50	1.000	6/20/2013	6/20/2013
13060657-002B	Water		50	0	0	50	1.000	6/20/2013	6/20/2013

STAT Analysis Corporation

Metals

SW846 6020

Run 1

Client: NRT, Inc.
Project: 69420, Peoples Gas - Willow Street / Hawthorne Ave
Lab Order: 13060604
Date Received: June 18, 2013

CLIENT: Natural Resource Technology, Inc.
Work Order: 13060604
Project: 69420, Peoples Gas - Willow Street / Hawthorne Ave

ANALYTICAL QC SUMMARY REPORT

Run ID: **ICPMS_130620A**

Sample ID: **ICV** SampType: **ICV** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS_130620A**
Client ID: **ZZZZZ** Batch ID: **R90327** TestNo: **SW6020** Analysis Date: **06/20/13 12:16** SeqNo: **2436034**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.0256	0.0030	0.025	0	102	90	110	0	0		
Arsenic	0.05154	0.0020	0.05	0	103	90	110	0	0		
Beryllium	0.05123	0.0010	0.05	0	102	90	110	0	0		
Copper	0.05084	0.0050	0.05	0	102	90	110	0	0		
Lead	0.05129	0.0010	0.05	0	103	90	110	0	0		

Sample ID: **ICB** SampType: **ICB** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS_130620A**
Client ID: **ZZZZZ** Batch ID: **R90327** TestNo: **SW6020** Analysis Date: **06/20/13 12:20** SeqNo: **2436035**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.00082	0.0030	0	0	0	0	0	0	0		
Arsenic	-0.00041	0.0020	0	0	0	0	0	0	0		
Beryllium	0.00053	0.0010	0	0	0	0	0	0	0		
Copper	-0.00005	0.0050	0	0	0	0	0	0	0		
Lead	0	0.0010	0	0	0	0	0	0	0		

Sample ID: **ICS A** SampType: **ICSA** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS_130620A**
Client ID: **ZZZZZ** Batch ID: **R90327** TestNo: **SW6020** Analysis Date: **06/20/13 12:24** SeqNo: **2436036**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.00095	0.0030	0	0	0	0	0	0	0		
Arsenic	0.00001	0.0020	0	0	0	0	0	0	0		
Beryllium	0.0005	0.0010	0	0	0	0	0	0	0		
Copper	0.00292	0.0050	0	0	0	0	0	0	0		
Lead	0.0003	0.0010	0	0	0	0	0	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Natural Resource Technology, Inc.
Work Order: 13060604
Project: 69420, Peoples Gas - Willow Street / Hawthorne Ave

ANALYTICAL QC SUMMARY REPORT

Run ID: **ICPMS_130620A**

Sample ID: **ICS AB** SampType: **ICSAB** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS_130620A**
Client ID: **ZZZZZ** Batch ID: **R90327** TestNo: **SW6020** Analysis Date: **06/20/13 12:28** SeqNo: **2436037**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.00144	0.0030	0	0	0	0	0	0	0		
Arsenic	0.01924	0.0020	0.02	0	96.2	80	120	0	0		
Beryllium	0.00049	0.0010	0	0	0	0	0	0	0		
Copper	0.02192	0.0050	0.02	0	110	80	120	0	0		
Lead	0.00043	0.0010	0	0	0	0	0	0	0		

Sample ID: **CCV1** SampType: **CCV** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS_130620A**
Client ID: **ZZZZZ** Batch ID: **R90327** TestNo: **SW6020** Analysis Date: **06/20/13 12:51** SeqNo: **2436038**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.05275	0.0030	0.05	0	106	90	110	0	0		
Arsenic	0.0988	0.0020	0.1	0	98.8	90	110	0	0		
Beryllium	0.1049	0.0010	0.1	0	105	90	110	0	0		
Copper	0.1031	0.0050	0.1	0	103	90	110	0	0		
Lead	0.09875	0.0010	0.1	0	98.8	90	110	0	0		

Sample ID: **CCB** SampType: **CCB** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS_130620A**
Client ID: **ZZZZZ** Batch ID: **R90327** TestNo: **SW6020** Analysis Date: **06/20/13 12:54** SeqNo: **2436039**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.00102	0.0030	0	0	0	0	0	0	0		
Arsenic	-0.0004	0.0020	0	0	0	0	0	0	0		
Beryllium	0.00052	0.0010	0	0	0	0	0	0	0		
Copper	-0.00001	0.0050	0	0	0	0	0	0	0		
Lead	0	0.0010	0	0	0	0	0	0	0		

Sample ID: **IMBW1 6/20/13** SampType: **MBLK** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: **6/20/2013** Run ID: **ICPMS_130620A**
Client ID: **ZZZZZ** Batch ID: **69988** TestNo: **SW6020** Analysis Date: **06/20/13 13:41** SeqNo: **2436044**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	ND	0.0060									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Natural Resource Technology, Inc.
Work Order: 13060604
Project: 69420, Peoples Gas - Willow Street / Hawthorne Ave

ANALYTICAL QC SUMMARY REPORT

Run ID: **ICPMS_130620A**

Sample ID: **IMBW1 6/20/13** SampType: **MBLK** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: **6/20/2013** Run ID: **ICPMS_130620A**
Client ID: **ZZZZZ** Batch ID: **69988** TestNo: **SW6020** Analysis Date: **06/20/13 13:41** SeqNo: **2436044**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.0040									
Beryllium	0.00113	0.0020									J
Copper	0.00094	0.010									J
Lead	0.00085	0.0020									J

Sample ID: **CCV1** SampType: **CCV** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS_130620A**
Client ID: **ZZZZZ** Batch ID: **R90327** TestNo: **SW6020** Analysis Date: **06/20/13 13:45** SeqNo: **2436045**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.05122	0.0030	0.05	0	102	90	110	0	0		
Arsenic	0.09889	0.0020	0.1	0	98.9	90	110	0	0		
Beryllium	0.09794	0.0010	0.1	0	97.9	90	110	0	0		
Copper	0.1013	0.0050	0.1	0	101	90	110	0	0		
Lead	0.09964	0.0010	0.1	0	99.6	90	110	0	0		

Sample ID: **CCB** SampType: **CCB** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS_130620A**
Client ID: **ZZZZZ** Batch ID: **R90327** TestNo: **SW6020** Analysis Date: **06/20/13 13:49** SeqNo: **2436046**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.00103	0.0030	0	0	0	0	0	0	0		
Arsenic	-0.00029	0.0020	0	0	0	0	0	0	0		
Beryllium	0.00055	0.0010	0	0	0	0	0	0	0		
Copper	-0.00001	0.0050	0	0	0	0	0	0	0		
Lead	0.00008	0.0010	0	0	0	0	0	0	0		

Sample ID: **ILCSW1 6/20/13** SampType: **LCS** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: **6/20/2013** Run ID: **ICPMS_130620A**
Client ID: **ZZZZZ** Batch ID: **69988** TestNo: **SW6020** Analysis Date: **06/20/13 13:53** SeqNo: **2436047**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.279	0.0060	0.25	0	112	80	120	0	0		
Arsenic	0.5074	0.0040	0.5	0	101	80	120	0	0		

Qualifiers:
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H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Natural Resource Technology, Inc.
Work Order: 13060604
Project: 69420, Peoples Gas - Willow Street / Hawthorne Ave

ANALYTICAL QC SUMMARY REPORT

Run ID: **ICPMS_130620A**

Sample ID: **ILCSW1 6/20/13** SampType: **LCS** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: **6/20/2013** Run ID: **ICPMS_130620A**
Client ID: **ZZZZZ** Batch ID: **69988** TestNo: **SW6020** Analysis Date: **06/20/13 13:53** SeqNo: **2436047**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Beryllium	0.4637	0.0020	0.5	0.00113	92.5	80	120	0	0		
Copper	0.5274	0.010	0.5	0.00094	105	80	120	0	0		
Lead	0.5164	0.0020	0.5	0.00085	103	80	120	0	0		

Sample ID: **CCV1** SampType: **CCV** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS_130620A**
Client ID: **ZZZZZ** Batch ID: **R90327** TestNo: **SW6020** Analysis Date: **06/20/13 14:34** SeqNo: **2436054**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.05111	0.0030	0.05	0	102	90	110	0	0		
Arsenic	0.09909	0.0020	0.1	0	99.1	90	110	0	0		
Beryllium	0.09832	0.0010	0.1	0	98.3	90	110	0	0		
Copper	0.09939	0.0050	0.1	0	99.4	90	110	0	0		
Lead	0.09898	0.0010	0.1	0	99	90	110	0	0		

Sample ID: **CCB** SampType: **CCB** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS_130620A**
Client ID: **ZZZZZ** Batch ID: **R90327** TestNo: **SW6020** Analysis Date: **06/20/13 14:37** SeqNo: **2436055**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.00102	0.0030	0	0	0	0	0	0	0		
Arsenic	-0.00011	0.0020	0	0	0	0	0	0	0		
Beryllium	0.00053	0.0010	0	0	0	0	0	0	0		
Copper	-0.00004	0.0050	0	0	0	0	0	0	0		
Lead	0.00001	0.0010	0	0	0	0	0	0	0		

Sample ID: **CCV1** SampType: **CCV** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS_130620A**
Client ID: **ZZZZZ** Batch ID: **R90327** TestNo: **SW6020** Analysis Date: **06/20/13 15:19** SeqNo: **2436061**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.05084	0.0030	0.05	0	102	90	110	0	0		
Arsenic	0.09932	0.0020	0.1	0	99.3	90	110	0	0		
Beryllium	0.101	0.0010	0.1	0	101	90	110	0	0		

Qualifiers:
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H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Natural Resource Technology, Inc.
Work Order: 13060604
Project: 69420, Peoples Gas - Willow Street / Hawthorne Ave

ANALYTICAL QC SUMMARY REPORT

Run ID: **ICPMS_130620A**

Sample ID: **CCV1** SampType: **CCV** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS_130620A**
Client ID: **ZZZZZ** Batch ID: **R90327** TestNo: **SW6020** Analysis Date: **06/20/13 15:19** SeqNo: **2436061**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	0.09827	0.0050	0.1	0	98.3	90	110	0	0		
Lead	0.0986	0.0010	0.1	0	98.6	90	110	0	0		

Sample ID: **CCB** SampType: **CCB** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS_130620A**
Client ID: **ZZZZZ** Batch ID: **R90327** TestNo: **SW6020** Analysis Date: **06/20/13 15:23** SeqNo: **2436062**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.00113	0.0030	0	0	0	0	0	0	0		
Arsenic	-0.00026	0.0020	0	0	0	0	0	0	0		
Beryllium	0.00052	0.0010	0	0	0	0	0	0	0		
Copper	-0.00003	0.0050	0	0	0	0	0	0	0		
Lead	0.00004	0.0010	0	0	0	0	0	0	0		

Sample ID: **CCV1** SampType: **CCV** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS_130620A**
Client ID: **ZZZZZ** Batch ID: **R90327** TestNo: **SW6020** Analysis Date: **06/20/13 16:00** SeqNo: **2436192**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.05036	0.0030	0.05	0	101	90	110	0	0		
Arsenic	0.09751	0.0020	0.1	0	97.5	90	110	0	0		
Beryllium	0.1012	0.0010	0.1	0	101	90	110	0	0		
Copper	0.09658	0.0050	0.1	0	96.6	90	110	0	0		
Lead	0.09749	0.0010	0.1	0	97.5	90	110	0	0		

Sample ID: **CCB** SampType: **CCB** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS_130620A**
Client ID: **ZZZZZ** Batch ID: **R90327** TestNo: **SW6020** Analysis Date: **06/20/13 16:04** SeqNo: **2436193**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.00117	0.0030	0	0	0	0	0	0	0		
Arsenic	-0.00052	0.0020	0	0	0	0	0	0	0		
Beryllium	0.00052	0.0010	0	0	0	0	0	0	0		
Copper	-0.00005	0.0050	0	0	0	0	0	0	0		

Qualifiers:
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H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Natural Resource Technology, Inc.
Work Order: 13060604
Project: 69420, Peoples Gas - Willow Street / Hawthorne Ave

ANALYTICAL QC SUMMARY REPORT

Run ID: **ICPMS_130620A**

Sample ID: **CCB** SampType: **CCB** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS_130620A**
Client ID: **ZZZZZ** Batch ID: **R90327** TestNo: **SW6020** Analysis Date: **06/20/13 16:04** SeqNo: **2436193**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.00001	0.0010	0	0	0	0	0	0	0		

Sample ID: **CCV1** SampType: **CCV** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS_130620A**
Client ID: **ZZZZZ** Batch ID: **R90327** TestNo: **SW6020** Analysis Date: **06/20/13 16:46** SeqNo: **2436202**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.04795	0.0030	0.05	0	95.9	90	110	0	0		
Arsenic	0.09796	0.0020	0.1	0	98	90	110	0	0		
Beryllium	0.1045	0.0010	0.1	0	104	90	110	0	0		
Copper	0.09786	0.0050	0.1	0	97.9	90	110	0	0		
Lead	0.09711	0.0010	0.1	0	97.1	90	110	0	0		

Sample ID: **CCB** SampType: **CCB** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS_130620A**
Client ID: **ZZZZZ** Batch ID: **R90327** TestNo: **SW6020** Analysis Date: **06/20/13 16:49** SeqNo: **2436203**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.00142	0.0030	0	0	0	0	0	0	0		
Arsenic	-0.00042	0.0020	0	0	0	0	0	0	0		
Beryllium	0.00053	0.0010	0	0	0	0	0	0	0		
Copper	-0.00005	0.0050	0	0	0	0	0	0	0		
Lead	0.00001	0.0010	0	0	0	0	0	0	0		

Sample ID: **CCV1** SampType: **CCV** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS_130620A**
Client ID: **ZZZZZ** Batch ID: **R90327** TestNo: **SW6020** Analysis Date: **06/20/13 17:32** SeqNo: **2436485**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.04918	0.0030	0.05	0	98.4	90	110	0	0		
Arsenic	0.09758	0.0020	0.1	0	97.6	90	110	0	0		
Beryllium	0.09987	0.0010	0.1	0	99.9	90	110	0	0		
Copper	0.09988	0.0050	0.1	0	99.9	90	110	0	0		
Lead	0.09725	0.0010	0.1	0	97.2	90	110	0	0		

Qualifiers:
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R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Natural Resource Technology, Inc.
Work Order: 13060604
Project: 69420, Peoples Gas - Willow Street / Hawthorne Ave

ANALYTICAL QC SUMMARY REPORT

Run ID: **ICPMS_130620A**

Sample ID: **CCB** SampType: **CCB** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS_130620A**
Client ID: **ZZZZZ** Batch ID: **R90327** TestNo: **SW6020** Analysis Date: **06/20/13 17:36** SeqNo: **2436486**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.00139	0.0030	0	0	0	0	0	0	0		
Arsenic	-0.00035	0.0020	0	0	0	0	0	0	0		
Beryllium	0.00054	0.0010	0	0	0	0	0	0	0		
Copper	0	0.0050	0	0	0	0	0	0	0		
Lead	0.00004	0.0010	0	0	0	0	0	0	0		

Sample ID: **CCV1** SampType: **CCV** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS_130620A**
Client ID: **ZZZZZ** Batch ID: **R90327** TestNo: **SW6020** Analysis Date: **06/20/13 18:08** SeqNo: **2436493**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.04976	0.0030	0.05	0	99.5	90	110	0	0		
Arsenic	0.09824	0.0020	0.1	0	98.2	90	110	0	0		
Beryllium	0.1012	0.0010	0.1	0	101	90	110	0	0		
Copper	0.09988	0.0050	0.1	0	99.9	90	110	0	0		
Lead	0.09811	0.0010	0.1	0	98.1	90	110	0	0		

Sample ID: **CCB** SampType: **CCB** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS_130620A**
Client ID: **ZZZZZ** Batch ID: **R90327** TestNo: **SW6020** Analysis Date: **06/20/13 18:12** SeqNo: **2436494**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.0014	0.0030	0	0	0	0	0	0	0		
Arsenic	-0.00051	0.0020	0	0	0	0	0	0	0		
Beryllium	0.00053	0.0010	0	0	0	0	0	0	0		
Copper	-0.00001	0.0050	0	0	0	0	0	0	0		
Lead	0.00002	0.0010	0	0	0	0	0	0	0		

Sample ID: **CCV1** SampType: **CCV** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS_130620A**
Client ID: **ZZZZZ** Batch ID: **R90327** TestNo: **SW6020** Analysis Date: **06/20/13 18:55** SeqNo: **2436500**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.05113	0.0030	0.05	0	102	90	110	0	0		

Qualifiers:
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R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Natural Resource Technology, Inc.
Work Order: 13060604
Project: 69420, Peoples Gas - Willow Street / Hawthorne Ave

ANALYTICAL QC SUMMARY REPORT

Run ID: **ICPMS_130620A**

Sample ID: **CCV1** SampType: **CCV** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS_130620A**
Client ID: **ZZZZZ** Batch ID: **R90327** TestNo: **SW6020** Analysis Date: **06/20/13 18:55** SeqNo: **2436500**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.1019	0.0020	0.1	0	102	90	110	0	0		
Beryllium	0.1057	0.0010	0.1	0	106	90	110	0	0		
Copper	0.1042	0.0050	0.1	0	104	90	110	0	0		
Lead	0.1024	0.0010	0.1	0	102	90	110	0	0		

Sample ID: **CCB** SampType: **CCB** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS_130620A**
Client ID: **ZZZZZ** Batch ID: **R90327** TestNo: **SW6020** Analysis Date: **06/20/13 18:58** SeqNo: **2436501**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.00146	0.0030	0	0	0	0	0	0	0		
Arsenic	-0.00036	0.0020	0	0	0	0	0	0	0		
Beryllium	0.00053	0.0010	0	0	0	0	0	0	0		
Copper	-0.00002	0.0050	0	0	0	0	0	0	0		
Lead	0.00003	0.0010	0	0	0	0	0	0	0		

Sample ID: **CCV1** SampType: **CCV** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS_130620A**
Client ID: **ZZZZZ** Batch ID: **R90327** TestNo: **SW6020** Analysis Date: **06/20/13 19:40** SeqNo: **2436507**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.05193	0.0030	0.05	0	104	90	110	0	0		
Arsenic	0.1004	0.0020	0.1	0	100	90	110	0	0		
Beryllium	0.1061	0.0010	0.1	0	106	90	110	0	0		
Copper	0.1061	0.0050	0.1	0	106	90	110	0	0		
Lead	0.1025	0.0010	0.1	0	103	90	110	0	0		

Sample ID: **CCB** SampType: **CCB** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS_130620A**
Client ID: **ZZZZZ** Batch ID: **R90327** TestNo: **SW6020** Analysis Date: **06/20/13 19:44** SeqNo: **2436508**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.00141	0.0030	0	0	0	0	0	0	0		
Arsenic	-0.0004	0.0020	0	0	0	0	0	0	0		

Qualifiers:
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* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Natural Resource Technology, Inc.
Work Order: 13060604
Project: 69420, Peoples Gas - Willow Street / Hawthorne Ave

ANALYTICAL QC SUMMARY REPORT

Run ID: **ICPMS_130620A**

Sample ID: **CCB** SampType: **CCB** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS_130620A**
Client ID: **ZZZZZ** Batch ID: **R90327** TestNo: **SW6020** Analysis Date: **06/20/13 19:44** SeqNo: **2436508**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Beryllium	0.00053	0.0010	0	0	0	0	0	0	0		
Copper	-0.00001	0.0050	0	0	0	0	0	0	0		
Lead	0.00005	0.0010	0	0	0	0	0	0	0		

Sample ID: **CCV1** SampType: **CCV** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS_130620A**
Client ID: **ZZZZZ** Batch ID: **R90327** TestNo: **SW6020** Analysis Date: **06/20/13 19:56** SeqNo: **2436509**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.0519	0.0030	0.05	0	104	90	110	0	0		
Arsenic	0.1022	0.0020	0.1	0	102	90	110	0	0		
Beryllium	0.1036	0.0010	0.1	0	104	90	110	0	0		
Copper	0.1034	0.0050	0.1	0	103	90	110	0	0		
Lead	0.1018	0.0010	0.1	0	102	90	110	0	0		

Sample ID: **CCB** SampType: **CCB** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS_130620A**
Client ID: **ZZZZZ** Batch ID: **R90327** TestNo: **SW6020** Analysis Date: **06/20/13 19:59** SeqNo: **2436510**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.00149	0.0030	0	0	0	0	0	0	0		
Arsenic	-0.00045	0.0020	0	0	0	0	0	0	0		
Beryllium	0.00053	0.0010	0	0	0	0	0	0	0		
Copper	-0.00003	0.0050	0	0	0	0	0	0	0		
Lead	0.00002	0.0010	0	0	0	0	0	0	0		

Sample ID: **13060511-044CMS** SampType: **MS** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: **6/20/2013** Run ID: **ICPMS_130620A**
Client ID: **ZZZZZ** Batch ID: **69988** TestNo: **SW6020** Analysis Date: **06/20/13 20:18** SeqNo: **2436513**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.1115	0.015	0.25	0	44.6	75	125	0	0		S
Arsenic	0.5636	0.010	0.5	0.04728	103	75	125	0	0		
Beryllium	0.4834	0.0050	0.5	0.00554	95.6	75	125	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Natural Resource Technology, Inc.
Work Order: 13060604
Project: 69420, Peoples Gas - Willow Street / Hawthorne Ave

ANALYTICAL QC SUMMARY REPORT

Run ID: **ICPMS_130620A**

Sample ID: **13060511-044CMS** SampType: **MS** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: **6/20/2013** Run ID: **ICPMS_130620A**
Client ID: **ZZZZZ** Batch ID: **69988** TestNo: **SW6020** Analysis Date: **06/20/13 20:18** SeqNo: **2436513**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	0.5698	0.025	0.5	0.1258	88.8	75	125	0	0		
Lead	0.7075	0.0050	0.5	0.1541	111	75	125	0	0		

Sample ID: **13060511-044CMSD** SampType: **MSD** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: **6/20/2013** Run ID: **ICPMS_130620A**
Client ID: **ZZZZZ** Batch ID: **69988** TestNo: **SW6020** Analysis Date: **06/20/13 20:26** SeqNo: **2436514**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.1045	0.015	0.25	0	41.8	75	125	0.1115	6.48	20	S
Arsenic	0.5924	0.010	0.5	0.04728	109	75	125	0.5636	4.98	20	
Beryllium	0.497	0.0050	0.5	0.00554	98.3	75	125	0.4834	2.77	20	
Copper	0.616	0.025	0.5	0.1258	98	75	125	0.5698	7.79	20	
Lead	0.758	0.0050	0.5	0.1541	121	75	125	0.7075	6.89	20	

Sample ID: **CCV1** SampType: **CCV** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS_130620A**
Client ID: **ZZZZZ** Batch ID: **R90327** TestNo: **SW6020** Analysis Date: **06/20/13 20:41** SeqNo: **2436516**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.05096	0.0030	0.05	0	102	90	110	0	0		
Arsenic	0.1028	0.0020	0.1	0	103	90	110	0	0		
Beryllium	0.1053	0.0010	0.1	0	105	90	110	0	0		
Copper	0.103	0.0050	0.1	0	103	90	110	0	0		
Lead	0.1021	0.0010	0.1	0	102	90	110	0	0		

Sample ID: **CCB** SampType: **CCB** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS_130620A**
Client ID: **ZZZZZ** Batch ID: **R90327** TestNo: **SW6020** Analysis Date: **06/20/13 20:45** SeqNo: **2436517**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.00144	0.0030	0	0	0	0	0	0	0		
Arsenic	-0.00031	0.0020	0	0	0	0	0	0	0		
Beryllium	0.00055	0.0010	0	0	0	0	0	0	0		
Copper	-0.00001	0.0050	0	0	0	0	0	0	0		

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H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Natural Resource Technology, Inc.
Work Order: 13060604
Project: 69420, Peoples Gas - Willow Street / Hawthorne Ave

ANALYTICAL QC SUMMARY REPORT

Run ID: **ICPMS_130620A**

Sample ID: **CCB** SampType: **CCB** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS_130620A**
Client ID: **ZZZZZ** Batch ID: **R90327** TestNo: **SW6020** Analysis Date: **06/20/13 20:45** SeqNo: **2436517**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.00007	0.0010	0	0	0	0	0	0	0		

Sample ID: **CCV1** SampType: **CCV** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS_130620A**
Client ID: **ZZZZZ** Batch ID: **R90327** TestNo: **SW6020** Analysis Date: **06/20/13 21:27** SeqNo: **2436523**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.05197	0.0030	0.05	0	104	90	110	0	0		
Arsenic	0.1017	0.0020	0.1	0	102	90	110	0	0		
Beryllium	0.1041	0.0010	0.1	0	104	90	110	0	0		
Copper	0.1031	0.0050	0.1	0	103	90	110	0	0		
Lead	0.1022	0.0010	0.1	0	102	90	110	0	0		

Sample ID: **CCB** SampType: **CCB** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS_130620A**
Client ID: **ZZZZZ** Batch ID: **R90327** TestNo: **SW6020** Analysis Date: **06/20/13 21:30** SeqNo: **2436524**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.00146	0.0030	0	0	0	0	0	0	0		
Arsenic	-0.00026	0.0020	0	0	0	0	0	0	0		
Beryllium	0.00053	0.0010	0	0	0	0	0	0	0		
Copper	-0.00004	0.0050	0	0	0	0	0	0	0		
Lead	0.00005	0.0010	0	0	0	0	0	0	0		

Sample ID: **CCV1** SampType: **CCV** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS_130620A**
Client ID: **ZZZZZ** Batch ID: **R90327** TestNo: **SW6020** Analysis Date: **06/20/13 22:12** SeqNo: **2436530**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.05126	0.0030	0.05	0	103	90	110	0	0		
Arsenic	0.0999	0.0020	0.1	0	99.9	90	110	0	0		
Beryllium	0.1084	0.0010	0.1	0	108	90	110	0	0		
Copper	0.1014	0.0050	0.1	0	101	90	110	0	0		
Lead	0.1025	0.0010	0.1	0	103	90	110	0	0		

Qualifiers:
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R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Natural Resource Technology, Inc.
Work Order: 13060604
Project: 69420, Peoples Gas - Willow Street / Hawthorne Ave

ANALYTICAL QC SUMMARY REPORT

Run ID: **ICPMS_130620A**

Sample ID: **CCB** SampType: **CCB** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS_130620A**
Client ID: **ZZZZZ** Batch ID: **R90327** TestNo: **SW6020** Analysis Date: **06/20/13 22:16** SeqNo: **2436531**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.00148	0.0030	0	0	0	0	0	0	0		
Arsenic	-0.00047	0.0020	0	0	0	0	0	0	0		
Beryllium	0.00053	0.0010	0	0	0	0	0	0	0		
Copper	-0.00003	0.0050	0	0	0	0	0	0	0		
Lead	0.00007	0.0010	0	0	0	0	0	0	0		

Qualifiers:
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J - Analyte detected below quantitation limits
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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

RUN SEQUENCE ICPMS 1

Sequence	Dilution	Internal Std	SAMPLE	ELEMENTS	TEST CODES	Date/Time
003CALB.	1		CAL Blank	#VALUE!		6/20/13 11:50
004CALS.	1		CAL STD 1	#VALUE!	60-22-449	6/20/13 11:54
005CALS.	1		CAL STD 2		60-22-448	6/20/13 11:58
006CALS.	1		CAL STD 3		60-22-447	6/20/13 12:01
007CALS.	1		CAL STD 4		60-22-446	6/20/13 12:05
008BLNK.	1		Blank		Blank	6/20/13 12:09
009BLNK.	1		Blank		Blank	6/20/13 12:13
010ICV1.	1		ICV		60-22-450	6/20/13 12:16
011_ICB.	1		ICB		60-22-473	6/20/13 12:20
012ICSA.	1		ICS A		60-22-474	6/20/13 12:24
013ICSAB.	1		ICS AB		60-22-475	6/20/13 12:28
014BLNK.	1		Blank		Blank	6/20/13 12:32
015SMPL.	1		blk		M_ICPMS_W	6/20/13 12:36
016SMPL.	1		blk		M_ICPMS_W	6/20/13 12:39
017SMPL.	1		blk		M_ICPMS_W	6/20/13 12:43
018SMPL.	1		blk		M_ICPMS_W	6/20/13 12:47
019CCV1.	1		CCV1	Al	60-22-451	6/20/13 12:51
020_CCB.	1		CCB		60-22-473	6/20/13 12:54
021SMPL.	1		blk		M_ICPMS_W	6/20/13 12:58
022SMPL.	1		blk		M_ICPMS_W	6/20/13 13:02
023SMPL.	10		ILCSS1 6/19/13	Pb As Cd Cr Ba Se Ag Cu Ni Zn Sb Be Tl Fe Co Mn V Al Mo Na Mg K Ca Sn B	M_ICPMS_S	6/20/13 13:15
024SMPL.	10		ILCSS2 6/19/13	Pb As Cd Cr Ba Se Ag Cu Ni Zn Sb Be Tl Fe Co Mn V Al Mo Na Mg K Ca Sn B	M_ICPMS_S	6/20/13 13:18
025SMPL.	10		ILCSS3 6/19/13	Pb As Cd Cr Ba Se Ag Cu Ni Zn Sb Be Tl Fe Co Mn V Al Mo Na Mg K Ca Sn B	M_ICPMS_S	6/20/13 13:22
026SMPL.	1		blk		M_ICPMS_W	6/20/13 13:26
027SMPL.	1	Li	ILCSS1 6/19/13	Se Ag Al Na Mg K Sn	M_ICPMS_S	6/20/13 13:30
028BLNK.	1		blk			6/20/13 13:34
029SMPL.	1		blk		M_ICPMS_W	6/20/13 13:38
030SMPL.	2		IMBW1 6/20/13	Pb	M_ICPMS_W	6/20/13 13:41
031CCV1.	1		CCV1		60-22-451	6/20/13 13:45
032_CCB.	1		CCB		60-22-473	6/20/13 13:49
033SMPL.	2		ILCSW1 6/20/13	Pb As Cd Cr Ba Se Ag Cu Ni Zn Sb Be Tl Fe Co Mn V Al Mo Na Mg K Ca Sn B	M_ICPMS_W	6/20/13 13:53
034SMPL.	5		IMBS1 6/20/13		M_ICPMS_S	6/20/13 13:57
035SMPL.	5		ILCSS1 6/20/13	Pb As Cd Cr Ba Se Ag Cu Ni Zn Sb Be Tl Fe Co Mn V Al Mo Na Mg K Ca Sn B	M_ICPMS_S	6/20/13 14:01
036SMPL.	10		13060640-001B		M_ICPMS_S	6/20/13 14:04
037SMPL.	10		13060640-002B		M_ICPMS_S	6/20/13 14:10
038SMPL.	1		blk		M_ICPMS_W	6/20/13 14:15
039SMPL.	100		13060640-001B		M_ICPMS_S	6/20/13 14:18
040SMPL.	100		13060640-002B		M_ICPMS_S	6/20/13 14:22
041SMPL.	1		blk		M_ICPMS_W	6/20/13 14:26
042SMPL.	1		blk		M_ICPMS_W	6/20/13 14:30
043CCV1.	1		CCV1		60-22-451	6/20/13 14:34
044_CCB.	1		CCB		60-22-473	6/20/13 14:37

File Path C:\ICPCHEM\1\DATA\ **13F20L00.B**
Method: 6020G.M

RUN SEQUENCE ICPMS 1

Sequence	Dilution	Internal Std	SAMPLE	ELEMENTS	TEST CODES	Date/Time
045SMPL.	50		13060587-001A		M_ICPMS_S	6/20/13 14:41
046BLNK.	1		blk			6/20/13 14:45
047SMPL.	10		13060587-001A		M_ICPMS_S	6/20/13 14:49
048BLNK.	1		blk			6/20/13 14:53
049SMPL.	10		13060587-001AMS		M_ICPMS_S	6/20/13 14:57
050BLNK.	1		blk			6/20/13 15:00
051SMPL.	10		13060587-001AMSD		M_ICPMS_S	6/20/13 15:04
052BLNK.	1		blk			6/20/13 15:08
053SMPL.	10		13060587-002A		M_ICPMS_S	6/20/13 15:12
054BLNK.	1		blk			6/20/13 15:15
055CCV1.	1		CCV1	Al	60-22-451	6/20/13 15:19
056_CCB.	1		CCB		60-22-473	6/20/13 15:23
057SMPL.	10		13060587-003A		M_ICPMS_S	6/20/13 15:27
058BLNK.	1		blk			6/20/13 15:31
059SMPL.	10		13060587-004A		M_ICPMS_S	6/20/13 15:35
060BLNK.	1		blk			6/20/13 15:38
061SMPL.	10		13060587-005A		M_ICPMS_S	6/20/13 15:42
062BLNK.	1		blk			6/20/13 15:47
063SMPL.	1		blk		M_ICPMS_W	6/20/13 15:51
064SMPL.	1		blk		M_ICPMS_W	6/20/13 15:56
065CCV1.	1		CCV1		60-22-451	6/20/13 16:00
066_CCB.	1		CCB		60-22-473	6/20/13 16:04
067SMPL.	100		13060587-001A		M_ICPMS_S	6/20/13 16:11
068SMPL.	100		13060587-001AMS		M_ICPMS_S	6/20/13 16:15
069SMPL.	100		13060587-001AMSD		M_ICPMS_S	6/20/13 16:18
070SMPL.	10000		13060515-003A		M_ICPMS_S	6/20/13 16:22
071SMPL.	10000		13060515-006A		M_ICPMS_S	6/20/13 16:26
072SMPL.	10000		13060515-007A		M_ICPMS_S	6/20/13 16:30
073SMPL.	100		13060533-001A		M_ICPMS_S	6/20/13 16:34
074SMPL.	100		13060533-002A		M_ICPMS_S	6/20/13 16:38
075SMPL.	1		blk		M_ICPMS_W	6/20/13 16:42
076CCV1.	1		CCV1		60-22-451	6/20/13 16:46
077_CCB.	1		CCB		60-22-473	6/20/13 16:49
078SMPL.	100		13060533-003A		M_ICPMS_S	6/20/13 16:53
079SMPL.	5		IMBTA1 6/19/13		M_ICPMS_T+	6/20/13 16:58
080SMPL.	2		IMBW2 6/20/13		M_ICPMS_W	6/20/13 17:02
081SMPL.	5		13060646-001A		M_ICPMS_T+	6/20/13 17:06
082SMPL.	5		13060650-001A	Na	M_ICPMS_T+	6/20/13 17:10
083BLNK.	1		blk			6/20/13 17:13
084SMPL.	2		ILCSW2 6/20/13	Zn Sb Na	M_ICPMS_W	6/20/13 17:17
085SMPL.	1		blk		M_ICPMS_W	6/20/13 17:21
086SMPL.	1		blk		M_ICPMS_W	6/20/13 17:25
087SMPL.	100		13060533-004A		M_ICPMS_S	6/20/13 17:28
088CCV1.	1		CCV1	Zn	60-22-451	6/20/13 17:32
089_CCB.	1		CCB		60-22-473	6/20/13 17:36
090SMPL.	100		13060533-005A		M_ICPMS_S	6/20/13 17:40
091SMPL.	100		13060533-006A		M_ICPMS_S	6/20/13 17:45
092SMPL.	100		13060533-007A		M_ICPMS_S	6/20/13 17:49
093SMPL.	100		13060533-008A		M_ICPMS_S	6/20/13 17:53
094SMPL.	100		13060533-009A		M_ICPMS_S	6/20/13 17:57
095SMPL.	100		13060533-010A		M_ICPMS_S	6/20/13 18:01

File Path C:\ICPCHEM\1\DATA\ **13F20L00.B**
Method: 6020G.M

RUN SEQUENCE ICPMS 1

Sequence	Dilution	Internal Std	SAMPLE	ELEMENTS	TEST CODES	Date/Time
096SMPL.	1		blk		M_ICPMS_W	6/20/13 18:04
097CCV1.	1		CCV1		60-22-451	6/20/13 18:08
098_CCB.	1		CCB		60-22-473	6/20/13 18:12
099SMPL.	10		13060533-001A		M_ICPMS_S	6/20/13 18:16
100BLNK.	1		blk			6/20/13 18:20
101SMPL.	10		13060533-002A		M_ICPMS_S	6/20/13 18:24
102BLNK.	1		blk			6/20/13 18:27
103SMPL.	10		13060533-003A		M_ICPMS_S	6/20/13 18:31
104BLNK.	1		blk			6/20/13 18:35
105SMPL.	10		13060533-004A		M_ICPMS_S	6/20/13 18:39
106BLNK.	1		blk			6/20/13 18:43
107SMPL.	10		13060533-005A		M_ICPMS_S	6/20/13 18:47
108BLNK.	1		blk			6/20/13 18:51
109CCV1.	1		CCV1	Al	60-22-451	6/20/13 18:55
110_CCB.	1		CCB		60-22-473	6/20/13 18:58
111SMPL.	10		13060533-006A		M_ICPMS_S	6/20/13 19:02
112BLNK.	1		blk			6/20/13 19:06
113SMPL.	10		13060533-007A		M_ICPMS_S	6/20/13 19:10
114BLNK.	1		blk			6/20/13 19:14
115SMPL.	10		13060533-008A		M_ICPMS_S	6/20/13 19:17
116BLNK.	1		blk			6/20/13 19:21
117SMPL.	10		13060533-009A		M_ICPMS_S	6/20/13 19:25
118BLNK.	1		blk			6/20/13 19:29
119SMPL.	10		13060533-010A		M_ICPMS_S	6/20/13 19:33
120BLNK.	1		blk			6/20/13 19:36
121CCV1.	1		CCV1	Zn Al Mg	60-22-451	6/20/13 19:40
122_CCB.	1		CCB		60-22-473	6/20/13 19:44
123SMPL.	1		blk		M_ICPMS_W	6/20/13 19:48
124SMPL.	1		blk		M_ICPMS_W	6/20/13 19:52
125CCV1.	1		CCV1	Al	60-22-451	6/20/13 19:56
126_CCB.	1		CCB		60-22-473	6/20/13 19:59
127SMPL.	25		13060511-044C		M_ICPMS_W	6/20/13 20:03
128BLNK.	1		blk			6/20/13 20:07
129SMPL.	5		13060511-044C		M_ICPMS_W	6/20/13 20:11
130BLNK.	1		blk			6/20/13 20:15
131SMPL.	5		13060511-044CMS		M_ICPMS_W	6/20/13 20:18
132BLNK.	1		blk			6/20/13 20:22
133SMPL.	5		13060511-044CMSD		M_ICPMS_W	6/20/13 20:26
134BLNK.	1		blk			6/20/13 20:30
135SMPL.	2		13060511-043C		M_ICPMS_W	6/20/13 20:33
136BLNK.	1		blk			6/20/13 20:37
137CCV1.	1		CCV1	Al	60-22-451	6/20/13 20:41
138_CCB.	1		CCB		60-22-473	6/20/13 20:45
139SMPL.	2		13060511-045C		M_ICPMS_W	6/20/13 20:49
140BLNK.	1		blk			6/20/13 20:52
141SMPL.	2		13060511-046C		M_ICPMS_W	6/20/13 20:56
142BLNK.	1		blk			6/20/13 21:00
143SMPL.	2		13060511-047C		M_ICPMS_W	6/20/13 21:04
144BLNK.	1		blk			6/20/13 21:08
145SMPL.	2		13060511-048C		M_ICPMS_W	6/20/13 21:11
146BLNK.	1		blk			6/20/13 21:15

File Path C:\ICPCHEM\1\DATA\ **13F20L00.B**
Method: 6020G.M

RUN SEQUENCE ICPMS 1

Sequence	Dilution	Internal Std	SAMPLE	ELEMENTS	TEST CODES	Date/Time
147SMPL.	2		13060511-049C		M_ICPMS_W	6/20/13 21:19
148BLNK.	1		blk			6/20/13 21:23
149CCV1.	1		CCV1	Al Mg	60-22-451	6/20/13 21:27
150_CCB.	1		CCB		60-22-473	6/20/13 21:30
151SMPL.	2		13060511-050C		M_ICPMS_W	6/20/13 21:34
152BLNK.	1		blk			6/20/13 21:38
153SMPL.	2		13060511-051C		M_ICPMS_W	6/20/13 21:42
154BLNK.	1		blk			6/20/13 21:46
155SMPL.	2		13060511-052C		M_ICPMS_W	6/20/13 21:49
156BLNK.	1		blk			6/20/13 21:53
157SMPL.	2		13060515-001A		M_ICPMS_W	6/20/13 21:57
158BLNK.	1		blk			6/20/13 22:01
159SMPL.	2		13060515-002A		M_ICPMS_W	6/20/13 22:04
160BLNK.	1		blk			6/20/13 22:08
161CCV1.	1		CCV1	Al Mg	60-22-451	6/20/13 22:12
162_CCB.	1		CCB		60-22-473	6/20/13 22:16
163SMPL.	2		13060515-004A		M_ICPMS_W	6/20/13 22:20
164BLNK.	1		blk			6/20/13 22:23
165SMPL.	2		13060515-005A		M_ICPMS_W	6/20/13 22:27
166BLNK.	1		blk			6/20/13 22:31
167SMPL.	2		13060530-002C		M_ICPMS_W	6/20/13 22:35
168BLNK.	1		blk			6/20/13 22:39
169SMPL.	2		13060602-001C		M_ICPMS_W	6/20/13 22:42
170BLNK.	1		blk			6/20/13 22:46
171SMPL.	1		13060603-001C		M_ICPMS_W	6/20/13 22:50
172BLNK.	1		blk			6/20/13 22:54
173CCV1.	1		CCV1	Al Na Mg B	60-22-451	6/20/13 22:58
174_CCB.	1		CCB		60-22-473	6/20/13 23:01
175SMPL.	1		13060604-001C		M_ICPMS_W	6/20/13 23:05
176BLNK.	1		blk			6/20/13 23:09
177SMPL.	1		13060657-001B		M_ICPMS_W	6/20/13 23:13
178BLNK.	1		blk			6/20/13 23:17
179SMPL.	1		13060657-002B		M_ICPMS_W	6/20/13 23:21
180BLNK.	1		blk			6/20/13 23:24
181SMPL.	1		blk		M_ICPMS_W	6/20/13 23:28
182CCV1.	1		CCV1		60-22-451	6/20/13 23:32
183_CCB.	1		CCB		60-22-473	6/20/13 23:36
184SMPL.	20		13060375-010A		M_ICPMS_S	6/20/13 23:40
185BLNK.	1		blk			6/20/13 23:43
186SMPL.	20		13060375-011A		M_ICPMS_S	6/20/13 23:47
187BLNK.	1		blk			6/20/13 23:51
188SMPL.	20		13060375-012A		M_ICPMS_S	6/20/13 23:55
189BLNK.	1	Li	blk			6/20/13 23:58
190BLNK.	1	Li Sc Ge	blk			6/21/13 0:02
191SMPL.	20	Li Sc Ge In	13060375-013A		M_ICPMS_S	6/21/13 0:06
192SMPL.	20	Li Sc Ge In	13060375-014A		M_ICPMS_S	6/21/13 0:10
193SMPL.	20	Li Sc Ge In	13060375-016A		M_ICPMS_S	6/21/13 0:14
194CCV1.	1	Li Sc Ge In Bi	CCV1	Ba Se Ag Cu Zn Sb Fe Mn Al Mo Na Mg B	60-22-451	6/21/13 0:17
195_CCB.	1	Li Sc Ge In Bi	CCB	Fe Mn K	60-22-473	6/21/13 0:21
196SMPL.	20	Li Sc Ge In	13060375-017A		M_ICPMS_S	6/21/13 0:25

File Path C:\ICPCHEM\1\DATA\ **13F20L00.B**
Method: 6020G.M

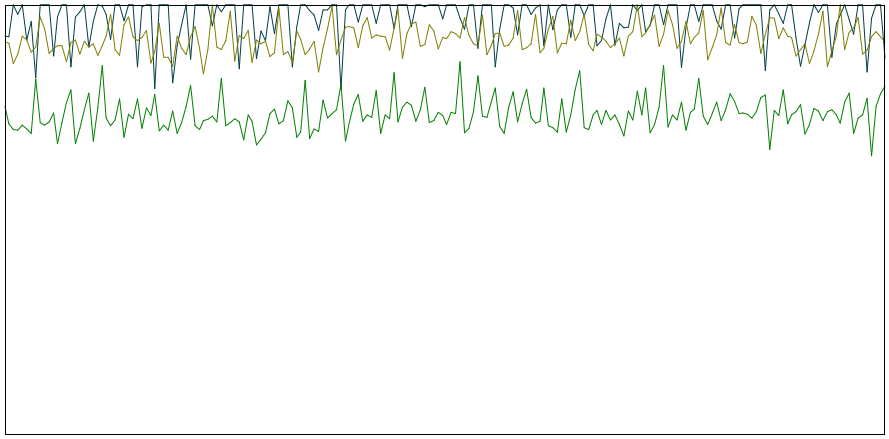
RUN SEQUENCE ICPMS 1

Sequence	Dilution	Internal Std	SAMPLE	ELEMENTS	TEST CODES	Date/Time
197SMPL.	20	Li Sc Ge In	13060375-018A		M_ICPMS_S	6/21/13 0:29
198ICSA.	1	Li Sc Ge In	ICS A		60-22-474	6/21/13 0:33
199ICSAB.	1	Li Sc Ge In	ICS AB		60-22-475	6/21/13 0:37
200SMPL.	20	Li Sc Ge In	13060375-019A		M_ICPMS_S	6/21/13 0:41
201SMPL.	20	Li Sc Ge In	13060375-020A		M_ICPMS_S	6/21/13 0:45
202SMPL.	5	Li Sc Ge In	13060595-001A		M_ICPMS_T+	6/21/13 0:48
203SMPL.	25	Li Sc Ge In	13060595-002A		M_ICPMS_T+	6/21/13 0:52
204SMPL.	5	Li Sc Ge In	13060595-002A		M_ICPMS_T+	6/21/13 0:56
205SMPL.	5	Li Sc Ge In	13060595-002AMS		M_ICPMS_T+	6/21/13 1:00
206CCV1.	1	Li Sc Ge In Bi	CCV1	As Se Ag Cu Ni Zn Sb Be Fe Co Mn Al Mo Na Mg K Ca B	60-22-451	6/21/13 1:04
207_CCB.	1	Li Sc Ge In Bi	CCB	Se Fe Mn Na K Ca	60-22-473	6/21/13 1:08
208SMPL.	5	Li Sc Ge In Bi	13060595-002AMSD		M_ICPMS_T+	6/21/13 1:12
209SMPL.	5	Li Sc Ge In Bi	13060595-003A		M_ICPMS_T+	6/21/13 1:16
210SMPL.	1	Li Sc Ge In Bi	blk		M_ICPMS_W	6/21/13 1:20
211SMPL.	1	Li Sc Ge In Bi	blk		M_ICPMS_W	6/21/13 1:23
212SMPL.	1	Li Sc Ge In Bi	blk		M_ICPMS_W	6/21/13 1:27
213SMPL.	1	Li Sc Ge In Bi	blk		M_ICPMS_W	6/21/13 1:31
214SMPL.	1	Li Sc Ge In Bi	blk		M_ICPMS_W	6/21/13 1:35
215SMPL.	1	Li Sc Ge In Bi	blk		M_ICPMS_W	6/21/13 1:39
216ICSA.	1	Li Sc Ge In Bi	ICS A		60-22-474	6/21/13 1:43
217SMPL.	1	Li Sc Ge In Bi	blk		M_ICPMS_W	6/21/13 1:47
218CCV1.	1	Li Sc Ge In Bi	CCV1	As Cd Cr Ba Se Cu Ni Zn Sb Be Tl Fe Co Mn Al Mo Na Mg K Ca Sn	60-20-47	6/21/13 1:51
219_CCB.	1	Li Sc Ge In Bi	CCB	Pb Cd Cr Ba Se Cu Ni Zn Sb Be Fe Co Mn Al Na K Ca B	60-20-48	6/21/13 1:54
220SMPL.	1	Li Sc Ge In Bi	blk		M_ICPMS_W	6/21/13 1:58
221SMPL.	1	Li Sc Ge In Bi	blk		M_ICPMS_W	6/21/13 2:02
222SMPL.	1	Li Sc Ge In Bi	blk		M_ICPMS_W	6/21/13 2:06
223SMPL.	1	Li Sc Ge In Bi	blk		M_ICPMS_W	6/21/13 2:10
224SMPL.	1	Li Sc Ge In Bi	blk		M_ICPMS_W	6/21/13 2:14
225SMPL.	1	Li Sc Ge In Bi	blk		M_ICPMS_W	6/21/13 2:18
226CCV1.	1	Li Sc Ge In Bi	CCV1	Pb As Cd Cr Ba Se Ag Cu Zn Sb Be Fe Co Mn V Al Mo Na Mg K Ca Sn B	60-20-47	6/21/13 2:22
227_CCB.	1	Li Sc Ge In Bi	CCB	Pb As Cd Cr Ba Se Ag Cu Ni Zn Sb Be Tl Fe Co Mn Al Mo Na Mg K Ca Sn B	60-20-48	6/21/13 2:26
228SMPL.	1	Li Sc Ge In Bi	blk		M_ICPMS_W	6/21/13 2:29
229SMPL.	1	Li Sc Ge In Bi	blk		M_ICPMS_W	6/21/13 2:33
230SMPL.	1	Li Sc Ge In Bi	blk		M_ICPMS_W	6/21/13 2:37

File Path C:\ICPCHEM\1\DATA\ **13F20L00.B**
Method: 6020G.M

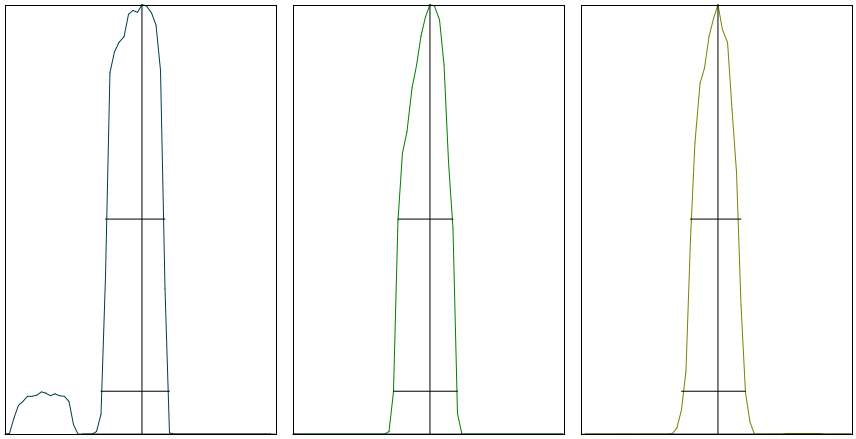
Tune Report

Tune File : Autotune.u
Comment : ICP MS1



Integration Time: 0.1000 sec
Sampling Period: 0.6200 sec
n: 200
Oxide: 156/140 0.482%
Doubly Charged: 70/140 1.380%

m/z	Range	Count	Mean	RSD%	Background
7	20,000	17514.0	20196.1	9.48	1.50
89	20,000	16217.0	14902.9	5.21	2.70
205	10,000	9131.0	9204.3	3.67	4.80
156/140	2	0.515%	0.476%	13.58	
70/140	2	1.345%	1.345%	13.74	



m/z:	7	89	205
Height:	20,280	15,142	9,312
Axis:	7.05	89.05	205.05
W-50%:	0.65	0.60	0.55
W-10%:	0.7500	0.700	0.700

Integration Time: 0.1000 sec
Acquisition Time: 22.7600 sec

Y axis : Linear

Generated : Jun 20, 2013 10:43:14
Printed : Jun 20, 2013 10:43:16

Tune Report

Tune File : Autotune.u
Comment : ICP MS1

Tuning Parameters

===Plasma Condition===			===Ion Lenses===			===Q-Pole Parameters===		
RF Power	:	1500 W	Extract 1	:	-180 V	AMU Gain	:	129
RF Matching	:	1.7 V	Extract 2	:	-100 V	AMU Offset	:	126
Smpl Depth	:	3.5 mm	Einzel 1,3	:	-102 V	Axis Gain	:	1
Torch-H	:	-0.2 mm	Einzel 2	:	0 V	Axis Offset	:	-0.01
Torch-V	:	-1.6 mm	Omega Bias	:	-36 V	QP Bias	:	3 V
Carrier Gas	:	1.25 L/min	Omega (+)	:	6.9 V			
Makeup Gas	:	0 L/min	Omega (-)	:	-6 V	===Detector Parameters===		
Optional Gas	:	--- %	QP Focus	:	9.7 V	Discriminator	:	8 mV
Nebulizer Pump	:	0.12 rps	Plate Bias	:	-10.9 V	Analog HV	:	1730 V
Sample Pump	:	--- rps				Pulse HV	:	1620 V
S/C Temp	:	2 degC						

P/A Factor Tuning Report

Acquired:Jun 20 2013 11:00 am

Mass[amu]	Element	P/A Factor
6	Li	0.077170
9	Be	0.087035
11	B	0.084633
23	Na	0.093509
24	Mg	0.096889
27	Al	0.100072
39	K	0.101566
44	Ca	0.102871
45	Sc	0.100057
47	Ti	0.100540
50	V	0.102099
51	V	0.102587
52	Cr	0.104237
53	Cr	0.104943
55	Mn	0.105164
57	Fe	0.106102
59	Co	0.107287
60	Ni	0.108514
63	Cu	0.109658
66	Zn	0.109165
74	Ge	Sensitivity too low
75	As	0.107511
77	(As)	Sensitivity too low
78	Se	Sensitivity too low
82	Se	Sensitivity too low
83	(Se)	Sensitivity too low
88	Sr	Sensitivity too low
89	Y	0.107083
98	Mo	0.108850
99	(Mo)	0.109384
101	Ru	0.109827
102	Ru	0.110448
104	Ru	0.110407
106	(Cd)	Sensitivity too low
107	Ag	0.110589
108	(Cd)	Sensitivity too low
111	Cd	0.111205
114	Cd	0.111336
115	In	0.111338
118	(In)	0.111603
120	Sn	0.112267
121	Sb	0.112212
137	Ba	0.112249
140	Ce	Sensitivity too low
142	Ce	Sensitivity too low
182	W	Sensitivity too low
184	W	Sensitivity too low
186	W	Sensitivity too low
203	Tl	0.114313
206	Pb	0.114756
207	Pb	0.115030
208	Pb	0.113687
209	Bi	0.115506

- 1 -

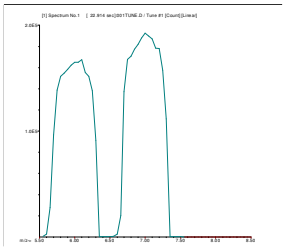
===Detector Parameters===
Discriminator: 8.0 mV
Analog HV: 1730 V
Pulse HV: 1620 V

6020 QC Tune Report

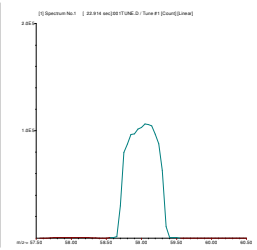
Data File: C:\ICPCHEM\1\DATA\13F20100.B\001TUNE.D
Date Acquired: Jun 20 2013 11:40 am
Acq. Method: TN_6020.M
Operator: ICPMS 1 - JG
Sample Name: Tune Check
Misc Info: 60-22-471
Vial Number: 1306
Current Method: C:\ICPCHEM\1\METHODS\TN_6020.M

RSD (%)

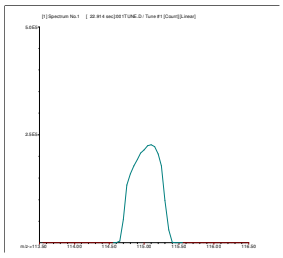
Element	Actual	Required	Flag
7 Li	1.68	5.00	
59 Co	1.93	5.00	
115 In	1.98	5.00	
205 Tl	2.25	5.00	



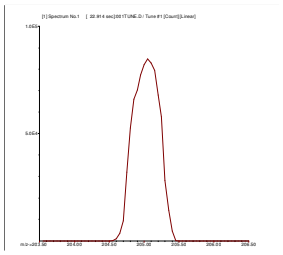
7 Li
Mass Calib.
Actual: 7.00
Required: 6.90 - 7.10
Flag:
Peak Width
Actual: 0.65
Required: 0.90
Flag:



59 Co
Mass Calib.
Actual: 59.05
Required: 58.90 - 59.10
Flag:
Peak Width
Actual: 0.60
Required: 0.80
Flag:



115 In
Mass Calib.
Actual: 115.05
Required: 114.90 - 115.10
Flag:
Peak Width
Actual: 0.65
Required: 0.80
Flag:



205 Tl
Mass Calib.
Actual: 205.05
Required: 204.90 - 205.10
Flag:
Peak Width
Actual: 0.65
Required: 0.90
Flag:

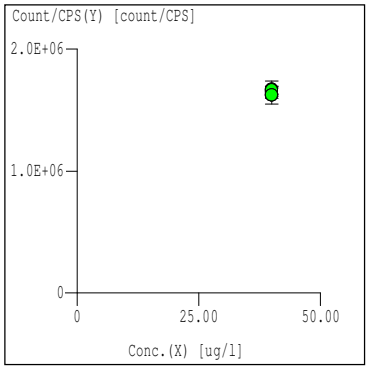
Last Calib: Jun 20, 2013 12:07 pm
Calibration Type: External Calibration Method
Calibration Title: ICPMS - 1
Weighting Method: 1/(SD*SD)
Mass Interpolation Fit for VIS: Point to Point
Method: C:\ICPCHEM\1\METHODS\6020G2W.M

=== Standard Files ===
<Data Correction>
Bkg File: ---
Rejected Masses: ---
Interference Correction: ON

	Data File	Sample Name	Date Acquired
1	c:\icpchem\1\data\13f20l00.b\003calb.d\003calb.d#	CAL Blank	Jun 20 2013 11:50 am
2	c:\icpchem\1\data\13f20l00.b\004cals.d\004cals.d#	CAL STD 1	Jun 20 2013 11:54 am
3	c:\icpchem\1\data\13f20l00.b\005cals.d\005cals.d#	CAL STD 2	Jun 20 2013 11:58 am
4	c:\icpchem\1\data\13f20l00.b\006cals.d\006cals.d#	CAL STD 3	Jun 20 2013 12:01 pm
5	c:\icpchem\1\data\13f20l00.b\007cals.d\007cals.d#	CAL STD 4	Jun 20 2013 12:05 pm
6	---		
7	---		
8	---		
9	---		
10	---		
11	---		
12	---		
13	---		
14	---		
15	---		
16	---		
17	---		
18	---		
19	---		
20	---		

=== Graph Detail ===

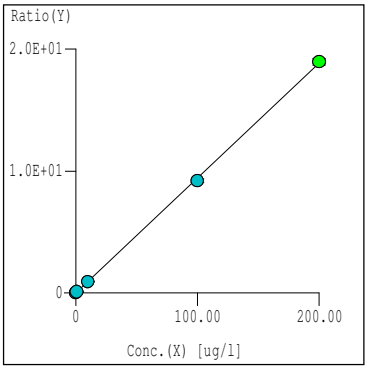
Step	Mass	Element	ISTD	Unit
(1)	6	Li	---	ug/l



Curve Fit: Excluded
r = 0.0000

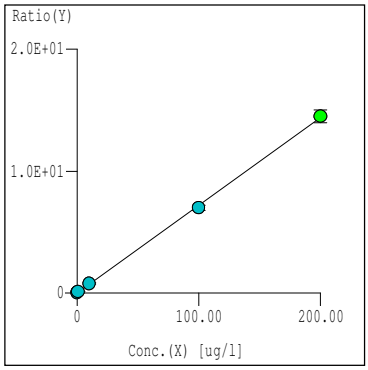
DL = --- ug/l
BEC = --- ug/l

Step	Mass	Element	ISTD	Unit
(1)	9	Be	6	ug/l



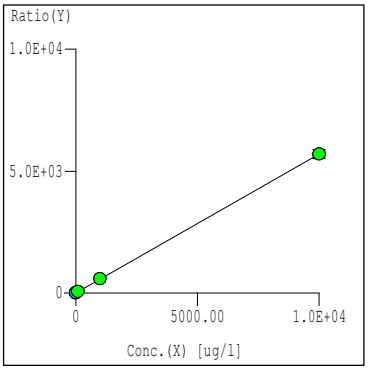
Curve Fit: Y=aX+b
r = 0.9999
Y = 9.452E-002*X -4.399E-002
X = 1.058E+001*Y +4.654E-001
DL = 3.801E-02 ug/l
BEC = -4.654E-01 ug/l

Step	Mass	Element	ISTD	Unit
(1)	11	B	6	ug/l



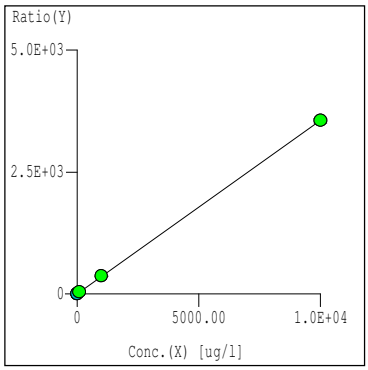
Curve Fit: Y=aX+b
r = 0.9998
Y = 7.195E-002*X +1.116E-002
X = 1.390E+001*Y -1.552E-001
DL = 7.173E-02 ug/l
BEC = 1.552E-01 ug/l

Step	Mass	Element	ISTD	Unit
(1)	23	Na	45	ug/l



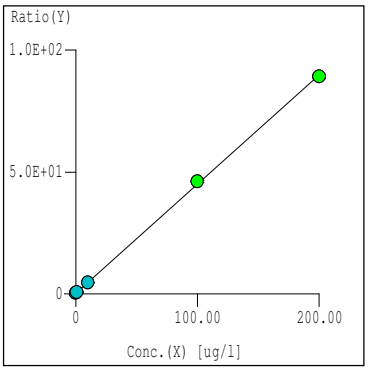
Curve Fit: Y=aX+b
r = 1.0000
Y = 5.685E-001*X +1.036E+001
X = 1.759E+000*Y -1.822E+001
DL = 1.233 ug/l
BEC = 18.22 ug/l

Step	Mass	Element	ISTD	Unit
(1)	24	Mg	45	ug/l



Curve Fit: Y=aX+b
r = 1.0000
Y = 3.554E-001*X +3.299E+000
X = 2.813E+000*Y -9.282E+000
DL = 8.322E-02 ug/l
BEC = 9.282 ug/l

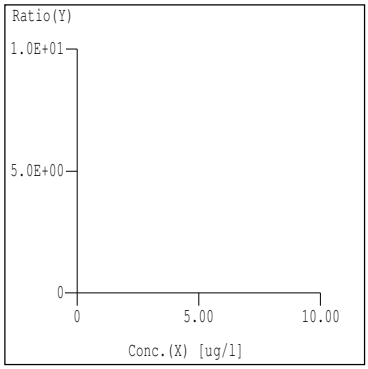
Step	Mass	Element	ISTD	Unit
(1)	27	Al	45	ug/l



Curve Fit: Y=aX+b
r = 0.9999
Y = 4.466E-001*X +4.131E-001
X = 2.239E+000*Y -9.251E-001
DL = 1.427E-01 ug/l
BEC = 9.251E-01 ug/l

=== Graph Detail ===

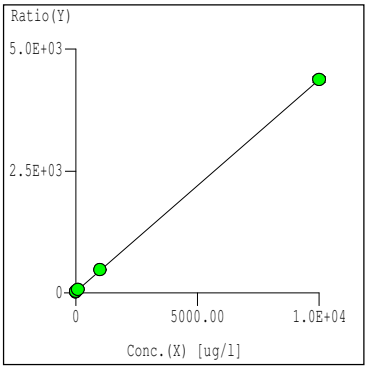
Step	Mass	Element	ISTD	Unit
(1)	28	Si	45	ug/l



Curve Fit: Y=aX+b
r = 0.0000

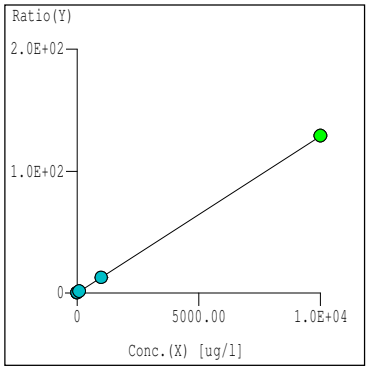
DL = --- ug/l
BEC = --- ug/l

Step	Mass	Element	ISTD	Unit
(1)	39	K	45	ug/l



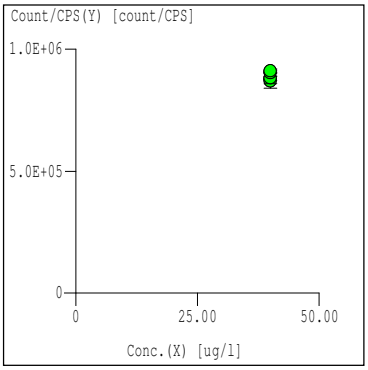
Curve Fit: Y=aX+b
r = 1.0000
Y = 4.349E-001*X +2.808E+001
X = 2.299E+000*Y -6.457E+001
DL = 4.846 ug/l
BEC = 64.57 ug/l

Step	Mass	Element	ISTD	Unit
(1)	44	Ca	45	ug/l



Curve Fit: Y=aX+b
r = 1.0000
Y = 1.289E-002*X +3.874E-002
X = 7.757E+001*Y -3.005E+000
DL = 1.112 ug/l
BEC = 3.005 ug/l

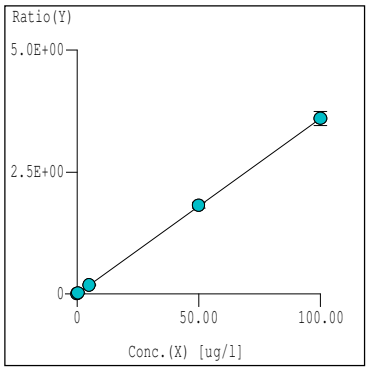
Step	Mass	Element	ISTD	Unit
(1)	45	Sc	---	ug/l



Curve Fit: Excluded
r = 0.0000

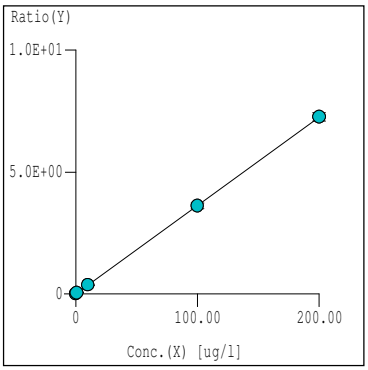
DL = --- ug/l
BEC = --- ug/l

Step	Mass	Element	ISTD	Unit
(1)	47	Ti	45	ug/l



Curve Fit: Y=aX+b
r = 1.0000
Y = 3.599E-002*X +3.995E-003
X = 2.779E+001*Y -1.110E-001
DL = 6.325E-02 ug/l
BEC = 1.110E-01 ug/l

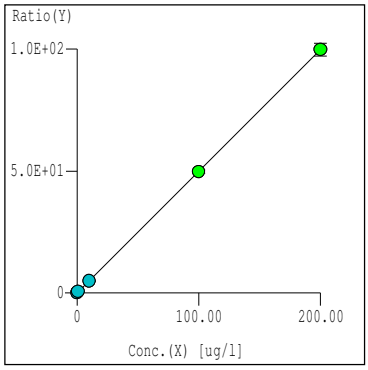
Step	Mass	Element	ISTD	Unit
(1)	50	V	45	ug/l



Curve Fit: Y=aX+b
r = 1.0000
Y = 3.625E-002*X +5.478E-003
X = 2.759E+001*Y -1.511E-001
DL = 4.940E-02 ug/l
BEC = 1.511E-01 ug/l

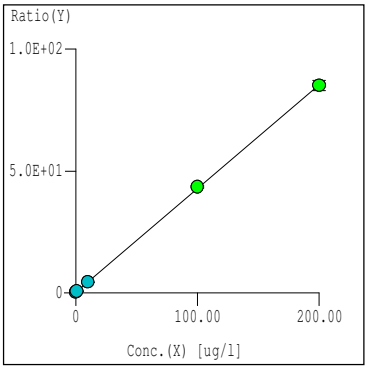
=== Graph Detail ===

Step	Mass	Element	ISTD	Unit
(1)	51	V	45	ug/l



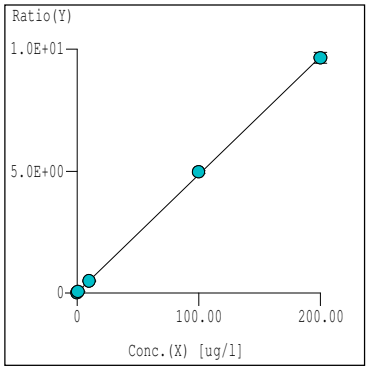
Curve Fit: Y=aX+b
r = 1.0000
Y = 4.989E-001*X +2.387E-002
X = 2.004E+000*Y -4.784E-002
DL = 1.107E-02 ug/l
BEC = 4.784E-02 ug/l

Step	Mass	Element	ISTD	Unit
(1)	52	Cr	45	ug/l



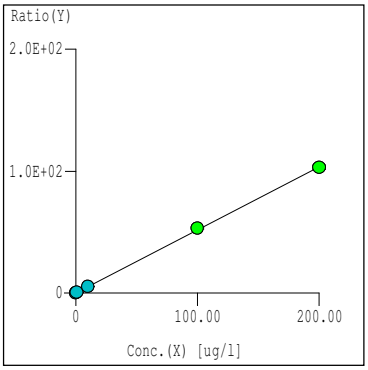
Curve Fit: Y=aX+b
r = 1.0000
Y = 4.254E-001*X +3.494E-001
X = 2.351E+000*Y -8.212E-001
DL = 1.848E-02 ug/l
BEC = 8.212E-01 ug/l

Step	Mass	Element	ISTD	Unit
(1)	53	Cr	45	ug/l



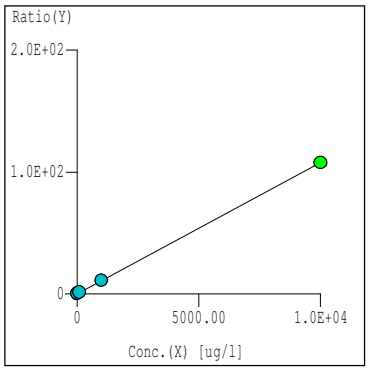
Curve Fit: Y=aX+b
r = 0.9999
Y = 4.838E-002*X +2.350E-002
X = 2.067E+001*Y -4.858E-001
DL = 2.357E-02 ug/l
BEC = 4.858E-01 ug/l

Step	Mass	Element	ISTD	Unit
(1)	55	Mn	45	ug/l



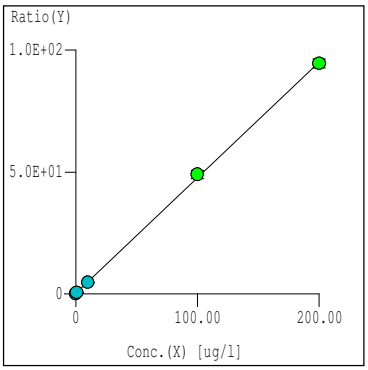
Curve Fit: Y=aX+b
r = 0.9999
Y = 5.172E-001*X +2.799E-001
X = 1.933E+000*Y -5.412E-001
DL = 1.031E-02 ug/l
BEC = 5.412E-01 ug/l

Step	Mass	Element	ISTD	Unit
(1)	57	Fe	45	ug/l



Curve Fit: Y=aX+b
r = 1.0000
Y = 1.074E-002*X +3.244E-001
X = 9.309E+001*Y -3.020E+001
DL = 4.828E-01 ug/l
BEC = 30.20 ug/l

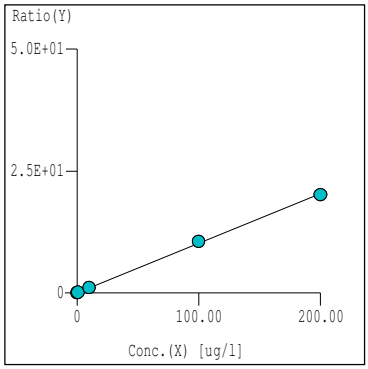
Step	Mass	Element	ISTD	Unit
(1)	59	Co	45	ug/l



Curve Fit: Y=aX+b
r = 0.9998
Y = 4.747E-001*X +2.514E-001
X = 2.107E+000*Y -5.297E-001
DL = 2.785E-02 ug/l
BEC = 5.297E-01 ug/l

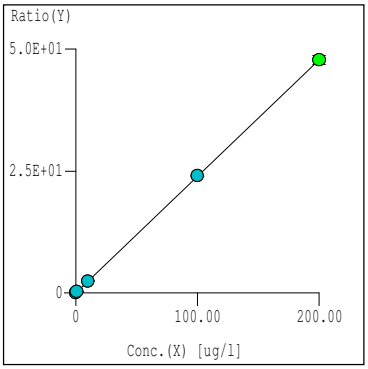
=== Graph Detail ===

Step	Mass	Element	ISTD	Unit
(1)	60	Ni	45	ug/l



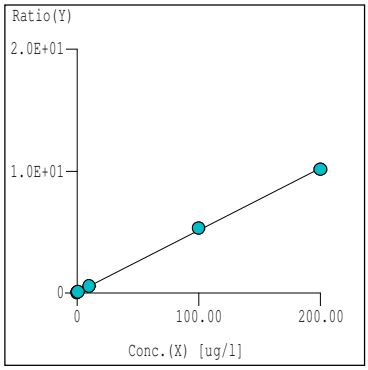
Curve Fit: Y=aX+b
r = 0.9997
Y = 1.011E-001*X +8.065E-002
X = 9.890E+000*Y -7.977E-001
DL = 3.816E-02 ug/l
BEC = 7.977E-01 ug/l

Step	Mass	Element	ISTD	Unit
(1)	63	Cu	45	ug/l



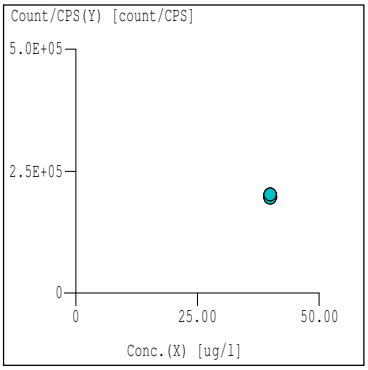
Curve Fit: Y=aX+b
r = 1.0000
Y = 2.390E-001*X +4.371E-002
X = 4.184E+000*Y -1.829E-001
DL = 2.959E-02 ug/l
BEC = 1.829E-01 ug/l

Step	Mass	Element	ISTD	Unit
(1)	66	Zn	45	ug/l



Curve Fit: Y=aX+b
r = 0.9997
Y = 5.077E-002*X +7.374E-002
X = 1.970E+001*Y -1.452E+000
DL = 1.835E-01 ug/l
BEC = 1.452 ug/l

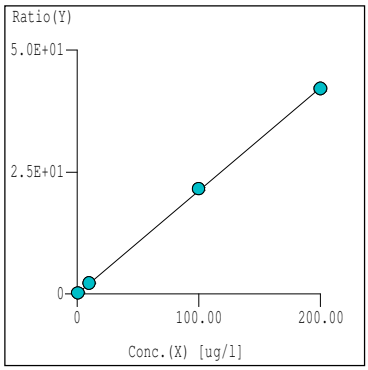
Step	Mass	Element	ISTD	Unit
(1)	74	Ge	---	ug/l



Curve Fit: Excluded
r = 0.0000

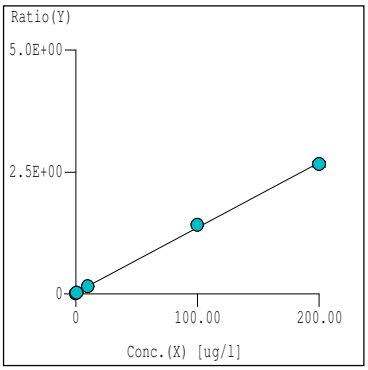
DL = --- ug/l
BEC = --- ug/l

Step	Mass	Element	ISTD	Unit
(1)	75	As	74	ug/l



Curve Fit: Y=aX+b
r = 0.9999
Y = 2.111E-001*X +7.721E-002
X = 4.738E+000*Y -3.658E-001
DL = 3.192E-01 ug/l
BEC = 3.658E-01 ug/l

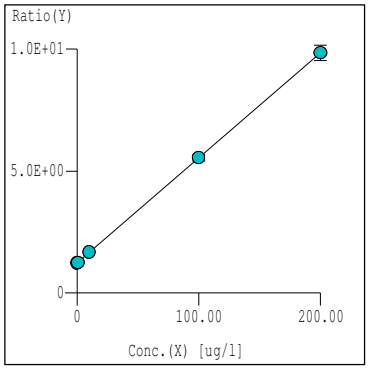
Step	Mass	Element	ISTD	Unit
(1)	77	(As)	74	ug/l



Curve Fit: Y=aX+b
r = 0.9996
Y = 1.334E-002*X +2.221E-002
X = 7.499E+001*Y -1.666E+000
DL = 1.752E-01 ug/l
BEC = 1.666 ug/l

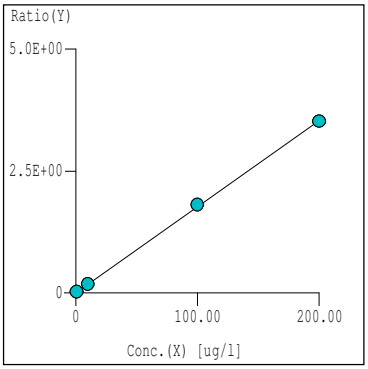
=== Graph Detail ===

Step	Mass	Element	ISTD	Unit
(1)	78	Se	74	ug/l



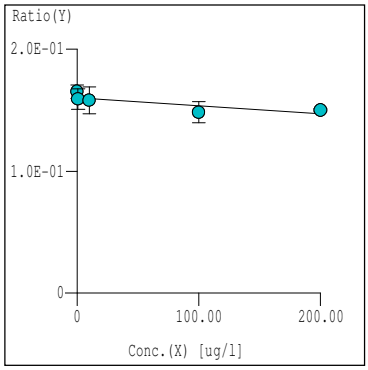
Curve Fit: Y=aX+b
r = 1.0000
Y = 4.315E-002*X +1.224E+000
X = 2.318E+001*Y -2.837E+001
DL = 1.008 ug/l
BEC = 28.37 ug/l

Step	Mass	Element	ISTD	Unit
(1)	82	Se	74	ug/l



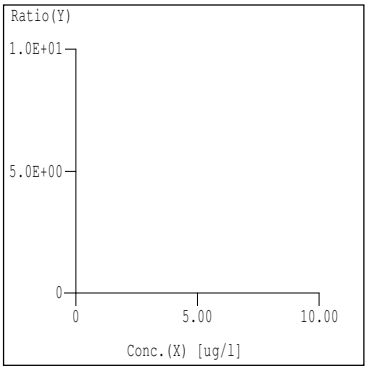
Curve Fit: Y=aX+b
r = 0.9999
Y = 1.765E-002*X +6.589E-003
X = 5.664E+001*Y -3.732E-001
DL = 1.471 ug/l
BEC = 3.732E-01 ug/l

Step	Mass	Element	ISTD	Unit
(1)	83	(Se)	74	ug/l



Curve Fit: Y=aX+b
r = -0.8155
Y = -6.482E-005*X +1.602E-001
X = -1.543E+004*Y +2.471E+003
DL = -2.628E+02 ug/l
BEC = -2.471E+03 ug/l

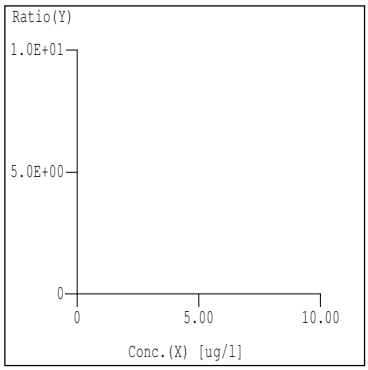
Step	Mass	Element	ISTD	Unit
(1)	86	Sr	74	ug/l



Curve Fit: Y=aX+b
r = 0.0000

DL = --- ug/l
BEC = --- ug/l

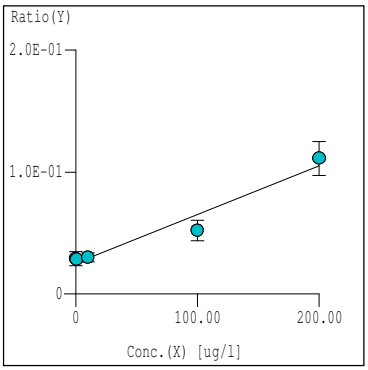
Step	Mass	Element	ISTD	Unit
(1)	87	Sr	74	ug/l



Curve Fit: Y=aX+b
r = 0.0000

DL = --- ug/l
BEC = --- ug/l

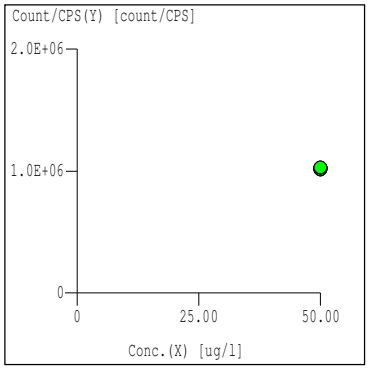
Step	Mass	Element	ISTD	Unit
(1)	88	Sr	74	ug/l



Curve Fit: Y=aX+b
r = 0.9772
Y = 3.974E-004*X +2.544E-002
X = 2.517E+003*Y -6.402E+001
DL = 43.16 ug/l
BEC = 64.02 ug/l

=== Graph Detail ===

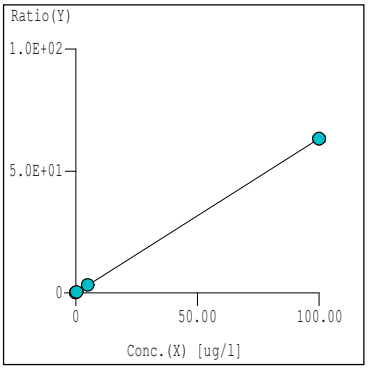
Step	Mass	Element	ISTD	Unit
(1)	89	Y	---	ug/l



Curve Fit: Y=aX+b
r = 0.0000

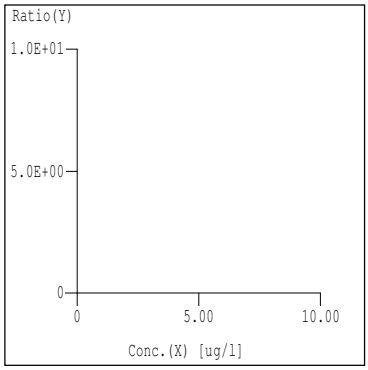
DL = --- ug/l
BEC = --- ug/l

Step	Mass	Element	ISTD	Unit
(1)	98	Mo	74	ug/l



Curve Fit: Y=aX+b
r = 1.0000
Y = 6.315E-001*X +4.617E-002
X = 1.584E+000*Y -7.311E-002
DL = 9.967E-03 ug/l
BEC = 7.311E-02 ug/l

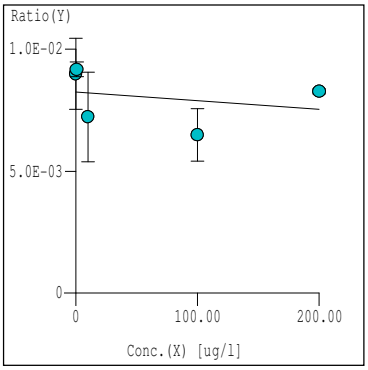
Step	Mass	Element	ISTD	Unit
(1)	99	(Mo)	74	ug/l



Curve Fit: Y=aX+b
r = 0.0000

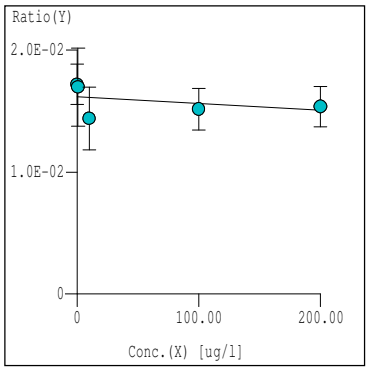
DL = --- ug/l
BEC = --- ug/l

Step	Mass	Element	ISTD	Unit
(1)	101	Ru	115	ug/l



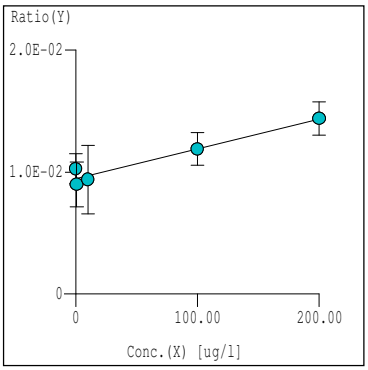
Curve Fit: Y=aX+b
r = -0.2796
Y = -3.671E-006*X +8.261E-003
X = -2.724E+005*Y +2.250E+003
DL = -1.194E+03 ug/l
BEC = -2.250E+03 ug/l

Step	Mass	Element	ISTD	Unit
(1)	102	Ru	115	ug/l



Curve Fit: Y=aX+b
r = -0.3967
Y = -5.497E-006*X +1.616E-002
X = -1.819E+005*Y +2.940E+003
DL = -9.040E+02 ug/l
BEC = -2.940E+03 ug/l

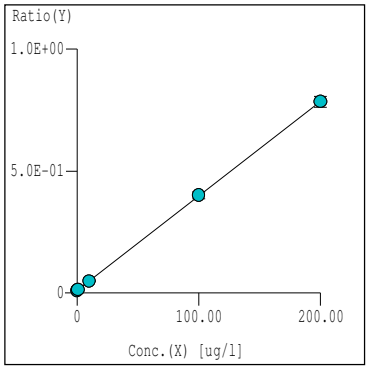
Step	Mass	Element	ISTD	Unit
(1)	104	Ru	115	ug/l



Curve Fit: Y=aX+b
r = 0.9738
Y = 2.450E-005*X +9.460E-003
X = 4.082E+004*Y -3.861E+002
DL = 151.4 ug/l
BEC = 386.1 ug/l

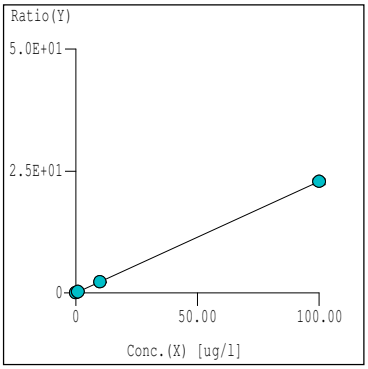
=== Graph Detail ===

Step Mass Element	ISTD	Unit
(1) 106 (Cd)	115	ug/l



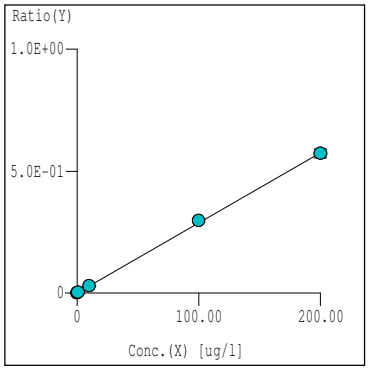
Curve Fit: Y=aX+b
r = 1.0000
Y = 3.879E-003*X +1.028E-002
X = 2.578E+002*Y -2.650E+000
DL = 5.790E-01 ug/l
BEC = 2.650 ug/l

Step Mass Element	ISTD	Unit
(1) 107 Ag	115	ug/l



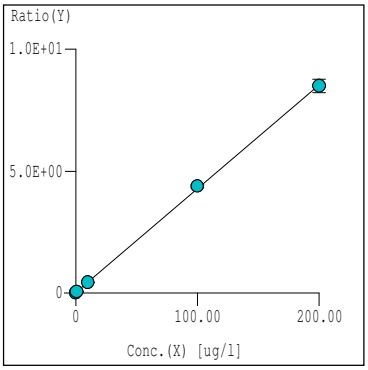
Curve Fit: Y=aX+b
r = 1.0000
Y = 2.284E-001*X -1.464E-002
X = 4.379E+000*Y +6.412E-002
DL = 9.557E-03 ug/l
BEC = -6.412E-02 ug/l

Step Mass Element	ISTD	Unit
(1) 108 (Cd)	115	ug/l



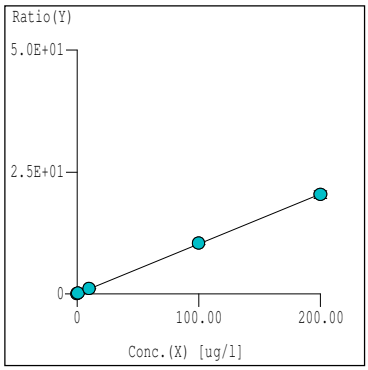
Curve Fit: Y=aX+b
r = 0.9999
Y = 2.875E-003*X +1.560E-003
X = 3.478E+002*Y -5.427E-001
DL = 3.329E-01 ug/l
BEC = 5.427E-01 ug/l

Step Mass Element	ISTD	Unit
(1) 111 Cd	115	ug/l



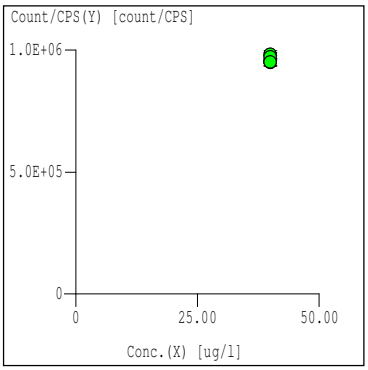
Curve Fit: Y=aX+b
r = 0.9999
Y = 4.259E-002*X +2.640E-002
X = 2.348E+001*Y -6.199E-001
DL = 7.123E-02 ug/l
BEC = 6.199E-01 ug/l

Step Mass Element	ISTD	Unit
(1) 114 Cd	115	ug/l



Curve Fit: Y=aX+b
r = 1.0000
Y = 1.021E-001*X +3.129E-002
X = 9.791E+000*Y -3.063E-001
DL = 1.559E-02 ug/l
BEC = 3.063E-01 ug/l

Step Mass Element	ISTD	Unit
(1) 115 In	---	ug/l

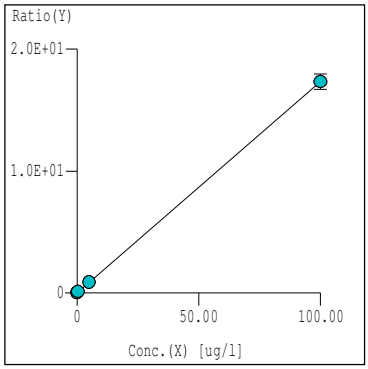


Curve Fit: Excluded
r = 0.0000

DL = --- ug/l
BEC = --- ug/l

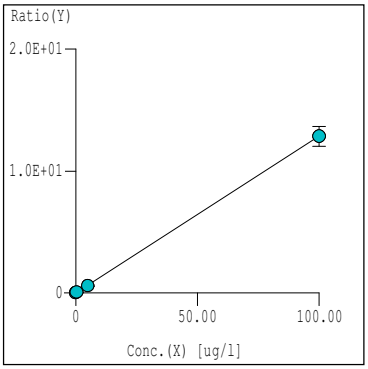
=== Graph Detail ===

Step Mass Element	ISTD	Unit
(1) 120 Sn	115	ug/l



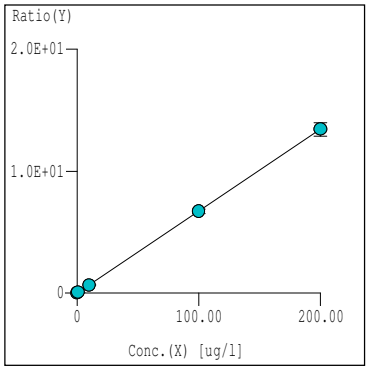
Curve Fit: Y=aX+b
r = 1.0000
Y = 1.731E-001*X +1.016E-002
X = 5.776E+000*Y -5.867E-002
DL = 1.174E-02 ug/l
BEC = 5.867E-02 ug/l

Step Mass Element	ISTD	Unit
(1) 121 Sb	115	ug/l



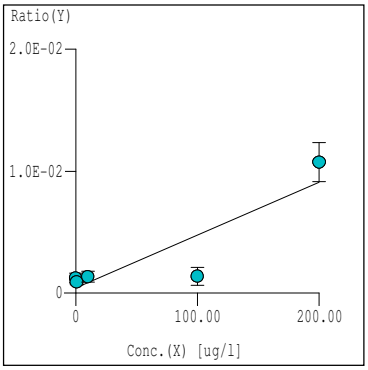
Curve Fit: Y=aX+b
r = 1.0000
Y = 1.287E-001*X -2.299E-002
X = 7.768E+000*Y +1.786E-001
DL = 1.624E-02 ug/l
BEC = -1.786E-01 ug/l

Step Mass Element	ISTD	Unit
(1) 137 Ba	115	ug/l



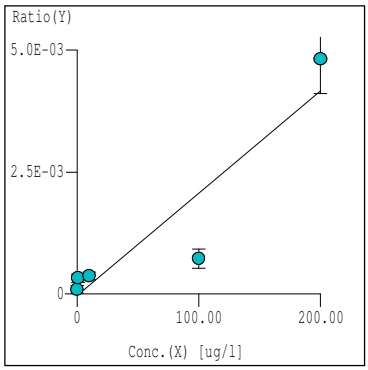
Curve Fit: Y=aX+b
r = 1.0000
Y = 6.720E-002*X -6.295E-003
X = 1.488E+001*Y +9.367E-002
DL = 6.766E-03 ug/l
BEC = -9.367E-02 ug/l

Step Mass Element	ISTD	Unit
(1) 140 Ce	115	ug/l



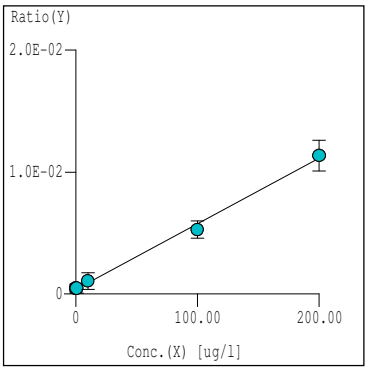
Curve Fit: Y=aX+b
r = 0.8894
Y = 4.330E-005*X +4.202E-004
X = 2.310E+004*Y -9.705E+000
DL = 26.91 ug/l
BEC = 9.705 ug/l

Step Mass Element	ISTD	Unit
(1) 142 Ce	115	ug/l



Curve Fit: Y=aX+b
r = 0.9224
Y = 2.103E-005*X -3.995E-005
X = 4.756E+004*Y +1.900E+000
DL = 11.12 ug/l
BEC = -1.900E+00 ug/l

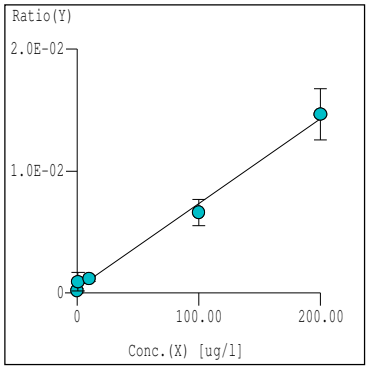
Step Mass Element	ISTD	Unit
(1) 182 W	209	ug/l



Curve Fit: Y=aX+b
r = 0.9983
Y = 5.375E-005*X +3.744E-004
X = 1.861E+004*Y -6.966E-000
DL = 16.31 ug/l
BEC = 6.966 ug/l

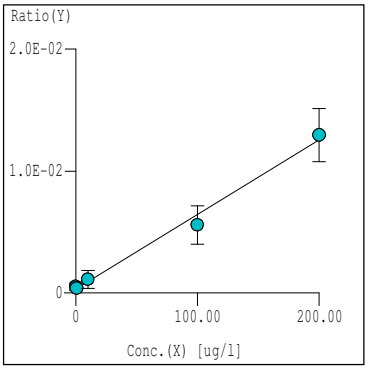
=== Graph Detail ===

Step Mass Element	ISTD	Unit
(1) 184 W	209	ug/l



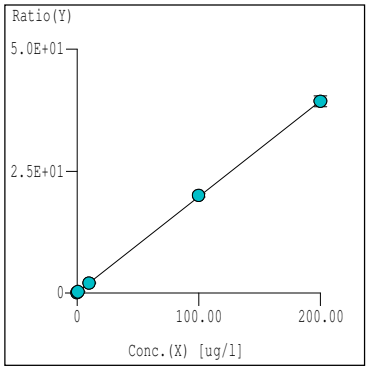
Curve Fit: Y=aX+b
r = 0.9969
Y = 6.958E-005*X +3.809E-004
X = 1.437E+004*Y -5.475E+000
DL = 8.293 ug/l
BEC = 5.475 ug/l

Step Mass Element	ISTD	Unit
(1) 186 W	209	ug/l



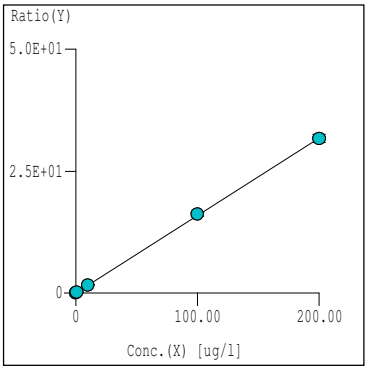
Curve Fit: Y=aX+b
r = 0.9959
Y = 6.120E-005*X +3.040E-004
X = 1.634E+004*Y -4.967E+000
DL = 14.42 ug/l
BEC = 4.967 ug/l

Step Mass Element	ISTD	Unit
(1) 203 Tl	209	ug/l



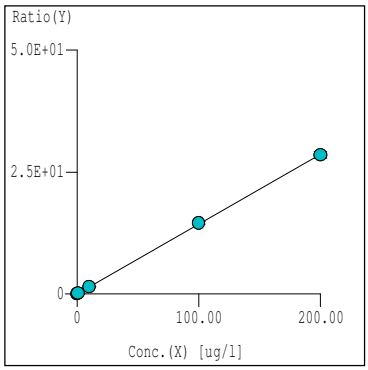
Curve Fit: Y=aX+b
r = 1.0000
Y = 1.968E-001*X +8.221E-002
X = 5.080E+000*Y -4.177E-001
DL = 7.991E-02 ug/l
BEC = 4.177E-01 ug/l

Step Mass Element	ISTD	Unit
(1) 206 Pb	209	ug/l



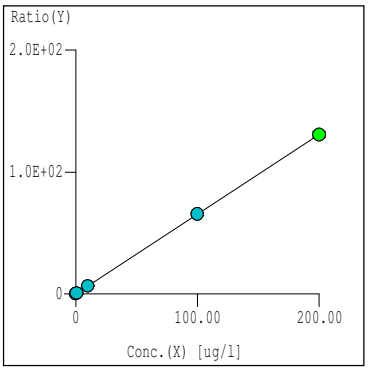
Curve Fit: Y=aX+b
r = 0.9999
Y = 1.588E-001*X +6.438E-002
X = 6.297E+000*Y -4.054E-001
DL = 2.885E-03 ug/l
BEC = 4.054E-01 ug/l

Step Mass Element	ISTD	Unit
(1) 207 Pb	209	ug/l



Curve Fit: Y=aX+b
r = 0.9999
Y = 1.427E-001*X +5.571E-002
X = 7.009E+000*Y -3.905E-001
DL = 4.522E-02 ug/l
BEC = 3.905E-01 ug/l

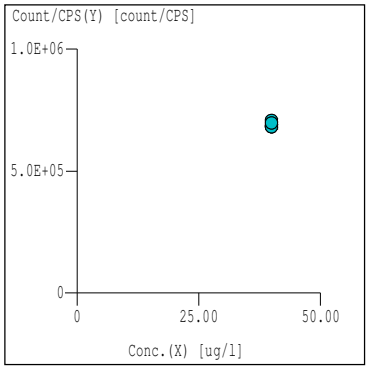
Step Mass Element	ISTD	Unit
(1) 208 Pb	209	ug/l



Curve Fit: Y=aX+b
r = 1.0000
Y = 6.531E-001*X +6.634E-002
X = 1.531E+000*Y -1.016E-001
DL = 9.894E-03 ug/l
BEC = 1.016E-01 ug/l

=== Graph Detail ===

Step	Mass	Element	ISTD	Unit
(1)	209	Bi	---	ug/l



Curve Fit: Excluded
r = 0.0000

DL = --- ug/l
BEC = --- ug/l

Calibration Blank QC Report

Data File:	C:\ICPCHEM\1\DATA\13F20100.B\003CAL
Date Acquired:	Jun 20 2013 11:50 am
Operator:	ICPMS 1 - JG
Sample Name:	CAL Blank
Misc Info:	60-22-473
Vial Number:	2101
Current Method:	C:\ICPCHEM\1\METHODS\6020G2W.M
Calibration File:	C:\ICPCHEM\1\CALIB\6020G2W.C
Last Cal Update:	Jun 20 2013 11:52 am
Sample Type:	CalBlk
Total Dil Factor:	1.00

QC&ISTD Elements

Element		CPS Mean		SD	RSD(%)
6	Li	1646939.00	A	34820.00	2.11
9	Be	200.00	P	50.44	25.22
11	B	1747.78	P	59.66	3.41
23	Na	135794.41	P	5700.00	4.20
24	Mg	5372.22	P	240.50	4.48
27	Al	5316.67	P	447.40	8.42
39	K	519649.00	M	11080.00	2.13
44	Ca	3277.23	P	117.60	3.59
45	Sc	879091.38	A	7722.00	0.88
47	Ti	58.89	P	17.10	29.04
50	V	208.89	P	13.47	6.45
51	V	2205.94	P	56.19	2.55
52	Cr	5638.89	P	87.01	1.54
53	Cr	141.11	P	8.39	5.95
55	Mn	1860.00	P	44.84	2.41
57	Fe	6881.11	P	91.55	1.33
59	Co	1793.33	P	84.13	4.69
60	Ni	212.22	P	30.25	14.25
63	Cu	811.11	P	48.57	5.99
66	Zn	931.11	P	68.66	7.37
74	Ge	197502.20	P	1615.00	0.82
75	As	-153.36	P	110.60	72.12
77	(As)	35.56	P	3.85	10.83
78	Se	6037.78	P	110.70	1.83
82	Se	-39.56	P	42.67	107.86
83	(Se)	815.56	P	23.65	2.90
88	Sr	143.33	P	29.06	20.27
89	Y	1026834.00	A	12250.00	1.19
98	Mo	109.19	P	10.41	9.53
99	(Mo)	157.78	P	48.34	30.64
101	Ru	221.11	P	38.92	17.60
102	Ru	422.22	P	42.86	10.15
104	Ru	252.22	P	32.37	12.83
106	(Cd)	241.11	P	22.19	9.20
107	Ag	76.67	P	17.64	23.01
108	(Cd)	7.78	P	7.70	98.97
111	Cd	235.86	P	27.97	11.86
114	Cd	115.56	P	12.62	10.92
115	In	981918.69	A	15210.00	1.55
118	(In)		P		
120	Sn	343.33	P	20.82	6.06
121	Sb	75.56	P	18.36	24.30
137	Ba	105.56	P	5.09	4.82
140	Ce	30.00	P	10.00	33.33
142	Ce	2.22	P	1.93	86.63
182	W	7.78	P	5.09	65.47
184	W	3.33	P	3.33	99.99
186	W	8.89	P	5.09	57.29
203	Tl	700.00	P	82.93	11.85
206	Pb	197.78	P	1.93	0.97
207	Pb	203.33	P	36.06	17.73
208	Pb	881.11	P	30.97	3.51
209	Bi	686715.63	P	6767.00	0.99

Calibration Standard QC Report

Data File: C:\ICPCHEM\1\DATA\13F20100.B\004CALS.D\004CALS.D#
Date Acquired: Jun 20 2013 11:54 am
Operator: ICPMS 1 - JG
Sample Name: CAL STD 1
Misc Info: 60-22-449
Vial Number: 2102
Current Method: C:\ICPCHEM\1\METHODS\6020G2W.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G2W.C
Last Cal Update: Jun 20 2013 11:52 am
Sample Type: CalStd
Total Dil Factor: 1.00

QC&ISTD Elements

Element	CPS Mean		SD	RSD(%)
6 Li	1669636.00	A	70370.00	4.21
9 Be	3715.55	P	85.14	2.29
11 B	4462.22	P	103.00	2.31
23 Na	262617.81	P	5084.00	1.94
24 Mg	84483.33	P	1443.00	1.71
27 Al	15088.89	P	200.00	1.33
39 K	625545.31	A	9004.00	1.44
44 Ca	6025.13	P	19.72	0.33
45 Sc	870326.81	A	29390.00	3.38
47 Ti	427.78	P	30.06	7.03
50 V	1002.22	P	60.12	6.00
51 V	12723.53	P	242.10	1.90
52 Cr	15008.89	P	227.50	1.52
53 Cr	1121.11	P	68.83	6.14
55 Mn	12558.89	P	386.20	3.08
57 Fe	9416.67	P	174.00	1.85
59 Co	11674.44	P	152.70	1.31
60 Ni	2330.00	P	103.30	4.43
63 Cu	5698.89	P	73.43	1.29
66 Zn	1935.56	P	57.96	2.99
74 Ge	196257.80	P	1570.00	0.80
75 As	990.26	P	111.90	11.30
77 (As)	111.11	P	18.36	16.52
78 Se	6104.44	P	84.94	1.39
82 Se	107.41	P	49.45	46.04
83 (Se)	781.11	P	45.50	5.83
88 Sr	138.89	P	6.94	5.00
89 Y	1010954.00	A	9379.00	0.93
98 Mo	1661.62	P	63.75	3.84
99 (Mo)	141.11	P	35.64	25.26
101 Ru	217.78	P	10.71	4.92
102 Ru	403.33	P	78.10	19.36
104 Ru	213.33	P	43.33	20.31
106 (Cd)	323.33	P	18.56	5.74
107 Ag	5330.00	P	43.33	0.81
108 (Cd)	75.56	P	15.40	20.38
111 Cd	1185.96	P	16.33	1.38
114 Cd	2574.44	P	83.69	3.25
115 In	949588.69	A	15560.00	1.64
118 (In)		P		
120 Sn	2275.55	P	156.40	6.87
121 Sb	1362.22	P	111.90	8.21
137 Ba	1627.78	P	25.24	1.55
140 Ce	21.11	P	5.09	24.12
142 Ce	7.78	P	1.93	24.75
182 W	7.78	P	6.94	89.22
184 W	15.56	P	12.62	81.13
186 W	6.67	P	8.82	132.29
203 Tl	3860.00	P	102.60	2.66
206 Pb	2803.33	P	37.56	1.34
207 Pb	2566.67	P	49.33	1.92
208 Pb	11572.22	P	95.70	0.83
209 Bi	682137.69	P	4487.00	0.66

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1669636.30	4.21	1646938.90	101.4	80 - 120	
45 Sc	870326.81	3.38	879091.44	99.0	80 - 120	
74 Ge	196257.77	0.80	197502.22	99.4	80 - 120	
115 In	949588.75	1.64	981918.75	96.7	80 - 120	
209 Bi	682137.75	0.66	686715.56	99.3	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F20100.B\003CALB.D\003CALB.D#

--- :Element Failures --- :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

Calibration Standard QC Report

Data File: C:\ICPCHEM\1\DATA\13F20100.B\005CALS.D\005CALS.D#
Date Acquired: Jun 20 2013 11:58 am
Operator: ICPMS 1 - JG
Sample Name: CAL STD 2
Misc Info: 60-22-448
Vial Number: 2103
Current Method: C:\ICPCHEM\1\METHODS\6020G2W.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G2W.C
Last Cal Update: Jun 20 2013 11:56 am
Sample Type: CalStd
Total Dil Factor: 1.00

QC&ISTD Elements

Element	CPS Mean		SD	RSD(%)
6 Li	1623571.00	A	71700.00	4.42
9 Be	37293.33	P	225.60	0.60
11 B	31475.56	P	939.20	2.98
23 Na	1473305.00	A	23520.00	1.60
24 Mg	832237.63	A	7962.00	0.96
27 Al	102610.00	P	858.50	0.84
39 K	1551362.00	A	6797.00	0.44
44 Ca	30868.28	P	560.60	1.82
45 Sc	881894.81	A	23960.00	2.72
47 Ti	3985.55	P	184.70	4.63
50 V	8108.89	P	150.30	1.85
51 V	108819.80	P	822.30	0.76
52 Cr	98313.33	P	1369.00	1.39
53 Cr	10851.11	P	191.60	1.77
55 Mn	115552.20	P	2257.00	1.95
57 Fe	30718.89	P	261.20	0.85
59 Co	103522.20	P	642.10	0.62
60 Ni	23121.11	P	510.70	2.21
63 Cu	53411.11	P	966.50	1.81
66 Zn	12314.44	P	387.70	3.15
74 Ge	194811.09	P	1299.00	0.67
75 As	10722.38	P	298.20	2.78
77 (As)	754.44	P	41.68	5.52
78 Se	8156.67	P	79.65	0.98
82 Se	885.29	P	101.20	11.43
83 (Se)	770.00	P	50.00	6.49
88 Sr	145.56	P	16.78	11.53
89 Y	1011746.00	A	20330.00	2.01
98 Mo	15843.56	P	410.90	2.59
99 (Mo)	127.78	P	8.39	6.57
101 Ru	173.33	P	47.26	27.27
102 Ru	344.44	P	67.36	19.56
104 Ru	224.44	P	68.66	30.59
106 (Cd)	1163.33	P	46.67	4.01
107 Ag	53450.00	P	682.40	1.28
108 (Cd)	693.33	P	15.28	2.20
111 Cd	10488.17	P	107.60	1.03
114 Cd	24761.11	P	32.03	0.13
115 In	955866.81	A	20310.00	2.12
118 (In)		P		
120 Sn	20842.22	P	619.10	2.97
121 Sb	13757.78	P	1209.00	8.79
137 Ba	15608.89	P	458.90	2.94
140 Ce	32.22	P	10.71	33.24
142 Ce	8.89	P	1.93	21.66
182 W	17.78	P	11.71	65.87
184 W	20.00	P	3.33	16.67
186 W	18.89	P	12.62	66.81
203 Tl	34392.22	P	1008.00	2.93
206 Pb	27820.00	P	643.10	2.31
207 Pb	24893.33	P	562.60	2.26
208 Pb	112114.40	P	2642.00	2.36
209 Bi	681022.19	P	9632.00	1.41

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1623571.40	4.42	1646938.90	98.6	80 - 120	
45 Sc	881894.75	2.72	879091.44	100.3	80 - 120	
74 Ge	194811.11	0.67	197502.22	98.6	80 - 120	
115 In	955866.75	2.12	981918.75	97.3	80 - 120	
209 Bi	681022.25	1.41	686715.56	99.2	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F20100.B\003CALB.D\003CALB.D#

--- :Element Failures --- :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

Calibration Standard QC Report

Data File: C:\ICPCHEM\1\DATA\13F20100.B\006CALS.D\006CALS.D#
Date Acquired: Jun 20 2013 12:01 pm
Operator: ICPMS 1 - JG
Sample Name: CAL STD 3
Misc Info: 60-22-447
Vial Number: 2104
Current Method: C:\ICPCHEM\1\METHODS\6020G2W.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G2W.C
Last Cal Update: Jun 20 2013 12:00 pm
Sample Type: CalStd
Total Dil Factor: 1.00

QC&ISTD Elements

Element	CPS Mean		SD	RSD(%)
6 Li	1663152.00	A	28760.00	1.73
9 Be	382425.50	P	7672.00	2.01
11 B	291246.69	P	3992.00	1.37
23 Na	13293710.00	A	184100.00	1.38
24 Mg	8285101.00	A	103000.00	1.24
27 Al	1043522.00	A	25270.00	2.42
39 K	10697250.00	A	109100.00	1.02
44 Ca	284886.19	P	2865.00	1.01
45 Sc	904085.13	A	14990.00	1.66
47 Ti	41040.00	P	1108.00	2.70
50 V	81644.45	P	1833.00	2.25
51 V	1124931.00	A	3329.00	0.30
52 Cr	983657.50	A	21940.00	2.23
53 Cr	112195.60	P	1191.00	1.06
55 Mn	1203011.00	A	9686.00	0.81
57 Fe	250416.70	P	2879.00	1.15
59 Co	1107222.00	A	19220.00	1.74
60 Ni	238686.70	P	1047.00	0.44
63 Cu	542856.63	P	6319.00	1.16
66 Zn	120396.70	P	2556.00	2.12
74 Ge	202066.70	P	3045.00	1.51
75 As	108834.50	P	546.60	0.50
77 (As)	7135.56	P	122.30	1.71
78 Se	28040.00	P	349.80	1.25
82 Se	9135.48	P	115.40	1.26
83 (Se)	748.89	P	38.92	5.20
88 Sr	263.33	P	38.44	14.60
89 Y	1024597.00	A	22200.00	2.17
98 Mo	160383.30	P	3464.00	2.16
99 (Mo)	167.78	P	11.71	6.98
101 Ru	157.78	P	26.74	16.95
102 Ru	368.89	P	44.76	12.13
104 Ru	288.89	P	29.12	10.08
106 (Cd)	9744.44	P	220.90	2.27
107 Ag	554983.31	P	15740.00	2.84
108 (Cd)	7210.00	P	190.00	2.64
111 Cd	106541.80	P	917.40	0.86
114 Cd	252285.50	P	4052.00	1.61
115 In	972617.50	A	16590.00	1.71
118 (In)		P		
120 Sn	209257.80	P	3598.00	1.72
121 Sb	613.33	P	50.44	8.22
137 Ba	162876.70	P	1937.00	1.19
140 Ce	33.33	P	17.64	52.92
142 Ce	17.78	P	5.09	28.64
182 W	93.33	P	13.33	14.28
184 W	116.67	P	18.56	15.91
186 W	98.89	P	28.74	29.06
203 Tl	353735.50	P	7451.00	2.11
206 Pb	286431.09	P	8452.00	2.95
207 Pb	257095.50	P	6431.00	2.50
208 Pb	1158087.00	P	30910.00	2.67
209 Bi	707086.69	P	6568.00	0.93

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1663152.00	1.73	1646938.90	101.0	80 - 120	
45 Sc	904085.06	1.66	879091.44	102.8	80 - 120	
74 Ge	202066.66	1.51	197502.22	102.3	80 - 120	
115 In	972617.50	1.71	981918.75	99.1	80 - 120	
209 Bi	707086.63	0.93	686715.56	103.0	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F20100.B\003CALB.D\003CALB.D#

--- :Element Failures --- :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

Calibration Standard QC Report

Data File: C:\ICPCHEM\1\DATA\13F20100.B\007CALS.D\007CALS.D#
Date Acquired: Jun 20 2013 12:05 pm
Operator: ICPMS 1 - JG
Sample Name: CAL STD 4
Misc Info: 60-22-446
Vial Number: 2105
Current Method: C:\ICPCHEM\1\METHODS\6020G2W.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G2W.C
Last Cal Update: Jun 20 2013 12:04 pm
Sample Type: CalStd
Total Dil Factor: 1.00

QC&ISTD Elements

Element	CPS Mean		SD	RSD(%)
6 Li	1624809.00	A	1653.00	0.10
9 Be	770328.00	A	12310.00	1.60
11 B	588886.13	A	21790.00	3.70
23 Na	############	A	3743000.00	2.89
24 Mg	80996728.00	A	780700.00	0.96
27 Al	2031129.00	A	29870.00	1.47
39 K	99661536.00	A	1714000.00	1.72
44 Ca	2937157.00	A	25230.00	0.86
45 Sc	910860.13	A	3669.00	0.40
47 Ti	81885.55	P	3051.00	3.73
50 V	165386.70	P	2997.00	1.81
51 V	2274191.00	A	51150.00	2.25
52 Cr	1938464.00	A	39450.00	2.04
53 Cr	219703.30	P	4272.00	1.94
55 Mn	2348274.00	A	37500.00	1.60
57 Fe	2453339.00	A	42950.00	1.75
59 Co	2153158.00	A	36580.00	1.70
60 Ni	458125.59	P	5630.00	1.23
63 Cu	1088725.00	A	16150.00	1.48
66 Zn	230937.80	P	2318.00	1.00
74 Ge	201750.00	P	2359.00	1.17
75 As	212371.80	P	545.00	0.26
77 (As)	13418.89	P	204.20	1.52
78 Se	49653.33	P	1112.00	2.24
82 Se	17750.97	P	220.40	1.24
83 (Se)	756.67	P	12.02	1.59
88 Sr	562.22	P	76.33	13.58
89 Y	1027297.00	A	20010.00	1.95
98 Mo	318698.31	P	5231.00	1.64
99 (Mo)	148.89	P	22.19	14.90
101 Ru	196.67	P	3.33	1.69
102 Ru	365.56	P	43.38	11.87
104 Ru	342.22	P	36.56	10.68
106 (Cd)	18646.67	P	310.20	1.66
107 Ag	1069601.00	A	16440.00	1.54
108 (Cd)	13614.44	P	283.20	2.08
111 Cd	201927.70	P	4017.00	1.99
114 Cd	484547.81	P	11990.00	2.47
115 In	950752.19	A	12030.00	1.27
118 (In)		P		
120 Sn	411624.41	P	9946.00	2.42
121 Sb	305313.31	P	15760.00	5.16
137 Ba	319364.41	P	9165.00	2.87
140 Ce	255.56	P	39.77	15.56
142 Ce	114.44	P	15.75	13.76
182 W	197.78	P	21.43	10.84
184 W	255.56	P	37.47	14.66
186 W	225.56	P	36.72	16.28
203 Tl	685302.19	P	17500.00	2.55
206 Pb	552363.31	P	13670.00	2.47
207 Pb	496276.59	P	10290.00	2.07
208 Pb	2276279.00	A	45410.00	1.99
209 Bi	697053.31	P	5154.00	0.74

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1624808.90	0.10	1646938.90	98.7	80 - 120	
45 Sc	910860.06	0.40	879091.44	103.6	80 - 120	
74 Ge	201750.00	1.17	197502.22	102.2	80 - 120	
115 In	950752.19	1.27	981918.75	96.8	80 - 120	
209 Bi	697053.31	0.74	686715.56	101.5	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F20100.B\003CALB.D\003CALB.D#

--- :Element Failures --- :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

Blank QC Report

Data File: C:\ICPCHEM\1\DATA\13F20100.B\008BLNK.D\008BLNK.D#
Date Acquired: Jun 20 2013 12:09 pm
Acq. Method: 6020G2W.M
Operator: ICPMS 1 - JG
Sample Name: Blank
Misc Info: Blank
Vial Number: 1
Current Method: C:\ICPCHEM\1\METHODS\6020G2W.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G2W.C
Last Cal. Update: Jun 20 2013 12:07 pm
Sample Type: Blank
Dilution Factor: 1.00

QC Elements

Element	Corr. Conc.		RSD(%)	Raw Conc.	High Limit	Flag
9 Be	0.5794	ug/l	7.66	0.5794	4.00	
11 B	4.04	ug/l	8.93	4.04	15.00	
23 Na	-4.09	ug/l	48.29	-4.09	40.00	
24 Mg	-4.476	ug/l	42.85	-4.476	50.00	
27 Al	-0.3688	ug/l	9.27	-0.3688	15.00	
39 K	-7.048	ug/l	17.75	-7.048	40.00	
44 Ca	7.777	ug/l	22.93	7.777	50.00	
47 Ti	0.00952	ug/l	155.15	0.00952	20.00	
50 V	0.1194	ug/l	43.30	0.1194	5.00	
51 V	0.1949	ug/l	13.44	0.1949	5.00	
52 Cr	-0.1699	ug/l	12.30	-0.1699	5.00	
53 Cr	-0.2892	ug/l	25.21	-0.2892	5.00	
55 Mn	-0.3218	ug/l	19.77	-0.3218	5.00	
57 Fe	2.682	ug/l	69.39	2.682	50.00	
59 Co	-0.3158	ug/l	11.32	-0.3158	5.00	
60 Ni	-0.6606	ug/l	10.35	-0.6606	5.00	
63 Cu	0.01942	ug/l	243.72	0.01942	10.00	
66 Zn	-0.9854	ug/l	8.84	-0.9854	20.00	
75 As	-0.4313	ug/l	19.91	-0.4313	5.00	
77 (As)	-0.9885	ug/l	2.14	-0.9885	10.00	
78 Se	-0.8029	ug/l	73.53	-0.8029	10.00	
82 Se	-0.8922	ug/l	10.05	-0.8922	5.00	
83 (Se)	-96	ug/l	76.47	-96	10.00	
88 Sr	-31.6	ug/l	29.00	-31.6	5.00	
89 Y	----	ug/l	--------	----	---	
98 Mo	0.1321	ug/l	48.57	0.1321	5.00	
99 (Mo)	----	ug/l	--------	----	---	
101 Ru	427.2	ug/l	88.41	427.2	5.00	
102 Ru	700.8	ug/l	100.98	700.8	5.00	
104 Ru	-0.8294	ug/l	2876.80	-0.8294	5.00	
106 (Cd)	0.01193	ug/l	1478.60	0.01193	5.00	
107 Ag	0.1916	ug/l	23.17	0.1916	5.00	
108 (Cd)	-0.4465	ug/l	18.29	-0.4465	10.00	
111 Cd	-0.3417	ug/l	17.16	-0.3417	5.00	
114 Cd	-0.1774	ug/l	27.16	-0.1774	5.00	
120 Sn	0.3891	ug/l	7.75	0.3891	10.00	
121 Sb	1.498	ug/l	10.54	1.498	10.00	
137 Ba	0.2156	ug/l	26.35	0.2156	10.00	
140 Ce	10.64	ug/l	66.09	10.64	10.00	
142 Ce	17.36	ug/l	78.86	17.36	10.00	
182 W	-0.9871	ug/l	423.77	-0.9871	10.00	
184 W	1.885	ug/l	82.44	1.885	10.00	
186 W	-0.7843	ug/l	612.78	-0.7843	10.00	
203 Tl	-0.1353	ug/l	28.17	-0.1353	5.00	
206 Pb	-0.249	ug/l	14.64	-0.249	5.00	
207 Pb	-0.2515	ug/l	19.77	-0.2515	5.00	
208 Pb	0.04575	ug/l	97.46	0.04575	5.00	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1610345.10	2.23	1646938.90	97.8	80 - 120	
45 Sc	891577.56	2.99	879091.44	101.4	80 - 120	
74 Ge	196868.89	1.28	197502.22	99.7	80 - 120	
115 In	955002.19	1.97	981918.75	97.3	80 - 120	
209 Bi	693662.25	0.80	686715.56	101.0	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F20100.B\003CALB.D\003CALB.D#

0 :Element Failures 15 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Nnumber of ISTD Failures Allowed

QC Results:
Analytes: Pass
ISTD: Pass

Blank QC Report

Data File: C:\ICPCHEM\1\DATA\13F20100.B\009BLNK.D\009BLNK.D#
Date Acquired: Jun 20 2013 12:13 pm
Acq. Method: 6020G2W.M
Operator: ICPMS 1 - JG
Sample Name: Blank
Misc Info: Blank
Vial Number: 1
Current Method: C:\ICPCHEM\1\METHODS\6020G2W.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G2W.C
Last Cal. Update: Jun 20 2013 12:07 pm
Sample Type: Blank
Dilution Factor: 1.00

QC Elements

Element	Corr. Conc.		RSD(%)	Raw Conc.	High Limit	Flag
9 Be	0.539	ug/l	2.21	0.539	4.00	
11 B	1.665	ug/l	11.85	1.665	15.00	
23 Na	-5.657	ug/l	18.93	-5.657	40.00	
24 Mg	-6.146	ug/l	6.37	-6.146	50.00	
27 Al	-0.4222	ug/l	6.30	-0.4222	15.00	
39 K	-10.53	ug/l	16.50	-10.53	40.00	
44 Ca	5.636	ug/l	13.29	5.636	50.00	
47 Ti	-0.05094	ug/l	22.10	-0.05094	20.00	
50 V	0.1017	ug/l	12.73	0.1017	5.00	
51 V	0.16	ug/l	10.66	0.16	5.00	
52 Cr	-0.2211	ug/l	13.32	-0.2211	5.00	
53 Cr	-0.35	ug/l	6.33	-0.35	5.00	
55 Mn	-0.3706	ug/l	2.39	-0.3706	5.00	
57 Fe	0.7233	ug/l	206.42	0.7233	50.00	
59 Co	-0.3483	ug/l	5.46	-0.3483	5.00	
60 Ni	-0.7104	ug/l	2.05	-0.7104	5.00	
63 Cu	-0.02707	ug/l	57.59	-0.02707	10.00	
66 Zn	-1.011	ug/l	2.69	-1.011	20.00	
75 As	-0.4146	ug/l	18.05	-0.4146	5.00	
77 (As)	-1.165	ug/l	19.96	-1.165	10.00	
78 Se	-0.8317	ug/l	77.16	-0.8317	10.00	
82 Se	-0.6806	ug/l	36.70	-0.6806	5.00	
83 (Se)	84.88	ug/l	103.83	84.88	10.00	
88 Sr	-35.46	ug/l	15.32	-35.46	5.00	
89 Y	----	ug/l	--------	----	---	
98 Mo	0.01498	ug/l	122.70	0.01498	5.00	
99 (Mo)	----	ug/l	--------	----	---	
101 Ru	303.5	ug/l	142.54	303.5	5.00	
102 Ru	421.4	ug/l	102.68	421.4	5.00	
104 Ru	-34.71	ug/l	219.68	-34.71	5.00	
106 (Cd)	0.3299	ug/l	102.52	0.3299	5.00	
107 Ag	0.1428	ug/l	4.90	0.1428	5.00	
108 (Cd)	-0.3842	ug/l	25.45	-0.3842	10.00	
111 Cd	-0.343	ug/l	11.26	-0.343	5.00	
114 Cd	-0.2344	ug/l	2.82	-0.2344	5.00	
120 Sn	0.148	ug/l	4.39	0.148	10.00	
121 Sb	0.5274	ug/l	5.12	0.5274	10.00	
137 Ba	0.1782	ug/l	12.82	0.1782	10.00	
140 Ce	12.44	ug/l	44.30	12.44	10.00	
142 Ce	21.44	ug/l	2.12	21.44	10.00	
182 W	-2.285	ug/l	234.05	-2.285	10.00	
184 W	1.814	ug/l	177.18	1.814	10.00	
186 W	5.37	ug/l	33.35	5.37	10.00	
203 Tl	-0.2048	ug/l	2.10	-0.2048	5.00	
206 Pb	-0.3007	ug/l	9.48	-0.3007	5.00	
207 Pb	-0.3015	ug/l	7.41	-0.3015	5.00	
208 Pb	-0.003711	ug/l	358.66	-0.003711	5.00	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1696135.90	2.30	1646938.90	103.0	80 - 120	
45 Sc	926527.50	1.31	879091.44	105.4	80 - 120	
74 Ge	200197.77	1.78	197502.22	101.4	80 - 120	
115 In	973713.81	2.33	981918.75	99.2	80 - 120	
209 Bi	702541.06	0.81	686715.56	102.3	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F20100.B\003CALB.D\003CALB.D#

0 :Element Failures 15 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Nnumber of ISTD Failures Allowed

QC Results:
Analytes: Pass
ISTD: Pass

ICV QC Report

Data File: C:\ICPCHEM\1\DATA\13F20100.B\010ICV1.D\010ICV1.D#
Date Acquired: Jun 20 2013 12:16 pm
Acq. Method: 6020G2W.M
Operator: ICPMS 1 - JG
Sample Name: ICV
Misc Info: 60-22-450
Vial Number: 2106
Current Method: C:\ICPCHEM\1\METHODS\6020G2W.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G2W.C
Last Cal. Update: Jun 20 2013 12:07 pm
Sample Type: ICV1
Dilution Factor: 1.00

QC Elements

Element	Conc.		RSD(%)	Expected	QC Range(%)	Flag
9 Be	51.23	ug/l	2.88	50.00	90 - 110	
11 B	51.12	ug/l	2.10	50.00	90 - 110	
23 Na	510.20	ug/l	3.47	500.00	90 - 110	
24 Mg	508.90	ug/l	2.99	500.00	90 - 110	
27 Al	47.58	ug/l	2.05	50.00	90 - 110	
39 K	506.70	ug/l	1.43	500.00	90 - 110	
44 Ca	491.10	ug/l	1.11	500.00	90 - 110	
47 Ti	24.91	ug/l	1.85	25.00	90 - 110	
50 V	49.51	ug/l	3.86	50.00	90 - 110	
51 V	49.63	ug/l	2.01	50.00	90 - 110	
52 Cr	50.41	ug/l	1.82	50.00	90 - 110	
53 Cr	50.96	ug/l	1.36	50.00	90 - 110	
55 Mn	50.15	ug/l	2.48	50.00	90 - 110	
57 Fe	500.00	ug/l	3.27	500.00	90 - 110	
59 Co	48.84	ug/l	3.67	50.00	90 - 110	
60 Ni	51.99	ug/l	3.47	50.00	90 - 110	
63 Cu	50.84	ug/l	3.23	50.00	90 - 110	
66 Zn	53.02	ug/l	2.54	50.00	90 - 110	
75 As	51.54	ug/l	2.79	50.00	90 - 110	
77 (As)	50.65	ug/l	2.83	50.00	90 - 110	
78 Se	51.24	ug/l	4.98	50.00	90 - 110	
82 Se	52.39	ug/l	4.02	50.00	90 - 110	
83 (Se)	174.40	ug/l	83.54	50.00	90 - 110	
88 Sr	134.50	ug/l	21.20	50.00	90 - 110	Fail
89 Y	--------	ug/l	--------	50.00	90 - 110	
98 Mo	25.01	ug/l	1.23	25.00	90 - 110	
99 (Mo)	--------	ug/l	--------	---	##### - #####	
101 Ru	649.50	ug/l	4.10	50.00	90 - 110	Fail
102 Ru	891.60	ug/l	41.84	50.00	90 - 110	Fail
104 Ru	-21.03	ug/l	60.44	50.00	90 - 110	Fail
106 (Cd)	50.55	ug/l	1.80	50.00	90 - 110	
107 Ag	50.24	ug/l	3.50	50.00	90 - 110	
108 (Cd)	49.41	ug/l	2.72	50.00	90 - 110	
111 Cd	50.91	ug/l	2.15	50.00	90 - 110	
114 Cd	51.39	ug/l	4.20	50.00	90 - 110	
120 Sn	26.01	ug/l	3.27	25.00	90 - 110	
121 Sb	25.60	ug/l	7.95	25.00	90 - 110	
137 Ba	48.99	ug/l	3.63	50.00	90 - 110	
140 Ce	19.46	ug/l	21.03	50.00	90 - 110	Fail
142 Ce	31.79	ug/l	45.46	50.00	90 - 110	Fail
182 W	4.70	ug/l	88.21	50.00	90 - 110	Fail
184 W	10.70	ug/l	67.10	50.00	90 - 110	Fail
186 W	9.30	ug/l	48.65	50.00	90 - 110	Fail
203 Tl	51.41	ug/l	2.67	50.00	90 - 110	
206 Pb	52.15	ug/l	2.79	50.00	90 - 110	
207 Pb	51.02	ug/l	3.36	50.00	90 - 110	
208 Pb	51.29	ug/l	2.85	50.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1675879.80	4.63	1646938.90	101.8	80 - 120	
45 Sc	920697.56	3.12	879091.44	104.7	80 - 120	
74 Ge	204298.89	1.71	197502.22	103.4	80 - 120	
115 In	983528.00	2.88	981918.75	100.2	80 - 120	
209 Bi	711101.06	1.27	686715.56	103.6	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F20100.B\003CALB.D\003CALB.D#

9 :Element Failures 10 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:

Analytes: Pass
ISTD: Pass

ICB QC Report

Data File: C:\ICPCHEM\1\DATA\13F20100.B\011_ICB.D\011_ICB.D#
Date Acquired: Jun 20 2013 12:20 pm
Acq. Method: 6020G2W.M
Operator: ICPMS 1 - JG
Sample Name: ICB
Misc Info: 60-22-473
Vial Number: 5
Current Method: C:\ICPCHEM\1\METHODS\6020G2W.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G2W.C
Last Cal. Update: Jun 20 2013 12:07 pm
Sample Type: ICB
Dilution Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	High Limit	Flag
9 Be	0.53 ug/l	1.35	1.00	
11 B	1.74 ug/l	2.50	5.00	
23 Na	-6.34 ug/l	6.04	40.00	
24 Mg	-7.49 ug/l	2.82	40.00	
27 Al	-0.52 ug/l	5.03	5.00	
39 K	-9.40 ug/l	9.58	40.00	
44 Ca	6.31 ug/l	0.12	40.00	
47 Ti	-0.04 ug/l	37.10	5.00	
50 V	0.07 ug/l	37.47	2.00	
51 V	0.15 ug/l	3.86	2.00	
52 Cr	-0.24 ug/l	2.38	2.00	
53 Cr	-0.36 ug/l	0.90	2.00	
55 Mn	-0.38 ug/l	2.52	2.00	
57 Fe	-0.40 ug/l	214.84	40.00	
59 Co	-0.36 ug/l	1.64	2.00	
60 Ni	-0.72 ug/l	1.46	2.00	
63 Cu	-0.05 ug/l	12.37	5.00	
66 Zn	-0.97 ug/l	6.40	5.00	
75 As	-0.41 ug/l	6.28	2.00	
77 (As)	-0.87 ug/l	29.24	3.00	
78 Se	-0.37 ug/l	176.68	3.00	
82 Se	-0.37 ug/l	35.46	2.00	
83 (Se)	18.73 ug/l	366.74	3.00	
88 Sr	-21.43 ug/l	14.86	2.00	
89 Y	-------- ug/l	--------	3.00	
98 Mo	0.01 ug/l	149.95	3.00	
99 (Mo)	-------- ug/l	--------	---	
101 Ru	556.10 ug/l	29.17	3.00	Fail
102 Ru	886.00 ug/l	24.71	3.00	Fail
104 Ru	-115.10 ug/l	64.93	3.00	
106 (Cd)	0.06 ug/l	629.43	3.00	
107 Ag	0.14 ug/l	7.30	2.00	
108 (Cd)	-0.41 ug/l	24.08	3.00	
111 Cd	-0.38 ug/l	4.35	1.00	
114 Cd	-0.24 ug/l	5.98	1.00	
120 Sn	0.17 ug/l	7.62	5.00	
121 Sb	0.82 ug/l	8.84	3.00	
137 Ba	0.16 ug/l	4.79	2.00	
140 Ce	20.07 ug/l	50.57	2.00	Fail
142 Ce	25.98 ug/l	52.43	2.00	Fail
182 W	0.13 ug/l	2637.90	3.00	
184 W	0.92 ug/l	453.10	3.00	
186 W	-0.81 ug/l	222.57	3.00	
203 Tl	-0.21 ug/l	8.13	2.00	
206 Pb	-0.31 ug/l	0.69	3.00	
207 Pb	-0.29 ug/l	1.42	3.00	
208 Pb	0.00 ug/l	124.69	1.00	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1677638.80	2.98	1646938.90	101.9	80 - 120	
45 Sc	929249.06	0.70	879091.44	105.7	80 - 120	
74 Ge	199561.11	1.32	197502.22	101.0	80 - 120	
115 In	964702.06	0.51	981918.75	98.2	80 - 120	
209 Bi	698253.31	0.37	686715.56	101.7	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F20100.B\003CALB.D\003CALB.D#

4 :Element Failures 0 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Nnumber of ISTD Failures Allowed

Data Results:

Analytes: Fail
ISTD: Pass

ICS-A QC Report

Data File: C:\ICPCHEM\1\DATA\13F20100.B\012ICSA.D\012ICSA.D#
Date Acquired: Jun 20 2013 12:24 pm
Acq. Method: 6020G2W.M
Operator: ICPMS 1 - JG
Sample Name: ICS A
Misc Info: 60-22-474
Vial Number: 1207
Current Method: C:\ICPCHEM\1\METHODS\6020G2W.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G2W.C
Last Cal. Update: Jun 20 2013 12:07 pm
Sample Type: ICS-A
Dilution Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	High Limit	Flag
9 Be	0.50 ug/l	0.64	10.00	
11 B	3.09 ug/l	3.96	10.00	
23 Na	99490.00 ug/l	3.89	1.20	
24 Mg	98500.00 ug/l	3.97	1.20	
27 Al	99030.00 ug/l	4.26	1.20	
39 K	99550.00 ug/l	2.95	1.20	
44 Ca	99350.00 ug/l	2.64	1.20	
47 Ti	2205.00 ug/l	2.37	1.20	
50 V	1721.00 ug/l	3.32	10.00	
51 V	0.35 ug/l	16.41	10.00	
52 Cr	1.15 ug/l	10.32	10.00	
53 Cr	1.51 ug/l	8.64	10.00	
55 Mn	1.30 ug/l	5.41	10.00	
57 Fe	96990.00 ug/l	3.18	10.00	Fail
59 Co	1.07 ug/l	5.47	10.00	
60 Ni	1.66 ug/l	2.40	10.00	
63 Cu	2.92 ug/l	2.77	10.00	
66 Zn	2.56 ug/l	3.57	10.00	
75 As	0.01 ug/l	1469.30	10.00	
77 (As)	3.41 ug/l	8.23	10.00	
78 Se	5.56 ug/l	2.65	10.00	
82 Se	0.51 ug/l	154.94	10.00	
83 (Se)	101.00 ug/l	117.23	10.00	
88 Sr	3795.00 ug/l	2.33	10.00	
89 Y	-------- ug/l	--------	10.00	
98 Mo	2174.00 ug/l	0.84	1.20	
99 (Mo)	-------- ug/l	--------	---	
101 Ru	1705.00 ug/l	4.61	10.00	
102 Ru	2484.00 ug/l	4.02	10.00	
104 Ru	-287.70 ug/l	0.73	10.00	
106 (Cd)	0.72 ug/l	42.51	10.00	
107 Ag	0.22 ug/l	18.56	10.00	
108 (Cd)	15.71 ug/l	1.78	10.00	
111 Cd	0.08 ug/l	94.28	10.00	
114 Cd	1.03 ug/l	2.55	10.00	
120 Sn	0.17 ug/l	6.04	10.00	
121 Sb	0.95 ug/l	3.63	10.00	
137 Ba	7.82 ug/l	4.33	10.00	
140 Ce	1279.00 ug/l	7.30	10.00	
142 Ce	387.20 ug/l	10.12	10.00	
182 W	6028.00 ug/l	3.51	10.00	
184 W	5516.00 ug/l	2.36	10.00	
186 W	5701.00 ug/l	1.00	10.00	
203 Tl	-0.24 ug/l	4.60	10.00	
206 Pb	-0.01 ug/l	536.45	10.00	
207 Pb	0.01 ug/l	499.74	10.00	
208 Pb	0.30 ug/l	0.43	10.00	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1545227.90	1.98	1646938.90	93.8	60 - 120	
45 Sc	869490.25	1.55	879091.44	98.9	60 - 120	
74 Ge	189156.66	1.51	197502.22	95.8	60 - 120	
115 In	866780.25	1.65	981918.75	88.3	60 - 120	
209 Bi	606405.56	1.60	686715.56	88.3	60 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F20100.B\003CALB.D\003CALB.D#

1 :Element Failures 0 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Nnumber of ISTD Failures Allowed

Data Results:

Analytes: Fail
ISTD: Pass

ICS-AB QC Report

Data File: C:\ICPCHEM\1\DATA\13F20100.B\013ICSAB.D\013ICSAB.D#
Date Acquired: Jun 20 2013 12:28 pm
Acq. Method: 6020G2W.M
Operator: ICPMS 1 - JG
Sample Name: ICS AB
Misc Info: 60-22-475
Vial Number: 1307
Current Method: C:\ICPCHEM\1\METHODS\6020G2W.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G2W.C
Last Cal. Update: Jun 20 2013 12:07 pm
Sample Type: ICS-AB
Dilution Factor: 1.00

QC Elements

Element	Conc.		RSD(%)	Expected	QC Range(%)	Flag
9 Be	0.49	ug/l	0.93	0.00	0 - 0	
11 B	2.51	ug/l	4.21	0.00	0 - 0	
23 Na	98040.00	ug/l	4.31	100000.00	80 - 120	
24 Mg	101600.00	ug/l	4.42	100000.00	80 - 120	
27 Al	98000.00	ug/l	2.36	100000.00	80 - 120	
39 K	100100.00	ug/l	3.00	100000.00	80 - 120	
44 Ca	99310.00	ug/l	2.71	100000.00	80 - 120	
47 Ti	2235.00	ug/l	3.18	2000.00	80 - 120	
50 V	1767.00	ug/l	3.52	40.00	80 - 120	Fail
51 V	43.52	ug/l	3.36	40.00	80 - 120	
52 Cr	22.11	ug/l	4.50	20.00	80 - 120	
53 Cr	22.68	ug/l	5.36	20.00	80 - 120	
55 Mn	21.98	ug/l	5.11	20.00	80 - 120	
57 Fe	99080.00	ug/l	3.76	100000.00	80 - 120	
59 Co	41.35	ug/l	4.13	40.00	80 - 120	
60 Ni	41.07	ug/l	5.79	40.00	80 - 120	
63 Cu	21.92	ug/l	5.52	20.00	80 - 120	
66 Zn	20.23	ug/l	5.39	20.00	80 - 120	
75 As	19.24	ug/l	2.78	20.00	80 - 120	
77 (As)	23.13	ug/l	3.48	0.00	0 - 0	
78 Se	25.63	ug/l	2.46	0.00	0 - 0	
82 Se	18.39	ug/l	3.90	20.00	80 - 120	
83 (Se)	-132.90	ug/l	98.42	0.00	0 - 0	
88 Sr	3733.00	ug/l	2.68	0.00	0 - 0	Fail
89 Y	--------	ug/l	--------	0.00	0 - 0	
98 Mo	2166.00	ug/l	1.05	2000.00	80 - 120	
99 (Mo)	--------	ug/l	--------	---	##### - #####	
101 Ru	1696.00	ug/l	6.86	0.00	0 - 0	Fail
102 Ru	1874.00	ug/l	4.80	0.00	0 - 0	Fail
104 Ru	528.60	ug/l	19.88	0.00	0 - 0	Fail
106 (Cd)	23.72	ug/l	9.12	0.00	0 - 0	
107 Ag	19.28	ug/l	4.12	20.00	80 - 120	
108 (Cd)	42.45	ug/l	3.88	10.00	80 - 120	
111 Cd	9.69	ug/l	5.98	10.00	80 - 120	
114 Cd	10.50	ug/l	3.95	10.00	80 - 120	
120 Sn	0.15	ug/l	8.91	0.00	0 - 0	
121 Sb	1.44	ug/l	3.22	0.00	0 - 0	
137 Ba	7.64	ug/l	4.29	0.00	0 - 0	
140 Ce	2676.00	ug/l	3.50	0.00	0 - 0	Fail
142 Ce	768.70	ug/l	5.63	0.00	0 - 0	Fail
182 W	4222.00	ug/l	2.96	---	##### - 0	
184 W	3801.00	ug/l	1.69	---	##### - 0	
186 W	4016.00	ug/l	4.55	---	##### - 0	
203 Tl	-0.12	ug/l	16.69	0.00	80 - 120	
206 Pb	0.13	ug/l	17.69	0.00	80 - 120	
207 Pb	0.14	ug/l	13.36	0.00	80 - 120	
208 Pb	0.43	ug/l	4.33	0.00	80 - 120	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1481052.80	4.66	1646938.90	89.9	60 - 120	
45 Sc	820039.38	4.25	879091.44	93.3	60 - 120	
74 Ge	185351.11	0.84	197502.22	93.8	60 - 120	
115 In	849714.44	2.51	981918.75	86.5	60 - 120	
209 Bi	600096.69	0.25	686715.56	87.4	60 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F20100.B\003CALB.D\003CALB.D#

7 :Element Failures 0 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:

Analytes: Fail
ISTD: Pass

CCV QC Report

Data File: C:\ICPCHEM\1\DATA\13F20100.B\019CCV1.D\019CCV1.D#
Date Acquired: Jun 20 2013 12:51 pm
Operator: ICPMS 1 - JG
Sample Name: CCV1
Misc Info: 60-22-451
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\6020G2W.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G2W.C
Last Cal Update: Jun 20 2013 12:07 pm
Sample Type: CCV1
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	Expected	QC Range(%)	Flag
9 Be	104.90 ug/l	4.23	100.00	90 - 110	
11 B	102.80 ug/l	5.34	100.00	90 - 110	
23 Na	995.50 ug/l	8.29	1000.00	90 - 110	
24 Mg	1009.00 ug/l	6.94	1000.00	90 - 110	
27 Al	111.80 ug/l	2.67	100.00	90 - 110	Fail
39 K	1003.00 ug/l	4.07	1000.00	90 - 110	
44 Ca	961.00 ug/l	3.98	1000.00	90 - 110	
47 Ti	50.33 ug/l	5.36	50.00	90 - 110	
50 V	100.50 ug/l	5.58	100.00	90 - 110	
51 V	100.30 ug/l	3.11	100.00	90 - 110	
52 Cr	99.80 ug/l	3.50	100.00	90 - 110	
53 Cr	100.70 ug/l	4.83	100.00	90 - 110	
55 Mn	99.25 ug/l	3.69	100.00	90 - 110	
57 Fe	982.00 ug/l	3.82	1000.00	90 - 110	
59 Co	98.26 ug/l	3.76	100.00	90 - 110	
60 Ni	104.70 ug/l	4.74	100.00	90 - 110	
63 Cu	103.10 ug/l	5.16	100.00	90 - 110	
66 Zn	106.50 ug/l	5.14	100.00	90 - 110	
75 As	98.80 ug/l	2.06	100.00	90 - 110	
77 (As)	101.20 ug/l	4.68	100.00	90 - 110	
78 Se	101.60 ug/l	3.93	100.00	90 - 110	
82 Se	100.40 ug/l	2.36	100.00	90 - 110	
83 (Se)	115.40 ug/l	165.60	100.00	90 - 110	
88 Sr	278.50 ug/l	3.53	100.00	90 - 110	Fail
89 Y	-------- ug/l	--------	100.00	90 - 110	
98 Mo	49.29 ug/l	1.90	50.00	90 - 110	
99 (Mo)	-------- ug/l	--------	---	##### - #####	
101 Ru	498.50 ug/l	138.70	100.00	90 - 110	Fail
102 Ru	505.00 ug/l	95.86	100.00	90 - 110	Fail
104 Ru	-1.75 ug/l	3435.70	100.00	90 - 110	Fail
106 (Cd)	103.30 ug/l	4.19	100.00	90 - 110	
107 Ag	99.35 ug/l	2.77	100.00	90 - 110	
108 (Cd)	102.90 ug/l	2.93	100.00	90 - 110	
111 Cd	102.90 ug/l	2.82	100.00	90 - 110	
114 Cd	102.90 ug/l	2.60	100.00	90 - 110	
120 Sn	52.36 ug/l	2.76	50.00	90 - 110	
121 Sb	52.75 ug/l	6.51	50.00	90 - 110	
137 Ba	99.52 ug/l	2.80	100.00	90 - 110	
140 Ce	26.95 ug/l	75.18	100.00	90 - 110	Fail
142 Ce	31.34 ug/l	70.71	100.00	90 - 110	Fail
182 W	19.04 ug/l	30.04	100.00	90 - 110	Fail
184 W	16.30 ug/l	33.02	100.00	90 - 110	Fail
186 W	4.54 ug/l	35.40	100.00	90 - 110	Fail
203 Tl	100.20 ug/l	2.34	100.00	90 - 110	
206 Pb	100.40 ug/l	2.80	100.00	90 - 110	
207 Pb	99.49 ug/l	2.27	100.00	90 - 110	
208 Pb	98.75 ug/l	2.33	100.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1594049.50	3.46	1646938.90	96.8	80 - 120	
45 Sc	918236.00	3.11	879091.44	104.5	80 - 120	
74 Ge	212205.56	0.86	197502.22	107.4	80 - 120	
115 In	1009431.40	1.25	981918.75	102.8	80 - 120	
209 Bi	763530.00	0.67	686715.56	111.2	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F20100.B\003CALB.D\003CALB.D#

10 :Element Failures 40 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCB QC Report

Data File: C:\ICPCHEM\1\DATA\13F20100.B\020_CCB.D\020_CCB.D#
Date Acquired: Jun 20 2013 12:54 pm
Operator: ICPMS 1 - JG
Sample Name: CCB
Misc Info: 60-22-473
Vial Number: 5
Current Method: C:\ICPCHEM\1\METHODS\6020G2W.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G2W.C
Last Cal Update: Jun 20 2013 12:07 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	High Limit	Flag
9 Be	0.52 ug/l	3.42	1.00	
11 B	2.18 ug/l	8.02	5.00	
23 Na	-1.39 ug/l	363.10	10.00	
24 Mg	1.25 ug/l	412.76	10.00	
27 Al	9.18 ug/l	60.95	3.00	Fail
39 K	-3.80 ug/l	160.89	5.00	
44 Ca	14.02 ug/l	31.95	10.00	Fail
47 Ti	0.17 ug/l	59.63	5.00	
50 V	0.24 ug/l	51.65	2.00	
51 V	0.17 ug/l	17.76	2.00	
52 Cr	-0.22 ug/l	16.89	2.00	
53 Cr	-0.36 ug/l	9.49	2.00	
55 Mn	-0.40 ug/l	6.35	2.00	
57 Fe	7.48 ug/l	66.26	10.00	
59 Co	-0.37 ug/l	7.33	2.00	
60 Ni	-0.73 ug/l	2.50	2.00	
63 Cu	-0.01 ug/l	264.66	5.00	
66 Zn	-0.95 ug/l	3.42	5.00	
75 As	-0.40 ug/l	110.08	2.00	
77 (As)	-1.12 ug/l	19.56	3.00	
78 Se	1.31 ug/l	36.53	3.00	
82 Se	-0.50 ug/l	371.01	2.00	
83 (Se)	59.34 ug/l	558.48	3.00	
88 Sr	-16.17 ug/l	38.78	2.00	
89 Y	-------- ug/l	--------	#VALUE!	
98 Mo	0.23 ug/l	48.63	3.00	
99 (Mo)	-------- ug/l	--------	#VALUE!	
101 Ru	686.90 ug/l	16.49	5.00	Fail
102 Ru	860.00 ug/l	22.70	5.00	Fail
104 Ru	-101.60 ug/l	71.21	5.00	
106 (Cd)	-0.08 ug/l	318.49	3.00	
107 Ag	0.12 ug/l	13.85	2.00	
108 (Cd)	-0.47 ug/l	15.02	3.00	
111 Cd	-0.39 ug/l	9.53	1.00	
114 Cd	-0.24 ug/l	8.05	1.00	
120 Sn	0.21 ug/l	13.44	5.00	
121 Sb	1.02 ug/l	11.71	3.00	
137 Ba	0.16 ug/l	10.97	2.00	
140 Ce	5.60 ug/l	56.43	2.00	Fail
142 Ce	24.98 ug/l	13.92	2.00	Fail
182 W	-2.58 ug/l	195.30	2.00	
184 W	1.30 ug/l	299.16	2.00	
186 W	-0.17 ug/l	1956.10	2.00	
203 Tl	-0.16 ug/l	20.98	2.00	
206 Pb	-0.31 ug/l	6.93	3.00	
207 Pb	-0.29 ug/l	8.36	3.00	
208 Pb	0.00 ug/l	1291.20	1.00	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1621913.90	1.14	1646938.90	98.5	80 - 120	
45 Sc	906830.81	2.43	879091.44	103.2	80 - 120	
74 Ge	207900.00	1.42	197502.22	105.3	80 - 120	
115 In	1006662.10	0.76	981918.75	102.5	80 - 120	
209 Bi	755217.75	0.46	686715.56	110.0	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F20100.B\003CALB.D\003CALB.D#

6 :Element Failures 15 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

Sample QC Report

Data File: c:\ICPCHEM\1\DATA\13F20100.B\030SMPL.D\030SMPL.D#
Date Acquired: Jun 20 2013 01:41 pm
Acq. Method: 6020G2W.M
Operator: ICPMS 1 - JG
Sample Name: IMBW1 6/20/13
Misc Info: M_ICPMS_W
Vial Number: 2301
Current Method: C:\ICPCHEM\1\METHODS\6020G2W.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G2W.C
Last Cal. Update: Jul 31 2013 07:16 pm
Sample Type: Sample
Dilution Factor: 2.00
Autodil Factor: Undiluted
Final Dil Factor: 2.00

QC Elements

Element	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	1.13	0.56	ug/l	2.51	10000.00	
11 B	28.04	14.02	ug/l	3.20	5000.00	
23 Na	61.04	30.52	ug/l	7.21	100000.00	
24 Mg	-12.46	-6.23	ug/l	1.45	100000.00	
27 Al	9.30	4.65	ug/l	3.59	100000.00	
39 K	11.16	5.58	ug/l	42.05	100000.00	
44 Ca	54.66	27.33	ug/l	10.07	100000.00	
47 Ti	0.13	0.06	ug/l	37.38	10000.00	
50 V	0.61	0.31	ug/l	13.33	10000.00	
51 V	0.15	0.07	ug/l	341.47	10000.00	
52 Cr	0.42	0.21	ug/l	21.02	10000.00	
53 Cr	43.02	21.51	ug/l	8.35	10000.00	
55 Mn	-0.48	-0.24	ug/l	4.69	10000.00	
57 Fe	7.40	3.70	ug/l	64.41	100000.00	
59 Co	-0.84	-0.42	ug/l	2.81	10000.00	
60 Ni	-1.24	-0.62	ug/l	3.14	10000.00	
63 Cu	0.94	0.47	ug/l	12.79	10000.00	
66 Zn	2.00	1.00	ug/l	6.72	10000.00	
75 As	-1.44	-0.72	ug/l	19.75	10000.00	
77 (As)	51.62	25.81	ug/l	6.00	10000.00	
78 Se	0.61	0.30	ug/l	265.98	10000.00	
82 Se	-0.87	-0.44	ug/l	131.26	10000.00	
83 (Se)	-262.00	-131.00	ug/l	124.20	10000.00	
88 Sr	354.40	177.20	ug/l	2.62	10000.00	
89 Y	----	--------	ug/l	--------	#VALUE!	
98 Mo	0.03	0.02	ug/l	71.37	10000.00	
99 (Mo)	----	--------	ug/l	--------	#VALUE!	
101 Ru	4,144.00	2072.00	ug/l	2.64	10000.00	
102 Ru	5,350.00	2675.00	ug/l	0.38	10000.00	
104 Ru	-691.20	-345.60	ug/l	8.33	10000.00	
106 (Cd)	0.10	0.05	ug/l	242.08	10000.00	
107 Ag	0.26	0.13	ug/l	10.68	10000.00	
108 (Cd)	-0.79	-0.40	ug/l	36.29	10000.00	
111 Cd	-0.68	-0.34	ug/l	4.46	10000.00	
114 Cd	-0.38	-0.19	ug/l	10.90	#VALUE!	
120 Sn	0.41	0.21	ug/l	8.24	10000.00	
121 Sb	0.60	0.30	ug/l	1.58	10000.00	
137 Ba	0.55	0.27	ug/l	4.92	10000.00	
140 Ce	99.62	49.81	ug/l	23.89	10000.00	
142 Ce	53.60	26.80	ug/l	79.14	10000.00	
182 W	7.44	3.72	ug/l	190.06	10000.00	
184 W	9.23	4.61	ug/l	122.81	10000.00	
186 W	8.86	4.43	ug/l	70.53	10000.00	
203 Tl	0.40	0.20	ug/l	6.85	10000.00	
206 Pb	0.31	0.15	ug/l	53.46	10000.00	
207 Pb	0.26	0.13	ug/l	39.33	10000.00	
208 Pb	0.85	0.42	ug/l	14.63	10000.00	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1804083.90	1.26	1646938.90	109.5	60 - 120	
45 Sc	874126.44	3.02	879091.44	99.4	60 - 120	
74 Ge	194356.66	2.22	197502.22	98.4	60 - 120	
115 In	946353.63	2.39	981918.75	96.4	60 - 120	
209 Bi	695123.31	0.64	686715.56	101.2	60 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F20100.B\003CALB.D\003CALB.D#

0 :Element Failures 0 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCV QC Report

Data File: C:\ICPCHEM\1\DATA\13F20100.B\031CCV1.D\031CCV1.D#
Date Acquired: Jun 20 2013 01:45 pm
Operator: ICPMS 1 - JG
Sample Name: CCV1
Misc Info: 60-22-451
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\6020G2W.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G2W.C
Last Cal Update: Jun 20 2013 12:07 pm
Sample Type: CCV1
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	Expected	QC Range(%)	Flag
9 Be	97.94 ug/l	4.80	100.00	90 - 110	
11 B	95.85 ug/l	6.49	100.00	90 - 110	
23 Na	1004.00 ug/l	3.61	1000.00	90 - 110	
24 Mg	1020.00 ug/l	3.21	1000.00	90 - 110	
27 Al	103.10 ug/l	3.28	100.00	90 - 110	
39 K	1020.00 ug/l	3.16	1000.00	90 - 110	
44 Ca	964.10 ug/l	2.85	1000.00	90 - 110	
47 Ti	49.09 ug/l	2.37	50.00	90 - 110	
50 V	101.30 ug/l	3.46	100.00	90 - 110	
51 V	100.00 ug/l	3.79	100.00	90 - 110	
52 Cr	100.50 ug/l	4.41	100.00	90 - 110	
53 Cr	101.60 ug/l	4.90	100.00	90 - 110	
55 Mn	102.90 ug/l	3.65	100.00	90 - 110	
57 Fe	1008.00 ug/l	4.75	1000.00	90 - 110	
59 Co	100.90 ug/l	2.14	100.00	90 - 110	
60 Ni	104.80 ug/l	1.26	100.00	90 - 110	
63 Cu	101.30 ug/l	4.21	100.00	90 - 110	
66 Zn	106.70 ug/l	4.92	100.00	90 - 110	
75 As	98.89 ug/l	1.68	100.00	90 - 110	
77 (As)	104.00 ug/l	1.90	100.00	90 - 110	
78 Se	98.67 ug/l	1.94	100.00	90 - 110	
82 Se	100.20 ug/l	3.24	100.00	90 - 110	
83 (Se)	55.23 ug/l	444.32	100.00	90 - 110	
88 Sr	283.10 ug/l	4.85	100.00	90 - 110	Fail
89 Y	-------- ug/l	--------	100.00	90 - 110	
98 Mo	50.23 ug/l	1.92	50.00	90 - 110	
99 (Mo)	-------- ug/l	--------	---	##### - #####	
101 Ru	1476.00 ug/l	2.91	100.00	90 - 110	Fail
102 Ru	1703.00 ug/l	18.02	100.00	90 - 110	Fail
104 Ru	-106.40 ug/l	21.09	100.00	90 - 110	Fail
106 (Cd)	101.40 ug/l	4.38	100.00	90 - 110	
107 Ag	97.69 ug/l	1.25	100.00	90 - 110	
108 (Cd)	97.96 ug/l	1.29	100.00	90 - 110	
111 Cd	101.00 ug/l	1.81	100.00	90 - 110	
114 Cd	100.00 ug/l	2.11	100.00	90 - 110	
120 Sn	51.32 ug/l	2.08	50.00	90 - 110	
121 Sb	51.22 ug/l	5.99	50.00	90 - 110	
137 Ba	97.09 ug/l	1.45	100.00	90 - 110	
140 Ce	25.76 ug/l	40.49	100.00	90 - 110	Fail
142 Ce	14.69 ug/l	75.43	100.00	90 - 110	Fail
182 W	16.64 ug/l	35.86	100.00	90 - 110	Fail
184 W	21.41 ug/l	6.17	100.00	90 - 110	Fail
186 W	14.76 ug/l	23.51	100.00	90 - 110	Fail
203 Tl	100.80 ug/l	3.25	100.00	90 - 110	
206 Pb	101.50 ug/l	2.60	100.00	90 - 110	
207 Pb	100.10 ug/l	2.51	100.00	90 - 110	
208 Pb	99.64 ug/l	2.72	100.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1625454.40	2.61	1646938.90	98.7	80 - 120	
45 Sc	859220.69	2.84	879091.44	97.7	80 - 120	
74 Ge	198208.89	1.06	197502.22	100.4	80 - 120	
115 In	985917.06	0.95	981918.75	100.4	80 - 120	
209 Bi	736420.00	0.66	686715.56	107.2	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F20100.B\003CALB.D\003CALB.D#

9 :Element Failures 40 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCB QC Report

Data File: C:\ICPCHEM\1\DATA\13F20100.B\032_CCB.D\032_CCB.D#
Date Acquired: Jun 20 2013 01:49 pm
Operator: ICPMS 1 - JG
Sample Name: CCB
Misc Info: 60-22-473
Vial Number: 5
Current Method: C:\ICPCHEM\1\METHODS\6020G2W.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G2W.C
Last Cal Update: Jun 20 2013 12:07 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	High Limit	Flag
9 Be	0.55 ug/l	5.52	1.00	
11 B	2.85 ug/l	1.80	5.00	
23 Na	-8.53 ug/l	2.26	10.00	
24 Mg	-8.29 ug/l	2.02	10.00	
27 Al	-0.45 ug/l	12.12	3.00	
39 K	-12.73 ug/l	11.17	5.00	
44 Ca	6.42 ug/l	4.09	10.00	
47 Ti	0.00 ug/l	859.22	5.00	
50 V	0.11 ug/l	24.60	2.00	
51 V	0.20 ug/l	12.04	2.00	
52 Cr	-0.19 ug/l	8.07	2.00	
53 Cr	-0.07 ug/l	60.17	2.00	
55 Mn	-0.34 ug/l	4.26	2.00	
57 Fe	-0.40 ug/l	82.21	10.00	
59 Co	-0.40 ug/l	5.48	2.00	
60 Ni	-0.69 ug/l	2.28	2.00	
63 Cu	-0.01 ug/l	354.87	5.00	
66 Zn	-0.95 ug/l	2.24	5.00	
75 As	-0.29 ug/l	54.93	2.00	
77 (As)	-0.83 ug/l	11.34	3.00	
78 Se	-0.52 ug/l	267.15	3.00	
82 Se	-0.10 ug/l	788.49	2.00	
83 (Se)	117.20 ug/l	178.41	3.00	
88 Sr	-24.54 ug/l	9.13	2.00	
89 Y	-------- ug/l	--------	#VALUE!	
98 Mo	0.06 ug/l	27.94	3.00	
99 (Mo)	-------- ug/l	--------	#VALUE!	
101 Ru	1270.00 ug/l	10.17	5.00	Fail
102 Ru	1622.00 ug/l	13.13	5.00	Fail
104 Ru	-235.40 ug/l	26.65	5.00	
106 (Cd)	-0.16 ug/l	128.16	3.00	
107 Ag	0.13 ug/l	9.29	2.00	
108 (Cd)	-0.43 ug/l	23.46	3.00	
111 Cd	-0.38 ug/l	11.01	1.00	
114 Cd	-0.20 ug/l	9.22	1.00	
120 Sn	0.25 ug/l	13.10	5.00	
121 Sb	1.03 ug/l	10.37	3.00	
137 Ba	0.19 ug/l	7.56	2.00	
140 Ce	12.66 ug/l	23.40	2.00	Fail
142 Ce	8.47 ug/l	77.01	2.00	Fail
182 W	-2.37 ug/l	85.56	2.00	
184 W	4.27 ug/l	129.77	2.00	Fail
186 W	6.07 ug/l	159.57	2.00	Fail
203 Tl	-0.17 ug/l	16.74	2.00	
206 Pb	-0.21 ug/l	11.87	3.00	
207 Pb	-0.21 ug/l	0.82	3.00	
208 Pb	0.08 ug/l	16.09	1.00	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1615998.60	4.85	1646938.90	98.1	80 - 120	
45 Sc	868467.19	1.85	879091.44	98.8	80 - 120	
74 Ge	195623.33	1.54	197502.22	99.0	80 - 120	
115 In	962807.50	1.06	981918.75	98.1	80 - 120	
209 Bi	721038.88	0.86	686715.56	105.0	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F20100.B\003CALB.D\003CALB.D#

6 :Element Failures 15 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\13F20100.B\033SMPL.D\033SMPL.D#
Date Acquired: Jun 20 2013 01:53 pm
Acq. Method: 6020G2W.M
Operator: ICPMS 1 - JG
Sample Name: ILCSW1 6/20/13
Misc Info: M_ICPMS_W
Vial Number: 2302
Current Method: C:\ICPCHEM\1\METHODS\6020G2W.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G2W.C
Last Cal. Update: Jun 20 2013 12:07 pm
Sample Type: Sample
Dilution Factor: 2.00
Autodil Factor: Undiluted
Final Dil Factor: 2.00

QC Elements

Element	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	463.60	231.80	ug/l	2.22	10000.00	
11 B	494.60	247.30	ug/l	3.01	5000.00	
23 Na	2,140.00	1070.00	ug/l	3.79	100000.00	
24 Mg	2,100.00	1050.00	ug/l	3.31	100000.00	
27 Al	552.60	276.30	ug/l	1.89	100000.00	
39 K	2,142.00	1071.00	ug/l	2.47	100000.00	
44 Ca	2,028.00	1014.00	ug/l	1.63	100000.00	
47 Ti	253.80	126.90	ug/l	4.73	10000.00	
50 V	510.60	255.30	ug/l	4.03	10000.00	
51 V	507.60	253.80	ug/l	3.36	10000.00	
52 Cr	520.80	260.40	ug/l	2.44	10000.00	
53 Cr	555.80	277.90	ug/l	2.34	10000.00	
55 Mn	523.20	261.60	ug/l	1.95	10000.00	
57 Fe	2,220.00	1110.00	ug/l	1.97	100000.00	
59 Co	516.60	258.30	ug/l	2.15	10000.00	
60 Ni	535.80	267.90	ug/l	4.33	10000.00	
63 Cu	527.40	263.70	ug/l	3.31	10000.00	
66 Zn	516.80	258.40	ug/l	4.00	10000.00	
75 As	507.40	253.70	ug/l	1.59	10000.00	
77 (As)	551.00	275.50	ug/l	0.48	10000.00	
78 Se	497.60	248.80	ug/l	2.09	10000.00	
82 Se	492.20	246.10	ug/l	0.56	10000.00	
83 (Se)	-89.64	-44.82	ug/l	442.66	10000.00	
88 Sr	396.80	198.40	ug/l	5.31	10000.00	
89 Y	----	--------	ug/l	--------	#VALUE!	
98 Mo	260.40	130.20	ug/l	0.75	10000.00	
99 (Mo)	----	--------	ug/l	--------	#VALUE!	
101 Ru	4,112.00	2056.00	ug/l	1.82	10000.00	
102 Ru	5,392.00	2696.00	ug/l	5.39	10000.00	
104 Ru	-185.58	-92.79	ug/l	50.06	10000.00	
106 (Cd)	505.20	252.60	ug/l	2.49	10000.00	
107 Ag	202.80	101.40	ug/l	0.77	10000.00	
108 (Cd)	504.80	252.40	ug/l	2.66	10000.00	
111 Cd	519.80	259.90	ug/l	2.25	10000.00	
114 Cd	518.40	259.20	ug/l	1.69	#VALUE!	
120 Sn	262.20	131.10	ug/l	1.48	10000.00	
121 Sb	279.00	139.50	ug/l	1.70	10000.00	
137 Ba	518.80	259.40	ug/l	1.94	10000.00	
140 Ce	145.54	72.77	ug/l	8.22	10000.00	
142 Ce	121.64	60.82	ug/l	45.12	10000.00	
182 W	609.40	304.70	ug/l	19.33	10000.00	
184 W	485.20	242.60	ug/l	13.97	10000.00	
186 W	487.80	243.90	ug/l	3.25	10000.00	
203 Tl	515.40	257.70	ug/l	3.85	10000.00	
206 Pb	514.00	257.00	ug/l	1.72	10000.00	
207 Pb	522.80	261.40	ug/l	2.74	10000.00	
208 Pb	516.40	258.20	ug/l	1.46	10000.00	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1798584.80	0.59	1646938.90	109.2	60 - 120	
45 Sc	854739.13	1.43	879091.44	97.2	60 - 120	
74 Ge	194326.66	0.57	197502.22	98.4	60 - 120	
115 In	933066.94	0.77	981918.75	95.0	60 - 120	
209 Bi	697510.00	0.31	686715.56	101.6	60 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F20100.B\003CALB.D\003CALB.D#

0 :Element Failures 0 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCV QC Report

Data File: C:\ICPCHEM\1\DATA\13F20100.B\043CCV1.D\043CCV1.D#
Date Acquired: Jun 20 2013 02:34 pm
Operator: ICPMS 1 - JG
Sample Name: CCV1
Misc Info: 60-22-451
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\6020G2W.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G2W.C
Last Cal Update: Jun 20 2013 12:07 pm
Sample Type: CCV1
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	Expected	QC Range(%)	Flag
9 Be	98.32 ug/l	1.01	100.00	90 - 110	
11 B	95.09 ug/l	3.02	100.00	90 - 110	
23 Na	968.10 ug/l	4.84	1000.00	90 - 110	
24 Mg	990.30 ug/l	4.24	1000.00	90 - 110	
27 Al	100.30 ug/l	4.62	100.00	90 - 110	
39 K	1010.00 ug/l	3.86	1000.00	90 - 110	
44 Ca	978.80 ug/l	3.95	1000.00	90 - 110	
47 Ti	49.49 ug/l	3.14	50.00	90 - 110	
50 V	99.21 ug/l	3.07	100.00	90 - 110	
51 V	98.01 ug/l	1.33	100.00	90 - 110	
52 Cr	98.15 ug/l	4.16	100.00	90 - 110	
53 Cr	99.93 ug/l	6.76	100.00	90 - 110	
55 Mn	100.30 ug/l	4.88	100.00	90 - 110	
57 Fe	995.60 ug/l	4.69	1000.00	90 - 110	
59 Co	98.27 ug/l	2.40	100.00	90 - 110	
60 Ni	102.90 ug/l	3.17	100.00	90 - 110	
63 Cu	99.39 ug/l	3.14	100.00	90 - 110	
66 Zn	105.00 ug/l	3.97	100.00	90 - 110	
75 As	99.09 ug/l	0.41	100.00	90 - 110	
77 (As)	102.70 ug/l	3.76	100.00	90 - 110	
78 Se	98.09 ug/l	1.72	100.00	90 - 110	
82 Se	101.30 ug/l	3.14	100.00	90 - 110	
83 (Se)	48.46 ug/l	314.07	100.00	90 - 110	
88 Sr	328.90 ug/l	3.81	100.00	90 - 110	Fail
89 Y	-------- ug/l	--------	100.00	90 - 110	
98 Mo	49.46 ug/l	1.33	50.00	90 - 110	
99 (Mo)	-------- ug/l	--------	---	##### - #####	
101 Ru	-144.80 ug/l	192.82	100.00	90 - 110	Fail
102 Ru	-34.73 ug/l	1078.00	100.00	90 - 110	Fail
104 Ru	81.01 ug/l	52.86	100.00	90 - 110	Fail
106 (Cd)	100.50 ug/l	3.91	100.00	90 - 110	
107 Ag	97.44 ug/l	2.01	100.00	90 - 110	
108 (Cd)	98.42 ug/l	3.71	100.00	90 - 110	
111 Cd	99.91 ug/l	2.89	100.00	90 - 110	
114 Cd	99.50 ug/l	2.03	100.00	90 - 110	
120 Sn	50.40 ug/l	3.68	50.00	90 - 110	
121 Sb	51.11 ug/l	6.42	50.00	90 - 110	
137 Ba	97.22 ug/l	2.83	100.00	90 - 110	
140 Ce	60.23 ug/l	26.20	100.00	90 - 110	Fail
142 Ce	41.26 ug/l	72.25	100.00	90 - 110	Fail
182 W	19.22 ug/l	20.71	100.00	90 - 110	Fail
184 W	9.46 ug/l	41.68	100.00	90 - 110	Fail
186 W	23.05 ug/l	30.74	100.00	90 - 110	Fail
203 Tl	99.95 ug/l	2.28	100.00	90 - 110	
206 Pb	100.70 ug/l	2.51	100.00	90 - 110	
207 Pb	98.73 ug/l	2.48	100.00	90 - 110	
208 Pb	98.98 ug/l	2.60	100.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1557548.30	2.83	1646938.90	94.6	80 - 120	
45 Sc	861405.38	2.73	879091.44	98.0	80 - 120	
74 Ge	196985.56	0.48	197502.22	99.7	80 - 120	
115 In	966257.06	1.73	981918.75	98.4	80 - 120	
209 Bi	726410.00	0.65	686715.56	105.8	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F20100.B\003CALB.D\003CALB.D#

9 :Element Failures 40 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCB QC Report

Data File: C:\ICPCHEM\1\DATA\13F20100.B\044_CCB.D\044_CCB.D#
Date Acquired: Jun 20 2013 02:37 pm
Operator: ICPMS 1 - JG
Sample Name: CCB
Misc Info: 60-22-473
Vial Number: 5
Current Method: C:\ICPCHEM\1\METHODS\6020G2W.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G2W.C
Last Cal Update: Jun 20 2013 12:07 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	High Limit	Flag
9 Be	0.53 ug/l	3.61	1.00	
11 B	2.39 ug/l	11.00	5.00	
23 Na	-11.38 ug/l	4.80	10.00	
24 Mg	-4.30 ug/l	46.05	10.00	
27 Al	-0.25 ug/l	67.25	3.00	
39 K	-13.73 ug/l	14.08	5.00	
44 Ca	15.20 ug/l	29.50	10.00	Fail
47 Ti	-0.03 ug/l	92.25	5.00	
50 V	0.13 ug/l	32.23	2.00	
51 V	0.16 ug/l	15.88	2.00	
52 Cr	-0.22 ug/l	14.71	2.00	
53 Cr	-0.30 ug/l	1.69	2.00	
55 Mn	-0.33 ug/l	10.75	2.00	
57 Fe	1.28 ug/l	117.87	10.00	
59 Co	-0.39 ug/l	6.68	2.00	
60 Ni	-0.72 ug/l	3.21	2.00	
63 Cu	-0.04 ug/l	38.29	5.00	
66 Zn	-0.98 ug/l	0.54	5.00	
75 As	-0.11 ug/l	66.94	2.00	
77 (As)	-1.18 ug/l	6.85	3.00	
78 Se	-1.65 ug/l	17.02	3.00	
82 Se	0.67 ug/l	27.98	2.00	
83 (Se)	171.40 ug/l	141.42	3.00	
88 Sr	13.53 ug/l	178.27	2.00	Fail
89 Y	-------- ug/l	--------	#VALUE!	
98 Mo	0.04 ug/l	24.43	3.00	
99 (Mo)	-------- ug/l	--------	#VALUE!	
101 Ru	233.50 ug/l	115.72	5.00	Fail
102 Ru	445.70 ug/l	114.18	5.00	Fail
104 Ru	-64.52 ug/l	18.80	5.00	
106 (Cd)	-0.19 ug/l	97.05	3.00	
107 Ag	0.13 ug/l	7.94	2.00	
108 (Cd)	-0.46 ug/l	6.10	3.00	
111 Cd	-0.40 ug/l	9.24	1.00	
114 Cd	-0.24 ug/l	6.26	1.00	
120 Sn	0.21 ug/l	6.74	5.00	
121 Sb	1.02 ug/l	7.49	3.00	
137 Ba	0.17 ug/l	12.28	2.00	
140 Ce	31.79 ug/l	37.37	2.00	Fail
142 Ce	26.71 ug/l	58.89	2.00	Fail
182 W	11.73 ug/l	46.19	2.00	Fail
184 W	5.35 ug/l	50.83	2.00	Fail
186 W	-0.84 ug/l	562.20	2.00	
203 Tl	-0.13 ug/l	26.78	2.00	
206 Pb	-0.28 ug/l	5.94	3.00	
207 Pb	-0.28 ug/l	1.41	3.00	
208 Pb	0.01 ug/l	121.06	1.00	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1516302.00	2.15	1646938.90	92.1	80 - 120	
45 Sc	854961.06	2.69	879091.44	97.3	80 - 120	
74 Ge	193194.44	0.46	197502.22	97.8	80 - 120	
115 In	941926.75	1.17	981918.75	95.9	80 - 120	
209 Bi	707903.31	0.92	686715.56	103.1	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F20100.B\003CALB.D\003CALB.D#

8 :Element Failures 15 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCV QC Report

Data File: C:\ICPCHEM\1\DATA\13F20100.B\055CCV1.D\055CCV1.D#
Date Acquired: Jun 20 2013 03:19 pm
Operator: ICPMS 1 - JG
Sample Name: CCV1
Misc Info: 60-22-451
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\6020G2W.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G2W.C
Last Cal Update: Jun 20 2013 12:07 pm
Sample Type: CCV1
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	Expected	QC Range(%)	Flag
9 Be	101.00 ug/l	0.34	100.00	90 - 110	
11 B	96.48 ug/l	1.90	100.00	90 - 110	
23 Na	975.40 ug/l	1.84	1000.00	90 - 110	
24 Mg	1012.00 ug/l	3.19	1000.00	90 - 110	
27 Al	118.10 ug/l	1.96	100.00	90 - 110	Fail
39 K	992.00 ug/l	4.14	1000.00	90 - 110	
44 Ca	988.60 ug/l	2.65	1000.00	90 - 110	
47 Ti	49.27 ug/l	3.33	50.00	90 - 110	
50 V	99.34 ug/l	5.51	100.00	90 - 110	
51 V	101.70 ug/l	3.24	100.00	90 - 110	
52 Cr	101.40 ug/l	4.46	100.00	90 - 110	
53 Cr	99.51 ug/l	3.97	100.00	90 - 110	
55 Mn	99.33 ug/l	4.00	100.00	90 - 110	
57 Fe	994.50 ug/l	5.50	1000.00	90 - 110	
59 Co	98.72 ug/l	5.33	100.00	90 - 110	
60 Ni	103.50 ug/l	4.67	100.00	90 - 110	
63 Cu	98.27 ug/l	4.17	100.00	90 - 110	
66 Zn	103.10 ug/l	3.99	100.00	90 - 110	
75 As	99.32 ug/l	1.66	100.00	90 - 110	
77 (As)	99.38 ug/l	3.03	100.00	90 - 110	
78 Se	98.51 ug/l	0.45	100.00	90 - 110	
82 Se	101.00 ug/l	0.68	100.00	90 - 110	
83 (Se)	191.60 ug/l	61.85	100.00	90 - 110	
88 Sr	609.70 ug/l	13.72	100.00	90 - 110	Fail
89 Y	-------- ug/l	--------	100.00	90 - 110	
98 Mo	48.13 ug/l	2.94	50.00	90 - 110	
99 (Mo)	-------- ug/l	--------	---	##### - #####	
101 Ru	1096.00 ug/l	43.31	100.00	90 - 110	Fail
102 Ru	1209.00 ug/l	12.28	100.00	90 - 110	Fail
104 Ru	-75.88 ug/l	85.10	100.00	90 - 110	Fail
106 (Cd)	98.02 ug/l	1.81	100.00	90 - 110	
107 Ag	97.42 ug/l	1.89	100.00	90 - 110	
108 (Cd)	97.27 ug/l	1.70	100.00	90 - 110	
111 Cd	100.60 ug/l	1.53	100.00	90 - 110	
114 Cd	100.40 ug/l	2.47	100.00	90 - 110	
120 Sn	50.98 ug/l	1.99	50.00	90 - 110	
121 Sb	50.84 ug/l	5.92	50.00	90 - 110	
137 Ba	97.84 ug/l	2.93	100.00	90 - 110	
140 Ce	517.30 ug/l	23.68	100.00	90 - 110	Fail
142 Ce	394.50 ug/l	25.04	100.00	90 - 110	Fail
182 W	15.02 ug/l	26.86	100.00	90 - 110	Fail
184 W	8.79 ug/l	62.46	100.00	90 - 110	Fail
186 W	18.43 ug/l	20.55	100.00	90 - 110	Fail
203 Tl	100.20 ug/l	1.85	100.00	90 - 110	
206 Pb	100.50 ug/l	1.58	100.00	90 - 110	
207 Pb	98.50 ug/l	1.55	100.00	90 - 110	
208 Pb	98.60 ug/l	1.62	100.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1598115.10	1.01	1646938.90	97.0	80 - 120	
45 Sc	884629.44	2.71	879091.44	100.6	80 - 120	
74 Ge	200585.56	0.30	197502.22	101.6	80 - 120	
115 In	952527.88	0.87	981918.75	97.0	80 - 120	
209 Bi	714835.56	1.16	686715.56	104.1	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F20100.B\003CALB.D\003CALB.D#

10 :Element Failures 40 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCB QC Report

Data File: C:\ICPCHEM\1\DATA\13F20100.B\056_CCB.D\056_CCB.D#
Date Acquired: Jun 20 2013 03:23 pm
Operator: ICPMS 1 - JG
Sample Name: CCB
Misc Info: 60-22-473
Vial Number: 5
Current Method: C:\ICPCHEM\1\METHODS\6020G2W.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G2W.C
Last Cal Update: Jun 20 2013 12:07 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	High Limit	Flag
9 Be	0.52 ug/l	3.46	1.00	
11 B	2.41 ug/l	7.08	5.00	
23 Na	-10.06 ug/l	2.03	10.00	
24 Mg	5.48 ug/l	48.57	10.00	
27 Al	9.15 ug/l	17.48	3.00	Fail
39 K	-9.15 ug/l	33.42	5.00	
44 Ca	34.74 ug/l	16.20	10.00	Fail
47 Ti	0.04 ug/l	109.95	5.00	
50 V	0.18 ug/l	2.56	2.00	
51 V	0.16 ug/l	8.44	2.00	
52 Cr	-0.22 ug/l	8.73	2.00	
53 Cr	-0.27 ug/l	5.24	2.00	
55 Mn	-0.10 ug/l	50.32	2.00	
57 Fe	17.48 ug/l	19.11	10.00	Fail
59 Co	-0.37 ug/l	3.73	2.00	
60 Ni	-0.69 ug/l	2.07	2.00	
63 Cu	-0.03 ug/l	42.20	5.00	
66 Zn	-0.93 ug/l	2.03	5.00	
75 As	-0.26 ug/l	87.62	2.00	
77 (As)	-0.90 ug/l	17.41	3.00	
78 Se	-2.52 ug/l	12.86	3.00	
82 Se	0.27 ug/l	280.50	2.00	
83 (Se)	-8.27 ug/l	955.51	3.00	
88 Sr	199.90 ug/l	26.60	2.00	Fail
89 Y	-------- ug/l	--------	#VALUE!	
98 Mo	0.03 ug/l	29.46	3.00	
99 (Mo)	-------- ug/l	--------	#VALUE!	
101 Ru	461.60 ug/l	19.30	5.00	Fail
102 Ru	681.40 ug/l	57.00	5.00	Fail
104 Ru	-67.24 ug/l	136.75	5.00	
106 (Cd)	-0.46 ug/l	45.85	3.00	
107 Ag	0.12 ug/l	11.22	2.00	
108 (Cd)	-0.45 ug/l	18.52	3.00	
111 Cd	-0.42 ug/l	3.12	1.00	
114 Cd	-0.24 ug/l	1.50	1.00	
120 Sn	0.19 ug/l	3.54	5.00	
121 Sb	1.13 ug/l	5.13	3.00	
137 Ba	0.22 ug/l	21.34	2.00	
140 Ce	359.00 ug/l	23.67	2.00	Fail
142 Ce	198.20 ug/l	24.11	2.00	Fail
182 W	-1.07 ug/l	192.02	2.00	
184 W	-2.74 ug/l	172.85	2.00	
186 W	0.19 ug/l	2445.60	2.00	
203 Tl	-0.12 ug/l	15.07	2.00	
206 Pb	-0.26 ug/l	10.29	3.00	
207 Pb	-0.25 ug/l	3.52	3.00	
208 Pb	0.04 ug/l	29.81	1.00	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1614842.00	1.87	1646938.90	98.1	80 - 120	
45 Sc	882539.06	3.88	879091.44	100.4	80 - 120	
74 Ge	196042.22	0.82	197502.22	99.3	80 - 120	
115 In	947136.75	1.59	981918.75	96.5	80 - 120	
209 Bi	700856.63	1.01	686715.56	102.1	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F20100.B\003CALB.D\003CALB.D#

8 :Element Failures 15 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCV QC Report

Data File: C:\ICPCHEM\1\DATA\13F20100.B\065CCV1.D\065CCV1.D#
Date Acquired: Jun 20 2013 04:00 pm
Operator: ICPMS 1 - JG
Sample Name: CCV1
Misc Info: 60-22-451
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\6020G2W.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G2W.C
Last Cal Update: Jun 20 2013 12:07 pm
Sample Type: CCV1
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	Expected	QC Range(%)	Flag
9 Be	101.20 ug/l	2.24	100.00	90 - 110	
11 B	95.63 ug/l	1.99	100.00	90 - 110	
23 Na	946.40 ug/l	4.21	1000.00	90 - 110	
24 Mg	985.50 ug/l	2.51	1000.00	90 - 110	
27 Al	101.60 ug/l	1.43	100.00	90 - 110	
39 K	964.50 ug/l	2.58	1000.00	90 - 110	
44 Ca	968.20 ug/l	3.05	1000.00	90 - 110	
47 Ti	49.07 ug/l	3.37	50.00	90 - 110	
50 V	97.18 ug/l	3.48	100.00	90 - 110	
51 V	96.82 ug/l	4.30	100.00	90 - 110	
52 Cr	97.28 ug/l	4.01	100.00	90 - 110	
53 Cr	98.52 ug/l	2.24	100.00	90 - 110	
55 Mn	98.32 ug/l	1.99	100.00	90 - 110	
57 Fe	961.60 ug/l	1.56	1000.00	90 - 110	
59 Co	96.46 ug/l	2.52	100.00	90 - 110	
60 Ni	99.82 ug/l	3.16	100.00	90 - 110	
63 Cu	96.58 ug/l	4.95	100.00	90 - 110	
66 Zn	102.70 ug/l	4.91	100.00	90 - 110	
75 As	97.51 ug/l	1.46	100.00	90 - 110	
77 (As)	98.56 ug/l	1.33	100.00	90 - 110	
78 Se	95.33 ug/l	3.31	100.00	90 - 110	
82 Se	98.09 ug/l	2.29	100.00	90 - 110	
83 (Se)	-52.22 ug/l	79.43	100.00	90 - 110	
88 Sr	410.10 ug/l	10.76	100.00	90 - 110	Fail
89 Y	-------- ug/l	--------	100.00	90 - 110	
98 Mo	48.22 ug/l	1.20	50.00	90 - 110	
99 (Mo)	-------- ug/l	--------	---	##### - #####	
101 Ru	292.80 ug/l	102.22	100.00	90 - 110	Fail
102 Ru	729.50 ug/l	26.64	100.00	90 - 110	Fail
104 Ru	32.06 ug/l	208.83	100.00	90 - 110	Fail
106 (Cd)	97.39 ug/l	4.03	100.00	90 - 110	
107 Ag	96.81 ug/l	2.23	100.00	90 - 110	
108 (Cd)	97.80 ug/l	2.72	100.00	90 - 110	
111 Cd	99.81 ug/l	4.26	100.00	90 - 110	
114 Cd	99.79 ug/l	3.19	100.00	90 - 110	
120 Sn	50.85 ug/l	3.74	50.00	90 - 110	
121 Sb	50.36 ug/l	7.04	50.00	90 - 110	
137 Ba	98.18 ug/l	4.02	100.00	90 - 110	
140 Ce	173.60 ug/l	28.66	100.00	90 - 110	Fail
142 Ce	113.00 ug/l	30.20	100.00	90 - 110	Fail
182 W	13.32 ug/l	45.32	100.00	90 - 110	Fail
184 W	11.91 ug/l	14.27	100.00	90 - 110	Fail
186 W	11.85 ug/l	39.49	100.00	90 - 110	Fail
203 Tl	99.37 ug/l	2.55	100.00	90 - 110	
206 Pb	98.93 ug/l	3.37	100.00	90 - 110	
207 Pb	97.76 ug/l	3.34	100.00	90 - 110	
208 Pb	97.49 ug/l	3.37	100.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1556585.30	3.64	1646938.90	94.5	80 - 120	
45 Sc	886958.13	4.03	879091.44	100.9	80 - 120	
74 Ge	202123.33	0.92	197502.22	102.3	80 - 120	
115 In	965262.06	2.40	981918.75	98.3	80 - 120	
209 Bi	735422.25	1.49	686715.56	107.1	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F20100.B\003CALB.D\003CALB.D#

9 :Element Failures 40 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCB QC Report

Data File: C:\ICPCHEM\1\DATA\13F20100.B\066_CCB.D\066_CCB.D#
Date Acquired: Jun 20 2013 04:04 pm
Operator: ICPMS 1 - JG
Sample Name: CCB
Misc Info: 60-22-473
Vial Number: 5
Current Method: C:\ICPCHEM\1\METHODS\6020G2W.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G2W.C
Last Cal Update: Jun 20 2013 12:07 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	High Limit	Flag
9 Be	0.52 ug/l	0.30	1.00	
11 B	2.17 ug/l	6.87	5.00	
23 Na	-11.69 ug/l	4.05	10.00	
24 Mg	4.07 ug/l	78.05	10.00	
27 Al	1.96 ug/l	28.21	3.00	
39 K	-13.59 ug/l	11.91	5.00	
44 Ca	28.30 ug/l	23.36	10.00	Fail
47 Ti	-0.01 ug/l	295.53	5.00	
50 V	0.14 ug/l	29.60	2.00	
51 V	0.15 ug/l	6.56	2.00	
52 Cr	-0.23 ug/l	12.62	2.00	
53 Cr	-0.31 ug/l	6.70	2.00	
55 Mn	-0.25 ug/l	14.35	2.00	
57 Fe	4.49 ug/l	22.71	10.00	
59 Co	-0.37 ug/l	1.74	2.00	
60 Ni	-0.71 ug/l	2.42	2.00	
63 Cu	-0.05 ug/l	20.50	5.00	
66 Zn	-0.96 ug/l	4.43	5.00	
75 As	-0.52 ug/l	50.52	2.00	
77 (As)	-1.00 ug/l	24.11	3.00	
78 Se	-2.60 ug/l	25.24	3.00	
82 Se	-0.97 ug/l	141.46	2.00	
83 (Se)	-121.70 ug/l	205.42	3.00	
88 Sr	70.30 ug/l	58.72	2.00	Fail
89 Y	-------- ug/l	--------	#VALUE!	
98 Mo	0.02 ug/l	49.30	3.00	
99 (Mo)	-------- ug/l	--------	#VALUE!	
101 Ru	271.80 ug/l	127.52	5.00	Fail
102 Ru	1032.00 ug/l	8.09	5.00	Fail
104 Ru	-61.47 ug/l	66.49	5.00	
106 (Cd)	-0.52 ug/l	76.77	3.00	
107 Ag	0.13 ug/l	8.05	2.00	
108 (Cd)	-0.43 ug/l	6.38	3.00	
111 Cd	-0.43 ug/l	6.31	1.00	
114 Cd	-0.25 ug/l	5.01	1.00	
120 Sn	0.20 ug/l	11.01	5.00	
121 Sb	1.17 ug/l	11.24	3.00	
137 Ba	0.16 ug/l	10.88	2.00	
140 Ce	114.60 ug/l	25.02	2.00	Fail
142 Ce	82.84 ug/l	35.65	2.00	Fail
182 W	-0.11 ug/l	5280.50	2.00	
184 W	3.34 ug/l	90.55	2.00	Fail
186 W	0.05 ug/l	3363.00	2.00	
203 Tl	-0.14 ug/l	6.28	2.00	
206 Pb	-0.30 ug/l	4.33	3.00	
207 Pb	-0.28 ug/l	4.25	3.00	
208 Pb	0.01 ug/l	108.38	1.00	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1615292.10	4.19	1646938.90	98.1	80 - 120	
45 Sc	894261.63	3.14	879091.44	101.7	80 - 120	
74 Ge	201095.56	1.15	197502.22	101.8	80 - 120	
115 In	966315.81	0.49	981918.75	98.4	80 - 120	
209 Bi	723675.56	0.49	686715.56	105.4	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F20100.B\003CALB.D\003CALB.D#

7 :Element Failures 15 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCV QC Report

Data File: C:\ICPCHEM\1\DATA\13F20100.B\076CCV1.D\076CCV1.D#
Date Acquired: Jun 20 2013 04:46 pm
Operator: ICPMS 1 - JG
Sample Name: CCV1
Misc Info: 60-22-451
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\6020G2W.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G2W.C
Last Cal Update: Jun 20 2013 12:07 pm
Sample Type: CCV1
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	Expected	QC Range(%)	Flag
9 Be	104.50 ug/l	2.36	100.00	90 - 110	
11 B	100.90 ug/l	4.28	100.00	90 - 110	
23 Na	947.70 ug/l	2.56	1000.00	90 - 110	
24 Mg	977.30 ug/l	2.80	1000.00	90 - 110	
27 Al	99.36 ug/l	2.98	100.00	90 - 110	
39 K	984.90 ug/l	3.34	1000.00	90 - 110	
44 Ca	950.80 ug/l	3.16	1000.00	90 - 110	
47 Ti	48.37 ug/l	2.35	50.00	90 - 110	
50 V	97.46 ug/l	3.64	100.00	90 - 110	
51 V	98.66 ug/l	2.49	100.00	90 - 110	
52 Cr	98.83 ug/l	3.14	100.00	90 - 110	
53 Cr	99.16 ug/l	3.82	100.00	90 - 110	
55 Mn	99.12 ug/l	3.01	100.00	90 - 110	
57 Fe	973.60 ug/l	4.60	1000.00	90 - 110	
59 Co	97.58 ug/l	3.30	100.00	90 - 110	
60 Ni	101.80 ug/l	4.88	100.00	90 - 110	
63 Cu	97.86 ug/l	3.36	100.00	90 - 110	
66 Zn	102.50 ug/l	4.26	100.00	90 - 110	
75 As	97.96 ug/l	0.62	100.00	90 - 110	
77 (As)	100.30 ug/l	2.46	100.00	90 - 110	
78 Se	94.80 ug/l	2.87	100.00	90 - 110	
82 Se	97.27 ug/l	1.05	100.00	90 - 110	
83 (Se)	-49.83 ug/l	222.16	100.00	90 - 110	
88 Sr	325.00 ug/l	6.24	100.00	90 - 110	Fail
89 Y	-------- ug/l	--------	100.00	90 - 110	
98 Mo	47.68 ug/l	1.32	50.00	90 - 110	
99 (Mo)	-------- ug/l	--------	---	##### - #####	
101 Ru	1121.00 ug/l	17.42	100.00	90 - 110	Fail
102 Ru	1455.00 ug/l	24.78	100.00	90 - 110	Fail
104 Ru	-106.70 ug/l	30.51	100.00	90 - 110	Fail
106 (Cd)	96.39 ug/l	2.49	100.00	90 - 110	
107 Ag	96.08 ug/l	3.93	100.00	90 - 110	
108 (Cd)	97.26 ug/l	4.70	100.00	90 - 110	
111 Cd	99.07 ug/l	2.81	100.00	90 - 110	
114 Cd	98.60 ug/l	3.30	100.00	90 - 110	
120 Sn	50.89 ug/l	3.25	50.00	90 - 110	
121 Sb	47.95 ug/l	9.37	50.00	90 - 110	
137 Ba	96.03 ug/l	4.37	100.00	90 - 110	
140 Ce	73.46 ug/l	27.35	100.00	90 - 110	Fail
142 Ce	68.36 ug/l	23.51	100.00	90 - 110	Fail
182 W	9.76 ug/l	90.51	100.00	90 - 110	Fail
184 W	12.60 ug/l	35.32	100.00	90 - 110	Fail
186 W	11.74 ug/l	74.33	100.00	90 - 110	Fail
203 Tl	98.87 ug/l	1.50	100.00	90 - 110	
206 Pb	99.26 ug/l	2.24	100.00	90 - 110	
207 Pb	97.62 ug/l	1.54	100.00	90 - 110	
208 Pb	97.11 ug/l	1.77	100.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1543184.10	2.73	1646938.90	93.7	80 - 120	
45 Sc	892540.94	2.19	879091.44	101.5	80 - 120	
74 Ge	205347.77	1.54	197502.22	104.0	80 - 120	
115 In	986029.38	1.35	981918.75	100.4	80 - 120	
209 Bi	741866.63	1.25	686715.56	108.0	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F20100.B\003CALB.D\003CALB.D#

9 :Element Failures 40 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCB QC Report

Data File: C:\ICPCHEM\1\DATA\13F20100.B\077_CCB.D\077_CCB.D#
Date Acquired: Jun 20 2013 04:49 pm
Operator: ICPMS 1 - JG
Sample Name: CCB
Misc Info: 60-22-473
Vial Number: 5
Current Method: C:\ICPCHEM\1\METHODS\6020G2W.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G2W.C
Last Cal Update: Jun 20 2013 12:07 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	High Limit	Flag
9 Be	0.53 ug/l	5.64	1.00	
11 B	1.99 ug/l	6.83	5.00	
23 Na	-12.38 ug/l	2.11	10.00	
24 Mg	-2.04 ug/l	135.26	10.00	
27 Al	0.36 ug/l	83.51	3.00	
39 K	-16.11 ug/l	4.58	5.00	
44 Ca	17.10 ug/l	37.75	10.00	Fail
47 Ti	-0.05 ug/l	21.50	5.00	
50 V	0.07 ug/l	76.27	2.00	
51 V	0.15 ug/l	12.77	2.00	
52 Cr	-0.24 ug/l	8.13	2.00	
53 Cr	-0.33 ug/l	9.23	2.00	
55 Mn	-0.32 ug/l	17.87	2.00	
57 Fe	0.19 ug/l	750.53	10.00	
59 Co	-0.39 ug/l	5.30	2.00	
60 Ni	-0.72 ug/l	4.71	2.00	
63 Cu	-0.05 ug/l	79.22	5.00	
66 Zn	-0.99 ug/l	4.80	5.00	
75 As	-0.42 ug/l	70.64	2.00	
77 (As)	-0.64 ug/l	4.60	3.00	
78 Se	-2.24 ug/l	31.60	3.00	
82 Se	-0.27 ug/l	417.07	2.00	
83 (Se)	-81.59 ug/l	205.91	3.00	
88 Sr	20.22 ug/l	154.45	2.00	Fail
89 Y	-------- ug/l	--------	#VALUE!	
98 Mo	0.11 ug/l	43.22	3.00	
99 (Mo)	-------- ug/l	--------	#VALUE!	
101 Ru	1176.00 ug/l	51.15	5.00	Fail
102 Ru	1566.00 ug/l	18.84	5.00	Fail
104 Ru	-163.60 ug/l	14.92	5.00	
106 (Cd)	-0.26 ug/l	25.42	3.00	
107 Ag	0.13 ug/l	25.40	2.00	
108 (Cd)	-0.48 ug/l	5.59	3.00	
111 Cd	-0.40 ug/l	9.71	1.00	
114 Cd	-0.24 ug/l	8.49	1.00	
120 Sn	0.36 ug/l	6.84	5.00	
121 Sb	1.42 ug/l	9.86	3.00	
137 Ba	0.16 ug/l	20.58	2.00	
140 Ce	34.27 ug/l	55.00	2.00	Fail
142 Ce	47.10 ug/l	82.74	2.00	Fail
182 W	-0.16 ug/l	3711.00	2.00	
184 W	-0.23 ug/l	1137.20	2.00	
186 W	1.01 ug/l	296.32	2.00	
203 Tl	-0.17 ug/l	13.95	2.00	
206 Pb	-0.30 ug/l	14.18	3.00	
207 Pb	-0.28 ug/l	11.32	3.00	
208 Pb	0.01 ug/l	493.62	1.00	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1594936.80	2.41	1646938.90	96.8	80 - 120	
45 Sc	907408.44	2.10	879091.44	103.2	80 - 120	
74 Ge	202113.33	1.84	197502.22	102.3	80 - 120	
115 In	977941.44	0.91	981918.75	99.6	80 - 120	
209 Bi	728828.88	0.68	686715.56	106.1	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F20100.B\003CALB.D\003CALB.D#

6 :Element Failures 15 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCV QC Report

Data File: C:\ICPCHEM\1\DATA\13F20100.B\088CCV1.D\088CCV1.D#
Date Acquired: Jun 20 2013 05:32 pm
Operator: ICPMS 1 - JG
Sample Name: CCV1
Misc Info: 60-22-451
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\6020G2W.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G2W.C
Last Cal Update: Jun 20 2013 12:07 pm
Sample Type: CCV1
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	Expected	QC Range(%)	Flag
9 Be	99.87 ug/l	1.86	100.00	90 - 110	
11 B	94.85 ug/l	1.86	100.00	90 - 110	
23 Na	1042.00 ug/l	3.49	1000.00	90 - 110	
24 Mg	1028.00 ug/l	4.30	1000.00	90 - 110	
27 Al	103.90 ug/l	3.13	100.00	90 - 110	
39 K	1007.00 ug/l	2.11	1000.00	90 - 110	
44 Ca	965.30 ug/l	2.50	1000.00	90 - 110	
47 Ti	49.87 ug/l	2.52	50.00	90 - 110	
50 V	99.50 ug/l	1.43	100.00	90 - 110	
51 V	99.82 ug/l	2.52	100.00	90 - 110	
52 Cr	100.40 ug/l	3.08	100.00	90 - 110	
53 Cr	102.10 ug/l	2.31	100.00	90 - 110	
55 Mn	99.13 ug/l	2.72	100.00	90 - 110	
57 Fe	975.90 ug/l	3.83	1000.00	90 - 110	
59 Co	95.82 ug/l	4.45	100.00	90 - 110	
60 Ni	101.90 ug/l	3.46	100.00	90 - 110	
63 Cu	99.88 ug/l	3.31	100.00	90 - 110	
66 Zn	112.10 ug/l	1.85	100.00	90 - 110	Fail
75 As	97.58 ug/l	1.94	100.00	90 - 110	
77 (As)	99.33 ug/l	6.14	100.00	90 - 110	
78 Se	93.48 ug/l	7.22	100.00	90 - 110	
82 Se	97.50 ug/l	2.43	100.00	90 - 110	
83 (Se)	66.41 ug/l	252.22	100.00	90 - 110	
88 Sr	317.70 ug/l	2.00	100.00	90 - 110	Fail
89 Y	-------- ug/l	--------	100.00	90 - 110	
98 Mo	46.56 ug/l	3.14	50.00	90 - 110	
99 (Mo)	-------- ug/l	--------	---	##### - #####	
101 Ru	1427.00 ug/l	17.41	100.00	90 - 110	Fail
102 Ru	2102.00 ug/l	1.83	100.00	90 - 110	Fail
104 Ru	-144.80 ug/l	22.79	100.00	90 - 110	Fail
106 (Cd)	101.10 ug/l	1.64	100.00	90 - 110	
107 Ag	98.54 ug/l	2.55	100.00	90 - 110	
108 (Cd)	100.30 ug/l	0.62	100.00	90 - 110	
111 Cd	101.40 ug/l	2.64	100.00	90 - 110	
114 Cd	101.00 ug/l	2.64	100.00	90 - 110	
120 Sn	51.03 ug/l	2.21	50.00	90 - 110	
121 Sb	49.18 ug/l	8.34	50.00	90 - 110	
137 Ba	98.14 ug/l	2.97	100.00	90 - 110	
140 Ce	75.11 ug/l	35.67	100.00	90 - 110	Fail
142 Ce	54.95 ug/l	31.37	100.00	90 - 110	Fail
182 W	7.79 ug/l	50.46	100.00	90 - 110	Fail
184 W	13.82 ug/l	61.51	100.00	90 - 110	Fail
186 W	10.97 ug/l	31.23	100.00	90 - 110	Fail
203 Tl	99.06 ug/l	2.92	100.00	90 - 110	
206 Pb	98.97 ug/l	3.24	100.00	90 - 110	
207 Pb	97.92 ug/l	3.04	100.00	90 - 110	
208 Pb	97.25 ug/l	3.00	100.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1679267.10	1.70	1646938.90	102.0	80 - 120	
45 Sc	907618.31	2.47	879091.44	103.2	80 - 120	
74 Ge	209200.00	1.41	197502.22	105.9	80 - 120	
115 In	954671.00	0.75	981918.75	97.2	80 - 120	
209 Bi	728686.63	0.23	686715.56	106.1	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F20100.B\003CALB.D\003CALB.D#

10 :Element Failures 40 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCB QC Report

Data File: C:\ICPCHEM\1\DATA\13F20100.B\089_CCB.D\089_CCB.D#
Date Acquired: Jun 20 2013 05:36 pm
Operator: ICPMS 1 - JG
Sample Name: CCB
Misc Info: 60-22-473
Vial Number: 5
Current Method: C:\ICPCHEM\1\METHODS\6020G2W.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G2W.C
Last Cal Update: Jun 20 2013 12:07 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	High Limit	Flag
9 Be	0.54 ug/l	3.09	1.00	
11 B	2.47 ug/l	9.89	5.00	
23 Na	16.85 ug/l	9.36	10.00	Fail
24 Mg	-6.08 ug/l	3.20	10.00	
27 Al	0.35 ug/l	81.18	3.00	
39 K	-12.74 ug/l	5.38	5.00	
44 Ca	8.97 ug/l	3.76	10.00	
47 Ti	-0.05 ug/l	13.52	5.00	
50 V	0.09 ug/l	6.79	2.00	
51 V	0.17 ug/l	4.91	2.00	
52 Cr	-0.22 ug/l	2.98	2.00	
53 Cr	-0.27 ug/l	4.69	2.00	
55 Mn	-0.34 ug/l	5.06	2.00	
57 Fe	0.19 ug/l	526.44	10.00	
59 Co	-0.42 ug/l	2.20	2.00	
60 Ni	-0.72 ug/l	0.78	2.00	
63 Cu	0.00 ug/l	117.55	5.00	
66 Zn	3.58 ug/l	3.57	5.00	
75 As	-0.35 ug/l	74.95	2.00	
77 (As)	-0.92 ug/l	27.25	3.00	
78 Se	-4.37 ug/l	16.57	3.00	
82 Se	-0.34 ug/l	403.90	2.00	
83 (Se)	64.93 ug/l	141.51	3.00	
88 Sr	13.59 ug/l	87.49	2.00	Fail
89 Y	-------- ug/l	--------	#VALUE!	
98 Mo	0.10 ug/l	31.51	3.00	
99 (Mo)	-------- ug/l	--------	#VALUE!	
101 Ru	1528.00 ug/l	21.94	5.00	Fail
102 Ru	1771.00 ug/l	8.02	5.00	Fail
104 Ru	-215.40 ug/l	32.67	5.00	
106 (Cd)	-0.09 ug/l	262.42	3.00	
107 Ag	0.13 ug/l	5.42	2.00	
108 (Cd)	-0.43 ug/l	16.85	3.00	
111 Cd	-0.38 ug/l	4.22	1.00	
114 Cd	-0.23 ug/l	1.58	1.00	
120 Sn	0.25 ug/l	1.87	5.00	
121 Sb	1.39 ug/l	8.38	3.00	
137 Ba	0.21 ug/l	6.82	2.00	
140 Ce	39.81 ug/l	12.93	2.00	Fail
142 Ce	35.25 ug/l	33.76	2.00	Fail
182 W	1.08 ug/l	491.17	2.00	
184 W	-5.47 ug/l	0.00	2.00	
186 W	1.07 ug/l	280.13	2.00	
203 Tl	-0.16 ug/l	14.77	2.00	
206 Pb	-0.26 ug/l	6.27	3.00	
207 Pb	-0.25 ug/l	9.17	3.00	
208 Pb	0.04 ug/l	32.29	1.00	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1681818.60	2.06	1646938.90	102.1	80 - 120	
45 Sc	922398.50	2.10	879091.44	104.9	80 - 120	
74 Ge	204588.89	0.27	197502.22	103.6	80 - 120	
115 In	953996.88	1.79	981918.75	97.2	80 - 120	
209 Bi	720781.06	0.32	686715.56	105.0	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F20100.B\003CALB.D\003CALB.D#

6 :Element Failures 15 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCV QC Report

Data File: C:\ICPCHEM\1\DATA\13F20100.B\097CCV1.D\097CCV1.D#
Date Acquired: Jun 20 2013 06:08 pm
Operator: ICPMS 1 - JG
Sample Name: CCV1
Misc Info: 60-22-451
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\6020G2W.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G2W.C
Last Cal Update: Jun 20 2013 12:07 pm
Sample Type: CCV1
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	Expected	QC Range(%)	Flag
9 Be	101.20 ug/l	1.03	100.00	90 - 110	
11 B	96.56 ug/l	2.48	100.00	90 - 110	
23 Na	986.30 ug/l	4.81	1000.00	90 - 110	
24 Mg	1003.00 ug/l	4.84	1000.00	90 - 110	
27 Al	102.50 ug/l	4.96	100.00	90 - 110	
39 K	1001.00 ug/l	4.98	1000.00	90 - 110	
44 Ca	960.20 ug/l	2.41	1000.00	90 - 110	
47 Ti	50.45 ug/l	2.12	50.00	90 - 110	
50 V	100.20 ug/l	4.54	100.00	90 - 110	
51 V	101.20 ug/l	5.67	100.00	90 - 110	
52 Cr	99.45 ug/l	5.98	100.00	90 - 110	
53 Cr	100.80 ug/l	6.60	100.00	90 - 110	
55 Mn	100.60 ug/l	5.15	100.00	90 - 110	
57 Fe	994.30 ug/l	3.71	1000.00	90 - 110	
59 Co	100.20 ug/l	3.79	100.00	90 - 110	
60 Ni	103.80 ug/l	3.25	100.00	90 - 110	
63 Cu	99.88 ug/l	3.76	100.00	90 - 110	
66 Zn	105.40 ug/l	5.26	100.00	90 - 110	
75 As	98.24 ug/l	1.64	100.00	90 - 110	
77 (As)	100.70 ug/l	0.28	100.00	90 - 110	
78 Se	97.36 ug/l	0.96	100.00	90 - 110	
82 Se	99.35 ug/l	2.05	100.00	90 - 110	
83 (Se)	-300.10 ug/l	108.26	100.00	90 - 110	
88 Sr	302.20 ug/l	10.60	100.00	90 - 110	Fail
89 Y	-------- ug/l	--------	100.00	90 - 110	
98 Mo	48.08 ug/l	3.97	50.00	90 - 110	
99 (Mo)	-------- ug/l	--------	---	##### - #####	
101 Ru	844.10 ug/l	43.77	100.00	90 - 110	Fail
102 Ru	1109.00 ug/l	16.85	100.00	90 - 110	Fail
104 Ru	-49.75 ug/l	106.57	100.00	90 - 110	Fail
106 (Cd)	101.50 ug/l	0.29	100.00	90 - 110	
107 Ag	98.04 ug/l	3.49	100.00	90 - 110	
108 (Cd)	99.47 ug/l	4.26	100.00	90 - 110	
111 Cd	100.80 ug/l	3.33	100.00	90 - 110	
114 Cd	100.80 ug/l	2.45	100.00	90 - 110	
120 Sn	51.43 ug/l	3.48	50.00	90 - 110	
121 Sb	49.76 ug/l	8.77	50.00	90 - 110	
137 Ba	99.05 ug/l	3.30	100.00	90 - 110	
140 Ce	134.30 ug/l	24.80	100.00	90 - 110	Fail
142 Ce	104.20 ug/l	27.12	100.00	90 - 110	
182 W	9.01 ug/l	44.36	100.00	90 - 110	Fail
184 W	8.63 ug/l	35.46	100.00	90 - 110	Fail
186 W	11.05 ug/l	56.29	100.00	90 - 110	Fail
203 Tl	99.91 ug/l	2.34	100.00	90 - 110	
206 Pb	99.39 ug/l	2.71	100.00	90 - 110	
207 Pb	98.34 ug/l	2.94	100.00	90 - 110	
208 Pb	98.11 ug/l	2.50	100.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1634010.30	1.77	1646938.90	99.2	80 - 120	
45 Sc	887770.38	3.40	879091.44	101.0	80 - 120	
74 Ge	202278.89	2.15	197502.22	102.4	80 - 120	
115 In	952759.75	1.81	981918.75	97.0	80 - 120	
209 Bi	724870.00	0.27	686715.56	105.6	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F20100.B\003CALB.D\003CALB.D#

8 :Element Failures 40 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCB QC Report

Data File: C:\ICPCHEM\1\DATA\13F20100.B\098_CCB.D\098_CCB.D#
Date Acquired: Jun 20 2013 06:12 pm
Operator: ICPMS 1 - JG
Sample Name: CCB
Misc Info: 60-22-473
Vial Number: 5
Current Method: C:\ICPCHEM\1\METHODS\6020G2W.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G2W.C
Last Cal Update: Jun 20 2013 12:07 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	High Limit	Flag
9 Be	0.53 ug/l	6.06	1.00	
11 B	2.11 ug/l	6.82	5.00	
23 Na	-5.60 ug/l	13.84	10.00	
24 Mg	-4.47 ug/l	44.56	10.00	
27 Al	1.39 ug/l	67.71	3.00	
39 K	-10.11 ug/l	17.76	5.00	
44 Ca	11.31 ug/l	32.84	10.00	Fail
47 Ti	0.00 ug/l	8578.90	5.00	
50 V	0.10 ug/l	33.66	2.00	
51 V	0.18 ug/l	22.23	2.00	
52 Cr	-0.20 ug/l	13.33	2.00	
53 Cr	-0.32 ug/l	5.48	2.00	
55 Mn	-0.27 ug/l	27.94	2.00	
57 Fe	3.20 ug/l	91.55	10.00	
59 Co	-0.40 ug/l	6.36	2.00	
60 Ni	-0.71 ug/l	5.87	2.00	
63 Cu	-0.01 ug/l	241.95	5.00	
66 Zn	-0.62 ug/l	19.61	5.00	
75 As	-0.51 ug/l	5.51	2.00	
77 (As)	-0.92 ug/l	10.60	3.00	
78 Se	-3.66 ug/l	38.36	3.00	
82 Se	-0.94 ug/l	23.81	2.00	
83 (Se)	-409.40 ug/l	31.80	3.00	
88 Sr	2.99 ug/l	486.13	2.00	Fail
89 Y	-------- ug/l	--------	#VALUE!	
98 Mo	0.09 ug/l	12.29	3.00	
99 (Mo)	-------- ug/l	--------	#VALUE!	
101 Ru	1017.00 ug/l	9.57	5.00	Fail
102 Ru	1512.00 ug/l	11.49	5.00	Fail
104 Ru	-203.20 ug/l	4.31	5.00	
106 (Cd)	0.07 ug/l	129.77	3.00	
107 Ag	0.14 ug/l	23.03	2.00	
108 (Cd)	-0.46 ug/l	12.19	3.00	
111 Cd	-0.36 ug/l	15.95	1.00	
114 Cd	-0.22 ug/l	22.69	1.00	
120 Sn	0.26 ug/l	6.00	5.00	
121 Sb	1.40 ug/l	13.12	3.00	
137 Ba	0.20 ug/l	34.61	2.00	
140 Ce	112.80 ug/l	33.30	2.00	Fail
142 Ce	63.33 ug/l	23.09	2.00	Fail
182 W	3.21 ug/l	104.73	2.00	Fail
184 W	1.55 ug/l	492.78	2.00	
186 W	1.98 ug/l	227.76	2.00	
203 Tl	-0.15 ug/l	13.33	2.00	
206 Pb	-0.28 ug/l	10.42	3.00	
207 Pb	-0.27 ug/l	10.65	3.00	
208 Pb	0.02 ug/l	201.17	1.00	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1700456.40	2.52	1646938.90	103.2	80 - 120	
45 Sc	909077.06	3.75	879091.44	103.4	80 - 120	
74 Ge	206001.11	3.29	197502.22	104.3	80 - 120	
115 In	962079.56	0.88	981918.75	98.0	80 - 120	
209 Bi	730540.00	0.67	686715.56	106.4	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F20100.B\003CALB.D\003CALB.D#

7 :Element Failures 15 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCV QC Report

Data File: C:\ICPCHEM\1\DATA\13F20100.B\109CCV1.D\109CCV1.D#
Date Acquired: Jun 20 2013 06:55 pm
Operator: ICPMS 1 - JG
Sample Name: CCV1
Misc Info: 60-22-451
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\6020G2W.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G2W.C
Last Cal Update: Jun 20 2013 12:07 pm
Sample Type: CCV1
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	Expected	QC Range(%)	Flag
9 Be	105.70 ug/l	1.37	100.00	90 - 110	
11 B	102.10 ug/l	3.75	100.00	90 - 110	
23 Na	1036.00 ug/l	3.56	1000.00	90 - 110	
24 Mg	1087.00 ug/l	2.02	1000.00	90 - 110	
27 Al	118.50 ug/l	2.09	100.00	90 - 110	Fail
39 K	1052.00 ug/l	0.62	1000.00	90 - 110	
44 Ca	1055.00 ug/l	2.11	1000.00	90 - 110	
47 Ti	51.58 ug/l	2.77	50.00	90 - 110	
50 V	103.00 ug/l	2.94	100.00	90 - 110	
51 V	103.40 ug/l	4.21	100.00	90 - 110	
52 Cr	103.00 ug/l	1.52	100.00	90 - 110	
53 Cr	103.80 ug/l	1.83	100.00	90 - 110	
55 Mn	102.10 ug/l	1.43	100.00	90 - 110	
57 Fe	1031.00 ug/l	2.16	1000.00	90 - 110	
59 Co	101.30 ug/l	2.98	100.00	90 - 110	
60 Ni	106.90 ug/l	3.58	100.00	90 - 110	
63 Cu	104.20 ug/l	2.00	100.00	90 - 110	
66 Zn	109.10 ug/l	1.08	100.00	90 - 110	
75 As	101.90 ug/l	1.21	100.00	90 - 110	
77 (As)	104.60 ug/l	4.15	100.00	90 - 110	
78 Se	99.02 ug/l	3.26	100.00	90 - 110	
82 Se	102.70 ug/l	3.03	100.00	90 - 110	
83 (Se)	771.90 ug/l	10.58	100.00	90 - 110	
88 Sr	469.10 ug/l	2.04	100.00	90 - 110	Fail
89 Y	-------- ug/l	--------	100.00	90 - 110	
98 Mo	49.06 ug/l	1.04	50.00	90 - 110	
99 (Mo)	-------- ug/l	--------	---	##### - #####	
101 Ru	1195.00 ug/l	17.46	100.00	90 - 110	Fail
102 Ru	1856.00 ug/l	12.43	100.00	90 - 110	Fail
104 Ru	-120.30 ug/l	26.80	100.00	90 - 110	Fail
106 (Cd)	105.40 ug/l	3.60	100.00	90 - 110	
107 Ag	103.70 ug/l	3.06	100.00	90 - 110	
108 (Cd)	102.20 ug/l	3.70	100.00	90 - 110	
111 Cd	105.60 ug/l	2.75	100.00	90 - 110	
114 Cd	105.00 ug/l	1.12	100.00	90 - 110	
120 Sn	53.48 ug/l	3.34	50.00	90 - 110	
121 Sb	51.13 ug/l	8.19	50.00	90 - 110	
137 Ba	101.90 ug/l	1.98	100.00	90 - 110	
140 Ce	569.40 ug/l	21.87	100.00	90 - 110	Fail
142 Ce	363.50 ug/l	12.74	100.00	90 - 110	Fail
182 W	11.49 ug/l	67.75	100.00	90 - 110	Fail
184 W	7.68 ug/l	73.22	100.00	90 - 110	Fail
186 W	15.60 ug/l	70.19	100.00	90 - 110	Fail
203 Tl	104.00 ug/l	0.60	100.00	90 - 110	
206 Pb	104.70 ug/l	1.30	100.00	90 - 110	
207 Pb	102.20 ug/l	0.75	100.00	90 - 110	
208 Pb	102.40 ug/l	0.63	100.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1520944.30	0.30	1646938.90	92.3	80 - 120	
45 Sc	854451.06	0.82	879091.44	97.2	80 - 120	
74 Ge	194461.11	0.18	197502.22	98.5	80 - 120	
115 In	894391.44	0.60	981918.75	91.1	80 - 120	
209 Bi	676225.56	2.33	686715.56	98.5	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F20100.B\003CALB.D\003CALB.D#

10 :Element Failures 40 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCB QC Report

Data File: C:\ICPCHEM\1\DATA\13F20100.B\110_CCB.D\110_CCB.D#
Date Acquired: Jun 20 2013 06:58 pm
Operator: ICPMS 1 - JG
Sample Name: CCB
Misc Info: 60-22-473
Vial Number: 5
Current Method: C:\ICPCHEM\1\METHODS\6020G2W.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G2W.C
Last Cal Update: Jun 20 2013 12:07 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	High Limit	Flag
9 Be	0.53 ug/l	4.06	1.00	
11 B	2.29 ug/l	14.53	5.00	
23 Na	-9.55 ug/l	4.07	10.00	
24 Mg	17.28 ug/l	54.51	10.00	Fail
27 Al	7.17 ug/l	37.26	3.00	Fail
39 K	-8.85 ug/l	16.05	5.00	
44 Ca	53.58 ug/l	36.34	10.00	Fail
47 Ti	0.09 ug/l	49.60	5.00	
50 V	0.18 ug/l	27.81	2.00	
51 V	0.19 ug/l	17.80	2.00	
52 Cr	-0.20 ug/l	7.50	2.00	
53 Cr	-0.28 ug/l	13.59	2.00	
55 Mn	0.50 ug/l	73.19	2.00	
57 Fe	18.46 ug/l	39.41	10.00	Fail
59 Co	-0.41 ug/l	3.06	2.00	
60 Ni	-0.68 ug/l	5.19	2.00	
63 Cu	-0.02 ug/l	107.73	5.00	
66 Zn	-0.88 ug/l	12.11	5.00	
75 As	-0.36 ug/l	43.40	2.00	
77 (As)	-0.90 ug/l	17.42	3.00	
78 Se	-3.99 ug/l	15.61	3.00	
82 Se	-0.25 ug/l	332.57	2.00	
83 (Se)	676.50 ug/l	13.53	3.00	
88 Sr	139.60 ug/l	36.49	2.00	Fail
89 Y	-------- ug/l	--------	#VALUE!	
98 Mo	0.09 ug/l	8.97	3.00	
99 (Mo)	-------- ug/l	--------	#VALUE!	
101 Ru	1121.00 ug/l	25.73	5.00	Fail
102 Ru	1449.00 ug/l	28.15	5.00	Fail
104 Ru	-184.60 ug/l	19.27	5.00	
106 (Cd)	0.13 ug/l	225.50	3.00	
107 Ag	0.14 ug/l	13.13	2.00	
108 (Cd)	-0.42 ug/l	14.23	3.00	
111 Cd	-0.39 ug/l	5.62	1.00	
114 Cd	-0.23 ug/l	12.42	1.00	
120 Sn	0.36 ug/l	70.04	5.00	
121 Sb	1.46 ug/l	12.03	3.00	
137 Ba	0.22 ug/l	17.76	2.00	
140 Ce	412.10 ug/l	44.63	2.00	Fail
142 Ce	257.50 ug/l	41.17	2.00	Fail
182 W	0.24 ug/l	3890.10	2.00	
184 W	2.07 ug/l	84.18	2.00	Fail
186 W	1.49 ug/l	222.52	2.00	
203 Tl	-0.15 ug/l	26.19	2.00	
206 Pb	-0.27 ug/l	9.06	3.00	
207 Pb	-0.25 ug/l	13.15	3.00	
208 Pb	0.03 ug/l	84.16	1.00	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1540983.30	2.19	1646938.90	93.6	80 - 120	
45 Sc	888248.75	2.80	879091.44	101.0	80 - 120	
74 Ge	195105.56	1.92	197502.22	98.8	80 - 120	
115 In	899935.94	0.79	981918.75	91.7	80 - 120	
209 Bi	678834.44	1.85	686715.56	98.9	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F20100.B\003CALB.D\003CALB.D#

10 :Element Failures 15 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCV QC Report

Data File: C:\ICPCHEM\1\DATA\13F20100.B\121CCV1.D\121CCV1.D#
Date Acquired: Jun 20 2013 07:40 pm
Operator: ICPMS 1 - JG
Sample Name: CCV1
Misc Info: 60-22-451
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\6020G2W.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G2W.C
Last Cal Update: Jun 20 2013 12:07 pm
Sample Type: CCV1
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	Expected	QC Range(%)	Flag
9 Be	106.10 ug/l	3.41	100.00	90 - 110	
11 B	105.00 ug/l	5.57	100.00	90 - 110	
23 Na	1090.00 ug/l	6.39	1000.00	90 - 110	
24 Mg	1121.00 ug/l	4.31	1000.00	90 - 110	Fail
27 Al	124.20 ug/l	3.65	100.00	90 - 110	Fail
39 K	1063.00 ug/l	3.90	1000.00	90 - 110	
44 Ca	1019.00 ug/l	1.47	1000.00	90 - 110	
47 Ti	52.25 ug/l	1.77	50.00	90 - 110	
50 V	105.10 ug/l	1.36	100.00	90 - 110	
51 V	105.60 ug/l	1.72	100.00	90 - 110	
52 Cr	105.60 ug/l	1.82	100.00	90 - 110	
53 Cr	106.30 ug/l	4.40	100.00	90 - 110	
55 Mn	105.30 ug/l	2.71	100.00	90 - 110	
57 Fe	1049.00 ug/l	3.76	1000.00	90 - 110	
59 Co	101.60 ug/l	3.22	100.00	90 - 110	
60 Ni	108.70 ug/l	3.21	100.00	90 - 110	
63 Cu	106.10 ug/l	3.44	100.00	90 - 110	
66 Zn	110.80 ug/l	1.20	100.00	90 - 110	Fail
75 As	100.40 ug/l	0.17	100.00	90 - 110	
77 (As)	104.20 ug/l	4.83	100.00	90 - 110	
78 Se	99.95 ug/l	4.44	100.00	90 - 110	
82 Se	101.30 ug/l	4.88	100.00	90 - 110	
83 (Se)	615.70 ug/l	24.80	100.00	90 - 110	
88 Sr	431.80 ug/l	3.69	100.00	90 - 110	Fail
89 Y	-------- ug/l	--------	100.00	90 - 110	
98 Mo	48.87 ug/l	2.99	50.00	90 - 110	
99 (Mo)	-------- ug/l	--------	---	##### - #####	
101 Ru	1299.00 ug/l	7.70	100.00	90 - 110	Fail
102 Ru	1744.00 ug/l	2.20	100.00	90 - 110	Fail
104 Ru	-79.96 ug/l	41.86	100.00	90 - 110	Fail
106 (Cd)	105.50 ug/l	1.99	100.00	90 - 110	
107 Ag	105.80 ug/l	2.90	100.00	90 - 110	
108 (Cd)	108.90 ug/l	1.46	100.00	90 - 110	
111 Cd	106.30 ug/l	3.29	100.00	90 - 110	
114 Cd	105.10 ug/l	2.24	100.00	90 - 110	
120 Sn	54.65 ug/l	2.59	50.00	90 - 110	
121 Sb	51.93 ug/l	8.14	50.00	90 - 110	
137 Ba	104.80 ug/l	3.19	100.00	90 - 110	
140 Ce	840.70 ug/l	5.28	100.00	90 - 110	Fail
142 Ce	487.80 ug/l	3.13	100.00	90 - 110	Fail
182 W	12.77 ug/l	99.92	100.00	90 - 110	Fail
184 W	13.85 ug/l	69.06	100.00	90 - 110	Fail
186 W	22.44 ug/l	32.69	100.00	90 - 110	Fail
203 Tl	103.50 ug/l	0.79	100.00	90 - 110	
206 Pb	104.20 ug/l	0.31	100.00	90 - 110	
207 Pb	102.90 ug/l	0.40	100.00	90 - 110	
208 Pb	102.50 ug/l	0.52	100.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1558621.10	2.81	1646938.90	94.6	80 - 120	
45 Sc	838350.81	2.55	879091.44	95.4	80 - 120	
74 Ge	193268.89	1.52	197502.22	97.9	80 - 120	
115 In	865441.00	0.66	981918.75	88.1	80 - 120	
209 Bi	664557.75	2.52	686715.56	96.8	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F20100.B\003CALB.D\003CALB.D#

12 :Element Failures 40 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCB QC Report

Data File: C:\ICPCHEM\1\DATA\13F20100.B\122_CCB.D\122_CCB.D#
Date Acquired: Jun 20 2013 07:44 pm
Operator: ICPMS 1 - JG
Sample Name: CCB
Misc Info: 60-22-473
Vial Number: 5
Current Method: C:\ICPCHEM\1\METHODS\6020G2W.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G2W.C
Last Cal Update: Jun 20 2013 12:07 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	High Limit	Flag
9 Be	0.53 ug/l	4.12	1.00	
11 B	2.04 ug/l	11.70	5.00	
23 Na	-6.76 ug/l	14.62	10.00	
24 Mg	8.22 ug/l	54.55	10.00	
27 Al	10.22 ug/l	19.28	3.00	Fail
39 K	-7.03 ug/l	24.32	5.00	
44 Ca	30.85 ug/l	21.99	10.00	Fail
47 Ti	0.10 ug/l	47.32	5.00	
50 V	0.15 ug/l	44.23	2.00	
51 V	0.20 ug/l	12.84	2.00	
52 Cr	-0.19 ug/l	2.85	2.00	
53 Cr	-0.25 ug/l	2.58	2.00	
55 Mn	0.23 ug/l	63.43	2.00	
57 Fe	22.29 ug/l	30.15	10.00	Fail
59 Co	-0.39 ug/l	6.83	2.00	
60 Ni	-0.69 ug/l	4.03	2.00	
63 Cu	-0.01 ug/l	266.97	5.00	
66 Zn	-0.87 ug/l	6.76	5.00	
75 As	-0.40 ug/l	87.32	2.00	
77 (As)	-0.88 ug/l	5.88	3.00	
78 Se	-3.07 ug/l	32.84	3.00	
82 Se	-0.34 ug/l	394.39	2.00	
83 (Se)	505.00 ug/l	38.83	3.00	
88 Sr	84.68 ug/l	28.89	2.00	Fail
89 Y	-------- ug/l	--------	#VALUE!	
98 Mo	0.07 ug/l	40.27	3.00	
99 (Mo)	-------- ug/l	--------	#VALUE!	
101 Ru	864.30 ug/l	23.08	5.00	Fail
102 Ru	1450.00 ug/l	15.32	5.00	Fail
104 Ru	-171.80 ug/l	46.68	5.00	
106 (Cd)	-0.14 ug/l	115.53	3.00	
107 Ag	0.14 ug/l	21.62	2.00	
108 (Cd)	-0.46 ug/l	6.68	3.00	
111 Cd	-0.39 ug/l	1.73	1.00	
114 Cd	-0.24 ug/l	13.45	1.00	
120 Sn	0.22 ug/l	12.85	5.00	
121 Sb	1.41 ug/l	13.66	3.00	
137 Ba	0.22 ug/l	20.16	2.00	
140 Ce	611.90 ug/l	28.49	2.00	Fail
142 Ce	320.80 ug/l	33.11	2.00	Fail
182 W	-0.63 ug/l	926.54	2.00	
184 W	0.32 ug/l	43.01	2.00	
186 W	8.16 ug/l	36.73	2.00	Fail
203 Tl	-0.16 ug/l	37.25	2.00	
206 Pb	-0.25 ug/l	12.66	3.00	
207 Pb	-0.24 ug/l	11.55	3.00	
208 Pb	0.05 ug/l	49.99	1.00	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1611131.10	1.80	1646938.90	97.8	80 - 120	
45 Sc	856137.56	0.89	879091.44	97.4	80 - 120	
74 Ge	190137.77	1.10	197502.22	96.3	80 - 120	
115 In	890918.00	1.47	981918.75	90.7	80 - 120	
209 Bi	661804.44	2.35	686715.56	96.4	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F20100.B\003CALB.D\003CALB.D#

9 :Element Failures 15 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCV QC Report

Data File: C:\ICPCHEM\1\DATA\13F20100.B\125CCV1.D\125CCV1.D#
Date Acquired: Jun 20 2013 07:56 pm
Operator: ICPMS 1 - JG
Sample Name: CCV1
Misc Info: 60-22-451
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\6020G2W.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G2W.C
Last Cal Update: Jun 20 2013 12:07 pm
Sample Type: CCV1
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	Expected	QC Range(%)	Flag
9 Be	103.60 ug/l	2.64	100.00	90 - 110	
11 B	100.30 ug/l	6.26	100.00	90 - 110	
23 Na	1065.00 ug/l	2.99	1000.00	90 - 110	
24 Mg	1061.00 ug/l	0.23	1000.00	90 - 110	
27 Al	112.90 ug/l	0.86	100.00	90 - 110	Fail
39 K	1060.00 ug/l	1.26	1000.00	90 - 110	
44 Ca	1000.00 ug/l	0.80	1000.00	90 - 110	
47 Ti	52.04 ug/l	1.92	50.00	90 - 110	
50 V	103.50 ug/l	0.46	100.00	90 - 110	
51 V	103.80 ug/l	2.35	100.00	90 - 110	
52 Cr	105.00 ug/l	2.26	100.00	90 - 110	
53 Cr	104.40 ug/l	2.02	100.00	90 - 110	
55 Mn	102.10 ug/l	1.58	100.00	90 - 110	
57 Fe	1021.00 ug/l	1.32	1000.00	90 - 110	
59 Co	99.79 ug/l	1.49	100.00	90 - 110	
60 Ni	106.50 ug/l	0.59	100.00	90 - 110	
63 Cu	103.40 ug/l	1.51	100.00	90 - 110	
66 Zn	106.60 ug/l	1.52	100.00	90 - 110	
75 As	102.20 ug/l	1.21	100.00	90 - 110	
77 (As)	105.80 ug/l	0.70	100.00	90 - 110	
78 Se	98.22 ug/l	4.76	100.00	90 - 110	
82 Se	101.60 ug/l	1.87	100.00	90 - 110	
83 (Se)	598.60 ug/l	17.36	100.00	90 - 110	
88 Sr	351.30 ug/l	13.16	100.00	90 - 110	Fail
89 Y	-------- ug/l	--------	100.00	90 - 110	
98 Mo	49.17 ug/l	1.25	50.00	90 - 110	
99 (Mo)	-------- ug/l	--------	---	##### - #####	
101 Ru	1056.00 ug/l	6.43	100.00	90 - 110	Fail
102 Ru	1498.00 ug/l	17.00	100.00	90 - 110	Fail
104 Ru	-111.80 ug/l	70.31	100.00	90 - 110	Fail
106 (Cd)	106.20 ug/l	1.52	100.00	90 - 110	
107 Ag	102.90 ug/l	0.88	100.00	90 - 110	
108 (Cd)	104.30 ug/l	0.36	100.00	90 - 110	
111 Cd	105.50 ug/l	1.10	100.00	90 - 110	
114 Cd	105.40 ug/l	0.84	100.00	90 - 110	
120 Sn	53.36 ug/l	0.58	50.00	90 - 110	
121 Sb	51.90 ug/l	5.18	50.00	90 - 110	
137 Ba	103.30 ug/l	1.00	100.00	90 - 110	
140 Ce	277.10 ug/l	18.54	100.00	90 - 110	Fail
142 Ce	150.70 ug/l	24.05	100.00	90 - 110	Fail
182 W	16.32 ug/l	55.24	100.00	90 - 110	Fail
184 W	20.24 ug/l	57.86	100.00	90 - 110	Fail
186 W	13.44 ug/l	52.26	100.00	90 - 110	Fail
203 Tl	103.40 ug/l	0.55	100.00	90 - 110	
206 Pb	103.70 ug/l	1.33	100.00	90 - 110	
207 Pb	101.60 ug/l	1.49	100.00	90 - 110	
208 Pb	101.80 ug/l	1.04	100.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1597812.00	3.87	1646938.90	97.0	80 - 120	
45 Sc	861627.19	1.49	879091.44	98.0	80 - 120	
74 Ge	193733.33	2.49	197502.22	98.1	80 - 120	
115 In	881894.25	1.49	981918.75	89.8	80 - 120	
209 Bi	672842.25	1.31	686715.56	98.0	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F20100.B\003CALB.D\003CALB.D#

10 :Element Failures 40 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCB QC Report

Data File: C:\ICPCHEM\1\DATA\13F20100.B\126_CCB.D\126_CCB.D#
Date Acquired: Jun 20 2013 07:59 pm
Operator: ICPMS 1 - JG
Sample Name: CCB
Misc Info: 60-22-473
Vial Number: 5
Current Method: C:\ICPCHEM\1\METHODS\6020G2W.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G2W.C
Last Cal Update: Jun 20 2013 12:07 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	High Limit	Flag
9 Be	0.53 ug/l	5.01	1.00	
11 B	2.21 ug/l	12.46	5.00	
23 Na	-3.64 ug/l	37.87	10.00	
24 Mg	-4.44 ug/l	38.91	10.00	
27 Al	1.97 ug/l	43.72	3.00	
39 K	-5.36 ug/l	10.94	5.00	
44 Ca	10.51 ug/l	25.01	10.00	Fail
47 Ti	-0.01 ug/l	11.69	5.00	
50 V	0.11 ug/l	30.47	2.00	
51 V	0.19 ug/l	16.53	2.00	
52 Cr	-0.19 ug/l	15.49	2.00	
53 Cr	-0.31 ug/l	6.28	2.00	
55 Mn	-0.23 ug/l	38.52	2.00	
57 Fe	5.54 ug/l	56.79	10.00	
59 Co	-0.41 ug/l	5.68	2.00	
60 Ni	-0.70 ug/l	5.01	2.00	
63 Cu	-0.03 ug/l	130.24	5.00	
66 Zn	-0.92 ug/l	4.31	5.00	
75 As	-0.45 ug/l	44.22	2.00	
77 (As)	-0.96 ug/l	16.04	3.00	
78 Se	-3.73 ug/l	10.65	3.00	
82 Se	-0.65 ug/l	99.11	2.00	
83 (Se)	478.50 ug/l	29.93	3.00	
88 Sr	4.32 ug/l	143.80	2.00	Fail
89 Y	-------- ug/l	--------	#VALUE!	
98 Mo	0.08 ug/l	21.55	3.00	
99 (Mo)	-------- ug/l	--------	#VALUE!	
101 Ru	1259.00 ug/l	20.46	5.00	Fail
102 Ru	1527.00 ug/l	3.10	5.00	Fail
104 Ru	-158.50 ug/l	26.15	5.00	
106 (Cd)	0.00 ug/l	10189.00	3.00	
107 Ag	0.14 ug/l	24.11	2.00	
108 (Cd)	-0.40 ug/l	19.84	3.00	
111 Cd	-0.38 ug/l	4.86	1.00	
114 Cd	-0.23 ug/l	15.29	1.00	
120 Sn	0.26 ug/l	7.50	5.00	
121 Sb	1.49 ug/l	15.01	3.00	
137 Ba	0.18 ug/l	16.21	2.00	
140 Ce	137.40 ug/l	3.82	2.00	Fail
142 Ce	58.69 ug/l	41.71	2.00	Fail
182 W	-2.02 ug/l	104.37	2.00	
184 W	-2.64 ug/l	186.24	2.00	
186 W	-0.62 ug/l	297.81	2.00	
203 Tl	-0.16 ug/l	11.07	2.00	
206 Pb	-0.28 ug/l	7.61	3.00	
207 Pb	-0.27 ug/l	9.65	3.00	
208 Pb	0.02 ug/l	107.53	1.00	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1621628.40	2.23	1646938.90	98.5	80 - 120	
45 Sc	861040.50	1.13	879091.44	97.9	80 - 120	
74 Ge	193068.89	0.79	197502.22	97.8	80 - 120	
115 In	892906.63	0.85	981918.75	90.9	80 - 120	
209 Bi	667077.75	1.83	686715.56	97.1	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F20100.B\003CALB.D\003CALB.D#

6 :Element Failures 15 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\13F20100.B\131SMPL.D\131SMPL.D#
Date Acquired: Jun 20 2013 08:18 pm
Acq. Method: 6020G2W.M
Operator: ICPMS 1 - JG
Sample Name: 13060511-044CMS
Misc Info: M_ICPMS_W
Vial Number: 2305
Current Method: C:\ICPCHEM\1\METHODS\6020G2W.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G2W.C
Last Cal. Update: Jun 20 2013 12:07 pm
Sample Type: Sample
Dilution Factor: 5.00
Autodil Factor: Undiluted
Final Dil Factor: 5.00

QC Elements

Element	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	483.40	96.68	ug/l	2.85	10000.00	
11 B	659.00	131.80	ug/l	5.45	5000.00	
23 Na	12,820.00	2564.00	ug/l	1.34	100000.00	
24 Mg	106,300.00	21260.00	ug/l	2.87	100000.00	
27 Al	69,850.00	13970.00	ug/l	0.30	100000.00	
39 K	21,180.00	4236.00	ug/l	1.01	100000.00	
44 Ca	789,500.00	157900.00	ug/l	1.25	100000.00	>LRS
47 Ti	928.50	185.70	ug/l	1.30	10000.00	
50 V	1,276.00	255.20	ug/l	27.87	10000.00	
51 V	579.50	115.90	ug/l	1.54	10000.00	
52 Cr	586.50	117.30	ug/l	1.75	10000.00	
53 Cr	603.50	120.70	ug/l	1.98	10000.00	
55 Mn	13,600.00	2720.00	ug/l	0.70	10000.00	
57 Fe	137,200.00	27440.00	ug/l	1.51	100000.00	
59 Co	571.00	114.20	ug/l	1.21	10000.00	
60 Ni	672.00	134.40	ug/l	0.11	10000.00	
63 Cu	570.00	114.00	ug/l	1.46	10000.00	
66 Zn	940.00	188.00	ug/l	1.45	10000.00	
75 As	563.50	112.70	ug/l	0.80	10000.00	
77 (As)	538.00	107.60	ug/l	5.13	10000.00	
78 Se	476.05	95.21	ug/l	2.95	10000.00	
82 Se	468.75	93.75	ug/l	1.48	10000.00	
83 (Se)	2,459.00	491.80	ug/l	30.34	10000.00	
88 Sr	5,755,000.00	1151000.00	ug/l	0.90	10000.00	>LRS
89 Y	----	--------	ug/l	--------	#VALUE!	
98 Mo	231.10	46.22	ug/l	1.57	10000.00	
99 (Mo)	----	--------	ug/l	--------	#VALUE!	
101 Ru	10,595.00	2119.00	ug/l	0.10	10000.00	
102 Ru	11,745.00	2349.00	ug/l	4.09	10000.00	
104 Ru	734.50	146.90	ug/l	48.53	10000.00	
106 (Cd)	509.50	101.90	ug/l	1.17	10000.00	
107 Ag	195.55	39.11	ug/l	0.79	10000.00	
108 (Cd)	498.45	99.69	ug/l	1.28	10000.00	
111 Cd	507.50	101.50	ug/l	2.10	10000.00	
114 Cd	507.50	101.50	ug/l	0.75	#VALUE!	
120 Sn	262.20	52.44	ug/l	1.45	10000.00	
121 Sb	111.55	22.31	ug/l	1.00	10000.00	
137 Ba	1,409.50	281.90	ug/l	0.81	10000.00	
140 Ce	2,990,500.00	598100.00	ug/l	0.62	10000.00	>LRS
142 Ce	1,639,500.00	327900.00	ug/l	0.45	10000.00	>LRS
182 W	5,030.00	1006.00	ug/l	8.64	10000.00	
184 W	4,392.50	878.50	ug/l	6.78	10000.00	
186 W	4,145.00	829.00	ug/l	14.27	10000.00	
203 Tl	521.50	104.30	ug/l	1.72	10000.00	
206 Pb	726.00	145.20	ug/l	1.64	10000.00	
207 Pb	709.50	141.90	ug/l	0.20	10000.00	
208 Pb	707.50	141.50	ug/l	0.94	10000.00	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1676527.10	0.87	1646938.90	101.8	60 - 120	
45 Sc	903468.13	1.52	879091.44	102.8	60 - 120	
74 Ge	180974.44	2.01	197502.22	91.6	60 - 120	
115 In	833842.25	1.64	981918.75	84.9	60 - 120	
209 Bi	604462.25	1.49	686715.56	88.0	60 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F20100.B\003CALB.D\003CALB.D#

4 :Element Failures 0 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Fail
ISTD: Pass

Blank QC Report

Data File: C:\ICPCHEM\1\DATA\13F20100.B\132BLNK.D\132BLNK.D#
Date Acquired: Jun 20 2013 08:22 pm
Acq. Method: 6020G2W.M
Operator: ICPMS 1 - JG
Sample Name: blk
Misc Info:
Vial Number: 1
Current Method: C:\ICPCHEM\1\METHODS\6020G2W.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G2W.C
Last Cal. Update: Jun 20 2013 12:07 pm
Sample Type: Blank
Dilution Factor: 1.00

QC Elements

Element	Corr. Conc.		RSD(%)	Raw Conc.	High Limit	Flag
9 Be	0.5535	ug/l	4.86	0.5535	4.00	
11 B	2.233	ug/l	10.07	2.233	15.00	
23 Na	0.4086	ug/l	417.77	0.4086	40.00	
24 Mg	22.09	ug/l	32.00	22.09	50.00	
27 Al	16.22	ug/l	26.70	16.22	15.00	
39 K	-4.111	ug/l	98.37	-4.111	40.00	
44 Ca	151.2	ug/l	32.08	151.2	50.00	
47 Ti	0.1635	ug/l	11.56	0.1635	20.00	
50 V	0.3162	ug/l	14.56	0.3162	5.00	
51 V	0.2202	ug/l	7.63	0.2202	5.00	
52 Cr	-0.1597	ug/l	11.08	-0.1597	5.00	
53 Cr	-0.1219	ug/l	58.77	-0.1219	5.00	
55 Mn	2.057	ug/l	42.57	2.057	5.00	
57 Fe	32.21	ug/l	26.23	32.21	50.00	
59 Co	-0.3939	ug/l	6.94	-0.3939	5.00	
60 Ni	-0.6391	ug/l	5.93	-0.6391	5.00	
63 Cu	0.01845	ug/l	258.21	0.01845	10.00	
66 Zn	0.2162	ug/l	38.34	0.2162	20.00	
75 As	-0.2432	ug/l	117.72	-0.2432	5.00	
77 (As)	-0.736	ug/l	23.67	-0.736	10.00	
78 Se	-3.007	ug/l	9.56	-3.007	10.00	
82 Se	0.003556	ug/l	30315.00	0.003556	5.00	
83 (Se)	706.4	ug/l	37.42	706.4	10.00	
88 Sr	876.1	ug/l	29.26	876.1	5.00	
89 Y	----	ug/l	--------	----	---	
98 Mo	0.08374	ug/l	4.86	0.08374	5.00	
99 (Mo)	----	ug/l	--------	----	---	
101 Ru	1680	ug/l	6.14	1680	5.00	
102 Ru	2160	ug/l	4.83	2160	5.00	
104 Ru	-290.4	ug/l	9.61	-290.4	5.00	
106 (Cd)	0.1651	ug/l	43.68	0.1651	5.00	
107 Ag	0.1111	ug/l	16.63	0.1111	5.00	
108 (Cd)	-0.3339	ug/l	41.57	-0.3339	10.00	
111 Cd	-0.3408	ug/l	6.65	-0.3408	5.00	
114 Cd	-0.2082	ug/l	14.33	-0.2082	5.00	
120 Sn	0.1409	ug/l	3.28	0.1409	10.00	
121 Sb	0.263	ug/l	2.03	0.263	10.00	
137 Ba	0.3556	ug/l	13.87	0.3556	10.00	
140 Ce	540.5	ug/l	27.44	540.5	10.00	
142 Ce	334	ug/l	45.12	334	10.00	
182 W	4.136	ug/l	235.88	4.136	10.00	
184 W	-0.6983	ug/l	475.01	-0.6983	10.00	
186 W	6.982	ug/l	71.64	6.982	10.00	
203 Tl	-0.02178	ug/l	90.63	-0.02178	5.00	
206 Pb	-0.1824	ug/l	17.20	-0.1824	5.00	
207 Pb	-0.1861	ug/l	13.61	-0.1861	5.00	
208 Pb	0.1098	ug/l	31.43	0.1098	5.00	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1627224.90	0.41	1646938.90	98.8	80 - 120	
45 Sc	867546.19	2.40	879091.44	98.7	80 - 120	
74 Ge	193301.11	1.87	197502.22	97.9	80 - 120	
115 In	891427.19	0.78	981918.75	90.8	80 - 120	
209 Bi	669094.44	0.33	686715.56	97.4	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F20100.B\003CALB.D\003CALB.D#

0 :Element Failures 15 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Nnumber of ISTD Failures Allowed

QC Results:
Analytes: Pass
ISTD: Pass

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\13F20100.B\133SMPL.D\133SMPL.D#
Date Acquired: Jun 20 2013 08:26 pm
Acq. Method: 6020G2W.M
Operator: ICPMS 1 - JG
Sample Name: 13060511-044CMSD
Misc Info: M_ICPMS_W
Vial Number: 2306
Current Method: C:\ICPCHEM\1\METHODS\6020G2W.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G2W.C
Last Cal. Update: Jun 20 2013 12:07 pm
Sample Type: Sample
Dilution Factor: 5.00
Autodil Factor: Undiluted
Final Dil Factor: 5.00

QC Elements

Element	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	497.05	99.41	ug/l	1.90	10000.00	
11 B	660.50	132.10	ug/l	1.59	5000.00	
23 Na	13,370.00	2674.00	ug/l	1.51	100000.00	
24 Mg	122,450.00	24490.00	ug/l	3.94	100000.00	
27 Al	81,200.00	16240.00	ug/l	2.79	100000.00	
39 K	23,720.00	4744.00	ug/l	1.38	100000.00	
44 Ca	836,500.00	167300.00	ug/l	1.41	100000.00	>LRS
47 Ti	1,059.50	211.90	ug/l	2.41	10000.00	
50 V	1,258.00	251.60	ug/l	3.93	10000.00	
51 V	632.50	126.50	ug/l	1.66	10000.00	
52 Cr	643.00	128.60	ug/l	2.20	10000.00	
53 Cr	649.50	129.90	ug/l	1.12	10000.00	
55 Mn	14,290.00	2858.00	ug/l	1.66	10000.00	
57 Fe	161,200.00	32240.00	ug/l	1.65	100000.00	
59 Co	600.00	120.00	ug/l	0.71	10000.00	
60 Ni	719.50	143.90	ug/l	2.88	10000.00	
63 Cu	616.00	123.20	ug/l	2.62	10000.00	
66 Zn	1,042.50	208.50	ug/l	2.92	10000.00	
75 As	592.50	118.50	ug/l	0.62	10000.00	
77 (As)	557.00	111.40	ug/l	1.40	10000.00	
78 Se	479.10	95.82	ug/l	0.19	10000.00	
82 Se	480.90	96.18	ug/l	3.15	10000.00	
83 (Se)	1,666.00	333.20	ug/l	44.54	10000.00	
88 Sr	6,010,000.00	1202000.00	ug/l	1.44	10000.00	>LRS
89 Y	----	--------	ug/l	--------	#VALUE!	
98 Mo	242.25	48.45	ug/l	0.67	10000.00	
99 (Mo)	----	--------	ug/l	--------	#VALUE!	
101 Ru	10,440.00	2088.00	ug/l	4.35	10000.00	
102 Ru	12,480.00	2496.00	ug/l	11.23	10000.00	
104 Ru	732.00	146.40	ug/l	24.44	10000.00	
106 (Cd)	534.50	106.90	ug/l	1.47	10000.00	
107 Ag	205.25	41.05	ug/l	0.45	10000.00	
108 (Cd)	514.50	102.90	ug/l	1.88	10000.00	
111 Cd	525.50	105.10	ug/l	1.69	10000.00	
114 Cd	532.50	106.50	ug/l	1.06	#VALUE!	
120 Sn	270.05	54.01	ug/l	0.97	10000.00	
121 Sb	104.55	20.91	ug/l	0.34	10000.00	
137 Ba	1,515.00	303.00	ug/l	1.18	10000.00	
140 Ce	3,526,500.00	705300.00	ug/l	0.40	10000.00	>LRS
142 Ce	1,936,000.00	387200.00	ug/l	0.93	10000.00	>LRS
182 W	5,720.00	1144.00	ug/l	7.66	10000.00	
184 W	4,749.00	949.80	ug/l	8.88	10000.00	
186 W	5,295.00	1059.00	ug/l	7.11	10000.00	
203 Tl	538.50	107.70	ug/l	1.83	10000.00	
206 Pb	771.50	154.30	ug/l	0.99	10000.00	
207 Pb	763.00	152.60	ug/l	0.61	10000.00	
208 Pb	758.00	151.60	ug/l	0.30	10000.00	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1639757.10	3.24	1646938.90	99.6	60 - 120	
45 Sc	877616.13	1.04	879091.44	99.8	60 - 120	
74 Ge	178090.00	1.87	197502.22	90.2	60 - 120	
115 In	817962.63	1.23	981918.75	83.3	60 - 120	
209 Bi	602881.06	1.65	686715.56	87.8	60 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F20100.B\003CALB.D\003CALB.D#

4 :Element Failures 0 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Fail
ISTD: Pass

CCV QC Report

Data File: C:\ICPCHEM\1\DATA\13F20100.B\137CCV1.D\137CCV1.D#
Date Acquired: Jun 20 2013 08:41 pm
Operator: ICPMS 1 - JG
Sample Name: CCV1
Misc Info: 60-22-451
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\6020G2W.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G2W.C
Last Cal Update: Jun 20 2013 12:07 pm
Sample Type: CCV1
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	Expected	QC Range(%)	Flag
9 Be	105.30 ug/l	1.13	100.00	90 - 110	
11 B	100.60 ug/l	1.04	100.00	90 - 110	
23 Na	1043.00 ug/l	1.63	1000.00	90 - 110	
24 Mg	1072.00 ug/l	2.25	1000.00	90 - 110	
27 Al	112.00 ug/l	1.26	100.00	90 - 110	Fail
39 K	1054.00 ug/l	1.97	1000.00	90 - 110	
44 Ca	1045.00 ug/l	1.94	1000.00	90 - 110	
47 Ti	52.02 ug/l	0.81	50.00	90 - 110	
50 V	103.90 ug/l	1.21	100.00	90 - 110	
51 V	102.70 ug/l	1.28	100.00	90 - 110	
52 Cr	103.60 ug/l	2.26	100.00	90 - 110	
53 Cr	103.10 ug/l	2.68	100.00	90 - 110	
55 Mn	102.60 ug/l	1.93	100.00	90 - 110	
57 Fe	1023.00 ug/l	1.11	1000.00	90 - 110	
59 Co	102.10 ug/l	1.15	100.00	90 - 110	
60 Ni	105.80 ug/l	1.71	100.00	90 - 110	
63 Cu	103.00 ug/l	3.19	100.00	90 - 110	
66 Zn	105.20 ug/l	2.64	100.00	90 - 110	
75 As	102.80 ug/l	0.76	100.00	90 - 110	
77 (As)	104.60 ug/l	2.50	100.00	90 - 110	
78 Se	101.90 ug/l	2.69	100.00	90 - 110	
82 Se	103.40 ug/l	0.66	100.00	90 - 110	
83 (Se)	551.60 ug/l	31.09	100.00	90 - 110	
88 Sr	751.80 ug/l	8.72	100.00	90 - 110	Fail
89 Y	-------- ug/l	--------	100.00	90 - 110	
98 Mo	49.42 ug/l	1.81	50.00	90 - 110	
99 (Mo)	-------- ug/l	--------	---	##### - #####	
101 Ru	1575.00 ug/l	1.88	100.00	90 - 110	Fail
102 Ru	2156.00 ug/l	9.95	100.00	90 - 110	Fail
104 Ru	-169.10 ug/l	21.55	100.00	90 - 110	Fail
106 (Cd)	104.00 ug/l	1.25	100.00	90 - 110	
107 Ag	103.10 ug/l	0.81	100.00	90 - 110	
108 (Cd)	103.00 ug/l	2.40	100.00	90 - 110	
111 Cd	104.70 ug/l	0.81	100.00	90 - 110	
114 Cd	104.60 ug/l	1.34	100.00	90 - 110	
120 Sn	53.50 ug/l	1.51	50.00	90 - 110	
121 Sb	50.96 ug/l	6.26	50.00	90 - 110	
137 Ba	102.10 ug/l	0.59	100.00	90 - 110	
140 Ce	220.60 ug/l	22.94	100.00	90 - 110	Fail
142 Ce	119.80 ug/l	21.29	100.00	90 - 110	Fail
182 W	14.01 ug/l	17.79	100.00	90 - 110	Fail
184 W	11.58 ug/l	46.19	100.00	90 - 110	Fail
186 W	21.01 ug/l	2.73	100.00	90 - 110	Fail
203 Tl	103.50 ug/l	1.22	100.00	90 - 110	
206 Pb	103.80 ug/l	0.23	100.00	90 - 110	
207 Pb	102.50 ug/l	1.03	100.00	90 - 110	
208 Pb	102.10 ug/l	0.56	100.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1533385.60	0.17	1646938.90	93.1	80 - 120	
45 Sc	826671.31	1.28	879091.44	94.0	80 - 120	
74 Ge	187590.00	1.13	197502.22	95.0	80 - 120	
115 In	878625.06	0.86	981918.75	89.5	80 - 120	
209 Bi	671144.44	2.19	686715.56	97.7	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F20100.B\003CALB.D\003CALB.D#

10 :Element Failures 40 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCB QC Report

Data File: C:\ICPCHEM\1\DATA\13F20100.B\138_CCB.D\138_CCB.D#
Date Acquired: Jun 20 2013 08:45 pm
Operator: ICPMS 1 - JG
Sample Name: CCB
Misc Info: 60-22-473
Vial Number: 5
Current Method: C:\ICPCHEM\1\METHODS\6020G2W.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G2W.C
Last Cal Update: Jun 20 2013 12:07 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	High Limit	Flag
9 Be	0.55 ug/l	2.11	1.00	
11 B	2.82 ug/l	8.08	5.00	
23 Na	-4.44 ug/l	22.77	10.00	
24 Mg	0.42 ug/l	264.88	10.00	
27 Al	2.79 ug/l	9.20	3.00	
39 K	-2.93 ug/l	100.75	5.00	
44 Ca	42.77 ug/l	8.99	10.00	Fail
47 Ti	0.01 ug/l	191.59	5.00	
50 V	0.15 ug/l	14.83	2.00	
51 V	0.18 ug/l	1.40	2.00	
52 Cr	-0.18 ug/l	11.72	2.00	
53 Cr	-0.11 ug/l	40.41	2.00	
55 Mn	0.21 ug/l	33.59	2.00	
57 Fe	7.36 ug/l	22.60	10.00	
59 Co	-0.41 ug/l	3.78	2.00	
60 Ni	-0.68 ug/l	3.82	2.00	
63 Cu	-0.01 ug/l	212.54	5.00	
66 Zn	-0.90 ug/l	2.58	5.00	
75 As	-0.31 ug/l	16.27	2.00	
77 (As)	-0.91 ug/l	5.44	3.00	
78 Se	-3.74 ug/l	18.31	3.00	
82 Se	-0.18 ug/l	105.89	2.00	
83 (Se)	588.00 ug/l	15.43	3.00	
88 Sr	293.20 ug/l	13.37	2.00	Fail
89 Y	-------- ug/l	--------	#VALUE!	
98 Mo	0.11 ug/l	31.89	3.00	
99 (Mo)	-------- ug/l	--------	#VALUE!	
101 Ru	1579.00 ug/l	16.83	5.00	Fail
102 Ru	2241.00 ug/l	11.44	5.00	Fail
104 Ru	-255.00 ug/l	22.89	5.00	
106 (Cd)	0.27 ug/l	127.21	3.00	
107 Ag	0.15 ug/l	11.35	2.00	
108 (Cd)	-0.42 ug/l	14.45	3.00	
111 Cd	-0.36 ug/l	10.79	1.00	
114 Cd	-0.22 ug/l	7.91	1.00	
120 Sn	0.25 ug/l	13.86	5.00	
121 Sb	1.44 ug/l	9.88	3.00	
137 Ba	0.22 ug/l	14.22	2.00	
140 Ce	126.40 ug/l	9.19	2.00	Fail
142 Ce	77.66 ug/l	31.97	2.00	Fail
182 W	-3.24 ug/l	115.25	2.00	
184 W	-1.62 ug/l	102.35	2.00	
186 W	-1.70 ug/l	193.45	2.00	
203 Tl	-0.20 ug/l	13.36	2.00	
206 Pb	-0.23 ug/l	11.61	3.00	
207 Pb	-0.22 ug/l	1.62	3.00	
208 Pb	0.07 ug/l	21.74	1.00	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1547848.90	1.06	1646938.90	94.0	80 - 120	
45 Sc	812724.19	2.19	879091.44	92.5	80 - 120	
74 Ge	185258.89	1.20	197502.22	93.8	80 - 120	
115 In	867897.31	1.86	981918.75	88.4	80 - 120	
209 Bi	661481.06	1.44	686715.56	96.3	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F20100.B\003CALB.D\003CALB.D#

6 :Element Failures 15 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCV QC Report

Data File: C:\ICPCHEM\1\DATA\13F20100.B\149CCV1.D\149CCV1.D#
Date Acquired: Jun 20 2013 09:27 pm
Operator: ICPMS 1 - JG
Sample Name: CCV1
Misc Info: 60-22-451
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\6020G2W.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G2W.C
Last Cal Update: Jun 20 2013 12:07 pm
Sample Type: CCV1
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	Expected	QC Range(%)	Flag
9 Be	104.10 ug/l	1.90	100.00	90 - 110	
11 B	100.40 ug/l	6.39	100.00	90 - 110	
23 Na	1065.00 ug/l	2.37	1000.00	90 - 110	
24 Mg	1103.00 ug/l	0.90	1000.00	90 - 110	Fail
27 Al	111.70 ug/l	2.65	100.00	90 - 110	Fail
39 K	1065.00 ug/l	4.45	1000.00	90 - 110	
44 Ca	1047.00 ug/l	0.99	1000.00	90 - 110	
47 Ti	51.52 ug/l	1.70	50.00	90 - 110	
50 V	102.70 ug/l	1.52	100.00	90 - 110	
51 V	102.80 ug/l	1.87	100.00	90 - 110	
52 Cr	103.30 ug/l	0.71	100.00	90 - 110	
53 Cr	105.00 ug/l	0.28	100.00	90 - 110	
55 Mn	103.40 ug/l	2.27	100.00	90 - 110	
57 Fe	1015.00 ug/l	1.23	1000.00	90 - 110	
59 Co	100.20 ug/l	3.89	100.00	90 - 110	
60 Ni	105.30 ug/l	1.47	100.00	90 - 110	
63 Cu	103.10 ug/l	1.53	100.00	90 - 110	
66 Zn	107.60 ug/l	1.19	100.00	90 - 110	
75 As	101.70 ug/l	1.45	100.00	90 - 110	
77 (As)	106.80 ug/l	2.16	100.00	90 - 110	
78 Se	100.50 ug/l	0.87	100.00	90 - 110	
82 Se	103.10 ug/l	2.34	100.00	90 - 110	
83 (Se)	439.40 ug/l	32.23	100.00	90 - 110	
88 Sr	923.50 ug/l	11.58	100.00	90 - 110	Fail
89 Y	-------- ug/l	--------	100.00	90 - 110	
98 Mo	50.53 ug/l	0.75	50.00	90 - 110	
99 (Mo)	-------- ug/l	--------	---	##### - #####	
101 Ru	1602.00 ug/l	11.98	100.00	90 - 110	Fail
102 Ru	2047.00 ug/l	8.77	100.00	90 - 110	Fail
104 Ru	-170.50 ug/l	10.56	100.00	90 - 110	Fail
106 (Cd)	107.00 ug/l	1.79	100.00	90 - 110	
107 Ag	103.20 ug/l	2.28	100.00	90 - 110	
108 (Cd)	102.60 ug/l	2.87	100.00	90 - 110	
111 Cd	105.50 ug/l	1.22	100.00	90 - 110	
114 Cd	106.10 ug/l	2.12	100.00	90 - 110	
120 Sn	53.90 ug/l	2.16	50.00	90 - 110	
121 Sb	51.97 ug/l	6.23	50.00	90 - 110	
137 Ba	103.70 ug/l	0.94	100.00	90 - 110	
140 Ce	105.00 ug/l	18.42	100.00	90 - 110	
142 Ce	84.78 ug/l	18.05	100.00	90 - 110	Fail
182 W	21.73 ug/l	24.31	100.00	90 - 110	Fail
184 W	13.80 ug/l	30.23	100.00	90 - 110	Fail
186 W	18.07 ug/l	16.67	100.00	90 - 110	Fail
203 Tl	103.90 ug/l	0.53	100.00	90 - 110	
206 Pb	103.30 ug/l	0.63	100.00	90 - 110	
207 Pb	102.20 ug/l	1.56	100.00	90 - 110	
208 Pb	102.20 ug/l	1.14	100.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1506836.60	4.44	1646938.90	91.5	80 - 120	
45 Sc	776391.06	1.76	879091.44	88.3	80 - 120	
74 Ge	178046.66	1.36	197502.22	90.1	80 - 120	
115 In	841777.25	1.10	981918.75	85.7	80 - 120	
209 Bi	661400.00	1.71	686715.56	96.3	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F20100.B\003CALB.D\003CALB.D#

10 :Element Failures 40 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCB QC Report

Data File: C:\ICPCHEM\1\DATA\13F20100.B\150_CCB.D\150_CCB.D#
Date Acquired: Jun 20 2013 09:30 pm
Operator: ICPMS 1 - JG
Sample Name: CCB
Misc Info: 60-22-473
Vial Number: 5
Current Method: C:\ICPCHEM\1\METHODS\6020G2W.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G2W.C
Last Cal Update: Jun 20 2013 12:07 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	High Limit	Flag
9 Be	0.53 ug/l	0.62	1.00	
11 B	3.50 ug/l	6.07	5.00	
23 Na	0.57 ug/l	180.27	10.00	
24 Mg	9.17 ug/l	16.86	10.00	
27 Al	1.37 ug/l	33.75	3.00	
39 K	-5.76 ug/l	30.67	5.00	
44 Ca	40.18 ug/l	12.03	10.00	Fail
47 Ti	-0.03 ug/l	53.47	5.00	
50 V	0.14 ug/l	18.46	2.00	
51 V	0.16 ug/l	13.62	2.00	
52 Cr	-0.23 ug/l	22.13	2.00	
53 Cr	0.06 ug/l	94.38	2.00	
55 Mn	-0.22 ug/l	8.15	2.00	
57 Fe	1.65 ug/l	84.09	10.00	
59 Co	-0.43 ug/l	4.37	2.00	
60 Ni	-0.71 ug/l	3.13	2.00	
63 Cu	-0.04 ug/l	31.62	5.00	
66 Zn	-0.97 ug/l	5.26	5.00	
75 As	-0.26 ug/l	39.41	2.00	
77 (As)	-0.85 ug/l	11.00	3.00	
78 Se	-5.01 ug/l	16.64	3.00	
82 Se	0.12 ug/l	405.22	2.00	
83 (Se)	665.90 ug/l	21.66	3.00	
88 Sr	421.20 ug/l	14.06	2.00	Fail
89 Y	-------- ug/l	--------	#VALUE!	
98 Mo	0.09 ug/l	16.53	3.00	
99 (Mo)	-------- ug/l	--------	#VALUE!	
101 Ru	1486.00 ug/l	12.01	5.00	Fail
102 Ru	2117.00 ug/l	12.55	5.00	Fail
104 Ru	-265.70 ug/l	12.28	5.00	
106 (Cd)	0.10 ug/l	365.28	3.00	
107 Ag	0.15 ug/l	14.03	2.00	
108 (Cd)	-0.44 ug/l	12.01	3.00	
111 Cd	-0.38 ug/l	11.66	1.00	
114 Cd	-0.24 ug/l	4.82	1.00	
120 Sn	0.26 ug/l	7.35	5.00	
121 Sb	1.46 ug/l	13.42	3.00	
137 Ba	0.19 ug/l	11.07	2.00	
140 Ce	33.44 ug/l	54.96	2.00	Fail
142 Ce	38.96 ug/l	20.67	2.00	Fail
182 W	1.72 ug/l	320.30	2.00	
184 W	-3.59 ug/l	91.05	2.00	
186 W	2.79 ug/l	246.90	2.00	Fail
203 Tl	-0.23 ug/l	8.29	2.00	
206 Pb	-0.25 ug/l	13.03	3.00	
207 Pb	-0.23 ug/l	2.51	3.00	
208 Pb	0.05 ug/l	29.69	1.00	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1516779.30	2.54	1646938.90	92.1	80 - 120	
45 Sc	793366.38	2.91	879091.44	90.2	80 - 120	
74 Ge	179824.44	1.87	197502.22	91.0	80 - 120	
115 In	857818.38	1.91	981918.75	87.4	80 - 120	
209 Bi	661874.44	2.24	686715.56	96.4	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F20100.B\003CALB.D\003CALB.D#

7 :Element Failures 15 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCV QC Report

Data File: C:\ICPCHEM\1\DATA\13F20100.B\161CCV1.D\161CCV1.D#
Date Acquired: Jun 20 2013 10:12 pm
Operator: ICPMS 1 - JG
Sample Name: CCV1
Misc Info: 60-22-451
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\6020G2W.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G2W.C
Last Cal Update: Jun 20 2013 12:07 pm
Sample Type: CCV1
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	Expected	QC Range(%)	Flag
9 Be	108.40 ug/l	1.74	100.00	90 - 110	
11 B	105.60 ug/l	0.31	100.00	90 - 110	
23 Na	1093.00 ug/l	1.71	1000.00	90 - 110	
24 Mg	1105.00 ug/l	3.57	1000.00	90 - 110	Fail
27 Al	115.20 ug/l	2.22	100.00	90 - 110	Fail
39 K	1065.00 ug/l	1.64	1000.00	90 - 110	
44 Ca	1051.00 ug/l	0.39	1000.00	90 - 110	
47 Ti	50.91 ug/l	0.36	50.00	90 - 110	
50 V	103.30 ug/l	2.74	100.00	90 - 110	
51 V	102.30 ug/l	2.06	100.00	90 - 110	
52 Cr	101.80 ug/l	2.30	100.00	90 - 110	
53 Cr	104.30 ug/l	1.11	100.00	90 - 110	
55 Mn	103.60 ug/l	1.74	100.00	90 - 110	
57 Fe	1009.00 ug/l	2.24	1000.00	90 - 110	
59 Co	99.05 ug/l	2.01	100.00	90 - 110	
60 Ni	104.80 ug/l	0.63	100.00	90 - 110	
63 Cu	101.40 ug/l	0.53	100.00	90 - 110	
66 Zn	107.30 ug/l	3.33	100.00	90 - 110	
75 As	99.90 ug/l	0.34	100.00	90 - 110	
77 (As)	103.60 ug/l	1.01	100.00	90 - 110	
78 Se	95.98 ug/l	5.25	100.00	90 - 110	
82 Se	101.70 ug/l	3.19	100.00	90 - 110	
83 (Se)	465.70 ug/l	28.45	100.00	90 - 110	
88 Sr	795.50 ug/l	7.15	100.00	90 - 110	Fail
89 Y	-------- ug/l	--------	100.00	90 - 110	
98 Mo	48.71 ug/l	0.51	50.00	90 - 110	
99 (Mo)	-------- ug/l	--------	---	##### - #####	
101 Ru	1192.00 ug/l	18.70	100.00	90 - 110	Fail
102 Ru	1951.00 ug/l	12.91	100.00	90 - 110	Fail
104 Ru	-140.50 ug/l	46.98	100.00	90 - 110	Fail
106 (Cd)	103.60 ug/l	1.50	100.00	90 - 110	
107 Ag	102.70 ug/l	2.46	100.00	90 - 110	
108 (Cd)	103.70 ug/l	2.38	100.00	90 - 110	
111 Cd	106.60 ug/l	1.42	100.00	90 - 110	
114 Cd	106.20 ug/l	1.10	100.00	90 - 110	
120 Sn	53.72 ug/l	1.65	50.00	90 - 110	
121 Sb	51.26 ug/l	5.56	50.00	90 - 110	
137 Ba	102.90 ug/l	2.54	100.00	90 - 110	
140 Ce	292.60 ug/l	4.29	100.00	90 - 110	Fail
142 Ce	190.10 ug/l	23.81	100.00	90 - 110	Fail
182 W	5.75 ug/l	72.55	100.00	90 - 110	Fail
184 W	14.48 ug/l	82.04	100.00	90 - 110	Fail
186 W	16.38 ug/l	31.40	100.00	90 - 110	Fail
203 Tl	104.50 ug/l	0.24	100.00	90 - 110	
206 Pb	104.50 ug/l	0.45	100.00	90 - 110	
207 Pb	102.60 ug/l	0.66	100.00	90 - 110	
208 Pb	102.50 ug/l	0.61	100.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1558223.90	3.60	1646938.90	94.6	80 - 120	
45 Sc	829006.50	2.19	879091.44	94.3	80 - 120	
74 Ge	186820.00	3.05	197502.22	94.6	80 - 120	
115 In	845923.44	2.66	981918.75	86.2	80 - 120	
209 Bi	646904.44	2.61	686715.56	94.2	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F20100.B\003CALB.D\003CALB.D#

11 :Element Failures 40 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCB QC Report

Data File: C:\ICPCHEM\1\DATA\13F20100.B\162_CCB.D\162_CCB.D#
Date Acquired: Jun 20 2013 10:16 pm
Operator: ICPMS 1 - JG
Sample Name: CCB
Misc Info: 60-22-473
Vial Number: 5
Current Method: C:\ICPCHEM\1\METHODS\6020G2W.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G2W.C
Last Cal Update: Jun 20 2013 12:07 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	High Limit	Flag
9 Be	0.53 ug/l	1.30	1.00	
11 B	3.17 ug/l	7.99	5.00	
23 Na	-6.26 ug/l	13.26	10.00	
24 Mg	0.05 ug/l	2828.60	10.00	
27 Al	4.32 ug/l	12.84	3.00	Fail
39 K	-5.86 ug/l	77.17	5.00	
44 Ca	52.36 ug/l	15.45	10.00	Fail
47 Ti	0.03 ug/l	50.96	5.00	
50 V	0.14 ug/l	39.38	2.00	
51 V	0.18 ug/l	24.97	2.00	
52 Cr	-0.21 ug/l	31.84	2.00	
53 Cr	-0.17 ug/l	17.51	2.00	
55 Mn	0.45 ug/l	34.94	2.00	
57 Fe	8.33 ug/l	29.36	10.00	
59 Co	-0.41 ug/l	3.53	2.00	
60 Ni	-0.70 ug/l	5.04	2.00	
63 Cu	-0.03 ug/l	44.85	5.00	
66 Zn	-0.95 ug/l	2.62	5.00	
75 As	-0.47 ug/l	48.11	2.00	
77 (As)	-0.67 ug/l	34.19	3.00	
78 Se	-6.03 ug/l	5.10	3.00	
82 Se	-0.62 ug/l	163.81	2.00	
83 (Se)	444.50 ug/l	43.80	3.00	
88 Sr	316.60 ug/l	16.62	2.00	Fail
89 Y	-------- ug/l	--------	#VALUE!	
98 Mo	0.07 ug/l	26.80	3.00	
99 (Mo)	-------- ug/l	--------	#VALUE!	
101 Ru	1598.00 ug/l	7.97	5.00	Fail
102 Ru	1720.00 ug/l	19.46	5.00	Fail
104 Ru	-242.80 ug/l	11.47	5.00	
106 (Cd)	-0.10 ug/l	282.36	3.00	
107 Ag	0.13 ug/l	7.29	2.00	
108 (Cd)	-0.47 ug/l	13.67	3.00	
111 Cd	-0.38 ug/l	10.80	1.00	
114 Cd	-0.23 ug/l	7.44	1.00	
120 Sn	0.22 ug/l	3.36	5.00	
121 Sb	1.48 ug/l	12.35	3.00	
137 Ba	0.20 ug/l	19.52	2.00	
140 Ce	145.10 ug/l	9.65	2.00	Fail
142 Ce	108.20 ug/l	30.60	2.00	Fail
182 W	4.66 ug/l	5.98	2.00	Fail
184 W	0.56 ug/l	1062.80	2.00	
186 W	-2.72 ug/l	71.36	2.00	
203 Tl	-0.17 ug/l	15.52	2.00	
206 Pb	-0.22 ug/l	8.35	3.00	
207 Pb	-0.21 ug/l	11.91	3.00	
208 Pb	0.07 ug/l	21.43	1.00	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1544701.90	2.71	1646938.90	93.8	80 - 120	
45 Sc	819417.50	3.46	879091.44	93.2	80 - 120	
74 Ge	184238.89	1.14	197502.22	93.3	80 - 120	
115 In	835308.69	0.48	981918.75	85.1	80 - 120	
209 Bi	640234.44	2.40	686715.56	93.2	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F20100.B\003CALB.D\003CALB.D#

8 :Element Failures 15 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\13F20100.B\175SMPL.D\175SMPL.D#
Date Acquired: Jun 20 2013 11:05 pm
Acq. Method: 6020G2W.M
Operator: ICPMS 1 - JG
Sample Name: 13060604-001C
Misc Info: M_ICPMS_W
Vial Number: 2311
Current Method: C:\ICPCHEM\1\METHODS\6020G2W.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G2W.C
Last Cal. Update: Jun 20 2013 12:07 pm
Sample Type: Sample
Dilution Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

QC Elements

Element	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	0.53	0.53	ug/l	2.10	10000.00	
11 B	320.30	320.30	ug/l	2.67	5000.00	
23 Na	16,290.00	16290.00	ug/l	2.19	100000.00	
24 Mg	17,550.00	17550.00	ug/l	0.59	100000.00	
27 Al	1,039.00	1039.00	ug/l	6.88	100000.00	
39 K	24,090.00	24090.00	ug/l	0.95	100000.00	
44 Ca	41,210.00	41210.00	ug/l	1.92	100000.00	
47 Ti	36.34	36.34	ug/l	12.68	10000.00	
50 V	30.50	30.50	ug/l	23.42	10000.00	
51 V	1.84	1.84	ug/l	15.80	10000.00	
52 Cr	1.88	1.88	ug/l	4.82	10000.00	
53 Cr	16.41	16.41	ug/l	10.70	10000.00	
55 Mn	319.70	319.70	ug/l	1.25	10000.00	
57 Fe	1,157.00	1157.00	ug/l	3.65	100000.00	
59 Co	0.41	0.41	ug/l	9.32	10000.00	
60 Ni	3.13	3.13	ug/l	2.12	10000.00	
63 Cu	4.03	4.03	ug/l	1.93	10000.00	
66 Zn	6.53	6.53	ug/l	6.98	10000.00	
75 As	0.10	0.10	ug/l	221.31	10000.00	
77 (As)	28.56	28.56	ug/l	4.24	10000.00	
78 Se	-3.26	-3.26	ug/l	29.90	10000.00	
82 Se	0.58	0.58	ug/l	67.73	10000.00	
83 (Se)	398.40	398.40	ug/l	19.76	10000.00	
88 Sr	354,400.00	354400.00	ug/l	0.74	10000.00	>LRS
89 Y	----	--------	ug/l	--------	#VALUE!	
98 Mo	11.50	11.50	ug/l	2.03	10000.00	
99 (Mo)	----	--------	ug/l	--------	#VALUE!	
101 Ru	2,156.00	2156.00	ug/l	2.14	10000.00	
102 Ru	2,657.00	2657.00	ug/l	8.23	10000.00	
104 Ru	-233.00	-233.00	ug/l	10.89	10000.00	
106 (Cd)	0.25	0.25	ug/l	138.41	10000.00	
107 Ag	0.25	0.25	ug/l	37.89	10000.00	
108 (Cd)	-0.14	-0.14	ug/l	48.30	10000.00	
111 Cd	-0.31	-0.31	ug/l	11.60	10000.00	
114 Cd	-0.17	-0.17	ug/l	10.86	#VALUE!	
120 Sn	0.47	0.47	ug/l	3.55	10000.00	
121 Sb	0.83	0.83	ug/l	11.21	10000.00	
137 Ba	27.78	27.78	ug/l	0.69	10000.00	
140 Ce	17,060.00	17060.00	ug/l	4.47	10000.00	>LRS
142 Ce	10,080.00	10080.00	ug/l	5.71	10000.00	>LRS
182 W	137.10	137.10	ug/l	20.28	10000.00	
184 W	98.04	98.04	ug/l	20.63	10000.00	
186 W	144.20	144.20	ug/l	35.04	10000.00	
203 Tl	-0.23	-0.23	ug/l	7.74	10000.00	
206 Pb	1.67	1.67	ug/l	2.54	10000.00	
207 Pb	1.60	1.60	ug/l	5.54	10000.00	
208 Pb	1.93	1.93	ug/l	1.32	10000.00	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1539899.40	2.27	1646938.90	93.5	60 - 120	
45 Sc	760316.94	3.05	879091.44	86.5	60 - 120	
74 Ge	164577.77	3.72	197502.22	83.3	60 - 120	
115 In	768309.13	2.28	981918.75	78.2	60 - 120	
209 Bi	572645.56	2.48	686715.56	83.4	60 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F20100.B\003CALB.D\003CALB.D#

3 :Element Failures 0 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Fail
ISTD: Pass

Blank QC Report

Data File: C:\ICPCHEM\1\DATA\13F20100.B\176BLNK.D\176BLNK.D#
Date Acquired: Jun 20 2013 11:09 pm
Acq. Method: 6020G2W.M
Operator: ICPMS 1 - JG
Sample Name: blk
Misc Info:
Vial Number: 1
Current Method: C:\ICPCHEM\1\METHODS\6020G2W.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G2W.C
Last Cal. Update: Jun 20 2013 12:07 pm
Sample Type: Blank
Dilution Factor: 1.00

QC Elements

Element	Corr. Conc.		RSD(%)	Raw Conc.	High Limit	Flag
9 Be	0.5327	ug/l	0.28	0.5327	4.00	
11 B	5.99	ug/l	5.02	5.99	15.00	
23 Na	23.28	ug/l	9.54	23.28	40.00	
24 Mg	35.12	ug/l	10.60	35.12	50.00	
27 Al	7.71	ug/l	7.01	7.71	15.00	
39 K	16.56	ug/l	23.66	16.56	40.00	
44 Ca	103.9	ug/l	6.78	103.9	50.00	
47 Ti	0.05547	ug/l	15.69	0.05547	20.00	
50 V	0.2555	ug/l	21.32	0.2555	5.00	
51 V	0.1744	ug/l	10.48	0.1744	5.00	
52 Cr	-0.211	ug/l	3.76	-0.211	5.00	
53 Cr	1.249	ug/l	11.03	1.249	5.00	
55 Mn	0.5291	ug/l	12.85	0.5291	5.00	
57 Fe	12.2	ug/l	18.75	12.2	50.00	
59 Co	-0.4458	ug/l	0.10	-0.4458	5.00	
60 Ni	-0.6852	ug/l	1.04	-0.6852	5.00	
63 Cu	-0.02734	ug/l	82.22	-0.02734	10.00	
66 Zn	0.0461	ug/l	78.81	0.0461	20.00	
75 As	-0.1629	ug/l	163.97	-0.1629	5.00	
77 (As)	-0.2147	ug/l	43.38	-0.2147	10.00	
78 Se	-4.85	ug/l	22.41	-4.85	10.00	
82 Se	0.6911	ug/l	164.67	0.6911	5.00	
83 (Se)	547.7	ug/l	55.16	547.7	10.00	
88 Sr	743.5	ug/l	14.18	743.5	5.00	
89 Y	----	ug/l	--------	----	---	
98 Mo	0.05771	ug/l	41.00	0.05771	5.00	
99 (Mo)	----	ug/l	--------	----	---	
101 Ru	1794	ug/l	4.92	1794	5.00	
102 Ru	2237	ug/l	9.12	2237	5.00	
104 Ru	-317.5	ug/l	6.22	-317.5	5.00	
106 (Cd)	-0.2219	ug/l	57.82	-0.2219	5.00	
107 Ag	0.1221	ug/l	4.15	0.1221	5.00	
108 (Cd)	-0.4153	ug/l	7.43	-0.4153	10.00	
111 Cd	-0.3987	ug/l	1.50	-0.3987	5.00	
114 Cd	-0.2427	ug/l	4.30	-0.2427	5.00	
120 Sn	0.07705	ug/l	11.30	0.07705	10.00	
121 Sb	0.3455	ug/l	4.59	0.3455	10.00	
137 Ba	0.2441	ug/l	10.00	0.2441	10.00	
140 Ce	201.7	ug/l	10.62	201.7	10.00	
142 Ce	101.5	ug/l	5.85	101.5	10.00	
182 W	-3.111	ug/l	0.76	-3.111	10.00	
184 W	3.457	ug/l	85.94	3.457	10.00	
186 W	-1.582	ug/l	1.31	-1.582	10.00	
203 Tl	-0.3047	ug/l	4.91	-0.3047	5.00	
206 Pb	-0.2307	ug/l	10.00	-0.2307	5.00	
207 Pb	-0.223	ug/l	5.52	-0.223	5.00	
208 Pb	0.06706	ug/l	5.39	0.06706	5.00	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1570750.50	3.46	1646938.90	95.4	80 - 120	
45 Sc	801812.88	2.48	879091.44	91.2	80 - 120	
74 Ge	179170.00	1.37	197502.22	90.7	80 - 120	
115 In	849273.19	1.61	981918.75	86.5	80 - 120	
209 Bi	643708.88	0.61	686715.56	93.7	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F20100.B\003CALB.D\003CALB.D#

0 :Element Failures 15 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Nnumber of ISTD Failures Allowed

QC Results:
Analytes: Pass
ISTD: Pass

STAT Analysis Corporation

Metals

SW846 6020

Run 2

Client: NRT, Inc.
Project: 69420, Peoples Gas - Willow Street / Hawthorne Ave
Lab Order: 13060604
Date Received: June 18, 2013

CLIENT: Natural Resource Technology, Inc.
Work Order: 13060604
Project: 69420, Peoples Gas - Willow Street / Hawthorne Ave

ANALYTICAL QC SUMMARY REPORT

Run ID: **ICPMS-2_130621A**

Sample ID: **ICV** SampType: **ICV** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS-2_130621A**
Client ID: **ZZZZZ** Batch ID: **R90367** TestNo: **SW6020** Analysis Date: **06/21/13 11:55** SeqNo: **2437530**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.02649	0.0030	0.025	0	106	90	110	0	0		
Arsenic	0.05167	0.0020	0.05	0	103	90	110	0	0		
Copper	0.05039	0.0050	0.05	0	101	90	110	0	0		
Lead	0.04961	0.0010	0.05	0	99.2	90	110	0	0		

Sample ID: **ICB** SampType: **ICB** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS-2_130621A**
Client ID: **ZZZZZ** Batch ID: **R90367** TestNo: **SW6020** Analysis Date: **06/21/13 12:00** SeqNo: **2437531**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.00274	0.0030	0	0	0	0	0	0	0		
Arsenic	-0.00046	0.0020	0	0	0	0	0	0	0		
Copper	-0.00101	0.0050	0	0	0	0	0	0	0		
Lead	0.00031	0.0010	0	0	0	0	0	0	0		

Sample ID: **ICS A** SampType: **ICSA** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS-2_130621A**
Client ID: **ZZZZZ** Batch ID: **R90367** TestNo: **SW6020** Analysis Date: **06/21/13 12:04** SeqNo: **2437532**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.00323	0.0030	0	0	0	0	0	0	0		
Arsenic	-0.00019	0.0020	0	0	0	0	0	0	0		
Copper	0.00178	0.0050	0	0	0	0	0	0	0		
Lead	0.00069	0.0010	0	0	0	0	0	0	0		

Sample ID: **ICS AB** SampType: **ICSAB** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS-2_130621A**
Client ID: **ZZZZZ** Batch ID: **R90367** TestNo: **SW6020** Analysis Date: **06/21/13 12:08** SeqNo: **2437533**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.00421	0.0030	0	0	0	0	0	0	0		
Arsenic	0.02061	0.0020	0.02	0	103	80	120	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Natural Resource Technology, Inc.
Work Order: 13060604
Project: 69420, Peoples Gas - Willow Street / Hawthorne Ave

ANALYTICAL QC SUMMARY REPORT

Run ID: **ICPMS-2_130621A**

Sample ID: **ICS AB** SampType: **ICSAB** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS-2_130621A**
Client ID: **ZZZZZ** Batch ID: **R90367** TestNo: **SW6020** Analysis Date: **06/21/13 12:08** SeqNo: **2437533**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	0.01928	0.0050	0.02	0	96.4	80	120	0	0		
Lead	0.00188	0.0010	0	0	0	0	0	0	0		

Sample ID: **ICS A** SampType: **ICSA** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS-2_130621A**
Client ID: **ZZZZZ** Batch ID: **R90367** TestNo: **SW6020** Analysis Date: **06/21/13 12:21** SeqNo: **2437534**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.00165	0.0030	0	0	0	0	0	0	0		
Arsenic	-0.00019	0.0020	0	0	0	0	0	0	0		
Copper	0.00181	0.0050	0	0	0	0	0	0	0		
Lead	0.00053	0.0010	0	0	0	0	0	0	0		

Sample ID: **ICS AB** SampType: **ICSAB** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS-2_130621A**
Client ID: **ZZZZZ** Batch ID: **R90367** TestNo: **SW6020** Analysis Date: **06/21/13 12:26** SeqNo: **2437535**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.0024	0.0030	0	0	0	0	0	0	0		
Arsenic	0.01926	0.0020	0.02	0	96.3	80	120	0	0		
Copper	0.01909	0.0050	0.02	0	95.5	80	120	0	0		
Lead	0.00065	0.0010	0	0	0	0	0	0	0		

Sample ID: **CCV1** SampType: **CCV** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS-2_130621A**
Client ID: **ZZZZZ** Batch ID: **R90367** TestNo: **SW6020** Analysis Date: **06/21/13 12:34** SeqNo: **2437536**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.05552	0.0030	0.05	0	111	90	110	0	0		S
Arsenic	0.09914	0.0020	0.1	0	99.1	90	110	0	0		
Copper	0.1042	0.0050	0.1	0	104	90	110	0	0		
Lead	0.1003	0.0010	0.1	0	100	90	110	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Natural Resource Technology, Inc.
Work Order: 13060604
Project: 69420, Peoples Gas - Willow Street / Hawthorne Ave

ANALYTICAL QC SUMMARY REPORT

Run ID: **ICPMS-2_130621A**

Sample ID: **CCB** SampType: **CCB** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS-2_130621A**
Client ID: **ZZZZZ** Batch ID: **R90367** TestNo: **SW6020** Analysis Date: **06/21/13 12:38** SeqNo: **2437537**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.00228	0.0030	0	0	0	0	0	0	0		
Arsenic	-0.00048	0.0020	0	0	0	0	0	0	0		
Copper	-0.00074	0.0050	0	0	0	0	0	0	0		
Lead	0.00036	0.0010	0	0	0	0	0	0	0		

Sample ID: **CCV1** SampType: **CCV** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS-2_130621A**
Client ID: **ZZZZZ** Batch ID: **R90367** TestNo: **SW6020** Analysis Date: **06/21/13 13:01** SeqNo: **2437538**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.05384	0.0030	0.05	0	108	90	110	0	0		
Arsenic	0.1014	0.0020	0.1	0	101	90	110	0	0		
Copper	0.09978	0.0050	0.1	0	99.8	90	110	0	0		
Lead	0.09814	0.0010	0.1	0	98.1	90	110	0	0		

Sample ID: **CCB** SampType: **CCB** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS-2_130621A**
Client ID: **ZZZZZ** Batch ID: **R90367** TestNo: **SW6020** Analysis Date: **06/21/13 13:05** SeqNo: **2437539**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.00231	0.0030	0	0	0	0	0	0	0		
Arsenic	-0.00033	0.0020	0	0	0	0	0	0	0		
Copper	-0.00092	0.0050	0	0	0	0	0	0	0		
Lead	0.00035	0.0010	0	0	0	0	0	0	0		

Sample ID: **CCV1** SampType: **CCV** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS-2_130621A**
Client ID: **ZZZZZ** Batch ID: **R90367** TestNo: **SW6020** Analysis Date: **06/21/13 13:49** SeqNo: **2437548**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.0536	0.0030	0.05	0	107	90	110	0	0		
Arsenic	0.0988	0.0020	0.1	0	98.8	90	110	0	0		
Copper	0.09547	0.0050	0.1	0	95.5	90	110	0	0		
Lead	0.09453	0.0010	0.1	0	94.5	90	110	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Natural Resource Technology, Inc.
Work Order: 13060604
Project: 69420, Peoples Gas - Willow Street / Hawthorne Ave

ANALYTICAL QC SUMMARY REPORT

Run ID: **ICPMS-2_130621A**

Sample ID: **CCB** SampType: **CCB** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS-2_130621A**
Client ID: **ZZZZZ** Batch ID: **R90367** TestNo: **SW6020** Analysis Date: **06/21/13 13:53** SeqNo: **2437549**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.00177	0.0030	0	0	0	0	0	0	0		
Arsenic	-0.00053	0.0020	0	0	0	0	0	0	0		
Copper	-0.00095	0.0050	0	0	0	0	0	0	0		
Lead	0.00037	0.0010	0	0	0	0	0	0	0		

Sample ID: **CCV1** SampType: **CCV** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS-2_130621A**
Client ID: **ZZZZZ** Batch ID: **R90367** TestNo: **SW6020** Analysis Date: **06/21/13 14:36** SeqNo: **2437558**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.05312	0.0030	0.05	0	106	90	110	0	0		
Arsenic	0.09783	0.0020	0.1	0	97.8	90	110	0	0		
Copper	0.09688	0.0050	0.1	0	96.9	90	110	0	0		
Lead	0.09757	0.0010	0.1	0	97.6	90	110	0	0		

Sample ID: **CCB** SampType: **CCB** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS-2_130621A**
Client ID: **ZZZZZ** Batch ID: **R90367** TestNo: **SW6020** Analysis Date: **06/21/13 14:40** SeqNo: **2437559**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.00158	0.0030	0	0	0	0	0	0	0		
Arsenic	-0.00049	0.0020	0	0	0	0	0	0	0		
Copper	-0.00099	0.0050	0	0	0	0	0	0	0		
Lead	0.00033	0.0010	0	0	0	0	0	0	0		

Sample ID: **CCV1** SampType: **CCV** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS-2_130621A**
Client ID: **ZZZZZ** Batch ID: **R90367** TestNo: **SW6020** Analysis Date: **06/21/13 15:25** SeqNo: **2437839**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.05303	0.0030	0.05	0	106	90	110	0	0		
Arsenic	0.09874	0.0020	0.1	0	98.7	90	110	0	0		
Copper	0.0979	0.0050	0.1	0	97.9	90	110	0	0		
Lead	0.101	0.0010	0.1	0	101	90	110	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Natural Resource Technology, Inc.
Work Order: 13060604
Project: 69420, Peoples Gas - Willow Street / Hawthorne Ave

ANALYTICAL QC SUMMARY REPORT

Run ID: **ICPMS-2_130621A**

Sample ID: **CCB** SampType: **CCB** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS-2_130621A**
Client ID: **ZZZZZ** Batch ID: **R90367** TestNo: **SW6020** Analysis Date: **06/21/13 15:28** SeqNo: **2437840**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.00171	0.0030	0	0	0	0	0	0	0		
Arsenic	-0.0005	0.0020	0	0	0	0	0	0	0		
Copper	-0.00091	0.0050	0	0	0	0	0	0	0		
Lead	0.00052	0.0010	0	0	0	0	0	0	0		

Sample ID: **CCV1** SampType: **CCV** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS-2_130621A**
Client ID: **ZZZZZ** Batch ID: **R90367** TestNo: **SW6020** Analysis Date: **06/21/13 16:12** SeqNo: **2437846**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.05245	0.0030	0.05	0	105	90	110	0	0		
Arsenic	0.09925	0.0020	0.1	0	99.2	90	110	0	0		
Copper	0.09623	0.0050	0.1	0	96.2	90	110	0	0		
Lead	0.1006	0.0010	0.1	0	101	90	110	0	0		

Sample ID: **CCB** SampType: **CCB** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS-2_130621A**
Client ID: **ZZZZZ** Batch ID: **R90367** TestNo: **SW6020** Analysis Date: **06/21/13 16:16** SeqNo: **2437847**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.00172	0.0030	0	0	0	0	0	0	0		
Arsenic	-0.00046	0.0020	0	0	0	0	0	0	0		
Copper	-0.00095	0.0050	0	0	0	0	0	0	0		
Lead	0.00036	0.0010	0	0	0	0	0	0	0		

Sample ID: **CCV1** SampType: **CCV** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS-2_130621A**
Client ID: **ZZZZZ** Batch ID: **R90367** TestNo: **SW6020** Analysis Date: **06/21/13 17:09** SeqNo: **2437852**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.05221	0.0030	0.05	0	104	90	110	0	0		
Arsenic	0.09767	0.0020	0.1	0	97.7	90	110	0	0		
Copper	0.09911	0.0050	0.1	0	99.1	90	110	0	0		
Lead	0.103	0.0010	0.1	0	103	90	110	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Natural Resource Technology, Inc.
Work Order: 13060604
Project: 69420, Peoples Gas - Willow Street / Hawthorne Ave

ANALYTICAL QC SUMMARY REPORT

Run ID: **ICPMS-2_130621A**

Sample ID: **CCB** SampType: **CCB** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS-2_130621A**
Client ID: **ZZZZZ** Batch ID: **R90367** TestNo: **SW6020** Analysis Date: **06/21/13 17:13** SeqNo: **2437853**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.00142	0.0030	0	0	0	0	0	0	0		
Arsenic	-0.00052	0.0020	0	0	0	0	0	0	0		
Copper	-0.00091	0.0050	0	0	0	0	0	0	0		
Lead	0.00036	0.0010	0	0	0	0	0	0	0		

Sample ID: **CCV1** SampType: **CCV** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS-2_130621A**
Client ID: **ZZZZZ** Batch ID: **R90367** TestNo: **SW6020** Analysis Date: **06/21/13 17:55** SeqNo: **2438444**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.05304	0.0030	0.05	0	106	90	110	0	0		
Arsenic	0.09893	0.0020	0.1	0	98.9	90	110	0	0		
Copper	0.09591	0.0050	0.1	0	95.9	90	110	0	0		
Lead	0.101	0.0010	0.1	0	101	90	110	0	0		

Sample ID: **CCB** SampType: **CCB** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS-2_130621A**
Client ID: **ZZZZZ** Batch ID: **R90367** TestNo: **SW6020** Analysis Date: **06/21/13 17:59** SeqNo: **2438445**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.00153	0.0030	0	0	0	0	0	0	0		
Arsenic	-0.00045	0.0020	0	0	0	0	0	0	0		
Copper	-0.00096	0.0050	0	0	0	0	0	0	0		
Lead	0.00037	0.0010	0	0	0	0	0	0	0		

Sample ID: **CCV1** SampType: **CCV** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS-2_130621A**
Client ID: **ZZZZZ** Batch ID: **R90367** TestNo: **SW6020** Analysis Date: **06/21/13 18:43** SeqNo: **2438455**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.052	0.0030	0.05	0	104	90	110	0	0		
Arsenic	0.09944	0.0020	0.1	0	99.4	90	110	0	0		
Copper	0.09561	0.0050	0.1	0	95.6	90	110	0	0		
Lead	0.1004	0.0010	0.1	0	100	90	110	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
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R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Natural Resource Technology, Inc.
Work Order: 13060604
Project: 69420, Peoples Gas - Willow Street / Hawthorne Ave

ANALYTICAL QC SUMMARY REPORT

Run ID: **ICPMS-2_130621A**

Sample ID: **CCB** SampType: **CCB** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS-2_130621A**
Client ID: **ZZZZZ** Batch ID: **R90367** TestNo: **SW6020** Analysis Date: **06/21/13 18:47** SeqNo: **2438456**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.00148	0.0030	0	0	0	0	0	0	0		
Arsenic	-0.00035	0.0020	0	0	0	0	0	0	0		
Copper	-0.00095	0.0050	0	0	0	0	0	0	0		
Lead	0.00039	0.0010	0	0	0	0	0	0	0		

Sample ID: **CCV1** SampType: **CCV** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS-2_130621A**
Client ID: **ZZZZZ** Batch ID: **R90367** TestNo: **SW6020** Analysis Date: **06/21/13 19:30** SeqNo: **2438466**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.0532	0.0030	0.05	0	106	90	110	0	0		
Arsenic	0.0977	0.0020	0.1	0	97.7	90	110	0	0		
Copper	0.09707	0.0050	0.1	0	97.1	90	110	0	0		
Lead	0.1034	0.0010	0.1	0	103	90	110	0	0		

Sample ID: **CCB** SampType: **CCB** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS-2_130621A**
Client ID: **ZZZZZ** Batch ID: **R90367** TestNo: **SW6020** Analysis Date: **06/21/13 19:34** SeqNo: **2438467**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.00163	0.0030	0	0	0	0	0	0	0		
Arsenic	-0.00031	0.0020	0	0	0	0	0	0	0		
Copper	-0.00083	0.0050	0	0	0	0	0	0	0		
Lead	0.00088	0.0010	0	0	0	0	0	0	0		

Sample ID: **CCV1** SampType: **CCV** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS-2_130621A**
Client ID: **ZZZZZ** Batch ID: **R90367** TestNo: **SW6020** Analysis Date: **06/21/13 20:25** SeqNo: **2438477**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.05189	0.0030	0.05	0	104	90	110	0	0		
Arsenic	0.09853	0.0020	0.1	0	98.5	90	110	0	0		
Copper	0.09485	0.0050	0.1	0	94.8	90	110	0	0		
Lead	0.1005	0.0010	0.1	0	101	90	110	0	0		

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H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Natural Resource Technology, Inc.
Work Order: 13060604
Project: 69420, Peoples Gas - Willow Street / Hawthorne Ave

ANALYTICAL QC SUMMARY REPORT

Run ID: **ICPMS-2_130621A**

Sample ID: **CCB** SampType: **CCB** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS-2_130621A**
Client ID: **ZZZZZ** Batch ID: **R90367** TestNo: **SW6020** Analysis Date: **06/21/13 20:29** SeqNo: **2438478**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.00164	0.0030	0	0	0	0	0	0	0		
Arsenic	-0.00042	0.0020	0	0	0	0	0	0	0		
Copper	-0.00098	0.0050	0	0	0	0	0	0	0		
Lead	0.00055	0.0010	0	0	0	0	0	0	0		

Sample ID: **CCV1** SampType: **CCV** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS-2_130621A**
Client ID: **ZZZZZ** Batch ID: **R90367** TestNo: **SW6020** Analysis Date: **06/21/13 21:12** SeqNo: **2438484**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.05146	0.0030	0.05	0	103	90	110	0	0		
Arsenic	0.09671	0.0020	0.1	0	96.7	90	110	0	0		
Copper	0.09268	0.0050	0.1	0	92.7	90	110	0	0		
Lead	0.09917	0.0010	0.1	0	99.2	90	110	0	0		

Sample ID: **CCB** SampType: **CCB** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS-2_130621A**
Client ID: **ZZZZZ** Batch ID: **R90367** TestNo: **SW6020** Analysis Date: **06/21/13 21:16** SeqNo: **2438485**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.00171	0.0030	0	0	0	0	0	0	0		
Arsenic	-0.00049	0.0020	0	0	0	0	0	0	0		
Copper	-0.00099	0.0050	0	0	0	0	0	0	0		
Lead	0.00041	0.0010	0	0	0	0	0	0	0		

Sample ID: **ICS A** SampType: **ICSA** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS-2_130621A**
Client ID: **ZZZZZ** Batch ID: **R90367** TestNo: **SW6020** Analysis Date: **06/21/13 21:36** SeqNo: **2438486**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.00114	0.0030	0	0	0	0	0	0	0		
Arsenic	-0.0002	0.0020	0	0	0	0	0	0	0		
Copper	0.00093	0.0050	0	0	0	0	0	0	0		
Lead	0.0006	0.0010	0	0	0	0	0	0	0		

Qualifiers:
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R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Natural Resource Technology, Inc.
Work Order: 13060604
Project: 69420, Peoples Gas - Willow Street / Hawthorne Ave

ANALYTICAL QC SUMMARY REPORT

Run ID: **ICPMS-2_130621A**

Sample ID: **ICS AB** SampType: **ICSAB** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS-2_130621A**
Client ID: **ZZZZZ** Batch ID: **R90367** TestNo: **SW6020** Analysis Date: **06/21/13 21:40** SeqNo: **2438487**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.00183	0.0030	0	0	0	0	0	0	0		
Arsenic	0.01891	0.0020	0.02	0	94.6	80	120	0	0		
Copper	0.01694	0.0050	0.02	0	84.7	80	120	0	0		
Lead	0.00074	0.0010	0	0	0	0	0	0	0		

Sample ID: **CCV1** SampType: **CCV** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS-2_130621A**
Client ID: **ZZZZZ** Batch ID: **R90367** TestNo: **SW6020** Analysis Date: **06/21/13 21:44** SeqNo: **2438488**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.05476	0.0030	0.05	0	110	90	110	0	0		
Arsenic	0.09675	0.0020	0.1	0	96.8	90	110	0	0		
Copper	0.09694	0.0050	0.1	0	96.9	90	110	0	0		
Lead	0.102	0.0010	0.1	0	102	90	110	0	0		

Sample ID: **CCB** SampType: **CCB** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS-2_130621A**
Client ID: **ZZZZZ** Batch ID: **R90367** TestNo: **SW6020** Analysis Date: **06/21/13 21:48** SeqNo: **2438489**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.00201	0.0030	0	0	0	0	0	0	0		
Arsenic	-0.00045	0.0020	0	0	0	0	0	0	0		
Copper	-0.00059	0.0050	0	0	0	0	0	0	0		
Lead	0.00044	0.0010	0	0	0	0	0	0	0		

Qualifiers:
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R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

RUN SEQUENCE ICPMS 2

Sequence	Dilution	Internal Std	SAMPLE	ELEMENTS	TEST CODES	Date/Time
003CALB.	1		CAL Blank	#VALUE!		6/21/13 11:28
004CALS.	1		CAL STD 1	#VALUE!	60-22-449	6/21/13 11:32
005CALS.	1		CAL STD 2		60-22-448	6/21/13 11:36
006CALS.	1		CAL STD 3		60-22-447	6/21/13 11:40
007CALS.	1		CAL STD 4		60-22-446	6/21/13 11:44
008BLNK.	1		Blank		Blank	6/21/13 11:48
009BLNK.	1		Blank		Blank	6/21/13 11:51
010ICV1.	1		ICV		60-22-450	6/21/13 11:55
011_ICB.	1		ICB		60-22-473	6/21/13 12:00
012ICSA.	1		ICS A		60-22-483	6/21/13 12:04
013ICSB.	1		ICS AB		60-22-484	6/21/13 12:08
014BLNK.	1		Blank		Blank	6/21/13 12:12
015SMPL.	1		blk		M_ICPMS_W	6/21/13 12:16
016ICSA.	1		ICS A		60-22-486	6/21/13 12:21
017ICSB.	1		ICS AB		60-22-487	6/21/13 12:26
018SMPL.	1		blk		M_ICPMS_W	6/21/13 12:30
019CCV1.	1		CCV1	Sb Al Mo Na K	60-22-451	6/21/13 12:34
020_CCB.	1		CCB	Al	60-22-473	6/21/13 12:38
021SMPL.	1		blk		M_ICPMS_W	6/21/13 12:42
022SMPL.	1		blk		M_ICPMS_W	6/21/13 12:45
023SMPL.	1		blk		M_ICPMS_W	6/21/13 12:49
024SMPL.	1		blk		M_ICPMS_W	6/21/13 12:53
025SMPL.	1		blk		M_ICPMS_W	6/21/13 12:57
026CCV1.	1		CCV1		60-22-451	6/21/13 13:01
027_CCB.	1		CCB		60-22-473	6/21/13 13:05
028SMPL.	20		13060511-044C		M_ICPMS_W	6/21/13 13:09
029SMPL.	20		13060511-044CMS		M_ICPMS_W	6/21/13 13:13
030SMPL.	5		13060511-044CMSD		M_ICPMS_W	6/21/13 13:17
031SMPL.	20		13060511-043C		M_ICPMS_W	6/21/13 13:21
032SMPL.	10		13060511-045C		M_ICPMS_W	6/21/13 13:25
033SMPL.	5		13060511-046C		M_ICPMS_W	6/21/13 13:29
034SMPL.	5		13060511-047C		M_ICPMS_W	6/21/13 13:33
035SMPL.	5		13060511-048C		M_ICPMS_W	6/21/13 13:37
036SMPL.	1		blk		M_ICPMS_W	6/21/13 13:41
037SMPL.	1		blk		M_ICPMS_W	6/21/13 13:45
038CCV1.	1		CCV1		60-22-451	6/21/13 13:49
039_CCB.	1		CCB		60-22-473	6/21/13 13:53
040SMPL.	10000		13060515-001A		M_ICPMS_W	6/21/13 13:57
041SMPL.	10000		13060515-002A		M_ICPMS_W	6/21/13 14:01
042SMPL.	10000		13060515-004A		M_ICPMS_W	6/21/13 14:05
043SMPL.	10000		13060515-005A		M_ICPMS_W	6/21/13 14:09
044SMPL.	5		13060511-049C		M_ICPMS_W	6/21/13 14:12
045SMPL.	10		13060511-050C		M_ICPMS_W	6/21/13 14:16
046SMPL.	5		13060511-051C		M_ICPMS_W	6/21/13 14:20
047SMPL.	5		13060511-052C		M_ICPMS_W	6/21/13 14:24
048SMPL.	1		blk		M_ICPMS_W	6/21/13 14:28
049SMPL.	1		blk		M_ICPMS_W	6/21/13 14:32
050CCV1.	1		CCV1		60-22-451	6/21/13 14:36
051_CCB.	1		CCB		60-22-473	6/21/13 14:40
052SMPL.	5		IMBTA1 6/20/13	Na	M_ICPMS_T+	6/21/13 14:44

File Path C:\ICPCHEM\1\DATA\ **13F21L00.B**
Method: 6020G.M

RUN SEQUENCE ICPMS 2

Sequence	Dilution	Internal Std	SAMPLE	ELEMENTS	TEST CODES	Date/Time
053SMPL.	5		13060688-001A	Na	M_ICPMS_T+	6/21/13 14:48
054BLNK.	1		blk			6/21/13 14:52
055SMPL.	2	Sc	13060530-002C		M_ICPMS_W	6/21/13 14:56
056BLNK.	1		blk			6/21/13 15:00
057SMPL.	1		blk		M_ICPMS_W	6/21/13 15:04
058SMPL.	1		blk		M_ICPMS_W	6/21/13 15:09
059SMPL.	1		blk		M_ICPMS_W	6/21/13 15:13
060SMPL.	5		13060530-002C		M_ICPMS_W	6/21/13 15:17
061SMPL.	200		13060688-001A		M_ICPMS_T+	6/21/13 15:21
062CCV1.	1		CCV1		60-22-451	6/21/13 15:25
063_CCB.	1		CCB		60-22-473	6/21/13 15:28
064SMPL.	2	Sc	13060602-001C		M_ICPMS_W	6/21/13 15:33
065BLNK.	1		blk			6/21/13 15:36
066SMPL.	2	Li	13060603-001C		M_ICPMS_W	6/21/13 15:40
067BLNK.	1		blk			6/21/13 15:44
068SMPL.	2	Li	13060604-001C		M_ICPMS_W	6/21/13 15:48
069BLNK.	1		blk			6/21/13 15:52
070SMPL.	2		13060657-001B		M_ICPMS_W	6/21/13 15:56
071BLNK.	1		blk			6/21/13 16:00
072SMPL.	2		13060657-002B		M_ICPMS_W	6/21/13 16:04
073BLNK.	1		blk			6/21/13 16:08
074CCV1.	1		CCV1	Na	60-22-451	6/21/13 16:12
075_CCB.	1		CCB		60-22-473	6/21/13 16:16
076SMPL.	2		13060602-001C		M_ICPMS_W	6/21/13 16:20
077BLNK.	1		blk			6/21/13 16:24
078SMPL.	5		13060652-001A	Na	M_ICPMS_T+	6/21/13 16:28
079BLNK.	1		blk			6/21/13 16:31
080SMPL.	5		13060684-001B	Na	M_ICPMS_T+	6/21/13 16:35
081BLNK.	1		blk			6/21/13 16:39
082SMPL.	1		blk		M_ICPMS_W	6/21/13 16:43
083SMPL.	1		blk		M_ICPMS_W	6/21/13 16:47
084SMPL.	1		blk		M_ICPMS_W	6/21/13 16:51
085SMPL.	5		IMBS2 6/21/13		M_ICPMS_S	6/21/13 17:01
086CCV1.	1		CCV1	Na Mg K B	60-22-451	6/21/13 17:09
087_CCB.	1		CCB		60-22-473	6/21/13 17:13
088SMPL.	100		13060675-006A		M_ICPMS_S	6/21/13 17:17
089SMPL.	5		ILCSS3 6/19/13	Pb As Cd Cr Ba Se Ag Cu Ni Zn Sb Be Tl Fe Co Mn V Al Mo Na Mg K Ca Sn B	M_ICPMS_S	6/21/13 17:23
090SMPL.	20		13060533-006A		M_ICPMS_S	6/21/13 17:27
091SMPL.	20		13060533-007A		M_ICPMS_S	6/21/13 17:31
092SMPL.	20		13060533-008A		M_ICPMS_S	6/21/13 17:35
093SMPL.	20		13060533-009A		M_ICPMS_S	6/21/13 17:39
094SMPL.	20		13060533-010A		M_ICPMS_S	6/21/13 17:43
095SMPL.	1		blk		M_ICPMS_W	6/21/13 17:47
096SMPL.	1		blk		M_ICPMS_W	6/21/13 17:51
097CCV1.	1		CCV1	Be B	60-22-451	6/21/13 17:55
098_CCB.	1		CCB		60-22-473	6/21/13 17:59
099SMPL.	100		13060675-006A		M_ICPMS_S	6/21/13 18:03
100SMPL.	100		13060675-006AMS		M_ICPMS_S	6/21/13 18:07
101SMPL.	100		13060675-006AMSD		M_ICPMS_S	6/21/13 18:11

File Path C:\ICPCHEM\1\DATA\ **13F21L00.B**
Method: 6020G.M

RUN SEQUENCE ICPMS 2

Sequence	Dilution	Internal Std	SAMPLE	ELEMENTS	TEST CODES	Date/Time
102SMPL.	100		13060588-001B		M_ICPMS_S	6/21/13 18:15
103SMPL.	100		13060588-002B		M_ICPMS_S	6/21/13 18:19
104SMPL.	100		13060588-003B		M_ICPMS_S	6/21/13 18:23
105SMPL.	100		13060588-004B		M_ICPMS_S	6/21/13 18:27
106SMPL.	100		13060675-004B		M_ICPMS_S	6/21/13 18:31
107SMPL.	5		ILCSS2 6/21/13	Sb Sn	M_ICPMS_S	6/21/13 18:35
108SMPL.	1		blk		M_ICPMS_W	6/21/13 18:39
109CCV1.	1		CCV1	B	60-22-451	6/21/13 18:43
110_CCB.	1		CCB		60-22-473	6/21/13 18:47
111SMPL.	50		13060675-006A		M_ICPMS_S	6/21/13 18:51
112SMPL.	10		13060675-006A		M_ICPMS_S	6/21/13 18:55
113SMPL.	10		13060675-006AMS		M_ICPMS_S	6/21/13 18:59
114SMPL.	10		13060675-006AMSD		M_ICPMS_S	6/21/13 19:03
115SMPL.	10		13060588-001B		M_ICPMS_S	6/21/13 19:06
116SMPL.	10		13060588-002B		M_ICPMS_S	6/21/13 19:10
117BLNK.	1		blk			6/21/13 19:14
118SMPL.	10		13060588-003B		M_ICPMS_S	6/21/13 19:18
119SMPL.	10		13060588-004B		M_ICPMS_S	6/21/13 19:22
120SMPL.	10		13060675-004B		M_ICPMS_S	6/21/13 19:26
121CCV1.	1		CCV1	Fe Al Mg K Ca B	60-22-451	6/21/13 19:30
122_CCB.	1		CCB		60-22-473	6/21/13 19:34
123SMPL.	10		13060675-001A		M_ICPMS_S	6/21/13 19:38
124SMPL.	10		13060675-002A		M_ICPMS_S	6/21/13 19:42
125SMPL.	10		13060675-003A		M_ICPMS_S	6/21/13 19:46
126SMPL.	10		13060675-005A		M_ICPMS_S	6/21/13 19:50
127SMPL.	10		13060675-007A		M_ICPMS_S	6/21/13 19:54
128SMPL.	10		13060675-008A		M_ICPMS_S	6/21/13 19:58
129BLNK.	1		blk			6/21/13 20:01
130SMPL.	10		13060675-009A		M_ICPMS_S	6/21/13 20:05
131SMPL.	10		13060675-010A		M_ICPMS_S	6/21/13 20:09
132SMPL.	10		13060675-011A		M_ICPMS_S	6/21/13 20:13
133BLNK.	1		blk			6/21/13 20:17
134BLNK.	1		blk			6/21/13 20:21
135CCV1.	1		CCV1	Al B	60-22-451	6/21/13 20:25
136_CCB.	1		CCB		60-22-473	6/21/13 20:29
137SMPL.	10		13060675-012A		M_ICPMS_S	6/21/13 20:33
138SMPL.	10		13060675-013A		M_ICPMS_S	6/21/13 20:37
139SMPL.	10		13060675-014A		M_ICPMS_S	6/21/13 20:41
140SMPL.	10		13060675-015A		M_ICPMS_S	6/21/13 20:45
141SMPL.	10		13060675-016A		M_ICPMS_S	6/21/13 20:49
142SMPL.	10		blk		M_ICPMS_W	6/21/13 20:52
143SMPL.	10		blk		M_ICPMS_W	6/21/13 20:56
144SMPL.	10		blk		M_ICPMS_W	6/21/13 21:00
145SMPL.	1		blk		M_ICPMS_W	6/21/13 21:04
146SMPL.	1		blk		M_ICPMS_W	6/21/13 21:08
147CCV1.	1		CCV1	Be B	60-22-451	6/21/13 21:12
148_CCB.	1		CCB		60-22-473	6/21/13 21:16
149SMPL.	1		blk		M_ICPMS_W	6/21/13 21:20
150SMPL.	1		blk		M_ICPMS_W	6/21/13 21:24
151SMPL.	1		blk		M_ICPMS_W	6/21/13 21:28
152SMPL.	1		blk		M_ICPMS_W	6/21/13 21:32

File Path C:\ICPCHEM\1\DATA\ **13F21L00.B**
Method: 6020G.M

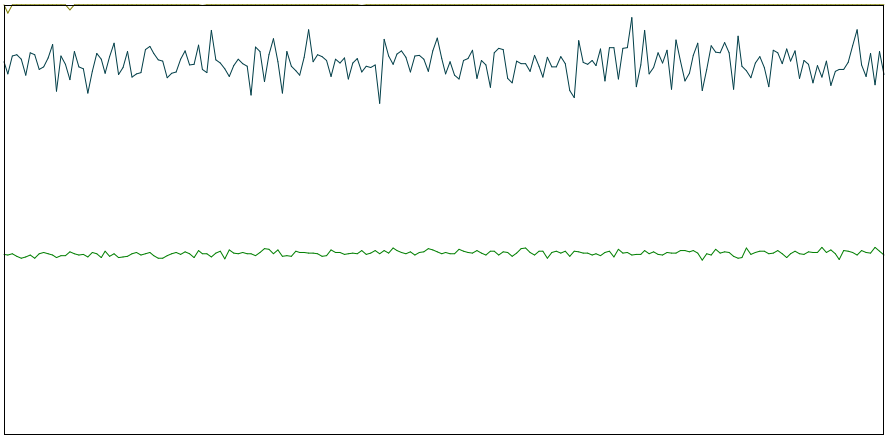
RUN SEQUENCE ICPMS 2

Sequence	Dilution	Internal Std	SAMPLE	ELEMENTS	TEST CODES	Date/Time
153ICSA.	1		ICS A		60-22-483	6/21/13 21:36
154ICSB.	1		ICS AB		60-22-484	6/21/13 21:40
155CCV1.	1		CCV1	Be Fe Al Mo Na Mg K B	60-22-451	6/21/13 21:44
156_CCB.	1		CCB	Fe Al Mo K	60-22-473	6/21/13 21:48

File Path C:\ICPCHEM\1\DATA\ **13F21L00.B**
Method: 6020G.M

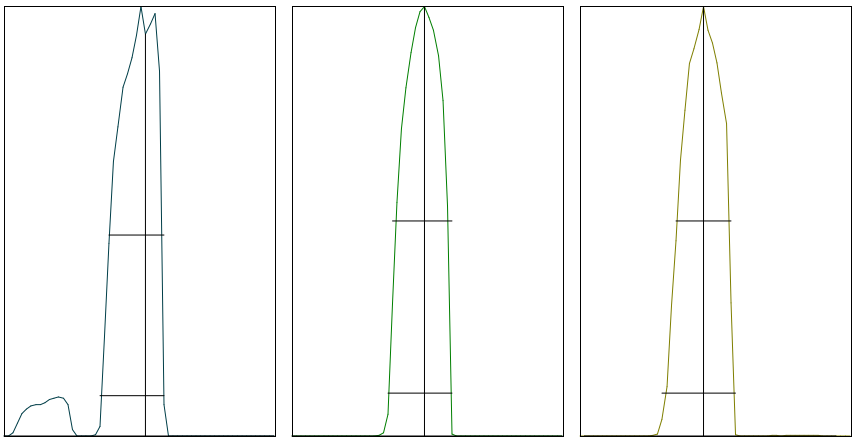
Tune Report

Tune File : ATUNE.U
Comment : ICP MS2



Integration Time: 0.1000 sec
Sampling Period: 0.7200 sec
n: 200
Oxide: 156/140 0.426%
Doubly Charged: 70/140 1.686%

m/z	Range	Count	Mean	RSD%	Background
7	20,000	16751.0	17276.0	3.76	1.80
89	50,000	20886.0	21074.6	1.35	2.00
205	10,000	10709.0	10386.0	1.89	5.50
156/140	1	0.420%	0.419%	11.90	
70/140	5	1.798%	1.674%	7.05	
208	50	46.0	40.0	16.13	4.40



m/z:	7	89	205
Height:	17,505	21,746	11,427
Axis:	7.10	89.00	204.90
W-50%:	0.60	0.65	0.60
W-10%:	0.700	0.700	0.800

Integration Time: 0.1000 sec
Acquisition Time: 22.7600 sec

Y axis : Linear

Generated : Jun 21, 2013 10:47:45
Printed : Jun 21, 2013 10:47:47

Tune Report

Tune File : ATUNE.U
Comment : ICP MS2

Tuning Parameters

===Plasma Condition===			===Ion Lenses===			===Q-Pole Parameters===		
RF Power	:	1500 W	Extract 1	:	-170 V	AMU Gain	:	129
RF Matching	:	1.6 V	Extract 2	:	-102 V	AMU Offset	:	126
Smpl Depth	:	5 mm	Einzel 1,3	:	-100 V	Axis Gain	:	1
Torch-H	:	1 mm	Einzel 2	:	0 V	Axis Offset	:	0.06
Torch-V	:	1.3 mm	Omega Bias	:	-35 V	QP Bias	:	3 V
Carrier Gas	:	1.15 L/min	Omega (+)	:	9.3 V			
Makeup Gas	:	0 L/min	Omega (-)	:	5 V	===Detector Parameters===		
Optional Gas	:	--- %	QP Focus	:	10 V	Discriminator	:	8 mV
Nebulizer Pump	:	0.12 rps	Plate Bias	:	-11 V	Analog HV	:	1720 V
Sample Pump	:	--- rps				Pulse HV	:	1310 V
S/C Temp	:	2 degC						

P/A Factor Tuning Report

Acquired:Jun 21 2013 11:06 am

Mass[amu]	Element	P/A Factor
6	Li	0.063862
9	Be	0.073632
11	B	0.071584
23	Na	0.079047
24	Mg	0.082310
27	Al	0.087913
28	Si	Sensitivity too low
39	K	0.087456
44	Ca	0.091134
45	Sc	0.087130
47	Ti	0.086863
51	V	0.091287
52	Cr	0.092958
53	Cr	0.092001
55	Mn	0.094119
57	Fe	0.095256
59	Co	0.096843
60	Ni	0.097877
63	Cu	0.098328
66	Zn	0.098083
74	Ge	Sensitivity too low
75	As	0.095827
77	(As)	Sensitivity too low
78	Se	Sensitivity too low
82	Se	Sensitivity too low
83	(Se)	Sensitivity too low
88	(Ca)	Sensitivity too low
89	Y	0.095062
98	Mo	0.097046
99	(Mo)	0.097791
106	(Cd)	Sensitivity too low
107	Ag	0.100536
108	(Cd)	Sensitivity too low
111	Cd	0.100152
114	Cd	0.101654
115	In	0.101016
118	(In)	0.101478
120	Sn	0.102329
121	Sb	0.102408
123	Sb	0.102429
137	Ba	0.102350
203	Tl	0.108929
206	Pb	0.108644
207	Pb	0.108611
208	Pb	0.106242
209	Bi	0.107874

===Detector Parameters===
Discriminator: 8.0 mV
Analog HV: 1720 V
Pulse HV: 1310 V

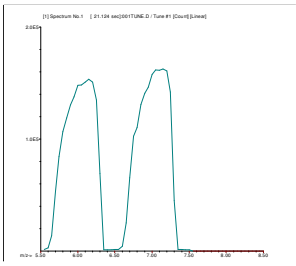
- 1 -

6020 QC Tune Report

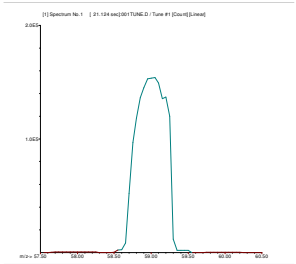
Data File: C:\ICPCHEM\1\DATA\13F21100.B\001TUNE.D
Date Acquired: Jun 21 2013 11:18 am
Acq. Method: TN6020.M
Operator: ICPMS 2 - JG
Sample Name: Tune Check
Misc Info: 60-22-471
Vial Number: 1306
Current Method: C:\ICPCHEM\1\METHODS\TN6020.M

RSD (%)

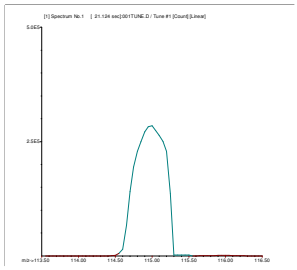
Element	Actual	Required	Flag
7 Li	2.06	5.00	
59 Co	1.17	5.00	
115 In	2.22	5.00	
205 Tl	1.07	5.00	



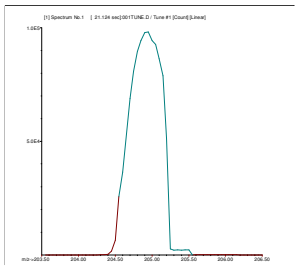
7 Li
Mass Calib.
Actual: 7.10
Required: 6.90 - 7.10
Flag:
Peak Width
Actual: 0.65
Required: 0.90
Flag:



59 Co
Mass Calib.
Actual: 59.00
Required: 58.90 - 59.10
Flag:
Peak Width
Actual: 0.55
Required: 0.90
Flag:



115 In
Mass Calib.
Actual: 115.00
Required: 114.90 - 115.10
Flag:
Peak Width
Actual: 0.60
Required: 0.90
Flag:



205 Tl
Mass Calib.
Actual: 204.95
Required: 204.90 - 205.10
Flag:
Peak Width
Actual: 0.65
Required: 0.90
Flag:

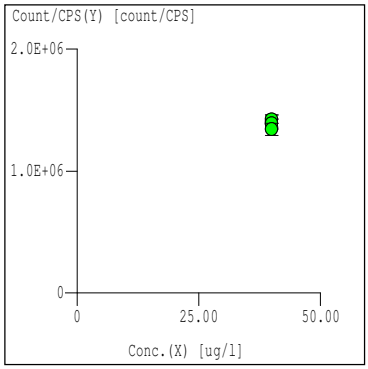
Last Calib: Jun 21, 2013 11:46 am
Calibration Type: External Calibration Method
Calibration Title: ICPMS - 2
Weighting Method: 1/(SD*SD)
Mass Interpolation Fit for VIS: Point to Point
Method: C:\ICPCHEM\1\METHODS\6020G.M

=== Standard Files ===
<Data Correction>
Bkg File: ---
Rejected Masses: ---
Interference Correction: ON

	Data File	Sample Name	Date Acquired
1	c:\icpchem\1\data\13f21l00.b\003calb.d\003calb.d#	CAL Blank	Jun 21 2013 11:28 am
2	c:\icpchem\1\data\13f21l00.b\004cals.d\004cals.d#	CAL STD 1	Jun 21 2013 11:32 am
3	c:\icpchem\1\data\13f21l00.b\005cals.d\005cals.d#	CAL STD 2	Jun 21 2013 11:36 am
4	c:\icpchem\1\data\13f21l00.b\006cals.d\006cals.d#	CAL STD 3	Jun 21 2013 11:40 am
5	c:\icpchem\1\data\13f21l00.b\007cals.d\007cals.d#	CAL STD 4	Jun 21 2013 11:44 am
6	---		
7	---		
8	---		
9	---		
10	---		
11	---		
12	---		
13	---		
14	---		
15	---		
16	---		
17	---		
18	---		
19	---		
20	---		

=== Graph Detail ===

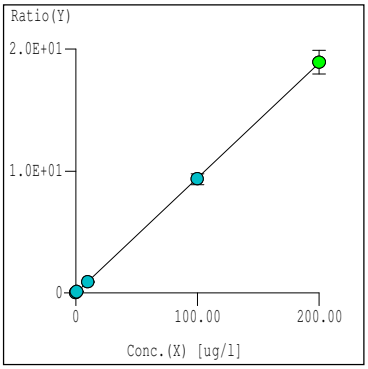
Step	Mass	Element	ISTD	Unit
(1)	6	Li	---	ug/l



Curve Fit: Excluded
r = 0.0000

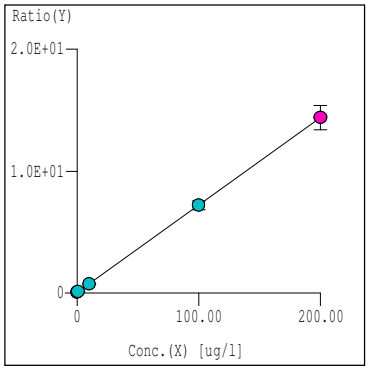
DL = --- ug/l
BEC = --- ug/l

Step	Mass	Element	ISTD	Unit
(1)	9	Be	6	ug/l



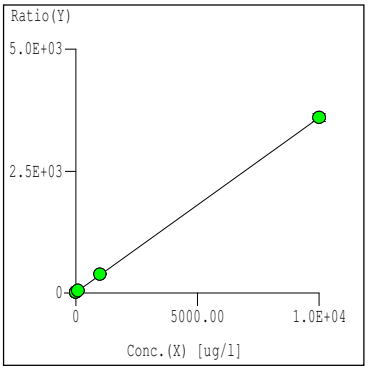
Curve Fit: Y=aX+b
r = 1.0000
Y = 9.452E-002*X -2.596E-002
X = 1.058E+001*Y +2.747E-001
DL = 8.174E-02 ug/l
BEC = -2.747E-01 ug/l

Step	Mass	Element	ISTD	Unit
(1)	11	B	6	ug/l



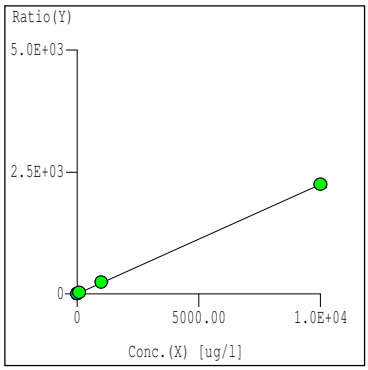
Curve Fit: Y=aX+b
r = 1.0000
Y = 7.179E-002*X +4.090E-002
X = 1.393E+001*Y -5.698E-001
DL = 1.906E-01 ug/l
BEC = 5.698E-01 ug/l

Step	Mass	Element	ISTD	Unit
(1)	23	Na	45	ug/l



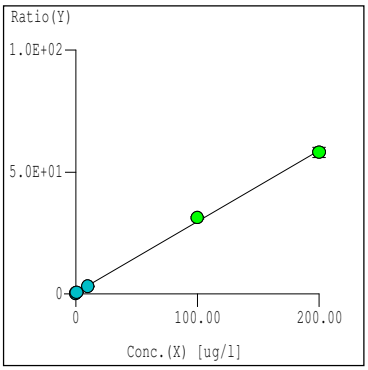
Curve Fit: Y=aX+b
r = 1.0000
Y = 3.585E-001*X +1.526E+001
X = 2.789E+000*Y -4.257E+001
DL = 4.220 ug/l
BEC = 42.57 ug/l

Step	Mass	Element	ISTD	Unit
(1)	24	Mg	45	ug/l



Curve Fit: Y=aX+b
r = 1.0000
Y = 2.242E-001*X +5.021E+000
X = 4.460E+000*Y -2.239E+001
DL = 1.551 ug/l
BEC = 22.39 ug/l

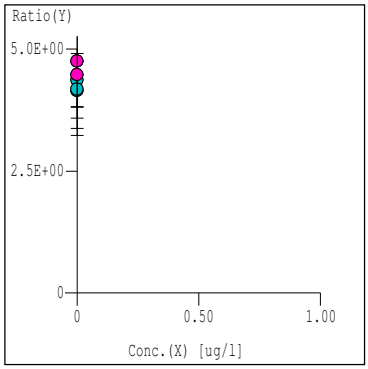
Step	Mass	Element	ISTD	Unit
(1)	27	Al	45	ug/l



Curve Fit: Y=aX+b
r = 0.9994
Y = 2.922E-001*X +4.477E-001
X = 3.422E+000*Y -1.532E+000
DL = 1.050E-01 ug/l
BEC = 1.532 ug/l

=== Graph Detail ===

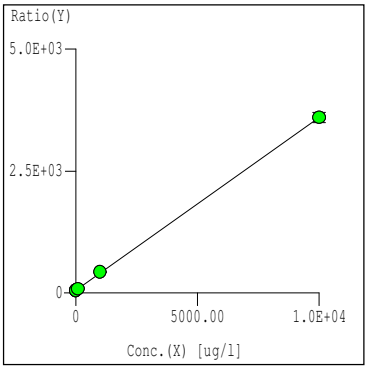
Step	Mass	Element	ISTD	Unit
(1)	28	Si	45	ug/l



Curve Fit: Y=aX+b
r = 0.0000

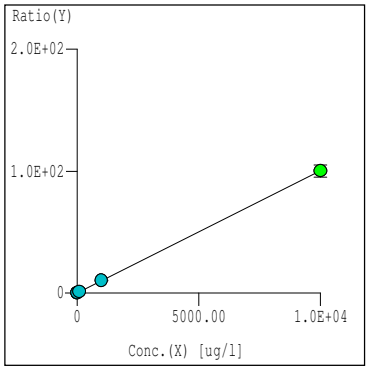
DL = --- ug/l
BEC = --- ug/l

Step	Mass	Element	ISTD	Unit
(1)	39	K	45	ug/l



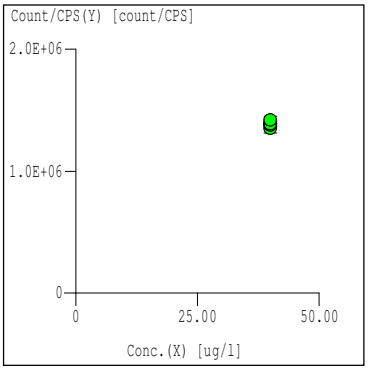
Curve Fit: Y=aX+b
r = 1.0000
Y = 3.546E-001*X +5.370E+001
X = 2.820E+000*Y -1.515E+002
DL = 6.734 ug/l
BEC = 151.5 ug/l

Step	Mass	Element	ISTD	Unit
(1)	44	Ca	45	ug/l



Curve Fit: Y=aX+b
r = 1.0000
Y = 1.000E-002*X +2.317E-001
X = 9.998E+001*Y -2.316E+001
DL = 1.400 ug/l
BEC = 23.16 ug/l

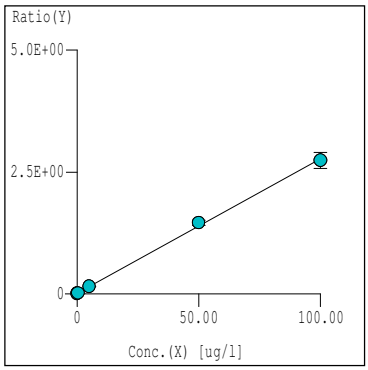
Step	Mass	Element	ISTD	Unit
(1)	45	Sc	---	ug/l



Curve Fit: Excluded
r = 0.0000

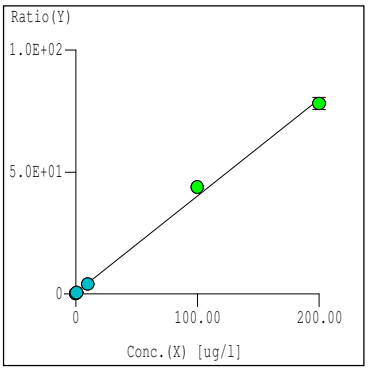
DL = --- ug/l
BEC = --- ug/l

Step	Mass	Element	ISTD	Unit
(1)	47	Ti	45	ug/l



Curve Fit: Y=aX+b
r = 0.9995
Y = 2.753E-002*X +2.131E-002
X = 3.633E+001*Y -7.741E-001
DL = 4.095E-01 ug/l
BEC = 7.741E-01 ug/l

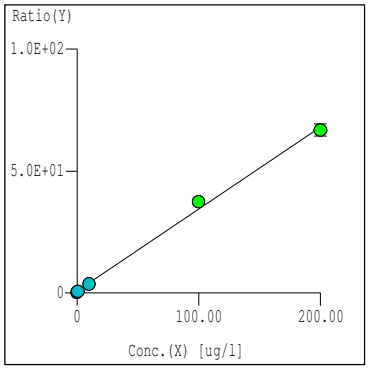
Step	Mass	Element	ISTD	Unit
(1)	51	V	45	ug/l



Curve Fit: Y=aX+b
r = 0.9983
Y = 3.957E-001*X +6.629E-001
X = 2.527E+000*Y -1.676E+000
DL = 8.408E-02 ug/l
BEC = 1.676 ug/l

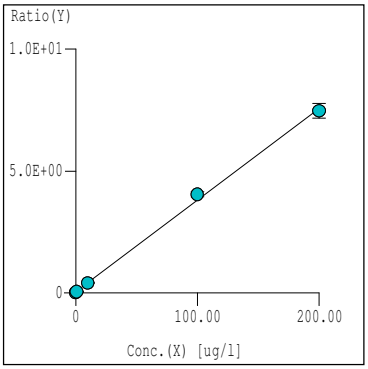
=== Graph Detail ===

Step	Mass	Element	ISTD	Unit
(1)	52	Cr	45	ug/l



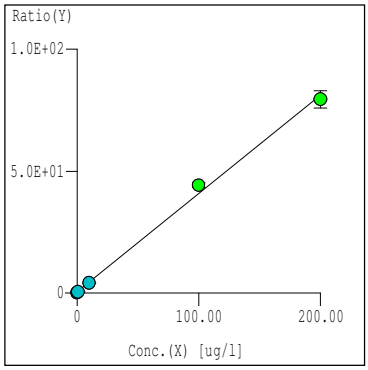
Curve Fit: Y=aX+b
r = 0.9984
Y = 3.374E-001*X +6.983E-001
X = 2.964E+000*Y -2.070E+000
DL = 4.825E-02 ug/l
BEC = 2.070 ug/l

Step	Mass	Element	ISTD	Unit
(1)	53	Cr	45	ug/l



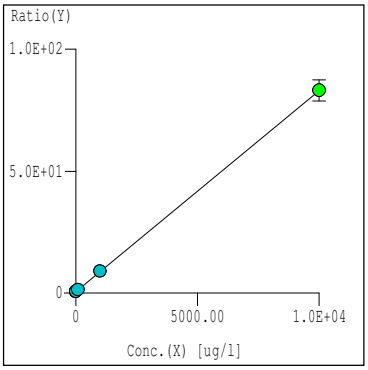
Curve Fit: Y=aX+b
r = 0.9993
Y = 3.763E-002*X +5.175E-002
X = 2.658E+001*Y -1.375E+000
DL = 1.594E-01 ug/l
BEC = 1.375 ug/l

Step	Mass	Element	ISTD	Unit
(1)	55	Mn	45	ug/l



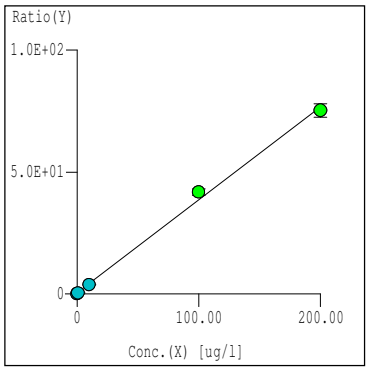
Curve Fit: Y=aX+b
r = 0.9985
Y = 4.024E-001*X +6.450E-001
X = 2.485E+000*Y -1.603E+000
DL = 1.302E-01 ug/l
BEC = 1.603 ug/l

Step	Mass	Element	ISTD	Unit
(1)	57	Fe	45	ug/l



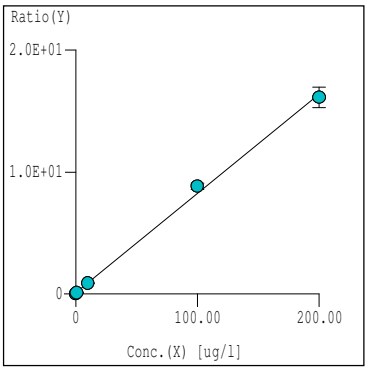
Curve Fit: Y=aX+b
r = 1.0000
Y = 8.251E-003*X +6.236E-001
X = 1.212E+002*Y -7.558E+001
DL = 7.353 ug/l
BEC = 75.58 ug/l

Step	Mass	Element	ISTD	Unit
(1)	59	Co	45	ug/l



Curve Fit: Y=aX+b
r = 0.9986
Y = 3.812E-001*X +5.474E-001
X = 2.623E+000*Y -1.436E+000
DL = 2.130E-01 ug/l
BEC = 1.436 ug/l

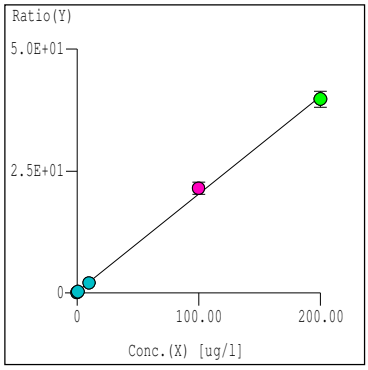
Step	Mass	Element	ISTD	Unit
(1)	60	Ni	45	ug/l



Curve Fit: Y=aX+b
r = 0.9989
Y = 8.144E-002*X +1.242E-001
X = 1.228E+001*Y -1.525E+000
DL = 1.417E-01 ug/l
BEC = 1.525 ug/l

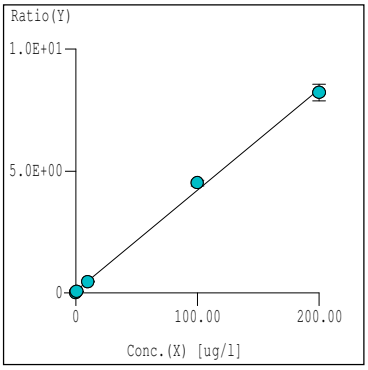
=== Graph Detail ===

Step	Mass	Element	ISTD	Unit
(1)	63	Cu	45	ug/l



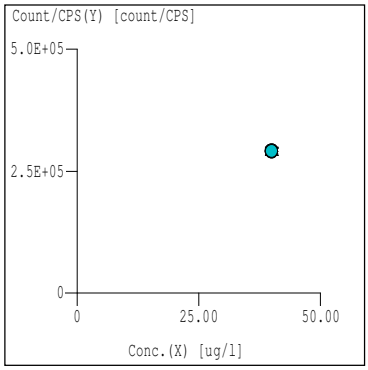
Curve Fit: Y=aX+b
r = 0.9993
Y = 2.004E-001*X +2.344E-001
X = 4.989E+000*Y -1.170E+000
DL = 1.261E-01 ug/l
BEC = 1.170 ug/l

Step	Mass	Element	ISTD	Unit
(1)	66	Zn	45	ug/l



Curve Fit: Y=aX+b
r = 0.9989
Y = 4.146E-002*X +7.322E-002
X = 2.412E+001*Y -1.766E+000
DL = 7.079E-02 ug/l
BEC = 1.766 ug/l

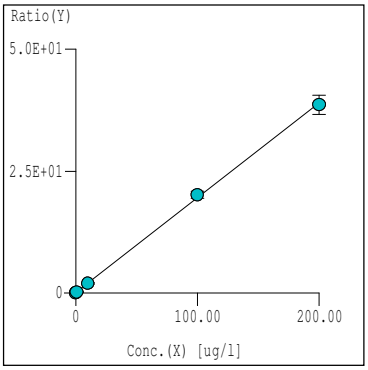
Step	Mass	Element	ISTD	Unit
(1)	74	Ge	---	ug/l



Curve Fit: Excluded
r = 0.0000

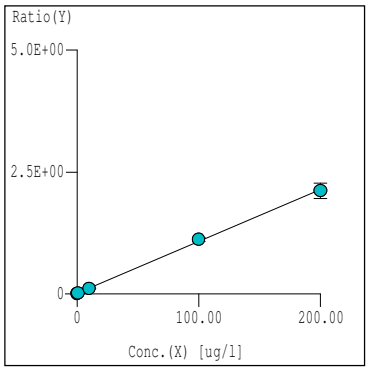
DL = --- ug/l
BEC = --- ug/l

Step	Mass	Element	ISTD	Unit
(1)	75	As	74	ug/l



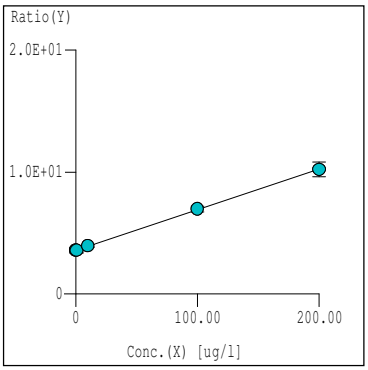
Curve Fit: Y=aX+b
r = 0.9998
Y = 1.942E-001*X +1.157E-001
X = 5.149E+000*Y -5.957E-001
DL = 4.854E-02 ug/l
BEC = 5.957E-01 ug/l

Step	Mass	Element	ISTD	Unit
(1)	77	(As)	74	ug/l



Curve Fit: Y=aX+b
r = 0.9997
Y = 1.062E-002*X +1.362E-002
X = 9.418E+001*Y -1.283E+000
DL = 8.522E-01 ug/l
BEC = 1.283 ug/l

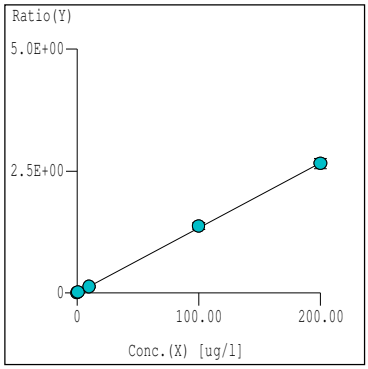
Step	Mass	Element	ISTD	Unit
(1)	78	Se	74	ug/l



Curve Fit: Y=aX+b
r = 0.9999
Y = 3.330E-002*X +3.583E+000
X = 3.003E+001*Y -1.076E+002
DL = 18.55 ug/l
BEC = 107.6 ug/l

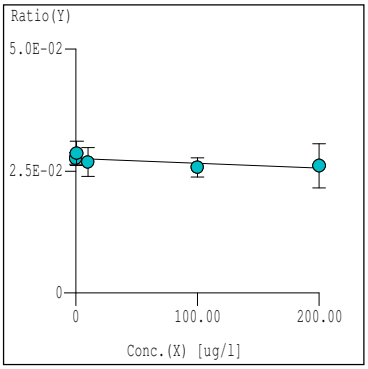
=== Graph Detail ===

Step	Mass	Element	ISTD	Unit
(1)	82	Se	74	ug/l



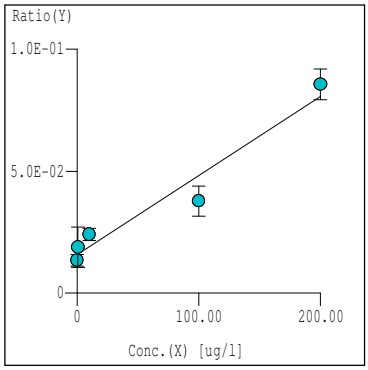
Curve Fit: Y=aX+b
r = 0.9999
Y = 1.334E-002*X +4.525E-003
X = 7.495E+001*Y -3.391E-001
DL = 3.162E-01 ug/l
BEC = 3.391E-01 ug/l

Step	Mass	Element	ISTD	Unit
(1)	83	(Se)	74	ug/l



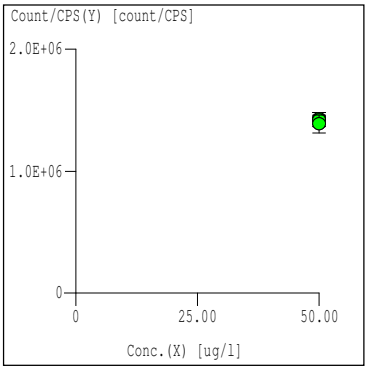
Curve Fit: Y=aX+b
r = -0.7447
Y = -9.895E-006*X +2.760E-002
X = -1.011E+005*Y +2.790E+003
DL = -3.496E+02 ug/l
BEC = -2.790E+03 ug/l

Step	Mass	Element	ISTD	Unit
(1)	88	(Ca)	74	ug/l



Curve Fit: Y=aX+b
r = 0.9744
Y = 3.246E-004*X +1.576E-002
X = 3.080E+003*Y -4.855E+001
DL = 22.09 ug/l
BEC = 48.55 ug/l

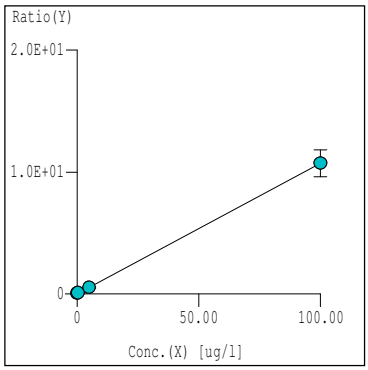
Step	Mass	Element	ISTD	Unit
(1)	89	Y	---	ug/l



Curve Fit: Y=aX+b
r = 0.0000

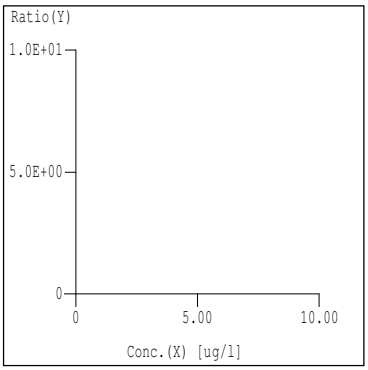
DL = --- ug/l
BEC = --- ug/l

Step	Mass	Element	ISTD	Unit
(1)	98	Mo	115	ug/l



Curve Fit: Y=aX+b
r = 1.0000
Y = 1.070E-001*X +2.670E-002
X = 9.345E+000*Y -2.495E-001
DL = 1.173E-01 ug/l
BEC = 2.495E-01 ug/l

Step	Mass	Element	ISTD	Unit
(1)	99	(Mo)	115	ug/l

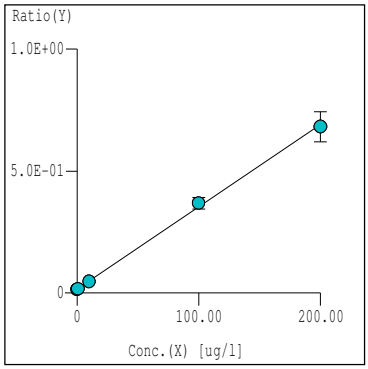


Curve Fit: Y=aX+b
r = 0.0000

DL = --- ug/l
BEC = --- ug/l

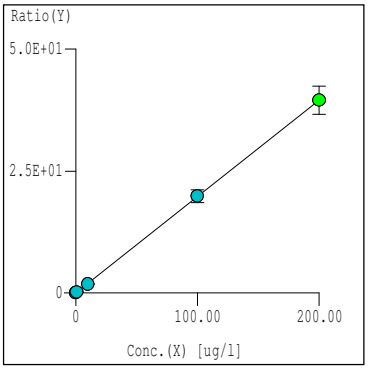
=== Graph Detail ===

Step Mass Element	ISTD	Unit
(1) 106 (Cd)	115	ug/l



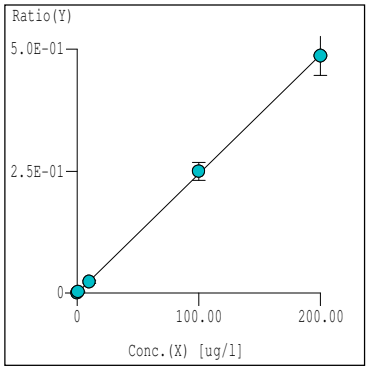
Curve Fit: Y=aX+b
r = 0.9995
Y = 3.368E-003*X +1.603E-002
X = 2.969E+002*Y -4.759E+000
DL = 1.042 ug/l
BEC = 4.759 ug/l

Step Mass Element	ISTD	Unit
(1) 107 Ag	115	ug/l



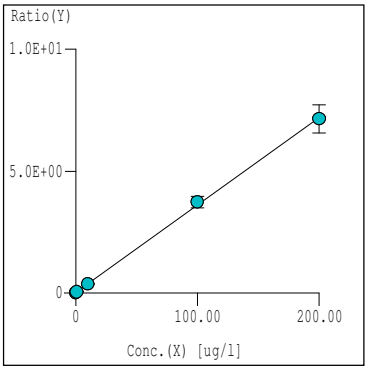
Curve Fit: Y=aX+b
r = 1.0000
Y = 1.980E-001*X -4.776E-002
X = 5.049E+000*Y +2.412E-001
DL = 3.992E-02 ug/l
BEC = -2.412E-01 ug/l

Step Mass Element	ISTD	Unit
(1) 108 (Cd)	115	ug/l



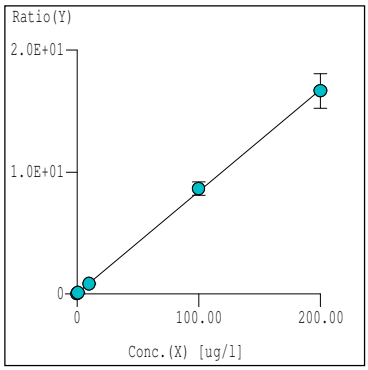
Curve Fit: Y=aX+b
r = 0.9999
Y = 2.442E-003*X +6.784E-004
X = 4.094E+002*Y -2.777E-001
DL = 1.749E-01 ug/l
BEC = 2.777E-01 ug/l

Step Mass Element	ISTD	Unit
(1) 111 Cd	115	ug/l



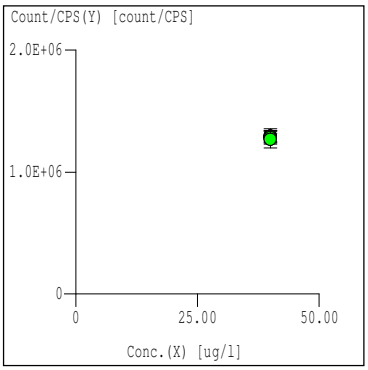
Curve Fit: Y=aX+b
r = 0.9998
Y = 3.587E-002*X +3.119E-002
X = 2.788E+001*Y -8.696E-001
DL = 9.546E-02 ug/l
BEC = 8.696E-01 ug/l

Step Mass Element	ISTD	Unit
(1) 114 Cd	115	ug/l



Curve Fit: Y=aX+b
r = 0.9998
Y = 8.366E-002*X +4.047E-002
X = 1.195E+001*Y -4.838E-001
DL = 1.274E-01 ug/l
BEC = 4.838E-01 ug/l

Step Mass Element	ISTD	Unit
(1) 115 In	---	ug/l

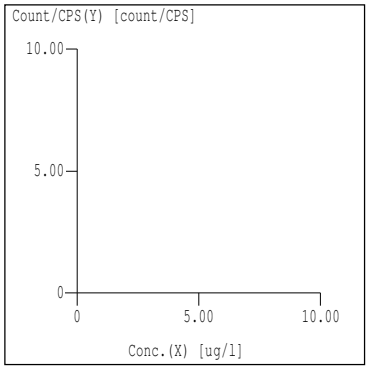


Curve Fit: Excluded
r = 0.0000

DL = --- ug/l
BEC = --- ug/l

=== Graph Detail ===

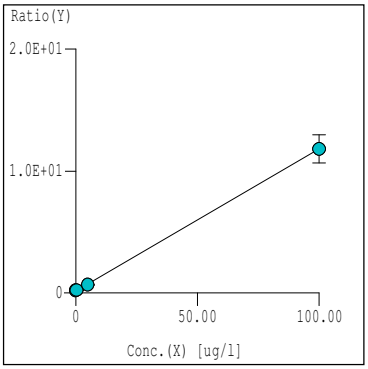
Step Mass Element	ISTD	Unit
(1) 118 (In)	---	ug/l



Curve Fit: Y=aX+b
r = 0.0000

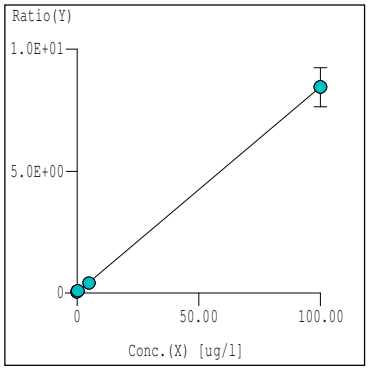
DL = --- ug/l
BEC = --- ug/l

Step Mass Element	ISTD	Unit
(1) 120 Sn	115	ug/l



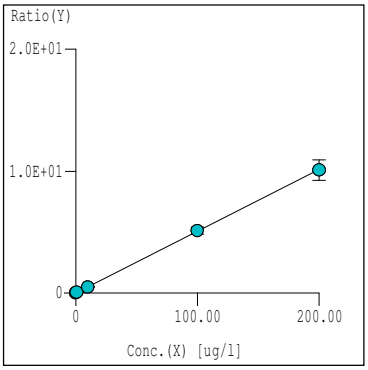
Curve Fit: Y=aX+b
r = 1.0000
Y = 1.166E-001*X +1.473E-001
X = 8.579E+000*Y -1.264E+000
DL = 2.984E-01 ug/l
BEC = 1.264 ug/l

Step Mass Element	ISTD	Unit
(1) 121 Sb	115	ug/l



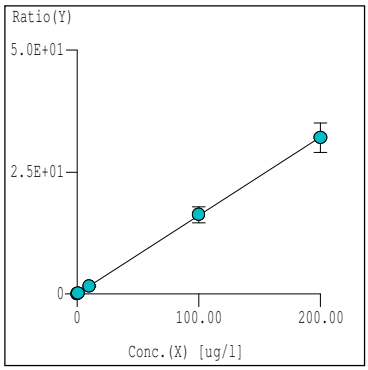
Curve Fit: Y=aX+b
r = 1.0000
Y = 8.422E-002*X +2.422E-002
X = 1.187E+001*Y -2.876E-001
DL = 4.679E-02 ug/l
BEC = 2.876E-01 ug/l

Step Mass Element	ISTD	Unit
(1) 137 Ba	115	ug/l



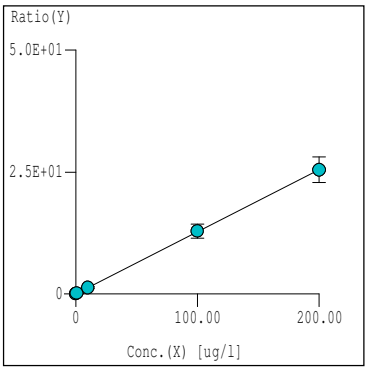
Curve Fit: Y=aX+b
r = 1.0000
Y = 5.057E-002*X +7.805E-003
X = 1.978E+001*Y -1.544E-001
DL = 1.116E-01 ug/l
BEC = 1.544E-01 ug/l

Step Mass Element	ISTD	Unit
(1) 203 Tl	209	ug/l



Curve Fit: Y=aX+b
r = 1.0000
Y = 1.607E-001*X +3.266E-002
X = 6.222E+000*Y -2.032E-001
DL = 1.720E-01 ug/l
BEC = 2.032E-01 ug/l

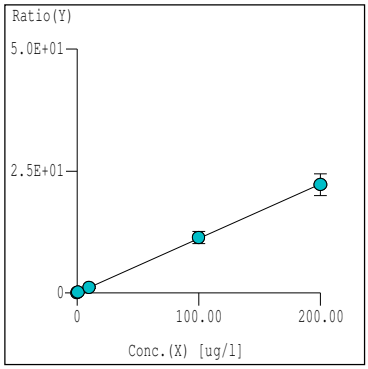
Step Mass Element	ISTD	Unit
(1) 206 Pb	209	ug/l



Curve Fit: Y=aX+b
r = 1.0000
Y = 1.274E-001*X +2.384E-002
X = 7.849E+000*Y -1.871E-001
DL = 1.031E-01 ug/l
BEC = 1.871E-01 ug/l

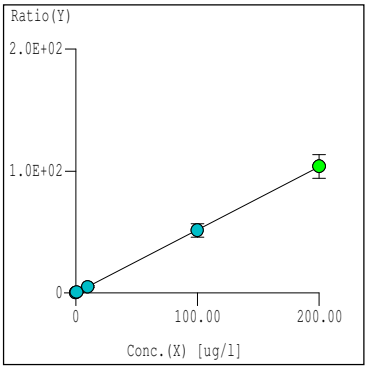
=== Graph Detail ===

Step Mass Element	ISTD	Unit
(1) 207 Pb	209	ug/l



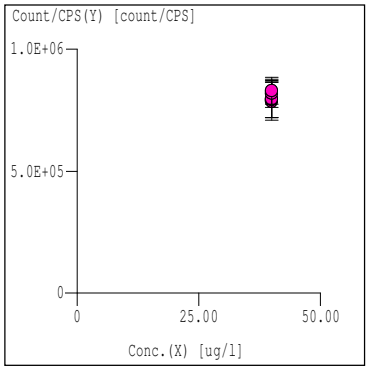
Curve Fit: Y=aX+b
r = 0.9999
Y = 1.113E-001*X +3.711E-002
X = 8.987E+000*Y -3.335E-001
DL = 7.807E-02 ug/l
BEC = 3.335E-01 ug/l

Step Mass Element	ISTD	Unit
(1) 208 Pb	209	ug/l



Curve Fit: Y=aX+b
r = 1.0000
Y = 5.189E-001*X -1.162E-001
X = 1.927E+000*Y +2.240E-001
DL = 9.614E-02 ug/l
BEC = -2.240E-01 ug/l

Step Mass Element	ISTD	Unit
(1) 209 Bi	---	ug/l



Curve Fit: Excluded
r = 0.0000

DL = --- ug/l
BEC = --- ug/l

Calibration Blank QC Report

Data File:	C:\ICPCHEM\1\DATA\13F21100.B\003CAL
Date Acquired:	Jun 21 2013 11:28 am
Operator:	ICPMS 2 - JG
Sample Name:	CAL Blank
Misc Info:	60-22-473
Vial Number:	2101
Current Method:	C:\ICPCHEM\1\METHODS\6020G.M
Calibration File:	C:\ICPCHEM\1\CALIB\6020G.C
Last Cal Update:	Jun 21 2013 11:30 am
Sample Type:	CalBlk
Total Dil Factor:	1.00

QC&ISTD Elements

Element		CPS Mean		SD	RSD(%)
6	Li	1384335.00	A	44070.00	3.18
9	Be	206.67	P	97.01	46.94
11	B	2302.22	P	89.09	3.87
23	Na	364695.09	M	23850.00	6.54
24	Mg	9656.67	P	4209.00	43.59
27	Al	5648.89	P	494.30	8.75
28	Si	147486.70	P	20120.00	13.64
39	K	1591240.00	A	16640.00	1.05
44	Ca	5829.57	P	67.12	1.15
45	Sc	1350054.00	A	34580.00	2.56
47	Ti	331.11	P	122.30	36.94
51	V	2616.97	P	445.40	17.02
52	Cr	6627.78	P	339.60	5.12
53	Cr	274.44	P	75.01	27.33
55	Mn	2674.44	P	660.80	24.71
57	Fe	20065.55	P	178.70	0.89
59	Co	1487.78	P	963.40	64.75
60	Ni	225.56	P	137.30	60.87
63	Cu	1183.33	P	317.80	26.86
66	Zn	318.89	P	41.41	12.99
74	Ge	289784.41	P	7031.00	2.43
75	As	132.16	P	25.91	19.61
77	(As)	53.33	P	23.33	43.74
78	Se	25965.55	P	947.80	3.65
82	Se	9.31	P	10.14	108.90
83	(Se)	200.00	P	5.77	2.89
88	(Ca)	97.78	P	17.10	17.49
89	Y	1421990.00	A	57070.00	4.01
98	Mo	1633.74	P	156.20	9.56
99	(Mo)	73.33	P	44.84	61.15
106	(Cd)	448.89	P	39.49	8.80
107	Ag	163.33	P	95.28	58.34
108	(Cd)	15.56	P	5.09	32.73

111	Cd	399.59	P	55.17	13.81
114	Cd	297.78	P	132.10	44.36
115	In	1292142.00	A	62680.00	4.85
118	(In)	4541.11	P	157.60	3.47
120	Sn	6307.78	P	149.30	2.37
121	Sb	1496.67	P	106.50	7.12
123	Sb		P		
137	Ba	127.78	P	68.50	53.61
203	Tl	532.22	P	243.60	45.77
206	Pb	232.22	P	109.60	47.20
207	Pb	192.22	P	76.76	39.93
208	Pb	885.56	P	427.70	48.30
209	Bi	786695.88	M	78690.00	10.00

Calibration Standard QC Report

Data File: C:\ICPCHEM\1\DATA\13F21100.B\004CALS.D\004CALS.D#
Date Acquired: Jun 21 2013 11:32 am
Operator: ICPMS 2 - JG
Sample Name: CAL STD 1
Misc Info: 60-22-449
Vial Number: 2102
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal Update: Jun 21 2013 11:30 am
Sample Type: CalStd
Total Dil Factor: 1.00

QC&ISTD Elements

Element	CPS Mean		SD	RSD(%)
6 Li	1406000.00	A	56350.00	4.01
9 Be	3260.00	P	124.70	3.83
11 B	4212.22	P	255.70	6.07
23 Na	499697.91	A	13090.00	2.62
24 Mg	87817.78	P	1218.00	1.39
27 Al	17878.89	P	1093.00	6.11
28 Si	142722.20	P	13160.00	9.22
39 K	1717744.00	A	29800.00	1.73
44 Ca	9961.88	P	292.90	2.94
45 Sc	1375767.00	A	18240.00	1.33
47 Ti	670.00	P	6.67	1.00
51 V	15735.33	P	550.40	3.50
52 Cr	18181.11	P	582.60	3.20
53 Cr	1577.78	P	124.40	7.88
55 Mn	16086.67	P	189.80	1.18
57 Fe	22946.67	P	418.30	1.82
59 Co	13968.89	P	478.70	3.43
60 Ni	3122.22	P	238.00	7.62
63 Cu	7860.00	P	96.09	1.22
66 Zn	2074.44	P	78.20	3.77
74 Ge	290391.09	P	8256.00	2.84
75 As	1446.36	P	253.70	17.54
77 (As)	130.00	P	42.56	32.74
78 Se	25845.55	P	576.50	2.23
82 Se	111.46	P	15.44	13.85
83 (Se)	207.78	P	18.36	8.84
88 (Ca)	135.56	P	55.81	41.17
89 Y	1425631.00	A	57060.00	4.00
98 Mo	2751.94	P	210.00	7.63
99 (Mo)	40.00	P	12.02	30.05
106 (Cd)	542.22	P	38.49	7.10
107 Ag	6240.00	P	182.60	2.93
108 (Cd)	80.00	P	12.02	15.03
111 Cd	1509.53	P	85.16	5.64
114 Cd	2916.67	P	104.10	3.57
115 In	1292940.00	A	43450.00	3.36
118 (In)	5206.67	P	132.20	2.54
120 Sn	7003.33	P	76.88	1.10
121 Sb	2570.00	P	127.70	4.97
123 Sb		P		
137 Ba	1654.44	P	40.73	2.46
203 Tl	2981.11	P	255.20	8.56
206 Pb	2521.11	P	178.60	7.08
207 Pb	2192.22	P	80.37	3.67
208 Pb	9906.67	P	600.10	6.06
209 Bi	793455.19	M	72630.00	9.15

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1405999.60	4.01	1384334.90	101.6	80 - 120	
45 Sc	1375767.40	1.33	1350053.50	101.9	80 - 120	
74 Ge	290391.13	2.84	289784.44	100.2	80 - 120	
115 In	1292940.00	3.36	1292141.60	100.1	80 - 120	
209 Bi	793455.19	9.15	786695.88	100.9	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F21100.B\003CALB.D\003CALB.D#

--- :Element Failures --- :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

Calibration Standard QC Report

Data File: C:\ICPCHEM\1\DATA\13F21100.B\005CALS.D\005CALS.D#
Date Acquired: Jun 21 2013 11:36 am
Operator: ICPMS 2 - JG
Sample Name: CAL STD 2
Misc Info: 60-22-448
Vial Number: 2103
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal Update: Jun 21 2013 11:34 am
Sample Type: CalStd
Total Dil Factor: 1.00

QC&ISTD Elements

Element	CPS Mean		SD	RSD(%)
6 Li	1424471.00	A	34660.00	2.43
9 Be	32100.00	P	725.50	2.26
11 B	26014.44	P	1333.00	5.12
23 Na	1697085.00	A	19260.00	1.13
24 Mg	871504.81	A	11560.00	1.33
27 Al	107187.80	P	2723.00	2.54
28 Si	145674.41	P	20180.00	13.85
39 K	2949045.00	A	23720.00	0.80
44 Ca	41726.35	P	862.40	2.07
45 Sc	1393995.00	A	22170.00	1.59
47 Ti	5314.44	P	139.90	2.63
51 V	139011.50	P	3648.00	2.62
52 Cr	125458.90	P	3953.00	3.15
53 Cr	14067.78	P	282.20	2.01
55 Mn	142595.50	P	3199.00	2.24
57 Fe	48806.67	P	517.70	1.06
59 Co	132915.50	P	3012.00	2.27
60 Ni	30660.00	P	836.10	2.73
63 Cu	71167.78	P	1968.00	2.77
66 Zn	15920.00	P	261.60	1.64
74 Ge	291648.91	P	6689.00	2.29
75 As	14210.74	P	593.60	4.18
77 (As)	820.00	P	84.13	10.26
78 Se	28692.22	P	327.60	1.14
82 Se	921.57	P	129.90	14.10
83 (Se)	195.56	P	18.95	9.69
88 (Ca)	175.56	P	20.37	11.60
89 Y	1431183.00	A	49020.00	3.43
98 Mo	17117.87	P	705.10	4.12
99 (Mo)	22.22	P	3.85	17.32
106 (Cd)	1491.11	P	68.66	4.60
107 Ag	57446.67	P	1078.00	1.88
108 (Cd)	750.00	P	74.46	9.93
111 Cd	11928.90	P	387.80	3.25
114 Cd	26695.55	P	737.60	2.76
115 In	1291182.00	A	48540.00	3.76
118 (In)	16034.44	P	275.90	1.72
120 Sn	21523.33	P	156.50	0.73
121 Sb	13150.00	P	606.50	4.61
123 Sb		P		
137 Ba	15896.67	P	407.00	2.56
203 Tl	31604.44	P	1185.00	3.75
206 Pb	25105.55	P	1538.00	6.13
207 Pb	21993.33	P	1235.00	5.62
208 Pb	99092.22	P	5113.00	5.16
209 Bi	796236.13	M	75630.00	9.50

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1424471.10	2.43	1384334.90	102.9	80 - 120	
45 Sc	1393995.30	1.59	1350053.50	103.3	80 - 120	
74 Ge	291648.88	2.29	289784.44	100.6	80 - 120	
115 In	1291181.80	3.76	1292141.60	99.9	80 - 120	
209 Bi	796236.06	9.50	786695.88	101.2	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F21100.B\003CALB.D\003CALB.D#

--- :Element Failures --- :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

Calibration Standard QC Report

Data File: C:\ICPCHEM\1\DATA\13F21100.B\006CALS.D\006CALS.D#
Date Acquired: Jun 21 2013 11:40 am
Operator: ICPMS 2 - JG
Sample Name: CAL STD 3
Misc Info: 60-22-447
Vial Number: 2104
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal Update: Jun 21 2013 11:38 am
Sample Type: CalStd
Total Dil Factor: 1.00

QC&ISTD Elements

Element	CPS Mean		SD	RSD(%)
6 Li	1392276.00	A	29870.00	2.15
9 Be	325131.09	P	10700.00	3.29
11 B	250672.20	P	9361.00	3.73
23 Na	13382080.00	A	119000.00	0.89
24 Mg	8400955.00	A	46520.00	0.55
27 Al	1082141.00	A	5404.00	0.50
28 Si	164947.20	M	49170.00	29.81
39 K	14857130.00	A	330600.00	2.23
44 Ca	359898.09	P	11890.00	3.30
45 Sc	1386474.00	A	22210.00	1.60
47 Ti	50737.78	P	1923.00	3.79
51 V	1517662.00	A	10630.00	0.70
52 Cr	1294198.00	A	12440.00	0.96
53 Cr	139817.80	P	3286.00	2.35
55 Mn	1534314.00	A	36320.00	2.37
57 Fe	312004.41	P	7618.00	2.44
59 Co	1446986.00	A	45860.00	3.17
60 Ni	306527.81	P	11050.00	3.60
63 Cu	743806.63	M	44450.00	5.98
66 Zn	156411.09	P	3536.00	2.26
74 Ge	293243.31	P	3423.00	1.17
75 As	147709.09	P	4129.00	2.80
77 (As)	8170.00	P	272.80	3.34
78 Se	51073.33	P	1280.00	2.51
82 Se	10052.74	P	479.90	4.77
83 (Se)	188.89	P	15.03	7.96
88 (Ca)	276.67	P	45.09	16.30
89 Y	1420016.00	A	34950.00	2.46
98 Mo	168779.30	P	8107.00	4.80
99 (Mo)	35.56	P	13.88	39.04
106 (Cd)	11785.56	P	452.90	3.84
107 Ag	634153.31	P	23300.00	3.67
108 (Cd)	7984.44	P	362.00	4.53
111 Cd	119269.10	P	3835.00	3.22
114 Cd	275623.31	P	9986.00	3.62
115 In	1279353.00	A	37560.00	2.94
118 (In)	132672.20	P	3952.00	2.98
120 Sn	181732.20	P	6694.00	3.68
121 Sb	1542.22	P	54.81	3.55
123 Sb		P		
137 Ba	163731.09	P	4904.00	3.00
203 Tl	331775.50	P	12140.00	3.66
206 Pb	262468.91	P	11820.00	4.50
207 Pb	231447.80	P	11490.00	4.96
208 Pb	1046389.00	P	46970.00	4.49
209 Bi	819259.19	M	58540.00	7.15

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1392275.90	2.15	1384334.90	100.6	80 - 120	
45 Sc	1386474.40	1.60	1350053.50	102.7	80 - 120	
74 Ge	293243.34	1.17	289784.44	101.2	80 - 120	
115 In	1279353.30	2.94	1292141.60	99.0	80 - 120	
209 Bi	819259.19	7.15	786695.88	104.1	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F21100.B\003CALB.D\003CALB.D#

--- :Element Failures --- :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

Calibration Standard QC Report

Data File: C:\ICPCHEM\1\DATA\13F21100.B\007CALS.D\007CALS.D#
Date Acquired: Jun 21 2013 11:44 am
Operator: ICPMS 2 - JG
Sample Name: CAL STD 4
Misc Info: 60-22-446
Vial Number: 2105
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal Update: Jun 21 2013 11:42 am
Sample Type: CalStd
Total Dil Factor: 1.00

QC&ISTD Elements

Element	CPS Mean		SD	RSD(%)
6 Li	1342240.00	A	51780.00	3.86
9 Be	633986.38	A	11370.00	1.79
11 B	482690.81	M	21250.00	4.40
23 Na	127685400.00	A	1029000.00	0.81
24 Mg	79680248.00	A	320100.00	0.40
27 Al	2062202.00	A	49500.00	2.40
28 Si	158551.41	M	42350.00	26.71
39 K	127616700.00	A	1170000.00	0.92
44 Ca	3554860.00	A	101700.00	2.86
45 Sc	1419601.00	A	32070.00	2.26
47 Ti	97206.67	P	3657.00	3.76
51 V	2768661.00	A	26120.00	0.94
52 Cr	2367491.00	A	36050.00	1.52
53 Cr	264905.50	P	4739.00	1.79
55 Mn	2818588.00	A	65570.00	2.33
57 Fe	2947688.00	A	93200.00	3.16
59 Co	2670258.00	A	43600.00	1.63
60 Ni	571946.69	P	18290.00	3.20
63 Cu	1409651.00	A	26120.00	1.85
66 Zn	291517.81	P	5643.00	1.94
74 Ge	290993.31	P	9006.00	3.09
75 As	280929.09	P	6906.00	2.46
77 (As)	15387.78	P	776.70	5.05
78 Se	74217.78	P	2479.00	3.34
82 Se	19316.07	P	291.00	1.51
83 (Se)	190.00	P	35.28	18.57
88 (Ca)	622.22	P	26.94	4.33
89 Y	1387734.00	A	75050.00	5.41
98 Mo	338975.31	P	16300.00	4.81
99 (Mo)	47.78	P	7.70	16.11
106 (Cd)	21554.44	P	752.60	3.49
107 Ag	1250050.00	A	23820.00	1.91
108 (Cd)	15390.00	P	466.20	3.03
111 Cd	226015.20	P	6148.00	2.72
114 Cd	526794.38	P	15920.00	3.02
115 In	1268731.00	A	72460.00	5.71
118 (In)	274501.09	P	9956.00	3.63
120 Sn	373100.00	P	15980.00	4.28
121 Sb	266998.91	P	10870.00	4.07
123 Sb		P		
137 Ba	319073.31	P	9132.00	2.86
203 Tl	663243.31	P	20750.00	3.13
206 Pb	525662.19	P	20710.00	3.94
207 Pb	458588.91	P	16570.00	3.61
208 Pb	2146784.00	A	65710.00	3.06
209 Bi	830068.69	M	55260.00	6.66

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1342239.80	3.86	1384334.90	97.0	80 - 120	
45 Sc	1419600.60	2.26	1350053.50	105.2	80 - 120	
74 Ge	290993.34	3.09	289784.44	100.4	80 - 120	
115 In	1268730.90	5.71	1292141.60	98.2	80 - 120	
209 Bi	830068.69	6.66	786695.88	105.5	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F21100.B\003CALB.D\003CALB.D#

--- :Element Failures --- :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

Blank QC Report

Data File: C:\ICPCHEM\1\DATA\13F21100.B\008BLNK.D\008BLNK.D#
Date Acquired: Jun 21 2013 11:48 am
Acq. Method: 6020G.M
Operator: ICPMS 2 - JG
Sample Name: Blank
Misc Info: Blank
Vial Number: 1
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal. Update: Jun 21 2013 11:46 am
Sample Type: Blank
Dilution Factor: 1.00

QC Elements

Element	Corr. Conc.		RSD(%)	Raw Conc.	High Limit	Flag
9 Be	0.4348	ug/l	9.84	0.4348	4.00	
11 B	2.427	ug/l	2.22	2.427	15.00	
23 Na	-5.257	ug/l	28.63	-5.257	40.00	
24 Mg	-14.26	ug/l	16.19	-14.26	50.00	
27 Al	-0.8822	ug/l	4.20	-0.8822	15.00	
28 Si	----	ug/l	--------	----	10.00	
39 K	-9.004	ug/l	51.89	-9.004	40.00	
44 Ca	-2.154	ug/l	90.48	-2.154	50.00	
47 Ti	-0.2976	ug/l	21.20	-0.2976	20.00	
51 V	-1.373	ug/l	3.81	-1.373	5.00	
52 Cr	-1.427	ug/l	2.48	-1.427	5.00	
53 Cr	-1.107	ug/l	4.61	-1.107	---	
55 Mn	-1.311	ug/l	3.73	-1.311	5.00	
57 Fe	17.71	ug/l	8.68	17.71	50.00	
59 Co	-1.265	ug/l	3.94	-1.265	5.00	
60 Ni	-1.309	ug/l	7.16	-1.309	5.00	
63 Cu	-0.7986	ug/l	5.60	-0.7986	10.00	
66 Zn	-1.366	ug/l	3.01	-1.366	20.00	
75 As	0.1174	ug/l	53.54	0.1174	5.00	
77 (As)	0.8623	ug/l	20.87	0.8623	1.00	
78 Se	-2.121	ug/l	204.05	-2.121	1.00	
82 Se	0.9999	ug/l	21.75	0.9999	5.00	
83 (Se)	108.3	ug/l	236.84	108.3	1.00	
88 (Ca)	-14.84	ug/l	69.47	-14.84	1.00	
89 Y	----	ug/l	--------	----	1.00	
98 Mo	2.208	ug/l	4.69	2.208	5.00	
99 (Mo)	----	ug/l	--------	----	1.00	
106 (Cd)	0.3763	ug/l	62.18	0.3763	1.00	
107 Ag	0.4226	ug/l	10.58	0.4226	5.00	
108 (Cd)	-0.03149	ug/l	189.04	-0.03149	1.00	
111 Cd	-0.343	ug/l	24.26	-0.343	5.00	
114 Cd	-0.2185	ug/l	17.55	-0.2185	5.00	
118 (In)	----	ug/l	--------	----	1.00	
120 Sn	2.879	ug/l	8.25	2.879	10.00	
121 Sb	4.286	ug/l	5.50	4.286	10.00	
137 Ba	0.0151	ug/l	212.65	0.0151	10.00	
203 Tl	0.08339	ug/l	45.59	0.08339	5.00	
206 Pb	0.07657	ug/l	36.20	0.07657	1.00	
207 Pb	-0.063	ug/l	78.30	-0.063	1.00	
208 Pb	0.4823	ug/l	6.57	0.4823	5.00	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1430145.50	2.42	1384334.90	103.3	80 - 120	
45 Sc	1373806.40	2.66	1350053.50	101.8	80 - 120	
74 Ge	288714.44	3.17	289784.44	99.6	80 - 120	
115 In	1263837.50	4.91	1292141.60	97.8	80 - 120	
209 Bi	800357.06	7.69	786695.88	101.7	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F21100.B\003CALB.D\003CALB.D#

0 :Element Failures 15 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Nnumber of ISTD Failures Allowed

QC Results:
Analytes: Pass
ISTD: Pass

Blank QC Report

Data File: C:\ICPCHEM\1\DATA\13F21100.B\009BLNK.D\009BLNK.D#
Date Acquired: Jun 21 2013 11:51 am
Acq. Method: 6020G.M
Operator: ICPMS 2 - JG
Sample Name: Blank
Misc Info: Blank
Vial Number: 1
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal. Update: Jun 21 2013 11:46 am
Sample Type: Blank
Dilution Factor: 1.00

QC Elements

Element	Corr. Conc.		RSD(%)	Raw Conc.	High Limit	Flag
9 Be	0.368	ug/l	5.08	0.368	4.00	
11 B	1.028	ug/l	7.17	1.028	15.00	
23 Na	-10	ug/l	3.67	-10	40.00	
24 Mg	-18.21	ug/l	1.35	-18.21	50.00	
27 Al	-1.007	ug/l	2.17	-1.007	15.00	
28 Si	----	ug/l	--------	----	10.00	
39 K	-16.26	ug/l	7.80	-16.26	40.00	
44 Ca	-5.515	ug/l	14.03	-5.515	50.00	
47 Ti	-0.5481	ug/l	5.63	-0.5481	20.00	
51 V	-1.477	ug/l	0.88	-1.477	5.00	
52 Cr	-1.501	ug/l	0.98	-1.501	5.00	
53 Cr	-1.168	ug/l	2.08	-1.168	---	
55 Mn	-1.389	ug/l	0.71	-1.389	5.00	
57 Fe	2.983	ug/l	60.07	2.983	50.00	
59 Co	-1.352	ug/l	0.50	-1.352	5.00	
60 Ni	-1.422	ug/l	1.74	-1.422	5.00	
63 Cu	-0.8914	ug/l	0.64	-0.8914	10.00	
66 Zn	-1.546	ug/l	0.87	-1.546	20.00	
75 As	-0.3596	ug/l	20.57	-0.3596	5.00	
77 (As)	-0.2324	ug/l	46.95	-0.2324	1.00	
78 Se	-2.404	ug/l	272.80	-2.404	1.00	
82 Se	0.1372	ug/l	336.66	0.1372	5.00	
83 (Se)	493.8	ug/l	115.71	493.8	1.00	
88 (Ca)	-20.13	ug/l	40.35	-20.13	1.00	
89 Y	----	ug/l	--------	----	1.00	
98 Mo	0.6255	ug/l	18.35	0.6255	5.00	
99 (Mo)	----	ug/l	--------	----	1.00	
106 (Cd)	-0.1505	ug/l	70.30	-0.1505	1.00	
107 Ag	0.3217	ug/l	2.77	0.3217	5.00	
108 (Cd)	-0.1657	ug/l	25.12	-0.1657	1.00	
111 Cd	-0.4767	ug/l	3.19	-0.4767	5.00	
114 Cd	-0.3441	ug/l	1.47	-0.3441	5.00	
118 (In)	----	ug/l	--------	----	1.00	
120 Sn	0.9527	ug/l	22.68	0.9527	10.00	
121 Sb	2.698	ug/l	10.58	2.698	10.00	
137 Ba	-0.06704	ug/l	18.69	-0.06704	10.00	
203 Tl	-0.08621	ug/l	9.60	-0.08621	5.00	
206 Pb	-0.06704	ug/l	26.89	-0.06704	1.00	
207 Pb	-0.219	ug/l	12.06	-0.219	1.00	
208 Pb	0.337	ug/l	2.76	0.337	5.00	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1402121.10	2.98	1384334.90	101.3	80 - 120	
45 Sc	1383223.10	2.25	1350053.50	102.5	80 - 120	
74 Ge	290506.66	2.61	289784.44	100.2	80 - 120	
115 In	1282045.00	5.55	1292141.60	99.2	80 - 120	
209 Bi	794723.50	9.41	786695.88	101.0	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F21100.B\003CALB.D\003CALB.D#

0 :Element Failures 15 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Nnumber of ISTD Failures Allowed

QC Results:
Analytes: Pass
ISTD: Pass

ICV QC Report

Data File: C:\ICPCHEM\1\DATA\13F21100.B\010ICV1.D\010ICV1.D#
Date Acquired: Jun 21 2013 11:55 am
Acq. Method: 6020G.M
Operator: ICPMS 2 - JG
Sample Name: ICV
Misc Info: 60-22-450
Vial Number: 2106
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal. Update: Jun 21 2013 11:46 am
Sample Type: ICV1
Dilution Factor: 1.00

QC Elements

Element	Conc.		RSD(%)	Expected	QC Range(%)	Flag
9 Be	49.43	ug/l	3.56	50.00	90 - 110	
11 B	49.57	ug/l	5.77	50.00	90 - 110	
23 Na	501.30	ug/l	3.30	500.00	90 - 110	
24 Mg	508.30	ug/l	1.85	500.00	90 - 110	
27 Al	48.37	ug/l	2.88	50.00	90 - 110	
28 Si	--------	ug/l	--------	50.00	90 - 110	
39 K	509.50	ug/l	3.67	500.00	90 - 110	
44 Ca	488.60	ug/l	4.45	500.00	90 - 110	
47 Ti	25.77	ug/l	3.08	25.00	90 - 110	
51 V	53.58	ug/l	4.00	50.00	90 - 110	
52 Cr	51.36	ug/l	6.97	50.00	90 - 110	
53 Cr	52.51	ug/l	4.62	---	##### - #####	
55 Mn	53.21	ug/l	3.47	50.00	90 - 110	
57 Fe	506.10	ug/l	4.48	500.00	90 - 110	
59 Co	50.01	ug/l	7.47	50.00	90 - 110	
60 Ni	53.39	ug/l	4.18	50.00	90 - 110	
63 Cu	50.39	ug/l	3.91	50.00	90 - 110	
66 Zn	52.70	ug/l	3.49	50.00	90 - 110	
75 As	51.67	ug/l	5.72	50.00	90 - 110	
77 (As)	50.05	ug/l	5.27	50.00	90 - 110	
78 Se	49.05	ug/l	13.56	50.00	90 - 110	
82 Se	51.93	ug/l	10.03	50.00	90 - 110	
83 (Se)	-47.74	ug/l	542.52	50.00	90 - 110	
88 (Ca)	155.10	ug/l	10.44	50.00	90 - 110	
89 Y	--------	ug/l	--------	50.00	90 - 110	
98 Mo	23.99	ug/l	9.15	25.00	90 - 110	
99 (Mo)	--------	ug/l	--------	---	##### - #####	
106 (Cd)	50.28	ug/l	5.22	50.00	90 - 110	
107 Ag	49.36	ug/l	7.53	50.00	90 - 110	
108 (Cd)	51.90	ug/l	8.00	50.00	90 - 110	
111 Cd	50.12	ug/l	8.01	50.00	90 - 110	
114 Cd	50.50	ug/l	8.32	50.00	90 - 110	
118 (In)	--------	ug/l	--------	50.00	90 - 110	
120 Sn	24.75	ug/l	8.93	25.00	90 - 110	
121 Sb	26.49	ug/l	10.08	25.00	90 - 110	
137 Ba	48.50	ug/l	8.67	50.00	90 - 110	
203 Tl	50.09	ug/l	11.12	50.00	90 - 110	
206 Pb	50.78	ug/l	11.98	50.00	90 - 110	
207 Pb	49.87	ug/l	12.17	50.00	90 - 110	
208 Pb	49.61	ug/l	11.91	50.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1407738.90	1.46	1384334.90	101.7	80 - 120	
45 Sc	1392226.40	0.64	1350053.50	103.1	80 - 120	
74 Ge	296098.88	1.71	289784.44	102.2	80 - 120	
115 In	1293441.60	4.97	1292141.60	100.1	80 - 120	
209 Bi	824468.50	7.82	786695.88	104.8	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F21100.B\003CALB.D\003CALB.D#

0 :Element Failures 10 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:

Analytes: Pass
ISTD: Pass

ICB QC Report

Data File: C:\ICPCHEM\1\DATA\13F21100.B\011_ICB.D\011_ICB.D#
Date Acquired: Jun 21 2013 12:00 pm
Acq. Method: 6020G.M
Operator: ICPMS 2 - JG
Sample Name: ICB
Misc Info: 60-22-473
Vial Number: 5
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal. Update: Jun 21 2013 11:46 am
Sample Type: ICB
Dilution Factor: 1.00

QC Elements

Element	Conc.		RSD(%)	High Limit	Flag
9 Be	0.32	ug/l	3.75	1.00	
11 B	0.62	ug/l	13.19	5.00	
23 Na	-12.97	ug/l	7.97	40.00	
24 Mg	-20.88	ug/l	0.78	40.00	
27 Al	-1.14	ug/l	0.69	5.00	
28 Si	--------	ug/l	--------	10.00	
39 K	-21.71	ug/l	13.96	40.00	
44 Ca	-7.18	ug/l	13.94	40.00	
47 Ti	-0.55	ug/l	1.71	5.00	
51 V	-1.50	ug/l	0.22	2.00	
52 Cr	-1.52	ug/l	0.91	2.00	
53 Cr	-1.21	ug/l	0.65	---	
55 Mn	-1.42	ug/l	0.56	2.00	
57 Fe	-2.52	ug/l	81.80	40.00	
59 Co	-1.39	ug/l	0.59	2.00	
60 Ni	-1.47	ug/l	1.55	2.00	
63 Cu	-1.01	ug/l	1.13	5.00	
66 Zn	-1.54	ug/l	1.18	5.00	
75 As	-0.46	ug/l	14.54	2.00	
77 (As)	-0.40	ug/l	11.96	3.00	
78 Se	-0.51	ug/l	678.03	3.00	
82 Se	0.06	ug/l	637.35	2.00	
83 (Se)	65.94	ug/l	214.59	3.00	
88 (Ca)	-8.35	ug/l	53.16	3.00	
89 Y	--------	ug/l	--------	3.00	
98 Mo	0.65	ug/l	12.21	3.00	
99 (Mo)	--------	ug/l	--------	---	
106 (Cd)	-0.18	ug/l	193.09	3.00	
107 Ag	0.29	ug/l	1.65	2.00	
108 (Cd)	-0.15	ug/l	23.91	3.00	
111 Cd	-0.50	ug/l	7.00	1.00	
114 Cd	-0.38	ug/l	3.41	1.00	
118 (In)	--------	ug/l	--------	3.00	
120 Sn	0.77	ug/l	26.57	5.00	
121 Sb	2.74	ug/l	8.66	3.00	
137 Ba	-0.09	ug/l	29.11	2.00	
203 Tl	-0.07	ug/l	24.44	2.00	
206 Pb	-0.10	ug/l	7.59	3.00	
207 Pb	-0.25	ug/l	3.27	3.00	
208 Pb	0.31	ug/l	0.55	1.00	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1438741.60	3.56	1384334.90	103.9	80 - 120	
45 Sc	1389057.40	2.21	1350053.50	102.9	80 - 120	
74 Ge	293425.53	2.66	289784.44	101.3	80 - 120	
115 In	1293169.90	5.51	1292141.60	100.1	80 - 120	
209 Bi	827835.06	7.66	786695.88	105.2	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F21100.B\003CALB.D\003CALB.D#

0 :Element Failures 0 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Nnumber of ISTD Failures Allowed

Data Results:

Analytes: Pass
ISTD: Pass

ICS-A QC Report

Data File: C:\ICPCHEM\1\DATA\13F21100.B\012ICSA.D\012ICSA.D#
Date Acquired: Jun 21 2013 12:04 pm
Acq. Method: 6020G.M
Operator: ICPMS 2 - JG
Sample Name: ICS A
Misc Info: 60-22-483
Vial Number: 1207
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal. Update: Jun 21 2013 11:46 am
Sample Type: ICS-A
Dilution Factor: 1.00

QC Elements

Element	Conc.		RSD(%)	High Limit	Flag
9 Be	0.31	ug/l	1.28	10.00	
11 B	2.31	ug/l	7.50	10.00	
23 Na	82190.00	ug/l	1.21	1.20	
24 Mg	81320.00	ug/l	1.75	1.20	
27 Al	82960.00	ug/l	1.64	1.20	
28 Si	--------	ug/l	--------	---	
39 K	83650.00	ug/l	1.92	1.20	
44 Ca	86620.00	ug/l	1.38	1.20	
47 Ti	1929.00	ug/l	2.09	1.20	
51 V	-1.38	ug/l	0.55	10.00	
52 Cr	-0.48	ug/l	10.61	10.00	
53 Cr	0.99	ug/l	12.47	---	
55 Mn	0.19	ug/l	24.19	10.00	
57 Fe	85220.00	ug/l	3.99	1.20	
59 Co	-0.06	ug/l	57.04	10.00	
60 Ni	0.89	ug/l	5.99	10.00	
63 Cu	1.78	ug/l	9.66	10.00	
66 Zn	2.84	ug/l	2.43	10.00	
75 As	-0.19	ug/l	16.48	10.00	
77 (As)	3.90	ug/l	7.70	10.00	
78 Se	16.42	ug/l	40.52	10.00	
82 Se	0.01	ug/l	3123.20	10.00	
83 (Se)	-117.50	ug/l	143.06	10.00	
88 (Ca)	4049.00	ug/l	4.93	10.00	
89 Y	--------	ug/l	--------	10.00	
98 Mo	2453.00	ug/l	10.58	1.20	Fail
99 (Mo)	--------	ug/l	--------	---	
106 (Cd)	1.49	ug/l	30.96	10.00	
107 Ag	0.41	ug/l	7.30	10.00	
108 (Cd)	23.21	ug/l	10.63	10.00	
111 Cd	0.27	ug/l	83.45	10.00	
114 Cd	1.36	ug/l	14.09	10.00	
118 (In)	--------	ug/l	--------	10.00	
120 Sn	1.72	ug/l	0.78	10.00	
121 Sb	3.23	ug/l	9.54	10.00	
137 Ba	8.06	ug/l	10.64	10.00	
203 Tl	0.01	ug/l	477.60	10.00	
206 Pb	0.30	ug/l	7.95	10.00	
207 Pb	0.16	ug/l	26.07	10.00	
208 Pb	0.69	ug/l	4.52	10.00	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1272879.60	2.99	1384334.90	91.9	60 - 120	
45 Sc	1541807.60	0.40	1350053.50	114.2	60 - 120	
74 Ge	261158.88	1.99	289784.44	90.1	60 - 120	
115 In	1095241.10	6.10	1292141.60	84.8	60 - 120	
209 Bi	727215.56	5.06	786695.88	92.4	60 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F21100.B\003CALB.D\003CALB.D#

1 :Element Failures 0 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Nnumber of ISTD Failures Allowed

Data Results:

Analytes: Fail
ISTD: Pass

ICS-AB QC Report

Data File: C:\ICPCHEM\1\DATA\13F21100.B\013ICSB.D\013ICSB.D#
Date Acquired: Jun 21 2013 12:08 pm
Acq. Method: 6020G.M
Operator: ICPMS 2 - JG
Sample Name: ICS AB
Misc Info: 60-22-484
Vial Number: 1307
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal. Update: Jun 21 2013 11:46 am
Sample Type: ICS-AB
Dilution Factor: 1.00

QC Elements

Element	Conc.		RSD(%)	Expected	QC Range(%)	Flag
9 Be	0.29	ug/l	2.91	0.00	0 - 0	
11 B	1.88	ug/l	7.41	0.00	0 - 0	
23 Na	87550.00	ug/l	1.65	#########	80 - 120	
24 Mg	90870.00	ug/l	1.19	#########	80 - 120	
27 Al	88640.00	ug/l	2.36	#########	80 - 120	
28 Si	--------	ug/l	--------	---	##### - #####	
39 K	89980.00	ug/l	2.59	#########	80 - 120	
44 Ca	92530.00	ug/l	4.13	#########	80 - 120	
47 Ti	2031.00	ug/l	4.80	2000.00	80 - 120	
51 V	35.78	ug/l	3.67	40.00	80 - 120	
52 Cr	17.54	ug/l	4.90	20.00	80 - 120	
53 Cr	20.02	ug/l	5.48	---	##### - #####	
55 Mn	18.61	ug/l	3.98	20.00	80 - 120	
57 Fe	90000.00	ug/l	3.67	#########	80 - 120	
59 Co	34.53	ug/l	4.78	40.00	80 - 120	
60 Ni	36.56	ug/l	4.39	40.00	80 - 120	
63 Cu	19.28	ug/l	5.64	20.00	80 - 120	
66 Zn	40.02	ug/l	4.77	20.00	80 - 120	Fail
75 As	20.61	ug/l	3.57	20.00	80 - 120	
77 (As)	23.51	ug/l	3.89	20.00	80 - 120	
78 Se	44.72	ug/l	9.21	20.00	80 - 120	
82 Se	19.32	ug/l	3.00	20.00	80 - 120	
83 (Se)	-1074.00	ug/l	48.77	20.00	80 - 120	
88 (Ca)	6221.00	ug/l	2.37	20.00	80 - 120	
89 Y	--------	ug/l	--------	---	80 - 120	
98 Mo	2547.00	ug/l	5.19	2000.00	80 - 120	Fail
99 (Mo)	--------	ug/l	--------	---	##### - #####	
106 (Cd)	24.47	ug/l	3.54	10.00	80 - 120	
107 Ag	21.04	ug/l	5.19	20.00	80 - 120	
108 (Cd)	54.29	ug/l	6.88	10.00	80 - 120	
111 Cd	10.32	ug/l	5.68	10.00	80 - 120	
114 Cd	11.88	ug/l	5.79	10.00	80 - 120	
118 (In)	--------	ug/l	--------	0.00	80 - 120	
120 Sn	0.92	ug/l	4.84	0.00	80 - 120	
121 Sb	4.21	ug/l	4.65	0.00	0 - 0	
137 Ba	9.96	ug/l	6.58	0.00	0 - 0	
203 Tl	0.02	ug/l	133.32	0.00	0 - 0	
206 Pb	1.56	ug/l	12.25	0.00	0 - 0	
207 Pb	1.33	ug/l	5.73	0.00	0 - 0	
208 Pb	1.88	ug/l	5.95	0.00	0 - 0	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1270503.00	0.95	1384334.90	91.8	60 - 120	
45 Sc	1444932.10	1.55	1350053.50	107.0	60 - 120	
74 Ge	263015.53	1.32	289784.44	90.8	60 - 120	
115 In	1055249.00	3.15	1292141.60	81.7	60 - 120	
209 Bi	704008.88	5.55	786695.88	89.5	60 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F21100.B\003CALB.D\003CALB.D#

2 :Element Failures 0 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:

Analytes: Fail
ISTD: Pass

ICS-A QC Report

Data File: C:\ICPCHEM\1\DATA\13F21100.B\016ICSA.D\016ICSA.D#
Date Acquired: Jun 21 2013 12:21 pm
Acq. Method: 6020G.M
Operator: ICPMS 2 - JG
Sample Name: ICS A
Misc Info: 60-22-486
Vial Number: 1207
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal. Update: Jun 21 2013 11:46 am
Sample Type: ICS-A
Dilution Factor: 1.00

QC Elements

Element	Conc.		RSD(%)	High Limit	Flag
9 Be	0.29	ug/l	0.86	10.00	
11 B	1.70	ug/l	2.87	10.00	
23 Na	87700.00	ug/l	1.57	1.20	
24 Mg	86950.00	ug/l	1.50	1.20	
27 Al	88440.00	ug/l	1.91	1.20	
28 Si	--------	ug/l	--------	---	
39 K	89170.00	ug/l	1.50	1.20	
44 Ca	91990.00	ug/l	1.98	1.20	
47 Ti	2056.00	ug/l	3.58	1.20	
51 V	-1.36	ug/l	1.81	10.00	
52 Cr	-0.36	ug/l	17.12	10.00	
53 Cr	1.55	ug/l	6.88	---	
55 Mn	0.14	ug/l	46.86	10.00	
57 Fe	90470.00	ug/l	3.53	1.20	
59 Co	0.04	ug/l	184.94	10.00	
60 Ni	0.85	ug/l	16.16	10.00	
63 Cu	1.81	ug/l	10.44	10.00	
66 Zn	1.46	ug/l	1.58	10.00	
75 As	-0.19	ug/l	22.00	10.00	
77 (As)	4.03	ug/l	24.88	10.00	
78 Se	25.39	ug/l	33.59	10.00	
82 Se	0.26	ug/l	215.33	10.00	
83 (Se)	-138.00	ug/l	440.22	10.00	
88 (Ca)	3417.00	ug/l	5.74	10.00	
89 Y	--------	ug/l	--------	10.00	
98 Mo	2340.00	ug/l	8.56	1.20	
99 (Mo)	--------	ug/l	--------	---	
106 (Cd)	1.19	ug/l	52.44	10.00	
107 Ag	0.35	ug/l	5.26	10.00	
108 (Cd)	21.33	ug/l	11.30	10.00	
111 Cd	0.26	ug/l	9.58	10.00	
114 Cd	1.26	ug/l	12.38	10.00	
118 (In)	--------	ug/l	--------	10.00	
120 Sn	0.00	ug/l	973.69	10.00	
121 Sb	1.65	ug/l	10.80	10.00	
137 Ba	7.72	ug/l	11.50	10.00	
203 Tl	-0.16	ug/l	4.50	10.00	
206 Pb	0.12	ug/l	28.72	10.00	
207 Pb	0.00	ug/l	745.37	10.00	
208 Pb	0.53	ug/l	6.20	10.00	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1304862.00	1.38	1384334.90	94.3	60 - 120	
45 Sc	1420492.60	0.75	1350053.50	105.2	60 - 120	
74 Ge	273591.13	2.74	289784.44	94.4	60 - 120	
115 In	1125115.90	6.47	1292141.60	87.1	60 - 120	
209 Bi	746044.44	5.41	786695.88	94.8	60 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F21100.B\003CALB.D\003CALB.D#

0 :Element Failures 0 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Nnumber of ISTD Failures Allowed

Data Results:

Analytes: Pass
ISTD: Pass

ICS-AB QC Report

Data File: C:\ICPCHEM\1\DATA\13F21100.B\017ICSB.D\017ICSB.D#
Date Acquired: Jun 21 2013 12:26 pm
Acq. Method: 6020G.M
Operator: ICPMS 2 - JG
Sample Name: ICS AB
Misc Info: 60-22-487
Vial Number: 1307
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal. Update: Jun 21 2013 11:46 am
Sample Type: ICS-AB
Dilution Factor: 1.00

QC Elements

Element	Conc.		RSD(%)	Expected	QC Range(%)	Flag
9 Be	0.28	ug/l	0.33	0.00	0 - 0	
11 B	1.38	ug/l	5.78	0.00	0 - 0	
23 Na	90620.00	ug/l	2.92	#########	80 - 120	
24 Mg	93900.00	ug/l	2.78	#########	80 - 120	
27 Al	91840.00	ug/l	4.12	#########	80 - 120	
28 Si	--------	ug/l	--------	---	##### - #####	
39 K	91840.00	ug/l	3.87	#########	80 - 120	
44 Ca	93870.00	ug/l	4.00	#########	80 - 120	
47 Ti	2090.00	ug/l	4.44	2000.00	80 - 120	
51 V	36.58	ug/l	4.58	40.00	80 - 120	
52 Cr	18.08	ug/l	6.19	20.00	80 - 120	
53 Cr	21.11	ug/l	6.42	---	##### - #####	
55 Mn	18.57	ug/l	4.91	20.00	80 - 120	
57 Fe	92190.00	ug/l	3.89	#########	80 - 120	
59 Co	35.49	ug/l	5.14	40.00	80 - 120	
60 Ni	37.08	ug/l	4.72	40.00	80 - 120	
63 Cu	19.09	ug/l	4.48	20.00	80 - 120	
66 Zn	18.58	ug/l	5.04	20.00	80 - 120	
75 As	19.26	ug/l	5.49	20.00	80 - 120	
77 (As)	23.64	ug/l	2.98	20.00	80 - 120	
78 Se	50.80	ug/l	12.41	20.00	80 - 120	
82 Se	18.00	ug/l	8.81	20.00	80 - 120	
83 (Se)	-581.10	ug/l	106.14	20.00	80 - 120	
88 (Ca)	3477.00	ug/l	7.61	20.00	80 - 120	
89 Y	--------	ug/l	--------	---	80 - 120	
98 Mo	2527.00	ug/l	6.18	2000.00	80 - 120	Fail
99 (Mo)	--------	ug/l	--------	---	##### - #####	
106 (Cd)	26.37	ug/l	4.76	10.00	80 - 120	
107 Ag	20.85	ug/l	5.19	20.00	80 - 120	
108 (Cd)	53.20	ug/l	4.47	10.00	80 - 120	
111 Cd	10.44	ug/l	7.78	10.00	80 - 120	
114 Cd	11.72	ug/l	4.66	10.00	80 - 120	
118 (In)	--------	ug/l	--------	0.00	80 - 120	
120 Sn	-0.08	ug/l	22.60	0.00	80 - 120	
121 Sb	2.40	ug/l	6.33	0.00	0 - 0	
137 Ba	7.76	ug/l	5.60	0.00	0 - 0	
203 Tl	-0.04	ug/l	79.21	0.00	0 - 0	
206 Pb	0.24	ug/l	21.79	0.00	0 - 0	
207 Pb	0.11	ug/l	21.89	0.00	0 - 0	
208 Pb	0.65	ug/l	4.37	0.00	0 - 0	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1278417.50	2.99	1384334.90	92.3	60 - 120	
45 Sc	1385410.80	2.39	1350053.50	102.6	60 - 120	
74 Ge	266937.78	2.11	289784.44	92.1	60 - 120	
115 In	1056415.80	3.29	1292141.60	81.8	60 - 120	
209 Bi	714912.25	5.93	786695.88	90.9	60 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F21100.B\003CALB.D\003CALB.D#

1 :Element Failures 0 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:

Analytes: Fail
ISTD: Pass

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\13F21100.B\018SMPL.D\018SMPL.D#
Date Acquired: Jun 21 2013 12:30 pm
Acq. Method: 6020G.M
Operator: ICPMS 2 - JG
Sample Name: blk
Misc Info: M_ICPMS_W
Vial Number: 1
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal. Update: Jun 21 2013 11:46 am
Sample Type: Sample
Dilution Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

QC Elements

Element	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	0.28	0.28	ug/l	0.50	13000.00	
11 B	-0.28	-0.28	ug/l	2.57	6500.00	
23 Na	138.60	138.60	ug/l	21.70	130000.00	
24 Mg	77.17	77.17	ug/l	35.62	130000.00	
27 Al	92.99	92.99	ug/l	25.82	130000.00	
28 Si	----	--------	ug/l	--------	13000.00	
39 K	134.50	134.50	ug/l	20.60	130000.00	
44 Ca	81.16	81.16	ug/l	27.46	130000.00	
47 Ti	5.78	5.78	ug/l	8.73	13000.00	
51 V	-1.49	-1.49	ug/l	1.66	13000.00	
52 Cr	-1.51	-1.51	ug/l	0.64	13000.00	
53 Cr	-1.11	-1.11	ug/l	4.00	#VALUE!	
55 Mn	-1.40	-1.40	ug/l	0.23	13000.00	
57 Fe	135.60	135.60	ug/l	15.82	130000.00	
59 Co	-1.39	-1.39	ug/l	0.38	13000.00	
60 Ni	-1.46	-1.46	ug/l	0.63	13000.00	
63 Cu	-0.62	-0.62	ug/l	2.91	13000.00	
66 Zn	-1.57	-1.57	ug/l	0.74	13000.00	
75 As	-0.58	-0.58	ug/l	14.62	13000.00	
77 (As)	-0.46	-0.46	ug/l	13.83	13000.00	
78 Se	14.44	14.44	ug/l	34.87	13000.00	
82 Se	-0.22	-0.22	ug/l	244.81	13000.00	
83 (Se)	59.71	59.71	ug/l	1158.30	13000.00	
88 (Ca)	-12.09	-12.09	ug/l	6.00	13000.00	
89 Y	----	--------	ug/l	--------	13000.00	
98 Mo	15.63	15.63	ug/l	3.68	13000.00	
99 (Mo)	----	--------	ug/l	--------	#VALUE!	
106 (Cd)	-0.37	-0.37	ug/l	109.78	13000.00	
107 Ag	0.28	0.28	ug/l	0.52	1300.00	
108 (Cd)	-0.05	-0.05	ug/l	32.93	13000.00	
111 Cd	-0.53	-0.53	ug/l	6.64	13000.00	
114 Cd	-0.44	-0.44	ug/l	0.34	1300.00	
118 (In)	----	--------	ug/l	--------	13000.00	
120 Sn	-0.68	-0.68	ug/l	6.01	13000.00	
121 Sb	0.40	0.40	ug/l	11.45	13000.00	
137 Ba	-0.13	-0.13	ug/l	5.24	13000.00	
203 Tl	-0.18	-0.18	ug/l	2.00	13000.00	
206 Pb	-0.16	-0.16	ug/l	4.38	13000.00	
207 Pb	-0.30	-0.30	ug/l	4.68	13000.00	
208 Pb	0.25	0.25	ug/l	2.76	13000.00	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1514904.50	3.88	1384334.90	109.4	60 - 120	
45 Sc	1378852.10	3.36	1350053.50	102.1	60 - 120	
74 Ge	304173.34	2.77	289784.44	105.0	60 - 120	
115 In	1262579.50	3.93	1292141.60	97.7	60 - 120	
209 Bi	820049.94	6.01	786695.88	104.2	60 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F21100.B\003CALB.D\003CALB.D#

0 :Element Failures 0 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCV QC Report

Data File: C:\ICPCHEM\1\DATA\13F21100.B\019CCV1.D\019CCV1.D#
Date Acquired: Jun 21 2013 12:34 pm
Operator: ICPMS 2 - JG
Sample Name: CCV1
Misc Info: 60-22-451
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal Update: Jun 21 2013 11:46 am
Sample Type: CCV1
Total Dil Factor: 1.00

QC Elements

Element	Conc.		RSD(%)	Expected	QC Range(%)	Flag
9 Be	96.80	ug/l	7.16	100.00	90 - 110	
11 B	94.32	ug/l	8.15	100.00	90 - 110	
23 Na	1124.00	ug/l	4.56	1000.00	90 - 110	Fail
24 Mg	1097.00	ug/l	4.36	1000.00	90 - 110	
27 Al	146.40	ug/l	10.31	100.00	90 - 110	Fail
28 Si	--------	ug/l	--------	100.00	90 - 110	
39 K	1120.00	ug/l	3.32	1000.00	90 - 110	Fail
44 Ca	1041.00	ug/l	3.83	1000.00	90 - 110	
47 Ti	55.69	ug/l	6.39	50.00	90 - 110	Fail
51 V	107.60	ug/l	5.28	100.00	90 - 110	
52 Cr	106.50	ug/l	5.56	100.00	90 - 110	
53 Cr	106.80	ug/l	6.43	---	##### - #####	
55 Mn	106.70	ug/l	7.06	100.00	90 - 110	
57 Fe	1090.00	ug/l	5.45	1000.00	90 - 110	
59 Co	105.10	ug/l	5.59	100.00	90 - 110	
60 Ni	108.70	ug/l	6.51	100.00	90 - 110	
63 Cu	104.20	ug/l	4.43	100.00	90 - 110	
66 Zn	108.20	ug/l	7.70	100.00	90 - 110	
75 As	99.14	ug/l	4.89	100.00	90 - 110	
77 (As)	101.10	ug/l	9.31	100.00	90 - 110	
78 Se	106.60	ug/l	11.44	100.00	90 - 110	
82 Se	98.35	ug/l	5.32	100.00	90 - 110	
83 (Se)	415.00	ug/l	42.00	100.00	90 - 110	
88 (Ca)	295.20	ug/l	5.41	100.00	90 - 110	
89 Y	--------	ug/l	--------	100.00	90 - 110	
98 Mo	55.77	ug/l	7.19	50.00	90 - 110	Fail
99 (Mo)	--------	ug/l	--------	---	##### - #####	
106 (Cd)	102.90	ug/l	7.66	100.00	90 - 110	
107 Ag	101.40	ug/l	6.25	100.00	90 - 110	
108 (Cd)	102.50	ug/l	6.95	100.00	90 - 110	
111 Cd	104.10	ug/l	6.73	100.00	90 - 110	
114 Cd	103.70	ug/l	7.03	100.00	90 - 110	
118 (In)	--------	ug/l	--------	100.00	90 - 110	
120 Sn	51.69	ug/l	7.34	50.00	90 - 110	
121 Sb	55.52	ug/l	7.76	50.00	90 - 110	Fail
137 Ba	100.40	ug/l	7.44	100.00	90 - 110	
203 Tl	101.70	ug/l	8.77	100.00	90 - 110	
206 Pb	103.00	ug/l	9.53	100.00	90 - 110	
207 Pb	101.20	ug/l	9.87	100.00	90 - 110	
208 Pb	100.30	ug/l	9.43	100.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1487895.80	3.85	1384334.90	107.5	80 - 120	
45 Sc	1397409.60	3.99	1350053.50	103.5	80 - 120	
74 Ge	309981.13	2.57	289784.44	107.0	80 - 120	
115 In	1289845.90	3.97	1292141.60	99.8	80 - 120	
209 Bi	848734.19	5.24	786695.88	107.9	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F21100.B\003CALB.D\003CALB.D#

6 :Element Failures 40 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCB QC Report

Data File: C:\ICPCHEM\1\DATA\13F21100.B\020_CCB.D\020_CCB.D#
Date Acquired: Jun 21 2013 12:38 pm
Operator: ICPMS 2 - JG
Sample Name: CCB
Misc Info: 60-22-473
Vial Number: 5
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal Update: Jun 21 2013 11:46 am
Sample Type: CCB
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	High Limit	Flag
9 Be	0.36 ug/l	7.13	1.00	
11 B	0.75 ug/l	8.24	5.00	
23 Na	51.85 ug/l	15.48	10.00	Fail
24 Mg	2.29 ug/l	352.01	10.00	
27 Al	21.34 ug/l	39.45	3.00	Fail
28 Si	-------- ug/l	--------	10.00	
39 K	43.54 ug/l	18.72	10.00	Fail
44 Ca	14.46 ug/l	53.36	10.00	Fail
47 Ti	0.89 ug/l	21.38	5.00	
51 V	-1.45 ug/l	1.65	2.00	
52 Cr	-1.48 ug/l	3.05	2.00	
53 Cr	-1.13 ug/l	4.73	#VALUE!	
55 Mn	-1.36 ug/l	3.14	2.00	
57 Fe	31.83 ug/l	35.60	10.00	Fail
59 Co	-1.33 ug/l	2.49	2.00	
60 Ni	-1.41 ug/l	2.31	2.00	
63 Cu	-0.74 ug/l	5.59	5.00	
66 Zn	-1.47 ug/l	3.05	5.00	
75 As	-0.48 ug/l	5.77	2.00	
77 (As)	0.19 ug/l	170.65	3.00	
78 Se	8.54 ug/l	31.91	3.00	
82 Se	0.29 ug/l	144.36	2.00	
83 (Se)	-80.95 ug/l	177.39	3.00	
88 (Ca)	-7.02 ug/l	94.73	3.00	
89 Y	-------- ug/l	--------	#VALUE!	
98 Mo	3.66 ug/l	10.54	3.00	Fail
99 (Mo)	-------- ug/l	--------	#VALUE!	
106 (Cd)	0.15 ug/l	365.01	3.00	
107 Ag	0.36 ug/l	8.53	2.00	
108 (Cd)	-0.04 ug/l	249.41	3.00	
111 Cd	-0.42 ug/l	14.48	1.00	
114 Cd	-0.33 ug/l	10.69	1.00	
118 (In)	-------- ug/l	--------	3.00	
120 Sn	0.77 ug/l	17.83	5.00	
121 Sb	2.28 ug/l	12.18	3.00	
137 Ba	-0.06 ug/l	58.79	2.00	
203 Tl	-0.01 ug/l	255.23	2.00	
206 Pb	-0.04 ug/l	68.88	3.00	
207 Pb	-0.20 ug/l	10.58	3.00	
208 Pb	0.36 ug/l	6.73	1.00	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1500823.80	2.57	1384334.90	108.4	80 - 120	
45 Sc	1409616.90	3.30	1350053.50	104.4	80 - 120	
74 Ge	306515.53	3.33	289784.44	105.8	80 - 120	
115 In	1299797.50	5.01	1292141.60	100.6	80 - 120	
209 Bi	875251.00	3.24	786695.88	111.3	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F21100.B\003CALB.D\003CALB.D#

6 :Element Failures 15 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCV QC Report

Data File: C:\ICPCHEM\1\DATA\13F21100.B\026CCV1.D\026CCV1.D#
Date Acquired: Jun 21 2013 01:01 pm
Operator: ICPMS 2 - JG
Sample Name: CCV1
Misc Info: 60-22-451
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal Update: Jun 21 2013 11:46 am
Sample Type: CCV1
Total Dil Factor: 1.00

QC Elements

Element	Conc.		RSD(%)	Expected	QC Range(%)	Flag
9 Be	96.88	ug/l	3.40	100.00	90 - 110	
11 B	94.83	ug/l	3.82	100.00	90 - 110	
23 Na	1034.00	ug/l	1.80	1000.00	90 - 110	
24 Mg	1011.00	ug/l	1.66	1000.00	90 - 110	
27 Al	101.80	ug/l	3.29	100.00	90 - 110	
28 Si	--------	ug/l	--------	100.00	90 - 110	
39 K	1030.00	ug/l	2.38	1000.00	90 - 110	
44 Ca	972.20	ug/l	3.90	1000.00	90 - 110	
47 Ti	52.00	ug/l	4.20	50.00	90 - 110	
51 V	106.90	ug/l	3.41	100.00	90 - 110	
52 Cr	105.90	ug/l	4.35	100.00	90 - 110	
53 Cr	104.80	ug/l	4.73	---	##### - #####	
55 Mn	104.50	ug/l	3.88	100.00	90 - 110	
57 Fe	995.20	ug/l	4.99	1000.00	90 - 110	
59 Co	101.80	ug/l	2.82	100.00	90 - 110	
60 Ni	105.10	ug/l	4.18	100.00	90 - 110	
63 Cu	99.78	ug/l	4.38	100.00	90 - 110	
66 Zn	105.20	ug/l	4.38	100.00	90 - 110	
75 As	101.40	ug/l	4.60	100.00	90 - 110	
77 (As)	98.48	ug/l	5.38	100.00	90 - 110	
78 Se	107.40	ug/l	10.67	100.00	90 - 110	
82 Se	101.50	ug/l	6.62	100.00	90 - 110	
83 (Se)	257.50	ug/l	72.39	100.00	90 - 110	
88 (Ca)	301.20	ug/l	10.02	100.00	90 - 110	
89 Y	--------	ug/l	--------	100.00	90 - 110	
98 Mo	47.61	ug/l	6.74	50.00	90 - 110	
99 (Mo)	--------	ug/l	--------	---	##### - #####	
106 (Cd)	100.90	ug/l	6.79	100.00	90 - 110	
107 Ag	98.41	ug/l	5.62	100.00	90 - 110	
108 (Cd)	101.10	ug/l	3.85	100.00	90 - 110	
111 Cd	102.00	ug/l	6.31	100.00	90 - 110	
114 Cd	101.20	ug/l	6.06	100.00	90 - 110	
118 (In)	--------	ug/l	--------	100.00	90 - 110	
120 Sn	47.56	ug/l	6.04	50.00	90 - 110	
121 Sb	53.84	ug/l	6.66	50.00	90 - 110	
137 Ba	97.54	ug/l	5.98	100.00	90 - 110	
203 Tl	99.55	ug/l	9.97	100.00	90 - 110	
206 Pb	100.80	ug/l	9.65	100.00	90 - 110	
207 Pb	98.77	ug/l	9.74	100.00	90 - 110	
208 Pb	98.14	ug/l	9.76	100.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1489960.60	2.40	1384334.90	107.6	80 - 120	
45 Sc	1438281.10	1.60	1350053.50	106.5	80 - 120	
74 Ge	306945.53	1.18	289784.44	105.9	80 - 120	
115 In	1322121.80	2.89	1292141.60	102.3	80 - 120	
209 Bi	851846.94	5.91	786695.88	108.3	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F21100.B\003CALB.D\003CALB.D#

0 :Element Failures 40 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCB QC Report

Data File: C:\ICPCHEM\1\DATA\13F21100.B\027_CCB.D\027_CCB.D#
Date Acquired: Jun 21 2013 01:05 pm
Operator: ICPMS 2 - JG
Sample Name: CCB
Misc Info: 60-22-473
Vial Number: 5
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal Update: Jun 21 2013 11:46 am
Sample Type: CCB
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	High Limit	Flag
9 Be	0.35 ug/l	9.33	1.00	
11 B	0.69 ug/l	12.73	5.00	
23 Na	8.56 ug/l	6.80	10.00	
24 Mg	-20.81 ug/l	2.46	10.00	
27 Al	-0.88 ug/l	18.72	3.00	
28 Si	-------- ug/l	--------	10.00	
39 K	-1.96 ug/l	240.07	10.00	
44 Ca	-6.90 ug/l	14.21	10.00	
47 Ti	-0.18 ug/l	32.27	5.00	
51 V	-1.46 ug/l	2.92	2.00	
52 Cr	-1.50 ug/l	2.16	2.00	
53 Cr	-1.18 ug/l	1.73	#VALUE!	
55 Mn	-1.39 ug/l	3.52	2.00	
57 Fe	-2.55 ug/l	29.22	10.00	
59 Co	-1.36 ug/l	2.86	2.00	
60 Ni	-1.43 ug/l	3.20	2.00	
63 Cu	-0.92 ug/l	4.43	5.00	
66 Zn	-1.48 ug/l	3.53	5.00	
75 As	-0.33 ug/l	11.82	2.00	
77 (As)	-0.24 ug/l	70.77	3.00	
78 Se	5.64 ug/l	81.46	3.00	
82 Se	0.65 ug/l	79.33	2.00	
83 (Se)	359.90 ug/l	123.20	3.00	
88 (Ca)	-8.38 ug/l	90.87	3.00	
89 Y	-------- ug/l	--------	#VALUE!	
98 Mo	1.36 ug/l	8.70	3.00	
99 (Mo)	-------- ug/l	--------	#VALUE!	
106 (Cd)	-0.45 ug/l	68.30	3.00	
107 Ag	0.33 ug/l	11.31	2.00	
108 (Cd)	-0.06 ug/l	184.20	3.00	
111 Cd	-0.49 ug/l	9.62	1.00	
114 Cd	-0.35 ug/l	8.80	1.00	
118 (In)	-------- ug/l	--------	3.00	
120 Sn	0.81 ug/l	8.71	5.00	
121 Sb	2.31 ug/l	4.87	3.00	
137 Ba	-0.08 ug/l	17.43	2.00	
203 Tl	-0.02 ug/l	200.60	2.00	
206 Pb	-0.05 ug/l	110.53	3.00	
207 Pb	-0.20 ug/l	24.39	3.00	
208 Pb	0.35 ug/l	12.26	1.00	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1496702.10	2.29	1384334.90	108.1	80 - 120	
45 Sc	1461228.30	2.37	1350053.50	108.2	80 - 120	
74 Ge	304098.88	2.46	289784.44	104.9	80 - 120	
115 In	1324642.00	3.74	1292141.60	102.5	80 - 120	
209 Bi	832343.81	7.95	786695.88	105.8	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F21100.B\003CALB.D\003CALB.D#

0 :Element Failures 15 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCV QC Report

Data File: C:\ICPCHEM\1\DATA\13F21100.B\038CCV1.D\038CCV1.D#
Date Acquired: Jun 21 2013 01:49 pm
Operator: ICPMS 2 - JG
Sample Name: CCV1
Misc Info: 60-22-451
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal Update: Jun 21 2013 11:46 am
Sample Type: CCV1
Total Dil Factor: 1.00

QC Elements

Element	Conc.		RSD(%)	Expected	QC Range(%)	Flag
9 Be	92.44	ug/l	6.01	100.00	90 - 110	
11 B	91.66	ug/l	7.65	100.00	90 - 110	
23 Na	1034.00	ug/l	3.83	1000.00	90 - 110	
24 Mg	1022.00	ug/l	4.83	1000.00	90 - 110	
27 Al	101.20	ug/l	4.30	100.00	90 - 110	
28 Si	--------	ug/l	--------	100.00	90 - 110	
39 K	1027.00	ug/l	4.96	1000.00	90 - 110	
44 Ca	944.70	ug/l	5.23	1000.00	90 - 110	
47 Ti	49.58	ug/l	5.90	50.00	90 - 110	
51 V	102.70	ug/l	5.16	100.00	90 - 110	
52 Cr	102.70	ug/l	5.81	100.00	90 - 110	
53 Cr	101.90	ug/l	5.85	---	##### - #####	
55 Mn	100.60	ug/l	5.27	100.00	90 - 110	
57 Fe	952.00	ug/l	6.32	1000.00	90 - 110	
59 Co	98.53	ug/l	5.19	100.00	90 - 110	
60 Ni	101.00	ug/l	5.91	100.00	90 - 110	
63 Cu	95.47	ug/l	5.63	100.00	90 - 110	
66 Zn	102.20	ug/l	6.39	100.00	90 - 110	
75 As	98.80	ug/l	6.00	100.00	90 - 110	
77 (As)	98.76	ug/l	5.40	100.00	90 - 110	
78 Se	82.14	ug/l	11.86	100.00	90 - 110	
82 Se	100.90	ug/l	7.14	100.00	90 - 110	
83 (Se)	-137.90	ug/l	244.31	100.00	90 - 110	
88 (Ca)	337.10	ug/l	4.34	100.00	90 - 110	
89 Y	--------	ug/l	--------	100.00	90 - 110	
98 Mo	47.09	ug/l	10.19	50.00	90 - 110	
99 (Mo)	--------	ug/l	--------	---	##### - #####	
106 (Cd)	100.70	ug/l	6.13	100.00	90 - 110	
107 Ag	97.78	ug/l	8.79	100.00	90 - 110	
108 (Cd)	100.70	ug/l	9.14	100.00	90 - 110	
111 Cd	100.40	ug/l	8.22	100.00	90 - 110	
114 Cd	100.00	ug/l	9.06	100.00	90 - 110	
118 (In)	--------	ug/l	--------	100.00	90 - 110	
120 Sn	47.31	ug/l	9.17	50.00	90 - 110	
121 Sb	53.60	ug/l	10.13	50.00	90 - 110	
137 Ba	96.90	ug/l	9.58	100.00	90 - 110	
203 Tl	95.87	ug/l	7.57	100.00	90 - 110	
206 Pb	97.20	ug/l	8.52	100.00	90 - 110	
207 Pb	95.00	ug/l	8.02	100.00	90 - 110	
208 Pb	94.53	ug/l	8.19	100.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1608353.90	4.53	1384334.90	116.2	80 - 120	
45 Sc	1472424.30	3.08	1350053.50	109.1	80 - 120	
74 Ge	310845.53	2.77	289784.44	107.3	80 - 120	
115 In	1334792.60	6.06	1292141.60	103.3	80 - 120	
209 Bi	895652.38	4.21	786695.88	113.8	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F21100.B\003CALB.D\003CALB.D#

0 :Element Failures 40 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCB QC Report

Data File: C:\ICPCHEM\1\DATA\13F21100.B\039_CCB.D\039_CCB.D#
Date Acquired: Jun 21 2013 01:53 pm
Operator: ICPMS 2 - JG
Sample Name: CCB
Misc Info: 60-22-473
Vial Number: 5
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal Update: Jun 21 2013 11:46 am
Sample Type: CCB
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	High Limit	Flag
9 Be	0.37 ug/l	6.80	1.00	
11 B	1.07 ug/l	10.61	5.00	
23 Na	14.86 ug/l	12.02	10.00	Fail
24 Mg	-19.25 ug/l	5.02	10.00	
27 Al	-0.97 ug/l	8.14	3.00	
28 Si	-------- ug/l	--------	10.00	
39 K	9.33 ug/l	38.47	10.00	
44 Ca	-4.75 ug/l	30.49	10.00	
47 Ti	-0.43 ug/l	2.63	5.00	
51 V	-1.45 ug/l	1.21	2.00	
52 Cr	-1.48 ug/l	1.04	2.00	
53 Cr	-0.88 ug/l	4.71	#VALUE!	
55 Mn	-1.34 ug/l	3.17	2.00	
57 Fe	-3.22 ug/l	74.29	10.00	
59 Co	-1.34 ug/l	2.70	2.00	
60 Ni	-1.43 ug/l	2.46	2.00	
63 Cu	-0.95 ug/l	4.43	5.00	
66 Zn	-1.48 ug/l	2.71	5.00	
75 As	-0.53 ug/l	2.17	2.00	
77 (As)	0.34 ug/l	150.70	3.00	
78 Se	-15.15 ug/l	33.48	3.00	
82 Se	0.00 ug/l	3339.80	2.00	
83 (Se)	-178.40 ug/l	171.08	3.00	
88 (Ca)	38.01 ug/l	51.49	3.00	
89 Y	-------- ug/l	--------	#VALUE!	
98 Mo	1.13 ug/l	1.17	3.00	
99 (Mo)	-------- ug/l	--------	#VALUE!	
106 (Cd)	-0.10 ug/l	401.98	3.00	
107 Ag	0.36 ug/l	6.53	2.00	
108 (Cd)	-0.11 ug/l	7.33	3.00	
111 Cd	-0.45 ug/l	5.61	1.00	
114 Cd	-0.35 ug/l	9.01	1.00	
118 (In)	-------- ug/l	--------	3.00	
120 Sn	0.65 ug/l	17.89	5.00	
121 Sb	1.77 ug/l	8.94	3.00	
137 Ba	-0.05 ug/l	99.31	2.00	
203 Tl	-0.01 ug/l	347.06	2.00	
206 Pb	-0.04 ug/l	91.74	3.00	
207 Pb	-0.18 ug/l	17.55	3.00	
208 Pb	0.37 ug/l	8.46	1.00	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1522400.90	1.29	1384334.90	110.0	80 - 120	
45 Sc	1445573.80	3.23	1350053.50	107.1	80 - 120	
74 Ge	304180.00	3.87	289784.44	105.0	80 - 120	
115 In	1325355.90	5.15	1292141.60	102.6	80 - 120	
209 Bi	854217.75	7.64	786695.88	108.6	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F21100.B\003CALB.D\003CALB.D#

1 :Element Failures 15 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCV QC Report

Data File: C:\ICPCHEM\1\DATA\13F21100.B\050CCV1.D\050CCV1.D#
Date Acquired: Jun 21 2013 02:36 pm
Operator: ICPMS 2 - JG
Sample Name: CCV1
Misc Info: 60-22-451
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal Update: Jun 21 2013 11:46 am
Sample Type: CCV1
Total Dil Factor: 1.00

QC Elements

Element	Conc.		RSD(%)	Expected	QC Range(%)	Flag
9 Be	95.17	ug/l	4.83	100.00	90 - 110	
11 B	93.25	ug/l	6.48	100.00	90 - 110	
23 Na	1009.00	ug/l	4.52	1000.00	90 - 110	
24 Mg	993.80	ug/l	5.25	1000.00	90 - 110	
27 Al	99.53	ug/l	3.48	100.00	90 - 110	
28 Si	--------	ug/l	--------	100.00	90 - 110	
39 K	1000.00	ug/l	3.47	1000.00	90 - 110	
44 Ca	943.30	ug/l	5.70	1000.00	90 - 110	
47 Ti	49.79	ug/l	8.12	50.00	90 - 110	
51 V	102.70	ug/l	5.92	100.00	90 - 110	
52 Cr	101.20	ug/l	6.11	100.00	90 - 110	
53 Cr	101.80	ug/l	6.75	---	##### - #####	
55 Mn	101.10	ug/l	5.24	100.00	90 - 110	
57 Fe	956.30	ug/l	6.76	1000.00	90 - 110	
59 Co	98.92	ug/l	5.01	100.00	90 - 110	
60 Ni	100.40	ug/l	6.33	100.00	90 - 110	
63 Cu	96.88	ug/l	8.69	100.00	90 - 110	
66 Zn	101.50	ug/l	6.65	100.00	90 - 110	
75 As	97.83	ug/l	4.75	100.00	90 - 110	
77 (As)	98.45	ug/l	7.03	100.00	90 - 110	
78 Se	82.52	ug/l	9.68	100.00	90 - 110	
82 Se	98.05	ug/l	7.26	100.00	90 - 110	
83 (Se)	-68.45	ug/l	713.95	100.00	90 - 110	
88 (Ca)	354.30	ug/l	11.05	100.00	90 - 110	
89 Y	--------	ug/l	--------	100.00	90 - 110	
98 Mo	46.64	ug/l	7.80	50.00	90 - 110	
99 (Mo)	--------	ug/l	--------	---	##### - #####	
106 (Cd)	98.77	ug/l	7.59	100.00	90 - 110	
107 Ag	97.53	ug/l	6.81	100.00	90 - 110	
108 (Cd)	99.91	ug/l	8.80	100.00	90 - 110	
111 Cd	99.77	ug/l	7.13	100.00	90 - 110	
114 Cd	99.67	ug/l	7.24	100.00	90 - 110	
118 (In)	--------	ug/l	--------	100.00	90 - 110	
120 Sn	48.21	ug/l	7.47	50.00	90 - 110	
121 Sb	53.12	ug/l	7.81	50.00	90 - 110	
137 Ba	96.22	ug/l	7.58	100.00	90 - 110	
203 Tl	98.83	ug/l	9.81	100.00	90 - 110	
206 Pb	100.50	ug/l	9.32	100.00	90 - 110	
207 Pb	98.18	ug/l	10.15	100.00	90 - 110	
208 Pb	97.57	ug/l	9.89	100.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1525571.40	3.54	1384334.90	110.2	80 - 120	
45 Sc	1461468.60	3.65	1350053.50	108.3	80 - 120	
74 Ge	308930.00	2.26	289784.44	106.6	80 - 120	
115 In	1327185.30	4.62	1292141.60	102.7	80 - 120	
209 Bi	857289.13	6.43	786695.88	109.0	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F21100.B\003CALB.D\003CALB.D#

0 :Element Failures 40 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCB QC Report

Data File: C:\ICPCHEM\1\DATA\13F21100.B\051_CCB.D\051_CCB.D#
Date Acquired: Jun 21 2013 02:40 pm
Operator: ICPMS 2 - JG
Sample Name: CCB
Misc Info: 60-22-473
Vial Number: 5
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal Update: Jun 21 2013 11:46 am
Sample Type: CCB
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	High Limit	Flag
9 Be	0.33 ug/l	6.78	1.00	
11 B	0.92 ug/l	2.50	5.00	
23 Na	7.36 ug/l	21.38	10.00	
24 Mg	-20.08 ug/l	3.30	10.00	
27 Al	-0.09 ug/l	1852.80	3.00	
28 Si	-------- ug/l	--------	10.00	
39 K	6.41 ug/l	71.00	10.00	
44 Ca	-6.84 ug/l	17.17	10.00	
47 Ti	-0.46 ug/l	5.44	5.00	
51 V	-1.47 ug/l	2.52	2.00	
52 Cr	-1.52 ug/l	2.40	2.00	
53 Cr	-1.00 ug/l	1.53	#VALUE!	
55 Mn	-1.38 ug/l	2.05	2.00	
57 Fe	-3.82 ug/l	88.52	10.00	
59 Co	-1.37 ug/l	1.37	2.00	
60 Ni	-1.46 ug/l	1.75	2.00	
63 Cu	-0.99 ug/l	2.62	5.00	
66 Zn	-1.55 ug/l	2.18	5.00	
75 As	-0.49 ug/l	15.75	2.00	
77 (As)	0.37 ug/l	35.31	3.00	
78 Se	-12.23 ug/l	51.69	3.00	
82 Se	0.34 ug/l	100.74	2.00	
83 (Se)	-410.40 ug/l	51.73	3.00	
88 (Ca)	17.15 ug/l	56.97	3.00	
89 Y	-------- ug/l	--------	#VALUE!	
98 Mo	1.01 ug/l	6.70	3.00	
99 (Mo)	-------- ug/l	--------	#VALUE!	
106 (Cd)	-0.18 ug/l	228.42	3.00	
107 Ag	0.32 ug/l	5.57	2.00	
108 (Cd)	-0.21 ug/l	11.00	3.00	
111 Cd	-0.49 ug/l	10.60	1.00	
114 Cd	-0.35 ug/l	7.46	1.00	
118 (In)	-------- ug/l	--------	3.00	
120 Sn	1.43 ug/l	11.68	5.00	
121 Sb	1.58 ug/l	5.52	3.00	
137 Ba	-0.07 ug/l	25.29	2.00	
203 Tl	-0.04 ug/l	72.00	2.00	
206 Pb	-0.07 ug/l	28.61	3.00	
207 Pb	-0.22 ug/l	7.00	3.00	
208 Pb	0.33 ug/l	6.19	1.00	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1483939.30	3.48	1384334.90	107.2	80 - 120	
45 Sc	1438240.90	3.32	1350053.50	106.5	80 - 120	
74 Ge	302254.44	3.55	289784.44	104.3	80 - 120	
115 In	1303802.40	4.96	1292141.60	100.9	80 - 120	
209 Bi	826115.25	8.60	786695.88	105.0	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F21100.B\003CALB.D\003CALB.D#

0 :Element Failures 15 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCV QC Report

Data File: C:\ICPCHEM\1\DATA\13F21100.B\062CCV1.D\062CCV1.D#
Date Acquired: Jun 21 2013 03:25 pm
Operator: ICPMS 2 - JG
Sample Name: CCV1
Misc Info: 60-22-451
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal Update: Jun 21 2013 11:46 am
Sample Type: CCV1
Total Dil Factor: 1.00

QC Elements

Element	Conc.		RSD(%)	Expected	QC Range(%)	Flag
9 Be	97.86	ug/l	3.54	100.00	90 - 110	
11 B	95.66	ug/l	5.69	100.00	90 - 110	
23 Na	1083.00	ug/l	2.44	1000.00	90 - 110	
24 Mg	1041.00	ug/l	2.00	1000.00	90 - 110	
27 Al	101.30	ug/l	2.43	100.00	90 - 110	
28 Si	--------	ug/l	--------	100.00	90 - 110	
39 K	1030.00	ug/l	2.65	1000.00	90 - 110	
44 Ca	971.00	ug/l	2.36	1000.00	90 - 110	
47 Ti	49.23	ug/l	3.28	50.00	90 - 110	
51 V	102.30	ug/l	3.46	100.00	90 - 110	
52 Cr	101.00	ug/l	4.48	100.00	90 - 110	
53 Cr	101.90	ug/l	4.70	---	##### - #####	
55 Mn	101.10	ug/l	4.61	100.00	90 - 110	
57 Fe	956.20	ug/l	5.61	1000.00	90 - 110	
59 Co	98.70	ug/l	3.96	100.00	90 - 110	
60 Ni	101.30	ug/l	3.56	100.00	90 - 110	
63 Cu	97.90	ug/l	5.63	100.00	90 - 110	
66 Zn	102.50	ug/l	5.02	100.00	90 - 110	
75 As	98.74	ug/l	5.46	100.00	90 - 110	
77 (As)	100.30	ug/l	6.48	100.00	90 - 110	
78 Se	84.16	ug/l	9.61	100.00	90 - 110	
82 Se	98.41	ug/l	4.35	100.00	90 - 110	
83 (Se)	60.51	ug/l	526.69	100.00	90 - 110	
88 (Ca)	557.90	ug/l	23.05	100.00	90 - 110	
89 Y	--------	ug/l	--------	100.00	90 - 110	
98 Mo	47.64	ug/l	7.15	50.00	90 - 110	
99 (Mo)	--------	ug/l	--------	---	##### - #####	
106 (Cd)	101.90	ug/l	4.49	100.00	90 - 110	
107 Ag	97.65	ug/l	6.44	100.00	90 - 110	
108 (Cd)	103.50	ug/l	7.41	100.00	90 - 110	
111 Cd	100.80	ug/l	6.39	100.00	90 - 110	
114 Cd	100.20	ug/l	6.23	100.00	90 - 110	
118 (In)	--------	ug/l	--------	100.00	90 - 110	
120 Sn	47.27	ug/l	5.90	50.00	90 - 110	
121 Sb	53.03	ug/l	7.60	50.00	90 - 110	
137 Ba	96.90	ug/l	6.49	100.00	90 - 110	
203 Tl	102.00	ug/l	5.32	100.00	90 - 110	
206 Pb	103.80	ug/l	5.57	100.00	90 - 110	
207 Pb	101.90	ug/l	5.24	100.00	90 - 110	
208 Pb	101.00	ug/l	5.65	100.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1501873.30	3.02	1384334.90	108.5	80 - 120	
45 Sc	1444254.50	2.40	1350053.50	107.0	80 - 120	
74 Ge	303003.34	2.22	289784.44	104.6	80 - 120	
115 In	1289837.10	4.04	1292141.60	99.8	80 - 120	
209 Bi	814396.63	1.89	786695.88	103.5	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F21100.B\003CALB.D\003CALB.D#

0 :Element Failures 40 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCB QC Report

Data File: C:\ICPCHEM\1\DATA\13F21100.B\063_CCB.D\063_CCB.D#
Date Acquired: Jun 21 2013 03:28 pm
Operator: ICPMS 2 - JG
Sample Name: CCB
Misc Info: 60-22-473
Vial Number: 5
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal Update: Jun 21 2013 11:46 am
Sample Type: CCB
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	High Limit	Flag
9 Be	0.35 ug/l	8.14	1.00	
11 B	1.36 ug/l	1.96	5.00	
23 Na	41.85 ug/l	11.53	10.00	Fail
24 Mg	-18.75 ug/l	7.75	10.00	
27 Al	-1.13 ug/l	5.50	3.00	
28 Si	-------- ug/l	--------	10.00	
39 K	16.61 ug/l	31.40	10.00	Fail
44 Ca	5.63 ug/l	101.65	10.00	
47 Ti	-0.48 ug/l	7.73	5.00	
51 V	-1.46 ug/l	2.84	2.00	
52 Cr	-1.50 ug/l	3.91	2.00	
53 Cr	-0.86 ug/l	1.50	#VALUE!	
55 Mn	-1.36 ug/l	1.84	2.00	
57 Fe	-2.15 ug/l	52.33	10.00	
59 Co	-1.36 ug/l	2.32	2.00	
60 Ni	-1.43 ug/l	2.27	2.00	
63 Cu	-0.91 ug/l	3.23	5.00	
66 Zn	-1.39 ug/l	2.76	5.00	
75 As	-0.50 ug/l	23.86	2.00	
77 (As)	0.09 ug/l	99.68	3.00	
78 Se	-13.34 ug/l	24.82	3.00	
82 Se	0.08 ug/l	373.45	2.00	
83 (Se)	-384.10 ug/l	88.68	3.00	
88 (Ca)	143.90 ug/l	49.50	3.00	
89 Y	-------- ug/l	--------	#VALUE!	
98 Mo	1.13 ug/l	6.10	3.00	
99 (Mo)	-------- ug/l	--------	#VALUE!	
106 (Cd)	-0.47 ug/l	72.94	3.00	
107 Ag	0.33 ug/l	10.53	2.00	
108 (Cd)	-0.17 ug/l	81.35	3.00	
111 Cd	-0.49 ug/l	8.32	1.00	
114 Cd	-0.36 ug/l	7.14	1.00	
118 (In)	-------- ug/l	--------	3.00	
120 Sn	0.75 ug/l	24.18	5.00	
121 Sb	1.71 ug/l	10.63	3.00	
137 Ba	-0.08 ug/l	44.26	2.00	
203 Tl	0.00 ug/l	22231.00	2.00	
206 Pb	0.14 ug/l	73.24	3.00	
207 Pb	-0.03 ug/l	228.33	3.00	
208 Pb	0.52 ug/l	16.16	1.00	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1529692.40	2.75	1384334.90	110.5	80 - 120	
45 Sc	1439983.00	2.24	1350053.50	106.7	80 - 120	
74 Ge	295643.34	1.85	289784.44	102.0	80 - 120	
115 In	1273941.50	4.31	1292141.60	98.6	80 - 120	
209 Bi	789720.00	2.54	786695.88	100.4	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F21100.B\003CALB.D\003CALB.D#

2 :Element Failures 15 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\13F21100.B\068SMPL.D\068SMPL.D#
Date Acquired: Jun 21 2013 03:48 pm
Acq. Method: 6020G.M
Operator: ICPMS 2 - JG
Sample Name: 13060604-001C
Misc Info: M_ICPMS_W
Vial Number: 2308
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal. Update: Jun 21 2013 11:46 am
Sample Type: Sample
Dilution Factor: 2.00
Autodil Factor: Undiluted
Final Dil Factor: 2.00

QC Elements

Element	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	0.57	0.28	ug/l	0.89	13000.00	
11 B	704.20	352.10	ug/l	3.56	6500.00	
23 Na	59,820.00	29910.00	ug/l	2.87	130000.00	
24 Mg	177,140.00	88570.00	ug/l	3.31	130000.00	
27 Al	26.14	13.07	ug/l	9.97	130000.00	
28 Si	----	--------	ug/l	--------	13000.00	
39 K	7,672.00	3836.00	ug/l	4.54	130000.00	
44 Ca	410,000.00	205000.00	ug/l	4.30	130000.00	>LRS
47 Ti	0.27	0.13	ug/l	74.52	13000.00	
51 V	-2.50	-1.25	ug/l	9.24	13000.00	
52 Cr	-1.27	-0.64	ug/l	3.78	13000.00	
53 Cr	65.26	32.63	ug/l	3.10	#VALUE!	
55 Mn	509.60	254.80	ug/l	3.94	13000.00	
57 Fe	4,134.00	2067.00	ug/l	4.81	130000.00	
59 Co	1.28	0.64	ug/l	13.03	13000.00	
60 Ni	9.12	4.56	ug/l	6.98	13000.00	
63 Cu	0.67	0.33	ug/l	25.03	13000.00	
66 Zn	17.54	8.77	ug/l	7.83	13000.00	
75 As	0.05	0.03	ug/l	1647.80	13000.00	
77 (As)	181.50	90.75	ug/l	2.90	13000.00	
78 Se	-54.88	-27.44	ug/l	13.09	13000.00	
82 Se	0.75	0.37	ug/l	192.17	13000.00	
83 (Se)	-627.80	-313.90	ug/l	125.39	13000.00	
88 (Ca)	17,564,000.00	8782000.00	ug/l	2.50	13000.00	
89 Y	----	--------	ug/l	--------	13000.00	
98 Mo	9.38	4.69	ug/l	6.92	13000.00	
99 (Mo)	----	--------	ug/l	--------	#VALUE!	
106 (Cd)	0.58	0.29	ug/l	104.97	13000.00	
107 Ag	0.65	0.32	ug/l	3.06	1300.00	
108 (Cd)	0.78	0.39	ug/l	40.05	13000.00	
111 Cd	-0.46	-0.23	ug/l	27.25	13000.00	
114 Cd	-0.18	-0.09	ug/l	46.72	1300.00	
118 (In)	----	--------	ug/l	--------	13000.00	
120 Sn	2.61	1.31	ug/l	7.57	13000.00	
121 Sb	2.49	1.25	ug/l	3.38	13000.00	
137 Ba	35.14	17.57	ug/l	5.18	13000.00	
203 Tl	-0.08	-0.04	ug/l	17.50	13000.00	
206 Pb	9.98	4.99	ug/l	11.88	13000.00	
207 Pb	9.12	4.56	ug/l	8.76	13000.00	
208 Pb	10.24	5.12	ug/l	10.38	13000.00	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1681547.10	1.66	1384334.90	121.5	60 - 120	ISFail
45 Sc	1538993.10	3.59	1350053.50	114.0	60 - 120	
74 Ge	269534.44	1.59	289784.44	93.0	60 - 120	
115 In	1092919.60	3.65	1292141.60	84.6	60 - 120	
209 Bi	713017.75	6.82	786695.88	90.6	60 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F21100.B\003CALB.D\003CALB.D#

1 :Element Failures 0 :Max. Number of Failures Allowed
1 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Fail
ISTD: Fail

Blank QC Report

Data File: C:\ICPCHEM\1\DATA\13F21100.B\069BLNK.D\069BLNK.D#
Date Acquired: Jun 21 2013 03:52 pm
Acq. Method: 6020G.M
Operator: ICPMS 2 - JG
Sample Name: blk
Misc Info:
Vial Number: 1
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal. Update: Jun 21 2013 11:46 am
Sample Type: Blank
Dilution Factor: 1.00

QC Elements

Element	Corr. Conc.		RSD(%)	Raw Conc.	High Limit	Flag
9 Be	0.2813	ug/l	0.74	0.2813	4.00	
11 B	4.107	ug/l	1.36	4.107	15.00	
23 Na	130.8	ug/l	3.10	130.8	40.00	
24 Mg	62.68	ug/l	44.83	62.68	50.00	
27 Al	-1.094	ug/l	2.88	-1.094	15.00	
28 Si	----	ug/l	--------	----	10.00	
39 K	73.2	ug/l	8.17	73.2	40.00	
44 Ca	179.3	ug/l	37.37	179.3	50.00	
47 Ti	-0.6732	ug/l	4.04	-0.6732	20.00	
51 V	-1.552	ug/l	1.13	-1.552	5.00	
52 Cr	-1.446	ug/l	2.72	-1.446	5.00	
53 Cr	2.062	ug/l	4.08	2.062	---	
55 Mn	-1.035	ug/l	9.76	-1.035	5.00	
57 Fe	1.922	ug/l	154.47	1.922	50.00	
59 Co	-1.424	ug/l	0.25	-1.424	5.00	
60 Ni	-1.498	ug/l	0.20	-1.498	5.00	
63 Cu	-1.004	ug/l	0.64	-1.004	10.00	
66 Zn	-1.517	ug/l	1.59	-1.517	20.00	
75 As	-0.6536	ug/l	19.13	-0.6536	5.00	
77 (As)	1.345	ug/l	12.69	1.345	1.00	
78 Se	-34.57	ug/l	5.35	-34.57	1.00	
82 Se	-0.6447	ug/l	79.34	-0.6447	5.00	
83 (Se)	-169.9	ug/l	157.56	-169.9	1.00	
88 (Ca)	7074	ug/l	37.36	7074	1.00	
89 Y	----	ug/l	--------	----	1.00	
98 Mo	-0.03387	ug/l	81.28	-0.03387	5.00	
99 (Mo)	----	ug/l	--------	----	1.00	
106 (Cd)	-0.7368	ug/l	47.67	-0.7368	1.00	
107 Ag	0.2627	ug/l	0.55	0.2627	5.00	
108 (Cd)	-0.2022	ug/l	47.72	-0.2022	1.00	
111 Cd	-0.5785	ug/l	3.45	-0.5785	5.00	
114 Cd	-0.4686	ug/l	0.68	-0.4686	5.00	
118 (In)	----	ug/l	--------	----	1.00	
120 Sn	-0.9	ug/l	3.76	-0.9	10.00	
121 Sb	0.1879	ug/l	24.63	0.1879	10.00	
137 Ba	-0.1098	ug/l	12.47	-0.1098	10.00	
203 Tl	-0.1896	ug/l	0.63	-0.1896	5.00	
206 Pb	-0.09139	ug/l	5.61	-0.09139	1.00	
207 Pb	-0.2385	ug/l	4.46	-0.2385	1.00	
208 Pb	0.3194	ug/l	4.14	0.3194	5.00	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1571730.00	2.44	1384334.90	113.5	80 - 120	
45 Sc	1361217.30	2.41	1350053.50	100.8	80 - 120	
74 Ge	289673.34	2.91	289784.44	100.0	80 - 120	
115 In	1233039.60	4.28	1292141.60	95.4	80 - 120	
209 Bi	736398.88	2.56	786695.88	93.6	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F21100.B\003CALB.D\003CALB.D#

0 :Element Failures 15 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Nnumber of ISTD Failures Allowed

QC Results:
Analytes: Pass
ISTD: Pass

CCV QC Report

Data File: C:\ICPCHEM\1\DATA\13F21100.B\074CCV1.D\074CCV1.D#
Date Acquired: Jun 21 2013 04:12 pm
Operator: ICPMS 2 - JG
Sample Name: CCV1
Misc Info: 60-22-451
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal Update: Jun 21 2013 11:46 am
Sample Type: CCV1
Total Dil Factor: 1.00

QC Elements

Element	Conc.		RSD(%)	Expected	QC Range(%)	Flag
9 Be	92.62	ug/l	5.96	100.00	90 - 110	
11 B	90.79	ug/l	6.62	100.00	90 - 110	
23 Na	1159.00	ug/l	4.35	1000.00	90 - 110	Fail
24 Mg	1063.00	ug/l	4.88	1000.00	90 - 110	
27 Al	105.00	ug/l	4.99	100.00	90 - 110	
28 Si	--------	ug/l	--------	100.00	90 - 110	
39 K	1093.00	ug/l	4.47	1000.00	90 - 110	
44 Ca	982.30	ug/l	5.17	1000.00	90 - 110	
47 Ti	49.76	ug/l	6.09	50.00	90 - 110	
51 V	105.00	ug/l	5.45	100.00	90 - 110	
52 Cr	102.50	ug/l	5.41	100.00	90 - 110	
53 Cr	103.40	ug/l	5.41	---	##### - #####	
55 Mn	101.80	ug/l	6.72	100.00	90 - 110	
57 Fe	971.40	ug/l	5.99	1000.00	90 - 110	
59 Co	99.22	ug/l	4.64	100.00	90 - 110	
60 Ni	102.90	ug/l	5.31	100.00	90 - 110	
63 Cu	96.23	ug/l	5.48	100.00	90 - 110	
66 Zn	103.20	ug/l	5.62	100.00	90 - 110	
75 As	99.25	ug/l	4.85	100.00	90 - 110	
77 (As)	101.80	ug/l	7.86	100.00	90 - 110	
78 Se	60.29	ug/l	15.85	100.00	90 - 110	
82 Se	99.45	ug/l	5.54	100.00	90 - 110	
83 (Se)	138.60	ug/l	104.47	100.00	90 - 110	
88 (Ca)	820.70	ug/l	36.93	100.00	90 - 110	
89 Y	--------	ug/l	--------	100.00	90 - 110	
98 Mo	46.39	ug/l	8.13	50.00	90 - 110	
99 (Mo)	--------	ug/l	--------	---	##### - #####	
106 (Cd)	99.17	ug/l	8.27	100.00	90 - 110	
107 Ag	97.63	ug/l	7.51	100.00	90 - 110	
108 (Cd)	98.62	ug/l	9.91	100.00	90 - 110	
111 Cd	99.78	ug/l	8.07	100.00	90 - 110	
114 Cd	99.34	ug/l	7.77	100.00	90 - 110	
118 (In)	--------	ug/l	--------	100.00	90 - 110	
120 Sn	46.46	ug/l	7.60	50.00	90 - 110	
121 Sb	52.45	ug/l	8.63	50.00	90 - 110	
137 Ba	95.73	ug/l	7.68	100.00	90 - 110	
203 Tl	101.80	ug/l	5.88	100.00	90 - 110	
206 Pb	103.30	ug/l	6.17	100.00	90 - 110	
207 Pb	101.40	ug/l	6.18	100.00	90 - 110	
208 Pb	100.60	ug/l	6.01	100.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1493598.60	3.69	1384334.90	107.9	80 - 120	
45 Sc	1351081.50	3.47	1350053.50	100.1	80 - 120	
74 Ge	281311.13	2.54	289784.44	97.1	80 - 120	
115 In	1204888.40	4.93	1292141.60	93.2	80 - 120	
209 Bi	753404.44	2.06	786695.88	95.8	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F21100.B\003CALB.D\003CALB.D#

1 :Element Failures 40 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCB QC Report

Data File: C:\ICPCHEM\1\DATA\13F21100.B\075_CCB.D\075_CCB.D#
Date Acquired: Jun 21 2013 04:16 pm
Operator: ICPMS 2 - JG
Sample Name: CCB
Misc Info: 60-22-473
Vial Number: 5
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal Update: Jun 21 2013 11:46 am
Sample Type: CCB
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	High Limit	Flag
9 Be	0.33 ug/l	4.21	1.00	
11 B	1.16 ug/l	4.83	5.00	
23 Na	68.15 ug/l	9.36	10.00	Fail
24 Mg	-19.04 ug/l	3.10	10.00	
27 Al	-1.11 ug/l	3.39	3.00	
28 Si	-------- ug/l	--------	10.00	
39 K	49.19 ug/l	12.91	10.00	Fail
44 Ca	-0.39 ug/l	374.97	10.00	
47 Ti	-0.50 ug/l	10.42	5.00	
51 V	-1.49 ug/l	3.39	2.00	
52 Cr	-1.50 ug/l	2.04	2.00	
53 Cr	0.11 ug/l	71.90	#VALUE!	
55 Mn	-1.32 ug/l	1.02	2.00	
57 Fe	-2.03 ug/l	93.16	10.00	
59 Co	-1.37 ug/l	1.23	2.00	
60 Ni	-1.44 ug/l	0.64	2.00	
63 Cu	-0.95 ug/l	2.76	5.00	
66 Zn	-1.46 ug/l	1.20	5.00	
75 As	-0.46 ug/l	22.79	2.00	
77 (As)	0.75 ug/l	53.57	3.00	
78 Se	-37.69 ug/l	4.44	3.00	
82 Se	0.34 ug/l	84.02	2.00	
83 (Se)	176.10 ug/l	304.49	3.00	
88 (Ca)	186.10 ug/l	25.33	3.00	
89 Y	-------- ug/l	--------	#VALUE!	
98 Mo	1.07 ug/l	5.77	3.00	
99 (Mo)	-------- ug/l	--------	#VALUE!	
106 (Cd)	-0.24 ug/l	70.40	3.00	
107 Ag	0.33 ug/l	4.18	2.00	
108 (Cd)	-0.20 ug/l	36.56	3.00	
111 Cd	-0.48 ug/l	6.20	1.00	
114 Cd	-0.36 ug/l	7.42	1.00	
118 (In)	-------- ug/l	--------	3.00	
120 Sn	0.53 ug/l	23.44	5.00	
121 Sb	1.72 ug/l	6.47	3.00	
137 Ba	-0.07 ug/l	24.72	2.00	
203 Tl	0.01 ug/l	178.43	2.00	
206 Pb	-0.04 ug/l	66.43	3.00	
207 Pb	-0.19 ug/l	6.31	3.00	
208 Pb	0.36 ug/l	4.97	1.00	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1498689.40	1.33	1384334.90	108.3	80 - 120	
45 Sc	1356314.00	1.38	1350053.50	100.5	80 - 120	
74 Ge	275294.44	1.19	289784.44	95.0	80 - 120	
115 In	1172918.50	5.06	1292141.60	90.8	80 - 120	
209 Bi	732515.56	1.46	786695.88	93.1	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F21100.B\003CALB.D\003CALB.D#

2 :Element Failures 15 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCV QC Report

Data File: C:\ICPCHEM\1\DATA\13F21100.B\086CCV1.D\086CCV1.D#
Date Acquired: Jun 21 2013 05:09 pm
Operator: ICPMS 2 - JG
Sample Name: CCV1
Misc Info: 60-22-451
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal Update: Jun 21 2013 11:46 am
Sample Type: CCV1
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	Expected	QC Range(%)	Flag
9 Be	94.06 ug/l	7.66	100.00	90 - 110	
11 B	89.18 ug/l	6.56	100.00	90 - 110	Fail
23 Na	1165.00 ug/l	3.43	1000.00	90 - 110	Fail
24 Mg	1119.00 ug/l	3.99	1000.00	90 - 110	Fail
27 Al	109.60 ug/l	3.58	100.00	90 - 110	
28 Si	-------- ug/l	--------	100.00	90 - 110	
39 K	1118.00 ug/l	2.93	1000.00	90 - 110	Fail
44 Ca	990.90 ug/l	4.81	1000.00	90 - 110	
47 Ti	51.73 ug/l	5.55	50.00	90 - 110	
51 V	108.00 ug/l	4.04	100.00	90 - 110	
52 Cr	107.10 ug/l	3.71	100.00	90 - 110	
53 Cr	107.80 ug/l	3.84	---	##### - #####	
55 Mn	105.60 ug/l	5.45	100.00	90 - 110	
57 Fe	1002.00 ug/l	4.02	1000.00	90 - 110	
59 Co	105.20 ug/l	4.72	100.00	90 - 110	
60 Ni	105.70 ug/l	6.58	100.00	90 - 110	
63 Cu	99.11 ug/l	4.43	100.00	90 - 110	
66 Zn	105.20 ug/l	5.73	100.00	90 - 110	
75 As	97.67 ug/l	5.77	100.00	90 - 110	
77 (As)	99.45 ug/l	6.20	100.00	90 - 110	
78 Se	58.96 ug/l	15.75	100.00	90 - 110	
82 Se	97.03 ug/l	7.16	100.00	90 - 110	
83 (Se)	203.30 ug/l	375.50	100.00	90 - 110	
88 (Ca)	313.60 ug/l	12.73	100.00	90 - 110	
89 Y	-------- ug/l	--------	100.00	90 - 110	
98 Mo	46.23 ug/l	7.79	50.00	90 - 110	
99 (Mo)	-------- ug/l	--------	---	##### - #####	
106 (Cd)	98.64 ug/l	4.51	100.00	90 - 110	
107 Ag	96.82 ug/l	5.32	100.00	90 - 110	
108 (Cd)	99.09 ug/l	7.71	100.00	90 - 110	
111 Cd	99.19 ug/l	6.54	100.00	90 - 110	
114 Cd	99.26 ug/l	6.81	100.00	90 - 110	
118 (In)	-------- ug/l	--------	100.00	90 - 110	
120 Sn	46.04 ug/l	6.69	50.00	90 - 110	
121 Sb	52.21 ug/l	7.51	50.00	90 - 110	
137 Ba	95.60 ug/l	6.50	100.00	90 - 110	
203 Tl	105.70 ug/l	4.73	100.00	90 - 110	
206 Pb	106.10 ug/l	5.39	100.00	90 - 110	
207 Pb	103.70 ug/l	5.91	100.00	90 - 110	
208 Pb	103.00 ug/l	5.22	100.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1449103.30	4.77	1384334.90	104.7	80 - 120	
45 Sc	1278381.50	2.51	1350053.50	94.7	80 - 120	
74 Ge	275880.00	2.77	289784.44	95.2	80 - 120	
115 In	1168183.10	3.75	1292141.60	90.4	80 - 120	
209 Bi	697933.31	1.37	786695.88	88.7	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F21100.B\003CALB.D\003CALB.D#

4 :Element Failures 40 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCB QC Report

Data File: C:\ICPCHEM\1\DATA\13F21100.B\087_CCB.D\087_CCB.D#
Date Acquired: Jun 21 2013 05:13 pm
Operator: ICPMS 2 - JG
Sample Name: CCB
Misc Info: 60-22-473
Vial Number: 5
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal Update: Jun 21 2013 11:46 am
Sample Type: CCB
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	High Limit	Flag
9 Be	0.34 ug/l	2.45	1.00	
11 B	0.72 ug/l	2.94	5.00	
23 Na	40.36 ug/l	5.04	10.00	Fail
24 Mg	-20.93 ug/l	0.27	10.00	
27 Al	-1.13 ug/l	0.47	3.00	
28 Si	-------- ug/l	--------	10.00	
39 K	33.57 ug/l	1.91	10.00	Fail
44 Ca	-6.00 ug/l	2.91	10.00	
47 Ti	-0.47 ug/l	9.73	5.00	
51 V	-1.47 ug/l	0.67	2.00	
52 Cr	-1.50 ug/l	2.37	2.00	
53 Cr	-0.59 ug/l	6.88	#VALUE!	
55 Mn	-1.36 ug/l	0.64	2.00	
57 Fe	-0.33 ug/l	615.20	10.00	
59 Co	-1.37 ug/l	0.74	2.00	
60 Ni	-1.46 ug/l	0.15	2.00	
63 Cu	-0.91 ug/l	1.99	5.00	
66 Zn	-1.48 ug/l	0.82	5.00	
75 As	-0.52 ug/l	8.92	2.00	
77 (As)	0.61 ug/l	44.74	3.00	
78 Se	-39.27 ug/l	9.94	3.00	
82 Se	0.06 ug/l	395.17	2.00	
83 (Se)	-238.50 ug/l	38.17	3.00	
88 (Ca)	20.02 ug/l	34.03	3.00	
89 Y	-------- ug/l	--------	#VALUE!	
98 Mo	0.94 ug/l	7.77	3.00	
99 (Mo)	-------- ug/l	--------	#VALUE!	
106 (Cd)	-0.24 ug/l	110.09	3.00	
107 Ag	0.32 ug/l	3.35	2.00	
108 (Cd)	-0.11 ug/l	62.01	3.00	
111 Cd	-0.49 ug/l	3.77	1.00	
114 Cd	-0.39 ug/l	4.51	1.00	
118 (In)	-------- ug/l	--------	3.00	
120 Sn	0.38 ug/l	34.82	5.00	
121 Sb	1.42 ug/l	4.14	3.00	
137 Ba	-0.08 ug/l	34.28	2.00	
203 Tl	0.00 ug/l	534.28	2.00	
206 Pb	-0.05 ug/l	33.45	3.00	
207 Pb	-0.19 ug/l	9.04	3.00	
208 Pb	0.36 ug/l	0.51	1.00	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1418569.40	3.25	1384334.90	102.5	80 - 120	
45 Sc	1300291.50	2.14	1350053.50	96.3	80 - 120	
74 Ge	269967.78	2.40	289784.44	93.2	80 - 120	
115 In	1170754.50	3.08	1292141.60	90.6	80 - 120	
209 Bi	697550.00	2.19	786695.88	88.7	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F21100.B\003CALB.D\003CALB.D#

2 :Element Failures 15 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCV QC Report

Data File: C:\ICPCHEM\1\DATA\13F21100.B\097CCV1.D\097CCV1.D#
Date Acquired: Jun 21 2013 05:55 pm
Operator: ICPMS 2 - JG
Sample Name: CCV1
Misc Info: 60-22-451
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal Update: Jun 21 2013 11:46 am
Sample Type: CCV1
Total Dil Factor: 1.00

QC Elements

Element	Conc.		RSD(%)	Expected	QC Range(%)	Flag
9 Be	88.19	ug/l	4.01	100.00	90 - 110	Fail
11 B	82.15	ug/l	5.33	100.00	90 - 110	Fail
23 Na	1098.00	ug/l	2.54	1000.00	90 - 110	
24 Mg	1080.00	ug/l	1.07	1000.00	90 - 110	
27 Al	106.90	ug/l	1.71	100.00	90 - 110	
28 Si	--------	ug/l	--------	100.00	90 - 110	
39 K	1073.00	ug/l	2.58	1000.00	90 - 110	
44 Ca	973.70	ug/l	3.08	1000.00	90 - 110	
47 Ti	50.74	ug/l	3.60	50.00	90 - 110	
51 V	104.90	ug/l	1.54	100.00	90 - 110	
52 Cr	103.70	ug/l	2.47	100.00	90 - 110	
53 Cr	102.50	ug/l	4.08	---	##### - #####	
55 Mn	102.20	ug/l	4.06	100.00	90 - 110	
57 Fe	977.60	ug/l	5.18	1000.00	90 - 110	
59 Co	99.03	ug/l	3.55	100.00	90 - 110	
60 Ni	101.50	ug/l	4.14	100.00	90 - 110	
63 Cu	95.91	ug/l	3.94	100.00	90 - 110	
66 Zn	101.40	ug/l	4.31	100.00	90 - 110	
75 As	98.93	ug/l	4.72	100.00	90 - 110	
77 (As)	98.87	ug/l	6.07	100.00	90 - 110	
78 Se	51.16	ug/l	16.47	100.00	90 - 110	
82 Se	96.42	ug/l	4.95	100.00	90 - 110	
83 (Se)	109.20	ug/l	97.25	100.00	90 - 110	
88 (Ca)	341.30	ug/l	10.49	100.00	90 - 110	
89 Y	--------	ug/l	--------	100.00	90 - 110	
98 Mo	47.84	ug/l	6.23	50.00	90 - 110	
99 (Mo)	--------	ug/l	--------	---	##### - #####	
106 (Cd)	101.30	ug/l	7.09	100.00	90 - 110	
107 Ag	97.65	ug/l	4.82	100.00	90 - 110	
108 (Cd)	101.60	ug/l	6.66	100.00	90 - 110	
111 Cd	99.28	ug/l	6.43	100.00	90 - 110	
114 Cd	99.40	ug/l	6.21	100.00	90 - 110	
118 (In)	--------	ug/l	--------	100.00	90 - 110	
120 Sn	48.32	ug/l	6.39	50.00	90 - 110	
121 Sb	53.04	ug/l	6.77	50.00	90 - 110	
137 Ba	96.86	ug/l	5.41	100.00	90 - 110	
203 Tl	102.50	ug/l	5.02	100.00	90 - 110	
206 Pb	104.00	ug/l	5.69	100.00	90 - 110	
207 Pb	101.70	ug/l	5.05	100.00	90 - 110	
208 Pb	101.00	ug/l	5.36	100.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1427817.40	1.76	1384334.90	103.1	80 - 120	
45 Sc	1234645.90	1.67	1350053.50	91.5	80 - 120	
74 Ge	254611.11	2.82	289784.44	87.9	80 - 120	
115 In	1068373.90	3.12	1292141.60	82.7	80 - 120	
209 Bi	654162.25	1.80	786695.88	83.2	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F21100.B\003CALB.D\003CALB.D#

2 :Element Failures 40 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCB QC Report

Data File: C:\ICPCHEM\1\DATA\13F21100.B\098_CCB.D\098_CCB.D#
Date Acquired: Jun 21 2013 05:59 pm
Operator: ICPMS 2 - JG
Sample Name: CCB
Misc Info: 60-22-473
Vial Number: 5
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal Update: Jun 21 2013 11:46 am
Sample Type: CCB
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	High Limit	Flag
9 Be	0.34 ug/l	5.73	1.00	
11 B	0.44 ug/l	11.10	5.00	
23 Na	23.63 ug/l	8.87	10.00	Fail
24 Mg	-19.22 ug/l	3.64	10.00	
27 Al	-0.08 ug/l	495.45	3.00	
28 Si	-------- ug/l	--------	10.00	
39 K	32.62 ug/l	8.53	10.00	Fail
44 Ca	-3.86 ug/l	21.72	10.00	
47 Ti	-0.44 ug/l	7.90	5.00	
51 V	-1.48 ug/l	1.46	2.00	
52 Cr	-1.50 ug/l	0.29	2.00	
53 Cr	-0.94 ug/l	2.35	#VALUE!	
55 Mn	-1.31 ug/l	2.41	2.00	
57 Fe	6.22 ug/l	12.59	10.00	
59 Co	-1.36 ug/l	1.21	2.00	
60 Ni	-1.44 ug/l	0.85	2.00	
63 Cu	-0.96 ug/l	1.82	5.00	
66 Zn	-1.46 ug/l	2.57	5.00	
75 As	-0.45 ug/l	31.41	2.00	
77 (As)	0.37 ug/l	113.38	3.00	
78 Se	-47.52 ug/l	8.34	3.00	
82 Se	0.42 ug/l	109.00	2.00	
83 (Se)	-119.10 ug/l	329.81	3.00	
88 (Ca)	28.25 ug/l	53.17	3.00	
89 Y	-------- ug/l	--------	#VALUE!	
98 Mo	0.94 ug/l	11.84	3.00	
99 (Mo)	-------- ug/l	--------	#VALUE!	
106 (Cd)	-0.39 ug/l	69.07	3.00	
107 Ag	0.33 ug/l	4.32	2.00	
108 (Cd)	-0.11 ug/l	31.89	3.00	
111 Cd	-0.50 ug/l	7.83	1.00	
114 Cd	-0.37 ug/l	4.39	1.00	
118 (In)	-------- ug/l	--------	3.00	
120 Sn	0.52 ug/l	20.17	5.00	
121 Sb	1.53 ug/l	9.67	3.00	
137 Ba	-0.08 ug/l	17.47	2.00	
203 Tl	0.02 ug/l	209.84	2.00	
206 Pb	-0.04 ug/l	39.31	3.00	
207 Pb	-0.20 ug/l	6.46	3.00	
208 Pb	0.37 ug/l	4.01	1.00	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1465500.30	5.24	1384334.90	105.9	80 - 120	
45 Sc	1252056.00	1.99	1350053.50	92.7	80 - 120	
74 Ge	257426.66	3.61	289784.44	88.8	80 - 120	
115 In	1088648.40	5.15	1292141.60	84.3	80 - 120	
209 Bi	651018.88	2.81	786695.88	82.8	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F21100.B\003CALB.D\003CALB.D#

2 :Element Failures 15 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCV QC Report

Data File: C:\ICPCHEM\1\DATA\13F21100.B\109CCV1.D\109CCV1.D#
Date Acquired: Jun 21 2013 06:43 pm
Operator: ICPMS 2 - JG
Sample Name: CCV1
Misc Info: 60-22-451
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal Update: Jun 21 2013 11:46 am
Sample Type: CCV1
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	Expected	QC Range(%)	Flag
9 Be	91.56 ug/l	6.14	100.00	90 - 110	
11 B	84.90 ug/l	4.44	100.00	90 - 110	Fail
23 Na	1073.00 ug/l	2.48	1000.00	90 - 110	
24 Mg	1069.00 ug/l	3.16	1000.00	90 - 110	
27 Al	105.10 ug/l	2.45	100.00	90 - 110	
28 Si	-------- ug/l	--------	100.00	90 - 110	
39 K	1068.00 ug/l	4.05	1000.00	90 - 110	
44 Ca	969.70 ug/l	3.26	1000.00	90 - 110	
47 Ti	50.36 ug/l	4.81	50.00	90 - 110	
51 V	105.40 ug/l	2.84	100.00	90 - 110	
52 Cr	102.70 ug/l	4.42	100.00	90 - 110	
53 Cr	102.00 ug/l	5.69	---	##### - #####	
55 Mn	102.20 ug/l	4.86	100.00	90 - 110	
57 Fe	975.40 ug/l	4.69	1000.00	90 - 110	
59 Co	100.30 ug/l	4.43	100.00	90 - 110	
60 Ni	103.50 ug/l	4.07	100.00	90 - 110	
63 Cu	95.61 ug/l	4.58	100.00	90 - 110	
66 Zn	102.40 ug/l	4.82	100.00	90 - 110	
75 As	99.44 ug/l	4.69	100.00	90 - 110	
77 (As)	96.79 ug/l	5.88	100.00	90 - 110	
78 Se	52.49 ug/l	14.10	100.00	90 - 110	
82 Se	98.99 ug/l	7.56	100.00	90 - 110	
83 (Se)	46.67 ug/l	686.52	100.00	90 - 110	
88 (Ca)	336.20 ug/l	11.80	100.00	90 - 110	
89 Y	-------- ug/l	--------	100.00	90 - 110	
98 Mo	47.42 ug/l	7.05	50.00	90 - 110	
99 (Mo)	-------- ug/l	--------	---	##### - #####	
106 (Cd)	97.66 ug/l	5.63	100.00	90 - 110	
107 Ag	96.38 ug/l	5.56	100.00	90 - 110	
108 (Cd)	99.13 ug/l	6.15	100.00	90 - 110	
111 Cd	98.01 ug/l	5.85	100.00	90 - 110	
114 Cd	98.31 ug/l	6.10	100.00	90 - 110	
118 (In)	-------- ug/l	--------	100.00	90 - 110	
120 Sn	47.43 ug/l	6.71	50.00	90 - 110	
121 Sb	52.00 ug/l	6.85	50.00	90 - 110	
137 Ba	95.92 ug/l	6.94	100.00	90 - 110	
203 Tl	101.80 ug/l	5.07	100.00	90 - 110	
206 Pb	103.50 ug/l	6.14	100.00	90 - 110	
207 Pb	101.40 ug/l	5.79	100.00	90 - 110	
208 Pb	100.40 ug/l	5.85	100.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1387402.10	2.05	1384334.90	100.2	80 - 120	
45 Sc	1247945.50	1.99	1350053.50	92.4	80 - 120	
74 Ge	257355.55	1.66	289784.44	88.8	80 - 120	
115 In	1096683.50	3.32	1292141.60	84.9	80 - 120	
209 Bi	668188.88	1.37	786695.88	84.9	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F21100.B\003CALB.D\003CALB.D#

1 :Element Failures 40 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCB QC Report

Data File: C:\ICPCHEM\1\DATA\13F21100.B\110_CCB.D\110_CCB.D#
Date Acquired: Jun 21 2013 06:47 pm
Operator: ICPMS 2 - JG
Sample Name: CCB
Misc Info: 60-22-473
Vial Number: 5
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal Update: Jun 21 2013 11:46 am
Sample Type: CCB
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	High Limit	Flag
9 Be	0.35 ug/l	13.89	1.00	
11 B	0.68 ug/l	11.70	5.00	
23 Na	13.86 ug/l	6.41	10.00	Fail
24 Mg	-20.36 ug/l	4.15	10.00	
27 Al	-0.87 ug/l	32.83	3.00	
28 Si	-------- ug/l	--------	10.00	
39 K	28.76 ug/l	3.46	10.00	Fail
44 Ca	-6.46 ug/l	16.64	10.00	
47 Ti	-0.45 ug/l	11.69	5.00	
51 V	-1.46 ug/l	4.34	2.00	
52 Cr	-1.49 ug/l	3.43	2.00	
53 Cr	-1.02 ug/l	4.01	#VALUE!	
55 Mn	-1.34 ug/l	3.85	2.00	
57 Fe	2.87 ug/l	116.96	10.00	
59 Co	-1.35 ug/l	3.62	2.00	
60 Ni	-1.43 ug/l	2.38	2.00	
63 Cu	-0.95 ug/l	7.09	5.00	
66 Zn	-1.42 ug/l	7.24	5.00	
75 As	-0.35 ug/l	17.25	2.00	
77 (As)	0.13 ug/l	42.09	3.00	
78 Se	-46.02 ug/l	8.30	3.00	
82 Se	0.77 ug/l	26.24	2.00	
83 (Se)	322.10 ug/l	109.38	3.00	
88 (Ca)	26.24 ug/l	36.84	3.00	
89 Y	-------- ug/l	--------	#VALUE!	
98 Mo	1.02 ug/l	7.59	3.00	
99 (Mo)	-------- ug/l	--------	#VALUE!	
106 (Cd)	-0.11 ug/l	440.97	3.00	
107 Ag	0.33 ug/l	11.98	2.00	
108 (Cd)	-0.13 ug/l	104.97	3.00	
111 Cd	-0.46 ug/l	6.26	1.00	
114 Cd	-0.35 ug/l	7.08	1.00	
118 (In)	-------- ug/l	--------	3.00	
120 Sn	0.61 ug/l	20.93	5.00	
121 Sb	1.48 ug/l	8.55	3.00	
137 Ba	-0.05 ug/l	86.18	2.00	
203 Tl	0.06 ug/l	92.65	2.00	
206 Pb	-0.01 ug/l	755.49	3.00	
207 Pb	-0.17 ug/l	30.13	3.00	
208 Pb	0.39 ug/l	13.72	1.00	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1445169.00	3.99	1384334.90	104.4	80 - 120	
45 Sc	1257788.60	3.39	1350053.50	93.2	80 - 120	
74 Ge	257701.11	3.30	289784.44	88.9	80 - 120	
115 In	1109800.90	5.72	1292141.60	85.9	80 - 120	
209 Bi	658990.00	3.13	786695.88	83.8	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F21100.B\003CALB.D\003CALB.D#

2 :Element Failures 15 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCV QC Report

Data File: C:\ICPCHEM\1\DATA\13F21100.B\121CCV1.D\121CCV1.D#
Date Acquired: Jun 21 2013 07:30 pm
Operator: ICPMS 2 - JG
Sample Name: CCV1
Misc Info: 60-22-451
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal Update: Jun 21 2013 11:46 am
Sample Type: CCV1
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	Expected	QC Range(%)	Flag
9 Be	91.10 ug/l	4.50	100.00	90 - 110	
11 B	84.15 ug/l	5.52	100.00	90 - 110	Fail
23 Na	1076.00 ug/l	1.67	1000.00	90 - 110	
24 Mg	1154.00 ug/l	3.65	1000.00	90 - 110	Fail
27 Al	131.20 ug/l	10.43	100.00	90 - 110	Fail
28 Si	-------- ug/l	--------	100.00	90 - 110	
39 K	1102.00 ug/l	2.44	1000.00	90 - 110	Fail
44 Ca	1159.00 ug/l	11.88	1000.00	90 - 110	Fail
47 Ti	52.64 ug/l	4.38	50.00	90 - 110	
51 V	105.50 ug/l	3.45	100.00	90 - 110	
52 Cr	105.30 ug/l	3.40	100.00	90 - 110	
53 Cr	104.60 ug/l	4.10	---	##### - #####	
55 Mn	103.10 ug/l	4.60	100.00	90 - 110	
57 Fe	1113.00 ug/l	6.34	1000.00	90 - 110	Fail
59 Co	101.80 ug/l	4.29	100.00	90 - 110	
60 Ni	103.40 ug/l	4.97	100.00	90 - 110	
63 Cu	97.07 ug/l	4.84	100.00	90 - 110	
66 Zn	103.20 ug/l	5.19	100.00	90 - 110	
75 As	97.70 ug/l	4.91	100.00	90 - 110	
77 (As)	96.69 ug/l	5.85	100.00	90 - 110	
78 Se	47.64 ug/l	16.33	100.00	90 - 110	
82 Se	95.50 ug/l	8.34	100.00	90 - 110	
83 (Se)	-244.20 ug/l	108.03	100.00	90 - 110	
88 (Ca)	1234.00 ug/l	37.23	100.00	90 - 110	
89 Y	-------- ug/l	--------	100.00	90 - 110	
98 Mo	48.97 ug/l	7.41	50.00	90 - 110	
99 (Mo)	-------- ug/l	--------	---	##### - #####	
106 (Cd)	100.60 ug/l	5.37	100.00	90 - 110	
107 Ag	98.06 ug/l	5.27	100.00	90 - 110	
108 (Cd)	102.40 ug/l	5.80	100.00	90 - 110	
111 Cd	99.80 ug/l	6.63	100.00	90 - 110	
114 Cd	99.45 ug/l	6.19	100.00	90 - 110	
118 (In)	-------- ug/l	--------	100.00	90 - 110	
120 Sn	51.74 ug/l	7.31	50.00	90 - 110	
121 Sb	53.20 ug/l	8.05	50.00	90 - 110	
137 Ba	97.64 ug/l	6.73	100.00	90 - 110	
203 Tl	103.80 ug/l	5.06	100.00	90 - 110	
206 Pb	106.50 ug/l	5.93	100.00	90 - 110	
207 Pb	104.40 ug/l	5.68	100.00	90 - 110	
208 Pb	103.40 ug/l	5.77	100.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1414546.10	3.38	1384334.90	102.2	80 - 120	
45 Sc	1249558.50	2.73	1350053.50	92.6	80 - 120	
74 Ge	263210.00	2.54	289784.44	90.8	80 - 120	
115 In	1087078.60	4.28	1292141.60	84.1	80 - 120	
209 Bi	662836.69	2.59	786695.88	84.3	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F21100.B\003CALB.D\003CALB.D#

6 :Element Failures 40 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCB QC Report

Data File: C:\ICPCHEM\1\DATA\13F21100.B\122_CCB.D\122_CCB.D#
Date Acquired: Jun 21 2013 07:34 pm
Operator: ICPMS 2 - JG
Sample Name: CCB
Misc Info: 60-22-473
Vial Number: 5
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal Update: Jun 21 2013 11:46 am
Sample Type: CCB
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	High Limit	Flag
9 Be	0.37 ug/l	7.16	1.00	
11 B	0.73 ug/l	3.21	5.00	
23 Na	10.29 ug/l	17.77	10.00	Fail
24 Mg	10.91 ug/l	104.86	10.00	Fail
27 Al	8.83 ug/l	37.28	3.00	Fail
28 Si	-------- ug/l	--------	10.00	
39 K	46.56 ug/l	2.16	10.00	Fail
44 Ca	46.07 ug/l	36.97	10.00	Fail
47 Ti	-0.17 ug/l	42.72	5.00	
51 V	-1.42 ug/l	2.14	2.00	
52 Cr	-1.44 ug/l	2.14	2.00	
53 Cr	-1.00 ug/l	6.11	#VALUE!	
55 Mn	-0.82 ug/l	21.85	2.00	
57 Fe	49.97 ug/l	15.48	10.00	Fail
59 Co	-1.33 ug/l	1.99	2.00	
60 Ni	-1.37 ug/l	3.41	2.00	
63 Cu	-0.83 ug/l	6.82	5.00	
66 Zn	-1.04 ug/l	15.17	5.00	
75 As	-0.31 ug/l	15.81	2.00	
77 (As)	0.11 ug/l	71.81	3.00	
78 Se	-50.00 ug/l	6.04	3.00	
82 Se	0.46 ug/l	88.26	2.00	
83 (Se)	94.61 ug/l	134.34	3.00	
88 (Ca)	352.50 ug/l	29.76	3.00	
89 Y	-------- ug/l	--------	#VALUE!	
98 Mo	0.93 ug/l	5.66	3.00	
99 (Mo)	-------- ug/l	--------	#VALUE!	
106 (Cd)	-0.43 ug/l	98.93	3.00	
107 Ag	0.35 ug/l	6.58	2.00	
108 (Cd)	-0.13 ug/l	60.97	3.00	
111 Cd	-0.48 ug/l	8.31	1.00	
114 Cd	-0.35 ug/l	9.88	1.00	
118 (In)	-------- ug/l	--------	3.00	
120 Sn	0.84 ug/l	7.26	5.00	
121 Sb	1.63 ug/l	6.18	3.00	
137 Ba	0.14 ug/l	52.60	2.00	
203 Tl	0.04 ug/l	134.30	2.00	
206 Pb	0.53 ug/l	30.66	3.00	
207 Pb	0.32 ug/l	44.46	3.00	
208 Pb	0.88 ug/l	17.25	1.00	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1406871.40	2.13	1384334.90	101.6	80 - 120	
45 Sc	1235206.10	3.59	1350053.50	91.5	80 - 120	
74 Ge	253110.00	3.72	289784.44	87.3	80 - 120	
115 In	1072432.00	5.38	1292141.60	83.0	80 - 120	
209 Bi	641272.25	3.51	786695.88	81.5	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F21100.B\003CALB.D\003CALB.D#

6 :Element Failures 15 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCV QC Report

Data File: C:\ICPCHEM\1\DATA\13F21100.B\135CCV1.D\135CCV1.D#
Date Acquired: Jun 21 2013 08:25 pm
Operator: ICPMS 2 - JG
Sample Name: CCV1
Misc Info: 60-22-451
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal Update: Jun 21 2013 11:46 am
Sample Type: CCV1
Total Dil Factor: 1.00

QC Elements

Element	Conc.		RSD(%)	Expected	QC Range(%)	Flag
9 Be	92.00	ug/l	3.32	100.00	90 - 110	
11 B	82.87	ug/l	4.20	100.00	90 - 110	Fail
23 Na	1086.00	ug/l	4.57	1000.00	90 - 110	
24 Mg	1098.00	ug/l	4.14	1000.00	90 - 110	
27 Al	110.50	ug/l	2.79	100.00	90 - 110	Fail
28 Si	--------	ug/l	--------	100.00	90 - 110	
39 K	1068.00	ug/l	4.44	1000.00	90 - 110	
44 Ca	992.60	ug/l	4.60	1000.00	90 - 110	
47 Ti	51.72	ug/l	5.92	50.00	90 - 110	
51 V	103.70	ug/l	5.01	100.00	90 - 110	
52 Cr	103.10	ug/l	5.14	100.00	90 - 110	
53 Cr	102.30	ug/l	6.17	---	##### - #####	
55 Mn	102.30	ug/l	4.85	100.00	90 - 110	
57 Fe	989.10	ug/l	5.01	1000.00	90 - 110	
59 Co	98.53	ug/l	3.93	100.00	90 - 110	
60 Ni	100.30	ug/l	5.00	100.00	90 - 110	
63 Cu	94.85	ug/l	5.64	100.00	90 - 110	
66 Zn	99.85	ug/l	5.91	100.00	90 - 110	
75 As	98.53	ug/l	6.48	100.00	90 - 110	
77 (As)	95.70	ug/l	4.93	100.00	90 - 110	
78 Se	47.63	ug/l	12.28	100.00	90 - 110	
82 Se	96.51	ug/l	6.37	100.00	90 - 110	
83 (Se)	87.75	ug/l	331.51	100.00	90 - 110	
88 (Ca)	452.60	ug/l	8.75	100.00	90 - 110	
89 Y	--------	ug/l	--------	100.00	90 - 110	
98 Mo	47.59	ug/l	7.69	50.00	90 - 110	
99 (Mo)	--------	ug/l	--------	---	##### - #####	
106 (Cd)	97.72	ug/l	7.81	100.00	90 - 110	
107 Ag	96.90	ug/l	6.73	100.00	90 - 110	
108 (Cd)	98.01	ug/l	7.58	100.00	90 - 110	
111 Cd	98.59	ug/l	6.16	100.00	90 - 110	
114 Cd	98.57	ug/l	6.99	100.00	90 - 110	
118 (In)	--------	ug/l	--------	100.00	90 - 110	
120 Sn	48.38	ug/l	8.33	50.00	90 - 110	
121 Sb	51.89	ug/l	8.43	50.00	90 - 110	
137 Ba	95.31	ug/l	7.03	100.00	90 - 110	
203 Tl	102.00	ug/l	5.85	100.00	90 - 110	
206 Pb	103.30	ug/l	5.98	100.00	90 - 110	
207 Pb	101.30	ug/l	6.50	100.00	90 - 110	
208 Pb	100.50	ug/l	5.91	100.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1369315.90	1.02	1384334.90	98.9	80 - 120	
45 Sc	1232611.80	2.70	1350053.50	91.3	80 - 120	
74 Ge	251561.11	3.04	289784.44	86.8	80 - 120	
115 In	1058663.60	4.70	1292141.60	81.9	80 - 120	
209 Bi	646415.56	2.30	786695.88	82.2	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F21100.B\003CALB.D\003CALB.D#

2 :Element Failures 40 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCB QC Report

Data File: C:\ICPCHEM\1\DATA\13F21100.B\136_CCB.D\136_CCB.D#
Date Acquired: Jun 21 2013 08:29 pm
Operator: ICPMS 2 - JG
Sample Name: CCB
Misc Info: 60-22-473
Vial Number: 5
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal Update: Jun 21 2013 11:46 am
Sample Type: CCB
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	High Limit	Flag
9 Be	0.34 ug/l	9.14	1.00	
11 B	0.65 ug/l	3.65	5.00	
23 Na	8.30 ug/l	24.29	10.00	
24 Mg	-13.40 ug/l	29.29	10.00	
27 Al	0.80 ug/l	89.33	3.00	
28 Si	-------- ug/l	--------	10.00	
39 K	32.77 ug/l	8.90	10.00	Fail
44 Ca	2.36 ug/l	242.75	10.00	
47 Ti	-0.41 ug/l	16.22	5.00	
51 V	-1.46 ug/l	2.18	2.00	
52 Cr	-1.49 ug/l	2.78	2.00	
53 Cr	-1.06 ug/l	5.20	#VALUE!	
55 Mn	-1.30 ug/l	5.23	2.00	
57 Fe	12.20 ug/l	28.77	10.00	Fail
59 Co	-1.37 ug/l	1.98	2.00	
60 Ni	-1.44 ug/l	2.14	2.00	
63 Cu	-0.98 ug/l	4.09	5.00	
66 Zn	-1.43 ug/l	3.61	5.00	
75 As	-0.42 ug/l	7.52	2.00	
77 (As)	0.16 ug/l	261.60	3.00	
78 Se	-52.31 ug/l	3.35	3.00	
82 Se	0.39 ug/l	114.11	2.00	
83 (Se)	-9.17 ug/l	3437.30	3.00	
88 (Ca)	63.83 ug/l	9.18	3.00	
89 Y	-------- ug/l	--------	#VALUE!	
98 Mo	0.87 ug/l	5.52	3.00	
99 (Mo)	-------- ug/l	--------	#VALUE!	
106 (Cd)	-0.33 ug/l	136.12	3.00	
107 Ag	0.33 ug/l	8.71	2.00	
108 (Cd)	-0.09 ug/l	134.73	3.00	
111 Cd	-0.49 ug/l	9.19	1.00	
114 Cd	-0.34 ug/l	12.89	1.00	
118 (In)	-------- ug/l	--------	3.00	
120 Sn	0.91 ug/l	12.66	5.00	
121 Sb	1.64 ug/l	9.38	3.00	
137 Ba	-0.05 ug/l	117.22	2.00	
203 Tl	0.01 ug/l	200.00	2.00	
206 Pb	0.14 ug/l	58.17	3.00	
207 Pb	-0.03 ug/l	109.34	3.00	
208 Pb	0.55 ug/l	12.22	1.00	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1367834.60	5.14	1384334.90	98.8	80 - 120	
45 Sc	1225039.00	1.96	1350053.50	90.7	80 - 120	
74 Ge	248350.00	2.61	289784.44	85.7	80 - 120	
115 In	1057487.40	6.13	1292141.60	81.8	80 - 120	
209 Bi	634634.44	3.45	786695.88	80.7	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F21100.B\003CALB.D\003CALB.D#

2 :Element Failures 15 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCV QC Report

Data File: C:\ICPCHEM\1\DATA\13F21100.B\147CCV1.D\147CCV1.D#
Date Acquired: Jun 21 2013 09:12 pm
Operator: ICPMS 2 - JG
Sample Name: CCV1
Misc Info: 60-22-451
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal Update: Jun 21 2013 11:46 am
Sample Type: CCV1
Total Dil Factor: 1.00

QC Elements

Element	Conc.		RSD(%)	Expected	QC Range(%)	Flag
9 Be	89.59	ug/l	6.59	100.00	90 - 110	Fail
11 B	81.56	ug/l	5.96	100.00	90 - 110	Fail
23 Na	1059.00	ug/l	3.20	1000.00	90 - 110	
24 Mg	1062.00	ug/l	3.79	1000.00	90 - 110	
27 Al	104.40	ug/l	3.91	100.00	90 - 110	
28 Si	--------	ug/l	--------	100.00	90 - 110	
39 K	1020.00	ug/l	3.92	1000.00	90 - 110	
44 Ca	945.80	ug/l	4.72	1000.00	90 - 110	
47 Ti	49.01	ug/l	5.56	50.00	90 - 110	
51 V	102.00	ug/l	4.05	100.00	90 - 110	
52 Cr	100.20	ug/l	4.39	100.00	90 - 110	
53 Cr	99.11	ug/l	5.64	---	##### - #####	
55 Mn	99.18	ug/l	4.66	100.00	90 - 110	
57 Fe	942.50	ug/l	5.51	1000.00	90 - 110	
59 Co	96.14	ug/l	4.99	100.00	90 - 110	
60 Ni	98.32	ug/l	5.61	100.00	90 - 110	
63 Cu	92.68	ug/l	4.93	100.00	90 - 110	
66 Zn	97.28	ug/l	5.33	100.00	90 - 110	
75 As	96.71	ug/l	5.79	100.00	90 - 110	
77 (As)	96.68	ug/l	6.39	100.00	90 - 110	
78 Se	44.38	ug/l	19.49	100.00	90 - 110	
82 Se	95.54	ug/l	7.22	100.00	90 - 110	
83 (Se)	-132.50	ug/l	493.36	100.00	90 - 110	
88 (Ca)	344.30	ug/l	8.55	100.00	90 - 110	
89 Y	--------	ug/l	--------	100.00	90 - 110	
98 Mo	46.73	ug/l	8.79	50.00	90 - 110	
99 (Mo)	--------	ug/l	--------	---	##### - #####	
106 (Cd)	97.11	ug/l	6.48	100.00	90 - 110	
107 Ag	95.30	ug/l	6.04	100.00	90 - 110	
108 (Cd)	95.59	ug/l	4.88	100.00	90 - 110	
111 Cd	97.87	ug/l	6.31	100.00	90 - 110	
114 Cd	97.25	ug/l	7.30	100.00	90 - 110	
118 (In)	--------	ug/l	--------	100.00	90 - 110	
120 Sn	46.68	ug/l	8.04	50.00	90 - 110	
121 Sb	51.46	ug/l	7.99	50.00	90 - 110	
137 Ba	94.47	ug/l	7.25	100.00	90 - 110	
203 Tl	100.70	ug/l	5.00	100.00	90 - 110	
206 Pb	102.10	ug/l	5.90	100.00	90 - 110	
207 Pb	99.82	ug/l	6.05	100.00	90 - 110	
208 Pb	99.17	ug/l	5.90	100.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1378333.90	4.05	1384334.90	99.6	80 - 120	
45 Sc	1241038.30	2.93	1350053.50	91.9	80 - 120	
74 Ge	248283.33	2.69	289784.44	85.7	80 - 120	
115 In	1050104.30	4.80	1292141.60	81.3	80 - 120	
209 Bi	645385.56	2.34	786695.88	82.0	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F21100.B\003CALB.D\003CALB.D#

2 :Element Failures 40 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCB QC Report

Data File: C:\ICPCHEM\1\DATA\13F21100.B\148_CCB.D\148_CCB.D#
Date Acquired: Jun 21 2013 09:16 pm
Operator: ICPMS 2 - JG
Sample Name: CCB
Misc Info: 60-22-473
Vial Number: 5
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal Update: Jun 21 2013 11:46 am
Sample Type: CCB
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	High Limit	Flag
9 Be	0.33 ug/l	1.36	1.00	
11 B	0.44 ug/l	11.86	5.00	
23 Na	6.64 ug/l	16.75	10.00	
24 Mg	-19.87 ug/l	0.37	10.00	
27 Al	-0.72 ug/l	7.99	3.00	
28 Si	-------- ug/l	--------	10.00	
39 K	24.49 ug/l	12.81	10.00	Fail
44 Ca	-7.71 ug/l	8.47	10.00	
47 Ti	-0.46 ug/l	2.76	5.00	
51 V	-1.47 ug/l	0.49	2.00	
52 Cr	-1.49 ug/l	1.80	2.00	
53 Cr	-1.09 ug/l	3.48	#VALUE!	
55 Mn	-1.37 ug/l	0.05	2.00	
57 Fe	4.35 ug/l	55.07	10.00	
59 Co	-1.37 ug/l	0.07	2.00	
60 Ni	-1.45 ug/l	0.70	2.00	
63 Cu	-0.99 ug/l	1.11	5.00	
66 Zn	-1.43 ug/l	3.23	5.00	
75 As	-0.49 ug/l	20.02	2.00	
77 (As)	0.25 ug/l	154.28	3.00	
78 Se	-53.48 ug/l	4.48	3.00	
82 Se	0.08 ug/l	654.57	2.00	
83 (Se)	-203.00 ug/l	371.72	3.00	
88 (Ca)	18.67 ug/l	109.43	3.00	
89 Y	-------- ug/l	--------	#VALUE!	
98 Mo	0.93 ug/l	3.67	3.00	
99 (Mo)	-------- ug/l	--------	#VALUE!	
106 (Cd)	-0.23 ug/l	201.98	3.00	
107 Ag	0.32 ug/l	3.06	2.00	
108 (Cd)	-0.12 ug/l	119.39	3.00	
111 Cd	-0.48 ug/l	7.03	1.00	
114 Cd	-0.37 ug/l	5.07	1.00	
118 (In)	-------- ug/l	--------	3.00	
120 Sn	0.65 ug/l	8.28	5.00	
121 Sb	1.71 ug/l	9.44	3.00	
137 Ba	-0.08 ug/l	17.21	2.00	
203 Tl	0.01 ug/l	167.70	2.00	
206 Pb	0.00 ug/l	558.42	3.00	
207 Pb	-0.15 ug/l	11.58	3.00	
208 Pb	0.41 ug/l	1.55	1.00	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1364765.10	3.56	1384334.90	98.6	80 - 120	
45 Sc	1212595.90	2.61	1350053.50	89.8	80 - 120	
74 Ge	245840.00	2.88	289784.44	84.8	80 - 120	
115 In	1043243.50	5.28	1292141.60	80.7	80 - 120	
209 Bi	630284.44	3.55	786695.88	80.1	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F21100.B\003CALB.D\003CALB.D#

1 :Element Failures 15 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

ICS-A QC Report

Data File: C:\ICPCHEM\1\DATA\13F21100.B\153ICSA.D\153ICSA.D#
Date Acquired: Jun 21 2013 09:36 pm
Acq. Method: 6020G.M
Operator: ICPMS 2 - JG
Sample Name: ICS A
Misc Info: 60-22-483
Vial Number: 1207
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal. Update: Jun 21 2013 11:46 am
Sample Type: ICS-A
Dilution Factor: 1.00

QC Elements

Element	Conc.		RSD(%)	High Limit	Flag
9 Be	0.28	ug/l	0.96	10.00	
11 B	1.37	ug/l	5.61	10.00	
23 Na	84920.00	ug/l	1.87	1.20	
24 Mg	82960.00	ug/l	0.47	1.20	
27 Al	82730.00	ug/l	0.10	1.20	
28 Si	--------	ug/l	--------	---	
39 K	81570.00	ug/l	1.27	1.20	
44 Ca	84190.00	ug/l	1.21	1.20	
47 Ti	1866.00	ug/l	0.92	1.20	
51 V	-1.42	ug/l	1.74	10.00	
52 Cr	-0.54	ug/l	6.75	10.00	
53 Cr	0.88	ug/l	8.69	---	
55 Mn	0.03	ug/l	91.77	10.00	
57 Fe	81040.00	ug/l	2.11	1.20	
59 Co	-0.15	ug/l	10.64	10.00	
60 Ni	0.62	ug/l	7.67	10.00	
63 Cu	0.93	ug/l	15.76	10.00	
66 Zn	1.24	ug/l	2.03	10.00	
75 As	-0.20	ug/l	55.39	10.00	
77 (As)	2.87	ug/l	17.58	10.00	
78 Se	-18.78	ug/l	28.77	10.00	
82 Se	-0.22	ug/l	249.73	10.00	
83 (Se)	-642.00	ug/l	58.80	10.00	
88 (Ca)	3438.00	ug/l	7.04	10.00	
89 Y	--------	ug/l	--------	10.00	
98 Mo	2260.00	ug/l	9.40	1.20	
99 (Mo)	--------	ug/l	--------	---	
106 (Cd)	0.63	ug/l	67.45	10.00	
107 Ag	0.31	ug/l	2.39	10.00	
108 (Cd)	21.36	ug/l	7.16	10.00	
111 Cd	0.20	ug/l	53.51	10.00	
114 Cd	1.15	ug/l	12.80	10.00	
118 (In)	--------	ug/l	--------	10.00	
120 Sn	-0.15	ug/l	31.63	10.00	
121 Sb	1.14	ug/l	12.99	10.00	
137 Ba	7.28	ug/l	10.60	10.00	
203 Tl	-0.14	ug/l	3.78	10.00	
206 Pb	0.23	ug/l	8.55	10.00	
207 Pb	0.02	ug/l	206.04	10.00	
208 Pb	0.60	ug/l	4.84	10.00	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1258012.80	4.41	1384334.90	90.9	60 - 120	
45 Sc	1377857.10	1.56	1350053.50	102.1	60 - 120	
74 Ge	232965.55	1.20	289784.44	80.4	60 - 120	
115 In	963189.75	5.18	1292141.60	74.5	60 - 120	
209 Bi	624531.06	4.85	786695.88	79.4	60 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F21100.B\003CALB.D\003CALB.D#

0 :Element Failures 0 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Nnumber of ISTD Failures Allowed

Data Results:

Analytes: Pass
ISTD: Pass

ICS-AB QC Report

Data File: C:\ICPCHEM\1\DATA\13F21100.B\154ICSB.D\154ICSB.D#
Date Acquired: Jun 21 2013 09:40 pm
Acq. Method: 6020G.M
Operator: ICPMS 2 - JG
Sample Name: ICS AB
Misc Info: 60-22-484
Vial Number: 1307
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal. Update: Jun 21 2013 11:46 am
Sample Type: ICS-AB
Dilution Factor: 1.00

QC Elements

Element	Conc.		RSD(%)	Expected	QC Range(%)	Flag
9 Be	0.28	ug/l	0.36	0.00	0 - 0	
11 B	1.04	ug/l	7.34	0.00	0 - 0	
23 Na	88980.00	ug/l	3.59	#########	80 - 120	
24 Mg	92500.00	ug/l	5.91	#########	80 - 120	
27 Al	87980.00	ug/l	4.15	#########	80 - 120	
28 Si	--------	ug/l	--------	---	##### - #####	
39 K	87300.00	ug/l	3.50	#########	80 - 120	
44 Ca	89900.00	ug/l	3.96	#########	80 - 120	
47 Ti	1959.00	ug/l	3.79	2000.00	80 - 120	
51 V	34.51	ug/l	6.49	40.00	80 - 120	
52 Cr	16.94	ug/l	6.30	20.00	80 - 120	
53 Cr	19.51	ug/l	5.28	---	##### - #####	
55 Mn	17.33	ug/l	5.93	20.00	80 - 120	
57 Fe	85880.00	ug/l	4.25	#########	80 - 120	
59 Co	32.70	ug/l	6.52	40.00	80 - 120	
60 Ni	33.52	ug/l	4.87	40.00	80 - 120	
63 Cu	16.94	ug/l	6.26	20.00	80 - 120	
66 Zn	16.90	ug/l	6.54	20.00	80 - 120	
75 As	18.91	ug/l	6.80	20.00	80 - 120	
77 (As)	22.10	ug/l	5.05	20.00	80 - 120	
78 Se	8.09	ug/l	75.63	20.00	80 - 120	
82 Se	18.77	ug/l	9.21	20.00	80 - 120	
83 (Se)	-498.50	ug/l	34.72	20.00	80 - 120	
88 (Ca)	3479.00	ug/l	5.92	20.00	80 - 120	
89 Y	--------	ug/l	--------	---	80 - 120	
98 Mo	2393.00	ug/l	7.99	2000.00	80 - 120	
99 (Mo)	--------	ug/l	--------	---	##### - #####	
106 (Cd)	23.59	ug/l	6.67	10.00	80 - 120	
107 Ag	19.62	ug/l	6.66	20.00	80 - 120	
108 (Cd)	50.21	ug/l	6.87	10.00	80 - 120	
111 Cd	9.97	ug/l	9.97	10.00	80 - 120	
114 Cd	10.97	ug/l	7.77	10.00	80 - 120	
118 (In)	--------	ug/l	--------	0.00	80 - 120	
120 Sn	-0.40	ug/l	9.20	0.00	80 - 120	
121 Sb	1.83	ug/l	9.06	0.00	0 - 0	
137 Ba	7.25	ug/l	8.02	0.00	0 - 0	
203 Tl	-0.03	ug/l	53.07	0.00	0 - 0	
206 Pb	0.37	ug/l	12.15	0.00	0 - 0	
207 Pb	0.19	ug/l	37.52	0.00	0 - 0	
208 Pb	0.74	ug/l	6.95	0.00	0 - 0	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1313372.60	4.67	1384334.90	94.9	60 - 120	
45 Sc	1329250.30	2.83	1350053.50	98.5	60 - 120	
74 Ge	239113.33	2.88	289784.44	82.5	60 - 120	
115 In	952651.44	4.16	1292141.60	73.7	60 - 120	
209 Bi	625513.31	5.82	786695.88	79.5	60 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F21100.B\003CALB.D\003CALB.D#

0 :Element Failures 0 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:

Analytes: Pass
ISTD: Pass

CCV QC Report

Data File: C:\ICPCHEM\1\DATA\13F21100.B\155CCV1.D\155CCV1.D#
Date Acquired: Jun 21 2013 09:44 pm
Operator: ICPMS 2 - JG
Sample Name: CCV1
Misc Info: 60-22-451
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal Update: Jun 21 2013 11:46 am
Sample Type: CCV1
Total Dil Factor: 1.00

QC Elements

Element	Conc.		RSD(%)	Expected	QC Range(%)	Flag
9 Be	89.99	ug/l	6.56	100.00	90 - 110	Fail
11 B	80.72	ug/l	7.92	100.00	90 - 110	Fail
23 Na	1233.00	ug/l	3.77	1000.00	90 - 110	Fail
24 Mg	1201.00	ug/l	2.43	1000.00	90 - 110	Fail
27 Al	225.70	ug/l	3.02	100.00	90 - 110	Fail
28 Si	--------	ug/l	--------	100.00	90 - 110	
39 K	1201.00	ug/l	3.46	1000.00	90 - 110	Fail
44 Ca	1093.00	ug/l	4.26	1000.00	90 - 110	
47 Ti	59.27	ug/l	4.27	50.00	90 - 110	Fail
51 V	104.20	ug/l	5.96	100.00	90 - 110	
52 Cr	103.30	ug/l	5.13	100.00	90 - 110	
53 Cr	104.00	ug/l	5.63	---	##### - #####	
55 Mn	101.80	ug/l	4.57	100.00	90 - 110	
57 Fe	1149.00	ug/l	4.83	1000.00	90 - 110	Fail
59 Co	98.32	ug/l	4.99	100.00	90 - 110	
60 Ni	101.90	ug/l	5.64	100.00	90 - 110	
63 Cu	96.94	ug/l	6.19	100.00	90 - 110	
66 Zn	102.70	ug/l	5.90	100.00	90 - 110	
75 As	96.75	ug/l	5.80	100.00	90 - 110	
77 (As)	97.64	ug/l	6.45	100.00	90 - 110	
78 Se	74.40	ug/l	13.33	100.00	90 - 110	
82 Se	94.36	ug/l	7.31	100.00	90 - 110	
83 (Se)	-252.10	ug/l	49.50	100.00	90 - 110	
88 (Ca)	371.90	ug/l	6.24	100.00	90 - 110	
89 Y	--------	ug/l	--------	100.00	90 - 110	
98 Mo	68.24	ug/l	5.95	50.00	90 - 110	Fail
99 (Mo)	--------	ug/l	--------	---	##### - #####	
106 (Cd)	102.20	ug/l	7.83	100.00	90 - 110	
107 Ag	100.40	ug/l	6.16	100.00	90 - 110	
108 (Cd)	101.80	ug/l	7.11	100.00	90 - 110	
111 Cd	102.40	ug/l	6.09	100.00	90 - 110	
114 Cd	101.80	ug/l	6.68	100.00	90 - 110	
118 (In)	--------	ug/l	--------	100.00	90 - 110	
120 Sn	52.40	ug/l	6.96	50.00	90 - 110	
121 Sb	54.76	ug/l	7.53	50.00	90 - 110	
137 Ba	99.18	ug/l	7.34	100.00	90 - 110	
203 Tl	104.30	ug/l	4.88	100.00	90 - 110	
206 Pb	104.50	ug/l	5.67	100.00	90 - 110	
207 Pb	103.00	ug/l	6.42	100.00	90 - 110	
208 Pb	102.00	ug/l	6.05	100.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1463338.30	4.76	1384334.90	105.7	80 - 120	
45 Sc	1288762.30	3.50	1350053.50	95.5	80 - 120	
74 Ge	272927.78	3.51	289784.44	94.2	80 - 120	
115 In	1105720.50	4.37	1292141.60	85.6	80 - 120	
209 Bi	700340.00	2.33	786695.88	89.0	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F21100.B\003CALB.D\003CALB.D#

9 :Element Failures 40 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCB QC Report

Data File: C:\ICPCHEM\1\DATA\13F21100.B\156_CCB.D\156_CCB.D#
Date Acquired: Jun 21 2013 09:48 pm
Operator: ICPMS 2 - JG
Sample Name: CCB
Misc Info: 60-22-473
Vial Number: 5
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal Update: Jun 21 2013 11:46 am
Sample Type: CCB
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	High Limit	Flag
9 Be	0.33 ug/l	3.78	1.00	
11 B	0.44 ug/l	3.54	5.00	
23 Na	82.89 ug/l	9.86	10.00	Fail
24 Mg	19.64 ug/l	53.26	10.00	Fail
27 Al	37.18 ug/l	26.15	3.00	Fail
28 Si	-------- ug/l	--------	10.00	
39 K	85.09 ug/l	8.31	10.00	Fail
44 Ca	26.60 ug/l	30.06	10.00	Fail
47 Ti	1.68 ug/l	4.64	5.00	
51 V	-1.48 ug/l	0.89	2.00	
52 Cr	-1.50 ug/l	1.60	2.00	
53 Cr	-1.02 ug/l	1.22	#VALUE!	
55 Mn	-1.38 ug/l	0.39	2.00	
57 Fe	53.20 ug/l	7.42	10.00	Fail
59 Co	-1.36 ug/l	1.11	2.00	
60 Ni	-1.43 ug/l	1.57	2.00	
63 Cu	-0.59 ug/l	1.49	5.00	
66 Zn	-1.46 ug/l	1.50	5.00	
75 As	-0.45 ug/l	13.03	2.00	
77 (As)	0.07 ug/l	212.90	3.00	
78 Se	-26.54 ug/l	12.88	3.00	
82 Se	0.36 ug/l	139.13	2.00	
83 (Se)	-141.50 ug/l	301.48	3.00	
88 (Ca)	23.30 ug/l	12.98	3.00	
89 Y	-------- ug/l	--------	#VALUE!	
98 Mo	5.44 ug/l	1.45	3.00	Fail
99 (Mo)	-------- ug/l	--------	#VALUE!	
106 (Cd)	-0.15 ug/l	117.16	3.00	
107 Ag	0.33 ug/l	3.95	2.00	
108 (Cd)	-0.13 ug/l	69.46	3.00	
111 Cd	-0.47 ug/l	4.88	1.00	
114 Cd	-0.38 ug/l	3.04	1.00	
118 (In)	-------- ug/l	--------	3.00	
120 Sn	0.37 ug/l	34.16	5.00	
121 Sb	2.01 ug/l	7.42	3.00	
137 Ba	-0.08 ug/l	19.84	2.00	
203 Tl	-0.04 ug/l	56.98	2.00	
206 Pb	0.04 ug/l	17.05	3.00	
207 Pb	-0.12 ug/l	6.48	3.00	
208 Pb	0.44 ug/l	1.70	1.00	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1473122.10	2.94	1384334.90	106.4	80 - 120	
45 Sc	1299617.50	3.92	1350053.50	96.3	80 - 120	
74 Ge	268634.44	3.37	289784.44	92.7	80 - 120	
115 In	1115027.50	5.49	1292141.60	86.3	80 - 120	
209 Bi	685250.00	3.72	786695.88	87.1	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F21100.B\003CALB.D\003CALB.D#

7 :Element Failures 15 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

Metals

SW846 6020

Run 3

Client: NRT, Inc.
Project: 69420, Peoples Gas - Willow Street / Hawthorne Ave
Lab Order: 13060604
Date Received: June 18, 2013

CLIENT: Natural Resource Technology, Inc.
Work Order: 13060604
Project: 69420, Peoples Gas - Willow Street / Hawthorne Ave

ANALYTICAL QC SUMMARY REPORT

Run ID: **ICPMS-2_130624A**

Sample ID: **ICV** SampType: **ICV** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS-2_130624A**
Client ID: **ZZZZZ** Batch ID: **R90429** TestNo: **SW6020** Analysis Date: **06/24/13 15:35** SeqNo: **2439535**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Beryllium	0.04966	0.0010	0.05	0	99.3	90	110	0	0		

Sample ID: **ICB** SampType: **ICB** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS-2_130624A**
Client ID: **ZZZZZ** Batch ID: **R90429** TestNo: **SW6020** Analysis Date: **06/24/13 15:39** SeqNo: **2439536**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Beryllium	0.00061	0.0010	0	0	0	0	0	0	0		

Sample ID: **ICS A** SampType: **ICSA** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS-2_130624A**
Client ID: **ZZZZZ** Batch ID: **R90429** TestNo: **SW6020** Analysis Date: **06/24/13 15:43** SeqNo: **2439537**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Beryllium	0.00058	0.0010	0	0	0	0	0	0	0		

Sample ID: **ICS AB** SampType: **ICSAB** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS-2_130624A**
Client ID: **ZZZZZ** Batch ID: **R90429** TestNo: **SW6020** Analysis Date: **06/24/13 15:47** SeqNo: **2439538**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Beryllium	0.00057	0.0010	0	0	0	0	0	0	0		

Sample ID: **CCV1** SampType: **CCV** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS-2_130624A**
Client ID: **ZZZZZ** Batch ID: **R90429** TestNo: **SW6020** Analysis Date: **06/24/13 16:14** SeqNo: **2439543**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Beryllium	0.1008	0.0010	0.1	0	101	90	110	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Natural Resource Technology, Inc.
Work Order: 13060604
Project: 69420, Peoples Gas - Willow Street / Hawthorne Ave

ANALYTICAL QC SUMMARY REPORT

Run ID: **ICPMS-2_130624A**

Sample ID: **CCB** SampType: **CCB** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS-2_130624A**
Client ID: **ZZZZZ** Batch ID: **R90429** TestNo: **SW6020** Analysis Date: **06/24/13 16:18** SeqNo: **2439544**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Beryllium	0.00062	0.0010	0	0	0	0	0	0	0		

Sample ID: **CCV1** SampType: **CCV** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS-2_130624A**
Client ID: **ZZZZZ** Batch ID: **R90429** TestNo: **SW6020** Analysis Date: **06/24/13 17:02** SeqNo: **2439555**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Beryllium	0.1067	0.0010	0.1	0	107	90	110	0	0		

Sample ID: **CCB** SampType: **CCB** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS-2_130624A**
Client ID: **ZZZZZ** Batch ID: **R90429** TestNo: **SW6020** Analysis Date: **06/24/13 17:05** SeqNo: **2439556**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Beryllium	0.00063	0.0010	0	0	0	0	0	0	0		

Sample ID: **CCV1** SampType: **CCV** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS-2_130624A**
Client ID: **ZZZZZ** Batch ID: **R90429** TestNo: **SW6020** Analysis Date: **06/24/13 17:21** SeqNo: **2439557**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Beryllium	0.1034	0.0010	0.1	0	103	90	110	0	0		

Sample ID: **CCB** SampType: **CCB** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS-2_130624A**
Client ID: **ZZZZZ** Batch ID: **R90429** TestNo: **SW6020** Analysis Date: **06/24/13 17:25** SeqNo: **2439558**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Beryllium	0.00063	0.0010	0	0	0	0	0	0	0		

Sample ID: **CCV1** SampType: **CCV** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS-2_130624A**
Client ID: **ZZZZZ** Batch ID: **R90429** TestNo: **SW6020** Analysis Date: **06/24/13 18:08** SeqNo: **2439560**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Natural Resource Technology, Inc.
Work Order: 13060604
Project: 69420, Peoples Gas - Willow Street / Hawthorne Ave

ANALYTICAL QC SUMMARY REPORT

Run ID: **ICPMS-2_130624A**

Sample ID: **CCV1** SampType: **CCV** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS-2_130624A**
Client ID: **ZZZZZ** Batch ID: **R90429** TestNo: **SW6020** Analysis Date: **06/24/13 18:08** SeqNo: **2439560**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Beryllium	0.1017	0.0010	0.1	0	102	90	110	0	0		

Sample ID: **CCB** SampType: **CCB** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS-2_130624A**
Client ID: **ZZZZZ** Batch ID: **R90429** TestNo: **SW6020** Analysis Date: **06/24/13 18:12** SeqNo: **2439561**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Beryllium	0.00063	0.0010	0	0	0	0	0	0	0		

Sample ID: **CCV1** SampType: **CCV** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS-2_130624A**
Client ID: **ZZZZZ** Batch ID: **R90429** TestNo: **SW6020** Analysis Date: **06/24/13 18:20** SeqNo: **2439571**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Beryllium	0.1075	0.0010	0.1	0	108	90	110	0	0		

Sample ID: **CCB** SampType: **CCB** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS-2_130624A**
Client ID: **ZZZZZ** Batch ID: **R90429** TestNo: **SW6020** Analysis Date: **06/24/13 18:24** SeqNo: **2439572**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Beryllium	0.00064	0.0010	0	0	0	0	0	0	0		

Sample ID: **CCV1** SampType: **CCV** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS-2_130624A**
Client ID: **ZZZZZ** Batch ID: **R90429** TestNo: **SW6020** Analysis Date: **06/24/13 19:07** SeqNo: **2439581**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Beryllium	0.1086	0.0010	0.1	0	109	90	110	0	0		

Sample ID: **CCB** SampType: **CCB** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS-2_130624A**
Client ID: **ZZZZZ** Batch ID: **R90429** TestNo: **SW6020** Analysis Date: **06/24/13 19:11** SeqNo: **2439582**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Natural Resource Technology, Inc.
Work Order: 13060604
Project: 69420, Peoples Gas - Willow Street / Hawthorne Ave

ANALYTICAL QC SUMMARY REPORT

Run ID: **ICPMS-2_130624A**

Sample ID: **CCB** SampType: **CCB** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS-2_130624A**
Client ID: **ZZZZZ** Batch ID: **R90429** TestNo: **SW6020** Analysis Date: **06/24/13 19:11** SeqNo: **2439582**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Beryllium	0.00062	0.0010	0	0	0	0	0	0	0		

Sample ID: **CCV1** SampType: **CCV** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS-2_130624A**
Client ID: **ZZZZZ** Batch ID: **R90429** TestNo: **SW6020** Analysis Date: **06/24/13 19:34** SeqNo: **2439583**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Beryllium	0.1071	0.0010	0.1	0	107	90	110	0	0		

Sample ID: **CCB** SampType: **CCB** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS-2_130624A**
Client ID: **ZZZZZ** Batch ID: **R90429** TestNo: **SW6020** Analysis Date: **06/24/13 19:38** SeqNo: **2439584**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Beryllium	0.00063	0.0010	0	0	0	0	0	0	0		

Sample ID: **CCV1** SampType: **CCV** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS-2_130624A**
Client ID: **ZZZZZ** Batch ID: **R90429** TestNo: **SW6020** Analysis Date: **06/24/13 20:17** SeqNo: **2439591**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Beryllium	0.103	0.0010	0.1	0	103	90	110	0	0		

Sample ID: **CCB** SampType: **CCB** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS-2_130624A**
Client ID: **ZZZZZ** Batch ID: **R90429** TestNo: **SW6020** Analysis Date: **06/24/13 20:21** SeqNo: **2439592**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Beryllium	0.00064	0.0010	0	0	0	0	0	0	0		

Sample ID: **CCV1** SampType: **CCV** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS-2_130624A**
Client ID: **ZZZZZ** Batch ID: **R90429** TestNo: **SW6020** Analysis Date: **06/24/13 21:05** SeqNo: **2439599**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Natural Resource Technology, Inc.
Work Order: 13060604
Project: 69420, Peoples Gas - Willow Street / Hawthorne Ave

ANALYTICAL QC SUMMARY REPORT

Run ID: **ICPMS-2_130624A**

Sample ID: **CCV1** SampType: **CCV** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS-2_130624A**
Client ID: **ZZZZZ** Batch ID: **R90429** TestNo: **SW6020** Analysis Date: **06/24/13 21:05** SeqNo: **2439599**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Beryllium	0.1023	0.0010	0.1	0	102	90	110	0	0		

Sample ID: **CCB** SampType: **CCB** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS-2_130624A**
Client ID: **ZZZZZ** Batch ID: **R90429** TestNo: **SW6020** Analysis Date: **06/24/13 21:09** SeqNo: **2439600**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Beryllium	0.00062	0.0010	0	0	0	0	0	0	0		

Sample ID: **CCV1** SampType: **CCV** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS-2_130624A**
Client ID: **ZZZZZ** Batch ID: **R90429** TestNo: **SW6020** Analysis Date: **06/24/13 22:08** SeqNo: **2439601**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Beryllium	0.1013	0.0010	0.1	0	101	90	110	0	0		

Sample ID: **CCB** SampType: **CCB** TestCode: **M_ICPMS_W** Units: **mg/L** Prep Date: Run ID: **ICPMS-2_130624A**
Client ID: **ZZZZZ** Batch ID: **R90429** TestNo: **SW6020** Analysis Date: **06/24/13 22:12** SeqNo: **2439602**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Beryllium	0.00063	0.0010	0	0	0	0	0	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

RUN SEQUENCE ICPMS 2

Sequence	Dilution	Internal Std	SAMPLE	ELEMENTS	TEST CODES	Date/Time
003CALB.	1		CAL Blank	#VALUE!		6/24/13 15:07
004CALS.	1		CAL STD 1	#VALUE!	60-23-05	6/24/13 15:11
005CALS.	1		CAL STD 2		60-23-04	6/24/13 15:15
006CALS.	1		CAL STD 3		60-23-03	6/24/13 15:19
007CALS.	1		CAL STD 4		60-23-02	6/24/13 15:23
008BLNK.	1		Blank		Blank	6/24/13 15:27
009BLNK.	1		Blank		Blank	6/24/13 15:31
010ICV1.	1		ICV		60-23-06	6/24/13 15:35
011_ICB.	1		ICB		60-22-493	6/24/13 15:39
012ICSA.	1		ICS A		60-22-486	6/24/13 15:43
013ICSB.	1		ICS AB		60-22-487	6/24/13 15:47
014BLNK.	1		Blank		Blank	6/24/13 15:51
015SMPL.	5		IMBS2 6/21/13	Fe Al K	M_ICPMS_S	6/24/13 15:54
016SMPL.	5		ILCSS2 6/21/13	Pb Cr Ba Ni Sb Fe Co Mn V Al Mo Na Mg K Sn	M_ICPMS_S	6/24/13 15:58
017SMPL.	10		13060588-001B		M_ICPMS_S	6/24/13 16:02
018SMPL.	10		13060588-002B		M_ICPMS_S	6/24/13 16:06
019BLNK.	1		blk			6/24/13 16:10
020CCV1.	1		CCV1	Cr Ni Zn Sb Fe V Al Mg K Ca	60-23-07	6/24/13 16:14
021_CCB.	1		CCB		60-22-493	6/24/13 16:18
022SMPL.	10		13060588-003B		M_ICPMS_S	6/24/13 16:22
023SMPL.	5		IMBS2 6/24/13	K	M_ICPMS_S	6/24/13 16:26
024SMPL.	10		13060588-004B		M_ICPMS_S	6/24/13 16:30
025SMPL.	100		13060675-006A		M_ICPMS_S	6/24/13 16:34
026SMPL.	20		13060675-006A		M_ICPMS_S	6/24/13 16:38
027SMPL.	20		13060675-006AMS		M_ICPMS_S	6/24/13 16:42
028SMPL.	20		13060675-006AMSD		M_ICPMS_S	6/24/13 16:46
029SMPL.	10	Sc	13060375-058AMS		M_ICPMS_S	6/24/13 16:50
030SMPL.	10		13060458-001A		M_ICPMS_W	6/24/13 16:54
031SMPL.	2		13060459-001A		M_ICPMS_W	6/24/13 16:58
032CCV1.	1		CCV1	Sb Mn Al Ca B	60-23-07	6/24/13 17:02
033_CCB.	1		CCB		60-22-493	6/24/13 17:05
034SMPL.	1		blk		M_ICPMS_W	6/24/13 17:09
035SMPL.	1		blk		M_ICPMS_W	6/24/13 17:13
036SMPL.	1		blk		M_ICPMS_W	6/24/13 17:17
037CCV1.	1		CCV1	Sb Mn V Al	60-23-07	6/24/13 17:21
038_CCB.	1		CCB		60-22-493	6/24/13 17:25
039SMPL.	1		blk		M_ICPMS_W	6/24/13 17:29
040SMPL.	1		blk		M_ICPMS_W	6/24/13 17:33
041SMPL.	1		blk		M_ICPMS_W	6/24/13 17:37
043SMPL.	2		START ERROR TERM		M_ICPMS_W	6/24/13 18:00
044CCV1.	1		CCV1	Sb Al K	60-20-04	6/24/13 18:08
045_CCB.	1		CCB		60-20-10	6/24/13 18:12
046SMPL.	20		13060759-001B		M_ICPMS_S	6/24/13 18:16
047CCV1.	1		CCV1	Sb Al Mg	60-20-04	6/24/13 18:20
048_CCB.	1		CCB		60-20-10	6/24/13 18:24
049SMPL.	5		ILCSS2 6/24/13	Sb Sn	M_ICPMS_S	6/24/13 18:28
050SMPL.	1		blk		M_ICPMS_W	6/24/13 18:32
051SMPL.	50		13060679-001A		M_ICPMS_S	6/24/13 18:36
052SMPL.	10		13060679-001A		M_ICPMS_S	6/24/13 18:40
053SMPL.	10		13060679-001AMS		M_ICPMS_S	6/24/13 18:44

File Path C:\ICPCHEM\1\DATA\ **13F24O00.B**
Method: 6020G.M

RUN SEQUENCE ICPMS 2

Sequence	Dilution	Internal Std	SAMPLE	ELEMENTS	TEST CODES	Date/Time
054SMPL.	10		13060679-001AMSD		M_ICPMS_S	6/24/13 18:48
055SMPL.	2		13060602-001C		M_ICPMS_W	6/24/13 18:52
056SMPL.	2		13060603-001C		M_ICPMS_W	6/24/13 18:56
057SMPL.	2		13060604-001C		M_ICPMS_W	6/24/13 19:00
058SMPL.	1		blk		M_ICPMS_W	6/24/13 19:03
059CCV1.	1		CCV1	Al Mg	60-20-04	6/24/13 19:07
060_CCB.	1		CCB		60-20-10	6/24/13 19:11
061SMPL.	1		blk		M_ICPMS_W	6/24/13 19:16
062SMPL.	1		blk		M_ICPMS_W	6/24/13 19:22
063SMPL.	1		blk		M_ICPMS_W	6/24/13 19:26
064SMPL.	1		blk		M_ICPMS_W	6/24/13 19:30
065CCV1.	1		CCV1	Sb	60-20-04	6/24/13 19:34
066_CCB.	1		CCB		60-20-10	6/24/13 19:38
067SMPL.	5		IMBS1 6/24/13	Na Ca Sn	M_ICPMS_S	6/24/13 19:42
068SMPL.	5		ILCSS1 6/24/13	Sb Na Sn	M_ICPMS_S	6/24/13 19:46
069SMPL.	1		blk		M_ICPMS_W	6/24/13 19:50
070SMPL.	5		13060779-003A		M_ICPMS_S	6/24/13 19:54
071SMPL.	5		13060779-003AMS		M_ICPMS_S	6/24/13 19:58
072SMPL.	1		blk		M_ICPMS_W	6/24/13 20:01
073SMPL.	5		13060779-003AMSD		M_ICPMS_S	6/24/13 20:05
074SMPL.	5		13060779-001A		M_ICPMS_S	6/24/13 20:09
075SMPL.	1		blk		M_ICPMS_W	6/24/13 20:13
076CCV1.	1		CCV1	Sb	60-20-04	6/24/13 20:17
077_CCB.	1		CCB		60-20-10	6/24/13 20:21
078SMPL.	5		13060779-002A		M_ICPMS_S	6/24/13 20:25
079SMPL.	5		13060779-004A		M_ICPMS_S	6/24/13 20:29
080SMPL.	1		blk		M_ICPMS_W	6/24/13 20:33
081SMPL.	5		13060779-005A		M_ICPMS_S	6/24/13 20:37
082SMPL.	1		blk		M_ICPMS_W	6/24/13 20:41
083SMPL.	5		13060779-006A		M_ICPMS_S	6/24/13 20:45
084SMPL.	1		blk		M_ICPMS_W	6/24/13 20:49
085SMPL.	5		13060779-007A		M_ICPMS_S	6/24/13 20:53
086SMPL.	5		13060779-008A		M_ICPMS_S	6/24/13 20:57
087SMPL.	1		blk		M_ICPMS_W	6/24/13 21:01
088CCV1.	1		CCV1	Sb Mo	60-20-04	6/24/13 21:05
089_CCB.	1		CCB		60-20-10	6/24/13 21:09
090SMPL.	1		blk		M_ICPMS_W	6/24/13 21:13
091SMPL.	1		blk		M_ICPMS_W	6/24/13 21:17
092SMPL.	1		blk		M_ICPMS_W	6/24/13 21:21
093SMPL.	1		blk		M_ICPMS_W	6/24/13 21:25
094SMPL.	1		blk		M_ICPMS_W	6/24/13 21:29
095SMPL.	1		blk		M_ICPMS_W	6/24/13 21:33
096SMPL.	1		blk		M_ICPMS_W	6/24/13 21:37
097SMPL.	1		blk		M_ICPMS_W	6/24/13 21:41
098SMPL.	1		blk		M_ICPMS_W	6/24/13 21:45
099SMPL.	1		blk		M_ICPMS_W	6/24/13 21:48
100SMPL.	1		blk		M_ICPMS_W	6/24/13 21:52
101SMPL.	1		blk		M_ICPMS_W	6/24/13 21:56
102SMPL.	1		blk		M_ICPMS_W	6/24/13 22:00
103SMPL.	1		blk		M_ICPMS_W	6/24/13 22:04
104CCV1.	1		CCV1	Sb	60-20-04	6/24/13 22:08

File Path C:\ICPCHEM\1\DATA\ **13F24O00.B**
Method: 6020G.M

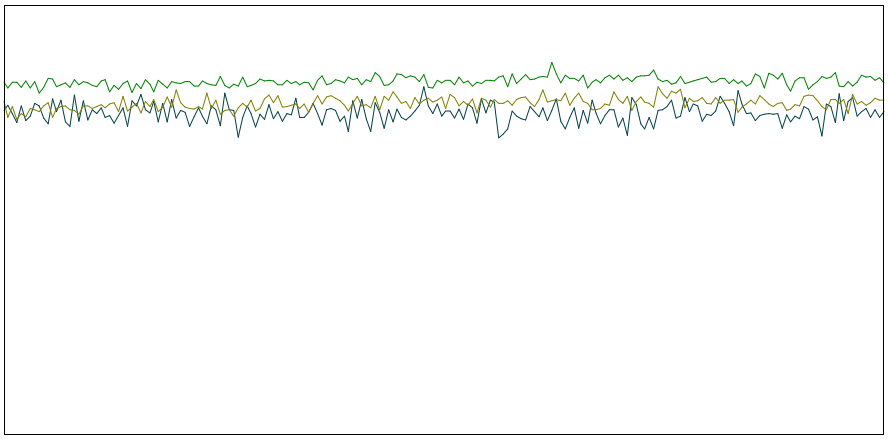
RUN SEQUENCE ICPMS 2

Sequence	Dilution	Internal Std	SAMPLE	ELEMENTS	TEST CODES	Date/Time
105_CCB.	1		CCB		60-20-10	6/24/13 22:12
106SMPL.	1		blk		M_ICPMS_W	6/24/13 22:16
107SMPL.	1		blk		M_ICPMS_W	6/24/13 22:20

File Path C:\ICPCHEM\1\DATA\ **13F24O00.B**
Method: 6020G.M

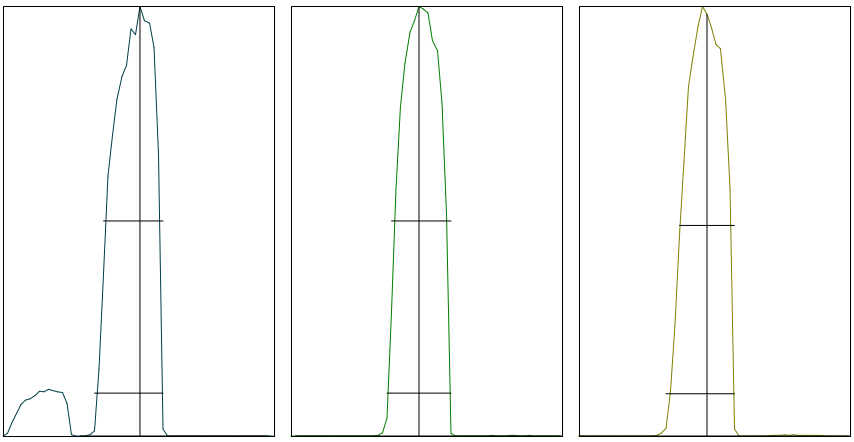
Tune Report

Tune File : ATUNE.U
Comment : icp ms2



Integration Time: 0.1000 sec
Sampling Period: 0.7200 sec
n: 200
Oxide: 156/140 0.572%
Doubly Charged: 70/140 1.927%

m/z	Range	Count	Mean	RSD%	Background
7	20,000	15011.0	14939.2	2.94	1.40
89	20,000	16358.0	16428.0	1.28	2.00
205	10,000	7772.0	7703.8	1.80	3.00
156/140	2	0.623%	0.525%	11.17	
70/140	5	1.738%	1.850%	7.36	
208	50	48.0	45.5	21.41	4.50



m/z:	7	89	205
Height:	15,835	16,703	8,070
Axis:	7.05	88.95	204.95
W-50%:	0.65	0.65	0.60
W-10%:	0.7500	0.700	0.7500

Integration Time: 0.1000 sec
Acquisition Time: 22.7600 sec

Y axis : Linear

Generated : Jun 24, 2013 09:28:19
Printed : Jun 24, 2013 09:28:21

Tune Report

Tune File : ATUNE.U
Comment : icp ms2

Tuning Parameters

===Plasma Condition===			===Ion Lenses===			===Q-Pole Parameters===		
RF Power	:	1500 W	Extract 1	:	-170 V	AMU Gain	:	129
RF Matching	:	1.6 V	Extract 2	:	-102 V	AMU Offset	:	126
Smpl Depth	:	5 mm	Einzel 1,3	:	-100 V	Axis Gain	:	1
Torch-H	:	1 mm	Einzel 2	:	0 V	Axis Offset	:	0.06
Torch-V	:	1.3 mm	Omega Bias	:	-35 V	QP Bias	:	3 V
Carrier Gas	:	1.15 L/min	Omega (+)	:	9.3 V			
Makeup Gas	:	0 L/min	Omega (-)	:	5 V	===Detector Parameters===		
Optional Gas	:	--- %	QP Focus	:	10 V	Discriminator	:	8 mV
Nebulizer Pump	:	0.12 rps	Plate Bias	:	-11 V	Analog HV	:	1720 V
Sample Pump	:	--- rps				Pulse HV	:	1310 V
S/C Temp	:	2 degC						

P/A Factor Tuning Report

Acquired:Jun 24 2013 09:52 am

Mass[amu]	Element	P/A Factor
6	Li	0.064540
9	Be	0.073252
11	B	0.071131
23	Na	0.079093
24	Mg	0.082029
27	Al	0.087084
28	Si	0.074452
39	K	0.087050
44	Ca	0.090116
45	Sc	0.086550
47	Ti	0.086172
51	V	0.090090
52	Cr	0.091458
53	Cr	0.090845
55	Mn	0.092611
57	Fe	0.093696
59	Co	0.095027
60	Ni	0.096327
63	Cu	0.098333
66	Zn	0.096566
74	Ge	Sensitivity too low
75	As	0.094223
77	(As)	Sensitivity too low
78	Se	Sensitivity too low
82	Se	Sensitivity too low
83	(Se)	Sensitivity too low
88	(Ca)	Sensitivity too low
89	Y	0.094307
98	Mo	0.095516
99	(Mo)	0.096027
106	(Cd)	Sensitivity too low
107	Ag	0.098115
108	(Cd)	Sensitivity too low
111	Cd	0.098273
114	Cd	0.099784
115	In	0.098272
118	(In)	0.099100
120	Sn	0.099930
121	Sb	0.100153
123	Sb	0.100171
137	Ba	0.099881
203	Tl	0.105840
206	Pb	0.105051
207	Pb	0.104593
208	Pb	0.105441
209	Bi	0.104607

===Detector Parameters===
Discriminator: 8.0 mV
Analog HV: 1720 V
Pulse HV: 1310 V

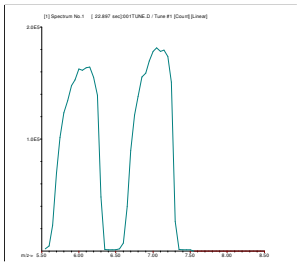
- 1 -

6020 QC Tune Report

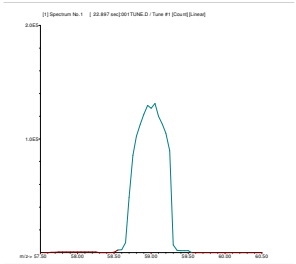
Data File: C:\ICPCHEM\1\DATA\13F24o00.B\001TUNE.D
Date Acquired: Jun 24 2013 02:57 pm
Acq. Method: TN6020.M
Operator: ICPMS 2 - JG
Sample Name: Tune Check
Misc Info: 60-22-495
Vial Number: 1306
Current Method: C:\ICPCHEM\1\METHODS\TN6020.M

RSD (%)

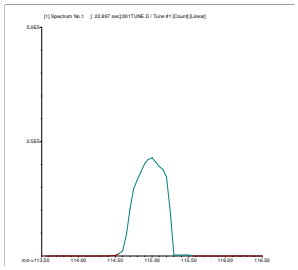
Element	Actual	Required	Flag
7 Li	2.20	5.00	
59 Co	0.98	5.00	
115 In	1.09	5.00	
205 Tl	1.19	5.00	



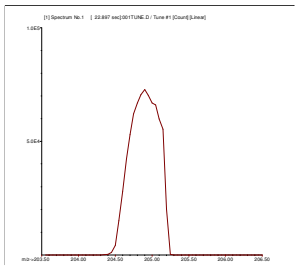
7 Li
Mass Calib.
Actual: 7.10
Required: 6.90 - 7.10
Flag:
Peak Width
Actual: 0.65
Required: 0.90
Flag:



59 Co
Mass Calib.
Actual: 59.00
Required: 58.90 - 59.10
Flag:
Peak Width
Actual: 0.55
Required: 0.90
Flag:



115 In
Mass Calib.
Actual: 115.00
Required: 114.90 - 115.10
Flag:
Peak Width
Actual: 0.60
Required: 0.90
Flag:



205 Tl
Mass Calib.
Actual: 204.90
Required: 204.90 - 205.10
Flag:
Peak Width
Actual: 0.65
Required: 0.90
Flag:

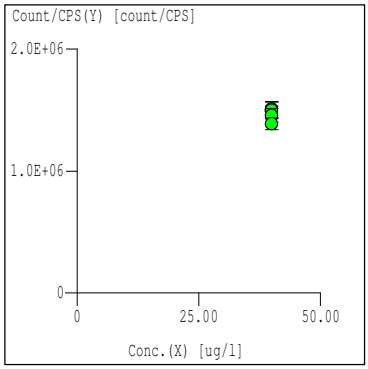
Last Calib: Jun 24, 2013 03:25 pm
Calibration Type: External Calibration Method
Calibration Title: ICPMS - 2
Weighting Method: 1/(SD*SD)
Mass Interpolation Fit for VIS: Point to Point
Method: C:\ICPCHEM\1\METHODS\6020G.M

=== Standard Files ===
<Data Correction>
Bkg File: ---
Rejected Masses: ---
Interference Correction: ON

	Data File	Sample Name	Date Acquired
1	c:\icpchem\1\data\13f24o00.b\003calb.d\003calb.d#	CAL Blank	Jun 24 2013 03:07 pm
2	c:\icpchem\1\data\13f24o00.b\004cals.d\004cals.d#	CAL STD 1	Jun 24 2013 03:11 pm
3	c:\icpchem\1\data\13f24o00.b\005cals.d\005cals.d#	CAL STD 2	Jun 24 2013 03:15 pm
4	c:\icpchem\1\data\13f24o00.b\006cals.d\006cals.d#	CAL STD 3	Jun 24 2013 03:19 pm
5	c:\icpchem\1\data\13f24o00.b\007cals.d\007cals.d#	CAL STD 4	Jun 24 2013 03:23 pm
6	---		
7	---		
8	---		
9	---		
10	---		
11	---		
12	---		
13	---		
14	---		
15	---		
16	---		
17	---		
18	---		
19	---		
20	---		

=== Graph Detail ===

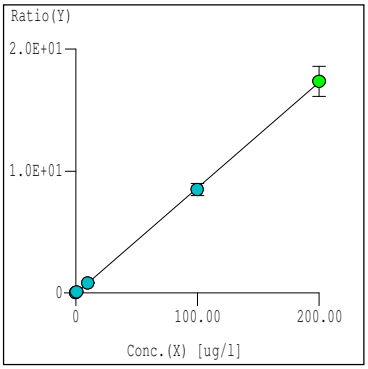
Step	Mass	Element	ISTD	Unit
(1)	6	Li	---	ug/l



Curve Fit: Excluded
r = 0.0000

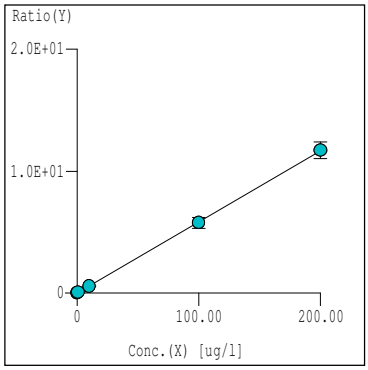
DL = --- ug/l
BEC = --- ug/l

Step	Mass	Element	ISTD	Unit
(1)	9	Be	6	ug/l



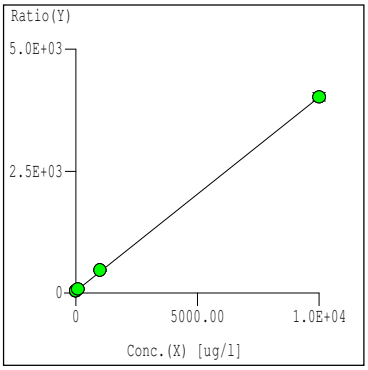
Curve Fit: Y=aX+b
r = 0.9999
Y = 8.668E-002*X -4.755E-002
X = 1.154E+001*Y +5.485E-001
DL = 3.930E-03 ug/l
BEC = -5.485E-01 ug/l

Step	Mass	Element	ISTD	Unit
(1)	11	B	6	ug/l



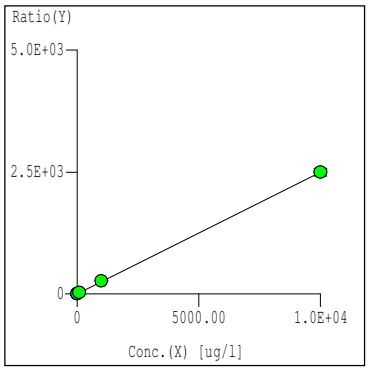
Curve Fit: Y=aX+b
r = 1.0000
Y = 5.844E-002*X -1.097E-002
X = 1.711E+001*Y +1.877E-001
DL = 5.562E-02 ug/l
BEC = -1.877E-01 ug/l

Step	Mass	Element	ISTD	Unit
(1)	23	Na	45	ug/l



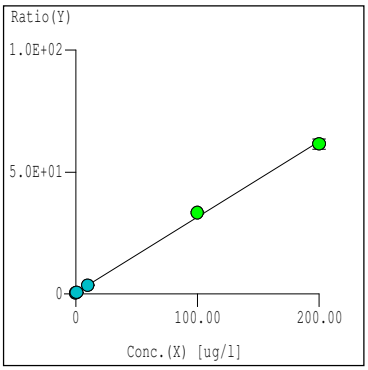
Curve Fit: Y=aX+b
r = 1.0000
Y = 3.976E-001*X +4.568E+001
X = 2.515E+000*Y -1.149E+002
DL = 11.87 ug/l
BEC = 114.9 ug/l

Step	Mass	Element	ISTD	Unit
(1)	24	Mg	45	ug/l



Curve Fit: Y=aX+b
r = 1.0000
Y = 2.496E-001*X +5.379E+000
X = 4.007E+000*Y -2.155E+001
DL = 2.178E-01 ug/l
BEC = 21.55 ug/l

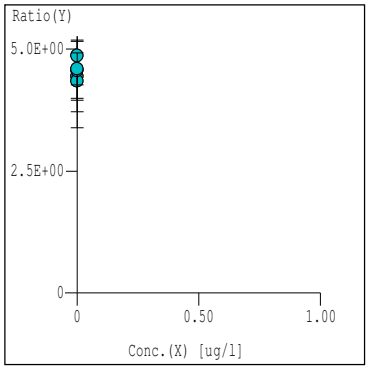
Step	Mass	Element	ISTD	Unit
(1)	27	Al	45	ug/l



Curve Fit: Y=aX+b
r = 0.9993
Y = 3.091E-001*X +6.033E-001
X = 3.235E+000*Y -1.952E+000
DL = 1.192E-01 ug/l
BEC = 1.952 ug/l

=== Graph Detail ===

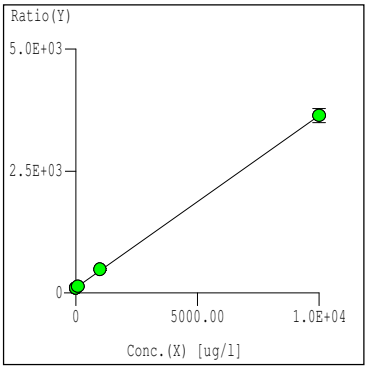
Step	Mass	Element	ISTD	Unit
(1)	28	Si	45	ug/l



Curve Fit: Y=aX+b
r = 0.0000

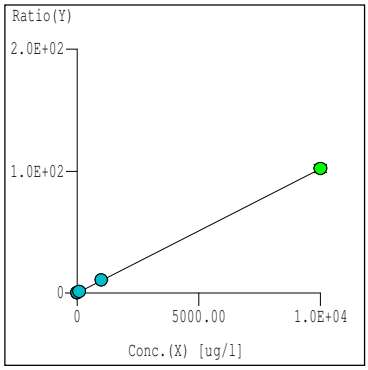
DL = --- ug/l
BEC = --- ug/l

Step	Mass	Element	ISTD	Unit
(1)	39	K	45	ug/l



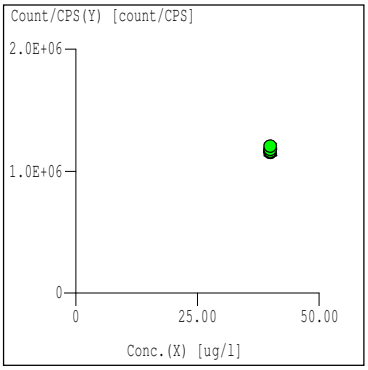
Curve Fit: Y=aX+b
r = 1.0000
Y = 3.535E-001*X +1.038E+002
X = 2.829E+000*Y -2.935E+002
DL = 8.100 ug/l
BEC = 293.5 ug/l

Step	Mass	Element	ISTD	Unit
(1)	44	Ca	45	ug/l



Curve Fit: Y=aX+b
r = 1.0000
Y = 1.019E-002*X +2.621E-001
X = 9.811E+001*Y -2.571E+001
DL = 1.389 ug/l
BEC = 25.71 ug/l

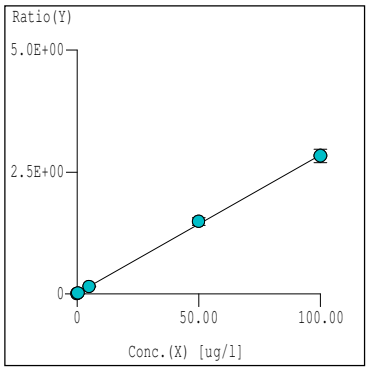
Step	Mass	Element	ISTD	Unit
(1)	45	Sc	---	ug/l



Curve Fit: Excluded
r = 0.0000

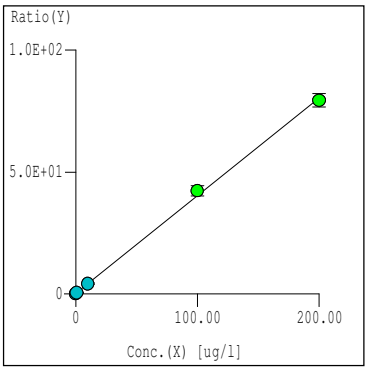
DL = --- ug/l
BEC = --- ug/l

Step	Mass	Element	ISTD	Unit
(1)	47	Ti	45	ug/l



Curve Fit: Y=aX+b
r = 0.9998
Y = 2.841E-002*X +1.490E-002
X = 3.520E+001*Y -5.244E-001
DL = 1.171E-01 ug/l
BEC = 5.244E-01 ug/l

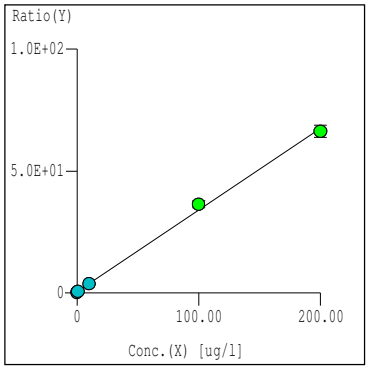
Step	Mass	Element	ISTD	Unit
(1)	51	V	45	ug/l



Curve Fit: Y=aX+b
r = 0.9995
Y = 3.997E-001*X +3.934E-001
X = 2.502E+000*Y -9.845E-001
DL = 3.622E-02 ug/l
BEC = 9.845E-01 ug/l

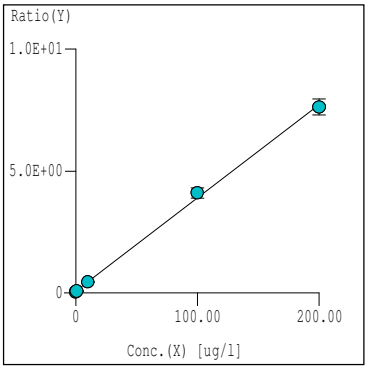
=== Graph Detail ===

Step	Mass	Element	ISTD	Unit
(1)	52	Cr	45	ug/l



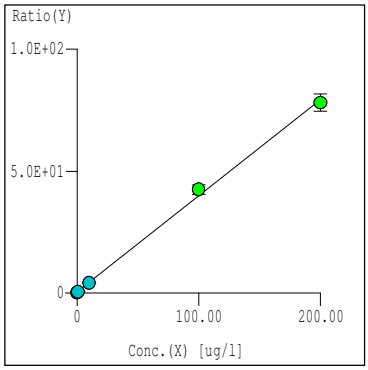
Curve Fit: Y=aX+b
r = 0.9990
Y = 3.339E-001*X +6.347E-001
X = 2.995E+000*Y -1.901E+000
DL = 7.183E-02 ug/l
BEC = 1.901 ug/l

Step	Mass	Element	ISTD	Unit
(1)	53	Cr	45	ug/l



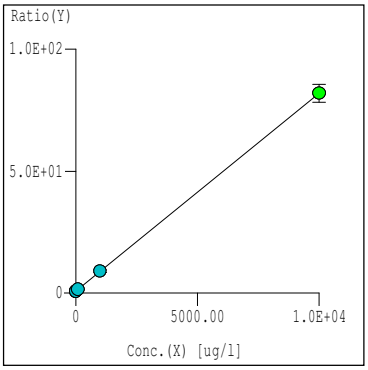
Curve Fit: Y=aX+b
r = 0.9994
Y = 3.825E-002*X +7.657E-002
X = 2.614E+001*Y -2.002E+000
DL = 8.177E-02 ug/l
BEC = 2.002 ug/l

Step	Mass	Element	ISTD	Unit
(1)	55	Mn	45	ug/l



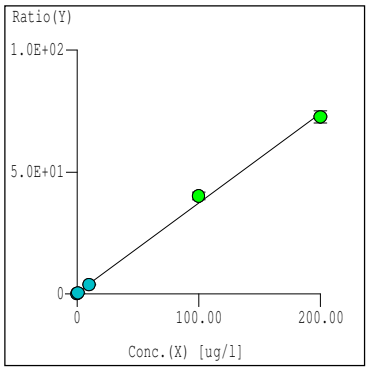
Curve Fit: Y=aX+b
r = 0.9991
Y = 3.937E-001*X +5.518E-001
X = 2.540E+000*Y -1.401E+000
DL = 1.950E-02 ug/l
BEC = 1.401 ug/l

Step	Mass	Element	ISTD	Unit
(1)	57	Fe	45	ug/l



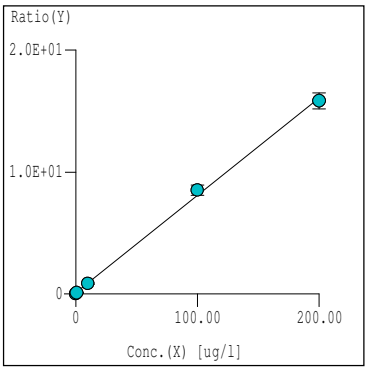
Curve Fit: Y=aX+b
r = 1.0000
Y = 8.136E-003*X +7.044E-001
X = 1.229E+002*Y -8.658E+001
DL = 5.463 ug/l
BEC = 86.58 ug/l

Step	Mass	Element	ISTD	Unit
(1)	59	Co	45	ug/l



Curve Fit: Y=aX+b
r = 0.9987
Y = 3.673E-001*X +5.344E-001
X = 2.722E+000*Y -1.455E+000
DL = 2.140E-02 ug/l
BEC = 1.455 ug/l

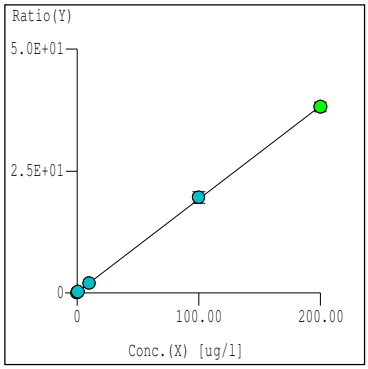
Step	Mass	Element	ISTD	Unit
(1)	60	Ni	45	ug/l



Curve Fit: Y=aX+b
r = 0.9994
Y = 7.985E-002*X +9.400E-002
X = 1.252E+001*Y -1.177E+000
DL = 2.478E-02 ug/l
BEC = 1.177 ug/l

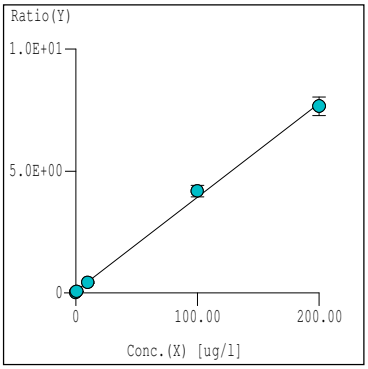
=== Graph Detail ===

Step	Mass	Element	ISTD	Unit
(1)	63	Cu	45	ug/l



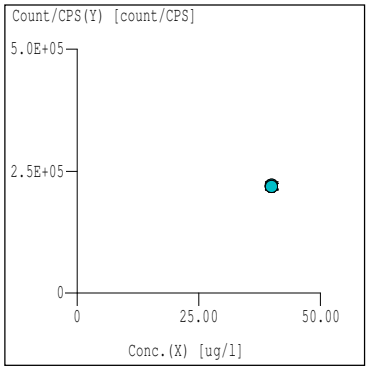
Curve Fit: Y=aX+b
r = 0.9999
Y = 1.912E-001*X +1.005E-001
X = 5.229E+000*Y -5.253E-001
DL = 2.395E-02 ug/l
BEC = 5.253E-01 ug/l

Step	Mass	Element	ISTD	Unit
(1)	66	Zn	45	ug/l



Curve Fit: Y=aX+b
r = 0.9991
Y = 3.857E-002*X +6.935E-002
X = 2.593E+001*Y -1.798E+000
DL = 5.635E-02 ug/l
BEC = 1.798 ug/l

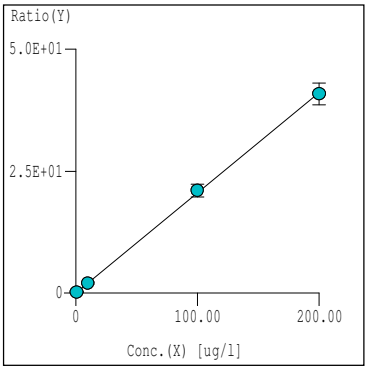
Step	Mass	Element	ISTD	Unit
(1)	74	Ge	---	ug/l



Curve Fit: Excluded
r = 0.0000

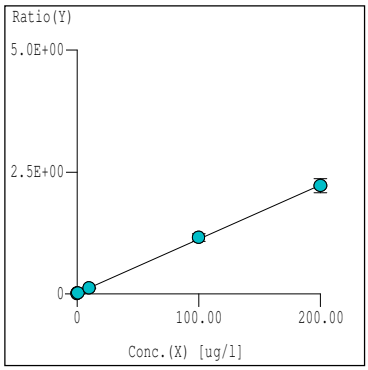
DL = --- ug/l
BEC = --- ug/l

Step	Mass	Element	ISTD	Unit
(1)	75	As	74	ug/l



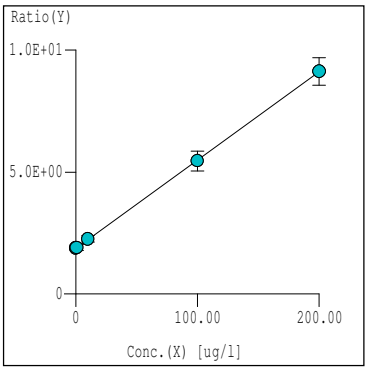
Curve Fit: Y=aX+b
r = 0.9999
Y = 2.052E-001*X +6.537E-002
X = 4.874E+000*Y -3.186E-001
DL = 1.040E-01 ug/l
BEC = 3.186E-01 ug/l

Step	Mass	Element	ISTD	Unit
(1)	77	(As)	74	ug/l



Curve Fit: Y=aX+b
r = 0.9998
Y = 1.111E-002*X +1.502E-002
X = 9.002E+001*Y -1.352E+000
DL = 2.426E-01 ug/l
BEC = 1.352 ug/l

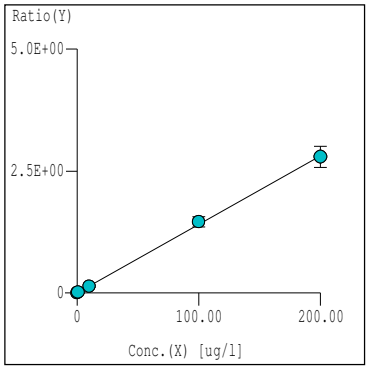
Step	Mass	Element	ISTD	Unit
(1)	78	Se	74	ug/l



Curve Fit: Y=aX+b
r = 1.0000
Y = 3.619E-002*X +1.874E+000
X = 2.763E+001*Y -5.179E+001
DL = 5.370 ug/l
BEC = 51.79 ug/l

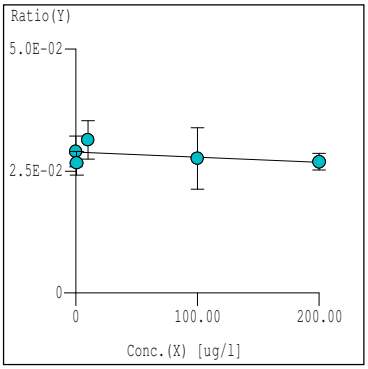
=== Graph Detail ===

Step	Mass	Element	ISTD	Unit
(1)	82	Se	74	ug/l



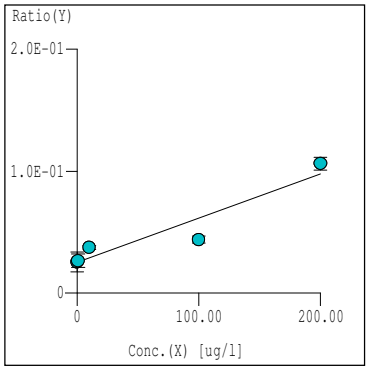
Curve Fit: Y=aX+b
r = 0.9998
Y = 1.404E-002*X +7.797E-003
X = 7.124E+001*Y -5.554E-001
DL = 3.264E-01 ug/l
BEC = 5.554E-01 ug/l

Step	Mass	Element	ISTD	Unit
(1)	83	(Se)	74	ug/l



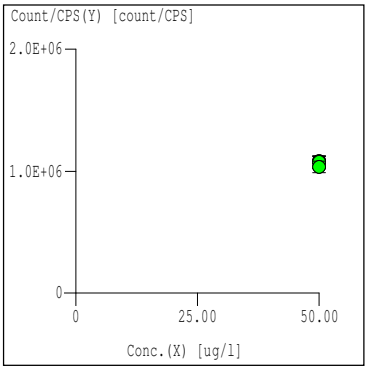
Curve Fit: Y=aX+b
r = -0.4707
Y = -1.051E-005*X +2.896E-002
X = -9.511E+004*Y +2.754E+003
DL = -8.981E+02 ug/l
BEC = -2.754E+03 ug/l

Step	Mass	Element	ISTD	Unit
(1)	88	(Ca)	74	ug/l



Curve Fit: Y=aX+b
r = 0.9472
Y = 3.628E-004*X +2.531E-002
X = 2.757E+003*Y -6.977E+001
DL = 66.97 ug/l
BEC = 69.77 ug/l

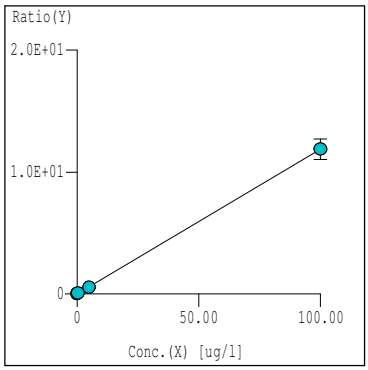
Step	Mass	Element	ISTD	Unit
(1)	89	Y	---	ug/l



Curve Fit: Y=aX+b
r = 0.0000

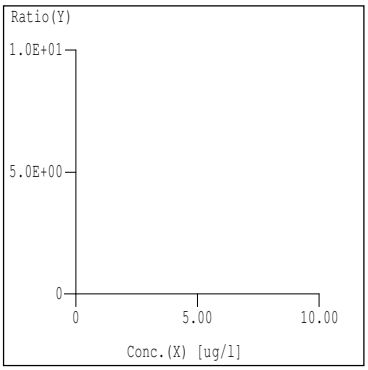
DL = --- ug/l
BEC = --- ug/l

Step	Mass	Element	ISTD	Unit
(1)	98	Mo	115	ug/l



Curve Fit: Y=aX+b
r = 1.0000
Y = 1.188E-001*X -5.873E-003
X = 8.415E+000*Y +4.942E-002
DL = 1.032E-01 ug/l
BEC = -4.942E-02 ug/l

Step	Mass	Element	ISTD	Unit
(1)	99	(Mo)	115	ug/l

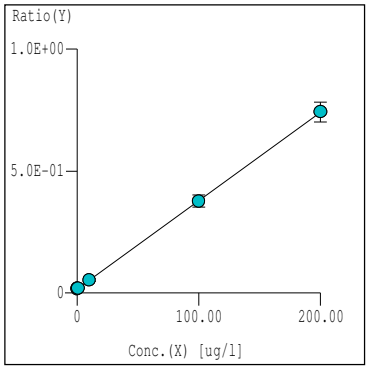


Curve Fit: Y=aX+b
r = 0.0000

DL = --- ug/l
BEC = --- ug/l

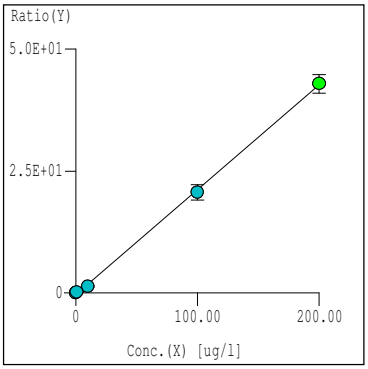
=== Graph Detail ===

Step Mass Element	ISTD	Unit
(1) 106 (Cd)	115	ug/l



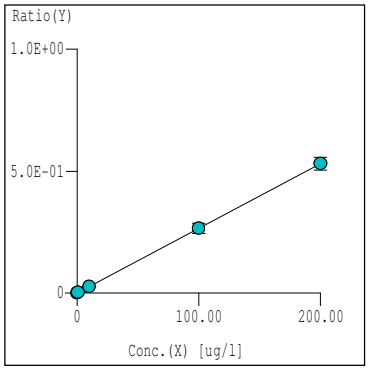
Curve Fit: Y=aX+b
r = 1.0000
Y = 3.629E-003*X +1.612E-002
X = 2.755E+002*Y -4.442E+000
DL = 7.495E-01 ug/l
BEC = 4.442 ug/l

Step Mass Element	ISTD	Unit
(1) 107 Ag	115	ug/l



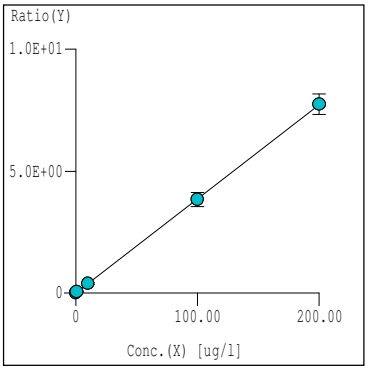
Curve Fit: Y=aX+b
r = 0.9997
Y = 2.150E-001*X -3.466E-001
X = 4.651E+000*Y +1.612E+000
DL = 3.073E-03 ug/l
BEC = -1.612E+00 ug/l

Step Mass Element	ISTD	Unit
(1) 108 (Cd)	115	ug/l



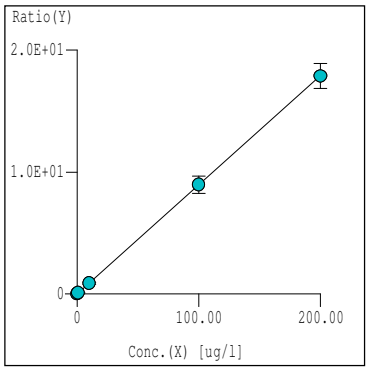
Curve Fit: Y=aX+b
r = 1.0000
Y = 2.657E-003*X -1.229E-004
X = 3.764E+002*Y +4.627E-002
DL = --- ug/l
BEC = -4.627E-02 ug/l

Step Mass Element	ISTD	Unit
(1) 111 Cd	115	ug/l



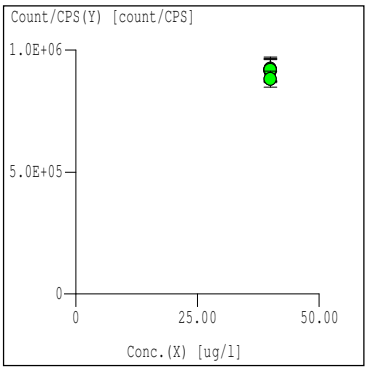
Curve Fit: Y=aX+b
r = 1.0000
Y = 3.865E-002*X +5.838E-003
X = 2.587E+001*Y -1.511E-001
DL = 4.824E-02 ug/l
BEC = 1.511E-01 ug/l

Step Mass Element	ISTD	Unit
(1) 114 Cd	115	ug/l



Curve Fit: Y=aX+b
r = 1.0000
Y = 8.949E-002*X -2.337E-003
X = 1.117E+001*Y +2.612E-002
DL = 1.668E-02 ug/l
BEC = -2.612E-02 ug/l

Step Mass Element	ISTD	Unit
(1) 115 In	---	ug/l

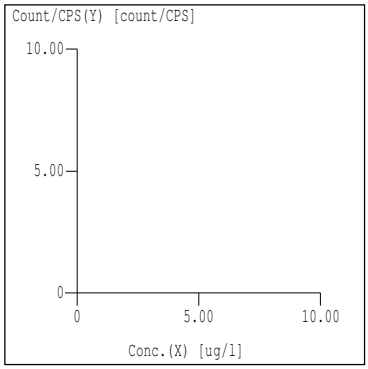


Curve Fit: Excluded
r = 0.0000

DL = --- ug/l
BEC = --- ug/l

=== Graph Detail ===

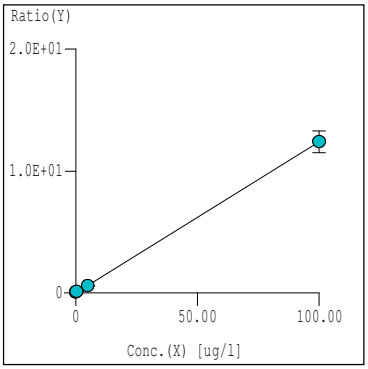
Step Mass Element	ISTD	Unit
(1) 118 (In)	---	ug/l



Curve Fit: Y=aX+b
r = 0.0000

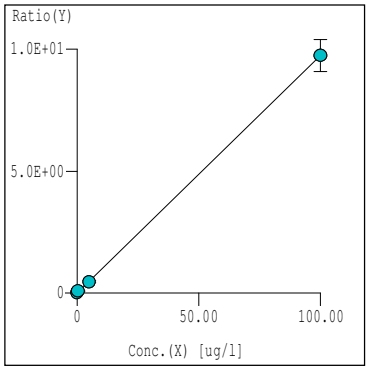
DL = --- ug/l
BEC = --- ug/l

Step Mass Element	ISTD	Unit
(1) 120 Sn	115	ug/l



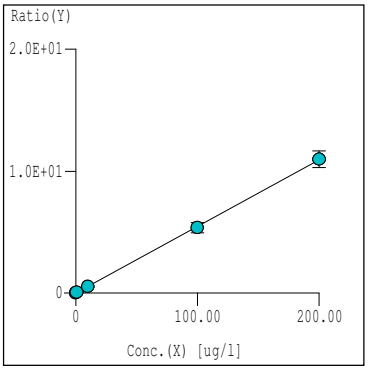
Curve Fit: Y=aX+b
r = 1.0000
Y = 1.238E-001*X +1.981E-002
X = 8.075E+000*Y -1.600E-001
DL = 1.013E-01 ug/l
BEC = 1.600E-01 ug/l

Step Mass Element	ISTD	Unit
(1) 121 Sb	115	ug/l



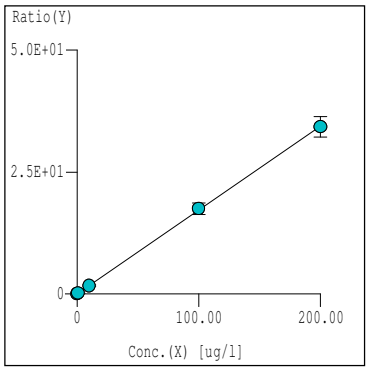
Curve Fit: Y=aX+b
r = 1.0000
Y = 9.737E-002*X +7.150E-003
X = 1.027E+001*Y -7.343E-002
DL = 5.542E-02 ug/l
BEC = 7.343E-02 ug/l

Step Mass Element	ISTD	Unit
(1) 137 Ba	115	ug/l



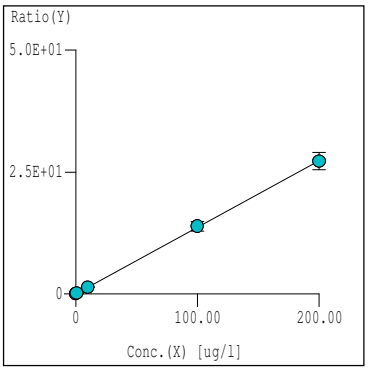
Curve Fit: Y=aX+b
r = 0.9999
Y = 5.473E-002*X -2.161E-002
X = 1.827E+001*Y +3.948E-001
DL = 2.299E-02 ug/l
BEC = -3.948E-01 ug/l

Step Mass Element	ISTD	Unit
(1) 203 Tl	209	ug/l



Curve Fit: Y=aX+b
r = 0.9999
Y = 1.719E-001*X +3.995E-002
X = 5.819E+000*Y -2.325E-001
DL = 3.948E-02 ug/l
BEC = 2.325E-01 ug/l

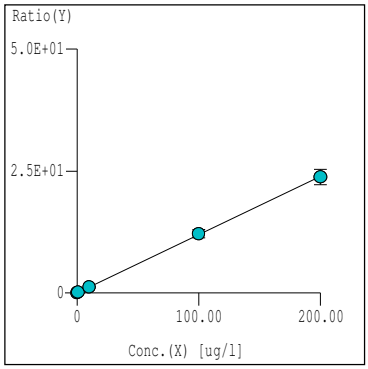
Step Mass Element	ISTD	Unit
(1) 206 Pb	209	ug/l



Curve Fit: Y=aX+b
r = 1.0000
Y = 1.364E-001*X +3.320E-002
X = 7.331E+000*Y -2.434E-001
DL = 1.877E-02 ug/l
BEC = 2.434E-01 ug/l

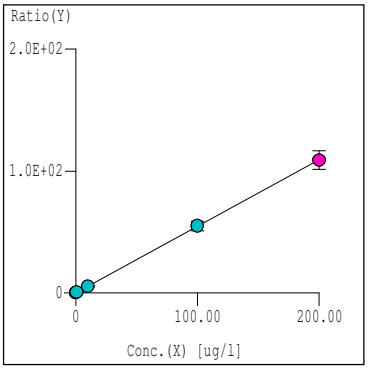
=== Graph Detail ===

Step Mass Element	ISTD	Unit
(1) 207 Pb	209	ug/l



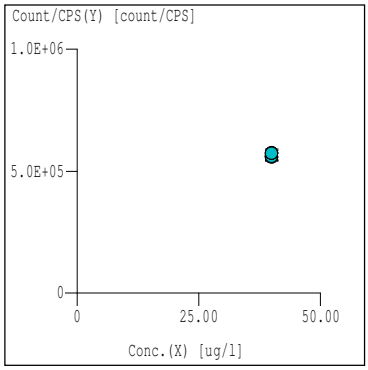
Curve Fit: Y=aX+b
r = 0.9999
Y = 1.193E-001*X +2.609E-002
X = 8.384E+000*Y -2.187E-001
DL = 2.332E-02 ug/l
BEC = 2.187E-01 ug/l

Step Mass Element	ISTD	Unit
(1) 208 Pb	209	ug/l



Curve Fit: Y=aX+b
r = 1.0000
Y = 5.458E-001*X +4.269E-002
X = 1.832E+000*Y -7.820E-002
DL = 9.417E-03 ug/l
BEC = 7.820E-02 ug/l

Step Mass Element	ISTD	Unit
(1) 209 Bi	---	ug/l



Curve Fit: Excluded
r = 0.0000

DL = --- ug/l
BEC = --- ug/l

Calibration Blank QC Report

Data File:	C:\ICPCHEM\1\DATA\13F24o00.B\003CAL
Date Acquired:	Jun 24 2013 03:07 pm
Operator:	ICPMS 2 - JG
Sample Name:	CAL Blank
Misc Info:	60-22-493
Vial Number:	2101
Current Method:	C:\ICPCHEM\1\METHODS\6020G.M
Calibration File:	C:\ICPCHEM\1\CALIB\6020G.C
Last Cal Update:	Jun 24 2013 03:09 pm
Sample Type:	CalBlk
Total Dil Factor:	1.00

QC&ISTD Elements

Element		CPS Mean		SD	RSD(%)
6	Li	1495870.00	A	68800.00	4.60
9	Be	21.11	P	5.09	24.12
11	B	473.33	P	23.33	4.93
23	Na	1074592.00	A	52420.00	4.88
24	Mg	11530.00	P	308.60	2.68
27	Al	8116.67	P	167.70	2.07
28	Si	127727.80	P	20100.00	15.74
39	K	2749976.00	A	46520.00	1.69
44	Ca	5431.79	P	24.95	0.46
45	Sc	1150710.00	A	27040.00	2.35
47	Ti	154.44	P	35.64	23.08
51	V	1187.59	P	115.60	9.73
52	Cr	5111.11	P	125.10	2.45
53	Cr	1023.33	P	8.82	0.86
55	Mn	2150.00	P	25.17	1.17
57	Fe	19006.67	P	55.48	0.29
59	Co	575.56	P	67.44	11.72
60	Ni	47.78	P	18.95	39.66
63	Cu	553.33	P	39.30	7.10
66	Zn	415.56	P	18.36	4.42
74	Ge	218860.00	P	5617.00	2.57
75	As	-42.76	P	38.40	89.81
77	(As)	58.89	P	3.85	6.54
78	Se	10307.78	P	126.20	1.22
82	Se	4.13	P	8.26	200.09
83	(Se)	158.89	P	20.37	12.82
88	(Ca)	138.89	P	41.94	30.20
89	Y	1072464.00	A	52140.00	4.86
98	Mo	474.91	P	71.94	15.15
99	(Mo)	4.44	P	1.93	43.31
106	(Cd)	408.89	P	26.94	6.59
107	Ag	33.33	P	6.67	20.00
108	(Cd)	0.00	P	0.00	0.00

111	Cd	316.84	P	18.81	5.94
114	Cd	28.89	P	10.18	35.24
115	In	923239.88	A	47580.00	5.15
118	(In)	758.89	P	68.50	9.03
120	Sn	1043.33	P	48.07	4.61
121	Sb	414.44	P	23.41	5.65
123	Sb		P		
137	Ba	23.33	P	8.82	37.80
203	Tl	247.78	P	30.97	12.50
206	Pb	53.33	P	12.02	22.54
207	Pb	42.22	P	13.88	32.87
208	Pb	184.44	P	25.02	13.57
209	Bi	560868.88	P	14270.00	2.54

Calibration Standard QC Report

Data File: C:\ICPCHEM\1\DATA\13F24o00.B\004CALS.D\004CALS.D#
Date Acquired: Jun 24 2013 03:11 pm
Operator: ICPMS 2 - JG
Sample Name: CAL STD 1
Misc Info: 60-23-05
Vial Number: 2102
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal Update: Jun 24 2013 03:09 pm
Sample Type: CalStd
Total Dil Factor: 1.00

QC&ISTD Elements

Element	CPS Mean		SD	RSD(%)
6 Li	1506741.00	A	64750.00	4.30
9 Be	2948.89	P	143.30	4.86
11 B	2482.22	P	166.60	6.71
23 Na	1220309.00	A	20100.00	1.65
24 Mg	89402.22	P	682.70	0.76
27 Al	15954.44	P	660.10	4.14
28 Si	125933.30	P	27410.00	21.77
39 K	2872064.00	A	75950.00	2.64
44 Ca	8703.89	P	205.80	2.36
45 Sc	1159288.00	A	27730.00	2.39
47 Ti	548.89	P	22.69	4.13
51 V	13385.56	P	847.50	6.33
52 Cr	15341.11	P	317.60	2.07
53 Cr	2011.11	P	65.52	3.26
55 Mn	13866.67	P	357.20	2.58
57 Fe	21322.22	P	190.90	0.90
59 Co	11133.33	P	540.20	4.85
60 Ni	2537.78	P	171.60	6.76
63 Cu	6446.67	P	228.20	3.54
66 Zn	1760.00	P	73.11	4.15
74 Ge	218356.70	P	7225.00	3.31
75 As	1043.54	P	129.80	12.44
77 (As)	106.67	P	17.32	16.24
78 Se	10365.56	P	386.90	3.73
82 Se	76.47	P	45.65	59.70
83 (Se)	145.56	P	16.44	11.30
88 (Ca)	143.33	P	26.03	18.16
89 Y	1075104.00	A	51160.00	4.76
98 Mo	1621.57	P	68.85	4.25
99 (Mo)	4.44	P	1.93	43.31
106 (Cd)	440.00	P	34.80	7.91
107 Ag	4728.89	P	68.66	1.45
108 (Cd)	58.89	P	16.78	28.49
111 Cd	1197.42	P	49.05	4.10
114 Cd	2053.33	P	169.10	8.24
115 In	913555.31	A	46730.00	5.12
118 (In)	1632.22	P	86.75	5.31
120 Sn	2303.33	P	69.60	3.02
121 Sb	1797.78	P	81.94	4.56
123 Sb		P		
137 Ba	1241.11	P	51.68	4.16
203 Tl	2262.22	P	180.00	7.96
206 Pb	1740.00	P	105.90	6.09
207 Pb	1566.67	P	130.20	8.31
208 Pb	7215.56	P	497.20	6.89
209 Bi	556824.38	P	16650.00	2.99

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1506741.10	4.30	1495870.10	100.7	80 - 120	
45 Sc	1159288.10	2.39	1150710.10	100.7	80 - 120	
74 Ge	218356.66	3.31	218860.00	99.8	80 - 120	
115 In	913555.31	5.12	923239.88	99.0	80 - 120	
209 Bi	556824.44	2.99	560868.88	99.3	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F24o00.B\003CALB.D\003CALB.D#

--- :Element Failures --- :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

Calibration Standard QC Report

Data File: C:\ICPCHEM\1\DATA\13F24o00.B\005CALS.D\005CALS.D#
Date Acquired: Jun 24 2013 03:15 pm
Operator: ICPMS 2 - JG
Sample Name: CAL STD 2
Misc Info: 60-23-04
Vial Number: 2103
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal Update: Jun 24 2013 03:13 pm
Sample Type: CalStd
Total Dil Factor: 1.00

QC&ISTD Elements

Element	CPS Mean		SD	RSD(%)
6 Li	1496654.00	A	38290.00	2.56
9 Be	29904.44	P	385.10	1.29
11 B	21060.00	P	677.70	3.22
23 Na	2308521.00	A	10860.00	0.47
24 Mg	812685.63	A	8996.00	1.11
27 Al	101163.30	P	975.70	0.96
28 Si	132567.80	P	17640.00	13.31
39 K	3856060.00	A	20010.00	0.52
44 Ca	36072.24	P	831.60	2.31
45 Sc	1161831.00	A	31370.00	2.70
47 Ti	4417.78	P	213.00	4.82
51 V	119553.90	P	4199.00	3.51
52 Cr	107162.20	P	4180.00	3.90
53 Cr	12816.67	P	343.70	2.68
55 Mn	120254.40	P	3533.00	2.94
57 Fe	42956.67	P	310.50	0.72
59 Co	110194.40	P	3468.00	3.15
60 Ni	24746.67	P	473.30	1.91
63 Cu	56928.88	P	865.90	1.52
66 Zn	12438.89	P	498.40	4.01
74 Ge	218502.20	P	6474.00	2.96
75 As	11107.56	P	605.10	5.45
77 (As)	657.78	P	15.03	2.29
78 Se	12286.67	P	363.30	2.96
82 Se	757.35	P	110.50	14.59
83 (Se)	171.11	P	16.78	9.81
88 (Ca)	204.44	P	9.62	4.71
89 Y	1083294.00	A	38370.00	3.54
98 Mo	12402.04	P	339.30	2.74
99 (Mo)	8.89	P	1.93	21.66
106 (Cd)	1202.22	P	88.96	7.40
107 Ag	30705.56	P	852.60	2.78
108 (Cd)	604.44	P	39.49	6.53
111 Cd	8922.15	P	387.60	4.34
114 Cd	20000.00	P	526.10	2.63
115 In	917774.38	A	46080.00	5.02
118 (In)	9671.11	P	338.60	3.50
120 Sn	13546.67	P	369.30	2.73
121 Sb	10486.67	P	507.50	4.84
123 Sb		P		
137 Ba	12080.00	P	352.60	2.92
203 Tl	23545.55	P	1080.00	4.59
206 Pb	19181.11	P	824.40	4.30
207 Pb	16507.78	P	754.40	4.57
208 Pb	75301.11	P	3382.00	4.49
209 Bi	560101.13	P	16500.00	2.95

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1496653.50	2.56	1495870.10	100.1	80 - 120	
45 Sc	1161831.00	2.70	1150710.10	101.0	80 - 120	
74 Ge	218502.20	2.96	218860.00	99.8	80 - 120	
115 In	917774.38	5.02	923239.88	99.4	80 - 120	
209 Bi	560101.06	2.95	560868.88	99.9	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F24o00.B\003CALB.D\003CALB.D#

--- :Element Failures --- :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

Calibration Standard QC Report

Data File: C:\ICPCHEM\1\DATA\13F24o00.B\006CALS.D\006CALS.D#
Date Acquired: Jun 24 2013 03:19 pm
Operator: ICPMS 2 - JG
Sample Name: CAL STD 3
Misc Info: 60-23-03
Vial Number: 2104
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal Update: Jun 24 2013 03:17 pm
Sample Type: CalStd
Total Dil Factor: 1.00

QC&ISTD Elements

Element	CPS Mean		SD	RSD(%)
6 Li	1455158.00	A	60220.00	4.14
9 Be	308153.31	P	7953.00	2.58
11 B	209412.20	P	8492.00	4.06
23 Na	13755540.00	A	209600.00	1.52
24 Mg	7899442.00	A	73040.00	0.92
27 Al	979724.19	A	13400.00	1.37
28 Si	142793.30	P	21770.00	15.25
39 K	14195950.00	A	46620.00	0.33
44 Ca	313313.41	P	8737.00	2.79
45 Sc	1178129.00	A	35490.00	3.01
47 Ti	43645.55	P	1105.00	2.53
51 V	1242711.00	A	26980.00	2.17
52 Cr	1069504.00	A	11200.00	1.05
53 Cr	120854.40	P	2558.00	2.12
55 Mn	1249454.00	A	22440.00	1.80
57 Fe	264418.91	P	6402.00	2.42
59 Co	1180332.00	A	12990.00	1.10
60 Ni	250482.20	P	7892.00	3.15
63 Cu	577274.38	P	18920.00	3.28
66 Zn	122975.60	P	3908.00	3.18
74 Ge	221321.09	P	7444.00	3.36
75 As	116243.20	P	3807.00	3.28
77 (As)	6397.78	P	272.30	4.26
78 Se	30153.33	P	1357.00	4.50
82 Se	8056.41	P	345.50	4.29
83 (Se)	152.22	P	32.03	21.04
88 (Ca)	242.22	P	22.19	9.16
89 Y	1076100.00	A	48990.00	4.55
98 Mo	127683.40	P	4956.00	3.88
99 (Mo)	14.44	P	3.85	26.65
106 (Cd)	8643.33	P	202.20	2.34
107 Ag	473995.59	P	12150.00	2.56
108 (Cd)	6084.44	P	167.60	2.75
111 Cd	88173.79	P	2221.00	2.52
114 Cd	205733.30	P	5956.00	2.90
115 In	920018.13	A	47780.00	5.19
118 (In)	95487.78	P	3083.00	3.23
120 Sn	130635.60	P	3318.00	2.54
121 Sb	593.33	P	109.70	18.49
123 Sb		P		
137 Ba	122934.40	P	3570.00	2.90
203 Tl	251160.00	P	9786.00	3.90
206 Pb	198940.00	P	9341.00	4.70
207 Pb	174067.80	P	7986.00	4.59
208 Pb	789478.88	P	34810.00	4.41
209 Bi	574513.31	P	16880.00	2.94

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1455158.30	4.14	1495870.10	97.3	80 - 120	
45 Sc	1178129.50	3.01	1150710.10	102.4	80 - 120	
74 Ge	221321.11	3.36	218860.00	101.1	80 - 120	
115 In	920018.13	5.19	923239.88	99.7	80 - 120	
209 Bi	574513.31	2.94	560868.88	102.4	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F24o00.B\003CALB.D\003CALB.D#

--- :Element Failures --- :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

Calibration Standard QC Report

Data File: C:\ICPCHEM\1\DATA\13F24o00.B\007CALS.D\007CALS.D#
Date Acquired: Jun 24 2013 03:23 pm
Operator: ICPMS 2 - JG
Sample Name: CAL STD 4
Misc Info: 60-23-02
Vial Number: 2105
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal Update: Jun 24 2013 03:21 pm
Sample Type: CalStd
Total Dil Factor: 1.00

QC&ISTD Elements

Element	CPS Mean		SD	RSD(%)
6 Li	1385718.00	A	46630.00	3.37
9 Be	600389.00	A	23930.00	3.99
11 B	405190.00	P	12460.00	3.08
23 Na	120961300.00	A	1123000.00	0.93
24 Mg	75214040.00	A	961200.00	1.28
27 Al	1852208.00	A	27540.00	1.49
28 Si	138391.09	P	11760.00	8.50
39 K	109408600.00	A	2159000.00	1.97
44 Ca	3074126.00	A	46570.00	1.51
45 Sc	1204054.00	A	24220.00	2.01
47 Ti	85183.33	P	2468.00	2.90
51 V	2389048.00	A	34780.00	1.46
52 Cr	1993709.00	A	36030.00	1.81
53 Cr	229402.20	P	5522.00	2.41
55 Mn	2347968.00	A	63650.00	2.71
57 Fe	2468415.00	A	62840.00	2.55
59 Co	2184589.00	A	31420.00	1.44
60 Ni	476867.69	P	10790.00	2.26
63 Cu	1148089.00	A	6460.00	0.56
66 Zn	230356.70	P	7135.00	3.10
74 Ge	217944.41	P	7037.00	3.23
75 As	222442.50	P	5450.00	2.45
77 (As)	12083.33	P	424.50	3.51
78 Se	49667.78	P	1638.00	3.30
82 Se	15189.79	P	725.80	4.78
83 (Se)	146.67	P	13.33	9.09
88 (Ca)	578.89	P	10.71	1.85
89 Y	1033277.00	A	47880.00	4.63
98 Mo	261348.30	P	8856.00	3.39
99 (Mo)	34.44	P	10.18	29.56
106 (Cd)	16354.44	P	305.30	1.87
107 Ag	944871.13	A	6662.00	0.71
108 (Cd)	11696.67	P	162.30	1.39
111 Cd	170555.41	P	3470.00	2.03
114 Cd	393573.31	P	8770.00	2.23
115 In	881512.38	A	33790.00	3.83
118 (In)	201516.70	P	7876.00	3.91
120 Sn	272911.09	P	10050.00	3.68
121 Sb	214408.91	P	6579.00	3.07
123 Sb		P		
137 Ba	241360.00	P	6126.00	2.54
203 Tl	490001.09	P	18780.00	3.83
206 Pb	389140.00	P	16180.00	4.16
207 Pb	340118.91	P	14080.00	4.14
208 Pb	1558283.00	M	71680.00	4.60
209 Bi	572437.81	P	13820.00	2.41

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1385717.80	3.37	1495870.10	92.6	80 - 120	
45 Sc	1204054.10	2.01	1150710.10	104.6	80 - 120	
74 Ge	217944.44	3.23	218860.00	99.6	80 - 120	
115 In	881512.38	3.83	923239.88	95.5	80 - 120	
209 Bi	572437.75	2.41	560868.88	102.1	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F24o00.B\003CALB.D\003CALB.D#

--- :Element Failures --- :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

Blank QC Report

Data File: C:\ICPCHEM\1\DATA\13F24o00.B\008BLNK.D\008BLNK.D#
Date Acquired: Jun 24 2013 03:27 pm
Acq. Method: 6020G.M
Operator: ICPMS 2 - JG
Sample Name: Blank
Misc Info: Blank
Vial Number: 1
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal. Update: Jun 24 2013 03:25 pm
Sample Type: Blank
Dilution Factor: 1.00

QC Elements

Element	Corr. Conc.		RSD(%)	Raw Conc.	High Limit	Flag
9 Be	0.7083	ug/l	7.15	0.7083	4.00	
11 B	3.03	ug/l	4.28	3.03	15.00	
23 Na	-14.78	ug/l	31.94	-14.78	40.00	
24 Mg	-11.49	ug/l	17.82	-11.49	50.00	
27 Al	-0.35	ug/l	38.94	-0.35	15.00	
28 Si	----	ug/l	--------	----	10.00	
39 K	-23.04	ug/l	8.20	-23.04	40.00	
44 Ca	-2.753	ug/l	77.95	-2.753	50.00	
47 Ti	-0.005189	ug/l	869.53	-0.005189	20.00	
51 V	-0.6991	ug/l	6.31	-0.6991	5.00	
52 Cr	-1.255	ug/l	5.30	-1.255	5.00	
53 Cr	-1.537	ug/l	5.63	-1.537	---	
55 Mn	-1.028	ug/l	4.47	-1.028	5.00	
57 Fe	21.75	ug/l	20.67	21.75	50.00	
59 Co	-1.271	ug/l	4.19	-1.271	5.00	
60 Ni	-0.9831	ug/l	5.51	-0.9831	5.00	
63 Cu	-0.267	ug/l	17.84	-0.267	10.00	
66 Zn	-1.415	ug/l	5.12	-1.415	20.00	
75 As	0.3784	ug/l	30.10	0.3784	5.00	
77 (As)	0.903	ug/l	31.87	0.903	1.00	
78 Se	4.53	ug/l	56.36	4.53	1.00	
82 Se	0.6743	ug/l	30.92	0.6743	5.00	
83 (Se)	-162.3	ug/l	197.35	-162.3	1.00	
88 (Ca)	87.48	ug/l	25.93	87.48	1.00	
89 Y	----	ug/l	--------	----	1.00	
98 Mo	2.559	ug/l	5.92	2.559	5.00	
99 (Mo)	----	ug/l	--------	----	1.00	
106 (Cd)	1.145	ug/l	15.62	1.145	1.00	
107 Ag	1.797	ug/l	2.76	1.797	5.00	
108 (Cd)	0.2878	ug/l	25.61	0.2878	1.00	
111 Cd	0.4081	ug/l	10.71	0.4081	5.00	
114 Cd	0.2873	ug/l	9.49	0.2873	5.00	
118 (In)	----	ug/l	--------	----	1.00	
120 Sn	3.34	ug/l	6.36	3.34	10.00	
121 Sb	2.804	ug/l	6.28	2.804	10.00	
137 Ba	0.608	ug/l	11.30	0.608	10.00	
203 Tl	0.06602	ug/l	42.15	0.06602	5.00	
206 Pb	0.01494	ug/l	326.44	0.01494	1.00	
207 Pb	0.03973	ug/l	84.42	0.03973	1.00	
208 Pb	0.1743	ug/l	25.75	0.1743	5.00	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1455064.30	3.57	1495870.10	97.3	80 - 120	
45 Sc	1151545.60	3.37	1150710.10	100.1	80 - 120	
74 Ge	217785.56	2.45	218860.00	99.5	80 - 120	
115 In	892719.25	5.16	923239.88	96.7	80 - 120	
209 Bi	561584.44	2.88	560868.88	100.1	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F24o00.B\003CALB.D\003CALB.D#

0 :Element Failures 15 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Nnumber of ISTD Failures Allowed

QC Results:
Analytes: Pass
ISTD: Pass

Blank QC Report

Data File: C:\ICPCHEM\1\DATA\13F24o00.B\009BLNK.D\009BLNK.D#
Date Acquired: Jun 24 2013 03:31 pm
Acq. Method: 6020G.M
Operator: ICPMS 2 - JG
Sample Name: Blank
Misc Info: Blank
Vial Number: 1
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal. Update: Jun 24 2013 03:25 pm
Sample Type: Blank
Dilution Factor: 1.00

QC Elements

Element	Corr. Conc.		RSD(%)	Raw Conc.	High Limit	Flag
9 Be	0.6326	ug/l	5.10	0.6326	4.00	
11 B	1.581	ug/l	5.75	1.581	15.00	
23 Na	-20.04	ug/l	46.57	-20.04	40.00	
24 Mg	-15.61	ug/l	7.14	-15.61	50.00	
27 Al	-0.4076	ug/l	15.56	-0.4076	15.00	
28 Si	----	ug/l	--------	----	10.00	
39 K	-28.92	ug/l	33.84	-28.92	40.00	
44 Ca	-6.652	ug/l	11.96	-6.652	50.00	
47 Ti	-0.2413	ug/l	17.74	-0.2413	20.00	
51 V	-0.7866	ug/l	3.69	-0.7866	5.00	
52 Cr	-1.326	ug/l	1.12	-1.326	5.00	
53 Cr	-1.612	ug/l	1.76	-1.612	---	
55 Mn	-1.111	ug/l	2.35	-1.111	5.00	
57 Fe	8.768	ug/l	29.21	8.768	50.00	
59 Co	-1.365	ug/l	1.40	-1.365	5.00	
60 Ni	-1.093	ug/l	1.00	-1.093	5.00	
63 Cu	-0.3517	ug/l	7.39	-0.3517	10.00	
66 Zn	-1.496	ug/l	1.97	-1.496	20.00	
75 As	-0.1187	ug/l	113.73	-0.1187	5.00	
77 (As)	-0.1156	ug/l	321.19	-0.1156	1.00	
78 Se	3.37	ug/l	70.45	3.37	1.00	
82 Se	-0.1799	ug/l	237.19	-0.1799	5.00	
83 (Se)	-96.9	ug/l	407.95	-96.9	1.00	
88 (Ca)	75.45	ug/l	7.54	75.45	1.00	
89 Y	----	ug/l	--------	----	1.00	
98 Mo	0.9354	ug/l	5.12	0.9354	5.00	
99 (Mo)	----	ug/l	--------	----	1.00	
106 (Cd)	1.443	ug/l	43.04	1.443	1.00	
107 Ag	1.692	ug/l	0.89	1.692	5.00	
108 (Cd)	0.1563	ug/l	61.07	0.1563	1.00	
111 Cd	0.3344	ug/l	16.52	0.3344	5.00	
114 Cd	0.1526	ug/l	12.15	0.1526	5.00	
118 (In)	----	ug/l	--------	----	1.00	
120 Sn	1.656	ug/l	7.02	1.656	10.00	
121 Sb	1.798	ug/l	7.40	1.798	10.00	
137 Ba	0.4961	ug/l	6.96	0.4961	10.00	
203 Tl	-0.1181	ug/l	20.09	-0.1181	5.00	
206 Pb	-0.1203	ug/l	17.67	-0.1203	1.00	
207 Pb	-0.1144	ug/l	6.19	-0.1144	1.00	
208 Pb	0.03676	ug/l	41.24	0.03676	5.00	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1430961.00	3.85	1495870.10	95.7	80 - 120	
45 Sc	1137427.10	2.20	1150710.10	98.8	80 - 120	
74 Ge	216872.22	2.36	218860.00	99.1	80 - 120	
115 In	899420.50	3.88	923239.88	97.4	80 - 120	
209 Bi	556922.25	2.52	560868.88	99.3	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F24o00.B\003CALB.D\003CALB.D#

0 :Element Failures 15 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Nnumber of ISTD Failures Allowed

QC Results:
Analytes: Pass
ISTD: Pass

ICV QC Report

Data File: C:\ICPCHEM\1\DATA\13F24o00.B\010ICV1.D\010ICV1.D#
Date Acquired: Jun 24 2013 03:35 pm
Acq. Method: 6020G.M
Operator: ICPMS 2 - JG
Sample Name: ICV
Misc Info: 60-23-06
Vial Number: 2106
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal. Update: Jun 24 2013 03:25 pm
Sample Type: ICV1
Dilution Factor: 1.00

QC Elements

Element	Conc.		RSD(%)	Expected	QC Range(%)	Flag
9 Be	49.66	ug/l	4.75	50.00	90 - 110	
11 B	50.19	ug/l	6.20	50.00	90 - 110	
23 Na	519.90	ug/l	2.59	500.00	90 - 110	
24 Mg	530.20	ug/l	1.39	500.00	90 - 110	
27 Al	50.28	ug/l	2.40	50.00	90 - 110	
28 Si	--------	ug/l	--------	50.00	90 - 110	
39 K	506.60	ug/l	3.70	500.00	90 - 110	
44 Ca	505.40	ug/l	3.97	500.00	90 - 110	
47 Ti	26.52	ug/l	5.40	25.00	90 - 110	
51 V	51.75	ug/l	4.16	50.00	90 - 110	
52 Cr	52.21	ug/l	5.26	50.00	90 - 110	
53 Cr	51.83	ug/l	5.47	---	##### - #####	
55 Mn	51.75	ug/l	4.25	50.00	90 - 110	
57 Fe	519.70	ug/l	5.76	500.00	90 - 110	
59 Co	50.00	ug/l	4.38	50.00	90 - 110	
60 Ni	54.17	ug/l	4.44	50.00	90 - 110	
63 Cu	51.78	ug/l	4.58	50.00	90 - 110	
66 Zn	54.06	ug/l	6.41	50.00	90 - 110	
75 As	51.52	ug/l	5.33	50.00	90 - 110	
77 (As)	50.06	ug/l	5.87	50.00	90 - 110	
78 Se	53.58	ug/l	12.44	50.00	90 - 110	
82 Se	52.25	ug/l	5.22	50.00	90 - 110	
83 (Se)	27.55	ug/l	1638.50	50.00	90 - 110	
88 (Ca)	145.10	ug/l	6.06	50.00	90 - 110	
89 Y	--------	ug/l	--------	50.00	90 - 110	
98 Mo	24.06	ug/l	9.17	25.00	90 - 110	
99 (Mo)	--------	ug/l	--------	---	##### - #####	
106 (Cd)	50.94	ug/l	5.55	50.00	90 - 110	
107 Ag	49.31	ug/l	7.80	50.00	90 - 110	
108 (Cd)	51.76	ug/l	8.42	50.00	90 - 110	
111 Cd	50.33	ug/l	6.96	50.00	90 - 110	
114 Cd	50.43	ug/l	7.85	50.00	90 - 110	
118 (In)	--------	ug/l	--------	50.00	90 - 110	
120 Sn	25.50	ug/l	7.65	25.00	90 - 110	
121 Sb	26.09	ug/l	9.08	25.00	90 - 110	
137 Ba	48.86	ug/l	8.33	50.00	90 - 110	
203 Tl	51.43	ug/l	5.05	50.00	90 - 110	
206 Pb	51.82	ug/l	6.51	50.00	90 - 110	
207 Pb	50.54	ug/l	5.57	50.00	90 - 110	
208 Pb	51.18	ug/l	5.81	50.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1457434.50	1.57	1495870.10	97.4	80 - 120	
45 Sc	1147584.60	1.92	1150710.10	99.7	80 - 120	
74 Ge	218922.20	2.22	218860.00	100.0	80 - 120	
115 In	907460.94	5.10	923239.88	98.3	80 - 120	
209 Bi	566842.25	1.36	560868.88	101.1	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F24o00.B\003CALB.D\003CALB.D#

0 :Element Failures 10 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:

Analytes: Pass
ISTD: Pass

ICB QC Report

Data File: C:\ICPCHEM\1\DATA\13F24o00.B\011_ICB.D\011_ICB.D#
Date Acquired: Jun 24 2013 03:39 pm
Acq. Method: 6020G.M
Operator: ICPMS 2 - JG
Sample Name: ICB
Misc Info: 60-22-493
Vial Number: 5
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal. Update: Jun 24 2013 03:25 pm
Sample Type: ICB
Dilution Factor: 1.00

QC Elements

Element	Conc.		RSD(%)	High Limit	Flag
9 Be	0.61	ug/l	6.72	1.00	
11 B	1.45	ug/l	2.62	5.00	
23 Na	-26.54	ug/l	16.38	40.00	
24 Mg	-19.20	ug/l	3.14	40.00	
27 Al	-1.57	ug/l	2.13	5.00	
28 Si	--------	ug/l	--------	10.00	
39 K	-33.33	ug/l	12.06	40.00	
44 Ca	-12.70	ug/l	2.71	40.00	
47 Ti	-0.25	ug/l	15.30	5.00	
51 V	-0.80	ug/l	5.07	2.00	
52 Cr	-1.34	ug/l	0.83	2.00	
53 Cr	-1.61	ug/l	3.70	---	
55 Mn	-1.17	ug/l	2.50	2.00	
57 Fe	1.24	ug/l	133.47	40.00	
59 Co	-1.39	ug/l	2.52	2.00	
60 Ni	-1.11	ug/l	3.44	2.00	
63 Cu	-0.37	ug/l	7.31	5.00	
66 Zn	-1.57	ug/l	0.77	5.00	
75 As	-0.14	ug/l	22.21	2.00	
77 (As)	-0.28	ug/l	87.82	3.00	
78 Se	2.47	ug/l	151.15	3.00	
82 Se	0.14	ug/l	305.97	2.00	
83 (Se)	43.22	ug/l	515.50	3.00	
88 (Ca)	-43.10	ug/l	12.51	3.00	
89 Y	--------	ug/l	--------	3.00	
98 Mo	1.05	ug/l	5.87	3.00	
99 (Mo)	--------	ug/l	--------	---	
106 (Cd)	0.99	ug/l	80.48	3.00	
107 Ag	1.68	ug/l	1.41	2.00	
108 (Cd)	0.10	ug/l	52.10	3.00	
111 Cd	0.29	ug/l	21.02	1.00	
114 Cd	0.15	ug/l	5.16	1.00	
118 (In)	--------	ug/l	--------	3.00	
120 Sn	2.70	ug/l	12.06	5.00	
121 Sb	1.98	ug/l	8.04	3.00	
137 Ba	0.44	ug/l	8.44	2.00	
203 Tl	-0.07	ug/l	25.96	2.00	
206 Pb	-0.12	ug/l	27.63	3.00	
207 Pb	-0.11	ug/l	35.29	3.00	
208 Pb	0.03	ug/l	103.99	1.00	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1457671.40	3.84	1495870.10	97.4	80 - 120	
45 Sc	1137283.80	4.23	1150710.10	98.8	80 - 120	
74 Ge	216537.77	3.44	218860.00	98.9	80 - 120	
115 In	905500.31	5.43	923239.88	98.1	80 - 120	
209 Bi	553682.25	3.96	560868.88	98.7	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F24o00.B\003CALB.D\003CALB.D#

0 :Element Failures 0 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Nnumber of ISTD Failures Allowed

Data Results:

Analytes: Pass
ISTD: Pass

ICS-A QC Report

Data File: C:\ICPCHEM\1\DATA\13F24o00.B\012ICSA.D\012ICSA.D#
Date Acquired: Jun 24 2013 03:43 pm
Acq. Method: 6020G.M
Operator: ICPMS 2 - JG
Sample Name: ICS A
Misc Info: 60-22-486
Vial Number: 1207
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal. Update: Jun 24 2013 03:25 pm
Sample Type: ICS-A
Dilution Factor: 1.00

QC Elements

Element	Conc.		RSD(%)	High Limit	Flag
9 Be	0.58	ug/l	0.69	10.00	
11 B	2.92	ug/l	5.65	10.00	
23 Na	79380.00	ug/l	0.80	1.20	Fail
24 Mg	76670.00	ug/l	0.82	1.20	Fail
27 Al	77690.00	ug/l	1.35	1.20	Fail
28 Si	--------	ug/l	--------	---	
39 K	80800.00	ug/l	2.70	1.20	
44 Ca	82520.00	ug/l	2.23	1.20	
47 Ti	1801.00	ug/l	2.92	1.20	
51 V	-0.71	ug/l	11.26	10.00	
52 Cr	-0.31	ug/l	15.41	10.00	
53 Cr	1.86	ug/l	13.40	---	
55 Mn	0.32	ug/l	11.57	10.00	
57 Fe	79240.00	ug/l	2.44	1.20	Fail
59 Co	-0.09	ug/l	34.11	10.00	
60 Ni	1.29	ug/l	1.46	10.00	
63 Cu	1.64	ug/l	14.83	10.00	
66 Zn	1.44	ug/l	13.07	10.00	
75 As	-0.14	ug/l	92.02	10.00	
77 (As)	6.65	ug/l	16.77	10.00	
78 Se	28.53	ug/l	31.42	10.00	
82 Se	-0.50	ug/l	86.36	10.00	
83 (Se)	-809.10	ug/l	93.72	10.00	
88 (Ca)	3340.00	ug/l	2.59	10.00	
89 Y	--------	ug/l	--------	10.00	
98 Mo	2259.00	ug/l	11.06	1.20	
99 (Mo)	--------	ug/l	--------	---	
106 (Cd)	2.33	ug/l	16.04	10.00	
107 Ag	1.73	ug/l	1.52	10.00	
108 (Cd)	27.13	ug/l	16.48	10.00	
111 Cd	0.91	ug/l	5.21	10.00	
114 Cd	2.05	ug/l	10.63	10.00	
118 (In)	--------	ug/l	--------	10.00	
120 Sn	2.25	ug/l	10.10	10.00	
121 Sb	2.38	ug/l	8.10	10.00	
137 Ba	7.84	ug/l	8.22	10.00	
203 Tl	-0.10	ug/l	10.68	10.00	
206 Pb	0.15	ug/l	37.79	10.00	
207 Pb	0.14	ug/l	41.17	10.00	
208 Pb	0.29	ug/l	15.85	10.00	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1297479.10	2.90	1495870.10	86.7	60 - 120	
45 Sc	1311811.50	0.45	1150710.10	114.0	60 - 120	
74 Ge	196903.33	1.91	218860.00	90.0	60 - 120	
115 In	782635.50	6.79	923239.88	84.8	60 - 120	
209 Bi	529697.75	5.77	560868.88	94.4	60 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F24o00.B\003CALB.D\003CALB.D#

4 :Element Failures 0 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Nnumber of ISTD Failures Allowed

Data Results:

Analytes: Fail
ISTD: Pass

ICS-AB QC Report

Data File: C:\ICPCHEM\1\DATA\13F24o00.B\013ICSB.D\013ICSB.D#
Date Acquired: Jun 24 2013 03:47 pm
Acq. Method: 6020G.M
Operator: ICPMS 2 - JG
Sample Name: ICS AB
Misc Info: 60-22-487
Vial Number: 1307
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal. Update: Jun 24 2013 03:25 pm
Sample Type: ICS-AB
Dilution Factor: 1.00

QC Elements

Element	Conc.		RSD(%)	Expected	QC Range(%)	Flag
9 Be	0.57	ug/l	1.01	0.00	0 - 0	
11 B	2.54	ug/l	6.79	0.00	0 - 0	
23 Na	88870.00	ug/l	4.37	#########	80 - 120	
24 Mg	89440.00	ug/l	2.67	#########	80 - 120	
27 Al	87770.00	ug/l	4.16	#########	80 - 120	
28 Si	--------	ug/l	--------	---	##### - #####	
39 K	89020.00	ug/l	4.20	#########	80 - 120	
44 Ca	91850.00	ug/l	6.63	#########	80 - 120	
47 Ti	2017.00	ug/l	7.87	2000.00	80 - 120	
51 V	36.60	ug/l	7.27	40.00	80 - 120	
52 Cr	18.24	ug/l	7.42	20.00	80 - 120	
53 Cr	20.42	ug/l	7.07	---	##### - #####	
55 Mn	18.67	ug/l	6.75	20.00	80 - 120	
57 Fe	88880.00	ug/l	6.77	#########	80 - 120	
59 Co	35.60	ug/l	6.78	40.00	80 - 120	
60 Ni	36.79	ug/l	7.07	40.00	80 - 120	
63 Cu	19.79	ug/l	6.02	20.00	80 - 120	
66 Zn	18.30	ug/l	6.30	20.00	80 - 120	
75 As	19.51	ug/l	6.75	20.00	80 - 120	
77 (As)	25.65	ug/l	8.38	20.00	80 - 120	
78 Se	63.14	ug/l	8.15	20.00	80 - 120	
82 Se	18.74	ug/l	7.60	20.00	80 - 120	
83 (Se)	-1039.00	ug/l	51.27	20.00	80 - 120	
88 (Ca)	3341.00	ug/l	5.35	20.00	80 - 120	
89 Y	--------	ug/l	--------	---	80 - 120	
98 Mo	2416.00	ug/l	8.10	2000.00	80 - 120	Fail
99 (Mo)	--------	ug/l	--------	---	##### - #####	
106 (Cd)	24.15	ug/l	11.13	10.00	80 - 120	
107 Ag	21.39	ug/l	6.21	20.00	80 - 120	
108 (Cd)	55.93	ug/l	4.83	10.00	80 - 120	
111 Cd	10.58	ug/l	8.79	10.00	80 - 120	
114 Cd	12.03	ug/l	5.85	10.00	80 - 120	Fail
118 (In)	--------	ug/l	--------	0.00	80 - 120	
120 Sn	1.61	ug/l	7.23	0.00	80 - 120	
121 Sb	2.82	ug/l	5.55	0.00	0 - 0	
137 Ba	8.04	ug/l	6.31	0.00	0 - 0	
203 Tl	-0.05	ug/l	20.16	0.00	0 - 0	
206 Pb	0.26	ug/l	22.48	0.00	0 - 0	
207 Pb	0.23	ug/l	20.30	0.00	0 - 0	
208 Pb	0.39	ug/l	15.05	0.00	0 - 0	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1271475.90	1.64	1495870.10	85.0	60 - 120	
45 Sc	1192350.90	3.31	1150710.10	103.6	60 - 120	
74 Ge	198546.66	1.57	218860.00	90.7	60 - 120	
115 In	760650.25	4.44	923239.88	82.4	60 - 120	
209 Bi	503417.75	5.93	560868.88	89.8	60 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F24o00.B\003CALB.D\003CALB.D#

2 :Element Failures 0 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:

Analytes: Fail
ISTD: Pass

CCV QC Report

Data File: C:\ICPCHEM\1\DATA\13F24o00.B\020CCV1.D\020CCV1.D#
Date Acquired: Jun 24 2013 04:14 pm
Operator: ICPMS 2 - JG
Sample Name: CCV1
Misc Info: 60-23-07
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal Update: Jun 24 2013 03:25 pm
Sample Type: CCV1
Total Dil Factor: 1.00

QC Elements

Element	Conc.		RSD(%)	Expected	QC Range(%)	Flag
9 Be	100.80	ug/l	5.96	100.00	90 - 110	
11 B	102.20	ug/l	7.33	100.00	90 - 110	
23 Na	1086.00	ug/l	4.48	1000.00	90 - 110	
24 Mg	1124.00	ug/l	4.70	1000.00	90 - 110	Fail
27 Al	155.40	ug/l	4.29	100.00	90 - 110	Fail
28 Si	--------	ug/l	--------	100.00	90 - 110	
39 K	1104.00	ug/l	3.66	1000.00	90 - 110	Fail
44 Ca	1110.00	ug/l	3.95	1000.00	90 - 110	Fail
47 Ti	54.29	ug/l	6.37	50.00	90 - 110	
51 V	111.10	ug/l	5.40	100.00	90 - 110	Fail
52 Cr	111.20	ug/l	5.16	100.00	90 - 110	Fail
53 Cr	107.70	ug/l	6.49	---	##### - #####	
55 Mn	109.30	ug/l	5.49	100.00	90 - 110	
57 Fe	1110.00	ug/l	4.37	1000.00	90 - 110	Fail
59 Co	109.40	ug/l	4.23	100.00	90 - 110	
60 Ni	111.90	ug/l	5.81	100.00	90 - 110	Fail
63 Cu	106.30	ug/l	4.95	100.00	90 - 110	
66 Zn	112.60	ug/l	5.84	100.00	90 - 110	Fail
75 As	101.30	ug/l	6.00	100.00	90 - 110	
77 (As)	99.96	ug/l	6.30	100.00	90 - 110	
78 Se	99.56	ug/l	9.20	100.00	90 - 110	
82 Se	101.50	ug/l	7.75	100.00	90 - 110	
83 (Se)	353.90	ug/l	57.93	100.00	90 - 110	
88 (Ca)	683.10	ug/l	26.42	100.00	90 - 110	
89 Y	--------	ug/l	--------	100.00	90 - 110	
98 Mo	49.27	ug/l	8.60	50.00	90 - 110	
99 (Mo)	--------	ug/l	--------	---	##### - #####	
106 (Cd)	103.40	ug/l	7.69	100.00	90 - 110	
107 Ag	100.90	ug/l	6.91	100.00	90 - 110	
108 (Cd)	100.50	ug/l	7.43	100.00	90 - 110	
111 Cd	102.00	ug/l	6.93	100.00	90 - 110	
114 Cd	102.30	ug/l	7.22	100.00	90 - 110	
118 (In)	--------	ug/l	--------	100.00	90 - 110	
120 Sn	51.01	ug/l	8.38	50.00	90 - 110	
121 Sb	56.14	ug/l	7.21	50.00	90 - 110	Fail
137 Ba	97.78	ug/l	6.19	100.00	90 - 110	
203 Tl	103.40	ug/l	6.09	100.00	90 - 110	
206 Pb	104.40	ug/l	6.62	100.00	90 - 110	
207 Pb	102.20	ug/l	7.26	100.00	90 - 110	
208 Pb	103.20	ug/l	6.60	100.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1404763.80	3.86	1495870.10	93.9	80 - 120	
45 Sc	1109417.60	3.36	1150710.10	96.4	80 - 120	
74 Ge	218495.55	2.62	218860.00	99.8	80 - 120	
115 In	882468.75	4.27	923239.88	95.6	80 - 120	
209 Bi	558100.00	2.77	560868.88	99.5	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F24o00.B\003CALB.D\003CALB.D#

10 :Element Failures 40 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCB QC Report

Data File: C:\ICPCHEM\1\DATA\13F24o00.B\021_CCB.D\021_CCB.D#
Date Acquired: Jun 24 2013 04:18 pm
Operator: ICPMS 2 - JG
Sample Name: CCB
Misc Info: 60-22-493
Vial Number: 5
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal Update: Jun 24 2013 03:25 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	High Limit	Flag
9 Be	0.62 ug/l	5.91	1.00	
11 B	1.92 ug/l	5.48	5.00	
23 Na	-23.36 ug/l	16.58	10.00	
24 Mg	-8.26 ug/l	40.79	10.00	
27 Al	1.37 ug/l	48.79	3.00	
28 Si	-------- ug/l	--------	10.00	
39 K	-16.62 ug/l	25.78	10.00	
44 Ca	5.14 ug/l	88.10	10.00	
47 Ti	0.04 ug/l	188.97	5.00	
51 V	-0.78 ug/l	0.44	2.00	
52 Cr	-1.34 ug/l	0.92	2.00	
53 Cr	-1.64 ug/l	2.70	#VALUE!	
55 Mn	-1.00 ug/l	7.13	2.00	
57 Fe	19.10 ug/l	28.90	10.00	Fail
59 Co	-1.38 ug/l	0.65	2.00	
60 Ni	-1.09 ug/l	2.50	2.00	
63 Cu	-0.34 ug/l	4.97	5.00	
66 Zn	-1.48 ug/l	0.68	5.00	
75 As	-0.08 ug/l	106.38	2.00	
77 (As)	0.14 ug/l	183.22	3.00	
78 Se	2.16 ug/l	137.39	3.00	
82 Se	0.53 ug/l	55.65	2.00	
83 (Se)	219.20 ug/l	112.14	3.00	
88 (Ca)	69.55 ug/l	30.80	3.00	
89 Y	-------- ug/l	--------	#VALUE!	
98 Mo	1.78 ug/l	6.50	3.00	
99 (Mo)	-------- ug/l	--------	#VALUE!	
106 (Cd)	1.18 ug/l	13.57	3.00	
107 Ag	1.69 ug/l	0.70	2.00	
108 (Cd)	0.20 ug/l	14.94	3.00	
111 Cd	0.31 ug/l	4.76	1.00	
114 Cd	0.13 ug/l	4.13	1.00	
118 (In)	-------- ug/l	--------	3.00	
120 Sn	1.95 ug/l	7.16	5.00	
121 Sb	1.20 ug/l	8.92	3.00	
137 Ba	0.48 ug/l	4.44	2.00	
203 Tl	-0.03 ug/l	58.50	2.00	
206 Pb	-0.11 ug/l	19.08	3.00	
207 Pb	-0.09 ug/l	60.81	3.00	
208 Pb	0.05 ug/l	49.10	1.00	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1378386.00	4.91	1495870.10	92.1	80 - 120	
45 Sc	1106260.10	4.18	1150710.10	96.1	80 - 120	
74 Ge	214667.77	3.34	218860.00	98.1	80 - 120	
115 In	884121.44	6.34	923239.88	95.8	80 - 120	
209 Bi	549226.69	3.06	560868.88	97.9	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F24o00.B\003CALB.D\003CALB.D#

1 :Element Failures 15 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCV QC Report

Data File: C:\ICPCHEM\1\DATA\13F24o00.B\032CCV1.D\032CCV1.D#
Date Acquired: Jun 24 2013 05:02 pm
Operator: ICPMS 2 - JG
Sample Name: CCV1
Misc Info: 60-23-07
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal Update: Jun 24 2013 03:25 pm
Sample Type: CCV1
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	Expected	QC Range(%)	Flag
9 Be	106.70 ug/l	1.16	100.00	90 - 110	
11 B	128.80 ug/l	1.90	100.00	90 - 110	Fail
23 Na	1047.00 ug/l	1.41	1000.00	90 - 110	
24 Mg	1069.00 ug/l	2.92	1000.00	90 - 110	
27 Al	160.10 ug/l	0.62	100.00	90 - 110	Fail
28 Si	-------- ug/l	--------	100.00	90 - 110	
39 K	1059.00 ug/l	5.90	1000.00	90 - 110	
44 Ca	1133.00 ug/l	0.79	1000.00	90 - 110	Fail
47 Ti	54.65 ug/l	5.31	50.00	90 - 110	
51 V	108.50 ug/l	5.01	100.00	90 - 110	
52 Cr	108.70 ug/l	4.60	100.00	90 - 110	
53 Cr	105.40 ug/l	4.73	---	##### - #####	
55 Mn	111.00 ug/l	4.42	100.00	90 - 110	Fail
57 Fe	1051.00 ug/l	6.59	1000.00	90 - 110	
59 Co	106.10 ug/l	5.51	100.00	90 - 110	
60 Ni	109.40 ug/l	6.84	100.00	90 - 110	
63 Cu	103.60 ug/l	5.21	100.00	90 - 110	
66 Zn	109.10 ug/l	5.25	100.00	90 - 110	
75 As	101.20 ug/l	7.11	100.00	90 - 110	
77 (As)	102.70 ug/l	4.48	100.00	90 - 110	
78 Se	100.20 ug/l	11.61	100.00	90 - 110	
82 Se	102.20 ug/l	7.13	100.00	90 - 110	
83 (Se)	-53.33 ug/l	257.64	100.00	90 - 110	
88 (Ca)	1542.00 ug/l	27.49	100.00	90 - 110	
89 Y	-------- ug/l	--------	100.00	90 - 110	
98 Mo	48.36 ug/l	8.27	50.00	90 - 110	
99 (Mo)	-------- ug/l	--------	---	##### - #####	
106 (Cd)	101.90 ug/l	7.05	100.00	90 - 110	
107 Ag	99.23 ug/l	6.22	100.00	90 - 110	
108 (Cd)	101.50 ug/l	8.46	100.00	90 - 110	
111 Cd	101.00 ug/l	7.10	100.00	90 - 110	
114 Cd	101.20 ug/l	6.58	100.00	90 - 110	
118 (In)	-------- ug/l	--------	100.00	90 - 110	
120 Sn	50.21 ug/l	7.15	50.00	90 - 110	
121 Sb	55.48 ug/l	6.78	50.00	90 - 110	Fail
137 Ba	97.46 ug/l	6.34	100.00	90 - 110	
203 Tl	100.80 ug/l	5.95	100.00	90 - 110	
206 Pb	101.60 ug/l	7.32	100.00	90 - 110	
207 Pb	99.33 ug/l	6.55	100.00	90 - 110	
208 Pb	100.10 ug/l	7.09	100.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1343241.40	0.24	1495870.10	89.8	80 - 120	
45 Sc	1148970.80	3.17	1150710.10	99.8	80 - 120	
74 Ge	221540.00	3.15	218860.00	101.2	80 - 120	
115 In	902263.31	4.16	923239.88	97.7	80 - 120	
209 Bi	578312.25	2.96	560868.88	103.1	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F24o00.B\003CALB.D\003CALB.D#

5 :Element Failures 40 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCB QC Report

Data File: C:\ICPCHEM\1\DATA\13F24o00.B\033_CCB.D\033_CCB.D#
Date Acquired: Jun 24 2013 05:05 pm
Operator: ICPMS 2 - JG
Sample Name: CCB
Misc Info: 60-22-493
Vial Number: 5
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal Update: Jun 24 2013 03:25 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	High Limit	Flag
9 Be	0.63 ug/l	2.74	1.00	
11 B	14.14 ug/l	2.86	5.00	Fail
23 Na	-22.90 ug/l	16.66	10.00	
24 Mg	-13.89 ug/l	18.60	10.00	
27 Al	3.03 ug/l	71.85	3.00	Fail
28 Si	-------- ug/l	--------	10.00	
39 K	-17.71 ug/l	61.10	10.00	
44 Ca	17.03 ug/l	82.15	10.00	Fail
47 Ti	0.34 ug/l	22.79	5.00	
51 V	-0.77 ug/l	1.86	2.00	
52 Cr	-1.29 ug/l	1.96	2.00	
53 Cr	-1.60 ug/l	3.13	#VALUE!	
55 Mn	-0.48 ug/l	66.65	2.00	
57 Fe	7.98 ug/l	32.66	10.00	
59 Co	-1.37 ug/l	1.72	2.00	
60 Ni	-1.08 ug/l	3.53	2.00	
63 Cu	-0.35 ug/l	6.95	5.00	
66 Zn	-1.50 ug/l	1.96	5.00	
75 As	-0.22 ug/l	6.82	2.00	
77 (As)	0.01 ug/l	3913.40	3.00	
78 Se	-1.64 ug/l	170.77	3.00	
82 Se	-0.35 ug/l	69.21	2.00	
83 (Se)	-154.00 ug/l	192.40	3.00	
88 (Ca)	318.70 ug/l	43.36	3.00	
89 Y	-------- ug/l	--------	#VALUE!	
98 Mo	1.46 ug/l	5.23	3.00	
99 (Mo)	-------- ug/l	--------	#VALUE!	
106 (Cd)	0.40 ug/l	35.48	3.00	
107 Ag	1.70 ug/l	0.27	2.00	
108 (Cd)	0.21 ug/l	65.16	3.00	
111 Cd	0.27 ug/l	9.56	1.00	
114 Cd	0.16 ug/l	11.66	1.00	
118 (In)	-------- ug/l	--------	3.00	
120 Sn	2.08 ug/l	10.40	5.00	
121 Sb	1.14 ug/l	11.28	3.00	
137 Ba	0.50 ug/l	8.19	2.00	
203 Tl	-0.04 ug/l	80.56	2.00	
206 Pb	-0.09 ug/l	29.73	3.00	
207 Pb	-0.07 ug/l	40.73	3.00	
208 Pb	0.08 ug/l	26.57	1.00	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1376416.00	3.29	1495870.10	92.0	80 - 120	
45 Sc	1135978.50	3.31	1150710.10	98.7	80 - 120	
74 Ge	217146.66	4.01	218860.00	99.2	80 - 120	
115 In	887141.94	5.47	923239.88	96.1	80 - 120	
209 Bi	557751.06	4.50	560868.88	99.4	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F24o00.B\003CALB.D\003CALB.D#

3 :Element Failures 15 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCV QC Report

Data File: C:\ICPCHEM\1\DATA\13F24o00.B\037CCV1.D\037CCV1.D#
Date Acquired: Jun 24 2013 05:21 pm
Operator: ICPMS 2 - JG
Sample Name: CCV1
Misc Info: 60-23-07
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal Update: Jun 24 2013 03:25 pm
Sample Type: CCV1
Total Dil Factor: 1.00

QC Elements

Element	Conc.		RSD(%)	Expected	QC Range(%)	Flag
9 Be	103.40	ug/l	8.69	100.00	90 - 110	
11 B	107.70	ug/l	5.99	100.00	90 - 110	
23 Na	1049.00	ug/l	5.58	1000.00	90 - 110	
24 Mg	1070.00	ug/l	3.68	1000.00	90 - 110	
27 Al	143.40	ug/l	2.21	100.00	90 - 110	Fail
28 Si	--------	ug/l	--------	100.00	90 - 110	
39 K	1045.00	ug/l	4.84	1000.00	90 - 110	
44 Ca	1016.00	ug/l	3.89	1000.00	90 - 110	
47 Ti	52.82	ug/l	5.90	50.00	90 - 110	
51 V	110.70	ug/l	3.76	100.00	90 - 110	Fail
52 Cr	109.60	ug/l	5.94	100.00	90 - 110	
53 Cr	105.50	ug/l	6.52	---	##### - #####	
55 Mn	110.60	ug/l	3.95	100.00	90 - 110	Fail
57 Fe	1034.00	ug/l	5.97	1000.00	90 - 110	
59 Co	104.70	ug/l	6.50	100.00	90 - 110	
60 Ni	109.00	ug/l	5.43	100.00	90 - 110	
63 Cu	103.40	ug/l	5.73	100.00	90 - 110	
66 Zn	109.50	ug/l	5.66	100.00	90 - 110	
75 As	101.10	ug/l	4.25	100.00	90 - 110	
77 (As)	103.10	ug/l	6.28	100.00	90 - 110	
78 Se	94.18	ug/l	9.90	100.00	90 - 110	
82 Se	102.50	ug/l	5.52	100.00	90 - 110	
83 (Se)	-151.40	ug/l	255.81	100.00	90 - 110	
88 (Ca)	315.60	ug/l	7.97	100.00	90 - 110	
89 Y	--------	ug/l	--------	100.00	90 - 110	
98 Mo	47.43	ug/l	9.60	50.00	90 - 110	
99 (Mo)	--------	ug/l	--------	---	##### - #####	
106 (Cd)	104.00	ug/l	4.00	100.00	90 - 110	
107 Ag	99.68	ug/l	7.57	100.00	90 - 110	
108 (Cd)	102.10	ug/l	8.79	100.00	90 - 110	
111 Cd	102.00	ug/l	6.54	100.00	90 - 110	
114 Cd	100.90	ug/l	7.86	100.00	90 - 110	
118 (In)	--------	ug/l	--------	100.00	90 - 110	
120 Sn	49.19	ug/l	7.16	50.00	90 - 110	
121 Sb	55.86	ug/l	9.11	50.00	90 - 110	Fail
137 Ba	96.98	ug/l	8.48	100.00	90 - 110	
203 Tl	101.50	ug/l	5.87	100.00	90 - 110	
206 Pb	103.10	ug/l	5.86	100.00	90 - 110	
207 Pb	100.40	ug/l	5.57	100.00	90 - 110	
208 Pb	101.20	ug/l	5.78	100.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1353492.50	4.77	1495870.10	90.5	80 - 120	
45 Sc	1122915.00	2.56	1150710.10	97.6	80 - 120	
74 Ge	215115.56	2.37	218860.00	98.3	80 - 120	
115 In	880327.50	4.91	923239.88	95.4	80 - 120	
209 Bi	554882.25	1.93	560868.88	98.9	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F24o00.B\003CALB.D\003CALB.D#

4 :Element Failures 40 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCB QC Report

Data File: C:\ICPCHEM\1\DATA\13F24o00.B\038_CCB.D\038_CCB.D#
Date Acquired: Jun 24 2013 05:25 pm
Operator: ICPMS 2 - JG
Sample Name: CCB
Misc Info: 60-22-493
Vial Number: 5
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal Update: Jun 24 2013 03:25 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	High Limit	Flag
9 Be	0.63 ug/l	2.42	1.00	
11 B	4.23 ug/l	0.68	5.00	
23 Na	-24.29 ug/l	17.87	10.00	
24 Mg	-18.95 ug/l	1.52	10.00	
27 Al	-1.35 ug/l	7.18	3.00	
28 Si	-------- ug/l	--------	10.00	
39 K	-29.47 ug/l	22.73	10.00	
44 Ca	-13.11 ug/l	2.98	10.00	
47 Ti	-0.11 ug/l	48.95	5.00	
51 V	-0.76 ug/l	3.76	2.00	
52 Cr	-1.30 ug/l	2.59	2.00	
53 Cr	-1.66 ug/l	1.06	#VALUE!	
55 Mn	-1.13 ug/l	1.59	2.00	
57 Fe	0.50 ug/l	386.37	10.00	
59 Co	-1.35 ug/l	2.10	2.00	
60 Ni	-1.07 ug/l	3.01	2.00	
63 Cu	-0.36 ug/l	9.10	5.00	
66 Zn	-1.51 ug/l	2.00	5.00	
75 As	-0.13 ug/l	29.17	2.00	
77 (As)	-0.12 ug/l	141.35	3.00	
78 Se	-4.24 ug/l	71.05	3.00	
82 Se	0.08 ug/l	419.41	2.00	
83 (Se)	31.18 ug/l	756.25	3.00	
88 (Ca)	-27.07 ug/l	36.54	3.00	
89 Y	-------- ug/l	--------	#VALUE!	
98 Mo	1.43 ug/l	3.96	3.00	
99 (Mo)	-------- ug/l	--------	#VALUE!	
106 (Cd)	1.01 ug/l	92.67	3.00	
107 Ag	1.72 ug/l	1.58	2.00	
108 (Cd)	0.18 ug/l	44.04	3.00	
111 Cd	0.30 ug/l	13.59	1.00	
114 Cd	0.16 ug/l	13.03	1.00	
118 (In)	-------- ug/l	--------	3.00	
120 Sn	2.13 ug/l	11.09	5.00	
121 Sb	1.55 ug/l	6.52	3.00	
137 Ba	0.47 ug/l	7.69	2.00	
203 Tl	-0.05 ug/l	28.89	2.00	
206 Pb	-0.10 ug/l	28.65	3.00	
207 Pb	-0.07 ug/l	42.46	3.00	
208 Pb	0.07 ug/l	40.17	1.00	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1378572.90	2.19	1495870.10	92.2	80 - 120	
45 Sc	1139969.60	2.27	1150710.10	99.1	80 - 120	
74 Ge	214196.66	3.71	218860.00	97.9	80 - 120	
115 In	878336.63	6.09	923239.88	95.1	80 - 120	
209 Bi	542530.00	2.56	560868.88	96.7	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F24o00.B\003CALB.D\003CALB.D#

0 :Element Failures 15 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCV QC Report

Data File: C:\ICPCHEM\1\DATA\13F24o00.B\044CCV1.D\044CCV1.D#
Date Acquired: Jun 24 2013 06:08 pm
Operator: ICPMS 2 - JG
Sample Name: CCV1
Misc Info: 60-20-04
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal Update: Jun 24 2013 03:25 pm
Sample Type: CCV1
Total Dil Factor: 1.00

QC Elements

Element	Conc.		RSD(%)	Expected	QC Range(%)	Flag
9 Be	101.70	ug/l	7.42	100.00	90 - 110	
11 B	100.40	ug/l	8.95	100.00	90 - 110	
23 Na	1095.00	ug/l	2.87	1000.00	90 - 110	
24 Mg	1099.00	ug/l	3.09	1000.00	90 - 110	
27 Al	148.50	ug/l	3.06	100.00	90 - 110	Fail
28 Si	--------	ug/l	--------	100.00	90 - 110	
39 K	1103.00	ug/l	4.53	1000.00	90 - 110	Fail
44 Ca	1016.00	ug/l	4.87	1000.00	90 - 110	
47 Ti	51.90	ug/l	5.24	50.00	90 - 110	
51 V	109.60	ug/l	4.17	100.00	90 - 110	
52 Cr	109.60	ug/l	4.22	100.00	90 - 110	
53 Cr	103.30	ug/l	4.37	---	##### - #####	
55 Mn	106.30	ug/l	3.65	100.00	90 - 110	
57 Fe	1004.00	ug/l	5.04	1000.00	90 - 110	
59 Co	106.00	ug/l	4.82	100.00	90 - 110	
60 Ni	106.50	ug/l	5.37	100.00	90 - 110	
63 Cu	101.10	ug/l	4.21	100.00	90 - 110	
66 Zn	106.00	ug/l	5.10	100.00	90 - 110	
75 As	99.98	ug/l	5.64	100.00	90 - 110	
77 (As)	102.80	ug/l	3.90	100.00	90 - 110	
78 Se	99.27	ug/l	9.16	100.00	90 - 110	
82 Se	101.40	ug/l	6.37	100.00	90 - 110	
83 (Se)	-64.20	ug/l	244.24	100.00	90 - 110	
88 (Ca)	332.20	ug/l	6.78	100.00	90 - 110	
89 Y	--------	ug/l	--------	100.00	90 - 110	
98 Mo	47.60	ug/l	9.22	50.00	90 - 110	
99 (Mo)	--------	ug/l	--------	---	##### - #####	
106 (Cd)	103.20	ug/l	6.20	100.00	90 - 110	
107 Ag	98.36	ug/l	6.89	100.00	90 - 110	
108 (Cd)	97.30	ug/l	7.90	100.00	90 - 110	
111 Cd	99.94	ug/l	7.99	100.00	90 - 110	
114 Cd	100.40	ug/l	7.90	100.00	90 - 110	
118 (In)	--------	ug/l	--------	100.00	90 - 110	
120 Sn	47.39	ug/l	7.75	50.00	90 - 110	
121 Sb	55.80	ug/l	8.36	50.00	90 - 110	Fail
137 Ba	95.92	ug/l	6.83	100.00	90 - 110	
203 Tl	101.60	ug/l	5.56	100.00	90 - 110	
206 Pb	103.50	ug/l	4.69	100.00	90 - 110	
207 Pb	102.20	ug/l	4.62	100.00	90 - 110	
208 Pb	103.10	ug/l	4.71	100.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1340706.40	5.40	1495870.10	89.6	80 - 120	
45 Sc	1051974.90	2.51	1150710.10	91.4	80 - 120	
74 Ge	194901.11	1.93	218860.00	89.1	80 - 120	
115 In	776654.94	4.53	923239.88	84.1	80 - 120	
209 Bi	512688.91	1.35	560868.88	91.4	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F24o00.B\003CALB.D\003CALB.D#

3 :Element Failures 40 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCB QC Report

Data File: C:\ICPCHEM\1\DATA\13F24o00.B\045_CCB.D\045_CCB.D#
Date Acquired: Jun 24 2013 06:12 pm
Operator: ICPMS 2 - JG
Sample Name: CCB
Misc Info: 60-20-10
Vial Number: 5
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal Update: Jun 24 2013 03:25 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	High Limit	Flag
9 Be	0.63 ug/l	1.13	1.00	
11 B	2.14 ug/l	5.00	5.00	
23 Na	-25.29 ug/l	1.72	10.00	
24 Mg	-17.91 ug/l	0.42	10.00	
27 Al	-1.24 ug/l	1.40	3.00	
28 Si	-------- ug/l	--------	10.00	
39 K	9.82 ug/l	100.30	10.00	
44 Ca	-3.61 ug/l	39.39	10.00	
47 Ti	-0.14 ug/l	11.96	5.00	
51 V	-0.77 ug/l	3.55	2.00	
52 Cr	-1.30 ug/l	2.47	2.00	
53 Cr	-1.67 ug/l	2.19	#VALUE!	
55 Mn	-1.11 ug/l	0.89	2.00	
57 Fe	9.09 ug/l	40.82	10.00	
59 Co	-1.38 ug/l	0.67	2.00	
60 Ni	-1.10 ug/l	0.21	2.00	
63 Cu	-0.36 ug/l	1.69	5.00	
66 Zn	-1.55 ug/l	1.77	5.00	
75 As	-0.03 ug/l	282.99	2.00	
77 (As)	0.19 ug/l	69.36	3.00	
78 Se	1.49 ug/l	77.78	3.00	
82 Se	0.83 ug/l	77.54	2.00	
83 (Se)	210.60 ug/l	284.76	3.00	
88 (Ca)	-26.97 ug/l	19.42	3.00	
89 Y	-------- ug/l	--------	#VALUE!	
98 Mo	1.40 ug/l	12.88	3.00	
99 (Mo)	-------- ug/l	--------	#VALUE!	
106 (Cd)	1.26 ug/l	65.75	3.00	
107 Ag	1.70 ug/l	0.75	2.00	
108 (Cd)	0.11 ug/l	56.40	3.00	
111 Cd	0.31 ug/l	21.55	1.00	
114 Cd	0.15 ug/l	8.42	1.00	
118 (In)	-------- ug/l	--------	3.00	
120 Sn	1.92 ug/l	10.70	5.00	
121 Sb	1.38 ug/l	14.11	3.00	
137 Ba	0.46 ug/l	3.09	2.00	
203 Tl	-0.05 ug/l	8.77	2.00	
206 Pb	-0.10 ug/l	14.61	3.00	
207 Pb	-0.08 ug/l	6.61	3.00	
208 Pb	0.06 ug/l	4.88	1.00	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1362095.90	2.79	1495870.10	91.1	80 - 120	
45 Sc	1051401.00	2.89	1150710.10	91.4	80 - 120	
74 Ge	192012.22	3.00	218860.00	87.7	80 - 120	
115 In	774929.75	7.84	923239.88	83.9	80 - 120	
209 Bi	507532.22	3.54	560868.88	90.5	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F24o00.B\003CALB.D\003CALB.D#

0 :Element Failures 15 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCV QC Report

Data File: C:\ICPCHEM\1\DATA\13F24o00.B\047CCV1.D\047CCV1.D#
Date Acquired: Jun 24 2013 06:20 pm
Operator: ICPMS 2 - JG
Sample Name: CCV1
Misc Info: 60-20-04
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal Update: Jun 24 2013 03:25 pm
Sample Type: CCV1
Total Dil Factor: 1.00

QC Elements

Element	Conc.		RSD(%)	Expected	QC Range(%)	Flag
9 Be	107.50	ug/l	6.31	100.00	90 - 110	
11 B	109.20	ug/l	6.85	100.00	90 - 110	
23 Na	1048.00	ug/l	3.85	1000.00	90 - 110	
24 Mg	1120.00	ug/l	5.19	1000.00	90 - 110	Fail
27 Al	151.10	ug/l	4.95	100.00	90 - 110	Fail
28 Si	--------	ug/l	--------	100.00	90 - 110	
39 K	1027.00	ug/l	4.60	1000.00	90 - 110	
44 Ca	1046.00	ug/l	3.44	1000.00	90 - 110	
47 Ti	51.56	ug/l	5.13	50.00	90 - 110	
51 V	109.20	ug/l	3.89	100.00	90 - 110	
52 Cr	105.70	ug/l	3.46	100.00	90 - 110	
53 Cr	101.50	ug/l	5.41	---	##### - #####	
55 Mn	105.20	ug/l	4.50	100.00	90 - 110	
57 Fe	1034.00	ug/l	5.24	1000.00	90 - 110	
59 Co	103.70	ug/l	4.59	100.00	90 - 110	
60 Ni	104.50	ug/l	4.28	100.00	90 - 110	
63 Cu	99.58	ug/l	4.81	100.00	90 - 110	
66 Zn	105.70	ug/l	5.13	100.00	90 - 110	
75 As	102.20	ug/l	4.90	100.00	90 - 110	
77 (As)	102.70	ug/l	5.39	100.00	90 - 110	
78 Se	103.40	ug/l	7.85	100.00	90 - 110	
82 Se	104.00	ug/l	3.87	100.00	90 - 110	
83 (Se)	224.00	ug/l	170.04	100.00	90 - 110	
88 (Ca)	469.00	ug/l	15.09	100.00	90 - 110	
89 Y	--------	ug/l	--------	100.00	90 - 110	
98 Mo	48.01	ug/l	8.52	50.00	90 - 110	
99 (Mo)	--------	ug/l	--------	---	##### - #####	
106 (Cd)	103.00	ug/l	6.77	100.00	90 - 110	
107 Ag	98.50	ug/l	6.59	100.00	90 - 110	
108 (Cd)	100.50	ug/l	9.28	100.00	90 - 110	
111 Cd	100.00	ug/l	6.63	100.00	90 - 110	
114 Cd	100.70	ug/l	7.68	100.00	90 - 110	
118 (In)	--------	ug/l	--------	100.00	90 - 110	
120 Sn	50.37	ug/l	7.30	50.00	90 - 110	
121 Sb	55.75	ug/l	7.88	50.00	90 - 110	Fail
137 Ba	95.39	ug/l	7.30	100.00	90 - 110	
203 Tl	100.80	ug/l	6.28	100.00	90 - 110	
206 Pb	102.60	ug/l	6.47	100.00	90 - 110	
207 Pb	101.00	ug/l	5.89	100.00	90 - 110	
208 Pb	102.20	ug/l	6.07	100.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1330655.50	4.22	1495870.10	89.0	80 - 120	
45 Sc	1112375.30	2.40	1150710.10	96.7	80 - 120	
74 Ge	202702.22	2.77	218860.00	92.6	80 - 120	
115 In	811225.13	4.75	923239.88	87.9	80 - 120	
209 Bi	541434.44	3.00	560868.88	96.5	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F24o00.B\003CALB.D\003CALB.D#

3 :Element Failures 40 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCB QC Report

Data File: C:\ICPCHEM\1\DATA\13F24o00.B\048_CCB.D\048_CCB.D#
Date Acquired: Jun 24 2013 06:24 pm
Operator: ICPMS 2 - JG
Sample Name: CCB
Misc Info: 60-20-10
Vial Number: 5
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal Update: Jun 24 2013 03:25 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	High Limit	Flag
9 Be	0.64 ug/l	3.19	1.00	
11 B	2.27 ug/l	1.85	5.00	
23 Na	-52.25 ug/l	4.56	10.00	
24 Mg	0.96 ug/l	644.14	10.00	
27 Al	-0.01 ug/l	9281.80	3.00	
28 Si	-------- ug/l	--------	10.00	
39 K	-48.02 ug/l	3.90	10.00	
44 Ca	23.30 ug/l	44.42	10.00	Fail
47 Ti	-0.07 ug/l	62.07	5.00	
51 V	-0.79 ug/l	5.69	2.00	
52 Cr	-1.32 ug/l	1.58	2.00	
53 Cr	-1.64 ug/l	4.20	#VALUE!	
55 Mn	-0.95 ug/l	6.42	2.00	
57 Fe	16.23 ug/l	19.39	10.00	Fail
59 Co	-1.36 ug/l	1.66	2.00	
60 Ni	-1.08 ug/l	1.98	2.00	
63 Cu	-0.35 ug/l	6.23	5.00	
66 Zn	-1.49 ug/l	2.24	5.00	
75 As	-0.11 ug/l	129.72	2.00	
77 (As)	0.36 ug/l	57.83	3.00	
78 Se	2.54 ug/l	42.69	3.00	
82 Se	0.61 ug/l	121.84	2.00	
83 (Se)	178.20 ug/l	387.93	3.00	
88 (Ca)	68.95 ug/l	46.19	3.00	
89 Y	-------- ug/l	--------	#VALUE!	
98 Mo	1.50 ug/l	9.08	3.00	
99 (Mo)	-------- ug/l	--------	#VALUE!	
106 (Cd)	1.19 ug/l	36.87	3.00	
107 Ag	1.72 ug/l	0.61	2.00	
108 (Cd)	0.20 ug/l	86.29	3.00	
111 Cd	0.34 ug/l	7.89	1.00	
114 Cd	0.16 ug/l	13.15	1.00	
118 (In)	-------- ug/l	--------	3.00	
120 Sn	2.12 ug/l	8.74	5.00	
121 Sb	1.96 ug/l	14.07	3.00	
137 Ba	0.50 ug/l	4.59	2.00	
203 Tl	-0.04 ug/l	44.23	2.00	
206 Pb	-0.09 ug/l	2.60	3.00	
207 Pb	-0.07 ug/l	29.73	3.00	
208 Pb	0.08 ug/l	14.02	1.00	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1340030.90	3.75	1495870.10	89.6	80 - 120	
45 Sc	1105997.50	1.80	1150710.10	96.1	80 - 120	
74 Ge	201190.00	3.46	218860.00	91.9	80 - 120	
115 In	788584.19	9.03	923239.88	85.4	80 - 120	
209 Bi	535101.06	3.45	560868.88	95.4	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F24o00.B\003CALB.D\003CALB.D#

2 :Element Failures 15 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\13F24o00.B\057SMPL.D\057SMPL.D#
Date Acquired: Jun 24 2013 07:00 pm
Acq. Method: 6020G.M
Operator: ICPMS 2 - JG
Sample Name: 13060604-001C
Misc Info: M_ICPMS_W
Vial Number: 2503
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal. Update: Jun 24 2013 03:25 pm
Sample Type: Sample
Dilution Factor: 2.00
Autodil Factor: Undiluted
Final Dil Factor: 2.00

QC Elements

Element	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	1.15	0.58	ug/l	0.91	13000.00	
11 B	690.40	345.20	ug/l	4.90	6500.00	
23 Na	52,400.00	26200.00	ug/l	3.15	130000.00	
24 Mg	150,160.00	75080.00	ug/l	2.67	130000.00	
27 Al	24.06	12.03	ug/l	5.43	130000.00	
28 Si	----	--------	ug/l	--------	13000.00	
39 K	7,014.00	3507.00	ug/l	4.31	130000.00	
44 Ca	354,200.00	177100.00	ug/l	5.58	130000.00	>LRS
47 Ti	1.25	0.63	ug/l	23.59	13000.00	
51 V	-1.04	-0.52	ug/l	16.21	13000.00	
52 Cr	-0.45	-0.23	ug/l	8.96	13000.00	
53 Cr	80.20	40.10	ug/l	3.10	#VALUE!	
55 Mn	448.20	224.10	ug/l	3.92	13000.00	
57 Fe	4,292.00	2146.00	ug/l	9.32	130000.00	
59 Co	0.98	0.49	ug/l	20.29	13000.00	
60 Ni	9.49	4.75	ug/l	5.91	13000.00	
63 Cu	1.87	0.93	ug/l	14.11	13000.00	
66 Zn	16.06	8.03	ug/l	7.09	13000.00	
75 As	-0.33	-0.16	ug/l	158.60	13000.00	
77 (As)	196.54	98.27	ug/l	5.67	13000.00	
78 Se	13.95	6.97	ug/l	34.29	13000.00	
82 Se	0.19	0.09	ug/l	146.99	13000.00	
83 (Se)	-518.00	-259.00	ug/l	136.76	13000.00	
88 (Ca)	13,442,000.00	6721000.00	ug/l	3.62	13000.00	
89 Y	----	--------	ug/l	--------	13000.00	
98 Mo	8.21	4.11	ug/l	6.49	13000.00	
99 (Mo)	----	--------	ug/l	--------	#VALUE!	
106 (Cd)	4.16	2.08	ug/l	45.40	13000.00	
107 Ag	3.47	1.74	ug/l	0.35	1300.00	
108 (Cd)	1.04	0.52	ug/l	61.73	13000.00	
111 Cd	1.16	0.58	ug/l	12.31	13000.00	
114 Cd	0.71	0.36	ug/l	13.91	1300.00	
118 (In)	----	--------	ug/l	--------	13000.00	
120 Sn	2.99	1.50	ug/l	2.57	13000.00	
121 Sb	0.72	0.36	ug/l	7.01	13000.00	
137 Ba	29.20	14.60	ug/l	5.42	13000.00	
203 Tl	-0.16	-0.08	ug/l	8.27	13000.00	
206 Pb	7.77	3.89	ug/l	11.70	13000.00	
207 Pb	7.43	3.72	ug/l	12.09	13000.00	
208 Pb	7.89	3.95	ug/l	10.62	13000.00	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1567397.00	1.58	1495870.10	104.8	60 - 120	
45 Sc	1261718.30	2.60	1150710.10	109.6	60 - 120	
74 Ge	212285.56	2.80	218860.00	97.0	60 - 120	
115 In	800803.00	4.00	923239.88	86.7	60 - 120	
209 Bi	550830.00	7.47	560868.88	98.2	60 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F24o00.B\003CALB.D\003CALB.D#

1 :Element Failures 0 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Fail
ISTD: Pass

CCV QC Report

Data File: C:\ICPCHEM\1\DATA\13F24o00.B\059CCV1.D\059CCV1.D#
Date Acquired: Jun 24 2013 07:07 pm
Operator: ICPMS 2 - JG
Sample Name: CCV1
Misc Info: 60-20-04
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal Update: Jun 24 2013 03:25 pm
Sample Type: CCV1
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	Expected	QC Range(%)	Flag
9 Be	108.60 ug/l	4.84	100.00	90 - 110	
11 B	109.90 ug/l	5.79	100.00	90 - 110	
23 Na	1083.00 ug/l	4.58	1000.00	90 - 110	
24 Mg	1116.00 ug/l	4.12	1000.00	90 - 110	Fail
27 Al	148.60 ug/l	4.90	100.00	90 - 110	Fail
28 Si	-------- ug/l	--------	100.00	90 - 110	
39 K	1089.00 ug/l	3.04	1000.00	90 - 110	
44 Ca	1068.00 ug/l	2.93	1000.00	90 - 110	
47 Ti	51.40 ug/l	3.82	50.00	90 - 110	
51 V	107.90 ug/l	4.17	100.00	90 - 110	
52 Cr	108.50 ug/l	2.70	100.00	90 - 110	
53 Cr	103.80 ug/l	4.90	---	##### - #####	
55 Mn	106.80 ug/l	3.19	100.00	90 - 110	
57 Fe	1014.00 ug/l	5.25	1000.00	90 - 110	
59 Co	104.20 ug/l	3.51	100.00	90 - 110	
60 Ni	103.80 ug/l	4.58	100.00	90 - 110	
63 Cu	100.50 ug/l	4.15	100.00	90 - 110	
66 Zn	107.90 ug/l	4.32	100.00	90 - 110	
75 As	99.43 ug/l	5.83	100.00	90 - 110	
77 (As)	104.70 ug/l	3.82	100.00	90 - 110	
78 Se	101.80 ug/l	8.06	100.00	90 - 110	
82 Se	100.30 ug/l	7.79	100.00	90 - 110	
83 (Se)	-175.80 ug/l	362.51	100.00	90 - 110	
88 (Ca)	2731.00 ug/l	18.74	100.00	90 - 110	
89 Y	-------- ug/l	--------	100.00	90 - 110	
98 Mo	47.21 ug/l	6.58	50.00	90 - 110	
99 (Mo)	-------- ug/l	--------	---	##### - #####	
106 (Cd)	101.60 ug/l	7.29	100.00	90 - 110	
107 Ag	97.62 ug/l	5.03	100.00	90 - 110	
108 (Cd)	98.91 ug/l	6.45	100.00	90 - 110	
111 Cd	99.18 ug/l	5.94	100.00	90 - 110	
114 Cd	100.30 ug/l	5.69	100.00	90 - 110	
118 (In)	-------- ug/l	--------	100.00	90 - 110	
120 Sn	48.21 ug/l	7.36	50.00	90 - 110	
121 Sb	54.75 ug/l	7.91	50.00	90 - 110	
137 Ba	96.49 ug/l	5.92	100.00	90 - 110	
203 Tl	99.87 ug/l	6.02	100.00	90 - 110	
206 Pb	101.00 ug/l	7.29	100.00	90 - 110	
207 Pb	100.30 ug/l	6.89	100.00	90 - 110	
208 Pb	101.10 ug/l	6.85	100.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1408677.60	3.07	1495870.10	94.2	80 - 120	
45 Sc	1133552.40	1.83	1150710.10	98.5	80 - 120	
74 Ge	215263.33	3.01	218860.00	98.4	80 - 120	
115 In	846656.94	3.61	923239.88	91.7	80 - 120	
209 Bi	573714.44	3.03	560868.88	102.3	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F24o00.B\003CALB.D\003CALB.D#

2 :Element Failures 40 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCB QC Report

Data File: C:\ICPCHEM\1\DATA\13F24o00.B\060_CCB.D\060_CCB.D#
Date Acquired: Jun 24 2013 07:11 pm
Operator: ICPMS 2 - JG
Sample Name: CCB
Misc Info: 60-20-10
Vial Number: 5
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal Update: Jun 24 2013 03:25 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	High Limit	Flag
9 Be	0.62 ug/l	3.47	1.00	
11 B	3.37 ug/l	5.16	5.00	
23 Na	-29.37 ug/l	11.86	10.00	
24 Mg	-5.47 ug/l	73.92	10.00	
27 Al	-1.19 ug/l	10.30	3.00	
28 Si	-------- ug/l	--------	10.00	
39 K	-25.15 ug/l	27.59	10.00	
44 Ca	18.37 ug/l	58.74	10.00	Fail
47 Ti	-0.05 ug/l	340.96	5.00	
51 V	-0.79 ug/l	4.79	2.00	
52 Cr	-1.30 ug/l	3.99	2.00	
53 Cr	-1.00 ug/l	0.82	#VALUE!	
55 Mn	-0.99 ug/l	4.46	2.00	
57 Fe	8.87 ug/l	41.76	10.00	
59 Co	-1.38 ug/l	1.37	2.00	
60 Ni	-1.10 ug/l	0.77	2.00	
63 Cu	-0.37 ug/l	6.87	5.00	
66 Zn	-1.56 ug/l	0.32	5.00	
75 As	-0.30 ug/l	28.18	2.00	
77 (As)	0.69 ug/l	42.23	3.00	
78 Se	2.28 ug/l	143.31	3.00	
82 Se	-0.34 ug/l	149.36	2.00	
83 (Se)	112.00 ug/l	391.07	3.00	
88 (Ca)	1047.00 ug/l	39.82	3.00	
89 Y	-------- ug/l	--------	#VALUE!	
98 Mo	1.29 ug/l	3.54	3.00	
99 (Mo)	-------- ug/l	--------	#VALUE!	
106 (Cd)	0.87 ug/l	59.54	3.00	
107 Ag	1.70 ug/l	1.26	2.00	
108 (Cd)	0.22 ug/l	66.50	3.00	
111 Cd	0.29 ug/l	10.77	1.00	
114 Cd	0.13 ug/l	10.81	1.00	
118 (In)	-------- ug/l	--------	3.00	
120 Sn	1.68 ug/l	5.67	5.00	
121 Sb	1.00 ug/l	6.38	3.00	
137 Ba	0.48 ug/l	4.53	2.00	
203 Tl	-0.05 ug/l	57.06	2.00	
206 Pb	-0.09 ug/l	55.38	3.00	
207 Pb	-0.09 ug/l	43.09	3.00	
208 Pb	0.06 ug/l	51.91	1.00	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1414776.00	4.45	1495870.10	94.6	80 - 120	
45 Sc	1135709.90	2.88	1150710.10	98.7	80 - 120	
74 Ge	210511.11	3.25	218860.00	96.2	80 - 120	
115 In	855196.63	4.05	923239.88	92.6	80 - 120	
209 Bi	562580.00	3.23	560868.88	100.3	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F24o00.B\003CALB.D\003CALB.D#

1 :Element Failures 15 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCV QC Report

Data File: C:\ICPCHEM\1\DATA\13F24o00.B\065CCV1.D\065CCV1.D#
Date Acquired: Jun 24 2013 07:34 pm
Operator: ICPMS 2 - JG
Sample Name: CCV1
Misc Info: 60-20-04
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal Update: Jun 24 2013 03:25 pm
Sample Type: CCV1
Total Dil Factor: 1.00

QC Elements

Element	Conc.		RSD(%)	Expected	QC Range(%)	Flag
9 Be	107.10	ug/l	6.03	100.00	90 - 110	
11 B	107.50	ug/l	6.63	100.00	90 - 110	
23 Na	1003.00	ug/l	2.48	1000.00	90 - 110	
24 Mg	1047.00	ug/l	1.27	1000.00	90 - 110	
27 Al	105.10	ug/l	2.34	100.00	90 - 110	
28 Si	--------	ug/l	--------	100.00	90 - 110	
39 K	987.50	ug/l	3.18	1000.00	90 - 110	
44 Ca	955.60	ug/l	4.30	1000.00	90 - 110	
47 Ti	49.80	ug/l	2.97	50.00	90 - 110	
51 V	104.80	ug/l	0.60	100.00	90 - 110	
52 Cr	104.20	ug/l	2.88	100.00	90 - 110	
53 Cr	98.83	ug/l	4.55	---	##### - #####	
55 Mn	103.90	ug/l	1.73	100.00	90 - 110	
57 Fe	966.00	ug/l	4.00	1000.00	90 - 110	
59 Co	99.58	ug/l	4.18	100.00	90 - 110	
60 Ni	99.65	ug/l	2.78	100.00	90 - 110	
63 Cu	96.09	ug/l	3.17	100.00	90 - 110	
66 Zn	103.80	ug/l	3.65	100.00	90 - 110	
75 As	98.59	ug/l	5.82	100.00	90 - 110	
77 (As)	100.20	ug/l	7.70	100.00	90 - 110	
78 Se	102.60	ug/l	9.28	100.00	90 - 110	
82 Se	99.66	ug/l	8.17	100.00	90 - 110	
83 (Se)	228.10	ug/l	91.14	100.00	90 - 110	
88 (Ca)	279.30	ug/l	17.47	100.00	90 - 110	
89 Y	--------	ug/l	--------	100.00	90 - 110	
98 Mo	46.30	ug/l	8.59	50.00	90 - 110	
99 (Mo)	--------	ug/l	--------	---	##### - #####	
106 (Cd)	99.23	ug/l	5.81	100.00	90 - 110	
107 Ag	95.14	ug/l	5.73	100.00	90 - 110	
108 (Cd)	96.19	ug/l	5.22	100.00	90 - 110	
111 Cd	96.55	ug/l	6.85	100.00	90 - 110	
114 Cd	96.55	ug/l	7.69	100.00	90 - 110	
118 (In)	--------	ug/l	--------	100.00	90 - 110	
120 Sn	46.97	ug/l	7.06	50.00	90 - 110	
121 Sb	56.68	ug/l	7.66	50.00	90 - 110	Fail
137 Ba	93.70	ug/l	7.25	100.00	90 - 110	
203 Tl	97.27	ug/l	6.38	100.00	90 - 110	
206 Pb	98.14	ug/l	6.73	100.00	90 - 110	
207 Pb	97.43	ug/l	6.17	100.00	90 - 110	
208 Pb	98.16	ug/l	6.67	100.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1366511.80	3.31	1495870.10	91.4	80 - 120	
45 Sc	1154848.10	0.79	1150710.10	100.4	80 - 120	
74 Ge	212446.66	2.39	218860.00	97.1	80 - 120	
115 In	846706.44	4.10	923239.88	91.7	80 - 120	
209 Bi	568040.00	2.84	560868.88	101.3	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F24o00.B\003CALB.D\003CALB.D#

1 :Element Failures 40 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCB QC Report

Data File: C:\ICPCHEM\1\DATA\13F24o00.B\066_CCB.D\066_CCB.D#
Date Acquired: Jun 24 2013 07:38 pm
Operator: ICPMS 2 - JG
Sample Name: CCB
Misc Info: 60-20-10
Vial Number: 5
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal Update: Jun 24 2013 03:25 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	High Limit	Flag
9 Be	0.63 ug/l	6.41	1.00	
11 B	1.94 ug/l	2.86	5.00	
23 Na	-51.02 ug/l	3.23	10.00	
24 Mg	-17.13 ug/l	2.02	10.00	
27 Al	-1.50 ug/l	4.72	3.00	
28 Si	-------- ug/l	--------	10.00	
39 K	-60.74 ug/l	10.81	10.00	
44 Ca	-10.05 ug/l	1.93	10.00	
47 Ti	-0.19 ug/l	17.94	5.00	
51 V	-0.79 ug/l	4.03	2.00	
52 Cr	-1.34 ug/l	1.47	2.00	
53 Cr	-1.48 ug/l	2.63	#VALUE!	
55 Mn	-1.15 ug/l	2.69	2.00	
57 Fe	1.73 ug/l	189.89	10.00	
59 Co	-1.38 ug/l	1.92	2.00	
60 Ni	-1.10 ug/l	3.82	2.00	
63 Cu	-0.38 ug/l	6.07	5.00	
66 Zn	-1.56 ug/l	1.38	5.00	
75 As	-0.25 ug/l	21.84	2.00	
77 (As)	0.52 ug/l	21.19	3.00	
78 Se	4.64 ug/l	94.61	3.00	
82 Se	-0.12 ug/l	343.24	2.00	
83 (Se)	-513.40 ug/l	71.00	3.00	
88 (Ca)	-20.89 ug/l	37.02	3.00	
89 Y	-------- ug/l	--------	#VALUE!	
98 Mo	1.31 ug/l	10.55	3.00	
99 (Mo)	-------- ug/l	--------	#VALUE!	
106 (Cd)	0.62 ug/l	47.09	3.00	
107 Ag	1.70 ug/l	1.89	2.00	
108 (Cd)	0.33 ug/l	39.24	3.00	
111 Cd	0.26 ug/l	25.59	1.00	
114 Cd	0.15 ug/l	24.27	1.00	
118 (In)	-------- ug/l	--------	3.00	
120 Sn	1.84 ug/l	9.91	5.00	
121 Sb	1.18 ug/l	10.38	3.00	
137 Ba	0.48 ug/l	7.09	2.00	
203 Tl	-0.06 ug/l	37.84	2.00	
206 Pb	-0.13 ug/l	22.83	3.00	
207 Pb	-0.09 ug/l	34.26	3.00	
208 Pb	0.05 ug/l	77.95	1.00	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1371593.50	2.68	1495870.10	91.7	80 - 120	
45 Sc	1167832.50	2.60	1150710.10	101.5	80 - 120	
74 Ge	208834.44	3.72	218860.00	95.4	80 - 120	
115 In	826239.88	7.05	923239.88	89.5	80 - 120	
209 Bi	556048.88	3.57	560868.88	99.1	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F24o00.B\003CALB.D\003CALB.D#

0 :Element Failures 15 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCV QC Report

Data File: C:\ICPCHEM\1\DATA\13F24o00.B\076CCV1.D\076CCV1.D#
Date Acquired: Jun 24 2013 08:17 pm
Operator: ICPMS 2 - JG
Sample Name: CCV1
Misc Info: 60-20-04
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal Update: Jun 24 2013 03:25 pm
Sample Type: CCV1
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	Expected	QC Range(%)	Flag
9 Be	103.00 ug/l	6.36	100.00	90 - 110	
11 B	102.30 ug/l	7.32	100.00	90 - 110	
23 Na	1037.00 ug/l	6.10	1000.00	90 - 110	
24 Mg	1058.00 ug/l	5.90	1000.00	90 - 110	
27 Al	106.80 ug/l	5.03	100.00	90 - 110	
28 Si	-------- ug/l	--------	100.00	90 - 110	
39 K	1056.00 ug/l	5.33	1000.00	90 - 110	
44 Ca	973.00 ug/l	7.06	1000.00	90 - 110	
47 Ti	50.66 ug/l	7.53	50.00	90 - 110	
51 V	108.00 ug/l	6.41	100.00	90 - 110	
52 Cr	106.50 ug/l	6.78	100.00	90 - 110	
53 Cr	101.40 ug/l	6.69	---	##### - #####	
55 Mn	107.20 ug/l	8.14	100.00	90 - 110	
57 Fe	992.10 ug/l	7.76	1000.00	90 - 110	
59 Co	103.00 ug/l	6.40	100.00	90 - 110	
60 Ni	102.70 ug/l	7.25	100.00	90 - 110	
63 Cu	98.89 ug/l	7.42	100.00	90 - 110	
66 Zn	105.50 ug/l	6.95	100.00	90 - 110	
75 As	97.36 ug/l	6.13	100.00	90 - 110	
77 (As)	99.15 ug/l	3.95	100.00	90 - 110	
78 Se	98.47 ug/l	10.86	100.00	90 - 110	
82 Se	98.24 ug/l	4.86	100.00	90 - 110	
83 (Se)	-58.21 ug/l	789.56	100.00	90 - 110	
88 (Ca)	274.60 ug/l	9.57	100.00	90 - 110	
89 Y	-------- ug/l	--------	100.00	90 - 110	
98 Mo	45.90 ug/l	8.36	50.00	90 - 110	
99 (Mo)	-------- ug/l	--------	---	##### - #####	
106 (Cd)	98.01 ug/l	6.97	100.00	90 - 110	
107 Ag	94.09 ug/l	6.84	100.00	90 - 110	
108 (Cd)	97.68 ug/l	8.61	100.00	90 - 110	
111 Cd	95.79 ug/l	7.79	100.00	90 - 110	
114 Cd	96.79 ug/l	7.41	100.00	90 - 110	
118 (In)	-------- ug/l	--------	100.00	90 - 110	
120 Sn	46.48 ug/l	8.36	50.00	90 - 110	
121 Sb	55.66 ug/l	8.31	50.00	90 - 110	Fail
137 Ba	92.28 ug/l	8.19	100.00	90 - 110	
203 Tl	98.33 ug/l	5.72	100.00	90 - 110	
206 Pb	99.93 ug/l	7.22	100.00	90 - 110	
207 Pb	98.84 ug/l	6.60	100.00	90 - 110	
208 Pb	99.61 ug/l	6.72	100.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1390152.60	4.06	1495870.10	92.9	80 - 120	
45 Sc	1117717.60	4.45	1150710.10	97.1	80 - 120	
74 Ge	210337.77	2.73	218860.00	96.1	80 - 120	
115 In	843132.63	4.71	923239.88	91.3	80 - 120	
209 Bi	551873.31	2.20	560868.88	98.4	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F24o00.B\003CALB.D\003CALB.D#

1 :Element Failures 40 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCB QC Report

Data File: C:\ICPCHEM\1\DATA\13F24o00.B\077_CCB.D\077_CCB.D#
Date Acquired: Jun 24 2013 08:21 pm
Operator: ICPMS 2 - JG
Sample Name: CCB
Misc Info: 60-20-10
Vial Number: 5
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal Update: Jun 24 2013 03:25 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Elements

Element	Conc.		RSD(%)	High Limit	Flag
9 Be	0.64	ug/l	4.25	1.00	
11 B	1.84	ug/l	6.82	5.00	
23 Na	-44.23	ug/l	2.51	10.00	
24 Mg	-17.16	ug/l	3.07	10.00	
27 Al	-1.40	ug/l	7.52	3.00	
28 Si	--------	ug/l	--------	10.00	
39 K	-37.79	ug/l	15.68	10.00	
44 Ca	-9.63	ug/l	5.55	10.00	
47 Ti	-0.15	ug/l	16.04	5.00	
51 V	-0.76	ug/l	4.57	2.00	
52 Cr	-1.28	ug/l	2.25	2.00	
53 Cr	-1.44	ug/l	2.73	#VALUE!	
55 Mn	-1.10	ug/l	2.69	2.00	
57 Fe	4.96	ug/l	38.05	10.00	
59 Co	-1.36	ug/l	2.90	2.00	
60 Ni	-1.08	ug/l	3.58	2.00	
63 Cu	-0.36	ug/l	9.79	5.00	
66 Zn	-1.52	ug/l	2.72	5.00	
75 As	0.11	ug/l	164.90	2.00	
77 (As)	-0.03	ug/l	994.06	3.00	
78 Se	1.79	ug/l	133.11	3.00	
82 Se	0.76	ug/l	72.65	2.00	
83 (Se)	-163.00	ug/l	109.20	3.00	
88 (Ca)	-36.71	ug/l	6.05	3.00	
89 Y	--------	ug/l	--------	#VALUE!	
98 Mo	1.34	ug/l	5.41	3.00	
99 (Mo)	--------	ug/l	--------	#VALUE!	
106 (Cd)	1.00	ug/l	48.68	3.00	
107 Ag	1.71	ug/l	1.51	2.00	
108 (Cd)	0.33	ug/l	32.97	3.00	
111 Cd	0.32	ug/l	13.85	1.00	
114 Cd	0.16	ug/l	10.71	1.00	
118 (In)	--------	ug/l	--------	3.00	
120 Sn	1.85	ug/l	6.95	5.00	
121 Sb	0.82	ug/l	8.87	3.00	
137 Ba	0.49	ug/l	12.34	2.00	
203 Tl	0.01	ug/l	330.71	2.00	
206 Pb	-0.09	ug/l	31.01	3.00	
207 Pb	-0.06	ug/l	89.52	3.00	
208 Pb	0.08	ug/l	44.83	1.00	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1411728.90	3.27	1495870.10	94.4	80 - 120	
45 Sc	1131201.60	2.10	1150710.10	98.3	80 - 120	
74 Ge	207462.22	3.23	218860.00	94.8	80 - 120	
115 In	826360.25	5.90	923239.88	89.5	80 - 120	
209 Bi	542662.25	3.38	560868.88	96.8	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F24o00.B\003CALB.D\003CALB.D#

0 :Element Failures 15 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCV QC Report

Data File: C:\ICPCHEM\1\DATA\13F24o00.B\088CCV1.D\088CCV1.D#
Date Acquired: Jun 24 2013 09:05 pm
Operator: ICPMS 2 - JG
Sample Name: CCV1
Misc Info: 60-20-04
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal Update: Jun 24 2013 03:25 pm
Sample Type: CCV1
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	Expected	QC Range(%)	Flag
9 Be	102.30 ug/l	4.35	100.00	90 - 110	
11 B	101.20 ug/l	5.52	100.00	90 - 110	
23 Na	1033.00 ug/l	2.45	1000.00	90 - 110	
24 Mg	1053.00 ug/l	2.47	1000.00	90 - 110	
27 Al	107.90 ug/l	1.88	100.00	90 - 110	
28 Si	-------- ug/l	--------	100.00	90 - 110	
39 K	1065.00 ug/l	3.88	1000.00	90 - 110	
44 Ca	980.50 ug/l	4.73	1000.00	90 - 110	
47 Ti	49.79 ug/l	4.04	50.00	90 - 110	
51 V	106.60 ug/l	3.64	100.00	90 - 110	
52 Cr	106.90 ug/l	6.14	100.00	90 - 110	
53 Cr	101.40 ug/l	5.92	---	##### - #####	
55 Mn	104.20 ug/l	4.31	100.00	90 - 110	
57 Fe	984.00 ug/l	6.72	1000.00	90 - 110	
59 Co	102.40 ug/l	4.31	100.00	90 - 110	
60 Ni	101.80 ug/l	5.07	100.00	90 - 110	
63 Cu	97.78 ug/l	5.16	100.00	90 - 110	
66 Zn	105.10 ug/l	5.28	100.00	90 - 110	
75 As	97.80 ug/l	5.44	100.00	90 - 110	
77 (As)	97.46 ug/l	4.74	100.00	90 - 110	
78 Se	96.66 ug/l	9.12	100.00	90 - 110	
82 Se	99.33 ug/l	6.93	100.00	90 - 110	
83 (Se)	-278.60 ug/l	184.13	100.00	90 - 110	
88 (Ca)	274.50 ug/l	3.27	100.00	90 - 110	
89 Y	-------- ug/l	--------	100.00	90 - 110	
98 Mo	44.97 ug/l	9.21	50.00	90 - 110	Fail
99 (Mo)	-------- ug/l	--------	---	##### - #####	
106 (Cd)	94.02 ug/l	7.27	100.00	90 - 110	
107 Ag	92.71 ug/l	7.73	100.00	90 - 110	
108 (Cd)	94.06 ug/l	5.08	100.00	90 - 110	
111 Cd	94.28 ug/l	7.63	100.00	90 - 110	
114 Cd	94.51 ug/l	7.07	100.00	90 - 110	
118 (In)	-------- ug/l	--------	100.00	90 - 110	
120 Sn	45.21 ug/l	8.49	50.00	90 - 110	
121 Sb	55.31 ug/l	8.83	50.00	90 - 110	Fail
137 Ba	92.09 ug/l	8.42	100.00	90 - 110	
203 Tl	97.85 ug/l	4.68	100.00	90 - 110	
206 Pb	98.73 ug/l	6.00	100.00	90 - 110	
207 Pb	98.00 ug/l	5.99	100.00	90 - 110	
208 Pb	98.67 ug/l	5.85	100.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1411645.10	3.61	1495870.10	94.4	80 - 120	
45 Sc	1124551.50	3.07	1150710.10	97.7	80 - 120	
74 Ge	211835.56	2.99	218860.00	96.8	80 - 120	
115 In	858013.56	5.80	923239.88	92.9	80 - 120	
209 Bi	555004.44	1.66	560868.88	99.0	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F24o00.B\003CALB.D\003CALB.D#

2 :Element Failures 40 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCB QC Report

Data File: C:\ICPCHEM\1\DATA\13F24o00.B\089_CCB.D\089_CCB.D#
Date Acquired: Jun 24 2013 09:09 pm
Operator: ICPMS 2 - JG
Sample Name: CCB
Misc Info: 60-20-10
Vial Number: 5
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal Update: Jun 24 2013 03:25 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	High Limit	Flag
9 Be	0.62 ug/l	2.94	1.00	
11 B	1.41 ug/l	2.84	5.00	
23 Na	-41.78 ug/l	6.84	10.00	
24 Mg	-17.02 ug/l	0.56	10.00	
27 Al	-1.44 ug/l	2.29	3.00	
28 Si	-------- ug/l	--------	10.00	
39 K	-31.42 ug/l	16.38	10.00	
44 Ca	-9.47 ug/l	3.64	10.00	
47 Ti	-0.23 ug/l	14.85	5.00	
51 V	-0.79 ug/l	2.91	2.00	
52 Cr	-1.31 ug/l	1.19	2.00	
53 Cr	-1.41 ug/l	3.56	#VALUE!	
55 Mn	-1.12 ug/l	0.75	2.00	
57 Fe	3.78 ug/l	98.01	10.00	
59 Co	-1.39 ug/l	0.57	2.00	
60 Ni	-1.10 ug/l	0.41	2.00	
63 Cu	-0.37 ug/l	4.24	5.00	
66 Zn	-1.54 ug/l	0.96	5.00	
75 As	-0.18 ug/l	61.21	2.00	
77 (As)	0.63 ug/l	68.92	3.00	
78 Se	2.00 ug/l	72.38	3.00	
82 Se	0.21 ug/l	70.60	2.00	
83 (Se)	-165.70 ug/l	248.40	3.00	
88 (Ca)	-25.79 ug/l	53.70	3.00	
89 Y	-------- ug/l	--------	#VALUE!	
98 Mo	1.21 ug/l	3.41	3.00	
99 (Mo)	-------- ug/l	--------	#VALUE!	
106 (Cd)	0.70 ug/l	102.33	3.00	
107 Ag	1.70 ug/l	0.70	2.00	
108 (Cd)	0.20 ug/l	70.84	3.00	
111 Cd	0.26 ug/l	16.09	1.00	
114 Cd	0.14 ug/l	9.55	1.00	
118 (In)	-------- ug/l	--------	3.00	
120 Sn	1.59 ug/l	8.94	5.00	
121 Sb	0.72 ug/l	4.72	3.00	
137 Ba	0.47 ug/l	5.06	2.00	
203 Tl	-0.06 ug/l	44.53	2.00	
206 Pb	-0.11 ug/l	5.93	3.00	
207 Pb	-0.09 ug/l	29.83	3.00	
208 Pb	0.06 ug/l	25.26	1.00	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1419036.40	3.66	1495870.10	94.9	80 - 120	
45 Sc	1122906.50	2.07	1150710.10	97.6	80 - 120	
74 Ge	207330.00	3.81	218860.00	94.7	80 - 120	
115 In	837849.13	5.37	923239.88	90.8	80 - 120	
209 Bi	543284.44	3.80	560868.88	96.9	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F24o00.B\003CALB.D\003CALB.D#

0 :Element Failures 15 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCV QC Report

Data File: C:\ICPCHEM\1\DATA\13F24o00.B\104CCV1.D\104CCV1.D#
Date Acquired: Jun 24 2013 10:08 pm
Operator: ICPMS 2 - JG
Sample Name: CCV1
Misc Info: 60-20-04
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal Update: Jun 24 2013 03:25 pm
Sample Type: CCV1
Total Dil Factor: 1.00

QC Elements

Element	Conc.		RSD(%)	Expected	QC Range(%)	Flag
9 Be	101.30	ug/l	3.00	100.00	90 - 110	
11 B	99.08	ug/l	3.53	100.00	90 - 110	
23 Na	974.30	ug/l	2.64	1000.00	90 - 110	
24 Mg	1012.00	ug/l	0.88	1000.00	90 - 110	
27 Al	105.10	ug/l	2.38	100.00	90 - 110	
28 Si	--------	ug/l	--------	100.00	90 - 110	
39 K	972.00	ug/l	3.80	1000.00	90 - 110	
44 Ca	942.60	ug/l	3.46	1000.00	90 - 110	
47 Ti	49.03	ug/l	6.04	50.00	90 - 110	
51 V	103.90	ug/l	2.27	100.00	90 - 110	
52 Cr	103.70	ug/l	3.19	100.00	90 - 110	
53 Cr	97.88	ug/l	3.46	---	##### - #####	
55 Mn	101.30	ug/l	3.28	100.00	90 - 110	
57 Fe	946.40	ug/l	3.95	1000.00	90 - 110	
59 Co	99.17	ug/l	5.48	100.00	90 - 110	
60 Ni	97.98	ug/l	4.41	100.00	90 - 110	
63 Cu	94.83	ug/l	4.98	100.00	90 - 110	
66 Zn	102.10	ug/l	4.50	100.00	90 - 110	
75 As	98.49	ug/l	5.04	100.00	90 - 110	
77 (As)	98.40	ug/l	7.23	100.00	90 - 110	
78 Se	100.60	ug/l	9.33	100.00	90 - 110	
82 Se	98.89	ug/l	7.45	100.00	90 - 110	
83 (Se)	113.30	ug/l	151.72	100.00	90 - 110	
88 (Ca)	276.00	ug/l	13.90	100.00	90 - 110	
89 Y	--------	ug/l	--------	100.00	90 - 110	
98 Mo	45.79	ug/l	8.80	50.00	90 - 110	
99 (Mo)	--------	ug/l	--------	---	##### - #####	
106 (Cd)	97.50	ug/l	8.35	100.00	90 - 110	
107 Ag	93.70	ug/l	7.50	100.00	90 - 110	
108 (Cd)	95.17	ug/l	5.28	100.00	90 - 110	
111 Cd	95.08	ug/l	7.22	100.00	90 - 110	
114 Cd	95.53	ug/l	8.11	100.00	90 - 110	
118 (In)	--------	ug/l	--------	100.00	90 - 110	
120 Sn	45.57	ug/l	7.50	50.00	90 - 110	
121 Sb	55.67	ug/l	9.01	50.00	90 - 110	Fail
137 Ba	92.55	ug/l	8.06	100.00	90 - 110	
203 Tl	97.12	ug/l	4.66	100.00	90 - 110	
206 Pb	97.93	ug/l	5.86	100.00	90 - 110	
207 Pb	97.89	ug/l	5.54	100.00	90 - 110	
208 Pb	98.49	ug/l	5.89	100.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1374590.50	2.38	1495870.10	91.9	80 - 120	
45 Sc	1144714.60	1.94	1150710.10	99.5	80 - 120	
74 Ge	208173.33	2.63	218860.00	95.1	80 - 120	
115 In	835277.31	5.44	923239.88	90.5	80 - 120	
209 Bi	547086.69	2.05	560868.88	97.5	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F24o00.B\003CALB.D\003CALB.D#

1 :Element Failures 40 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCB QC Report

Data File: C:\ICPCHEM\1\DATA\13F24o00.B\105_CCB.D\105_CCB.D#
Date Acquired: Jun 24 2013 10:12 pm
Operator: ICPMS 2 - JG
Sample Name: CCB
Misc Info: 60-20-10
Vial Number: 5
Current Method: C:\ICPCHEM\1\METHODS\6020G.M
Calibration File: C:\ICPCHEM\1\CALIB\6020G.C
Last Cal Update: Jun 24 2013 03:25 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	High Limit	Flag
9 Be	0.63 ug/l	5.06	1.00	
11 B	1.35 ug/l	1.87	5.00	
23 Na	-52.60 ug/l	9.44	10.00	
24 Mg	-17.88 ug/l	2.16	10.00	
27 Al	-1.47 ug/l	3.03	3.00	
28 Si	-------- ug/l	--------	10.00	
39 K	-68.05 ug/l	15.81	10.00	
44 Ca	-11.03 ug/l	7.65	10.00	
47 Ti	-0.23 ug/l	20.66	5.00	
51 V	-0.78 ug/l	4.98	2.00	
52 Cr	-1.32 ug/l	1.79	2.00	
53 Cr	-1.65 ug/l	1.74	#VALUE!	
55 Mn	-1.15 ug/l	2.49	2.00	
57 Fe	2.80 ug/l	174.54	10.00	
59 Co	-1.38 ug/l	1.98	2.00	
60 Ni	-1.10 ug/l	4.53	2.00	
63 Cu	-0.38 ug/l	8.54	5.00	
66 Zn	-1.53 ug/l	2.40	5.00	
75 As	-0.09 ug/l	133.67	2.00	
77 (As)	-0.01 ug/l	7098.80	3.00	
78 Se	4.02 ug/l	65.78	3.00	
82 Se	0.28 ug/l	76.99	2.00	
83 (Se)	8.67 ug/l	2985.40	3.00	
88 (Ca)	-21.73 ug/l	19.09	3.00	
89 Y	-------- ug/l	--------	#VALUE!	
98 Mo	1.24 ug/l	9.45	3.00	
99 (Mo)	-------- ug/l	--------	#VALUE!	
106 (Cd)	0.24 ug/l	126.75	3.00	
107 Ag	1.69 ug/l	1.59	2.00	
108 (Cd)	0.27 ug/l	53.28	3.00	
111 Cd	0.25 ug/l	20.98	1.00	
114 Cd	0.14 ug/l	20.06	1.00	
118 (In)	-------- ug/l	--------	3.00	
120 Sn	1.56 ug/l	6.74	5.00	
121 Sb	0.76 ug/l	6.12	3.00	
137 Ba	0.48 ug/l	7.73	2.00	
203 Tl	-0.05 ug/l	44.98	2.00	
206 Pb	-0.09 ug/l	39.03	3.00	
207 Pb	-0.09 ug/l	40.01	3.00	
208 Pb	0.07 ug/l	53.51	1.00	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1404782.80	1.09	1495870.10	93.9	80 - 120	
45 Sc	1142578.10	3.50	1150710.10	99.3	80 - 120	
74 Ge	206366.66	3.25	218860.00	94.3	80 - 120	
115 In	818697.94	7.74	923239.88	88.7	80 - 120	
209 Bi	536801.06	2.88	560868.88	95.7	80 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\13F24o00.B\003CALB.D\003CALB.D#

0 :Element Failures 15 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass