



**Groundwater Investigation Sample Results,  
Level 2 Laboratory Report, Level 4 Laboratory Report,  
Electronic Data Deliverable, Data Validation Report,  
and the Sample Location Figure, SDG 1700261**

*Outlying Landing Field Coupeville  
Naval Air Station Whidbey Island  
Coupeville, Washington*

February 2019



March 02, 2017

**Vista Work Order No. 1700261**

Ms. Tiffany Hill  
CH2M Hill  
1100 NE Circle Blvd. Suite 300  
Corvallis, OR 97330

Dear Ms. Hill,

Enclosed are the results for the sample set received at Vista Analytical Laboratory on February 24, 2017. This sample set was analyzed on a rush turn-around time, under your Project Name 'NavyClean OLF Coupeville'.

Vista Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at [mmaier@vista-analytical.com](mailto:mmaier@vista-analytical.com).

Thank you for choosing Vista as part of your analytical support team.

Sincerely,

A handwritten signature in black ink that reads "Martha Maier". The signature is fluid and cursive, with the first name being more prominent than the last.

Martha Maier  
Laboratory Director



*Vista Analytical Laboratory certifies that the report herein meets all the requirements set forth by NELAP for those applicable test methods. Results relate only to the samples as received by the laboratory. This report should not be reproduced except in full without the written approval of Vista.*

**Vista Work Order No. 1700261**

**Case Narrative**

**Sample Condition on Receipt:**

Ten aqueous samples were received in good condition and within the method temperature requirements. The samples were received and stored securely in accordance with Vista standard operating procedures and EPA methodology.

**Analytical Notes:**

**Modified EPA Method 537**

The aqueous samples were extracted and analyzed for PFBS, PFOA, and PFOS using Modified EPA Method 537.

**Holding Times**

The samples were extracted and analyzed within the method hold times.

**Quality Control**

The Initial Calibration and Continuing Calibration Verifications met the method acceptance criteria.

A Method Blank and Ongoing Precision and Recovery (OPR) sample were extracted and analyzed with the preparation batch. No analytes were detected in the Method Blank above 1/2 the LOQ. The OPR recoveries were within the method acceptance criteria

The labeled standard recoveries for all QC and field samples were within the acceptance criteria.

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# Sample Inventory Report

Vista Sample ID	Client Sample ID		Sampled	Received	Components/Containers
1700261-01	WI-CV-GW10D-0217		20-Feb-17 11:45	24-Feb-17 07:32	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1700261-02	WI-CV-EB01-022017		20-Feb-17 12:00	24-Feb-17 07:32	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1700261-03	WI-CV-GW06S-0217		22-Feb-17 12:05	24-Feb-17 07:32	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1700261-04	WI-CV-GW06SP-0217		22-Feb-17 11:05	24-Feb-17 07:32	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1700261-05	WI-CV-GW10S-0217		22-Feb-17 10:00	24-Feb-17 07:32	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1700261-06	WI-CV-EB03-022217		22-Feb-17 11:15	24-Feb-17 07:32	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1700261-07	WI-CV-GW06M-0217	MS/MSD MS/MSD MS/MSD MS/MSD MS/MSD MS/MSD	21-Feb-17 14:25	24-Feb-17 07:32	HDPE Bottle, 125 mL HDPE Bottle, 125 mL HDPE Bottle, 125 mL HDPE Bottle, 125 mL HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1700261-08	WI-CV-EB02-022117		21-Feb-17 16:10	24-Feb-17 07:32	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1700261-09	WI-CV-EB04-022317		23-Feb-17 12:05	24-Feb-17 07:32	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1700261-10	WI-CV-GW13M-0217		22-Feb-17 16:25	24-Feb-17 07:32	HDPE Bottle, 125 mL HDPE Bottle, 125 mL

## **ANALYTICAL RESULTS**

Sample ID: Method Blank						Modified EPA Method 537			
Matrix: Aqueous Sample Size: 0.125 L		QC Batch: B7B0118 Date Extracted: 24-Feb-2017 10:58		Lab Sample: B7B0118-BLK1 Date Analyzed: 01-Mar-17 18:05 Column: BEH C18					
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	1.79	4.00	8.00		IS 13C3-PFBS	115	60 - 150	
PFOA	ND	0.651	2.00	8.00		IS 13C2-PFOA	106	60 - 150	
PFOS	ND	0.807	0.900	8.00		IS 13C8-PFOS	97.7	60 - 150	

DL - Detection limit  
RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit  
Results reported to DL.  
When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.  
Only the linear isomer is reported for all other analytes.

**Sample ID: OPR**

**Modified EPA Method 537**

Matrix: Aqueous Sample Size: 0.125 L	QC Batch: B7B0118 Date Extracted: 24-Feb-2017 10:58	Lab Sample: B7B0118-BS1 Date Analyzed: 01-Mar-17 17:27 Column: BEH C18					
Analyte	Amt Found (ng/L)	Spike Amt	%R	Limits	Labeled Standard	%R	LCL-UCL
PFBS	85.9	80.0	107	60 - 130	IS 13C3-PFBS	118	60 - 150
PFOA	84.0	80.0	105	70 - 130	IS 13C2-PFOA	99.8	60 - 150
PFOS	84.0	80.0	105	70 - 130	IS 13C8-PFOS	105	60 - 150

LCL-UCL - Lower control limit - upper control limit

**Sample ID: WI-CV-GW10D-0217****Modified EPA Method 537**

Client Data		Sample Data			Laboratory Data				
Name:	CH2M Hill	Matrix:	Groundwater		Lab Sample:	1700261-01	Date Received:	24-Feb-2017 7:32	
Project:	NavyClean OLF Coupeville	Sample Size:	0.130 L		QC Batch:	B7B0118	Date Extracted:	24-Feb-2017 10:58	
Date Collected:	20-Feb-2017 11:45	Date Analyzed: 01-Mar-17 18:30 Column: BEH C18							
Location:	WI-CV-MW10D								

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	1.72	3.85	7.67		IS 13C3-PFBS	88.5	60 - 150	
PFOA	ND	0.624	1.92	7.67		IS 13C2-PFOA	97.0	60 - 150	
PFOS	ND	0.773	0.865	7.67		IS 13C8-PFOS	93.5	60 - 150	

DL - Detection limit  
 RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit  
 Results reported to DL.  
 When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.  
 Only the linear isomer is reported for all other analytes.

**Sample ID: WI-CV-EB01-022017****Modified EPA Method 537**

Client Data		Sample Data			Laboratory Data				
Name:	CH2M Hill	Matrix:	Groundwater		Lab Sample:	1700261-02	Date Received:	24-Feb-2017 7:32	
Project:	NavyClean OLF Coupeville	Sample Size:	0.118 L		QC Batch:	B7B0118	Date Extracted:	24-Feb-2017 10:58	
Date Collected:	20-Feb-2017 12:00	Date Analyzed: 01-Mar-17 18:43 Column: BEH C18							
Location:	Equipment Blank								

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	1.89	4.24	8.46		IS 13C3-PFBS	107	60 - 150	
PFOA	ND	0.689	2.12	8.46		IS 13C2-PFOA	95.4	60 - 150	
PFOS	ND	0.854	0.953	8.46		IS 13C8-PFOS	107	60 - 150	

DL - Detection limit  
 RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit  
 Results reported to DL.  
 When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.  
 Only the linear isomer is reported for all other analytes.

**Sample ID: WI-CV-GW06S-0217**

**Modified EPA Method 537**

Client Data		Sample Data		Laboratory Data			
Name:	Cu 2M u ill	Matrix:	Hr3ondGater	Lab Sample:	1700261-0v	Date weceiRed:	24-Feb-2017 7:v2
Pr3ject:	NaRyClean OLF C3opeRille	Sample Size:	0.126 L	QC Batch:	B7B0118	Date Extracted:	24-Feb-2017 10:58
Date C3llected:	22-Feb-2017 12:05			Date Analyzed:	01-Mar-17 18:55	C3lumn:	BEu C18
L3cati3n:	WI-CV-MW06S						

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	1.77	v.97	7.9v		IS 1vCv-PFBS	114	60 - 150	
PFOA	ND	0.645	1.98	7.9v		IS 1vC2-PFOA	102	60 - 150	
PFOS	ND	0.800	0.89v	7.9v		IS 1vC8-PFOS	99.0	60 - 150	

DL - Detecti3n limit  
wL - wep3rting limit

LCL-UCL - L3Ger c3ntr3l limit - opper c3ntr3l limit  
wesolts rep3rted t3 DL.  
When rep3rted, PFBS, PFu xS, PFOA and PFOS include b3th linear and branched is3mers.  
Only the linear is3mer is rep3rted f3r all 3ther analytes.

**Sample ID: WI-CV-GW06SP-0217****Modified EPA Method 537**

Client Data		Sample Data			Laboratory Data				
Name:	CH2M Hill	Matrix:	Groundwater		Lab Sample:	1700261-04	Date Received:	24-Feb-2017 7:32	
Project:	NavyClean OLF Coupeville	Sample Size:	0.127 L		QC Batch:	B7B0118	Date Extracted:	24-Feb-2017 10:58	
Date Collected:	22-Feb-2017 11:05	Date Analyzed: 01-Mar-17 19:08 Column: BEH C18							
Location:	WI-CV-MW06S Spike								
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	1.77	3.94	7.90		IS 13C3-PFBS	102	60 - 150	
PFOA	ND	0.643	1.97	7.90		IS 13C2-PFOA	106	60 - 150	
PFOS	ND	0.797	0.886	7.90		IS 13C8-PFOS	104	60 - 150	

DL - Detection limit  
 RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit  
 Results reported to DL.  
 When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.  
 Only the linear isomer is reported for all other analytes.



**Sample ID: WI-CV-GW10S-0217**

**Modified EPA Method 537**

Client Data		Sample Data		Laboratory Data					
Name:	CH2M Hill	Matrix:	Groundwater	Lab Sample:	1700261-05	Date Received:	24-Feb-2017 7:32		
Project:	NavyClean OLF Coupeville	Sample Size:	0.120 L	QC Batch:	B7B0118	Date Extracted:	24-Feb-2017 10:58		
Date Collected:	22-Feb-2017 10:00			Date Analyzed:	01-Mar-17 19:20	Column:	BEH C18		
Location:	WI-CV-MW10S								
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	3.07	1.87	4.17	8.35	J	IS 13C3-PFBS	95.9	60 - 150	
PFOA	ND	0.679	2.08	8.35		IS 13C2-PFOA	90.3	60 - 150	
PFOS	ND	0.842	0.938	8.35		IS 13C8-PFOS	100	60 - 150	

DL - Detection limit  
 RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit  
 Results reported to DL.  
 When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.  
 Only the linear isomer is reported for all other analytes.

**Sample ID: WI-CV-EB03-011127**

**Modified EPA Method 537**

Client Data			Sample Data			Laboratory Data				
P name:	CG2M Gill		Matrix:	wruHndRater		Lab Sample:	17002q1-0q	Date v eceiNed:	24-Feb-2017 7:o2	
j ru@ct:	PaNyClean . LF CuHpeNlle		Sample Size:	0613 L		QC Batch:	B7B0118	Date Extracted:	24-Feb-2017 10:58	
Date Collected:	22-Feb-2017 11:15					Date Analyzed:	01-Mar-17 13:oo		CulHmn: BEG C18	
Lucatium:	EkHpment Blan9									

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
j FBS	PD	168	460	868		IS 1oCo-j FBS	110	q0 - 150	
j F. A	PD	06q82	260	868		IS 1oC2-j F. A	105	q0 - 150	
j F. S	PD	0645	0645	868		IS 1oC8-j F. S	376	q0 - 150	

DL - Detectiun limit  
vL - v eputing limit

LCL-UCL - LuRer cuntrl limit - Hpper cuntrl limit  
v esHts repurtd tu DL6  
When repurtd, j FBS, j FGxS, j F. A and j F. S inclHle both linear and branched isumers6  
nly the linear isumer is repurtd fur all uther analytes6

**Sample ID: WI-CV-GW06M-0217**

**Modified EPA Method 537**

Client Data		Sample Data		Laboratory Data			
Name:	CH2M Hill	Matrix:	Groundwater	Lab Sample:	17002W-07	Date Received:	24-Feb-2017 7:12
Project:	PavyClean . LF Coupeville	Sample Size:	0628 L	QC Batch:	B7B0118	Date Extracted:	24-Feb-2017 10:58
Date Collected:	21-Feb-2017 14:25			Date Analyzed:	01-Mar-17 13:45	Column:	BEH C18
Location:	I VC9-MI 0WM						

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
j FBS	PD	165	161	761		1NC-j FBS	107	0 - 150	
j F. A	PD	0675	165	761		1NC2-j F. A	10W	0 - 150	
j F. S	PD	06787	0673	761		1NC8-j F. S	110	0 - 150	

DL - Detection limit  
RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit  
Results reported to DL6

When reported, j FBS, j FHS, j F. A and j F. S include both linear and branched isomers  
Only the linear isomer is reported for all other analytes

**Matrix Spike Results**

**Modified EPA Method 537**

Source Client ID: WI-CV-GW06M-0217	QC Batch: B7B0118	Lab Sample: B7B0118-MS1/B7B0118-MSD1
Source LabNumber: 1700261-07	Date Extracted: 24-Feb-2017 10:58	Date Analyzed: 01-Mar-17 20:10 Column: BEH C18
Matrix: Aqueous		01-Mar-17 19:58 Column: BEH C18
Sample Size: 0.129/0.128 L		

Analyte	Spike-MS (ng/L)	MS %R	MS Qual.	Spike-MSD (ng/L)	MSD %R	MSD RPD	MSD Qual.	%R Limit	%RPD Limit	Labeled Standard	MS %R	MS Qualifiers	MSD %R	MS Qual.
PFBS	77.6	119		78.0	113	5.17		60 - 130	25	IS 13C3-PFBS	95.0		99.9	
PFOA	77.6	99.4		78.0	105	5.48		70 - 130	25	IS 13C2-PFOA	111		103	
PFOS	77.6	87.3		78.0	102	15.5		70 - 130	25	IS 13C8-PFOS	114		104	

When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

**Sample ID: WI-CV-EB01-011227**

**Modified EPA Method 537**

Client Data		Sample Data			Laboratory Data				
Name:	CH2M Hill	Matrix:	Groundwater		Lab Sample:	170020I-08	Date Received:	24-Feb-2017 7:32	
Project:	NavyClean . LF Coupeville	Sample Size:	0624 L		QC Batch:	B7B0118	Date Extracted:	24-Feb-2017 10:58	
Date Collected:	21-Feb-2017 1010				Date Analyzed:	01-Mar-17 20:23 Column: BEH C18			
Location:	Equipment Blank								
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	161	403	807		IS 13C3-PFBS	916	00 - 150	
PF. A	ND	0657	202	807		IS 13C2-PF. A	908	00 - 150	
PF. S	ND	0615	0607	807		IS 13C8-PF. S	956	00 - 150	

DL - Detection limit  
 RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit  
 Results reported to DL6  
 When reported, PFBS, PFHxS, PF. A and PF. S include both linear and branched isomers6  
 Only the linear isomer is reported for all other analytes6

**Sample ID: WI-CV-EB04-022317****Modified EPA Method 537**

Client Data		Sample Data		Laboratory Data					
Name:	CH2M Hill	Matrix:	Groundwater	Lab Sample:	1700261-09	Date Received:	24-Feb-2017 7:32		
Project:	NavyClean OLF Coupeville	Sample Size:	0.122 L	QC Batch:	B7B0118	Date Extracted:	24-Feb-2017 10:58		
Date Collected:	23-Feb-2017 12:05			Date Analyzed:	01-Mar-17 21:51	Column:	BEH C18		
Location:	Equipment Blank								

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	2.99	1.84	4.10	8.23	J	IS 13C3-PFBS	86.5	60 - 150	
PFOA	2.55	0.670	2.05	8.23	J	IS 13C2-PFOA	107	60 - 150	
PFOS	ND	0.830	0.922	8.23		IS 13C8-PFOS	105	60 - 150	

DL - Detection limit  
 RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit  
 Results reported to DL.  
 When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.  
 Only the linear isomer is reported for all other analytes.

**Sample ID: WI-CV-GW13M-0217**

**Modified EPA Method 537**

Client Data		Sample Data			Laboratory Data				
Name:	CH2M Hill	Matrix:	Groundwater		Lab Sample:	170020I-10	Date Received:	24-Feb-2017 7:32	
Project:	NavyClean . LF Coupeville	Sample Size:	062WL		QC Batch:	B7B0118	Date Extracted:	24-Feb-2017 10:58	
Date Collected:	22-Feb-2017 1025				Date Analyzed:	01-Mar-17 22:03 Column: BEH C18			
Location:	I VC9-MI 13M								

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	13W	164	368	768		13C3-PFBS	122	00 - 150	
PF. A	206	0633	164	768		13C2-PF. A	117	00 - 150	
PF. S	ND	0685	0672	768		13C8-PF. S	100	00 - 150	

DL - Detection limit  
 RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit  
 Results reported to DL6  
 When reported, PFBS, PFHxS, PF. A and PF. S include both linear and branched isomers6  
 Only the linear isomer is reported for all other analytes6

## **DATA QUALIFIERS & ABBREVIATIONS**

<b>B</b>	<b>This compound was also detected in the method blank.</b>
<b>D</b>	<b>Dilution</b>
<b>E</b>	<b>The associated compound concentration exceeded the calibration range of the instrument.</b>
<b>H</b>	<b>Recovery and/or RPD was outside laboratory acceptance limits.</b>
<b>I</b>	<b>Chemical Interference</b>
<b>J</b>	<b>The amount detected is below the Reporting Limit/LOQ.</b>
<b>M</b>	<b>Estimated Maximum Possible Concentration. (CA Region 2 projects only)</b>
<b>*</b>	<b>See Cover Letter</b>
<b>Conc.</b>	<b>Concentration</b>
<b>NA</b>	<b>Not applicable</b>
<b>ND</b>	<b>Not Detected</b>
<b>TEQ</b>	<b>Toxic Equivalency</b>

**Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.**



## CERTIFICATIONS

<b>Accrediting Authority</b>	<b>Certificate Number</b>
California Department of Health – ELAP	2892
DoD ELAP - A2LA Accredited - ISO/IEC 17025:2005	3091.01
Florida Department of Health	E87777
Hawaii Department of Health	N/A
Louisiana Department of Environmental Quality	01977
Maine Department of Health	2014022
Nevada Division of Environmental Protection	CA004132015-1
New Jersey Department of Environmental Protection	CA003
New York Department of Health	11411
Oregon Laboratory Accreditation Program	4042-004
Pennsylvania Department of Environmental Protection	012
South Carolina Department of Health	87002001
Texas Commission on Environmental Quality	T104704189-15-6
Virginia Department of General Services	7923
Washington Department of Ecology	C584
Wisconsin Department of Natural Resources	998036160

*Current certificates and lists of licensed parameters are located in the Quality Assurance office and are available upon request*

## NELAP Accredited Test Methods

MATRIX: Air	
Description of Test	Method
Determination of Polychlorinated p-Dioxins & Polychlorinated Dibenzofurans	EPA 23

MATRIX: Biological Tissue	
Description of Test	Method
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

MATRIX: Drinking Water	
Description of Test	Method
2,3,7,8-Tetrachlorodibenzo- p-dioxin (2,3,7,8-TCDD) GC/HRMS	EPA 1613
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537

MATRIX: Non-Potable Water	
Description of Test	Method
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Dioxin by GC/HRMS	EPA 613
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

MATRIX: Solids	
Description of Test	Method
Tetra-Octa Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope	EPA 1613B

Dilution GC/HRMS	
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A





# CHAIN OF CUSTODY

For Laboratory Use Only  
 Laboratory Project ID: 1700261 Temp: 1.3 °C  
 Storage ID: WR-2 F7 Storage Secured: Yes  No

Project ID: Mavy Clean OLF Coopersville P.O.#: 10006-7-106051 Sampler: Eros Dilgea / mark Endt  
 (name)

TAT Standard:  21 days  
 (check one): Rush (surcharge may apply)  
 14 days  7 days Specify: \_\_\_\_\_

Invoice to: Name	Company	Address	City	State	Ph#	Fax#
<u>Katie Tippin</u>	<u>CH2M</u>					
Relinquished by (printed name and signature)	Date	Time	Received by (printed name and signature)	Date	Time	
<u>Collin Hall</u>	<u>2/23/17</u>	<u>1430</u>	<u>[Signature]</u>	<u>2/24/17</u>	<u>07:52</u>	
Relinquished by (printed name and signature)	Date	Time	Received by (printed name and signature)	Date	Time	

SHIP TO: Vista Analytical Laboratory 1104 Windfield Way El Dorado Hills, CA 95762 (916) 673-1520 * Fax (916) 673-0106				Add Analysis(es) Requested																Comments					
ATTN: <u>SAMPLE RECEIVING</u>				Container(s)																					
Method of Shipment: <u>FedEx overnight</u>				Tracking No.:																					
Sample ID	Date	Time	Location/Sample Description	Quantity	Type	Matrix	2378-TCDD	2378 TCDD/TCDF	PCDD/PCDF	2378-TCDD	2378-TCDD/TCDF	PCDD/PCDF	2378-TCDD	2378 TCDD/TCDF	PCDD/PCDF	TOTALS	COPLANAR PCB's	208 CONGENERS	PBDE	PAH	WHO-29	Mod. EPA 537			
<u>WI-CV-ED04-022317</u>	<u>2/23/17</u>	<u>1205</u>	<u>Eq. Ambient blank</u>	<u>2</u>	<u>O</u>	<u>GW</u>																		<u>X</u>	
<u>WI-CV-GW13M-0217</u>	<u>2/22/17</u>	<u>1625</u>	<u>WI-CV-MW13M</u>	<u>2</u>	<u>O</u>	<u>GW</u>																		<u>X</u>	

Special Instructions/Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

SEND DOCUMENTATION AND RESULTS TO:  
 Name: Tiffany Hill  
 Company: CH2M Hill  
 Address: 1100 NE Circle Blvd  
 City: CoVall's State: OR Zip: 97336  
 Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
 Email: Tiffany.Hill@ch2m.com

Container Types: A = 1 Liter Amber, G = Glass Jar  
 P = PUF, T = MM5, O = Other: 125 ml HDPE

Bottle Preservation Type: T = Thiosulfate,  
 O = Other: \_\_\_\_\_

Matrix Types: AQ = Aqueous, DW = Drinking Water, EF = Effluent, PP = Pulp/Paper, SD = Sediment,  
 SL = Sludge, SO = Soil, WW = Wastewater, B = Blood/Serum, O = Other: \_\_\_\_\_

# SAMPLE LOG-IN CHECKLIST



Vista Project #: 1700261 TAT 7

Samples Arrival:	Date/Time <u>2/24/17</u> <u>07:32</u>	Initials: <u>CR</u>	Location: <u>WR-2</u> Shelf/Rack: <u>N/A</u>
Logged In:	Date/Time <u>2/24/17</u> <u>0853</u>	Initials: <u>SR</u> <u>JAB</u>	Location: <u>WR-2</u> Shelf/Rack: <u>F7</u>
Delivered By:	<input checked="" type="radio"/> FedEx	<input type="radio"/> UPS	<input type="radio"/> On Trac
		<input type="radio"/> DHL	<input type="radio"/> Hand Delivered
	<input type="radio"/> Other		
Preservation:	<input checked="" type="radio"/> Ice	<input type="radio"/> Blue Ice	<input type="radio"/> Dry Ice
	<input type="radio"/> None		
Temp °C: <u>1.6</u> (uncorrected)	Time: <u>07:32</u>	Thermometer ID: IR-2	
Temp °C: <u>1.3</u> (corrected)	Probe used: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?	✓		
Shipping Documentation Present?	✓		
Airbill			
Trk # <u>8088 6658 4299</u>	✓		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?	✓		
COC Anomaly/Sample Acceptance Form completed?		✓	
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓
Preservation Documented:	<input type="checkbox"/> Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	<input type="checkbox"/> Trizma	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA
Shipping Container	<input type="checkbox"/> Vista	<input checked="" type="checkbox"/> Client	<input type="checkbox"/> Retain <input checked="" type="checkbox"/> Return <input type="checkbox"/> Dispose

Comments: "B" bottle:  
 COC ID: WI-CV-GW105-0217  
 Label ID: WI-CV-GW-105-0217





March 02, 2017

**Vista Work Order No. 1700261**

Ms. Tiffany Hill  
CH2M Hill  
1100 NE Circle Blvd. Suite 300  
Corvallis, OR 97330

Dear Ms. Hill,

Enclosed are the results for the sample set received at Vista Analytical Laboratory on February 24, 2017. This sample set was analyzed on a rush turn-around time, under your Project Name 'NavyClean OLF Coupeville'.

Vista Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at [mmaier@vista-analytical.com](mailto:mmaier@vista-analytical.com).

Thank you for choosing Vista as part of your analytical support team.

Sincerely,

A handwritten signature in black ink that reads "Karen Lopez" followed by a small "for" and a line.

Martha Maier  
Laboratory Director



*Vista Analytical Laboratory certifies that the report herein meets all the requirements set forth by NELAP for those applicable test methods. Results relate only to the samples as received by the laboratory. This report should not be reproduced except in full without the written approval of Vista.*

**Vista Work Order No. 1700261**

**Case Narrative**

**Sample Condition on Receipt:**

Ten aqueous samples were received in good condition and within the method temperature requirements. The samples were received and stored securely in accordance with Vista standard operating procedures and EPA methodology.

**Analytical Notes:**

**Modified EPA Method 537**

The aqueous samples were extracted and analyzed for PFBS, PFOA, and PFOS using Modified EPA Method 537.

**Holding Times**

The samples were extracted and analyzed within the method hold times.

**Quality Control**

The Initial Calibration and Continuing Calibration Verifications met the method acceptance criteria.

A Method Blank and Ongoing Precision and Recovery (OPR) sample were extracted and analyzed with the preparation batch. No analytes were detected in the Method Blank above 1/2 the LOQ. The OPR recoveries were within the method acceptance criteria

The labeled standard recoveries for all QC and field samples were within the acceptance criteria.



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# Sample Inventory Report

Vista Sample ID	Client Sample ID		Sampled	Received	Components/Containers
1700261-01	WI-CV-GW10D-0217		20-Feb-17 11:45	24-Feb-17 07:32	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1700261-02	WI-CV-EB01-022017		20-Feb-17 12:00	24-Feb-17 07:32	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1700261-03	WI-CV-GW06S-0217		22-Feb-17 12:05	24-Feb-17 07:32	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1700261-04	WI-CV-GW06SP-0217		22-Feb-17 11:05	24-Feb-17 07:32	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1700261-05	WI-CV-GW10S-0217		22-Feb-17 10:00	24-Feb-17 07:32	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1700261-06	WI-CV-EB03-022217		22-Feb-17 11:15	24-Feb-17 07:32	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1700261-07	WI-CV-GW06M-0217	MS/MSD MS/MSD MS/MSD MS/MSD MS/MSD MS/MSD	21-Feb-17 14:25	24-Feb-17 07:32	HDPE Bottle, 125 mL HDPE Bottle, 125 mL HDPE Bottle, 125 mL HDPE Bottle, 125 mL HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1700261-08	WI-CV-EB02-022117		21-Feb-17 16:10	24-Feb-17 07:32	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1700261-09	WI-CV-EB04-022317		23-Feb-17 12:05	24-Feb-17 07:32	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1700261-10	WI-CV-GW13M-0217		22-Feb-17 16:25	24-Feb-17 07:32	HDPE Bottle, 125 mL HDPE Bottle, 125 mL

## **ANALYTICAL RESULTS**

<b>Sample ID: Method Blank</b>	<b>Modified EPA Method 537</b>
--------------------------------	--------------------------------

Matrix: Aqueous	QC Batch: B7B0118	Lab Sample: B7B0118-BLK1
Sample Size: 0.125 L	Date Extracted: 24-Feb-2017 10:58	Date Analyzed: 01-Mar-17 18:05 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	1.79	4.00	8.00		IS 13C3-PFBS	115	60 - 150	
PFOA	ND	0.651	2.00	8.00		IS 13C2-PFOA	106	60 - 150	
PFOS	ND	0.807	0.900	8.00		IS 13C8-PFOS	97.7	60 - 150	

DL - Detection limit  
 RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit  
 Results reported to DL.  
 When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.  
 Only the linear isomer is reported for all other analytes.

**Sample ID: OPR**

**Modified EPA Method 537**

Matrix: Aqueous Sample Size: 0.125 L	QC Batch: B7B0118 Date Extracted: 24-Feb-2017 10:58	Lab Sample: B7B0118-BS1 Date Analyzed: 01-Mar-17 17:27 Column: BEH C18					
Analyte	Amt Found (ng/L)	Spike Amt	%R	Limits	Labeled Standard	%R	LCL-UCL
PFBS	85.9	80.0	107	60 - 130	IS 13C3-PFBS	118	60 - 150
PFOA	84.0	80.0	105	70 - 130	IS 13C2-PFOA	99.8	60 - 150
PFOS	84.0	80.0	105	70 - 130	IS 13C8-PFOS	105	60 - 150

LCL-UCL - Lower control limit - upper control limit

**Sample ID: WI-CV-GW10D-0217****Modified EPA Method 537**

Client Data		Sample Data			Laboratory Data				
Name:	CH2M Hill	Matrix:	Groundwater		Lab Sample:	1700261-01	Date Received:	24-Feb-2017 7:32	
Project:	NavyClean OLF Coupeville	Sample Size:	0.130 L		QC Batch:	B7B0118	Date Extracted:	24-Feb-2017 10:58	
Date Collected:	20-Feb-2017 11:45				Date Analyzed:	01-Mar-17 18:30 Column: BEH C18			
Location:	WI-CV-MW10D								
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	1.72	3.85	7.67		IS 13C3-PFBS	88.5	60 - 150	
PFOA	ND	0.624	1.92	7.67		IS 13C2-PFOA	97.0	60 - 150	
PFOS	ND	0.773	0.865	7.67		IS 13C8-PFOS	93.5	60 - 150	

DL - Detection limit  
 RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit  
 Results reported to DL.  
 When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.  
 Only the linear isomer is reported for all other analytes.

**Sample ID: WI-CV-EB01-022017****Modified EPA Method 537**

Client Data		Sample Data			Laboratory Data				
Name:	CH2M Hill	Matrix:	Groundwater		Lab Sample:	1700261-02	Date Received:	24-Feb-2017 7:32	
Project:	NavyClean OLF Coupeville	Sample Size:	0.118 L		QC Batch:	B7B0118	Date Extracted:	24-Feb-2017 10:58	
Date Collected:	20-Feb-2017 12:00	Date Analyzed: 01-Mar-17 18:43 Column: BEH C18							
Location:	Equipment Blank								

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	1.89	4.24	8.46		IS 13C3-PFBS	107	60 - 150	
PFOA	ND	0.689	2.12	8.46		IS 13C2-PFOA	95.4	60 - 150	
PFOS	ND	0.854	0.953	8.46		IS 13C8-PFOS	107	60 - 150	

DL - Detection limit  
 RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit  
 Results reported to DL.  
 When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.  
 Only the linear isomer is reported for all other analytes.

**Sample ID: WI-CV-GW06S-0217**

**Modified EPA Method 537**

Client Data		Sample Data		Laboratory Data			
Name:	Cu 2M u ill	Matrix:	Hr3ondGater	Lab Sample:	1700261-0v	Date weceiRed:	24-Feb-2017 7:v2
Pr3ject:	NaRyClean OLF C3opeRille	Sample Size:	0.126 L	QC Batch:	B7B0118	Date Extracted:	24-Feb-2017 10:58
Date C3llected:	22-Feb-2017 12:05			Date Analyzed:	01-Mar-17 18:55	C3lumn:	BEu C18
L3cati3n:	WI-CV-MW06S						

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	1.77	v.97	7.9v		IS 1vCv-PFBS	114	60 - 150	
PFOA	ND	0.645	1.98	7.9v		IS 1vC2-PFOA	102	60 - 150	
PFOS	ND	0.800	0.89v	7.9v		IS 1vC8-PFOS	99.0	60 - 150	

DL - Detecti3n limit  
wL - wep3rting limit

LCL-UCL - L3Ger c3ntr3l limit - opper c3ntr3l limit  
wesolts rep3rted t3 DL.  
When rep3rted, PFBS, PFu xS, PFOA and PFOS inclode b3th linear and branched is3mers.  
Only the linear is3mer is rep3rted f3r all 3ther analytes.



**Sample ID: WI-CV-GW06SP-0217****Modified EPA Method 537**

Client Data		Sample Data			Laboratory Data				
Name:	CH2M Hill	Matrix:	Groundwater		Lab Sample:	1700261-04	Date Received:	24-Feb-2017 7:32	
Project:	NavyClean OLF Coupeville	Sample Size:	0.127 L		QC Batch:	B7B0118	Date Extracted:	24-Feb-2017 10:58	
Date Collected:	22-Feb-2017 11:05								
Location:	WI-CV-MW06S Spike								
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	1.77	3.94	7.90		IS 13C3-PFBS	102	60 - 150	
PFOA	ND	0.643	1.97	7.90		IS 13C2-PFOA	106	60 - 150	
PFOS	ND	0.797	0.886	7.90		IS 13C8-PFOS	104	60 - 150	

DL - Detection limit

RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit

Results reported to DL.

When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.

Only the linear isomer is reported for all other analytes.

**Sample ID: WI-CV-GW10S-0217****Modified EPA Method 537**

Client Data		Sample Data		Laboratory Data					
Name:	CH2M Hill	Matrix:	Groundwater	Lab Sample:	1700261-05	Date Received:	24-Feb-2017 7:32		
Project:	NavyClean OLF Coupeville	Sample Size:	0.120 L	QC Batch:	B7B0118	Date Extracted:	24-Feb-2017 10:58		
Date Collected:	22-Feb-2017 10:00			Date Analyzed:	01-Mar-17 19:20	Column:	BEH C18		
Location:	WI-CV-MW10S								

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	3.07	1.87	4.17	8.35	J	IS 13C3-PFBS	95.9	60 - 150	
PFOA	ND	0.679	2.08	8.35		IS 13C2-PFOA	90.3	60 - 150	
PFOS	ND	0.842	0.938	8.35		IS 13C8-PFOS	100	60 - 150	

DL - Detection limit  
 RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit  
 Results reported to DL.  
 When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.  
 Only the linear isomer is reported for all other analytes.

**Sample ID: WI-CV-EB03-011127**

**Modified EPA Method 537**

Client Data		Sample Data		Laboratory Data			
Name:	CG2M Gill	Matrix:	wruHndRater	Lab Sample:	17002q1-0q	Date received:	24-Feb-2017 7:02
Product:	PaNyClean . LF CuHpeNlle	Sample Size:	0613 L	QC Batch:	B7B0118	Date Extracted:	24-Feb-2017 10:58
Date Collected:	22-Feb-2017 11:15			Date Analyzed:	01-Mar-17 13:00	CulHmn:	BEG C18
Location:	EkHpment Blan9						

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
j FBS	PD	168	460	868		IS 1oCo-j FBS	110	q0 - 150	
j F. A	PD	0682	260	868		IS 1oC2-j F. A	105	q0 - 150	
j F. S	PD	0645	0645	868		IS 1oC8-j F. S	376	q0 - 150	

DL - Detectiun limit  
vL - v eputing limit

LCL-UCL - LuRer cuntrl limit - Hpper cuntrl limit  
v esHts repurted tu DL6  
When repurted, j FBS, j FGxS, j F. A and j F. S inclHle both linear and branched isumers6  
nly the linear isumer is repurted fur all uther analytes6

**Sample ID: WI-CV-GW06M-0217**

**Modified EPA Method 537**

Client Data		Sample Data		Laboratory Data			
Name:	CH2M Hill	Matrix:	Groundwater	Lab Sample:	17002W-07	Date Received:	24-Feb-2017 7:12
Project:	PavyClean . LF Coupeville	Sample Size:	0628 L	QC Batch:	B7B0118	Date Extracted:	24-Feb-2017 10:58
Date Collected:	21-Feb-2017 14:25			Date Analyzed:	01-Mar-17 13:45	Column:	BEH C18
Location:	I VC9-MI 0WM						

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
j FBS	PD	165	161	761		1NC-j FBS	107	0 - 150	
j F. A	PD	0675	165	761		1NC2-j F. A	10W	0 - 150	
j F. S	PD	06787	0673	761		1NC8-j F. S	110	0 - 150	

DL - Detection limit  
RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit  
Results reported to DL6  
When reported, j FBS, j FHS, j F. A and j F. S include both linear and branched isomers  
Only the linear isomer is reported for all other analytes

**Matrix Spike Results**

**Modified EPA Method 537**

Source Client ID: WI-CV-GW06M-0217	QC Batch: B7B0118	Lab Sample: B7B0118-MS1/B7B0118-MSD1
Source LabNumber: 1700261-07	Date Extracted: 24-Feb-2017 10:58	Date Analyzed: 01-Mar-17 20:10 Column: BEH C18
Matrix: Aqueous		01-Mar-17 19:58 Column: BEH C18
Sample Size: 0.129/0.128 L		

Analyte	Spike-MS (ng/L)	MS %R	MS Qual.	Spike-MSD (ng/L)	MSD %R	MSD RPD	MSD Qual.	%R Limit	%RPD Limit	Labeled Standard	MS %R	MS Qualifiers	MSD %R	MS Qual.
PFBS	77.6	119		78.0	113	5.17		60 - 130	25	IS 13C3-PFBS	95.0		99.9	
PFOA	77.6	99.4		78.0	105	5.48		70 - 130	25	IS 13C2-PFOA	111		103	
PFOS	77.6	87.3		78.0	102	15.5		70 - 130	25	IS 13C8-PFOS	114		104	

When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.  
Only the linear isomer is reported for all other analytes.

**Sample ID: WI-CV-EB01-011227**

**Modified EPA Method 537**

Client Data		Sample Data			Laboratory Data				
Name:	CH2M Hill	Matrix:	Groundwater		Lab Sample:	170020I-08	Date Received:	24-Feb-2017 7:32	
Project:	NavyClean . LF Coupeville	Sample Size:	0624 L		QC Batch:	B7B0118	Date Extracted:	24-Feb-2017 10:58	
Date Collected:	21-Feb-2017 1010				Date Analyzed:	01-Mar-17 20:23 Column: BEH C18			
Location:	Equipment Blank								
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	161	403	807		IS 13C3-PFBS	916	00 - 150	
PF. A	ND	0657	202	807		IS 13C2-PF. A	908	00 - 150	
PF. S	ND	0615	0607	807		IS 13C8-PF. S	956	00 - 150	

DL - Detection limit  
 RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit  
 Results reported to DL6  
 When reported, PFBS, PFHxS, PF. A and PF. S include both linear and branched isomers6  
 Only the linear isomer is reported for all other analytes6

**Sample ID: WI-CV-EB04-022317****Modified EPA Method 537**

Client Data		Sample Data		Laboratory Data					
Name:	CH2M Hill	Matrix:	Groundwater	Lab Sample:	1700261-09	Date Received:	24-Feb-2017 7:32		
Project:	NavyClean OLF Coupeville	Sample Size:	0.122 L	QC Batch:	B7B0118	Date Extracted:	24-Feb-2017 10:58		
Date Collected:	23-Feb-2017 12:05			Date Analyzed:	01-Mar-17 21:51	Column:	BEH C18		
Location:	Equipment Blank								
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	2.99	1.84	4.10	8.23	J	IS 13C3-PFBS	86.5	60 - 150	
PFOA	2.55	0.670	2.05	8.23	J	IS 13C2-PFOA	107	60 - 150	
PFOS	ND	0.830	0.922	8.23		IS 13C8-PFOS	105	60 - 150	

DL - Detection limit  
 RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit  
 Results reported to DL.  
 When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.  
 Only the linear isomer is reported for all other analytes.

**Sample ID: WI-CV-GW13M-0217**

**Modified EPA Method 537**

Client Data		Sample Data			Laboratory Data				
Name:	CH2M Hill	Matrix:	Groundwater		Lab Sample:	170020I-10	Date Received:	24-Feb-2017 7:32	
Project:	NavyClean . LF Coupeville	Sample Size:	062WL		QC Batch:	B7B0118	Date Extracted:	24-Feb-2017 10:58	
Date Collected:	22-Feb-2017 1025				Date Analyzed:	01-Mar-17 22:03 Column: BEH C18			
Location:	I VC9-MI 13M								
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	13W	164	368	768		13C3-PFBS	122	00 - 150	
PF. A	206	063	164	768		13C2-PF. A	117	00 - 150	
PF. S	ND	0685	0672	768		13C8-PF. S	100	00 - 150	

DL - Detection limit  
RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit  
Results reported to DL6  
When reported, PFBS, PFHxS, PF. A and PF. S include both linear and branched isomers  
Only the linear isomer is reported for all other analytes



## DATA QUALIFIERS & ABBREVIATIONS

<b>B</b>	<b>This compound was also detected in the method blank.</b>
<b>D</b>	<b>Dilution</b>
<b>E</b>	<b>The associated compound concentration exceeded the calibration range of the instrument.</b>
<b>H</b>	<b>Recovery and/or RPD was outside laboratory acceptance limits.</b>
<b>I</b>	<b>Chemical Interference</b>
<b>J</b>	<b>The amount detected is below the Reporting Limit/LOQ.</b>
<b>M</b>	<b>Estimated Maximum Possible Concentration. (CA Region 2 projects only)</b>
<b>*</b>	<b>See Cover Letter</b>
<b>Conc.</b>	<b>Concentration</b>
<b>NA</b>	<b>Not applicable</b>
<b>ND</b>	<b>Not Detected</b>
<b>TEQ</b>	<b>Toxic Equivalency</b>

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

**CERTIFICATIONS**

<b>Accrediting Authority</b>	<b>Certificate Number</b>
California Department of Health – ELAP	2892
DoD ELAP - A2LA Accredited - ISO/IEC 17025:2005	3091.01
Florida Department of Health	E87777
Hawaii Department of Health	N/A
Louisiana Department of Environmental Quality	01977
Maine Department of Health	2014022
Nevada Division of Environmental Protection	CA004132015-1
New Jersey Department of Environmental Protection	CA003
New York Department of Health	11411
Oregon Laboratory Accreditation Program	4042-004
Pennsylvania Department of Environmental Protection	012
South Carolina Department of Health	87002001
Texas Commission on Environmental Quality	T104704189-15-6
Virginia Department of General Services	7923
Washington Department of Ecology	C584
Wisconsin Department of Natural Resources	998036160

*Current certificates and lists of licensed parameters are located in the Quality Assurance office and are available upon request*

## NELAP Accredited Test Methods

MATRIX: Air	
Description of Test	Method
Determination of Polychlorinated p-Dioxins & Polychlorinated Dibenzofurans	EPA 23

MATRIX: Biological Tissue	
Description of Test	Method
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

MATRIX: Drinking Water	
Description of Test	Method
2,3,7,8-Tetrachlorodibenzo- p-dioxin (2,3,7,8-TCDD) GC/HRMS	EPA 1613
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537

MATRIX: Non-Potable Water	
Description of Test	Method
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Dioxin by GC/HRMS	EPA 613
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

MATRIX: Solids	
Description of Test	Method
Tetra-Octa Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope	EPA 1613B

Dilution GC/HRMS	
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

# CHAIN OF CUSTODY

For Laboratory Use Only

Laboratory Project ID: 1700261 Temp: 1.3 °C

Storage ID: WK-2 F7 Storage Secured: Yes  No

Project ID: NAYCLEAN OLF COLLEVILLE

P.O.#: 10006-7-106051

Sampler: Eres Bilyer / MANUEL ENDO  
(name)

TAT Standard:  21 days  
(check one): Rush (surcharge may apply)  
 14 days  7 days Specify: \_\_\_\_\_

Invoice to: Name Collin Hill J Co Company \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_

Ph# \_\_\_\_\_

Fax# \_\_\_\_\_

Relinquished by (printed name and signature) JCH

Date 2/23/17

Time 1430

Received by (printed name and signature) \_\_\_\_\_

Date 2/29/17

Time 08:32

Relinquished by (printed name and signature) \_\_\_\_\_

Date \_\_\_\_\_

Time \_\_\_\_\_

Received by (printed name and signature) \_\_\_\_\_

Date \_\_\_\_\_

Time \_\_\_\_\_

SHIP TO: Vista Analytical Laboratory  
1104 Windfield Way  
El Dorado Hills, CA 95762  
(916) 673-1520 \* Fax (916) 673-0106

Method of Shipment: Fed Ex overnight

Tracking No.: \_\_\_\_\_

Add Analysis(es) Requested

Container(s)

ATTN: Sample Receiving

Sample ID	Date	Time	Location/Sample Description	Quantity	Type	Matrix	Add Analysis(es) Requested														Comments						
							2378-TCDD	2378 TCDD/TCDF	PCDD/PCDF	2378-TCDD	2378-TCDD/TCDF	PCDD/PCDF	2378-TCDD	2378 TCDD/TCDF	PCDD/PCDF	TOTALS	COPLANAR PCBs	209 CONGENERS	PBDE	PAH		WHO-29	Mod EPA 537				
WI-CV-GW10D-0217	2/20/17	1145	WI-CV-MW10D	2	O	GW																				X	
WI-CV-EB01-022017	2/20/17	1200	EQUIPMENT BLANK	2	O	GW																				X	
WI-CV-GW06S-0217	2/20/17	1205	WI-CV-MW06S	2	O	GW																				X	
WI-CV-GW06S/SP-0217	2/20/17	1105	WI-CV-MW06S <sup>SPIKE</sup> <del>SP</del>	2	O	GW																				X	
WI-CV-GW10S-0217	2/22/17	1000	WI-CV-MW10S	2	O	GW																				X	
WI-CV-EB03-02217	2/22/17	1115	EQUIPMENT BLANK	2	O	GW																				X	
WI-CV-GW06M-0217	2/21/17	1425	WI-CV-MW06M	2	O	GW																				X	
WI-CV-GW06M-0217MS	2/21/17	1425	MW06M MAT: X SPIKE	2	O	GW																				X	
WI-CV-GW06M-0217MS	2/21/17	1425	MW06M MAT: X SPIKE	2	O	GW																				X	
WI-CV-EB02-02217	2/21/17	1610	Equipment blank	2	O	GW																				X	

Special Instructions/Comments: 1

SEND DOCUMENTATION AND RESULTS TO:

Name: TIFFANY HILL  
Company: CH2M HILL  
Address: 1100 NE Circle Blvd  
City: COVINGTON State: OR Zip: 97330  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
Email: Tiffany.Hill@ch2m.com

Container Types: A = 1 Liter Amber, G = Glass Jar

Bottle Preservation Type: T = Thiosulfate.

Matrix Types: AQ = Aqueous, DW = Drinking Water, EF = Effluent, PP = Pulp/Paper, SD = Sediment,

P = PUF, T = MM5, O = Other: 125 ml HDPE

O = Other: \_\_\_\_\_

SL = Sludge, SO = Soil, WW = Wastewater, B = Blood/Serum, O = Other: \_\_\_\_\_



# CHAIN OF CUSTODY

*For Laboratory Use Only*  
 Laboratory Project ID: 1700261 Temp: 1.3 °C  
 Storage ID: WR-2 F7 Storage Secured: Yes  No

Project ID: Mavy Clean OLF Connerville P.O.#: 10006-7-106051 Sampler: Eros Dilyea / mark Endt  
 (name)

TAT Standard:  21 days  
 (check one): Rush (surcharge may apply)  
 14 days  7 days Specify: \_\_\_\_\_

Invoice to: Name	Company	Address	City	State	Ph#	Fax#
Katie Tippin	CH2M					

Relinquished by (printed name and signature)	Date	Time	Received by (printed name and signature)	Date	Time
Collin Hall <i>[Signature]</i>	2/23/17	1430	<i>[Signature]</i>	2/24/17	07:52

SHIP TO: Vista Analytical Laboratory 1104 Windfield Way El Dorado Hills, CA 95762 (916) 673-1520 * Fax (916) 673-0106				Add Analysis(es) Requested																Comments			
ATTN: <u>SAMPLE RECEIVING</u>				Container(s)																			
Method of Shipment: <u>FedEx overnight</u>				Tracking No.:																			
Sample ID	Date	Time	Location/Sample Description	Quantity	Type	Matrix	2378-TCDD	2378-TCDD/TCDF	PCDD/PCDF	2378-TCDD	2378-TCDD/TCDF	PCDD/PCDF	2378-TCDD	2378-TCDD/TCDF	PCDD/PCDF	TOTALS	COPLANAR PCB's	208 CONGENERS	PBDE	PAH	WHO-29	Mod. EPA 537	
WI-CV-ED04-022317	2/23/17	1205	Eq. Ambient blank	2	O	GW																	X
WI-CV-GW13M-0217	2/22/17	1625	WI-CV-MW13M	2	O	GW																	X

Special Instructions/Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

SEND DOCUMENTATION AND RESULTS TO:  
 Name: Tiffany Hill  
 Company: CH2M Hill  
 Address: 1100 NE Circle Blvd  
 City: ColVall's State: OR Zip: 97336  
 Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
 Email: Tiffany.Hill@ch2m.com

Container Types: A = 1 Liter Amber, G = Glass Jar  
 P = PUF, T = MM5, O = Other: 125 ml HDPE

Bottle Preservation Type: T = Thiosulfate,  
 O = Other: \_\_\_\_\_

Matrix Types: AQ = Aqueous, DW = Drinking Water, EF = Effluent, PP = Pulp/Paper, SD = Sediment,  
 SL = Sludge, SO = Soil, WW = Wastewater, B = Blood/Serum, O = Other: \_\_\_\_\_

# SAMPLE LOG-IN CHECKLIST



Vista Project #: 1700261 TAT 7

Samples Arrival:	Date/Time <u>2/24/17</u> <u>07:32</u>	Initials: <u>CR</u>	Location: <u>WR-2</u> Shelf/Rack: <u>N/A</u>
Logged In:	Date/Time <u>2/24/17</u> <u>0853</u>	Initials: <u>SR</u> <u>JAB</u>	Location: <u>WR-2</u> Shelf/Rack: <u>F7</u>
Delivered By:	<input checked="" type="checkbox"/> FedEx	<input type="checkbox"/> UPS	<input type="checkbox"/> On Trac
	<input type="checkbox"/> DHL	<input type="checkbox"/> Hand Delivered	<input type="checkbox"/> Other
Preservation:	<input checked="" type="checkbox"/> Ice	<input type="checkbox"/> Blue Ice	<input type="checkbox"/> Dry Ice
	<input type="checkbox"/> None		
Temp °C: <u>1.6</u> (uncorrected)	Time: <u>07:32</u>	Thermometer ID: IR-2	
Temp °C: <u>1.3</u> (corrected)	Probe used: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?	✓		
Shipping Documentation Present?	✓		
Airbill			
Trk # <u>8088 6658 4299</u>	✓		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?	✓		
COC Anomaly/Sample Acceptance Form completed?		✓	
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓
Preservation Documented:			
$\text{Na}_2\text{S}_2\text{O}_3$			
Trizma	Yes	No	NA
Shipping Container	Vista	Client	Return
	Retain	Return	Dispose

Comments: "B" bottle:  
 COC ID: WI-CV-GW105-0217  
 Label ID: WI-CV-GW-105-0217

## **EXTRACTION INFORMATION**



Process Sheet  
 Workorder: 1700261



Prep Expiration: 2017-Mar-06  
 Client: CH2M Hill

Workorder Due: 03-Mar-17 00:00

TAT: 7

Method: 537 PFAS DOD (LOQ as mRL)  
 Matrix: Aqueous  
 Client Matrix: Groundwater

Prep Batch: B7B0118

Version: PFOA, PFOS, PFBS

Prep Data Entered: BP 2.28.17  
 Date and Initials

Initial Sequence: \_\_\_\_\_

LabSampleID	Recon	ClientSampleID	Date Received	Location	Comments
1700261-01	<input checked="" type="checkbox"/>	WI-CV-GW10D-0217	24-Feb-17 07:32	WR-2 F-7	
1700261-02	<input checked="" type="checkbox"/>	WI-CV-EB01-022017	24-Feb-17 07:32	WR-2 F-7	
1700261-03	<input checked="" type="checkbox"/>	WI-CV-GW06S-0217	24-Feb-17 07:32	WR-2 F-7	
1700261-04	<input checked="" type="checkbox"/>	WI-CV-GW06SP-0217	24-Feb-17 07:32	WR-2 F-7	
1700261-05	<input checked="" type="checkbox"/>	WI-CV-GW10S-0217	24-Feb-17 07:32	WR-2 F-7	
1700261-06	<input checked="" type="checkbox"/>	WI-CV-EB03-022217	24-Feb-17 07:32	WR-2 F-7	
1700261-07	<input checked="" type="checkbox"/>	WI-CV-GW06M-0217	24-Feb-17 07:32	WR-2 F-7	MS/MSD
1700261-08	<input checked="" type="checkbox"/>	WI-CV-EB02-022117	24-Feb-17 07:32	WR-2 F-7	
1700261-09	<input checked="" type="checkbox"/>	WI-CV-EB04-022317	24-Feb-17 07:32	WR-2 F-7	
1700261-10	<input checked="" type="checkbox"/>	WI-CV-GW13M-0217	24-Feb-17 07:32	WR-2 F-7	

Vista PM: Martha Maier

Vial Box ID: Badger

Sample Reconciled By: [Signature] 2/24/17

# Percent Solids



Project: B7B0118

Balance ID: HRMS9

Sample ID	Chemist: <u>NA</u> Date: <u>J</u> Time: <u>J</u>		Chemist: <u>NA</u> Date: <u>J</u> Time: <u>J</u>		Chemist/Date <u>JS 2/24/17</u>	
	Boat Wt.	Sample + Boat Wt.	Residue + Boat Wt.	pH before	pH* after	CF
1700261 - 01 (B)				8	2	0
- 02 (A)				5	2	0
- 03 (B)				8	2	0
- 04 (B)				8	2	0
- 05 (B)				8	2	0
- 06 (A)				5	2	0
- 07 (A) (B)				8	2	0
- 07 (B) (B)				8	2	0
- 07 (C) (B)				8	2	0
- 08 (A)				5	2	0
- 09 (A)				5	2	0
- 10 (B)				8	2	0

JS 2/24/17

**Procedure:**

- Tare the balance.
- Record Boat Weight.
- Add 2 - 10 g of sample.
- Record Wet Wt. + Boat Wt.
- Dry in oven overnight at 107°C.
- Tare the balance.
- Record Residue + Boat Wt.

**Notes:**

- (A) 2 drops HCl used to adjust pH. JS 2/24/17
- (B) 3 drops HCl used to adjust pH.

- Methods 8280, 613, 1613, 8290, 1614 - pH < 9
- Methods 1668/PCN - pH 2-3
- NCASI 551 - pH 1



PREPARATION BENCH SHEET

Matrix: Aqueous

Method: 537 PFAS DOD (LOO as mL)

B7B0118

Chemist: E. Schneider

Prep Date/Time: 24-Feb-17 10:58

Prepared using: LCMS - SPE Extraction-LCMS

C	VISTA Sample ID	Bottle + Sample (g)	Bottle Only (g)	Sample Amt. (L)	IS/NS CHEM/WIT DATE	SPE	RS CHEM/WIT DATE
<input type="checkbox"/>	B7B0118-BLK1	NA	NA	(0.125)	ES JS 2/24/17	JS 2/24/17	ES JS 2/24/17
<input type="checkbox"/>	B7B0118-BS1	J	J	J			
<input type="checkbox"/>	B7B0118-MS1 1700261-07	155.99	27.05	0.12894			
<input type="checkbox"/>	B7B0118-MSD1 1700261-07	155.16	26.96	0.12820			
<input type="checkbox"/>	1700261-01	157.58	27.14	0.13044			
<input type="checkbox"/>	1700261-02	145.31	27.16	0.11815			
<input type="checkbox"/>	1700261-03	153.24	27.14	0.12610			
<input type="checkbox"/>	1700261-04	153.60	27.07	0.12653			
<input type="checkbox"/>	1700261-05	146.92	27.09	0.11983			
<input type="checkbox"/>	1700261-06	146.40	27.08	0.11932			
<input type="checkbox"/>	1700261-07	155.14	27.04	0.12512			
<input type="checkbox"/>	1700261-08	150.87	27.03	0.12354			
<input type="checkbox"/>	1700261-09 <sup>(A)</sup>	148.60	27.05	0.12152			
<input type="checkbox"/>	1700261-10	155.66	27.09	0.12857			

C7B0123

(B) JS 2/28/17

(A) Sample took ~20 minutes longer on SPE than other samples. JS 2/24/17  
 (B) samples spiked for RS on 2/24/17 but failed to sum. On 2/28/17

IS Name <u>VZ</u> 16L1920, 10µL	NS Name <u>VI</u> 16I2905, 10µL	RS Name <u>VR</u> 17A1201, 10µL	SPE Chem <u>Skate KAW 33mm 20µg/6µL</u>	Check Out: JS 2/24/17
			Ele SOLV: <u>0.500 ALKOH in meth + meold</u>	Check In: NA
			Final Volume(s) <u>1mL</u>	Balance ID: <u>HRMS9</u>

Comments: Assume 1 g = 1 mL

**SAMPLE DATA – MODIFIED EPA METHOD 537**

Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-16.qld

Last Altered: Thursday, March 02, 2017 10:39:01 Pacific Standard Time

Printed: Thursday, March 02, 2017 10:39:25 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS\_6\_2trans\_LINEAR.mdb 28 Feb 2017 16:04:45

Calibration: U:\G1.pro\CurveDB\C18\_VAL-PFC\_Q1\_3-01-17\_L6\_2Trans.cdb 02 Mar 2017 08:18:08

ID: B7B0118-BLK1 Method Blank 0.125, Description: Method Blank, Name: 170301G1\_16, Date: 01-Mar-2017, Time: 18:05:24

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7		6.894e3		0.125			
2	4 PFOA	413 > 368.7	1.628e2	2.460e4		0.125	4.28		
3	6 PFOS	499 >79.9		6.720e3		0.125			
4	7 13C3-PFBS	302.0 > 98.8	6.894e3	1.351e4	0.442	0.125	2.98	115	115
5	10 13C2-PFOA	414.9 > 369.7	2.460e4	8.370e3	2.782	0.125	4.28	106	106
6	12 13C8-PFOS	507.0 > 79.9	6.720e3	7.304e3	0.941	0.125	4.67	97.7	97.7
7	14 13C3-PFHxS	401.9 > 79.9	1.351e4	1.351e4	1.000	0.125	3.98	100	100
8	15 13C8-PFOA	421.3 > 376	8.370e3	8.370e3	1.000	0.125	4.27	100	100
9	17 13C4-PFOS	503.0 > 79.9	7.304e3	7.304e3	1.000	0.125	4.67	100	100

Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-16.qld

Last Altered: Thursday, March 02, 2017 10:39:01 Pacific Standard Time

Printed: Thursday, March 02, 2017 10:40:18 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS\_6\_2trans\_LINEAR.mdb 28 Feb 2017 16:04:45

Calibration: U:\G1.pro\CurveDB\C18\_VAL-PFC\_Q1\_3-01-17\_L6\_2Trans.cdb 02 Mar 2017 08:18:08

ID: B7B0118-BLK1 Method Blank 0.125, Description: Method Blank, Name: 170301G1\_16, Date: 01-Mar-2017, Time: 18:05:24

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	18 Total PFBS	299 > 79.7		6.074e3		0.125			
2	20 Total PFOA	413 > 368.7		2.460e4		0.125			
3	21 Total PFOS	499 > 79.9		6.720e3		0.125			

Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-16.qld

Last Altered: Thursday, March 02, 2017 10:39:01 Pacific Standard Time

Printed: Thursday, March 02, 2017 10:39:25 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS\_6\_2trans\_LINEAR.mdb 28 Feb 2017 16:04:45

Calibration: U:\G1.pro\CurveDB\C18\_VAL-PFC\_Q1\_3-01-17\_L6\_2Trans.cdb 02 Mar 2017 08:18:08

ID: B7B0118-BLK1 Method Blank 0.125, Description: Method Blank, Name: 170301G1\_16, Date: 01-Mar-2017, Time: 18:05:24

**Total PFBS**

#	Name	Trace	RT	Area	IS Area	Conc.
1						

**Total PFHxS**

#	Name	Trace	RT	Area	IS Area	Conc.
1	3 PFHxS	398.9 > 79.6	3.99	41.283	6073.926	

**Total PFOA**

#	Name	Trace	RT	Area	IS Area	Conc.
1	4 PFOA	413 > 368.7	4.28	162.750	24597.111	

**Total PFOS**

#	Name	Trace	RT	Area	IS Area	Conc.
1						

Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-16.qld

Last Altered: Thursday, March 02, 2017 10:39:01 Pacific Standard Time

Printed: Thursday, March 02, 2017 10:39:25 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS\_6\_2trans\_LINEAR.mdb 28 Feb 2017 16:04:45

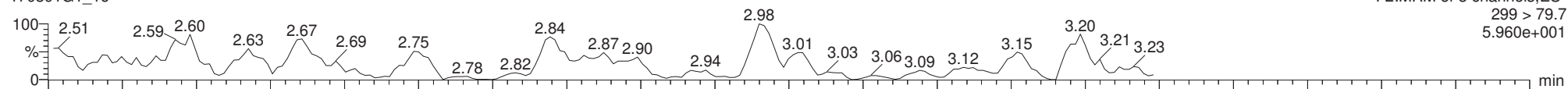
Calibration: U:\G1.pro\CurveDB\C18\_VAL-PFC\_Q1\_3-01-17\_L6\_2Trans.cdb 02 Mar 2017 08:18:08

ID: B7B0118-BLK1 Method Blank 0.125, Description: Method Blank, Name: 170301G1\_16, Date: 01-Mar-2017, Time: 18:05:24, Instrument: , Lab: , User:

**PFBS**

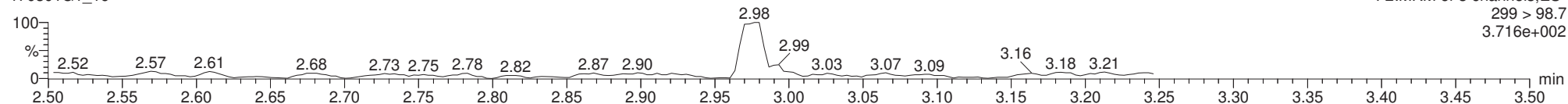
170301G1\_16

F2:MRM of 3 channels,ES-  
299 > 79.7  
5.960e+001



170301G1\_16

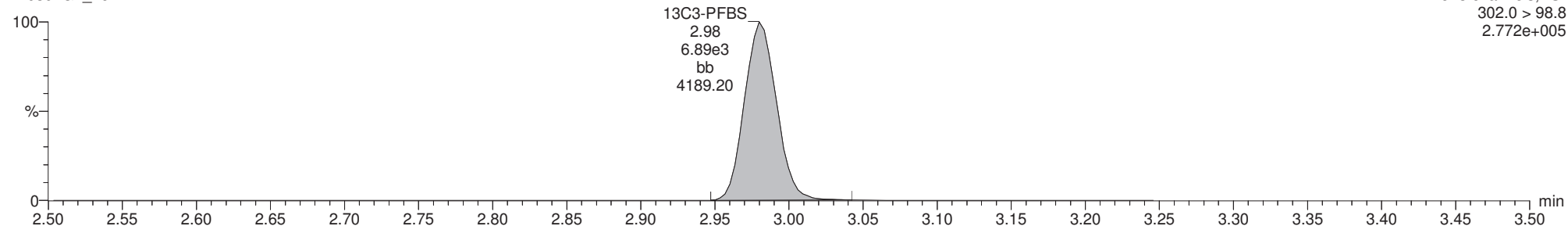
F2:MRM of 3 channels,ES-  
299 > 98.7  
3.716e+002



**13C3-PFBS**

170301G1\_16

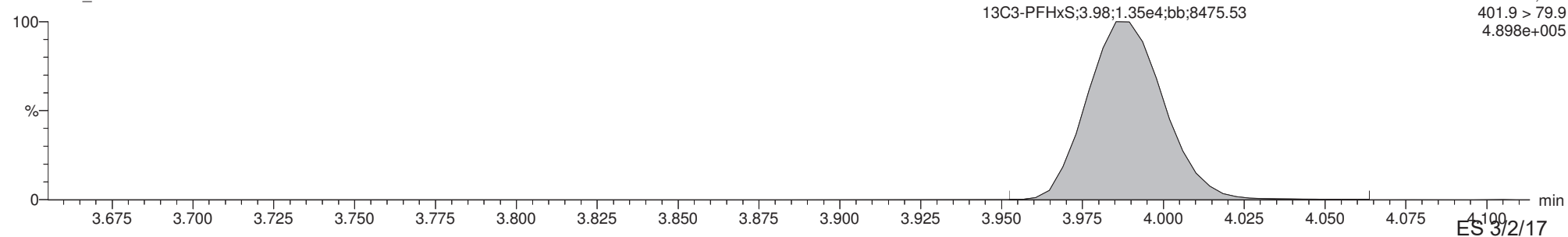
F2:MRM of 3 channels,ES-  
302.0 > 98.8  
2.772e+005



**13C3-PFHxS**

170301G1\_16

F4:MRM of 7 channels,ES-  
401.9 > 79.9  
4.898e+005



ES 3/2/17



Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-16.qld

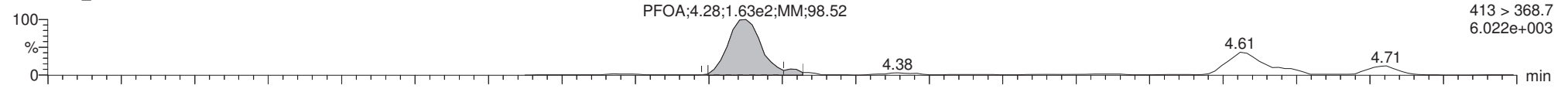
Last Altered: Thursday, March 02, 2017 10:39:01 Pacific Standard Time

Printed: Thursday, March 02, 2017 10:39:25 Pacific Standard Time

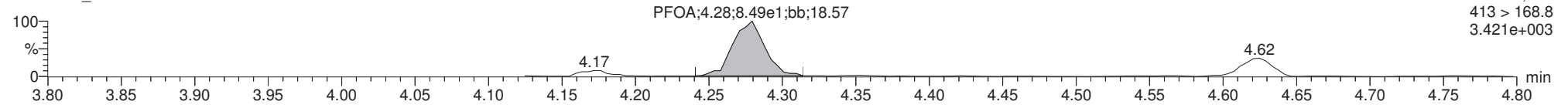
ID: B7B0118-BLK1 Method Blank 0.125, Description: Method Blank, Name: 170301G1\_16, Date: 01-Mar-2017, Time: 18:05:24, Instrument: , Lab: , User:

**Total PFOA**

170301G1\_16

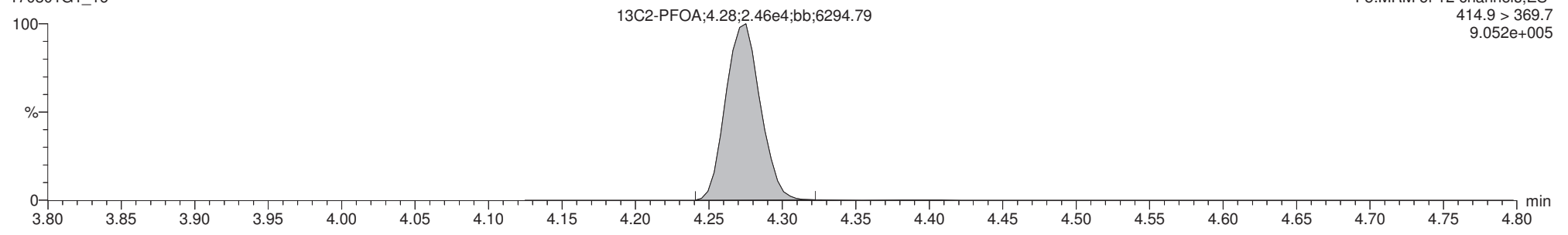


170301G1\_16



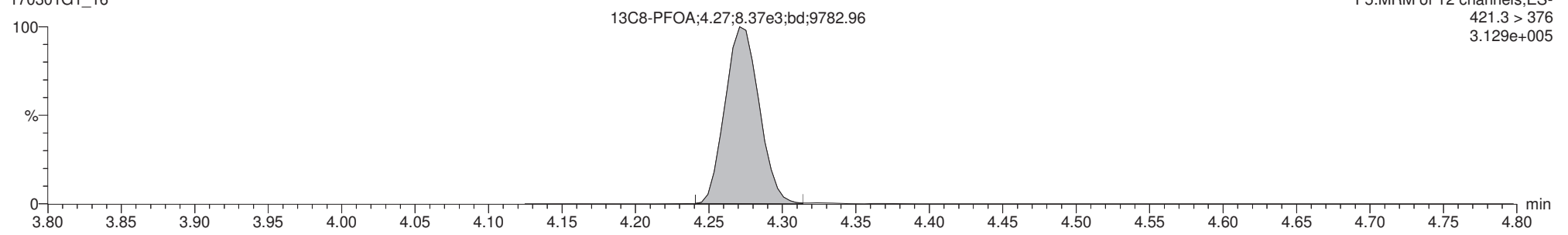
**13C2-PFOA**

170301G1\_16



**13C8-PFOA**

170301G1\_16



Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-16.qld

Last Altered: Thursday, March 02, 2017 10:39:01 Pacific Standard Time

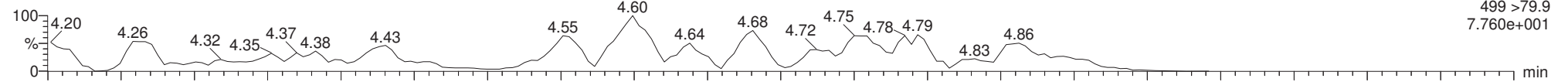
Printed: Thursday, March 02, 2017 10:39:25 Pacific Standard Time

ID: B7B0118-BLK1 Method Blank 0.125, Description: Method Blank, Name: 170301G1\_16, Date: 01-Mar-2017, Time: 18:05:24, Instrument: , Lab: , User:

**Total PFOS**

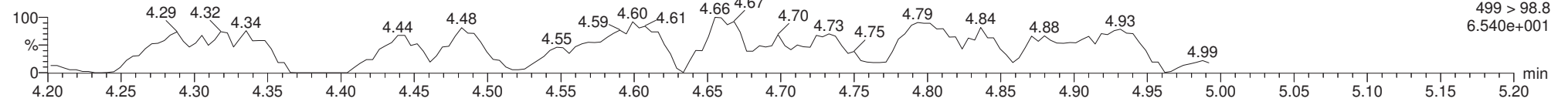
170301G1\_16

F5:MRM of 12 channels,ES-  
499 >79.9  
7.760e+001



170301G1\_16

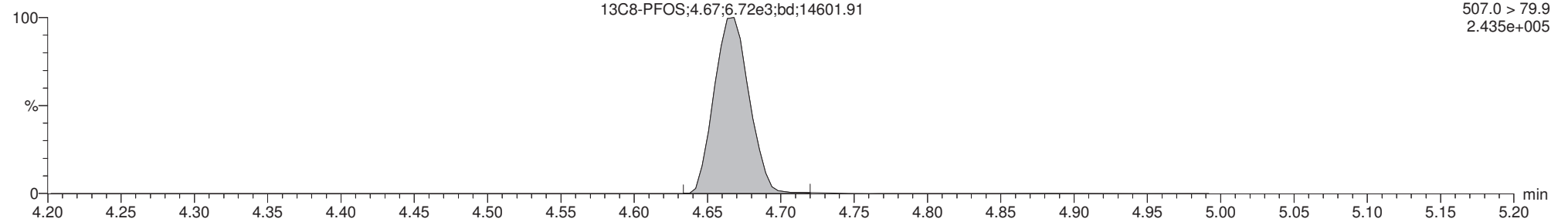
F5:MRM of 12 channels,ES-  
499 > 98.8  
6.540e+001



**13C8-PFOS**

170301G1\_16

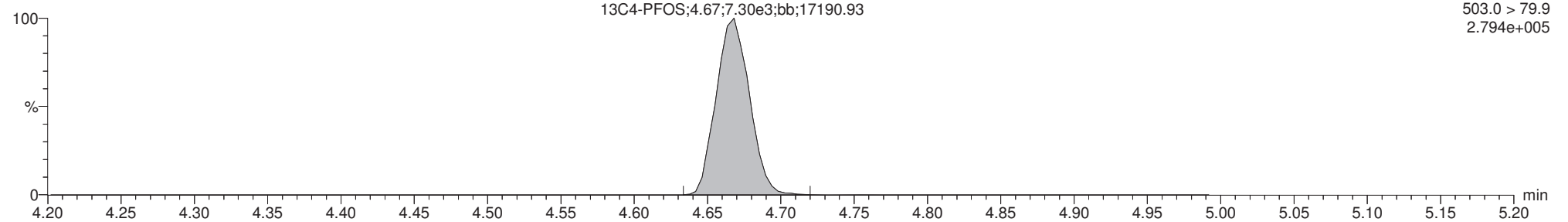
F5:MRM of 12 channels,ES-  
507.0 > 79.9  
2.435e+005



**13C4-PFOS**

170301G1\_16

F5:MRM of 12 channels,ES-  
503.0 > 79.9  
2.794e+005



Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-13.qld

Last Altered: Thursday, March 02, 2017 10:37:21 Pacific Standard Time

Printed: Thursday, March 02, 2017 10:37:35 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS\_6\_2trans\_LINEAR.mdb 28 Feb 2017 16:04:45

Calibration: U:\G1.pro\CurveDB\C18\_VAL-PFC\_Q1\_3-01-17\_L6\_2Trans.cdb 02 Mar 2017 08:18:08

ID: B7B0118-BS1 OPR 0.125, Description: OPR, Name: 170301G1\_13, Date: 01-Mar-2017, Time: 17:27:46

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7	1.235e4	6.683e3		0.125	2.98	85.8	107
2	4 PFOA	413 > 368.7	1.733e4	2.238e4		0.125	4.28	84.0	105
3	6 PFOS	499 >79.9	2.748e3	6.273e3		0.125	4.67	84.0	105
4	7 13C3-PFBS	302.0 > 98.8	6.683e3	1.277e4	0.442	0.125	2.98	118	118
5	10 13C2-PFOA	414.9 > 369.7	2.238e4	8.061e3	2.782	0.125	4.28	99.8	99.8
6	12 13C8-PFOS	507.0 > 79.9	6.273e3	6.328e3	0.941	0.125	4.67	105	105
7	14 13C3-PFHxS	401.9 > 79.9	1.277e4	1.277e4	1.000	0.125	3.99	100	100
8	15 13C8-PFOA	421.3 > 376	8.061e3	8.061e3	1.000	0.125	4.27	100	100
9	17 13C4-PFOS	503.0 > 79.9	6.328e3	6.328e3	1.000	0.125	4.67	100	100

Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-13.qld

Last Altered: Thursday, March 02, 2017 10:37:21 Pacific Standard Time

Printed: Thursday, March 02, 2017 10:37:49 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS\_6\_2trans\_LINEAR.mdb 28 Feb 2017 16:04:45

Calibration: U:\G1.pro\CurveDB\C18\_VAL-PFC\_Q1\_3-01-17\_L6\_2Trans.cdb 02 Mar 2017 08:18:08

ID: B7B0118-BS1 OPR 0.125, Description: OPR, Name: 170301G1\_13, Date: 01-Mar-2017, Time: 17:27:46

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	18 Total PFBS	299 > 79.7		5.288e3		0.125		85.9	
2	20 Total PFOA	413 > 368.7		2.238e4		0.125		84.0	
3	21 Total PFOS	499 > 79.9		6.273e3		0.125		84.0	

Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-13.qld

Last Altered: Thursday, March 02, 2017 10:37:21 Pacific Standard Time

Printed: Thursday, March 02, 2017 10:37:35 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS\_6\_2trans\_LINEAR.mdb 28 Feb 2017 16:04:45

Calibration: U:\G1.pro\CurveDB\C18\_VAL-PFC\_Q1\_3-01-17\_L6\_2Trans.cdb 02 Mar 2017 08:18:08

ID: B7B0118-BS1 OPR 0.125, Description: OPR, Name: 170301G1\_13, Date: 01-Mar-2017, Time: 17:27:46

**Total PFBS**

	# Name	Trace	RT	Area	IS Area	Conc.
1	18 Total PFBS	299 > 79.7	3.12	6.648	5287.653	0.1
2	1 PFBS	299 > 79.7	2.98	12350.464	6682.721	85.8

**Total PFHxS**

	# Name	Trace	RT	Area	IS Area	Conc.
1	3 PFHxS	398.9 > 79.6	3.99	6803.180	5287.653	72.8
2	19 Total PFHxS	398.9 > 79.6	3.89	1264.072	5287.653	13.0
3	19 Total PFHxS	398.9 > 79.6	3.87	488.458	5287.653	4.6
4	19 Total PFHxS	398.9 > 79.6	3.78	5.703	5287.653	

**Total PFOA**

	# Name	Trace	RT	Area	IS Area	Conc.
1	4 PFOA	413 > 368.7	4.28	17328.156	22379.910	84.0

**Total PFOS**

	# Name	Trace	RT	Area	IS Area	Conc.
1	6 PFOS	499 > 79.9	4.67	2747.801	6273.412	84.0

Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-13.qld

Last Altered: Thursday, March 02, 2017 10:37:21 Pacific Standard Time

Printed: Thursday, March 02, 2017 10:37:35 Pacific Standard Time

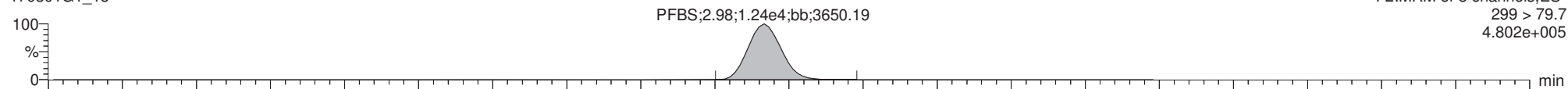
Method: U:\G1.pro\MethDB\PFAS\_6\_2trans\_LINEAR.mdb 28 Feb 2017 16:04:45

Calibration: U:\G1.pro\CurveDB\C18\_VAL-PFC\_Q1\_3-01-17\_L6\_2Trans.cdb 02 Mar 2017 08:18:08

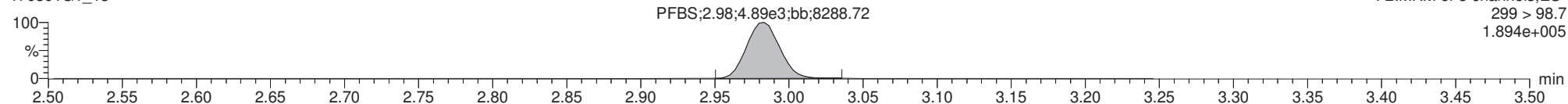
ID: B7B0118-BS1 OPR 0.125, Description: OPR, Name: 170301G1\_13, Date: 01-Mar-2017, Time: 17:27:46, Instrument: , Lab: , User:

**PFBS**

170301G1\_13

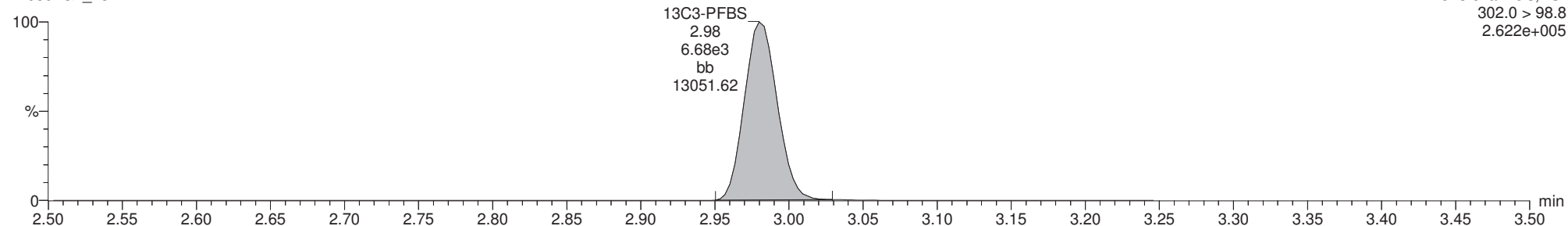


170301G1\_13



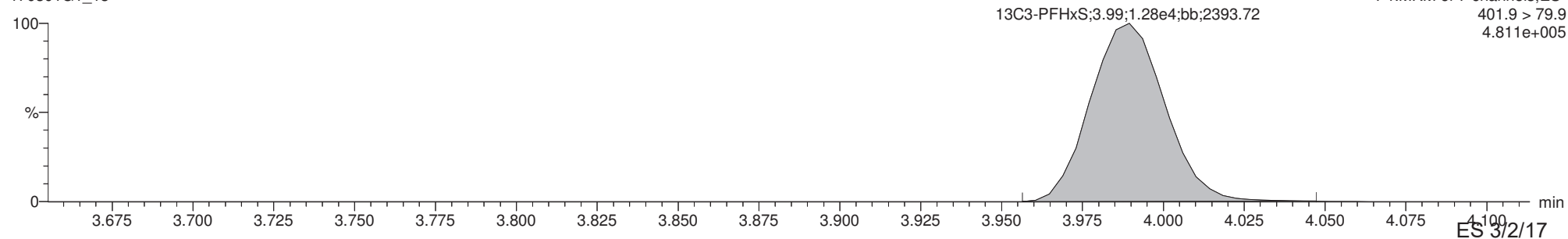
**13C3-PFBS**

170301G1\_13



**13C3-PFHxS**

170301G1\_13



Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-13.qld

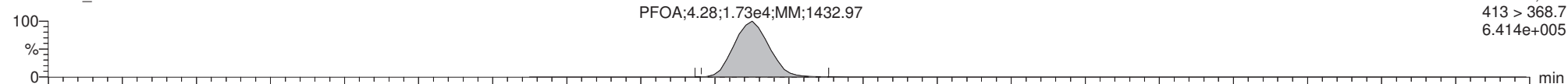
Last Altered: Thursday, March 02, 2017 10:37:21 Pacific Standard Time

Printed: Thursday, March 02, 2017 10:37:35 Pacific Standard Time

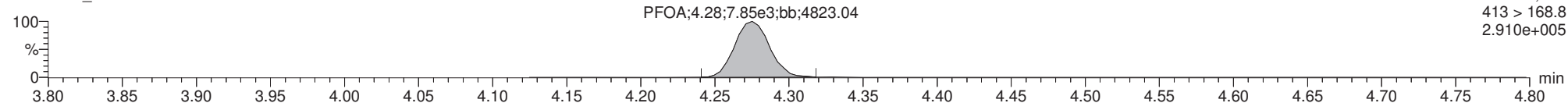
ID: B7B0118-BS1 OPR 0.125, Description: OPR, Name: 170301G1\_13, Date: 01-Mar-2017, Time: 17:27:46, Instrument: , Lab: , User:

**Total PFOA**

170301G1\_13

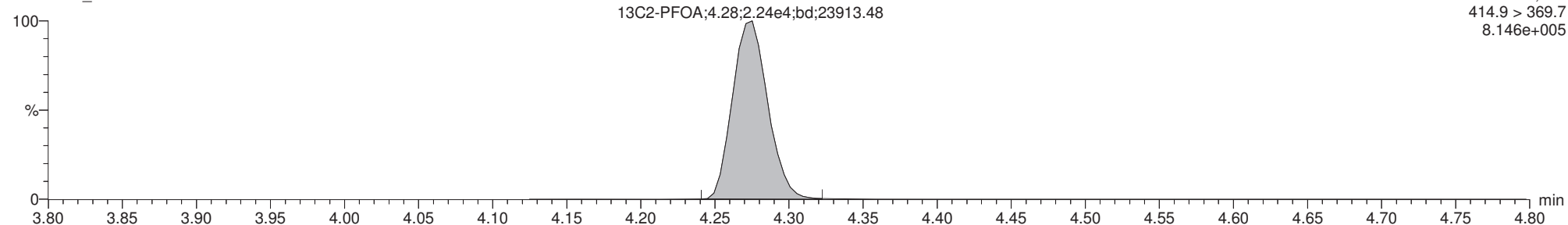


170301G1\_13



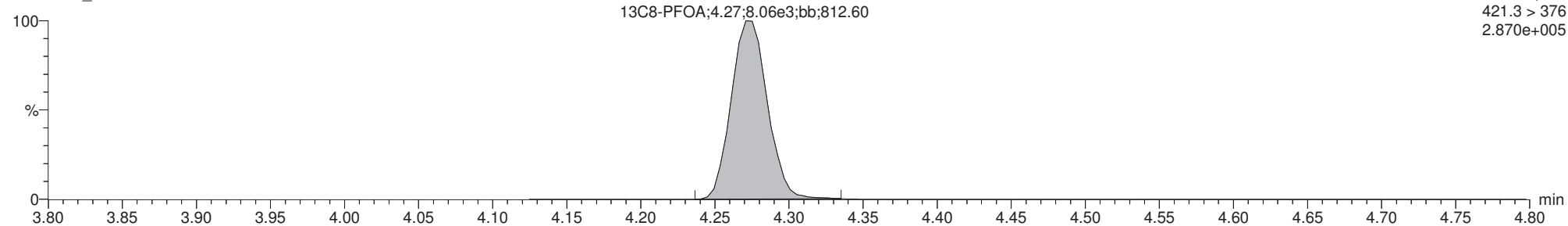
**13C2-PFOA**

170301G1\_13



**13C8-PFOA**

170301G1\_13



Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-13.qld

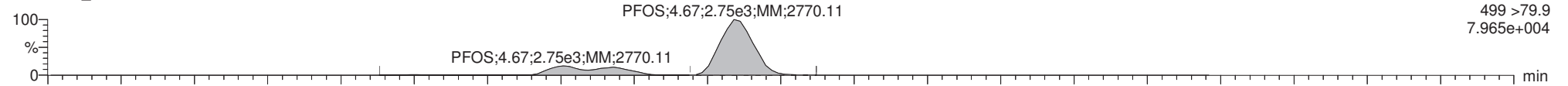
Last Altered: Thursday, March 02, 2017 10:37:21 Pacific Standard Time

Printed: Thursday, March 02, 2017 10:37:35 Pacific Standard Time

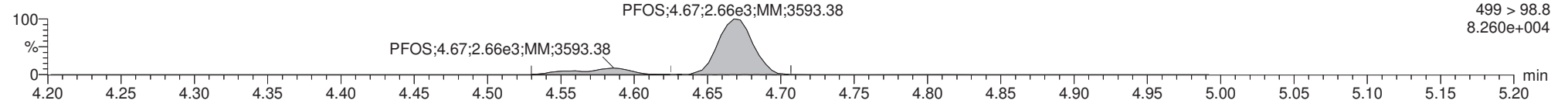
ID: B7B0118-BS1 OPR 0.125, Description: OPR, Name: 170301G1\_13, Date: 01-Mar-2017, Time: 17:27:46, Instrument: , Lab: , User:

**Total PFOS**

170301G1\_13

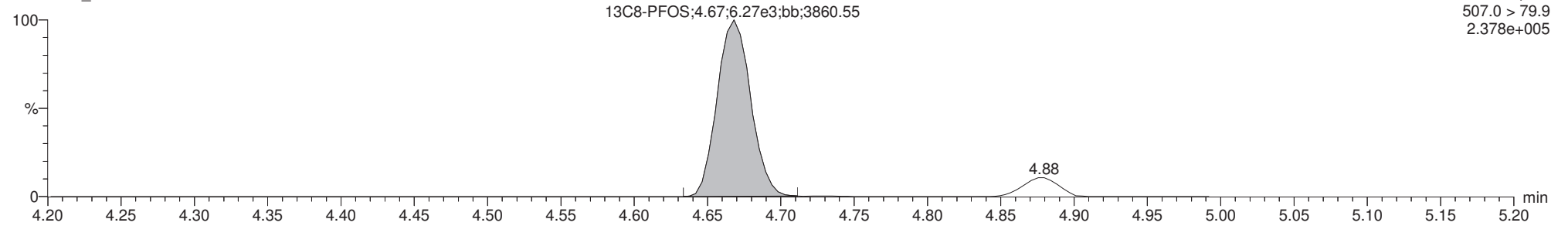


170301G1\_13



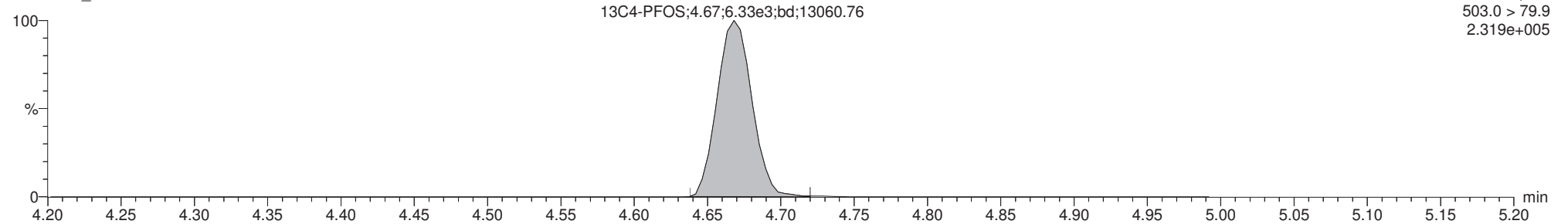
**13C8-PFOS**

170301G1\_13



**13C4-PFOS**

170301G1\_13





Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-18.qld

Last Altered: Thursday, March 02, 2017 10:41:27 Pacific Standard Time

Printed: Thursday, March 02, 2017 10:41:42 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS\_6\_2trans\_LINEAR.mdb 28 Feb 2017 16:04:45

Calibration: U:\G1.pro\CurveDB\C18\_VAL-PFC\_Q1\_3-01-17\_L6\_2Trans.cdb 02 Mar 2017 08:18:08

ID: 1700261-01 WI-CV-GW10D-0217 0.125, Description: WI-CV-GW10D-0217, Name: 170301G1\_18, Date: 01-Mar-2017, Time: 18:30:28

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7		6.908e3		0.130			
2	4 PFOA	413 > 368.7	1.427e2	3.491e4		0.130	4.27		
3	6 PFOS	499 >79.9		1.251e4		0.130			
4	7 13C3-PFBS	302.0 > 98.8	6.908e3	1.765e4	0.442	0.130	2.98	84.8	88.5
5	10 13C2-PFOA	414.9 > 369.7	3.491e4	1.294e4	2.782	0.130	4.27	92.9	97.0
6	12 13C8-PFOS	507.0 > 79.9	1.251e4	1.422e4	0.941	0.130	4.67	89.6	93.5
7	14 13C3-PFHxS	401.9 > 79.9	1.765e4	1.765e4	1.000	0.130	3.99	95.8	100
8	15 13C8-PFOA	421.3 > 376	1.294e4	1.294e4	1.000	0.130	4.27	95.8	100
9	17 13C4-PFOS	503.0 > 79.9	1.422e4	1.422e4	1.000	0.130	4.67	95.8	100

Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-18.qld

Last Altered: Thursday, March 02, 2017 10:41:27 Pacific Standard Time

Printed: Thursday, March 02, 2017 10:41:54 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS\_6\_2trans\_LINEAR.mdb 28 Feb 2017 16:04:45

Calibration: U:\G1.pro\CurveDB\C18\_VAL-PFC\_Q1\_3-01-17\_L6\_2Trans.cdb 02 Mar 2017 08:18:08

ID: 1700261-01 WI-CV-GW10D-0217 0.125, Description: WI-CV-GW10D-0217, Name: 170301G1\_18, Date: 01-Mar-2017, Time: 18:30:28

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	18 Total PFBS	299 > 79.7		6.834e3		0.130			
2	20 Total PFOA	413 > 368.7		3.491e4		0.130			
3	21 Total PFOS	499 > 79.9		1.251e4		0.130			

Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-18.qld

Last Altered: Thursday, March 02, 2017 10:41:27 Pacific Standard Time

Printed: Thursday, March 02, 2017 10:41:42 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS\_6\_2trans\_LINEAR.mdb 28 Feb 2017 16:04:45

Calibration: U:\G1.pro\CurveDB\C18\_VAL-PFC\_Q1\_3-01-17\_L6\_2Trans.cdb 02 Mar 2017 08:18:08

ID: 1700261-01 WI-CV-GW10D-0217 0.125, Description: WI-CV-GW10D-0217, Name: 170301G1\_18, Date: 01-Mar-2017, Time: 18:30:28

**Total PFBS**

#	Name	Trace	RT	Area	IS Area	Conc.
1	1 PFBS	299 > 79.7			6907.765	

**Total PFHxS**

#	Name	Trace	RT	Area	IS Area	Conc.
1	3 PFHxS	398.9 > 79.6	3.98	52.755	6833.805	

**Total PFOA**

#	Name	Trace	RT	Area	IS Area	Conc.
1	4 PFOA	413 > 368.7	4.27	142.672	34913.324	

**Total PFOS**

#	Name	Trace	RT	Area	IS Area	Conc.
1						

Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-18.qld

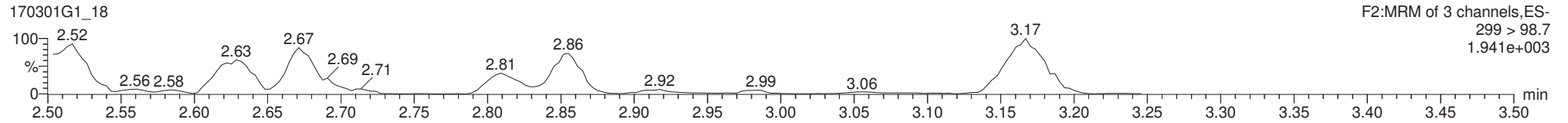
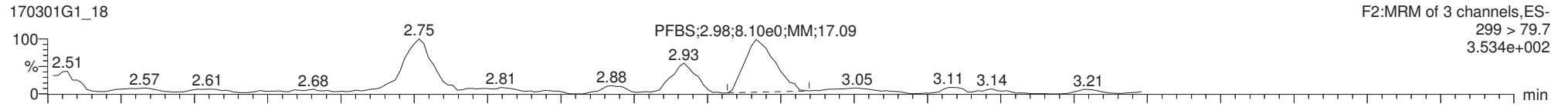
Last Altered: Thursday, March 02, 2017 10:41:27 Pacific Standard Time

Printed: Thursday, March 02, 2017 10:41:42 Pacific Standard Time

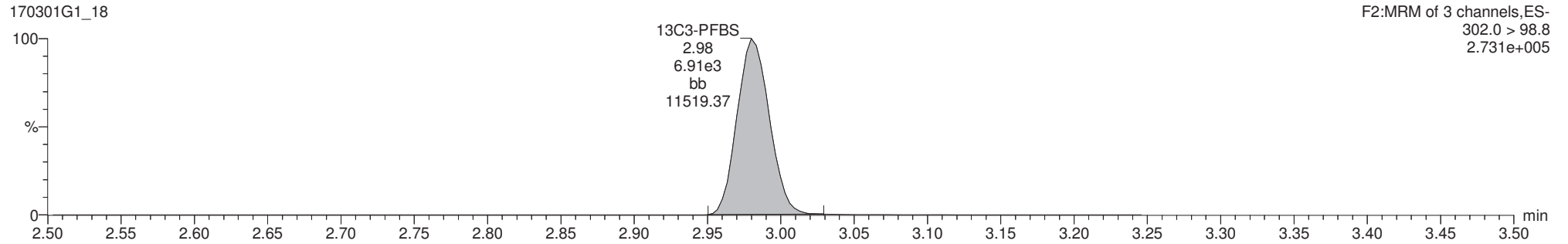
Method: U:\G1.pro\MethDB\PFAS\_6\_2trans\_LINEAR.mdb 28 Feb 2017 16:04:45  
Calibration: U:\G1.pro\CurveDB\C18\_VAL-PFC\_Q1\_3-01-17\_L6\_2Trans.cdb 02 Mar 2017 08:18:08

ID: 1700261-01 WI-CV-GW10D-0217 0.125, Description: WI-CV-GW10D-0217, Name: 170301G1\_18, Date: 01-Mar-2017, Time: 18:30:28, Instrument: , Lab: , User:

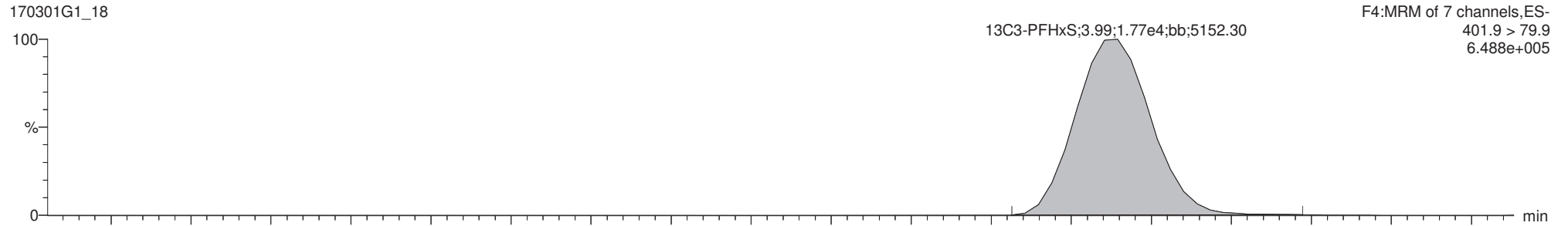
**PFBS**



**13C3-PFBS**



**13C3-PFHxS**



Reviewed: CT 03/02/17

ES 3/2/17

Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-18.qld

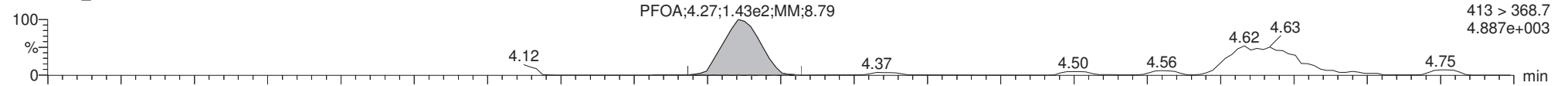
Last Altered: Thursday, March 02, 2017 10:41:27 Pacific Standard Time

Printed: Thursday, March 02, 2017 10:41:42 Pacific Standard Time

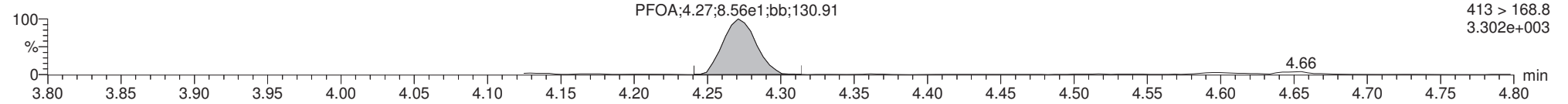
ID: 1700261-01 WI-CV-GW10D-0217 0.125, Description: WI-CV-GW10D-0217, Name: 170301G1\_18, Date: 01-Mar-2017, Time: 18:30:28, Instrument: , Lab: , User:

**Total PFOA**

170301G1\_18

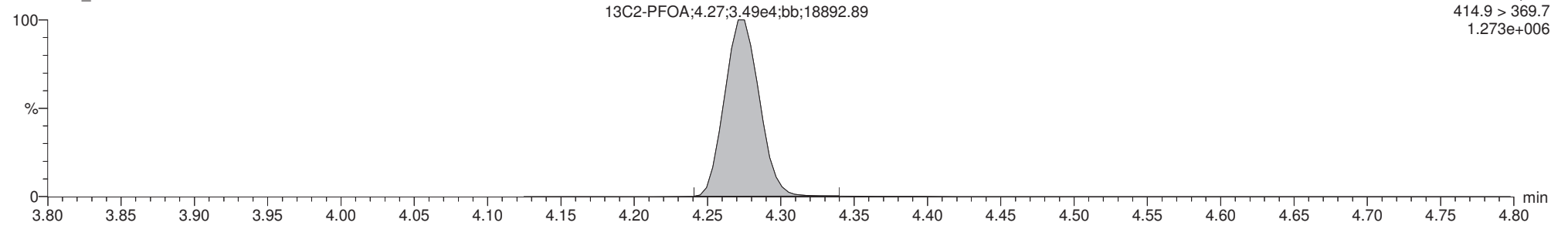


170301G1\_18



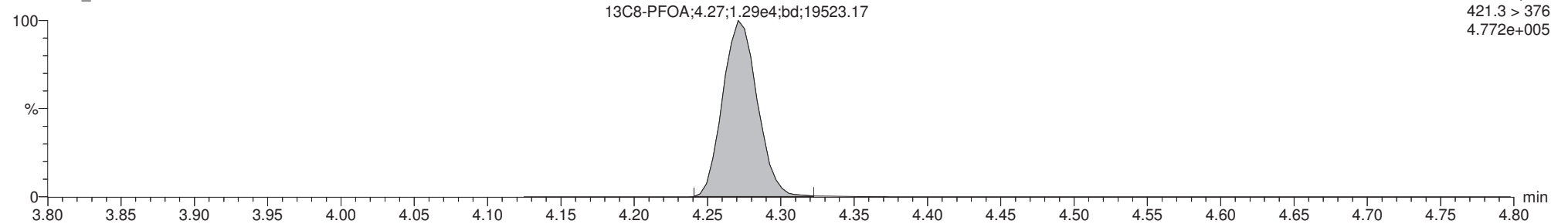
**13C2-PFOA**

170301G1\_18



**13C8-PFOA**

170301G1\_18



Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-18.qld

Last Altered: Thursday, March 02, 2017 10:41:27 Pacific Standard Time

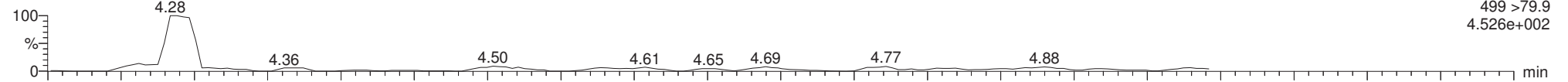
Printed: Thursday, March 02, 2017 10:41:42 Pacific Standard Time

ID: 1700261-01 WI-CV-GW10D-0217 0.125, Description: WI-CV-GW10D-0217, Name: 170301G1\_18, Date: 01-Mar-2017, Time: 18:30:28, Instrument: , Lab: , User:

**Total PFOS**

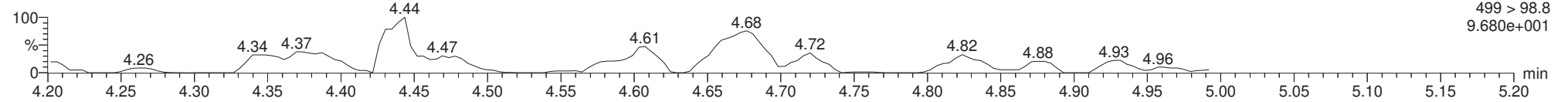
170301G1\_18

F5:MRM of 12 channels,ES-  
499 >79.9  
4.526e+002



170301G1\_18

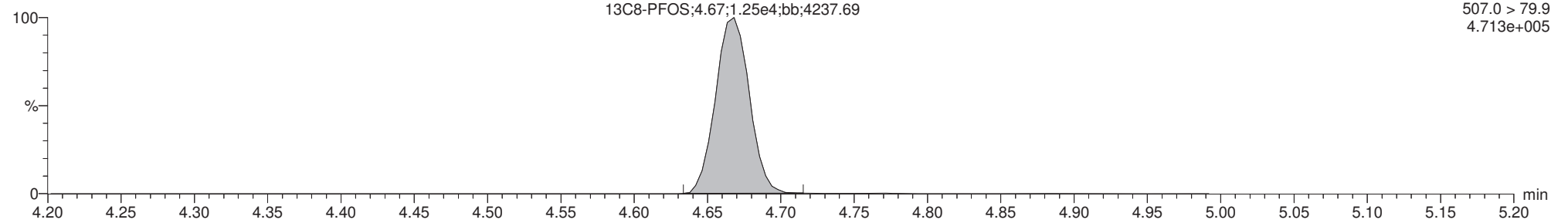
F5:MRM of 12 channels,ES-  
499 > 98.8  
9.680e+001



**13C8-PFOS**

170301G1\_18

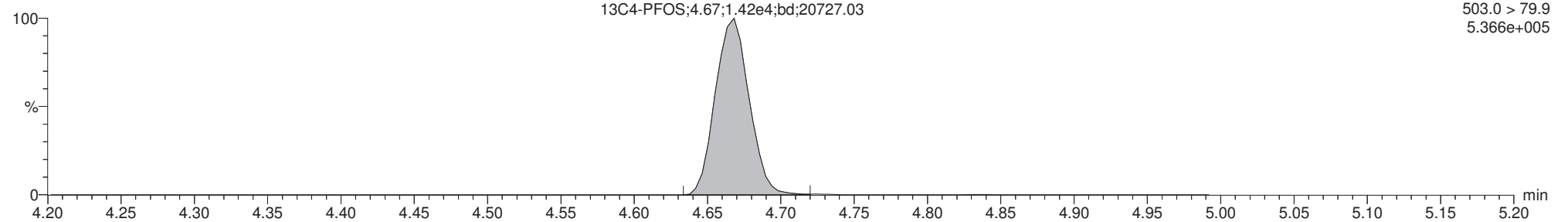
F5:MRM of 12 channels,ES-  
507.0 > 79.9  
4.713e+005



**13C4-PFOS**

170301G1\_18

F5:MRM of 12 channels,ES-  
503.0 > 79.9  
5.366e+005



Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-19.qld

Last Altered: Thursday, March 02, 2017 10:24:29 Pacific Standard Time

Printed: Thursday, March 02, 2017 10:25:13 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS\_6\_2trans\_LINEAR.mdb 28 Feb 2017 16:04:45

Calibration: U:\G1.pro\CurveDB\C18\_VAL-PFC\_Q1\_3-01-17\_L6\_2Trans.cdb 02 Mar 2017 08:18:08

ID: 1700261-02 WI-CV-EB01-022017 0.125, Description: WI-CV-EB01-022017, Name: 170301G1\_19, Date: 01-Mar-2017, Time: 18:43:01

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7		6.659e3		0.118			
2	4 PFOA	413 > 368.7	1.542e2	2.543e4		0.118	4.27		
3	6 PFOS	499 >79.9		8.403e3		0.118			
4	7 13C3-PFBS	302.0 > 98.8	6.659e3	1.403e4	0.442	0.118	2.98	114	107
5	10 13C2-PFOA	414.9 > 369.7	2.543e4	9.587e3	2.782	0.118	4.28	101	95.4
6	12 13C8-PFOS	507.0 > 79.9	8.403e3	8.323e3	0.941	0.118	4.67	113	107
7	14 13C3-PFHxS	401.9 > 79.9	1.403e4	1.403e4	1.000	0.118	3.99	106	100
8	15 13C8-PFOA	421.3 > 376	9.587e3	9.587e3	1.000	0.118	4.28	106	100
9	17 13C4-PFOS	503.0 > 79.9	8.323e3	8.323e3	1.000	0.118	4.67	106	100

Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-19.qld

Last Altered: Thursday, March 02, 2017 10:24:29 Pacific Standard Time

Printed: Thursday, March 02, 2017 10:25:35 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS\_6\_2trans\_LINEAR.mdb 28 Feb 2017 16:04:45

Calibration: U:\G1.pro\CurveDB\C18\_VAL-PFC\_Q1\_3-01-17\_L6\_2Trans.cdb 02 Mar 2017 08:18:08

ID: 1700261-02 WI-CV-EB01-022017 0.125, Description: WI-CV-EB01-022017, Name: 170301G1\_19, Date: 01-Mar-2017, Time: 18:43:01

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	18 Total PFBS	299 > 79.7		5.593e3		0.118			
2	20 Total PFOA	413 > 368.7		2.543e4		0.118			
3	21 Total PFOS	499 > 79.9		8.403e3		0.118			



Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-19.qld

Last Altered: Thursday, March 02, 2017 10:24:29 Pacific Standard Time

Printed: Thursday, March 02, 2017 10:25:13 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS\_6\_2trans\_LINEAR.mdb 28 Feb 2017 16:04:45

Calibration: U:\G1.pro\CurveDB\C18\_VAL-PFC\_Q1\_3-01-17\_L6\_2Trans.cdb 02 Mar 2017 08:18:08

ID: 1700261-02 WI-CV-EB01-022017 0.125, Description: WI-CV-EB01-022017, Name: 170301G1\_19, Date: 01-Mar-2017, Time: 18:43:01

**Total PFBS**

#	Name	Trace	RT	Area	IS Area	Conc.
1						

**Total PFHxS**

#	Name	Trace	RT	Area	IS Area	Conc.
1	19 Total PFHxS	398.9 > 79.6	3.99	19.217	5592.597	

**Total PFOA**

#	Name	Trace	RT	Area	IS Area	Conc.
1	4 PFOA	413 > 368.7	4.27	154.183	25432.275	

**Total PFOS**

#	Name	Trace	RT	Area	IS Area	Conc.
1						

Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-19.qld

Last Altered: Thursday, March 02, 2017 10:24:29 Pacific Standard Time

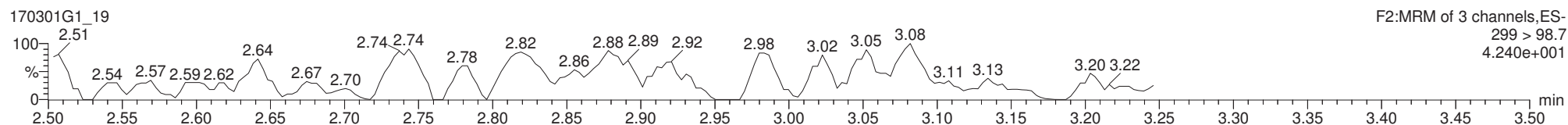
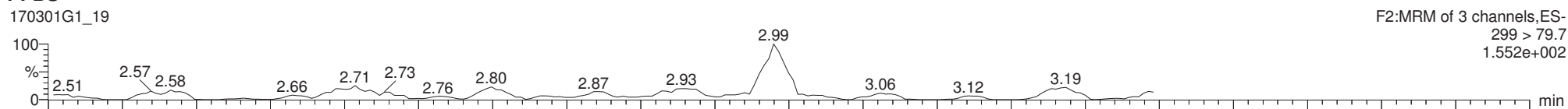
Printed: Thursday, March 02, 2017 10:25:13 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS\_6\_2trans\_LINEAR.mdb 28 Feb 2017 16:04:45

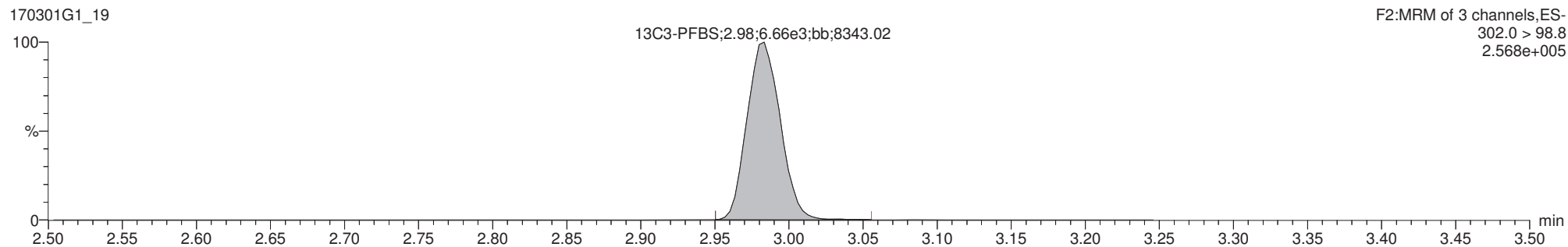
Calibration: U:\G1.pro\CurveDB\C18\_VAL-PFC\_Q1\_3-01-17\_L6\_2Trans.cdb 02 Mar 2017 08:18:08

ID: 1700261-02 WI-CV-EB01-022017 0.125, Description: WI-CV-EB01-022017, Name: 170301G1\_19, Date: 01-Mar-2017, Time: 18:43:01, Instrument: , Lab: , User:

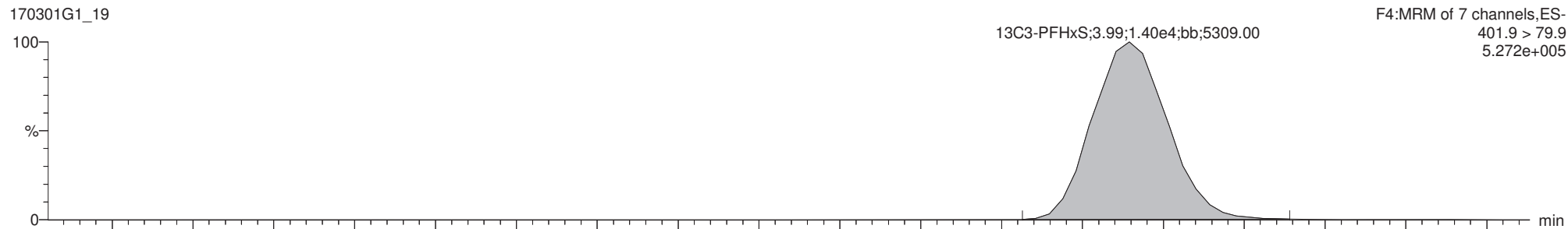
PFBS



13C3-PFBS



13C3-PFHxS



Reviewed: CT 03/02/17

ES 3/2/17

Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-19.qld

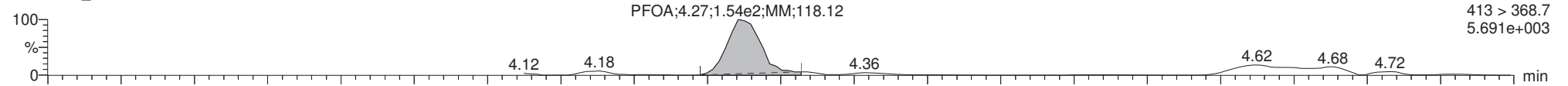
Last Altered: Thursday, March 02, 2017 10:24:29 Pacific Standard Time

Printed: Thursday, March 02, 2017 10:25:13 Pacific Standard Time

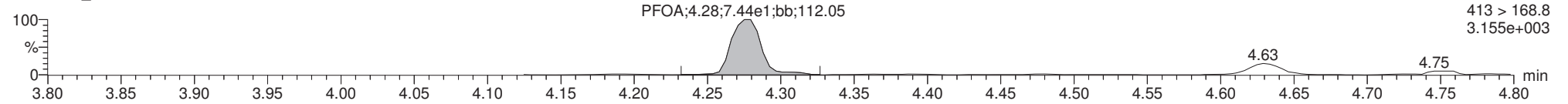
ID: 1700261-02 WI-CV-EB01-022017 0.125, Description: WI-CV-EB01-022017, Name: 170301G1\_19, Date: 01-Mar-2017, Time: 18:43:01, Instrument: , Lab: , User:

**Total PFOA**

170301G1\_19

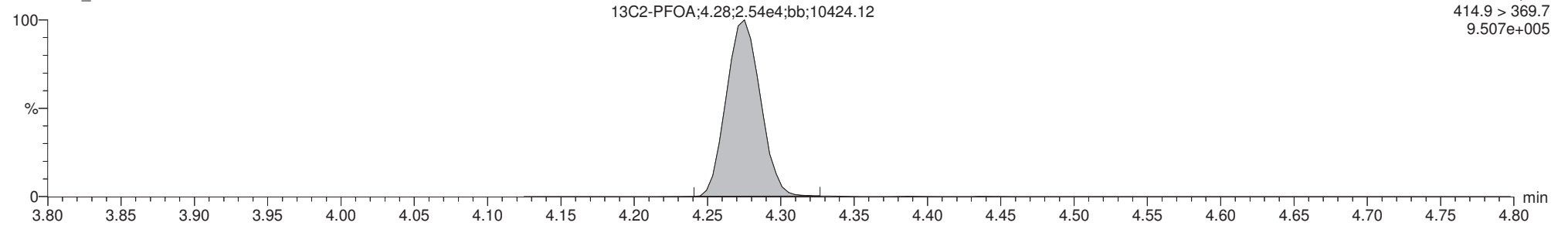


170301G1\_19



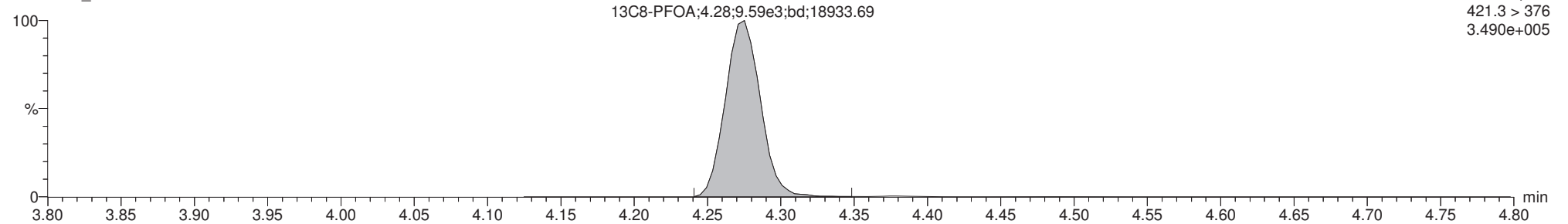
**13C2-PFOA**

170301G1\_19



**13C8-PFOA**

170301G1\_19



Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-19.qld

Last Altered: Thursday, March 02, 2017 10:24:29 Pacific Standard Time

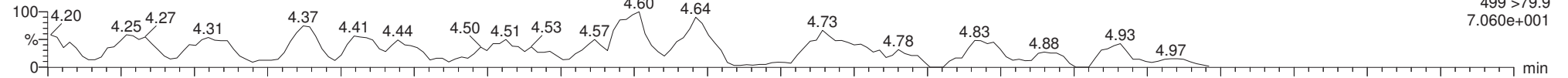
Printed: Thursday, March 02, 2017 10:25:13 Pacific Standard Time

ID: 1700261-02 WI-CV-EB01-022017 0.125, Description: WI-CV-EB01-022017, Name: 170301G1\_19, Date: 01-Mar-2017, Time: 18:43:01, Instrument: , Lab: , User:

**Total PFOS**

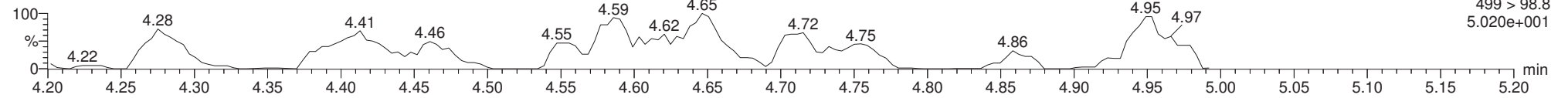
170301G1\_19

F5:MRM of 12 channels,ES-  
499 >79.9  
7.060e+001



170301G1\_19

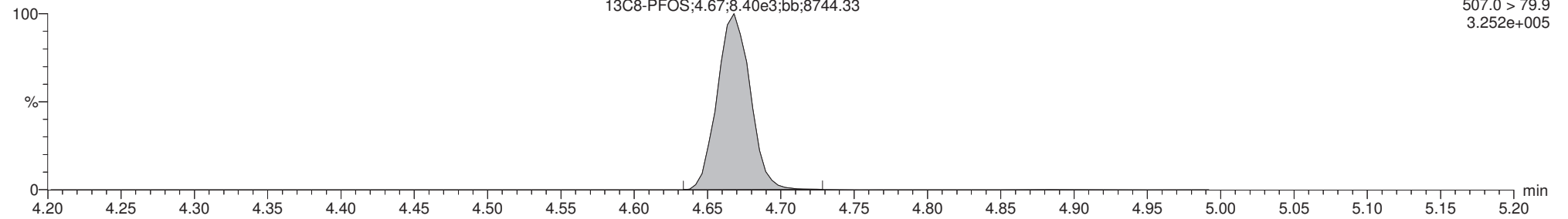
F5:MRM of 12 channels,ES-  
499 > 98.8  
5.020e+001



**13C8-PFOS**

170301G1\_19

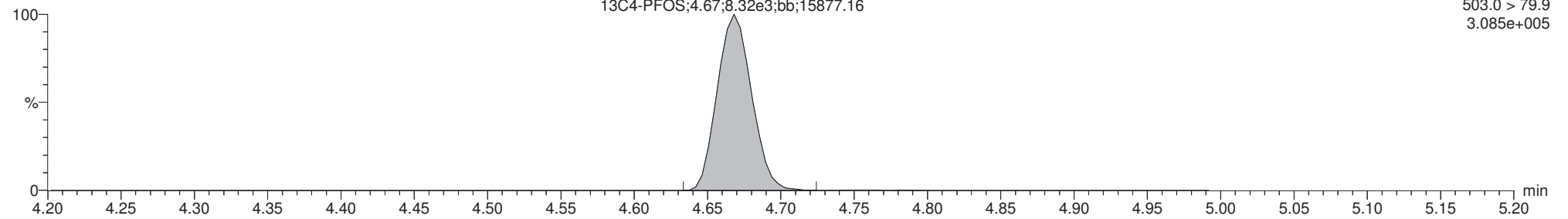
F5:MRM of 12 channels,ES-  
507.0 > 79.9  
3.252e+005



**13C4-PFOS**

170301G1\_19

F5:MRM of 12 channels,ES-  
503.0 > 79.9  
3.085e+005



Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-20.qld

Last Altered: Thursday, March 02, 2017 10:34:36 Pacific Standard Time

Printed: Thursday, March 02, 2017 10:35:11 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS\_6\_2trans\_LINEAR.mdb 28 Feb 2017 16:04:45

Calibration: U:\G1.pro\CurveDB\C18\_VAL-PFC\_Q1\_3-01-17\_L6\_2Trans.cdb 02 Mar 2017 08:18:08

ID: 1700261-03 WI-CV-GW065-0217 0.125, Description: WI-CV-GW065-0217, Name: 170301G1\_20, Date: 01-Mar-2017, Time: 18:55:35

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7		6.420e3		0.126			
2	4 PFOA	413 > 368.7	1.560e2	2.212e4		0.126	4.28		
3	6 PFOS	499 >79.9		6.823e3		0.126			
4	7 13C3-PFBS	302.0 > 98.8	6.420e3	1.270e4	0.442	0.126	2.98	113	114
5	10 13C2-PFOA	414.9 > 369.7	2.212e4	7.796e3	2.782	0.126	4.28	101	102
6	12 13C8-PFOS	507.0 > 79.9	6.823e3	7.324e3	0.941	0.126	4.67	98.1	99.0
7	14 13C3-PFHxS	401.9 > 79.9	1.270e4	1.270e4	1.000	0.126	3.99	99.1	100
8	15 13C8-PFOA	421.3 > 376	7.796e3	7.796e3	1.000	0.126	4.28	99.1	100
9	17 13C4-PFOS	503.0 > 79.9	7.324e3	7.324e3	1.000	0.126	4.67	99.1	100

Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-20.qld

Last Altered: Thursday, March 02, 2017 10:34:36 Pacific Standard Time

Printed: Thursday, March 02, 2017 10:35:44 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS\_6\_2trans\_LINEAR.mdb 28 Feb 2017 16:04:45

Calibration: U:\G1.pro\CurveDB\C18\_VAL-PFC\_Q1\_3-01-17\_L6\_2Trans.cdb 02 Mar 2017 08:18:08

ID: 1700261-03 WI-CV-GW065-0217 0.125, Description: WI-CV-GW065-0217, Name: 170301G1\_20, Date: 01-Mar-2017, Time: 18:55:35

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	18 Total PFBS	299 > 79.7		5.343e3		0.126			
2	20 Total PFOA	413 > 368.7		2.212e4		0.126			
3	21 Total PFOS	499 > 79.9		6.823e3		0.126			

Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-20.qld

Last Altered: Thursday, March 02, 2017 10:34:36 Pacific Standard Time

Printed: Thursday, March 02, 2017 10:35:11 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS\_6\_2trans\_LINEAR.mdb 28 Feb 2017 16:04:45

Calibration: U:\G1.pro\CurveDB\C18\_VAL-PFC\_Q1\_3-01-17\_L6\_2Trans.cdb 02 Mar 2017 08:18:08

ID: 1700261-03 WI-CV-GW065-0217 0.125, Description: WI-CV-GW065-0217, Name: 170301G1\_20, Date: 01-Mar-2017, Time: 18:55:35

**Total PFBS**

#	Name	Trace	RT	Area	IS Area	Conc.
1						

**Total PFHxS**

#	Name	Trace	RT	Area	IS Area	Conc.
1	3 PFHxS	398.9 > 79.6	3.99	34.211	5343.457	

**Total PFOA**

#	Name	Trace	RT	Area	IS Area	Conc.
1	4 PFOA	413 > 368.7	4.28	155.991	22116.092	

**Total PFOS**

#	Name	Trace	RT	Area	IS Area	Conc.
1						

Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-20.qld

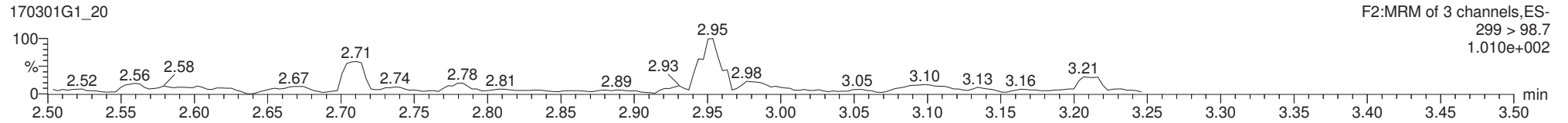
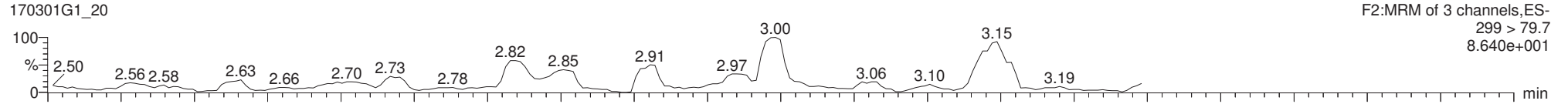
Last Altered: Thursday, March 02, 2017 10:34:36 Pacific Standard Time

Printed: Thursday, March 02, 2017 10:35:11 Pacific Standard Time

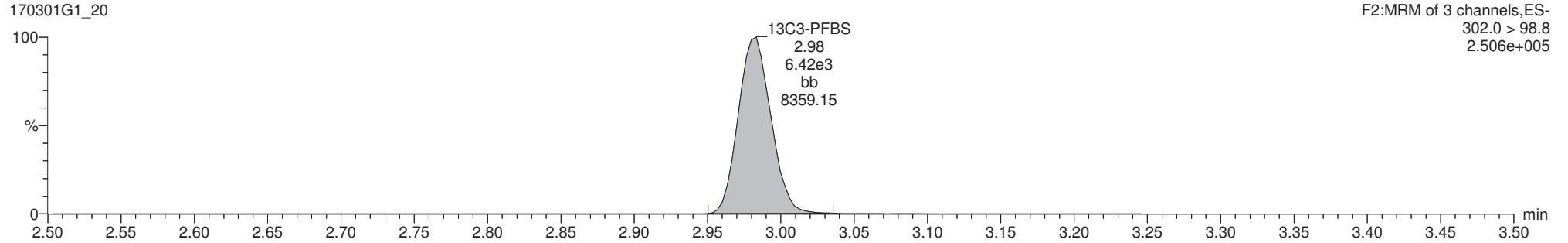
Method: U:\G1.pro\MethDB\PFAS\_6\_2trans\_LINEAR.mdb 28 Feb 2017 16:04:45  
Calibration: U:\G1.pro\CurveDB\C18\_VAL-PFC\_Q1\_3-01-17\_L6\_2Trans.cdb 02 Mar 2017 08:18:08

ID: 1700261-03 WI-CV-GW065-0217 0.125, Description: WI-CV-GW065-0217, Name: 170301G1\_20, Date: 01-Mar-2017, Time: 18:55:35, Instrument: , Lab: , User:

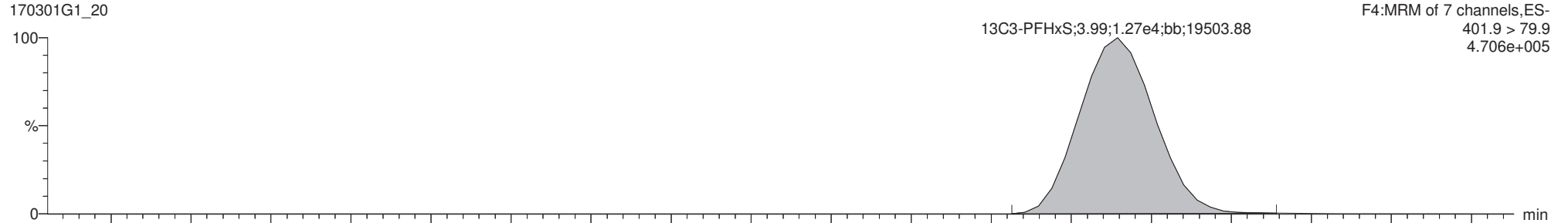
**PFBS**



**13C3-PFBS**



**13C3-PFHxS**



Reviewed: CT 03/02/17

ES 3/2/17



Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-20.qld

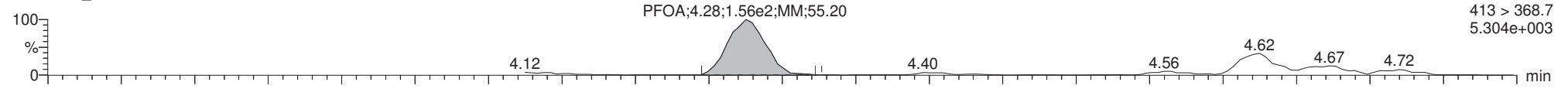
Last Altered: Thursday, March 02, 2017 10:34:36 Pacific Standard Time

Printed: Thursday, March 02, 2017 10:35:11 Pacific Standard Time

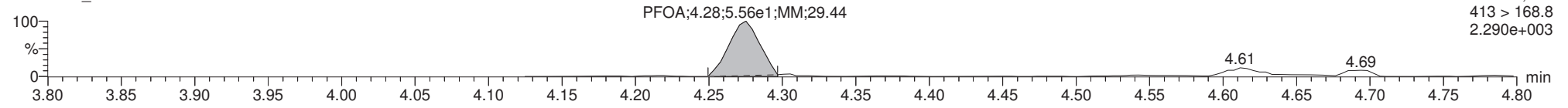
ID: 1700261-03 WI-CV-GW065-0217 0.125, Description: WI-CV-GW065-0217, Name: 170301G1\_20, Date: 01-Mar-2017, Time: 18:55:35, Instrument: , Lab: , User:

**Total PFOA**

170301G1\_20

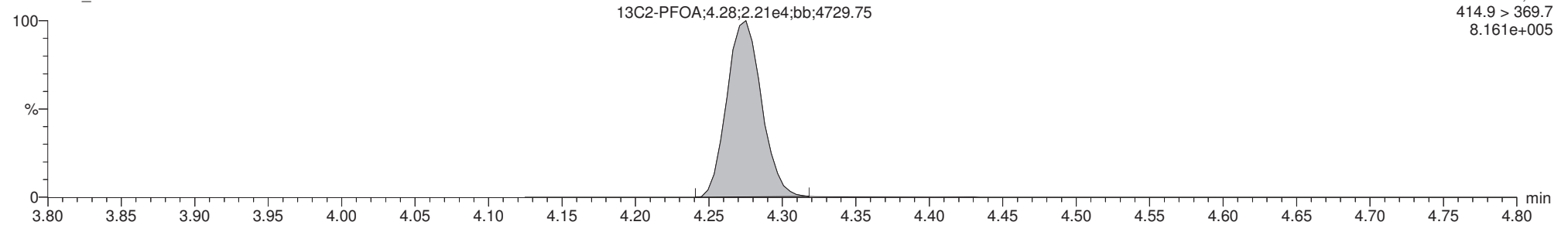


170301G1\_20



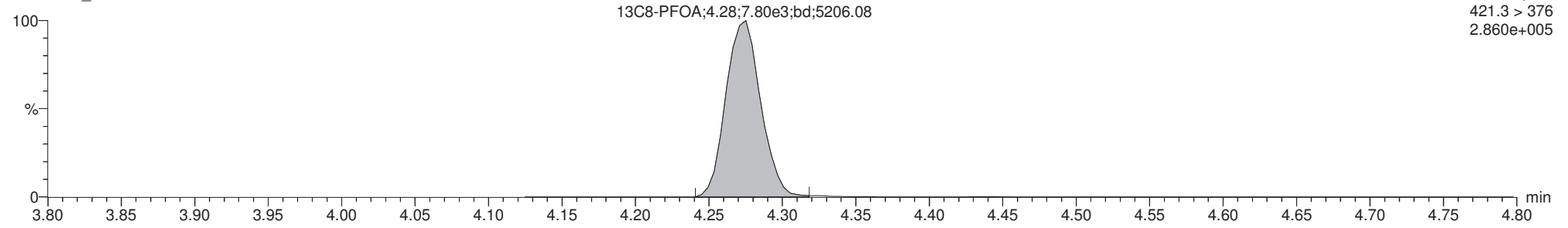
**13C2-PFOA**

170301G1\_20



**13C8-PFOA**

170301G1\_20



Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-20.qld

Last Altered: Thursday, March 02, 2017 10:34:36 Pacific Standard Time

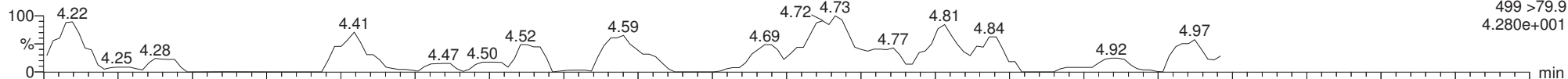
Printed: Thursday, March 02, 2017 10:35:11 Pacific Standard Time

ID: 1700261-03 WI-CV-GW065-0217 0.125, Description: WI-CV-GW065-0217, Name: 170301G1\_20, Date: 01-Mar-2017, Time: 18:55:35, Instrument: , Lab: , User:

**Total PFOS**

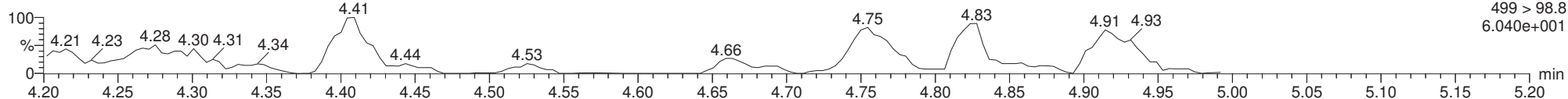
170301G1\_20

F5:MRM of 12 channels,ES-  
499 >79.9  
4.280e+001



170301G1\_20

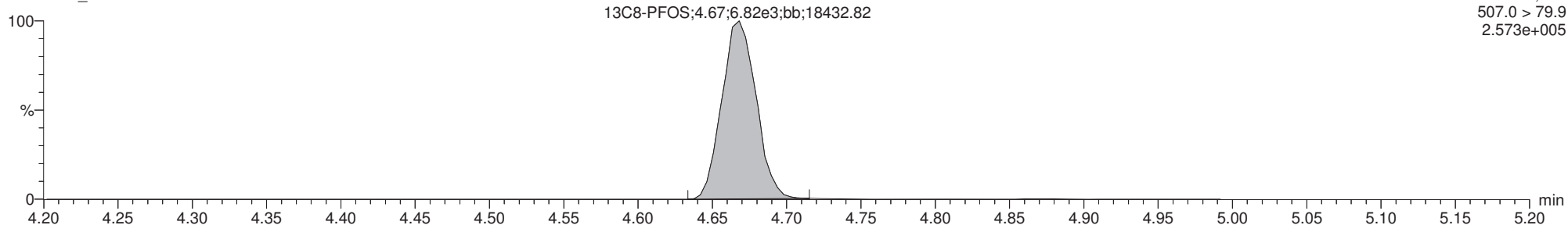
F5:MRM of 12 channels,ES-  
499 > 98.8  
6.040e+001



**13C8-PFOS**

170301G1\_20

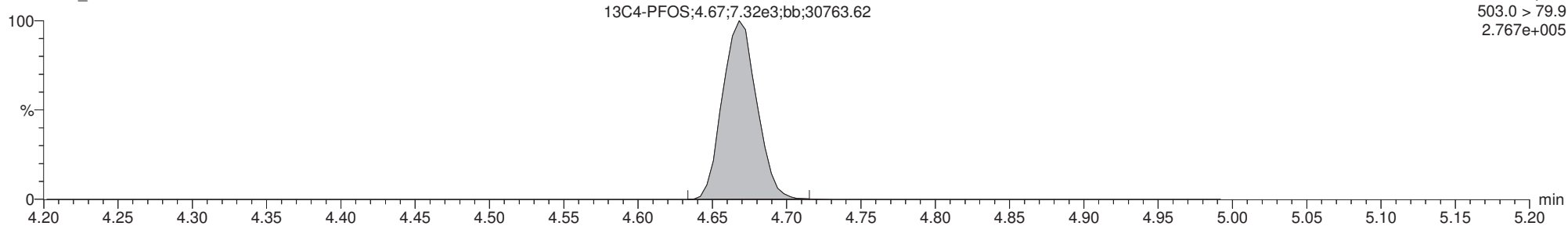
F5:MRM of 12 channels,ES-  
507.0 > 79.9  
2.573e+005



**13C4-PFOS**

170301G1\_20

F5:MRM of 12 channels,ES-  
503.0 > 79.9  
2.767e+005



Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-21.qld

Last Altered: Thursday, March 02, 2017 10:43:11 Pacific Standard Time

Printed: Thursday, March 02, 2017 10:43:46 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS\_6\_2trans\_LINEAR.mdb 28 Feb 2017 16:04:45

Calibration: U:\G1.pro\CurveDB\C18\_VAL-PFC\_Q1\_3-01-17\_L6\_2Trans.cdb 02 Mar 2017 08:18:08

ID: 1700261-04 WI-CV-GW065/5P-0217 0.125, Description: WI-CV-GW065/5P-0217, Name: 170301G1\_21, Date: 01-Mar-2017, Time: 19:08:08

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7		6.736e3		0.127			
2	4 PFOA	413 > 368.7	1.278e2	2.872e4		0.127	4.28		
3	6 PFOS	499 >79.9		7.940e3		0.127			
4	7 13C3-PFBS	302.0 > 98.8	6.736e3	1.496e4	0.442	0.127	2.98	101	102
5	10 13C2-PFOA	414.9 > 369.7	2.872e4	9.746e3	2.782	0.127	4.28	105	106
6	12 13C8-PFOS	507.0 > 79.9	7.940e3	8.114e3	0.941	0.127	4.67	103	104
7	14 13C3-PFHxS	401.9 > 79.9	1.496e4	1.496e4	1.000	0.127	3.99	98.8	100
8	15 13C8-PFOA	421.3 > 376	9.746e3	9.746e3	1.000	0.127	4.28	98.8	100
9	17 13C4-PFOS	503.0 > 79.9	8.114e3	8.114e3	1.000	0.127	4.67	98.8	100

Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-21.qld

Last Altered: Thursday, March 02, 2017 10:43:11 Pacific Standard Time

Printed: Thursday, March 02, 2017 10:44:00 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS\_6\_2trans\_LINEAR.mdb 28 Feb 2017 16:04:45

Calibration: U:\G1.pro\CurveDB\C18\_VAL-PFC\_Q1\_3-01-17\_L6\_2Trans.cdb 02 Mar 2017 08:18:08

ID: 1700261-04 WI-CV-GW065/5P-0217 0.125, Description: WI-CV-GW065/5P-0217, Name: 170301G1\_21, Date: 01-Mar-2017, Time: 19:08:08

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	18 Total PFBS	299 > 79.7		5.672e3		0.127			
2	20 Total PFOA	413 > 368.7		2.872e4		0.127			
3	21 Total PFOS	499 > 79.9		7.940e3		0.127			

Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-21.qld

Last Altered: Thursday, March 02, 2017 10:43:11 Pacific Standard Time

Printed: Thursday, March 02, 2017 10:43:46 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS\_6\_2trans\_LINEAR.mdb 28 Feb 2017 16:04:45

Calibration: U:\G1.pro\CurveDB\C18\_VAL-PFC\_Q1\_3-01-17\_L6\_2Trans.cdb 02 Mar 2017 08:18:08

ID: 1700261-04 WI-CV-GW065/5P-0217 0.125, Description: WI-CV-GW065/5P-0217, Name: 170301G1\_21, Date: 01-Mar-2017, Time: 19:08:08

Total PFBS

#	Name	Trace	RT	Area	IS Area	Conc.
1						

Total PFHxS

#	Name	Trace	RT	Area	IS Area	Conc.
1	19 Total PFHxS	398.9 > 79.6	3.99	22.489	5671.622	

Total PFOA

#	Name	Trace	RT	Area	IS Area	Conc.
1	4 PFOA	413 > 368.7	4.28	127.786	28718.217	

Total PFOS

#	Name	Trace	RT	Area	IS Area	Conc.
1						

Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-21.qld

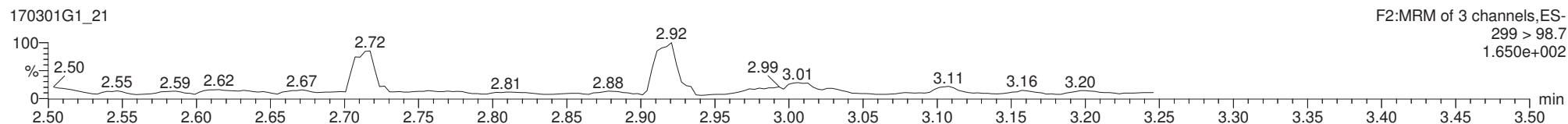
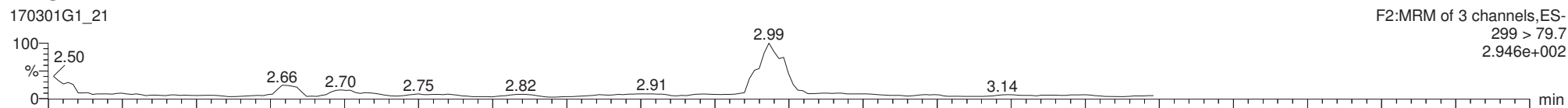
Last Altered: Thursday, March 02, 2017 10:43:11 Pacific Standard Time

Printed: Thursday, March 02, 2017 10:43:46 Pacific Standard Time

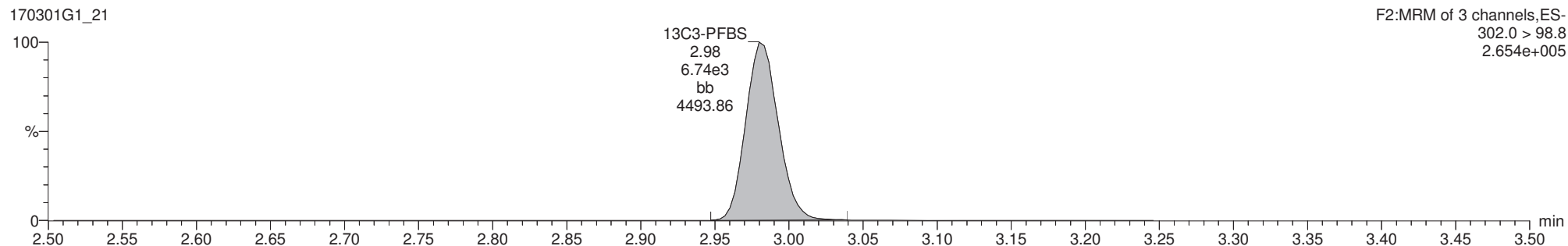
Method: U:\G1.pro\MethDB\PFAS\_6\_2trans\_LINEAR.mdb 28 Feb 2017 16:04:45  
Calibration: U:\G1.pro\CurveDB\C18\_VAL-PFC\_Q1\_3-01-17\_L6\_2Trans.cdb 02 Mar 2017 08:18:08

ID: 1700261-04 WI-CV-GW065/5P-0217 0.125, Description: WI-CV-GW065/5P-0217, Name: 170301G1\_21, Date: 01-Mar-2017, Time: 19:08:08, Instrument: , Lab: , User:

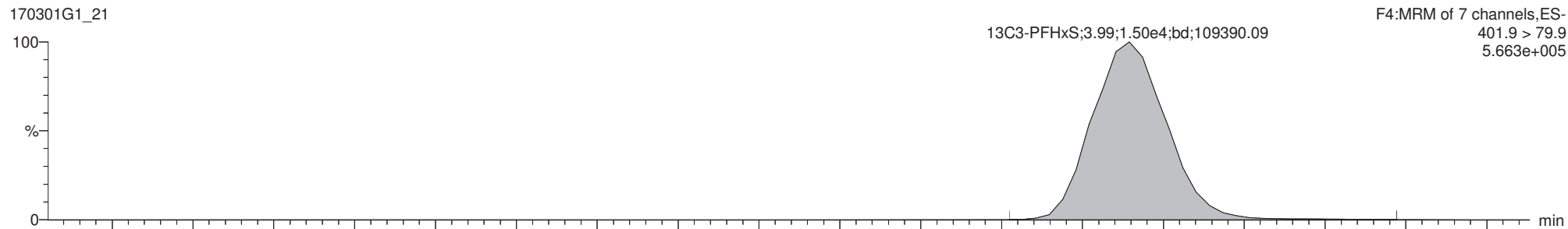
PFBS



13C3-PFBS



13C3-PFHxS



Reviewed: CT 03/02/17

ES 3/2/17

Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-21.qld

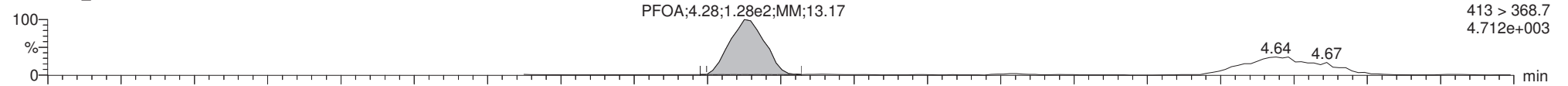
Last Altered: Thursday, March 02, 2017 10:43:11 Pacific Standard Time

Printed: Thursday, March 02, 2017 10:43:46 Pacific Standard Time

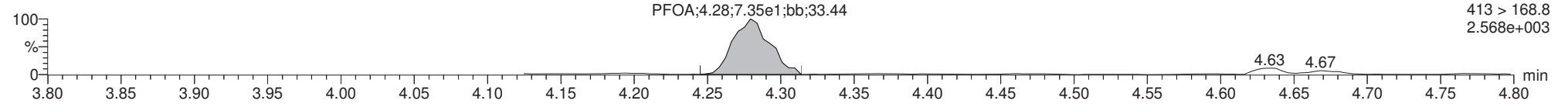
ID: 1700261-04 WI-CV-GW065/5P-0217 0.125, Description: WI-CV-GW065/5P-0217, Name: 170301G1\_21, Date: 01-Mar-2017, Time: 19:08:08, Instrument: , Lab: , User:

**Total PFOA**

170301G1\_21

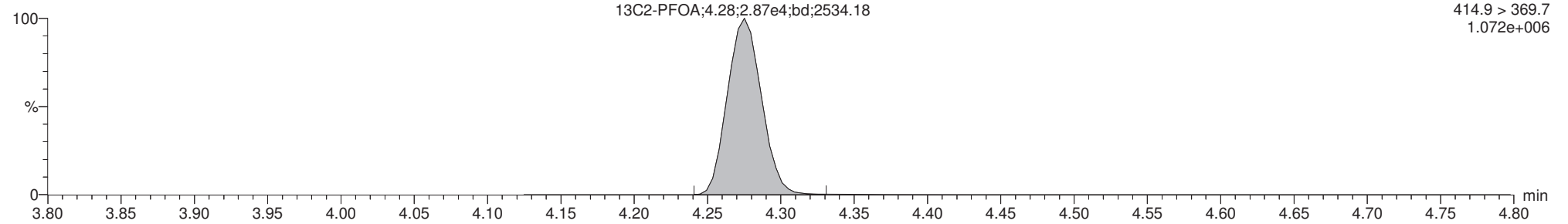


170301G1\_21



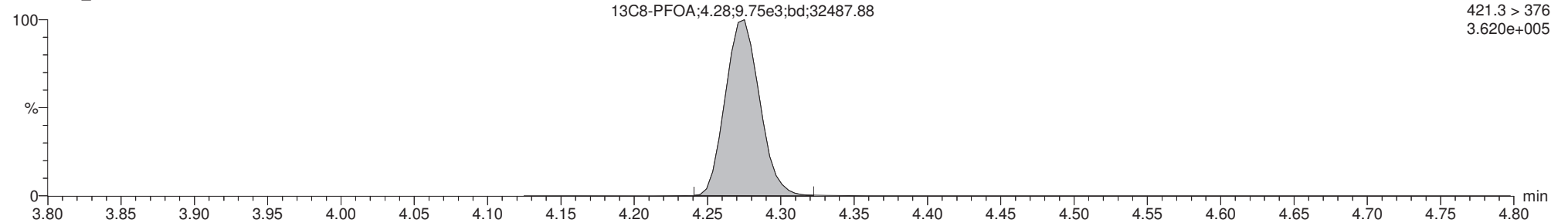
**13C2-PFOA**

170301G1\_21



**13C8-PFOA**

170301G1\_21



Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-21.qld

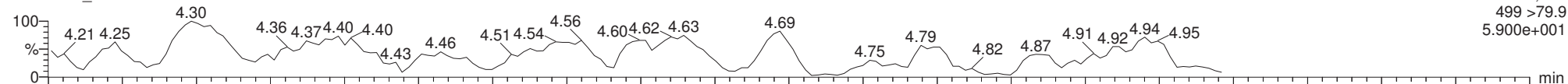
Last Altered: Thursday, March 02, 2017 10:43:11 Pacific Standard Time

Printed: Thursday, March 02, 2017 10:43:46 Pacific Standard Time

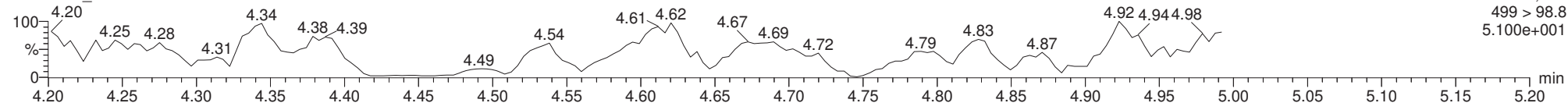
ID: 1700261-04 WI-CV-GW065/5P-0217 0.125, Description: WI-CV-GW065/5P-0217, Name: 170301G1\_21, Date: 01-Mar-2017, Time: 19:08:08, Instrument: , Lab: , User:

**Total PFOS**

170301G1\_21

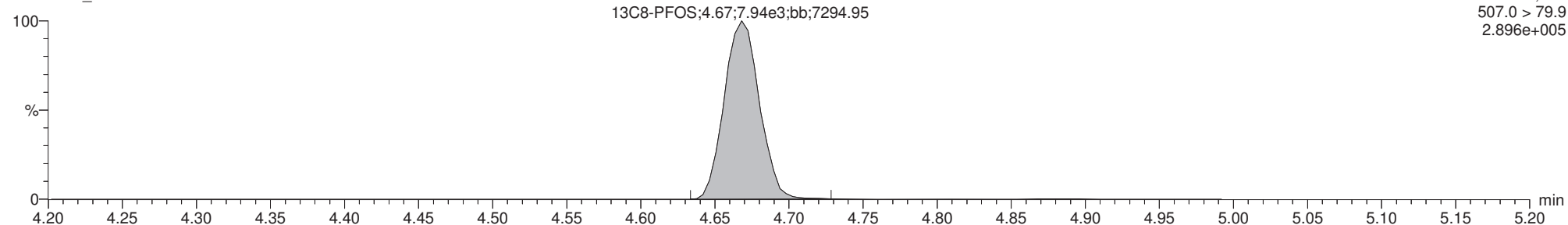


170301G1\_21



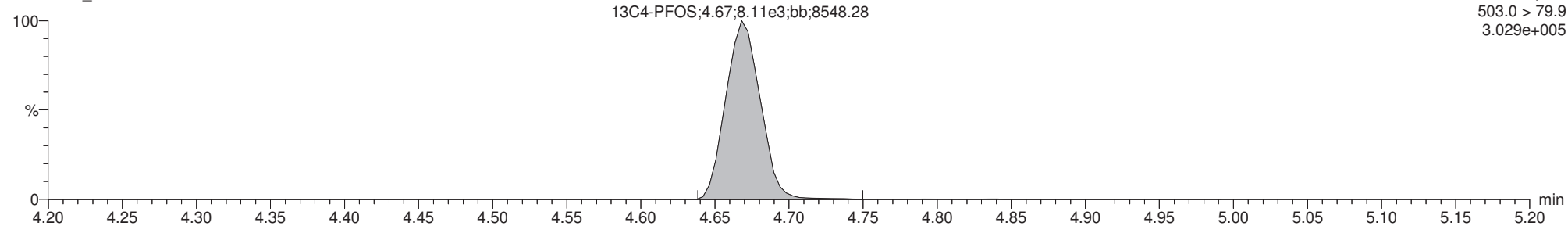
**13C8-PFOS**

170301G1\_21



**13C4-PFOS**

170301G1\_21





Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-22.qld

Last Altered: Thursday, March 02, 2017 10:45:33 Pacific Standard Time

Printed: Thursday, March 02, 2017 10:47:18 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS\_6\_2trans\_LINEAR.mdb 28 Feb 2017 16:04:45

Calibration: U:\G1.pro\CurveDB\C18\_VAL-PFC\_Q1\_3-01-17\_L6\_2Trans.cdb 02 Mar 2017 08:18:08

ID: 1700261-05 WI-CV-GW105-0217 0.125, Description: WI-CV-GW105-0217, Name: 170301G1\_22, Date: 01-Mar-2017, Time: 19:20:37

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7	3.990e2	6.517e3		0.120	2.99	3.00	
2	4 PFOA	413 > 368.7	1.390e2	2.363e4		0.120	4.28		
3	6 PFOS	499 >79.9		7.403e3		0.120			
4	7 13C3-PFBS	302.0 > 98.8	6.517e3	1.536e4	0.442	0.120	2.98	100	95.9
5	10 13C2-PFOA	414.9 > 369.7	2.363e4	9.411e3	2.782	0.120	4.28	94.1	90.3
6	12 13C8-PFOS	507.0 > 79.9	7.403e3	7.848e3	0.941	0.120	4.67	105	100
7	14 13C3-PFHxS	401.9 > 79.9	1.536e4	1.536e4	1.000	0.120	3.99	104	100
8	15 13C8-PFOA	421.3 > 376	9.411e3	9.411e3	1.000	0.120	4.28	104	100
9	17 13C4-PFOS	503.0 > 79.9	7.848e3	7.848e3	1.000	0.120	4.67	104	100

Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-22.qld

Last Altered: Thursday, March 02, 2017 10:45:33 Pacific Standard Time

Printed: Thursday, March 02, 2017 10:47:37 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS\_6\_2trans\_LINEAR.mdb 28 Feb 2017 16:04:45

Calibration: U:\G1.pro\CurveDB\C18\_VAL-PFC\_Q1\_3-01-17\_L6\_2Trans.cdb 02 Mar 2017 08:18:08

ID: 1700261-05 WI-CV-GW105-0217 0.125, Description: WI-CV-GW105-0217, Name: 170301G1\_22, Date: 01-Mar-2017, Time: 19:20:37

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	18 Total PFBS	299 > 79.7		6.407e3		0.120		3.07	
2	20 Total PFOA	413 > 368.7		2.363e4		0.120			
3	21 Total PFOS	499 > 79.9		7.403e3		0.120			

Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-22.qld

Last Altered: Thursday, March 02, 2017 10:45:33 Pacific Standard Time

Printed: Thursday, March 02, 2017 10:47:18 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS\_6\_2trans\_LINEAR.mdb 28 Feb 2017 16:04:45

Calibration: U:\G1.pro\CurveDB\C18\_VAL-PFC\_Q1\_3-01-17\_L6\_2Trans.cdb 02 Mar 2017 08:18:08

ID: 1700261-05 WI-CV-GW105-0217 0.125, Description: WI-CV-GW105-0217, Name: 170301G1\_22, Date: 01-Mar-2017, Time: 19:20:37

**Total PFBS**

	# Name	Trace	RT	Area	IS Area	Conc.
1	18 Total PFBS	299 > 79.7	3.02	5.054	6406.715	0.1
2	1 PFBS	299 > 79.7	2.99	398.993	6516.731	3.0

**Total PFHxS**

	# Name	Trace	RT	Area	IS Area	Conc.
1	19 Total PFHxS	398.9 > 79.6	3.99	40.631	6406.715	
2	19 Total PFHxS	398.9 > 79.6	3.89	30.281	6406.715	
3	19 Total PFHxS	398.9 > 79.6	3.86	20.895	6406.715	

**Total PFOA**

	# Name	Trace	RT	Area	IS Area	Conc.
1	4 PFOA	413 > 368.7	4.28	139.015	23626.281	

**Total PFOS**

	# Name	Trace	RT	Area	IS Area	Conc.
1						

Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-22.qld

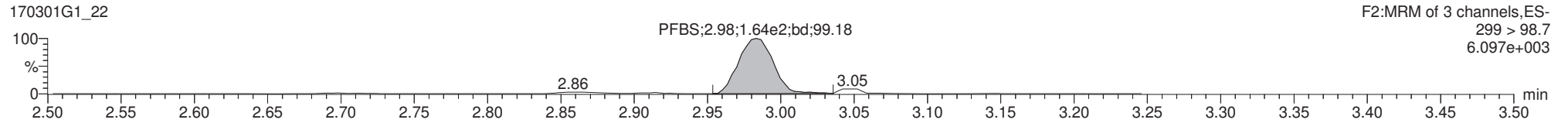
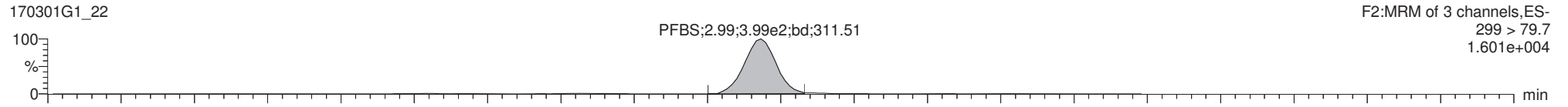
Last Altered: Thursday, March 02, 2017 10:45:33 Pacific Standard Time

Printed: Thursday, March 02, 2017 10:47:18 Pacific Standard Time

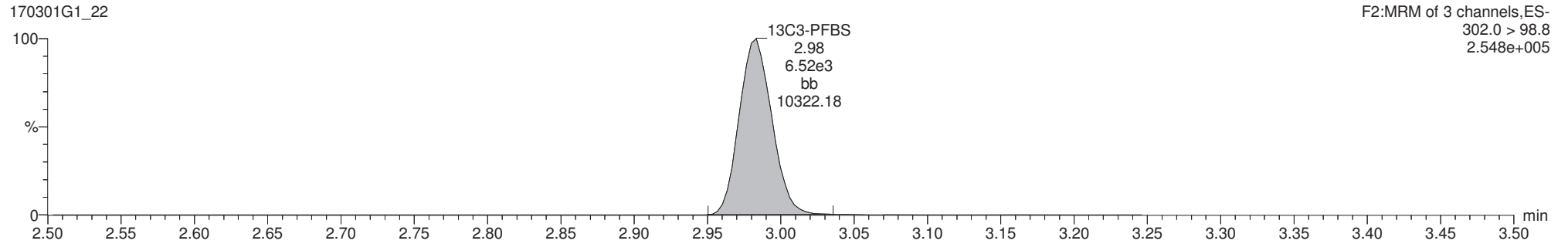
Method: U:\G1.pro\MethDB\PFAS\_6\_2trans\_LINEAR.mdb 28 Feb 2017 16:04:45  
Calibration: U:\G1.pro\CurveDB\C18\_VAL-PFC\_Q1\_3-01-17\_L6\_2Trans.cdb 02 Mar 2017 08:18:08

ID: 1700261-05 WI-CV-GW105-0217 0.125, Description: WI-CV-GW105-0217, Name: 170301G1\_22, Date: 01-Mar-2017, Time: 19:20:37, Instrument: , Lab: , User:

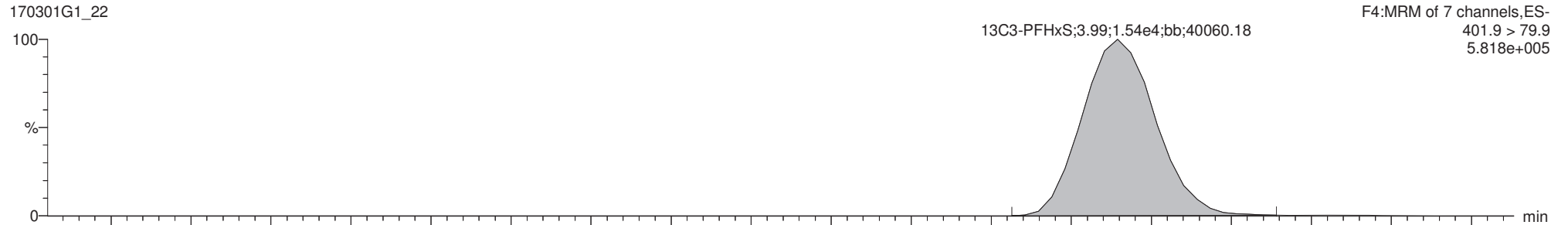
**PFBS**



**13C3-PFBS**



**13C3-PFHxS**



Reviewed: CT 03/02/17

ES 3/2/17

Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-22.qld

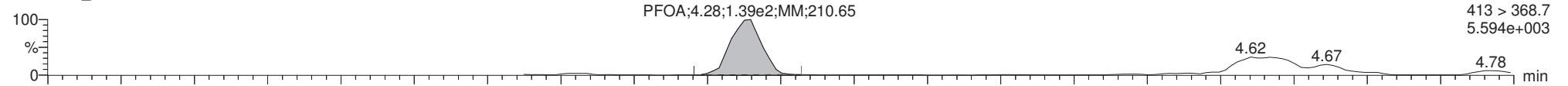
Last Altered: Thursday, March 02, 2017 10:45:33 Pacific Standard Time

Printed: Thursday, March 02, 2017 10:47:18 Pacific Standard Time

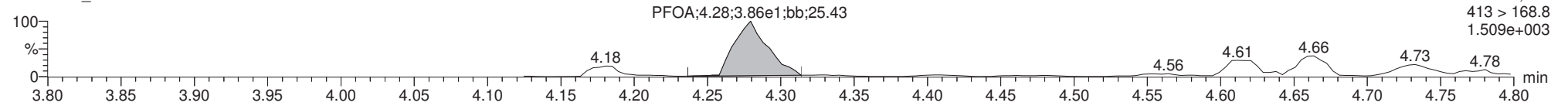
ID: 1700261-05 WI-CV-GW105-0217 0.125, Description: WI-CV-GW105-0217, Name: 170301G1\_22, Date: 01-Mar-2017, Time: 19:20:37, Instrument: , Lab: , User:

**Total PFOA**

170301G1\_22

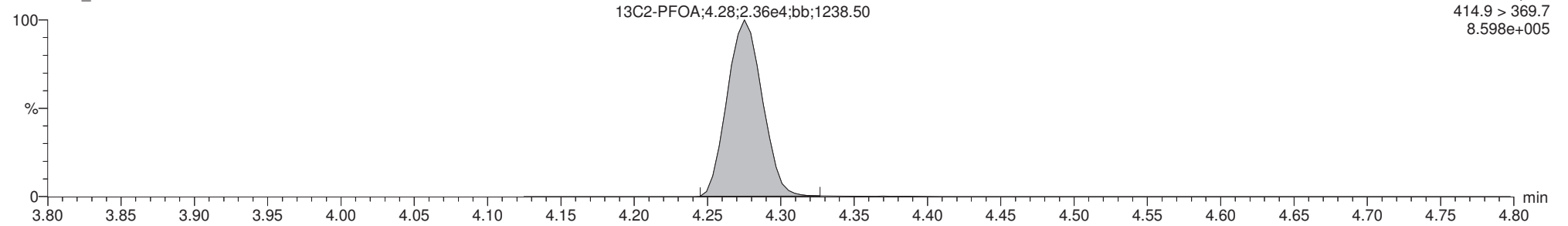


170301G1\_22



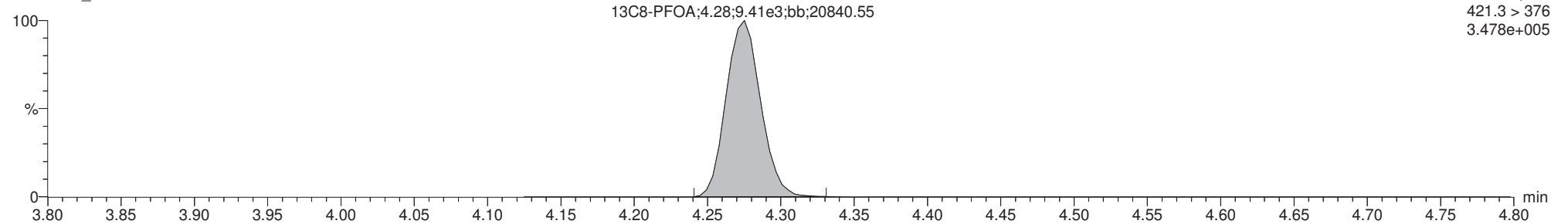
**13C2-PFOA**

170301G1\_22



**13C8-PFOA**

170301G1\_22



Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-22.qld

Last Altered: Thursday, March 02, 2017 10:45:33 Pacific Standard Time

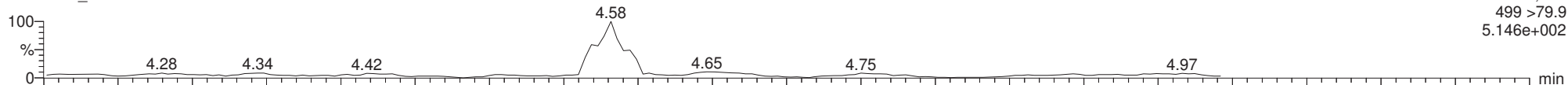
Printed: Thursday, March 02, 2017 10:47:18 Pacific Standard Time

ID: 1700261-05 WI-CV-GW105-0217 0.125, Description: WI-CV-GW105-0217, Name: 170301G1\_22, Date: 01-Mar-2017, Time: 19:20:37, Instrument: , Lab: , User:

**Total PFOS**

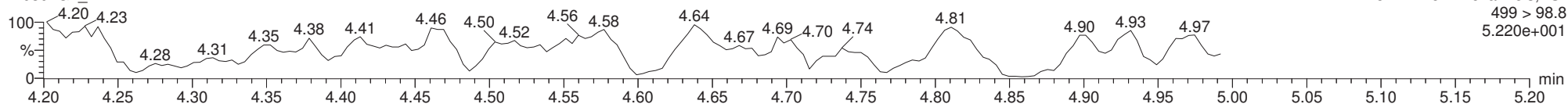
170301G1\_22

F5:MRM of 12 channels,ES-  
499 >79.9  
5.146e+002



170301G1\_22

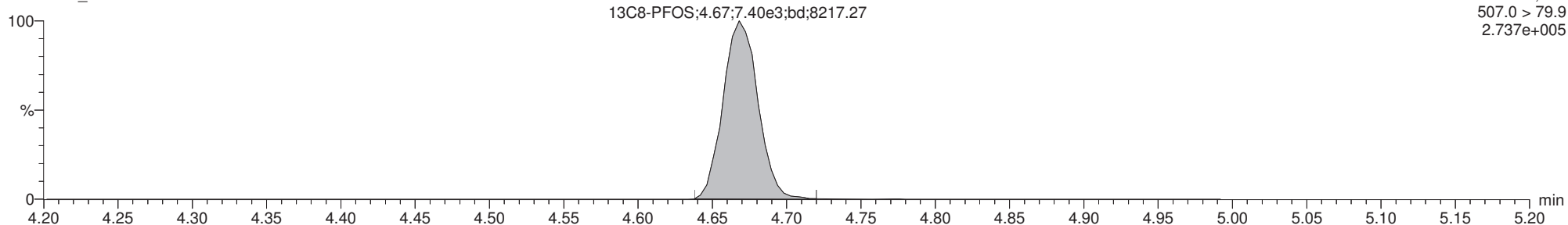
F5:MRM of 12 channels,ES-  
499 > 98.8  
5.220e+001



**13C8-PFOS**

170301G1\_22

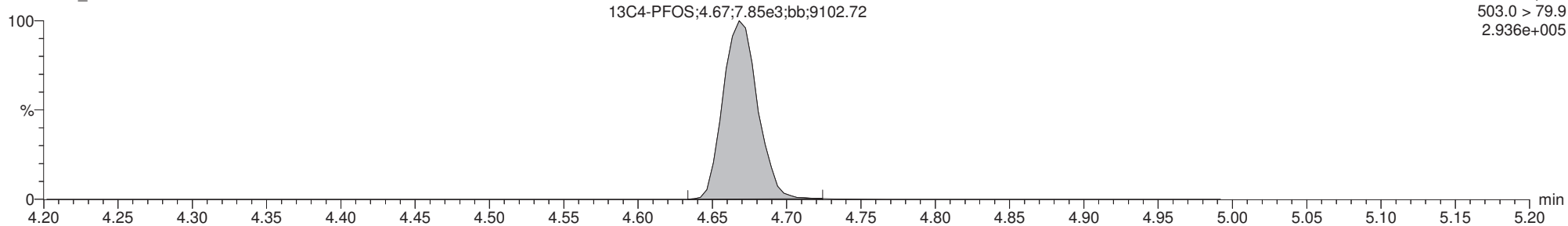
F5:MRM of 12 channels,ES-  
507.0 > 79.9  
2.737e+005



**13C4-PFOS**

170301G1\_22

F5:MRM of 12 channels,ES-  
503.0 > 79.9  
2.936e+005



Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-23.qld

Last Altered: Thursday, March 02, 2017 10:49:40 Pacific Standard Time

Printed: Thursday, March 02, 2017 10:50:29 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS\_6\_2trans\_LINEAR.mdb 28 Feb 2017 16:04:45

Calibration: U:\G1.pro\CurveDB\C18\_VAL-PFC\_Q1\_3-01-17\_L6\_2Trans.cdb 02 Mar 2017 08:18:08

ID: 1700261-06 WI-CV-EB03-022217 0.125, Description: WI-CV-EB03-022217, Name: 170301G1\_23, Date: 01-Mar-2017, Time: 19:33:12

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7		6.586e3		0.119			
2	4 PFOA	413 > 368.7	1.737e2	2.462e4		0.119	4.28		
3	6 PFOS	499 >79.9		6.923e3		0.119			
4	7 13C3-PFBS	302.0 > 98.8	6.586e3	1.350e4	0.442	0.119	2.98	116	110
5	10 13C2-PFOA	414.9 > 369.7	2.462e4	8.465e3	2.782	0.119	4.28	110	105
6	12 13C8-PFOS	507.0 > 79.9	6.923e3	7.556e3	0.941	0.119	4.67	102	97.3
7	14 13C3-PFHxS	401.9 > 79.9	1.350e4	1.350e4	1.000	0.119	3.99	105	100
8	15 13C8-PFOA	421.3 > 376	8.465e3	8.465e3	1.000	0.119	4.28	105	100
9	17 13C4-PFOS	503.0 > 79.9	7.556e3	7.556e3	1.000	0.119	4.67	105	100

Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-23.qld

Last Altered: Thursday, March 02, 2017 10:49:40 Pacific Standard Time

Printed: Thursday, March 02, 2017 10:50:51 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS\_6\_2trans\_LINEAR.mdb 28 Feb 2017 16:04:45

Calibration: U:\G1.pro\CurveDB\C18\_VAL-PFC\_Q1\_3-01-17\_L6\_2Trans.cdb 02 Mar 2017 08:18:08

ID: 1700261-06 WI-CV-EB03-022217 0.125, Description: WI-CV-EB03-022217, Name: 170301G1\_23, Date: 01-Mar-2017, Time: 19:33:12

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	18 Total PFBS	299 > 79.7		5.744e3		0.119			
2	20 Total PFOA	413 > 368.7		2.462e4		0.119			
3	21 Total PFOS	499 > 79.9		6.923e3		0.119			



Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-23.qld

Last Altered: Thursday, March 02, 2017 10:49:40 Pacific Standard Time

Printed: Thursday, March 02, 2017 10:50:29 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS\_6\_2trans\_LINEAR.mdb 28 Feb 2017 16:04:45

Calibration: U:\G1.pro\CurveDB\C18\_VAL-PFC\_Q1\_3-01-17\_L6\_2Trans.cdb 02 Mar 2017 08:18:08

ID: 1700261-06 WI-CV-EB03-022217 0.125, Description: WI-CV-EB03-022217, Name: 170301G1\_23, Date: 01-Mar-2017, Time: 19:33:12

Total PFBS

#	Name	Trace	RT	Area	IS Area	Conc.
1						

Total PFHxS

#	Name	Trace	RT	Area	IS Area	Conc.
1	3 PFHxS	398.9 > 79.6	3.99	35.503	5743.795	

Total PFOA

#	Name	Trace	RT	Area	IS Area	Conc.
1	4 PFOA	413 > 368.7	4.28	173.667	24622.893	

Total PFOS

#	Name	Trace	RT	Area	IS Area	Conc.
1						

Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-23.qld

Last Altered: Thursday, March 02, 2017 10:49:40 Pacific Standard Time

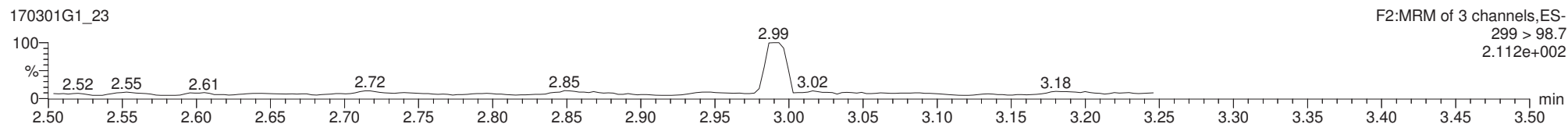
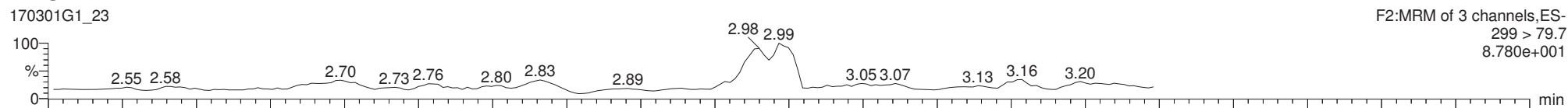
Printed: Thursday, March 02, 2017 10:50:29 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS\_6\_2trans\_LINEAR.mdb 28 Feb 2017 16:04:45

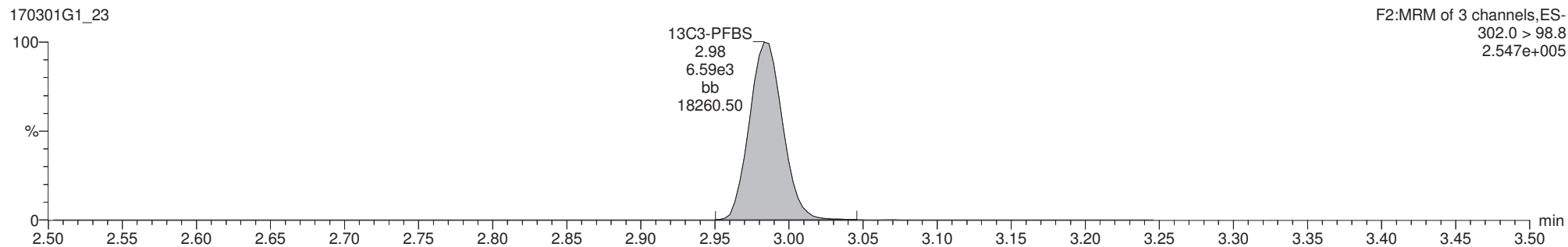
Calibration: U:\G1.pro\CurveDB\C18\_VAL-PFC\_Q1\_3-01-17\_L6\_2Trans.cdb 02 Mar 2017 08:18:08

ID: 1700261-06 WI-CV-EB03-022217 0.125, Description: WI-CV-EB03-022217, Name: 170301G1\_23, Date: 01-Mar-2017, Time: 19:33:12, Instrument: , Lab: , User:

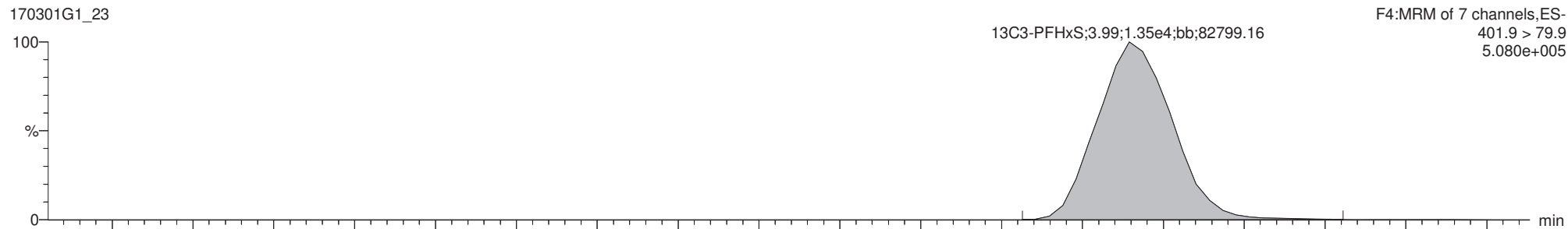
**PFBS**



**13C3-PFBS**



**13C3-PFHxS**



Reviewed: CT 03/02/17

ES 3/2/17

Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-23.qld

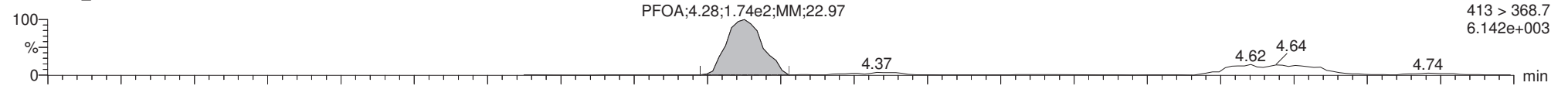
Last Altered: Thursday, March 02, 2017 10:49:40 Pacific Standard Time

Printed: Thursday, March 02, 2017 10:50:29 Pacific Standard Time

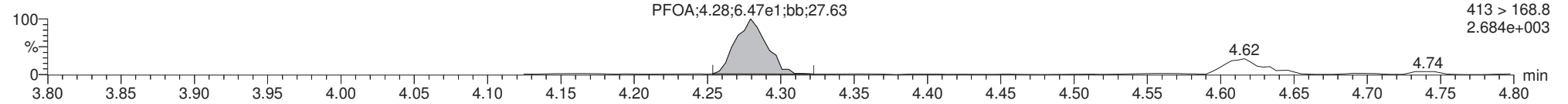
ID: 1700261-06 WI-CV-EB03-022217 0.125, Description: WI-CV-EB03-022217, Name: 170301G1\_23, Date: 01-Mar-2017, Time: 19:33:12, Instrument: , Lab: , User:

**Total PFOA**

170301G1\_23

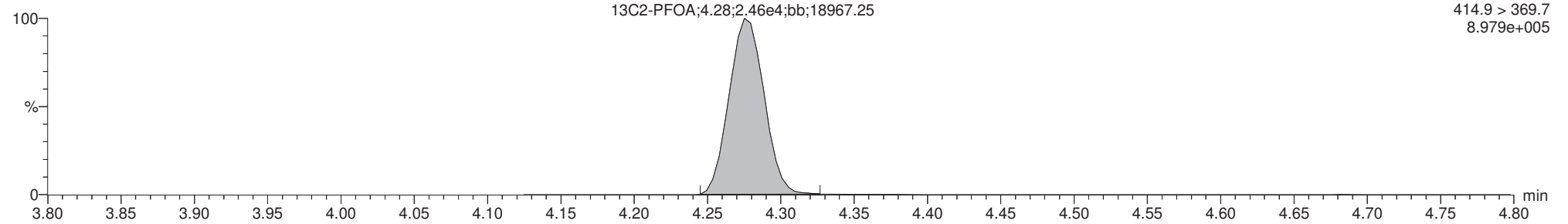


170301G1\_23



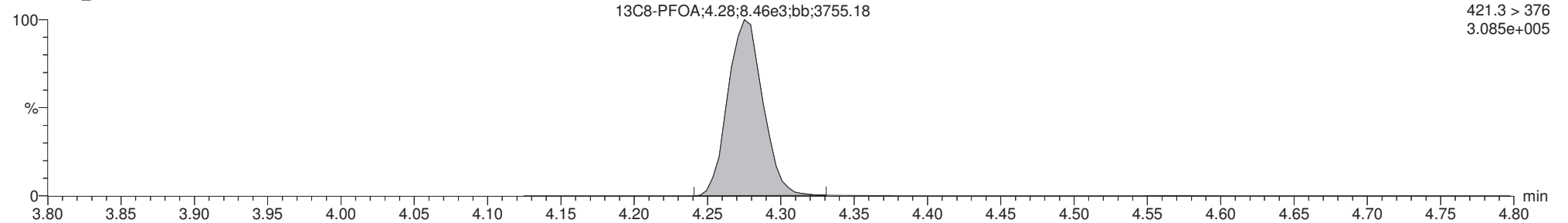
**13C2-PFOA**

170301G1\_23



**13C8-PFOA**

170301G1\_23



Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-23.qld

Last Altered: Thursday, March 02, 2017 10:49:40 Pacific Standard Time

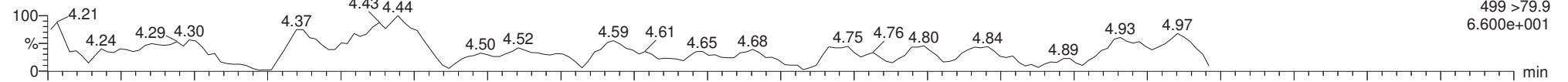
Printed: Thursday, March 02, 2017 10:50:29 Pacific Standard Time

ID: 1700261-06 WI-CV-EB03-022217 0.125, Description: WI-CV-EB03-022217, Name: 170301G1\_23, Date: 01-Mar-2017, Time: 19:33:12, Instrument: , Lab: , User:

**Total PFOS**

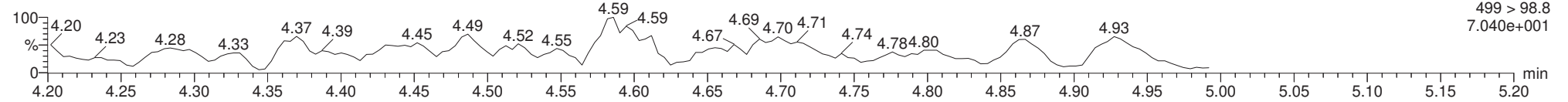
170301G1\_23

F5:MRM of 12 channels,ES-  
499 >79.9  
6.600e+001



170301G1\_23

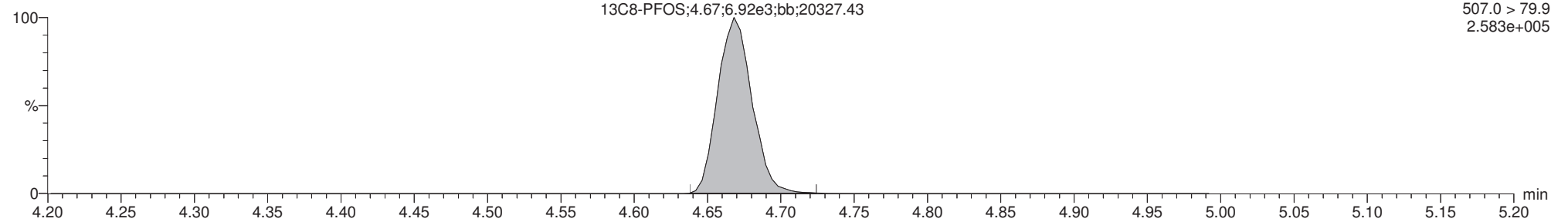
F5:MRM of 12 channels,ES-  
499 > 98.8  
7.040e+001



**13C8-PFOS**

170301G1\_23

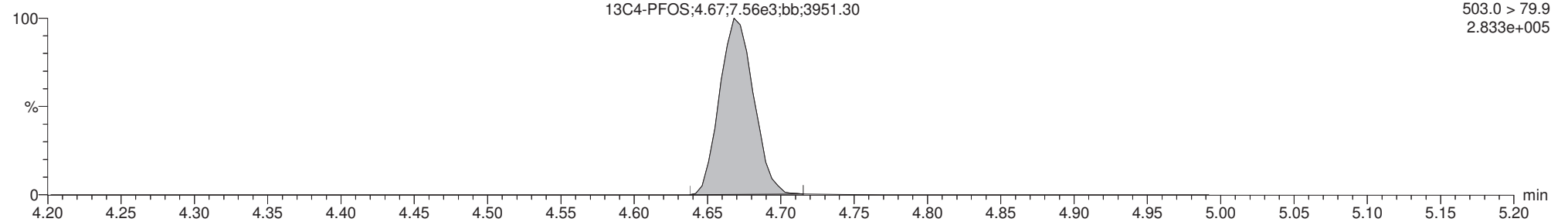
F5:MRM of 12 channels,ES-  
507.0 > 79.9  
2.583e+005



**13C4-PFOS**

170301G1\_23

F5:MRM of 12 channels,ES-  
503.0 > 79.9  
2.833e+005



Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-24.qld

Last Altered: Thursday, March 02, 2017 10:51:56 Pacific Standard Time

Printed: Thursday, March 02, 2017 10:52:30 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS\_6\_2trans\_LINEAR.mdb 28 Feb 2017 16:04:45

Calibration: U:\G1.pro\CurveDB\C18\_VAL-PFC\_Q1\_3-01-17\_L6\_2Trans.cdb 02 Mar 2017 08:18:08

ID: 1700261-07 WI-CV-GW06M-0217 0.125, Description: WI-CV-GW06M-0217, Name: 170301G1\_24, Date: 01-Mar-2017, Time: 19:45:41

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7		6.383e3		0.128			
2	4 PFOA	413 > 368.7	2.158e2	2.549e4		0.128	4.28	0.000485	
3	6 PFOS	499 >79.9		7.962e3		0.128			
4	7 13C3-PFBS	302.0 > 98.8	6.383e3	1.345e4	0.442	0.128	2.98	105	107
5	10 13C2-PFOA	414.9 > 369.7	2.549e4	8.684e3	2.782	0.128	4.28	103	105
6	12 13C8-PFOS	507.0 > 79.9	7.962e3	7.670e3	0.941	0.128	4.67	108	110
7	14 13C3-PFHxS	401.9 > 79.9	1.345e4	1.345e4	1.000	0.128	3.99	97.6	100
8	15 13C8-PFOA	421.3 > 376	8.684e3	8.684e3	1.000	0.128	4.28	97.6	100
9	17 13C4-PFOS	503.0 > 79.9	7.670e3	7.670e3	1.000	0.128	4.67	97.6	100

Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-24.qld

Last Altered: Thursday, March 02, 2017 10:51:56 Pacific Standard Time

Printed: Thursday, March 02, 2017 10:52:55 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS\_6\_2trans\_LINEAR.mdb 28 Feb 2017 16:04:45

Calibration: U:\G1.pro\CurveDB\C18\_VAL-PFC\_Q1\_3-01-17\_L6\_2Trans.cdb 02 Mar 2017 08:18:08

ID: 1700261-07 WI-CV-GW06M-0217 0.125, Description: WI-CV-GW06M-0217, Name: 170301G1\_24, Date: 01-Mar-2017, Time: 19:45:41

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	18 Total PFBS	299 > 79.7		5.733e3		0.128			
2	20 Total PFOA	413 > 368.7		2.549e4		0.128		0.000485	
3	21 Total PFOS	499 > 79.9		7.962e3		0.128			

Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-24.qld

Last Altered: Thursday, March 02, 2017 10:51:56 Pacific Standard Time

Printed: Thursday, March 02, 2017 10:52:30 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS\_6\_2trans\_LINEAR.mdb 28 Feb 2017 16:04:45

Calibration: U:\G1.pro\CurveDB\C18\_VAL-PFC\_Q1\_3-01-17\_L6\_2Trans.cdb 02 Mar 2017 08:18:08

ID: 1700261-07 WI-CV-GW06M-0217 0.125, Description: WI-CV-GW06M-0217, Name: 170301G1\_24, Date: 01-Mar-2017, Time: 19:45:41

**Total PFBS**

#	Name	Trace	RT	Area	IS Area	Conc.
1						

**Total PFHxS**

#	Name	Trace	RT	Area	IS Area	Conc.
1	19 Total PFHxS	398.9 > 79.6	3.99	39.677	5733.339	

**Total PFOA**

#	Name	Trace	RT	Area	IS Area	Conc.
1	4 PFOA	413 > 368.7	4.28	215.820	25485.508	0.0

**Total PFOS**

#	Name	Trace	RT	Area	IS Area	Conc.
1						

Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-24.qld

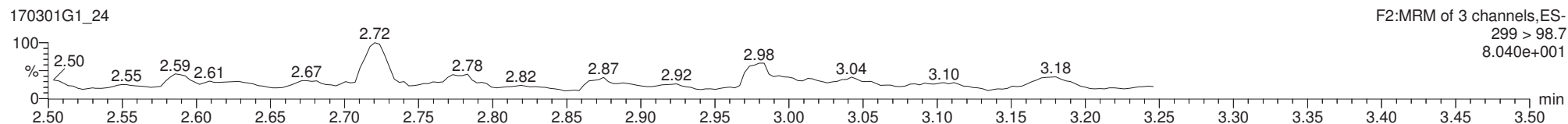
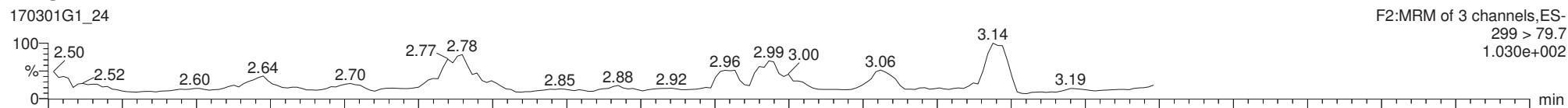
Last Altered: Thursday, March 02, 2017 10:51:56 Pacific Standard Time

Printed: Thursday, March 02, 2017 10:52:30 Pacific Standard Time

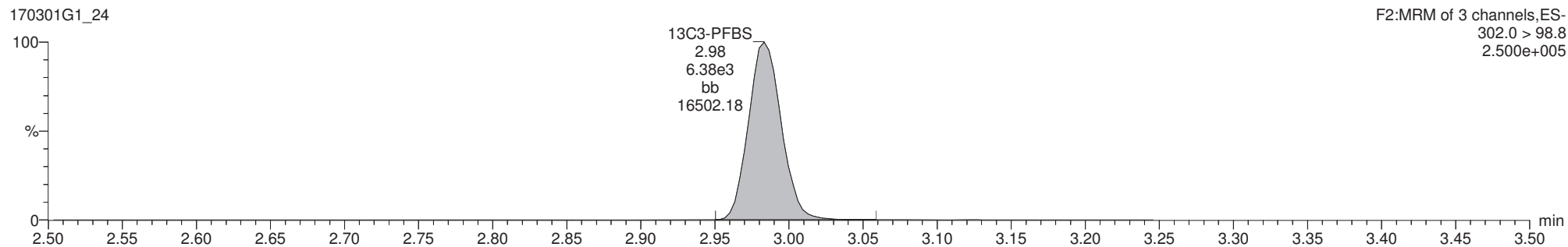
Method: U:\G1.pro\MethDB\PFAS\_6\_2trans\_LINEAR.mdb 28 Feb 2017 16:04:45  
Calibration: U:\G1.pro\CurveDB\C18\_VAL-PFC\_Q1\_3-01-17\_L6\_2Trans.cdb 02 Mar 2017 08:18:08

ID: 1700261-07 WI-CV-GW06M-0217 0.125, Description: WI-CV-GW06M-0217, Name: 170301G1\_24, Date: 01-Mar-2017, Time: 19:45:41, Instrument: , Lab: , User:

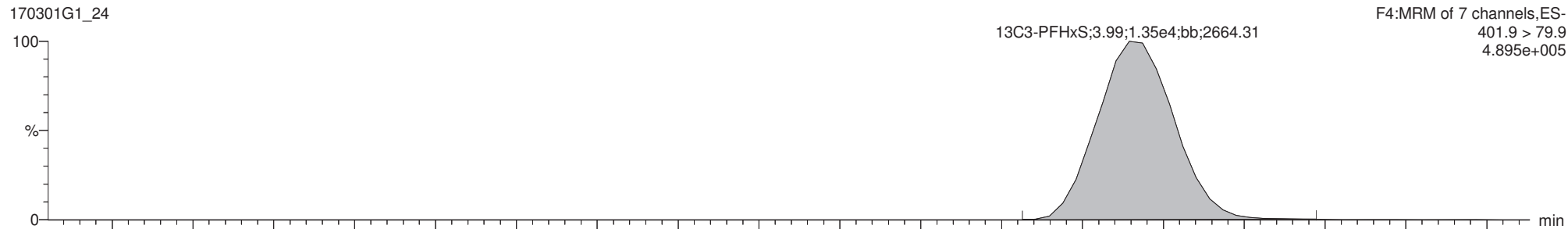
**PFBS**



**13C3-PFBS**



**13C3-PFHxS**



Reviewed: CT 03/02/17

ES 3/2/17



Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-24.qld

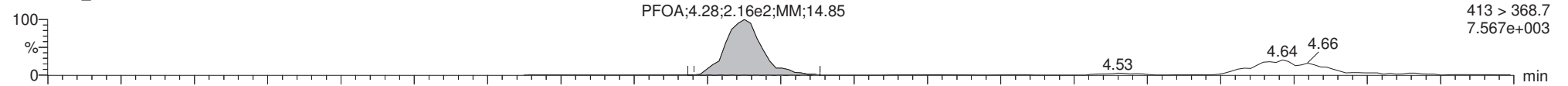
Last Altered: Thursday, March 02, 2017 10:51:56 Pacific Standard Time

Printed: Thursday, March 02, 2017 10:52:30 Pacific Standard Time

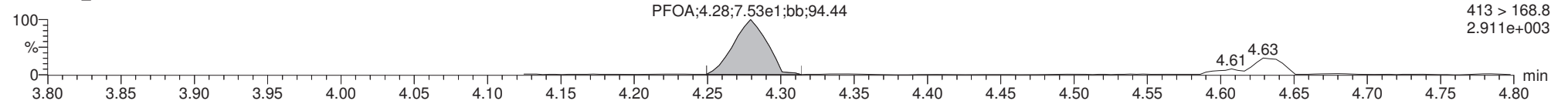
ID: 1700261-07 WI-CV-GW06M-0217 0.125, Description: WI-CV-GW06M-0217, Name: 170301G1\_24, Date: 01-Mar-2017, Time: 19:45:41, Instrument: , Lab: , User:

**Total PFOA**

170301G1\_24

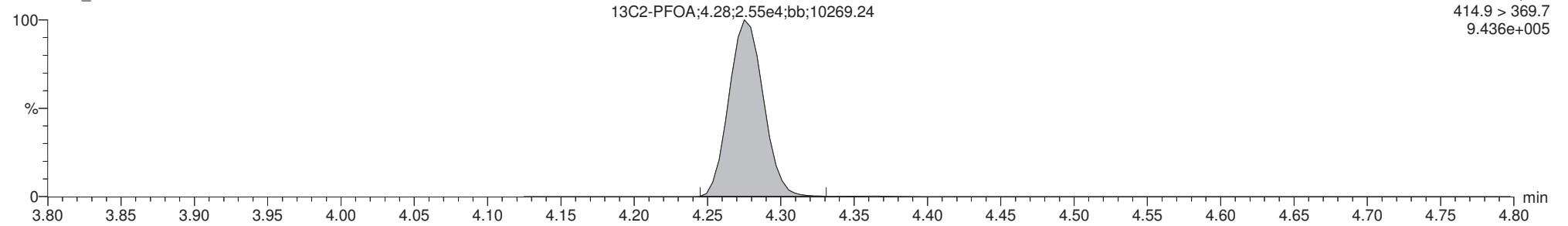


170301G1\_24



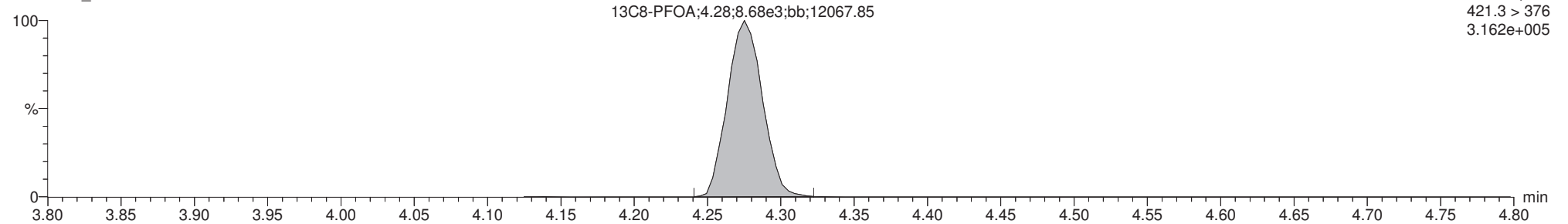
**13C2-PFOA**

170301G1\_24



**13C8-PFOA**

170301G1\_24



Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-24.qld

Last Altered: Thursday, March 02, 2017 10:51:56 Pacific Standard Time

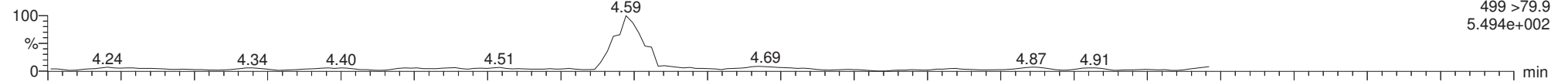
Printed: Thursday, March 02, 2017 10:52:30 Pacific Standard Time

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**Total PFOS**

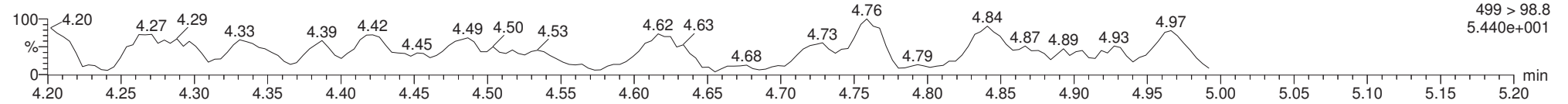
170301G1\_24

F5:MRM of 12 channels,ES-  
499 >79.9  
5.494e+002



170301G1\_24

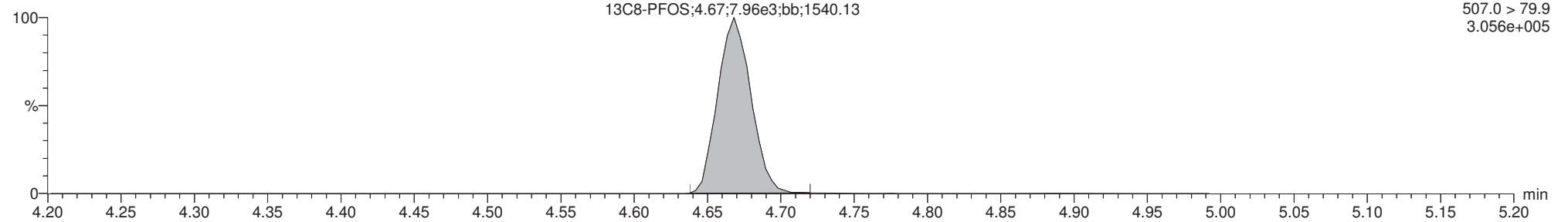
F5:MRM of 12 channels,ES-  
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5.440e+001



**13C8-PFOS**

170301G1\_24

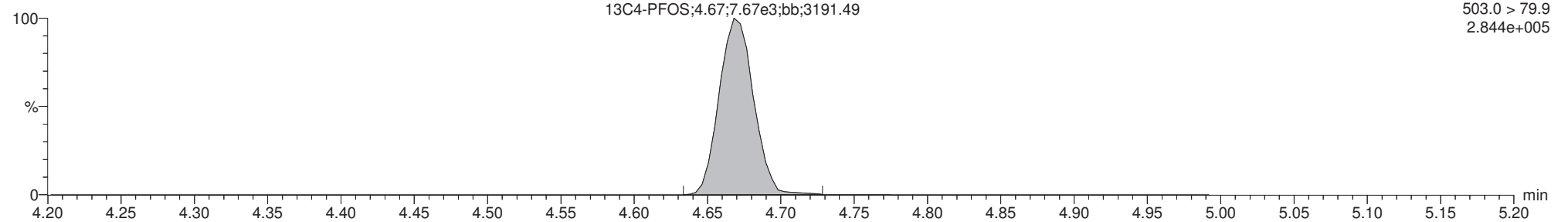
F5:MRM of 12 channels,ES-  
507.0 > 79.9  
3.056e+005



**13C4-PFOS**

170301G1\_24

F5:MRM of 12 channels,ES-  
503.0 > 79.9  
2.844e+005



Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-26.qld

Last Altered: Thursday, March 02, 2017 11:50:32 Pacific Standard Time

Printed: Thursday, March 02, 2017 11:51:02 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS\_6\_2trans\_LINEAR.mdb 02 Mar 2017 11:26:53

Calibration: U:\G1.pro\CurveDB\C18\_VAL-PFC\_Q1\_3-01-17\_L6\_2Trans.cdb 02 Mar 2017 08:18:08

ID: B7B0118-MS1 Matrix Spike 0.125, Description: Matrix Spike, Name: 170301G1\_26, Date: 01-Mar-2017, Time: 20:10:56

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7	1.271e4	6.182e3		0.129	2.99	92.5	
2	4 PFOA	413 > 368.7	2.089e4	2.849e4		0.129	4.28	77.1	
3	6 PFOS	499 >79.9	3.097e3	8.506e3		0.129	4.67	67.8	
4	7 13C3-PFBS	302.0 > 98.8	6.182e3	1.472e4	0.442	0.129	2.98	92.1	95.0
5	10 13C2-PFOA	414.9 > 369.7	2.849e4	9.257e3	2.782	0.129	4.28	107	111
6	12 13C8-PFOS	507.0 > 79.9	8.506e3	7.956e3	0.941	0.129	4.67	110	114
7	14 13C3-PFHxS	401.9 > 79.9	1.472e4	1.472e4	1.000	0.129	3.99	96.9	100
8	15 13C8-PFOA	421.3 > 376	9.257e3	9.257e3	1.000	0.129	4.28	96.9	100
9	17 13C4-PFOS	503.0 > 79.9	7.956e3	7.956e3	1.000	0.129	4.67	96.9	100

Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-26.qld

Last Altered: Thursday, March 02, 2017 11:50:32 Pacific Standard Time

Printed: Thursday, March 02, 2017 11:51:21 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS\_6\_2trans\_LINEAR.mdb 02 Mar 2017 11:26:53

Calibration: U:\G1.pro\CurveDB\C18\_VAL-PFC\_Q1\_3-01-17\_L6\_2Trans.cdb 02 Mar 2017 08:18:08

ID: B7B0118-MS1 Matrix Spike 0.125, Description: Matrix Spike, Name: 170301G1\_26, Date: 01-Mar-2017, Time: 20:10:56

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	18 Total PFBS	299 > 79.7		5.983e3		0.129		92.5	
2	20 Total PFOA	413 > 368.7		2.849e4		0.129		77.1	
3	21 Total PFOS	499 > 79.9		8.506e3		0.129		67.8	

Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-26.qld

Last Altered: Thursday, March 02, 2017 11:50:32 Pacific Standard Time

Printed: Thursday, March 02, 2017 11:51:02 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS\_6\_2trans\_LINEAR.mdb 02 Mar 2017 11:26:53

Calibration: U:\G1.pro\CurveDB\C18\_VAL-PFC\_Q1\_3-01-17\_L6\_2Trans.cdb 02 Mar 2017 08:18:08

ID: B7B0118-MS1 Matrix Spike 0.125, Description: Matrix Spike, Name: 170301G1\_26, Date: 01-Mar-2017, Time: 20:10:56

**Total PFBS**

	# Name	Trace	RT	Area	IS Area	Conc.
1	1 PFBS	299 > 79.7	2.99	12710.745	6181.907	92.5

**Total PFHxS**

	# Name	Trace	RT	Area	IS Area	Conc.
1	19 Total PFHxS	398.9 > 79.6	3.89	1495.427	5982.794	13.2
2	19 Total PFHxS	398.9 > 79.6	3.87	527.517	5982.794	4.2
3	3 PFHxS	398.9 > 79.6	3.99	7733.690	5982.794	70.9

**Total PFOA**

	# Name	Trace	RT	Area	IS Area	Conc.
1	4 PFOA	413 > 368.7	4.28	20894.906	28486.309	77.1

**Total PFOS**

	# Name	Trace	RT	Area	IS Area	Conc.
1	6 PFOS	499 > 79.9	4.67	3097.472	8505.991	67.8

Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-26.qld

Last Altered: Thursday, March 02, 2017 11:50:32 Pacific Standard Time

Printed: Thursday, March 02, 2017 11:51:02 Pacific Standard Time

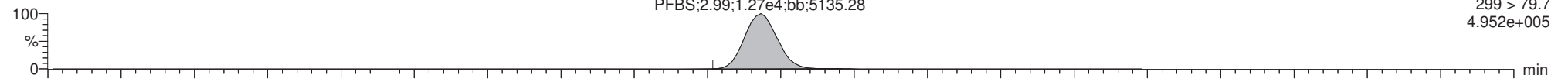
Method: U:\G1.pro\MethDB\PFAS\_6\_2trans\_LINEAR.mdb 02 Mar 2017 11:26:53

Calibration: U:\G1.pro\CurveDB\C18\_VAL-PFC\_Q1\_3-01-17\_L6\_2Trans.cdb 02 Mar 2017 08:18:08

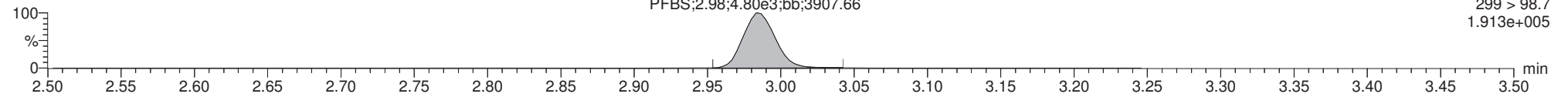
ID: B7B0118-MS1 Matrix Spike 0.125, Description: Matrix Spike, Name: 170301G1\_26, Date: 01-Mar-2017, Time: 20:10:56, Instrument: , Lab: , User:

**PFBS**

170301G1\_26

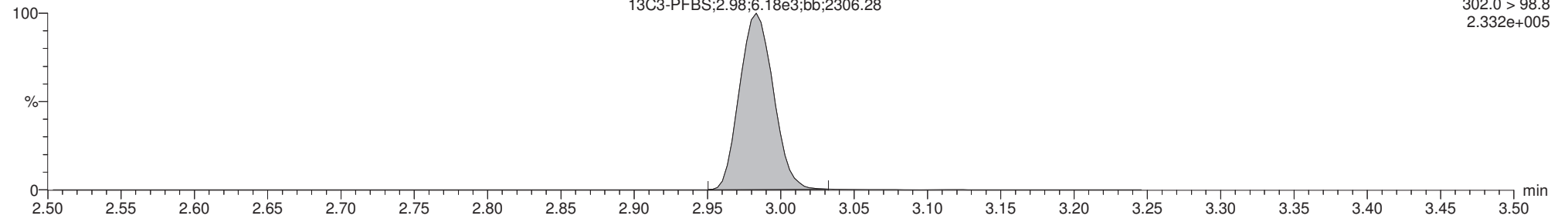


170301G1\_26



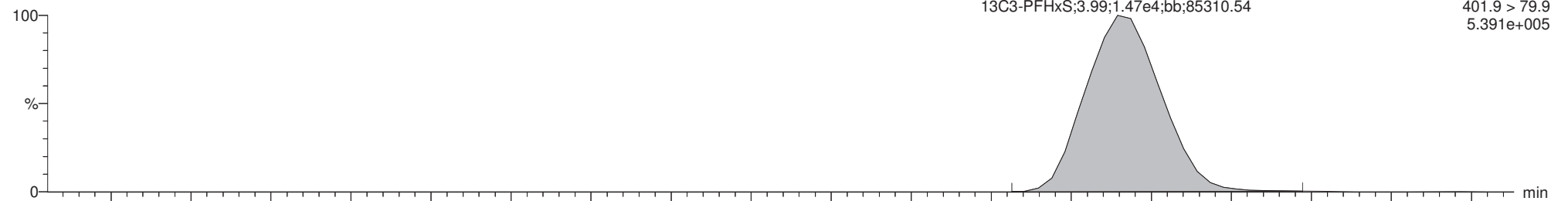
**13C3-PFBS**

170301G1\_26



**13C3-PFHxS**

170301G1\_26



Reviewed: CT 03/02/17

ES 3/2/17

Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-26.qld

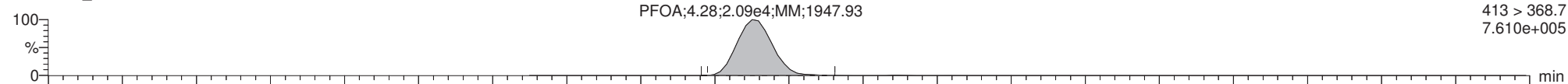
Last Altered: Thursday, March 02, 2017 11:50:32 Pacific Standard Time

Printed: Thursday, March 02, 2017 11:51:02 Pacific Standard Time

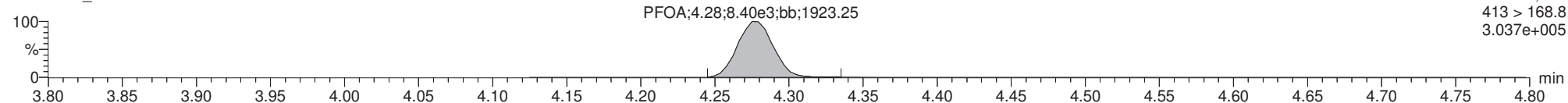
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**Total PFOA**

170301G1\_26

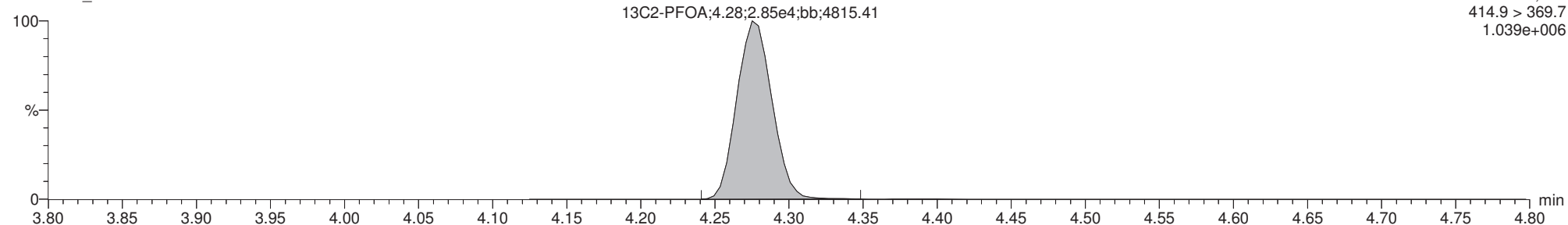


170301G1\_26



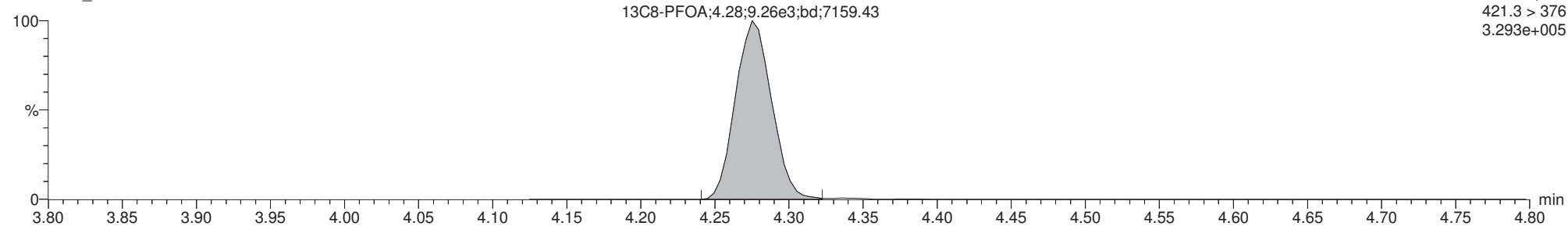
**13C2-PFOA**

170301G1\_26



**13C8-PFOA**

170301G1\_26



Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-26.qld

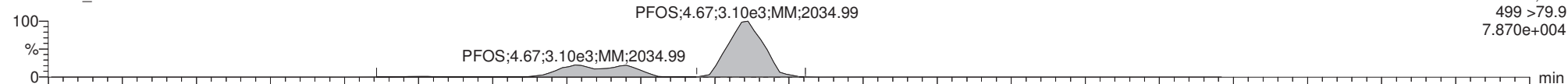
Last Altered: Thursday, March 02, 2017 11:50:32 Pacific Standard Time

Printed: Thursday, March 02, 2017 11:51:02 Pacific Standard Time

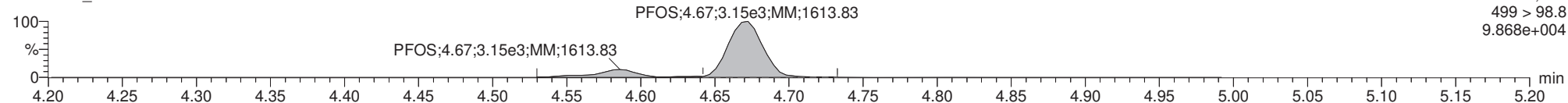
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**Total PFOS**

170301G1\_26

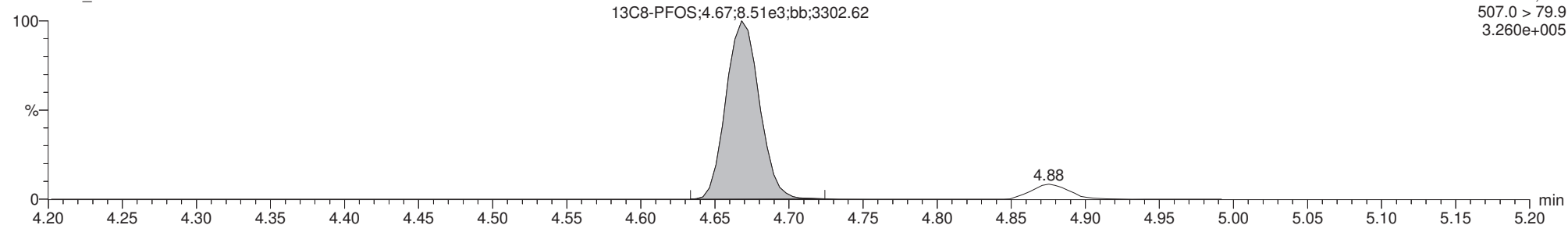


170301G1\_26



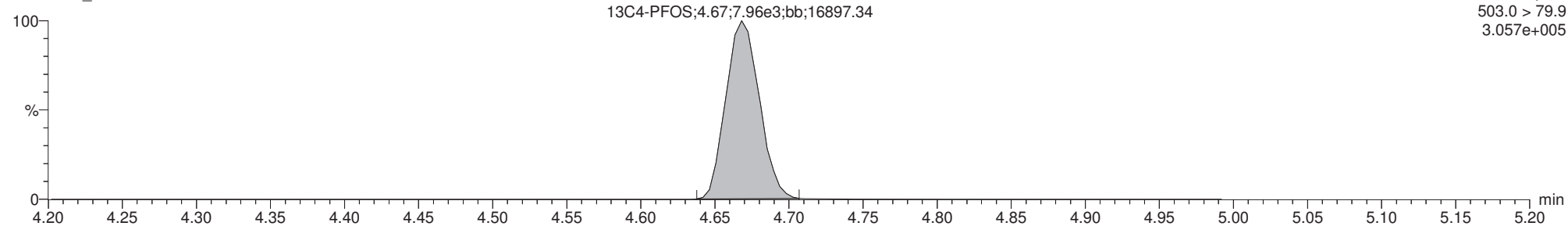
**13C8-PFOS**

170301G1\_26



**13C4-PFOS**

170301G1\_26





Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-25.qld

Last Altered: Thursday, March 02, 2017 11:47:34 Pacific Standard Time

Printed: Thursday, March 02, 2017 11:48:18 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS\_6\_2trans\_LINEAR.mdb 02 Mar 2017 11:26:53

Calibration: U:\G1.pro\CurveDB\C18\_VAL-PFC\_Q1\_3-01-17\_L6\_2Trans.cdb 02 Mar 2017 08:18:08

ID: B7B0118-MSD1 Matrix Spike Dup 0.125, Description: Matrix Spike Dup, Name: 170301G1\_25, Date: 01-Mar-2017, Time: 19:58:14

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7	1.202e4	6.181e3		0.128	2.99	88.0	
2	4 PFOA	413 > 368.7	1.959e4	2.529e4		0.128	4.28	81.9	
3	6 PFOS	499 >79.9	3.289e3	7.710e3		0.128	4.67	79.8	
4	7 13C3-PFBS	302.0 > 98.8	6.181e3	1.399e4	0.442	0.128	2.98	97.4	99.9
5	10 13C2-PFOA	414.9 > 369.7	2.529e4	8.795e3	2.782	0.128	4.28	101	103
6	12 13C8-PFOS	507.0 > 79.9	7.710e3	7.885e3	0.941	0.128	4.67	101	104
7	14 13C3-PFHxS	401.9 > 79.9	1.399e4	1.399e4	1.000	0.128	3.99	97.5	100
8	15 13C8-PFOA	421.3 > 376	8.795e3	8.795e3	1.000	0.128	4.28	97.5	100
9	17 13C4-PFOS	503.0 > 79.9	7.885e3	7.885e3	1.000	0.128	4.67	97.5	100

Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-25.qld

Last Altered: Thursday, March 02, 2017 11:47:34 Pacific Standard Time

Printed: Thursday, March 02, 2017 11:48:37 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS\_6\_2trans\_LINEAR.mdb 02 Mar 2017 11:26:53

Calibration: U:\G1.pro\CurveDB\C18\_VAL-PFC\_Q1\_3-01-17\_L6\_2Trans.cdb 02 Mar 2017 08:18:08

ID: B7B0118-MSD1 Matrix Spike Dup 0.125, Description: Matrix Spike Dup, Name: 170301G1\_25, Date: 01-Mar-2017, Time: 19:58:14

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	18 Total PFBS	299 > 79.7		5.758e3		0.128		88.1	
2	20 Total PFOA	413 > 368.7		2.529e4		0.128		81.9	
3	21 Total PFOS	499 > 79.9		7.710e3		0.128		79.8	

Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-25.qld

Last Altered: Thursday, March 02, 2017 11:47:34 Pacific Standard Time

Printed: Thursday, March 02, 2017 11:48:18 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS\_6\_2trans\_LINEAR.mdb 02 Mar 2017 11:26:53

Calibration: U:\G1.pro\CurveDB\C18\_VAL-PFC\_Q1\_3-01-17\_L6\_2Trans.cdb 02 Mar 2017 08:18:08

ID: B7B0118-MSD1 Matrix Spike Dup 0.125, Description: Matrix Spike Dup, Name: 170301G1\_25, Date: 01-Mar-2017, Time: 19:58:14

**Total PFBS**

	# Name	Trace	RT	Area	IS Area	Conc.
1	18 Total PFBS	299 > 79.7	3.17	6.063	5758.455	0.1
2	1 PFBS	299 > 79.7	2.99	12021.251	6181.496	88.0

**Total PFHxS**

	# Name	Trace	RT	Area	IS Area	Conc.
1	19 Total PFHxS	398.9 > 79.6	4.06	6.075	5758.455	
2	3 PFHxS	398.9 > 79.6	3.99	7507.153	5758.455	71.9
3	19 Total PFHxS	398.9 > 79.6	3.89	1527.172	5758.455	14.2
4	19 Total PFHxS	398.9 > 79.6	3.87	450.059	5758.455	3.7
5	19 Total PFHxS	398.9 > 79.6	3.78	10.786	5758.455	

**Total PFOA**

	# Name	Trace	RT	Area	IS Area	Conc.
1	4 PFOA	413 > 368.7	4.28	19585.127	25287.678	81.9

**Total PFOS**

	# Name	Trace	RT	Area	IS Area	Conc.
1	6 PFOS	499 > 79.9	4.67	3288.741	7709.784	79.8

Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-25.qld

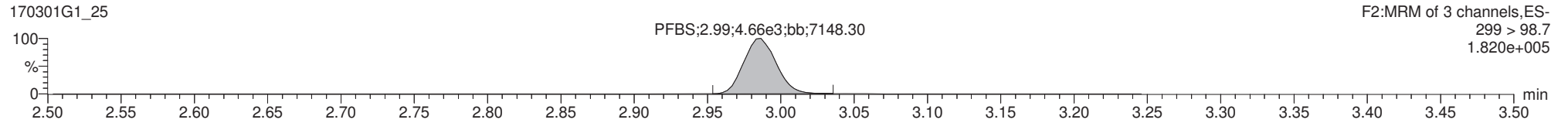
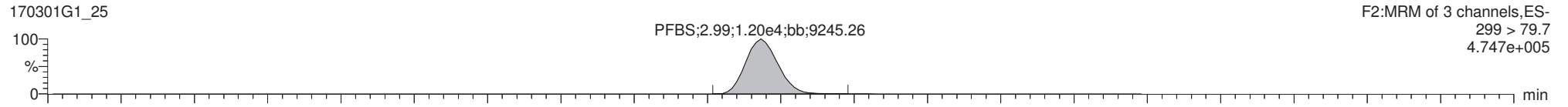
Last Altered: Thursday, March 02, 2017 11:47:34 Pacific Standard Time

Printed: Thursday, March 02, 2017 11:48:18 Pacific Standard Time

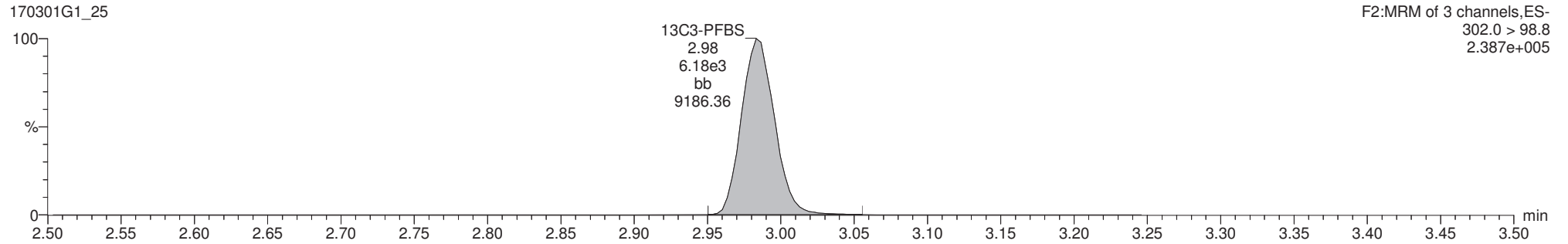
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Calibration: U:\G1.pro\CurveDB\C18\_VAL-PFC\_Q1\_3-01-17\_L6\_2Trans.cdb 02 Mar 2017 08:18:08

ID: B7B0118-MSD1 Matrix Spike Dup 0.125, Description: Matrix Spike Dup, Name: 170301G1\_25, Date: 01-Mar-2017, Time: 19:58:14, Instrument: , Lab: , User:

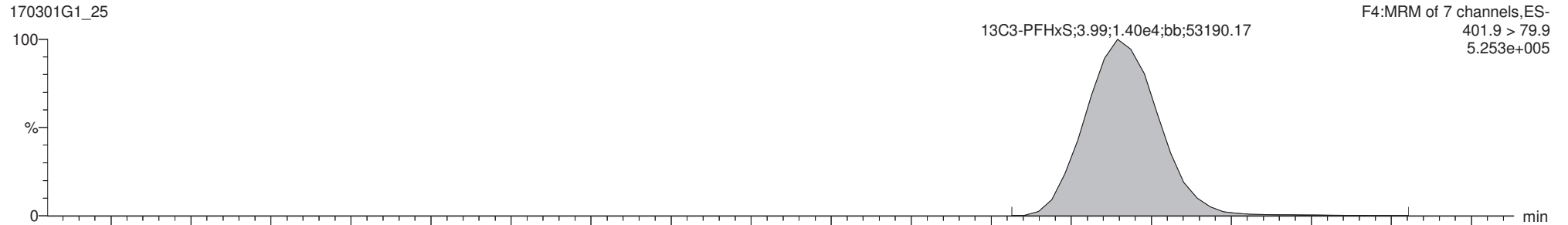
**PFBS**



**13C3-PFBS**



**13C3-PFHxS**



Reviewed: CT 03/02/17

ES 3/2/17

Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-25.qld

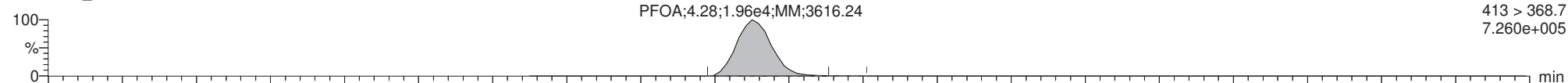
Last Altered: Thursday, March 02, 2017 11:47:34 Pacific Standard Time

Printed: Thursday, March 02, 2017 11:48:18 Pacific Standard Time

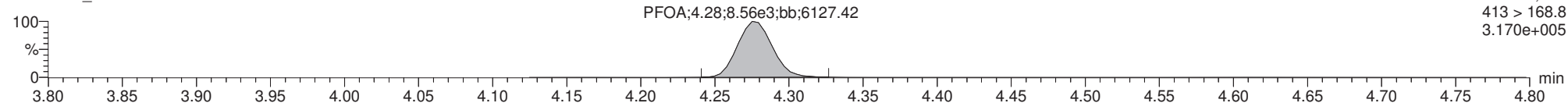
ID: B7B0118-MSD1 Matrix Spike Dup 0.125, Description: Matrix Spike Dup, Name: 170301G1\_25, Date: 01-Mar-2017, Time: 19:58:14, Instrument: , Lab: , User:

**Total PFOA**

170301G1\_25

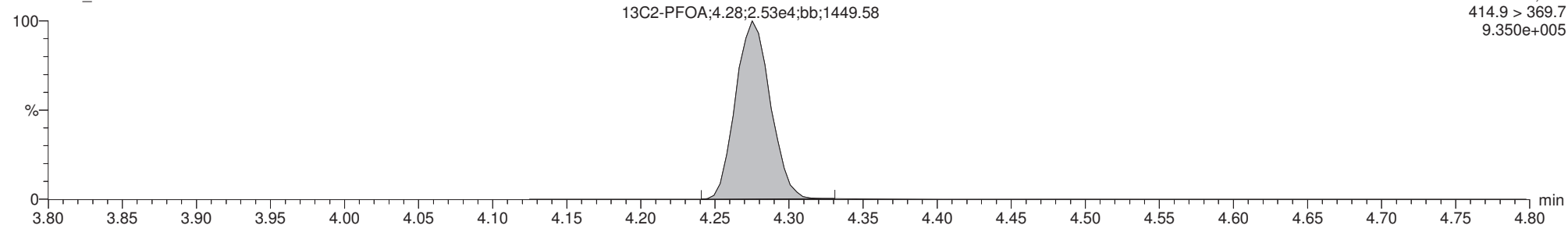


170301G1\_25



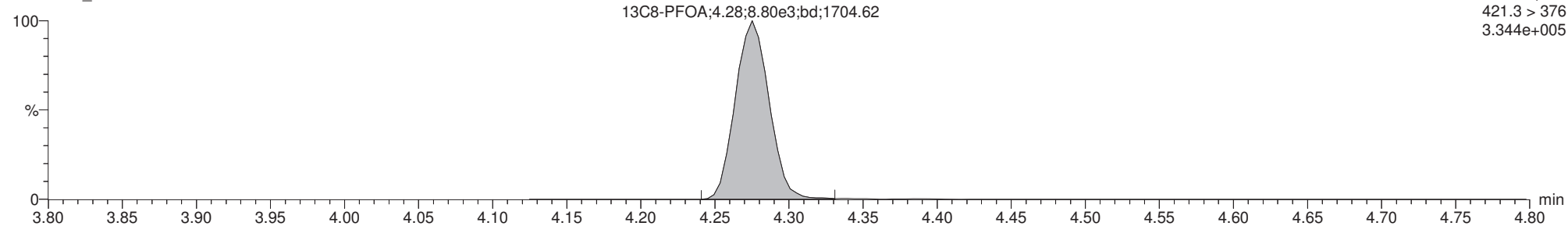
**13C2-PFOA**

170301G1\_25



**13C8-PFOA**

170301G1\_25



Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-25.qld

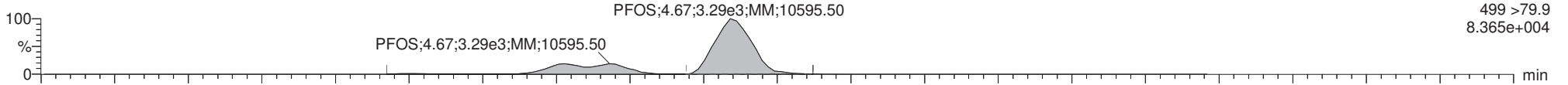
Last Altered: Thursday, March 02, 2017 11:47:34 Pacific Standard Time

Printed: Thursday, March 02, 2017 11:48:18 Pacific Standard Time

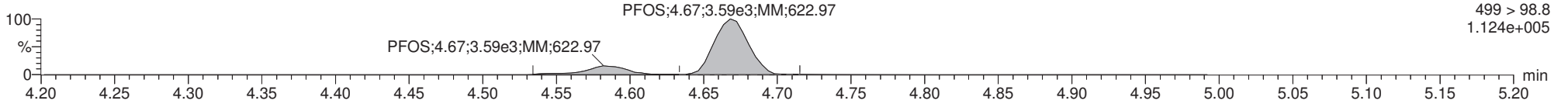
ID: B7B0118-MSD1 Matrix Spike Dup 0.125, Description: Matrix Spike Dup, Name: 170301G1\_25, Date: 01-Mar-2017, Time: 19:58:14, Instrument: , Lab: , User:

**Total PFOS**

170301G1\_25

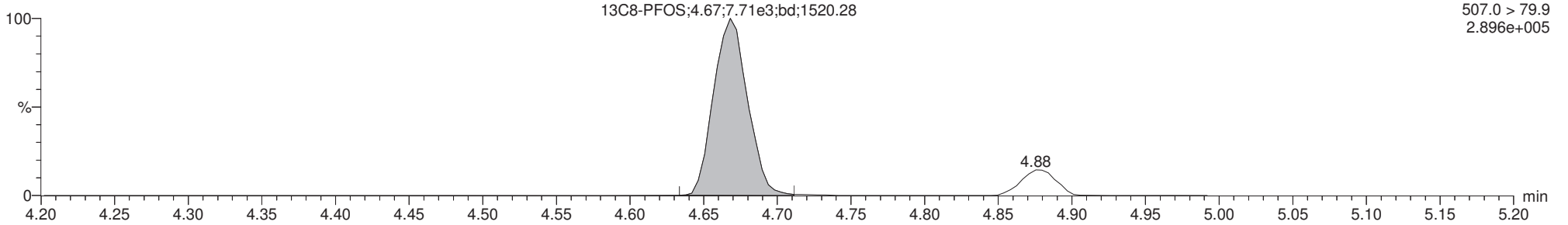


170301G1\_25



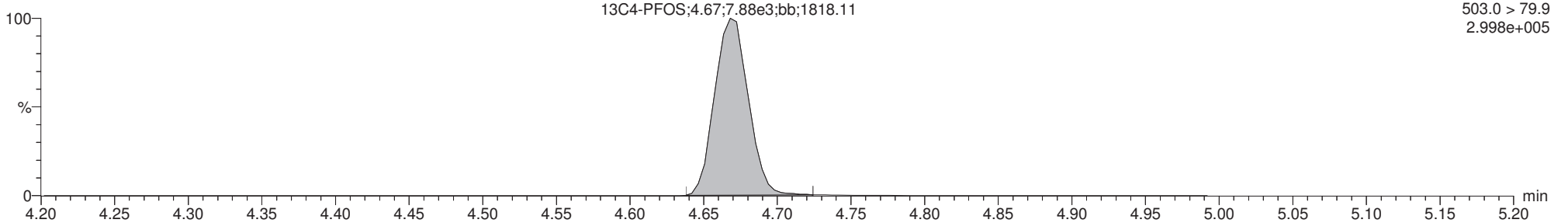
**13C8-PFOS**

170301G1\_25



**13C4-PFOS**

170301G1\_25



Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-27.qld

Last Altered: Thursday, March 02, 2017 11:06:01 Pacific Standard Time

Printed: Thursday, March 02, 2017 11:06:44 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS\_6\_2trans\_LINEAR.mdb 28 Feb 2017 16:04:45

Calibration: U:\G1.pro\CurveDB\C18\_VAL-PFC\_Q1\_3-01-17\_L6\_2Trans.cdb 02 Mar 2017 08:18:08

ID: 1700261-08 WI-CV-EB02-022117 0.125, Description: WI-CV-EB02-022117, Name: 170301G1\_27, Date: 01-Mar-2017, Time: 20:23:23

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7		7.183e3		0.124			
2	4 PFOA	413 > 368.7	1.684e2	3.449e4		0.124	4.28		
3	6 PFOS	499 >79.9		1.388e4		0.124			
4	7 13C3-PFBS	302.0 > 98.8	7.183e3	1.775e4	0.442	0.124	2.98	92.3	91.5
5	10 13C2-PFOA	414.9 > 369.7	3.449e4	1.281e4	2.782	0.124	4.28	97.7	96.8
6	12 13C8-PFOS	507.0 > 79.9	1.388e4	1.545e4	0.941	0.124	4.67	96.3	95.4
7	14 13C3-PFHxS	401.9 > 79.9	1.775e4	1.775e4	1.000	0.124	3.99	101	100
8	15 13C8-PFOA	421.3 > 376	1.281e4	1.281e4	1.000	0.124	4.28	101	100
9	17 13C4-PFOS	503.0 > 79.9	1.545e4	1.545e4	1.000	0.124	4.67	101	100

Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-27.qld

Last Altered: Thursday, March 02, 2017 11:06:01 Pacific Standard Time

Printed: Thursday, March 02, 2017 11:07:12 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS\_6\_2trans\_LINEAR.mdb 28 Feb 2017 16:04:45

Calibration: U:\G1.pro\CurveDB\C18\_VAL-PFC\_Q1\_3-01-17\_L6\_2Trans.cdb 02 Mar 2017 08:18:08

ID: 1700261-08 WI-CV-EB02-022117 0.125, Description: WI-CV-EB02-022117, Name: 170301G1\_27, Date: 01-Mar-2017, Time: 20:23:23

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	18 Total PFBS	299 > 79.7		7.227e3		0.124			
2	20 Total PFOA	413 > 368.7		3.449e4		0.124			
3	21 Total PFOS	499 > 79.9		1.388e4		0.124			



Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-27.qld

Last Altered: Thursday, March 02, 2017 11:06:01 Pacific Standard Time

Printed: Thursday, March 02, 2017 11:06:44 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS\_6\_2trans\_LINEAR.mdb 28 Feb 2017 16:04:45

Calibration: U:\G1.pro\CurveDB\C18\_VAL-PFC\_Q1\_3-01-17\_L6\_2Trans.cdb 02 Mar 2017 08:18:08

ID: 1700261-08 WI-CV-EB02-022117 0.125, Description: WI-CV-EB02-022117, Name: 170301G1\_27, Date: 01-Mar-2017, Time: 20:23:23

**Total PFBS**

#	Name	Trace	RT	Area	IS Area	Conc.
1						

**Total PFHxS**

#	Name	Trace	RT	Area	IS Area	Conc.
1	3 PFHxS	398.9 > 79.6	4.00	25.195	7226.800	

**Total PFOA**

#	Name	Trace	RT	Area	IS Area	Conc.
1	4 PFOA	413 > 368.7	4.28	168.421	34485.633	

**Total PFOS**

#	Name	Trace	RT	Area	IS Area	Conc.
1						

Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-27.qld

Last Altered: Thursday, March 02, 2017 11:06:01 Pacific Standard Time

Printed: Thursday, March 02, 2017 11:06:44 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS\_6\_2trans\_LINEAR.mdb 28 Feb 2017 16:04:45

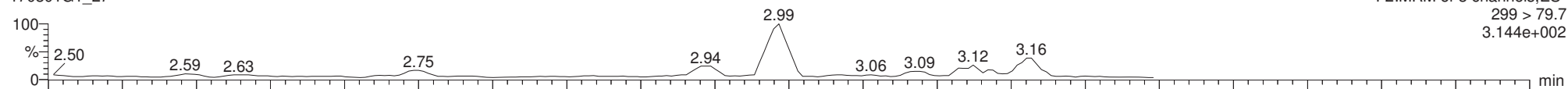
Calibration: U:\G1.pro\CurveDB\C18\_VAL-PFC\_Q1\_3-01-17\_L6\_2Trans.cdb 02 Mar 2017 08:18:08

ID: 1700261-08 WI-CV-EB02-022117 0.125, Description: WI-CV-EB02-022117, Name: 170301G1\_27, Date: 01-Mar-2017, Time: 20:23:23, Instrument: , Lab: , User:

**PFBS**

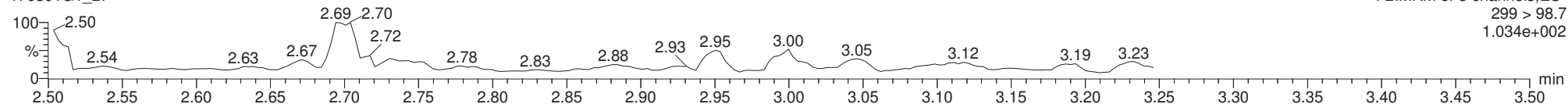
170301G1\_27

F2:MRM of 3 channels,ES-  
299 > 79.7  
3.144e+002



170301G1\_27

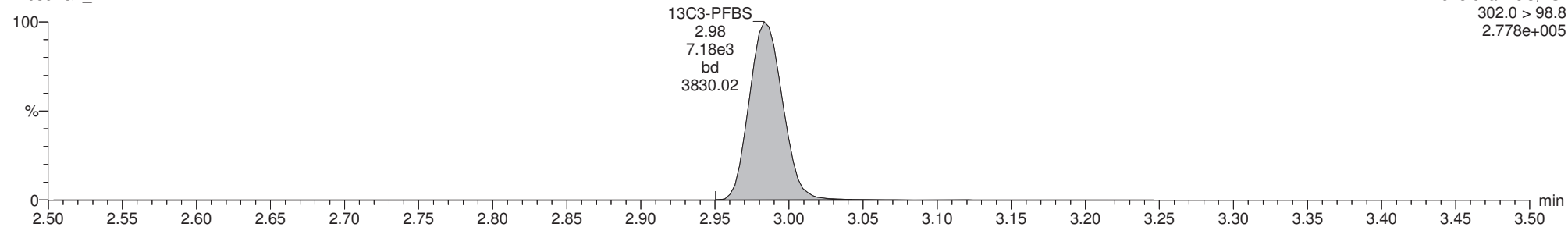
F2:MRM of 3 channels,ES-  
299 > 98.7  
1.034e+002



**13C3-PFBS**

170301G1\_27

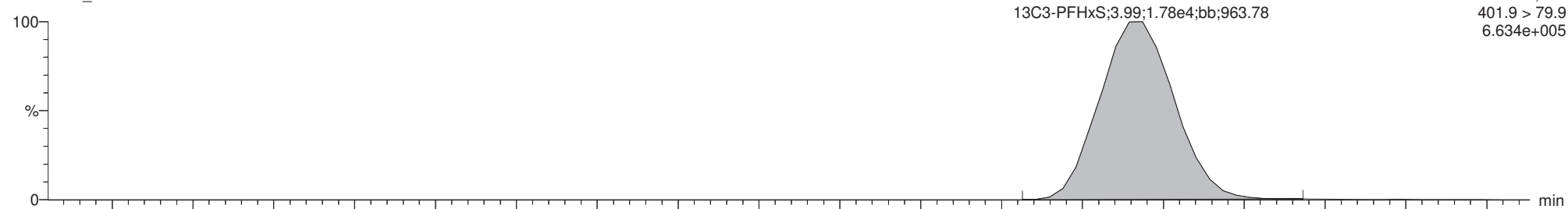
F2:MRM of 3 channels,ES-  
302.0 > 98.8  
2.778e+005



**13C3-PFHxS**

170301G1\_27

F4:MRM of 7 channels,ES-  
401.9 > 79.9  
6.634e+005



Reviewed: CT 03/02/17

ES 3/2/17

Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-27.qld

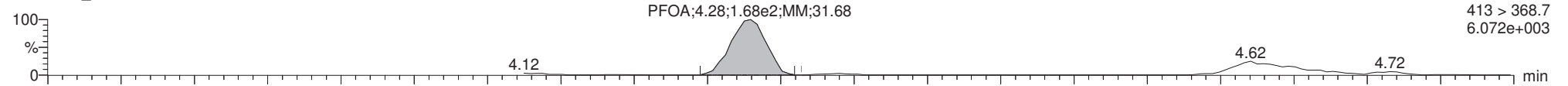
Last Altered: Thursday, March 02, 2017 11:06:01 Pacific Standard Time

Printed: Thursday, March 02, 2017 11:06:44 Pacific Standard Time

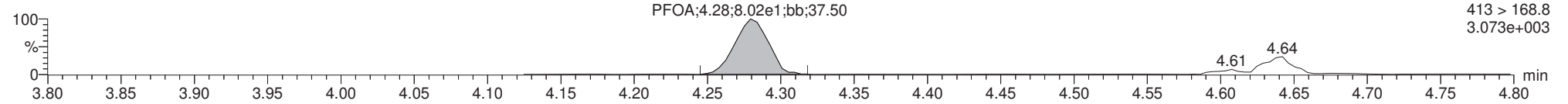
ID: 1700261-08 WI-CV-EB02-022117 0.125, Description: WI-CV-EB02-022117, Name: 170301G1\_27, Date: 01-Mar-2017, Time: 20:23:23, Instrument: , Lab: , User:

**Total PFOA**

170301G1\_27

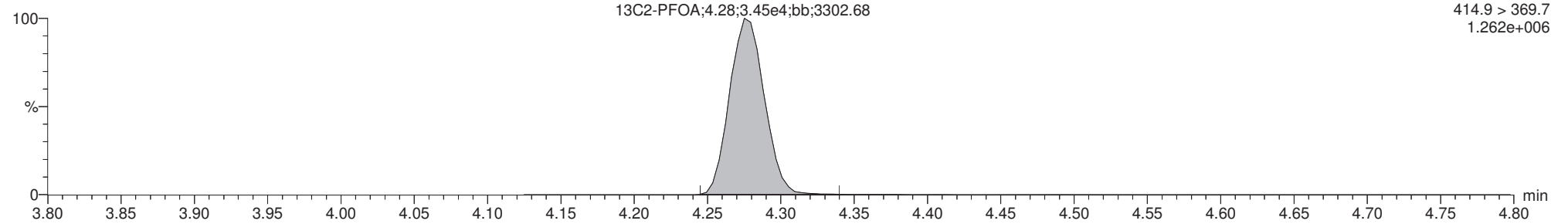


170301G1\_27



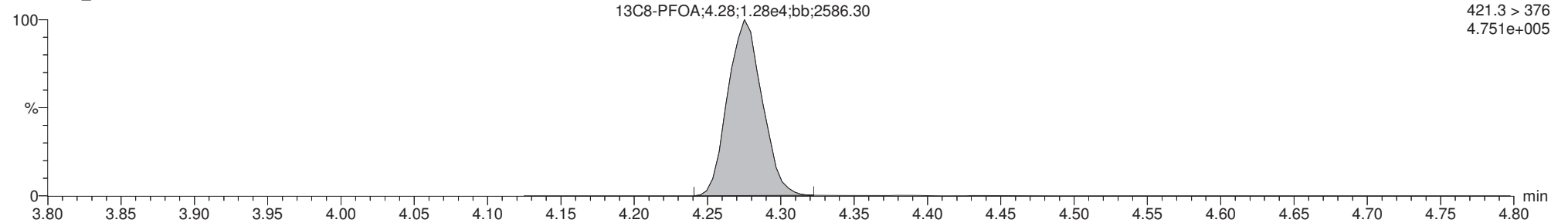
**13C2-PFOA**

170301G1\_27



**13C8-PFOA**

170301G1\_27



Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-27.qld

Last Altered: Thursday, March 02, 2017 11:06:01 Pacific Standard Time

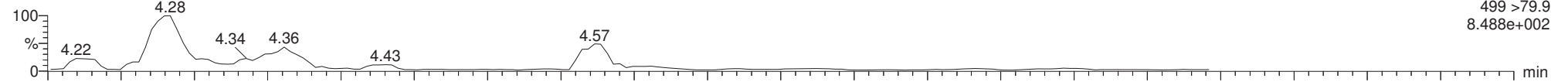
Printed: Thursday, March 02, 2017 11:06:44 Pacific Standard Time

ID: 1700261-08 WI-CV-EB02-022117 0.125, Description: WI-CV-EB02-022117, Name: 170301G1\_27, Date: 01-Mar-2017, Time: 20:23:23, Instrument: , Lab: , User:

**Total PFOS**

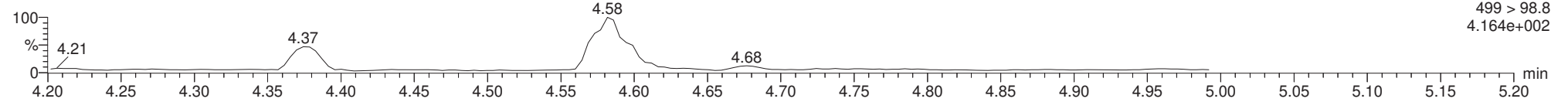
170301G1\_27

F5:MRM of 12 channels,ES-  
499 >79.9  
8.488e+002



170301G1\_27

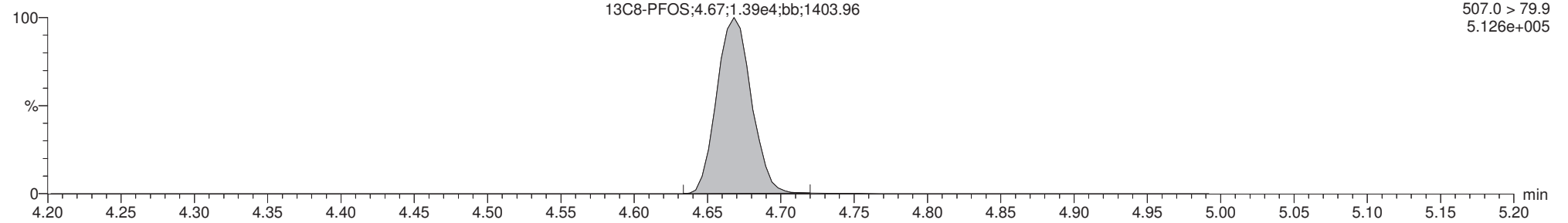
F5:MRM of 12 channels,ES-  
499 > 98.8  
4.164e+002



**13C8-PFOS**

170301G1\_27

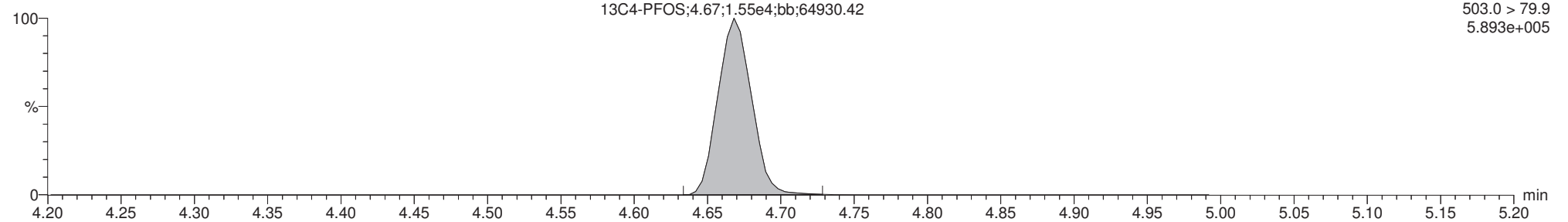
F5:MRM of 12 channels,ES-  
507.0 > 79.9  
5.126e+005



**13C4-PFOS**

170301G1\_27

F5:MRM of 12 channels,ES-  
503.0 > 79.9  
5.893e+005



Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-34.qld

Last Altered: Thursday, March 02, 2017 11:03:23 Pacific Standard Time

Printed: Thursday, March 02, 2017 11:03:40 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS\_6\_2trans\_LINEAR.mdb 28 Feb 2017 16:04:45

Calibration: U:\G1.pro\CurveDB\C18\_VAL-PFC\_Q1\_3-01-17\_L6\_2Trans.cdb 02 Mar 2017 08:18:08

ID: 1700261-09 WI-CV-EB04-022317 0.125, Description: WI-CV-EB04-022317, Name: 170301G1\_34, Date: 01-Mar-2017, Time: 21:51:09

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7	4.276e2	6.896e3		0.122	2.99	2.99	
2	4 PFOA	413 > 368.7	1.130e3	3.640e4		0.122	4.27	2.55	
3	6 PFOS	499 >79.9		1.476e4		0.122			
4	7 13C3-PFBS	302.0 > 98.8	6.896e3	1.803e4	0.442	0.122	2.99	88.9	86.5
5	10 13C2-PFOA	414.9 > 369.7	3.640e4	1.219e4	2.782	0.122	4.27	110	107
6	12 13C8-PFOS	507.0 > 79.9	1.476e4	1.499e4	0.941	0.122	4.66	108	105
7	14 13C3-PFHxS	401.9 > 79.9	1.803e4	1.803e4	1.000	0.122	3.99	103	100
8	15 13C8-PFOA	421.3 > 376	1.219e4	1.219e4	1.000	0.122	4.27	103	100
9	17 13C4-PFOS	503.0 > 79.9	1.499e4	1.499e4	1.000	0.122	4.66	103	100

Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-34.qld

Last Altered: Thursday, March 02, 2017 11:03:23 Pacific Standard Time

Printed: Thursday, March 02, 2017 11:03:54 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS\_6\_2trans\_LINEAR.mdb 28 Feb 2017 16:04:45

Calibration: U:\G1.pro\CurveDB\C18\_VAL-PFC\_Q1\_3-01-17\_L6\_2Trans.cdb 02 Mar 2017 08:18:08

ID: 1700261-09 WI-CV-EB04-022317 0.125, Description: WI-CV-EB04-022317, Name: 170301G1\_34, Date: 01-Mar-2017, Time: 21:51:09

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	18 Total PFBS	299 > 79.7		6.601e3		0.122		2.99	
2	20 Total PFOA	413 > 368.7		3.640e4		0.122		2.55	
3	21 Total PFOS	499 > 79.9		1.476e4		0.122			

Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-34.qld

Last Altered: Thursday, March 02, 2017 11:03:23 Pacific Standard Time

Printed: Thursday, March 02, 2017 11:03:40 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS\_6\_2trans\_LINEAR.mdb 28 Feb 2017 16:04:45

Calibration: U:\G1.pro\CurveDB\C18\_VAL-PFC\_Q1\_3-01-17\_L6\_2Trans.cdb 02 Mar 2017 08:18:08

ID: 1700261-09 WI-CV-EB04-022317 0.125, Description: WI-CV-EB04-022317, Name: 170301G1\_34, Date: 01-Mar-2017, Time: 21:51:09

**Total PFBS**

#	Name	Trace	RT	Area	IS Area	Conc.
1	1 PFBS	299 > 79.7	2.99	427.578	6895.925	3.0

**Total PFHxS**

#	Name	Trace	RT	Area	IS Area	Conc.
1	19 Total PFHxS	398.9 > 79.6	3.89	89.983	6600.804	0.1
2	19 Total PFHxS	398.9 > 79.6	3.86	51.245	6600.804	
3	3 PFHxS	398.9 > 79.6	3.99	447.313	6600.804	3.3

**Total PFOA**

#	Name	Trace	RT	Area	IS Area	Conc.
1	4 PFOA	413 > 368.7	4.27	1130.024	36402.469	2.5
2	20 Total PFOA	413 > 368.7	4.18	271.060	36402.469	

**Total PFOS**

#	Name	Trace	RT	Area	IS Area	Conc.
1						

Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-34.qld

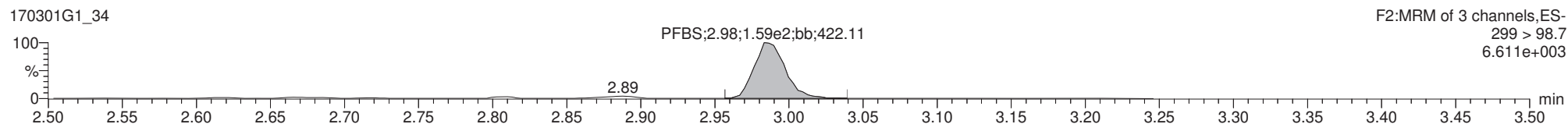
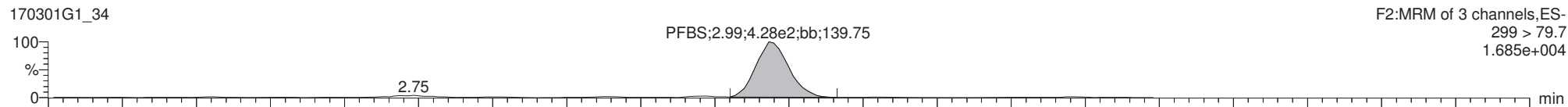
Last Altered: Thursday, March 02, 2017 11:03:23 Pacific Standard Time

Printed: Thursday, March 02, 2017 11:03:40 Pacific Standard Time

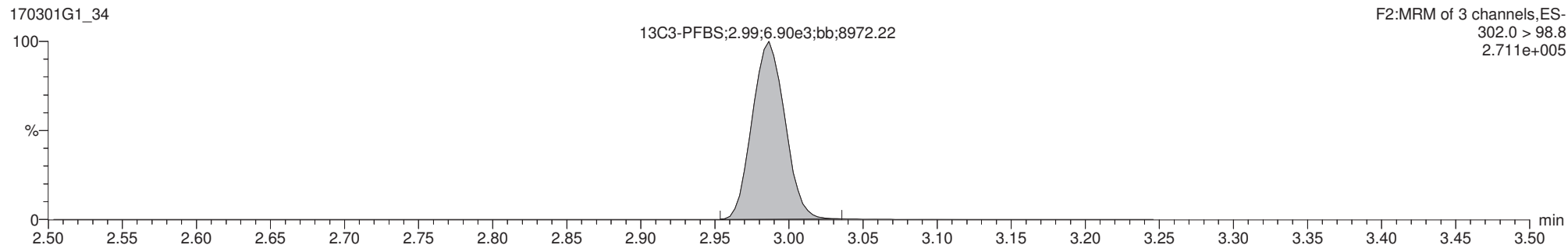
Method: U:\G1.pro\MethDB\PFAS\_6\_2trans\_LINEAR.mdb 28 Feb 2017 16:04:45  
Calibration: U:\G1.pro\CurveDB\C18\_VAL-PFC\_Q1\_3-01-17\_L6\_2Trans.cdb 02 Mar 2017 08:18:08

ID: 1700261-09 WI-CV-EB04-022317 0.125, Description: WI-CV-EB04-022317, Name: 170301G1\_34, Date: 01-Mar-2017, Time: 21:51:09, Instrument: , Lab: , User:

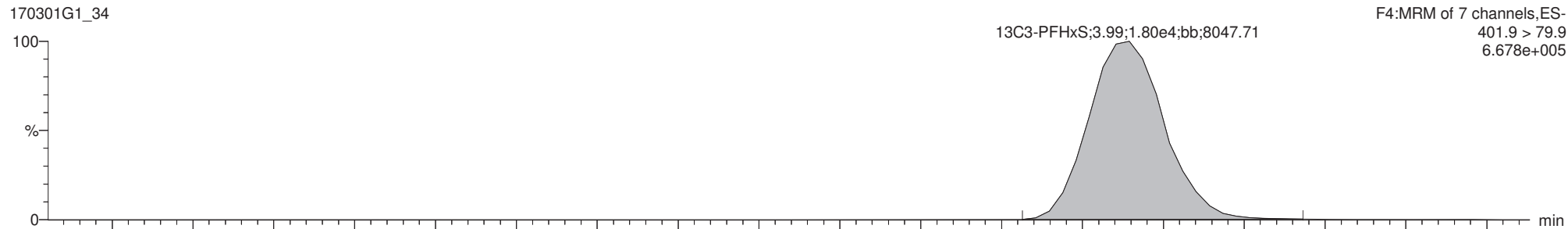
**PFBS**



**13C3-PFBS**



**13C3-PFHxS**



Reviewed: CT 03/02/17

ES 3/2/17



Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-34.qld

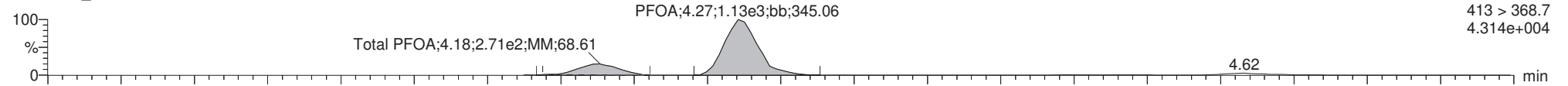
Last Altered: Thursday, March 02, 2017 11:03:23 Pacific Standard Time

Printed: Thursday, March 02, 2017 11:03:40 Pacific Standard Time

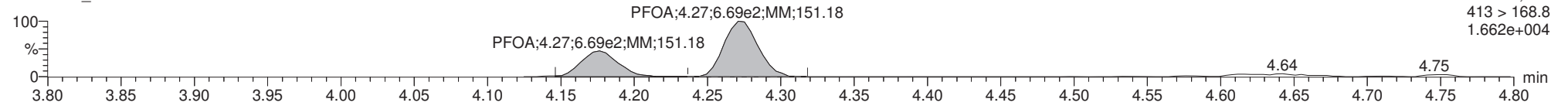
ID: 1700261-09 WI-CV-EB04-022317 0.125, Description: WI-CV-EB04-022317, Name: 170301G1\_34, Date: 01-Mar-2017, Time: 21:51:09, Instrument: , Lab: , User:

**Total PFOA**

170301G1\_34

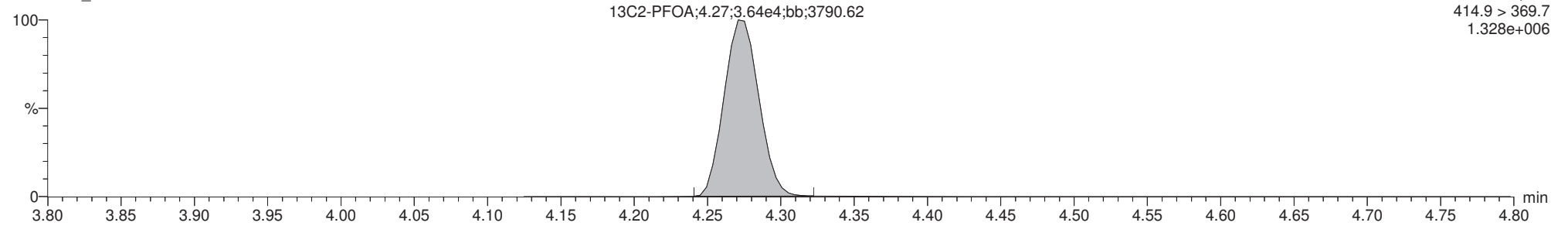


170301G1\_34



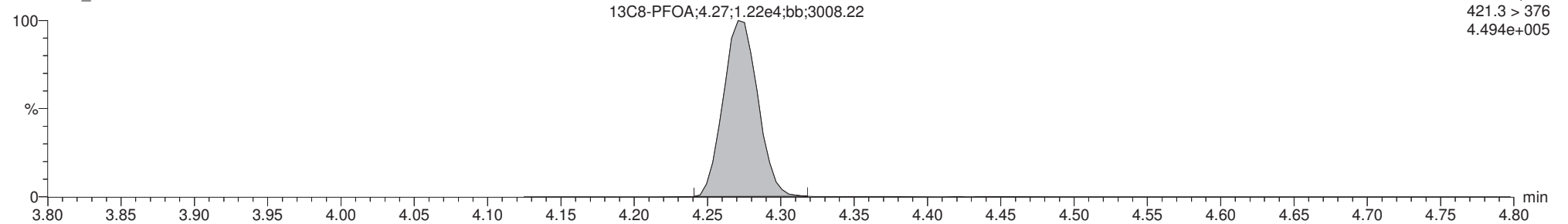
**13C2-PFOA**

170301G1\_34



**13C8-PFOA**

170301G1\_34



Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-34.qld

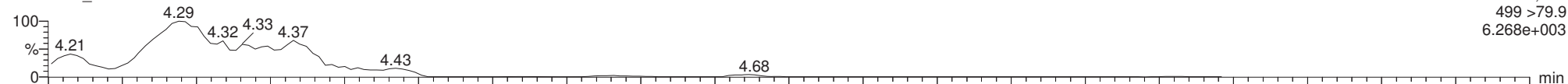
Last Altered: Thursday, March 02, 2017 11:03:23 Pacific Standard Time

Printed: Thursday, March 02, 2017 11:03:40 Pacific Standard Time

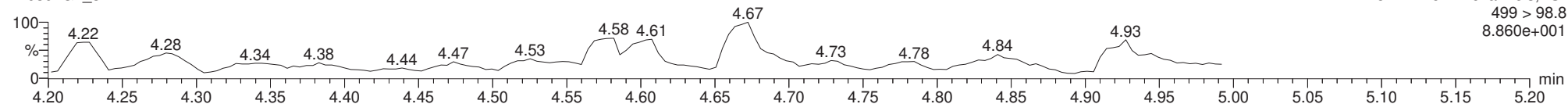
ID: 1700261-09 WI-CV-EB04-022317 0.125, Description: WI-CV-EB04-022317, Name: 170301G1\_34, Date: 01-Mar-2017, Time: 21:51:09, Instrument: , Lab: , User:

**Total PFOS**

170301G1\_34

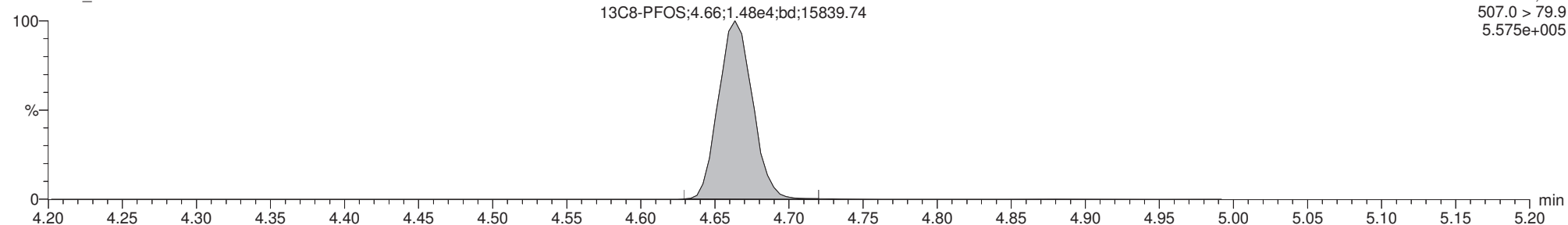


170301G1\_34



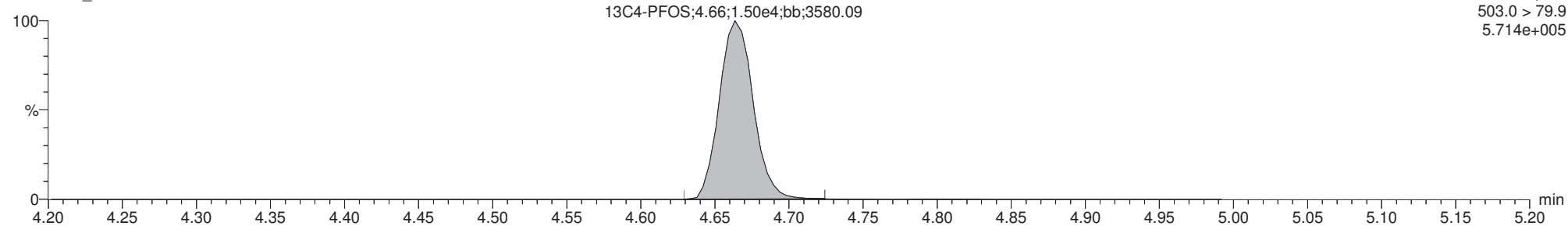
**13C8-PFOS**

170301G1\_34



**13C4-PFOS**

170301G1\_34



Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-35.qld

Last Altered: Thursday, March 02, 2017 11:10:01 Pacific Standard Time

Printed: Thursday, March 02, 2017 11:10:31 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS\_6\_2trans\_LINEAR.mdb 28 Feb 2017 16:04:45

Calibration: U:\G1.pro\CurveDB\C18\_VAL-PFC\_Q1\_3-01-17\_L6\_2Trans.cdb 02 Mar 2017 08:18:08

ID: 1700261-10 WI-CV-GW13M-0217 0.125, Description: WI-CV-GW13M-0217, Name: 170301G1\_35, Date: 01-Mar-2017, Time: 22:03:43

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7	1.873e4	6.275e3		0.128	2.98	135	
2	4 PFOA	413 > 368.7	3.883e3	2.784e4		0.128	4.27	14.0	
3	6 PFOS	499 >79.9	9.606e0	9.195e3		0.128	4.58	0.278	
4	7 13C3-PFBS	302.0 > 98.8	6.275e3	1.539e4	0.442	0.128	2.98	89.7	92.2
5	10 13C2-PFOA	414.9 > 369.7	2.784e4	8.592e3	2.782	0.128	4.27	113	116
6	12 13C8-PFOS	507.0 > 79.9	9.195e3	9.236e3	0.941	0.128	4.66	103	106
7	14 13C3-PFHxS	401.9 > 79.9	1.539e4	1.539e4	1.000	0.128	3.99	97.3	100
8	15 13C8-PFOA	421.3 > 376	8.592e3	8.592e3	1.000	0.128	4.27	97.3	100
9	17 13C4-PFOS	503.0 > 79.9	9.236e3	9.236e3	1.000	0.128	4.66	97.3	100

Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-35.qld

Last Altered: Thursday, March 02, 2017 11:10:01 Pacific Standard Time

Printed: Thursday, March 02, 2017 11:10:44 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS\_6\_2trans\_LINEAR.mdb 28 Feb 2017 16:04:45

Calibration: U:\G1.pro\CurveDB\C18\_VAL-PFC\_Q1\_3-01-17\_L6\_2Trans.cdb 02 Mar 2017 08:18:08

ID: 1700261-10 WI-CV-GW13M-0217 0.125, Description: WI-CV-GW13M-0217, Name: 170301G1\_35, Date: 01-Mar-2017, Time: 22:03:43

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	18 Total PFBS	299 > 79.7		6.308e3		0.128		139	
2	20 Total PFOA	413 > 368.7		2.784e4		0.128		20.4	
3	21 Total PFOS	499 > 79.9		9.195e3		0.128		0.278	

Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-35.qld

Last Altered: Thursday, March 02, 2017 11:10:01 Pacific Standard Time

Printed: Thursday, March 02, 2017 11:10:31 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS\_6\_2trans\_LINEAR.mdb 28 Feb 2017 16:04:45

Calibration: U:\G1.pro\CurveDB\C18\_VAL-PFC\_Q1\_3-01-17\_L6\_2Trans.cdb 02 Mar 2017 08:18:08

ID: 1700261-10 WI-CV-GW13M-0217 0.125, Description: WI-CV-GW13M-0217, Name: 170301G1\_35, Date: 01-Mar-2017, Time: 22:03:43

**Total PFBS**

	# Name	Trace	RT	Area	IS Area	Conc.
1	1 PFBS	299 > 79.7	2.98	18731.404	6275.069	134.8
2	18 Total PFBS	299 > 79.7	2.86	518.945	6308.284	3.7

**Total PFHxS**

	# Name	Trace	RT	Area	IS Area	Conc.
1	19 Total PFHxS	398.9 > 79.6	4.04	5.052	6308.284	
2	3 PFHxS	398.9 > 79.6	3.99	4169.701	6308.284	36.2
3	19 Total PFHxS	398.9 > 79.6	3.89	1777.173	6308.284	15.1
4	19 Total PFHxS	398.9 > 79.6	3.86	949.452	6308.284	7.7
5	19 Total PFHxS	398.9 > 79.6	3.78	39.277	6308.284	

**Total PFOA**

	# Name	Trace	RT	Area	IS Area	Conc.
1	4 PFOA	413 > 368.7	4.27	3883.364	27842.727	14.0
2	20 Total PFOA	413 > 368.7	4.17	1906.464	27842.727	6.4

**Total PFOS**

	# Name	Trace	RT	Area	IS Area	Conc.
1	6 PFOS	499 > 79.9	4.58	9.606	9195.147	0.3

Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-35.qld

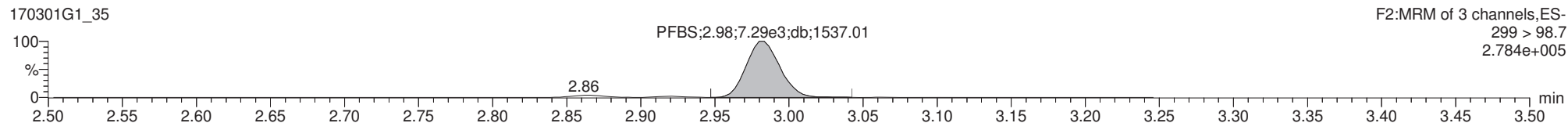
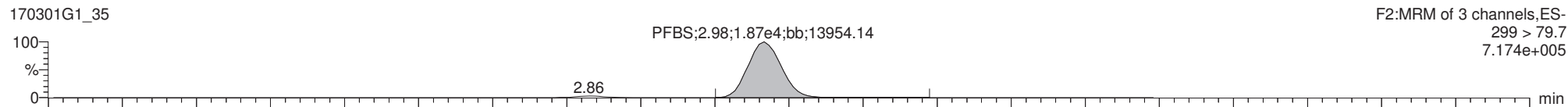
Last Altered: Thursday, March 02, 2017 11:10:01 Pacific Standard Time

Printed: Thursday, March 02, 2017 11:10:31 Pacific Standard Time

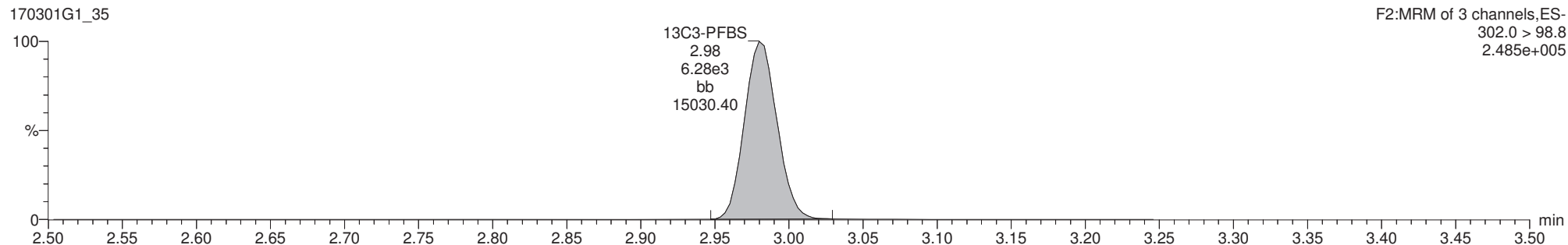
Method: U:\G1.pro\MethDB\PFAS\_6\_2trans\_LINEAR.mdb 28 Feb 2017 16:04:45  
Calibration: U:\G1.pro\CurveDB\C18\_VAL-PFC\_Q1\_3-01-17\_L6\_2Trans.cdb 02 Mar 2017 08:18:08

ID: 1700261-10 WI-CV-GW13M-0217 0.125, Description: WI-CV-GW13M-0217, Name: 170301G1\_35, Date: 01-Mar-2017, Time: 22:03:43, Instrument: , Lab: , User:

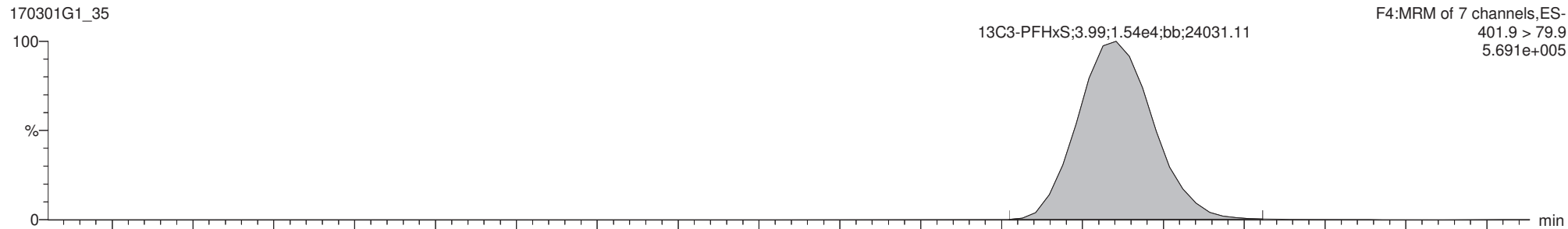
**PFBS**



**13C3-PFBS**



**13C3-PFHxS**



Reviewed: CT 03/02/17

ES 3/2/17

Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-35.qld

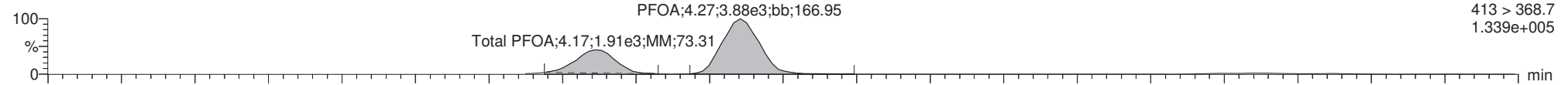
Last Altered: Thursday, March 02, 2017 11:10:01 Pacific Standard Time

Printed: Thursday, March 02, 2017 11:10:31 Pacific Standard Time

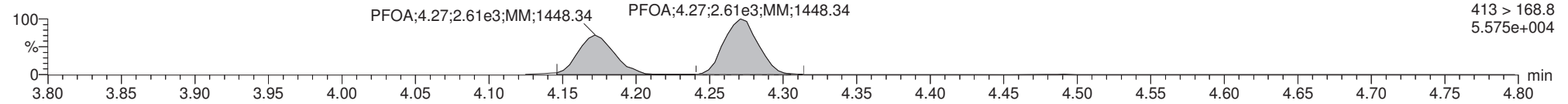
ID: 1700261-10 WI-CV-GW13M-0217 0.125, Description: WI-CV-GW13M-0217, Name: 170301G1\_35, Date: 01-Mar-2017, Time: 22:03:43, Instrument: , Lab: , User:

**Total PFOA**

170301G1\_35

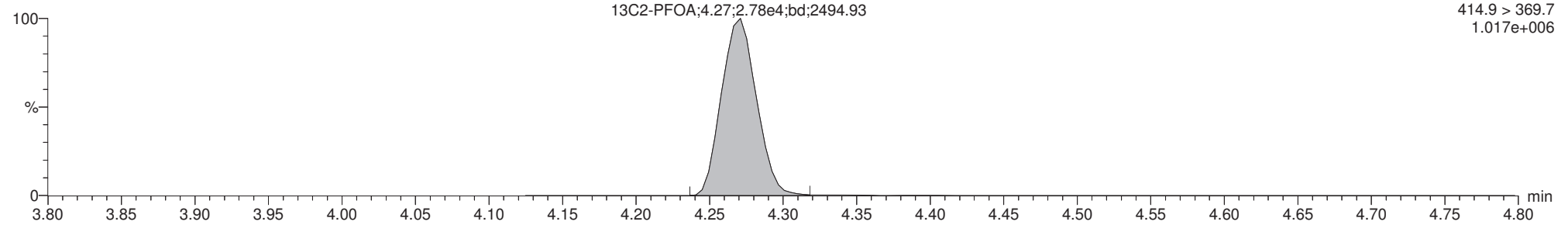


170301G1\_35



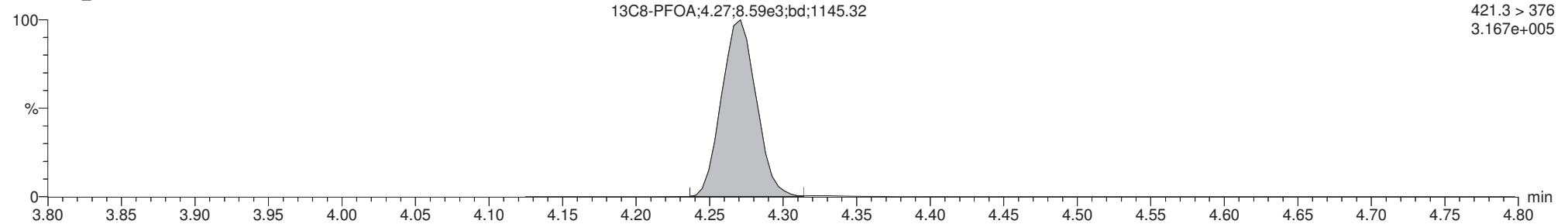
**13C2-PFOA**

170301G1\_35



**13C8-PFOA**

170301G1\_35



Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-35.qld

Last Altered: Thursday, March 02, 2017 11:10:01 Pacific Standard Time

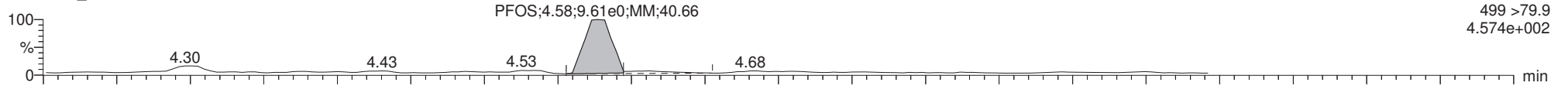
Printed: Thursday, March 02, 2017 11:10:31 Pacific Standard Time

ID: 1700261-10 WI-CV-GW13M-0217 0.125, Description: WI-CV-GW13M-0217, Name: 170301G1\_35, Date: 01-Mar-2017, Time: 22:03:43, Instrument: , Lab: , User:

**Total PFOS**

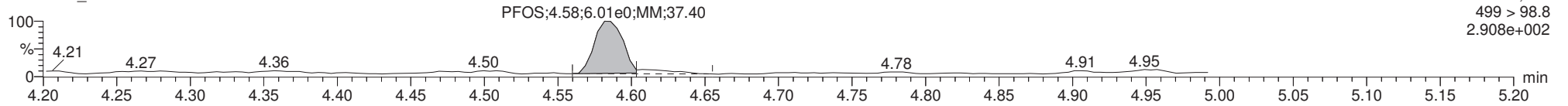
170301G1\_35

F5:MRM of 12 channels,ES-  
499 >79.9  
4.574e+002



170301G1\_35

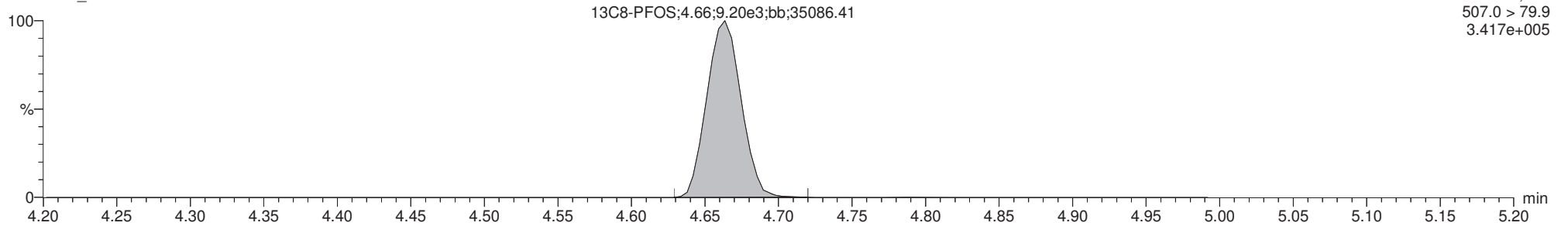
F5:MRM of 12 channels,ES-  
499 > 98.8  
2.908e+002



**13C8-PFOS**

170301G1\_35

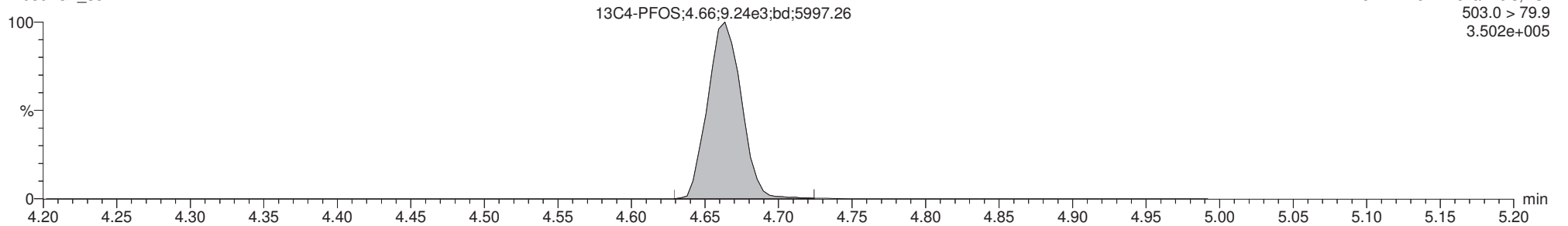
F5:MRM of 12 channels,ES-  
507.0 > 79.9  
3.417e+005



**13C4-PFOS**

170301G1\_35

F5:MRM of 12 channels,ES-  
503.0 > 79.9  
3.502e+005





## **CONTINUING CALIBRATION**

Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-29.qld

Last Altered: Thursday, March 02, 2017 09:18:09 Pacific Standard Time

Printed: Thursday, March 02, 2017 09:19:04 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS\_6\_2trans\_LINEAR.mdb 28 Feb 2017 16:04:45

Calibration: U:\G1.pro\CurveDB\C18\_VAL-PFC\_Q1\_3-01-17\_L6\_2Trans.cdb 02 Mar 2017 08:18:08

Name: 170301G1\_29, Date: 01-Mar-2017, Time: 20:48:27, ID: ST170301G1-9 PFC CS2 17C0123, Description: PFC CS2 17C0123 A

#	Name	Trace	Response	IS Resp	RRF	Wt/Vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7	6.78e3	7.52e3		1.000	2.99	5.23	104.7
2	2 PFHpA	363 > 318.9	1.46e4	2.10e4		1.000	3.88	4.73	94.6
3	3 PFHxS	398.9 > 79.6	5.91e3	7.38e3		1.000	3.99	5.64	112.9
4	4 PFOA	413 > 368.7	1.20e4	3.67e4		1.000	4.28	4.35	87.0
5	5 PFNA	463 > 418.8	1.11e4	1.17e4		1.000	4.61	5.44	108.9
6	6 PFOS	499 > 79.9	2.09e3	1.05e4		1.000	4.67	4.77	95.4
7	7 13C3-PFBS	302.0 > 98.8	7.52e3	1.84e4	0.442	1.000	2.98	11.6	92.6
8	8 13C4-PFHpA	367.2 > 321.8	2.10e4	1.84e4	1.117	1.000	3.87	12.8	102.2
9	9 18O2-PFHxS	403 > 102.6	7.38e3	1.84e4	0.420	1.000	3.99	12.0	95.7
10	10 13C2-PFOA	414.9 > 369.7	3.67e4	1.11e4	2.782	1.000	4.28	14.9	118.8
11	11 13C5-PFNA	468.2 > 422.9	1.17e4	1.28e4	0.846	1.000	4.61	13.4	107.5
12	12 13C8-PFOS	507.0 > 79.9	1.05e4	1.06e4	0.941	1.000	4.67	13.2	105.3
13	13 13C5-PFHxA	318 > 272.9	3.07e4	3.07e4	1.000	1.000	3.36	12.5	100.0
14	14 13C3-PFHxS	401.9 > 79.9	1.84e4	1.84e4	1.000	1.000	3.99	12.5	100.0
15	15 13C8-PFOA	421.3 > 376	1.11e4	1.11e4	1.000	1.000	4.28	12.5	100.0
16	16 13C9-PFNA	472.2 > 426.9	1.28e4	1.28e4	1.000	1.000	4.61	12.5	100.0
17	17 13C4-PFOS	503.0 > 79.9	1.06e4	1.06e4	1.000	1.000	4.67	12.5	100.0

75-125

60-150

80-150

60-150

ES 3/2/17

Vista Analytical Laboratory VG-11

Dataset: Untitled

Last Altered: Thursday, March 02, 2017 09:06:06 Pacific Standard Time

Printed: Thursday, March 02, 2017 09:06:22 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS\_6\_2trans\_LINEAR.mdb 28 Feb 2017 16:04:45

Calibration: U:\G1.pro\CurveDB\C18\_VAL-PFC\_Q1\_3-01-17\_L6\_2Trans.cdb 02 Mar 2017 08:18:08

Compound name: PFBS

	Name	ID	Acq.Date	Acq.Time
1	170301G1_1	IPA	01-Mar-17	14:57:20
2	170301G1_2	ST170301G1-1 PFC CS-2 17C0119	01-Mar-17	15:09:39
3	170301G1_3	ST170301G1-2 PFC CS-1 17C0120	01-Mar-17	15:22:08
4	170301G1_4	ST170301G1-3 PFC CS0 17C0121	01-Mar-17	15:34:43
5	170301G1_5	ST170301G1-4 PFC CS1 17C0122	01-Mar-17	15:47:17
6	170301G1_6	ST170301G1-5 PFC CS2 17C0123	01-Mar-17	15:59:50
7	170301G1_7	ST170301G1-6 PFC CS3 17C0124	01-Mar-17	16:12:23
8	170301G1_8	ST170301G1-7 PFC CS4 17C0125	01-Mar-17	16:24:59
9	170301G1_9	ST170301G1-8 PFC CS5 17B2726	01-Mar-17	16:37:33
10	170301G1_10	IPA	01-Mar-17	16:50:06
11	170301G1_11	SS170301G1-1 PFC SSS 17C0127	01-Mar-17	17:02:38
12	170301G1_12	IPA	01-Mar-17	17:15:08
13	170301G1_13	B7B0118-BS1 OPR 0.125	01-Mar-17	17:27:46
14	170301G1_14	B7B0114-BS1 OPR 0.125	01-Mar-17	17:40:13
15	170301G1_15	IPA	01-Mar-17	17:52:54
16	170301G1_16	B7B0118-BLK1 Method Blank 0.125	01-Mar-17	18:05:24
17	170301G1_17	B7B0114-BLK1 Method Blank 0.125	01-Mar-17	18:17:56
18	170301G1_18	1700261-01 WI-CV-GW10D-0217 0.125	01-Mar-17	18:30:28
19	170301G1_19	1700261-02 WI-CV-EB01-022017 0.125	01-Mar-17	18:43:01
20	170301G1_20	1700261-03 WI-CV-GW065-0217 0.125	01-Mar-17	18:55:35
21	170301G1_21	1700261-04 WI-CV-GW065/5P-0217 0.125	01-Mar-17	19:08:08
22	170301G1_22	1700261-05 WI-CV-GW105-0217 0.125	01-Mar-17	19:20:37
23	170301G1_23	1700261-06 WI-CV-EB03-022217 0.125	01-Mar-17	19:33:12
24	170301G1_24	1700261-07 WI-CV-GW06M-0217 0.125	01-Mar-17	19:45:41
25	170301G1_25	B7B0118-MSD1 Matrix Spike Dup 0.125	01-Mar-17	19:58:14
26	170301G1_26	B7B0118-MS1 Matrix Spike 0.125	01-Mar-17	20:10:56
27	170301G1_27	1700261-08 WI-CV-EB02-022117 0.125	01-Mar-17	20:23:23
28	170301G1_28	IPA	01-Mar-17	20:35:54
29	170301G1_29	ST170301G1-9 PFC CS2 17C0123	01-Mar-17	20:48:27
30	170301G1_30	IPA	01-Mar-17	21:01:00
31	170301G1_31	B7B0129-BS1 OPR 0.125	01-Mar-17	21:13:33
32	170301G1_32	IPA	01-Mar-17	21:26:03



Dataset: Untitled

Last Altered: Thursday, March 02, 2017 09:06:06 Pacific Standard Time

Printed: Thursday, March 02, 2017 09:06:22 Pacific Standard Time

Compound name: PFBS

	Name	ID	Acq.Date	Acq.Time
33	170301G1_33	B7B0129-BLK1 Method Blank 0.125	01-Mar-17	21:38:38
34	170301G1_34	1700261-09 WI-CV-EB04-022317 0.125	01-Mar-17	21:51:09
35	170301G1_35	1700261-10 WI-CV-GW13M-0217 0.125	01-Mar-17	22:03:43
36	170301G1_36	1700245-01 Milk - 012617 0.125	01-Mar-17	22:16:13
37	170301G1_37	1700263-01 OW2E-MW09R-0217 0.12578	01-Mar-17	22:28:46
38	170301G1_38	1700263-02 OW2E-MW09RP-0217 0.12994	01-Mar-17	22:41:20
39	170301G1_39	1700263-03 OW2C-MW05-0217 0.13161	01-Mar-17	22:53:54
40	170301G1_40	1700263-04 OW2C-MW25-0217 0.12534	01-Mar-17	23:06:27
41	170301G1_41	1700263-05 OW2C-MW19-0217 0.12438	01-Mar-17	23:19:00
42	170301G1_42	B7B0129-MS1 Matrix Spike 0.12756	01-Mar-17	23:31:30
43	170301G1_43	B7B0129-MSD1 Matrix Spike Dup 0.12637	01-Mar-17	23:44:02
44	170301G1_44	1700263-06 OW2C-MW24-0217 0.1257	01-Mar-17	23:56:35
45	170301G1_45	1700263-07 OW2C-EB-0217 0.12647	02-Mar-17	00:09:09
46	170301G1_46	1700263-08 OW2C-FB-0217 0.13011	02-Mar-17	00:21:42
47	170301G1_47	IPA	02-Mar-17	00:34:15
48	170301G1_48	ST170301G1-10 PFC CS2 17C0123	02-Mar-17	00:46:50
49	170301G1_49	IPA	02-Mar-17	00:59:21

# LC Calibration Standards Review Checklist

Q1

Calibration ID:	L M H	ION Ratio	Concentration	C-Cals Name	Sign Date	Correct I-Cal	Manual Integrations	
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↓ -10	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Full Mass Cal. Date: 12/6/17

Run Log Present:

# of Samples per Sequence Checked:

Reviewed By: elm 3/2/17  
Initials/Date

Comments:  
L6 ; Two Transitions

Dataset:    Untitled

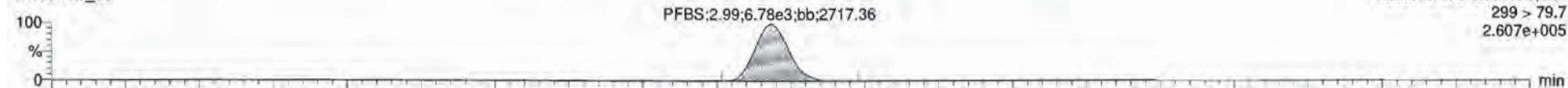
Last Altered:    Thursday, March 02, 2017 09:19:39 Pacific Standard Time  
Printed:    Thursday, March 02, 2017 09:22:00 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS\_6\_2trans\_LINEAR.mdb 28 Feb 2017 16:04:45  
Calibration: U:\G1.pro\CurveDB\C18\_VAL-PFC\_Q1\_3-01-17\_L6\_2Trans.cdb 02 Mar 2017 08:18:08

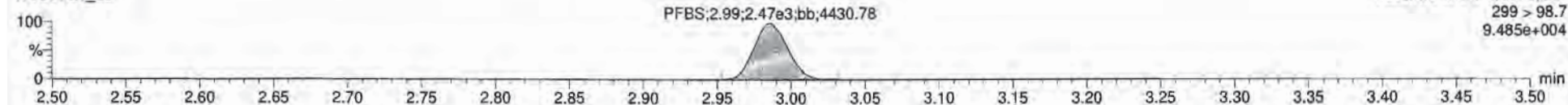
ID: ST170301G1-9 PFC CS2 17C0123, Description: PFC CS2 17C0123 A, Name: 170301G1\_29, Date: 01-Mar-2017, Time: 20:48:27, Instrument: , Lab: , User:

**PFBS**

170301G1\_29

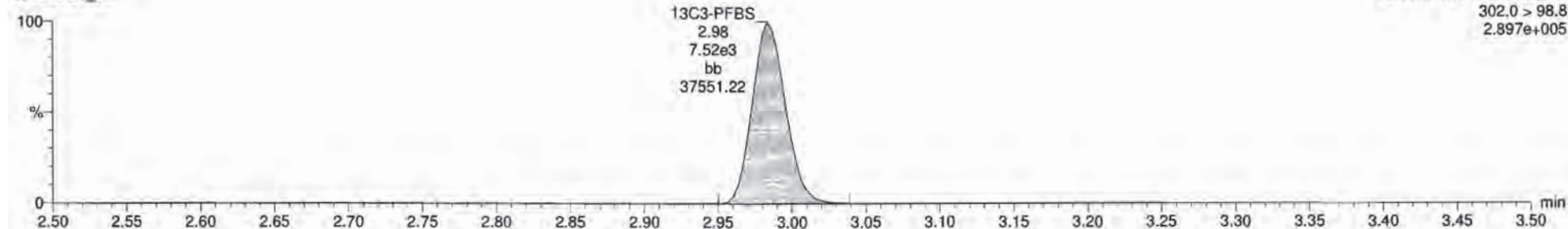


170301G1\_29



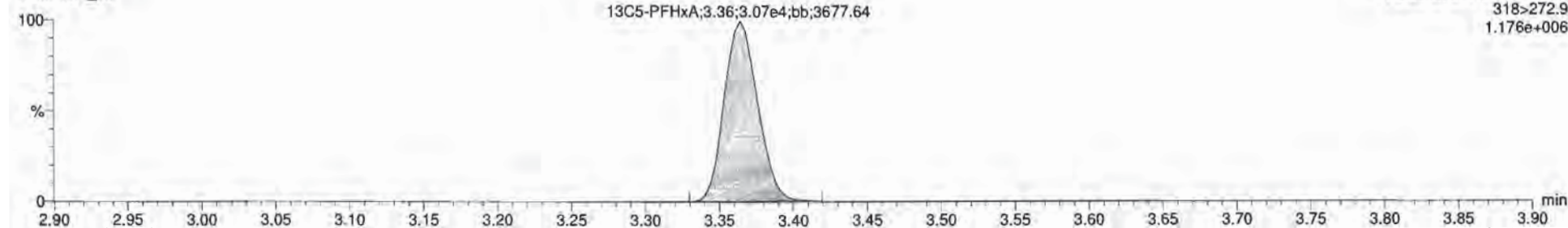
**13C3-PFBS**

170301G1\_29



**13C5-PFHxA**

170301G1\_29

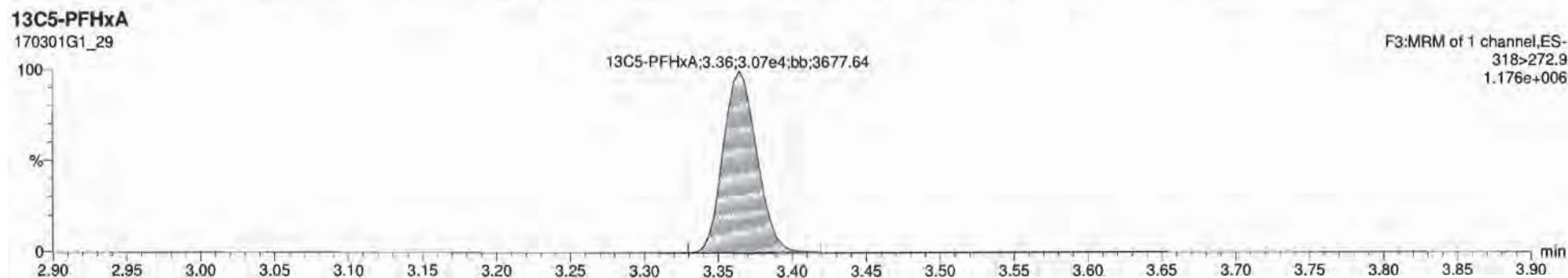
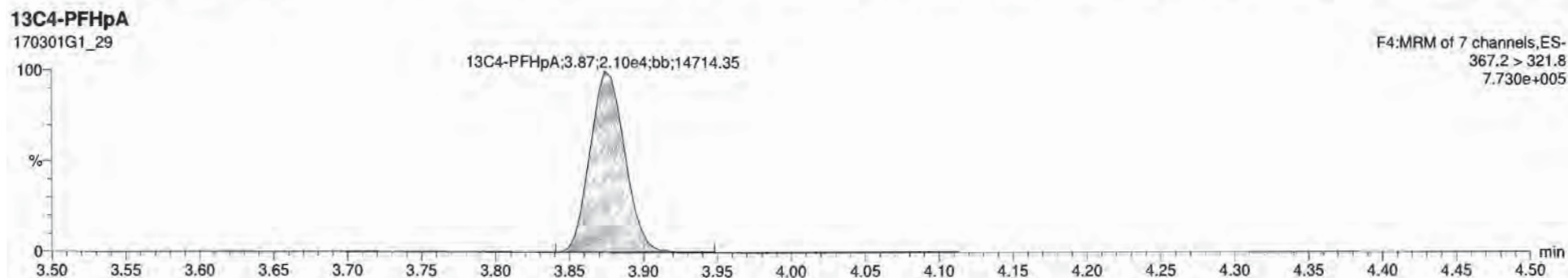
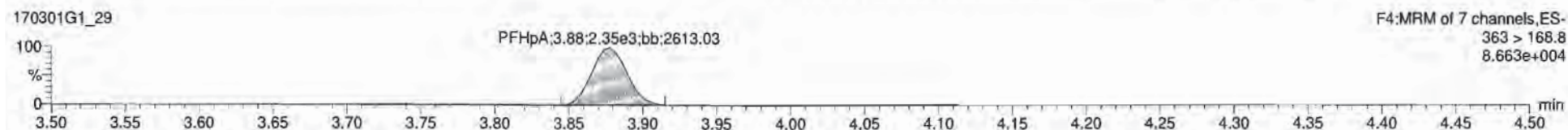
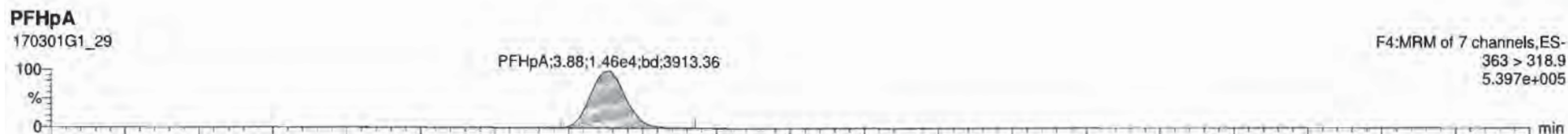




Dataset: Untitled

Last Altered: Thursday, March 02, 2017 09:19:39 Pacific Standard Time  
Printed: Thursday, March 02, 2017 09:22:00 Pacific Standard Time

ID: ST170301G1-9 PFC CS2 17C0123, Description: PFC CS2 17C0123 A, Name: 170301G1\_29, Date: 01-Mar-2017, Time: 20:48:27, Instrument: , Lab: , User:



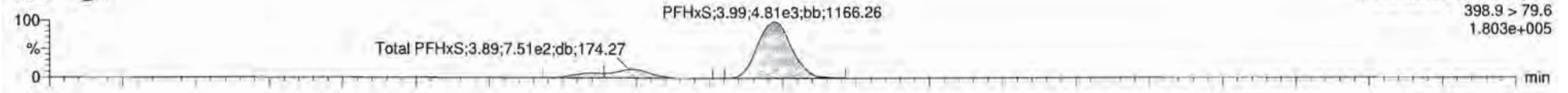
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Last Altered: Thursday, March 02, 2017 09:19:39 Pacific Standard Time  
Printed: Thursday, March 02, 2017 09:22:00 Pacific Standard Time

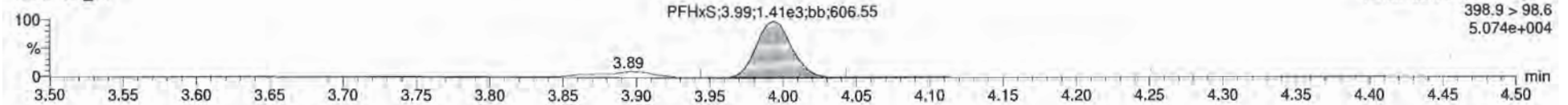
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**Total PFHxS**

170301G1\_29

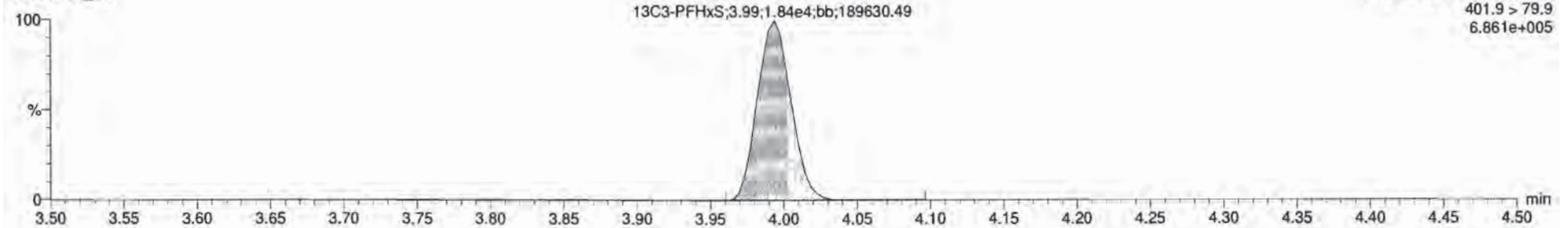


170301G1\_29



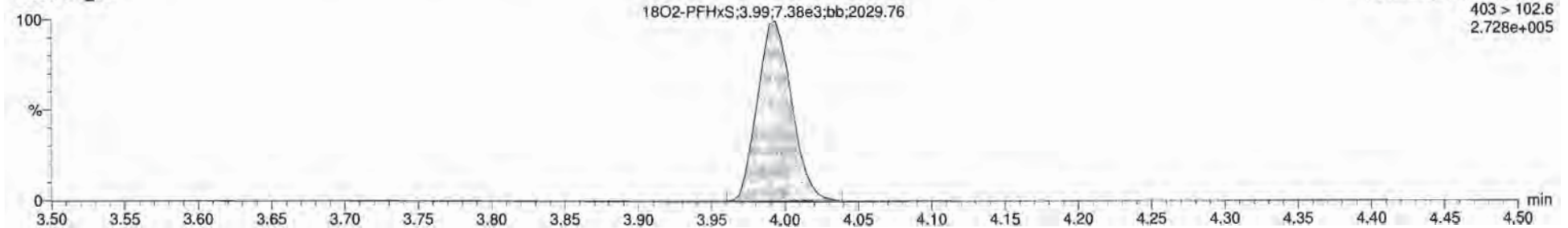
**13C3-PFHxS**

170301G1\_29



**18O2-PFHxS**

170301G1\_29

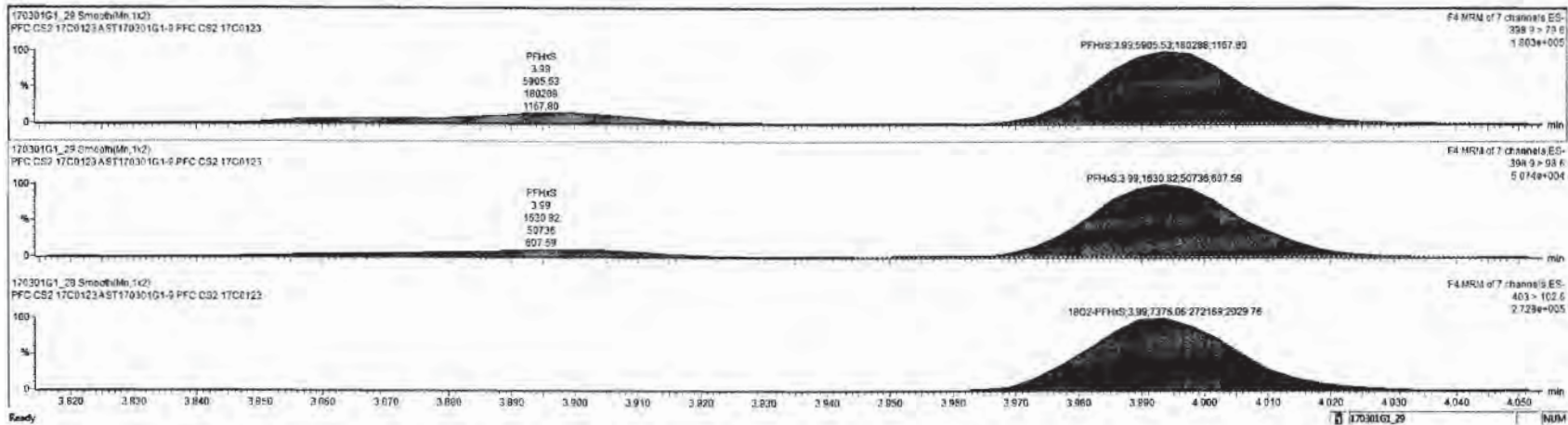






170301G1\_29-ST170301G1-9 PFC CS2 17C0123 - PFC CS2 17C0123 A

#	Name	Conc	DL	NRWD	EMPC	Abn Resp	RP	#	Ed	DA	YN	SP1	Acq Date	Acq Time	Ch Name	D	Sample Text	Factor1	SWR	Cal/Fib	+NOC
1	PFBS	5.235000	0.0000	104.7	1.001	6.775e3	2.99	1	7	0.365	YES	1.001	01-Mar-17	20:43:27	21.343	ST170301G	PFC CS2 17C01	1.0	1.00	C18_V	NO
2	PFNA	4.7200991		94.6		1.402e1	3.68	2	3			1.001	01-Mar-17	20:43:27		ST170301G	PFC CS2 17C01	1.0	1.00	C18_V	NO
3	PFOS	8.5000478		102.8		5.900e3	3.90	3	9			0.999	01-Mar-17	20:43:27		ST170301G	PFC CS2 17C01	1.0	1.00	C18_V	YES
4	PFDA	4.3492881		87.0		1.195e4	4.28	4	10			1.000	01-Mar-17	20:43:27		ST170301G	PFC CS2 17C01	1.0	1.00	C18_V	YES
5	PFNA	5.4440177		100.9		1.106e4	4.61	5	11			1.000	01-Mar-17	20:43:27		ST170301G	PFC CS2 17C01	1.0	1.00	C18_V	YES
6	PFOS	4.7718719	0.0168	95.4		2.006e3	4.67	6	12			0.999	01-Mar-17	20:43:27		ST170301G	PFC CS2 17C01	1.0	1.00	C18_V	YES
7	13C3-PFBS	11.570426	0.000794	92.6		7.515e3	0.442	2.58	7	14		0.997	01-Mar-17	20:43:27		ST170301G	PFC CS2 17C01	1.0	1.00	C18_V	NO
8	13C4-PFNA	12.780749	0.00214	102.2		2.096e4	1.117	3.67	8	14		0.970	01-Mar-17	20:43:27		ST170301G	PFC CS2 17C01	1.0	1.00	C18_V	NO
9	18O2-PFHs	11.957173	0.0145	95.7		7.376e3	0.420	3.99	9	14		1.000	01-Mar-17	20:43:27		ST170301G	PFC CS2 17C01	1.0	1.00	C18_V	NO
10	13C2-PFOA	14.055667	0.0115	118.8		3.671e4	2.752	4.20	10	15		1.000	01-Mar-17	20:43:27		ST170301G	PFC CS2 17C01	1.0	1.00	C18_V	NO
11	13C5-PFNA	13.430076	0.00542	107.5		1.167e4	0.646	4.61	11	16		1.000	01-Mar-17	20:43:27		ST170301G	PFC CS2 17C01	1.0	1.00	C18_V	NO
12	13C5-PFOS	13.159179	0.00453	105.3		1.605e4	0.941	4.67	12	17		1.000	01-Mar-17	20:43:27		ST170301G	PFC CS2 17C01	1.0	1.00	C18_V	NO
13	13C5-PFOA	12.500000	0.00050	100.0		3.070e4	1.000	3.36	13	13		0.000	01-Mar-17	20:43:27		ST170301G	PFC CS2 17C01	1.0	1.00	C18_V	NO
14	13C3-PFHs	12.500000	0.000165	100.0		1.636e4	1.000	3.99	14	14		0.000	01-Mar-17	20:43:27		ST170301G	PFC CS2 17C01	1.0	1.00	C18_V	NO
15	13C5-PFOA	12.500000	0.00445	100.0		1.110e4	1.000	4.28	15	15		0.000	01-Mar-17	20:43:27		ST170301G	PFC CS2 17C01	1.0	1.00	C18_V	NO
16	13C5-PFNA	12.500000	0.00560	100.0		1.203e4	1.000	4.61	16	16		0.000	01-Mar-17	20:43:27		ST170301G	PFC CS2 17C01	1.0	1.00	C18_V	NO
17	13C4-PFOS	12.500000	0.01156	100.0		1.059e4	1.000	4.67	17	17		0.000	01-Mar-17	20:43:27		ST170301G	PFC CS2 17C01	1.0	1.00	C18_V	NO
18	Total PFBS	5.235000	0.00000					10					01-Mar-17	20:43:27		ST170301G	PFC CS2 17C01	1.0	1.00	C18_V	NO
19	Total PFHs	6.5154125						15					01-Mar-17	20:43:27		ST170301G	PFC CS2 17C01	1.0	1.00	C18_V	NO
20	Total PFOA	4.3492881						20					01-Mar-17	20:43:27		ST170301G	PFC CS2 17C01	1.0	1.00	C18_V	NO
21	Total PFOS	6.1200000	0.0168					21					01-Mar-17	20:43:27		ST170301G	PFC CS2 17C01	1.0	1.00	C18_V	NO



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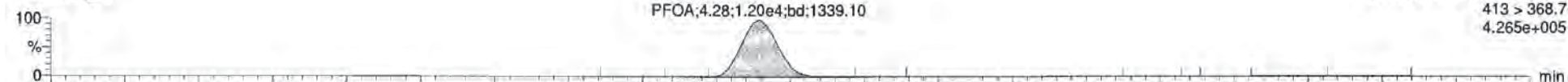
Last Altered: Thursday, March 02, 2017 09:19:39 Pacific Standard Time

Printed: Thursday, March 02, 2017 09:22:00 Pacific Standard Time

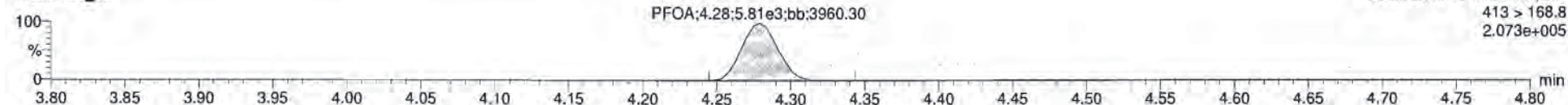
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**Total PFOA**

170301G1\_29

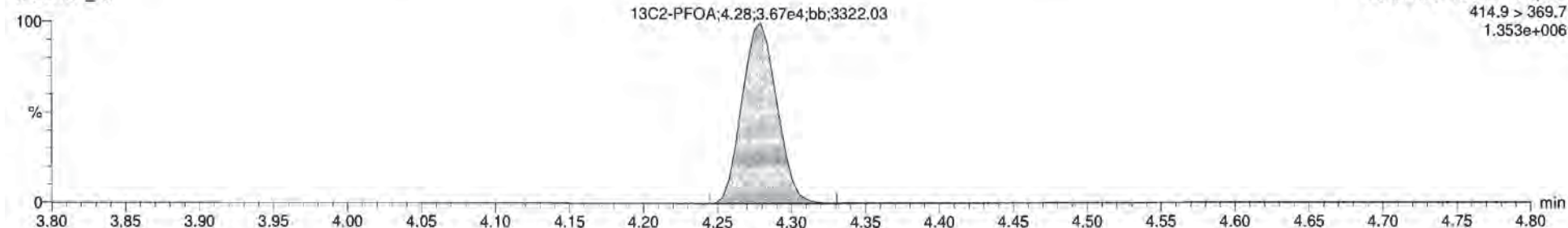


170301G1\_29



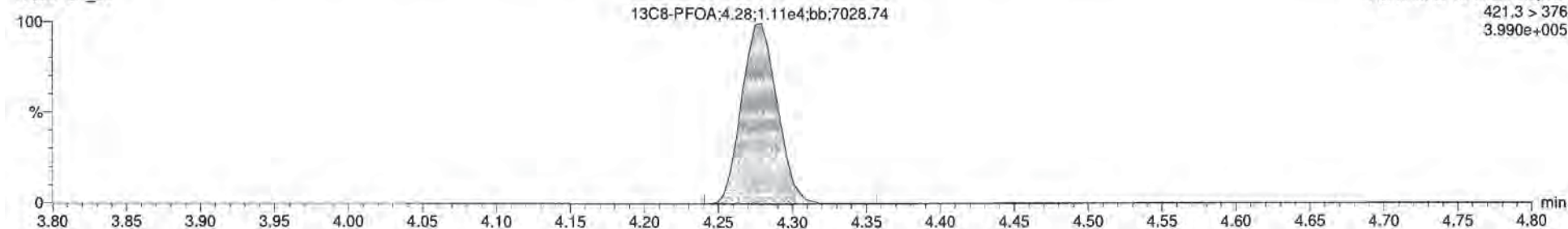
**13C2-PFOA**

170301G1\_29



**13C8-PFOA**

170301G1\_29



Dataset: Untitled

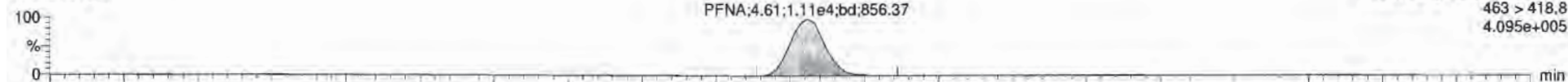
Last Altered: Thursday, March 02, 2017 09:19:39 Pacific Standard Time

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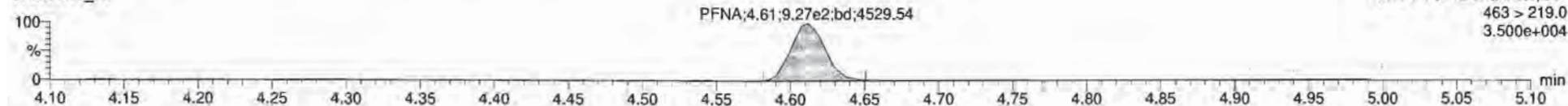
ID: ST170301G1-9 PFC CS2 17C0123, Description: PFC CS2 17C0123 A, Name: 170301G1\_29, Date: 01-Mar-2017, Time: 20:48:27, Instrument: , Lab: , User:

**PFNA**

170301G1\_29

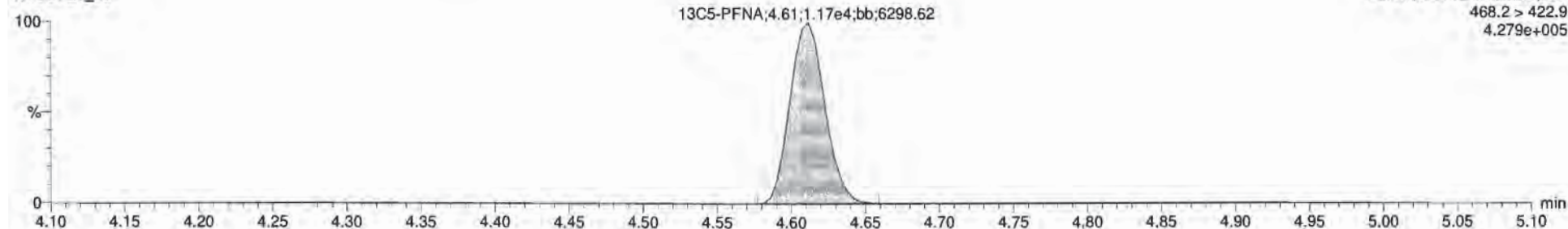


170301G1\_29



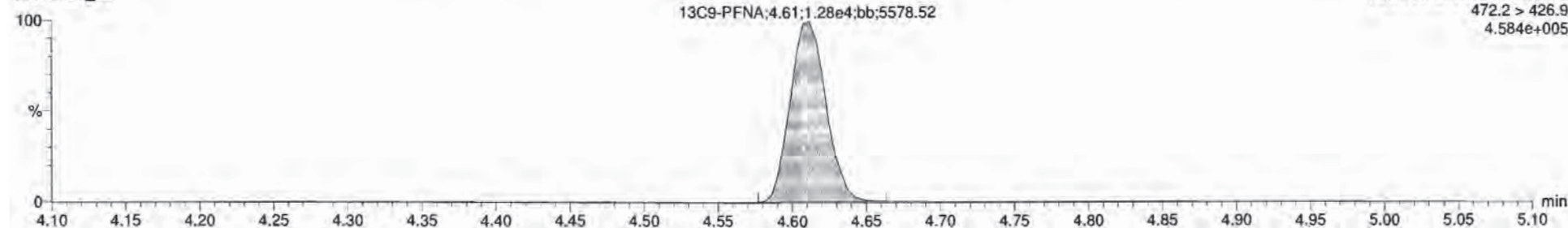
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170301G1\_29



**13C9-PFNA**

170301G1\_29





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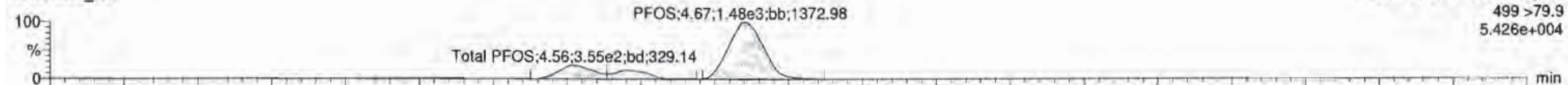
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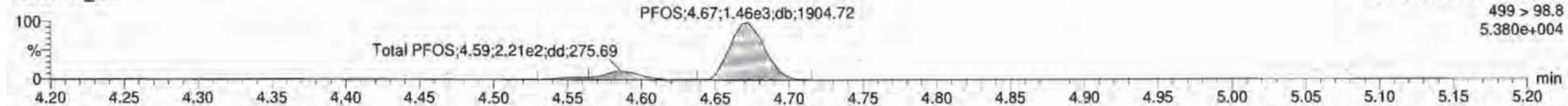
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**Total PFOS**

170301G1\_29

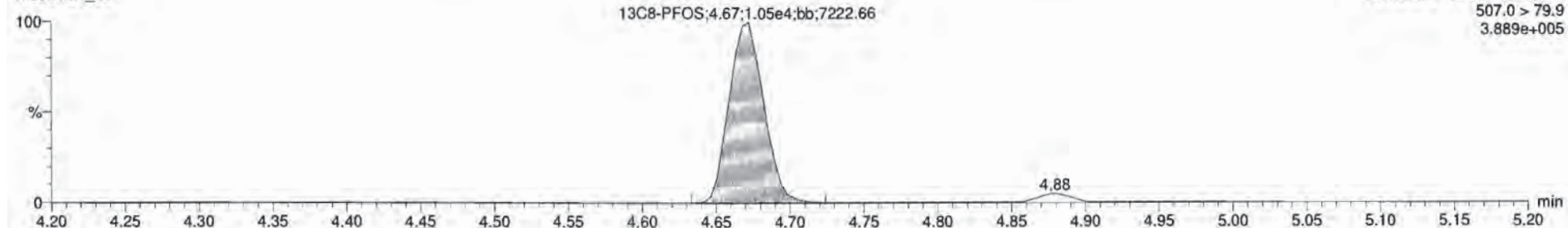


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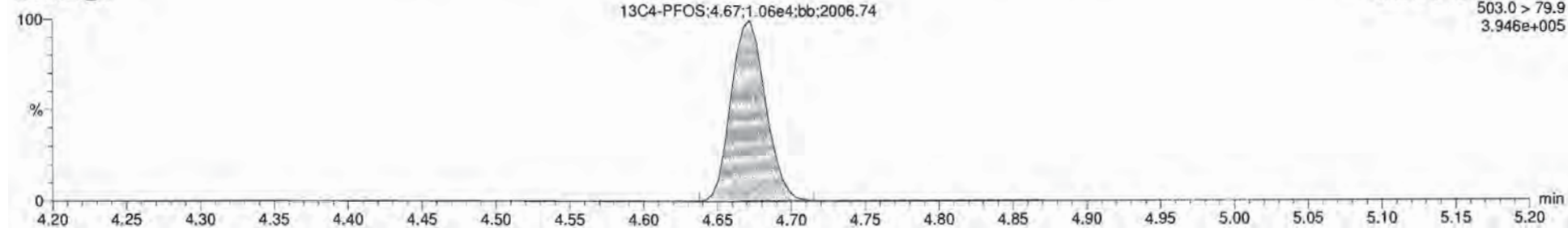
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170301G1\_29



**13C4-PFOS**

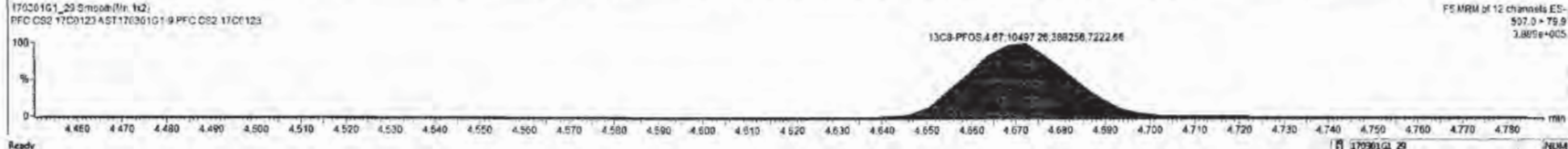
170301G1\_29





170301G1\_29\_ST170301G1-9-PFC-CS2-17C0-28\_PFC-CS2-17C0123A

#	Name	Conc.	DL	Subst	EMPC	Abs.Resp	RRP	RT	#	RF	RL	Y/N	REI	Acq.Date	Acq.Time	1 <sup>st</sup> Chroma	ID	Sample Text	Factor	SW	CMF%	MDEL
1	PFBS	5.2330066	0.0026	104.7		6.775e4		2.99	1	7	0.362	YES	1.001	01-Mar-17	20:48:27	21.343	ST170301G	PFC CS2 17C01	1.0	1.00	C16_V	NO
2	PFNA	4.7202911		94.6		1.462e4		3.88	2	8			1.001	01-Mar-17	20:48:27		ST170301G	PFC CS2 17C01	1.0	1.00	C16_V	NO
3	PFHxS	5.6443476		112.9		3.966e4		3.99	3	9			1.000	01-Mar-17	20:48:27		ST170301G	PFC CS2 17C01	1.0	1.00	C16_V	YES
4	PFOA	4.3492681		87.0		1.195e4		4.25	4	10			1.000	01-Mar-17	20:48:27		ST170301G	PFC CS2 17C01	1.0	1.00	C16_V	YES
5	PFNA	5.4440777		108.9		1.180e4		4.61	5	11			1.000	01-Mar-17	20:48:27		ST170301G	PFC CS2 17C01	1.0	1.00	C16_V	YES
6	PFOS	5.2710719	0.0180	98.4		2.096e4		4.87	6	12			0.999	01-Mar-17	20:48:27		ST170301G	PFC CS2 17C01	1.0	1.00	C16_V	YES
7	13C1-PFBS	11.579420	0.000794	92.6		1.515e3	0.442	2.98	7	14			0.357	01-Mar-17	20:48:27		ST170301G	PFC CS2 17C01	1.0	1.00	C16_V	NO
8	13C4-PFNa	12.780749	0.00214	162.2		2.096e4	1.117	3.87	8	14			0.970	01-Mar-17	20:48:27		ST170301G	PFC CS2 17C01	1.0	1.00	C16_V	NO
9	18O2-PFHxS	11.957173	0.01845	89.7		7.376e3	0.420	3.99	9	14			1.000	01-Mar-17	20:48:27		ST170301G	PFC CS2 17C01	1.0	1.00	C16_V	NO
10	13C2-PFOA	14.805987	0.0115	118.6		3.671e4	2.762	4.28	10	15			1.000	01-Mar-17	20:48:27		ST170301G	PFC CS2 17C01	1.0	1.00	C16_V	NO
11	13C5-PFNA	13.438076	0.00548	137.5		1.167e4	0.546	4.61	11	16			1.000	01-Mar-17	20:48:27		ST170301G	PFC CS2 17C01	1.0	1.00	C16_V	NO
12	13C8-PFOS	13.158179	0.00453	105.3		1.550e4	0.941	4.67	12	17			1.000	01-Mar-17	20:48:27		ST170301G	PFC CS2 17C01	1.0	1.00	C16_V	NO
13	13C5-PFHxS	12.500000	0.00050	100.0		3.070e4	1.000	3.36	13	13			0.300	01-Mar-17	20:48:27		ST170301G	PFC CS2 17C01	1.0	1.00	C16_V	NO
14	13C3-PFHxS	12.500000	0.000165	100.0		1.836e4	1.000	3.99	14	14			0.000	01-Mar-17	20:48:27		ST170301G	PFC CS2 17C01	1.0	1.00	C16_V	NO
15	13C8-PFOA	12.500000	0.00445	100.0		1.110e4	1.000	4.28	15	15			0.000	01-Mar-17	20:48:27		ST170301G	PFC CS2 17C01	1.0	1.00	C16_V	NO
16	13C8-PFNA	12.500000	0.00560	100.0		1.283e4	1.000	4.61	16	16			0.000	01-Mar-17	20:48:27		ST170301G	PFC CS2 17C01	1.0	1.00	C16_V	NO
17	13C4-PFOS	12.500000	0.0156	100.0		1.699e4	1.000	4.67	17	17			0.000	01-Mar-17	20:48:27		ST170301G	PFC CS2 17C01	1.0	1.00	C16_V	NO
18	Total PFBS	5.2330066	0.00517						18					01-Mar-17	20:48:27		ST170301G	PFC CS2 17C01	1.0	1.00	C16_V	NO
19	Total PFHxS	6.5154125							19					01-Mar-17	20:48:27		ST170301G	PFC CS2 17C01	1.0	1.00	C16_V	NO
20	Total PFOA	4.3492681							20					01-Mar-17	20:48:27		ST170301G	PFC CS2 17C01	1.0	1.00	C16_V	NO
21	Total PFOS	6.1208006	0.0163						21					01-Mar-17	20:48:27		ST170301G	PFC CS2 17C01	1.0	1.00	C16_V	NO





Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-48.qld

Last Altered: Thursday, March 02, 2017 09:28:46 Pacific Standard Time

Printed: Thursday, March 02, 2017 09:29:50 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS\_6\_2trans\_LINEAR.mdb 28 Feb 2017 16:04:45

Calibration: U:\G1.pro\CurveDB\C18\_VAL-PFC\_Q1\_3-01-17\_L6\_2Trans.cdb 02 Mar 2017 08:18:08

Name: 170301G1\_48, Date: 02-Mar-2017, Time: 00:46:50, ID: ST170301G1-10 PFC CS2 17C0123, Description: PFC CS2 17C0123 A

#	Name	Trace	Response	IS Resp	RRF	Wt/Vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7	6.35e3	7.47e3		1.000	2.99	4.93	98.7
2	2 PFHpA	363 > 318.9	1.39e4	2.12e4		1.000	3.88	4.45	89.0
3	3 PFHxS	398.9 > 79.6	5.46e3	8.10e3		1.000	3.99	4.74	94.8
4	4 PFOA	413 > 368.7	1.34e4	3.70e4		1.000	4.28	4.84	96.8
5	5 PFNA	463 > 418.8	1.09e4	1.03e4		1.000	4.62	6.10	122.0
6	6 PFOS	499 > 79.9	2.04e3	8.54e3		1.000	4.68	5.75	115.0
7	7 13C3-PFBS	302.0 > 98.8	7.47e3	1.81e4	0.442	1.000	2.99	11.7	93.4
8	8 13C4-PFHpA	367.2 > 321.8	2.12e4	1.81e4	1.117	1.000	3.88	13.1	104.9
9	9 18O2-PFHxS	403 > 102.6	8.10e3	1.81e4	0.420	1.000	3.99	13.3	106.6
10	10 13C2-PFOA	414.9 > 369.7	3.70e4	1.00e4	2.782	1.000	4.28	16.5	132.3
11	11 13C5-PFNA	468.2 > 422.9	1.03e4	1.25e4	0.846	1.000	4.62	12.2	98.0
12	12 13C8-PFOS	507.0 > 79.9	8.54e3	9.92e3	0.941	1.000	4.68	11.4	91.4
13	13 13C5-PFHxA	318 > 272.9	3.21e4	3.21e4	1.000	1.000	3.37	12.5	100.0
14	14 13C3-PFHxS	401.9 > 79.9	1.81e4	1.81e4	1.000	1.000	3.99	12.5	100.0
15	15 13C8-PFOA	421.3 > 376	1.00e4	1.00e4	1.000	1.000	4.28	12.5	100.0
16	16 13C9-PFNA	472.2 > 426.9	1.25e4	1.25e4	1.000	1.000	4.61	12.5	100.0
17	17 13C4-PFOS	503.0 > 79.9	9.92e3	9.92e3	1.000	1.000	4.67	12.5	100.0

75-125  
↓  
60-150  
↓  
50-150  
60-150  
↓

ES 3/2/17

Dataset: Untitled

Last Altered: Thursday, March 02, 2017 09:06:06 Pacific Standard Time

Printed: Thursday, March 02, 2017 09:06:22 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS\_6\_2trans\_LINEAR.mdb 28 Feb 2017 16:04:45

Calibration: U:\G1.pro\CurveDB\C18\_VAL-PFC\_Q1\_3-01-17\_L6\_2Trans.cdb 02 Mar 2017 08:18:08

Compound name: PFBS

	Name	ID	Acq.Date	Acq.Time
1	170301G1_1	IPA	01-Mar-17	14:57:20
2	170301G1_2	ST170301G1-1 PFC CS-2 17C0119	01-Mar-17	15:09:39
3	170301G1_3	ST170301G1-2 PFC CS-1 17C0120	01-Mar-17	15:22:08
4	170301G1_4	ST170301G1-3 PFC CS0 17C0121	01-Mar-17	15:34:43
5	170301G1_5	ST170301G1-4 PFC CS1 17C0122	01-Mar-17	15:47:17
6	170301G1_6	ST170301G1-5 PFC CS2 17C0123	01-Mar-17	15:59:50
7	170301G1_7	ST170301G1-6 PFC CS3 17C0124	01-Mar-17	16:12:23
8	170301G1_8	ST170301G1-7 PFC CS4 17C0125	01-Mar-17	16:24:59
9	170301G1_9	ST170301G1-8 PFC CS5 17B2726	01-Mar-17	16:37:33
10	170301G1_10	IPA	01-Mar-17	16:50:06
11	170301G1_11	SS170301G1-1 PFC SSS 17C0127	01-Mar-17	17:02:38
12	170301G1_12	IPA	01-Mar-17	17:15:08
13	170301G1_13	B7B0118-BS1 OPR 0.125	01-Mar-17	17:27:46
14	170301G1_14	B7B0114-BS1 OPR 0.125	01-Mar-17	17:40:13
15	170301G1_15	IPA	01-Mar-17	17:52:54
16	170301G1_16	B7B0118-BLK1 Method Blank 0.125	01-Mar-17	18:05:24
17	170301G1_17	B7B0114-BLK1 Method Blank 0.125	01-Mar-17	18:17:56
18	170301G1_18	1700261-01 WI-CV-GW10D-0217 0.125	01-Mar-17	18:30:28
19	170301G1_19	1700261-02 WI-CV-EB01-022017 0.125	01-Mar-17	18:43:01
20	170301G1_20	1700261-03 WI-CV-GW065-0217 0.125	01-Mar-17	18:55:35
21	170301G1_21	1700261-04 WI-CV-GW065/5P-0217 0.125	01-Mar-17	19:08:08
22	170301G1_22	1700261-05 WI-CV-GW105-0217 0.125	01-Mar-17	19:20:37
23	170301G1_23	1700261-06 WI-CV-EB03-022217 0.125	01-Mar-17	19:33:12
24	170301G1_24	1700261-07 WI-CV-GW06M-0217 0.125	01-Mar-17	19:45:41
25	170301G1_25	B7B0118-MSD1 Matrix Spike Dup 0.125	01-Mar-17	19:58:14
26	170301G1_26	B7B0118-MS1 Matrix Spike 0.125	01-Mar-17	20:10:56
27	170301G1_27	1700261-08 WI-CV-EB02-022117 0.125	01-Mar-17	20:23:23
28	170301G1_28	IPA	01-Mar-17	20:35:54
29	170301G1_29	ST170301G1-9 PFC CS2 17C0123	01-Mar-17	20:48:27
30	170301G1_30	IPA	01-Mar-17	21:01:00
31	170301G1_31	B7B0129-BS1 OPR 0.125	01-Mar-17	21:13:33
32	170301G1_32	IPA	01-Mar-17	21:26:03



Dataset: Untitled

Last Altered: Thursday, March 02, 2017 09:06:06 Pacific Standard Time

Printed: Thursday, March 02, 2017 09:06:22 Pacific Standard Time

Compound name: PFBS

	Name	ID	Acq.Date	Acq.Time
33	170301G1_33	B7B0129-BLK1 Method Blank 0.125	01-Mar-17	21:38:38
34	170301G1_34	1700261-09 WI-CV-EB04-022317 0.125	01-Mar-17	21:51:09
35	170301G1_35	1700261-10 WI-CV-GW13M-0217 0.125	01-Mar-17	22:03:43
36	170301G1_36	1700245-01 Milk - 012617 0.125	01-Mar-17	22:16:13
37	170301G1_37	1700263-01 OW2E-MW09R-0217 0.12578	01-Mar-17	22:28:46
38	170301G1_38	1700263-02 OW2E-MW09RP-0217 0.12994	01-Mar-17	22:41:20
39	170301G1_39	1700263-03 OW2C-MW05-0217 0.13161	01-Mar-17	22:53:54
40	170301G1_40	1700263-04 OW2C-MW25-0217 0.12534	01-Mar-17	23:06:27
41	170301G1_41	1700263-05 OW2C-MW19-0217 0.12438	01-Mar-17	23:19:00
42	170301G1_42	B7B0129-MS1 Matrix Spike 0.12756	01-Mar-17	23:31:30
43	170301G1_43	B7B0129-MSD1 Matrix Spike Dup 0.12637	01-Mar-17	23:44:02
44	170301G1_44	1700263-06 OW2C-MW24-0217 0.1257	01-Mar-17	23:56:35
45	170301G1_45	1700263-07 OW2C-EB-0217 0.12647	02-Mar-17	00:09:09
46	170301G1_46	1700263-08 OW2C-FB-0217 0.13011	02-Mar-17	00:21:42
47	170301G1_47	IPA	02-Mar-17	00:34:15
48	170301G1_48	ST170301G1-10 PFC CS2 17C0123	02-Mar-17	00:46:50
49	170301G1_49	IPA	02-Mar-17	00:59:21



Dataset: Untitled

Last Altered: Thursday, March 02, 2017 09:26:36 Pacific Standard Time

Printed: Thursday, March 02, 2017 09:26:42 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS\_6\_2trans\_LINEAR.mdb 28 Feb 2017 16:04:45

Calibration: U:\G1.pro\CurveDB\C18\_VAL-PFC\_Q1\_3-01-17\_L6\_2Trans.cdb 02 Mar 2017 08:18:08

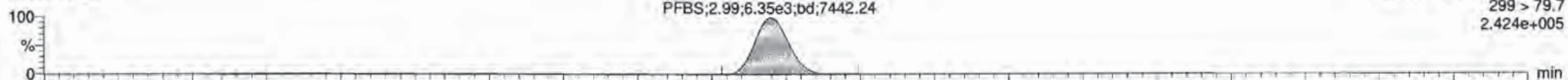
ID: ST170301G1-10 PFC CS2 17C0123, Description: PFC CS2 17C0123 A, Name: 170301G1\_48, Date: 02-Mar-2017, Time: 00:46:50, Instrument: , Lab: , User:

**PFBS**

170301G1\_48

PFBS;2.99;6.35e3;bd;7442.24

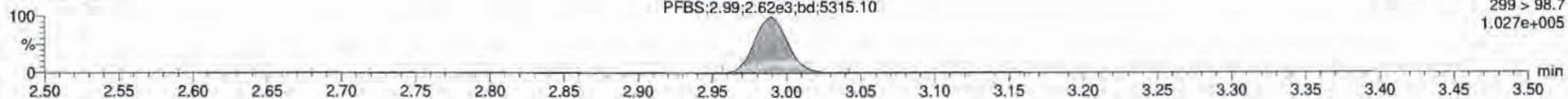
F2:MRM of 3 channels,ES-  
299 > 79.7  
2.424e+005



170301G1\_48

PFBS;2.99;2.62e3;bd;5315.10

F2:MRM of 3 channels,ES-  
299 > 98.7  
1.027e+005

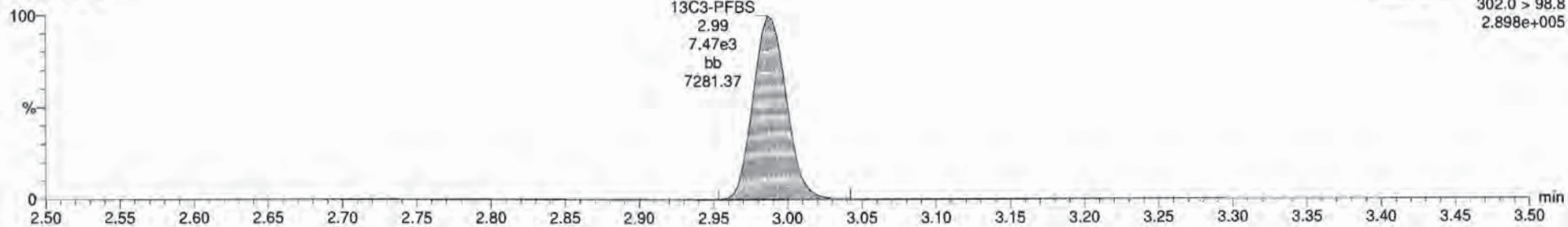


**13C3-PFBS**

170301G1\_48

13C3-PFBS  
2.99  
7.47e3  
bb  
7281.37

F2:MRM of 3 channels,ES-  
302.0 > 98.8  
2.898e+005

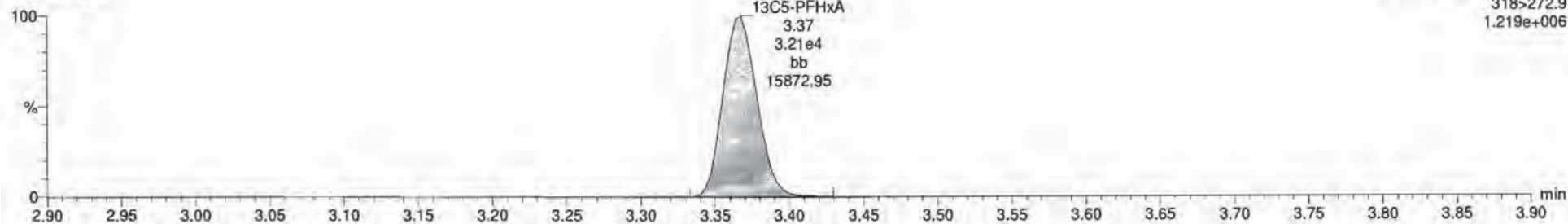


**13C5-PFHxA**

170301G1\_48

13C5-PFHxA  
3.37  
3.21e4  
bb  
15872.95

F3:MRM of 1 channel,ES-  
318>272.9  
1.219e+006



Dataset: Untitled

Last Altered: Thursday, March 02, 2017 09:26:36 Pacific Standard Time

Printed: Thursday, March 02, 2017 09:26:42 Pacific Standard Time

ID: ST170301G1-10 PFC CS2 17C0123, Description: PFC CS2 17C0123 A, Name: 170301G1\_48, Date: 02-Mar-2017, Time: 00:46:50, Instrument: , Lab: , User:

**PFHpA**

170301G1\_48

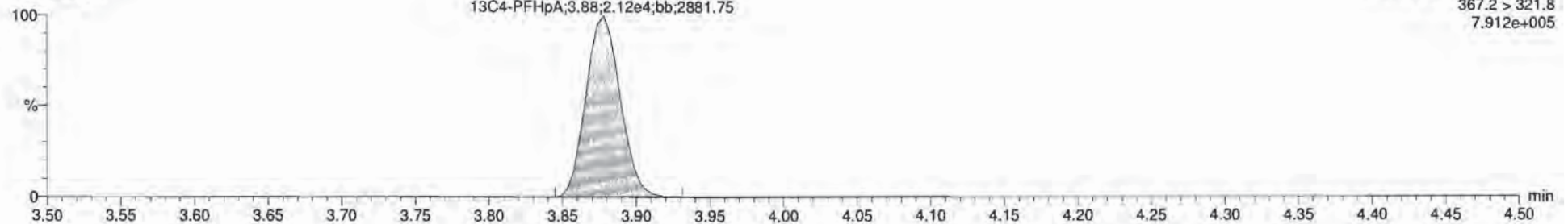


170301G1\_48



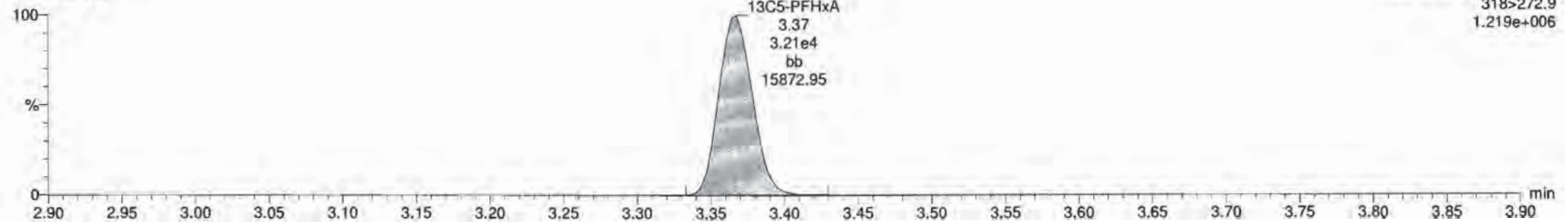
**13C4-PFHpA**

170301G1\_48



**13C5-PFHxA**

170301G1\_48



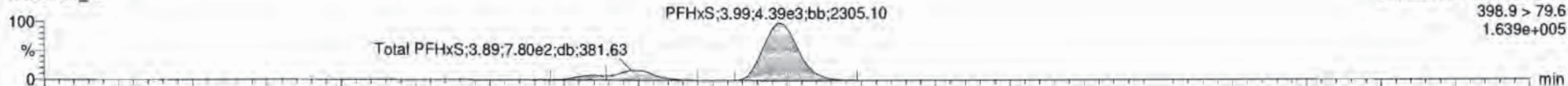
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Last Altered: Thursday, March 02, 2017 09:26:36 Pacific Standard Time  
Printed: Thursday, March 02, 2017 09:26:42 Pacific Standard Time

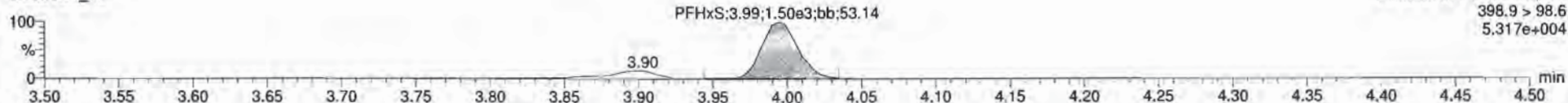
ID: ST170301G1-10 PFC CS2 17C0123, Description: PFC CS2 17C0123 A, Name: 170301G1\_48, Date: 02-Mar-2017, Time: 00:46:50, Instrument: , Lab: , User:

**Total PFHxS**

170301G1\_48

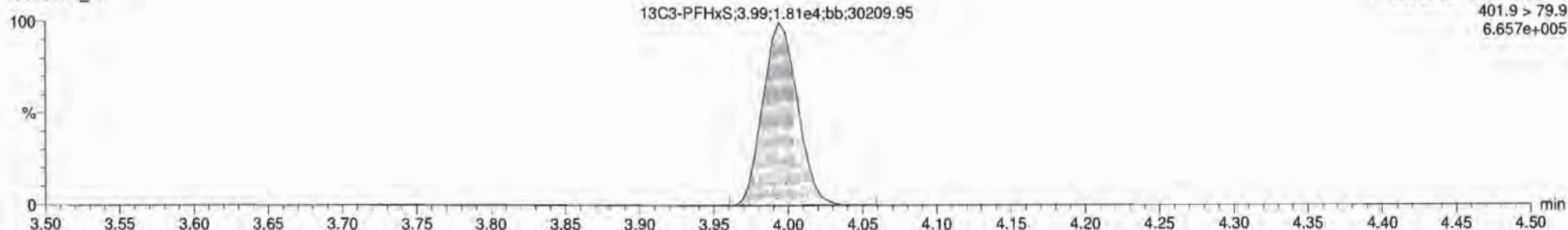


170301G1\_48



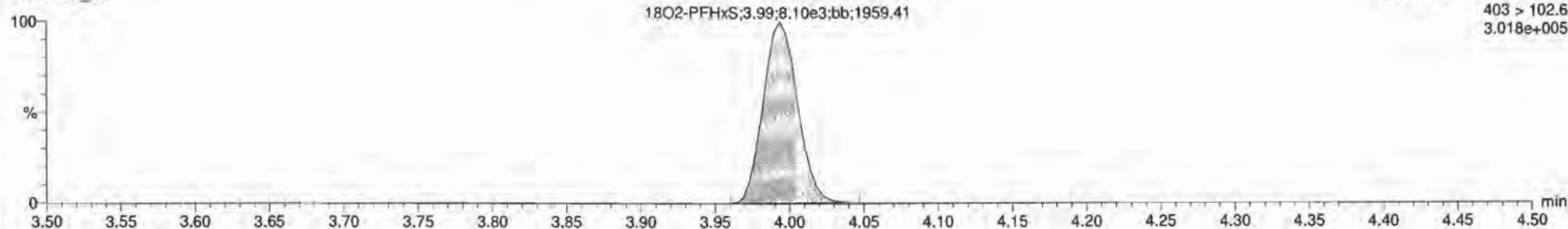
**13C3-PFHxS**

170301G1\_48



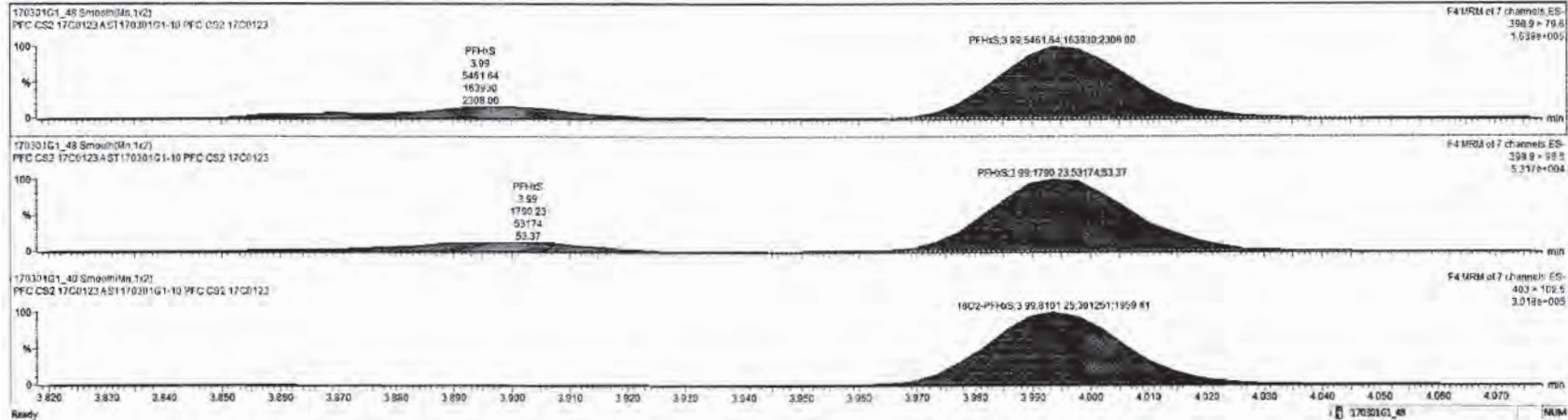
**18O2-PFHxS**

170301G1\_48





Name	Conc	DL	MR	EMPC	Abs. Resp	RF	RT	IS	SA	YS	RRT	Acc Date	Acq Time	P Chk/Name	D	Sample Test	Factor1	SR	Cal/Fa	WCL
1	PFBS	4.9329874	0.0049	93.7	8.347e3	2.99	1	7	0.413	-YES	1.001	02-Mar-17	00:46:53	19.246	ST170301G	PF-C52-17C01	1.0	1.00	C18_V	NO
2	PFHxA	4.4507420	0.0050	89.0	1.322e4	3.60	2	3			1.000	02-Mar-17	00:46:50		ST170301G	PF-C52-17C01	1.0	1.00	C18_V	NO
3	PFHxS	1.7422240	0.0000	34.8	5.465e3	3.90	3	9			1.000	02-Mar-17	00:46:50		ST170301G	PF-C52-17C01	1.0	1.00	C18_V	YES
4	PFOA	4.6413442	0.0000	96.0	1.335e4	4.28	4	10			1.000	02-Mar-17	00:46:50		ST170301G	PF-C52-17C01	1.0	1.00	C18_V	YES
5	PFNA	6.0964406	0.0000	122.0	1.094e4	4.82	5	11			1.000	02-Mar-17	00:46:50		ST170301G	PF-C52-17C01	1.0	1.00	C18_V	YES
6	PFOS	5.7478990	0.0337	115.0	2.045e3	4.88	6	12			1.000	02-Mar-17	00:46:50		ST170301G	PF-C52-17C01	1.0	1.00	C18_V	YES
7	13C-PFBS	11.670305	0.0042	33.4	7.468e3	0.442	2.99	7	14		0.887	02-Mar-17	00:46:50		ST170301G	PF-C52-17C01	1.0	1.00	C18_V	NO
8	13C-PFHxA	13.114139	0.0115	104.9	2.118e4	1.117	3.80	8	14		0.871	02-Mar-17	00:46:50		ST170301G	PF-C52-17C01	1.0	1.00	C18_V	NO
9	18O2-PFHxS	13.328596	0.0172	106.6	8.191e3	0.420	3.99	5	14		1.000	02-Mar-17	00:46:50		ST170301G	PF-C52-17C01	1.0	1.00	C18_V	NO
10	13C-PFOA	18.535749	0.0030	132.3	3.996e4	2.702	4.29	10	13		1.000	02-Mar-17	00:46:50		ST170301G	PF-C52-17C01	1.0	1.00	C18_V	NO
11	13C-PFHxA	12.244847	0.00487	98.0	1.032e4	0.846	4.82	11	18		1.001	02-Mar-17	00:46:50		ST170301G	PF-C52-17C01	1.0	1.00	C18_V	NO
12	13C-PFOS	11.427155	0.0155	91.4	8.541e3	0.841	4.88	12	17		1.001	02-Mar-17	00:46:50		ST170301G	PF-C52-17C01	1.0	1.00	C18_V	NO
13	13C-PFHxS	12.506000	0.00197	100.0	3.213e4	1.008	3.27	13	13		0.800	02-Mar-17	00:46:50		ST170301G	PF-C52-17C01	1.0	1.00	C18_V	NO
14	13C-PFHxS	12.506000	0.00193	100.0	1.809e4	1.009	3.89	14	14		0.800	02-Mar-17	00:46:50		ST170301G	PF-C52-17C01	1.0	1.00	C18_V	NO
15	13C-PFOA	12.505050	0.00320	100.0	1.055e4	1.008	4.29	15	15		0.800	02-Mar-17	00:46:50		ST170301G	PF-C52-17C01	1.0	1.00	C18_V	NO
16	13C-PFNA	12.505000	0.00990	100.0	1.245e4	1.008	4.81	16	16		0.800	02-Mar-17	00:46:50		ST170301G	PF-C52-17C01	1.0	1.00	C18_V	NO
17	13C-PFOS	12.505000	0.00121	100.0	9.925e3	1.900	4.87	17	17		0.800	02-Mar-17	00:46:50		ST170301G	PF-C52-17C01	1.0	1.00	C18_V	NO
18	Total PFBS	4.9902539	0.00463									02-Mar-17	00:46:50		ST170301G	PF-C52-17C01	1.0	1.00	C18_V	NO
19	Total PFHxS	5.5847731										02-Mar-17	00:46:50		ST170301G	PF-C52-17C01	1.0	1.00	C18_V	NO
20	Total PFOA	4.6413442										02-Mar-17	00:46:50		ST170301G	PF-C52-17C01	1.0	1.00	C18_V	NO
21	Total PFOS	7.3284874	0.0337									02-Mar-17	00:46:50		ST170301G	PF-C52-17C01	1.0	1.00	C18_V	NO



Dataset: Untitled

Last Altered: Thursday, March 02, 2017 09:26:36 Pacific Standard Time

Printed: Thursday, March 02, 2017 09:26:42 Pacific Standard Time

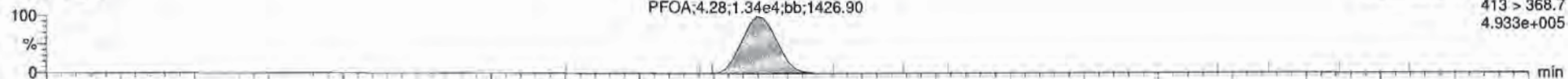
ID: ST170301G1-10 PFC CS2 17C0123, Description: PFC CS2 17C0123 A, Name: 170301G1\_48, Date: 02-Mar-2017, Time: 00:46:50, Instrument: , Lab: , User:

**Total PFOA**

170301G1\_48

PFOA;4.28;1.34e4;bb;1426.90

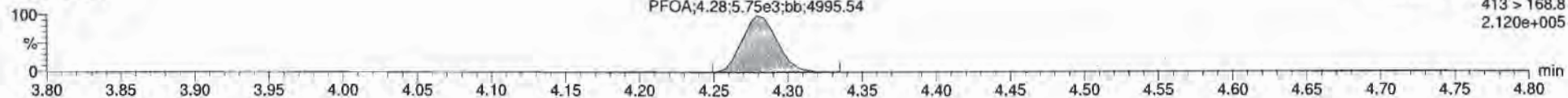
F5:MRM of 12 channels,ES-  
413 > 368.7  
4.933e+005



170301G1\_48

PFOA;4.28;5.75e3;bb;4995.54

F5:MRM of 12 channels,ES-  
413 > 168.8  
2.120e+005

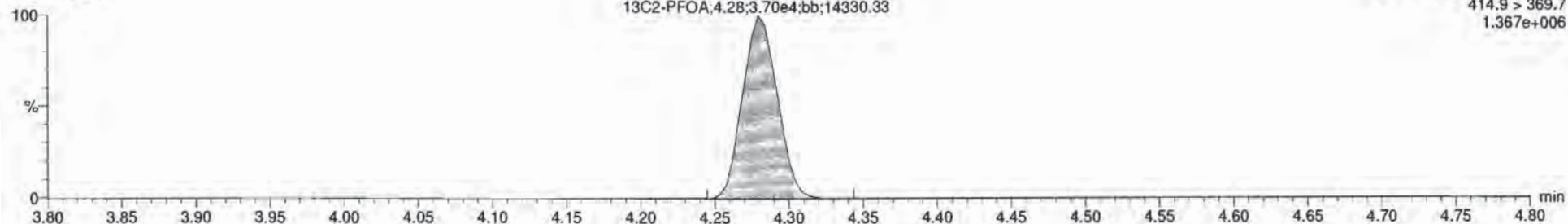


**13C2-PFOA**

170301G1\_48

13C2-PFOA;4.28;3.70e4;bb;14330.33

F5:MRM of 12 channels,ES-  
414.9 > 369.7  
1.367e+006

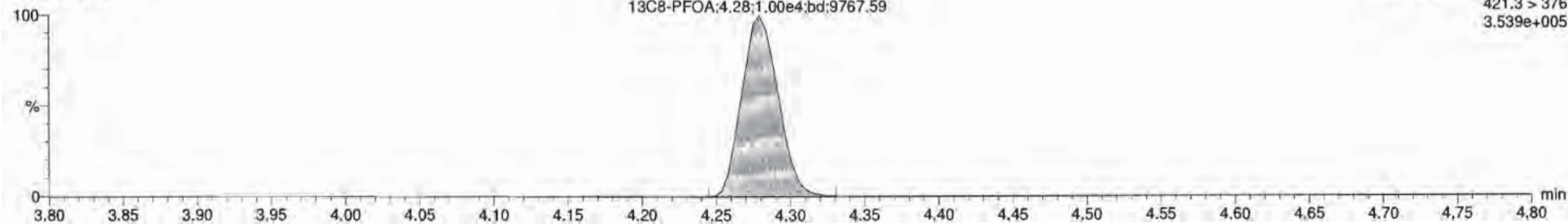


**13C8-PFOA**

170301G1\_48

13C8-PFOA;4.28;1.00e4;bd;9767.59

F5:MRM of 12 channels,ES-  
421.3 > 376  
3.539e+005



Dataset: Untitled

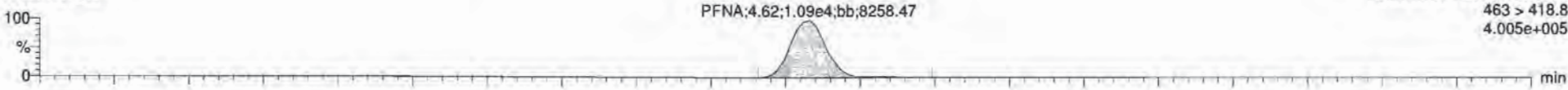
Last Altered: Thursday, March 02, 2017 09:26:36 Pacific Standard Time

Printed: Thursday, March 02, 2017 09:26:42 Pacific Standard Time

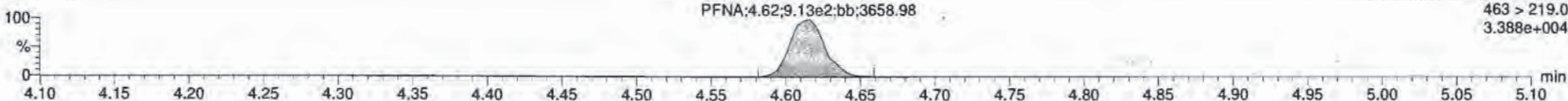
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**PFNA**

170301G1\_48

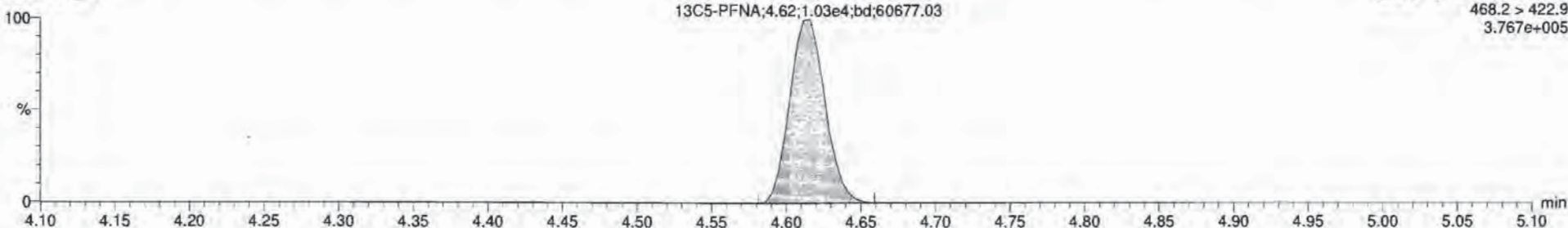


170301G1\_48



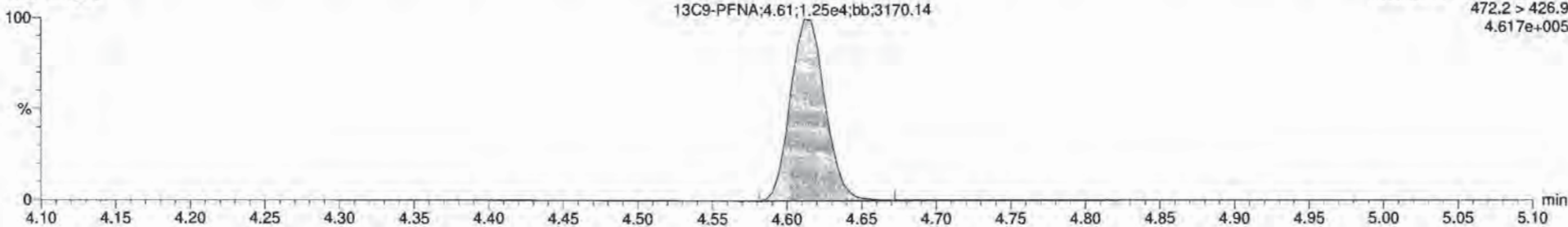
**13C5-PFNA**

170301G1\_48



**13C9-PFNA**

170301G1\_48





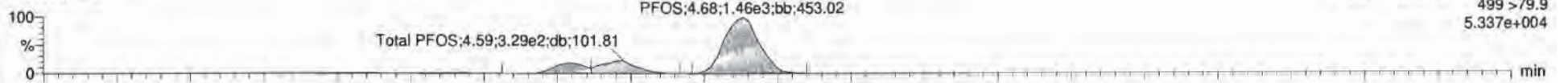
Dataset: Untitled

Last Altered: Thursday, March 02, 2017 09:26:36 Pacific Standard Time  
Printed: Thursday, March 02, 2017 09:26:42 Pacific Standard Time

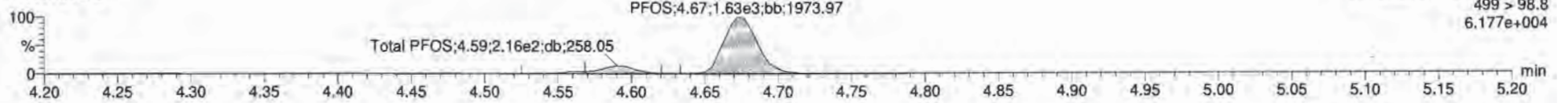
ID: ST170301G1-10 PFC CS2 17C0123, Description: PFC CS2 17C0123 A, Name: 170301G1\_48, Date: 02-Mar-2017, Time: 00:46:50, Instrument: , Lab: , User:

**Total PFOS**

170301G1\_48

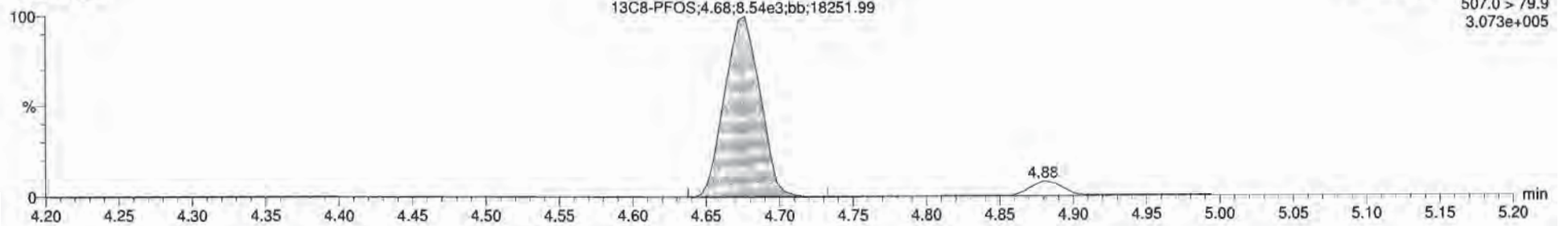


170301G1\_48



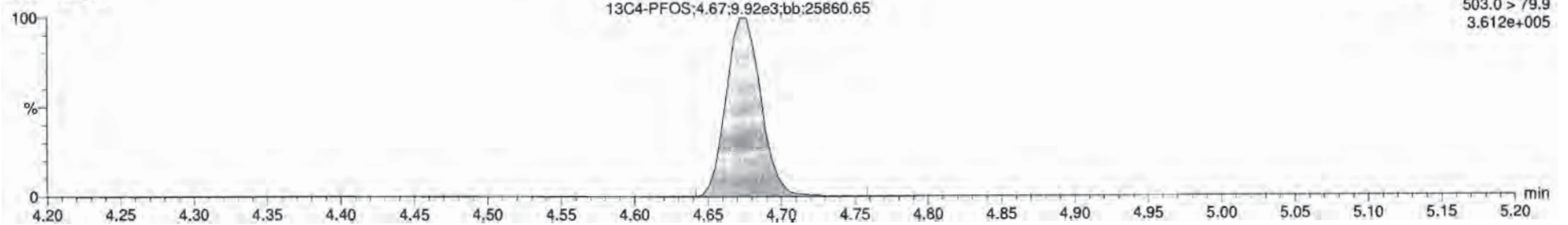
**13C8-PFOS**

170301G1\_48



**13C4-PFOS**

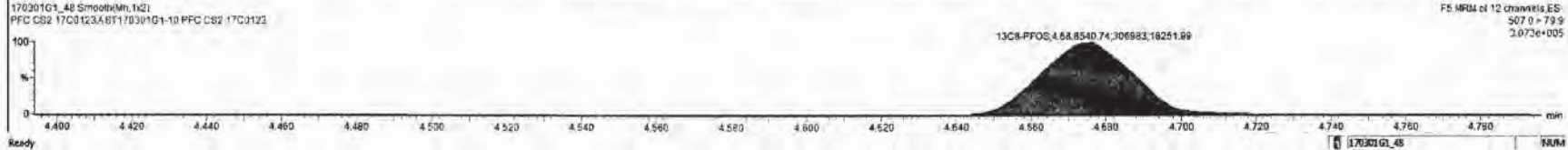
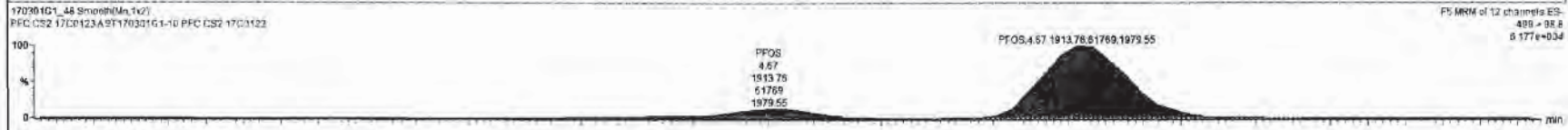
170301G1\_48





170301G1\_48 - ST170301G1-10 PFC CS2 17C0123 - PFC CS2 17C0123 A

#	Name	Contd.	CL	%Rec	EMPC	Abst Ratio	RPF	RT	#	ISF	RA	YN	RRT	Acq Date	Acq Time	1 <sup>st</sup> Chk No	ID	Sample Text	Factor1	SW	Cal File	MOD
1	PFBS	4.9338274	0.00569	96.7		6.34703		2.99	1	7	0.412	YES	1.00	02-Mar-17	00:46:50	19.316	ST170301G	PFC CS2 17C01	1.0	1.00	C18_V	NO
2	PFHpA	4.4507420	0.0000	80.0		1.59244		3.08	2	8			1.00	02-Mar-17	00:46:50		ST170301G	PFC CS2 17C01	1.0	1.00	C18_V	NO
3	PFHxS	3.7922598	0.0000	75.9		4.38543		3.99	3	9			1.00	02-Mar-17	00:46:50		ST170301G	PFC CS2 17C01	1.0	1.00	C18_V	YES
4	PFOA	4.8413442	0.0000	96.0		1.32644		4.28	4	10			1.00	02-Mar-17	00:46:50		ST170301G	PFC CS2 17C01	1.0	1.00	C18_V	YES
5	PFNA	8.0984408	0.0000	122.0		1.09444		4.62	6	11			1.00	02-Mar-17	00:46:50		ST170301G	PFC CS2 17C01	1.0	1.00	C18_V	YES
6	PFOS	4.7470900	0.0000	115.0		2.84940		4.68	6	12			1.00	02-Mar-17	00:46:50		ST170301G	PFC CS2 17C01	1.0	1.00	C18_V	YES
7	13CS-PFBS	11.070305	0.00422	93.4		7.48063	0.442	2.99	7	14			0.85	02-Mar-17	00:46:50		ST170301G	PFC CS2 17C01	1.0	1.00	C18_V	NO
8	13CL-PFHpA	13.114139	0.0115	104.8		2.11964	1.117	3.08	8	14			0.97	02-Mar-17	00:46:50		ST170301G	PFC CS2 17C01	1.0	1.00	C18_V	NO
9	13OC-PFHxS	13.328556	0.0172	106.6		8.10143	0.420	3.99	9	14			1.00	02-Mar-17	00:46:50		ST170301G	PFC CS2 17C01	1.0	1.00	C18_V	NO
10	13CC-PFOA	16.535749	0.0303	152.3		3.69564	2.782	4.28	10	15			1.00	02-Mar-17	00:46:50		ST170301G	PFC CS2 17C01	1.0	1.00	C18_V	NO
11	13CS-PFNA	12.244847	0.00497	96.0		1.03244	0.548	4.62	11	16			1.00	02-Mar-17	00:46:50		ST170301G	PFC CS2 17C01	1.0	1.00	C18_V	NO
12	13CS-PFOS	11.427155	0.00155	91.4		8.54163	0.941	4.68	12	17			1.00	02-Mar-17	00:46:50		ST170301G	PFC CS2 17C01	1.0	1.00	C18_V	NO
13	13CS-PFHpA	12.500000	0.00197	100.0		3.21364	1.000	3.37	13	13			0.00	02-Mar-17	00:46:50		ST170301G	PFC CS2 17C01	1.0	1.00	C18_V	NO
14	13CS-PFHxS	12.500000	0.00103	100.0		1.00964	1.000	3.99	14	14			0.00	02-Mar-17	00:46:50		ST170301G	PFC CS2 17C01	1.0	1.00	C18_V	NO
15	13CB-PFOA	12.500000	0.00320	100.0		1.00964	1.000	4.28	15	15			0.00	02-Mar-17	00:46:50		ST170301G	PFC CS2 17C01	1.0	1.00	C18_V	NO
16	13CS-PFNA	12.500000	0.00886	100.0		1.24564	1.000	4.61	16	16			0.00	02-Mar-17	00:46:50		ST170301G	PFC CS2 17C01	1.0	1.00	C18_V	NO
17	13CL-PFOS	12.500000	0.00121	100.0		9.92540	1.000	4.67	17	17			0.00	02-Mar-17	00:46:50		ST170301G	PFC CS2 17C01	1.0	1.00	C18_V	NO
18	Total PFBS	4.9502509	0.00563						18					02-Mar-17	00:46:50		ST170301G	PFC CS2 17C01	1.0	1.00	C18_V	NO
19	Total PFHxS	4.5567402							19					02-Mar-17	00:46:50		ST170301G	PFC CS2 17C01	1.0	1.00	C18_V	NO
20	Total PFOA	4.8413442							20					02-Mar-17	00:46:50		ST170301G	PFC CS2 17C01	1.0	1.00	C18_V	NO
21	Total PFOS	7.3384874	0.0037						21					02-Mar-17	00:46:50		ST170301G	PFC CS2 17C01	1.0	1.00	C18_V	NO





## **INITIAL CALIBRATION**

Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-CRV.qld

Last Altered: Thursday, March 02, 2017 08:18:08 Pacific Standard Time

Printed: Thursday, March 02, 2017 08:22:21 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS\_6\_2trans\_LINEAR.mdb 28 Feb 2017 16:04:45

Calibration: U:\G1.PRO\CurveDB\C18\_VAL-PFC\_Q1\_3-01-17\_L6\_2Trans.cdb 02 Mar 2017 08:18:08

**Compound name: PFBS**

Correlation coefficient:  $r = 0.999661$ ,  $r^2 = 0.999322$

Calibration curve:  $2.15479 * x + -0.00874732$

Response type: Internal Std ( Ref 7 ), Area \* ( IS Conc. / IS Area )

Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

*es 3/2/17*

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170301G1_2	0.250	2.98	3.28e2	7.51e3	0.258	3.2	2.19
2	2 170301G1_3	0.500	2.97	7.28e2	8.00e3	0.532	6.4	2.28
3	3 170301G1_4	1.00	2.97	1.23e3	8.02e3	0.891	-10.9	1.91
4	4 170301G1_5	2.00	2.97	2.93e3	8.74e3	1.95	-2.5	2.10
5	5 170301G1_6	5.00	2.98	6.07e3	7.36e3	4.78	-4.3	2.06
6	6 170301G1_7	10.0	2.98	1.44e4	7.66e3	10.9	9.0	2.35
7	7 170301G1_8	50.0	2.98	5.72e4	6.68e3	49.6	-0.7	2.14
8	8 170301G1_9	100	2.98	9.97e4	5.79e3	99.8	-0.2	2.15

*olm  
3/2/17*

**Compound name: PFHpA**

Correlation coefficient:  $r = 0.999574$ ,  $r^2 = 0.999147$

Calibration curve:  $1.83353 * x + 0.0475478$

Response type: Internal Std ( Ref 8 ), Area \* ( IS Conc. / IS Area )

Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170301G1_2	0.250	3.86	7.85e2	1.81e4	0.269	7.8	2.17
2	2 170301G1_3	0.500	3.86	1.47e3	1.95e4	0.488	-2.4	1.89
3	3 170301G1_4	1.00	3.86	3.16e3	1.98e4	1.06	6.1	1.99
4	4 170301G1_5	2.00	3.86	6.18e3	2.28e4	1.82	-8.8	1.70
5	5 170301G1_6	5.00	3.87	1.34e4	1.89e4	4.79	-4.2	1.77
6	6 170301G1_7	10.0	3.87	2.91e4	1.99e4	9.91	-0.9	1.82
7	7 170301G1_8	50.0	3.87	1.28e5	1.67e4	52.0	4.0	1.91
8	8 170301G1_9	100	3.87	2.16e5	1.49e4	98.4	-1.6	1.80

Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-CRV.qld

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**Compound name: PFHxS**

Coefficient of Determination:  $R^2 = 0.999683$

Calibration curve:  $0.0013481 * x^2 + 1.73839 * x + 0.152899$

Response type: Internal Std ( Ref 9 ), Area \* ( IS Conc. / IS Area )

Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170301G1_2	0.250	3.98	3.81e2	6.74e3	0.318	27.3	2.82
2	2 170301G1_3	0.500	3.98	5.38e2	7.28e3	0.443	-11.4	1.85
3	3 170301G1_4	1.00	3.98	1.01e3	7.61e3	0.870	-13.0	1.67
4	4 170301G1_5	2.00	3.98	2.16e3	7.82e3	1.89	-5.4	1.72
5	5 170301G1_6	5.00	3.98	4.81e3	6.79e3	4.98	-0.4	1.77
6	6 170301G1_7	10.0	3.98	1.12e4	7.73e3	10.3	3.0	1.82
7	7 170301G1_8	50.0	3.98	4.80e4	6.65e3	49.9	-0.1	1.81
8	8 170301G1_9	100	3.98	8.93e4	5.95e3	100	0.0	1.87

**Compound name: PFOA**

Correlation coefficient:  $r = 0.999586$ ,  $r^2 = 0.999171$

Calibration curve:  $0.91162 * x + 0.105798$

Response type: Internal Std ( Ref 10 ), Area \* ( IS Conc. / IS Area )

Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170301G1_2	0.250	4.27	8.80e2	3.24e4	0.257	2.7	1.36
2	2 170301G1_3	0.500	4.27	1.60e3	3.43e4	0.526	5.3	1.17
3	3 170301G1_4	1.00	4.27	2.80e3	3.31e4	1.04	4.5	1.06
4	4 170301G1_5	2.00	4.27	5.14e3	3.56e4	1.86	-6.8	0.903
5	5 170301G1_6	5.00	4.27	1.16e4	3.37e4	4.61	-7.8	0.862
6	6 170301G1_7	10.0	4.27	2.61e4	3.55e4	9.97	-0.3	0.920
7	7 170301G1_8	50.0	4.27	1.21e5	3.20e4	51.9	3.8	0.948
8	8 170301G1_9	100	4.27	2.10e5	2.92e4	98.6	-1.4	0.900



Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-CRV.qld

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**Compound name: PFNA**

Correlation coefficient:  $r = 0.999823$ ,  $r^2 = 0.999645$

Calibration curve:  $2.14195 * x + 0.180366$

Response type: Internal Std ( Ref 11 ), Area \* ( IS Conc. / IS Area )

Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170301G1_2	0.250	4.60	5.85e2	1.09e4	0.230	-7.9	2.69
2	2 170301G1_3	0.500	4.60	1.19e3	1.18e4	0.505	1.0	2.52
3	3 170301G1_4	1.00	4.60	2.16e3	1.11e4	1.05	4.5	2.42
4	4 170301G1_5	2.00	4.60	4.21e3	1.21e4	1.95	-2.3	2.18
5	5 170301G1_6	5.00	4.60	9.48e3	1.10e4	4.92	-1.5	2.14
6	6 170301G1_7	10.0	4.61	1.93e4	1.05e4	10.7	6.9	2.31
7	7 170301G1_8	50.0	4.61	1.05e5	1.23e4	50.0	-0.1	2.14
8	8 170301G1_9	100	4.60	1.89e5	1.11e4	99.4	-0.6	2.13

**Compound name: PFOS**

Correlation coefficient:  $r = 0.998821$ ,  $r^2 = 0.997644$

Calibration curve:  $0.521667 * x + -0.00559175$

Response type: Internal Std ( Ref 12 ), Area \* ( IS Conc. / IS Area )

Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170301G1_2	0.250	4.67	1.09e2	8.67e3	0.311	24.5	0.627
2	2 170301G1_3	0.500	4.66	1.57e2	1.02e4	0.379	-24.2	0.384
3	3 170301G1_4	1.00	4.66	3.48e2	1.01e4	0.833	-16.7	0.429
4	4 170301G1_5	2.00	4.66	7.67e2	9.01e3	2.05	2.5	0.532
5	5 170301G1_6	5.00	4.67	1.73e3	8.84e3	4.70	-6.0	0.489
6	6 170301G1_7	10.0	4.66	3.59e3	7.38e3	11.7	16.6	0.608
7	7 170301G1_8	50.0	4.67	2.23e4	1.07e4	50.2	0.3	0.523
8	8 170301G1_9	100	4.67	4.10e4	9.97e3	98.7	-1.3	0.515

Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-CRV.qld

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**Compound name: 13C3-PFBS**

Response Factor: 0.442319

RRF SD: 0.0236024, Relative SD: 5.33606

Response type: Internal Std ( Ref 14 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170301G1_2	12.5	2.97	7.51e3	1.69e4	12.6	0.4	0.444
2	2 170301G1_3	12.5	2.97	8.00e3	1.78e4	12.7	1.6	0.449
3	3 170301G1_4	12.5	2.97	8.02e3	1.82e4	12.4	-0.6	0.440
4	4 170301G1_5	12.5	2.97	8.74e3	1.94e4	12.7	1.7	0.450
5	5 170301G1_6	12.5	2.97	7.36e3	1.59e4	13.1	4.6	0.463
6	6 170301G1_7	12.5	2.97	7.66e3	1.61e4	13.4	7.5	0.475
7	7 170301G1_8	12.5	2.97	6.68e3	1.65e4	11.4	-8.5	0.405
8	8 170301G1_9	12.5	2.97	5.79e3	1.40e4	11.7	-6.6	0.413

**Compound name: 13C4-PFHpA**

Response Factor: 1.11689

RRF SD: 0.0752551, Relative SD: 6.7379

Response type: Internal Std ( Ref 14 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170301G1_2	12.5	3.86	1.81e4	1.69e4	12.0	-4.0	1.07
2	2 170301G1_3	12.5	3.86	1.95e4	1.78e4	12.3	-1.8	1.10
3	3 170301G1_4	12.5	3.86	1.98e4	1.82e4	12.2	-2.6	1.09
4	4 170301G1_5	12.5	3.86	2.28e4	1.94e4	13.1	4.9	1.17
5	5 170301G1_6	12.5	3.87	1.89e4	1.59e4	13.3	6.7	1.19
6	6 170301G1_7	12.5	3.87	1.99e4	1.61e4	13.8	10.8	1.24
7	7 170301G1_8	12.5	3.87	1.67e4	1.65e4	11.3	-9.3	1.01
8	8 170301G1_9	12.5	3.87	1.49e4	1.40e4	11.9	-4.6	1.07



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**Compound name: 18O2-PFHxS**

Response Factor: 0.420072

RRF SD: 0.026108, Relative SD: 6.21512

Response type: Internal Std ( Ref 14 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170301G1_2	12.5	3.98	6.74e3	1.69e4	11.9	-5.0	0.399
2	2 170301G1_3	12.5	3.98	7.28e3	1.78e4	12.2	-2.6	0.409
3	3 170301G1_4	12.5	3.98	7.61e3	1.82e4	12.4	-0.7	0.417
4	4 170301G1_5	12.5	3.98	7.82e3	1.94e4	12.0	-4.2	0.402
5	5 170301G1_6	12.5	3.98	6.79e3	1.59e4	12.7	1.7	0.427
6	6 170301G1_7	12.5	3.98	7.73e3	1.61e4	14.3	14.1	0.479
7	7 170301G1_8	12.5	3.98	6.65e3	1.65e4	12.0	-4.2	0.403
8	8 170301G1_9	12.5	3.98	5.95e3	1.40e4	12.6	1.0	0.424

**Compound name: 13C2-PFOA**

Response Factor: 2.78174

RRF SD: 0.14342, Relative SD: 5.15577

Response type: Internal Std ( Ref 15 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170301G1_2	12.5	4.27	3.24e4	1.11e4	13.2	5.3	2.93
2	2 170301G1_3	12.5	4.27	3.43e4	1.25e4	12.3	-1.6	2.74
3	3 170301G1_4	12.5	4.27	3.31e4	1.29e4	11.5	-7.7	2.57
4	4 170301G1_5	12.5	4.27	3.56e4	1.38e4	11.6	-7.6	2.57
5	5 170301G1_6	12.5	4.27	3.37e4	1.16e4	13.1	4.6	2.91
6	6 170301G1_7	12.5	4.27	3.55e4	1.26e4	12.7	1.7	2.83
7	7 170301G1_8	12.5	4.27	3.20e4	1.13e4	12.7	1.9	2.83
8	8 170301G1_9	12.5	4.27	2.92e4	1.02e4	12.9	3.3	2.87

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Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-CRV.qld

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**Compound name: 13C5-PFNA**

Response Factor: 0.846329

RRF SD: 0.0461649, Relative SD: 5.45473

Response type: Internal Std ( Ref 16 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170301G1_2	12.5	4.60	1.09e4	1.33e4	12.0	-3.8	0.814
2	2 170301G1_3	12.5	4.60	1.18e4	1.46e4	12.0	-4.0	0.812
3	3 170301G1_4	12.5	4.60	1.11e4	1.40e4	11.7	-6.0	0.795
4	4 170301G1_5	12.5	4.60	1.21e4	1.51e4	11.8	-5.7	0.798
5	5 170301G1_6	12.5	4.60	1.10e4	1.26e4	12.9	3.4	0.876
6	6 170301G1_7	12.5	4.60	1.05e4	1.20e4	12.8	2.7	0.869
7	7 170301G1_8	12.5	4.60	1.23e4	1.36e4	13.3	6.5	0.902
8	8 170301G1_9	12.5	4.60	1.11e4	1.22e4	13.4	6.9	0.904

**Compound name: 13C8-PFOS**

Response Factor: 0.941363

RRF SD: 0.084731, Relative SD: 9.00088

Response type: Internal Std ( Ref 17 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170301G1_2	12.5	4.66	8.67e3	9.62e3	12.0	-4.2	0.901
2	2 170301G1_3	12.5	4.66	1.02e4	1.15e4	11.8	-5.2	0.892
3	3 170301G1_4	12.5	4.66	1.01e4	1.07e4	12.5	0.4	0.945
4	4 170301G1_5	12.5	4.66	9.01e3	1.11e4	10.8	-13.7	0.812
5	5 170301G1_6	12.5	4.66	8.84e3	9.82e3	12.0	-4.3	0.901
6	6 170301G1_7	12.5	4.66	7.38e3	7.48e3	13.1	4.7	0.986
7	7 170301G1_8	12.5	4.66	1.07e4	1.06e4	13.3	6.8	1.01
8	8 170301G1_9	12.5	4.66	9.97e3	9.15e3	14.5	15.7	1.09

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**Compound name: 13C5-PFHxA**

Response Factor: 1

RRF SD: 1.18688e-016, Relative SD: 1.18688e-014

Response type: Internal Std ( Ref 13 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170301G1_2	12.5	3.35	2.76e4	2.76e4	12.5	0.0	1.00
2	2 170301G1_3	12.5	3.35	3.04e4	3.04e4	12.5	0.0	1.00
3	3 170301G1_4	12.5	3.35	3.12e4	3.12e4	12.5	0.0	1.00
4	4 170301G1_5	12.5	3.35	3.16e4	3.16e4	12.5	0.0	1.00
5	5 170301G1_6	12.5	3.35	2.80e4	2.80e4	12.5	0.0	1.00
6	6 170301G1_7	12.5	3.35	3.05e4	3.05e4	12.5	0.0	1.00
7	7 170301G1_8	12.5	3.35	2.64e4	2.64e4	12.5	0.0	1.00
8	8 170301G1_9	12.5	3.35	2.31e4	2.31e4	12.5	0.0	1.00

**Compound name: 13C3-PFHxS**

Response Factor: 1

RRF SD: 5.93439e-017, Relative SD: 5.93439e-015

Response type: Internal Std ( Ref 14 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170301G1_2	12.5	3.98	1.69e4	1.69e4	12.5	0.0	1.00
2	2 170301G1_3	12.5	3.98	1.78e4	1.78e4	12.5	0.0	1.00
3	3 170301G1_4	12.5	3.98	1.82e4	1.82e4	12.5	0.0	1.00
4	4 170301G1_5	12.5	3.98	1.94e4	1.94e4	12.5	0.0	1.00
5	5 170301G1_6	12.5	3.98	1.59e4	1.59e4	12.5	-0.0	1.00
6	6 170301G1_7	12.5	3.98	1.61e4	1.61e4	12.5	0.0	1.00
7	7 170301G1_8	12.5	3.98	1.65e4	1.65e4	12.5	0.0	1.00
8	8 170301G1_9	12.5	3.98	1.40e4	1.40e4	12.5	-0.0	1.00



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**Compound name: 13C8-PFOA**

Response Factor: 1

RRF SD: 8.3925e-017, Relative SD: 8.3925e-015

Response type: Internal Std ( Ref 15 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170301G1_2	12.5	4.27	1.11e4	1.11e4	12.5	0.0	1.00
2	2 170301G1_3	12.5	4.27	1.25e4	1.25e4	12.5	0.0	1.00
3	3 170301G1_4	12.5	4.27	1.29e4	1.29e4	12.5	0.0	1.00
4	4 170301G1_5	12.5	4.27	1.38e4	1.38e4	12.5	0.0	1.00
5	5 170301G1_6	12.5	4.27	1.16e4	1.16e4	12.5	0.0	1.00
6	6 170301G1_7	12.5	4.27	1.26e4	1.26e4	12.5	0.0	1.00
7	7 170301G1_8	12.5	4.27	1.13e4	1.13e4	12.5	0.0	1.00
8	8 170301G1_9	12.5	4.27	1.02e4	1.02e4	12.5	0.0	1.00

**Compound name: 13C9-PFNA**

Response Factor: 1

RRF SD: 1.02787e-016, Relative SD: 1.02787e-014

Response type: Internal Std ( Ref 16 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170301G1_2	12.5	4.60	1.33e4	1.33e4	12.5	0.0	1.00
2	2 170301G1_3	12.5	4.60	1.46e4	1.46e4	12.5	0.0	1.00
3	3 170301G1_4	12.5	4.60	1.40e4	1.40e4	12.5	0.0	1.00
4	4 170301G1_5	12.5	4.60	1.51e4	1.51e4	12.5	-0.0	1.00
5	5 170301G1_6	12.5	4.60	1.26e4	1.26e4	12.5	0.0	1.00
6	6 170301G1_7	12.5	4.60	1.20e4	1.20e4	12.5	0.0	1.00
7	7 170301G1_8	12.5	4.60	1.36e4	1.36e4	12.5	-0.0	1.00
8	8 170301G1_9	12.5	4.60	1.22e4	1.22e4	12.5	0.0	1.00

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**Compound name: 13C4-PFOS**

Response Factor: 1

RRF SD: 0, Relative SD: 0

Response type: Internal Std ( Ref 17 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170301G1_2	12.5	4.66	9.62e3	9.62e3	12.5	0.0	1.00
2	2 170301G1_3	12.5	4.66	1.15e4	1.15e4	12.5	0.0	1.00
3	3 170301G1_4	12.5	4.66	1.07e4	1.07e4	12.5	0.0	1.00
4	4 170301G1_5	12.5	4.66	1.11e4	1.11e4	12.5	0.0	1.00
5	5 170301G1_6	12.5	4.67	9.82e3	9.82e3	12.5	0.0	1.00
6	6 170301G1_7	12.5	4.66	7.48e3	7.48e3	12.5	0.0	1.00
7	7 170301G1_8	12.5	4.67	1.06e4	1.06e4	12.5	0.0	1.00
8	8 170301G1_9	12.5	4.66	9.15e3	9.15e3	12.5	0.0	1.00

Dataset: Untitled

Last Altered: Thursday, March 02, 2017 09:06:06 Pacific Standard Time

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Method: U:\G1.pro\MethDB\PFAS\_6\_2trans\_LINEAR.mdb 28 Feb 2017 16:04:45

Calibration: U:\G1.pro\CurveDB\C18\_VAL-PFC\_Q1\_3-01-17\_L6\_2Trans.cdb 02 Mar 2017 08:18:08

Compound name: PFBS

	Name	ID	Acq.Date	Acq.Time
1	170301G1_1	IPA	01-Mar-17	14:57:20
2	170301G1_2	ST170301G1-1 PFC CS-2 17C0119	01-Mar-17	15:09:39
3	170301G1_3	ST170301G1-2 PFC CS-1 17C0120	01-Mar-17	15:22:08
4	170301G1_4	ST170301G1-3 PFC CS0 17C0121	01-Mar-17	15:34:43
5	170301G1_5	ST170301G1-4 PFC CS1 17C0122	01-Mar-17	15:47:17
6	170301G1_6	ST170301G1-5 PFC CS2 17C0123	01-Mar-17	15:59:50
7	170301G1_7	ST170301G1-6 PFC CS3 17C0124	01-Mar-17	16:12:23
8	170301G1_8	ST170301G1-7 PFC CS4 17C0125	01-Mar-17	16:24:59
9	170301G1_9	ST170301G1-8 PFC CS5 17B2726	01-Mar-17	16:37:33
10	170301G1_10	IPA	01-Mar-17	16:50:06
11	170301G1_11	SS170301G1-1 PFC SSS 17C0127	01-Mar-17	17:02:38
12	170301G1_12	IPA	01-Mar-17	17:15:08
13	170301G1_13	B7B0118-BS1 OPR 0.125	01-Mar-17	17:27:46
14	170301G1_14	B7B0114-BS1 OPR 0.125	01-Mar-17	17:40:13
15	170301G1_15	IPA	01-Mar-17	17:52:54
16	170301G1_16	B7B0118-BLK1 Method Blank 0.125	01-Mar-17	18:05:24
17	170301G1_17	B7B0114-BLK1 Method Blank 0.125	01-Mar-17	18:17:56
18	170301G1_18	1700261-01 WI-CV-GW10D-0217 0.125	01-Mar-17	18:30:28
19	170301G1_19	1700261-02 WI-CV-EB01-022017 0.125	01-Mar-17	18:43:01
20	170301G1_20	1700261-03 WI-CV-GW065-0217 0.125	01-Mar-17	18:55:35
21	170301G1_21	1700261-04 WI-CV-GW065/5P-0217 0.125	01-Mar-17	19:08:08
22	170301G1_22	1700261-05 WI-CV-GW105-0217 0.125	01-Mar-17	19:20:37
23	170301G1_23	1700261-06 WI-CV-EB03-022217 0.125	01-Mar-17	19:33:12
24	170301G1_24	1700261-07 WI-CV-GW06M-0217 0.125	01-Mar-17	19:45:41
25	170301G1_25	B7B0118-MSD1 Matrix Spike Dup 0.125	01-Mar-17	19:58:14
26	170301G1_26	B7B0118-MS1 Matrix Spike 0.125	01-Mar-17	20:10:56
27	170301G1_27	1700261-08 WI-CV-EB02-022117 0.125	01-Mar-17	20:23:23
28	170301G1_28	IPA	01-Mar-17	20:35:54
29	170301G1_29	ST170301G1-9 PFC CS2 17C0123	01-Mar-17	20:48:27
30	170301G1_30	IPA	01-Mar-17	21:01:00
31	170301G1_31	B7B0129-BS1 OPR 0.125	01-Mar-17	21:13:33
32	170301G1_32	IPA	01-Mar-17	21:26:03



Dataset: Untitled

Last Altered: Thursday, March 02, 2017 09:06:06 Pacific Standard Time

Printed: Thursday, March 02, 2017 09:06:22 Pacific Standard Time

Compound name: PFBS

	Name	ID	Acq.Date	Acq.Time
33	170301G1_33	B7B0129-BLK1 Method Blank 0.125	01-Mar-17	21:38:38
34	170301G1_34	1700261-09 WI-CV-EB04-022317 0.125	01-Mar-17	21:51:09
35	170301G1_35	1700261-10 WI-CV-GW13M-0217 0.125	01-Mar-17	22:03:43
36	170301G1_36	1700245-01 Milk - 012617 0.125	01-Mar-17	22:16:13
37	170301G1_37	1700263-01 OW2E-MW09R-0217 0.12578	01-Mar-17	22:28:46
38	170301G1_38	1700263-02 OW2E-MW09RP-0217 0.12994	01-Mar-17	22:41:20
39	170301G1_39	1700263-03 OW2C-MW05-0217 0.13161	01-Mar-17	22:53:54
40	170301G1_40	1700263-04 OW2C-MW25-0217 0.12534	01-Mar-17	23:06:27
41	170301G1_41	1700263-05 OW2C-MW19-0217 0.12438	01-Mar-17	23:19:00
42	170301G1_42	B7B0129-MS1 Matrix Spike 0.12756	01-Mar-17	23:31:30
43	170301G1_43	B7B0129-MSD1 Matrix Spike Dup 0.12637	01-Mar-17	23:44:02
44	170301G1_44	1700263-06 OW2C-MW24-0217 0.1257	01-Mar-17	23:56:35
45	170301G1_45	1700263-07 OW2C-EB-0217 0.12647	02-Mar-17	00:09:09
46	170301G1_46	1700263-08 OW2C-FB-0217 0.13011	02-Mar-17	00:21:42
47	170301G1_47	IPA	02-Mar-17	00:34:15
48	170301G1_48	ST170301G1-10 PFC CS2 17C0123	02-Mar-17	00:46:50
49	170301G1_49	IPA	02-Mar-17	00:59:21

Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-CRV.qld

Last Altered: Thursday, March 02, 2017 08:18:08 Pacific Standard Time

Printed: Thursday, March 02, 2017 08:20:49 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS\_6\_2trans\_LINEAR.mdb 28 Feb 2017 16:04:45

Calibration: U:\G1.PRO\CurveDB\C18\_VAL-PFC\_Q1\_3-01-17\_L6\_2Trans.cdb 02 Mar 2017 08:18:08

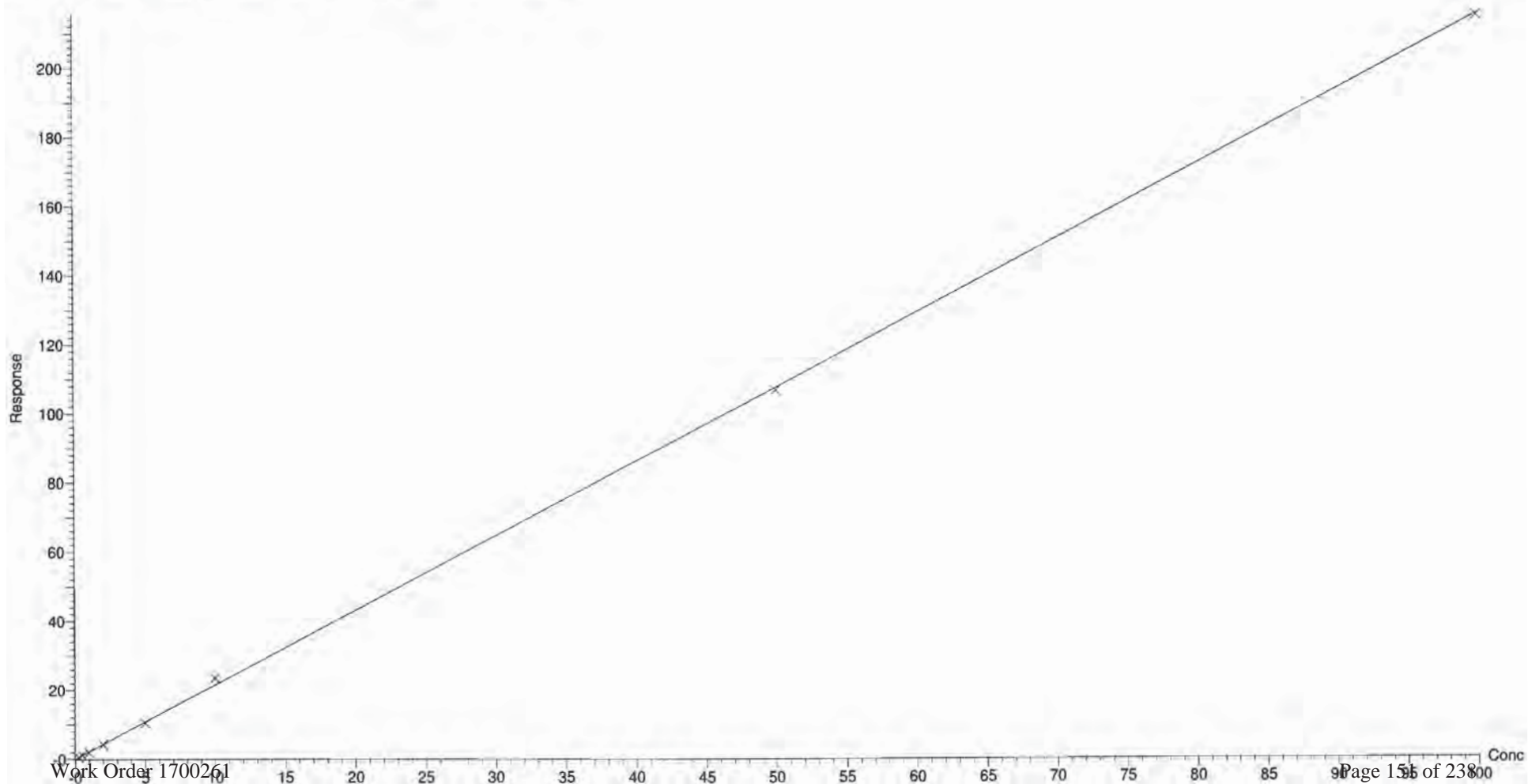
Compound name: PFBS

Correlation coefficient:  $r = 0.999661$ ,  $r^2 = 0.999322$

Calibration curve:  $2.15479 * x + -0.00874732$

Response type: Internal Std ( Ref 7 ), Area \* ( IS Conc. / IS Area )

Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

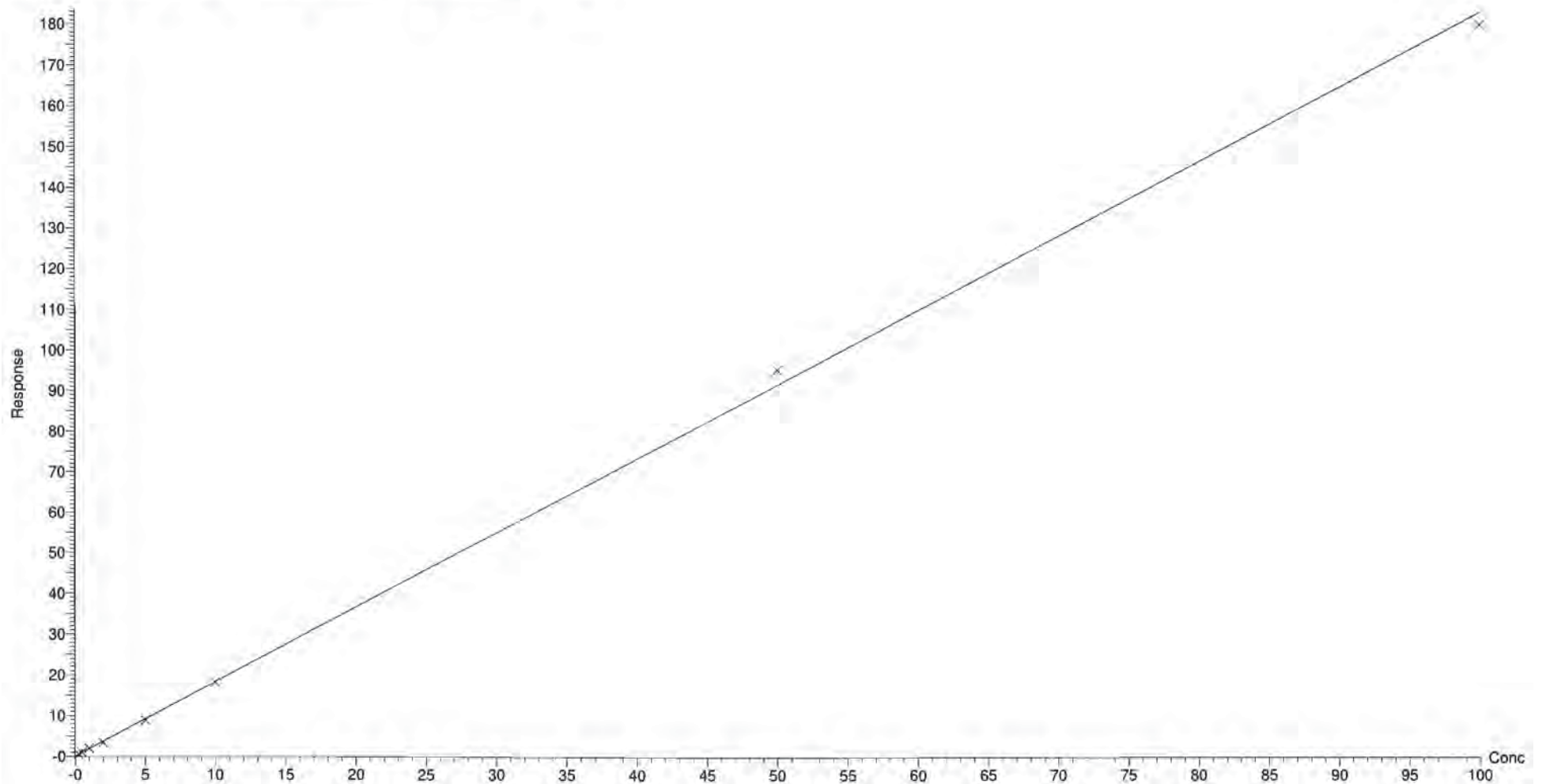


Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-CRV.qld

Last Altered: Thursday, March 02, 2017 08:18:08 Pacific Standard Time

Printed: Thursday, March 02, 2017 08:20:49 Pacific Standard Time

Compound name: PFHpA  
Correlation coefficient:  $r = 0.999574$ ,  $r^2 = 0.999147$   
Calibration curve:  $1.83353 * x + 0.0475478$   
Response type: Internal Std ( Ref 8 ), Area \* ( IS Conc. / IS Area )  
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-CRV.qld

Last Altered: Thursday, March 02, 2017 08:18:08 Pacific Standard Time

Printed: Thursday, March 02, 2017 08:20:49 Pacific Standard Time

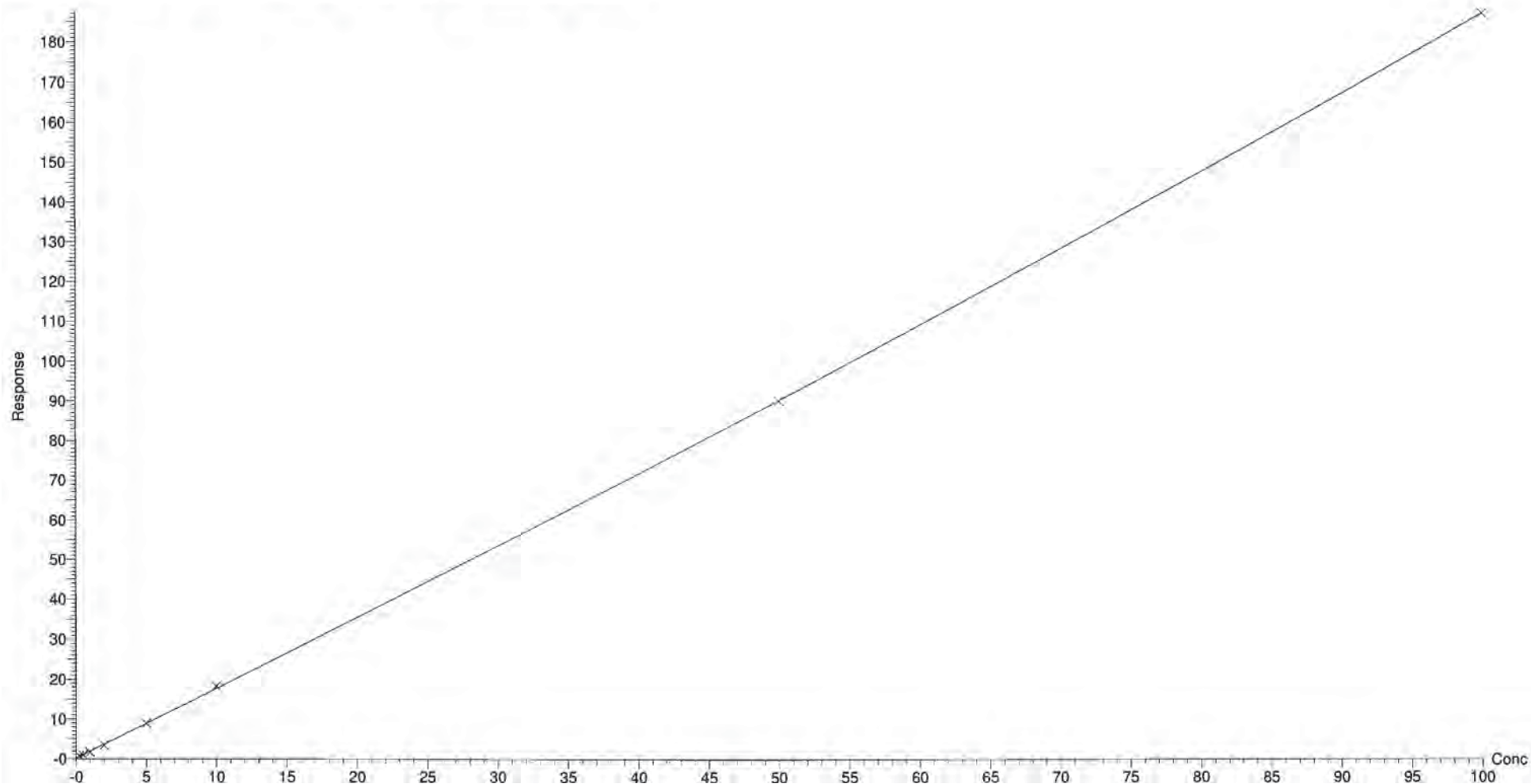
Compound name: PFHxS

Coefficient of Determination:  $R^2 = 0.999683$

Calibration curve:  $0.0013481 * x^2 + 1.73839 * x + 0.152899$

Response type: Internal Std ( Ref 9 ), Area \* ( IS Conc. / IS Area )

Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None





Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-CRV.qld

Last Altered: Thursday, March 02, 2017 08:18:08 Pacific Standard Time

Printed: Thursday, March 02, 2017 08:20:49 Pacific Standard Time

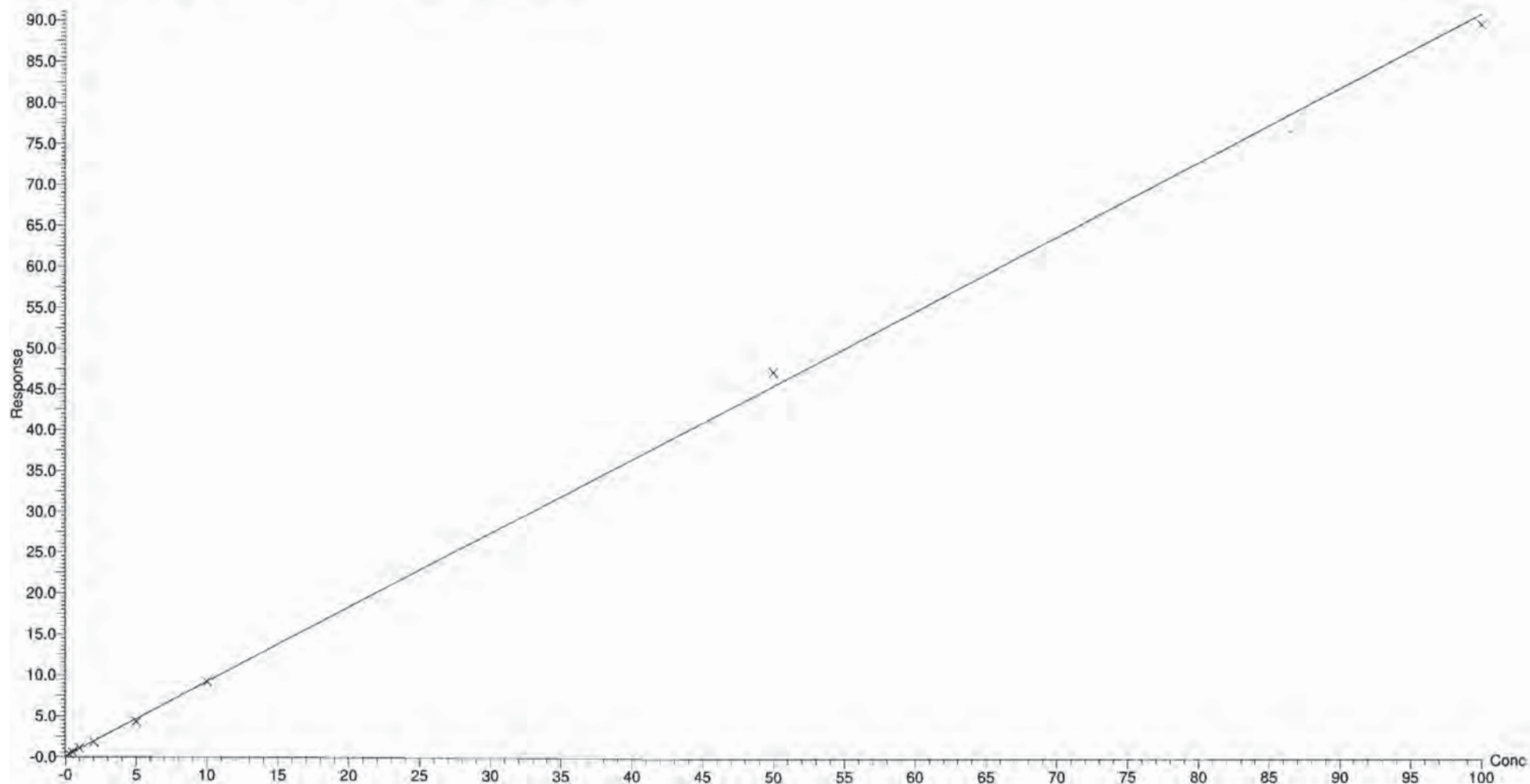
Compound name: PFOA

Correlation coefficient:  $r = 0.999586$ ,  $r^2 = 0.999171$

Calibration curve:  $0.91162 * x + 0.105798$

Response type: Internal Std ( Ref 10 ), Area \* ( IS Conc. / IS Area )

Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-CRV.qld

Last Altered: Thursday, March 02, 2017 08:18:08 Pacific Standard Time

Printed: Thursday, March 02, 2017 08:20:49 Pacific Standard Time

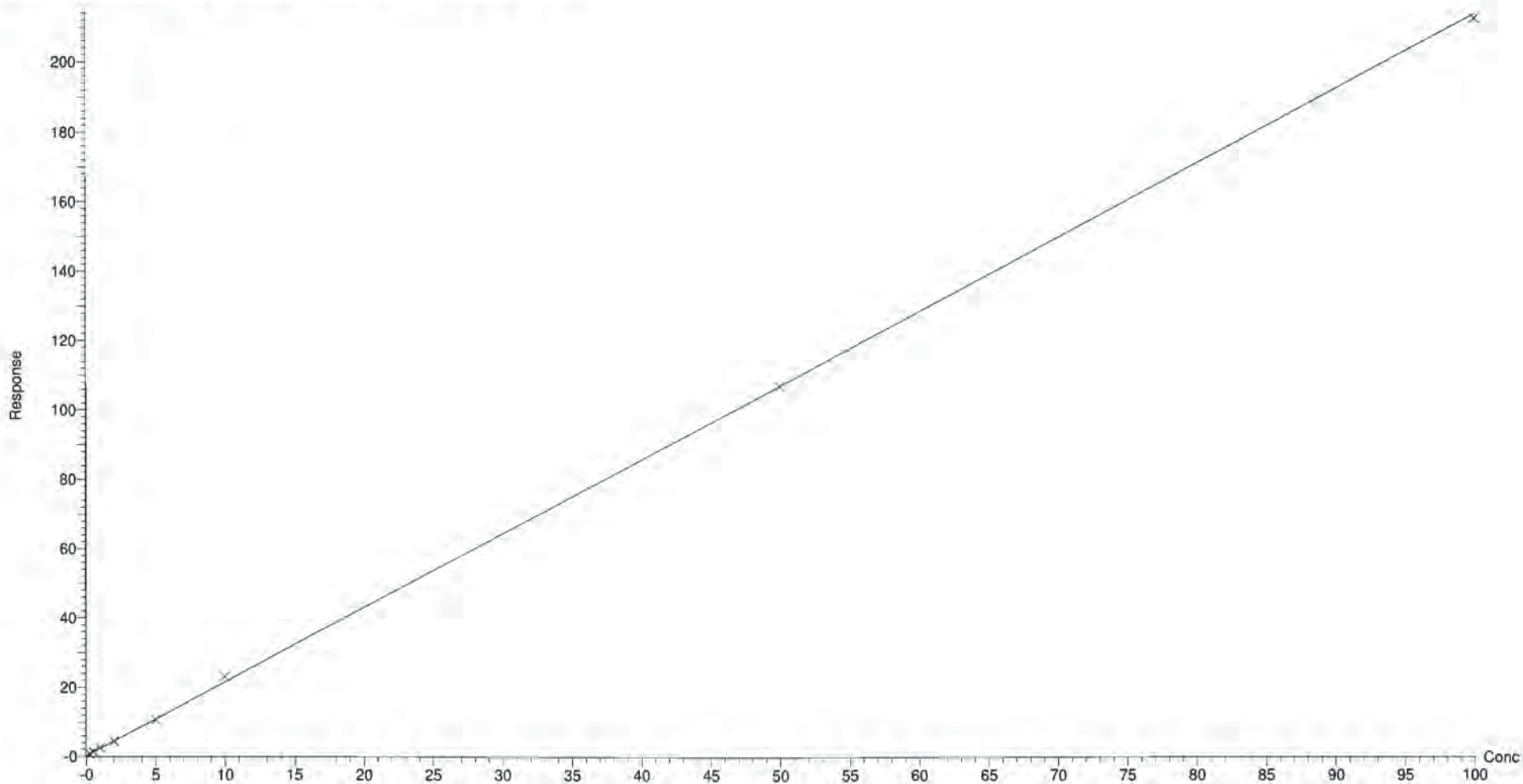
Compound name: PFNA

Correlation coefficient:  $r = 0.999823$ ,  $r^2 = 0.999645$

Calibration curve:  $2.14195 * x + 0.180366$

Response type: Internal Std ( Ref 11 ), Area \* ( IS Conc. / IS Area )

Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

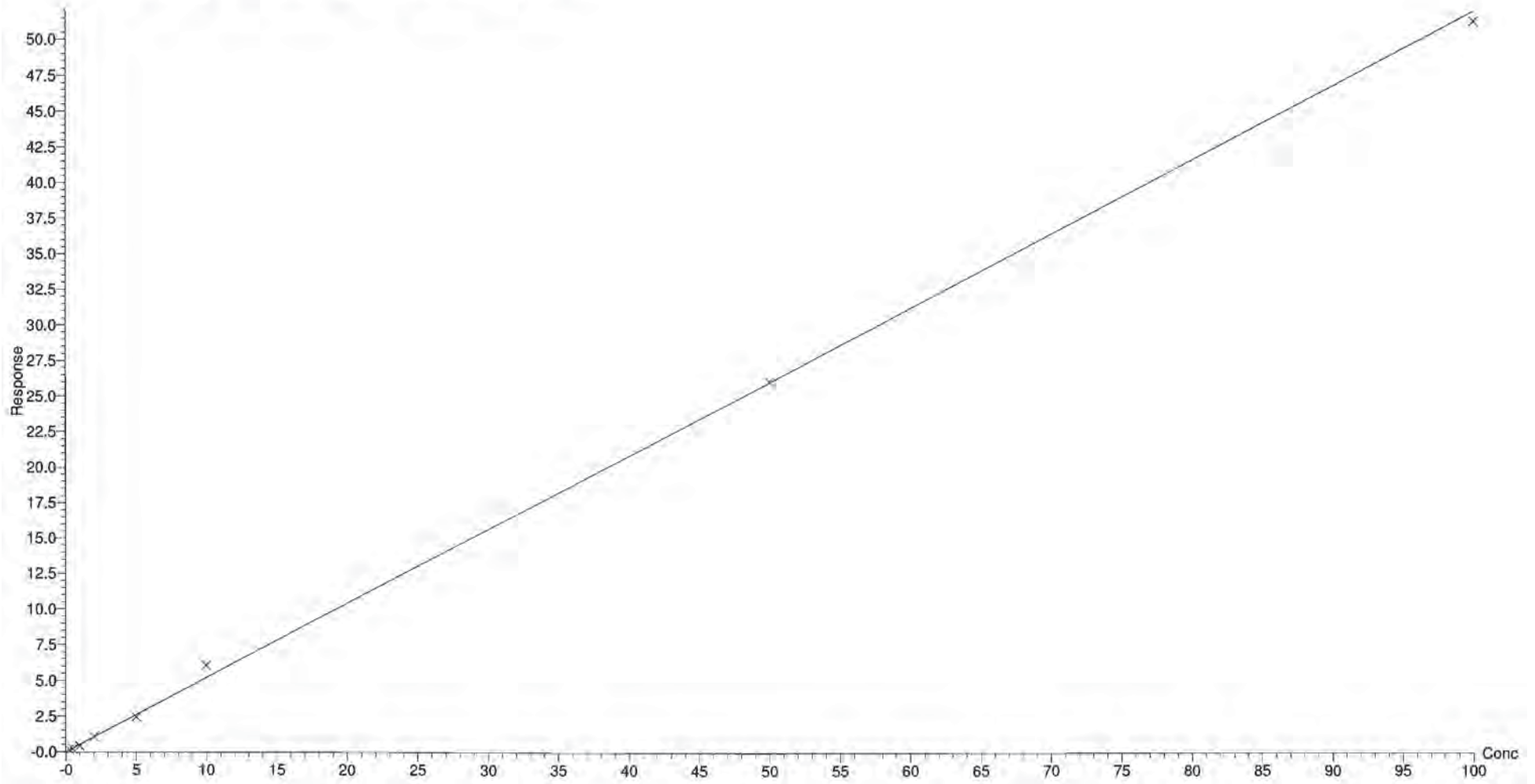


Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-CRV.qld

Last Altered: Thursday, March 02, 2017 08:18:08 Pacific Standard Time

Printed: Thursday, March 02, 2017 08:20:49 Pacific Standard Time

Compound name: PFOS  
Correlation coefficient:  $r = 0.998821$ ,  $r^2 = 0.997644$   
Calibration curve:  $0.521667 * x + -0.00559175$   
Response type: Internal Std ( Ref 12 ), Area \* ( IS Conc. / IS Area )  
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None



Dataset: Untitled

Last Altered: Thursday, March 02, 2017 08:21:56 Pacific Standard Time

Printed: Thursday, March 02, 2017 08:26:44 Pacific Standard Time

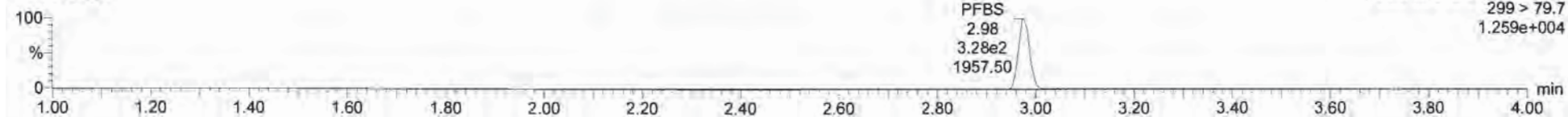
Method: U:\G1.PRO\MethDB\PFAS\_6\_2trans\_LINEAR.mdb 28 Feb 2017 16:04:45

Calibration: 02 Mar 2017 08:21:56

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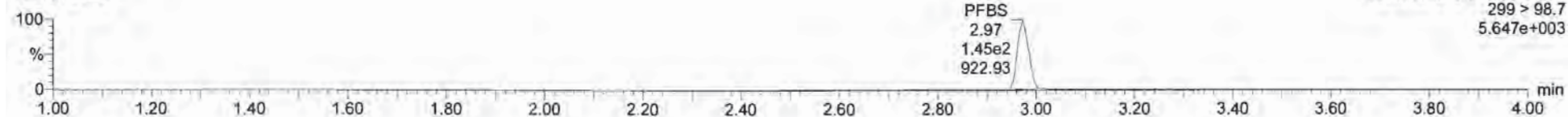
**PFBS**

170301G1\_2



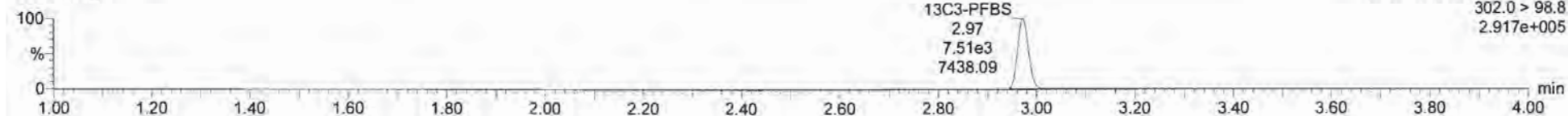
**PFBS**

170301G1\_2



**13C3-PFBS**

170301G1\_2



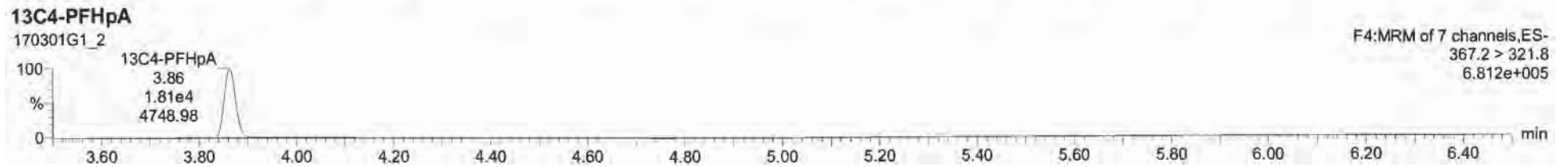
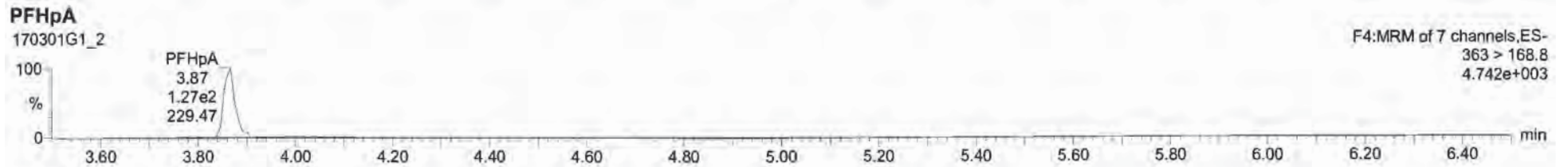
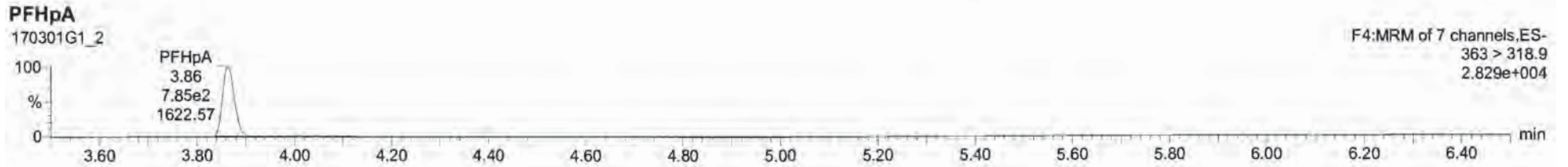


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Last Altered: Thursday, March 02, 2017 08:21:56 Pacific Standard Time

Printed: Thursday, March 02, 2017 08:26:44 Pacific Standard Time

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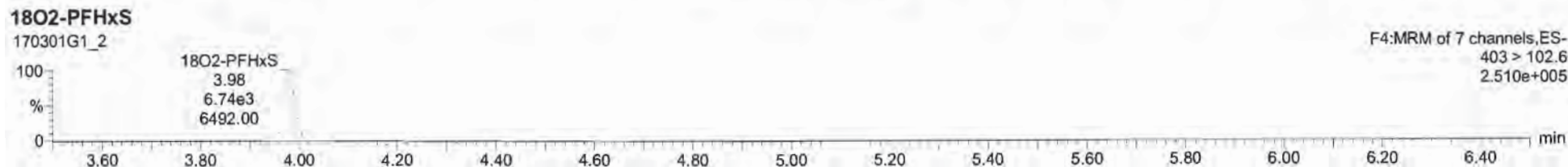
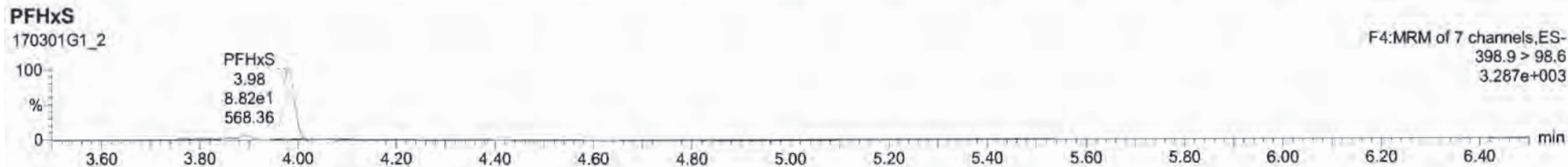
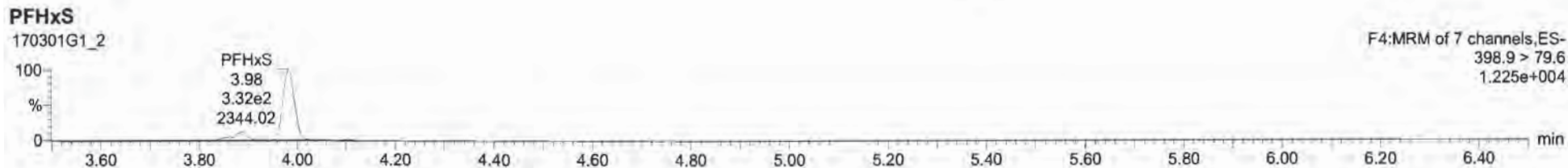


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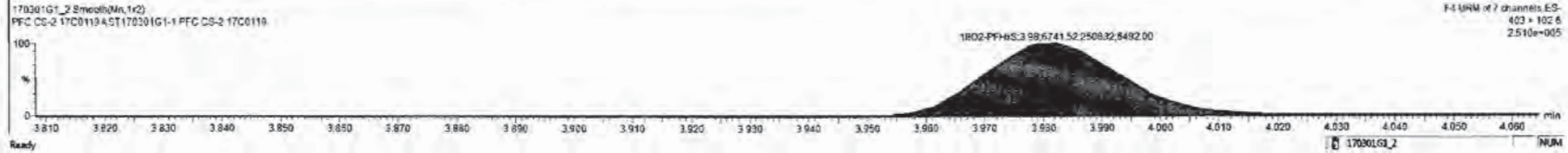
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Name: 170301G1\_2, Date: 01-Mar-2017, Time: 15:09:39, ID: ST170301G1-1 PFC CS-2 17C0119, Description: PFC CS-2 17C0119 A





170301G1_2 ST170301G1-1 PFC CS-2 17C0119 PFC CS-2 17C0119A																					
ID	Name	Comp.	DL	%Rec	FWFC	Abs Resp	DFP	BT	S	SA	Y/N	QCD	Acq Date	Acq Time	SP Dir Method	ES	Sample Test	Factor1	SWL	Cal File	MOD
1	PFBS	0.25795124	0.00438	103.2		3.285e2		2.61	1	7	0.441	YES	01-Mar-17	15:09:39	6.964	ST170301G	PFC CS-2 17C01	1.0	1.00		NO
2	PFHoA	0.28047149		107.0		7.852e2		3.06	2	8			01-Mar-17	15:09:39		ST170301G	PFC CS-2 17C01	1.0	1.00		NO
3	PFHoS	0.31137279		112.9		3.209e2		3.36	3	9			01-Mar-17	15:09:39		ST170301G	PFC CS-2 17C01	1.0	1.00		NO
4	PFOA	0.25009679		132.7		5.805e2		4.27	4	10			01-Mar-17	15:09:39		ST170301G	PFC CS-2 17C01	1.0	1.00		NO
5	PFNA	0.22029717		92.1		5.853e2		4.62	5	11			01-Mar-17	15:09:39		ST170301G	PFC CS-2 17C01	1.0	1.00		NO
6	PFOE	0.31137446	0.0123	124.5		1.088e2		4.67	6	12			01-Mar-17	15:09:39		ST170301G	PFC CS-2 17C01	1.0	1.00		NO
7	13C3-PFB5	12.552325	0.00444	100.4		7.505e3	0.442	2.87	7	14			01-Mar-17	15:09:39		ST170301G	PFC CS-2 17C01	1.0	1.00		NO
8	13C4-PFHoA	12.203233	0.00643	96.0		1.812e4	1.117	3.56	8	14			01-Mar-17	15:09:39		ST170301G	PFC CS-2 17C01	1.0	1.00		NO
9	1802-PFHoS	11.872519	0.00481	95.0		6.742e3	0.420	3.96	9	14			01-Mar-17	15:09:39		ST170301G	PFC CS-2 17C01	1.0	1.00		NO
10	13C2-PFOA	12.162765	0.00157	105.3		3.238e4	2.782	4.27	10	15			01-Mar-17	15:09:39		ST170301G	PFC CS-2 17C01	1.0	1.00		NO
11	13C5-PFNA	12.027213	0.0132	96.2		1.086e4	0.846	4.62	11	16			01-Mar-17	15:09:39		ST170301G	PFC CS-2 17C01	1.0	1.00		NO
12	130B-PFOS	11.969626	0.00187	95.6		0.872e3	0.941	4.66	12	17			01-Mar-17	15:09:39		ST170301G	PFC CS-2 17C01	1.0	1.00		NO
13	13C5-PFHoA	12.500000	0.00386	100.0		2.756e4	1.000	3.35	13	13			01-Mar-17	15:09:39		ST170301G	PFC CS-2 17C01	1.0	1.00		NO
14	13C3-PFHoS	12.500000	0.0222	100.0		1.836e4	1.000	3.96	14	14			01-Mar-17	15:09:39		ST170301G	PFC CS-2 17C01	1.0	1.00		NO
15	150B-PFOA	12.500000	0.06424	100.0		1.195e4	1.000	4.27	15	15			01-Mar-17	15:09:39		ST170301G	PFC CS-2 17C01	1.0	1.00		NO
16	1309-PFNA	12.500000	0.00156	100.0		1.334e4	1.000	4.62	16	16			01-Mar-17	15:09:39		ST170301G	PFC CS-2 17C01	1.0	1.00		NO
17	13C4-PFOS	12.500000	0.000679	100.0		9.621e3	1.000	4.66	17	17			01-Mar-17	15:09:39		ST170301G	PFC CS-2 17C01	1.0	1.00		NO
18	Total PFBS	0.25795124	0.00443						18				01-Mar-17	15:09:39		ST170301G	PFC CS-2 17C01	1.0	1.00		NO
19	Total PFHoS	0.31137279							19				01-Mar-17	15:09:39		ST170301G	PFC CS-2 17C01	1.0	1.00		NO
20	Total PFOA	0.25009679							20				01-Mar-17	15:09:39		ST170301G	PFC CS-2 17C01	1.0	1.00		NO
21	Total PFOS	0.31137446	0.0123						21				01-Mar-17	15:09:39		ST170301G	PFC CS-2 17C01	1.0	1.00		NO





Dataset: Untitled

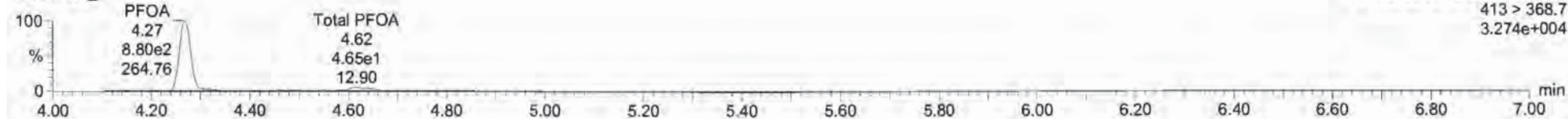
Last Altered: Thursday, March 02, 2017 08:21:56 Pacific Standard Time

Printed: Thursday, March 02, 2017 08:26:44 Pacific Standard Time

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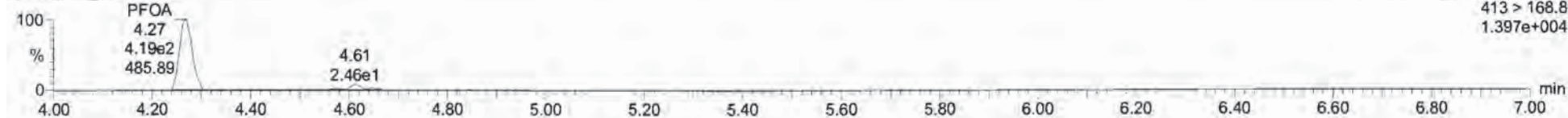
**PFOA**

170301G1\_2



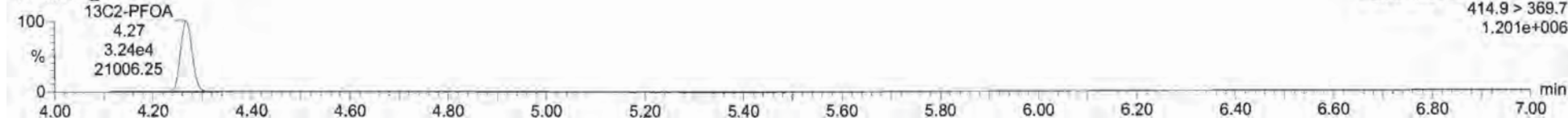
**PFOA**

170301G1\_2



**13C2-PFOA**

170301G1\_2

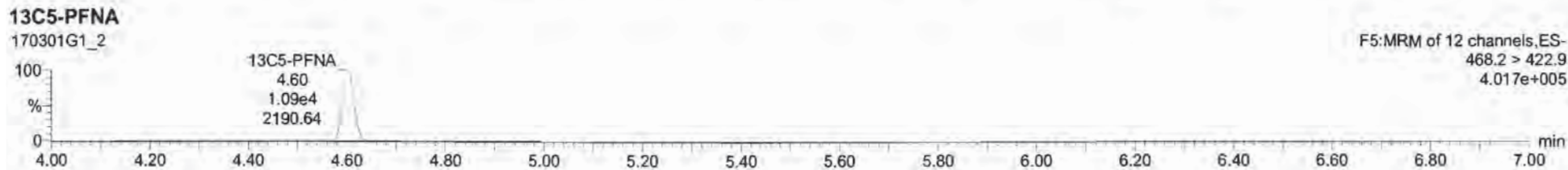
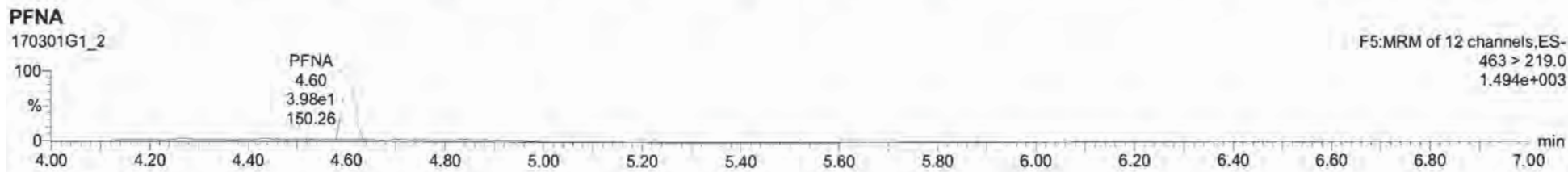
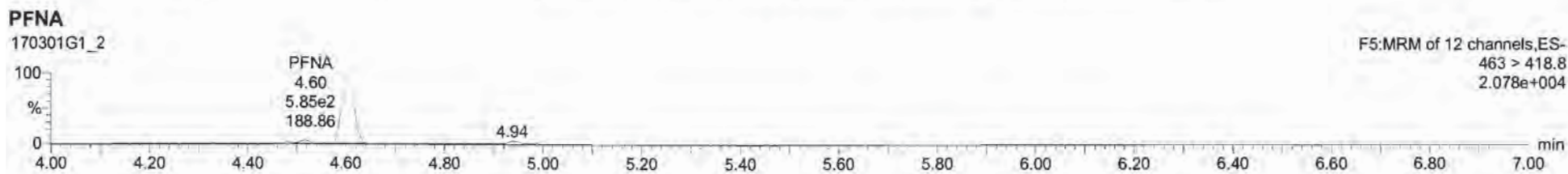


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Last Altered: Thursday, March 02, 2017 08:21:56 Pacific Standard Time

Printed: Thursday, March 02, 2017 08:26:44 Pacific Standard Time

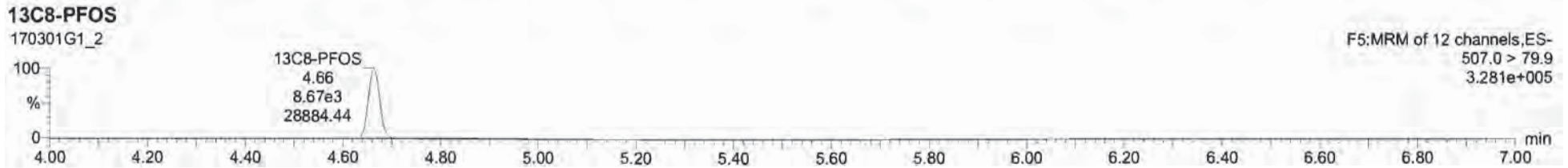
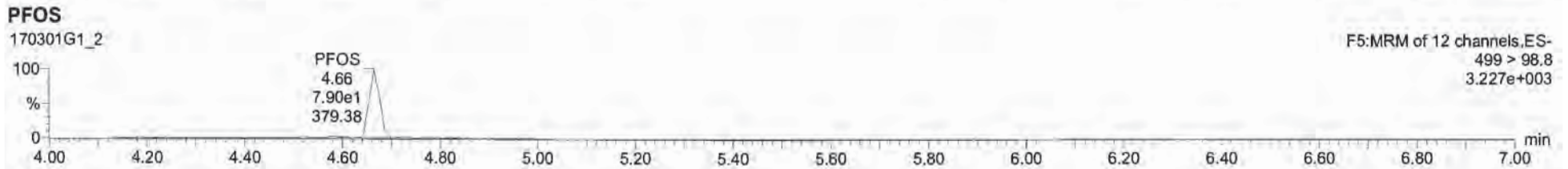
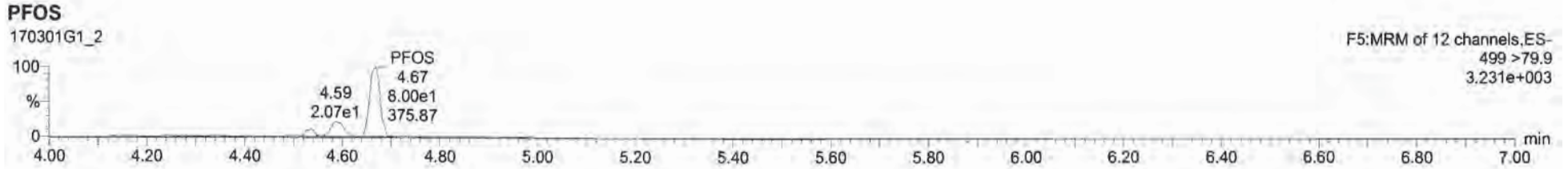
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Dataset: Untitled

Last Altered: Thursday, March 02, 2017 08:21:56 Pacific Standard Time  
Printed: Thursday, March 02, 2017 08:26:44 Pacific Standard Time

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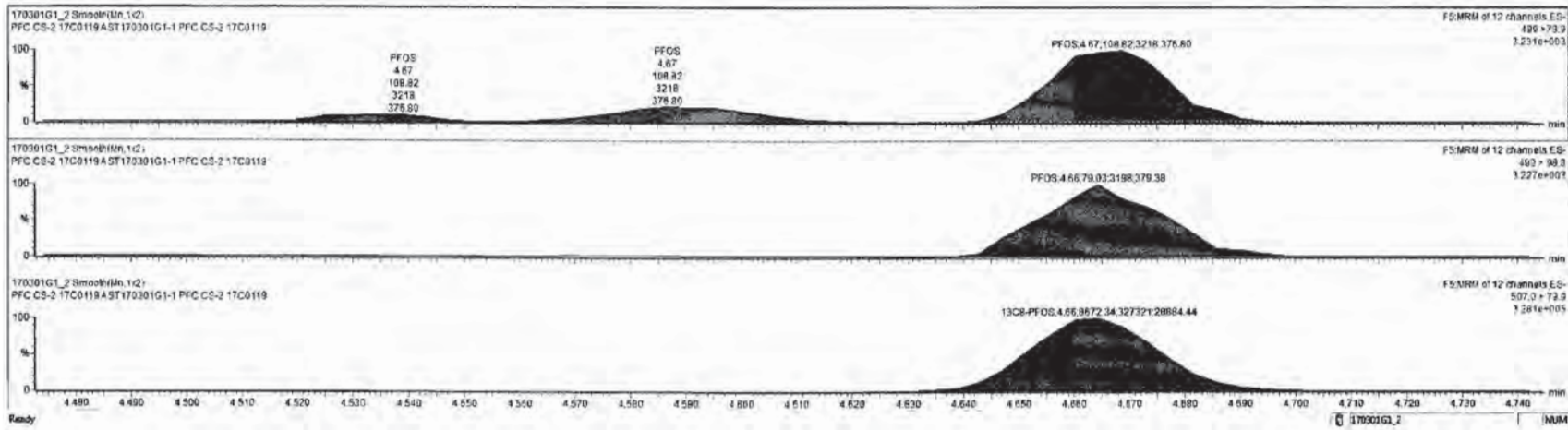






170301G1\_2 ST170301G1-1 PFC CS-2 17C0119 PFC CS-2 17C0119 A

#	Name	Conc	DL	%Rec	EMPC	Abs Smp	REP	RT	#	SP	RA	Y/N	SD	Acq Date	Acq Time	# Channels	ID	Sample Type	Firm	SN	Cal File	REC
1	PFBS	0.25795124	0.00438	103.2		3.285e2		2.90	1	7	0.441	Y/S	1.001	01-Mar-17	15:39:39	6.064	ST170301G	PFC CS-2 17C0119	1.0	1.00		NO
2	PFHpA	0.28947140		197.8		7.852e2		3.95	2	8			1.008	01-Mar-17	15:39:39		ST170301G	PFC CS-2 17C0119	1.0	1.00		NO
3	PFHxS	0.31813279		127.3		3.088e2		3.98	3	9			1.008	01-Mar-17	15:39:39		ST170301G	PFC CS-2 17C0119	1.0	1.00		NO
4	PFDA	0.25680670		102.7		8.056e2		4.27	4	10			1.000	01-Mar-17	15:39:39		ST170301G	PFC CS-2 17C0119	1.0	1.00		NO
5	PFNA	0.23020717		92.1		5.853e2		4.60	5	11			1.000	01-Mar-17	15:39:39		ST170301G	PFC CS-2 17C0119	1.0	1.00		NO
6	PFOS	0.81937446	0.0123	134.3		1.086e3		4.67	6	12			1.001	01-Mar-17	15:39:39		ST170301G	PFC CS-2 17C0119	1.0	1.00		NO
7	13C3-PFBS	12.552625	0.00444	100.4		7.565e3	0.442	2.97	7	14			0.505	01-Mar-17	15:39:39		ST170301G	PFC CS-2 17C0119	1.0	1.00		NO
8	13C4-PFHpA	12.003233	0.00643	98.0		1.612e4	1.117	3.88	8	14			0.970	01-Mar-17	15:39:39		ST170301G	PFC CS-2 17C0119	1.0	1.00		NO
9	18O2-PFHxS	11.872519	0.00461	95.0		6.742e3	0.420	3.98	9	14			1.000	01-Mar-17	15:39:39		ST170301G	PFC CS-2 17C0119	1.0	1.00		NO
10	13C3-PFDA	13.162765	0.00157	105.3		3.248e4	2.752	4.27	10	15			1.000	01-Mar-17	15:39:39		ST170301G	PFC CS-2 17C0119	1.0	1.00		NO
11	13C3-PFNA	12.027213	0.0130	96.2		1.086e4	0.846	4.60	11	16			1.000	01-Mar-17	15:39:39		ST170301G	PFC CS-2 17C0119	1.0	1.00		NO
12	13C6-PFOS	11.909626	0.00107	95.8		5.672e3	0.941	4.66	12	17			1.000	01-Mar-17	15:39:39		ST170301G	PFC CS-2 17C0119	1.0	1.00		NO
13	13C3-PFHxS	12.500000	0.00806	100.0		2.756e4	1.000	3.35	13	13			0.509	01-Mar-17	15:39:39		ST170301G	PFC CS-2 17C0119	1.0	1.00		NO
14	13C3-PFHxS	12.500000	0.0222	100.0		1.690e4	1.000	3.98	14	14			0.508	01-Mar-17	15:39:39		ST170301G	PFC CS-2 17C0119	1.0	1.00		NO
15	13C6-PFDA	12.500000	0.00484	100.0		1.195e4	1.000	4.27	15	15			0.505	01-Mar-17	15:39:39		ST170301G	PFC CS-2 17C0119	1.0	1.00		NO
16	13C6-PFNA	12.500000	0.00196	100.0		1.334e4	1.000	4.60	16	16			0.509	01-Mar-17	15:39:39		ST170301G	PFC CS-2 17C0119	1.0	1.00		NO
17	13C4-PFOS	12.500000	0.00509	100.0		9.821e3	1.000	4.66	17	17			0.506	01-Mar-17	15:39:39		ST170301G	PFC CS-2 17C0119	1.0	1.00		NO
18	Total PFBS	0.25795124	0.00443						18					01-Mar-17	15:39:39		ST170301G	PFC CS-2 17C0119	1.0	1.00		NO
19	Total PFHpA	0.31813279							19					01-Mar-17	15:39:39		ST170301G	PFC CS-2 17C0119	1.0	1.00		NO
20	Total PFHxS	0.25680670							20					01-Mar-17	15:39:39		ST170301G	PFC CS-2 17C0119	1.0	1.00		NO
21	Total PFOS	0.81937446	0.0123						21					01-Mar-17	15:39:39		ST170301G	PFC CS-2 17C0119	1.0	1.00		NO



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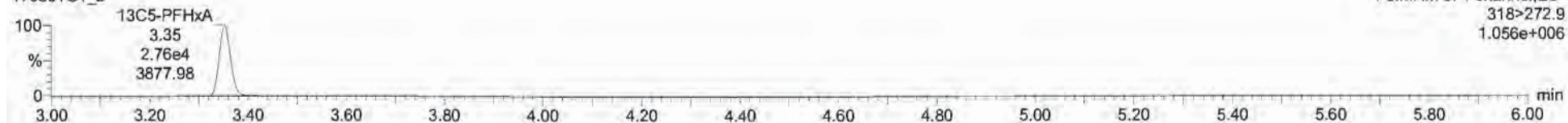
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Printed: Thursday, March 02, 2017 08:26:44 Pacific Standard Time

Name: 170301G1\_2, Date: 01-Mar-2017, Time: 15:09:39, ID: ST170301G1-1 PFC CS-2 17C0119, Description: PFC CS-2 17C0119 A

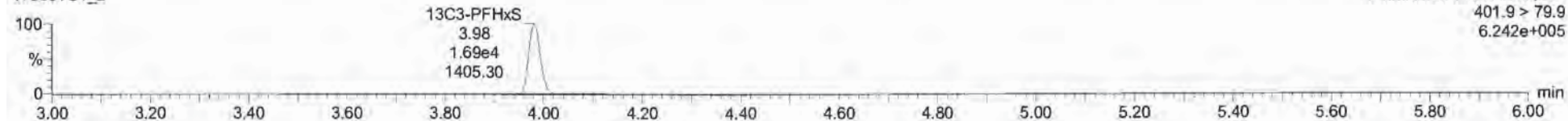
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170301G1\_2



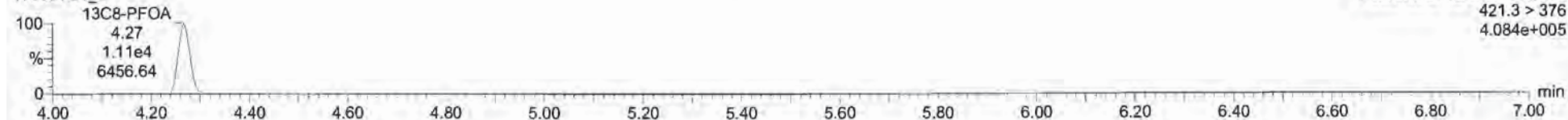
**13C3-PFHxS**

170301G1\_2



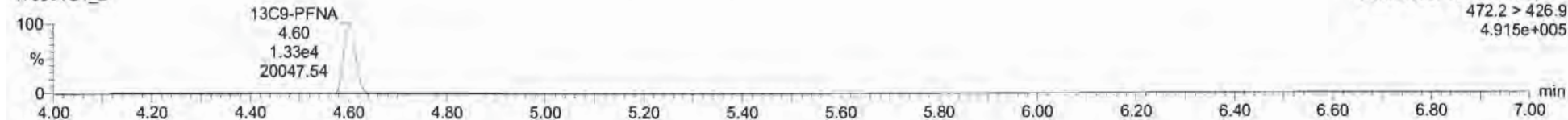
**13C8-PFOA**

170301G1\_2



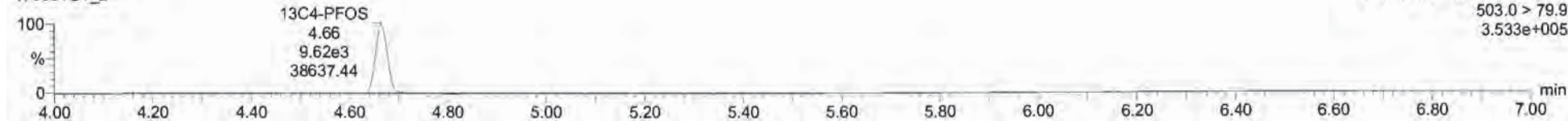
**13C9-PFNA**

170301G1\_2



**13C4-PFOS**

170301G1\_2



Dataset: Untitled

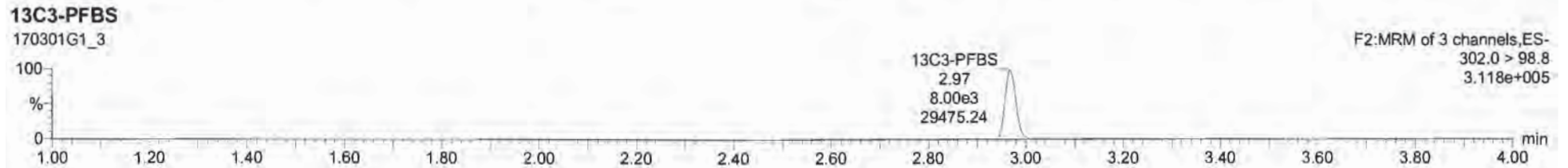
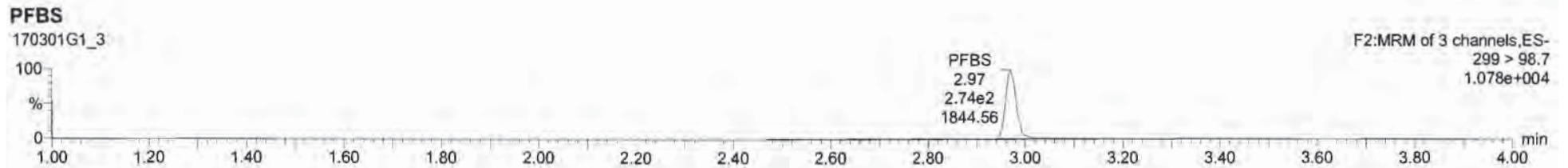
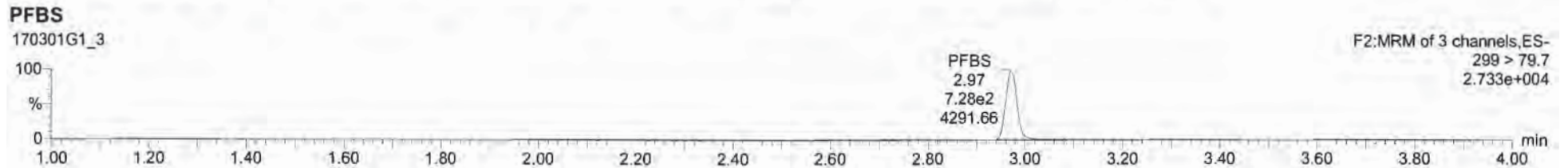
Last Altered: Thursday, March 02, 2017 08:21:56 Pacific Standard Time

Printed: Thursday, March 02, 2017 08:27:08 Pacific Standard Time

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Calibration: 02 Mar 2017 08:21:56

Name: 170301G1\_3, Date: 01-Mar-2017, Time: 15:22:08, ID: ST170301G1-2 PFC CS-1 17C0120, Description: PFC CS-1 17C0120 A



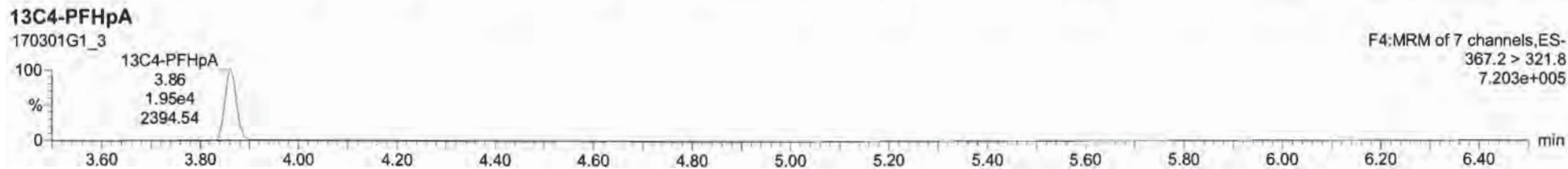
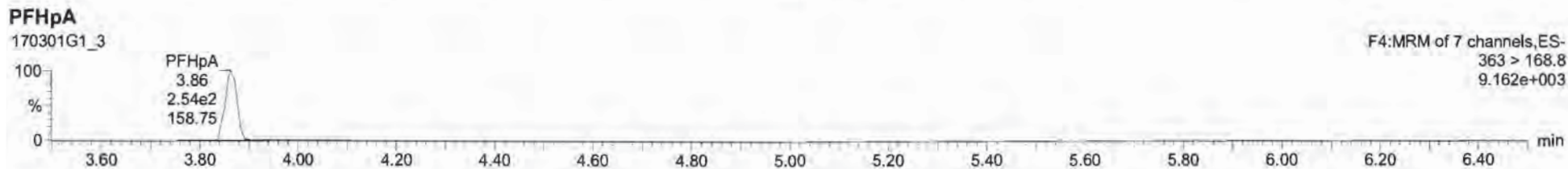
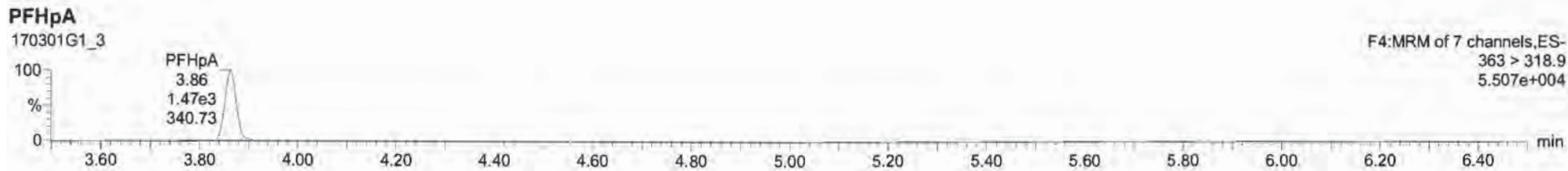


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Printed: Thursday, March 02, 2017 08:27:08 Pacific Standard Time

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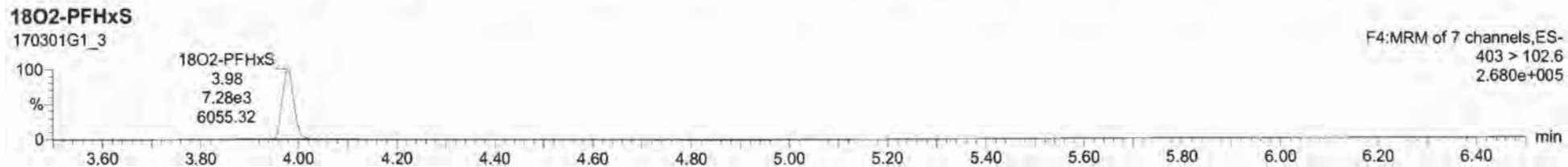
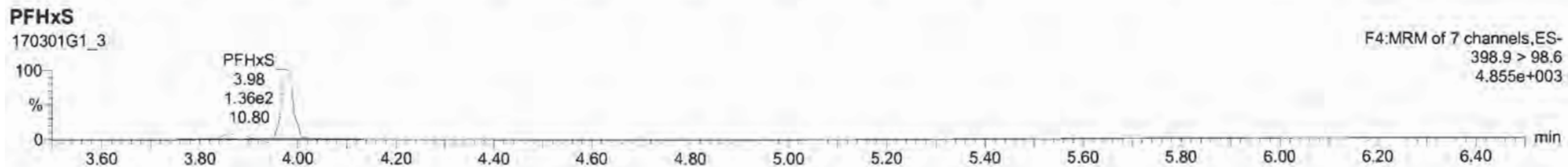
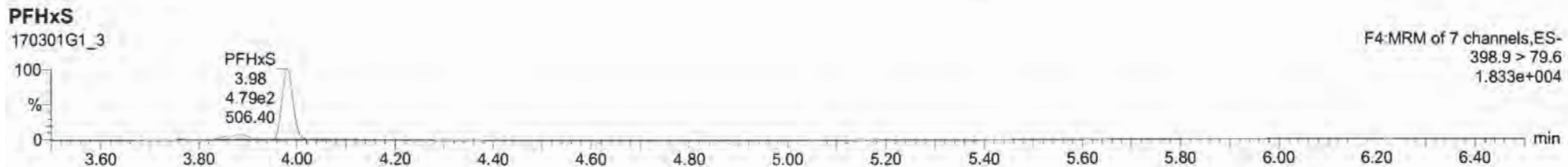


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Printed: Thursday, March 02, 2017 08:27:08 Pacific Standard Time

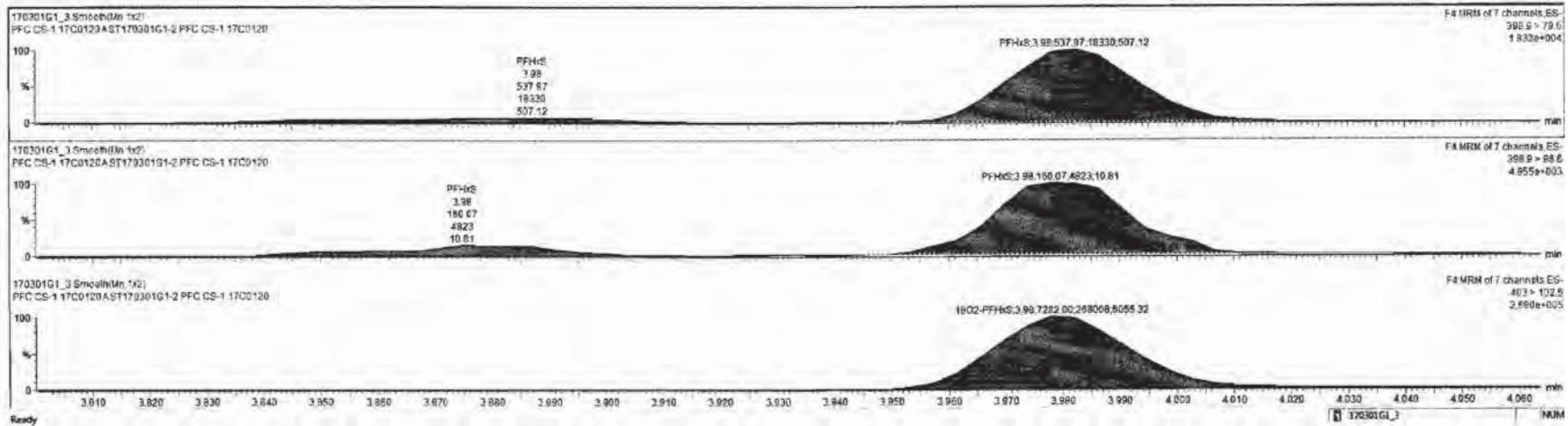
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170301G1\_3 ST170301G1-2 PFC CS-1 17C0120 PFC CS-1 17C0120A

#	Name	Comp	CL	%Rec	EMPC	Abd Smp	RF	RT	#	RF	RA	Y/N	QRT	Acq Date	Acq Time	1 <sup>st</sup> Dir	Wave	D	Smpg	Test	Factor1	Spn	Cal	File	PKL
1	PFBS	0.53186000	0.00436	106.4		7.279e2		2.97	1	7	0.377	YES	1.001	01-Mar-17	15:22:05	5.830	ST170301G	PFC CS-1 17C01	1.0	1.00				NO	
2	PFHpA	0.48816450		97.6		1.472e3		3.86	2	8			1.000	01-Mar-17	15:22:05		ST170301G	PFC CS-1 17C01	1.0	1.00				NO	
3	PFHxG	0.44210614		96.0		5.205e0		3.95	3	9			1.001	01-Mar-17	15:22:05		ST170301G	PFC CS-1 17C01	1.0	1.00				NO	
4	PFOA	0.52834878		105.3		1.605e5		4.27	4	10			1.000	01-Mar-17	15:22:05		ST170301G	PFC CS-1 17C01	1.0	1.00				NO	
5	PFNA	0.50488938		101.0		1.184e3		4.60	5	11			1.000	01-Mar-17	15:22:05		ST170301G	PFC CS-1 17C01	1.0	1.00				NO	
6	PFOS	0.37689948	0.0142	75.8		1.573e2		4.66	6	12			1.001	01-Mar-17	15:22:05		ST170301G	PFC CS-1 17C01	1.0	1.00				NO	
7	13C3-PFBS	12.894488	0.00114	101.6		7.985e3	0.442	2.97	7	14			0.999	01-Mar-17	15:22:05		ST170301G	PFC CS-1 17C01	1.0	1.00				NO	
8	13C3-PFHpA	12.270736	0.0128	98.2		1.852e4	1.117	3.86	8	14			0.970	01-Mar-17	15:22:05		ST170301G	PFC CS-1 17C01	1.0	1.00				NO	
9	18O2-PFHxG	12.169892	0.00501	97.4		7.282e3	0.420	3.96	9	14			0.999	01-Mar-17	15:22:05		ST170301G	PFC CS-1 17C01	1.0	1.00				NO	
10	13C3-PFOA	12.303851	0.00799	96.4		3.425e4	2.782	4.27	10	15			1.000	01-Mar-17	15:22:05		ST170301G	PFC CS-1 17C01	1.0	1.00				NO	
11	13C3-PFNA	11.994471	0.00973	96.0		1.185e4	0.548	4.60	11	16			1.000	01-Mar-17	15:22:05		ST170301G	PFC CS-1 17C01	1.0	1.00				NO	
12	13C3-PFOS	11.847360	0.00710	94.8		1.024e4	0.541	4.66	12	17			0.999	01-Mar-17	15:22:05		ST170301G	PFC CS-1 17C01	1.0	1.00				NO	
13	13C3-PFHpA	12.900000	0.00448	109.0		3.079e4	1.000	3.35	13	13			0.000	01-Mar-17	15:22:05		ST170301G	PFC CS-1 17C01	1.0	1.00				NO	
14	13C3-PFHxG	12.900000	0.00464	108.0		1.761e4	1.000	3.86	14	14			0.000	01-Mar-17	15:22:05		ST170301G	PFC CS-1 17C01	1.0	1.00				NO	
15	13C3-PFOA	12.900000	0.0064	100.0		1.251e4	1.000	4.27	15	15			0.000	01-Mar-17	15:22:05		ST170301G	PFC CS-1 17C01	1.0	1.00				NO	
16	13C3-PFNA	12.900000	0.00256	100.0		1.457e4	1.000	4.60	16	16			0.000	01-Mar-17	15:22:05		ST170301G	PFC CS-1 17C01	1.0	1.00				NO	
17	13C3-PFOS	12.900000	0.00333	100.0		1.148e4	1.000	4.66	17	17			0.000	01-Mar-17	15:22:05		ST170301G	PFC CS-1 17C01	1.0	1.00				NO	
18	Total PFBS	0.53188800	0.00440						15					01-Mar-17	15:22:05		ST170301G	PFC CS-1 17C01	1.0	1.00				NO	
19	Total PFHpA	0.44310514							19					01-Mar-17	15:22:05		ST170301G	PFC CS-1 17C01	1.0	1.00				NO	
20	Total PFOA	0.52834878							20					01-Mar-17	15:22:05		ST170301G	PFC CS-1 17C01	1.0	1.00				NO	
21	Total PFOS	0.42635111	0.0142						21					01-Mar-17	15:22:05		ST170301G	PFC CS-1 17C01	1.0	1.00				NO	

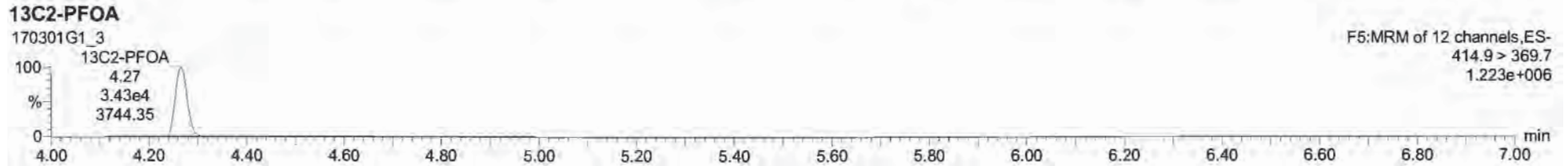
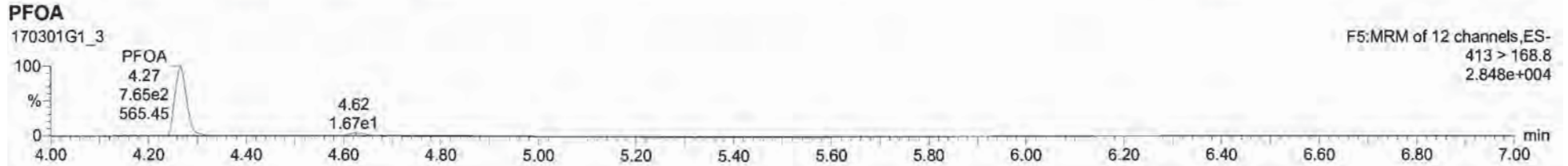
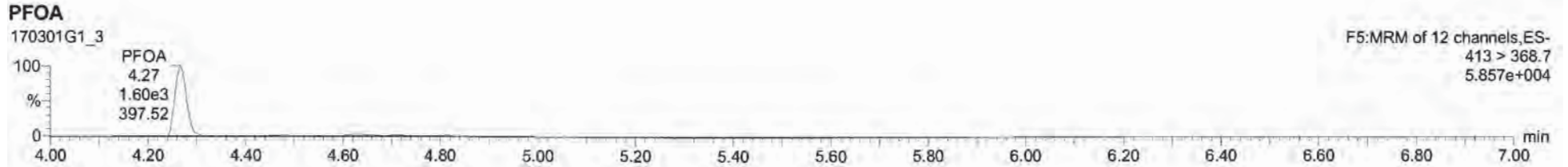


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Printed: Thursday, March 02, 2017 08:27:08 Pacific Standard Time

Name: 170301G1\_3, Date: 01-Mar-2017, Time: 15:22:08, ID: ST170301G1-2 PFC CS-1 17C0120, Description: PFC CS-1 17C0120 A





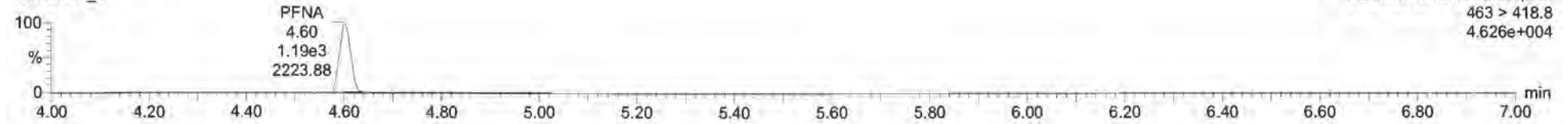
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Printed: Thursday, March 02, 2017 08:27:08 Pacific Standard Time

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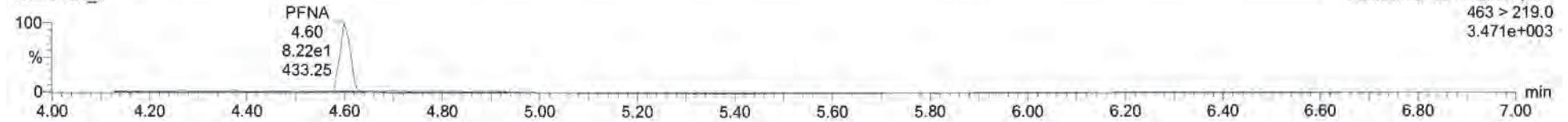
**PFNA**

170301G1\_3



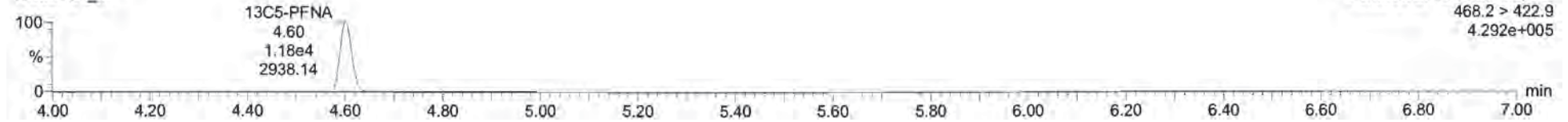
**PFNA**

170301G1\_3



**13C5-PFNA**

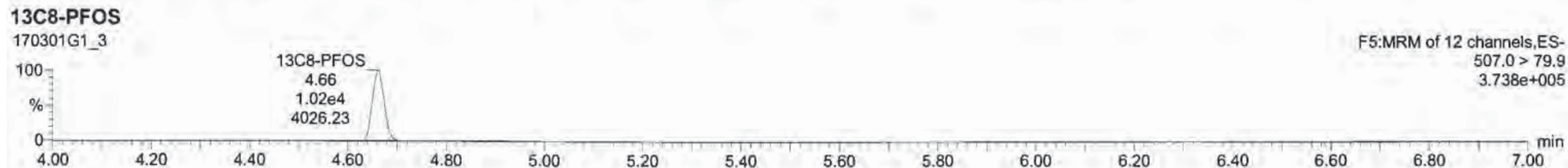
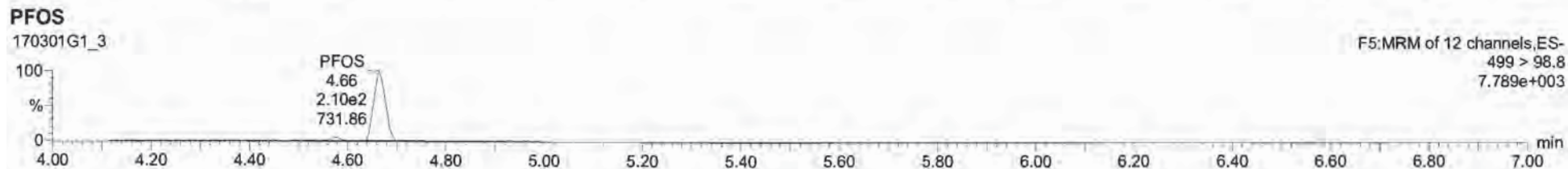
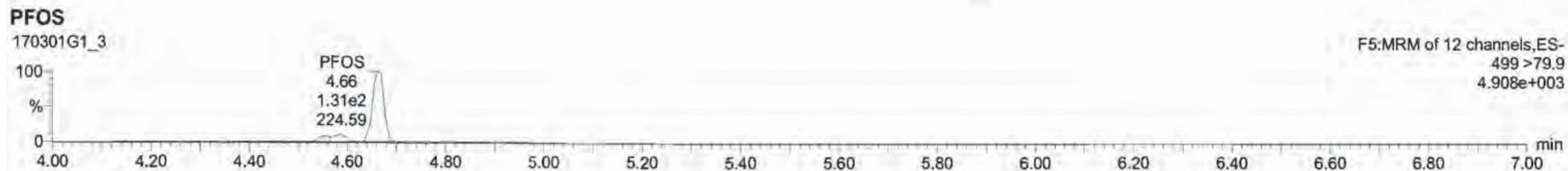
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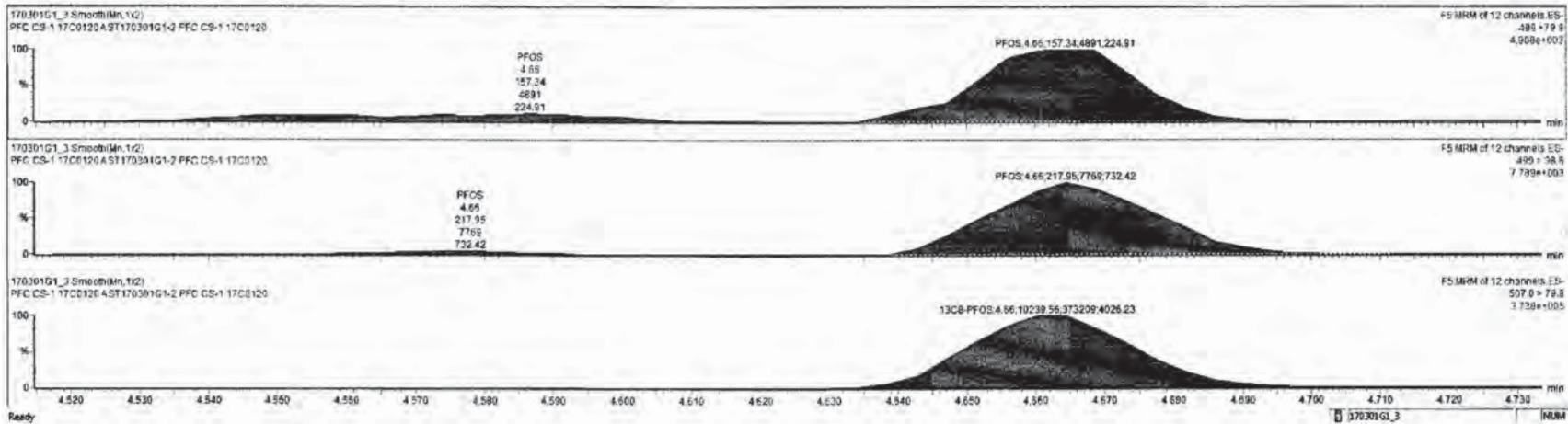
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170301G1\_3 - ST170301G1-2 PFC CS-1 17C0120 - PFC CS-1 17C0120A

ID	Item	Conc	DL	%Rec	EMPC	Abs Resp	SDF	RT	#	SA	Y/N	ERT	Acq Date	Acq Time	1st Ch/Name	D	Sample Type	Percent	SIG	Cal File	>MOD
1	PFBS	0.53190200	0.00436	106.4		7.279e2	2.97	1	7	6.377	YES	1.001	01-Mar-17	15:22:08	6.020	ST170301G	PFC CS-1 17C01	3.0	1.00		ND
2	PFHpA	0.40816450		97.6		1.472e3	3.96	2	8			1.001	01-Mar-17	15:22:08		ST170301G	PFC CS-1 17C01	1.0	1.00		ND
3	PFHxS	0.44310514		86.6		5.350e2	3.96	3	9			1.001	01-Mar-17	15:22:08		ST170301G	PFC CS-1 17C01	1.0	1.00		ND
4	PFDA	0.52634876		106.3		1.605e3	4.27	4	10			1.001	01-Mar-17	15:22:08		ST170301G	PFC CS-1 17C01	1.0	1.00		ND
5	PFNA	0.50402930		101.0		1.194e3	4.80	5	11			1.001	01-Mar-17	15:22:08		ST170301G	PFC CS-1 17C01	1.0	1.00		ND
6	PFOS	0.57028940	0.0142	75.3		1.572e3	4.98	6	12			1.991	01-Mar-17	15:22:08		ST170301G	PFC CS-1 17C01	1.0	1.00		ND
7	13C3-PFBS	12.694468	0.00114	101.6		7.990e3	0.442	2.97	7	14		0.006	01-Mar-17	15:22:08		ST170301G	PFC CS-1 17C01	1.0	1.00		ND
8	13C4-PFHpA	12.270736	0.0128	98.2		1.952e4	1.117	3.96	8	14		0.970	01-Mar-17	15:22:08		ST170301G	PFC CS-1 17C01	1.0	1.00		ND
9	1802-PFHpS	12.198962	0.00501	97.4		7.282e3	0.420	3.96	8	14		0.999	01-Mar-17	15:22:08		ST170301G	PFC CS-1 17C01	1.0	1.00		ND
10	13C2-PFDA	12.303631	0.00799	96.4		3.425e4	2.782	4.27	10	15		1.001	01-Mar-17	15:22:08		ST170301G	PFC CS-1 17C01	1.0	1.00		ND
11	13C5-PFNA	11.994471	0.00973	96.0		1.183e4	0.646	4.80	11	16		1.001	01-Mar-17	15:22:08		ST170301G	PFC CS-1 17C01	1.0	1.00		ND
12	13C6-PFOS	11.847369	0.00710	94.6		1.024e4	0.941	4.98	12	17		0.999	01-Mar-17	15:22:08		ST170301G	PFC CS-1 17C01	1.0	1.00		ND
13	13C5-PFHpA	12.500000	0.00440	100.0		3.039e4	1.000	3.35	13	13		0.001	01-Mar-17	15:22:08		ST170301G	PFC CS-1 17C01	1.0	1.00		ND
14	13C3-PFHpS	12.500000	0.00404	100.0		1.781e4	1.000	3.96	14	14		0.001	01-Mar-17	15:22:08		ST170301G	PFC CS-1 17C01	1.0	1.00		ND
15	13C5-PFDA	12.500000	0.00564	100.0		1.251e4	1.000	4.27	15	15		0.001	01-Mar-17	15:22:08		ST170301G	PFC CS-1 17C01	1.0	1.00		ND
16	13C9-PFNA	12.500000	0.00256	100.0		1.457e4	1.000	4.80	16	16		0.001	01-Mar-17	15:22:08		ST170301G	PFC CS-1 17C01	1.0	1.00		ND
17	13C4-PFOS	12.500000	0.00333	100.0		1.148e4	1.000	4.80	17	17		0.001	01-Mar-17	15:22:08		ST170301G	PFC CS-1 17C01	1.0	1.00		ND
18	Total PFBS	0.53190800	0.00440						18				01-Mar-17	15:22:08		ST170301G	PFC CS-1 17C01	1.0	1.00		ND
19	Total PFHpA	0.44310514							19				01-Mar-17	15:22:08		ST170301G	PFC CS-1 17C01	1.0	1.00		ND
20	Total PFDA	0.52634876							20				01-Mar-17	15:22:08		ST170301G	PFC CS-1 17C01	1.0	1.00		ND
21	Total PFOS	0.42835111	0.0142						21				01-Mar-17	15:22:08		ST170301G	PFC CS-1 17C01	1.0	1.00		ND





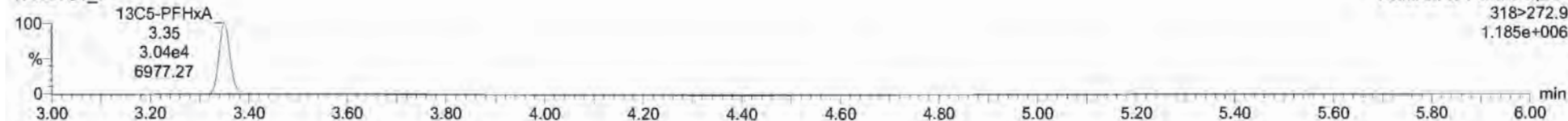
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Last Altered: Thursday, March 02, 2017 08:21:56 Pacific Standard Time  
Printed: Thursday, March 02, 2017 08:27:08 Pacific Standard Time

Name: 170301G1\_3, Date: 01-Mar-2017, Time: 15:22:08, ID: ST170301G1-2 PFC CS-1 17C0120, Description: PFC CS-1 17C0120 A

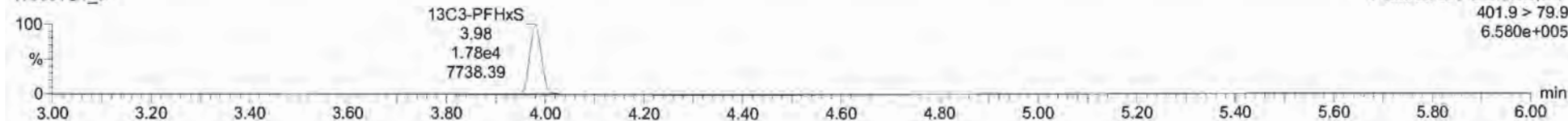
**13C5-PFHxA**

170301G1\_3



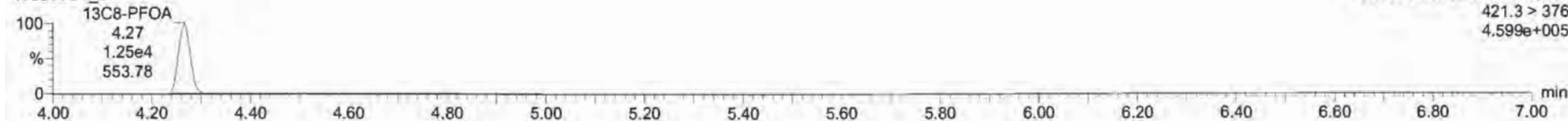
**13C3-PFHxS**

170301G1\_3



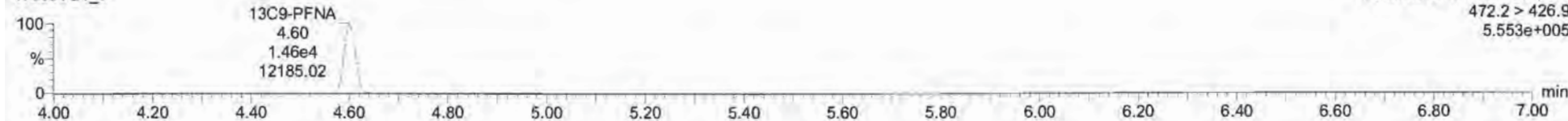
**13C8-PFOA**

170301G1\_3



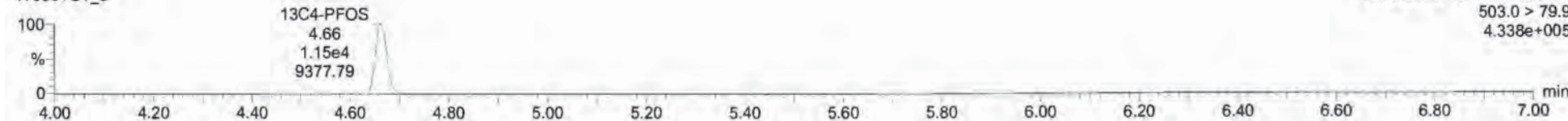
**13C9-PFNA**

170301G1\_3



**13C4-PFOS**

170301G1\_3

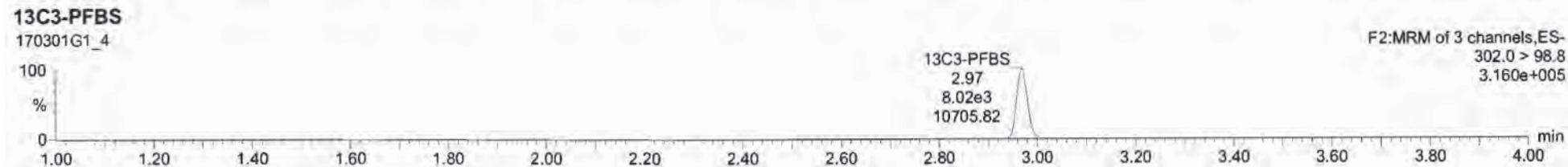
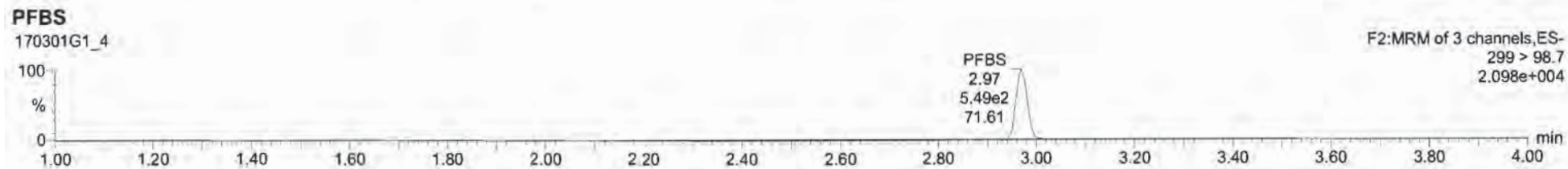
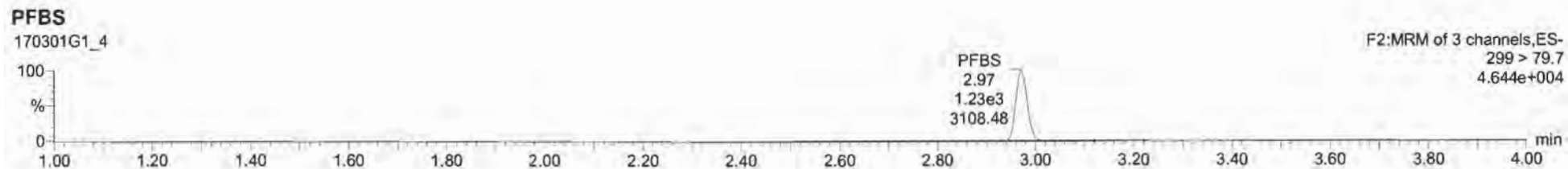


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Last Altered: Thursday, March 02, 2017 08:21:56 Pacific Standard Time

Printed: Thursday, March 02, 2017 08:27:08 Pacific Standard Time

Name: 170301G1\_4, Date: 01-Mar-2017, Time: 15:34:43, ID: ST170301G1-3 PFC CS0 17C0121, Description: PFC CS0 17C0121 A

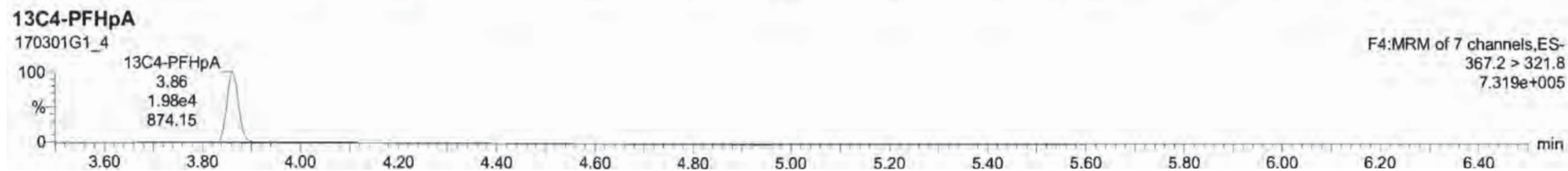
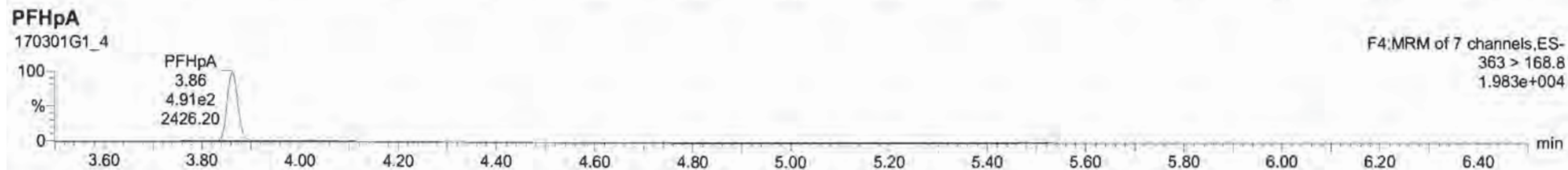
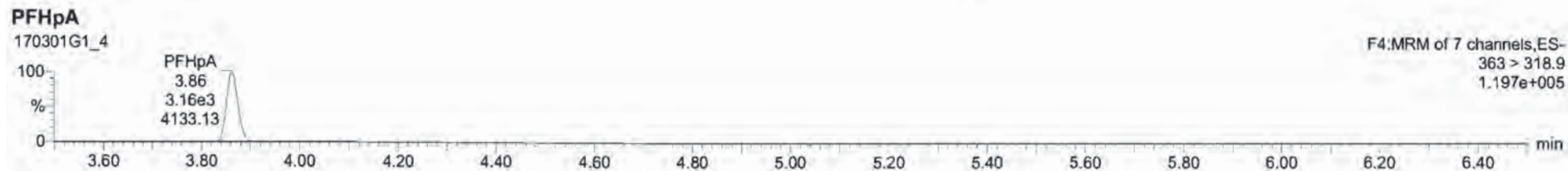


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Last Altered: Thursday, March 02, 2017 08:21:56 Pacific Standard Time

Printed: Thursday, March 02, 2017 08:27:08 Pacific Standard Time

Name: 170301G1\_4, Date: 01-Mar-2017, Time: 15:34:43, ID: ST170301G1-3 PFC CS0 17C0121, Description: PFC CS0 17C0121 A



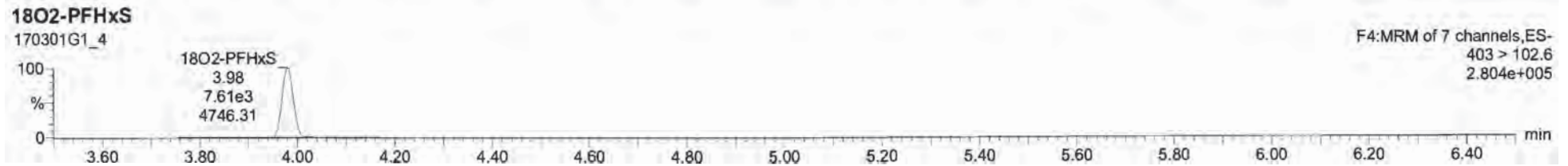
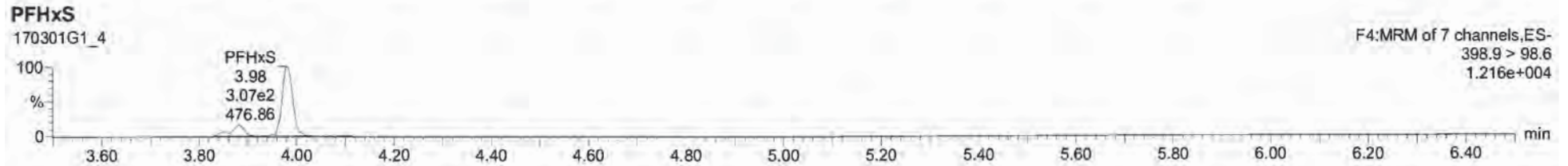
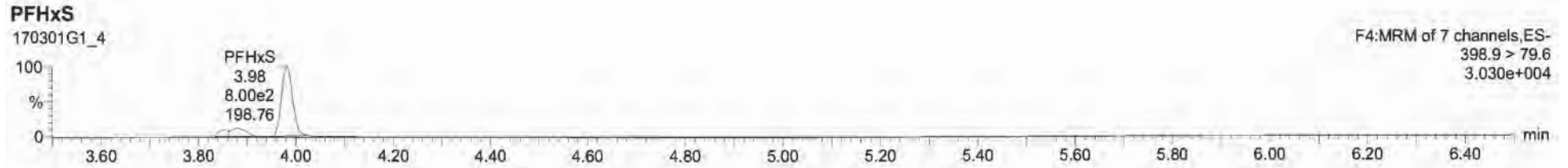


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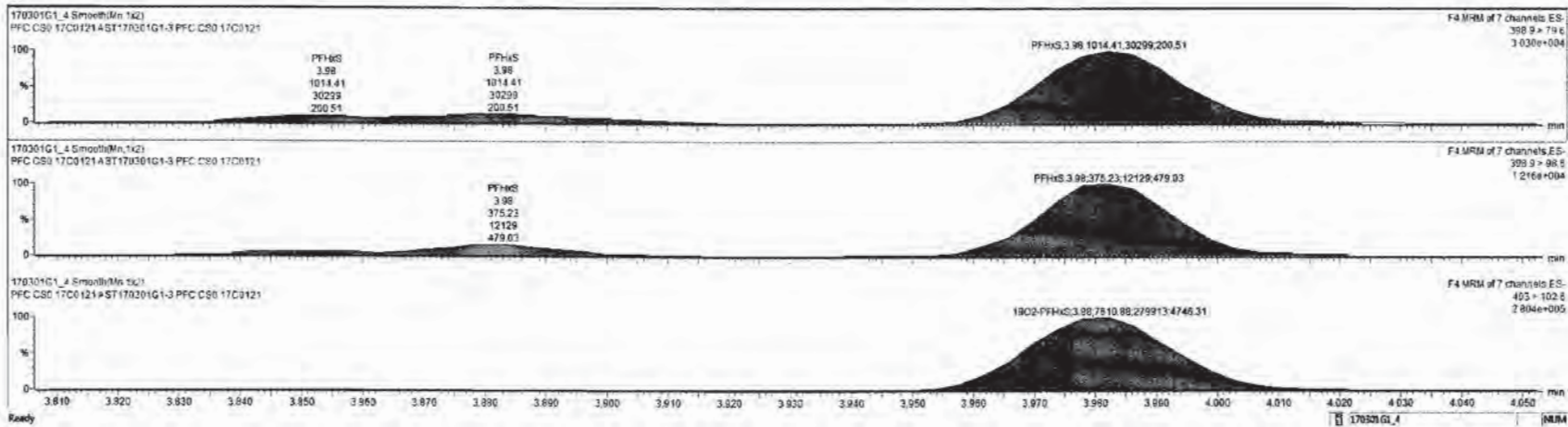
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Name: 170301G1\_4, Date: 01-Mar-2017, Time: 15:34:43, ID: ST170301G1-3 PFC CS0 17C0121, Description: PFC CS0 17C0121 A



Line	Name	Conc.	DL	M/Rec	EMPC	Abn Prop	R/P	RT	#	SA	Y/N	RTI	Acc Date	Acq Time	17-Chr Note	D	Sample Text	Factor1	SW	Cal File	MOK	
1	PFBS	0.8997441	0.00474	99.1		1.227e3		2.97	1	71	0.447	YES	1.000	01-Mar-17	15:34:43	292.645	ST170301G	PF C50 17C01	1.0	1.00		NO
2	PFHpA	1.0610513		106.1		3.162e3		3.86	2	8			1.000	01-Mar-17	15:34:43		ST170301G	PF C50 17C01	1.0	1.00		NO
3	PFHxT	1.0804923		37.2		1.084e3		3.90	3	9			1.000	01-Mar-17	15:34:43		ST170301G	PF C50 17C01	1.0	1.00		NO
4	PFOA	1.5449353		104.5		2.025e3		4.27	4	10			1.000	01-Mar-17	15:34:43		ST170301G	PF C50 17C01	1.0	1.00		NO
5	PFNA	1.3454228		104.5		2.125e3		4.60	5	11			0.999	01-Mar-17	15:34:43		ST170301G	PF C50 17C01	1.0	1.00		NO
6	PFOS	0.83039396	0.0307	83.3		3.477e2		4.68	6	12			0.987	01-Mar-17	15:34:43		ST170301G	PF C50 17C01	1.0	1.00		NO
7	13C3-PFBS	12.429790	0.00309	99.4		8.823e3	0.442	2.97	7	14			1.000	01-Mar-17	15:34:43		ST170301G	PF C50 17C01	1.0	1.00		NO
8	13C3-PFHpA	12.189291	0.0347	87.4		1.963e4	1.117	3.86	8	14			0.970	01-Mar-17	15:34:43		ST170301G	PF C50 17C01	1.0	1.00		NO
9	13C3-PFHxS	12.415810	0.0051	99.3		7.611e3	0.420	3.90	9	14			1.000	01-Mar-17	15:34:43		ST170301G	PF C50 17C01	1.0	1.00		NO
10	13C3-PFOA	11.959470	0.0206	92.3		3.312e4	2.782	4.27	10	15			1.000	01-Mar-17	15:34:43		ST170301G	PF C50 17C01	1.0	1.00		NO
11	13C3-PFNA	11.744200	0.00284	94.0		1.115e4	0.846	4.60	11	16			1.000	01-Mar-17	15:34:43		ST170301G	PF C50 17C01	1.0	1.00		NO
12	13C3-PFOS	12.546272	0.0291	100.4		1.913e4	0.941	4.66	12	17			1.000	01-Mar-17	15:34:43		ST170301G	PF C50 17C01	1.0	1.00		NO
13	13C3-PFHS	12.509000	0.00279	100.0		3.117e4	1.050	3.95	13	13			0.000	01-Mar-17	15:34:43		ST170301G	PF C50 17C01	1.0	1.00		NO
14	13C3-PFHxS	12.509000	0.0182	100.0		1.624e4	1.000	3.98	14	14			0.000	01-Mar-17	15:34:43		ST170301G	PF C50 17C01	1.0	1.00		NO
15	13C3-PFOA	12.509000	0.00622	100.0		1.280e4	1.000	4.27	15	15			0.000	01-Mar-17	15:34:43		ST170301G	PF C50 17C01	1.0	1.00		NO
16	13C3-PFNA	12.509000	0.00406	100.0		1.409e4	1.000	4.60	16	16			0.000	01-Mar-17	15:34:43		ST170301G	PF C50 17C01	1.0	1.00		NO
17	13C3-PFOS	12.509000	0.00433	100.0		1.072e4	1.000	4.66	17	17			0.000	01-Mar-17	15:34:43		ST170301G	PF C50 17C01	1.0	1.00		NO
18	Total PFBS	0.8997441	0.00403						18				01-Mar-17	15:34:43			ST170301G	PF C50 17C01	1.0	1.00		NO
19	Total PFHxS	0.90318119							19				01-Mar-17	15:34:43			ST170301G	PF C50 17C01	1.0	1.00		NO
20	Total PFOA	1.0449353							20				01-Mar-17	15:34:43			ST170301G	PF C50 17C01	1.0	1.00		NO
21	Total PFOS	1.0654659	0.0307						21				01-Mar-17	15:34:43			ST170301G	PF C50 17C01	1.0	1.00		NO



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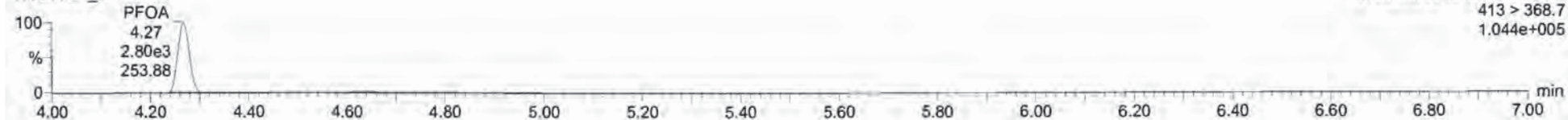
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Printed: Thursday, March 02, 2017 08:27:08 Pacific Standard Time

Name: 170301G1\_4, Date: 01-Mar-2017, Time: 15:34:43, ID: ST170301G1-3 PFC CS0 17C0121, Description: PFC CS0 17C0121 A

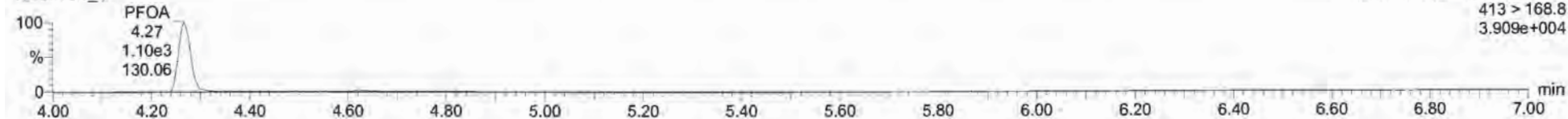
**PFOA**

170301G1\_4



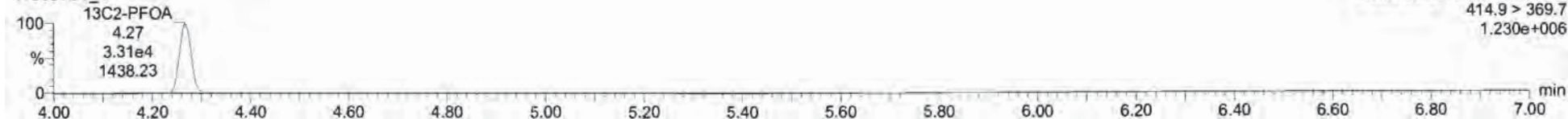
**PFOA**

170301G1\_4



**13C2-PFOA**

170301G1\_4

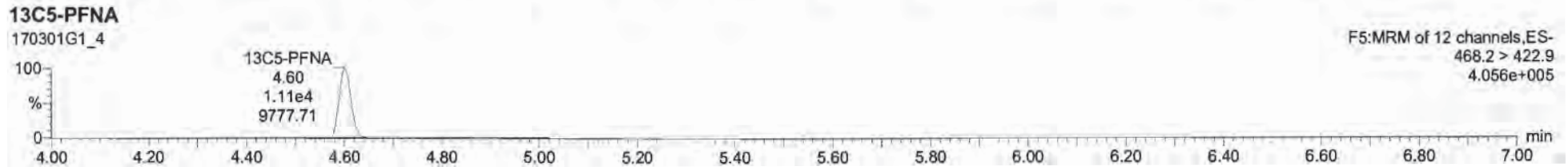
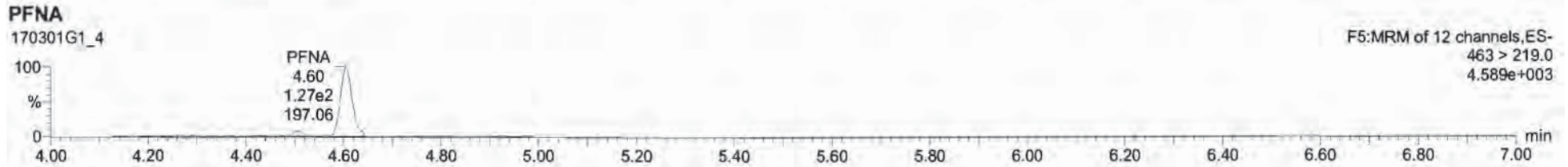
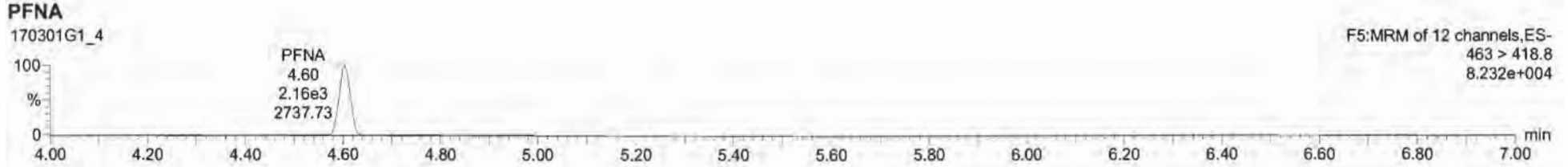




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Printed: Thursday, March 02, 2017 08:27:08 Pacific Standard Time

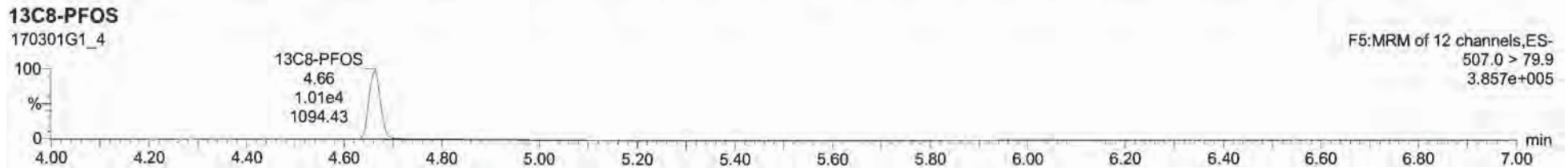
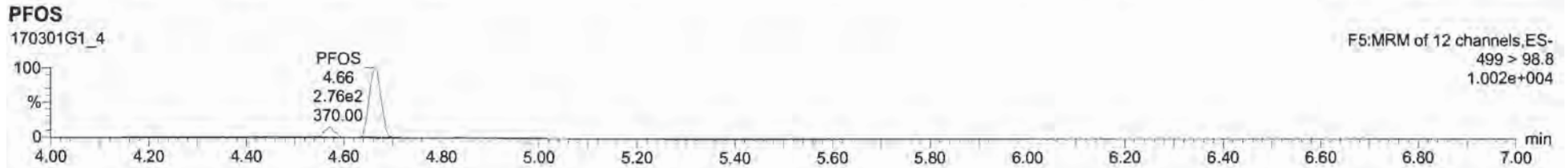
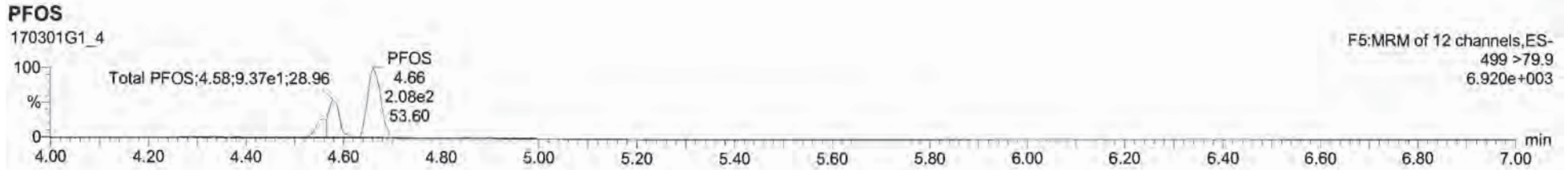
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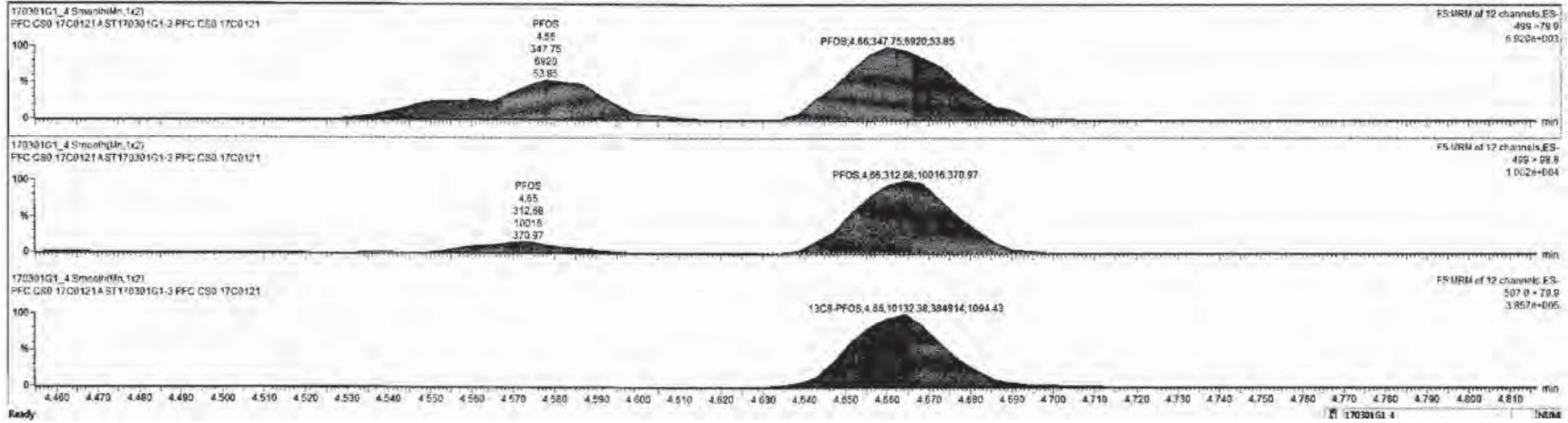
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Printed: Thursday, March 02, 2017 08:27:08 Pacific Standard Time

Name: 170301G1\_4, Date: 01-Mar-2017, Time: 15:34:43, ID: ST170301G1-3 PFC CS0 17C0121, Description: PFC CS0 17C0121 A



Name	Conc	DL	%Rec	ENPC	Abt.Meq	RRF	RT	#	SM	RA	Y/N	RST	Acq.Date	Acq.Time	SP	Chr/Noise	D	Sample Text	Factor1	DW	Cal File	INOC
1 PFBS	0.0007441	0.00474	89.1		1.227e3	2.97	7	7	0.447		YES	1.000	01-Mar-17	15:34:43		292.845	ST170301G	PFC CS0 17C01	1.0	1.00		NO
2 PFHxA	1.0610513		106.1		3.102e3	3.96	2	6				1.000	01-Mar-17	15:34:43			ST170301G	PFC CS0 17C01	1.0	1.00		NO
3 PFHxS	0.0004028		87.0		1.014e3	3.93	3	9				1.000	01-Mar-17	15:34:43			ST170301G	PFC CS0 17C01	1.0	1.00		NO
4 PFDA	1.0449353		104.5		2.006e3	4.27	4	10				1.000	01-Mar-17	15:34:43			ST170301G	PFC CS0 17C01	1.0	1.00		NO
5 PFNA	1.0454726		104.5		2.155e3	4.60	5	11				1.001	01-Mar-17	15:34:43			ST170301G	PFC CS0 17C01	1.0	1.00		NO
6 PFOS	0.0002009	0.0021	35.3		1.477e3	4.88	8	12				0.900	01-Mar-17	15:34:43			ST170301G	PFC CS0 17C01	1.0	1.00		NO
7 13C3-PFBS	12.429768	0.00309	99.4		8.023e3	0.442	2.97	7	14			0.907	01-Mar-17	15:34:43			ST170301G	PFC CS0 17C01	1.0	1.00		NO
8 13C4-PFHxA	12.169251	0.0347	97.4		1.983e4	1.117	3.96	8	14			0.970	01-Mar-17	15:34:43			ST170301G	PFC CS0 17C01	1.0	1.00		NO
9 18O2-PFHxS	12.415018	0.00051	99.3		7.611e3	0.420	3.96	9	14			1.000	01-Mar-17	15:34:43			ST170301G	PFC CS0 17C01	1.0	1.00		NO
10 13C2-PFDA	11.535676	0.0206	92.3		3.312e4	2.782	4.27	10	15			1.000	01-Mar-17	15:34:43			ST170301G	PFC CS0 17C01	1.0	1.00		NO
11 13C5-PFNA	11.744206	0.00264	94.0		1.113e4	0.848	4.60	11	16			1.000	01-Mar-17	15:34:43			ST170301G	PFC CS0 17C01	1.0	1.00		NO
12 13C8-PFOS	12.546272	0.0201	100.4		1.013e4	0.941	4.66	12	17			1.000	01-Mar-17	15:34:43			ST170301G	PFC CS0 17C01	1.0	1.00		NO
13 13C5-PFHxA	12.500000	0.00279	100.0		3.117e4	1.000	3.95	13	13			0.000	01-Mar-17	15:34:43			ST170301G	PFC CS0 17C01	1.0	1.00		NO
14 13C3-PFHxS	12.500000	0.0182	100.0		1.824e4	1.000	3.98	14	14			0.000	01-Mar-17	15:34:43			ST170301G	PFC CS0 17C01	1.0	1.00		NO
15 13C8-PFDA	12.500000	0.00622	100.0		1.292e4	1.000	4.27	15	15			0.000	01-Mar-17	15:34:43			ST170301G	PFC CS0 17C01	1.0	1.00		NO
16 13C8-PFNA	12.500000	0.00490	100.0		1.400e4	1.000	4.60	16	16			0.000	01-Mar-17	15:34:43			ST170301G	PFC CS0 17C01	1.0	1.00		NO
17 13C4-PFDS	12.500000	0.00433	100.0		1.072e4	1.000	4.66	17	17			0.000	01-Mar-17	15:34:43			ST170301G	PFC CS0 17C01	1.0	1.00		NO
18 Total PFBS	0.0007441	0.00453					18						01-Mar-17	15:34:43			ST170301G	PFC CS0 17C01	1.0	1.00		NO
19 Total PFHxS	0.0031019						19						01-Mar-17	15:34:43			ST170301G	PFC CS0 17C01	1.0	1.00		NO
20 Total PFDA	1.0449353						20						01-Mar-17	15:34:43			ST170301G	PFC CS0 17C01	1.0	1.00		NO
21 Total PFOS	1.0654650	0.0337					21						01-Mar-17	15:34:43			ST170301G	PFC CS0 17C01	1.0	1.00		NO





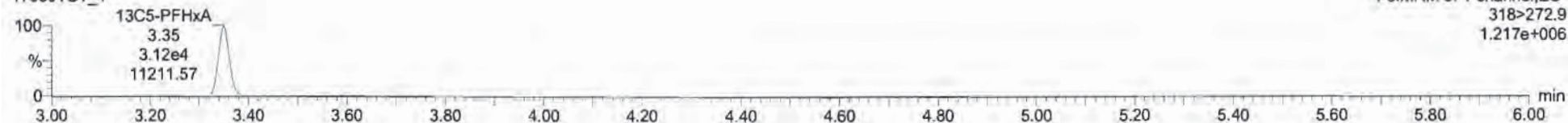
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Last Altered: Thursday, March 02, 2017 08:21:56 Pacific Standard Time  
Printed: Thursday, March 02, 2017 08:27:08 Pacific Standard Time

Name: 170301G1\_4, Date: 01-Mar-2017, Time: 15:34:43, ID: ST170301G1-3 PFC CS0 17C0121, Description: PFC CS0 17C0121 A

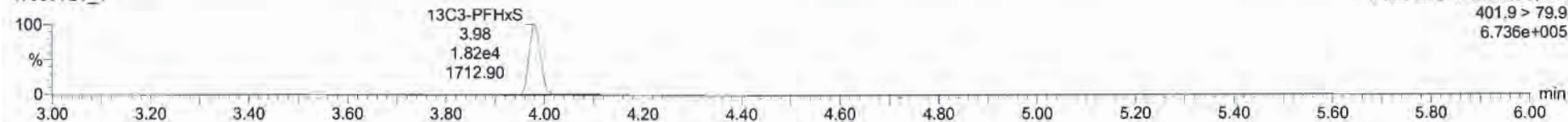
**13C5-PFHxA**

170301G1\_4



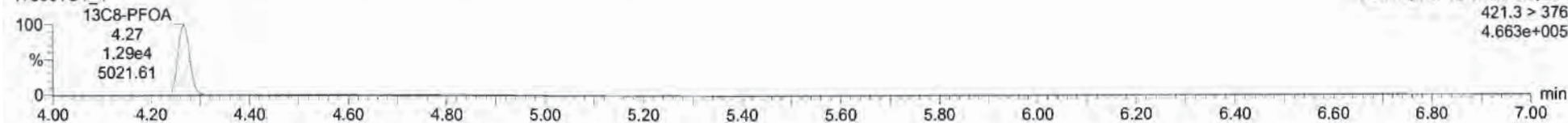
**13C3-PFHxS**

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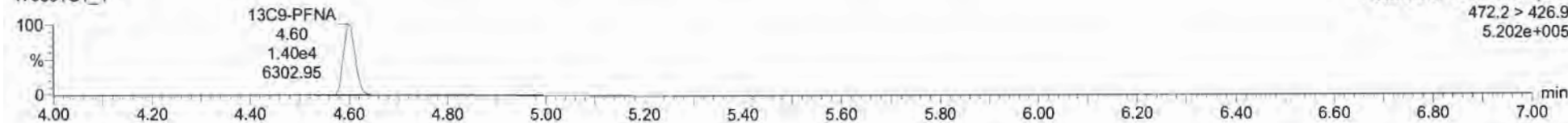
**13C8-PFOA**

170301G1\_4



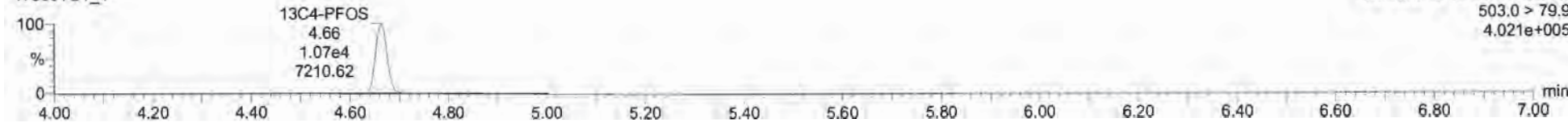
**13C9-PFNA**

170301G1\_4



**13C4-PFOS**

170301G1\_4

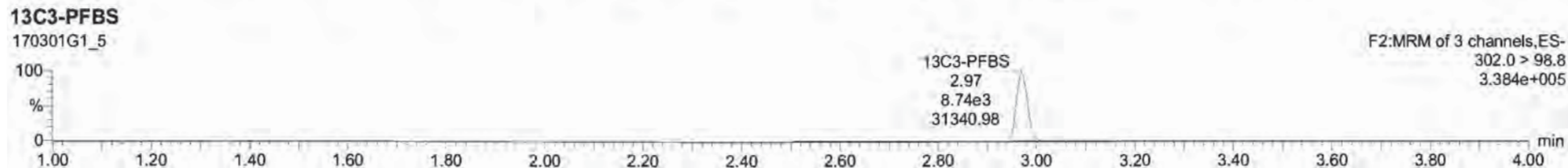
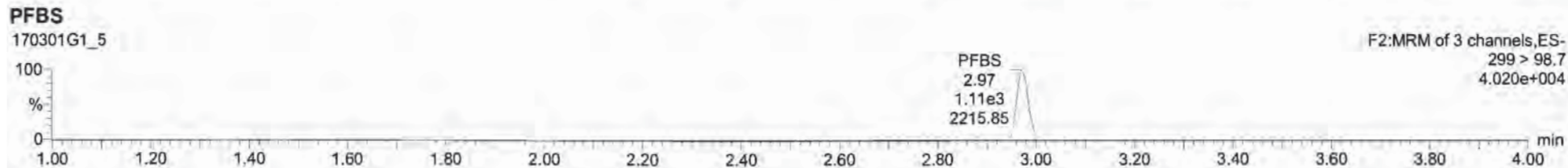
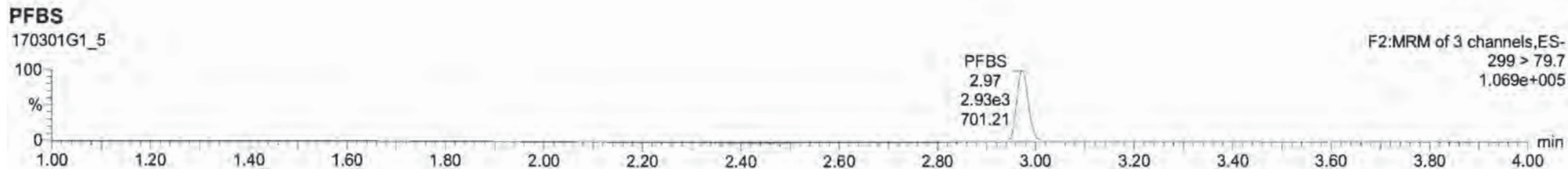


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Printed: Thursday, March 02, 2017 08:27:08 Pacific Standard Time

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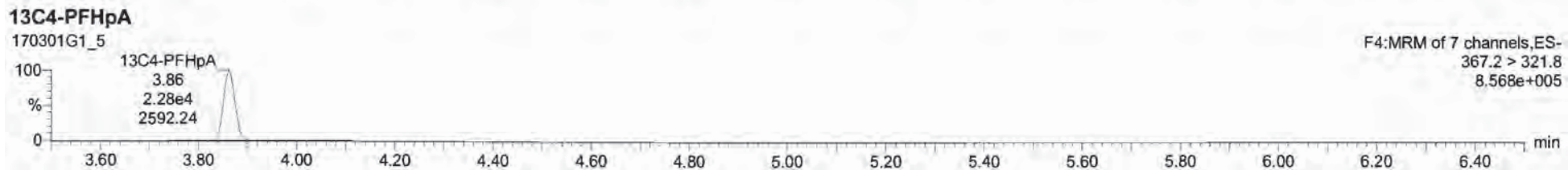
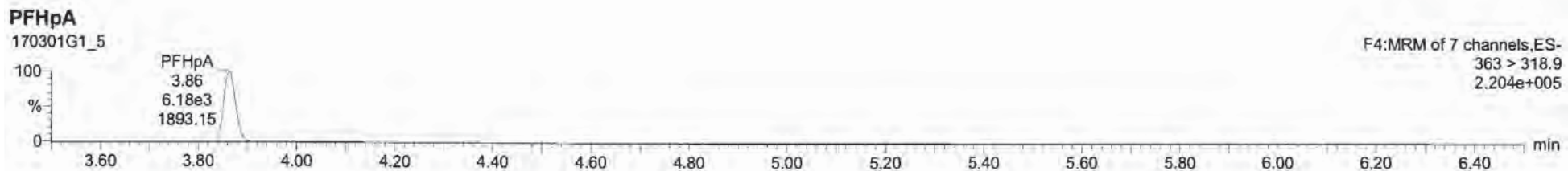


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Printed: Thursday, March 02, 2017 08:27:08 Pacific Standard Time

Name: 170301G1\_5, Date: 01-Mar-2017, Time: 15:47:17, ID: ST170301G1-4 PFC CS1 17C0122, Description: PFC CS1 17C0122 A



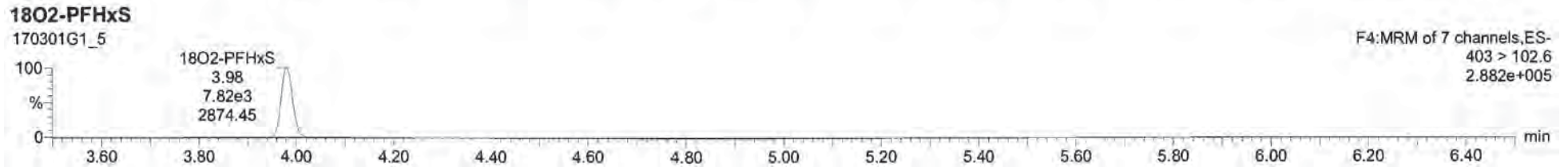
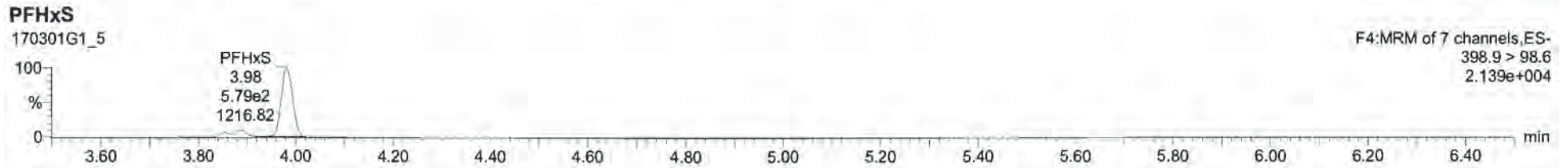
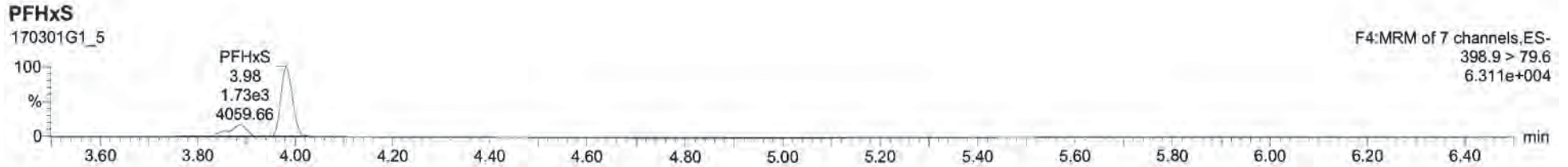


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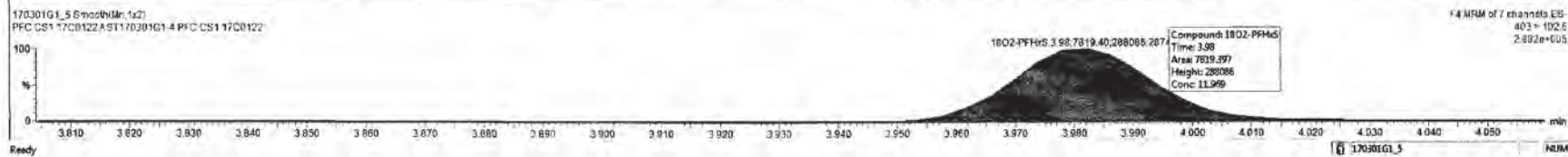
Last Altered: Thursday, March 02, 2017 08:21:56 Pacific Standard Time

Printed: Thursday, March 02, 2017 08:27:08 Pacific Standard Time

Name: 170301G1\_5, Date: 01-Mar-2017, Time: 15:47:17, ID: ST170301G1-4 PFC CS1 17C0122, Description: PFC CS1 17C0122 A



Name	Comp	DL	Area	EMPC	Area Peak	RRF	RT	#	ES	RA	YN	RT1	Acq Date	Acq Time	1 <sup>st</sup> Chr Name	ID	Sample Text	Factor	Stm	Cal File	Model
1	PFBS	1.9506772	0.9196	97.5	2.935e3	2.97	1	7	0.380	YES	1.001	01-Mar-17	15:47:17	18.119	ST170301G	PFC CS1 17C01	1.0	1.00		NO	
2	PFHpA	1.8234487		91.2	6.175e3	3.86	2	6			1.000	01-Mar-17	15:47:17		ST170301G	PFC CS1 17C01	1.0	1.00		NO	
3	PFHxS	2.0525890		94.8	8.157e3	3.80	3	9			1.000	01-Mar-17	15:47:17		ST170301G	PFC CS1 17C01	1.0	1.00		NO	
4	PFOA	1.8649281		93.2	5.143e3	4.27	4	10			1.000	01-Mar-17	15:47:17		ST170301G	PFC CS1 17C01	1.0	1.00		NO	
5	PFNA	1.9531600		97.7	4.211e3	4.60	5	11			1.000	01-Mar-17	15:47:17		ST170301G	PFC CS1 17C01	1.0	1.00		NO	
9	PFO5	2.0457287	0.0136	102.5	7.669e2	4.86	6	12			1.000	01-Mar-17	15:47:17		ST170301G	PFC CS1 17C01	1.0	1.00		YES	
7	13C3-PFBS	12.787219	0.00103	101.7	8.741e3	8.442	2.97	7	14		0.087	01-Mar-17	15:47:17		ST170301G	PFC CS1 17C01	1.0	1.00		NO	
8	13C4-PFHpA	13.112836	0.0125	104.9	2.278e4	1.117	3.86	6	14		0.070	01-Mar-17	15:47:17		ST170301G	PFC CS1 17C01	1.0	1.00		NO	
9	18O2-PFHxS	11.869468	0.0101	95.8	7.818e3	6.420	3.90	9	14		1.000	01-Mar-17	15:47:17		ST170301G	PFC CS1 17C01	1.0	1.00		NO	
10	13C2-PFOA	11.855568	0.00239	92.4	3.561e4	2.782	4.27	10	15		1.000	01-Mar-17	15:47:17		ST170301G	PFC CS1 17C01	1.0	1.00		NO	
11	13C5-PFNA	11.731860	0.00143	94.3	1.206e4	8.848	4.80	11	16		1.001	01-Mar-17	15:47:17		ST170301G	PFC CS1 17C01	1.0	1.00		NO	
12	13C8-PFO5	10.781882	0.00712	86.3	8.012e3	8.941	4.86	12	17		1.000	01-Mar-17	15:47:17		ST170301G	PFC CS1 17C01	1.0	1.00		NO	
13	13C3-PFHxS	12.590000	0.00390	100.0	3.165e4	1.000	3.35	13	13		0.000	01-Mar-17	15:47:17		ST170301G	PFC CS1 17C01	1.0	1.00		NO	
14	13C3-PFHxS	12.590000	0.00068	108.0	1.044e4	1.000	3.95	14	14		0.000	01-Mar-17	15:47:17		ST170301G	PFC CS1 17C01	1.0	1.00		NO	
15	13C8-PFOA	12.590000	0.00106	108.0	1.305e4	1.000	4.27	15	15		0.000	01-Mar-17	15:47:17		ST170301G	PFC CS1 17C01	1.0	1.00		NO	
16	13C3-PFNA	12.590000	0.00077	108.0	1.511e4	1.000	4.80	16	16		0.000	01-Mar-17	15:47:17		ST170301G	PFC CS1 17C01	1.0	1.00		NO	
17	13C4-PFO5	12.590000	0.00941	108.0	1.110e4	1.000	4.86	17	17		0.000	01-Mar-17	15:47:17		ST170301G	PFC CS1 17C01	1.0	1.00		NO	
18	Total PFBS	1.9506772	0.0117					18				01-Mar-17	15:47:17		ST170301G	PFC CS1 17C01	1.0	1.00		NO	
19	Total PFHpA	2.1021049						19				01-Mar-17	15:47:17		ST170301G	PFC CS1 17C01	1.0	1.00		NO	
20	Total PFOA	1.8649281						20				01-Mar-17	15:47:17		ST170301G	PFC CS1 17C01	1.0	1.00		NO	
24	Total PFO5	2.7240372	0.0136					24				01-Mar-17	15:47:17		ST170301G	PFC CS1 17C01	1.0	1.00		NO	

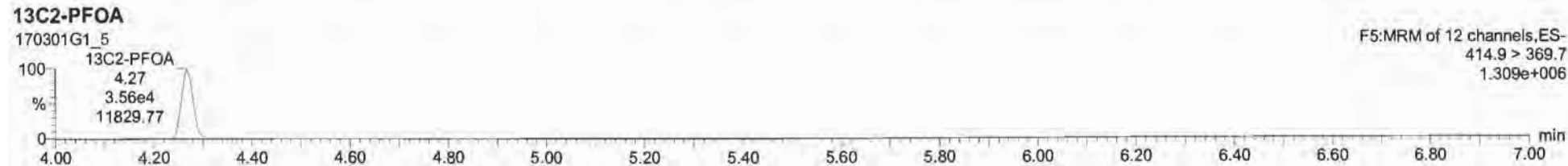
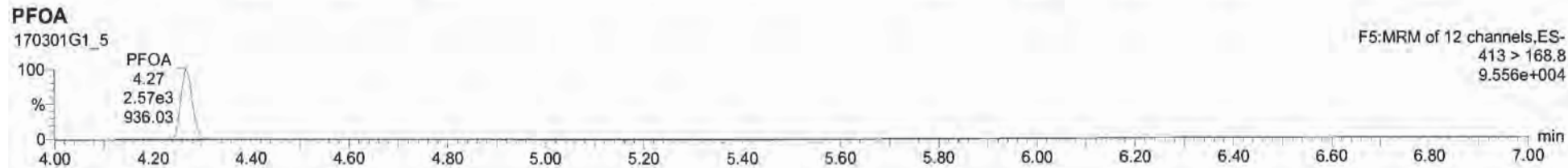
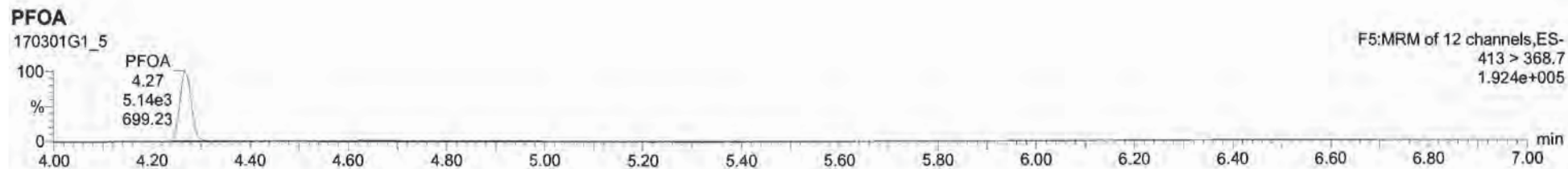


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Last Altered: Thursday, March 02, 2017 08:21:56 Pacific Standard Time

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Name: 170301G1\_5, Date: 01-Mar-2017, Time: 15:47:17, ID: ST170301G1-4 PFC CS1 17C0122, Description: PFC CS1 17C0122 A



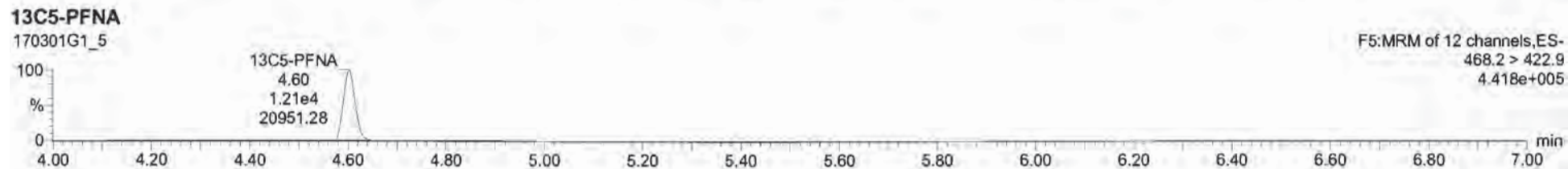
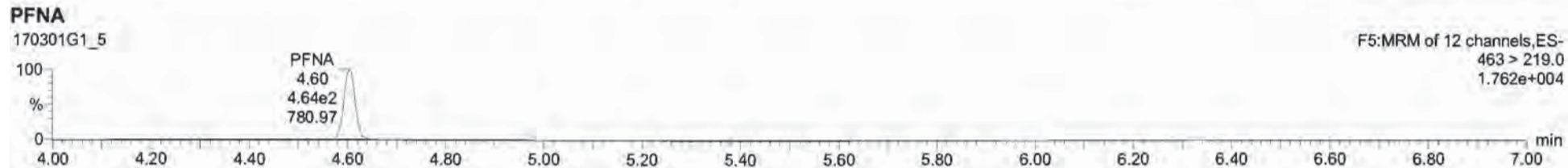
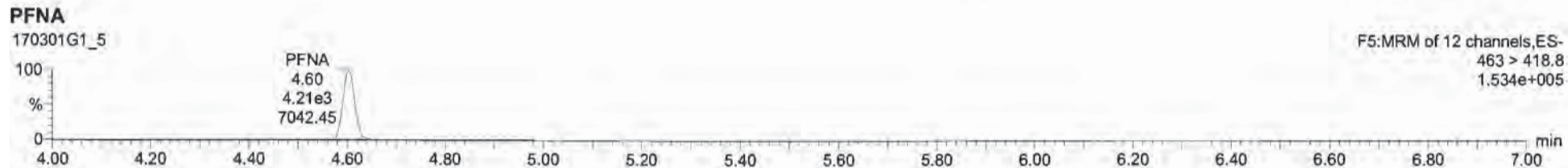


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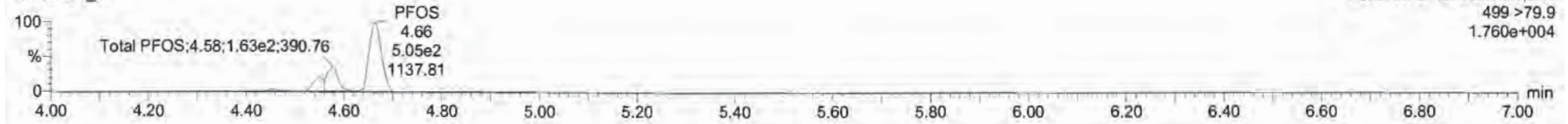
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Printed: Thursday, March 02, 2017 08:27:08 Pacific Standard Time

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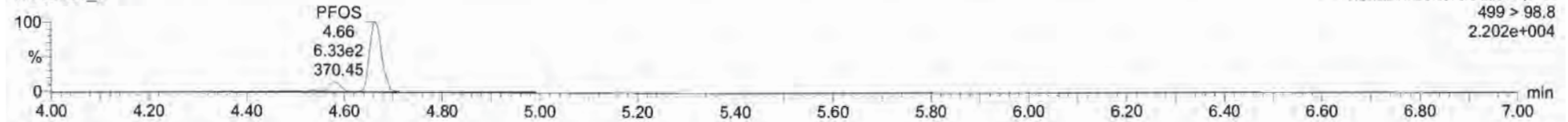
**PFOS**

170301G1\_5



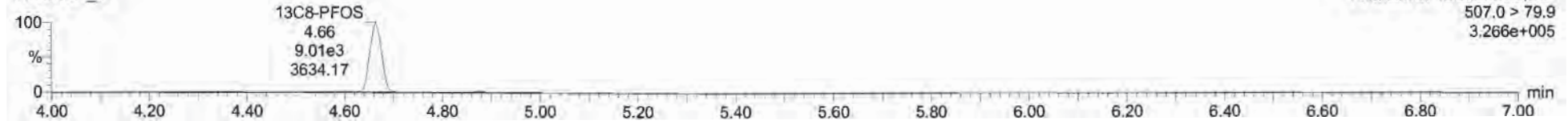
**PFOS**

170301G1\_5

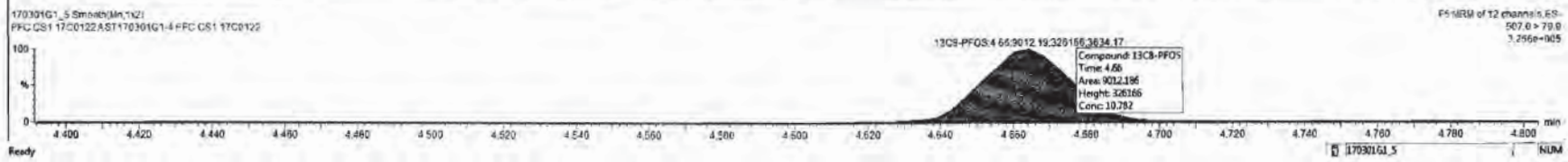
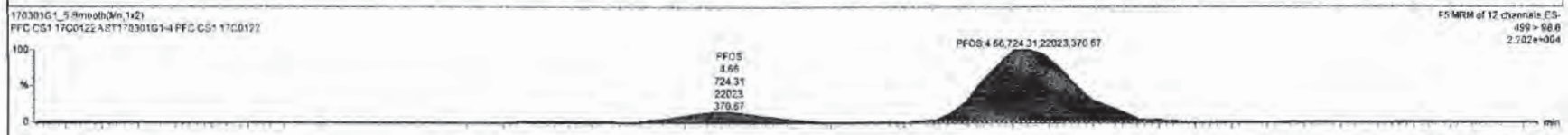
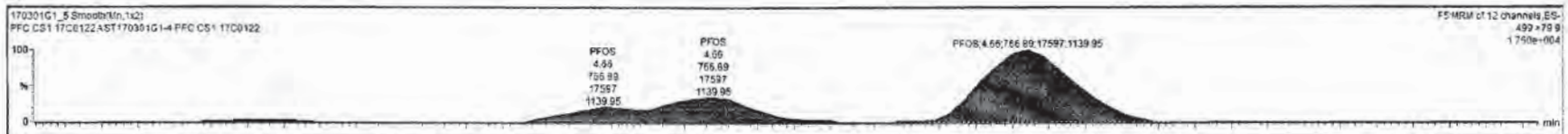


**13C8-PFOS**

170301G1\_5



SI	Name	Conc.	DL	%Rec	EMPC	Abs Resp	RFR	RT	#	Ch	RA	Y/N	RRT	Acq Date	Acq Time	V' Ch' Noise	ID	Sample Text	Factor1	SVN	Cal File	MODEL
1	PFBS	1.9695772	0.0106	87.5		2.93545		2.97	1	7	0.330	YES	1.001	01-Mar-17	15:47:17	18.119	ST170301G	PFC CS1 17C01...	1.0	1.00		NO
2	PFHpA	1.5224407		91.2		6.17863		3.06	2	8			1.000	01-Mar-17	15:47:17		ST170301G	PFC CS1 17C01...	1.0	1.00		NO
3	PFtCS	1.8925999		94.6		2.15763		3.96	3	9			1.003	01-Mar-17	15:47:17		ST170301G	PFC CS1 17C01...	1.0	1.00		NO
4	PFOA	1.8640261		93.2		5.14363		4.27	4	10			1.000	01-Mar-17	15:47:17		ST170301G	PFC CS1 17C01...	1.0	1.00		NO
5	PFNA	1.9531600		97.7		4.21163		4.60	5	11			1.002	01-Mar-17	15:47:17		ST170301G	PFC CS1 17C01...	1.0	1.00		NO
6	PFOS	2.9407207	0.0136	100.0		7.88562		4.80	6	12			1.003	01-Mar-17	15:47:17		ST170301G	PFC CS1 17C01...	1.0	1.00		YES
7	13C3-PFBS	12.707219	0.00103	101.7		8.74163	0.442	2.97	7	14			0.827	01-Mar-17	15:47:17		ST170301G	PFC CS1 17C01...	1.0	1.00		NO
8	13C4-PFHpA	13.112636	0.0125	104.3		2.27864	1.117	3.06	8	14			0.970	01-Mar-17	15:47:17		ST170301G	PFC CS1 17C01...	1.0	1.00		NO
9	18O2-PFOA	11.969408	0.0101	95.0		7.81963	0.420	3.96	9	14			1.000	01-Mar-17	15:47:17		ST170301G	PFC CS1 17C01...	1.0	1.00		NO
10	13C2-PFOA	11.555586	0.00239	92.4		3.56164	2.782	4.27	10	15			1.000	01-Mar-17	15:47:17		ST170301G	PFC CS1 17C01...	1.0	1.00		NO
11	13C2-PFNA	11.791880	0.00143	94.3		1.20664	0.546	4.60	11	16			1.001	01-Mar-17	15:47:17		ST170301G	PFC CS1 17C01...	1.0	1.00		NO
12	13C8-PFOS	10.791902	0.00912	86.3		8.01263	0.941	4.80	12	17			1.000	01-Mar-17	15:47:17		ST170301G	PFC CS1 17C01...	1.0	1.00		NO
13	13C3-PFHpA	12.500050	0.00396	100.0		3.19564	1.000	2.95	13	13			0.900	01-Mar-17	15:47:17		ST170301G	PFC CS1 17C01...	1.0	1.00		NO
14	13C3-PFtCS	12.500099	0.000058	100.0		1.94464	1.000	3.96	14	14			0.900	01-Mar-17	15:47:17		ST170301G	PFC CS1 17C01...	1.0	1.00		NO
15	13C8-PFOA	12.500089	0.00106	100.0		1.38064	1.000	4.27	15	15			0.900	01-Mar-17	15:47:17		ST170301G	PFC CS1 17C01...	1.0	1.00		NO
16	13C8-PFNA	12.500080	0.000777	100.0		1.51164	1.000	4.60	16	16			0.900	01-Mar-17	15:47:17		ST170301G	PFC CS1 17C01...	1.0	1.00		NO
17	13C4-PFOS	12.500080	0.00841	100.0		1.11064	1.000	4.80	17	17			0.900	01-Mar-17	15:47:17		ST170301G	PFC CS1 17C01...	1.0	1.00		NO
18	Total PFBS	1.9690772	0.0117						18					01-Mar-17	15:47:17		ST170301G	PFC CS1 17C01...	1.0	1.00		NO
19	Total PFHpA	2.1021449							19					01-Mar-17	15:47:17		ST170301G	PFC CS1 17C01...	1.0	1.00		NO
20	Total PFOA	1.8640261							20					01-Mar-17	15:47:17		ST170301G	PFC CS1 17C01...	1.0	1.00		NO
21	Total PFOS	2.7240372	0.0136						21					01-Mar-17	15:47:17		ST170301G	PFC CS1 17C01...	1.0	1.00		NO





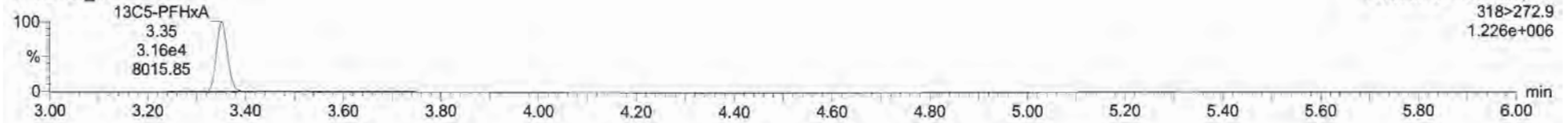
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Last Altered: Thursday, March 02, 2017 08:21:56 Pacific Standard Time  
Printed: Thursday, March 02, 2017 08:27:08 Pacific Standard Time

Name: 170301G1\_5, Date: 01-Mar-2017, Time: 15:47:17, ID: ST170301G1-4 PFC CS1 17C0122, Description: PFC CS1 17C0122 A

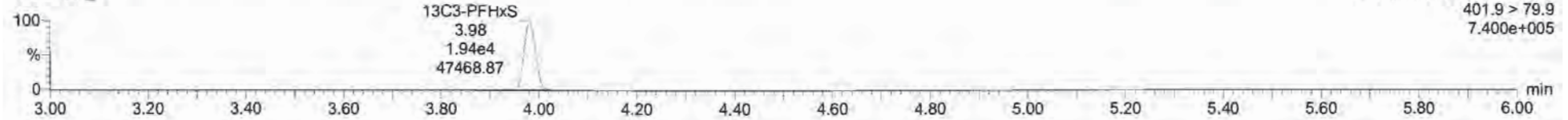
**13C5-PFHxA**

170301G1\_5



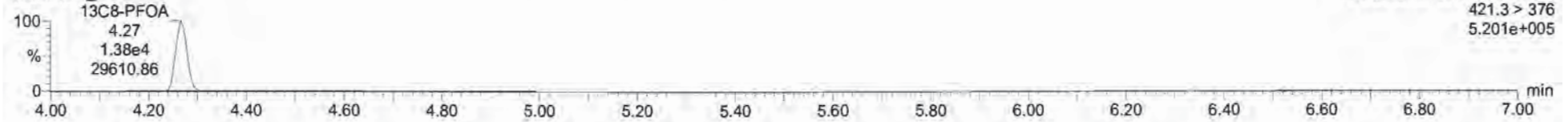
**13C3-PFHxS**

170301G1\_5



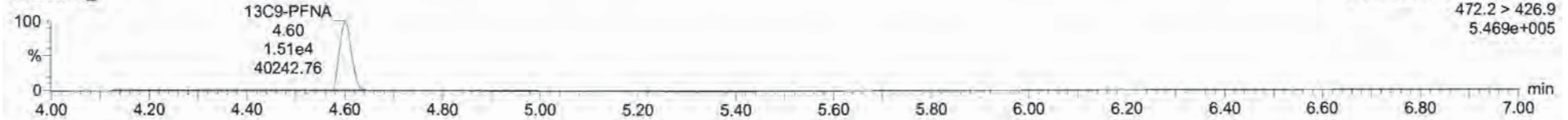
**13C8-PFOA**

170301G1\_5



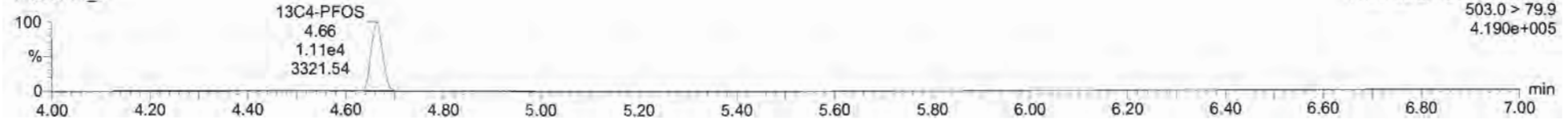
**13C9-PFNA**

170301G1\_5



**13C4-PFOS**

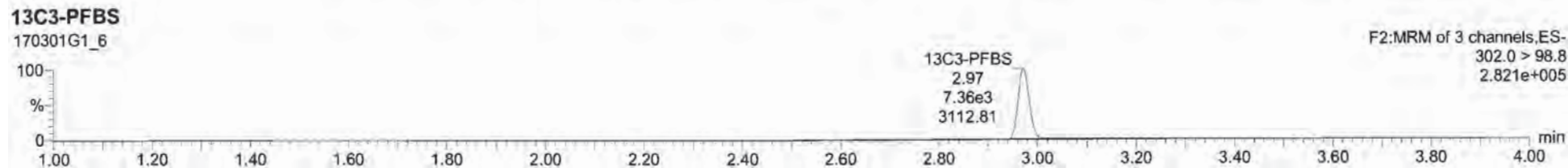
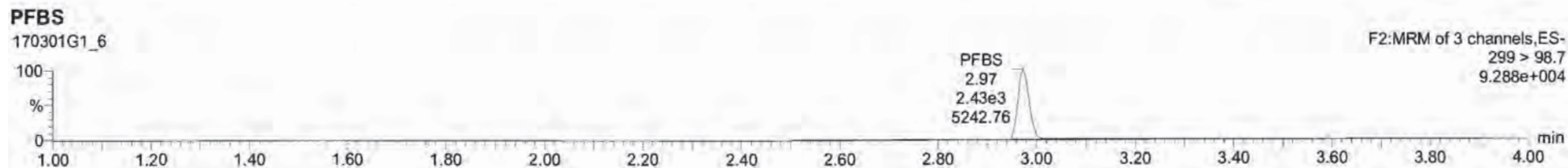
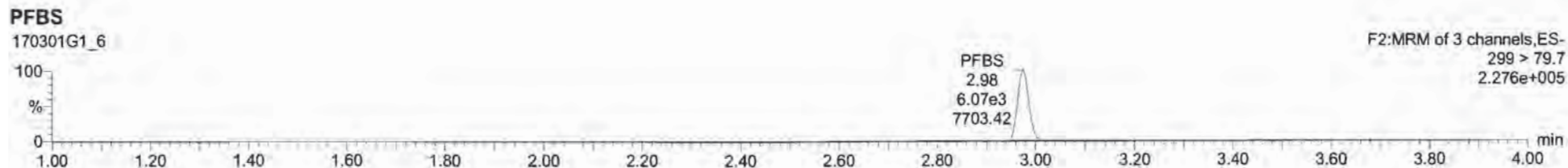
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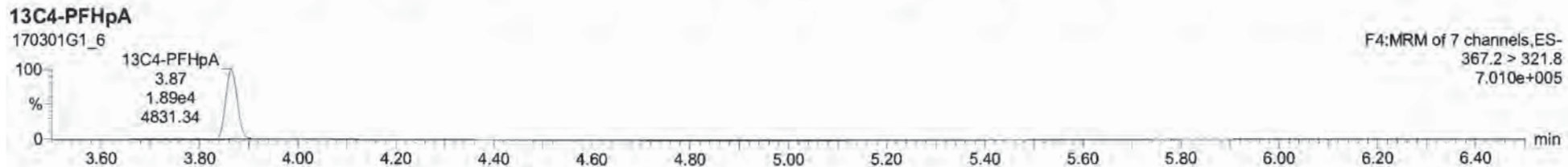
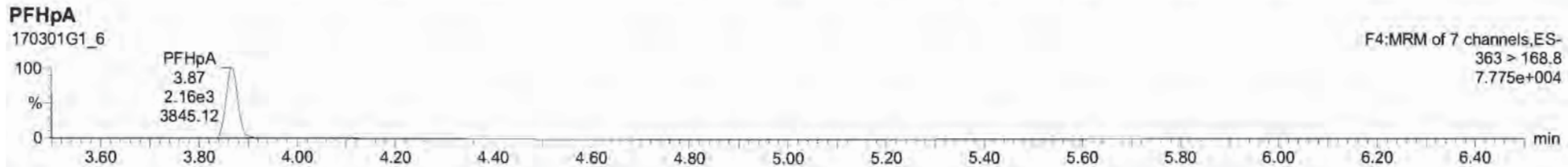
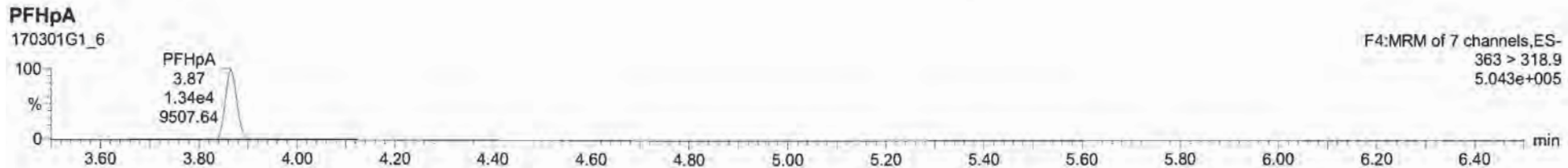
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Printed: Thursday, March 02, 2017 08:27:08 Pacific Standard Time

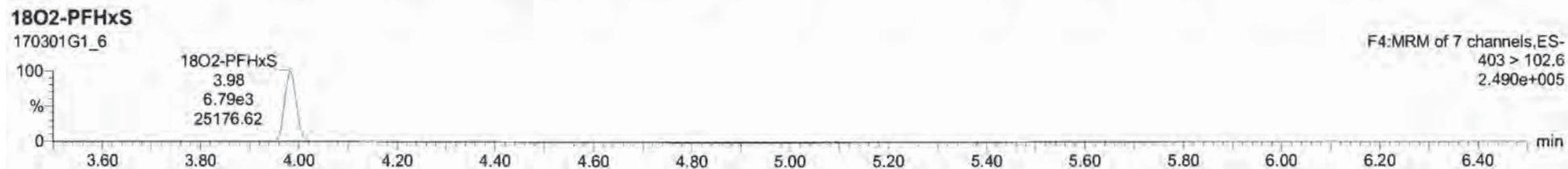
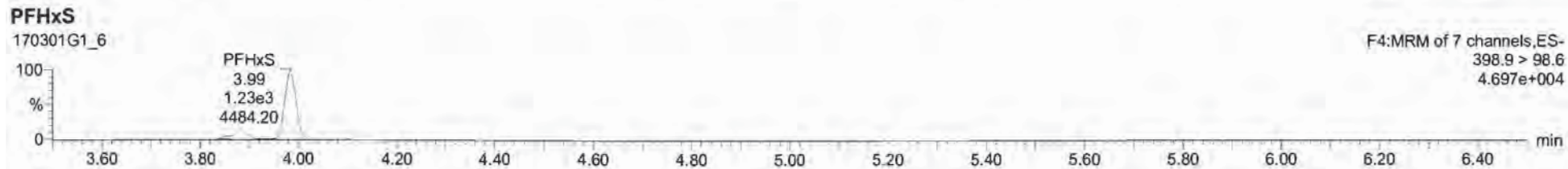
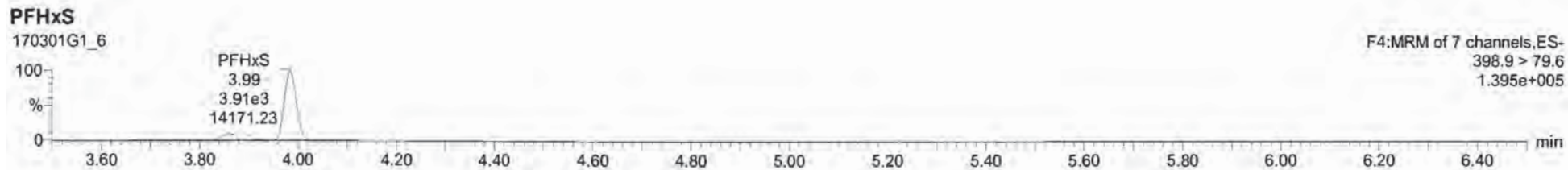
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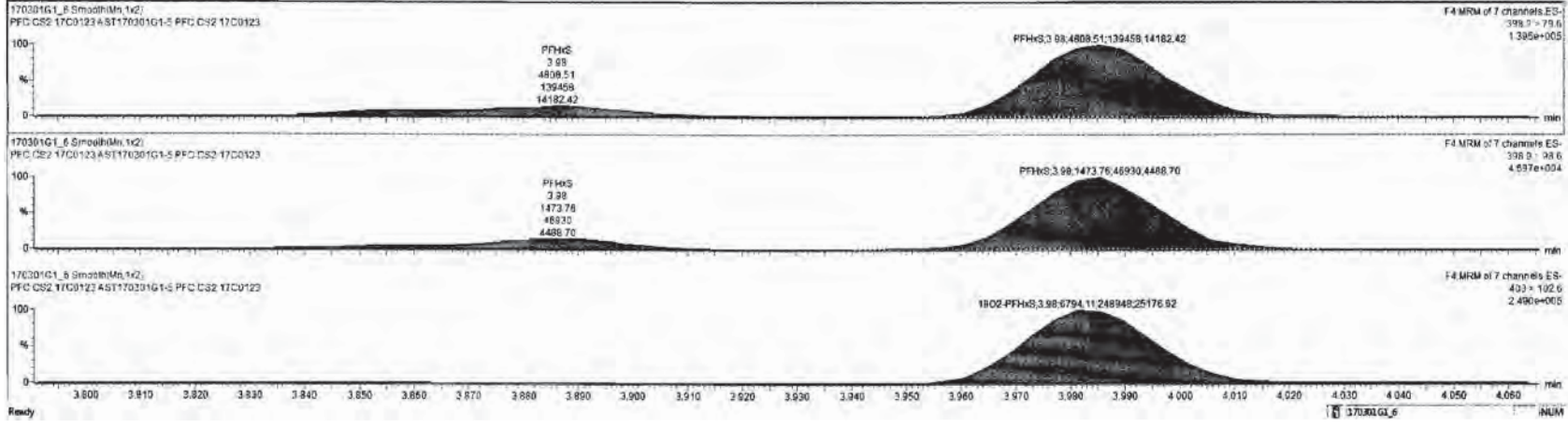
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170301G1\_6-ST170301G1-5-PFC CS2 17C0123 - PFC CS2 17C0123A

#	Name	Conc	DL	%Rec	EMPC	Abs.Prec	RRF	RT	#	SR	RA	Y/N	QRT	Acq.Dat	Acq.Time	17 Chr	17 Chr	Sample Tot	Factor1	SW	Col File	INOC	
1	PFBS	4.7549196	0.00555	95.7		6.36543	3.88	1	7	0.401	YES	1.001	01-Mar-17	15:59:50	17.687	ST170301G	PFC CS2 17C01	1.0	1.00			NO	
2	PFHpA	4.7911339		95.8		1.33844	3.87	2	8				1.000	01-Mar-17	15:59:53		ST170301G	PFC CS2 17C01	1.0	1.00			NO
3	PFHxS	4.9018793		95.8		4.39944	3.88	3	9				1.001	01-Mar-17	15:59:50		ST170301G	PFC CS2 17C01	1.0	1.00			YES
4	PFOA	4.6117978		92.2		1.18244	4.27	4	10				1.000	01-Mar-17	15:59:50		ST170301G	PFC CS2 17C01	1.0	1.00			YES
5	PFNA	4.9225520		98.5		9.40943	4.60	5	11				1.000	01-Mar-17	15:59:52		ST170301G	PFC CS2 17C01	1.0	1.00			YES
6	PFOS	4.7088570	0.0148	94.8		1.73043	4.67	6	12				1.001	01-Mar-17	15:59:50		ST170301G	PFC CS2 17C01	1.0	1.00			YES
7	13C3-PFBS	13.070366	0.0111	104.6		7.36263	0.442	2.97	7	14			0.686	01-Mar-17	15:59:53		ST170301G	PFC CS2 17C01	1.0	1.00			NO
8	13C4-PFHpA	13.311342	0.00701	106.7		1.89584	1.117	3.87	8	14			0.970	01-Mar-17	15:59:50		ST170301G	PFC CS2 17C01	1.0	1.00			NO
9	18O2-PFHxS	12.758881	0.00127	101.7		6.79443	0.420	3.88	9	14			0.999	01-Mar-17	15:59:50		ST170301G	PFC CS2 17C01	1.0	1.00			NO
10	13C2-PFOA	13.080296	0.0128	104.6		3.30944	2.782	4.27	10	15			1.001	01-Mar-17	15:59:50		ST170301G	PFC CS2 17C01	1.0	1.00			NO
11	13C5-PFNA	12.931109	0.00201	103.4		1.10584	0.646	4.60	11	16			1.000	01-Mar-17	15:59:50		ST170301G	PFC CS2 17C01	1.0	1.00			NO
12	13C2-PFOS	11.959294	0.00298	95.7		0.64162	0.841	4.68	12	17			0.999	01-Mar-17	15:59:50		ST170301G	PFC CS2 17C01	1.0	1.00			NO
13	13C5-PFNA	12.586000	0.00318	106.9		2.89464	1.000	3.35	13	13			0.002	01-Mar-17	15:59:50		ST170301G	PFC CS2 17C01	1.0	1.00			NO
14	13C3-PFHpA	12.586000	0.00322	106.9		1.59164	1.000	3.98	14	14			0.000	01-Mar-17	15:59:50		ST170301G	PFC CS2 17C01	1.0	1.00			NO
15	13C4-PFOA	12.586000	0.00379	100.9		1.15744	1.000	4.27	15	15			0.000	01-Mar-17	15:59:50		ST170301G	PFC CS2 17C01	1.0	1.00			NO
16	13C3-PFNA	12.586000	0.00626	100.9		1.26244	1.000	4.60	16	16			0.000	01-Mar-17	15:59:50		ST170301G	PFC CS2 17C01	1.0	1.00			NO
17	13C4-PFOS	12.586000	0.00363	100.8		9.81643	1.000	4.67	17	17			0.000	01-Mar-17	15:59:50		ST170301G	PFC CS2 17C01	1.0	1.00			NO
18	Total PFBS	4.8332281	0.00578					18						01-Mar-17	15:59:52		ST170301G	PFC CS2 17C01	1.0	1.00			NO
19	Total PFHpG	5.7412223						19						01-Mar-17	15:59:50		ST170301G	PFC CS2 17C01	1.0	1.00			NO
20	Total PFOA	4.6117978						20						01-Mar-17	15:59:53		ST170301G	PFC CS2 17C01	1.0	1.00			NO
21	Total PFOS	6.0654845	0.0148					21						01-Mar-17	15:59:50		ST170301G	PFC CS2 17C01	1.0	1.00			NO



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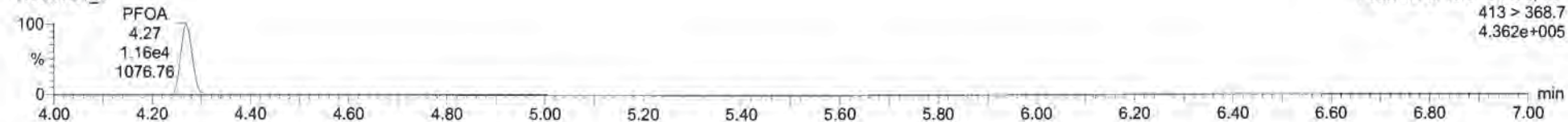
Last Altered: Thursday, March 02, 2017 08:21:56 Pacific Standard Time

Printed: Thursday, March 02, 2017 08:27:08 Pacific Standard Time

Name: 170301G1\_6, Date: 01-Mar-2017, Time: 15:59:50, ID: ST170301G1-5 PFC CS2 17C0123, Description: PFC CS2 17C0123 A

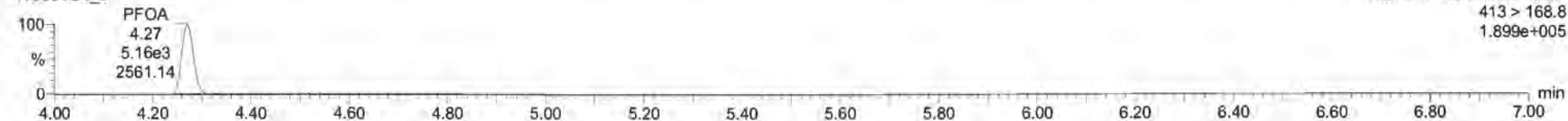
**PFOA**

170301G1\_6



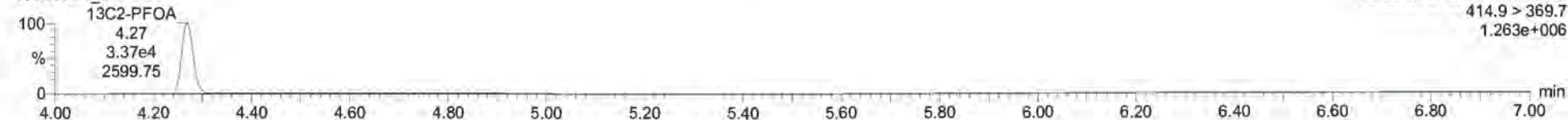
**PFOA**

170301G1\_6



**13C2-PFOA**

170301G1\_6





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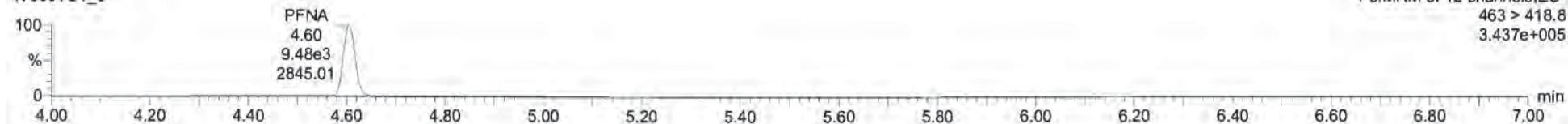
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Printed: Thursday, March 02, 2017 08:27:08 Pacific Standard Time

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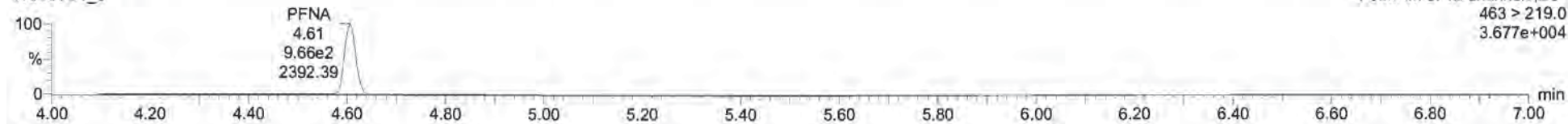
**PFNA**

170301G1\_6



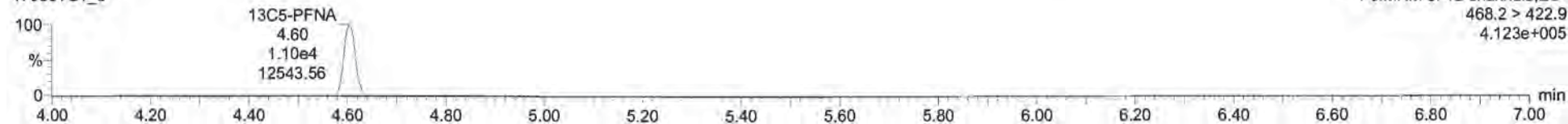
**PFNA**

170301G1\_6



**13C5-PFNA**

170301G1\_6

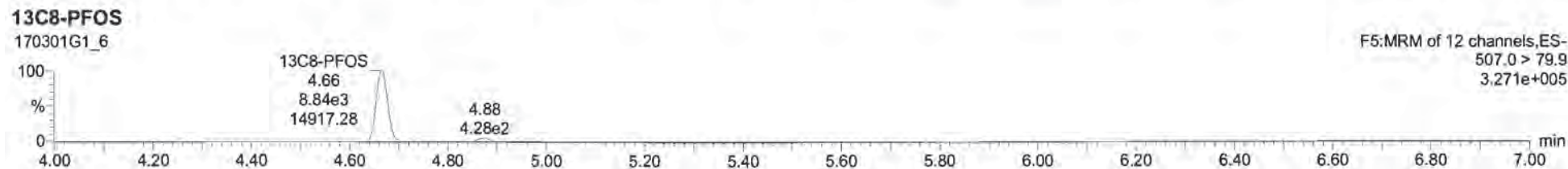
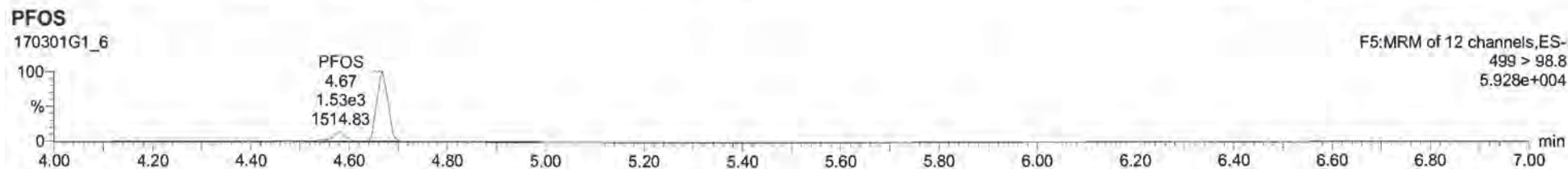
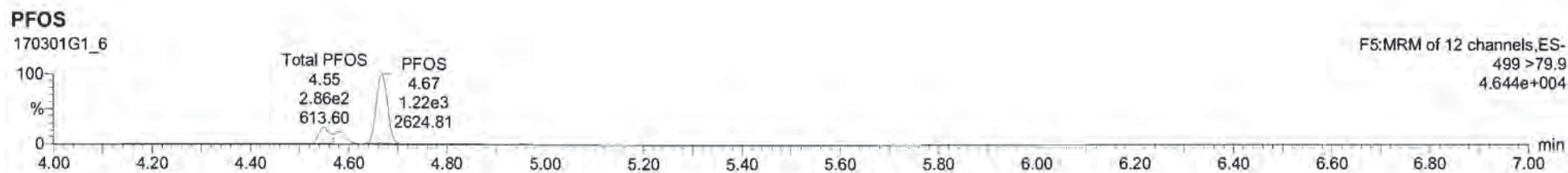


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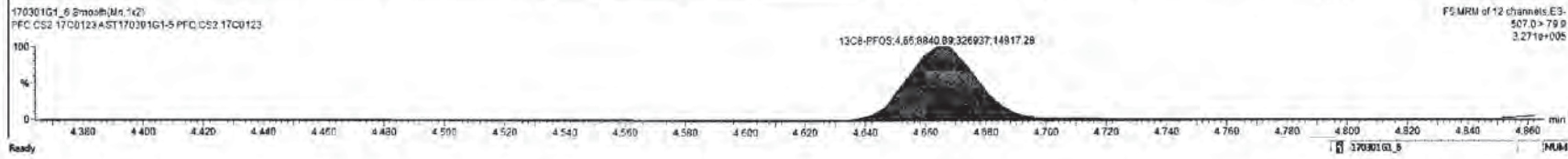
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170301G1\_6-ST170301G1-5-PFC-CS2-17C0123-PFC-CS2-17C0123-A

#	Name	Comp	DL	%Rec	EMPC	Area/Intg	RFI	RTI	#	SB	RA	Y/N	RRF	Area/Std	Acq Time	17 Chr/Noise	ID	Sample Text	Factor1	SNR	Cal File	MSD
1	PFBS	4.7549100	0.00350	95.7		6.06e3	2.99	1	7	0.481	YES	1.001	01-Mar-17	15:59:50	17.687	ST170301G	PFC CS2 17C01	1.0	1.00		NO	
2	PFHpA	4.7911338		95.8		1.339e4	3.87	2	8			1.000	01-Mar-17	15:59:50		ST170301G	PFC CS2 17C01	1.0	1.00		NO	
3	PFHxS	4.9818933		99.6		4.809e3	3.98	3	9			1.001	01-Mar-17	15:59:50		ST170301G	PFC CS2 17C01	1.0	1.00		YES	
4	PFOA	4.8117975		92.2		1.162e4	4.27	4	10			1.000	01-Mar-17	15:59:50		ST170301G	PFC CS2 17C01	1.0	1.00		YES	
5	PFNA	4.9225526		96.5		9.490e3	4.61	5	11			1.000	01-Mar-17	15:59:50		ST170301G	PFC CS2 17C01	1.0	1.00		YES	
6	PFOS	4.7065270	0.0149	94.3		1.709e3	4.87	6	12			1.001	01-Mar-17	15:59:50		ST170301G	PFC CS2 17C01	1.0	1.00		YES	
7	13C3-PFBS	13.070986	0.0111	104.6		7.362e3	0.442	2.97	7	14		0.886	01-Mar-17	15:59:50		ST170301G	PFC CS2 17C01	1.0	1.00		NO	
8	13C4-PFHpA	13.331342	0.00701	106.7		1.895e4	1.117	3.87	8	14		0.570	01-Mar-17	15:59:50		ST170301G	PFC CS2 17C01	1.0	1.00		NO	
9	18O2-PFHxS	12.708801	0.00127	101.7		6.794e3	0.420	3.95	9	14		0.989	01-Mar-17	15:59:50		ST170301G	PFC CS2 17C01	1.0	1.00		NO	
10	13C2-PFOA	13.080296	0.0128	104.6		3.369e4	2.782	4.27	10	15		1.001	01-Mar-17	15:59:50		ST170301G	PFC CS2 17C01	1.0	1.00		NO	
11	13C5-PFNA	12.931109	0.00281	103.4		1.165e4	0.048	4.60	11	16		1.000	01-Mar-17	15:59:50		ST170301G	PFC CS2 17C01	1.0	1.00		NO	
12	13C6-PFOS	11.969294	0.00200	99.7		6.841e3	0.941	4.69	12	17		0.999	01-Mar-17	15:59:50		ST170301G	PFC CS2 17C01	1.0	1.00		NO	
13	13C5-PFHpA	12.506960	0.00518	100.0		2.864e4	1.000	3.35	13	13		0.000	01-Mar-17	15:59:50		ST170301G	PFC CS2 17C01	1.0	1.00		NO	
14	13C3-PFHxS	12.500000	0.00832	100.0		1.591e4	1.000	3.95	14	14		0.000	01-Mar-17	15:59:50		ST170301G	PFC CS2 17C01	1.0	1.00		NO	
15	13C8-PFOA	12.500000	0.00379	100.0		1.157e4	1.000	4.27	15	15		0.000	01-Mar-17	15:59:50		ST170301G	PFC CS2 17C01	1.0	1.00		NO	
16	13C9-PFNA	12.500000	0.00626	100.0		1.282e4	1.000	4.60	16	16		0.000	01-Mar-17	15:59:50		ST170301G	PFC CS2 17C01	1.0	1.00		NO	
17	13C4-PFOS	12.500000	0.00365	100.0		9.816e3	1.000	4.67	17	17		0.000	01-Mar-17	15:59:50		ST170301G	PFC CS2 17C01	1.0	1.00		NO	
18	Total PFBS	4.8033281	0.00578						18				01-Mar-17	15:59:50		ST170301G	PFC CS2 17C01	1.0	1.00		NO	
19	Total PFHxS	5.7412723							19				01-Mar-17	15:59:50		ST170301G	PFC CS2 17C01	1.0	1.00		NO	
20	Total PFOA	4.8117976							20				01-Mar-17	15:59:50		ST170301G	PFC CS2 17C01	1.0	1.00		NO	
21	Total PFOS	6.0854845	0.0140						21				01-Mar-17	15:59:50		ST170301G	PFC CS2 17C01	1.0	1.00		NO	





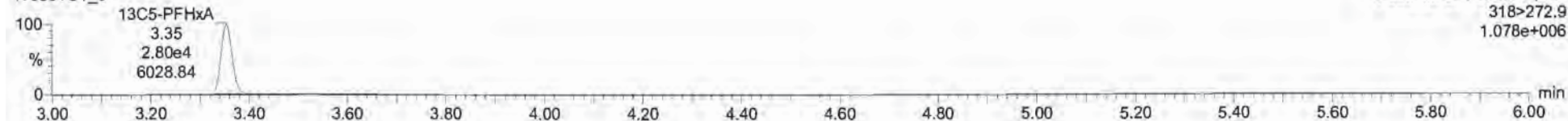
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Last Altered: Thursday, March 02, 2017 08:21:56 Pacific Standard Time  
Printed: Thursday, March 02, 2017 08:27:08 Pacific Standard Time

Name: 170301G1\_6, Date: 01-Mar-2017, Time: 15:59:50, ID: ST170301G1-5 PFC CS2 17C0123, Description: PFC CS2 17C0123 A

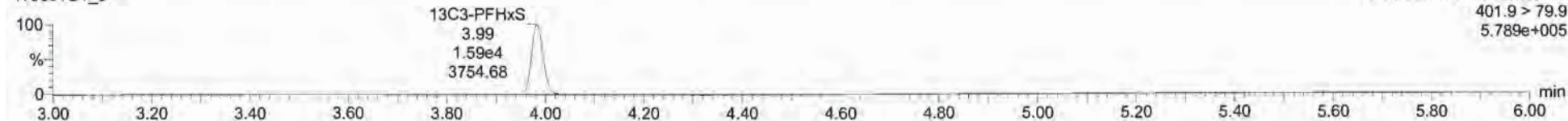
**13C5-PFHxA**

170301G1\_6



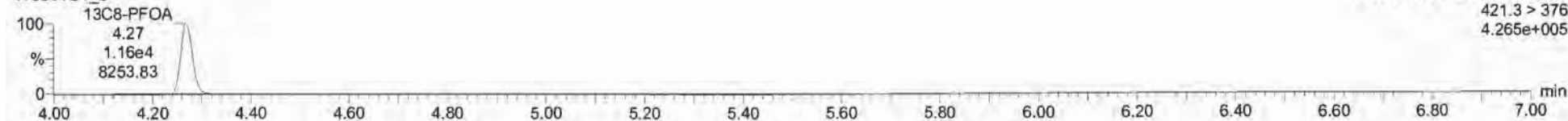
**13C3-PFHxS**

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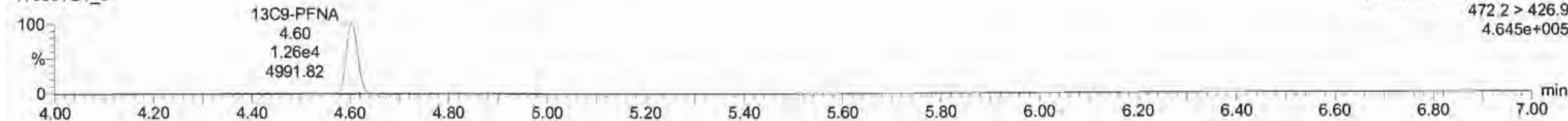
**13C8-PFOA**

170301G1\_6



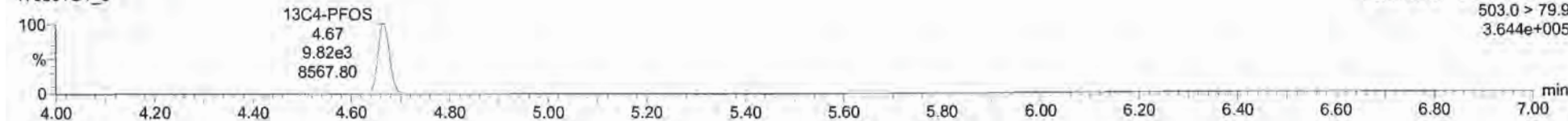
**13C9-PFNA**

170301G1\_6



**13C4-PFOS**

170301G1\_6



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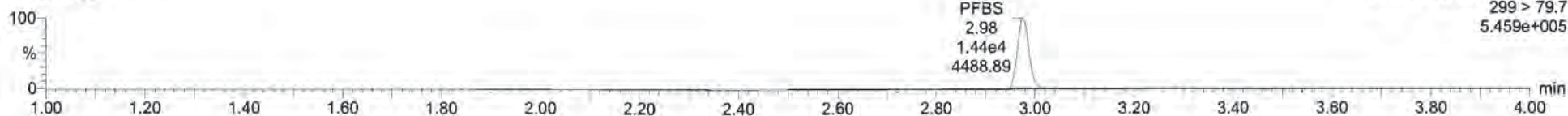
Last Altered: Thursday, March 02, 2017 08:21:56 Pacific Standard Time

Printed: Thursday, March 02, 2017 08:27:08 Pacific Standard Time

Name: 170301G1\_7, Date: 01-Mar-2017, Time: 16:12:23, ID: ST170301G1-6 PFC CS3 17C0124, Description: PFC CS3 17C0124 A

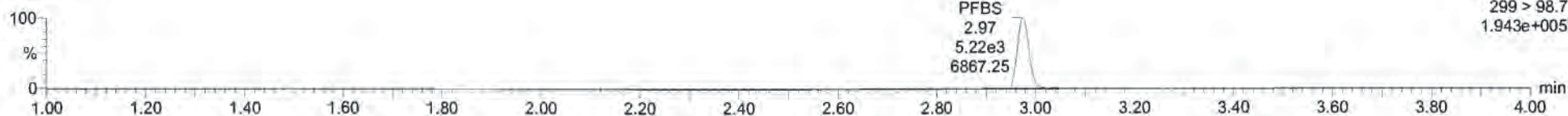
**PFBS**

170301G1\_7



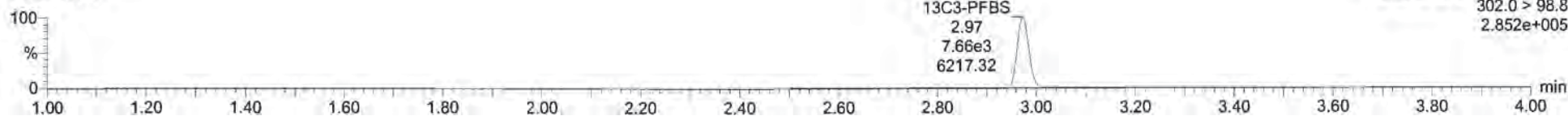
**PFBS**

170301G1\_7



**13C3-PFBS**

170301G1\_7

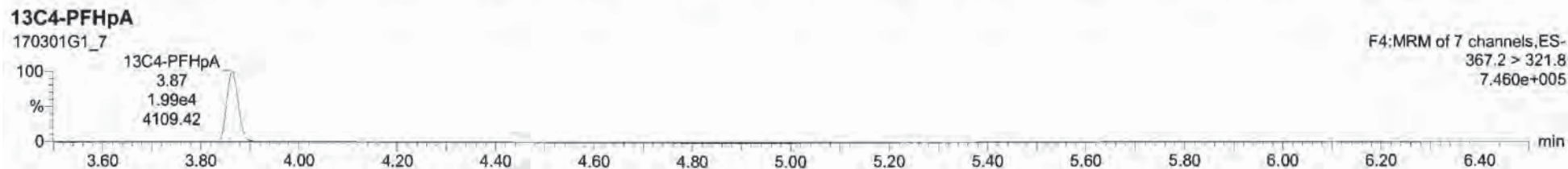
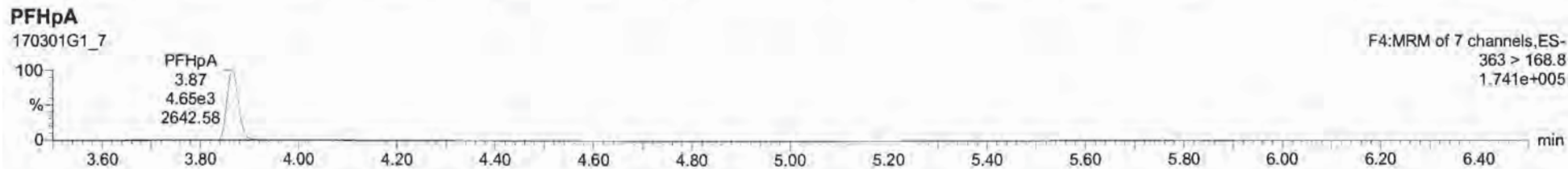
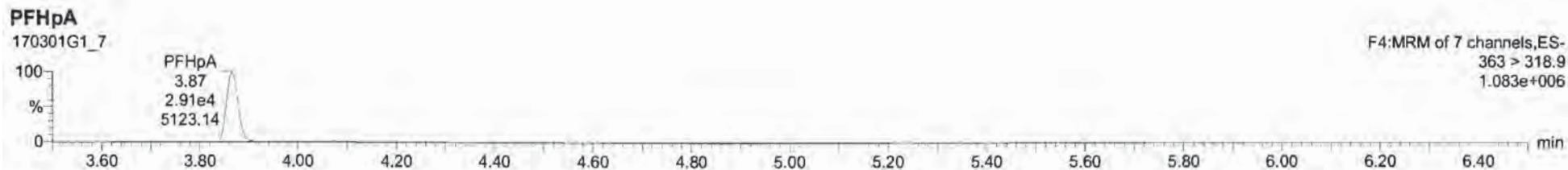


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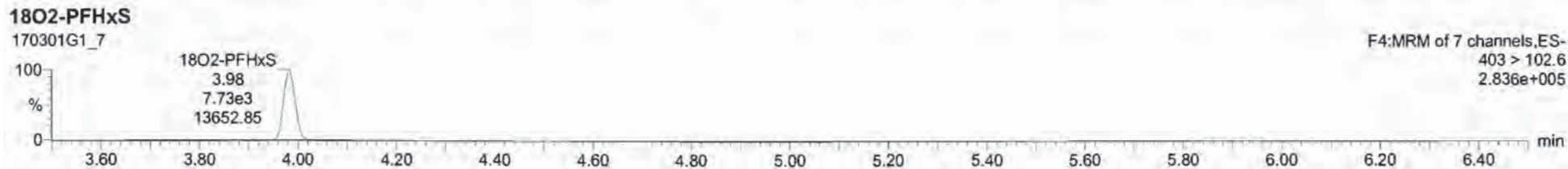
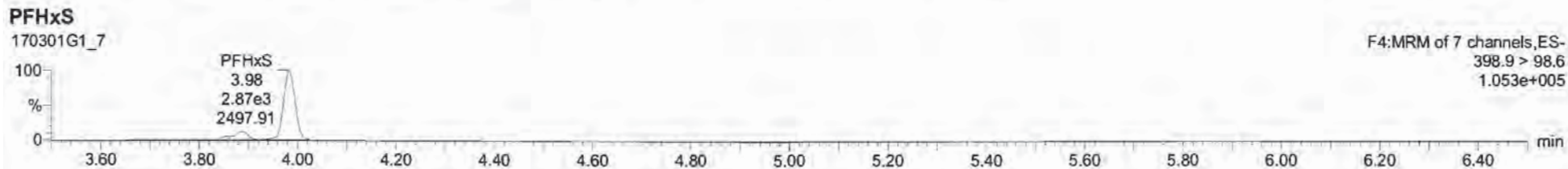
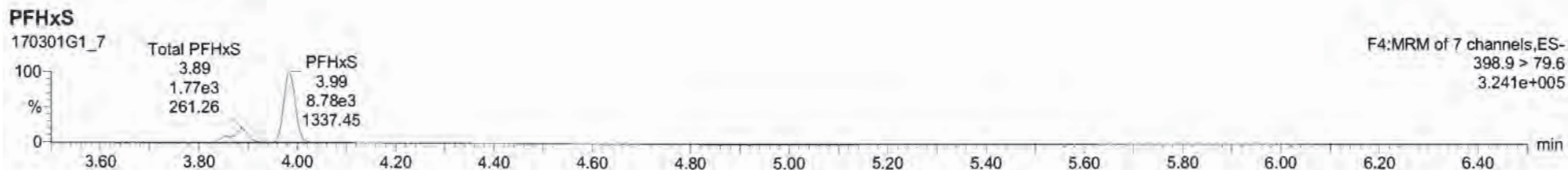


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Last Altered: Thursday, March 02, 2017 08:21:56 Pacific Standard Time

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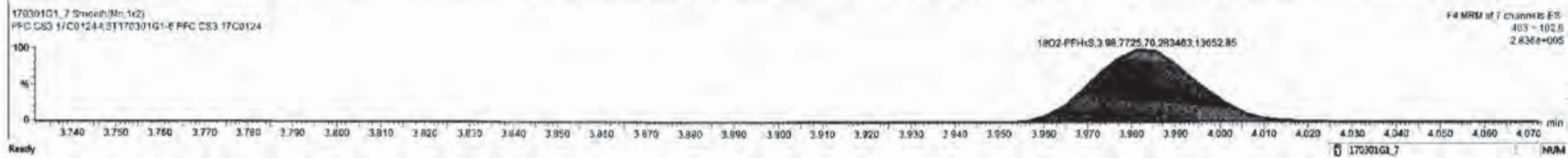
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170301G1\_7 - ST170301G1-6-PFC CS3 17C0124 - PFC CS3 17C0124A

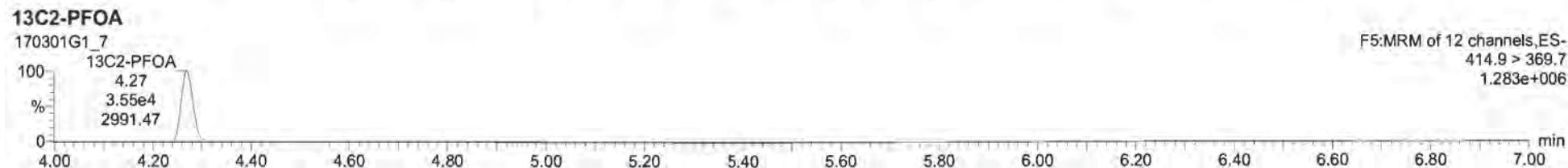
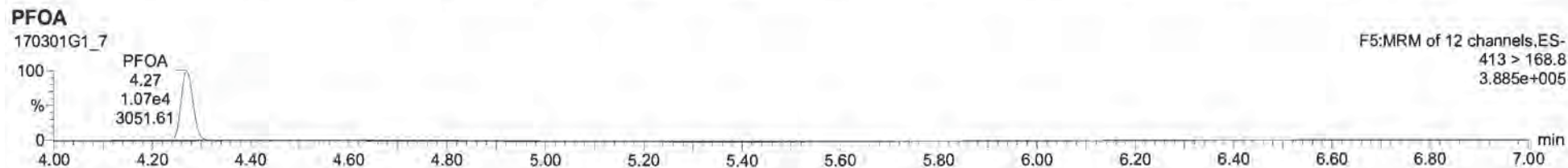
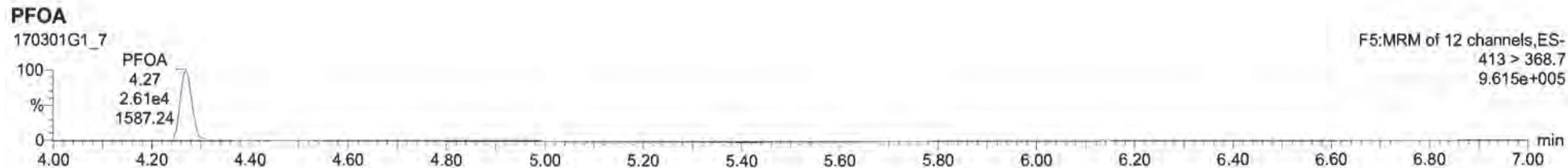
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1	PFBS	10.901515	0.0102	100.0		1.439e4	2.98	3.98	7	0.362	YES	1.001	01-Mar-17	18:12:23	26.225	ST170301G	PFC CS3 17C01	1.0	1.00		YES	
2	PFHpA	9.902563		99.1		2.095e4	3.87	3.98	3			1.001	01-Mar-17	18:12:23		ST170301G	PFC CS3 17C01	1.0	1.00		YES	
3	PFHxS	13.329200		102.8		1.125e4	3.98	3.98	3			1.001	01-Mar-17	18:12:23		ST170301G	PFC CS3 17C01	1.0	1.00		YES	
4	PFDA	9.9726600		99.7		2.614e4	4.27	4.10				1.001	01-Mar-17	18:12:23		ST170301G	PFC CS3 17C01	1.0	1.00		YES	
5	PFNA	10.894020		106.9		1.531e4	4.81	5.11				1.001	01-Mar-17	18:12:23		ST170301G	PFC CS3 17C01	1.0	1.00		YES	
6	PFOS	11.860322	0.0175	104.6		3.597e3	4.56	6.12				1.001	01-Mar-17	18:12:23		ST170301G	PFC CS3 17C01	1.0	1.00		YES	
7	13C3-PFBS	15.431747	0.00565	107.6		7.661e3	0.442	2.97	7	14		0.368	01-Mar-17	18:12:23		ST170301G	PFC CS3 17C01	1.0	1.00		NO	
8	13C4-PFHpA	13.945202	0.00889	110.8		1.995e4	1.117	3.87	3	14		0.971	01-Mar-17	18:12:23		ST170301G	PFC CS3 17C01	1.0	1.00		NO	
9	18O2-PFHxS	14.261743	0.00285	114.1		7.726e3	0.420	3.98	9	14		1.001	01-Mar-17	18:12:23		ST170301G	PFC CS3 17C01	1.0	1.00		NO	
10	13C2-PFOA	12.717799	0.0106	101.7		5.532e4	2.782	4.27	10	15		1.001	01-Mar-17	18:12:23		ST170301G	PFC CS3 17C01	1.0	1.00		NO	
11	13C5-PFNA	12.026004	0.00174	102.7		1.048e4	0.846	4.60	11	16		1.001	01-Mar-17	18:12:23		ST170301G	PFC CS3 17C01	1.0	1.00		NO	
12	13C6-PFOS	13.098222	0.00467	104.7		7.377e3	0.941	4.06	12	17		1.001	01-Mar-17	18:12:23		ST170301G	PFC CS3 17C01	1.0	1.00		NO	
13	13C5-PFHxS	12.500000	0.00334	100.0		3.055e4	1.000	3.15	13	13		0.001	01-Mar-17	18:12:23		ST170301G	PFC CS3 17C01	1.0	1.00		NO	
14	13C3-PFHxS	12.500000	0.00091	100.0		1.612e4	1.000	3.98	14	14		0.001	01-Mar-17	18:12:23		ST170301G	PFC CS3 17C01	1.0	1.00		NO	
15	13C6-PFOA	12.500000	0.00112	100.0		1.255e4	1.000	4.27	15	15		0.001	01-Mar-17	18:12:23		ST170301G	PFC CS3 17C01	1.0	1.00		NO	
16	13C6-PFNA	12.500000	0.00201	100.0		1.293e4	1.000	4.60	16	16		0.001	01-Mar-17	18:12:23		ST170301G	PFC CS3 17C01	1.0	1.00		NO	
17	13C4-PFOS	12.500000	0.00068	100.0		7.484e3	1.000	4.06	17	17		0.001	01-Mar-17	18:12:23		ST170301G	PFC CS3 17C01	1.0	1.00		NO	
18	Total PFBS	10.901515	0.0103					3.98	7				01-Mar-17	18:12:23		ST170301G	PFC CS3 17C01	1.0	1.00		NO	
19	Total PFHxS	12.338630						3.98	3				01-Mar-17	18:12:23		ST170301G	PFC CS3 17C01	1.0	1.00		NO	
20	Total PFDA	9.9726600						4.27	10				01-Mar-17	18:12:23		ST170301G	PFC CS3 17C01	1.0	1.00		NO	
21	Total PFOS	14.703064	0.0175					4.56	12				01-Mar-17	18:12:23		ST170301G	PFC CS3 17C01	1.0	1.00		NO	



Dataset: Untitled

Last Altered: Thursday, March 02, 2017 08:21:56 Pacific Standard Time  
Printed: Thursday, March 02, 2017 08:27:08 Pacific Standard Time

Name: 170301G1\_7, Date: 01-Mar-2017, Time: 16:12:23, ID: ST170301G1-6 PFC CS3 17C0124, Description: PFC CS3 17C0124 A



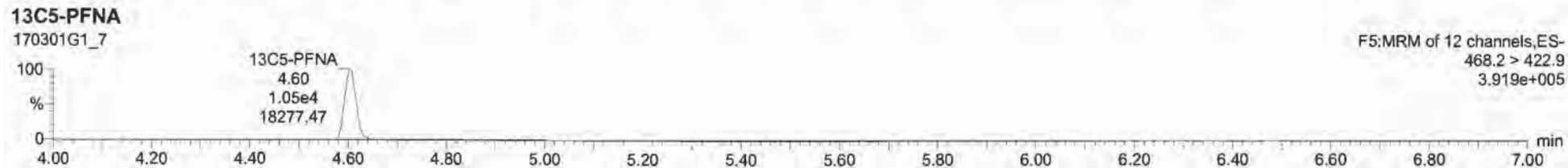
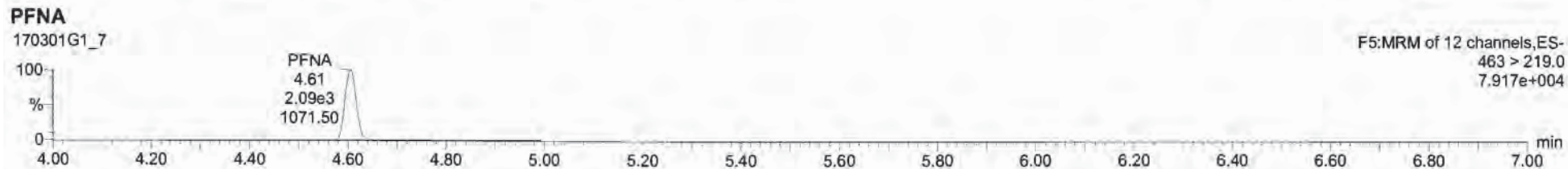
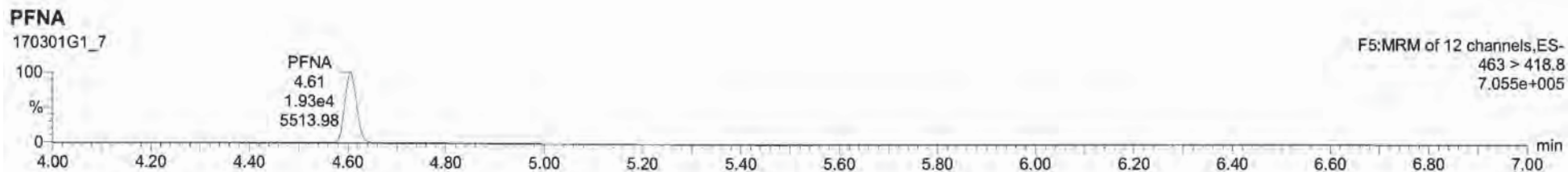


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Last Altered: Thursday, March 02, 2017 08:21:56 Pacific Standard Time

Printed: Thursday, March 02, 2017 08:27:08 Pacific Standard Time

Name: 170301G1\_7, Date: 01-Mar-2017, Time: 16:12:23, ID: ST170301G1-6 PFC CS3 17C0124, Description: PFC CS3 17C0124 A

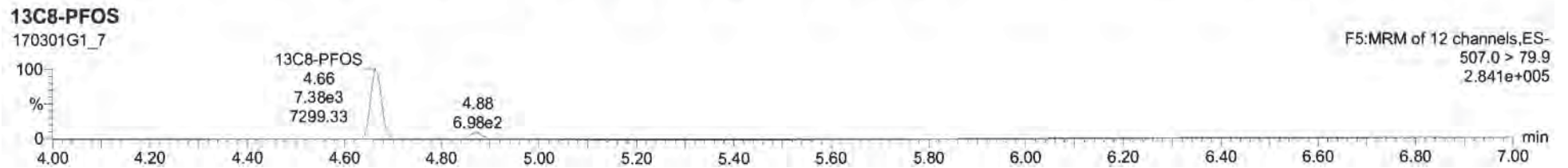
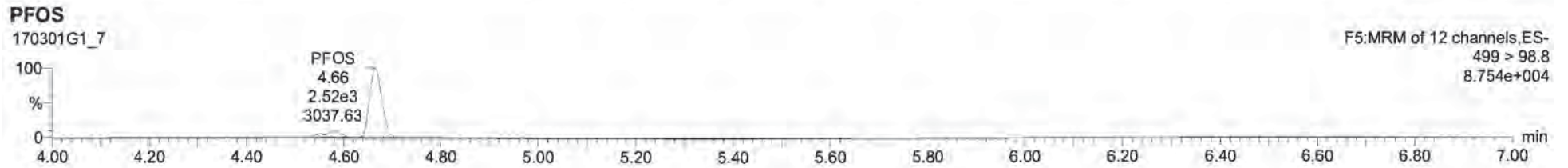
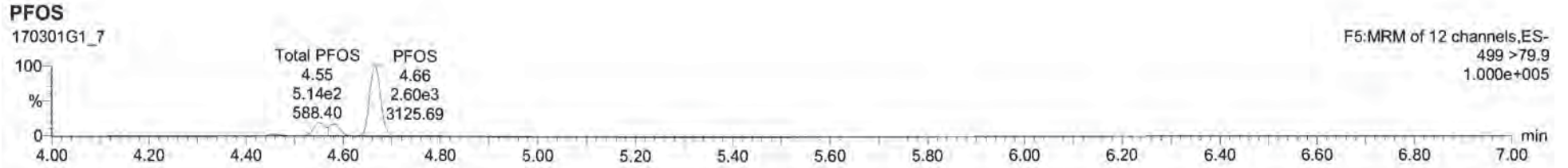


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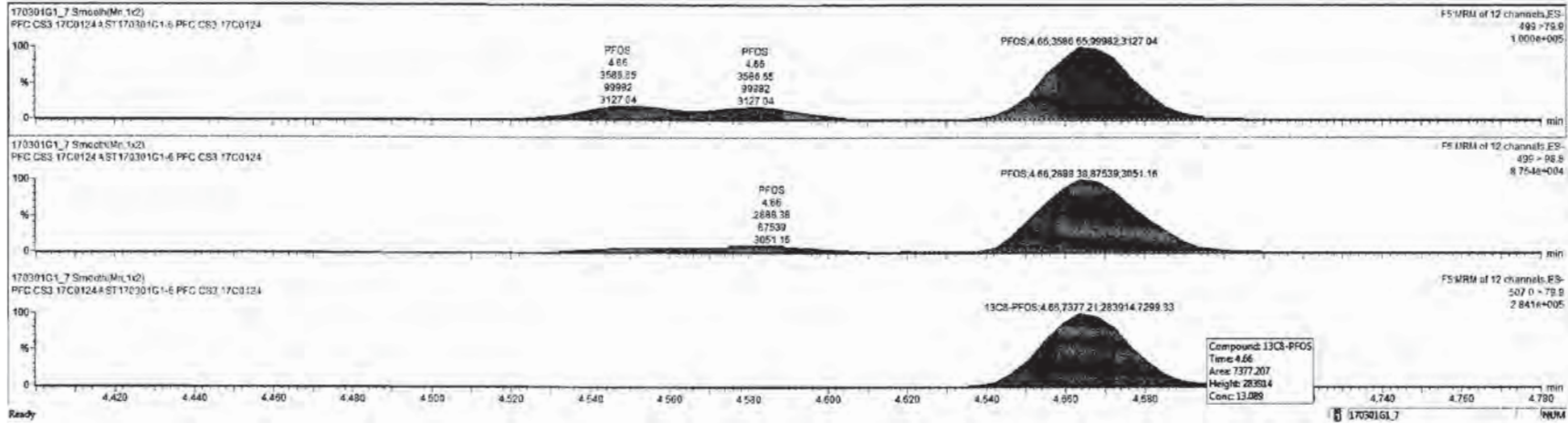
Last Altered: Thursday, March 02, 2017 08:21:56 Pacific Standard Time

Printed: Thursday, March 02, 2017 08:27:08 Pacific Standard Time

Name: 170301G1\_7, Date: 01-Mar-2017, Time: 16:12:23, ID: ST170301G1-6 PFC CS3 17C0124, Description: PFC CS3 17C0124 A



Name	Conc	DL	Nbnc	EMPC	Adj Resp	RSD	RT	#	ISL	SA	YIN	RRT	Acq Date	Acq Time	1 <sup>st</sup> Ctr House	ID	Sample Time	Factor1	SW	Col File	INCL
1	PFBS	10.901515	0.0102	100.0	1.43064	2.96	7	7	0.962	YES	1.001	01-Mar-17	18:12:23	25.225	ST170301G	PFCS317C01	1.0	1.00		YES	
2	PFHpA	9.9050963	99.1		2.90564	3.97	2	6			1.000	01-Mar-17	18:12:23		ST170301G	PFCS317C01	1.0	1.00		YES	
3	PFHxS	10.296260	103.0		1.12561	3.98	3	9			1.000	01-Mar-17	18:12:23		ST170301G	PFCS317C01	1.0	1.00		YES	
4	PFDA	9.9726500	99.7		2.61464	4.27	4	10			1.000	01-Mar-17	18:12:23		ST170301G	PFCS317C01	1.0	1.00		YES	
5	PFNA	10.696220	106.9		1.93164	4.61	5	11			1.001	01-Mar-17	18:12:23		ST170301G	PFCS317C01	1.0	1.00		YES	
6	PFOS	91.000000	0.0175	100.0	3.58700	4.86	6	12			1.000	01-Mar-17	18:12:23		ST170301G	PFCS317C01	1.0	1.00		YES	
7	13C3-PFBS	13.431747	0.00555	107.5	7.66163	0.442	2.97	7	14		0.206	01-Mar-17	18:12:23		ST170301G	PFCS317C01	1.0	1.00		NO	
8	13C4-PFHpA	13.946202	0.00689	110.8	1.99564	1.117	3.67	8	14		0.971	01-Mar-17	18:12:23		ST170301G	PFCS317C01	1.0	1.00		NO	
9	13C2-PFHpS	14.281743	0.00265	114.1	7.72563	0.420	3.60	9	14		1.000	01-Mar-17	18:12:23		ST170301G	PFCS317C01	1.0	1.00		NO	
10	13C2-PFDA	12.717799	0.0106	101.7	3.55264	2.762	4.27	10	15		1.000	01-Mar-17	18:12:23		ST170301G	PFCS317C01	1.0	1.00		NO	
11	13C5-PFNA	12.836034	0.00174	102.7	1.94864	0.248	4.60	11	16		1.000	01-Mar-17	18:12:23		ST170301G	PFCS317C01	1.0	1.00		NO	
12	13C4-PFOS	13.089222	0.00487	104.7	7.37763	0.941	4.66	12	17		1.000	01-Mar-17	18:12:23		ST170301G	PFCS317C01	1.0	1.00		NO	
13	13C5-PFHpA	12.506000	0.00334	100.0	3.08564	1.000	3.35	13	15		0.000	01-Mar-17	18:12:23		ST170301G	PFCS317C01	1.0	1.00		NO	
14	13C6-PFHpS	12.500000	0.000931	100.0	1.61264	1.000	3.60	14	14		0.000	01-Mar-17	18:12:23		ST170301G	PFCS317C01	1.0	1.00		NO	
15	13C6-PFDA	12.500000	0.00112	100.0	1.25564	1.000	4.27	15	15		0.000	01-Mar-17	18:12:23		ST170301G	PFCS317C01	1.0	1.00		NO	
16	13C6-PFNA	12.500000	0.00261	100.0	1.20364	1.000	4.60	16	16		0.000	01-Mar-17	18:12:23		ST170301G	PFCS317C01	1.0	1.00		NO	
17	13C4-PFOS	12.500000	0.00068	100.0	7.45463	1.000	4.66	17	17		0.000	01-Mar-17	18:12:23		ST170301G	PFCS317C01	1.0	1.00		NO	
18	Total PFBS	10.901515	0.0103					18				01-Mar-17	18:12:23		ST170301G	PFCS317C01	1.0	1.00		NO	
19	Total PFHpS	12.338634						19				01-Mar-17	18:12:23		ST170301G	PFCS317C01	1.0	1.00		NO	
20	Total PFDA	9.9726500						20				01-Mar-17	18:12:23		ST170301G	PFCS317C01	1.0	1.00		NO	
21	Total PFOS	14.703004	0.0175					21				01-Mar-17	18:12:23		ST170301G	PFCS317C01	1.0	1.00		NO	





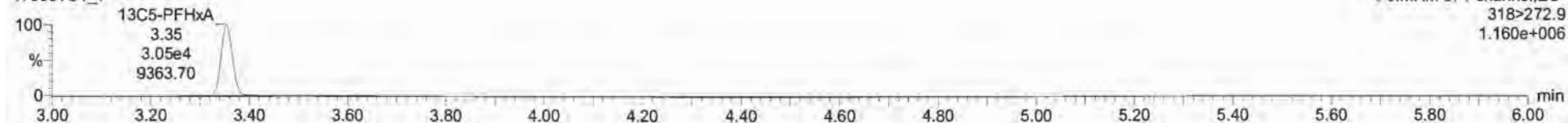
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Last Altered: Thursday, March 02, 2017 08:21:56 Pacific Standard Time  
Printed: Thursday, March 02, 2017 08:27:08 Pacific Standard Time

Name: 170301G1\_7, Date: 01-Mar-2017, Time: 16:12:23, ID: ST170301G1-6 PFC CS3 17C0124, Description: PFC CS3 17C0124 A

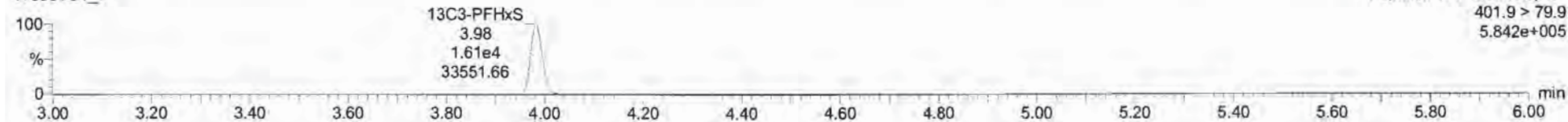
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170301G1\_7



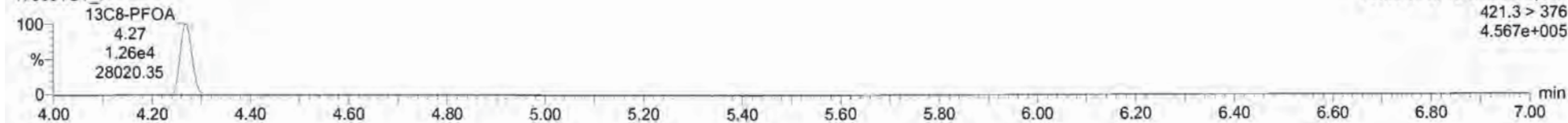
**13C3-PFHxS**

170301G1\_7



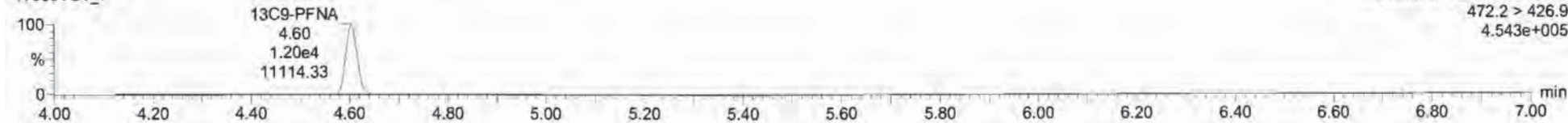
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170301G1\_7



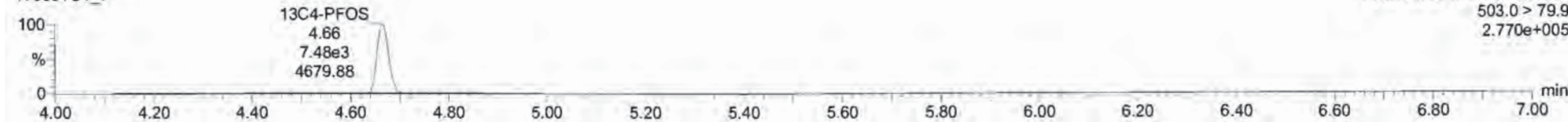
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170301G1\_7



**13C4-PFOS**

170301G1\_7

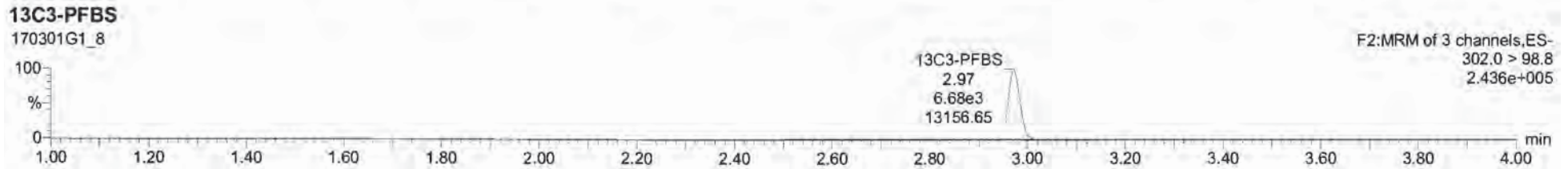
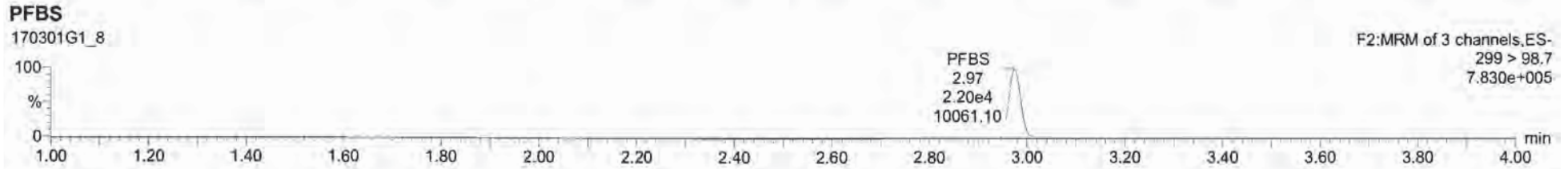
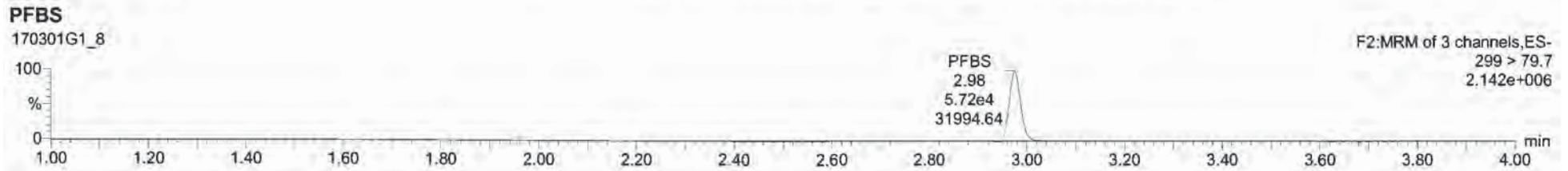


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Name: 170301G1\_8, Date: 01-Mar-2017, Time: 16:24:59, ID: ST170301G1-7 PFC CS4 17C0125, Description: PFC CS4 17C0125 A

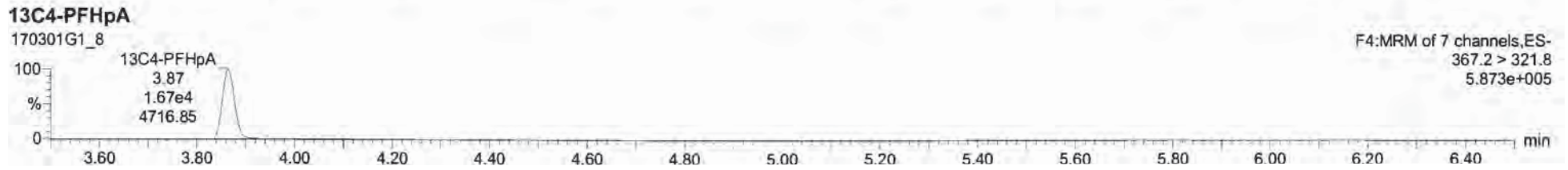
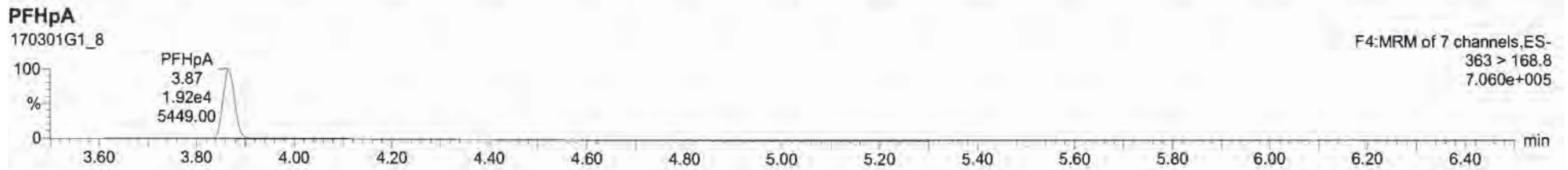
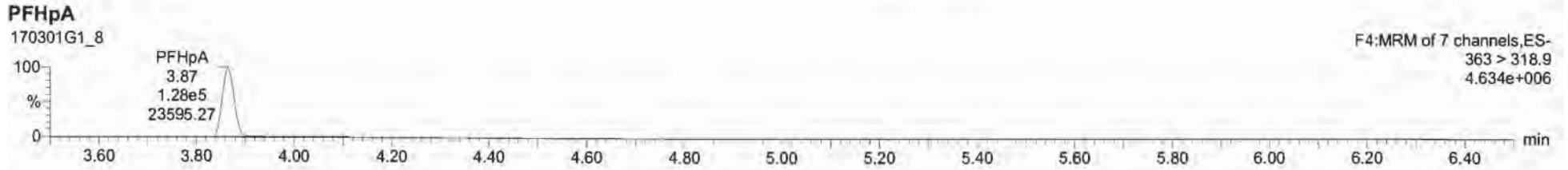


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Last Altered: Thursday, March 02, 2017 08:21:56 Pacific Standard Time

Printed: Thursday, March 02, 2017 08:27:08 Pacific Standard Time

Name: 170301G1\_8, Date: 01-Mar-2017, Time: 16:24:59, ID: ST170301G1-7 PFC CS4 17C0125, Description: PFC CS4 17C0125 A



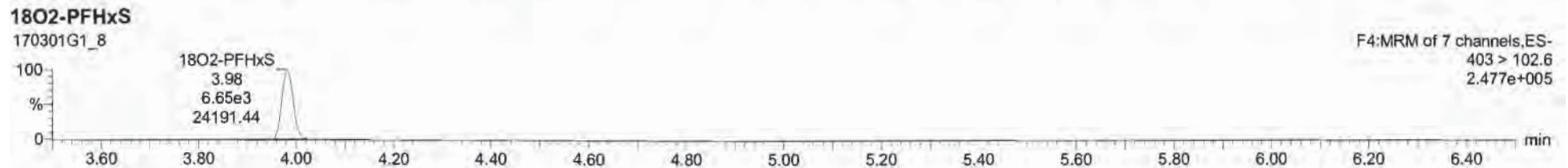
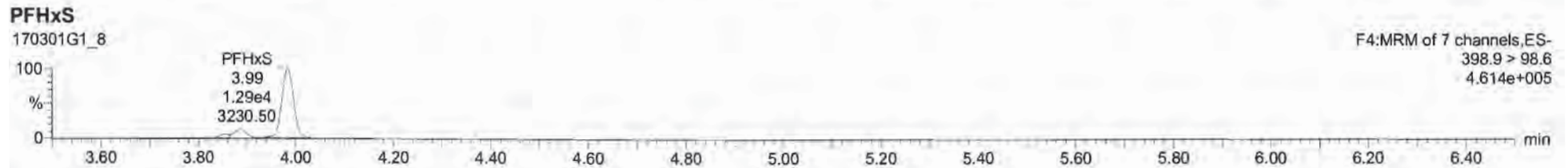
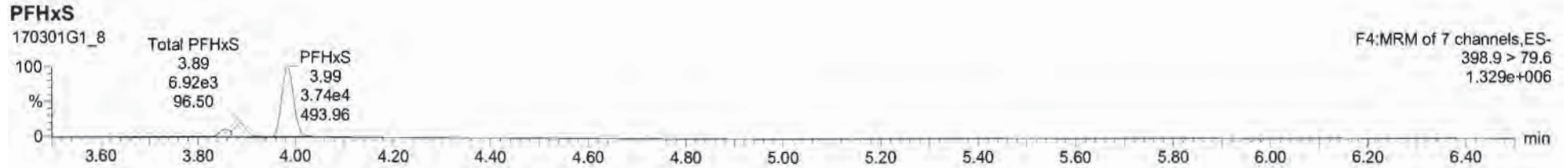


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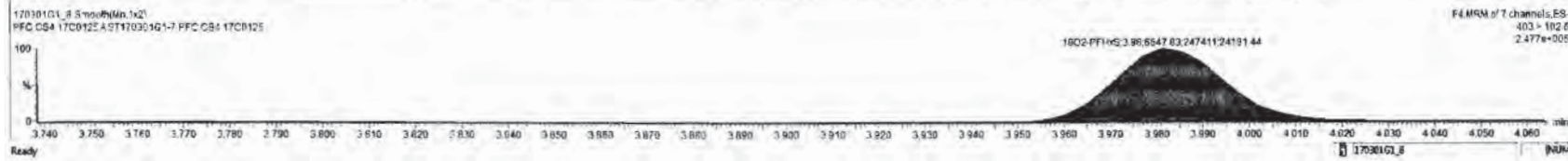
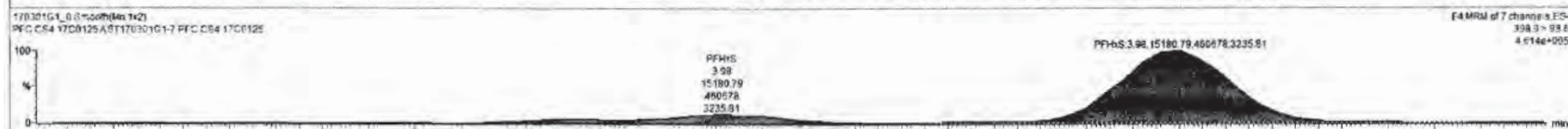
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170301G1\_8-ST170301G1-7-PFC054-17C0125-PFC054-17C0125A

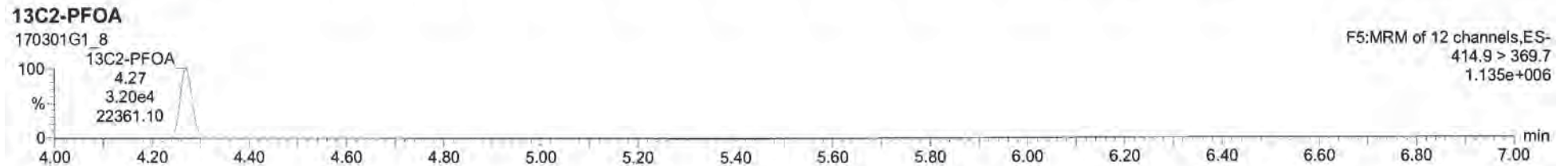
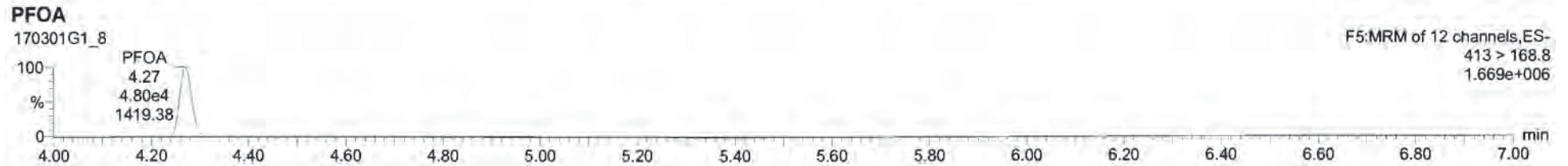
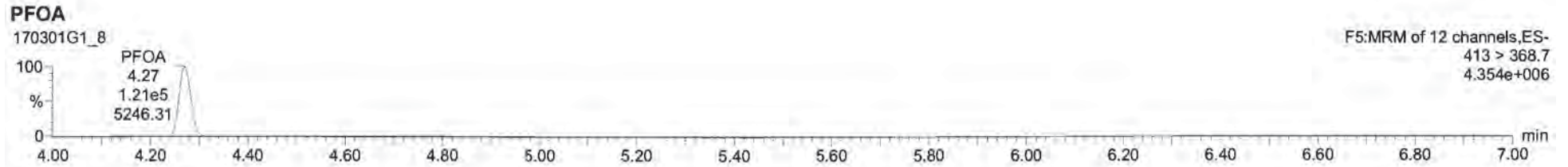
SI	Name	Conc	DL	%Rec	ChkC	Abn Pkgs	RRP	DT	#	SA	RA	YRI	RRP	Acq Date	Acq Time	* Chr Name	D	Sample Test	Factor1	SM	Cell File	>BOX
1	PFBS	49.645261	0.00054	99.3		5.718e4	2.98	1	7	0.585	YES	1.001	01-Mar-17	16:24:55	77.720	ST170301G	PFC C54 17C01	1.0	1.00		YES	
2	PFHxA	52.602248		104.0		1.277e5	3.87	2	8			1.001	01-Mar-17	16:24:58		ST170301G	PFC C54 17C01	1.0	1.00		YES	
3	PFHxS	49.848199	0.107	99.9		4.854e4	3.98	3	9			1.001	01-Mar-17	16:24:59		ST170301G	PFC C54 17C01	1.0	1.00		YES	
4	PFOA	51.878581		103.8		1.213e5	4.27	4	10			1.001	01-Mar-17	16:24:58		ST170301G	PFC C54 17C01	1.0	1.00		YES	
5	PFNA	49.971652		99.9		1.852e5	4.61	5	11			1.001	01-Mar-17	16:24:59		ST170301G	PFC C54 17C01	1.0	1.00		YES	
6	PFO5	50.150341	0.0216	100.3		2.231e4	4.67	6	12			1.001	01-Mar-17	16:24:59		ST170301G	PFC C54 17C01	1.0	1.00		YES	
7	13C3-PFBS	11.435935	0.00214	91.5		6.852e3	0.442	2.97	7	14		0.886	01-Mar-17	16:24:59		ST170301G	PFC C54 17C01	1.0	1.00		NO	
8	13C4-PFHxA	11.343418	0.00570	90.7		1.674e4	1.117	3.07	8	14		0.971	01-Mar-17	16:24:59		ST170301G	PFC C54 17C01	1.0	1.00		NO	
9	18O2-PFHxS	11.979274	0.00125	95.0		6.646e3	0.425	3.08	9	14		1.000	01-Mar-17	16:24:59		ST170301G	PFC C54 17C01	1.0	1.00		NO	
10	13C2-PFOA	12.732742	0.00137	101.9		3.198e4	2.782	4.27	10	15		1.001	01-Mar-17	16:24:59		ST170301G	PFC C54 17C01	1.0	1.00		NO	
11	13C2-PFNA	13.317444	0.0115	106.5		1.227e4	0.248	4.60	11	16		1.000	01-Mar-17	16:24:59		ST170301G	PFC C54 17C01	1.0	1.00		NO	
12	13C2-PFO5	13.345267	0.05402	106.0		1.066e4	0.941	4.66	12	17		0.999	01-Mar-17	16:24:59		ST170301G	PFC C54 17C01	1.0	1.00		NO	
13	13C3-PFHxA	12.500000	0.00394	100.0		2.638e4	1.000	3.35	13	13		0.900	01-Mar-17	16:24:59		ST170301G	PFC C54 17C01	1.0	1.00		NO	
14	13C3-PFHxS	12.500000	0.00124	100.0		1.651e4	1.000	3.90	14	14		0.900	01-Mar-17	16:24:59		ST170301G	PFC C54 17C01	1.0	1.00		NO	
15	13C2-PFOA	12.500000	0.00210	100.0		1.126e4	1.000	4.27	15	15		0.800	01-Mar-17	16:24:59		ST170301G	PFC C54 17C01	1.0	1.00		NO	
16	13C3-PFNA	12.500000	0.00960	100.0		1.301e4	1.000	4.60	16	16		0.800	01-Mar-17	16:24:59		ST170301G	PFC C54 17C01	1.0	1.00		NO	
17	13C2-PFO5	12.500000	0.00241	100.0		1.041e4	1.000	4.67	17	17		0.800	01-Mar-17	16:24:59		ST170301G	PFC C54 17C01	1.0	1.00		NO	
18	Total PFBS	49.855229	0.00768											01-Mar-17	16:24:59		ST170301G	PFC C54 17C01	1.0	1.00		NO
19	Total PFHxS	80.737586	0.107											01-Mar-17	16:24:59		ST170301G	PFC C54 17C01	1.0	1.00		NO
20	Total PFOA	51.876581												01-Mar-17	16:24:59		ST170301G	PFC C54 17C01	1.0	1.00		NO
21	Total PFO5	49.780670	0.0216											01-Mar-17	16:24:59		ST170301G	PFC C54 17C01	1.0	1.00		NO



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Name: 170301G1\_8, Date: 01-Mar-2017, Time: 16:24:59, ID: ST170301G1-7 PFC CS4 17C0125, Description: PFC CS4 17C0125 A



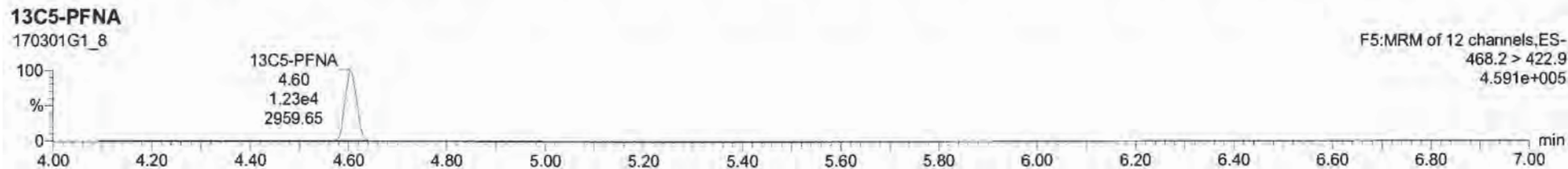
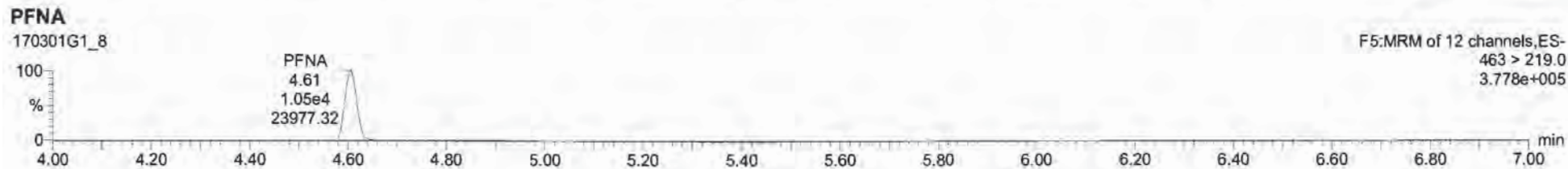
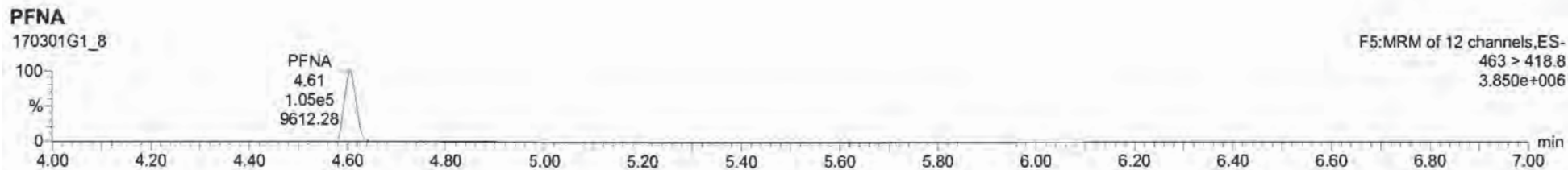


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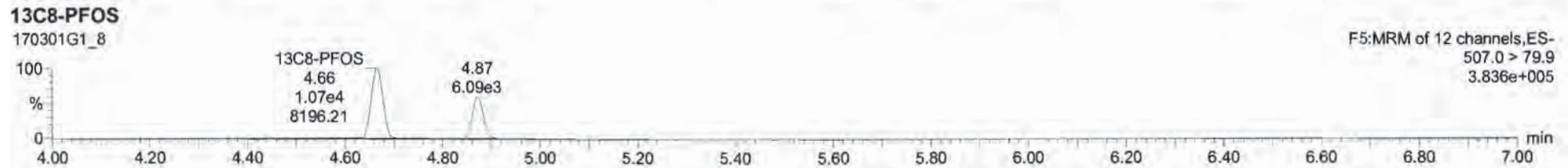
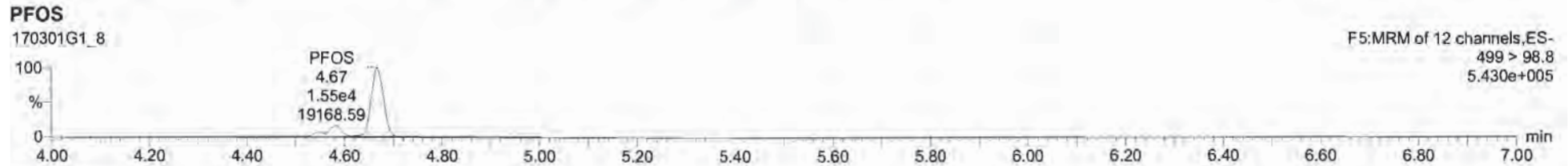
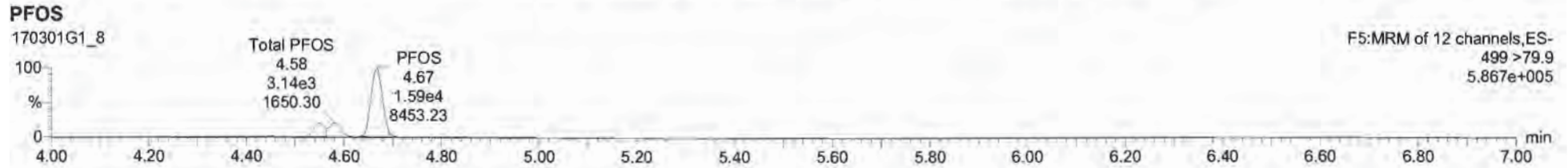
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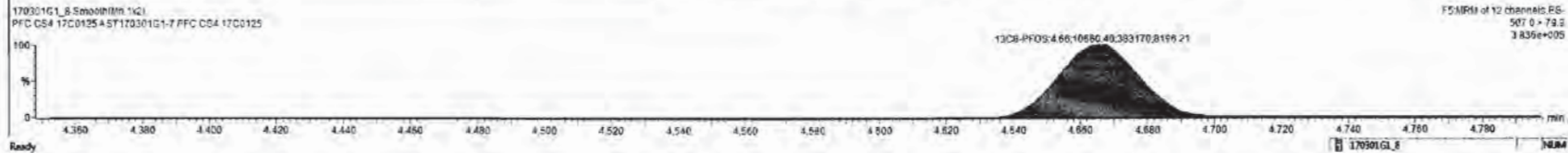
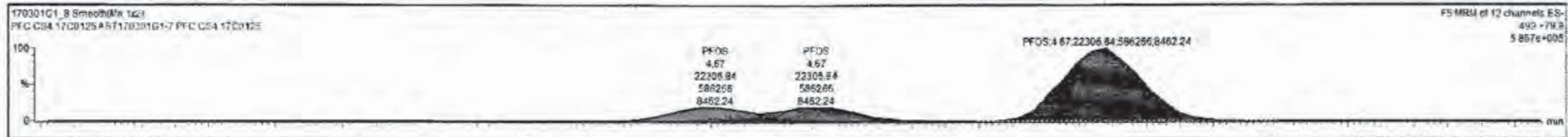
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Last Altered: Thursday, March 02, 2017 08:21:56 Pacific Standard Time  
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Name: 170301G1\_8, Date: 01-Mar-2017, Time: 16:24:59, ID: ST170301G1-7 PFC CS4 17C0125, Description: PFC CS4 17C0125 A



ID	Name	Conc	DL	MSD	CMPO	Abn Resp	RSP	RT	#	SA	RA	YAI	RYI	App Date	Acq Time	1 <sup>st</sup> Ch Hold	ID	Sample Tm	Faktor	SWI	Cal File	MDL	
1	PFBS	49.845261	0.0034	99.3		5.718e4		2.90	1	7	0.385	YES		1.001	01-Mar-17	16:24:59	ST170301G	PFC CS4-17C0125	1.0	1.00		YES	
2	PFHpA	52.909248		104.0		1.277e5		3.87	2	8				1.009	01-Mar-17	16:24:59	ST170301G	PFC CS4-17C0125	1.0	1.00		YES	
3	PFHxS	49.948499	0.107	98.9		4.854e4		3.95	3	9				1.009	01-Mar-17	16:24:59	ST170301G	PFC CS4-17C0125	1.0	1.00		YES	
4	PFDA	51.876581		103.8		1.213e5		4.27	4	10				1.005	01-Mar-17	16:24:59	ST170301G	PFC CS4-17C0125	1.0	1.00		YES	
5	PFNA	49.971852		99.9		1.052e5		4.61	5	11				1.001	01-Mar-17	16:24:59	ST170301G	PFC CS4-17C0125	1.0	1.00		YES	
6	PFOS	50.170341	0.0216	106.3		2.231e4		4.87	6	12				1.001	01-Mar-17	16:24:59	ST170301G	PFC CS4-17C0125	1.0	1.00		YES	
7	13C3-PFBS	11.435935	0.00214	91.5		8.862e3	0.442	2.97	7	14				0.898	01-Mar-17	16:24:59	ST170301G	PFC CS4-17C0125	1.0	1.00		NO	
8	13C4-PFHpA	11.343416	0.00570	90.7		1.674e4	1.117	3.87	8	14				0.971	01-Mar-17	16:24:59	ST170301G	PFC CS4-17C0125	1.0	1.00		NO	
9	18O2-PFHxS	11.979274	0.00125	95.8		6.848e3	0.428	3.98	9	14				1.003	01-Mar-17	16:24:59	ST170301G	PFC CS4-17C0125	1.0	1.00		NO	
10	13C2-PFDA	12.732742	0.00137	101.9		3.198e4	2.762	4.27	10	15				1.001	01-Mar-17	16:24:59	ST170301G	PFC CS4-17C0125	1.0	1.00		NO	
11	13C5-PFNA	15.317444	0.0115	106.5		1.227e4	0.848	4.60	11	16				1.000	01-Mar-17	16:24:59	ST170301G	PFC CS4-17C0125	1.0	1.00		NO	
12	13C8-PFOS	13.345267	0.00402	100.5		1.995e4	0.941	4.86	12	17				0.999	01-Mar-17	16:24:59	ST170301G	PFC CS4-17C0125	1.0	1.00		NO	
13	13C5-PFHpA	12.598990	0.00394	100.0		2.635e4	1.803	3.95	13	13				0.900	01-Mar-17	16:24:59	ST170301G	PFC CS4-17C0125	1.0	1.00		NO	
14	13C3-PFHxS	12.509050	0.00124	100.0		1.851e4	1.000	3.90	14	14				0.000	01-Mar-17	16:24:59	ST170301G	PFC CS4-17C0125	1.0	1.00		NO	
15	13C8-PFDA	12.509050	0.00219	100.0		1.129e4	1.900	4.27	15	15				0.000	01-Mar-17	16:24:59	ST170301G	PFC CS4-17C0125	1.0	1.00		NO	
16	13C5-PFNA	12.509050	0.00668	100.0		1.361e4	1.000	4.60	16	16				0.000	01-Mar-17	16:24:59	ST170301G	PFC CS4-17C0125	1.0	1.00		NO	
17	13C4-PFOS	12.509050	0.00141	100.0		1.961e4	1.000	4.87	17	17				0.000	01-Mar-17	16:24:59	ST170301G	PFC CS4-17C0125	1.0	1.00		NO	
18	Total PFBS	49.852223		99.786																			
19	Total PFHxS	60.737990	0.107																				
20	Total PFDA	51.876581																					
21	Total PFOS	63.789670	0.0216																				





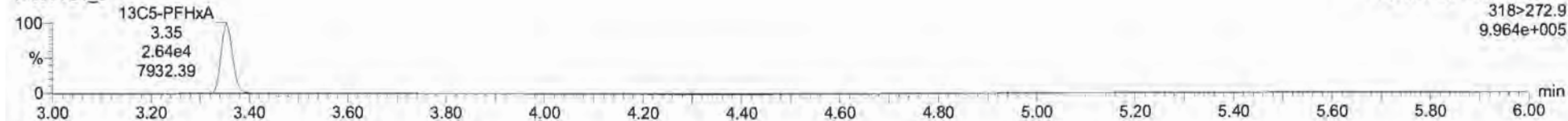
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Last Altered: Thursday, March 02, 2017 08:21:56 Pacific Standard Time  
Printed: Thursday, March 02, 2017 08:27:08 Pacific Standard Time

Name: 170301G1\_8, Date: 01-Mar-2017, Time: 16:24:59, ID: ST170301G1-7 PFC CS4 17C0125, Description: PFC CS4 17C0125 A

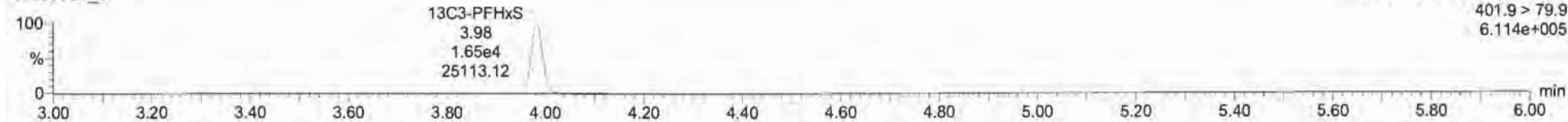
**13C5-PFHxA**

170301G1\_8



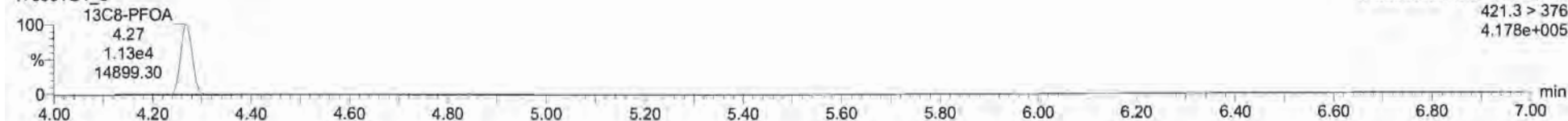
**13C3-PFHxS**

170301G1\_8



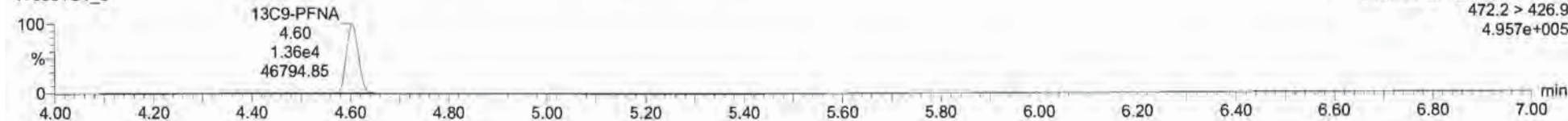
**13C8-PFOA**

170301G1\_8



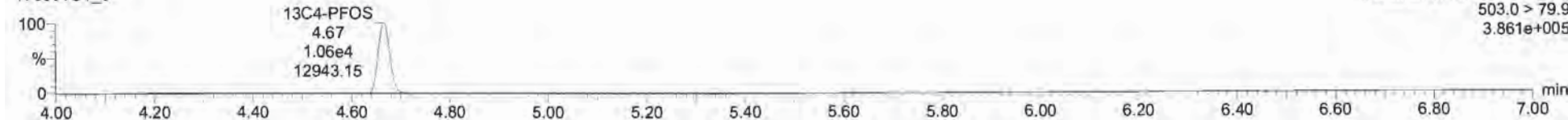
**13C9-PFNA**

170301G1\_8



**13C4-PFOS**

170301G1\_8

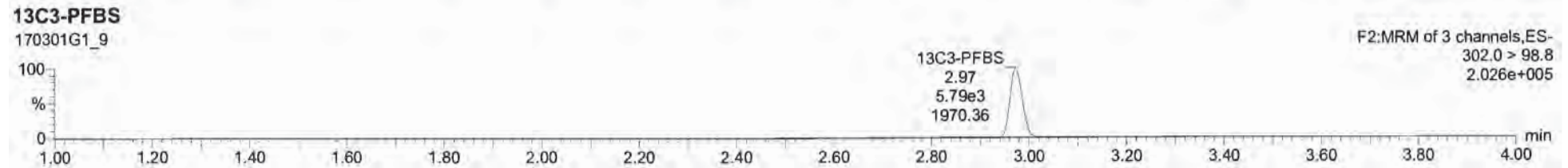
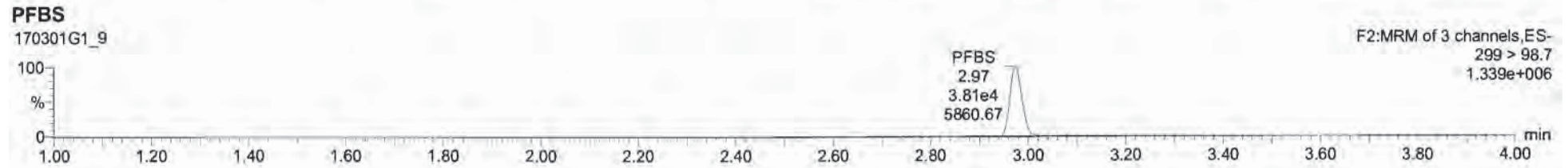
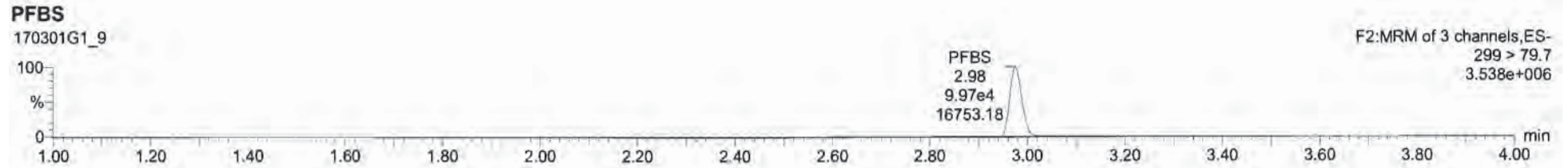


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Name: 170301G1\_9, Date: 01-Mar-2017, Time: 16:37:33, ID: ST170301G1-8 PFC CS5 17B2726, Description: PFC CS5 17B2726 A





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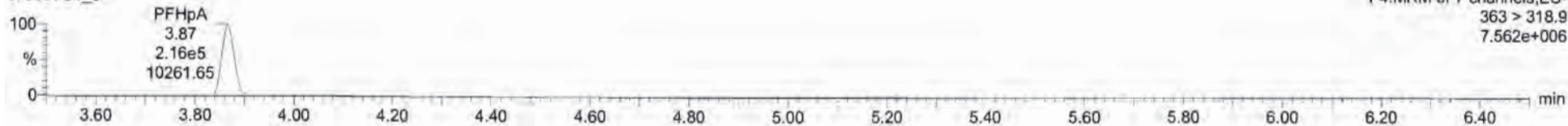
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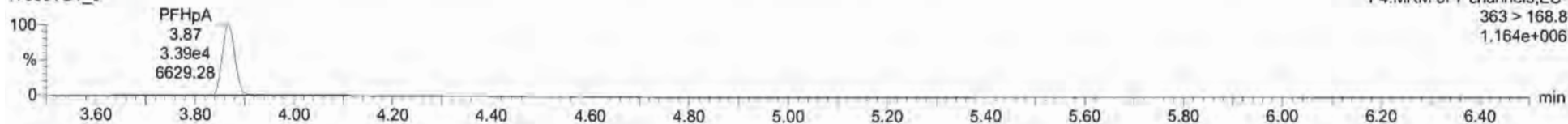
**PFHpA**

170301G1\_9



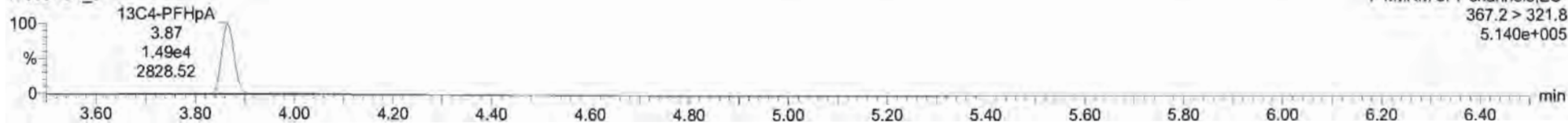
**PFHpA**

170301G1\_9



**<sup>13</sup>C4-PFHpA**

170301G1\_9

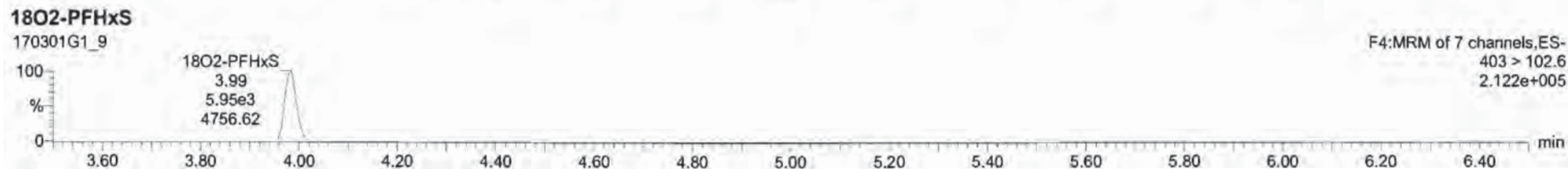
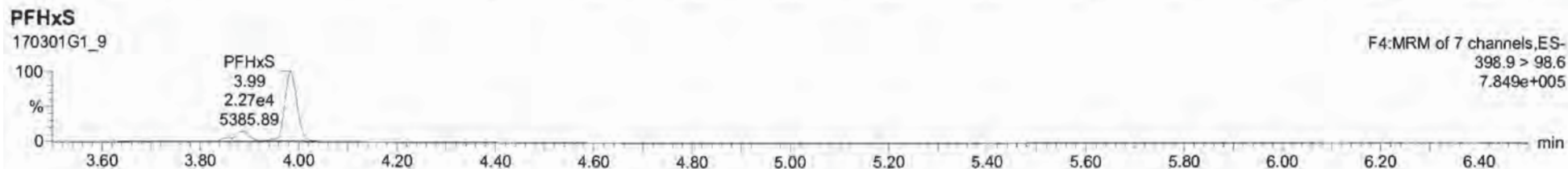
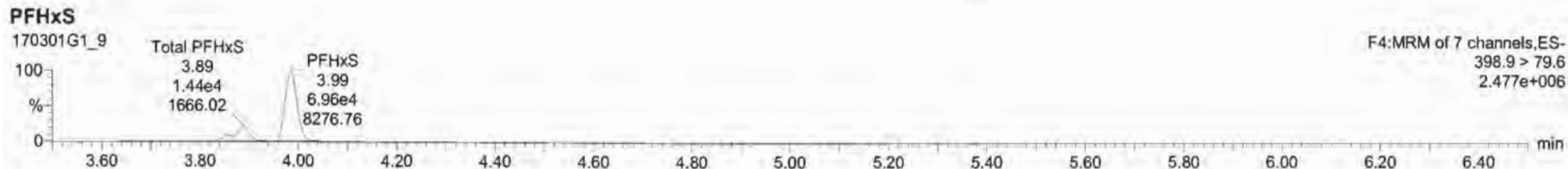


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Printed: Thursday, March 02, 2017 08:27:08 Pacific Standard Time

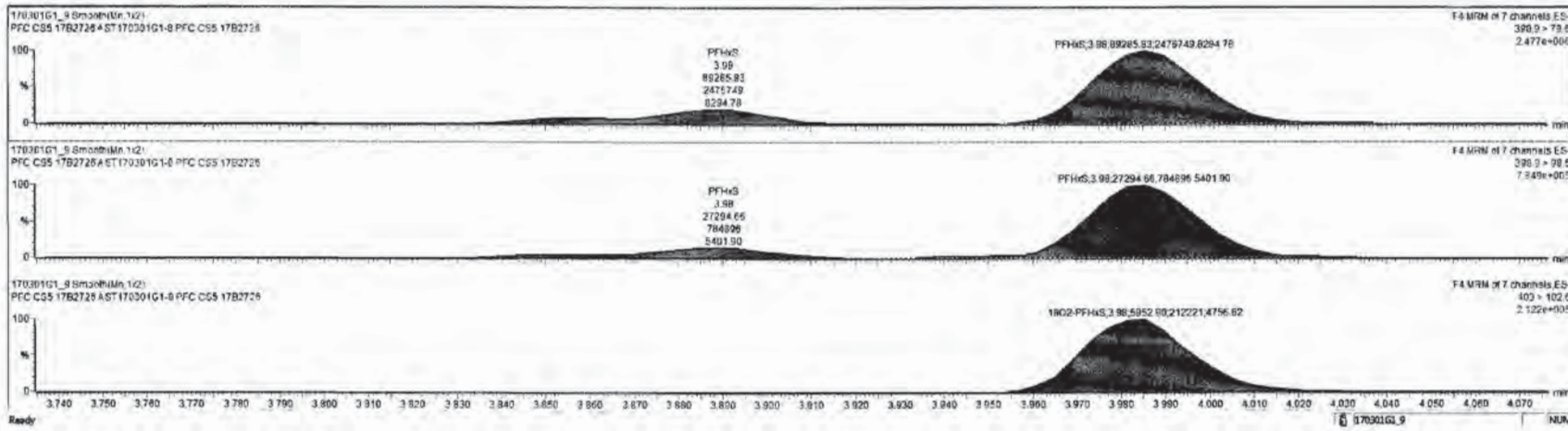
Name: 170301G1\_9, Date: 01-Mar-2017, Time: 16:37:33, ID: ST170301G1-8 PFC CS5 17B2726, Description: PFC CS5 17B2726 A





170301G1\_9 ST170301G1 8 PFC CS5 17CU126 PFC CS9 17C012U A

#	Name	Conc	DL	%Rec	EMPC	Area Ratio	RRR	RT	#	SD	DA	Y/N	QCT	AcqDate	AcqTime	IP	Cal Name	ID	Sample Name	Factor	SNR	Cal File	>MCL
1	PFBS	99.796722	0.8192	99.8		9.967e4	2.98	11	7	0.382	YES		1.001	01-Mar-17	16:37:33	228	230	ST170301G1	PFC CS5 17B27	1.0	1.00	YES	
2	PFHxA	90.401634		90.4		2.156e5	3.67	2	8				1.000	01-Mar-17	16:37:33			ST170301G1	PFC CS5 17B27	1.0	1.00	YES	
3	PFHxS	100.000001		100.0		3.029e4	3.98	3	9				1.000	01-Mar-17	16:37:33			ST170301G1	PFC CS5 17B27	1.0	1.00	YES	
4	PFOA	88.596634		88.6		2.185e5	4.27	4	10				1.000	01-Mar-17	16:37:33			ST170301G1	PFC CS5 17B27	1.0	1.00	YES	
5	PFNA	99.451040		99.4		1.067e5	4.60	5	11				1.000	01-Mar-17	16:37:33			ST170301G1	PFC CS5 17B27	1.0	1.00	YES	
6	PFO5	98.665333	0.0527	98.7		4.104e4	4.67	6	12				1.001	01-Mar-17	16:37:33			ST170301G1	PFC CS5 17B27	1.0	1.00	YES	
7	13C3-PFBS	11.669132	0.0147	93.4		5.795e3	0.442	2.97	7	14			0.008	01-Mar-17	16:37:33			ST170301G1	PFC CS5 17B27	1.0	1.00	NO	
8	13C4-PFHxA	11.821184	0.0103	95.4		1.495e4	1.117	3.67	8	14			0.071	01-Mar-17	16:37:33			ST170301G1	PFC CS5 17B27	1.0	1.00	NO	
9	18O2-PFHxS	12.822808	0.00874	101.0		5.953e3	0.420	3.98	9	14			1.001	01-Mar-17	16:37:33			ST170301G1	PFC CS5 17B27	1.0	1.00	NO	
10	13C2-PFOA	12.811524	0.00439	103.3		2.922e4	2.782	4.27	10	15			1.000	01-Mar-17	16:37:33			ST170301G1	PFC CS5 17B27	1.0	1.00	NO	
11	13C5-PFNA	13.357685	0.0187	106.9		1.167e4	0.648	4.60	11	16			1.008	01-Mar-17	16:37:33			ST170301G1	PFC CS5 17B27	1.0	1.00	NO	
12	13C8-PFO5	14.461068	0.0425	115.7		9.960e3	0.941	4.60	12	17			1.000	01-Mar-17	16:37:33			ST170301G1	PFC CS5 17B27	1.0	1.00	NO	
13	13C5-PFHxA	12.500000	0.0175	100.0		2.315e4	1.800	3.35	13	13			0.006	01-Mar-17	16:37:33			ST170301G1	PFC CS5 17B27	1.0	1.00	NO	
14	13C3-PFBS	12.500000	0.00484	100.0		1.403e4	1.800	3.98	14	14			0.020	01-Mar-17	16:37:33			ST170301G1	PFC CS5 17B27	1.0	1.00	NO	
15	13C6-PFOA	12.500000	0.00310	100.0		1.017e4	1.000	4.27	15	15			0.000	01-Mar-17	16:37:33			ST170301G1	PFC CS5 17B27	1.0	1.00	NO	
16	13C8-PFNA	12.500000	0.00585	100.0		1.226e4	1.600	4.60	16	16			0.000	01-Mar-17	16:37:33			ST170301G1	PFC CS5 17B27	1.0	1.00	NO	
17	13C4-PFO5	12.500000	0.00415	100.0		9.153e3	1.000	4.66	17	17			0.000	01-Mar-17	16:37:33			ST170301G1	PFC CS5 17B27	1.0	1.00	NO	
18	Total PFBS	99.820270	0.0165						16					01-Mar-17	16:37:33			ST170301G1	PFC CS5 17B27	1.0	1.00	NO	
19	Total PFHxS	122.37210							19					01-Mar-17	16:37:33			ST170301G1	PFC CS5 17B27	1.0	1.00	NO	
20	Total PFOA	88.596634							23					01-Mar-17	16:37:33			ST170301G1	PFC CS5 17B27	1.0	1.00	NO	
21	Total PFO5	129.53687	0.0527						21					01-Mar-17	16:37:33			ST170301G1	PFC CS5 17B27	1.0	1.00	NO	

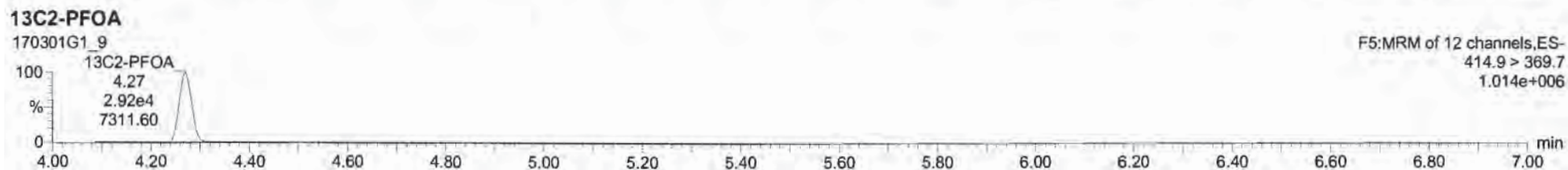
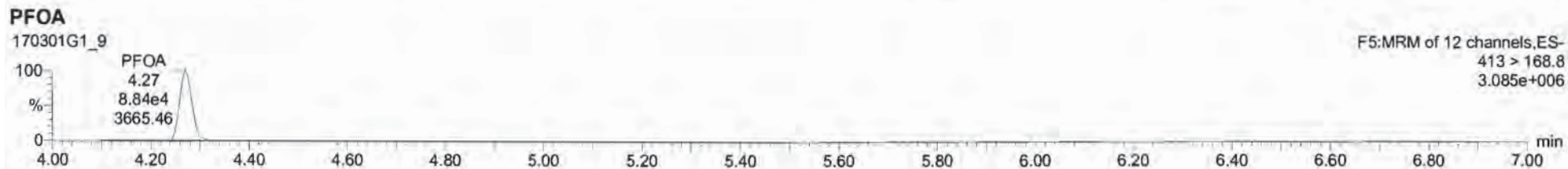
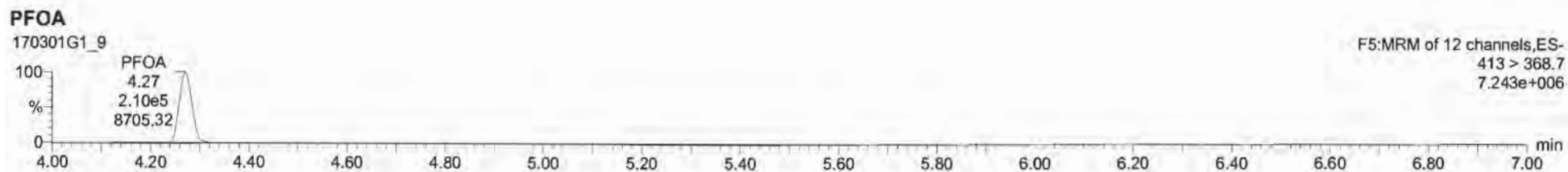




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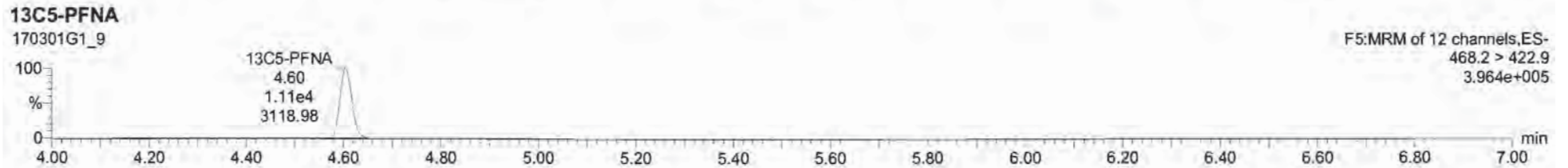
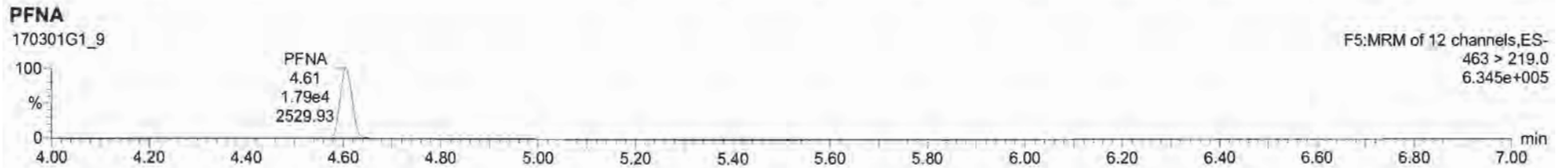
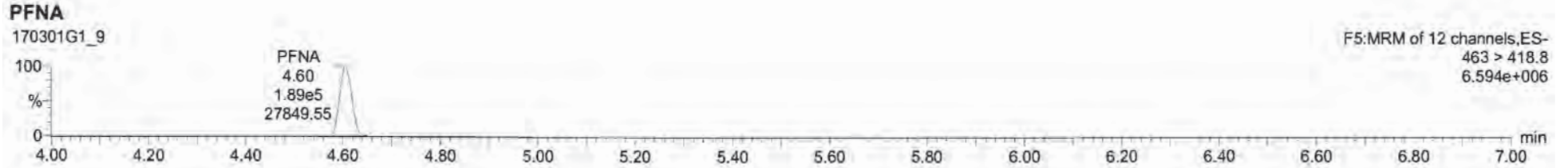
Name: 170301G1\_9, Date: 01-Mar-2017, Time: 16:37:33, ID: ST170301G1-8 PFC CS5 17B2726, Description: PFC CS5 17B2726 A



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Printed: Thursday, March 02, 2017 08:27:08 Pacific Standard Time

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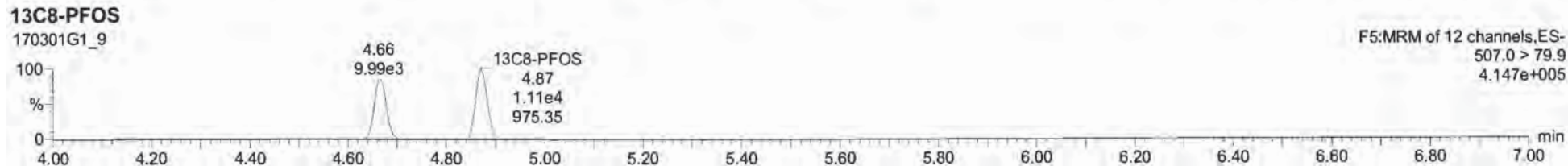
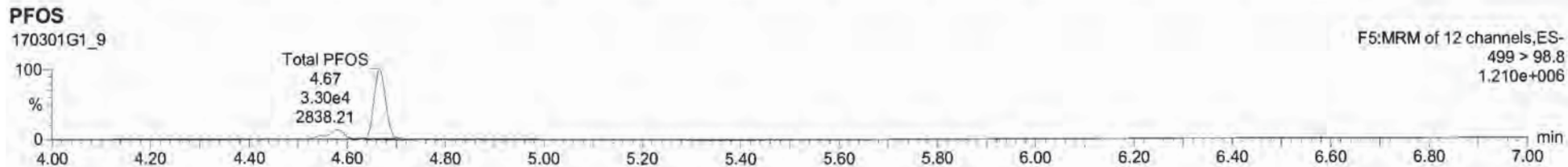
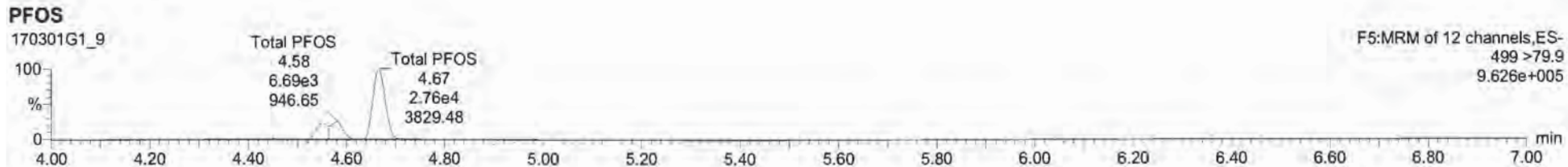


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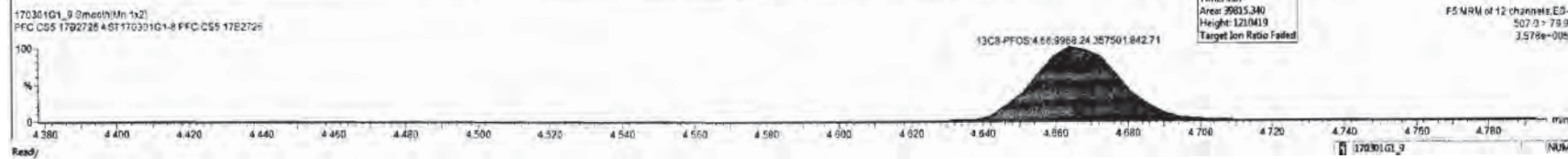
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Name: 170301G1\_9, Date: 01-Mar-2017, Time: 16:37:33, ID: ST170301G1-8 PFC CS5 17B2726, Description: PFC CS5 17B2726 A



SL	Name	Conc	DL	%Rec	EMPC	Abs Resp	RRF	RT	#	ISA	BA	Y/N	RRF	Acq Date	Acq Time	1 <sup>st</sup> Ch Name	ID	Sample Name	Factor1	SN	Cal/Re	INCL
1	PFBS	99.79572	0.0192	99.0		5.967e4	2.90	1	7		0.362	YES	1.001	01-Mar-17	16:37:33	226.230	ST170301G	PFC C55 17027	1.0	1.00		YES
2	PFHxA	98.401634		99.4		2.156e4	3.07	2	6				1.000	01-Mar-17	16:37:33		ST170301G	PFC C55 17027	1.0	1.00		YES
3	PFHxS	100.00241		100.0		8.929e4	3.99	3	6				1.000	01-Mar-17	16:37:33		ST170301G	PFC C55 17027	1.0	1.00		YES
4	PFOA	88.596534		88.0		2.105e5	4.27	4	10				1.000	01-Mar-17	16:37:33		ST170301G	PFC C55 17027	1.0	1.00		YES
5	PFNA	99.431045		99.4		1.857e5	4.50	5	11				1.000	01-Mar-17	16:37:33		ST170301G	PFC C55 17027	1.0	1.00		YES
6	PFOS	98.067133	0.0527	98.7		4.174e4	4.87	6	12				1.000	01-Mar-17	16:37:33		ST170301G	PFC C55 17027	1.0	1.00		YES
7	13C1-PFBS	11.669132	0.0147	93.4		5.795e3	0.442	2.97	7	14			0.836	01-Mar-17	16:37:33		ST170301G	PFC C55 17027	1.0	1.00		NO
8	13C1-PFHxA	11.821184	0.0153	93.4		1.495e4	1.117	3.07	8	14			0.971	01-Mar-17	16:37:33		ST170301G	PFC C55 17027	1.0	1.00		NO
9	13C1-PFHxS	12.622980	0.00674	101.0		5.953e3	0.420	3.99	9	14			1.001	01-Mar-17	16:37:33		ST170301G	PFC C55 17027	1.0	1.00		NO
10	13C1-PFOA	12.911534	0.00439	103.3		2.923e4	2.782	4.27	10	15			1.000	01-Mar-17	16:37:33		ST170301G	PFC C55 17027	1.0	1.00		NO
11	13C1-PFNA	13.337663	0.0107	106.9		1.107e4	0.846	4.50	11	16			1.003	01-Mar-17	16:37:33		ST170301G	PFC C55 17027	1.0	1.00		NO
12	13C1-PFOS	14.461060	0.0425	115.7		9.965e3	0.941	4.86	12	17			1.000	01-Mar-17	16:37:33		ST170301G	PFC C55 17027	1.0	1.00		NO
13	13C1-PFHxA	12.500000	0.0175	100.0		2.315e4	1.601	3.35	13	13			0.000	01-Mar-17	16:37:33		ST170301G	PFC C55 17027	1.0	1.00		NO
14	13C1-PFHxS	12.500000	0.00454	100.0		1.483e4	1.800	3.08	14	14			0.000	01-Mar-17	16:37:33		ST170301G	PFC C55 17027	1.0	1.00		NO
15	13C1-PFOA	12.500000	0.00310	100.0		1.017e4	1.000	4.27	15	15			0.000	01-Mar-17	16:37:33		ST170301G	PFC C55 17027	1.0	1.00		NO
16	13C1-PFNA	12.500000	0.00520	100.0		1.224e4	1.000	4.80	16	19			0.000	01-Mar-17	16:37:33		ST170301G	PFC C55 17027	1.0	1.00		NO
17	13C1-PFOS	12.500000	0.00415	100.0		9.453e3	1.000	4.05	17	17			0.000	01-Mar-17	16:37:33		ST170301G	PFC C55 17027	1.0	1.00		NO
18	Total PFBS	99.828270	0.0185					18						01-Mar-17	16:37:33		ST170301G	PFC C55 17027	1.0	1.00		NO
19	Total PFHxS	122.37310						19						01-Mar-17	16:37:33		ST170301G	PFC C55 17027	1.0	1.00		NO
20	Total PFOA	88.596534						20						01-Mar-17	16:37:33		ST170301G	PFC C55 17027	1.0	1.00		NO
21	Total PFOS	129.58607	0.0527					21						01-Mar-17	16:37:33		ST170301G	PFC C55 17027	1.0	1.00		NO



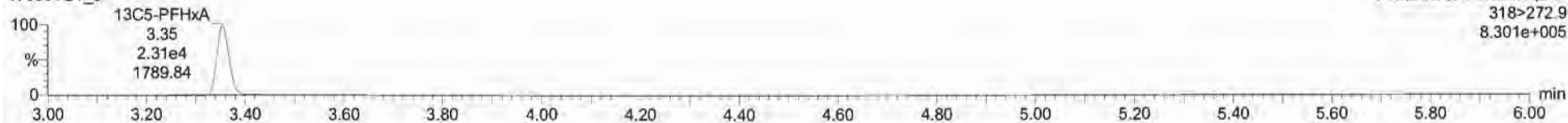
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Printed: Thursday, March 02, 2017 08:27:08 Pacific Standard Time

Name: 170301G1\_9, Date: 01-Mar-2017, Time: 16:37:33, ID: ST170301G1-8 PFC CS5 17B2726, Description: PFC CS5 17B2726 A

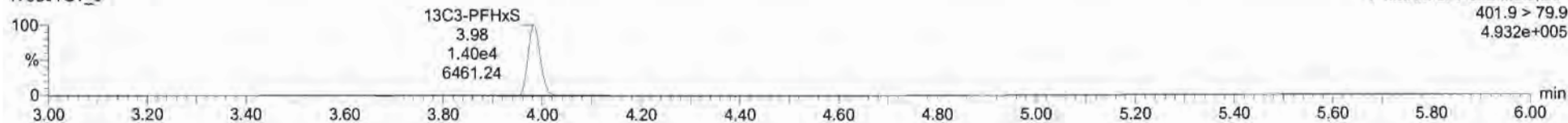
**13C5-PFHxA**

170301G1\_9



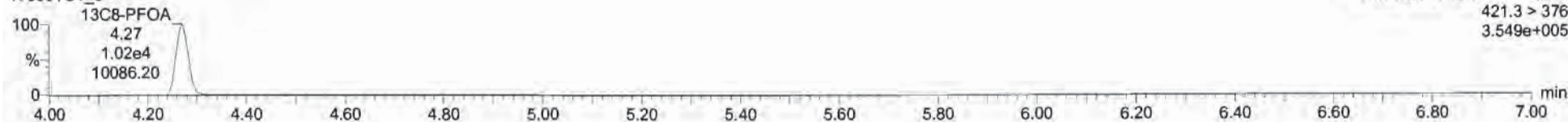
**13C3-PFHxS**

170301G1\_9



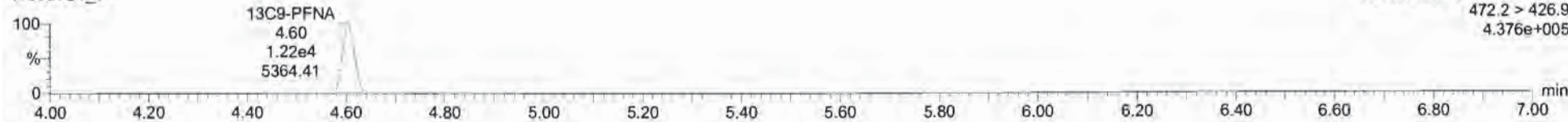
**13C8-PFOA**

170301G1\_9



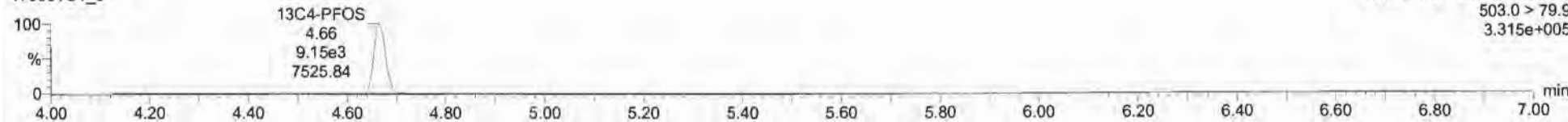
**13C9-PFNA**

170301G1\_9



**13C4-PFOS**

170301G1\_9





Dataset: U:\G1.PRO\Results\2017\170301G1\170301G1-11.qld

Last Altered: Thursday, March 02, 2017 09:00:59 Pacific Standard Time

Printed: Thursday, March 02, 2017 09:01:33 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS\_6\_2trans\_LINEAR.mdb 28 Feb 2017 16:04:45

Calibration: U:\G1.PRO\CurveDB\C18\_VAL-PFC\_Q1\_3-01-17\_L6\_2Trans.cdb 02 Mar 2017 08:18:08

Name: 170301G1\_11, Date: 01-Mar-2017, Time: 17:02:38, ID: SS170301G1-1 PFC SSS 17C0127, Description: PFC SSS 17C0127 A

#	Name	Trace	Response	IS Resp	RRF	Wt/Vol	RT	Conc.	%Rec
1	1 PFBS (A)	299 > 79.7	1.26e4	8.35e3		1.000	2.98	8.75	97.3
2	2 PFHpA	363 > 318.9	3.02e4	2.14e4		1.000	3.87	9.57	95.7
3	3 PFHxS (A)	398.9 > 79.6	1.06e4	8.52e3		1.000	3.99	8.78	87.0
4	4 PFOA	413 > 368.7	2.68e4	3.81e4		1.000	4.27	9.54	95.4
5	5 PFNA	463 > 418.8	2.30e4	1.40e4		1.000	4.61	9.48	94.8
6	6 PFOS (A)	499 > 79.9	4.13e3	1.18e4		1.000	4.67	8.42	84.2
7	7 13C3-PFBS	302.0 > 98.8	8.35e3	1.92e4	0.442	1.000	2.98	12.3	98.5
8	8 13C4-PFHpA	367.2 > 321.8	2.14e4	1.92e4	1.117	1.000	3.87	12.5	100.2
9	9 18O2-PFHxS	403 > 102.6	8.52e3	1.92e4	0.420	1.000	3.99	13.2	105.9
10	10 13C2-PFOA	414.9 > 369.7	3.81e4	1.38e4	2.782	1.000	4.27	12.4	99.2
11	11 13C5-PFNA	468.2 > 422.9	1.40e4	1.46e4	0.846	1.000	4.61	14.2	113.4
12	12 13C8-PFOS	507.0 > 79.9	1.18e4	1.11e4	0.941	1.000	4.67	14.0	112.3
13	13 13C5-PFHxA	318 > 272.9	3.12e4	3.12e4	1.000	1.000	3.36	12.5	100.0
14	14 13C3-PFHxS	401.9 > 79.9	1.92e4	1.92e4	1.000	1.000	3.99	12.5	100.0
15	15 13C8-PFOA	421.3 > 376	1.38e4	1.38e4	1.000	1.000	4.27	12.5	100.0
16	16 13C9-PFNA	472.2 > 426.9	1.46e4	1.46e4	1.000	1.000	4.60	12.5	100.0
17	17 13C4-PFOS	503.0 > 79.9	1.11e4	1.11e4	1.000	1.000	4.67	12.5	100.0

75-125  
↓

ES 3/2/17

(A) Concentration < 10 ng/L in SS native mix. ES 3/2/17

Dataset: Untitled

Last Altered: Thursday, March 02, 2017 08:29:33 Pacific Standard Time

Printed: Thursday, March 02, 2017 08:29:43 Pacific Standard Time

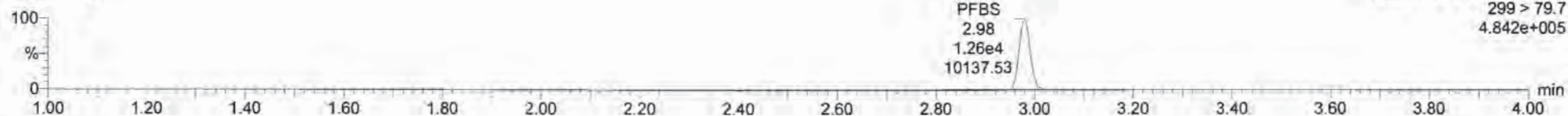
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Name: 170301G1\_11, Date: 01-Mar-2017, Time: 17:02:38, ID: SS170301G1-1 PFC SSS 17C0127, Description: PFC SSS 17C0127 A

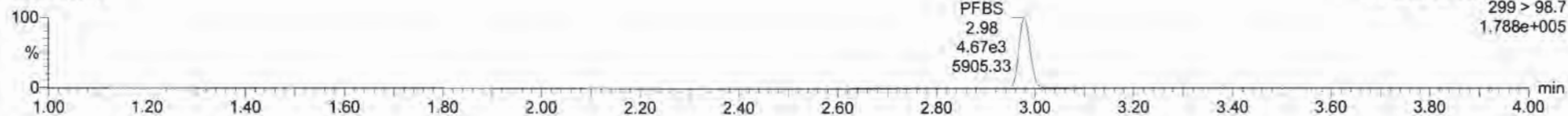
**PFBS**

170301G1\_11



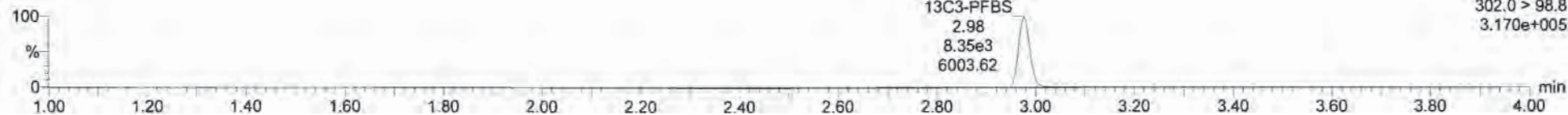
**PFBS**

170301G1\_11



**13C3-PFBS**

170301G1\_11

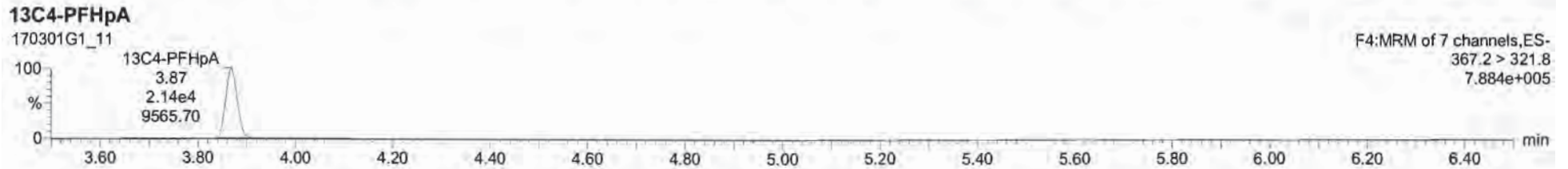
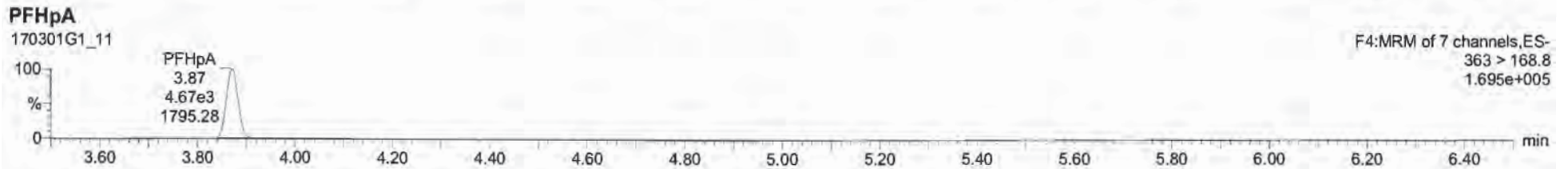
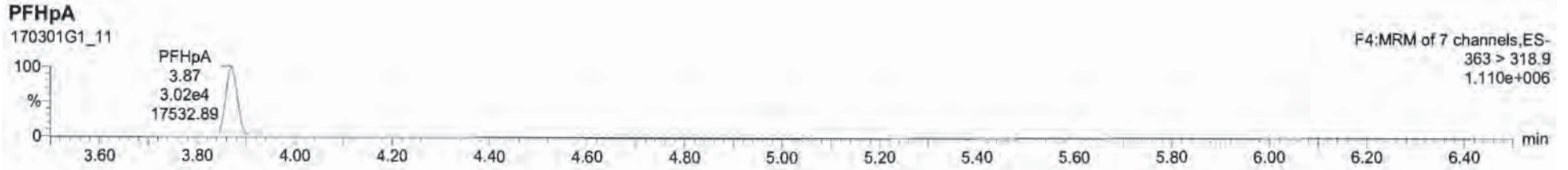




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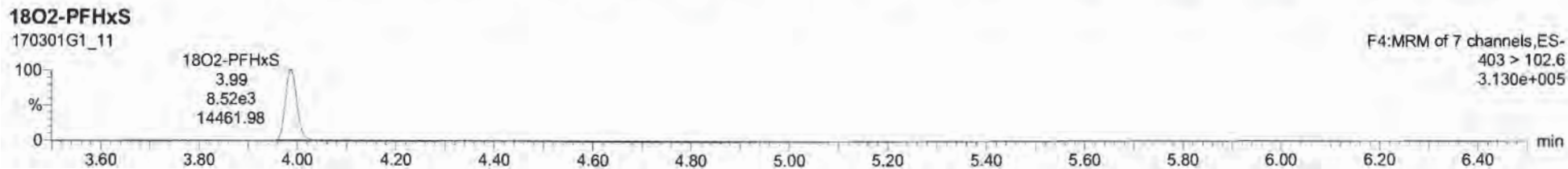
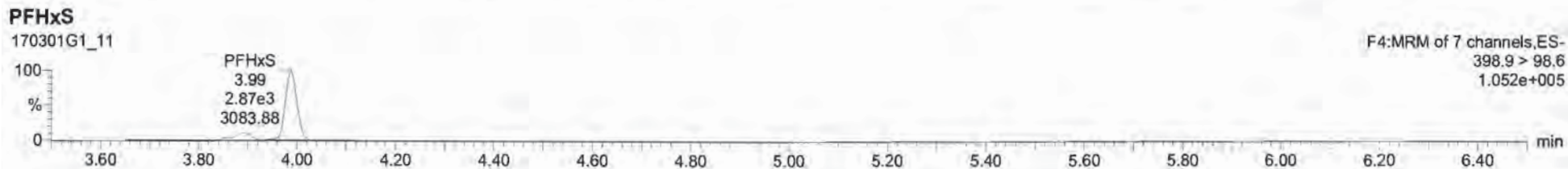
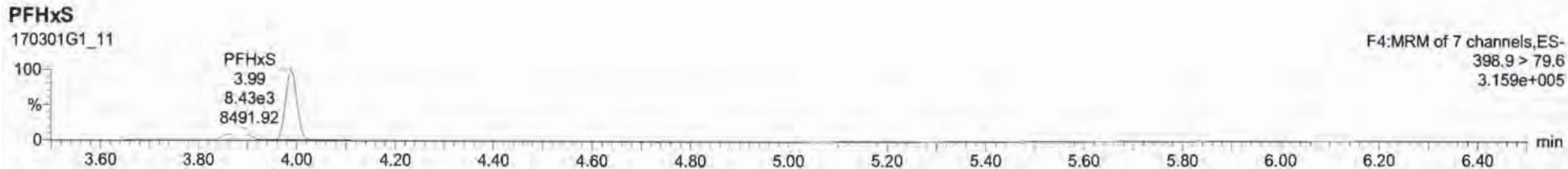
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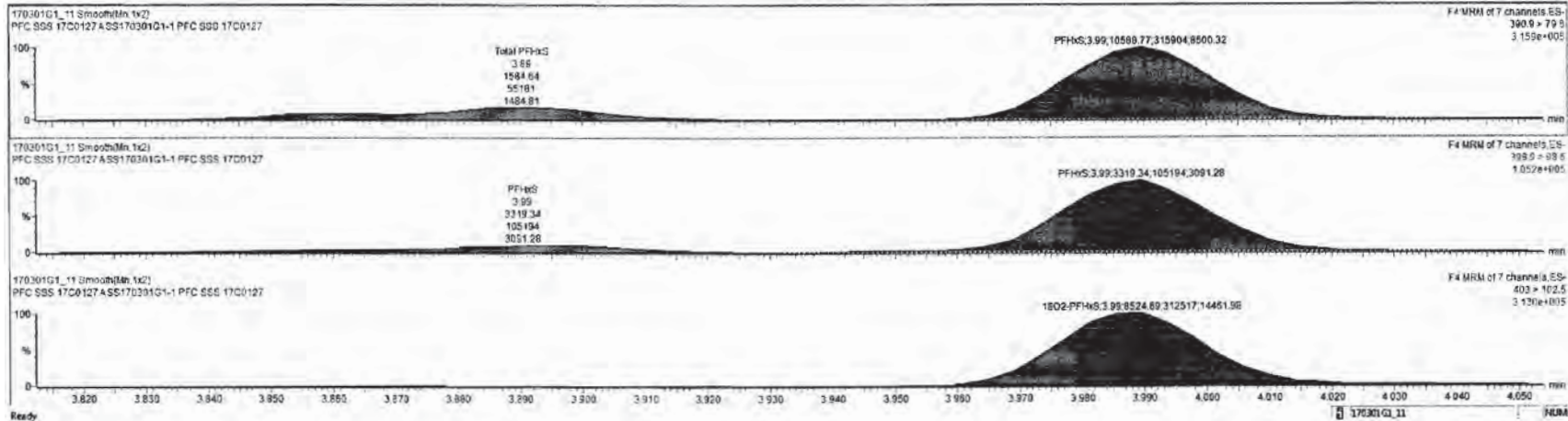
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170301G1\_11 - SS170301G1-1 PFC SSS 17C0127 - PFC SSS 17C0127 A

#	Name	Trace	Area	RPF	WVVol	ProdRT	RT	Conc	MDL	%Rec	DL
1	PFBS	299 > 79.7	1.264		1.000	2.95	2.95	8.75	NO	57.5	0.002441
2	PFHpA	363 > 318.8	3.924		1.000	3.87	3.87	9.57	YES	95.7	0.000000
3	PFHxS	398.9 > 79.9	1.054		1.000	3.99	3.99	8.78	YES	57.8	0.000000
4	PFOA	413 > 368.7	2.694		1.000	4.27	4.27	9.54	YES	95.4	0.000000
5	PFNA	463 > 418.8	2.394		1.000	4.61	4.61	9.48	YES	94.8	0.000000
6	PFOs	499 > 79.9	4.134		1.000	4.67	4.67	8.42	YES	84.2	0.0596010
7	13C3-PFBS	362.0 > 98.8	0.3563	0.442	1.000	2.98	2.98	13.3	NO	88.5	0.0052804
8	13C4-PFHpA	367.2 > 321.8	2.1484	1.12	1.000	3.86	3.87	12.5	NO	100.2	0.0032621
9	18O2-PFHxS	483 > 182.8	8.5283	0.420	1.000	3.99	3.99	13.2	NO	185.8	0.0022771
10	13C2-PFOA	414.9 > 369.7	3.8164	2.78	1.000	4.27	4.27	12.4	NO	99.2	0.0023340
11	13C5-PFNA	468.2 > 422.9	1.4964	0.848	1.000	4.60	4.61	14.2	NO	113.4	0.0019425
12	13C5-PFOs	507.0 > 79.9	1.1864	0.941	1.000	4.67	4.67	14.6	NO	112.3	0.0016278
13	13C5-PFHpA	318-272.9	3.1244	1.90	1.000	3.29	3.36	12.5	NO	100.0	0.0046902
14	13C3-PFHxS	491.9 > 79.9	1.9244	1.00	1.000	3.94	3.99	12.5	NO	100.0	0.0057740
15	13C2-PFOA	421.3 > 378	1.3384	1.00	1.000	4.22	4.27	12.5	NO	100.0	0.0011889
16	13C3-PFNA	472.3 > 426.9	1.4584	1.00	1.000	4.58	4.60	12.5	NO	100.0	0.0045131
17	13C4-PFOs	503.9 > 79.9	1.1144	1.00	1.000	4.63	4.67	12.5	NO	100.0	0.0054349
18	Total PFBS	299 > 79.7	1.264		1.000	3.11		8.77	NO		0.002738
19	Total PFHxS	363.9 > 79.9	1.274		1.000	4.09		10.4	NO		
20	Total PFOA	413 > 368.7	2.694		1.000	4.29		9.54	NO		
21	Total PFOs	499 > 79.9	4.684		1.000	4.62		9.95	NO		0.0096310

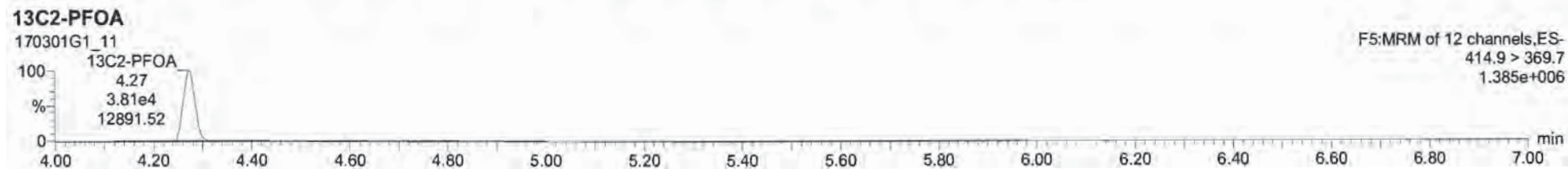
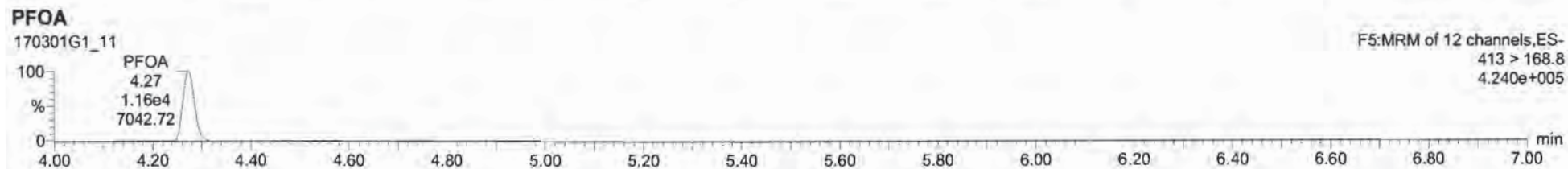
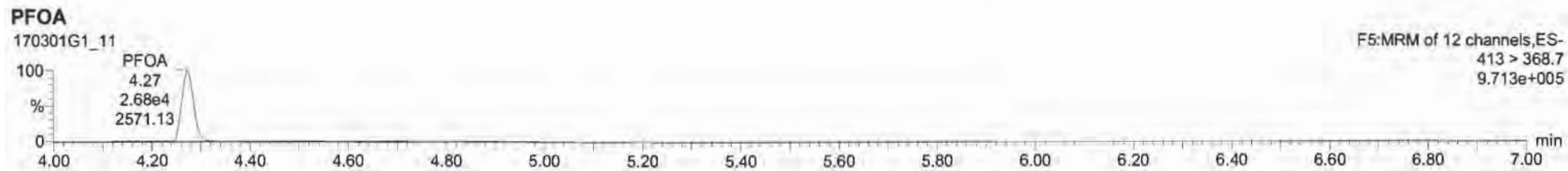


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Last Altered: Thursday, March 02, 2017 08:29:33 Pacific Standard Time

Printed: Thursday, March 02, 2017 08:29:43 Pacific Standard Time

Name: 170301G1\_11, Date: 01-Mar-2017, Time: 17:02:38, ID: SS170301G1-1 PFC SSS 17C0127, Description: PFC SSS 17C0127 A





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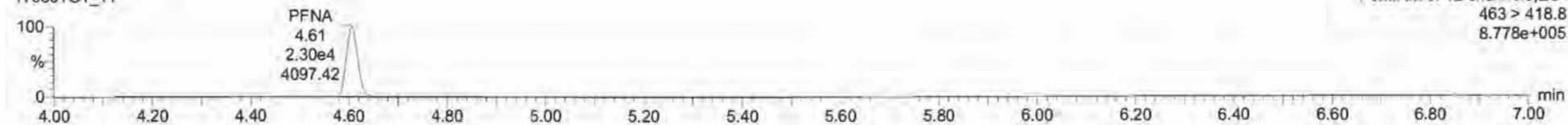
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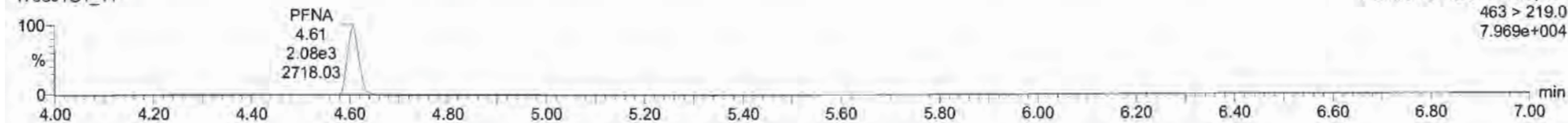
**PFNA**

170301G1\_11



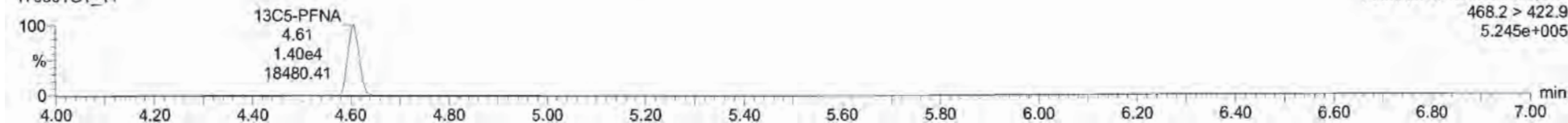
**PFNA**

170301G1\_11



**<sup>13</sup>C5-PFNA**

170301G1\_11





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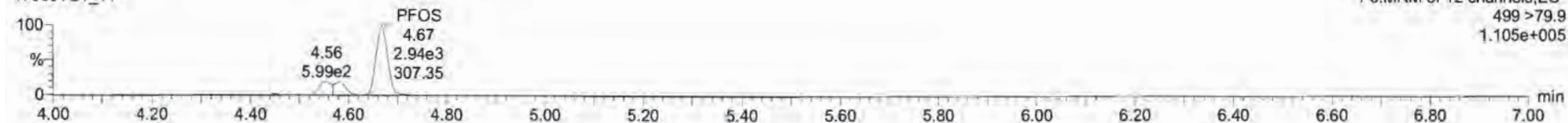
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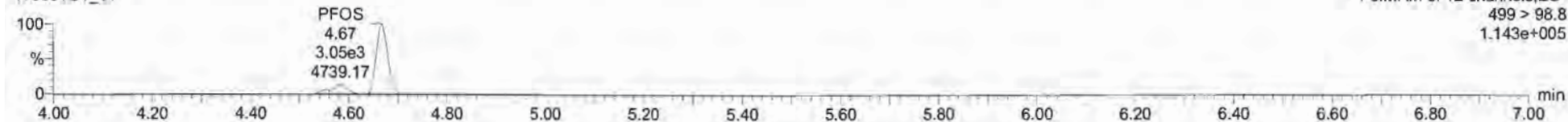
**PFOS**

170301G1\_11



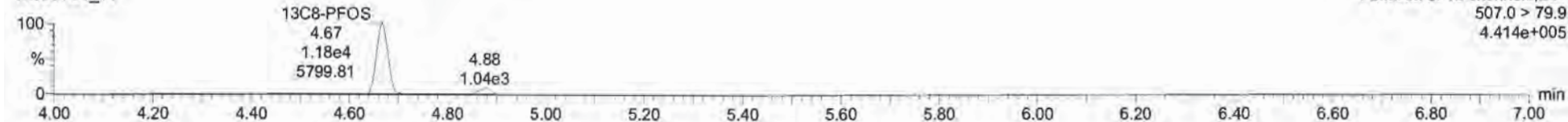
**PFOS**

170301G1\_11



**13C8-PFOS**

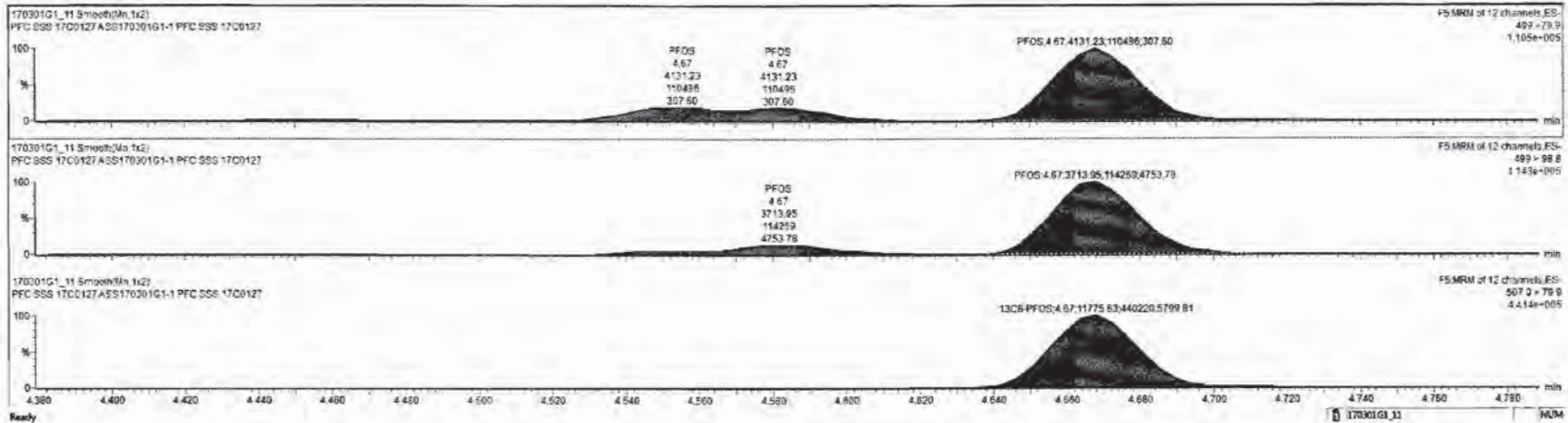
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170301G1\_11\_SS170301G1-1\_PFC\_SSS\_1700127\_PFC\_SSS\_1700127A

#	Name	Trace	Area	DRP	WPA	Prd RT	RT	Conc.	>MOL	%Rec	DL
1	PFBS	290 > 79.7	1.26e4		1.000	2.90	2.90	8.75	NO	97.5	0.0082441
2	PFHpA	363 > 318.9	3.02e4		1.000	3.67	3.67	9.57	YES	95.7	0.0000000
3	PFHxS	390.9 > 79.9	1.06e4		1.000	3.99	3.99	8.70	YES	87.6	0.0000000
4	PFDA	413 > 368.7	2.68e4		1.000	4.27	4.27	9.54	YES	95.4	0.0000000
5	PFNA	462 > 418.8	2.20e4		1.000	4.61	4.61	9.48	YES	94.8	0.0000000
6	PFOS	467 > 413.1	4.13e3		1.000	4.67	4.67	8.42	YES	84.0	0.0088910
7	13C1-PFBS	302.0 > 98.8	8.35e3	0.442	1.000	2.98	2.98	12.3	NO	95.5	0.0052804
8	13C4-PFHpA	367.2 > 321.8	2.14e4	1.12	1.000	3.66	3.67	12.5	NO	100.2	0.0032821
9	18O2-PFHxS	403 > 102.6	6.02e3	0.420	1.000	3.99	3.99	13.2	NO	105.9	0.0022771
10	13C2-PFDA	414.9 > 369.7	3.81e4	2.76	1.000	4.27	4.27	12.4	NO	99.2	0.0023340
11	13C5-PFNA	468.2 > 422.9	1.49e4	0.848	1.000	4.60	4.61	14.2	NO	113.4	0.0019423
12	13C6-PFOS	507.0 > 79.9	1.15e4	0.941	1.000	4.67	4.67	14.0	NO	112.3	0.0061276
13	13C5-PFHxA	318-272.9	3.12e4	1.00	1.000	3.29	3.28	12.5	NO	100.0	0.0046902
14	13C3-PFHxS	401.9 > 79.9	1.92e4	1.00	1.000	3.94	3.96	12.5	NO	100.0	0.0057740
15	13C5-PFDA	421.3 > 376	1.36e4	1.00	1.000	4.22	4.27	12.5	NO	100.0	0.0031166
16	13C9-PFNA	472.2 > 426.9	1.46e4	1.00	1.000	4.56	4.60	12.5	NO	100.0	0.0045431
17	13C4-PFOS	503.0 > 79.9	1.11e4	1.00	1.000	4.63	4.67	12.5	NO	100.0	0.0064348
18	Total PFBS	290 > 79.7	1.26e4		1.000	3.11		9.77	NO		0.0062738
19	Total PFHxS	390.9 > 79.9	1.27e4		1.000	4.09		16.4	NO		
20	Total PFDA	413 > 368.7	2.69e4		1.000	4.39		9.54	NO		
21	Total PFOS	469 > 79.9	4.65e3		1.000	4.62		9.51	NO		0.0086010



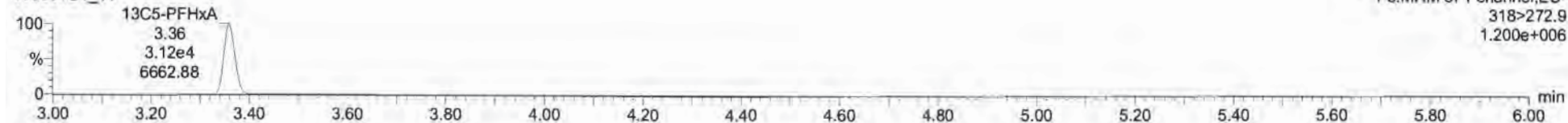
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Printed: Thursday, March 02, 2017 08:29:43 Pacific Standard Time

Name: 170301G1\_11, Date: 01-Mar-2017, Time: 17:02:38, ID: SS170301G1-1 PFC SSS 17C0127, Description: PFC SSS 17C0127 A

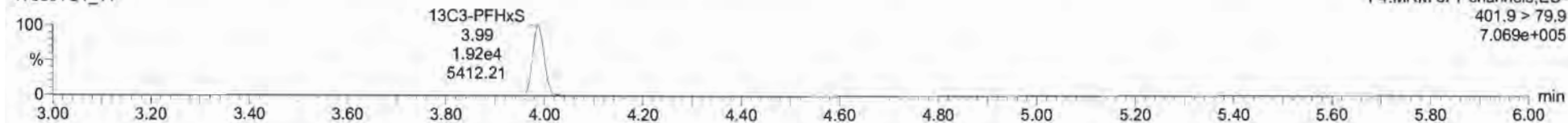
**13C5-PFHxA**

170301G1\_11



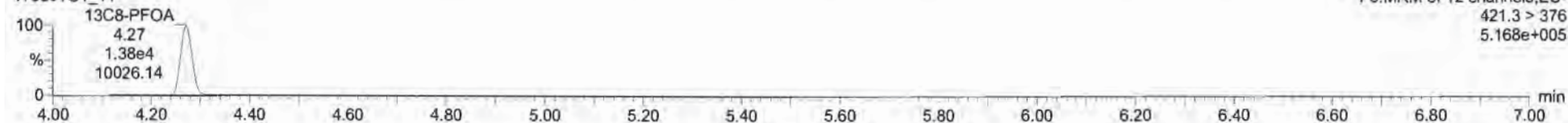
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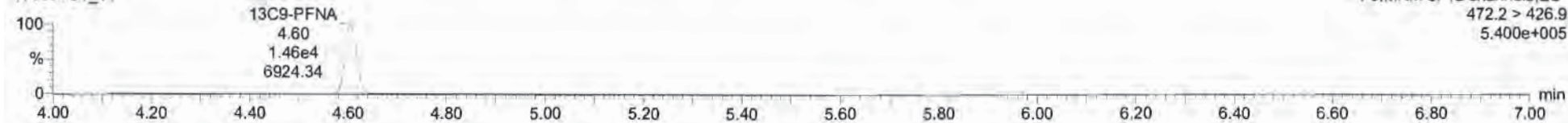
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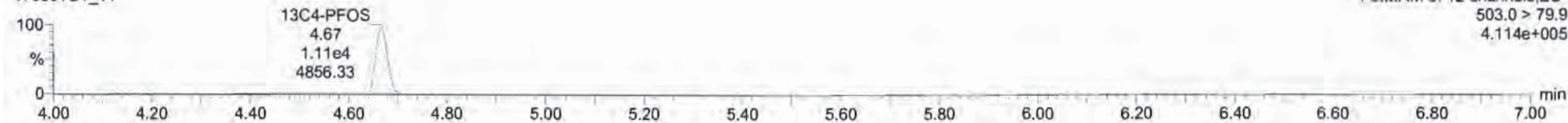
**13C9-PFNA**

170301G1\_11



**13C4-PFOS**

170301G1\_11







Contract_ID	DO_CTO_Number	Phase	Installation_ID	Sample_Name	CH2M_Code	Analysis_Group	Analytical_Method	PRC_Code	Lab_Code	Lab_Name	Leachate_Method	Sample_Basis	Extraction_Method	Result_Type	Lab_QC_Type	Sample_Medium	QC_Level	DateTime_Collected	Date_Received	Leachate_Date
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	02/24/2017 10:58	02/24/2017	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	02/24/2017 10:58	02/24/2017	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Matrix Spike	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	MS	W	4	02/24/2017 10:58	02/24/2017	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Matrix Spike	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	MS	W	4	02/24/2017 10:58	02/24/2017	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Matrix Spike	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	MS	W	4	02/24/2017 10:58	02/24/2017	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Matrix Spike	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	MS	W	4	02/24/2017 10:58	02/24/2017	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Matrix Spike Dup	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	MSD	W	4	02/24/2017 10:58	02/24/2017	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Matrix Spike Dup	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	MSD	W	4	02/24/2017 10:58	02/24/2017	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Matrix Spike Dup	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	MSD	W	4	02/24/2017 10:58	02/24/2017	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Matrix Spike Dup	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	MSD	W	4	02/24/2017 10:58	02/24/2017	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Matrix Spike Dup	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	MSD	W	4	02/24/2017 10:58	02/24/2017	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Matrix Spike Dup	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	MSD	W	4	02/24/2017 10:58	02/24/2017	





Contract_ID	DO_CTO_Number	Phase	Installation_ID	Sample_Name	Leachate_Time	Extraction_Date	Extraction_Time	Analysis_Date	Analysis_Time	Lab_Sample_ID	Dilution	Run_Number	Percent_Moisture	Percent_Lipid	Chem_Name	Analyte_ID	Analyte_Value	Original_Analyte_Value	Result_Units	Lab_Qualifier
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS		20170224	10:58:00	20170301	17:27:00	B7B0118-BS1	1	-999			13C2-PFOA	13C2-PFOA	99.8		PCT_REC	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS		20170224	10:58:00	20170301	17:27:00	B7B0118-BS1	1	-999			13C8-PFOS	13C8-PFOS	105		PCT_REC	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Matrix Spike		20170224	10:58:00	20170301	20:10:00	B7B0118-MS1	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5	92.5		NG_L	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Matrix Spike		20170224	10:58:00	20170301	20:10:00	B7B0118-MS1	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1	77.1		NG_L	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Matrix Spike		20170224	10:58:00	20170301	20:10:00	B7B0118-MS1	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1	67.8		NG_L	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Matrix Spike		20170224	10:58:00	20170301	20:10:00	B7B0118-MS1	1	-999			13C3-PFBS	13C3-PFBS	95.0		PCT_REC	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Matrix Spike		20170224	10:58:00	20170301	20:10:00	B7B0118-MS1	1	-999			13C2-PFOA	13C2-PFOA	111		PCT_REC	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Matrix Spike		20170224	10:58:00	20170301	20:10:00	B7B0118-MS1	1	-999			13C8-PFOS	13C8-PFOS	114		PCT_REC	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Matrix Spike Dup		20170224	10:58:00	20170301	19:58:00	B7B0118-MSD1	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5	88.1		NG_L	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Matrix Spike Dup		20170224	10:58:00	20170301	19:58:00	B7B0118-MSD1	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1	81.9		NG_L	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Matrix Spike Dup		20170224	10:58:00	20170301	19:58:00	B7B0118-MSD1	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1	79.8		NG_L	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Matrix Spike Dup		20170224	10:58:00	20170301	19:58:00	B7B0118-MSD1	1	-999			13C3-PFBS	13C3-PFBS	99.9		PCT_REC	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Matrix Spike Dup		20170224	10:58:00	20170301	19:58:00	B7B0118-MSD1	1	-999			13C2-PFOA	13C2-PFOA	103		PCT_REC	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Matrix Spike Dup		20170224	10:58:00	20170301	19:58:00	B7B0118-MSD1	1	-999			13C8-PFOS	13C8-PFOS	104		PCT_REC	

Contract_ID	DO_CTO_Number	Phase	Installation_ID	Sample_Name	Validator_Qualifier	GC_Column_Type	Analysis_Result_Type	Result_Narrative	QC_Control_Limit_Code	QC_Accuracy_Upper	QC_Accuracy_Lower	Control_Limit_Date	QC_Narrative	MDL	Detection_Limit	QSM_Version	DL	LOD	LOQ	SDG	Analysis_Batch	Validator_Name	Val_Date
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW10D-0217		PR	TRG									5.0	1.72	3.85	7.67	1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW10D-0217		PR	TRG									5.0	0.624	1.92	7.67	1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW10D-0217		PR	TRG									5.0	0.773	0.865	7.67	1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW10D-0217		PR	IS		SLSA	150	60					5.0				1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW10D-0217		PR	IS		SLSA	150	60					5.0				1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW10D-0217		PR	IS		SLSA	150	60					5.0				1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB01-022017		PR	TRG									5.0	1.89	4.24	8.46	1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB01-022017		PR	TRG									5.0	0.689	2.12	8.46	1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB01-022017		PR	TRG									5.0	0.854	0.953	8.46	1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB01-022017		PR	IS		SLSA	150	60					5.0				1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB01-022017		PR	IS		SLSA	150	60					5.0				1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB01-022017		PR	IS		SLSA	150	60					5.0				1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW06S-0217		PR	TRG									5.0	1.77	3.97	7.93	1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW06S-0217		PR	TRG									5.0	0.645	1.98	7.93	1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW06S-0217		PR	TRG									5.0	0.800	0.893	7.93	1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW06S-0217		PR	IS		SLSA	150	60					5.0				1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW06S-0217		PR	IS		SLSA	150	60					5.0				1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW06S-0217		PR	IS		SLSA	150	60					5.0				1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW06SP-0217		PR	TRG									5.0	1.77	3.94	7.90	1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW06SP-0217		PR	TRG									5.0	0.643	1.97	7.90	1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW06SP-0217		PR	TRG									5.0	0.797	0.886	7.90	1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW06SP-0217		PR	IS		SLSA	150	60					5.0				1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW06SP-0217		PR	IS		SLSA	150	60					5.0				1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW10S-0217		PR	TRG									5.0	1.87	4.17	8.35	1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW10S-0217		PR	TRG									5.0	0.679	2.08	8.35	1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW10S-0217		PR	TRG									5.0	0.842	0.938	8.35	1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW10S-0217		PR	IS		SLSA	150	60					5.0				1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW10S-0217		PR	IS		SLSA	150	60					5.0				1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB03-022217		PR	TRG									5.0	1.88	4.20	8.38	1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB03-022217		PR	TRG									5.0	0.682	2.10	8.38	1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB03-022217		PR	TRG									5.0	0.845	0.945	8.38	1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB03-022217		PR	IS		SLSA	150	60					5.0				1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB03-022217		PR	IS		SLSA	150	60					5.0				1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW06M-0217		PR	TRG									5.0	1.75	3.91	7.81	1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW06M-0217		PR	TRG									5.0	0.635	1.95	7.81	1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW06M-0217		PR	TRG									5.0	0.787	0.879	7.81	1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW06M-0217		PR	IS		SLSA	150	60					5.0				1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW06M-0217		PR	IS		SLSA	150	60					5.0				1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB02-022117		PR	TRG									5.0	1.81	4.03	8.07	1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB02-022117		PR	TRG									5.0	0.657	2.02	8.07	1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB02-022117		PR	TRG									5.0	0.815	0.907	8.07	1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB02-022117		PR	IS		SLSA	150	60					5.0				1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB02-022117		PR	IS		SLSA	150	60					5.0				1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB02-022117		PR	IS		SLSA	150	60					5.0				1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB04-022317		PR	TRG									5.0	1.84	4.10	8.23	1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB04-022317		PR	TRG									5.0	0.670	2.05	8.23	1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB04-022317		PR	TRG									5.0	0.830	0.922	8.23	1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB04-022317		PR	IS		SLSA	150	60					5.0				1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB04-022317		PR	IS		SLSA	150	60					5.0				1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB04-022317		PR	IS		SLSA	150	60					5.0				1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW13M-0217		PR	TRG									5.0	1.74	3.88	7.78	1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW13M-0217		PR	TRG									5.0	0.633	1.94	7.78	1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW13M-0217		PR	TRG									5.0	0.785	0.872	7.78	1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW13M-0217		PR	IS		SLSA	150	60					5.0				1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW13M-0217		PR	IS		SLSA	150	60					5.0				1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW13M-0217		PR	IS		SLSA	150	60					5.0				1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank		PR	TRG									5.0	1.79	4.00	8.00	1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank		PR	TRG									5.0	0.651	2.00	8.00	1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank		PR	TRG									5.0	0.807	0.900	8.00	1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank		PR	IS		SLSA	150	60					5.0				1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank		PR	IS		SLSA	150	60					5.0				1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank		PR	IS		SLSA	150	60					5.0				1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS		PR	TRG		LSA	130	60					5.0	1.79	4.00	8.00	1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS		PR	TRG		LSA	130	70					5.0	0.651	2.00	8.00	1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS		PR	TRG		LSA	130	70					5.0	0.807	0.900	8.00	1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS		PR	IS		LSA	150	60					5.0				1700261	S7B0048		

Contract_ID	DO_CTO_Number	Phase	Installation_ID	Sample_Name	Validator_Qualifier	GC_Column_Type	Analysis_Result_Type	Result_Narrative	QC_Control_Limit_Code	QC_Accuracy_Upper	QC_Accuracy_Lower	Control_Limit_Date	QC_Narrative	MDL	Detection_Limit	QSM_Version	DL	LOD	LOQ	SDG	Analysis_Batch	Validator_Name	Val_Date
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS		PR	IS		LSA	150	60					5.0				1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS		PR	IS		LSA	150	60					5.0				1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Matrix Spike		PR	TRG		LSA	130	60					5.0	1.74	3.88	7.76	1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Matrix Spike		PR	TRG		LSA	130	70					5.0	0.631	1.94	7.76	1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Matrix Spike		PR	TRG		LSA	130	70					5.0	0.782	0.872	7.76	1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Matrix Spike		PR	IS		LSA	150	150					5.0				1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Matrix Spike		PR	IS		LSA	150	150					5.0				1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Matrix Spike		PR	IS		LSA	150	150					5.0				1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Matrix Spike Dup		PR	TRG		LSA	130	60					5.0	1.75	3.91	7.80	1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Matrix Spike Dup		PR	TRG		LSA	130	70					5.0	0.635	1.95	7.80	1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Matrix Spike Dup		PR	TRG		LSA	130	70					5.0	0.787	0.879	7.80	1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Matrix Spike Dup		PR	IS		LSA	150	150					5.0				1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Matrix Spike Dup		PR	IS		LSA	150	150					5.0				1700261	S7B0048		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Matrix Spike Dup		PR	IS		LSA	150	150					5.0				1700261	S7B0048		

**DATA VALIDATION SUMMARY REPORT  
COUPEVILLE, WASHINGTON**

Client: CH2M HILL, Inc., Corvallis, Oregon  
 SDG: 1700261  
 Laboratory: Vista Analytical Laboratory, El Dorado Hills, California  
 Site: Coupeville, CTO-0008, Washington  
 Date: March 24, 2017

PFCs			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	WI-CV-GW10D-0217	1700261-01	Water
2	WI-CV-EB01-022017	1700261-02	Water
3	WI-CV-GW06S-0217	1700261-03	Water
4	WI-CV-GW06SP-0217	1700261-04	Water
5	WI-CV-GW10S-0217	1700261-05	Water
6	WI-CV-EB03-022217	1700261-06	Water
7	WI-CV-GW06M-0217	1700261-07	Water
7MS	WI-CV-GW06M-0217MS	1700261-07MS	Water
7MSD	WI-CV-GW06M-0217MSD	1700261-07MSD	Water
8	WI-CV-EB02-022117	1700261-08	Water
9	WI-CV-EB04-022317	1700261-09	Water
10	WI-CV-GW13M-0217	1700261-10	Water

A full data validation was performed on the analytical data for six water samples and four aqueous equipment blank samples collected on February 20-23, 2017 by CH2M HILL at the Coupeville site in Washington. The samples were analyzed under the EPA Method "Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS)".

Specific method references are as follows:

Analysis  
PFCs

Method References  
USEPA Method 537 Modified

The data have been validated according to the protocols and quality control (QC) requirements of the analytical method, and the U.S. Department of Defense (DoD) Quality Systems Manual (QSM), Version 5.0 (July 2013) and the USEPA National Functional Guidelines for Organic Data Review as follows:

- The USEPA "Contract Laboratories Program National Functional Guidelines for Superfund Organic Methods Data Review," August 2014;
- and the reviewer's professional judgment.



The following data quality indicators were reviewed for this report:

### ***Organics***

- Date Completeness, Case Narrative & Custody Documentation
- Holding times
- Initial and continuing calibration summaries
- Method blank and field QC blank contamination
- Surrogate recovery (%R)
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) recoveries
- Ongoing Precision and Recovery (OPR)
- Target Compound Identification
- Compound Quantitation
- Field Duplicate sample precision

A full (Level IV) data validation was performed with this review including a recalculation of 10% of the detected results in the samples.

### **Data Usability Assessment**

There were no rejections of data.

Overall the data is acceptable for the intended purposes. There were no qualifications.

### **Perfluorinated Compounds (PFCs)**

#### **Data Completeness, Case Narrative & Custody Documentation**

- The case narrative and chain-of-custody documentation were included in the data package as required. All criteria were met.

#### **Holding Times**

- All samples were extracted within 14 days for water samples and analyzed within 28 days.

#### **Initial Calibration**

- All percent difference (%D) and/or correlation coefficients criteria were met.

#### **Continuing Calibration**

- All percent difference (%D) and RRF criteria were met.

### Method Blank

- The method blanks were free of contamination.

### Field QC Blank

- The field blank samples exhibited the following contamination.

Blank ID	Compound	Conc. ng/L	Qualifier	Affected Samples
WI-CV-EB01-022017	None - ND	-	-	-
WI-CV-EB03-022217	None - ND	-	-	-
WI-CV-EB02-022117	None - ND	-	-	-
WI-CV-EB04-022317	Perfluorobutanesulfonate	2.99	None	All associated ND
	Perfluorooctanoic Acid	2.55	None	All associated ND
WI-CV-FB01-030217 (SDG 1700293)	None - ND	-	-	-

### Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values.

### Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- The MS/MSD sample exhibited acceptable %R and RPD values.

### Ongoing Precision and Recovery (OPR)

- The OPR samples exhibited acceptable percent recoveries (%R) values.

### Target Compound Identification

- All mass spectra and quantitation criteria were met.

### Compound Quantitation


- All criteria were met.

### Field Duplicate Sample Precision

- Field duplicate results are summarized below.

Compound	WI-CV-GW06S-0217 ng/L	WI-CV-GW06SP-0217 ng/L	RPD	Qualifier
None	ND	ND	-	-

Please contact the undersigned at (757) 564-0090 if you have any questions or need further information.

Signed:  Dated: 3/24/17  
Nancy Weaver  
Senior Chemist

<b>Data Qualifier</b>	<b>Definition</b>
U	The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
J	The analyte is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
NJ	The analysis has been "tentatively identified" or "presumptively" as present and the associated numerical value is the estimated concentration in the samples.
UJ	The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the samples.





Sample ID: WI-CV-GW10D-0217

Modified EPA Method 537

Client Data		Sample Data		Laboratory Data			
Name:	CH2M Hill	Matrix:	Groundwater	Lab Sample:	1700261-01	Date Received:	24-Feb-2017 7:32
Project:	NavyClean OLF Coupeville	Sample Size:	0.130 L	QC Batch:	B7B0118	Date Extracted:	24-Feb-2017 10:58
Date Collected:	20-Feb-2017 11:45			Date Analyzed:	01-Mar-17 18:30	Column:	BEH C18
Location:	WI-CV-MW10D						

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	1.72	3.85	7.67		IS 13C3-PFBS	88.5	60 - 150	
PFOA	ND	0.624	1.92	7.67		IS 13C2-PFOA	97.0	60 - 150	
PFOS	ND	0.773	0.865	7.67		IS 13C8-PFOS	93.5	60 - 150	

DL - Detection limit

RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit

Results reported to DL.

When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.

Only the linear isomer is reported for all other analytes.

*mw31241.7*

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Sample ID: WI-CV-EB01-022017						Modified EPA Method 537			
Client Data		Sample Data		Laboratory Data					
Name:	CH2M Hill	Matrix:	Groundwater	Lab Sample:	1700261-02	Date Received:	24-Feb-2017 7:32		
Project:	NavyClean OLF Coupeville	Sample Size:	0.118 L	QC Batch:	B7B0118	Date Extracted:	24-Feb-2017 10:58		
Date Collected:	20-Feb-2017 12:00	Date Analyzed: 01-Mar-17 18:43 Column: BEH C18							
Location:	Equipment Blank								
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	1.89	4.24	8.46		IS 13C3-PFBS	107	60 - 150	
PFOA	ND	0.689	2.12	8.46		IS 13C2-PFOA	95.4	60 - 150	
PFOS	ND	0.854	0.953	8.46		IS 13C8-PFOS	107	60 - 150	

DL - Detection limit  
 RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit  
 Results reported to DL.  
 When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.  
 Only the linear isomer is reported for all other analytes.

new 3/24/17

3

Sample ID: WI-CV-GW06S-0217					Modified EPA Method 537				
Client Data		Sample Data			Laboratory Data				
Name:	CH2M Hill	Matrix:	Groundwater		Lab Sample:	1700261-03	Date Received:	24-Feb-2017 7:32	
Project:	NavyClean OLF Coupeville	Sample Size:	0.126 L		QC Batch:	B7B0118	Date Extracted:	24-Feb-2017 10:58	
Date Collected:	22-Feb-2017 12:05								
Location:	WI-CV-MW06S								
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	1.77	3.97	7.93		IS 13C3-PFBS	114	60 - 150	
PFOA	ND	0.645	1.98	7.93		IS 13C2-PFOA	102	60 - 150	
PFOS	ND	0.800	0.893	7.93		IS 13C8-PFOS	99.0	60 - 150	

DL - Detection limit

RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit

Results reported to DL.

When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.

Only the linear isomer is reported for all other analytes.

MW31241.7

4

Sample ID: WI-CV-GW06SP-0217					Modified EPA Method 537				
Client Data			Sample Data		Laboratory Data				
Name:	CH2M Hill		Matrix:	Groundwater	Lab Sample:	1700261-04	Date Received:	24-Feb-2017 7:32	
Project:	NavyClean OLF Coupeville		Sample Size:	0.127 L	QC Batch:	B7B0118	Date Extracted:	24-Feb-2017 10:58	
Date Collected:	22-Feb-2017 11:05				Date Analyzed:	01-Mar-17 19:08 Column: BEH C18			
Location:	WI-CV-MW06S Spike								
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	1.77	3.94	7.90		IS 13C3-PFBS	102	60 - 150	
PFOA	ND	0.643	1.97	7.90		IS 13C2-PFOA	106	60 - 150	
PFOS	ND	0.797	0.886	7.90		IS 13C8-PFOS	104	60 - 150	

DL - Detection limit  
 RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit  
 Results reported to DL.  
 When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.  
 Only the linear isomer is reported for all other analytes.

3/24/17

5

Sample ID: WI-CV-GW10S-0217						Modified EPA Method 537			
Client Data		Sample Data		Laboratory Data					
Name:	CH2M Hill	Matrix:	Groundwater	Lab Sample:	1700261-05	Date Received:	24-Feb-2017 7:32		
Project:	NavyClean OLF Coupeville	Sample Size:	0.120 L	QC Batch:	B7B0118	Date Extracted:	24-Feb-2017 10:58		
Date Collected:	22-Feb-2017 10:00			Date Analyzed:	01-Mar-17 19:20 Column: BEH C18				
Location:	WI-CV-MW10S								
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	3.07	1.87	4.17	8.35	J	IS 13C3-PFBS	95.9	60 - 150	
PFOA	ND	0.679	2.08	8.35		IS 13C2-PFOA	90.3	60 - 150	
PFOS	ND	0.842	0.938	8.35		IS 13C8-PFOS	100	60 - 150	

DL - Detection limit  
 RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit  
 Results reported to DL.  
 When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.  
 Only the linear isomer is reported for all other analytes.

mw-31-24-17



6

Sample ID: WI-CV-EB03-022217						Modified EPA Method 537			
Client Data			Sample Data			Laboratory Data			
Name:	CH2M Hill		Matrix:	Groundwater		Lab Sample:	1700261-06	Date Received:	24-Feb-2017 7:32
Project:	NavyClean OLF Coupeville		Sample Size:	0.119 L		QC Batch:	B7B0118	Date Extracted:	24-Feb-2017 10:58
Date Collected:	22-Feb-2017 11:15					Date Analyzed:	01-Mar-17 19:33 Column: BEH C18		
Location:	Equipment Blank								
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	1.88	4.20	8.38		IS 13C3-PFBS	110	60 - 150	
PFOA	ND	0.682	2.10	8.38		IS 13C2-PFOA	105	60 - 150	
PFOS	ND	0.845	0.945	8.38		IS 13C8-PFOS	97.3	60 - 150	

DL - Detection limit

RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit

Results reported to DL.

When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.

Only the linear isomer is reported for all other analytes.

NW 3/24/17

7

Sample ID: WI-CV-GW06M-0217					Modified EPA Method 537				
Client Data			Sample Data		Laboratory Data				
Name:	CH2M Hill		Matrix:	Groundwater	Lab Sample:	1700261-07	Date Received:	24-Feb-2017 7:32	
Project:	NavyClean OLF Coupeville		Sample Size:	0.128 L	QC Batch:	B7B0118	Date Extracted:	24-Feb-2017 10:58	
Date Collected:	21-Feb-2017 14:25				Date Analyzed:	01-Mar-17 19:45 Column: BEH C18			
Location:	WI-CV-MW06M								
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	1.75	3.91	7.81		IS 13C3-PFBS	107	60 - 150	
PFOA	ND	0.635	1.95	7.81		IS 13C2-PFOA	106	60 - 150	
PFOS	ND	0.787	0.879	7.81		IS 13C8-PFOS	110	60 - 150	

DL - Detection limit  
 RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit  
 Results reported to DL.  
 When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers  
 Only the linear isomer is reported for all other analytes.

W312417

Sample ID: WI-CV-EB02-022117						Modified EPA Method 537				
Client Data			Sample Data			Laboratory Data				
Name:	CH2M Hill		Matrix:	Groundwater		Lab Sample:	1700261-08	Date Received:	24-Feb-2017 7:32	
Project:	NavyClean OLF Coupeville		Sample Size:	0.124 L		QC Batch:	B7B0118	Date Extracted:	24-Feb-2017 10:58	
Date Collected:	21-Feb-2017 16:10					Date Analyzed:	01-Mar-17 20:23 Column: BEH C18			
Location:	Equipment Blank									
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers	
PFBS	ND	1.81	4.03	8.07		IS 13C3-PFBS	91.5	60 - 150		
PFOA	ND	0.657	2.02	8.07		IS 13C2-PFOA	96.8	60 - 150		
PFOS	ND	0.815	0.907	8.07		IS 13C8-PFOS	95.4	60 - 150		

DL - Detection limit  
 RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit  
 Results reported to DL.  
 When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.  
 Only the linear isomer is reported for all other analytes.

NW-3124117

9

Sample ID: WI-CV-EB04-022317						Modified EPA Method 537				
Client Data			Sample Data			Laboratory Data				
Name:	CH2M Hill		Matrix:	Groundwater		Lab Sample:	1700261-09	Date Received:	24-Feb-2017 7:32	
Project:	NavyClean OLF Coupeville		Sample Size:	0.122 L		QC Batch:	B7B0118	Date Extracted:	24-Feb-2017 10:58	
Date Collected:	23-Feb-2017 12:05					Date Analyzed:	01-Mar-17 21:51 Column: BEH C18			
Location:	Equipment Blank									
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard		%R	LCL-UCL	Qualifiers
PFBS	2.99	1.84	4.10	8.23	J	IS	13C3-PFBS	86.5	60 - 150	
PFOA	2.55	0.670	2.05	8.23	J	IS	13C2-PFOA	107	60 - 150	
PFOS	ND	0.830	0.922	8.23		IS	13C8-PFOS	105	60 - 150	

DL - Detection limit

RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit

Results reported to DL.

When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.

Only the linear isomer is reported for all other analytes.

NW 3/24/17

**Sample ID: WI-CV-GW13M-0217** **Modified EPA Method 537**

<b>Client Data</b>		<b>Sample Data</b>		<b>Laboratory Data</b>			
Name:	CH2M Hill	Matrix:	Groundwater	Lab Sample:	1700261-10	Date Received:	24-Feb-2017 7:32
Project:	NavyClean OLF Coupeville	Sample Size:	0.129 L	QC Batch:	B7B0118	Date Extracted:	24-Feb-2017 10:58
Date Collected:	22-Feb-2017 16:25			Date Analyzed:	01-Mar-17 22:03	Column:	BEH C18
Location:	WI-CV-MW13M						

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	139	1.74	3.88	7.78		IS 13C3-PFBS	92.2	60 - 150	
PFOA	20.4	0.633	1.94	7.78		IS 13C2-PFOA	117	60 - 150	
PFOS	ND	0.785	0.872	7.78		IS 13C8-PFOS	106	60 - 150	

DL - Detection limit  
 RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit  
 Results reported to DL.  
 When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.  
 Only the linear isomer is reported for all other analytes.

WI 3/24/17



<b>CV-MW11-M</b>	2/26/17
Depth (ft bgs)	170.43
PFBS	7.66 U
PFOS	1.72 U
PFOA	3.83 U
<b>CV-MW07-S</b>	3/4/17
Depth (ft bgs)	145.02
PFBS	4.39 U
PFOS	0.987 U
PFOA	2.19 U
<b>CV-MW07-M</b>	3/4/17
Depth (ft bgs)	193.75
PFBS	3.91 U
PFOS	<b>0.844 J</b>
PFOA	1.95 U
<b>CV-MW04-M</b>	2/28/17
Depth (ft bgs)	159.05
PFBS	4.03 U
PFOS	0.907 U
PFOA	2.02 U
<b>CV-MW04-S</b>	3/1/17
Depth (ft bgs)	126.93
PFBS	3.91 U
PFOS	0.879 U
PFOA	1.95 U
<b>CV-MW14-M</b>	3/4/17
Depth (ft bgs)	176.34
PFBS	<b>111</b>
PFOS	<b>0.898 J</b>
PFOA	<b>166</b>
<b>CV-MW03-D</b>	2/27/17
Depth (ft bgs)	237.43
PFBS	3.91 U
PFOS	<b>0.914 J</b>
PFOA	1.95 U
<b>CV-MW03-M</b>	2/27/17
Depth (ft bgs)	160.35
PFBS	3.88 U
PFOS	0.872 U
PFOA	1.94 U
<b>CV-MW13-S</b>	3/3/17
Depth (ft bgs)	114.98
PFBS	4.07 U
PFOS	0.915 U
PFOA	2.03 U
<b>CV-MW13-M</b>	2/22/17
Depth (ft bgs)	187.76
PFBS	<b>139</b>
PFOS	0.872 U
PFOA	<b>20.4</b>
<b>CV-MW09-M</b>	2/23/17
Depth (ft bgs)	197.33
PFBS	<b>11.2</b>
PFOS	0.915 U
PFOA	2.03 U
<b>CV-MW09-S</b>	NA
Depth (ft bgs)	110.92
PFBS	NS
PFOS	NS
PFOA	NS

<b>CV-MW11-S</b>	2/26/17
Depth (ft bgs)	140.43
PFBS	3.91 U
PFOS	<b>1.0 J</b>
PFOA	1.95 U
<b>Building 11</b>	9/19/16
Depth (ft bgs)	162
PFBS	10 U
PFOS	10 U
PFOA	3 U
<b>Building 2807</b>	9/19/16
Depth (ft bgs)	178
PFBS	<b>110</b>
PFOS	10 U
PFOA	<b>17.5 J</b>

<b>CV-MW08-S</b>	3/2/17
Depth (ft bgs)	131.26
PFBS	3.85 U
PFOS	0.865 U
PFOA	1.92 U
<b>CV-MW08-M</b>	3/4/17
Depth (ft bgs)	165.21
PFBS	3.91 U
PFOS	0.879 U
PFOA	1.95 U
<b>CV-MW01-M</b>	2/28/17
Depth (ft bgs)	163.36
PFBS	3.94 U
PFOS	0.886 U
PFOA	1.97 U
<b>CV-MW01-D</b>	2/28/17
Depth (ft bgs)	217.42
PFBS	4 U
PFOS	0.9 U
PFOA	2 U
<b>CV-MW02-S</b>	3/1/17
Depth (ft bgs)	106.86
PFBS	<b>332 D</b>
PFOS	<b>54.7</b>
PFOA	<b>571</b>
<b>CV-MW02-M</b>	3/1/17
Depth (ft bgs)	167.96
PFBS	3.88 U
PFOS	0.872 U
PFOA	1.94 U
<b>CV-MW05-S</b>	2/24/17
Depth (ft bgs)	124.56
PFBS	<b>12.9</b>
PFOS	0.922 U
PFOA	<b>9.87</b>
<b>CV-MW05-M</b>	2/23/17
Depth (ft bgs)	175.35
PFBS	<b>473</b>
PFOS	<b>3.26 J</b>
PFOA	<b>1190</b>
<b>CV-MW06-S</b>	2/22/17
Depth (ft bgs)	140.43
PFBS	3.97 U
PFOS	0.893 U
PFOA	1.98 U
<b>CV-MW06-M</b>	2/21/17
Depth (ft bgs)	189.51
PFBS	3.91 U
PFOS	0.879 U
PFOA	1.95 U
<b>CV-MW10-D</b>	2/20/17
Depth (ft bgs)	206.67
PFBS	3.85 U
PFOS	0.865 U
PFOA	1.92 U
<b>CV-MW10-S</b>	2/22/17
Depth (ft bgs)	159.45
PFBS	<b>3.07 J</b>
PFOS	0.938 U
PFOA	2.08 U
<b>CV-MW12-S</b>	NA
Depth (ft bgs)	106.92
PFBS	NS
PFOS	NS
PFOA	NS
<b>CV-MW12-D</b>	3/1/17
Depth (ft bgs)	198.03
PFBS	3.97 U
PFOS	0.893 U
PFOA	1.98 U

<b>CV-MW01-M</b>	2/28/17
Depth (ft bgs)	163.36
PFBS	3.94 U
PFOS	0.886 U
PFOA	1.97 U
<b>CV-MW01-D</b>	2/28/17
Depth (ft bgs)	217.42
PFBS	4 U
PFOS	0.9 U
PFOA	2 U
<b>CV-MW02-S</b>	3/1/17
Depth (ft bgs)	106.86
PFBS	<b>332 D</b>
PFOS	<b>54.7</b>
PFOA	<b>571</b>
<b>CV-MW02-M</b>	3/1/17
Depth (ft bgs)	167.96
PFBS	3.88 U
PFOS	0.872 U
PFOA	1.94 U
<b>CV-MW05-S</b>	2/24/17
Depth (ft bgs)	124.56
PFBS	<b>12.9</b>
PFOS	0.922 U
PFOA	<b>9.87</b>
<b>CV-MW05-M</b>	2/23/17
Depth (ft bgs)	175.35
PFBS	<b>473</b>
PFOS	<b>3.26 J</b>
PFOA	<b>1190</b>
<b>CV-MW06-S</b>	2/22/17
Depth (ft bgs)	140.43
PFBS	3.97 U
PFOS	0.893 U
PFOA	1.98 U
<b>CV-MW06-M</b>	2/21/17
Depth (ft bgs)	189.51
PFBS	3.91 U
PFOS	0.879 U
PFOA	1.95 U
<b>CV-MW10-D</b>	2/20/17
Depth (ft bgs)	206.67
PFBS	3.85 U
PFOS	0.865 U
PFOA	1.92 U
<b>CV-MW10-S</b>	2/22/17
Depth (ft bgs)	159.45
PFBS	<b>3.07 J</b>
PFOS	0.938 U
PFOA	2.08 U
<b>CV-MW12-S</b>	NA
Depth (ft bgs)	106.92
PFBS	NS
PFOS	NS
PFOA	NS
<b>CV-MW12-D</b>	3/1/17
Depth (ft bgs)	198.03
PFBS	3.97 U
PFOS	0.893 U
PFOA	1.98 U

**Notes**  
 PFBS - Perfluorobutanesulfonic acid  
 PFOS - Perfluorooctane Sulfonate  
 PFOA - Perfluorooctanoic acid  
 LHA - lifetime health advisory  
 units - nanograms per liter (ng/L)  
 ft bgs - feet below ground surface  
 NS - not sampled  
 J - analyte detected, concentration is estimated  
 U - not detected  
 D - diluted sample  
**Bold indicates detection**  
 Shaded text indicates exceedance of USEPA LHA  
 Samples were not collected from CV-GW09S and CV-GW12S because the wells were dry at the time of sampling.  
 Samples collected from the wells within Buildings 2807 and 11 were analyzed by ALS-Kelso using Method 537 for drinking water.

- Legend**
- Base Supply Well
  - Monitoring well with no exceedance of LHA
  - Monitoring well with LHA exceedance
  - No detections of PFAS
  - Not Sampled
  - Direction of Middle Zone Groundwater Flow
  - Direction of Deep Zone Groundwater Flow
  - Base Boundary

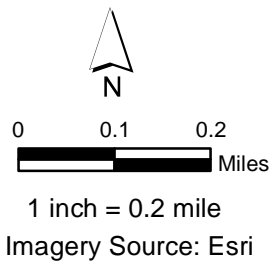


Figure 10  
 Detections of PFAS in Groundwater  
 Outlying Landing Field Coupeville  
 Coupeville, Washington  
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	<b>LHA</b>
PFBS	--
PFOS	70
PFOA	70