Naval Facilities Engineering Command

Groundwater Investigation Sample Results, Level 2 Laboratory Report, Level 4 Laboratory Report, Electronic Data Deliverable, Data Validation Report, and the Sample Location Figure, SDG 1700268

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

February 2019

March 07, 2017

Vista Work Order No. 1700268

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 28, 2017. This sample set was analyzed on a rush turn-around time, under your Project Name 'Navy Clean CTO-0008 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.

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

Sincerely,

Karen Lopez for

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. 1700268
Case Narrative

Sample Condition on Receipt:

Eight groundwater 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:

Samples "WI-CV-GW05M-0217", "WI-CV-GW05S-0217", "WI-CV-GW11M-0217" and "WI-CV-GW11S-0217" contained particulate and were centrifuged prior to extraction. Due to clogging of cartridges, only half of the sample volume was used for samples "WI-CV-GW05M-0217" and "WI-CV-GW11M-0217". One sample bottle was provided for sample "WI-CV-GW13S-0217" (sample 06). As requested by the client on March 6, 2017, back-up samples will be provided at a later date and will be reported in a separate Work Order.

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
1700268-01	WI-CV-GW09M-0217	23-Feb-17 16:55	28-Feb-17 07:28	HDPE Bottle, 125 mL
				HDPE Bottle, 125 mL
1700268-02	WI-CV-GW05M-0217	23-Feb-17 15:45	28-Feb-17 07:28	HDPE Bottle, 125 mL
				HDPE Bottle, 125 mL
1700268-03	WI-CV-GW05S-0217	24-Feb-17 17:30	28-Feb-17 07:28	HDPE Bottle, 125 mL
				HDPE Bottle, 125 mL
1700268-04	WI-CV-GW11M-0217	26-Feb-17 14:35	28-Feb-17 07:28	HDPE Bottle, 125 mL
				HDPE Bottle, 125 mL
1700268-05	WI-CV-GW11S-0217	26-Feb-17 16:30	28-Feb-17 07:28	HDPE Bottle, 125 mL
				HDPE Bottle, 125 mL
1700268-06	WI-CV-GW13S-0217	24-Feb-17 10:55	28-Feb-17 07:28	HDPE Bottle, 125 mL
1700268-07	WI-CV-EB06-022617	26-Feb-17 17:45	28-Feb-17 07:28	HDPE Bottle, 125 mL
				HDPE Bottle, 125 mL
1700268-08	WI-CV-EB05-022417	24-Feb-17 11:35	28-Feb-17 07:28	HDPE Bottle, 125 mL
				HDPE Bottle, 125 mL

ANALYTICAL RESULTS

Sample ID: Method Blank — Modified EPA Method 537

Matrix:	Aqueous	QC Batch:	B7C0003	Lab Sample:	B7C0003-BLK1
Sample Size:	0.125 L	Date Extracted:	01-Mar-2017 8:54	Date Analyzed:	06-Mar-17 16:52 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	ND	1.79	4.00	8.00	
PFOA	ND	0.651	2.00	8.00	
PFOS	ND	0.807	0.900	8.00	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	112	60 - 150	
IS	13C2-PFOA	86.5	60 - 150	
IS	13C8-PFOS	93.1	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	QC Batch:	B7C0003	Lab Sample:	B7C0003-BS1
Sample Size:	0.125 L	Date Extracted:	01-Mar-2017 8:54	Date Analyzed:	06-Mar-17 16:02 Column: BEH C18

Analyte	Amt Found (ng/L)	Spike Amt	%R	Limits
PFBS	81.0	80.0	101	60 - 130
PFOA	89.0	80.0	111	70 - 130
PFOS	75.3	80.0	94.1	70 - 130

	Labeled Standard	%R	LCL-UCL
IS	13C3-PFBS	111	60 - 150
IS	13C2-PFOA	85.5	60 - 150
IS	13C8-PFOS	93.9	60 - 150

LCL-UCL - Lower control limit - upper control limit

Sample ID: Method Blank — Modified EPA Method 537

Matrix:	Aqueous	QC Batch:	B7C0031
Sample Size:	0H315 4	Date Extracted:	0-2Mar21037 8:15

4aL Sample:	B7C00312B4y 3
Date Abalnzed:	052Mar237 35:K1 Columb: BE6 C38

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
. PBS	F D	3H7N	K100	8100	
. P9 A	F D	0K053	1100	8100	
. P9 S	F D	0H807	0EN00	8100	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	3-C-2 PBS	30K	C0 2350	
IS	3-C12 P9 A	87K0	C0 2350	
IS	3-C82 P9 S	88H7	C0 2350	

D4 2Detectiob limit

R4 2Reportibg limit

4C42UC4 24ower cobtrol limit 2upper cobtrol limit

Results reported to D4H

Wheb reported, . PBS, . P6 xS, . P9 A abd . P9 S ibclude Loth libear abd Lrabched isomersH

9 bln the libear isomer is reported for all other abalntesH

Sample ID: OPR **Modified EPA Method 537**

Matrix:	Aqueous	QC Batch:	B7C0031	4aL Sample:	B7C00312BS3
Sample Size:	0H315 4	Date Extracted:	0-2Mar21037 8:15	Date Abalnzed:	052Mar237 35:0y Columb: BE6 C38

Analyte	Amt Found (ng/L)	Spike Amt	%R	Limits
. PBS	8CH8	80I0	331	F0 23-0
. P9 A	O-I8	80I0	337	70 23-0
. P9 S	83H3	80I0	303	70 23-0

	Labeled Standard	%R	LCL-UCL
IS	3-C-2 PBS	305	F0 2350
IS	3-C12 P9 A	8CHy	F0 2350
IS	3-C82 P9 S	O1H-	F0 2350

4C42UC4 24ower cobtrol limit 2upper cobtrol limit

Sample ID: WI-CV-GW09M-0217

Modified EPA Method 537

Client Data

Name:	CH2M Hill
Project:	Navy Clean CTO-0008 OLF Coupeville
Date Collected:	23-Feb-2017 16:55
Location:	MW09M

Sample Data

Matrix:	Groundwater
Sample Size:	0.123 L

Laboratory Data

Lab Sample:	1700268-01	Date Received:	28-Feb-2017 7:28
QC Batch:	B7C0003	Date Extracted:	01-Mar-2017 8:54
Date Analyzed:	06-Mar-17 17:30 Column: BEH C18		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	11.2	1.82	4.07	8.12	
PFOA	ND	0.661	2.03	8.12	
PFOS	ND	0.819	0.915	8.12	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	95.8	60 - 150	
IS	13C2-PFOA	86.1	60 - 150	
IS	13C8-PFOS	93.9	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-GW05M-0217

Modified EPA Method 537

Client Data

Name:	CH2M Hill
Project:	Navy Clean CTO-0008 OLF Coupeville
Date Collected:	23-Feb-2017 15:45
Location:	MW05M

Sample Data

Matrix:	Groundwater
Sample Size:	0.0655 L

Laboratory Data

Lab Sample:	1700268-02	Date Received:	28-Feb-2017 7:28
QC Batch:	B7C0012	Date Extracted:	01-Mar-2017 8:54
Date Analyzed:	05-Mar-17 16:07	Column:	BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	473	3.42	7.63	15.3	
PFOA	1190	1.24	3.82	15.3	
PFOS	3.26	1.54	1.72	15.3	J

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	103	60 - 150	
IS	13C2-PFOA	84.9	60 - 150	
IS	13C8-PFOS	98.7	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: WI-CV-GW05S-0217

Modified EPA Method 537

Client Data

Name:	CH2M Hill
Project:	Navy Clean CTO-0008 OLF Coupeville
Date Collected:	24-Feb-2017 17:30
Location:	MW05S

Sample Data

Matrix:	Groundwater
Sample Size:	0.122 L

Laboratory Data

Lab Sample:	1700268-03	Date Received:	28-Feb-2017 7:28
QC Batch:	B7C0003	Date Extracted:	01-Mar-2017 8:54
Date Analyzed:	06-Mar-17 17:43 Column: BEH C18		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	12.9	1.83	4.10	8.17	
PFOA	9.87	0.665	2.05	8.17	
PFOS	ND	0.824	0.922	8.17	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	75.3	60 - 150	
IS	13C2-PFOA	75.9	60 - 150	
IS	13C8-PFOS	78.8	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-GW00M-2107

Modified EPA Method 537

Client Data

Name:	CH2M Hill
Project:	Navy Clean CTO-0008 OLF Coupeville
Date Collected:	26-Feb-2017 14:35
Location:	MW11M

Sample Data

Matrix:	Groundwater
Sample Size:	0.0653 L

Laboratory Data

Lab Sample:	1700268-04	Date Received:	28-Feb-2017 7:28
QC Batch:	B7C0012	Date Extracted:	01-Mar-2017 8:54
Date Analyzed:	05-Mar-17 16:20	Column:	BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	ND	3.43	7.66	15.3	
PFOA	ND	1.25	3.83	15.3	
PFOS	ND	1.55	1.72	15.3	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	90.6	60 - 150	
IS	13C2-PFOA	87.4	60 - 150	
IS	13C8-PFOS	86.1	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-GW00S-2107

Modified EPA Method 537

Client Data		Sample Data		Laboratory Data			
P ame:	CG8M Gill	Matrix:	wruHydRater	b aA Sample:	27008o5-04	Date v eceiFed:	85-NeA-8027 7:85
j ru3ect:	P aF6 Cleay CTO-0005 Ob N CuHpeFille	Sample Size:	0.285 b	QC Batch:	B7C0001	Date Extracted:	02-Mar-8027 5:4L
Date Cullected:	8o-NeA-8027 2o:10			Date n yal6zed:	0o-Mar-27 27:44	CulHmy:	BEG C25
b ucatiuy:	MW22S						

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
j NBS	P D	2.74	1.92	7.51	
j NOn	P D	0.o17	2.94	7.51	
j NOS	2.00	0.790	0.579	7.51	J

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	21C1-j NBS	79.o	o0 - 240	
IS	21C8-j NOn	91.0	o0 - 240	
IS	21C5-j NOS	59.5	o0 - 240	

Db - Detectiuy limit

v b - v epurtiyg limit

b Cb-UCb - b uRer cuytrul limit - Hpper cuytrul limit

v esHts repurted tu Db.

Whey repurted, j NBS, j NGxS, j NOn ayd j NOS iyclHde Auth liyear ayd Arayched isumers.

Oyl6 the liyear isumer is repurted fur all uther ayal6tes.

Sample ID: WI-CV-EB06-022617

Modified EPA Method 537

Client Data

Name:	CH2M Hill
Project:	Navy Clean CTO-0008 OLF Coupeville
Date Collected:	26-Feb-2017 17:45
Location:	Eq. Blank

Sample Data

Matrix:	Groundwater
Sample Size:	0.106 L

Laboratory Data

Lab Sample:	1700268-07	Date Received:	28-Feb-2017 7:28
QC Batch:	B7C0003	Date Extracted:	01-Mar-2017 8:54
Date Analyzed:	06-Mar-17 18:08	Column:	BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	ND	2.10	4.72	9.40	
PFOA	ND	0.765	2.36	9.40	
PFOS	1.12	0.948	1.06	9.40	J

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	86.8	60 - 150	
IS	13C2-PFOA	84.2	60 - 150	
IS	13C8-PFOS	91.9	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-EB05-022417

Modified EPA Method 537

Client Data

Name:	CH2M Hill
Project:	Navy Clean CTO-0008 OLF Coupeville
Date Collected:	24-Feb-2017 11:35
Location:	Eq. Blank

Sample Data

Matrix:	Groundwater
Sample Size:	0.127 L

Laboratory Data

Lab Sample:	1700268-08	Date Received:	28-Feb-2017 7:28
QC Batch:	B7C0003	Date Extracted:	01-Mar-2017 8:54
Date Analyzed:	06-Mar-17 18:20 Column: BEH C18		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	ND	1.77	3.94	7.90	
PFOA	ND	0.643	1.97	7.90	
PFOS	ND	0.797	0.886	7.90	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	97.9	60 - 150	
IS	13C2-PFOA	88.7	60 - 150	
IS	13C8-PFOS	99.8	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.

DATA QUALIFIERS & ABBREVIATIONS

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

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

CERTIFICATIONS

Accrediting Authority	Certificate Number
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

Vista Analytical Laboratory

CHAIN OF CUSTODY

For Laboratory Use Only
Laboratory Project ID: 1700268 Temp: 1.3 °C
Storage ID: WR-2 F5 Storage Secured: Yes ☒ No ☐

PN: 679580.06.FI.WS
10006-7-106051

Project ID: Navy clean CTO 7 OLF Coupeville P.O.#: 10006-7-106051
Sampler: Mark Endo, Eros Billyen, Collin Hall (name)

TAT (check one): Standard: ☐ 21 days; 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 [signature]	2/27/17	1400	[signature]	2/28/17	07:28

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

ATTN: Sample Recieving

Method of Shipment: FedEx overnight
Tracking No.: ____

Add Analysis(es) Requested: EPA 1613 (2378-TCDD, 2378 TCDD/TCDF, PCDD/PCDF); EPA 8290 (2378-TCDD, 2378-TCDD/TCDF, PCDD/PCDF); EPA 8280 (2378-TCDD, 2378 TCDD/TCDF, PCDD/PCDF, TOTALS); EPA 1668 (COPLANAR PCB's, 209 CONGENERS); EPA 1614 (PBDE); CARB429 (PAH); WHO-29; Mod. EPA 537

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	209 CONGENERS	PBDE	PAH	WHO-29	Mod. EPA 537		Comments
WI-CV-GW09M-0217	2/23	1655	MW09M	2	O	GW																X		
WI-CV-GW05M-0217	2/23	1545	MW05M	2	O	GW																X		
WI-CV-GW05S-0217	2/24	1730	MW05S	2	O	GW																X		
WI-CV-GW11M-0217	2/26	1435	MW11M	2	O	GW																X		
WI-CV-GW11S-0217	2/26	1630	MW11S	2	O	GW																X		
WI-CV-GW13S-0217	2/24	1055	MW13S	1	O	GW																X		
WI-CV-EB06-022617	2/26	1745	Eq. Blank	2	O	GW																X		
WI-CV-EB05-022417	2/24	1135	Eq. Blank	2	O	GW																X		

Special Instructions/Comments: ____

SEND DOCUMENTATION AND RESULTS TO:
Name: Tiffany Hill
Company: CH2M Hill
Address: 1100 NE Circle Blvd
City: Corvallis State: OR Zip: 97330
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: <6°C

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 Analytical Laboratory

Vista Project #: 1700268 **TAT** 7

Samples Arrival:	**Date/Time** 02/28/17 07:28	**Initials:**	**Location:** WR-2 **Shelf/Rack:**
Logged In:	**Date/Time** 2/28/17 0852	**Initials:** SR	**Location:** WR-2 **Shelf/Rack:** F5

Delivered By:	FedEx	UPS	On Trac	DHL	Hand Delivered	Other
Preservation:	Ice	Blue Ice		Dry Ice		None

Temp °C: 1.4	(uncorrected)	**Time:** 07:30	**Thermometer ID:** IR-2
Temp °C: 1.3	(corrected)	**Probe used: Yes☐ No☒**	

		YES	NO	NA
Adequate Sample Volume Received?		✓		
Holding Time Acceptable?		✓		
Shipping Container(s) Intact?		✓		
Shipping Custody Seals Intact?		✓		
Shipping Documentation Present?		✓		
Airbill	Trk # 8088 6796 1056	✓		
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:	$Na_2S_2O_3$	Trizma			Yes	(No)	NA
Shipping Container	Vista	(Client)	Retain	(Return)		Dispose	

Comments:

March 07, 2017

Vista Work Order No. 1700268

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 28, 2017. This sample set was analyzed on a rush turn-around time, under your Project Name 'Navy Clean CTO-0008 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.

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

Sincerely,

Karen Lopez for

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. 1700268
Case Narrative

Sample Condition on Receipt:

Eight groundwater 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:

Samples "WI-CV-GW05M-0217", "WI-CV-GW05S-0217", "WI-CV-GW11M-0217" and "WI-CV-GW11S-0217" contained particulate and were centrifuged prior to extraction. Due to clogging of cartridges, only half of the sample volume was used for samples "WI-CV-GW05M-0217" and "WI-CV-GW11M-0217". One sample bottle was provided for sample "WI-CV-GW13S-0217" (sample 06). As requested by the client on March 6, 2017, back-up samples will be provided at a later date and will be reported in a separate Work Order.

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
1700268-01	WI-CV-GW09M-0217	23-Feb-17 16:55	28-Feb-17 07:28	HDPE Bottle, 125 mL
				HDPE Bottle, 125 mL
1700268-02	WI-CV-GW05M-0217	23-Feb-17 15:45	28-Feb-17 07:28	HDPE Bottle, 125 mL
				HDPE Bottle, 125 mL
1700268-03	WI-CV-GW05S-0217	24-Feb-17 17:30	28-Feb-17 07:28	HDPE Bottle, 125 mL
				HDPE Bottle, 125 mL
1700268-04	WI-CV-GW11M-0217	26-Feb-17 14:35	28-Feb-17 07:28	HDPE Bottle, 125 mL
				HDPE Bottle, 125 mL
1700268-05	WI-CV-GW11S-0217	26-Feb-17 16:30	28-Feb-17 07:28	HDPE Bottle, 125 mL
				HDPE Bottle, 125 mL
1700268-06	WI-CV-GW13S-0217	24-Feb-17 10:55	28-Feb-17 07:28	HDPE Bottle, 125 mL
1700268-07	WI-CV-EB06-022617	26-Feb-17 17:45	28-Feb-17 07:28	HDPE Bottle, 125 mL
				HDPE Bottle, 125 mL
1700268-08	WI-CV-EB05-022417	24-Feb-17 11:35	28-Feb-17 07:28	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: B7C0003
Date Extracted: 01-Mar-2017 8:54

Lab Sample: B7C0003-BLK1
Date Analyzed: 06-Mar-17 16:52 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	ND	1.79	4.00	8.00	
PFOA	ND	0.651	2.00	8.00	
PFOS	ND	0.807	0.900	8.00	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	112	60 - 150	
IS	13C2-PFOA	86.5	60 - 150	
IS	13C8-PFOS	93.1	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	QC Batch:	B7C0003	Lab Sample:	B7C0003-BS1
Sample Size:	0.125 L	Date Extracted:	01-Mar-2017 8:54	Date Analyzed:	06-Mar-17 16:02 Column: BEH C18

Analyte	Amt Found (ng/L)	Spike Amt	%R	Limits
PFBS	81.0	80.0	101	60 - 130
PFOA	89.0	80.0	111	70 - 130
PFOS	75.3	80.0	94.1	70 - 130

	Labeled Standard	%R	LCL-UCL
IS	13C3-PFBS	111	60 - 150
IS	13C2-PFOA	85.5	60 - 150
IS	13C8-PFOS	93.9	60 - 150

LCL-UCL - Lower control limit - upper control limit

Sample ID: Method Blank — Modified EPA Method 537

Matrix:	Aqueous	QC Batch:	B7C0031
Sample Size:	0H315 4	Date Extracted:	0-2Mar21037 8:15

4aL Sample:	B7C00312B4y 3
Date Abalnzed:	052Mar237 35:K1 Columb: BE6 C38

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
. PBS	F D	3H7N	K100	8100	
. P9 A	F D	0K053	1100	8100	
. P9 S	F D	0H807	0HN00	8100	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	3-C-2 PBS	30K	C0 2350	
IS	3-C12 P9 A	87K0	C0 2350	
IS	3-C82 P9 S	88H7	C0 2350	

D4 2Detectiob limit

R4 2Reportibg limit

4C42UC4 24ower cobtrol limit 2upper cobtrol limit

Results reported to D4H

Wheb reported, . PBS, . P6 xS, . P9 A abd . P9 S ibclude Loth libear abd Lrabched isomersH

9 bln the libear isomer is reported for all other abalntesH

Sample ID: OPR

Modified EPA Method 537

Matrix:	Aqueous	QC Batch:	B7C0031	4aL Sample:	B7C00312BS3
Sample Size:	0H315 4	Date Extracted:	0-2Mar21037 8:15	Date Abalnzed:	052Mar237 35:0y Columb: BE6 C38

Analyte	Amt Found (ng/L)	Spike Amt	%R	Limits
. PBS	8CI8	80I0	331	F0 23-0
. P9 A	O-I8	80I0	337	70 23-0
. P9 S	83H3	80I0	303	70 23-0

	Labeled Standard	%R	LCL-UCL
IS	3-C-2 PBS	305	F0 2350
IS	3-C12 P9 A	8CIy	F0 2350
IS	3-C82 P9 S	OI1-	F0 2350

4C42UC4 24ower cobtrol limit 2upper cobtrol limit

Sample ID: WI-CV-GW09M-0217

Modified EPA Method 537

Client Data

Name:	CH2M Hill
Project:	Navy Clean CTO-0008 OLF Coupeville
Date Collected:	23-Feb-2017 16:55
Location:	MW09M

Sample Data

Matrix:	Groundwater
Sample Size:	0.123 L

Laboratory Data

Lab Sample:	1700268-01	Date Received:	28-Feb-2017 7:28
QC Batch:	B7C0003	Date Extracted:	01-Mar-2017 8:54
Date Analyzed:	06-Mar-17 17:30 Column: BEH C18		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	11.2	1.82	4.07	8.12	
PFOA	ND	0.661	2.03	8.12	
PFOS	ND	0.819	0.915	8.12	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	95.8	60 - 150	
IS	13C2-PFOA	86.1	60 - 150	
IS	13C8-PFOS	93.9	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-GW05M-0217

Modified EPA Method 537

Client Data

Name:	CH2M Hill
Project:	Navy Clean CTO-0008 OLF Coupeville
Date Collected:	23-Feb-2017 15:45
Location:	MW05M

Sample Data

Matrix:	Groundwater
Sample Size:	0.0655 L

Laboratory Data

Lab Sample:	1700268-02	Date Received:	28-Feb-2017 7:28
QC Batch:	B7C0012	Date Extracted:	01-Mar-2017 8:54
Date Analyzed:	05-Mar-17 16:07 Column: BEH C18		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	473	3.42	7.63	15.3	
PFOA	1190	1.24	3.82	15.3	
PFOS	3.26	1.54	1.72	15.3	J

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	103	60 - 150	
IS	13C2-PFOA	84.9	60 - 150	
IS	13C8-PFOS	98.7	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: WI-CV-GW05S-0217

Modified EPA Method 537

Client Data

Name:	CH2M Hill
Project:	Navy Clean CTO-0008 OLF Coupeville
Date Collected:	24-Feb-2017 17:30
Location:	MW05S

Sample Data

Matrix:	Groundwater
Sample Size:	0.122 L

Laboratory Data

Lab Sample:	1700268-03	Date Received:	28-Feb-2017 7:28
QC Batch:	B7C0003	Date Extracted:	01-Mar-2017 8:54
Date Analyzed:	06-Mar-17 17:43 Column: BEH C18		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	12.9	1.83	4.10	8.17	
PFOA	9.87	0.665	2.05	8.17	
PFOS	ND	0.824	0.922	8.17	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	75.3	60 - 150	
IS	13C2-PFOA	75.9	60 - 150	
IS	13C8-PFOS	78.8	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-GW00M-2107

Modified EPA Method 537

Client Data

Name:	CH2M Hill
Project:	Navy Clean CTO-0008 OLF Coupeville
Date Collected:	26-Feb-2017 14:35
Location:	MW11M

Sample Data

Matrix:	Groundwater
Sample Size:	0.0653 L

Laboratory Data

Lab Sample:	1700268-04	Date Received:	28-Feb-2017 7:28
QC Batch:	B7C0012	Date Extracted:	01-Mar-2017 8:54
Date Analyzed:	05-Mar-17 16:20 Column: BEH C18		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	ND	3.43	7.66	15.3	
PFOA	ND	1.25	3.83	15.3	
PFOS	ND	1.55	1.72	15.3	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	90.6	60 - 150	
IS	13C2-PFOA	87.4	60 - 150	
IS	13C8-PFOS	86.1	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-GW00S-2107

Modified EPA Method 537

Client Data		Sample Data		Laboratory Data			
P ame:	CG8M Gill	Matrix:	wruHydRater	b aA Sample:	27008o5-04	Date v eceiFed:	85-NeA-8027 7:85
j ru3ect:	P aF6 Cleay CTO-0005 Ob N CuHpeFille	Sample Size:	0.285 b	QC Batch:	B7C0001	Date Extracted:	02-Mar-8027 5:4L
Date Cullected:	8o-NeA-8027 2o:10			Date n yal6zed:	0o-Mar-27 27:44	CulHmy:	BEG C25
b ucatiuy:	MW22S						

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
j NBS	P D	2.74	1.92	7.51	
j NOn	P D	0.o17	2.94	7.51	
j NOS	2.00	0.790	0.579	7.51	J

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	21C1-j NBS	79.o	o0 - 240	
IS	21C8-j NOn	91.0	o0 - 240	
IS	21C5-j NOS	59.5	o0 - 240	

Db - Detectiuy limit

v b - v epurtiyg limit

b Cb-UCb - b uRer cuytrul limit - Hpper cuytrul limit

v esHts repurted tu Db.

Whey repurted, j NBS, j NGxS, j NOn ayd j NOS iyclHde Auth liyear ayd Arayched isumers.

Oyl6 the liyear isumer is repurted fur all uther ayal6tes.

Sample ID: WI-CV-EB06-022617

Modified EPA Method 537

Client Data

Name:	CH2M Hill
Project:	Navy Clean CTO-0008 OLF Coupeville
Date Collected:	26-Feb-2017 17:45
Location:	Eq. Blank

Sample Data

Matrix:	Groundwater
Sample Size:	0.106 L

Laboratory Data

Lab Sample:	1700268-07	Date Received:	28-Feb-2017 7:28
QC Batch:	B7C0003	Date Extracted:	01-Mar-2017 8:54
Date Analyzed:	06-Mar-17 18:08	Column:	BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	ND	2.10	4.72	9.40	
PFOA	ND	0.765	2.36	9.40	
PFOS	1.12	0.948	1.06	9.40	J

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	86.8	60 - 150	
IS	13C2-PFOA	84.2	60 - 150	
IS	13C8-PFOS	91.9	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-EB05-022417

Modified EPA Method 537

Client Data

Name:	CH2M Hill
Project:	Navy Clean CTO-0008 OLF Coupeville
Date Collected:	24-Feb-2017 11:35
Location:	Eq. Blank

Sample Data

Matrix:	Groundwater
Sample Size:	0.127 L

Laboratory Data

Lab Sample:	1700268-08	Date Received:	28-Feb-2017 7:28
QC Batch:	B7C0003	Date Extracted:	01-Mar-2017 8:54
Date Analyzed:	06-Mar-17 18:20 Column: BEH C18		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	ND	1.77	3.94	7.90	
PFOA	ND	0.643	1.97	7.90	
PFOS	ND	0.797	0.886	7.90	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	97.9	60 - 150	
IS	13C2-PFOA	88.7	60 - 150	
IS	13C8-PFOS	99.8	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.

DATA QUALIFIERS & ABBREVIATIONS

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

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

CERTIFICATIONS

Accrediting Authority	Certificate Number
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

Vista Analytical Laboratory

CHAIN OF CUSTODY

PN: 679580.06.FI.WS
10006-7-106051

For Laboratory Use Only
Laboratory Project ID: 1700268 Temp: 1.3 °C
Storage ID: WR-2 F5 Storage Secured: Yes ☒ No ☐

Project ID: Navy clean CTO 7 OLF Corrective P.O.#: Sampler: Mark Endo, Eros Bilgen, Collin Hall (name)

TAT (check one): Standard: ☐ 21 days; Rush (surcharge may apply): ☐ 14 days ☑ 7 days Specify:

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

Relinquished by (printed name and signature)	Date	Time	Received by (printed name and signature)	Date	Time
Collin Hall	2/27/17	1400		2/28/17	07:28
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

ATTN: Sample Recieving

Method of Shipment: FedEx overnight

Tracking No.:

Add Analysis(es) Requested

Sample ID	Date	Time	Location/Sample Description	Container(s) Quantity	Type	Matrix	EPA 1613 2378-TCDD	EPA 1613 2378 TCDD/TCDF	EPA 1613 PCDD/PCDF	EPA 8290 2378-TCDD	EPA 8290 2378-TCDD/TCDF	EPA 8290 PCDD/PCDF	EPA 8280 2378-TCDD	EPA 8280 2378 TCDD/TCDF	EPA 8280 PCDD/PCDF	EPA 1668 TOTALS	EPA 1668 COPLANAR PCB's	EPA 1668 209 CONGENERS	EPA 1668 PBDE	EPA 1668 PAH	EPA 1614 WHO-29	CARB429 Mod. EPA 537	Comments
WI-CV-GW09M-0217	2/23	1655	MW09M	2	G	GW															X		
WI-CV-GW05M-0217	2/23	1545	MW05M	2	O	GW															X		
WI-CV-GW05S-0217	2/24	1730	MW05S	2	O	GW															X		
WI-CV-GW11M-0217	2/26	1435	MW11M	2	O	GW															X		
WI-CV-GW11S-0217	2/26	1630	MW11S	2	O	GW															X		
WI-CV-GW13S-0217	2/24	1055	MW13S	1	O	GW															X		
WI-CV-EB06-022617	2/26	1745	Eq. Blank	2	O	GW															X		
WI-CV-EB05-022417	2/24	1135	Eq. Blank	2	O	GW															X		

Special Instructions/Comments:

SEND DOCUMENTATION AND RESULTS TO:

Name: Tiffany Hill
Company: CH2M Hill
Address: 1100 NE Circle Blvd
City: Corvallis State: OR Zip: 97330
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: ≤6°C

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 Analytical Laboratory

Vista Project #: 1700268 **TAT** 7

Samples Arrival:	**Date/Time** 02/28/17 07:28	**Initials:**	**Location:** WR-2 **Shelf/Rack:**
Logged In:	**Date/Time** 2/28/17 0852	**Initials:** SR	**Location:** WR-2 **Shelf/Rack:** F5

Delivered By:	FedEx	UPS	On Trac	DHL	Hand Delivered	Other
Preservation:	Ice	Blue Ice		Dry Ice		None

Temp °C: 1.4	(uncorrected)	**Time:** 07:30	**Thermometer ID:** IR-2
Temp °C: 1.3	(corrected)	**Probe used:** Yes☐ No☒	

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?	✓		
Shipping Documentation Present?	✓		
Airbill Trk # 8088 6796 1056	✓		
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:	$Na_2S_2O_3$	Trizma			Yes	(No) NA
Shipping Container	Vista	(Client)	Retain	(Return)		Dispose

Comments:

EXTRACTION INFORMATION

Process Sheet

RUSH

Workorder: 1700268

Prep Expiration: 2017-Mar-09
Client: CH2M Hill

Workorder Due: 07-Mar-17 00:00

TAT: 7

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

Prep Batch: B7C0003

Prep Data Entered: BP 3.2.17
Date and Initials

Version: PFOA, PFOS, PFBS

Initial Sequence: S7C0013

LabSampleID	Recon	ClientSampleID	Date Received	Location	Comments
1700268-01	☑	WI-CV-GW09M-0217	28-Feb-17 07:28	WR-2 F-5	
1700268-02	☑	WI-CV-GW05M-0217	28-Feb-17 07:28	WR-2 F-5	
1700268-03	☑	WI-CV-GW05S-0217	28-Feb-17 07:28	WR-2 F-5	
1700268-04	☑	WI-CV-GW11M-0217	28-Feb-17 07:28	WR-2 F-5	
1700268-05	☑	WI-CV-GW11S-0217	28-Feb-17 07:28	WR-2 F-5	
1700268-06	☑	WI-CV-GW13S-0217	28-Feb-17 07:28	WR-2 F-5	
1700268-07	☑	WI-CV-EB06-022617	28-Feb-17 07:28	WR-2 F-5	
1700268-08	☑	WI-CV-EB05-022417	28-Feb-17 07:28	WR-2 F-5	

Vista PM:Martha Maier

Vial Box ID: Badger

Sample Reconciled By: B. Parker 3/1/17

Page 1 of 1

Percent Solids

Vista Analytical Laboratory

Project: B7C0003 *Balance ID:* NA

Sample ID	Chemist: NA Date: Time: Boat Wt.	Sample + Boat Wt.	Chemist: NA Date: Time: Residue + Boat Wt.	Chemist/Date BP 3.1.17 pH before	pH* after	Cl
1700268-01 (A)				7	2	0
-02 (A)				7	2	0
-03 (A)				7	2	0
-04 (A)				7	2	0
-05 (A)				7	2	0
-06 (A)				7	2	0
-07 (B)				5	2	0
-08 (B)			BP 3.1.17	5	2	0

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) Added 3 drops HCl to adjust pH to 2 BP 3.1.17

(B) Added 2 drops HCl to adjust pH to 2

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

%Solids rmh 5/2011

PREPARATION BENCH SHEET

Matrix: Aqueous

Method: 537 PFAS DOD (LOO as mRL)

B7C0003

Chemist: G Menchola

Prep Date/Time: 01-Mar-17 08:54

Prepared using: LCMS - SPE Extraction-LCMS

C7C0005

C	VISTA Sample ID	Bottle + Sample (g)	Bottle Only (g)	Sample Amt. (L)	IS/NS CHEM/WIT DATE	SPE	RS CHEM/WIT DATE
☐	B7C0003-BLK1	NA	NA	(0.125)	BP 3/1/17	BP 3.1.17	BP 3.1.17
☐	B7C0003-BS1	↓	↓	↓			↓
☐	1700268-01	150.20	27.03	0.12317			
☐	1700268-02 (D)	149.59	NA	NA			NA
☐	1700268-03 (A)(C)	140.61	27.13	0.12246			BP 3.1.17
☐	1700268-04 (B)	152.36	NA	NA			NA
☐	1700268-05 (A)	154.83	27.10	0.12773			BP 3.1.17
☐	1700268-06 (D)	150.87	NA	NA			NA
☐	1700268-07 (E)	133.45	27.07	0.10638			BP 3.1.17
☐	1700268-08 ~~(B)~~ BP 3.1.17	153.69	27.12	0.12657			↓

(A) Sample contained particulate; centrifuged to remove BP 3.1.17

(B) Cartridge clogged after ~ 10 mL; sample discarded

(C) Cartridge clogged after ~ 30 mL; eluted from 2 cartridges

(D) Cartridge clogged after ~ 40 mL; second cartridge clogged after another ~ 40 mL; samples discarded BP 3.1.17

(E) Cartridge clogged, but was able to elute using 1 cartridge

IS Name	NS Name	RS Name		
(V3) 166420, 10uL	(V1) 162905, 10uL	(V4) 174120, 10uL	SPE Chem: ~~Strata~~ X-AW 33um 200mg/6mL Ele SOLV: 0.5% NH4OH in MeOH/MeCN Final Volume(s) 1mL	Check Out: Chemist/Date: BP 3.1.17 Check In: Chemist/Date: NA Balance ID: HRMS-8

Comments: Assume 1 g = 1 mL

RX

Process Sheet

Workorder: 1700268

Prep Expiration: 2017-Mar-09
Client: CH2M Hill

Workorder Due: 07-Mar-17 00:00

TAT: 7

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

Prep Batch: B7C0012

Prep Data Entered: BP 3-6-17
Date and Initials

Version: PFOA, PFOS, PFBS

Initial Sequence: _____

LabSampleID	Recon	ClientSampleID	Date Received	Location	Comments
~~1700268-01~~	☐	~~WI-CV-GW09M-0217~~	~~28-Feb-17 07:28~~	~~WR-2 F-5~~	
* 1700268-02 "B"	☑	WI-CV-GW05M-0217	28-Feb-17 07:28	WR-2 F-5	
~~1700268-03~~	☐	~~WI-CV-GW05S-0217~~	~~28-Feb-17 07:28~~	~~WR-2 F-5~~	
* 1700268-04 "B"	☑	WI-CV-GW11M-0217	28-Feb-17 07:28	WR-2 F-5	
~~1700268-05~~	☐	~~WI-CV-GW11S-0217~~	~~28-Feb-17 07:28~~	~~WR-2 F-5~~	
~~1700268-06~~	☐	~~WI-CV-GW13S-0217~~	28-Feb-17 07:28	WR-2 F-5	
~~1700268-07~~	☐	~~WI-CV-EB06-022617~~	~~28-Feb-17 07:28~~	~~WR-2 F-5~~	
~~1700268-08~~	☐	~~WI-CV-EB05-022417~~	~~28-Feb-17 07:28~~	~~WR-2 F-5~~	

60mLS

Vista PM: Martha Maier

Vial Box ID: The Duke

Sample Reconciled By: B. Parker 3/3/17

Page 1 of 1

Percent Solids

Vista Analytical Laboratory

Project: B7C0012 *Balance ID:* HRMS-9

Sample ID	Chemist: NA Date: Time: Boat Wt.	Sample + Boat Wt.	Chemist: NA Date: Time: Residue + Boat Wt.	Chemist/Date BP 3.3.17 pH before	pH* after	Cl
1700268-02Re1 (A)				7	2	0
-04Re1 (A)				7	2	0
1700280-01 (B)				7	2	0
-02 (B)				7	2	0
-03 (A)				5	2	0
-04 (B)				7	2	0
-05 (C)				7	2	0
-06 (A)				5	2	0
-07 (B)			BP 3.3.17	6	2	0

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) Added 2 drops HCl to adjust pH to 2

(B) Added 3 drops HCl to adjust pH to 2 BP 3.3.17

(C) Added 3-4 drops HCl to adjust pH to 2 BP 3.3.17

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

%Solids rmh 5/2011

PREPARATION BENCH SHEET

Matrix: Aqueous

Method: 537 PFAS DOD (LOO as mRL)

B7C0012

Chemist: G. Mendiola

Prep Date/Time: 03-Mar-17 08:25

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 C7C0017	RS CHEM/WIT DATE
☐	B7C0012-BLK1	NA	NA	(0.125)	on BP 3/3/17	BP 3.3.17	on BP 3/3/17
☐	B7C0012-BS1	↓	↓	(0.125)	↓	↓	↓
☐	1700268-02RE1 (A)(D)	92.03	26.57	0.06546			
☐	1700268-04RE1 (D)	91.85	26.59	0.06526			
☐	1700280-01 (B)	155.98	27.06	0.12892			
☐	1700280-02 (C)	155.24	27.19	0.12805			
☐	1700280-03 (C)	142.21	27.20	0.11501			
☐	1700280-04 (C)	151.19	27.15	0.12404			
☐	1700280-05 (B)	154.04	27.13	0.12691			
☐	1700280-06 (B)	136.76	27.16	0.10960			
☐	1700280-07 ✓(B)	152.16	27.18	0.12498			

(A) Centrifuged to remove gelatinous substance BP 3.3.17

(B) Contained very little gel (< 1g) BP 3.3.17

(C) Contained medium amounts of gel (~1-2g) BP 3.3.17

(D) Contained ~~~1-2g~~ BP 3.3.17 (~2-5g) of gel BP 3.3.17

IS Name	NS Name	RS Name		
(U3) 161920, 10uL	(U1) 161905, 10uL	(U4) 174120, 10uL	SPE Chem: Strata X-AW 33um 200mg/6mL Ele SOLV: 0.5% NH4OH in MeOH/H2O Final Volume(s): 1mL	Check Out: Chemist/Date: BP 3.3.17 Check In: Chemist/Date: BP 3.3.17 Balance ID: HBMS-8

Comments: Assume 1 g = 1 mL

SAMPLE DATA – MODIFIED EPA METHOD 537

Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170306G1\170306G1-8.qld

Last Altered: Tuesday, March 07, 2017 10:04:16 AM Pacific Standard Time
Printed: Tuesday, March 07, 2017 10:04:37 AM Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS_6_2_NEW.mdb 07 Mar 2017 09:58:54
Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: B7C0003-BLK1 Method Blank 0.125, Description: Method Blank, Name: 170306G1_8, Date: 06-Mar-2017, Time: 16:52:50

	#	Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1	PFBS	299 > 79.7		5.238e3		0.125			
2	4	PFOA	413 > 368.7	1.392e2	2.294e4		0.125	4.29		
3	6	PFOS	499 >79.9		5.496e3		0.125			
4	7	13C3-PFBS	302.0 > 98.8	5.238e3	1.141e4	0.410	0.125	3.02	112	112
5	8	13C4-PFHpA	367.2 > 321.8	1.247e4	1.141e4	1.098	0.125	3.89	99.5	99.5
6	9	18O2-PFHxS	403 > 102.6	4.653e3	1.141e4	0.434	0.125	4.01	93.9	93.9
7	10	13C2-PFOA	414.9 > 369.7	2.294e4	5.756e3	4.608	0.125	4.29	86.5	86.5
8	11	13C5-PFNA	468.2 > 422.9	5.460e3	7.482e3	0.867	0.125	4.62	84.2	84.2
9	12	13C8-PFOS	507.0 > 79.9	5.496e3	6.158e3	0.958	0.125	4.68	93.1	93.1
10	13	13C5-PFHxA	318>272.9	2.460e4	2.460e4	1.000	0.125	3.40	100	100
11	14	13C3-PFHxS	401.9 > 79.9	1.141e4	1.141e4	1.000	0.125	4.01	100	100
12	15	13C8-PFOA	421.3 > 376	5.756e3	5.756e3	1.000	0.125	4.29	100	100
13	16	13C9-PFNA	472.2 > 426.9	7.482e3	7.482e3	1.000	0.125	4.62	100	100
14	17	13C4-PFOS	503.0 > 79.9	6.158e3	6.158e3	1.000	0.125	4.68	100	100
15	18	Total PFBS	299 > 79.7		4.653e3		0.125			
16	20	Total PFOA	413 > 368.7		2.294e4		0.125			
17	21	Total PFOS	499 > 79.9		5.496e3		0.125			

Reviewed: CT 03/07/17

AC 3/7/17

Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170306G1\170306G1-8.qld

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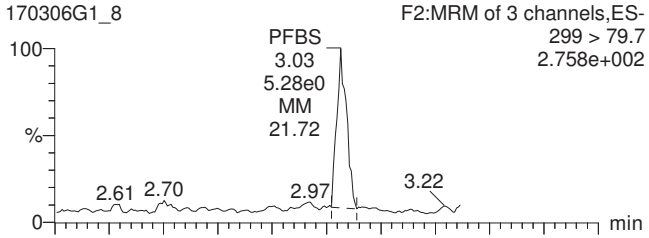
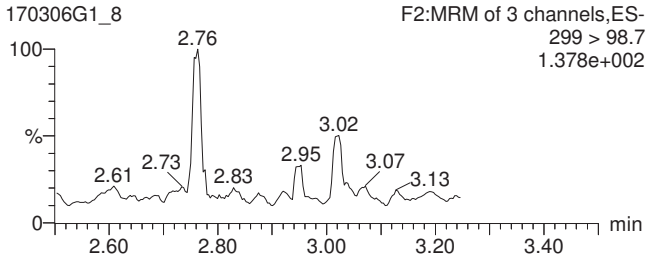
Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

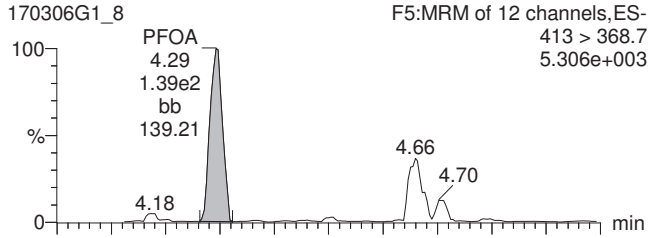
ID: B7C0003-BLK1 Method Blank 0.125, Description: Method Blank, Name: 170306G1_8, Date: 06-Mar-2017, Time: 16:52:50, Instrument: , Lab: , User:

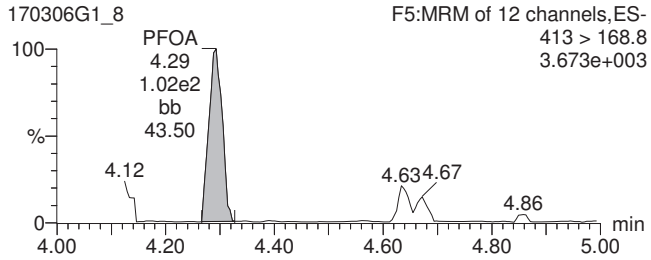
Total PFBS





Total PFOA





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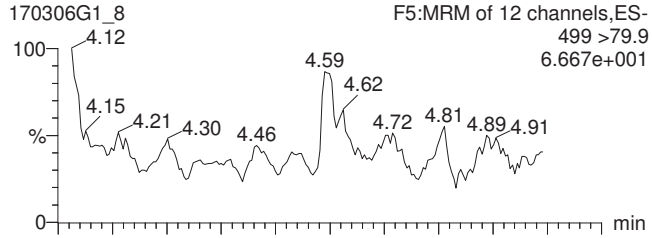

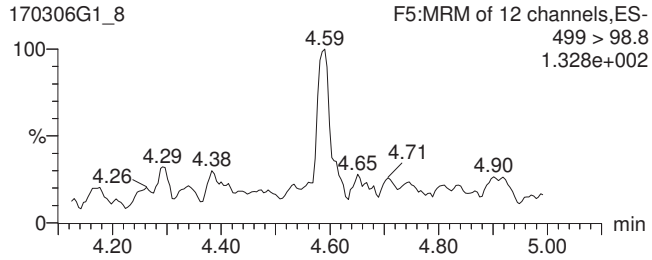

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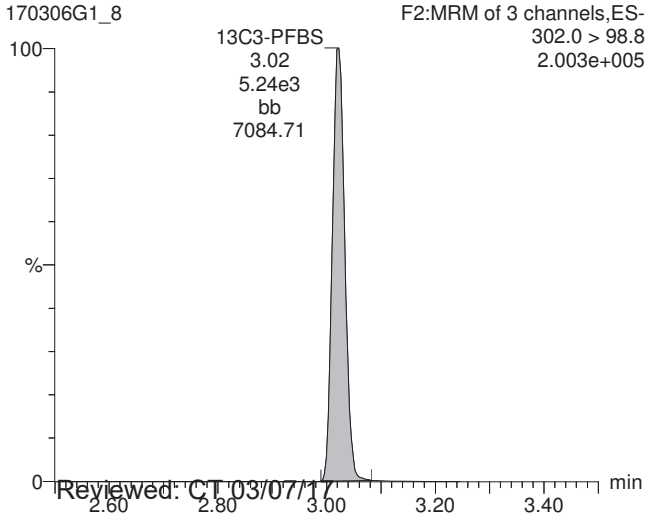

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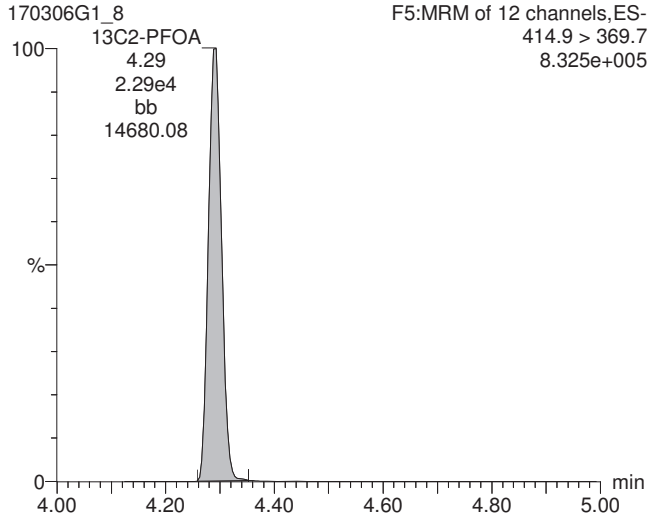
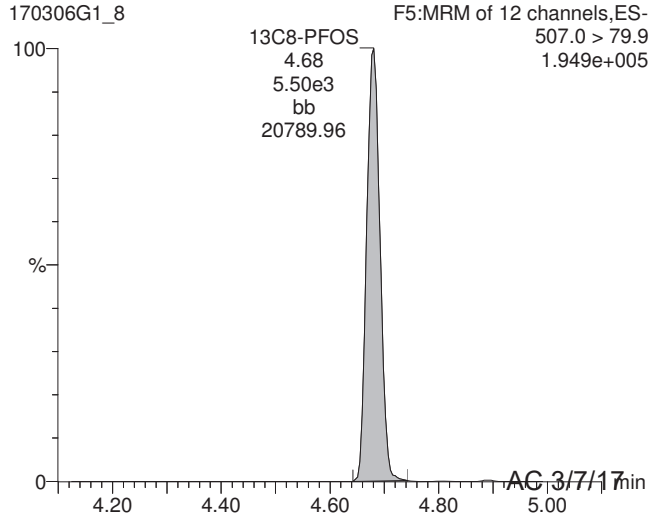


13C8-PFOS



Reviewed: CT 03/07/17 AC 3/7/17

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Printed: Tuesday, March 07, 2017 10:04:37 AM Pacific Standard Time

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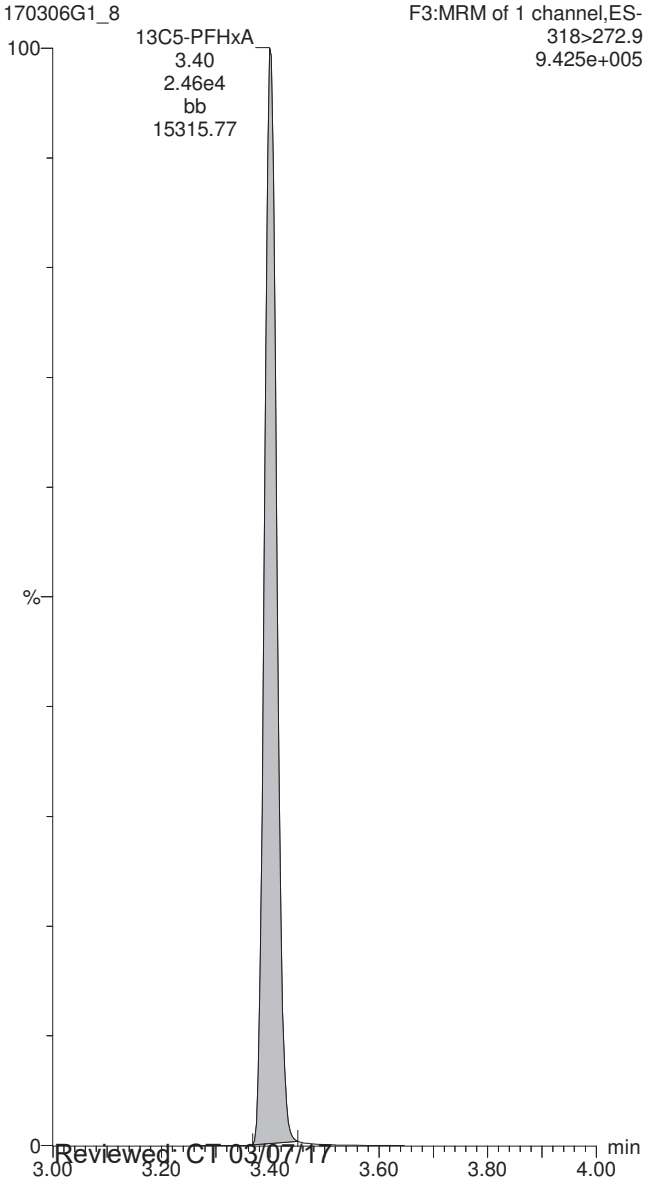

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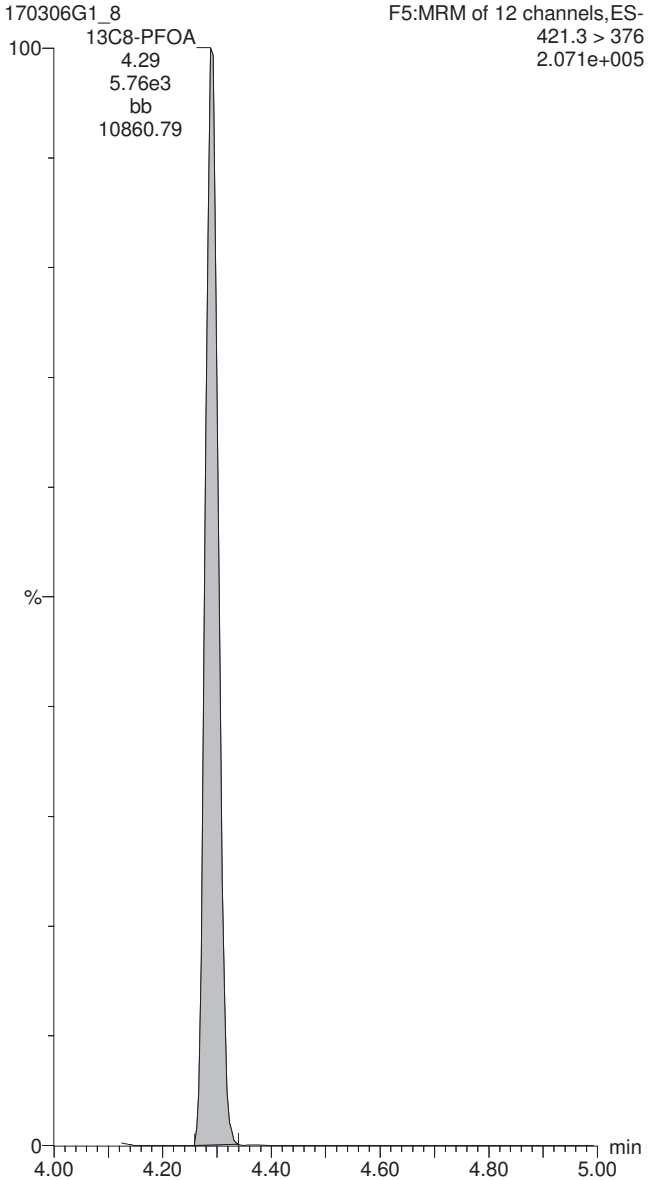
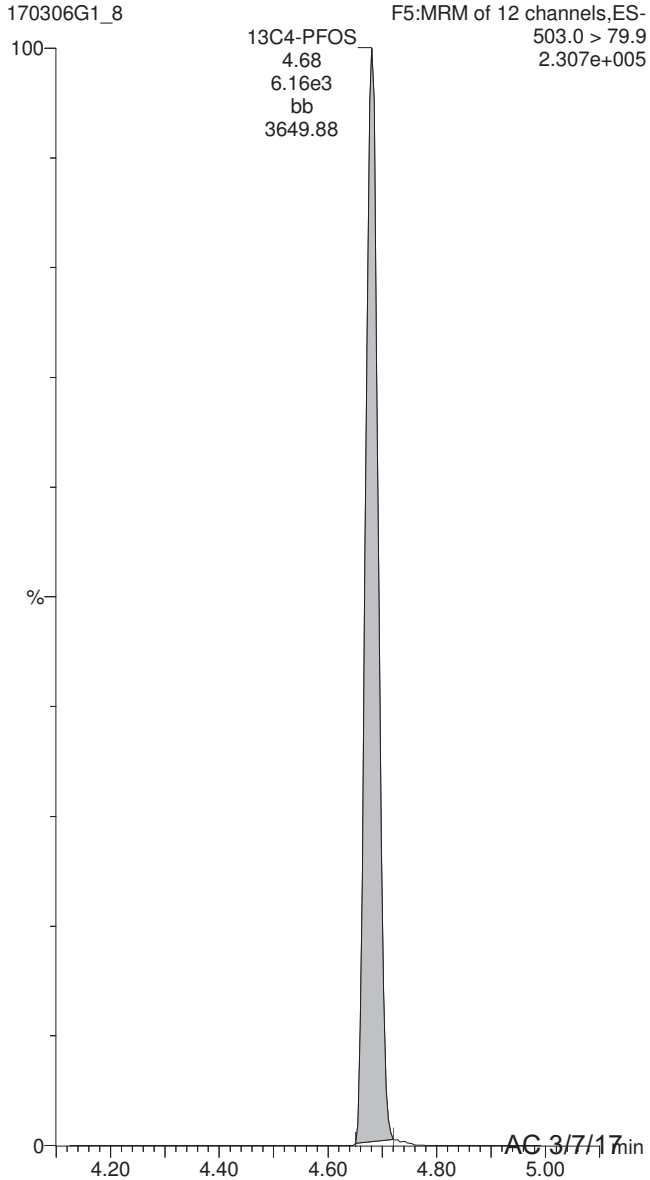


13C4-PFOS



Reviewed: CT 03/07/17 AC 3/7/17

Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170306G1\170306G1-4.qld

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Printed: Tuesday, March 07, 2017 10:02:24 AM Pacific Standard Time

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Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: B7C0003-BS1 OPR 0.125, Description: OPR, Name: 170306G1_4, Date: 06-Mar-2017, Time: 16:02:38

	#	Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1	PFBS	299 > 79.7	1.042e4	5.392e3		0.125	3.05	81.0	101
2	4	PFOA	413 > 368.7	1.757e4	2.436e4		0.125	4.32	89.0	111
3	6	PFOS	499 >79.9	2.472e3	6.160e3		0.125	4.70	75.3	94.1
4	7	13C3-PFBS	302.0 > 98.8	5.392e3	1.182e4	0.410	0.125	3.05	111	111
5	8	13C4-PFHpA	367.2 > 321.8	1.375e4	1.182e4	1.098	0.125	3.92	106	106
6	9	18O2-PFHxS	403 > 102.6	5.036e3	1.182e4	0.434	0.125	4.03	98.1	98.1
7	10	13C2-PFOA	414.9 > 369.7	2.436e4	6.180e3	4.608	0.125	4.32	85.5	85.5
8	11	13C5-PFNA	468.2 > 422.9	6.403e3	8.148e3	0.867	0.125	4.64	90.6	90.6
9	12	13C8-PFOS	507.0 > 79.9	6.160e3	6.843e3	0.958	0.125	4.70	93.9	93.9
10	13	13C5-PFHxA	318>272.9	2.462e4	2.462e4	1.000	0.125	3.43	100	100
11	14	13C3-PFHxS	401.9 > 79.9	1.182e4	1.182e4	1.000	0.125	4.03	100	100
12	15	13C8-PFOA	421.3 > 376	6.180e3	6.180e3	1.000	0.125	4.32	100	100
13	16	13C9-PFNA	472.2 > 426.9	8.148e3	8.148e3	1.000	0.125	4.65	100	100
14	17	13C4-PFOS	503.0 > 79.9	6.843e3	6.843e3	1.000	0.125	4.70	100	100
15	18	Total PFBS	299 > 79.7		5.036e3		0.125		81.0	
16	20	Total PFOA	413 > 368.7		2.436e4		0.125		89.0	
17	21	Total PFOS	499 > 79.9		6.160e3		0.125		75.3	

Reviewed: CT 03/07/17

AC 3/7/17

Dataset: U:\G1.PRO\Results\2017\170306G1\170306G1-4.qld

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Printed: Tuesday, March 07, 2017 10:02:24 AM Pacific Standard Time

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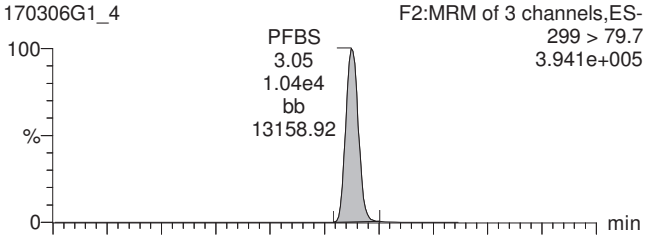
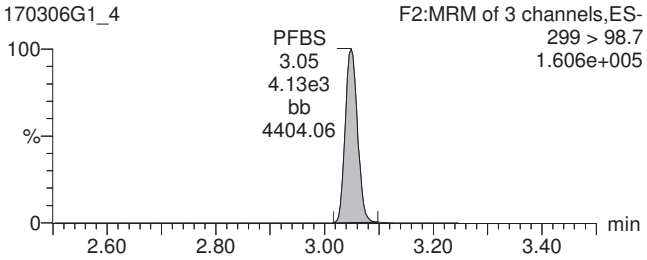
Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

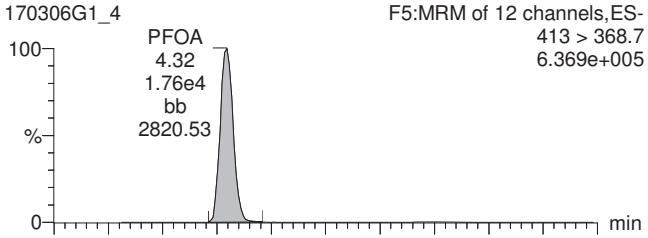
ID: B7C0003-BS1 OPR 0.125, Description: OPR, Name: 170306G1_4, Date: 06-Mar-2017, Time: 16:02:38, Instrument: , Lab: , User:

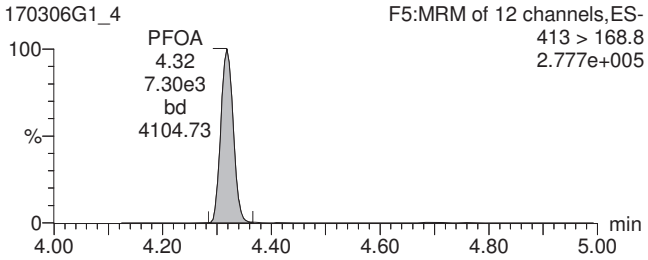
Total PFBS



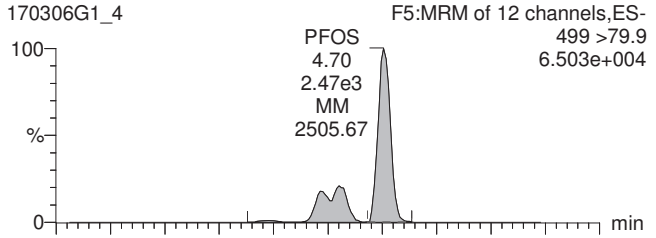


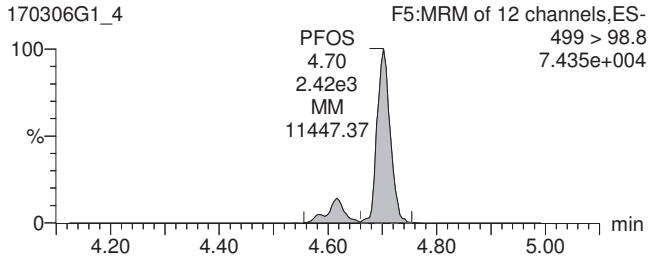
Total PFOA



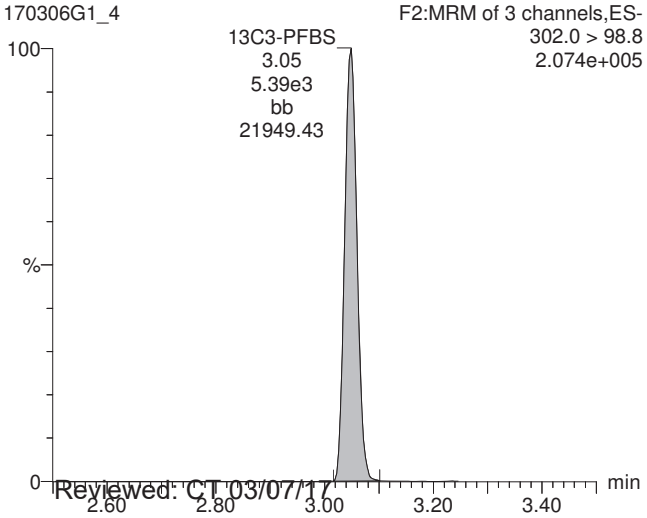


Total PFOS

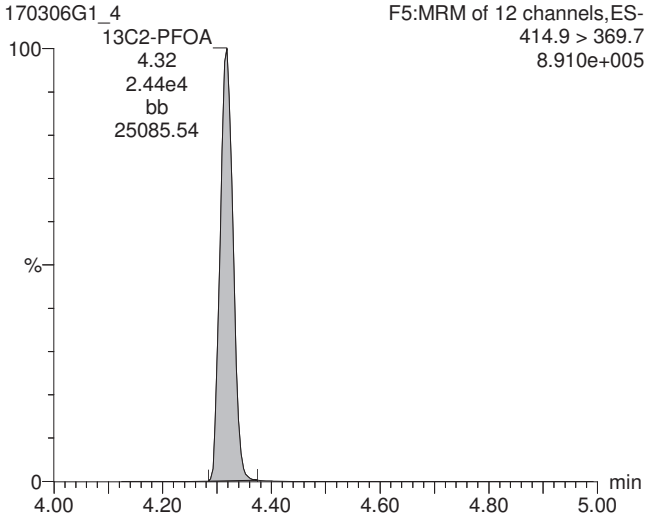




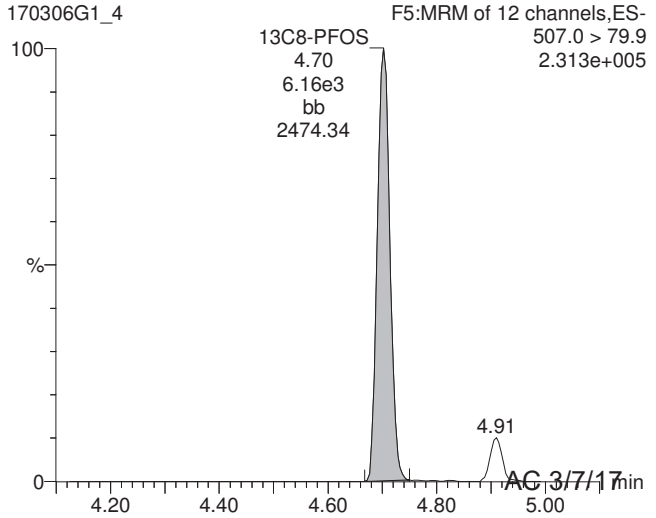
13C3-PFBS



13C2-PFOA



13C8-PFOS



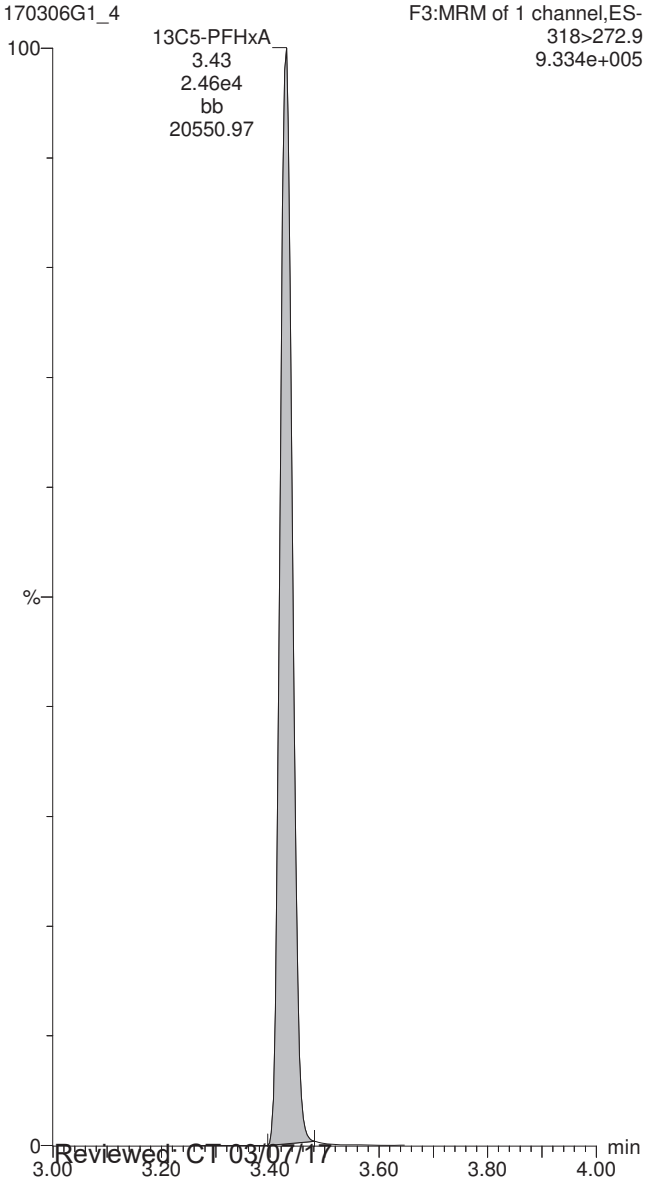
Reviewed: CT 03/07/17 AC 3/7/17

Dataset: U:\G1.PRO\Results\2017\170306G1\170306G1-4.qld

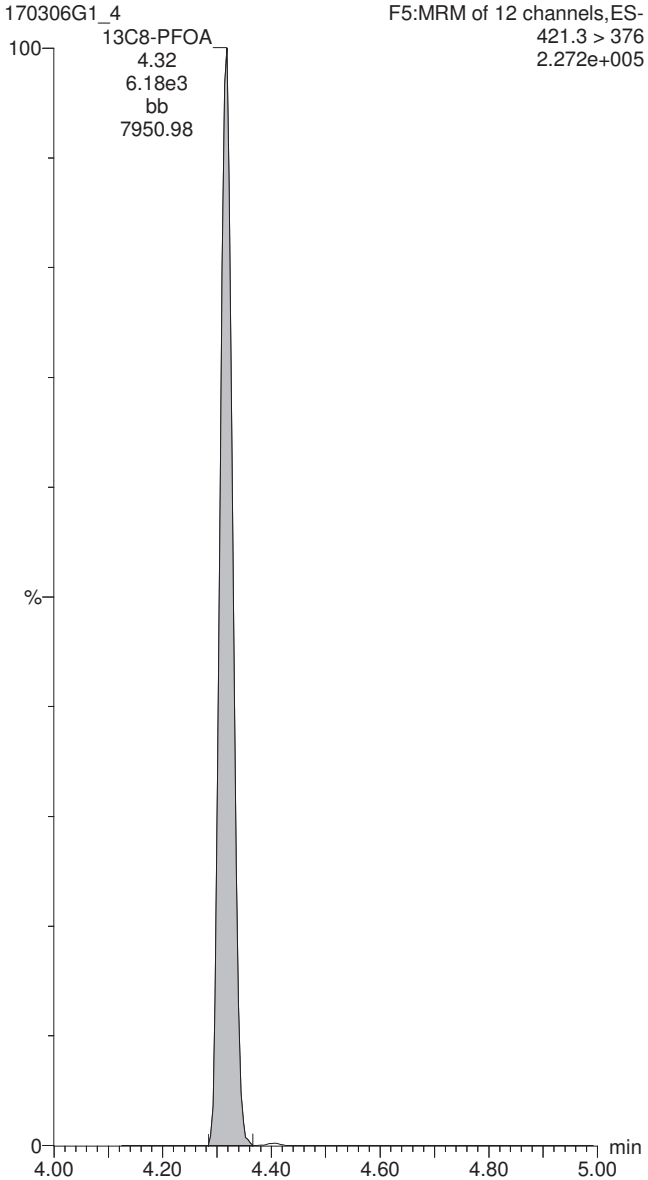
Last Altered: Tuesday, March 07, 2017 10:00:04 AM Pacific Standard Time
Printed: Tuesday, March 07, 2017 10:02:24 AM Pacific Standard Time

ID: B7C0003-BS1 OPR 0.125, Description: OPR, Name: 170306G1_4, Date: 06-Mar-2017, Time: 16:02:38, Instrument: , Lab: , User:

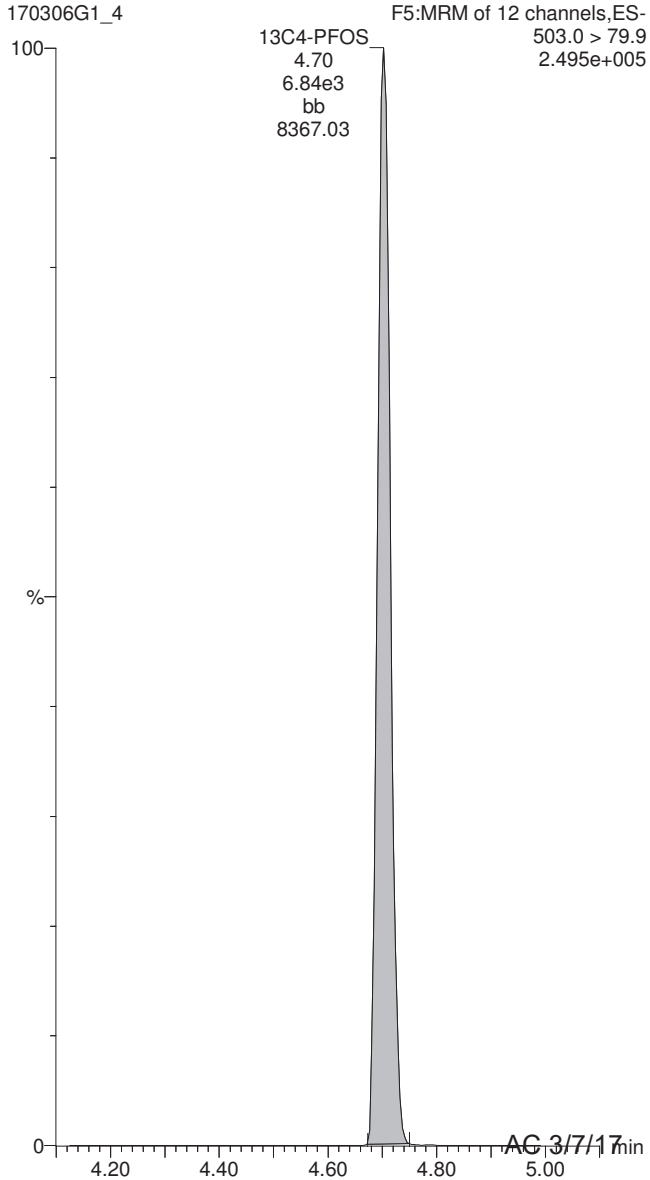
13C5-PFHxA



13C8-PFOA



13C4-PFOS



Reviewed: CT 03/07/17 AC 3/7/17

Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-16.qld

Last Altered: Monday, March 06, 2017 10:32:37 Pacific Standard Time
Printed: Monday, March 06, 2017 10:34:33 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_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: B7C0012-BLK1 Method Blank 0.125, Description: Method Blank, Name: 170305G1_16, Date: 05-Mar-2017, Time: 15:42:23

	#	Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1	PFBS	299 > 79.7		5.809e3		0.125			
2	4	PFOA	413 > 368.7	1.839e2	2.727e4		0.125	4.31		
3	6	PFOS	499 >79.9		6.667e3		0.125			
4	7	13C3-PFBS	302.0 > 98.8	5.809e3	1.363e4	0.410	0.125	3.03	104	104
5	10	13C2-PFOA	414.9 > 369.7	2.727e4	6.759e3	4.608	0.125	4.31	87.6	87.6
6	12	13C8-PFOS	507.0 > 79.9	6.667e3	7.841e3	0.958	0.125	4.69	88.7	88.7
7	14	13C3-PFHxS	401.9 > 79.9	1.363e4	1.363e4	1.000	0.125	4.03	100	100
8	15	13C8-PFOA	421.3 > 376	6.759e3	6.759e3	1.000	0.125	4.31	100	100
9	17	13C4-PFOS	503.0 > 79.9	7.841e3	7.841e3	1.000	0.125	4.70	100	100

Reviewed: CT 03/07/17

ES 3/6/17

Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-16.qld

Last Altered: Monday, March 06, 2017 10:32:37 Pacific Standard Time
Printed: Monday, March 06, 2017 10:35:06 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_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: B7C0012-BLK1 Method Blank 0.125, Description: Method Blank, Name: 170305G1_16, Date: 05-Mar-2017, Time: 15:42:23

	#	Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	18	Total PFBS	299 > 79.7		5.664e3		0.125			
2	20	Total PFOA	413 > 368.7		2.727e4		0.125			
3	21	Total PFOS	499 > 79.9		6.667e3		0.125			

Reviewed: CT 03/07/17

ES 3/6/17

Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-16.qld

Last Altered: Monday, March 06, 2017 10:32:37 Pacific Standard Time
Printed: Monday, March 06, 2017 10:34:33 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_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: B7C0012-BLK1 Method Blank 0.125, Description: Method Blank, Name: 170305G1_16, Date: 05-Mar-2017, Time: 15:42:23

Total PFBS

	#	Name	Trace	RT	Area	IS Area	Conc.
1	1	PFBS	299 > 79.7			5808.713	

Total PFHxS

	#	Name	Trace	RT	Area	IS Area	Conc.
1	3	PFHxS	398.9 > 79.6	4.03	40.616	5663.959	

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Conc.
1	4	PFOA	413 > 368.7	4.31	183.924	27271.393	

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Conc.
1							

Reviewed: CT 03/07/17

ES 3/6/17

Vista Analytical Laboratory Q1

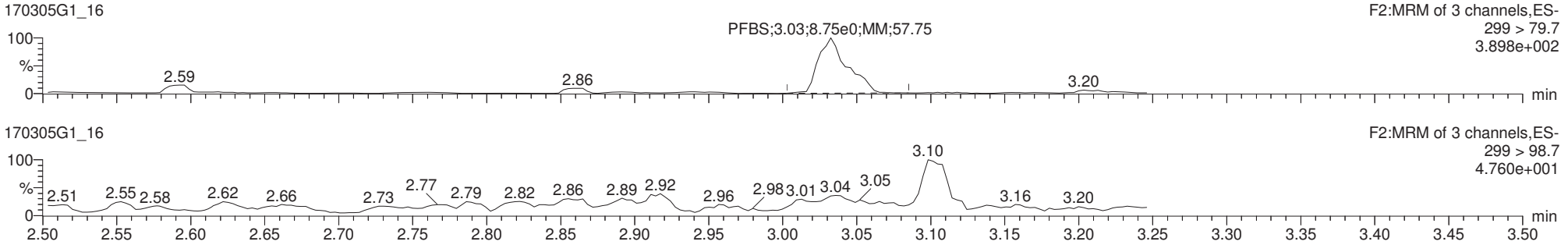
Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-16.qld

Last Altered: Monday, March 06, 2017 10:32:37 Pacific Standard Time
Printed: Monday, March 06, 2017 10:34:33 Pacific Standard Time

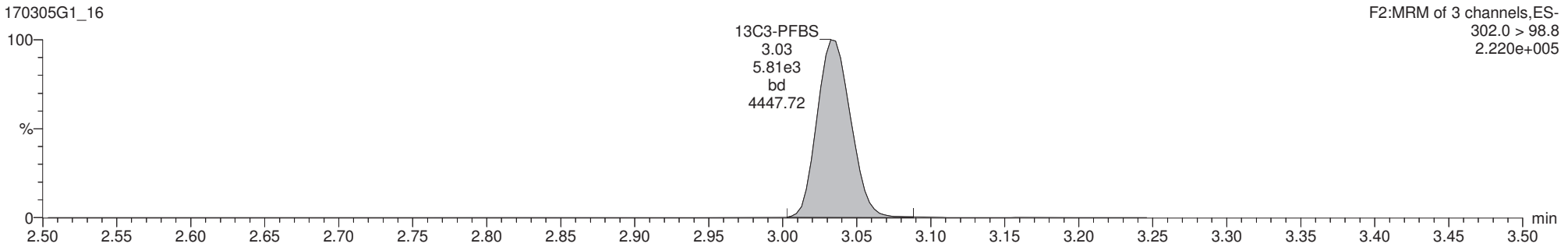
Method: U:\G1.pro\MethDB\PFAS_6_2trans_LINEAR.mdb 02 Mar 2017 11:26:53
Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: B7C0012-BLK1 Method Blank 0.125, Description: Method Blank, Name: 170305G1_16, Date: 05-Mar-2017, Time: 15:42:23, Instrument: , Lab: , User:

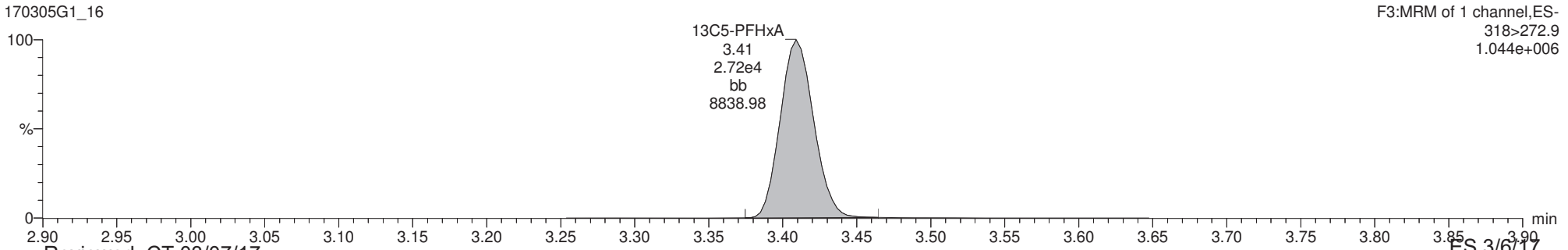
PFBS



13C3-PFBS



13C5-PFHxA



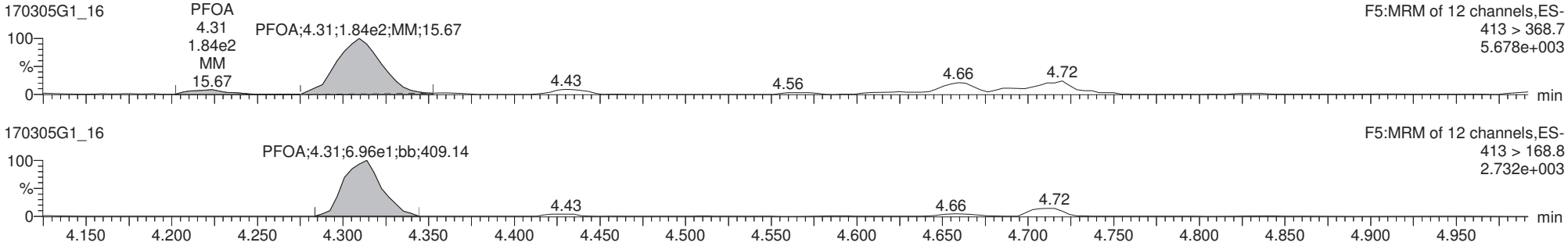
Reviewed: CT 03/07/17 ES 3/6/17

Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-16.qld

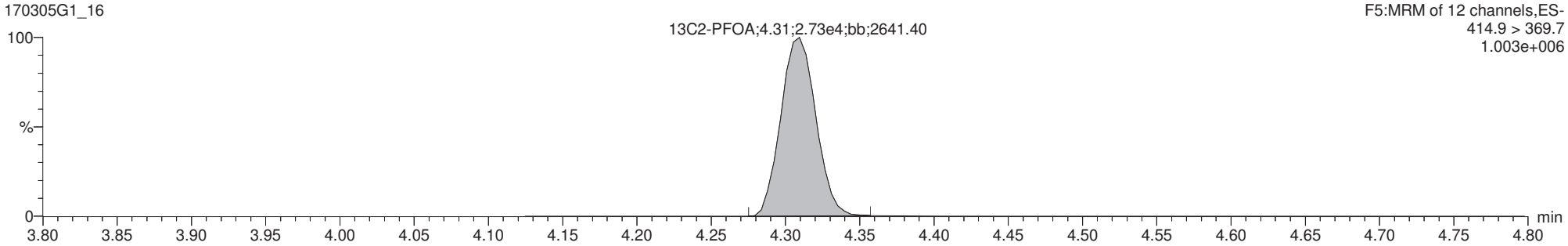
Last Altered: Monday, March 06, 2017 10:32:37 Pacific Standard Time
Printed: Monday, March 06, 2017 10:34:33 Pacific Standard Time

ID: B7C0012-BLK1 Method Blank 0.125, Description: Method Blank, Name: 170305G1_16, Date: 05-Mar-2017, Time: 15:42:23, Instrument: , Lab: , User:

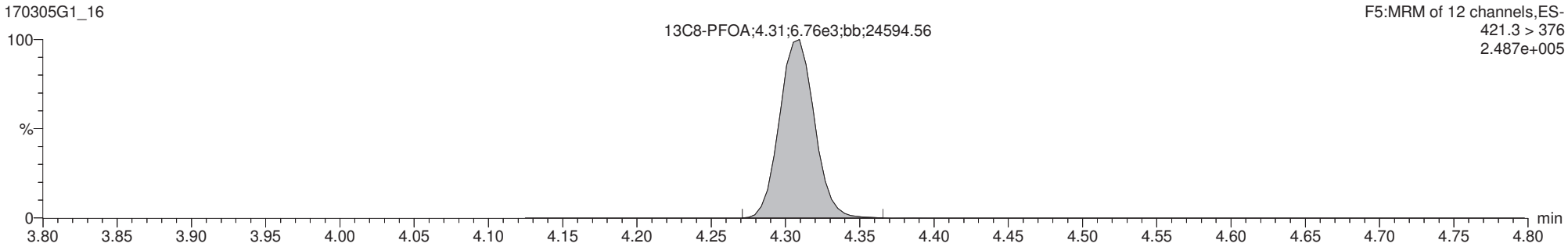
PFOA



13C2-PFOA



13C8-PFOA



Reviewed: CT 03/07/17

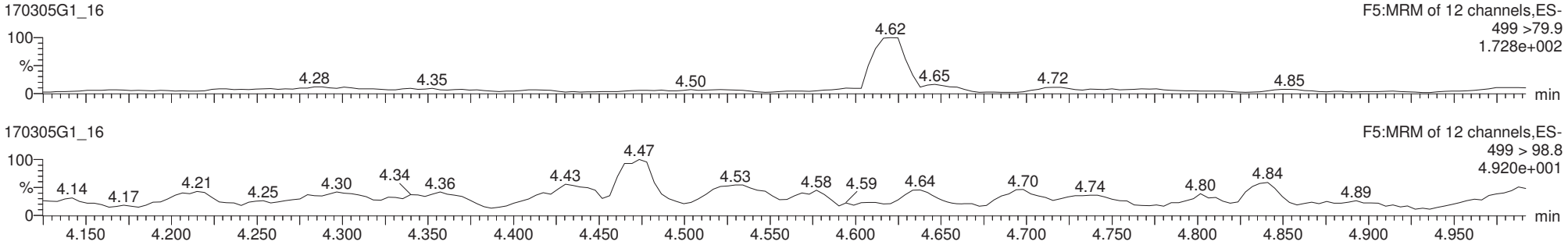
ES 3/6/17

Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-16.qld

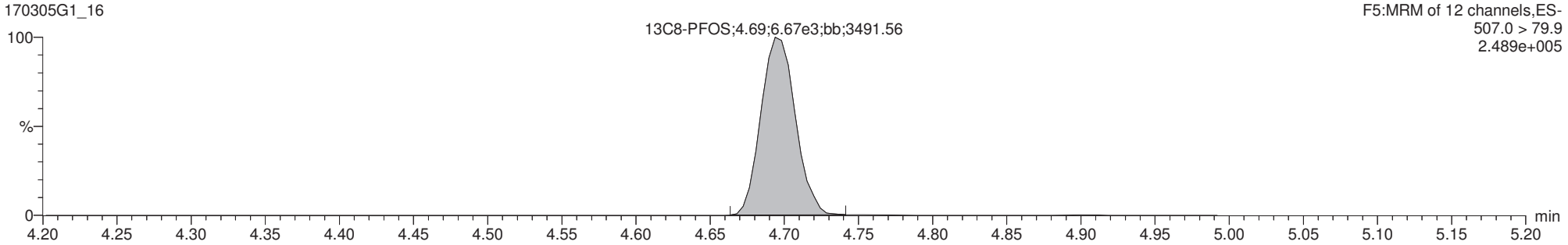
Last Altered: Monday, March 06, 2017 10:32:37 Pacific Standard Time
Printed: Monday, March 06, 2017 10:34:33 Pacific Standard Time

ID: B7C0012-BLK1 Method Blank 0.125, Description: Method Blank, Name: 170305G1_16, Date: 05-Mar-2017, Time: 15:42:23, Instrument: , Lab: , User:

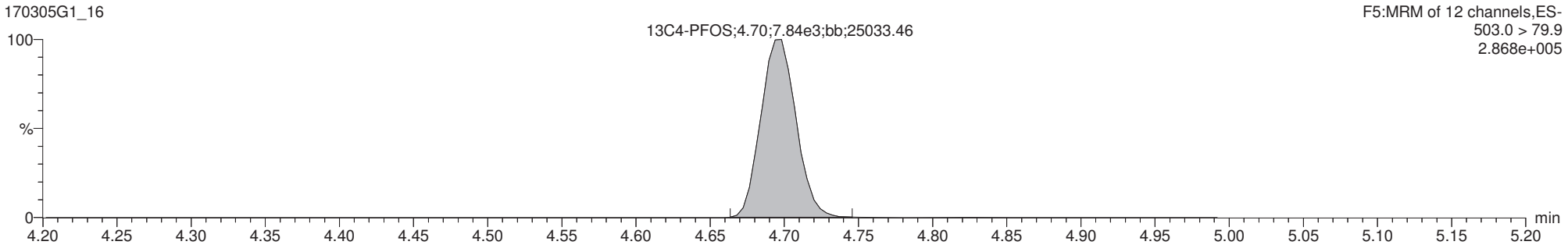
PFOS



13C8-PFOS



13C4-PFOS



Reviewed: CT 03/07/17

ES 3/6/17

Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-13.qld

Last Altered: Monday, March 06, 2017 10:17:53 Pacific Standard Time
Printed: Monday, March 06, 2017 10:20:09 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_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: B7C0012-BS1 OPR 0.125, Description: OPR, Name: 170305G1_13, Date: 05-Mar-2017, Time: 15:04:45

	#	Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1	PFBS	299 > 79.7	1.163e4	5.427e3		0.125	3.04	89.8	112
2	4	PFOA	413 > 368.7	1.828e4	2.406e4		0.125	4.31	93.8	117
3	6	PFOS	499 >79.9	2.607e3	6.027e3		0.125	4.69	81.1	101
4	7	13C3-PFBS	302.0 > 98.8	5.427e3	1.265e4	0.410	0.125	3.03	105	105
5	10	13C2-PFOA	414.9 > 369.7	2.406e4	5.841e3	4.608	0.125	4.31	89.4	89.4
6	12	13C8-PFOS	507.0 > 79.9	6.027e3	6.816e3	0.958	0.125	4.69	92.3	92.3
7	14	13C3-PFHxS	401.9 > 79.9	1.265e4	1.265e4	1.000	0.125	4.03	100	100
8	15	13C8-PFOA	421.3 > 376	5.841e3	5.841e3	1.000	0.125	4.31	100	100
9	17	13C4-PFOS	503.0 > 79.9	6.816e3	6.816e3	1.000	0.125	4.69	100	100

Reviewed: CT 03/07/17

ES 3/6/17

Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-13.qld

Last Altered: Monday, March 06, 2017 10:17:53 Pacific Standard Time
Printed: Monday, March 06, 2017 10:20:31 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_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: B7C0012-BS1 OPR 0.125, Description: OPR, Name: 170305G1_13, Date: 05-Mar-2017, Time: 15:04:45

	#	Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	18	Total PFBS	299 > 79.7		5.115e3		0.125		89.8	
2	20	Total PFOA	413 > 368.7		2.406e4		0.125		93.8	
3	21	Total PFOS	499 > 79.9		6.027e3		0.125		81.1	

Reviewed: CT 03/07/17

ES 3/6/17

Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-13.qld

Last Altered: Monday, March 06, 2017 10:17:53 Pacific Standard Time
Printed: Monday, March 06, 2017 10:20:09 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_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: B7C0012-BS1 OPR 0.125, Description: OPR, Name: 170305G1_13, Date: 05-Mar-2017, Time: 15:04:45

Total PFBS

	#	Name	Trace	RT	Area	IS Area	Conc.
1	1	PFBS	299 > 79.7	3.04	11629.240	5426.664	89.8

Total PFHxS

	#	Name	Trace	RT	Area	IS Area	Conc.
1	3	PFHxS	398.9 > 79.6	4.03	6732.899	5114.757	72.1
2	19	Total PFHxS	398.9 > 79.6	3.93	1269.312	5114.757	13.2
3	19	Total PFHxS	398.9 > 79.6	3.90	477.182	5114.757	4.7

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Conc.
1	4	PFOA	413 > 368.7	4.31	18275.373	24060.582	93.8

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Conc.
1	6	PFOS	499 >79.9	4.69	2607.217	6026.942	81.1

Vista Analytical Laboratory Q1

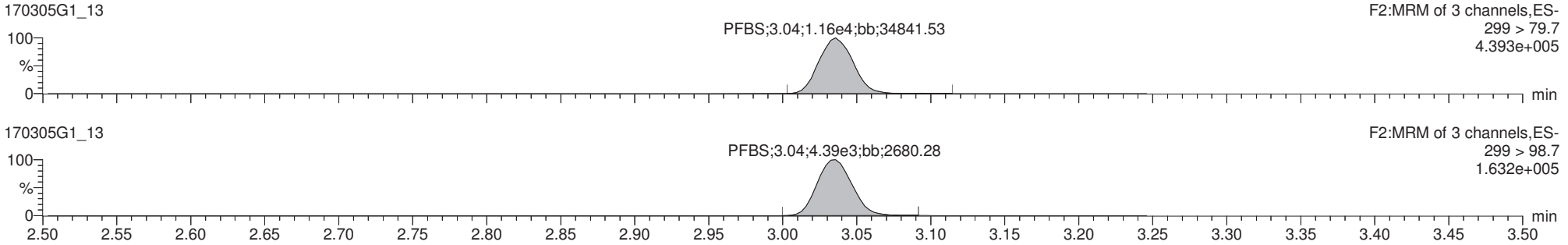
Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-13.qld

Last Altered: Monday, March 06, 2017 10:17:53 Pacific Standard Time
Printed: Monday, March 06, 2017 10:20:09 Pacific Standard Time

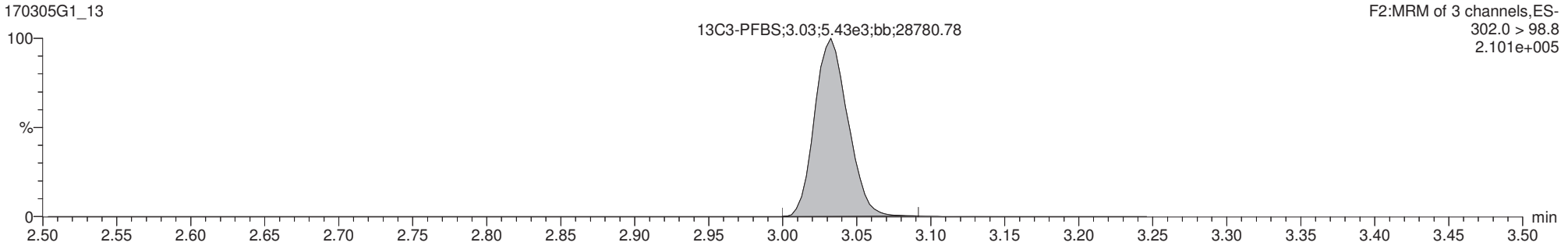
Method: U:\G1.pro\MethDB\PFAS_6_2trans_LINEAR.mdb 02 Mar 2017 11:26:53
Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: B7C0012-BS1 OPR 0.125, Description: OPR, Name: 170305G1_13, Date: 05-Mar-2017, Time: 15:04:45, Instrument: , Lab: , User:

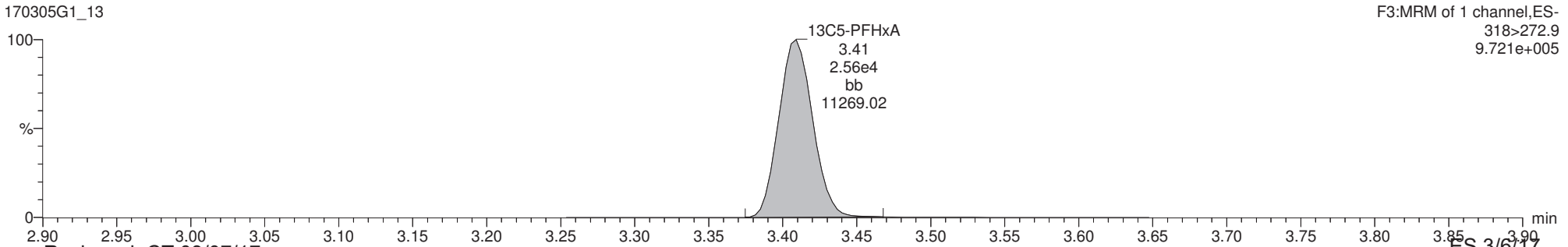
PFBS



13C3-PFBS



13C5-PFHxA



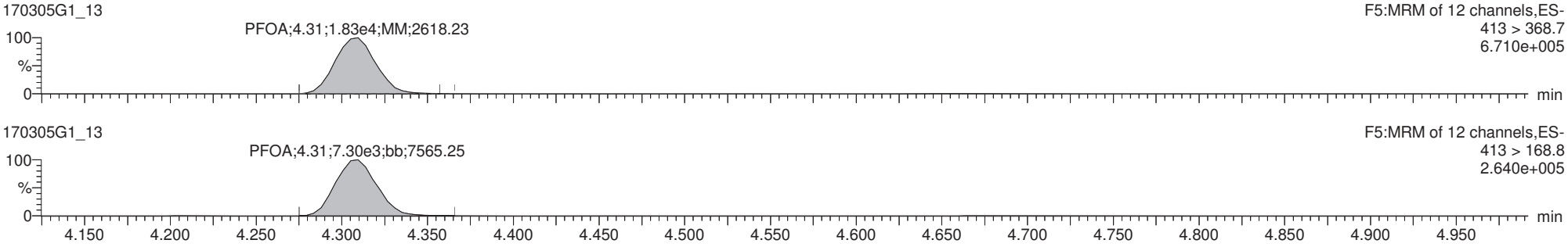
Reviewed: CT 03/07/17 ES 3/6/17

Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-13.qld

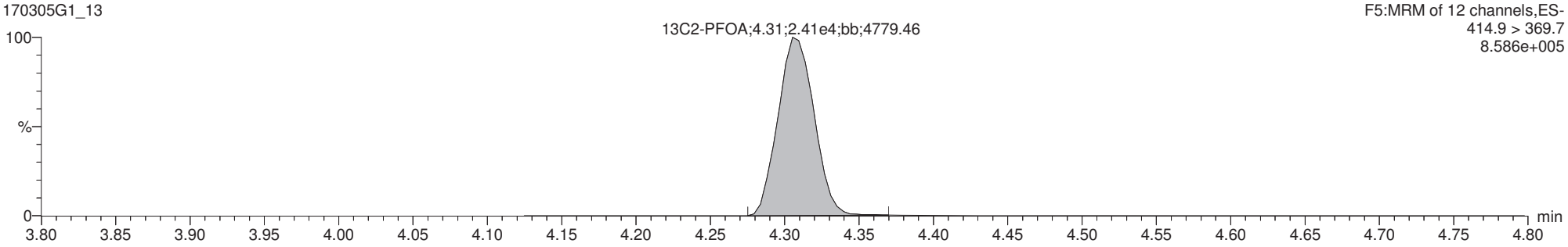
Last Altered: Monday, March 06, 2017 10:17:53 Pacific Standard Time
Printed: Monday, March 06, 2017 10:20:09 Pacific Standard Time

ID: B7C0012-BS1 OPR 0.125, Description: OPR, Name: 170305G1_13, Date: 05-Mar-2017, Time: 15:04:45, Instrument: , Lab: , User:

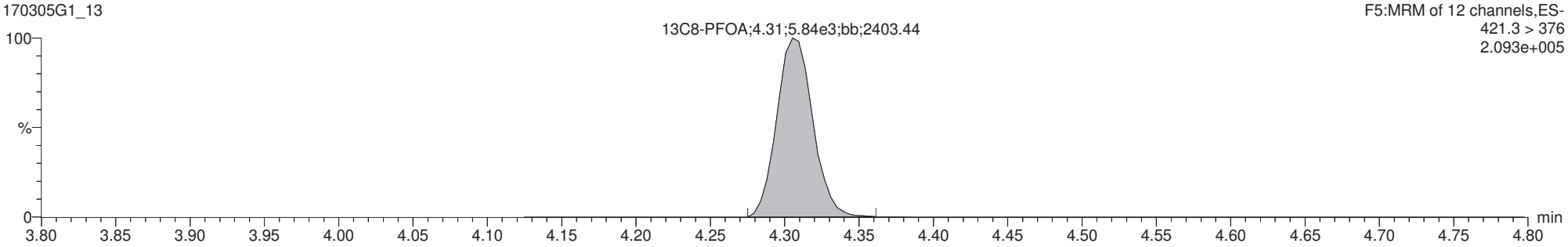
PFOA



13C2-PFOA



13C8-PFOA



Reviewed: CT 03/07/17

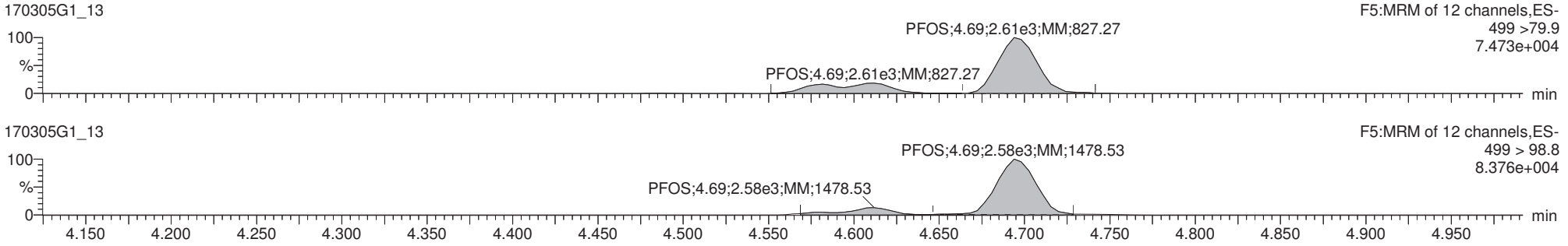
ES 3/6/17

Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-13.qld

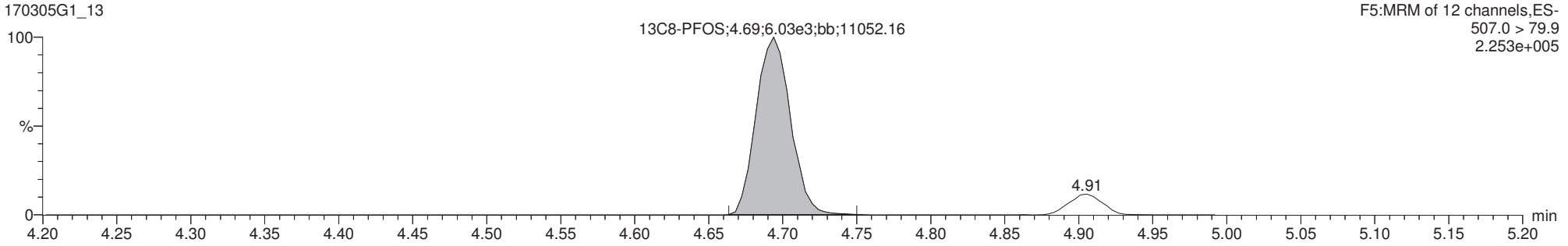
Last Altered: Monday, March 06, 2017 10:17:53 Pacific Standard Time
Printed: Monday, March 06, 2017 10:20:09 Pacific Standard Time

ID: B7C0012-BS1 OPR 0.125, Description: OPR, Name: 170305G1_13, Date: 05-Mar-2017, Time: 15:04:45, Instrument: , Lab: , User:

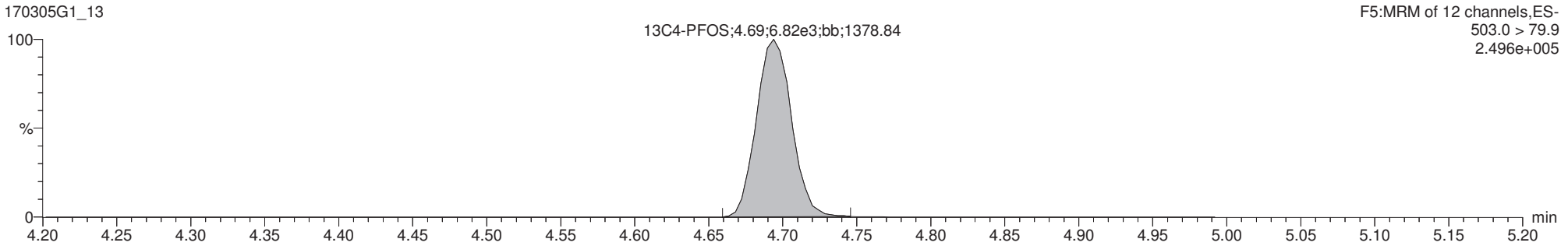
PFOS



13C8-PFOS



13C4-PFOS



Reviewed: CT 03/07/17

ES 3/6/17

Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170306G1\170306G1-11.qld

Last Altered: Tuesday, March 07, 2017 10:07:24 AM Pacific Standard Time
Printed: Tuesday, March 07, 2017 10:08:40 AM Pacific Standard Time

Method: Untitled 07 Mar 2017 09:58:54
Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: 1700268-01 WI-CV-GW09M-0217 0.12317, Description: WI-CV-GW09M-0217, Name: 170306G1_11, Date: 06-Mar-2017, Time: 17:30:29

	#	Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1	PFBS	299 > 79.7	1.558e3	5.903e3		0.123	2.98	11.0	
2	4	PFOA	413 > 368.7	3.070e2	2.769e4		0.123	4.27		
3	6	PFOS	499 >79.9		8.381e3		0.123			
4	7	13C3-PFBS	302.0 > 98.8	5.903e3	1.504e4	0.410	0.123	2.97	97.2	95.8
5	8	13C4-PFHpA	367.2 > 321.8	1.520e4	1.504e4	1.098	0.123	3.87	93.4	92.0
6	9	18O2-PFHxS	403 > 102.6	6.337e3	1.504e4	0.434	0.123	3.99	98.5	97.0
7	10	13C2-PFOA	414.9 > 369.7	2.769e4	6.976e3	4.608	0.123	4.27	87.4	86.1
8	11	13C5-PFNA	468.2 > 422.9	6.921e3	8.632e3	0.867	0.123	4.60	93.8	92.5
9	12	13C8-PFOS	507.0 > 79.9	8.381e3	9.314e3	0.958	0.123	4.66	95.3	93.9
10	13	13C5-PFHxA	318>272.9	2.608e4	2.608e4	1.000	0.123	3.35	101	100
11	14	13C3-PFHxS	401.9 > 79.9	1.504e4	1.504e4	1.000	0.123	3.99	101	100
12	15	13C8-PFOA	421.3 > 376	6.976e3	6.976e3	1.000	0.123	4.27	101	100
13	16	13C9-PFNA	472.2 > 426.9	8.632e3	8.632e3	1.000	0.123	4.60	101	100
14	17	13C4-PFOS	503.0 > 79.9	9.314e3	9.314e3	1.000	0.123	4.67	101	100
15	18	Total PFBS	299 > 79.7		6.337e3		0.123		11.2	
16	20	Total PFOA	413 > 368.7		2.769e4		0.123			
17	21	Total PFOS	499 > 79.9		8.381e3		0.123			

Reviewed: CT 03/07/17

AC 3/7/17

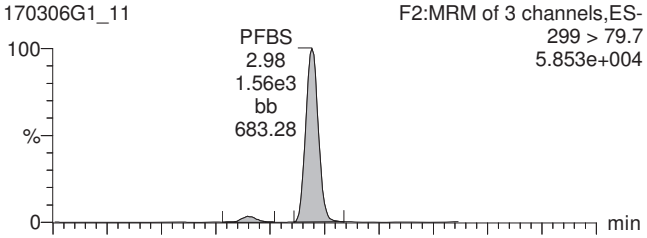
Dataset: U:\G1.PRO\Results\2017\170306G1\170306G1-11.qld

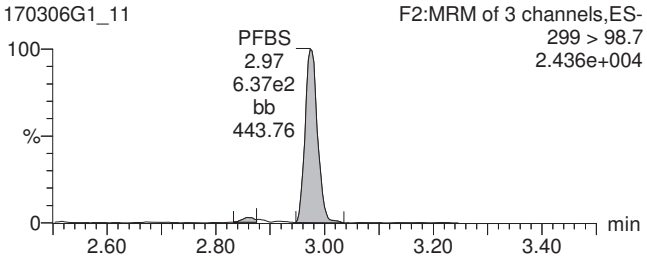
Last Altered: Tuesday, March 07, 2017 10:07:24 AM Pacific Standard Time
Printed: Tuesday, March 07, 2017 10:08:40 AM Pacific Standard Time

Method: Untitled 07 Mar 2017 09:58:54
Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: 1700268-01 WI-CV-GW09M-0217 0.12317, Description: WI-CV-GW09M-0217, Name: 170306G1_11, Date: 06-Mar-2017, Time: 17:30:29, Instrument: , Lab: , User:

Total PFBS





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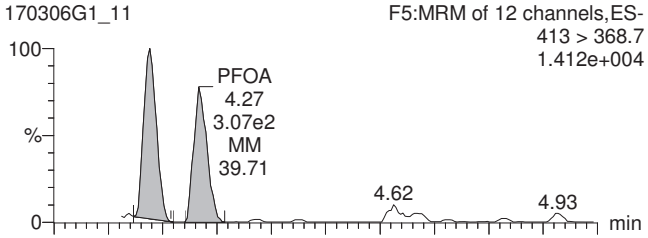

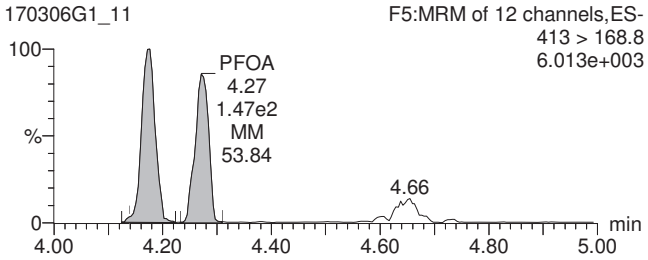

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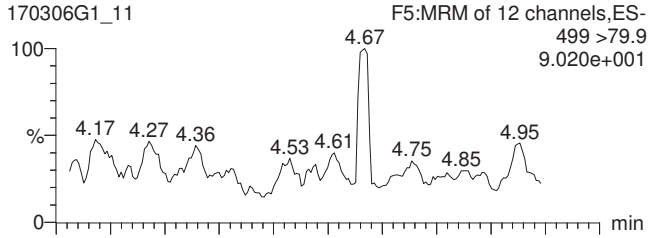
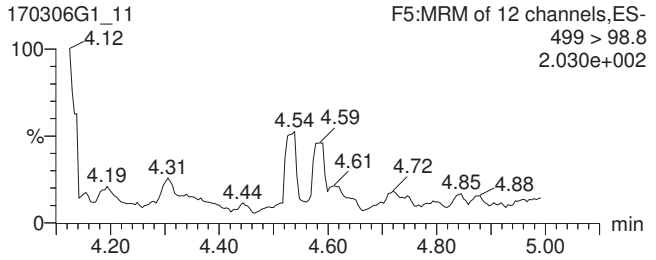
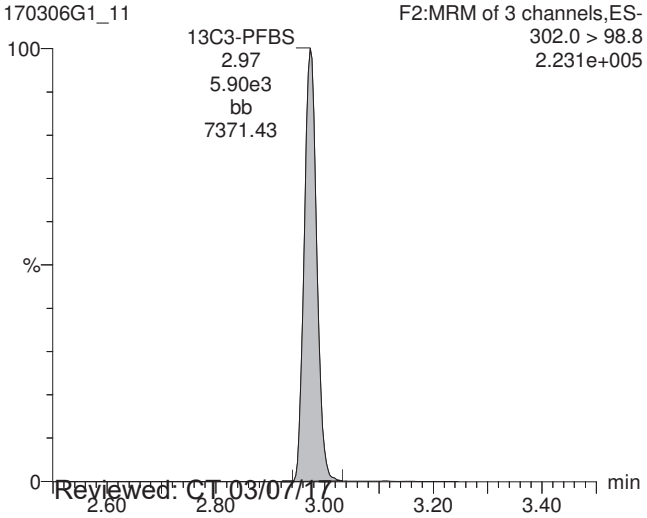




13C3-PFBS



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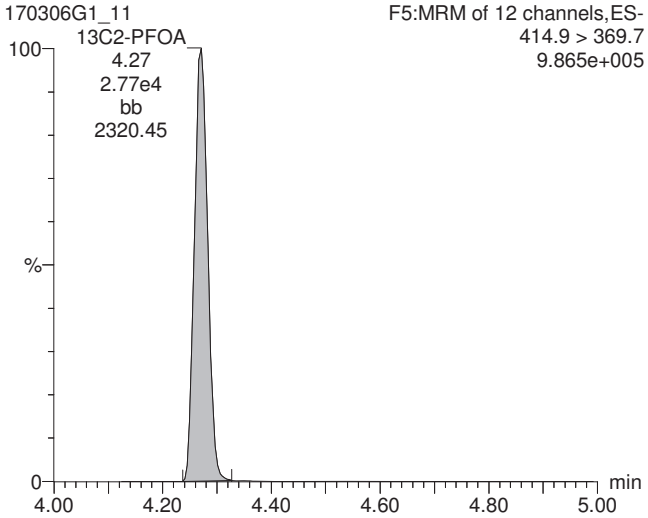
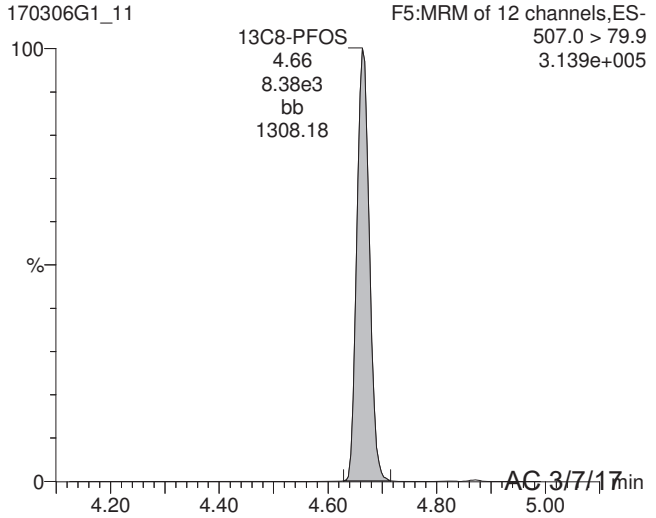


13C8-PFOS



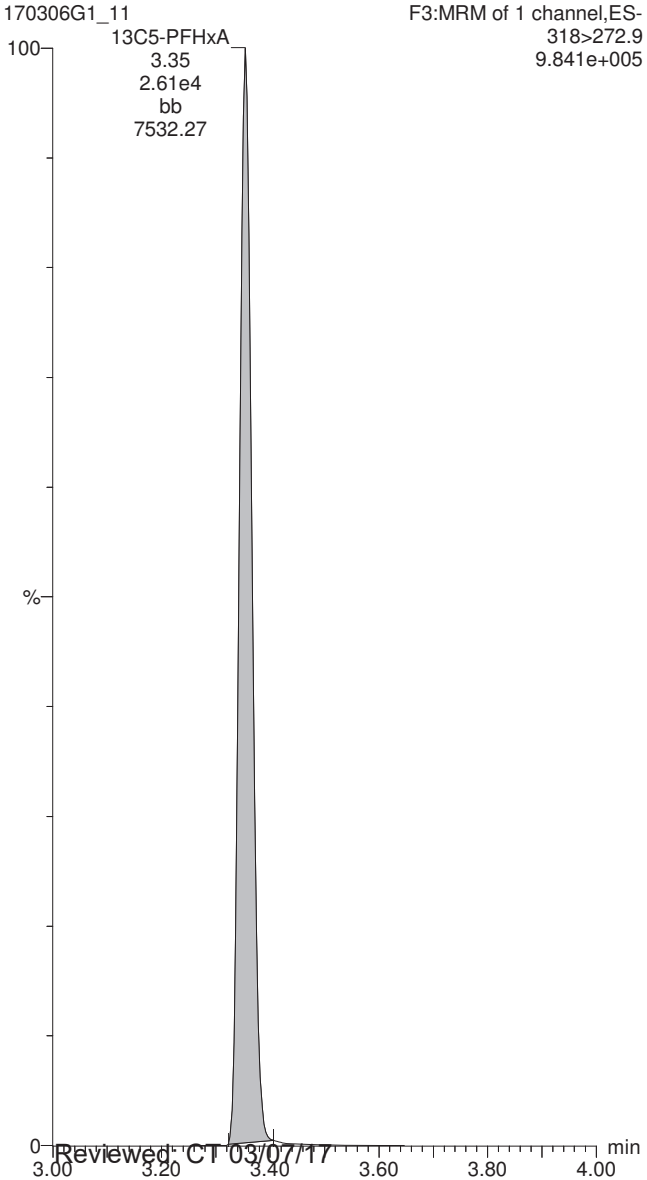
Reviewed: CT 03/07/17 AC 3/7/17

Dataset: U:\G1.PRO\Results\2017\170306G1\170306G1-11.qld

Last Altered: Tuesday, March 07, 2017 10:07:24 AM Pacific Standard Time
Printed: Tuesday, March 07, 2017 10:08:40 AM Pacific Standard Time

ID: 1700268-01 WI-CV-GW09M-0217 0.12317, Description: WI-CV-GW09M-0217, Name: 170306G1_11, Date: 06-Mar-2017, Time: 17:30:29, Instrument: , Lab: , User:

13C5-PFHxA



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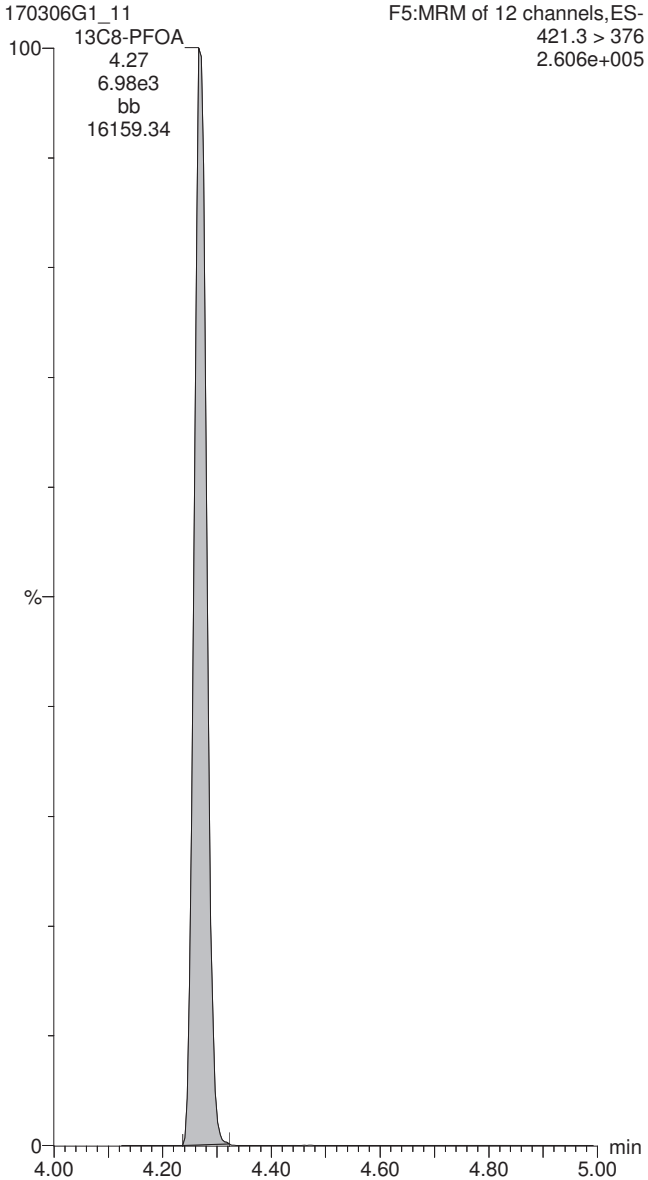
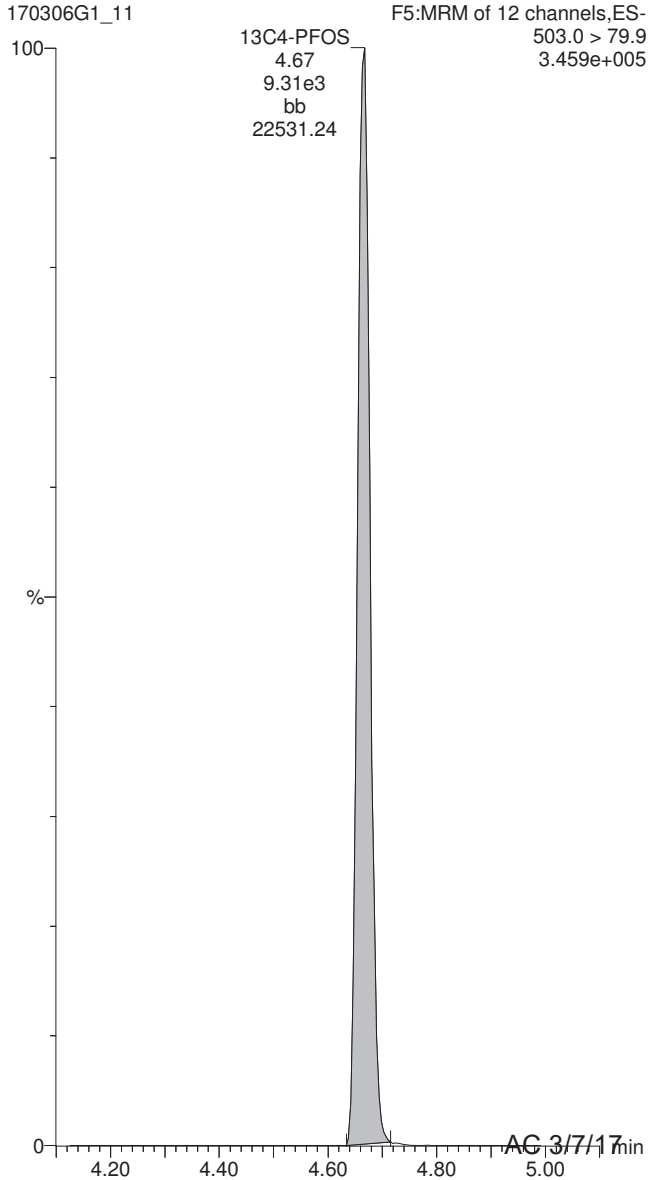


13C4-PFOS



Reviewed: CT 03/07/17 AC 3/7/17

Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-18.qld

Last Altered: Monday, March 06, 2017 12:24:51 Pacific Standard Time
Printed: Monday, March 06, 2017 12:25:04 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_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: 1700268-02RE1 WI-CV-GW05M-0217 0.125, Description: WI-CV-GW05M-0217, Name: 170305G1_18, Date: 05-Mar-2017, Time: 16:07:28

	#	Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1	PFBS	299 > 79.7	3.078e4	5.212e3		0.0655	3.04	473	
2	4	PFOA	413 > 368.7	8.839e4	2.299e4		0.0655	4.31	921	
3	6	PFOS	499 >79.9	3.633e1	7.227e3		0.0655	4.69	3.26	
4	7	13C3-PFBS	302.0 > 98.8	5.212e3	1.241e4	0.410	0.0655	3.04	196	102
5	10	13C2-PFOA	414.9 > 369.7	2.299e4	5.874e3	4.608	0.0655	4.31	162	84.9
6	12	13C8-PFOS	507.0 > 79.9	7.227e3	7.639e3	0.958	0.0655	4.70	189	98.7
7	14	13C3-PFHxS	401.9 > 79.9	1.241e4	1.241e4	1.000	0.0655	4.03	191	100
8	15	13C8-PFOA	421.3 > 376	5.874e3	5.874e3	1.000	0.0655	4.31	191	100
9	17	13C4-PFOS	503.0 > 79.9	7.639e3	7.639e3	1.000	0.0655	4.70	191	100

Reviewed: CT 03/07/17

ES 3/6/17

Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-18.qld

Last Altered: Monday, March 06, 2017 12:24:51 Pacific Standard Time
Printed: Monday, March 06, 2017 12:25:23 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_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: 1700268-02RE1 WI-CV-GW05M-0217 0.125, Description: WI-CV-GW05M-0217, Name: 170305G1_18, Date: 05-Mar-2017, Time: 16:07:28

	#	Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	18	Total PFBS	299 > 79.7		4.778e3		0.0655		473	
2	20	Total PFOA	413 > 368.7		2.299e4		0.0655		1190	
3	21	Total PFOS	499 > 79.9		7.227e3		0.0655		3.26	

Reviewed: CT 03/07/17

ES 3/6/17

Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-18.qld

Last Altered: Monday, March 06, 2017 12:24:51 Pacific Standard Time
Printed: Monday, March 06, 2017 12:25:04 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_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: 1700268-02RE1 WI-CV-GW05M-0217 0.125, Description: WI-CV-GW05M-0217, Name: 170305G1_18, Date: 05-Mar-2017, Time: 16:07:28

Total PFBS

	#	Name	Trace	RT	Area	IS Area	Conc.
1	1	PFBS	299 > 79.7	3.04	30777.482	5211.732	473.2

Total PFHxS

	#	Name	Trace	RT	Area	IS Area	Conc.
1	3	PFHxS	398.9 > 79.6	4.03	24688.721	4778.333	543.2
2	19	Total PFHxS	398.9 > 79.6	3.93	8736.571	4778.333	191.7
3	19	Total PFHxS	398.9 > 79.6	3.91	4008.230	4778.333	87.5
4	19	Total PFHxS	398.9 > 79.6	3.82	156.679	4778.333	2.6
5	19	Total PFHxS	398.9 > 79.6	3.78	7.470	4778.333	

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Conc.
1	4	PFOA	413 > 368.7	4.31	88389.422	22992.320	920.6
2	20	Total PFOA	413 > 368.7	4.21	25656.943	22992.320	264.8

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Conc.
1	6	PFOS	499 >79.9	4.69	36.328	7226.970	3.3

Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-18.qld

Last Altered: Monday, March 06, 2017 12:24:51 Pacific Standard Time
Printed: Monday, March 06, 2017 12:25:04 Pacific Standard Time

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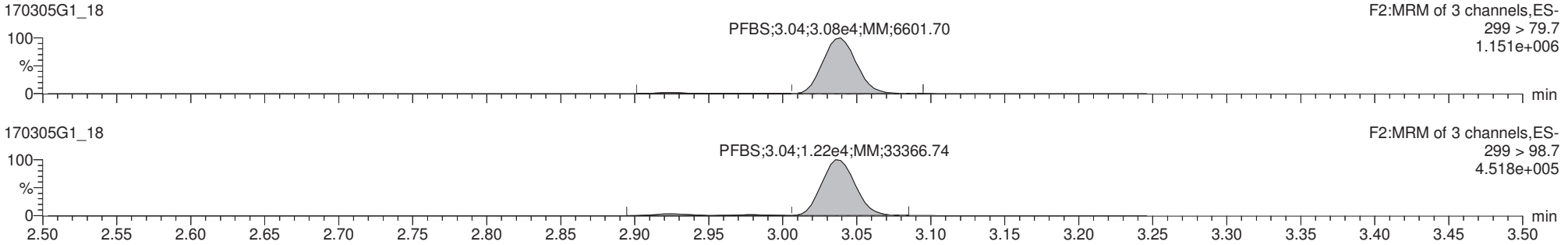
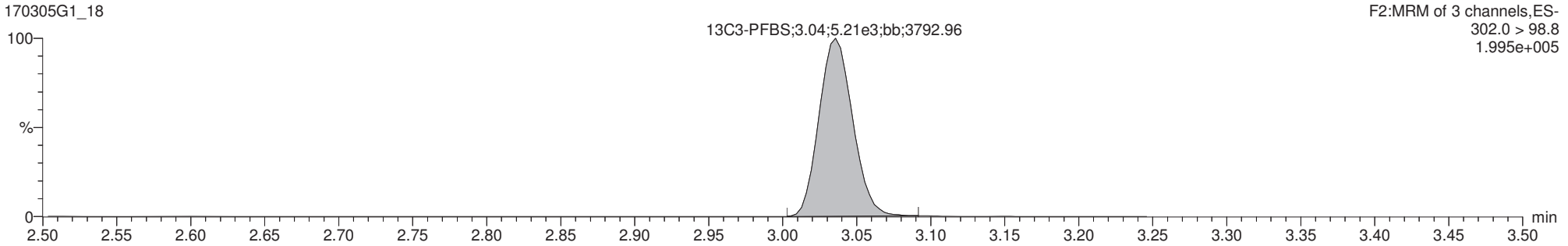
Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: 1700268-02RE1 WI-CV-GW05M-0217 0.125, Description: WI-CV-GW05M-0217, Name: 170305G1_18, Date: 05-Mar-2017, Time: 16:07:28, Instrument: , Lab: , User:

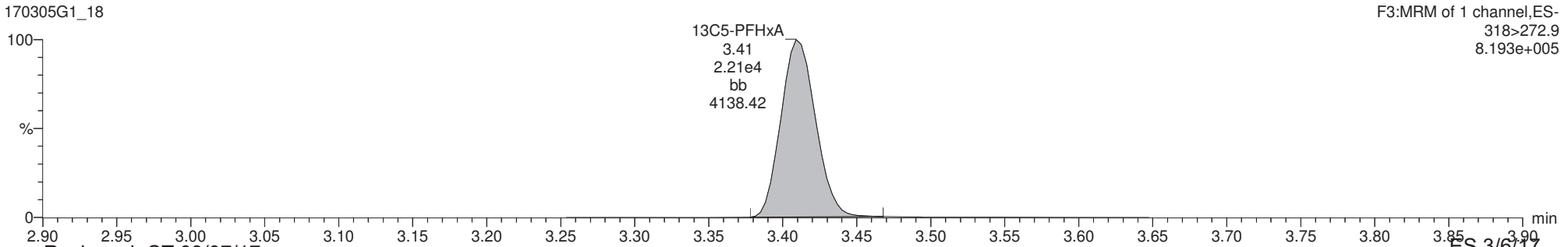
PFBS



13C3-PFBS



13C5-PFHxA



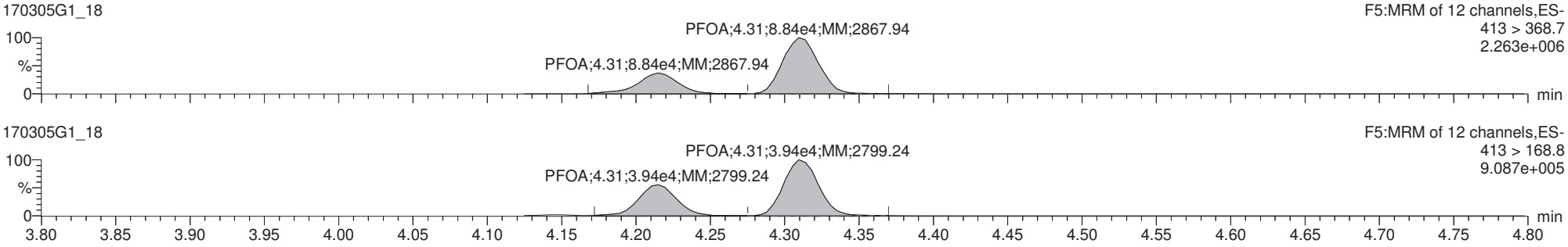
Reviewed: CT 03/07/17 ES 3/6/17

Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-18.qld

Last Altered: Monday, March 06, 2017 12:24:51 Pacific Standard Time
Printed: Monday, March 06, 2017 12:25:04 Pacific Standard Time

ID: 1700268-02RE1 WI-CV-GW05M-0217 0.125, Description: WI-CV-GW05M-0217, Name: 170305G1_18, Date: 05-Mar-2017, Time: 16:07:28, Instrument: , Lab: , User:

PFOA



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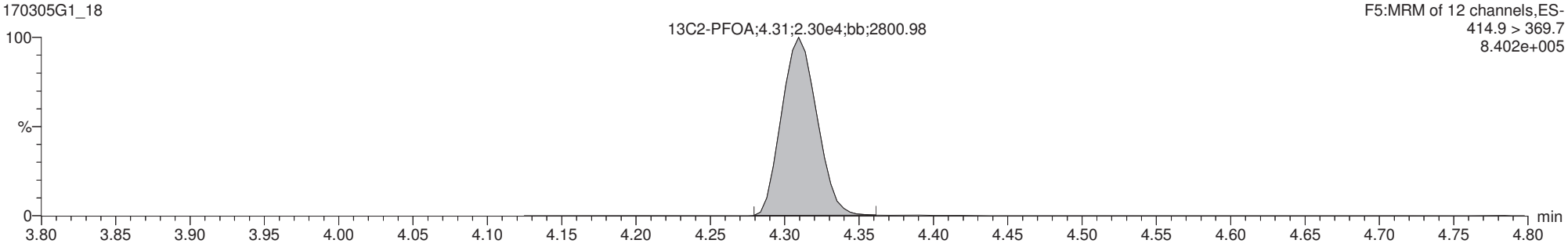
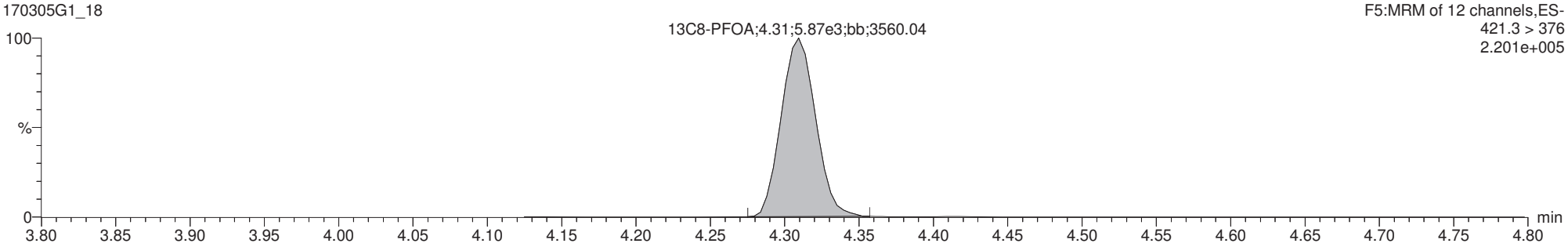


13C8-PFOA



Reviewed: CT 03/07/17 ES 3/6/17

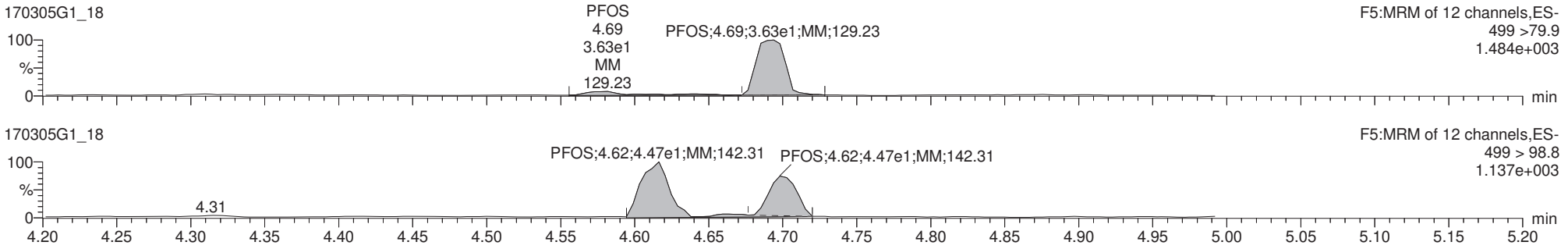
Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-18.qld

Last Altered: Monday, March 06, 2017 12:24:51 Pacific Standard Time
Printed: Monday, March 06, 2017 12:25:04 Pacific Standard Time

ID: 1700268-02RE1 WI-CV-GW05M-0217 0.125, Description: WI-CV-GW05M-0217, Name: 170305G1_18, Date: 05-Mar-2017, Time: 16:07:28, Instrument: , Lab: , User:

PFOS



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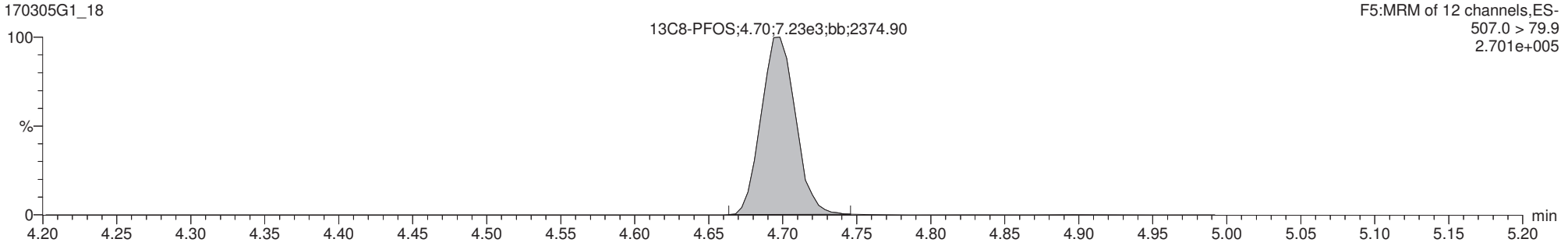
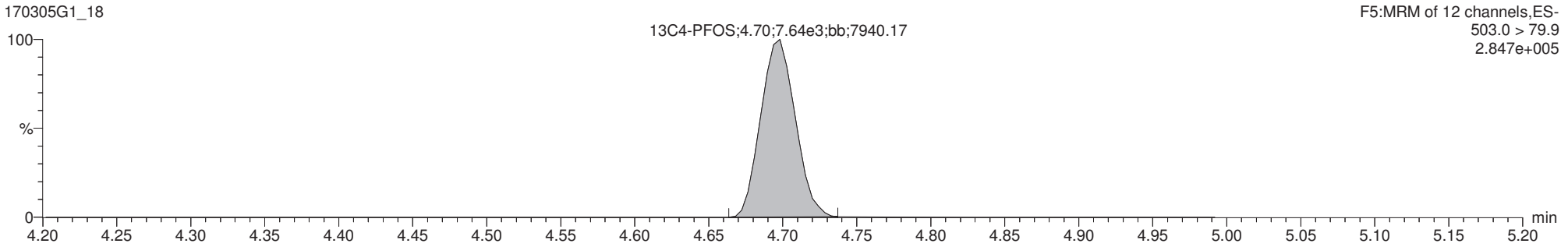


13C4-PFOS



Reviewed: CT 03/07/17

ES 3/6/17

Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170306G1\170306G1-12.qld

Last Altered: Tuesday, March 07, 2017 10:11:18 AM Pacific Standard Time
Printed: Tuesday, March 07, 2017 10:11:43 AM Pacific Standard Time

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Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: 1700268-03 WI-CV-GW05S-0217 0.12246, Description: WI-CV-GW05S-0217, Name: 170306G1_12, Date: 06-Mar-2017, Time: 17:43:02

	#	Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1	PFBS	299 > 79.7	1.695e3	5.521e3		0.122	2.97	12.9	
2	4	PFOA	413 > 368.7	2.240e3	2.778e4		0.122	4.27	8.52	
3	6	PFOS	499 >79.9		1.065e4		0.122			
4	7	13C3-PFBS	302.0 > 98.8	5.521e3	1.789e4	0.410	0.122	2.96	76.9	75.3
5	8	13C4-PFHpA	367.2 > 321.8	1.259e4	1.789e4	1.098	0.122	3.86	65.4	64.1
6	9	18O2-PFHxS	403 > 102.6	6.769e3	1.789e4	0.434	0.122	3.98	88.9	87.1
7	10	13C2-PFOA	414.9 > 369.7	2.778e4	7.945e3	4.608	0.122	4.27	77.4	75.9
8	11	13C5-PFNA	468.2 > 422.9	8.267e3	1.254e4	0.867	0.122	4.60	77.6	76.0
9	12	13C8-PFOS	507.0 > 79.9	1.065e4	1.411e4	0.958	0.122	4.66	80.4	78.8
10	13	13C5-PFHxA	318>272.9	2.245e4	2.245e4	1.000	0.122	3.35	102	100
11	14	13C3-PFHxS	401.9 > 79.9	1.789e4	1.789e4	1.000	0.122	3.98	102	100
12	15	13C8-PFOA	421.3 > 376	7.945e3	7.945e3	1.000	0.122	4.27	102	100
13	16	13C9-PFNA	472.2 > 426.9	1.254e4	1.254e4	1.000	0.122	4.60	102	100
14	17	13C4-PFOS	503.0 > 79.9	1.411e4	1.411e4	1.000	0.122	4.66	102	100
15	18	Total PFBS	299 > 79.7		6.769e3		0.122		12.9	
16	20	Total PFOA	413 > 368.7		2.778e4		0.122		9.87	
17	21	Total PFOS	499 > 79.9		1.065e4		0.122			

Reviewed: CT 03/07/17

AC 3/7/17

Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170306G1\170306G1-12.qld

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Printed: Tuesday, March 07, 2017 10:11:43 AM Pacific Standard Time

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Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: 1700268-03 WI-CV-GW05S-0217 0.12246, Description: WI-CV-GW05S-0217, Name: 170306G1_12, Date: 06-Mar-2017, Time: 17:43:02, Instrument: , Lab: , User:

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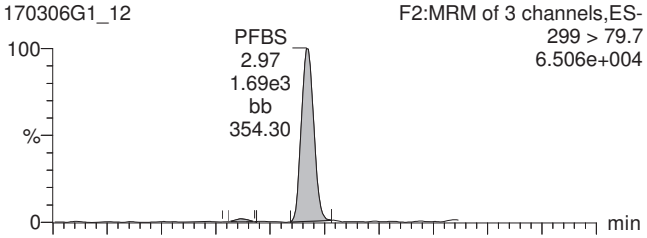

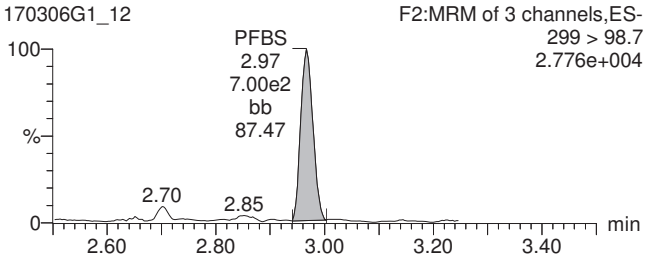

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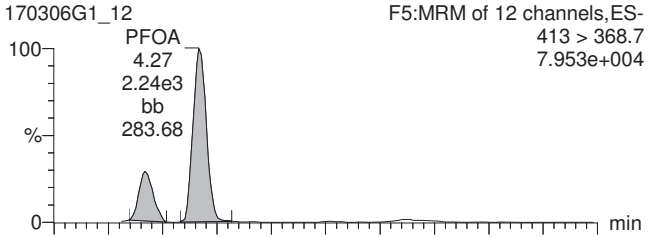
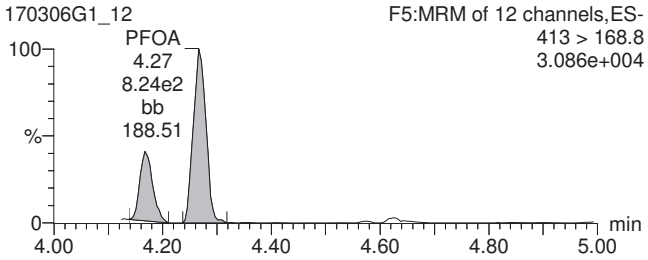
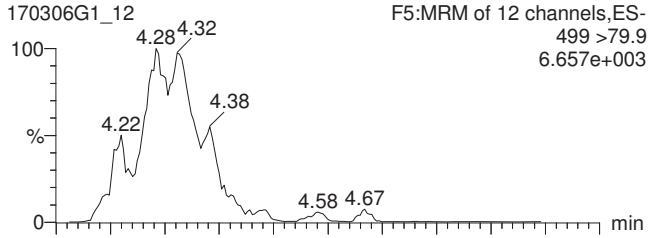
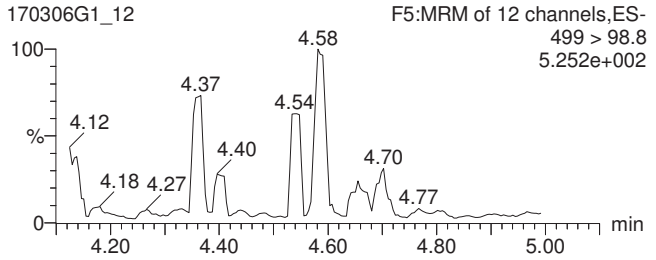


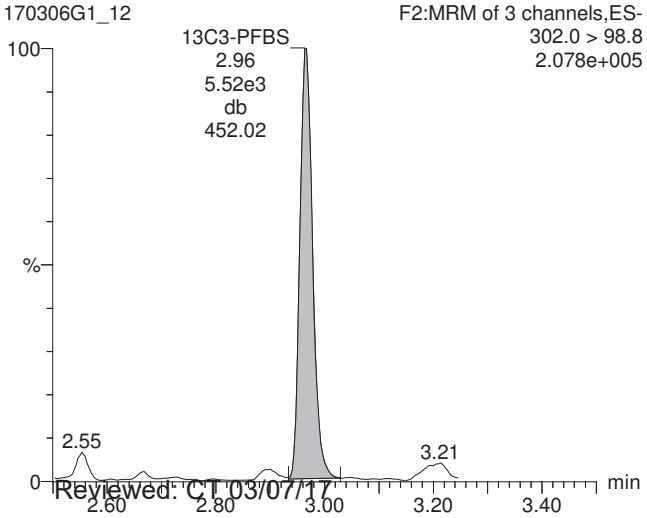


Total PFOS

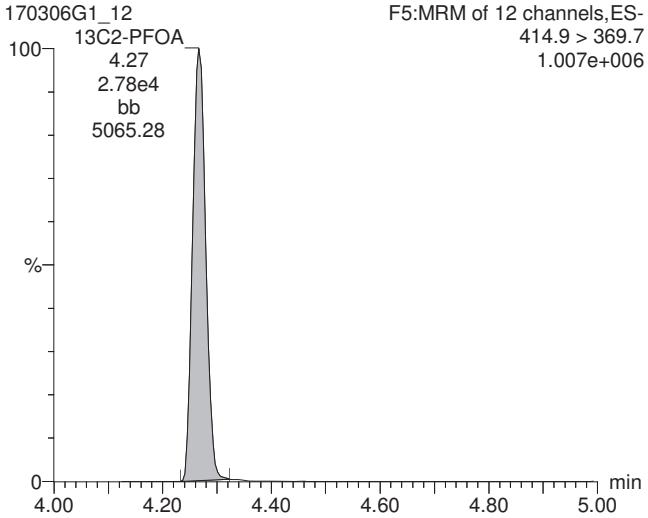




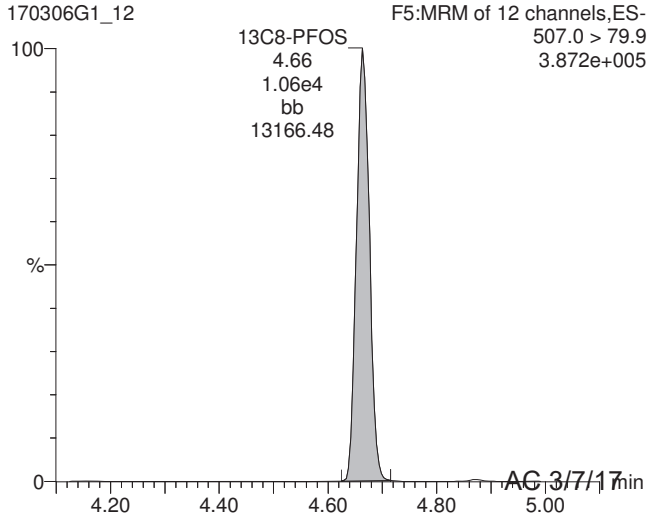
13C3-PFBS



13C2-PFOA



13C8-PFOS



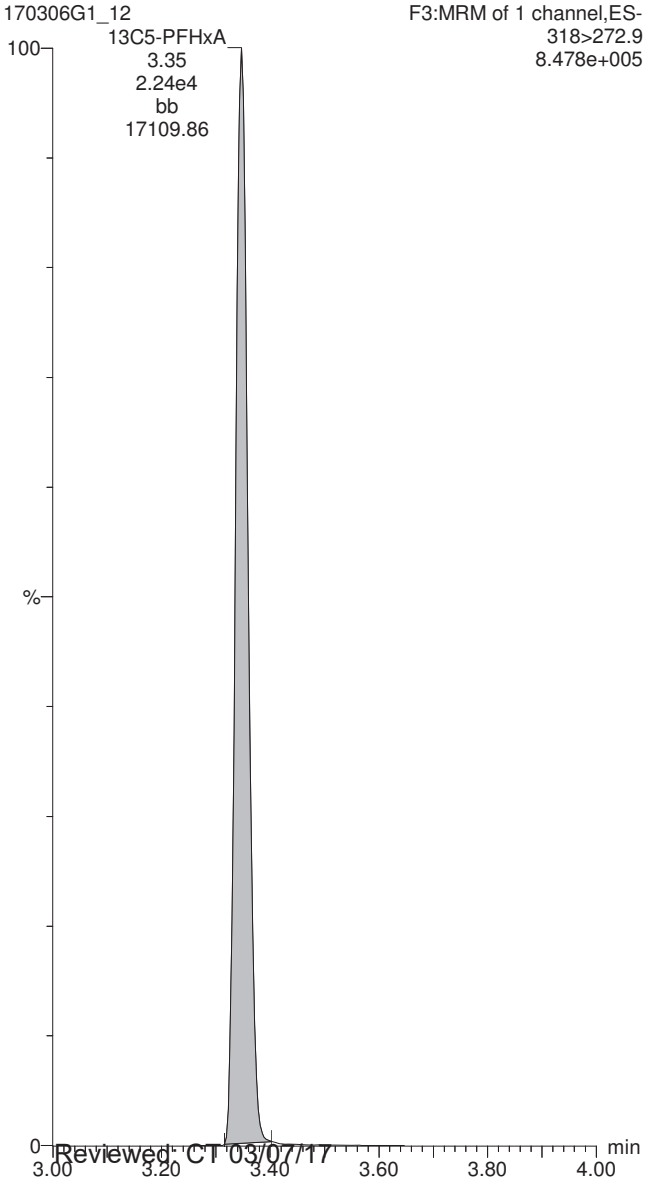
Reviewed: CT 03/07/17 AC 3/7/17

Dataset: U:\G1.PRO\Results\2017\170306G1\170306G1-12.qld

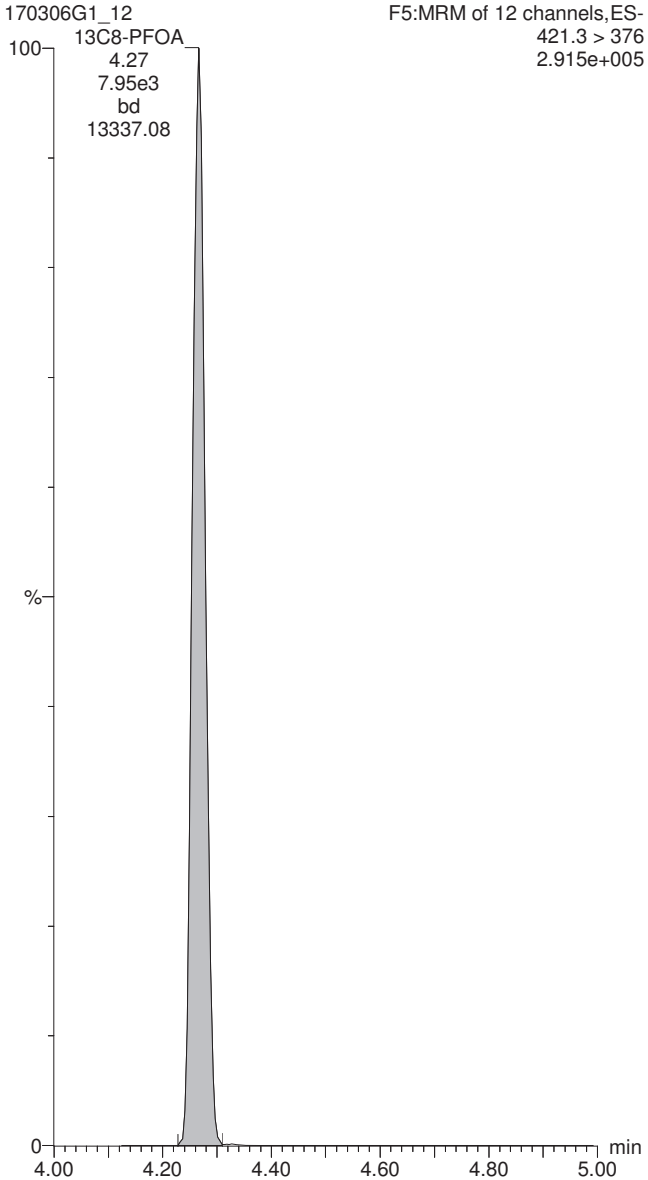
Last Altered: Tuesday, March 07, 2017 10:11:18 AM Pacific Standard Time
Printed: Tuesday, March 07, 2017 10:11:43 AM Pacific Standard Time

ID: 1700268-03 WI-CV-GW05S-0217 0.12246, Description: WI-CV-GW05S-0217, Name: 170306G1_12, Date: 06-Mar-2017, Time: 17:43:02, Instrument: , Lab: , User:

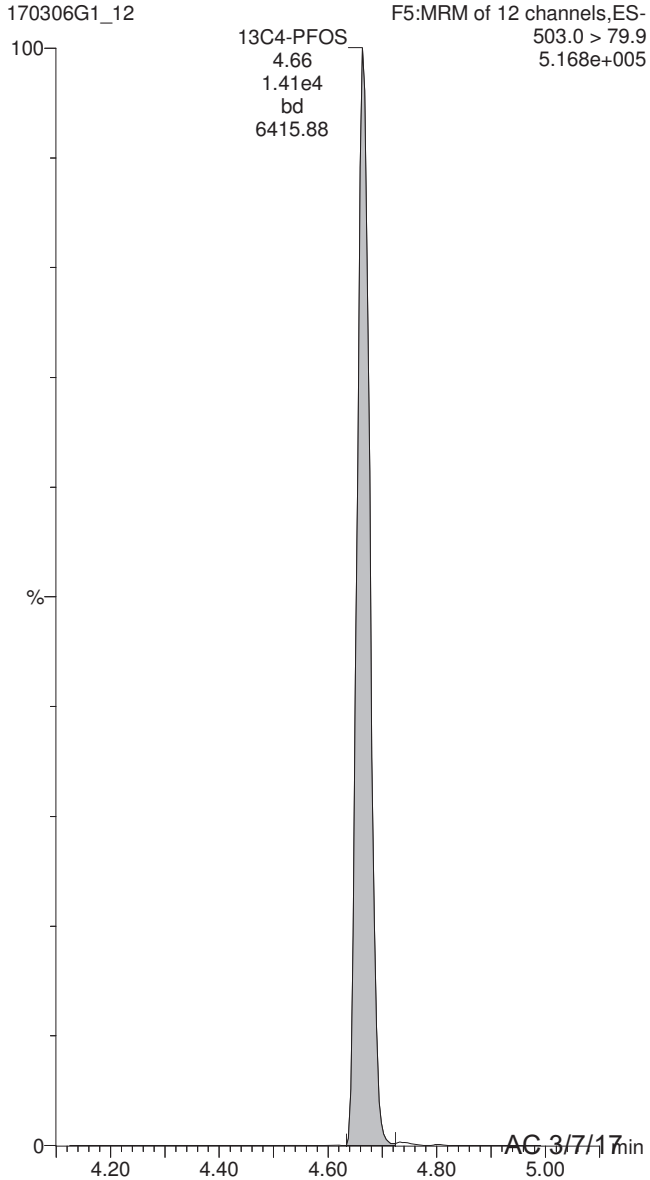
13C5-PFHxA



13C8-PFOA



13C4-PFOS



Reviewed: CT 03/07/17 AC 3/7/17

Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-19.qld

Last Altered: Monday, March 06, 2017 12:29:05 Pacific Standard Time
Printed: Monday, March 06, 2017 12:30:37 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_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: 1700268-04RE1 WI-CV-GW11M-0217 0.125, Description: WI-CV-GW11M-0217, Name: 170305G1_19, Date: 05-Mar-2017, Time: 16:20:00

	#	Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1	PFBS	299 > 79.7		6.074e3		0.0653			
2	4	PFOA	413 > 368.7	2.160e2	3.191e4		0.0653	4.31		
3	6	PFOS	499 >79.9		7.406e3		0.0653			
4	7	13C3-PFBS	302.0 > 98.8	6.074e3	1.635e4	0.410	0.0653	3.04	174	90.6
5	10	13C2-PFOA	414.9 > 369.7	3.191e4	7.918e3	4.608	0.0653	4.31	167	87.4
6	12	13C8-PFOS	507.0 > 79.9	7.406e3	8.974e3	0.958	0.0653	4.70	165	86.1
7	14	13C3-PFHxS	401.9 > 79.9	1.635e4	1.635e4	1.000	0.0653	4.03	192	100
8	15	13C8-PFOA	421.3 > 376	7.918e3	7.918e3	1.000	0.0653	4.31	192	100
9	17	13C4-PFOS	503.0 > 79.9	8.974e3	8.974e3	1.000	0.0653	4.70	192	100

Reviewed: CT 03/07/17

ES 3/6/17

Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-19.qld

Last Altered: Monday, March 06, 2017 12:29:05 Pacific Standard Time
Printed: Monday, March 06, 2017 12:33:03 Pacific Standard Time

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Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: 1700268-04RE1 WI-CV-GW11M-0217 0.125, Description: WI-CV-GW11M-0217, Name: 170305G1_19, Date: 05-Mar-2017, Time: 16:20:00

	#	Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	18	Total PFBS	299 > 79.7		5.850e3		0.0653			
2	20	Total PFOA	413 > 368.7		3.191e4		0.0653			
3	21	Total PFOS	499 > 79.9		7.406e3		0.0653			

Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-19.qld

Last Altered: Monday, March 06, 2017 12:29:05 Pacific Standard Time
Printed: Monday, March 06, 2017 12:30:37 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_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: 1700268-04RE1 WI-CV-GW11M-0217 0.125, Description: WI-CV-GW11M-0217, Name: 170305G1_19, Date: 05-Mar-2017, Time: 16:20:00

Total PFBS

	#	Name	Trace	RT	Area	IS Area	Conc.
1	1	PFBS	299 > 79.7			6073.773	

Total PFHxS

	#	Name	Trace	RT	Area	IS Area	Conc.
1	19	Total PFHxS	398.9 > 79.6	4.03	18.954	5849.952	
2	3	PFHxS	398.9 > 79.6	4.03	19.955	5849.952	

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Conc.
1	4	PFOA	413 > 368.7	4.31	215.977	31905.305	

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Conc.
1							

Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-19.qld

Last Altered: Monday, March 06, 2017 12:29:05 Pacific Standard Time
Printed: Monday, March 06, 2017 12:30:37 Pacific Standard Time

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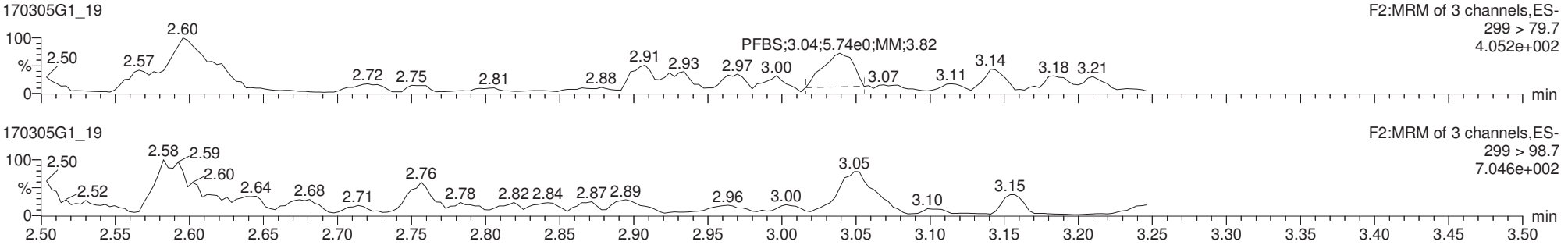
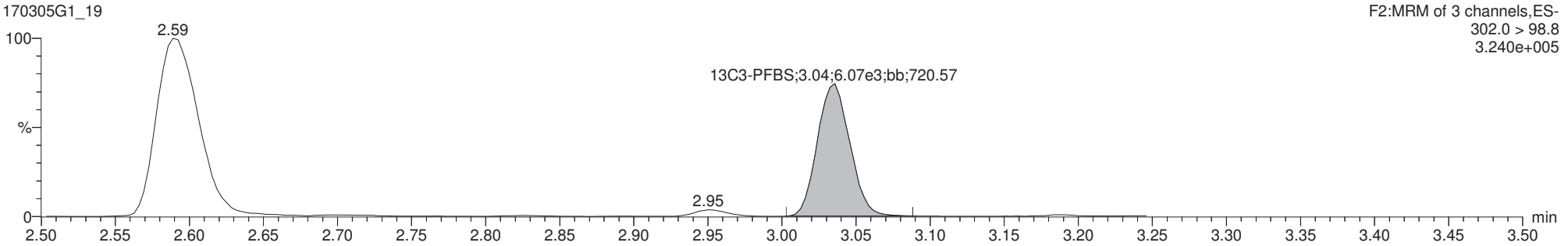
Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: 1700268-04RE1 WI-CV-GW11M-0217 0.125, Description: WI-CV-GW11M-0217, Name: 170305G1_19, Date: 05-Mar-2017, Time: 16:20:00, Instrument: , Lab: , User:

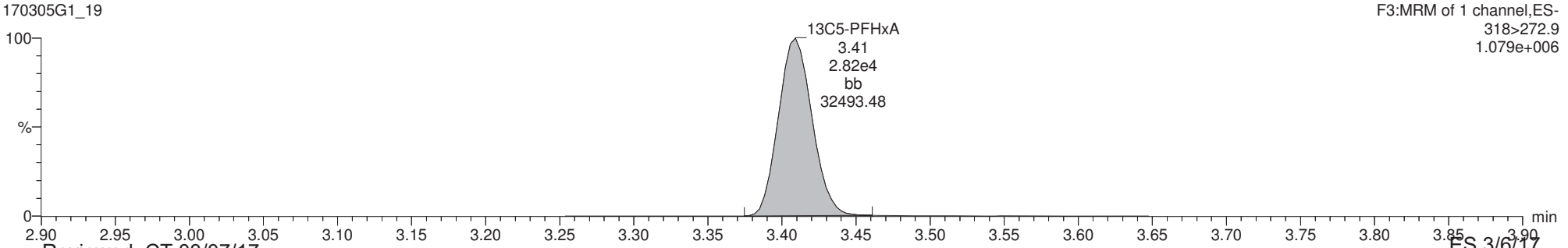
PFBS



13C3-PFBS



13C5-PFHxA



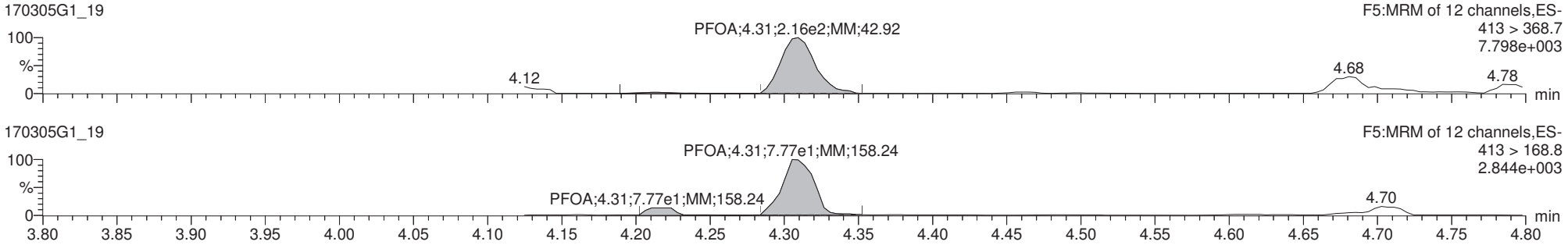
Reviewed: CT 03/07/17 ES 3/6/17

Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-19.qld

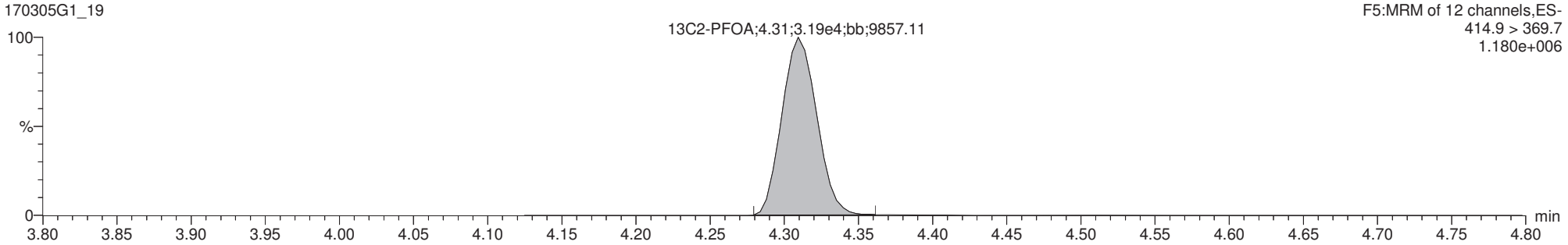
Last Altered: Monday, March 06, 2017 12:29:05 Pacific Standard Time
Printed: Monday, March 06, 2017 12:30:37 Pacific Standard Time

ID: 1700268-04RE1 WI-CV-GW11M-0217 0.125, Description: WI-CV-GW11M-0217, Name: 170305G1_19, Date: 05-Mar-2017, Time: 16:20:00, Instrument: , Lab: , User:

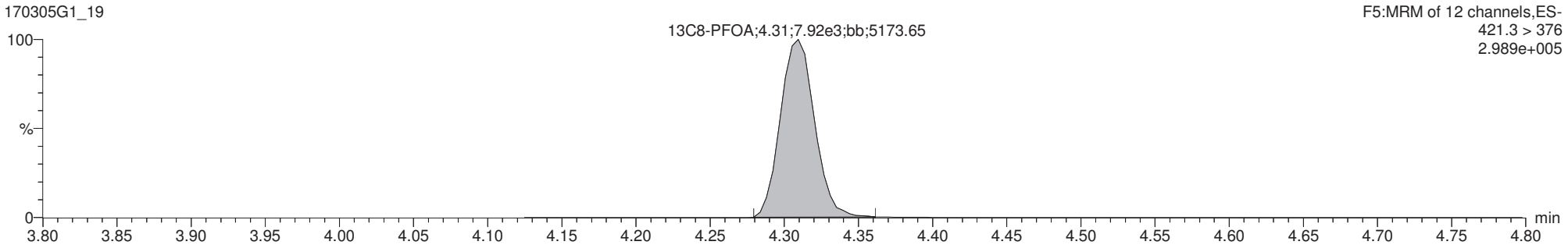
PFOA



13C2-PFOA



13C8-PFOA



Reviewed: CT 03/07/17

ES 3/6/17

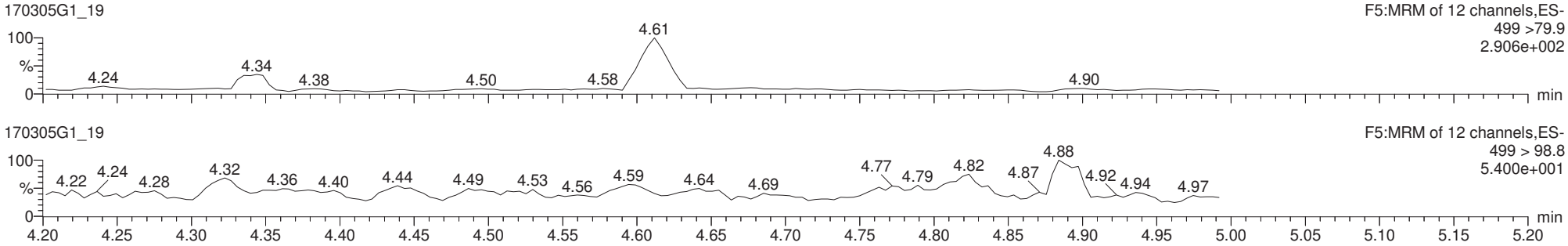
Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-19.qld

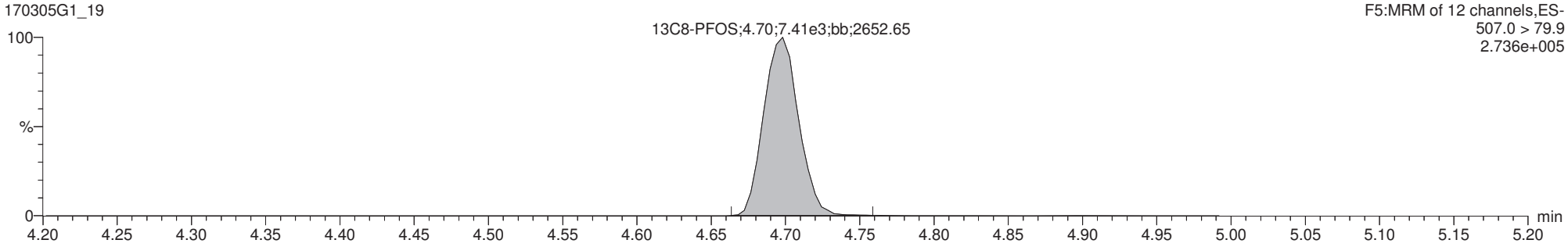
Last Altered: Monday, March 06, 2017 12:29:05 Pacific Standard Time
Printed: Monday, March 06, 2017 12:30:37 Pacific Standard Time

ID: 1700268-04RE1 WI-CV-GW11M-0217 0.125, Description: WI-CV-GW11M-0217, Name: 170305G1_19, Date: 05-Mar-2017, Time: 16:20:00, Instrument: , Lab: , User:

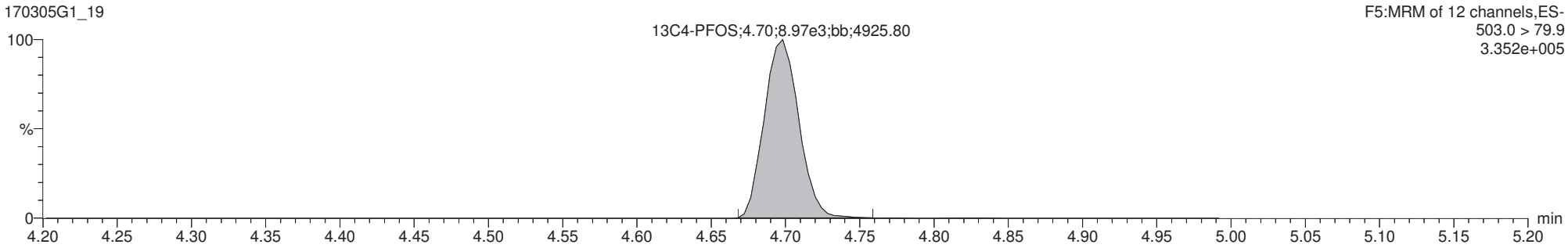
PFOS



13C8-PFOS



13C4-PFOS



Reviewed: CT 03/07/17

ES 3/6/17

Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170306G1\170306G1-13.qld

Last Altered: Tuesday, March 07, 2017 10:13:22 AM Pacific Standard Time
Printed: Tuesday, March 07, 2017 10:13:47 AM Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS_6_2_NEW.mdb 07 Mar 2017 09:58:54
Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: 1700268-05 WI-CV-GW11S-0217 0.12773, Description: WI-CV-GW11S-0217, Name: 170306G1_13, Date: 06-Mar-2017, Time: 17:55:31

	#	Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1	PFBS	299 > 79.7		6.062e3		0.128			
2	4	PFOA	413 > 368.7	2.749e2	3.232e4		0.128	4.27		
3	6	PFOS	499 >79.9	1.415e1	1.063e4		0.128	4.59	1.00	
4	7	13C3-PFBS	302.0 > 98.8	6.062e3	1.859e4	0.410	0.128	2.97	77.9	79.6
5	8	13C4-PFHpA	367.2 > 321.8	1.437e4	1.859e4	1.098	0.128	3.86	68.9	70.4
6	9	18O2-PFHxS	403 > 102.6	7.150e3	1.859e4	0.434	0.128	3.99	86.7	88.6
7	10	13C2-PFOA	414.9 > 369.7	3.232e4	7.544e3	4.608	0.128	4.27	91.0	93.0
8	11	13C5-PFNA	468.2 > 422.9	8.704e3	1.134e4	0.867	0.128	4.60	86.7	88.5
9	12	13C8-PFOS	507.0 > 79.9	1.063e4	1.236e4	0.958	0.128	4.66	87.8	89.8
10	13	13C5-PFHxA	318>272.9	2.487e4	2.487e4	1.000	0.128	3.35	97.9	100
11	14	13C3-PFHxS	401.9 > 79.9	1.859e4	1.859e4	1.000	0.128	3.98	97.9	100
12	15	13C8-PFOA	421.3 > 376	7.544e3	7.544e3	1.000	0.128	4.27	97.9	100
13	16	13C9-PFNA	472.2 > 426.9	1.134e4	1.134e4	1.000	0.128	4.60	97.9	100
14	17	13C4-PFOS	503.0 > 79.9	1.236e4	1.236e4	1.000	0.128	4.66	97.9	100
15	18	Total PFBS	299 > 79.7		7.150e3		0.128			
16	20	Total PFOA	413 > 368.7		3.232e4		0.128			
17	21	Total PFOS	499 > 79.9		1.063e4		0.128		1.00	

Reviewed: CT 03/07/17

AC 3/7/17

Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170306G1\170306G1-13.qld

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Printed: Tuesday, March 07, 2017 10:13:47 AM Pacific Standard Time

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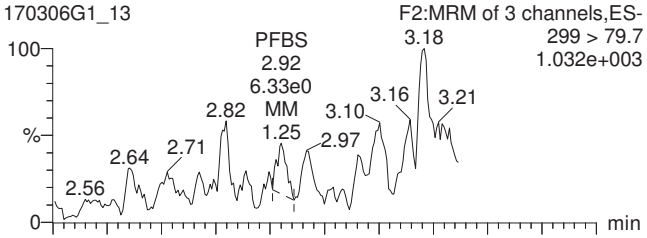
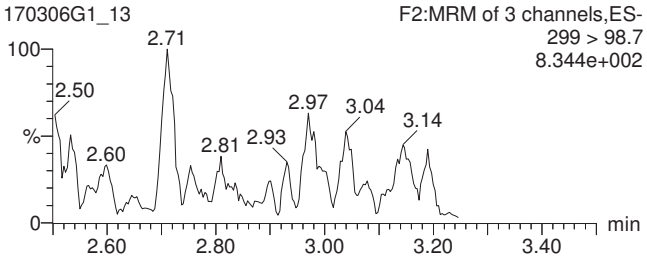
Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

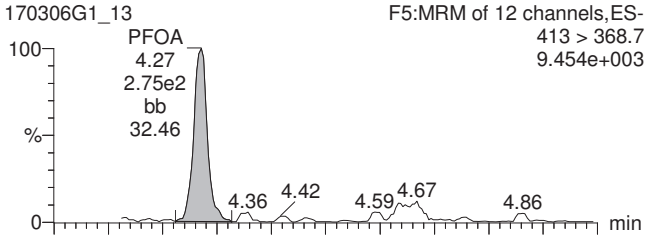
ID: 1700268-05 WI-CV-GW11S-0217 0.12773, Description: WI-CV-GW11S-0217, Name: 170306G1_13, Date: 06-Mar-2017, Time: 17:55:31, Instrument: , Lab: , User:

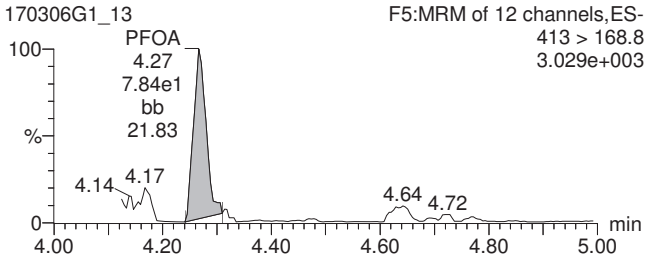
Total PFBS



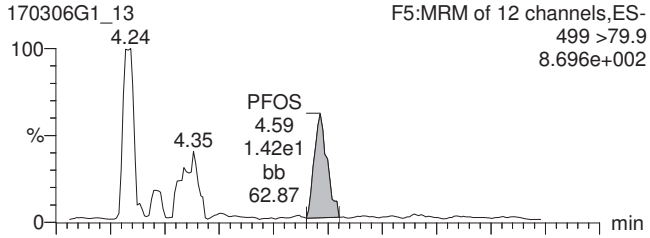


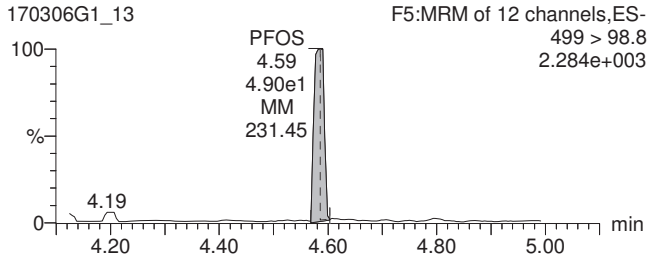
Total PFOA



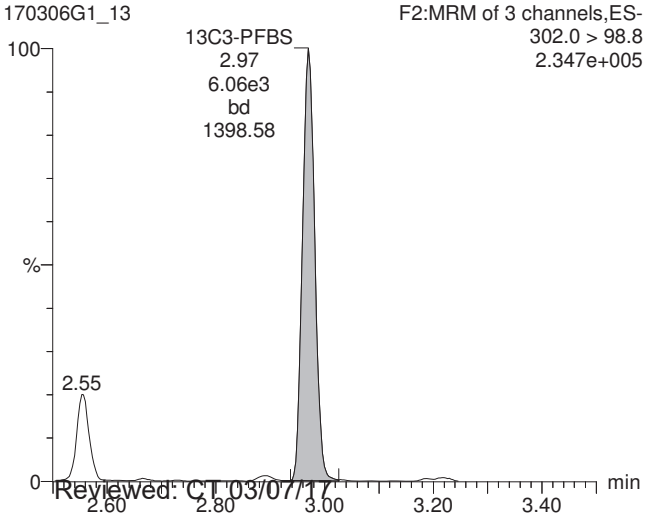


Total PFOS

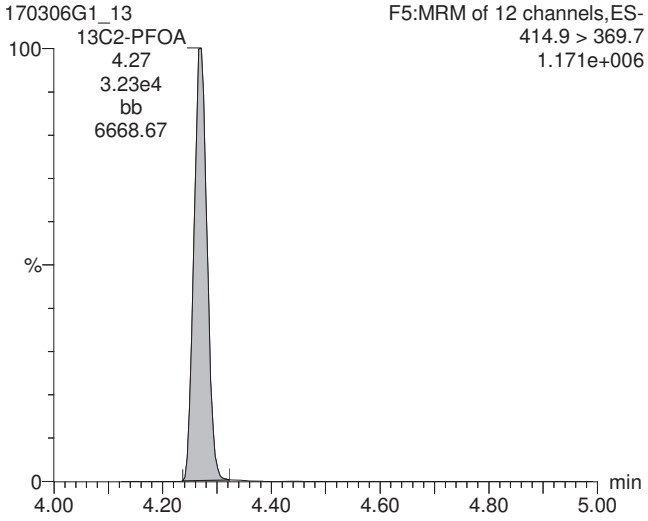




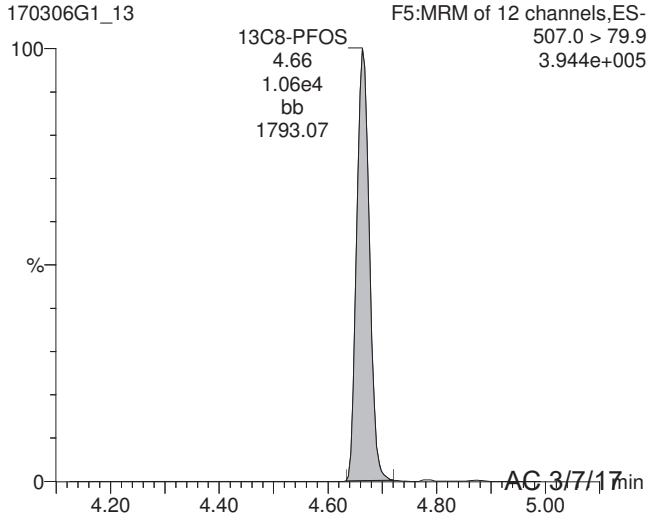
13C3-PFBS



13C2-PFOA



13C8-PFOS



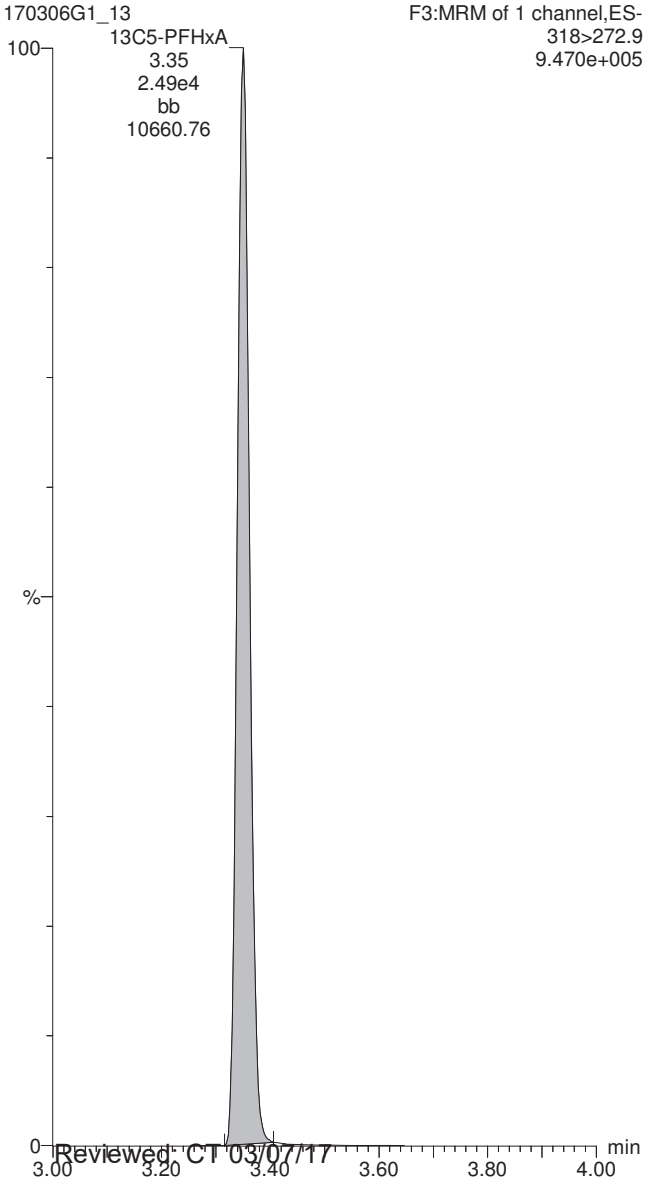
Reviewed: CT 03/07/17 AC 3/7/17

Dataset: U:\G1.PRO\Results\2017\170306G1\170306G1-13.qld

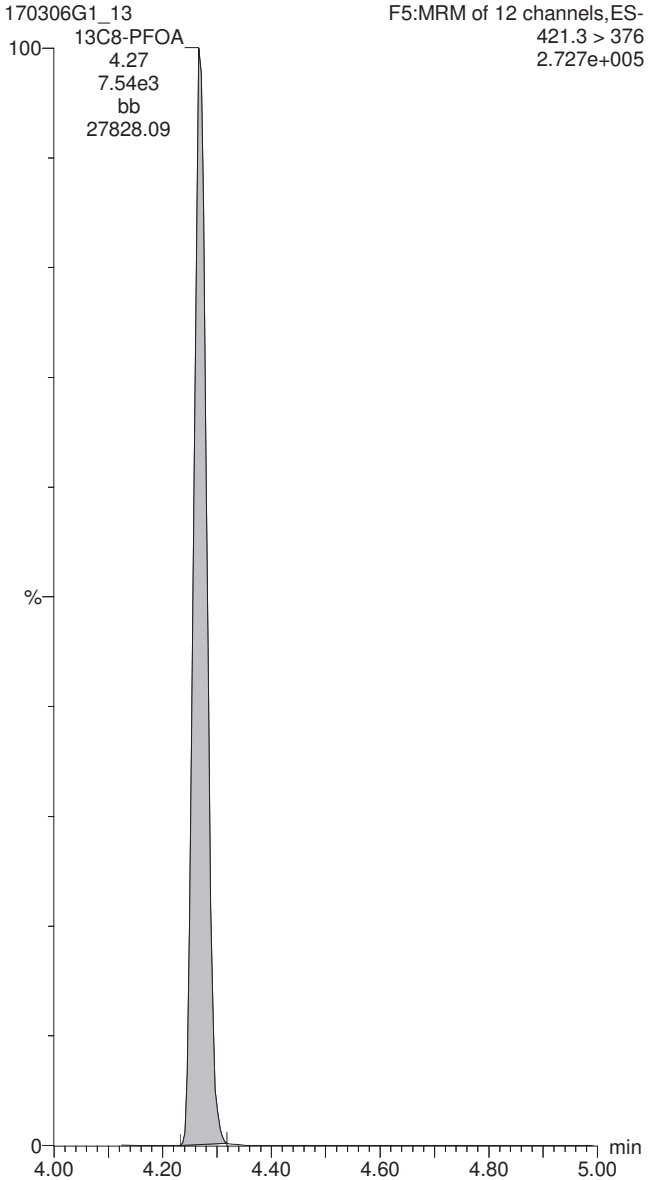
Last Altered: Tuesday, March 07, 2017 10:13:22 AM Pacific Standard Time
Printed: Tuesday, March 07, 2017 10:13:47 AM Pacific Standard Time

ID: 1700268-05 WI-CV-GW11S-0217 0.12773, Description: WI-CV-GW11S-0217, Name: 170306G1_13, Date: 06-Mar-2017, Time: 17:55:31, Instrument: , Lab: , User:

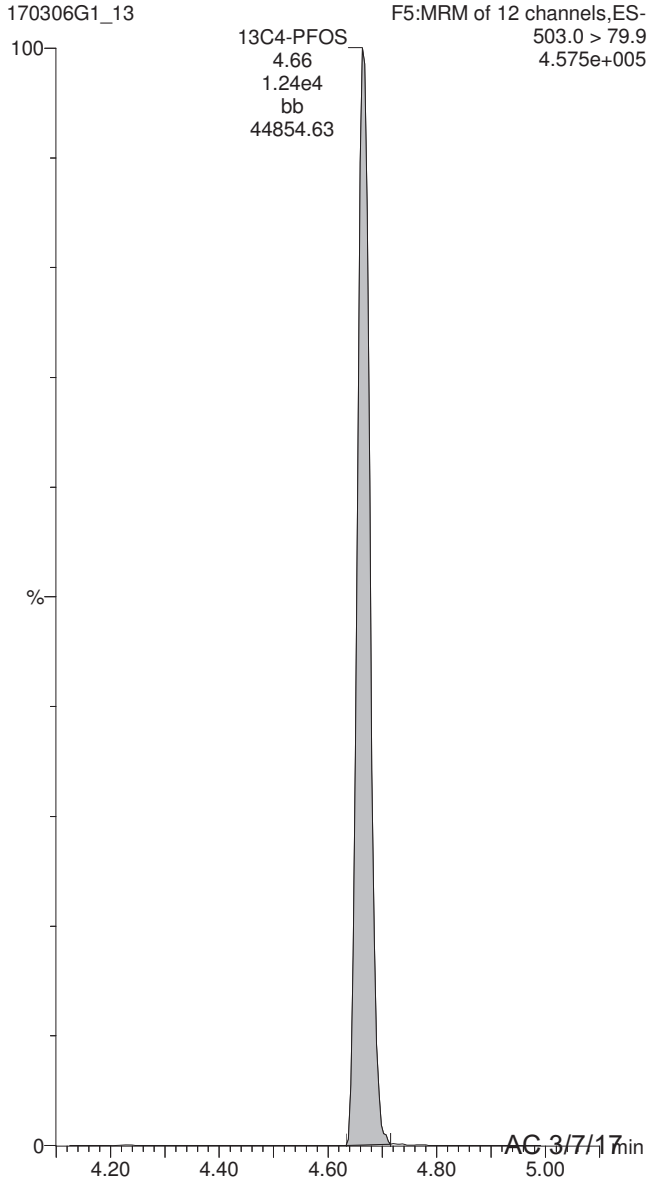
13C5-PFHxA



13C8-PFOA



13C4-PFOS



Reviewed: CT 03/07/17 AC 3/7/17

Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170306G1\170306G1-14.qld

Last Altered: Tuesday, March 07, 2017 10:15:13 AM Pacific Standard Time
Printed: Tuesday, March 07, 2017 10:15:33 AM Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS_6_2_NEW.mdb 07 Mar 2017 09:58:54
Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: 1700268-07 WI-CV-EB06-022617 0.10638, Description: WI-CV-EB06-022617, Name: 170306G1_14, Date: 06-Mar-2017, Time: 18:08:03

	#	Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1	PFBS	299 > 79.7		5.775e3		0.106			
2	4	PFOA	413 > 368.7	2.771e2	3.073e4		0.106	4.27		
3	6	PFOS	499 >79.9	1.150e1	1.189e4		0.106	4.59	1.12	
4	7	13C3-PFBS	302.0 > 98.8	5.775e3	1.623e4	0.410	0.106	2.97	102	86.8
5	8	13C4-PFHpA	367.2 > 321.8	1.489e4	1.623e4	1.098	0.106	3.87	98.2	83.5
6	9	18O2-PFHxS	403 > 102.6	6.650e3	1.623e4	0.434	0.106	3.99	111	94.4
7	10	13C2-PFOA	414.9 > 369.7	3.073e4	7.924e3	4.608	0.106	4.27	98.9	84.2
8	11	13C5-PFNA	468.2 > 422.9	8.176e3	1.146e4	0.867	0.106	4.60	96.7	82.3
9	12	13C8-PFOS	507.0 > 79.9	1.189e4	1.350e4	0.958	0.106	4.66	108	91.9
10	13	13C5-PFHxA	318>272.9	2.647e4	2.647e4	1.000	0.106	3.35	118	100
11	14	13C3-PFHxS	401.9 > 79.9	1.623e4	1.623e4	1.000	0.106	3.99	118	100
12	15	13C8-PFOA	421.3 > 376	7.924e3	7.924e3	1.000	0.106	4.27	118	100
13	16	13C9-PFNA	472.2 > 426.9	1.146e4	1.146e4	1.000	0.106	4.60	118	100
14	17	13C4-PFOS	503.0 > 79.9	1.350e4	1.350e4	1.000	0.106	4.66	118	100
15	18	Total PFBS	299 > 79.7		6.650e3		0.106			
16	20	Total PFOA	413 > 368.7		3.073e4		0.106			
17	21	Total PFOS	499 > 79.9		1.189e4		0.106		1.12	

Reviewed: CT 03/07/17

AC 3/7/17

Vista Analytical Laboratory Q1

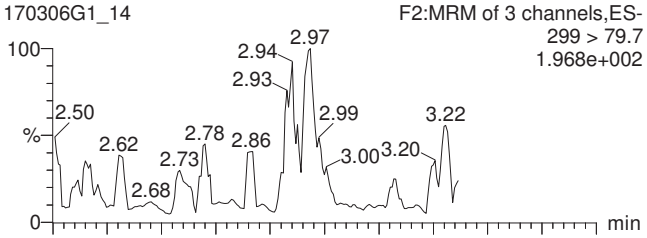
Dataset: U:\G1.PRO\Results\2017\170306G1\170306G1-14.qld

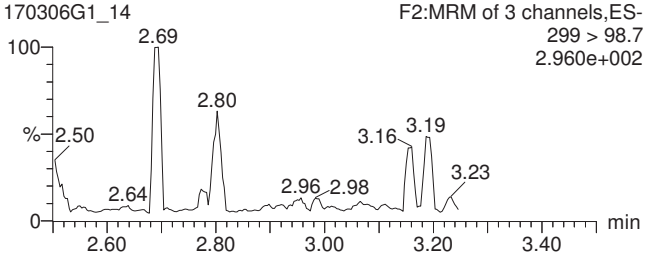
Last Altered: Tuesday, March 07, 2017 10:15:13 AM Pacific Standard Time
Printed: Tuesday, March 07, 2017 10:15:33 AM Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS_6_2_NEW.mdb 07 Mar 2017 09:58:54
Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

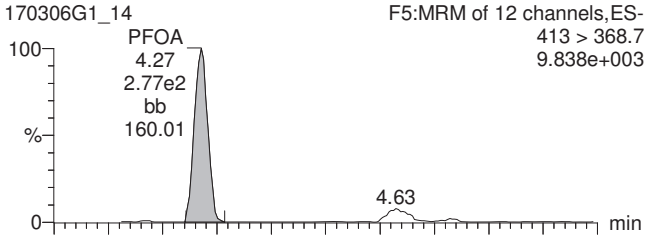
ID: 1700268-07 WI-CV-EB06-022617 0.10638, Description: WI-CV-EB06-022617, Name: 170306G1_14, Date: 06-Mar-2017, Time: 18:08:03, Instrument: , Lab: , User:

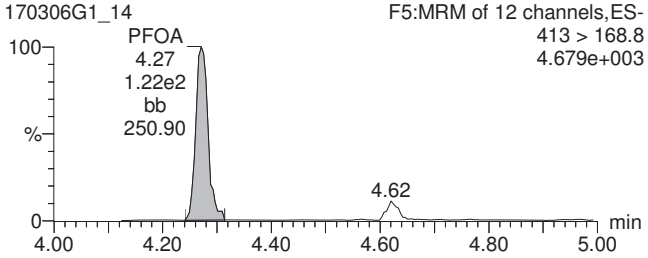
Total PFBS



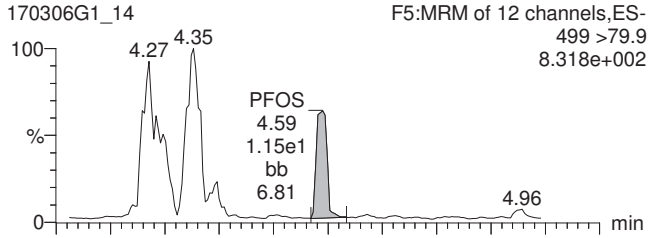


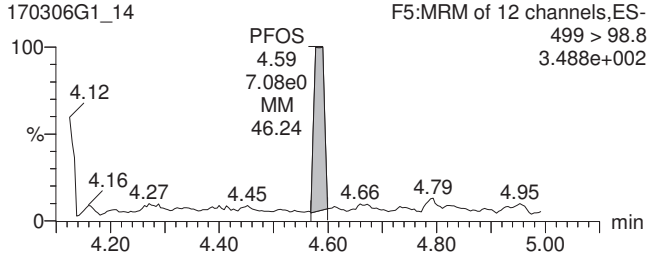
Total PFOA



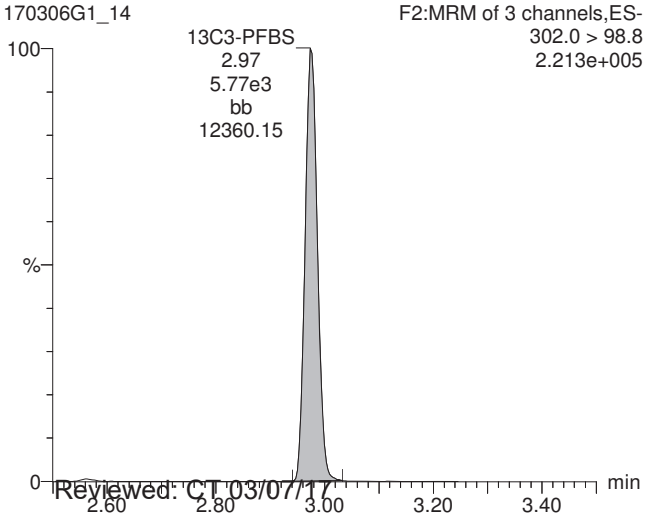


Total PFOS

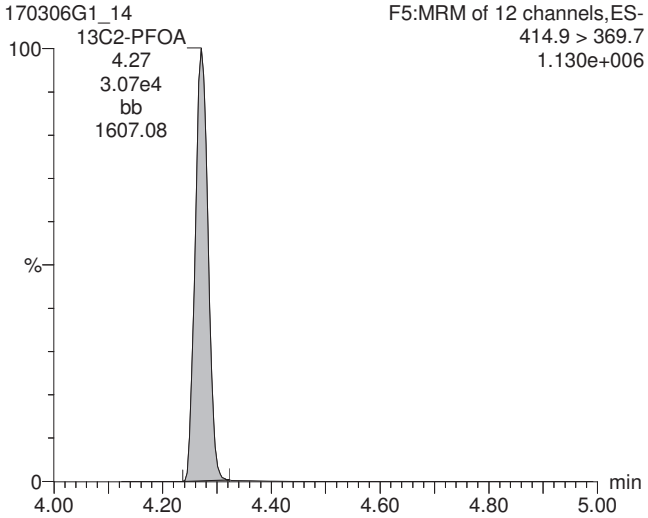




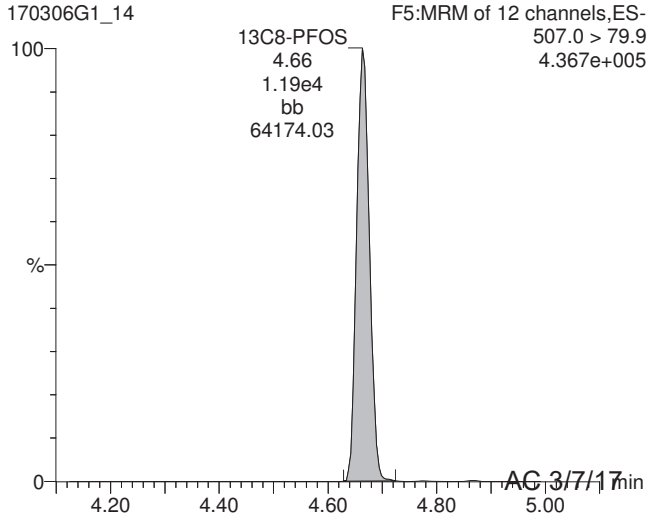
13C3-PFBS



13C2-PFOA



13C8-PFOS



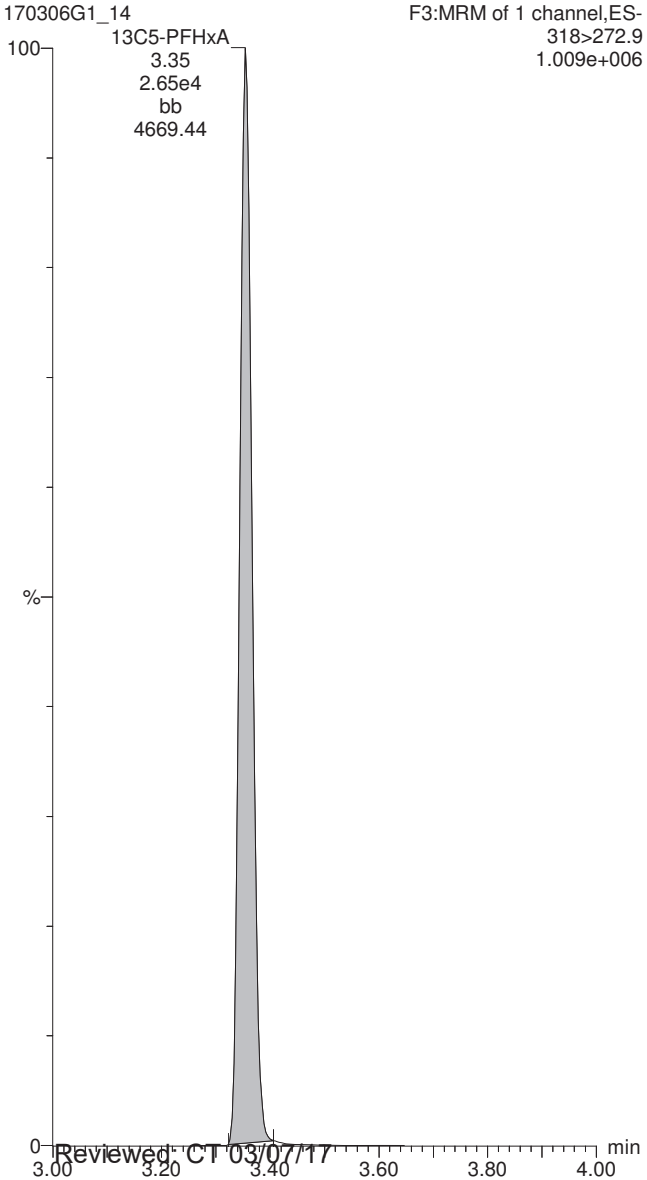
Reviewed: CT 03/07/17 AC 3/7/17

Dataset: U:\G1.PRO\Results\2017\170306G1\170306G1-14.qld

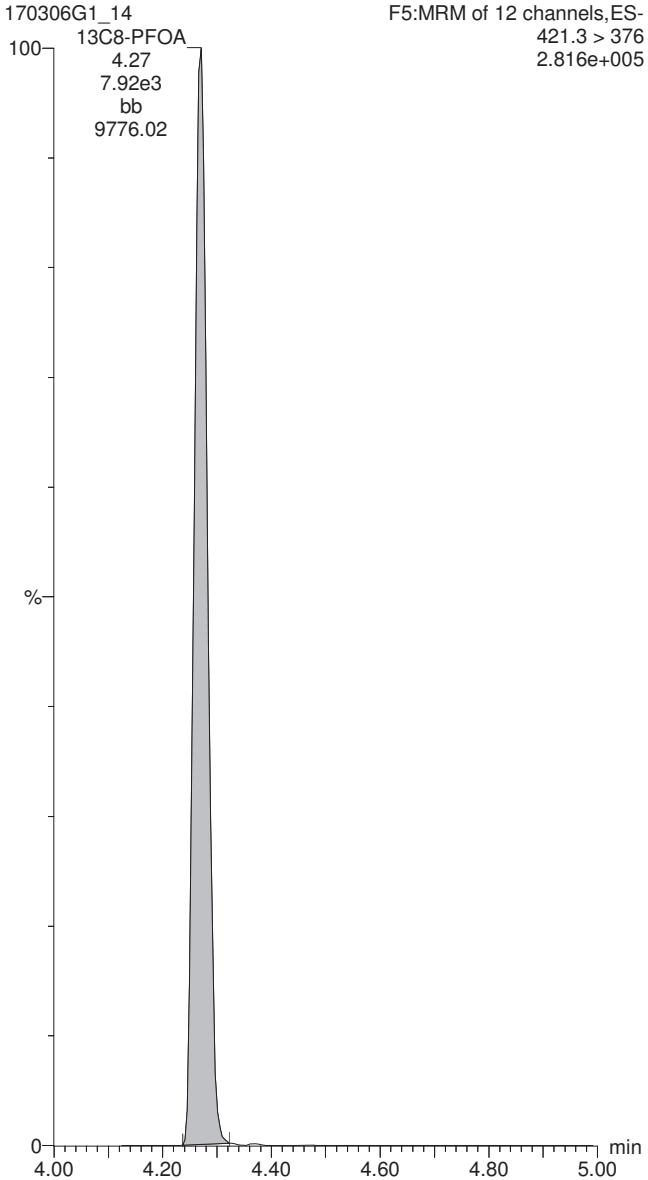
Last Altered: Tuesday, March 07, 2017 10:15:13 AM Pacific Standard Time
Printed: Tuesday, March 07, 2017 10:15:33 AM Pacific Standard Time

ID: 1700268-07 WI-CV-EB06-022617 0.10638, Description: WI-CV-EB06-022617, Name: 170306G1_14, Date: 06-Mar-2017, Time: 18:08:03, Instrument: , Lab: , User:

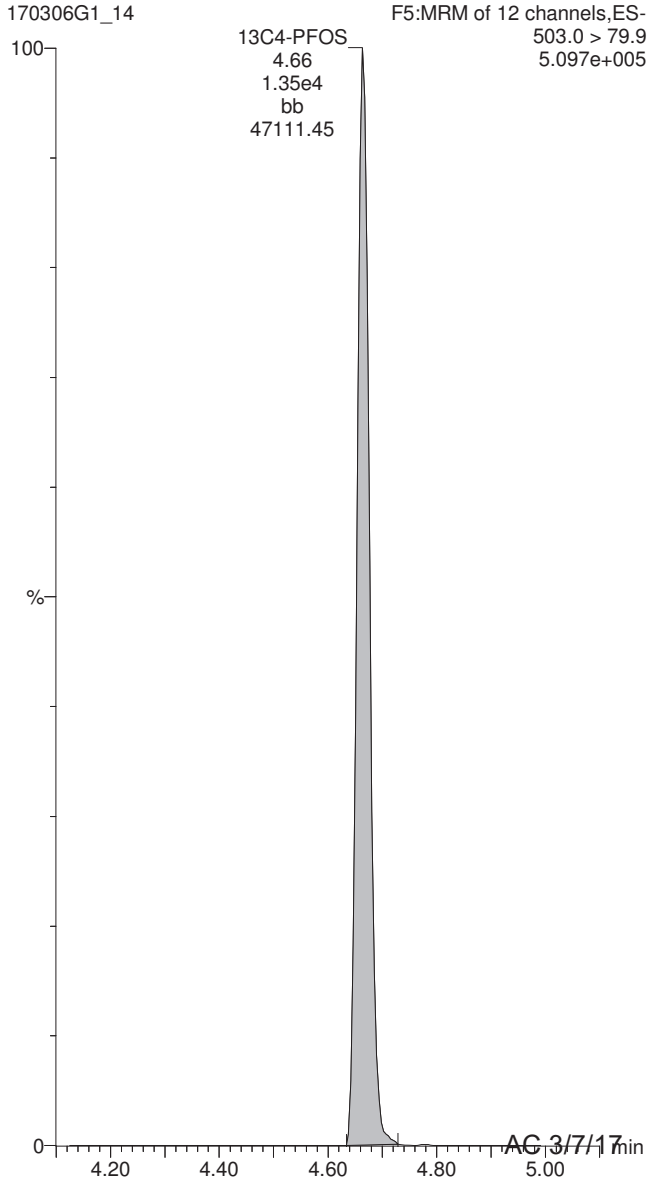
13C5-PFHxA



13C8-PFOA



13C4-PFOS



Reviewed: CT 03/07/17 AC 3/7/17

Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170306G1\170306G1-15.qld

Last Altered: Tuesday, March 07, 2017 10:23:02 AM Pacific Standard Time
Printed: Tuesday, March 07, 2017 10:24:17 AM Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS_6_2_NEW.mdb 07 Mar 2017 09:58:54
Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: 1700268-08 WI-CV-EB05-022417 0.12657, Description: WI-CV-EB05-022417, Name: 170306G1_15, Date: 06-Mar-2017, Time: 18:20:37

	#	Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1	PFBS	299 > 79.7		6.009e3		0.127			
2	4	PFOA	413 > 368.7	2.492e2	3.250e4		0.127	4.27		
3	6	PFOS	499 >79.9		1.088e4		0.127			
4	7	13C3-PFBS	302.0 > 98.8	6.009e3	1.497e4	0.410	0.127	2.98	96.7	97.9
5	8	13C4-PFHpA	367.2 > 321.8	1.501e4	1.497e4	1.098	0.127	3.87	90.2	91.3
6	9	18O2-PFHxS	403 > 102.6	6.721e3	1.497e4	0.434	0.127	3.99	102	103
7	10	13C2-PFOA	414.9 > 369.7	3.250e4	7.949e3	4.608	0.127	4.27	87.6	88.7
8	11	13C5-PFNA	468.2 > 422.9	8.907e3	1.091e4	0.867	0.127	4.61	93.0	94.1
9	12	13C8-PFOS	507.0 > 79.9	1.088e4	1.138e4	0.958	0.127	4.66	98.5	99.8
10	13	13C5-PFHxA	318>272.9	2.650e4	2.650e4	1.000	0.127	3.35	98.8	100
11	14	13C3-PFHxS	401.9 > 79.9	1.497e4	1.497e4	1.000	0.127	3.99	98.8	100
12	15	13C8-PFOA	421.3 > 376	7.949e3	7.949e3	1.000	0.127	4.27	98.8	100
13	16	13C9-PFNA	472.2 > 426.9	1.091e4	1.091e4	1.000	0.127	4.60	98.8	100
14	17	13C4-PFOS	503.0 > 79.9	1.138e4	1.138e4	1.000	0.127	4.66	98.8	100
15	18	Total PFBS	299 > 79.7		6.721e3		0.127			
16	20	Total PFOA	413 > 368.7		3.250e4		0.127			
17	21	Total PFOS	499 > 79.9		1.088e4		0.127			

Reviewed: CT 03/07/17

AC 3/7/17

Vista Analytical Laboratory Q1

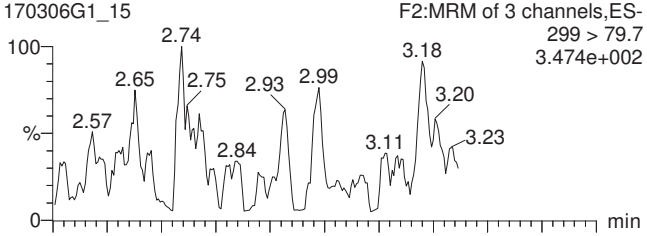
Dataset: U:\G1.PRO\Results\2017\170306G1\170306G1-15.qld

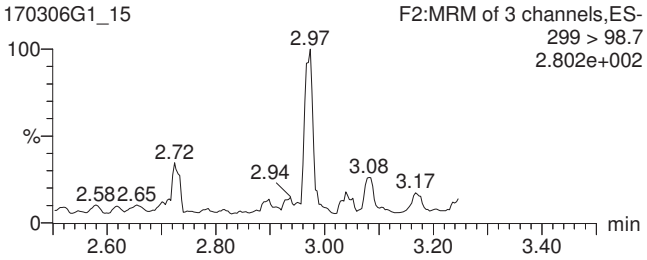
Last Altered: Tuesday, March 07, 2017 10:23:02 AM Pacific Standard Time
Printed: Tuesday, March 07, 2017 10:24:17 AM Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS_6_2_NEW.mdb 07 Mar 2017 09:58:54
Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

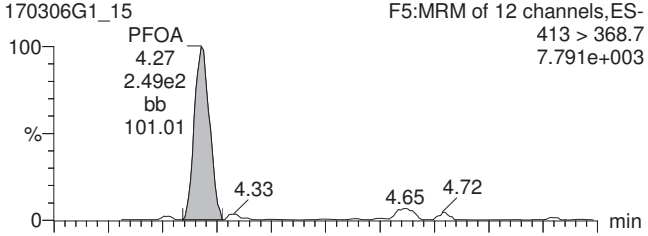
ID: 1700268-08 WI-CV-EB05-022417 0.12657, Description: WI-CV-EB05-022417, Name: 170306G1_15, Date: 06-Mar-2017, Time: 18:20:37, Instrument: , Lab: , User:

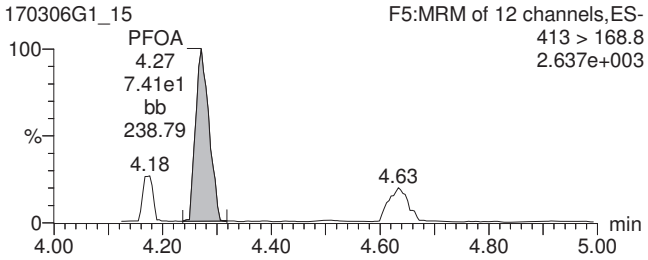
Total PFBS



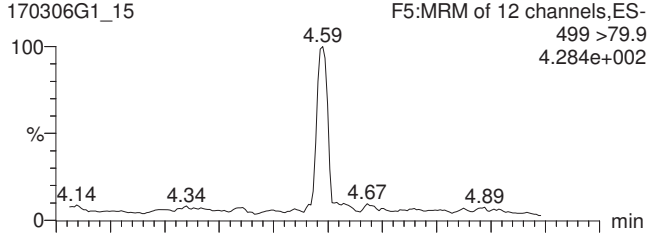


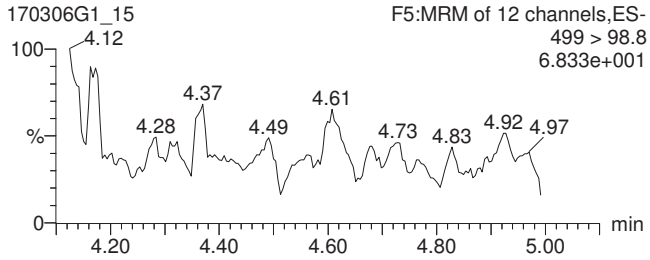
Total PFOA



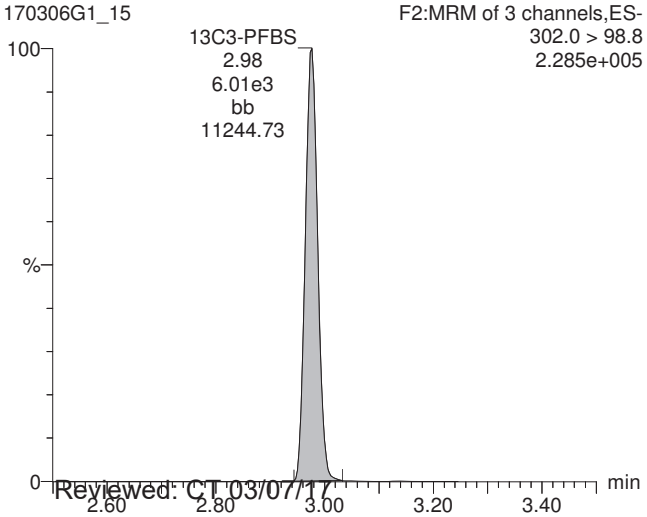


Total PFOS

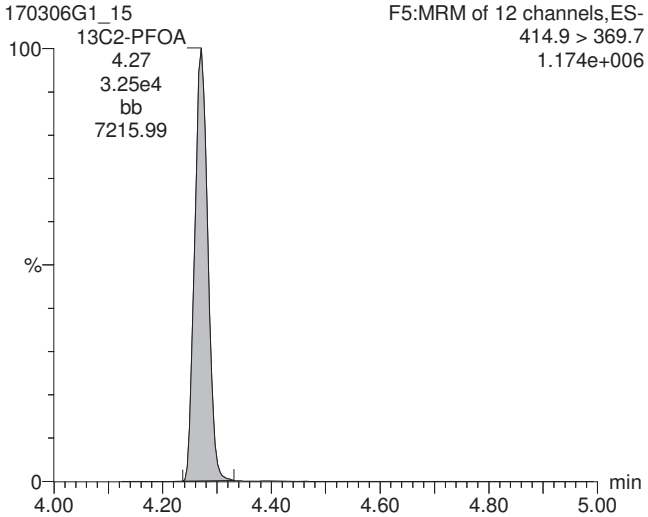




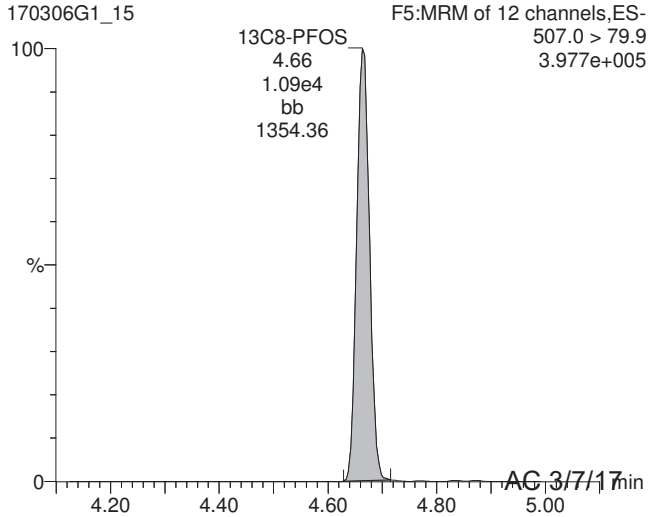
13C3-PFBS



13C2-PFOA



13C8-PFOS



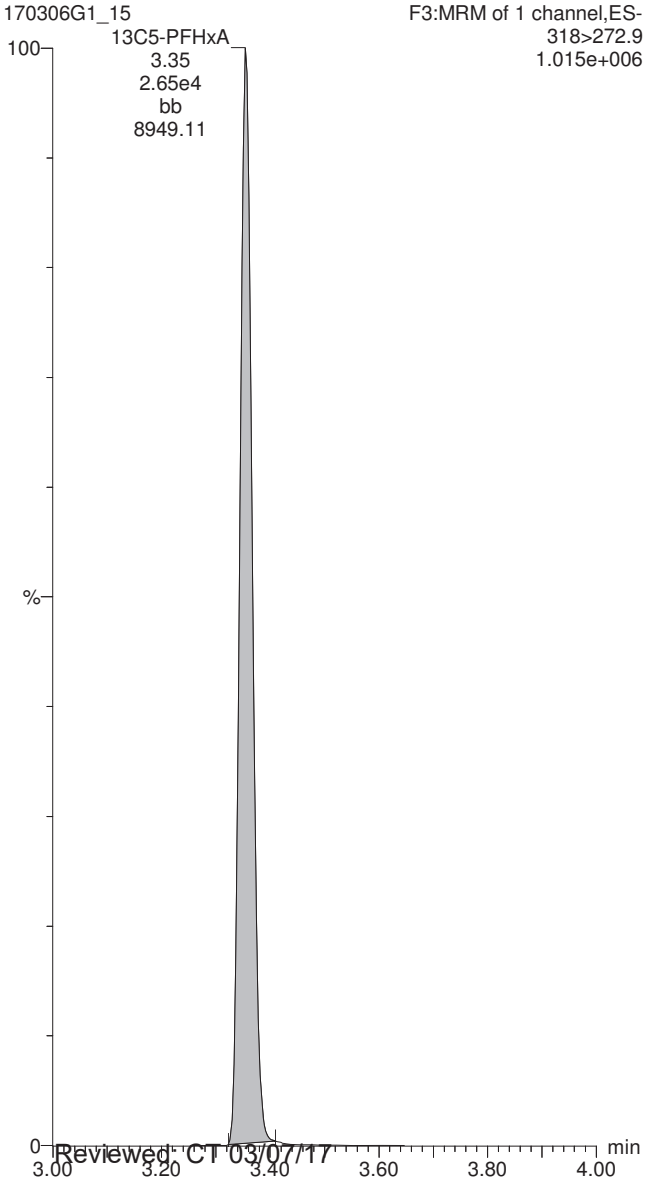
Reviewed: CT 03/07/17 AC 3/7/17

Dataset: U:\G1.PRO\Results\2017\170306G1\170306G1-15.qld

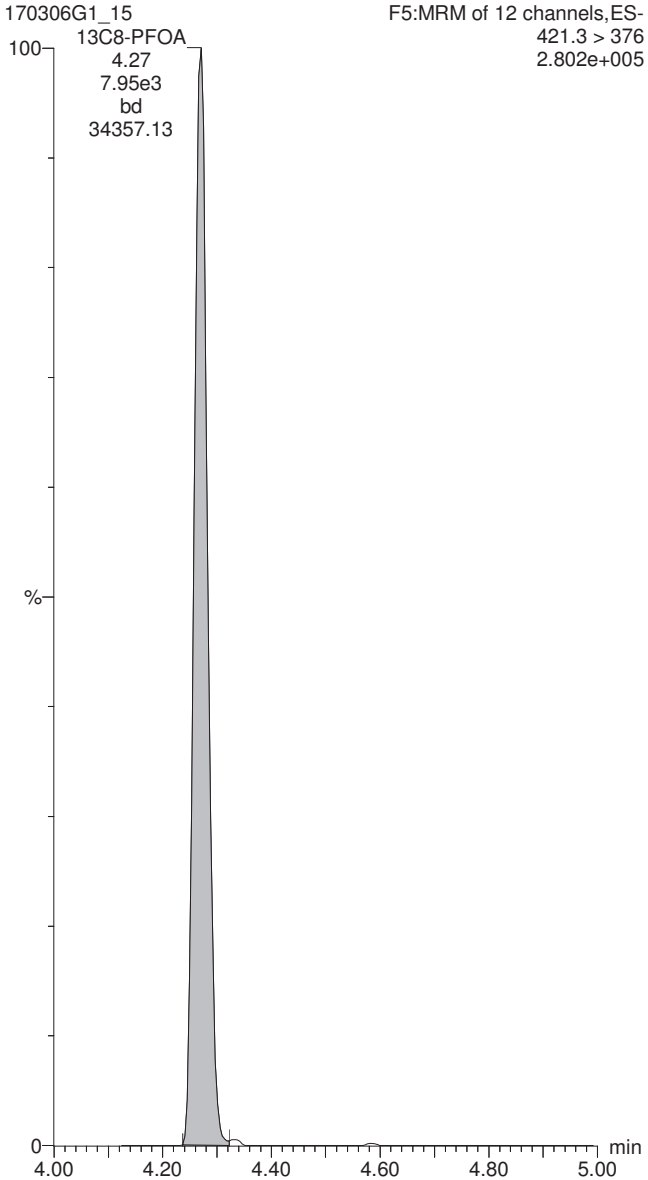
Last Altered: Tuesday, March 07, 2017 10:23:02 AM Pacific Standard Time
Printed: Tuesday, March 07, 2017 10:24:17 AM Pacific Standard Time

ID: 1700268-08 WI-CV-EB05-022417 0.12657, Description: WI-CV-EB05-022417, Name: 170306G1_15, Date: 06-Mar-2017, Time: 18:20:37, Instrument: , Lab: , User:

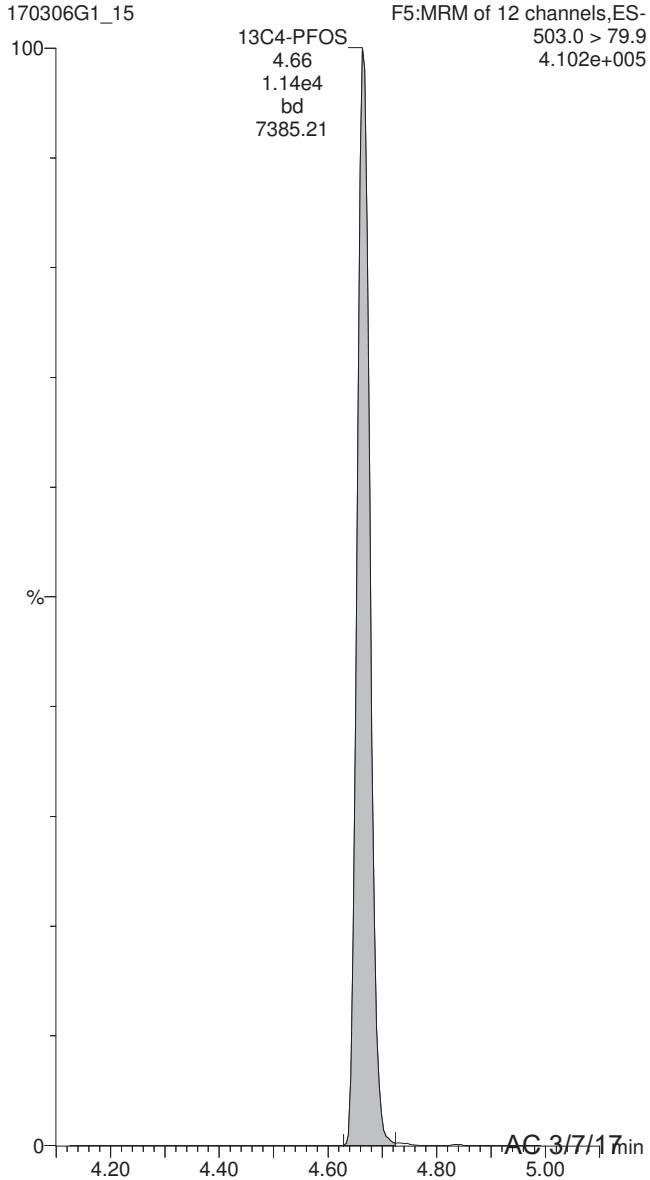
13C5-PFHxA



13C8-PFOA



13C4-PFOS



Reviewed: CT 03/07/17 AC 3/7/17

CONTINUING CALIBRATION

Quantify Sample Summary Report **MassLynx 4.1 SCN815**
Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-29.qld

Last Altered: Monday, March 06, 2017 09:19:31 Pacific Standard Time
Printed: Monday, March 06, 2017 09:21:39 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_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

Name: 170305G1_29, Date: 05-Mar-2017, Time: 18:25:28, ID: ST170305G1-9 PFC CS3 17C0506, Description: PFC CS3 17C0506 A

	#	Name	Trace	Response	IS Resp	RRF	Wt/Vol	RT	Conc.	%Rec
1	1	PFBS	299 > 79.7	1.28e4	6.48e3		1.000	3.04	10.3	103.5
2	2	PFHpA	363 > 318.9	2.87e4	1.84e4		1.000	3.92	10.8	107.8
3	3	PFHxS	398.9 > 79.6	1.13e4	6.93e3		1.000	4.03	11.2	111.7
4	4	PFOA	413 > 368.7	2.58e4	3.78e4		1.000	4.31	10.5	105.0
5	5	PFNA	463 > 418.8	1.43e4	5.76e3		1.000	4.64	11.3	112.9
6	6	PFOS	499 >79.9	1.66e3	3.19e3		1.000	4.70	12.2	121.5
7	7	13C3-PFBS	302.0 > 98.8	6.48e3	1.60e4	0.410	1.000	3.04	12.3	98.6
8	8	13C4-PFHpA	367.2 > 321.8	1.84e4	1.60e4	1.098	1.000	3.92	13.0	104.4
9	9	18O2-PFHxS	403 > 102.6	6.93e3	1.60e4	0.434	1.000	4.03	12.4	99.5
10	10	13C2-PFOA	414.9 > 369.7	3.78e4	8.73e3	4.608	1.000	4.31	11.7	94.0
11	11	13C5-PFNA	468.2 > 422.9	5.76e3	6.97e3	0.867	1.000	4.64	11.9	95.3
12	12	13C8-PFOS	507.0 > 79.9	3.19e3	3.51e3	0.958	1.000	4.70	11.9	94.8
13	13	13C5-PFHxA	318>272.9	2.93e4	2.93e4	1.000	1.000	3.41	12.5	100.0
14	14	13C3-PFHxS	401.9 > 79.9	1.60e4	1.60e4	1.000	1.000	4.03	12.5	100.0
15	15	13C8-PFOA	421.3 > 376	8.73e3	8.73e3	1.000	1.000	4.31	12.5	100.0
16	16	13C9-PFNA	472.2 > 426.9	6.97e3	6.97e3	1.000	1.000	4.64	12.5	100.0
17	17	13C4-PFOS	503.0 > 79.9	3.51e3	3.51e3	1.000	1.000	4.70	12.5	100.0

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

ES 3/6/17

✓ AC 3/6/17

Vista Analytical Laboratory VG-11

Dataset: Untitled

Last Altered: Monday, March 06, 2017 09:13:54 Pacific Standard Time
Printed: Monday, March 06, 2017 09:14:12 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_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

Compound name: PFBS

	Name	ID	Acq.Date	Acq.Time
1	170305G1_1	IPA	05-Mar-17	12:34:35
2	170305G1_2	ST170305G1-1 PFC CS-2 17C0501	05-Mar-17	12:46:48
3	170305G1_3	ST170305G1-2 PFC CS-1 17C0502	05-Mar-17	12:59:15
4	170305G1_4	ST170305G1-3 PFC CS0 17C0503	05-Mar-17	13:11:49
5	170305G1_5	ST170305G1-4 PFC CS1 17C0504	05-Mar-17	13:24:21
6	170305G1_6	ST170305G1-5 PFC CS2 17C0505	05-Mar-17	13:36:55
7	170305G1_7	ST170305G1-6 PFC CS3 17C0506	05-Mar-17	13:49:29
8	170305G1_8	ST170305G1-7 PFC CS4 17C0507	05-Mar-17	14:02:00
9	170305G1_9	ST170305G1-8 PFC CS5 17C0508	05-Mar-17	14:14:34
10	170305G1_10	IPA	05-Mar-17	14:27:08
11	170305G1_11	SS170305G1-1 PFC SSS 17C0509	05-Mar-17	14:39:40
12	170305G1_12	IPA	05-Mar-17	14:52:09
13	170305G1_13	B7C0012-BS1 OPR 0.125	05-Mar-17	15:04:45
14	170305G1_14	B7C0010-BS1 OPR 0.125	05-Mar-17	15:17:15
15	170305G1_15	IPA	05-Mar-17	15:29:48
16	170305G1_16	B7C0012-BLK1 Method Blank 0.125	05-Mar-17	15:42:23
17	170305G1_17	B7C0010-BLK1 Method Blank 0.125	05-Mar-17	15:54:54
18	170305G1_18	1700268-02RE1 WI-CV-GW05M-0217 0.125	05-Mar-17	16:07:28
19	170305G1_19	1700268-04RE1 WI-CV-GW11M-0217 0.125	05-Mar-17	16:20:00
20	170305G1_20	1700280-01 WI-CV-GW03M-0217 0.125	05-Mar-17	16:32:34
21	170305G1_21	1700280-02 WI-CV-GW03D-0217 0.125	05-Mar-17	16:45:07
22	170305G1_22	1700280-03 WI-CV-EB07-022717 0.125	05-Mar-17	16:57:36
23	170305G1_23	1700280-04 WI-CV-GW04M-0217 0.125	05-Mar-17	17:10:09
24	170305G1_24	1700280-05 WI-CV-GW01M-0217 0.125	05-Mar-17	17:22:42
25	170305G1_25	1700280-06 WI-CV-EB08-022817 0.125	05-Mar-17	17:35:16
26	170305G1_26	1700280-07 WI-CV-GW01D-0217 0.125	05-Mar-17	17:47:49
27	170305G1_27	1700277-01 MILK-022717 0.005	05-Mar-17	18:00:22
28	170305G1_28	IPA	05-Mar-17	18:12:56
29	170305G1_29	ST170305G1-9 PFC CS3 17C0506	05-Mar-17	18:25:28
30	170305G1_30	IPA	05-Mar-17	18:38:01

LC Calibration Standards Review Checklist Q1

			ION Ratio	Concentration	C-Cals Name	Sign Date	Correct I-Cal	Manual Integrations	NA
Calibration ID:	ST170305G1-9	L (M) H	☑ NA	☑	☑	☑	☑	☑	☑
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐

Full Mass Cal. Date: 12/6/17

Run Log Present: ☑

# of Samples per Sequence Checked: ☑

Reviewed By: AC 3/6/17
Initials/Date

Comments:
L6, 2-Trans

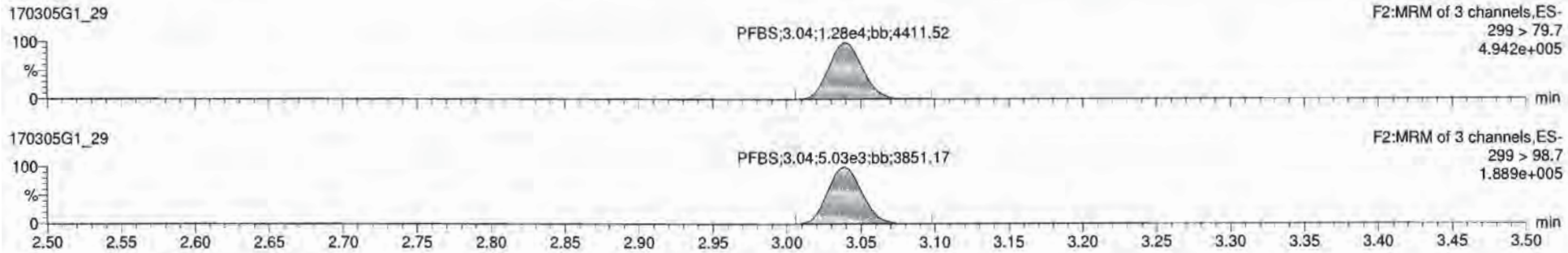
Dataset: Untitled

Last Altered: Monday, March 06, 2017 09:16:05 Pacific Standard Time
Printed: Monday, March 06, 2017 09:18:07 Pacific Standard Time

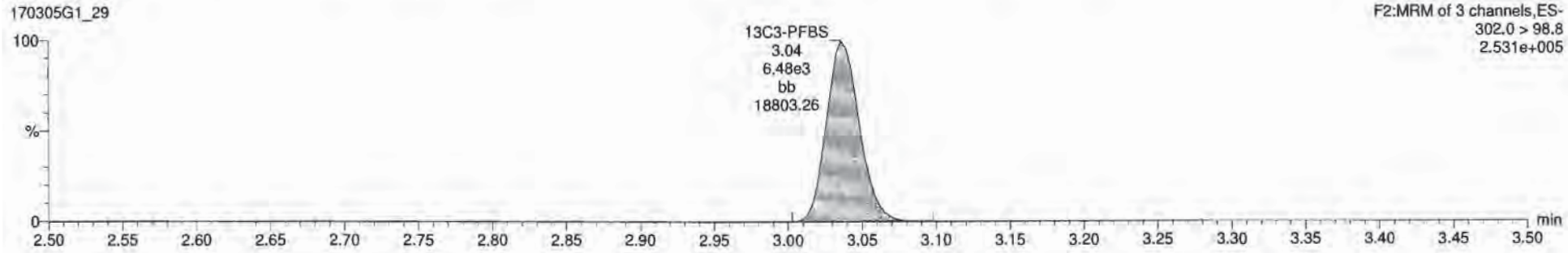
Method: U:\G1.pro\MethDB\PFAS_6_2trans_LINEAR.mdb 02 Mar 2017 11:26:53
Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: ST170305G1-9 PFC CS3 17C0506, Description: PFC CS3 17C0506 A, Name: 170305G1_29, Date: 05-Mar-2017, Time: 18:25:28, Instrument: , Lab: , User:

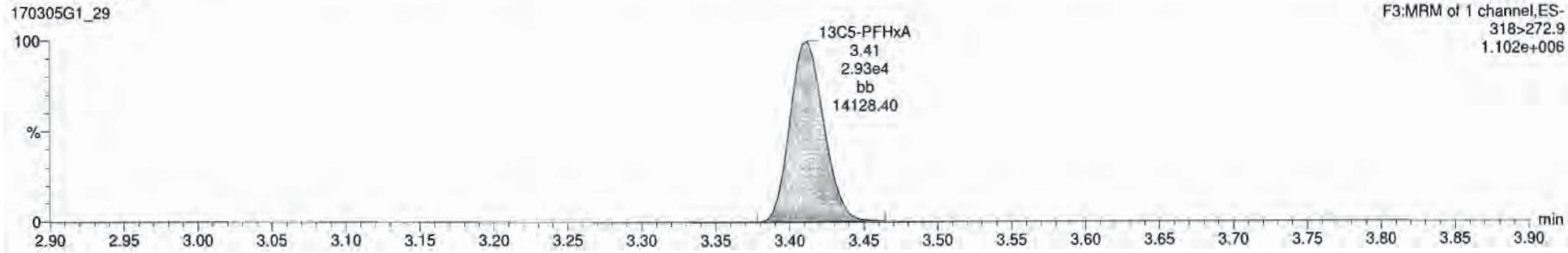
PFBS



13C3-PFBS



13C5-PFHxA

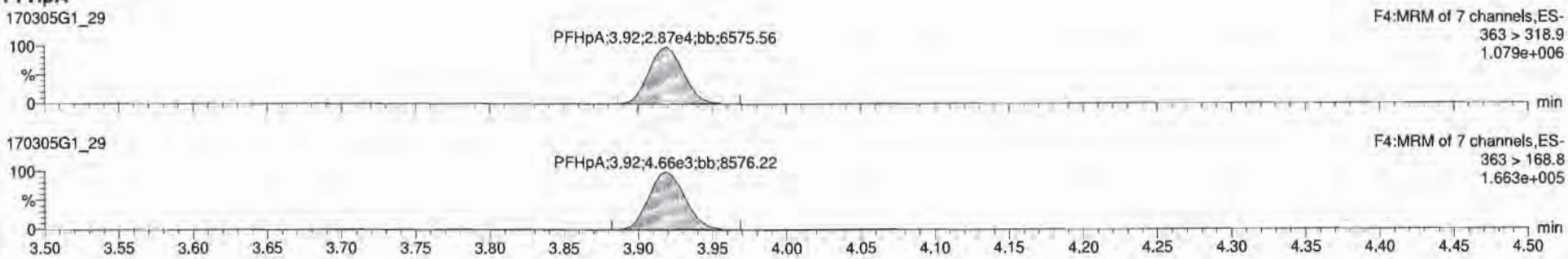


Dataset: Untitled

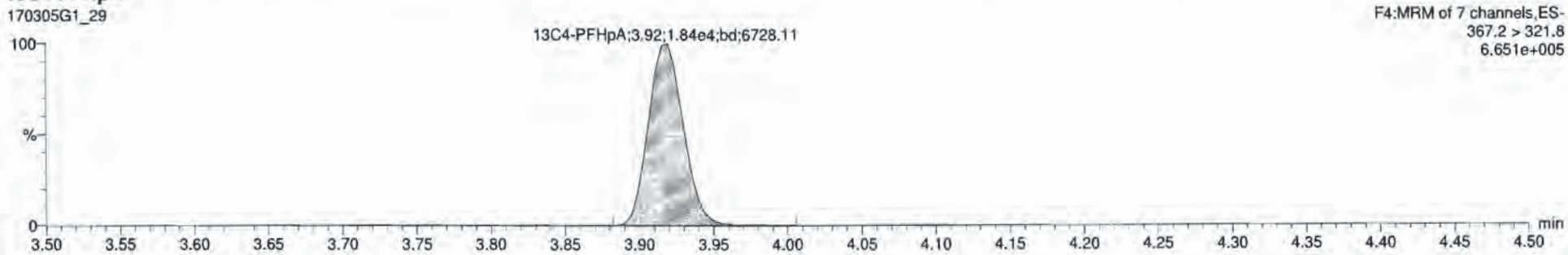
Last Altered: Monday, March 06, 2017 09:16:05 Pacific Standard Time
Printed: Monday, March 06, 2017 09:18:07 Pacific Standard Time

ID: ST170305G1-9 PFC CS3 17C0506, Description: PFC CS3 17C0506 A, Name: 170305G1_29, Date: 05-Mar-2017, Time: 18:25:28, Instrument: , Lab: , User:

PFHpA



13C4-PFHpA



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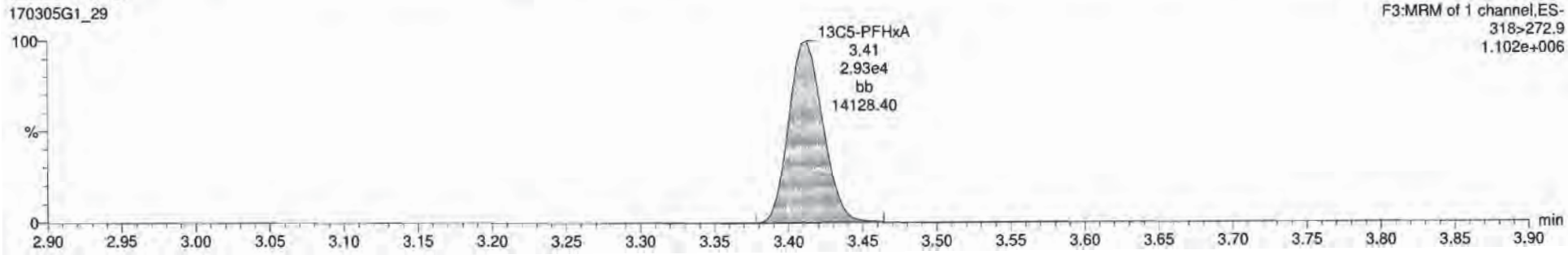


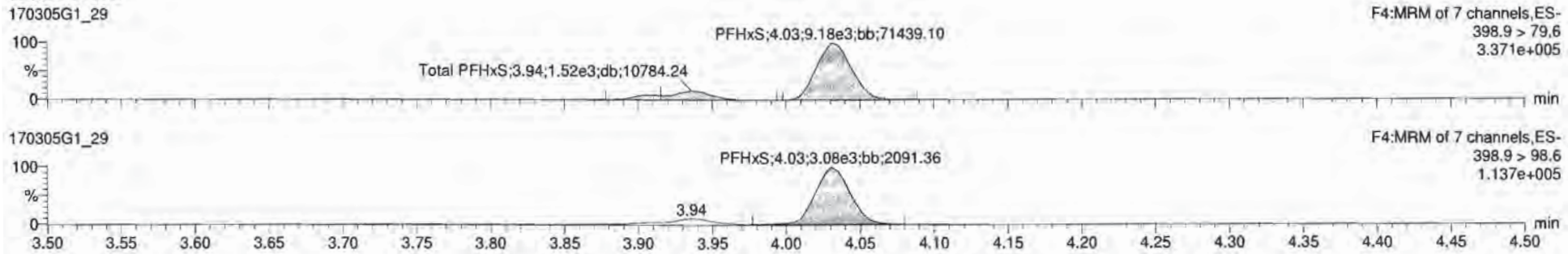
Vista Analytical Laboratory Q1

Dataset: Untitled

Last Altered: Monday, March 06, 2017 09:16:05 Pacific Standard Time
Printed: Monday, March 06, 2017 09:18:07 Pacific Standard Time

ID: ST170305G1-9 PFC CS3 17C0506, Description: PFC CS3 17C0506 A, Name: 170305G1_29, Date: 05-Mar-2017, Time: 18:25:28, Instrument: , Lab: , User:

Total PFHxS



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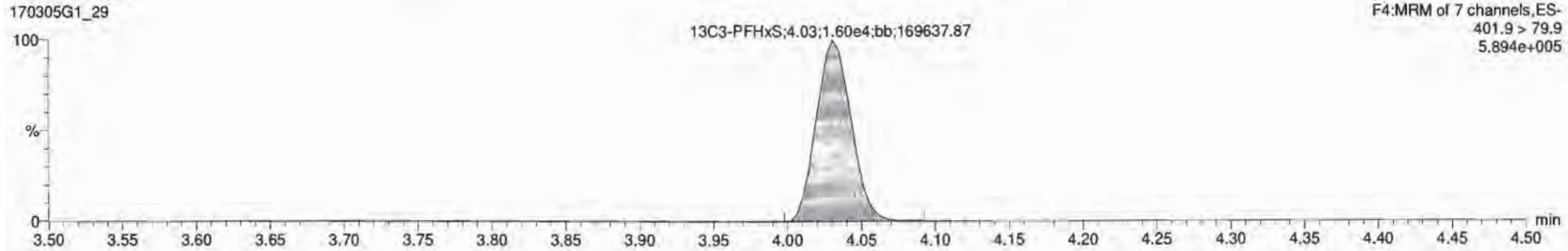
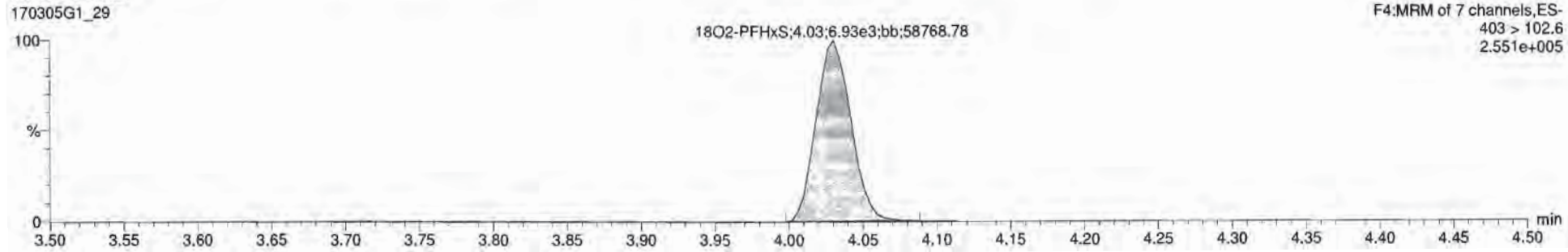
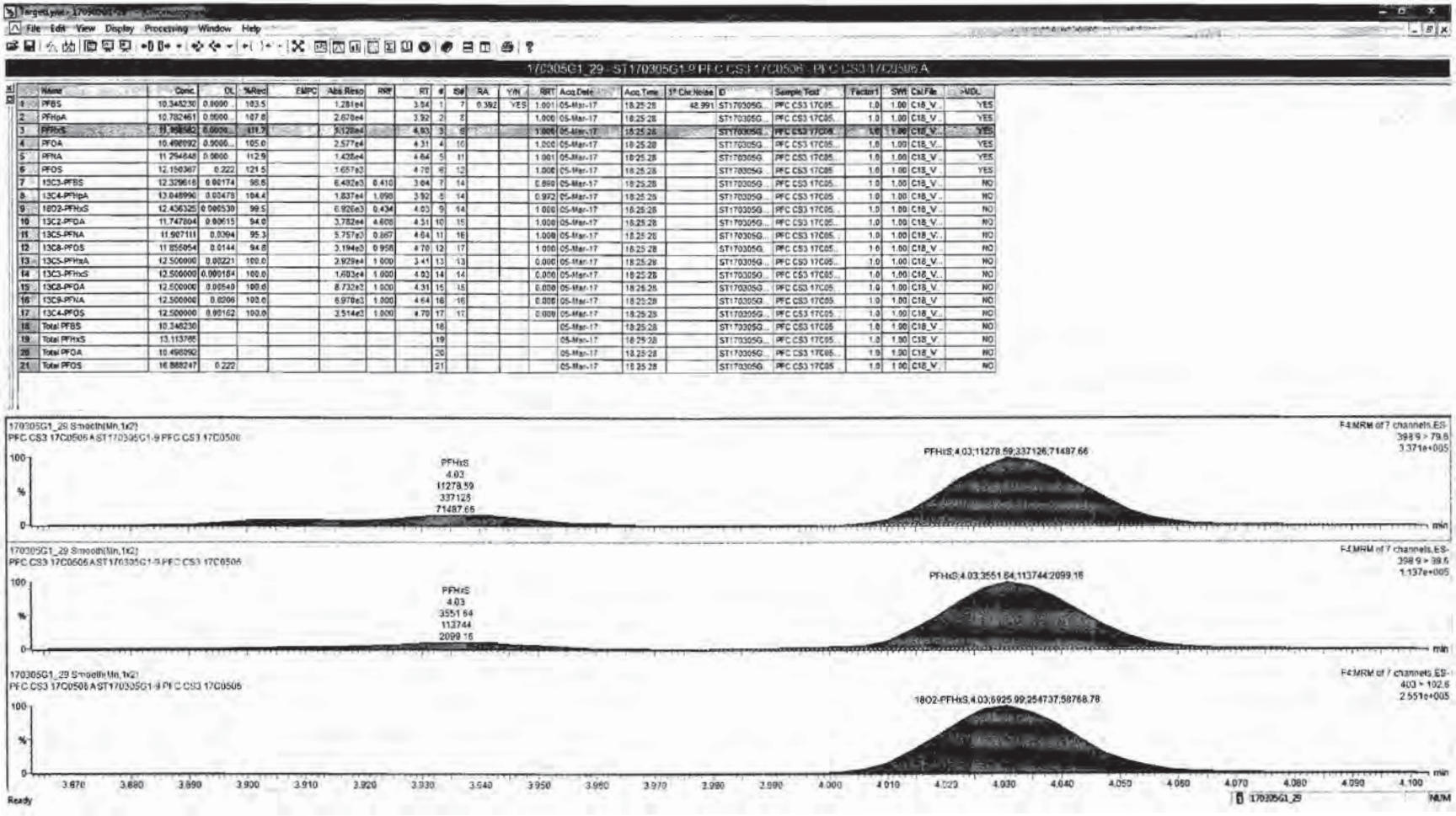


18O2-PFHxS

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170305G1_29 - ST170305G1-9 PFC CS3 17C0506 - PFC CS3 17C0506 A
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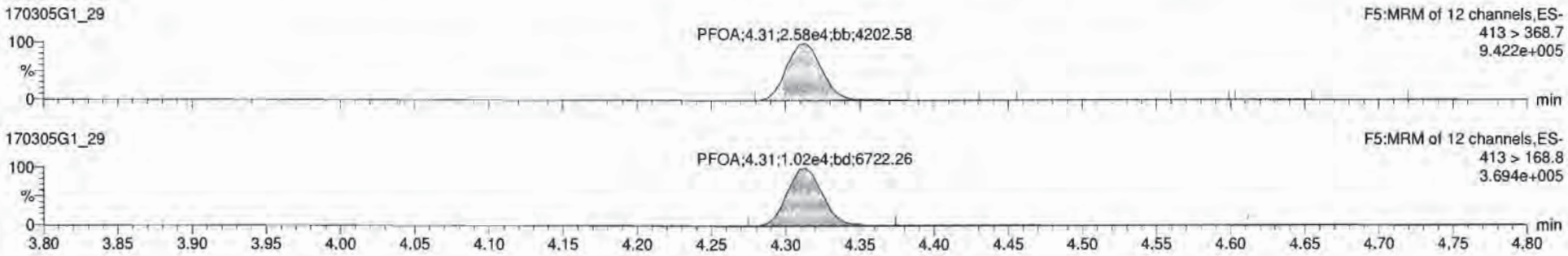
PFHxS 4.03 3551.64 113744 2099.16
18O2-PFHxS 4.03 6925.99 254737 58768.78
Ready

Dataset: Untitled

Last Altered: Monday, March 06, 2017 09:16:05 Pacific Standard Time
Printed: Monday, March 06, 2017 09:18:07 Pacific Standard Time

ID: ST170305G1-9 PFC CS3 17C0506, Description: PFC CS3 17C0506 A, Name: 170305G1_29, Date: 05-Mar-2017, Time: 18:25:28, Instrument: , Lab: , User:

Total PFOA



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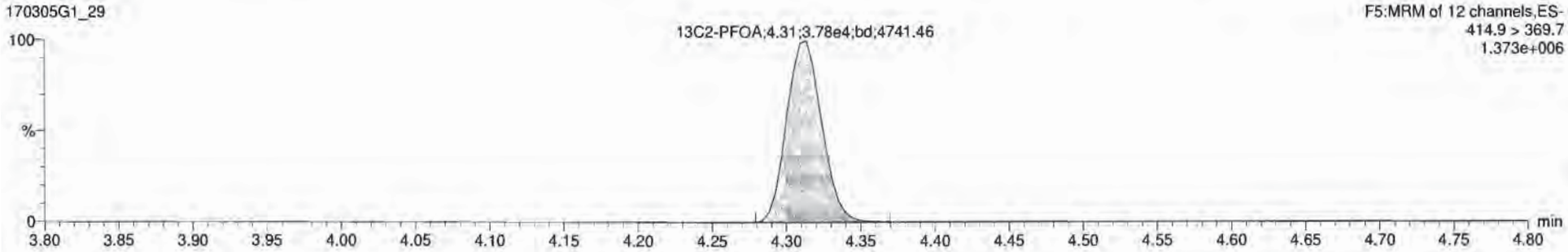

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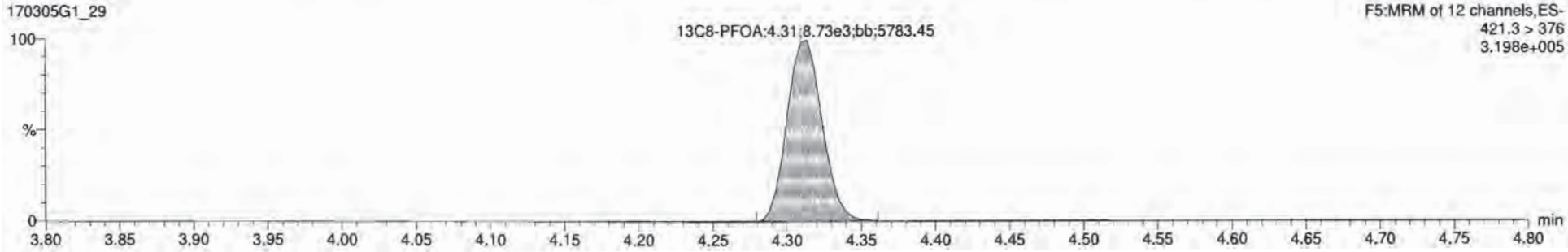
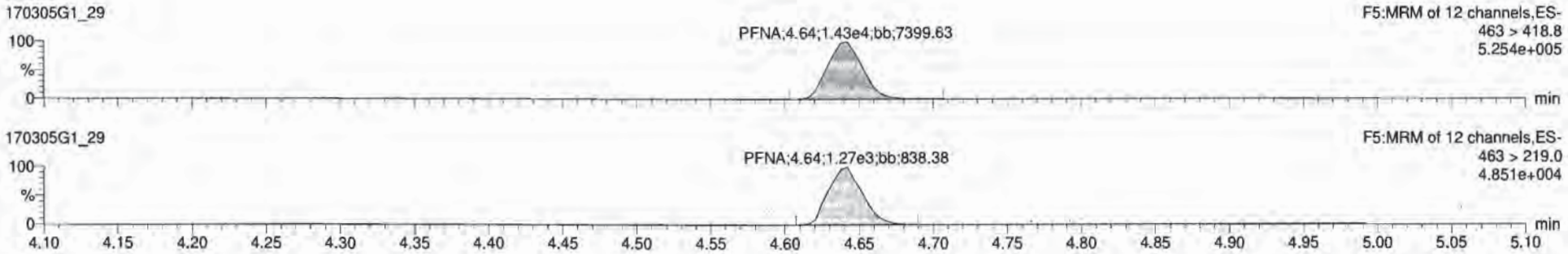


Dataset: Untitled

Last Altered: Monday, March 06, 2017 09:16:05 Pacific Standard Time
Printed: Monday, March 06, 2017 09:18:07 Pacific Standard Time

ID: ST170305G1-9 PFC CS3 17C0506, Description: PFC CS3 17C0506 A, Name: 170305G1_29, Date: 05-Mar-2017, Time: 18:25:28, Instrument: , Lab: , User:

PFNA



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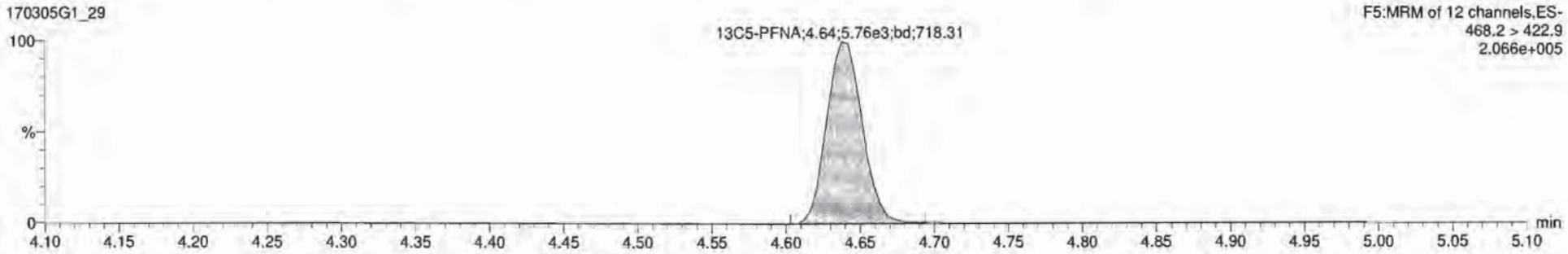

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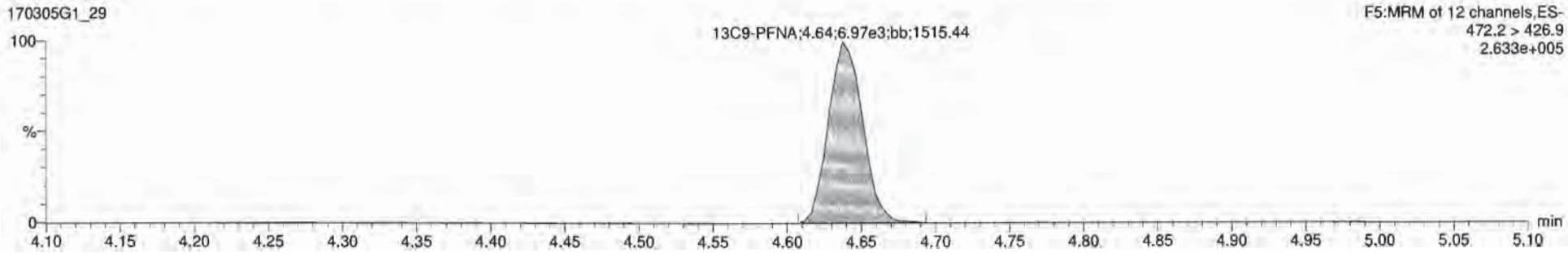

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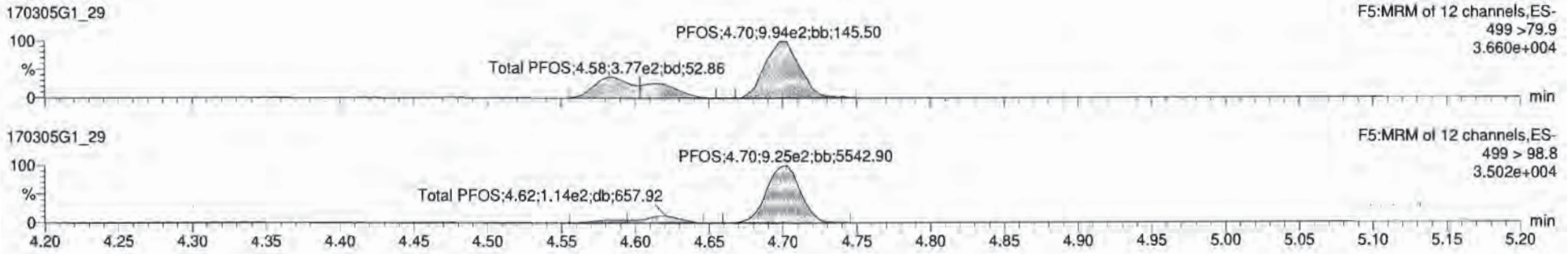
Last Altered: Monday, March 06, 2017 09:16:05 Pacific Standard Time
Printed: Monday, March 06, 2017 09:18:07 Pacific Standard Time

ID: ST170305G1-9 PFC CS3 17C0506, Description: PFC CS3 17C0506 A, Name: 170305G1_29, Date: 05-Mar-2017, Time: 18:25:28, Instrument: , Lab: , User:

Total PFOS



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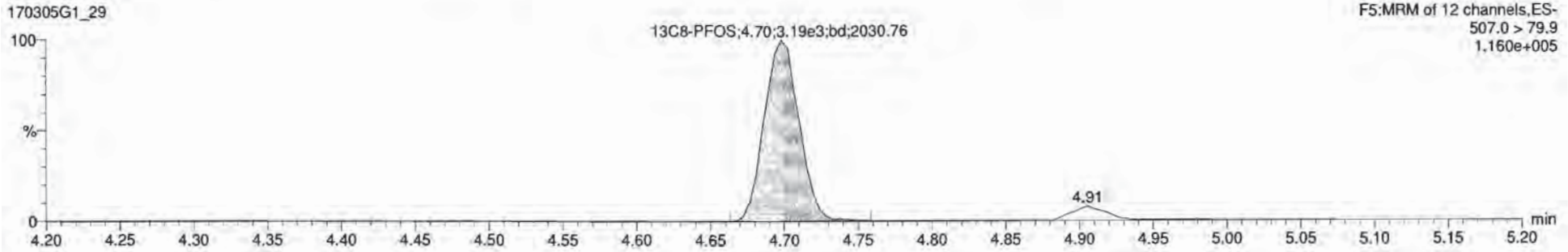

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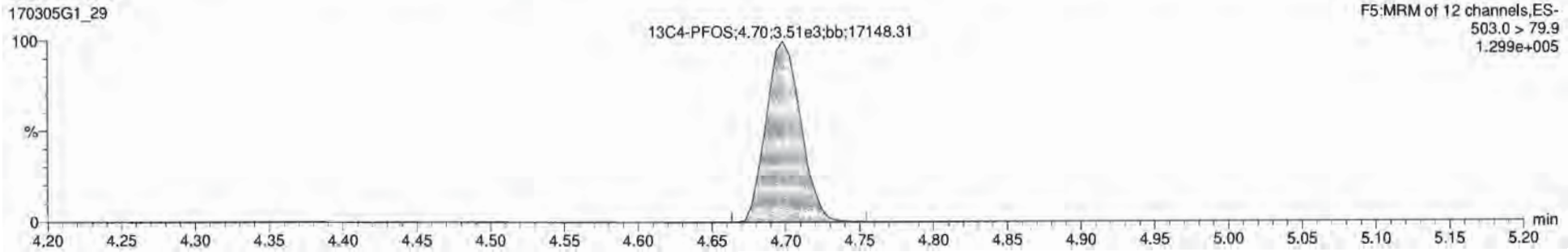

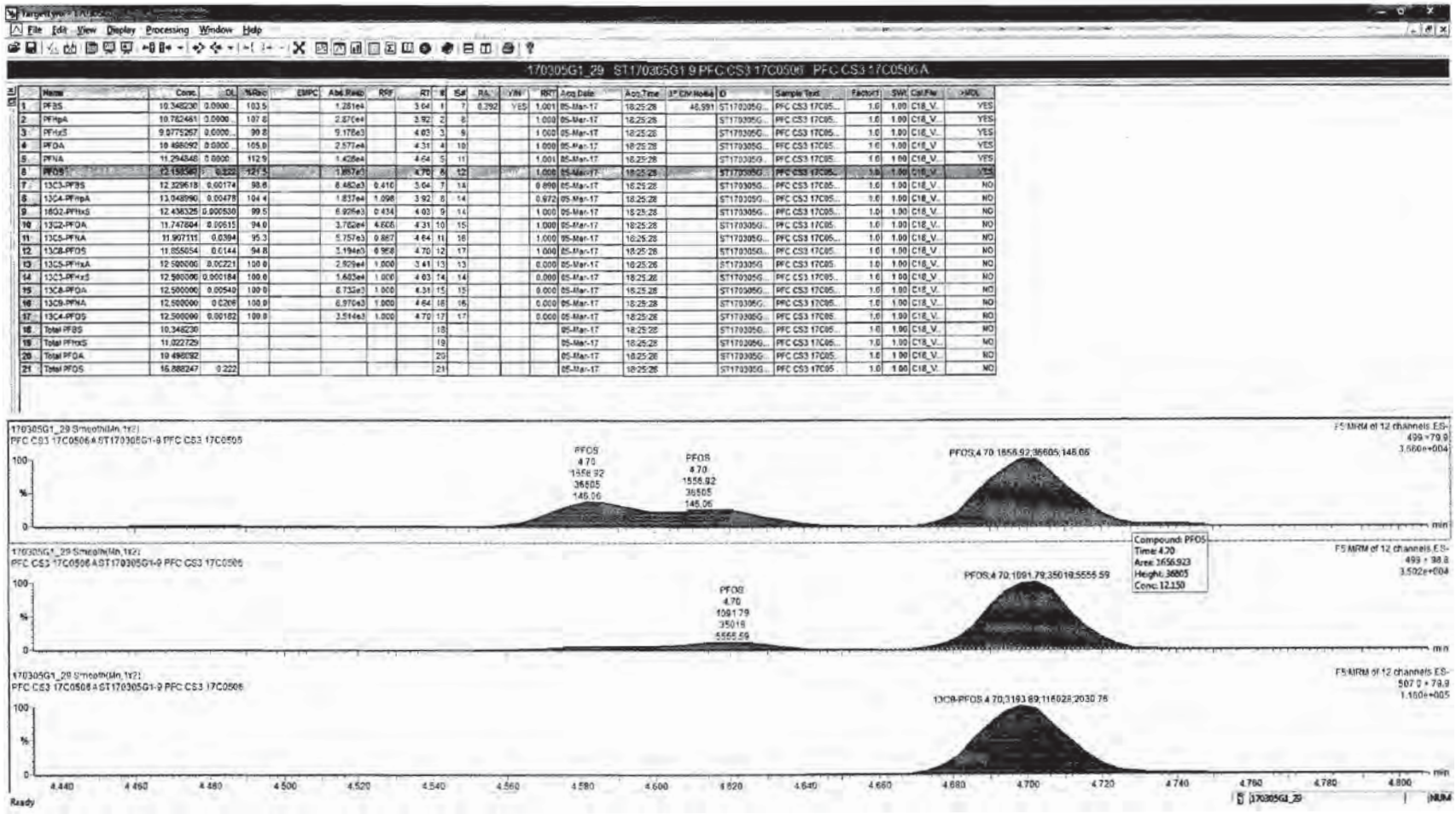
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170305G1_29 ST170305G1 9 PFC CS3 17C0506 PFC CS3 17C0506A
PFOS 4.70 1556.92 36805 146.06
PFOS 4.70 1556.92 36805 146.06
PFOS 4.70,1556.92,36805,146.06
Compound: PFOS
Time: 4.70
Area: 1656.923
Height: 36805
Conc: 12.150
PFOS 4.70 1091.79 35018 5555.59
PFOS 4.70,1091.79,35018,5555.59
13C8-PFOS 4.70,3193.89,116028,2030.76
Ready

Quantify Sample Summary Report **MassLynx 4.1 SCN815**
Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170306G1\170306G1-2.qld

Last Altered: Tuesday, March 07, 2017 09:06:49 Pacific Standard Time
Printed: Tuesday, March 07, 2017 09:09:59 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_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

Name: 170306G1_2, Date: 06-Mar-2017, Time: 15:37:57, ID: ST170306G1-1 PFC CS3 17C0612, Description: PFC CS3 17C0612 A

	#	Name	Trace	Response	IS Resp	RRF	Wt/Vol	RT	Conc.	%Rec
1	1	PFBS	299 > 79.7	1.26e4	6.88e3		1.000	3.05	9.60	96.0
2	2	PFHpA	363 > 318.9	2.81e4	1.84e4		1.000	3.94	10.6	105.7
3	3	PFHxS	398.9 > 79.6	1.15e4	7.26e3		1.000	4.05	10.9	109.0
4	4	PFOA	413 > 368.7	2.77e4	3.55e4		1.000	4.33	12.1	120.5
5	5	PFNA	463 > 418.8	2.11e4	9.36e3		1.000	4.66	10.3	102.8
6	6	PFOS	499 >79.9	3.60e3	8.36e3		1.000	4.72	10.1	101.0
7	7	13C3-PFBS	302.0 > 98.8	6.88e3	1.78e4	0.410	1.000	3.05	11.8	94.3
8	8	13C4-PFHpA	367.2 > 321.8	1.84e4	1.78e4	1.098	1.000	3.94	11.8	94.0
9	9	18O2-PFHxS	403 > 102.6	7.26e3	1.78e4	0.434	1.000	4.05	11.7	93.9
10	10	13C2-PFOA	414.9 > 369.7	3.55e4	9.87e3	4.608	1.000	4.33	9.77	78.1
11	11	13C5-PFNA	468.2 > 422.9	9.36e3	1.07e4	0.867	1.000	4.66	12.6	101.0
12	12	13C8-PFOS	507.0 > 79.9	8.36e3	9.12e3	0.958	1.000	4.72	12.0	95.7
13	13	13C5-PFHxA	318>272.9	3.02e4	3.02e4	1.000	1.000	3.44	12.5	100.0
14	14	13C3-PFHxS	401.9 > 79.9	1.78e4	1.78e4	1.000	1.000	4.05	12.5	100.0
15	15	13C8-PFOA	421.3 > 376	9.87e3	9.87e3	1.000	1.000	4.33	12.5	100.0
16	16	13C9-PFNA	472.2 > 426.9	1.07e4	1.07e4	1.000	1.000	4.66	12.5	100.0
17	17	13C4-PFOS	503.0 > 79.9	9.12e3	9.12e3	1.000	1.000	4.72	12.5	100.0

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

AC 3/7/17

√88 3/7/17

Vista Analytical Laboratory VG-9

Dataset: Untitled

Last Altered: Tuesday, March 07, 2017 9:31:27 AM Pacific Standard Time
Printed: Tuesday, March 07, 2017 9:32:15 AM 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_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

Compound name: PFBS

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1	170306G1_1	IPA	06-Mar-17	14:49:33
2	170306G1_2	ST170306G1-1 PFC CS3 17C0612	06-Mar-17	15:37:57
3	170306G1_3	IPA	06-Mar-17	15:50:07
4	170306G1_4	B7C0003-BS1 OPR 0.125	06-Mar-17	16:02:38
5	170306G1_5	B7C0015-BS1 OPR 0.125	06-Mar-17	16:15:10
6	170306G1_6	B7C0017-BS1 OPR 0.125	06-Mar-17	16:27:44
7	170306G1_7	IPA	06-Mar-17	16:40:16
8	170306G1_8	B7C0003-BLK1 Method Blank 0.125	06-Mar-17	16:52:50
9	170306G1_9	B7C0015-BLK1 Method Blank 0.125	06-Mar-17	17:05:23
10	170306G1_10	B7C0017-BLK1 Method Blank 0.125	06-Mar-17	17:17:56
11	170306G1_11	1700268-01 WI-CV-GW09M-0217 0.12317	06-Mar-17	17:30:29
12	170306G1_12	1700268-03 WI-CV-GW05S-0217 0.12246	06-Mar-17	17:43:02
13	170306G1_13	1700268-05 WI-CV-GW11S-0217 0.12773	06-Mar-17	17:55:31
14	170306G1_14	1700268-07 WI-CV-EB06-022617 0.10638	06-Mar-17	18:08:03
15	170306G1_15	1700268-08 WI-CV-EB05-022417 0.12657	06-Mar-17	18:20:37
16	170306G1_16	1700263-04RE1 OW2C-MW25-0217 0.12534	06-Mar-17	18:33:10
17	170306G1_17	1700293-01 WI-CV-GW02S-0317 0.125	06-Mar-17	18:45:44
18	170306G1_18	1700293-02 WI-CV-GW02S/SP-0317 0.125	06-Mar-17	18:58:16
19	170306G1_19	1700293-03 WI-CV-GW04S-0317 0.125	06-Mar-17	19:10:50
20	170306G1_20	1700293-04 WI-CV-GW04S/SP-0317 0.125	06-Mar-17	19:23:25
21	170306G1_21	IPA	06-Mar-17	19:35:53
22	170306G1_22	ST170306G1-2 PFC CS3 17C0612	06-Mar-17	19:48:29
23	170306G1_23	IPA	06-Mar-17	20:00:59
24	170306G1_24	1700293-05 WI-CV-GW02M-0317 0.125	06-Mar-17	20:13:35
25	170306G1_25	1700293-06 WI-CV-GW12D-0317 0.125	06-Mar-17	20:26:04
26	170306G1_26	1700293-07 WI-CV-EB09-030117 0.125	06-Mar-17	20:38:37
27	170306G1_27	1700293-08 WI-CV-GW08S-0317 0.125	06-Mar-17	20:51:11
28	170306G1_28	1700293-09 WI-CV-FB01-030217 0.125	06-Mar-17	21:03:44
29	170306G1_29	1700293-10 WI-CV-EB10-030217 0.125	06-Mar-17	21:16:17
30	170306G1_30	1700293-11 WI-CV-EB11-030217 0.125	06-Mar-17	21:28:51
31	170306G1_31	B7C0017-MS1 Matrix Spike 0.125	06-Mar-17	21:41:24

Dataset: Untitled

Last Altered: Tuesday, March 07, 2017 9:31:27 AM Pacific Standard Time
Printed: Tuesday, March 07, 2017 9:32:15 AM Pacific Standard Time

Compound name: PFBS

	Name	ID	Acq.Date	Acq.Time
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33	170306G1_33	IPA	06-Mar-17	22:06:26
34	170306G1_34	ST170306G1-3 PFC CS3 17C0612	06-Mar-17	22:19:02
35	170306G1_35	IPA	06-Mar-17	22:31:42

LC Calibration Standards Review Checklist Q1

Calibration ID:	L M H	ION Ratio	Concentration	C-Cals Name	Sign Date	Correct I-Cal	Manual Integrations	N/A
ST170306G1-1	L (M) H	N/A	☑	☑	☑	☑	☑	☐
-2	L (M) H	☐	☑	☑	☑	☑	☑	☐
-3	L (M) H	☑	☑	☑	☑	☑	☑	☑
	L M H	☐	☐	☐	☐	☐	☐	☐
	L M H	☐	☐	☐	☐	☐	☐	☐
	L M H	☐	☐	☐	☐	☐	☐	☐
	L M H	☐	☐	☐	☐	☐	☐	☐
	L M H	☐	☐	☐	☐	☐	☐	☐
	L M H	☐	☐	☐	☐	☐	☐	☐
	L M H	☐	☐	☐	☐	☐	☐	☐

Full Mass Cal. Date: 12/7/16

Run Log Present: ☑

# of Samples per Sequence Checked: ☑

Comments: List of 6

Reviewed By: 98 3/7/17
Initials/Date

Dataset: Untitled

Last Altered: Tuesday, March 07, 2017 09:00:41 Pacific Standard Time
Printed: Tuesday, March 07, 2017 09:00:55 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_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

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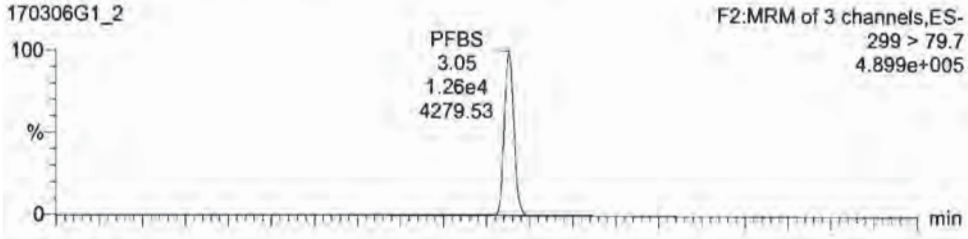
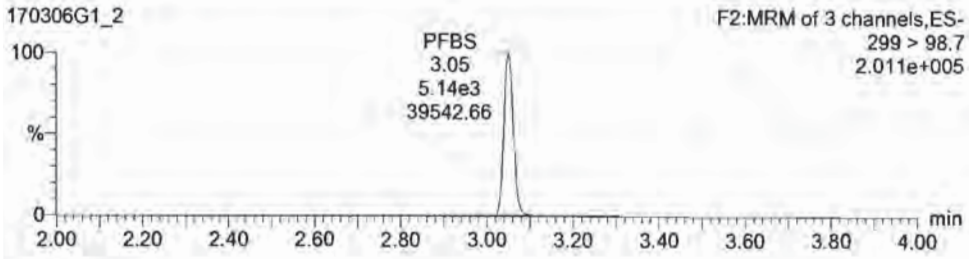
PFBS





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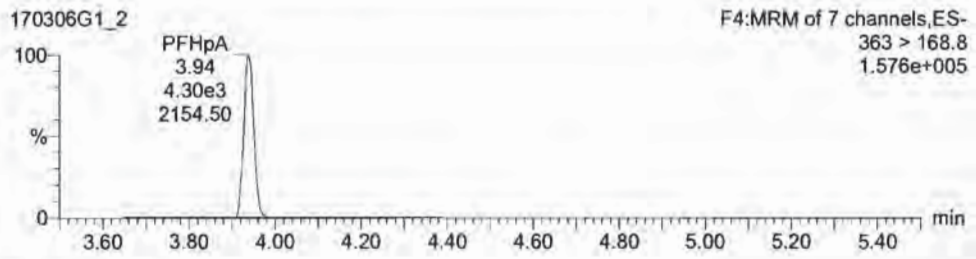
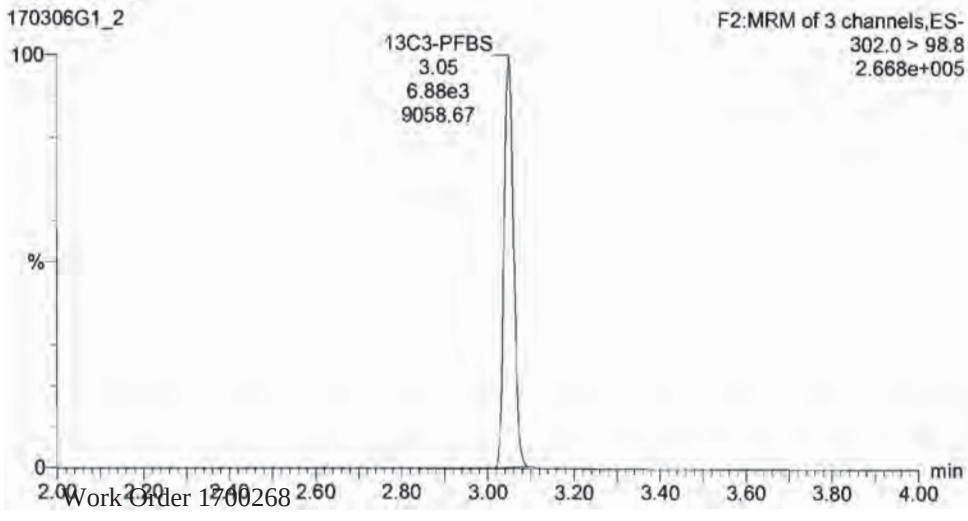
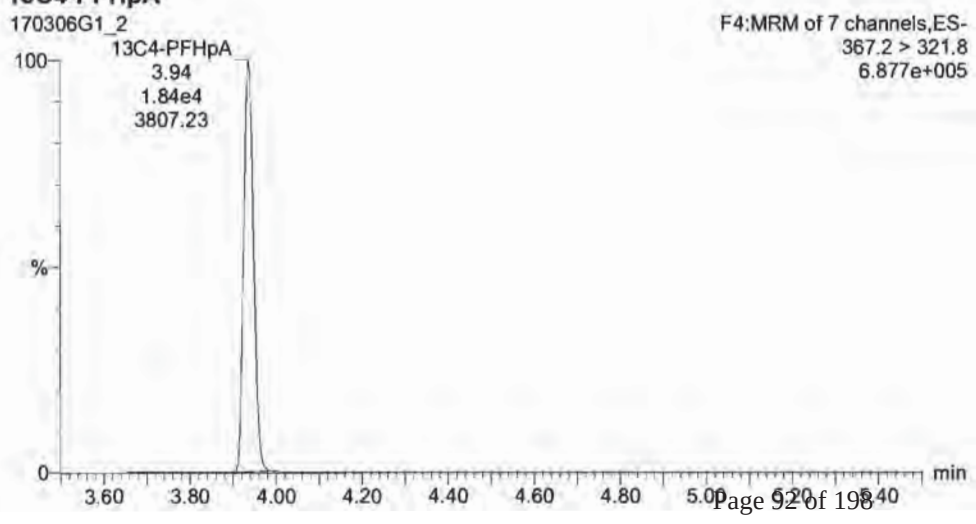


13C3-PFBS



13C4-PFHpA



Dataset: Untitled

Last Altered: Tuesday, March 07, 2017 09:00:41 Pacific Standard Time
Printed: Tuesday, March 07, 2017 09:00:55 Pacific Standard Time

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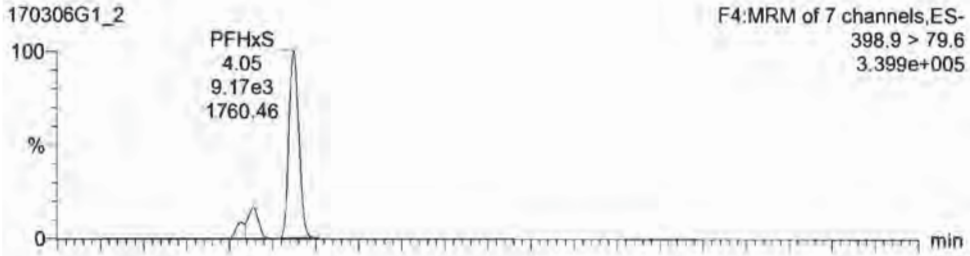
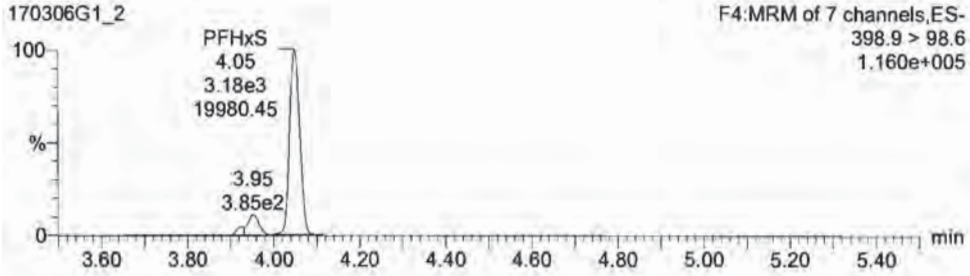
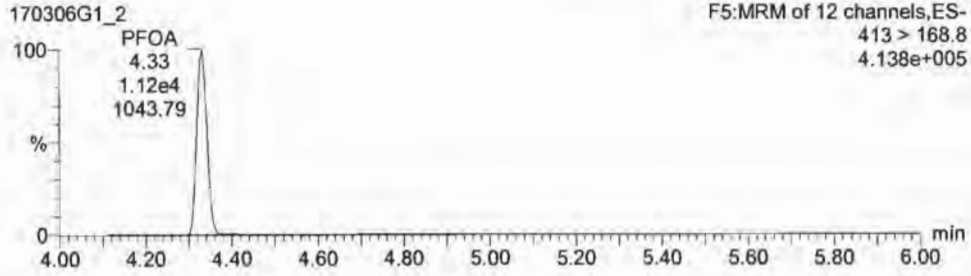
PFHxS

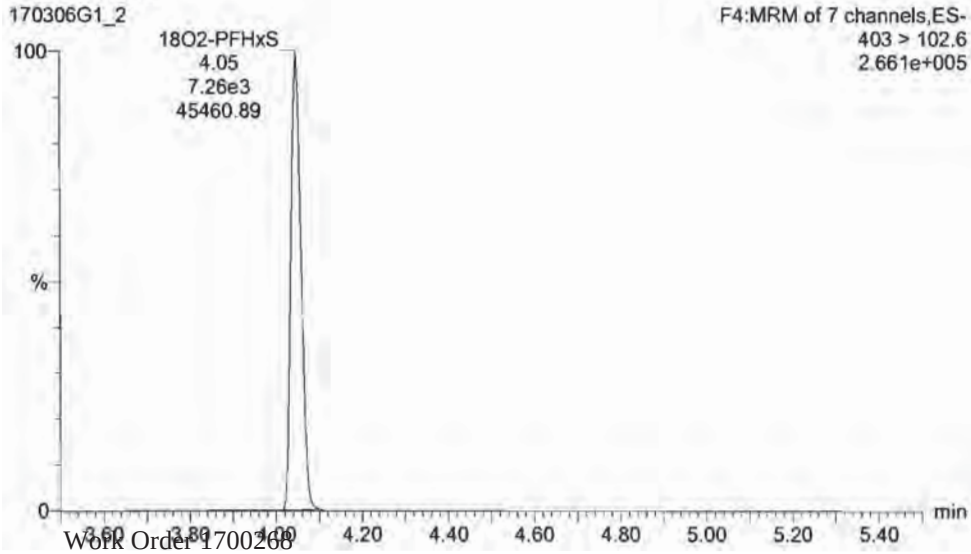




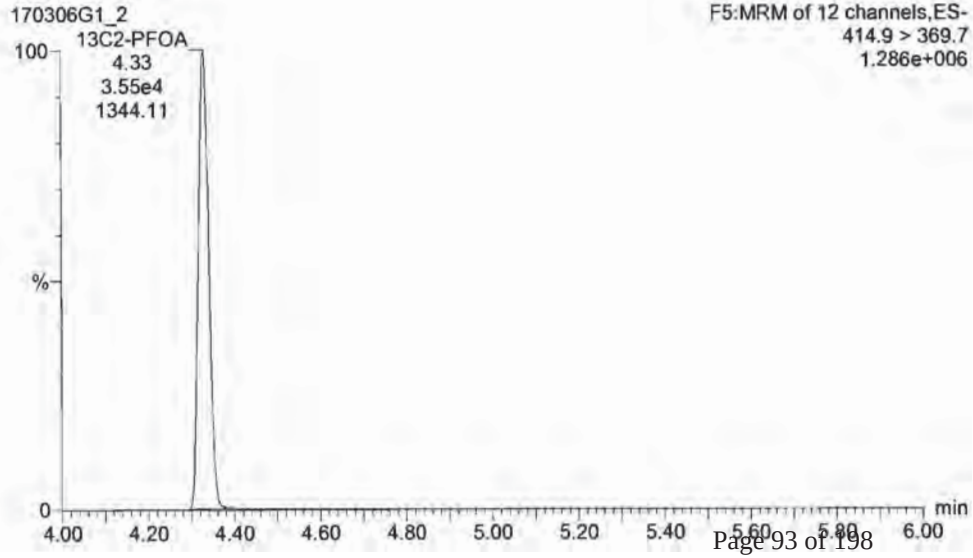
PFOA

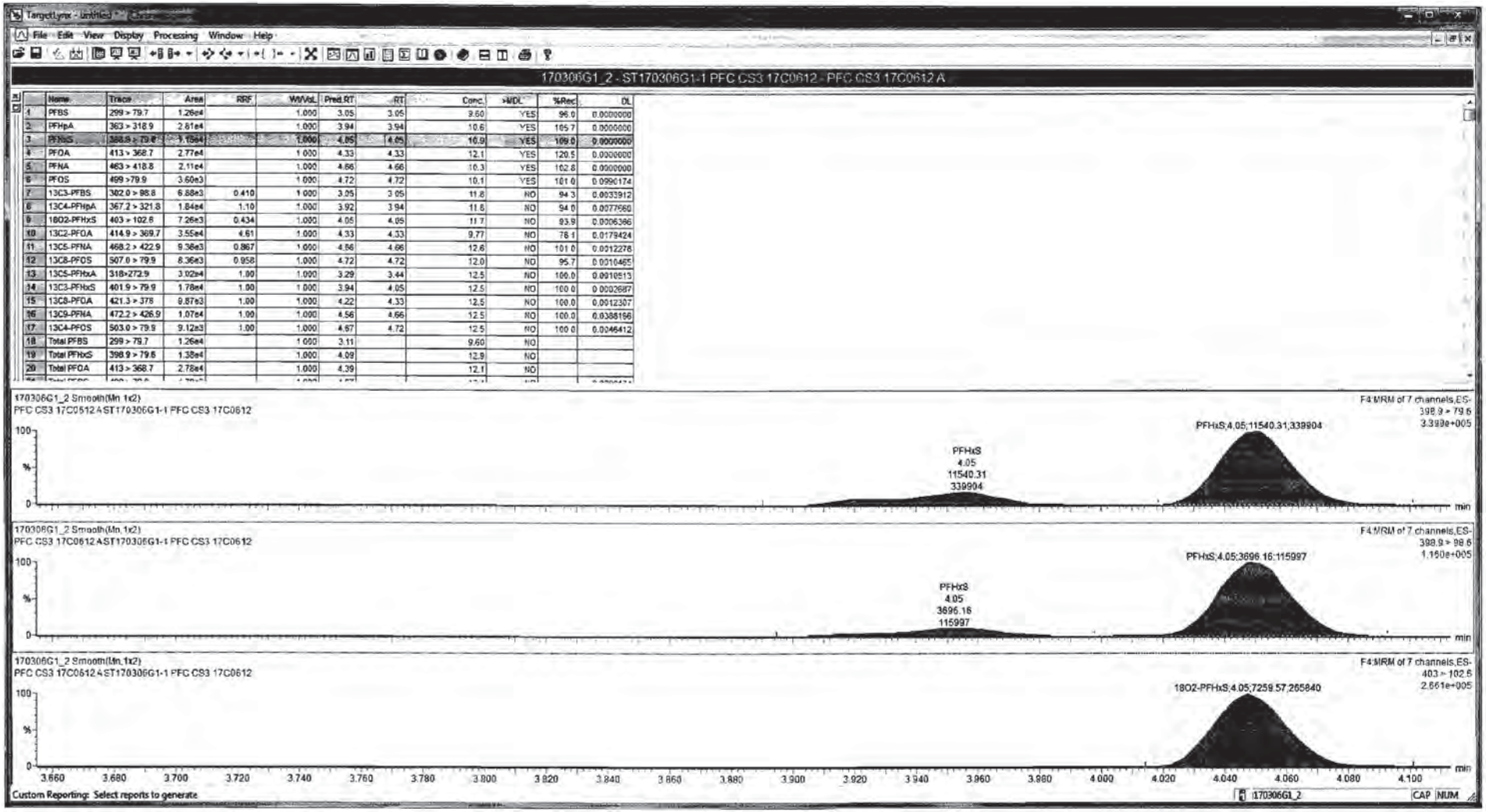


18O2-PFHxS



13C2-PFOA





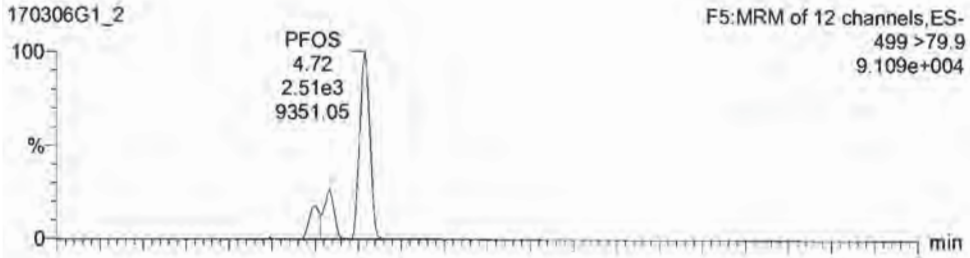
	Name	Trace	Area	RRF	Wt/Vol	Pred RT	RT	Conc	>MDL	%Rec	DL
1	PFBS	299 > 79.7	1.26e4		1.000	3.05	3.05	9.60	YES	96.0	0.0000000
2	PFHpA	363 > 318.9	2.61e4		1.000	3.94	3.94	10.6	YES	105.7	0.0000000
3	PFHxS	398.9 > 79.6	3.39e4		1.000	4.05	4.05	10.9	YES	109.0	0.0000000
4	PFOA	413 > 368.7	2.77e4		1.000	4.33	4.33	12.1	YES	120.5	0.0000000
5	PFNA	463 > 418.8	2.11e4		1.000	4.66	4.66	10.3	YES	102.8	0.0000000
6	PFOS	499 >79.9	3.60e3		1.000	4.72	4.72	10.1	YES	101.0	0.0990174
7	13C3-PFBS	302.0 > 98.8	6.88e3	0.410	1.000	3.05	3.05	11.8	NO	94.3	0.0033912
8	13C4-PFHpA	367.2 > 321.8	1.84e4	1.10	1.000	3.92	3.94	11.8	NO	94.0	0.0077660
9	18O2-PFHxS	403 > 102.6	7.26e3	0.434	1.000	4.05	4.05	11.7	NO	93.9	0.0006386
10	13C2-PFOA	414.9 > 369.7	3.55e4	4.61	1.000	4.33	4.33	9.77	NO	78.1	0.0179424
11	13C5-PFNA	468.2 > 422.9	9.38e3	0.867	1.000	4.66	4.66	12.6	NO	101.0	0.0012276
12	13C8-PFOS	507.0 > 79.9	8.36e3	0.958	1.000	4.72	4.72	12.0	NO	95.7	0.0010465
13	13C5-PFHxA	318>272.9	3.92e4	1.00	1.000	3.29	3.44	12.5	NO	100.0	0.0010515
14	13C3-PFHxS	401.9 > 79.9	1.78e4	1.00	1.000	3.94	4.05	12.5	NO	100.0	0.0002687
15	13C8-PFOA	421.3 > 376	9.87e3	1.00	1.000	4.22	4.33	12.5	NO	100.0	0.0012307
16	13C9-PFNA	472.2 > 426.9	1.07e4	1.00	1.000	4.56	4.66	12.5	NO	100.0	0.0388156
17	13C4-PFOS	503.0 > 79.9	9.12e3	1.00	1.000	4.67	4.72	12.5	NO	100.0	0.0046412
18	Total PFBS	299 > 79.7	1.26e4		1.000	3.11		9.60	NO		
19	Total PFHxS	398.9 > 79.6	1.38e4		1.000	4.09		12.9	NO		
20	Total PFOA	413 > 368.7	2.78e4		1.000	4.39		12.1	NO		

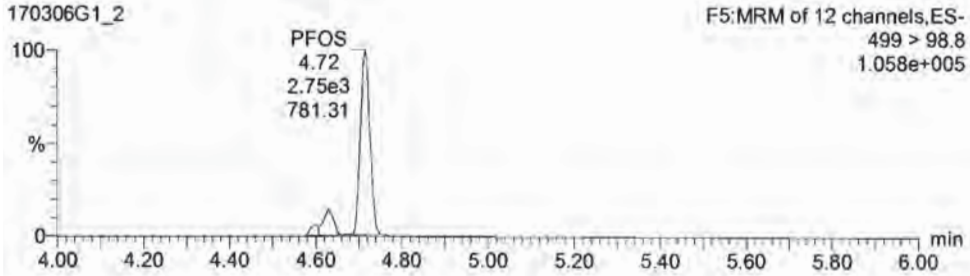
Dataset: Untitled

Last Altered: Tuesday, March 07, 2017 09:00:41 Pacific Standard Time
Printed: Tuesday, March 07, 2017 09:00:55 Pacific Standard Time

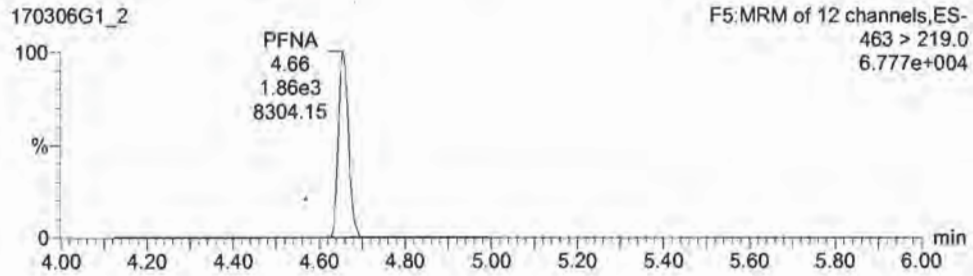
Name: 170306G1_2, Date: 06-Mar-2017, Time: 15:37:57, ID: ST170306G1-1 PFC CS3 17C0612, Description: PFC CS3 17C0612 A

PFOS

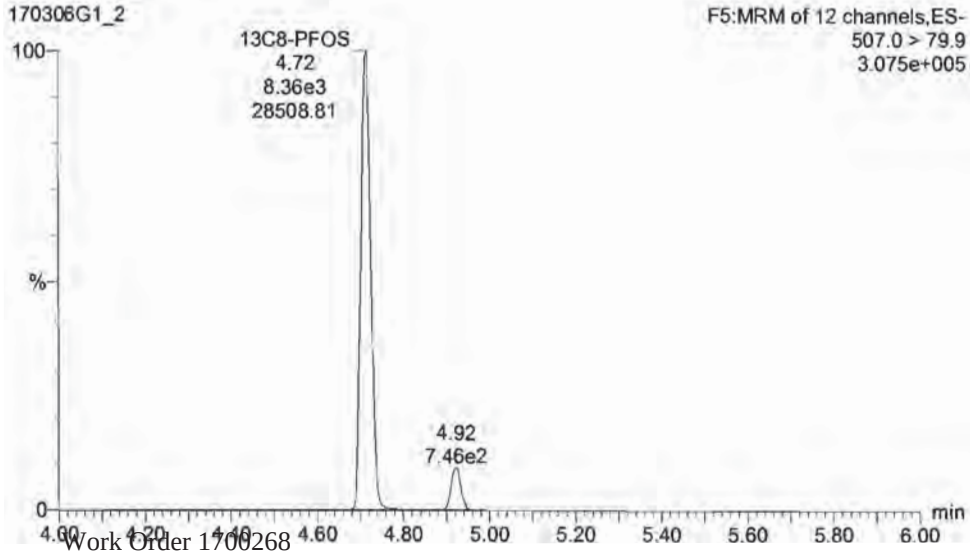




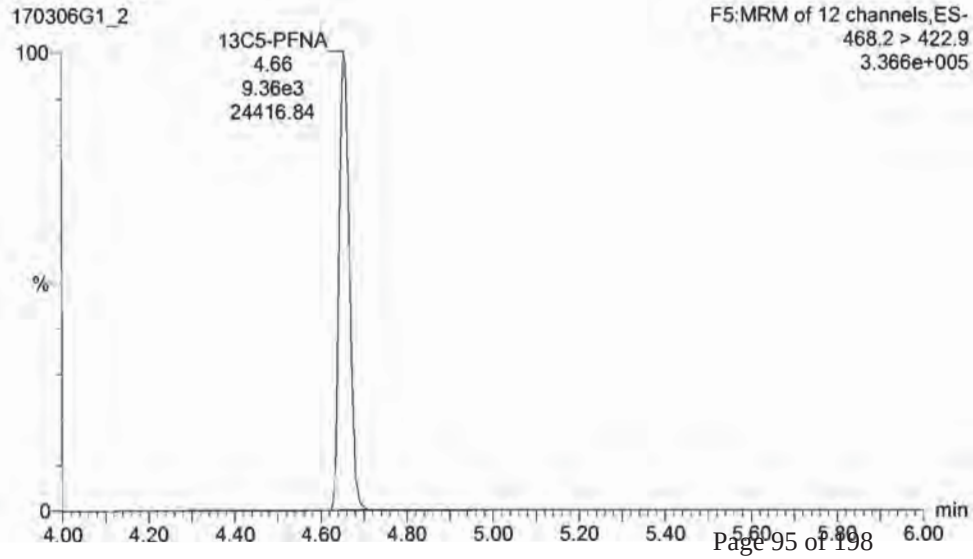
PFNA

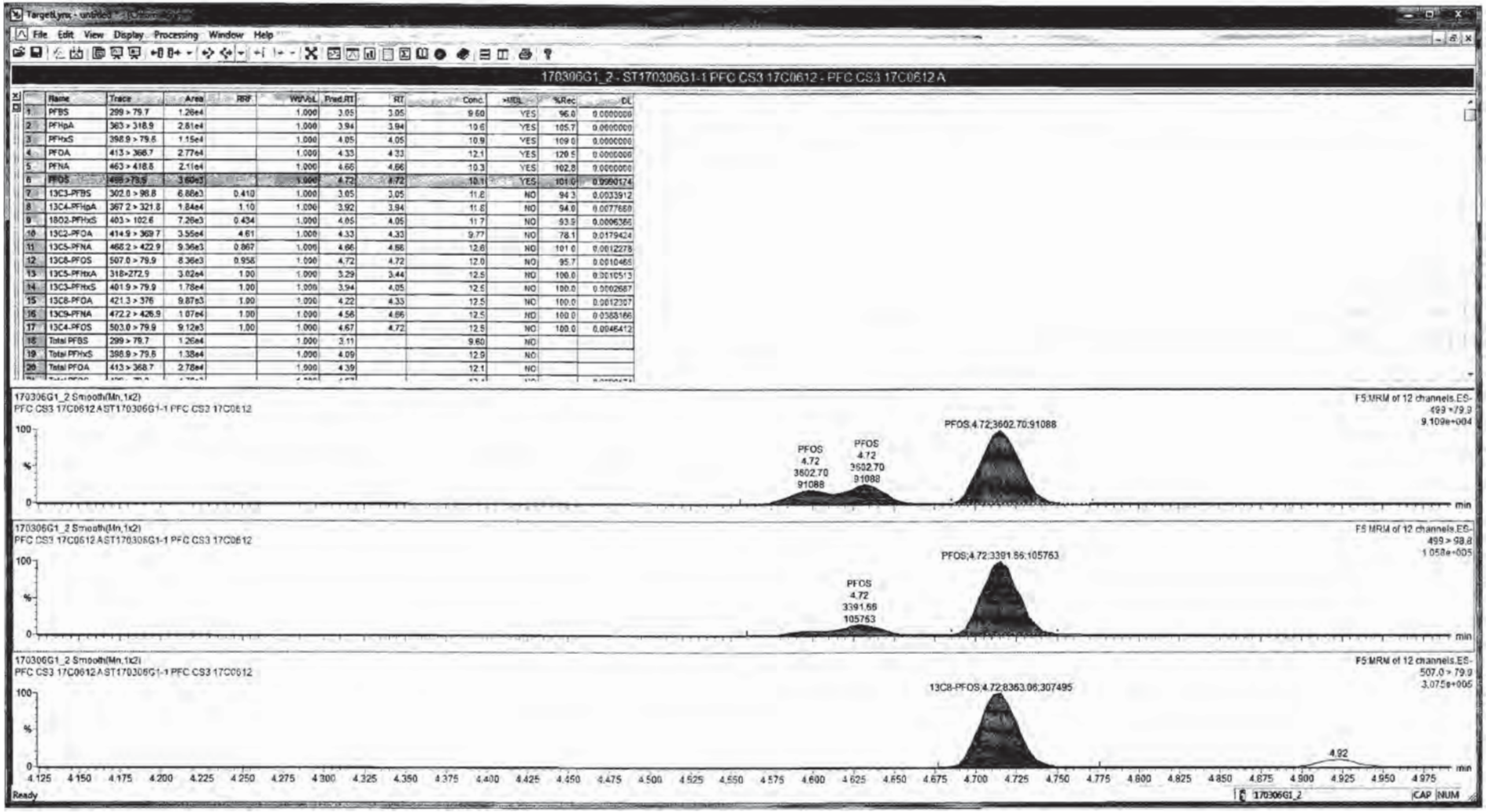


13C8-PFOS



13C5-PFNA





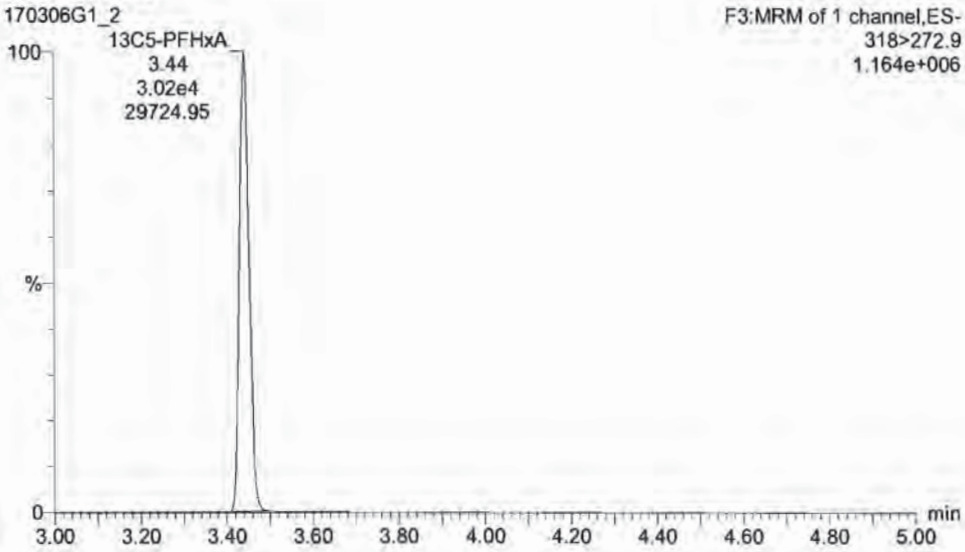
	Name	Trace	Area	RRF	Wt/Vol	Pred.RT	RT	Conc.	>MDL	%Rec	DL
1	PFBS	299 > 79.7	1.26e4		1.000	3.05	3.05	9.60	YES	96.0	0.0000000
2	PFHpA	363 > 318.9	2.81e4		1.000	3.94	3.94	10.6	YES	105.7	0.0000000
3	PFHxS	398.9 > 79.8	1.15e4		1.000	4.05	4.05	10.9	YES	109.0	0.0000000
4	PFOA	413 > 368.7	2.77e4		1.000	4.33	4.33	12.1	YES	120.5	0.0000000
5	PFNA	463 > 418.8	2.11e4		1.000	4.66	4.66	10.3	YES	102.8	0.0000000
6	PFOS	499 > 79.9	3.60e3		1.000	4.72	4.72	10.1	YES	101.0	0.9960174
7	13C3-PFBS	302.0 > 98.8	6.88e3	0.410	1.000	3.05	3.05	11.8	NO	94.3	0.0033912
8	13C4-PFHpA	367.2 > 321.8	1.84e4	1.10	1.000	3.92	3.94	11.8	NO	94.8	0.0077668
9	1802-PFHxS	403 > 102.6	7.26e3	0.434	1.000	4.05	4.05	11.7	NO	93.5	0.0006366
10	13C2-PFOA	414.9 > 369.7	3.55e4	4.61	1.000	4.33	4.33	9.77	NO	78.1	0.0179424
11	13C5-PFNA	468.2 > 422.9	9.36e3	0.867	1.000	4.66	4.66	12.6	NO	101.0	0.0012278
12	13C8-PFOS	507.0 > 79.9	8.36e3	0.958	1.000	4.72	4.72	12.0	NO	95.7	0.0010465
13	13C5-PFHxA	318>272.9	3.02e4	1.00	1.000	3.29	3.44	12.5	NO	100.0	0.0010513
14	13C3-PFHxS	401.9 > 79.9	1.78e4	1.00	1.000	3.94	4.05	12.5	NO	100.0	0.0002687
15	13C8-PFOA	421.3 > 376	9.87e3	1.00	1.000	4.22	4.33	12.5	NO	100.0	0.0012307
16	13C9-PFNA	472.2 > 426.9	1.07e4	1.00	1.000	4.56	4.66	12.5	NO	100.0	0.0053166
17	13C4-PFOS	503.0 > 79.9	9.12e3	1.00	1.000	4.67	4.72	12.5	NO	100.0	0.0046412
18	Total PFBS	299 > 79.7	1.26e4		1.000	3.11		9.60	NO		
19	Total PFHxS	398.9 > 79.8	1.38e4		1.000	4.09		12.9	NO		
20	Total PFOA	413 > 368.7	2.78e4		1.000	4.39		12.1	NO		

Dataset: Untitled

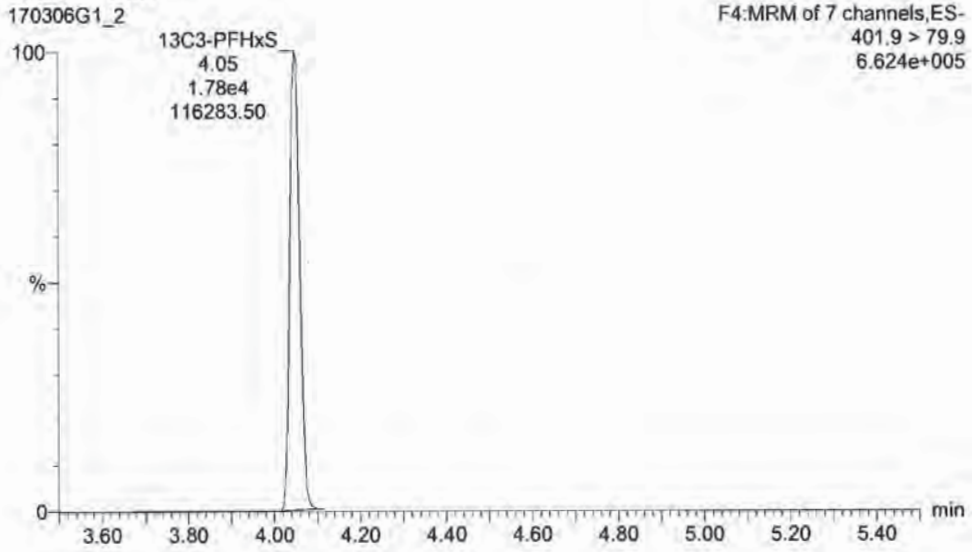
Last Altered: Tuesday, March 07, 2017 09:00:41 Pacific Standard Time
Printed: Tuesday, March 07, 2017 09:00:55 Pacific Standard Time

Name: 170306G1_2, Date: 06-Mar-2017, Time: 15:37:57, ID: ST170306G1-1 PFC CS3 17C0612, Description: PFC CS3 17C0612 A

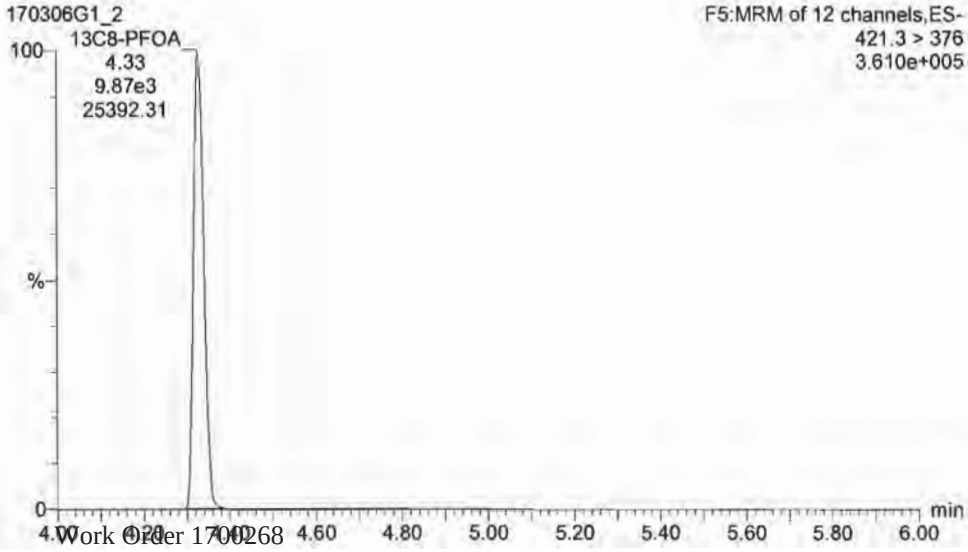
13C5-PFHxA



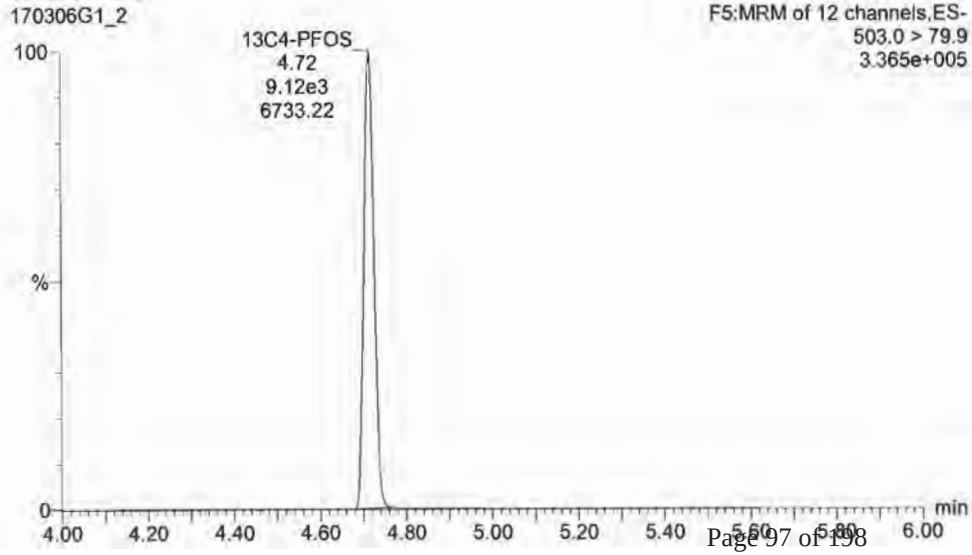
13C3-PFHxS



13C8-PFOA



13C4-PFOS

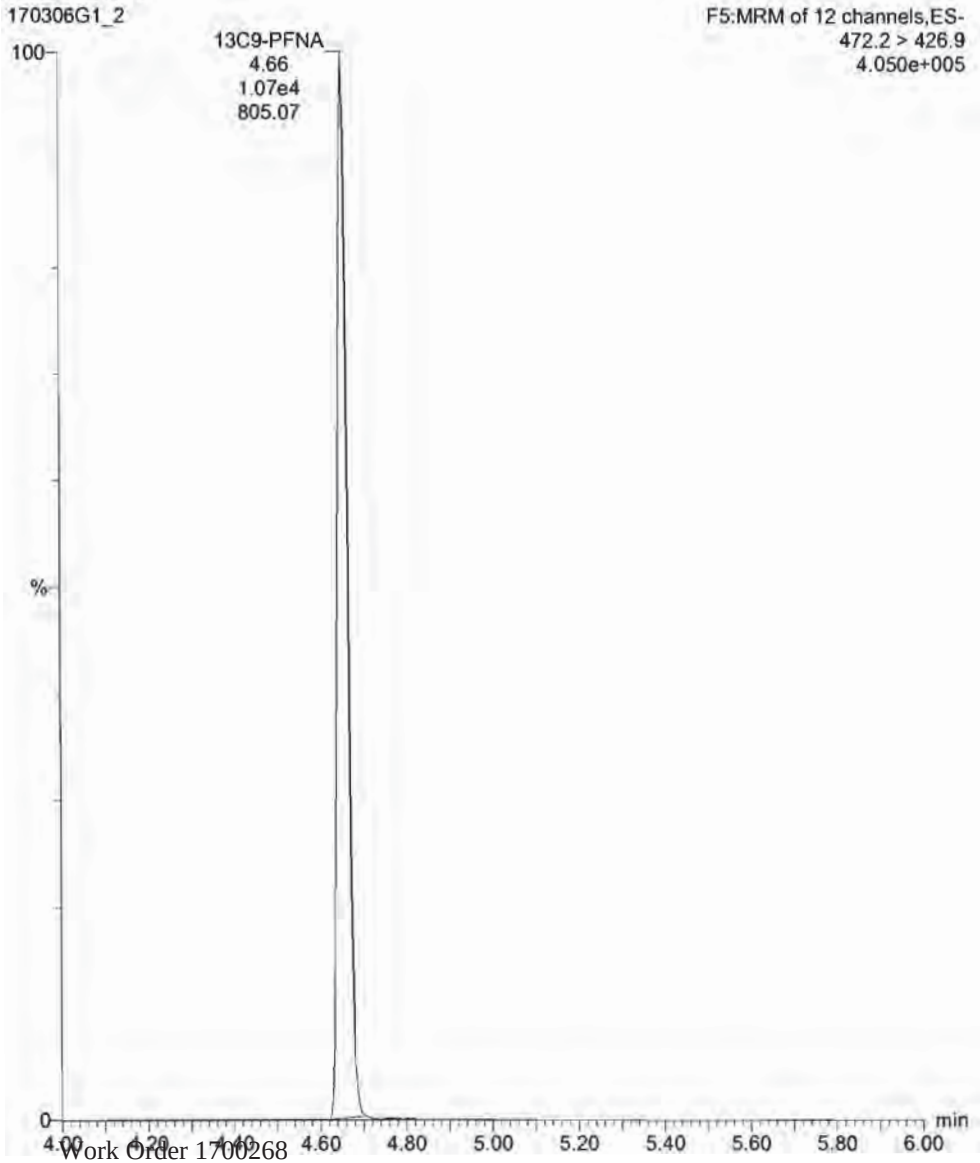


Dataset: Untitled

Last Altered: Tuesday, March 07, 2017 09:00:41 Pacific Standard Time
Printed: Tuesday, March 07, 2017 09:00:55 Pacific Standard Time

Name: 170306G1_2, Date: 06-Mar-2017, Time: 15:37:57, ID: ST170306G1-1 PFC CS3 17C0612, Description: PFC CS3 17C0612 A

13C9-PFNA



Quantify Sample Summary Report **MassLynx 4.1 SCN815**
Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170306G1\170306G1-22.qld

Last Altered: Tuesday, March 07, 2017 09:10:55 Pacific Standard Time
Printed: Tuesday, March 07, 2017 09:12:46 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_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

Name: 170306G1_22, Date: 06-Mar-2017, Time: 19:48:29, ID: ST170306G1-2 PFC CS3 17C0612, Description: PFC CS3 17C0612 A

	#	Name	Trace	Response	IS Resp	RRF	Wt/Vol	RT	Conc.	%Rec	
1	1	PFBS	299 > 79.7	1.51e4	7.64e3		1.000	2.98	10.3	103.5	75-125
2	2	PFHpA	363 > 318.9	3.10e4	2.11e4		1.000	3.87	10.1	101.3	
3	3	PFHxS	398.9 > 79.6	1.18e4	7.69e3		1.000	3.99	10.5	105.4	
4	4	PFOA	413 > 368.7	2.89e4	4.14e4		1.000	4.27	10.8	107.5	
5	5	PFNA	463 > 418.8	2.14e4	9.26e3		1.000	4.61	10.5	105.4	
6	6	PFOS	499 >79.9	3.84e3	9.66e3		1.000	4.67	9.32	93.2	
7	7	13C3-PFBS	302.0 > 98.8	7.64e3	1.82e4	0.410	1.000	2.97	12.8	102.4	60-150
8	8	13C4-PFHpA	367.2 > 321.8	2.11e4	1.82e4	1.098	1.000	3.87	13.2	105.7	
9	9	18O2-PFHxS	403 > 102.6	7.69e3	1.82e4	0.434	1.000	3.99	12.2	97.3	
10	10	13C2-PFOA	414.9 > 369.7	4.14e4	1.01e4	4.608	1.000	4.27	11.1	89.2	
11	11	13C5-PFNA	468.2 > 422.9	9.26e3	1.13e4	0.867	1.000	4.61	11.8	94.3	50-150
12	12	13C8-PFOS	507.0 > 79.9	9.66e3	1.05e4	0.958	1.000	4.67	12.0	95.8	60-150
13	13	13C5-PFHxA	318>272.9	3.58e4	3.58e4	1.000	1.000	3.35	12.5	100.0	
14	14	13C3-PFHxS	401.9 > 79.9	1.82e4	1.82e4	1.000	1.000	3.99	12.5	100.0	
15	15	13C8-PFOA	421.3 > 376	1.01e4	1.01e4	1.000	1.000	4.27	12.5	100.0	
16	16	13C9-PFNA	472.2 > 426.9	1.13e4	1.13e4	1.000	1.000	4.61	12.5	100.0	
17	17	13C4-PFOS	503.0 > 79.9	1.05e4	1.05e4	1.000	1.000	4.67	12.5	100.0	

AC 3/7/17

JES 3/7/17

Vista Analytical Laboratory VG-9

Dataset: Untitled

Last Altered: Tuesday, March 07, 2017 9:31:27 AM Pacific Standard Time
Printed: Tuesday, March 07, 2017 9:32:15 AM 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_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

Compound name: PFBS

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1	170306G1_1	IPA	06-Mar-17	14:49:33
2	170306G1_2	ST170306G1-1 PFC CS3 17C0612	06-Mar-17	15:37:57
3	170306G1_3	IPA	06-Mar-17	15:50:07
4	170306G1_4	B7C0003-BS1 OPR 0.125	06-Mar-17	16:02:38
5	170306G1_5	B7C0015-BS1 OPR 0.125	06-Mar-17	16:15:10
6	170306G1_6	B7C0017-BS1 OPR 0.125	06-Mar-17	16:27:44
7	170306G1_7	IPA	06-Mar-17	16:40:16
8	170306G1_8	B7C0003-BLK1 Method Blank 0.125	06-Mar-17	16:52:50
9	170306G1_9	B7C0015-BLK1 Method Blank 0.125	06-Mar-17	17:05:23
10	170306G1_10	B7C0017-BLK1 Method Blank 0.125	06-Mar-17	17:17:56
11	170306G1_11	1700268-01 WI-CV-GW09M-0217 0.12317	06-Mar-17	17:30:29
12	170306G1_12	1700268-03 WI-CV-GW05S-0217 0.12246	06-Mar-17	17:43:02
13	170306G1_13	1700268-05 WI-CV-GW11S-0217 0.12773	06-Mar-17	17:55:31
14	170306G1_14	1700268-07 WI-CV-EB06-022617 0.10638	06-Mar-17	18:08:03
15	170306G1_15	1700268-08 WI-CV-EB05-022417 0.12657	06-Mar-17	18:20:37
16	170306G1_16	1700263-04RE1 OW2C-MW25-0217 0.12534	06-Mar-17	18:33:10
17	170306G1_17	1700293-01 WI-CV-GW02S-0317 0.125	06-Mar-17	18:45:44
18	170306G1_18	1700293-02 WI-CV-GW02S/SP-0317 0.125	06-Mar-17	18:58:16
19	170306G1_19	1700293-03 WI-CV-GW04S-0317 0.125	06-Mar-17	19:10:50
20	170306G1_20	1700293-04 WI-CV-GW04S/SP-0317 0.125	06-Mar-17	19:23:25
21	170306G1_21	IPA	06-Mar-17	19:35:53
22	170306G1_22	ST170306G1-2 PFC CS3 17C0612	06-Mar-17	19:48:29
23	170306G1_23	IPA	06-Mar-17	20:00:59
24	170306G1_24	1700293-05 WI-CV-GW02M-0317 0.125	06-Mar-17	20:13:35
25	170306G1_25	1700293-06 WI-CV-GW12D-0317 0.125	06-Mar-17	20:26:04
26	170306G1_26	1700293-07 WI-CV-EB09-030117 0.125	06-Mar-17	20:38:37
27	170306G1_27	1700293-08 WI-CV-GW08S-0317 0.125	06-Mar-17	20:51:11
28	170306G1_28	1700293-09 WI-CV-FB01-030217 0.125	06-Mar-17	21:03:44
29	170306G1_29	1700293-10 WI-CV-EB10-030217 0.125	06-Mar-17	21:16:17
30	170306G1_30	1700293-11 WI-CV-EB11-030217 0.125	06-Mar-17	21:28:51
31	170306G1_31	B7C0017-MS1 Matrix Spike 0.125	06-Mar-17	21:41:24

Vista Analytical Laboratory VG-9

Dataset: Untitled

Last Altered: Tuesday, March 07, 2017 9:31:27 AM Pacific Standard Time
Printed: Tuesday, March 07, 2017 9:32:15 AM Pacific Standard Time

Compound name: PFBS

	Name	ID	Acq.Date	Acq.Time
32	170306G1_32	B7C0017-MSD1 Matrix Spike Dup 0.125	06-Mar-17	21:53:53
33	170306G1_33	IPA	06-Mar-17	22:06:26
34	170306G1_34	ST170306G1-3 PFC CS3 17C0612	06-Mar-17	22:19:02
35	170306G1_35	IPA	06-Mar-17	22:31:42

Vista Analytical Laboratory Q1

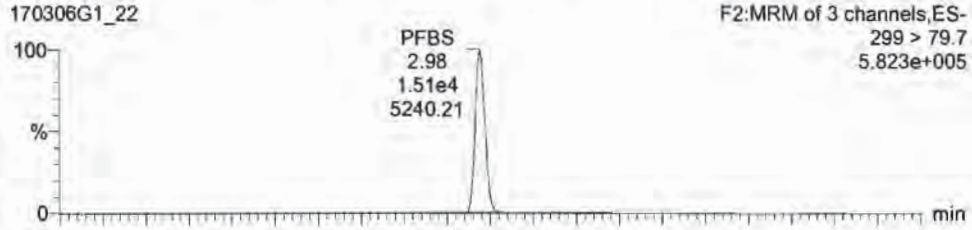
Dataset: Untitled

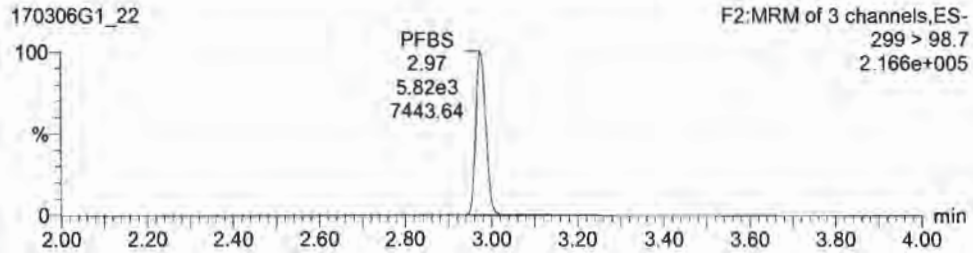
Last Altered: Tuesday, March 07, 2017 09:01:05 Pacific Standard Time
Printed: Tuesday, March 07, 2017 09:01:09 Pacific Standard Time

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_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

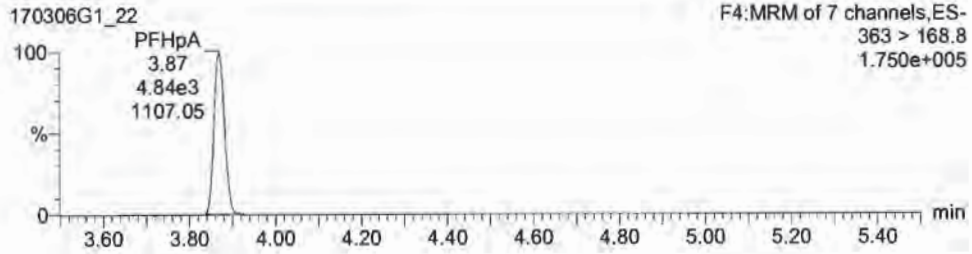
Name: 170306G1_22, Date: 06-Mar-2017, Time: 19:48:29, ID: ST170306G1-2 PFC CS3 17C0612, Description: PFC CS3 17C0612 A

PFBS

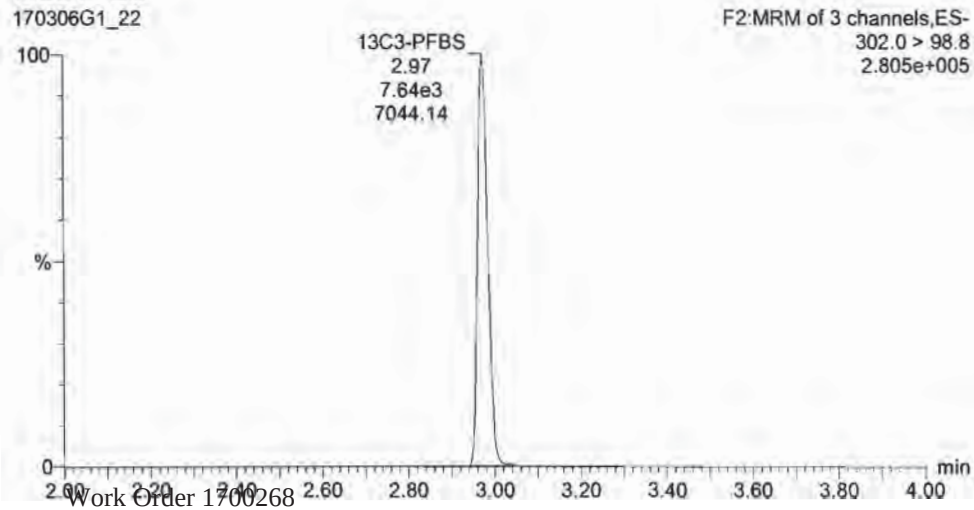




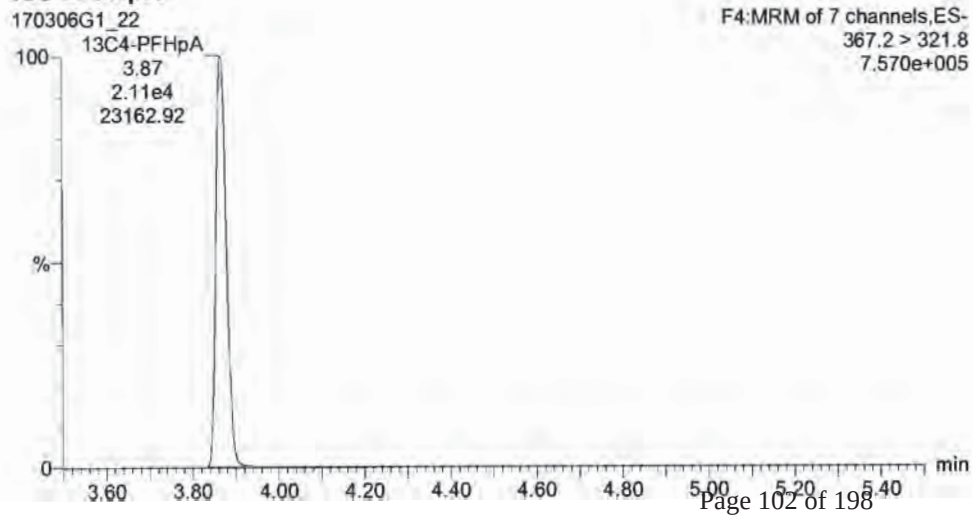
PFHpA



13C3-PFBS



13C4-PFHpA

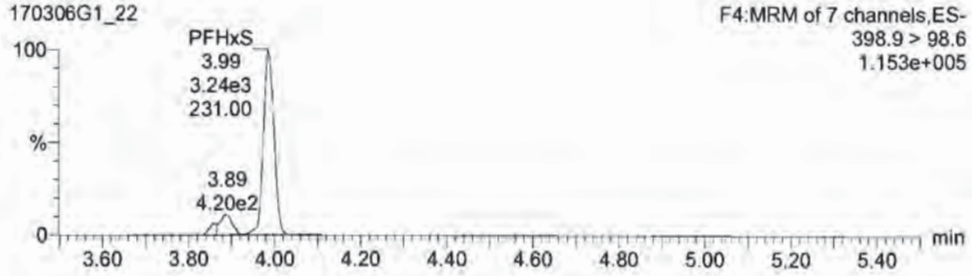


Dataset: Untitled

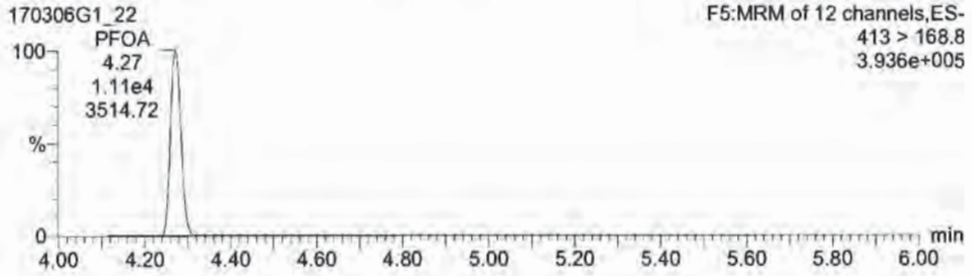
Last Altered: Tuesday, March 07, 2017 09:01:05 Pacific Standard Time
Printed: Tuesday, March 07, 2017 09:01:09 Pacific Standard Time

Name: 170306G1_22, Date: 06-Mar-2017, Time: 19:48:29, ID: ST170306G1-2 PFC CS3 17C0612, Description: PFC CS3 17C0612 A

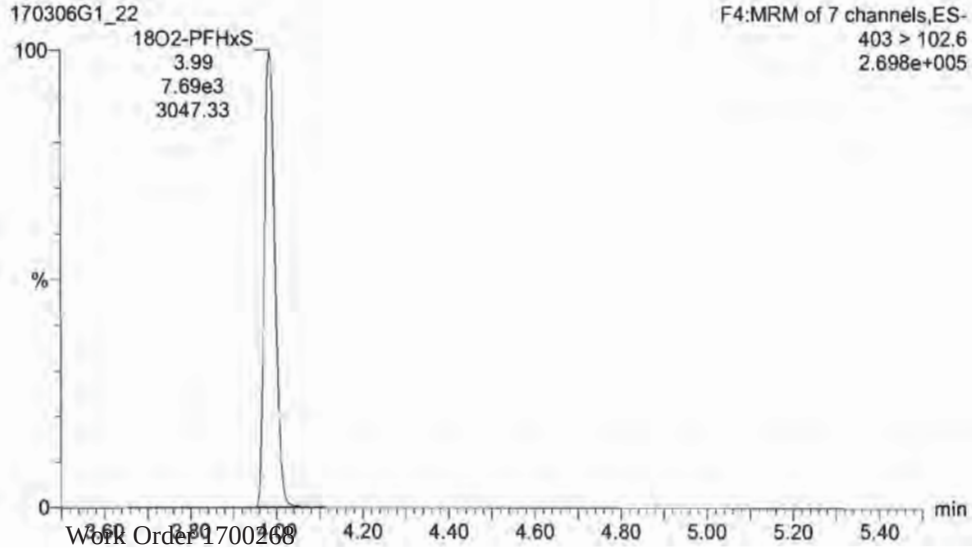
PFHxS



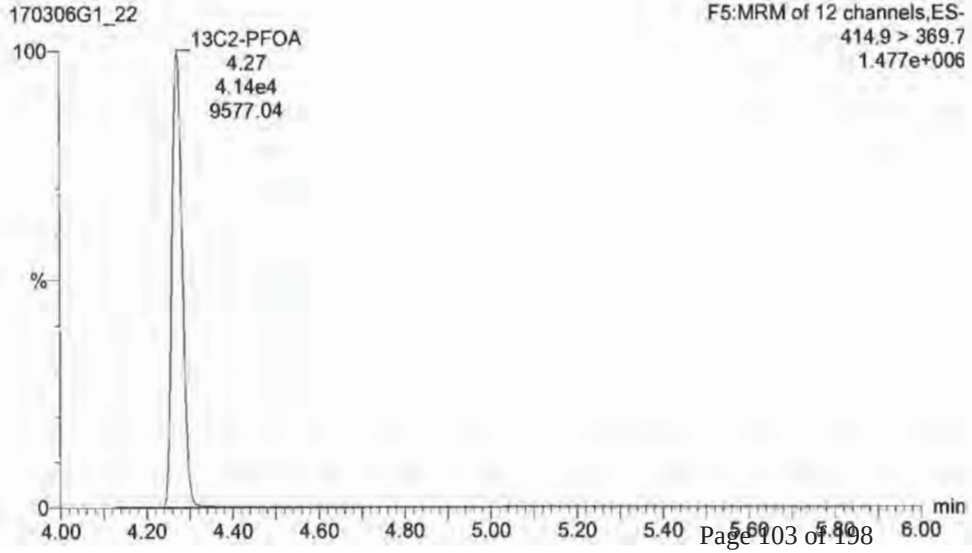
PFOA

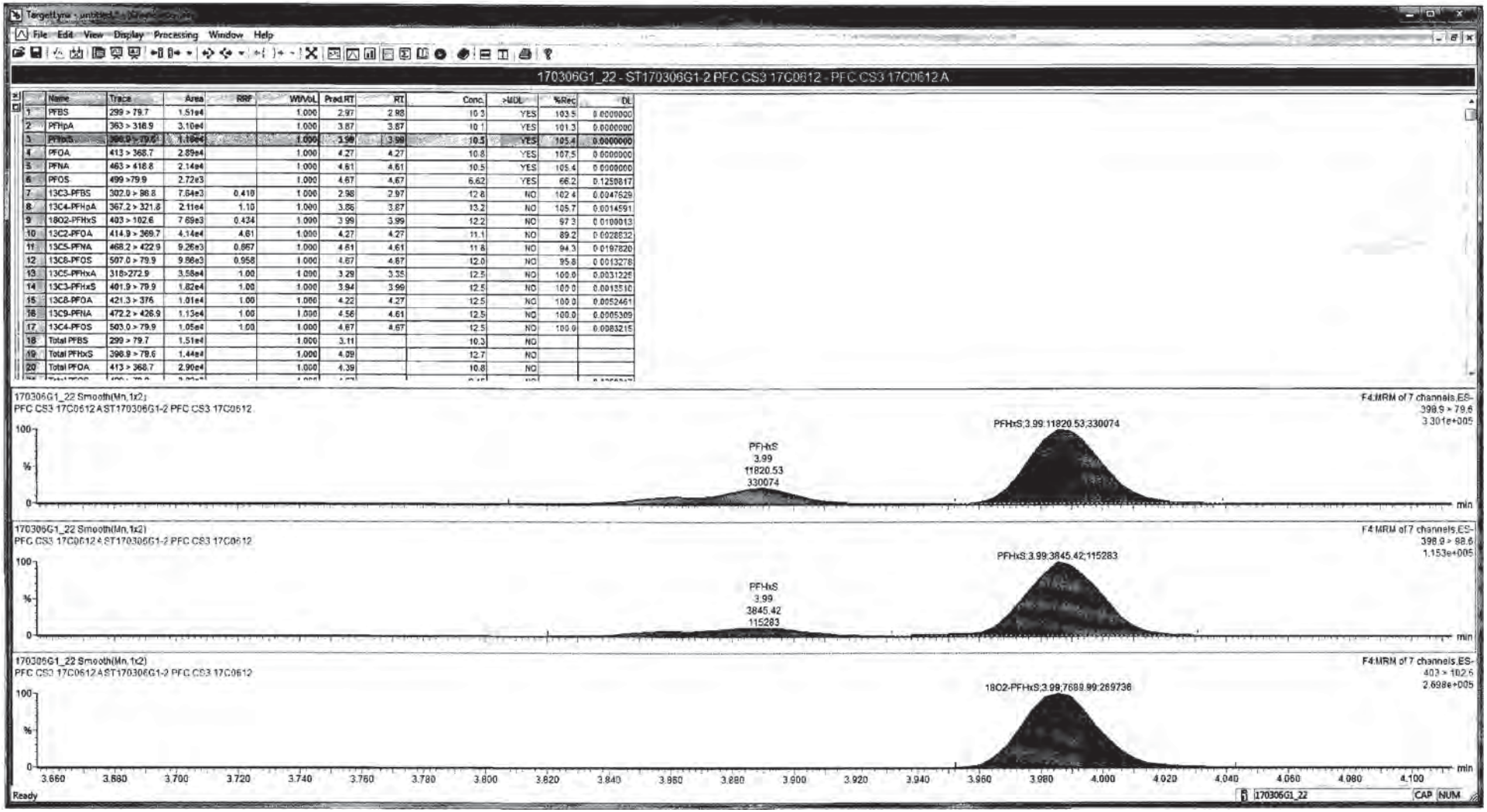


18O2-PFHxS



13C2-PFOA





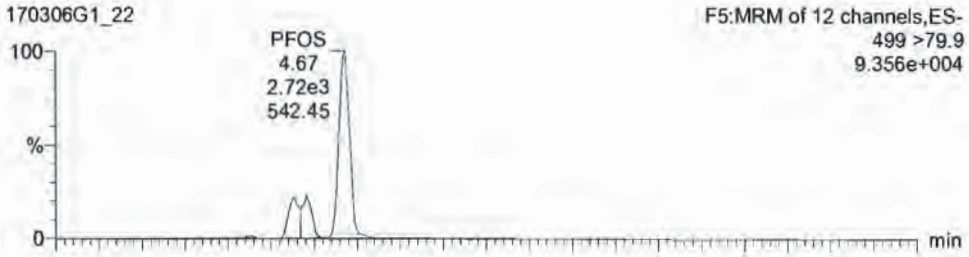
	Name	Trace	Area	RRF	Wt/Vol	Pred.RT	RT	Conc.	>MDL	%Rec	DL
1	PFBS	299 > 79.7	1.51e4		1.000	2.97	2.98	10.3	YES	103.5	0.0000000
2	PFHpA	363 > 318.9	3.10e4		1.000	3.87	3.87	10.1	YES	101.3	0.0000000
3	PFHxS	398.9 > 79.6	1.16e4		1.000	3.98	3.99	10.5	YES	105.4	0.0000000
4	PFOA	413 > 368.7	2.89e4		1.000	4.27	4.27	10.8	YES	107.5	0.0000000
5	PFNA	463 > 418.8	2.14e4		1.000	4.61	4.61	10.5	YES	105.4	0.0000000
6	PFOS	499 >79.9	2.72e3		1.000	4.67	4.67	6.62	YES	66.2	0.1250817
7	13C3-PFBS	302.0 > 98.8	7.84e3	0.419	1.000	2.98	2.97	12.8	NO	102.4	0.0047629
8	13C4-PFHpA	367.2 > 321.8	2.11e4	1.10	1.000	3.86	3.87	13.2	NO	105.7	0.0014591
9	18O2-PFHxS	403 > 102.6	7.69e3	0.434	1.000	3.99	3.99	12.2	NO	97.3	0.0100013
10	13C2-PFOA	414.9 > 369.7	4.14e4	4.61	1.000	4.27	4.27	11.1	NO	89.2	0.0028832
11	13C5-PFNA	468.2 > 422.9	9.26e3	0.867	1.000	4.61	4.61	11.8	NO	94.3	0.0197820
12	13C8-PFOS	507.0 > 79.9	9.86e3	0.958	1.000	4.67	4.67	12.0	NO	95.8	0.0013278
13	13C5-PFHxA	318>272.9	3.58e4	1.00	1.000	3.29	3.35	12.5	NO	100.0	0.0031225
14	13C3-PFHxS	401.9 > 79.9	1.82e4	1.00	1.000	3.94	3.99	12.5	NO	100.0	0.0013510
15	13C8-PFOA	421.3 > 376	1.01e4	1.00	1.000	4.22	4.27	12.5	NO	100.0	0.0052461
16	13C9-PFNA	472.2 > 426.9	1.13e4	1.00	1.000	4.56	4.61	12.5	NO	100.0	0.0005309
17	13C4-PFOS	503.0 > 79.9	1.05e4	1.00	1.000	4.67	4.67	12.5	NO	100.0	0.0083215
18	Total PFBS	299 > 79.7	1.51e4		1.000	3.11		10.3	NO		
19	Total PFHxS	398.9 > 79.6	1.44e4		1.000	4.09		12.7	NO		
20	Total PFOA	413 > 368.7	2.90e4		1.000	4.39		10.8	NO		

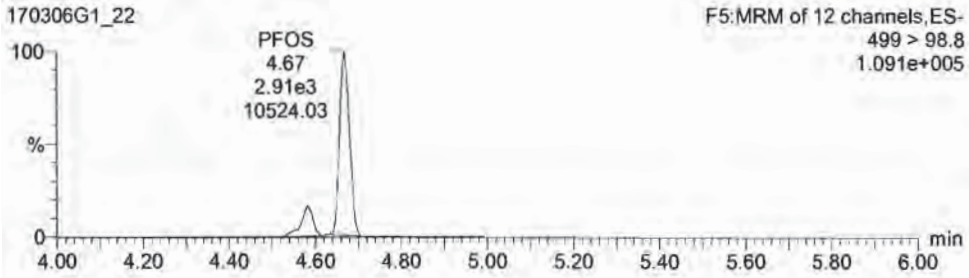
Dataset: Untitled

Last Altered: Tuesday, March 07, 2017 09:01:05 Pacific Standard Time
Printed: Tuesday, March 07, 2017 09:01:09 Pacific Standard Time

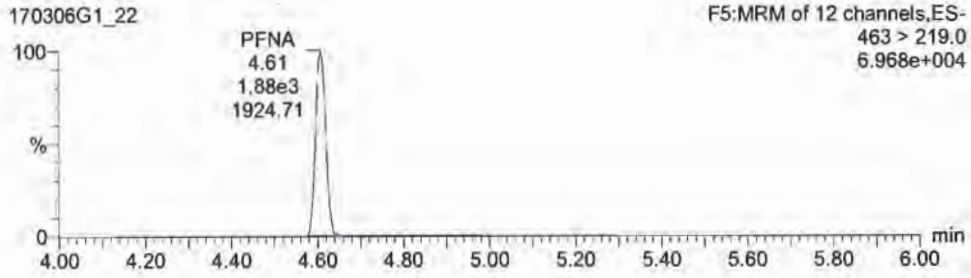
Name: 170306G1_22, Date: 06-Mar-2017, Time: 19:48:29, ID: ST170306G1-2 PFC CS3 17C0612, Description: PFC CS3 17C0612 A

PFOS

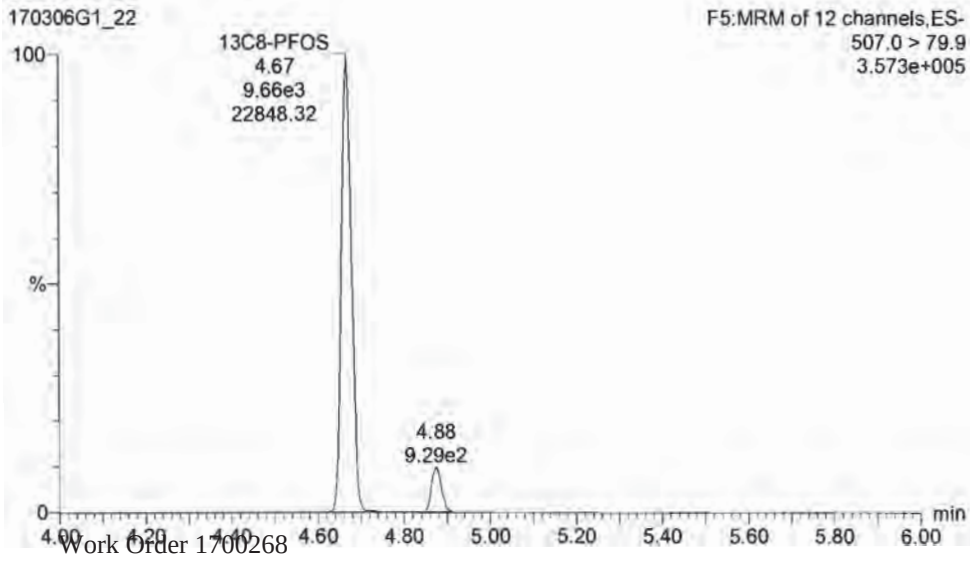




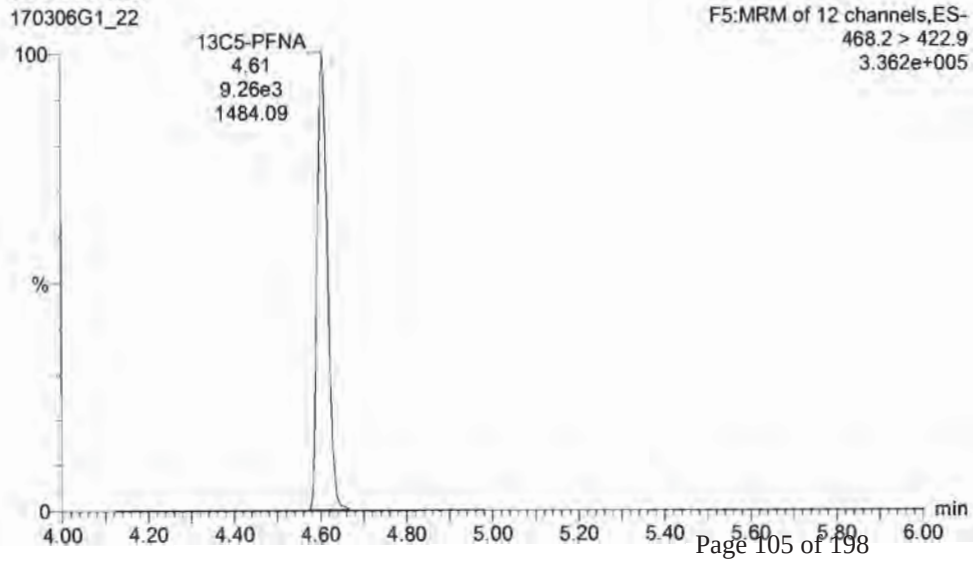
PFNA

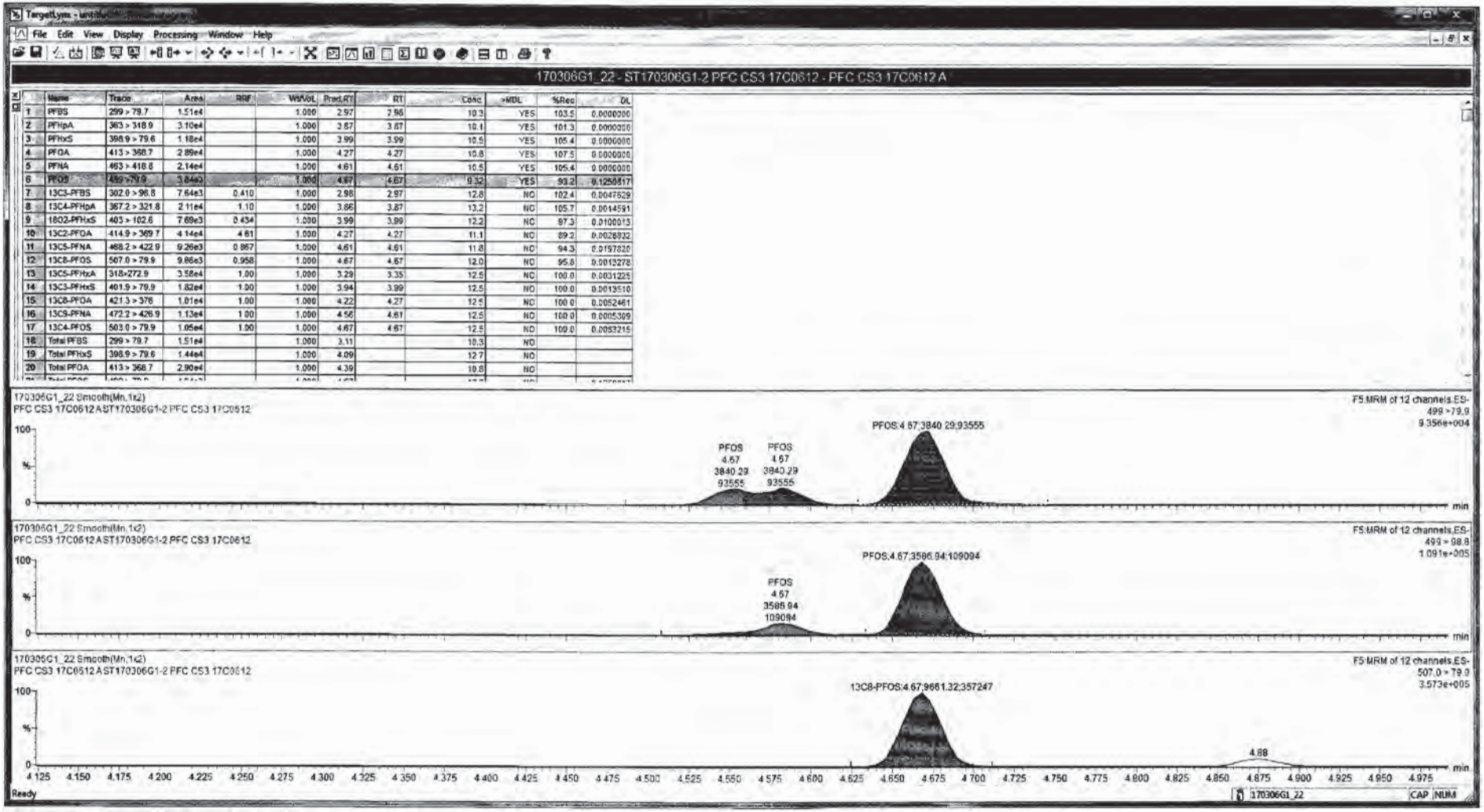


13C8-PFOS



13C5-PFNA





	Name	Trace	Area	RRF	Wt/VoL	Pred.RT	RT	Conc	>MDL	%Rec	DL
1	PFBS	299 > 79.7	1.51e4		1.000	2.97	2.96	10.3	YES	103.5	0.0000000
2	PFHpA	363 > 318.9	3.10e4		1.000	3.87	3.87	10.1	YES	101.3	0.0000000
3	PFHxS	398.9 > 79.6	1.18e4		1.000	3.99	3.99	10.5	YES	105.4	0.0000000
4	PFOA	413 > 368.7	2.89e4		1.000	4.27	4.27	10.8	YES	107.5	0.0000000
5	PFNA	463 > 418.8	2.14e4		1.000	4.61	4.61	10.5	YES	105.4	0.0000000
6	PFOS	499 > 79.9	3.84e3		1.000	4.67	4.67	9.32	YES	93.2	0.1258517
7	13C3-PFBS	302.0 > 98.8	7.64e3	0.410	1.000	2.98	2.97	12.8	NO	102.4	0.0047629
8	13C4-PFHpA	367.2 > 321.8	2.11e4	1.10	1.000	3.86	3.87	13.2	NO	105.7	0.0014591
9	1802-PFHxS	403 > 102.6	7.69e3	0.434	1.000	3.99	3.99	12.2	NO	97.3	0.0100013
10	13C2-PFOA	414.9 > 369.7	4.14e4	4.61	1.000	4.27	4.27	11.1	NO	89.2	0.0028832
11	13C5-PFNA	468.2 > 422.9	9.26e3	0.867	1.000	4.61	4.61	11.8	NO	94.3	0.0197820
12	13C8-PFOS	507.0 > 79.9	9.86e3	0.958	1.000	4.67	4.67	12.0	NO	95.8	0.0013278
13	13C5-PFHxA	318>272.9	3.58e4	1.00	1.000	3.29	3.35	12.5	NO	100.0	0.0031225
14	13C3-PFHxS	401.9 > 79.9	1.82e4	1.00	1.000	3.94	3.99	12.5	NO	100.0	0.0013510
15	13C8-PFOA	421.3 > 376	1.01e4	1.00	1.000	4.22	4.27	12.5	NO	100.0	0.0052461
16	13C9-PFNA	472.2 > 426.9	1.13e4	1.00	1.000	4.56	4.61	12.5	NO	100.0	0.0005309
17	13C4-PFOS	503.0 > 79.9	1.05e4	1.00	1.000	4.67	4.67	12.5	NO	100.0	0.0053215
18	Total PFBS	299 > 79.7	1.51e4		1.000	3.11		10.3	NO		
19	Total PFHxS	398.9 > 79.6	1.44e4		1.000	4.09		12.7	NO		
20	Total PFOA	413 > 368.7	2.90e4		1.000	4.39		10.8	NO		

Dataset: Untitled

Last Altered: Tuesday, March 07, 2017 09:01:05 Pacific Standard Time
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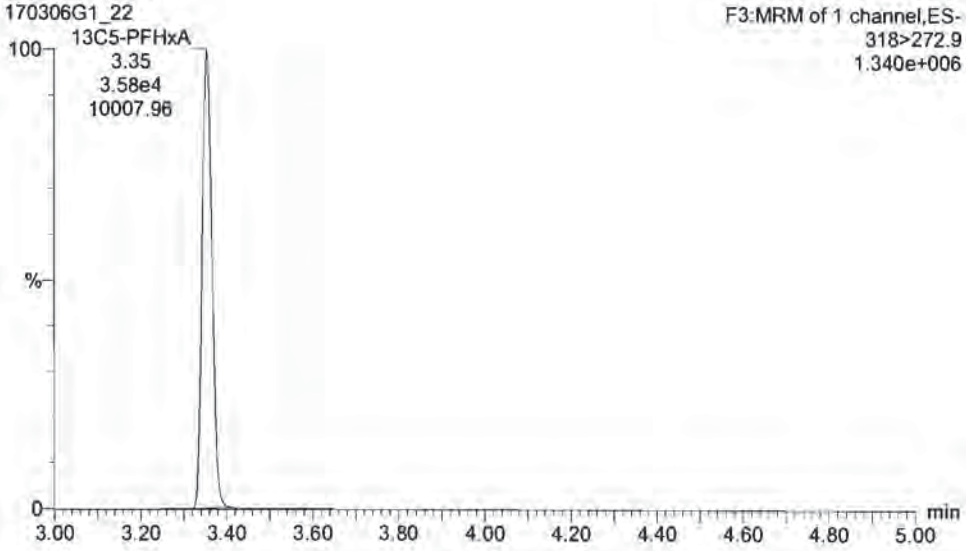
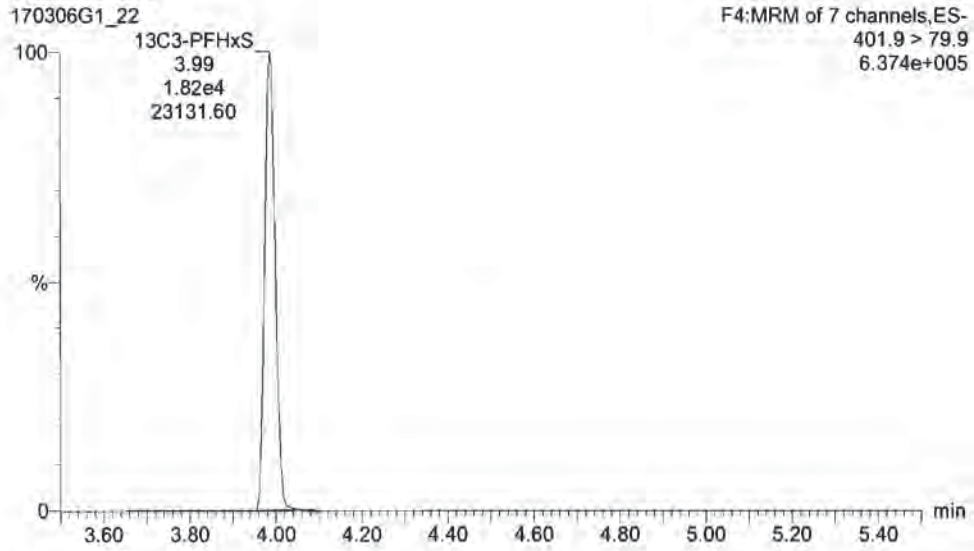
Name: 170306G1_22, Date: 06-Mar-2017, Time: 19:48:29, ID: ST170306G1-2 PFC CS3 17C0612, Description: PFC CS3 17C0612 A

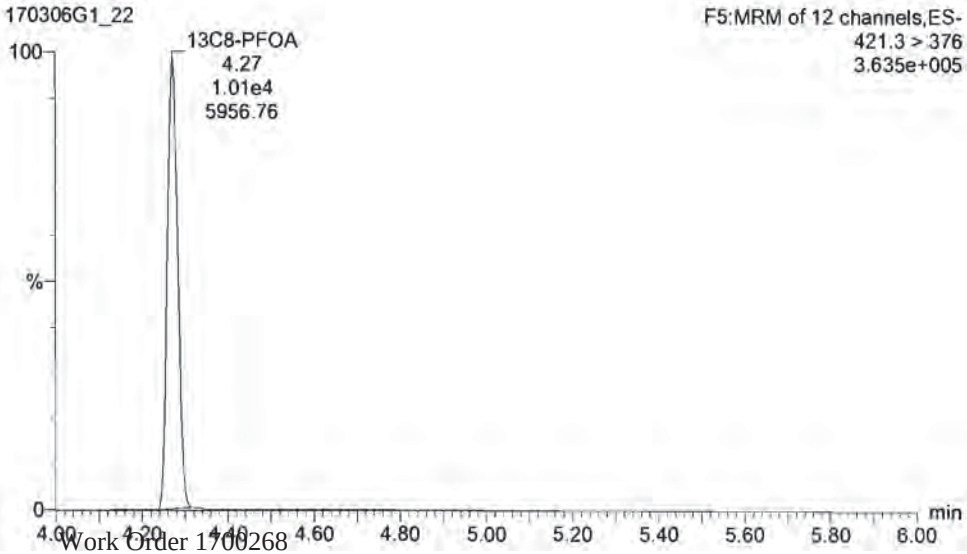
13C5-PFHxA



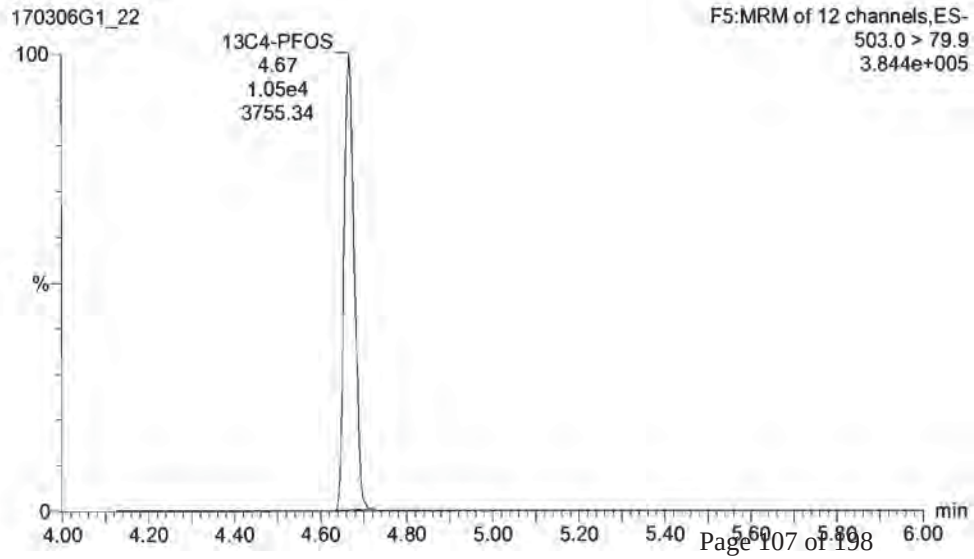
13C3-PFHxS



13C8-PFOA



13C4-PFOS

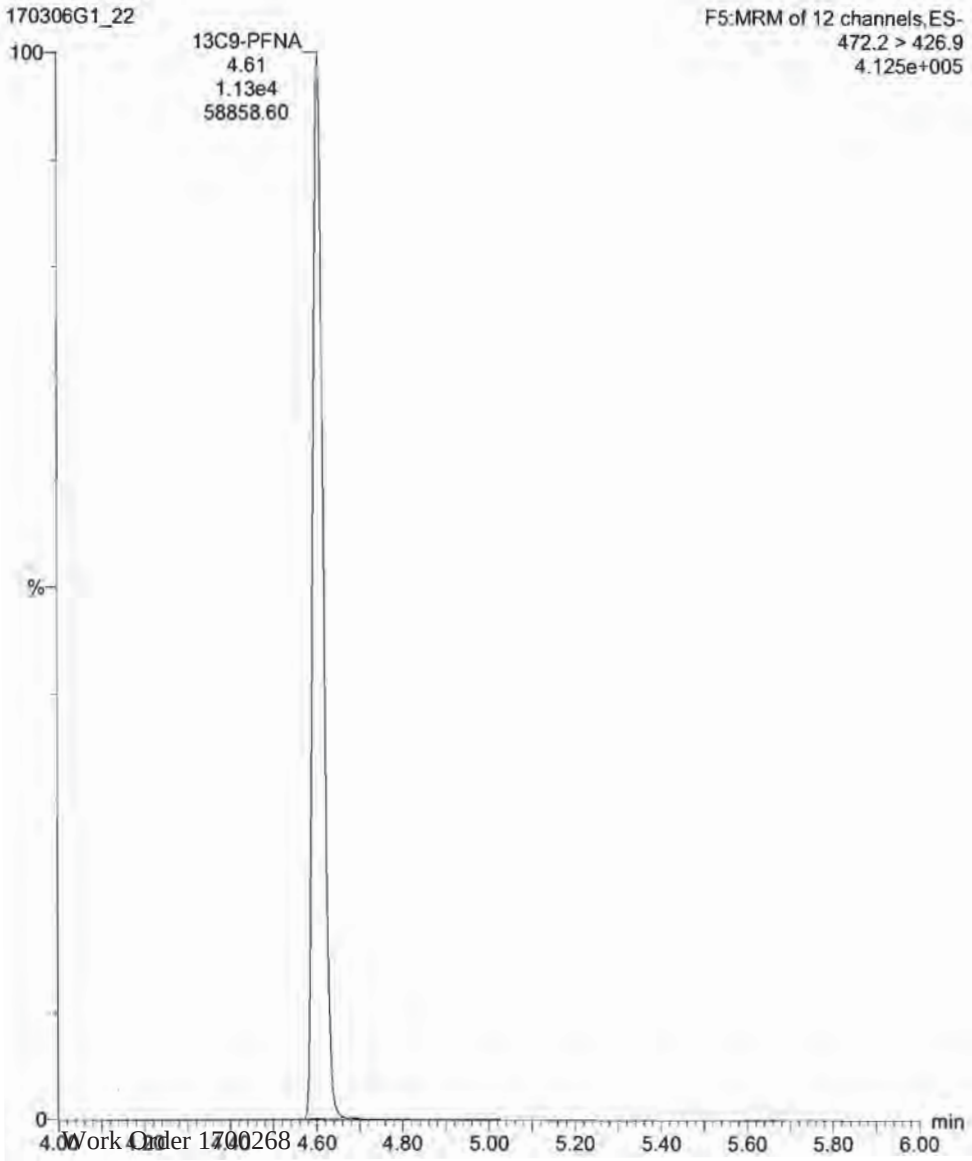


Dataset: Untitled

Last Altered: Tuesday, March 07, 2017 09:01:05 Pacific Standard Time
Printed: Tuesday, March 07, 2017 09:01:09 Pacific Standard Time

Name: 170306G1_22, Date: 06-Mar-2017, Time: 19:48:29, ID: ST170306G1-2 PFC CS3 17C0612, Description: PFC CS3 17C0612 A

13C9-PFNA



INITIAL CALIBRATION

Vista Analytical Laboratory Q2

Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-CRV.qld

Last Altered: Monday, March 06, 2017 08:19:21 Pacific Standard Time
Printed: Monday, March 06, 2017 08:29:13 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_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:19:21

Compound name: PFBS
Correlation coefficient: r = 0.999596, r^2 = 0.999192
Calibration curve: 2.38097 * x + 0.0682571
Response type: Internal Std (Ref 7), 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	170305G1_2	0.250	3.05	3.44e2	6.21e3	0.263	5.1	2.77
2	2	170305G1_3	0.500	3.05	6.19e2	6.45e3	0.475	-5.0	2.40
3	3	170305G1_4	1.00	3.04	1.07e3	5.41e3	1.01	1.1	2.47
4	4	170305G1_5	2.00	3.03	2.78e3	7.24e3	1.99	-0.7	2.40
5	5	170305G1_6	5.00	3.03	5.91e3	6.73e3	4.58	-8.4	2.20
6	6	170305G1_7	10.0	3.03	1.12e4	5.49e3	10.7	7.2	2.56
7	7	170305G1_8	50.0	3.03	5.43e4	5.58e3	51.1	2.1	2.43
8	8	170305G1_9	100	3.03	9.61e4	5.11e3	98.6	-1.4	2.35

GS 3/6/17

Compound name: PFHpA
Correlation coefficient: r = 0.999429, r^2 = 0.998857
Calibration curve: 1.79957 * x + 0.123896
Response type: Internal Std (Ref 8), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

✓ AC 3/6/17

	#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1	170305G1_2	0.250	3.93	7.46e2	1.70e4	0.235	-5.8	2.19
2	2	170305G1_3	0.500	3.92	1.43e3	1.69e4	0.518	3.7	2.11
3	3	170305G1_4	1.00	3.91	2.27e3	1.52e4	0.964	-3.6	1.86
4	4	170305G1_5	2.00	3.91	5.65e3	1.86e4	2.05	2.3	1.90
5	5	170305G1_6	5.00	3.91	1.36e4	1.95e4	4.78	-4.4	1.74
6	6	170305G1_7	10.0	3.91	1.98e4	1.29e4	10.6	6.4	1.93
7	7	170305G1_8	50.0	3.91	1.16e5	1.55e4	51.9	3.8	1.87
8	8	170305G1_9	100	3.91	1.99e5	1.42e4	97.6	-2.4	1.76

Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-CRV.qld

Last Altered: Monday, March 06, 2017 08:19:21 Pacific Standard Time
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Compound name: PFHxS
Correlation coefficient: r = 0.999200, r^2 = 0.998401
Calibration curve: 1.81334 * x + 0.103191
Response type: Internal Std (Ref 9), 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	170305G1_2	0.250	4.04	3.26e2	7.11e3	0.259	3.8	2.29
2	2	170305G1_3	0.500	4.03	5.47e2	6.83e3	0.496	-0.9	2.00
3	3	170305G1_4	1.00	4.03	8.97e2	5.85e3	1.00	0.1	1.92
4	4	170305G1_5	2.00	4.03	2.23e3	7.43e3	2.01	0.5	1.87
5	5	170305G1_6	5.00	4.03	5.17e3	7.64e3	4.60	-8.0	1.69
6	6	170305G1_7	10.0	4.03	6.69e3	4.52e3	10.1	1.5	1.85
7	7	170305G1_8	50.0	4.03	4.78e4	6.24e3	52.8	5.6	1.92
8	8	170305G1_9	100	4.03	8.33e4	5.89e3	97.4	-2.6	1.77

Compound name: PFOA
Correlation coefficient: r = 0.998804, r^2 = 0.997609
Calibration curve: 0.794457 * x + 0.179058
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	170305G1_2	0.250	4.32	1.04e3	3.51e4	0.241	-3.7	1.48
2	2	170305G1_3	0.500	4.31	1.52e3	3.53e4	0.452	-9.6	1.08
3	3	170305G1_4	1.00	4.30	2.09e3	2.91e4	0.908	-9.2	0.901
4	4	170305G1_5	2.00	4.30	5.39e3	3.70e4	2.06	3.1	0.909
5	5	170305G1_6	5.00	4.30	1.24e4	3.46e4	5.43	8.5	0.898
6	6	170305G1_7	10.0	4.30	1.56e4	2.18e4	11.0	9.8	0.890
7	7	170305G1_8	50.0	4.30	1.10e5	3.30e4	52.3	4.6	0.835
8	8	170305G1_9	100	4.30	1.98e5	3.22e4	96.4	-3.6	0.767

Vista Analytical Laboratory Q2

Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-CRV.qld

Last Altered: Monday, March 06, 2017 08:19:21 Pacific Standard Time
Printed: Monday, March 06, 2017 08:29:13 Pacific Standard Time

Compound name: PFNA
Correlation coefficient: r = 0.999011, r^2 = 0.998022
Calibration curve: 2.73664 * x + 0.0966541
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	170305G1_2	0.250	4.65	5.06e2	8.36e3	0.241	-3.5	3.03
2	2	170305G1_3	0.500	4.64	8.81e2	7.67e3	0.489	-2.1	2.87
3	3	170305G1_4	1.00	4.63	1.26e3	5.74e3	0.968	-3.2	2.75
4	4	170305G1_5	2.00	4.63	3.17e3	6.97e3	2.04	2.0	2.84
5	5	170305G1_6	5.00	4.63	7.77e3	7.48e3	4.71	-5.8	2.60
6	6	170305G1_7	10.0	4.63	7.05e3	2.88e3	11.1	11.4	3.06
7	7	170305G1_8	50.0	4.63	7.41e4	6.50e3	52.1	4.1	2.85
8	8	170305G1_9	100	4.63	1.56e5	7.35e3	97.1	-2.9	2.66

Compound name: PFOS
Coefficient of Determination: R^2 = 0.997963
Calibration curve: -0.000185224 * x^2 + 0.54028 * x + -0.0525057
Response type: Internal Std (Ref 12), 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	170305G1_2	0.250	4.62	3.72e1	6.28e3	0.234	-6.3	0.296 (A)
2	2	170305G1_3	0.500	4.71	7.39e1	6.57e3	0.358	-28.5	0.281
3	3	170305G1_4	1.00	4.69	1.82e2	4.73e3	0.989	-1.1	0.482
4	4	170305G1_5	2.00	4.69	5.28e2	5.18e3	2.46	23.0	0.638
5	5	170305G1_6	5.00	4.69	1.23e3	5.64e3	5.14	2.8	0.544
6	6	170305G1_7	10.0	4.69	8.60e2	1.88e3	10.7	7.1	0.571
7	7	170305G1_8	50.0	4.69	1.04e4	5.14e3	47.8	-4.4	0.507
8	8	170305G1_9	100	4.69	2.64e4	6.26e3	101	1.1	0.527

(A) Point excluded.
ES 3/6/17

Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-CRV.qld

Last Altered: Monday, March 06, 2017 08:19:21 Pacific Standard Time
Printed: Monday, March 06, 2017 08:29:13 Pacific Standard Time

Compound name: 13C3-PFBS
Response Factor: 0.40994
RRF SD: 0.0411734, Relative SD: 10.0438
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	170305G1_2	12.5	3.05	6.21e3	1.48e4	12.8	2.4	0.420
2	2	170305G1_3	12.5	3.05	6.45e3	1.61e4	12.2	-2.5	0.400
3	3	170305G1_4	12.5	3.03	5.41e3	1.44e4	11.5	-8.1	0.377
4	4	170305G1_5	12.5	3.03	7.24e3	1.74e4	12.7	1.2	0.415
5	5	170305G1_6	12.5	3.03	6.73e3	1.72e4	11.9	-4.7	0.391
6	6	170305G1_7	12.5	3.03	5.49e3	1.09e4	15.4	23.0	0.504
7	7	170305G1_8	12.5	3.03	5.58e3	1.48e4	11.5	-7.9	0.378
8	8	170305G1_9	12.5	3.03	5.11e3	1.29e4	12.1	-3.5	0.396

Compound name: 13C4-PFHpA
Response Factor: 1.09794
RRF SD: 0.0510391, Relative SD: 4.64862
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	170305G1_2	12.5	3.92	1.70e4	1.48e4	13.1	5.0	1.15
2	2	170305G1_3	12.5	3.92	1.69e4	1.61e4	11.9	-4.5	1.05
3	3	170305G1_4	12.5	3.91	1.52e4	1.44e4	12.1	-3.4	1.06
4	4	170305G1_5	12.5	3.91	1.86e4	1.74e4	12.1	-3.1	1.06
5	5	170305G1_6	12.5	3.91	1.95e4	1.72e4	12.9	3.0	1.13
6	6	170305G1_7	12.5	3.91	1.29e4	1.09e4	13.4	7.6	1.18
7	7	170305G1_8	12.5	3.91	1.55e4	1.48e4	11.9	-4.4	1.05
8	8	170305G1_9	12.5	3.91	1.42e4	1.29e4	12.5	-0.2	1.10

Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-CRV.qld

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Compound name: 18O2-PFHxS
Response Factor: 0.434252
RRF SD: 0.0243573, Relative SD: 5.60903
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 170305G1_2	12.5	4.04	7.11e3	1.48e4	13.8	10.7	0.481
2	2 170305G1_3	12.5	4.03	6.83e3	1.61e4	12.2	-2.6	0.423
3	3 170305G1_4	12.5	4.03	5.85e3	1.44e4	11.7	-6.2	0.407
4	4 170305G1_5	12.5	4.02	7.43e3	1.74e4	12.3	-1.8	0.426
5	5 170305G1_6	12.5	4.02	7.64e3	1.72e4	12.8	2.2	0.444
6	6 170305G1_7	12.5	4.02	4.52e3	1.09e4	12.0	-4.4	0.415
7	7 170305G1_8	12.5	4.02	6.24e3	1.48e4	12.1	-2.8	0.422
8	8 170305G1_9	12.5	4.02	5.89e3	1.29e4	13.1	5.0	0.456

Compound name: 13C2-PFOA
Response Factor: 4.60838
RRF SD: 0.269705, Relative SD: 5.85249
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 170305G1_2	12.5	4.32	3.51e4	7.77e3	12.2	-2.0	4.51
2	2 170305G1_3	12.5	4.31	3.53e4	8.14e3	11.8	-5.8	4.34
3	3 170305G1_4	12.5	4.31	2.91e4	6.38e3	12.4	-1.0	4.56
4	4 170305G1_5	12.5	4.30	3.70e4	8.23e3	12.2	-2.4	4.50
5	5 170305G1_6	12.5	4.30	3.46e4	7.88e3	11.9	-4.6	4.40
6	6 170305G1_7	12.5	4.30	2.18e4	4.25e3	13.9	11.6	5.14
7	7 170305G1_8	12.5	4.30	3.30e4	7.29e3	12.3	-1.8	4.53
8	8 170305G1_9	12.5	4.30	3.22e4	6.59e3	13.3	6.0	4.89

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Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-CRV.qld

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Compound name: 13C5-PFNA
Response Factor: 0.867114
RRF SD: 0.0501317, Relative SD: 5.78144
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 170305G1_2	12.5	4.64	8.36e3	8.87e3	13.6	8.7	0.943
2	2 170305G1_3	12.5	4.64	7.67e3	8.20e3	13.5	7.9	0.936
3	3 170305G1_4	12.5	4.63	5.74e3	7.15e3	11.6	-7.4	0.803
4	4 170305G1_5	12.5	4.63	6.97e3	8.16e3	12.3	-1.4	0.855
5	5 170305G1_6	12.5	4.63	7.48e3	8.62e3	12.5	0.0	0.867
6	6 170305G1_7	12.5	4.63	2.88e3	3.54e3	11.7	-6.0	0.815
7	7 170305G1_8	12.5	4.63	6.50e3	7.60e3	12.3	-1.3	0.856
8	8 170305G1_9	12.5	4.63	7.35e3	8.52e3	12.4	-0.5	0.863

Compound name: 13C8-PFOS
Response Factor: 0.95832
RRF SD: 0.0597595, Relative SD: 6.23587
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 170305G1_2	12.5	4.70	6.28e3	6.73e3	12.2	-2.5	0.934
2	2 170305G1_3	12.5	4.70	6.57e3	7.11e3	12.1	-3.6	0.924
3	3 170305G1_4	12.5	4.69	4.73e3	5.19e3	11.9	-4.7	0.913
4	4 170305G1_5	12.5	4.69	5.18e3	5.45e3	12.4	-0.9	0.950
5	5 170305G1_6	12.5	4.69	5.64e3	6.31e3	11.7	-6.8	0.894
6	6 170305G1_7	12.5	4.69	1.88e3	1.74e3	14.1	12.8	1.08
7	7 170305G1_8	12.5	4.69	5.14e3	5.13e3	13.1	4.4	1.00
8	8 170305G1_9	12.5	4.69	6.26e3	6.45e3	12.7	1.3	0.971

Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-CRV.qld

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Compound name: 13C5-PFHxA
Response Factor: 1
RRF SD: 0, Relative SD: 0
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	170305G1_2	12.5	3.43	2.72e4	2.72e4	12.5	0.0	1.00
2	2	170305G1_3	12.5	3.43	2.95e4	2.95e4	12.5	0.0	1.00
3	3	170305G1_4	12.5	3.41	2.60e4	2.60e4	12.5	0.0	1.00
4	4	170305G1_5	12.5	3.41	3.17e4	3.17e4	12.5	0.0	1.00
5	5	170305G1_6	12.5	3.41	3.10e4	3.10e4	12.5	0.0	1.00
6	6	170305G1_7	12.5	3.41	2.37e4	2.37e4	12.5	0.0	1.00
7	7	170305G1_8	12.5	3.41	2.69e4	2.69e4	12.5	0.0	1.00
8	8	170305G1_9	12.5	3.41	2.39e4	2.39e4	12.5	0.0	1.00

Compound name: 13C3-PFHxS
Response Factor: 1
RRF SD: 0, Relative SD: 0
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	170305G1_2	12.5	4.04	1.48e4	1.48e4	12.5	0.0	1.00
2	2	170305G1_3	12.5	4.03	1.61e4	1.61e4	12.5	0.0	1.00
3	3	170305G1_4	12.5	4.03	1.44e4	1.44e4	12.5	0.0	1.00
4	4	170305G1_5	12.5	4.02	1.74e4	1.74e4	12.5	0.0	1.00
5	5	170305G1_6	12.5	4.02	1.72e4	1.72e4	12.5	0.0	1.00
6	6	170305G1_7	12.5	4.03	1.09e4	1.09e4	12.5	0.0	1.00
7	7	170305G1_8	12.5	4.02	1.48e4	1.48e4	12.5	0.0	1.00
8	8	170305G1_9	12.5	4.02	1.29e4	1.29e4	12.5	0.0	1.00

Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-CRV.qld

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Compound name: 13C8-PFOA
Response Factor: 1
RRF SD: 0, Relative SD: 0
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	170305G1_2	12.5	4.32	7.77e3	7.77e3	12.5	0.0	1.00
2	2	170305G1_3	12.5	4.31	8.14e3	8.14e3	12.5	0.0	1.00
3	3	170305G1_4	12.5	4.30	6.38e3	6.38e3	12.5	0.0	1.00
4	4	170305G1_5	12.5	4.30	8.23e3	8.23e3	12.5	0.0	1.00
5	5	170305G1_6	12.5	4.30	7.88e3	7.88e3	12.5	0.0	1.00
6	6	170305G1_7	12.5	4.30	4.25e3	4.25e3	12.5	0.0	1.00
7	7	170305G1_8	12.5	4.30	7.29e3	7.29e3	12.5	0.0	1.00
8	8	170305G1_9	12.5	4.30	6.59e3	6.59e3	12.5	0.0	1.00

Compound name: 13C9-PFNA
Response Factor: 1
RRF SD: 0, Relative SD: 0
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	170305G1_2	12.5	4.64	8.87e3	8.87e3	12.5	0.0	1.00
2	2	170305G1_3	12.5	4.64	8.20e3	8.20e3	12.5	0.0	1.00
3	3	170305G1_4	12.5	4.63	7.15e3	7.15e3	12.5	0.0	1.00
4	4	170305G1_5	12.5	4.63	8.16e3	8.16e3	12.5	0.0	1.00
5	5	170305G1_6	12.5	4.63	8.62e3	8.62e3	12.5	0.0	1.00
6	6	170305G1_7	12.5	4.63	3.54e3	3.54e3	12.5	0.0	1.00
7	7	170305G1_8	12.5	4.63	7.60e3	7.60e3	12.5	0.0	1.00
8	8	170305G1_9	12.5	4.63	8.52e3	8.52e3	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 170305G1_2	12.5	4.70	6.73e3	6.73e3	12.5	0.0	1.00
2	2 170305G1_3	12.5	4.70	7.11e3	7.11e3	12.5	0.0	1.00
3	3 170305G1_4	12.5	4.69	5.19e3	5.19e3	12.5	0.0	1.00
4	4 170305G1_5	12.5	4.69	5.45e3	5.45e3	12.5	0.0	1.00
5	5 170305G1_6	12.5	4.69	6.31e3	6.31e3	12.5	0.0	1.00
6	6 170305G1_7	12.5	4.69	1.74e3	1.74e3	12.5	0.0	1.00
7	7 170305G1_8	12.5	4.69	5.13e3	5.13e3	12.5	0.0	1.00
8	8 170305G1_9	12.5	4.69	6.45e3	6.45e3	12.5	0.0	1.00

Vista Analytical Laboratory VG-11

Dataset: Untitled

Last Altered: Monday, March 06, 2017 09:13:54 Pacific Standard Time
Printed: Monday, March 06, 2017 09:14:12 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_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

Compound name: PFBS

	Name	ID	Acq.Date	Acq.Time
1	170305G1_1	IPA	05-Mar-17	12:34:35
2	170305G1_2	ST170305G1-1 PFC CS-2 17C0501	05-Mar-17	12:46:48
3	170305G1_3	ST170305G1-2 PFC CS-1 17C0502	05-Mar-17	12:59:15
4	170305G1_4	ST170305G1-3 PFC CS0 17C0503	05-Mar-17	13:11:49
5	170305G1_5	ST170305G1-4 PFC CS1 17C0504	05-Mar-17	13:24:21
6	170305G1_6	ST170305G1-5 PFC CS2 17C0505	05-Mar-17	13:36:55
7	170305G1_7	ST170305G1-6 PFC CS3 17C0506	05-Mar-17	13:49:29
8	170305G1_8	ST170305G1-7 PFC CS4 17C0507	05-Mar-17	14:02:00
9	170305G1_9	ST170305G1-8 PFC CS5 17C0508	05-Mar-17	14:14:34
10	170305G1_10	IPA	05-Mar-17	14:27:08
11	170305G1_11	SS170305G1-1 PFC SSS 17C0509	05-Mar-17	14:39:40
12	170305G1_12	IPA	05-Mar-17	14:52:09
13	170305G1_13	B7C0012-BS1 OPR 0.125	05-Mar-17	15:04:45
14	170305G1_14	B7C0010-BS1 OPR 0.125	05-Mar-17	15:17:15
15	170305G1_15	IPA	05-Mar-17	15:29:48
16	170305G1_16	B7C0012-BLK1 Method Blank 0.125	05-Mar-17	15:42:23
17	170305G1_17	B7C0010-BLK1 Method Blank 0.125	05-Mar-17	15:54:54
18	170305G1_18	1700268-02RE1 WI-CV-GW05M-0217 0.125	05-Mar-17	16:07:28
19	170305G1_19	1700268-04RE1 WI-CV-GW11M-0217 0.125	05-Mar-17	16:20:00
20	170305G1_20	1700280-01 WI-CV-GW03M-0217 0.125	05-Mar-17	16:32:34
21	170305G1_21	1700280-02 WI-CV-GW03D-0217 0.125	05-Mar-17	16:45:07
22	170305G1_22	1700280-03 WI-CV-EB07-022717 0.125	05-Mar-17	16:57:36
23	170305G1_23	1700280-04 WI-CV-GW04M-0217 0.125	05-Mar-17	17:10:09
24	170305G1_24	1700280-05 WI-CV-GW01M-0217 0.125	05-Mar-17	17:22:42
25	170305G1_25	1700280-06 WI-CV-EB08-022817 0.125	05-Mar-17	17:35:16
26	170305G1_26	1700280-07 WI-CV-GW01D-0217 0.125	05-Mar-17	17:47:49
27	170305G1_27	1700277-01 MILK-022717 0.005	05-Mar-17	18:00:22
28	170305G1_28	IPA	05-Mar-17	18:12:56
29	170305G1_29	ST170305G1-9 PFC CS3 17C0506	05-Mar-17	18:25:28
30	170305G1_30	IPA	05-Mar-17	18:38:01

Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-CRV.qld

Last Altered: Monday, March 06, 2017 08:19:21 Pacific Standard Time
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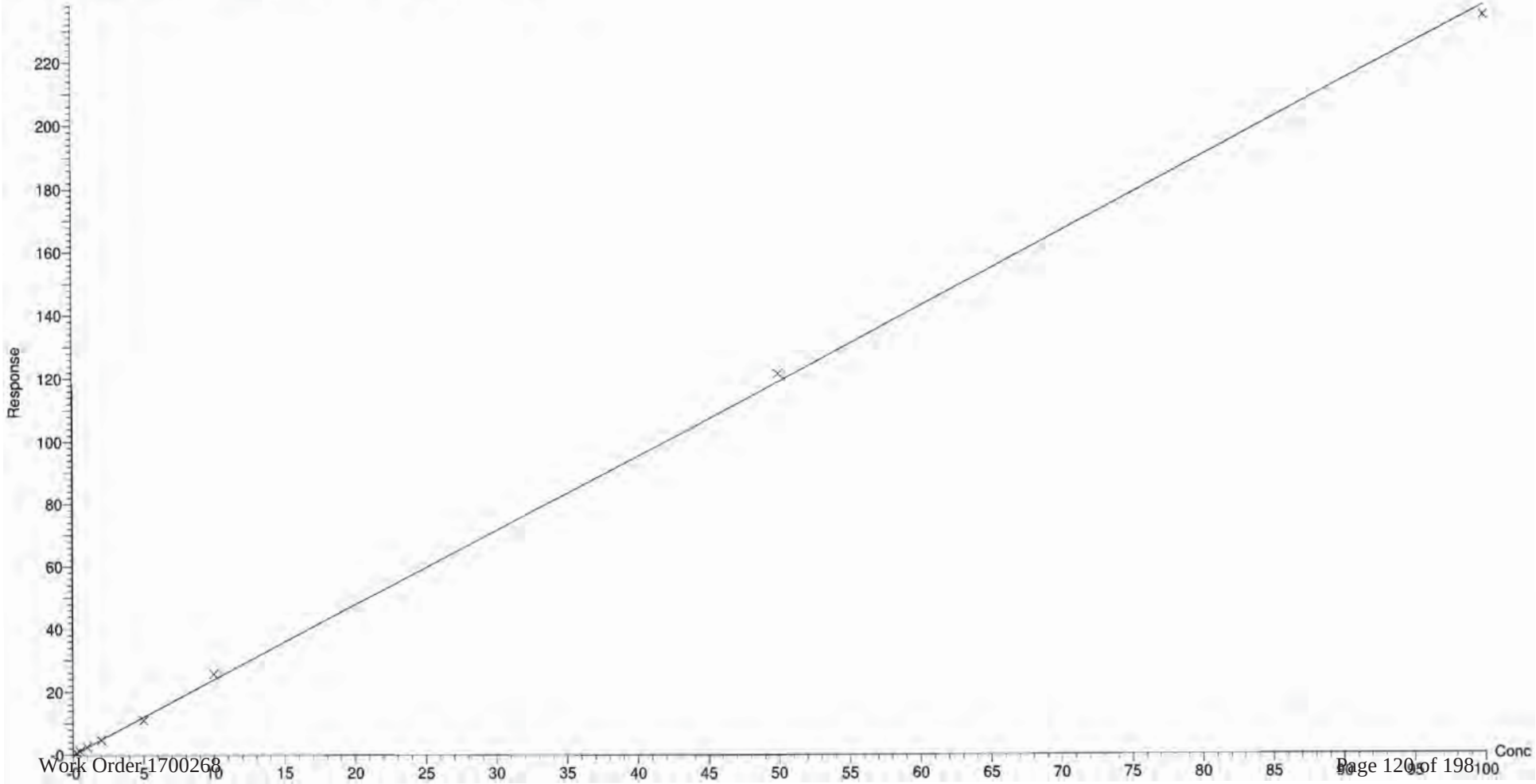
Method: U:\G1.pro\MethDB\PFAS_6_2trans_LINEAR.mdb 02 Mar 2017 11:26:53
Calibration: U:\G1.PRO\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:19:21

Compound name: PFBS
Correlation coefficient: r = 0.999596, r^2 = 0.999192
Calibration curve: 2.38097 * x + 0.0682571
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\170305G1\170305G1-CRV.qld

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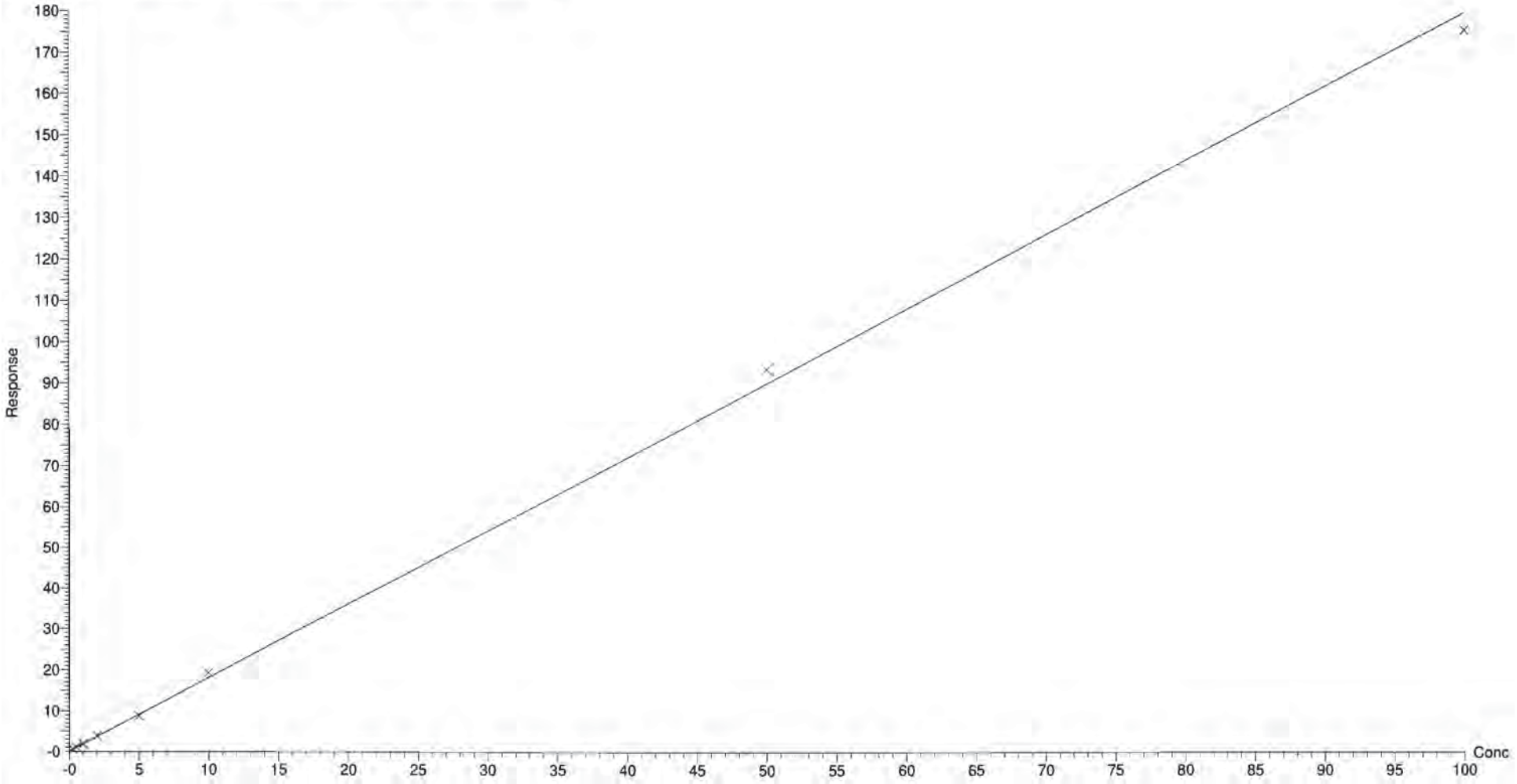
Compound name: PFHpA
Correlation coefficient: r = 0.999429, r^2 = 0.998857
Calibration curve: 1.79957 * x + 0.123896
Response type: Internal Std (Ref 8), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-CRV.qld

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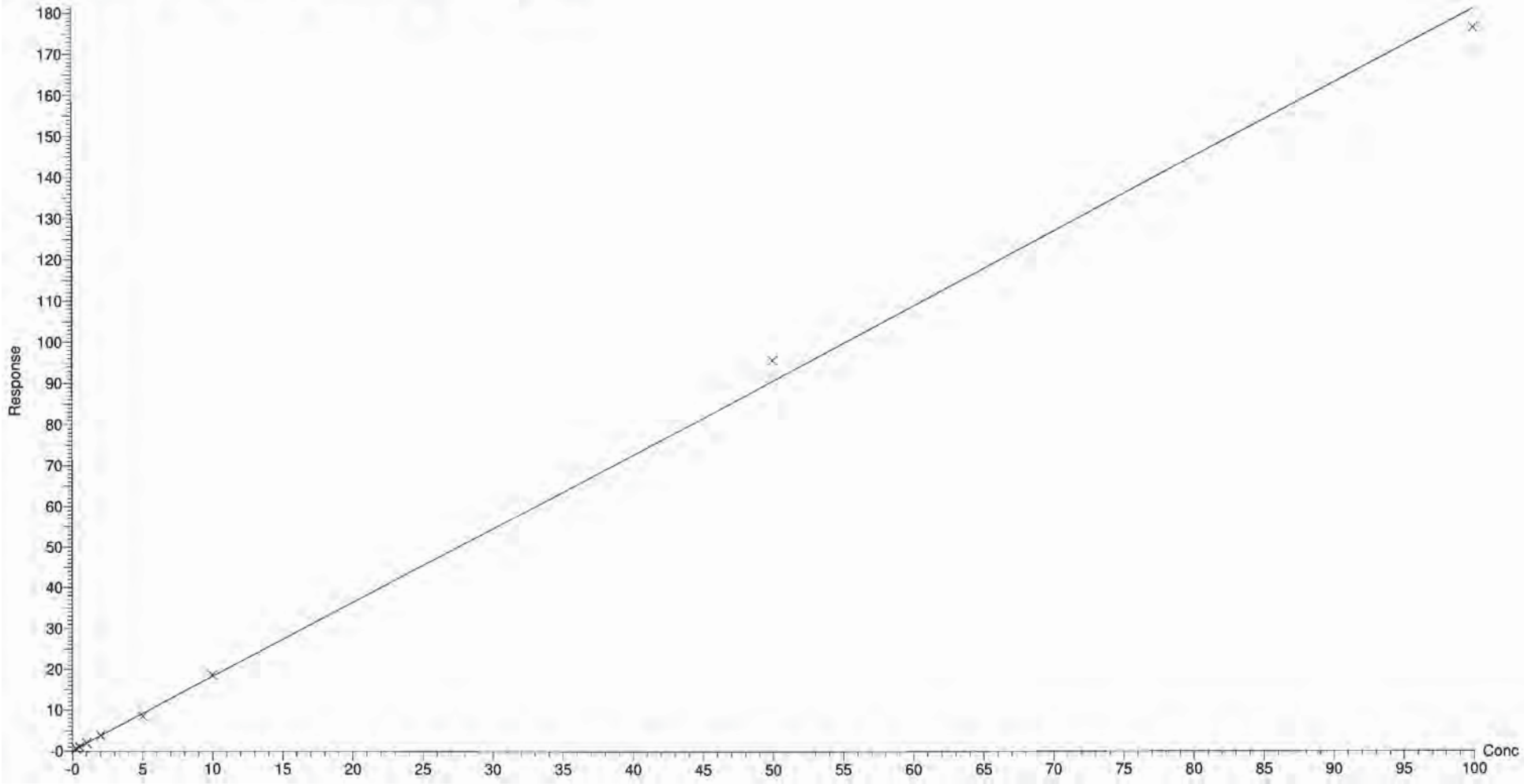
Compound name: PFHxS
Correlation coefficient: r = 0.999200, r^2 = 0.998401
Calibration curve: 1.81334 * x + 0.103191
Response type: Internal Std (Ref 9), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-CRV.qld

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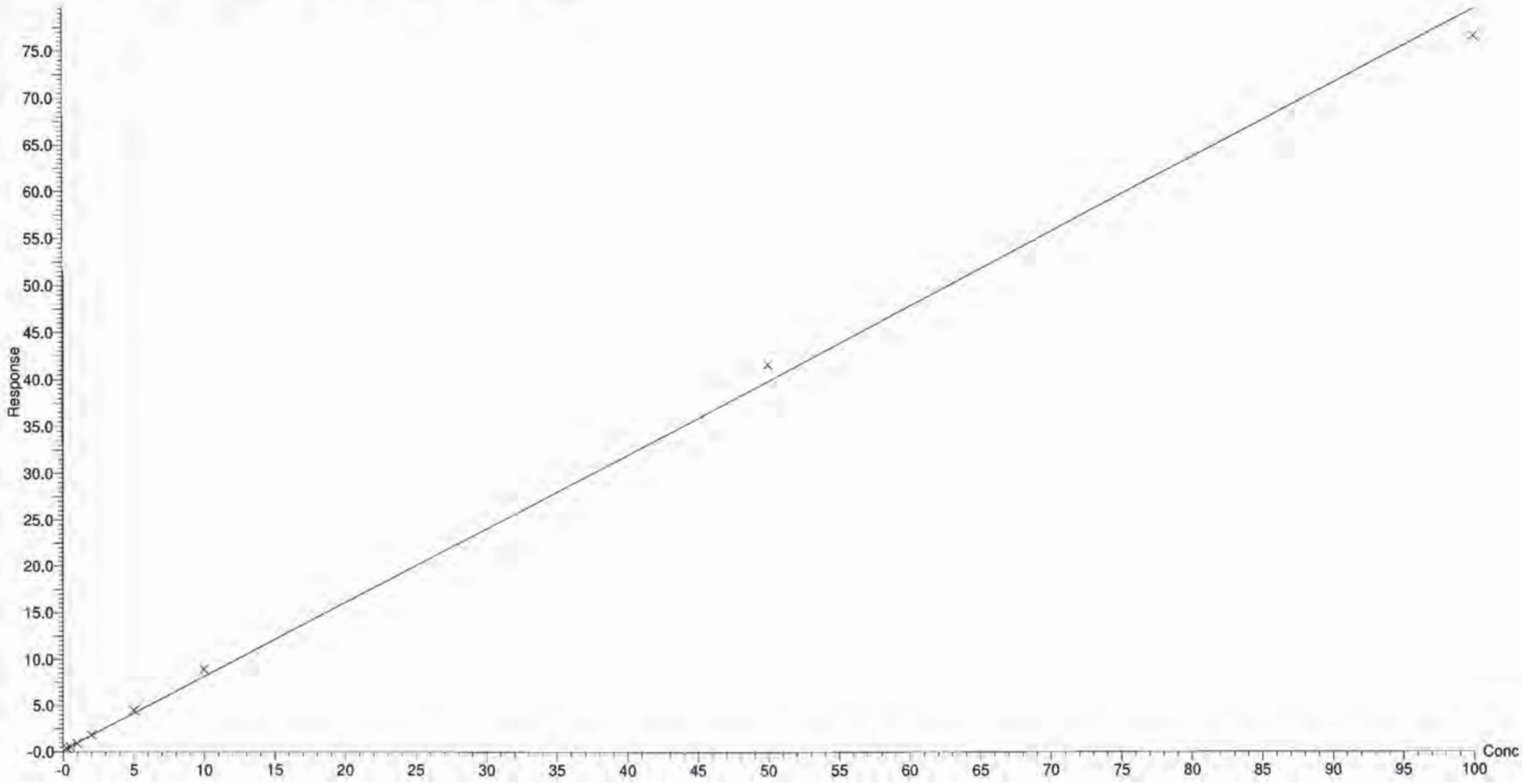
Compound name: PFOA
Correlation coefficient: r = 0.998804, r^2 = 0.997609
Calibration curve: 0.794457 * x + 0.179058
Response type: Internal Std (Ref 10), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-CRV.qld

Last Altered: Monday, March 06, 2017 08:19:21 Pacific Standard Time
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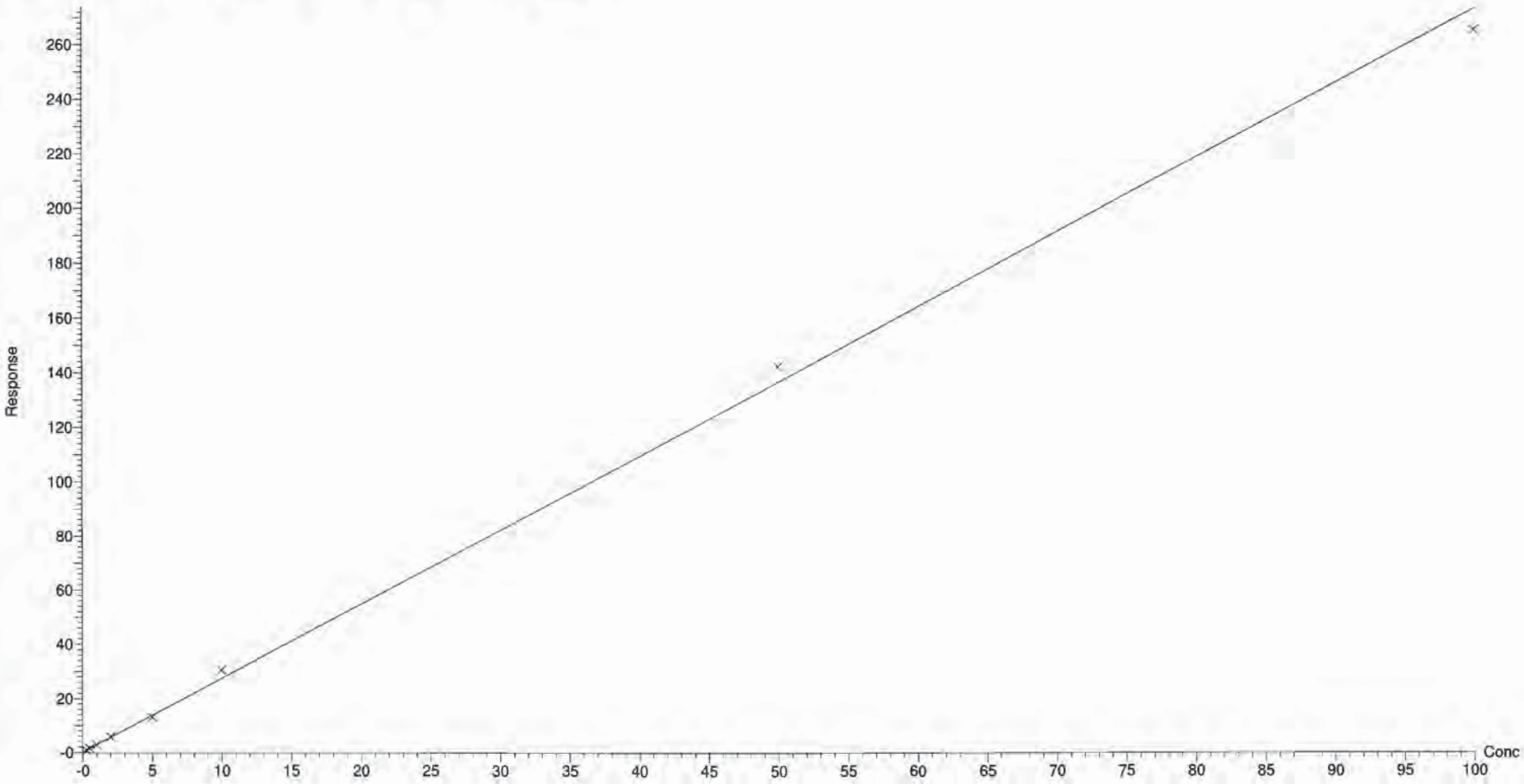
Compound name: PFNA
Correlation coefficient: r = 0.999011, r^2 = 0.998022
Calibration curve: 2.73664 * x + 0.0966541
Response type: Internal Std (Ref 11), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-CRV.qld

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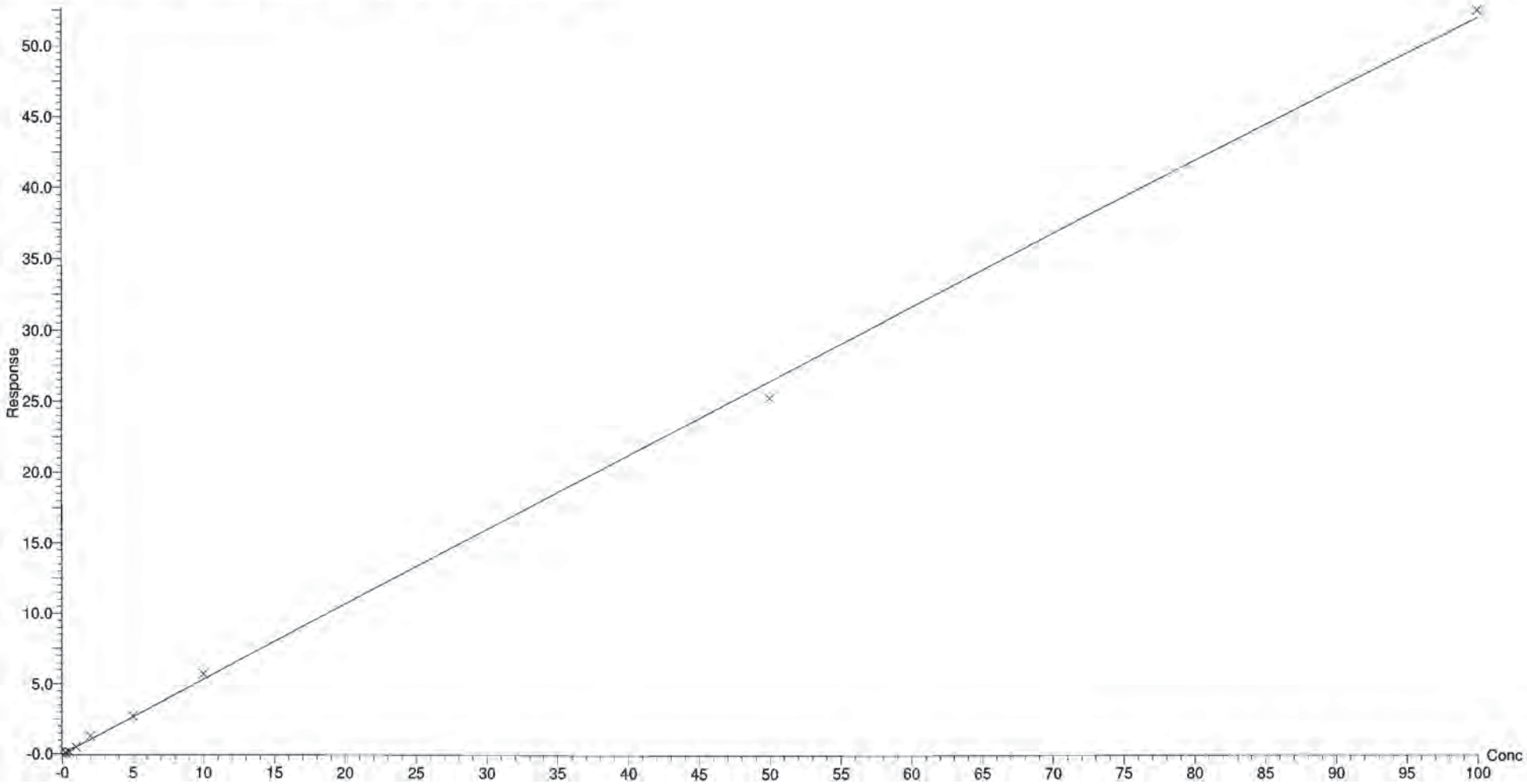
Compound name: PFOS
Coefficient of Determination: R^2 = 0.997963
Calibration curve: -0.000185224 * x^2 + 0.54028 * x + -0.0525057
Response type: Internal Std (Ref 12), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



Vista Analytical Laboratory Q1

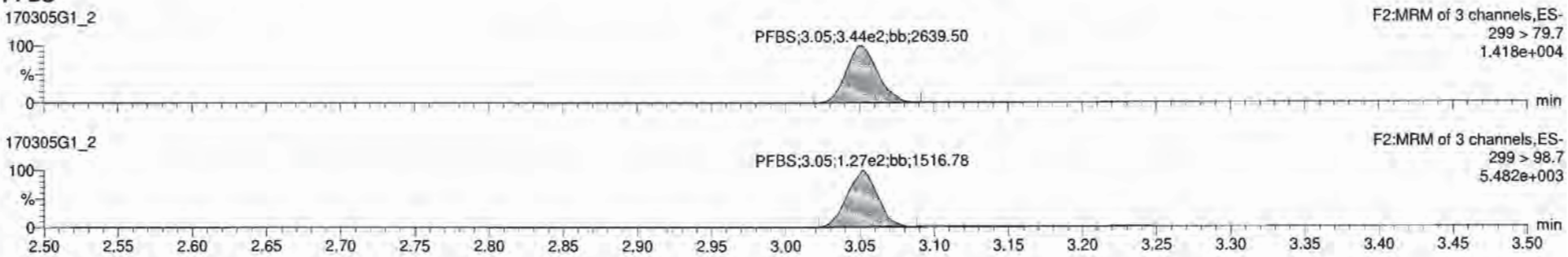
Dataset: Untitled

Last Altered: Monday, March 06, 2017 08:36:20 Pacific Standard Time
Printed: Monday, March 06, 2017 08:37:19 Pacific Standard Time

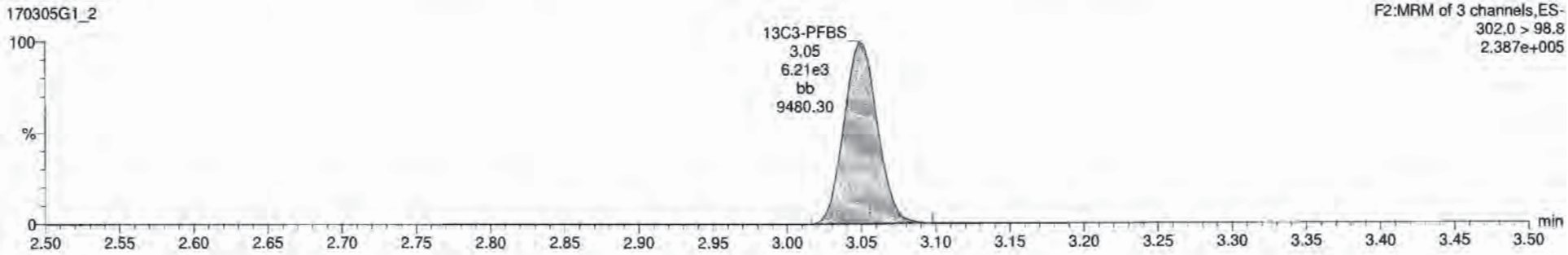
Method: U:\G1.pro\MethDB\PFAS_6_2trans_LINEAR.mdb 02 Mar 2017 11:26:53
Calibration: 06 Mar 2017 08:36:20

ID: ST170305G1-1 PFC CS-2 17C0501, Description: PFC CS-2 17C0501 A, Name: 170305G1_2, Date: 05-Mar-2017, Time: 12:46:48, Instrument: , Lab: , User:

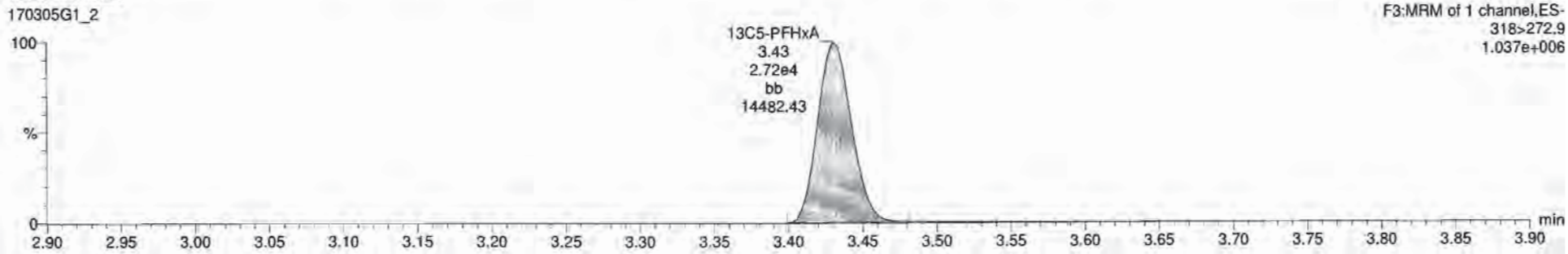
PFBS



13C3-PFBS



13C5-PFHxA



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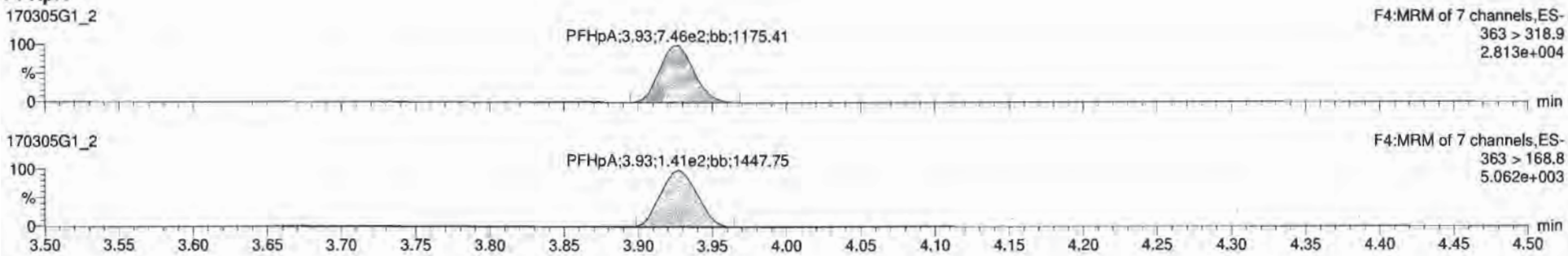
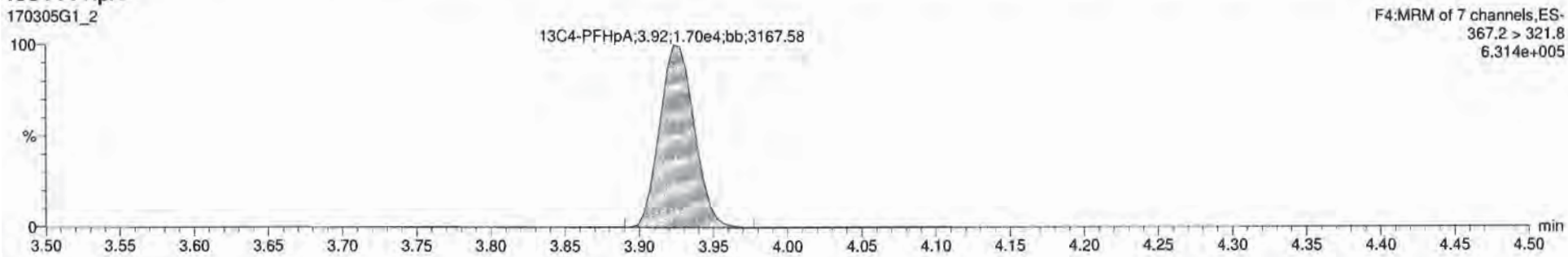
ID: ST170305G1-1 PFC CS-2 17C0501, Description: PFC CS-2 17C0501 A, Name: 170305G1_2, Date: 05-Mar-2017, Time: 12:46:48, Instrument: , Lab: , User:

PFHpA



13C4-PFHpA



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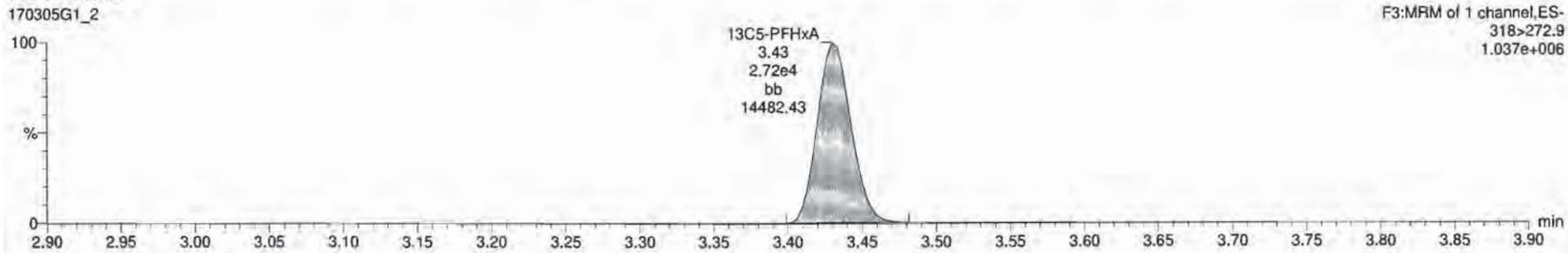

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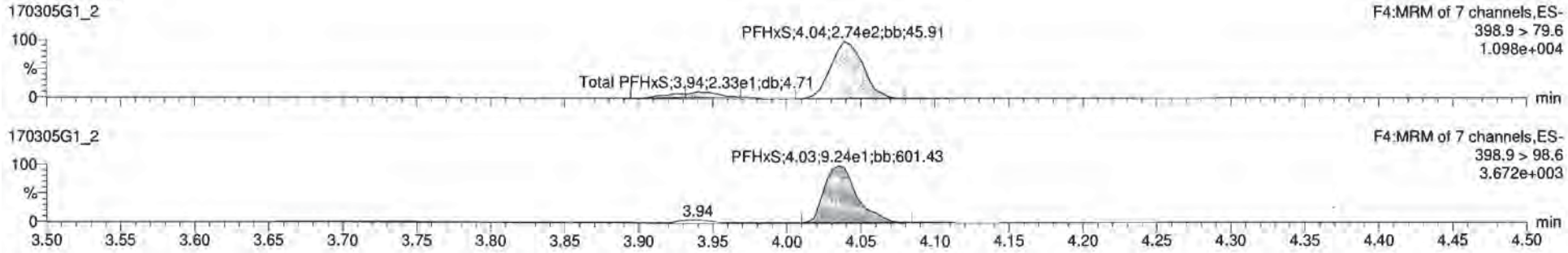
Printed: Monday, March 06, 2017 08:37:19 Pacific Standard Time

ID: ST170305G1-1 PFC CS-2 17C0501, Description: PFC CS-2 17C0501 A, Name: 170305G1_2, Date: 05-Mar-2017, Time: 12:46:48, Instrument: , Lab: , User:

Total PFHxS



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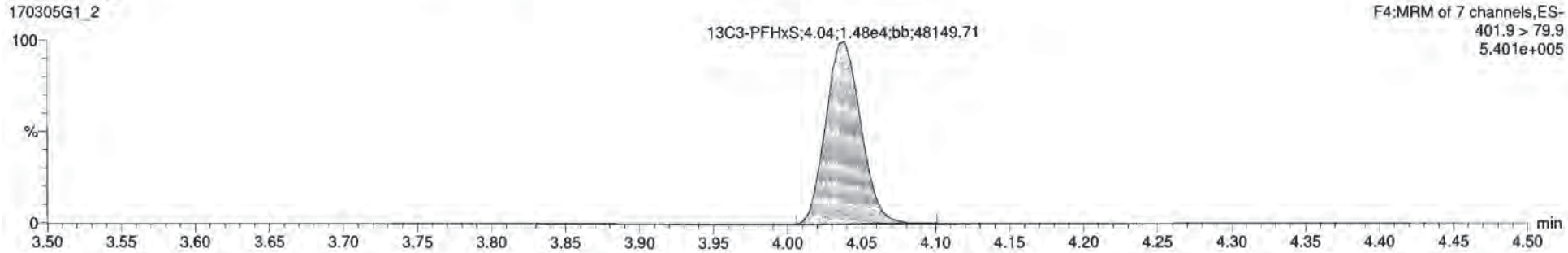
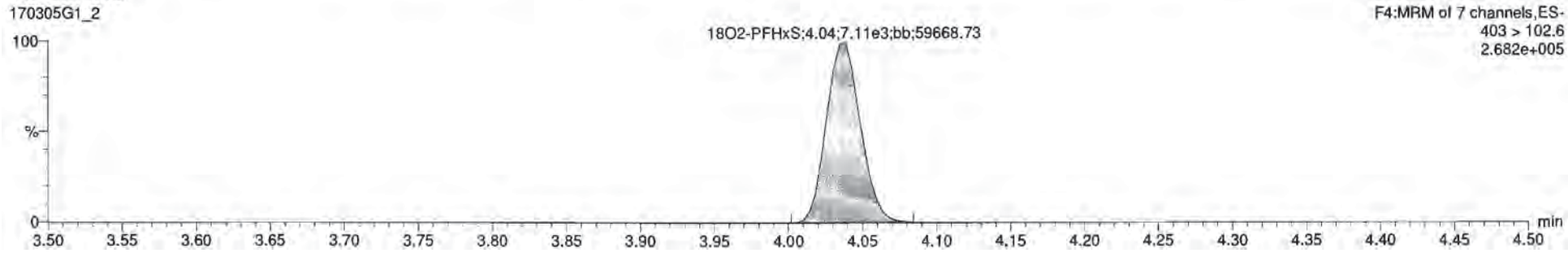
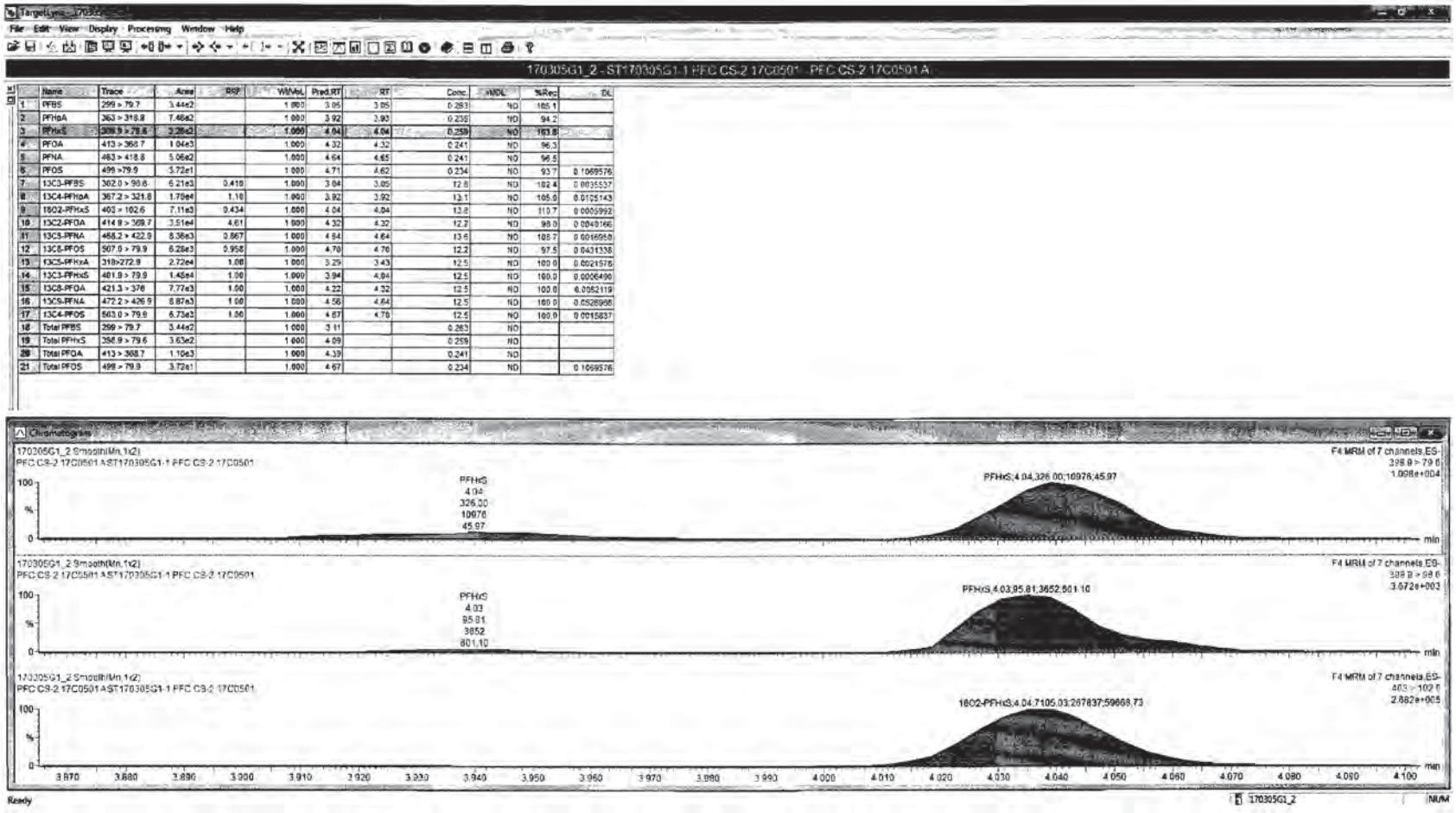


18O2-PFHxS





	Name	Trace	Area	RRF	Wt/Vol	Pred.RT	RT	Conc.	MDL	%Rec	DL
1	PFBS	299 > 79.7	3.44e2		1.000	3.85	3.85	0.283	ND	185.1	
2	PFHpA	363 > 318.8	7.46e2		1.000	3.92	3.93	0.239	ND	94.2	
3	PFHxS	398.9 > 79.8	3.28e2		1.000	4.04	4.04	0.259	ND	163.8	
4	PFOA	413 > 368.7	1.04e3		1.000	4.32	4.32	0.241	ND	96.3	
5	PFNA	463 > 418.8	5.06e2		1.000	4.64	4.65	0.241	ND	96.5	
6	PFOS	499 >79.9	3.72e1		1.000	4.71	4.62	0.234	ND	93.7	0.1069576
7	13C3-PFBS	302.0 > 98.6	6.21e3	0.419	1.000	3.84	3.85	12.8	ND	102.4	0.0035537
8	13C4-PFHpA	367.2 > 321.8	1.78e4	1.16	1.000	3.92	3.92	13.1	ND	105.0	0.0125143
9	1802-PFHxS	403 > 102.6	7.11e3	0.434	1.000	4.04	4.04	13.8	ND	110.7	0.0005992
10	13C2-PFOA	414.9 > 369.7	3.51e4	4.61	1.000	4.32	4.32	12.7	ND	98.0	0.0040166
11	13C3-PFNA	466.2 > 422.9	8.36e3	0.867	1.000	4.64	4.64	13.6	ND	108.7	0.0016958
12	13C8-PFOS	507.0 > 79.9	6.28e3	0.958	1.000	4.70	4.76	12.2	ND	97.5	0.0431338
13	13C5-PFHxA	318>272.9	2.72e4	1.00	1.000	3.29	3.43	12.5	ND	100.0	0.0021576
14	13C3-PFHxS	401.9 > 79.9	1.45e4	1.00	1.000	3.94	4.04	12.5	ND	100.0	0.0006490
15	13C8-PFOA	421.3 > 376	7.77e3	1.00	1.000	4.22	4.32	12.5	ND	100.0	0.0052119
16	13C9-PFNA	472.2 > 426.9	8.87e3	1.00	1.000	4.56	4.64	12.5	ND	100.0	0.0526998
17	13C4-PFOS	503.0 > 79.9	6.73e3	1.00	1.000	4.67	4.76	12.5	ND	100.0	0.0015837
18	Total PFBS	299 > 79.7	3.44e2		1.000	3.11		0.283	ND		
19	Total PFHxS	398.9 > 79.8	3.63e2		1.000	4.09		0.259	ND		
20	Total PFOA	413 > 368.7	1.10e3		1.000	4.39		0.241	ND		
21	Total PFOS	499 > 79.9	3.72e1		1.000	4.67		0.234	ND		0.1069576

Dataset: Untitled

Last Altered: Monday, March 06, 2017 08:36:20 Pacific Standard Time
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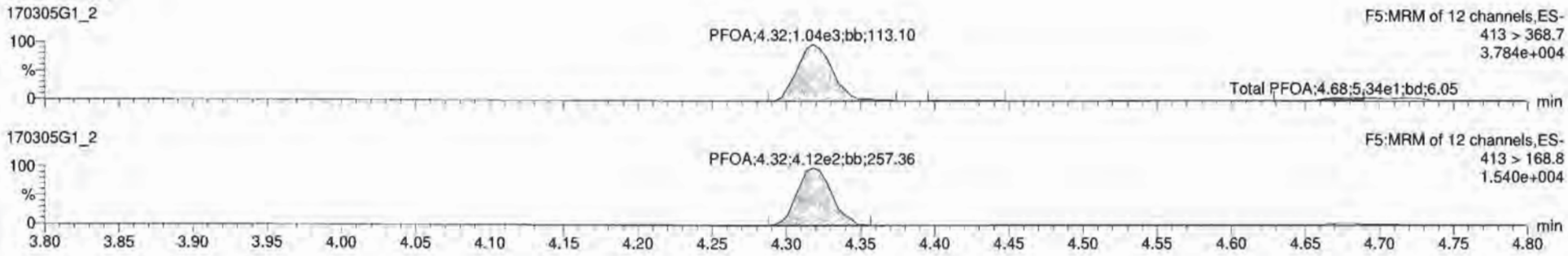
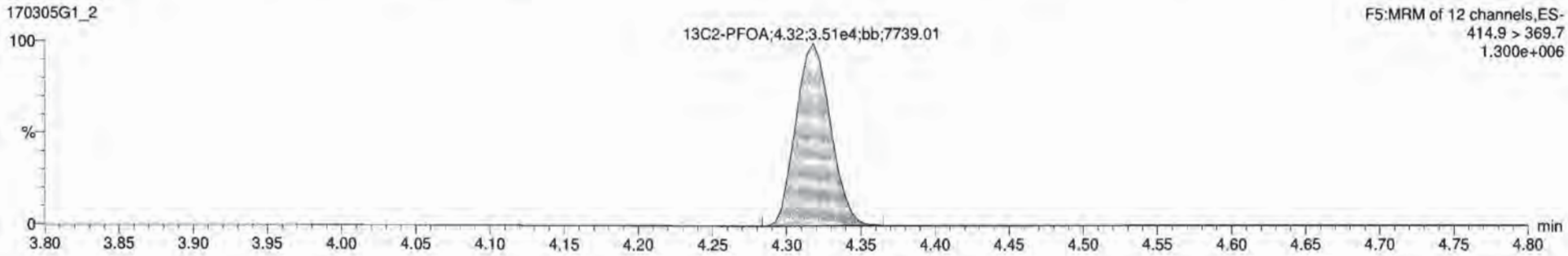
ID: ST170305G1-1 PFC CS-2 17C0501, Description: PFC CS-2 17C0501 A, Name: 170305G1_2, Date: 05-Mar-2017, Time: 12:46:48, Instrument: , Lab: , User:

Total PFOA



13C2-PFOA



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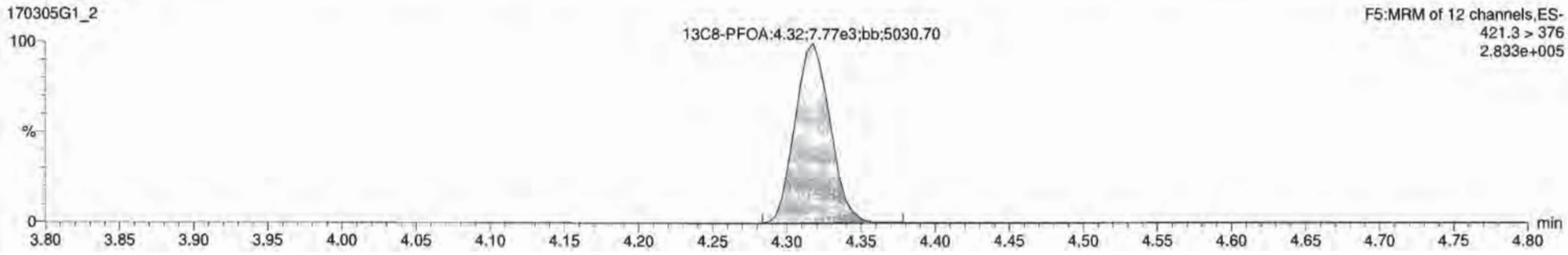

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Last Altered: Monday, March 06, 2017 08:36:20 Pacific Standard Time
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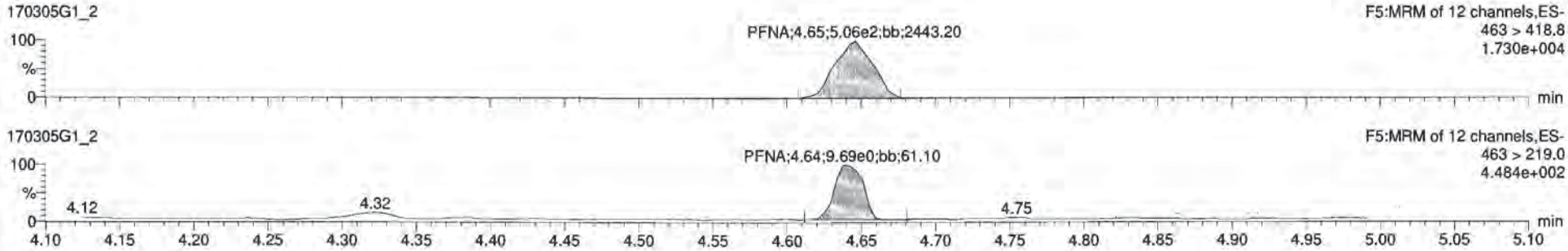
ID: ST170305G1-1 PFC CS-2 17C0501, Description: PFC CS-2 17C0501 A, Name: 170305G1_2, Date: 05-Mar-2017, Time: 12:46:48, Instrument: , Lab: , User:

PFNA



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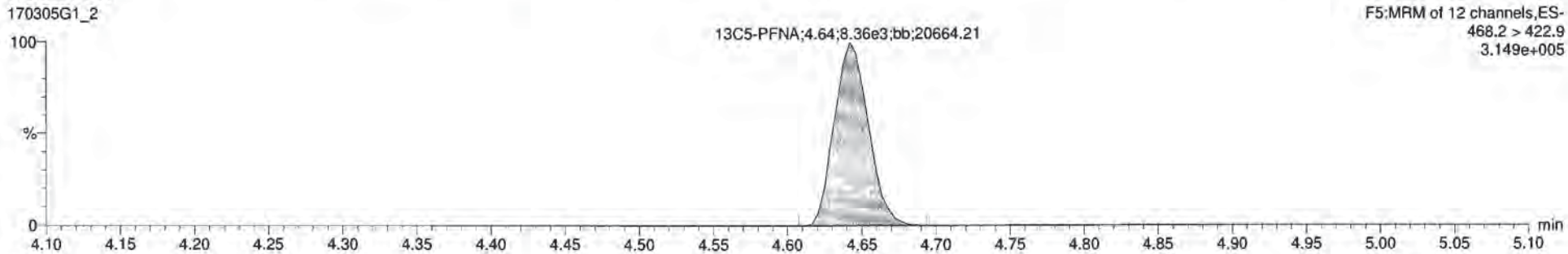

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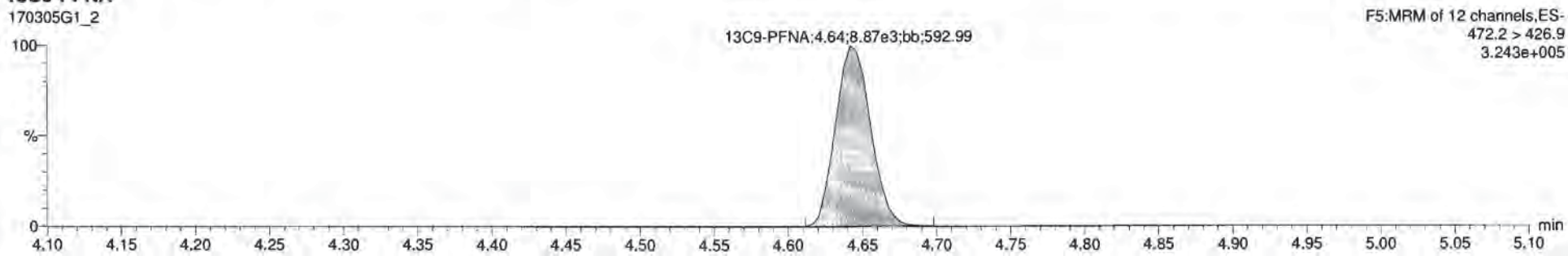

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Last Altered: Monday, March 06, 2017 08:36:20 Pacific Standard Time
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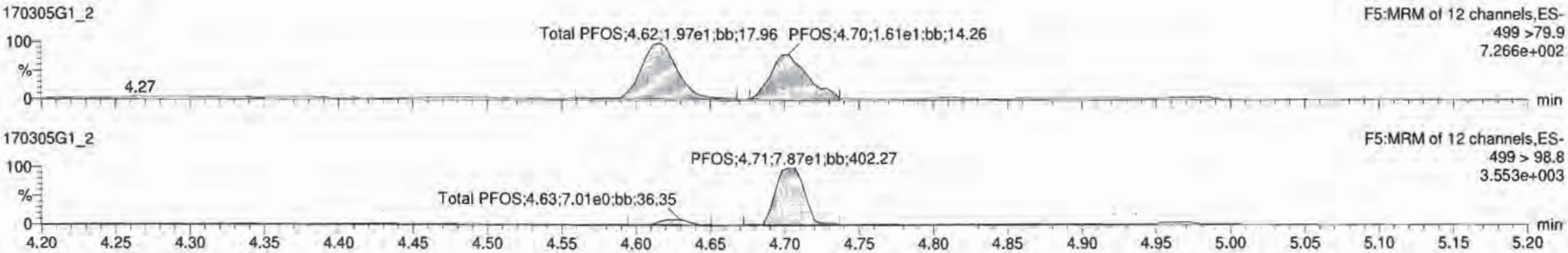
ID: ST170305G1-1 PFC CS-2 17C0501, Description: PFC CS-2 17C0501 A, Name: 170305G1_2, Date: 05-Mar-2017, Time: 12:46:48, Instrument: , Lab: , User:

Total PFOS



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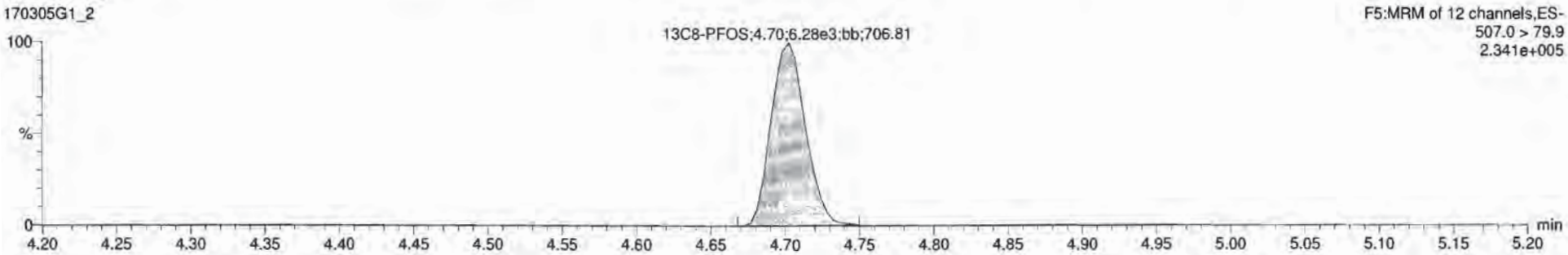

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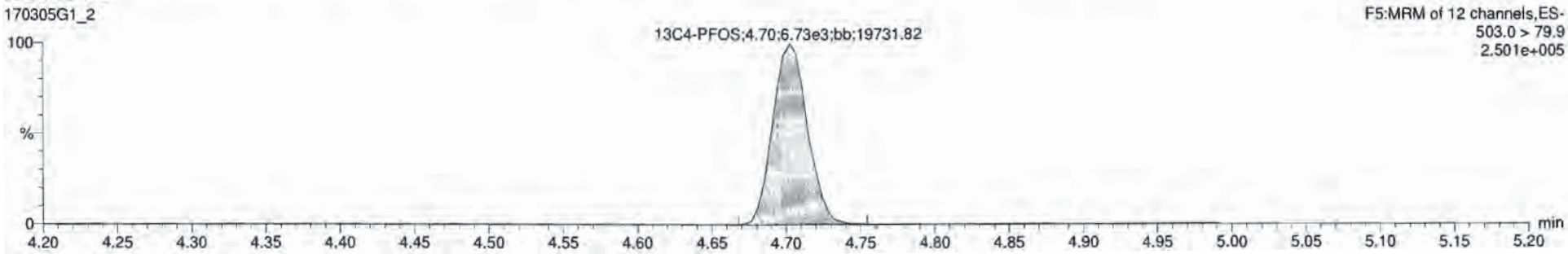

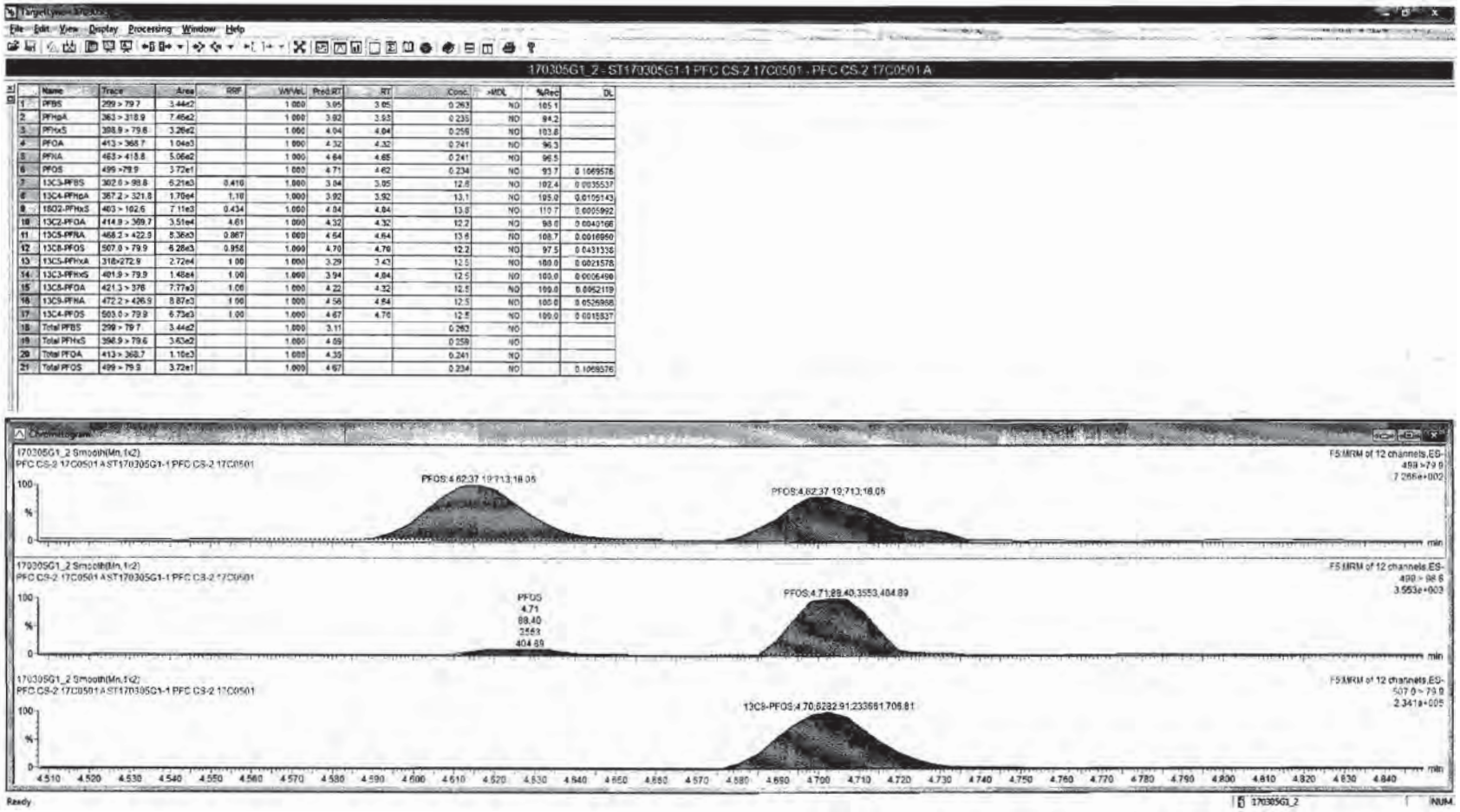

	Name	Trace	Area	RRF	WtVal	PredRT	RT	Conc.	>MDL	%Rec	DL
1	PFBS	299 > 79.7	3.44e2		1.000	3.95	3.95	0.263	NO	105.1	
2	PFHpA	363 > 318.9	7.46e2		1.000	3.92	3.93	0.235	NO	94.2	
3	PFHxS	398.9 > 79.6	3.26e2		1.000	4.04	4.04	0.258	NO	103.8	
4	PFOA	413 > 368.7	1.04e3		1.000	4.32	4.32	0.241	NO	96.3	
5	PFNA	463 > 418.8	5.06e2		1.000	4.64	4.65	0.241	NO	96.5	
6	PFOS	499 > 79.9	3.72e1		1.000	4.71	4.62	0.234	NO	93.7	0.1069578
7	13C3-PFBS	302.0 > 98.8	6.21e3	0.410	1.000	3.94	3.95	12.6	NO	102.4	0.0035537
8	13C4-PFHpA	367.2 > 321.8	1.70e4	1.10	1.000	3.92	3.92	13.1	NO	105.0	0.0105143
9	18O2-PFHxS	403 > 102.6	7.11e3	0.434	1.000	4.04	4.04	13.8	NO	110.7	0.0005992
10	13C2-PFOA	414.9 > 369.7	3.51e4	4.61	1.000	4.32	4.32	12.2	NO	98.0	0.0040166
11	13C5-PFNA	468.2 > 422.8	8.36e3	0.867	1.000	4.64	4.64	13.6	NO	108.7	0.0016960
12	13C8-PFOS	507.0 > 79.9	6.28e3	0.958	1.000	4.70	4.70	12.2	NO	97.5	0.0431336
13	13C5-PFHxA	318>272.9	2.72e4	1.00	1.000	3.29	3.43	12.5	NO	100.0	0.0021578
14	13C3-PFHxS	401.9 > 79.9	1.48e4	1.00	1.000	3.94	4.04	12.5	NO	100.0	0.0006490
15	13C8-PFOA	421.3 > 376	7.77e3	1.00	1.000	4.22	4.32	12.5	NO	100.0	0.0052119
16	13C9-PFNA	472.2 > 426.9	8.87e3	1.00	1.000	4.56	4.64	12.5	NO	100.0	0.0526968
17	13C4-PFOS	503.0 > 79.9	6.73e3	1.00	1.000	4.67	4.70	12.5	NO	100.0	0.0015837
18	Total PFBS	299 > 79.7	3.44e2		1.000	3.11		0.263	NO		
19	Total PFHxS	398.9 > 79.6	3.63e2		1.000	4.09		0.258	NO		
20	Total PFOA	413 > 368.7	1.16e3		1.000	4.33		0.241	NO		
21	Total PFOS	499 > 79.9	3.72e1		1.000	4.67		0.234	NO		0.1069576

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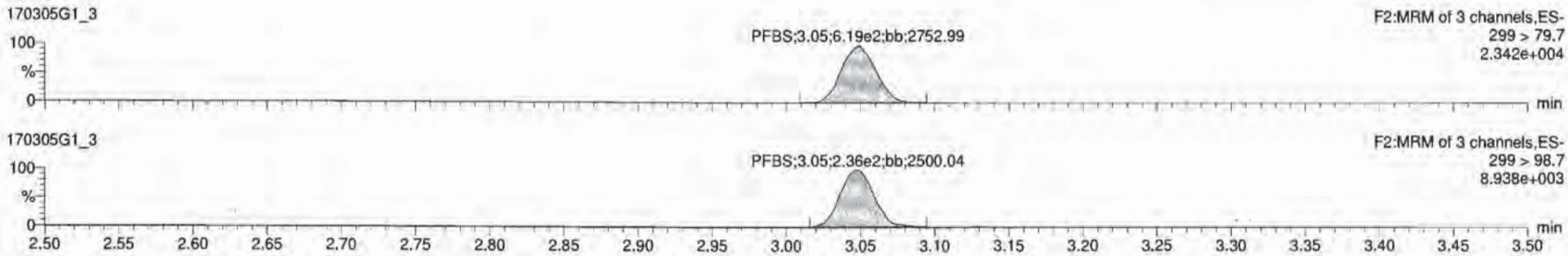
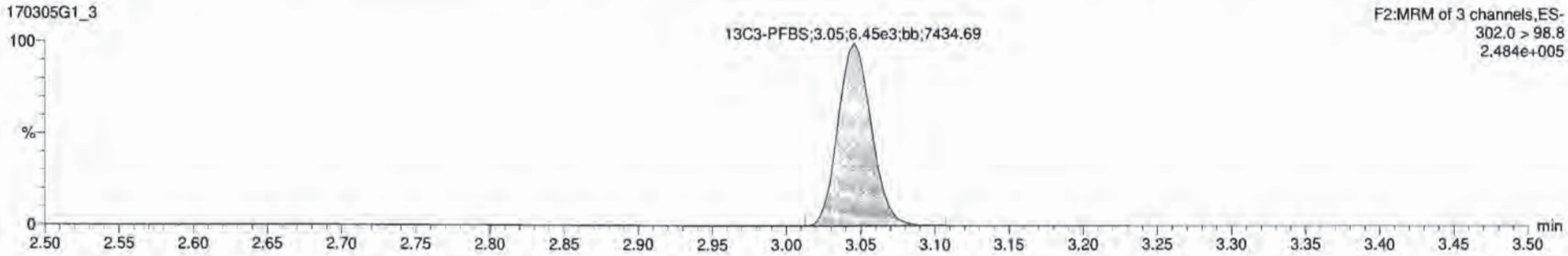
Last Altered: Monday, March 06, 2017 08:36:20 Pacific Standard Time
Printed: Monday, March 06, 2017 08:37:19 Pacific Standard Time

ID: ST170305G1-2 PFC CS-1 17C0502, Description: PFC CS-1 17C0502 A, Name: 170305G1_3, Date: 05-Mar-2017, Time: 12:59:15, Instrument: , Lab: , User:

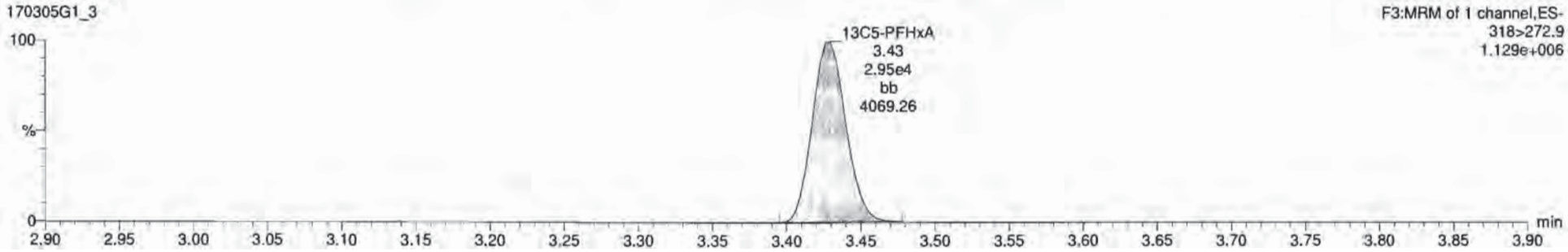
PFBS



13C3-PFBS



13C5-PFHxA



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Printed: Monday, March 06, 2017 08:37:19 Pacific Standard Time

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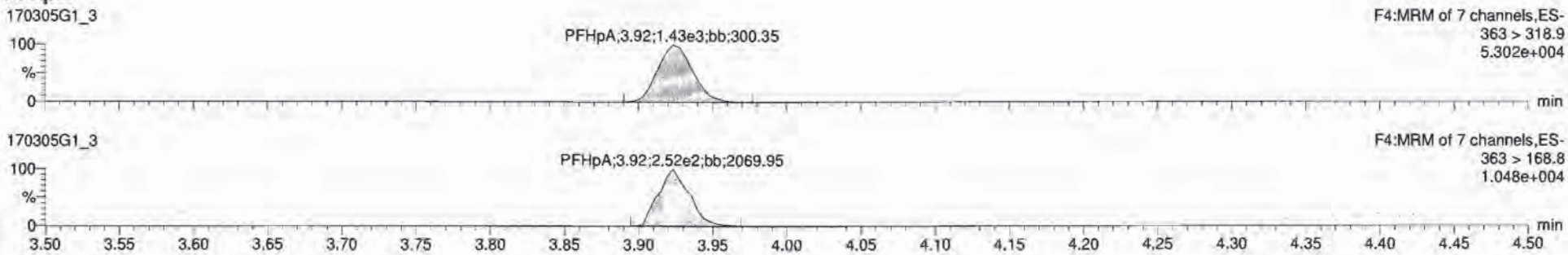
PFHpA



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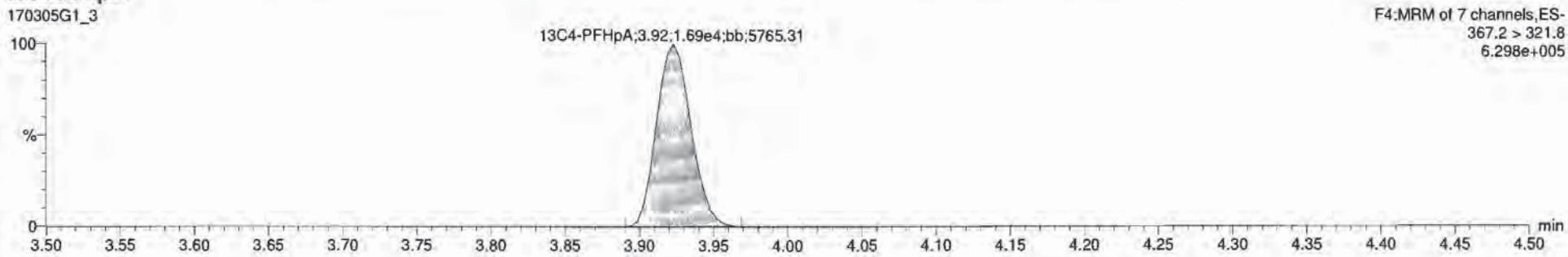

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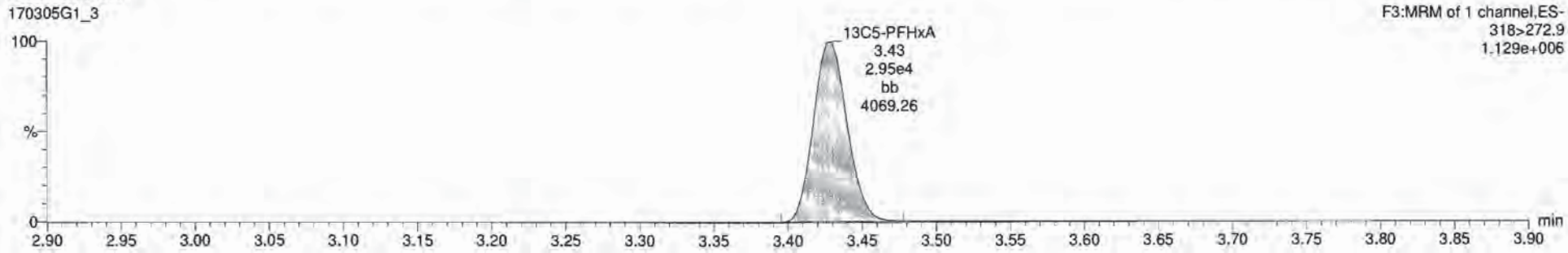

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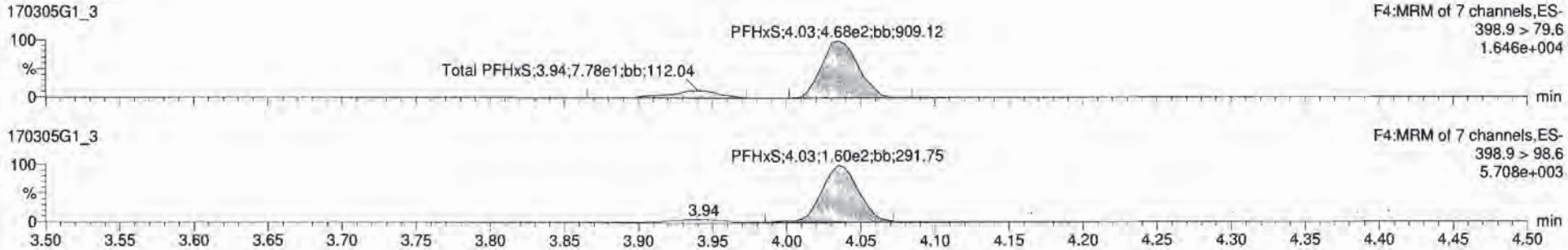
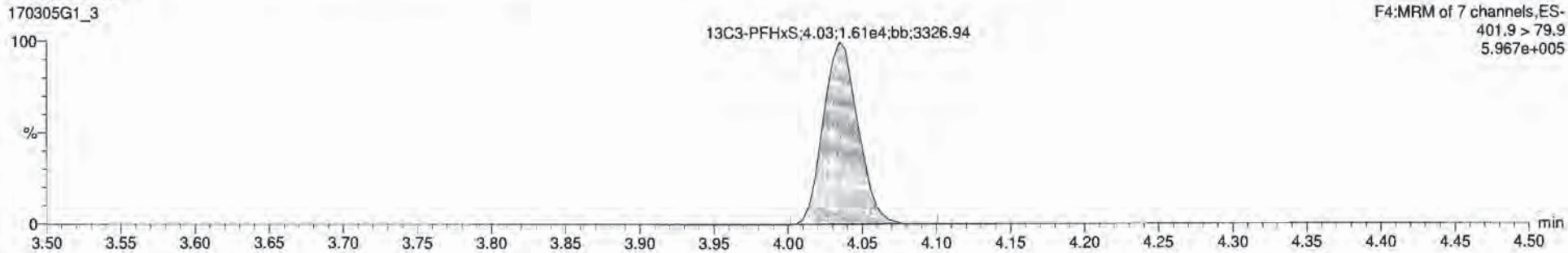
Last Altered: Monday, March 06, 2017 08:36:20 Pacific Standard Time
Printed: Monday, March 06, 2017 08:37:19 Pacific Standard Time

ID: ST170305G1-2 PFC CS-1 17C0502, Description: PFC CS-1 17C0502 A, Name: 170305G1_3, Date: 05-Mar-2017, Time: 12:59:15, Instrument: , Lab: , User:

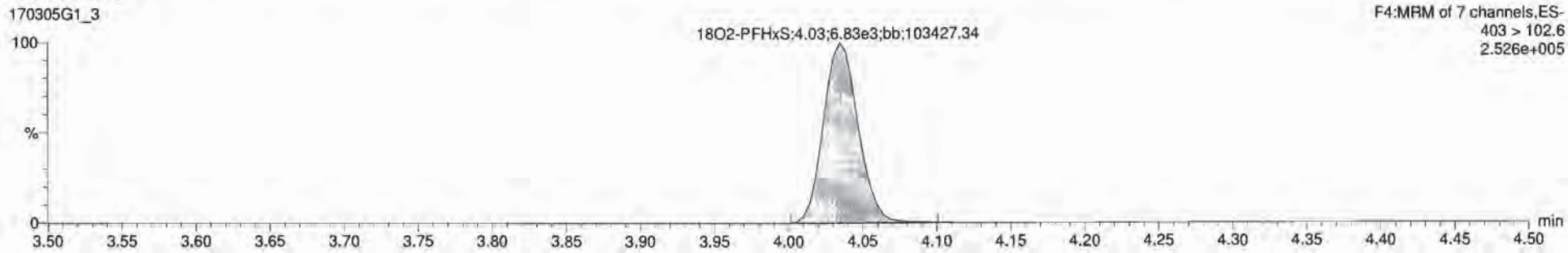
Total PFHxS

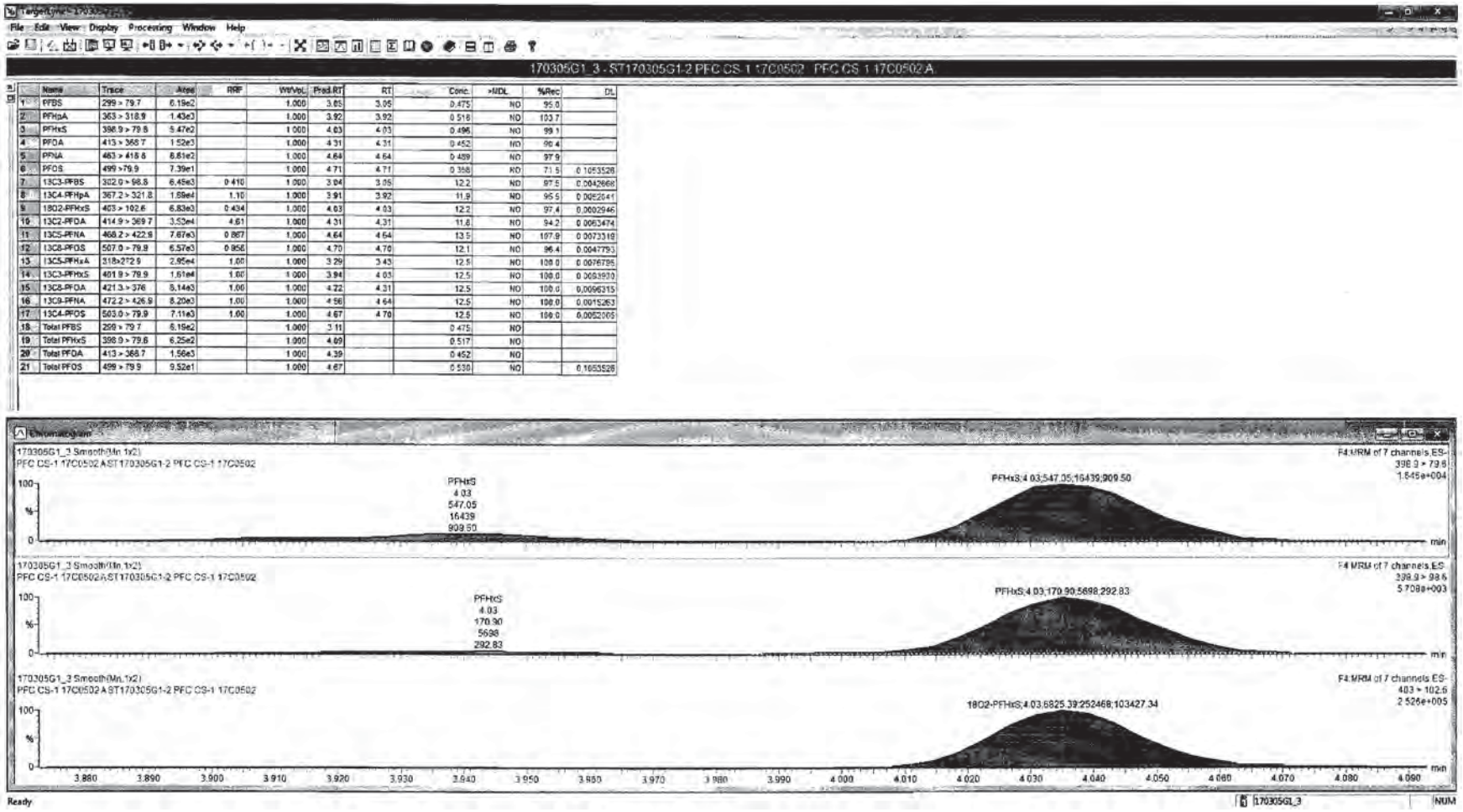


13C3-PFHxS



18O2-PFHxS





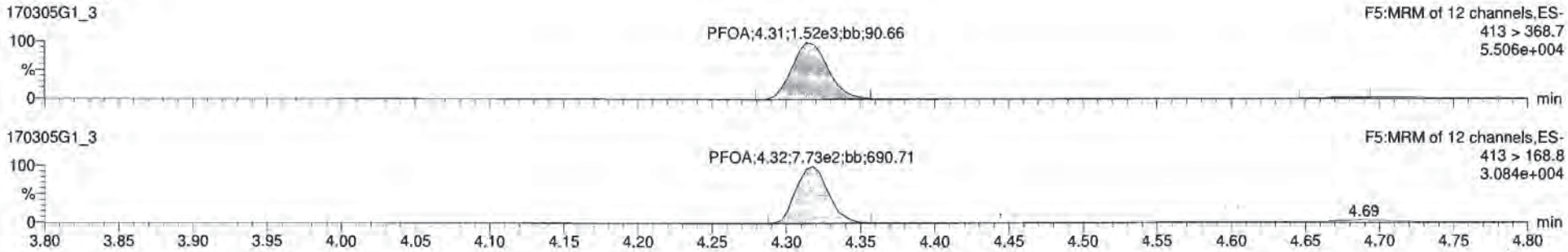
	Name	Trace	Area	RRF	Wt/Vol	Pred.RT	RT	Conc.	>MDL	%Rec	DL
1	PFBS	299 > 79.7	6.19e2		1.000	3.05	3.05	0.475	NO	95.0	
2	PFHpA	363 > 318.9	1.43e3		1.000	3.92	3.92	0.518	NO	103.7	
3	PFHxS	398.9 > 79.8	5.47e2		1.000	4.03	4.03	0.496	NO	99.1	
4	PFOA	413 > 368.7	1.52e3		1.000	4.31	4.31	0.452	NO	90.4	
5	PFNA	463 > 418.8	8.81e2		1.000	4.64	4.64	0.459	NO	97.9	
6	PFOS	499 >79.9	7.39e1		1.000	4.71	4.71	0.358	ND	71.5	0.1053528
7	13C3-PFBS	302.0 > 98.8	6.45e3	0.410	1.000	3.04	3.05	12.2	ND	97.5	0.0042668
8	13C4-PFHpA	367.2 > 321.8	1.69e4	1.10	1.000	3.91	3.92	11.9	ND	95.5	0.0052041
9	18O2-PFHxS	403 > 102.6	6.83e3	0.434	1.000	4.03	4.03	12.2	NO	97.4	0.0002946
10	13C2-PFDA	414.9 > 369.7	3.53e4	4.61	1.000	4.31	4.31	11.8	NO	94.2	0.0063474
11	13C5-PFNA	468.2 > 422.9	7.67e3	0.867	1.000	4.64	4.64	13.5	NO	107.9	0.0073319
12	13C8-PFOS	507.0 > 79.9	6.57e3	0.956	1.000	4.70	4.70	12.1	NO	96.4	0.0047793
13	13C5-PFHxA	318>272.9	2.85e4	1.00	1.000	3.29	3.43	12.5	NO	100.0	0.0076785
14	13C3-PFHxS	401.9 > 79.9	1.61e4	1.00	1.000	3.94	4.03	12.5	NO	100.0	0.0053930
15	13C8-PFOA	421.3 > 376	8.14e3	1.00	1.000	4.22	4.31	12.5	NO	100.0	0.0096315
16	13C9-PFNA	472.2 > 426.9	8.20e3	1.00	1.000	4.56	4.64	12.5	NO	100.0	0.0015263
17	13C4-PFOS	503.0 > 79.9	7.11e3	1.00	1.000	4.67	4.70	12.5	NO	100.0	0.0052005
18	Total PFBS	299 > 79.7	6.19e2		1.000	3.11		0.475	NO		
19	Total PFHxS	398.9 > 79.8	6.25e2		1.000	4.09		0.517	NO		
20	Total PFOA	413 > 368.7	1.56e3		1.000	4.39		0.452	NO		
21	Total PFOS	499 > 79.9	9.52e1		1.000	4.67		0.530	NO		0.1053528

Dataset: Untitled

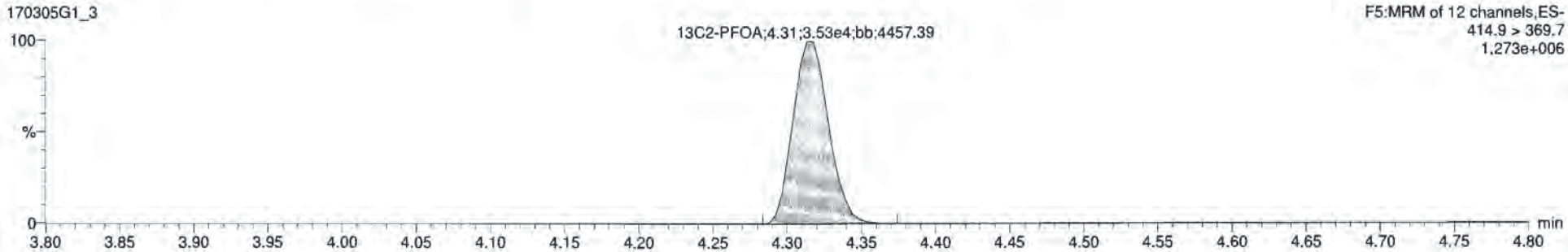
Last Altered: Monday, March 06, 2017 08:36:20 Pacific Standard Time
Printed: Monday, March 06, 2017 08:37:19 Pacific Standard Time

ID: ST170305G1-2 PFC CS-1 17C0502, Description: PFC CS-1 17C0502 A, Name: 170305G1_3, Date: 05-Mar-2017, Time: 12:59:15, Instrument: , Lab: , User:

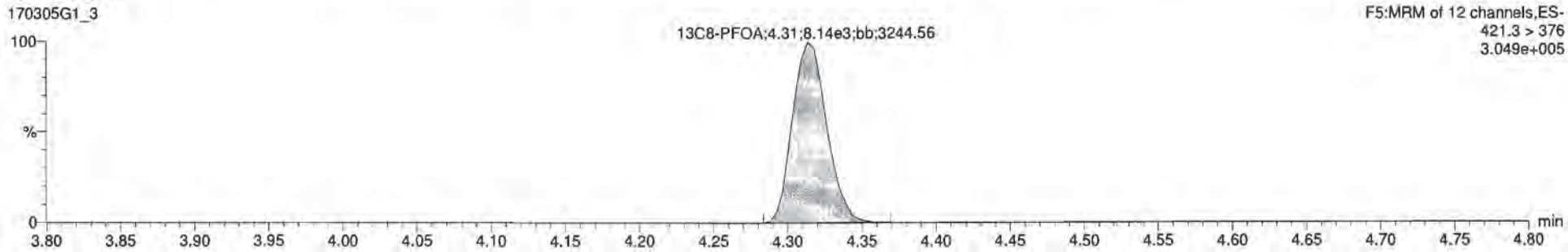
Total PFOA



13C2-PFOA



13C8-PFOA



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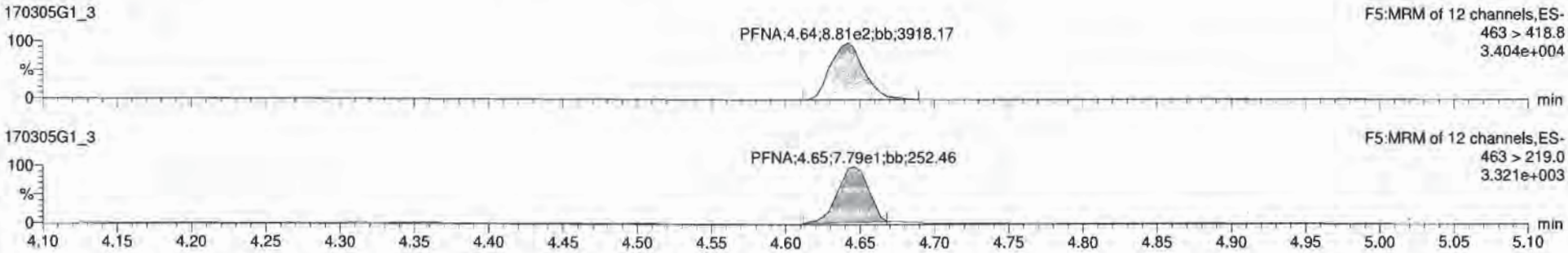
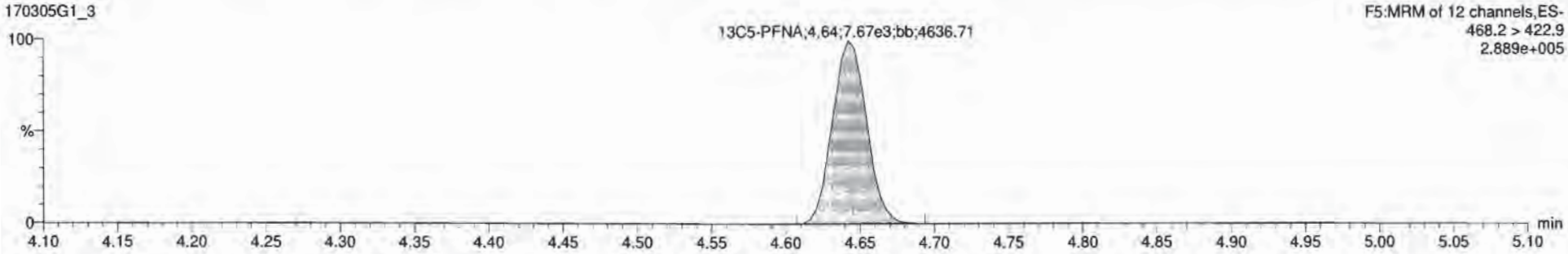
Last Altered: Monday, March 06, 2017 08:36:20 Pacific Standard Time
Printed: Monday, March 06, 2017 08:37:19 Pacific Standard Time

ID: ST170305G1-2 PFC CS-1 17C0502, Description: PFC CS-1 17C0502 A, Name: 170305G1_3, Date: 05-Mar-2017, Time: 12:59:15, Instrument: , Lab: , User:

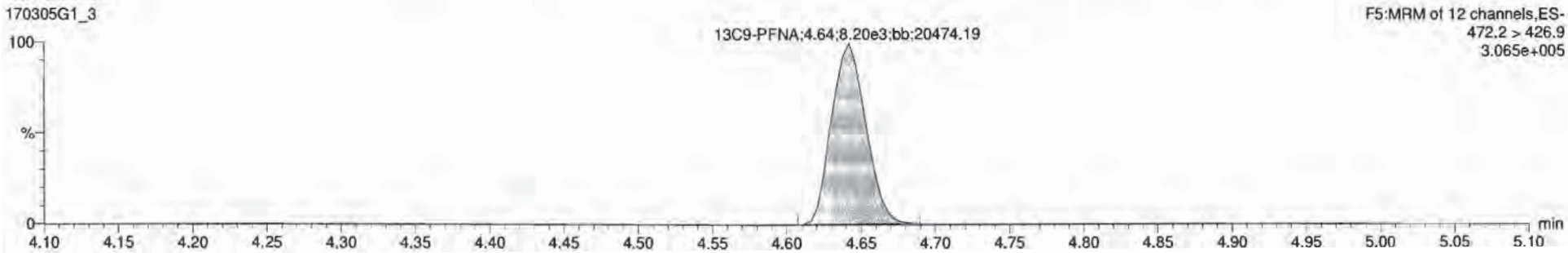
PFNA



13C5-PFNA



13C9-PFNA



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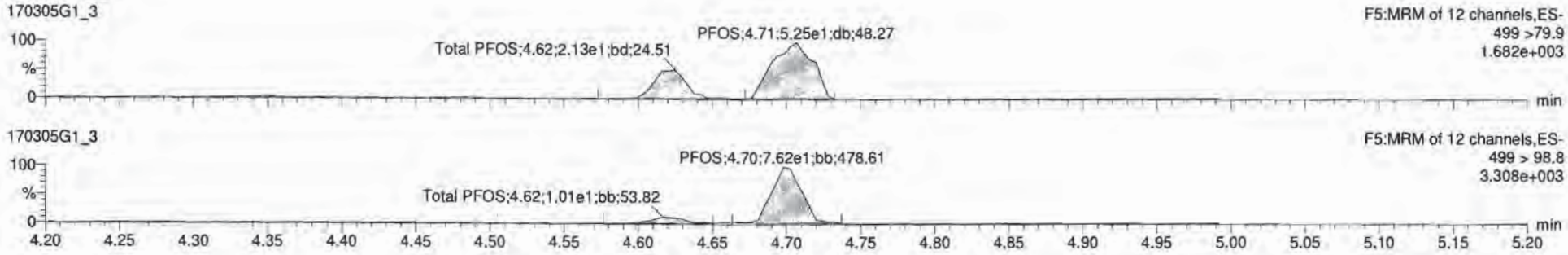
Last Altered: Monday, March 06, 2017 08:36:20 Pacific Standard Time
Printed: Monday, March 06, 2017 08:37:19 Pacific Standard Time

ID: ST170305G1-2 PFC CS-1 17C0502, Description: PFC CS-1 17C0502 A, Name: 170305G1_3, Date: 05-Mar-2017, Time: 12:59:15, Instrument: , Lab: , User:

Total PFOS



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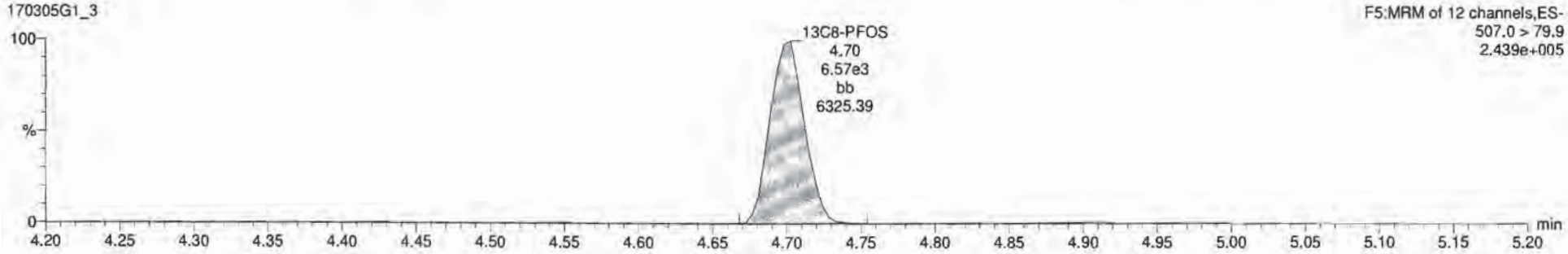
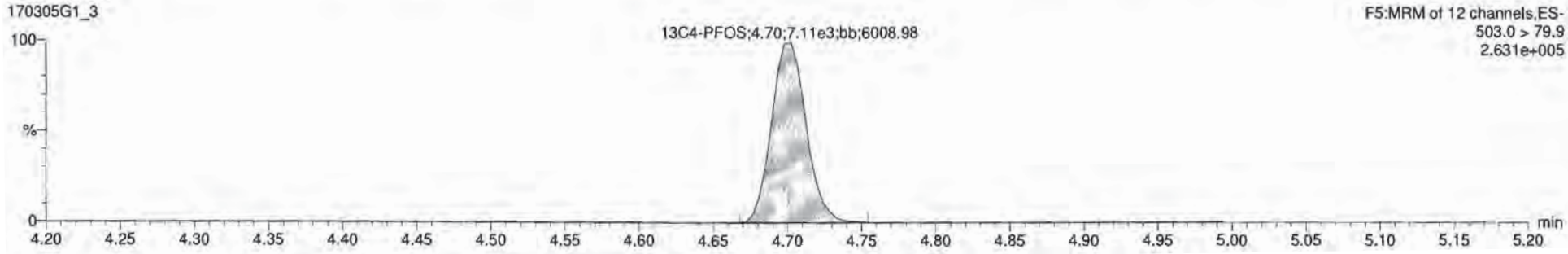
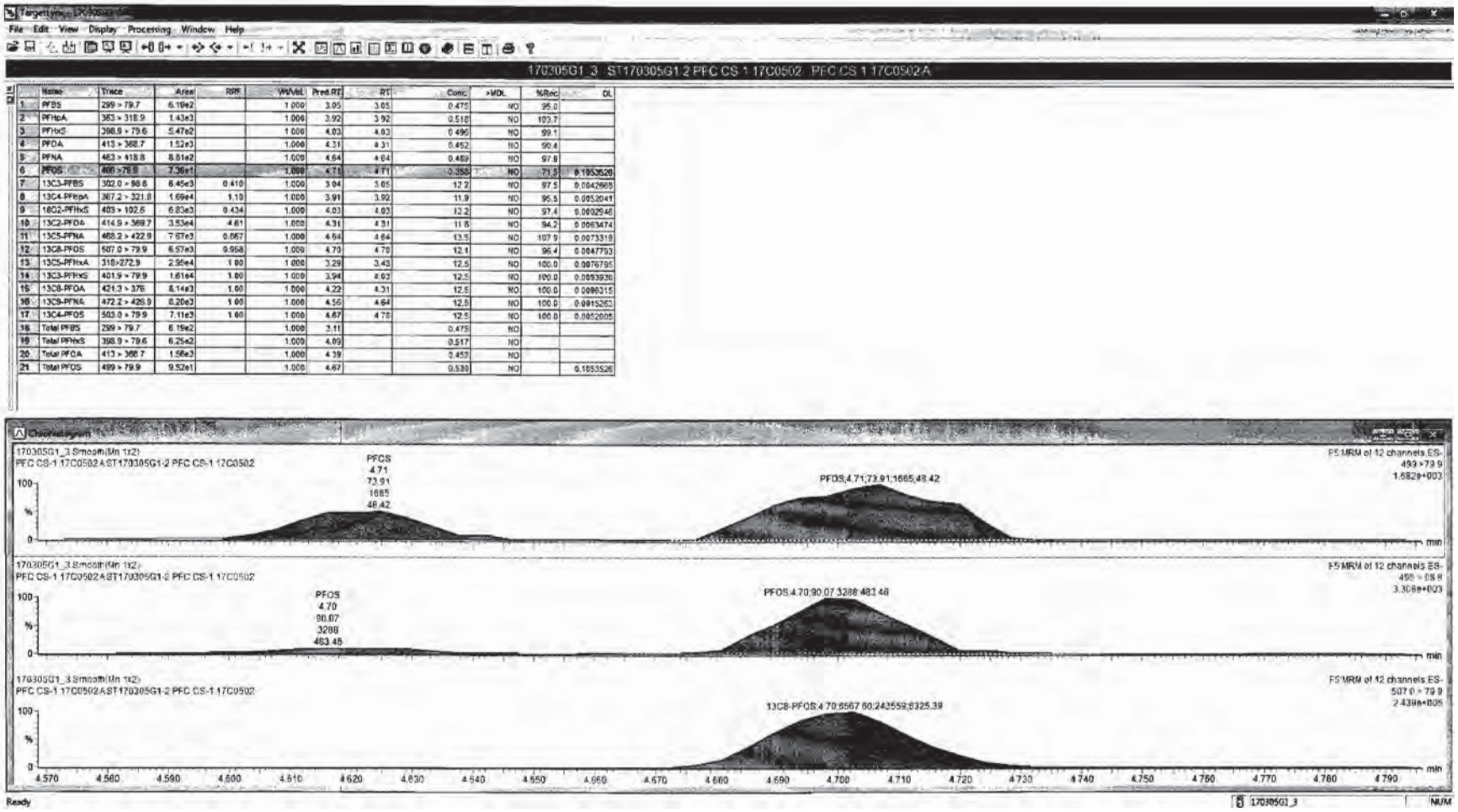


13C4-PFOS





	Name	Trace	Area	RRF	Wt/VoL	Pred.RT	RT	Conc	>VOL	%Rec	DL
1	PFBS	299 > 79.7	6.19e2		1.000	3.05	3.05	0.475	NO	95.0	
2	PFHpA	363 > 318.9	1.43e3		1.000	3.92	3.92	0.518	NO	103.7	
3	PFHxS	398.9 > 79.6	5.47e2		1.000	4.03	4.03	0.496	NO	99.1	
4	PFOA	413 > 368.7	1.52e3		1.000	4.31	4.31	0.452	NO	90.4	
5	PFNA	463 > 418.8	8.81e2		1.000	4.64	4.64	0.489	NO	97.8	
6	PFOS	499 > 79.9	7.36e1		1.000	4.71	4.71	0.355	NO	71.1	0.1053526
7	13C3-PFBS	302.0 > 98.8	6.45e3	0.410	1.000	3.04	3.05	12.2	NO	97.5	0.0042985
8	13C4-PFHpA	367.2 > 321.8	1.69e4	1.10	1.000	3.91	3.92	11.9	NO	95.5	0.0052041
9	18O2-PFHxS	403 > 102.6	6.83e3	0.434	1.000	4.03	4.03	12.2	NO	97.4	0.0032946
10	13C2-PFOA	414.9 > 369.7	3.53e4	4.61	1.000	4.31	4.31	11.8	NO	94.2	0.0063474
11	13C5-PFNA	468.2 > 422.9	7.57e3	0.857	1.000	4.64	4.64	13.5	NO	107.9	0.0073318
12	13C8-PFOS	507.0 > 79.9	6.57e3	0.958	1.000	4.70	4.70	12.1	NO	96.4	0.0047793
13	13C5-PFHxA	318>272.9	2.95e4	1.00	1.000	3.29	3.43	12.5	NO	100.0	0.0076795
14	13C3-PFHxS	401.9 > 79.9	1.61e4	1.00	1.000	3.94	4.03	12.5	NO	100.0	0.0093939
15	13C8-PFOA	421.3 > 376	8.14e3	1.00	1.000	4.22	4.31	12.5	NO	100.0	0.0090315
16	13C9-PFNA	472.2 > 426.9	8.20e3	1.00	1.000	4.56	4.64	12.5	NO	100.0	0.0091263
17	13C4-PFOS	503.0 > 79.9	7.11e3	1.00	1.000	4.67	4.70	12.5	NO	100.0	0.0052005
18	Total PFBS	299 > 79.7	6.19e2		1.000	3.11		0.475	NO		
19	Total PFHxS	398.9 > 79.6	6.25e2		1.000	4.09		0.517	NO		
20	Total PFOA	413 > 368.7	1.56e3		1.000	4.39		0.453	NO		
21	Total PFOS	499 > 79.9	9.52e1		1.000	4.67		0.530	NO		0.1053526

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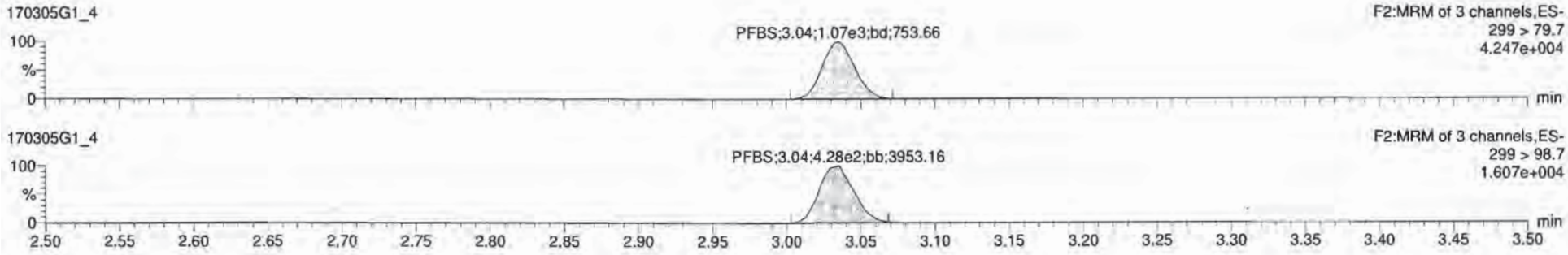
Last Altered: Monday, March 06, 2017 08:36:20 Pacific Standard Time
Printed: Monday, March 06, 2017 08:37:19 Pacific Standard Time

ID: ST170305G1-3 PFC CS0 17C0503, Description: PFC CS0 17C0503 A, Name: 170305G1_4, Date: 05-Mar-2017, Time: 13:11:49, Instrument: , Lab: , User:

PFBS



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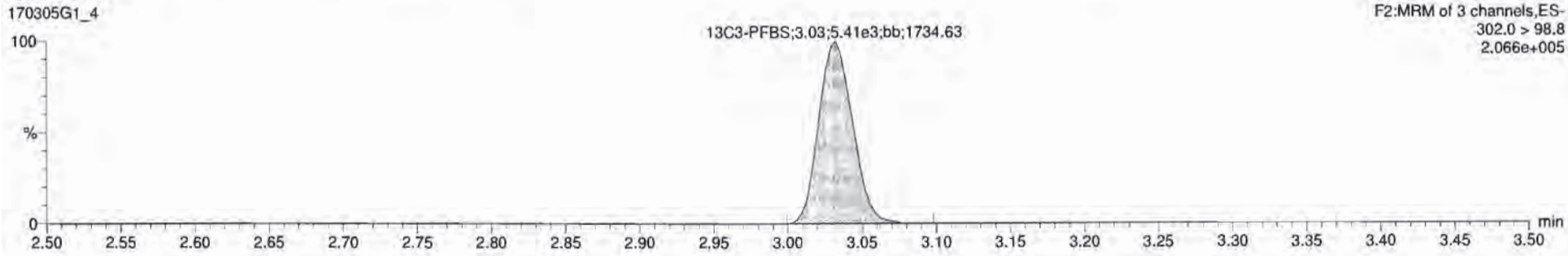

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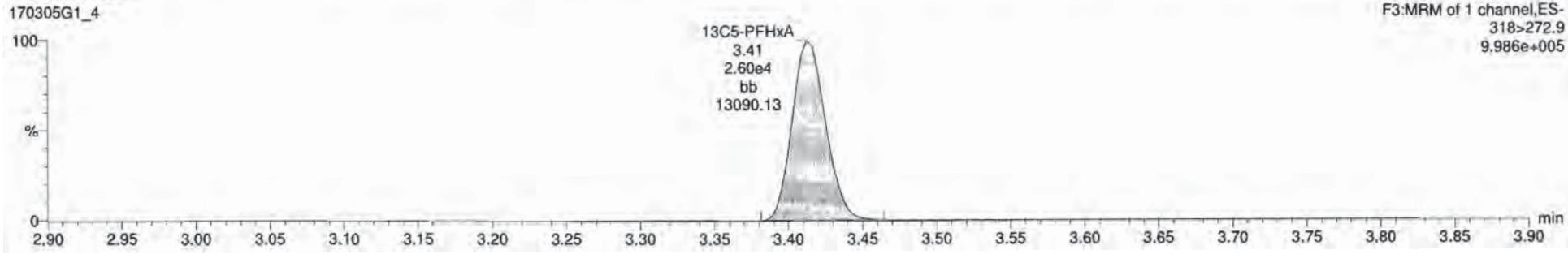

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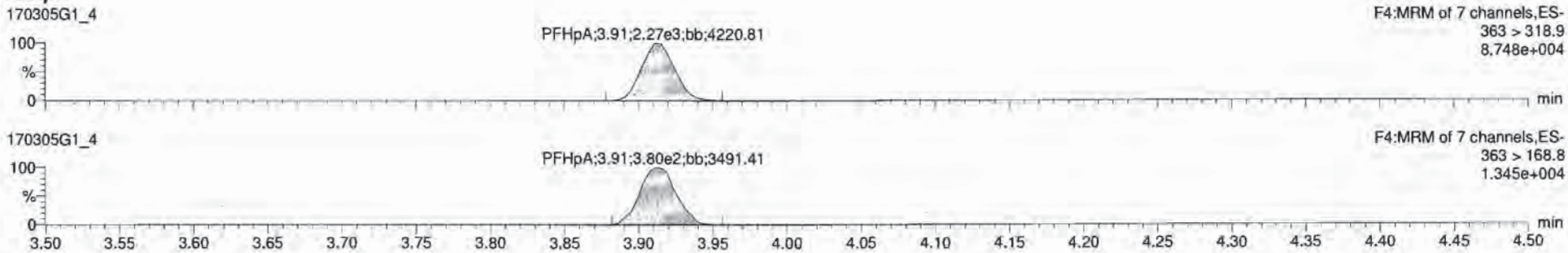
Last Altered: Monday, March 06, 2017 08:36:20 Pacific Standard Time
Printed: Monday, March 06, 2017 08:37:19 Pacific Standard Time

ID: ST170305G1-3 PFC CS0 17C0503, Description: PFC CS0 17C0503 A, Name: 170305G1_4, Date: 05-Mar-2017, Time: 13:11:49, Instrument: , Lab: , User:

PFHpA



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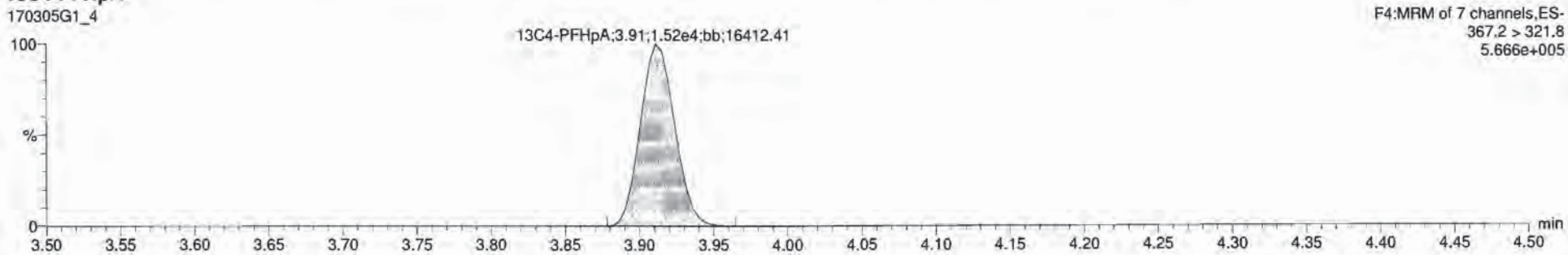

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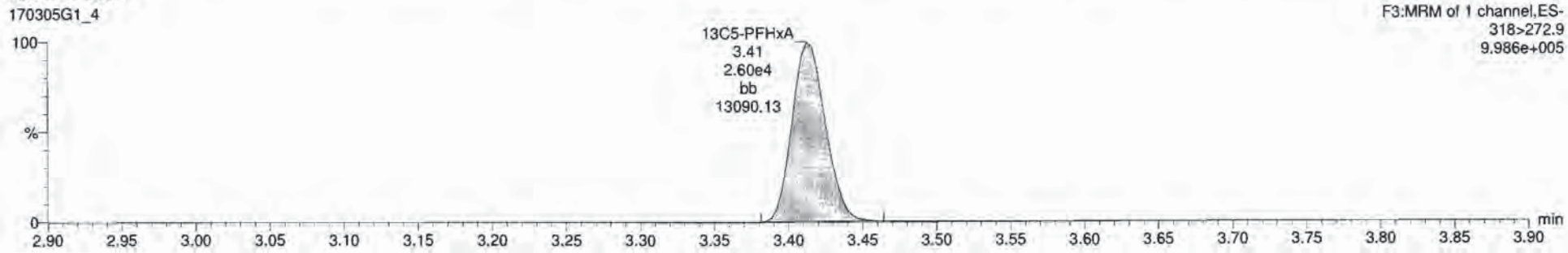

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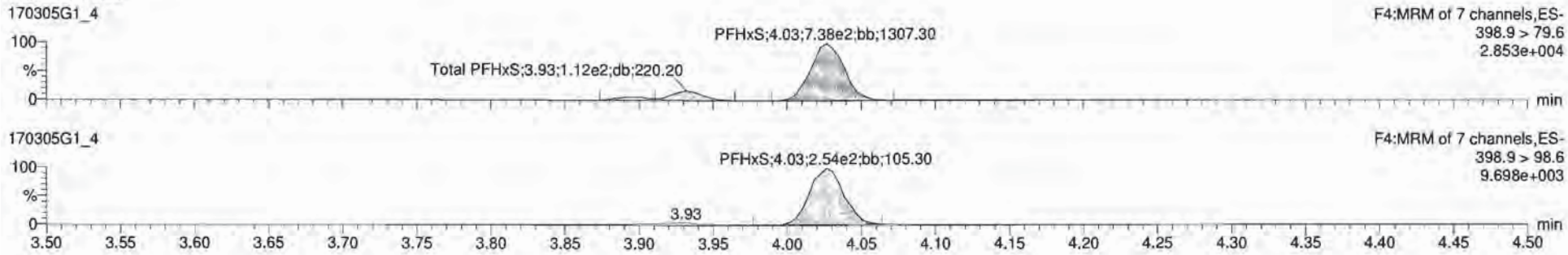
Last Altered: Monday, March 06, 2017 08:36:20 Pacific Standard Time
Printed: Monday, March 06, 2017 08:37:19 Pacific Standard Time

ID: ST170305G1-3 PFC CS0 17C0503, Description: PFC CS0 17C0503 A, Name: 170305G1_4, Date: 05-Mar-2017, Time: 13:11:49, Instrument: , Lab: , User:

Total PFHxS



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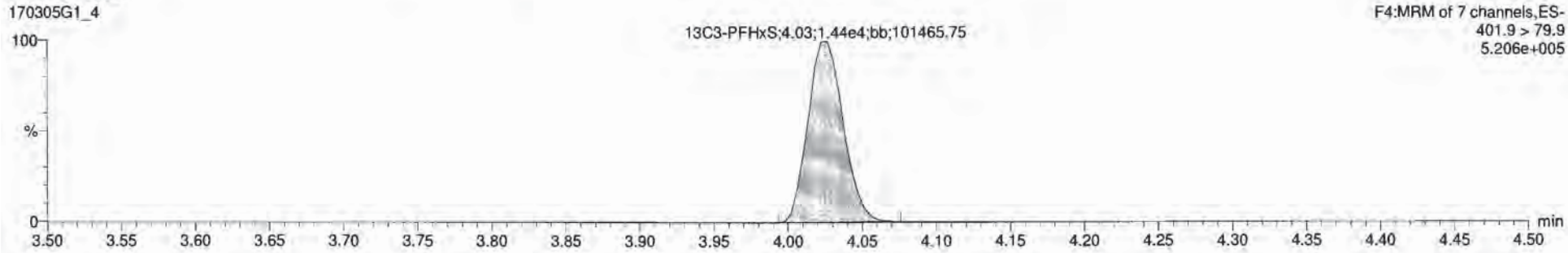

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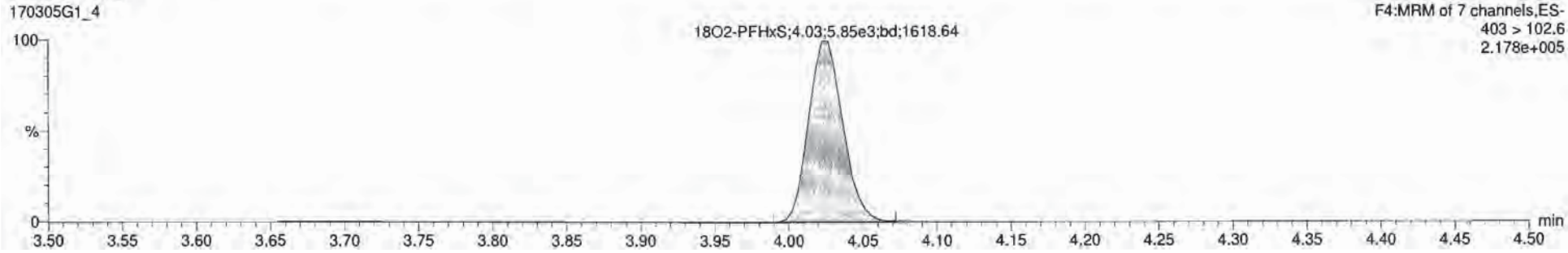

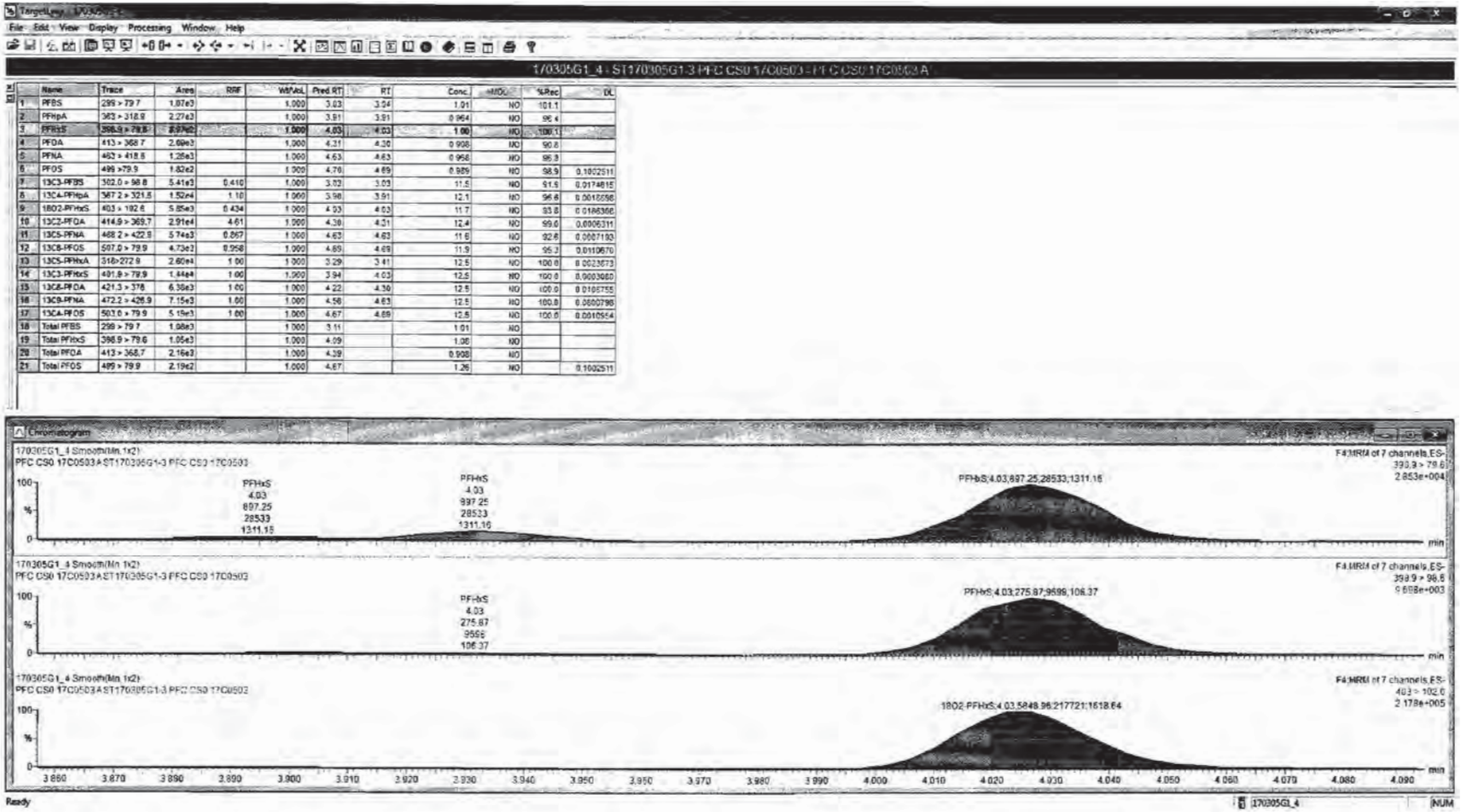
File Edit View Display Processing Window Help
170305G1_4 - ST170305G1-3 PFC CS0 17C0503 - PFC CS0 17C0503 A
Chromatogram
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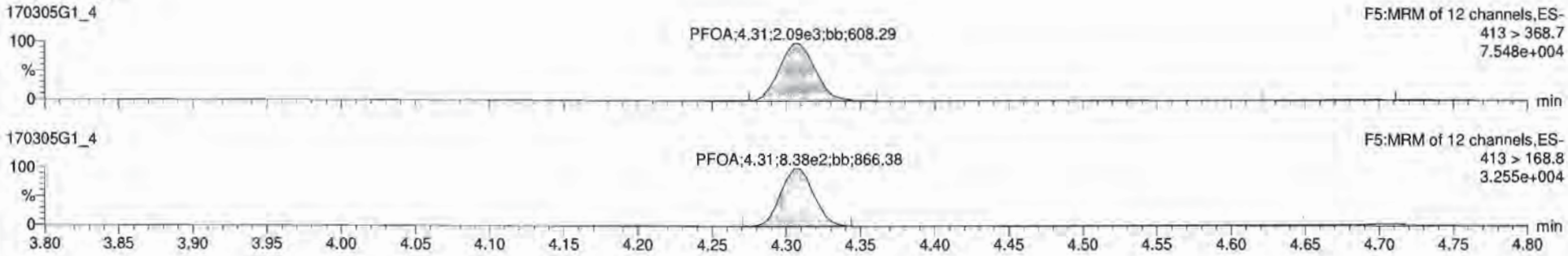
Last Altered: Monday, March 06, 2017 08:36:20 Pacific Standard Time
Printed: Monday, March 06, 2017 08:37:19 Pacific Standard Time

ID: ST170305G1-3 PFC CS0 17C0503, Description: PFC CS0 17C0503 A, Name: 170305G1_4, Date: 05-Mar-2017, Time: 13:11:49, Instrument: , Lab: , User:

Total PFOA



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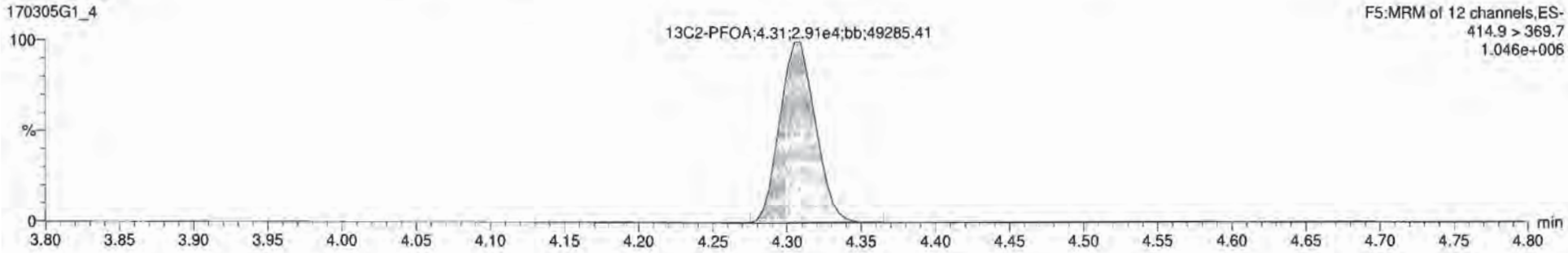

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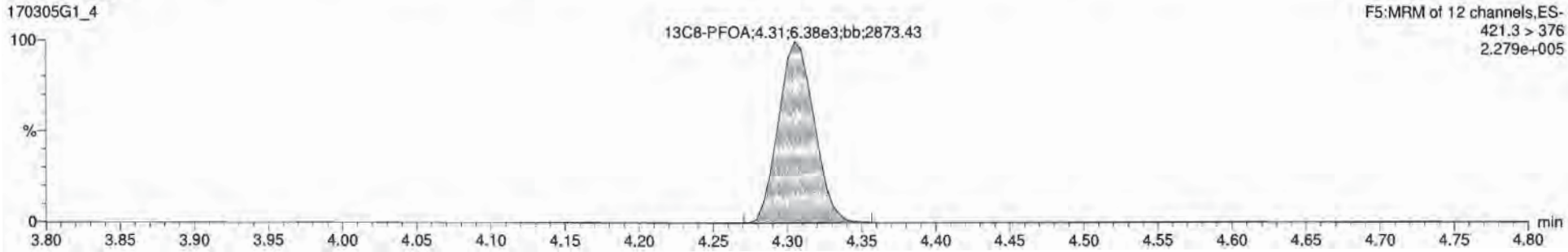

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Last Altered: Monday, March 06, 2017 08:36:20 Pacific Standard Time
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ID: ST170305G1-3 PFC CS0 17C0503, Description: PFC CS0 17C0503 A, Name: 170305G1_4, Date: 05-Mar-2017, Time: 13:11:49, Instrument: , Lab: , User:

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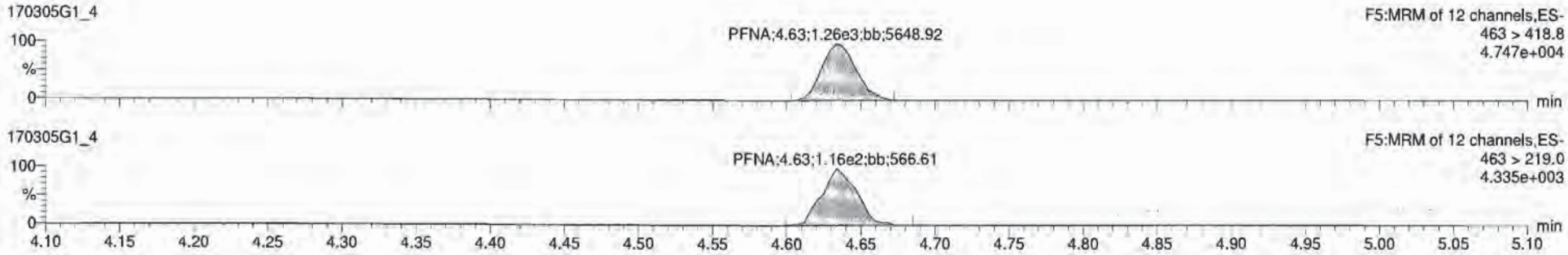

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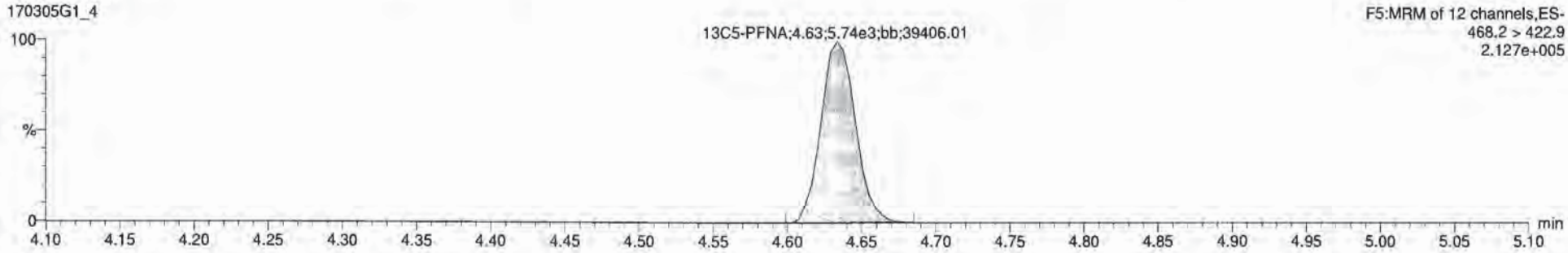

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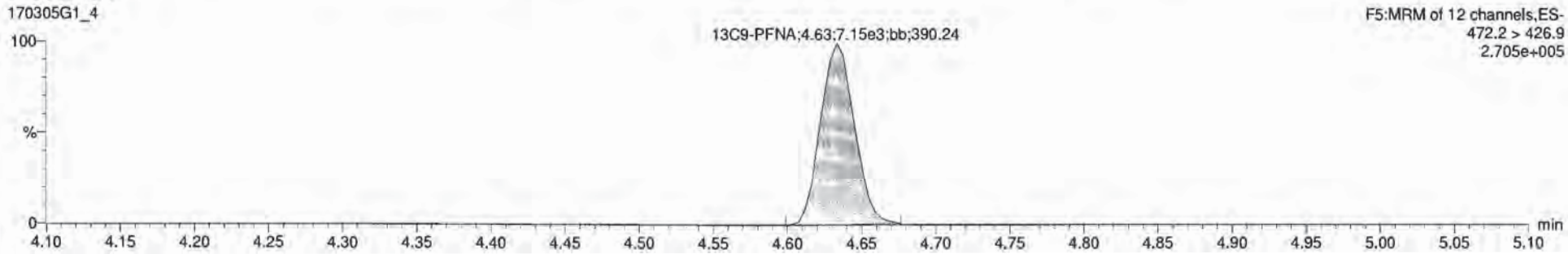

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Printed: Monday, March 06, 2017 08:37:19 Pacific Standard Time

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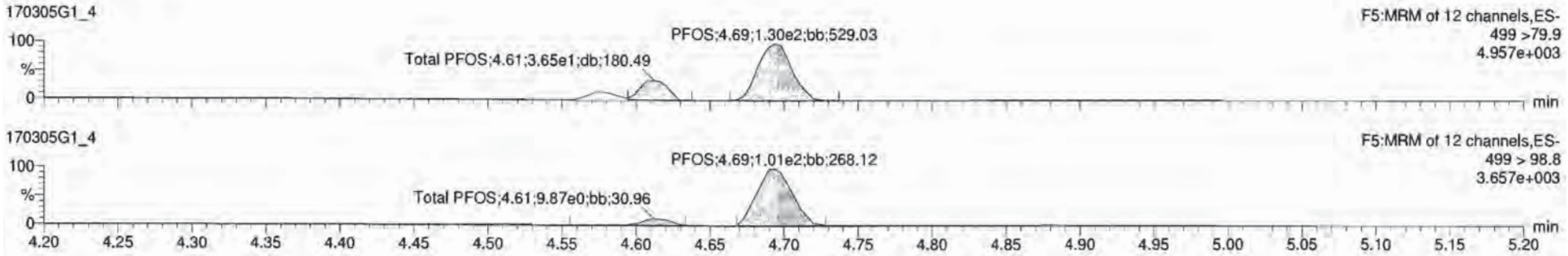
Total PFOS



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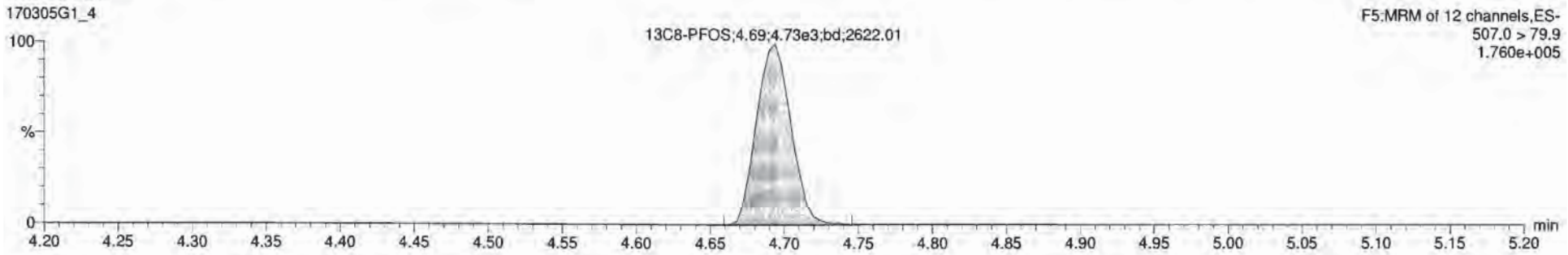

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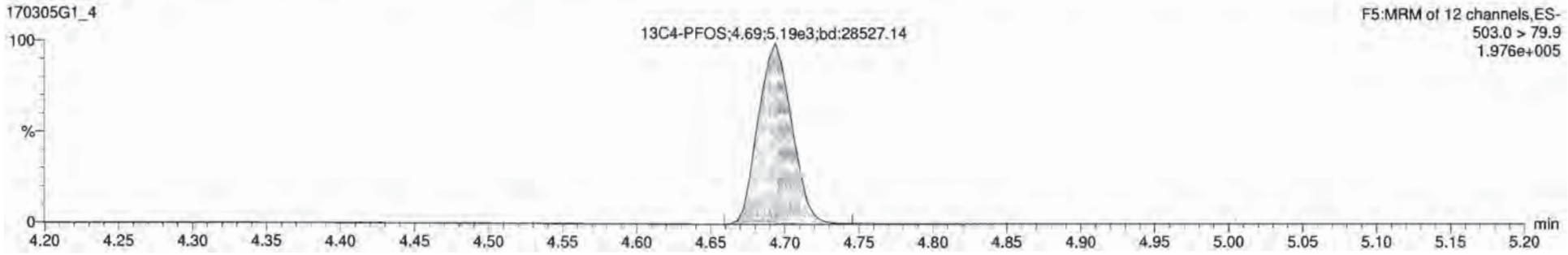

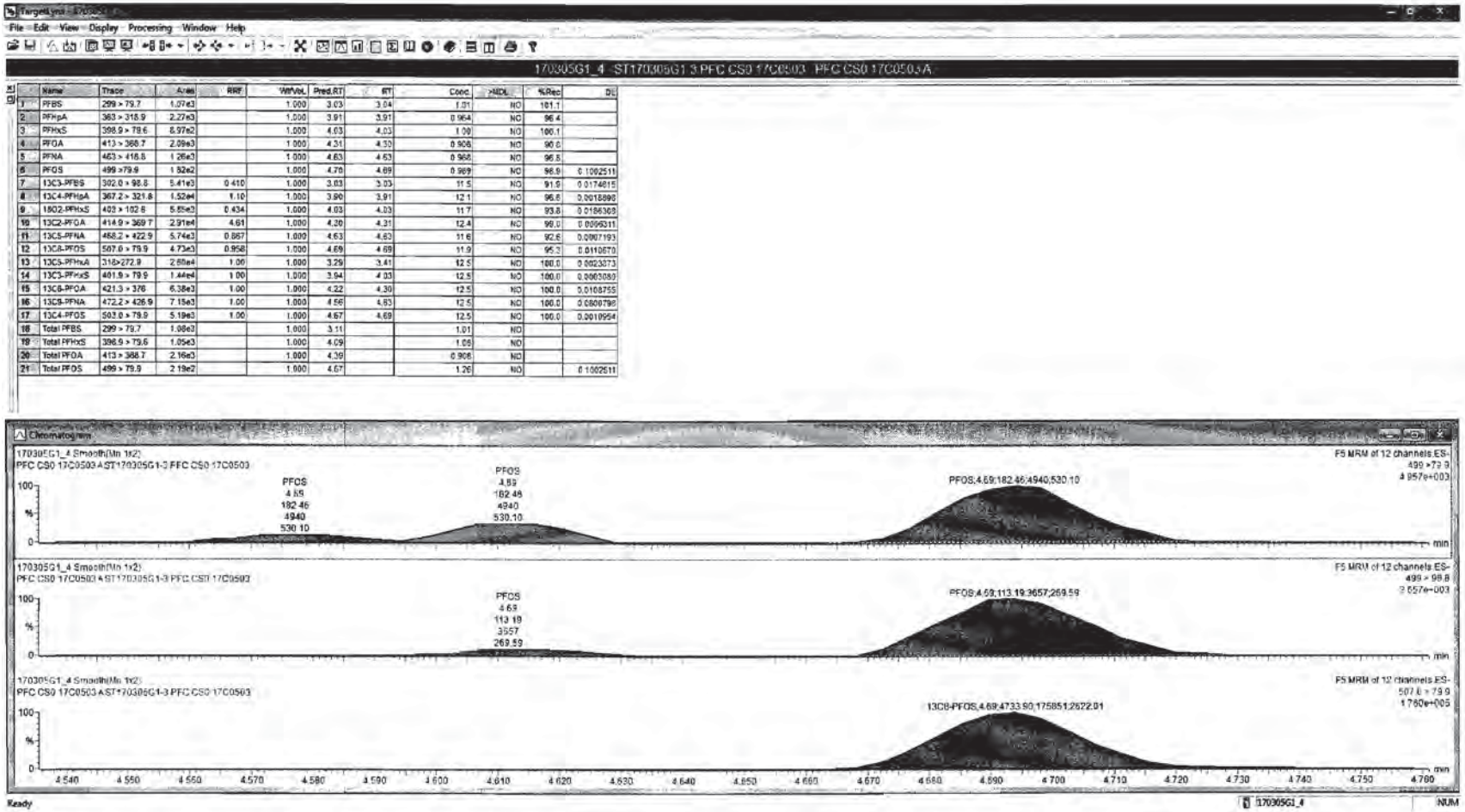

	Name	Trace	Area	RRF	WtVal	Pred.RT	RT	Conc	>MDL	%Rec	DL
1	PFBS	299 > 79.7	1.07e3		1.000	3.03	3.04	1.01	NO	101.1	
2	PFHpA	363 > 318.9	2.27e3		1.000	3.91	3.91	0.964	NO	96.4	
3	PFHxS	398.9 > 79.6	8.97e2		1.000	4.03	4.03	1.00	NO	100.1	
4	PFOA	413 > 368.7	2.09e3		1.000	4.31	4.30	0.906	NO	90.6	
5	PFNA	463 > 418.8	1.26e3		1.000	4.63	4.63	0.968	NO	96.8	
6	PFOS	499 >79.9	1.82e2		1.000	4.70	4.69	0.969	NO	96.9	0.1002511
7	13C3-PFBS	302.0 > 98.8	5.41e3	0.410	1.000	3.03	3.03	11.5	NO	91.9	0.0174615
8	13C4-PFHpA	367.2 > 321.8	1.52e4	1.10	1.000	3.90	3.91	12.1	NO	96.8	0.0018898
9	1802-PFHxS	403 > 102.8	5.85e3	0.434	1.000	4.03	4.03	11.7	NO	93.8	0.0186369
10	13C2-PFOA	414.9 > 369.7	2.91e4	4.61	1.000	4.30	4.31	12.4	NO	99.0	0.0096311
11	13C5-PFNA	468.2 > 422.9	5.74e3	0.867	1.000	4.63	4.63	11.6	NO	92.6	0.0907193
12	13C8-PFOS	507.0 > 79.9	4.73e3	0.958	1.000	4.69	4.69	11.9	NO	95.3	0.0410670
13	13C5-PFHxA	318>272.9	2.68e4	1.00	1.000	3.29	3.41	12.5	NO	100.0	0.0023073
14	13C3-PFHxS	401.9 > 79.9	1.44e4	1.00	1.000	3.94	4.03	12.5	NO	100.0	0.0063089
15	13C8-PFOA	421.3 > 376	6.38e3	1.00	1.000	4.22	4.30	12.5	NO	100.0	0.0108755
16	13C9-PFNA	472.2 > 426.9	7.15e3	1.00	1.000	4.56	4.63	12.5	NO	100.0	0.0809798
17	13C4-PFOS	503.0 > 79.9	5.19e3	1.00	1.000	4.67	4.69	12.5	NO	100.0	0.0010954
18	Total PFBS	299 > 79.7	1.08e3		1.000	3.11		1.01	NO		
19	Total PFHxS	398.9 > 79.6	1.05e3		1.000	4.09		1.00	NO		
20	Total PFOA	413 > 368.7	2.16e3		1.000	4.39		0.906	NO		
21	Total PFOS	499 > 79.9	2.19e2		1.000	4.67		1.26	NO		0.1002511

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Last Altered: Monday, March 06, 2017 08:36:20 Pacific Standard Time
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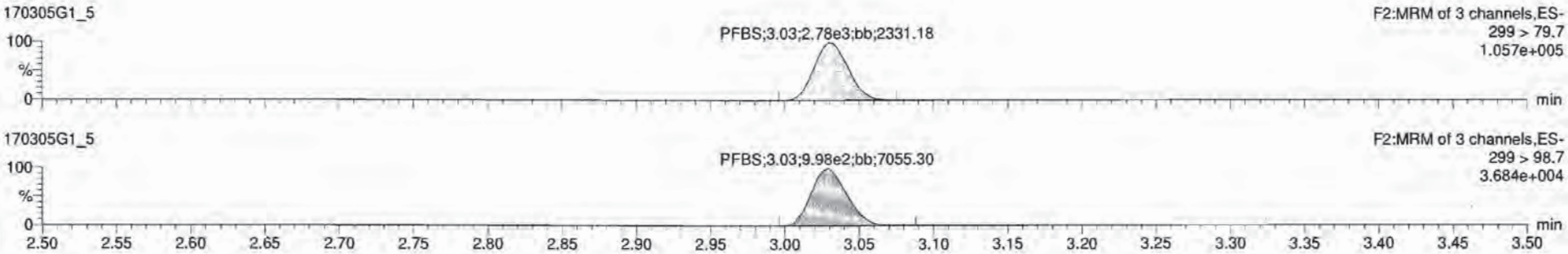
ID: ST170305G1-4 PFC CS1 17C0504, Description: PFC CS1 17C0504 A, Name: 170305G1_5, Date: 05-Mar-2017, Time: 13:24:21, Instrument: , Lab: , User:

PFBS



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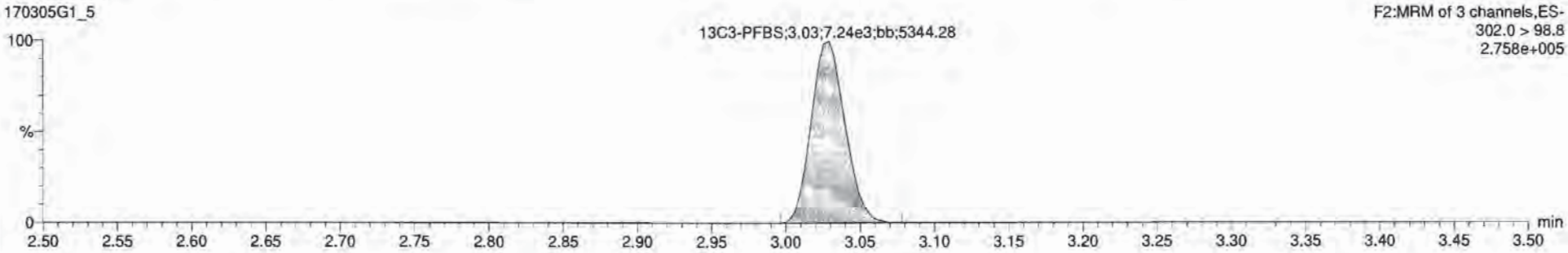

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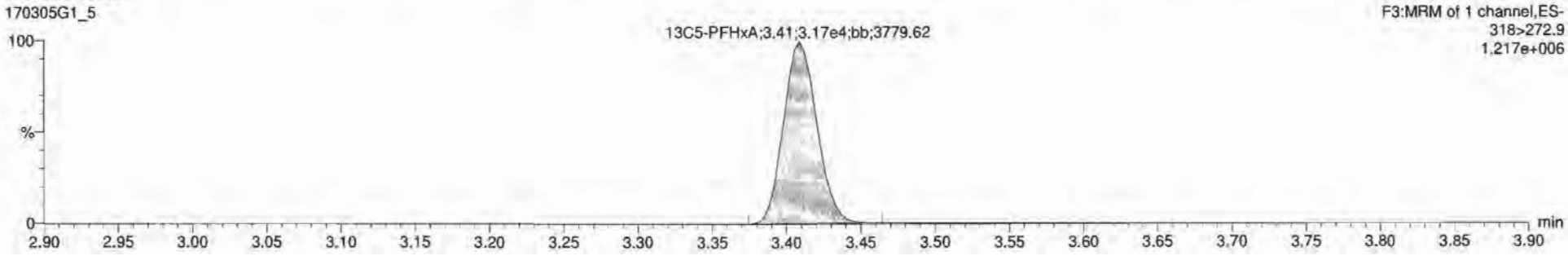

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Printed: Monday, March 06, 2017 08:37:19 Pacific Standard Time

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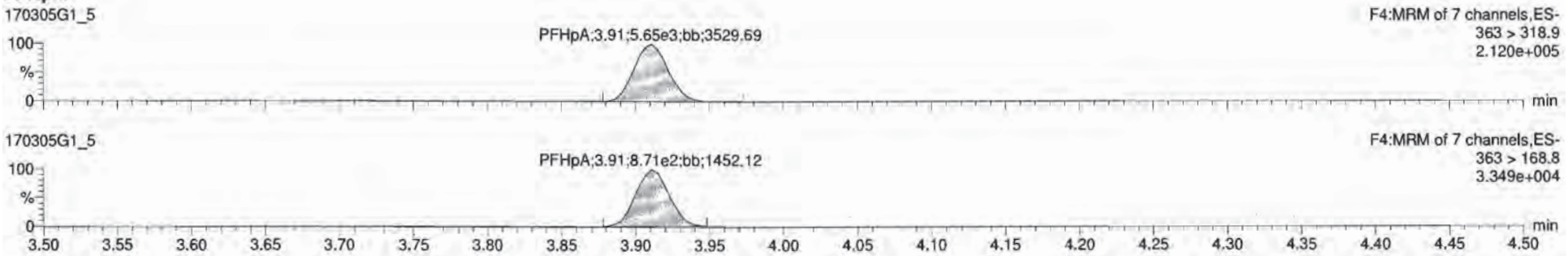

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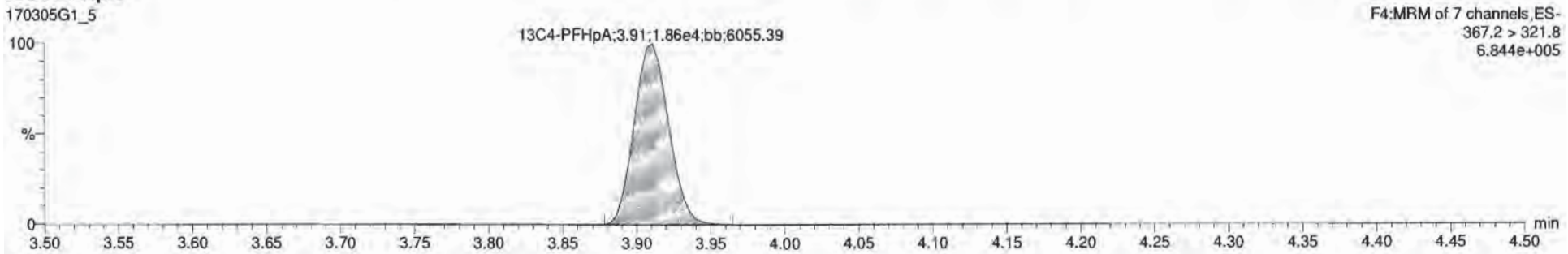

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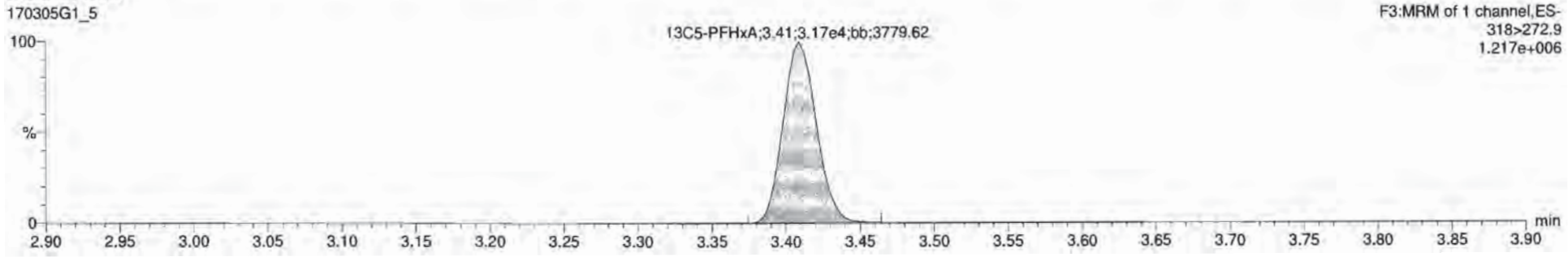

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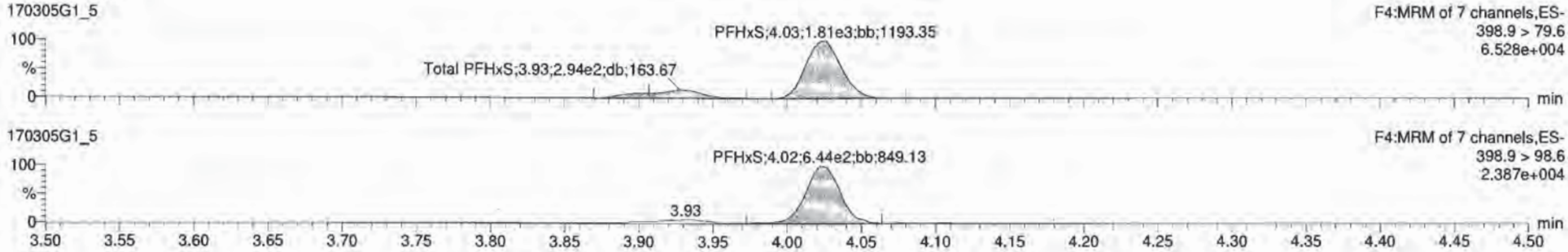
ID: ST170305G1-4 PFC CS1 17C0504, Description: PFC CS1 17C0504 A, Name: 170305G1_5, Date: 05-Mar-2017, Time: 13:24:21, Instrument: , Lab: , User:

Total PFHxS



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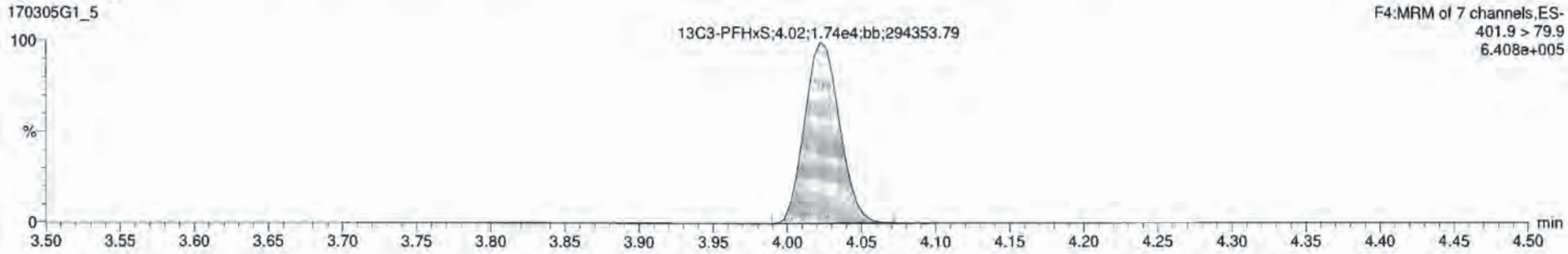

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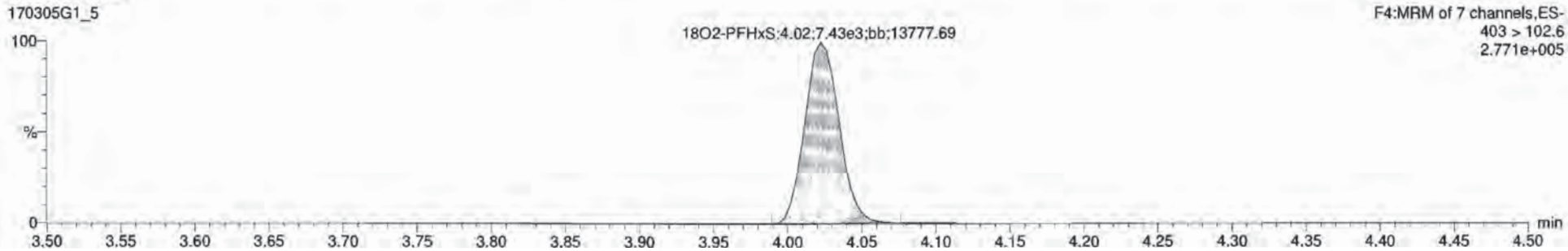

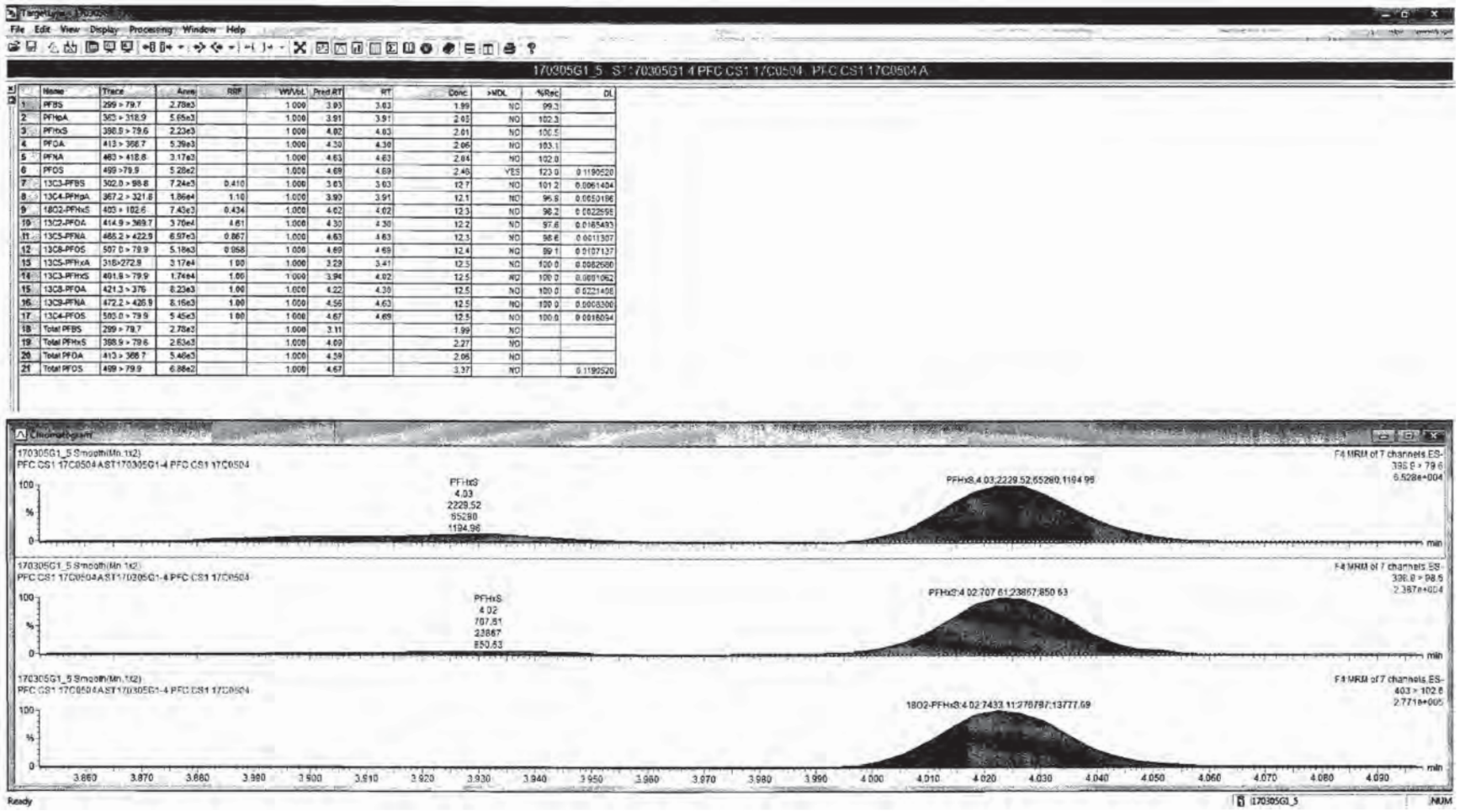

	Name	Trace	Area	RRF	Wt/Vol	Pred RT	RT	Conc	>MDL	%Rec	DL
1	PFBS	299 > 79.7	2.78e3		1.000	3.93	3.63	1.99	NO	99.3	
2	PFHpA	363 > 318.9	5.65e3		1.000	3.91	3.91	2.03	NO	102.3	
3	PFHxS	398.9 > 79.6	2.23e3		1.000	4.02	4.03	2.01	NO	100.5	
4	PFOA	413 > 368.7	5.39e3		1.000	4.30	4.30	2.06	NO	103.1	
5	PFNA	463 > 418.8	3.17e3		1.000	4.63	4.63	2.04	NO	102.0	
6	PFOS	499 >79.9	5.28e2		1.000	4.69	4.69	2.46	YES	123.0	0.1190520
7	13C3-PFBS	302.0 > 98.8	7.24e3	0.410	1.000	3.63	3.63	12.7	NO	101.2	0.0061404
8	13C4-PFHpA	367.2 > 321.8	1.86e4	1.10	1.000	3.90	3.91	12.1	NO	96.8	0.0050196
9	18O2-PFHxS	403 > 102.8	7.43e3	0.434	1.000	4.02	4.02	12.3	NO	98.2	0.0022595
10	13C2-PFOA	414.9 > 369.7	3.70e4	4.61	1.000	4.30	4.30	12.2	NO	97.6	0.0185493
11	13C5-PFNA	468.2 > 422.9	6.97e3	0.867	1.000	4.63	4.63	12.3	NO	98.6	0.0011307
12	13C8-PFOS	507.0 > 79.9	5.18e3	0.958	1.000	4.69	4.69	12.4	NO	99.1	0.0107137
13	13C5-PFHxA	318>272.9	3.17e4	1.00	1.000	3.29	3.41	12.5	NO	100.0	0.0082680
14	13C3-PFHxS	401.9 > 79.9	1.74e4	1.00	1.000	3.94	4.02	12.5	NO	100.0	0.0091062
15	13C8-PFOA	421.3 > 376	8.23e3	1.00	1.000	4.22	4.30	12.5	NO	100.0	0.0221408
16	13C9-PFNA	472.2 > 426.9	8.16e3	1.00	1.000	4.56	4.63	12.5	NO	100.0	0.0008300
17	13C4-PFOS	503.0 > 79.9	5.45e3	1.00	1.000	4.67	4.69	12.5	NO	100.0	0.0018094
18	Total PFBS	299 > 79.7	2.78e2		1.000	3.11		1.99	NO		
19	Total PFHxS	398.9 > 79.6	2.63e3		1.000	4.09		2.27	NO		
20	Total PFOA	413 > 368.7	5.46e3		1.000	4.39		2.06	NO		
21	Total PFOS	499 > 79.9	6.86e2		1.000	4.67		3.37	NO		0.1190520

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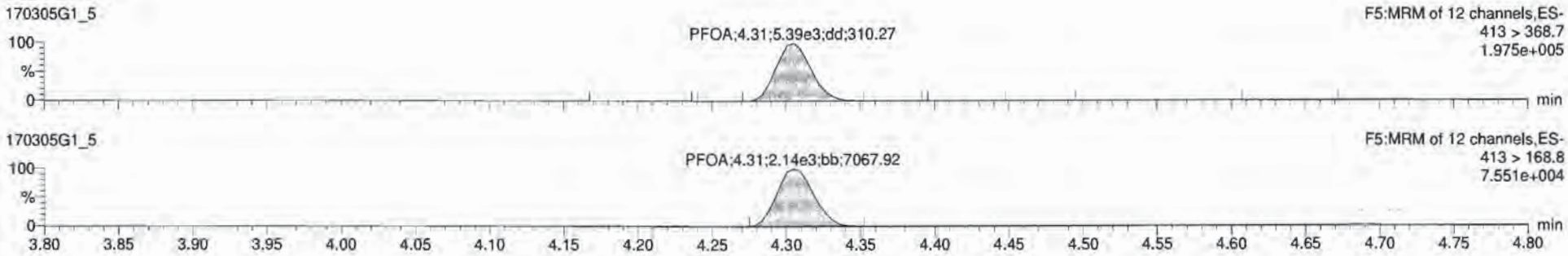
ID: ST170305G1-4 PFC CS1 17C0504, Description: PFC CS1 17C0504 A, Name: 170305G1_5, Date: 05-Mar-2017, Time: 13:24:21, Instrument: , Lab: , User:

Total PFOA



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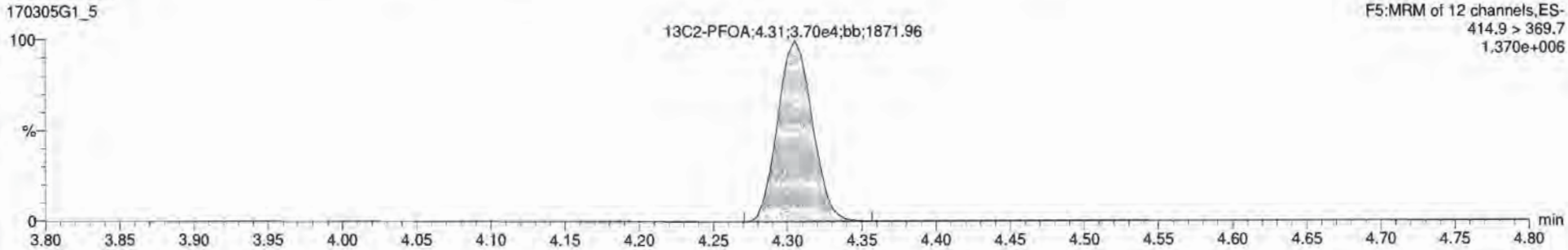

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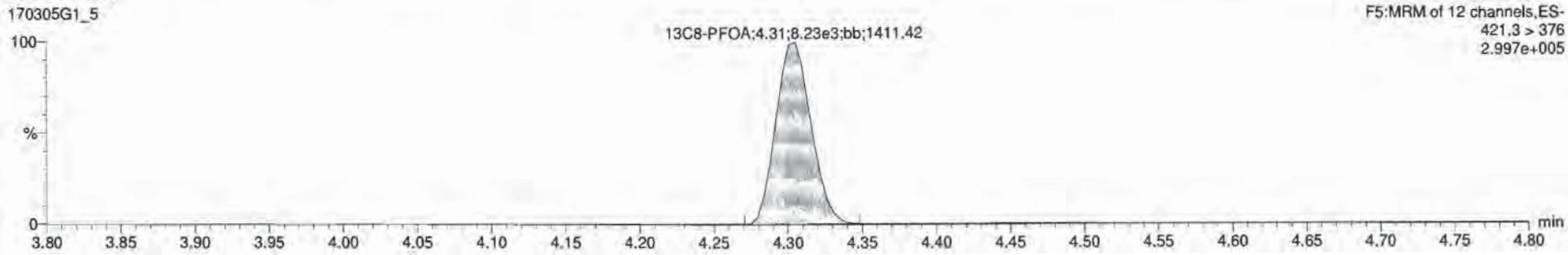

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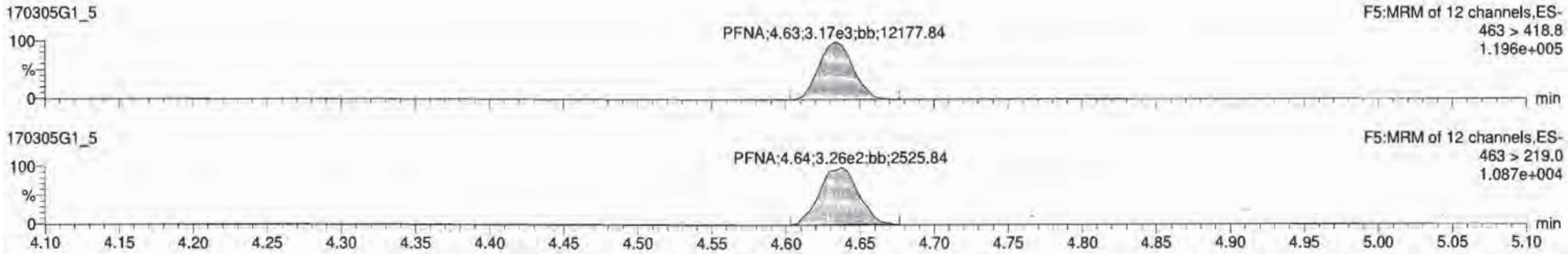

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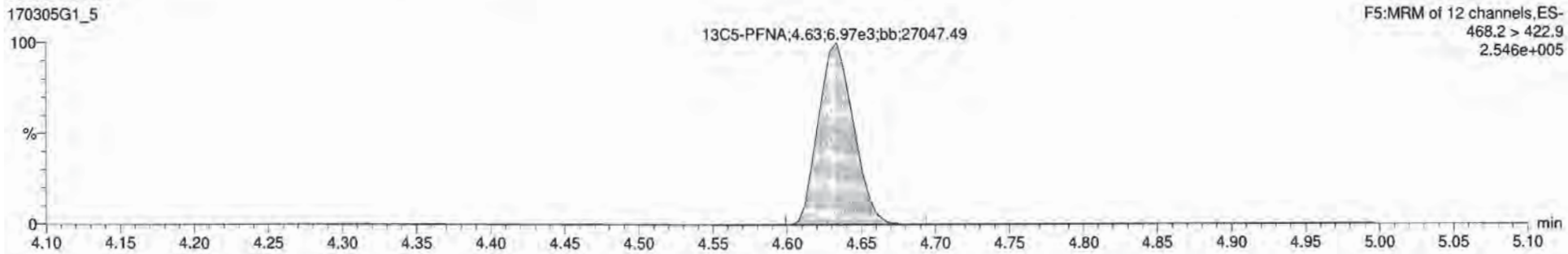

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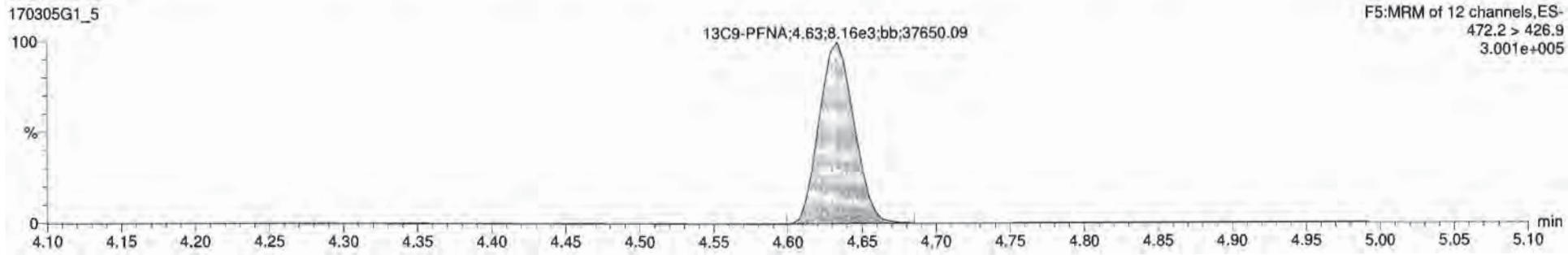

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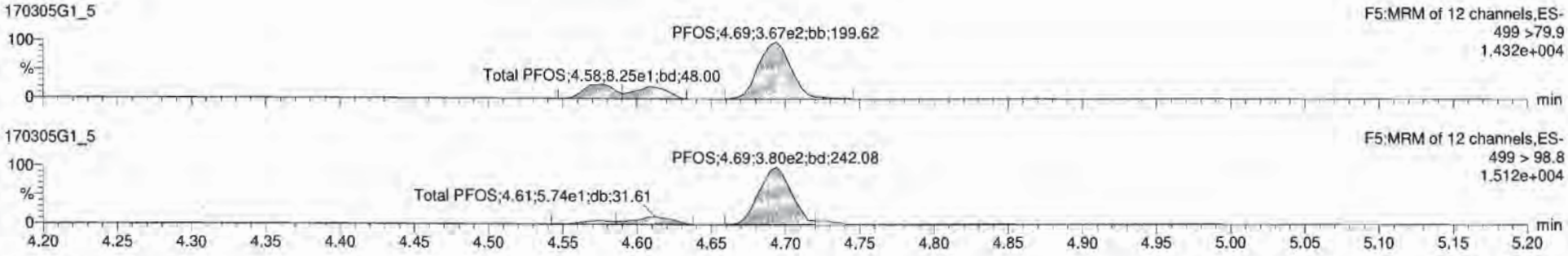
Total PFOS



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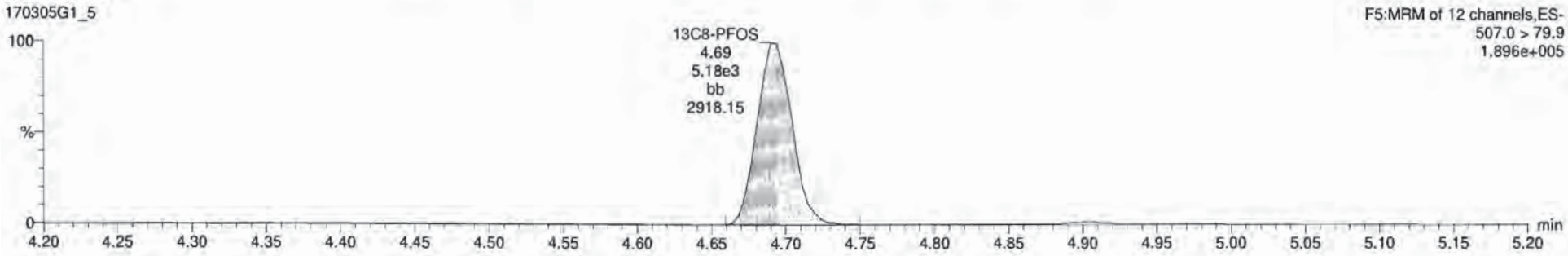

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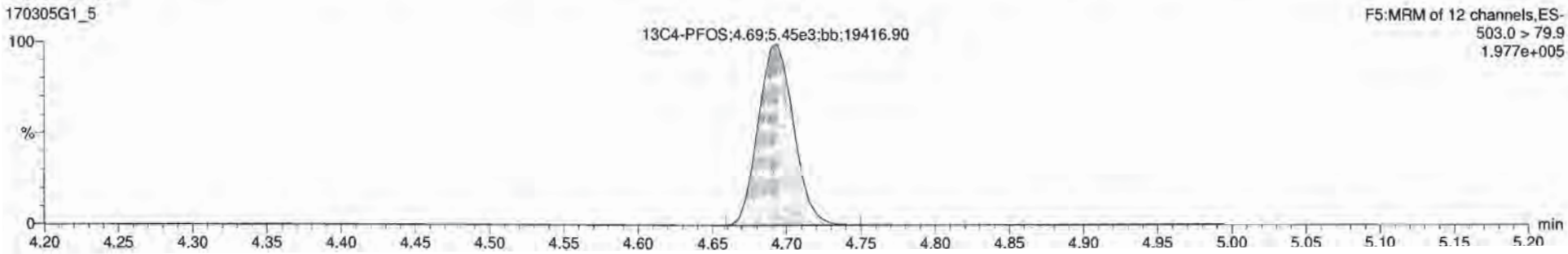

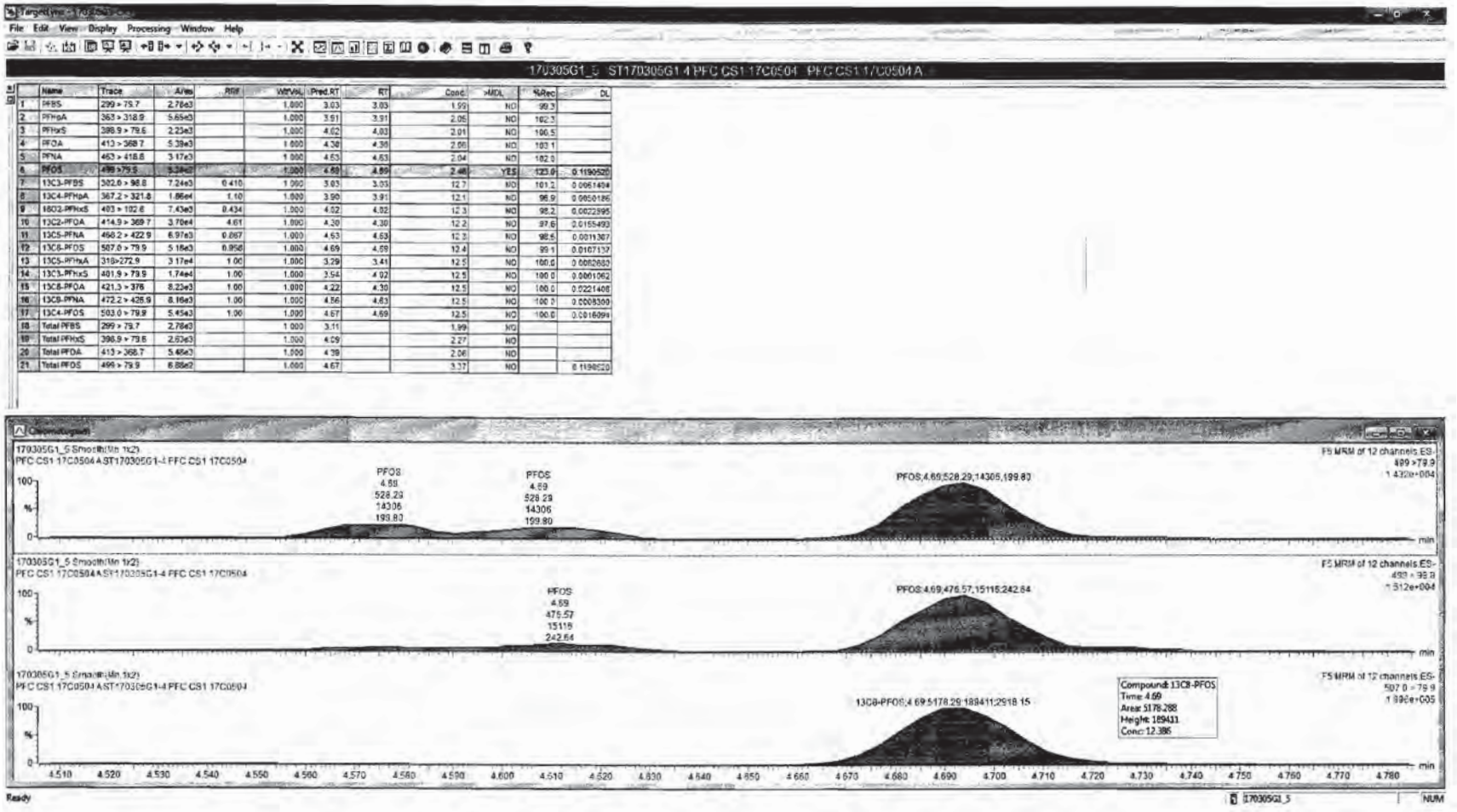

	Name	Trace	Area	RRF	WtVol	Pred.RT	RT	Conc	>MDL	%Rec	DL
1	PFBS	299 > 79.7	2.78e3		1.000	3.03	3.03	1.99	NO	99.3	
2	PFHpA	363 > 318.9	5.65e3		1.000	3.91	3.91	2.05	NO	102.3	
3	PFHxS	398.9 > 79.6	2.23e3		1.000	4.02	4.03	2.01	NO	100.5	
4	PFOA	413 > 368.7	5.38e3		1.000	4.36	4.36	2.06	NO	103.1	
5	PFNA	463 > 418.8	3.17e3		1.000	4.63	4.63	2.04	NO	102.0	
6	PFOS	499 > 79.9	5.34e3		1.000	4.69	4.69	2.48	YES	123.9	0.1190520
7	13C3-PFBS	302.0 > 98.8	7.24e3	0.410	1.000	3.03	3.03	12.7	NO	101.2	0.0061404
8	13C4-PFHpA	367.2 > 321.8	1.86e4	1.10	1.000	3.90	3.91	12.1	NO	96.9	0.0650186
9	18O2-PFHxS	403 > 102.8	7.43e3	0.434	1.000	4.02	4.02	12.3	NO	98.2	0.0022895
10	13C2-PFOA	414.9 > 369.7	3.70e4	4.61	1.000	4.30	4.30	12.2	NO	97.6	0.0155493
11	13C5-PFNA	468.2 > 422.9	6.97e3	0.867	1.000	4.63	4.63	12.3	NO	98.5	0.0011367
12	13C8-PFOS	507.0 > 79.9	5.16e3	0.956	1.000	4.69	4.69	12.4	NO	99.1	0.0107137
13	13C5-PFHxA	318>272.9	3.17e4	1.00	1.000	3.29	3.41	12.5	NO	100.0	0.0002683
14	13C3-PFHxS	401.9 > 79.9	1.74e4	1.00	1.000	3.54	4.02	12.5	NO	100.0	0.0001062
15	13C8-PFOA	421.3 > 376	8.23e3	1.00	1.000	4.22	4.30	12.5	NO	100.0	0.0221408
16	13C9-PFNA	472.2 > 426.9	8.16e3	1.00	1.000	4.56	4.63	12.5	NO	100.0	0.0008300
17	13C4-PFOS	503.0 > 79.9	5.45e3	1.00	1.000	4.67	4.69	12.5	NO	100.0	0.0016099
18	Total PFBS	299 > 79.7	2.78e3		1.000	3.11		1.99	NO		
19	Total PFHxS	398.9 > 79.6	2.63e3		1.000	4.09		2.27	NO		
20	Total PFOA	413 > 368.7	5.48e3		1.000	4.39		2.06	NO		
21	Total PFOS	499 > 79.9	6.88e2		1.000	4.67		3.37	NO		0.1190520

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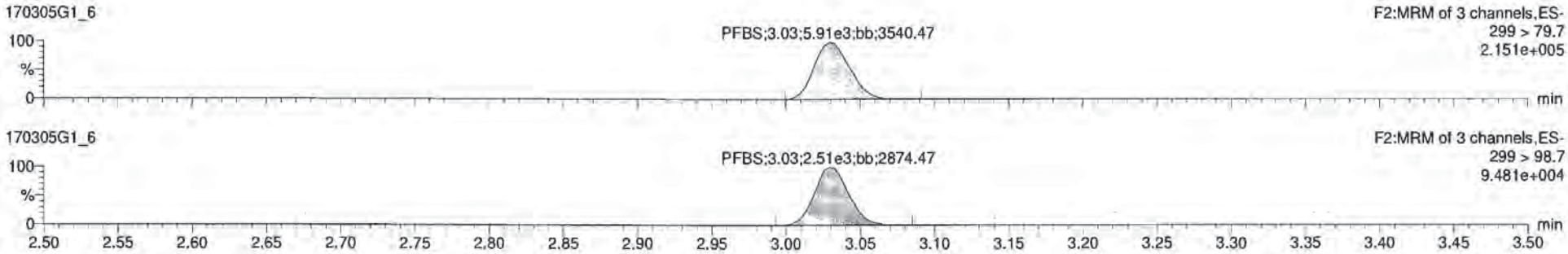
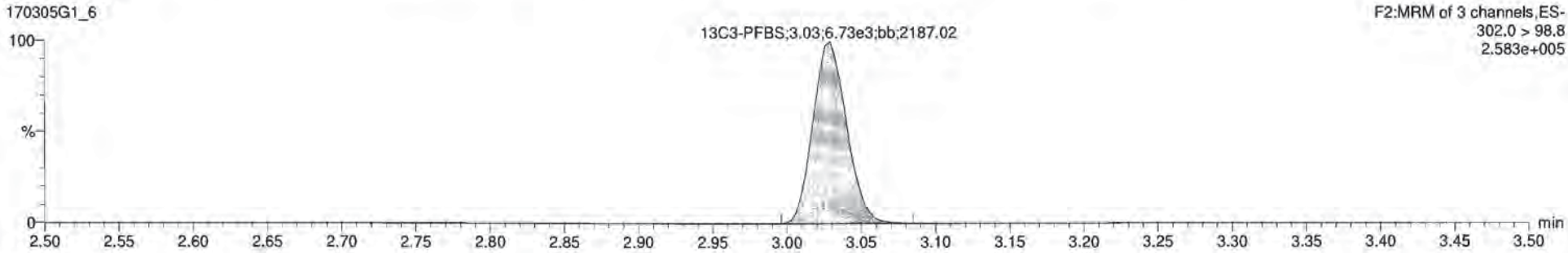
PFBS



13C3-PFBS



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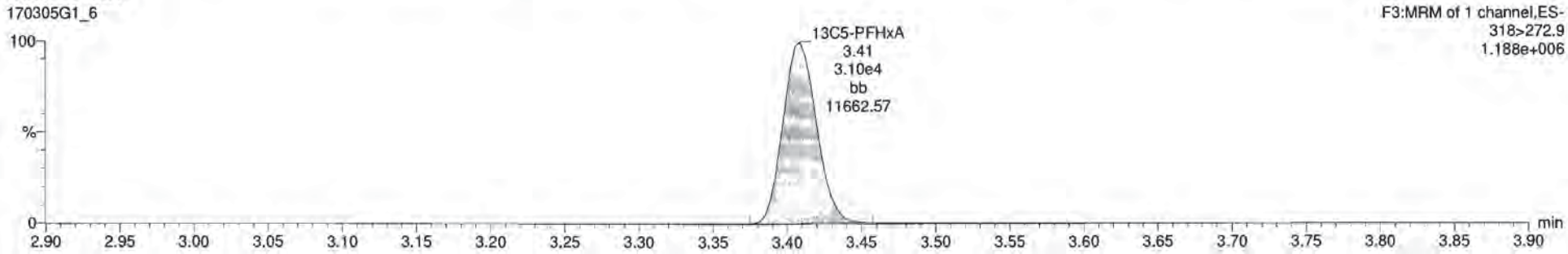

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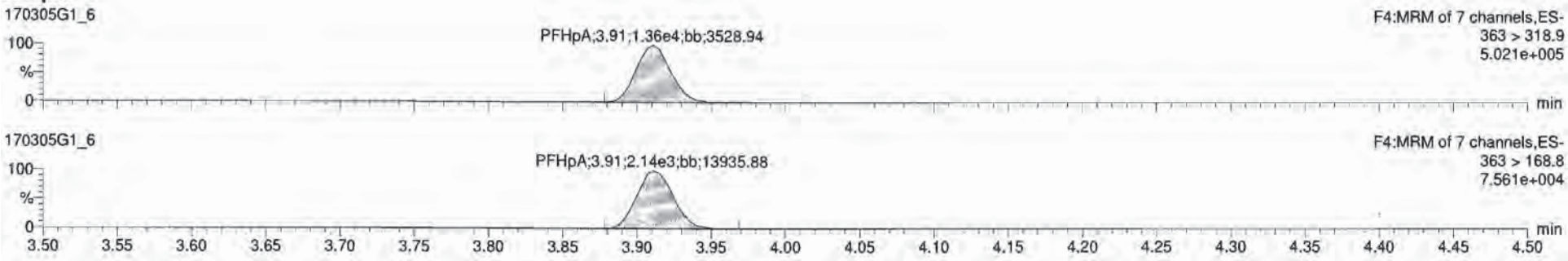
PFHpA



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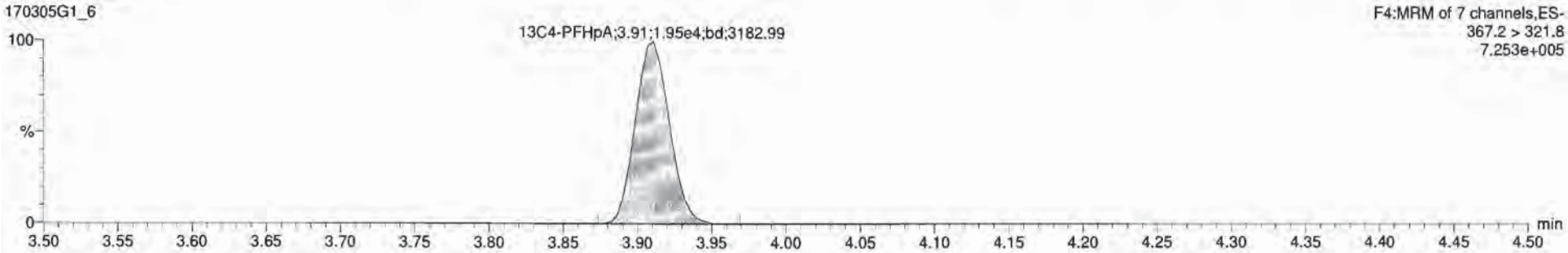

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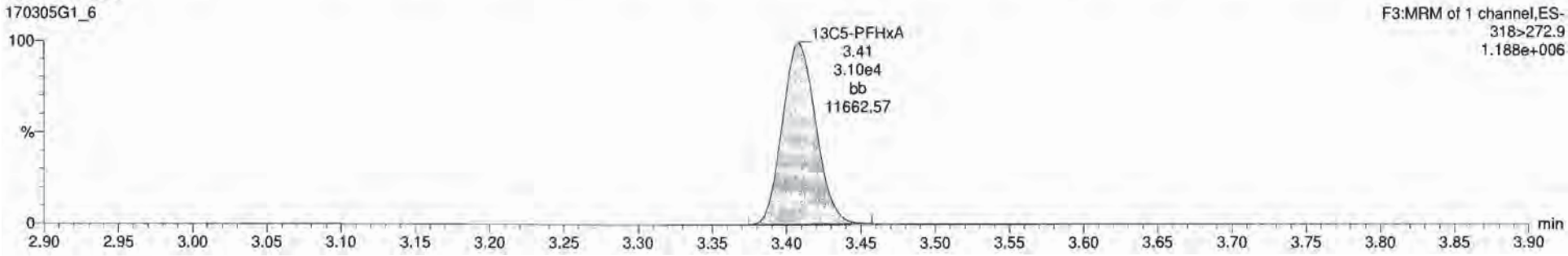

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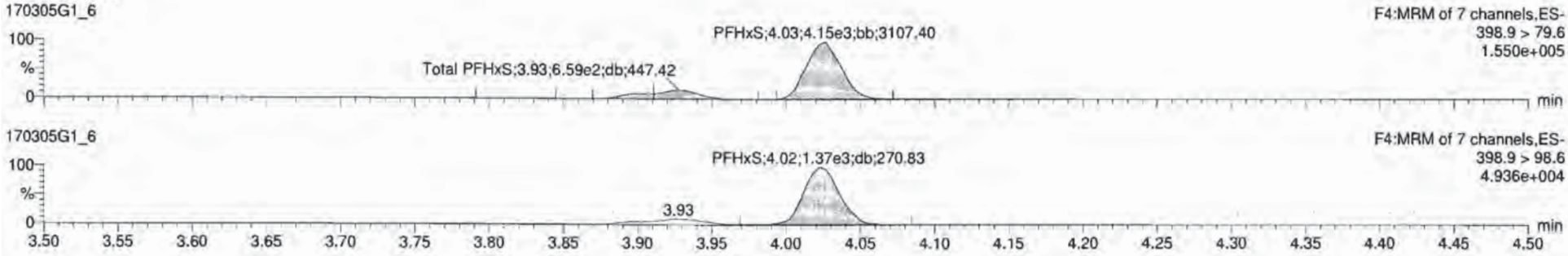
Total PFHxS



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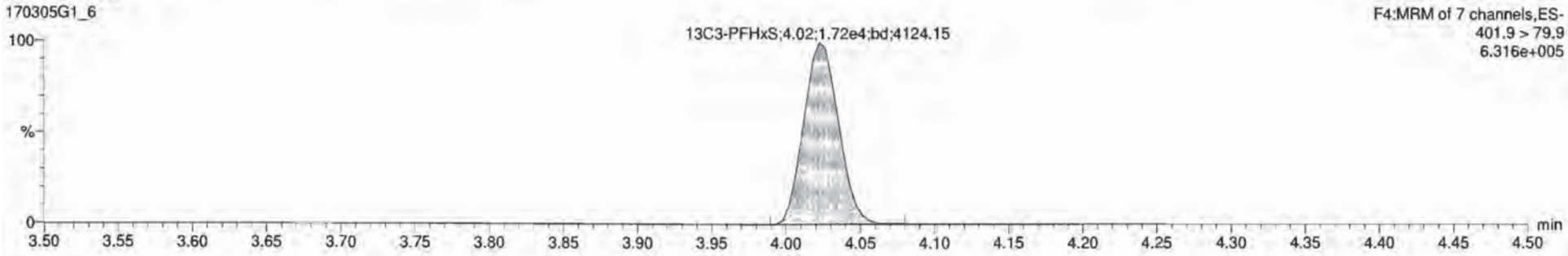
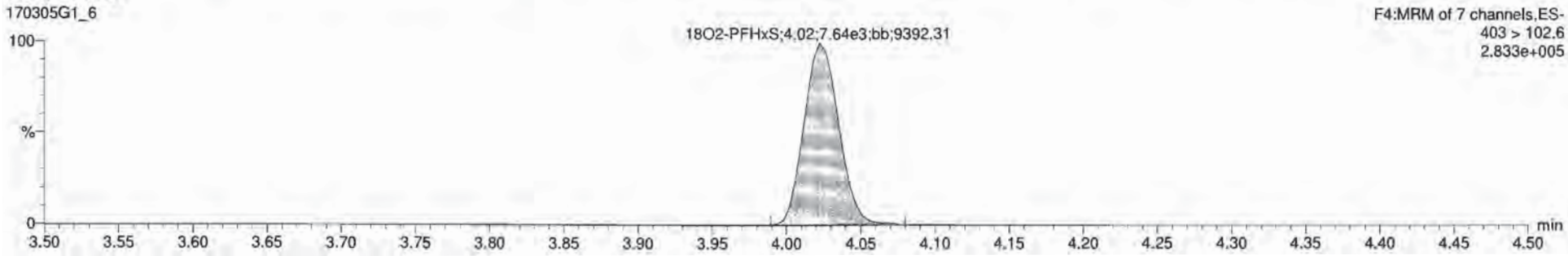
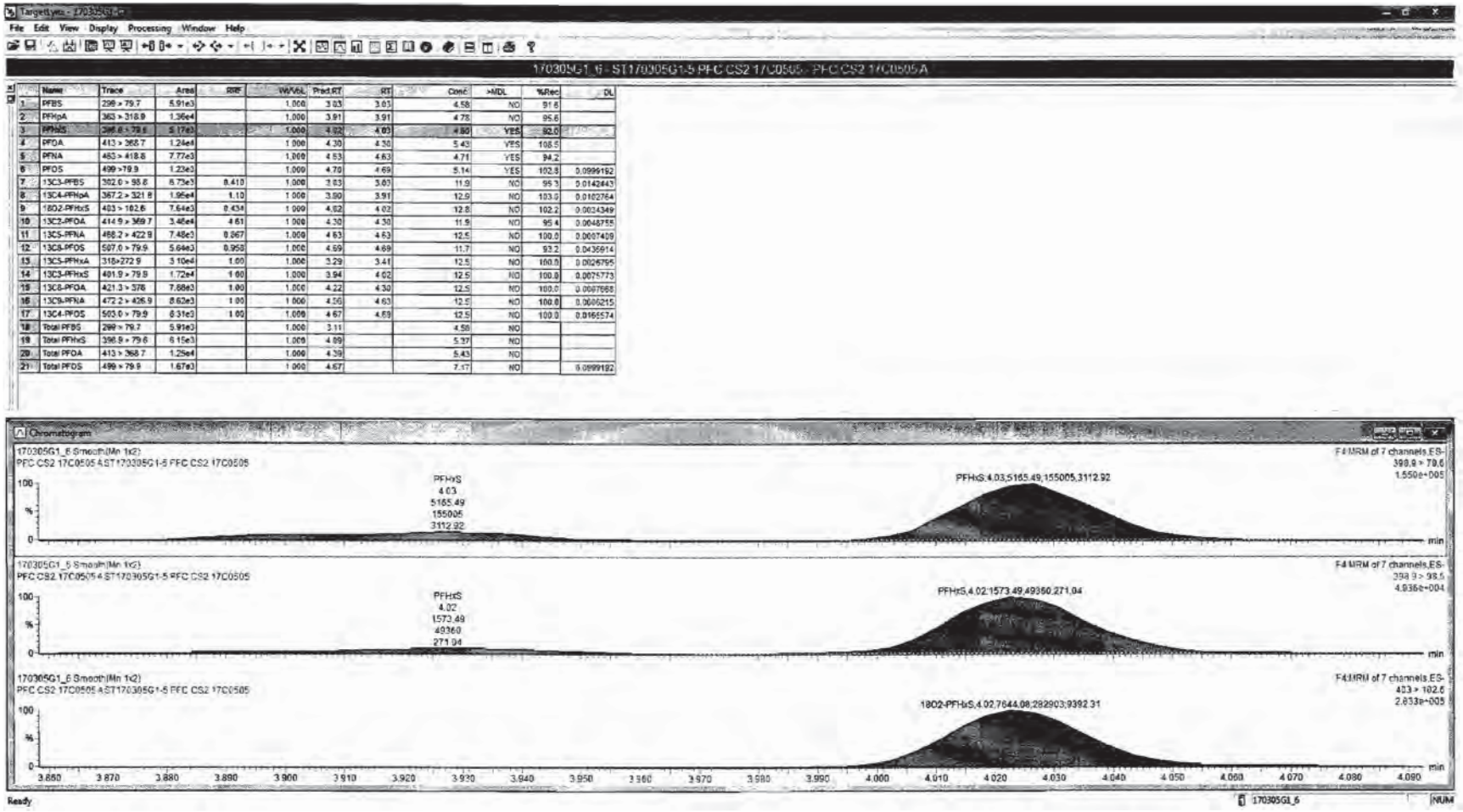


18O2-PFHxS





	Name	Trace	Area	RRF	Wt/Vol	Pred.RT	RT	Conc	>MDL	%Rec	DL
1	PFBS	299 > 79.7	5.91e3		1.000	3.03	3.03	4.58	NO	91.6	
2	PFHpA	363 > 318.9	1.36e4		1.000	3.91	3.91	4.78	NO	95.6	
3	PFHxS	398.8 > 79.6	5.17e3		1.000	4.02	4.03	4.60	YES	92.0	
4	PFOA	413 > 368.7	1.24e4		1.000	4.30	4.30	5.43	YES	108.5	
5	PFNA	463 > 418.8	7.77e3		1.000	4.63	4.63	4.71	YES	94.2	
6	PFOS	499 >79.9	1.23e3		1.000	4.70	4.69	5.14	YES	102.8	0.0999192
7	13C3-PFBS	302.0 > 98.8	8.73e3	0.410	1.000	3.03	3.03	11.9	NO	95.3	0.0142443
8	13C4-PFHpA	367.2 > 321.8	1.95e4	1.10	1.000	3.90	3.91	12.9	NO	103.0	0.0102764
9	1802-PFHxS	403 > 102.6	7.64e3	0.434	1.000	4.02	4.02	12.8	NO	102.2	0.0024349
10	13C2-PFOA	414.9 > 369.7	3.46e4	4.61	1.000	4.30	4.30	11.9	NO	95.4	0.0048755
11	13C5-PFNA	468.2 > 422.9	7.48e3	0.867	1.000	4.63	4.63	12.5	NO	100.0	0.0007409
12	13C8-PFOS	507.0 > 79.9	5.64e3	0.958	1.000	4.69	4.69	11.7	NO	93.2	0.0436914
13	13C5-PFHxA	318>272.9	3.10e4	1.00	1.000	3.29	3.41	12.5	NO	100.0	0.0026755
14	13C3-PFHxS	401.9 > 79.9	1.72e4	1.00	1.000	3.94	4.02	12.5	NO	100.0	0.0075773
15	13C8-PFOA	421.3 > 376	7.88e3	1.00	1.000	4.22	4.30	12.5	NO	100.0	0.0007668
16	13C9-PFNA	472.2 > 426.9	8.62e3	1.00	1.000	4.56	4.63	12.5	NO	100.0	0.0006215
17	13C4-PFOS	503.0 > 79.9	8.31e3	1.00	1.000	4.67	4.69	12.5	NO	100.0	0.0166574
18	Total PFBS	299 > 79.7	5.91e3		1.000	3.11		4.58	NO		
19	Total PFHxS	398.8 > 79.6	6.15e3		1.000	4.09		5.37	NO		
20	Total PFOA	413 > 368.7	1.25e4		1.000	4.39		5.43	NO		
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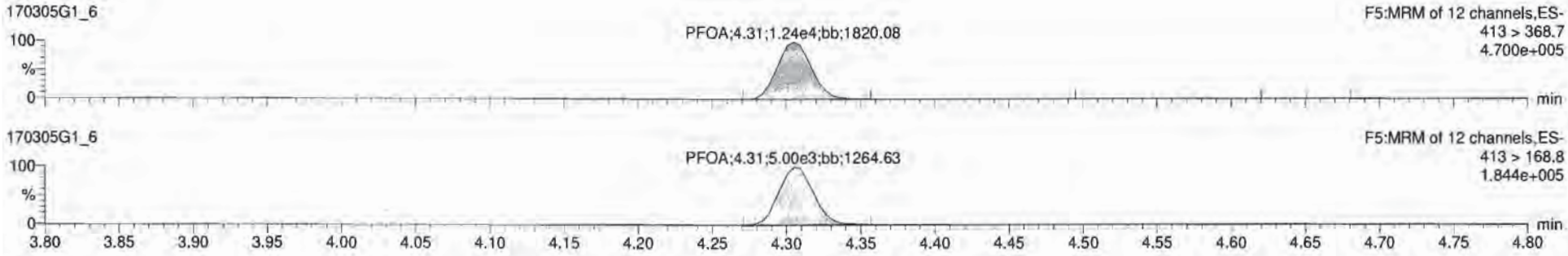
ID: ST170305G1-5 PFC CS2 17C0505, Description: PFC CS2 17C0505 A, Name: 170305G1_6, Date: 05-Mar-2017, Time: 13:36:55, Instrument: , Lab: , User:

Total PFOA



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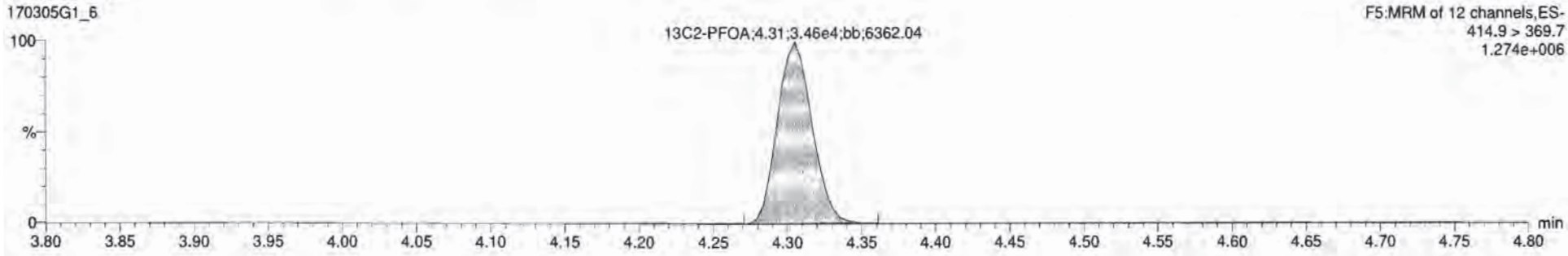
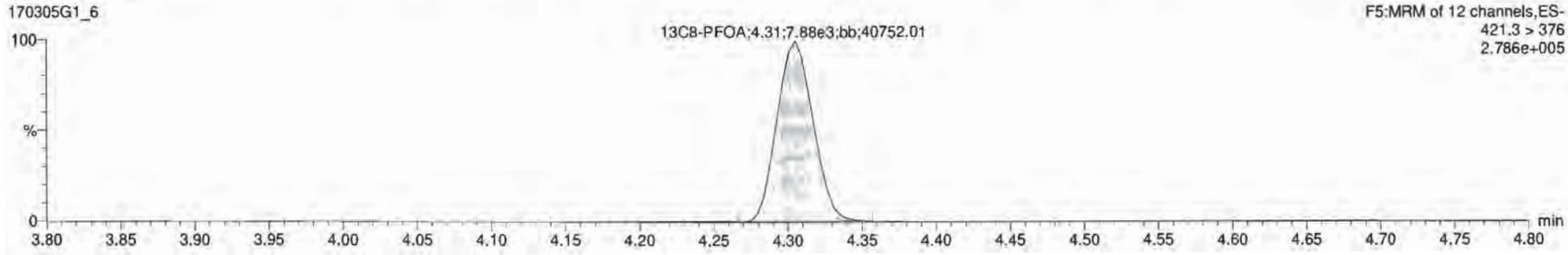


13C8-PFOA



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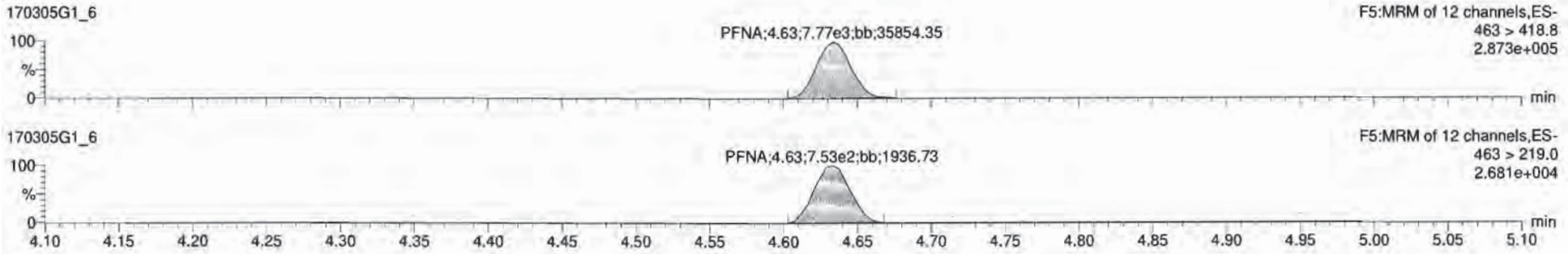
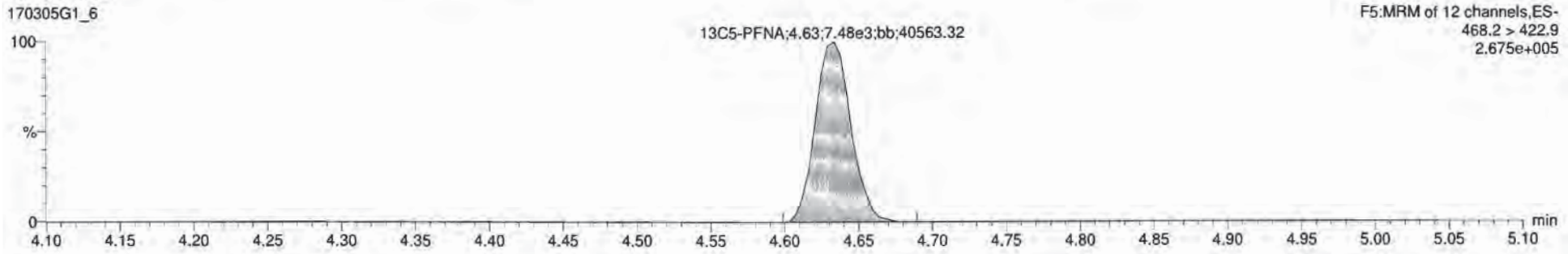
ID: ST170305G1-5 PFC CS2 17C0505, Description: PFC CS2 17C0505 A, Name: 170305G1_6, Date: 05-Mar-2017, Time: 13:36:55, Instrument: , Lab: , User:

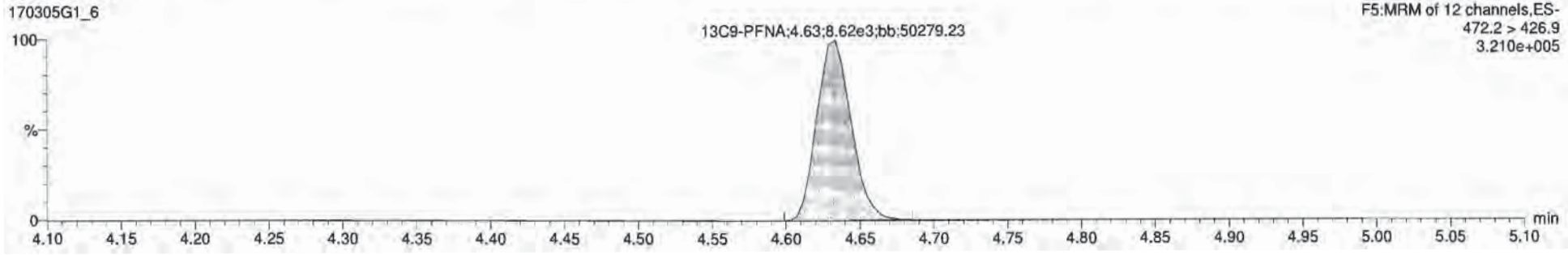
PFNA



13C5-PFNA



13C9-PFNA



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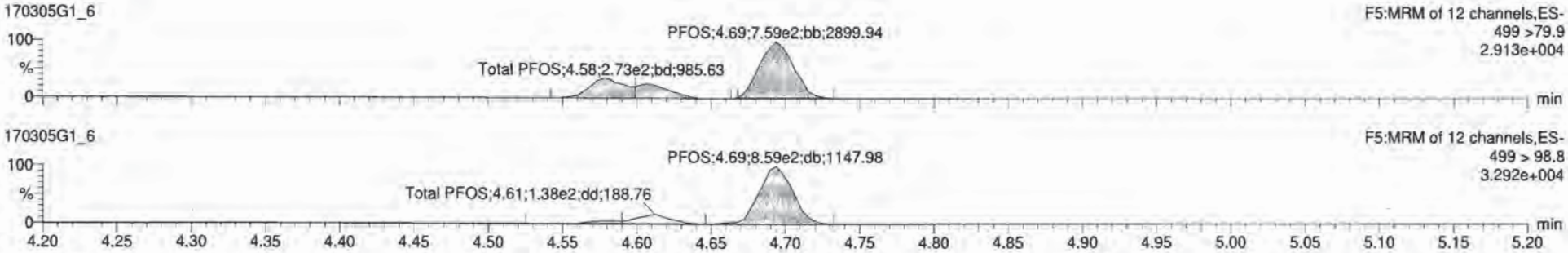
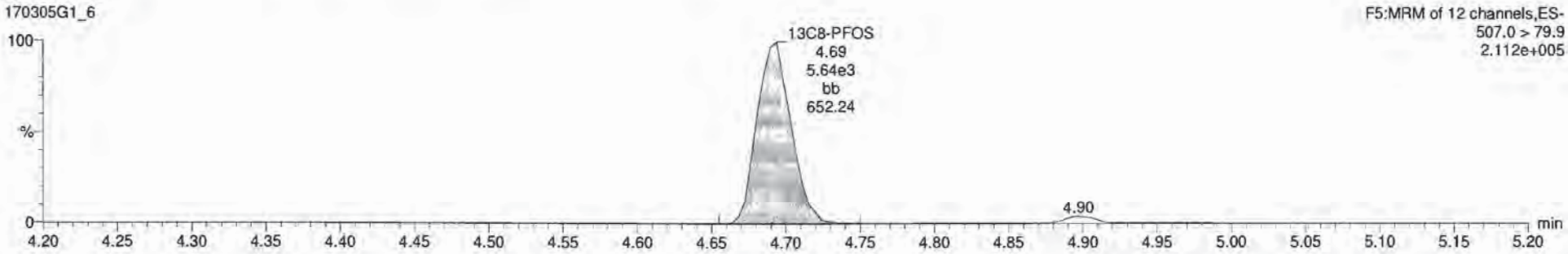
ID: ST170305G1-5 PFC CS2 17C0505, Description: PFC CS2 17C0505 A, Name: 170305G1_6, Date: 05-Mar-2017, Time: 13:36:55, Instrument: , Lab: , User:

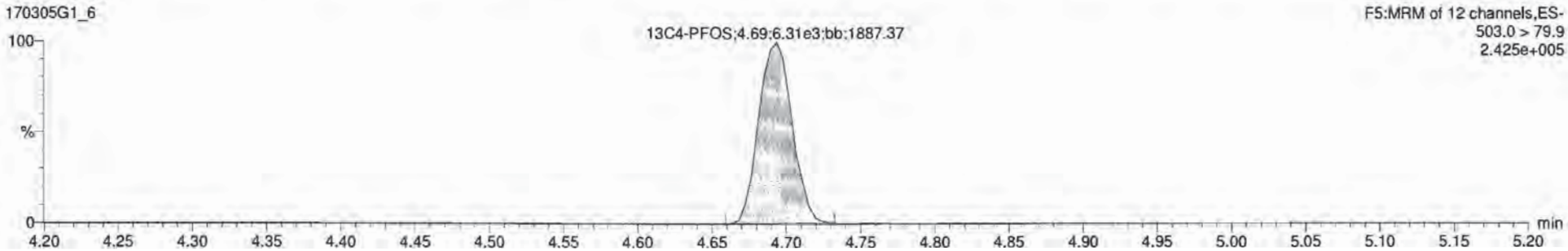
Total PFOS

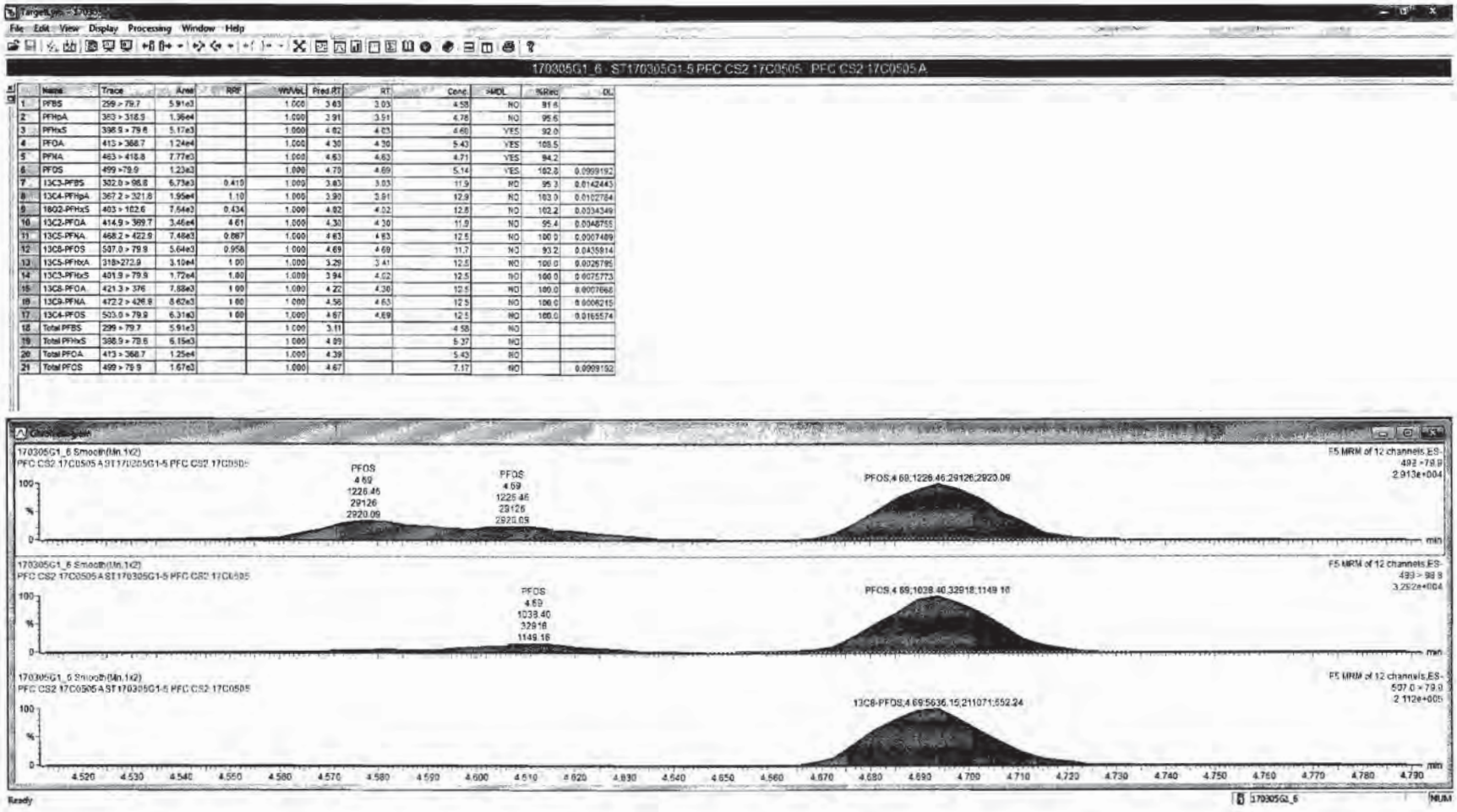


13C8-PFOS



13C4-PFOS





	Name	Trace	Area	RRF	WAVbL	Pred.RT	RT	Conc	HADL	%Rec	DL
1	PFBS	299 > 79.7	5.91e3		1.000	3.03	3.03	4.58	NO	91.6	
2	PFHpA	363 > 318.8	1.36e4		1.000	3.91	3.91	4.78	NO	95.6	
3	PFHxS	398.9 > 79.8	5.17e3		1.000	4.62	4.63	4.60	YES	92.0	
4	PFOA	413 > 368.7	1.24e4		1.000	4.30	4.30	5.43	YES	108.5	
5	PFNA	463 > 418.8	7.77e3		1.000	4.63	4.63	4.71	YES	94.2	
6	PFOS	499 > 79.9	1.23e3		1.000	4.70	4.69	5.14	YES	102.8	0.0999192
7	13C3-PFBS	302.0 > 98.8	6.73e3	0.410	1.000	3.03	3.03	11.9	NO	95.3	0.0142443
8	13C4-PFHpA	367.2 > 321.8	1.95e4	1.10	1.000	3.90	3.91	12.9	NO	103.0	0.0102764
9	1802-PFHxS	403 > 102.6	7.64e2	0.434	1.000	4.62	4.62	12.8	NO	102.2	0.0034349
10	13C2-PFOA	414.9 > 369.7	3.46e4	4.61	1.000	4.30	4.30	11.9	NO	95.4	0.0048755
11	13C5-PFNA	468.2 > 422.9	7.48e3	0.887	1.000	4.63	4.63	12.5	NO	100.0	0.0007489
12	13C8-PFOS	507.0 > 79.9	5.64e3	0.958	1.000	4.69	4.69	11.7	NO	93.2	0.0435814
13	13C5-PFHxA	318>272.9	3.10e4	1.00	1.000	3.29	3.41	12.5	NO	100.0	0.0026795
14	13C3-PFHxS	401.9 > 79.9	1.72e4	1.00	1.000	3.94	4.02	12.5	NO	100.0	0.0075773
15	13C8-PFOA	421.3 > 376	7.68e3	1.00	1.000	4.22	4.30	12.5	NO	100.0	0.0007668
16	13C9-PFNA	472.2 > 426.8	8.62e3	1.00	1.000	4.56	4.63	12.5	NO	100.0	0.0006215
17	13C4-PFOS	503.0 > 79.9	6.31e3	1.00	1.000	4.67	4.69	12.5	NO	100.0	0.0165574
18	Total PFBS	299 > 79.7	5.91e3		1.000	3.11		4.58	NO		
19	Total PFHxS	398.9 > 79.8	6.15e3		1.000	4.69		5.37	NO		
20	Total PFOA	413 > 368.7	1.25e4		1.000	4.39		5.43	NO		
21	Total PFOS	499 > 79.9	1.67e3		1.000	4.67		7.17	NO		0.0999192

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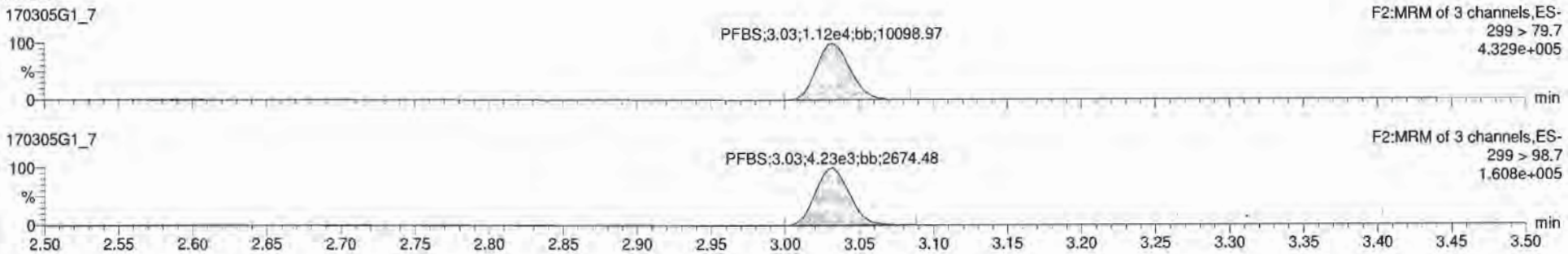
ID: ST170305G1-6 PFC CS3 17C0506, Description: PFC CS3 17C0506 A, Name: 170305G1_7, Date: 05-Mar-2017, Time: 13:49:29, Instrument: , Lab: , User:

PFBS



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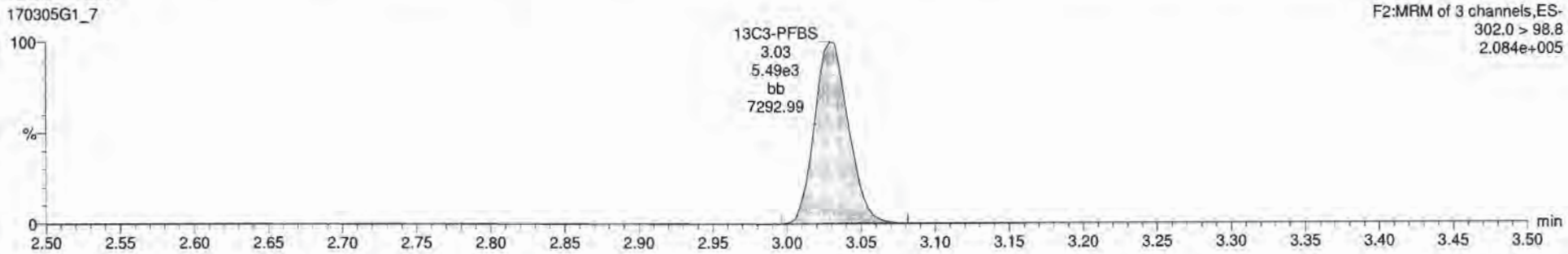

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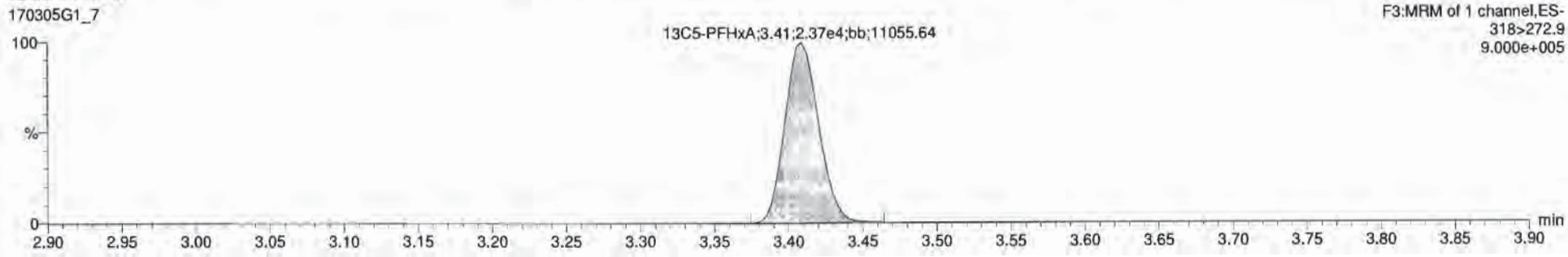

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Last Altered: Monday, March 06, 2017 08:36:20 Pacific Standard Time
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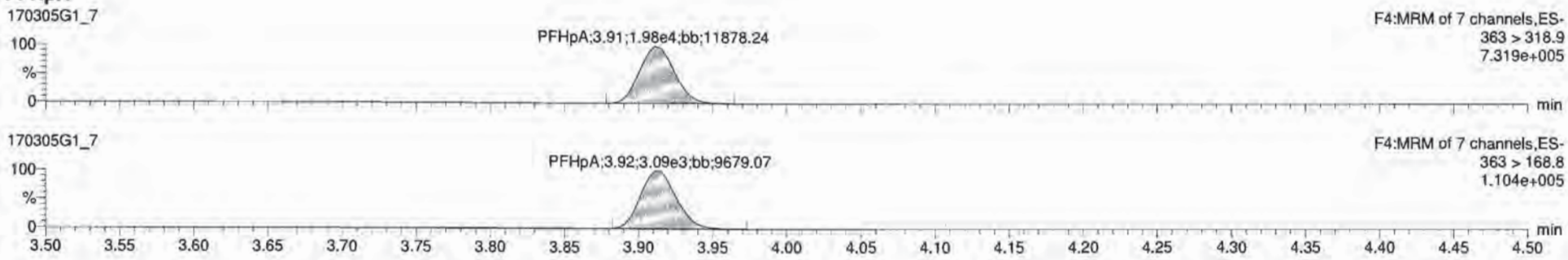
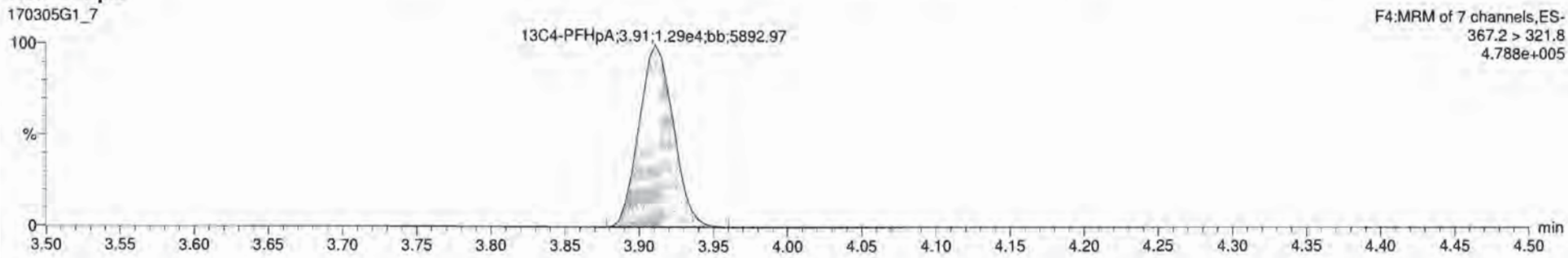
ID: ST170305G1-6 PFC CS3 17C0506, Description: PFC CS3 17C0506 A, Name: 170305G1_7, Date: 05-Mar-2017, Time: 13:49:29, Instrument: , Lab: , User:

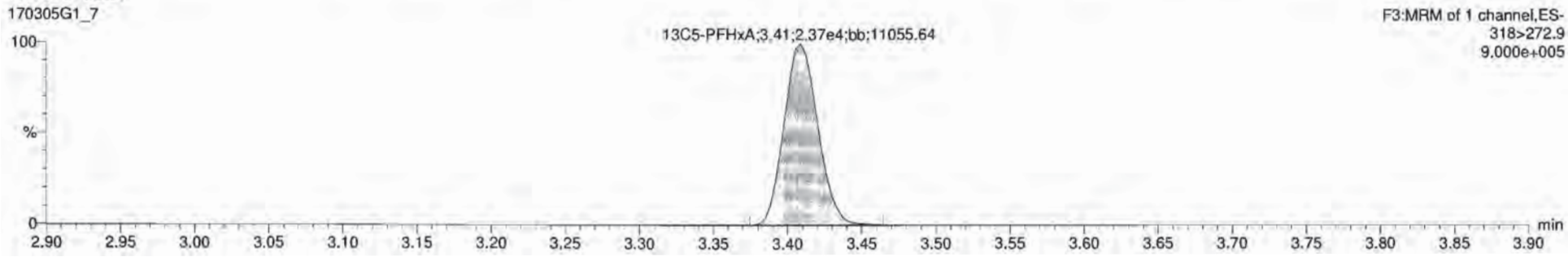
PFHpA



13C4-PFHpA



13C5-PFHxA



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Last Altered: Monday, March 06, 2017 08:36:20 Pacific Standard Time
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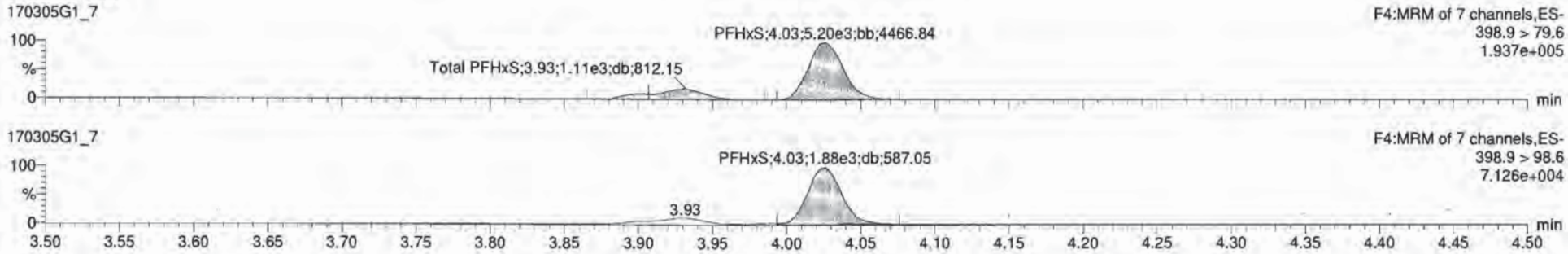
ID: ST170305G1-6 PFC CS3 17C0506, Description: PFC CS3 17C0506 A, Name: 170305G1_7, Date: 05-Mar-2017, Time: 13:49:29, Instrument: , Lab: , User:

Total PFHxS



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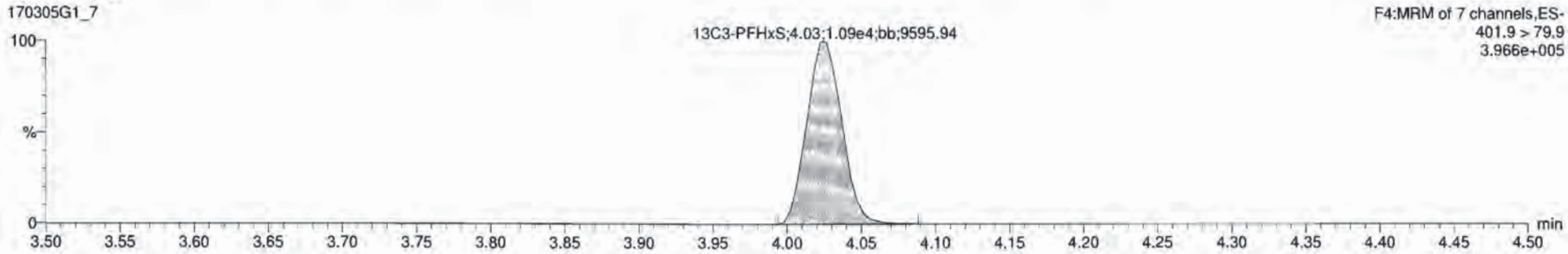
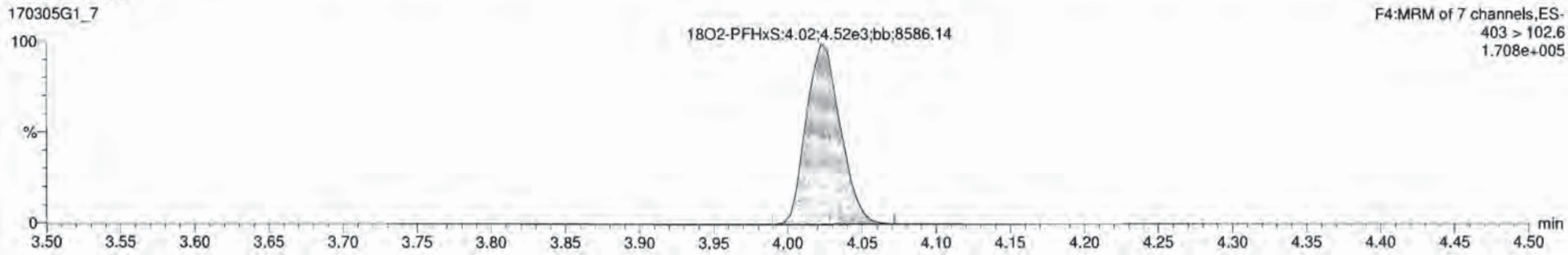
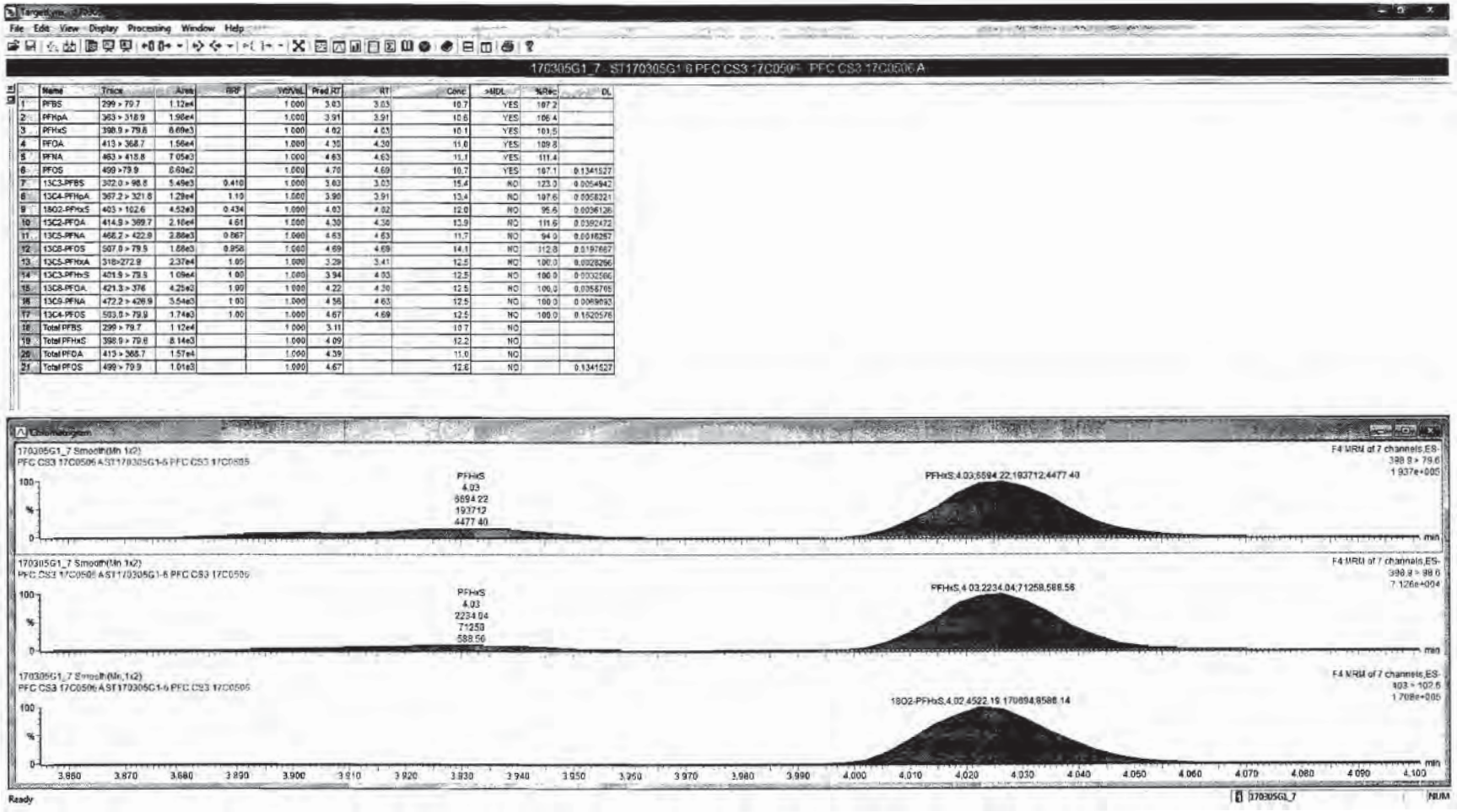


18O2-PFHxS





	Name	Trace	Area	RRF	IstdVal	Pred RT	RT	Conc	>MDL	%Rec	DL
1	PFBS	299 > 79.7	1.12e4		1.000	3.83	3.83	10.7	YES	107.2	
2	PFHpA	363 > 318.9	1.98e4		1.000	3.91	3.91	10.6	YES	106.4	
3	PFHxS	398.9 > 79.6	6.69e3		1.000	4.02	4.03	10.1	YES	101.5	
4	PFOA	413 > 368.7	1.56e4		1.000	4.30	4.30	11.0	YES	109.8	
5	PFNA	463 > 418.8	7.05e3		1.000	4.63	4.63	11.1	YES	111.4	
6	PFOS	499 > 79.9	8.60e2		1.000	4.70	4.69	10.7	YES	107.1	0.1341527
7	13C3-PFBS	302.0 > 98.6	5.49e3	0.410	1.000	3.83	3.83	15.4	NO	123.3	0.0054942
8	13C4-PFHpA	367.2 > 321.8	1.29e4	1.10	1.000	3.90	3.91	13.4	NO	107.6	0.0058321
9	18O2-PFHxS	403 > 102.6	4.52e3	0.434	1.000	4.03	4.02	12.0	NO	95.6	0.0036126
10	13C2-PFOA	414.9 > 369.7	2.16e4	4.61	1.000	4.30	4.30	13.9	NO	111.6	0.0392472
11	13C5-PFNA	468.2 > 422.9	2.88e3	0.867	1.000	4.63	4.63	11.7	NO	94.0	0.0018257
12	13C8-PFOS	507.9 > 79.5	1.68e3	0.958	1.000	4.69	4.69	14.1	NO	112.8	0.0197667
13	13C5-PFHxA	318>272.9	2.37e4	1.05	1.000	3.29	3.41	12.5	NO	100.0	0.0028256
14	13C3-PFHxS	401.9 > 79.5	1.09e4	1.00	1.000	3.94	4.03	12.5	NO	100.0	0.0032566
15	13C8-PFOA	421.3 > 376	4.25e3	1.99	1.000	4.22	4.30	12.5	NO	100.0	0.0058705
16	13C9-PFNA	472.2 > 426.9	3.54e3	1.00	1.000	4.56	4.63	12.5	NO	100.0	0.0069093
17	13C4-PFOS	503.0 > 79.9	1.74e3	1.00	1.000	4.67	4.69	12.5	NO	100.0	0.1620576
18	Total PFBS	299 > 79.7	1.12e4		1.000	3.11		10.7	NO		
19	Total PFHxS	398.9 > 79.6	8.14e3		1.000	4.09		12.2	NO		
20	Total PFOA	413 > 368.7	1.57e4		1.000	4.39		11.0	NO		
21	Total PFOS	499 > 79.9	1.01e3		1.000	4.67		12.6	NO		0.1341527

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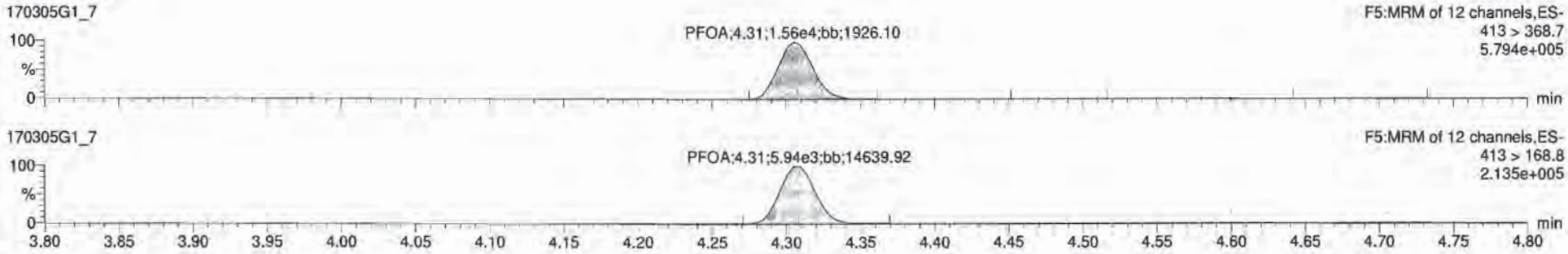
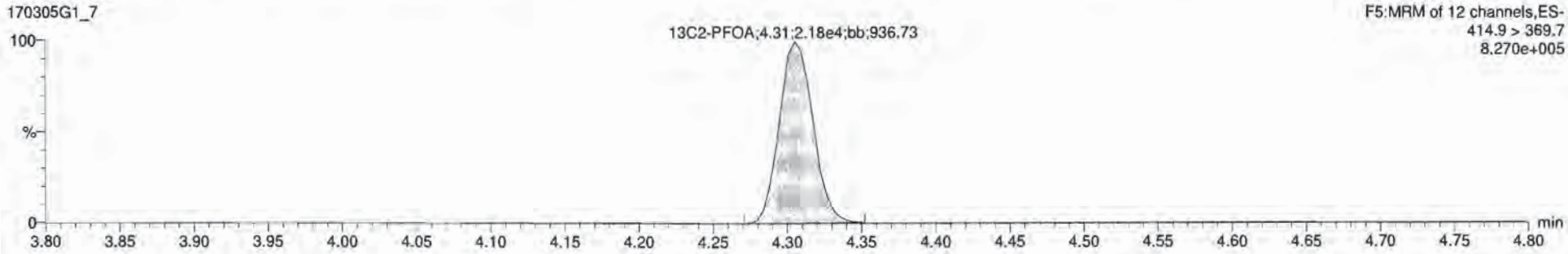
ID: ST170305G1-6 PFC CS3 17C0506, Description: PFC CS3 17C0506 A, Name: 170305G1_7, Date: 05-Mar-2017, Time: 13:49:29, Instrument: , Lab: , User:

Total PFOA



13C2-PFOA



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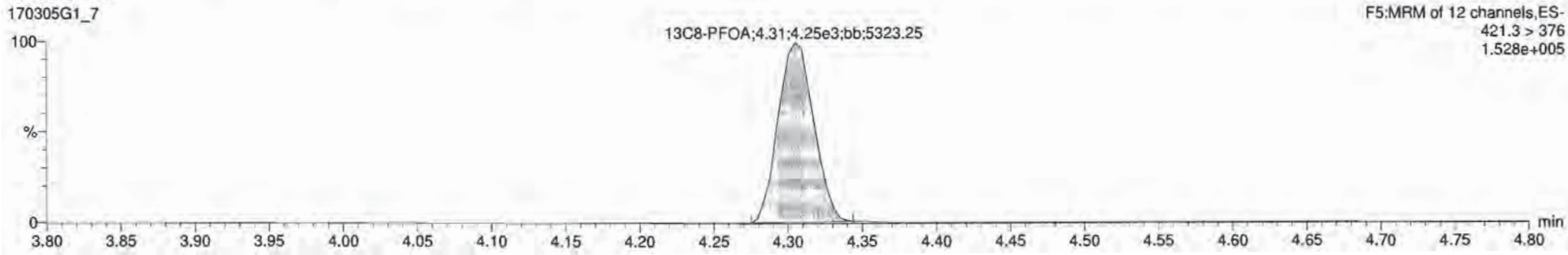

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Last Altered: Monday, March 06, 2017 08:36:20 Pacific Standard Time
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ID: ST170305G1-6 PFC CS3 17C0506, Description: PFC CS3 17C0506 A, Name: 170305G1_7, Date: 05-Mar-2017, Time: 13:49:29, Instrument: , Lab: , User:

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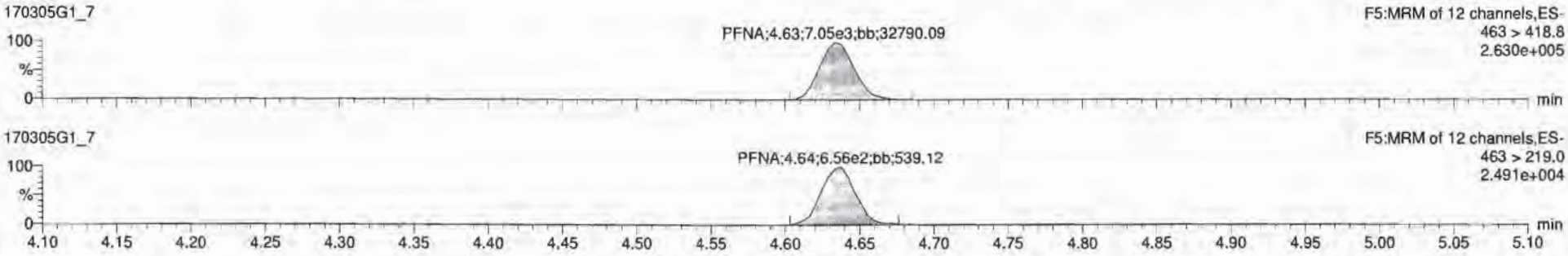

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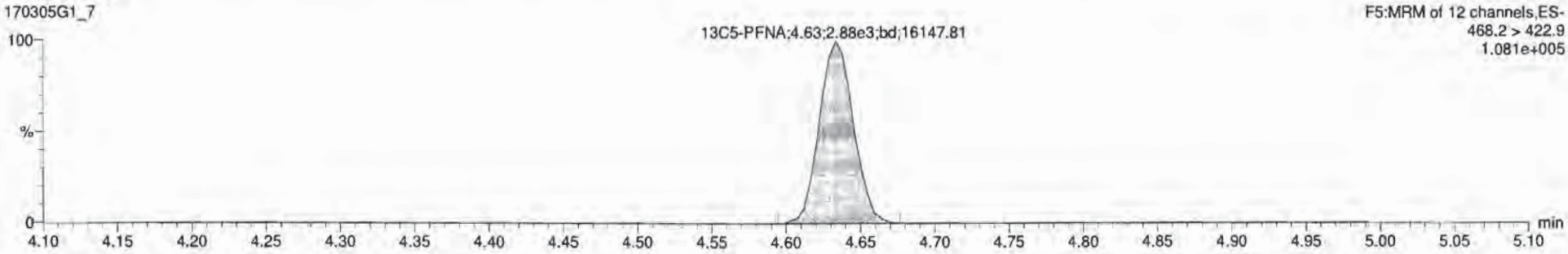
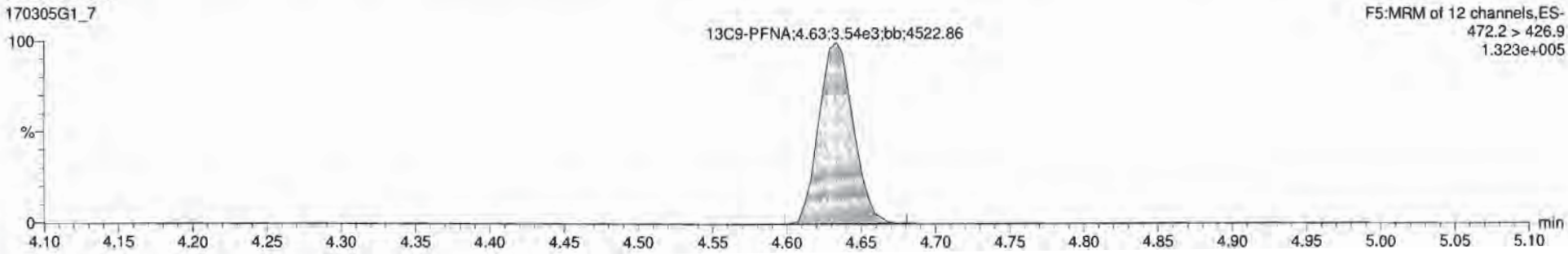


13C9-PFNA



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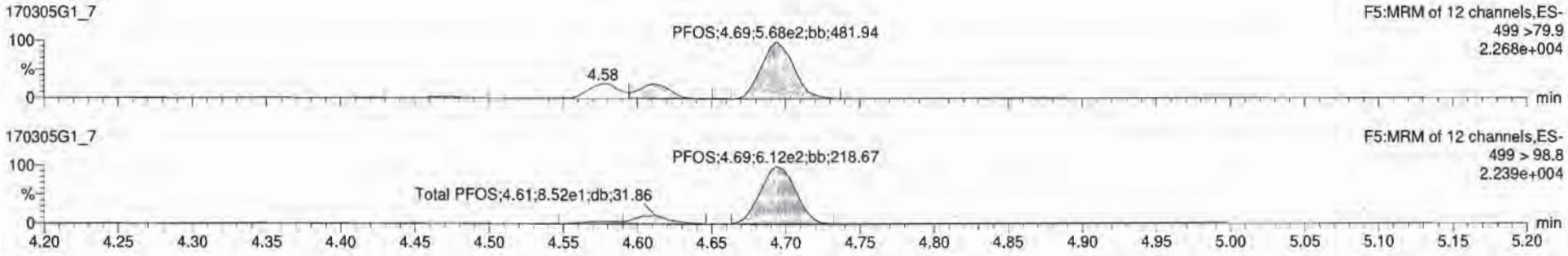
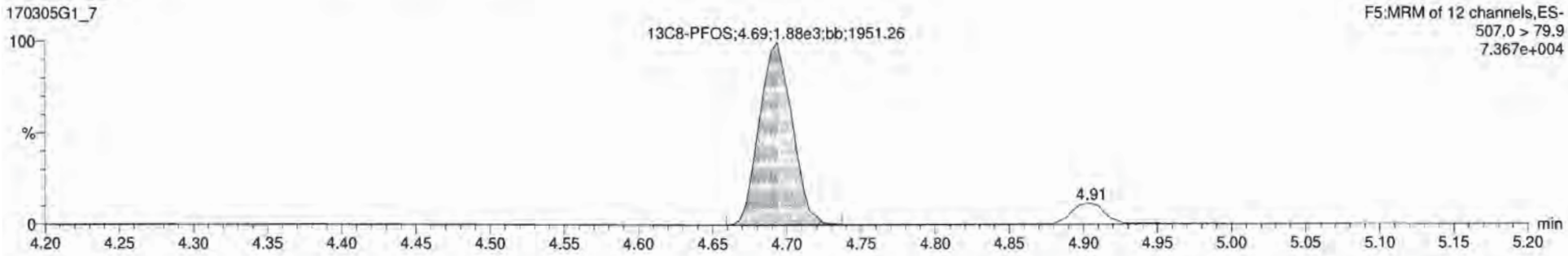
ID: ST170305G1-6 PFC CS3 17C0506, Description: PFC CS3 17C0506 A, Name: 170305G1_7, Date: 05-Mar-2017, Time: 13:49:29, Instrument: , Lab: , User:

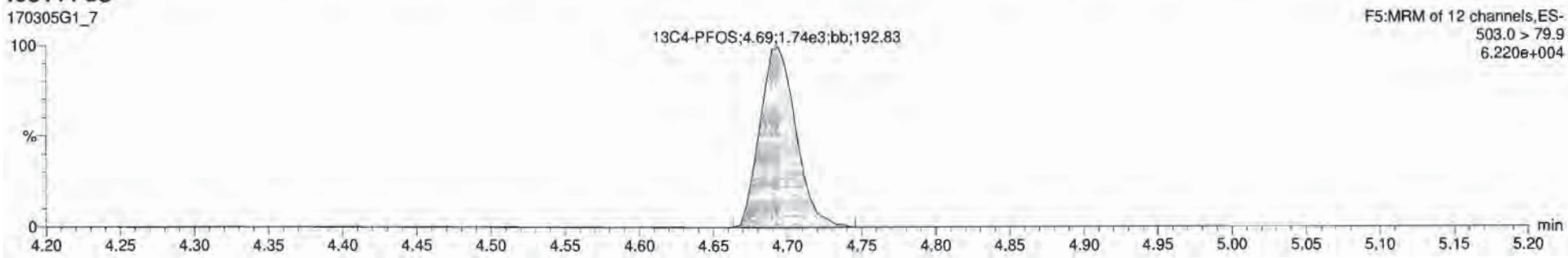
Total PFOS

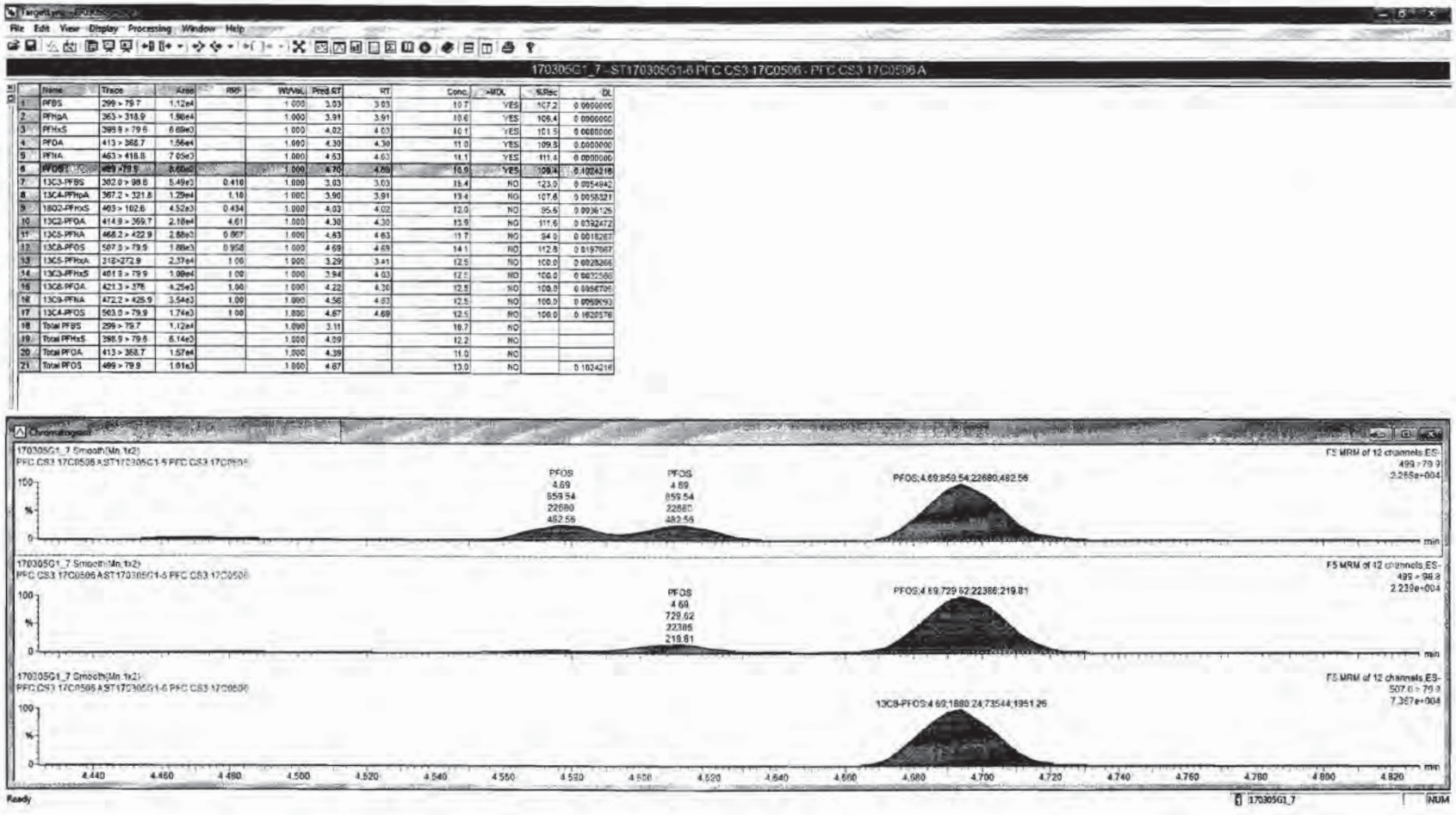


13C8-PFOS



13C4-PFOS





	Name	Trace	Area	RRF	Wt/Vol	Pred.RT	RT	Conc.	>MDL	%Rec	DL
1	PFBS	299 > 79.7	1.12e4		1.000	3.03	3.03	10.7	YES	107.2	0.0000000
2	PFHpA	363 > 318.9	1.98e4		1.000	3.91	3.91	10.6	YES	105.4	0.0000000
3	PFHxS	398.9 > 79.6	8.69e3		1.000	4.02	4.03	10.1	YES	101.5	0.0000000
4	PFOA	413 > 368.7	1.56e4		1.000	4.30	4.30	11.0	YES	109.8	0.0000000
5	PFNA	463 > 418.8	7.05e3		1.000	4.63	4.63	11.1	YES	111.4	0.0000000
6	PFOS	499 > 79.9	8.60e3		1.000	4.70	4.69	10.9	YES	109.4	0.1024218
7	13C3-PFBS	302.0 > 98.8	5.49e3	0.410	1.000	3.03	3.03	15.4	NO	123.0	0.0054942
8	13C4-PFHpA	367.2 > 321.8	1.29e4	1.16	1.000	3.90	3.91	13.4	NO	107.6	0.0058321
9	18O2-PFHxS	403 > 102.6	4.52e3	0.434	1.000	4.03	4.02	12.0	NO	95.6	0.0036125
10	13C2-PFOA	414.9 > 369.7	2.18e4	4.61	1.000	4.30	4.30	13.9	NO	111.6	0.0392472
11	13C5-PFNA	468.2 > 422.9	2.88e3	0.867	1.000	4.63	4.63	11.7	NO	94.0	0.0018267
12	13C8-PFOS	507.3 > 79.9	1.88e3	0.958	1.000	4.69	4.69	14.1	NO	112.8	0.0197067
13	13C5-PFHxA	318>272.9	2.37e4	1.00	1.000	3.29	3.41	12.5	NO	100.0	0.0028266
14	13C3-PFHxS	401.9 > 79.9	1.08e4	1.00	1.000	3.94	4.03	12.5	NO	100.0	0.0022580
15	13C8-PFOA	421.3 > 376	4.25e3	1.00	1.000	4.22	4.30	12.5	NO	100.0	0.0056705
16	13C9-PFNA	472.2 > 426.9	3.54e3	1.00	1.000	4.56	4.63	12.5	NO	100.0	0.0059093
17	13C4-PFOS	503.0 > 79.9	1.74e3	1.00	1.000	4.67	4.69	12.5	NO	100.0	0.1620176
18	Total PFBS	299 > 79.7	1.12e4		1.000	3.11		10.7	NO		
19	Total PFHxS	398.9 > 79.6	8.14e3		1.000	4.09		12.2	NO		
20	Total PFOA	413 > 368.7	1.57e4		1.000	4.39		11.0	NO		
21	Total PFOS	499 > 79.9	1.01e3		1.000	4.67		13.0	NO		0.1634216

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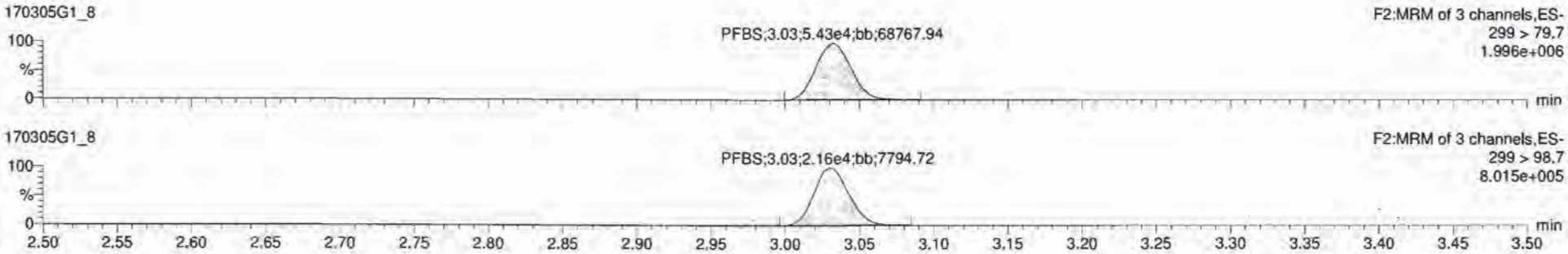
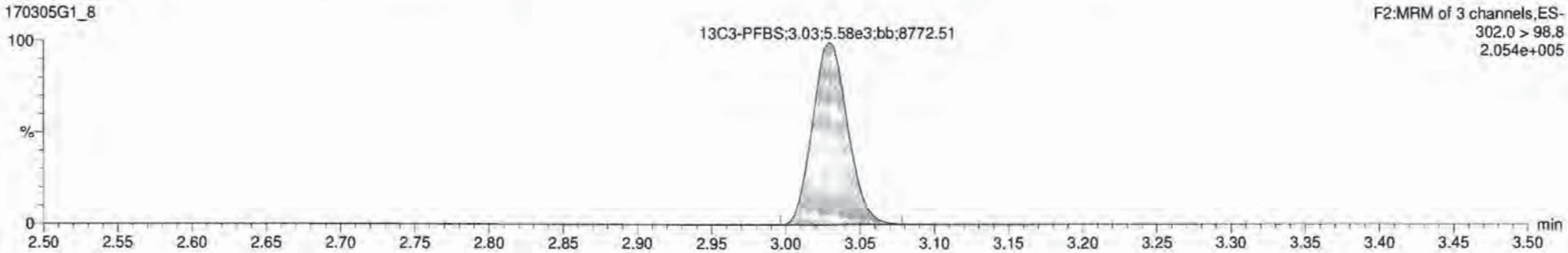
ID: ST170305G1-7 PFC CS4 17C0507, Description: PFC CS4 17C0507 A, Name: 170305G1_8, Date: 05-Mar-2017, Time: 14:02:00, Instrument: , Lab: , User:

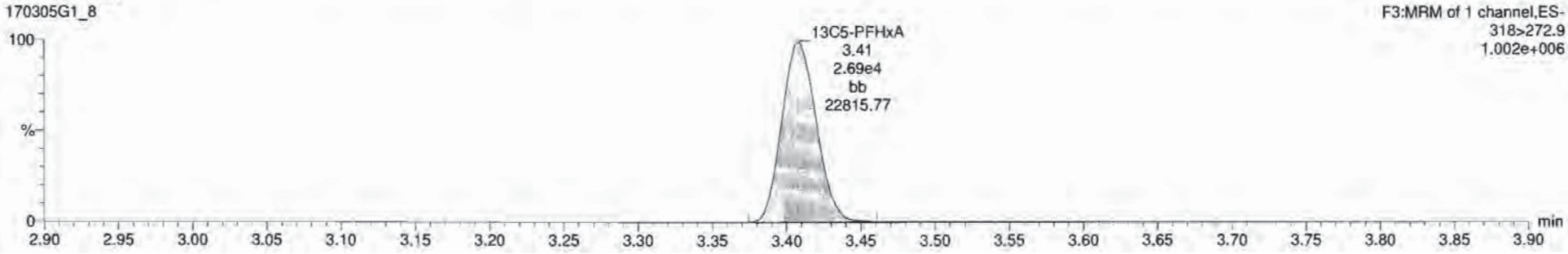
PFBS



13C3-PFBS



13C5-PFHxA



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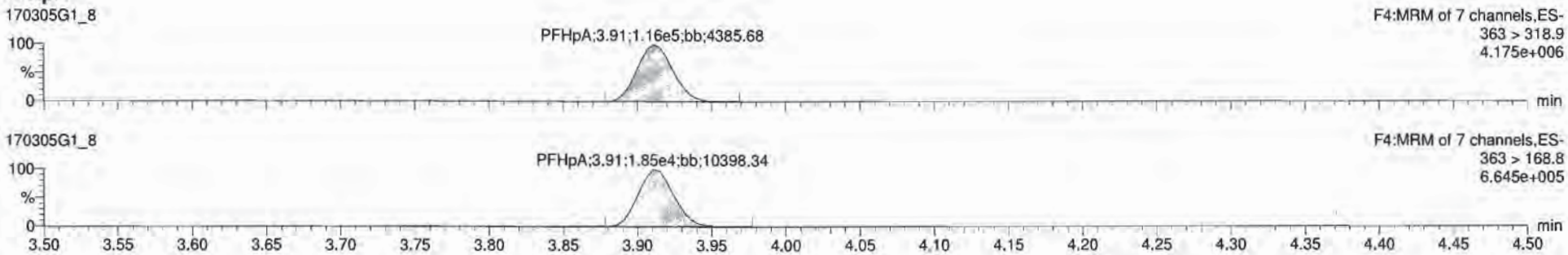
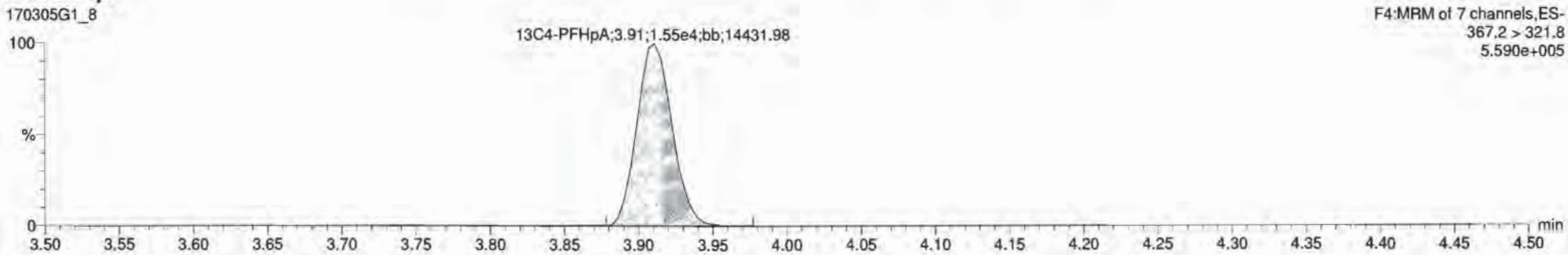
Last Altered: Monday, March 06, 2017 08:36:20 Pacific Standard Time
Printed: Monday, March 06, 2017 08:37:19 Pacific Standard Time

ID: ST170305G1-7 PFC CS4 17C0507, Description: PFC CS4 17C0507 A, Name: 170305G1_8, Date: 05-Mar-2017, Time: 14:02:00, Instrument: , Lab: , User:

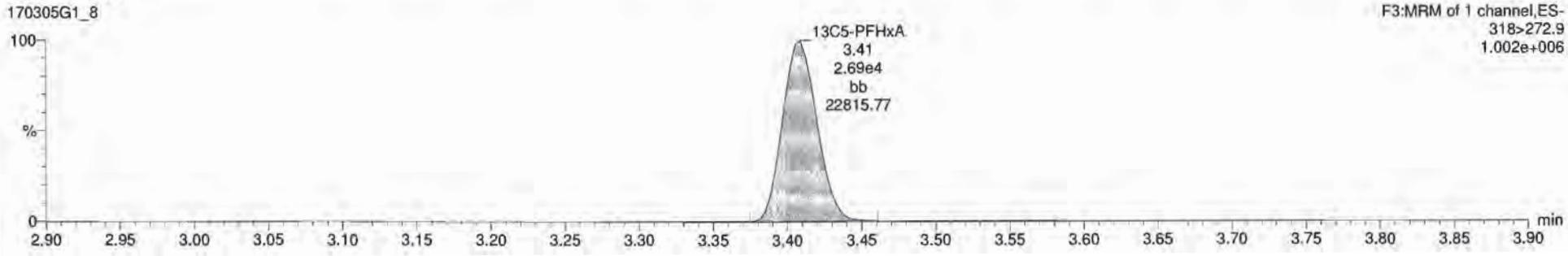
PFHpA



13C4-PFHpA



13C5-PFHxA



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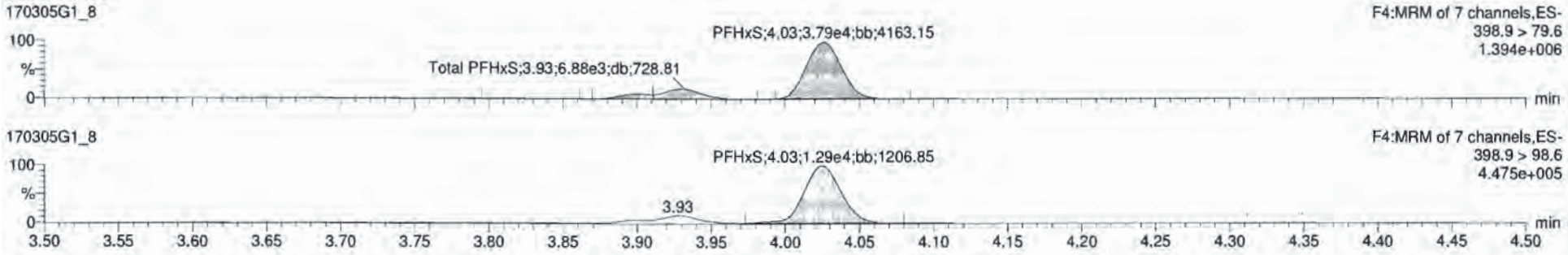
Last Altered: Monday, March 06, 2017 08:36:20 Pacific Standard Time
Printed: Monday, March 06, 2017 08:37:19 Pacific Standard Time

ID: ST170305G1-7 PFC CS4 17C0507, Description: PFC CS4 17C0507 A, Name: 170305G1_8, Date: 05-Mar-2017, Time: 14:02:00, Instrument: , Lab: , User:

Total PFHxS



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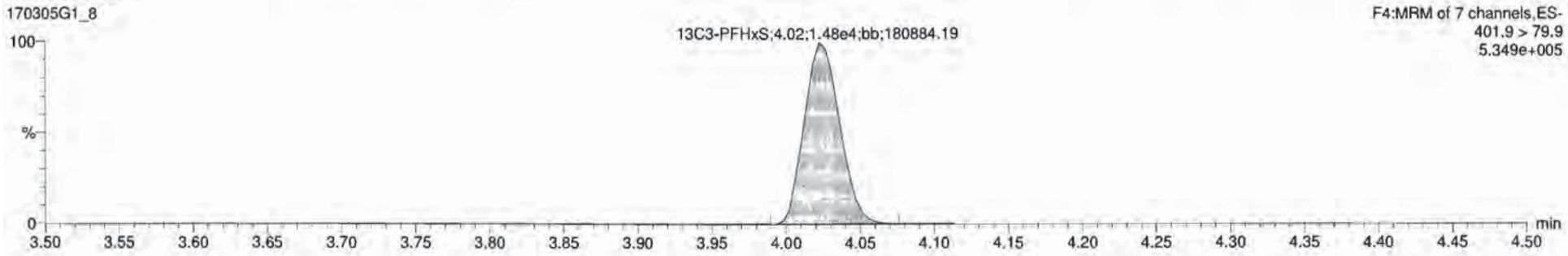
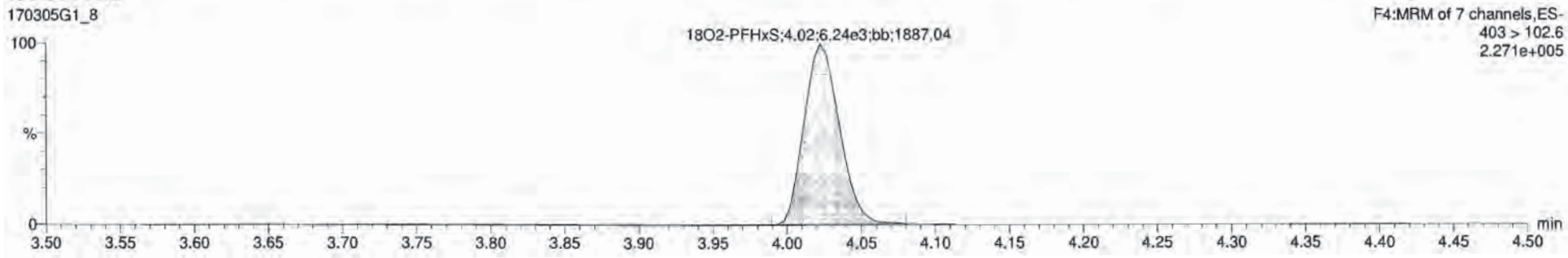
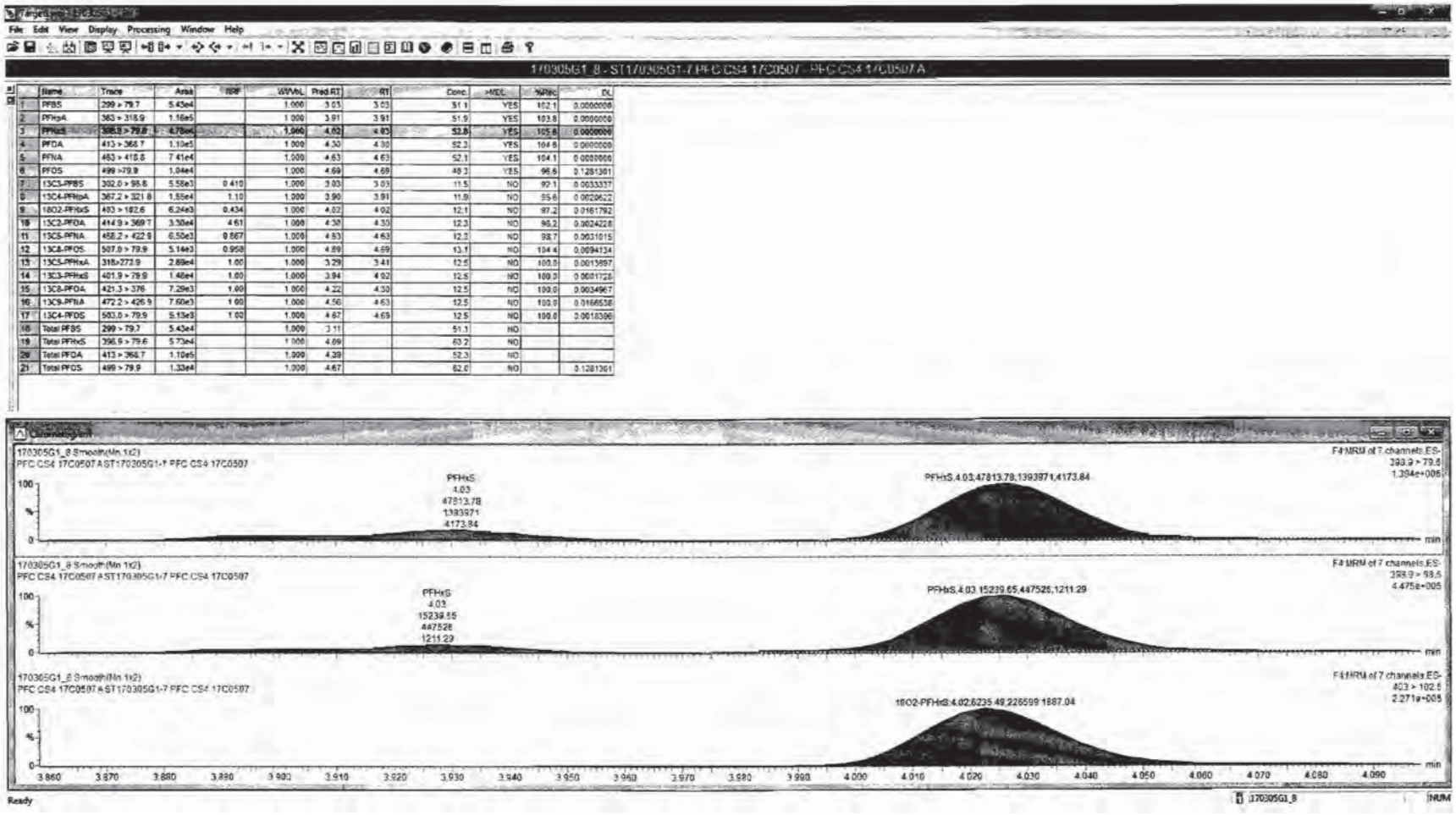


18O2-PFHxS





	Name	Trace	Area	ISTD	WWbL	Pred RT	RT	Conc	>MDL	%Rec	DL
1	PFBS	299 > 79.7	5.43e4		1.000	3.03	3.03	51.1	YES	102.1	0.0000000
2	PFHpA	363 > 318.9	1.18e5		1.000	3.91	3.91	51.9	YES	103.8	0.0000000
3	PFHxS	399.9 > 79.6	4.78e4		1.000	4.02	4.03	52.8	YES	105.6	0.0000000
4	PFDA	413 > 368.7	1.10e5		1.000	4.30	4.30	52.3	YES	104.6	0.0000000
5	PFNA	463 > 418.8	7.41e4		1.000	4.63	4.63	52.1	YES	104.1	0.0000000
6	PFOS	499 >79.9	1.04e4		1.000	4.69	4.69	48.3	YES	96.6	0.1281301
7	13C3-PFBS	302.0 > 98.8	5.58e3	0.410	1.000	3.03	3.03	11.5	NO	92.1	0.0033337
8	13C4-PFHpA	367.2 > 321.8	1.55e4	1.10	1.000	3.90	3.91	11.9	NO	95.6	0.0029622
9	1802-PFHxS	403 > 102.6	6.24e3	0.434	1.000	4.02	4.02	12.1	NO	97.2	0.0161792
10	13C2-PFDA	414.9 > 369.7	3.50e4	4.61	1.000	4.30	4.30	12.3	NO	98.2	0.0024228
11	13C5-PFNA	468.2 > 422.9	6.50e3	0.867	1.000	4.63	4.63	12.3	NO	98.7	0.0031015
12	13C8-PFOS	507.0 > 79.9	5.14e3	0.958	1.000	4.69	4.69	13.1	NO	104.4	0.0094134
13	13C5-PFHxA	318>272.9	2.89e4	1.00	1.000	3.29	3.41	12.5	NO	100.0	0.0013897
14	13C3-PFHxS	401.9 > 79.9	1.46e4	1.00	1.000	3.94	4.02	12.5	NO	100.0	0.0001728
15	13C8-PFOA	421.3 > 376	7.29e3	1.00	1.000	4.22	4.30	12.5	NO	100.0	0.0034967
16	13C9-PFNA	472.2 > 426.9	7.60e3	1.00	1.000	4.56	4.63	12.5	NO	100.0	0.0166538
17	13C4-PFOS	503.0 > 79.9	5.13e3	1.00	1.000	4.67	4.69	12.5	NO	100.0	0.0018096
18	Total PFBS	299 > 79.7	5.43e4		1.000	3.11		51.1	NO		
19	Total PFHxS	399.9 > 79.6	5.73e4		1.000	4.09		63.2	NO		
20	Total PFDA	413 > 368.7	1.10e5		1.000	4.39		52.3	NO		
21	Total PFOS	499 > 79.9	1.33e4		1.000	4.67		62.0	NO		0.1281301

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Last Altered: Monday, March 06, 2017 08:36:20 Pacific Standard Time
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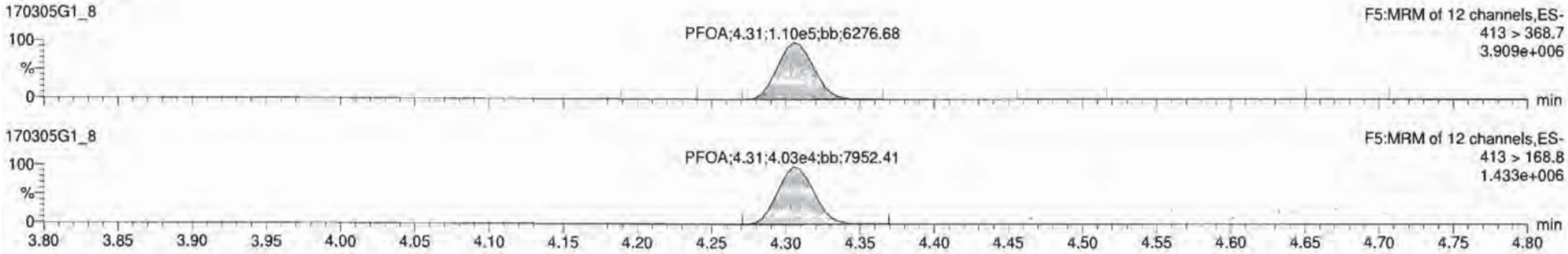
ID: ST170305G1-7 PFC CS4 17C0507, Description: PFC CS4 17C0507 A, Name: 170305G1_8, Date: 05-Mar-2017, Time: 14:02:00, Instrument: , Lab: , User:

Total PFOA



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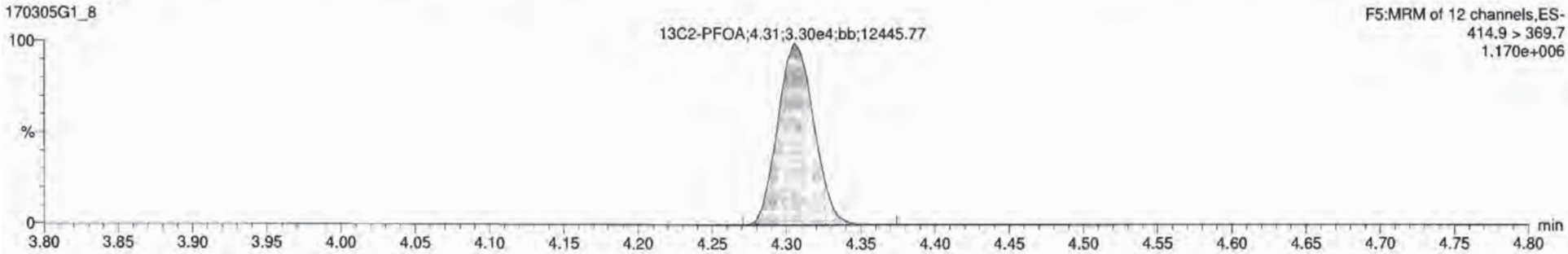
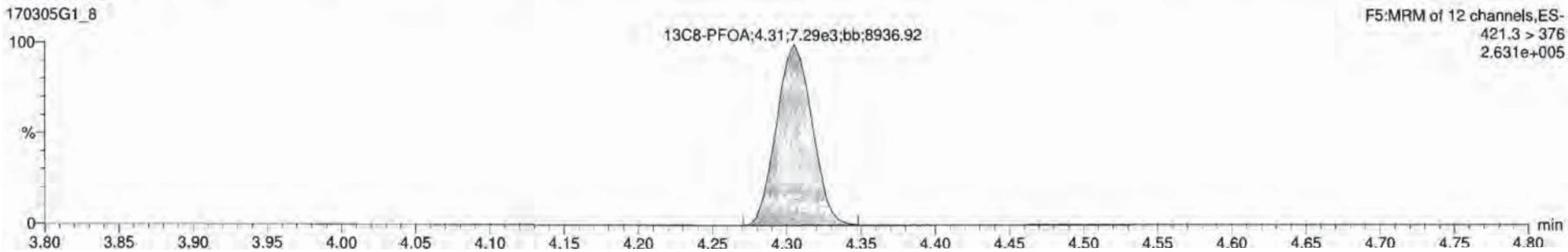


13C8-PFOA



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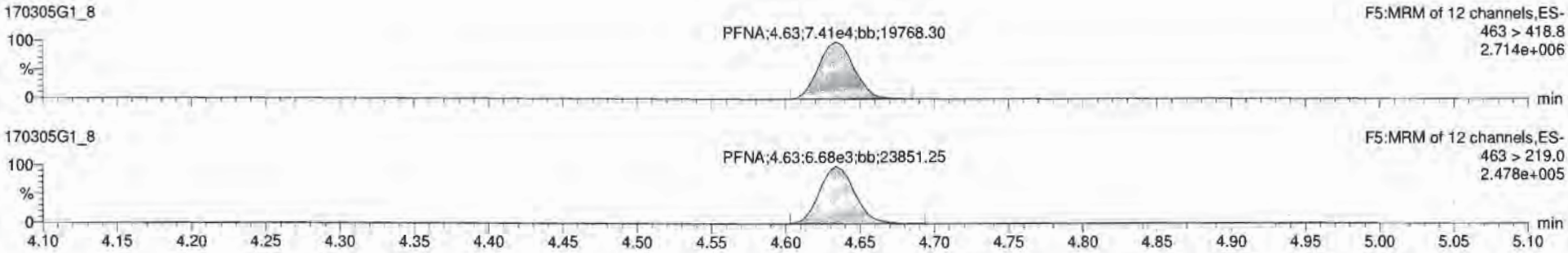

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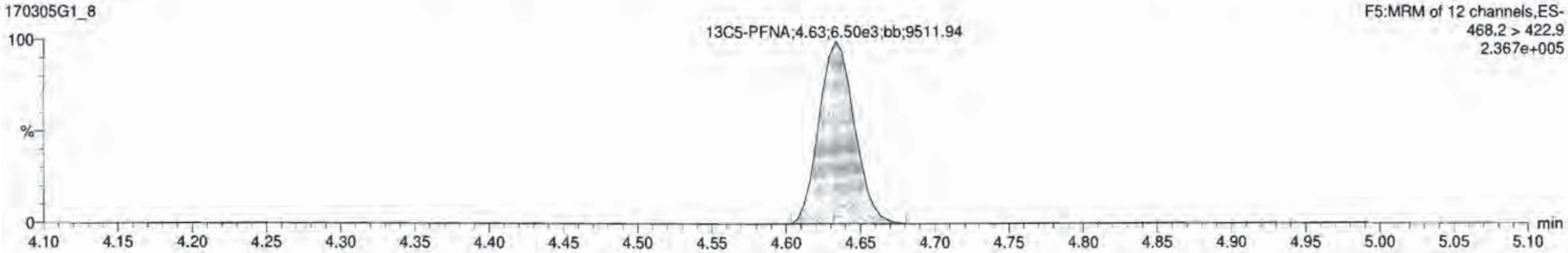

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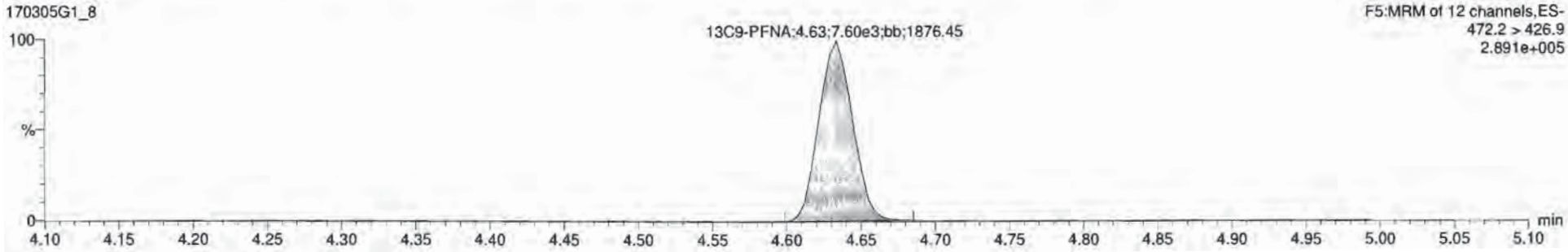

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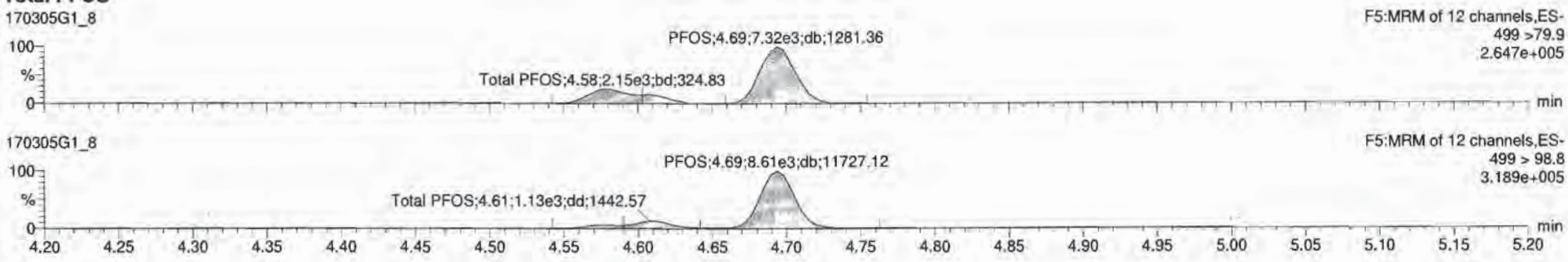
Last Altered: Monday, March 06, 2017 08:36:20 Pacific Standard Time
Printed: Monday, March 06, 2017 08:37:19 Pacific Standard Time

ID: ST170305G1-7 PFC CS4 17C0507, Description: PFC CS4 17C0507 A, Name: 170305G1_8, Date: 05-Mar-2017, Time: 14:02:00, Instrument: , Lab: , User:

Total PFOS



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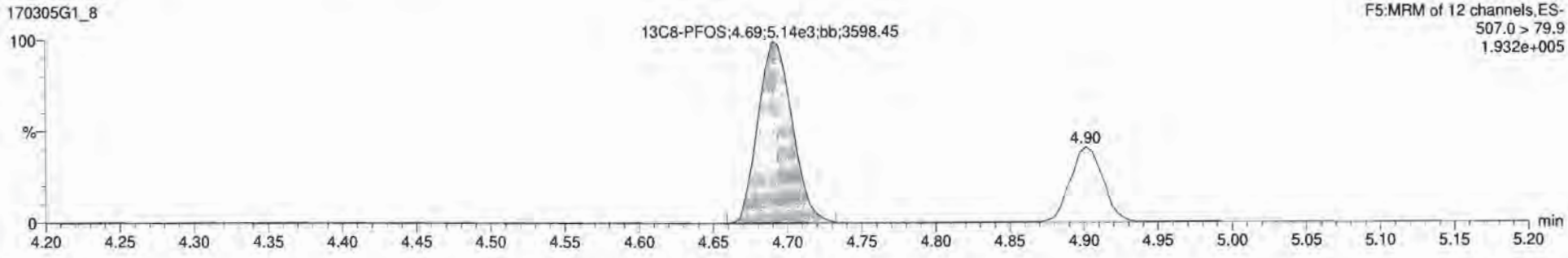

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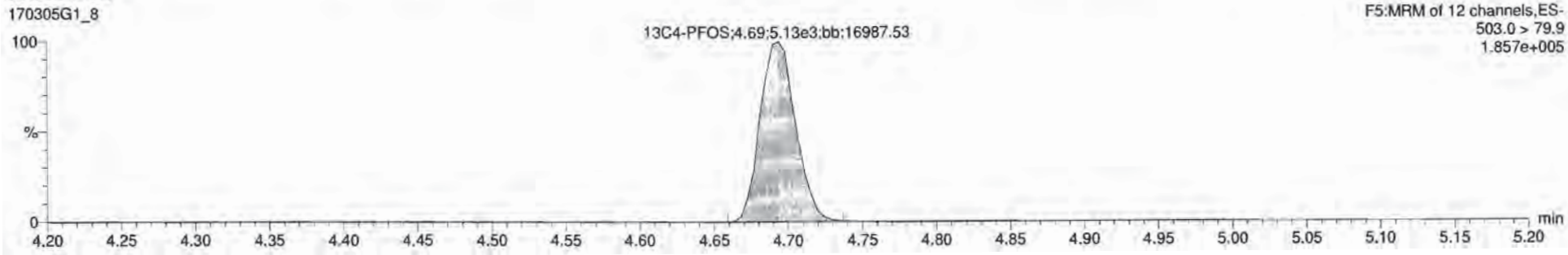

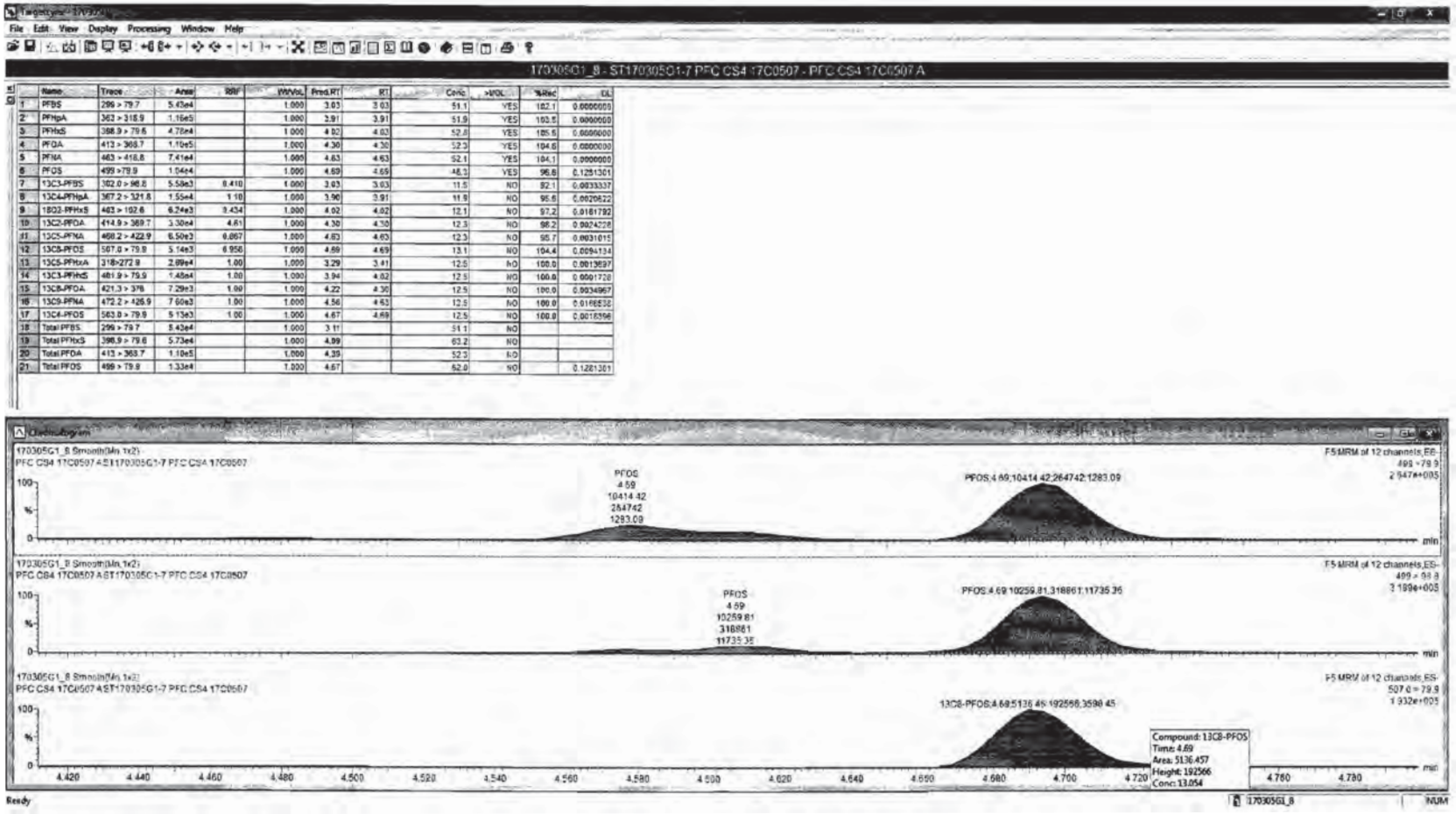

	Name	Trace	Area	RRF	RWVol	Pred.RT	RT	Conc	>VOL	%Rec	CL
1	PFBS	299 > 79.7	5.43e4		1.000	3.03	3.03	51.1	YES	102.1	0.0000000
2	PFHpA	363 > 318.9	1.16e5		1.000	3.91	3.91	51.9	YES	103.8	0.0000000
3	PFHxS	398.9 > 79.8	4.78e4		1.000	4.02	4.03	52.8	YES	105.5	0.0000000
4	PFOA	413 > 368.7	1.10e5		1.000	4.30	4.30	52.3	YES	104.6	0.0000000
5	PFNA	463 > 418.8	7.41e4		1.000	4.63	4.63	52.1	YES	104.1	0.0000000
6	PFOS	499 >79.9	1.04e4		1.000	4.69	4.69	48.3	YES	96.6	0.1251301
7	13C3-PFBS	302.0 > 98.8	5.58e3	0.410	1.000	3.03	3.03	11.5	NO	92.1	0.0033337
8	13C4-PFHpA	367.2 > 321.8	1.55e4	1.10	1.000	3.90	3.91	11.9	NO	95.6	0.0020622
9	1802-PFHxS	403 > 102.6	6.24e3	0.434	1.000	4.02	4.02	12.1	NO	97.2	0.0181792
10	13C2-PFOA	414.9 > 369.7	3.30e4	4.61	1.000	4.30	4.30	12.3	NO	98.2	0.0024228
11	13C5-PFNA	468.2 > 422.9	6.50e3	0.867	1.000	4.63	4.63	12.3	NO	98.7	0.0031015
12	13C8-PFOS	507.0 > 79.9	5.14e3	0.956	1.000	4.69	4.69	13.1	NO	104.4	0.0094134
13	13C5-PFHxA	318>272.9	2.89e4	1.00	1.000	3.29	3.41	12.5	NO	100.0	0.0013697
14	13C3-PFHxS	401.9 > 79.9	1.48e4	1.00	1.000	3.94	4.02	12.5	NO	100.0	0.0001720
15	13C8-PFOA	421.3 > 376	7.29e3	1.00	1.000	4.22	4.30	12.5	NO	100.0	0.0034967
16	13C9-PFNA	472.2 > 426.9	7.60e3	1.00	1.000	4.56	4.63	12.5	NO	100.0	0.0186538
17	13C4-PFOS	503.0 > 79.9	5.13e3	1.00	1.000	4.67	4.69	12.5	NO	100.0	0.0016596
18	Total PFBS	299 > 79.7	8.43e4		1.000	3.11		51.1	NO		
19	Total PFHxS	398.9 > 79.8	5.73e4		1.000	4.09		65.2	NO		
20	Total PFOA	413 > 368.7	1.10e5		1.000	4.35		52.3	NO		
21	Total PFOS	499 > 79.8	1.33e4		1.000	4.67		62.0	NO		0.1281301

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Last Altered: Monday, March 06, 2017 08:36:20 Pacific Standard Time
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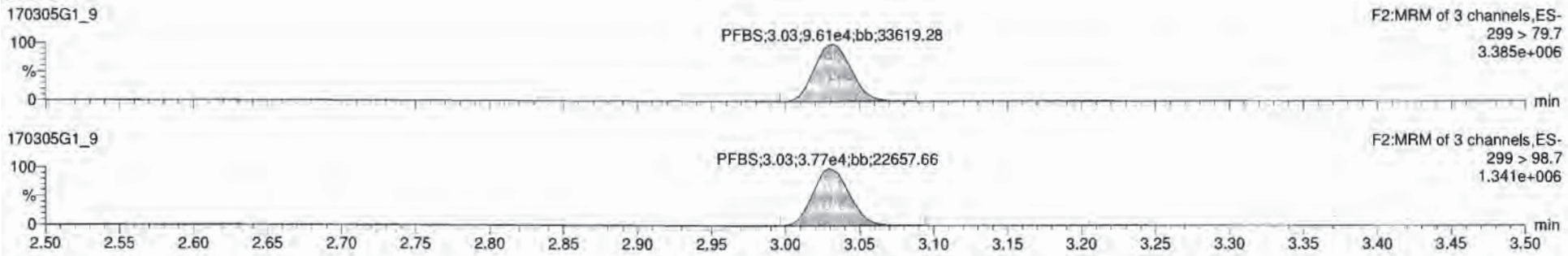
ID: ST170305G1-8 PFC CS5 17C0508, Description: PFC CS5 17C0508 A, Name: 170305G1_9, Date: 05-Mar-2017, Time: 14:14:34, Instrument: , Lab: , User:

PFBS



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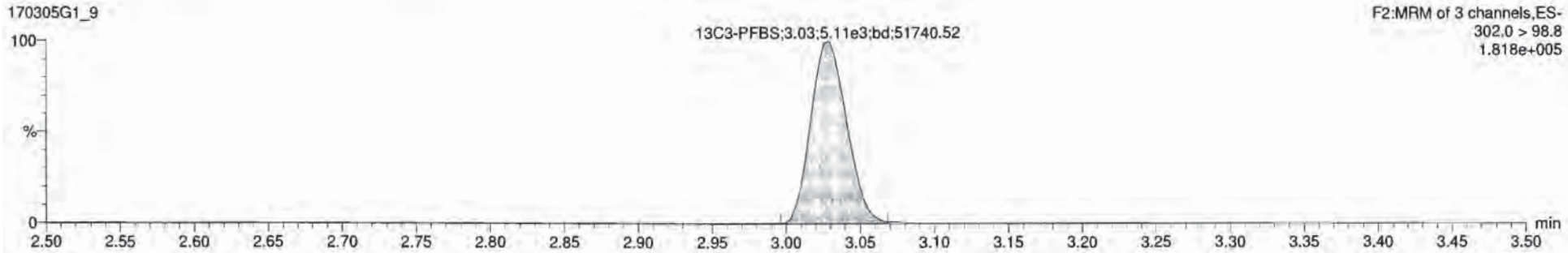

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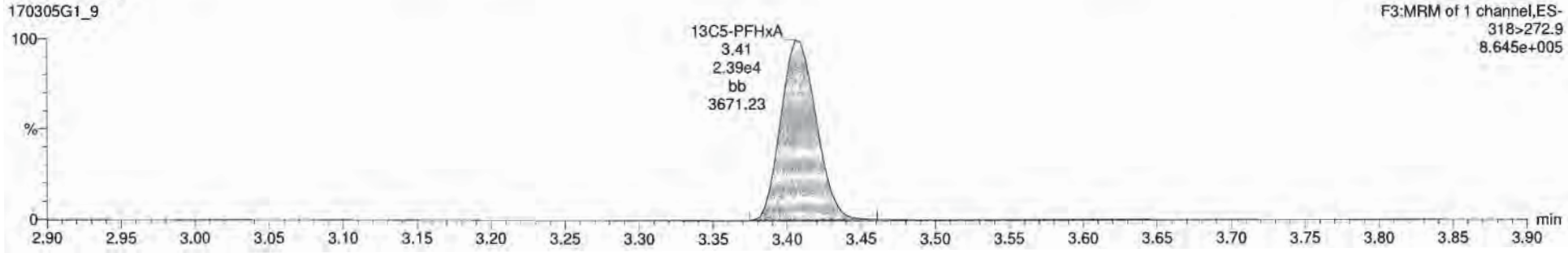

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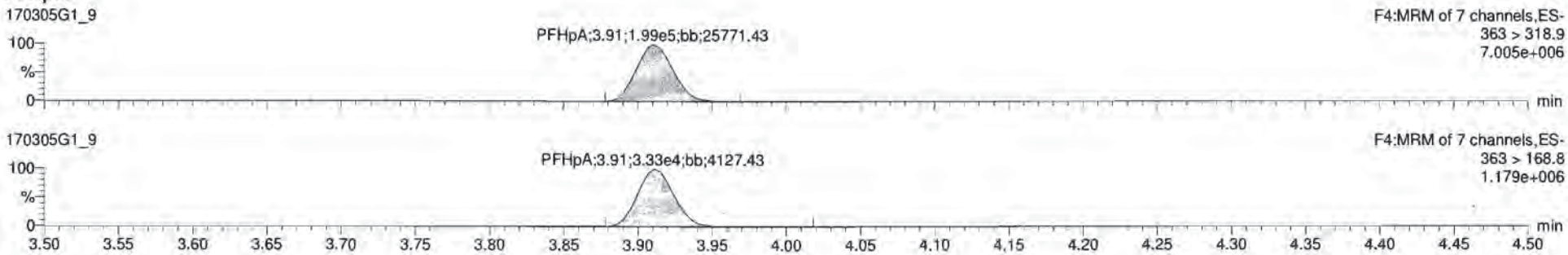
PFHpA



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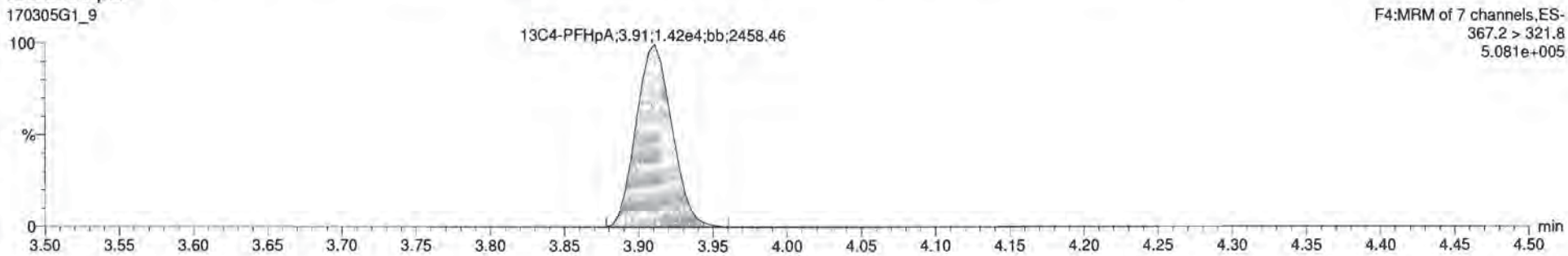

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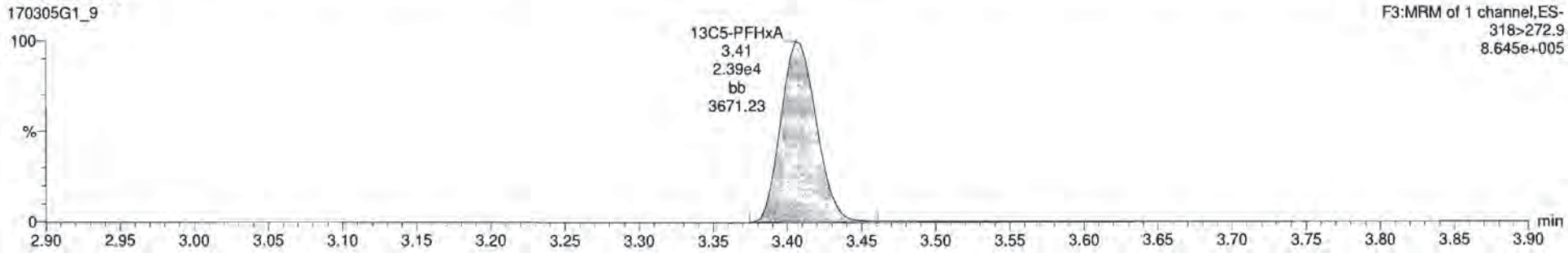

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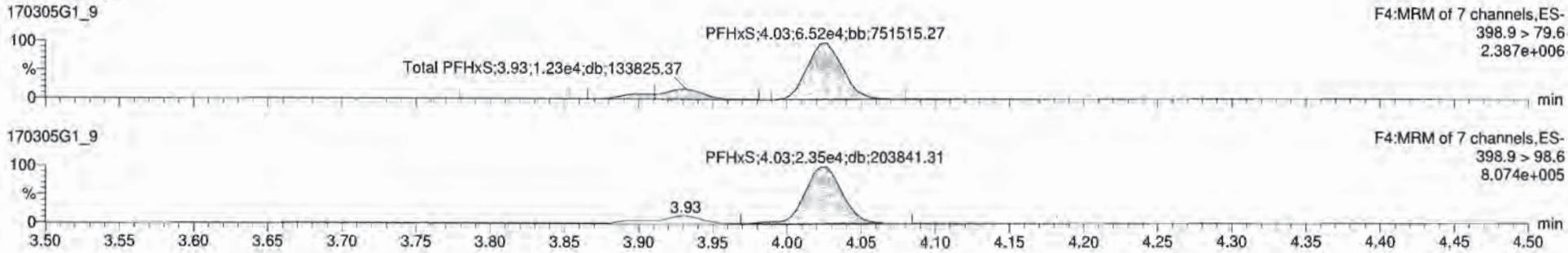
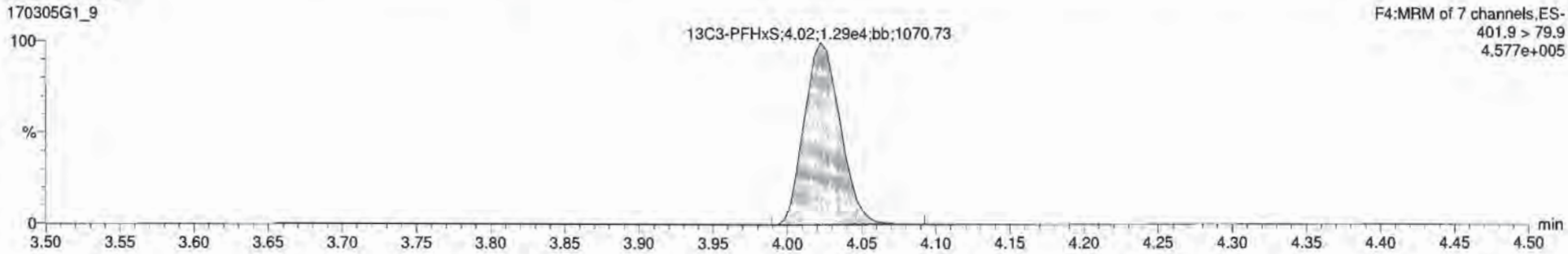
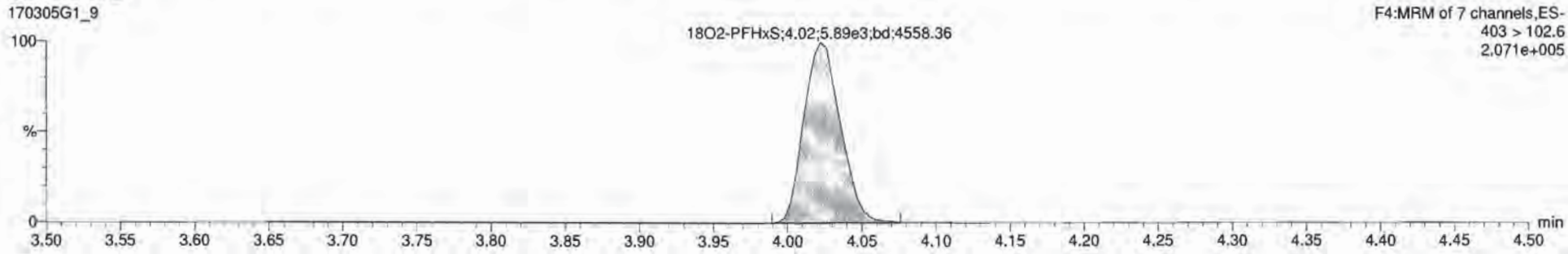
Total PFHxS

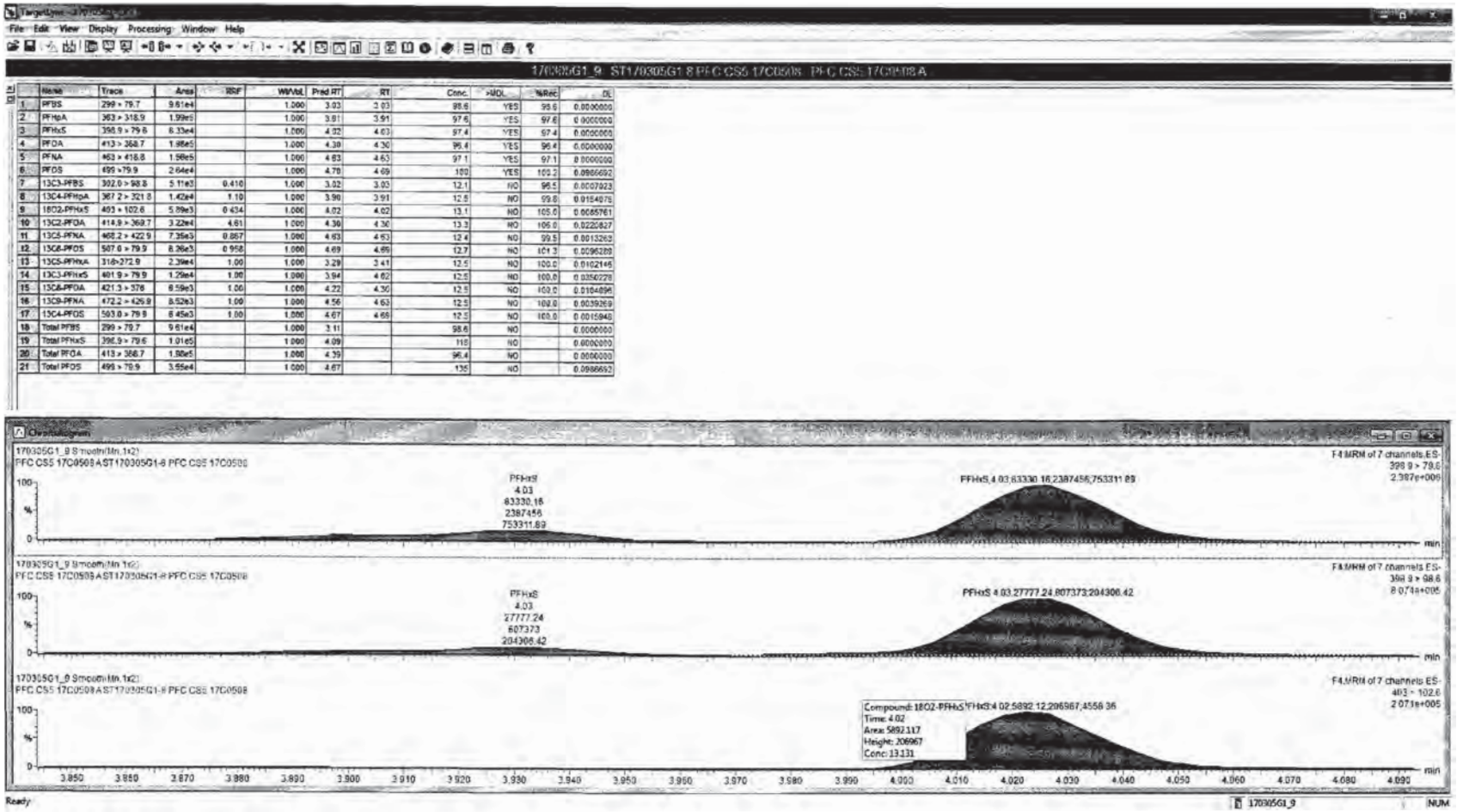


13C3-PFHxS



18O2-PFHxS





	Name	Trace	Area	RRF	WtVal	Pred RT	RT	Conc.	>IDL	%Rec	DL
1	PFBS	299 > 79.7	9.61e4		1.000	3.03	3.03	98.6	YES	98.6	0.0000000
2	PFHpA	363 > 318.9	1.99e5		1.000	3.91	3.91	97.6	YES	97.6	0.0000000
3	PFHxS	398.9 > 79.8	8.33e4		1.000	4.02	4.03	97.4	YES	97.4	0.0000000
4	PFOA	413 > 368.7	1.98e5		1.000	4.30	4.30	96.4	YES	96.4	0.0000000
5	PFNA	463 > 418.8	1.98e5		1.000	4.63	4.63	97.1	YES	97.1	0.0000000
6	PFOS	499 > 79.9	2.64e4		1.000	4.70	4.69	100	YES	100.2	0.0986692
7	13C3-PFBS	302.0 > 98.8	5.11e3	0.410	1.000	3.02	3.03	12.1	NO	96.5	0.0007923
8	13C4-PFHpA	367.2 > 321.8	1.42e4	1.10	1.000	3.90	3.91	12.5	NO	99.8	0.0154076
9	18O2-PFHxS	403 > 102.6	5.89e3	0.434	1.000	4.02	4.02	13.1	NO	105.0	0.0065761
10	13C2-PFOA	414.9 > 369.7	3.22e4	4.61	1.000	4.30	4.30	13.3	NO	106.0	0.0220827
11	13C5-PFNA	468.2 > 422.9	7.35e3	0.867	1.000	4.63	4.63	12.4	NO	99.5	0.0013263
12	13C8-PFOS	507.0 > 79.9	8.26e3	0.958	1.000	4.69	4.69	12.7	NO	101.3	0.0096289
13	13C5-PFHxA	318>272.9	2.39e4	1.00	1.000	3.29	3.41	12.5	NO	100.0	0.0102146
14	13C3-PFHxS	401.9 > 79.9	1.29e4	1.00	1.000	3.94	4.02	12.5	NO	100.0	0.0350228
15	13C8-PFOA	421.3 > 376	8.59e3	1.00	1.000	4.22	4.30	12.5	NO	100.0	0.0104896
16	13C9-PFNA	472.2 > 426.9	8.52e3	1.00	1.000	4.56	4.63	12.5	NO	100.0	0.0039269
17	13C4-PFOS	503.0 > 79.9	8.45e3	1.00	1.000	4.67	4.68	12.5	NO	100.0	0.0015948
18	Total PFBS	299 > 79.7	9.61e4		1.000	3.11		98.6	NO		0.0000000
19	Total PFHxS	398.9 > 79.8	1.01e5		1.000	4.09		118	NO		0.0000000
20	Total PFOA	413 > 368.7	1.98e5		1.000	4.39		96.4	NO		0.0000000
21	Total PFOS	499 > 79.9	3.55e4		1.000	4.67		135	NO		0.0986692

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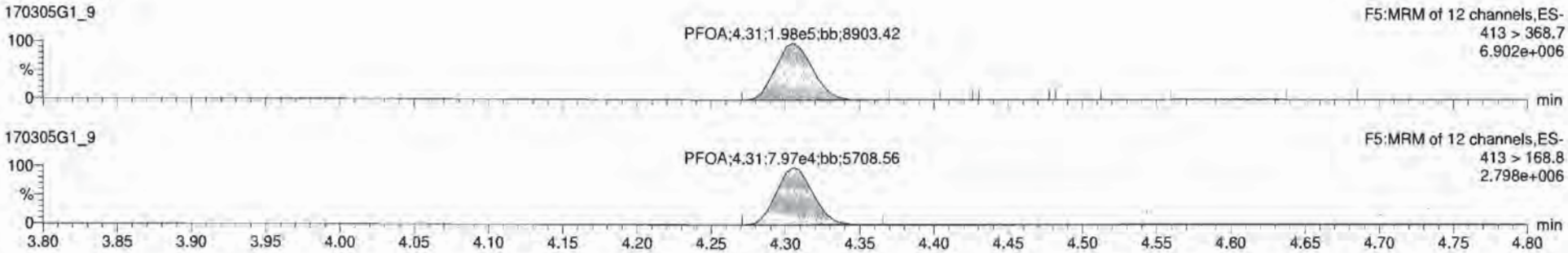
ID: ST170305G1-8 PFC CS5 17C0508, Description: PFC CS5 17C0508 A, Name: 170305G1_9, Date: 05-Mar-2017, Time: 14:14:34, Instrument: , Lab: , User:

Total PFOA



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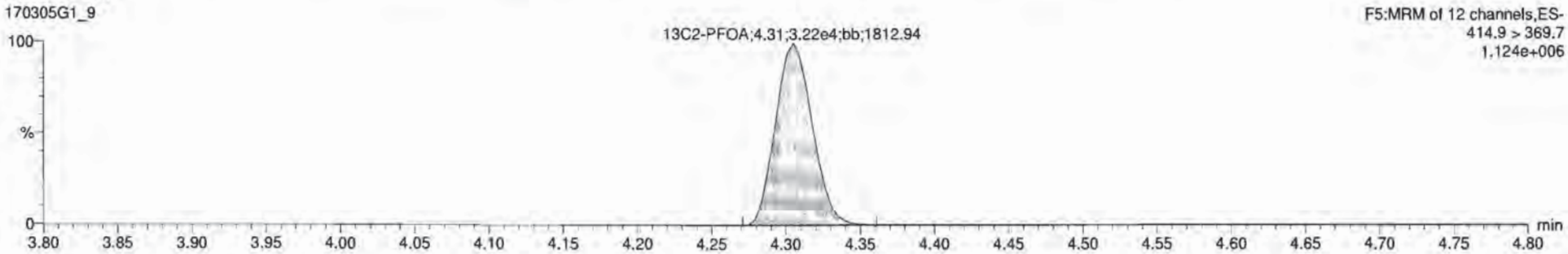
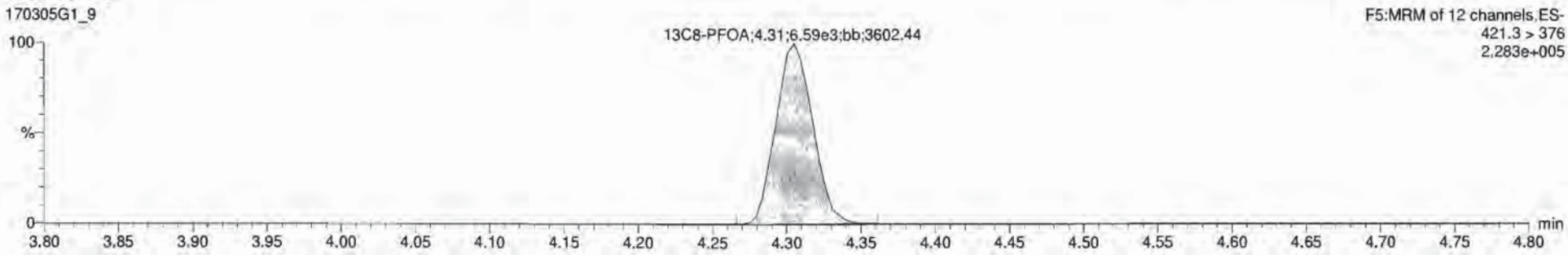


13C8-PFOA



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Last Altered: Monday, March 06, 2017 08:36:20 Pacific Standard Time
Printed: Monday, March 06, 2017 08:37:19 Pacific Standard Time

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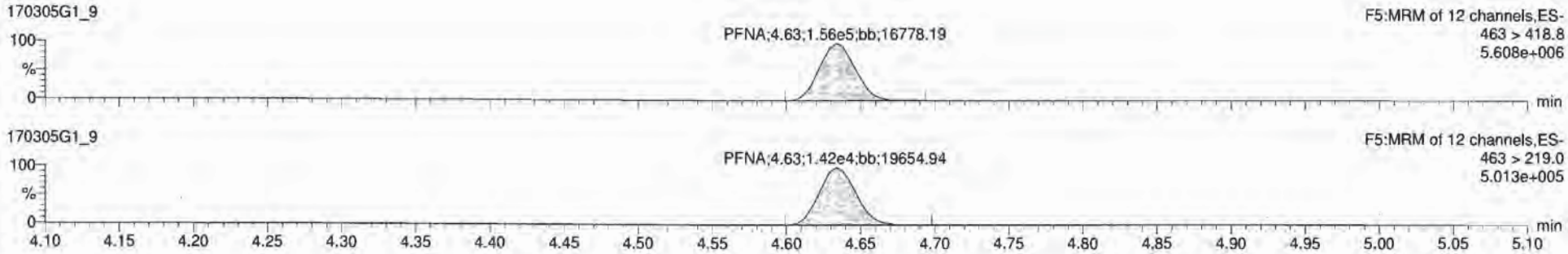
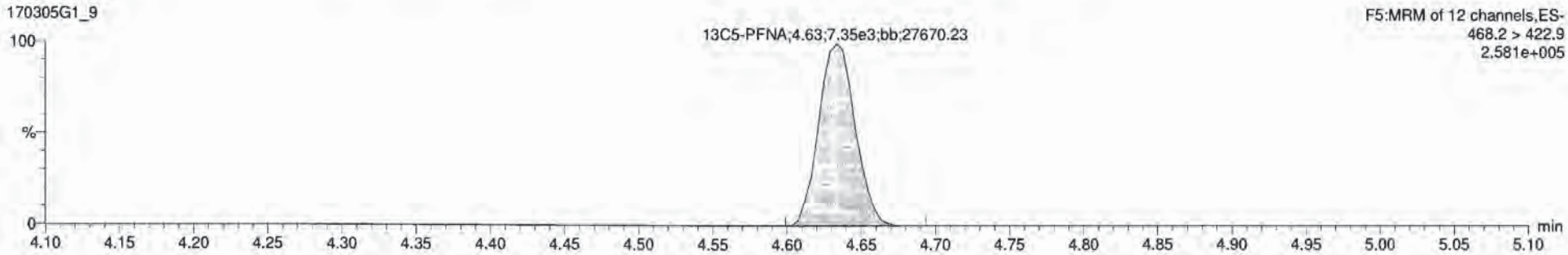
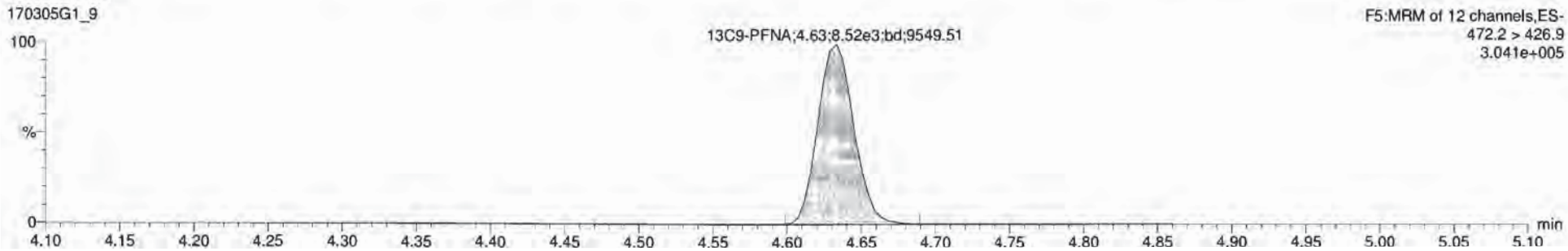
PFNA



13C5-PFNA



13C9-PFNA



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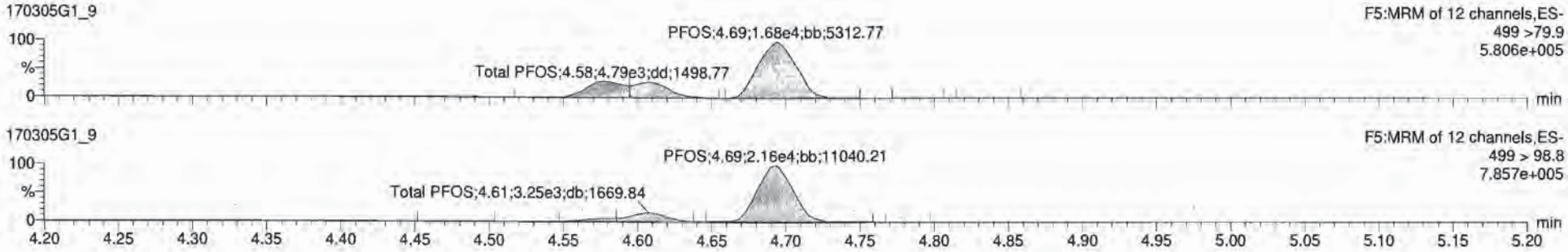
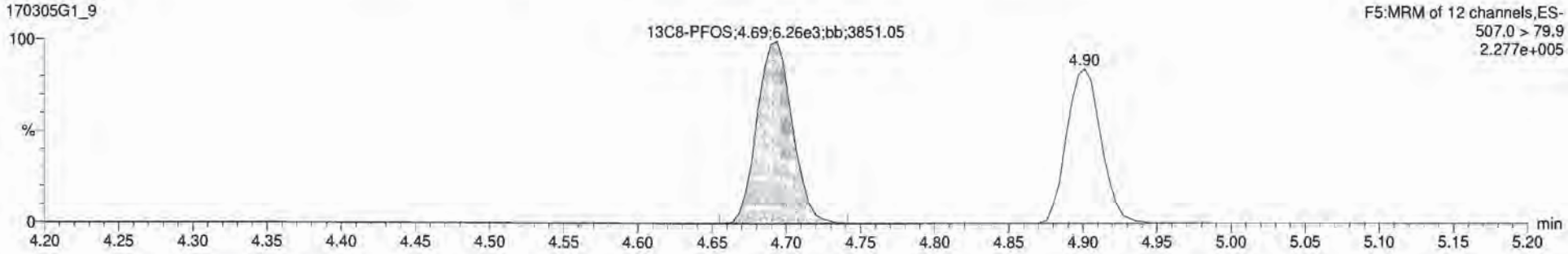
Last Altered: Monday, March 06, 2017 08:36:20 Pacific Standard Time
Printed: Monday, March 06, 2017 08:37:19 Pacific Standard Time

ID: ST170305G1-8 PFC CS5 17C0508, Description: PFC CS5 17C0508 A, Name: 170305G1_9, Date: 05-Mar-2017, Time: 14:14:34, Instrument: , Lab: , User:

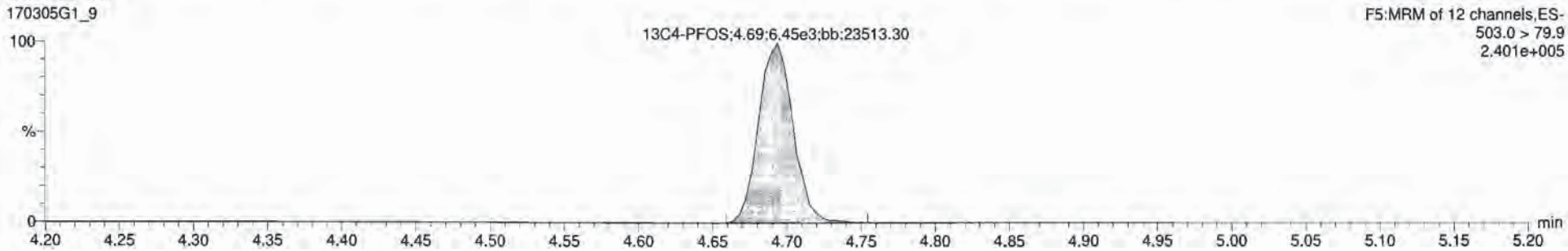
Total PFOS

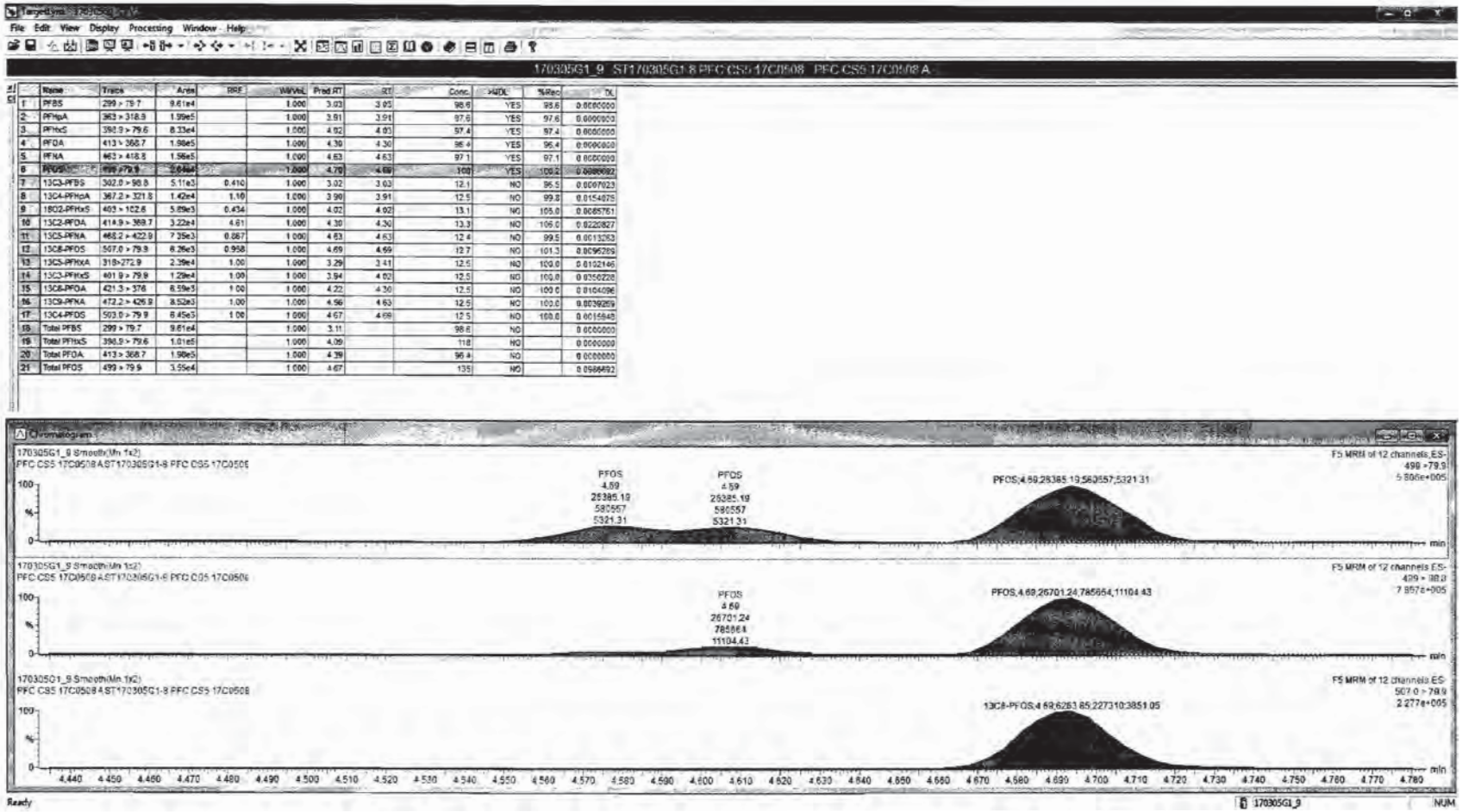


13C8-PFOS



13C4-PFOS





	Name	Trace	Area	RRF	WWkL	Pred RT	RT	Conc.	HIDL	%Rec	DL
1	PFBS	299 > 79.7	9.61e4		1.000	3.03	3.03	98.6	YES	98.6	0.0000000
2	PFHpA	363 > 318.9	1.99e5		1.000	3.91	3.91	97.6	YES	97.6	0.0000000
3	PFHxS	398.9 > 79.6	8.33e4		1.000	4.02	4.03	97.4	YES	97.4	0.0000000
4	PFOA	413 > 368.7	1.98e5		1.000	4.30	4.30	96.4	YES	96.4	0.0000000
5	PFNA	463 > 418.8	1.98e5		1.000	4.63	4.63	97.1	YES	97.1	0.0000000
6	PFOS	499 > 79.9	2.04e5		1.000	4.70	4.69	100	YES	100.2	0.0000000
7	13C3-PFBS	302.0 > 98.8	5.11e3	0.410	1.000	3.02	3.03	12.1	NO	96.5	0.0097023
8	13C4-PFHpA	367.2 > 321.8	1.42e4	1.10	1.000	3.90	3.91	12.5	NO	99.8	0.0154875
9	1802-PFHxS	403 > 102.8	5.89e3	0.434	1.000	4.02	4.02	13.1	NO	105.0	0.0085761
10	13C2-PFOA	414.9 > 369.7	3.22e4	4.61	1.000	4.30	4.30	13.3	NO	106.0	0.0220827
11	13C5-PFNA	468.2 > 422.9	7.35e3	0.867	1.000	4.63	4.63	12.4	NO	99.5	0.0113263
12	13C8-PFOS	507.0 > 79.9	8.26e3	0.958	1.000	4.69	4.69	12.7	NO	101.3	0.0096289
13	13C5-PFHxA	318>272.9	2.39e4	1.00	1.000	3.29	3.41	12.5	NO	100.0	0.0102146
14	13C3-PFHxS	401.9 > 79.9	1.29e4	1.00	1.000	3.94	4.02	12.5	NO	100.0	0.0350228
15	13C8-PFOA	421.3 > 376	8.59e3	1.00	1.000	4.22	4.30	12.5	NO	100.0	0.0104096
16	13C9-PFNA	472.2 > 426.9	8.52e3	1.00	1.000	4.56	4.63	12.5	NO	100.0	0.0039259
17	13C4-PFOS	503.0 > 79.9	8.45e3	1.00	1.000	4.67	4.69	12.5	NO	100.0	0.0015845
18	Total PFBS	299 > 79.7	9.61e4		1.000	3.11		98.6	NO		0.0000000
19	Total PFHxS	398.9 > 79.6	1.01e5		1.000	4.09		118	NO		0.0000000
20	Total PFOA	413 > 368.7	1.98e5		1.000	4.39		96.4	NO		0.0000000
21	Total PFOS	499 > 79.9	3.55e4		1.000	4.67		135	NO		0.0966492

Quantify Sample Summary Report **MassLynx 4.1 SCN815**
Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-11.qld

Last Altered: Monday, March 06, 2017 09:12:14 Pacific Standard Time
Printed: Monday, March 06, 2017 09:13:06 Pacific Standard Time

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Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

Name: 170305G1_11, Date: 05-Mar-2017, Time: 14:39:40, ID: SS170305G1-1 PFC SSS 17C0509, Description: PFC SSS 17C0509 A

	#	Name	Trace	Response	IS Resp	RRF	Wt/Vol	RT	Conc.	%Rec
1	1	PFBS	299 > 79.7	1.09e4	6.54e3		1.000	3.03	8.70	87.0
2	2	PFHpA	363 > 318.9	2.52e4	1.73e4		1.000	3.91	10.0	100.4
3	3	PFHxS	398.9 > 79.6	8.94e3	6.56e3		1.000	4.03	9.33	93.3
4	4	PFOA	413 > 368.7	2.26e4	3.20e4		1.000	4.31	10.9	108.7
5	5	PFNA	463 > 418.8	1.28e4	5.80e3		1.000	4.63	10.0	100.4
6	6	PFOS	499 >79.9	2.01e3	4.01e3		1.000	4.69	11.7	117.2
7	7	13C3-PFBS	302.0 > 98.8	6.54e3	1.49e4	0.410	1.000	3.03	13.4	106.8
8	8	13C4-PFHpA	367.2 > 321.8	1.73e4	1.49e4	1.098	1.000	3.91	13.2	105.7
9	9	18O2-PFHxS	403 > 102.6	6.56e3	1.49e4	0.434	1.000	4.02	12.6	101.2
10	10	13C2-PFOA	414.9 > 369.7	3.20e4	7.38e3	4.608	1.000	4.31	11.8	94.1
11	11	13C5-PFNA	468.2 > 422.9	5.80e3	6.69e3	0.867	1.000	4.63	12.5	99.9
12	12	13C8-PFOS	507.0 > 79.9	4.01e3	4.48e3	0.958	1.000	4.69	11.7	93.4
13	13	13C5-PFHxA	318>272.9	2.89e4	2.89e4	1.000	1.000	3.41	12.5	100.0
14	14	13C3-PFHxS	401.9 > 79.9	1.49e4	1.49e4	1.000	1.000	4.03	12.5	100.0
15	15	13C8-PFOA	421.3 > 376	7.38e3	7.38e3	1.000	1.000	4.31	12.5	100.0
16	16	13C9-PFNA	472.2 > 426.9	6.69e3	6.69e3	1.000	1.000	4.63	12.5	100.0
17	17	13C4-PFOS	503.0 > 79.9	4.48e3	4.48e3	1.000	1.000	4.69	12.5	100.0

75-125

ES 3/6/17

✓AC 3/6/17

Vista Analytical Laboratory Q1

Dataset: Untitled

Last Altered: Monday, March 06, 2017 09:10:12 Pacific Standard Time
Printed: Monday, March 06, 2017 09:10:17 Pacific Standard Time

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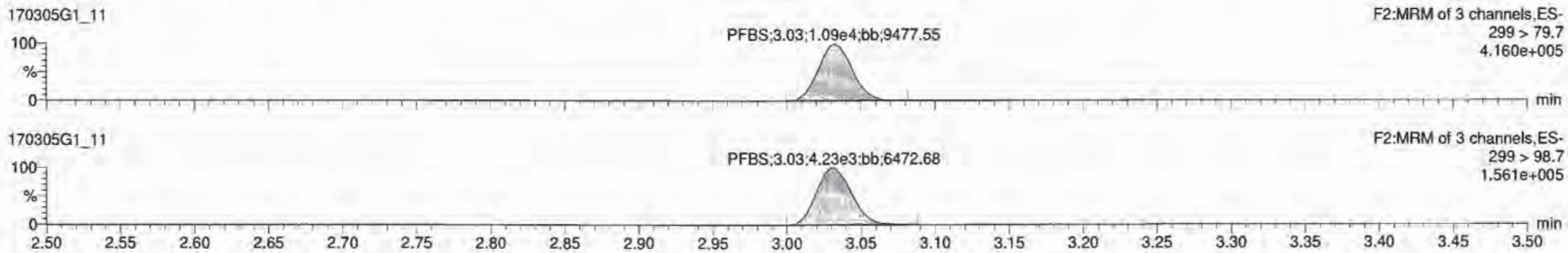
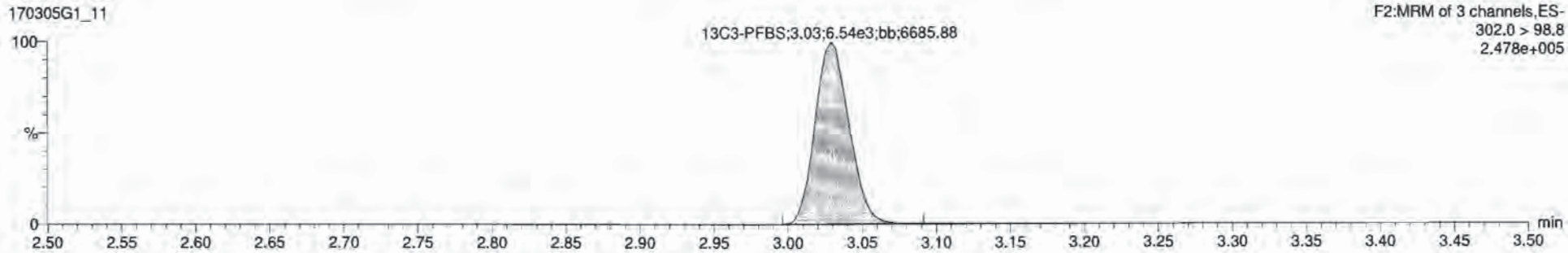
Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: SS170305G1-1 PFC SSS 17C0509, Description: PFC SSS 17C0509 A, Name: 170305G1_11, Date: 05-Mar-2017, Time: 14:39:40, Instrument: , Lab: , User:

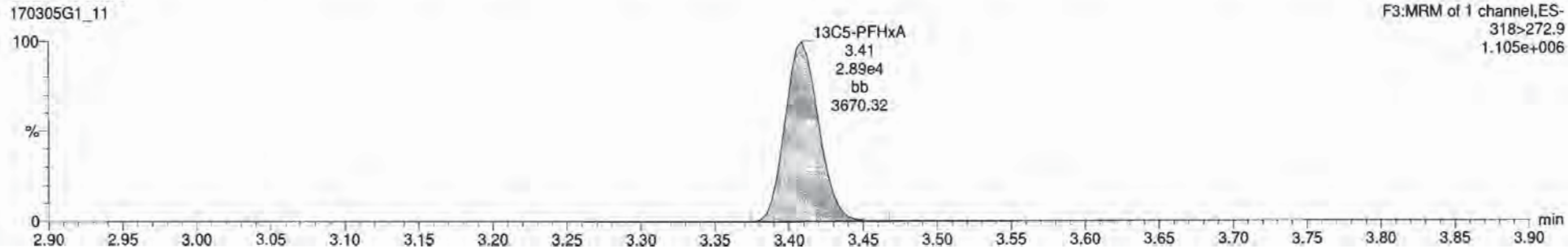
PFBS



13C3-PFBS



13C5-PFHxA



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Printed: Monday, March 06, 2017 09:10:17 Pacific Standard Time

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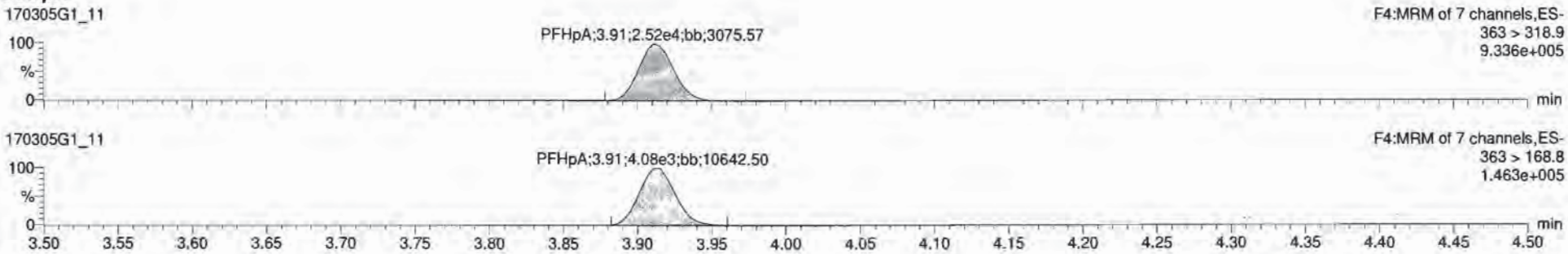
PFHpA



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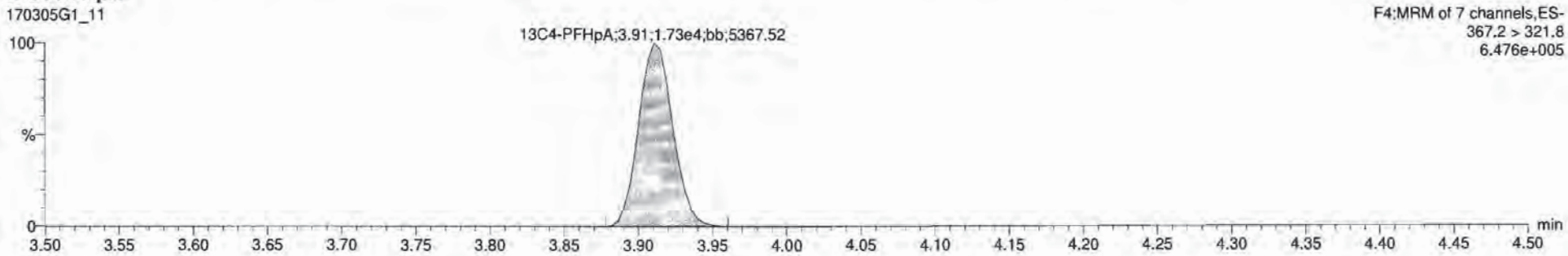

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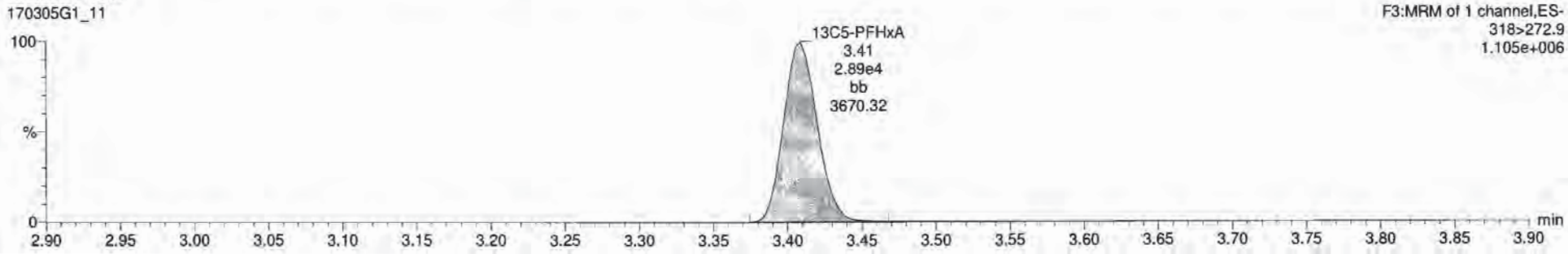

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Printed: Monday, March 06, 2017 09:10:17 Pacific Standard Time

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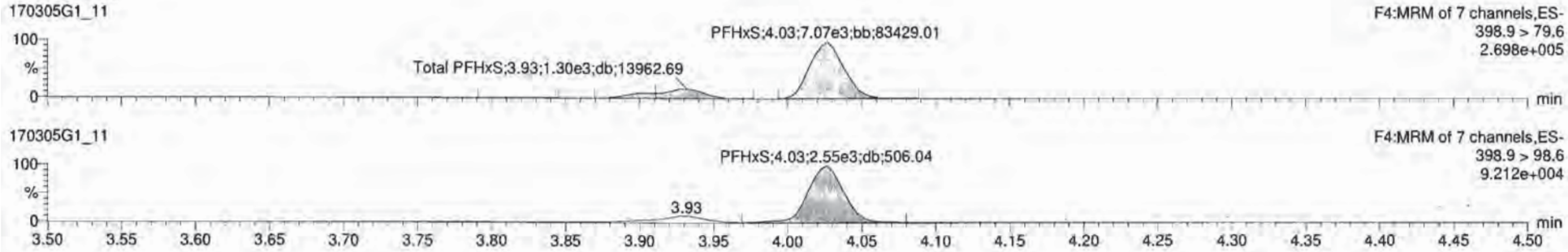
Total PFHxS



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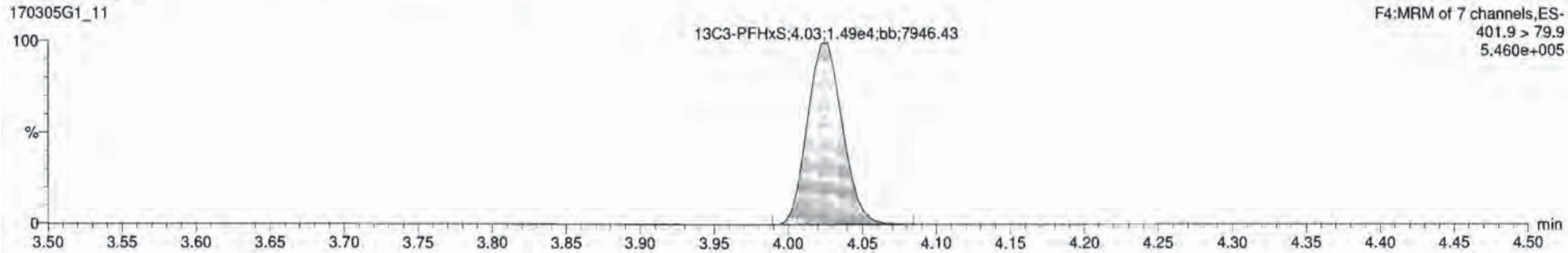

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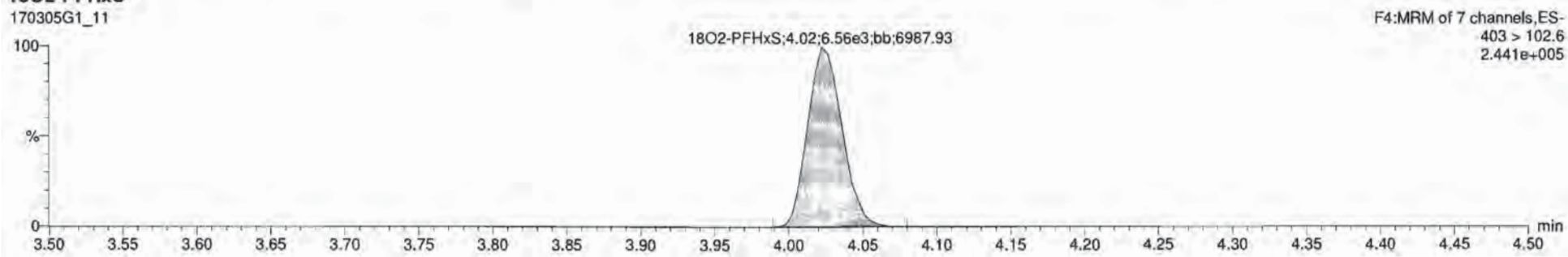

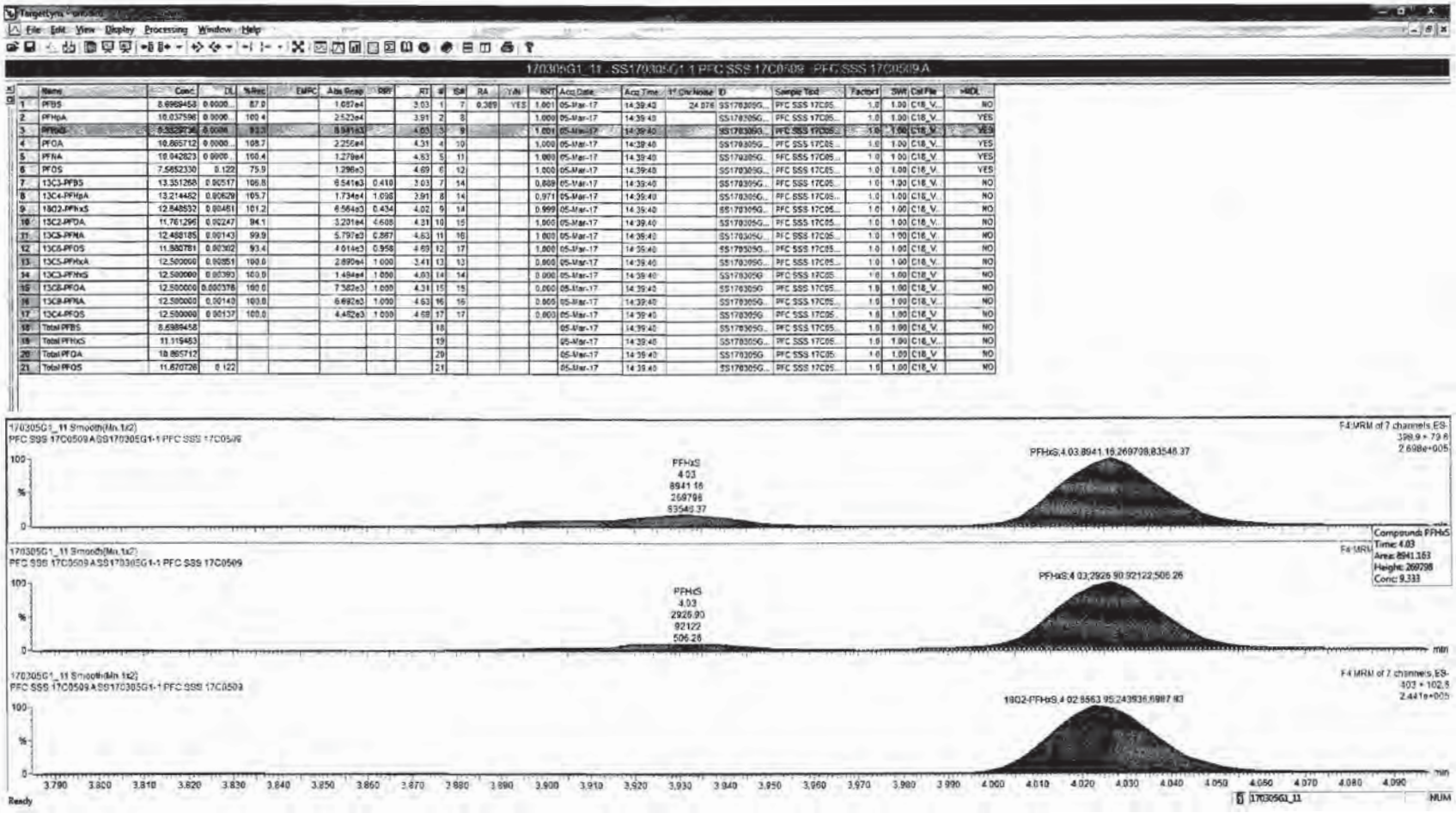
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170305G1_11 - SS170305G1-1 PFC SSS 17C0509 - PFC SSS 17C0509 A
Name | Conc. | DL | %Rec | EMPC | Abs Area | RRT | RT | # | ISR | RA | Y/N | RRT | Acq Date | Acq Time | 1/ Dw Noise | ID | Sample Text | Factor | SWR | Cal File | >MDL
1 PFBS 8.6969453 0.0000... 87.0 1.087e4 3.03 1 7 0.389 YES 1.001 05-Mar-17 14:39:43 24.876 SS170305G... PFC SSS 17C05... 1.0 1.00 C18_V... NO
2 PFHpA 10.037596 0.0000... 100.4 2.522e4 3.91 2 8 1.000 05-Mar-17 14:39:43 SS170305G... PFC SSS 17C05... 1.0 1.00 C18_V... YES
3 PFHxS 9.332736 0.0000... 93.3 8.941e3 4.03 3 9 1.031 05-Mar-17 14:39:40 SS170305G... PFC SSS 17C05... 1.0 1.00 C18_V... YES
4 PFOA 10.885712 0.0000... 108.7 2.256e4 4.31 4 10 1.000 05-Mar-17 14:39:40 SS170305G... PFC SSS 17C05... 1.0 1.00 C18_V... YES
5 PFNA 10.942823 0.0000... 100.4 1.279e4 4.63 5 11 1.000 05-Mar-17 14:39:40 SS170305G... PFC SSS 17C05... 1.0 1.00 C18_V... YES
6 PFOS 7.5652330 0.122 75.9 1.298e3 4.69 6 12 1.000 05-Mar-17 14:39:40 SS170305G... PFC SSS 17C05... 1.0 1.00 C18_V... YES
7 13C3-PFBS 13.351268 0.90517 106.8 9.541e3 0.410 3.03 7 14 0.889 05-Mar-17 14:39:40 SS170305G... PFC SSS 17C05... 1.0 1.00 C18_V... NO
8 13C4-PFHpA 13.214452 0.90629 105.7 1.734e4 1.036 3.91 8 14 0.971 05-Mar-17 14:39:40 SS170305G... PFC SSS 17C05... 1.0 1.00 C18_V... NO
9 1802-PFHxS 12.848532 0.90461 101.2 6.564e3 0.434 4.02 9 14 0.999 05-Mar-17 14:39:40 SS170305G... PFC SSS 17C05... 1.0 1.00 C18_V... NO
10 13C2-PFDA 11.761296 0.90247 94.1 3.201e4 4.608 4.31 10 15 1.000 05-Mar-17 14:39:40 SS170305G... PFC SSS 17C05... 1.0 1.00 C18_V... NO
11 13C5-PFNA 12.488185 0.90143 99.9 5.797e3 0.887 4.63 11 16 1.000 05-Mar-17 14:39:40 SS170305G... PFC SSS 17C05... 1.0 1.00 C18_V... NO
12 13C8-PFOS 11.880781 0.90302 93.4 4.614e3 0.958 4.69 12 17 1.000 05-Mar-17 14:39:40 SS170305G... PFC SSS 17C05... 1.0 1.00 C18_V... NO
13 13C3-PFHxA 12.500000 0.90851 100.0 2.890e4 1.000 3.41 13 13 0.000 05-Mar-17 14:39:40 SS170305G... PFC SSS 17C05... 1.0 1.00 C18_V... NO
14 13C3-PFHxS 12.500000 0.90393 100.0 1.484e4 1.000 4.03 14 14 0.000 05-Mar-17 14:39:40 SS170305G... PFC SSS 17C05... 1.0 1.00 C18_V... NO
15 13C8-PFOA 12.500000 0.900378 100.0 7.582e3 1.000 4.31 15 15 0.000 05-Mar-17 14:39:40 SS170305G... PFC SSS 17C05... 1.0 1.00 C18_V... NO
16 13C8-PFNA 12.500000 0.90140 100.0 6.692e3 1.000 4.63 16 16 0.000 05-Mar-17 14:39:40 SS170305G... PFC SSS 17C05... 1.0 1.00 C18_V... NO
17 13C4-PFOS 12.500000 0.90137 100.0 4.482e3 1.000 4.69 17 17 0.000 05-Mar-17 14:39:40 SS170305G... PFC SSS 17C05... 1.0 1.00 C18_V... NO
18 Total PFBS 8.6969453 18 05-Mar-17 14:39:40 SS170305G... PFC SSS 17C05... 1.0 1.00 C18_V... NO
19 Total PFHxS 11.115483 19 05-Mar-17 14:39:40 SS170305G... PFC SSS 17C05... 1.0 1.00 C18_V... NO
20 Total PFOA 10.885712 20 05-Mar-17 14:39:40 SS170305G... PFC SSS 17C05... 1.0 1.00 C18_V... NO
21 Total PFOS 11.670726 0.122 21 05-Mar-17 14:39:40 SS170305G... PFC SSS 17C05... 1.0 1.00 C18_V... NO
170305G1_11 Smooth(Mn,1x2)
PFC SSS 17C0509 A SS170305G1-1 PFC SSS 17C05/9
F4 MRM of 7 channels,ES-
398.9 > 79.8
2.698e+005
PFHxS
4.03
8941.16
269798
83546.37
PFHxS,4.03,8941.16,269798,83546.37
Compounds: PFHxS
Time: 4.03
Area: 8941.163
Height: 269798
Conc: 9.333
170305G1_11 Smooth(Mn,1x2)
PFC SSS 17C0509 A SS170305G1-1 PFC SSS 17C0509
F4 MRM
PFHxS
4.03
2926.90
92122
506.26
PFHxS,4.03,2926.90,92122,506.26
min
170305G1_11 Smooth(Mn,1x2)
PFC SSS 17C0509 A SS170305G1-1 PFC SSS 17C0509
F4 MRM of 7 channels,ES-
403 > 102.8
2.441e+005
1802-PFHxS,4.02,8563.95,243936.6887,83
3.790 3.800 3.810 3.820 3.830 3.840 3.850 3.860 3.870 3.880 3.890 3.900 3.910 3.920 3.930 3.940 3.950 3.960 3.970 3.980 3.990 4.000 4.010 4.020 4.030 4.040 4.050 4.060 4.070 4.080 4.090
170305G1_11
Ready
NUM

Vista Analytical Laboratory Q1

Dataset: Untitled

Last Altered: Monday, March 06, 2017 09:10:12 Pacific Standard Time
Printed: Monday, March 06, 2017 09:10:17 Pacific Standard Time

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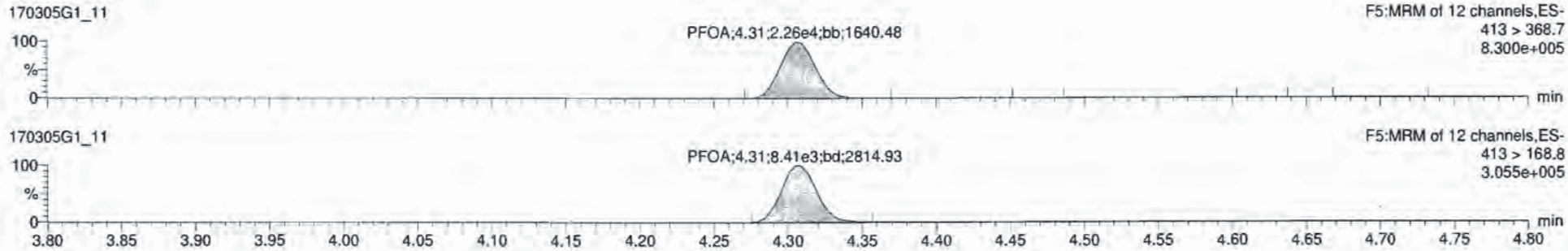
Total PFOA



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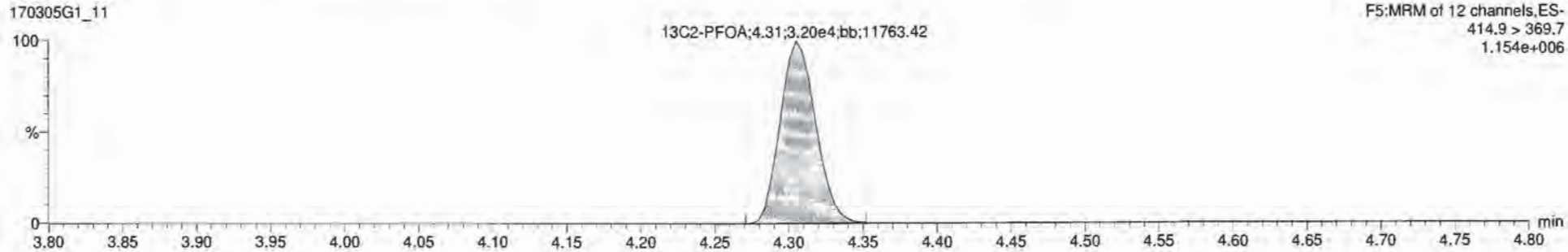

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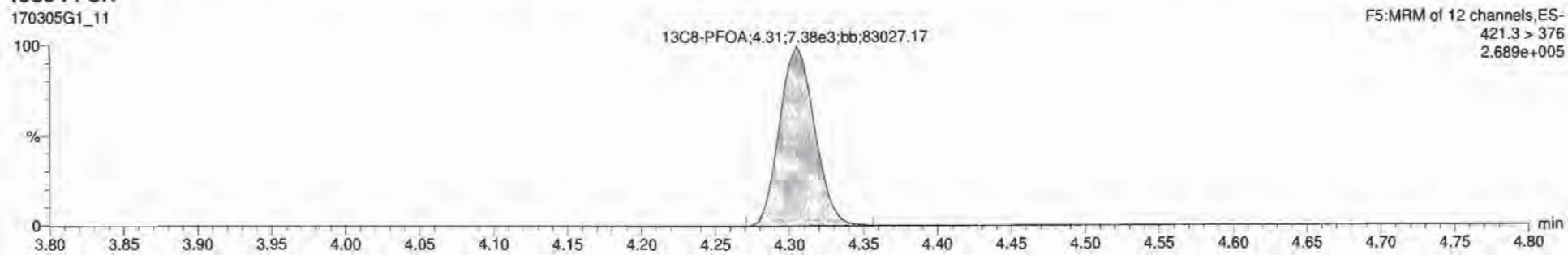


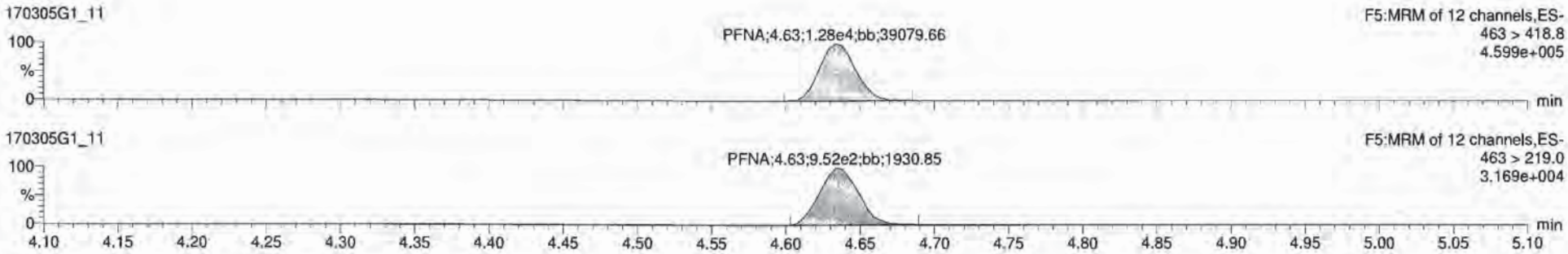
Vista Analytical Laboratory Q1

Dataset: Untitled

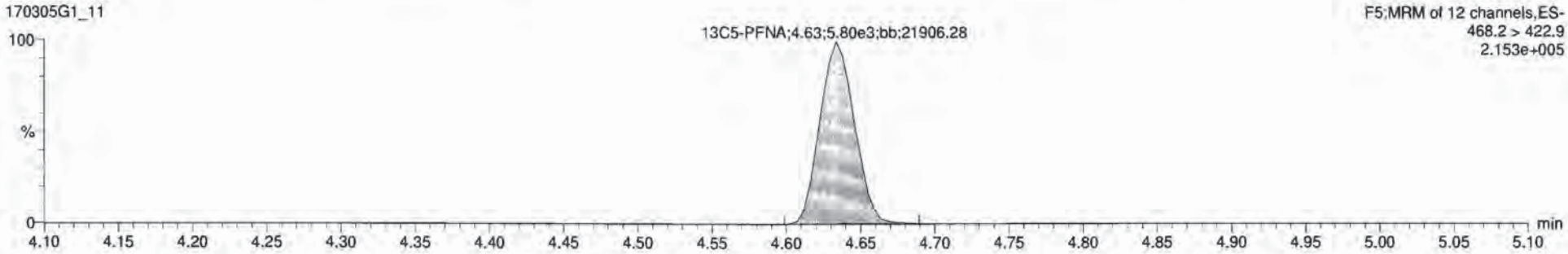
Last Altered: Monday, March 06, 2017 09:10:12 Pacific Standard Time
Printed: Monday, March 06, 2017 09:10:17 Pacific Standard Time

ID: SS170305G1-1 PFC SSS 17C0509, Description: PFC SSS 17C0509 A, Name: 170305G1_11, Date: 05-Mar-2017, Time: 14:39:40, Instrument: , Lab: , User:

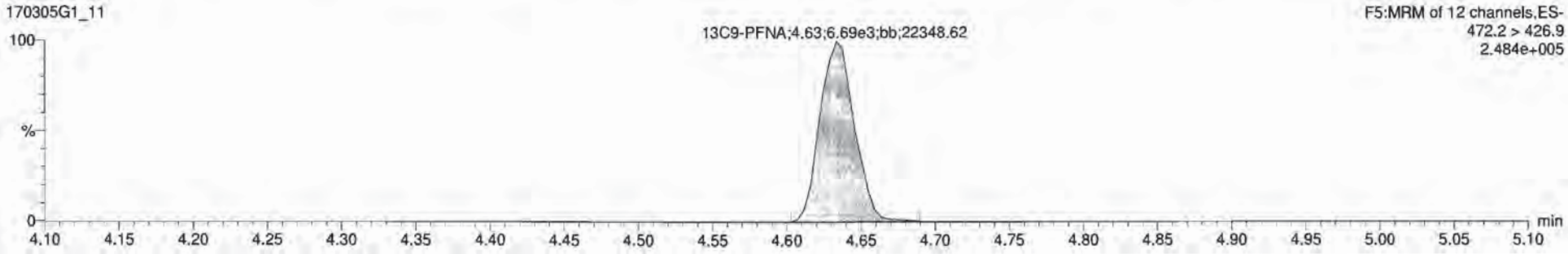
PFNA



13C5-PFNA



13C9-PFNA



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Last Altered: Monday, March 06, 2017 09:10:12 Pacific Standard Time
Printed: Monday, March 06, 2017 09:10:17 Pacific Standard Time

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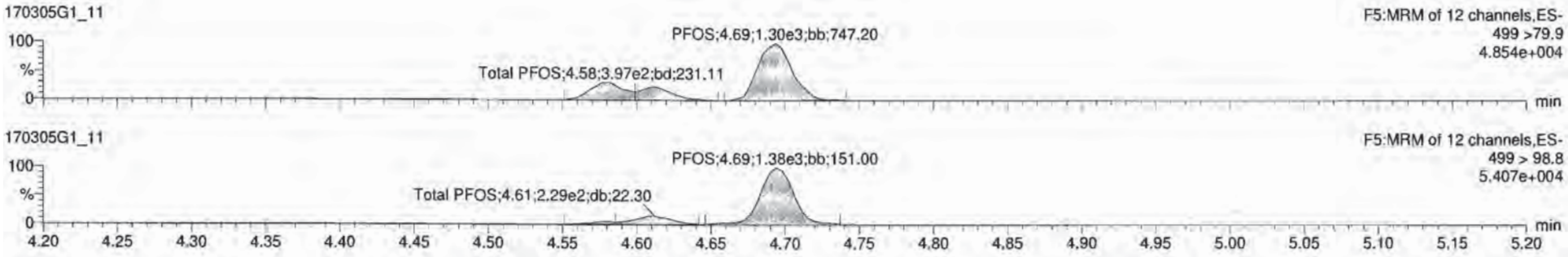
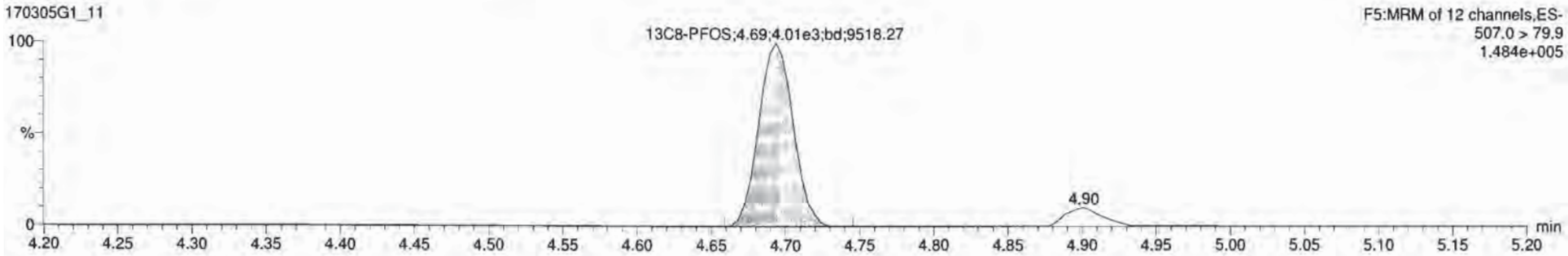
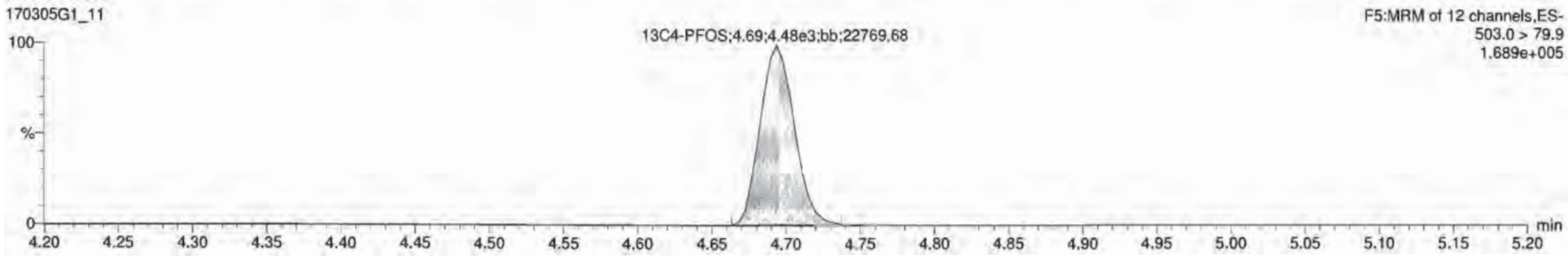
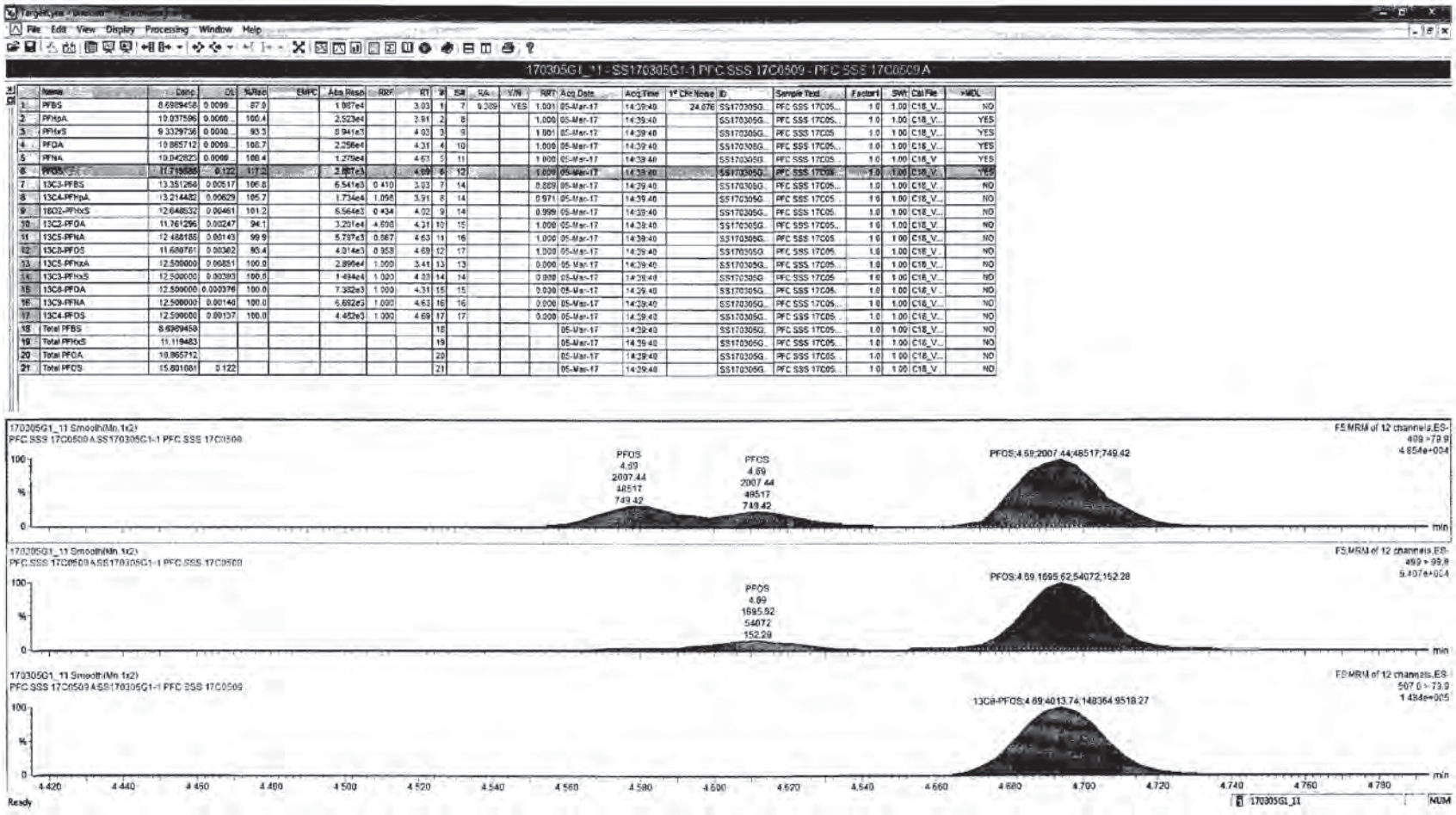


13C8-PFOS



13C4-PFOS





	Name	Conc	DL	%Rec	EMPC	Abs Resp	RRF	RT	#	S/N	RA	Y/N	RRT	Acq Date	Acq Time	1st Chl Noise	ID	Sample Text	Factor	Wt	Cal File	>MDL
1	PFBS	8.6989458	0.0090	87.0		1.087e4		3.03	1	7	0.389	YES	1.001	05-Mar-17	14:39:40	24.076	SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	YES
2	PFHpA	10.037596	0.0060	100.4		2.523e4		3.91	2	8			1.000	05-Mar-17	14:39:40		SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	YES
3	PFHxS	9.3329736	0.0090	93.3		8.941e3		4.03	3	9			1.001	05-Mar-17	14:39:40		SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	YES
4	PFOA	10.865712	0.0090	108.7		2.256e4		4.31	4	10			1.000	05-Mar-17	14:39:40		SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	YES
5	PFNA	10.042823	0.0099	100.4		1.275e4		4.61	5	11			1.000	05-Mar-17	14:39:40		SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	YES
6	PFOS	11.719586	0.122	117.2		2.807e3		4.69	6	12			1.000	05-Mar-17	14:39:40		SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	YES
7	13C3-PFBS	13.351266	0.00517	106.8		6.541e3	0.410	3.03	7	14			0.859	05-Mar-17	14:39:40		SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	NO
8	13C4-PFHpA	13.214482	0.00629	105.7		1.734e4	1.056	3.91	8	14			0.971	05-Mar-17	14:39:40		SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	NO
9	18O2-PFHxS	12.648532	0.00461	101.2		6.564e3	0.434	4.02	9	14			0.999	05-Mar-17	14:39:40		SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	NO
10	13C2-PFOA	11.761296	0.00247	94.1		3.291e4	4.698	4.31	10	15			1.000	05-Mar-17	14:39:40		SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	NO
11	13C5-PFNA	12.488186	0.00143	99.9		5.797e3	0.567	4.63	11	16			1.000	05-Mar-17	14:39:40		SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	NO
12	13C8-PFOS	11.689761	0.00362	93.4		4.014e3	0.958	4.69	12	17			1.000	05-Mar-17	14:39:40		SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	NO
13	13C5-PFHxA	12.500000	0.00851	100.0		2.996e4	1.000	3.41	13	13			0.000	05-Mar-17	14:39:40		SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	NO
14	13C3-PFHxS	12.500000	0.00393	100.0		1.494e4	1.000	4.03	14	14			0.000	05-Mar-17	14:39:40		SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	NO
15	13C8-PFOA	12.500000	0.000376	100.0		7.382e3	1.000	4.31	15	15			0.000	05-Mar-17	14:39:40		SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	NO
16	13C9-PFNA	12.500000	0.00146	100.0		5.892e3	1.000	4.63	16	16			0.000	05-Mar-17	14:39:40		SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	NO
17	13C4-PFOS	12.500000	0.00137	100.0		4.452e3	1.000	4.69	17	17			0.000	05-Mar-17	14:39:40		SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	NO
18	Total PFBS	8.6989458							18					05-Mar-17	14:39:40		SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	NO
19	Total PFHxS	11.119483							19					05-Mar-17	14:39:40		SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	NO
20	Total PFOA	10.865712							20					05-Mar-17	14:39:40		SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	NO
21	Total PFOS	15.801081	0.122						21					05-Mar-17	14:39:40		SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	NO

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	Leachate_ Time
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW09M-0217	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	02/23/2017 16:55	02/28/2017		
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N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW05M-0217	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	02/23/2017 15:45	02/28/2017		
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N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW11S-0217	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	02/26/2017 16:30	02/28/2017		
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N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB05-022417	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	02/24/2017 11:35	02/28/2017		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB05-022417	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	02/24/2017 11:35	02/28/2017		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	03/01/2017 08:54	03/01/2017		
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N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	03/01/2017 08:54	03/01/2017		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	03/01/2017 08:54	03/01/2017		
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N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	03/01/2017 08:54	03/01/2017		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	03/01/2017 08:54	03/01/2017		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	03/01/2017 08:54	03/01/2017		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	03/03/2017 08:25	03/03/2017		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	03/03/2017 08:25	03/03/2017		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	03/03/2017 08:25	03/03/2017		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	03/03/2017 08:25	03/03/2017		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	03/03/2017 08:25	03/03/2017		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	03/03/2017 08:25	03/03/2017		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	03/03/2017 08:25	03/03/2017		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	03/03/2017 08:25	03/03/2017		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	03/03/2017 08:25	03/03/2017		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	03/03/2017 08:25	03/03/2017		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	03/03/2017 08:25	03/03/2017		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	03/03/2017 08:25	03/03/2017		

Contract_ID	DO_CTO_ Number	Phase	Installation_ID	Sample_Name	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	Validator_ Qualifier
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW09M-0217	20170301	08:54:00	20170306	17:30:00	1700268-01	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5		11.2	NG_L		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW09M-0217	20170301	08:54:00	20170306	17:30:00	1700268-01	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1		2.03	NG_L	U	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW09M-0217	20170301	08:54:00	20170306	17:30:00	1700268-01	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1		0.915	NG_L	U	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW09M-0217	20170301	08:54:00	20170306	17:30:00	1700268-01	1	-999			13C3-PFBS	13C3-PFBS		95.8	PCT_REC		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW09M-0217	20170301	08:54:00	20170306	17:30:00	1700268-01	1	-999			13C2-PFOA	13C2-PFOA		86.1	PCT_REC		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW09M-0217	20170301	08:54:00	20170306	17:30:00	1700268-01	1	-999			13C8-PFOS	13C8-PFOS		93.9	PCT_REC		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW05M-0217	20170301	08:54:00	20170305	16:07:00	1700268-02	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5		473	NG_L		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW05M-0217	20170301	08:54:00	20170305	16:07:00	1700268-02	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1		1190	NG_L		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW05M-0217	20170301	08:54:00	20170305	16:07:00	1700268-02	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1		3.26	NG_L	J	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW05M-0217	20170301	08:54:00	20170305	16:07:00	1700268-02	1	-999			13C3-PFBS	13C3-PFBS		103	PCT_REC		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW05M-0217	20170301	08:54:00	20170305	16:07:00	1700268-02	1	-999			13C2-PFOA	13C2-PFOA		84.9	PCT_REC		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW05M-0217	20170301	08:54:00	20170305	16:07:00	1700268-02	1	-999			13C8-PFOS	13C8-PFOS		98.7	PCT_REC		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW05S-0217	20170301	08:54:00	20170306	17:43:00	1700268-03	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5		12.9	NG_L		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW05S-0217	20170301	08:54:00	20170306	17:43:00	1700268-03	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1		9.87	NG_L		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW05S-0217	20170301	08:54:00	20170306	17:43:00	1700268-03	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1		0.922	NG_L	U	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW05S-0217	20170301	08:54:00	20170306	17:43:00	1700268-03	1	-999			13C3-PFBS	13C3-PFBS		75.3	PCT_REC		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW05S-0217	20170301	08:54:00	20170306	17:43:00	1700268-03	1	-999			13C2-PFOA	13C2-PFOA		75.9	PCT_REC		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW05S-0217	20170301	08:54:00	20170306	17:43:00	1700268-03	1	-999			13C8-PFOS	13C8-PFOS		78.8	PCT_REC		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW11M-0217	20170301	08:54:00	20170305	16:20:00	1700268-04	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5		7.66	NG_L	U	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW11M-0217	20170301	08:54:00	20170305	16:20:00	1700268-04	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1		3.83	NG_L	U	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW11M-0217	20170301	08:54:00	20170305	16:20:00	1700268-04	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1		1.72	NG_L	U	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW11M-0217	20170301	08:54:00	20170305	16:20:00	1700268-04	1	-999			13C3-PFBS	13C3-PFBS		90.6	PCT_REC		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW11M-0217	20170301	08:54:00	20170305	16:20:00	1700268-04	1	-999			13C2-PFOA	13C2-PFOA		87.4	PCT_REC		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW11M-0217	20170301	08:54:00	20170305	16:20:00	1700268-04	1	-999			13C8-PFOS	13C8-PFOS		86.1	PCT_REC		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW11S-0217	20170301	08:54:00	20170306	17:55:00	1700268-05	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5		3.91	NG_L	U	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW11S-0217	20170301	08:54:00	20170306	17:55:00	1700268-05	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1		1.95	NG_L	U	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW11S-0217	20170301	08:54:00	20170306	17:55:00	1700268-05	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1		1.00	NG_L	J	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW11S-0217	20170301	08:54:00	20170306	17:55:00	1700268-05	1	-999			13C3-PFBS	13C3-PFBS		79.6	PCT_REC		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW11S-0217	20170301	08:54:00	20170306	17:55:00	1700268-05	1	-999			13C2-PFOA	13C2-PFOA		93.0	PCT_REC		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW11S-0217	20170301	08:54:00	20170306	17:55:00	1700268-05	1	-999			13C8-PFOS	13C8-PFOS		89.8	PCT_REC		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB06-022617	20170301	08:54:00	20170306	18:08:00	1700268-07	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5		4.72	NG_L	U	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB06-022617	20170301	08:54:00	20170306	18:08:00	1700268-07	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1		2.36	NG_L	U	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB06-022617	20170301	08:54:00	20170306	18:08:00	1700268-07	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1		1.12	NG_L	J	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB06-022617	20170301	08:54:00	20170306	18:08:00	1700268-07	1	-999			13C3-PFBS	13C3-PFBS		86.8	PCT_REC		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB06-022617	20170301	08:54:00	20170306	18:08:00	1700268-07	1	-999			13C2-PFOA	13C2-PFOA		84.2	PCT_REC		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB06-022617	20170301	08:54:00	20170306	18:08:00	1700268-07	1	-999			13C8-PFOS	13C8-PFOS		91.9	PCT_REC		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB05-022417	20170301	08:54:00	20170306	18:20:00	1700268-08	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5		3.94	NG_L	U	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB05-022417	20170301	08:54:00	20170306	18:20:00	1700268-08	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1		1.97	NG_L	U	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB05-022417	20170301	08:54:00	20170306	18:20:00	1700268-08	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1		0.886	NG_L	U	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB05-022417	20170301	08:54:00	20170306	18:20:00	1700268-08	1	-999			13C3-PFBS	13C3-PFBS		97.9	PCT_REC		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB05-022417	20170301	08:54:00	20170306	18:20:00	1700268-08	1	-999			13C2-PFOA	13C2-PFOA		88.7	PCT_REC		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB05-022417	20170301	08:54:00	20170306	18:20:00	1700268-08	1	-999			13C8-PFOS	13C8-PFOS		99.8	PCT_REC		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank	20170301	08:54:00	20170306	16:52:00	B7C0003-BLK1	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5		4.00	NG_L	U	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank	20170301	08:54:00	20170306	16:52:00	B7C0003-BLK1	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1		2.00	NG_L	U	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank	20170301	08:54:00	20170306	16:52:00	B7C0003-BLK1	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1		0.900	NG_L	U	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank	20170301	08:54:00	20170306	16:52:00	B7C0003-BLK1	1	-999			13C3-PFBS	13C3-PFBS		112	PCT_REC		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank	20170301	08:54:00	20170306	16:52:00	B7C0003-BLK1	1	-999			13C2-PFOA	13C2-PFOA		86.5	PCT_REC		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank	20170301	08:54:00	20170306	16:52:00	B7C0003-BLK1	1	-999			13C8-PFOS	13C8-PFOS		93.1	PCT_REC		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS	20170301	08:54:00	20170306	16:02:00	B7C0003-BS1	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5		81.0	NG_L		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS	20170301	08:54:00	20170306	16:02:00	B7C0003-BS1	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1		89.0	NG_L		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS	20170301	08:54:00	20170306	16:02:00	B7C0003-BS1	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1		75.3	NG_L		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS	20170301	08:54:00	20170306	16:02:00	B7C0003-BS1	1	-999			13C3-PFBS	13C3-PFBS		111	PCT_REC		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS	20170301	08:54:00	20170306	16:02:00	B7C0003-BS1	1	-999			13C2-PFOA	13C2-PFOA		85.5	PCT_REC		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS	20170301	08:54:00	20170306	16:02:00	B7C0003-BS1	1	-999			13C8-PFOS	13C8-PFOS		93.9	PCT_REC		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank	20170303	08:25:00	20170305	15:42:00	B7C0012-BLK1	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5		4.00	NG_L	U	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank	20170303	08:25:00	20170305	15:42:00	B7C0012-BLK1	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1		2.00	NG_L	U	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank	20170303	08:25:00	20170305	15:42:00	B7C0012-BLK1	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1		0.900	NG_L	U	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank	20170303	08:25:00	20170305	15:42:00	B7C0012-BLK1	1	-999			13C3-PFBS	13C3-PFBS		104	PCT_REC		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank	20170303	08:25:00	20170305	15:42:00	B7C0012-BLK1	1	-999			13C2-PFOA	13C2-PFOA		87.6	PCT_REC		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank	20170303	08:25:00	20170305	15:42:00	B7C0012-BLK1	1	-999			13C8-PFOS	13C8-PFOS		88.7	PCT_REC		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS	20170303	08:25:00	20170305	15:04:00	B7C0012-BS1	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5		89.8	NG_L		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS	20170303	08:25:00	20170305	15:04:00	B7C0012-BS1	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1		93.8	NG_L		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS	20170303	08:25:00	20170305	15:04:00	B7C0012-BS1	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1		81.1	NG_L		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS	20170303	08:25:00	20170305	15:04:00	B7C0012-BS1	1	-999			13C3-PFBS	13C3-PFBS		105	PCT_REC		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS	20170303	08:25:00	20170305	15:04:00	B7C0012-BS1	1	-999			13C2-PFOA	13C2-PFOA		89.4	PCT_REC		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS	20170303	08:25:00	20170305	15:04:00	B7C0012-BS1	1	-999			13C8-PFOS	13C8-PFOS		92.3	PCT_REC		

Contract_ID	DO_CTO_ Number	Phase	Installation_ID	Sample_Name	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-GW09M-0217	PR	TRG									5.0	1.82	4.07	8.12	1700268	S7C0013		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW09M-0217	PR	TRG									5.0	0.661	2.03	8.12	1700268	S7C0013		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW09M-0217	PR	TRG									5.0	0.819	0.915	8.12	1700268	S7C0013		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW09M-0217	PR	IS		SLSA	150	60					5.0				1700268	S7C0013		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW09M-0217	PR	IS		SLSA	150	60					5.0				1700268	S7C0013		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW09M-0217	PR	IS		SLSA	150	60					5.0				1700268	S7C0013		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW05M-0217	PR	TRG									5.0	3.42	7.63	15.3	1700268	S7C0008		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW05M-0217	PR	TRG									5.0	1.24	3.82	15.3	1700268	S7C0008		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW05M-0217	PR	TRG									5.0	1.54	1.72	15.3	1700268	S7C0008		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW05M-0217	PR	IS		SLSA	150	60					5.0				1700268	S7C0008		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW05M-0217	PR	IS		SLSA	150	60					5.0				1700268	S7C0008		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW05M-0217	PR	IS		SLSA	150	60					5.0				1700268	S7C0008		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW05S-0217	PR	TRG									5.0	1.83	4.10	8.17	1700268	S7C0013		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW05S-0217	PR	TRG									5.0	0.665	2.05	8.17	1700268	S7C0013		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW05S-0217	PR	TRG									5.0	0.824	0.922	8.17	1700268	S7C0013		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW05S-0217	PR	IS		SLSA	150	60					5.0				1700268	S7C0013		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW05S-0217	PR	IS		SLSA	150	60					5.0				1700268	S7C0013		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW05S-0217	PR	IS		SLSA	150	60					5.0				1700268	S7C0013		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW11M-0217	PR	TRG									5.0	3.43	7.66	15.3	1700268	S7C0008		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW11M-0217	PR	TRG									5.0	1.25	3.83	15.3	1700268	S7C0008		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW11M-0217	PR	TRG									5.0	1.55	1.72	15.3	1700268	S7C0008		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW11M-0217	PR	IS		SLSA	150	60					5.0				1700268	S7C0008		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW11M-0217	PR	IS		SLSA	150	60					5.0				1700268	S7C0008		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW11M-0217	PR	IS		SLSA	150	60					5.0				1700268	S7C0008		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW11S-0217	PR	TRG									5.0	1.75	3.91	7.83	1700268	S7C0013		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW11S-0217	PR	TRG									5.0	0.637	1.95	7.83	1700268	S7C0013		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW11S-0217	PR	TRG									5.0	0.790	0.879	7.83	1700268	S7C0013		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW11S-0217	PR	IS		SLSA	150	60					5.0				1700268	S7C0013		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW11S-0217	PR	IS		SLSA	150	60					5.0				1700268	S7C0013		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-GW11S-0217	PR	IS		SLSA	150	60					5.0				1700268	S7C0013		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB06-022617	PR	TRG									5.0	2.10	4.72	9.40	1700268	S7C0013		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB06-022617	PR	TRG									5.0	0.765	2.36	9.40	1700268	S7C0013		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB06-022617	PR	TRG									5.0	0.948	1.06	9.40	1700268	S7C0013		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB06-022617	PR	IS		SLSA	150	60					5.0				1700268	S7C0013		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB06-022617	PR	IS		SLSA	150	60					5.0				1700268	S7C0013		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB06-022617	PR	IS		SLSA	150	60					5.0				1700268	S7C0013		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB05-022417	PR	TRG									5.0	1.77	3.94	7.90	1700268	S7C0013		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB05-022417	PR	TRG									5.0	0.643	1.97	7.90	1700268	S7C0013		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB05-022417	PR	TRG									5.0	0.797	0.886	7.90	1700268	S7C0013		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB05-022417	PR	IS		SLSA	150	60					5.0				1700268	S7C0013		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB05-022417	PR	IS		SLSA	150	60					5.0				1700268	S7C0013		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-EB05-022417	PR	IS		SLSA	150	60					5.0				1700268	S7C0013		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank	PR	TRG									5.0	1.79	4.00	8.00	1700268	S7C0013		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank	PR	TRG									5.0	0.651	2.00	8.00	1700268	S7C0013		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank	PR	TRG									5.0	0.807	0.900	8.00	1700268	S7C0013		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank	PR	IS		SLSA	150	60					5.0				1700268	S7C0013		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank	PR	IS		SLSA	150	60					5.0				1700268	S7C0013		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank	PR	IS		SLSA	150	60					5.0				1700268	S7C0013		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS	PR	TRG		LSA	130	60					5.0	1.79	4.00	8.00	1700268	S7C0013		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS	PR	TRG		LSA	130	70					5.0	0.651	2.00	8.00	1700268	S7C0013		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS	PR	TRG		LSA	130	70					5.0	0.807	0.900	8.00	1700268	S7C0013		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS	PR	IS		LSA	150	60					5.0				1700268	S7C0013		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS	PR	IS		LSA	150	60					5.0				1700268	S7C0013		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS	PR	IS		LSA	150	60					5.0				1700268	S7C0013		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank	PR	TRG									5.0	1.79	4.00	8.00	1700268	S7C0008		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank	PR	TRG									5.0	0.651	2.00	8.00	1700268	S7C0008		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank	PR	TRG									5.0	0.807	0.900	8.00	1700268	S7C0008		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank	PR	IS		SLSA	150	60					5.0				1700268	S7C0008		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank	PR	IS		SLSA	150	60					5.0				1700268	S7C0008		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	Blank	PR	IS		SLSA	150	60					5.0				1700268	S7C0008		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS	PR	TRG		LSA	130	60					5.0	1.79	4.00	8.00	1700268	S7C0008		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS	PR	TRG		LSA	130	70					5.0	0.651	2.00	8.00	1700268	S7C0008		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS	PR	TRG		LSA	130	70					5.0	0.807	0.900	8.00	1700268	S7C0008		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS	PR	IS		LSA	150	60					5.0				1700268	S7C0008		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS	PR	IS		LSA	150	60					5.0				1700268	S7C0008		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS	PR	IS		LSA	150	60					5.0				1700268	S7C0008		

ENVIRONMENTAL
Data Services, Inc.

DATA VALIDATION SUMMARY REPORT
COUPEVILLE, WASHINGTON

Client: CH2M HILL, Inc., Corvallis, Oregon
SDG: 1700268
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-GW09M-0217	1700268-01	Water
2	WI-CV-GW05M-0217	1700268-02	Water
3	WI-CV-GW05S-0217	1700268-03	Water
4	WI-CV-GW11M-0217	1700268-04	Water
5	WI-CV-GW11S-0217	1700268-05	Water
6	WI-CV-EB06-022617	1700268-06	Water
7	WI-CV-EB05-022417	1700268-07	Water

A full data validation was performed on the analytical data for five water samples and two aqueous equipment blank samples collected on February 23-26, 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	*Method References*
PFCs	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 as qualified for the data quality indicator criteria as detailed in this report.

Please note that any results qualified (U) due to blank contamination may be then qualified (J) due to another action. Therefore, the results may be qualified (UJ) due to the culmination of the blank contaminations and actions from other exceedences of QC criteria.

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 were free of contamination except for the following.

Blank ID	Compound	Conc. ng/L	Qualifier	Affected Samples
WI-CV-EB06-022617	Perfluorooctanesulfonate	1.12	U	5
WI-CV-EB05-022417	None - ND	-	-	-
WI-CV-FB01-031217 (SDG 1700293)	None - ND	-	-	-

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- A MS/MSD sample was not collected.

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

- Several samples were analyzed at various dilutions due to high concentrations of target compounds. The reporting limits were adjusted accordingly. No action was required.

Field Duplicate Sample Precision

- Field duplicate samples were not collected.

Please contact the undersigned at (757) 564-0090 if you have any questions or need further information.

Signed: _____ Dated: _____

Nancy Weaver
Senior Chemist

Data Qualifier	Definition
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-GW09M-0217

Modified EPA Method 537

Client Data		Sample Data		Laboratory Data			
Name:	CH2M Hill	Matrix:	Groundwater	Lab Sample:	1700268-01	Date Received:	28-Feb-2017 7:28
Project:	Navy Clean CTO-0008 OLF Coupeville	Sample Size:	0.123 L	QC Batch:	B7C0003	Date Extracted:	01-Mar-2017 8:54
Date Collected:	23-Feb-2017 16:55			Date Analyzed:	06-Mar-17 17:30	Column:	BEH C18
Location:	MW09M						

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	11.2	1.82	4.07	8.12	
PFOA	ND	0.661	2.03	8.12	
PFOS	ND	0.819	0.915	8.12	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	95.8	60 - 150	
IS	13C2-PFOA	86.1	60 - 150	
IS	13C8-PFOS	93.9	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

2

Sample ID: WI-CV-GW05M-0217 — **Modified EPA Method 537**

Client Data		Sample Data		Laboratory Data			
Name:	CH2M Hill	Matrix:	Groundwater	Lab Sample:	1700268-02	Date Received:	28-Feb-2017 7:28
Project:	Navy Clean CTO-0008 OLF Coupeville	Sample Size:	0.0655 L	QC Batch:	B7C0012	Date Extracted:	01-Mar-2017 8:54
Date Collected:	23-Feb-2017 15:45			Date Analyzed:	05-Mar-17 16:07 Column: BEH C18		
Location:	MW05M						

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	473	3.42	7.63	15.3	
PFOA	1190	1.24	3.82	15.3	
PFOS	3.26	1.54	1.72	15.3	J

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	103	60 - 150	
IS	13C2-PFOA	84.9	60 - 150	
IS	13C8-PFOS	98.7	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.

MW 3/24/17

3

Sample ID: WI-CV-GW05S-0217 — **Modified EPA Method 537**

Client Data		Sample Data		Laboratory Data			
Name:	CH2M Hill	Matrix:	Groundwater	Lab Sample:	1700268-03	Date Received:	28-Feb-2017 7:28
Project:	Navy Clean CTO-0008 OLF Coupeville	Sample Size:	0.122 L	QC Batch:	B7C0003	Date Extracted:	01-Mar-2017 8:54
Date Collected:	24-Feb-2017 17:30			Date Analyzed:	06-Mar-17 17:43	Column:	BEH C18
Location:	MW05S						

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	12.9	1.83	4.10	8.17	
PFOA	9.87	0.665	2.05	8.17	
PFOS	ND	0.824	0.922	8.17	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	75.3	60 - 150	
IS	13C2-PFOA	75.9	60 - 150	
IS	13C8-PFOS	78.8	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

4

Sample ID: WI-CV-GW11M-0217

Modified EPA Method 537

Client Data		Sample Data		Laboratory Data			
Name:	CH2M Hill	Matrix:	Groundwater	Lab Sample:	1700268-04	Date Received:	28-Feb-2017 7:28
Project:	Navy Clean CTO-0008 OLF Coupeville	Sample Size:	0.0653 L	QC Batch:	B7C0012	Date Extracted:	01-Mar-2017 8:54
Date Collected:	26-Feb-2017 14:35			Date Analyzed:	05-Mar-17 16:20	Column:	BEH C18
Location:	MW11M						

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	ND	3.43	7.66	15.3	
PFOA	ND	1.25	3.83	15.3	
PFOS	ND	1.55	1.72	15.3	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	90.6	60 - 150	
IS	13C2-PFOA	87.4	60 - 150	
IS	13C8-PFOS	86.1	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

5

Sample ID: WI-CV-GW11S-0217 — **Modified EPA Method 537**

Client Data		Sample Data		Laboratory Data			
Name:	CH2M Hill	Matrix:	Groundwater	Lab Sample:	1700268-05	Date Received:	28-Feb-2017 7:28
Project:	Navy Clean CTO-0008 OLF Coupeville	Sample Size:	0.128 L	QC Batch:	B7C0003	Date Extracted:	01-Mar-2017 8:54
Date Collected:	26-Feb-2017 16:30			Date Analyzed:	06-Mar-17 17:55	Column:	BEH C18
Location:	MW11S						

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	ND	1.75	3.91	7.83	
PFOA	ND	0.637	1.95	7.83	
PFOS	1.00 U	0.790	0.879	7.83	J

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	79.6	60 - 150	
IS	13C2-PFOA	93.0	60 - 150	
IS	13C8-PFOS	89.8	60 - 150	

EBL

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 3/24/17

6

Sample ID: WI-CV-EB06-022617 **Modified EPA Method 537**

Client Data		Sample Data		Laboratory Data			
Name:	CH2M Hill	Matrix:	Groundwater	Lab Sample:	1700268-07	Date Received:	28-Feb-2017 7:28
Project:	Navy Clean CTO-0008 OLF Coupeville	Sample Size:	0.106 L	QC Batch:	B7C0003	Date Extracted:	01-Mar-2017 8:54
Date Collected:	26-Feb-2017 17:45			Date Analyzed:	06-Mar-17 18:08	Column:	BEH C18
Location:	Eq. Blank						

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	ND	2.10	4.72	9.40	
PFOA	ND	0.765	2.36	9.40	
PFOS	1.12	0.948	1.06	9.40	J

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	86.8	60 - 150	
IS	13C2-PFOA	84.2	60 - 150	
IS	13C8-PFOS	91.9	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-EB05-022417

Modified EPA Method 537

Client Data		Sample Data		Laboratory Data			
Name:	CH2M Hill	Matrix:	Groundwater	Lab Sample:	1700268-08	Date Received:	28-Feb-2017 7:28
Project:	Navy Clean CTO-0008 OLF Coupeville	Sample Size:	0.127 L	QC Batch:	B7C0003	Date Extracted:	01-Mar-2017 8:54
Date Collected:	24-Feb-2017 11:35			Date Analyzed:	06-Mar-17 18:20	Column:	BEH C18
Location:	Eq. Blank						

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	ND	1.77	3.94	7.90	
PFOA	ND	0.643	1.97	7.90	
PFOS	ND	0.797	0.886	7.90	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	97.9	60 - 150	
IS	13C2-PFOA	88.7	60 - 150	
IS	13C8-PFOS	99.8	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 3/24/17

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CV-MW11-M	2/26/17
Depth (ft bgs)	170.43
PFBS	7.66 U
PFOS	1.72 U
PFOA	3.83 U

CV-MW11-S	2/26/17
Depth (ft bgs)	140.43
PFBS	3.91 U
PFOS	**1.0 J**
PFOA	1.95 U

CV-MW08-S	3/2/17
Depth (ft bgs)	131.26
PFBS	3.85 U
PFOS	0.865 U
PFOA	1.92 U

CV-MW08-M	3/4/17
Depth (ft bgs)	165.21
PFBS	3.91 U
PFOS	0.879 U
PFOA	1.95 U

CV-MW07-S	3/4/17
Depth (ft bgs)	145.02
PFBS	4.39 U
PFOS	0.987 U
PFOA	2.19 U

Building 11	9/19/16
Depth (ft bgs)	162
PFBS	10 U
PFOS	10 U
PFOA	3 U

CV-MW01-M	2/28/17
Depth (ft bgs)	163.36
PFBS	3.94 U
PFOS	0.886 U
PFOA	1.97 U

CV-MW07-M	3/4/17
Depth (ft bgs)	193.75
PFBS	3.91 U
PFOS	**0.844 J**
PFOA	1.95 U

CV-MW01-D	2/28/17
Depth (ft bgs)	217.42
PFBS	4 U
PFOS	0.9 U
PFOA	2 U

CV-MW04-M	2/28/17
Depth (ft bgs)	159.05
PFBS	4.03 U
PFOS	0.907 U
PFOA	2.02 U

CV-MW02-S	3/1/17
Depth (ft bgs)	106.86
PFBS	**332** D
PFOS	**54.7**
PFOA	**571**

CV-MW04-S	3/1/17
Depth (ft bgs)	126.93
PFBS	3.91 U
PFOS	0.879 U
PFOA	1.95 U

CV-MW02-M	3/1/17
Depth (ft bgs)	167.96
PFBS	3.88 U
PFOS	0.872 U
PFOA	1.94 U

CV-MW14-M	3/4/17
Depth (ft bgs)	176.34
PFBS	**111**
PFOS	**0.898 J**
PFOA	**166**

CV-MW05-S	2/24/17
Depth (ft bgs)	124.56
PFBS	**12.9**
PFOS	0.922 U
PFOA	**9.87**

CV-MW03-D	2/27/17
Depth (ft bgs)	237.43
PFBS	3.91 U
PFOS	**0.914 J**
PFOA	1.95 U

CV-MW05-M	2/23/17
Depth (ft bgs)	175.35
PFBS	**473**
PFOS	**3.26 J**
PFOA	**1190**

Building 11

WI-CV-WL01

CV-MW03-M	2/27/17
Depth (ft bgs)	160.35
PFBS	3.88 U
PFOS	0.872 U
PFOA	1.94 U

CV-MW06-S	2/22/17
Depth (ft bgs)	140.43
PFBS	3.97 U
PFOS	0.893 U
PFOA	1.98 U

CV-MW13-S	3/3/17
Depth (ft bgs)	114.98
PFBS	4.07 U
PFOS	0.915 U
PFOA	2.03 U

Building 2807

WI-CV-WL02

CV-MW13-M	2/22/17
Depth (ft bgs)	187.76
PFBS	**139**
PFOS	0.872 U
PFOA	**20.4**

CV-MW06-M	2/21/17
Depth (ft bgs)	189.51
PFBS	3.91 U
PFOS	0.879 U
PFOA	1.95 U

CV-MW09-M	2/23/17
Depth (ft bgs)	197.33
PFBS	**11.2**
PFOS	0.915 U
PFOA	2.03 U

CV-MW10-D	2/20/17
Depth (ft bgs)	206.67
PFBS	3.85 U
PFOS	0.865 U
PFOA	1.92 U

CV-MW09-S	NA
Depth (ft bgs)	110.92
PFBS	NS
PFOS	NS
PFOA	NS

Building 2807	9/19/16
Depth (ft bgs)	178
PFBS	**110**
PFOS	10 U
PFOA	**17.5 J**

CV-MW10-S	2/22/17
Depth (ft bgs)	159.45
PFBS	**3.07 J**
PFOS	0.938 U
PFOA	2.08 U

CV-MW12-S	NA
Depth (ft bgs)	106.92
PFBS	NS
PFOS	NS
PFOA	NS

CV-MW12-D	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.

	LHA
PFBS	--
PFOS	70
PFOA	70

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

N

0 0.1 0.2 Miles

1 inch = 0.2 mile

Imagery Source: Esri

Figure 10
Detections of PFAS in Groundwater
Outlying Landing Field Coupeville
Coupeville, Washington

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