



**Groundwater Sample Results,
Level 2 Laboratory Report, Level 4 Laboratory Report,
Electronic Data Deliverable, and Data Validation Report,
SDG 1700293**

*Naval Air Station Whidbey Island
Oak Harbor, Washington*

June 2019



March 09, 2017

Vista Work Order No. 1700293

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 March 04, 2017. This sample set was analyzed on a rush turn-around time, under your Project Name 'Navy Clean CTO-08'.

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,

A handwritten signature in cursive script that reads "Karen Lopez" followed by the word "for" in a smaller font.

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. 1700293**Case Narrative****Sample Condition on Receipt:**

Eleven 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:**EPA Method 537**

All of the samples were centrifuged prior to extraction.

The 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 (MB) 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 surrogate recoveries for all QC and field samples were within the acceptance criteria.

An MD/MSD were performed on sample "WI-CV-GW12D-0317".

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Sample Inventory Report

Vista Sample ID	Client Sample ID		Sampled	Received	Components/Containers
1700293-01	WI-CV-GW02S-0317		01-Mar-17 11:00	04-Mar-17 09:49	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1700293-02	WI-CV-GW02SP-0317		01-Mar-17 11:05	04-Mar-17 09:49	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1700293-03	WI-CV-GW04S-0317		01-Mar-17 13:25	04-Mar-17 09:49	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1700293-04	WI-CV-GW04SP-0317		01-Mar-17 13:35	04-Mar-17 09:49	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1700293-05	WI-CV-GW02M-0317		01-Mar-17 13:55	04-Mar-17 09:49	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1700293-06	WI-CV-GW12D-0317	MS/MSD	01-Mar-17 16:50	04-Mar-17 09:49	HDPE Bottle, 125 mL
		MS/MSD			HDPE Bottle, 125 mL
		MS/MSD			HDPE Bottle, 125 mL
		MS/MSD			HDPE Bottle, 125 mL
		MS/MSD			HDPE Bottle, 125 mL
		MS/MSD			HDPE Bottle, 125 mL
1700293-07	WI-CV-EB09-030117		01-Mar-17 14:00	04-Mar-17 09:49	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1700293-08	WI-CV-GW08S-0317		02-Mar-17 10:50	04-Mar-17 09:49	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1700293-09	WI-CV-FB01-030217		02-Mar-17 13:00	04-Mar-17 09:49	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1700293-10	WI-CV-EB10-030217		02-Mar-17 13:15	04-Mar-17 09:49	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1700293-11	WI-CV-EB11-030217		02-Mar-17 13:30	04-Mar-17 09:49	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: B7C0017 Date Extracted: 06-Mar-2017 8:15				Lab Sample: B7C0017-BLK1 Date Analyzed: 06-Mar-17 17:17 Column: BEH C18			
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	1.79	4.00	8.00		IS 13C3-PFBS	117	60 - 150	
PFOA	ND	0.651	2.00	8.00		IS 13C2-PFOA	82.1	60 - 150	
PFOS	ND	0.807	0.900	8.00		IS 13C8-PFOS	104	60 - 150	

DL - Detection limit
RL - Reporting limit

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

Sample ID: OPR					Modified EPA Method 537			
Matrix: Aqueous Sample Size: 0.125 L		QC Batch: B7C0017 Date Extracted: 06-Mar-2017 8:15			Lab Sample: B7C0017-BS1 Date Analyzed: 06-Mar-17 16:27 Column: BEH C18			
Analyte	Amt Found (ng/L)	Spike Amt	%R	Limits	Labeled Standard		%R	LCL-UCL
PFBS	84.2	80.0	105	60 - 130	IS	13C3-PFBS	106	60 - 150
PFOA	83.5	80.0	104	70 - 130	IS	13C2-PFOA	88.8	60 - 150
PFOS	70.4	80.0	88.0	70 - 130	IS	13C8-PFOS	91.8	60 - 150

LCL-UCL - Lower control limit - upper control limit

Sample ID: WI-CV-GW02S-0317						Modified EPA Method 537					
Client Data			Sample Data			Laboratory Data					
Name:	CH2M Hill		Matrix:	Groundwater		Lab Sample:	1700293-01		Date Received:	04-Mar-2017 9:49	
Project:	Navy Clean CTO-08		Sample Size:	0.131 L		QC Batch:	B7C0017		Date Extracted:	06-Mar-2017 8:15	
Date Collected:	01-Mar-2017 11:00					Date Analyzed:	06-Mar-17 18:45 Column: BEH C18				
Location:	MW-02S					07-Mar-17 09:51 Column: BEH C18					
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard		%R	LCL-UCL	Qualifiers	
PFBS	332	17.1	38.2	76.3	D	IS	13C3-PFBS	112	60 - 150	D	
PFOA	571	0.621	1.91	7.63		IS	13C2-PFOA	78.6	60 - 150		
PFOS	54.7	0.770	0.859	7.63		IS	13C8-PFOS	94.0	60 - 150		

DL - Detection limit
 RL - Reporting limit

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

Sample ID: WI-CV-GW02SP-0317						Modified EPA Method 537				
Client Data			Sample Data			Laboratory Data				
Name:	CH2M Hill		Matrix:	Groundwater		Lab Sample:	1700293-02	Date Received:	04-Mar-2017	9:49
Project:	Navy Clean CTO-08		Sample Size:	0.129 L		QC Batch:	B7C0017	Date Extracted:	06-Mar-2017	8:15
Date Collected:	01-Mar-2017 11:05					Date Analyzed:	06-Mar-17 18:58 Column: BEH C18			
Location:	MW-02S						07-Mar-17 10:04 Column: BEH C18			
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard		%R	LCL-UCL	Qualifiers
PFBS	357	17.3	38.8	77.4	D	IS	13C3-PFBS	112	60 - 150	D
PFOA	564	0.630	1.94	7.74		IS	13C2-PFOA	86.4	60 - 150	
PFOS	53.0	0.781	0.872	7.74		IS	13C8-PFOS	90.4	60 - 150	

DL - Detection limit
 RL - Reporting limit

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

Sample ID: WI-CV-GW04S-0317						Modified EPA Method 537				
Client Data			Sample Data			Laboratory Data				
Name: CH2M Hill			Matrix: Groundwater			Lab Sample: 1700293-03		Date Received: 04-Mar-2017 9:49		
Project: Navy Clean CTO-08			Sample Size: 0.128 L			QC Batch: B7C0017		Date Extracted: 06-Mar-2017 8:15		
Date Collected: 01-Mar-2017 13:25						Date Analyzed: 06-Mar-17 19:10 Column: BEH C18				
Location: MW-04S										
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard		%R	LCL-UCL	Qualifiers
PFBS	ND	1.75	3.91	7.83		IS	13C3-PFBS	98.7	60 - 150	
PFOA	ND	0.637	1.95	7.83		IS	13C2-PFOA	83.2	60 - 150	
PFOS	ND	0.790	0.879	7.83		IS	13C8-PFOS	94.8	60 - 150	
DL - Detection limit						LCL-UCL - Lower control limit - upper control limit				
RL - Reporting 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-GW04SP-0317							Modified EPA Method 537												
Client Data			Sample Data			Laboratory Data													
Name:		CH2M Hill		Matrix:		Groundwater		Lab Sample:		1700293-04		Date Received:		04-Mar-2017 9:49					
Project:		Navy Clean CTO-08		Sample Size:		0.131 L		QC Batch:		B7C0017		Date Extracted:		06-Mar-2017 8:15					
Date Collected:		01-Mar-2017 13:35						Date Analyzed:		06-Mar-17 19:23		Column:		BEH C18					
Location:		MW-04S																	
Analyte		Conc. (ng/L)		DL		LOD		LOQ		Qualifiers		Labeled Standard		%R		LCL-UCL		Qualifiers	
PFBS		ND		1.71		3.82		7.64				IS 13C3-PFBS		93.1		60 - 150			
PFOA		ND		0.621		1.91		7.64				IS 13C2-PFOA		82.6		60 - 150			
PFOS		ND		0.770		0.859		7.64				IS 13C8-PFOS		89.8		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-GW02M-0317						Modified EPA Method 537				
Client Data			Sample Data			Laboratory Data				
Name: CH2M Hill			Matrix: Groundwater			Lab Sample: 1700293-05		Date Received: 04-Mar-2017 9:49		
Project: Navy Clean CTO-08			Sample Size: 0.129 L			QC Batch: B7C0017		Date Extracted: 06-Mar-2017 8:15		
Date Collected: 01-Mar-2017 13:55						Date Analyzed: 06-Mar-17 20:13 Column: BEH C18				
Location: MW-02M										
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard		%R	LCL-UCL	Qualifiers
PFBS	ND	1.74	3.88	7.76		IS	13C3-PFBS	96.4	60 - 150	
PFOA	ND	0.631	1.94	7.76		IS	13C2-PFOA	86.0	60 - 150	
PFOS	ND	0.783	0.872	7.76		IS	13C8-PFOS	96.0	60 - 150	

DL - Detection limit
RL - Reporting limit

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

Sample ID: WI-CV-GW12D-0317						Modified EPA Method 537				
Client Data			Sample Data			Laboratory Data				
Name:	CH2M Hill		Matrix:	Groundwater		Lab Sample:	1700293-06	Date Received:	04-Mar-2017	9:49
Project:	Navy Clean CTO-08		Sample Size:	0.126 L		QC Batch:	B7C0017	Date Extracted:	06-Mar-2017	8:15
Date Collected:	01-Mar-2017 16:50					Date Analyzed:	06-Mar-17 20:26 Column: BEH C18			
Location:	MW-12D									
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard		%R	LCL-UCL	Qualifiers
PFBS	ND	1.78	3.97	7.96		IS	13C3-PFBS	88.9	60 - 150	
PFOA	ND	0.648	1.98	7.96		IS	13C2-PFOA	82.0	60 - 150	
PFOS	ND	0.803	0.893	7.96		IS	13C8-PFOS	84.0	60 - 150	

DL - Detection limit
 RL - Reporting limit

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

Sample ID: Matrix Spike										Modified EPA Method 537				
Source Client ID: WI-CV-GW12D-0317			QC Batch: B7C0017				Lab Sample: B7C0017-MS1/B7C0017-MSD1							
Source LabNumber: 1700293-06			Date Extracted: 06-Mar-2017 8:15				Date Analyzed: 06-Mar-17 21:41 Column: BEH C18							
Matrix: Aqueous							06-Mar-17 21:53 Column: BEH C18							
Sample Size: 0.124/0.125 L														
Analyte	Spike-MS (ng/L)	MS %R	MS Qualifers	Spike-MSD (ng/L)	MSD %R	RPD	MSD Qualifers	Labeled Standard		MS %R	MS Qualifers	MSD %R	MSD Qualifers	
PFBS	80.6	111		79.7	107	3.67		IS	13C3-PFBS	89.4		88.0		
PFOA	80.6	114		79.7	112	1.77		IS	13C2-PFOA	83.9		83.0		
PFOS	80.6	111		79.7	90.8	20.0		IS	13C8-PFOS	74.7		89.8		

Sample ID: WI-CV-EB09-030117						Modified EPA Method 537				
Client Data			Sample Data		Laboratory Data					
Name: CH2M Hill			Matrix: Groundwater		Lab Sample: 1700293-07		Date Received: 04-Mar-2017 9:49			
Project: Navy Clean CTO-08			Sample Size: 0.115 L		QC Batch: B7C0017		Date Extracted: 06-Mar-2017 8:15			
Date Collected: 01-Mar-2017 14:00					Date Analyzed: 06-Mar-17 20:38 Column: BEH C18					
Location: EB-09										
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard		%R	LCL-UCL	Qualifiers
PFBS	ND	1.94	4.35	8.69		IS	13C3-PFBS	90.8	60 - 150	
PFOA	ND	0.707	2.17	8.69		IS	13C2-PFOA	86.1	60 - 150	
PFOS	ND	0.877	0.978	8.69		IS	13C8-PFOS	95.5	60 - 150	

DL - Detection limit
RL - Reporting limit

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

Sample ID: WI-CV-GW08S-0317						Modified EPA Method 537				
Client Data			Sample Data			Laboratory Data				
Name: CH2M Hill			Matrix: Groundwater			Lab Sample: 1700293-08		Date Received: 04-Mar-2017 9:49		
Project: Navy Clean CTO-08			Sample Size: 0.130 L			QC Batch: B7C0017		Date Extracted: 06-Mar-2017 8:15		
Date Collected: 02-Mar-2017 10:50						Date Analyzed: 06-Mar-17 20:51 Column: BEH C18				
Location: MW-08S										
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard		%R	LCL-UCL	Qualifiers
PFBS	ND	1.72	3.85	7.71		IS	13C3-PFBS	101	60 - 150	
PFOA	ND	0.627	1.92	7.71		IS	13C2-PFOA	92.3	60 - 150	
PFOS	ND	0.777	0.865	7.71		IS	13C8-PFOS	76.9	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-FB01-030217						Modified EPA Method 537				
Client Data			Sample Data			Laboratory Data				
Name: CH2M Hill			Matrix: Groundwater			Lab Sample: 1700293-09		Date Received: 04-Mar-2017 9:49		
Project: Navy Clean CTO-08			Sample Size: 0.119 L			QC Batch: B7C0017		Date Extracted: 06-Mar-2017 8:15		
Date Collected: 02-Mar-2017 13:00						Date Analyzed: 06-Mar-17 21:03 Column: BEH C18				
Location: FB01										
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard		%R	LCL-UCL	Qualifiers
PFBS	ND	1.87	4.20	8.37		IS	13C3-PFBS	103	60 - 150	
PFOA	ND	0.681	2.10	8.37		IS	13C2-PFOA	85.9	60 - 150	
PFOS	ND	0.845	0.945	8.37		IS	13C8-PFOS	84.0	60 - 150	

DL - Detection limit
 RL - Reporting limit

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

Sample ID: WI-CV-EB10-030217						Modified EPA Method 537				
Client Data			Sample Data			Laboratory Data				
Name: CH2M Hill			Matrix: Groundwater			Lab Sample: 1700293-10		Date Received: 04-Mar-2017 9:49		
Project: Navy Clean CTO-08			Sample Size: 0.0930 L			QC Batch: B7C0017		Date Extracted: 06-Mar-2017 8:15		
Date Collected: 02-Mar-2017 13:15						Date Analyzed: 06-Mar-17 21:16 Column: BEH C18				
Location: EB10										
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard		%R	LCL-UCL	Qualifiers
PFBS	ND	2.41	5.38	10.8		IS	13C3-PFBS	105	60 - 150	
PFOA	ND	0.875	2.69	10.8		IS	13C2-PFOA	92.4	60 - 150	
PFOS	ND	1.08	1.21	10.8		IS	13C8-PFOS	97.0	60 - 150	

DL - Detection limit
RL - Reporting limit

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

Sample ID: WI-CV-EB11-030217						Modified EPA Method 537				
Client Data			Sample Data			Laboratory Data				
Name: CH2M Hill			Matrix: Groundwater			Lab Sample: 1700293-11		Date Received: 04-Mar-2017 9:49		
Project: Navy Clean CTO-08			Sample Size: 0.118 L			QC Batch: B7C0017		Date Extracted: 06-Mar-2017 8:15		
Date Collected: 02-Mar-2017 13:30						Date Analyzed: 06-Mar-17 21:28 Column: BEH C18				
Location: EB11										
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard		%R	LCL-UCL	Qualifiers
PFBS	ND	1.89	4.24	8.46		IS	13C3-PFBS	103	60 - 150	
PFOA	ND	0.689	2.12	8.46		IS	13C2-PFOA	85.0	60 - 150	
PFOS	ND	0.854	0.953	8.46		IS	13C8-PFOS	97.5	60 - 150	

DL - Detection limit
RL - Reporting limit

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

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



Laboratory Project ID: 14093 Temp. 0.7 °C
Storage ID: WR-2 Storage Secured: Yes ☒ No ☐

TAT Standard: ☐ 21 days
(check one): Rush (surcharge may apply)
☐ 14 days ☒ 7 days Specify: _____
State _____ Ph# _____ Fax# _____

Relinquished by (printed name and signature)	Date	Time	Received by (printed name and signature)	Date	Time
Brittany Prentice Bsp	3/3/2017	15:11	Beth B. Benedict	03/04/17	1001
Relinquished by (printed name and signature)	Date	Time	Received by (printed name and signature)	Date	Time

SAMPLE LOG-IN CHECKLIST



Vista Project #: 1700293 TAT 7

Samples Arrival:	Date/Time <u>03/04/17 0949</u>		Initials: <u>UBB</u>		Location: <u>WR-2</u>	
	Shelf/Rack: <u>NA</u>					
Logged In:	Date/Time <u>03/04/17 1011</u>		Initials: <u>UBB</u>		Location: <u>WR-2</u>	
	Shelf/Rack: <u>E5</u>					
Delivered By:	☒ FedEx	☐ UPS	☐ On Trac	☐ DHL	☐ Hand Delivered	☐ Other
Preservation:	☒ Ice	☐ Blue Ice	☐ Dry Ice	☐ None		
Temp °C: <u>0.0</u> (uncorrected)	Time:		Probe used: Yes ☒ No ☐		Thermometer ID: <u>HR-1</u>	
Temp °C: <u>-0.7</u> (corrected)					<u>DT-3</u>	

		YES	NO	NA
Adequate Sample Volume Received? <u>A/B MS/MSD</u>		☒		
Holding Time Acceptable?			☒	
Shipping Container(s) Intact?		☒		
Shipping Custody Seals Intact?		☒		
Shipping Documentation Present?		☒		
Airbill	Trk # <u>7785 7280 8447</u>	☒		
Sample Container Intact?		☒		
Sample Custody Seals Intact?				☒
Chain of Custody / Sample Documentation Present?		☒		
COC Anomaly/Sample Acceptance Form completed?			☒	
If Chlorinated or Drinking Water Samples, Acceptable Preservation?				☒
Preservation Documented:	<u>Na₂S₂O₃</u> <u>Trizma</u>	Yes	No	☒ NA
Shipping Container	<u>Vista</u>	Client	Retain	Return
				Dispose

Comments:



March 09, 2017

Vista Work Order No. 1700293

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 March 04, 2017. This sample set was analyzed on a rush turn-around time, under your Project Name 'Navy Clean CTO-08'.

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,

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

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. 1700293**Case Narrative****Sample Condition on Receipt:**

Eleven 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:**EPA Method 537**

All of the samples were centrifuged prior to extraction.

The 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 (MB) 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 surrogate recoveries for all QC and field samples were within the acceptance criteria.

An MD/MSD were performed on sample "WI-CV-GW12D-0317".

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Sample Inventory Report

Vista Sample ID	Client Sample ID		Sampled	Received	Components/Containers
1700293-01	WI-CV-GW02S-0317		01-Mar-17 11:00	04-Mar-17 09:49	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1700293-02	WI-CV-GW02SP-0317		01-Mar-17 11:05	04-Mar-17 09:49	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1700293-03	WI-CV-GW04S-0317		01-Mar-17 13:25	04-Mar-17 09:49	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1700293-04	WI-CV-GW04SP-0317		01-Mar-17 13:35	04-Mar-17 09:49	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1700293-05	WI-CV-GW02M-0317		01-Mar-17 13:55	04-Mar-17 09:49	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1700293-06	WI-CV-GW12D-0317	MS/MSD	01-Mar-17 16:50	04-Mar-17 09:49	HDPE Bottle, 125 mL
		MS/MSD			HDPE Bottle, 125 mL
		MS/MSD			HDPE Bottle, 125 mL
		MS/MSD			HDPE Bottle, 125 mL
		MS/MSD			HDPE Bottle, 125 mL
		MS/MSD			HDPE Bottle, 125 mL
1700293-07	WI-CV-EB09-030117		01-Mar-17 14:00	04-Mar-17 09:49	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1700293-08	WI-CV-GW08S-0317		02-Mar-17 10:50	04-Mar-17 09:49	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1700293-09	WI-CV-FB01-030217		02-Mar-17 13:00	04-Mar-17 09:49	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1700293-10	WI-CV-EB10-030217		02-Mar-17 13:15	04-Mar-17 09:49	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1700293-11	WI-CV-EB11-030217		02-Mar-17 13:30	04-Mar-17 09:49	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: B7C0017 Date Extracted: 06-Mar-2017 8:15				Lab Sample: B7C0017-BLK1 Date Analyzed: 06-Mar-17 17:17 Column: BEH C18			
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	1.79	4.00	8.00		IS 13C3-PFBS	117	60 - 150	
PFOA	ND	0.651	2.00	8.00		IS 13C2-PFOA	82.1	60 - 150	
PFOS	ND	0.807	0.900	8.00		IS 13C8-PFOS	104	60 - 150	

DL - Detection limit
RL - Reporting limit

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

Sample ID: OPR					Modified EPA Method 537		
Matrix: Aqueous Sample Size: 0.125 L		QC Batch: B7C0017 Date Extracted: 06-Mar-2017 8:15			Lab Sample: B7C0017-BS1 Date Analyzed: 06-Mar-17 16:27 Column: BEH C18		
Analyte	Amt Found (ng/L)	Spike Amt	%R	Limits	Labeled Standard	%R	LCL-UCL
PFBS	84.2	80.0	105	60 - 130	IS 13C3-PFBS	106	60 - 150
PFOA	83.5	80.0	104	70 - 130	IS 13C2-PFOA	88.8	60 - 150
PFOS	70.4	80.0	88.0	70 - 130	IS 13C8-PFOS	91.8	60 - 150

LCL-UCL - Lower control limit - upper control limit

Sample ID: WI-CV-GW02S-0317							Modified EPA Method 537			
Client Data			Sample Data			Laboratory Data				
Name:	CH2M Hill		Matrix:	Groundwater		Lab Sample:	1700293-01	Date Received:	04-Mar-2017	9:49
Project:	Navy Clean CTO-08		Sample Size:	0.131 L		QC Batch:	B7C0017	Date Extracted:	06-Mar-2017	8:15
Date Collected:	01-Mar-2017 11:00					Date Analyzed:	06-Mar-17 18:45 Column: BEH C18			
Location:	MW-02S					07-Mar-17 09:51 Column: BEH C18				
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard		%R	LCL-UCL	Qualifiers
PFBS	332	17.1	38.2	76.3	D	IS	13C3-PFBS	112	60 - 150	D
PFOA	571	0.621	1.91	7.63		IS	13C2-PFOA	78.6	60 - 150	
PFOS	54.7	0.770	0.859	7.63		IS	13C8-PFOS	94.0	60 - 150	

DL - Detection limit
 RL - Reporting limit

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

Sample ID: WI-CV-GW02SP-0317							Modified EPA Method 537				
Client Data			Sample Data			Laboratory Data					
Name:	CH2M Hill		Matrix:	Groundwater		Lab Sample:	1700293-02		Date Received:	04-Mar-2017 9:49	
Project:	Navy Clean CTO-08		Sample Size:	0.129 L		QC Batch:	B7C0017		Date Extracted:	06-Mar-2017 8:15	
Date Collected:	01-Mar-2017 11:05					Date Analyzed:	06-Mar-17 18:58 Column: BEH C18				
Location:	MW-02S					07-Mar-17 10:04 Column: BEH C18					
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard		%R	LCL-UCL	Qualifiers	
PFBS	357	17.3	38.8	77.4	D	IS	13C3-PFBS	112	60 - 150	D	
PFOA	564	0.630	1.94	7.74		IS	13C2-PFOA	86.4	60 - 150		
PFOS	53.0	0.781	0.872	7.74		IS	13C8-PFOS	90.4	60 - 150		

DL - Detection limit
 RL - Reporting limit

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

Sample ID: WI-CV-GW04S-0317						Modified EPA Method 537				
Client Data			Sample Data			Laboratory Data				
Name: CH2M Hill			Matrix: Groundwater			Lab Sample: 1700293-03		Date Received: 04-Mar-2017 9:49		
Project: Navy Clean CTO-08			Sample Size: 0.128 L			QC Batch: B7C0017		Date Extracted: 06-Mar-2017 8:15		
Date Collected: 01-Mar-2017 13:25						Date Analyzed: 06-Mar-17 19:10 Column: BEH C18				
Location: MW-04S										
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard		%R	LCL-UCL	Qualifiers
PFBS	ND	1.75	3.91	7.83		IS	13C3-PFBS	98.7	60 - 150	
PFOA	ND	0.637	1.95	7.83		IS	13C2-PFOA	83.2	60 - 150	
PFOS	ND	0.790	0.879	7.83		IS	13C8-PFOS	94.8	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-GW04SP-0317						Modified EPA Method 537				
Client Data			Sample Data			Laboratory Data				
Name: CH2M Hill			Matrix: Groundwater			Lab Sample: 1700293-04		Date Received: 04-Mar-2017 9:49		
Project: Navy Clean CTO-08			Sample Size: 0.131 L			QC Batch: B7C0017		Date Extracted: 06-Mar-2017 8:15		
Date Collected: 01-Mar-2017 13:35						Date Analyzed: 06-Mar-17 19:23 Column: BEH C18				
Location: MW-04S										
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard		%R	LCL-UCL	Qualifiers
PFBS	ND	1.71	3.82	7.64		IS	13C3-PFBS	93.1	60 - 150	
PFOA	ND	0.621	1.91	7.64		IS	13C2-PFOA	82.6	60 - 150	
PFOS	ND	0.770	0.859	7.64		IS	13C8-PFOS	89.8	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-GW02M-0317						Modified EPA Method 537				
Client Data			Sample Data			Laboratory Data				
Name: CH2M Hill			Matrix: Groundwater			Lab Sample: 1700293-05		Date Received: 04-Mar-2017 9:49		
Project: Navy Clean CTO-08			Sample Size: 0.129 L			QC Batch: B7C0017		Date Extracted: 06-Mar-2017 8:15		
Date Collected: 01-Mar-2017 13:55						Date Analyzed: 06-Mar-17 20:13 Column: BEH C18				
Location: MW-02M										
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard		%R	LCL-UCL	Qualifiers
PFBS	ND	1.74	3.88	7.76		IS	13C3-PFBS	96.4	60 - 150	
PFOA	ND	0.631	1.94	7.76		IS	13C2-PFOA	86.0	60 - 150	
PFOS	ND	0.783	0.872	7.76		IS	13C8-PFOS	96.0	60 - 150	

DL - Detection limit
 RL - Reporting limit

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

Sample ID: WI-CV-GW12D-0317						Modified EPA Method 537				
Client Data Name: CH2M Hill Project: Navy Clean CTO-08 Date Collected: 01-Mar-2017 16:50 Location: MW-12D			Sample Data Matrix: Groundwater Sample Size: 0.126 L			Laboratory Data Lab Sample: 1700293-06 Date Received: 04-Mar-2017 9:49 QC Batch: B7C0017 Date Extracted: 06-Mar-2017 8:15 Date Analyzed: 06-Mar-17 20:26 Column: BEH C18				
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard		%R	LCL-UCL	Qualifiers
PFBS	ND	1.78	3.97	7.96		IS	13C3-PFBS	88.9	60 - 150	
PFOA	ND	0.648	1.98	7.96		IS	13C2-PFOA	82.0	60 - 150	
PFOS	ND	0.803	0.893	7.96		IS	13C8-PFOS	84.0	60 - 150	

DL - Detection limit
RL - Reporting limit

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

Sample ID: Matrix Spike								Modified EPA Method 537					
Source Client ID: WI-CV-GW12D-0317				QC Batch: B7C0017				Lab Sample: B7C0017-MS1/B7C0017-MSD1					
Source LabNumber: 1700293-06				Date Extracted: 06-Mar-2017 8:15				Date Analyzed: 06-Mar-17 21:41 Column: BEH C18					
Matrix: Aqueous								06-Mar-17 21:53 Column: BEH C18					
Sample Size: 0.124/0.125 L													
Analyte	Spike-MS (ng/L)	MS %R	MS Qualifers	Spike-MSD (ng/L)	MSD %R	RPD	MSD Qualifers	Labeled Standard		MS %R	MS Qualifers	MSD %R	MSD Qualifers
PFBS	80.6	111		79.7	107	3.67		IS 13C3-PFBS	89.4			88.0	
PFOA	80.6	114		79.7	112	1.77		IS 13C2-PFOA	83.9			83.0	
PFOS	80.6	111		79.7	90.8	20.0		IS 13C8-PFOS	74.7			89.8	

Sample ID: WI-CV-EB09-030117						Modified EPA Method 537				
Client Data			Sample Data			Laboratory Data				
Name:	CH2M Hill		Matrix:	Groundwater		Lab Sample:	1700293-07		Date Received:	04-Mar-2017 9:49
Project:	Navy Clean CTO-08		Sample Size:	0.115 L		QC Batch:	B7C0017		Date Extracted:	06-Mar-2017 8:15
Date Collected:	01-Mar-2017 14:00					Date Analyzed:	06-Mar-17 20:38 Column: BEH C18			
Location:	EB-09									
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard		%R	LCL-UCL	Qualifiers
PFBS	ND	1.94	4.35	8.69		IS	13C3-PFBS	90.8	60 - 150	
PFOA	ND	0.707	2.17	8.69		IS	13C2-PFOA	86.1	60 - 150	
PFOS	ND	0.877	0.978	8.69		IS	13C8-PFOS	95.5	60 - 150	

DL - Detection limit
RL - Reporting limit

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

Sample ID: WI-CV-GW08S-0317						Modified EPA Method 537				
Client Data			Sample Data			Laboratory Data				
Name:	CH2M Hill		Matrix:	Groundwater		Lab Sample:	1700293-08	Date Received:	04-Mar-2017 9:49	
Project:	Navy Clean CTO-08		Sample Size:	0.130 L		QC Batch:	B7C0017	Date Extracted:	06-Mar-2017 8:15	
Date Collected:	02-Mar-2017 10:50					Date Analyzed:	06-Mar-17 20:51	Column: BEH C18		
Location:	MW-08S									
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard		%R	LCL-UCL	Qualifiers
PFBS	ND	1.72	3.85	7.71		IS	13C3-PFBS	101	60 - 150	
PFOA	ND	0.627	1.92	7.71		IS	13C2-PFOA	92.3	60 - 150	
PFOS	ND	0.777	0.865	7.71		IS	13C8-PFOS	76.9	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-FB01-030217						Modified EPA Method 537				
Client Data			Sample Data			Laboratory Data				
Name: CH2M Hill			Matrix: Groundwater			Lab Sample: 1700293-09		Date Received: 04-Mar-2017 9:49		
Project: Navy Clean CTO-08			Sample Size: 0.119 L			QC Batch: B7C0017		Date Extracted: 06-Mar-2017 8:15		
Date Collected: 02-Mar-2017 13:00						Date Analyzed: 06-Mar-17 21:03 Column: BEH C18				
Location: FB01										
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard		%R	LCL-UCL	Qualifiers
PFBS	ND	1.87	4.20	8.37		IS	13C3-PFBS	103	60 - 150	
PFOA	ND	0.681	2.10	8.37		IS	13C2-PFOA	85.9	60 - 150	
PFOS	ND	0.845	0.945	8.37		IS	13C8-PFOS	84.0	60 - 150	

DL - Detection limit
RL - Reporting limit

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

Sample ID: WI-CV-EB10-030217						Modified EPA Method 537				
Client Data			Sample Data			Laboratory Data				
Name: CH2M Hill			Matrix: Groundwater			Lab Sample: 1700293-10		Date Received: 04-Mar-2017 9:49		
Project: Navy Clean CTO-08			Sample Size: 0.0930 L			QC Batch: B7C0017		Date Extracted: 06-Mar-2017 8:15		
Date Collected: 02-Mar-2017 13:15						Date Analyzed: 06-Mar-17 21:16 Column: BEH C18				
Location: EB10										
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard		%R	LCL-UCL	Qualifiers
PFBS	ND	2.41	5.38	10.8		IS	13C3-PFBS	105	60 - 150	
PFOA	ND	0.875	2.69	10.8		IS	13C2-PFOA	92.4	60 - 150	
PFOS	ND	1.08	1.21	10.8		IS	13C8-PFOS	97.0	60 - 150	

DL - Detection limit
RL - Reporting limit

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

Sample ID: WI-CV-EB11-030217						Modified EPA Method 537				
Client Data			Sample Data			Laboratory Data				
Name: CH2M Hill			Matrix: Groundwater			Lab Sample: 1700293-11		Date Received: 04-Mar-2017 9:49		
Project: Navy Clean CTO-08			Sample Size: 0.118 L			QC Batch: B7C0017		Date Extracted: 06-Mar-2017 8:15		
Date Collected: 02-Mar-2017 13:30						Date Analyzed: 06-Mar-17 21:28 Column: BEH C18				
Location: EB11										
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard		%R	LCL-UCL	Qualifiers
PFBS	ND	1.89	4.24	8.46		IS	13C3-PFBS	103	60 - 150	
PFOA	ND	0.689	2.12	8.46		IS	13C2-PFOA	85.0	60 - 150	
PFOS	ND	0.854	0.953	8.46		IS	13C8-PFOS	97.5	60 - 150	

DL - Detection limit
 RL - Reporting limit

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

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

CHAIN OF CUSTODY

For Laboratory Use Only

Laboratory Project ID: 1700293 Temp: 70.7 °C

Storage ID: WR-2 Storage Secured: Yes ☒ No ☐

Project ID: Navy CLEAN CTD-08 P.O.#: 10006-7-106051 Sampler: B. Prentice
674580.09.FI.WS (name)

TAT (check one): ☐ 21 days ☒ 7 days Specify: _____

Standard: ☐ Rush (surcharge may apply) ☐ 14 days ☒ 7 days

State _____ Ph# _____ Fax# _____

Invoice to: Name Katie Tiffin Company CH2M Address _____ City _____ State _____

Relinquished by (printed name and signature) Brittany Prentice Byp Date 3/3/2017 Time 15:11 Received by (printed name and signature) B. Benedict Date 03/04/17 Time 1001

SHIP TO: Vista Analytical Laboratory 1104 Windfield Way El Dorado Hills, CA 95762 (916) 673-1520 * Fax (916) 673-0106				Method of Shipment: <u>FedEx</u>		Tracking No.: _____		Add Analysis(es) Requested		EPA 1613	EPA 8290	EPA 8280	EPA 1668	EPA 1614	CAR8429								
ATTN: <u>sample receiving</u>								Container(s)															
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-GW025-0317	3/1/2017	11:00	MW-025	2	O	GW																X	
WI-CV-GW025/SP-0317	3/1/2017	11:05	MW-025	2	O	GW																X	
WI-CV-GW045-0317	3/1/2017	13:25	MW-045	2	O	GW																X	
WI-CV-GW045/SP-0317	3/1/2017	13:35	MW-045	2	O	GW																X	
WI-CV-GW02M-0317	3/1/2017	13:55	MW-02M	2	O	GW																X	
WI-CV-GW12D-0317	3/1/2017	16:50	MW-12D	2	O	GW																X	
WI-CV-GW12D-0317-MU	3/1/2017	16:50	MW-12D	2	O	GW																X	
WI-CV-GW12D-0317-SD	3/1/2017	16:50	MW-12D	2	O	GW																X	
WI-CV-EB09-030117	3/1/2017	14:00	EB-09	2	O	GW																X	
WI-CV-GW085-0317	3/2/2017	10:50	GW-085	2	O	GW																X	

Special Instructions/Comments: _____

SEND DOCUMENTATION AND RESULTS TO:

Name: Tiffany Hill
 Company: CH2M
 Address: 1100 NE Circle Blvd
 City: Corvallis State: OR Zip: 97330
 Phone: _____ Fax: _____
 Email: Tiffany.Hill@chem.com

Container Types: A = 1 Liter Amber, G = Glass Jar
 P = PUF, T = MM5, O = Other: 125ml HDPE
 Work Order 1700293

Bottle Preservation Type: T = Thiosulfate,
 O = Other: <60°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: _____



Storage Secured: Yes ☒ No ☐

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. Page 25 of 225

SAMPLE LOG-IN CHECKLIST



Vista Project #: 1700293 TAT 7

Samples Arrival:	Date/Time <u>03/04/17 0949</u>		Initials: <u>UBB</u>		Location: <u>WR-2</u>	
	Shelf/Rack: <u>NA</u>					
Logged In:	Date/Time <u>03/04/17 1011</u>		Initials: <u>UBB</u>		Location: <u>WR-2</u>	
	Shelf/Rack: <u>E5</u>					
Delivered By:	☒ FedEx	☐ UPS	☐ On Trac	☐ DHL	☐ Hand Delivered	☐ Other
Preservation:	☒ Ice	☐ Blue Ice	☐ Dry Ice	☐ None		
Temp °C: <u>0.0</u> (uncorrected)	Time:		Probe used: Yes ☒ No ☐		Thermometer ID: <u>HR-1</u>	
Temp °C: <u>-0.7</u> (corrected)					<u>DT-3</u>	

		YES	NO	NA	
Adequate Sample Volume Received? <u>A/B MS/MSD</u>		☒			
Holding Time Acceptable?			☒		
Shipping Container(s) Intact?		☒			
Shipping Custody Seals Intact?		☒			
Shipping Documentation Present?		☒			
Airbill	Trk # <u>7785 7280 8447</u>	☒			
Sample Container Intact?		☒			
Sample Custody Seals Intact?				☒	
Chain of Custody / Sample Documentation Present?		☒			
COC Anomaly/Sample Acceptance Form completed?			☒		
If Chlorinated or Drinking Water Samples, Acceptable Preservation?				☒	
Preservation Documented:	<u>Na₂S₂O₃</u> <u>Trizma</u>	Yes	No	☒ NA	
Shipping Container	☒ Vista	☐ Client	☐ Retain	☐ Return	☐ Dispose

Comments:

EXTRACTION INFORMATION



Process Sheet

Workorder: **1700293**

Prep Expiration: 2017-Mar-15

Client: CH2M Hill

Workorder Due: 11-Mar-17 00:00

TAT: 7

Method: 537 PFAS DOD (LOQ as mRL)

Matrix: Aqueous

Prep Batch: B7 C0017Prep Data Entered: BP 3.7.17
Date and Initials

Version: PFOA, PFOS, PFBS

Initial Sequence: _____

LabSampleID	Recon	ClientSampleID	Date Received	Location	Comments
1700293-01	☒	WI-CV-GW02S-0317	04-Mar-17 09:49	WR-2 E-5	
1700293-02	☒	WI-CV-GW02S/SP-0317	04-Mar-17 09:49	WR-2 E-5	
1700293-03	☒	WI-CV-GW04S-0317	04-Mar-17 09:49	WR-2 E-5	
1700293-04	☒	WI-CV-GW04S/SP-0317	04-Mar-17 09:49	WR-2 E-5	
1700293-05	☒	WI-CV-GW02M-0317	04-Mar-17 09:49	WR-2 E-5	
1700293-06	☒	WI-CV-GW12D-0317	04-Mar-17 09:49	WR-2 E-5	MS/MSD
1700293-07	☒	WI-CV-EB09-030117	04-Mar-17 09:49	WR-2 E-5	
1700293-08	☒	WI-CV-GW08S-0317	04-Mar-17 09:49	WR-2 E-5	
1700293-09	☒	WI-CV-FB01-030217	04-Mar-17 09:49	WR-2 E-5	
1700293-10	☒	WI-CV-EB10-030217	04-Mar-17 09:49	WR-2 E-5	
1700293-11	☒	WI-CV-EB11-030217	04-Mar-17 09:49	WR-2 E-5	

Vista PM: Martha Maier

Vial Box ID: The DukeSample Reconciled By: B. Parker 3/6/17

Page 1 of 1

Balance ID: NA

Sample ID	Chemist: <u>NA</u> Date: <u>↓</u> Time: <u>↓</u>		Chemist: <u>NA</u> Date: <u>↓</u> Time: <u>↓</u>		Chemist/Date BP 3.6.17		
	Boat Wt.	Sample + Boat Wt.	Residue + Boat Wt.	pH before	pH* after	Cr	
1700a93-01 (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 (A)				7	2	0	
-06 B (A)				7	2	0	
-06-C (A)				7	2	0	
-07 (A) (C)				5	2	0	
-08 (A)				7	2	0	
-09 (A) (C)				5	2	0	
-10 (C)				5	2	0	
-11 (C)				5	2	0	

BP 3.6.17

Procedure:

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

Notes:

- (A) Added 3 drops HCl to adjust pH to 2
- (B) Added 4 drops HCl to adjust pH to 2
- (C) Added 2 drops HCl to adjust pH to 2

BP 3.6.17

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

PREPARATION BENCH SHEET

Matrix: Aqueous

Method: 537 PFAS DOD (LOO as mRL)

B7C0017

Chemist: E. Schnitzler

Prep Date/Time: 06-Mar-17 08:15

Prepared using: LCMS - SPE Extraction-LCMS

C	VISTA Sample ID	Bottle + Sample (g)	Bottle Only (g)	Sample Amt. (L)	IS/NS CHEM/WIT DATE	C7C0030 SPE	RS CHEM/WIT DATE
☐	B7C0017-BLK1	NA	NA	(0.125)	EL BP 3/6/17	BP 3.6.17	EL BP 3/6/17
☐	B7C0017-BS1	↓	↓	↓			
☐	B7C0017-MS1 1700293-06 (A)	150.92	26.84	0.12408			
☐	B7C0017-MSD1 1700293-06	153.07	27.67	0.12540			
☐	1700293-01	158.17	27.11	0.13106			
☐	1700293-02	156.20	27.08	0.12912			
☐	1700293-03	154.78	27.02	0.12776			
☐	1700293-04	157.96	26.99	0.13097			
☐	1700293-05	155.92	27.02	0.12890			
☐	1700293-06	152.36	26.71	0.12565			
☐	1700293-07	141.81	26.74	0.11507			
☐	1700293-08	156.74	26.96	0.12978			
☐	1700293-09	146.36	26.94	0.11942			
☐	1700293-10	119.71	26.72	0.09299			
☐	1700293-11	144.91	26.73	0.11818			

(A) centrifuged to remove gelatinous substance BP 3.6.17

IS Name (3) 16L1920, 10 mL	NS Name (V1) 16I2905, 10 mL	RS Name (V4) 17A1201, 10 mL	SPE Chem: Strata X-AU 33μm 200μm Ele SOLV: 25% Methanol / MeOH Final Volume(s): 1 mL	Check Out: BP 3.6.17 Chemist/Date: Check In: NA Chemist/Date: Balance ID: HAMS-8
----------------------------------	-----------------------------------	-----------------------------------	--	--

Comments: Assume 1 g = 1 mL

SAMPLE DATA – MODIFIED EPA METHOD 537

Dataset: U:\G1.PRO\Results\2017\170306G1\170306G1-10.qld

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Printed: Tuesday, March 07, 2017 10:59:48 AM Pacific Standard Time

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	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7	4.309e0	6.086e3		0.125	2.97		
2	4 PFOA	413 > 368.7	2.102e2	2.394e4		0.125	4.27		
3	6 PFOS	499 > 79.9		6.807e3		0.125			
4	7 13C3-PFBS	302.0 > 98.8	6.086e3	1.271e4	0.410	0.125	2.98	117	117
5	8 13C4-PFHxA	367.2 > 321.8	1.417e4	1.271e4	1.098	0.125	3.87	102	102
6	9 18O2-PFHxS	403 > 102.6	5.539e3	1.271e4	0.434	0.125	3.99	100	100
7	10 13C2-PFOA	414.9 > 369.7	2.394e4	6.330e3	4.608	0.125	4.27	82.1	82.1
8	11 13C5-PFNA	468.2 > 422.9	6.128e3	8.425e3	0.867	0.125	4.60	83.9	83.9
9	12 13C8-PFOS	507.0 > 79.9	6.807e3	6.861e3	0.958	0.125	4.67	104	104
10	13 13C5-PFHxA	318>272.9	2.929e4	2.929e4	1.000	0.125	3.35	100	100
11	14 13C3-PFHxS	401.9 > 79.9	1.271e4	1.271e4	1.000	0.125	3.99	100	100
12	15 13C8-PFOA	421.3 > 376	6.330e3	6.330e3	1.000	0.125	4.27	100	100
13	16 13C9-PFNA	472.2 > 426.9	8.425e3	8.425e3	1.000	0.125	4.60	100	100
14	17 13C4-PFOS	503.0 > 79.9	6.861e3	6.861e3	1.000	0.125	4.67	100	100
15	18 Total PFBS	299 > 79.7		5.539e3		0.125			
16	20 Total PFOA	413 > 368.7		2.394e4		0.125			
17	21 Total PFOS	499 > 79.9		6.807e3		0.125			

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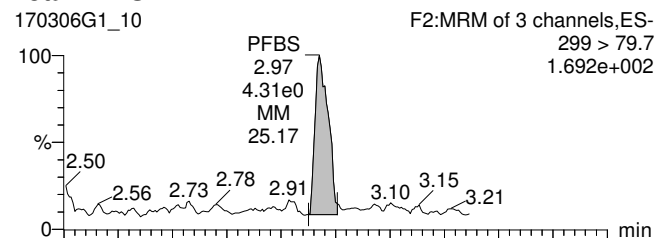
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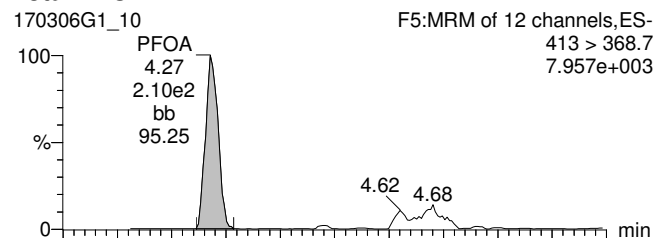
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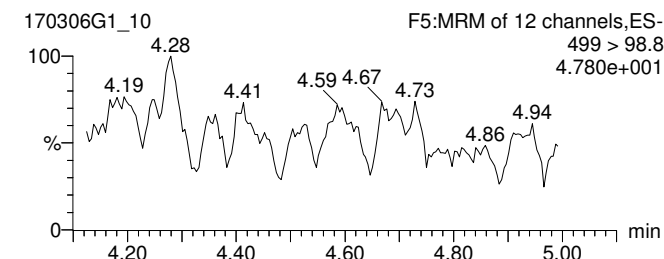
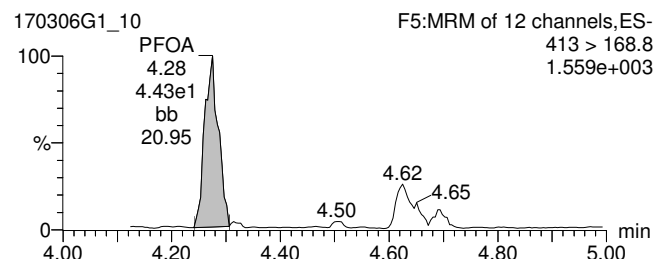
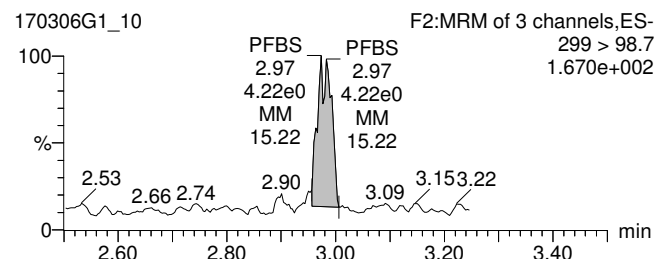
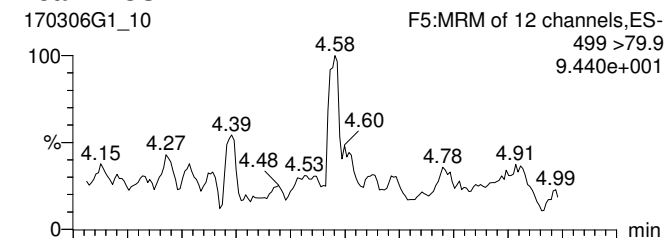
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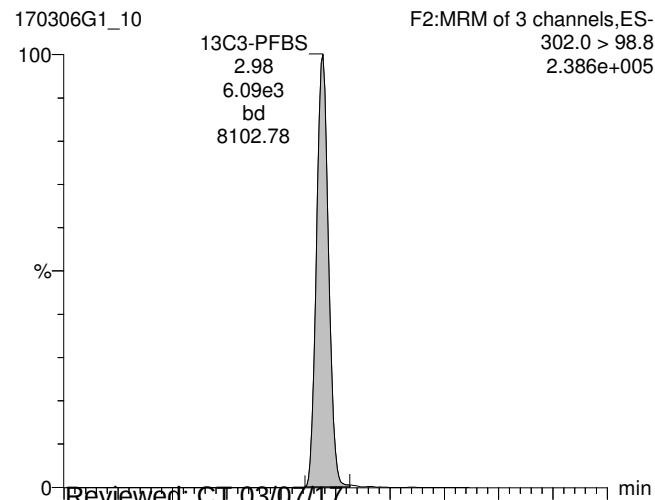
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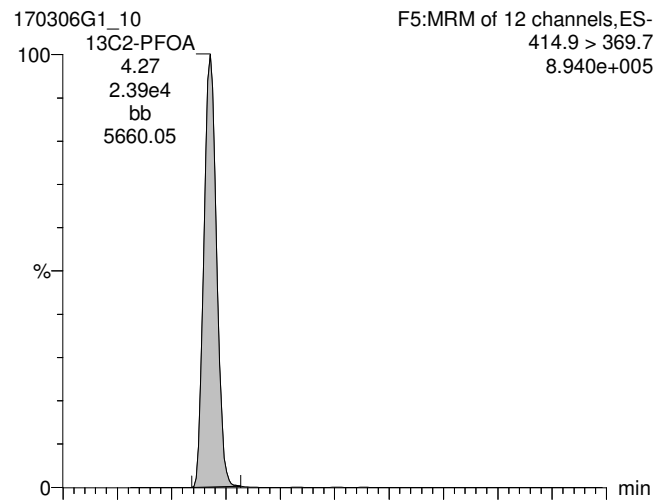
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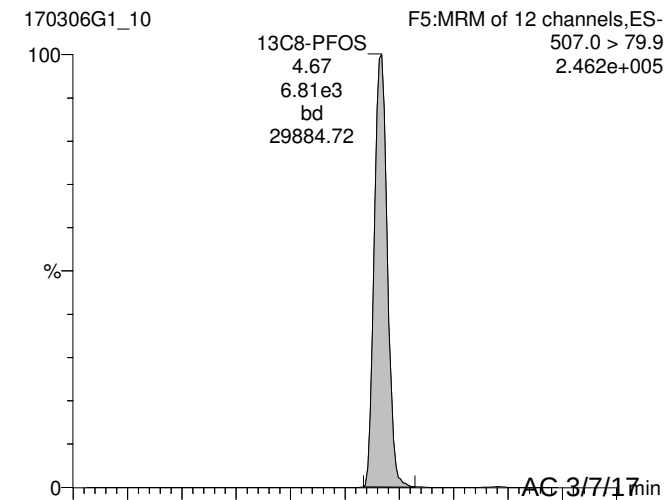
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13C2-PFOA



13C8-PFOS



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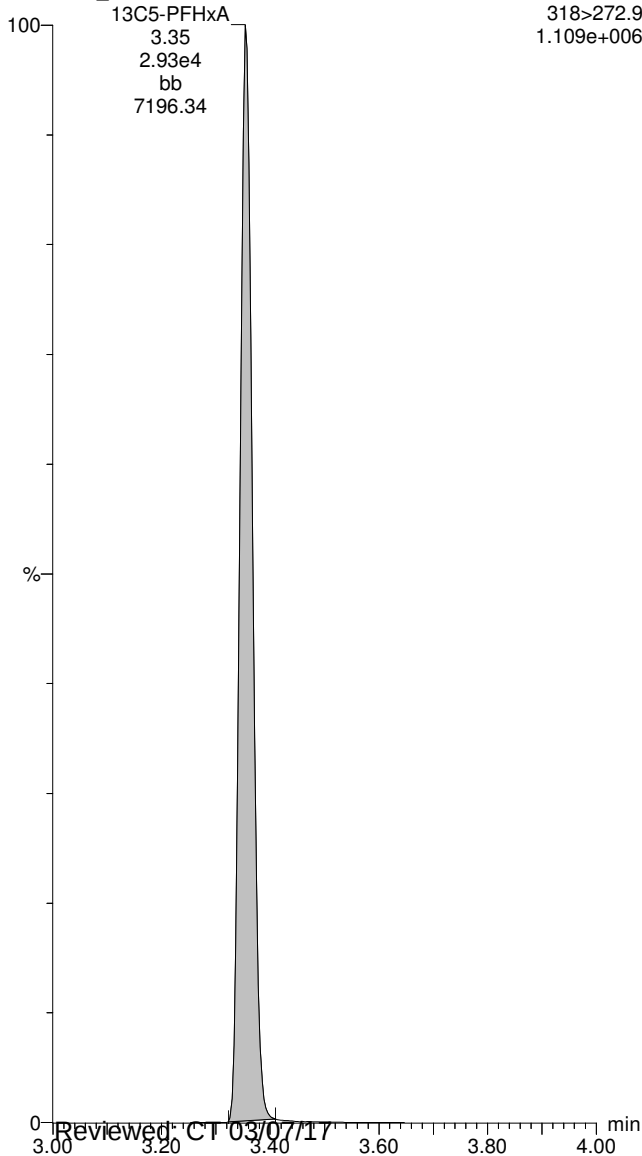
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13C5-PFHxA

170306G1_10

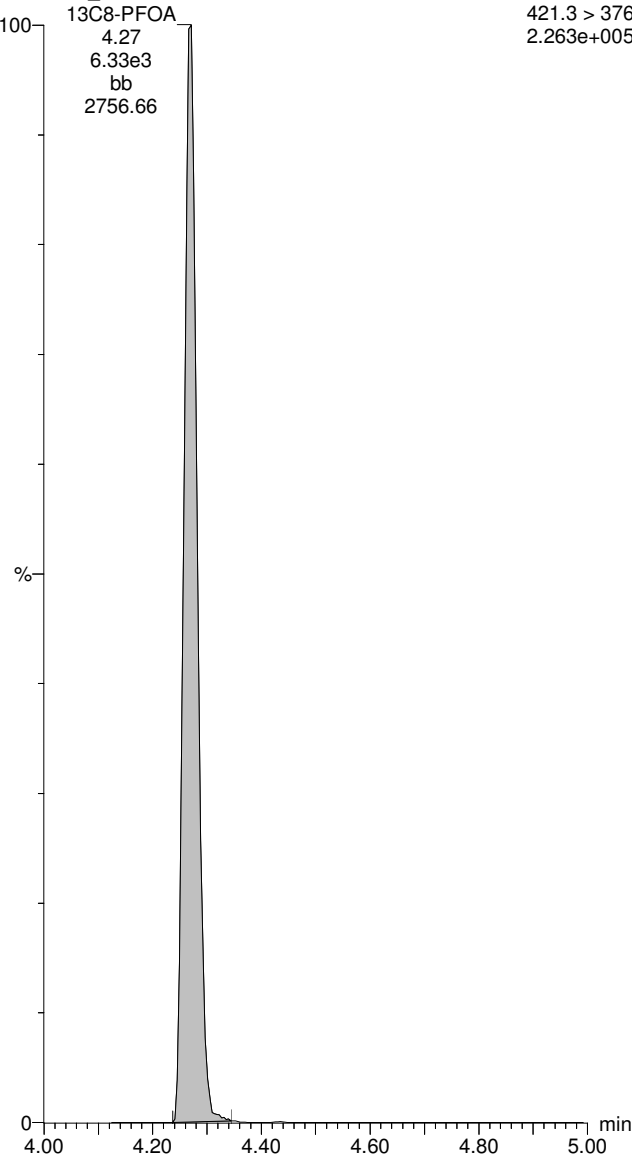
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318>272.9
1.109e+006



13C8-PFOA

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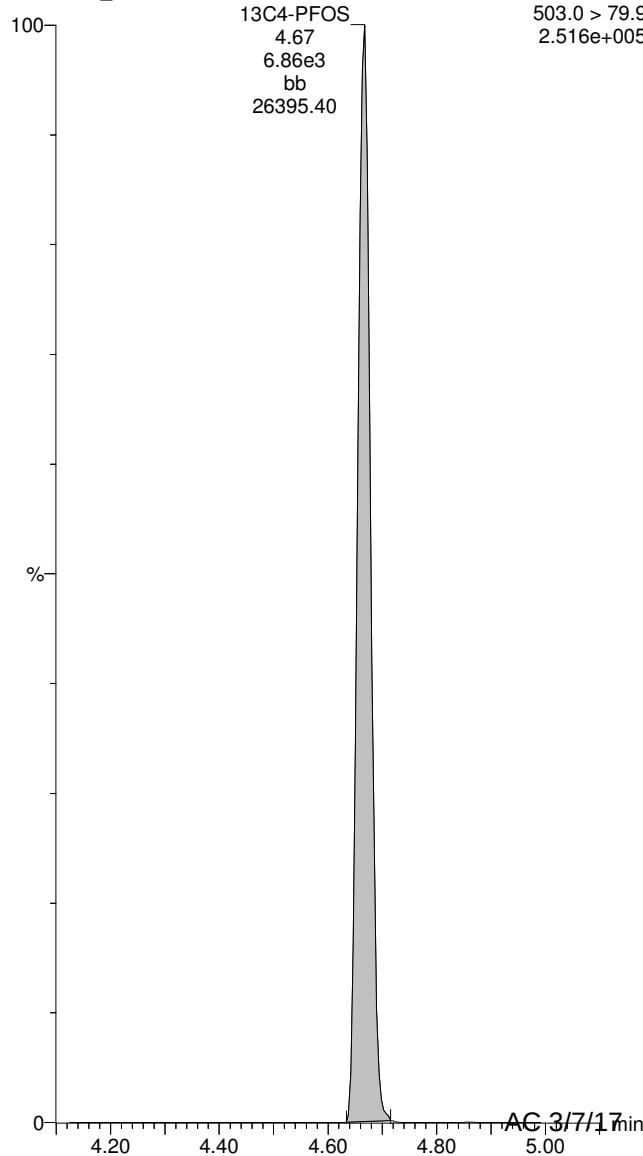
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421.3 > 376
2.263e+005



13C4-PFOS

170306G1_10

F5:MRM of 12 channels,ES-
503.0 > 79.9
2.516e+005



Reviewed: CT 03/07/17

Work Order 1700293

AC 3/7/17

Page 34 of 225

Dataset: U:\G1.PRO\Results\2017\170306G1\170306G1-6.qld

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	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7	1.084e4	5.394e3		0.125	3.05	84.2	105
2	4 PFOA	413 > 368.7	1.772e4	2.616e4		0.125	4.32	83.5	104
3	6 PFOS	499 > 79.9	2.263e3	6.031e3		0.125	4.70	70.4	88.0
4	7 13C3-PFBS	302.0 > 98.8	5.394e3	1.242e4	0.410	0.125	3.05	106	106
5	8 13C4-PFHxA	367.2 > 321.8	1.426e4	1.242e4	1.098	0.125	3.93	105	105
6	9 18O2-PFHxS	403 > 102.6	5.249e3	1.242e4	0.434	0.125	4.04	97.3	97.3
7	10 13C2-PFOA	414.9 > 369.7	2.616e4	6.394e3	4.608	0.125	4.32	88.8	88.8
8	11 13C5-PFNA	468.2 > 422.9	5.699e3	8.095e3	0.867	0.125	4.64	81.2	81.2
9	12 13C8-PFOS	507.0 > 79.9	6.031e3	6.852e3	0.958	0.125	4.70	91.8	91.8
10	13 13C5-PFHxA	318>272.9	2.591e4	2.591e4	1.000	0.125	3.43	100	100
11	14 13C3-PFHxS	401.9 > 79.9	1.242e4	1.242e4	1.000	0.125	4.04	100	100
12	15 13C8-PFOA	421.3 > 376	6.394e3	6.394e3	1.000	0.125	4.32	100	100
13	16 13C9-PFNA	472.2 > 426.9	8.095e3	8.095e3	1.000	0.125	4.64	100	100
14	17 13C4-PFOS	503.0 > 79.9	6.852e3	6.852e3	1.000	0.125	4.70	100	100
15	18 Total PFBS	299 > 79.7		5.249e3		0.125		84.2	
16	20 Total PFOA	413 > 368.7		2.616e4		0.125		83.5	
17	21 Total PFOS	499 > 79.9		6.031e3		0.125		70.4	

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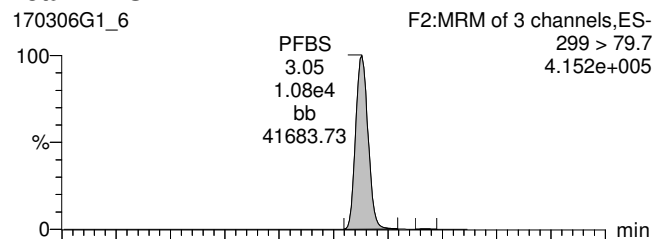
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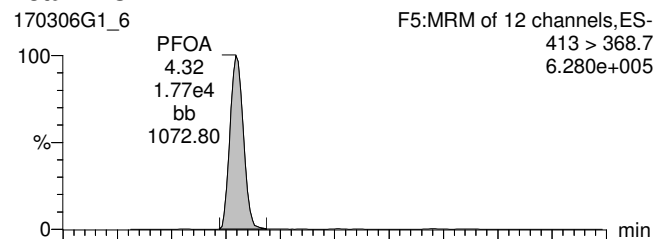
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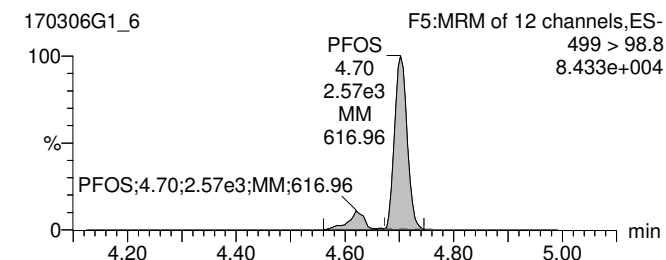
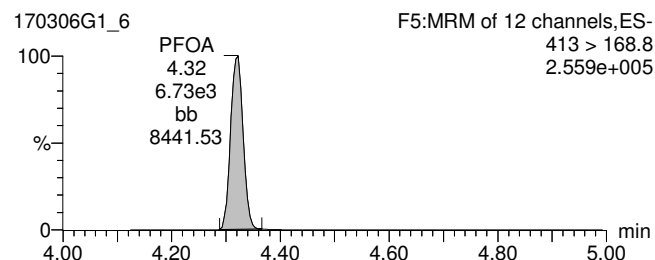
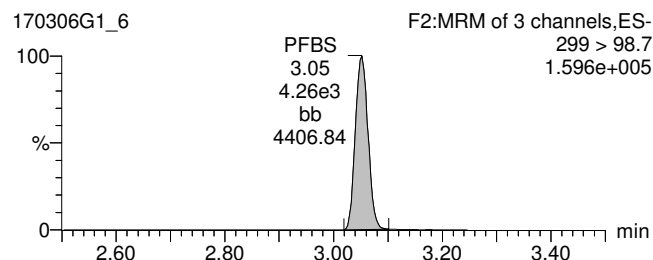
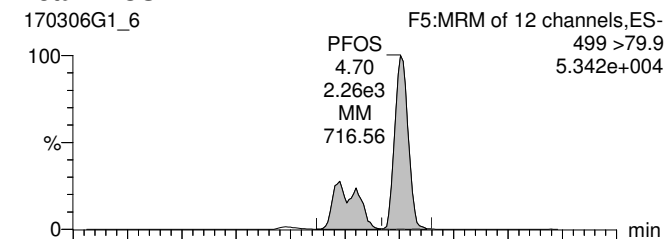
Total PFBS



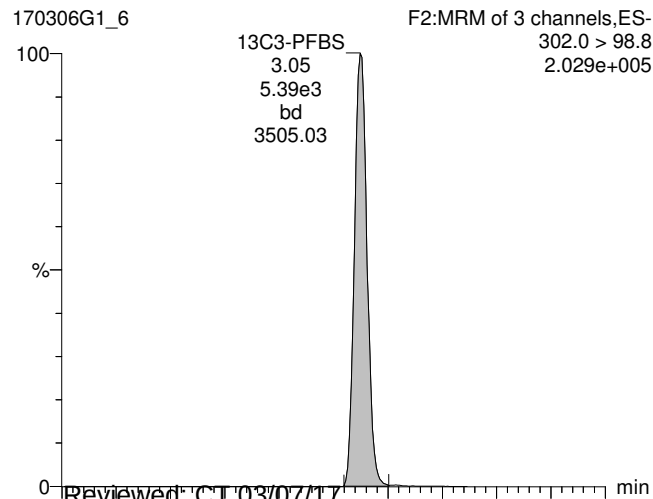
Total PFOA



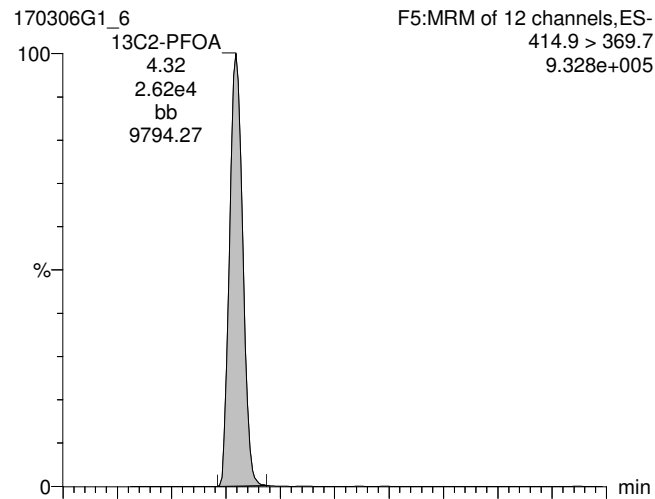
Total PFOS



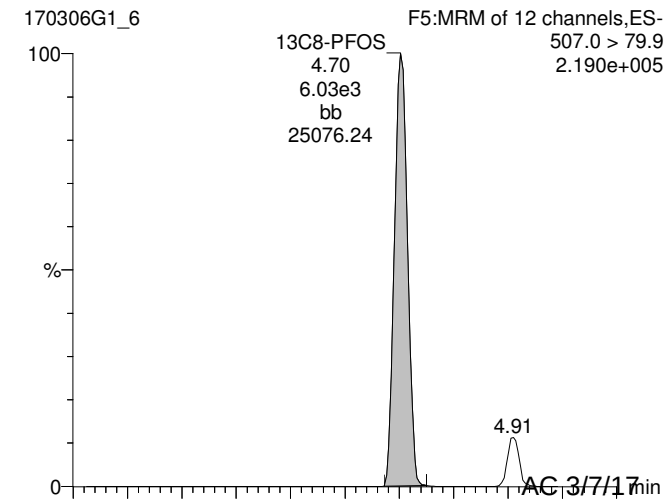
13C3-PFBS



13C2-PFOA



13C8-PFOS



Reviewed: C:\03\07\17

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Dataset: U:\G1.PRO\Results\2017\170306G1\170306G1-6.qld

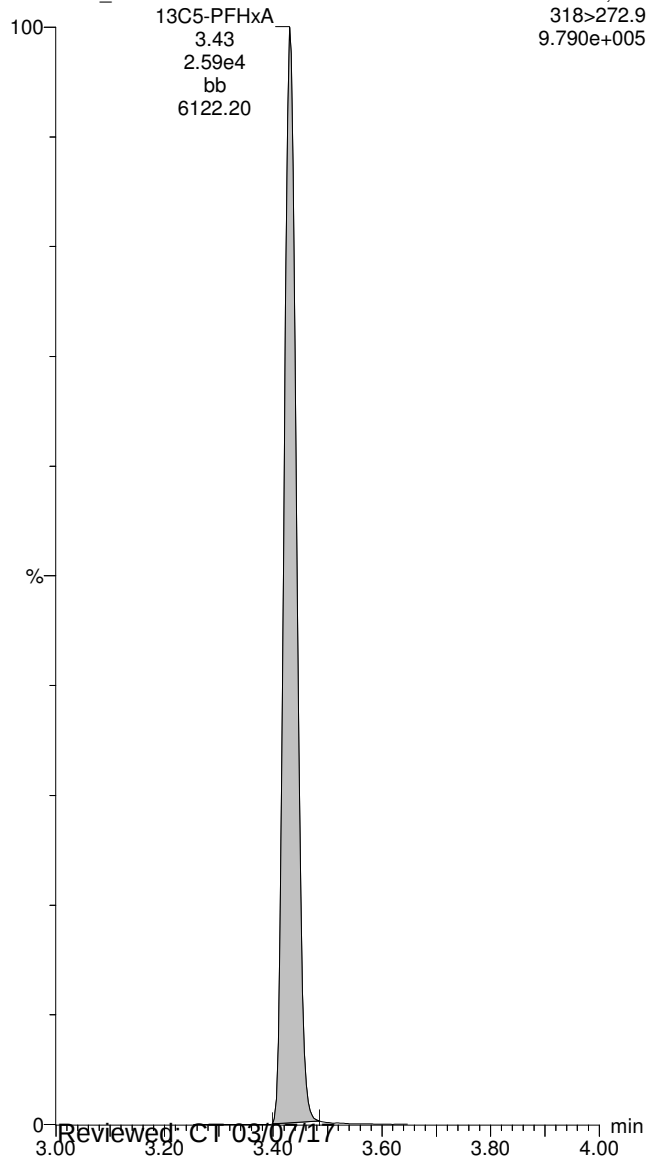
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Printed: Tuesday, March 07, 2017 10:56:07 AM Pacific Standard Time

ID: B7C0017-BS1 OPR 0.125, Description: OPR, Name: 170306G1_6, Date: 06-Mar-2017, Time: 16:27:44, Instrument: , Lab: , User:

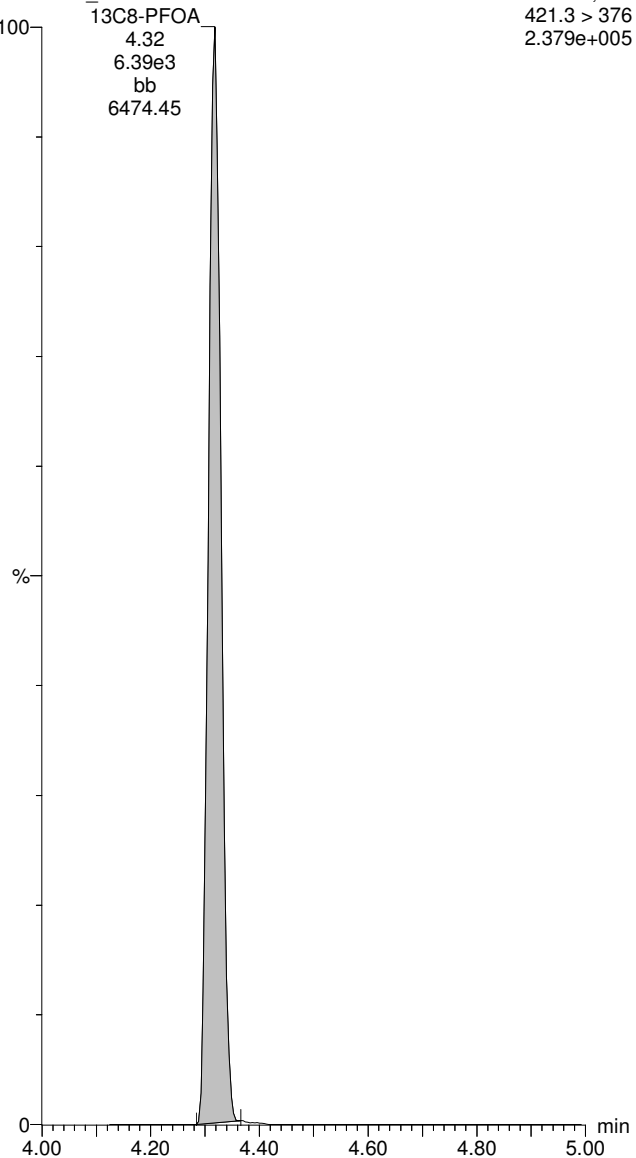
13C5-PFHxA

170306G1_6
F3:MRM of 1 channel,ES-
318>272.9
9.790e+005



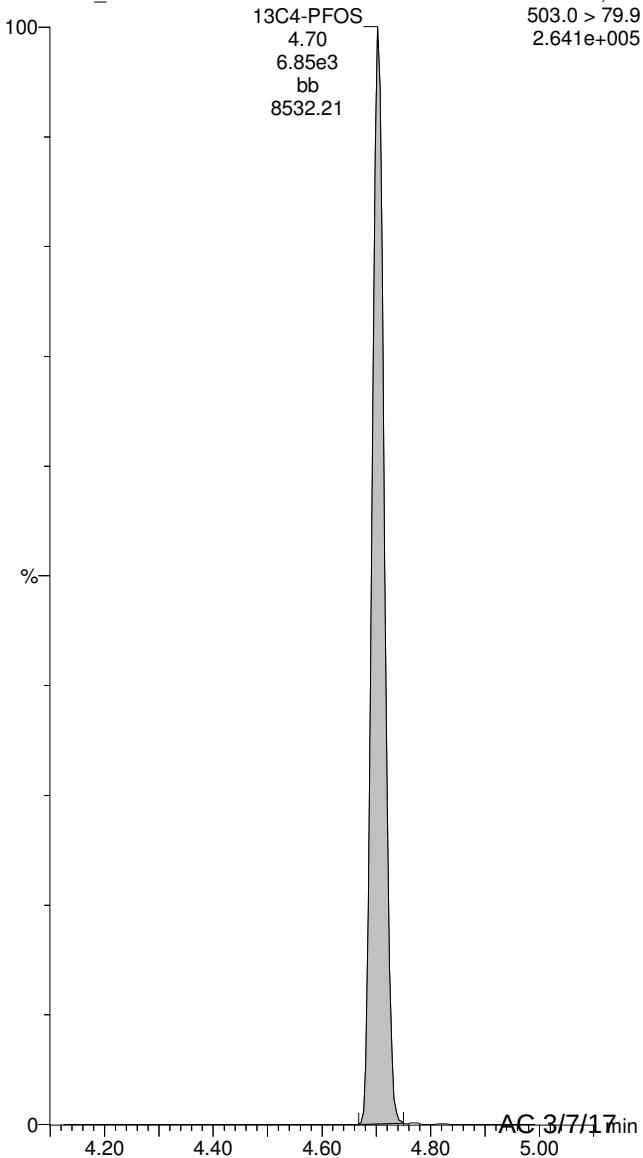
13C8-PFOA

170306G1_6
F5:MRM of 12 channels,ES-
421.3 > 376
2.379e+005



13C4-PFOS

170306G1_6
F5:MRM of 12 channels,ES-
503.0 > 79.9
2.641e+005



Dataset: U:\G1.PRO\Results\2017\170306G1\170306G1-17.qld

Last Altered: Tuesday, March 07, 2017 11:10:30 AM Pacific Standard Time

Printed: Tuesday, March 07, 2017 11:10:48 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: 1700293-01 WI-CV-GW02S-0317 0.125, Description: WI-CV-GW02S-0317, Name: 170306G1_17, Date: 06-Mar-2017, Time: 18:45:44

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7	4.430e4	4.898e3		0.131	2.98	362 *	
2	4 PFOA	413 > 368.7	9.116e4	2.464e4		0.131	4.27	443	
3	6 PFOS	499 > 79.9	2.638e3	8.655e3		0.131	4.45	54.7	
4	7 13C3-PFBS	302.0 > 98.8	4.898e3	7.756e3	0.410	0.131	2.97	147	154 *
5	8 13C4-PFHxA	367.2 > 321.8	1.241e4	7.756e3	1.098	0.131	3.87	139	146
6	9 18O2-PFHxS	403 > 102.6	3.204e3	7.756e3	0.434	0.131	3.98	90.7	95.1
7	10 13C2-PFOA	414.9 > 369.7	2.464e4	6.799e3	4.608	0.131	4.27	75.0	78.6
8	11 13C5-PFNA	468.2 > 422.9	7.150e3	9.347e3	0.867	0.131	4.61	84.1	88.2
9	12 13C8-PFOS	507.0 > 79.9	8.655e3	9.612e3	0.958	0.131	4.67	89.6	94.0
10	13 13C5-PFHxA	318 > 272.9	2.090e4	2.090e4	1.000	0.131	3.35	95.4	100
11	14 13C3-PFHxS	401.9 > 79.9	7.756e3	7.756e3	1.000	0.131	3.98	95.4	100
12	15 13C8-PFOA	421.3 > 376	6.799e3	6.799e3	1.000	0.131	4.27	95.4	100
13	16 13C9-PFNA	472.2 > 426.9	9.347e3	9.347e3	1.000	0.131	4.60	95.4	100
14	17 13C4-PFOS	503.0 > 79.9	9.612e3	9.612e3	1.000	0.131	4.67	95.4	100
15	18 Total PFBS	299 > 79.7		3.204e3		0.131		375	
16	20 Total PFOA	413 > 368.7		2.464e4		0.131		571	
17	21 Total PFOS	499 > 79.9		8.655e3		0.131		54.7	

*See dilution

Dataset: U:\G1.PRO\Results\2017\170306G1\170306G1-17.qld

Last Altered: Tuesday, March 07, 2017 11:10:30 AM Pacific Standard Time

Printed: Tuesday, March 07, 2017 11:10:48 AM Pacific Standard Time

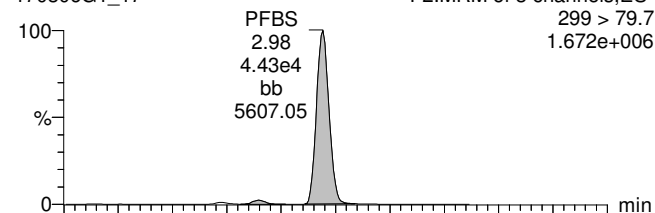
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Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: 1700293-01 WI-CV-GW02S-0317 0.125, Description: WI-CV-GW02S-0317, Name: 170306G1_17, Date: 06-Mar-2017, Time: 18:45:44, Instrument: , Lab: , User:

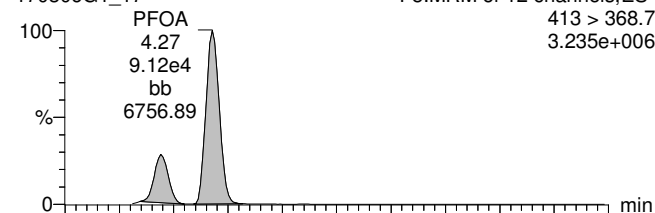
Total PFBS

170306G1_17



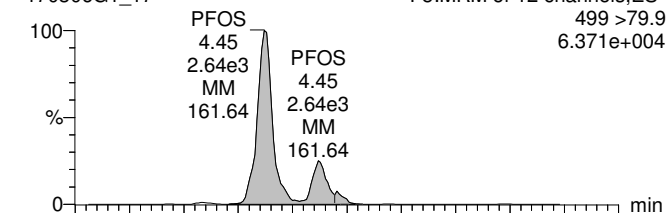
Total PFOA

170306G1_17

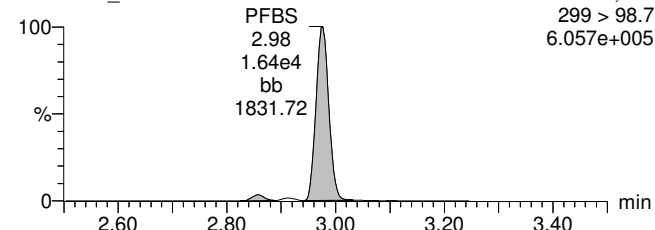


Total PFOS

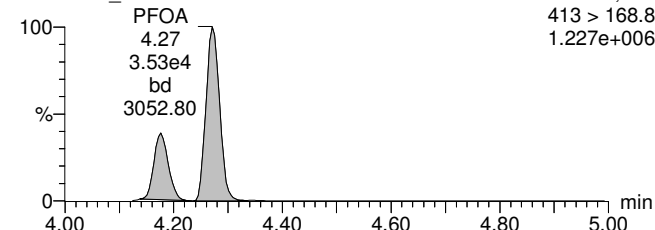
170306G1_17



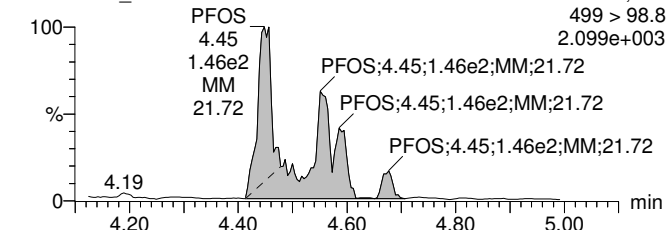
170306G1_17



170306G1_17

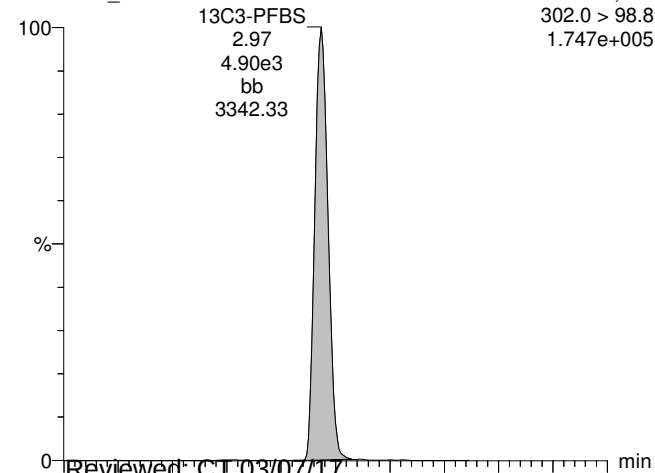


170306G1_17



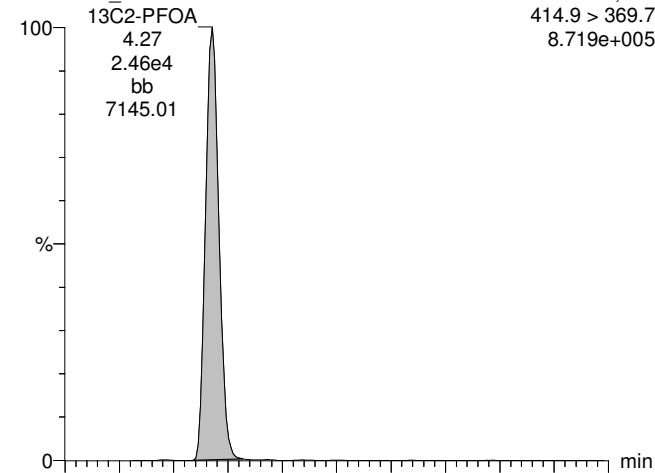
13C3-PFBS

170306G1_17



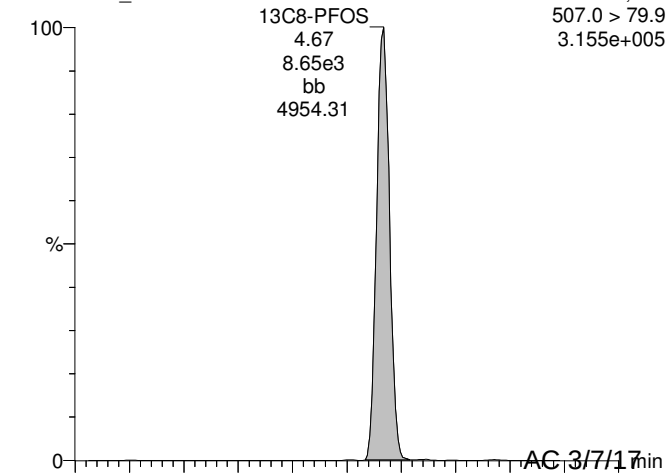
13C2-PFOA

170306G1_17



13C8-PFOS

170306G1_17



Reviewed: C:\170307\17

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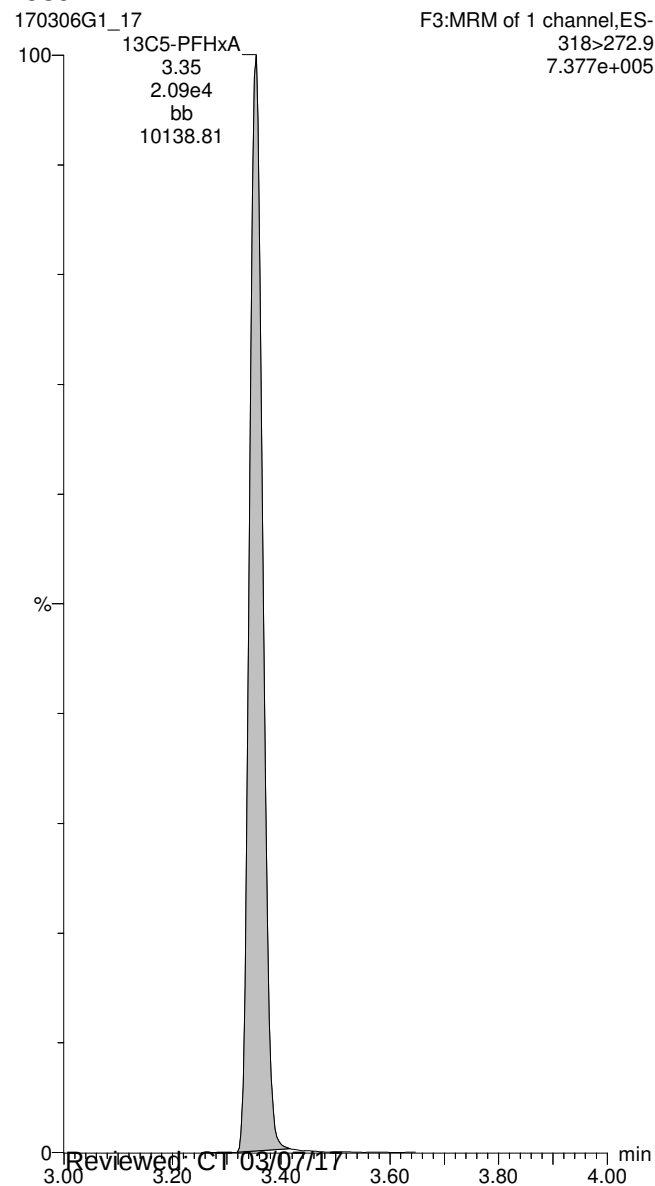
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Printed: Tuesday, March 07, 2017 11:10:48 AM Pacific Standard Time

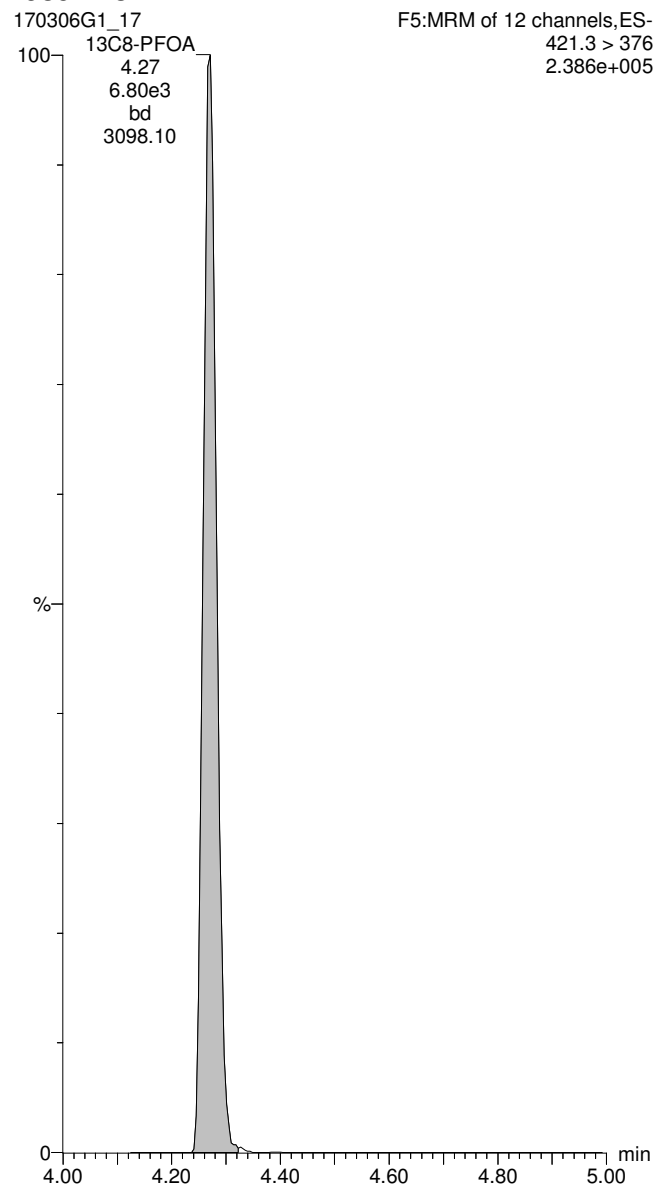
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13C5-PFHxA

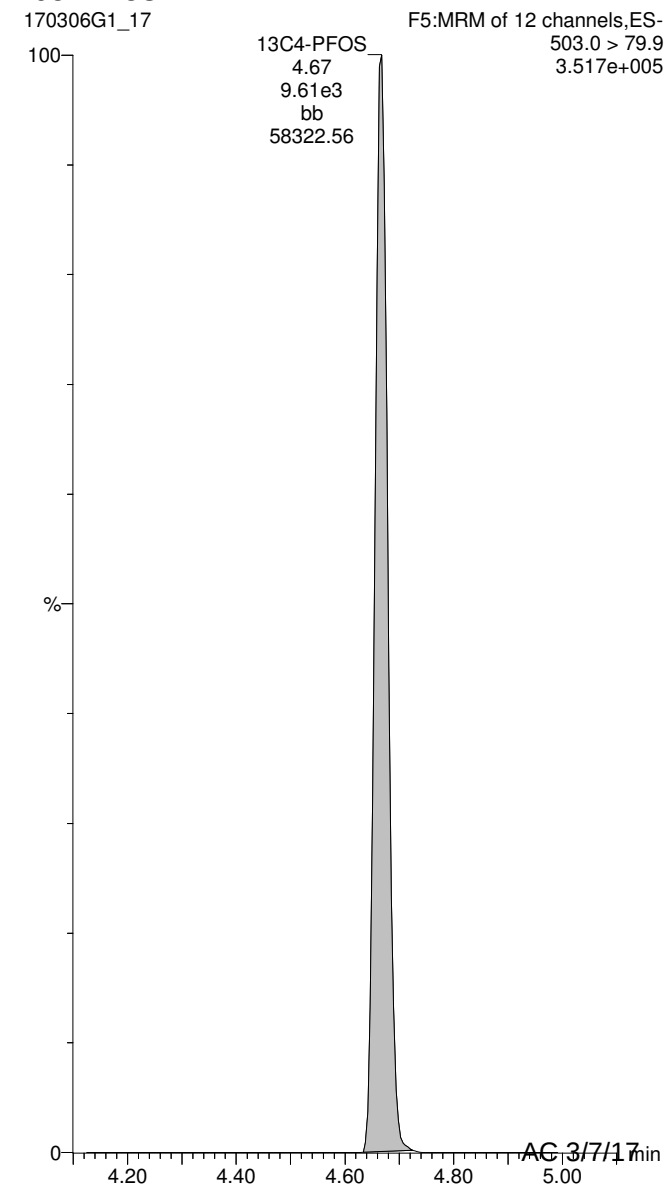


Work Order 1700293

13C8-PFOA



13C4-PFOS



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Dataset: U:\G1.PRO\Results\2017\New folder\170307G1-5.qld

Last Altered: Tuesday, March 07, 2017 1:38:05 PM Pacific Standard Time

Printed: Tuesday, March 07, 2017 1:42:23 PM 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: 1700293-01@10X WI-CV-GW02S-0317 0.125, Description: WI-CV-GW02S-0317, Name: 170307G1_5, Date: 07-Mar-2017, Time: 09:51:58

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7	5.243e3	6.462e2		0.131	2.99	325	
2	7 13C3-PFBS	302.0 > 98.8	6.462e2	1.402e3	0.410	0.131	2.99	107	112
3	14 13C3-PFHxS	401.9 > 79.9	1.402e3	1.402e3	1.000	0.131	3.99	95.4	100
4	18 Total PFBS	299 > 79.7		5.616e2		0.131		332	

Dataset: U:\G1.PRO\Results\2017\New folder\170307G1-5.qld

Last Altered: Tuesday, March 07, 2017 1:38:05 PM Pacific Standard Time

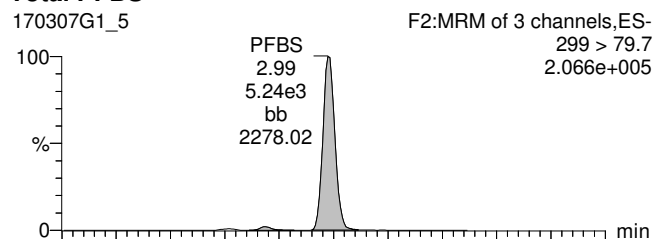
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Method: U:\G1.pro\MethDB\PFAS_6_2_NEW.mdb 07 Mar 2017 09:58:54

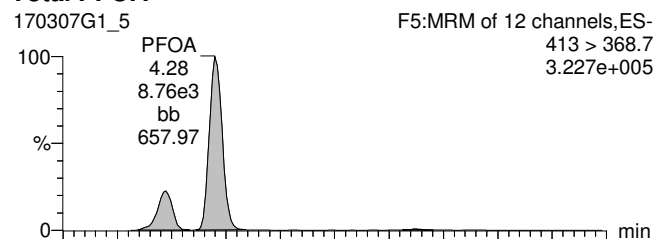
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ID: 1700293-01@10X WI-CV-GW02S-0317 0.125, Description: WI-CV-GW02S-0317, Name: 170307G1_5, Date: 07-Mar-2017, Time: 09:51:58, Instrument: , Lab: , User:

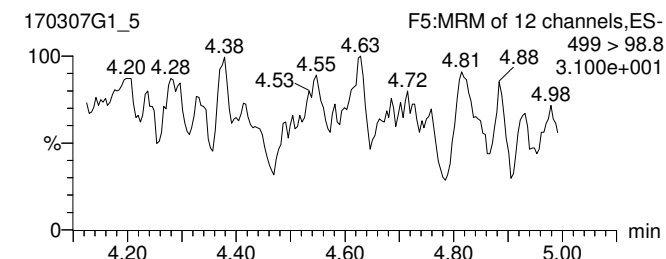
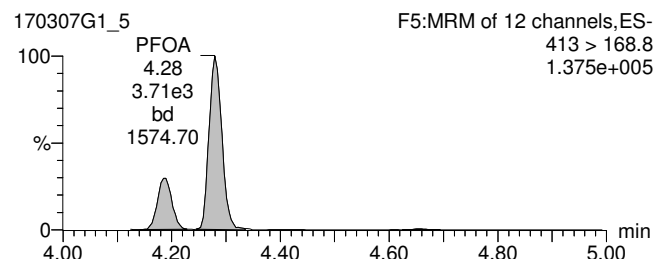
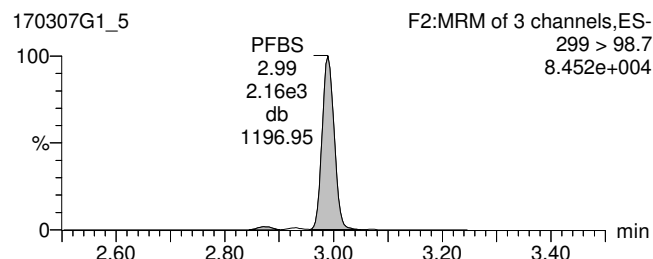
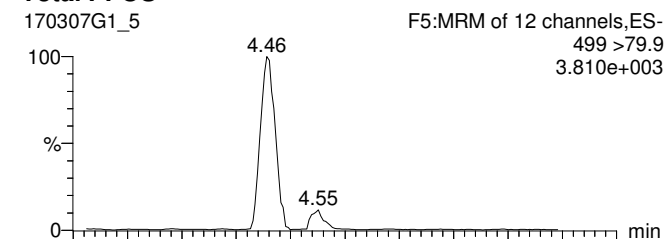
Total PFBS



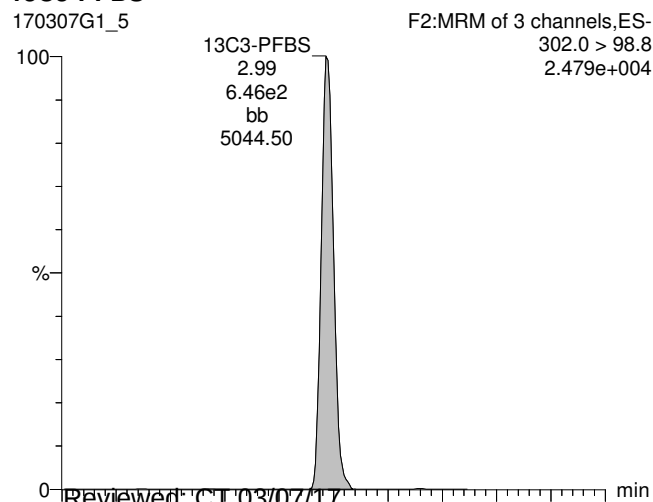
Total PFOA



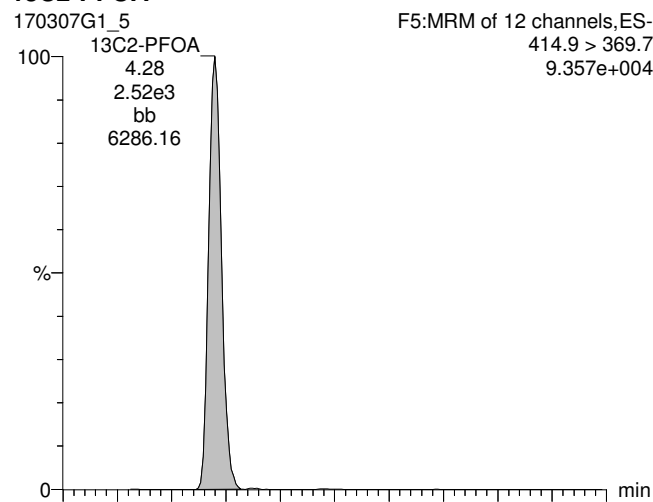
Total PFOS



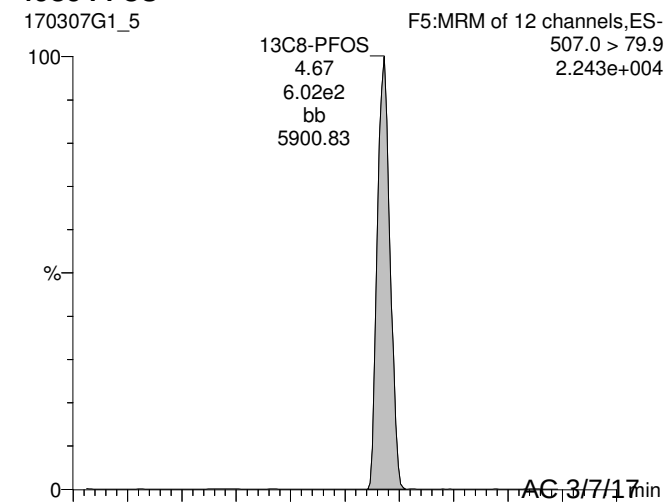
13C3-PFBS



13C2-PFOA



13C8-PFOS



Dataset: U:\G1.PRO\Results\2017\New folder\170307G1-5.qld

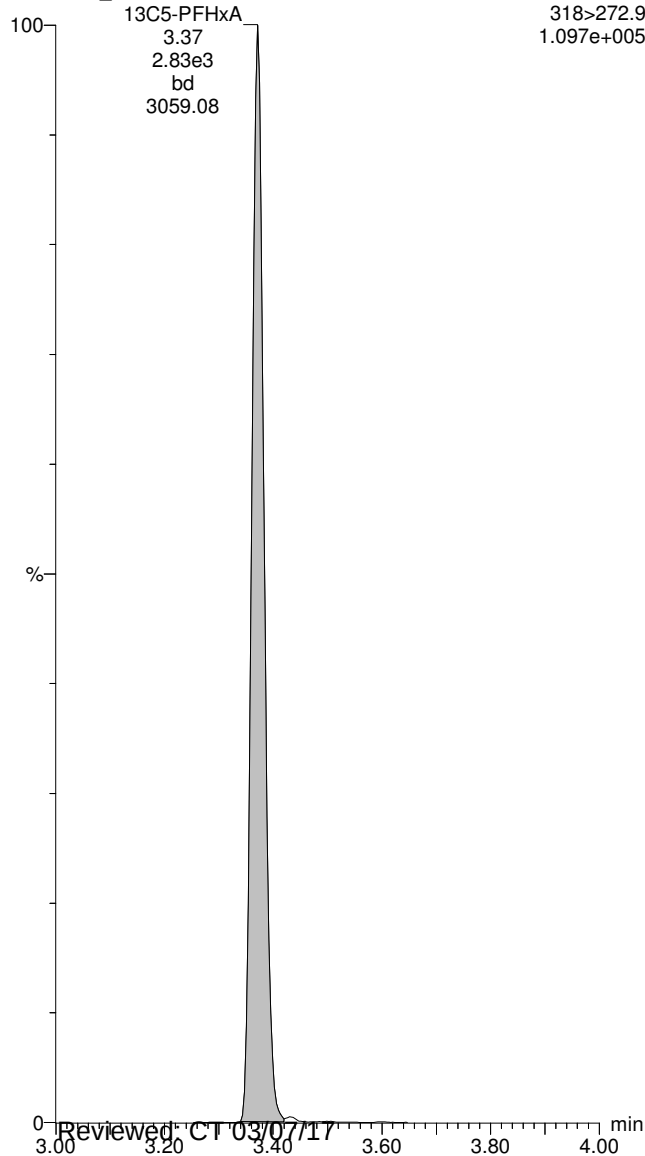
Last Altered: Tuesday, March 07, 2017 1:38:05 PM Pacific Standard Time

Printed: Tuesday, March 07, 2017 1:42:23 PM Pacific Standard Time

ID: 1700293-01@10X WI-CV-GW02S-0317 0.125, Description: WI-CV-GW02S-0317, Name: 170307G1_5, Date: 07-Mar-2017, Time: 09:51:58, Instrument: , Lab: , User:

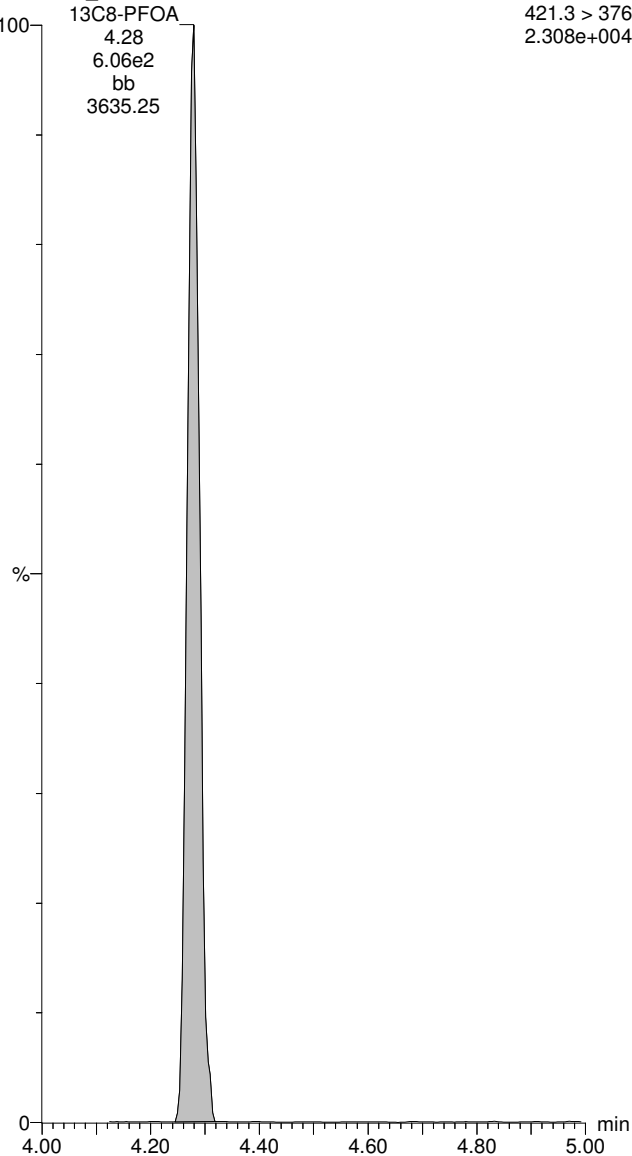
13C5-PFHxA

170307G1_5
F3:MRM of 1 channel,ES-
318>272.9
1.097e+005



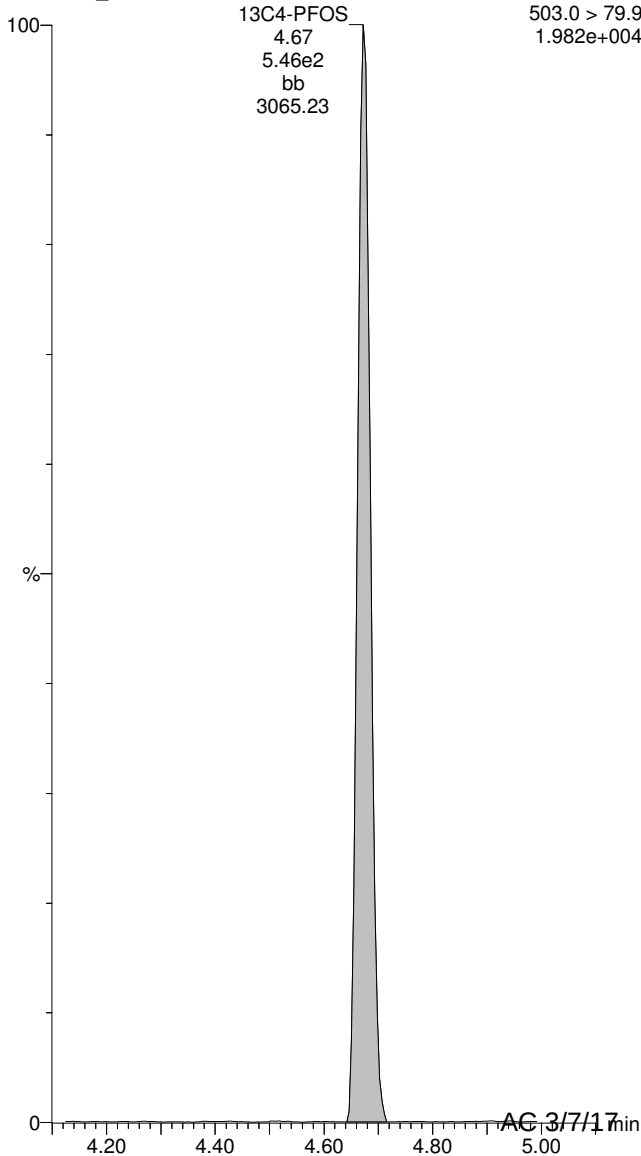
13C8-PFOA

170307G1_5
F5:MRM of 12 channels,ES-
421.3 > 376
2.308e+004



13C4-PFOS

170307G1_5
F5:MRM of 12 channels,ES-
503.0 > 79.9
1.982e+004



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Dataset: U:\G1.PRO\Results\2017\170306G1\170306G1-18.qld

Last Altered: Tuesday, March 07, 2017 11:16:29 AM Pacific Standard Time

Printed: Tuesday, March 07, 2017 11:16:44 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: 1700293-02 WI-CV-GW02S/SP-0317 0.125, Description: WI-CV-GW02S/SP-0317, Name: 170306G1_18, Date: 06-Mar-2017, Time: 18:58:16

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7	4.122e4	4.712e3		0.129	2.98	355 *	
2	4 PFOA	413 > 368.7	8.348e4	2.313e4		0.129	4.27	438	
3	6 PFOS	499 > 79.9	2.265e3	7.785e3		0.129	4.45	53.0	
4	7 13C3-PFBS	302.0 > 98.8	4.712e3	7.471e3	0.410	0.129	2.97	149	154 *
5	8 13C4-PFHxPA	367.2 > 321.8	1.189e4	7.471e3	1.098	0.129	3.87	140	145
6	9 18O2-PFHxS	403 > 102.6	3.061e3	7.471e3	0.434	0.129	3.99	91.3	94.3
7	10 13C2-PFOA	414.9 > 369.7	2.313e4	5.811e3	4.608	0.129	4.27	83.6	86.4
8	11 13C5-PFNA	468.2 > 422.9	6.931e3	9.651e3	0.867	0.129	4.61	80.2	82.8
9	12 13C8-PFOS	507.0 > 79.9	7.785e3	8.986e3	0.958	0.129	4.67	87.5	90.4
10	13 13C5-PFHxA	318>272.9	2.046e4	2.046e4	1.000	0.129	3.35	96.8	100
11	14 13C3-PFHxS	401.9 > 79.9	7.471e3	7.471e3	1.000	0.129	3.99	96.8	100
12	15 13C8-PFOA	421.3 > 376	5.811e3	5.811e3	1.000	0.129	4.27	96.8	100
13	16 13C9-PFNA	472.2 > 426.9	9.651e3	9.651e3	1.000	0.129	4.61	96.8	100
14	17 13C4-PFOS	503.0 > 79.9	8.986e3	8.986e3	1.000	0.129	4.67	96.8	100
15	18 Total PFBS	299 > 79.7		3.061e3		0.129		376	
16	20 Total PFOA	413 > 368.7		2.313e4		0.129		564	
17	21 Total PFOS	499 > 79.9		7.785e3		0.129		53.0	

See dilution.

Dataset: U:\G1.PRO\Results\2017\170306G1\170306G1-18.qld

Last Altered: Tuesday, March 07, 2017 11:16:29 AM Pacific Standard Time

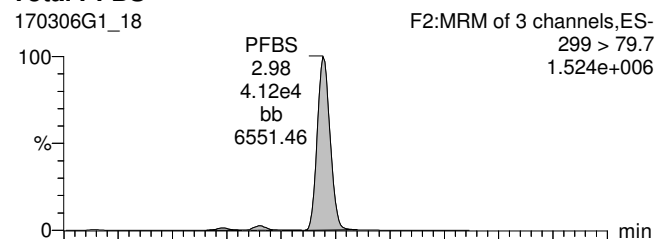
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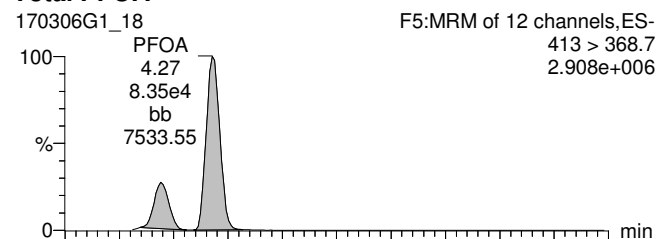
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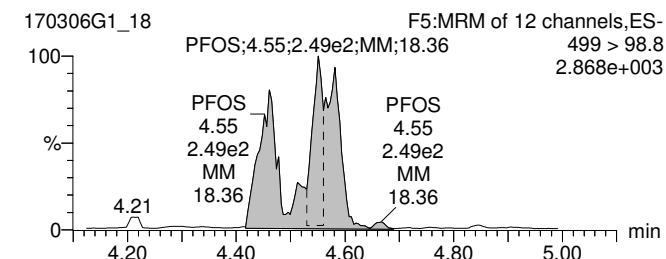
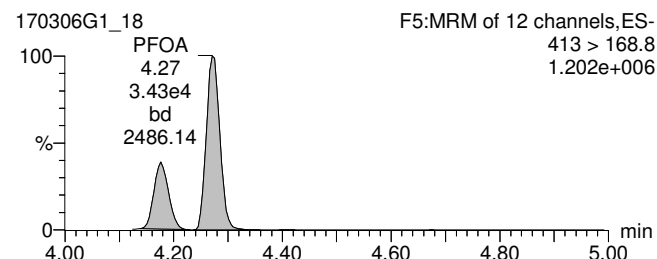
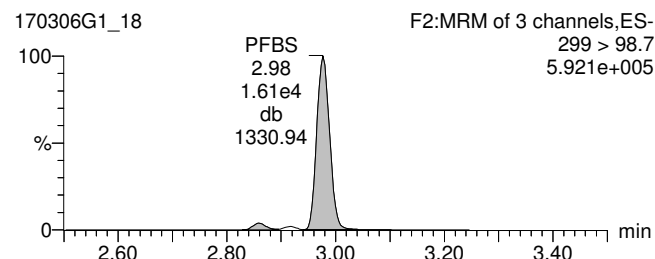
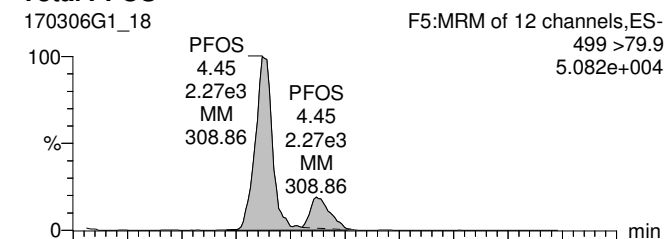
Total PFBS



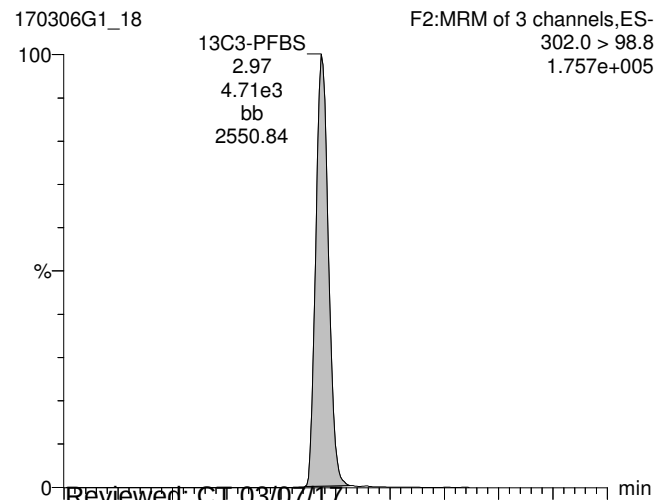
Total PFOA



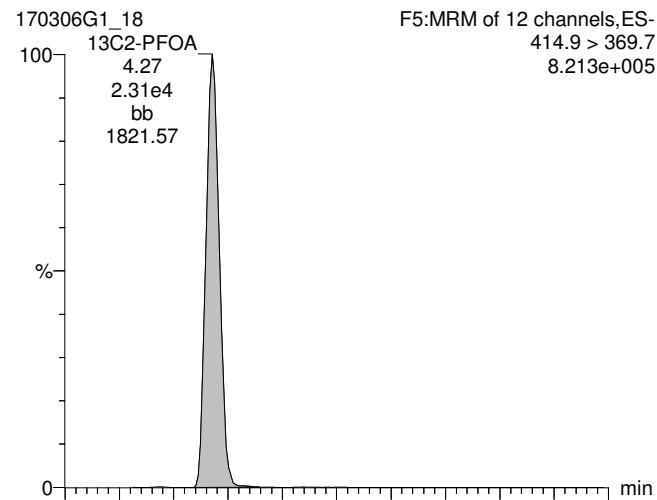
Total PFOS



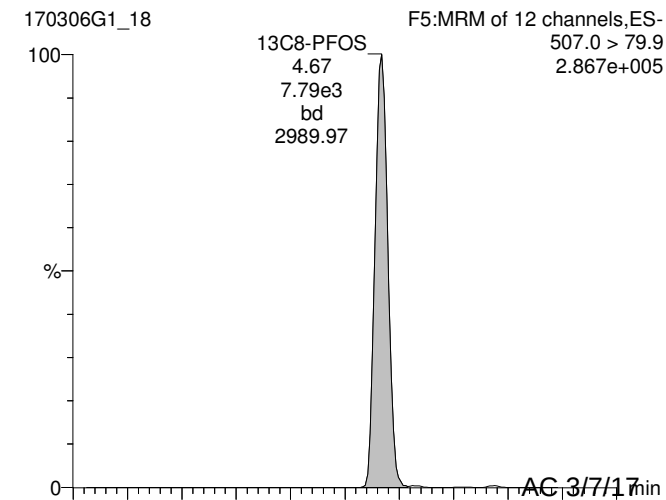
13C3-PFBS



13C2-PFOA



13C8-PFOS



Reviewed: C:\03\07\17

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Dataset: U:\G1.PRO\Results\2017\170306G1\170306G1-18.qld

Last Altered: Tuesday, March 07, 2017 11:16:29 AM Pacific Standard Time

Printed: Tuesday, March 07, 2017 11:16:44 AM Pacific Standard Time

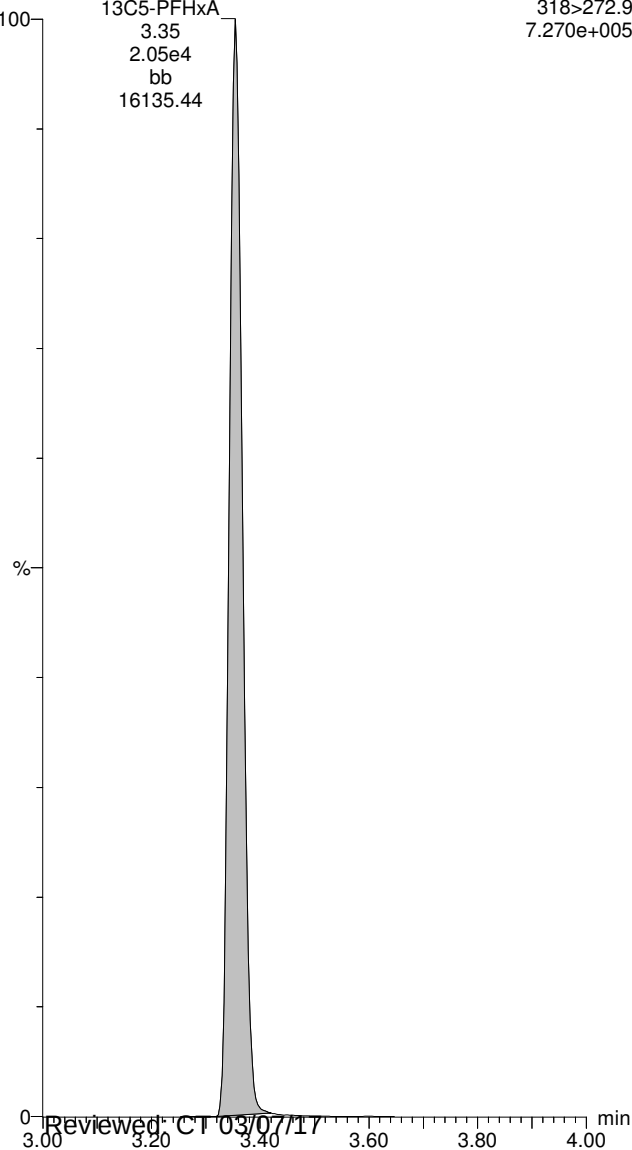
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13C5-PFHxA

170306G1_18

13C5-PFHxA
3.35
2.05e4
bb
16135.44

F3:MRM of 1 channel,ES-
318>272.9
7.270e+005

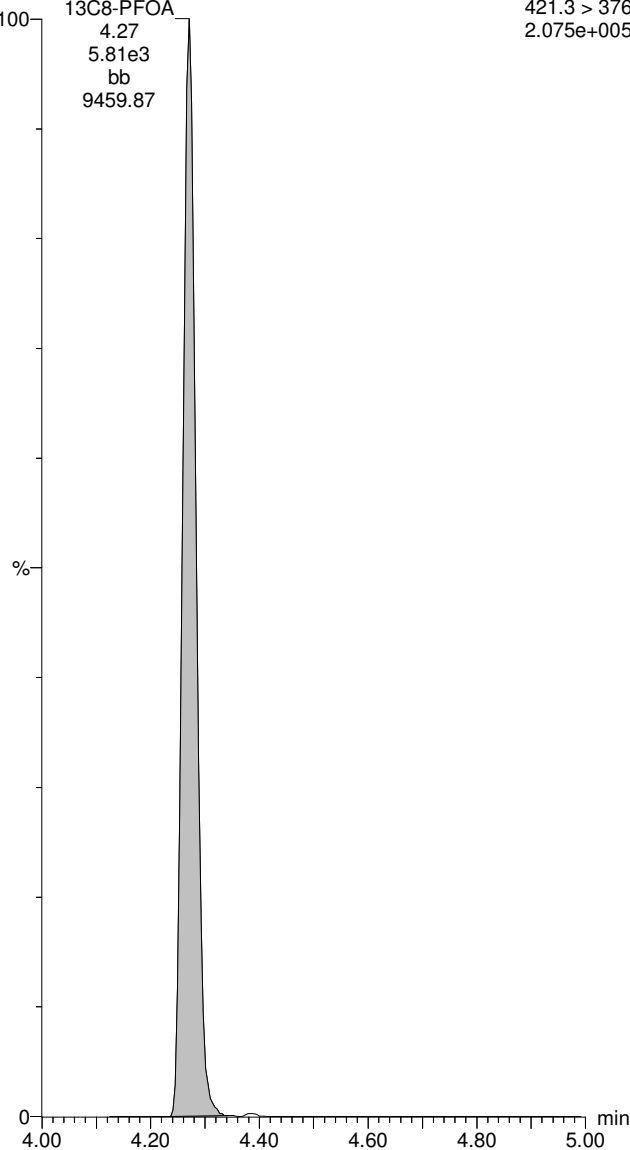


13C8-PFOA

170306G1_18

13C8-PFOA
4.27
5.81e3
bb
9459.87

F5:MRM of 12 channels,ES-
421.3 > 376
2.075e+005

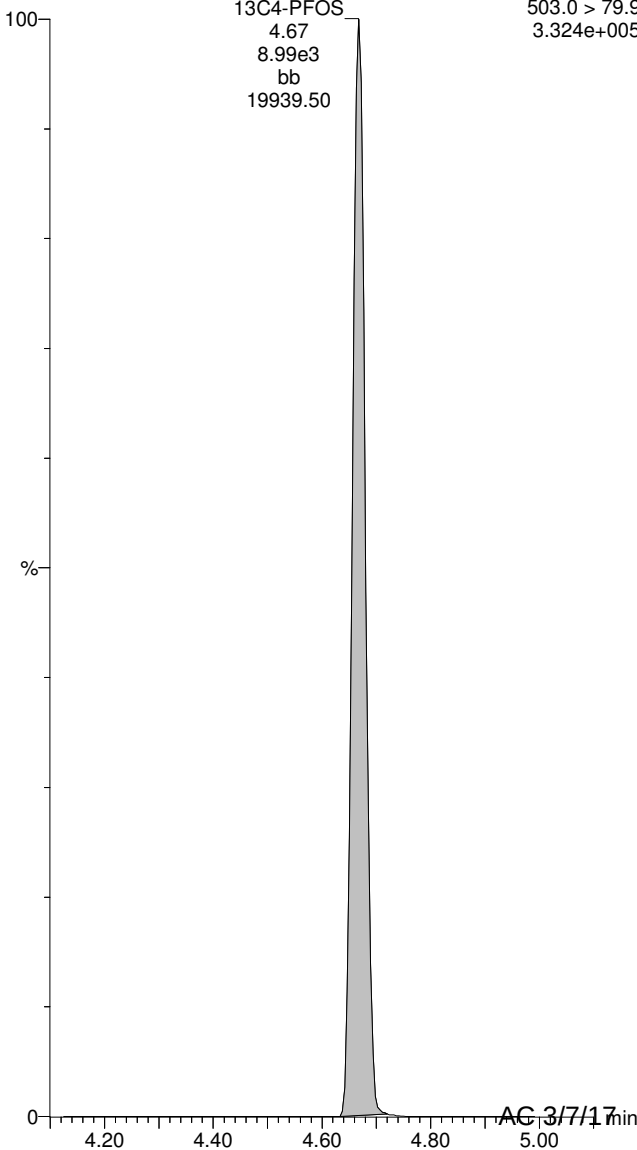


13C4-PFOS

170306G1_18

13C4-PFOS
4.67
8.99e3
bb
19939.50

F5:MRM of 12 channels,ES-
503.0 > 79.9
3.324e+005



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Dataset: U:\G1.PRO\Results\2017\New folder\170307G1-6.qld

Last Altered: Tuesday, March 07, 2017 1:57:13 PM Pacific Standard Time

Printed: Tuesday, March 07, 2017 2:00:17 PM 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: 1700293-02@10X WI-CV-GW02S/SP-0317 0.125, Description: WI-CV-GW02S/SP-0317, Name: 170307G1_6, Date: 07-Mar-2017, Time: 10:04:33

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7	5.510e3	6.462e2		0.129	2.99	346	
2	7 13C3-PFBS	302.0 > 98.8	6.462e2	1.407e3	0.410	0.129	2.99	108	112
3	14 13C3-PFHxS	401.9 > 79.9	1.407e3	1.407e3	1.000	0.129	4.00	96.8	100
4	18 Total PFBS	299 > 79.7		5.759e2		0.129		357	

Dataset: U:\G1.PRO\Results\2017\New folder\170307G1-6.qld

Last Altered: Tuesday, March 07, 2017 1:57:13 PM Pacific Standard Time

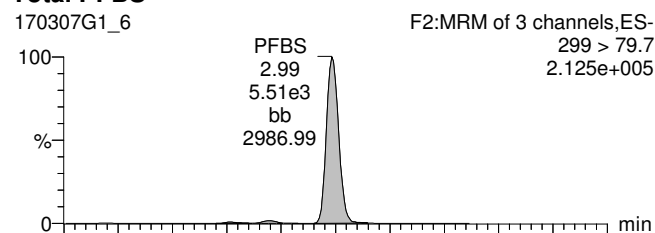
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Method: U:\G1.pro\MethDB\PFAS_6_2_NEW.mdb 07 Mar 2017 09:58:54

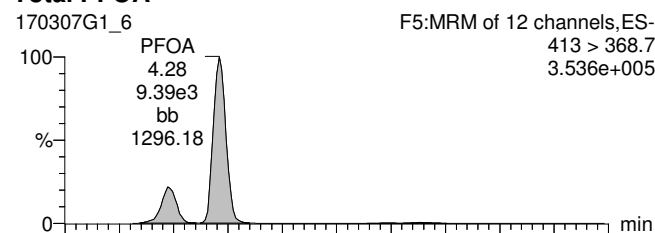
Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: 1700293-02@10X WI-CV-GW02S/SP-0317 0.125, Description: WI-CV-GW02S/SP-0317, Name: 170307G1_6, Date: 07-Mar-2017, Time: 10:04:33, Instrument: , Lab: , User:

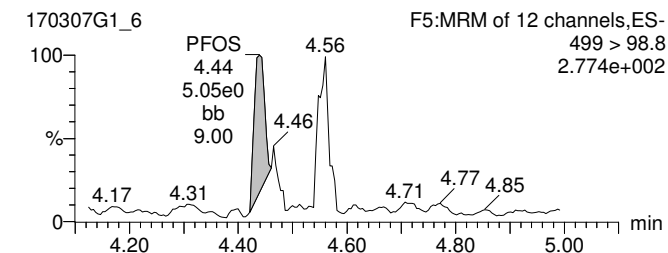
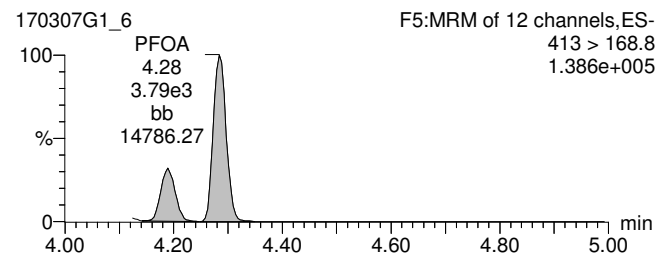
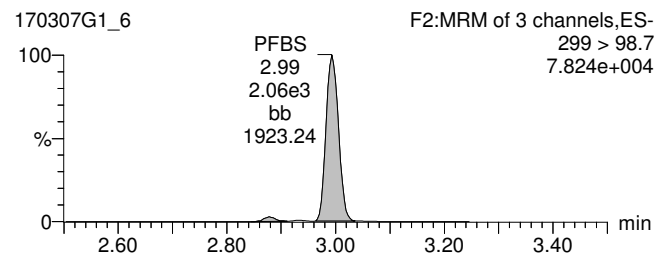
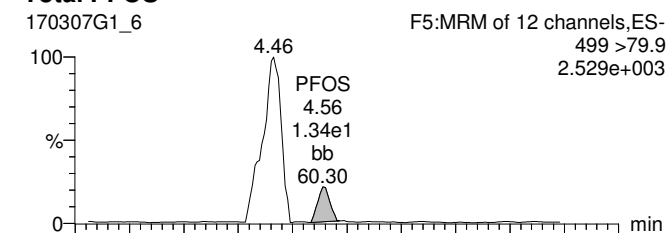
Total PFBS



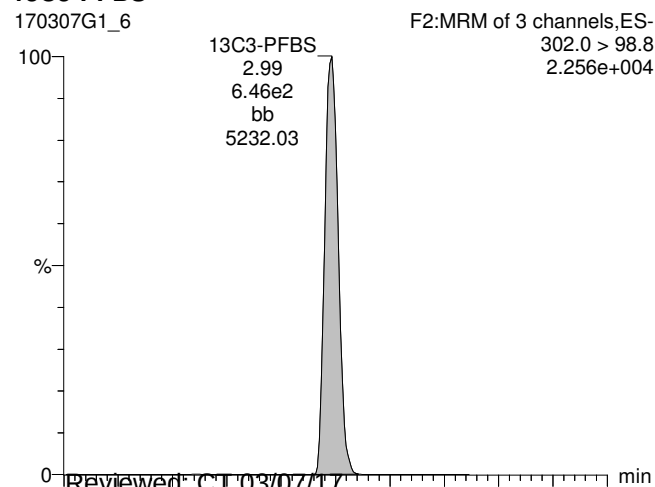
Total PFOA



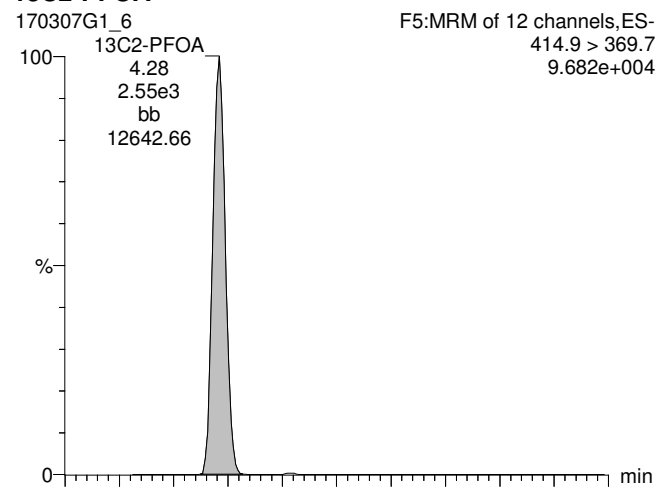
Total PFOS



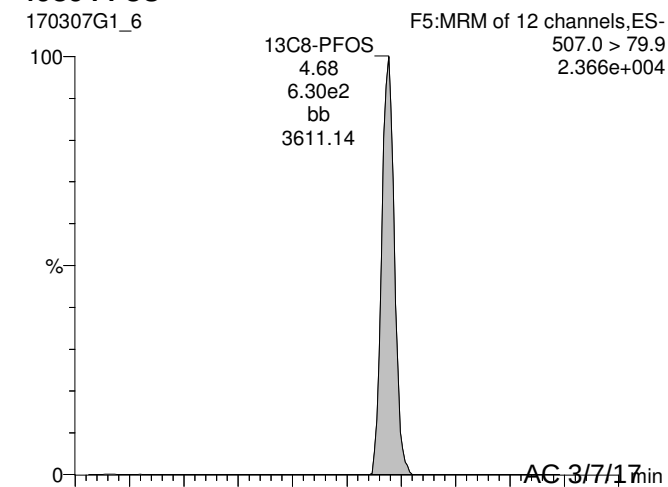
13C3-PFBS



13C2-PFOA



13C8-PFOS



Reviewed: C:\030717

Work Order 1700293

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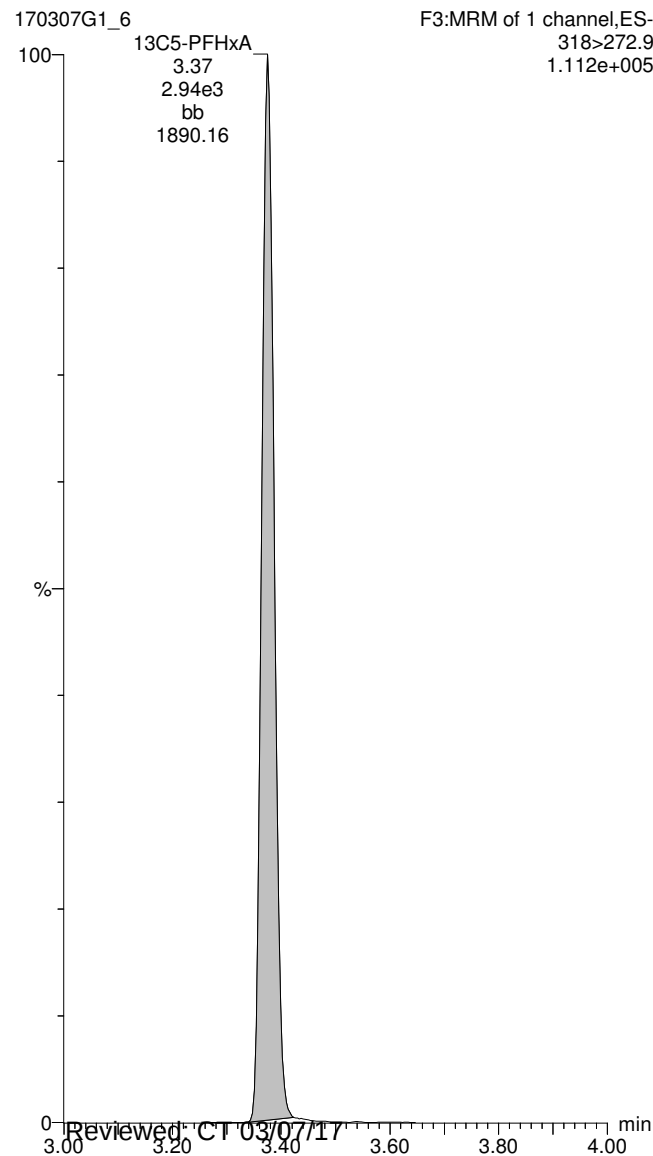
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Last Altered: Tuesday, March 07, 2017 1:57:13 PM Pacific Standard Time

Printed: Tuesday, March 07, 2017 2:00:17 PM Pacific Standard Time

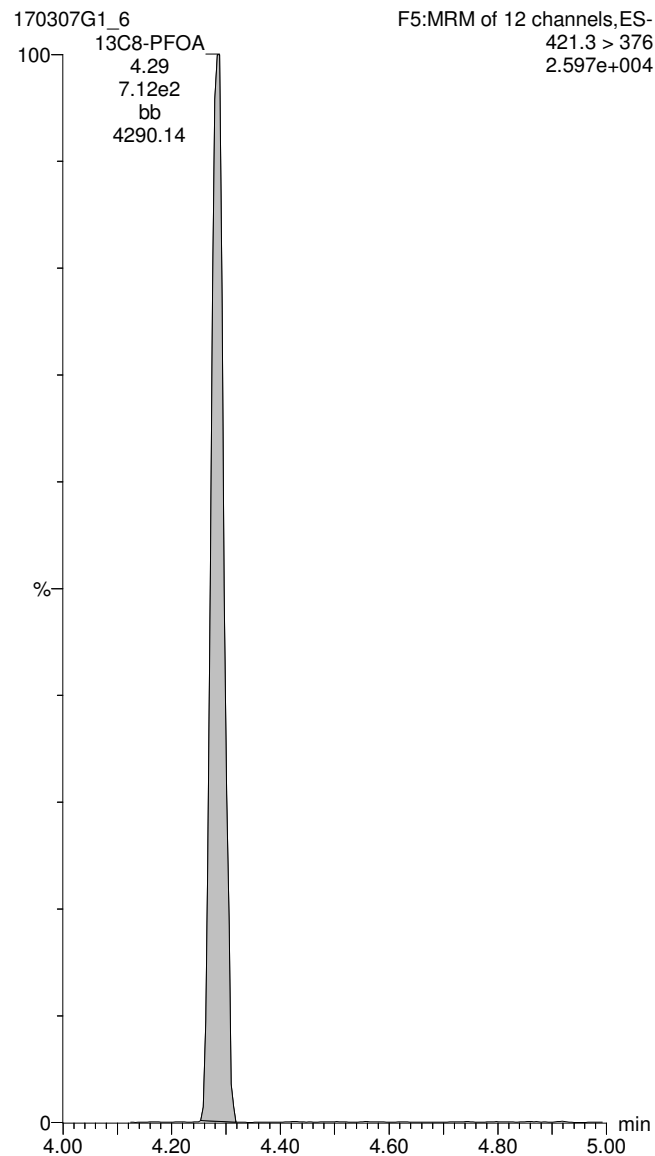
ID: 1700293-02@10X WI-CV-GW02S/SP-0317 0.125, Description: WI-CV-GW02S/SP-0317, Name: 170307G1_6, Date: 07-Mar-2017, Time: 10:04:33, Instrument: , Lab: , User:

13C5-PFHxA

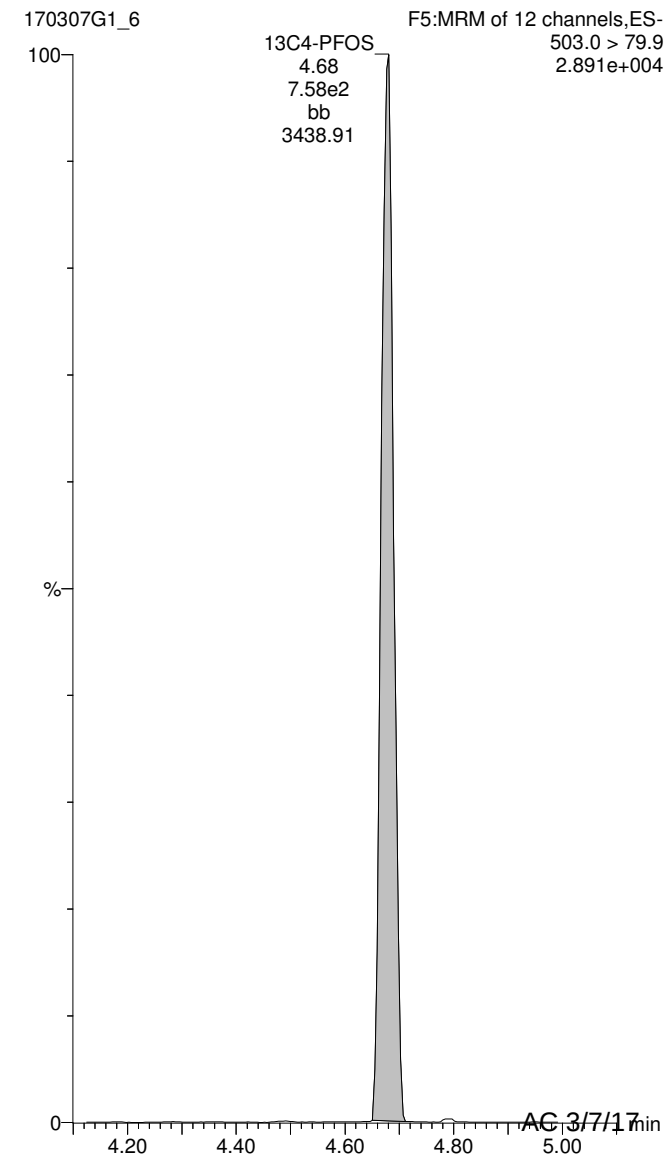


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13C8-PFOA



13C4-PFOS



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Dataset: U:\G1.PRO\Results\2017\170306G1\170306G1-19.qld

Last Altered: Tuesday, March 07, 2017 11:18:57 AM Pacific Standard Time

Printed: Tuesday, March 07, 2017 11:19:19 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: 1700293-03 WI-CV-GW04S-0317 0.125, Description: WI-CV-GW04S-0317, Name: 170306G1_19, Date: 06-Mar-2017, Time: 19:10:50

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7		6.305e3		0.128			
2	4 PFOA	413 > 368.7	2.781e2	2.808e4		0.128	4.28		
3	6 PFOS	499 > 79.9		7.346e3		0.128			
4	7 13C3-PFBS	302.0 > 98.8	6.305e3	1.558e4	0.410	0.128	2.98	96.6	98.7
5	8 13C4-PFHxA	367.2 > 321.8	1.428e4	1.558e4	1.098	0.128	3.87	81.7	83.5
6	9 18O2-PFHxS	403 > 102.6	6.704e3	1.558e4	0.434	0.128	3.99	97.0	99.1
7	10 13C2-PFOA	414.9 > 369.7	2.808e4	7.327e3	4.608	0.128	4.27	81.4	83.2
8	11 13C5-PFNA	468.2 > 422.9	7.326e3	8.542e3	0.867	0.128	4.61	96.8	98.9
9	12 13C8-PFOS	507.0 > 79.9	7.346e3	8.088e3	0.958	0.128	4.67	92.7	94.8
10	13 13C5-PFHxA	318>272.9	2.723e4	2.723e4	1.000	0.128	3.35	97.8	100
11	14 13C3-PFHxS	401.9 > 79.9	1.558e4	1.558e4	1.000	0.128	3.99	97.8	100
12	15 13C8-PFOA	421.3 > 376	7.327e3	7.327e3	1.000	0.128	4.28	97.8	100
13	16 13C9-PFNA	472.2 > 426.9	8.542e3	8.542e3	1.000	0.128	4.61	97.8	100
14	17 13C4-PFOS	503.0 > 79.9	8.088e3	8.088e3	1.000	0.128	4.67	97.8	100
15	18 Total PFBS	299 > 79.7		6.704e3		0.128			
16	20 Total PFOA	413 > 368.7		2.808e4		0.128			
17	21 Total PFOS	499 > 79.9		7.346e3		0.128			

Dataset: U:\G1.PRO\Results\2017\170306G1\170306G1-19.qld

Last Altered: Tuesday, March 07, 2017 11:18:57 AM Pacific Standard Time

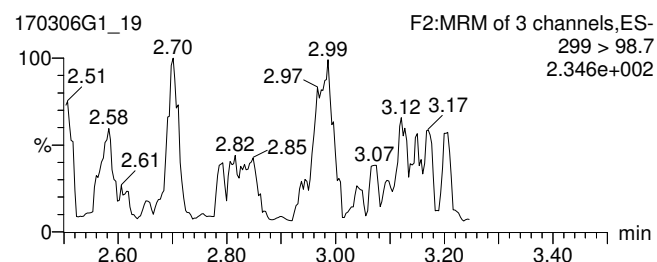
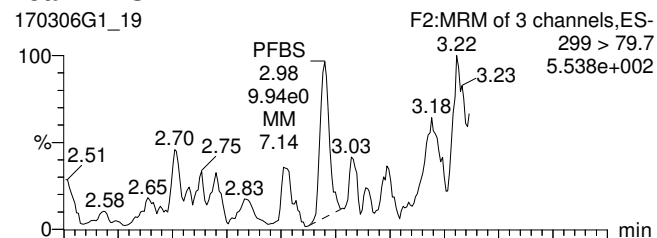
Printed: Tuesday, March 07, 2017 11:19:19 AM Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS_6_2_NEW.mdb 07 Mar 2017 09:58:54

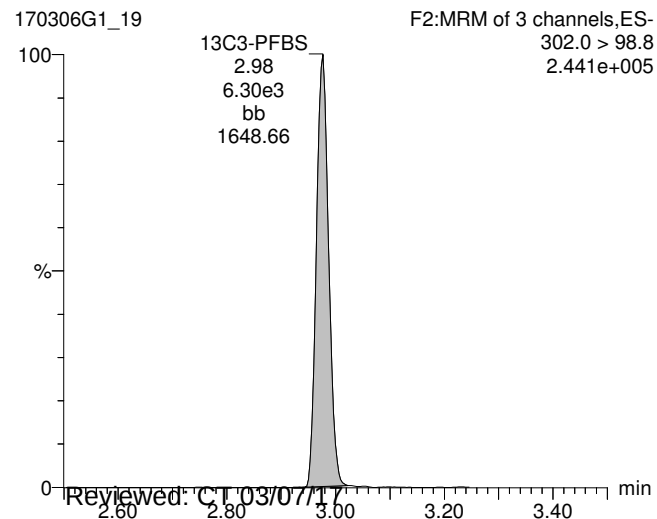
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ID: 1700293-03 WI-CV-GW04S-0317 0.125, Description: WI-CV-GW04S-0317, Name: 170306G1_19, Date: 06-Mar-2017, Time: 19:10:50, Instrument: , Lab: , User:

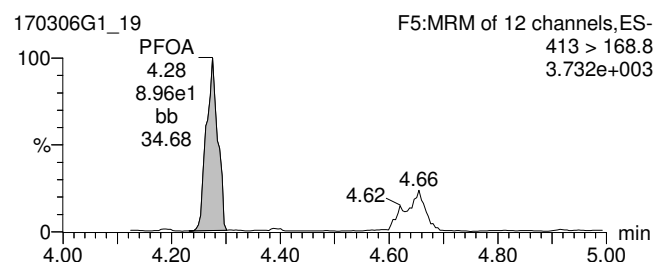
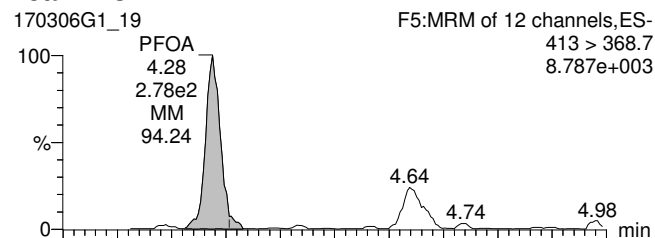
Total PFBS



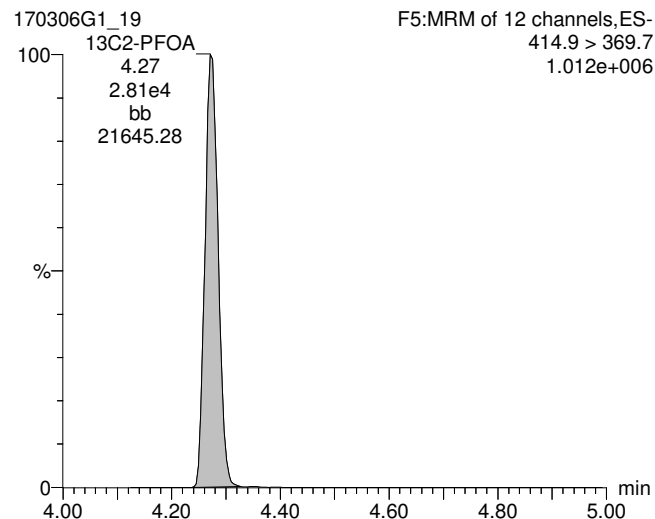
13C3-PFBS



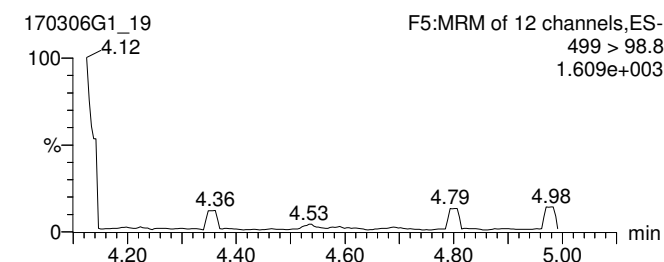
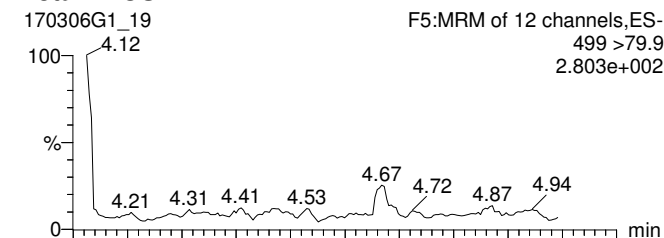
Total PFOA



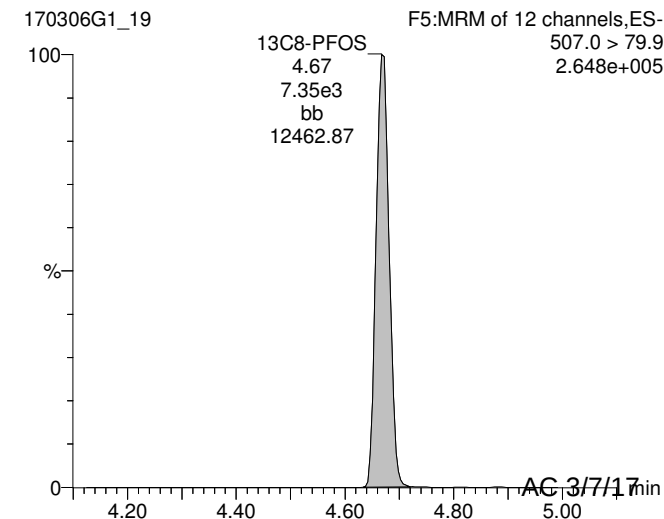
13C2-PFOA



Total PFOS



13C8-PFOS



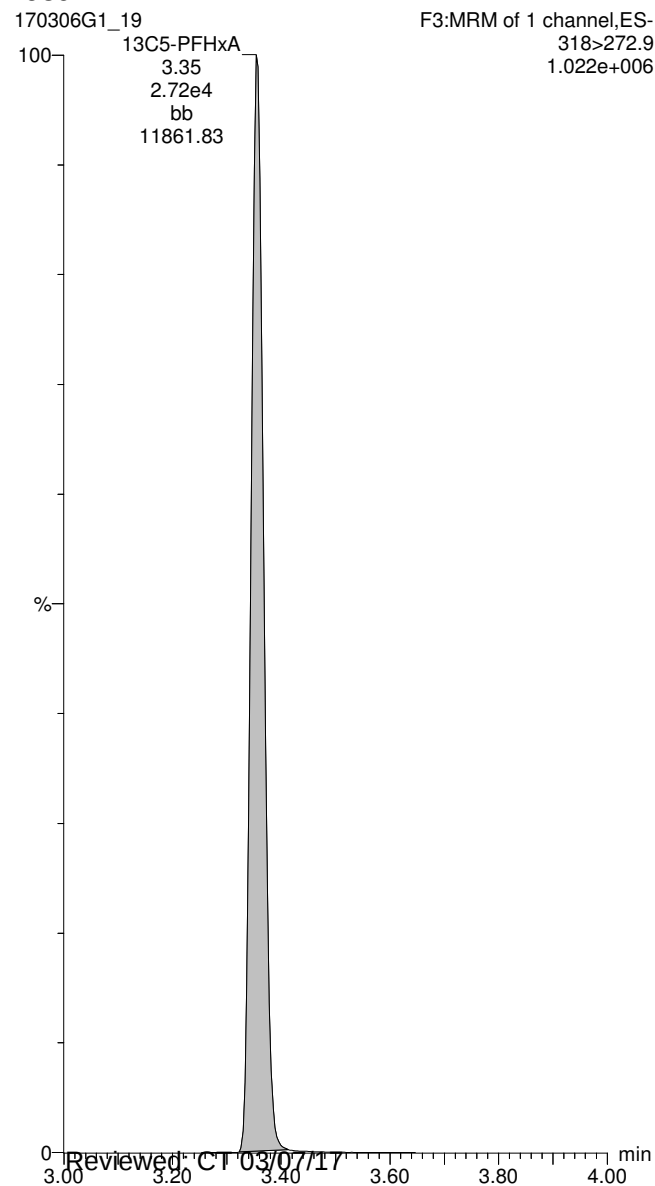
Dataset: U:\G1.PRO\Results\2017\170306G1\170306G1-19.qld

Last Altered: Tuesday, March 07, 2017 11:18:57 AM Pacific Standard Time

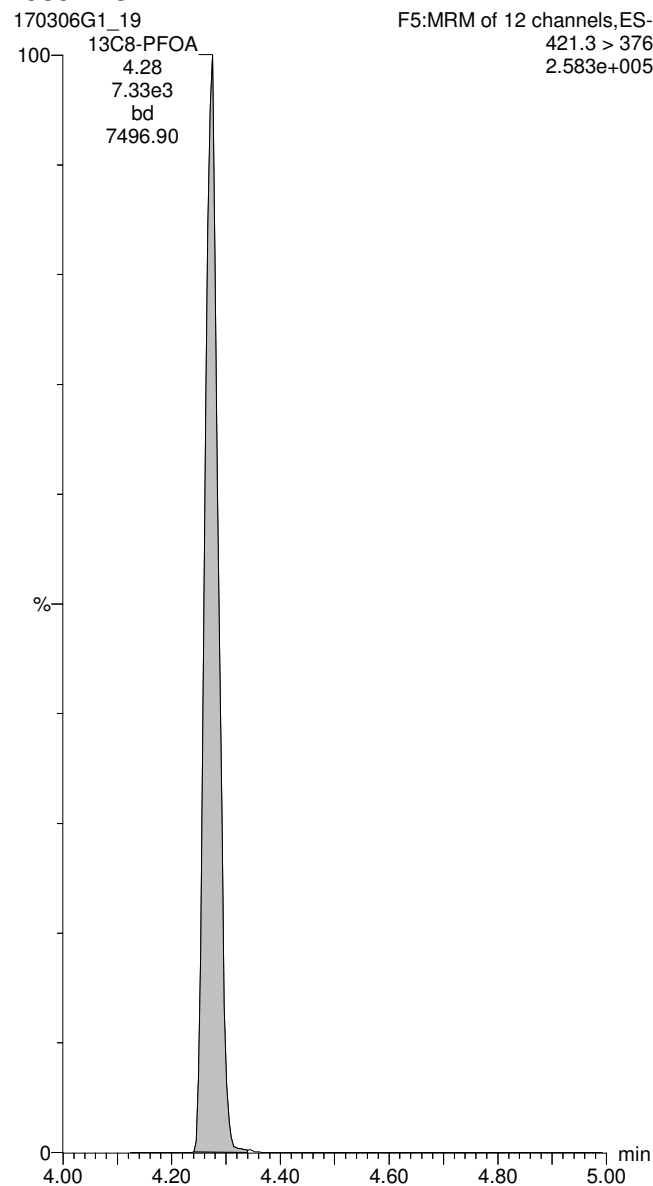
Printed: Tuesday, March 07, 2017 11:19:19 AM Pacific Standard Time

ID: 1700293-03 WI-CV-GW04S-0317 0.125, Description: WI-CV-GW04S-0317, Name: 170306G1_19, Date: 06-Mar-2017, Time: 19:10:50, Instrument: , Lab: , User:

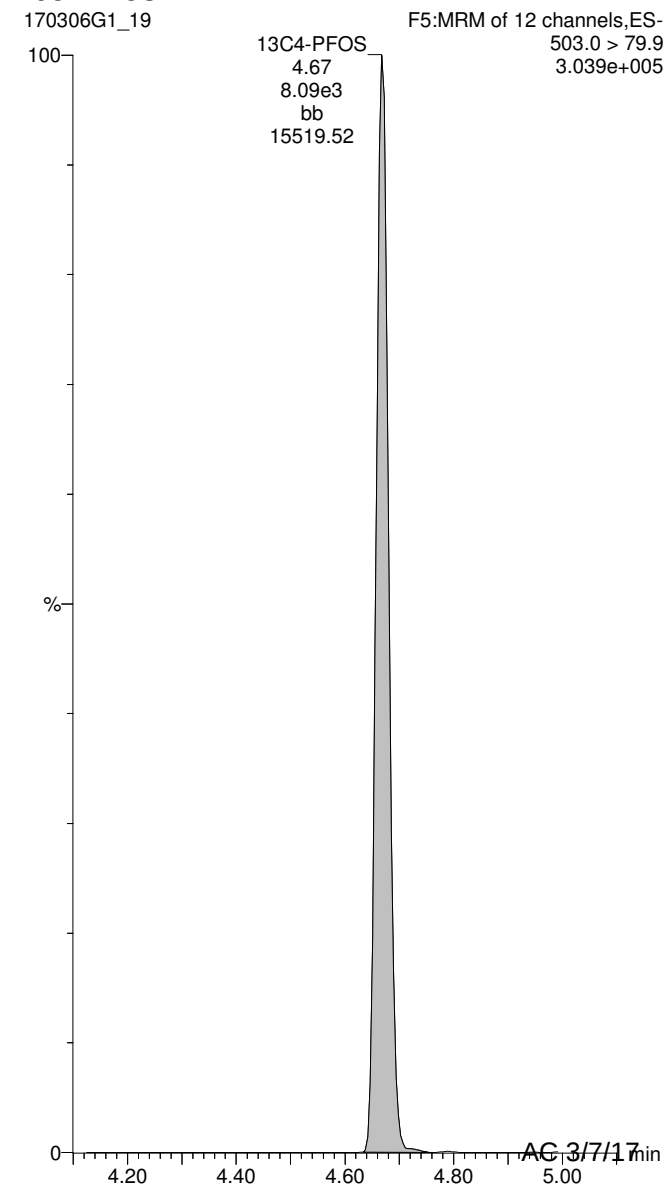
13C5-PFHxA



13C8-PFOA



13C4-PFOS



Reviewed: CT 03/07/17

AC 3/7/17

Dataset: U:\G1.PRO\Results\2017\170306G1\170306G1-20.qld

Last Altered: Tuesday, March 07, 2017 11:20:25 AM Pacific Standard Time

Printed: Tuesday, March 07, 2017 11:20:52 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: 1700293-04 WI-CV-GW04S/SP-0317 0.125, Description: WI-CV-GW04S/SP-0317, Name: 170306G1_20, Date: 06-Mar-2017, Time: 19:23:25

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7		6.031e3		0.131			
2	4 PFOA	413 > 368.7	2.368e2	2.827e4		0.131	4.28		
3	6 PFOS	499 > 79.9		7.808e3		0.131			
4	7 13C3-PFBS	302.0 > 98.8	6.031e3	1.580e4	0.410	0.131	2.97	88.8	93.1
5	8 13C4-PFHxA	367.2 > 321.8	1.478e4	1.580e4	1.098	0.131	3.87	81.3	85.2
6	9 18O2-PFHxS	403 > 102.6	6.506e3	1.580e4	0.434	0.131	3.99	90.5	94.8
7	10 13C2-PFOA	414.9 > 369.7	2.827e4	7.431e3	4.608	0.131	4.27	78.8	82.6
8	11 13C5-PFNA	468.2 > 422.9	7.212e3	8.965e3	0.867	0.131	4.60	88.5	92.8
9	12 13C8-PFOS	507.0 > 79.9	7.808e3	9.074e3	0.958	0.131	4.66	85.7	89.8
10	13 13C5-PFHxA	318>272.9	2.811e4	2.811e4	1.000	0.131	3.35	95.4	100
11	14 13C3-PFHxS	401.9 > 79.9	1.580e4	1.580e4	1.000	0.131	3.99	95.4	100
12	15 13C8-PFOA	421.3 > 376	7.431e3	7.431e3	1.000	0.131	4.27	95.4	100
13	16 13C9-PFNA	472.2 > 426.9	8.965e3	8.965e3	1.000	0.131	4.60	95.4	100
14	17 13C4-PFOS	503.0 > 79.9	9.074e3	9.074e3	1.000	0.131	4.66	95.4	100
15	18 Total PFBS	299 > 79.7		6.506e3		0.131			
16	20 Total PFOA	413 > 368.7		2.827e4		0.131			
17	21 Total PFOS	499 > 79.9		7.808e3		0.131			

Dataset: U:\G1.PRO\Results\2017\170306G1\170306G1-20.qld

Last Altered: Tuesday, March 07, 2017 11:20:25 AM Pacific Standard Time

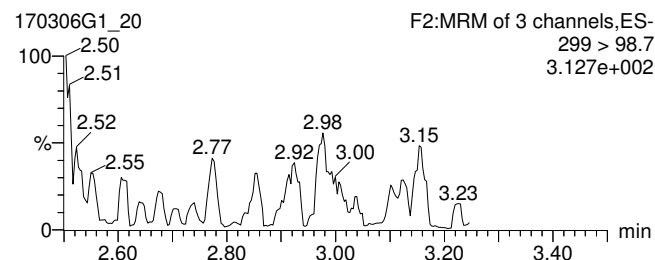
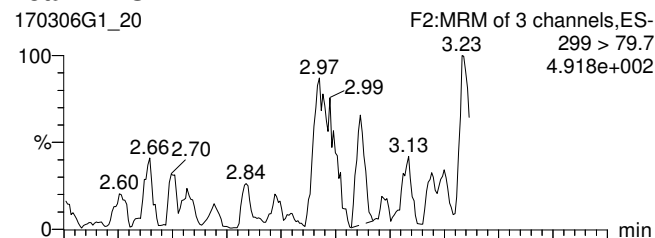
Printed: Tuesday, March 07, 2017 11:20:52 AM Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS_6_2_NEW.mdb 07 Mar 2017 09:58:54

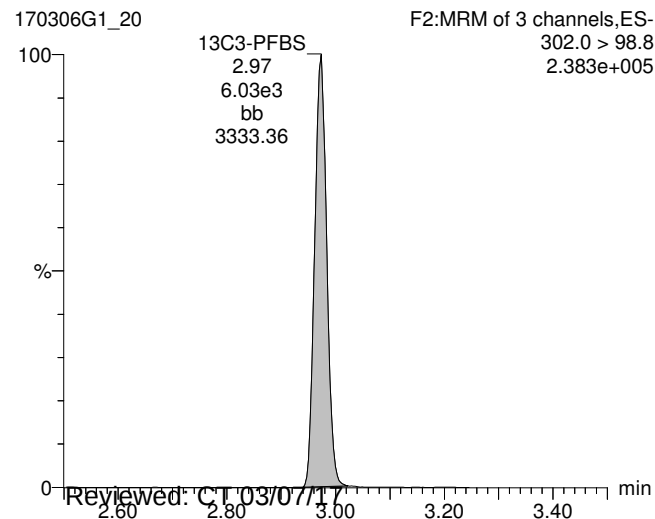
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ID: 1700293-04 WI-CV-GW04S/SP-0317 0.125, Description: WI-CV-GW04S/SP-0317, Name: 170306G1_20, Date: 06-Mar-2017, Time: 19:23:25, Instrument: , Lab: , User:

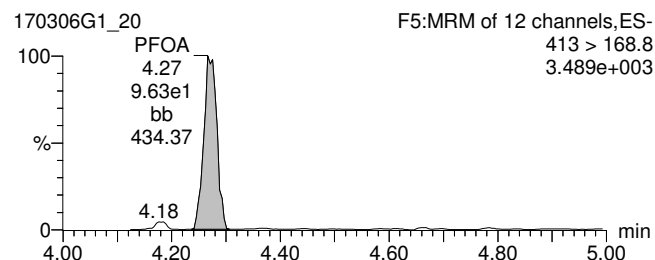
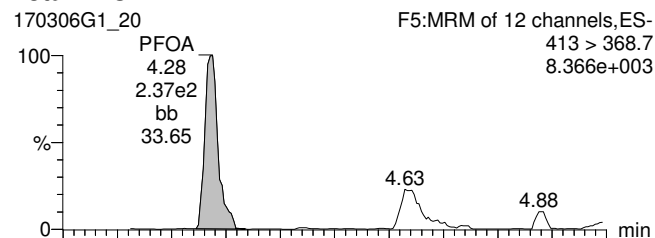
Total PFBS



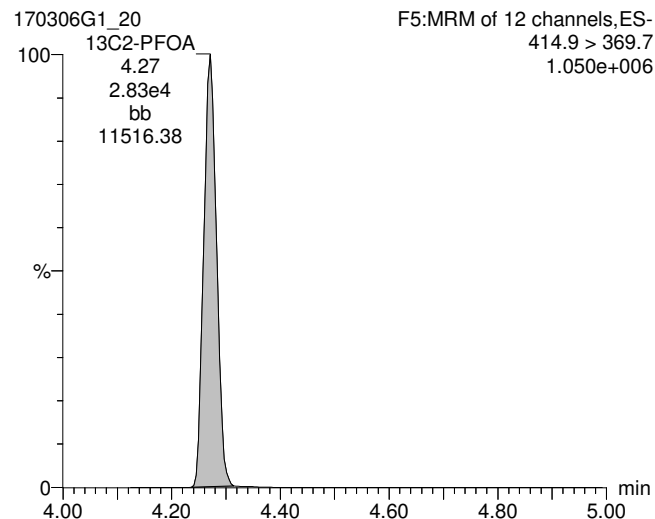
13C3-PFBS



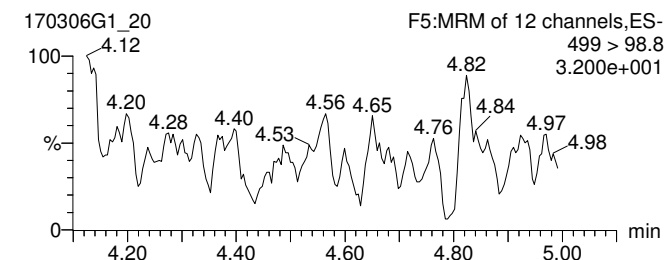
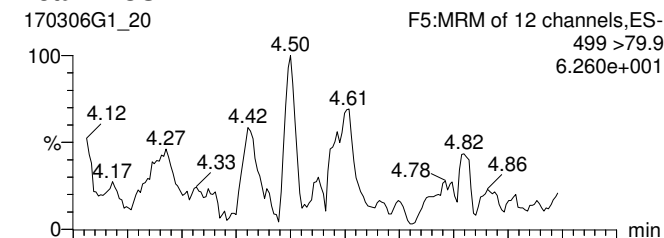
Total PFOA



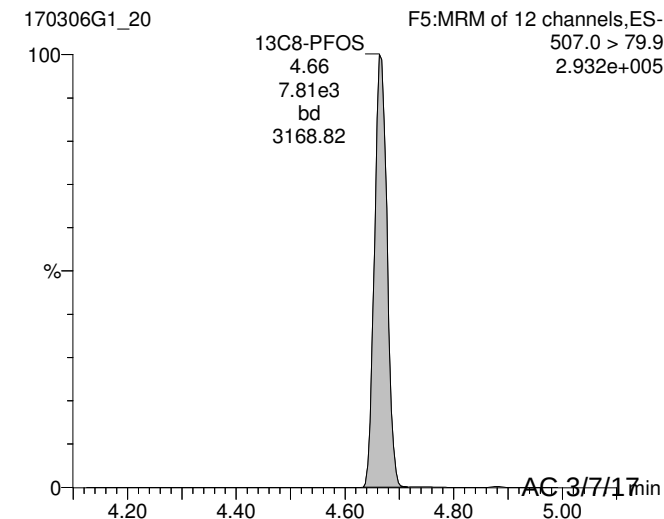
13C2-PFOA



Total PFOS



13C8-PFOS



Reviewed: C10307/17

Work Order 1700293

AC 3/7/17

Dataset: U:\G1.PRO\Results\2017\170306G1\170306G1-20.qld

Last Altered: Tuesday, March 07, 2017 11:20:25 AM Pacific Standard Time

Printed: Tuesday, March 07, 2017 11:20:52 AM Pacific Standard Time

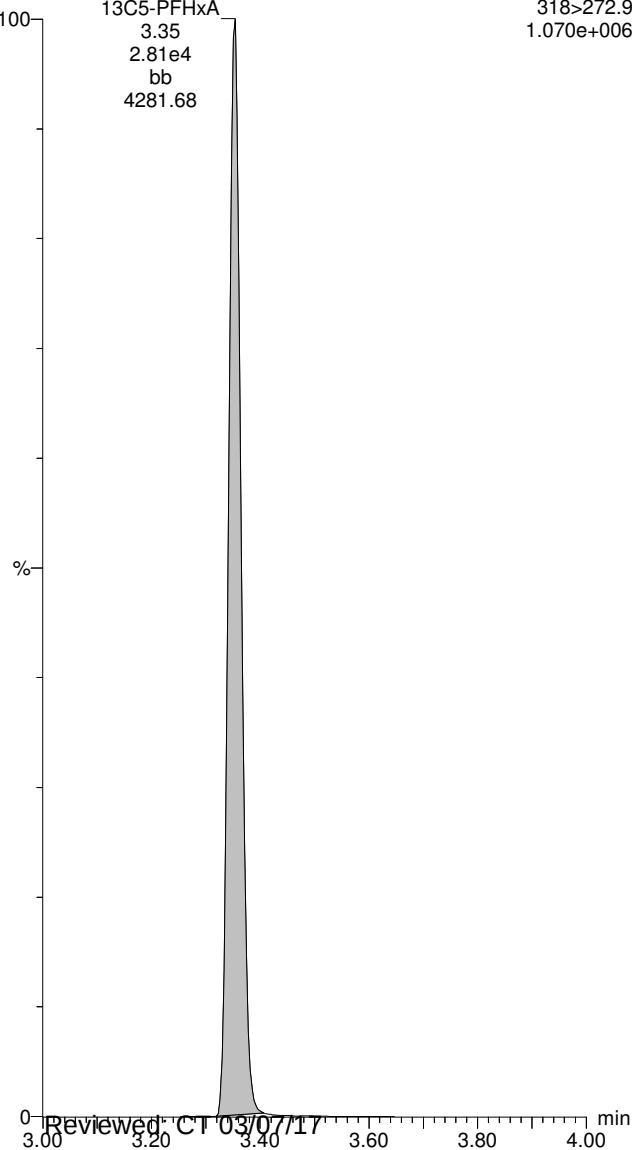
ID: 1700293-04 WI-CV-GW04S/SP-0317 0.125, Description: WI-CV-GW04S/SP-0317, Name: 170306G1_20, Date: 06-Mar-2017, Time: 19:23:25, Instrument: , Lab: , User:

13C5-PFHxA

170306G1_20

13C5-PFHxA
3.35
2.81e4
bb
4281.68

F3:MRM of 1 channel,ES-
318>272.9
1.070e+006

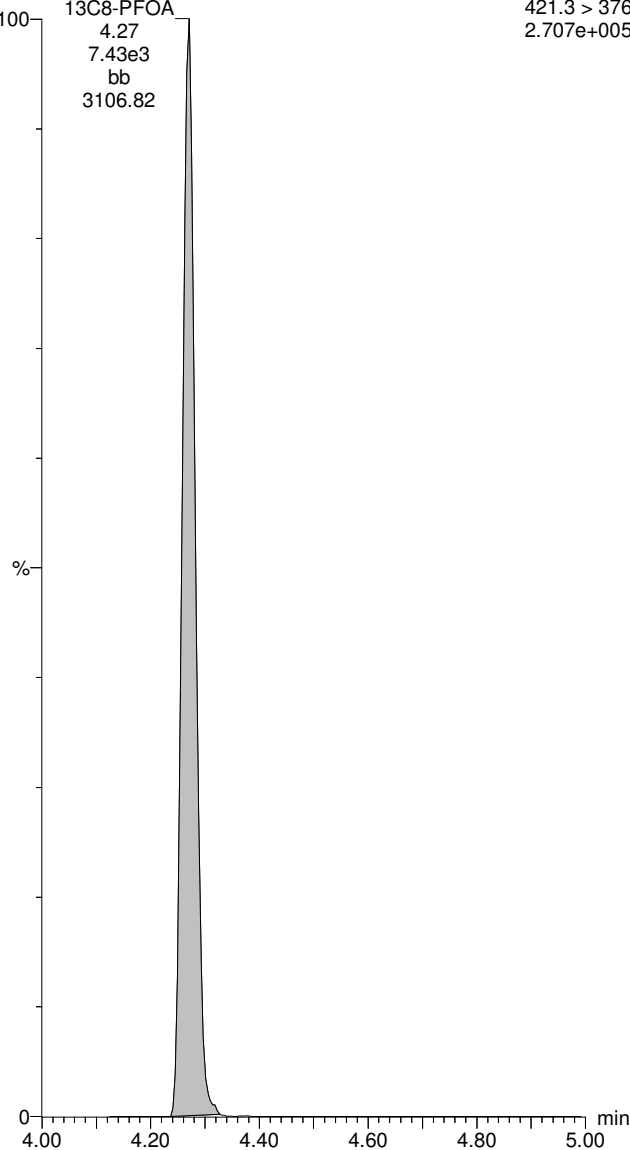


13C8-PFOA

170306G1_20

13C8-PFOA
4.27
7.43e3
bb
3106.82

F5:MRM of 12 channels,ES-
421.3 > 376
2.707e+005

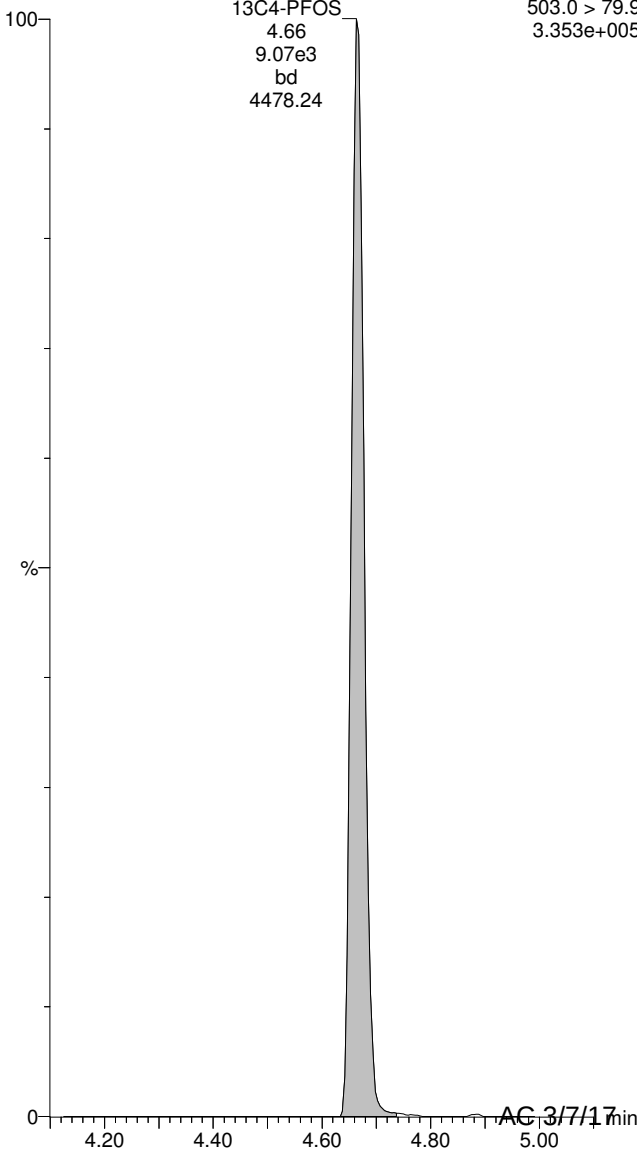


13C4-PFOS

170306G1_20

13C4-PFOS
4.66
9.07e3
bd
4478.24

F5:MRM of 12 channels,ES-
503.0 > 79.9
3.353e+005



Reviewed: 03/07/17

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Dataset: U:\G1.PRO\Results\2017\170306G1\170306G1-24.qld

Last Altered: Tuesday, March 07, 2017 11:21:54 AM Pacific Standard Time

Printed: Tuesday, March 07, 2017 11:22:19 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: 1700293-05 WI-CV-GW02M-0317 0.125, Description: WI-CV-GW02M-0317, Name: 170306G1_24, Date: 06-Mar-2017, Time: 20:13:35

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7	3.568e1	6.489e3		0.129	2.98	0.00152	
2	4 PFOA	413 > 368.7	1.729e2	2.933e4		0.129	4.28		
3	6 PFOS	499 > 79.9		8.502e3		0.129			
4	7 13C3-PFBS	302.0 > 98.8	6.489e3	1.642e4	0.410	0.129	2.97	93.5	96.4
5	8 13C4-PFHxA	367.2 > 321.8	1.627e4	1.642e4	1.098	0.129	3.87	87.5	90.2
6	9 18O2-PFHxS	403 > 102.6	7.001e3	1.642e4	0.434	0.129	3.99	95.2	98.2
7	10 13C2-PFOA	414.9 > 369.7	2.933e4	7.396e3	4.608	0.129	4.28	83.4	86.0
8	11 13C5-PFNA	468.2 > 422.9	6.821e3	9.530e3	0.867	0.129	4.61	80.0	82.5
9	12 13C8-PFOS	507.0 > 79.9	8.502e3	9.246e3	0.958	0.129	4.67	93.1	96.0
10	13 13C5-PFHxA	318>272.9	2.908e4	2.908e4	1.000	0.129	3.35	97.0	100
11	14 13C3-PFHxS	401.9 > 79.9	1.642e4	1.642e4	1.000	0.129	3.99	97.0	100
12	15 13C8-PFOA	421.3 > 376	7.396e3	7.396e3	1.000	0.129	4.27	97.0	100
13	16 13C9-PFNA	472.2 > 426.9	9.530e3	9.530e3	1.000	0.129	4.61	97.0	100
14	17 13C4-PFOS	503.0 > 79.9	9.246e3	9.246e3	1.000	0.129	4.67	97.0	100
15	18 Total PFBS	299 > 79.7		7.001e3		0.129		0.00152	
16	20 Total PFOA	413 > 368.7		2.933e4		0.129			
17	21 Total PFOS	499 > 79.9		8.502e3		0.129			

Dataset: U:\G1.PRO\Results\2017\170306G1\170306G1-24.qld

Last Altered: Tuesday, March 07, 2017 11:21:54 AM Pacific Standard Time

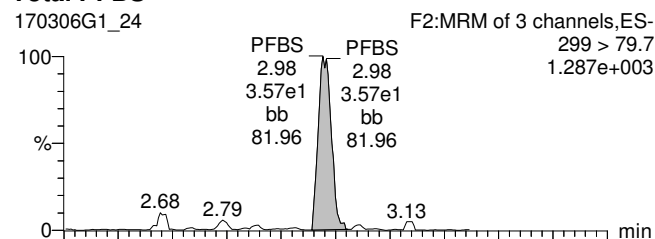
Printed: Tuesday, March 07, 2017 11:22:19 AM Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS_6_2_NEW.mdb 07 Mar 2017 09:58:54

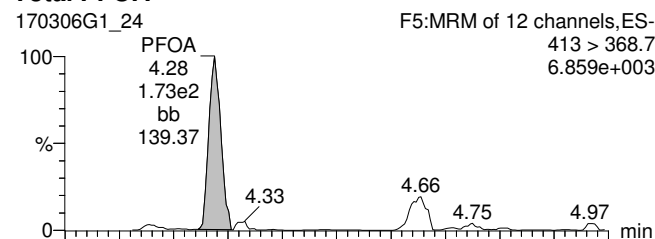
Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: 1700293-05 WI-CV-GW02M-0317 0.125, Description: WI-CV-GW02M-0317, Name: 170306G1_24, Date: 06-Mar-2017, Time: 20:13:35, Instrument: , Lab: , User:

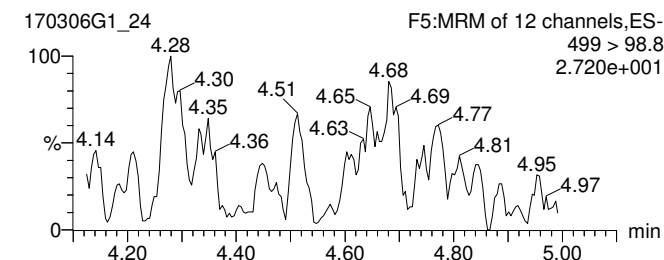
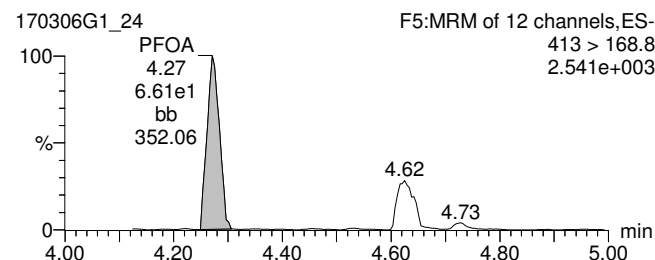
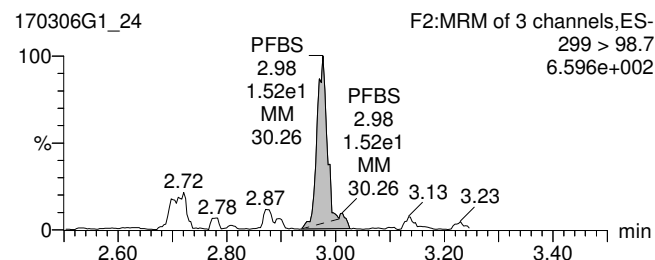
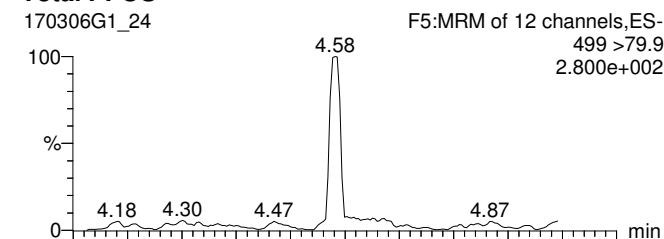
Total PFBS



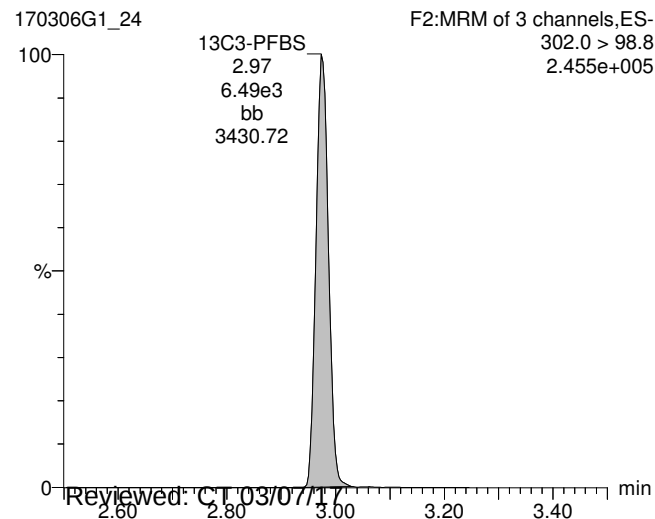
Total PFOA



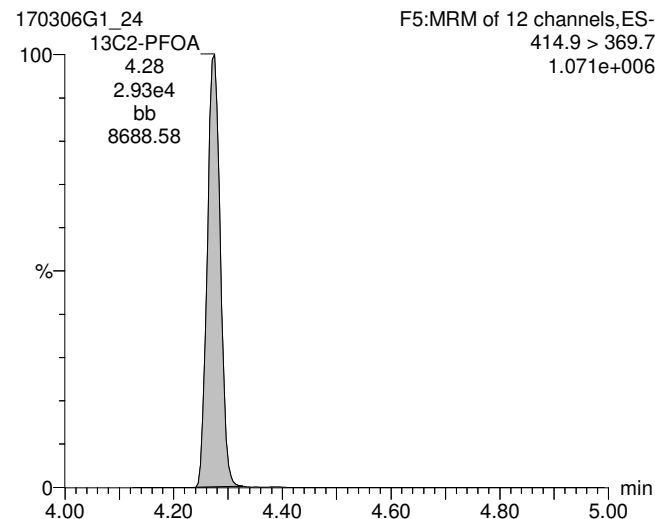
Total PFOS



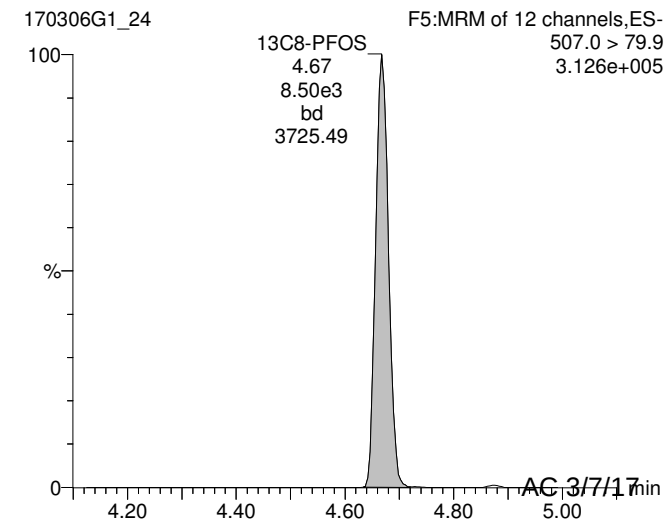
13C3-PFBS



13C2-PFOA



13C8-PFOS



Dataset: U:\G1.PRO\Results\2017\170306G1\170306G1-24.qld

Last Altered: Tuesday, March 07, 2017 11:21:54 AM Pacific Standard Time

Printed: Tuesday, March 07, 2017 11:22:19 AM Pacific Standard Time

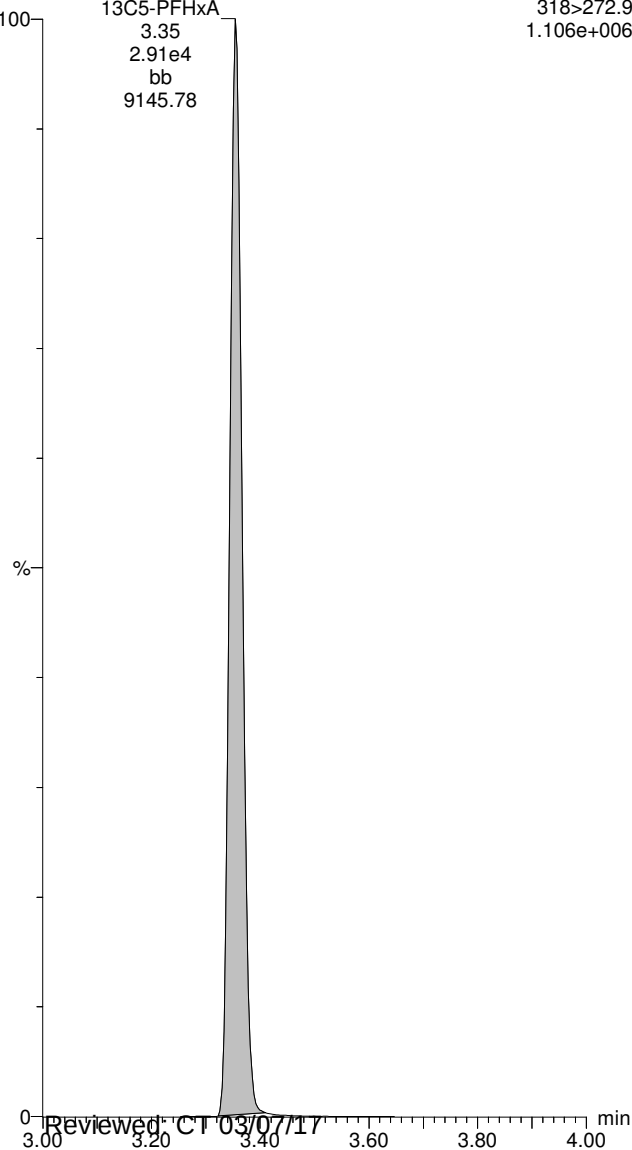
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13C5-PFHxA

170306G1_24

13C5-PFHxA
3.35
2.91e4
bb
9145.78

F3:MRM of 1 channel,ES-
318>272.9
1.106e+006

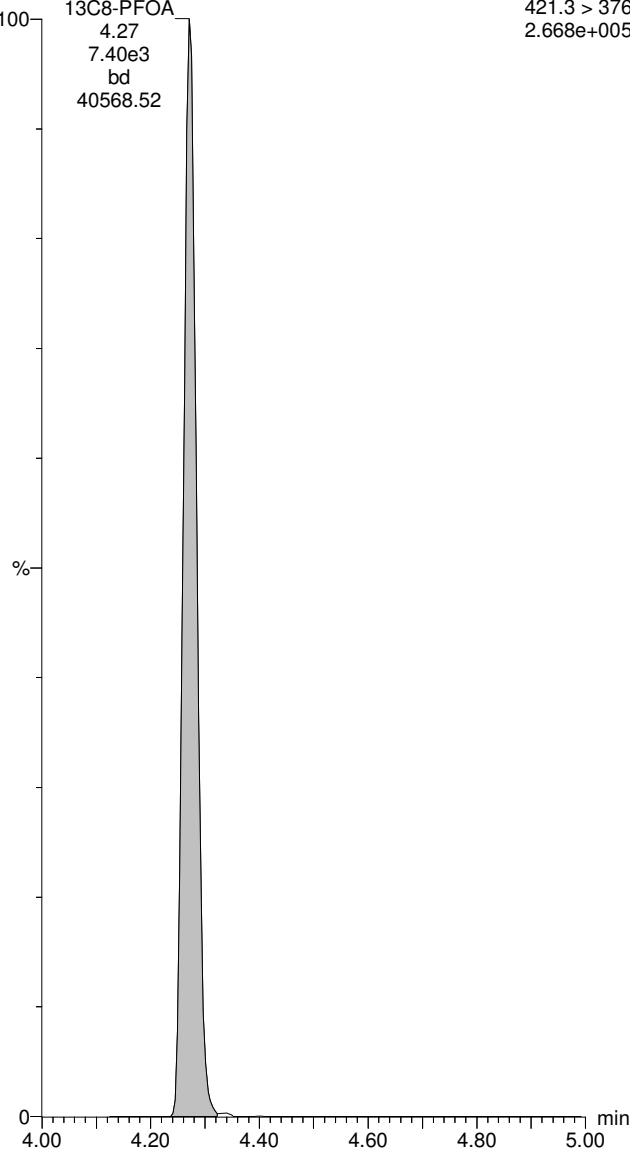


13C8-PFOA

170306G1_24

13C8-PFOA
4.27
7.40e3
bd
40568.52

F5:MRM of 12 channels,ES-
421.3 > 376
2.668e+005

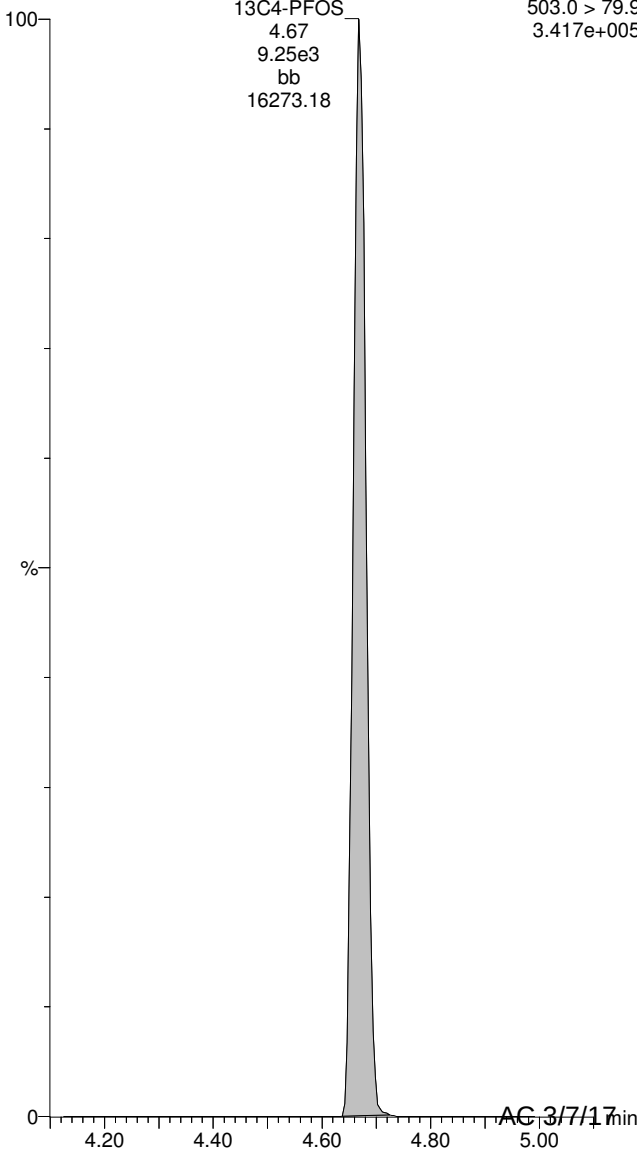


13C4-PFOS

170306G1_24

13C4-PFOS
4.67
9.25e3
bb
16273.18

F5:MRM of 12 channels,ES-
503.0 > 79.9
3.417e+005



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Dataset: U:\G1.PRO\Results\2017\170306G1\170306G1-25.qld

Last Altered: Tuesday, March 07, 2017 11:24:23 AM Pacific Standard Time

Printed: Tuesday, March 07, 2017 11:24:39 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: 1700293-06 WI-CV-GW12D-0317 0.125, Description: WI-CV-GW12D-0317, Name: 170306G1_25, Date: 06-Mar-2017, Time: 20:26:04

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7		6.073e3		0.126			
2	4 PFOA	413 > 368.7	1.353e2	2.981e4		0.126	4.28		
3	6 PFOS	499 > 79.9		7.978e3		0.126			
4	7 13C3-PFBS	302.0 > 98.8	6.073e3	1.667e4	0.410	0.126	2.98	88.4	88.9
5	8 13C4-PFHpA	367.2 > 321.8	1.608e4	1.667e4	1.098	0.126	3.87	87.4	87.9
6	9 18O2-PFHxS	403 > 102.6	6.881e3	1.667e4	0.434	0.126	3.99	94.6	95.1
7	10 13C2-PFOA	414.9 > 369.7	2.981e4	7.890e3	4.608	0.126	4.28	81.6	82.0
8	11 13C5-PFNA	468.2 > 422.9	7.030e3	9.841e3	0.867	0.126	4.61	82.0	82.4
9	12 13C8-PFOS	507.0 > 79.9	7.978e3	9.906e3	0.958	0.126	4.67	83.6	84.0
10	13 13C5-PFHxA	318>272.9	2.891e4	2.891e4	1.000	0.126	3.35	99.5	100
11	14 13C3-PFHxS	401.9 > 79.9	1.667e4	1.667e4	1.000	0.126	3.99	99.5	100
12	15 13C8-PFOA	421.3 > 376	7.890e3	7.890e3	1.000	0.126	4.27	99.5	100
13	16 13C9-PFNA	472.2 > 426.9	9.841e3	9.841e3	1.000	0.126	4.61	99.5	100
14	17 13C4-PFOS	503.0 > 79.9	9.906e3	9.906e3	1.000	0.126	4.67	99.5	100
15	18 Total PFBS	299 > 79.7		6.881e3		0.126			
16	20 Total PFOA	413 > 368.7		2.981e4		0.126			
17	21 Total PFOS	499 > 79.9		7.978e3		0.126			

Dataset: U:\G1.PRO\Results\2017\170306G1\170306G1-25.qld

Last Altered: Tuesday, March 07, 2017 11:24:23 AM Pacific Standard Time

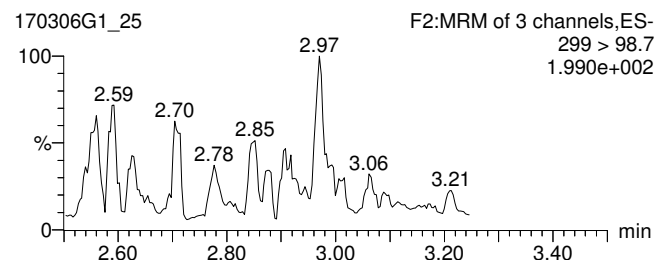
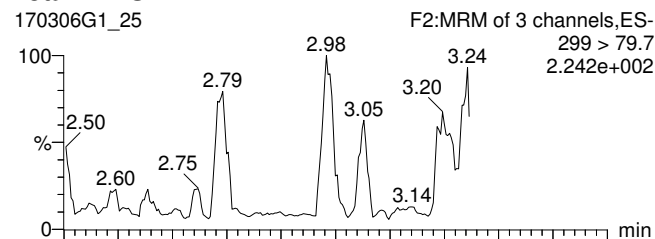
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Method: U:\G1.pro\MethDB\PFAS_6_2_NEW.mdb 07 Mar 2017 09:58:54

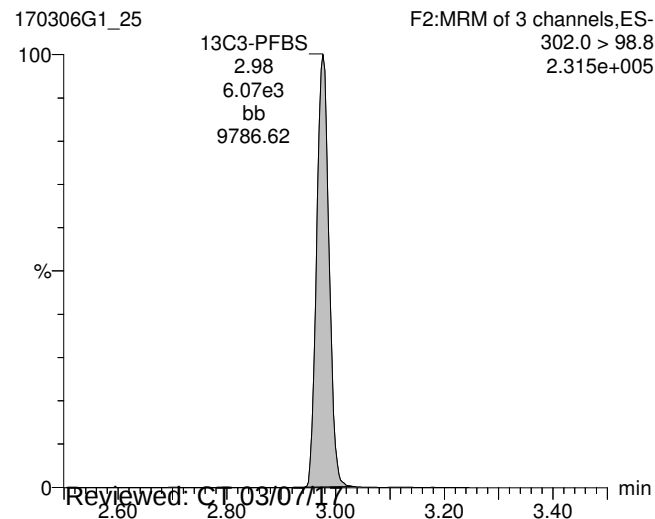
Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: 1700293-06 WI-CV-GW12D-0317 0.125, Description: WI-CV-GW12D-0317, Name: 170306G1_25, Date: 06-Mar-2017, Time: 20:26:04, Instrument: , Lab: , User:

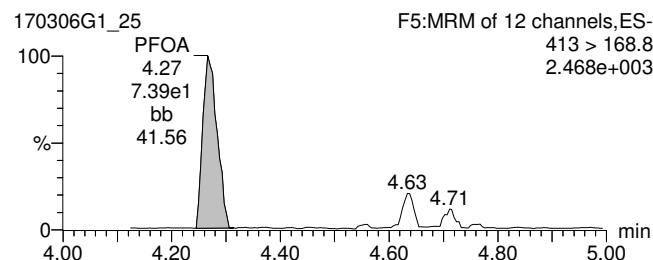
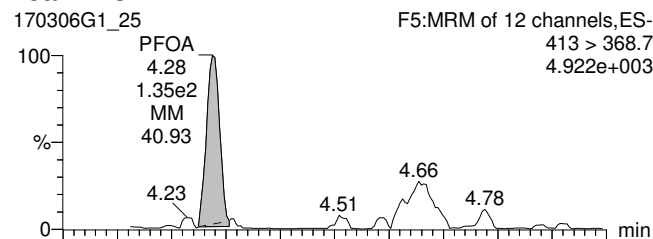
Total PFBS



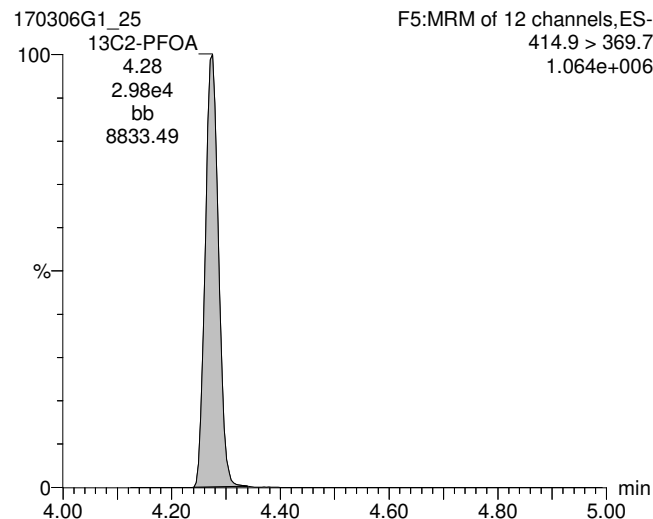
13C3-PFBS



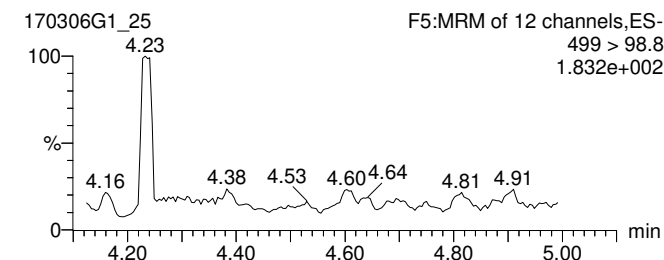
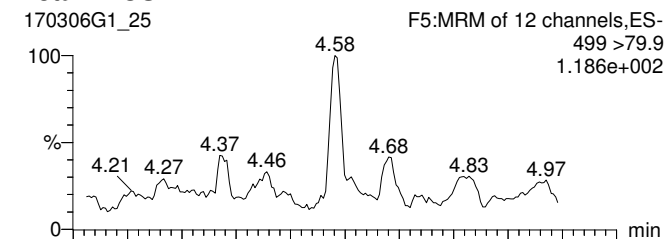
Total PFOA



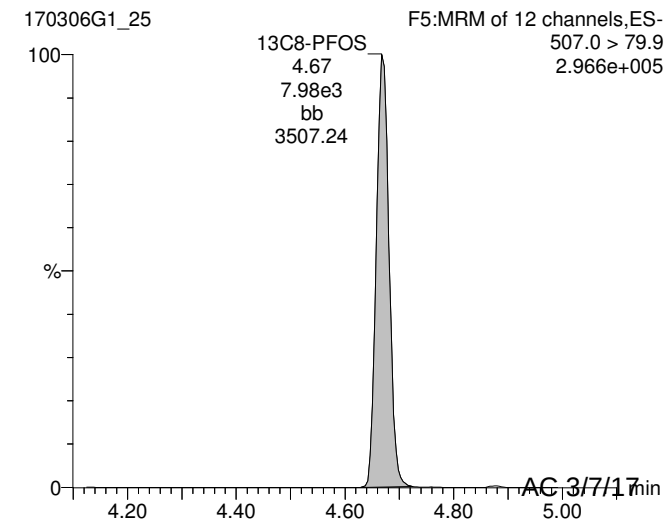
13C2-PFOA



Total PFOS



13C8-PFOS



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Dataset: U:\G1.PRO\Results\2017\170306G1\170306G1-25.qld

Last Altered: Tuesday, March 07, 2017 11:24:23 AM Pacific Standard Time

Printed: Tuesday, March 07, 2017 11:24:39 AM Pacific Standard Time

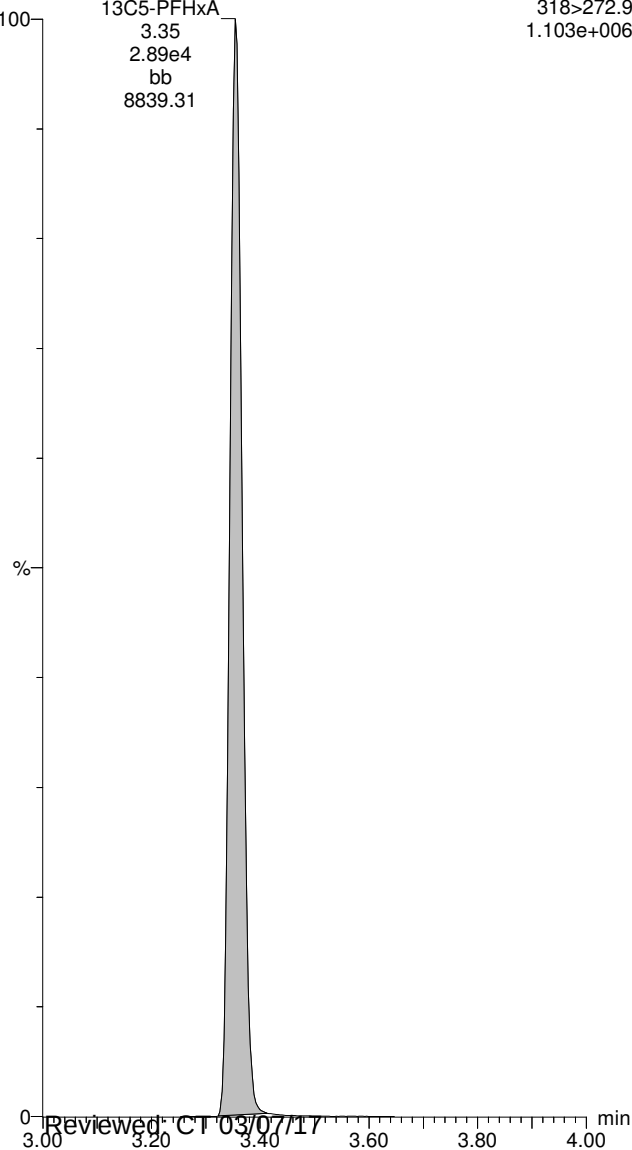
ID: 1700293-06 WI-CV-GW12D-0317 0.125, Description: WI-CV-GW12D-0317, Name: 170306G1_25, Date: 06-Mar-2017, Time: 20:26:04, Instrument: , Lab: , User:

13C5-PFHxA

170306G1_25

13C5-PFHxA
3.35
2.89e4
bb
8839.31

F3:MRM of 1 channel,ES-
318>272.9
1.103e+006

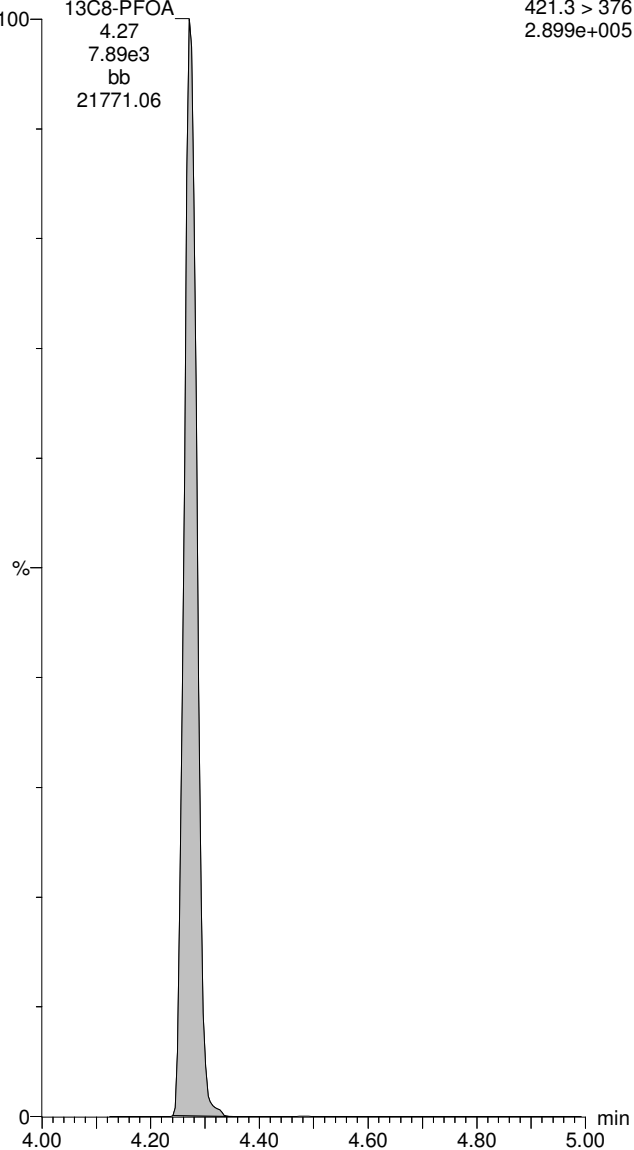


13C8-PFOA

170306G1_25

13C8-PFOA
4.27
7.89e3
bb
21771.06

F5:MRM of 12 channels,ES-
421.3 > 376
2.899e+005

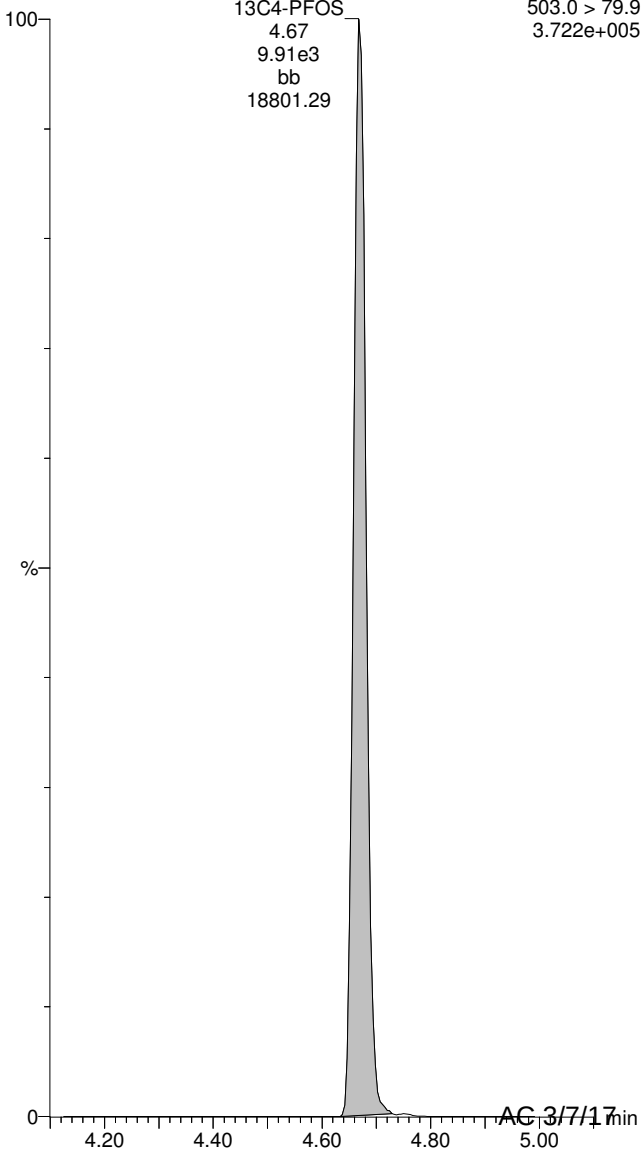


13C4-PFOS

170306G1_25

13C4-PFOS
4.67
9.91e3
bb
18801.29

F5:MRM of 12 channels,ES-
503.0 > 79.9
3.722e+005



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Dataset: U:\G1.PRO\Results\2017\170306G1\170306G1-31.qld

Last Altered: Tuesday, March 07, 2017 11:39:43 AM Pacific Standard Time

Printed: Tuesday, March 07, 2017 11:40:11 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: B7C0017-MS1 Matrix Spike 0.125, Description: Matrix Spike, Name: 170306G1_31, Date: 06-Mar-2017, Time: 21:41:24

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7	1.189e4	5.624e3		0.124	2.98	89.2	
2	4 PFOA	413 > 368.7	2.091e4	2.837e4		0.124	4.28	91.6	
3	6 PFOS	499 > 79.9	3.292e3	6.921e3		0.124	4.67	89.8	
4	7 13C3-PFBS	302.0 > 98.8	5.624e3	1.535e4	0.410	0.124	2.98	90.0	89.4
5	8 13C4-PFHxA	367.2 > 321.8	1.446e4	1.535e4	1.098	0.124	3.87	86.4	85.8
6	9 18O2-PFHxS	403 > 102.6	6.238e3	1.535e4	0.434	0.124	3.99	94.3	93.6
7	10 13C2-PFOA	414.9 > 369.7	2.837e4	7.341e3	4.608	0.124	4.27	84.5	83.9
8	11 13C5-PFNA	468.2 > 422.9	6.697e3	9.350e3	0.867	0.124	4.61	83.2	82.6
9	12 13C8-PFOS	507.0 > 79.9	6.921e3	9.672e3	0.958	0.124	4.67	75.2	74.7
10	13 13C5-PFHxA	318>272.9	2.786e4	2.786e4	1.000	0.124	3.35	101	100
11	14 13C3-PFHxS	401.9 > 79.9	1.535e4	1.535e4	1.000	0.124	3.99	101	100
12	15 13C8-PFOA	421.3 > 376	7.341e3	7.341e3	1.000	0.124	4.27	101	100
13	16 13C9-PFNA	472.2 > 426.9	9.350e3	9.350e3	1.000	0.124	4.61	101	100
14	17 13C4-PFOS	503.0 > 79.9	9.672e3	9.672e3	1.000	0.124	4.67	101	100
15	18 Total PFBS	299 > 79.7		6.238e3		0.124		89.2	
16	20 Total PFOA	413 > 368.7		2.837e4		0.124		91.6	
17	21 Total PFOS	499 > 79.9		6.921e3		0.124		89.8	

Dataset: U:\G1.PRO\Results\2017\170306G1\170306G1-31.qld

Last Altered: Tuesday, March 07, 2017 11:39:43 AM Pacific Standard Time

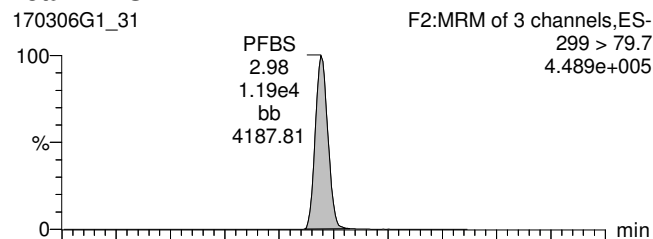
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Method: U:\G1.pro\MethDB\PFAS_6_2_NEW.mdb 07 Mar 2017 09:58:54

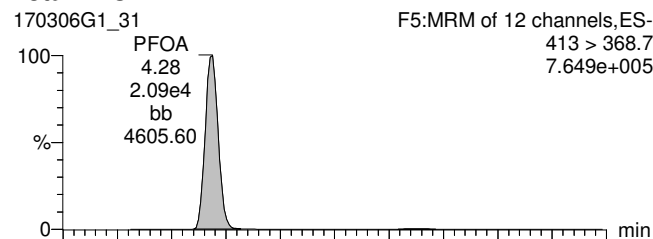
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ID: B7C0017-MS1 Matrix Spike 0.125, Description: Matrix Spike, Name: 170306G1_31, Date: 06-Mar-2017, Time: 21:41:24, Instrument: , Lab: , User:

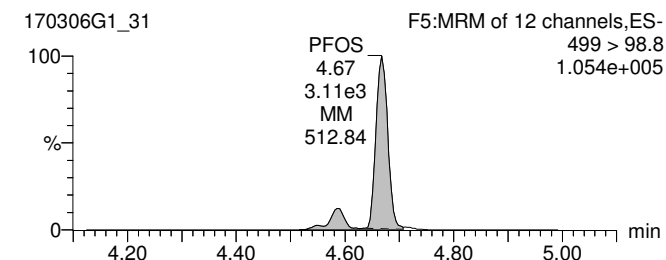
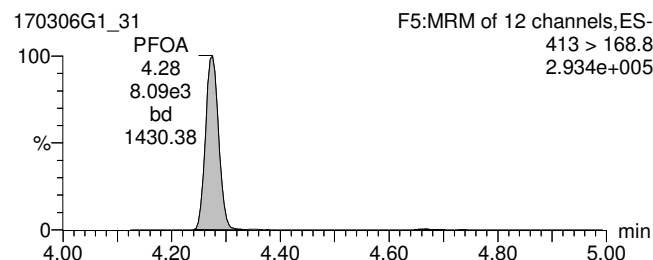
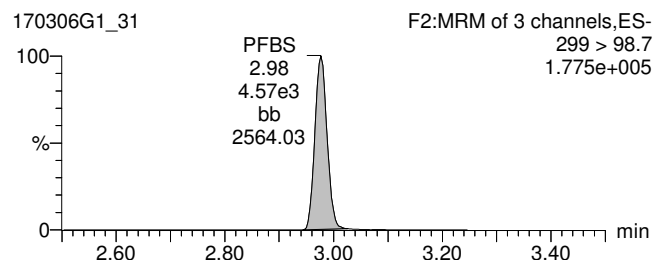
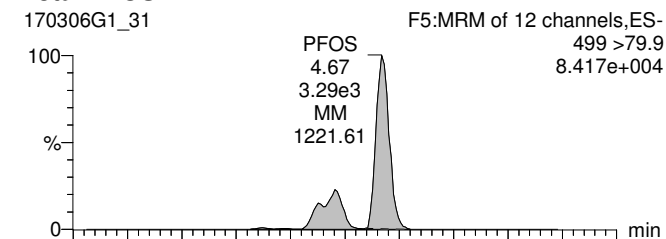
Total PFBS



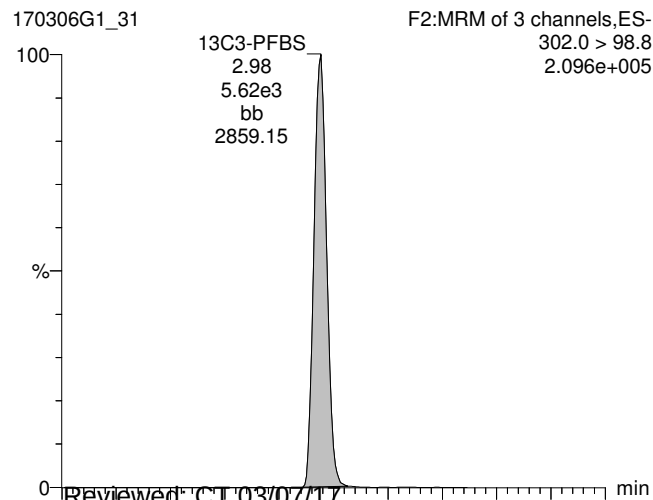
Total PFOA



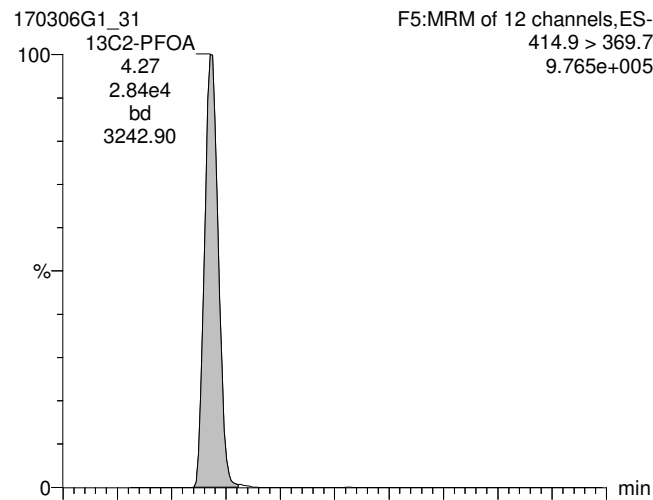
Total PFOS



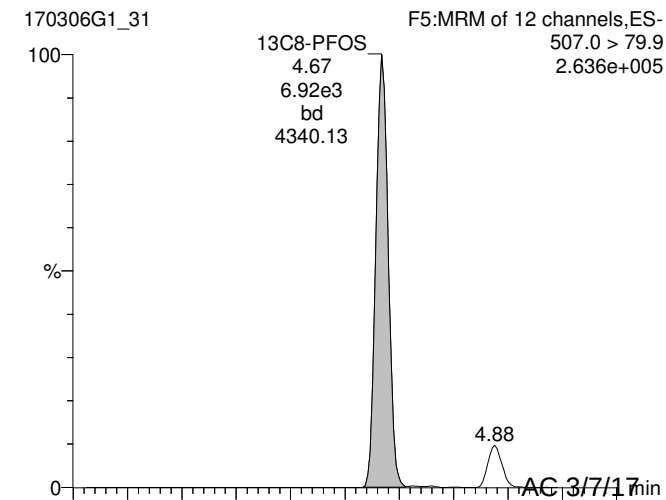
13C3-PFBS



13C2-PFOA



13C8-PFOS



Reviewed: C:\03\07\17

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Dataset: U:\G1.PRO\Results\2017\170306G1\170306G1-31.qld

Last Altered: Tuesday, March 07, 2017 11:39:43 AM Pacific Standard Time

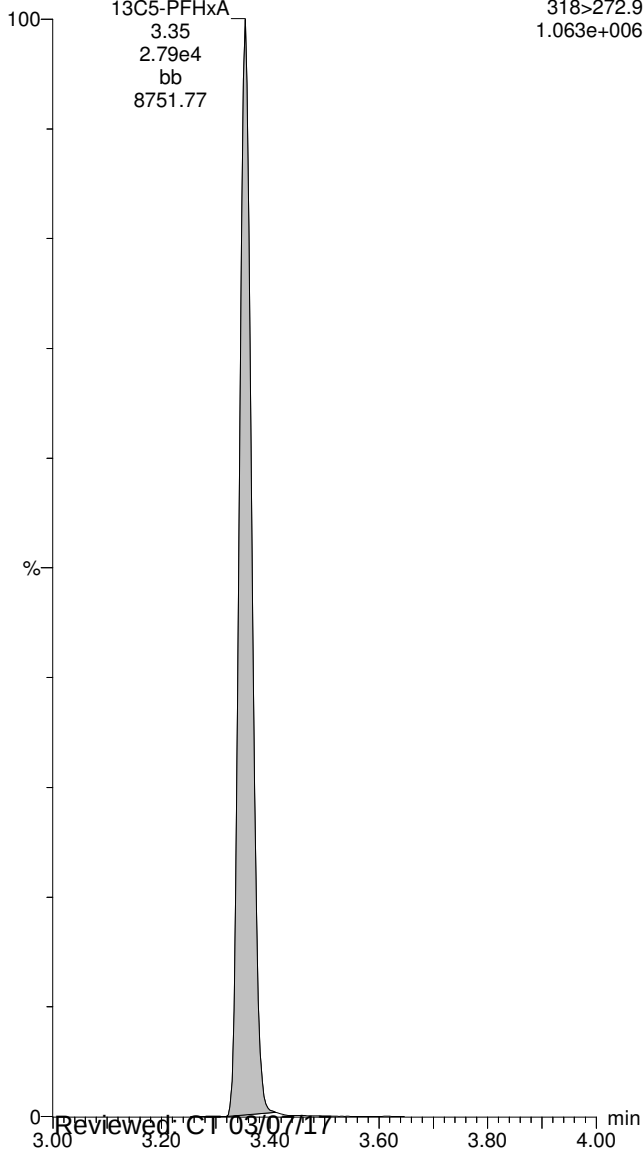
Printed: Tuesday, March 07, 2017 11:40:11 AM Pacific Standard Time

ID: B7C0017-MS1 Matrix Spike 0.125, Description: Matrix Spike, Name: 170306G1_31, Date: 06-Mar-2017, Time: 21:41:24, Instrument: , Lab: , User:

13C5-PFHxA

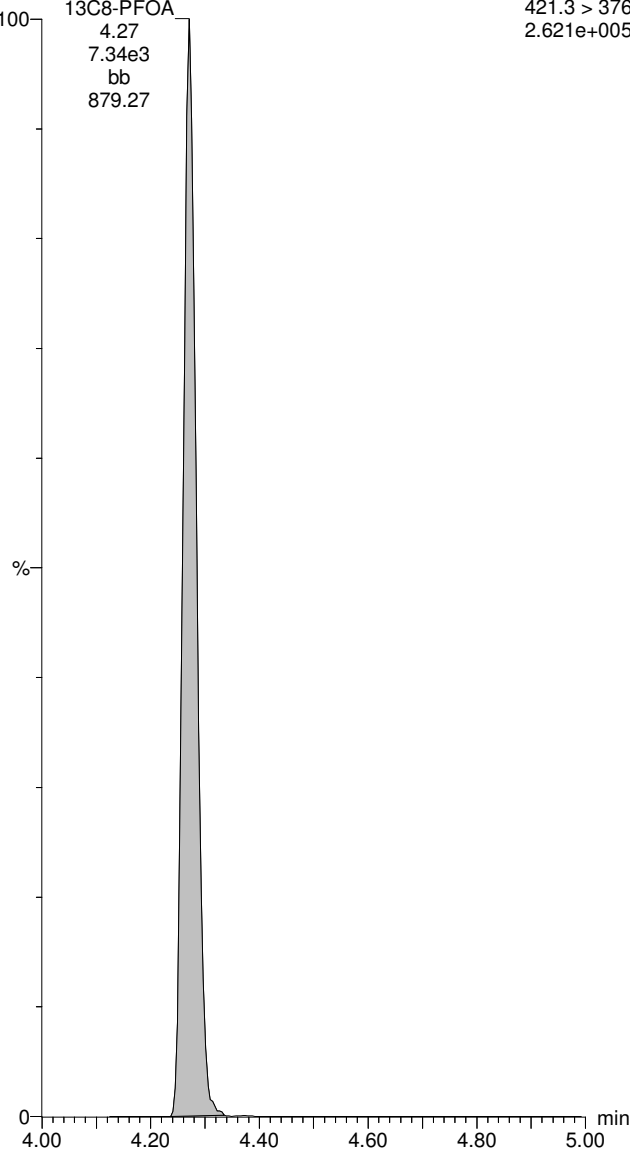
170306G1_31
13C5-PFHxA
3.35
2.79e4
bb
8751.77

F3:MRM of 1 channel,ES-
318>272.9
1.063e+006



13C8-PFOA

170306G1_31
13C8-PFOA
4.27
7.34e3
bb
879.27



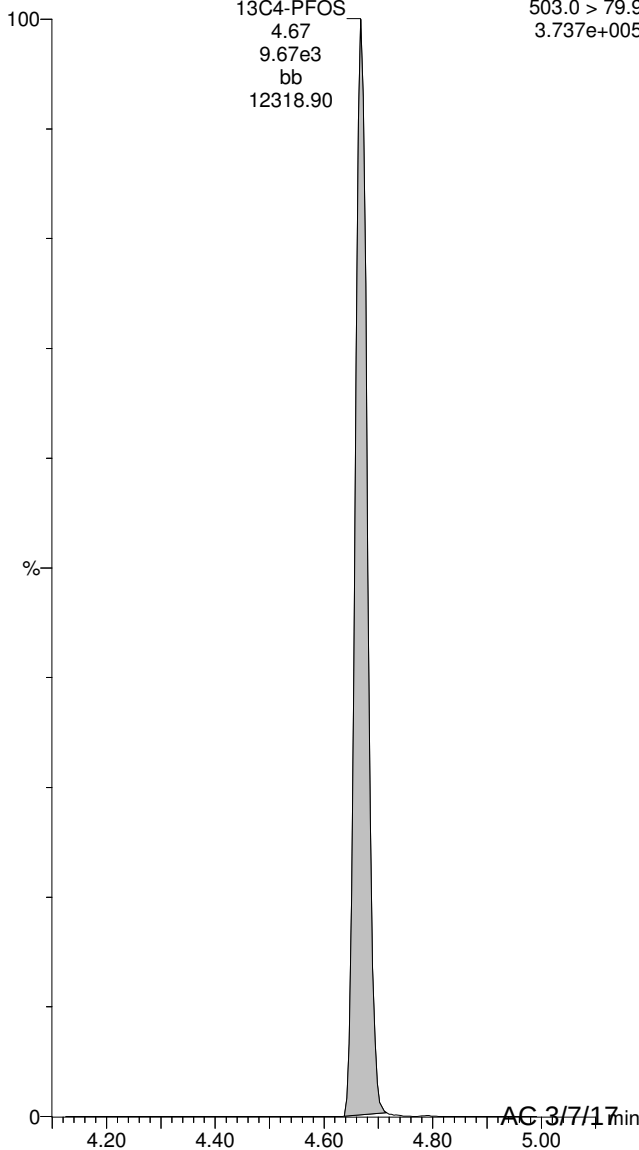
13C4-PFOS

170306G1_31

13C4-PFOS
4.67
9.67e3
bb
12318.90

F5:MRM of 12 channels,ES-
421.3 > 376
2.621e+005

F5:MRM of 12 channels,ES-
503.0 > 79.9
3.737e+005



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Dataset: U:\G1.PRO\Results\2017\170306G1\170306G1-32.qld

Last Altered: Tuesday, March 07, 2017 11:41:43 AM Pacific Standard Time

Printed: Tuesday, March 07, 2017 11:42:03 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: B7C0017-MSD1 Matrix Spike Dup 0.125, Description: Matrix Spike Dup, Name: 170306G1_32, Date: 06-Mar-2017, Time: 21:53:53

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7	1.144e4	5.611e3		0.125	2.98	85.1	
2	4 PFOA	413 > 368.7	2.058e4	2.832e4		0.125	4.28	89.4	
3	6 PFOS	499 > 79.9	3.006e3	7.769e3		0.125	4.67	72.4	
4	7 13C3-PFBS	302.0 > 98.8	5.611e3	1.555e4	0.410	0.125	2.98	87.7	88.0
5	8 13C4-PFHpA	367.2 > 321.8	1.450e4	1.555e4	1.098	0.125	3.87	84.6	84.9
6	9 18O2-PFHxS	403 > 102.6	6.443e3	1.555e4	0.434	0.125	3.99	95.1	95.4
7	10 13C2-PFOA	414.9 > 369.7	2.832e4	7.399e3	4.608	0.125	4.28	82.8	83.0
8	11 13C5-PFNA	468.2 > 422.9	7.024e3	9.084e3	0.867	0.125	4.61	88.9	89.2
9	12 13C8-PFOS	507.0 > 79.9	7.769e3	9.030e3	0.958	0.125	4.67	89.5	89.8
10	13 13C5-PFHxA	318>272.9	2.692e4	2.692e4	1.000	0.125	3.35	99.7	100
11	14 13C3-PFHxS	401.9 > 79.9	1.555e4	1.555e4	1.000	0.125	3.99	99.7	100
12	15 13C8-PFOA	421.3 > 376	7.399e3	7.399e3	1.000	0.125	4.27	99.7	100
13	16 13C9-PFNA	472.2 > 426.9	9.084e3	9.084e3	1.000	0.125	4.61	99.7	100
14	17 13C4-PFOS	503.0 > 79.9	9.030e3	9.030e3	1.000	0.125	4.67	99.7	100
15	18 Total PFBS	299 > 79.7		6.443e3		0.125		85.1	
16	20 Total PFOA	413 > 368.7		2.832e4		0.125		89.4	
17	21 Total PFOS	499 > 79.9		7.769e3		0.125		72.4	

Dataset: U:\G1.PRO\Results\2017\170306G1\170306G1-32.qld

Last Altered: Tuesday, March 07, 2017 11:41:43 AM Pacific Standard Time

Printed: Tuesday, March 07, 2017 11:42:03 AM Pacific Standard Time

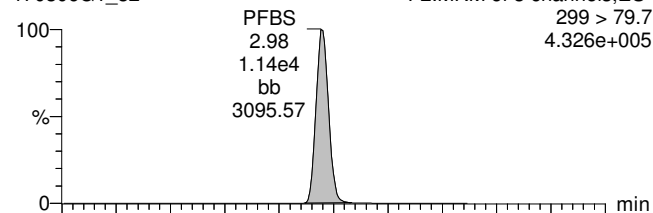
Method: U:\G1.pro\MethDB\PFAS_6_2_NEW.mdb 07 Mar 2017 09:58:54

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

ID: B7C0017-MSD1 Matrix Spike Dup 0.125, Description: Matrix Spike Dup, Name: 170306G1_32, Date: 06-Mar-2017, Time: 21:53:53, Instrument: , Lab: , User:

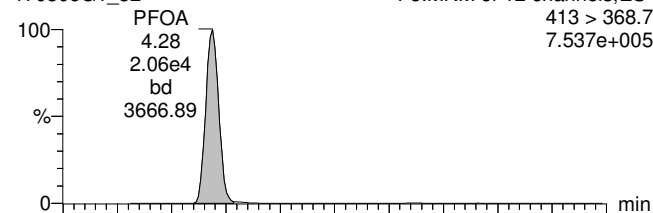
Total PFBS

170306G1_32



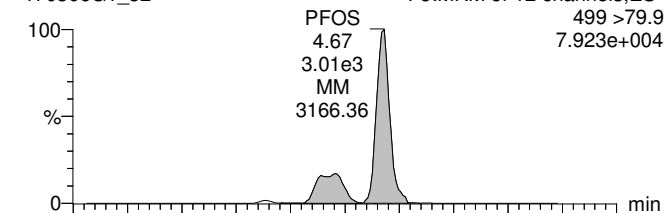
Total PFOA

170306G1_32

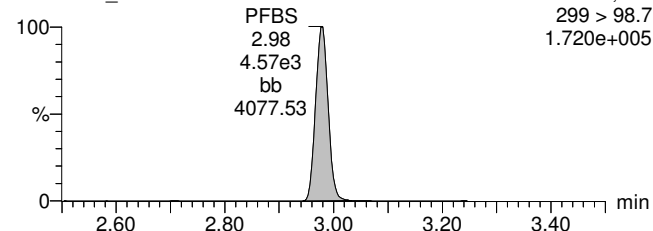


Total PFOS

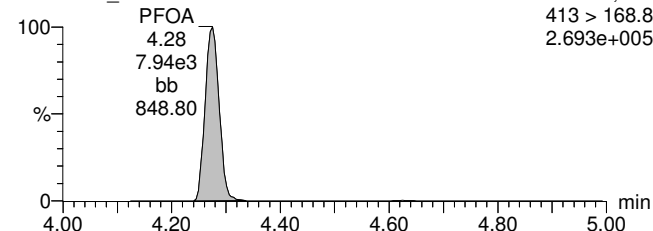
170306G1_32



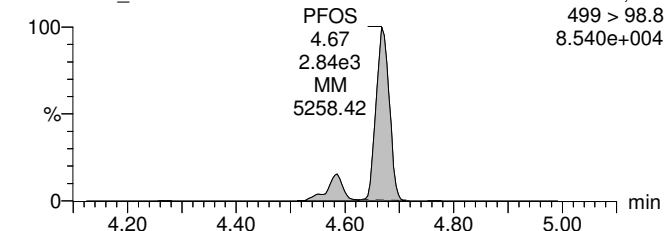
170306G1_32



170306G1_32

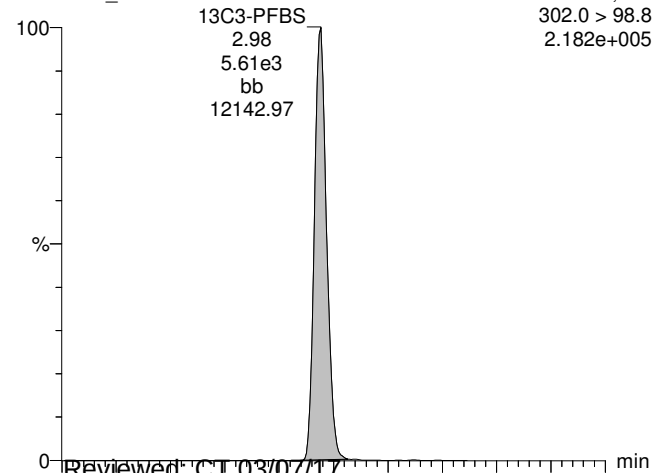


170306G1_32



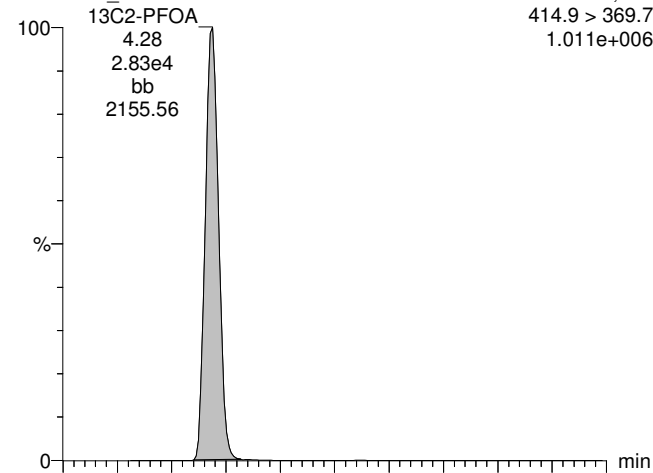
13C3-PFBS

170306G1_32



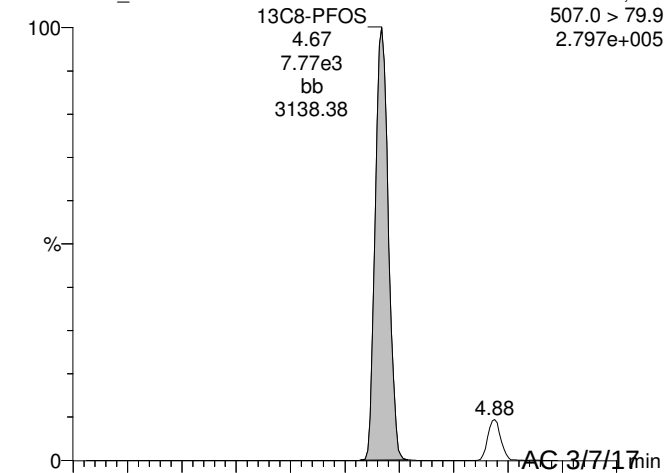
13C2-PFOA

170306G1_32



13C8-PFOS

170306G1_32



Reviewed: C:\030717

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Dataset: U:\G1.PRO\Results\2017\170306G1\170306G1-32.qld

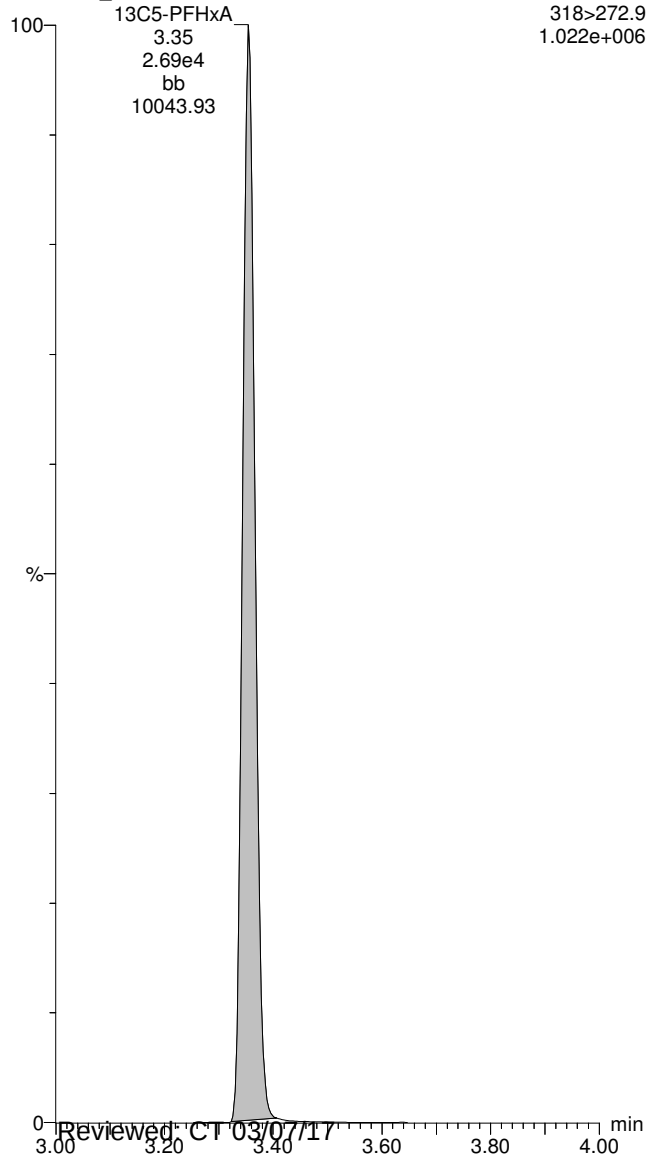
Last Altered: Tuesday, March 07, 2017 11:41:43 AM Pacific Standard Time

Printed: Tuesday, March 07, 2017 11:42:03 AM Pacific Standard Time

ID: B7C0017-MSD1 Matrix Spike Dup 0.125, Description: Matrix Spike Dup, Name: 170306G1_32, Date: 06-Mar-2017, Time: 21:53:53, Instrument: , Lab: , User:

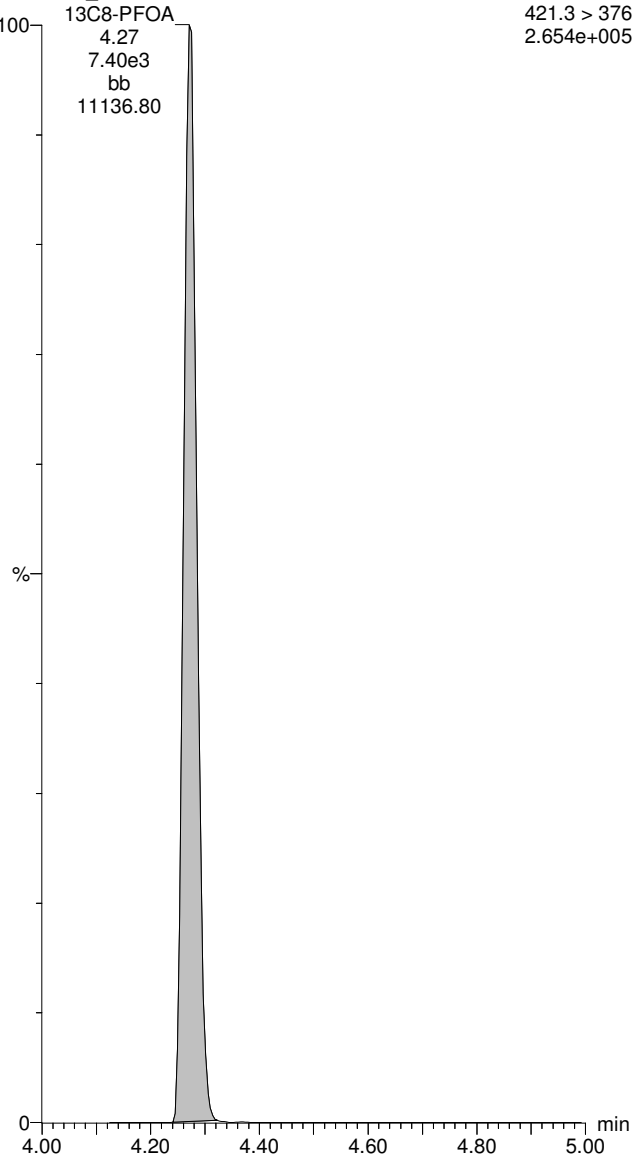
13C5-PFHxA

170306G1_32
F3:MRM of 1 channel,ES-
318>272.9
1.022e+006



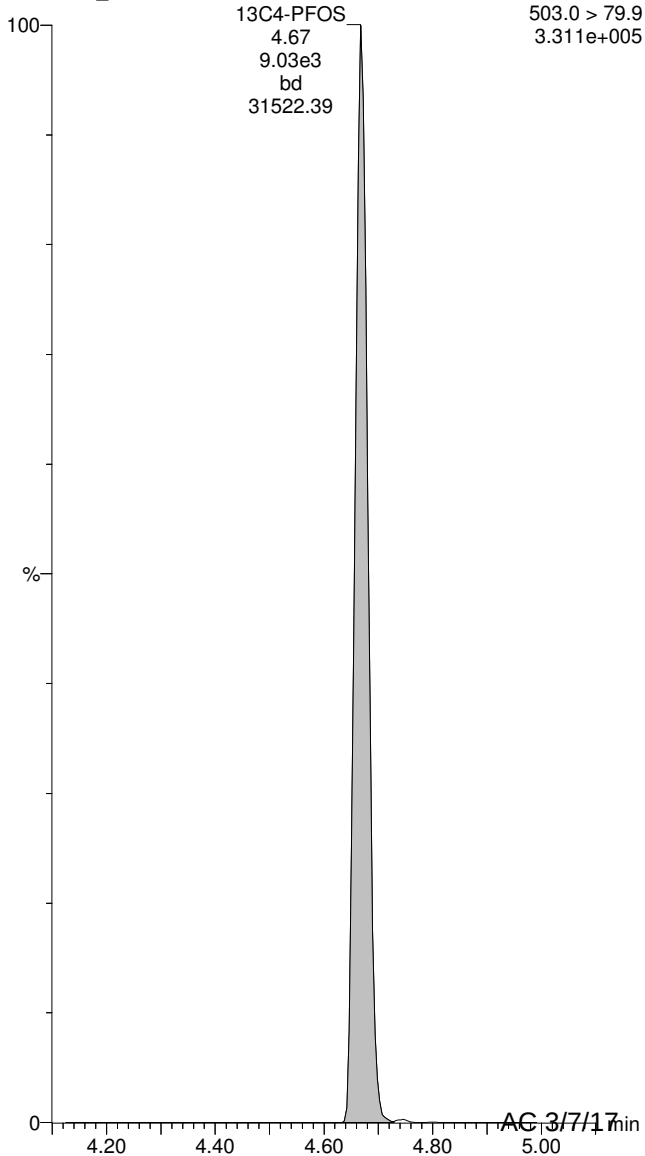
13C8-PFOA

170306G1_32
F5:MRM of 12 channels,ES-
421.3 > 376
2.654e+005



13C4-PFOS

170306G1_32
F5:MRM of 12 channels,ES-
503.0 > 79.9
3.311e+005



Reviewed: CT 03/07/17

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Dataset: U:\G1.PRO\Results\2017\170306G1\170306G1-26.qld

Last Altered: Tuesday, March 07, 2017 11:26:07 AM Pacific Standard Time

Printed: Tuesday, March 07, 2017 11:26:24 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: 1700293-07 WI-CV-EB09-030117 0.125, Description: WI-CV-EB09-030117, Name: 170306G1_26, Date: 06-Mar-2017, Time: 20:38:37

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7	4.887e0	6.215e3		0.115	2.98		
2	4 PFOA	413 > 368.7	1.967e2	3.456e4		0.115	4.28		
3	6 PFOS	499 > 79.9		9.932e3		0.115			
4	7 13C3-PFBS	302.0 > 98.8	6.215e3	1.670e4	0.410	0.115	2.98	98.6	90.8
5	8 13C4-PFHxA	367.2 > 321.8	1.622e4	1.670e4	1.098	0.115	3.87	96.1	88.5
6	9 18O2-PFHxS	403 > 102.6	7.279e3	1.670e4	0.434	0.115	3.99	109	100
7	10 13C2-PFOA	414.9 > 369.7	3.456e4	8.713e3	4.608	0.115	4.27	93.5	86.1
8	11 13C5-PFNA	468.2 > 422.9	9.383e3	1.055e4	0.867	0.115	4.61	111	103
9	12 13C8-PFOS	507.0 > 79.9	9.932e3	1.085e4	0.958	0.115	4.67	104	95.5
10	13 13C5-PFHxA	318>272.9	3.001e4	3.001e4	1.000	0.115	3.35	109	100
11	14 13C3-PFHxS	401.9 > 79.9	1.670e4	1.670e4	1.000	0.115	3.99	109	100
12	15 13C8-PFOA	421.3 > 376	8.713e3	8.713e3	1.000	0.115	4.27	109	100
13	16 13C9-PFNA	472.2 > 426.9	1.055e4	1.055e4	1.000	0.115	4.61	109	100
14	17 13C4-PFOS	503.0 > 79.9	1.085e4	1.085e4	1.000	0.115	4.67	109	100
15	18 Total PFBS	299 > 79.7		7.279e3		0.115			
16	20 Total PFOA	413 > 368.7		3.456e4		0.115			
17	21 Total PFOS	499 > 79.9		9.932e3		0.115			

Dataset: U:\G1.PRO\Results\2017\170306G1\170306G1-26.qld

Last Altered: Tuesday, March 07, 2017 11:26:07 AM Pacific Standard Time

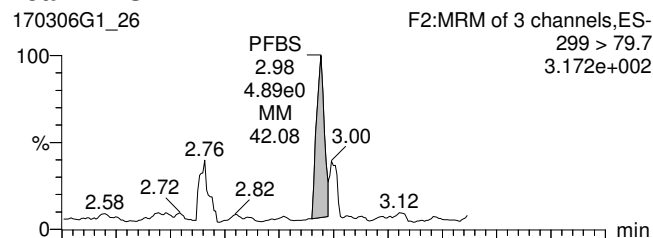
Printed: Tuesday, March 07, 2017 11:26:24 AM Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS_6_2_NEW.mdb 07 Mar 2017 09:58:54

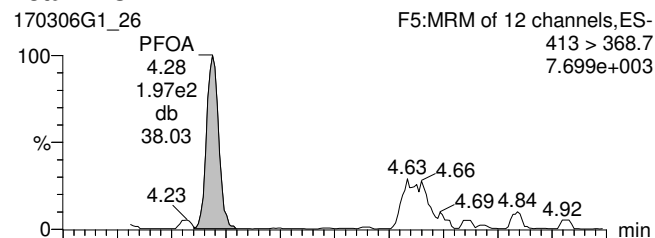
Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: 1700293-07 WI-CV-EB09-030117 0.125, Description: WI-CV-EB09-030117, Name: 170306G1_26, Date: 06-Mar-2017, Time: 20:38:37, Instrument: , Lab: , User:

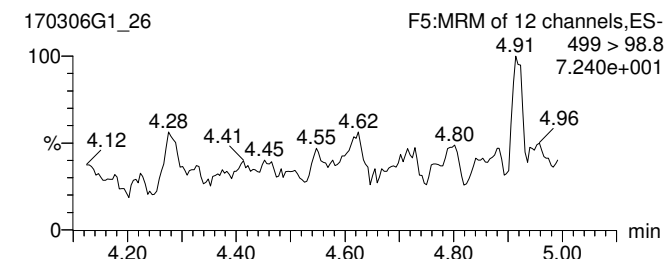
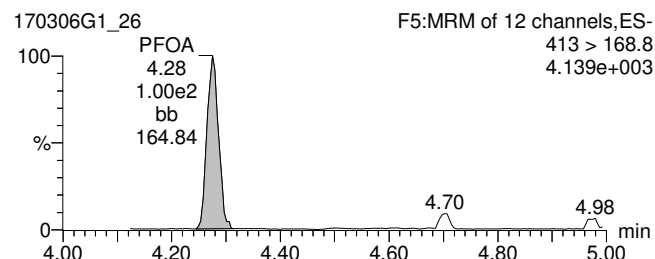
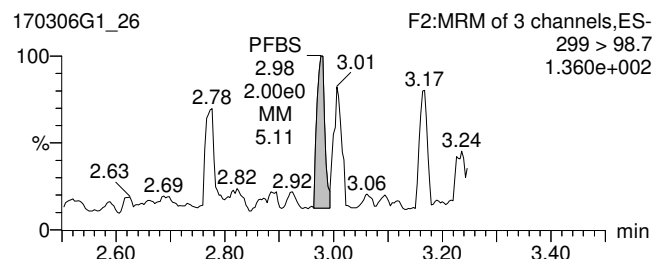
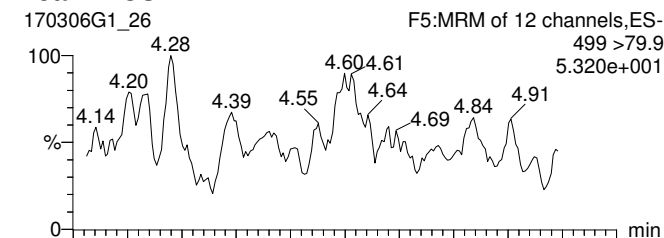
Total PFBS



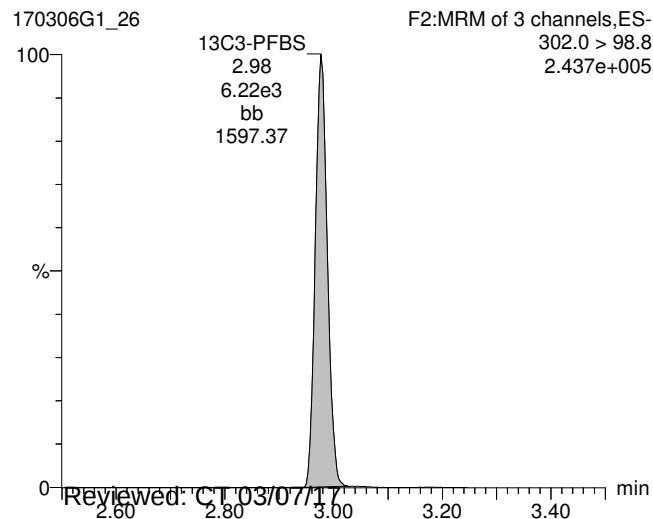
Total PFOA



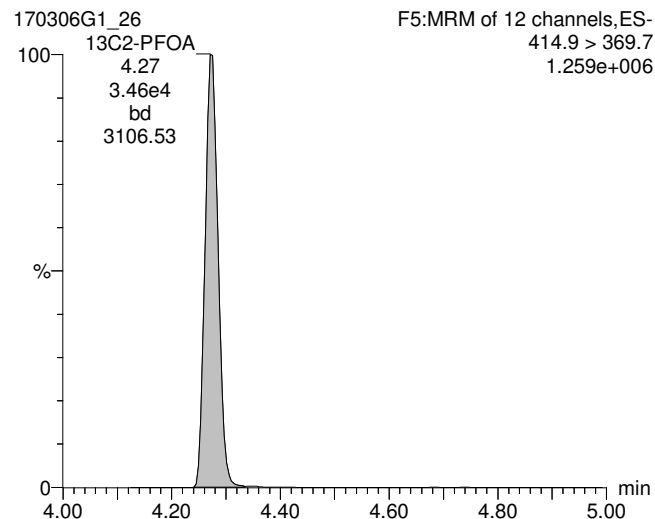
Total PFOS



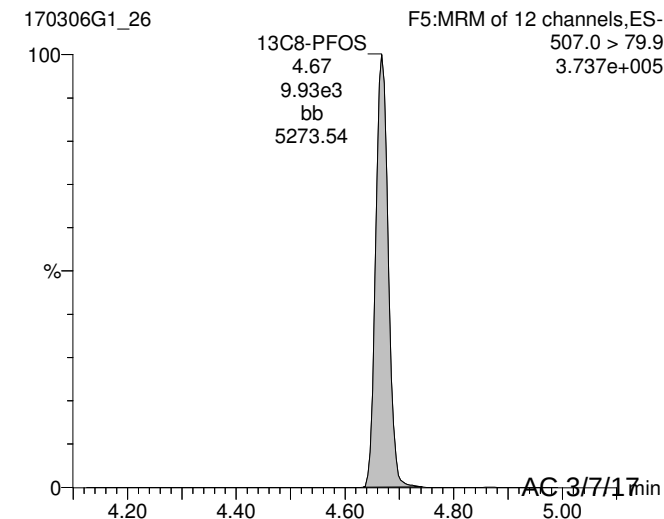
13C3-PFBS



13C2-PFOA



13C8-PFOS



Reviewed: C:\03\07\17

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Dataset: U:\G1.PRO\Results\2017\170306G1\170306G1-26.qld

Last Altered: Tuesday, March 07, 2017 11:26:07 AM Pacific Standard Time

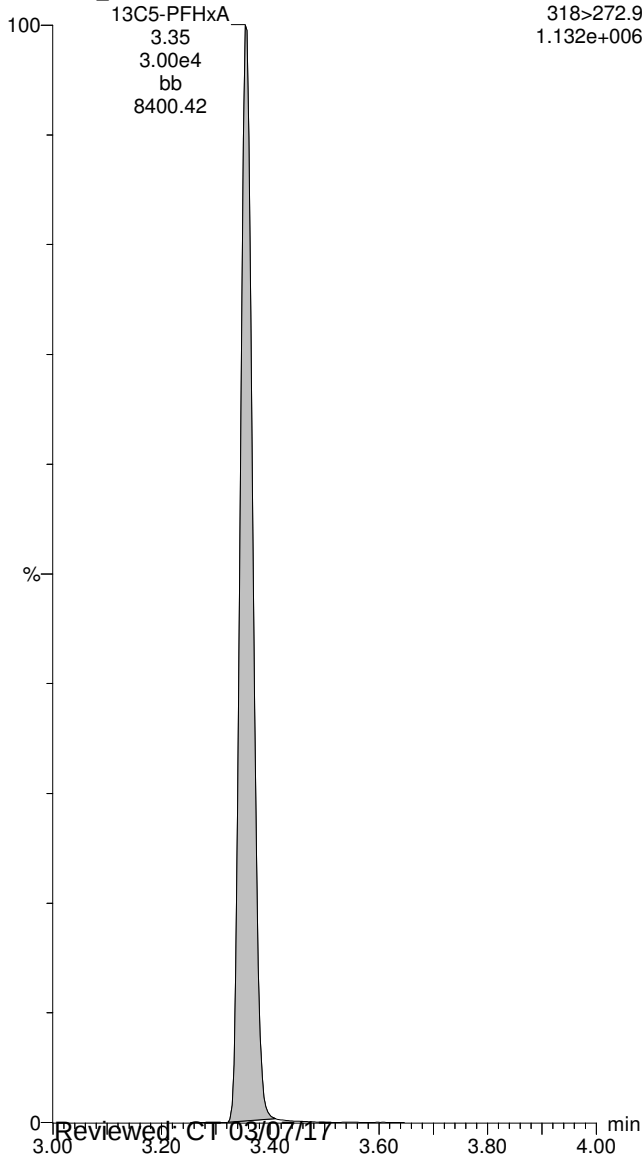
Printed: Tuesday, March 07, 2017 11:26:24 AM Pacific Standard Time

ID: 1700293-07 WI-CV-EB09-030117 0.125, Description: WI-CV-EB09-030117, Name: 170306G1_26, Date: 06-Mar-2017, Time: 20:38:37, Instrument: , Lab: , User:

13C5-PFHxA

170306G1_26

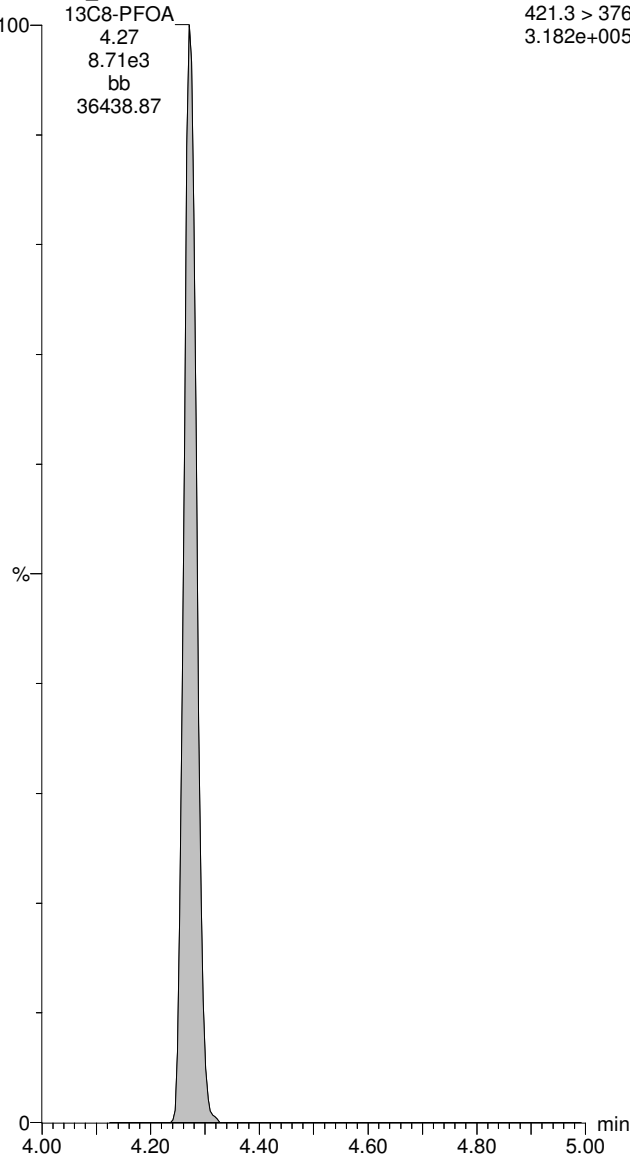
F3:MRM of 1 channel,ES-
318>272.9
1.132e+006



13C8-PFOA

170306G1_26

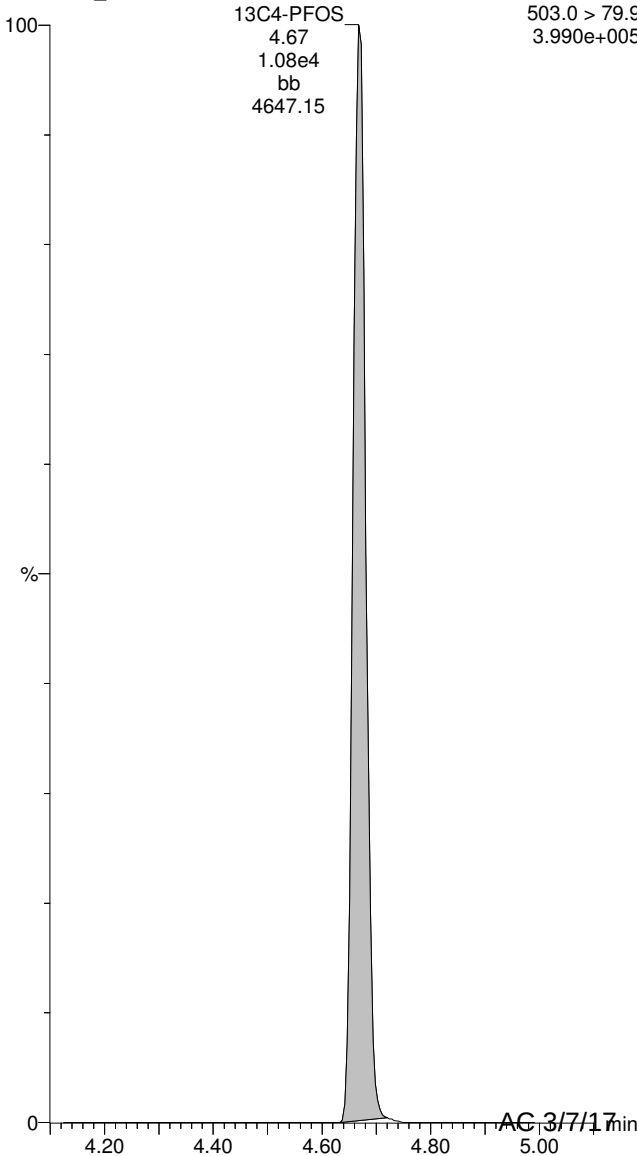
F5:MRM of 12 channels,ES-
421.3 > 376
3.182e+005



13C4-PFOS

170306G1_26

F5:MRM of 12 channels,ES-
503.0 > 79.9
3.990e+005



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Dataset: U:\G1.PRO\Results\2017\170306G1\170306G1-27.qld

Last Altered: Tuesday, March 07, 2017 11:29:20 AM Pacific Standard Time

Printed: Tuesday, March 07, 2017 11:29:46 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: 1700293-08 WI-CV-GW08S-0317 0.125, Description: WI-CV-GW08S-0317, Name: 170306G1_27, Date: 06-Mar-2017, Time: 20:51:11

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7	1.737e2	5.960e3		0.130	2.98	0.958	
2	4 PFOA	413 > 368.7	2.664e2	2.675e4		0.130	4.28		
3	6 PFOS	499 > 79.9		6.175e3		0.130			
4	7 13C3-PFBS	302.0 > 98.8	5.960e3	1.444e4	0.410	0.130	2.98	97.0	101
5	8 13C4-PFHxA	367.2 > 321.8	1.435e4	1.444e4	1.098	0.130	3.87	87.2	90.5
6	9 18O2-PFHxS	403 > 102.6	6.124e3	1.444e4	0.434	0.130	3.99	94.1	97.6
7	10 13C2-PFOA	414.9 > 369.7	2.675e4	6.287e3	4.608	0.130	4.28	88.9	92.3
8	11 13C5-PFNA	468.2 > 422.9	5.395e3	7.912e3	0.867	0.130	4.61	75.7	78.6
9	12 13C8-PFOS	507.0 > 79.9	6.175e3	8.376e3	0.958	0.130	4.67	74.1	76.9
10	13 13C5-PFHxA	318>272.9	2.781e4	2.781e4	1.000	0.130	3.35	96.3	100
11	14 13C3-PFHxS	401.9 > 79.9	1.444e4	1.444e4	1.000	0.130	3.99	96.3	100
12	15 13C8-PFOA	421.3 > 376	6.287e3	6.287e3	1.000	0.130	4.27	96.3	100
13	16 13C9-PFNA	472.2 > 426.9	7.912e3	7.912e3	1.000	0.130	4.61	96.3	100
14	17 13C4-PFOS	503.0 > 79.9	8.376e3	8.376e3	1.000	0.130	4.67	96.3	100
15	18 Total PFBS	299 > 79.7		6.124e3		0.130		0.958	
16	20 Total PFOA	413 > 368.7		2.675e4		0.130			
17	21 Total PFOS	499 > 79.9		6.175e3		0.130			

Dataset: U:\G1.PRO\Results\2017\170306G1\170306G1-27.qld

Last Altered: Tuesday, March 07, 2017 11:29:20 AM Pacific Standard Time

Printed: Tuesday, March 07, 2017 11:29:46 AM Pacific Standard Time

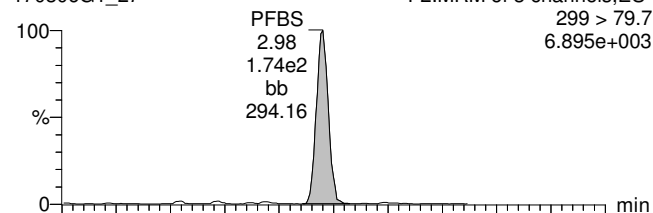
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Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: 1700293-08 WI-CV-GW08S-0317 0.125, Description: WI-CV-GW08S-0317, Name: 170306G1_27, Date: 06-Mar-2017, Time: 20:51:11, Instrument: , Lab: , User:

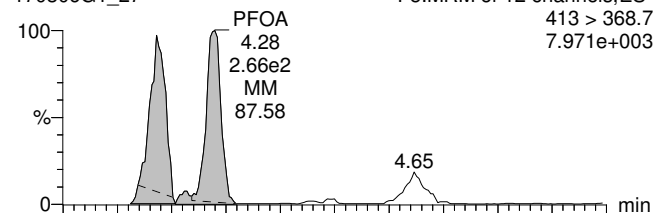
Total PFBS

170306G1_27



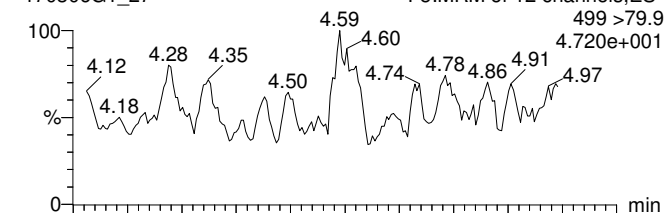
Total PFOA

170306G1_27

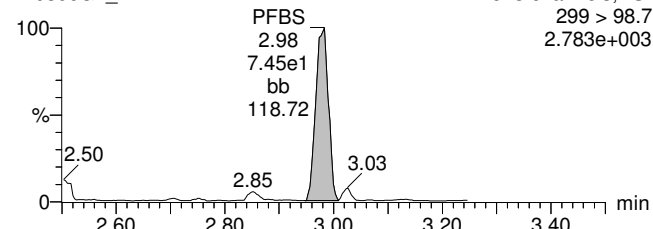


Total PFOS

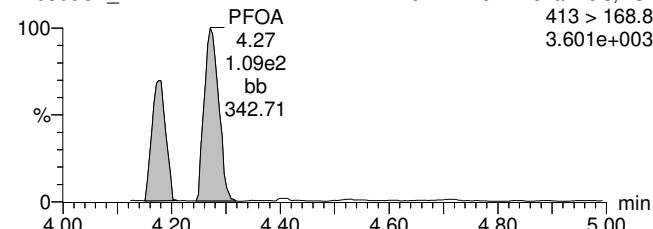
170306G1_27



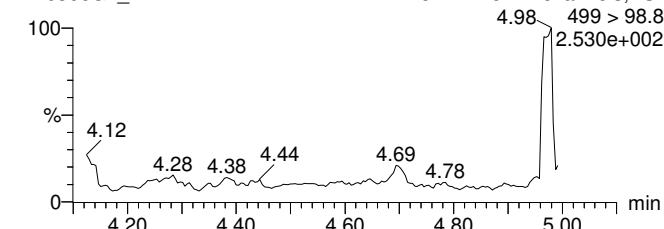
170306G1_27



170306G1_27

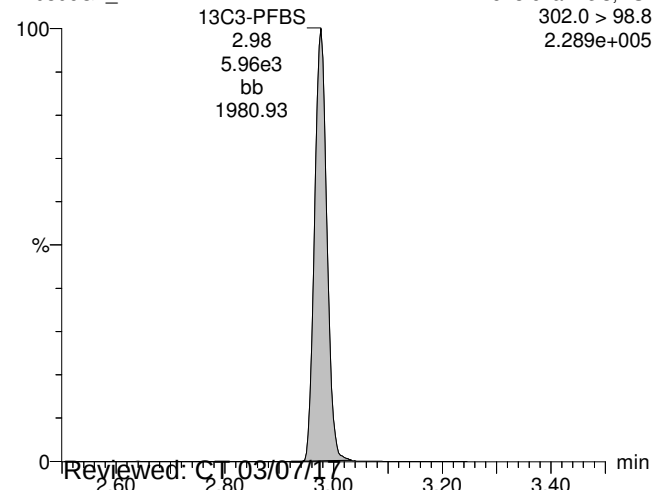


170306G1_27



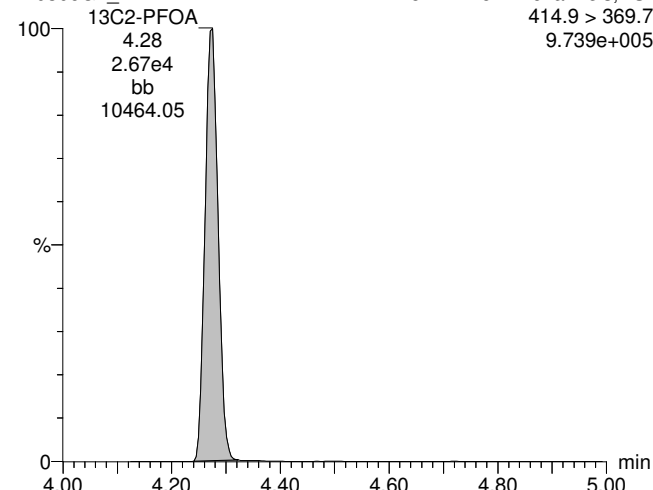
13C3-PFBS

170306G1_27



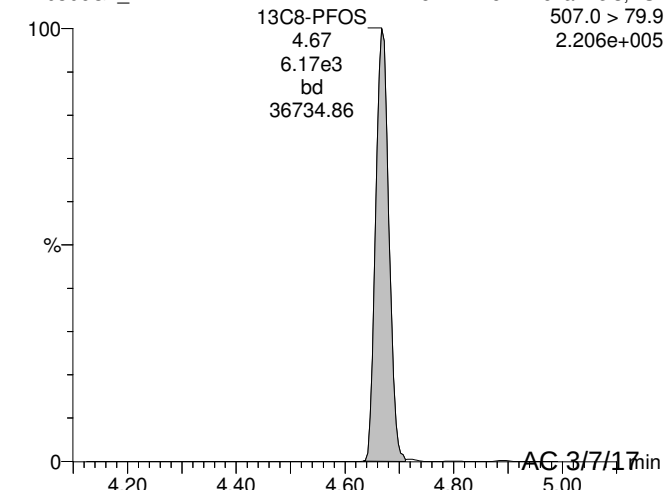
13C2-PFOA

170306G1_27



13C8-PFOS

170306G1_27



Reviewed: C:\030717

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Dataset: U:\G1.PRO\Results\2017\170306G1\170306G1-27.qld

Last Altered: Tuesday, March 07, 2017 11:29:20 AM Pacific Standard Time

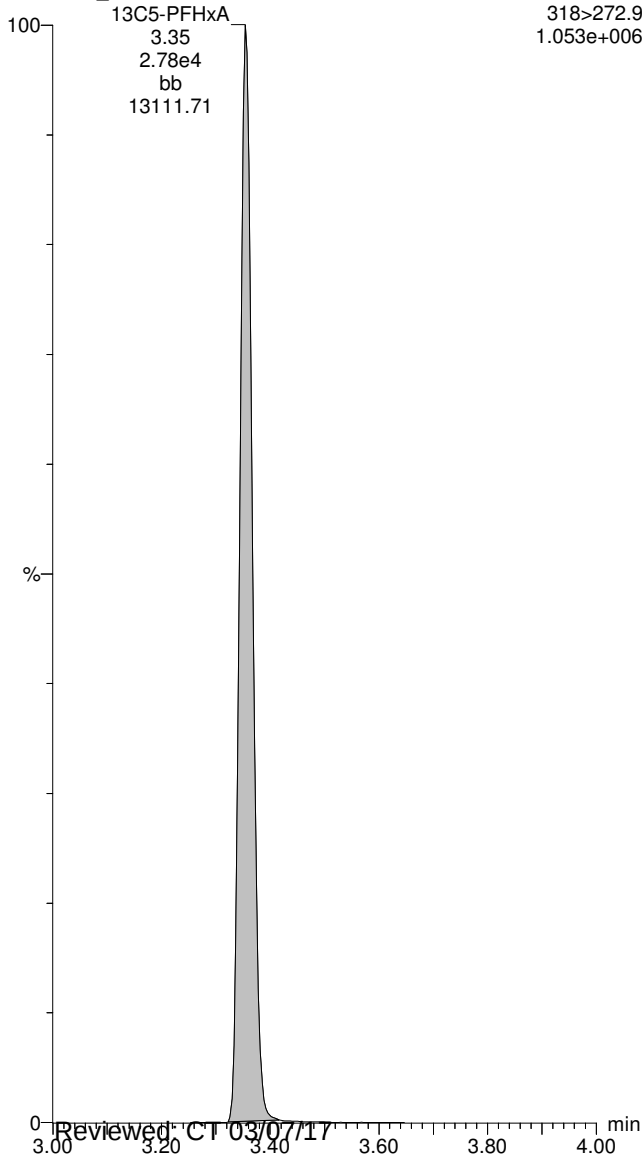
Printed: Tuesday, March 07, 2017 11:29:46 AM Pacific Standard Time

ID: 1700293-08 WI-CV-GW08S-0317 0.125, Description: WI-CV-GW08S-0317, Name: 170306G1_27, Date: 06-Mar-2017, Time: 20:51:11, Instrument: , Lab: , User:

13C5-PFHxA

170306G1_27

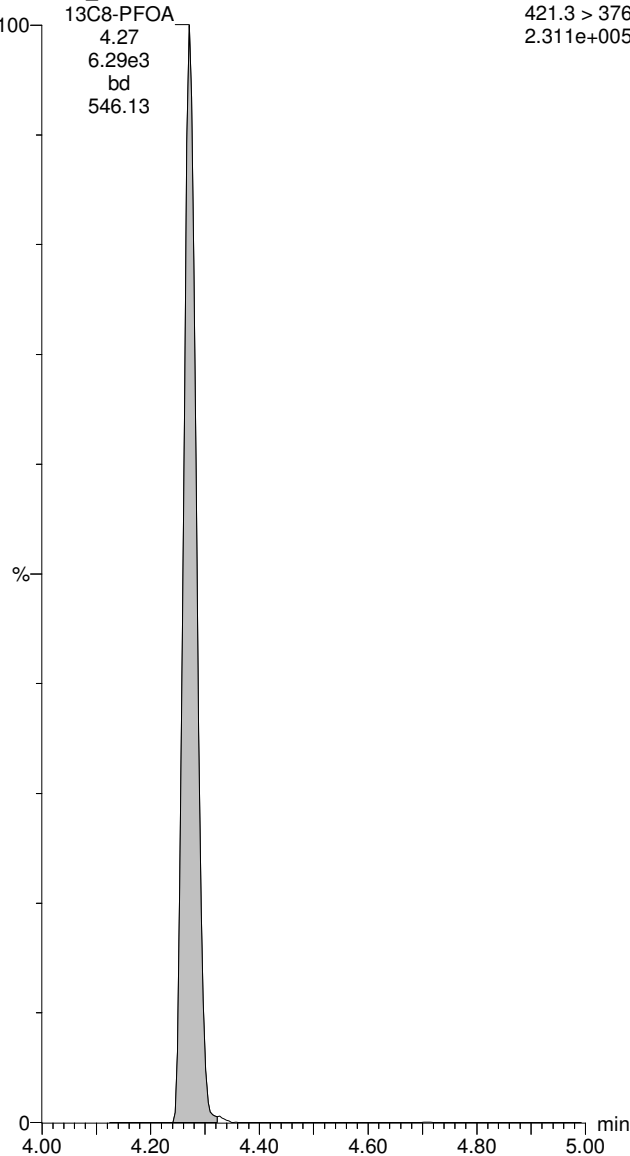
F3:MRM of 1 channel,ES-
318>272.9
1.053e+006



13C8-PFOA

170306G1_27

13C8-PFOA
4.27
6.29e3
bd
546.13

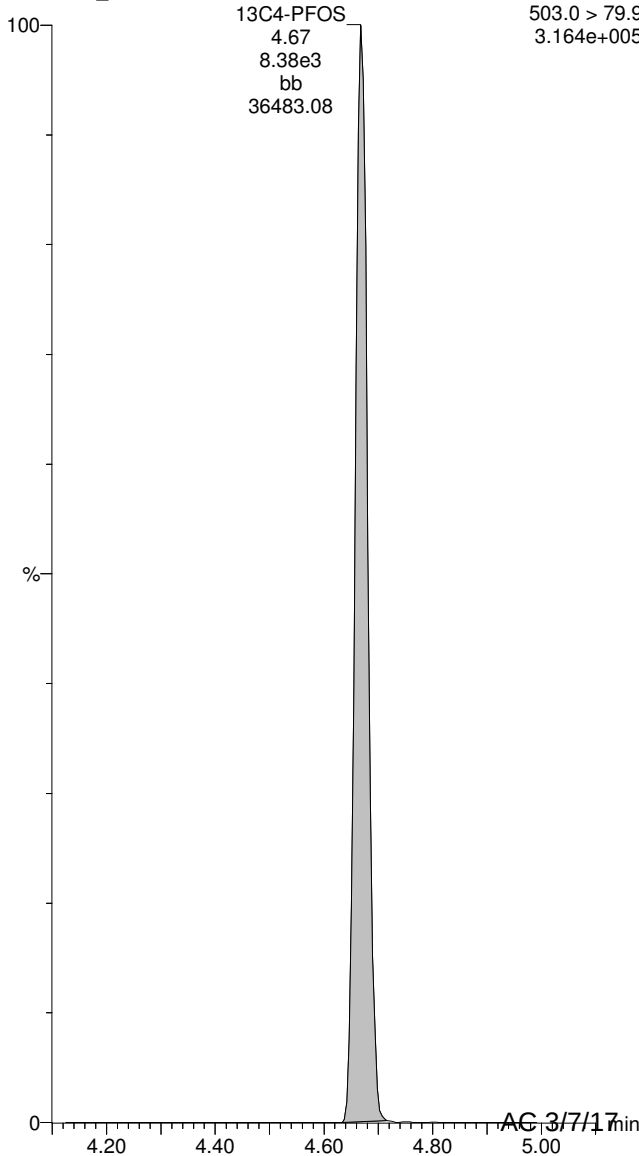


13C4-PFOS

170306G1_27

F5:MRM of 12 channels,ES-
421.3 > 376
2.311e+005

13C4-PFOS
4.67
8.38e3
bb
36483.08



Reviewed: CT 03/07/17

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Dataset: U:\G1.PRO\Results\2017\170306G1\170306G1-28.qld

Last Altered: Tuesday, March 07, 2017 11:30:54 AM Pacific Standard Time

Printed: Tuesday, March 07, 2017 11:31:17 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: 1700293-09 WI-CV-FB01-030217 0.125, Description: WI-CV-FB01-030217, Name: 170306G1_28, Date: 06-Mar-2017, Time: 21:03:44

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7		5.893e3		0.119			
2	4 PFOA	413 > 368.7	1.427e2	2.484e4		0.119	4.28		
3	6 PFOS	499 > 79.9		6.750e3		0.119			
4	7 13C3-PFBS	302.0 > 98.8	5.893e3	1.400e4	0.410	0.119	2.98	107	103
5	8 13C4-PFHpA	367.2 > 321.8	1.442e4	1.400e4	1.098	0.119	3.87	98.2	93.8
6	9 18O2-PFHxS	403 > 102.6	5.434e3	1.400e4	0.434	0.119	3.99	93.5	89.4
7	10 13C2-PFOA	414.9 > 369.7	2.484e4	6.276e3	4.608	0.119	4.28	89.9	85.9
8	11 13C5-PFNA	468.2 > 422.9	6.595e3	8.451e3	0.867	0.119	4.61	94.2	90.0
9	12 13C8-PFOS	507.0 > 79.9	6.750e3	8.381e3	0.958	0.119	4.67	88.0	84.0
10	13 13C5-PFHxA	318>272.9	2.735e4	2.735e4	1.000	0.119	3.35	105	100
11	14 13C3-PFHxS	401.9 > 79.9	1.400e4	1.400e4	1.000	0.119	3.99	105	100
12	15 13C8-PFOA	421.3 > 376	6.276e3	6.276e3	1.000	0.119	4.28	105	100
13	16 13C9-PFNA	472.2 > 426.9	8.451e3	8.451e3	1.000	0.119	4.61	105	100
14	17 13C4-PFOS	503.0 > 79.9	8.381e3	8.381e3	1.000	0.119	4.67	105	100
15	18 Total PFBS	299 > 79.7		5.434e3		0.119			
16	20 Total PFOA	413 > 368.7		2.484e4		0.119			
17	21 Total PFOS	499 > 79.9		6.750e3		0.119			

Dataset: U:\G1.PRO\Results\2017\170306G1\170306G1-28.qld

Last Altered: Tuesday, March 07, 2017 11:30:54 AM Pacific Standard Time

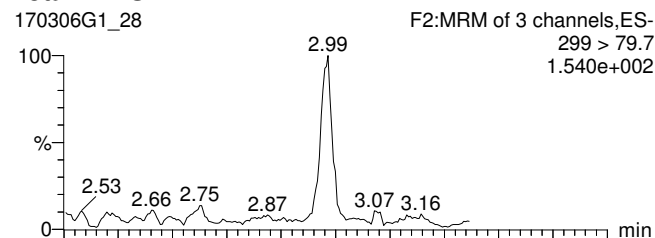
Printed: Tuesday, March 07, 2017 11:31:17 AM Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS_6_2_NEW.mdb 07 Mar 2017 09:58:54

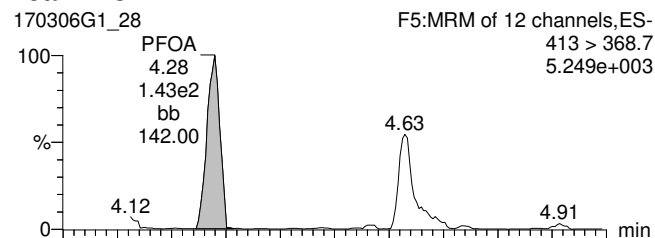
Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: 1700293-09 WI-CV-FB01-030217 0.125, Description: WI-CV-FB01-030217, Name: 170306G1_28, Date: 06-Mar-2017, Time: 21:03:44, Instrument: , Lab: , User:

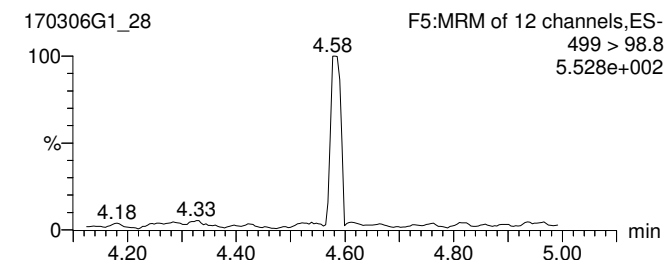
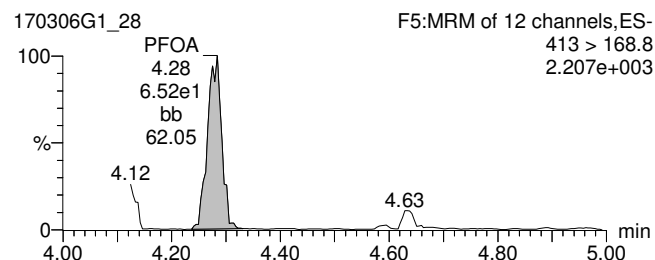
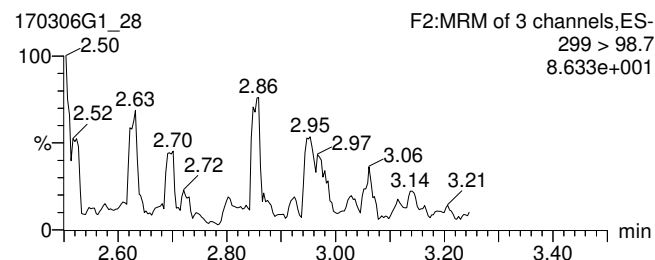
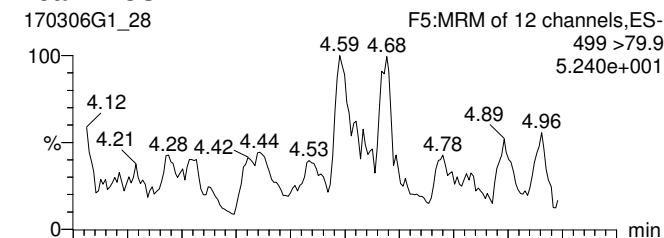
Total PFBS



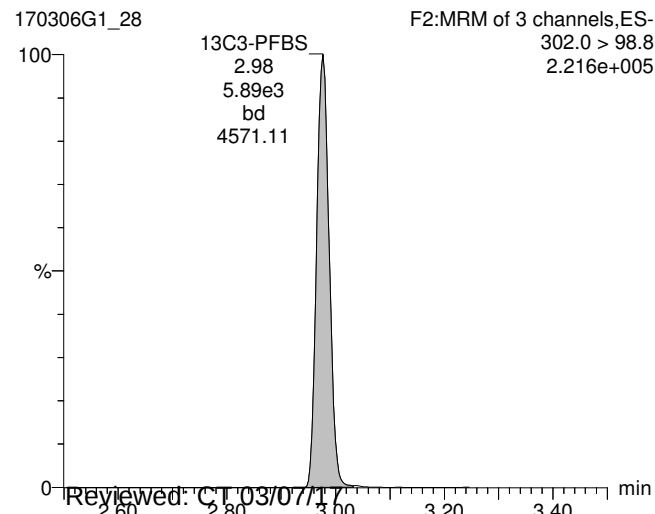
Total PFOA



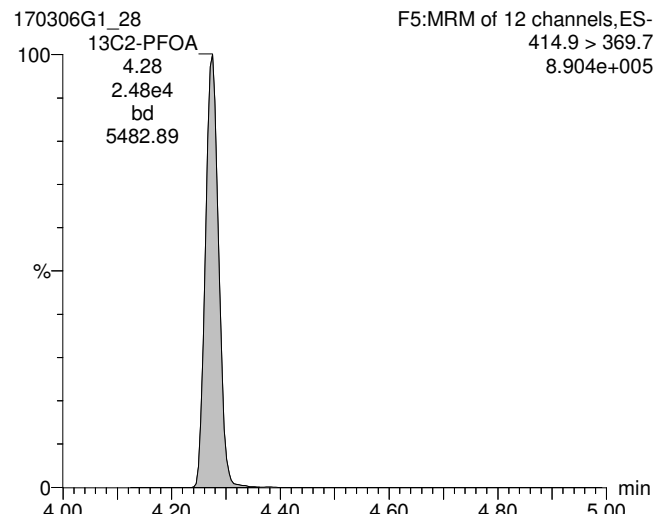
Total PFOS



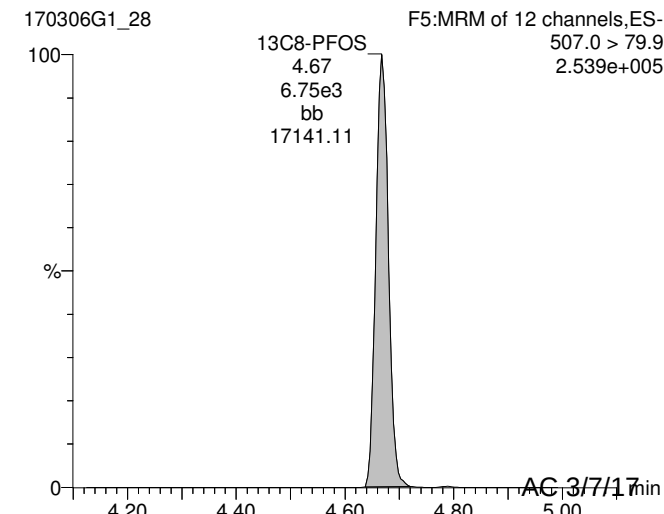
13C3-PFBS



13C2-PFOA



13C8-PFOS



Reviewed: C:\10307\17

Work Order 1700293

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Dataset: U:\G1.PRO\Results\2017\170306G1\170306G1-28.qld

Last Altered: Tuesday, March 07, 2017 11:30:54 AM Pacific Standard Time

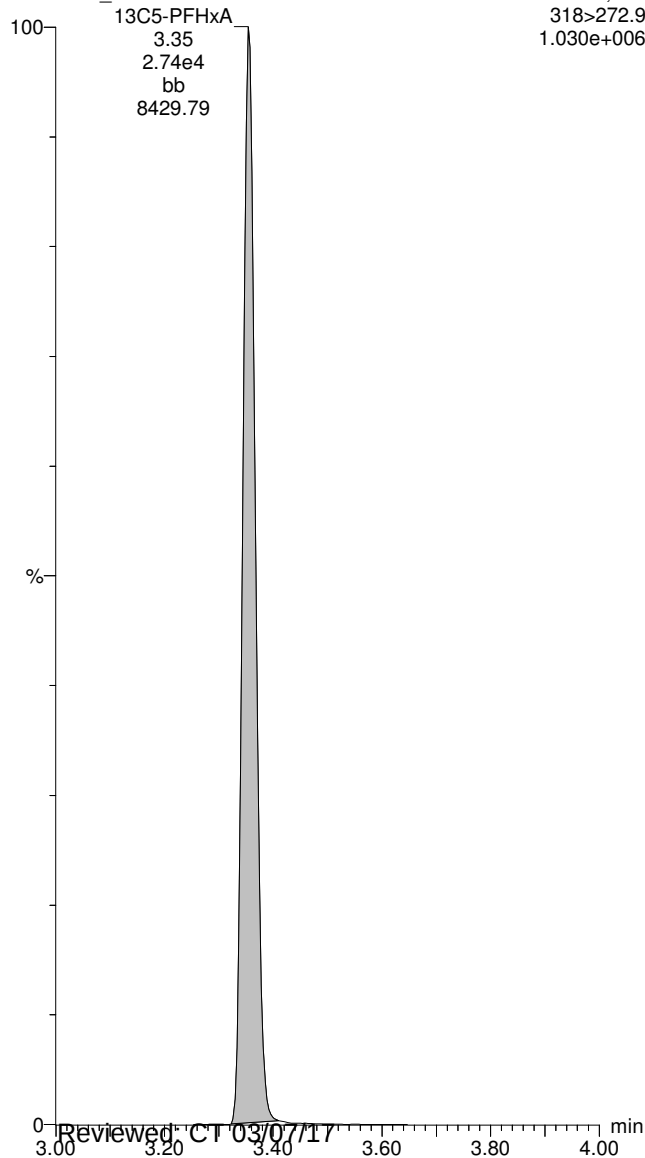
Printed: Tuesday, March 07, 2017 11:31:17 AM Pacific Standard Time

ID: 1700293-09 WI-CV-FB01-030217 0.125, Description: WI-CV-FB01-030217, Name: 170306G1_28, Date: 06-Mar-2017, Time: 21:03:44, Instrument: , Lab: , User:

13C5-PFHxA

170306G1_28

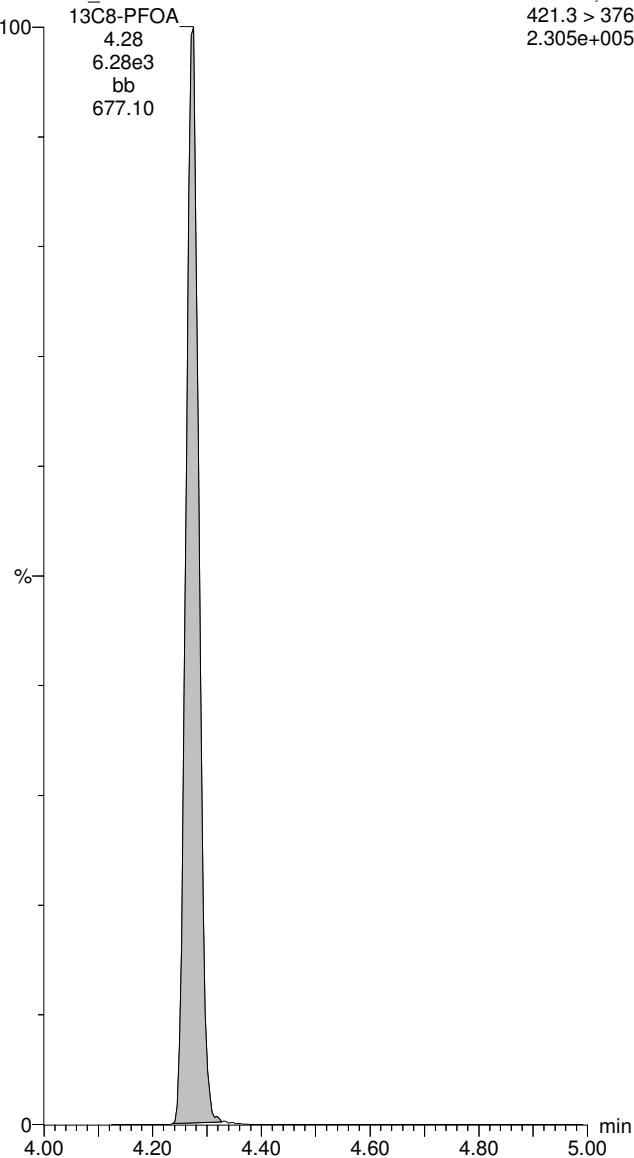
F3:MRM of 1 channel,ES-
318>272.9
1.030e+006



13C8-PFOA

170306G1_28

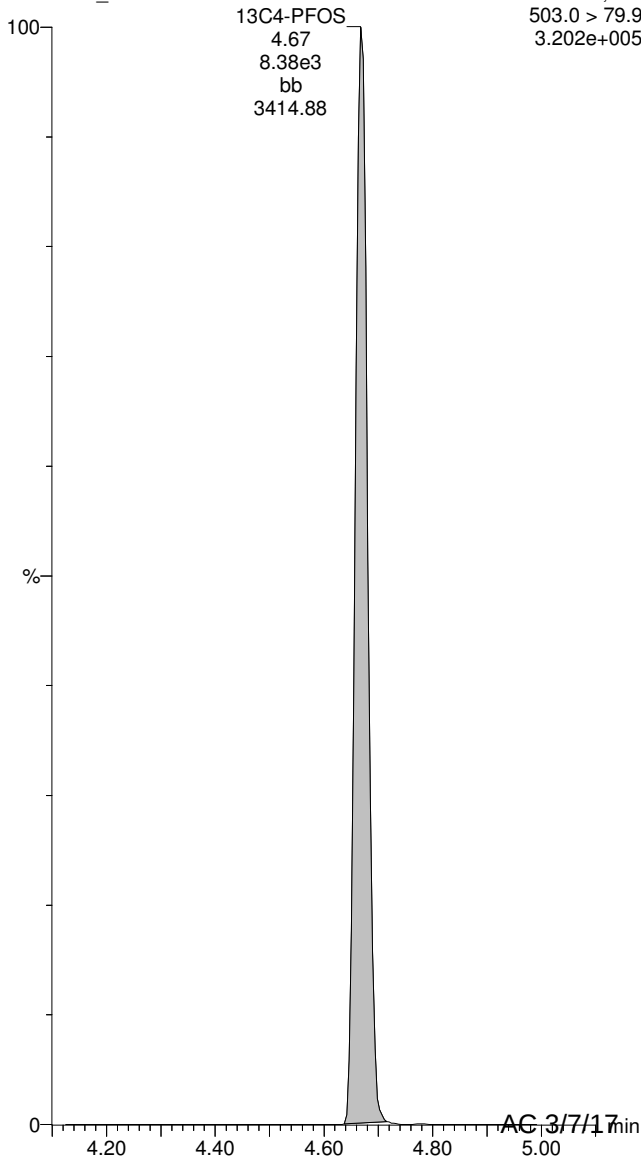
F5:MRM of 12 channels,ES-
421.3 > 376
2.305e+005



13C4-PFOS

170306G1_28

F5:MRM of 12 channels,ES-
503.0 > 79.9
3.202e+005



Reviewed: 03/07/17

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Dataset: U:\G1.PRO\Results\2017\170306G1\170306G1-29.qld

Last Altered: Tuesday, March 07, 2017 11:32:41 AM Pacific Standard Time

Printed: Tuesday, March 07, 2017 11:34:42 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: 1700293-10 WI-CV-EB10-030217 0.125, Description: WI-CV-EB10-030217, Name: 170306G1_29, Date: 06-Mar-2017, Time: 21:16:17

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7		5.813e3		0.0930			
2	4 PFOA	413 > 368.7	1.689e2	2.768e4		0.0930	4.28		
3	6 PFOS	499 > 79.9		7.807e3		0.0930			
4	7 13C3-PFBS	302.0 > 98.8	5.813e3	1.349e4	0.410	0.0930	2.98	141	105
5	8 13C4-PFHxA	367.2 > 321.8	1.483e4	1.349e4	1.098	0.0930	3.87	135	100
6	9 18O2-PFHxS	403 > 102.6	5.845e3	1.349e4	0.434	0.0930	3.99	134	99.8
7	10 13C2-PFOA	414.9 > 369.7	2.768e4	6.501e3	4.608	0.0930	4.28	124	92.4
8	11 13C5-PFNA	468.2 > 422.9	6.298e3	8.369e3	0.867	0.0930	4.61	117	86.8
9	12 13C8-PFOS	507.0 > 79.9	7.807e3	8.402e3	0.958	0.0930	4.67	130	97.0
10	13 13C5-PFHxA	318 > 272.9	2.716e4	2.716e4	1.000	0.0930	3.36	134	100
11	14 13C3-PFHxS	401.9 > 79.9	1.349e4	1.349e4	1.000	0.0930	3.99	134	100
12	15 13C8-PFOA	421.3 > 376	6.501e3	6.501e3	1.000	0.0930	4.27	134	100
13	16 13C9-PFNA	472.2 > 426.9	8.369e3	8.369e3	1.000	0.0930	4.61	134	100
14	17 13C4-PFOS	503.0 > 79.9	8.402e3	8.402e3	1.000	0.0930	4.67	134	100
15	18 Total PFBS	299 > 79.7		5.845e3		0.0930			
16	20 Total PFOA	413 > 368.7		2.768e4		0.0930			
17	21 Total PFOS	499 > 79.9		7.807e3		0.0930			

Dataset: U:\G1.PRO\Results\2017\170306G1\170306G1-29.qld

Last Altered: Tuesday, March 07, 2017 11:32:41 AM Pacific Standard Time

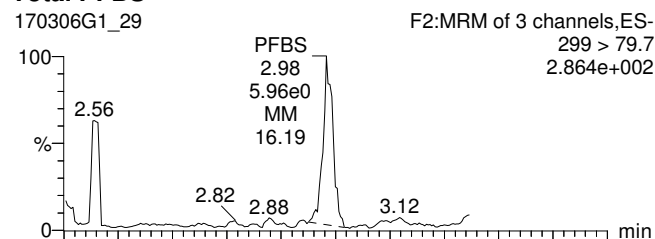
Printed: Tuesday, March 07, 2017 11:34:42 AM Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS_6_2_NEW.mdb 07 Mar 2017 09:58:54

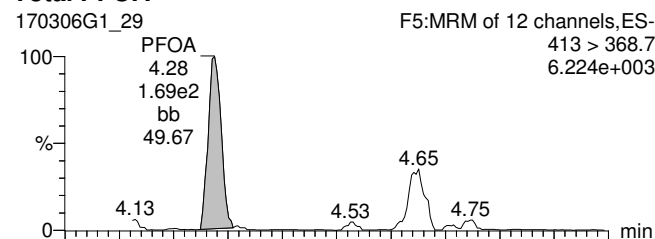
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ID: 1700293-10 WI-CV-EB10-030217 0.125, Description: WI-CV-EB10-030217, Name: 170306G1_29, Date: 06-Mar-2017, Time: 21:16:17, Instrument: , Lab: , User:

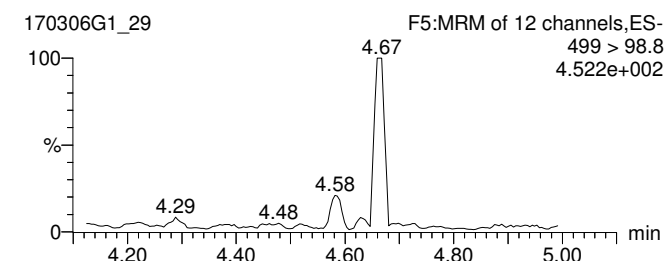
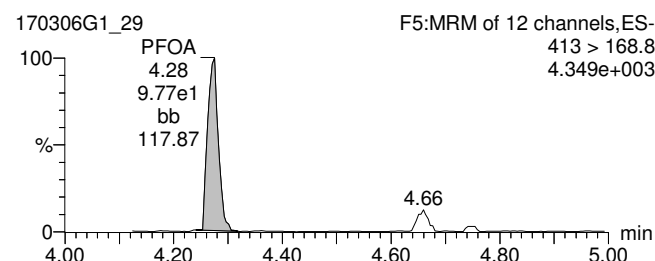
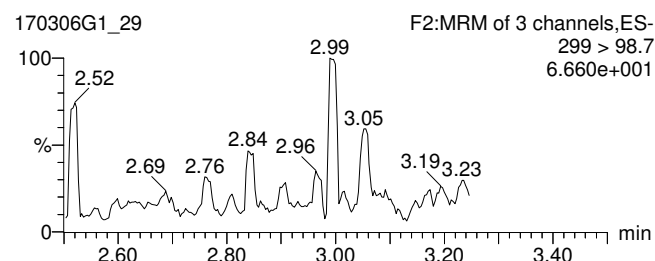
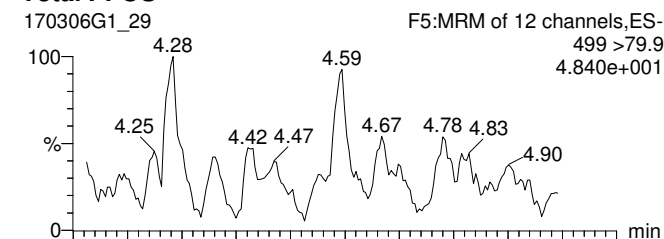
Total PFBS



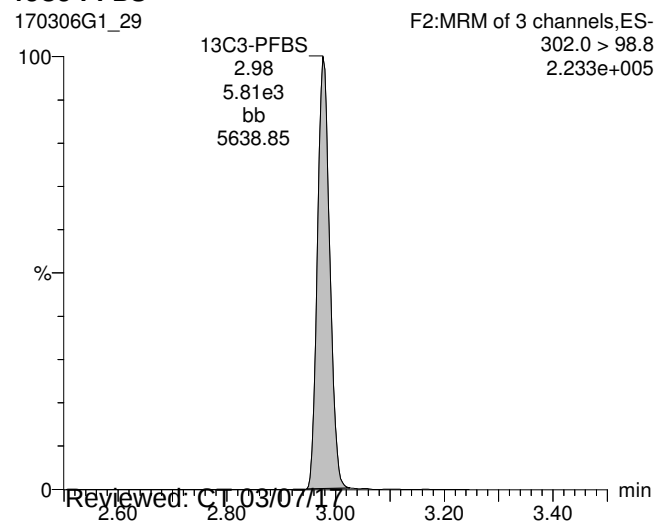
Total PFOA



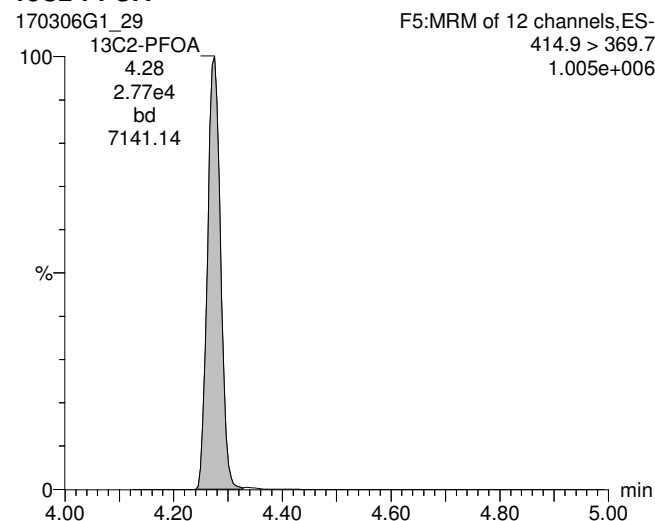
Total PFOS



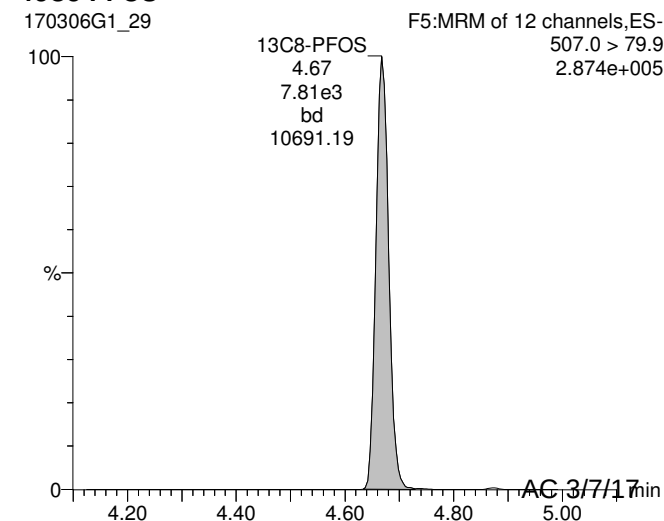
13C3-PFBS



13C2-PFOA



13C8-PFOS



Dataset: U:\G1.PRO\Results\2017\170306G1\170306G1-29.qld

Last Altered: Tuesday, March 07, 2017 11:32:41 AM Pacific Standard Time

Printed: Tuesday, March 07, 2017 11:34:42 AM Pacific Standard Time

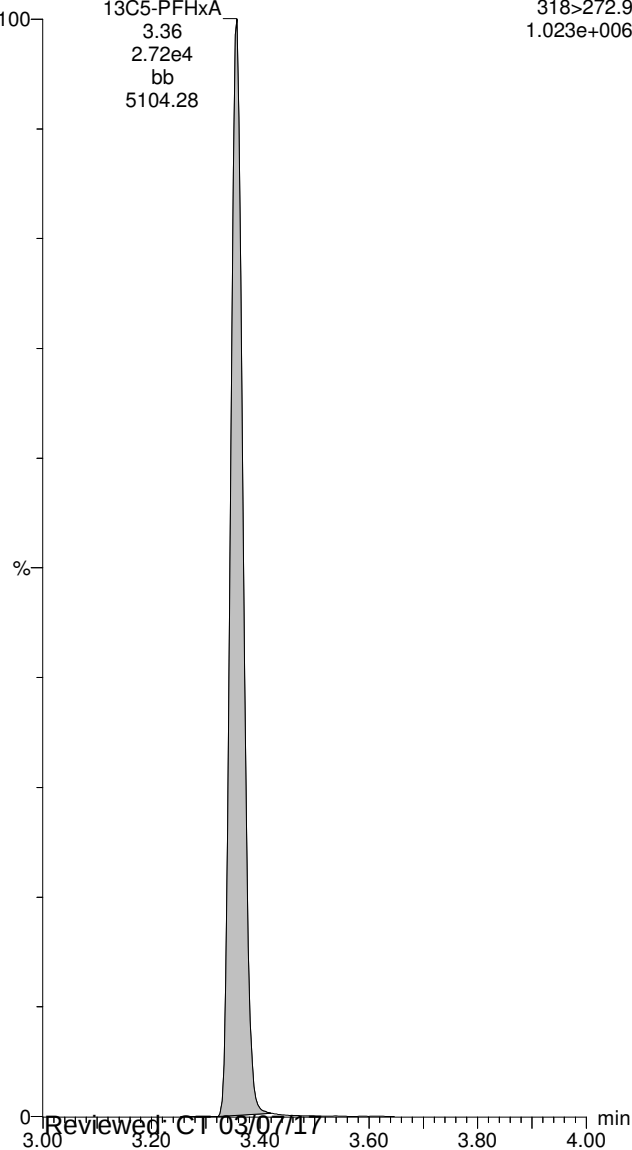
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13C5-PFHxA

170306G1_29

13C5-PFHxA
3.36
2.72e4
bb
5104.28

F3:MRM of 1 channel,ES-
318>272.9
1.023e+006

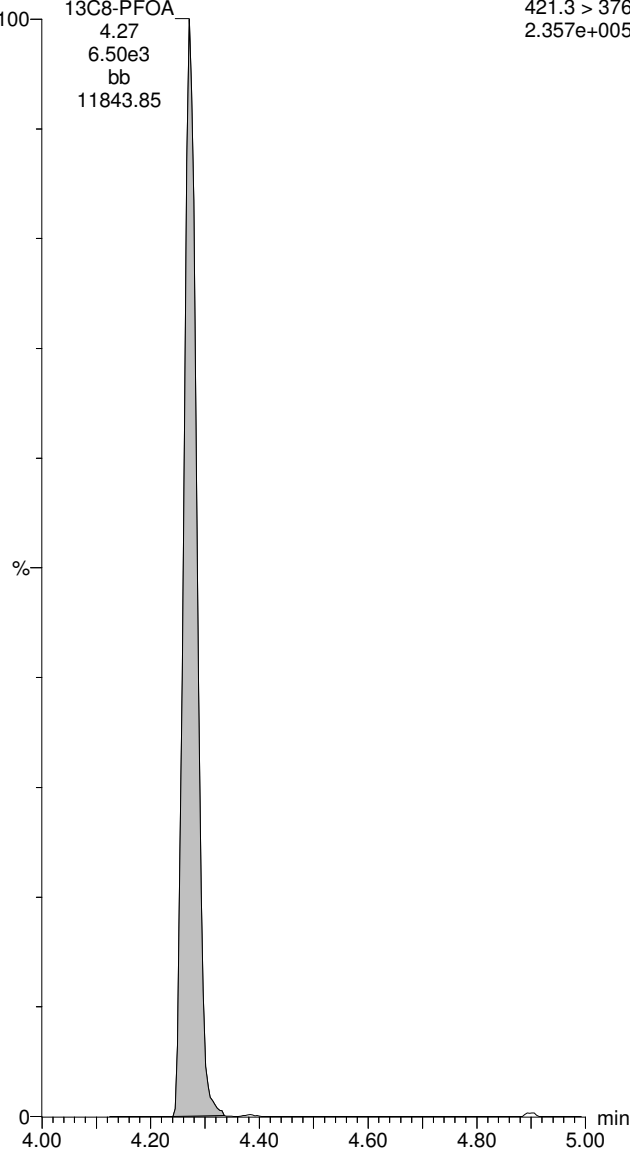


13C8-PFOA

170306G1_29

13C8-PFOA
4.27
6.50e3
bb
11843.85

F5:MRM of 12 channels,ES-
421.3 > 376
2.357e+005

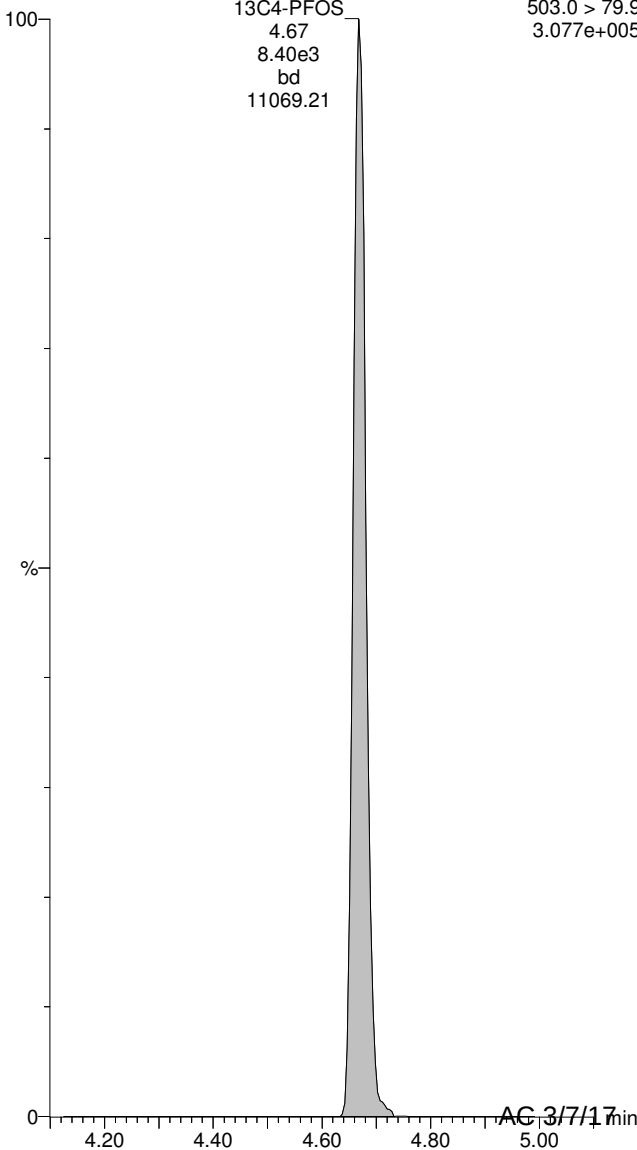


13C4-PFOS

170306G1_29

13C4-PFOS
4.67
8.40e3
bd
11069.21

F5:MRM of 12 channels,ES-
503.0 > 79.9
3.077e+005



Reviewed: 03/07/17

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Dataset: U:\G1.PRO\Results\2017\170306G1\170306G1-30.qld

Last Altered: Tuesday, March 07, 2017 11:36:54 AM Pacific Standard Time

Printed: Tuesday, March 07, 2017 11:37:12 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: 1700293-11 WI-CV-EB11-030217 0.125, Description: WI-CV-EB11-030217, Name: 170306G1_30, Date: 06-Mar-2017, Time: 21:28:51

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7		5.779e3		0.118			
2	4 PFOA	413 > 368.7	1.611e2	2.543e4		0.118	4.28		
3	6 PFOS	499 > 79.9		6.601e3		0.118			
4	7 13C3-PFBS	302.0 > 98.8	5.779e3	1.365e4	0.410	0.118	2.98	109	103
5	8 13C4-PFHxA	367.2 > 321.8	1.416e4	1.365e4	1.098	0.118	3.87	99.9	94.5
6	9 18O2-PFHxS	403 > 102.6	5.721e3	1.365e4	0.434	0.118	3.99	102	96.5
7	10 13C2-PFOA	414.9 > 369.7	2.543e4	6.493e3	4.608	0.118	4.28	89.9	85.0
8	11 13C5-PFNA	468.2 > 422.9	4.853e3	7.841e3	0.867	0.118	4.61	75.5	71.4
9	12 13C8-PFOS	507.0 > 79.9	6.601e3	7.062e3	0.958	0.118	4.67	103	97.5
10	13 13C5-PFHxA	318>272.9	2.797e4	2.797e4	1.000	0.118	3.35	106	100
11	14 13C3-PFHxS	401.9 > 79.9	1.365e4	1.365e4	1.000	0.118	3.99	106	100
12	15 13C8-PFOA	421.3 > 376	6.493e3	6.493e3	1.000	0.118	4.27	106	100
13	16 13C9-PFNA	472.2 > 426.9	7.841e3	7.841e3	1.000	0.118	4.61	106	100
14	17 13C4-PFOS	503.0 > 79.9	7.062e3	7.062e3	1.000	0.118	4.67	106	100
15	18 Total PFBS	299 > 79.7		5.721e3		0.118			
16	20 Total PFOA	413 > 368.7		2.543e4		0.118			
17	21 Total PFOS	499 > 79.9		6.601e3		0.118			

Dataset: U:\G1.PRO\Results\2017\170306G1\170306G1-30.qld

Last Altered: Tuesday, March 07, 2017 11:36:54 AM Pacific Standard Time

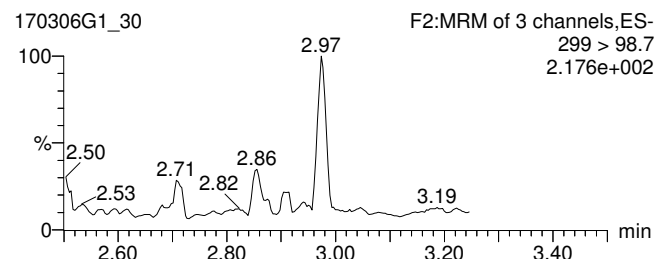
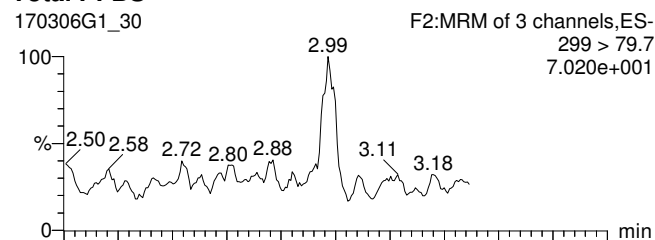
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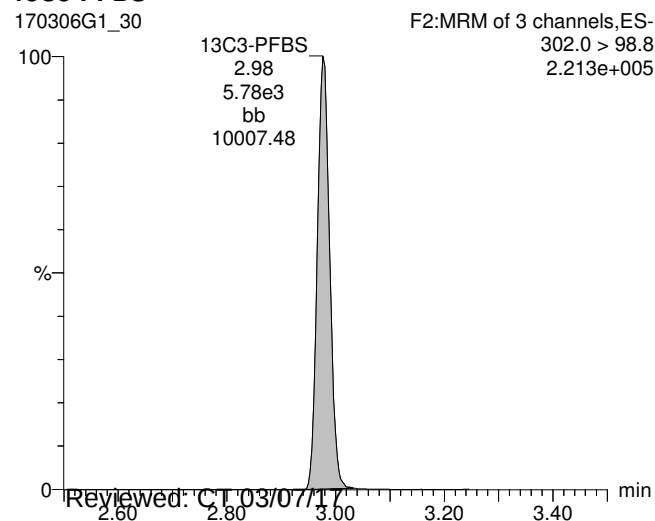
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ID: 1700293-11 WI-CV-EB11-030217 0.125, Description: WI-CV-EB11-030217, Name: 170306G1_30, Date: 06-Mar-2017, Time: 21:28:51, Instrument: , Lab: , User:

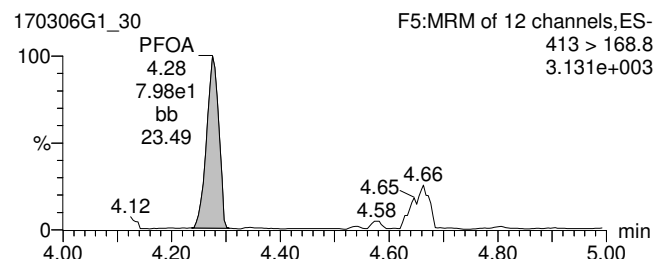
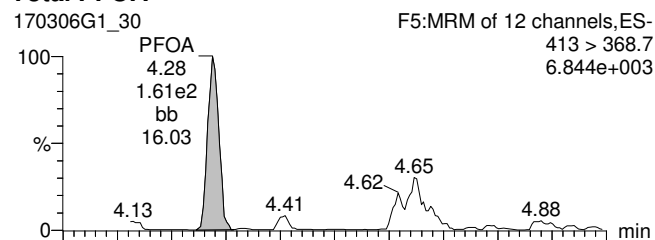
Total PFBS



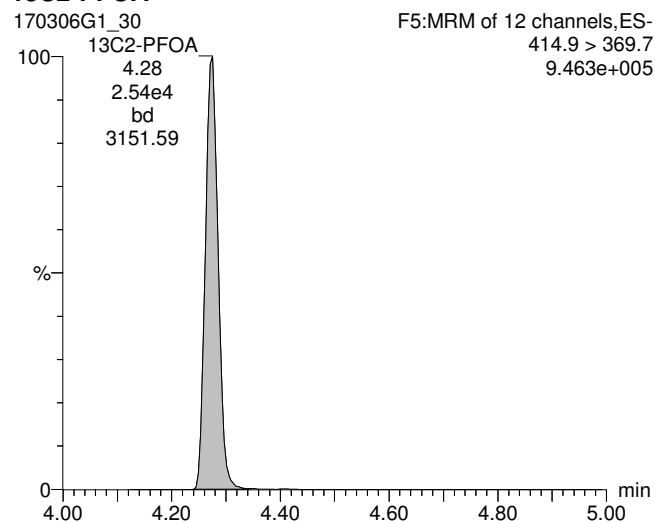
13C3-PFBS



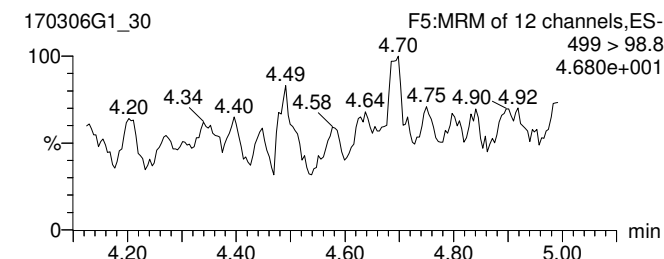
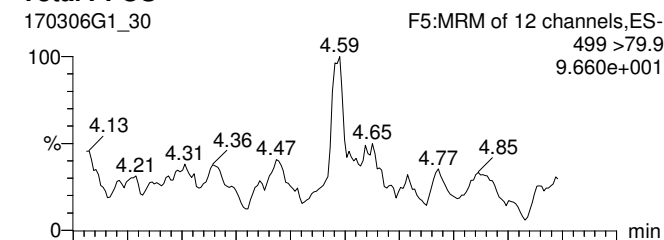
Total PFOA



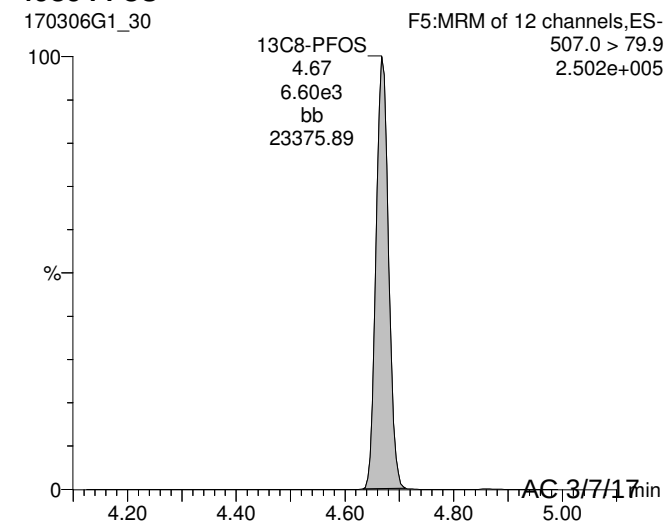
13C2-PFOA



Total PFOS



13C8-PFOS



Reviewed: C170307/17

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Dataset: U:\G1.PRO\Results\2017\170306G1\170306G1-30.qld

Last Altered: Tuesday, March 07, 2017 11:36:54 AM Pacific Standard Time

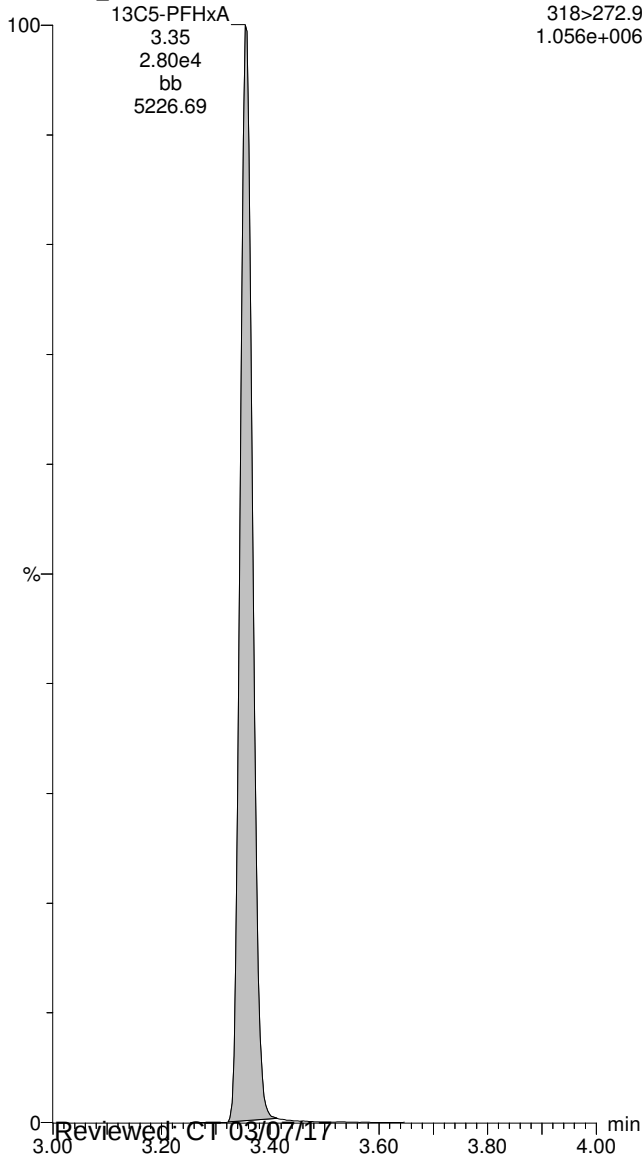
Printed: Tuesday, March 07, 2017 11:37:12 AM Pacific Standard Time

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13C5-PFHxA

170306G1_30

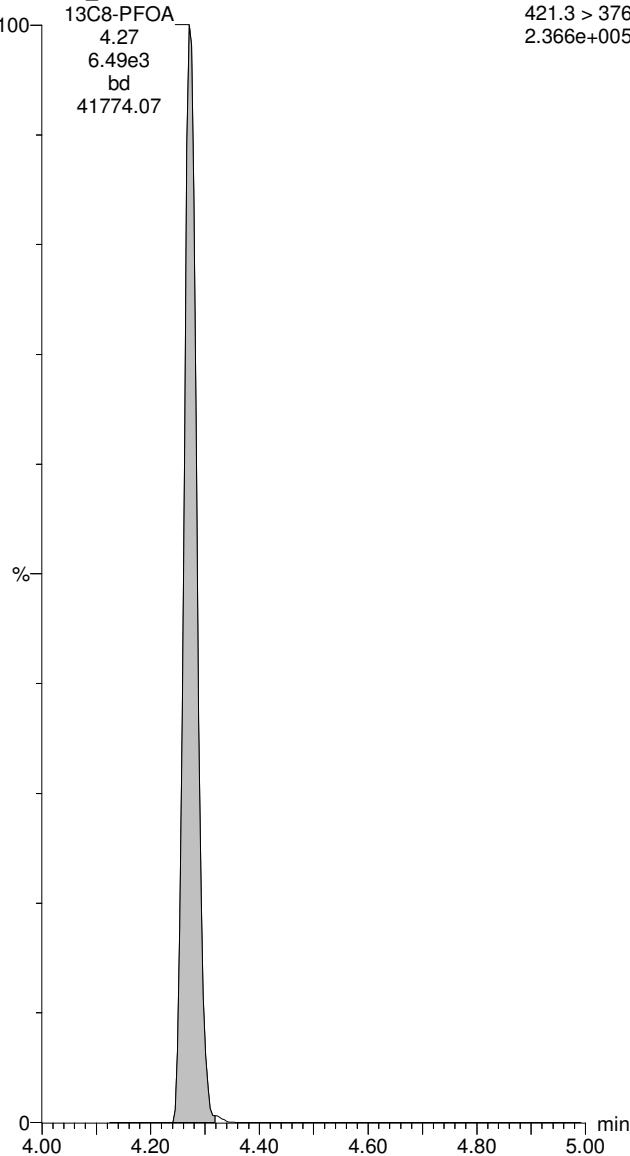
F3:MRM of 1 channel,ES-
318>272.9
1.056e+006



13C8-PFOA

170306G1_30

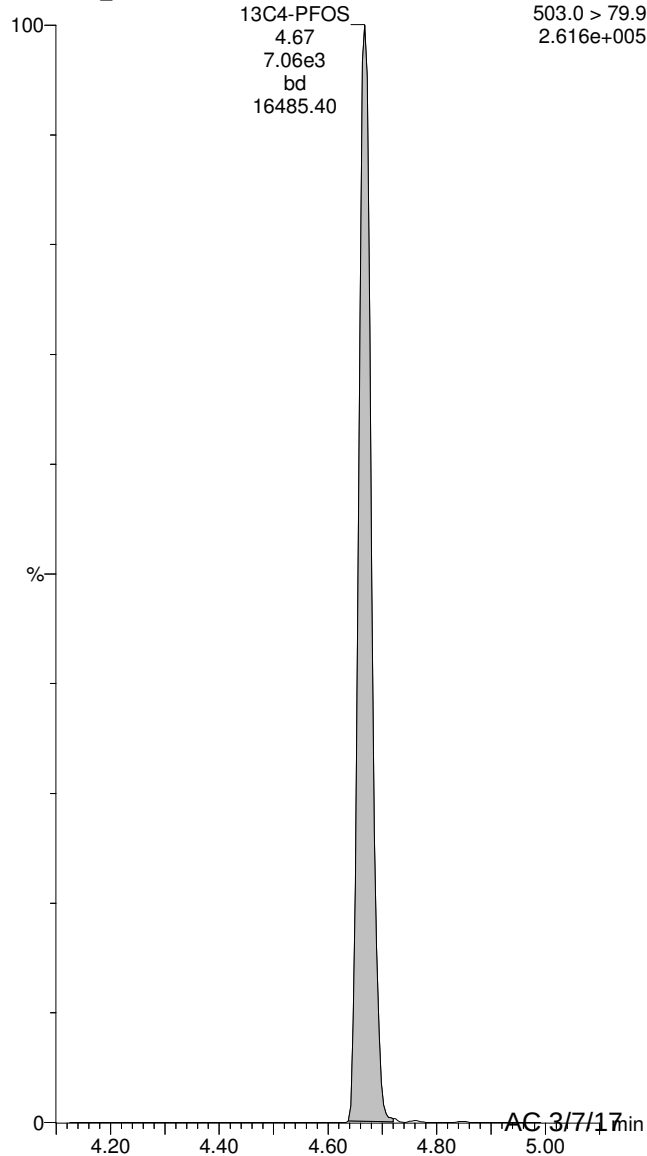
13C8-PFOA
4.27
6.49e3
bd
41774.07



13C4-PFOS

170306G1_30

F5:MRM of 12 channels,ES-
421.3 > 376
2.366e+005



Reviewed: 03/07/17

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CONTINUING CALIBRATION

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

15-125

60-150

50-150

60-150

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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

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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

Compound name: PFBS

	Name	ID	Acq.Date	Acq.Time
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
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

LC Calibration Standards Review Checklist

Q1

Calibration ID:		ION Ratio	Concentration	C-Cals Name	Sign Date	Correct I-Cal	Manual Integrations	N/A
ST17030661-1	LMH	N/A	☒	☒	☒	☒	☒	☐
↓ -2	LMH	☐	☒	☒	☒	☒	☒	☐
↓ -3	LMH	☒	☒	☒	☒	☒	☒	☒
Calibration ID:	LMH	☐	☐	☐	☐	☐	☐	☐
Calibration ID:	LMH	☐	☐	☐	☐	☐	☐	☐
Calibration ID:	LMH	☐	☐	☐	☐	☐	☐	☐
Calibration ID:	LMH	☐	☐	☐	☐	☐	☐	☐
Calibration ID:	LMH	☐	☐	☐	☐	☐	☐	☐
Calibration ID:	LMH	☐	☐	☐	☐	☐	☐	☐
Calibration ID:	LMH	☐	☐	☐	☐	☐	☐	☐
Calibration ID:	LMH	☐	☐	☐	☐	☐	☐	☐

Full Mass Cal. Date: 12/7/16

Run Log Present: ☒

of Samples per Sequence Checked: ☒

Reviewed By:

28 3/7/17

Initials/Date

Comments:

List of 6

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

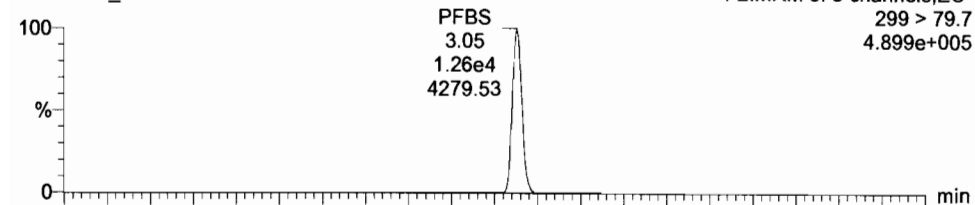
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Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

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

PFBS

170306G1_2

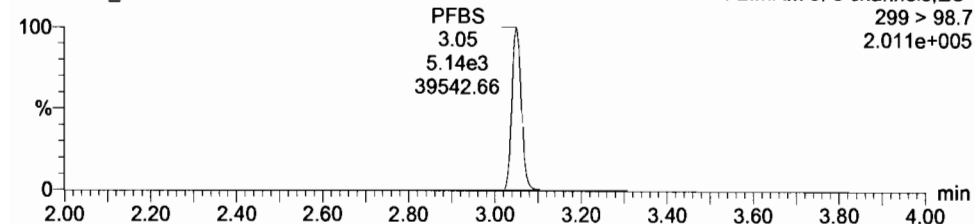


PFHpA

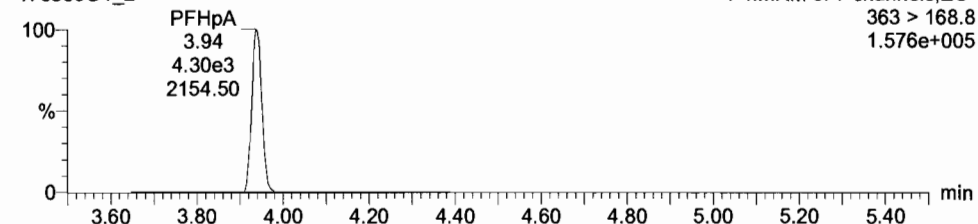
170306G1_2



170306G1_2

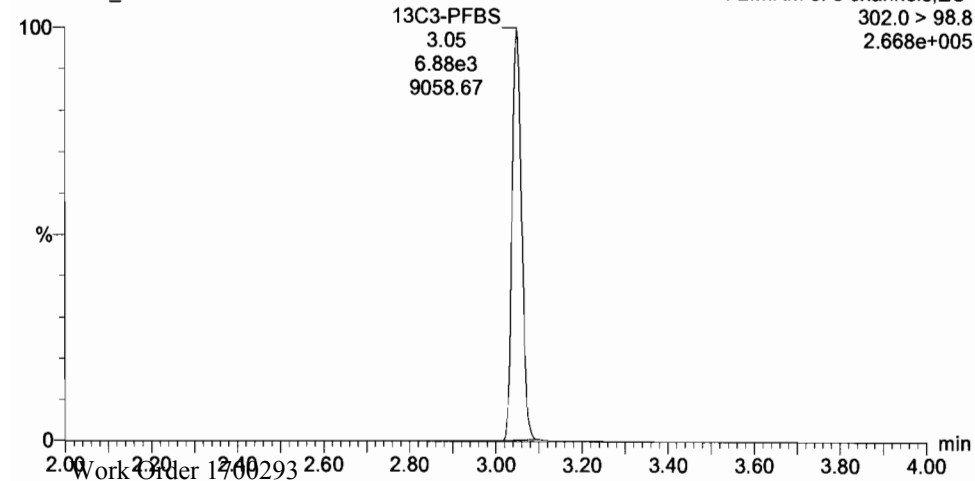


170306G1_2



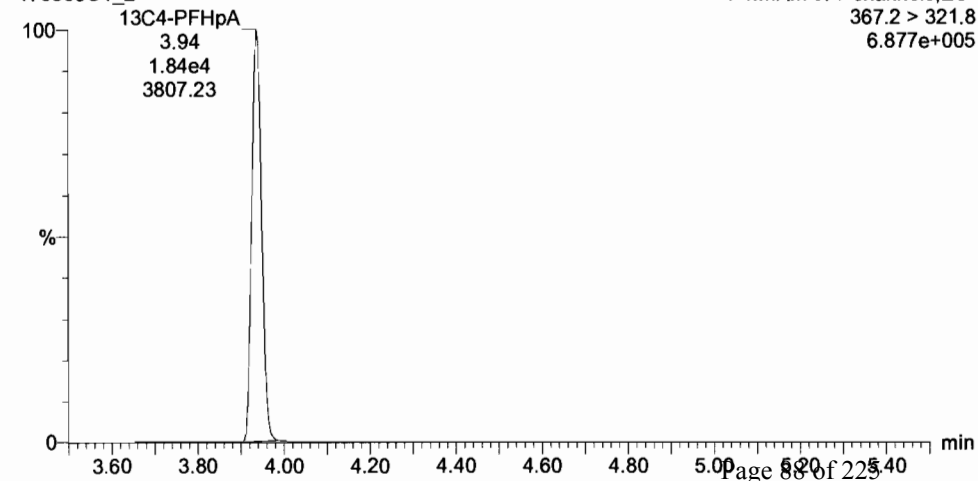
13C3-PFBS

170306G1_2



13C4-PFHpa

170306G1_2



Dataset: Untitled

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

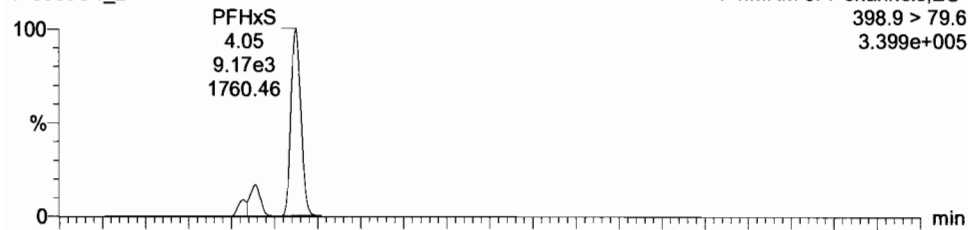
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PFHxS

170306G1_2

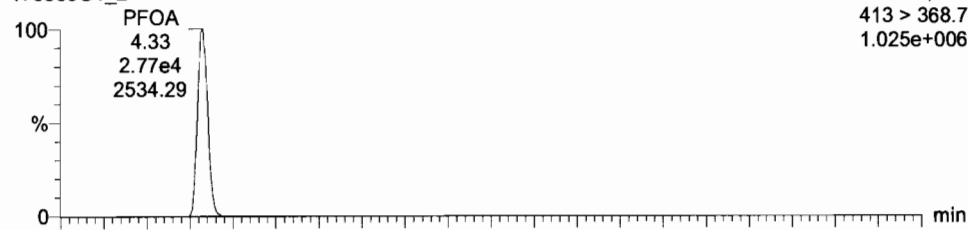
F4:MRM of 7 channels,ES-
398.9 > 79.6
3.399e+005



PFOA

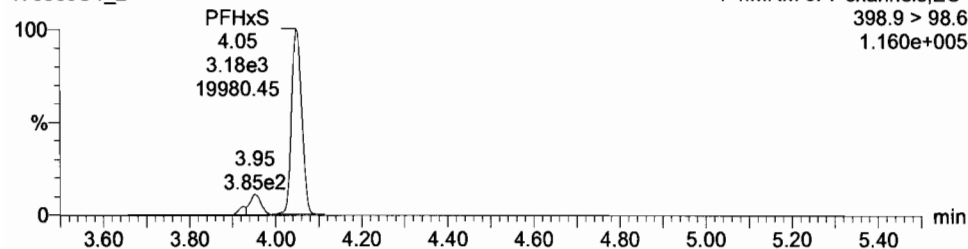
170306G1_2

F5:MRM of 12 channels,ES-
413 > 368.7
1.025e+006



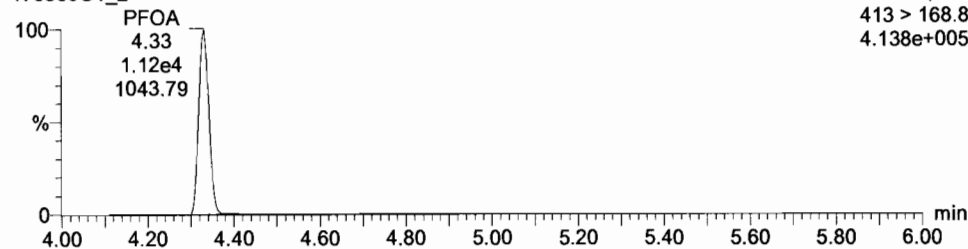
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170306G1_2

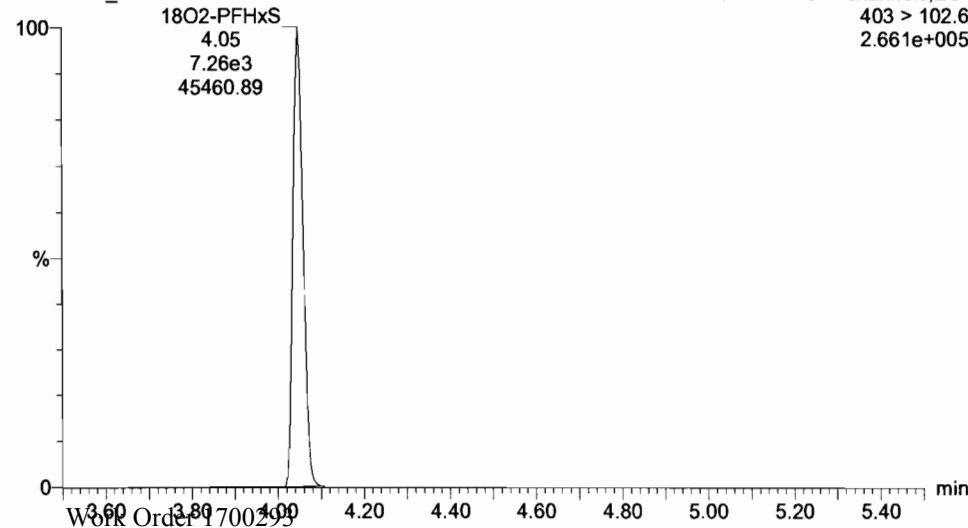
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413 > 168.8
4.138e+005



18O2-PFHxS

170306G1_2

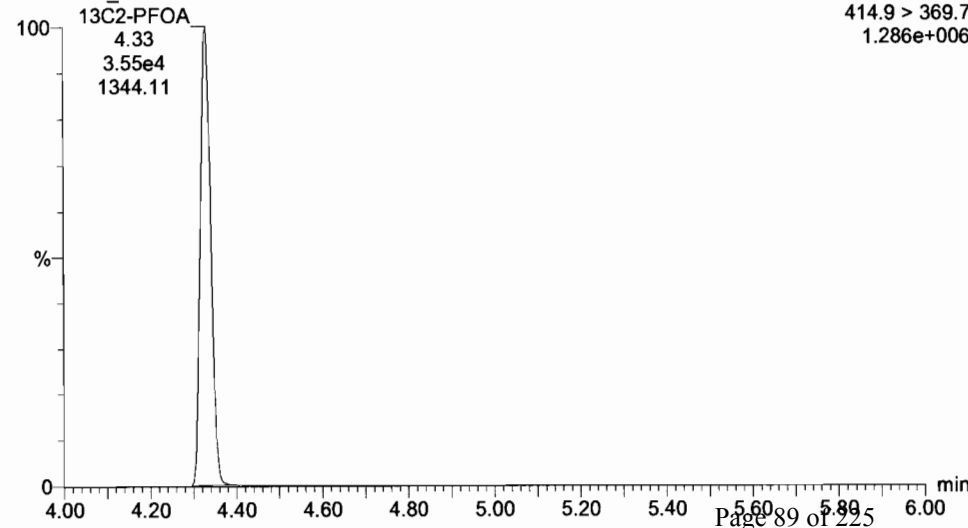
F4:MRM of 7 channels,ES-
403 > 102.6
2.661e+005

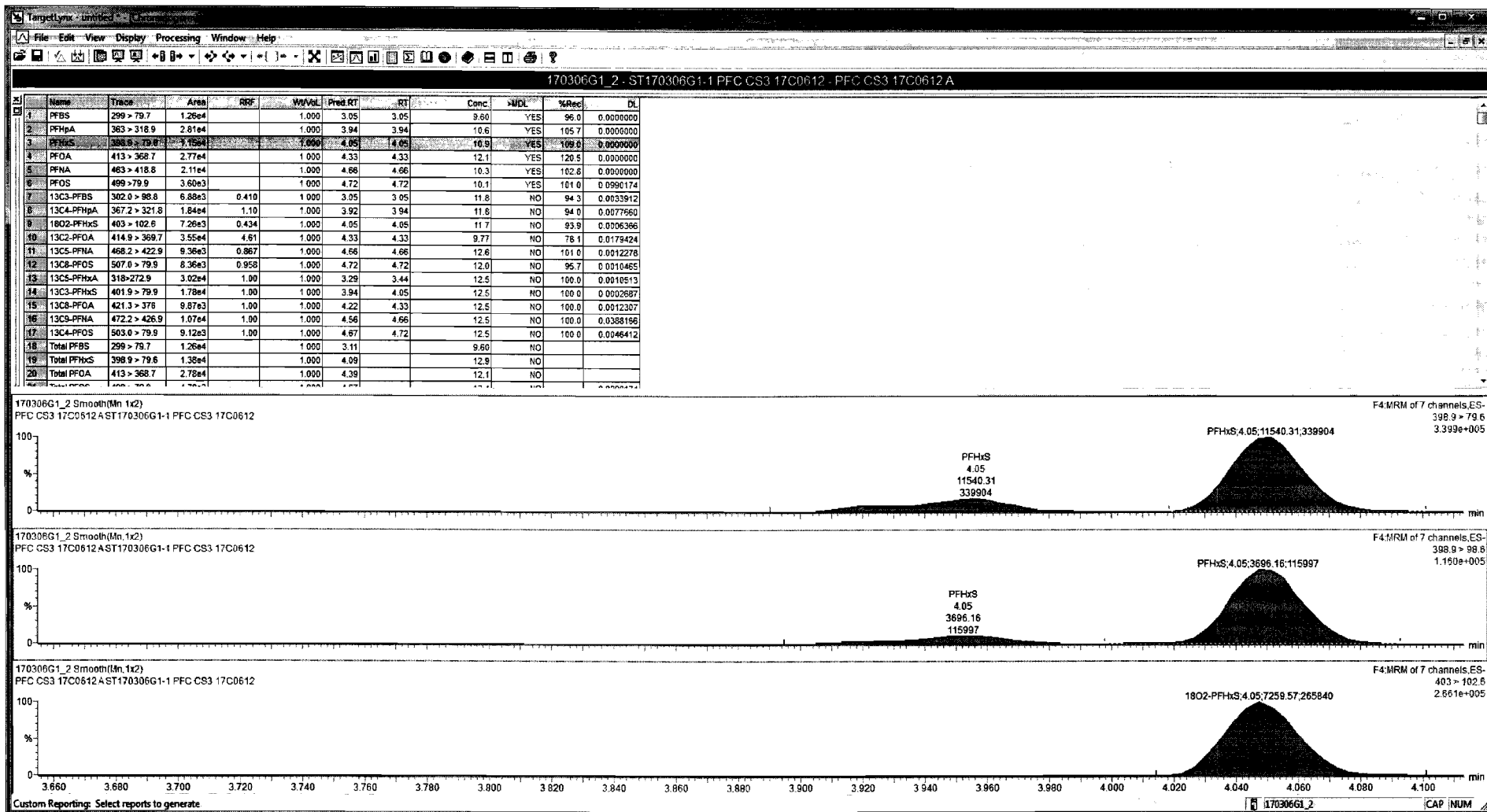


13C2-PFOA

170306G1_2

F5:MRM of 12 channels,ES-
414.9 > 369.7
1.286e+006





Dataset: Untitled

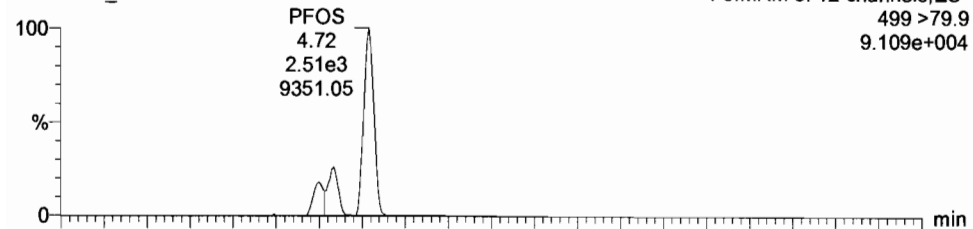
Last Altered: Tuesday, March 07, 2017 09:00:41 Pacific Standard Time

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

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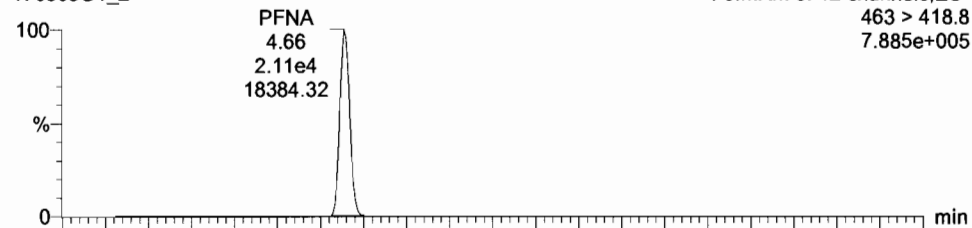
PFOS

170306G1_2

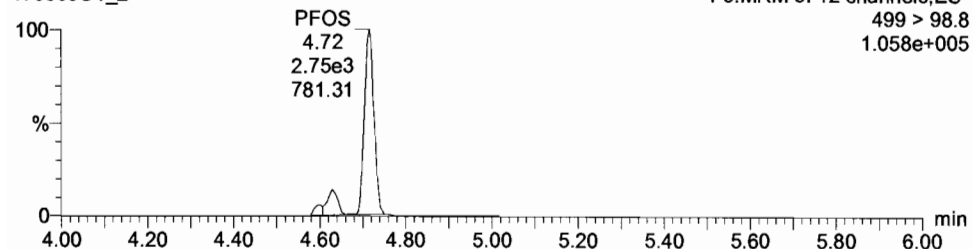


PFNA

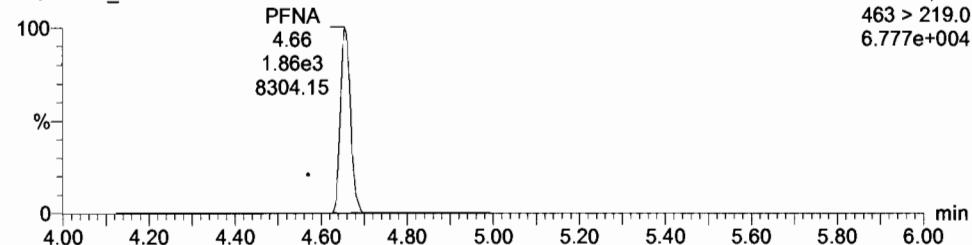
170306G1_2



170306G1_2

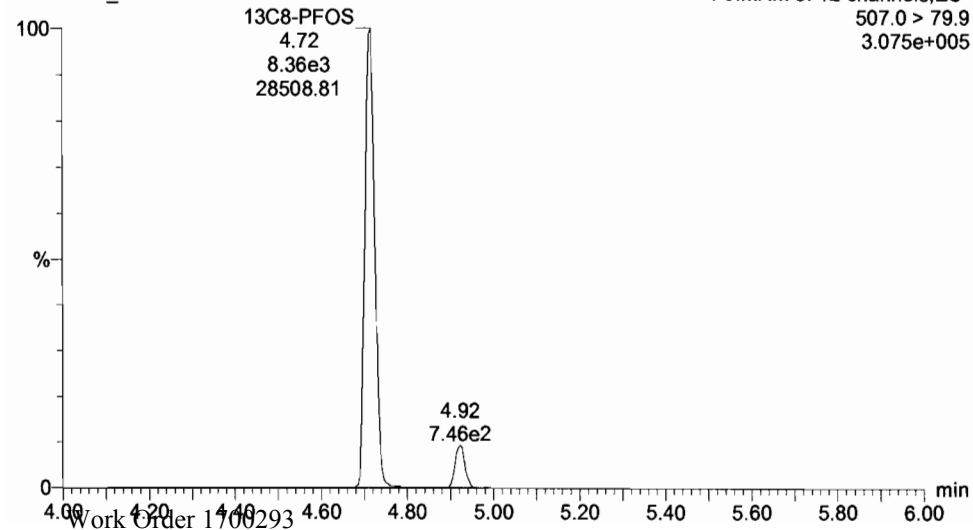


170306G1_2



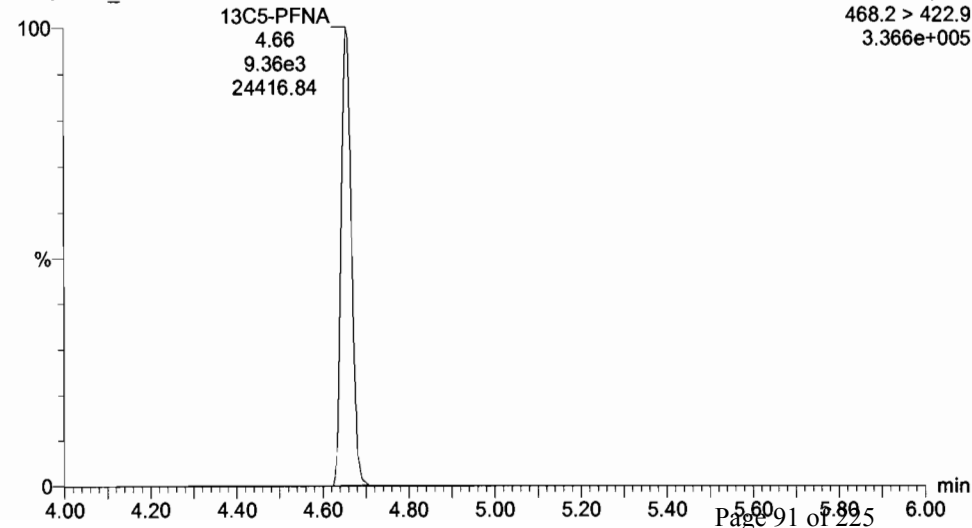
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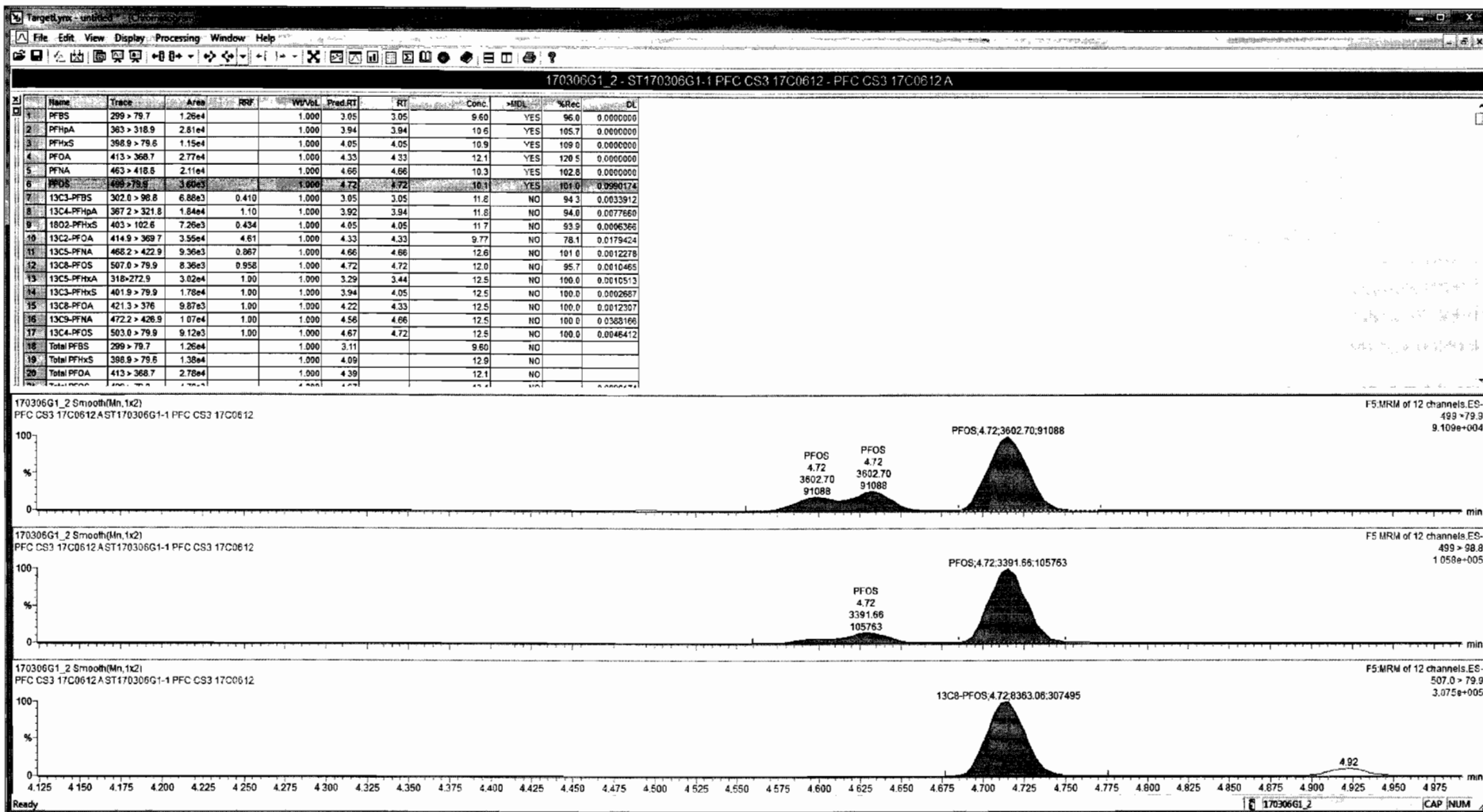
170306G1_2



13C5-PFNA

170306G1_2





Dataset: Untitled

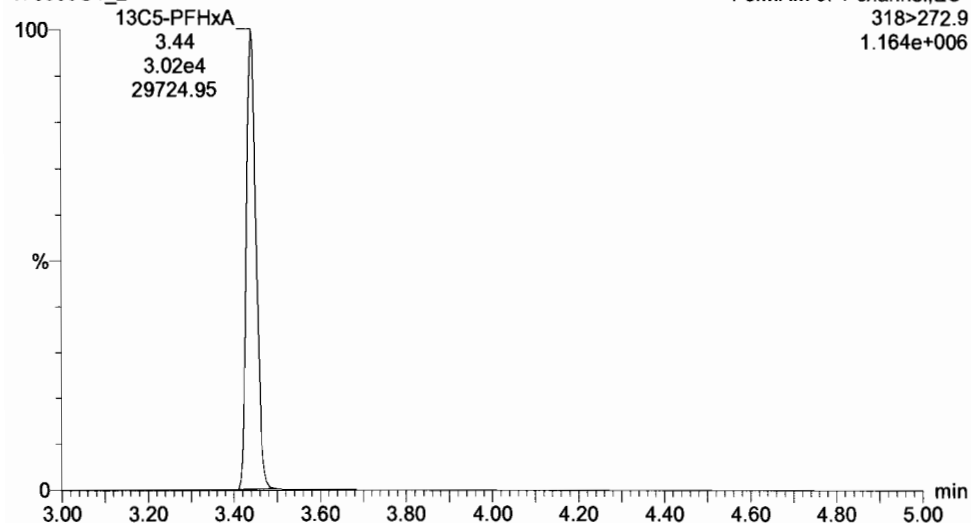
Last Altered: Tuesday, March 07, 2017 09:00:41 Pacific Standard Time

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

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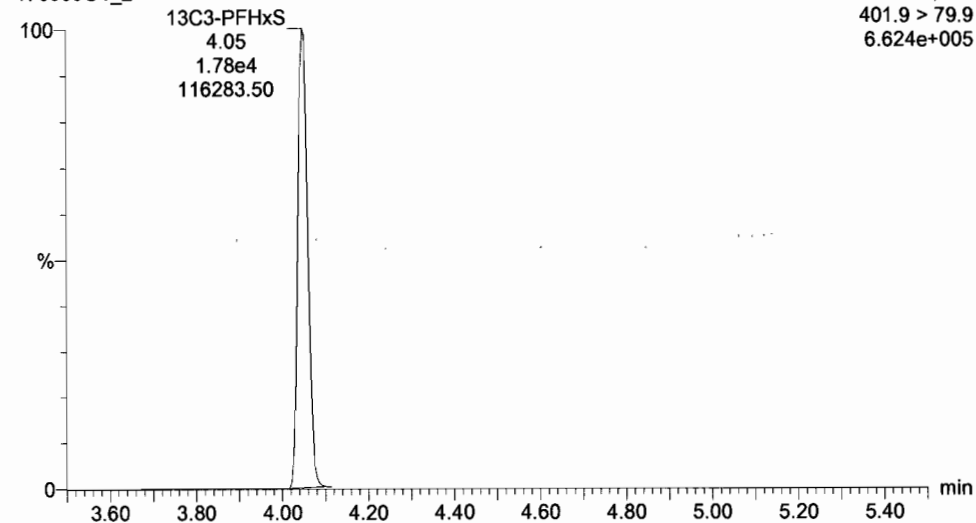
13C5-PFHxA

170306G1_2



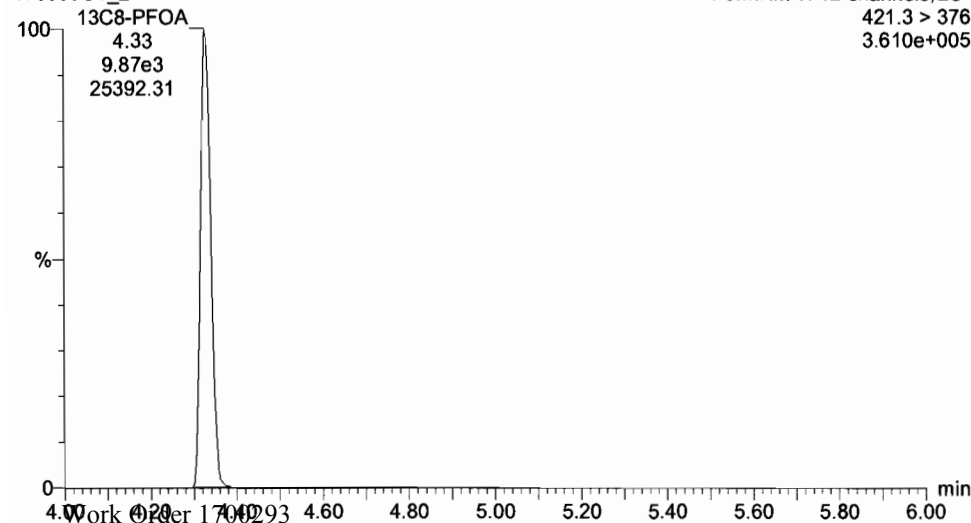
13C3-PFHxS

170306G1_2



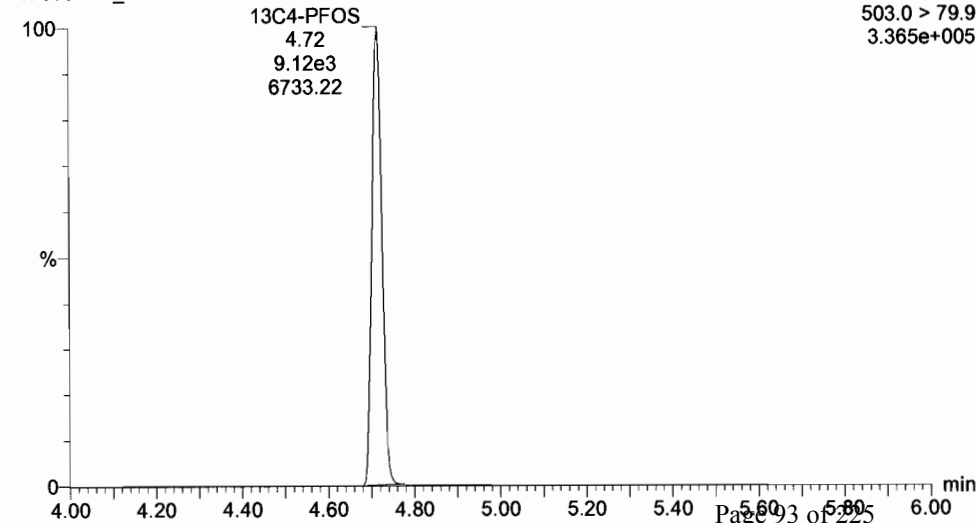
13C8-PFOA

170306G1_2



13C4-PFOS

170306G1_2



Dataset: Untitled

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

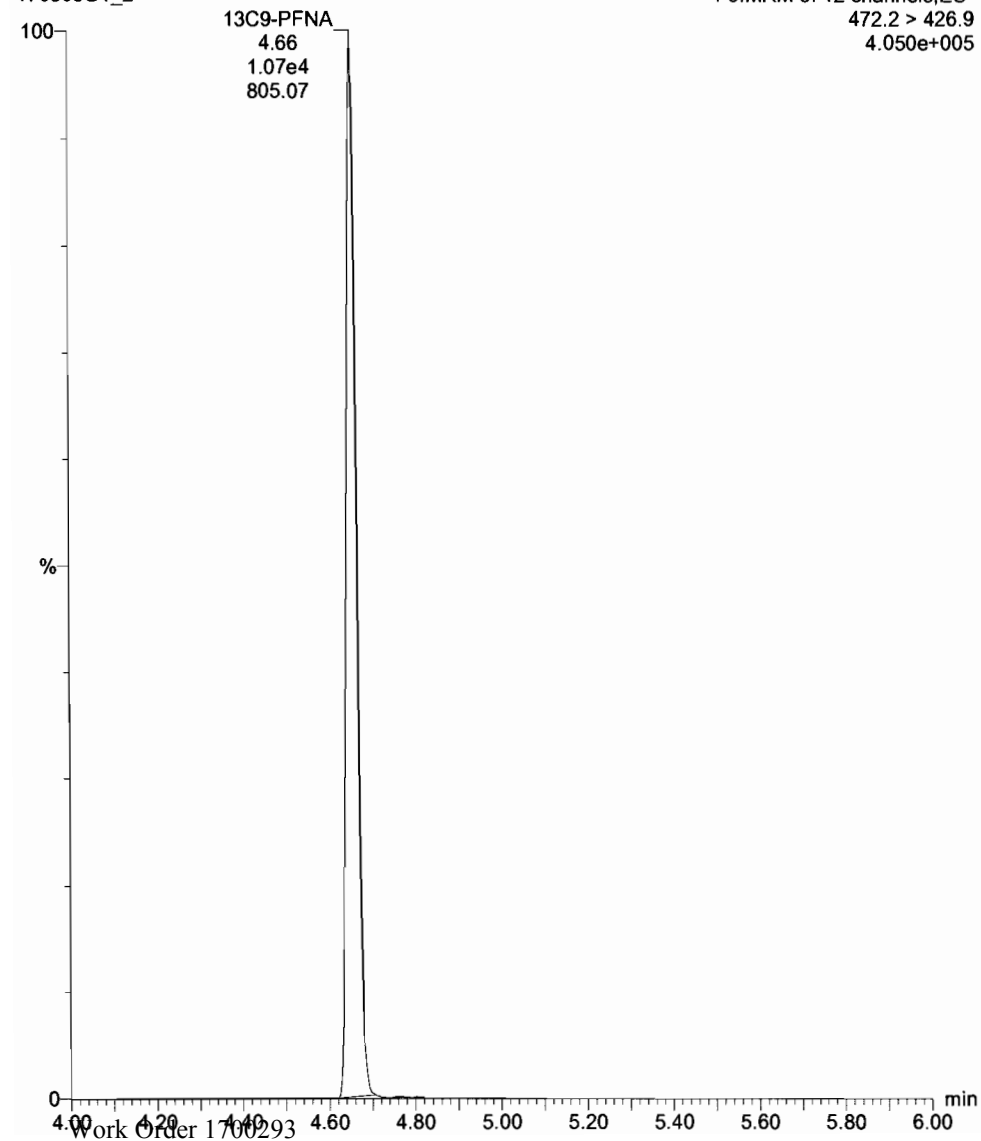
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13C9-PFNA

170306G1_2

F5:MRM of 12 channels,ES-
472.2 > 426.9
4.050e+005



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

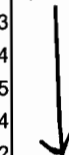
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Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

Name: 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
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
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
12	12 13C8-PFOS	507.0 > 79.9	9.66e3	1.05e4	0.958	1.000	4.67	12.0	95.8
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

75-125



60-150



50-150

60-150

AC
3/7/17

✓ es 3/9/17

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

	Name	ID	Acq.Date	Acq.Time
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	Work Order 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

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

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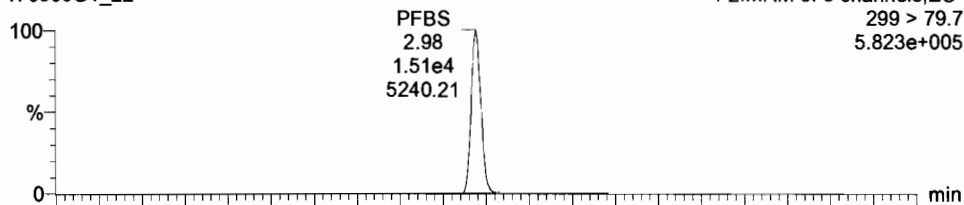
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Name: 170306G1_22, Date: 06-Mar-2017, Time: 19:48:29, ID: ST170306G1-2 PFC CS3 17C0612, Description: PFC CS3 17C0612 A

PFBS

170306G1_22

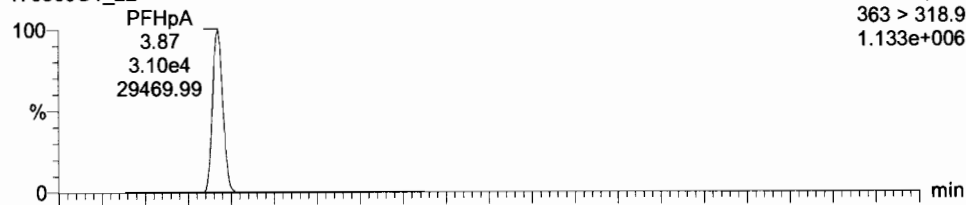
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299 > 79.7
5.823e+005



PFHpA

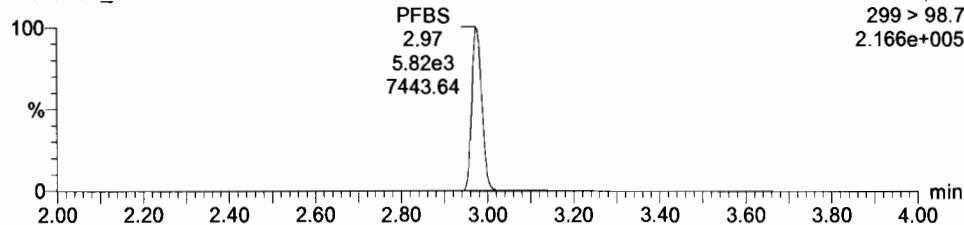
170306G1_22

F4:MRM of 7 channels,ES-
363 > 318.9
1.133e+006



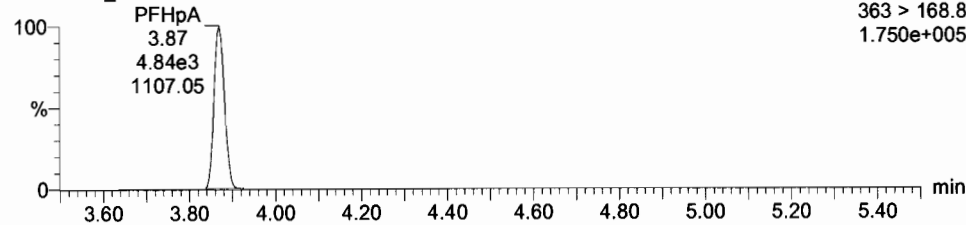
170306G1_22

F2:MRM of 3 channels,ES-
299 > 98.7
2.166e+005



170306G1_22

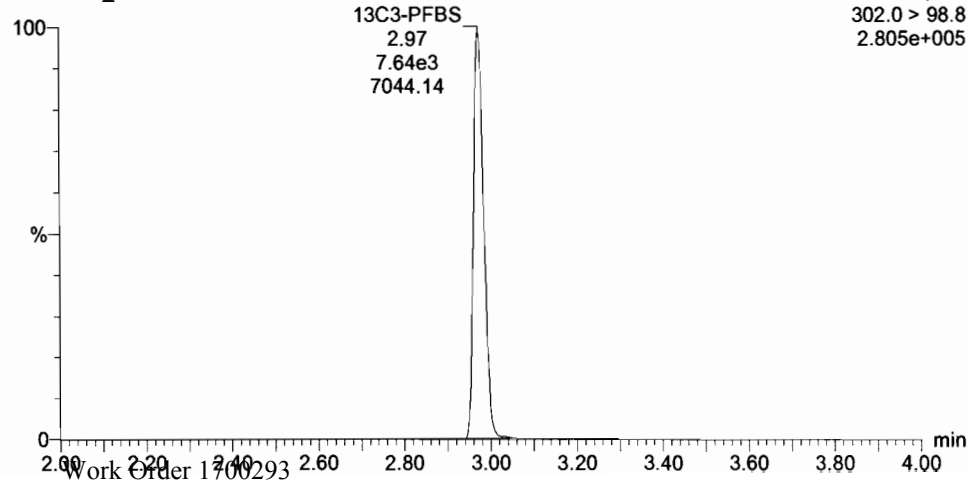
F4:MRM of 7 channels,ES-
363 > 168.8
1.750e+005



13C3-PFBS

170306G1_22

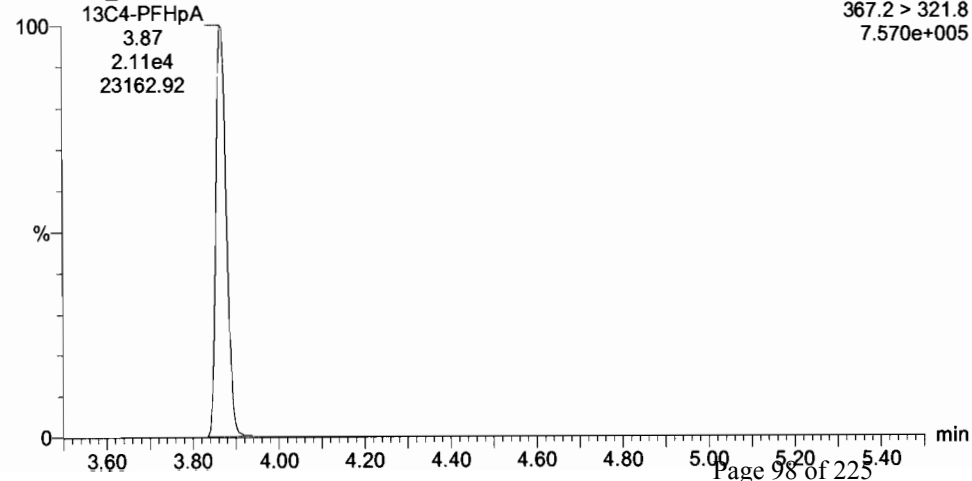
F2:MRM of 3 channels,ES-
302.0 > 98.8
2.805e+005



13C4-PFHpA

170306G1_22

F4:MRM of 7 channels,ES-
367.2 > 321.8
7.570e+005



Dataset: Untitled

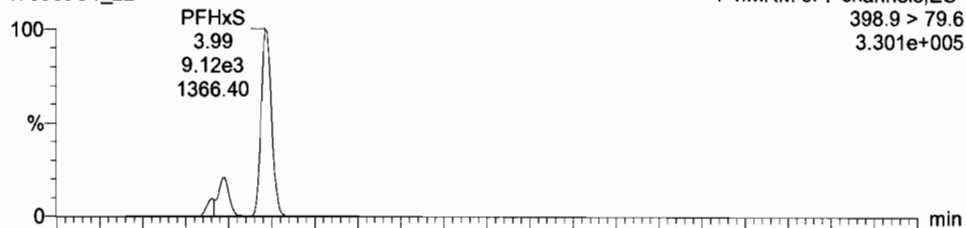
Last Altered: Tuesday, March 07, 2017 09:01:05 Pacific Standard Time

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

170306G1_22

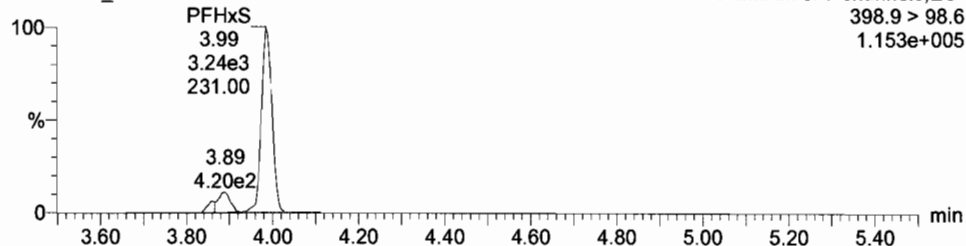


PFOA

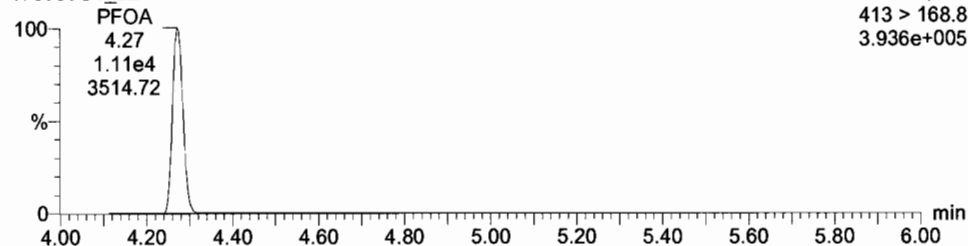
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170306G1_22

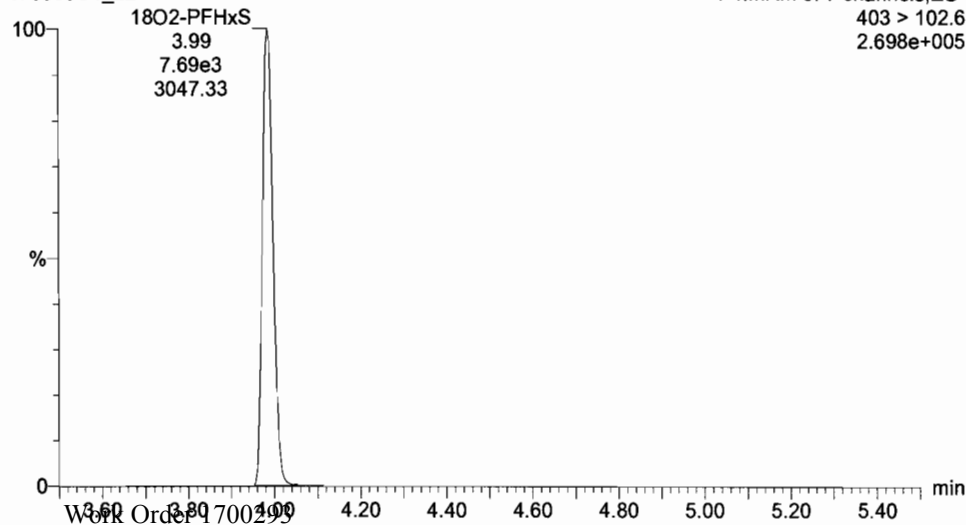


170306G1_22



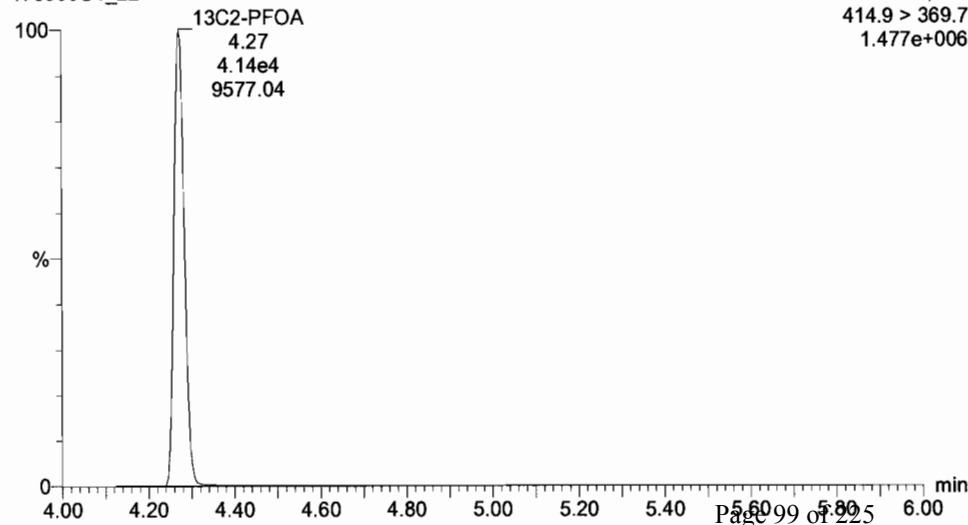
18O2-PFHxS

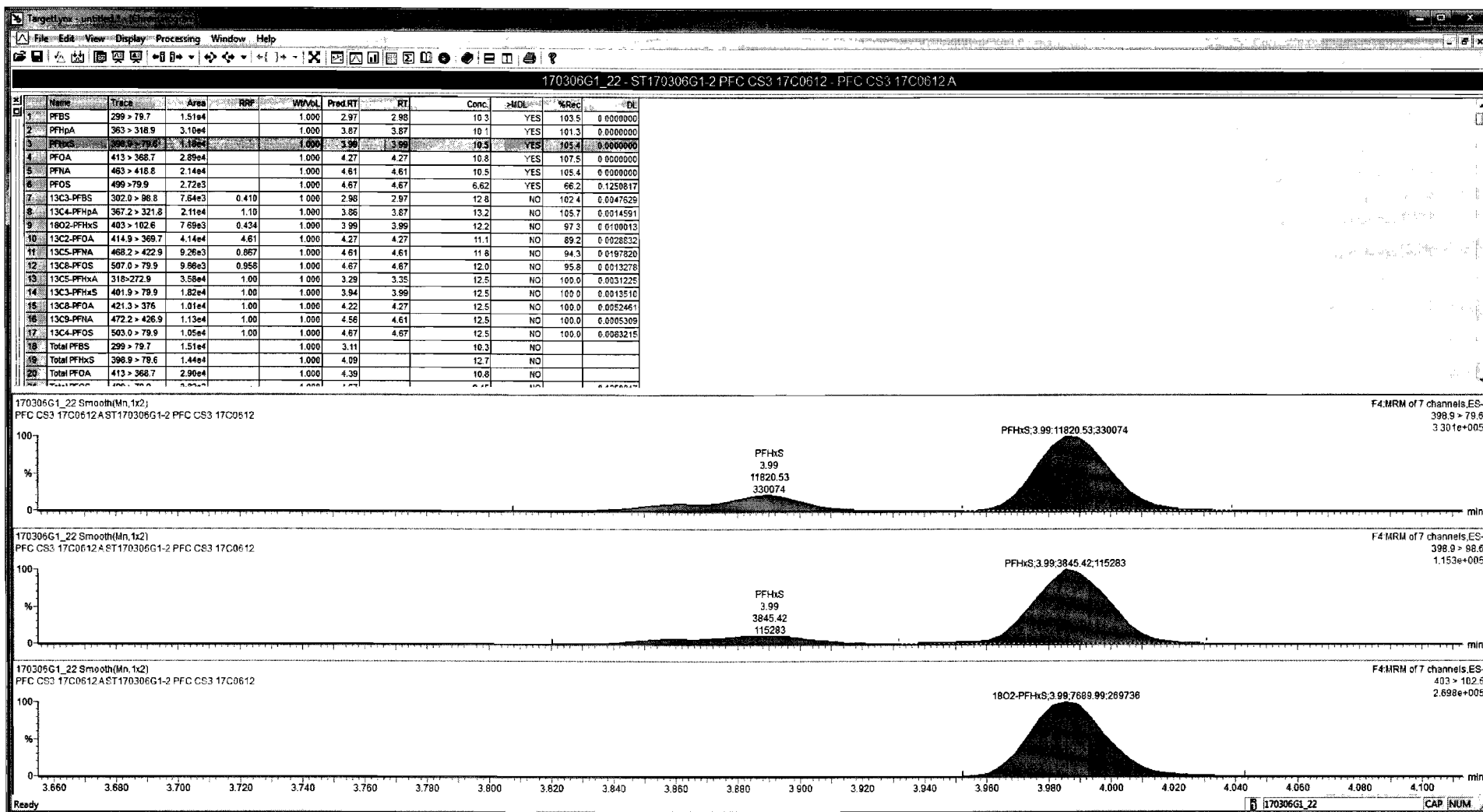
170306G1_22



13C2-PFOA

170306G1_22





Dataset: Untitled

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

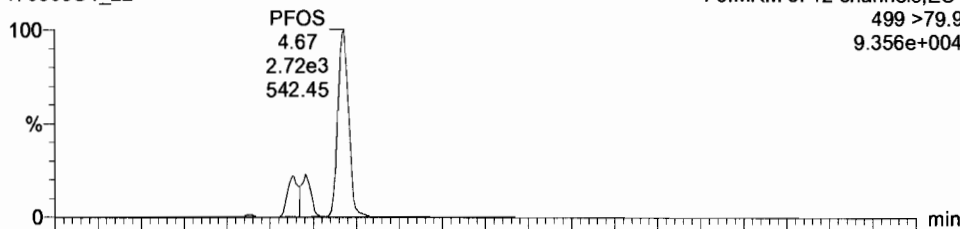
Printed: Tuesday, March 07, 2017 09:01:09 Pacific Standard Time

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

PFOS

170306G1_22

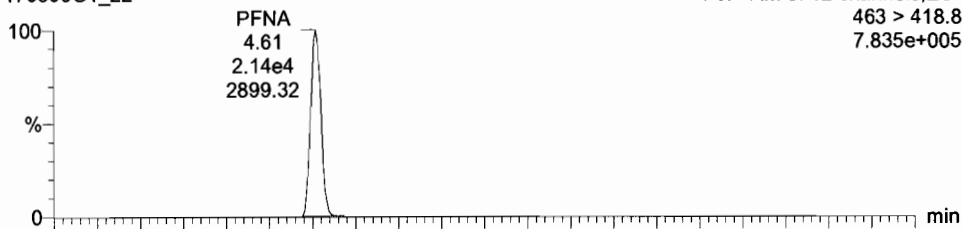
F5:MRM of 12 channels,ES-
499 > 79.9
9.356e+004



PFNA

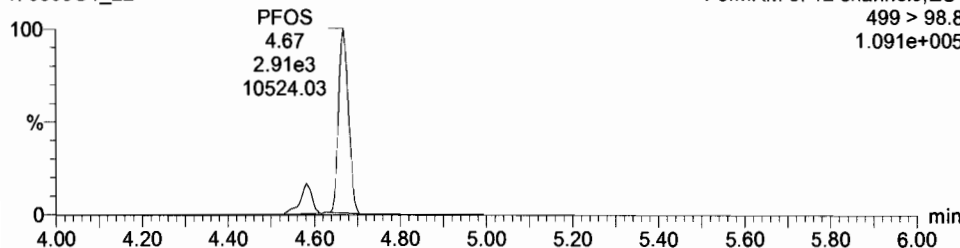
170306G1_22

F5:MRM of 12 channels,ES-
463 > 418.8
7.835e+005



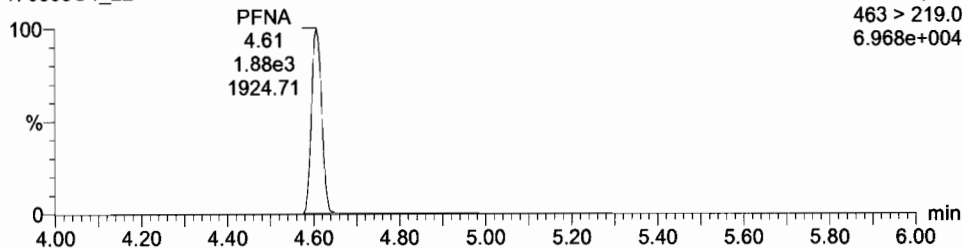
170306G1_22

F5:MRM of 12 channels,ES-
499 > 98.8
1.091e+005



170306G1_22

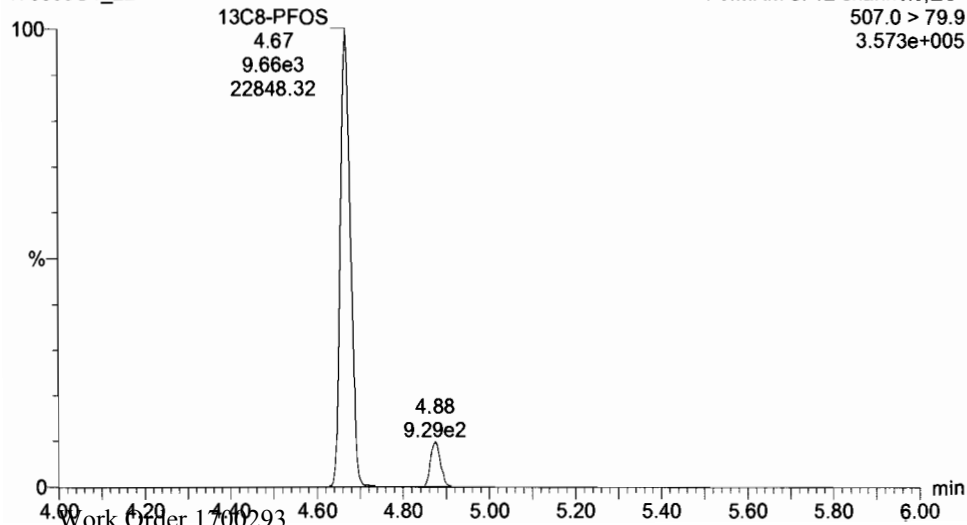
F5:MRM of 12 channels,ES-
463 > 219.0
6.968e+004



13C8-PFOS

170306G1_22

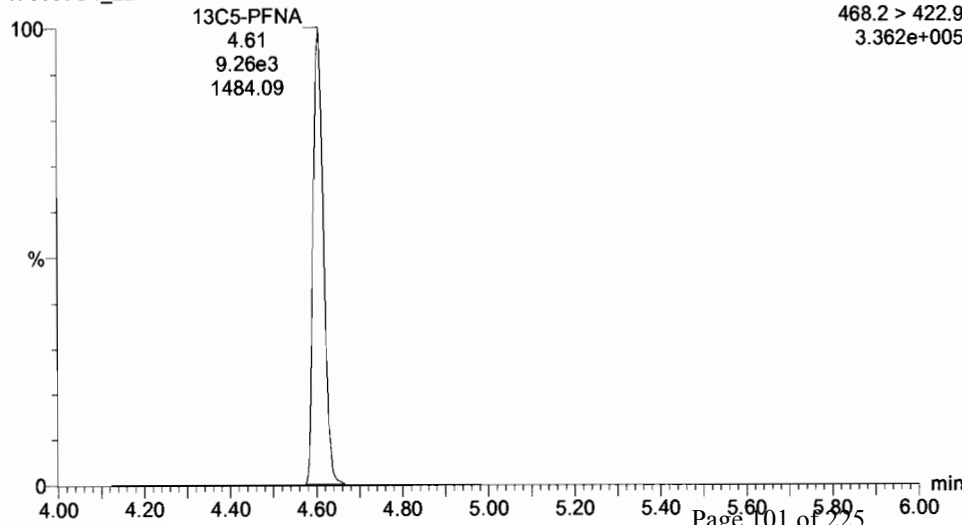
F5:MRM of 12 channels,ES-
507.0 > 79.9
3.573e+005

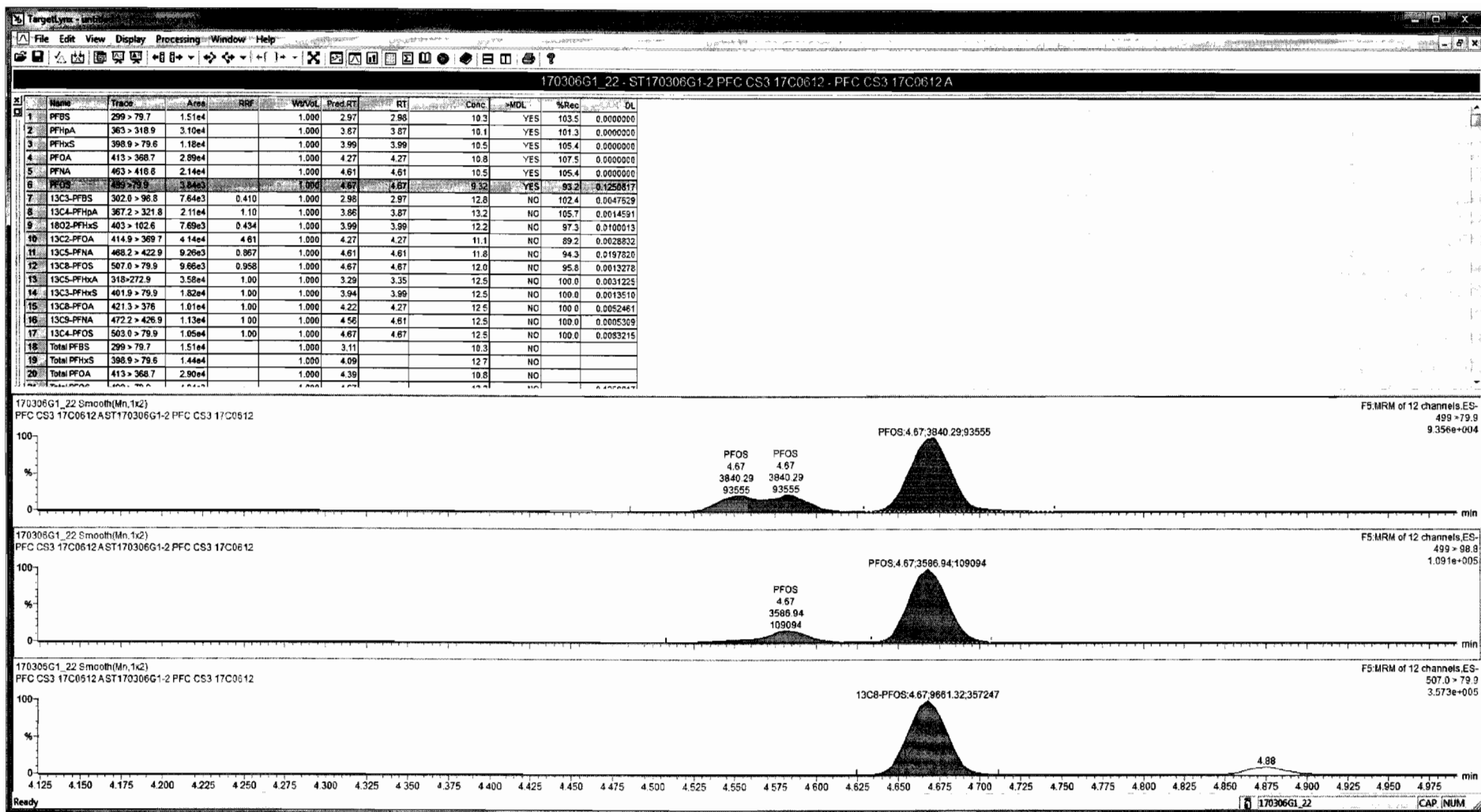


13C5-PFNA

170306G1_22

F5:MRM of 12 channels,ES-
468.2 > 422.9
3.362e+005





Dataset: Untitled

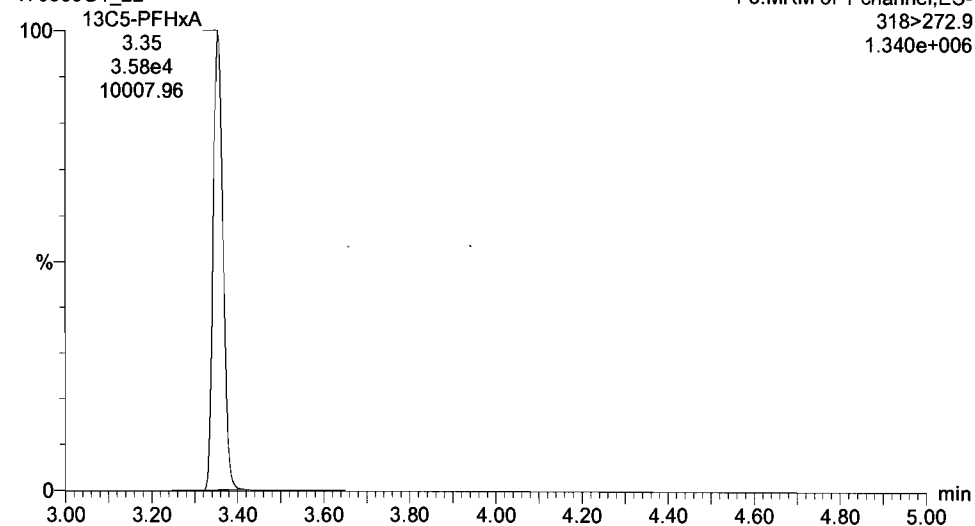
Last Altered: Tuesday, March 07, 2017 09:01:05 Pacific Standard Time

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

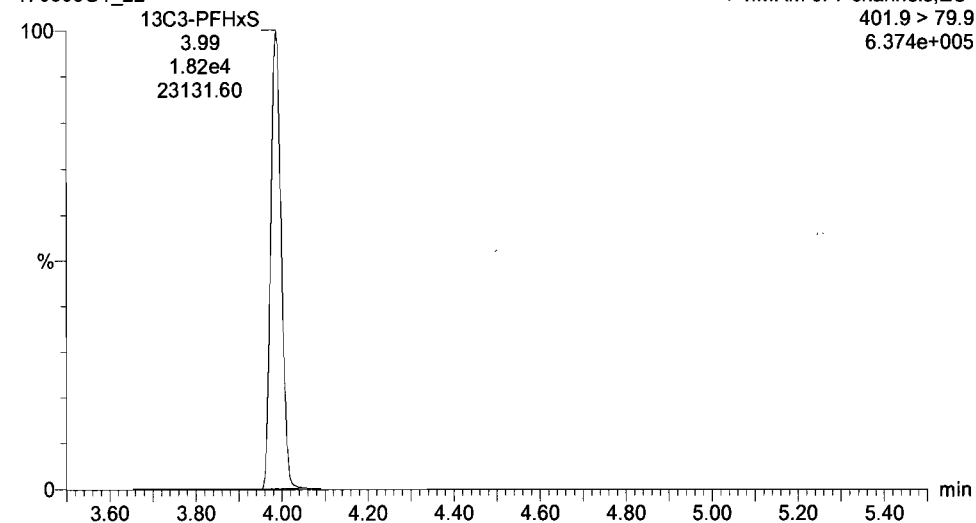
13C5-PFHxA

170306G1_22



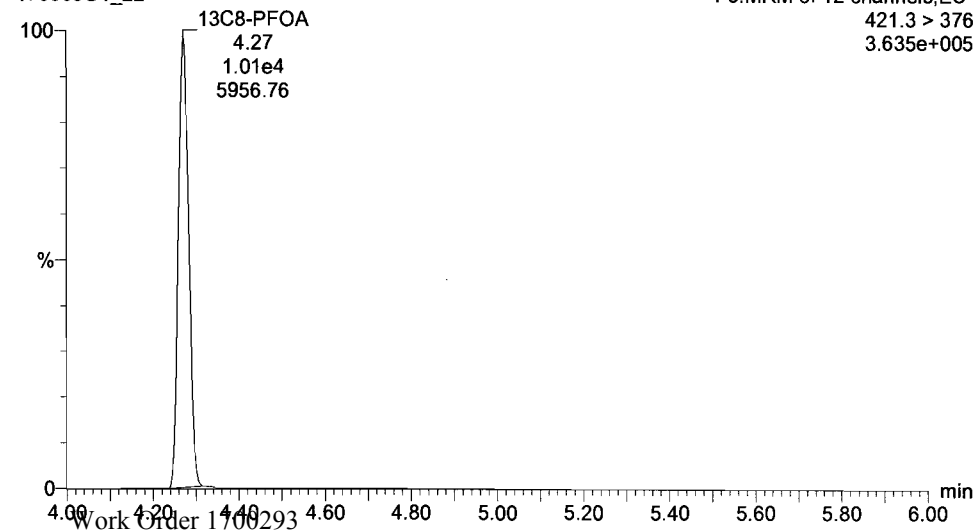
13C3-PFHxS

170306G1_22



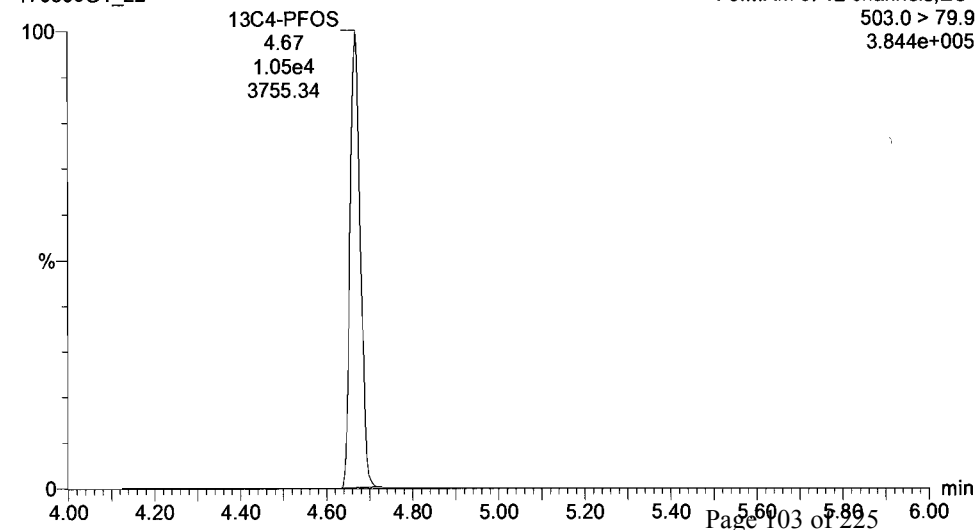
13C8-PFOA

170306G1_22



13C4-PFOS

170306G1_22

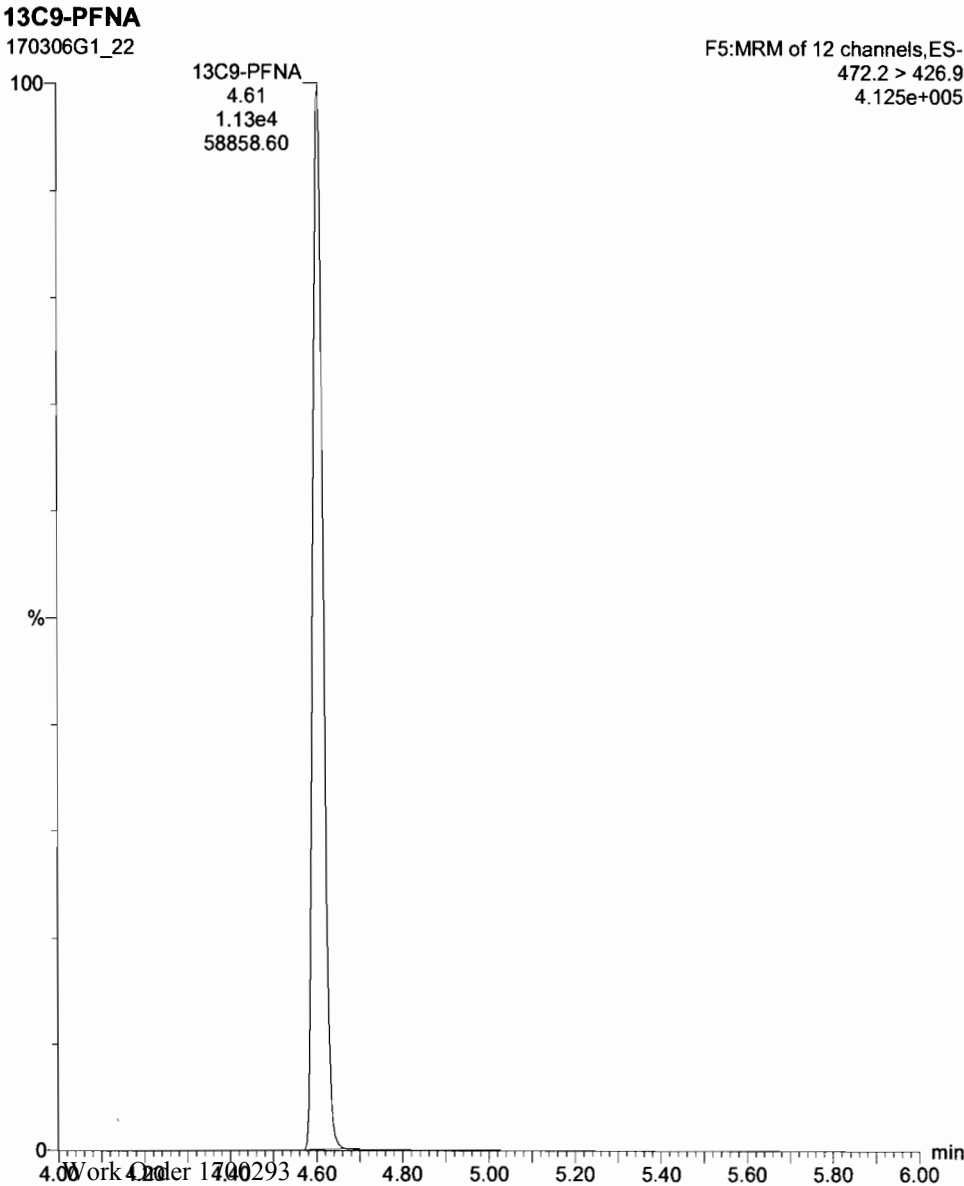


Dataset: Untitled

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



Dataset: U:\G1.PRO\Results\2017\170306G1\170306G1-34.qld

Last Altered: Tuesday, March 07, 2017 9:20:14 AM Pacific Standard Time

Printed: Tuesday, March 07, 2017 9:20:55 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

Name: 170306G1_34, Date: 06-Mar-2017, Time: 22:19:02, ID: ST170306G1-3 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	1.57e4	7.69e3		1.000	2.98	10.7	106.8
2	2 PFHpA	363 > 318.9	3.16e4	2.08e4		1.000	3.87	10.5	104.9
3	3 PFHxS	398.9 > 79.6	1.30e4	8.69e3		1.000	3.99	10.2	102.3
4	4 PFOA	413 > 368.7	2.84e4	3.90e4		1.000	4.28	11.2	112.1
5	5 PFNA	463 > 418.8	2.15e4	9.42e3		1.000	4.61	10.4	104.1
6	6 PFOS	499 > 79.9	3.98e3	9.87e3		1.000	4.67	9.45	94.5
7	7 13C3-PFBS	302.0 > 98.8	7.69e3	1.89e4	0.410	1.000	2.98	12.4	99.1
8	8 13C4-PFHpA	367.2 > 321.8	2.08e4	1.89e4	1.098	1.000	3.87	12.5	100.1
9	9 18O2-PFHxS	403 > 102.6	8.69e3	1.89e4	0.434	1.000	3.99	13.2	105.7
10	10 13C2-PFOA	414.9 > 369.7	3.90e4	9.54e3	4.608	1.000	4.28	11.1	88.7
11	11 13C5-PFNA	468.2 > 422.9	9.42e3	1.08e4	0.867	1.000	4.61	12.5	100.2
12	12 13C8-PFOS	507.0 > 79.9	9.87e3	1.07e4	0.958	1.000	4.67	12.0	95.9
13	13 13C5-PFHxA	318 > 272.9	3.58e4	3.58e4	1.000	1.000	3.36	12.5	100.0
14	14 13C3-PFHxS	401.9 > 79.9	1.89e4	1.89e4	1.000	1.000	3.99	12.5	100.0
15	15 13C8-PFOA	421.3 > 376	9.54e3	9.54e3	1.000	1.000	4.28	12.5	100.0
16	16 13C9-PFNA	472.2 > 426.9	1.08e4	1.08e4	1.000	1.000	4.61	12.5	100.0
17	17 13C4-PFOS	503.0 > 79.9	1.07e4	1.07e4	1.000	1.000	4.67	12.5	100.0

75-125
↓
60-150
↓
50-150
60-150

AC
3/7/17

✓ 3/7/17

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

	Name	ID	Acq.Date	Acq.Time
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
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

Dataset: Untitled

Last Altered: Tuesday, March 07, 2017 09:01:17 Pacific Standard Time

Printed: Tuesday, March 07, 2017 09:01:22 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS_6_2trans_LINEAR.mdb 02 Mar 2017 11:26:53

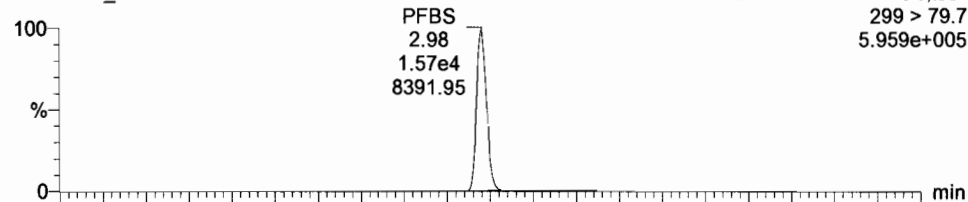
Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

Name: 170306G1_34, Date: 06-Mar-2017, Time: 22:19:02, ID: ST170306G1-3 PFC CS3 17C0612, Description: PFC CS3 17C0612 A

PFBS

170306G1_34

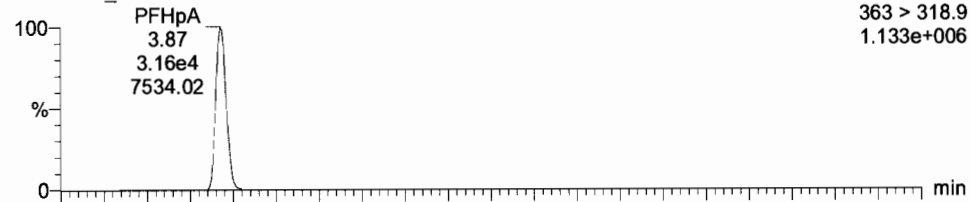
F2:MRM of 3 channels,ES-
299 > 79.7
5.959e+005



PFHpA

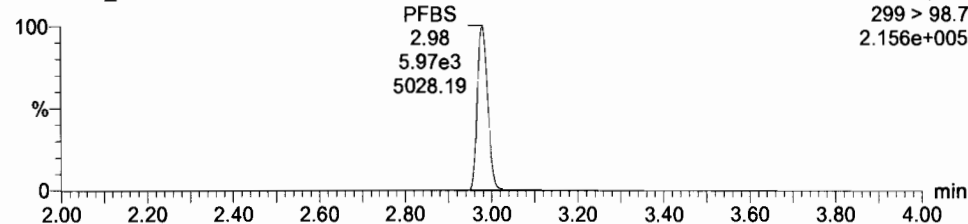
170306G1_34

F4:MRM of 7 channels,ES-
363 > 318.9
1.133e+006



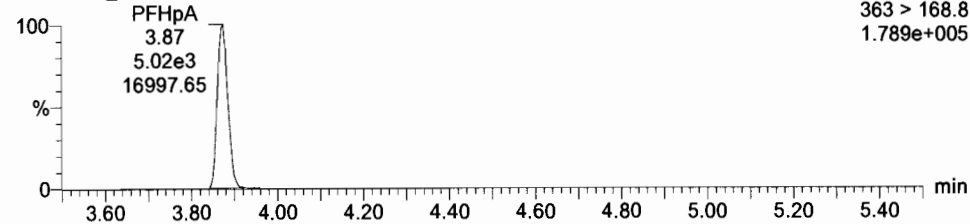
170306G1_34

F2:MRM of 3 channels,ES-
299 > 98.7
2.156e+005



170306G1_34

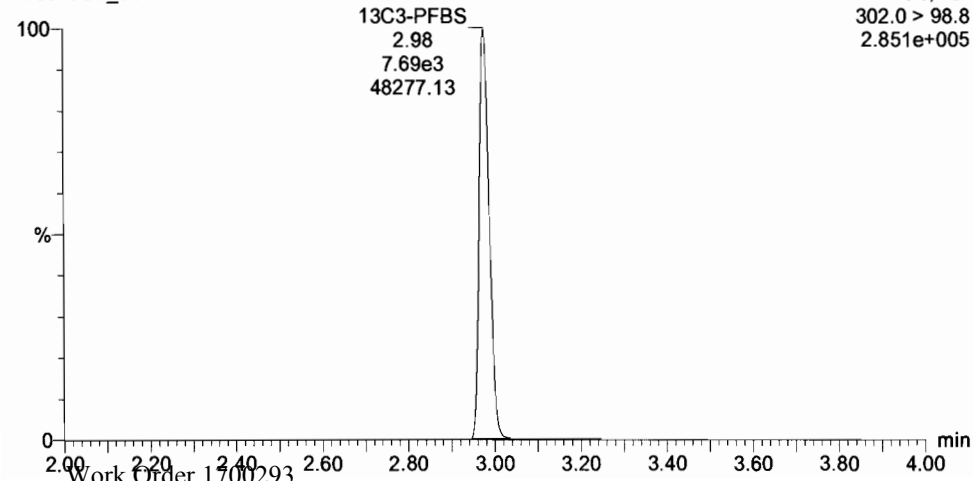
F4:MRM of 7 channels,ES-
363 > 168.8
1.789e+005



13C3-PFBS

170306G1_34

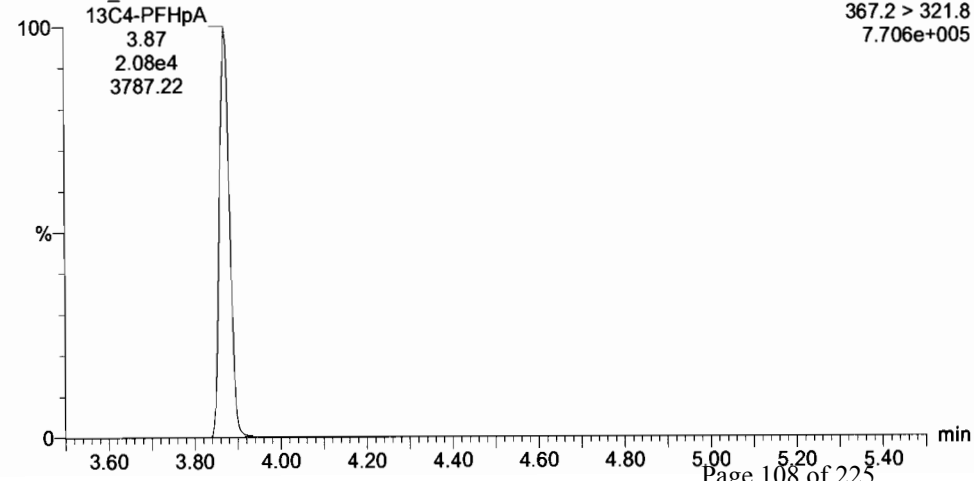
F2:MRM of 3 channels,ES-
302.0 > 98.8
2.851e+005



13C4-PFHpA

170306G1_34

F4:MRM of 7 channels,ES-
367.2 > 321.8
7.706e+005



Dataset: Untitled

Last Altered: Tuesday, March 07, 2017 09:01:17 Pacific Standard Time

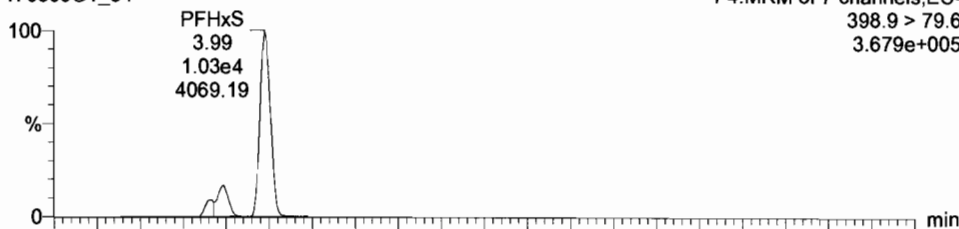
Printed: Tuesday, March 07, 2017 09:01:22 Pacific Standard Time

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PFHxS

170306G1_34

F4:MRM of 7 channels,ES-
398.9 > 79.6
3.679e+005



PFOA

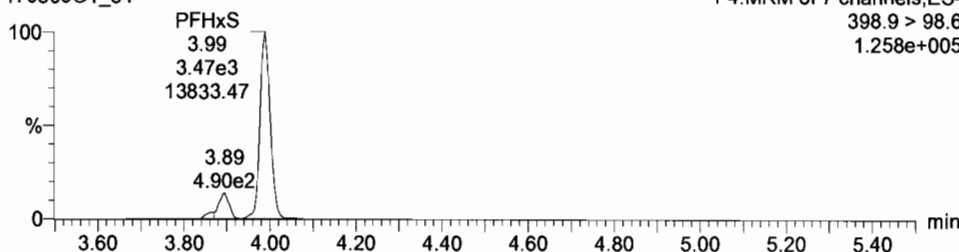
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F5:MRM of 12 channels,ES-
413 > 368.7
1.016e+006



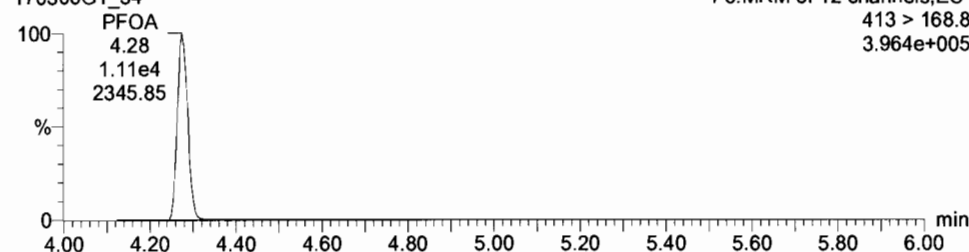
170306G1_34

F4:MRM of 7 channels,ES-
398.9 > 98.6
1.258e+005



170306G1_34

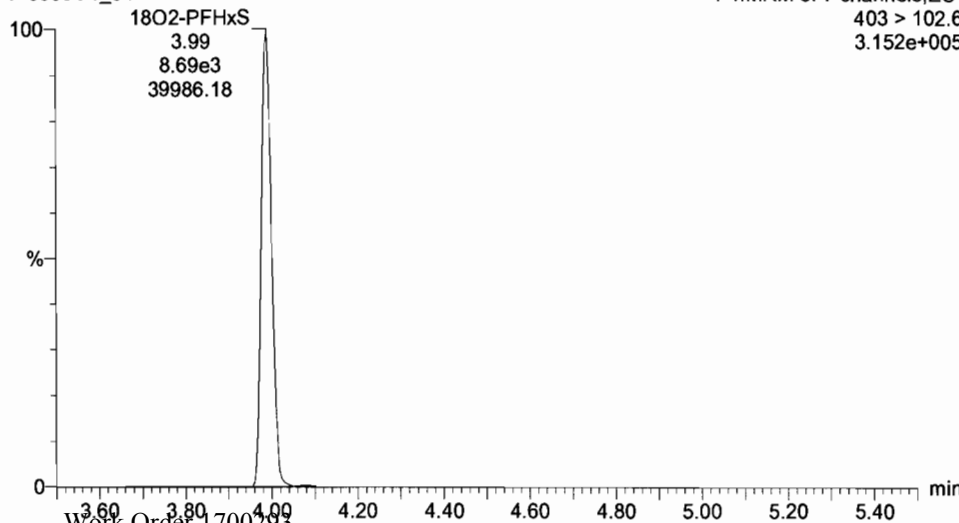
F5:MRM of 12 channels,ES-
413 > 168.8
3.964e+005



18O2-PFHxS

170306G1_34

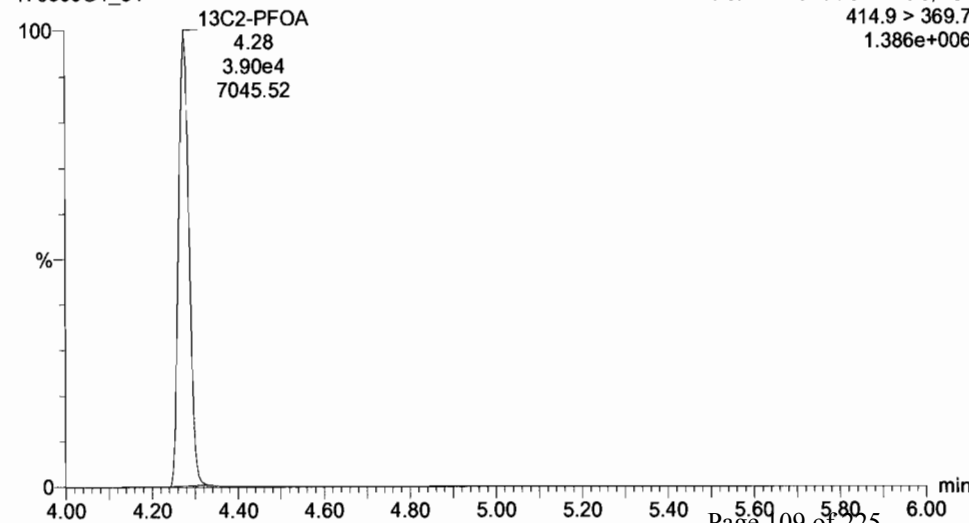
F4:MRM of 7 channels,ES-
403 > 102.6
3.152e+005

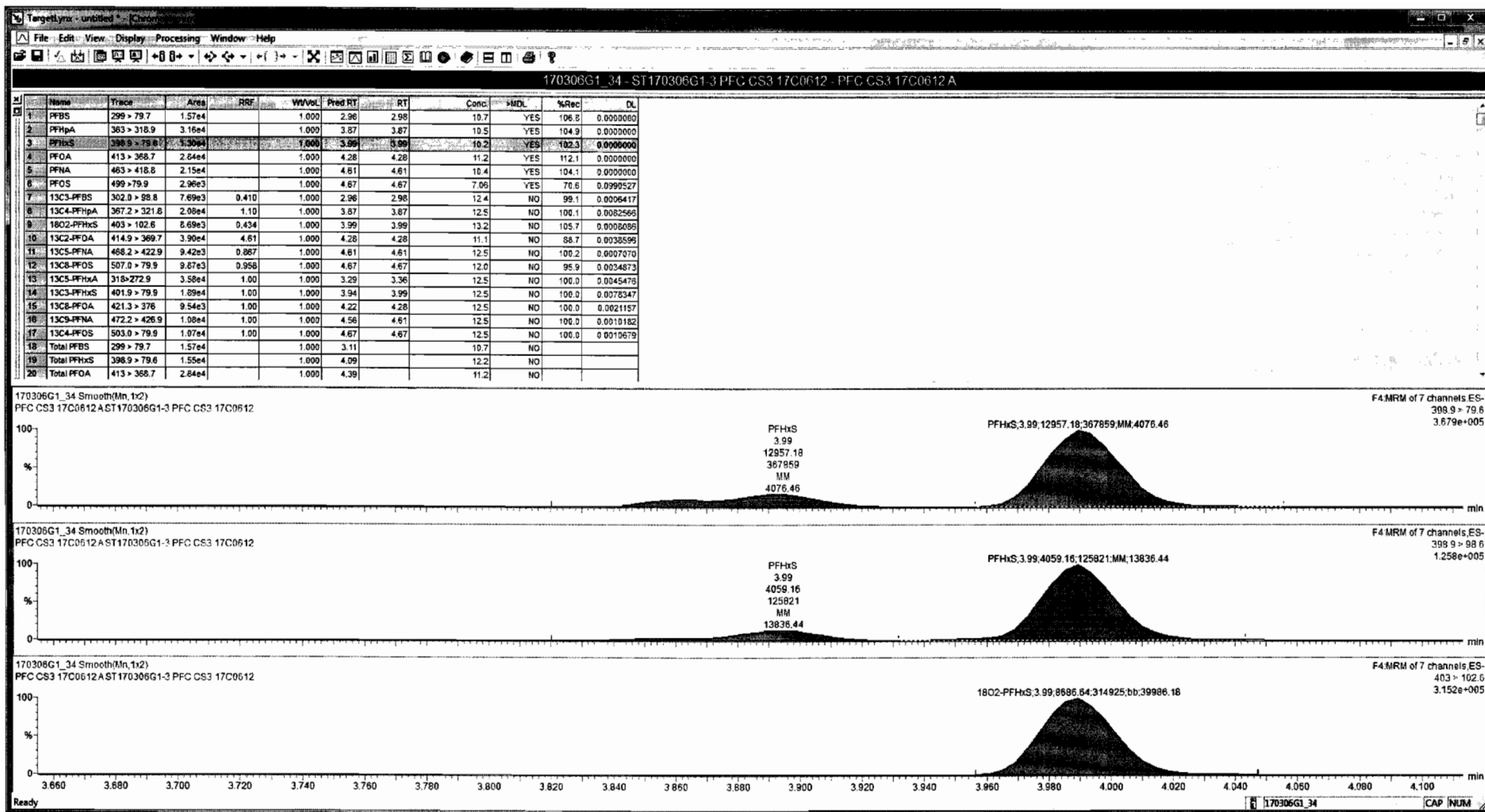


13C2-PFOA

170306G1_34

F5:MRM of 12 channels,ES-
414.9 > 369.7
1.386e+006





Dataset: Untitled

Last Altered: Tuesday, March 07, 2017 09:01:17 Pacific Standard Time

Printed: Tuesday, March 07, 2017 09:01:22 Pacific Standard Time

Name: 170306G1_34, Date: 06-Mar-2017, Time: 22:19:02, ID: ST170306G1-3 PFC CS3 17C0612, Description: PFC CS3 17C0612 A

PFOS

170306G1_34

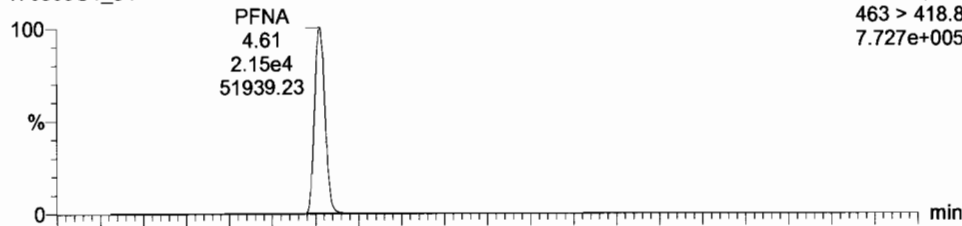
F5:MRM of 12 channels,ES-
499 > 79.9
1.091e+005



PFNA

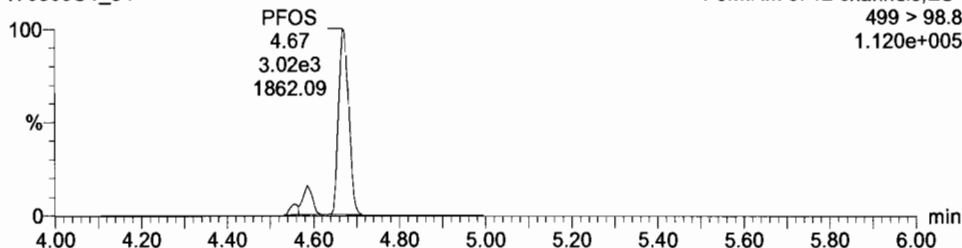
170306G1_34

F5:MRM of 12 channels,ES-
463 > 418.8
7.727e+005



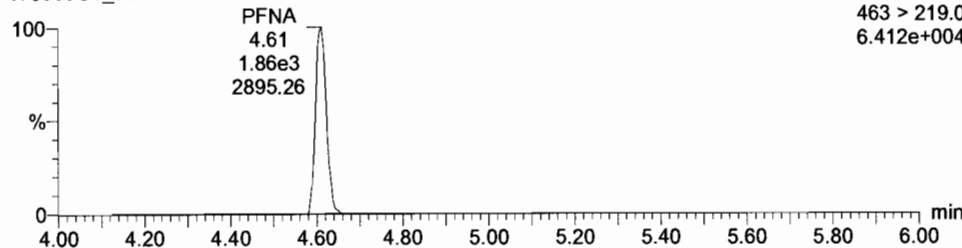
170306G1_34

F5:MRM of 12 channels,ES-
499 > 98.8
1.120e+005



170306G1_34

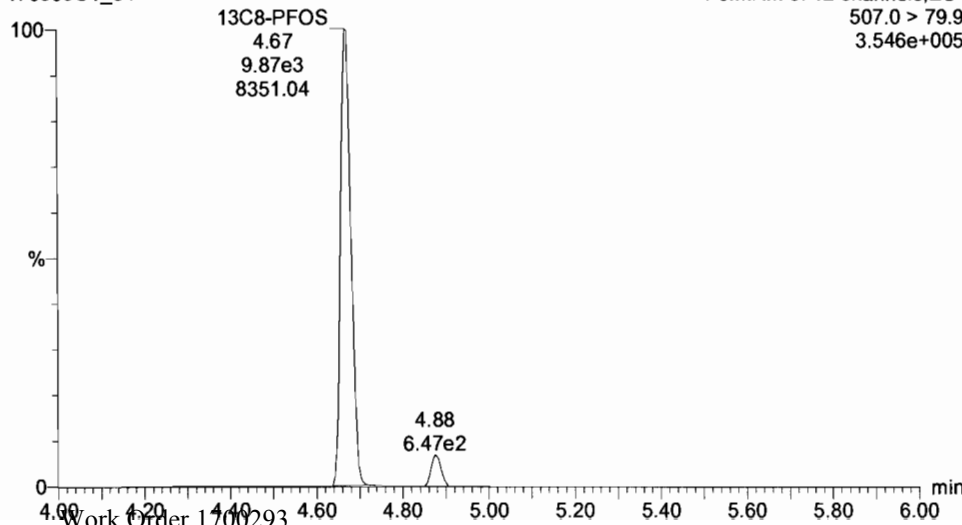
F5:MRM of 12 channels,ES-
463 > 219.0
6.412e+004



13C8-PFOS

170306G1_34

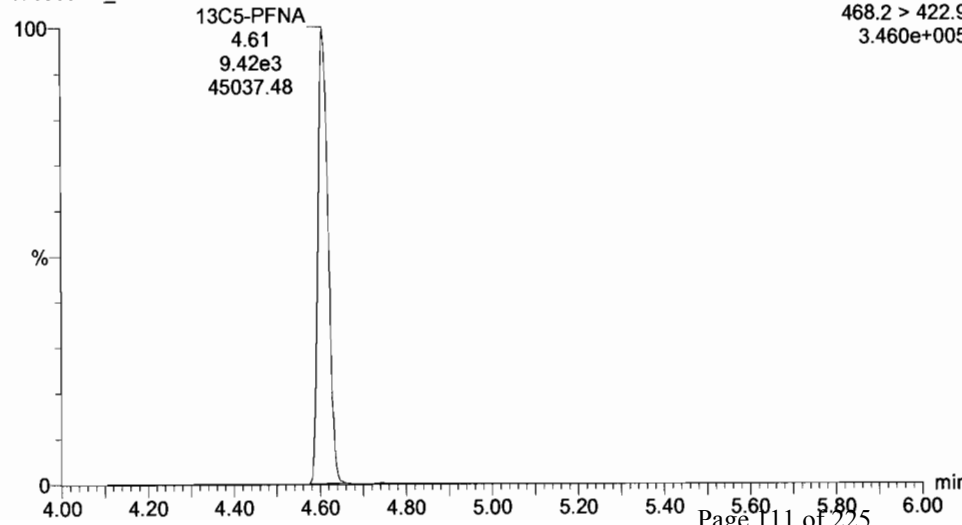
F5:MRM of 12 channels,ES-
507.0 > 79.9
3.546e+005

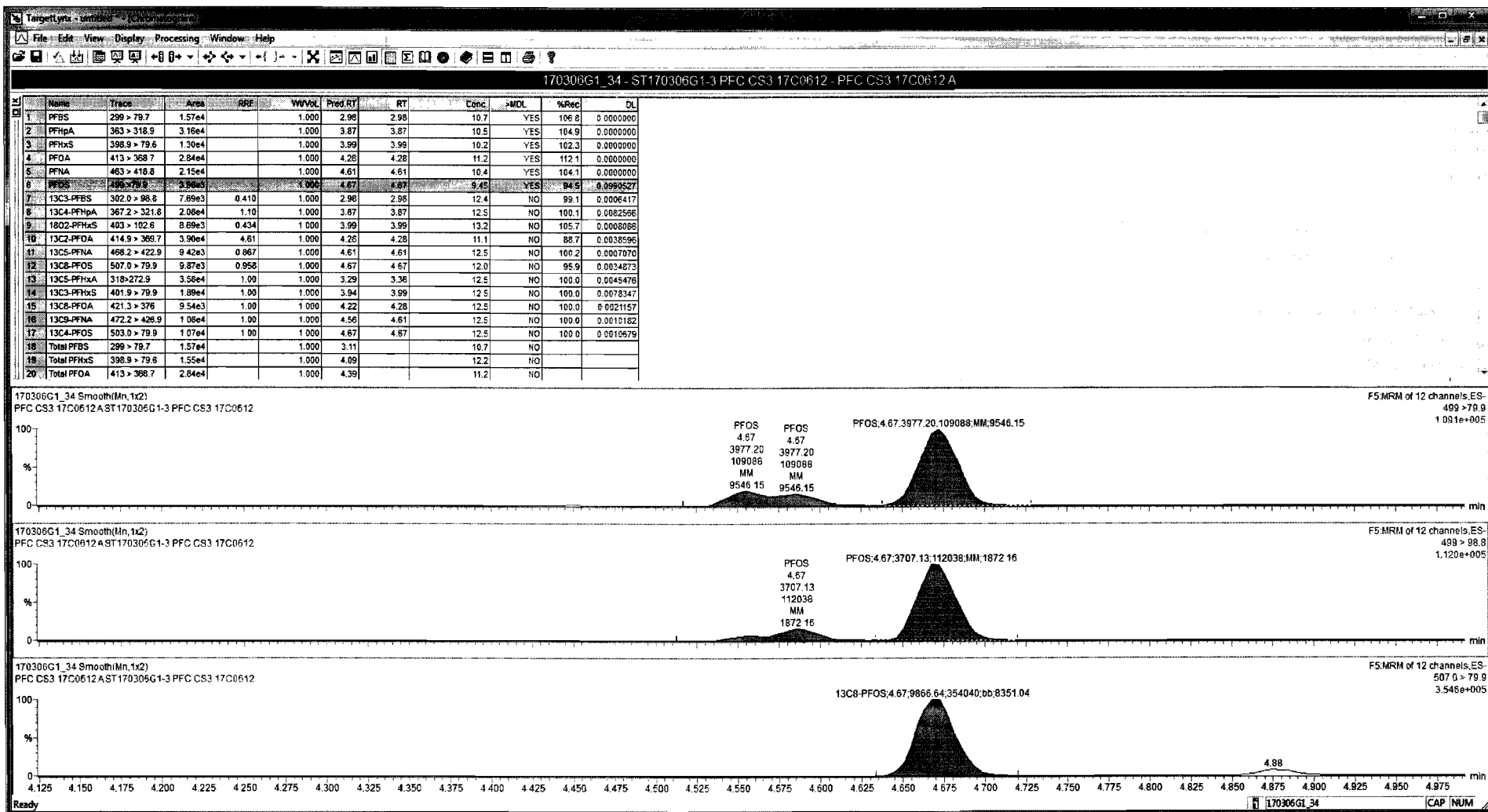


13C5-PFNA

170306G1_34

F5:MRM of 12 channels,ES-
468.2 > 422.9
3.460e+005





Dataset: Untitled

Last Altered: Tuesday, March 07, 2017 09:01:17 Pacific Standard Time

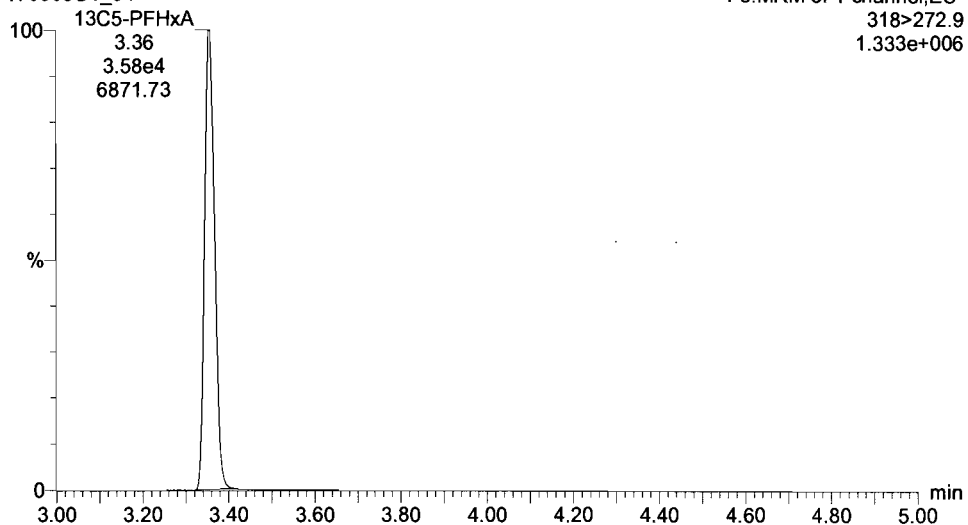
Printed: Tuesday, March 07, 2017 09:01:22 Pacific Standard Time

Name: 170306G1_34, Date: 06-Mar-2017, Time: 22:19:02, ID: ST170306G1-3 PFC CS3 17C0612, Description: PFC CS3 17C0612 A

13C5-PFHxA

170306G1_34

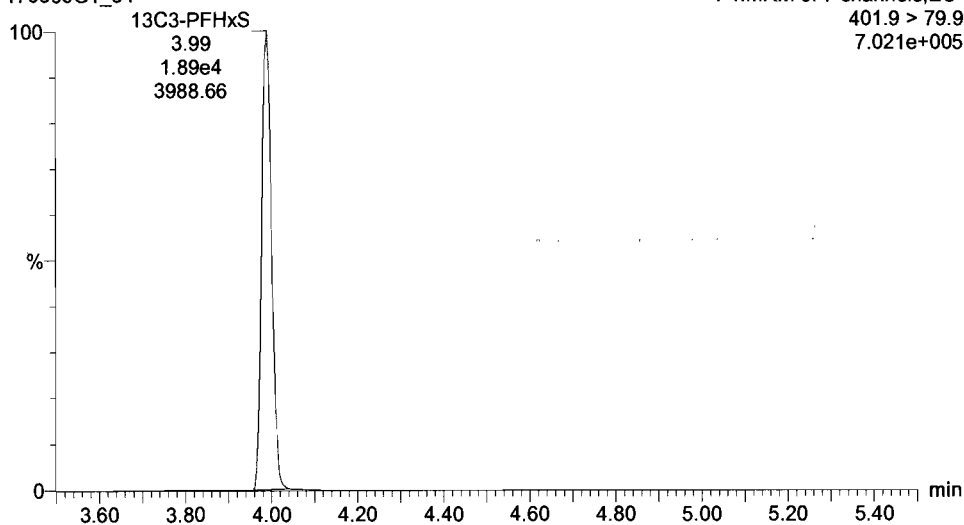
F3:MRM of 1 channel,ES-
318>272.9
1.333e+006



13C3-PFHxS

170306G1_34

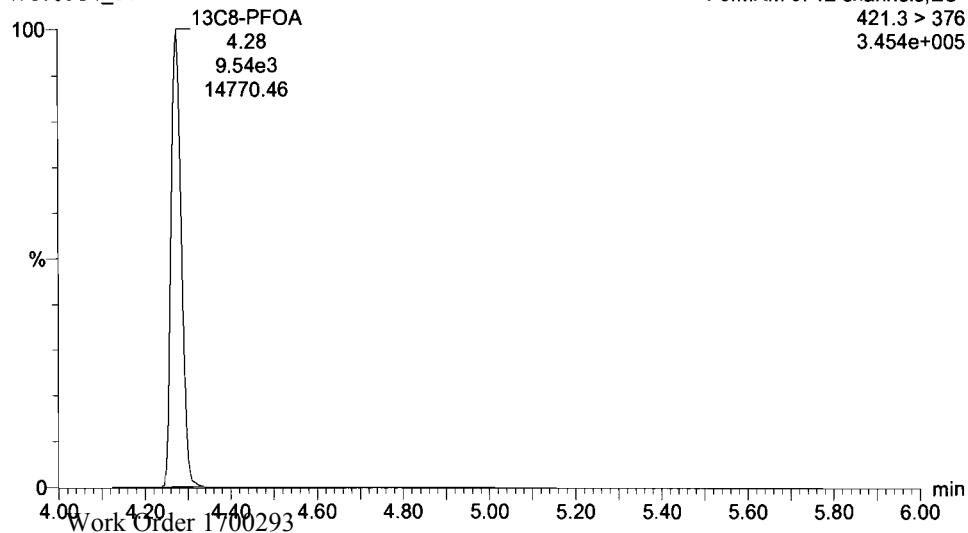
F4:MRM of 7 channels,ES-
401.9 > 79.9
7.021e+005



13C8-PFOA

170306G1_34

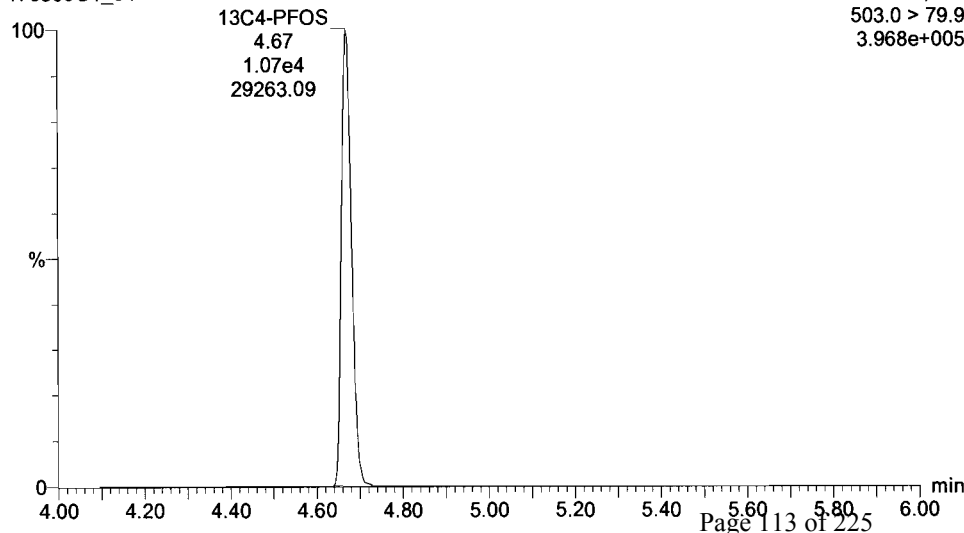
F5:MRM of 12 channels,ES-
421.3 > 376
3.454e+005



13C4-PFOS

170306G1_34

F5:MRM of 12 channels,ES-
503.0 > 79.9
3.968e+005



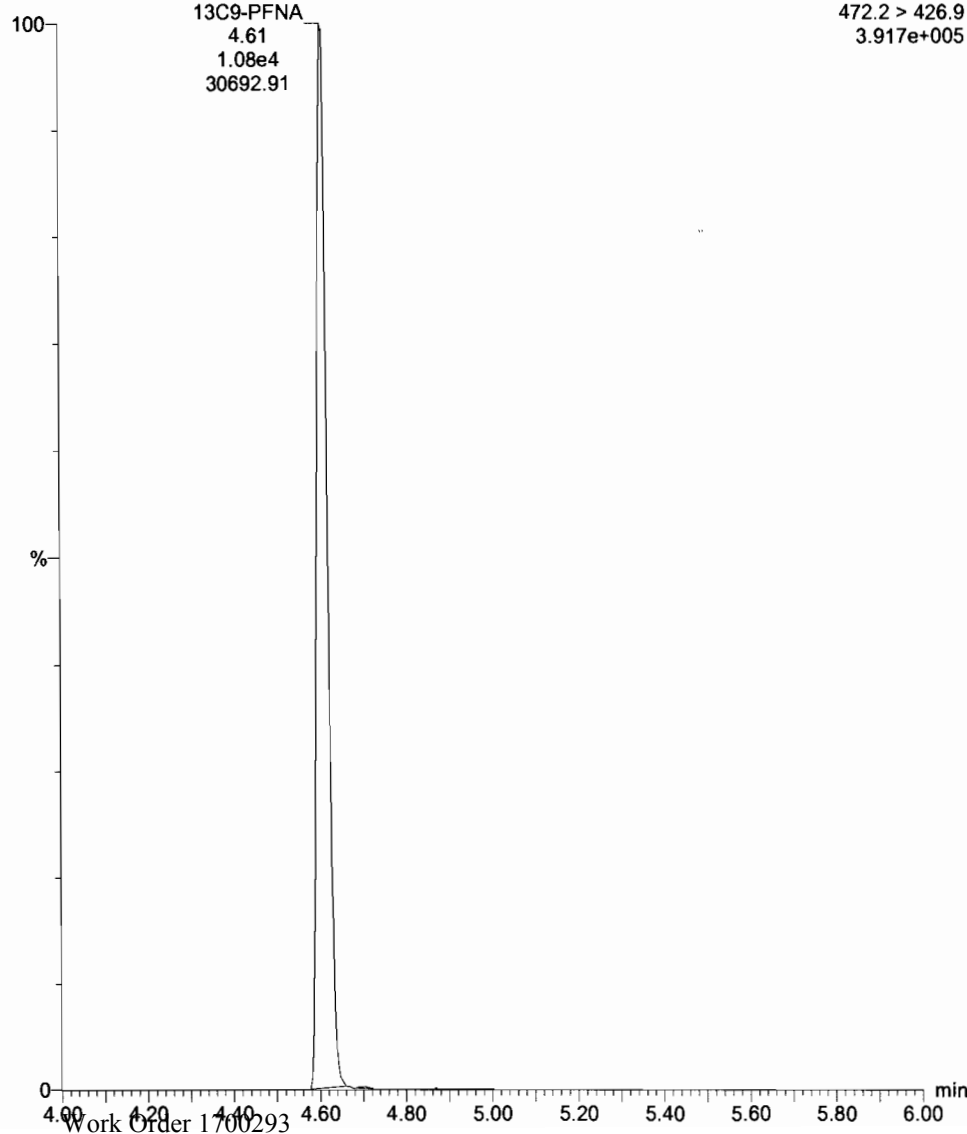
Dataset: Untitled

Last Altered: Tuesday, March 07, 2017 09:01:17 Pacific Standard Time
Printed: Tuesday, March 07, 2017 09:01:22 Pacific Standard Time

Name: 170306G1_34, Date: 06-Mar-2017, Time: 22:19:02, ID: ST170306G1-3 PFC CS3 17C0612, Description: PFC CS3 17C0612 A

13C9-PFNA
170306G1_34

F5:MRM of 12 channels,ES-
472.2 > 426.9
3.917e+005



Dataset: U:\G1.PRO\Results\2017\New folder\170307G1-2.qld

Last Altered: Tuesday, March 07, 2017 09:51:38 Pacific Standard Time

Printed: Tuesday, March 07, 2017 09:54:56 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: 170307G1_2, Date: 07-Mar-2017, Time: 09:14:04, ID: ST170307G1-1 PFC CS3 17C0701, Description: PFC CS3 17C0701 A

	# Name	Trace	Response	IS Resp	RRF	Wt/Vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7	1.31e4	7.20e3		1.000	2.99	9.55	95.5
2	2 PFHpA	363 > 318.9	2.77e4	1.83e4		1.000	3.88	10.4	104.3
3	3 PFHxS	398.9 > 79.6	1.20e4	7.52e3		1.000	4.00	10.9	109.4
4	4 PFOA	413 > 368.7	2.44e4	3.81e4		1.000	4.28	9.86	98.6
5	5 PFNA	463 > 418.8	1.87e4	8.55e3		1.000	4.61	9.94	99.4
6	6 PFOS	499 > 79.9	3.38e3	8.10e3		1.000	4.67	9.77	97.7
7	7 13C3-PFBS	302.0 > 98.8	7.20e3	1.80e4	0.410	1.000	2.99	12.2	97.9
8	8 13C4-PFHpA	367.2 > 321.8	1.83e4	1.80e4	1.098	1.000	3.88	11.6	93.0
9	9 18O2-PFHxS	403 > 102.6	7.52e3	1.80e4	0.434	1.000	4.00	12.1	96.4
10	10 13C2-PFOA	414.9 > 369.7	3.81e4	8.44e3	4.608	1.000	4.28	12.2	98.0
11	11 13C5-PFNA	468.2 > 422.9	8.55e3	1.03e4	0.867	1.000	4.61	12.0	95.6
12	12 13C8-PFOS	507.0 > 79.9	8.10e3	8.25e3	0.958	1.000	4.67	12.8	102.5
13	13 13C5-PFHxA	318 > 272.9	3.17e4	3.17e4	1.000	1.000	3.37	12.5	100.0
14	14 13C3-PFHxS	401.9 > 79.9	1.80e4	1.80e4	1.000	1.000	4.00	12.5	100.0
15	15 13C8-PFOA	421.3 > 376	8.44e3	8.44e3	1.000	1.000	4.28	12.5	100.0
16	16 13C9-PFNA	472.2 > 426.9	1.03e4	1.03e4	1.000	1.000	4.61	12.5	100.0
17	17 13C4-PFOS	503.0 > 79.9	8.25e3	8.25e3	1.000	1.000	4.67	12.5	100.0

75-125

60-150

50-150

60-150

ES 3/7/17

✓ AC 3/7/17

Dataset: Untitled

Last Altered: Tuesday, March 07, 2017 10:58:31 Pacific Standard Time

Printed: Tuesday, March 07, 2017 10:58:48 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	170307G1_1	IPA	07-Mar-17	09:01:51
2	170307G1_2	ST170307G1-1 PFC CS3 17C0701	07-Mar-17	09:14:04
3	170307G1_3	IPA	07-Mar-17	09:26:31
4	170307G1_4	1700263-04RE1@10X OW2C-MW25-0217 0....	07-Mar-17	09:39:38
5	170307G1_5	1700293-01@10X WI-CV-GW02S-0317 0.125	07-Mar-17	09:51:58
6	170307G1_6	1700293-02@10X WI-CV-GW02S/SP-0317 0....	07-Mar-17	10:04:33
7	170307G1_7	IPA	07-Mar-17	10:17:07
8	170307G1_8	ST170307G1-2 PFC CS3 17C0701	07-Mar-17	10:29:40
9	170307G1_9	IPA	07-Mar-17	10:42:20

LC Calibration Standards Review Checklist

Q1

Calibration ID:	L M H	ION Ratio	Concentration	C-Cals Name	Sign Date	Correct I-Cal	Manual Integrations	
ST170307G1-1	L M H	☒	☒	☒	☒	☒	☒	☒
J -2	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: ☒

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

Comments:

List 6

Dataset: Untitled

Last Altered: Tuesday, March 07, 2017 09:55:08 Pacific Standard Time

Printed: Tuesday, March 07, 2017 09:55:29 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

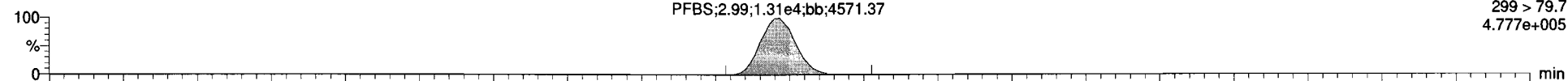
ID: ST170307G1-1 PFC CS3 17C0701, Description: PFC CS3 17C0701 A, Name: 170307G1_2, Date: 07-Mar-2017, Time: 09:14:04, Instrument: , Lab: , User:

PFBS

170307G1_2

PFBS;2.99;1.31e4;bb;4571.37

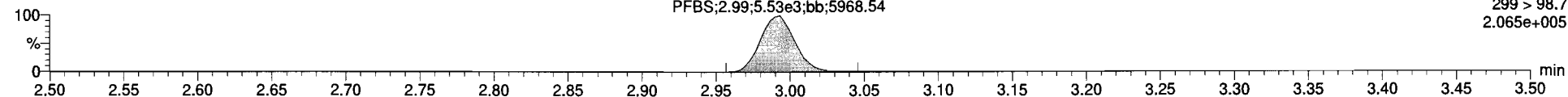
F2:MRM of 3 channels,ES-
299 > 79.7
4.777e+005



170307G1_2

PFBS;2.99;5.53e3;bb;5968.54

F2:MRM of 3 channels,ES-
299 > 98.7
2.065e+005

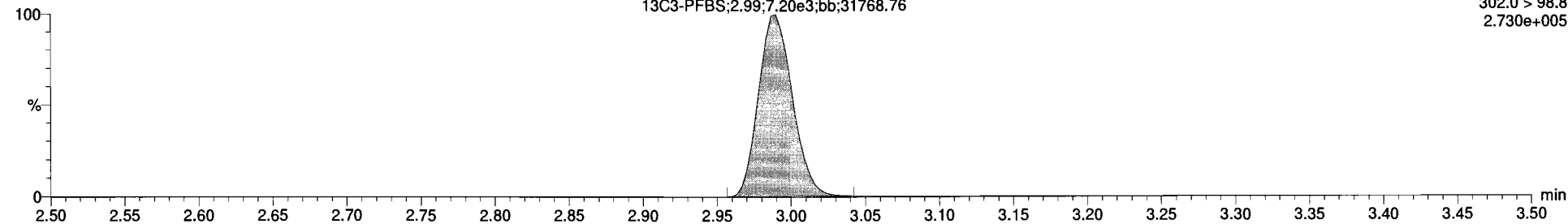


13C3-PFBS

170307G1_2

13C3-PFBS;2.99;7.20e3;bb;31768.76

F2:MRM of 3 channels,ES-
302.0 > 98.8
2.730e+005

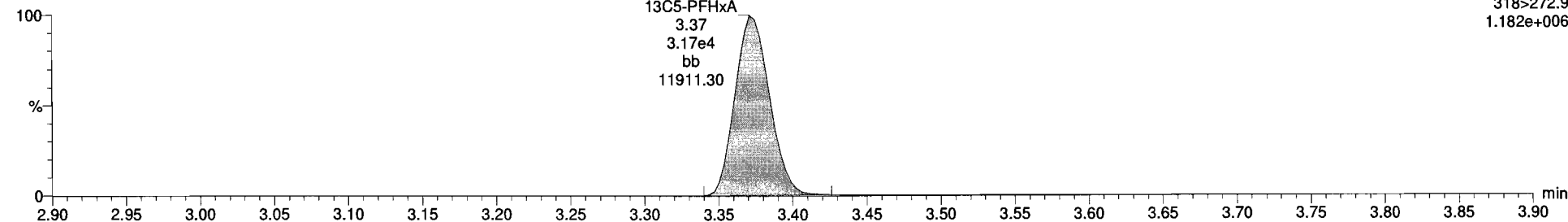


13C5-PFHxA

170307G1_2

13C5-PFHxA
3.37
3.17e4
bb
11911.30

F3:MRM of 1 channel,ES-
318>272.9
1.182e+006



Dataset: Untitled

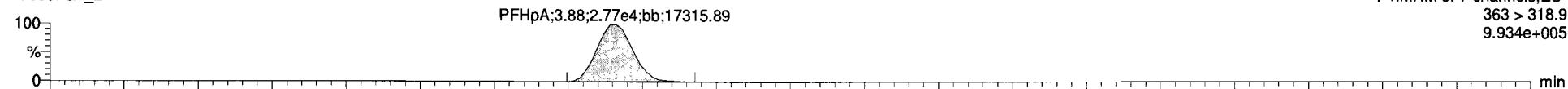
Last Altered: Tuesday, March 07, 2017 09:55:08 Pacific Standard Time

Printed: Tuesday, March 07, 2017 09:55:29 Pacific Standard Time

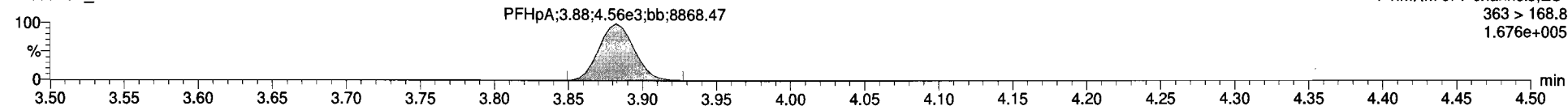
ID: ST170307G1-1 PFC CS3 17C0701, Description: PFC CS3 17C0701 A, Name: 170307G1_2, Date: 07-Mar-2017, Time: 09:14:04, Instrument: , Lab: , User:

PFHpA

170307G1_2

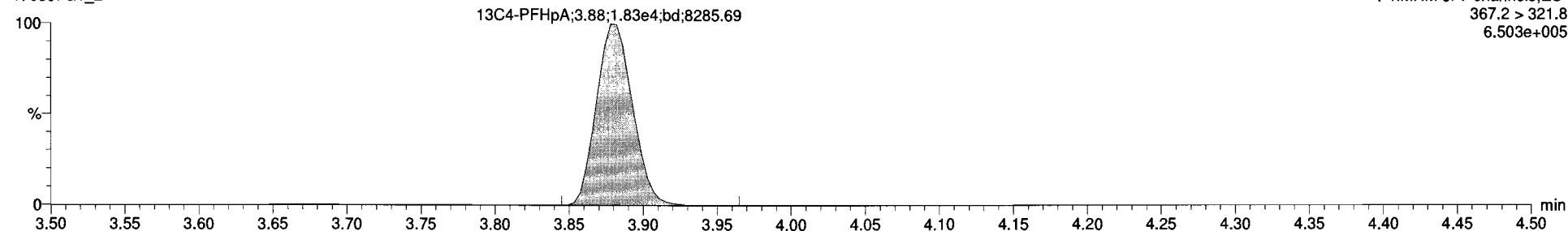


170307G1_2



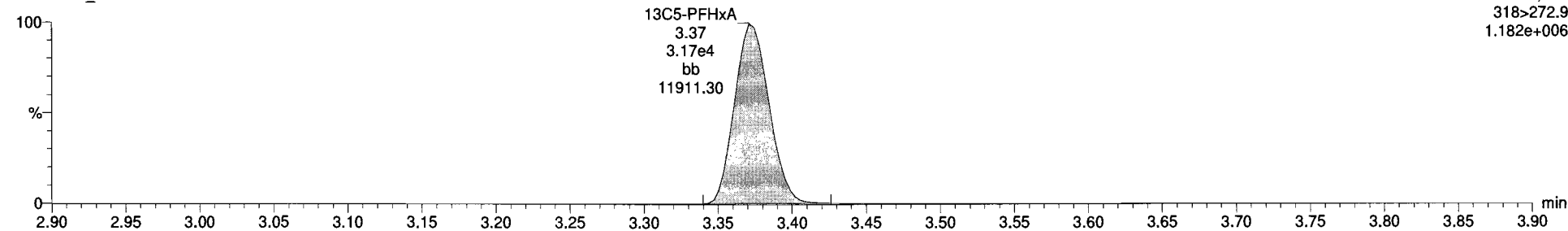
13C4-PFHpA

170307G1_2



13C5-PFHxA

170307G1_2



Dataset: Untitled

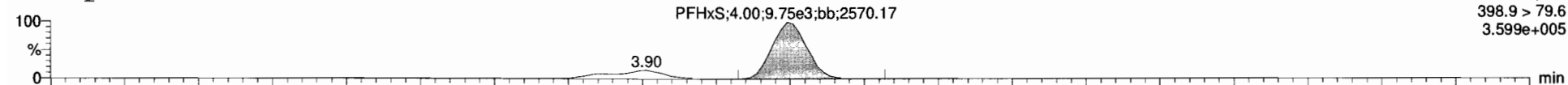
Last Altered: Tuesday, March 07, 2017 09:55:08 Pacific Standard Time

Printed: Tuesday, March 07, 2017 09:55:29 Pacific Standard Time

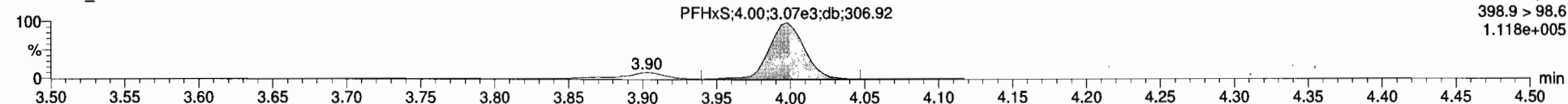
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PFHxS

170307G1_2

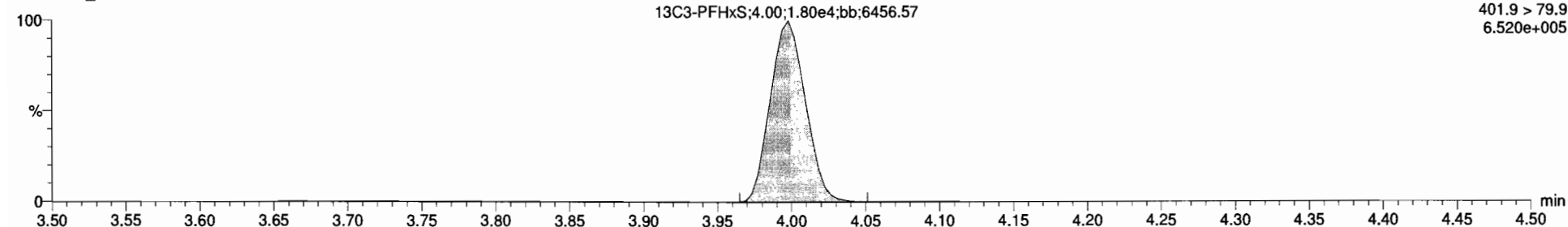


170307G1_2



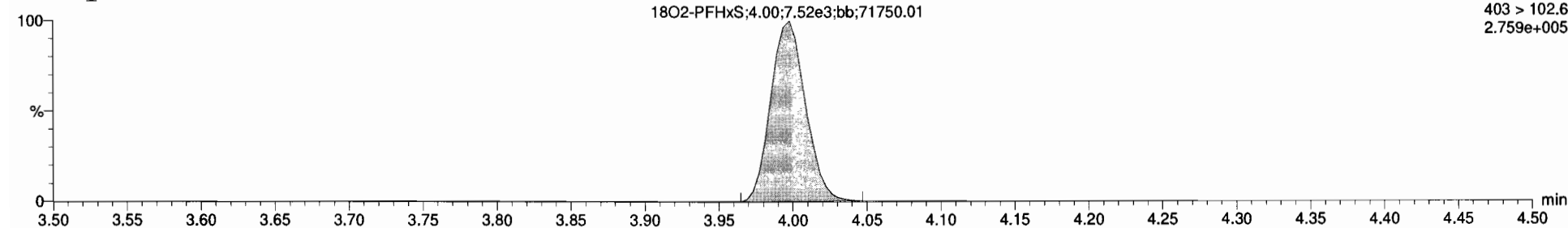
13C3-PFHxS

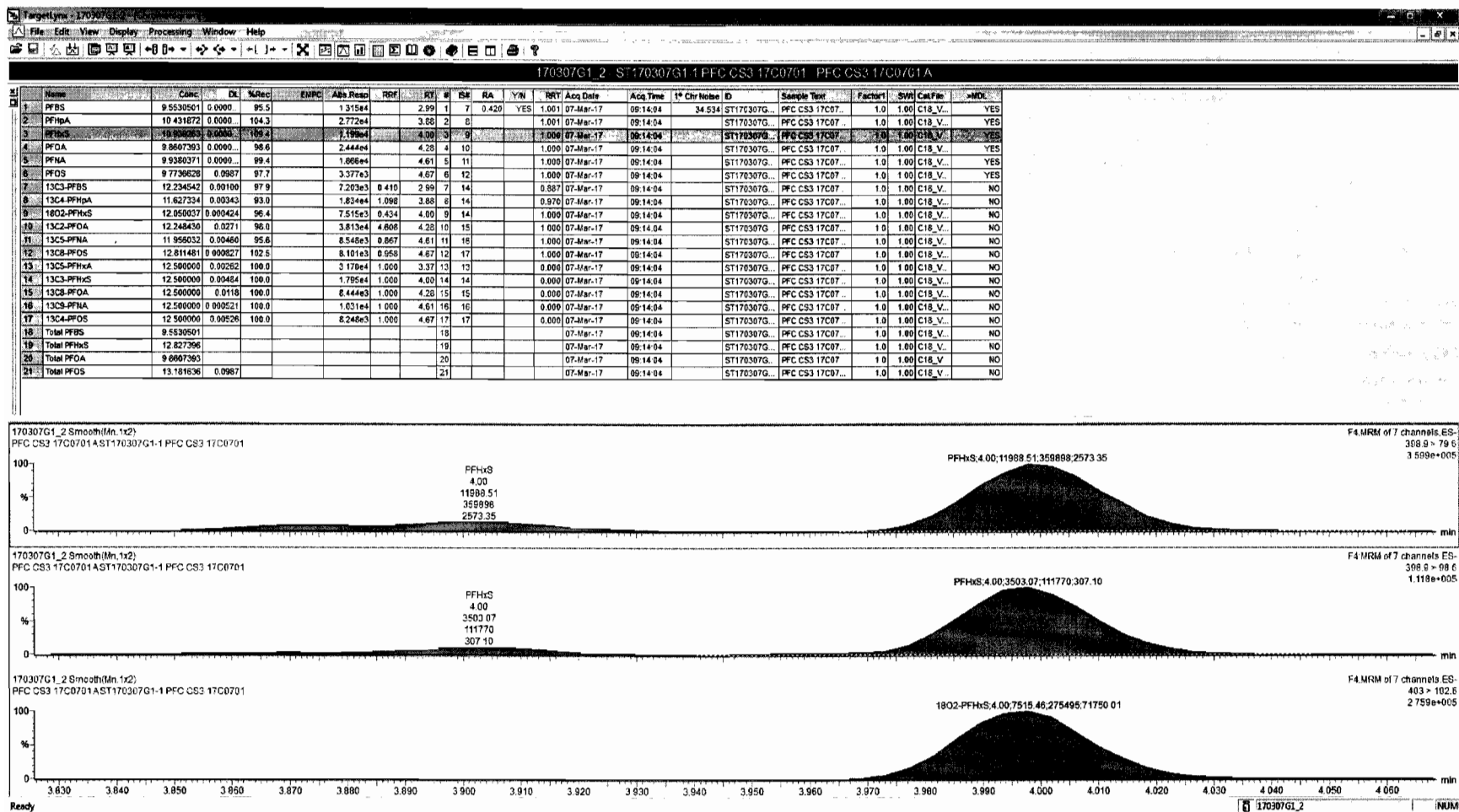
170307G1_2



18O2-PFHxS

170307G1_2





Dataset: Untitled

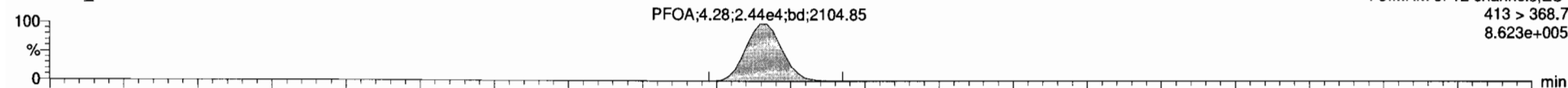
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Printed: Tuesday, March 07, 2017 09:55:29 Pacific Standard Time

ID: ST170307G1-1 PFC CS3 17C0701, Description: PFC CS3 17C0701 A, Name: 170307G1_2, Date: 07-Mar-2017, Time: 09:14:04, Instrument: , Lab: , User:

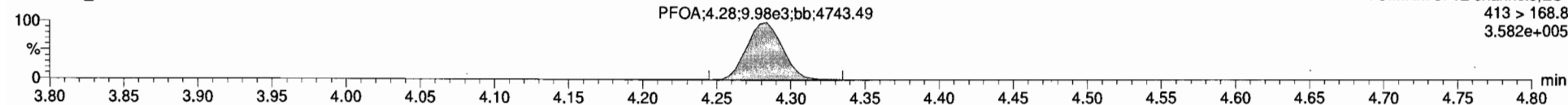
PFOA

170307G1_2



F5:MRM of 12 channels,ES-
413 > 368.7
8.623e+005

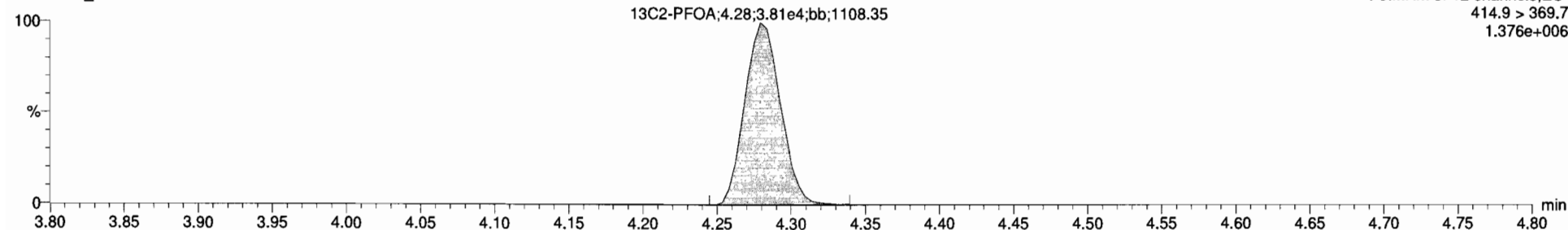
170307G1_2



F5:MRM of 12 channels,ES-
413 > 168.8
3.582e+005

13C2-PFOA

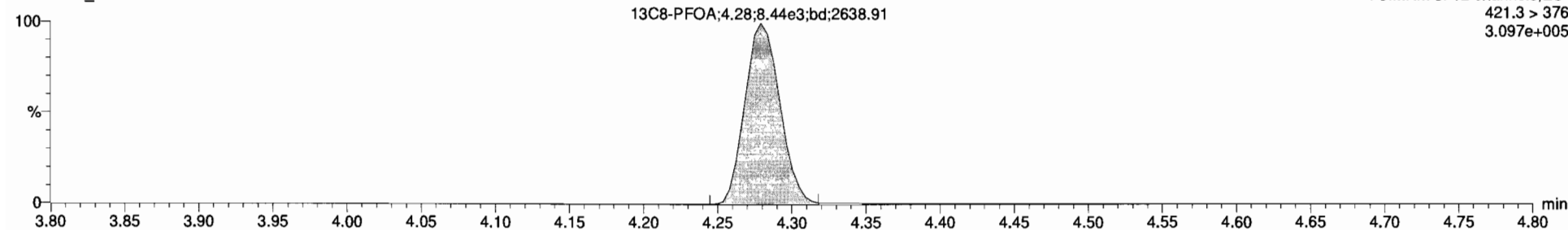
170307G1_2



F5:MRM of 12 channels,ES-
414.9 > 369.7
1.376e+006

13C8-PFOA

170307G1_2



F5:MRM of 12 channels,ES-
421.3 > 376
3.097e+005

Dataset: Untitled

Last Altered: Tuesday, March 07, 2017 09:55:08 Pacific Standard Time

Printed: Tuesday, March 07, 2017 09:55:29 Pacific Standard Time

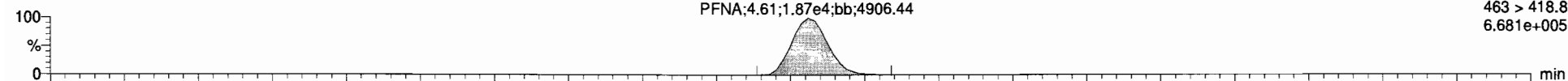
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PFNA

170307G1_2

PFNA;4.61;1.87e4;bb;4906.44

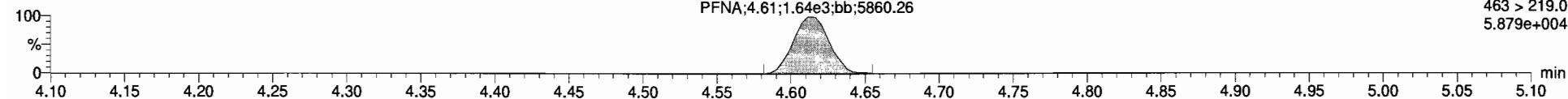
F5:MRM of 12 channels,ES-
463 > 418.8
6.681e+005



170307G1_2

PFNA;4.61;1.64e3;bb;5860.26

F5:MRM of 12 channels,ES-
463 > 219.0
5.879e+004

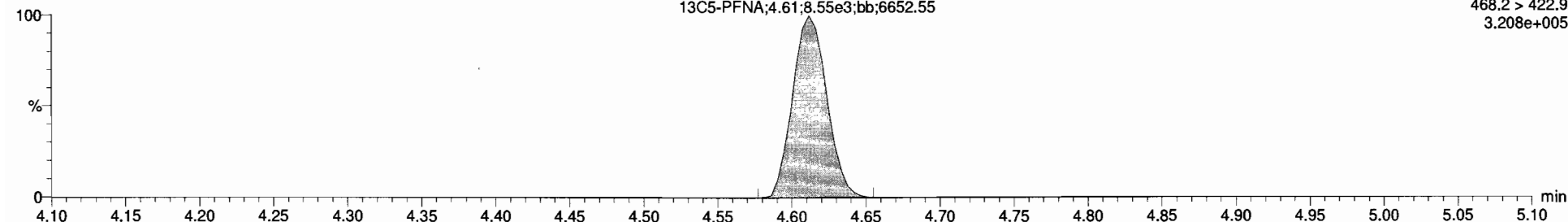


13C5-PFNA

170307G1_2

13C5-PFNA;4.61;8.55e3;bb;6652.55

F5:MRM of 12 channels,ES-
468.2 > 422.9
3.208e+005

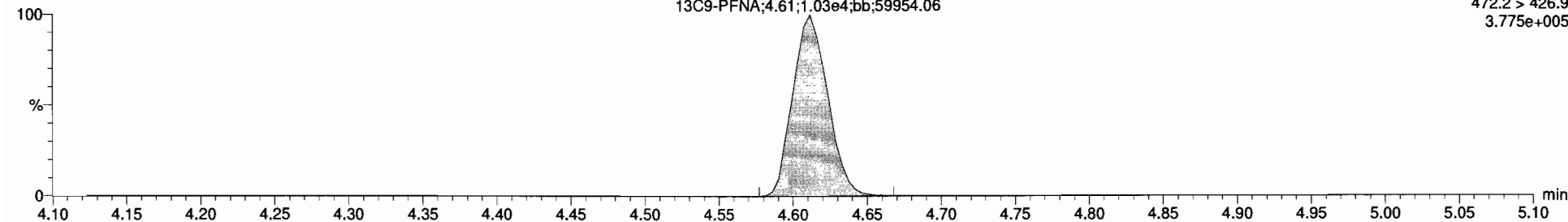


13C9-PFNA

170307G1_2

13C9-PFNA;4.61;1.03e4;bb;59954.06

F5:MRM of 12 channels,ES-
472.2 > 426.9
3.775e+005



Dataset: Untitled

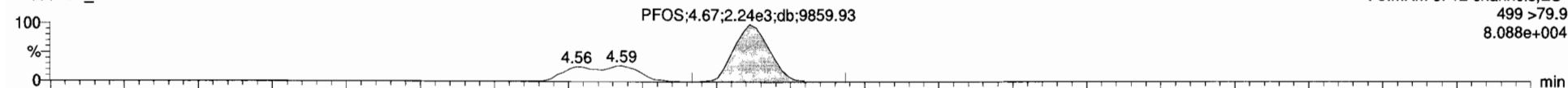
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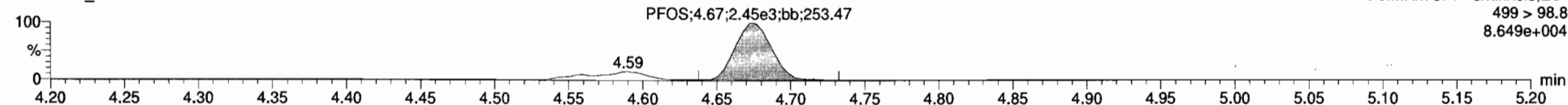
ID: ST170307G1-1 PFC CS3 17C0701, Description: PFC CS3 17C0701 A, Name: 170307G1_2, Date: 07-Mar-2017, Time: 09:14:04, Instrument: , Lab: , User:

PFOS

170307G1_2

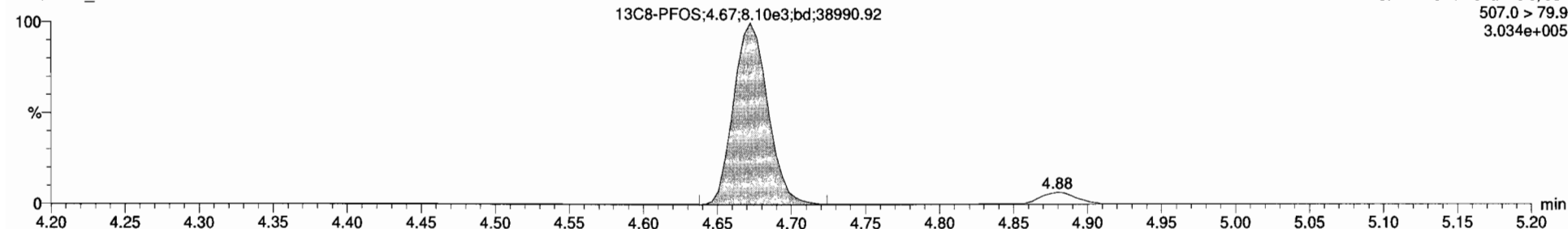


170307G1_2



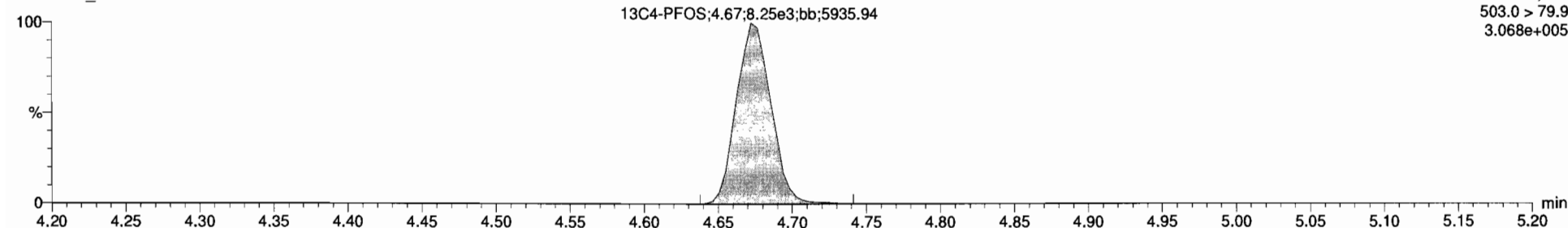
13C8-PFOS

170307G1_2



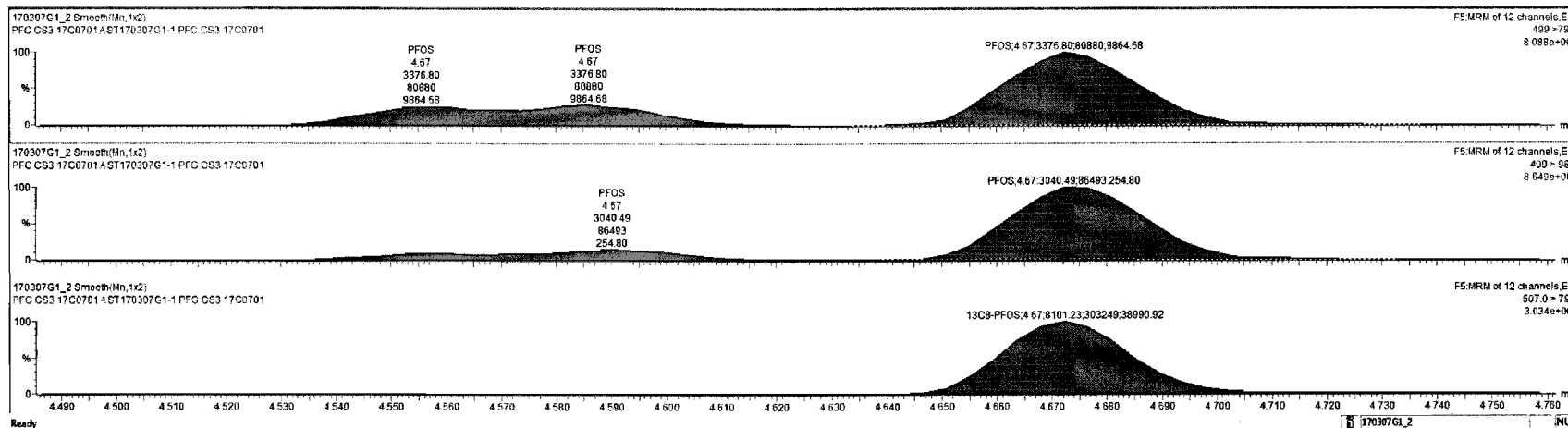
13C4-PFOS

170307G1_2





170307G1_2 - ST170307G1-1 PFC CS3 17C0701 - PFC CS3 17C0701A																						
#	Name	Conc	DL	%Rec	EMPC	Abs Resp	RRF	RT	#	SR	RA	Y/N	RRT	Acq Date	Acq Time	1 st Chr Noise	D	Sample Test	Factor1	SWI	Cal File	>MOL
1	PFBS	9.5530501	0.0000	95.5		1.315e4	2.99	1	7	0.420	YES		1.001	07-Mar-17	09:14:04	24.534	ST170307G	PFC CS3 17C07	1.0	1.00	C18_V	YES
2	PFHpA	10.431872	0.0000	104.3		2.772e4	3.88	2	8				1.001	07-Mar-17	09:14:04		ST170307G	PFC CS3 17C07	1.0	1.00	C18_V	YES
3	PFHxS	10.939263	0.0000	109.4		1.199e4	4.00	3	9				1.000	07-Mar-17	09:14:04		ST170307G	PFC CS3 17C07	1.0	1.00	C18_V	YES
4	PFDA	9.8607393	0.0000	98.6		2.444e4	4.28	4	10				1.000	07-Mar-17	09:14:04		ST170307G	PFC CS3 17C07	1.0	1.00	C18_V	YES
5	PFNA	9.9360371	0.0000	99.4		1.866e4	4.61	5	11				1.000	07-Mar-17	09:14:04		ST170307G	PFC CS3 17C07	1.0	1.00	C18_V	YES
6	PFOS	8.7726628	0.0967	87.7		3.377e3	4.67	6	12				1.000	07-Mar-17	09:14:04		ST170307G	PFC CS3 17C07	1.0	1.00	C18_V	YES
7	13C3-PFBS	12.234542	0.00100	97.9		7.203e3	0.410	2.99	7	14			0.887	07-Mar-17	09:14:04		ST170307G	PFC CS3 17C07	1.0	1.00	C18_V	NO
8	13C4-PFHpA	11.627334	0.00343	93.0		1.834e4	1.056	3.88	8	14			0.970	07-Mar-17	09:14:04		ST170307G	PFC CS3 17C07	1.0	1.00	C18_V	NO
9	18O2-PFHxS	12.050637	0.000424	96.4		7.515e3	0.434	4.00	9	14			1.000	07-Mar-17	09:14:04		ST170307G	PFC CS3 17C07	1.0	1.00	C18_V	NO
10	13C2-PFDA	12.240430	0.00271	96.0		3.813e4	4.608	4.28	10	15			1.000	07-Mar-17	09:14:04		ST170307G	PFC CS3 17C07	1.0	1.00	C18_V	NO
11	13C5-PFNA	11.968032	0.00469	95.6		8.545e3	0.867	4.61	11	16			1.000	07-Mar-17	09:14:04		ST170307G	PFC CS3 17C07	1.0	1.00	C18_V	NO
12	13C8-PFOS	12.811481	0.000827	102.5		6.161e3	0.958	4.67	12	17			1.000	07-Mar-17	09:14:04		ST170307G	PFC CS3 17C07	1.0	1.00	C18_V	NO
13	13C5-PFHxS	12.509090	0.00262	100.0		3.170e4	1.000	3.37	13	13			0.000	07-Mar-17	09:14:04		ST170307G	PFC CS3 17C07	1.0	1.00	C18_V	NO
14	13C3-PFHxS	12.509090	0.00454	100.0		1.795e4	1.000	4.00	14	14			0.000	07-Mar-17	09:14:04		ST170307G	PFC CS3 17C07	1.0	1.00	C18_V	NO
15	13C4-PFDA	12.509090	0.0118	100.0		8.444e3	1.000	4.28	15	15			0.000	07-Mar-17	09:14:04		ST170307G	PFC CS3 17C07	1.0	1.00	C18_V	NO
16	13C5-PFNA	12.509090	0.009521	100.0		1.031e4	1.000	4.61	16	16			0.000	07-Mar-17	09:14:04		ST170307G	PFC CS3 17C07	1.0	1.00	C18_V	NO
17	13C4-PFOS	12.509090	0.00526	100.0		8.248e3	1.000	4.67	17	17			0.000	07-Mar-17	09:14:04		ST170307G	PFC CS3 17C07	1.0	1.00	C18_V	NO
18	Total PFBS	9.5530501							18					07-Mar-17	09:14:04		ST170307G	PFC CS3 17C07	1.0	1.00	C18_V	NO
19	Total PFHpA	10.431872							19					07-Mar-17	09:14:04		ST170307G	PFC CS3 17C07	1.0	1.00	C18_V	NO
20	Total PFDA	9.8607393							20					07-Mar-17	09:14:04		ST170307G	PFC CS3 17C07	1.0	1.00	C18_V	NO
21	Total PFOS	13.181636	0.0967						21					07-Mar-17	09:14:04		ST170307G	PFC CS3 17C07	1.0	1.00	C18_V	NO



Dataset: U:\G1.PRO\Results\2017\New folder\170307G1-8.qld

Last Altered: Tuesday, March 07, 2017 10:55:27 Pacific Standard Time

Printed: Tuesday, March 07, 2017 10:55:59 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: 170307G1_8, Date: 07-Mar-2017, Time: 10:29:40, ID: ST170307G1-2 PFC CS3 17C0701, Description: PFC CS3 17C0701 A

	# Name	Trace	Response	IS Resp	RRF	Wt/Vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7	1.56e4	7.84e3		1.000	2.99	10.4	104.0
2	2 PFHpA	363 > 318.9	3.08e4	1.95e4		1.000	3.88	10.9	109.1
3	3 PFHxS	398.9 > 79.6	1.22e4	8.14e3		1.000	4.00	10.3	102.6
4	4 PFOA	413 > 368.7	2.90e4	4.09e4		1.000	4.28	10.9	109.3
5	5 PFNA	463 > 418.8	2.28e4	9.69e3		1.000	4.62	10.7	107.2
6	6 PFOS	499 > 79.9	4.26e3	9.91e3		1.000	4.68	10.1	100.9
7	7 13C3-PFBS	302.0 > 98.8	7.84e3	1.97e4	0.410	1.000	2.99	12.1	97.1
8	8 13C4-PFHpA	367.2 > 321.8	1.95e4	1.97e4	1.098	1.000	3.88	11.3	90.2
9	9 18O2-PFHxS	403 > 102.6	8.14e3	1.97e4	0.434	1.000	4.00	11.9	95.1
10	10 13C2-PFOA	414.9 > 369.7	4.09e4	1.00e4	4.608	1.000	4.28	11.1	88.7
11	11 13C5-PFNA	468.2 > 422.9	9.69e3	1.22e4	0.867	1.000	4.61	11.4	91.5
12	12 13C8-PFOS	507.0 > 79.9	9.91e3	1.02e4	0.958	1.000	4.67	12.7	101.8
13	13 13C5-PFHxA	318 > 272.9	3.64e4	3.64e4	1.000	1.000	3.37	12.5	100.0
14	14 13C3-PFHxS	401.9 > 79.9	1.97e4	1.97e4	1.000	1.000	4.00	12.5	100.0
15	15 13C8-PFOA	421.3 > 376	1.00e4	1.00e4	1.000	1.000	4.28	12.5	100.0
16	16 13C9-PFNA	472.2 > 426.9	1.22e4	1.22e4	1.000	1.000	4.61	12.5	100.0
17	17 13C4-PFOS	503.0 > 79.9	1.02e4	1.02e4	1.000	1.000	4.68	12.5	100.0

75-125
↓
60-150
↓
50-150
60-150

28 3/7/17
✓ AC 3/7/17

Dataset: Untitled

Last Altered: Tuesday, March 07, 2017 10:58:31 Pacific Standard Time

Printed: Tuesday, March 07, 2017 10:58:48 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	170307G1_1	IPA	07-Mar-17	09:01:51
2	170307G1_2	ST170307G1-1 PFC CS3 17C0701	07-Mar-17	09:14:04
3	170307G1_3	IPA	07-Mar-17	09:26:31
4	170307G1_4	1700263-04RE1@10X OW2C-MW25-0217 0....	07-Mar-17	09:39:38
5	170307G1_5	1700293-01@10X WI-CV-GW02S-0317 0.125	07-Mar-17	09:51:58
6	170307G1_6	1700293-02@10X WI-CV-GW02S/SP-0317 0....	07-Mar-17	10:04:33
7	170307G1_7	IPA	07-Mar-17	10:17:07
8	170307G1_8	ST170307G1-2 PFC CS3 17C0701	07-Mar-17	10:29:40
9	170307G1_9	IPA	07-Mar-17	10:42:20

Dataset: Untitled

Last Altered: Tuesday, March 07, 2017 10:56:53 Pacific Standard Time

Printed: Tuesday, March 07, 2017 10:57:19 Pacific Standard Time

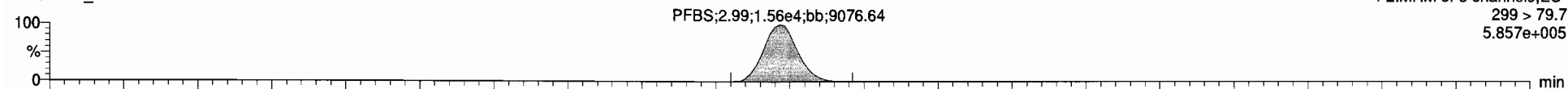
Method: U:\G1.pro\MethDB\PFAS_6_2trans_LINEAR.mdb 02 Mar 2017 11:26:53

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

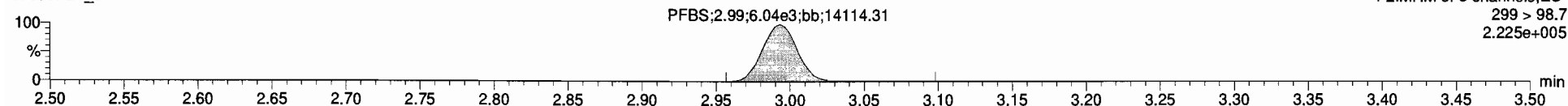
ID: ST170307G1-2 PFC CS3 17C0701, Description: PFC CS3 17C0701 A, Name: 170307G1_8, Date: 07-Mar-2017, Time: 10:29:40, Instrument: , Lab: , User:

PFBS

170307G1_8

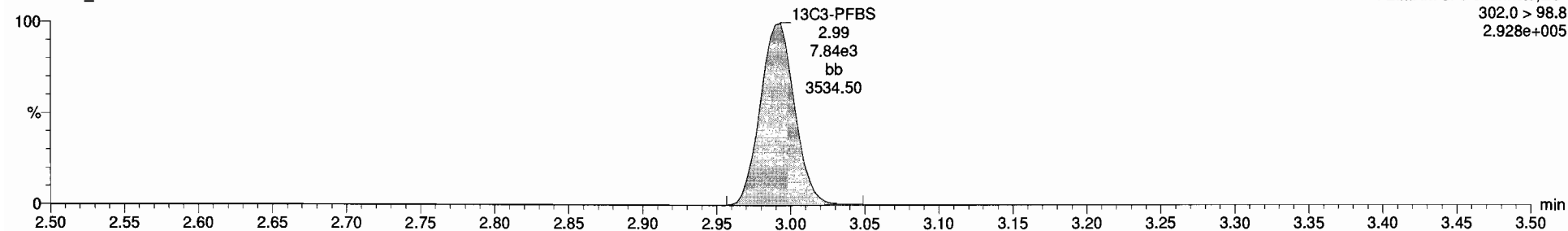


170307G1_8



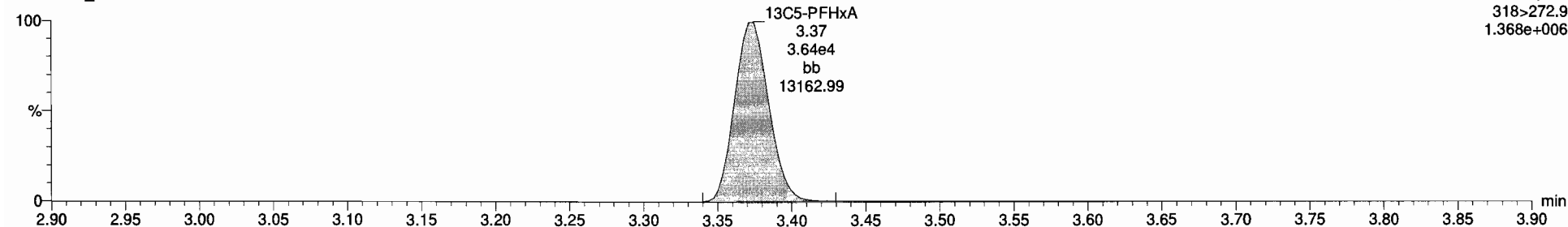
13C3-PFBS

170307G1_8



13C5-PFHxA

170307G1_8



Dataset: Untitled

Last Altered: Tuesday, March 07, 2017 10:56:53 Pacific Standard Time

Printed: Tuesday, March 07, 2017 10:57:19 Pacific Standard Time

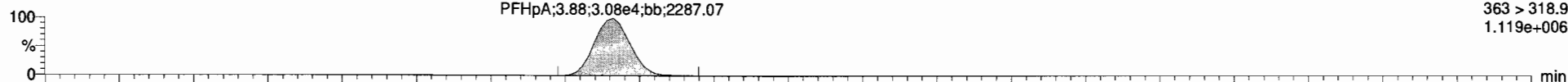
ID: ST170307G1-2 PFC CS3 17C0701, Description: PFC CS3 17C0701 A, Name: 170307G1_8, Date: 07-Mar-2017, Time: 10:29:40, Instrument: , Lab: , User:

PFHpA

170307G1_8

PFHpA;3.88;3.08e4;bb;2287.07

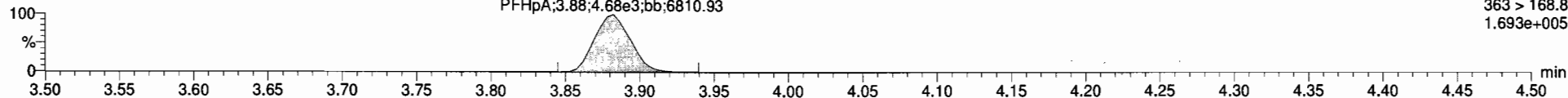
F4:MRM of 7 channels,ES-
363 > 318.9
1.119e+006



170307G1_8

PFHpA;3.88;4.68e3;bb;6810.93

F4:MRM of 7 channels,ES-
363 > 168.8
1.693e+005

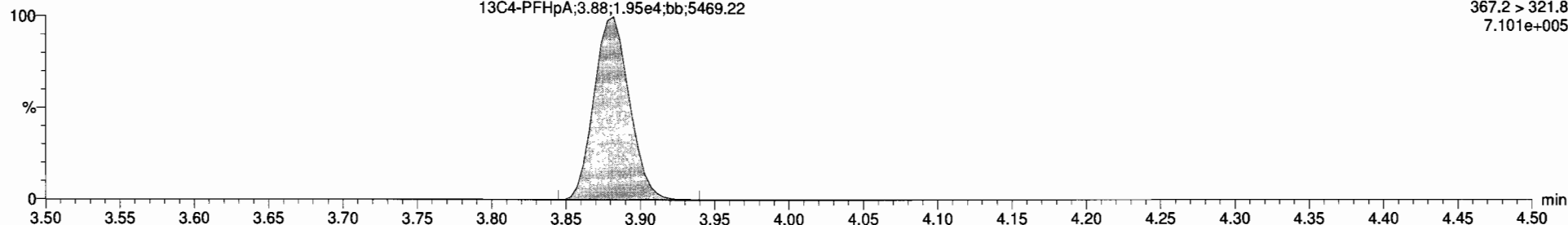


13C4-PFHpA

170307G1_8

13C4-PFHpA;3.88;1.95e4;bb;5469.22

F4:MRM of 7 channels,ES-
367.2 > 321.8
7.101e+005

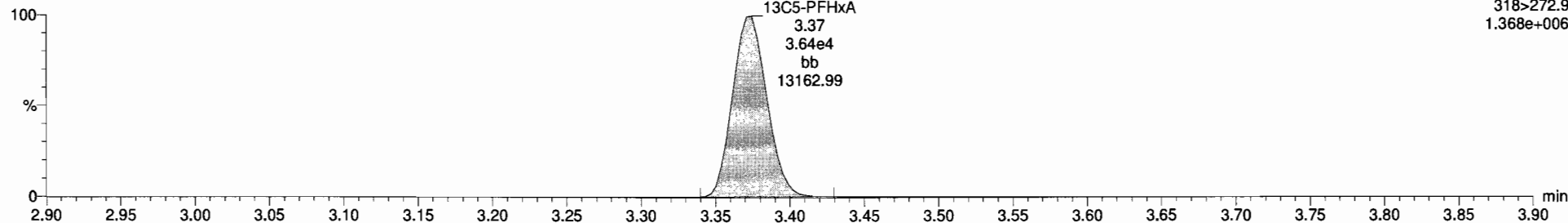


13C5-PFHxA

170307G1_8

13C5-PFHxA
3.37
3.64e4
bb
13162.99

F3:MRM of 1 channel,ES-
318>272.9
1.368e+006



Dataset: Untitled

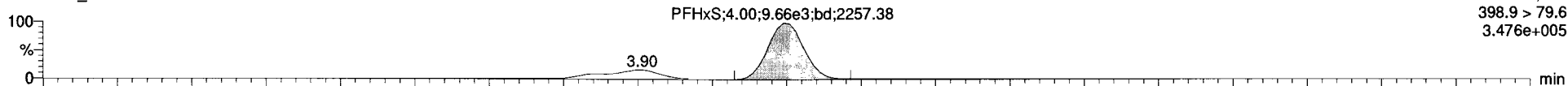
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Printed: Tuesday, March 07, 2017 10:57:19 Pacific Standard Time

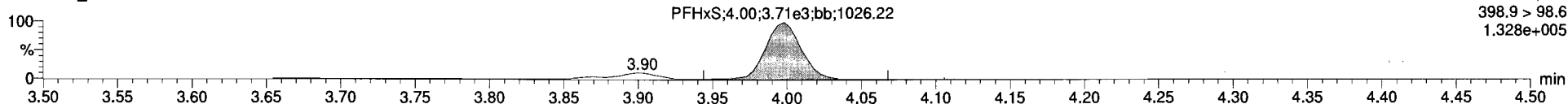
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PFHxS

170307G1_8

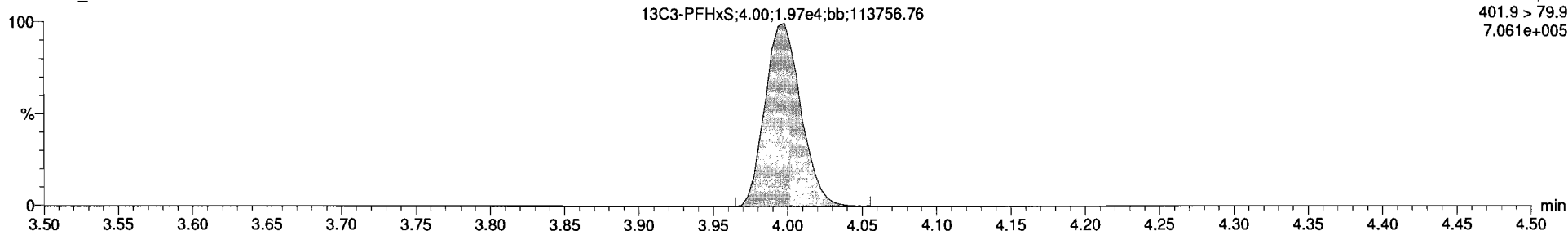


170307G1_8



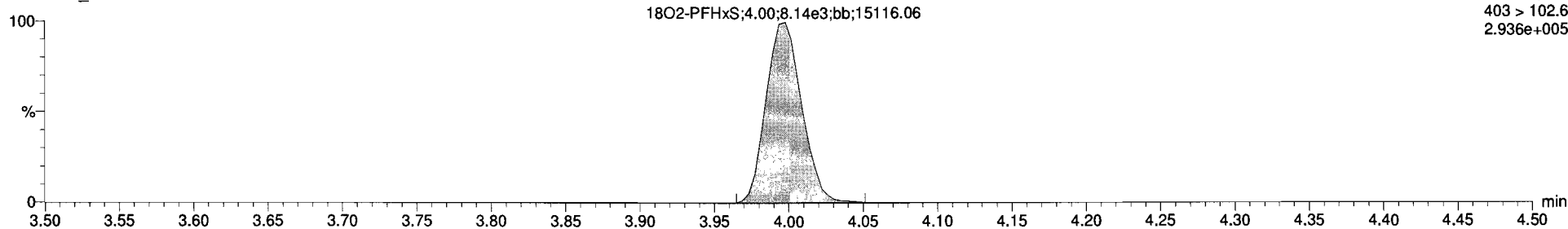
13C3-PFHxS

170307G1_8

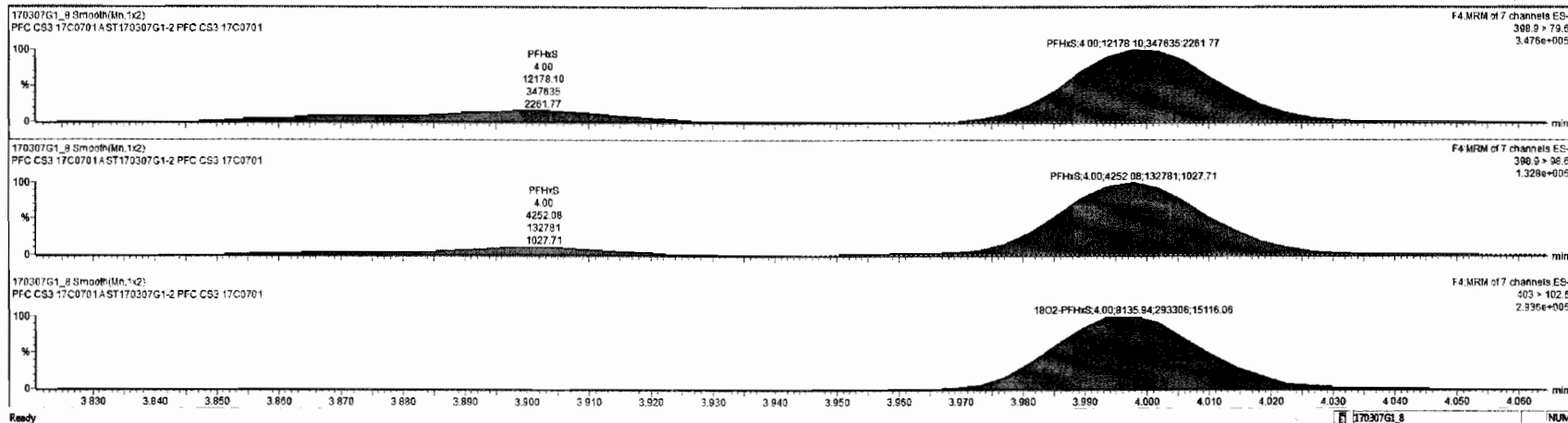


18O2-PFHxS

170307G1_8



Name	Trace	Area	ROP	WVOL	Pred RT	RT	Comp.	MDL	%Rec	DI
1 PFBS	299 > 79.7	1.56e4		1.000	2.99	2.99	10.4	YES	104.0	0.0000000
2 PFHpA	363 > 318.9	3.08e4		1.000	3.68	3.68	10.9	YES	109.1	0.0000000
3 PFHxS	398.9 > 79.8	1.22e4		1.000	4.09	4.00	10.3	YES	102.5	0.0000000
4 PFOA	413 > 368.7	2.90e4		1.000	4.28	4.28	10.9	YES	109.3	0.0000000
5 PFNA	463 > 418.8	2.28e4		1.000	4.61	4.62	10.7	YES	107.2	0.0000000
6 PFOS	499 > 79.9	4.28e3		1.000	4.66	4.66	10.1	YES	100.9	0.1020764
7 13C3-PFBS	302.0 > 96.8	7.84e3	0.410	1.000	2.99	2.99	12.1	NO	97.1	0.0089459
8 13C4-PFHpA	367.2 > 321.8	1.95e4	1.10	1.000	3.88	3.88	11.3	NO	90.2	0.0052350
9 18O2-PFHxS	403 > 102.8	8.14e3	0.434	1.000	4.09	4.00	11.9	NO	95.1	0.0018807
10 13C2-PFOA	414.9 > 369.7	4.09e4	4.61	1.000	4.28	4.28	11.1	NO	88.7	0.0075607
11 13C5-PFNA	468.2 > 422.9	9.69e3	0.967	1.000	4.61	4.61	11.4	NO	91.5	0.0193856
12 13C6-PFOS	507.0 > 79.9	9.91e3	0.958	1.000	4.66	4.67	12.7	NO	101.6	0.0079572
13 13C5-PFHxS	318 > 272.9	3.64e4	1.00	1.000	3.29	3.37	12.5	NO	100.0	0.0023741
14 13C3-PFHxS	401.9 > 79.9	1.97e4	1.00	1.000	3.94	4.00	12.5	NO	100.0	0.0002747
15 13C6-PFOA	421.3 > 376	1.00e4	1.00	1.000	4.22	4.28	12.5	NO	100.0	0.0099667
16 13C5-PFNA	472.2 > 426.9	1.22e4	1.00	1.000	4.56	4.61	12.5	NO	100.0	0.0011821
17 13C4-PFOS	503.0 > 79.9	1.02e4	1.00	1.000	4.67	4.66	12.5	NO	100.0	0.0009496
18 Total PFBS	299 > 79.7	1.56e4		1.000	3.11		10.4	NO		
19 Total PFHxS	398.9 > 79.8	1.46e4		1.000	4.09		12.2	NO		
20 Total PFOA	413 > 368.7	2.90e4		1.000	4.35		10.9	NO		
21 Total PFOS	499 > 79.9	4.39e3		1.000	4.67		11.6	NO		0.1020764

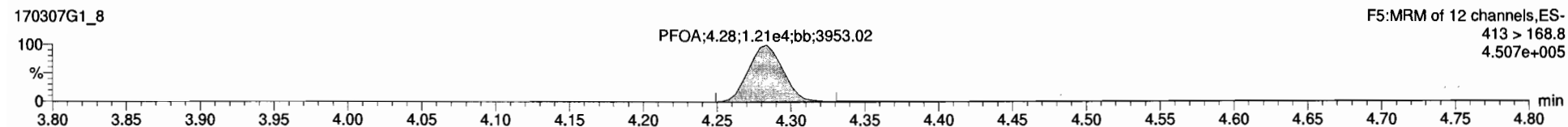
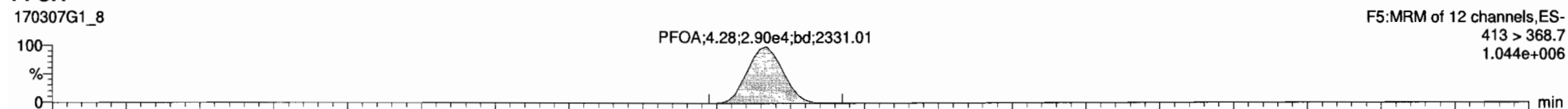


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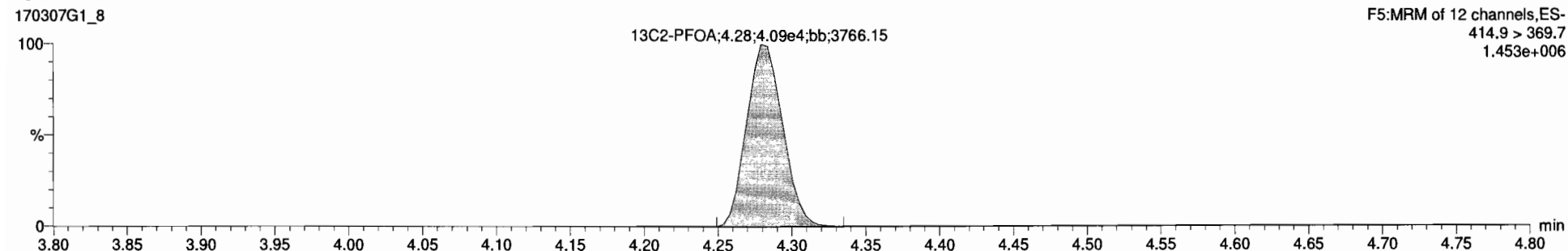
Last Altered: Tuesday, March 07, 2017 10:56:53 Pacific Standard Time
Printed: Tuesday, March 07, 2017 10:57:19 Pacific Standard Time

ID: ST170307G1-2 PFC CS3 17C0701, Description: PFC CS3 17C0701 A, Name: 170307G1_8, Date: 07-Mar-2017, Time: 10:29:40, Instrument: , Lab: , User:

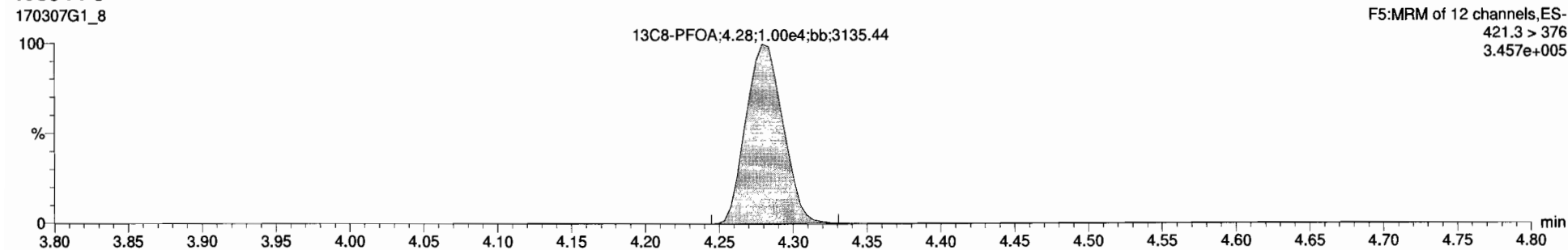
PFOA



13C2-PFOA



13C8-PFOA



Dataset: Untitled

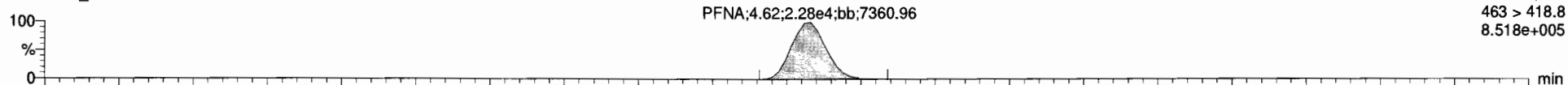
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Printed: Tuesday, March 07, 2017 10:57:19 Pacific Standard Time

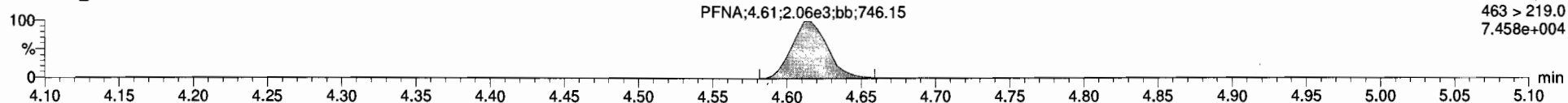
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PFNA

170307G1_8

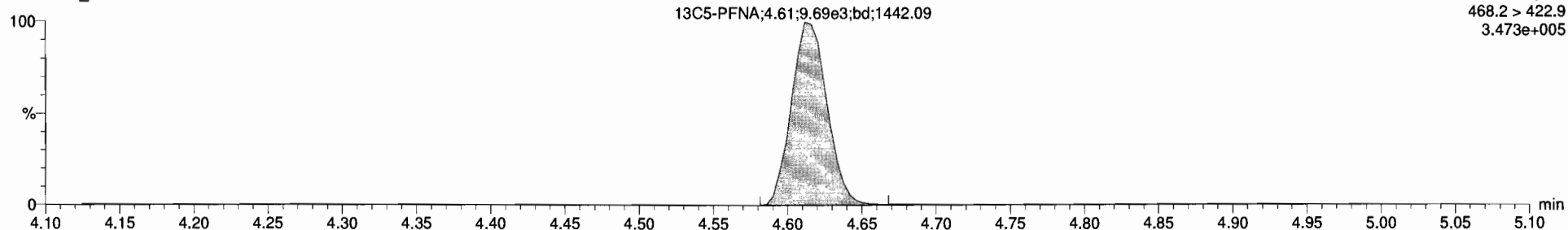


170307G1_8



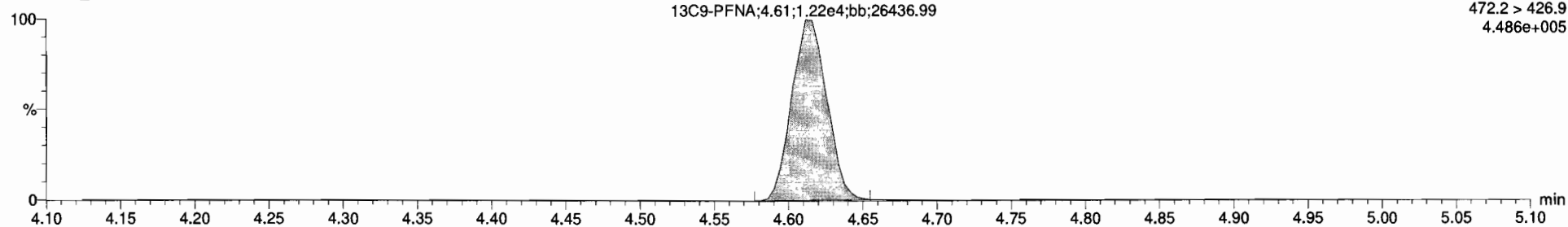
13C5-PFNA

170307G1_8



13C9-PFNA

170307G1_8



Dataset: Untitled

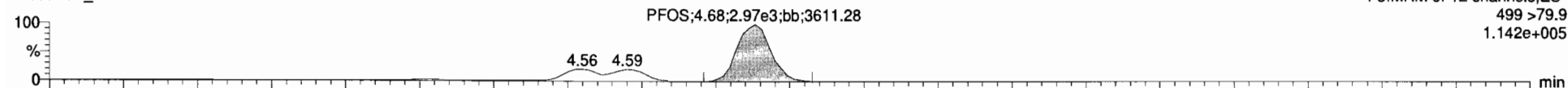
Last Altered: Tuesday, March 07, 2017 10:56:53 Pacific Standard Time

Printed: Tuesday, March 07, 2017 10:57:19 Pacific Standard Time

ID: ST170307G1-2 PFC CS3 17C0701, Description: PFC CS3 17C0701 A, Name: 170307G1_8, Date: 07-Mar-2017, Time: 10:29:40, Instrument: , Lab: , User:

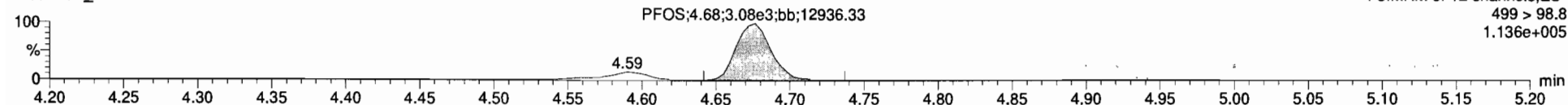
PFOS

170307G1_8



F5:MRM of 12 channels,ES-
499 >79.9
1.142e+005

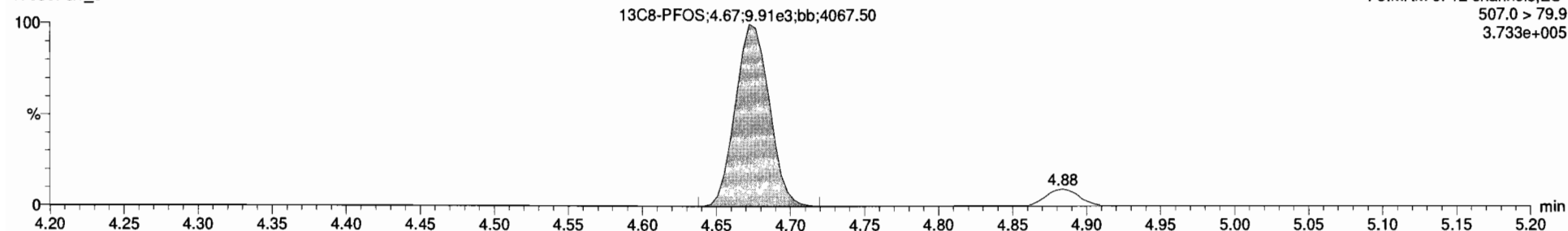
170307G1_8



F5:MRM of 12 channels,ES-
499 > 98.8
1.136e+005

13C8-PFOS

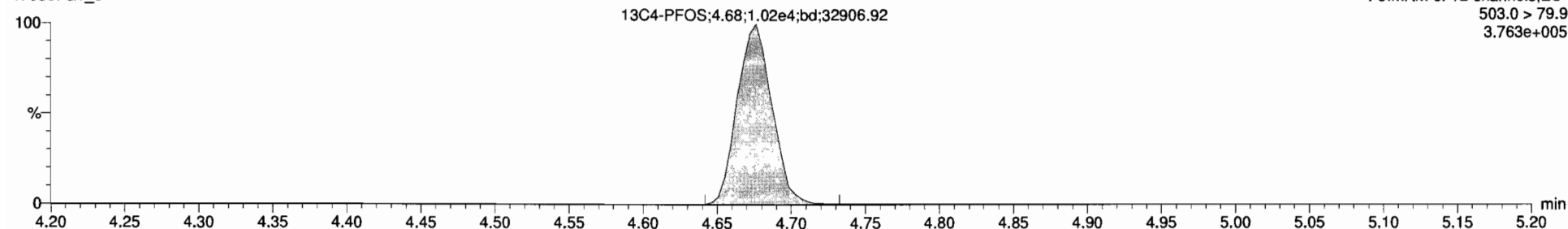
170307G1_8



F5:MRM of 12 channels,ES-
507.0 > 79.9
3.733e+005

13C4-PFOS

170307G1_8



F5:MRM of 12 channels,ES-
503.0 > 79.9
3.763e+005

F5 MRM of 12 channels ES
498 > 79
1.142e+00

170307G1_8.SMOOTH(MN.1X2)
PFC CS3 17C0701-4-ST170307G1-2 PFC CS3 17C0701

PFOS
4.68
4263.33
114173
3619.65

PFOS
4.68
4263.33
114173
3619.65

PFOS:4.68;4263.33;114173;3619.65

Compound: PFOS
Time: 4.68
Area: 4263.326
Height: 114173
Conc: 10.090

F5 MRM of 12 channels ES
498 > 58
1.135e+00

170307G1_8.SMOOTH(MN.1X2)
PFC CS3 17C0701-AST170307G1-2 PFC CS3 17C0701

PFOS
4.68
3635.77
113552
12965.56

PFOS:4.68;3635.77;113552;12965.56

F5 MRM of 12 channels ES
507 > 79
3.733e+00

170307G1_8.SMOOTH(MN.1X2)
PFC CS3 17C0701-AST170307G1-2 PFC CS3 17C0701

13C8-PFOS:4.67;9905.48;373066;4067.50

Ready

5 170307G1_8

INITIAL CALIBRATION

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

ES 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

	# 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

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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

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

	# 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
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

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Ⓐ Point excluded.
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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: 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

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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

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

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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

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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

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

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

Printed: Monday, March 06, 2017 08:27:41 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

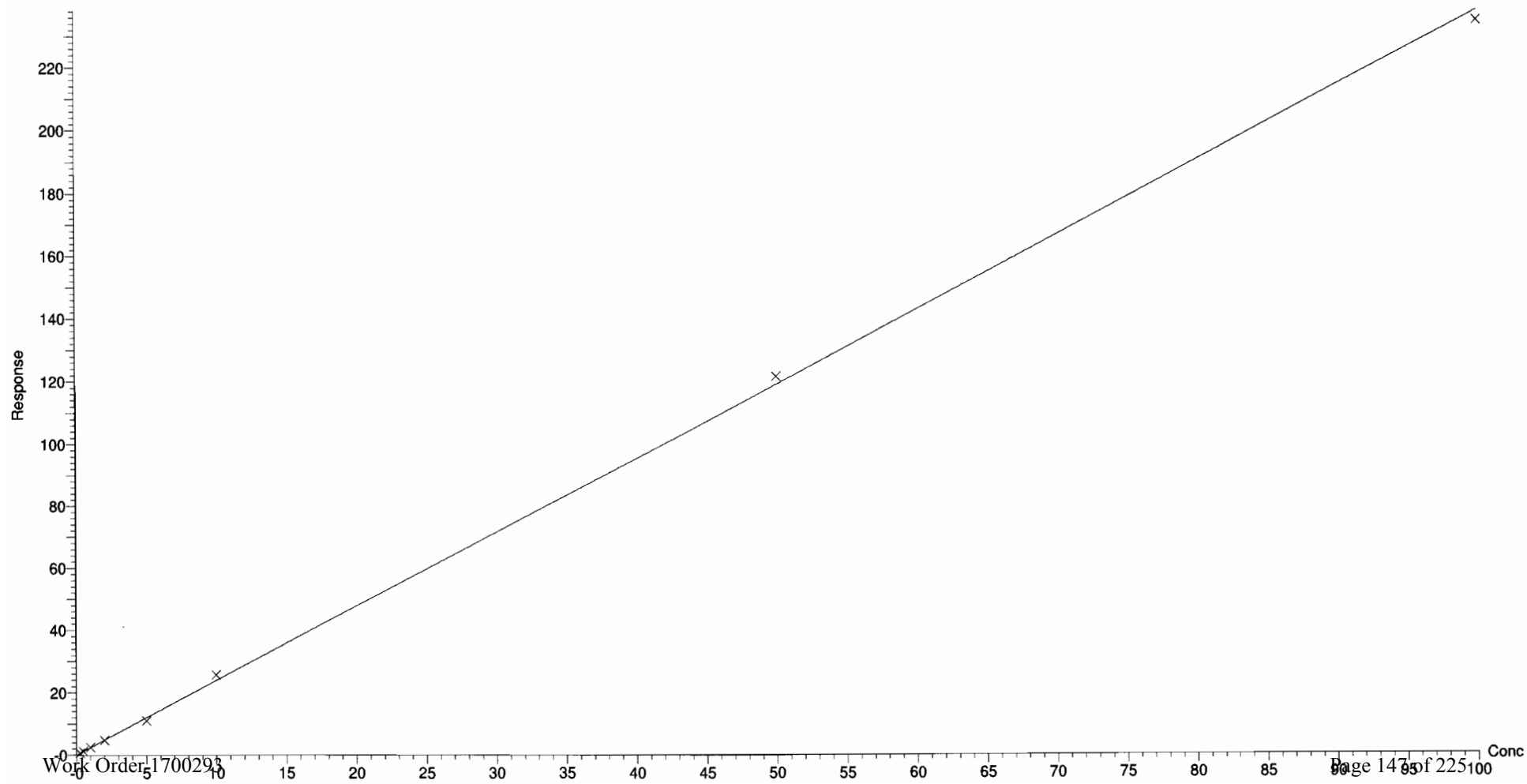
Compound name: PFBS

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



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 08:27:41 Pacific Standard Time

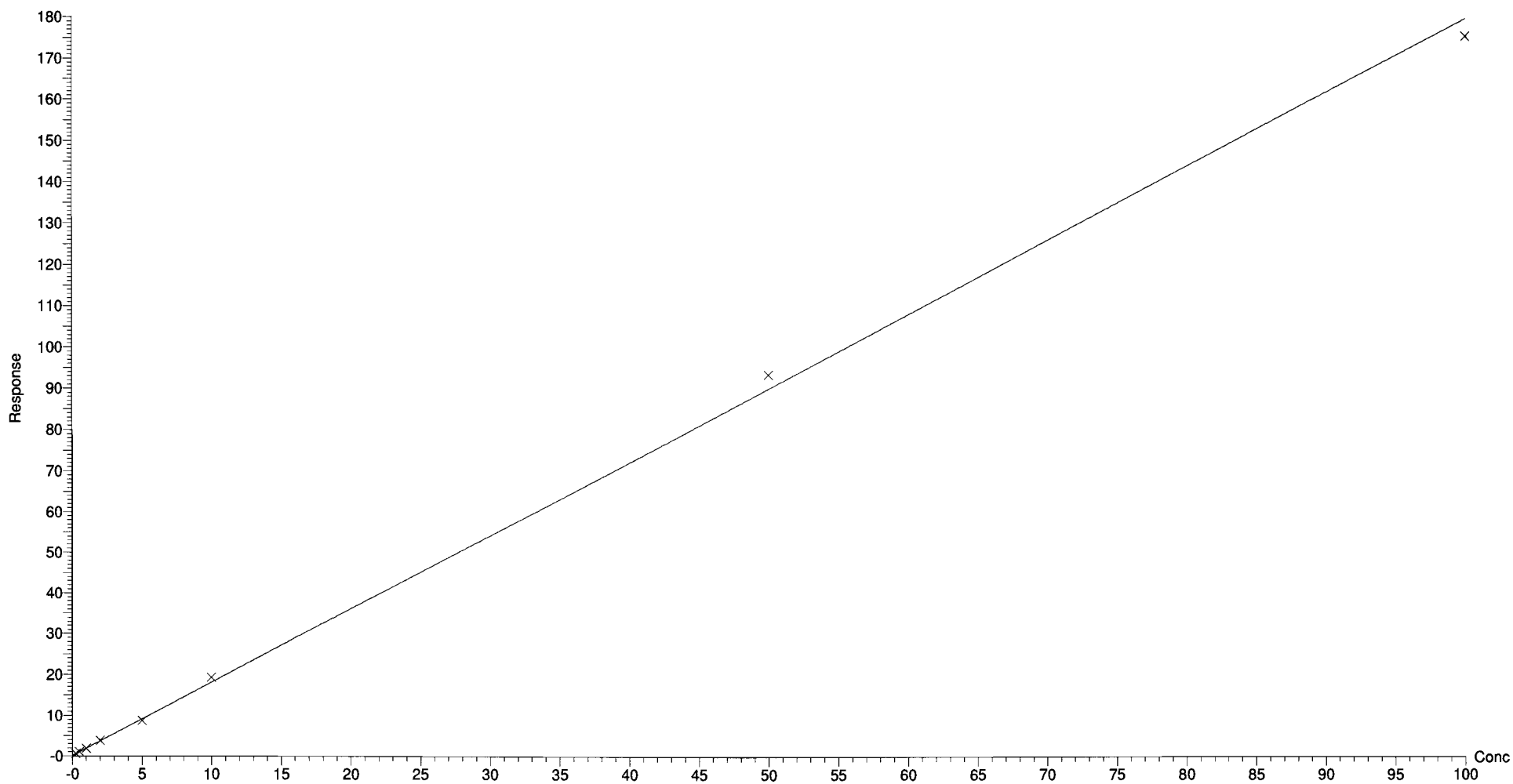
Compound name: PFHpA

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



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Printed: Monday, March 06, 2017 08:27:41 Pacific Standard Time

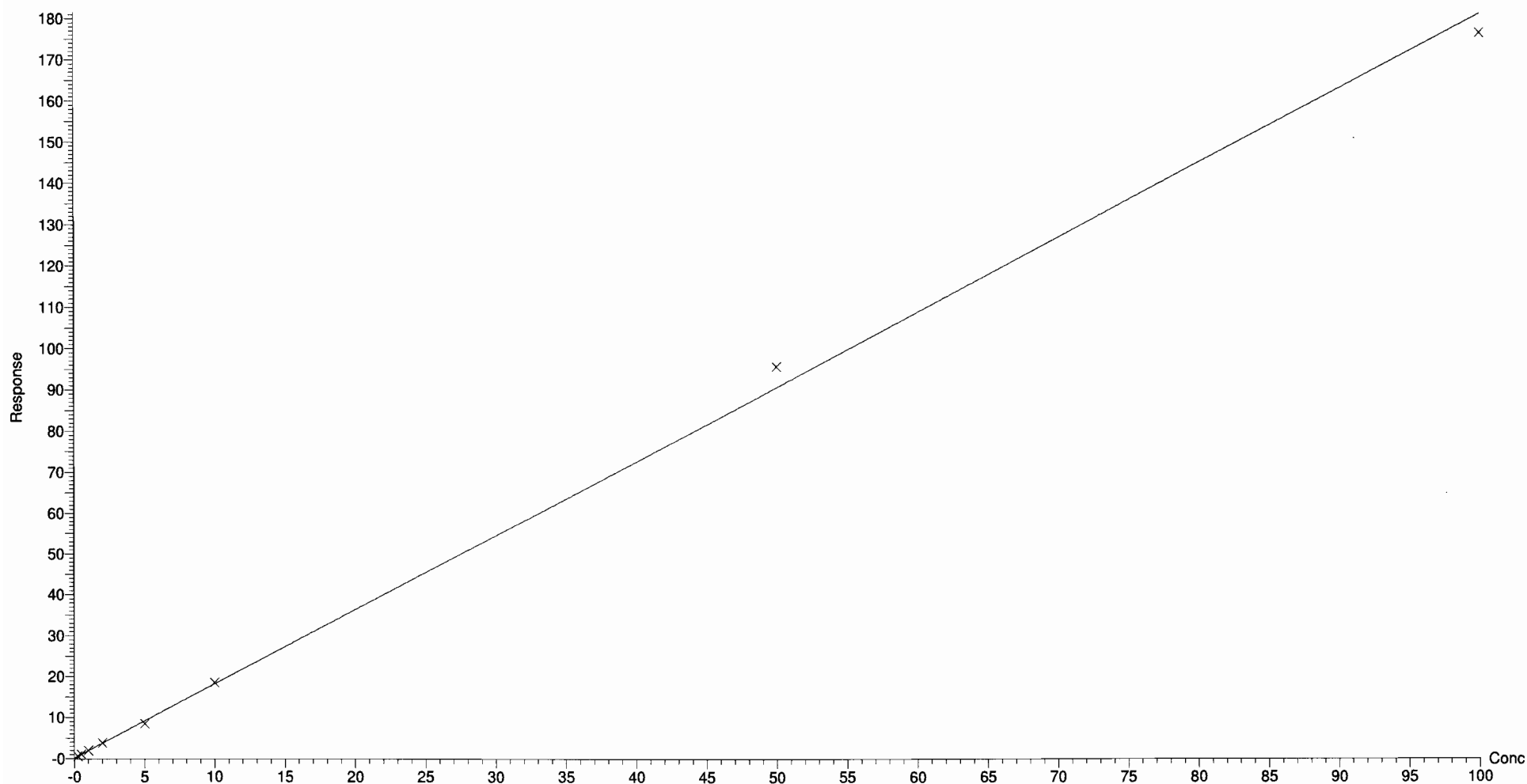
Compound name: PFHxS

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



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Printed: Monday, March 06, 2017 08:27:41 Pacific Standard Time

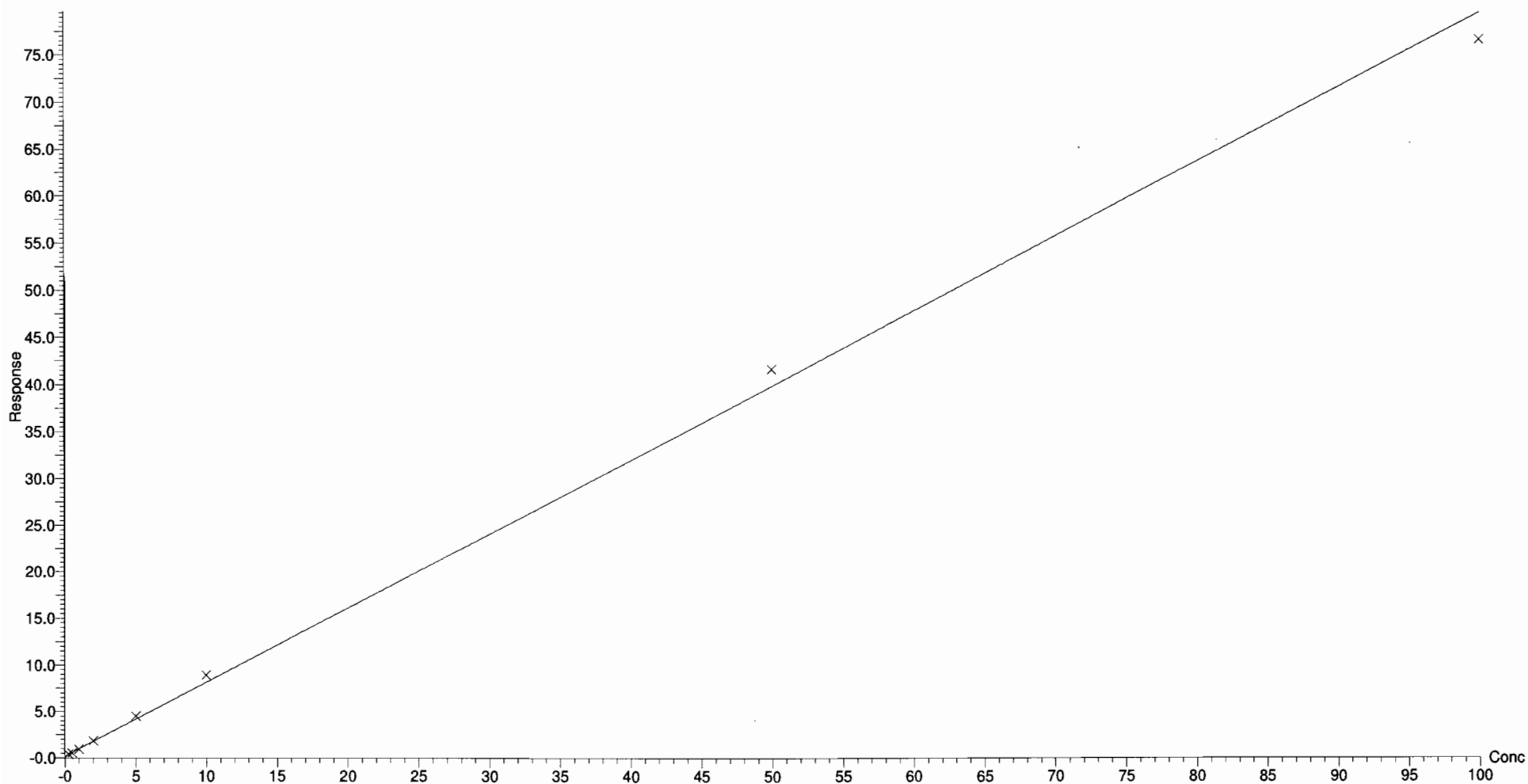
Compound name: PFOA

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

Printed: Monday, March 06, 2017 08:27:41 Pacific Standard Time

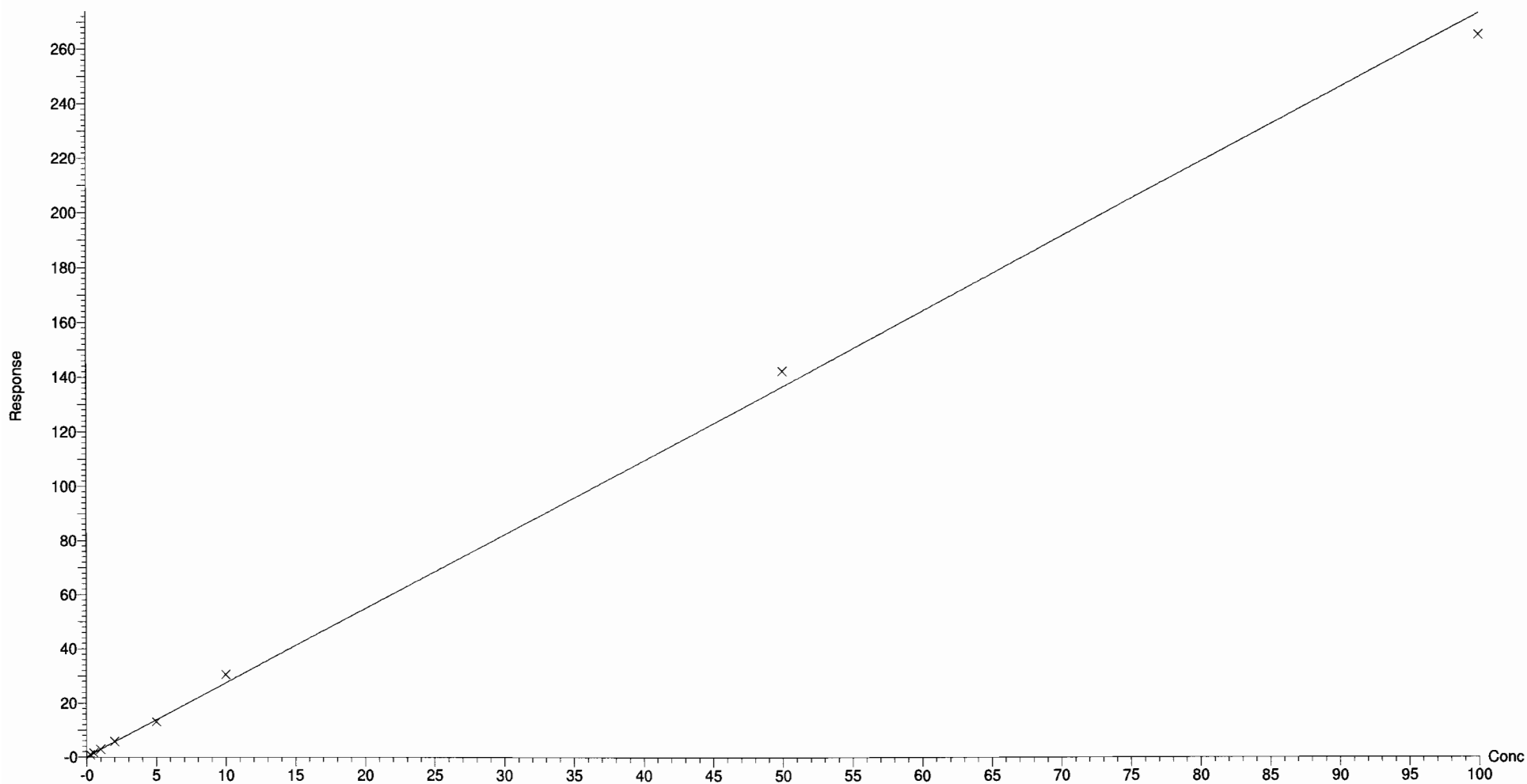
Compound name: PFNA

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



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

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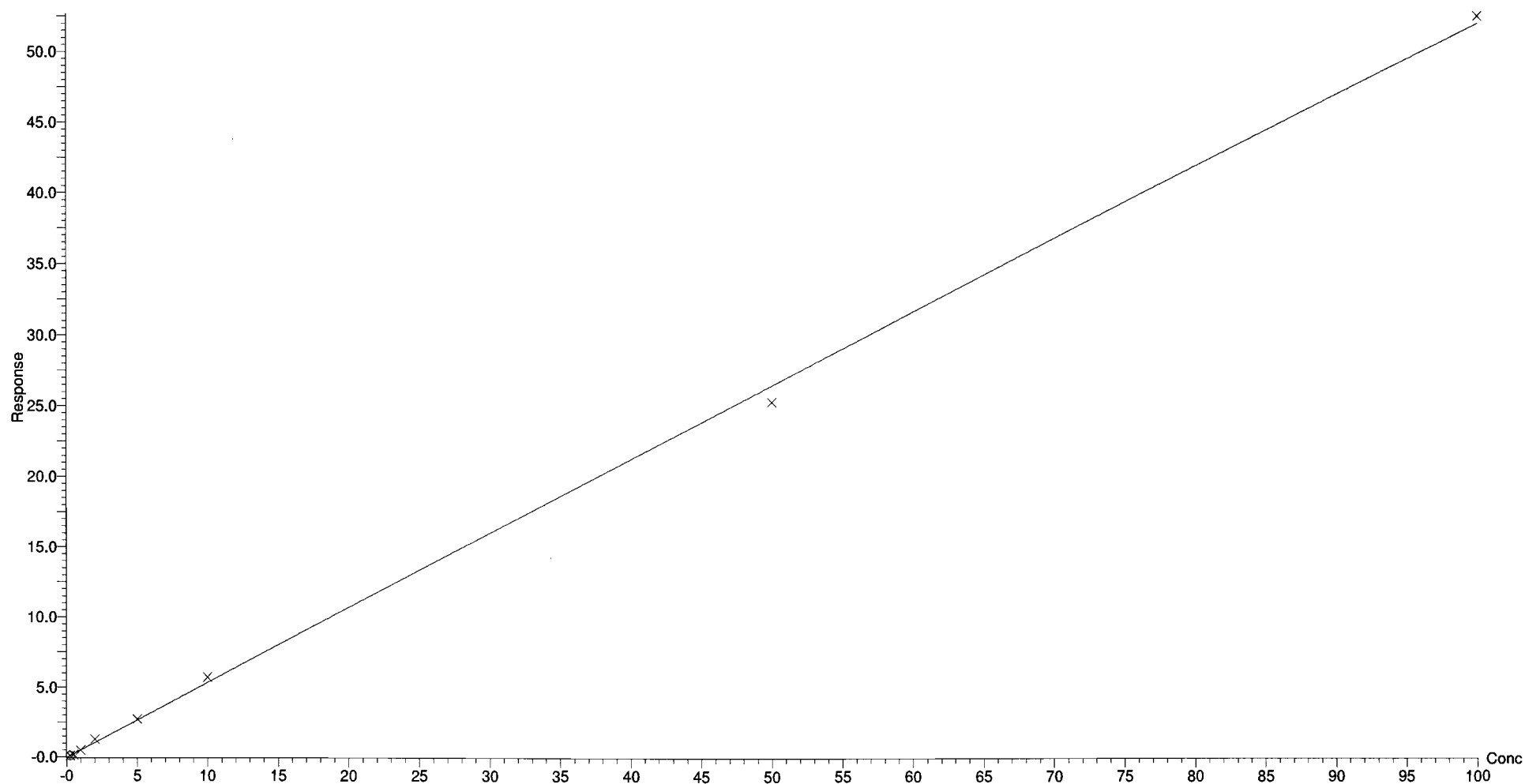
Compound name: PFOS

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



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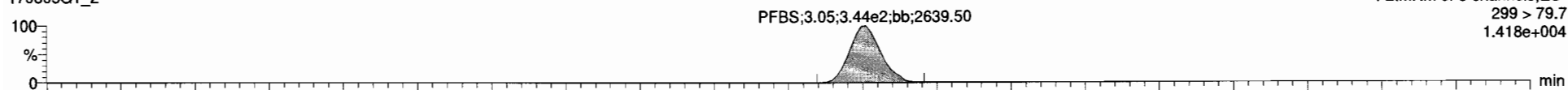
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Printed: Monday, March 06, 2017 08:37:19 Pacific Standard Time

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Calibration: 06 Mar 2017 08:36:20

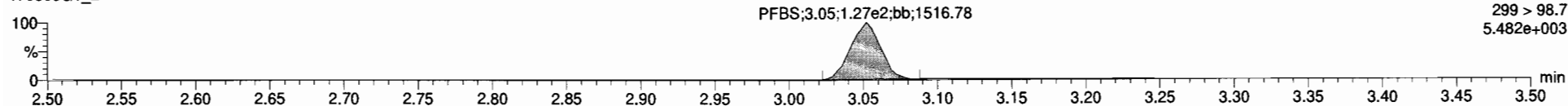
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PFBS

170305G1_2

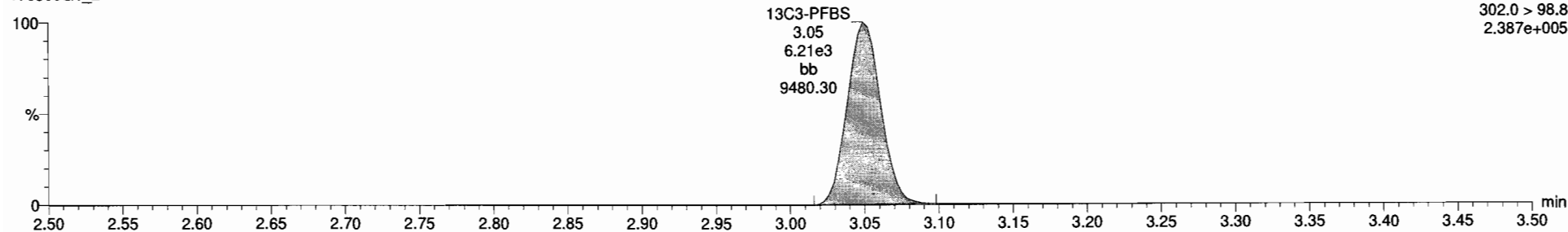


170305G1_2



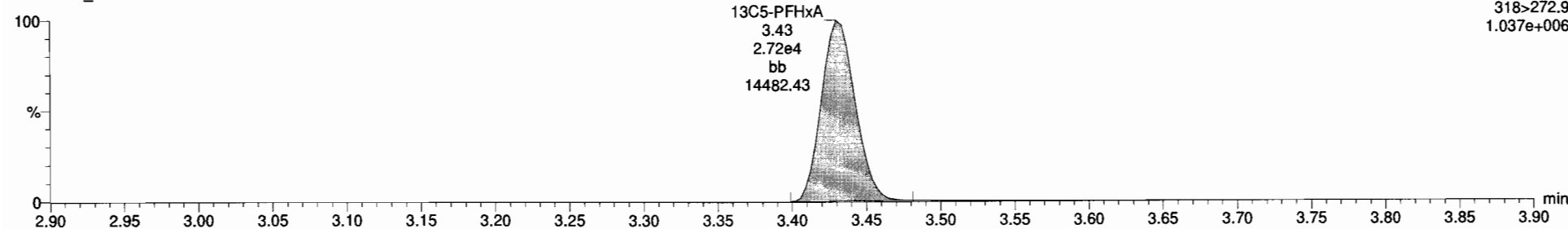
13C3-PFBS

170305G1_2



13C5-PFHxA

170305G1_2



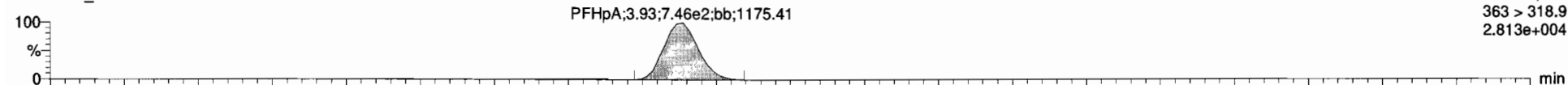
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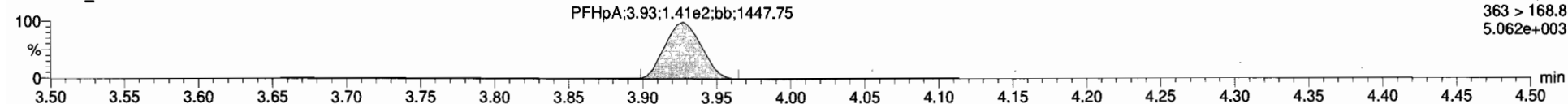
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PFHpA

170305G1_2

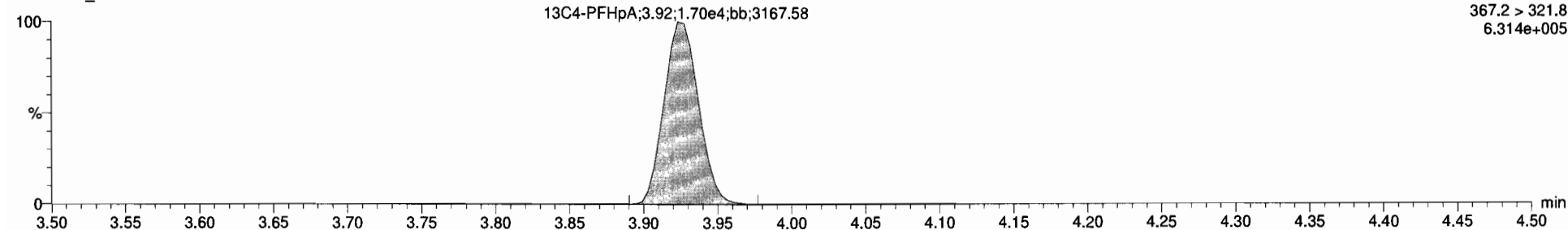


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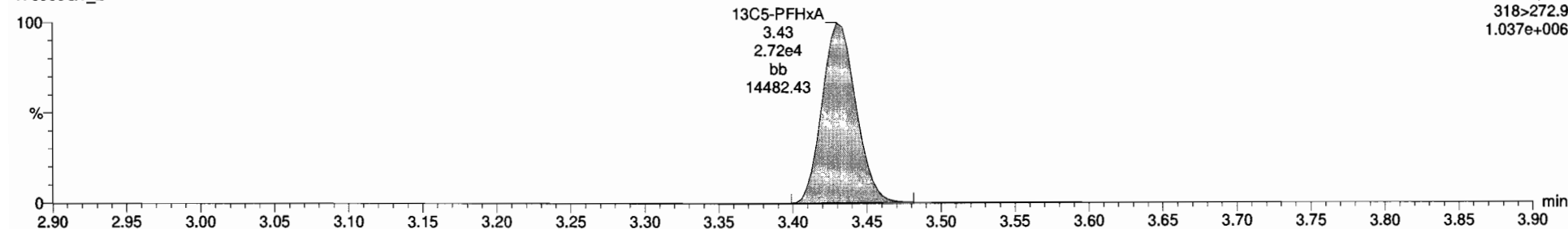
13C4-PFHpA

170305G1_2



13C5-PFHxA

170305G1_2



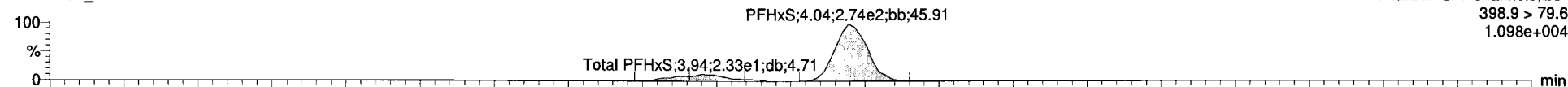
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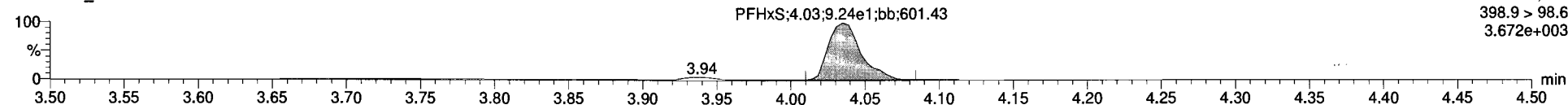
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Total PFHxS

170305G1_2

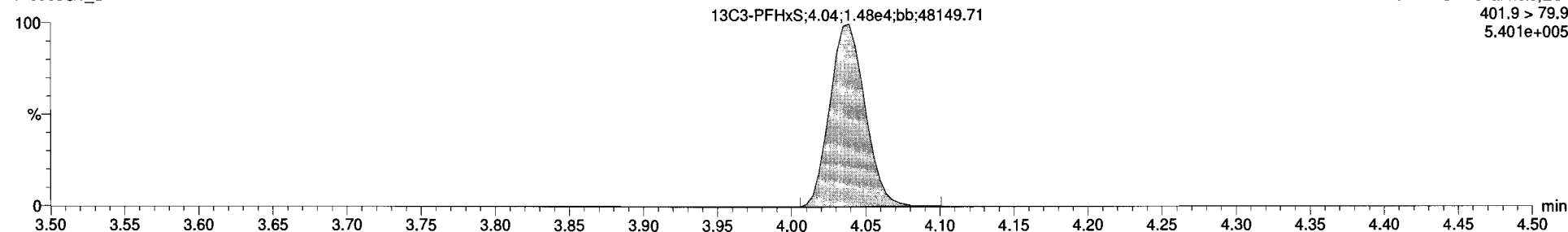


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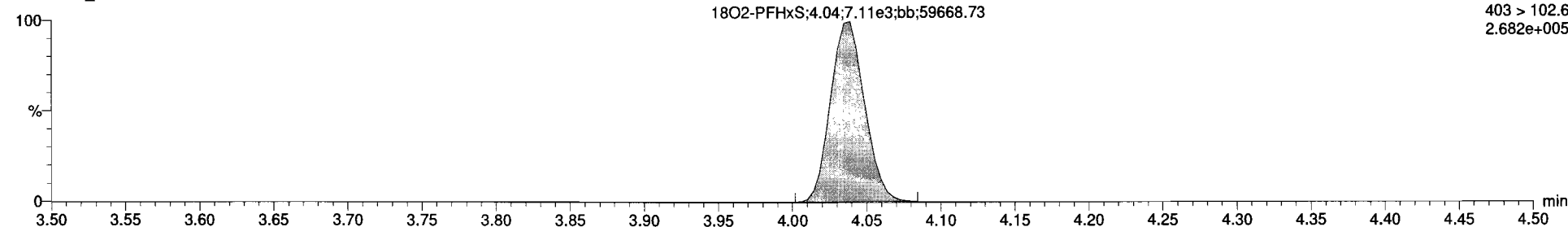
13C3-PFHxS

170305G1_2



18O2-PFHxS

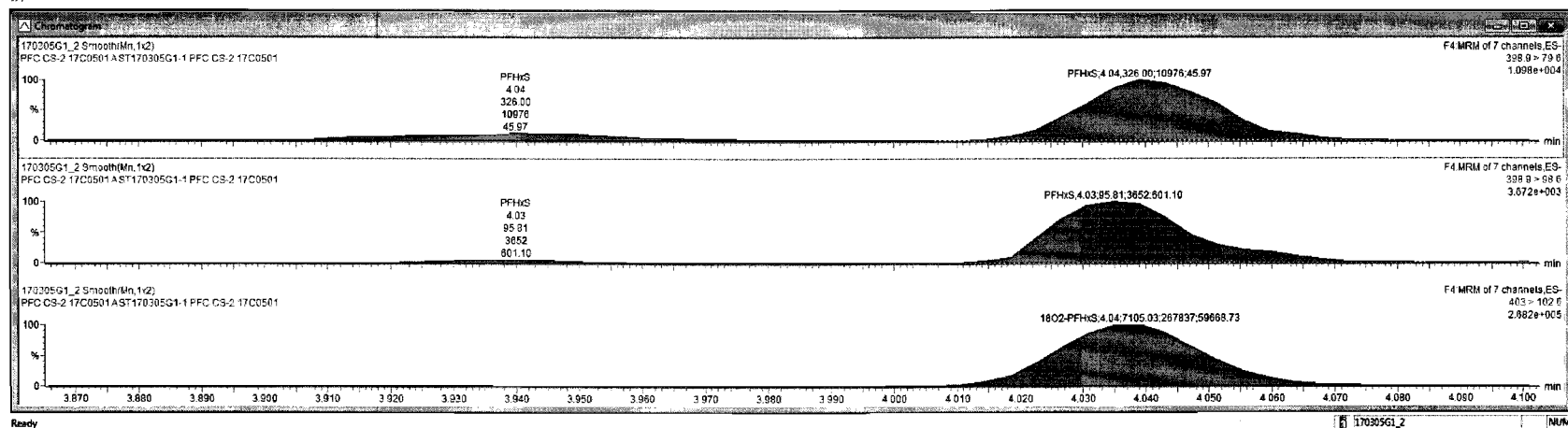
170305G1_2





170305G1_2 - ST170305G1-1 PFC CS-2 17C0501 - PFC CS-2 17C0501 A

#	Name	Trace	Area	RRP	WVAL	Pred.RT	RT	Conc.	MDL	%Rec	DL
1	PFBS	299 > 79.7	3.44e2		1.000	3.05	3.05	0.283	NO	105.1	
2	PFHpA	363 > 318.8	7.46e2		1.000	3.92	3.93	0.235	NO	94.2	
3	PFHxS	398.9 > 79.6	3.29e2		1.000	4.04	4.04	0.259	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	5.08e2		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	0.1069576
7	13C3-PFBS	302.0 > 98.8	6.21e3	0.410	1.000	3.04	3.05	12.8	NO	102.4	0.0035537
8	13C4-PFHpA	367.2 > 321.8	1.70e4	1.10	1.000	3.82	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 > 368.7	3.51e4	4.61	1.000	4.32	4.32	12.2	NO	98.0	0.0040166
11	13C5-PFNA	468.2 > 422.9	8.36e3	0.867	1.000	4.64	4.64	13.6	NO	103.7	0.0016950
12	13C6-PFOS	507.0 > 79.9	6.28e3	0.956	1.000	4.70	4.70	12.2	NO	97.5	0.0431338
13	13C3-PFHpA	318 > 272.9	2.72e4	1.00	1.000	3.29	3.43	12.5	NO	100.0	0.0021576
14	13C3-PFHxS	401.9 > 79.9	1.45e4	1.00	1.000	3.94	4.04	12.5	NO	100.0	0.0036490
15	13C5-PFOA	421.3 > 376	7.77e3	1.00	1.000	4.22	4.32	12.5	NO	100.0	0.0062119
16	13C5-PFNA	472.2 > 426.9	8.87e3	1.00	1.000	4.56	4.64	12.5	NO	100.0	0.0538988
17	13C4-PFOS	503.0 > 79.9	6.73e3	1.68	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		0.283	NO		
19	Total PFHxS	398.9 > 79.6	3.63e2		1.000	4.09		0.259	NO		
20	Total PFOA	413 > 368.7	1.10e3		1.000	4.39		0.241	NO		
21	Total PFOS	499 > 79.9	3.72e1		1.000	4.67		0.234	NO		0.1069576



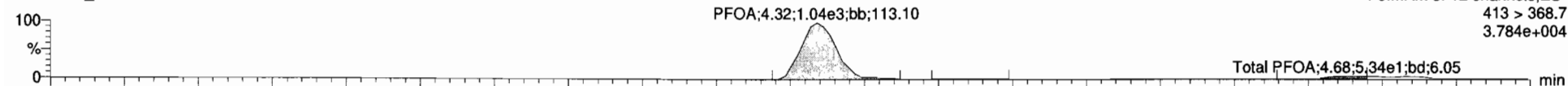
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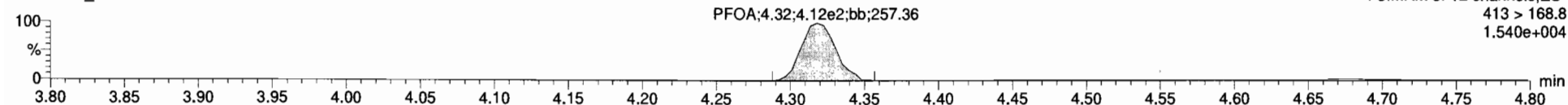
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Total PFOA

170305G1_2

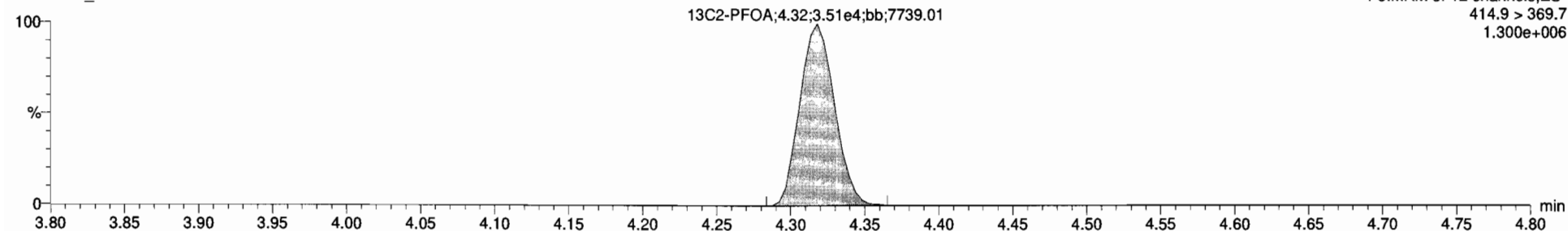


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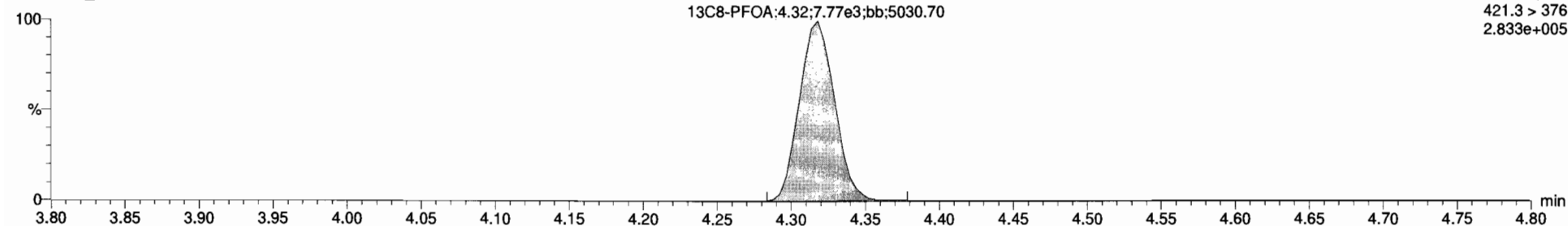
13C2-PFOA

170305G1_2



13C8-PFOA

170305G1_2



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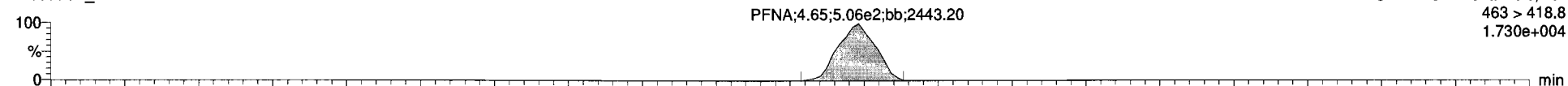
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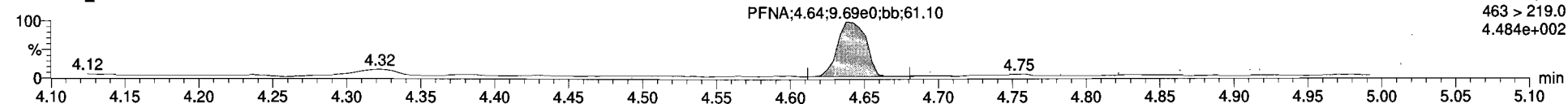
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PFNA

170305G1_2

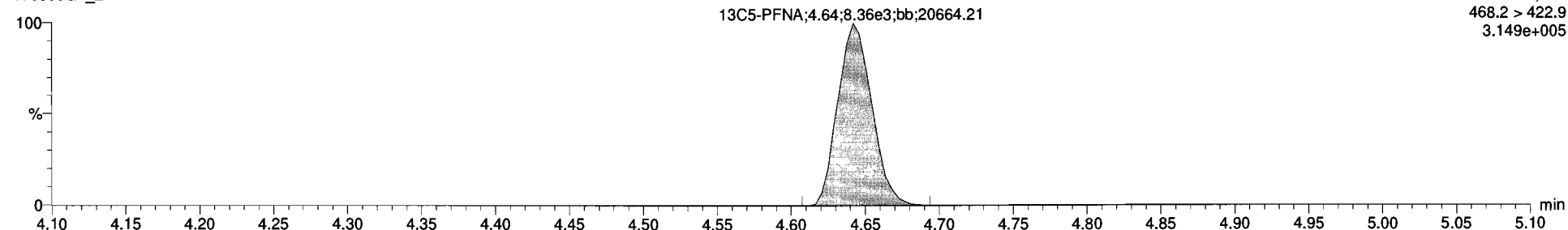


170305G1_2



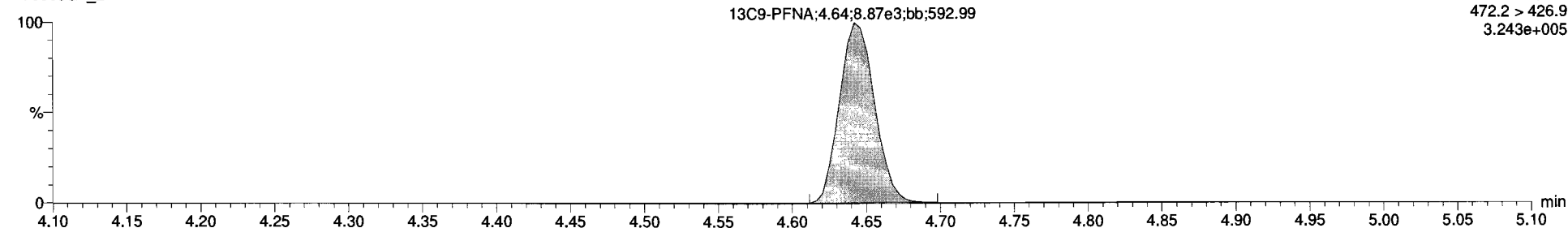
13C5-PFNA

170305G1_2



13C9-PFNA

170305G1_2



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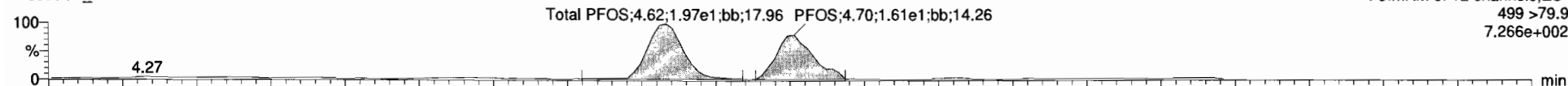
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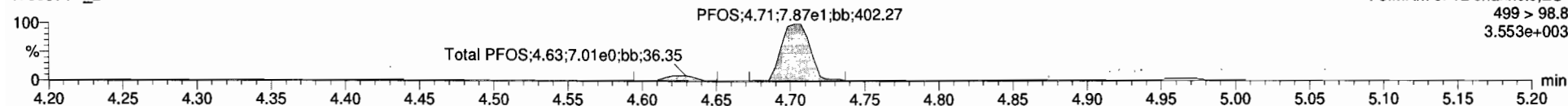
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Total PFOS

170305G1_2

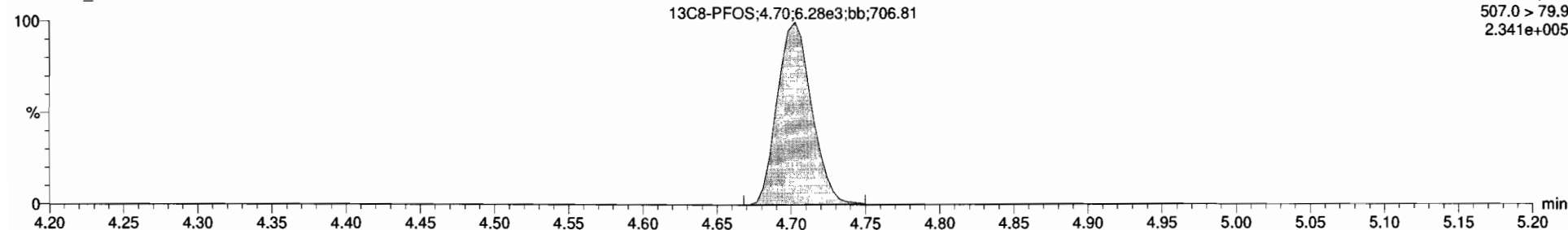


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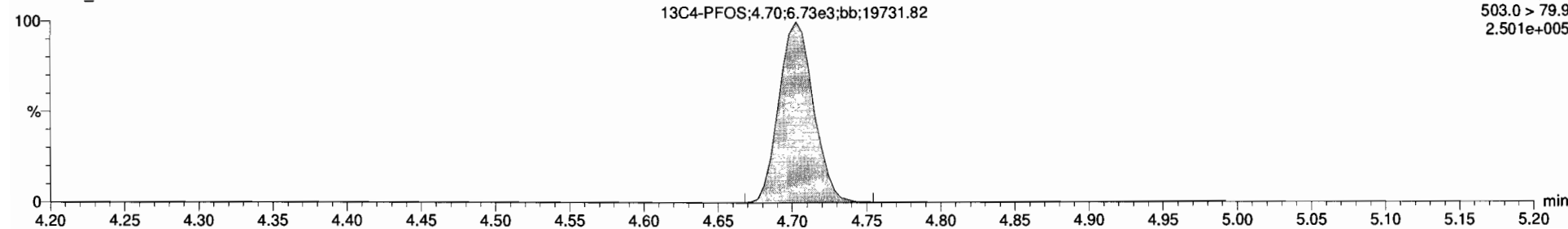
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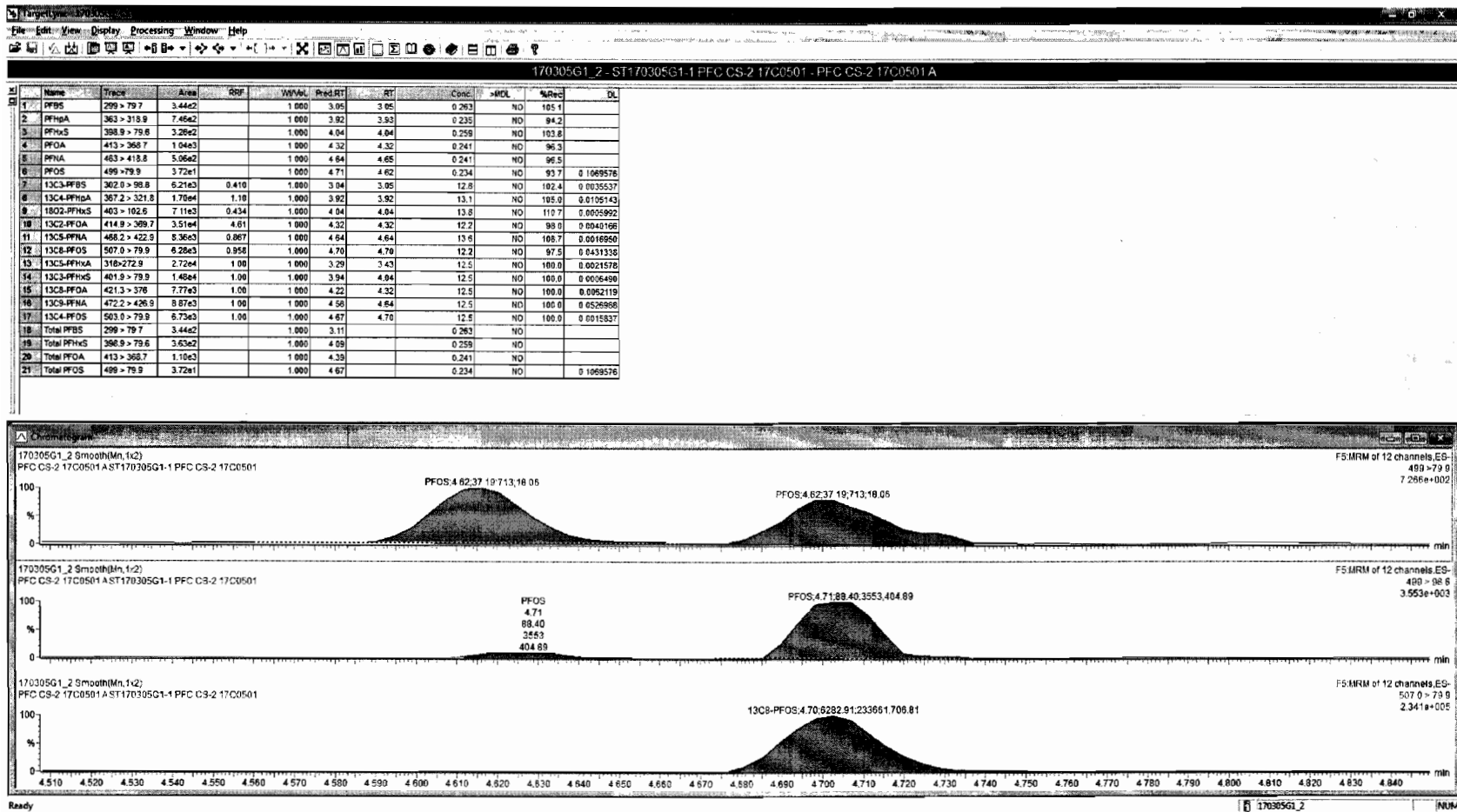
170305G1_2



13C4-PFOS

170305G1_2





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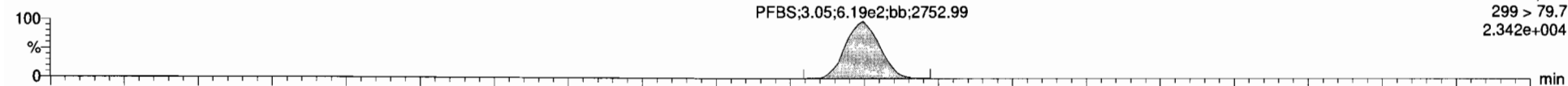
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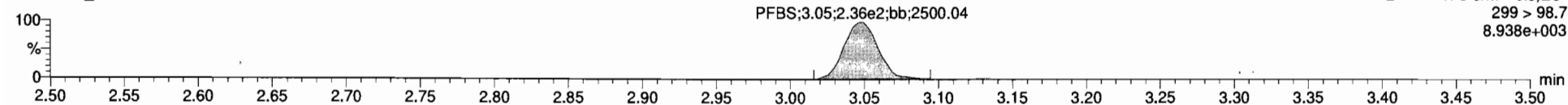
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PFBS

170305G1_3

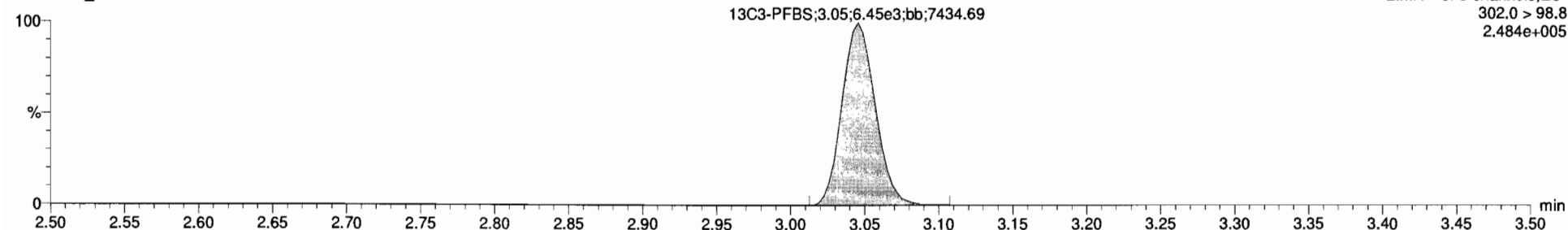


170305G1_3



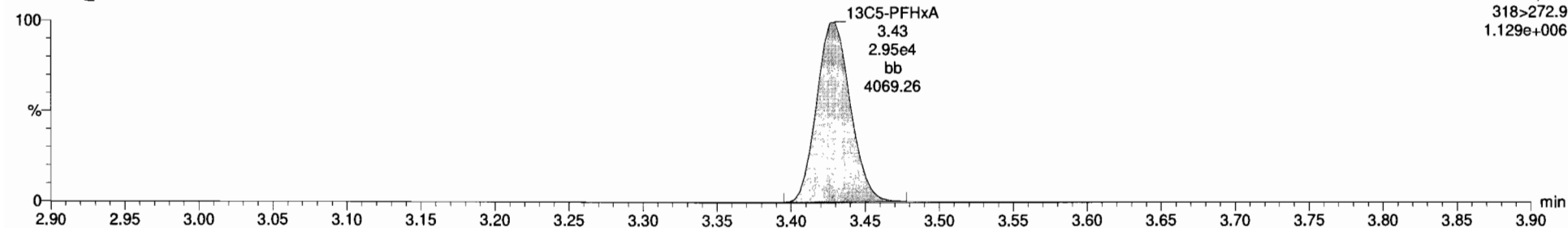
13C3-PFBS

170305G1_3



13C5-PFHxA

170305G1_3



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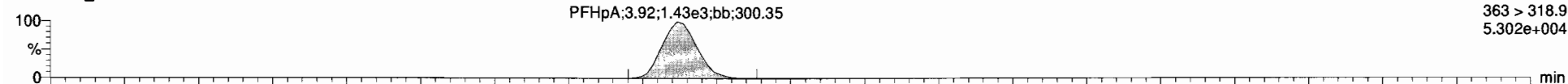
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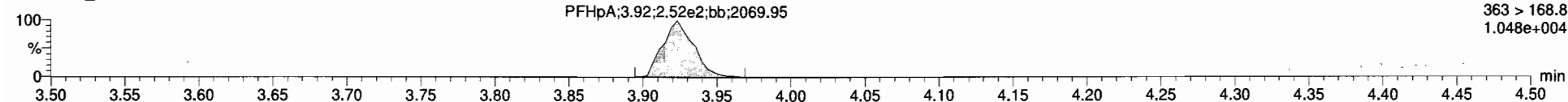
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PFHpA

170305G1_3

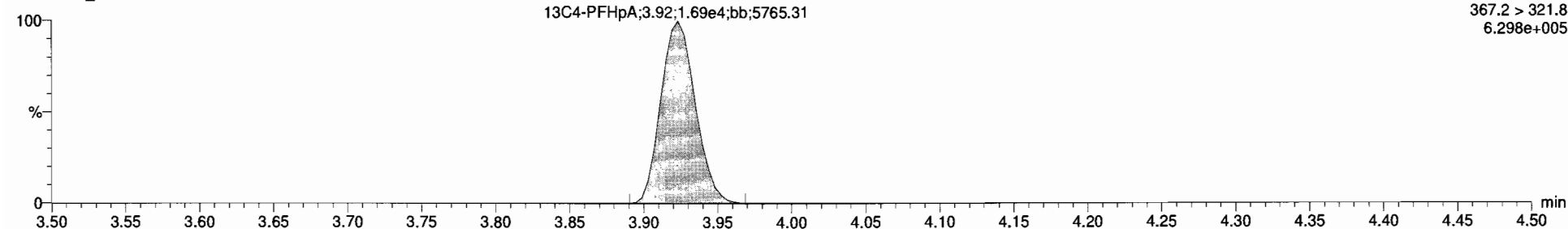


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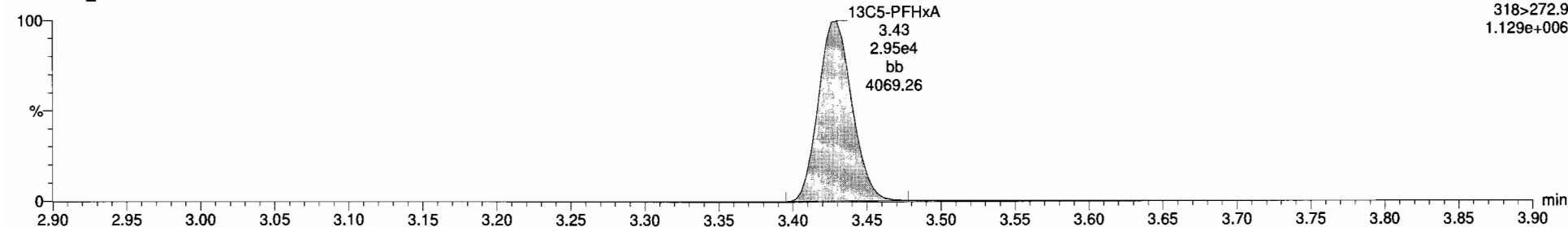
13C4-PFHpA

170305G1_3



13C5-PFHxA

170305G1_3



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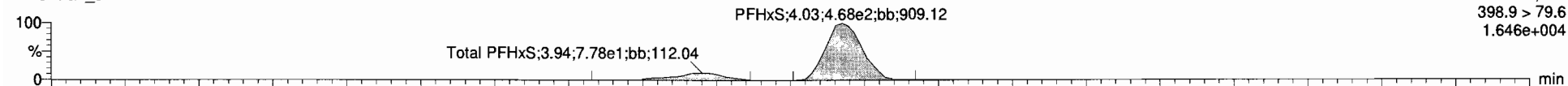
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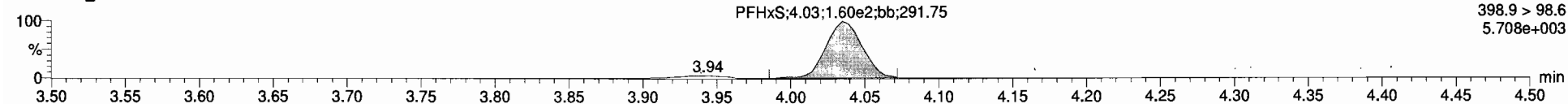
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Total PFHxS

170305G1_3

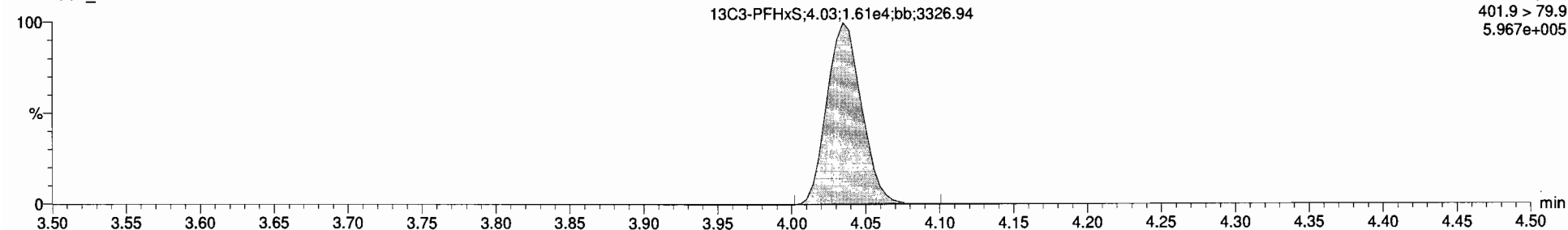


170305G1_3



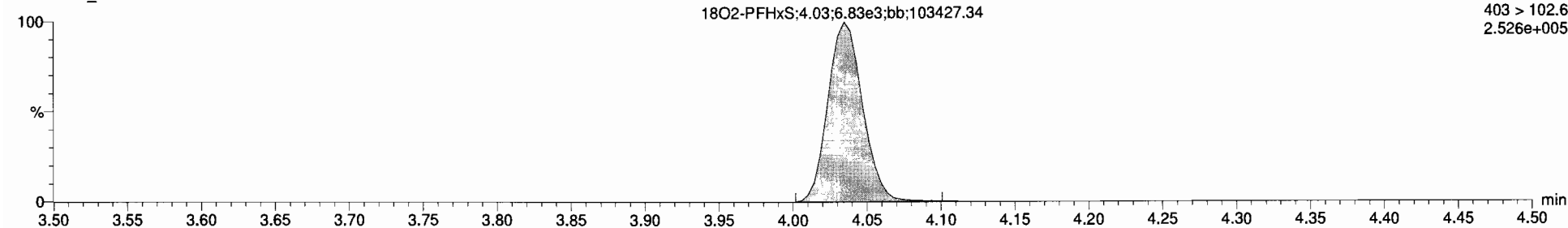
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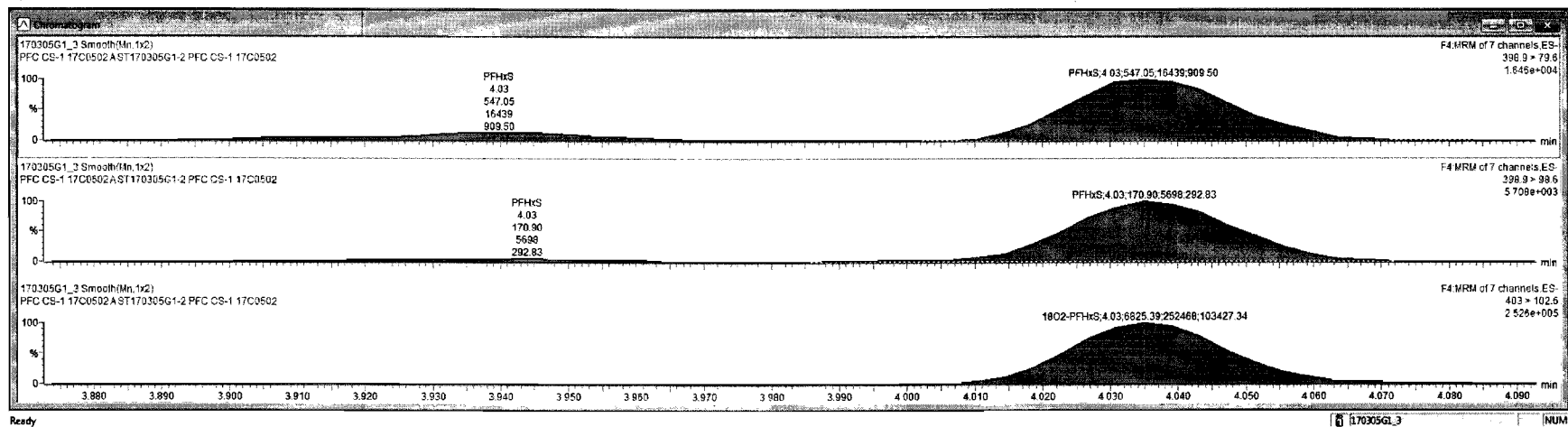


18O2-PFHxS

170305G1_3



170305G1_3-ST170305G1.2 PFC CS-1 17C0502 PFC CS-1 17C0502 A												
Name	Trace	Area	Wt%	WtVol	Pred RT	RT	Conc.	>NOL	%Rec	DL		
1	PFB	299 > 79.7	6.19e2	1.000	3.05	3.05	0.475	NO	95.0			
2	PFB	363 > 318.9	1.43e3	1.000	3.92	3.92	0.518	NO	103.7			
3	PFB	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	PFA	463 > 418.8	8.81e2	1.000	4.64	4.64	0.489	NO	97.9			
6	PFS	499 > 79.9	7.39e1	1.000	4.71	4.71	0.358	NO	71.5	0.1053528		
7	13C3-PFB	302.0 > 98.8	6.45e3	0.410	1.000	3.04	3.05	12.2	NO	97.5	0.0042668	
8	13C4-PFB	367.2 > 321.8	1.89e4	1.10	1.000	3.91	3.92	11.9	NO	95.5	0.0052041	
9	18O2-PFB	403 > 102.6	6.83e3	0.434	1.000	4.03	4.03	12.2	NO	97.4	0.0002946	
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-PFA	460.2 > 422.9	7.67e3	0.867	1.000	4.64	4.64	13.5	NO	107.9	0.0073319	
12	13C8-PFS	507.0 > 79.9	6.57e3	0.958	1.000	4.70	4.70	12.1	NO	96.4	0.0047793	
13	13C5-PFB	318 > 272.9	2.95e4	1.00	1.000	3.29	3.43	12.5	NO	100.0	0.0076795	
14	13C3-PFB	401.9 > 79.9	1.61e4	1.00	1.000	3.94	4.03	12.5	NO	100.0	0.0083970	
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-PFA	472.2 > 426.8	8.20e3	1.00	1.000	4.56	4.64	12.5	NO	100.0	0.0015263	
17	13C4-PFS	503.0 > 79.9	7.11e3	1.00	1.000	4.67	4.70	12.5	NO	100.0	0.0052005	
18	Total PFB	299 > 79.7	6.19e2	1.000	3.11		0.475	NO				
19	Total PFB	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 PFS	499 > 79.9	9.52e1	1.000	4.67		0.530	NO		0.1053528		



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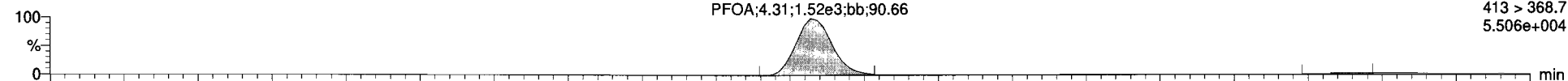
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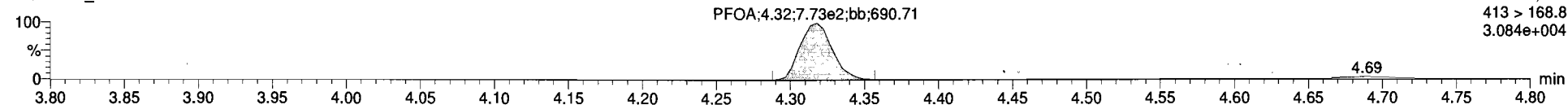
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Total PFOA

170305G1_3

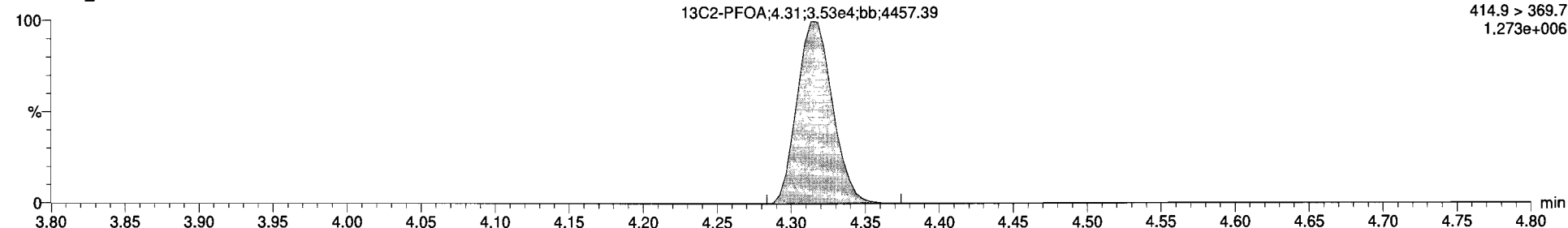


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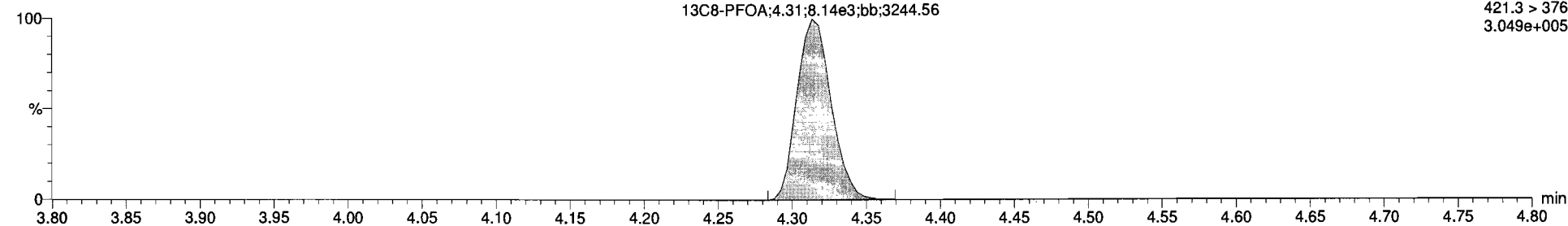
13C2-PFOA

170305G1_3



13C8-PFOA

170305G1_3



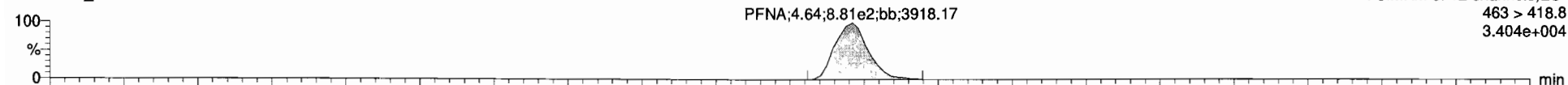
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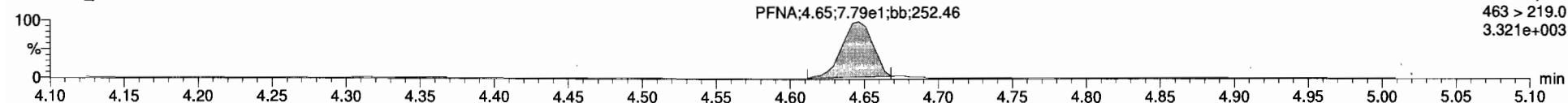
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170305G1_3

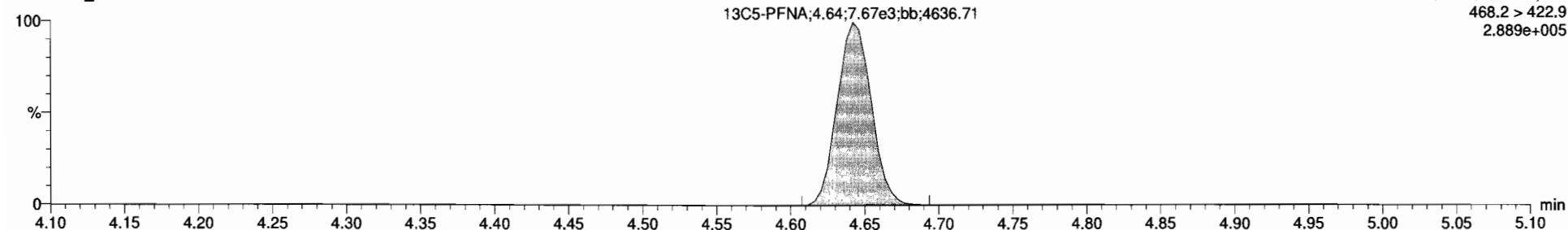


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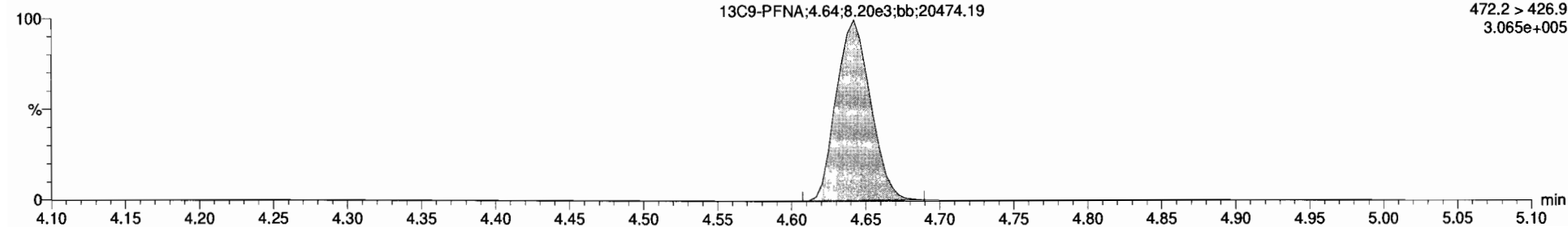
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170305G1_3



13C9-PFNA

170305G1_3



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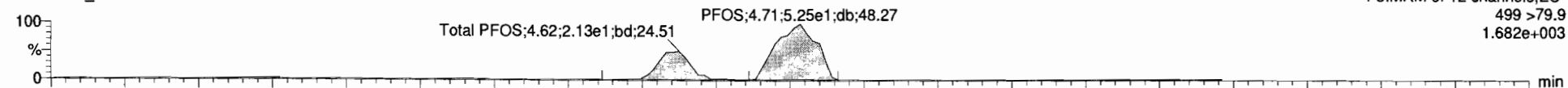
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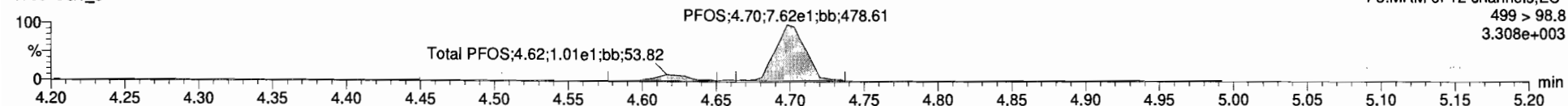
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Total PFOS

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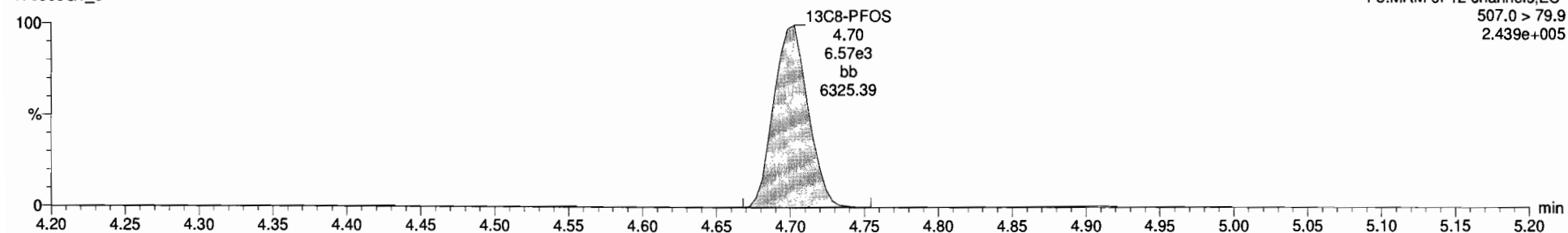


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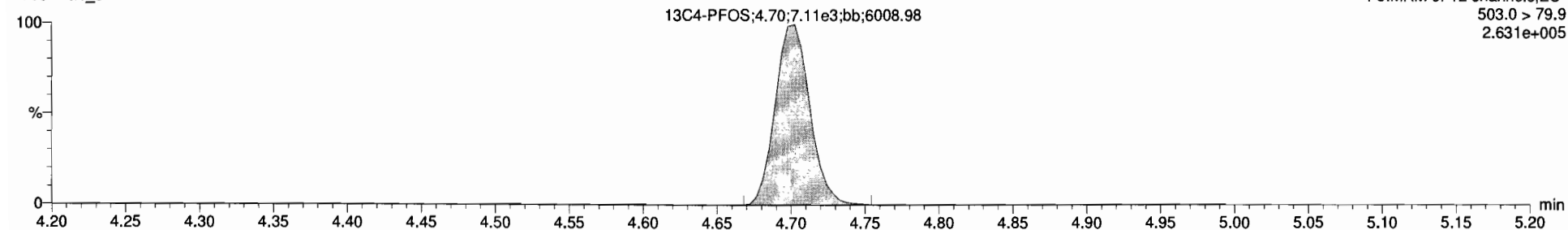
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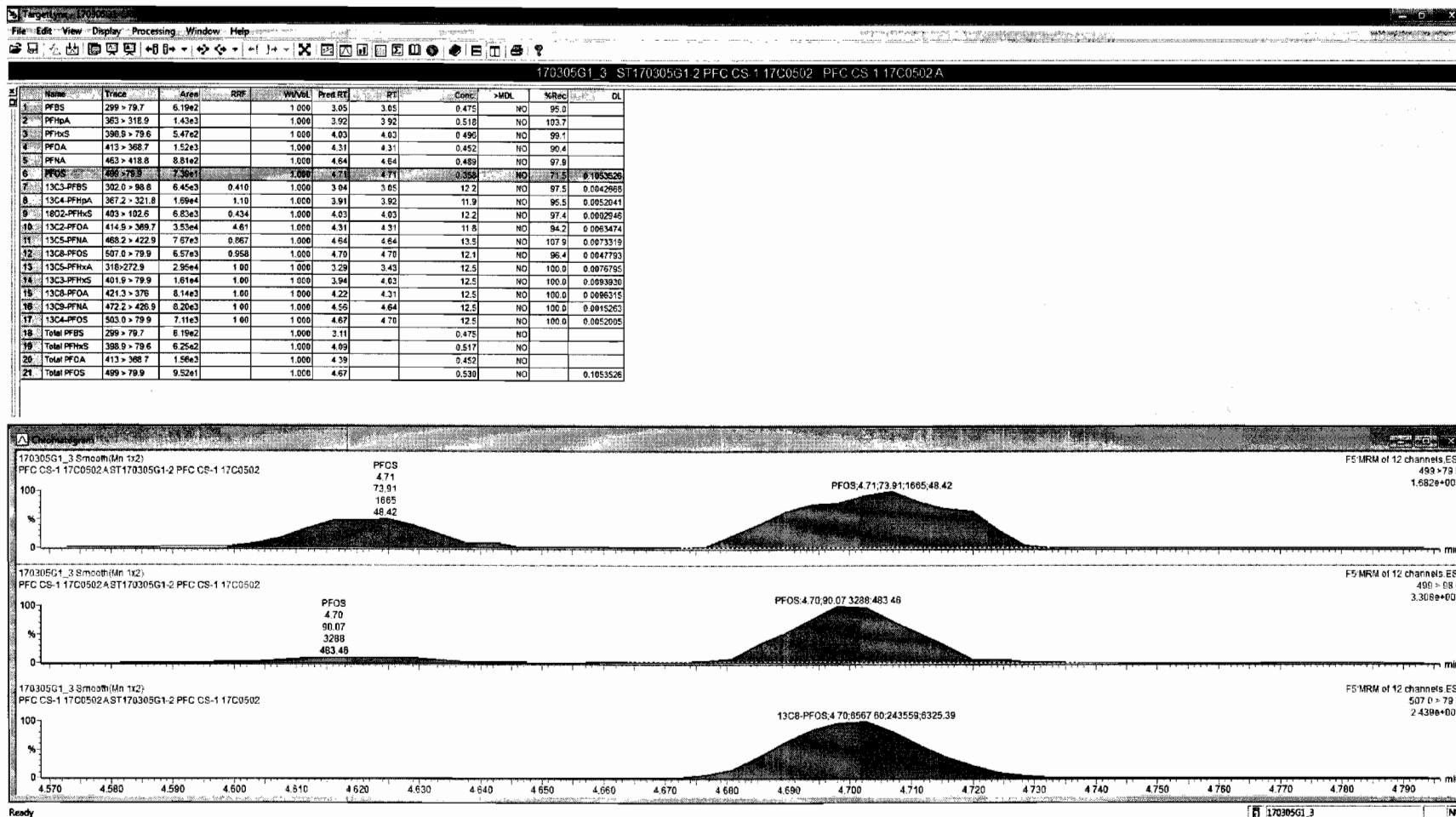
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13C4-PFOS

170305G1_3





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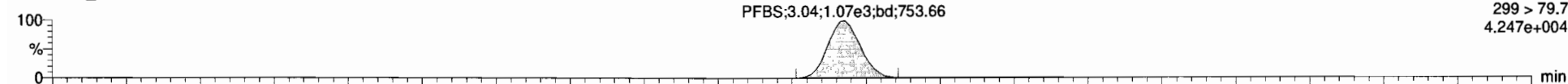
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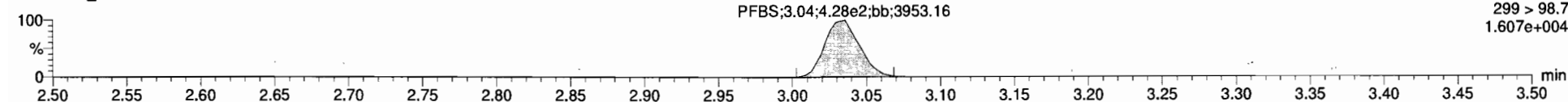
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PFBS

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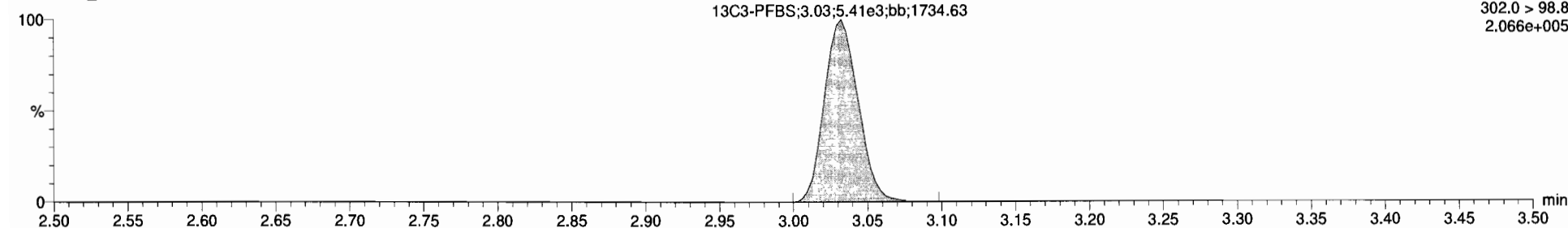


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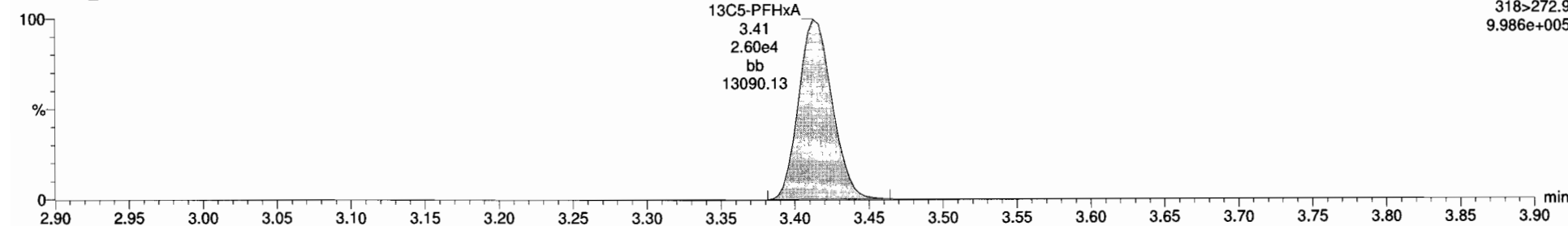
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13C5-PFHxA

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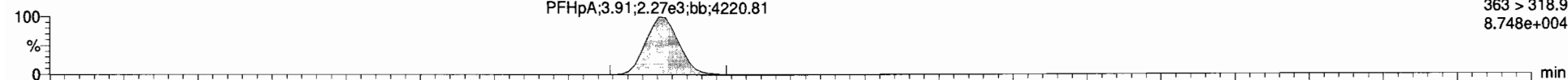
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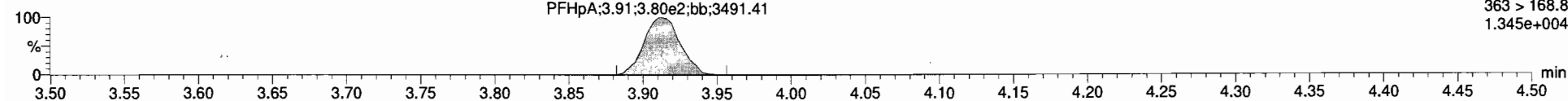
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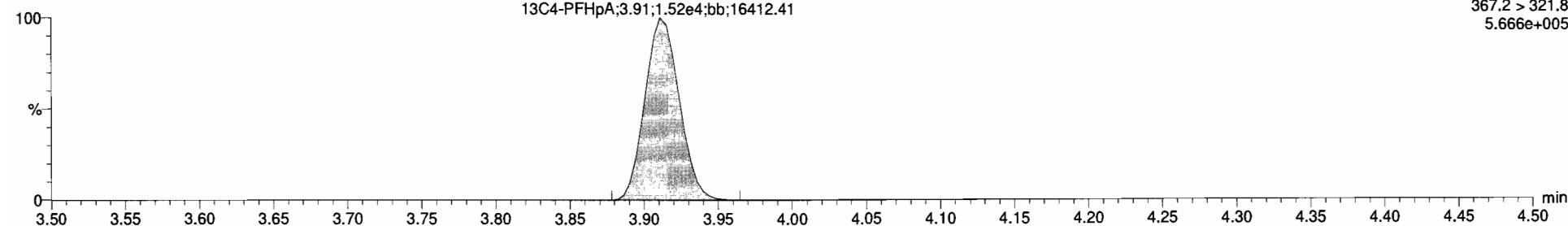


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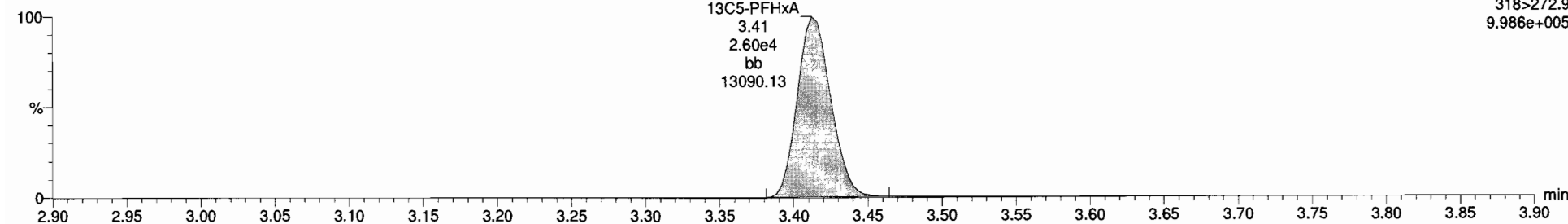
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13C5-PFHxA

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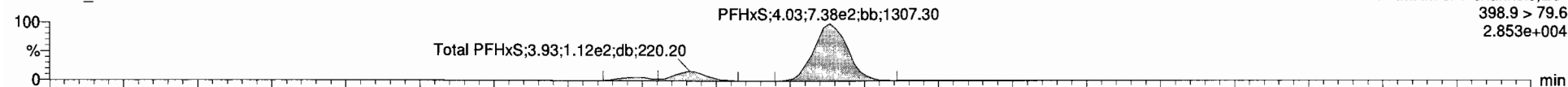
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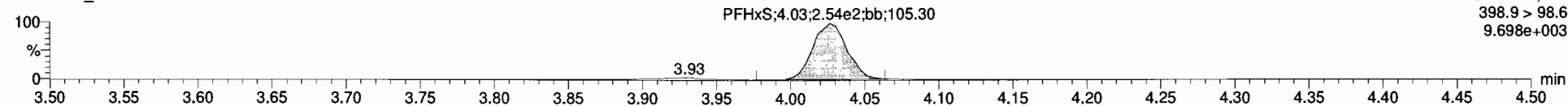
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Total PFHxS

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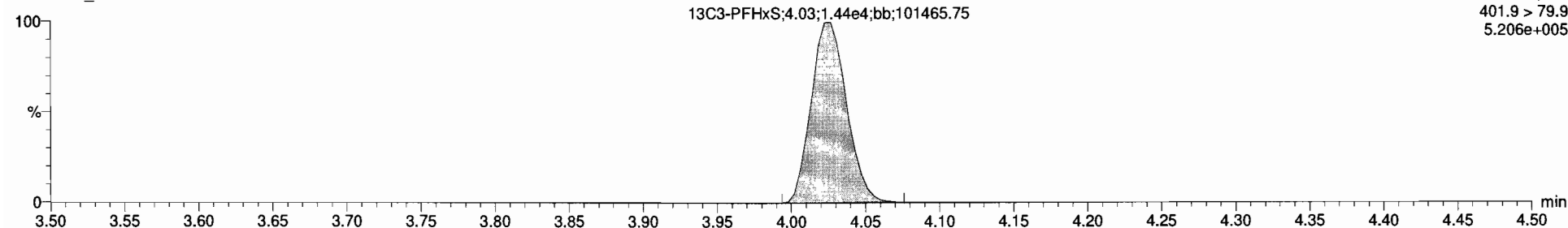


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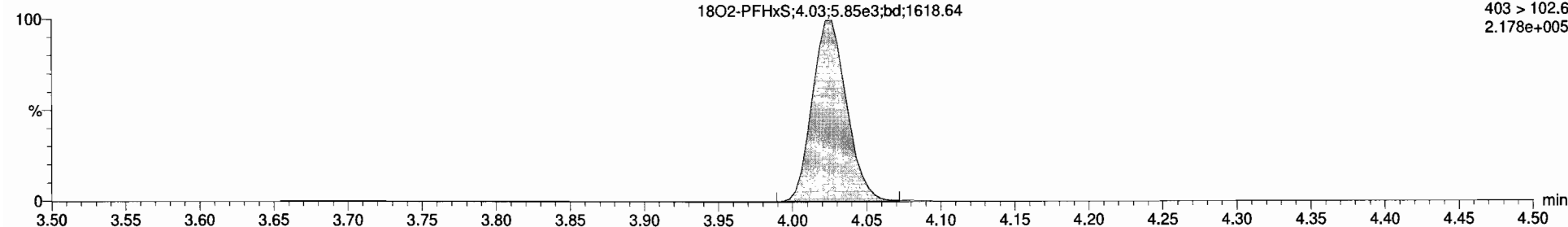
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18O2-PFHxS

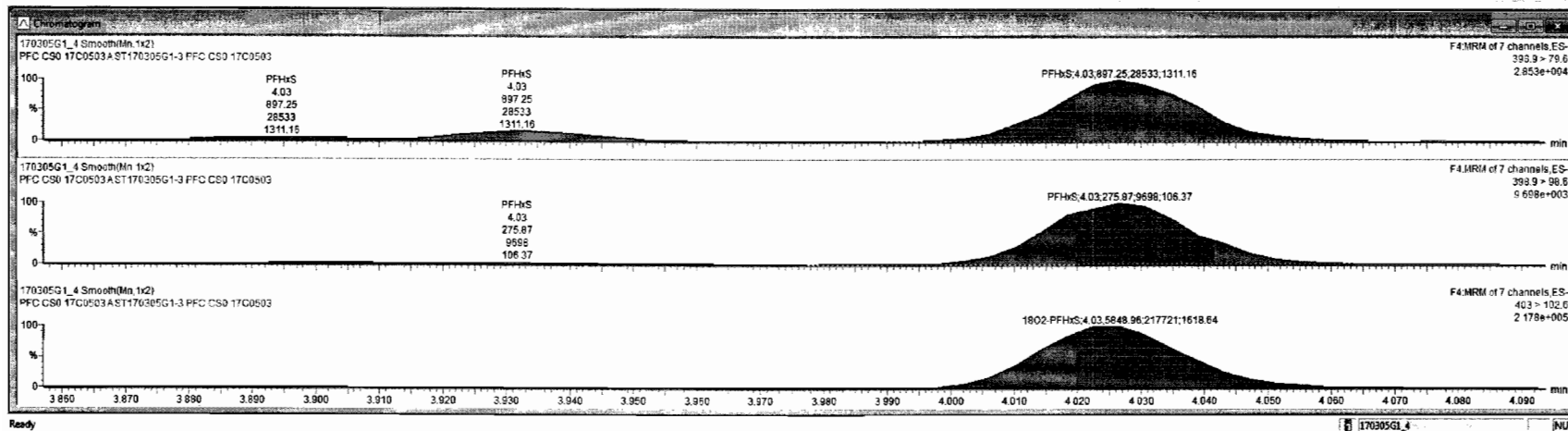
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170305G1_4 - ST170305G1-3 PFC CS0 17C0503 - PFC CS0 17C0503A

#	Name	Trace	Area	RRF	Wt/Mol	Pred RT	RT	Conc	MOL	%Rec	DL
1	PFBS	299 > 79.7	1.07e3		1.000	3.03	3.04	1.91	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 > 79.8	2.57e3		1.000	4.03	4.03	1.00	NO	100.1	
4	PFOA	413 > 368.7	2.09e3		1.000	4.31	4.30	0.908	NO	90.8	
5	PFNA	463 > 419.5	1.26e3		1.000	4.63	4.63	0.958	NO	95.8	
6	PFOS	499 > 79.9	1.82e2		1.000	4.70	4.69	0.889	NO	88.9	0.1002511
7	13C3-PFBS	302.0 > 98.8	5.41e3	0.410	1.000	3.03	3.03	11.5	NO	91.8	0.0174615
8	13C4-PFHpA	367.2 > 321.5	1.52e4	1.10	1.000	3.90	3.91	12.1	NO	96.6	0.0012598
9	18O2-PFHxS	403 > 102.6	5.85e3	0.434	1.000	4.03	4.03	11.7	NO	93.8	0.0186300
10	13C2-PFOA	414.9 > 369.7	2.91e4	4.61	1.000	4.30	4.31	12.4	NO	99.0	0.0006311
11	13C5-PFNA	468.2 > 422.9	5.74e3	0.067	1.000	4.63	4.63	11.6	NO	92.6	0.0007193
12	13C6-PFOS	507.0 > 79.9	4.73e3	0.958	1.000	4.69	4.69	11.9	NO	95.3	0.0110670
13	13C5-PFHpA	318 > 272.9	2.60e4	1.00	1.000	3.29	3.41	12.5	NO	100.0	0.0023673
14	13C3-PFHxS	401.9 > 79.9	1.44e4	1.00	1.000	3.94	4.03	12.5	NO	100.0	0.0003060
15	13C6-PFOA	421.5 > 376	6.38e3	1.00	1.000	4.22	4.30	12.5	NO	100.0	0.0102755
16	13C9-PFNA	472.2 > 428.9	7.15e3	1.00	1.000	4.56	4.63	12.5	NO	100.0	0.0800796
17	13C4-PFOS	503.9 > 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 > 79.8	1.05e3		1.000	4.09		1.36	NO		
20	Total PFOA	413 > 368.7	2.16e3		1.000	4.39		0.998	NO		
21	Total PFOS	499 > 79.9	2.19e2		1.000	4.67		1.26	NO		0.1002511



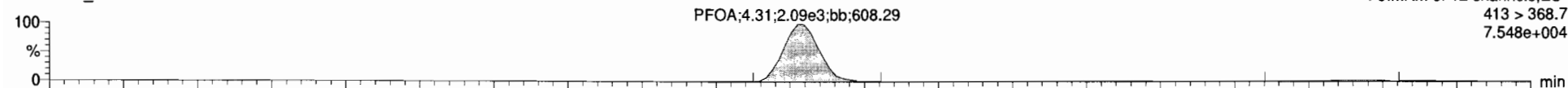
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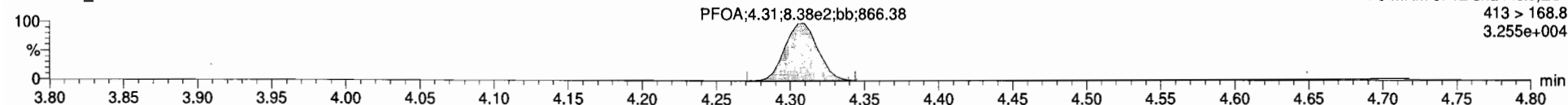
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Total PFOA

170305G1_4

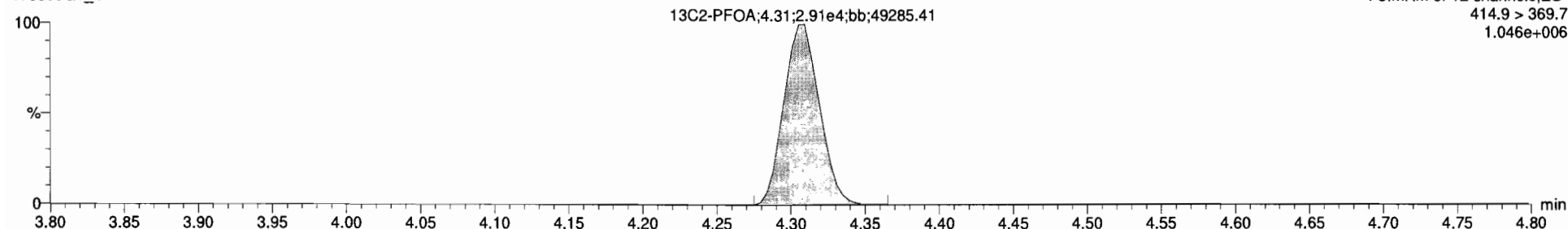


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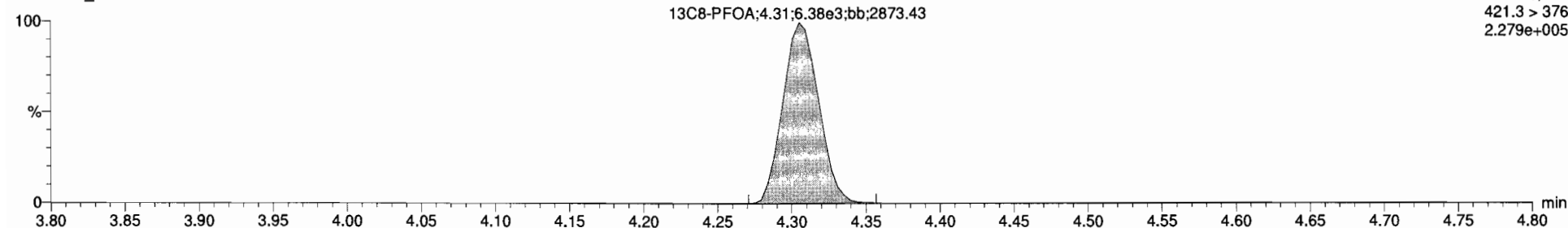
13C2-PFOA

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13C8-PFOA

170305G1_4



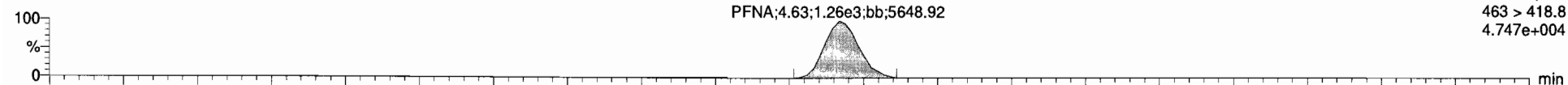
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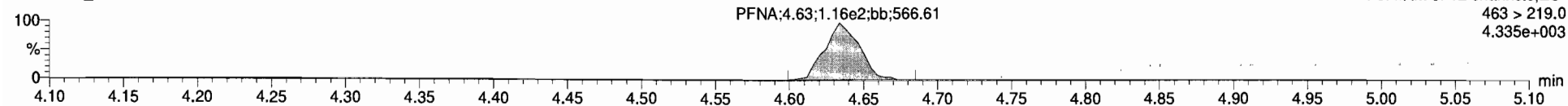
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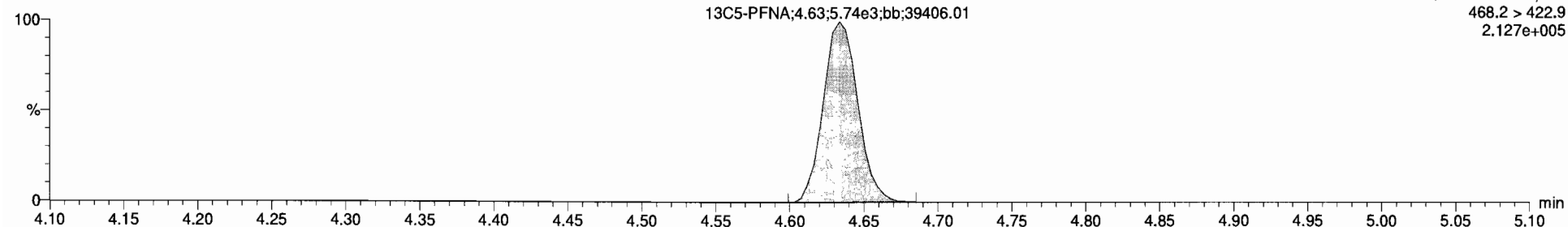


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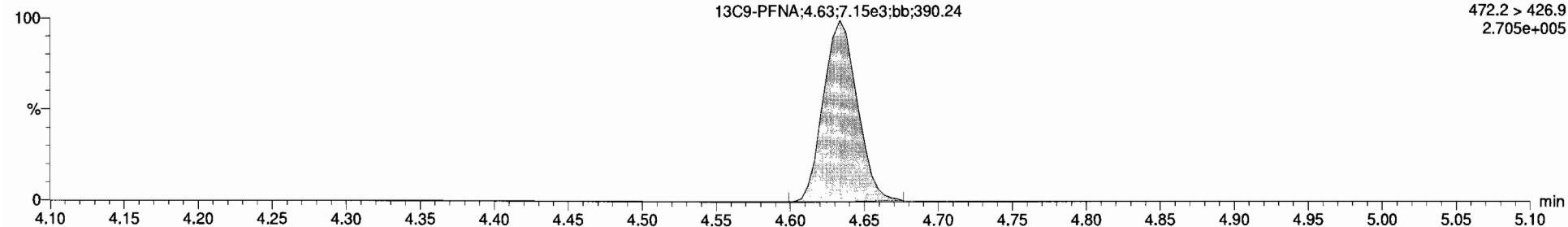
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170305G1_4



13C9-PFNA

170305G1_4



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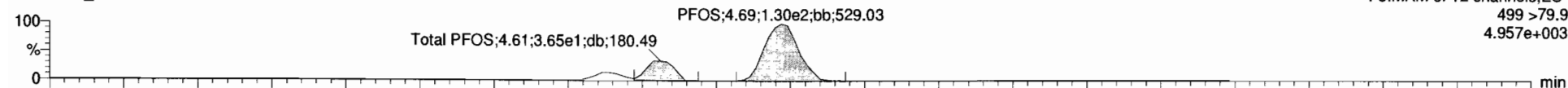
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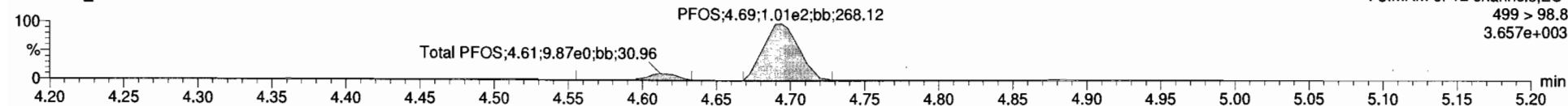
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Total PFOS

170305G1_4

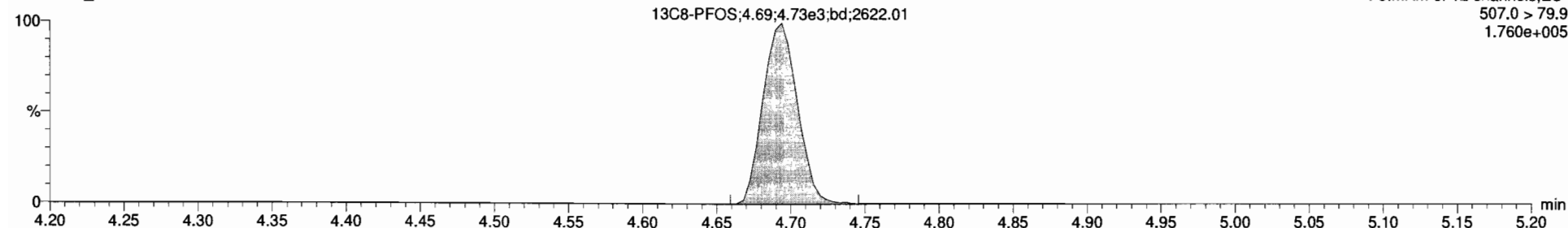


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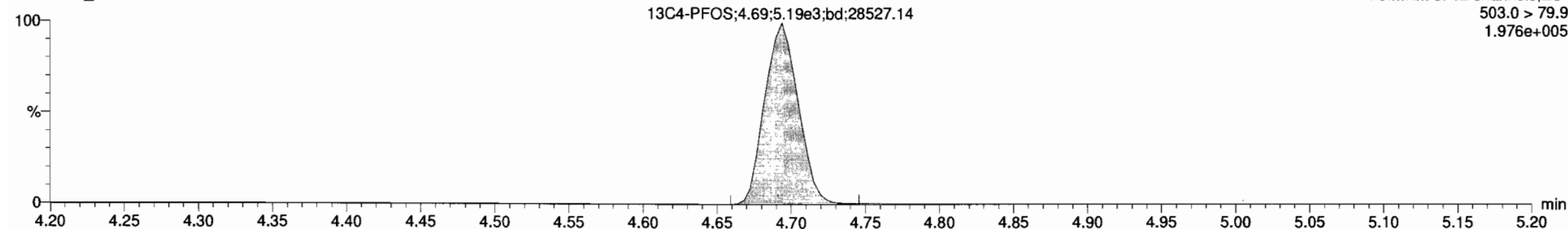
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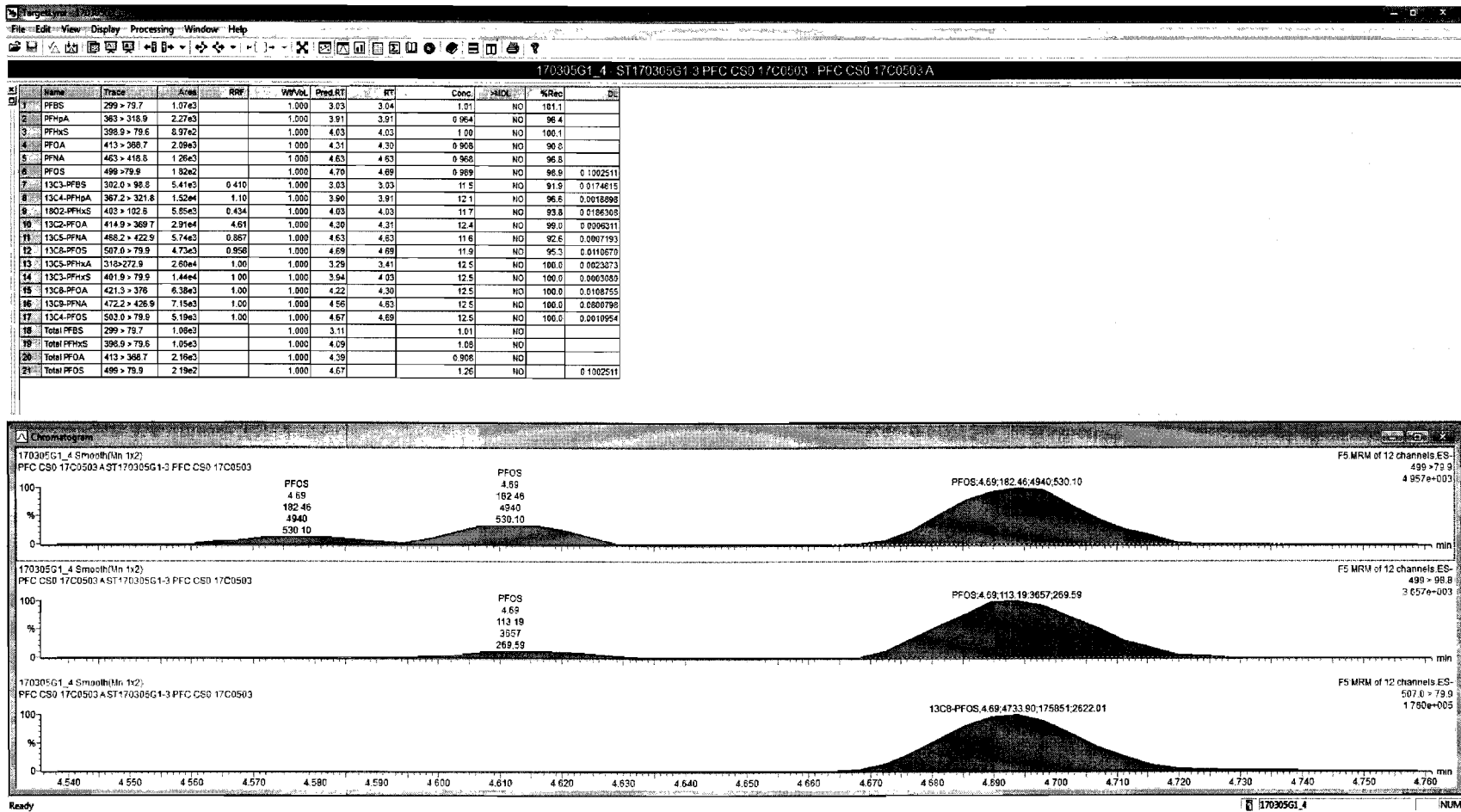
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13C4-PFOS

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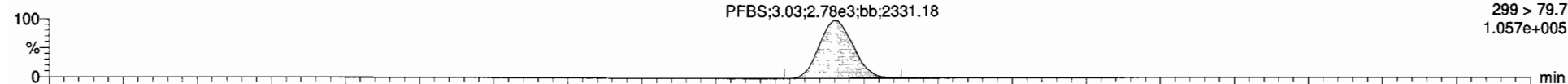
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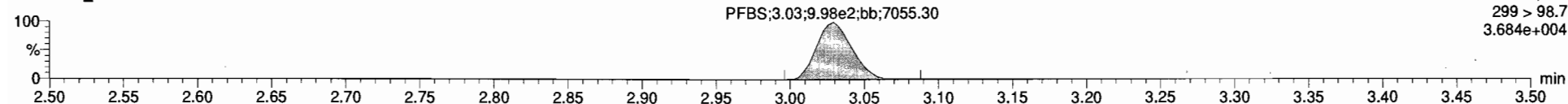
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PFBS

170305G1_5

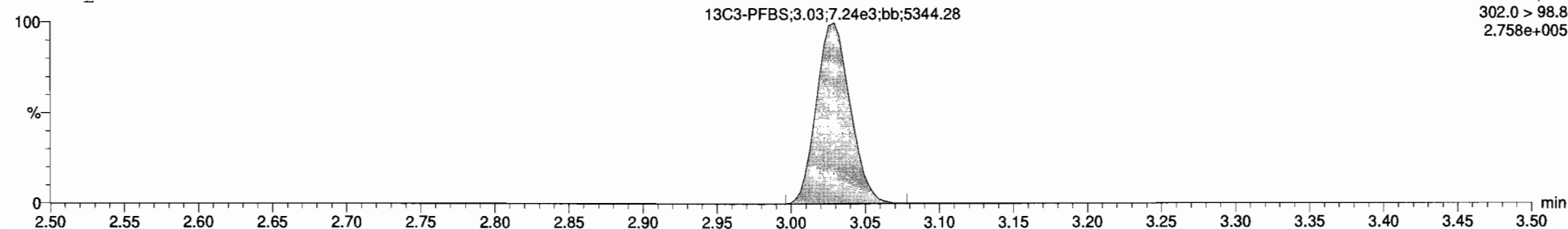


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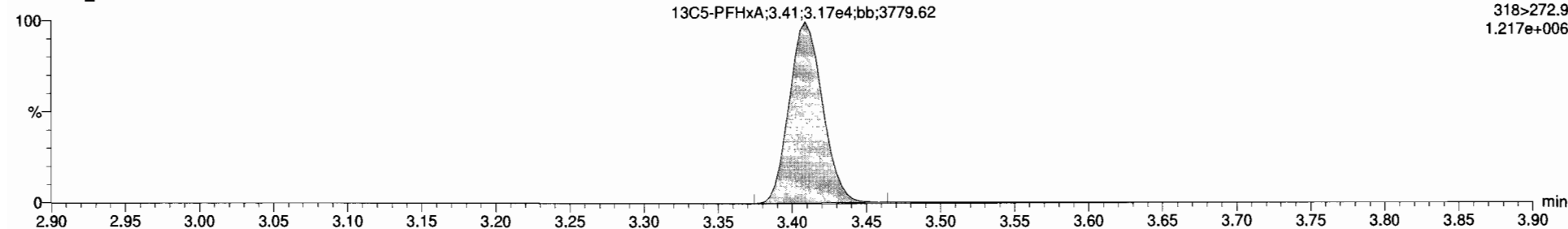
13C3-PFBS

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13C5-PFHxA

170305G1_5



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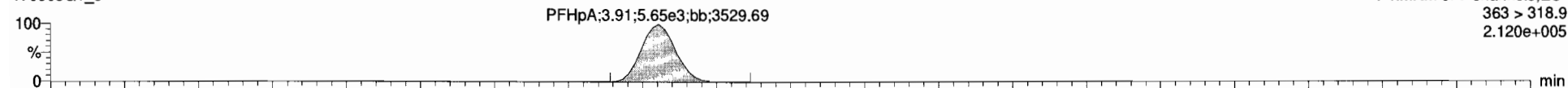
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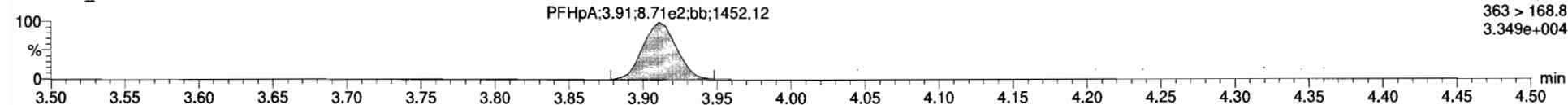
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PFHpA

170305G1_5

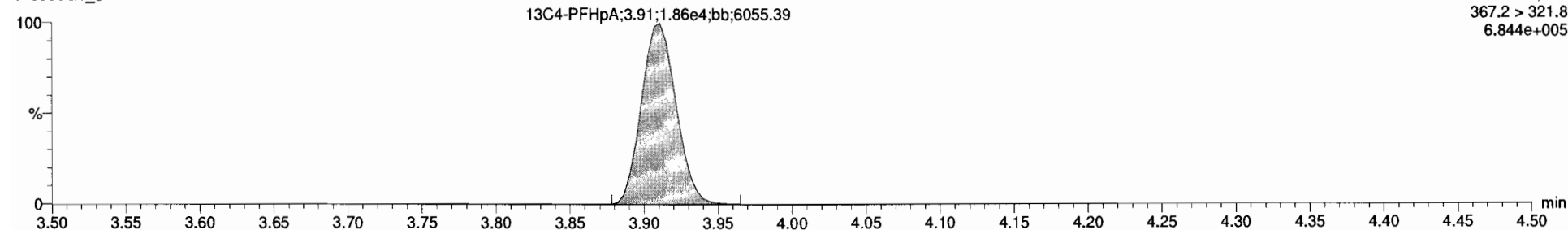


170305G1_5



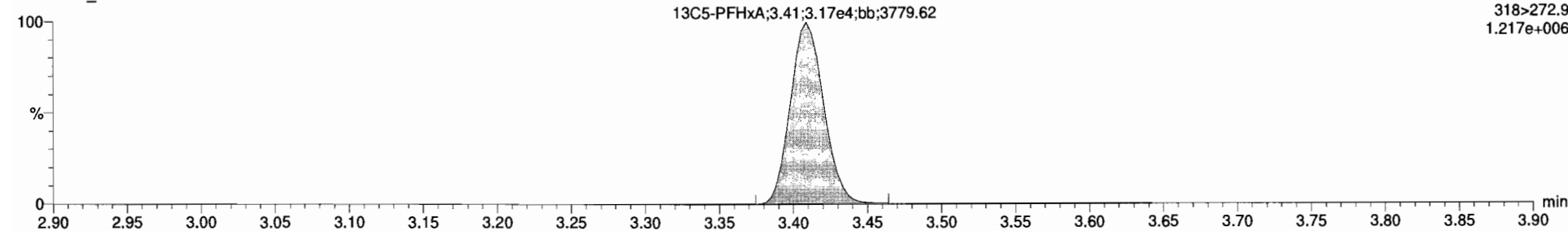
13C4-PFHpA

170305G1_5



13C5-PFHxA

170305G1_5



Dataset: Untitled

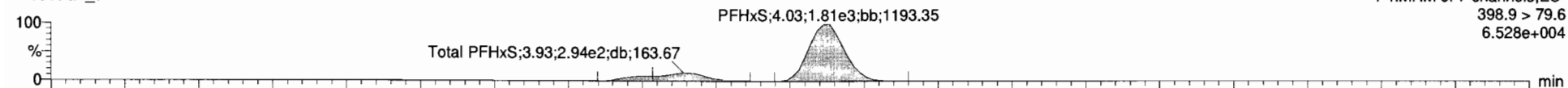
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Printed: Monday, March 06, 2017 08:37:19 Pacific Standard Time

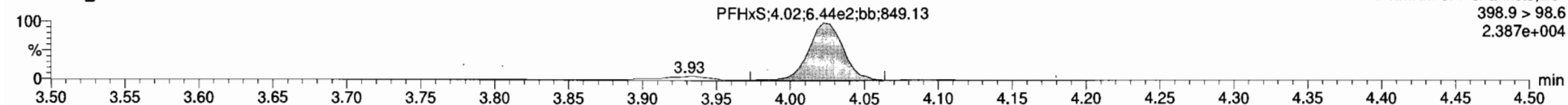
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Total PFHxS

170305G1_5

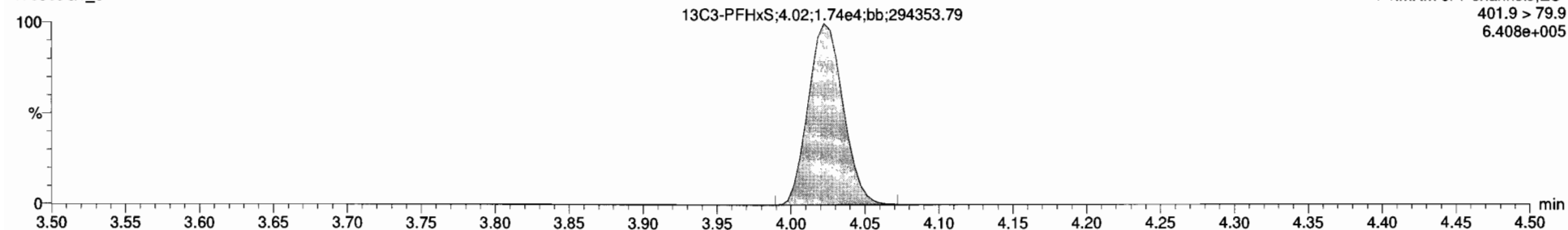


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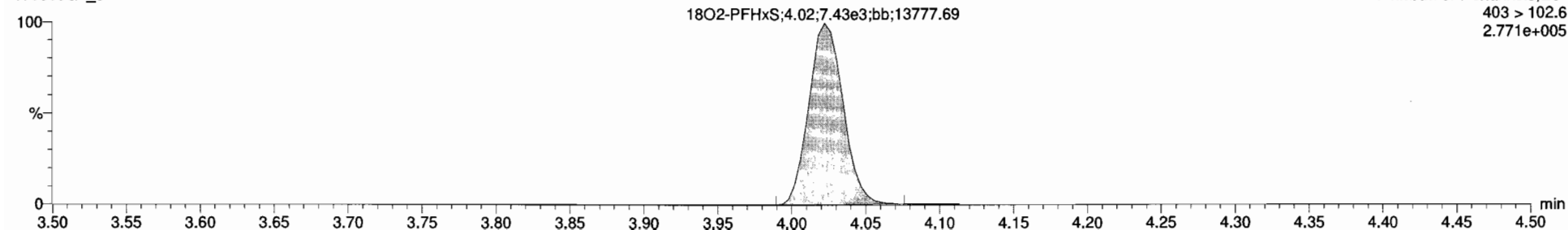
13C3-PFHxS

170305G1_5

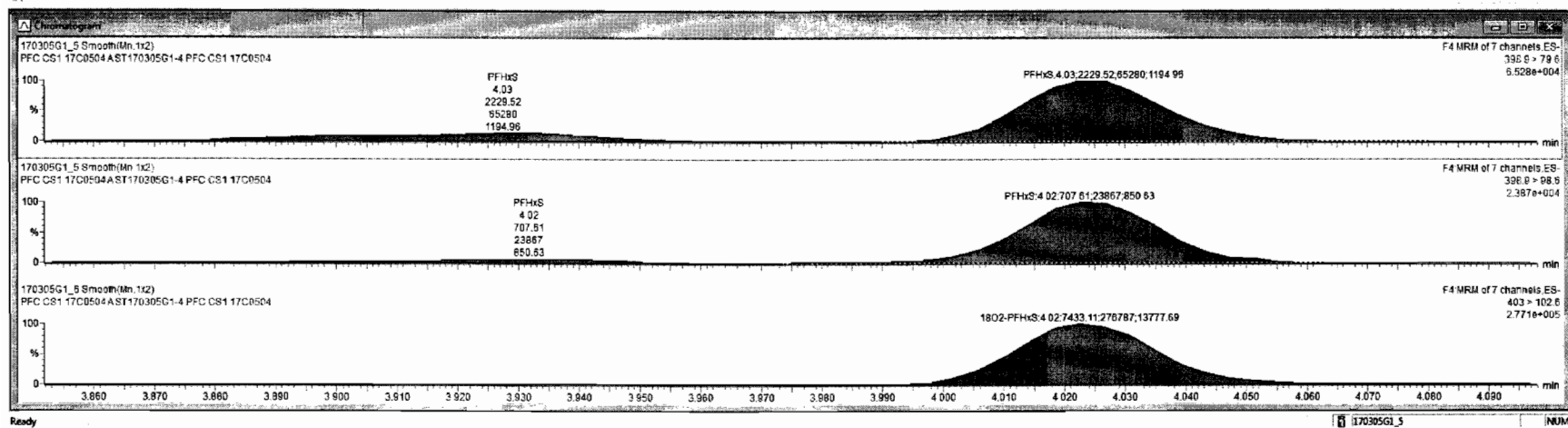


18O2-PFHxS

170305G1_5



170305G1_5 ST:170305G1 4 PFC CS1 17C0504 PFC CS1 17C0504 A												
#	Name	Trace	Area	RRF	WWSL	Prod RT	RT	Comp	>MOL	%Rec	DL	
1	PFBS	299 > 79.7	2.7843		1.000	3.93	3.93	1.99	NO	99.3		
2	PFHxA	363 > 318.9	5.6543		1.000	3.91	3.91	2.63	NO	102.3		
3	PFHxS	386.9 > 79.6	2.2343		1.000	4.82	4.83	2.61	NO	100.5		
4	PFOA	413 > 368.7	5.3943		1.000	4.30	4.30	2.06	NO	103.1		
5	PFNA	463 > 418.8	3.1743		1.000	4.63	4.63	2.84	NO	102.0		
6	PFOS	499 > 79.9	5.2842		1.000	4.69	4.69	2.46	YES	123.0	0.1190520	
7	13C3-PFBS	302.0 > 98.6	7.2443	0.410	1.000	3.83	3.83	12.7	NO	101.2	0.0061404	
8	13C4-PFHxA	367.2 > 321.8	1.8644	1.10	1.000	3.90	3.91	12.1	NO	96.9	0.0050106	
9	18O2-PFHxS	403 > 102.6	7.4343	0.434	1.000	4.02	4.02	12.3	NO	96.2	0.0022555	
10	13C2-PFOA	414.9 > 369.7	3.7044	4.61	1.000	4.30	4.30	12.2	NO	97.6	0.0185493	
11	13C5-PFNA	468.2 > 422.9	6.9743	0.867	1.000	4.63	4.63	12.3	NO	96.6	0.0011307	
12	13C8-PFOS	507.0 > 79.9	5.1843	0.958	1.000	4.69	4.69	12.4	NO	99.1	0.0187137	
13	13C5-PFHxA	318-272.9	3.1744	1.00	1.000	3.29	3.41	12.5	NO	100.0	0.0082680	
14	13C3-PFHxS	401.9 > 79.9	1.7444	1.00	1.000	3.94	4.02	12.5	NO	100.0	0.0001062	
15	13C8-PFOA	421.3 > 376	8.2343	1.00	1.000	4.22	4.30	12.5	NO	100.0	0.0221408	
16	13C9-PFNA	472.2 > 426.9	8.1643	1.00	1.000	4.56	4.63	12.5	NO	100.0	0.0003300	
17	13C4-PFOS	503.0 > 79.9	5.4543	1.00	1.000	4.67	4.69	12.5	NO	100.0	0.0016094	
18	Total PFBS	299 > 79.7	2.7843		1.000	3.11		1.99	NO			
19	Total PFHxS	386.9 > 79.6	2.6343		1.000	4.09		2.27	NO			
20	Total PFOA	413 > 368.7	5.4643		1.000	4.39		2.06	NO			
21	Total PFOS	499 > 79.9	6.8642		1.000	4.67		3.37	NO		0.1190520	



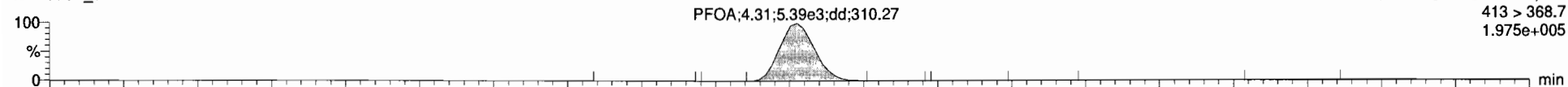
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Printed: Monday, March 06, 2017 08:37:19 Pacific Standard Time

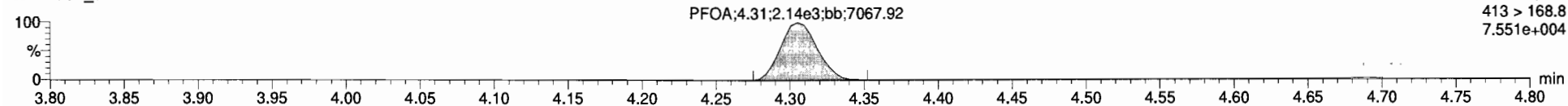
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Total PFOA

170305G1_5

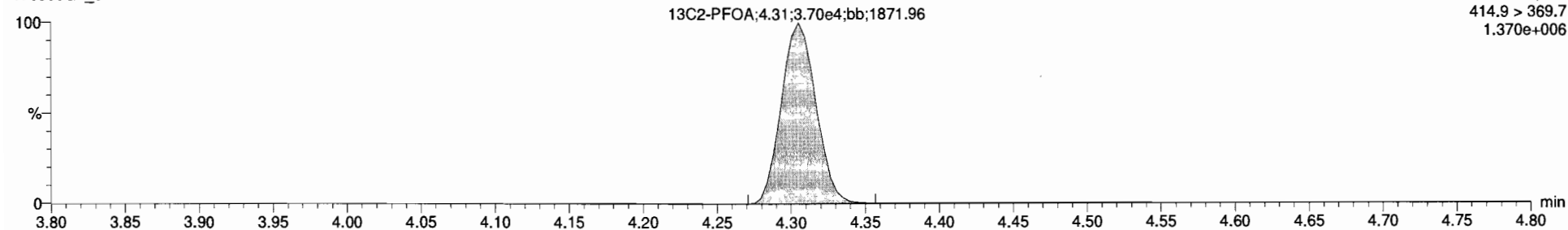


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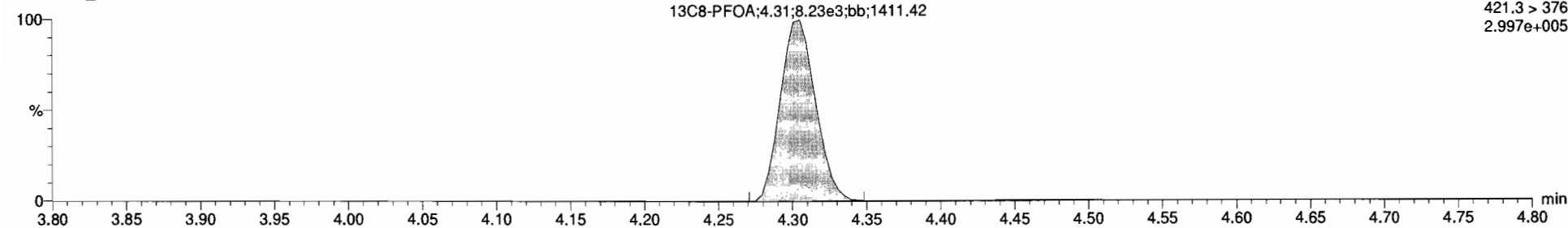
13C2-PFOA

170305G1_5



13C8-PFOA

170305G1_5



Dataset: Untitled

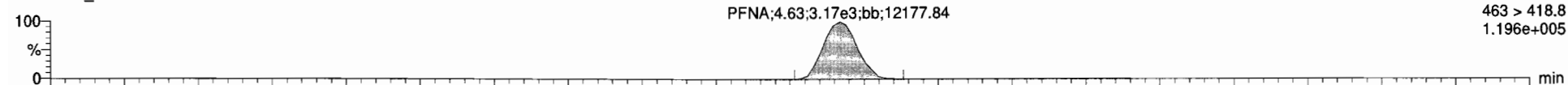
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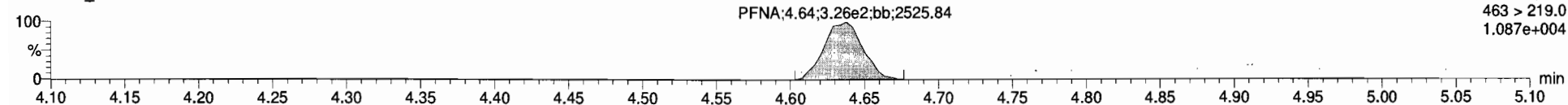
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PFNA

170305G1_5

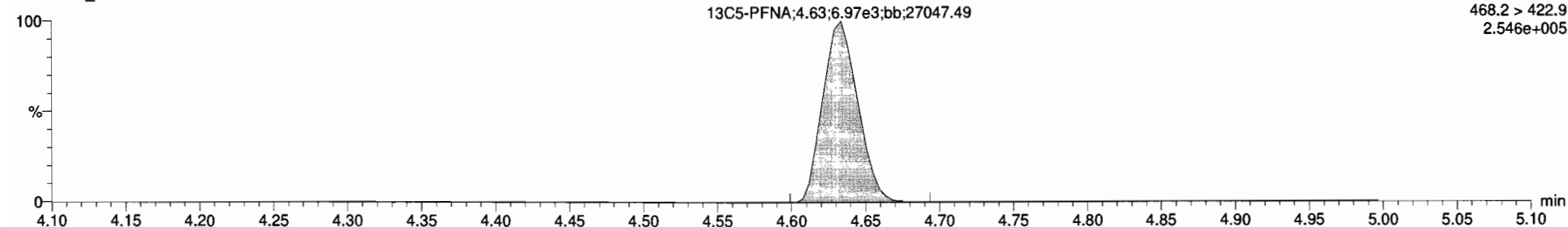


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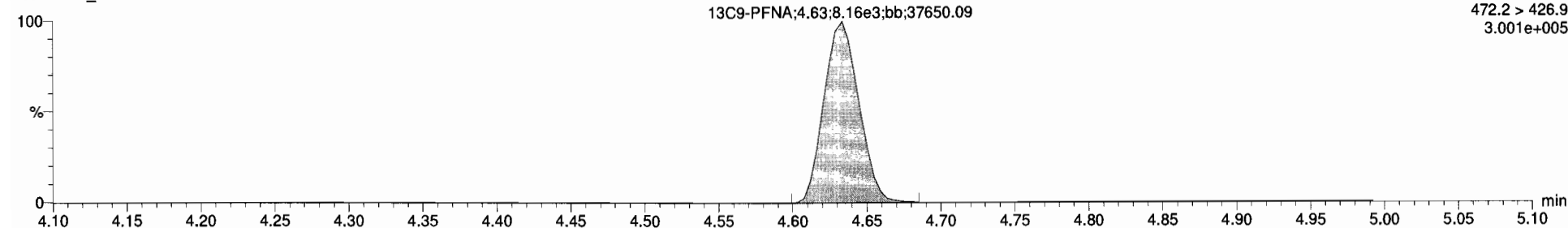
13C5-PFNA

170305G1_5



13C9-PFNA

170305G1_5



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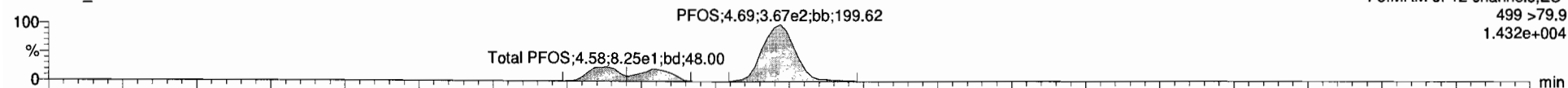
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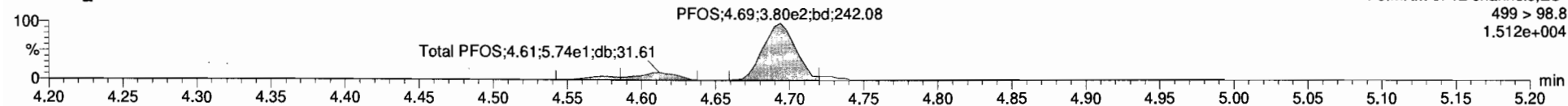
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Total PFOS

170305G1_5

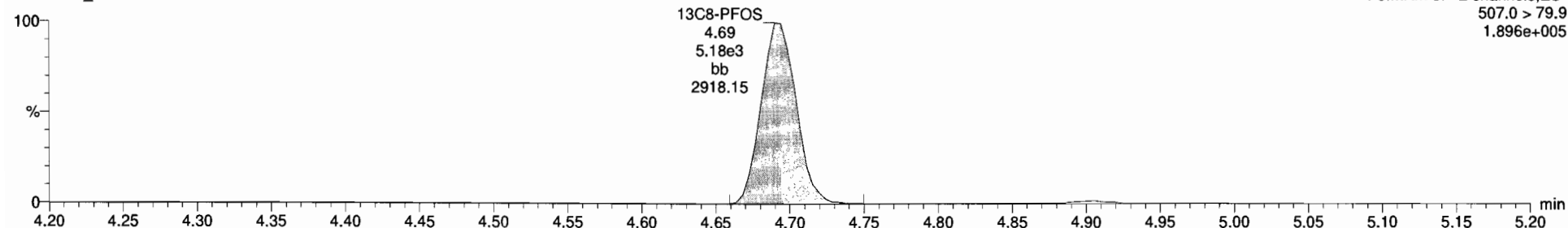


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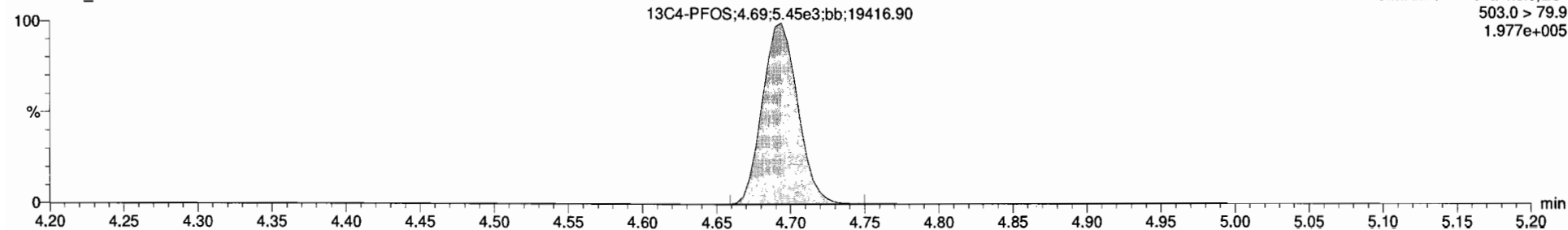
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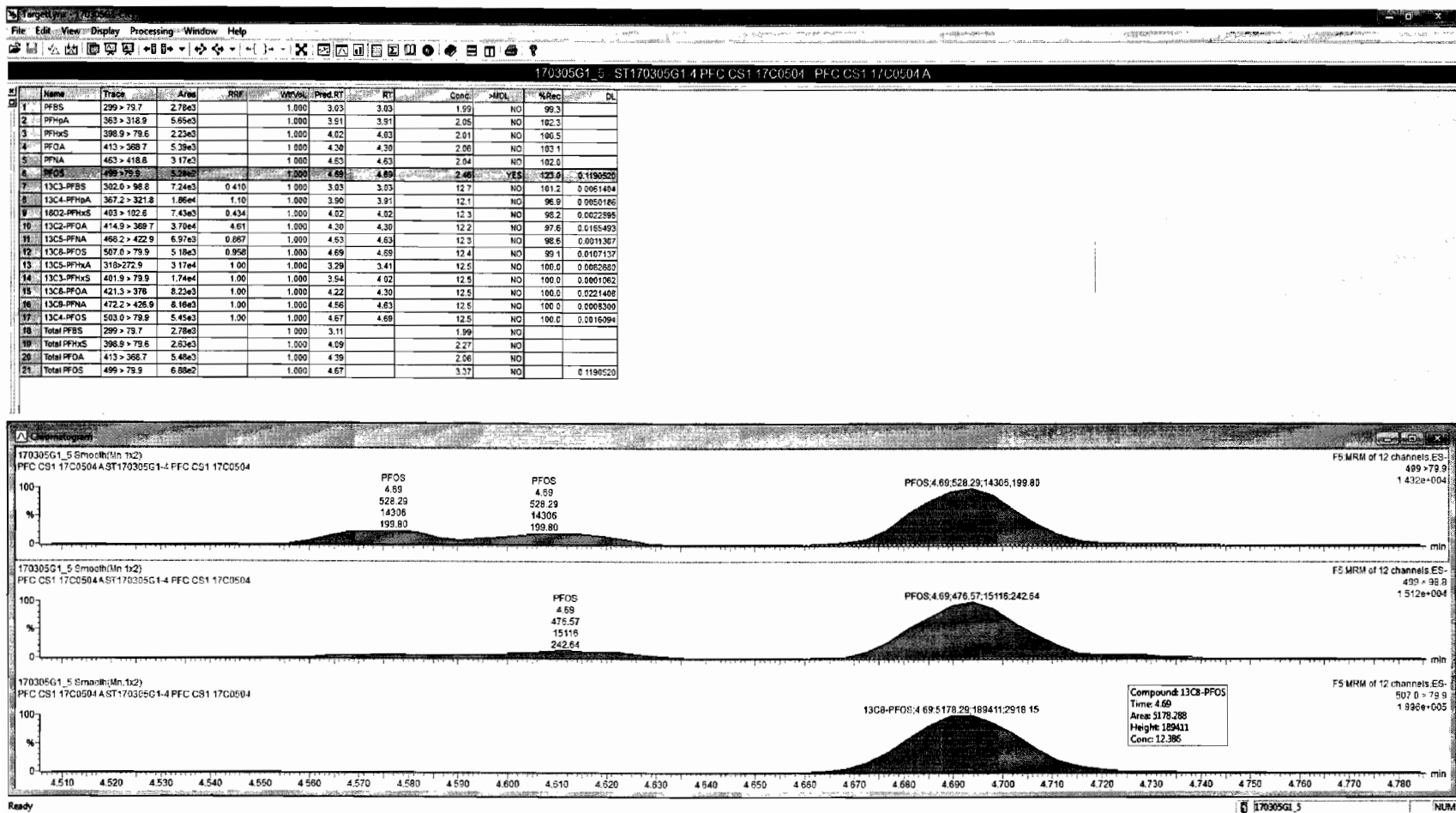
170305G1_5



13C4-PFOS

170305G1_5





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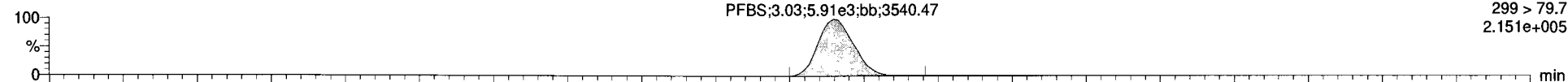
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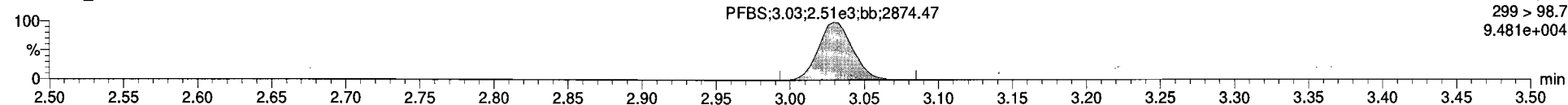
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PFBS

170305G1_6

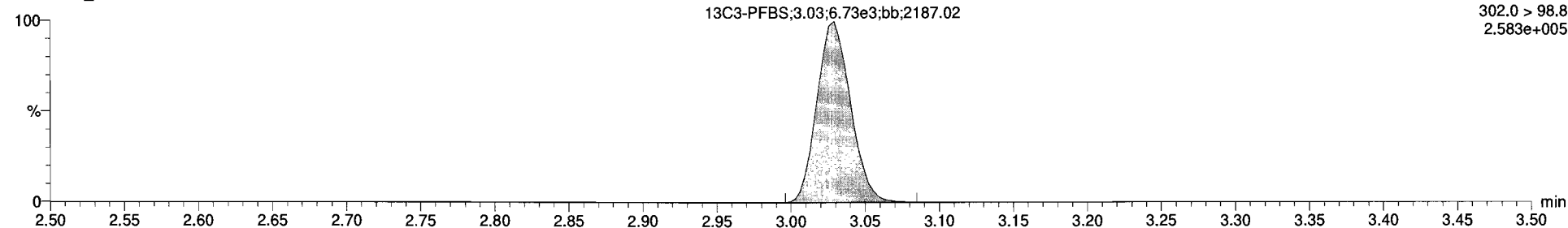


170305G1_6



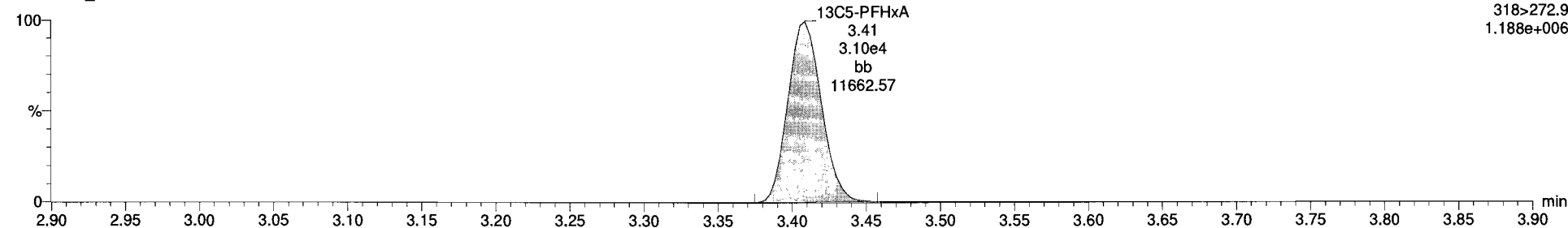
13C3-PFBS

170305G1_6



13C5-PFHxA

170305G1_6



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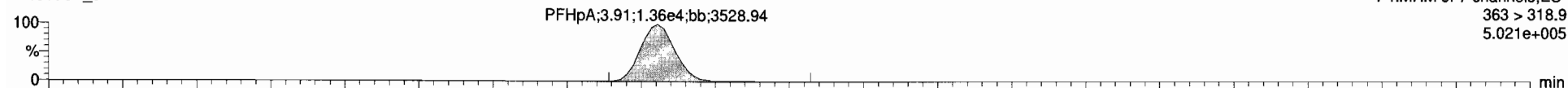
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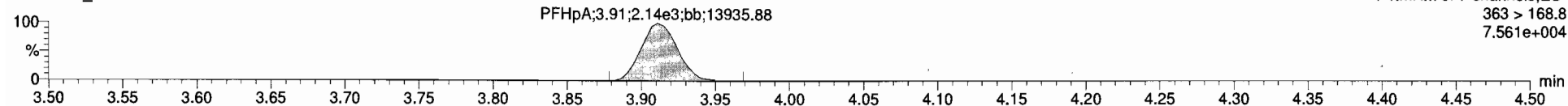
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PFHpA

170305G1_6

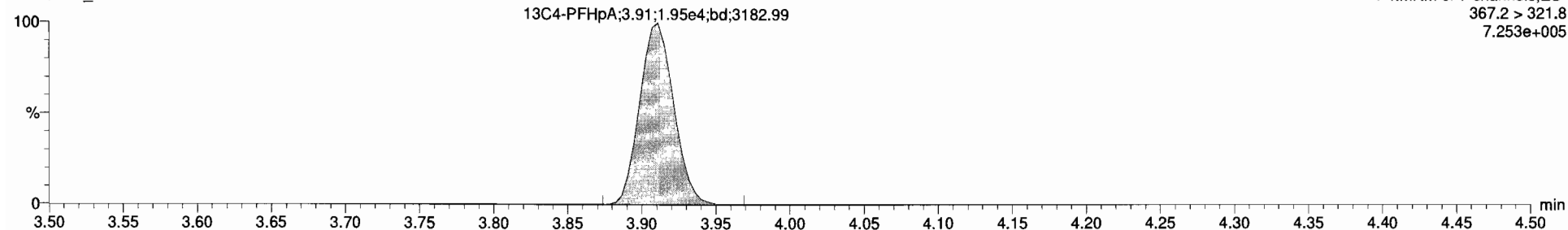


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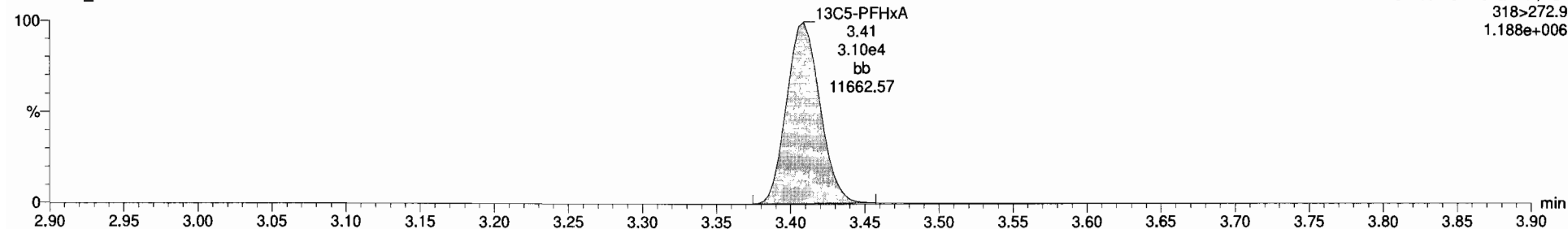
13C4-PFHpA

170305G1_6



13C5-PFHxA

170305G1_6



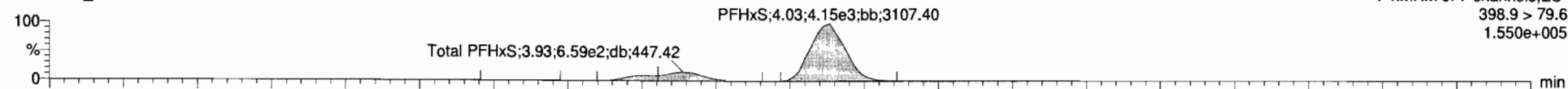
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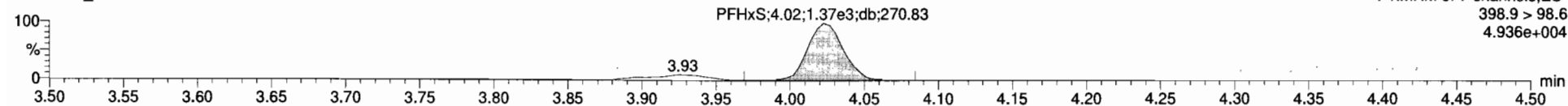
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Total PFHxS

170305G1_6

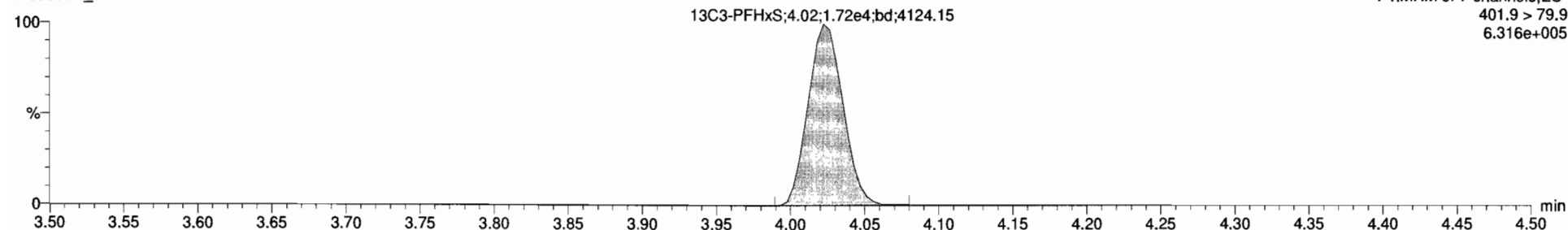


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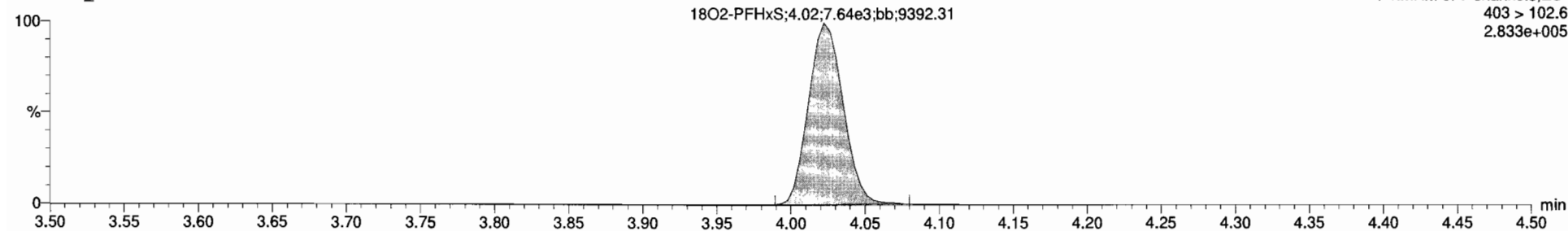
13C3-PFHxS

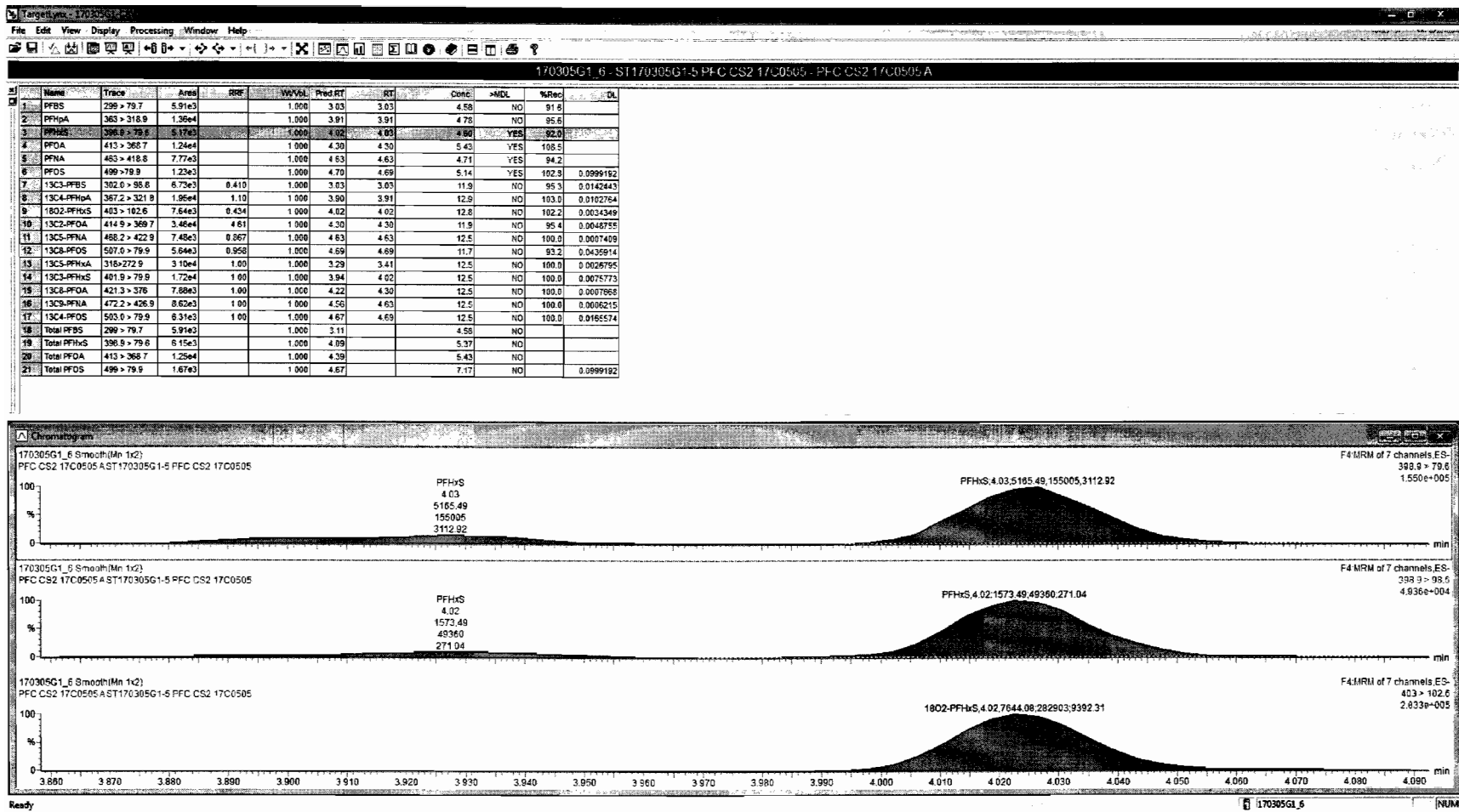
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18O2-PFHxS

170305G1_6





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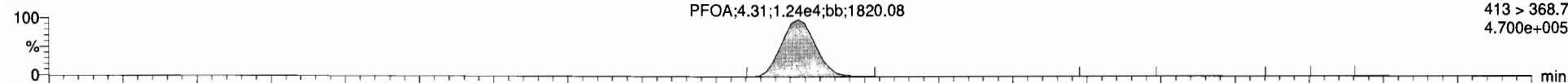
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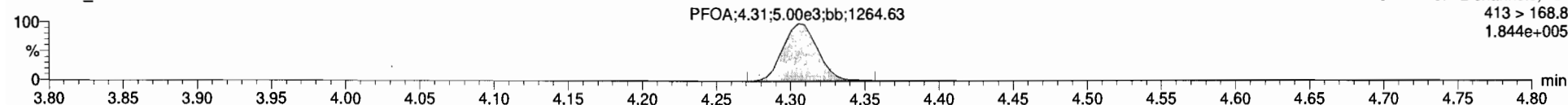
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Total PFOA

170305G1_6

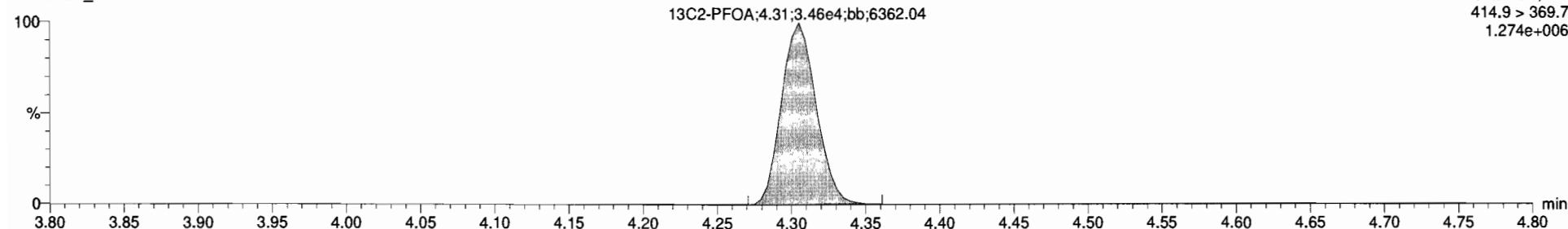


170305G1_6



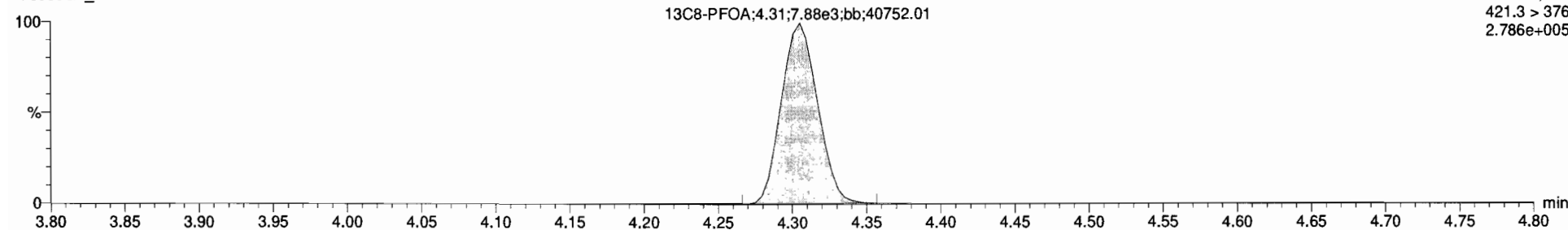
13C2-PFOA

170305G1_6



13C8-PFOA

170305G1_6



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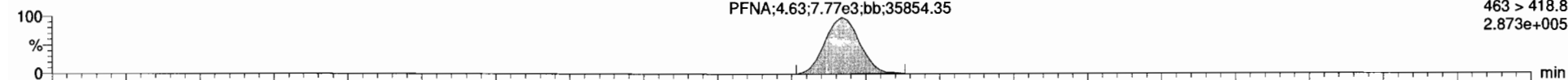
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PFNA

170305G1_6

PFNA;4.63;7.77e3;bb;35854.35

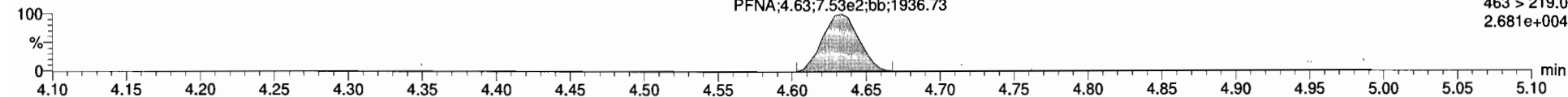
F5:MRM of 12 channels,ES-
463 > 418.8
2.873e+005



170305G1_6

PFNA;4.63;7.53e2;bb;1936.73

F5:MRM of 12 channels,ES-
463 > 219.0
2.681e+004

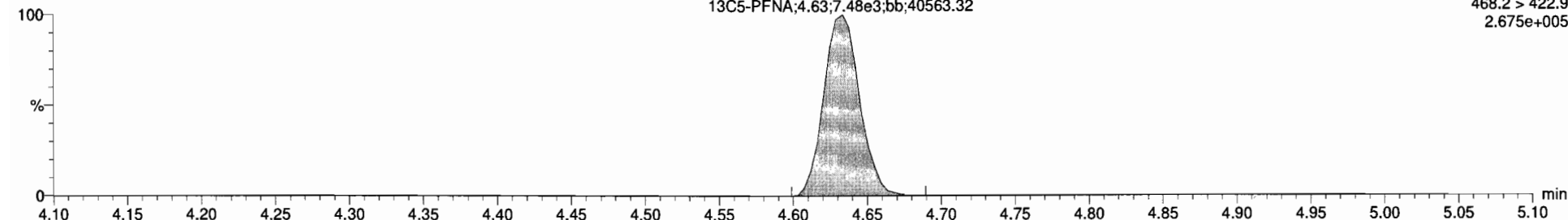


13C5-PFNA

170305G1_6

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468.2 > 422.9
2.675e+005

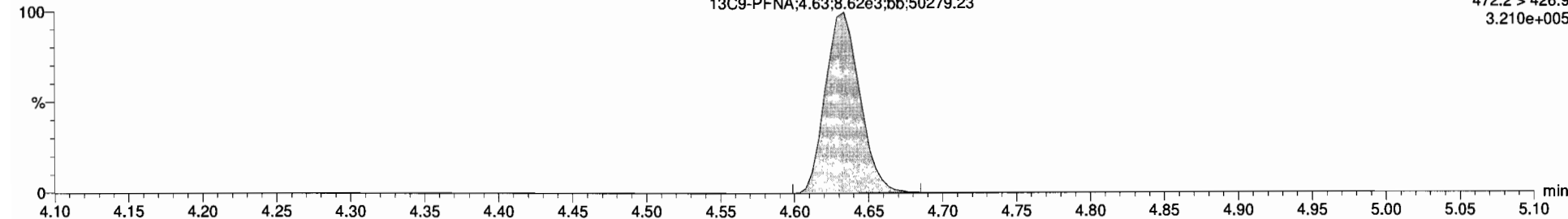


13C9-PFNA

170305G1_6

13C9-PFNA;4.63;8.62e3;bb;50279.23

F5:MRM of 12 channels,ES-
472.2 > 426.9
3.210e+005



Dataset: Untitled

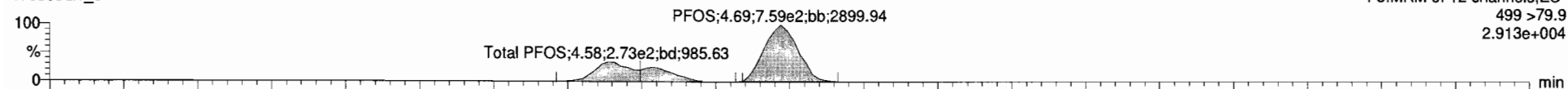
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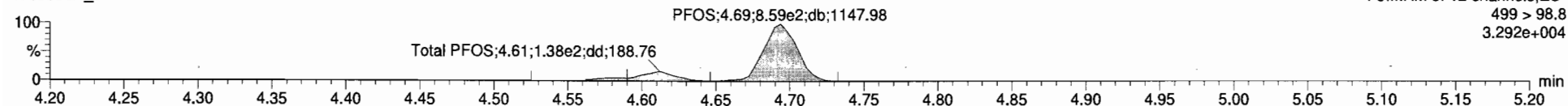
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Total PFOS

170305G1_6

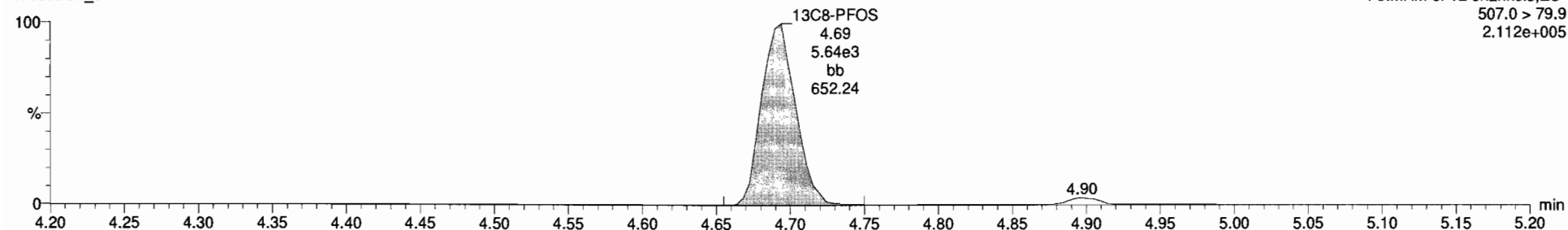


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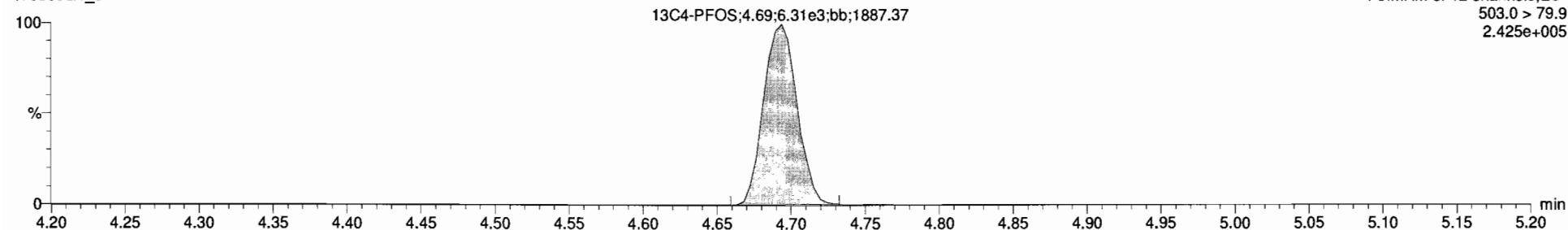
¹³C8-PFOS

170305G1_6



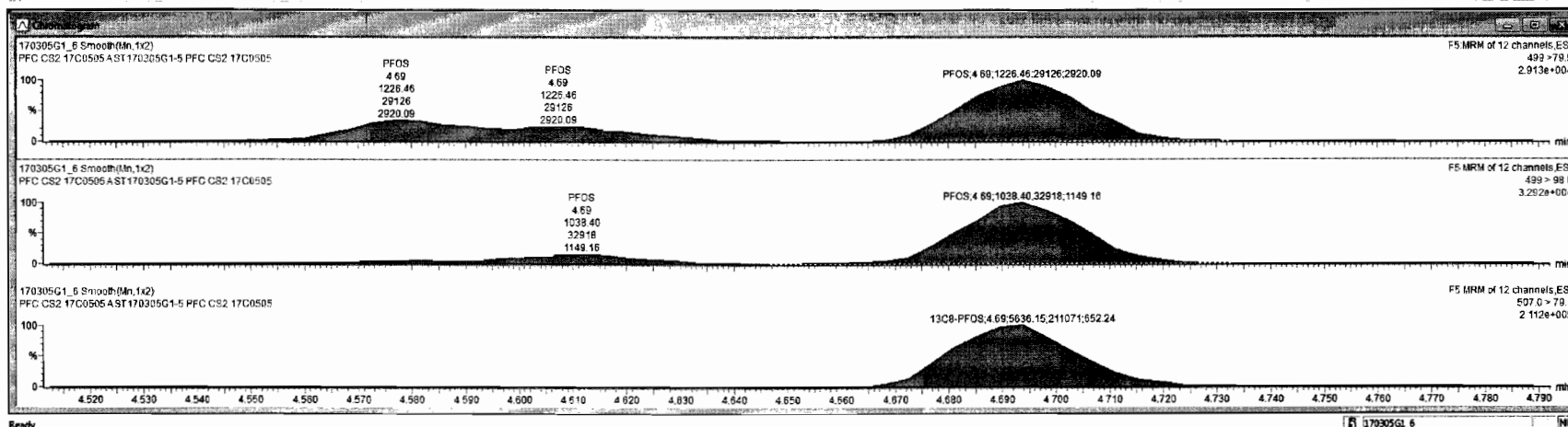
¹³C4-PFOS

170305G1_6



170305G1_6 ST170305G1-5 PFC CS2 17C0505 PFC CS2 17C0505A													
Name	Trace	Area	RRF	WVWL	Pred RT	RT	Cone	SMOL	%Rel	DL			

1	PFBS	299 > 79.7	5.91e3		1.000	3.83	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	398.9 > 79.8	5.17e3		1.000	4.62	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	4.79	4.69	5.14	YES	102.8	0.0999192		
7	13C3-PFBS	302.0 > 98.8	6.73e3	0.410	1.000	3.83	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	0.0102784		
9	18O2-PFHxS	403 > 102.6	7.64e3	0.434	1.000	4.62	4.02	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	0.867	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	0.0435914		
13	13C5-PFHxS	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	13C6-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	0.0008215		
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	368.9 > 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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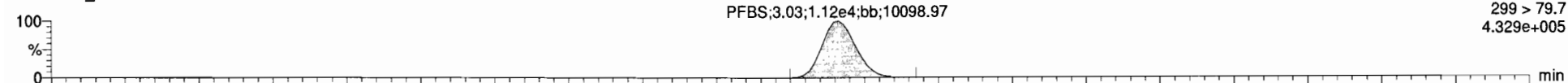
Last Altered: Monday, March 06, 2017 08:36:20 Pacific Standard Time

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

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

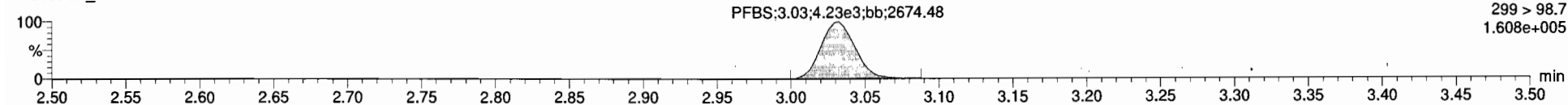
PFBS

170305G1_7



F2:MRM of 3 channels,ES-
299 > 79.7
4.329e+005

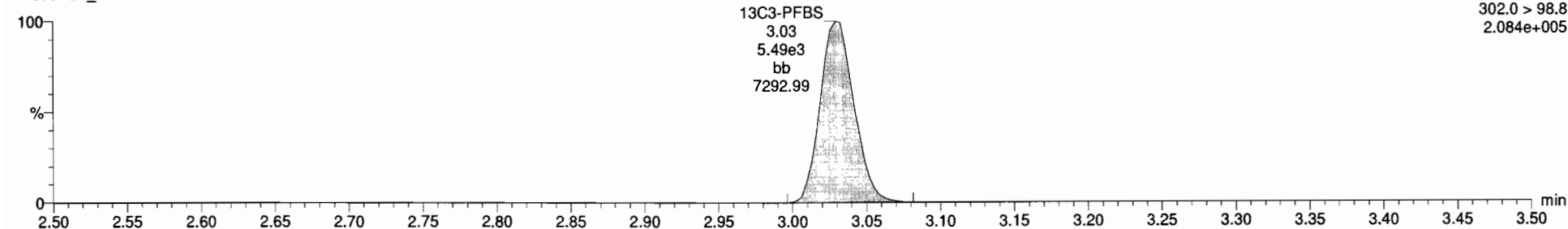
170305G1_7



F2:MRM of 3 channels,ES-
299 > 98.7
1.608e+005

13C3-PFBS

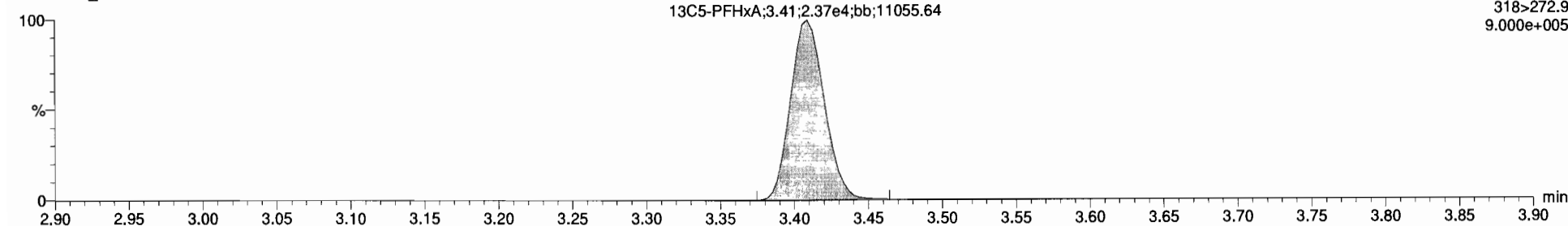
170305G1_7



F2:MRM of 3 channels,ES-
302.0 > 98.8
2.084e+005

13C5-PFHxA

170305G1_7



F3:MRM of 1 channel,ES-
318>272.9
9.000e+005

Dataset: Untitled

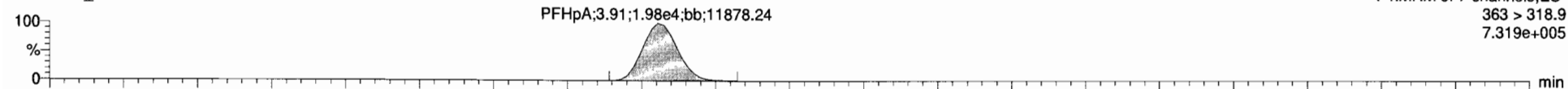
Last Altered: Monday, March 06, 2017 08:36:20 Pacific Standard Time

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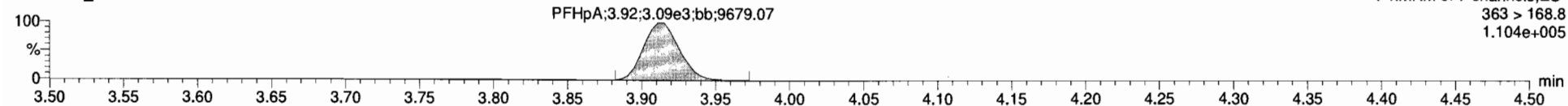
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PFHpA

170305G1_7

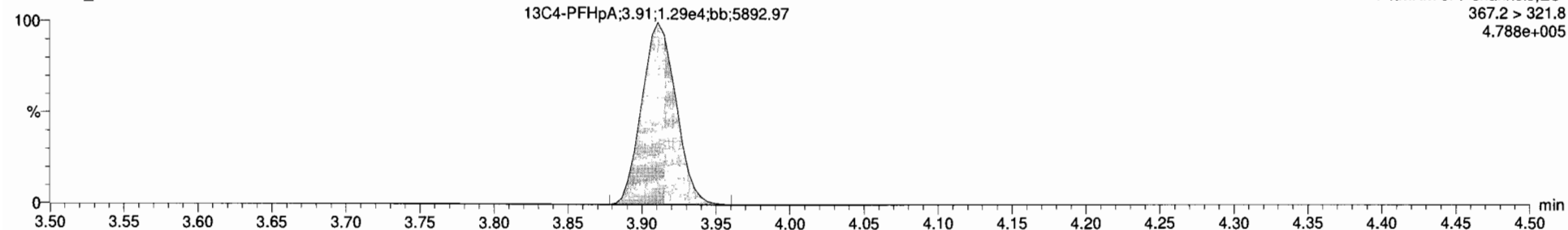


170305G1_7



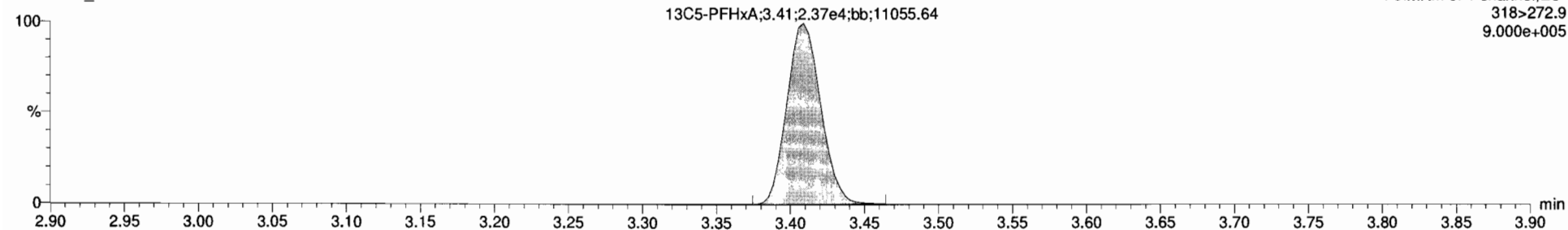
13C4-PFHpA

170305G1_7



13C5-PFHxA

170305G1_7



Dataset: Untitled

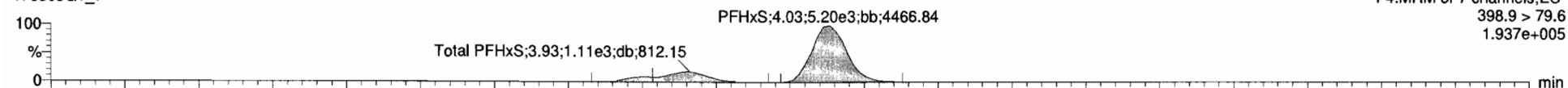
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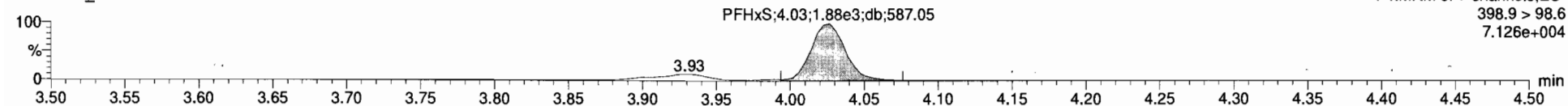
Total PFHxS

170305G1_7



F4:MRM of 7 channels,ES-
398.9 > 79.6
1.937e+005

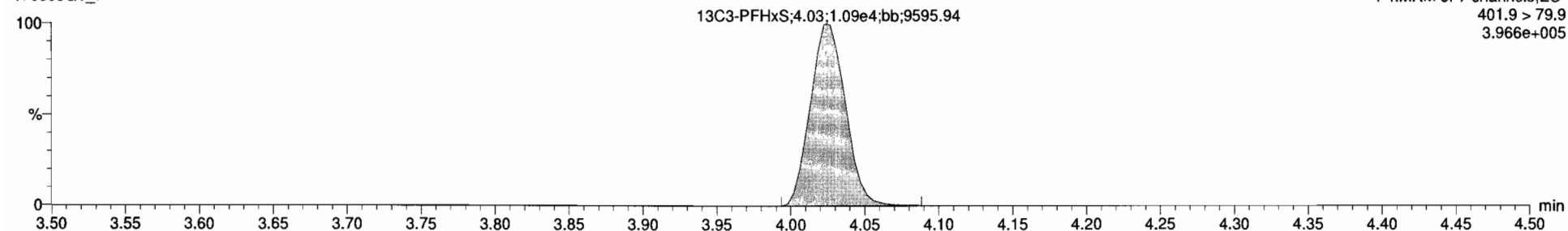
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F4:MRM of 7 channels,ES-
398.9 > 98.6
7.126e+004

13C3-PFHxS

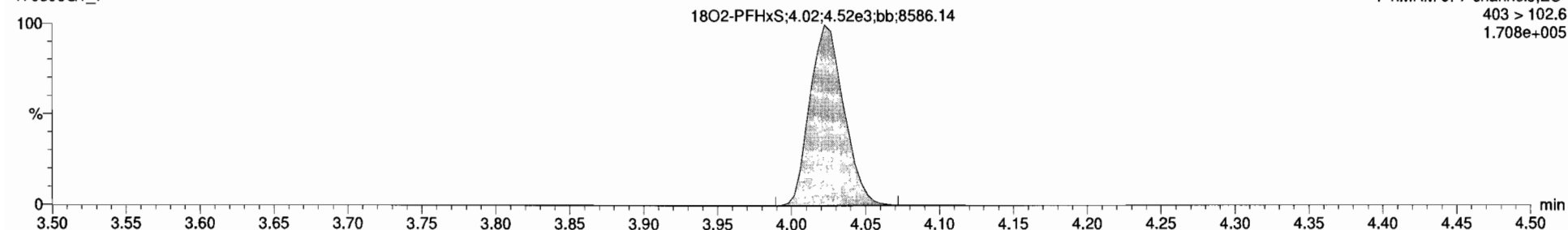
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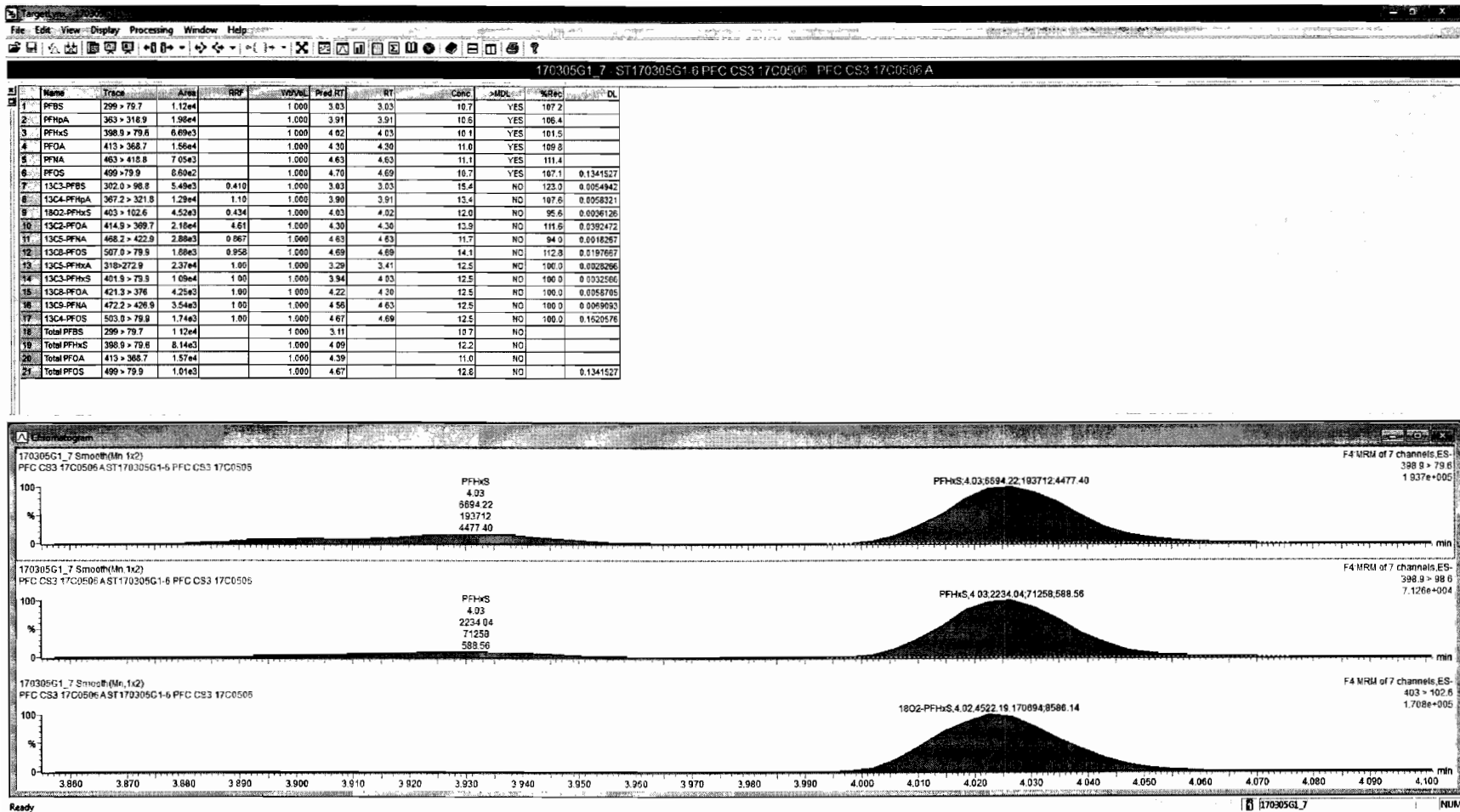
F4:MRM of 7 channels,ES-
401.9 > 79.9
3.966e+005

18O2-PFHxS

170305G1_7



F4:MRM of 7 channels,ES-
403 > 102.6
1.708e+005



Dataset: Untitled

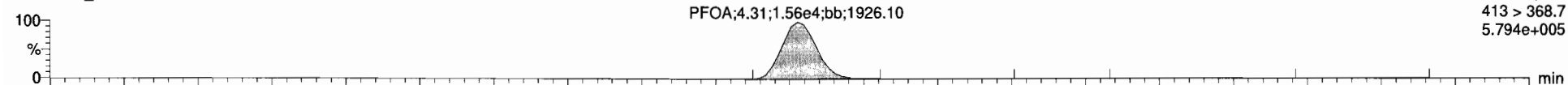
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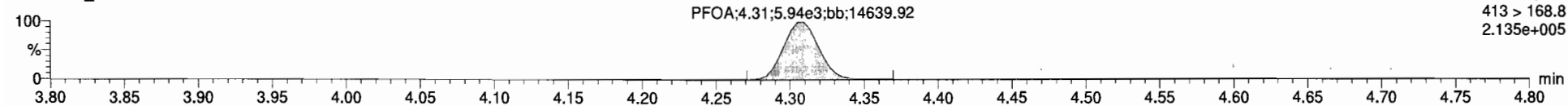
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Total PFOA

170305G1_7

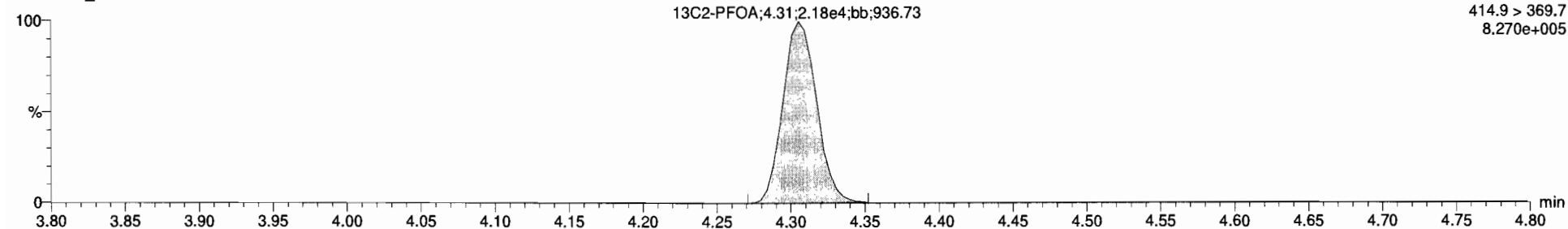


170305G1_7



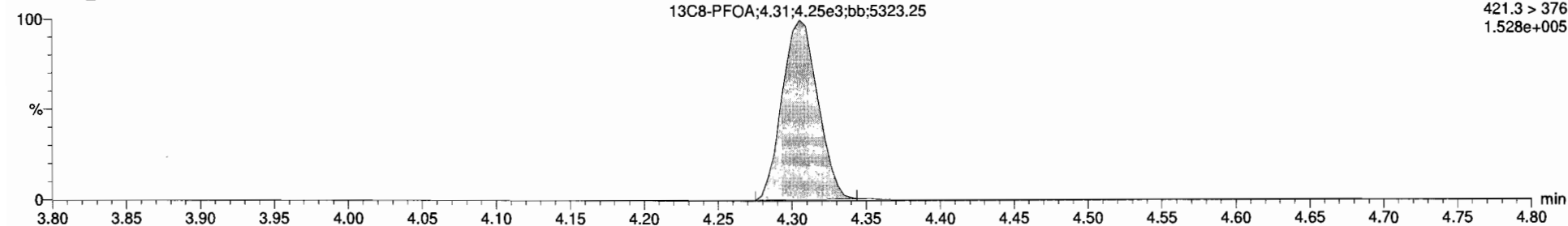
13C2-PFOA

170305G1_7



13C8-PFOA

170305G1_7



Dataset: Untitled

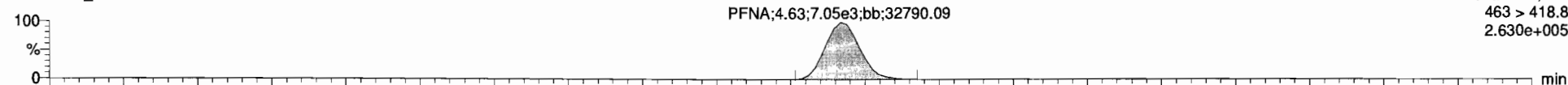
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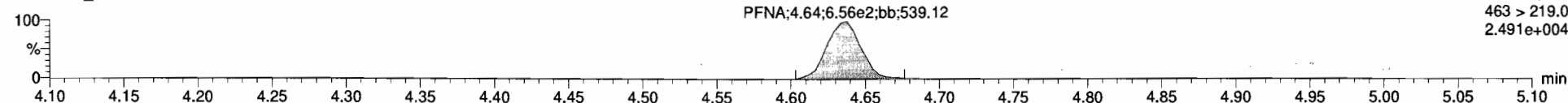
PFNA

170305G1_7



F5:MRM of 12 channels,ES-
463 > 418.8
2.630e+005

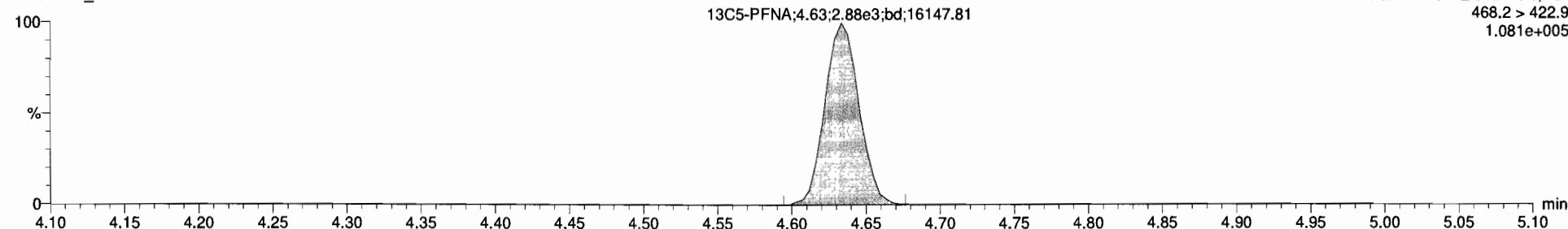
170305G1_7



F5:MRM of 12 channels,ES-
463 > 219.0
2.491e+004

13C5-PFNA

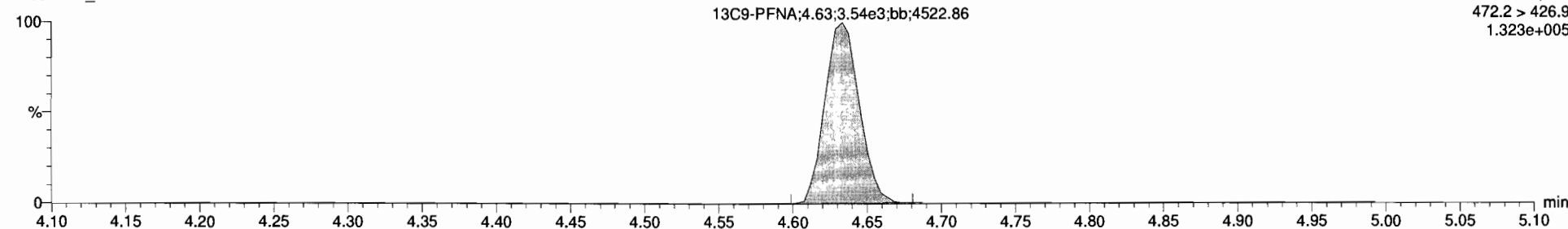
170305G1_7



F5:MRM of 12 channels,ES-
468.2 > 422.9
1.081e+005

13C9-PFNA

170305G1_7



F5:MRM of 12 channels,ES-
472.2 > 426.9
1.323e+005

Dataset: Untitled

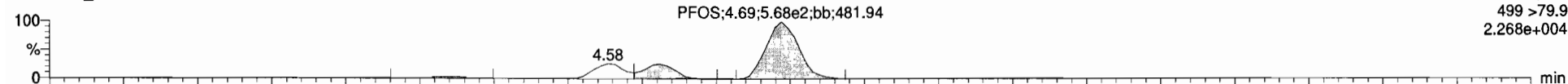
Last Altered: Monday, March 06, 2017 08:36:20 Pacific Standard Time

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

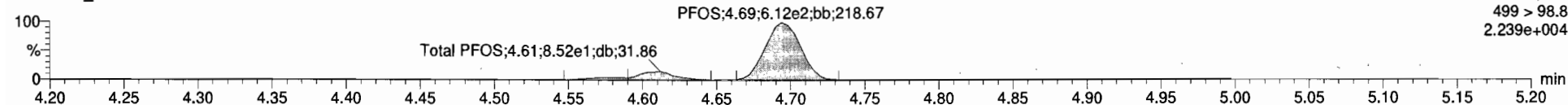
ID: ST170305G1-6 PFC CS3 17C0506, Description: PFC CS3 17C0506 A, Name: 170305G1_7, Date: 05-Mar-2017, Time: 13:49:29, Instrument: , Lab: , User:

Total PFOS

170305G1_7

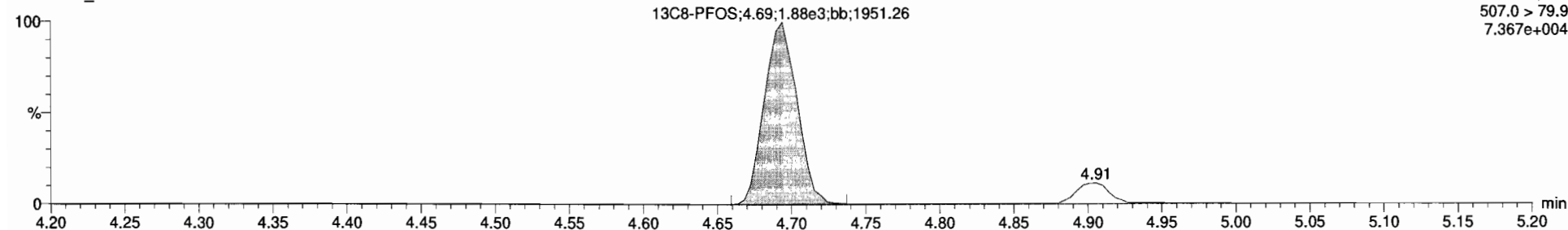


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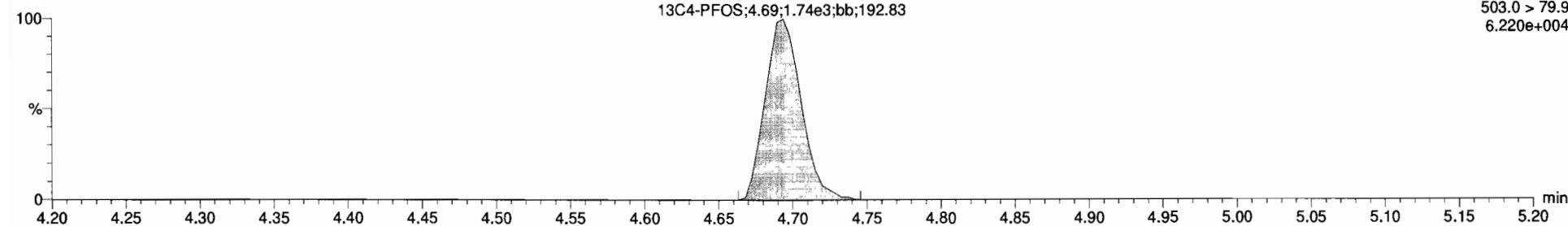
13C8-PFOS

170305G1_7



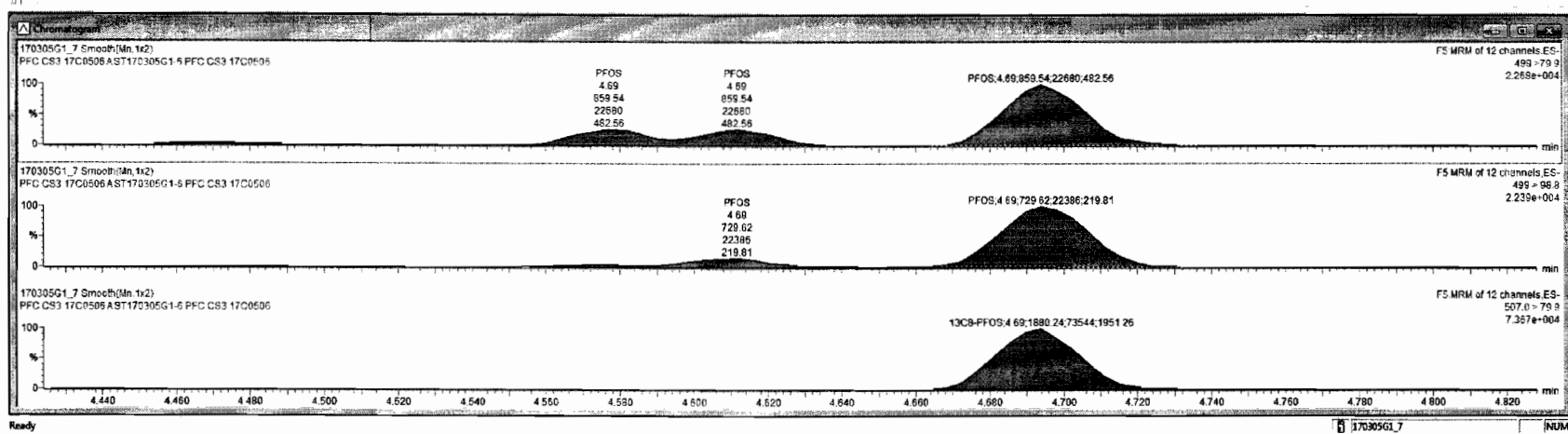
13C4-PFOS

170305G1_7





170305G1_7 - ST170305G1-6 PFC CS3 17C0506 - PFC CS3 17C0506 A											
#	Name	Trace	Area	RRP	WtVal	Pred RT	RT	Conc.	>40L	%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	1.96e4		1.000	3.91	3.91	10.6	YES	106.4	0.0000000
3	PFHxS	398.9 > 79.8	6.69e3		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	109.3	0.0000000
5	PFNA	463 > 418.8	7.05e3		1.000	4.53	4.53	11.1	YES	111.4	0.0000000
6	PFOS	499 > 79.9	8.14e3		1.000	4.69	4.69	10.9	YES	109.4	0.1024216
7	13C3-PFBS	302.0 > 98.8	5.49e2	0.410	1.000	3.03	3.03	15.4	NO	123.0	0.0054942
8	13C4-PFHpA	367.2 > 321.8	1.29e4	1.10	1.000	3.90	3.91	13.4	NO	107.8	0.0058321
9	18O2-PFHxS	403 > 102.6	4.52e3	0.434	1.000	4.03	4.02	12.0	NO	95.5	0.0036126
10	13C2-PFOA	414.8 > 369.7	2.18e4	4.61	1.000	4.30	4.30	13.9	NO	111.6	0.032472
11	13C3-PFNA	468.2 > 422.9	2.86e3	0.867	1.000	4.63	4.63	11.7	NO	94.9	0.0018287
12	13C8-PFOS	507.0 > 79.8	1.86e3	0.958	1.000	4.69	4.69	14.1	NO	112.8	0.0197667
13	13C5-PFHxS	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	1.09e4	1.00	1.000	3.84	4.03	12.5	NO	100.0	0.0032560
15	13C8-PFOA	421.3 > 378	4.25e3	1.00	1.000	4.22	4.30	12.5	NO	100.0	0.0058705
16	13C9-PFNA	472.2 > 425.9	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	0.1620578
18	Total PFBS	299 > 79.7	1.12e4		1.000	3.11		10.7	NO		
19	Total PFHxS	398.9 > 79.8	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	4.87		13.0	NO		0.1024216



Dataset: Untitled

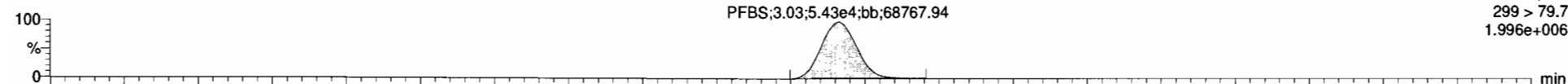
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Printed: Monday, March 06, 2017 08:37:19 Pacific Standard Time

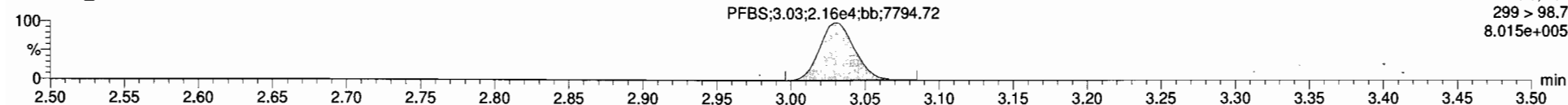
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PFBS

170305G1_8

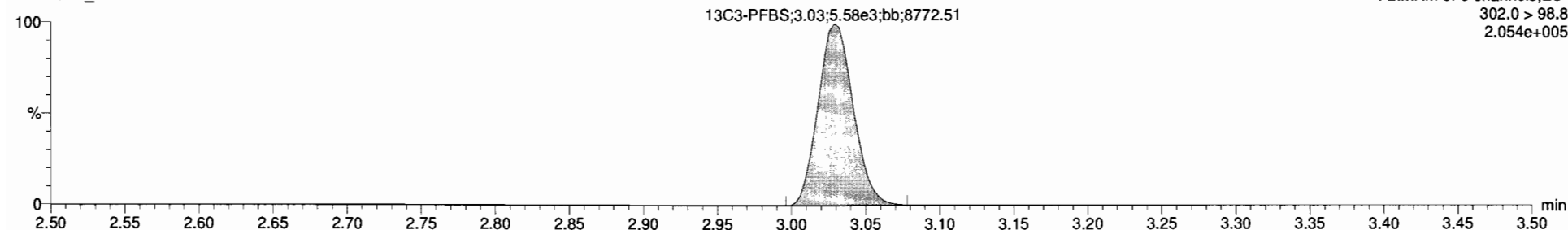


170305G1_8



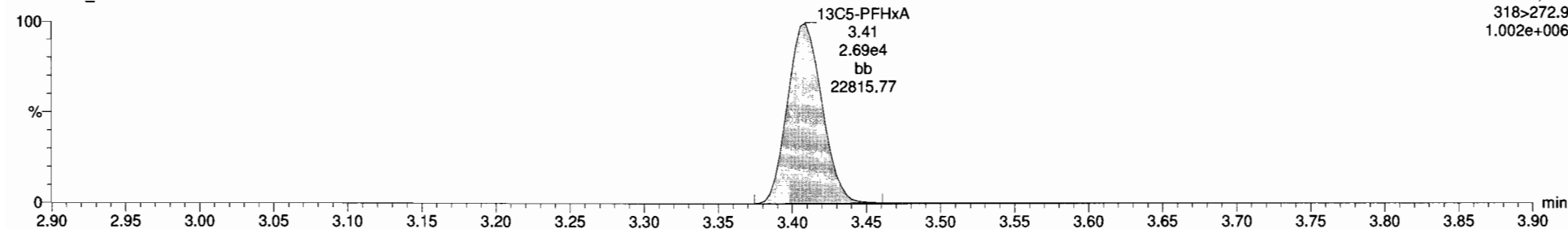
13C3-PFBS

170305G1_8



13C5-PFHxA

170305G1_8



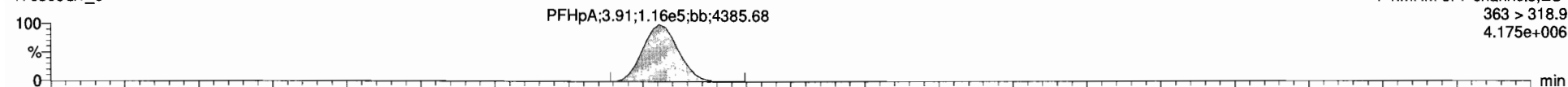
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Last Altered: Monday, March 06, 2017 08:36:20 Pacific Standard Time
Printed: Monday, March 06, 2017 08:37:19 Pacific Standard Time

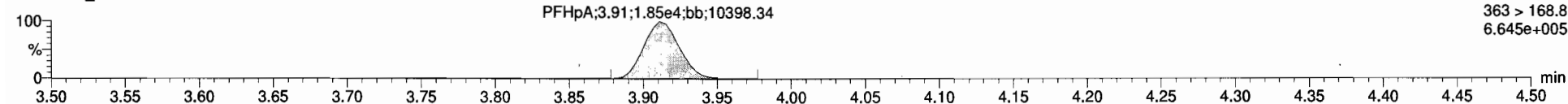
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PFHpA

170305G1_8

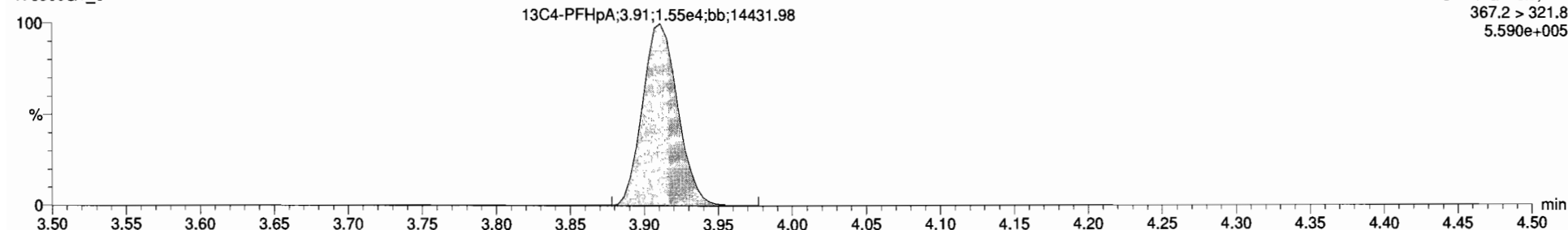


170305G1_8



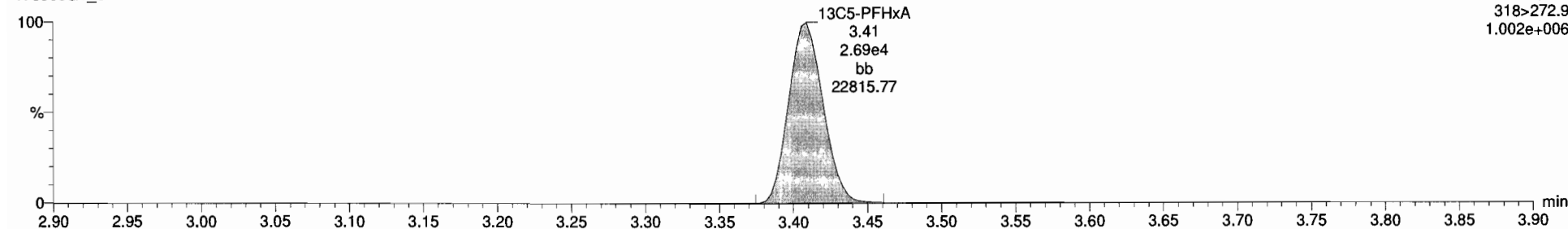
13C4-PFHpA

170305G1_8



13C5-PFHxA

170305G1_8



Dataset: Untitled

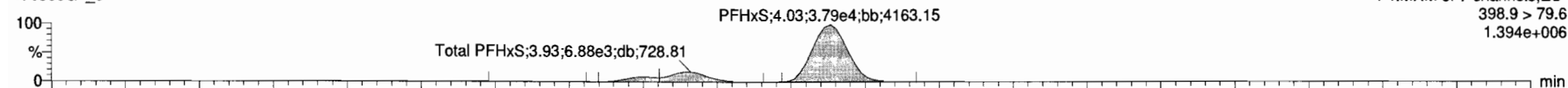
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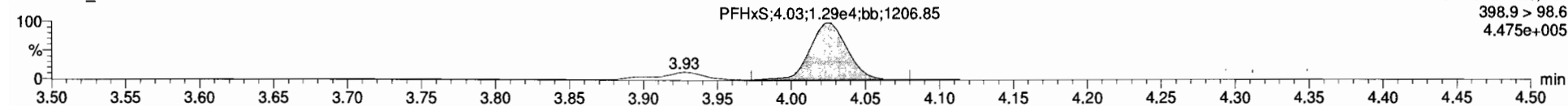
Total PFHxS

170305G1_8



F4:MRM of 7 channels,ES-
398.9 > 79.6
1.394e+006

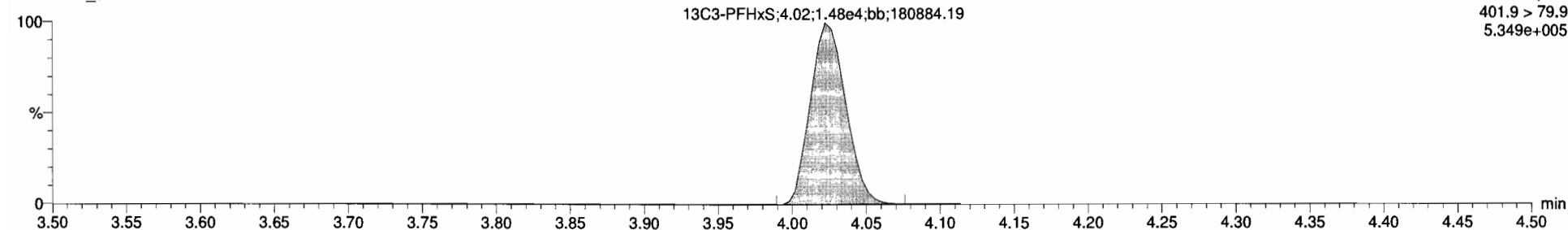
170305G1_8



F4:MRM of 7 channels,ES-
398.9 > 98.6
4.475e+005

13C3-PFHxS

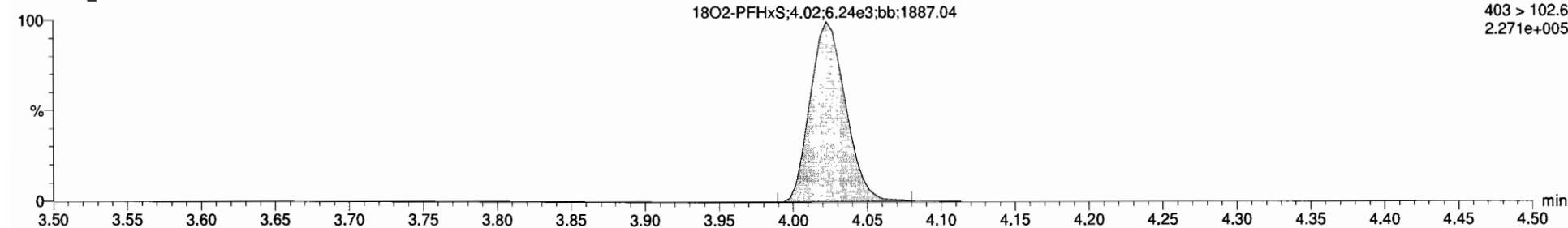
170305G1_8



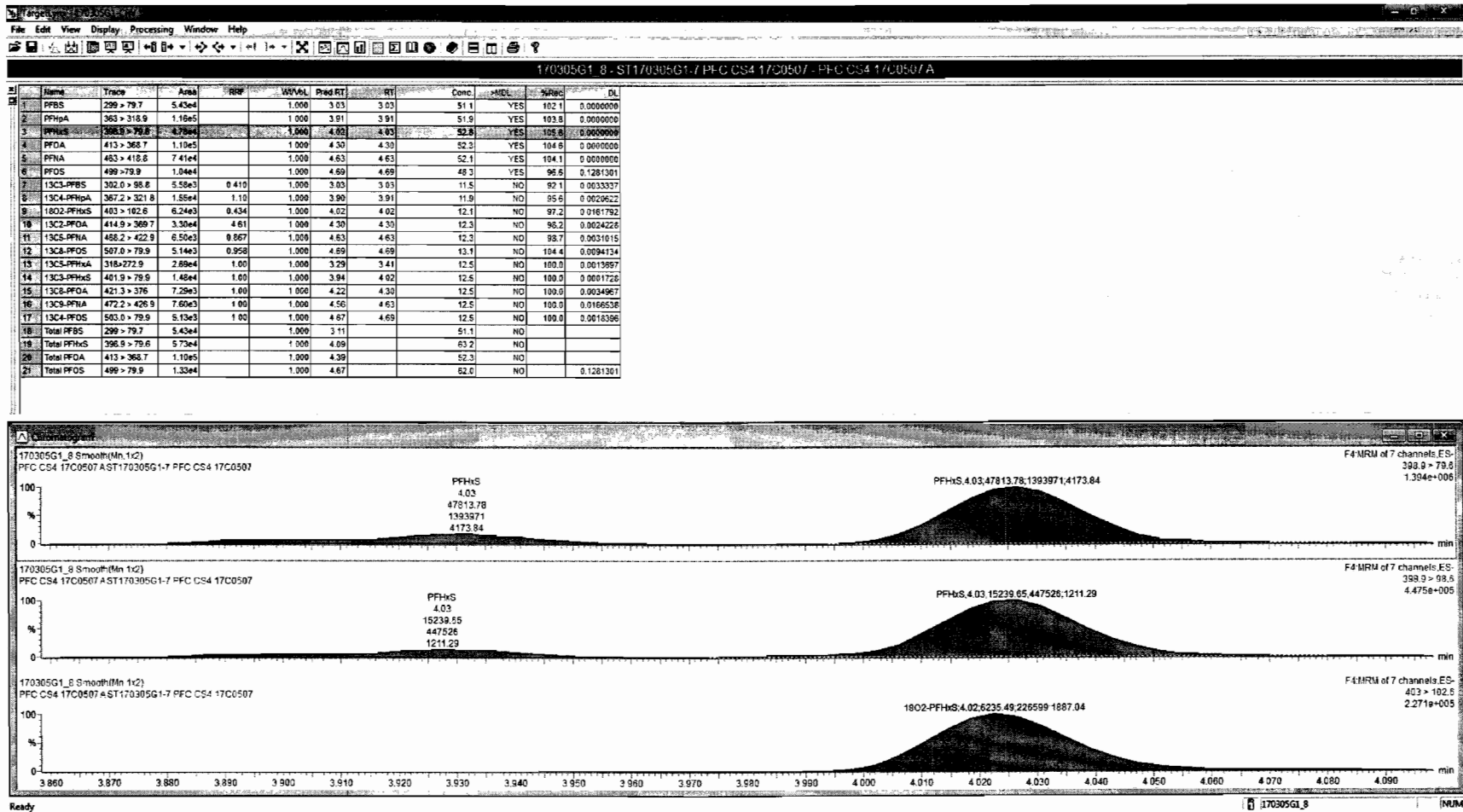
F4:MRM of 7 channels,ES-
401.9 > 79.9
5.349e+005

18O2-PFHxS

170305G1_8



F4:MRM of 7 channels,ES-
403 > 102.6
2.271e+005



Dataset: Untitled

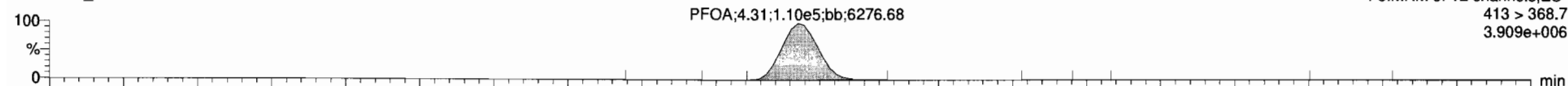
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Printed: Monday, March 06, 2017 08:37:19 Pacific Standard Time

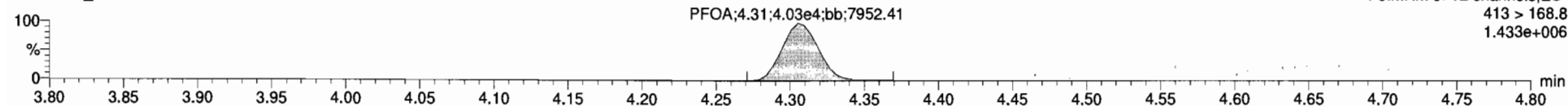
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Total PFOA

170305G1_8

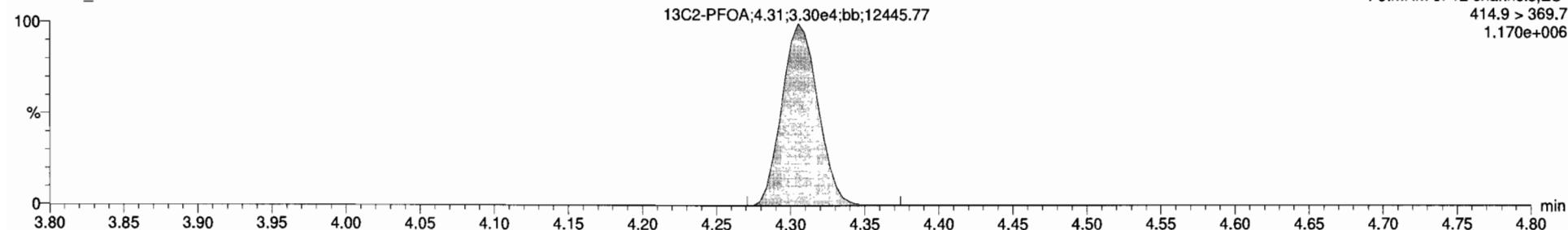


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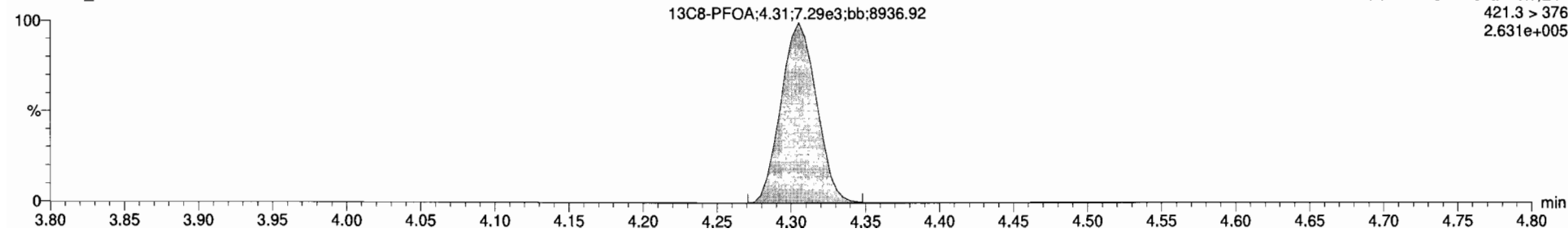
13C2-PFOA

170305G1_8



13C8-PFOA

170305G1_8



Dataset: Untitled

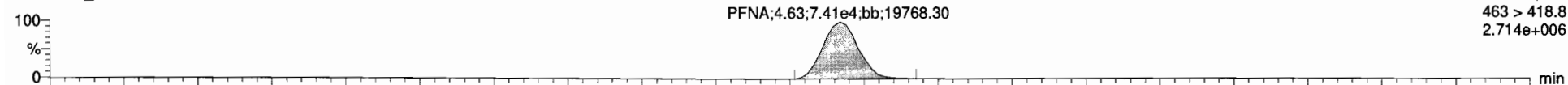
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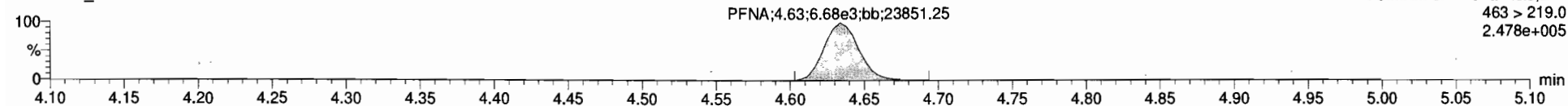
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PFNA

170305G1_8

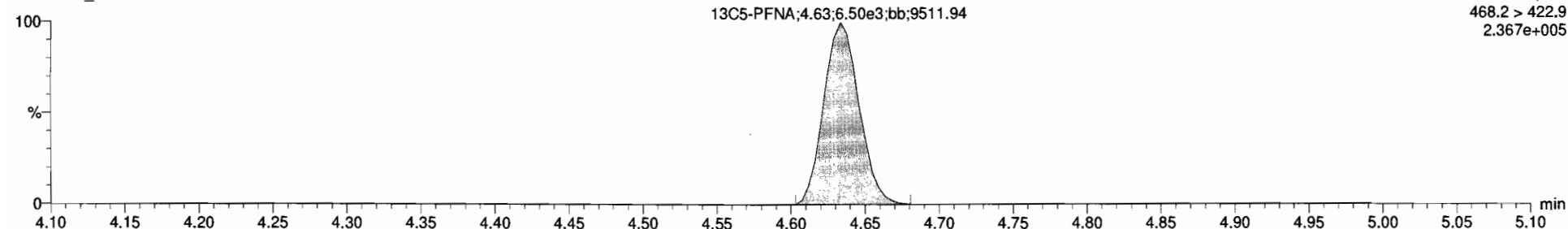


170305G1_8



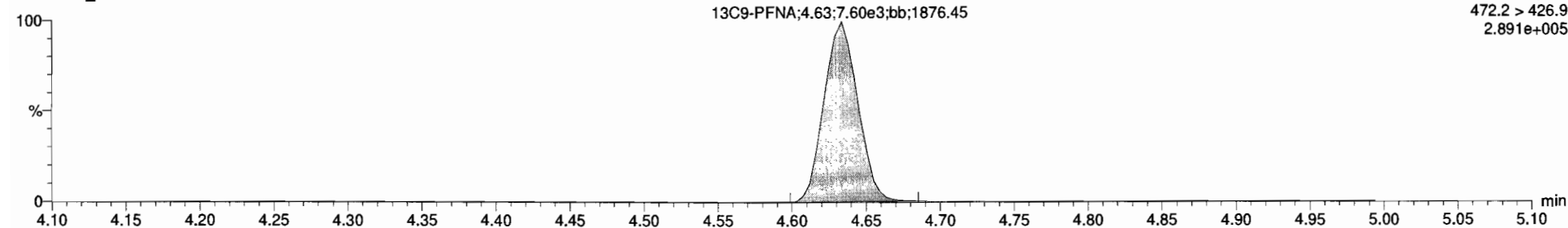
13C5-PFNA

170305G1_8



13C9-PFNA

170305G1_8



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

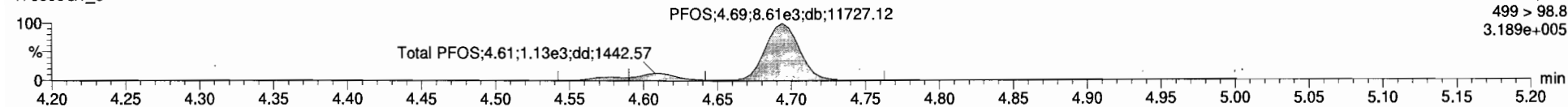
Total PFOS

170305G1_8



F5:MRM of 12 channels,ES-
499 >79.9
2.647e+005

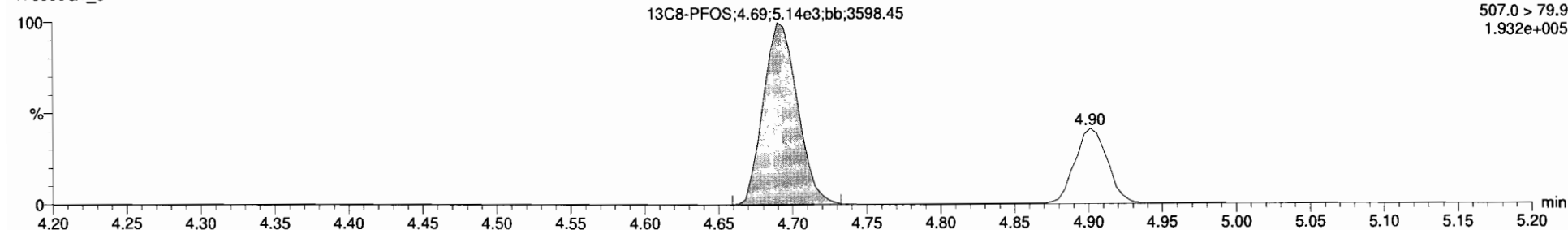
170305G1_8



F5:MRM of 12 channels,ES-
499 > 98.8
3.189e+005

13C8-PFOS

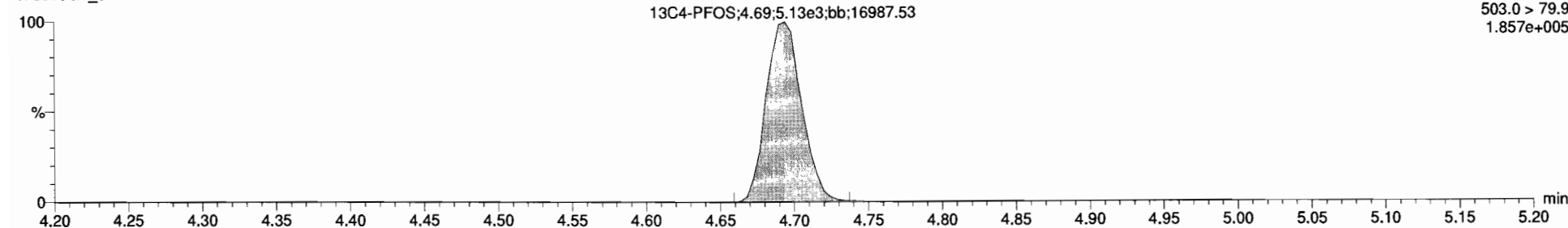
170305G1_8



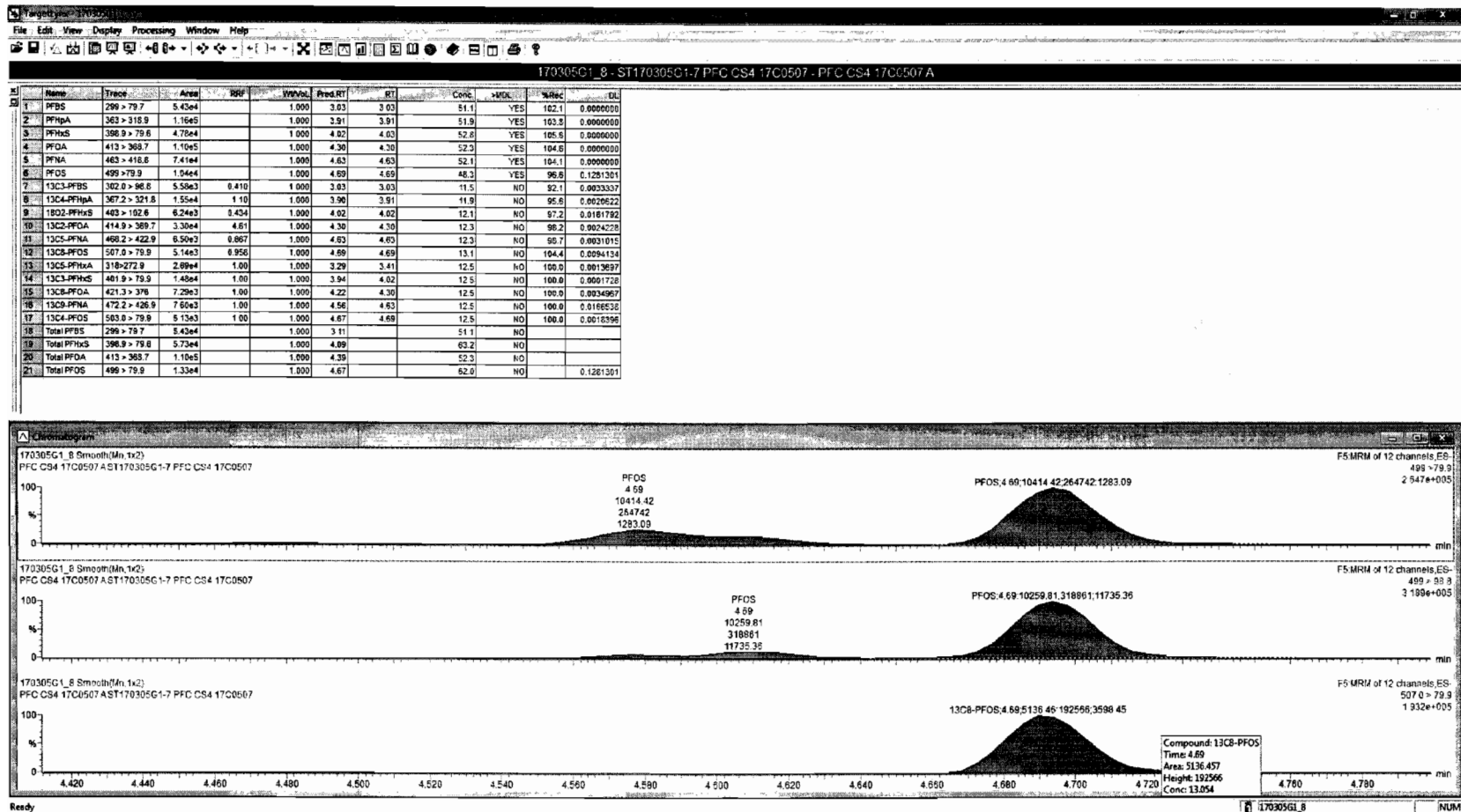
F5:MRM of 12 channels,ES-
507.0 > 79.9
1.932e+005

13C4-PFOS

170305G1_8



F5:MRM of 12 channels,ES-
503.0 > 79.9
1.857e+005



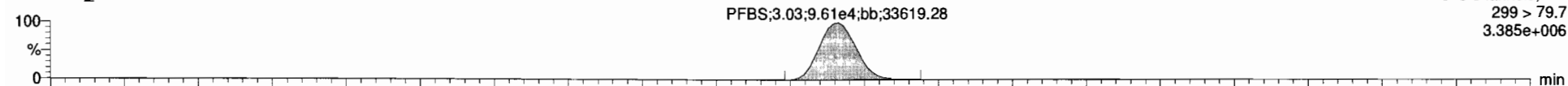
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Last Altered: Monday, March 06, 2017 08:36:20 Pacific Standard Time
Printed: Monday, March 06, 2017 08:37:19 Pacific Standard Time

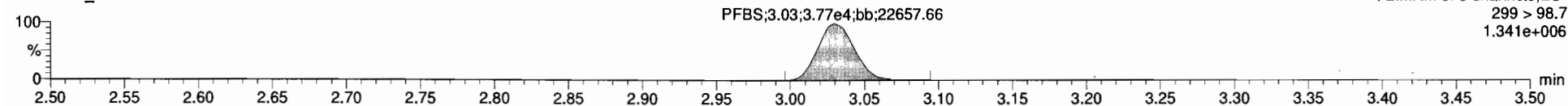
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PFBS

170305G1_9

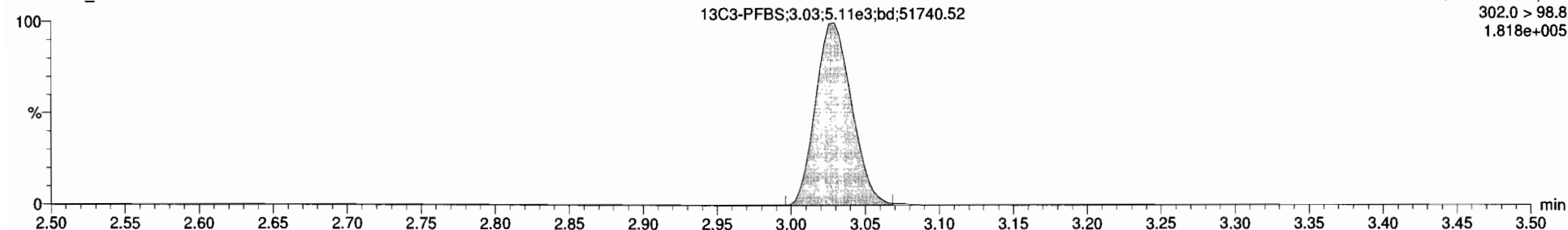


170305G1_9



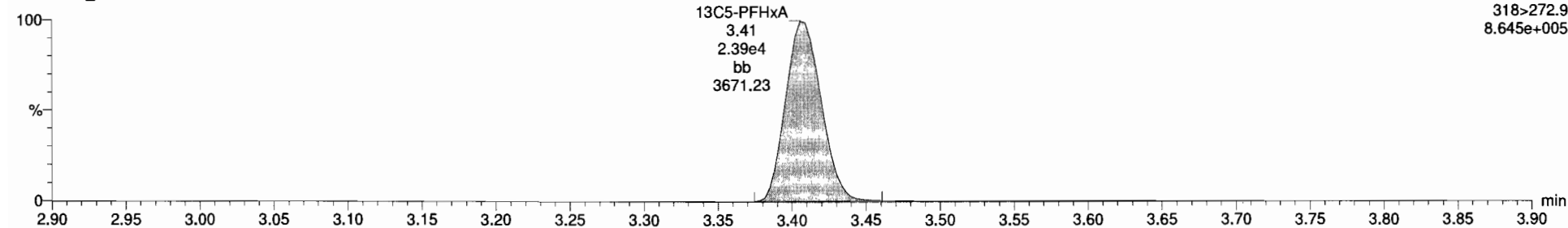
13C3-PFBS

170305G1_9



13C5-PFHxA

170305G1_9



Dataset: Untitled

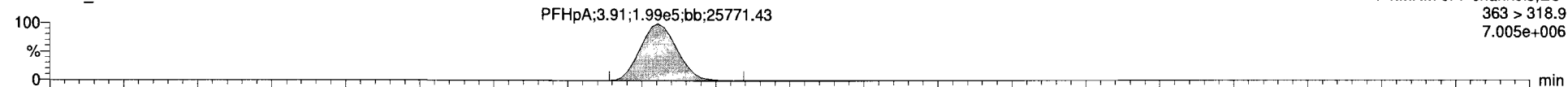
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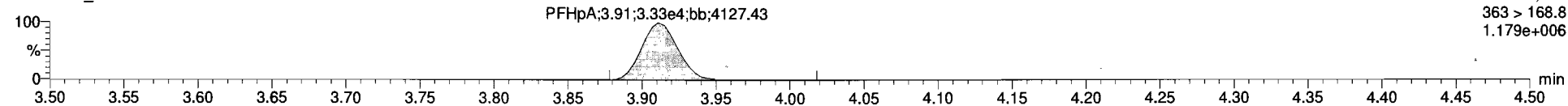
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PFHpA

170305G1_9

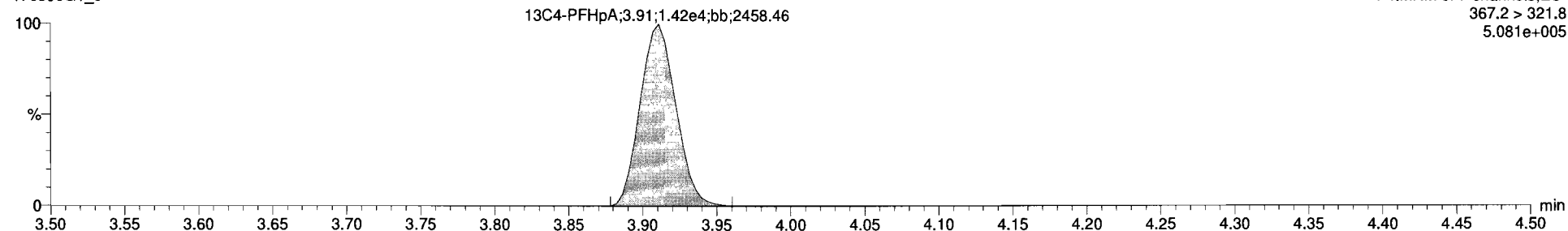


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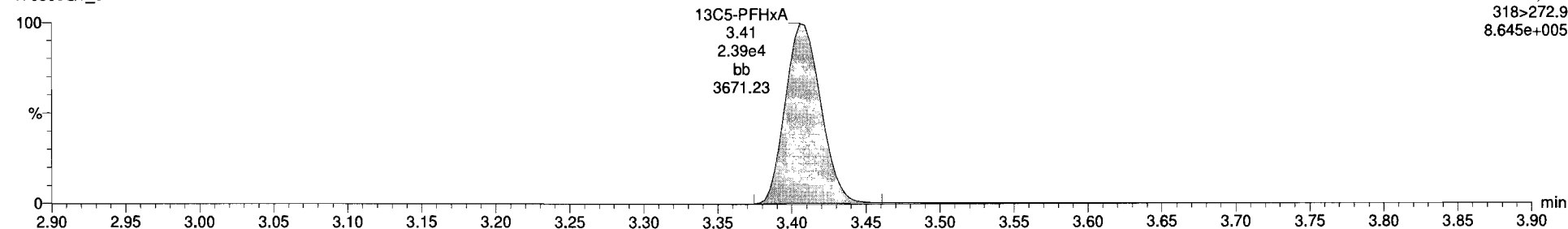
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170305G1_9



13C5-PFHxA

170305G1_9



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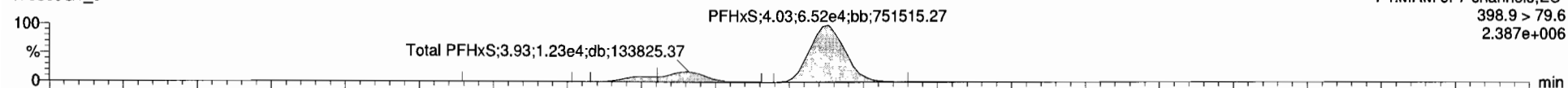
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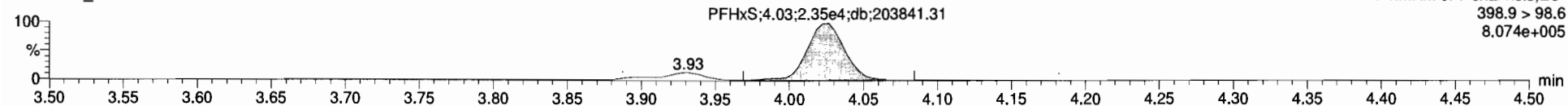
Total PFHxS

170305G1_9



F4:MRM of 7 channels,ES-
398.9 > 79.6
2.387e+006

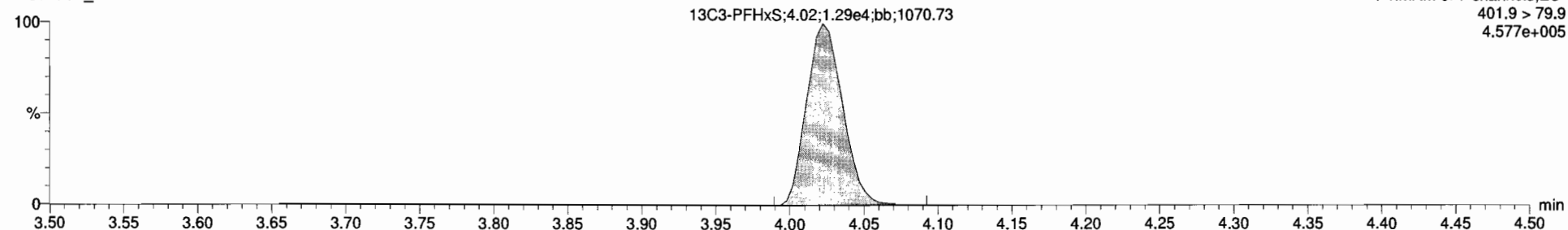
170305G1_9



F4:MRM of 7 channels,ES-
398.9 > 98.6
8.074e+005

13C3-PFHxS

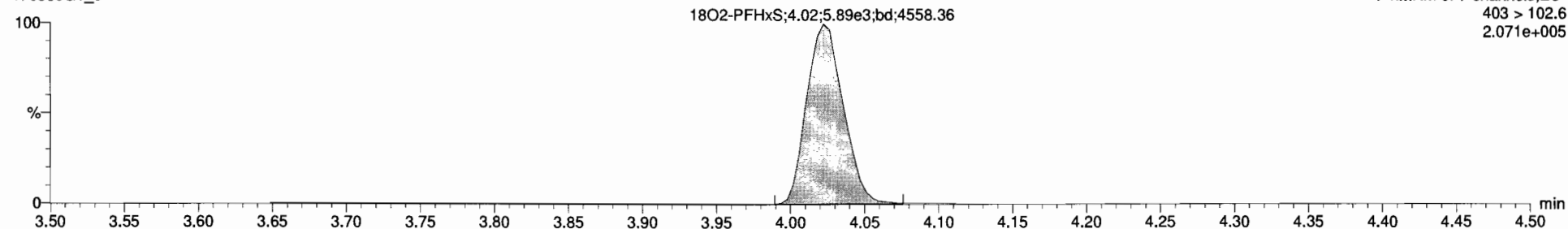
170305G1_9



F4:MRM of 7 channels,ES-
401.9 > 79.9
4.577e+005

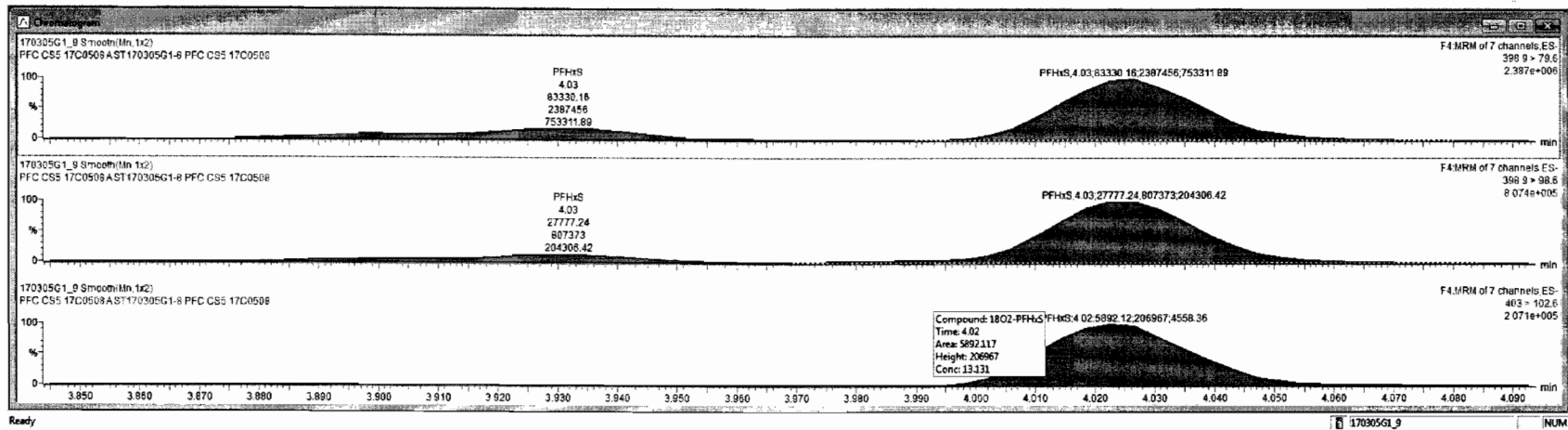
18O2-PFHxS

170305G1_9



F4:MRM of 7 channels,ES-
403 > 102.6
2.071e+005

1/0300G1_9 ST170305G1 8 PFC CS5 17C0508 PFC CS5 17C0408 A											
	Name	Trace	Area	RRF	WtVol	Prod RT	RT	Conc	WtVol	WtRet	DE
1	PFBS	299 > 79.7	9.81e4		1.000	3.03	3.03	98.6	YES	98.6	0.000000
2	PFHpA	363 > 318.9	1.99e5		1.000	3.91	3.91	97.6	YES	97.6	0.000000
3	PFHxS	368.9 > 79.6	8.33e4		1.000	4.02	4.03	97.4	YES	97.4	0.000000
4	PFOA	413 > 368.7	1.98e5		1.000	4.30	4.30	96.4	YES	96.4	0.000000
5	PFNA	463 > 418.8	1.58e5		1.000	4.63	4.63	97.1	YES	97.1	0.000000
6	PFOS	499 > 79.9	2.64e4		1.000	4.78	4.69	100	YES	100.2	0.098692
7	13C1-PFBS	302.0 > 98.8	5.11e3	0.410	1.000	3.02	3.03	12.1	NO	96.5	0.007023
8	13C4-PFHpA	367.2 > 321.8	1.42e4	1.10	1.000	3.90	3.91	12.5	NO	99.8	0.0154075
9	18O2-PFHxS	403 > 102.6	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	4.81	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	13C6-PFOS	507.0 > 79.9	6.36e3	0.958	1.000	4.69	4.69	12.7	NO	101.3	0.0096289
13	13C8-PFHpA	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 > 378	6.59e3	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	0.0039269
17	13C4-PFOS	503.0 > 79.9	6.45e3	1.00	1.000	4.67	4.69	12.5	NO	100.0	0.0015940
18	Total PFBS	299 > 79.7	9.81e4		1.000	3.11		98.6	NO		0.000000
19	Total PFHxS	368.9 > 79.6	1.01e5		1.000	4.09		113	NO		0.000000
20	Total PFOA	413 > 368.7	1.98e5		1.000	4.39		96.4	NO		0.000000
21	Total PFOS	499 > 79.9	3.55e4		1.000	4.67		135	NO		0.098692



Dataset: Untitled

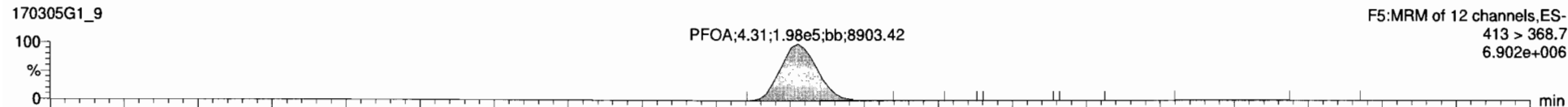
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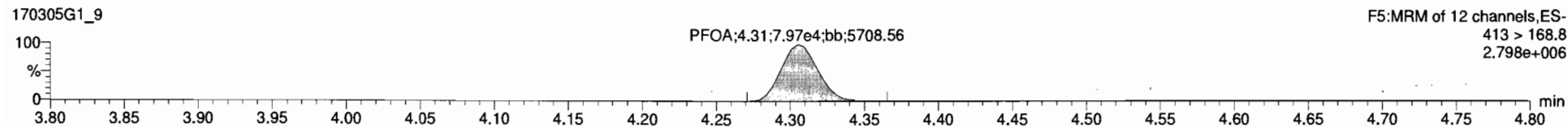
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Total PFOA

170305G1_9

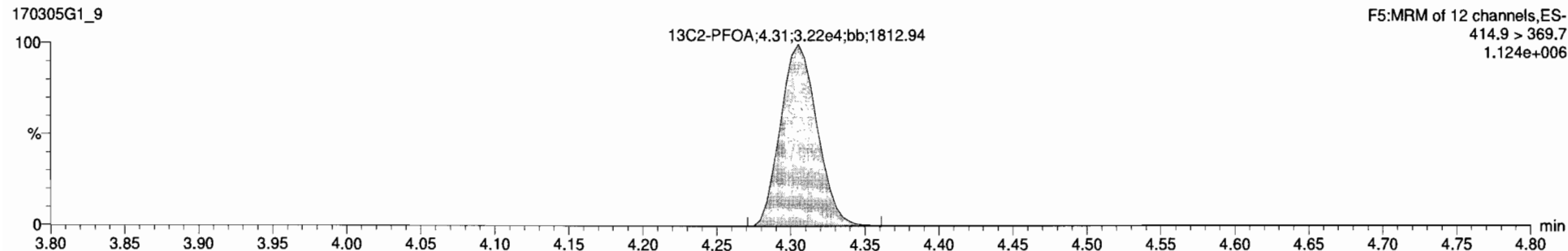


170305G1_9



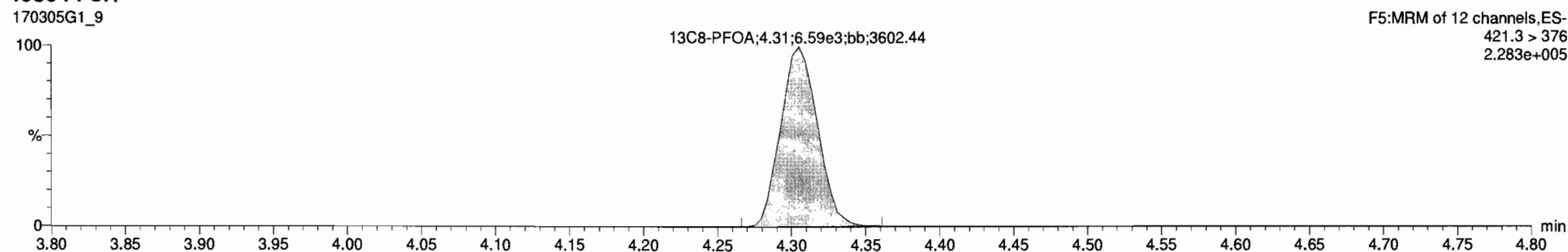
13C2-PFOA

170305G1_9



13C8-PFOA

170305G1_9



Dataset: Untitled

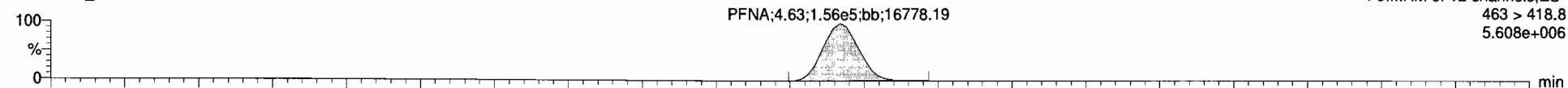
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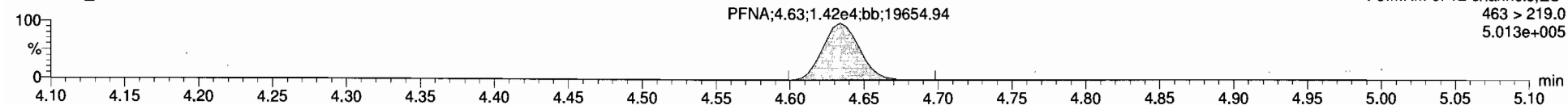
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PFNA

170305G1_9

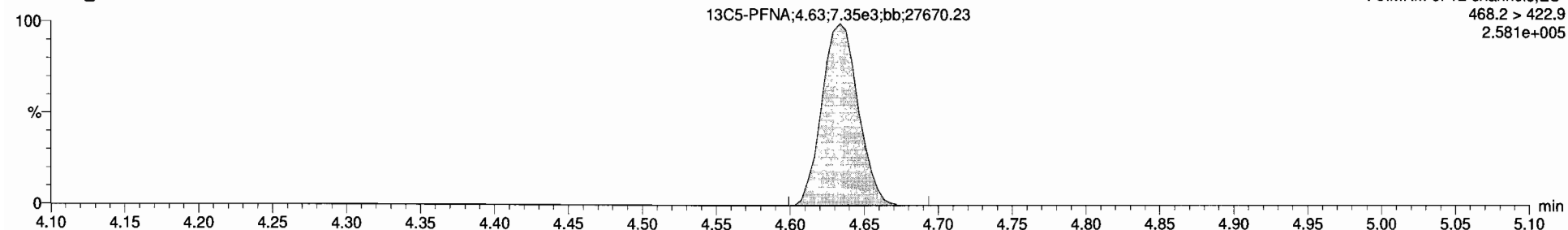


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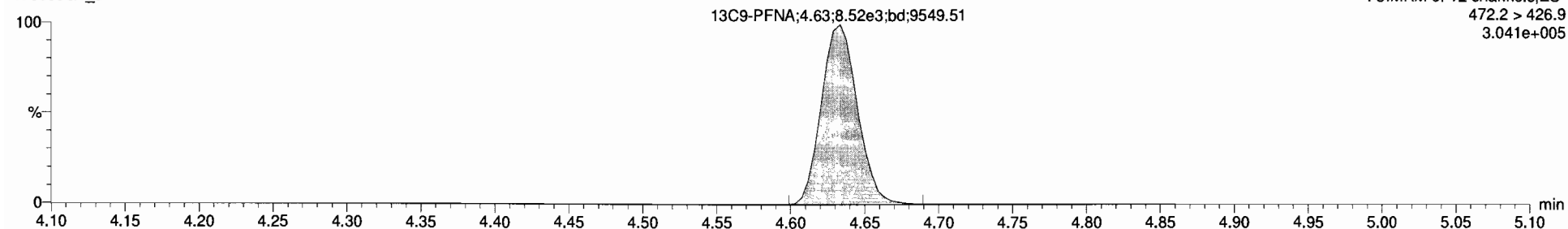
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170305G1_9



13C9-PFNA

170305G1_9



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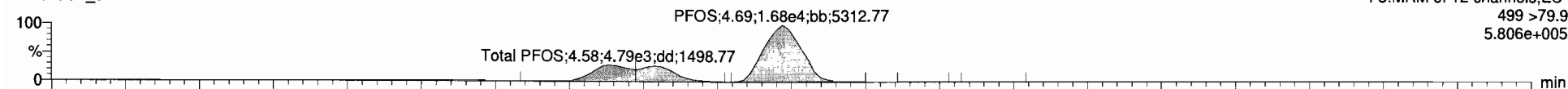
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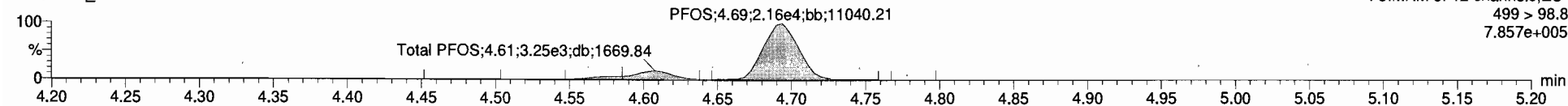
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Total PFOS

170305G1_9

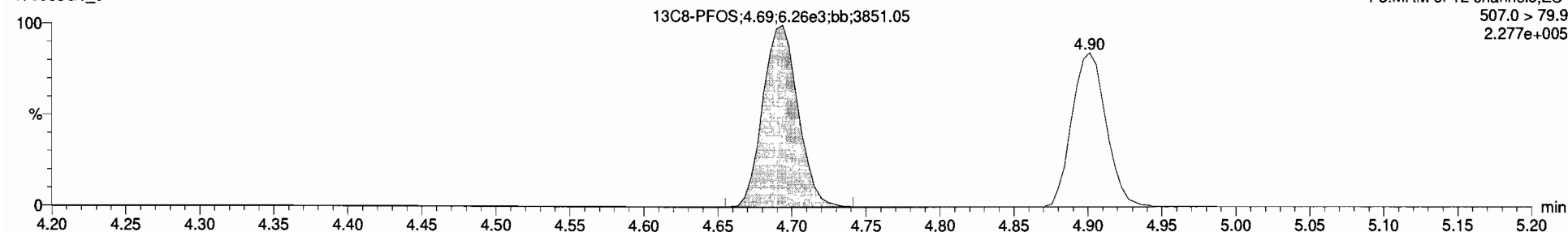


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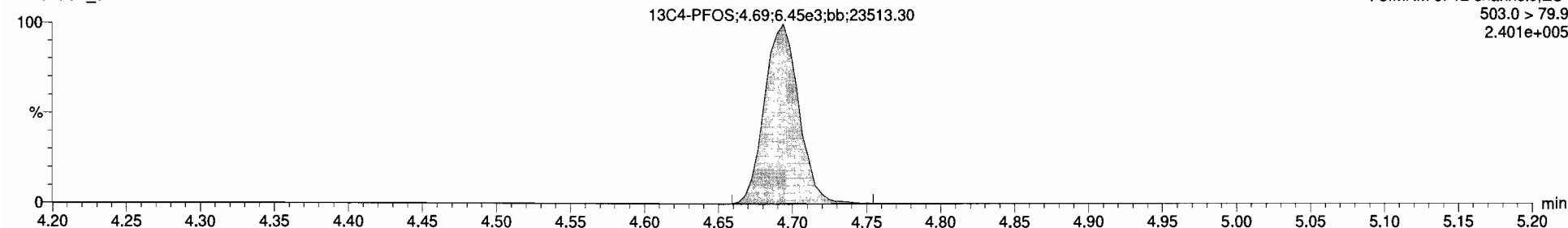
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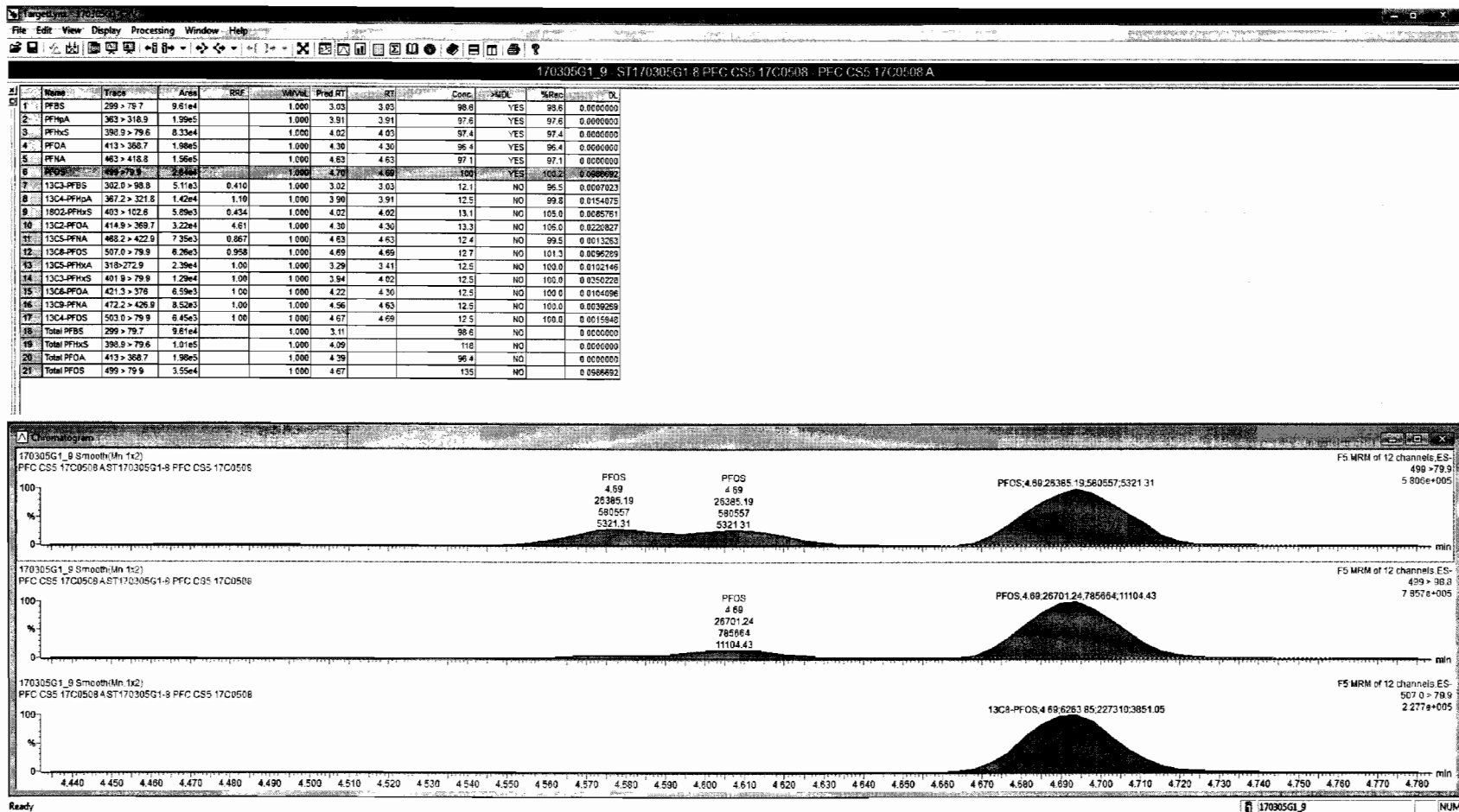
170305G1_9



13C4-PFOS

170305G1_9





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

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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

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

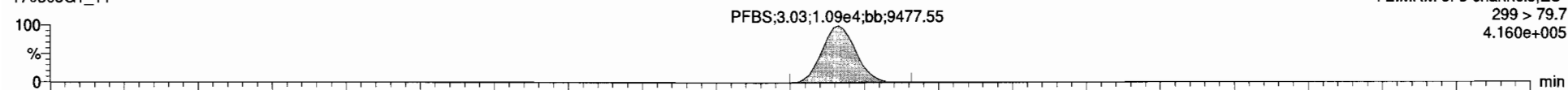
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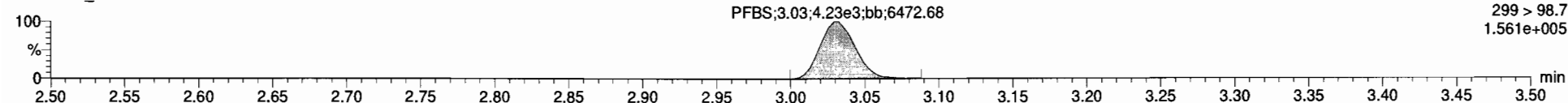
PFBS

170305G1_11



F2:MRM of 3 channels,ES-
299 > 79.7
4.160e+005

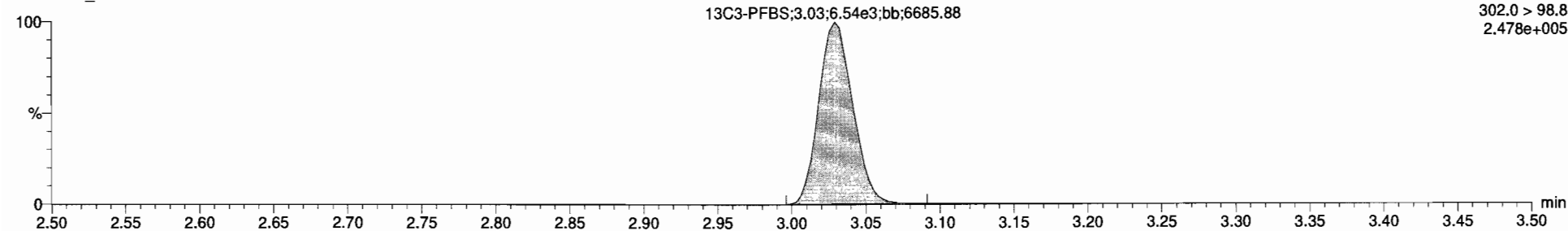
170305G1_11



F2:MRM of 3 channels,ES-
299 > 98.7
1.561e+005

13C3-PFBS

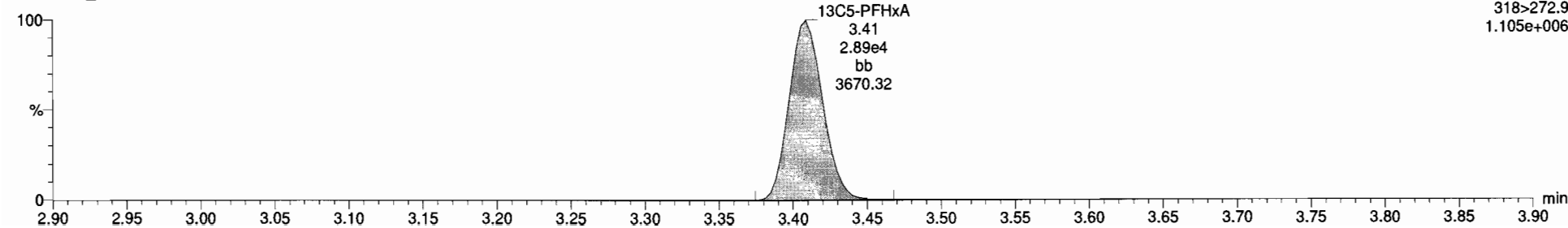
170305G1_11



F2:MRM of 3 channels,ES-
302.0 > 98.8
2.478e+005

13C5-PFHxA

170305G1_11



F3:MRM of 1 channel,ES-
318>272.9
1.105e+006

Dataset: Untitled

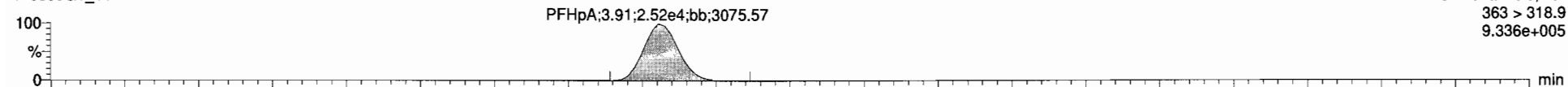
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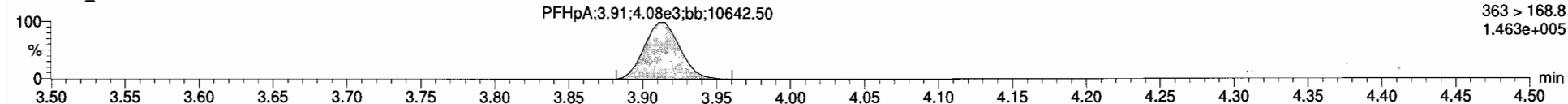
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PFHpA

170305G1_11

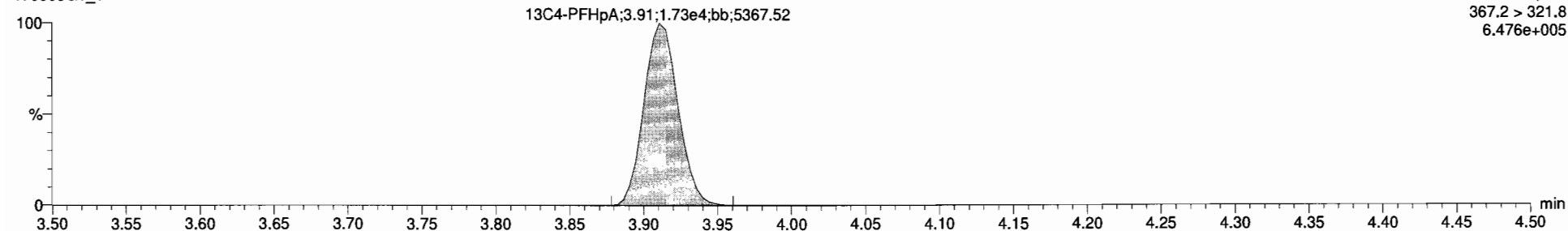


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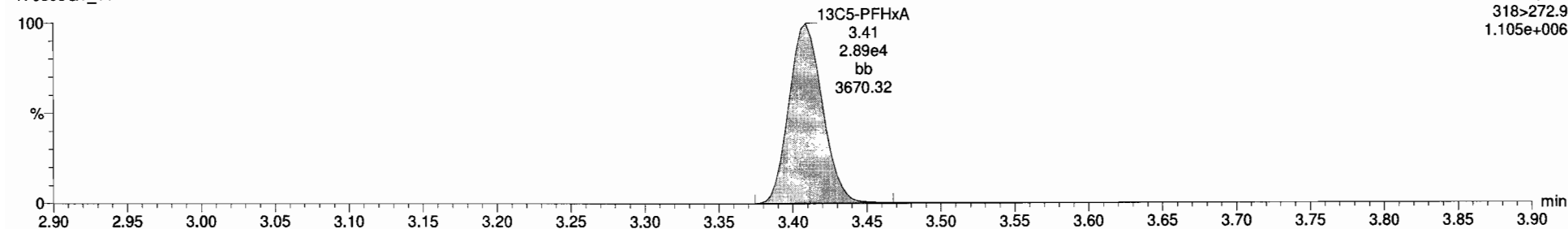
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170305G1_11



13C5-PFHxA

170305G1_11



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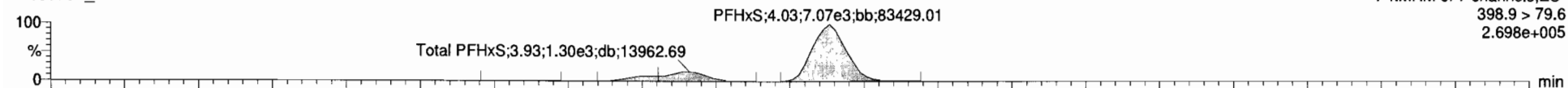
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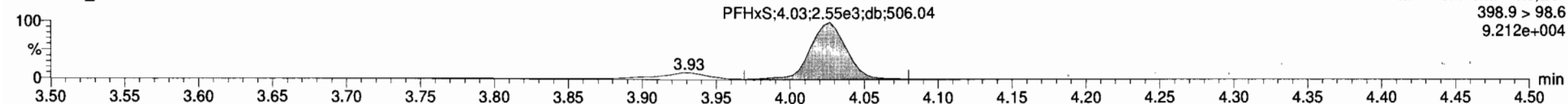
Total PFHxS

170305G1_11



F4:MRM of 7 channels,ES-
398.9 > 79.6
2.698e+005

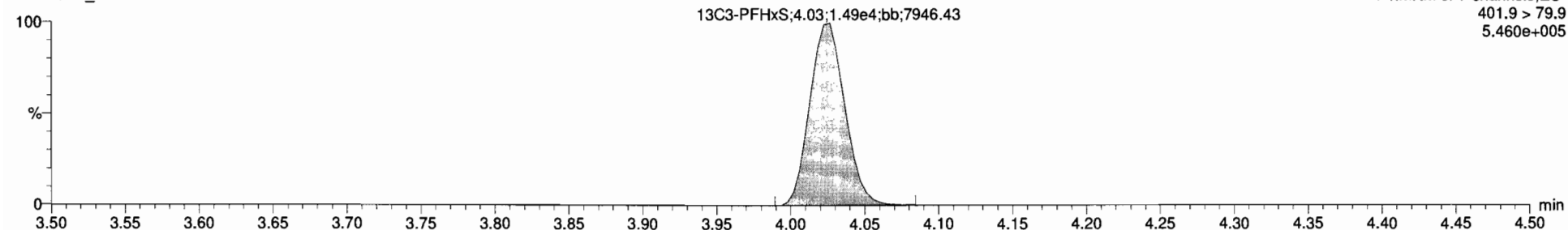
170305G1_11



F4:MRM of 7 channels,ES-
398.9 > 98.6
9.212e+004

13C3-PFHxS

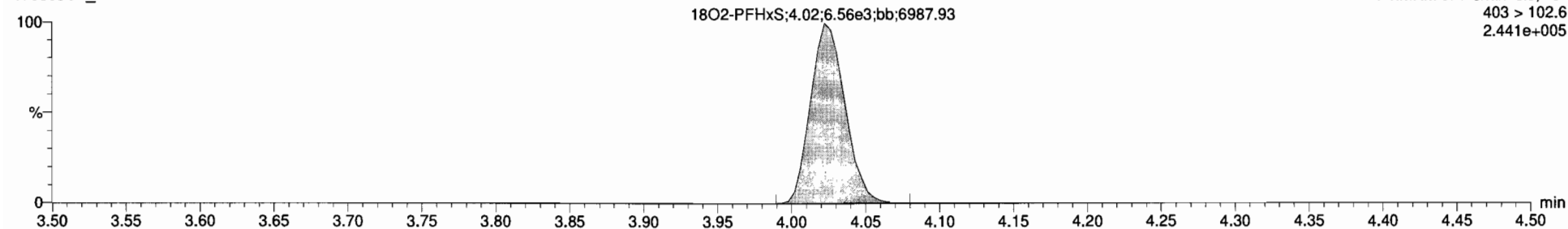
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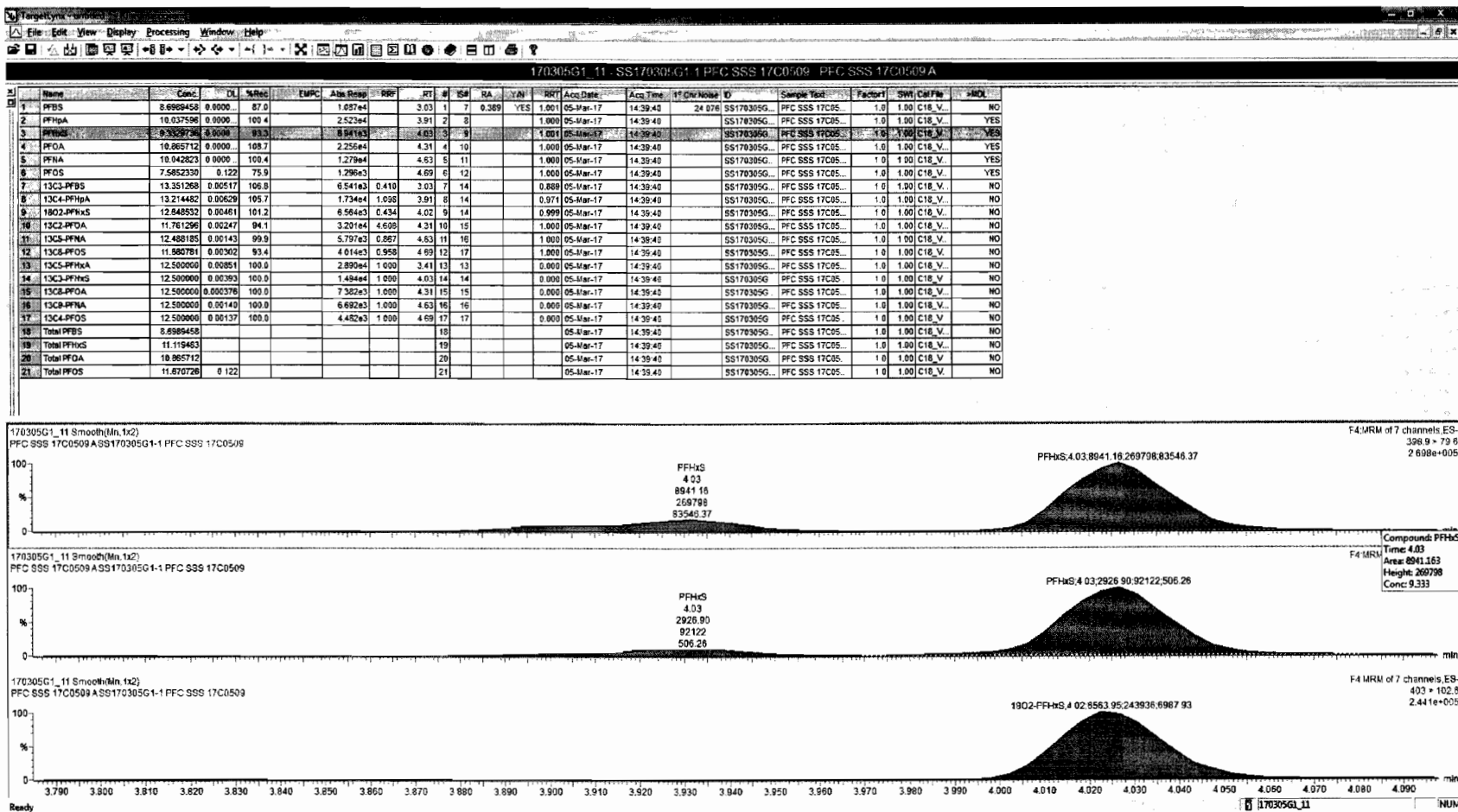
F4:MRM of 7 channels,ES-
401.9 > 79.9
5.460e+005

18O2-PFHxS

170305G1_11



F4:MRM of 7 channels,ES-
403 > 102.6
2.441e+005



Dataset: Untitled

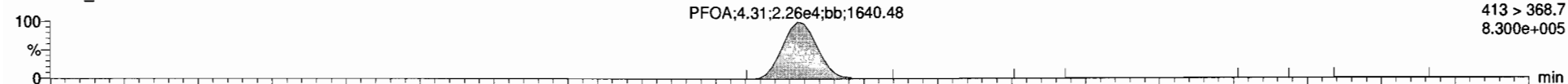
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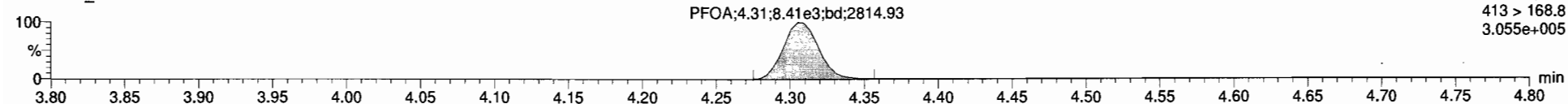
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Total PFOA

170305G1_11

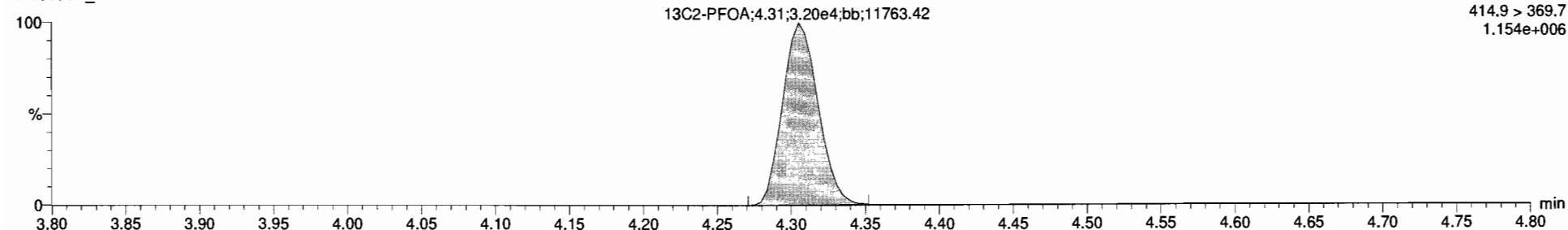


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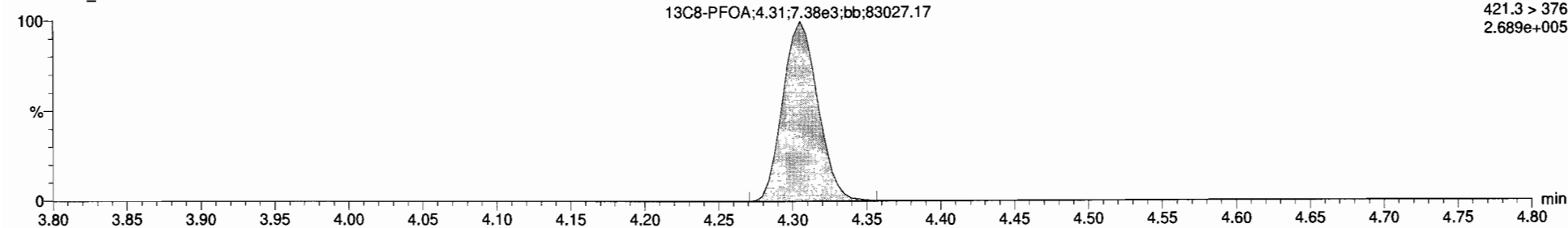
13C2-PFOA

170305G1_11



13C8-PFOA

170305G1_11



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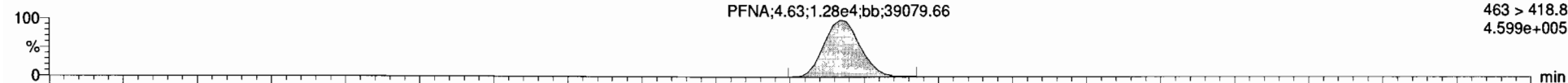
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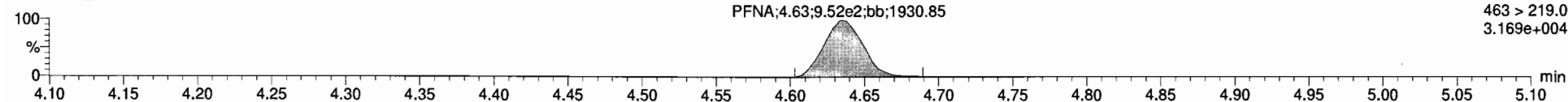
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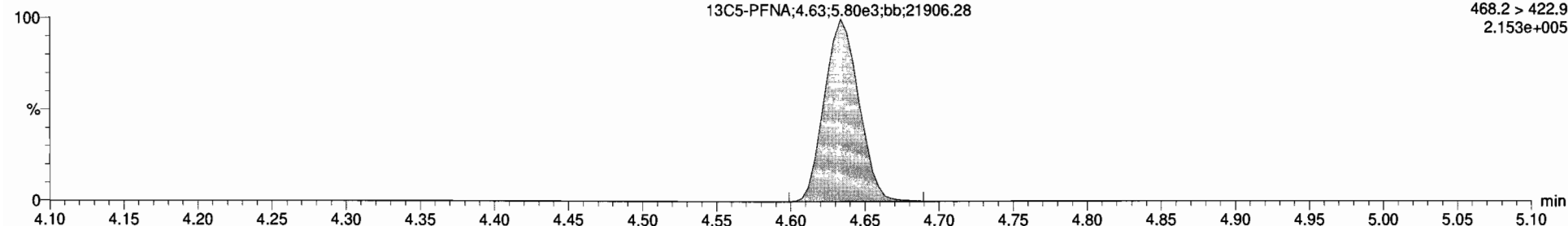


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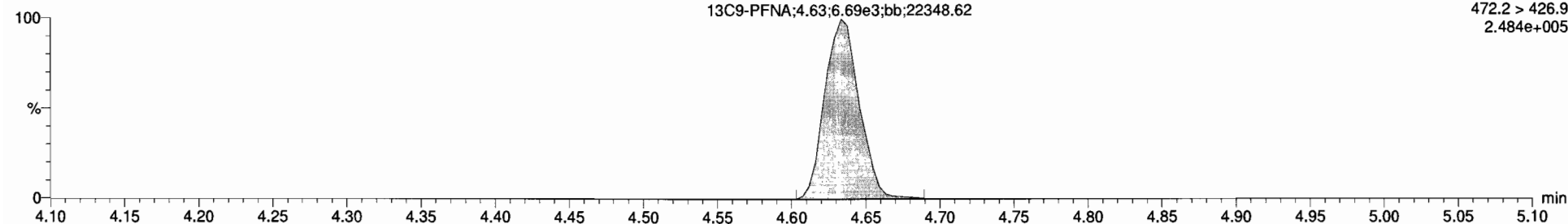
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170305G1_11



13C9-PFNA

170305G1_11



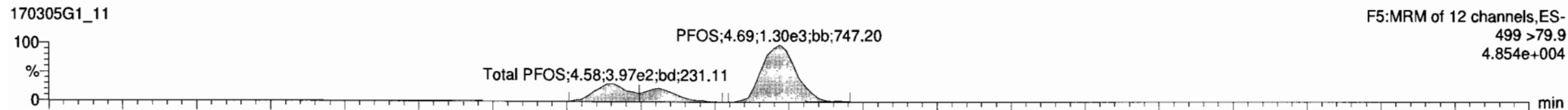
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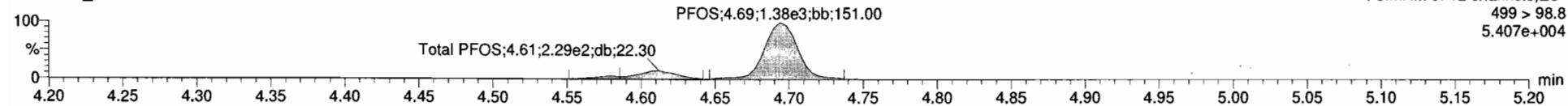
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Total PFOS

170305G1_11

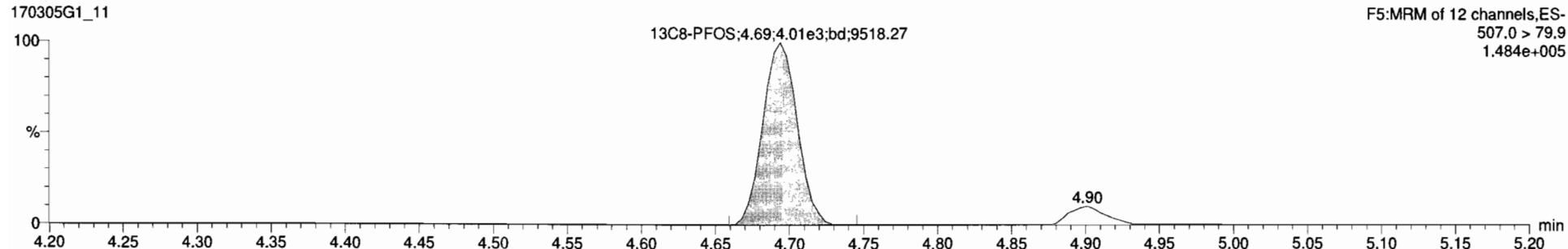


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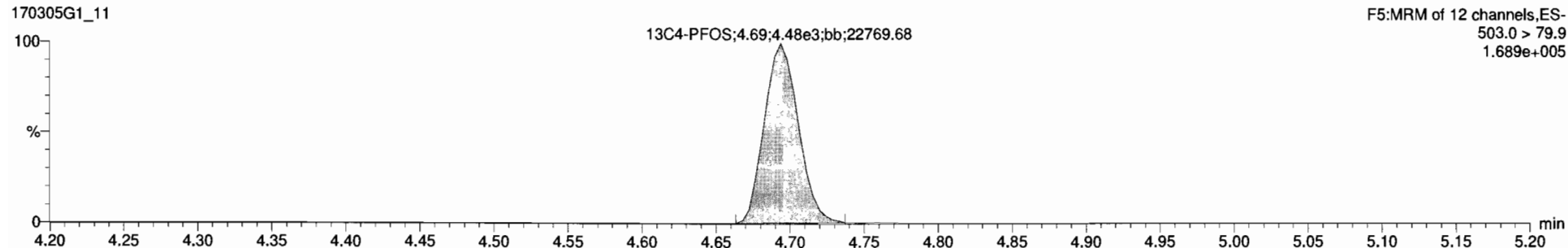
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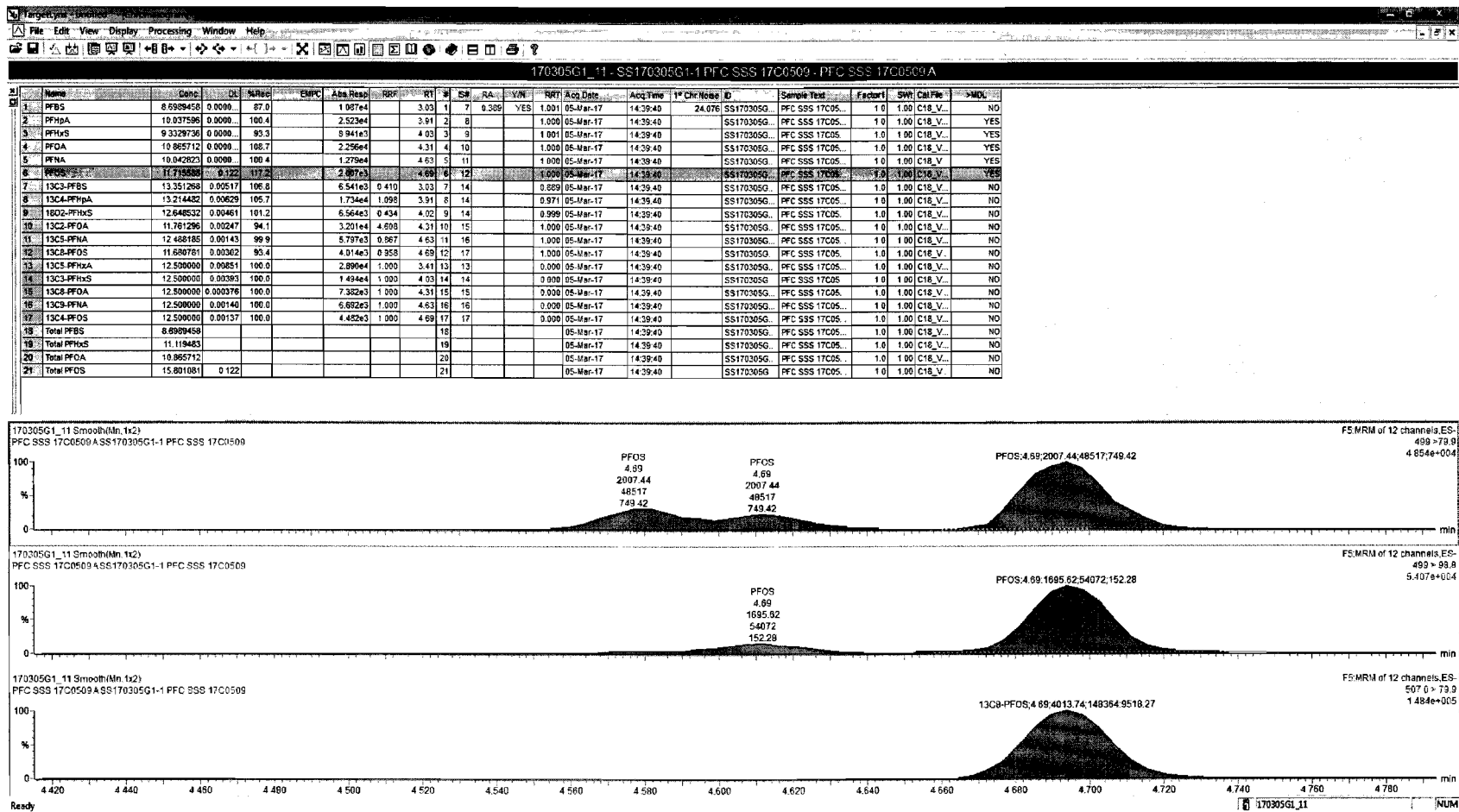
170305G1_11



13C4-PFOS

170305G1_11





[illegible]

**DATA VALIDATION SUMMARY REPORT
COUPEVILLE, WASHINGTON**

Client: CH2M HILL, Inc., Corvallis, Oregon
SDG: 1700293
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-GW02S-0317	1700293-01	Water
2	WI-CV-GW02SP-0317	1700293-02	Water
3	WI-CV-GW04S-0317	1700293-03	Water
4	WI-CV-GW04SP-0317	1700293-04	Water
5	WI-CV-GW02M-0317	1700293-05	Water
6	WI-CV-GW12D-0317	1700293-06	Water
6MS	WI-CV-GW12D-0317MS	1700293-06MS	Water
6MSD	WI-CV-GW12D-0317MSD	1700293-06MSD	Water
7	WI-CV-EB09-030117	1700293-07	Water
8	WI-CV-GW08S-0317	1700293-08	Water
9	WI-CV-FB01-030217	1700293-09	Water
10	WI-CV-EB10-030217	1700293-10	Water
11	WI-CV-EB11-030217	1700293-11	Water

A full data validation was performed on the analytical data for seven water samples, three aqueous equipment blank samples, and one field blank sample collected on March 1-2, 2017 by CH2M HILL at the Coupeville site in Washington. The samples were analyzed under the EPA Method “Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS)”.

Specific method references are as follows:

Analysis
PFCs

Method References
USEPA Method 537 Modified

The data have been validated according to the protocols and quality control (QC) requirements of the analytical method, and the U.S. Department of Defense (DoD) Quality Systems Manual (QSM), Version 5.0 (July 2013) and the USEPA National Functional Guidelines for Organic Data Review as follows:

- The USEPA “Contract Laboratories Program National Functional Guidelines for Superfund Organic Methods Data Review,” August 2014;
- and the reviewer's professional judgment.

The following data quality indicators were reviewed for this report:

Organics

- Date Completeness, Case Narrative & Custody Documentation
- Holding times
- Initial and continuing calibration summaries
- Method blank and field QC blank contamination
- Surrogate recovery (%R)
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) recoveries
- Ongoing Precision and Recovery (OPR)
- Target Compound Identification
- Compound Quantitation
- Field Duplicate sample precision

A full (Level IV) data validation was performed with this review including a recalculation of 10% of the detected results in the samples.

Data Usability Assessment

There were no rejections of data.

Overall the data is acceptable for the intended purposes. There were no qualifications.

Perfluorinated Compounds (PFCs)

Data Completeness, Case Narrative & Custody Documentation

- The case narrative and chain-of-custody documentation were included in the data package as required. All criteria were met.

Holding Times

- All samples were extracted within 14 days for water samples and analyzed within 28 days.

Initial Calibration

- All percent difference (%D) and/or correlation coefficients criteria were met.

Continuing Calibration

- All percent difference (%D) and RRF criteria were met.

Method Blank

- The method blanks were free of contamination.

Field QC Blank

- The field blank samples were free of contamination except for the following.

Blank ID	Compound	Conc. ng/L	Qualifier	Affected Samples
WI-CV-EB09-030117	None - ND	-	-	-
WI-CV-FB01-030217	None - ND	-	-	-
WI-CV-EB10-030217	None - ND	-	-	-
WI-CV-EB11-030217	None - ND	-	-	-

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values.

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

- The MS/MSD sample exhibited acceptable %R and RPD values.

Ongoing Precision and Recovery (OPR)

- The OPR samples exhibited acceptable percent recoveries (%R) values.

Target Compound Identification

- All mass spectra and quantitation criteria were met.

Compound Quantitation

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

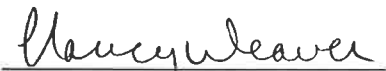
Field Duplicate Sample Precision

- Field duplicate results are summarized below. The precision was acceptable.

Compound	WI-CV-GW02S-0317 ng/L	WI-CV-GW02SP-0317 ng/L	RPD	Qualifier
PFBS	332	357	7%	None
PFOA	571	564	1%	
PFOS	54.7	53.0	3%	

Compound	WI-CV-GW04S-0317 ng/L	WI-CV-GW04SP-0317 ug/L	RPD	Qualifier
None - ND	-	-	-	-

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

Signed: 
Nancy Weaver
Senior Chemist

Dated: 3/24/17

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-GW02S-0317				Modified EPA Method 537					
Client Data		Sample Data		Laboratory Data					
Name:	CH2M Hill	Matrix:	Groundwater	Lab Sample:	1700293-01	Date Received:	04-Mar-2017	9:49	
Project:	Navy Clean CTO-08	Sample Size:	0.131 L	QC Batch:	B7C0017	Date Extracted:	06-Mar-2017	8:15	
Date Collected:	01-Mar-2017 11:00			Date Analyzed:	06-Mar-17 18:45	Column:	BEH C18		
Location:	MW-02S				07-Mar-17 09:51	Column:	BEH C18		
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	332	17.1	38.2	76.3	✓	IS 13C3-PFBS	112	60- 150	✓
PFOA	571	0.621	1.91	7.63		IS 13C2-PFOA	78.6	60- 150	
PFOS	54.7	0.770	0.859	7.63		IS 13C8-PFOS	94.0	60- 150	

DL - Detection limit

RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit

Results reported to DL

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

Only the linear isomer is reported for all other analytes

new 3/24/17

Sample ID: WI-CV-GW02SP-0317

Modified EPA Method 537

Client Data		Sample Data		Laboratory Data					
Name:	CH2M Hill	Matrix:	Groundwater	Lab Sample:	1700293-02	Date Received:	04-Mar-2017 9:49		
Project:	Navy Clean CTO-08	Sample Size:	0.129 L	QC Batch:	B7C0017	Date Extracted:	06-Mar-2017 8:15		
Date Collected:	01-Mar-2017 11:05			Date Analyzed:	06-Mar-17 18:58	Column:	BEH C18		
Location:	MW-02S				07-Mar-17 10:04	Column:	BEH C18		
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	357	17.3	38.8	77.4	✓	IS 13C3-PFBS	112	60- 150	✓
PFOA	564	0.630	1.94	7.74		IS 13C2-PFOA	86.4	60- 150	
PFOS	53.0	0.781	0.872	7.74		IS 13C8-PFOS	90.4	60- 150	

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

DL - Detection limit

RL - Reporting limit

mw 3/24/17

3

Sample ID: WI-CV-GW04S-0317				Modified EPA Method 537					
Client Data		Sample Data		Laboratory Data					
Name:	CH2M Hill	Matrix:	Groundwater	Lab Sample:	1700293-03	Date Received:	04-Mar-2017 9:49		
Project:	Navy Clean CTO-08	Sample Size:	0.128 L	QC Batch:	B7C0017	Date Extracted:	06-Mar-2017 8:15		
Date Collected:	01-Mar-2017 13:25			Date Analyzed:	06-Mar-17 19:10	Column:	BEH C18		
Location:	MW-04S								
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	1.75	3.91	7.83		IS 13C3-PFBS	98.7	60 - 150	
PFOA	ND	0.637	1.95	7.83		IS 13C2-PFOA	83.2	60 - 150	
PFOS	ND	0.790	0.879	7.83		IS 13C8-PFOS	94.8	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

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Sample ID: WI-CV-GW04SP-0317				Modified EPA Method 537					
Client Data		Sample Data		Laboratory Data					
Name:	CH2M Hill	Matrix:	Groundwater	Lab Sample:	1700293-04	Date Received:	04-Mar-2017 9:49		
Project:	Navy Clean CTO-08	Sample Size:	0.131 L	QC Batch:	B7C0017	Date Extracted:	06-Mar-2017 8:15		
Date Collected:	01-Mar-2017 13:35			Date Analyzed:	06-Mar-17 19:23	Column:	BEH C18		
Location:	MW-04S								
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	1.71	3.82	7.64		IS 13C3-PFBS	93.1	60 - 150	
PFOA	ND	0.621	1.91	7.64		IS 13C2-PFOA	82.6	60 - 150	
PFOS	ND	0.770	0.859	7.64		IS 13C8-PFOS	89.8	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

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Sample ID: WI-CV-GW02M-0317				Modified EPA Method 537					
Client Data		Sample Data		Laboratory Data					
Name:	CH2M Hill	Matrix:	Groundwater	Lab Sample:	1700293-05	Date Received:	04-Mar-2017 9:49		
Project:	Navy Clean CTO-08	Sample Size:	0.129 L	QC Batch:	B7C0017	Date Extracted:	06-Mar-2017 8:15		
Date Collected:	01-Mar-2017 13:55			Date Analyzed:	06-Mar-17 20:13	Column:	BEH C18		
Location:	MW-02M								
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	1.74	3.88	7.76		IS 13C3-PFBS	96.4	60 - 150	
PFOA	ND	0.631	1.94	7.76		IS 13C2-PFOA	86.0	60 - 150	
PFOS	ND	0.783	0.872	7.76		IS 13C8-PFOS	96.0	60 - 150	

DL - Detection 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

RL - Reporting limit

NW 3/24/17

Sample ID: WI-CV-GW12D-0317				Modified EPA Method 537					
Client Data		Sample Data		Laboratory Data					
Name:	CH2M Hill	Matrix:	Groundwater	Lab Sample:	1700293-06	Date Received:	04-Mar-2017 9:49		
Project:	Navy Clean CTO-08	Sample Size:	0.126 L	QC Batch:	B7C0017	Date Extracted:	06-Mar-2017 8:15		
Date Collected:	01-Mar-2017 16:50			Date Analyzed:	06-Mar-17 20:26	Column:	BEH C18		
Location:	MW-12D								
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	1.78	3.97	7.96		IS 13C3-PFBS	88.9	60 - 150	
PFOA	ND	0.648	1.98	7.96		IS 13C2-PFOA	82.0	60 - 150	
PFOS	ND	0.803	0.893	7.96		IS 13C8-PFOS	84.0	60 - 150	

DL - Detection limit
 RL - Reporting limit

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

NW 3/24/17

7

Sample ID: WI-CV-EB09-030117				Modified EPA Method 537					
Client Data		Sample Data		Laboratory Data					
Name:	CH2M Hill	Matrix:	Groundwater	Lab Sample:	1700293-07	Date Received:	04-Mar-2017 9:49		
Project:	Navy Clean CTO-08	Sample Size:	0.115 L	QC Batch:	B7C0017	Date Extracted:	06-Mar-2017 8:15		
Date Collected:	01-Mar-2017 14:00			Date Analyzed:	06-Mar-17 20:38	Column:	BEH C18		
Location:	EB-09								
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	1.94	4.35	8.69		IS 13C3-PFBS	90.8	60 - 150	
PFOA	ND	0.707	2.17	8.69		IS 13C2-PFOA	86.1	60 - 150	
PFOS	ND	0.877	0.978	8.69		IS 13C8-PFOS	95.5	60 - 150	

DL - Detection limit

RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit

Results reported to DL

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

Only the linear isomer is reported for all other analytes

NW 3/24/17

8

Sample ID: WI-CV-GW08S-0317				Modified EPA Method 537					
Client Data		Sample Data		Laboratory Data					
Name:	CH2M Hill	Matrix:	Groundwater	Lab Sample:	1700293-08	Date Received:	04-Mar-2017 9:49		
Project:	Navy Clean CTO-08	Sample Size:	0.130 L	QC Batch:	B7C0017	Date Extracted:	06-Mar-2017 8:15		
Date Collected:	02-Mar-2017 10:50			Date Analyzed:	06-Mar-17 20:51	Column:	BEH C18		
Location:	MW-08S								
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	1.72	3.85	7.71		IS 13C3-PFBS	101	60- 150	
PFOA	ND	0.627	1.92	7.71		IS 13C2-PFOA	92.3	60- 150	
PFOS	ND	0.777	0.865	7.71		IS 13C8-PFOS	76.9	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

9

Sample ID: WI-CV-FB01-030217				Modified EPA Method 537					
Client Data		Sample Data		Laboratory Data					
Name:	CH2M Hill	Matrix:	Groundwater	Lab Sample:	1700293-09	Date Received:	04-Mar-2017 9:49		
Project:	Navy Clean CTO-08	Sample Size:	0.119 L	QC Batch:	B7C0017	Date Extracted:	06-Mar-2017 8:15		
Date Collected:	02-Mar-2017 13:00			Date Analyzed:	06-Mar-17 21:03	Column:	BEH C18		
Location:	FB01								
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	1.87	4.20	8.37		IS 13C3-PFBS	103	60 - 150	
PFOA	ND	0.681	2.10	8.37		IS 13C2-PFOA	85.9	60 - 150	
PFOS	ND	0.845	0.945	8.37		IS 13C8-PFOS	84.0	60 - 150	

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

DL - Detection limit

RL - Reporting limit

new 3/24/17

Sample ID: WI-CV-EB10-030217				Modified EPA Method 537					
Client Data		Sample Data		Laboratory Data					
Name:	CH2M Hill	Matrix:	Groundwater	Lab Sample:	1700293-10	Date Received:	04-Mar-2017 9:49		
Project:	Navy Clean CTO-08	Sample Size:	0.0930 L	QC Batch:	B7C0017	Date Extracted:	06-Mar-2017 8:15		
Date Collected:	02-Mar-2017 13:15			Date Analyzed:	06-Mar-17 21:16	Column:	BEH C18		
Location:	EB10								
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	2.41	5.38	10.8		IS 13C3-PFBS	105	60- 150	
PFOA	ND	0.875	2.69	10.8		IS 13C2-PFOA	92.4	60- 150	
PFOS	ND	1.08	1.21	10.8		IS 13C8-PFOS	97.0	60- 150	

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.

DL - Detection limit

RL - Reporting limit

W 3/24/17

Sample ID: WI-CV-EB11-030217				Modified EPA Method 537					
Client Data		Sample Data		Laboratory Data					
Name:	CH2M Hill	Matrix:	Groundwater	Lab Sample:	1700293-11	Date Received:	04-Mar-2017 9:49		
Project:	Navy Clean CTO-08	Sample Size:	0.118 L	QC Batch:	B7C0017	Date Extracted:	06-Mar-2017 8:15		
Date Collected:	02-Mar-2017 13:30			Date Analyzed:	06-Mar-17 21:28	Column:	BEH C18		
Location:	EB11								
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	1.89	4.24	8.46		IS 13C3-PFBS	103	60 - 150	
PFOA	ND	0.689	2.12	8.46		IS 13C2-PFOA	85.0	60 - 150	
PFOS	ND	0.854	0.953	8.46		IS 13C8-PFOS	97.5	60 - 150	

DL - Detection limit
 RL - Reporting limit

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

rw 3/24/17