NAVFAC
Naval Facilities Engineering Command

Off-Base Drinking Water Sample Results, Level 2 Laboratory Report, Level 4 Laboratory Report, Electronic Data Deliverable, Data Validation Report, and the Sample Location Figure, SDG J17278-1

Naval Air Station Oceana
Virginia Beach, Virginia

July 2019

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Tel: (916)373-5600

TestAmerica Job ID: 320-17278-1
TestAmerica SDG: CTO WE7G PFC Sampling
Client Project/Site: CTO WE7G PFC Sampling

For:
CH2M Hill, Inc.
5701 Cleveland Street
Suite 200
Virginia Beach, Virginia 23462

Attn: Laurie George

Authorized for release by:
2/29/2016 2:33:38 PM

Laura Turpen, Project Manager I
(916)374-4414
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Job ID: 320-17278-1

Laboratory: TestAmerica Sacramento

Narrative

CASE NARRATIVE

Client: CH2M Hill, Inc.

Project: CTO WE7G PFC Sampling

Report Number: 320-17278-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica West Sacramento attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

TestAmerica utilizes USEPA approved methods and DOD QSM, where applicable, in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. A summary of QC data for these analyses is included at the back of the report.

All parameters for which TestAmerica West Sacramento has certification were evaluated to the QSM specified reporting convention or to the client specified format if different from QSM. Parameters not certified under QSM, if any, were evaluated to the detection limit (DL) and include qualified results where applicable.

The sample(s) that contain constituents flagged with U are undetected. The result associated with this flag is the limit of detection (LOD).

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

Receipt
The samples were received on 2/12/2016 9:10 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.4° C.

Subcontract Work
PFC: This method was subcontracted to Maxxam Analytics Inc.. The subcontract laboratory certification is different from that of the facility issuing the final report. Any analytical or quality issues are noted in the subcontract portion of the report. DL/LOD/LOQ limits for Maxxam are included under "General Comments" in the subcontract report.

Certification Summary

Client: CH2M Hill, Inc.
Project/Site: CTO WE7G PFC Sampling

TestAmerica Job ID: 320-17278-1
SDG: CTO WE7G PFC Sampling

Laboratory: TestAmerica Sacramento

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	DoD ELAP		2928-01	01-31-17
Oregon	NELAP	10	CA200005	01-29-17

Sample Summary

Client: CH2M Hill, Inc.
Project/Site: CTO WE7G PFC Sampling

TestAmerica Job ID: 320-17278-1
SDG: CTO WE7G PFC Sampling

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-17278-1	OF-FB24-0216	Water	02/10/16 10:05	02/12/16 09:10
320-17278-2	OF-RW24-0216	Water	02/10/16 10:12	02/12/16 09:10
320-17278-3	OF-FB31-0216	Water	02/10/16 13:05	02/12/16 09:10
320-17278-4	OF-RW31-0216	Water	02/10/16 13:12	02/12/16 09:10
320-17278-5	OF-FB60-0216	Water	02/11/16 11:20	02/12/16 09:10
320-17278-6	OF-RW60-0216	Water	02/11/16 11:23	02/12/16 09:10
320-17278-7	OF-RW60P-0216	Water	02/11/16 11:25	02/12/16 09:10
320-17278-8	OF-FB46-0216	Water	02/11/16 13:20	02/12/16 09:10
320-17278-9	OF-RW46-0216	Water	02/11/16 13:25	02/12/16 09:10

Maxxam
A Bureau Veritas Group Company

Your Project #: 320-17278
Your C.O.C. #: 283624

Attention:PFC Reporting Group

TestAmerica
Sacramento
880 Riverside Parkway
West Sacramento, CA
USA 95605

Report Date: 2016/02/29
Report #: R3912199
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B630789
Received: 2016/02/13, 13:40

Sample Matrix: Water
Samples Received: 9

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Low level PFOS and PFOA in water	4	2016/02/24	2016/02/25	CAM SOP-00894	EPA 537 m
Low level PFOS and PFOA in water	5	2016/02/25	2016/02/29	CAM SOP-00894	EPA 537 m

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
U = Undetected at the limit of quantitation.
J = Estimated concentration between the EDL & RDL.
B = Blank Contamination.
Q = One or more quality control criteria failed.
E = Analyte concentration exceeds the maximum concentration level.
K = Estimated maximum possible concentration due to ion abundance ratio failure.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Melissa DiGrazia, Project Manager - ATUT
Email: MDiGrazia@maxxam.ca
Phone# (905) 817-5700

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Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Job #: B630789
Report Date: 2016/02/29

TestAmerica
Client Project #: 320-17278

RESULTS OF ANALYSES OF WATER

Maxxam ID		BVX748	BVX749	BVX750	BVX751			
Sampling Date		2016/02/10 10:05	2016/02/10 10:12	2016/02/10 13:05	2016/02/10 13:12			
COC Number		283624	283624	283624	283624			
	UNITS	OF-FB24-0216	OF-RW24-0216	OF-FB31-0216	OF-RW31-0216	MDL	QC Batch	RDL
Perfluorobutane Sulfonate (PFBS)	ng/L	0.27 U	0.27 U	0.27 U	4.3	0.27	4393242	2.0
Perfluoroheptanoic Acid (PFHpA)	ng/L	0.39 U	0.39 U	0.39 U	1.0 J	0.39	4393242	2.0
Perfluorohexane Sulfonate (PFHxS)	ng/L	0.40 U	0.40 U	0.40 U	1.4 J	0.40	4393242	2.0
Perfluoro-n-Octanoic Acid (PFOA)	ng/L	0.39 U	0.39 U	0.39 U	4.1	0.39	4393242	2.0
Perfluorononanoic Acid (PFNA)	ng/L	0.33 U	0.33 U	0.33 U	0.70 J	0.33	4393242	2.0
Perfluorooctane Sulfonate (PFOS)	ng/L	0.30 U	0.90 J	0.30 U	2.7	0.30	4393242	2.0
Surrogate Recovery (%)								
13C4-Perfluoroheptanoic acid	%	64	48 (1)	63	71	N/A	4393242	N/A
13C4-Perfluorooctanesulfonate	%	63	52	62	69	N/A	4393242	N/A
13C4-Perfluorooctanoic acid	%	67	53	63	69	N/A	4393242	N/A
13C5-Perfluorononanoic acid	%	65	45 (1)	58	64	N/A	4393242	N/A
18O2-Perfluorohexanesulfonate	%	63	55	64	81	N/A	4393242	N/A

QC Batch = Quality Control Batch

N/A = Not Applicable

(1) Surrogate recovery was below the defined lower control limit (LCL). Laboratory spiked water resulted in satisfactory recovery of the surrogate. When considered together, these QC data suggest that matrix interferences may be biasing the data low. Because quantitation is performed using isotope dilution techniques, any losses of the native compound that may occur during any of the sample preparation, extraction, cleanup or determinative steps will be mirrored by a similar loss of the labeled standard, and as such can be accounted for and corrected. Therefore, the quantification of these target compounds is not affected by the low surrogate recovery.

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Maxxam Job #: B630789
Report Date: 2016/02/29

TestAmerica
Client Project #: 320-17278

RESULTS OF ANALYSES OF WATER

Maxxam ID		BVX752	BVX753	BVX754	BVX755	BVX756			
Sampling Date		2016/02/11 11:20	2016/02/11 11:23	2016/02/11 11:25	2016/02/11 13:20	2016/02/11 13:25			
COC Number		283624	283624	283624	283624	283624			
	UNITS	OF-FB60-0216	OF-RW60-0216	OF-RW60P-0216	OF-FB46-0216	OF-RW46-0216	MDL	QC Batch	RDL
Perfluorobutane Sulfonate (PFBS)	ng/L	0.27 U	0.72 J	0.85 J	0.27 U	0.27 U	0.27	4394558	2.0
Perfluoroheptanoic Acid (PFHpA)	ng/L	0.39 U	0.57 J	0.62 J	0.39 U	0.39 U	0.39	4394558	2.0
Perfluorohexane Sulfonate (PFHxS)	ng/L	0.40 U	0.99 J	1.1 J	0.40 U	0.40 U	0.40	4394558	2.0
Perfluoro-n-Octanoic Acid (PFOA)	ng/L	0.39 U	1.7 J	1.5 J	0.39 U	0.39 U	0.39	4394558	2.0
Perfluorononanoic Acid (PFNA)	ng/L	0.33 U	0.67 J	0.69 J	0.33 U	0.33 U	0.33	4394558	2.0
Perfluorooctane Sulfonate (PFOS)	ng/L	0.30 U	2.1	1.9 J	0.30 U	0.30 U	0.30	4394558	2.0
Surrogate Recovery (%)									
13C4-Perfluoroheptanoic acid	%	104	71	69	120	77	N/A	4394558	N/A
13C4-Perfluorooctanesulfonate	%	103	57	65	106	69	N/A	4394558	N/A
13C4-Perfluorooctanoic acid	%	110	67	70	125	82	N/A	4394558	N/A
13C5-Perfluorononanoic acid	%	98	58	67	101	73	N/A	4394558	N/A
18O2-Perfluorohexanesulfonate	%	108	74	72	113	69	N/A	4394558	N/A

QC Batch = Quality Control Batch
N/A = Not Applicable

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TEST SUMMARY

Maxxam ID: BVX748 **Collected:** 2016/02/10
Sample ID: OF-FB24-0216 **Shipped:**
Matrix: Water **Received:** 2016/02/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA in water	LCMS	4393242	2016/02/24	2016/02/25	Sin Chii Chia

Maxxam ID: BVX749 **Collected:** 2016/02/10
Sample ID: OF-RW24-0216 **Shipped:**
Matrix: Water **Received:** 2016/02/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA in water	LCMS	4393242	2016/02/24	2016/02/25	Sin Chii Chia

Maxxam ID: BVX750 **Collected:** 2016/02/10
Sample ID: OF-FB31-0216 **Shipped:**
Matrix: Water **Received:** 2016/02/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA in water	LCMS	4393242	2016/02/24	2016/02/25	Sin Chii Chia

Maxxam ID: BVX751 **Collected:** 2016/02/10
Sample ID: OF-RW31-0216 **Shipped:**
Matrix: Water **Received:** 2016/02/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA in water	LCMS	4393242	2016/02/24	2016/02/25	Sin Chii Chia

Maxxam ID: BVX752 **Collected:** 2016/02/11
Sample ID: OF-FB60-0216 **Shipped:**
Matrix: Water **Received:** 2016/02/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA in water	LCMS	4394558	2016/02/25	2016/02/29	Sin Chii Chia

Maxxam ID: BVX753 **Collected:** 2016/02/11
Sample ID: OF-RW60-0216 **Shipped:**
Matrix: Water **Received:** 2016/02/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA in water	LCMS	4394558	2016/02/25	2016/02/29	Sin Chii Chia

Maxxam ID: BVX754 **Collected:** 2016/02/11
Sample ID: OF-RW60P-0216 **Shipped:**
Matrix: Water **Received:** 2016/02/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA in water	LCMS	4394558	2016/02/25	2016/02/29	Sin Chii Chia

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Maxxam Job #: B630789
Report Date: 2016/02/29

TestAmerica
Client Project #: 320-17278

TEST SUMMARY

Maxxam ID: BVX755
Sample ID: OF-FB46-0216
Matrix: Water

Collected: 2016/02/11
Shipped:
Received: 2016/02/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA in water	LCMS	4394558	2016/02/25	2016/02/29	Sin Chii Chia

Maxxam ID: BVX756
Sample ID: OF-RW46-0216
Matrix: Water

Collected: 2016/02/11
Shipped:
Received: 2016/02/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA in water	LCMS	4394558	2016/02/25	2016/02/29	Sin Chii Chia

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GENERAL COMMENTS

Perfluoroheptanoic acid (PFHpA) MDL = 0.39, LOD = 1.0, LOQ = 2.0
Perfluorooctanoic acid (PFOA) MDL = 0.39, LOD = 1.0, LOQ = 2.0
Perfluorononanoic acid (PFNA) MDL = 0.33, LOD = 1.0, LOQ = 2.0
Perfluorobutane sulfonate (PFBS) MDL = 0.27, LOD = 1.0, LOQ = 2.0
Perfluorohexane sulfonate (PFHxA) MDL = 0.40, LOD = 1.0, LOQ = 2.0
Perfluorooctane sulfonate (PFOS) MDL = 0.30, LOD = 1.0, LOQ = 2.0
All Units are in ng/L

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	% Recovery	UNITS	QC Limits
4393242	SCH	Matrix Spike	13C4-Perfluoroheptanoic acid	2016/02/25		89	%	50 - 130
			13C4-Perfluorooctanesulfonate	2016/02/25		90	%	50 - 130
			13C4-Perfluorooctanoic acid	2016/02/25		93	%	50 - 130
			13C5-Perfluorononanoic acid	2016/02/25		90	%	50 - 130
			18O2-Perfluorohexanesulfonate	2016/02/25		97	%	50 - 130
			Perfluorobutane Sulfonate (PFBS)	2016/02/25		89	%	70 - 130
			Perfluoroheptanoic Acid (PFHpA)	2016/02/25		101	%	70 - 130
			Perfluorohexane Sulfonate (PFHxS)	2016/02/25		100	%	70 - 130
			Perfluorononanoic Acid (PFNA)	2016/02/25		104	%	70 - 130
			Perfluoro-n-Octanoic Acid (PFOA)	2016/02/25		103	%	70 - 130
			Perfluorooctane Sulfonate (PFOS)	2016/02/25		98	%	70 - 130
4393242	SCH	Matrix Spike DUP	13C4-Perfluoroheptanoic acid	2016/02/25		94	%	50 - 130
			13C4-Perfluorooctanesulfonate	2016/02/25		92	%	50 - 130
			13C4-Perfluorooctanoic acid	2016/02/25		101	%	50 - 130
			13C5-Perfluorononanoic acid	2016/02/25		92	%	50 - 130
			18O2-Perfluorohexanesulfonate	2016/02/25		109	%	50 - 130
			Perfluorobutane Sulfonate (PFBS)	2016/02/25		96	%	70 - 130
			Perfluoroheptanoic Acid (PFHpA)	2016/02/25		113	%	70 - 130
			Perfluorohexane Sulfonate (PFHxS)	2016/02/25		108	%	70 - 130
			Perfluorononanoic Acid (PFNA)	2016/02/25		121	%	70 - 130
			Perfluoro-n-Octanoic Acid (PFOA)	2016/02/25		112	%	70 - 130
			Perfluorooctane Sulfonate (PFOS)	2016/02/25		118	%	70 - 130
4393242	SCH	MS/MSD RPD	Perfluorobutane Sulfonate (PFBS)	2016/02/25	7.1		%	30
			Perfluoroheptanoic Acid (PFHpA)	2016/02/25	11		%	30
			Perfluorohexane Sulfonate (PFHxS)	2016/02/25	8.1		%	30
			Perfluorononanoic Acid (PFNA)	2016/02/25	15		%	30
			Perfluoro-n-Octanoic Acid (PFOA)	2016/02/25	8.0		%	30
			Perfluorooctane Sulfonate (PFOS)	2016/02/25	19		%	30
4393242	SCH	Spiked Blank	13C4-Perfluoroheptanoic acid	2016/02/25		88	%	50 - 130
			13C4-Perfluorooctanesulfonate	2016/02/25		88	%	50 - 130
			13C4-Perfluorooctanoic acid	2016/02/25		89	%	50 - 130
			13C5-Perfluorononanoic acid	2016/02/25		84	%	50 - 130
			18O2-Perfluorohexanesulfonate	2016/02/25		89	%	50 - 130
			Perfluorobutane Sulfonate (PFBS)	2016/02/25		102	%	70 - 130
			Perfluoroheptanoic Acid (PFHpA)	2016/02/25		110	%	70 - 130
			Perfluorohexane Sulfonate (PFHxS)	2016/02/25		115	%	70 - 130
			Perfluorononanoic Acid (PFNA)	2016/02/25		118	%	70 - 130
			Perfluoro-n-Octanoic Acid (PFOA)	2016/02/25		118	%	70 - 130
			Perfluorooctane Sulfonate (PFOS)	2016/02/25		110	%	70 - 130
4393242	SCH	Method Blank	13C4-Perfluoroheptanoic acid	2016/02/25		93	%	50 - 130
			13C4-Perfluorooctanesulfonate	2016/02/25		89	%	50 - 130
			13C4-Perfluorooctanoic acid	2016/02/25		96	%	50 - 130
			13C5-Perfluorononanoic acid	2016/02/25		91	%	50 - 130
			18O2-Perfluorohexanesulfonate	2016/02/25		89	%	50 - 130
			Perfluorobutane Sulfonate (PFBS)	2016/02/25	0.27 U, MDL=0.27		ng/L	
			Perfluoroheptanoic Acid (PFHpA)	2016/02/25	0.39 U, MDL=0.39		ng/L	
			Perfluorohexane Sulfonate (PFHxS)	2016/02/25	0.40 U, MDL=0.40		ng/L	
			Perfluorononanoic Acid (PFNA)	2016/02/25	0.33 U, MDL=0.33		ng/L	
			Perfluoro-n-Octanoic Acid (PFOA)	2016/02/25	0.39 U, MDL=0.39		ng/L	

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	% Recovery	UNITS	QC Limits
			Perfluorooctane Sulfonate (PFOS)	2016/02/25	0.30 U, MDL=0.30		ng/L	
4393242	SCH	RPD - Sample/Sample Dup	Perfluorobutane Sulfonate (PFBS)	2016/02/25	NC		%	30
			Perfluoroheptanoic Acid (PFHpA)	2016/02/25	NC		%	30
			Perfluorohexane Sulfonate (PFHxS)	2016/02/25	NC		%	30
			Perfluorononanoic Acid (PFNA)	2016/02/25	NC		%	30
			Perfluoro-n-Octanoic Acid (PFOA)	2016/02/25	NC		%	30
			Perfluorooctane Sulfonate (PFOS)	2016/02/25	NC		%	30
4394558	SCH	Matrix Spike	13C4-Perfluoroheptanoic acid	2016/02/29		96	%	50 - 130
			13C4-Perfluorooctanesulfonate	2016/02/29		95	%	50 - 130
			13C4-Perfluorooctanoic acid	2016/02/29		102	%	50 - 130
			13C5-Perfluorononanoic acid	2016/02/29		93	%	50 - 130
			18O2-Perfluorohexanesulfonate	2016/02/29		92	%	50 - 130
4394558	SCH	Matrix Spike DUP	13C4-Perfluoroheptanoic acid	2016/02/29		96	%	50 - 130
			13C4-Perfluorooctanesulfonate	2016/02/29		101	%	50 - 130
			13C4-Perfluorooctanoic acid	2016/02/29		109	%	50 - 130
			13C5-Perfluorononanoic acid	2016/02/29		102	%	50 - 130
			18O2-Perfluorohexanesulfonate	2016/02/29		104	%	50 - 130
4394558	SCH	Matrix Spike(BVX752)	Perfluorobutane Sulfonate (PFBS)	2016/02/29		115	%	70 - 130
			Perfluoroheptanoic Acid (PFHpA)	2016/02/29		109	%	70 - 130
			Perfluorohexane Sulfonate (PFHxS)	2016/02/29		123	%	70 - 130
			Perfluorononanoic Acid (PFNA)	2016/02/29		130	%	70 - 130
			Perfluoro-n-Octanoic Acid (PFOA)	2016/02/29		116	%	70 - 130
			Perfluorooctane Sulfonate (PFOS)	2016/02/29		126	%	70 - 130
4394558	SCH	Matrix Spike DUP(BVX752)	Perfluorobutane Sulfonate (PFBS)	2016/02/29		102	%	70 - 130
			Perfluoroheptanoic Acid (PFHpA)	2016/02/29		106	%	70 - 130
			Perfluorohexane Sulfonate (PFHxS)	2016/02/29		110	%	70 - 130
			Perfluorononanoic Acid (PFNA)	2016/02/29		119	%	70 - 130
			Perfluoro-n-Octanoic Acid (PFOA)	2016/02/29		102	%	70 - 130
			Perfluorooctane Sulfonate (PFOS)	2016/02/29		111	%	70 - 130
4394558	SCH	MS/MSD RPD	Perfluorobutane Sulfonate (PFBS)	2016/02/29	11		%	30
			Perfluoroheptanoic Acid (PFHpA)	2016/02/29	2.8		%	30
			Perfluorohexane Sulfonate (PFHxS)	2016/02/29	12		%	30
			Perfluorononanoic Acid (PFNA)	2016/02/29	9.2		%	30
			Perfluoro-n-Octanoic Acid (PFOA)	2016/02/29	12		%	30
			Perfluorooctane Sulfonate (PFOS)	2016/02/29	12		%	30
4394558	SCH	Spiked Blank	13C4-Perfluoroheptanoic acid	2016/02/29		99	%	50 - 130
			13C4-Perfluorooctanesulfonate	2016/02/29		99	%	50 - 130
			13C4-Perfluorooctanoic acid	2016/02/29		109	%	50 - 130
			13C5-Perfluorononanoic acid	2016/02/29		98	%	50 - 130
			18O2-Perfluorohexanesulfonate	2016/02/29		108	%	50 - 130
			Perfluorobutane Sulfonate (PFBS)	2016/02/29		98	%	70 - 130
			Perfluoroheptanoic Acid (PFHpA)	2016/02/29		108	%	70 - 130
			Perfluorohexane Sulfonate (PFHxS)	2016/02/29		102	%	70 - 130
			Perfluorononanoic Acid (PFNA)	2016/02/29		118	%	70 - 130
			Perfluoro-n-Octanoic Acid (PFOA)	2016/02/29		101	%	70 - 130
			Perfluorooctane Sulfonate (PFOS)	2016/02/29		113	%	70 - 130
4394558	SCH	Method Blank	13C4-Perfluoroheptanoic acid	2016/02/29		98	%	50 - 130
			13C4-Perfluorooctanesulfonate	2016/02/29		83	%	50 - 130
			13C4-Perfluorooctanoic acid	2016/02/29		97	%	50 - 130
			13C5-Perfluorononanoic acid	2016/02/29		91	%	50 - 130
			18O2-Perfluorohexanesulfonate	2016/02/29		89	%	50 - 130
			Perfluorobutane Sulfonate (PFBS)	2016/02/29	0.27 U, MDL=0.27		ng/L	

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	% Recovery	UNITS	QC Limits
			Perfluoroheptanoic Acid (PFHpA)	2016/02/29	0.39 U, MDL=0.39		ng/L	
			Perfluorohexane Sulfonate (PFHxS)	2016/02/29	0.40 U, MDL=0.40		ng/L	
			Perfluorononanoic Acid (PFNA)	2016/02/29	0.33 U, MDL=0.33		ng/L	
			Perfluoro-n-Octanoic Acid (PFOA)	2016/02/29	0.39 U, MDL=0.39		ng/L	
			Perfluorooctane Sulfonate (PFOS)	2016/02/29	0.30 U, MDL=0.30		ng/L	

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Job #: B630789
Report Date: 2016/02/29

TestAmerica
Client Project #: 320-17278

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Sin Chii Chia, Scientific Services

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

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Chain of Custody Record

Temperature on Receipt 3.4°C

Drinking Water? Yes ☒ No ☐

320-17278 Chain of Custody

CTO WE76

TAL-4124 (1007)

Client	Project Manager	Date	Chain of Custody Number
CH2M Hill	Bill Friedmann	02/10/16	283624
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page** 1 of 1
5701 Cleveland St, Suite 200	757-671-6223		
City / **State** / **Zip Code**	**Site Contact**	**Lab Contact**	
Virginia Beach / VA / 23462			
Project Name and Location (State)	**Carrier/Waybill Number**		
CTO WE76 PFC Sampling	FedEx		
Contract/Purchase Order/Quote No.			
PO# 10006-7-104000			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis: Select PFCs	Special Instructions/ Conditions of Receipt
OF-FB24-0216	02/10/16	1005		X			X						2	collected 02/10/16
OF-RW24-0216	02/10/16	1012		X			X						2	collected 02/10/16
OF-FB31-0216	02/10/16	1305		X			X						2	collected 02/10/16
OF-RW31-0216	02/10/16	1312		X			X						2	collected 02/10/16
OF-FB60-0216	02/11/16	1120		X			X						2	
OF-RW60-0216	02/11/16	1123		X			X						2	
OF-RW60P-0216	02/11/16	1125		X			X						2	
OF-FB46-0216	02/11/16	1320		X			X						2	
OF-RW46-0216	02/11/16	1325		X			X						2	

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
(A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By	02/11/16	1500	1. Received By	2/12/16	910
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Chain of Custody Record

Temperature on Receipt 3.4°C

Drinking Water? Yes ☒ No ☐

320-17278 Chain of Custody

CTO WE76

Due 2/22

13-Feb-16 13:40

Hongmei Zhao (Grace)

B630789

AKP ENV-1090

[redacted] Fax Number

[redacted] Lab Contact

Date 02/10/16

Chain of Custody Number 283624

Lab Number

Page 1 of 1

Analysis (Attach list if more space is needed)

Special Instructions/ Conditions of Receipt

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/ NaOH	Select 8TCS	Special Instructions/ Conditions of Receipt
OF-FB24-0216	02/10/16	1005		X			X						2	collected 02/10/16
OF-RW24-0216	02/10/16	1012		X			X						2	collected 02/10/16
OF-FB31-0216	02/10/16	1305		X			X						2	collected 02/10/16
OF-RW31-0216	02/10/16	1312		X			X						2	collected 02/10/16
OF-FB60-0216	02/11/16	1120		X			X						2	
OF-RW60-0216	02/11/16	1123		X			X						2	
OF-RW60P-0216	02/11/16	1125		X			X						2	
OF-FB46-0216	02/11/16	1320		X			X						2	
OF-RW46-0216	02/11/16	1325		X			X						2	

Possible Hazard Identification

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal

☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required

☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

1. Relinquished By	Date 02/11/16	Time 1500	1. Received By	Date 2/12/16	Time 0910
2. Relinquished By	Date	Time	2. Received By	Date	Time
3. Relinquished By	Date	Time	3. Received By	Date 2/13/02	Time 13:40

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Login Sample Receipt Checklist

Client: CH2M Hill, Inc.

Job Number: 320-17278-1
SDG Number: CTO WE7G PFC Sampling

Login Number: 17278
List Number: 1
Creator: Nelson, Kym D

List Source: TestAmerica Sacramento

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 320-17278-1

SDG Number: CTO WE7G PFC Sampling

Job Description: CTO WE7G PFC Sampling

For:
CH2M Hill, Inc.
5701 Cleveland Street
Suite 200
Virginia Beach, VA 23462

Attention: Laurie George

Approved for release.
Laura Turpen
Project Manager I
3/14/2016 8:48 AM

Laura Turpen, Project Manager I
880 Riverside Parkway, West Sacramento, CA, 95605
(916)374-4414
laura.turpen@testamericainc.com
03/14/2016

The test results in this report relate only to the samples in this report and meet all requirements of NELAC, with any exceptions noted. Pursuant to NELAP, this report shall not be reproduced except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Denver Project Manager.

The Lab Certification ID# is 4025.

Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.

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Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

CASE NARRATIVE

Client: CH2M Hill, Inc.

Project: CTO WE7G PFC Sampling

Report Number: 320-17278-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica West Sacramento attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

TestAmerica utilizes USEPA approved methods and DOD QSM, where applicable, in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. A summary of QC data for these analyses is included at the back of the report.

All parameters for which TestAmerica West Sacramento has certification were evaluated to the QSM specified reporting convention or to the client specified format if different from QSM. Parameters not certified under QSM, if any, were evaluated to the detection limit (DL) and include qualified results where applicable.

The sample(s) that contain constituents flagged with U are undetected. The result associated with this flag is the limit of detection (LOD).

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

Receipt
The samples were received on 2/12/2016 9:10 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.4° C.

Subcontract Work
PFC: This method was subcontracted to Maxxam Analytics Inc.. The subcontract laboratory certification is different from that of the facility issuing the final report. Any analytical or quality issues are noted in the subcontract portion of the report.

The DL/LOD/LOQ limits for Maxxam, along with information on the data qualifiers, are included in the narrative (Page 8 of 254 of the subcontract report; page 15 of 265 of the entire report).

Certification Summary

Client: CH2M Hill, Inc.
Project/Site: CTO WE7G PFC Sampling

TestAmerica Job ID: 320-17278-1
SDG: CTO WE7G PFC Sampling

Laboratory: TestAmerica Sacramento

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	DoD ELAP		2928-01	01-31-17
Oregon	NELAP	10	CA200005	01-29-17

Sample Summary

Client: CH2M Hill, Inc.
Project/Site: CTO WE7G PFC Sampling

TestAmerica Job ID: 320-17278-1
SDG: CTO WE7G PFC Sampling

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-17278-1	OF-FB24-0216	Water	02/10/16 10:05	02/12/16 09:10
320-17278-2	OF-RW24-0216	Water	02/10/16 10:12	02/12/16 09:10
320-17278-3	OF-FB31-0216	Water	02/10/16 13:05	02/12/16 09:10
320-17278-4	OF-RW31-0216	Water	02/10/16 13:12	02/12/16 09:10
320-17278-5	OF-FB60-0216	Water	02/11/16 11:20	02/12/16 09:10
320-17278-6	OF-RW60-0216	Water	02/11/16 11:23	02/12/16 09:10
320-17278-7	OF-RW60P-0216	Water	02/11/16 11:25	02/12/16 09:10
320-17278-8	OF-FB46-0216	Water	02/11/16 13:20	02/12/16 09:10
320-17278-9	OF-RW46-0216	Water	02/11/16 13:25	02/12/16 09:10

Subcontract Data

Prepared for: Test America

Project: 320-17278

Analytical Data Package
(Level IV)

Analysis: Low level PFOS and PFOA in water (Method 537)

Maxxam Job #: B630789

Maxxam Analytics International
6740 Campobello Rd.
Mississauga, Ontario, Canada
L5N 2L8
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www.maxxamanalytics.com

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Table of Contents

I hereby certify that to the best of my knowledge all analytical data presented in this report:

- Has been checked for completeness.
- Is accurate, legible and error free.
- Has been conducted in accordance with approved SOP's and that all deviations are clearly listed in the Case Narrative.
- This report has been generated in .pdf format.

Review Performed By:

M Di Grazia

Project Manager

Maxxam
A Bureau Veritas Group Company

Melissa DiGrazia
2016.03.14 07:54:46 -04'00'

Maxxam Analytics International
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L5N 2L8
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www.maxxamanalytics.com

Glossary of Terms

- ***Detection Limit (DL)*** this can also be called ***Method Detection Limit (MDL***): The lowest concentration or amount of the target analyte that can be identified, measured, and reported with confidence that the analyte concentration is not a false positive value. (Clarification): The smallest analyte concentration that can be demonstrated to be different from zero or a blank concentration at the 99% level of confidence. At the DL, the false positive rate (Type I error) is 1%.

- ***Limit of Detection (LOD*)**: An estimate of the minimum amount of a substance that an analytical process can reliably detect. An LOD is analyte- and matrix-specific and may be laboratory-dependent. (Clarification): The smallest amount or concentration of a substance that must be present in a sample in order to be detected at a high level of confidence (99%). At the LOD, the false negative rate (Type II error) is 1%.

- ***Limits of Quantitation (LOQ)*** this can also be called ***Reporting Detection Limit (RDL)***: The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. (Clarification): The lowest concentration that produces a quantitative result within specified limits of precision and bias. For DoD projects, the LOQ shall be set at or above the concentration of the lowest initial calibration standard.

- ***Acceptance Criteria*** are values used by the laboratory to determine that a process is in control.

- ***Accuracy*** is the degree of agreement of a measured value with the true or expected value.

- ***Calibration Standards*** are a set of solutions containing the analytes of interest at a specified concentration.

- ***Calibration Verification Standard*** consists of a calibration standard solution of intermediate concentration (mid-point initial calibration level) used to access whether the initial calibration is still valid

- ***Certified Reference Material*** is a stable homogenous material that is certified by repetitive analysis from a supplier who is certified to generate said materials.

- ***Internal Standard*** a deuterated or ^{13}C-labelled analyte that is added to a sample extract prior to instrumental analysis to compensate for injection variability.

- ***Isomer*** is a member of a group of compounds that differ from each other only in the locations of a specific number of common substituent atoms or groups of atoms on the parent compound.

- ***Method Blank*** is a laboratory control sample using reagents that are known to be free of contamination.

- ***Precision*** is the degree of agreement between the data generated from repetitive measurements under specific conditions.

- ***Quality Assurance*** is a system of activities whose purpose is to provide the producer or user of a product with the assurance that the product meets a defined standard of quality.

- ***Quality Control*** is the overall system of activities whose purpose is to control the quality of a product so that it meets the needs of the end user.

- ***RSD*** is the relative standard deviation.

- ***Blank Spike*** is a laboratory control sample that has been fortified with native analytes of interest.

- ***Window Defining Mixture*** is a solution containing only the earliest and latest eluting congeners within each homologous group of target analytes on a specified GC column.

- ***RPD*** or Relative Percent Difference. A measure used to compare duplicate sample analysis.

- ***EMPC/NDR –*** Peak detected does not meet ratio criteria and has resulted in a higher detection limit.

1.0 Project Narrative

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Maxxam Job: B630789

Sample Analysis

The following samples were analyzed on QC batch 4393242 (2016/02/25):

BVX748 *OF-FB24-0216*
BVX749 *OF-RW24-0216*
BVX750 *OF-FB31-0216*
BVX751 *OF-RW31-0216*

The following samples were analyzed on QC batch 4394558 (2016/02/29):

BVX752 *OF-FB60-0216*
BVX753 *OF-RW60-0216*
BVX754 *OF-RW50P-0216*
BVX755 *OF-FB46-0216*
BVX756 *OF-RW46-0216*

Data Qualifiers

In the Results of Analyses, U-flags are applied to results that are less than the DL (MDL). J-flags are applied to results that are less than the RDL (LOQ) but greater than the DL (MDL). Due to limitations in LIMS, the results cannot be U-flagged to the LOD. The LODs for each analyte are presented in the table below.

Parameter	MDL (ng/L)	LOD (ng/L)	LOQ (ng/L)
Perfluorobutane sulfonate (PFBS)	0.27	1.0	2.0
Perfluorohexane sulfonate (PFHxS)	0.40	1.0	2.0
Perfluoroheptanoic acid (PFHpA)	0.39	1.0	2.0
Perfluorooctanoic acid (PFOA)	0.39	1.0	2.0
Perfluorooctane sulfonate (PFOS)	0.30	1.0	2.0
Perfluorononanoic acid (PFNA)	0.33	1.0	2.0

Sin Chii Chia, B.Sc.
schia@maxxam.ca
Office 905 817 5700

PROJECT NARRATIVE

Maxxam Analytics
Client Project #: 320-17278

Client: TestAmerica
Client Project: 320-17278

I. SAMPLE RECEIPT/ANALYSIS

a) Sample Listing

Maxxam ID	Client Sample ID	Date Sampled	Date Received	Date Prepped	Date Run	Initial Calibration
Low level PFOS and PFOA in water						
BVX748	OF-FB24-0216	2016/02/10	2016/02/13	2016/02/24	2016/02/25	2016/02/25
BVX749	OF-RW24-0216	2016/02/10	2016/02/13	2016/02/24	2016/02/25	2016/02/25
BVX750	OF-FB31-0216	2016/02/10	2016/02/13	2016/02/24	2016/02/25	2016/02/25
BVX751	OF-RW31-0216	2016/02/10	2016/02/13	2016/02/24	2016/02/25	2016/02/25
BVX752	OF-FB60-0216	2016/02/11	2016/02/13	2016/02/25	2016/02/29	2016/02/29
BVX753	OF-RW60-0216	2016/02/11	2016/02/13	2016/02/25	2016/02/29	2016/02/29
BVX754	OF-RW60P-0216	2016/02/11	2016/02/13	2016/02/25	2016/02/29	2016/02/29
BVX755	OF-FB46-0216	2016/02/11	2016/02/13	2016/02/25	2016/02/29	2016/02/29
BVX756	OF-RW46-0216	2016/02/11	2016/02/13	2016/02/25	2016/02/29	2016/02/29

Run Date is defined as the date of injection of the last calibration standard (12 hours or less) prior to the samples analyzed within that run sequence. Therefore the time of calibration injection that defines the run date is always within 12 hours of the time of sample injection.

b) Shipping Problems: none encountered

c) Documentation Problems: none encountered

II. SAMPLE PREP:

No problems encountered

III. SAMPLE ANALYSIS:

See also comments within the appropriate Certificate of Analysis

a) Hold Times: all within recommended hold times

b) Instrument Calibration: all within control limits

c) Quality Control: All applicable QC meets control criteria, except where otherwise noted.

d) All analytes requiring manual intergration(s) are noted on the sample chromatograms

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for other than the conditions detailed above.

In addition, I certify, that to the best of my knowledge and belief, the data as reported are true and accurate. Release of the data contained in this data package has been authorized by the cognizant laboratory official or his/her designee, as verified by this signature.

M Di Grazia

2016/03/14
Date

2. Sample Management Records

Maxxam Analytics International
6740 Campobello Rd
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1-800-668-0639
www.maxxamanalytics.com

2.1 Sample Custody

Maxxam Analytics International
6740 Campobello Rd
Mississauga, Ontario, Canada
L5N 2L8
1-800-668-0639
www.maxxamanalytics.com

Chain of Custody Record

Temperature on Receipt 3.4°C

Drinking Water? Yes ☒ No ☐

320-17278 Chain of Custody

CTO WE76

Due 2/22

13-Feb-16 13:40

Hongmei Zhao (Grace)

B630789

AKP ENV-1090

[redacted] Fax Number

Lab Contact

Date 02/10/16

Chain of Custody Number 283624

Lab Number

Page 1 of 1

Analysis (Attach list if more space is needed)

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Select BTEX	Special Instructions/ Conditions of Receipt
OF-FB24-Ø216	02/10/16	1005		X			X						2	collected 02/10/16
OF-RW24-Ø216	02/10/16	1012		X			X						2	collected 02/10/16
OF-FB31-Ø216	02/10/16	1305		X			X						2	collected 02/10/16
OF-RW31-Ø216	02/10/16	1312		X			X						2	collected 02/10/16
OF-FB60-Ø216	02/11/16	1120		X			X						2	
OF-RW60-Ø216	02/11/16	1123		X			X						2	
OF-RW60P-Ø216	02/11/16	1125		X			X						2	
OF-FB46-Ø216	02/11/16	1320		X			X						2	
OF-RW46-Ø216	02/11/16	1325		X			X						2	

Possible Hazard Identification

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal

☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required

☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

	Date	Time
1. Relinquished By	02/11/16	1500
2. Relinquished By		
3. Relinquished By		

	Date	Time
1. Received By	2/12/16	910
2. Received By		
3. Received By	02/12/16	13:40

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

3. Analytical Results

Maxxam Analytics International
6740 Campobello Rd
Mississauga, Ontario, Canada
L5N 2L8
1-800-668-0639
www.maxxamanalytics.com

3.1 Summary Report

Maxxam Analytics International
6740 Campobello Rd
Mississauga, Ontario, Canada
L5N 2L8
1-800-668-0639
www.maxxamanalytics.com

Your Project #: 320-17278
Your C.O.C. #: 283624

Attention:PFC Reporting Group

TestAmerica
Sacramento
880 Riverside Parkway
West Sacramento, CA
USA 95605

Report Date: 2016/03/14
Report #: R3929259
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B630789
Received: 2016/02/13, 13:40

Sample Matrix: Water
Samples Received: 9

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Low level PFOS and PFOA in water	4	2016/02/24	2016/02/25	CAM SOP-00894	EPA 537 m
Low level PFOS and PFOA in water	5	2016/02/25	2016/02/29	CAM SOP-00894	EPA 537 m

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Melissa DiGrazia, Project Manager - ATUT
Email: MDiGrazia@maxxam.ca
Phone# (905) 817-5700
==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

RESULTS OF ANALYSES OF WATER

Maxxam ID		BVX748	BVX749	BVX750	BVX751			
Sampling Date		2016/02/10 10:05	2016/02/10 10:12	2016/02/10 13:05	2016/02/10 13:12			
COC Number		283624	283624	283624	283624			
	UNITS	OF-FB24-0216	OF-RW24-0216	OF-FB31-0216	OF-RW31-0216	RDL	MDL	QC Batch
Miscellaneous Parameters								
Perfluorobutane Sulfonate (PFBS)	ng/L	0.27 U	0.27 U	0.27 U	4.3	2.0	0.27	4393242
Perfluoroheptanoic Acid (PFHpA)	ng/L	0.39 U	0.39 U	0.39 U	1.0 J	2.0	0.39	4393242
Perfluorohexane Sulfonate (PFHxS)	ng/L	0.40 U	0.40 U	0.40 U	1.4 J	2.0	0.40	4393242
Perfluoro-n-Octanoic Acid (PFOA)	ng/L	0.39 U	0.39 U	0.39 U	4.1	2.0	0.39	4393242
Perfluorononanoic Acid (PFNA)	ng/L	0.33 U	0.33 U	0.33 U	0.70 J	2.0	0.33	4393242
Perfluorooctane Sulfonate (PFOS)	ng/L	0.30 U	0.90 J	0.30 U	2.7	2.0	0.30	4393242
Surrogate Recovery (%)								
13C4-Perfluoroheptanoic acid	%	64	48 (1)	63	71	N/A	N/A	4393242
13C4-Perfluorooctanesulfonate	%	63	52	62	69	N/A	N/A	4393242
13C4-Perfluorooctanoic acid	%	67	53	63	69	N/A	N/A	4393242
13C5-Perfluorononanoic acid	%	65	45 (1)	58	64	N/A	N/A	4393242
18O2-Perfluorohexanesulfonate	%	63	55	64	81	N/A	N/A	4393242

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

N/A = Not Applicable

(1) Surrogate recovery was below the defined lower control limit (LCL). Laboratory spiked water resulted in satisfactory recovery of the surrogate. When considered together, these QC data suggest that matrix interferences may be biasing the data low. Because quantitation is performed using isotope dilution techniques, any losses of the native compound that may occur during any of the sample preparation, extraction, cleanup or determinative steps will be mirrored by a similar loss of the labeled standard, and as such can be accounted for and corrected. Therefore, the quantification of these target compounds is not affected by the low surrogate recovery.

Maxxam Job #: B630789
Report Date: 2016/03/14

TestAmerica
Client Project #: 320-17278

RESULTS OF ANALYSES OF WATER

Maxxam ID		BVX752	BVX753	BVX754	BVX755	BVX756			
Sampling Date		2016/02/11 11:20	2016/02/11 11:23	2016/02/11 11:25	2016/02/11 13:20	2016/02/11 13:25			
COC Number		283624	283624	283624	283624	283624			
	UNITS	OF-FB60-0216	OF-RW60-0216	OF-RW60P-0216	OF-FB46-0216	OF-RW46-0216	RDL	MDL	QC Batch
Miscellaneous Parameters									
Perfluorobutane Sulfonate (PFBS)	ng/L	0.27 U	0.72 J	0.85 J	0.27 U	0.27 U	2.0	0.27	4394558
Perfluoroheptanoic Acid (PFHpA)	ng/L	0.39 U	0.57 J	0.62 J	0.39 U	0.39 U	2.0	0.39	4394558
Perfluorohexane Sulfonate (PFHxS)	ng/L	0.40 U	0.99 J	1.1 J	0.40 U	0.40 U	2.0	0.40	4394558
Perfluoro-n-Octanoic Acid (PFOA)	ng/L	0.39 U	1.7 J	1.5 J	0.39 U	0.39 U	2.0	0.39	4394558
Perfluorononanoic Acid (PFNA)	ng/L	0.33 U	0.67 J	0.69 J	0.33 U	0.33 U	2.0	0.33	4394558
Perfluorooctane Sulfonate (PFOS)	ng/L	0.30 U	2.1	1.9 J	0.30 U	0.30 U	2.0	0.30	4394558
Surrogate Recovery (%)									
13C4-Perfluoroheptanoic acid	%	104	71	69	120	77	N/A	N/A	4394558
13C4-Perfluorooctanesulfonate	%	103	57	65	106	69	N/A	N/A	4394558
13C4-Perfluorooctanoic acid	%	110	67	70	125	82	N/A	N/A	4394558
13C5-Perfluorononanoic acid	%	98	58	67	101	73	N/A	N/A	4394558
18O2-Perfluorohexanesulfonate	%	108	74	72	113	69	N/A	N/A	4394558

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

TEST SUMMARY

Maxxam ID: BVX748 **Collected:** 2016/02/10
Sample ID: OF-FB24-0216 **Shipped:**
Matrix: Water **Received:** 2016/02/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA in water	LCMS	4393242	2016/02/24	2016/02/25	Sin Chii Chia

Maxxam ID: BVX749 **Collected:** 2016/02/10
Sample ID: OF-RW24-0216 **Shipped:**
Matrix: Water **Received:** 2016/02/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA in water	LCMS	4393242	2016/02/24	2016/02/25	Sin Chii Chia

Maxxam ID: BVX750 **Collected:** 2016/02/10
Sample ID: OF-FB31-0216 **Shipped:**
Matrix: Water **Received:** 2016/02/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA in water	LCMS	4393242	2016/02/24	2016/02/25	Sin Chii Chia

Maxxam ID: BVX751 **Collected:** 2016/02/10
Sample ID: OF-RW31-0216 **Shipped:**
Matrix: Water **Received:** 2016/02/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA in water	LCMS	4393242	2016/02/24	2016/02/25	Sin Chii Chia

Maxxam ID: BVX752 **Collected:** 2016/02/11
Sample ID: OF-FB60-0216 **Shipped:**
Matrix: Water **Received:** 2016/02/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA in water	LCMS	4394558	2016/02/25	2016/02/29	Sin Chii Chia

Maxxam ID: BVX753 **Collected:** 2016/02/11
Sample ID: OF-RW60-0216 **Shipped:**
Matrix: Water **Received:** 2016/02/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA in water	LCMS	4394558	2016/02/25	2016/02/29	Sin Chii Chia

Maxxam ID: BVX754 **Collected:** 2016/02/11
Sample ID: OF-RW60P-0216 **Shipped:**
Matrix: Water **Received:** 2016/02/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA in water	LCMS	4394558	2016/02/25	2016/02/29	Sin Chii Chia

Maxxam Job #: B630789
Report Date: 2016/03/14

TestAmerica
Client Project #: 320-17278

TEST SUMMARY

Maxxam ID: BVX755
Sample ID: OF-FB46-0216
Matrix: Water

Collected: 2016/02/11
Shipped:
Received: 2016/02/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA in water	LCMS	4394558	2016/02/25	2016/02/29	Sin Chii Chia

Maxxam ID: BVX756
Sample ID: OF-RW46-0216
Matrix: Water

Collected: 2016/02/11
Shipped:
Received: 2016/02/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low level PFOS and PFOA in water	LCMS	4394558	2016/02/25	2016/02/29	Sin Chii Chia

GENERAL COMMENTS

Report revised to remove qualifier legend

Perfluoroheptanoic acid (PFHpA) MDL = 0.39, LOD = 1.0, LOQ = 2.0
Perfluorooctanoic acid (PFOA) MDL = 0.39, LOD = 1.0, LOQ = 2.0
Perfluorononanoic acid (PFNA) MDL = 0.33, LOD = 1.0, LOQ = 2.0
Perfluorobutane sulfonate (PFBS) MDL = 0.27, LOD = 1.0, LOQ = 2.0
Perfluorohexane sulfonate (PFHxS) MDL = 0.40, LOD = 1.0, LOQ = 2.0
Perfluorooctane sulfonate (PFOS) MDL = 0.30, LOD = 1.0, LOQ = 2.0
All Units are in ng/L

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4393242	SCH	Matrix Spike	13C4-Perfluoroheptanoic acid	2016/02/25		89	%	50 - 130
			13C4-Perfluorooctanesulfonate	2016/02/25		90	%	50 - 130
			13C4-Perfluorooctanoic acid	2016/02/25		93	%	50 - 130
			13C5-Perfluorononanoic acid	2016/02/25		90	%	50 - 130
			18O2-Perfluorohexanesulfonate	2016/02/25		97	%	50 - 130
			Perfluorobutane Sulfonate (PFBS)	2016/02/25		89	%	70 - 130
			Perfluoroheptanoic Acid (PFHpA)	2016/02/25		101	%	70 - 130
			Perfluorohexane Sulfonate (PFHxS)	2016/02/25		100	%	70 - 130
			Perfluorononanoic Acid (PFNA)	2016/02/25		104	%	70 - 130
			Perfluoro-n-Octanoic Acid (PFOA)	2016/02/25		103	%	70 - 130
			Perfluorooctane Sulfonate (PFOS)	2016/02/25		98	%	70 - 130
4393242	SCH	RPD	Perfluorobutane Sulfonate (PFBS)	2016/02/25	7.1		%	30
			Perfluoroheptanoic Acid (PFHpA)	2016/02/25	11		%	30
			Perfluorohexane Sulfonate (PFHxS)	2016/02/25	8.1		%	30
			Perfluorononanoic Acid (PFNA)	2016/02/25	15		%	30
			Perfluoro-n-Octanoic Acid (PFOA)	2016/02/25	8.0		%	30
			Perfluorooctane Sulfonate (PFOS)	2016/02/25	19		%	30
			Perfluorobutane Sulfonate (PFBS)	2016/02/25	NC		%	30
			Perfluoroheptanoic Acid (PFHpA)	2016/02/25	NC		%	30
			Perfluorohexane Sulfonate (PFHxS)	2016/02/25	NC		%	30
			Perfluorononanoic Acid (PFNA)	2016/02/25	NC		%	30
			Perfluoro-n-Octanoic Acid (PFOA)	2016/02/25	NC		%	30
			Perfluorooctane Sulfonate (PFOS)	2016/02/25	NC		%	30
4393242	SCH	Spiked Blank	13C4-Perfluoroheptanoic acid	2016/02/25		88	%	50 - 130
			13C4-Perfluorooctanesulfonate	2016/02/25		88	%	50 - 130
			13C4-Perfluorooctanoic acid	2016/02/25		89	%	50 - 130
			13C5-Perfluorononanoic acid	2016/02/25		84	%	50 - 130
			18O2-Perfluorohexanesulfonate	2016/02/25		89	%	50 - 130
			Perfluorobutane Sulfonate (PFBS)	2016/02/25		102	%	70 - 130
			Perfluoroheptanoic Acid (PFHpA)	2016/02/25		110	%	70 - 130
			Perfluorohexane Sulfonate (PFHxS)	2016/02/25		115	%	70 - 130
			Perfluorononanoic Acid (PFNA)	2016/02/25		118	%	70 - 130
			Perfluoro-n-Octanoic Acid (PFOA)	2016/02/25		118	%	70 - 130
			Perfluorooctane Sulfonate (PFOS)	2016/02/25		110	%	70 - 130
4393242	SCH	Method Blank	13C4-Perfluoroheptanoic acid	2016/02/25		93	%	50 - 130
			13C4-Perfluorooctanesulfonate	2016/02/25		89	%	50 - 130
			13C4-Perfluorooctanoic acid	2016/02/25		96	%	50 - 130
			13C5-Perfluorononanoic acid	2016/02/25		91	%	50 - 130
			18O2-Perfluorohexanesulfonate	2016/02/25		89	%	50 - 130
			Perfluorobutane Sulfonate (PFBS)	2016/02/25	0.27 U, MDL=0.27		ng/L	
			Perfluoroheptanoic Acid (PFHpA)	2016/02/25	0.39 U, MDL=0.39		ng/L	
			Perfluorohexane Sulfonate (PFHxS)	2016/02/25	0.40 U, MDL=0.40		ng/L	
			Perfluorononanoic Acid (PFNA)	2016/02/25	0.33 U, MDL=0.33		ng/L	
			Perfluoro-n-Octanoic Acid (PFOA)	2016/02/25	0.39 U, MDL=0.39		ng/L	
			Perfluorooctane Sulfonate (PFOS)	2016/02/25	0.30 U, MDL=0.30		ng/L	
4394558	SCH	Matrix Spike [BVX752-01]	13C4-Perfluoroheptanoic acid	2016/02/29		96	%	50 - 130
			13C4-Perfluorooctanesulfonate	2016/02/29		95	%	50 - 130
			13C4-Perfluorooctanoic acid	2016/02/29		102	%	50 - 130

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			13C5-Perfluorononanoic acid	2016/02/29		93	%	50 - 130
			18O2-Perfluorohexanesulfonate	2016/02/29		92	%	50 - 130
			Perfluorobutane Sulfonate (PFBS)	2016/02/29		115	%	70 - 130
			Perfluoroheptanoic Acid (PFHpA)	2016/02/29		109	%	70 - 130
			Perfluorohexane Sulfonate (PFHxS)	2016/02/29		123	%	70 - 130
			Perfluorononanoic Acid (PFNA)	2016/02/29		130	%	70 - 130
			Perfluoro-n-Octanoic Acid (PFOA)	2016/02/29		116	%	70 - 130
			Perfluorooctane Sulfonate (PFOS)	2016/02/29		126	%	70 - 130
4394558	SCH	RPD [BVX752-01]	Perfluorobutane Sulfonate (PFBS)	2016/02/29	11		%	30
			Perfluoroheptanoic Acid (PFHpA)	2016/02/29	2.8		%	30
			Perfluorohexane Sulfonate (PFHxS)	2016/02/29	12		%	30
			Perfluorononanoic Acid (PFNA)	2016/02/29	9.2		%	30
			Perfluoro-n-Octanoic Acid (PFOA)	2016/02/29	12		%	30
			Perfluorooctane Sulfonate (PFOS)	2016/02/29	12		%	30
4394558	SCH	Spiked Blank	13C4-Perfluoroheptanoic acid	2016/02/29		99	%	50 - 130
			13C4-Perfluorooctanesulfonate	2016/02/29		99	%	50 - 130
			13C4-Perfluorooctanoic acid	2016/02/29		109	%	50 - 130
			13C5-Perfluorononanoic acid	2016/02/29		98	%	50 - 130
			18O2-Perfluorohexanesulfonate	2016/02/29		108	%	50 - 130
			Perfluorobutane Sulfonate (PFBS)	2016/02/29		98	%	70 - 130
			Perfluoroheptanoic Acid (PFHpA)	2016/02/29		108	%	70 - 130
			Perfluorohexane Sulfonate (PFHxS)	2016/02/29		102	%	70 - 130
			Perfluorononanoic Acid (PFNA)	2016/02/29		118	%	70 - 130
			Perfluoro-n-Octanoic Acid (PFOA)	2016/02/29		101	%	70 - 130
			Perfluorooctane Sulfonate (PFOS)	2016/02/29		113	%	70 - 130
4394558	SCH	Method Blank	13C4-Perfluoroheptanoic acid	2016/02/29		98	%	50 - 130
			13C4-Perfluorooctanesulfonate	2016/02/29		83	%	50 - 130
			13C4-Perfluorooctanoic acid	2016/02/29		97	%	50 - 130
			13C5-Perfluorononanoic acid	2016/02/29		91	%	50 - 130
			18O2-Perfluorohexanesulfonate	2016/02/29		89	%	50 - 130
			Perfluorobutane Sulfonate (PFBS)	2016/02/29	0.27 U, MDL=0.27		ng/L	
			Perfluoroheptanoic Acid (PFHpA)	2016/02/29	0.39 U, MDL=0.39		ng/L	
			Perfluorohexane Sulfonate (PFHxS)	2016/02/29	0.40 U, MDL=0.40		ng/L	
			Perfluorononanoic Acid (PFNA)	2016/02/29	0.33 U, MDL=0.33		ng/L	
			Perfluoro-n-Octanoic Acid (PFOA)	2016/02/29	0.39 U, MDL=0.39		ng/L	
			Perfluorooctane Sulfonate (PFOS)	2016/02/29	0.30 U, MDL=0.30		ng/L	

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

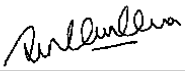
NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

Maxxam Job #: B630789
Report Date: 2016/03/14

TestAmerica
Client Project #: 320-17278

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



Sin Chii Chia, Scientific Services

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METHOD 537

DETERMINATION OF SELECTED PERFLUORINATED ALKYL ACIDS IN DRINKING WATER BY SOLID PHASE EXTRACTION AND LIQUID CHROMATOGRAPHY/TANDEM MASS SPECTROMETRY (LC/MS/MS)

Maxxam Analytics International
6740 Campobello Rd
Mississauga, Ontario, Canada
L5N 2L8
1-800-668-0639
www.maxxamanalytics.com

3.2 Sample Chromatograms

Maxxam Analytics International
6740 Campobello Rd
Mississauga, Ontario, Canada
L5N 2L8
1-800-668-0639
www.maxxamanalytics.com

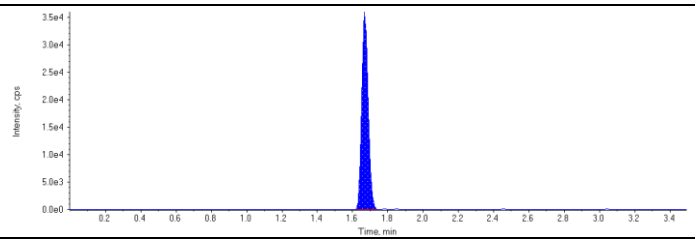
Sample Name	**4393242~BVX748-01**	**Injection Vial**	15
Sample ID	4393242~BVX748-01	**Injection Volume (µL)**	3
Sample Type	Unknown	**Algorithm Used**	Analyst Classic
Acquisition Date	2016/02/25 6:14:10 PM	**Dilution Factor**	1.00
Acquisition Method	PFC_Water_Low.dam	**Sample Annotation**	-
Project	Enviro\PFOS	**Instrument Name**	LCMS03
Data File	PFC_160225\WS#4393242.wiff		
Result Table	PFC_Water_160225_4393242_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	90100.	1.67	1.00	-
MPFHpA	317000.	1.69	1.00	-
MPFOA	297000.	1.87	1.00	-
MPFOS	124000.	1.96	1.00	-
MPFNA	243000.	2.01	1.00	-
13C6-PFHxA IS	2280000.	1.42	1.00	-
N/A	N/A	N/A	N/A	-

Target Analyte	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)	Accuracy (%)
PFBS 1	0	0.00	N/A	N/A	N/A
PFHxS 1	0	0.00	N/A	N/A	N/A
PFHpA 1	0	0.00	N/A	N/A	N/A
PFOA 1	0	0.00	N/A	N/A	N/A
PFOS 1	0	0.00	N/A	N/A	N/A
PFNA 1	0	0.00	N/A	N/A	N/A
18O2-PFHxS	90100	1.67	N/A	63.1	N/A
13C4-PFHpA	317000	1.69	N/A	64.2	N/A
13C4-PFOA	297000	1.87	N/A	66.6	N/A
13C4-PFOS	124000	1.96	N/A	63.2	N/A
13C5-PFNA	243000	2.01	N/A	64.5	N/A
13C6-PFHxA	2280000	1.42	N/A	98.4	N/A

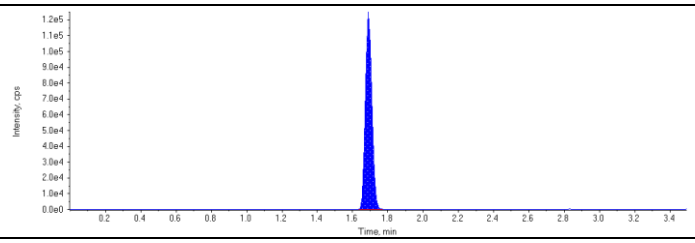
MPFHxS (Internal Standard)

RT (Exp. RT): 1.67(1.68) min
Concentration: 1.00 ng/L
Sample Type: (Unknown)



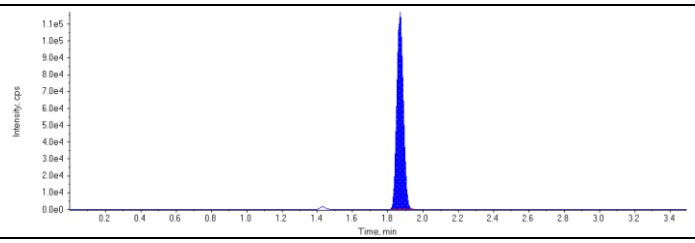
MPFHpA (Internal Standard)

RT (Exp. RT): 1.69(1.69) min
Concentration: 1.00 ng/L
Sample Type: (Unknown)



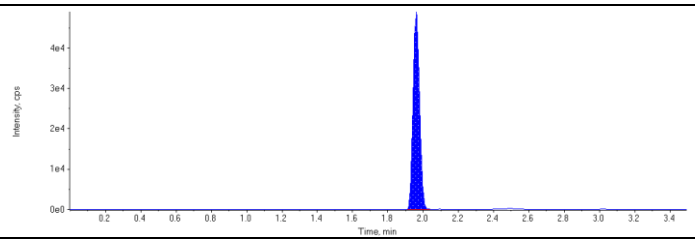
MPFOA (Internal Standard)

RT (Exp. RT): 1.87(1.88) min
Concentration: 1.00 ng/L
Sample Type: (Unknown)



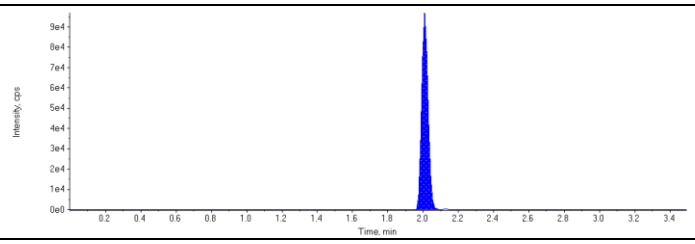
MPFOS (Internal Standard)

RT (Exp. RT): 1.96(1.97) min
Concentration: 1.00 ng/L
Sample Type: (Unknown)



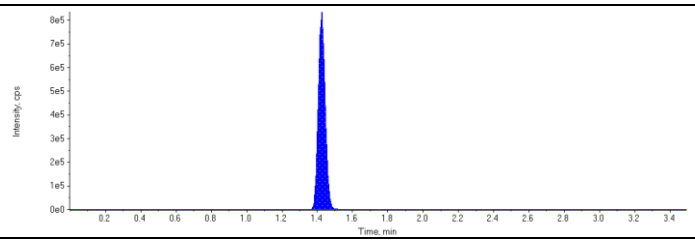
MPFNA (Internal Standard)

RT (Exp. RT): 2.01(2.02) min
Concentration: 1.00 ng/L
Sample Type: (Unknown)



13C6-PFHxA IS (Internal Standard)

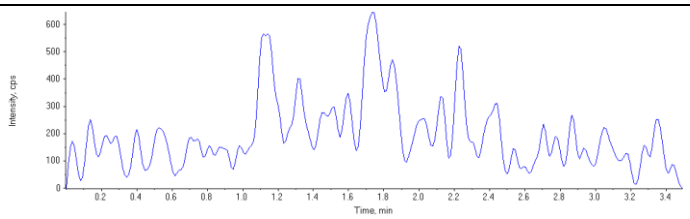
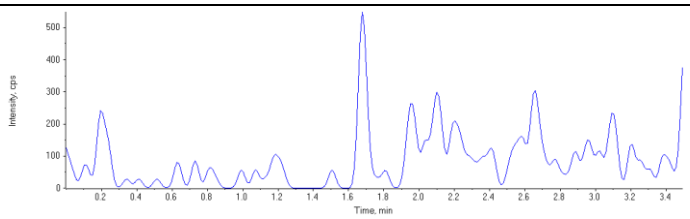
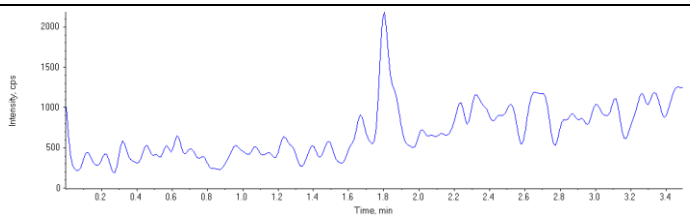
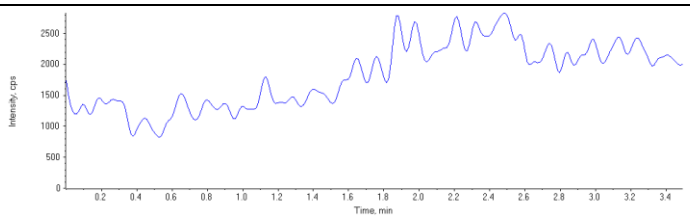
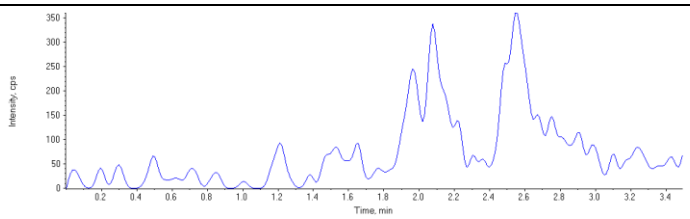
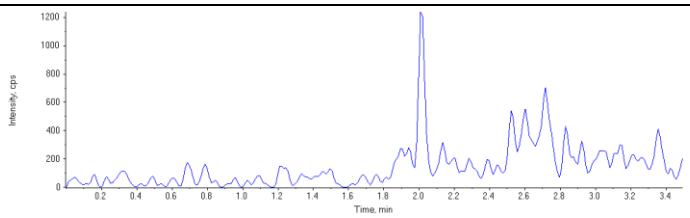
RT (Exp. RT): 1.42(1.42) min
Concentration: 1.00 ng/L
Sample Type: (Unknown)

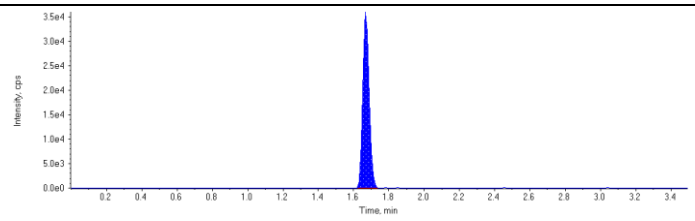
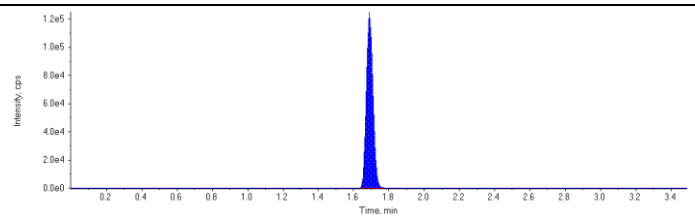
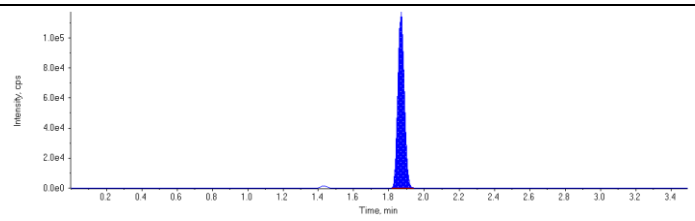
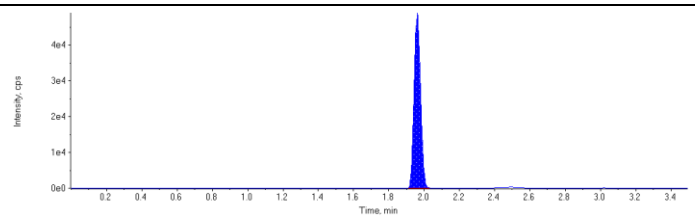
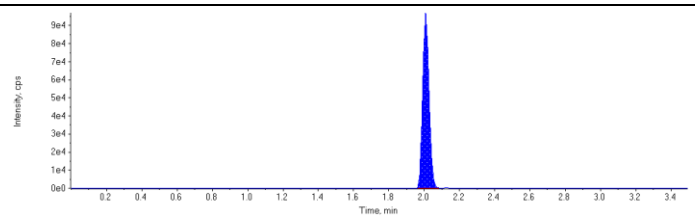
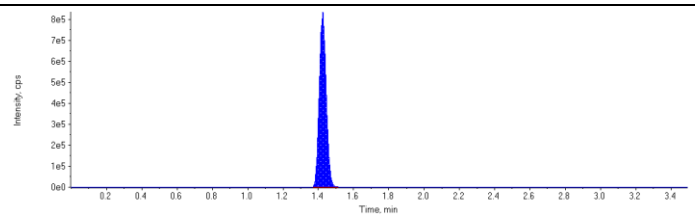


N/A (Internal Standard)

RT (Exp. RT): N/A(N/A) min
Concentration: N/A N/A
Sample Type: (Unknown)

This image is not available

PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 0.00 (1.09) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 0.00 (1.68) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 0.00 (1.75) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 0.00 (1.92) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 0.00 (1.97) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 0.00 (2.02) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	

18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 63.1 ng/L Area Ratio: 0.0396 Sample Type: (Unknown)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.69 (1.69) min Calculated Conc: 64.2 ng/L Area Ratio: 0.139 Sample Type: (Unknown)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 66.6 ng/L Area Ratio: 0.130 Sample Type: (Unknown)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 63.2 ng/L Area Ratio: 0.0545 Sample Type: (Unknown)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 64.5 ng/L Area Ratio: 0.107 Sample Type: (Unknown)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.42 (1.42) min Calculated Conc: 98.4 ng/L Area Ratio: 0.00 Sample Type: (Unknown)	

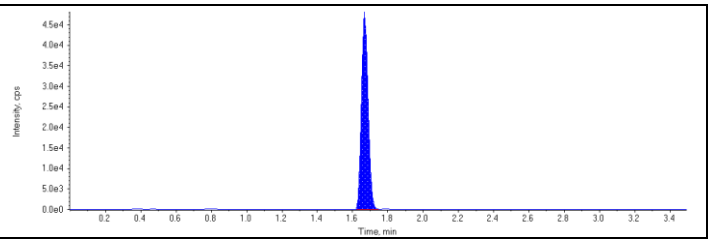
Sample Name	**4393242~BVX749-01**	**Injection Vial**	16
Sample ID	4393242~BVX749-01	**Injection Volume (µL)**	3
Sample Type	Unknown	**Algorithm Used**	Analyst Classic
Acquisition Date	2016/02/25 6:19:16 PM	**Dilution Factor**	1.00
Acquisition Method	PFC_Water_Low.dam	**Sample Annotation**	Re-injected
Project	Enviro\PFOS	**Instrument Name**	LCMS03
Data File	PFC_160225\WS#4393242.wiff		
Result Table	PFC_Water_160225_4393242_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	124000.	1.67	1.00	-
MPFHpA	412000.	1.69	1.00	-
MPFOA	380000.	1.87	1.00	-
MPFOS	139000.	1.96	1.00	-
MPFNA	273000.	2.01	1.00	-
13C6-PFHxA IS	3330000.	1.42	1.00	-
N/A	N/A	N/A	N/A	-

Target Analyte	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)	Accuracy (%)
PFBS 1	2750	1.08	N/A	0.737	N/A
PFHxS 1	8960	1.67	N/A	0.503	N/A
PFHpA 1	0	0.00	N/A	N/A	N/A
PFOA 1	0	0.00	N/A	N/A	N/A
PFOS 1	12900	1.95	N/A	0.901	N/A
PFNA 1	0	0.00	N/A	N/A	N/A
18O2-PFHxS	124000	1.67	N/A	59.5	N/A
13C4-PFHpA	412000	1.69	N/A	57.1	N/A
13C4-PFOA	380000	1.87	N/A	58.3	N/A
13C4-PFOS	139000	1.96	N/A	48.3	N/A
13C5-PFNA	273000	2.01	N/A	49.6	N/A
13C6-PFHxA	3330000	1.42	N/A	144.	N/A

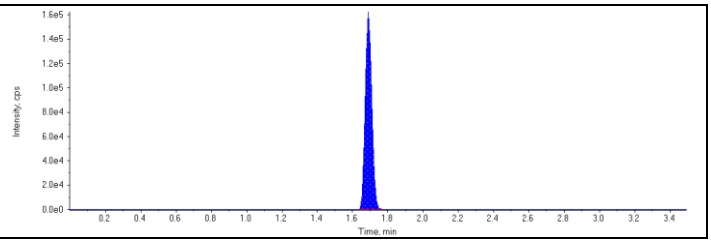
MPFHxS (Internal Standard)

RT (Exp. RT): 1.67(1.68) min
Concentration: 1.00 ng/L
Sample Type: (Unknown)



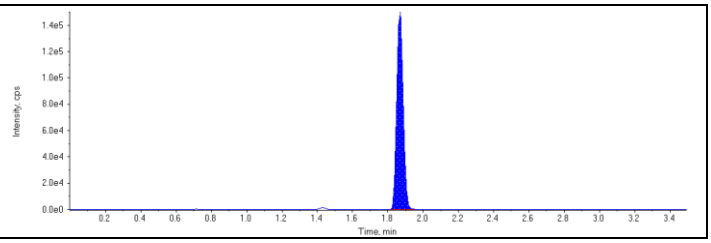
MPFHpA (Internal Standard)

RT (Exp. RT): 1.69(1.69) min
Concentration: 1.00 ng/L
Sample Type: (Unknown)



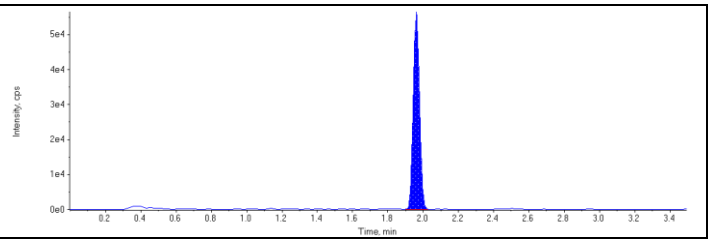
MPFOA (Internal Standard)

RT (Exp. RT): 1.87(1.88) min
Concentration: 1.00 ng/L
Sample Type: (Unknown)



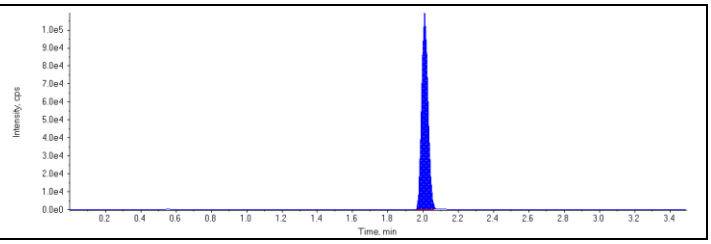
MPFOS (Internal Standard)

RT (Exp. RT): 1.96(1.97) min
Concentration: 1.00 ng/L
Sample Type: (Unknown)



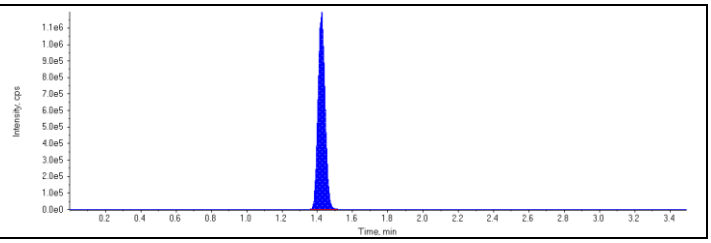
MPFNA (Internal Standard)

RT (Exp. RT): 2.01(2.02) min
Concentration: 1.00 ng/L
Sample Type: (Unknown)



13C6-PFHxA IS (Internal Standard)

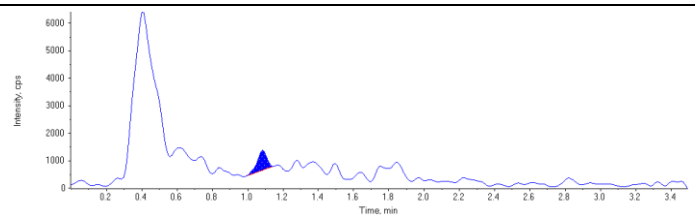
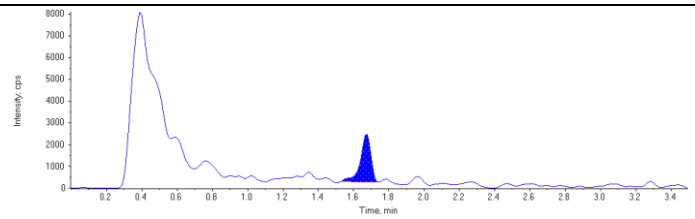
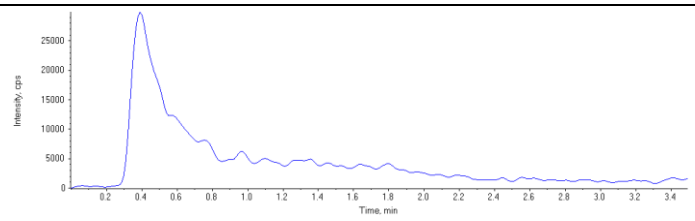
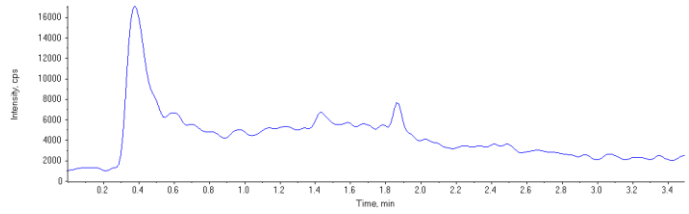
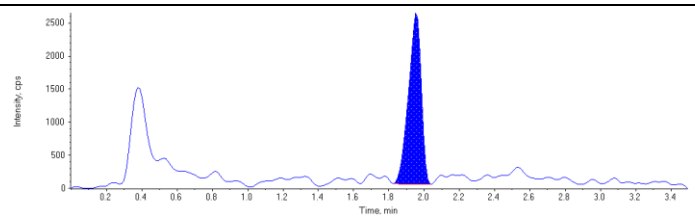
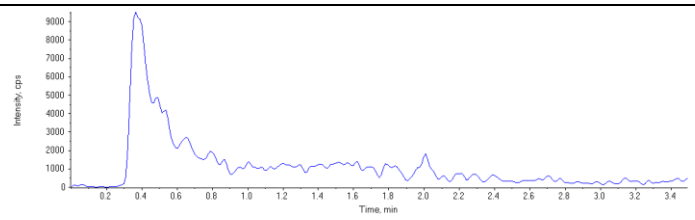
RT (Exp. RT): 1.42(1.42) min
Concentration: 1.00 ng/L
Sample Type: (Unknown)

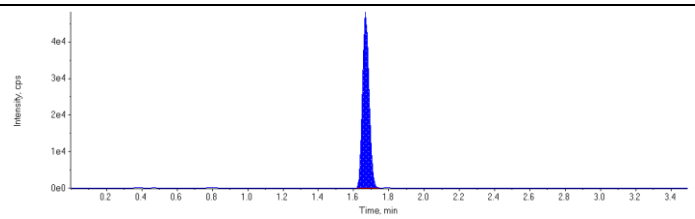
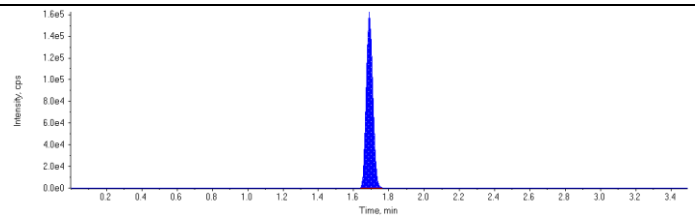
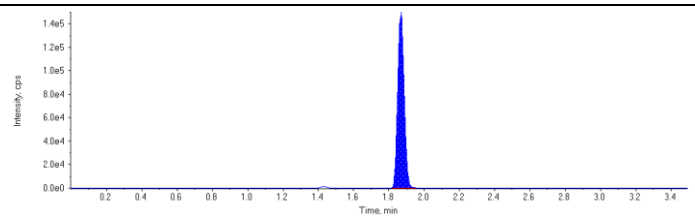
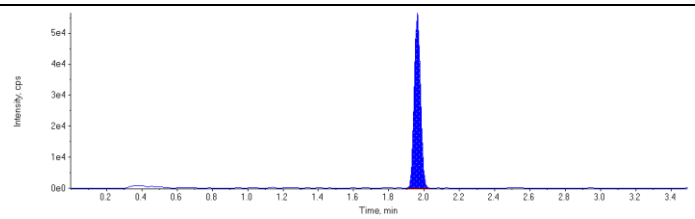
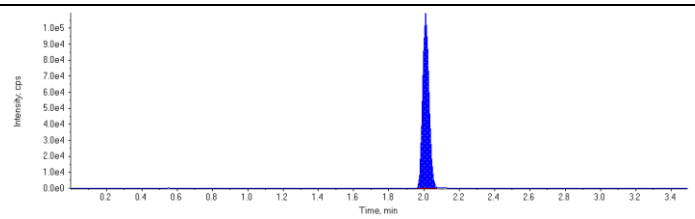
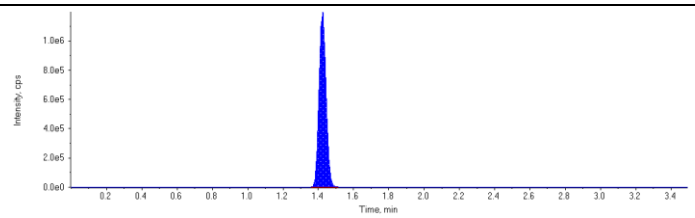


N/A (Internal Standard)

RT (Exp. RT): N/A(N/A) min
Concentration: N/A N/A
Sample Type: (Unknown)

This image is not available

PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.08 (1.09) min Calculated Conc: 0.737 ng/L Area Ratio: 0.0222 Sample Type: (Unknown)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 0.503 ng/L Area Ratio: 0.0722 Sample Type: (Unknown)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 0.00 (1.75) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 0.00 (1.92) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.95 (1.97) min Calculated Conc: 0.901 ng/L Area Ratio: 0.0930 Sample Type: (Unknown)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 0.00 (2.02) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	

18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 59.5 ng/L Area Ratio: 0.0373 Sample Type: (Unknown)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.69 (1.69) min Calculated Conc: 57.1 ng/L Area Ratio: 0.124 Sample Type: (Unknown)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 58.3 ng/L Area Ratio: 0.114 Sample Type: (Unknown)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 48.3 ng/L Area Ratio: 0.0417 Sample Type: (Unknown)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 49.6 ng/L Area Ratio: 0.0820 Sample Type: (Unknown)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.42 (1.42) min Calculated Conc: 144. ng/L Area Ratio: 0.00 Sample Type: (Unknown)	

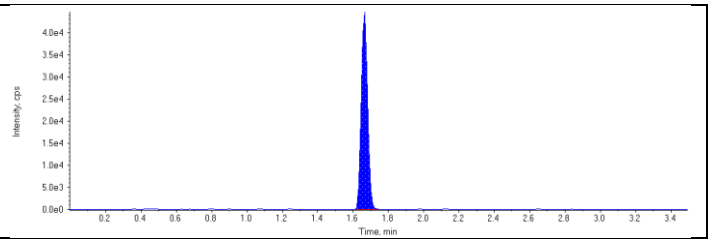
Sample Name	**4393242~BVX749-01**	**Injection Vial**	16
Sample ID	4393242~BVX749-01	**Injection Volume (µL)**	3
Sample Type	Unknown	**Algorithm Used**	Analyst Classic
Acquisition Date	2016/02/26 7:58:16 AM	**Dilution Factor**	1.00
Acquisition Method	PFC_Water_Low.dam	**Sample Annotation**	Reported
Project	Enviro\PFOS	**Instrument Name**	LCMS03
Data File	PFC_160225\WS#4393242.wiff		
Result Table	PFC_Water_160225_4393242_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	111000.	1.66	1.00	-
MPFHpA	339000.	1.68	1.00	-
MPFOA	335000.	1.86	1.00	-
MPFOS	145000.	1.95	1.00	-
MPFNA	242000.	2.00	1.00	-
13C6-PFHxA IS	3240000.	1.42	1.00	-
N/A	N/A	N/A	N/A	-

Target Analyte	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)	Accuracy (%)
PFBS 1	0	0.00	N/A	N/A	N/A
PFHxS 1	0	0.00	N/A	N/A	N/A
PFHpA 1	0	0.00	N/A	N/A	N/A
PFOA 1	0	0.00	N/A	N/A	N/A
PFOS 1	13300	1.95	N/A	0.895	N/A
PFNA 1	0	0.00	N/A	N/A	N/A
18O2-PFHxS	111000	1.66	N/A	54.7	N/A
13C4-PFHpA	339000	1.68	N/A	48.2	N/A
13C4-PFOA	335000	1.86	N/A	52.8	N/A
13C4-PFOS	145000	1.95	N/A	51.8	N/A
13C5-PFNA	242000	2.00	N/A	45.2	N/A
13C6-PFHxA	3240000	1.42	N/A	140.	N/A

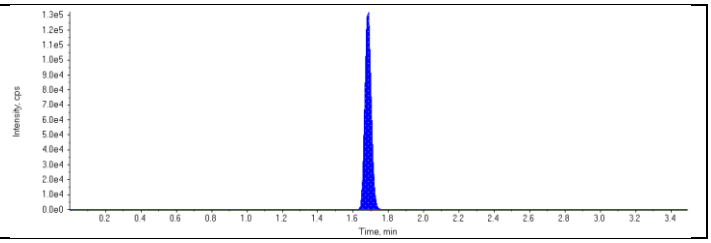
MPFHxS (Internal Standard)

RT (Exp. RT): 1.66(1.68) min
Concentration: 1.00 ng/L
Sample Type: (Unknown)



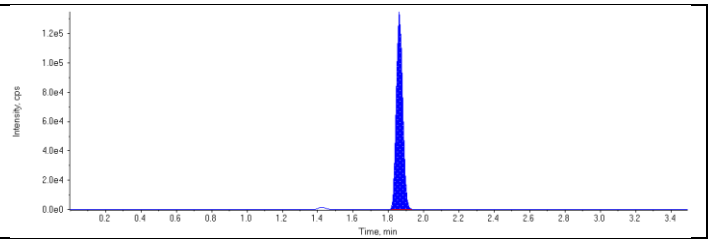
MPFHpA (Internal Standard)

RT (Exp. RT): 1.68(1.69) min
Concentration: 1.00 ng/L
Sample Type: (Unknown)



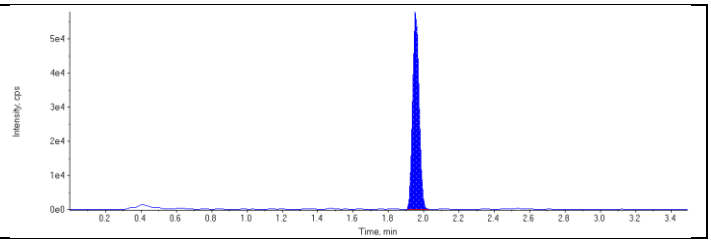
MPFOA (Internal Standard)

RT (Exp. RT): 1.86(1.88) min
Concentration: 1.00 ng/L
Sample Type: (Unknown)



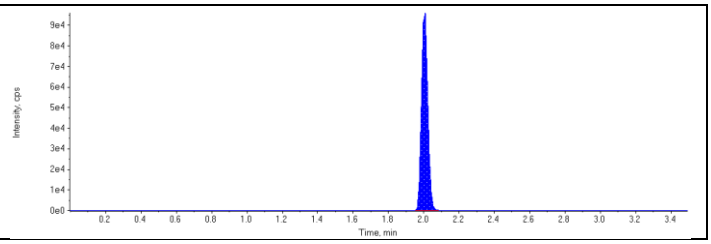
MPFOS (Internal Standard)

RT (Exp. RT): 1.95(1.97) min
Concentration: 1.00 ng/L
Sample Type: (Unknown)



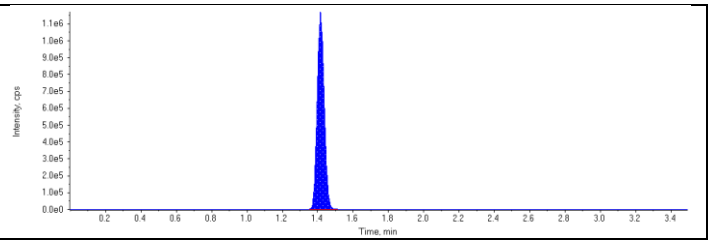
MPFNA (Internal Standard)

RT (Exp. RT): 2.00(2.02) min
Concentration: 1.00 ng/L
Sample Type: (Unknown)



13C6-PFHxA IS (Internal Standard)

RT (Exp. RT): 1.42(1.42) min
Concentration: 1.00 ng/L
Sample Type: (Unknown)



N/A (Internal Standard)

RT (Exp. RT): N/A(N/A) min
Concentration: N/A N/A
Sample Type: (Unknown)

This image is not available

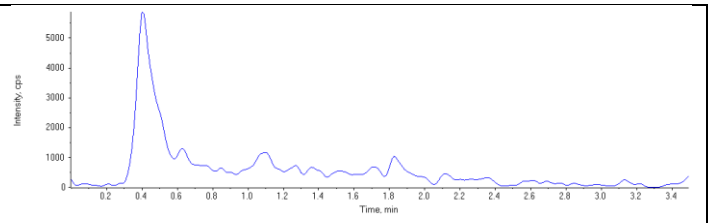
PFBS 1 (298.900/79.900 Da)

RT (Exp. RT): 0.00 (1.09) min

Calculated Conc: N/A ng/L

Area Ratio: 0.00

Sample Type: (Unknown)



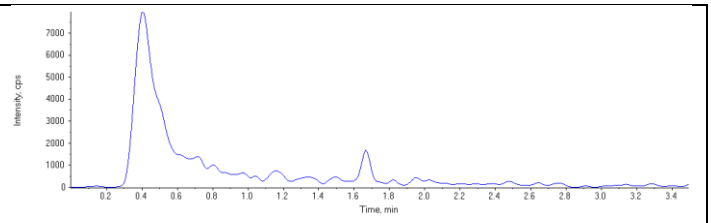
PFHxS 1 (398.900/79.900 Da)

RT (Exp. RT): 0.00 (1.68) min

Calculated Conc: N/A ng/L

Area Ratio: 0.00

Sample Type: (Unknown)



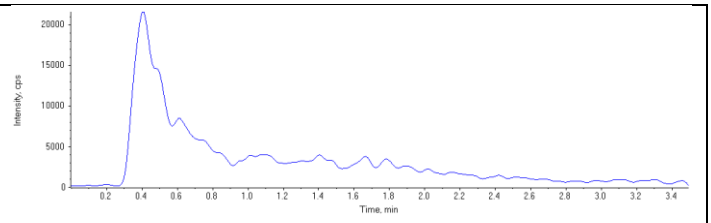
PFHpA 1 (363.000/319.000 Da)

RT (Exp. RT): 0.00 (1.75) min

Calculated Conc: N/A ng/L

Area Ratio: 0.00

Sample Type: (Unknown)



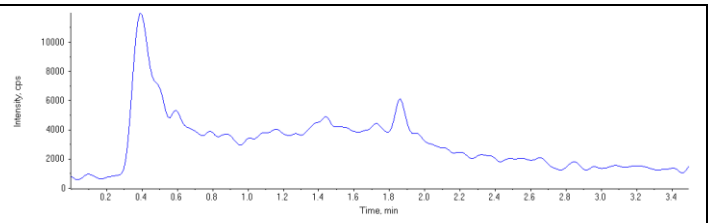
PFOA 1 (413.100/369.000 Da)

RT (Exp. RT): 0.00 (1.92) min

Calculated Conc: N/A ng/L

Area Ratio: 0.00

Sample Type: (Unknown)



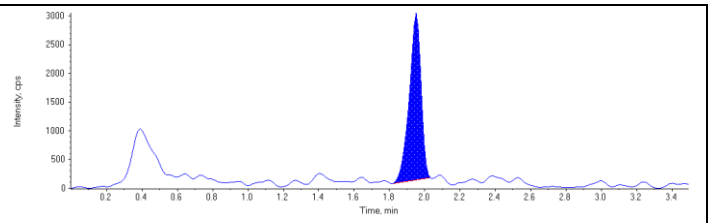
PFOS 1 (498.900/79.900 Da)

RT (Exp. RT): 1.95 (1.97) min

Calculated Conc: 0.895 ng/L

Area Ratio: 0.0922

Sample Type: (Unknown)



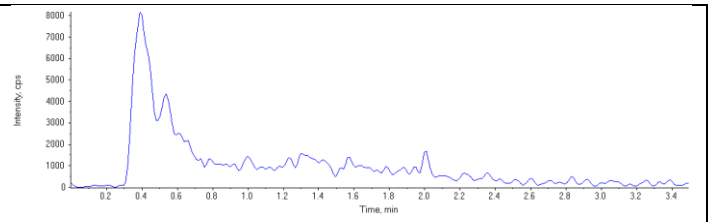
PFNA 1 (462.900/419.000 Da)

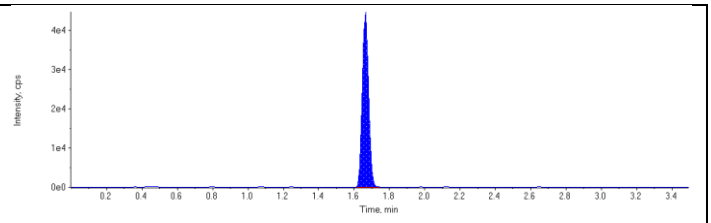
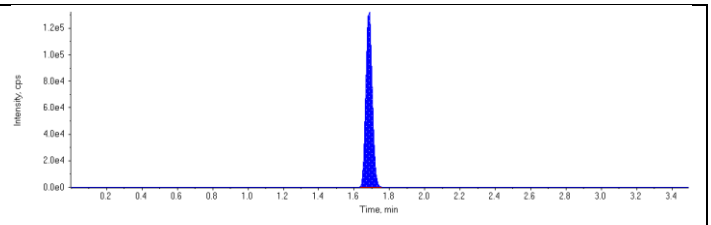
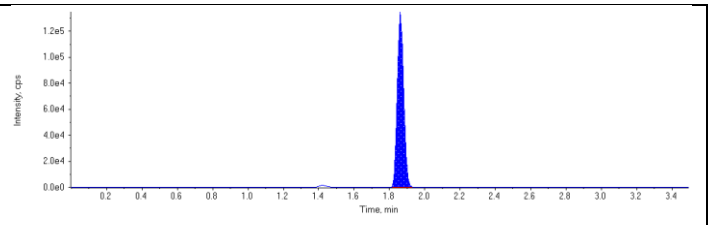
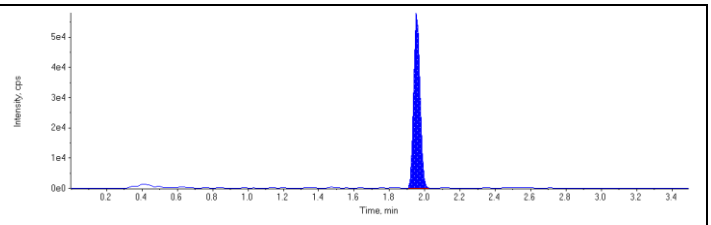
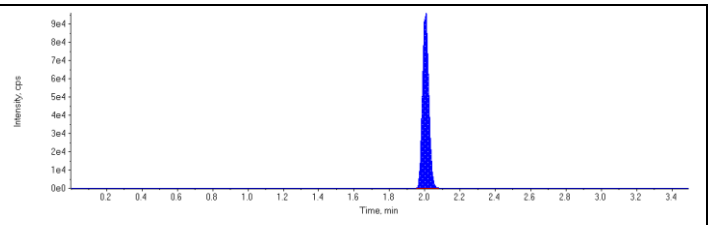
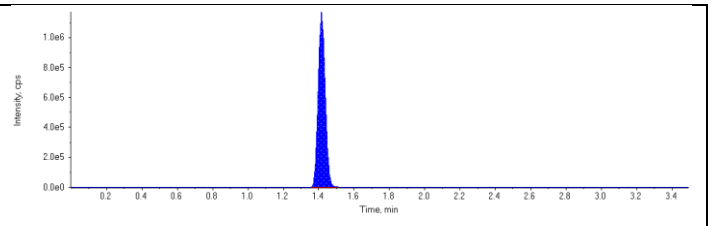
RT (Exp. RT): 0.00 (2.02) min

Calculated Conc: N/A ng/L

Area Ratio: 0.00

Sample Type: (Unknown)



18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.66 (1.68) min Calculated Conc: 54.7 ng/L Area Ratio: 0.0343 Sample Type: (Unknown)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.68 (1.69) min Calculated Conc: 48.2 ng/L Area Ratio: 0.105 Sample Type: (Unknown)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.86 (1.88) min Calculated Conc: 52.8 ng/L Area Ratio: 0.103 Sample Type: (Unknown)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.95 (1.97) min Calculated Conc: 51.8 ng/L Area Ratio: 0.0447 Sample Type: (Unknown)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.00 (2.02) min Calculated Conc: 45.2 ng/L Area Ratio: 0.0747 Sample Type: (Unknown)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.42 (1.42) min Calculated Conc: 140. ng/L Area Ratio: 0.00 Sample Type: (Unknown)	

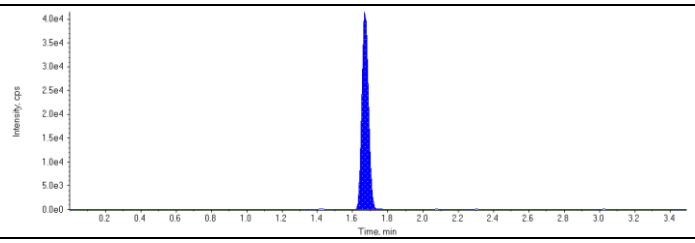
Sample Name	**4393242~BVX750-01**	**Injection Vial**	17
Sample ID	4393242~BVX750-01	**Injection Volume (µL)**	3
Sample Type	Unknown	**Algorithm Used**	Analyst Classic
Acquisition Date	2016/02/25 6:24:21 PM	**Dilution Factor**	1.00
Acquisition Method	PFC_Water_Low.dam	**Sample Annotation**	-
Project	Enviro\PFOS	**Instrument Name**	LCMS03
Data File	PFC_160225\WS#4393242.wiff		
Result Table	PFC_Water_160225_4393242_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	107000.	1.67	1.00	-
MPFHpA	364000.	1.69	1.00	-
MPFOA	327000.	1.87	1.00	-
MPFOS	143000.	1.96	1.00	-
MPFNA	256000.	2.01	1.00	-
13C6-PFHxA IS	2660000.	1.42	1.00	-
N/A	N/A	N/A	N/A	-

Target Analyte	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)	Accuracy (%)
PFBS 1	0	0.00	N/A	N/A	N/A
PFHxS 1	0	0.00	N/A	N/A	N/A
PFHpA 1	0	0.00	N/A	N/A	N/A
PFOA 1	0	0.00	N/A	N/A	N/A
PFOS 1	0	0.00	N/A	N/A	N/A
PFNA 1	0	0.00	N/A	N/A	N/A
18O2-PFHxS	107000	1.67	N/A	64.2	N/A
13C4-PFHpA	364000	1.69	N/A	63.2	N/A
13C4-PFOA	327000	1.87	N/A	62.8	N/A
13C4-PFOS	143000	1.96	N/A	62.4	N/A
13C5-PFNA	256000	2.01	N/A	58.4	N/A
13C6-PFHxA	2660000	1.42	N/A	115.	N/A

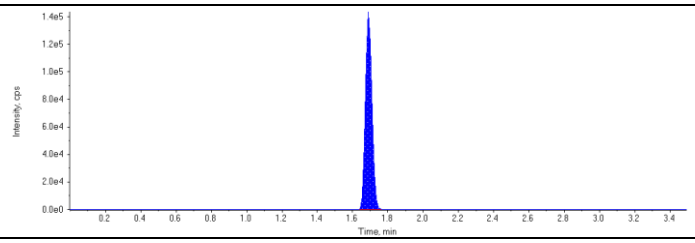
MPFHxS (Internal Standard)

RT (Exp. RT): 1.67(1.68) min
Concentration: 1.00 ng/L
Sample Type: (Unknown)



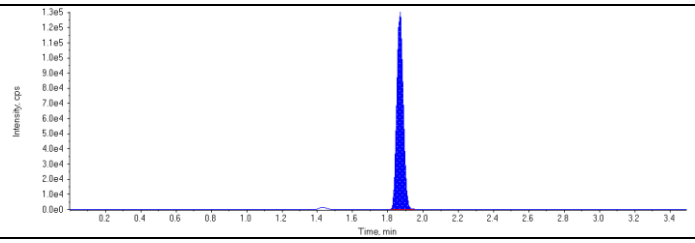
MPFHpA (Internal Standard)

RT (Exp. RT): 1.69(1.69) min
Concentration: 1.00 ng/L
Sample Type: (Unknown)



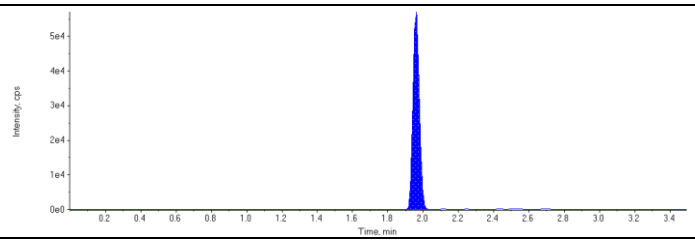
MPFOA (Internal Standard)

RT (Exp. RT): 1.87(1.88) min
Concentration: 1.00 ng/L
Sample Type: (Unknown)



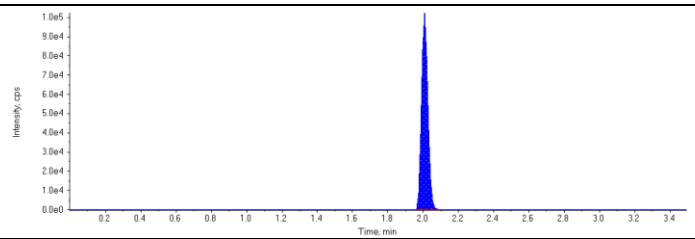
MPFOS (Internal Standard)

RT (Exp. RT): 1.96(1.97) min
Concentration: 1.00 ng/L
Sample Type: (Unknown)



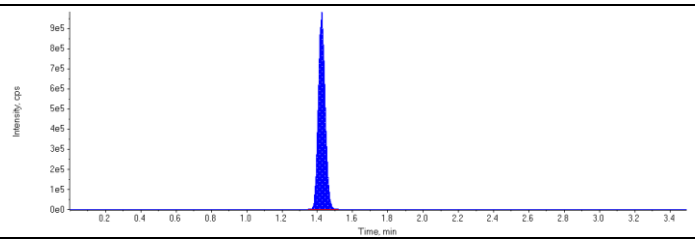
MPFNA (Internal Standard)

RT (Exp. RT): 2.01(2.02) min
Concentration: 1.00 ng/L
Sample Type: (Unknown)



13C6-PFHxA IS (Internal Standard)

RT (Exp. RT): 1.42(1.42) min
Concentration: 1.00 ng/L
Sample Type: (Unknown)



N/A (Internal Standard)

RT (Exp. RT): N/A(N/A) min
Concentration: N/A N/A
Sample Type: (Unknown)

This image is not available

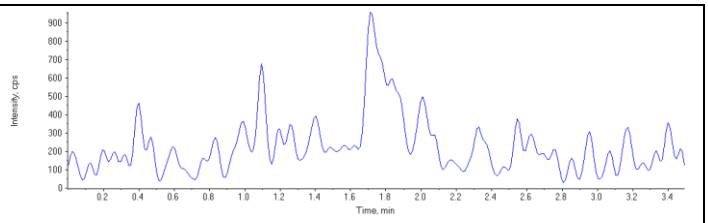
PFBS 1 (298.900/79.900 Da)

RT (Exp. RT): 0.00 (1.09) min

Calculated Conc: N/A ng/L

Area Ratio: 0.00

Sample Type: (Unknown)



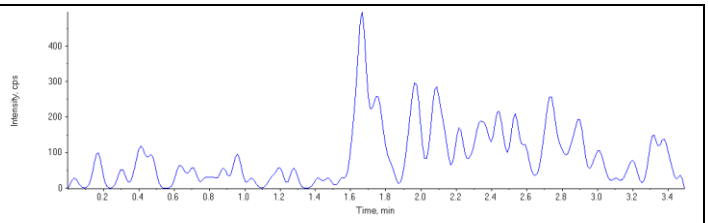
PFHxS 1 (398.900/79.900 Da)

RT (Exp. RT): 0.00 (1.68) min

Calculated Conc: N/A ng/L

Area Ratio: 0.00

Sample Type: (Unknown)



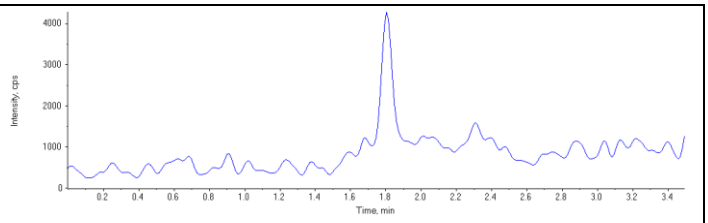
PFHpA 1 (363.000/319.000 Da)

RT (Exp. RT): 0.00 (1.75) min

Calculated Conc: N/A ng/L

Area Ratio: 0.00

Sample Type: (Unknown)



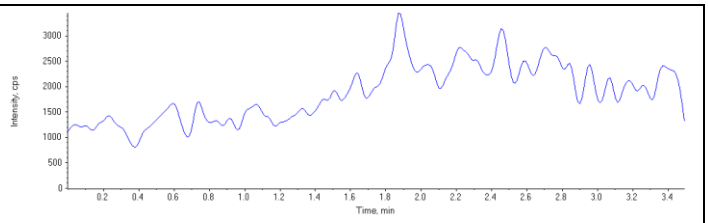
PFOA 1 (413.100/369.000 Da)

RT (Exp. RT): 0.00 (1.92) min

Calculated Conc: N/A ng/L

Area Ratio: 0.00

Sample Type: (Unknown)



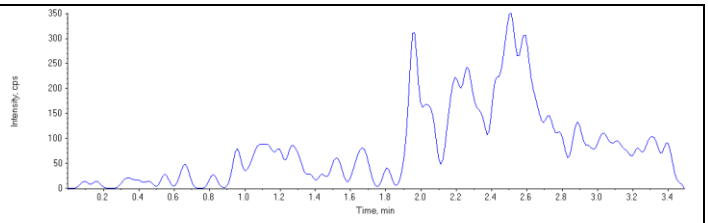
PFOS 1 (498.900/79.900 Da)

RT (Exp. RT): 0.00 (1.97) min

Calculated Conc: N/A ng/L

Area Ratio: 0.00

Sample Type: (Unknown)



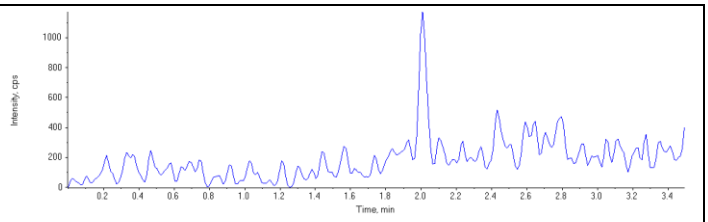
PFNA 1 (462.900/419.000 Da)

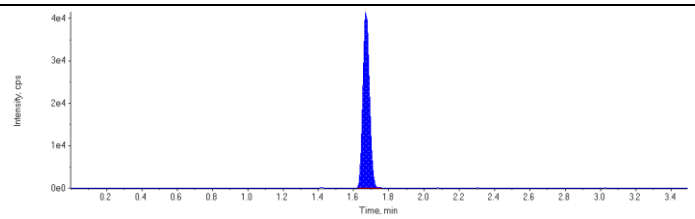
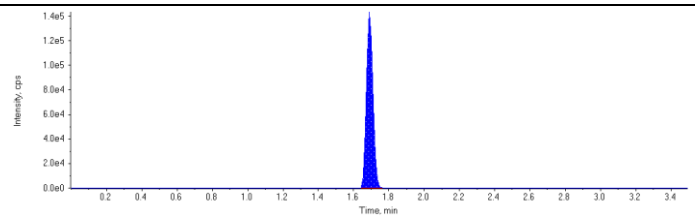
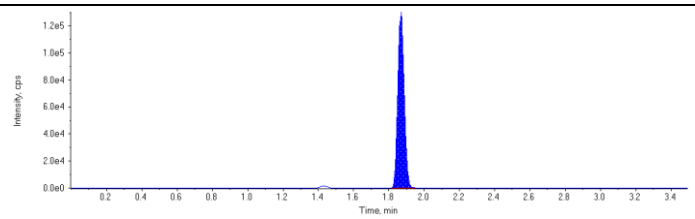
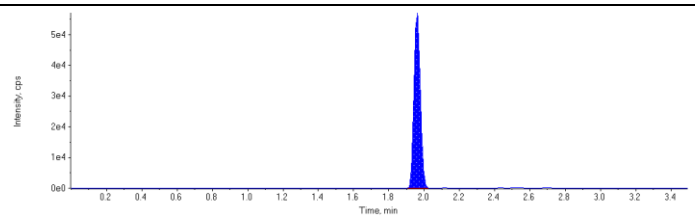
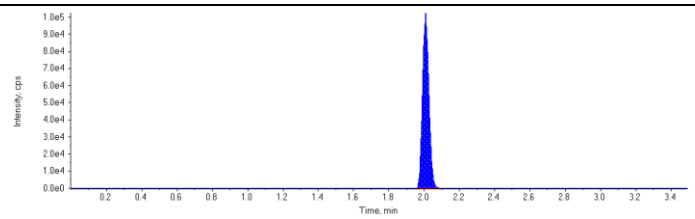
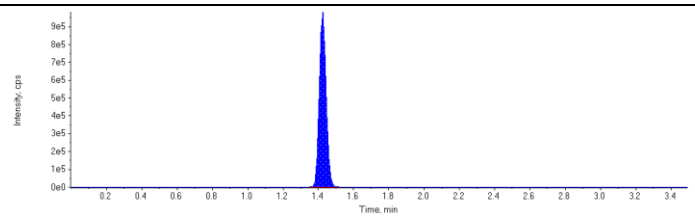
RT (Exp. RT): 0.00 (2.02) min

Calculated Conc: N/A ng/L

Area Ratio: 0.00

Sample Type: (Unknown)



18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 64.2 ng/L Area Ratio: 0.0402 Sample Type: (Unknown)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.69 (1.69) min Calculated Conc: 63.2 ng/L Area Ratio: 0.137 Sample Type: (Unknown)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 62.8 ng/L Area Ratio: 0.123 Sample Type: (Unknown)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 62.4 ng/L Area Ratio: 0.0539 Sample Type: (Unknown)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 58.4 ng/L Area Ratio: 0.0965 Sample Type: (Unknown)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.42 (1.42) min Calculated Conc: 115. ng/L Area Ratio: 0.00 Sample Type: (Unknown)	

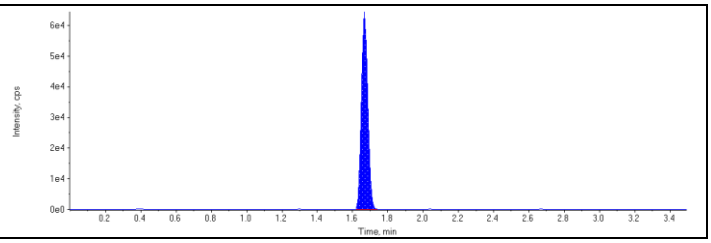
Sample Name	**4393242~BVX751-01**	**Injection Vial**	18
Sample ID	4393242~BVX751-01	**Injection Volume (µL)**	3
Sample Type	Unknown	**Algorithm Used**	Analyst Classic
Acquisition Date	2016/02/25 6:29:27 PM	**Dilution Factor**	1.00
Acquisition Method	PFC_Water_Low.dam	**Sample Annotation**	-
Project	Enviro\PFOS	**Instrument Name**	LCMS03
Data File	PFC_160225\WS#4393242.wiff		
Result Table	PFC_Water_160225_4393242_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	160000.	1.67	1.00	-
MPFHpA	482000.	1.69	1.00	-
MPFOA	429000.	1.87	1.00	-
MPFOS	187000.	1.96	1.00	-
MPFNA	335000.	2.01	1.00	-
13C6-PFHxA IS	3150000.	1.42	1.00	-
N/A	N/A	N/A	N/A	-

Target Analyte	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)	Accuracy (%)
PFBS 1	177000	1.10	N/A	4.31	N/A
PFHxS 1	53600	1.67	N/A	1.36	N/A
PFHpA 1	41800	1.69	N/A	1.00	N/A
PFOA 1	245000	1.87	N/A	4.14	N/A
PFOS 1	70300	1.95	N/A	2.74	N/A
PFNA 1	21900	2.01	N/A	0.697	N/A
18O2-PFHxS	160000	1.67	N/A	81.0	N/A
13C4-PFHpA	482000	1.69	N/A	70.5	N/A
13C4-PFOA	429000	1.87	N/A	69.3	N/A
13C4-PFOS	187000	1.96	N/A	68.6	N/A
13C5-PFNA	335000	2.01	N/A	64.3	N/A
13C6-PFHxA	3150000	1.42	N/A	136.	N/A

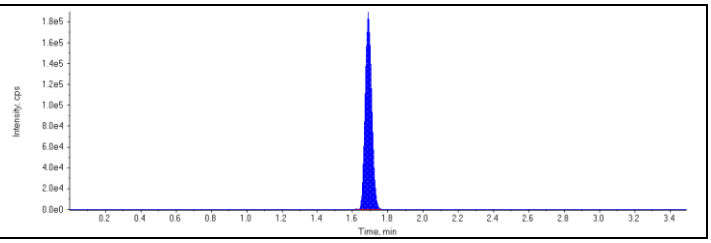
MPFHxS (Internal Standard)

RT (Exp. RT): 1.67(1.68) min
Concentration: 1.00 ng/L
Sample Type: (Unknown)



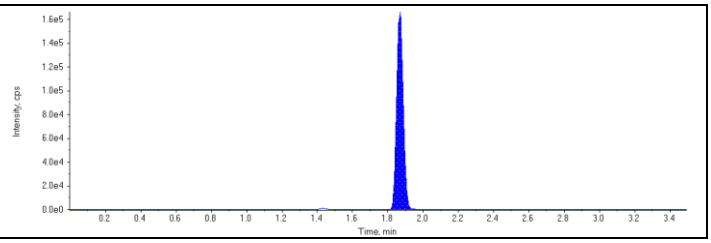
MPFHpA (Internal Standard)

RT (Exp. RT): 1.69(1.69) min
Concentration: 1.00 ng/L
Sample Type: (Unknown)



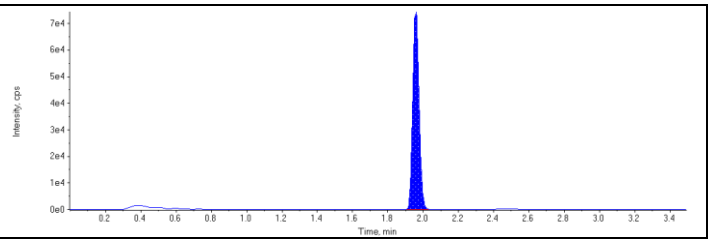
MPFOA (Internal Standard)

RT (Exp. RT): 1.87(1.88) min
Concentration: 1.00 ng/L
Sample Type: (Unknown)



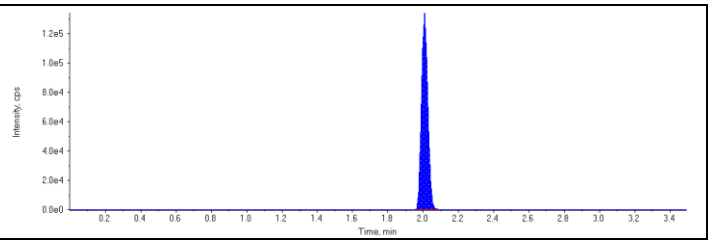
MPFOS (Internal Standard)

RT (Exp. RT): 1.96(1.97) min
Concentration: 1.00 ng/L
Sample Type: (Unknown)



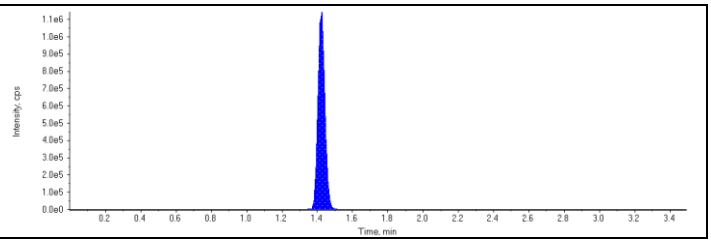
MPFNA (Internal Standard)

RT (Exp. RT): 2.01(2.02) min
Concentration: 1.00 ng/L
Sample Type: (Unknown)



13C6-PFHxA IS (Internal Standard)

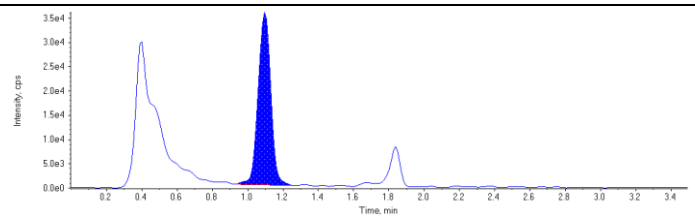
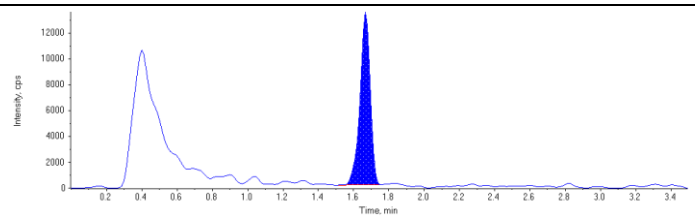
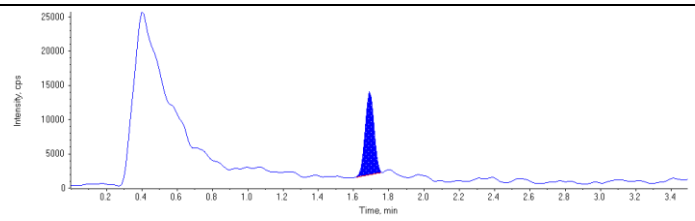
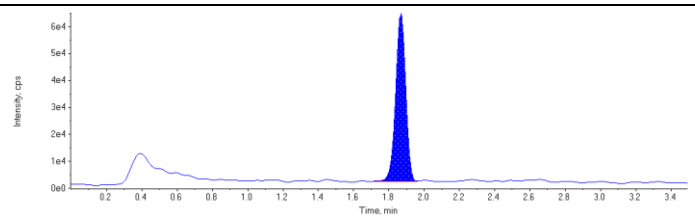
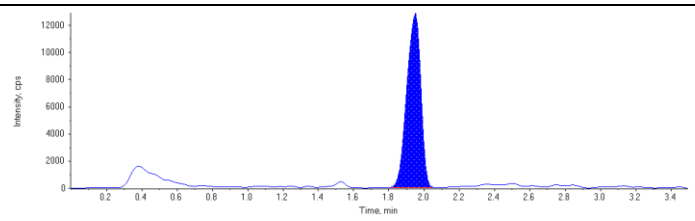
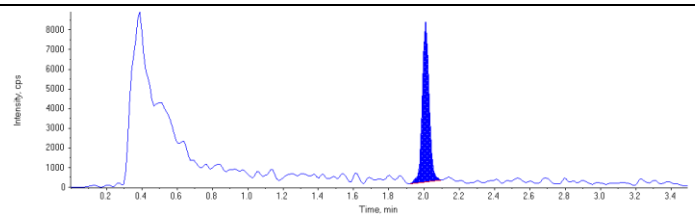
RT (Exp. RT): 1.42(1.42) min
Concentration: 1.00 ng/L
Sample Type: (Unknown)

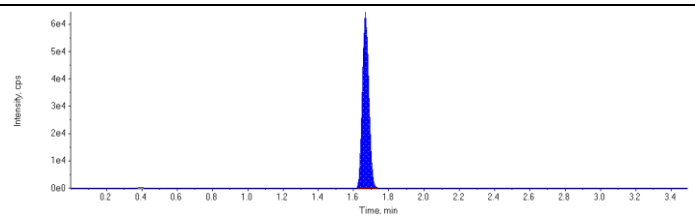
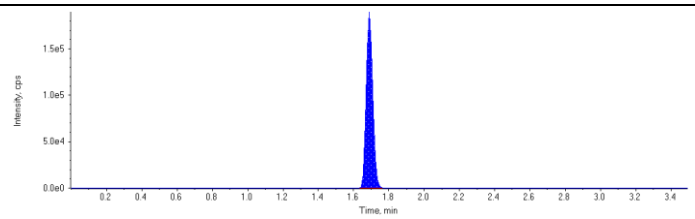
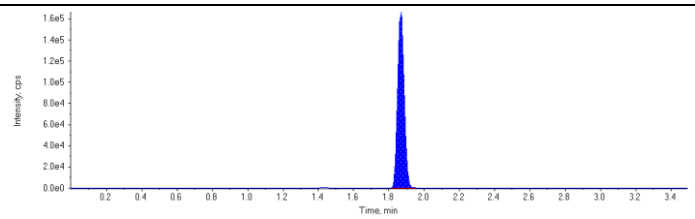
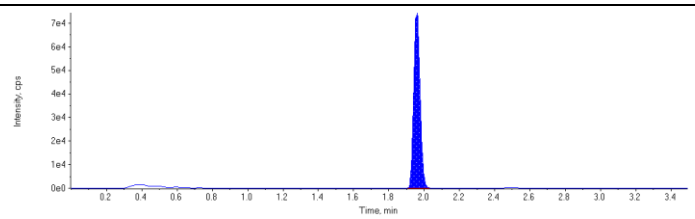
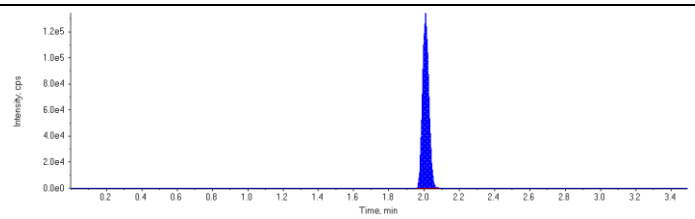
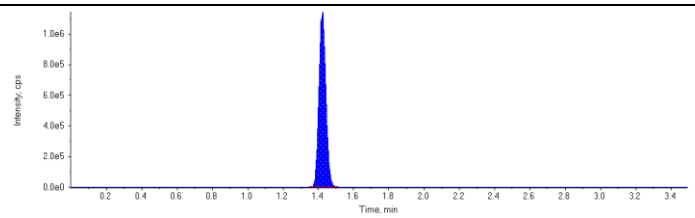


N/A (Internal Standard)

RT (Exp. RT): N/A(N/A) min
Concentration: N/A N/A
Sample Type: (Unknown)

This image is not available

PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.10 (1.09) min Calculated Conc: 4.31 ng/L Area Ratio: 1.10 Sample Type: (Unknown)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 1.36 ng/L Area Ratio: 0.335 Sample Type: (Unknown)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.69 (1.75) min Calculated Conc: 1.00 ng/L Area Ratio: 0.0867 Sample Type: (Unknown)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.87 (1.92) min Calculated Conc: 4.14 ng/L Area Ratio: 0.572 Sample Type: (Unknown)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.95 (1.97) min Calculated Conc: 2.74 ng/L Area Ratio: 0.377 Sample Type: (Unknown)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 0.697 ng/L Area Ratio: 0.0652 Sample Type: (Unknown)	

18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 81.0 ng/L Area Ratio: 0.0508 Sample Type: (Unknown)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.69 (1.69) min Calculated Conc: 70.5 ng/L Area Ratio: 0.153 Sample Type: (Unknown)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 69.3 ng/L Area Ratio: 0.136 Sample Type: (Unknown)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 68.6 ng/L Area Ratio: 0.0592 Sample Type: (Unknown)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 64.3 ng/L Area Ratio: 0.106 Sample Type: (Unknown)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.42 (1.42) min Calculated Conc: 136. ng/L Area Ratio: 0.00 Sample Type: (Unknown)	

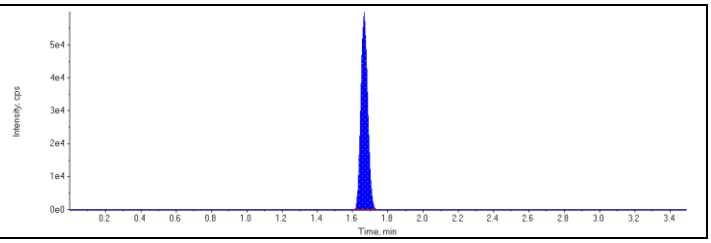
Sample Name	**4394558~BVX752-01**	**Injection Vial**	32
Sample ID	4394558~BVX752-01	**Injection Volume (µL)**	3
Sample Type	Unknown	**Algorithm Used**	Analyst Classic
Acquisition Date	2016/02/29 10:30:15 AM	**Dilution Factor**	1.00
Acquisition Method	PFC_Water_Low.dam	**Sample Annotation**	-
Project	Enviro\PFOS	**Instrument Name**	LCMS03
Data File	PFC_160226\WS#4394558.wiff		
Result Table	PFC_Water_160226_4394558_ULow_6.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	156000.	1.67	1.00	-
MPFHpA	446000.	1.69	1.00	-
MPFOA	412000.	1.87	1.00	-
MPFOS	182000.	1.96	1.00	-
MPFNA	295000.	2.01	1.00	-
13C6-PFHxA IS	2240000.	1.42	1.00	-
N/A	N/A	N/A	N/A	-

Target Analyte	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)	Accuracy (%)
PFBS 1	0	0.00	N/A	N/A	N/A
PFHxS 1	0	0.00	N/A	N/A	N/A
PFHpA 1	0	0.00	N/A	N/A	N/A
PFOA 1	0	0.00	N/A	N/A	N/A
PFOS 1	0	0.00	N/A	N/A	N/A
PFNA 1	0	0.00	N/A	N/A	N/A
18O2-PFHxS	156000	1.67	N/A	108.	N/A
13C4-PFHpA	446000	1.69	N/A	104.	N/A
13C4-PFOA	412000	1.87	N/A	110.	N/A
13C4-PFOS	182000	1.96	N/A	103.	N/A
13C5-PFNA	295000	2.01	N/A	98.4	N/A
13C6-PFHxA	2240000	1.42	N/A	90.5	N/A

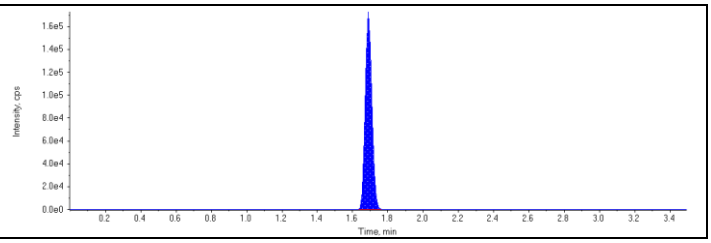
MPFHxS (Internal Standard)

RT (Exp. RT): 1.67(1.68) min
Concentration: 1.00 ng/L
Sample Type: (Unknown)



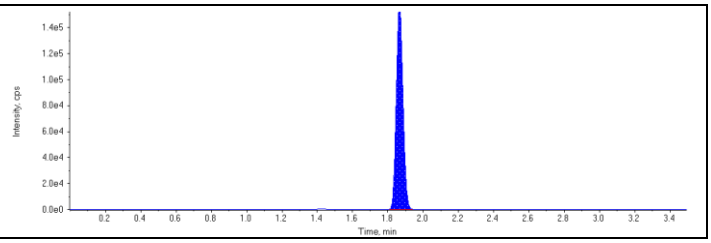
MPFHpA (Internal Standard)

RT (Exp. RT): 1.69(1.69) min
Concentration: 1.00 ng/L
Sample Type: (Unknown)



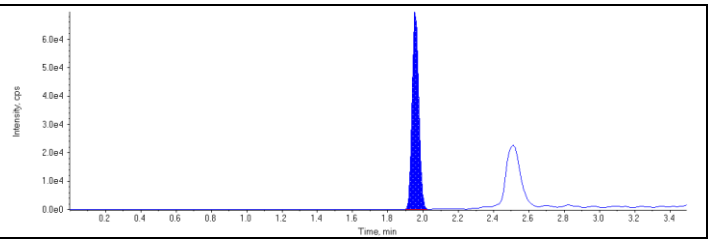
MPFOA (Internal Standard)

RT (Exp. RT): 1.87(1.88) min
Concentration: 1.00 ng/L
Sample Type: (Unknown)



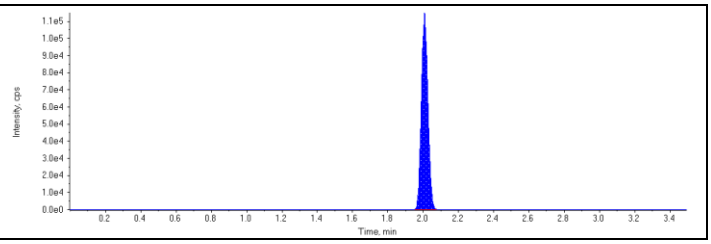
MPFOS (Internal Standard)

RT (Exp. RT): 1.96(1.97) min
Concentration: 1.00 ng/L
Sample Type: (Unknown)



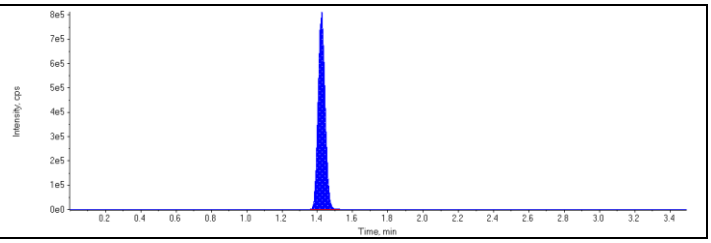
MPFNA (Internal Standard)

RT (Exp. RT): 2.01(2.02) min
Concentration: 1.00 ng/L
Sample Type: (Unknown)



13C6-PFHxA IS (Internal Standard)

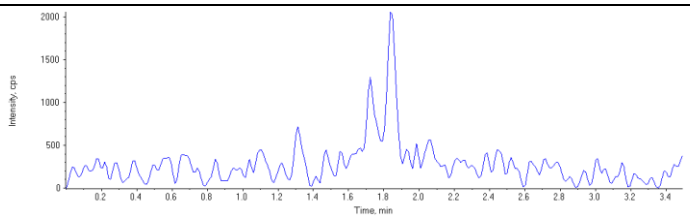
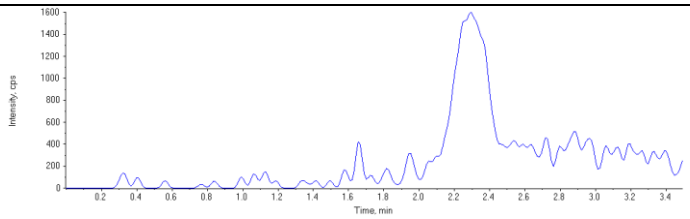
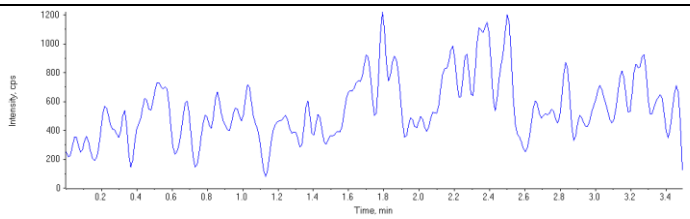
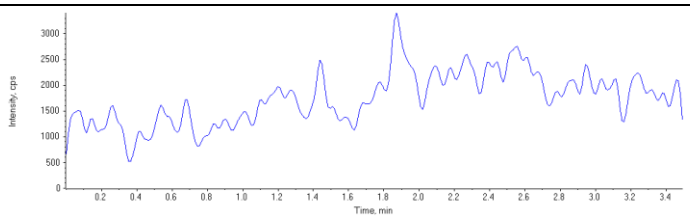
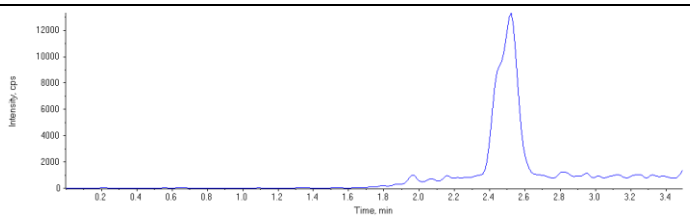
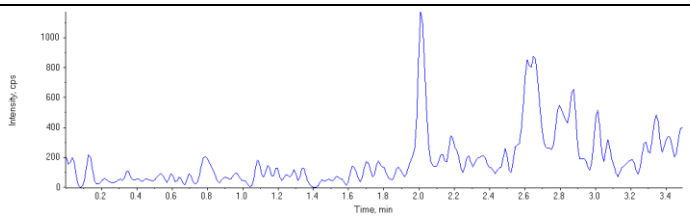
RT (Exp. RT): 1.42(1.42) min
Concentration: 1.00 ng/L
Sample Type: (Unknown)

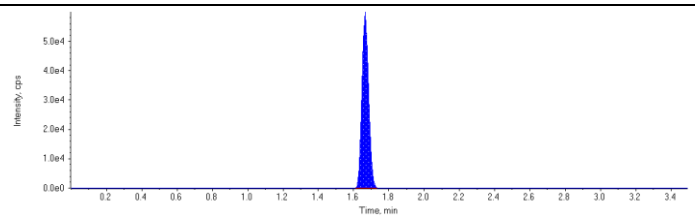
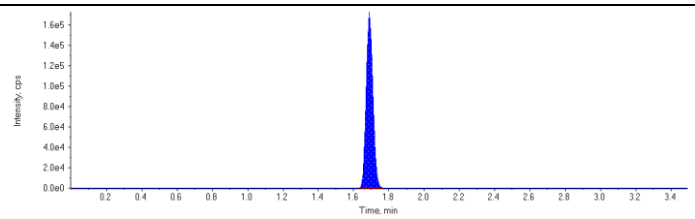
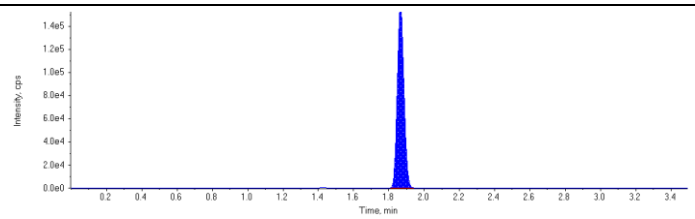
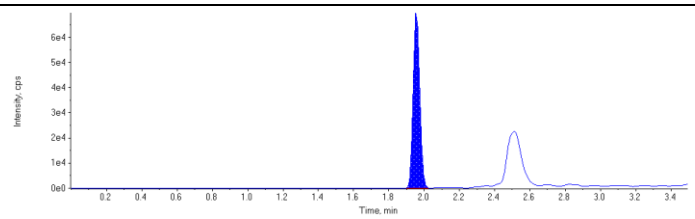
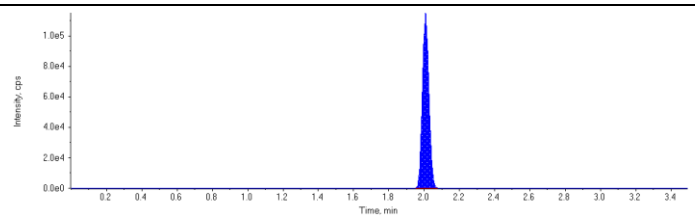
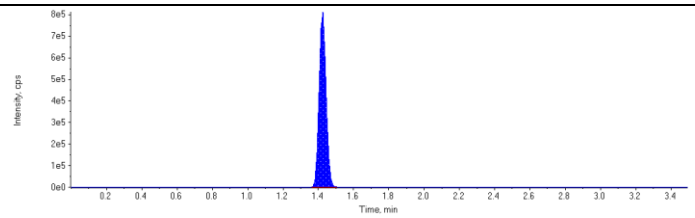


N/A (Internal Standard)

RT (Exp. RT): N/A(N/A) min
Concentration: N/A N/A
Sample Type: (Unknown)

This image is not available

PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 0.00 (1.09) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 0.00 (1.68) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 0.00 (1.70) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 0.00 (1.88) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 0.00 (1.97) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 0.00 (2.02) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	

18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 108. ng/L Area Ratio: 0.0696 Sample Type: (Unknown)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.69 (1.69) min Calculated Conc: 104. ng/L Area Ratio: 0.199 Sample Type: (Unknown)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 110. ng/L Area Ratio: 0.184 Sample Type: (Unknown)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 103. ng/L Area Ratio: 0.0811 Sample Type: (Unknown)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 98.4 ng/L Area Ratio: 0.132 Sample Type: (Unknown)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.42 (1.42) min Calculated Conc: 90.5 ng/L Area Ratio: 0.00 Sample Type: (Unknown)	

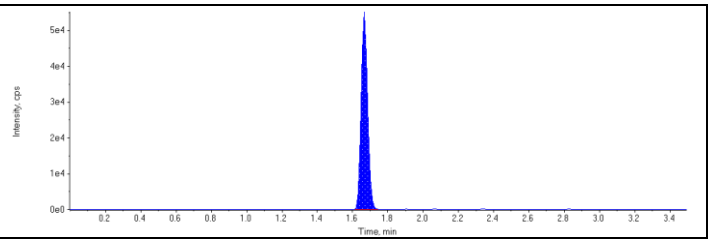
Sample Name	**4394558~BVX753-01**	**Injection Vial**	33
Sample ID	4394558~BVX753-01	**Injection Volume (µL)**	3
Sample Type	Unknown	**Algorithm Used**	Analyst Classic
Acquisition Date	2016/02/29 10:35:21 AM	**Dilution Factor**	1.00
Acquisition Method	PFC_Water_Low.dam	**Sample Annotation**	-
Project	Enviro\PFOS	**Instrument Name**	LCMS03
Data File	PFC_160226\WS#4394558.wiff		
Result Table	PFC_Water_160226_4394558_ULow_6.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	139000.	1.67	1.00	-
MPFHpA	396000.	1.69	1.00	-
MPFOA	325000.	1.87	1.00	-
MPFOS	131000.	1.96	1.00	-
MPFNA	227000.	2.01	1.00	-
13C6-PFHxA IS	2920000.	1.42	1.00	-
N/A	N/A	N/A	N/A	-

Target Analyte	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)	Accuracy (%)
PFBS 1	11700	1.09	N/A	0.720	N/A
PFHxS 1	30000	1.67	N/A	0.987	N/A
PFHpA 1	22500	1.69	N/A	0.572	N/A
PFOA 1	77700	1.87	N/A	1.70	N/A
PFOS 1	36000	1.95	N/A	2.13	N/A
PFNA 1	20400	2.01	N/A	0.673	N/A
18O2-PFHxS	139000	1.67	N/A	73.8	N/A
13C4-PFHpA	396000	1.69	N/A	70.8	N/A
13C4-PFOA	325000	1.87	N/A	66.6	N/A
13C4-PFOS	131000	1.96	N/A	57.1	N/A
13C5-PFNA	227000	2.01	N/A	58.1	N/A
13C6-PFHxA	2920000	1.42	N/A	118.	N/A

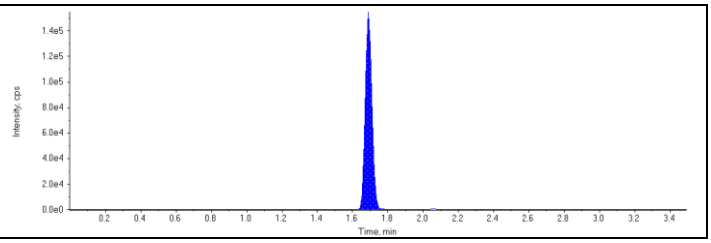
MPFHxS (Internal Standard)

RT (Exp. RT): 1.67(1.68) min
Concentration: 1.00 ng/L
Sample Type: (Unknown)



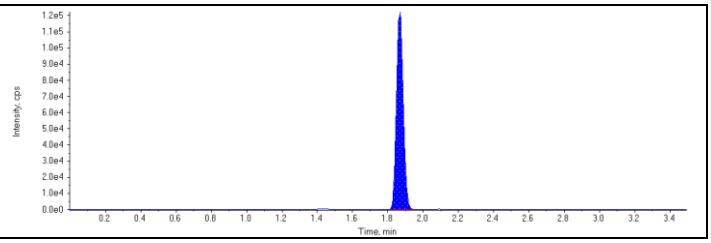
MPFHpA (Internal Standard)

RT (Exp. RT): 1.69(1.69) min
Concentration: 1.00 ng/L
Sample Type: (Unknown)



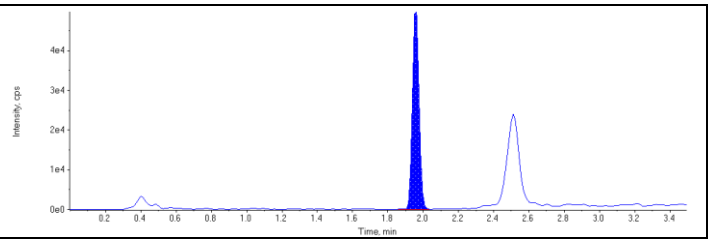
MPFOA (Internal Standard)

RT (Exp. RT): 1.87(1.88) min
Concentration: 1.00 ng/L
Sample Type: (Unknown)



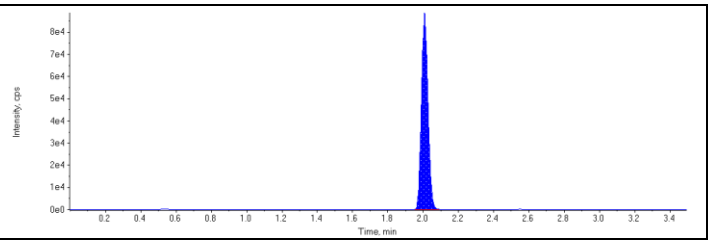
MPFOS (Internal Standard)

RT (Exp. RT): 1.96(1.97) min
Concentration: 1.00 ng/L
Sample Type: (Unknown)



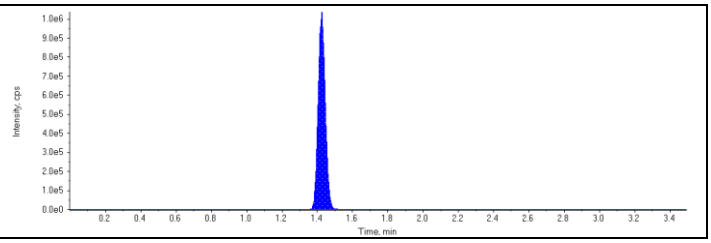
MPFNA (Internal Standard)

RT (Exp. RT): 2.01(2.02) min
Concentration: 1.00 ng/L
Sample Type: (Unknown)



13C6-PFHxA IS (Internal Standard)

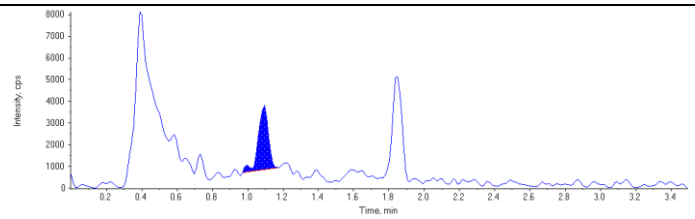
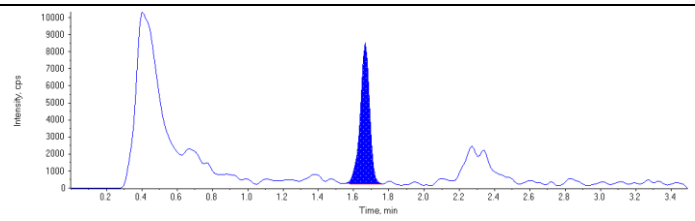
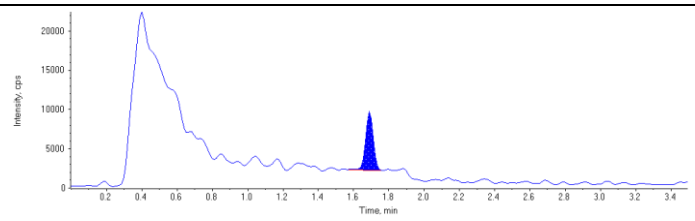
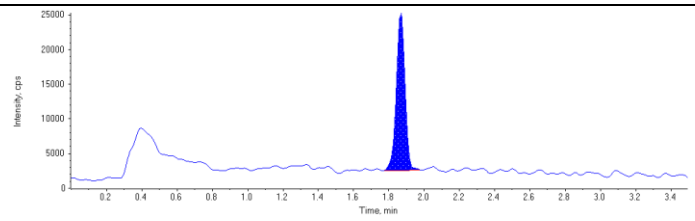
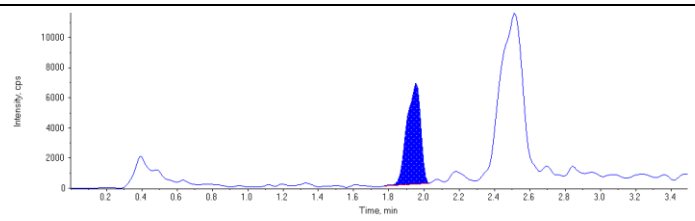
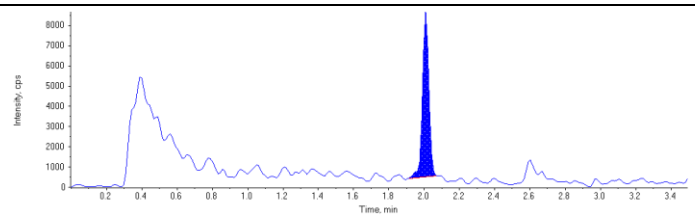
RT (Exp. RT): 1.42(1.42) min
Concentration: 1.00 ng/L
Sample Type: (Unknown)

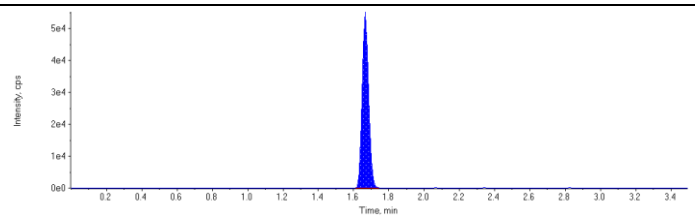
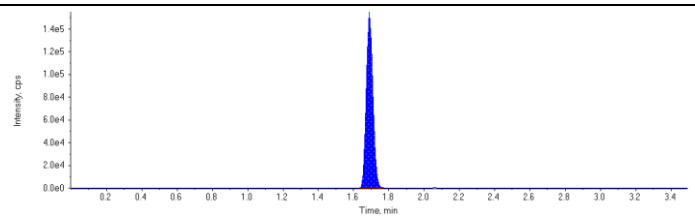
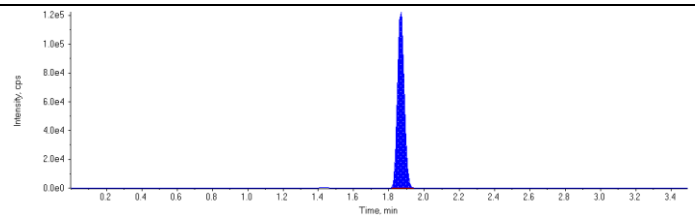
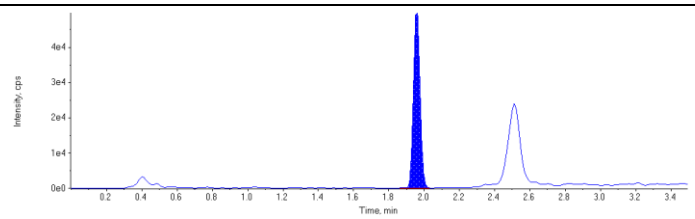
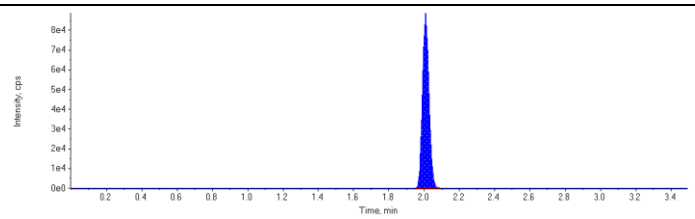
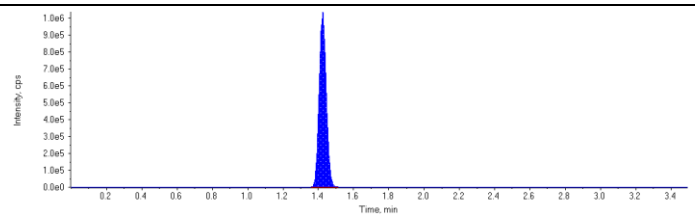


N/A (Internal Standard)

RT (Exp. RT): N/A(N/A) min
Concentration: N/A N/A
Sample Type: (Unknown)

This image is not available

PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.09 (1.09) min Calculated Conc: 0.720 ng/L Area Ratio: 0.0840 Sample Type: (Unknown)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 0.987 ng/L Area Ratio: 0.216 Sample Type: (Unknown)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.69 (1.70) min Calculated Conc: 0.572 ng/L Area Ratio: 0.0567 Sample Type: (Unknown)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 1.70 ng/L Area Ratio: 0.239 Sample Type: (Unknown)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.95 (1.97) min Calculated Conc: 2.13 ng/L Area Ratio: 0.274 Sample Type: (Unknown)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 0.673 ng/L Area Ratio: 0.0900 Sample Type: (Unknown)	

18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 73.8 ng/L Area Ratio: 0.0476 Sample Type: (Unknown)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.69 (1.69) min Calculated Conc: 70.8 ng/L Area Ratio: 0.136 Sample Type: (Unknown)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 66.6 ng/L Area Ratio: 0.111 Sample Type: (Unknown)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 57.1 ng/L Area Ratio: 0.0450 Sample Type: (Unknown)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 58.1 ng/L Area Ratio: 0.0777 Sample Type: (Unknown)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.42 (1.42) min Calculated Conc: 118. ng/L Area Ratio: 0.00 Sample Type: (Unknown)	

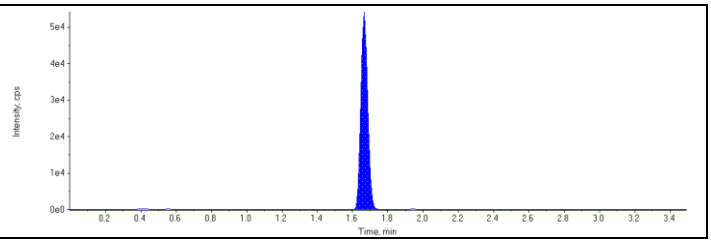
Sample Name	**4394558~BVX754-01**	**Injection Vial**	34
Sample ID	4394558~BVX754-01	**Injection Volume (µL)**	3
Sample Type	Unknown	**Algorithm Used**	Analyst Classic
Acquisition Date	2016/02/29 10:40:27 AM	**Dilution Factor**	1.00
Acquisition Method	PFC_Water_Low.dam	**Sample Annotation**	-
Project	Enviro\PFOS	**Instrument Name**	LCMS03
Data File	PFC_160226\WS#4394558.wiff		
Result Table	PFC_Water_160226_4394558_ULow_6.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	143000.	1.67	1.00	-
MPFHpA	407000.	1.69	1.00	-
MPFOA	359000.	1.87	1.00	-
MPFOS	157000.	1.96	1.00	-
MPFNA	274000.	2.01	1.00	-
13C6-PFHxA IS	3060000.	1.42	1.00	-
N/A	N/A	N/A	N/A	-

Target Analyte	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)	Accuracy (%)
PFBS 1	17200	1.09	N/A	0.848	N/A
PFHxS 1	36500	1.67	N/A	1.12	N/A
PFHpA 1	25400	1.69	N/A	0.619	N/A
PFOA 1	74800	1.87	N/A	1.49	N/A
PFOS 1	38000	1.95	N/A	1.92	N/A
PFNA 1	25300	2.01	N/A	0.693	N/A
18O2-PFHxS	143000	1.67	N/A	72.4	N/A
13C4-PFHpA	407000	1.69	N/A	69.3	N/A
13C4-PFOA	359000	1.87	N/A	70.2	N/A
13C4-PFOS	157000	1.96	N/A	65.2	N/A
13C5-PFNA	274000	2.01	N/A	66.8	N/A
13C6-PFHxA	3060000	1.42	N/A	124.	N/A

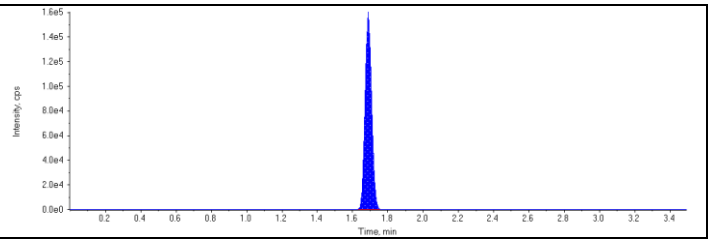
MPFHxS (Internal Standard)

RT (Exp. RT): 1.67(1.68) min
Concentration: 1.00 ng/L
Sample Type: (Unknown)



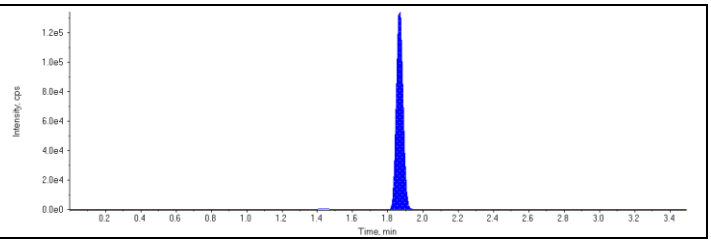
MPFHpA (Internal Standard)

RT (Exp. RT): 1.69(1.69) min
Concentration: 1.00 ng/L
Sample Type: (Unknown)



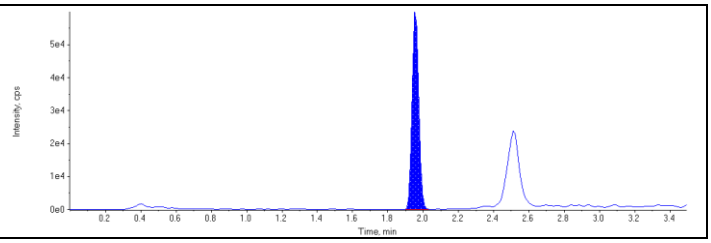
MPFOA (Internal Standard)

RT (Exp. RT): 1.87(1.88) min
Concentration: 1.00 ng/L
Sample Type: (Unknown)



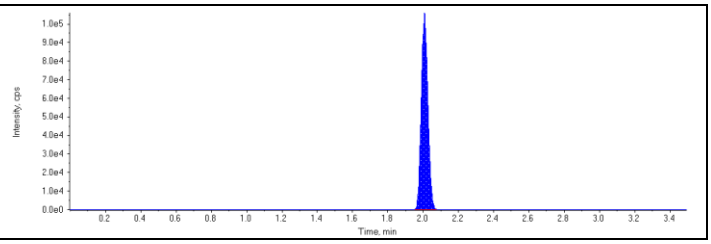
MPFOS (Internal Standard)

RT (Exp. RT): 1.96(1.97) min
Concentration: 1.00 ng/L
Sample Type: (Unknown)



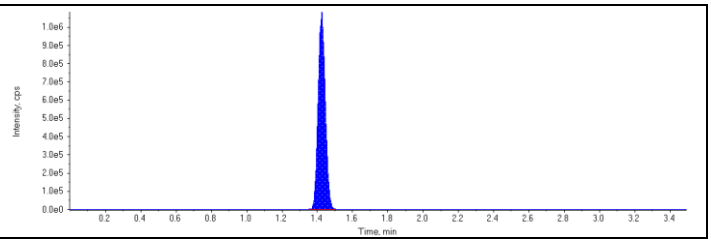
MPFNA (Internal Standard)

RT (Exp. RT): 2.01(2.02) min
Concentration: 1.00 ng/L
Sample Type: (Unknown)



13C6-PFHxA IS (Internal Standard)

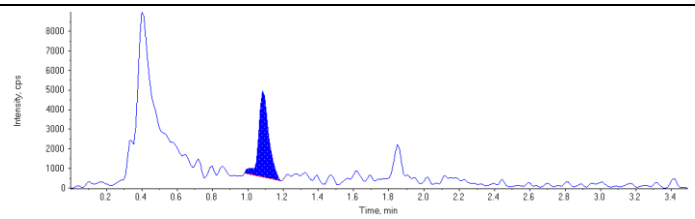
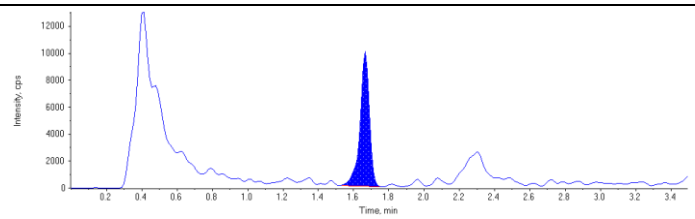
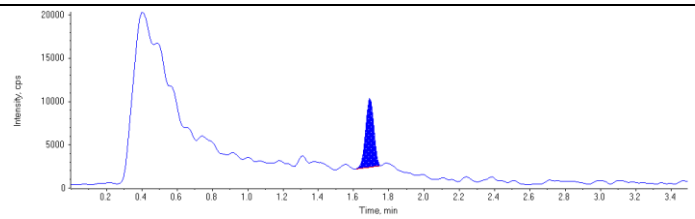
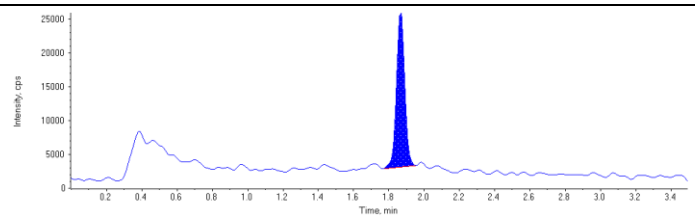
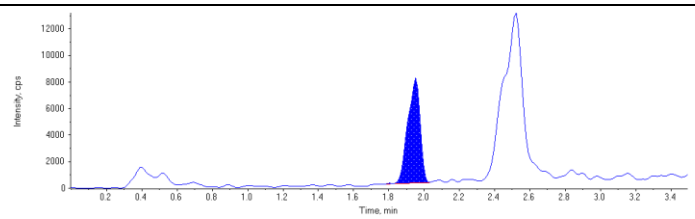
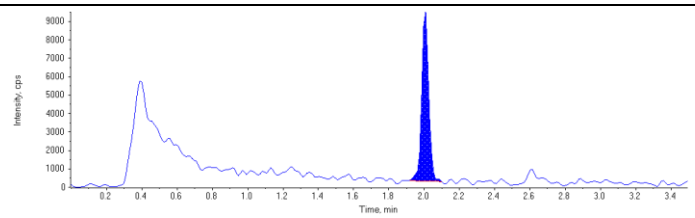
RT (Exp. RT): 1.42(1.42) min
Concentration: 1.00 ng/L
Sample Type: (Unknown)

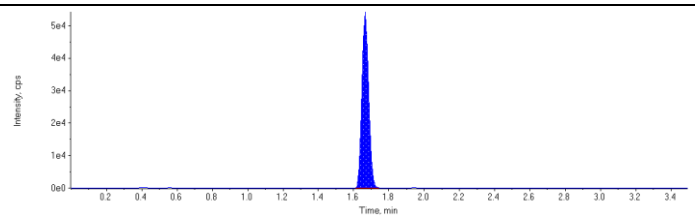
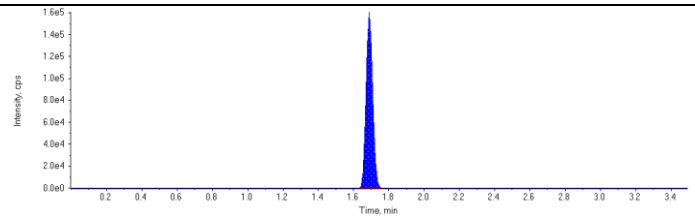
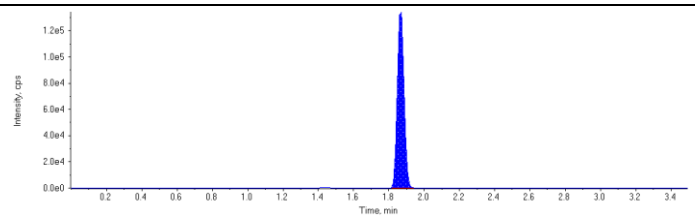
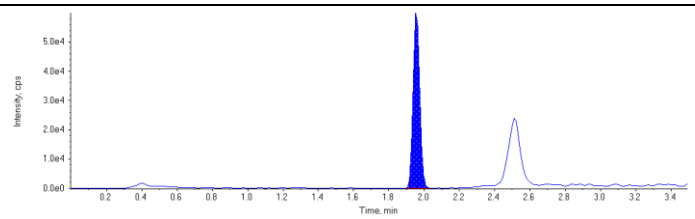
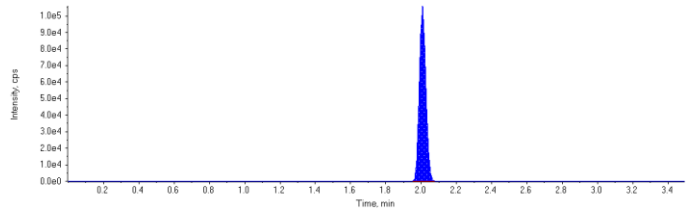
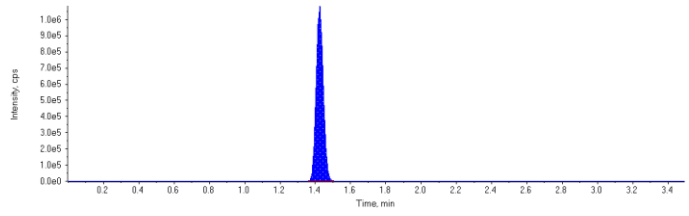


N/A (Internal Standard)

RT (Exp. RT): N/A(N/A) min
Concentration: N/A N/A
Sample Type: (Unknown)

This image is not available

PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.09 (1.09) min Calculated Conc: 0.848 ng/L Area Ratio: 0.120 Sample Type: (Unknown)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 1.12 ng/L Area Ratio: 0.255 Sample Type: (Unknown)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.69 (1.70) min Calculated Conc: 0.619 ng/L Area Ratio: 0.0623 Sample Type: (Unknown)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 1.49 ng/L Area Ratio: 0.208 Sample Type: (Unknown)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.95 (1.97) min Calculated Conc: 1.92 ng/L Area Ratio: 0.242 Sample Type: (Unknown)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 0.693 ng/L Area Ratio: 0.0925 Sample Type: (Unknown)	

18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 72.4 ng/L Area Ratio: 0.0467 Sample Type: (Unknown)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.69 (1.69) min Calculated Conc: 69.3 ng/L Area Ratio: 0.133 Sample Type: (Unknown)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 70.2 ng/L Area Ratio: 0.117 Sample Type: (Unknown)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 65.2 ng/L Area Ratio: 0.0514 Sample Type: (Unknown)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 66.8 ng/L Area Ratio: 0.0894 Sample Type: (Unknown)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.42 (1.42) min Calculated Conc: 124. ng/L Area Ratio: 0.00 Sample Type: (Unknown)	

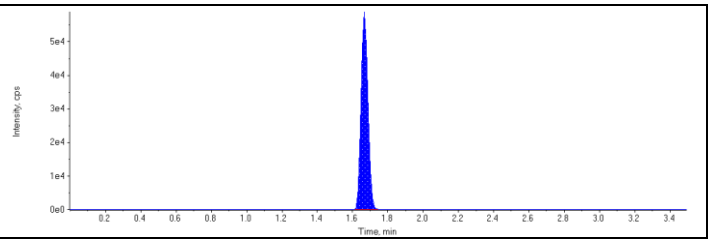
Sample Name	**4394558~BVX755-01**	**Injection Vial**	35
Sample ID	4394558~BVX755-01	**Injection Volume (µL)**	3
Sample Type	Unknown	**Algorithm Used**	Analyst Classic
Acquisition Date	2016/02/29 10:45:33 AM	**Dilution Factor**	1.00
Acquisition Method	PFC_Water_Low.dam	**Sample Annotation**	-
Project	Enviro\PFOS	**Instrument Name**	LCMS03
Data File	PFC_160226\WS#4394558.wiff		
Result Table	PFC_Water_160226_4394558_ULow_6.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	158000.	1.67	1.00	-
MPFHpA	500000.	1.69	1.00	-
MPFOA	455000.	1.87	1.00	-
MPFOS	182000.	1.96	1.00	-
MPFNA	294000.	2.01	1.00	-
13C6-PFHxA IS	2170000.	1.43	1.00	-
N/A	N/A	N/A	N/A	-

Target Analyte	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)	Accuracy (%)
PFBS 1	0	0.00	N/A	N/A	N/A
PFHxS 1	0	0.00	N/A	N/A	N/A
PFHpA 1	0	0.00	N/A	N/A	N/A
PFOA 1	9480	1.87	N/A	0.209	N/A
PFOS 1	0	0.00	N/A	N/A	N/A
PFNA 1	0	0.00	N/A	N/A	N/A
18O2-PFHxS	158000	1.67	N/A	113.	N/A
13C4-PFHpA	500000	1.69	N/A	120.	N/A
13C4-PFOA	455000	1.87	N/A	125.	N/A
13C4-PFOS	182000	1.96	N/A	106.	N/A
13C5-PFNA	294000	2.01	N/A	101.	N/A
13C6-PFHxA	2170000	1.43	N/A	87.8	N/A

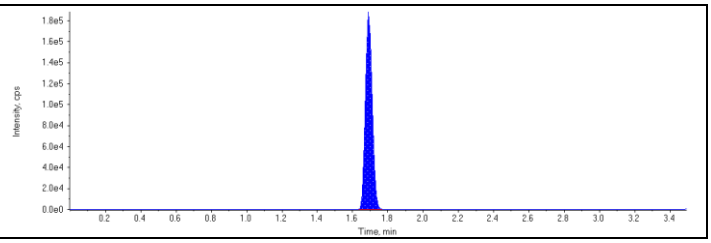
MPFHxS (Internal Standard)

RT (Exp. RT): 1.67(1.68) min
Concentration: 1.00 ng/L
Sample Type: (Unknown)



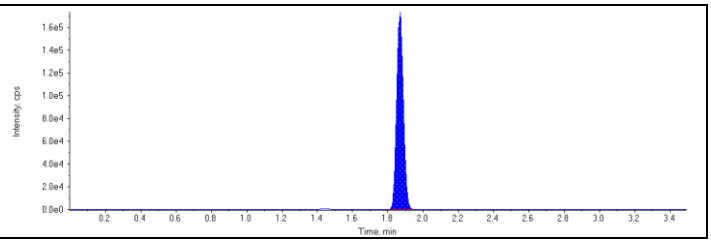
MPFHpA (Internal Standard)

RT (Exp. RT): 1.69(1.69) min
Concentration: 1.00 ng/L
Sample Type: (Unknown)



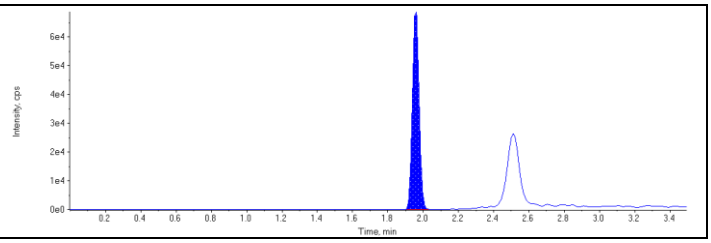
MPFOA (Internal Standard)

RT (Exp. RT): 1.87(1.88) min
Concentration: 1.00 ng/L
Sample Type: (Unknown)



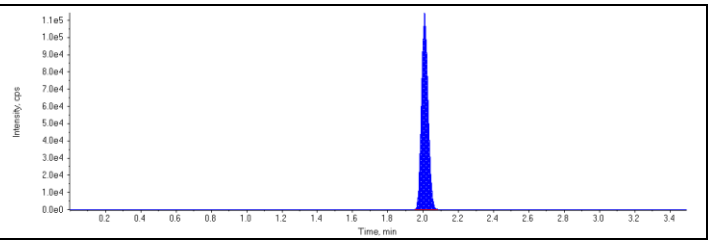
MPFOS (Internal Standard)

RT (Exp. RT): 1.96(1.97) min
Concentration: 1.00 ng/L
Sample Type: (Unknown)



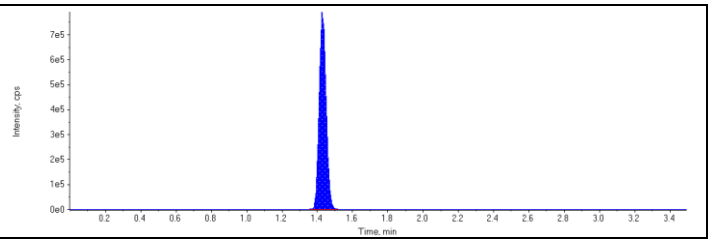
MPFNA (Internal Standard)

RT (Exp. RT): 2.01(2.02) min
Concentration: 1.00 ng/L
Sample Type: (Unknown)



13C6-PFHxA IS (Internal Standard)

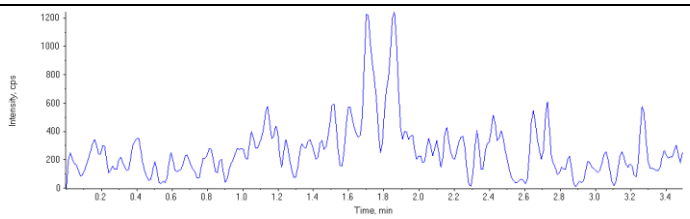
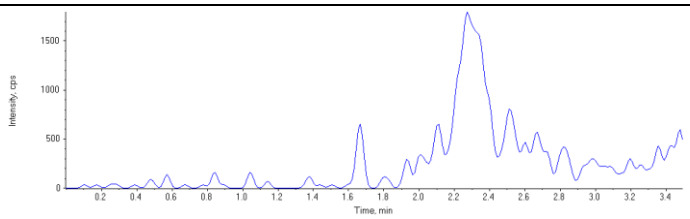
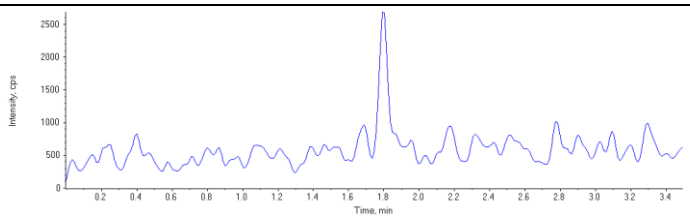
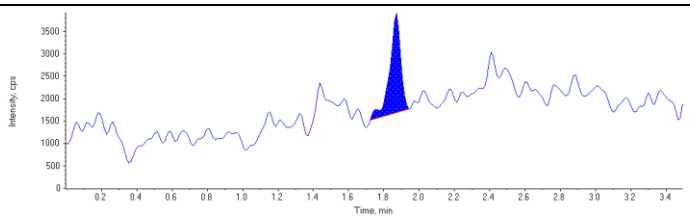
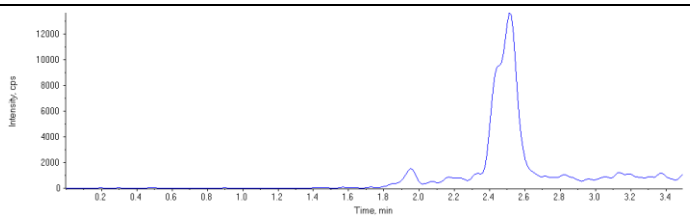
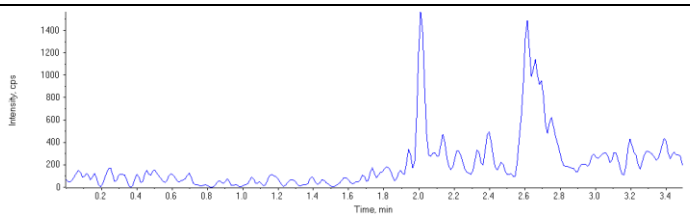
RT (Exp. RT): 1.43(1.42) min
Concentration: 1.00 ng/L
Sample Type: (Unknown)

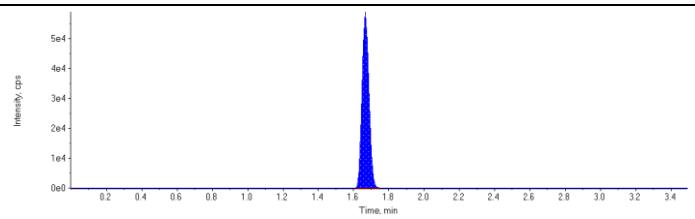
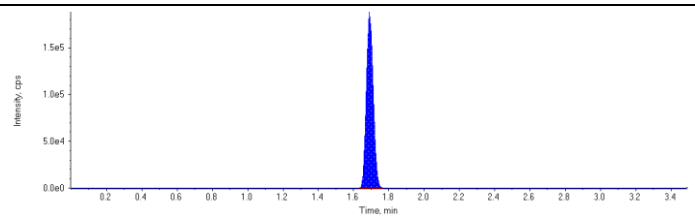
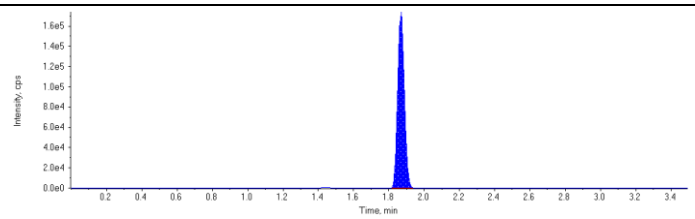
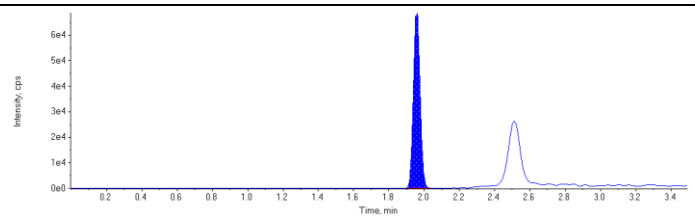
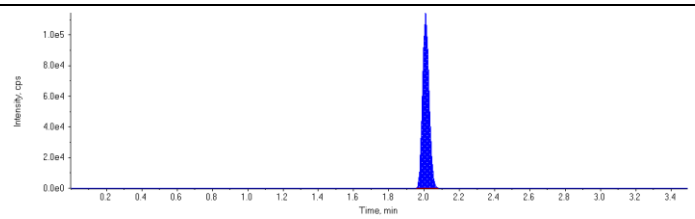
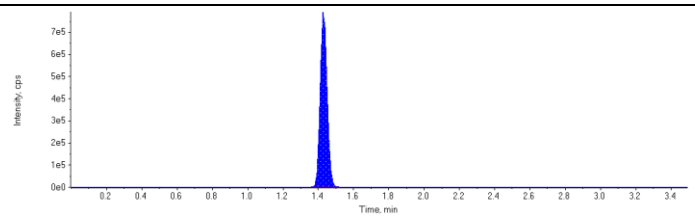


N/A (Internal Standard)

RT (Exp. RT): N/A(N/A) min
Concentration: N/A N/A
Sample Type: (Unknown)

This image is not available

PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 0.00 (1.09) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 0.00 (1.68) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 0.00 (1.70) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 0.209 ng/L Area Ratio: 0.0209 Sample Type: (Unknown)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 0.00 (1.97) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 0.00 (2.02) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	

18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 113. ng/L Area Ratio: 0.0728 Sample Type: (Unknown)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.69 (1.69) min Calculated Conc: 120. ng/L Area Ratio: 0.230 Sample Type: (Unknown)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 125. ng/L Area Ratio: 0.209 Sample Type: (Unknown)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 106. ng/L Area Ratio: 0.0838 Sample Type: (Unknown)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 101. ng/L Area Ratio: 0.135 Sample Type: (Unknown)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.43 (1.42) min Calculated Conc: 87.8 ng/L Area Ratio: 0.00 Sample Type: (Unknown)	

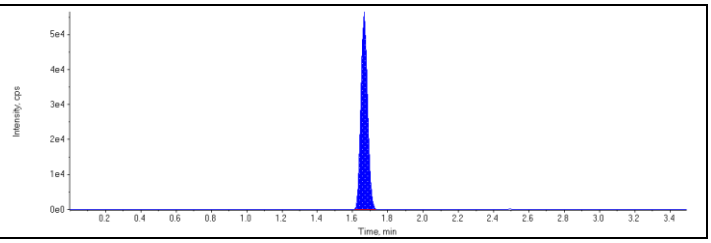
Sample Name	**4394558~BVX756-01**	**Injection Vial**	36
Sample ID	4394558~BVX756-01	**Injection Volume (µL)**	3
Sample Type	Unknown	**Algorithm Used**	Analyst Classic
Acquisition Date	2016/02/29 10:50:39 AM	**Dilution Factor**	1.00
Acquisition Method	PFC_Water_Low.dam	**Sample Annotation**	-
Project	Enviro\PFOS	**Instrument Name**	LCMS03
Data File	PFC_160226\WS#4394558.wiff		
Result Table	PFC_Water_160226_4394558_ULow_6.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	146000.	1.67	1.00	-
MPFHpA	482000.	1.69	1.00	-
MPFOA	448000.	1.87	1.00	-
MPFOS	178000.	1.95	1.00	-
MPFNA	319000.	2.01	1.00	-
13C6-PFHxA IS	3280000.	1.43	1.00	-
N/A	N/A	N/A	N/A	-

Target Analyte	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)	Accuracy (%)
PFBS 1	0	0.00	N/A	N/A	N/A
PFHxS 1	0	0.00	N/A	N/A	N/A
PFHpA 1	0	0.00	N/A	N/A	N/A
PFOA 1	11300	1.86	N/A	0.238	N/A
PFOS 1	0	0.00	N/A	N/A	N/A
PFNA 1	0	0.00	N/A	N/A	N/A
18O2-PFHxS	146000	1.67	N/A	69.0	N/A
13C4-PFHpA	482000	1.69	N/A	76.5	N/A
13C4-PFOA	448000	1.87	N/A	81.6	N/A
13C4-PFOS	178000	1.95	N/A	69.0	N/A
13C5-PFNA	319000	2.01	N/A	72.7	N/A
13C6-PFHxA	3280000	1.43	N/A	132.	N/A

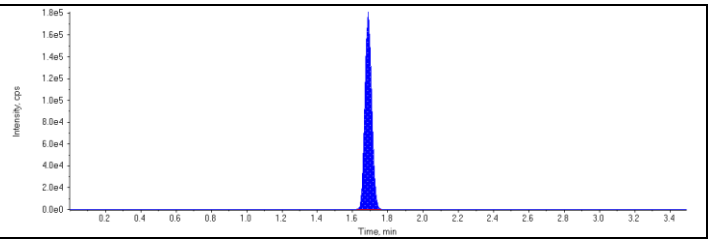
MPFHxS (Internal Standard)

RT (Exp. RT): 1.67(1.68) min
Concentration: 1.00 ng/L
Sample Type: (Unknown)



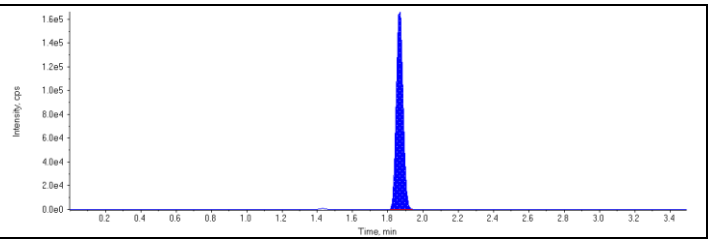
MPFHpA (Internal Standard)

RT (Exp. RT): 1.69(1.69) min
Concentration: 1.00 ng/L
Sample Type: (Unknown)



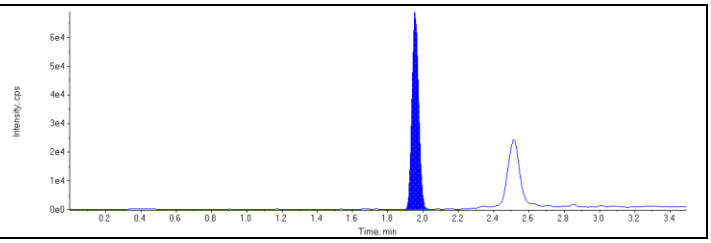
MPFOA (Internal Standard)

RT (Exp. RT): 1.87(1.88) min
Concentration: 1.00 ng/L
Sample Type: (Unknown)



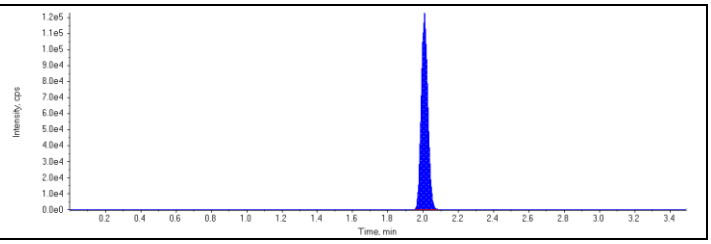
MPFOS (Internal Standard)

RT (Exp. RT): 1.95(1.97) min
Concentration: 1.00 ng/L
Sample Type: (Unknown)



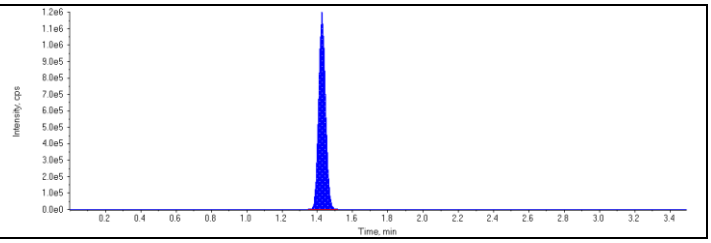
MPFNA (Internal Standard)

RT (Exp. RT): 2.01(2.02) min
Concentration: 1.00 ng/L
Sample Type: (Unknown)



13C6-PFHxA IS (Internal Standard)

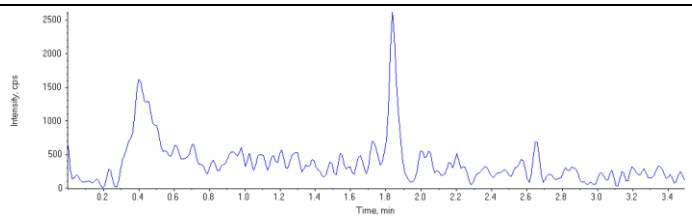
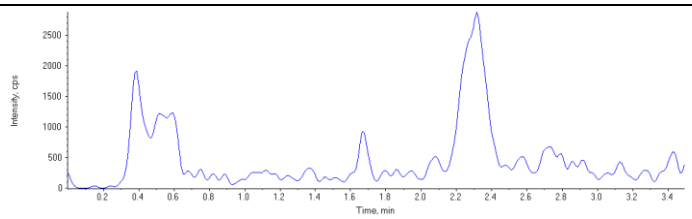
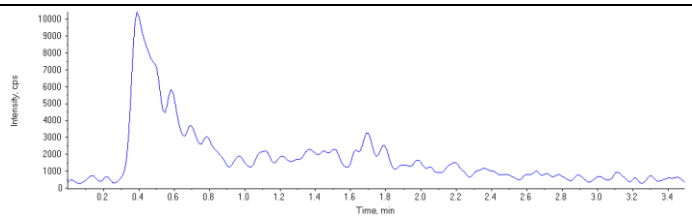
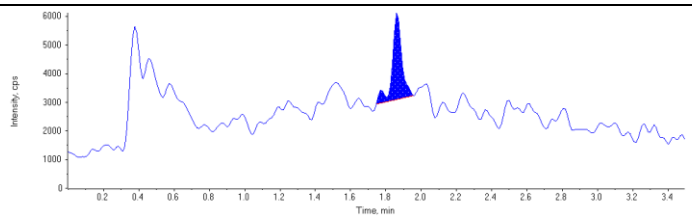
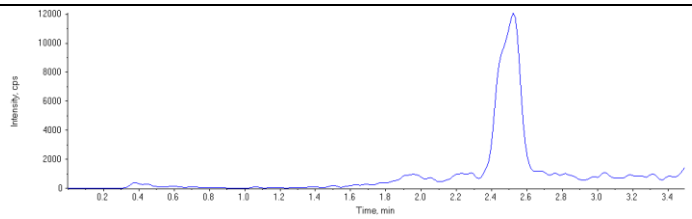
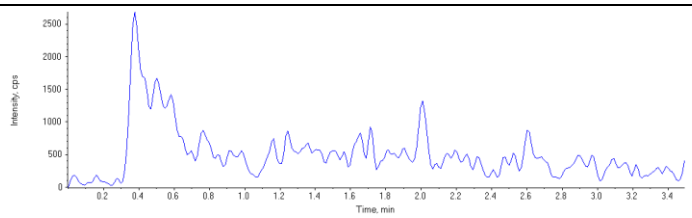
RT (Exp. RT): 1.43(1.42) min
Concentration: 1.00 ng/L
Sample Type: (Unknown)

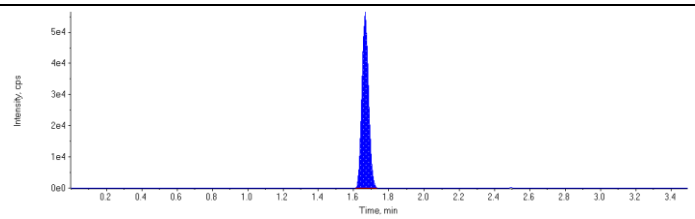
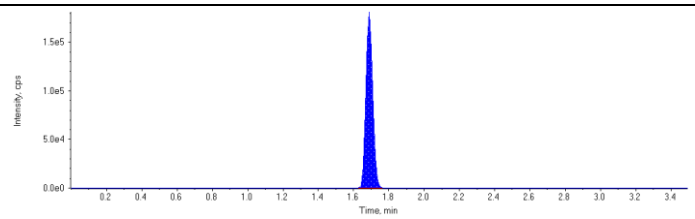
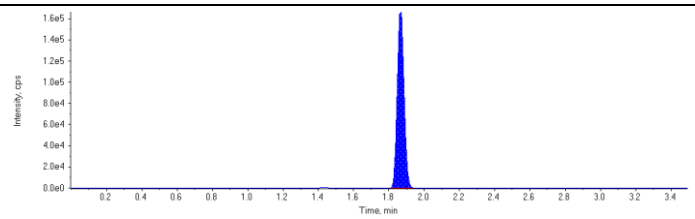
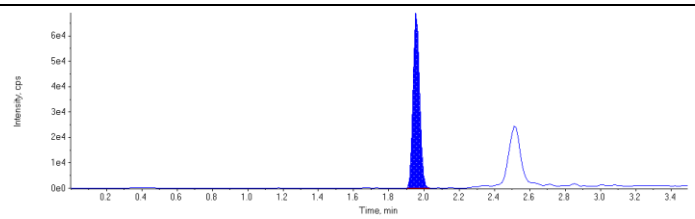
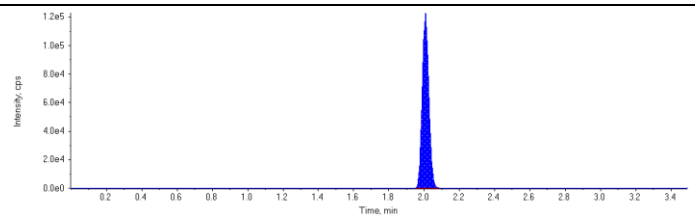
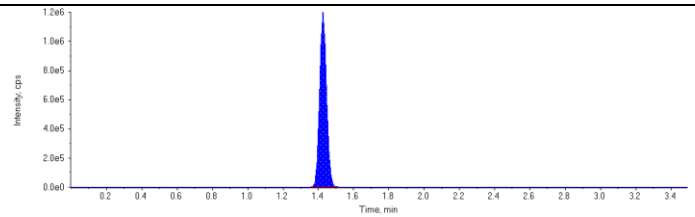


N/A (Internal Standard)

RT (Exp. RT): N/A(N/A) min
Concentration: N/A N/A
Sample Type: (Unknown)

This image is not available

PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 0.00 (1.09) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 0.00 (1.68) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 0.00 (1.70) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.86 (1.88) min Calculated Conc: 0.238 ng/L Area Ratio: 0.0251 Sample Type: (Unknown)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 0.00 (1.97) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 0.00 (2.02) min Calculated Conc: N/A ng/L Area Ratio: 0.00 Sample Type: (Unknown)	

18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 69.0 ng/L Area Ratio: 0.0446 Sample Type: (Unknown)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.69 (1.69) min Calculated Conc: 76.5 ng/L Area Ratio: 0.147 Sample Type: (Unknown)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 81.6 ng/L Area Ratio: 0.137 Sample Type: (Unknown)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.95 (1.97) min Calculated Conc: 69.0 ng/L Area Ratio: 0.0544 Sample Type: (Unknown)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 72.7 ng/L Area Ratio: 0.0973 Sample Type: (Unknown)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.43 (1.42) min Calculated Conc: 132. ng/L Area Ratio: 0.00 Sample Type: (Unknown)	

4. QA/QC Data

Maxxam Analytics International
6740 Campobello Rd
Mississauga, Ontario, Canada
L5N 2L8
1-800-668-0639
www.maxxamanalytics.com

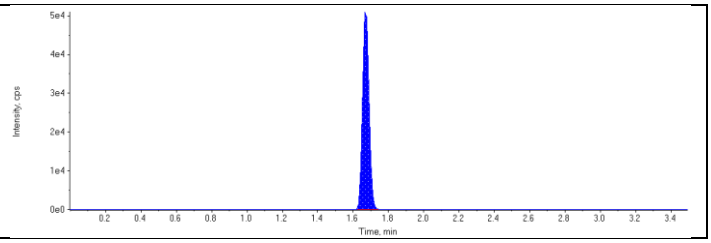
Sample Name	**4393242~BLANK**	**Injection Vial**	2
Sample ID	4393242~BLANK	**Injection Volume (µL)**	3
Sample Type	Unknown	**Algorithm Used**	Analyst Classic
Acquisition Date	2016/02/25 5:02:47 PM	**Dilution Factor**	1.00
Acquisition Method	PFC_Water_Low.dam	**Sample Annotation**	-
Project	Enviro\PFOS	**Instrument Name**	LCMS03
Data File	PFC_160225\WS#4393242.wiff		
Result Table	PFC_Water_160225_4393242_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	132000.	1.67	1.00	-
MPFHpA	475000.	1.69	1.00	-
MPFOA	445000.	1.87	1.00	-
MPFOS	181000.	1.96	1.00	-
MPFNA	355000.	2.01	1.00	-
13C6-PFHxA IS	2360000.	1.43	1.00	-
N/A	N/A	N/A	N/A	-

Target Analyte	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)	Accuracy (%)
PFBS 1	0	0.00	N/A	N/A	N/A
PFHxS 1	0	0.00	N/A	N/A	N/A
PFHpA 1	0	0.00	N/A	N/A	N/A
PFOA 1	0	0.00	N/A	N/A	N/A
PFOS 1	0	0.00	N/A	N/A	N/A
PFNA 1	0	0.00	N/A	N/A	N/A
18O2-PFHxS	132000	1.67	N/A	89.2	N/A
13C4-PFHpA	475000	1.69	N/A	92.8	N/A
13C4-PFOA	445000	1.87	N/A	96.1	N/A
13C4-PFOS	181000	1.96	N/A	89.1	N/A
13C5-PFNA	355000	2.01	N/A	91.1	N/A
13C6-PFHxA	2360000	1.43	N/A	102.	N/A

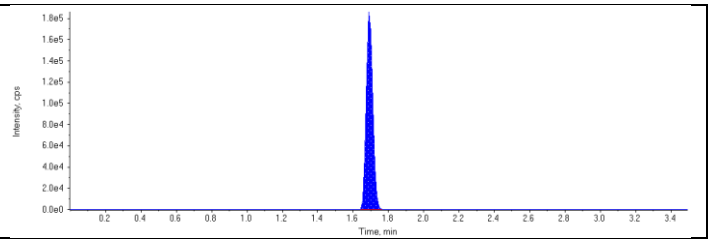
MPFHxS (Internal Standard)

RT (Exp. RT): 1.67(1.68) min
Concentration: 1.00 ng/L
Sample Type: (Unknown)



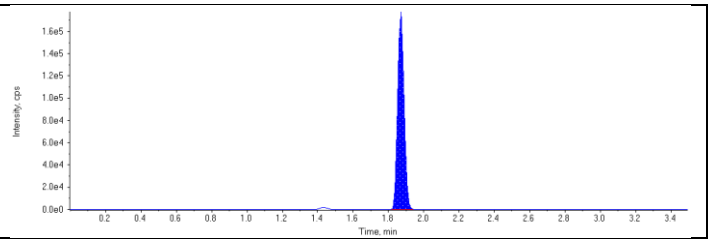
MPFHpA (Internal Standard)

RT (Exp. RT): 1.69(1.69) min
Concentration: 1.00 ng/L
Sample Type: (Unknown)



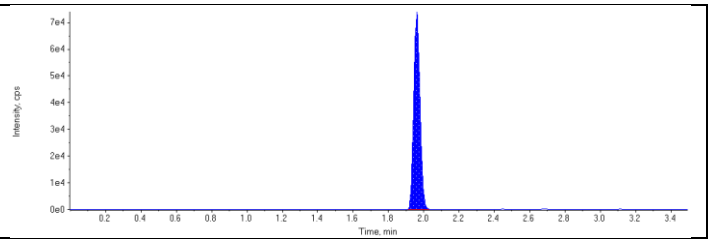
MPFOA (Internal Standard)

RT (Exp. RT): 1.87(1.88) min
Concentration: 1.00 ng/L
Sample Type: (Unknown)



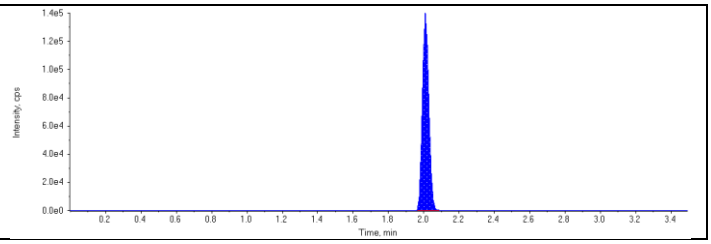
MPFOS (Internal Standard)

RT (Exp. RT): 1.96(1.97) min
Concentration: 1.00 ng/L
Sample Type: (Unknown)



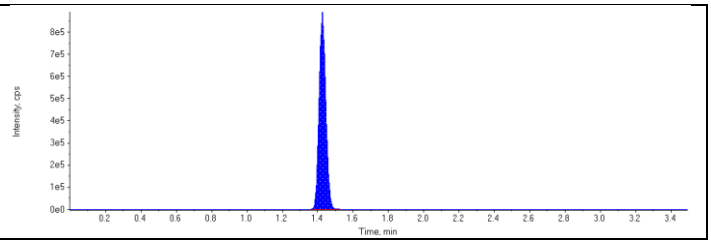
MPFNA (Internal Standard)

RT (Exp. RT): 2.01(2.02) min
Concentration: 1.00 ng/L
Sample Type: (Unknown)



13C6-PFHxA IS (Internal Standard)

RT (Exp. RT): 1.43(1.42) min
Concentration: 1.00 ng/L
Sample Type: (Unknown)



N/A (Internal Standard)

RT (Exp. RT): N/A(N/A) min
Concentration: N/A N/A
Sample Type: (Unknown)

This image is not available

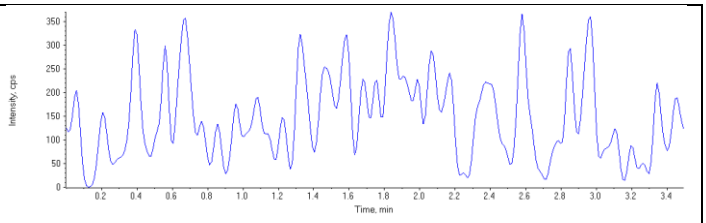
PFBS 1 (298.900/79.900 Da)

RT (Exp. RT): 0.00 (1.09) min

Calculated Conc: N/A ng/L

Area Ratio: 0.00

Sample Type: (Unknown)



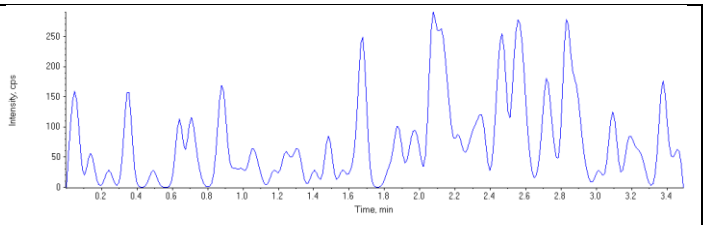
PFHxS 1 (398.900/79.900 Da)

RT (Exp. RT): 0.00 (1.68) min

Calculated Conc: N/A ng/L

Area Ratio: 0.00

Sample Type: (Unknown)



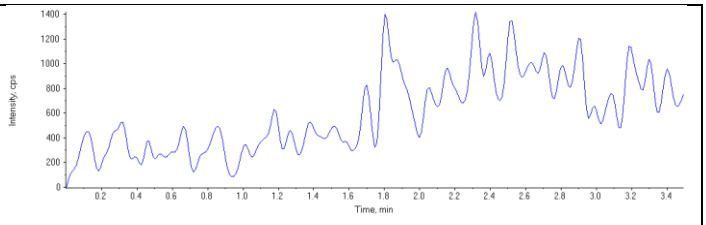
PFHpA 1 (363.000/319.000 Da)

RT (Exp. RT): 0.00 (1.75) min

Calculated Conc: N/A ng/L

Area Ratio: 0.00

Sample Type: (Unknown)



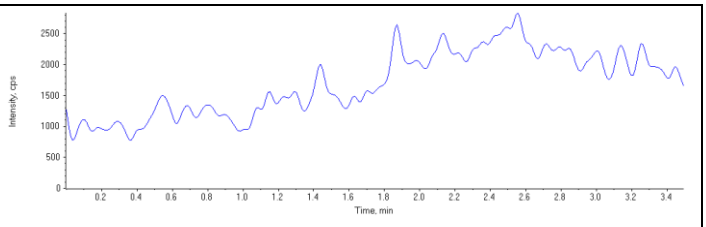
PFOA 1 (413.100/369.000 Da)

RT (Exp. RT): 0.00 (1.92) min

Calculated Conc: N/A ng/L

Area Ratio: 0.00

Sample Type: (Unknown)



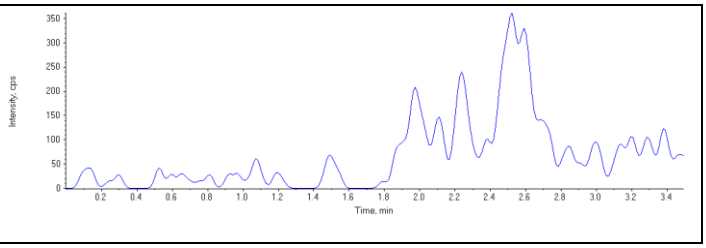
PFOS 1 (498.900/79.900 Da)

RT (Exp. RT): 0.00 (1.97) min

Calculated Conc: N/A ng/L

Area Ratio: 0.00

Sample Type: (Unknown)



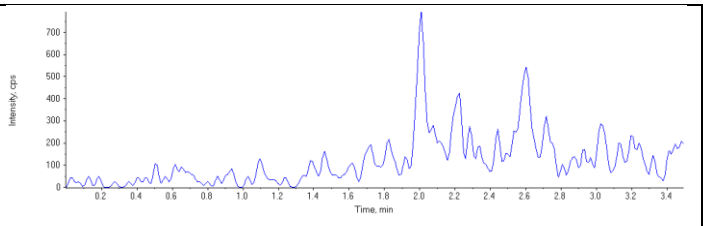
PFNA 1 (462.900/419.000 Da)

RT (Exp. RT): 0.00 (2.02) min

Calculated Conc: N/A ng/L

Area Ratio: 0.00

Sample Type: (Unknown)



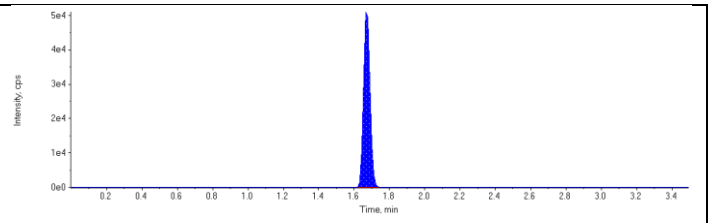
18O2-PFHxS (402.900/84.000 Da)

RT (Exp. RT): 1.67 (1.68) min

Calculated Conc: 89.2 ng/L

Area Ratio: 0.0559

Sample Type: (Unknown)



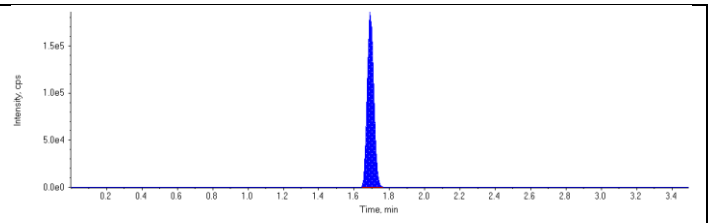
13C4-PFHpA (366.900/322.000 Da)

RT (Exp. RT): 1.69 (1.69) min

Calculated Conc: 92.8 ng/L

Area Ratio: 0.201

Sample Type: (Unknown)



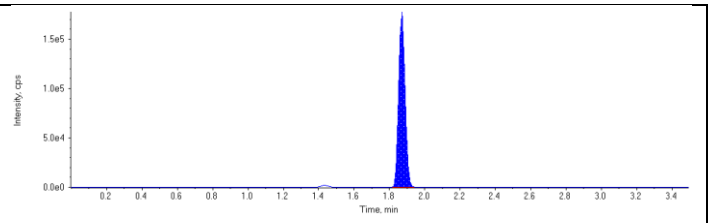
13C4-PFOA (416.900/372.000 Da)

RT (Exp. RT): 1.87 (1.88) min

Calculated Conc: 96.1 ng/L

Area Ratio: 0.188

Sample Type: (Unknown)



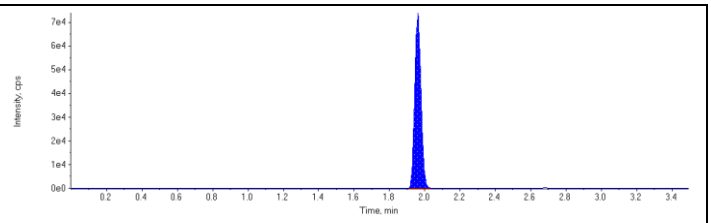
13C4-PFOS (502.900/79.900 Da)

RT (Exp. RT): 1.96 (1.97) min

Calculated Conc: 89.1 ng/L

Area Ratio: 0.0769

Sample Type: (Unknown)



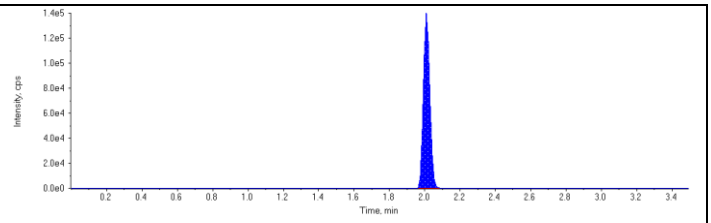
13C5-PFNA (467.900/423.000 Da)

RT (Exp. RT): 2.01 (2.02) min

Calculated Conc: 91.1 ng/L

Area Ratio: 0.151

Sample Type: (Unknown)



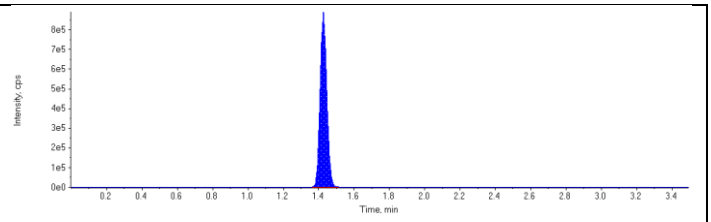
13C6-PFHxA (318.900/274.000 Da)

RT (Exp. RT): 1.43 (1.42) min

Calculated Conc: 102. ng/L

Area Ratio: 0.00

Sample Type: (Unknown)



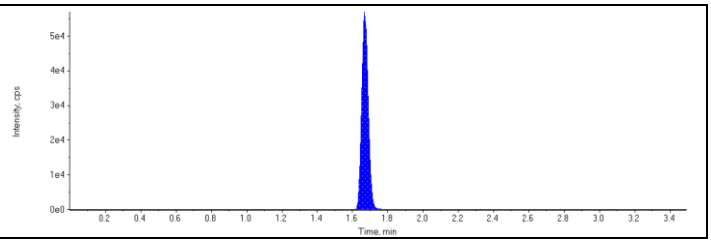
Sample Name	**4393242~MTRX SPK**	**Injection Vial**	10
Sample ID	4393242~MTRX SPK (BWH295)	**Injection Volume (µL)**	3
Sample Type	Quality Control	**Algorithm Used**	Analyst Classic
Acquisition Date	2016/02/25 5:48:40 PM	**Dilution Factor**	1.00
Acquisition Method	PFC_Water_Low.dam	**Sample Annotation**	-
Project	Enviro\PFOS	**Instrument Name**	LCMS03
Data File	PFC_160225\WS#4393242.wiff		
Result Table	PFC_Water_160225_4393242_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	144000.	1.67	1.00	-
MPFHpA	457000.	1.69	1.00	-
MPFOA	428000.	1.87	1.00	-
MPFOS	182000.	1.96	1.00	-
MPFNA	352000.	2.01	1.00	-
13C6-PFHxA IS	2360000.	1.42	1.00	-
N/A	N/A	N/A	N/A	-

Target Analyte	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)	Accuracy (%)
PFBS 1	1920000	1.09	50.0	44.6	89.3
PFHxS 1	2180000	1.67	50.0	49.9	99.8
PFHpA 1	2720000	1.69	50.0	50.5	101.0
PFOA 1	3130000	1.87	50.0	52.7	105.0
PFOS 1	1360000	1.96	50.0	48.8	97.5
PFNA 1	2340000	2.01	50.0	51.9	104.0
18O2-PFHxS	144000	1.67	100.	97.2	97.2
13C4-PFHpA	457000	1.69	100.	89.4	89.4
13C4-PFOA	428000	1.87	100.	92.6	92.6
13C4-PFOS	182000	1.96	100.	89.5	89.5
13C5-PFNA	352000	2.01	100.	90.1	90.1
13C6-PFHxA	2360000	1.42	100.	102.	102.0

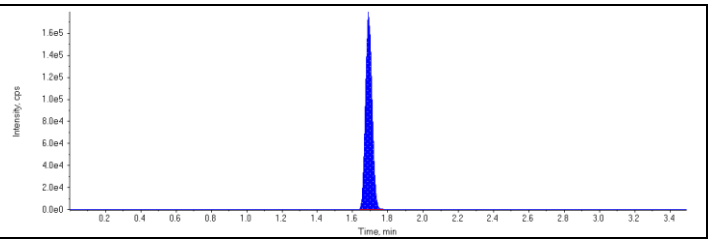
MPFHxS (Internal Standard)

RT (Exp. RT): 1.67(1.68) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



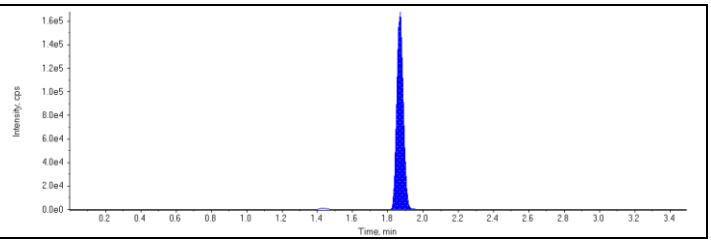
MPFHpA (Internal Standard)

RT (Exp. RT): 1.69(1.69) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



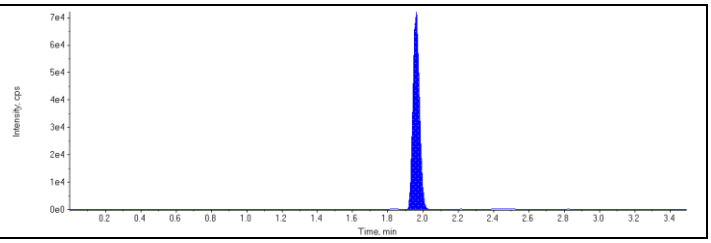
MPFOA (Internal Standard)

RT (Exp. RT): 1.87(1.88) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



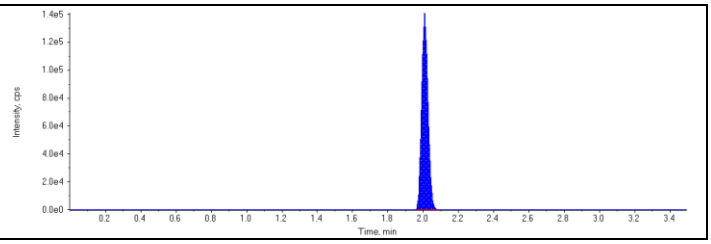
MPFOS (Internal Standard)

RT (Exp. RT): 1.96(1.97) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



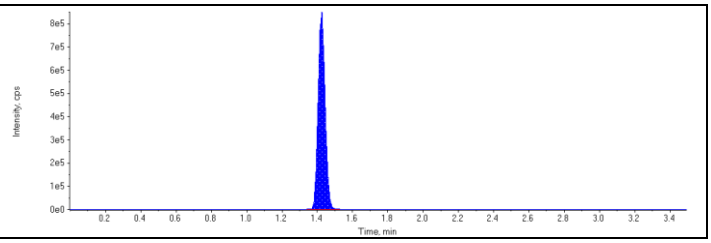
MPFNA (Internal Standard)

RT (Exp. RT): 2.01(2.02) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



13C6-PFHxA IS (Internal Standard)

RT (Exp. RT): 1.42(1.42) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



N/A (Internal Standard)

RT (Exp. RT): N/A(N/A) min
Concentration: N/A N/A
Sample Type: (Quality Control)

This image is not available

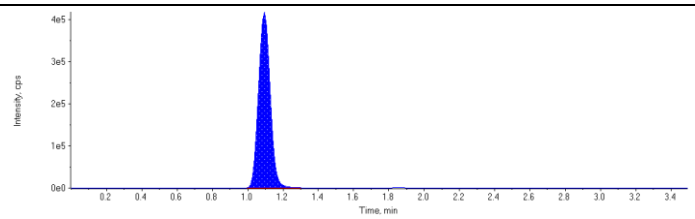
PFBS 1 (298.900/79.900 Da)

RT (Exp. RT): 1.09 (1.09) min

Calculated Conc: 44.6 ng/L

Area Ratio: 13.3

Sample Type: (Quality Control)



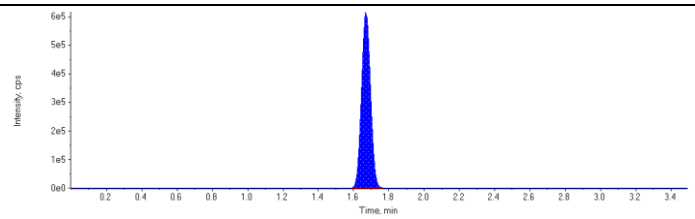
PFHxS 1 (398.900/79.900 Da)

RT (Exp. RT): 1.67 (1.68) min

Calculated Conc: 49.9 ng/L

Area Ratio: 15.2

Sample Type: (Quality Control)



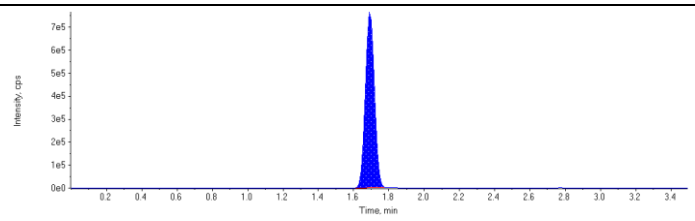
PFHpA 1 (363.000/319.000 Da)

RT (Exp. RT): 1.69 (1.75) min

Calculated Conc: 50.5 ng/L

Area Ratio: 5.95

Sample Type: (Quality Control)



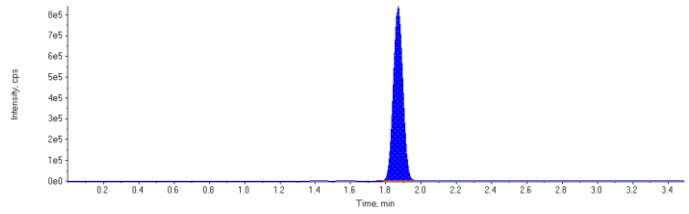
PFOA 1 (413.100/369.000 Da)

RT (Exp. RT): 1.87 (1.92) min

Calculated Conc: 52.7 ng/L

Area Ratio: 7.30

Sample Type: (Quality Control)



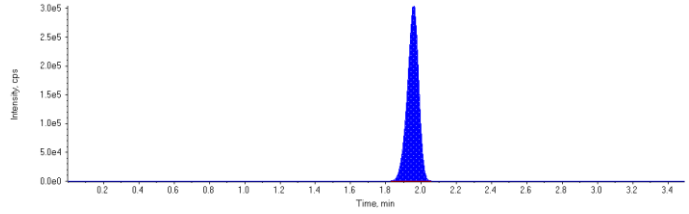
PFOS 1 (498.900/79.900 Da)

RT (Exp. RT): 1.96 (1.97) min

Calculated Conc: 48.8 ng/L

Area Ratio: 7.46

Sample Type: (Quality Control)



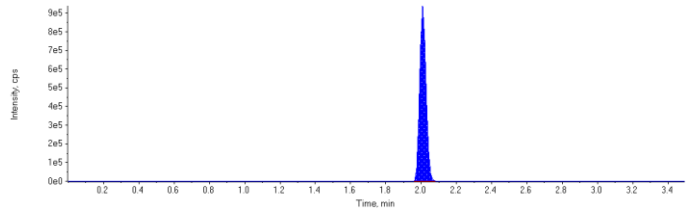
PFNA 1 (462.900/419.000 Da)

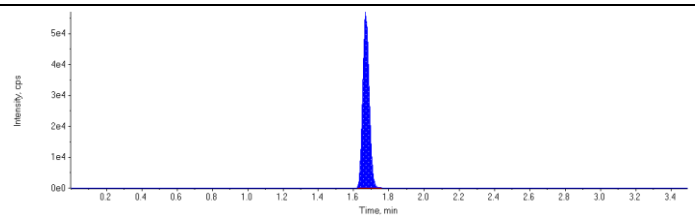
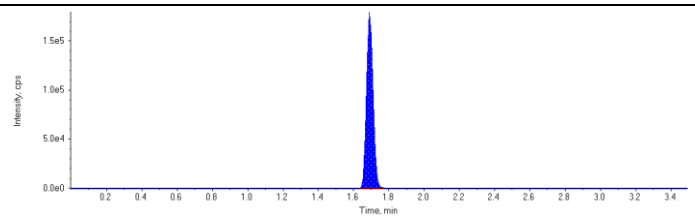
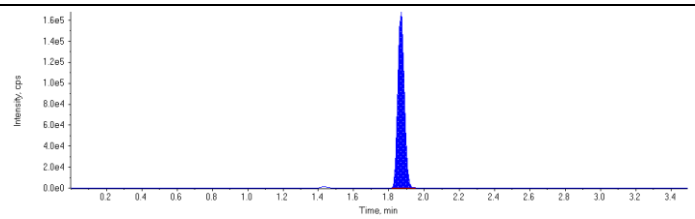
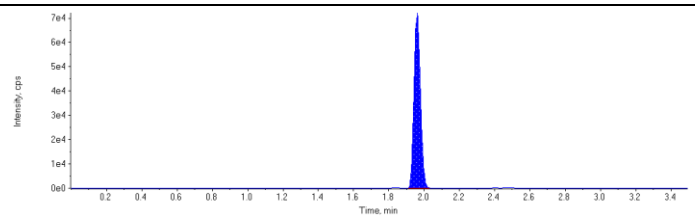
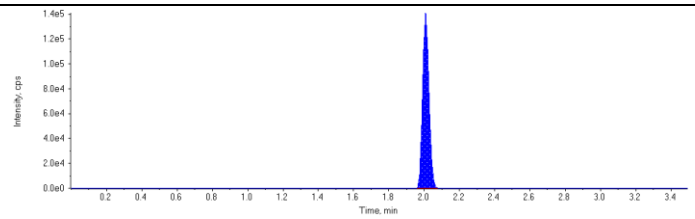
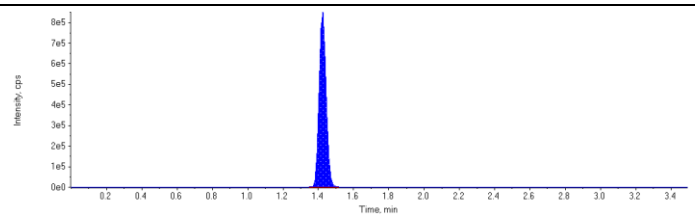
RT (Exp. RT): 2.01 (2.02) min

Calculated Conc: 51.9 ng/L

Area Ratio: 6.66

Sample Type: (Quality Control)



18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 97.2 ng/L Area Ratio: 0.0609 Sample Type: (Quality Control)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.69 (1.69) min Calculated Conc: 89.4 ng/L Area Ratio: 0.194 Sample Type: (Quality Control)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 92.6 ng/L Area Ratio: 0.181 Sample Type: (Quality Control)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 89.5 ng/L Area Ratio: 0.0773 Sample Type: (Quality Control)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 90.1 ng/L Area Ratio: 0.149 Sample Type: (Quality Control)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.42 (1.42) min Calculated Conc: 102. ng/L Area Ratio: 0.00 Sample Type: (Quality Control)	

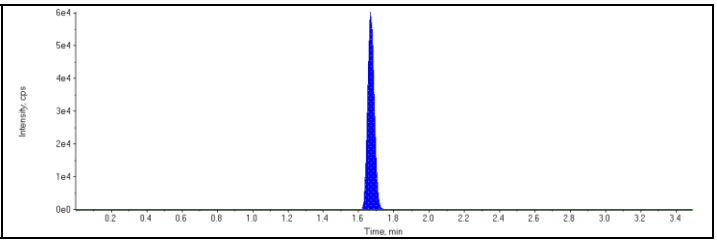
Sample Name	**4393242~MTRX SPK:D1**	**Injection Vial**	11
Sample ID	4393242~MTRX SPK:D1 (BWH295)	**Injection Volume (µL)**	3
Sample Type	Quality Control	**Algorithm Used**	Analyst Classic
Acquisition Date	2016/02/25 5:53:46 PM	**Dilution Factor**	1.00
Acquisition Method	PFC_Water_Low.dam	**Sample Annotation**	-
Project	Enviro\PFOS	**Instrument Name**	LCMS03
Data File	PFC_160225\WS#4393242.wiff		
Result Table	PFC_Water_160225_4393242_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	154000.	1.67	1.00	-
MPFHpA	458000.	1.69	1.00	-
MPFOA	445000.	1.87	1.00	-
MPFOS	178000.	1.96	1.00	-
MPFNA	341000.	2.01	1.00	-
13C6-PFHxA IS	2240000.	1.42	1.00	-
N/A	N/A	N/A	N/A	-

Target Analyte	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)	Accuracy (%)
PFBS 1	2200000	1.10	50.0	47.9	95.7
PFHxS 1	2530000	1.67	50.0	54.1	108.0
PFHpA 1	3040000	1.69	50.0	56.3	113.0
PFOA 1	3520000	1.87	50.0	57.0	114.0
PFOS 1	1610000	1.96	50.0	58.8	118.0
PFNA 1	2640000	2.01	50.0	60.3	121.0
18O2-PFHxS	154000	1.67	100.	109.	109.0
13C4-PFHpA	458000	1.69	100.	94.2	94.2
13C4-PFOA	445000	1.87	100.	101.	101.0
13C4-PFOS	178000	1.96	100.	92.2	92.2
13C5-PFNA	341000	2.01	100.	92.1	92.1
13C6-PFHxA	2240000	1.42	100.	96.9	96.9

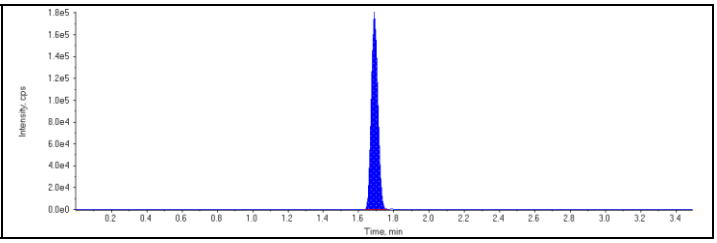
MPFHxS (Internal Standard)

RT (Exp. RT): 1.67(1.68) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



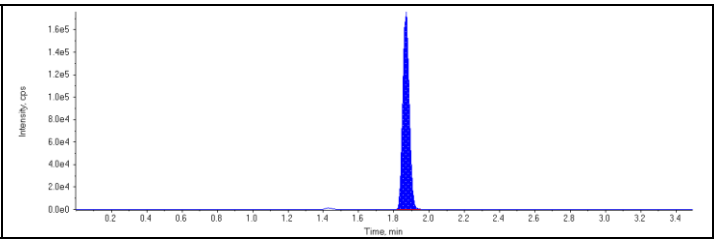
MPFHpA (Internal Standard)

RT (Exp. RT): 1.69(1.69) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



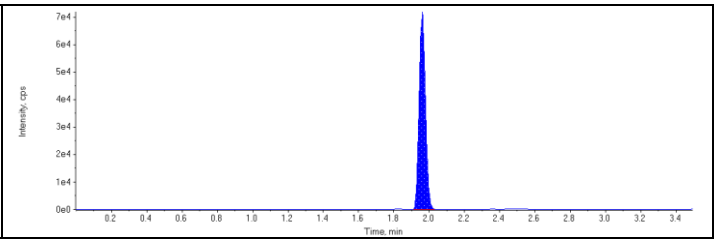
MPFOA (Internal Standard)

RT (Exp. RT): 1.87(1.88) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



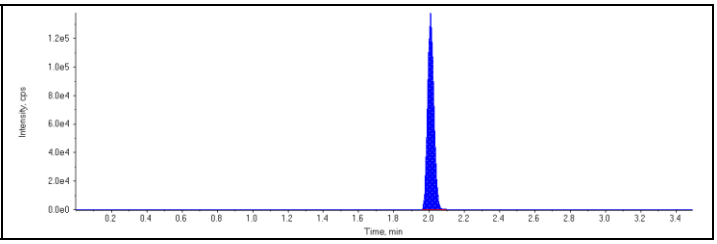
MPFOS (Internal Standard)

RT (Exp. RT): 1.96(1.97) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



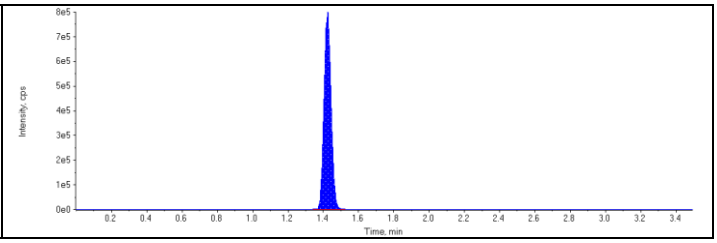
MPFNA (Internal Standard)

RT (Exp. RT): 2.01(2.02) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



13C6-PFHxA IS (Internal Standard)

RT (Exp. RT): 1.42(1.42) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



N/A (Internal Standard)

RT (Exp. RT): N/A(N/A) min
Concentration: N/A N/A
Sample Type: (Quality Control)

This image is not available

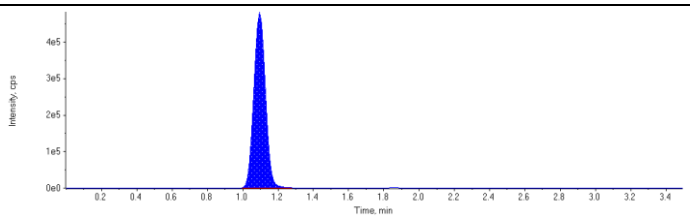
PFBS 1 (298.900/79.900 Da)

RT (Exp. RT): 1.10 (1.09) min

Calculated Conc: 47.9 ng/L

Area Ratio: 14.3

Sample Type: (Quality Control)



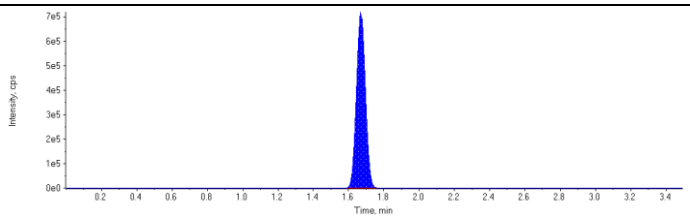
PFHxS 1 (398.900/79.900 Da)

RT (Exp. RT): 1.67 (1.68) min

Calculated Conc: 54.1 ng/L

Area Ratio: 16.5

Sample Type: (Quality Control)



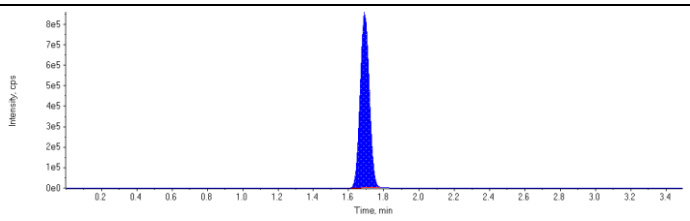
PFHpA 1 (363.000/319.000 Da)

RT (Exp. RT): 1.69 (1.75) min

Calculated Conc: 56.3 ng/L

Area Ratio: 6.64

Sample Type: (Quality Control)



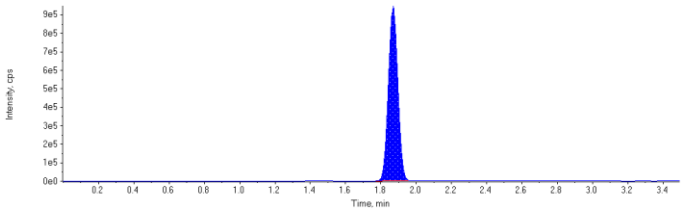
PFOA 1 (413.100/369.000 Da)

RT (Exp. RT): 1.87 (1.92) min

Calculated Conc: 57.0 ng/L

Area Ratio: 7.90

Sample Type: (Quality Control)



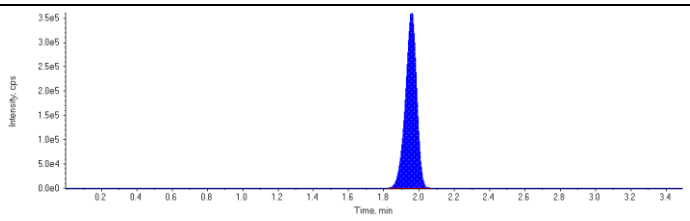
PFOS 1 (498.900/79.900 Da)

RT (Exp. RT): 1.96 (1.97) min

Calculated Conc: 58.8 ng/L

Area Ratio: 9.01

Sample Type: (Quality Control)



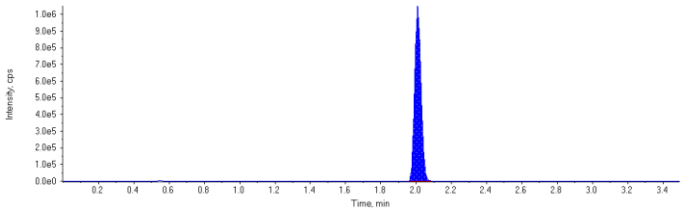
PFNA 1 (462.900/419.000 Da)

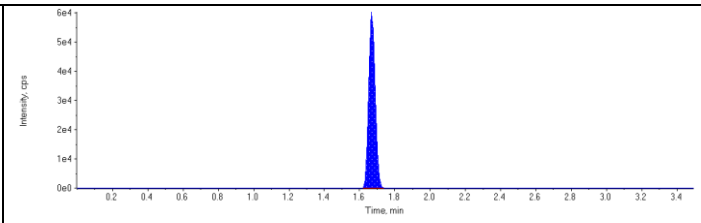
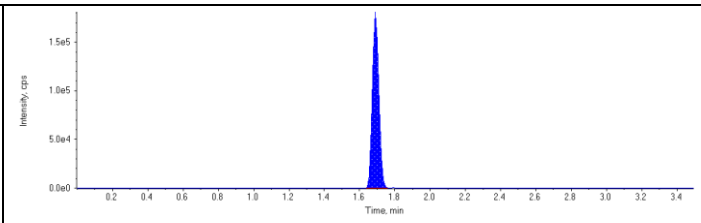
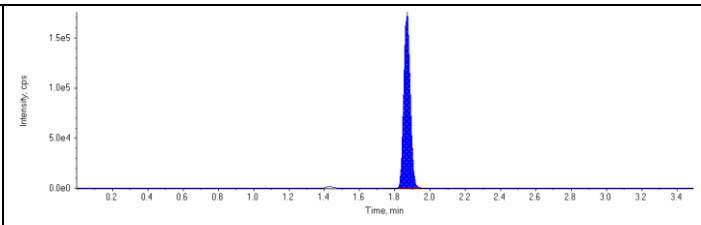
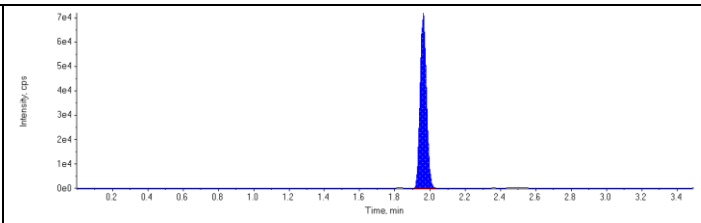
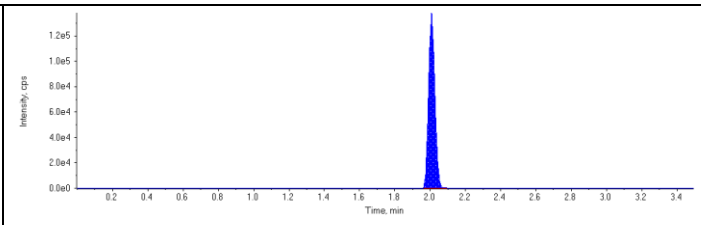
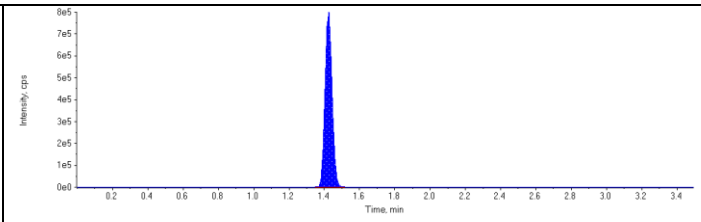
RT (Exp. RT): 2.01 (2.02) min

Calculated Conc: 60.3 ng/L

Area Ratio: 7.73

Sample Type: (Quality Control)



18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 109. ng/L Area Ratio: 0.0685 Sample Type: (Quality Control)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.69 (1.69) min Calculated Conc: 94.2 ng/L Area Ratio: 0.204 Sample Type: (Quality Control)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 101. ng/L Area Ratio: 0.199 Sample Type: (Quality Control)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 92.2 ng/L Area Ratio: 0.0795 Sample Type: (Quality Control)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 92.1 ng/L Area Ratio: 0.152 Sample Type: (Quality Control)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.42 (1.42) min Calculated Conc: 96.9 ng/L Area Ratio: 0.00 Sample Type: (Quality Control)	

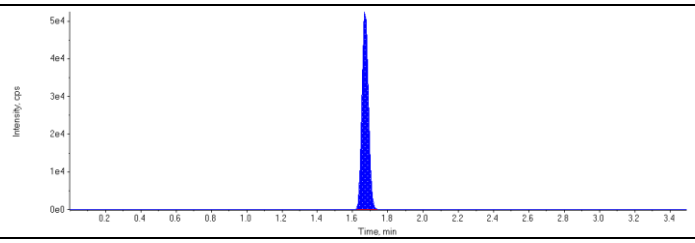
Sample Name	**4393242~SPIKE**	**Injection Vial**	12
Sample ID	4393242~SPIKE	**Injection Volume (µL)**	3
Sample Type	Quality Control	**Algorithm Used**	Analyst Classic
Acquisition Date	2016/02/25 5:58:52 PM	**Dilution Factor**	1.00
Acquisition Method	PFC_Water_Low.dam	**Sample Annotation**	-
Project	Enviro\PFOS	**Instrument Name**	LCMS03
Data File	PFC_160225\WS#4393242.wiff		
Result Table	PFC_Water_160225_4393242_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	134000.	1.67	1.00	-
MPFHpA	459000.	1.69	1.00	-
MPFOA	416000.	1.87	1.00	-
MPFOS	182000.	1.96	1.00	-
MPFNA	334000.	2.01	1.00	-
13C6-PFHxA IS	2400000.	1.43	1.00	-
N/A	N/A	N/A	N/A	-

Target Analyte	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)	Accuracy (%)
PFBS 1	2040000	1.10	50.0	50.9	102.0
PFHxS 1	2340000	1.67	50.0	57.4	115.0
PFHpA 1	2970000	1.69	50.0	55.0	110.0
PFOA 1	3420000	1.87	50.0	59.2	118.0
PFOS 1	1530000	1.96	50.0	54.9	110.0
PFNA 1	2520000	2.01	50.0	59.0	118.0
18O2-PFHxS	134000	1.67	100.	89.3	89.3
13C4-PFHpA	459000	1.69	100.	88.3	88.3
13C4-PFOA	416000	1.87	100.	88.7	88.7
13C4-PFOS	182000	1.96	100.	88.0	88.0
13C5-PFNA	334000	2.01	100.	84.3	84.3
13C6-PFHxA	2400000	1.43	100.	104.	104.0

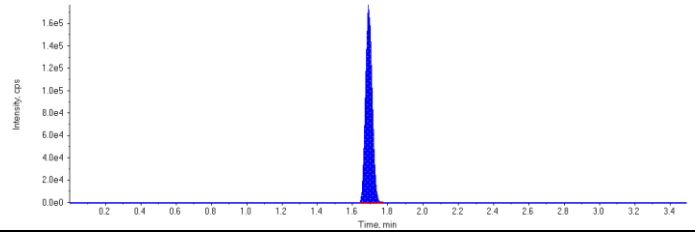
MPFHxS (Internal Standard)

RT (Exp. RT): 1.67(1.68) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



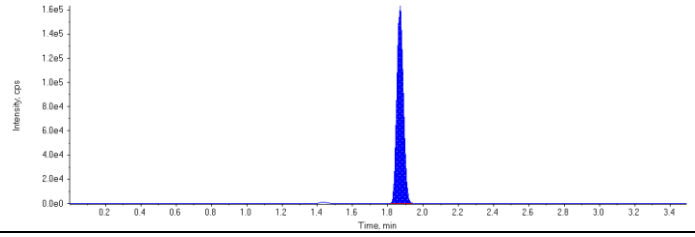
MPFHpA (Internal Standard)

RT (Exp. RT): 1.69(1.69) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



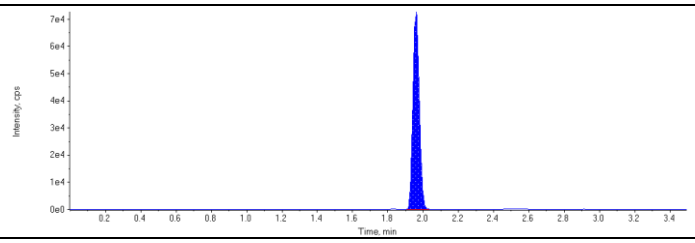
MPFOA (Internal Standard)

RT (Exp. RT): 1.87(1.88) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



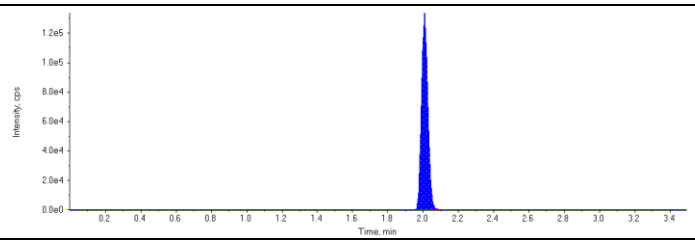
MPFOS (Internal Standard)

RT (Exp. RT): 1.96(1.97) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



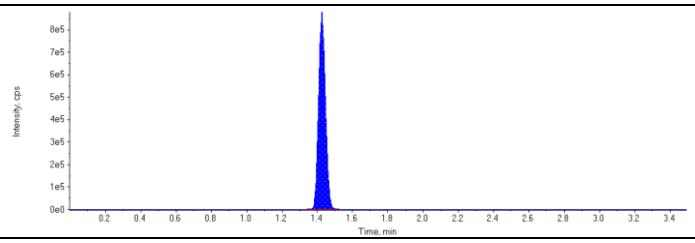
MPFNA (Internal Standard)

RT (Exp. RT): 2.01(2.02) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



13C6-PFHxA IS (Internal Standard)

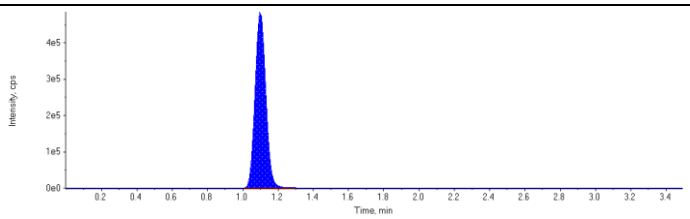
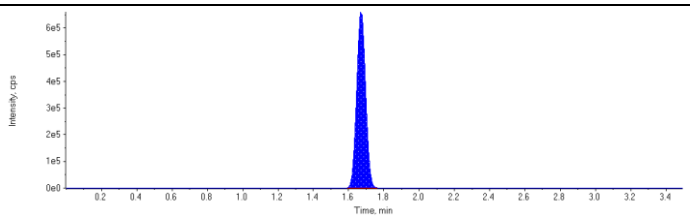
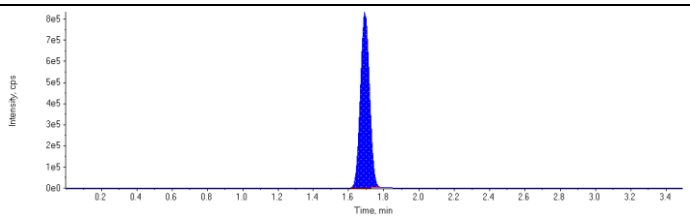
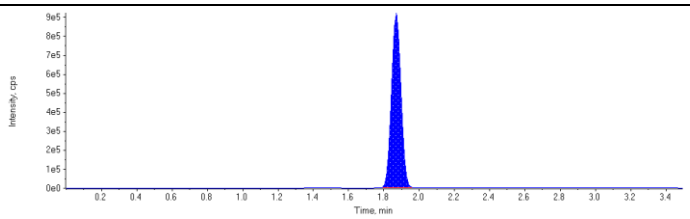
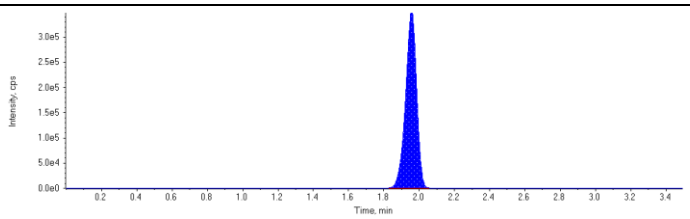
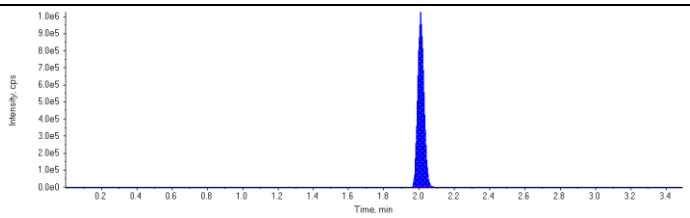
RT (Exp. RT): 1.43(1.42) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)

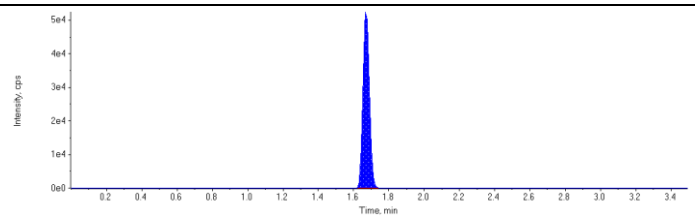
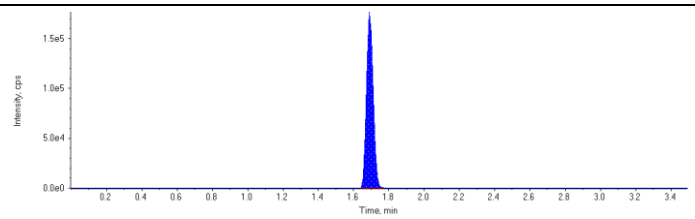
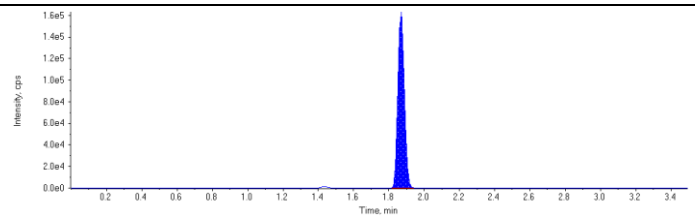
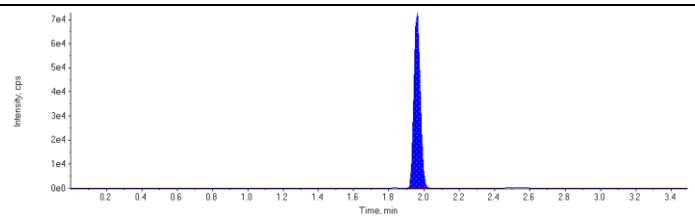
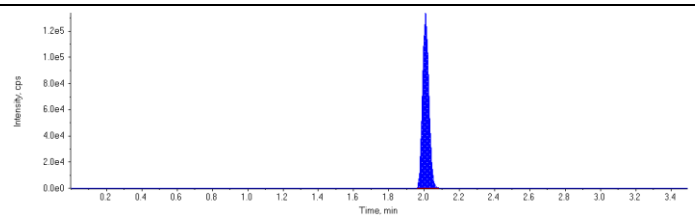
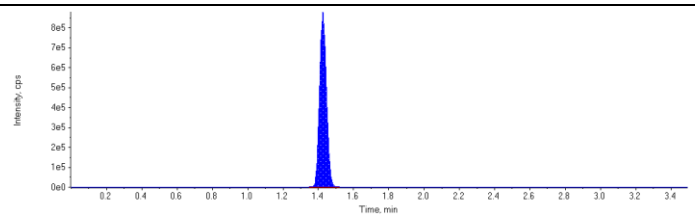


N/A (Internal Standard)

RT (Exp. RT): N/A(N/A) min
Concentration: N/A N/A
Sample Type: (Quality Control)

This image is not available

PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.10 (1.09) min Calculated Conc: 50.9 ng/L Area Ratio: 15.2 Sample Type: (Quality Control)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 57.4 ng/L Area Ratio: 17.5 Sample Type: (Quality Control)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.69 (1.75) min Calculated Conc: 55.0 ng/L Area Ratio: 6.48 Sample Type: (Quality Control)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.87 (1.92) min Calculated Conc: 59.2 ng/L Area Ratio: 8.21 Sample Type: (Quality Control)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 54.9 ng/L Area Ratio: 8.41 Sample Type: (Quality Control)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 59.0 ng/L Area Ratio: 7.56 Sample Type: (Quality Control)	

18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 89.3 ng/L Area Ratio: 0.0560 Sample Type: (Quality Control)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.69 (1.69) min Calculated Conc: 88.3 ng/L Area Ratio: 0.191 Sample Type: (Quality Control)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 88.7 ng/L Area Ratio: 0.174 Sample Type: (Quality Control)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 88.0 ng/L Area Ratio: 0.0760 Sample Type: (Quality Control)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 84.3 ng/L Area Ratio: 0.139 Sample Type: (Quality Control)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.43 (1.42) min Calculated Conc: 104. ng/L Area Ratio: 0.00 Sample Type: (Quality Control)	

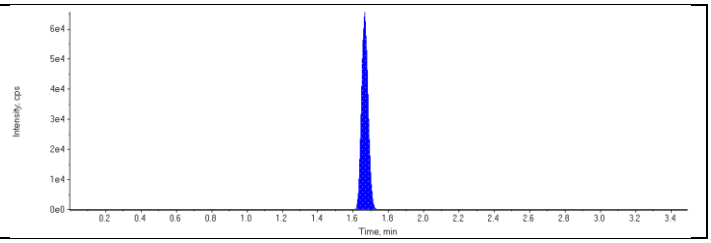
Sample Name	**4394558~BLANK**	**Injection Vial**	27
Sample ID	4394558~BLANK	**Injection Volume (µL)**	3
Sample Type	Quality Control	**Algorithm Used**	Analyst Classic
Acquisition Date	2016/02/29 8:55:42 AM	**Dilution Factor**	1.00
Acquisition Method	PFC_Water_Low.dam	**Sample Annotation**	-
Project	Enviro\PFOS	**Instrument Name**	LCMS03
Data File	PFC_160226\WS#4394558.wiff		
Result Table	PFC_Water_160226_4394558_ULow_6.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	166000.	1.67	1.00	-
MPFHpA	539000.	1.69	1.00	-
MPFOA	466000.	1.87	1.00	-
MPFOS	189000.	1.96	1.00	-
MPFNA	350000.	2.01	1.00	-
13C6-PFHxA IS	2880000.	1.42	1.00	-
N/A	N/A	N/A	N/A	-

Target Analyte	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)	Accuracy (%)
PFBS 1	0	0.00	0.00	N/A	0.0
PFHxS 1	0	0.00	0.00	N/A	0.0
PFHpA 1	0	0.00	0.00	N/A	0.0
PFOA 1	0	0.00	0.00	N/A	0.0
PFOS 1	0	0.00	0.00	N/A	0.0
PFNA 1	0	0.00	0.00	N/A	0.0
18O2-PFHxS	166000	1.67	100.	89.4	89.4
13C4-PFHpA	539000	1.69	100.	97.6	97.6
13C4-PFOA	466000	1.87	100.	96.9	96.9
13C4-PFOS	189000	1.96	100.	83.2	83.2
13C5-PFNA	350000	2.01	100.	90.8	90.8
13C6-PFHxA	2880000	1.42	100.	116.	116.0

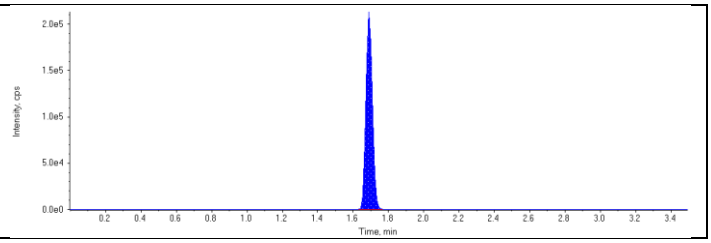
MPFHxS (Internal Standard)

RT (Exp. RT): 1.67(1.68) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



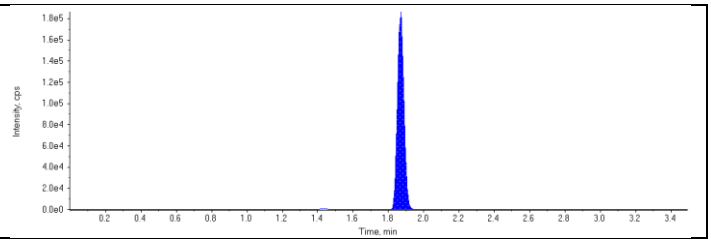
MPFHpA (Internal Standard)

RT (Exp. RT): 1.69(1.69) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



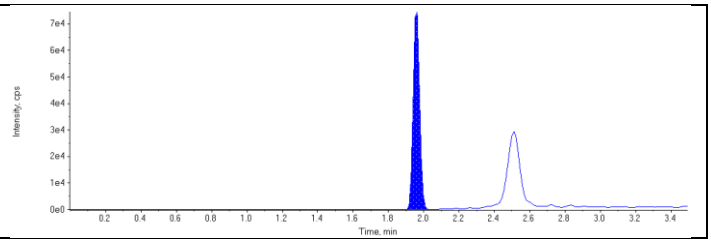
MPFOA (Internal Standard)

RT (Exp. RT): 1.87(1.88) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



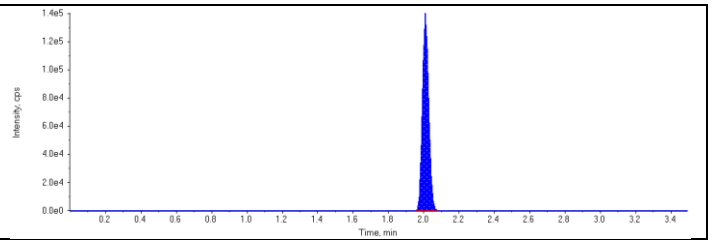
MPFOS (Internal Standard)

RT (Exp. RT): 1.96(1.97) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



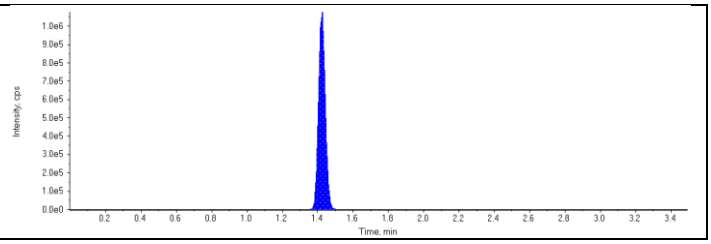
MPFNA (Internal Standard)

RT (Exp. RT): 2.01(2.02) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



13C6-PFHxA IS (Internal Standard)

RT (Exp. RT): 1.42(1.42) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



N/A (Internal Standard)

RT (Exp. RT): N/A(N/A) min
Concentration: N/A N/A
Sample Type: (Quality Control)

This image is not available

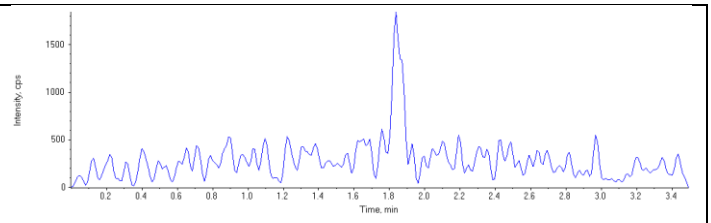
PFBS 1 (298.900/79.900 Da)

RT (Exp. RT): 0.00 (1.09) min

Calculated Conc: N/A ng/L

Area Ratio: 0.00

Sample Type: (Quality Control)



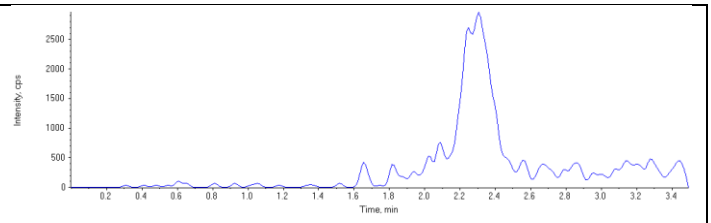
PFHxS 1 (398.900/79.900 Da)

RT (Exp. RT): 0.00 (1.68) min

Calculated Conc: N/A ng/L

Area Ratio: 0.00

Sample Type: (Quality Control)



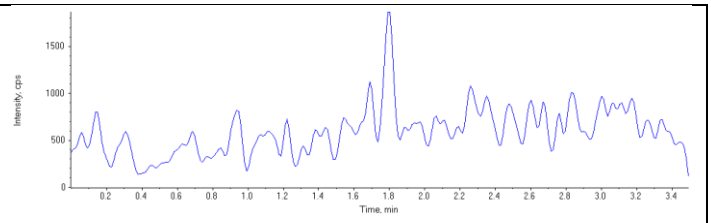
PFHpA 1 (363.000/319.000 Da)

RT (Exp. RT): 0.00 (1.70) min

Calculated Conc: N/A ng/L

Area Ratio: 0.00

Sample Type: (Quality Control)



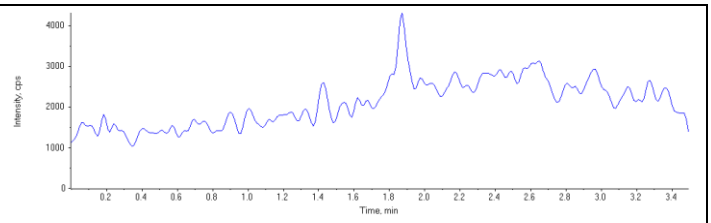
PFOA 1 (413.100/369.000 Da)

RT (Exp. RT): 0.00 (1.88) min

Calculated Conc: N/A ng/L

Area Ratio: 0.00

Sample Type: (Quality Control)



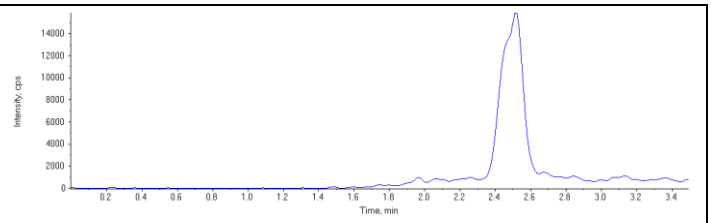
PFOS 1 (498.900/79.900 Da)

RT (Exp. RT): 0.00 (1.97) min

Calculated Conc: N/A ng/L

Area Ratio: 0.00

Sample Type: (Quality Control)



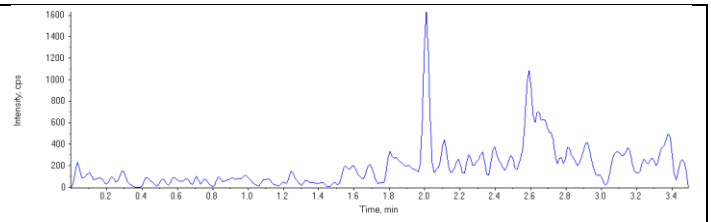
PFNA 1 (462.900/419.000 Da)

RT (Exp. RT): 0.00 (2.02) min

Calculated Conc: N/A ng/L

Area Ratio: 0.00

Sample Type: (Quality Control)



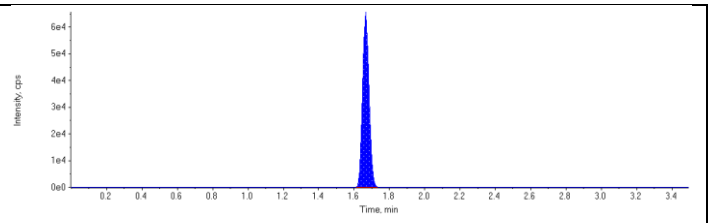
18O2-PFHxS (402.900/84.000 Da)

RT (Exp. RT): 1.67 (1.68) min

Calculated Conc: 89.4 ng/L

Area Ratio: 0.0577

Sample Type: (Quality Control)



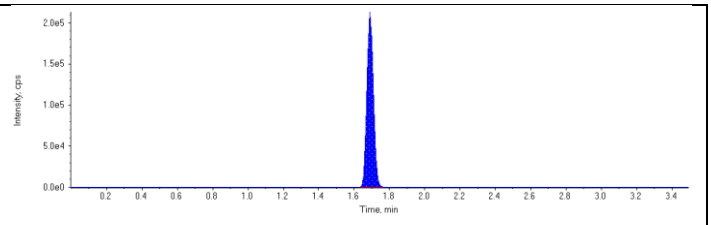
13C4-PFHpA (366.900/322.000 Da)

RT (Exp. RT): 1.69 (1.69) min

Calculated Conc: 97.6 ng/L

Area Ratio: 0.187

Sample Type: (Quality Control)



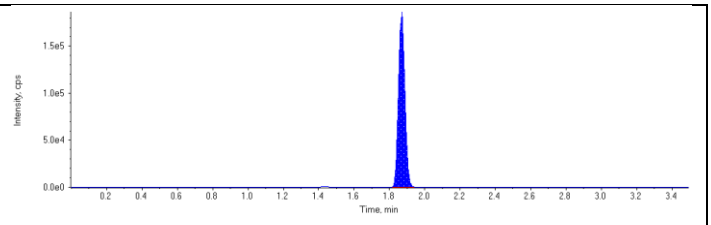
13C4-PFOA (416.900/372.000 Da)

RT (Exp. RT): 1.87 (1.88) min

Calculated Conc: 96.9 ng/L

Area Ratio: 0.162

Sample Type: (Quality Control)



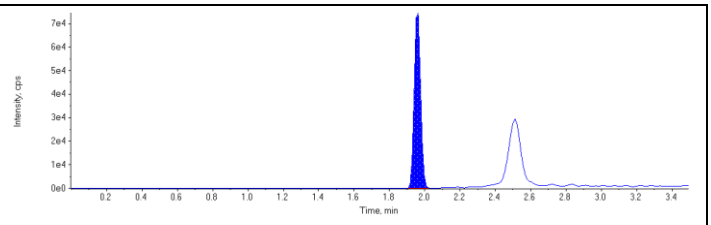
13C4-PFOS (502.900/79.900 Da)

RT (Exp. RT): 1.96 (1.97) min

Calculated Conc: 83.2 ng/L

Area Ratio: 0.0656

Sample Type: (Quality Control)



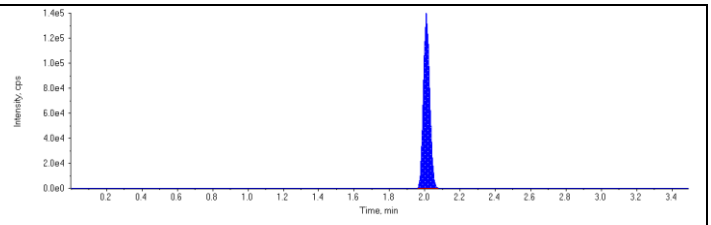
13C5-PFNA (467.900/423.000 Da)

RT (Exp. RT): 2.01 (2.02) min

Calculated Conc: 90.8 ng/L

Area Ratio: 0.122

Sample Type: (Quality Control)



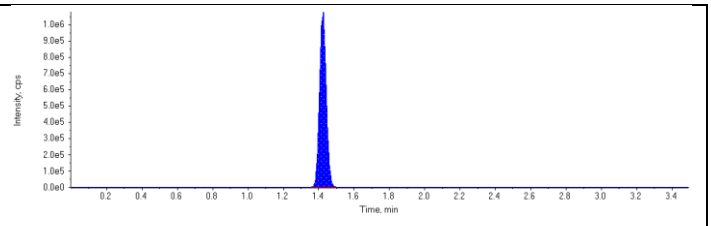
13C6-PFHxA (318.900/274.000 Da)

RT (Exp. RT): 1.42 (1.42) min

Calculated Conc: 116. ng/L

Area Ratio: 0.00

Sample Type: (Quality Control)



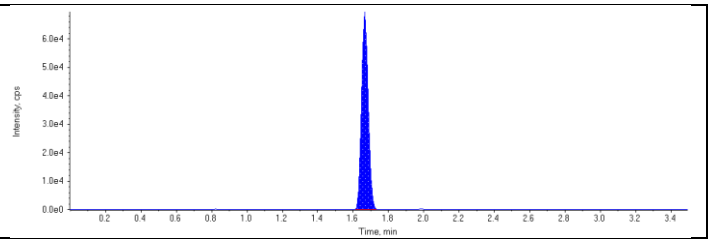
Sample Name	**4394558~MTRX SPK**	**Injection Vial**	28
Sample ID	4394558~MTRX SPK	**Injection Volume (µL)**	3
Sample Type	Quality Control	**Algorithm Used**	Analyst Classic
Acquisition Date	2016/02/29 10:09:47 AM	**Dilution Factor**	1.00
Acquisition Method	PFC_Water_Low.dam	**Sample Annotation**	Re-injected
Project	Enviro\PFOS	**Instrument Name**	LCMS03
Data File	PFC_160226\WS#4394558.wiff		
Result Table	PFC_Water_160226_4394558_ULow_6.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	180000.	1.67	1.00	-
MPFHpA	422000.	1.69	1.00	-
MPFOA	348000.	1.87	1.00	-
MPFOS	155000.	1.96	1.00	-
MPFNA	261000.	2.01	1.00	-
13C6-PFHxA IS	3520000.	1.42	1.00	-
N/A	N/A	N/A	N/A	-

Target Analyte	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)	Accuracy (%)
PFBS 1	2760000	1.11	0.00	54.6	0.0
PFHxS 1	3160000	1.67	0.00	60.3	0.0
PFHpA 1	3350000	1.69	0.00	66.4	0.0
PFOA 1	3420000	1.87	0.00	67.3	0.0
PFOS 1	1670000	1.96	0.00	69.3	0.0
PFNA 1	2340000	2.01	0.00	67.6	0.0
18O2-PFHxS	180000	1.67	100.	79.5	79.5
13C4-PFHpA	422000	1.69	100.	62.6	62.6
13C4-PFOA	348000	1.87	100.	59.1	59.1
13C4-PFOS	155000	1.96	100.	55.9	55.9
13C5-PFNA	261000	2.01	100.	55.5	55.5
13C6-PFHxA	3520000	1.42	100.	142.	142.0

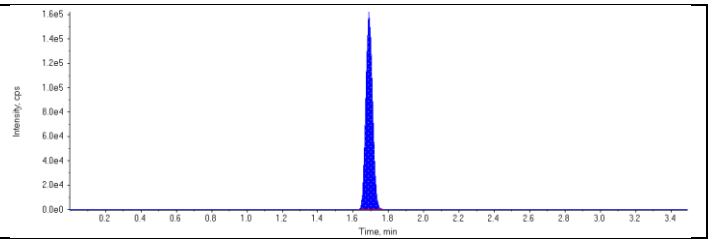
MPFHxS (Internal Standard)

RT (Exp. RT): 1.67(1.68) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



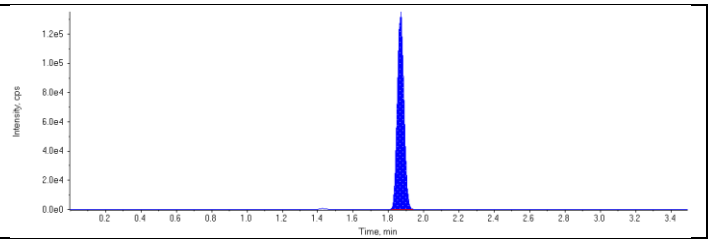
MPFHpA (Internal Standard)

RT (Exp. RT): 1.69(1.69) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



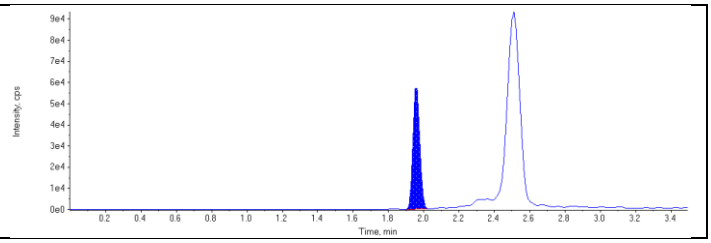
MPFOA (Internal Standard)

RT (Exp. RT): 1.87(1.88) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



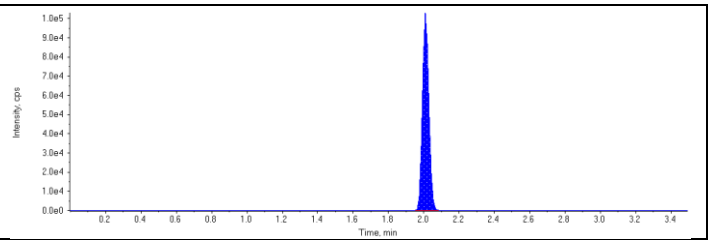
MPFOS (Internal Standard)

RT (Exp. RT): 1.96(1.97) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



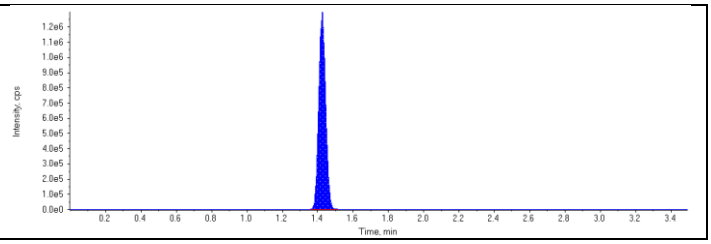
MPFNA (Internal Standard)

RT (Exp. RT): 2.01(2.02) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



13C6-PFHxA IS (Internal Standard)

RT (Exp. RT): 1.42(1.42) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



N/A (Internal Standard)

RT (Exp. RT): N/A(N/A) min
Concentration: N/A N/A
Sample Type: (Quality Control)

This image is not available

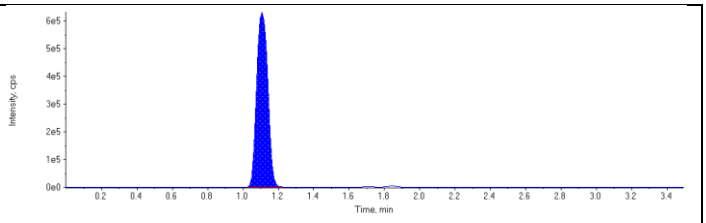
PFBS 1 (298.900/79.900 Da)

RT (Exp. RT): 1.11 (1.09) min

Calculated Conc: 54.6 ng/L

Area Ratio: 15.3

Sample Type: (Quality Control)



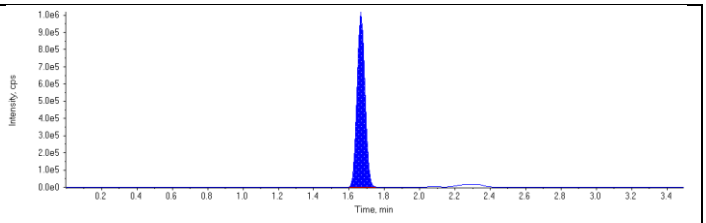
PFHxS 1 (398.900/79.900 Da)

RT (Exp. RT): 1.67 (1.68) min

Calculated Conc: 60.3 ng/L

Area Ratio: 17.5

Sample Type: (Quality Control)



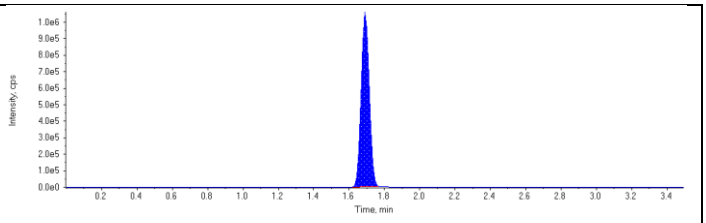
PFHpA 1 (363.000/319.000 Da)

RT (Exp. RT): 1.69 (1.70) min

Calculated Conc: 66.4 ng/L

Area Ratio: 7.94

Sample Type: (Quality Control)



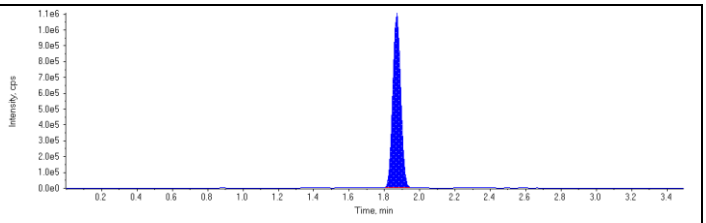
PFOA 1 (413.100/369.000 Da)

RT (Exp. RT): 1.87 (1.88) min

Calculated Conc: 67.3 ng/L

Area Ratio: 9.84

Sample Type: (Quality Control)



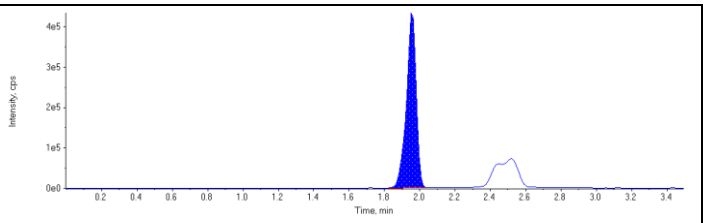
PFOS 1 (498.900/79.900 Da)

RT (Exp. RT): 1.96 (1.97) min

Calculated Conc: 69.3 ng/L

Area Ratio: 10.8

Sample Type: (Quality Control)



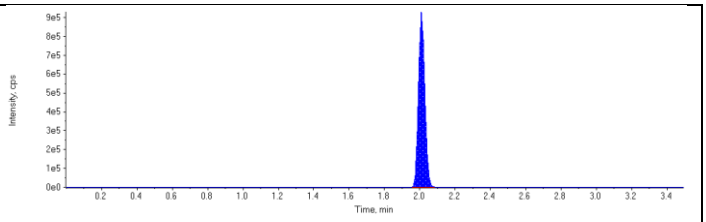
PFNA 1 (462.900/419.000 Da)

RT (Exp. RT): 2.01 (2.02) min

Calculated Conc: 67.6 ng/L

Area Ratio: 8.95

Sample Type: (Quality Control)



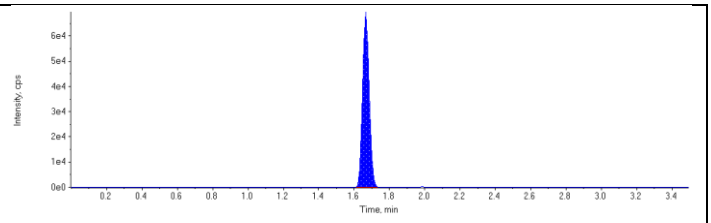
18O2-PFHxS (402.900/84.000 Da)

RT (Exp. RT): 1.67 (1.68) min

Calculated Conc: 79.5 ng/L

Area Ratio: 0.0513

Sample Type: (Quality Control)



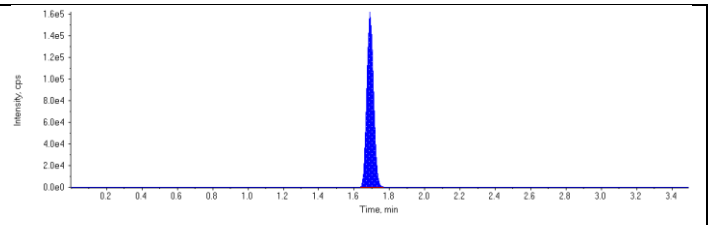
13C4-PFHpA (366.900/322.000 Da)

RT (Exp. RT): 1.69 (1.69) min

Calculated Conc: 62.6 ng/L

Area Ratio: 0.120

Sample Type: (Quality Control)



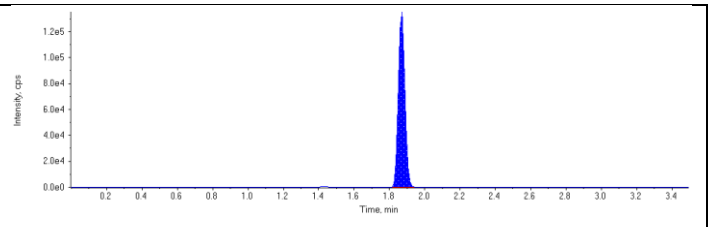
13C4-PFOA (416.900/372.000 Da)

RT (Exp. RT): 1.87 (1.88) min

Calculated Conc: 59.1 ng/L

Area Ratio: 0.0989

Sample Type: (Quality Control)



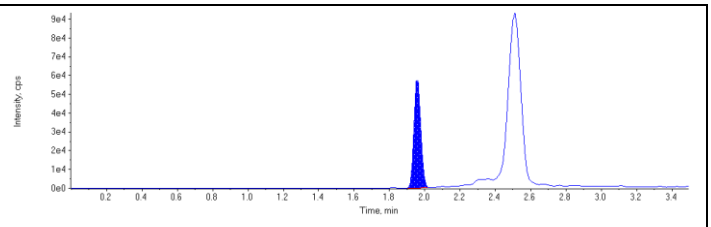
13C4-PFOS (502.900/79.900 Da)

RT (Exp. RT): 1.96 (1.97) min

Calculated Conc: 55.9 ng/L

Area Ratio: 0.0441

Sample Type: (Quality Control)



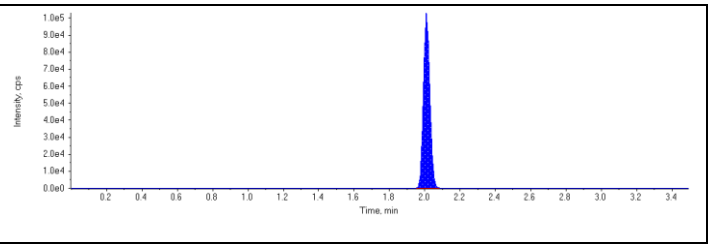
13C5-PFNA (467.900/423.000 Da)

RT (Exp. RT): 2.01 (2.02) min

Calculated Conc: 55.5 ng/L

Area Ratio: 0.0742

Sample Type: (Quality Control)



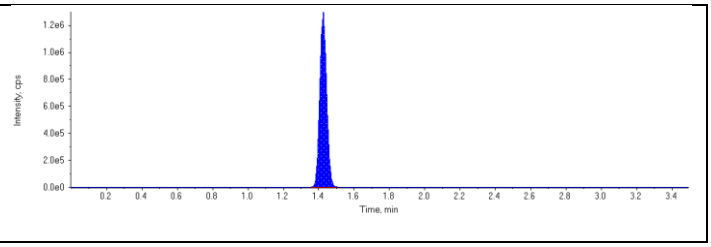
13C6-PFHxA (318.900/274.000 Da)

RT (Exp. RT): 1.42 (1.42) min

Calculated Conc: 142. ng/L

Area Ratio: 0.00

Sample Type: (Quality Control)



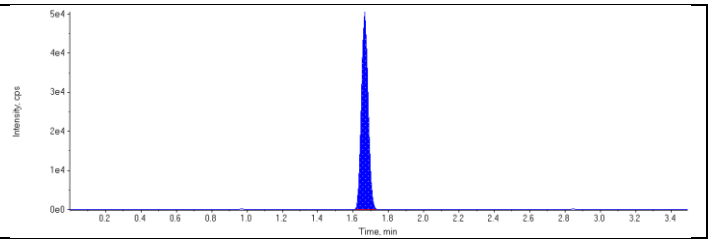
Sample Name	**4394558~MTRX SPK**	**Injection Vial**	28
Sample ID	4394558~MTRX SPK	**Injection Volume (µL)**	3
Sample Type	Quality Control	**Algorithm Used**	Analyst Classic
Acquisition Date	2016/02/29 11:26:22 AM	**Dilution Factor**	1.00
Acquisition Method	PFC_Water_Low.dam	**Sample Annotation**	Reported
Project	Enviro\PFOS	**Instrument Name**	LCMS03
Data File	PFC_160226\WS#4394558.wiff		
Result Table	PFC_Water_160226_4394558_ULow_6.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	131000.	1.67	1.00	-
MPFHpA	405000.	1.69	1.00	-
MPFOA	373000.	1.87	1.00	-
MPFOS	164000.	1.96	1.00	-
MPFNA	275000.	2.01	1.00	-
13C6-PFHxA IS	2200000.	1.43	1.00	-
N/A	N/A	N/A	N/A	-

Target Analyte	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)	Accuracy (%)
PFBS 1	2110000	1.11	0.00	57.4	0.0
PFHxS 1	2340000	1.67	0.00	61.6	0.0
PFHpA 1	2640000	1.69	0.00	54.4	0.0
PFOA 1	3160000	1.87	0.00	57.8	0.0
PFOS 1	1610000	1.95	0.00	62.9	0.0
PFNA 1	2370000	2.01	0.00	65.1	0.0
18O2-PFHxS	131000	1.67	100.	92.3	92.3
13C4-PFHpA	405000	1.69	100.	96.1	96.1
13C4-PFOA	373000	1.87	100.	102.	102.0
13C4-PFOS	164000	1.96	100.	94.8	94.8
13C5-PFNA	275000	2.01	100.	93.4	93.4
13C6-PFHxA	2200000	1.43	100.	88.6	88.6

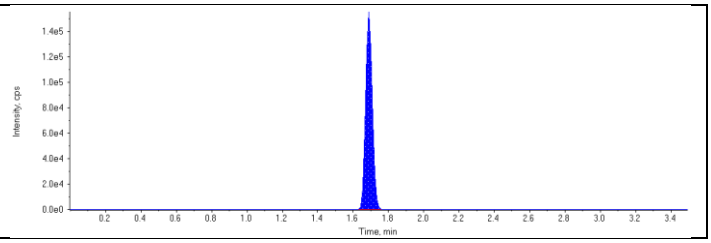
MPFHxS (Internal Standard)

RT (Exp. RT): 1.67(1.68) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



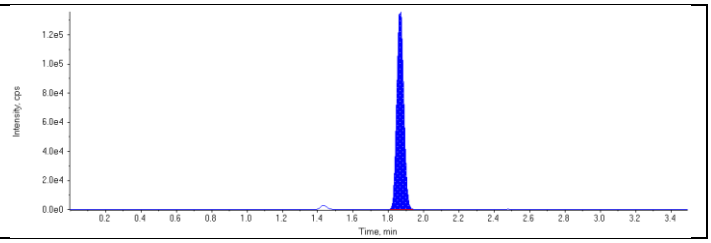
MPFHpA (Internal Standard)

RT (Exp. RT): 1.69(1.69) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



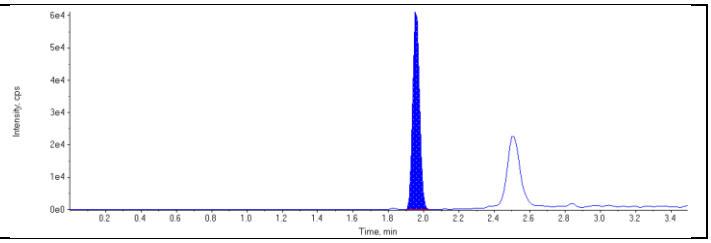
MPFOA (Internal Standard)

RT (Exp. RT): 1.87(1.88) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



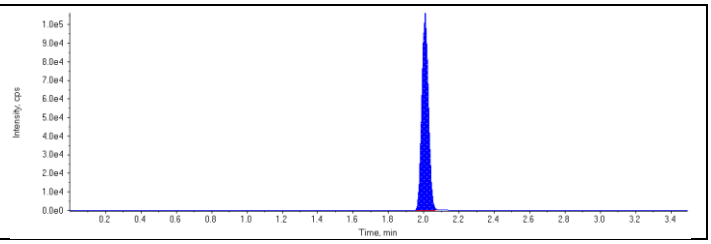
MPFOS (Internal Standard)

RT (Exp. RT): 1.96(1.97) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



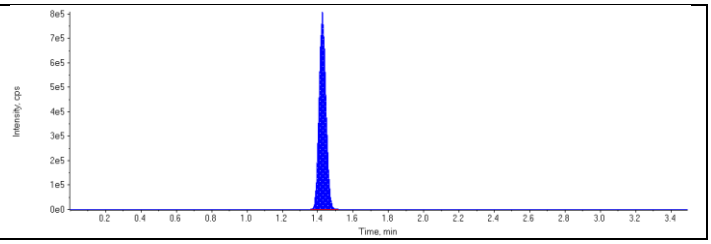
MPFNA (Internal Standard)

RT (Exp. RT): 2.01(2.02) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



13C6-PFHxA IS (Internal Standard)

RT (Exp. RT): 1.43(1.42) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



N/A (Internal Standard)

RT (Exp. RT): N/A(N/A) min
Concentration: N/A N/A
Sample Type: (Quality Control)

This image is not available

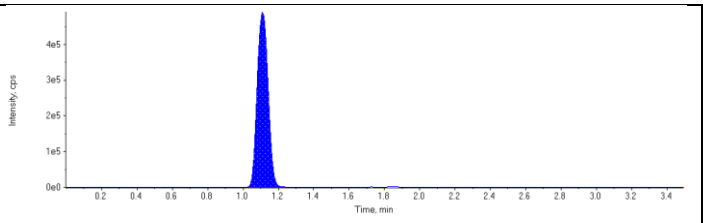
PFBS 1 (298.900/79.900 Da)

RT (Exp. RT): 1.11 (1.09) min

Calculated Conc: 57.4 ng/L

Area Ratio: 16.1

Sample Type: (Quality Control)



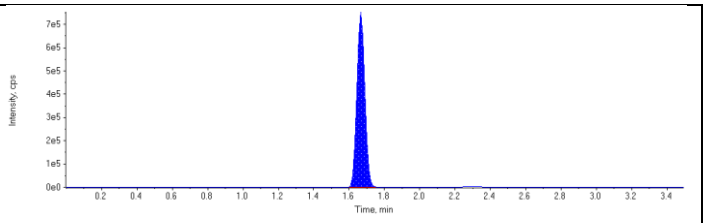
PFHxS 1 (398.900/79.900 Da)

RT (Exp. RT): 1.67 (1.68) min

Calculated Conc: 61.6 ng/L

Area Ratio: 17.9

Sample Type: (Quality Control)



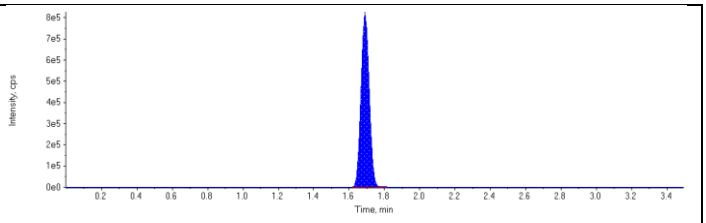
PFHpA 1 (363.000/319.000 Da)

RT (Exp. RT): 1.69 (1.70) min

Calculated Conc: 54.4 ng/L

Area Ratio: 6.51

Sample Type: (Quality Control)



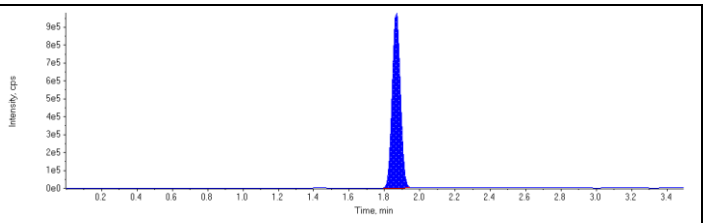
PFOA 1 (413.100/369.000 Da)

RT (Exp. RT): 1.87 (1.88) min

Calculated Conc: 57.8 ng/L

Area Ratio: 8.45

Sample Type: (Quality Control)



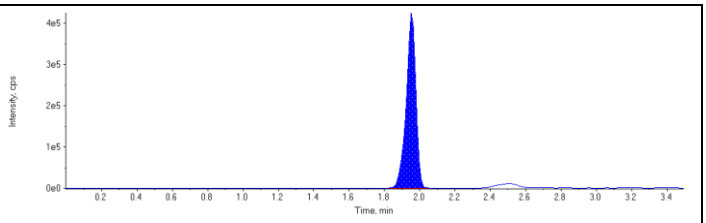
PFOS 1 (498.900/79.900 Da)

RT (Exp. RT): 1.95 (1.97) min

Calculated Conc: 62.9 ng/L

Area Ratio: 9.78

Sample Type: (Quality Control)



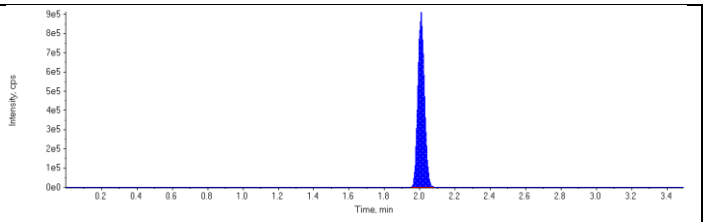
PFNA 1 (462.900/419.000 Da)

RT (Exp. RT): 2.01 (2.02) min

Calculated Conc: 65.1 ng/L

Area Ratio: 8.62

Sample Type: (Quality Control)



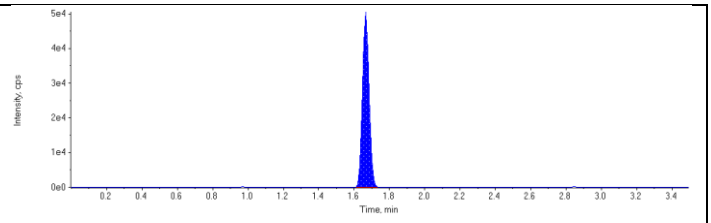
18O2-PFHxS (402.900/84.000 Da)

RT (Exp. RT): 1.67 (1.68) min

Calculated Conc: 92.3 ng/L

Area Ratio: 0.0596

Sample Type: (Quality Control)



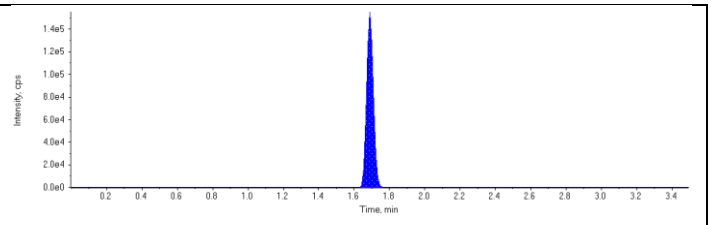
13C4-PFHpA (366.900/322.000 Da)

RT (Exp. RT): 1.69 (1.69) min

Calculated Conc: 96.1 ng/L

Area Ratio: 0.184

Sample Type: (Quality Control)



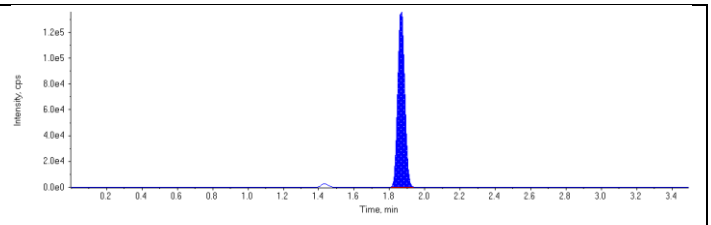
13C4-PFOA (416.900/372.000 Da)

RT (Exp. RT): 1.87 (1.88) min

Calculated Conc: 102. ng/L

Area Ratio: 0.170

Sample Type: (Quality Control)



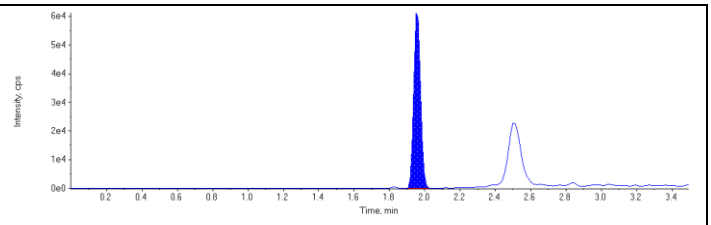
13C4-PFOS (502.900/79.900 Da)

RT (Exp. RT): 1.96 (1.97) min

Calculated Conc: 94.8 ng/L

Area Ratio: 0.0748

Sample Type: (Quality Control)



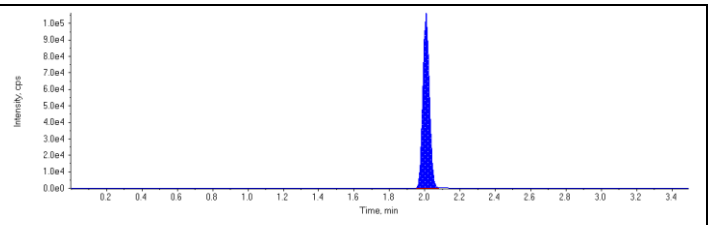
13C5-PFNA (467.900/423.000 Da)

RT (Exp. RT): 2.01 (2.02) min

Calculated Conc: 93.4 ng/L

Area Ratio: 0.125

Sample Type: (Quality Control)



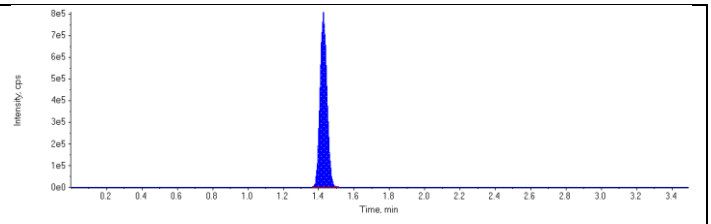
13C6-PFHxA (318.900/274.000 Da)

RT (Exp. RT): 1.43 (1.42) min

Calculated Conc: 88.6 ng/L

Area Ratio: 0.00

Sample Type: (Quality Control)



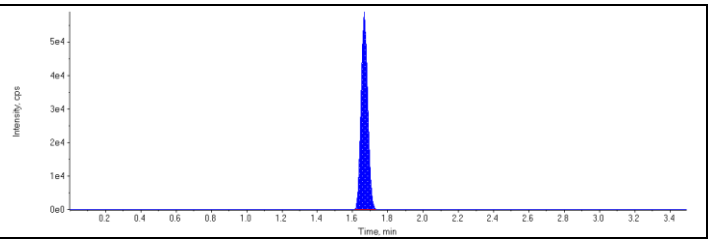
Sample Name	**4394558~MTRX SPK:D1**	**Injection Vial**	29
Sample ID	4394558~MTRX SPK:D1	**Injection Volume (µL)**	3
Sample Type	Quality Control	**Algorithm Used**	Analyst Classic
Acquisition Date	2016/02/29 10:14:52 AM	**Dilution Factor**	1.00
Acquisition Method	PFC_Water_Low.dam	**Sample Annotation**	Re-injected
Project	Enviro\PFOS	**Instrument Name**	LCMS03
Data File	PFC_160226\WS#4394558.wiff		
Result Table	PFC_Water_160226_4394558_ULow_6.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	153000.	1.67	1.00	-
MPFHpA	434000.	1.69	1.00	-
MPFOA	376000.	1.87	1.00	-
MPFOS	161000.	1.96	1.00	-
MPFNA	275000.	2.01	1.00	-
13C6-PFHxA IS	2410000.	1.43	1.00	-
N/A	N/A	N/A	N/A	-

Target Analyte	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)	Accuracy (%)
PFBS 1	2100000	1.12	0.00	49.1	0.0
PFHxS 1	2370000	1.67	0.00	53.4	0.0
PFHpA 1	2860000	1.69	0.00	55.2	0.0
PFOA 1	3060000	1.87	0.00	55.7	0.0
PFOS 1	1490000	1.95	0.00	59.4	0.0
PFNA 1	2270000	2.01	0.00	62.4	0.0
18O2-PFHxS	153000	1.67	100.	98.1	98.1
13C4-PFHpA	434000	1.69	100.	93.8	93.8
13C4-PFOA	376000	1.87	100.	93.1	93.1
13C4-PFOS	161000	1.96	100.	84.6	84.6
13C5-PFNA	275000	2.01	100.	85.1	85.1
13C6-PFHxA	2410000	1.43	100.	97.4	97.4

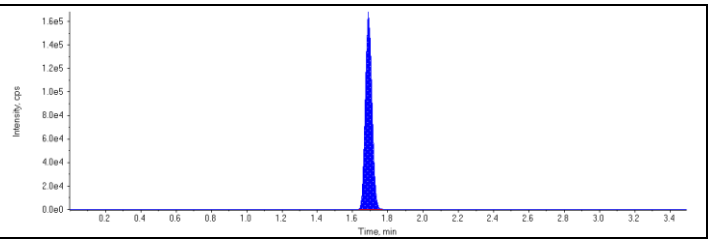
MPFHxS (Internal Standard)

RT (Exp. RT): 1.67(1.68) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



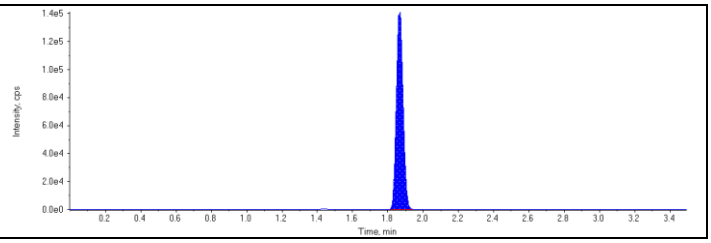
MPFHpA (Internal Standard)

RT (Exp. RT): 1.69(1.69) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



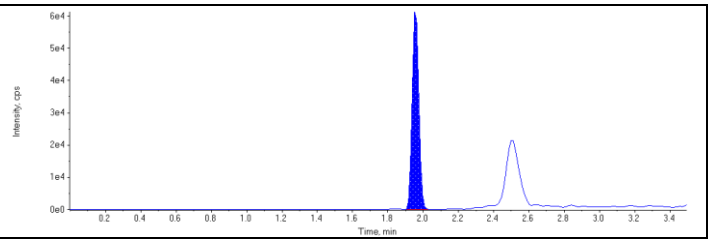
MPFOA (Internal Standard)

RT (Exp. RT): 1.87(1.88) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



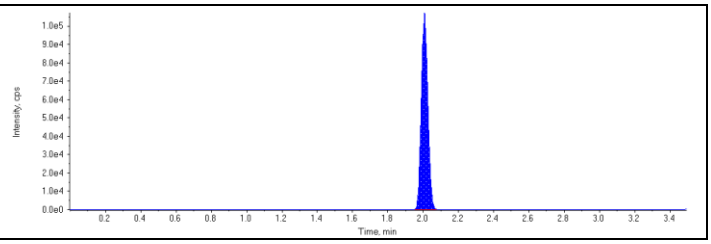
MPFOS (Internal Standard)

RT (Exp. RT): 1.96(1.97) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



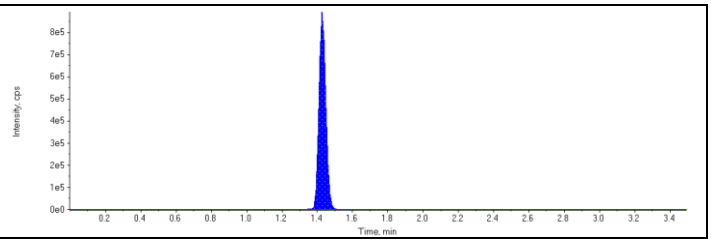
MPFNA (Internal Standard)

RT (Exp. RT): 2.01(2.02) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



13C6-PFHxA IS (Internal Standard)

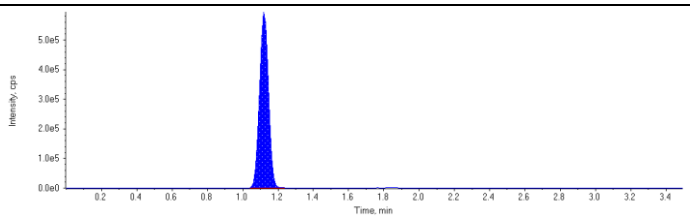
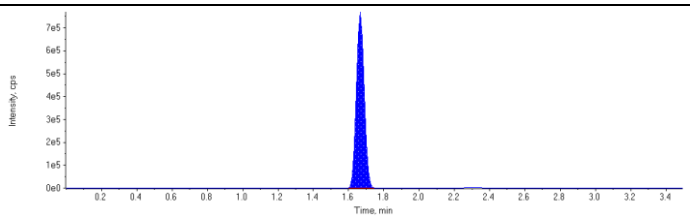
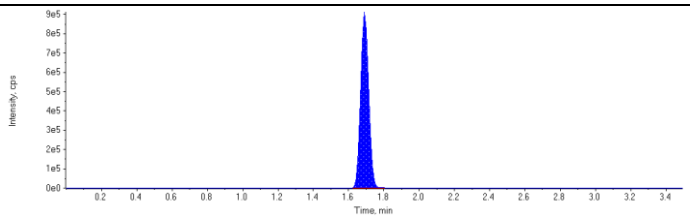
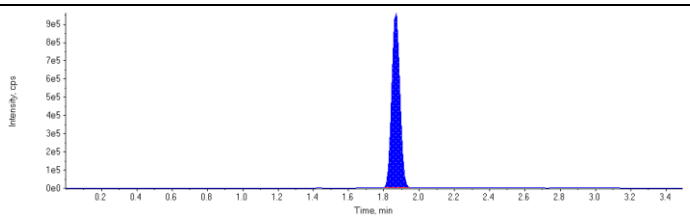
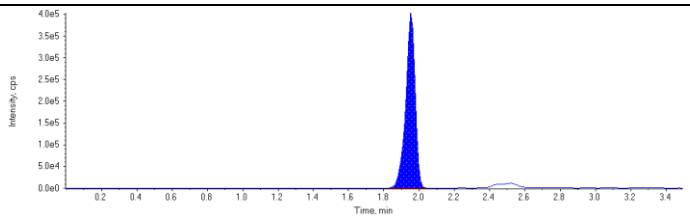
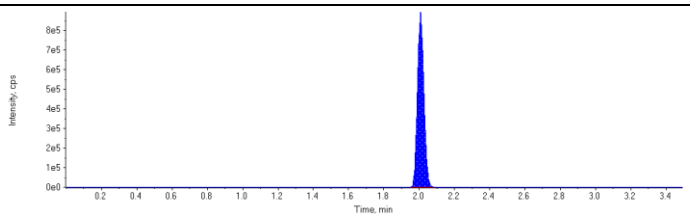
RT (Exp. RT): 1.43(1.42) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)

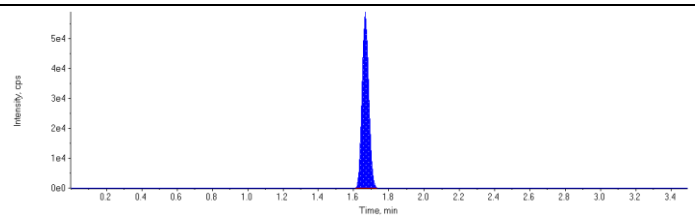
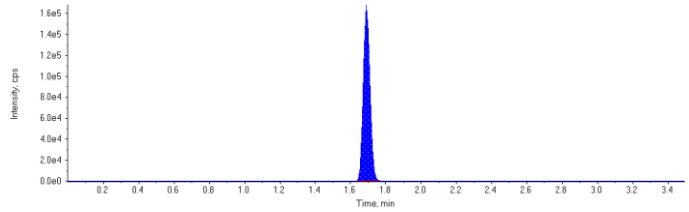
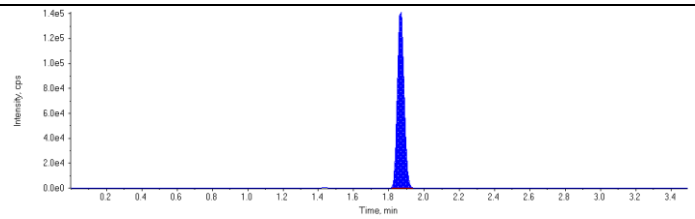
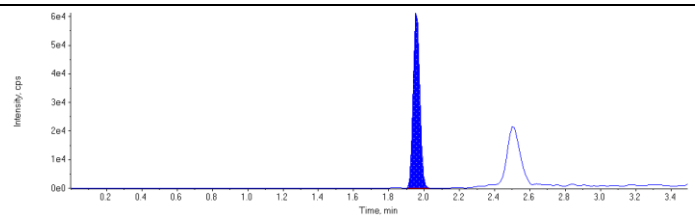
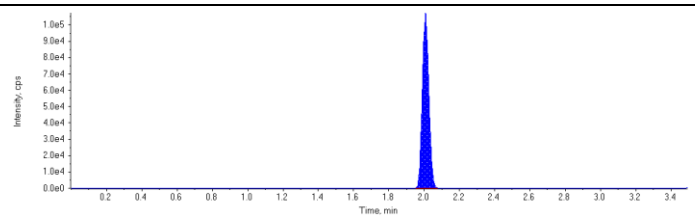
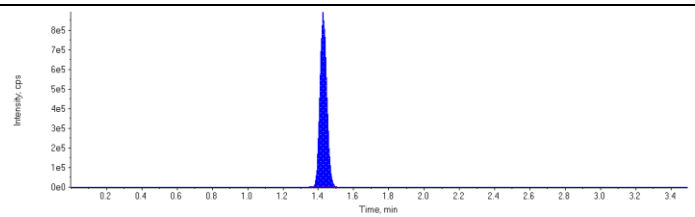


N/A (Internal Standard)

RT (Exp. RT): N/A(N/A) min
Concentration: N/A N/A
Sample Type: (Quality Control)

This image is not available

PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.12 (1.09) min Calculated Conc: 49.1 ng/L Area Ratio: 13.7 Sample Type: (Quality Control)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 53.4 ng/L Area Ratio: 15.5 Sample Type: (Quality Control)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.69 (1.70) min Calculated Conc: 55.2 ng/L Area Ratio: 6.60 Sample Type: (Quality Control)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 55.7 ng/L Area Ratio: 8.13 Sample Type: (Quality Control)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.95 (1.97) min Calculated Conc: 59.4 ng/L Area Ratio: 9.24 Sample Type: (Quality Control)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 62.4 ng/L Area Ratio: 8.26 Sample Type: (Quality Control)	

18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 98.1 ng/L Area Ratio: 0.0634 Sample Type: (Quality Control)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.69 (1.69) min Calculated Conc: 93.8 ng/L Area Ratio: 0.180 Sample Type: (Quality Control)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 93.1 ng/L Area Ratio: 0.156 Sample Type: (Quality Control)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 84.6 ng/L Area Ratio: 0.0667 Sample Type: (Quality Control)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 85.1 ng/L Area Ratio: 0.114 Sample Type: (Quality Control)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.43 (1.42) min Calculated Conc: 97.4 ng/L Area Ratio: 0.00 Sample Type: (Quality Control)	

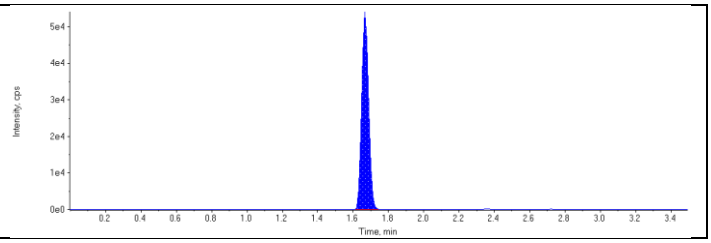
Sample Name	**4394558~MTRX SPK:D1**	**Injection Vial**	29
Sample ID	4394558~MTRX SPK:D1	**Injection Volume (µL)**	3
Sample Type	Quality Control	**Algorithm Used**	Analyst Classic
Acquisition Date	2016/02/29 11:31:29 AM	**Dilution Factor**	1.00
Acquisition Method	PFC_Water_Low.dam	**Sample Annotation**	Reported
Project	Enviro\PFOS	**Instrument Name**	LCMS03
Data File	PFC_160226\WS#4394558.wiff		
Result Table	PFC_Water_160226_4394558_ULow_6.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	146000.	1.67	1.00	-
MPFHpA	404000.	1.69	1.00	-
MPFOA	398000.	1.87	1.00	-
MPFOS	174000.	1.96	1.00	-
MPFNA	298000.	2.01	1.00	-
13C6-PFHxA IS	2190000.	1.43	1.00	-
N/A	N/A	N/A	N/A	-

Target Analyte	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)	Accuracy (%)
PFBS 1	2100000	1.12	0.00	51.2	0.0
PFHxS 1	2320000	1.67	0.00	54.8	0.0
PFHpA 1	2560000	1.69	0.00	52.9	0.0
PFOA 1	2980000	1.87	0.00	51.2	0.0
PFOS 1	1500000	1.95	0.00	55.6	0.0
PFNA 1	2340000	2.01	0.00	59.4	0.0
18O2-PFHxS	146000	1.67	100.	104.	104.0
13C4-PFHpA	404000	1.69	100.	96.2	96.2
13C4-PFOA	398000	1.87	100.	109.	109.0
13C4-PFOS	174000	1.96	100.	101.	101.0
13C5-PFNA	298000	2.01	100.	102.	102.0
13C6-PFHxA	2190000	1.43	100.	88.2	88.2

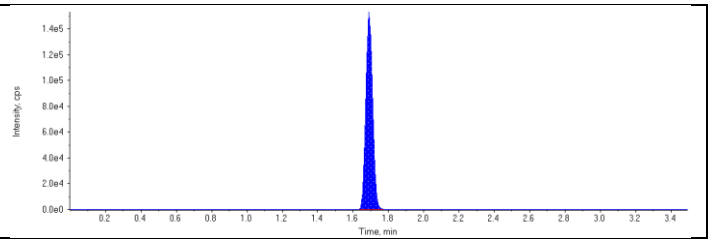
MPFHxS (Internal Standard)

RT (Exp. RT): 1.67(1.68) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



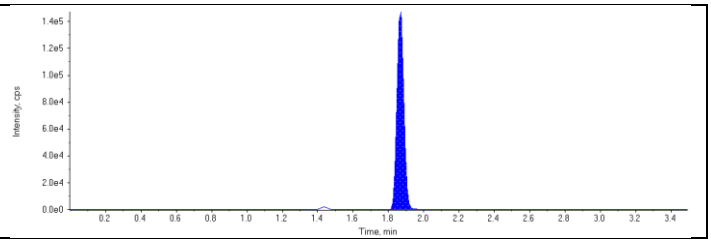
MPFHpA (Internal Standard)

RT (Exp. RT): 1.69(1.69) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



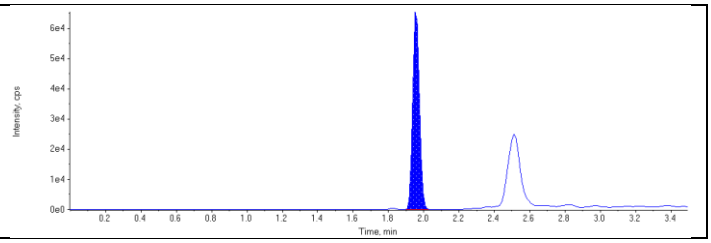
MPFOA (Internal Standard)

RT (Exp. RT): 1.87(1.88) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



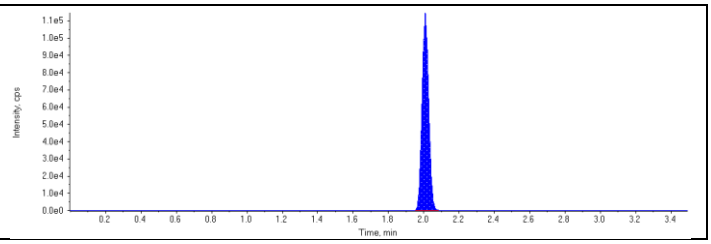
MPFOS (Internal Standard)

RT (Exp. RT): 1.96(1.97) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



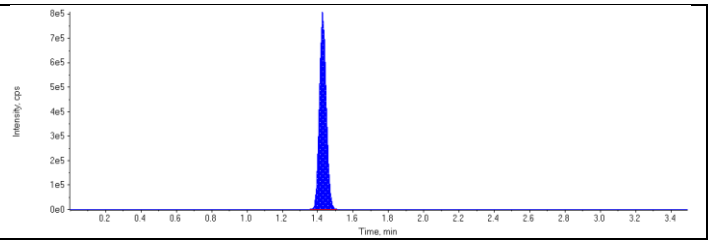
MPFNA (Internal Standard)

RT (Exp. RT): 2.01(2.02) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



13C6-PFHxA IS (Internal Standard)

RT (Exp. RT): 1.43(1.42) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



N/A (Internal Standard)

RT (Exp. RT): N/A(N/A) min
Concentration: N/A N/A
Sample Type: (Quality Control)

This image is not available

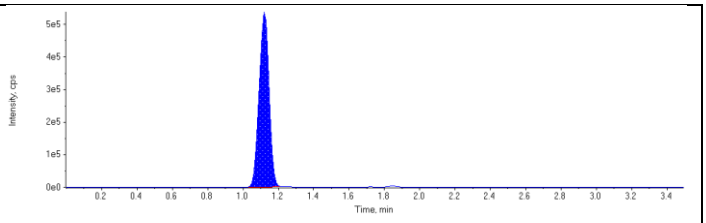
PFBS 1 (298.900/79.900 Da)

RT (Exp. RT): 1.12 (1.09) min

Calculated Conc: 51.2 ng/L

Area Ratio: 14.3

Sample Type: (Quality Control)



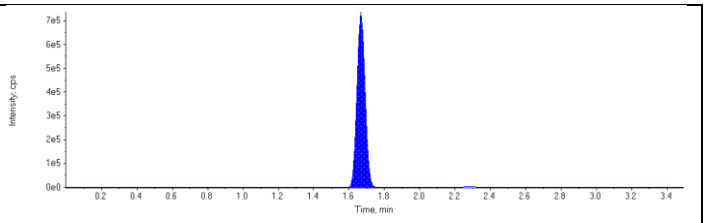
PFHxS 1 (398.900/79.900 Da)

RT (Exp. RT): 1.67 (1.68) min

Calculated Conc: 54.8 ng/L

Area Ratio: 15.9

Sample Type: (Quality Control)



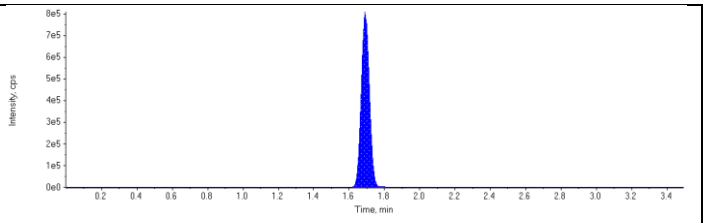
PFHpA 1 (363.000/319.000 Da)

RT (Exp. RT): 1.69 (1.70) min

Calculated Conc: 52.9 ng/L

Area Ratio: 6.33

Sample Type: (Quality Control)



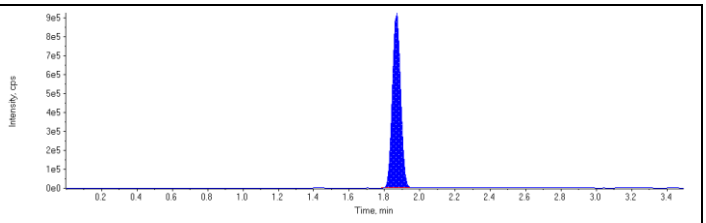
PFOA 1 (413.100/369.000 Da)

RT (Exp. RT): 1.87 (1.88) min

Calculated Conc: 51.2 ng/L

Area Ratio: 7.48

Sample Type: (Quality Control)



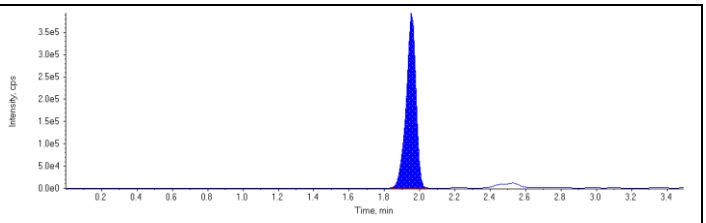
PFOS 1 (498.900/79.900 Da)

RT (Exp. RT): 1.95 (1.97) min

Calculated Conc: 55.6 ng/L

Area Ratio: 8.64

Sample Type: (Quality Control)



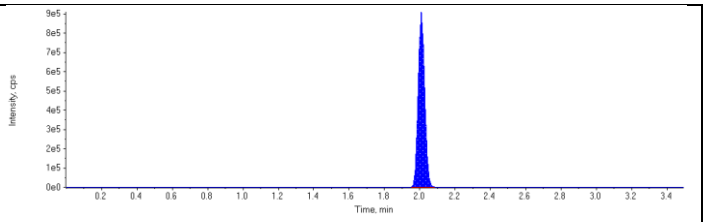
PFNA 1 (462.900/419.000 Da)

RT (Exp. RT): 2.01 (2.02) min

Calculated Conc: 59.4 ng/L

Area Ratio: 7.85

Sample Type: (Quality Control)



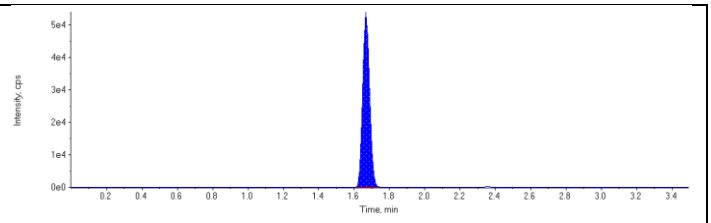
18O2-PFHxS (402.900/84.000 Da)

RT (Exp. RT): 1.67 (1.68) min

Calculated Conc: 104. ng/L

Area Ratio: 0.0669

Sample Type: (Quality Control)



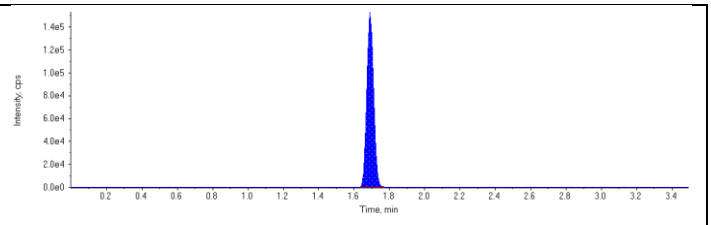
13C4-PFHpA (366.900/322.000 Da)

RT (Exp. RT): 1.69 (1.69) min

Calculated Conc: 96.2 ng/L

Area Ratio: 0.185

Sample Type: (Quality Control)



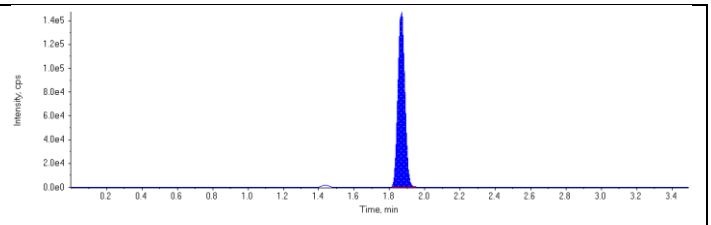
13C4-PFOA (416.900/372.000 Da)

RT (Exp. RT): 1.87 (1.88) min

Calculated Conc: 109. ng/L

Area Ratio: 0.182

Sample Type: (Quality Control)



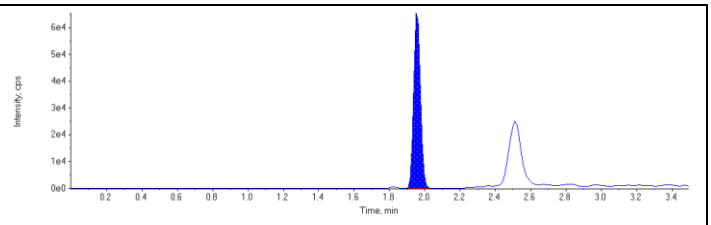
13C4-PFOS (502.900/79.900 Da)

RT (Exp. RT): 1.96 (1.97) min

Calculated Conc: 101. ng/L

Area Ratio: 0.0794

Sample Type: (Quality Control)



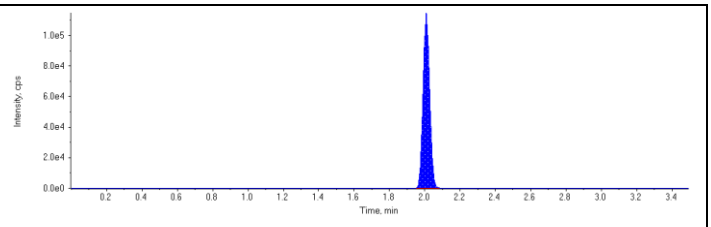
13C5-PFNA (467.900/423.000 Da)

RT (Exp. RT): 2.01 (2.02) min

Calculated Conc: 102. ng/L

Area Ratio: 0.136

Sample Type: (Quality Control)



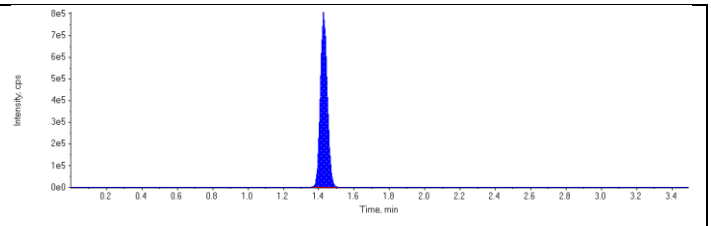
13C6-PFHxA (318.900/274.000 Da)

RT (Exp. RT): 1.43 (1.42) min

Calculated Conc: 88.2 ng/L

Area Ratio: 0.00

Sample Type: (Quality Control)



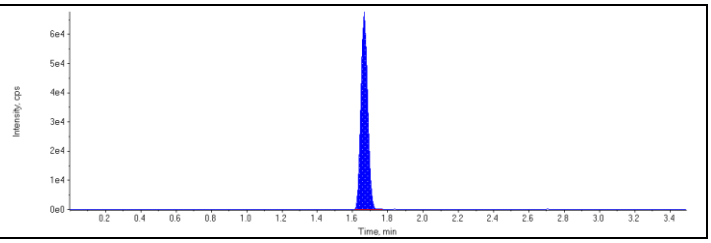
Sample Name	**4394558~SPIKE**	**Injection Vial**	30
Sample ID	4394558~SPIKE	**Injection Volume (µL)**	3
Sample Type	Quality Control	**Algorithm Used**	Analyst Classic
Acquisition Date	2016/02/29 10:19:58 AM	**Dilution Factor**	1.00
Acquisition Method	PFC_Water_Low.dam	**Sample Annotation**	-
Project	Enviro\PFOS	**Instrument Name**	LCMS03
Data File	PFC_160226\WS#4394558.wiff		
Result Table	PFC_Water_160226_4394558_ULow_6.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	178000.	1.67	1.00	-
MPFHpA	483000.	1.69	1.00	-
MPFOA	464000.	1.87	1.00	-
MPFOS	199000.	1.96	1.00	-
MPFNA	335000.	2.01	1.00	-
13C6-PFHxA IS	2540000.	1.43	1.00	-
N/A	N/A	N/A	N/A	-

Target Analyte	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)	Accuracy (%)
PFBS 1	2450000	1.12	0.00	49.2	0.0
PFHxS 1	2630000	1.67	0.00	51.1	0.0
PFHpA 1	3130000	1.69	0.00	54.2	0.0
PFOA 1	3430000	1.87	0.00	50.6	0.0
PFOS 1	1740000	1.95	0.00	56.4	0.0
PFNA 1	2610000	2.01	0.00	58.9	0.0
18O2-PFHxS	178000	1.67	100.	108.	108.0
13C4-PFHpA	483000	1.69	100.	98.8	98.8
13C4-PFOA	464000	1.87	100.	109.	109.0
13C4-PFOS	199000	1.96	100.	99.0	99.0
13C5-PFNA	335000	2.01	100.	98.3	98.3
13C6-PFHxA	2540000	1.43	100.	103.	103.0

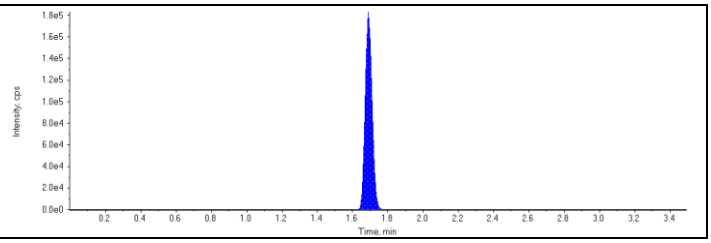
MPFHxS (Internal Standard)

RT (Exp. RT): 1.67(1.68) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



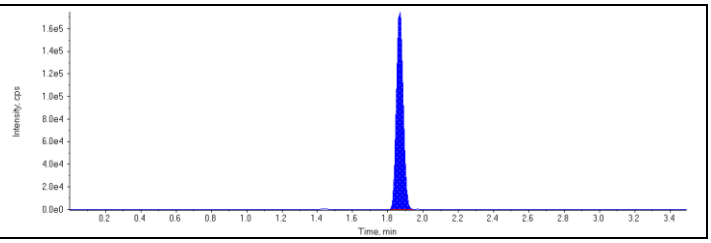
MPFHpA (Internal Standard)

RT (Exp. RT): 1.69(1.69) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



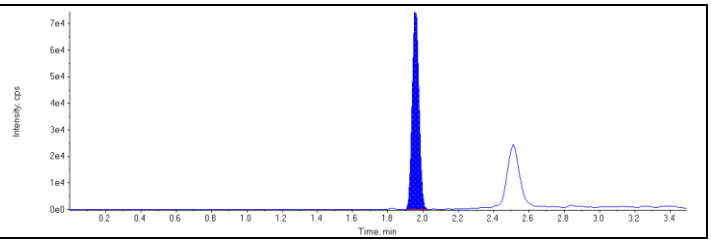
MPFOA (Internal Standard)

RT (Exp. RT): 1.87(1.88) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



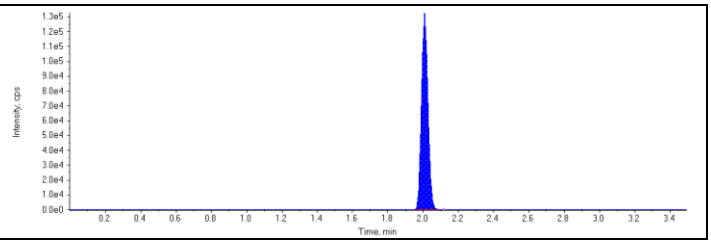
MPFOS (Internal Standard)

RT (Exp. RT): 1.96(1.97) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



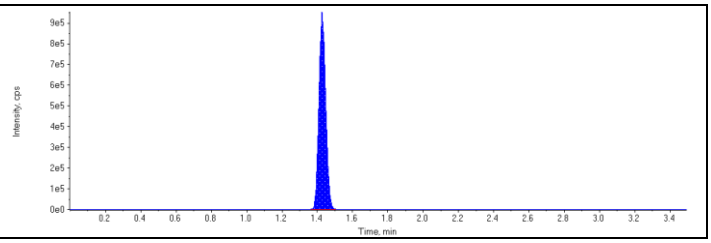
MPFNA (Internal Standard)

RT (Exp. RT): 2.01(2.02) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



13C6-PFHxA IS (Internal Standard)

RT (Exp. RT): 1.43(1.42) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



N/A (Internal Standard)

RT (Exp. RT): N/A(N/A) min
Concentration: N/A N/A
Sample Type: (Quality Control)

This image is not available

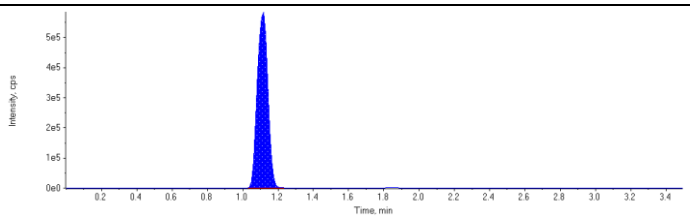
PFBS 1 (298.900/79.900 Da)

RT (Exp. RT): 1.12 (1.09) min

Calculated Conc: 49.2 ng/L

Area Ratio: 13.8

Sample Type: (Quality Control)



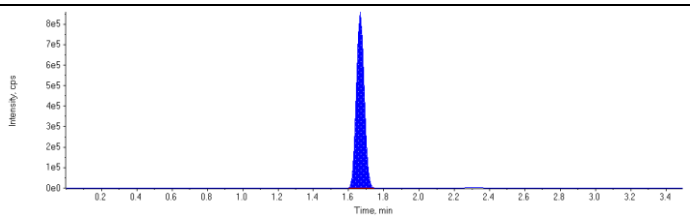
PFHxS 1 (398.900/79.900 Da)

RT (Exp. RT): 1.67 (1.68) min

Calculated Conc: 51.1 ng/L

Area Ratio: 14.8

Sample Type: (Quality Control)



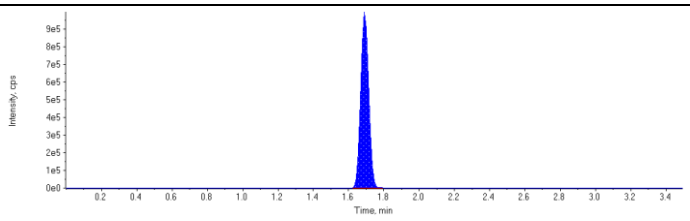
PFHpA 1 (363.000/319.000 Da)

RT (Exp. RT): 1.69 (1.70) min

Calculated Conc: 54.2 ng/L

Area Ratio: 6.48

Sample Type: (Quality Control)



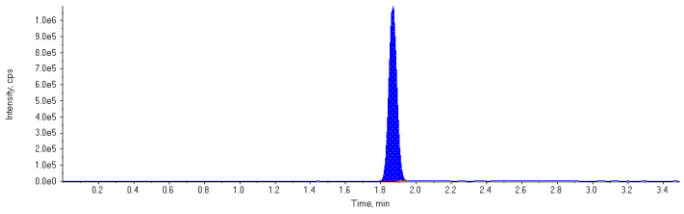
PFOA 1 (413.100/369.000 Da)

RT (Exp. RT): 1.87 (1.88) min

Calculated Conc: 50.6 ng/L

Area Ratio: 7.39

Sample Type: (Quality Control)



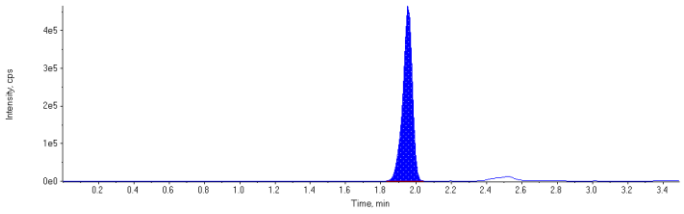
PFOS 1 (498.900/79.900 Da)

RT (Exp. RT): 1.95 (1.97) min

Calculated Conc: 56.4 ng/L

Area Ratio: 8.76

Sample Type: (Quality Control)



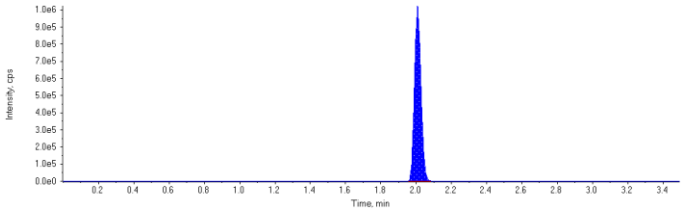
PFNA 1 (462.900/419.000 Da)

RT (Exp. RT): 2.01 (2.02) min

Calculated Conc: 58.9 ng/L

Area Ratio: 7.79

Sample Type: (Quality Control)



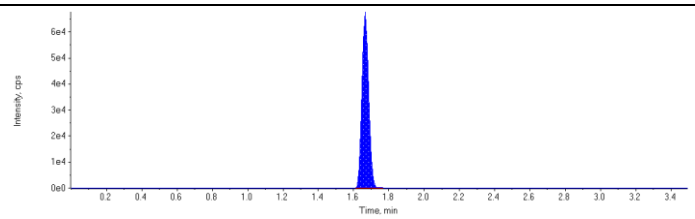
18O2-PFHxS (402.900/84.000 Da)

RT (Exp. RT): 1.67 (1.68) min

Calculated Conc: 108. ng/L

Area Ratio: 0.0699

Sample Type: (Quality Control)



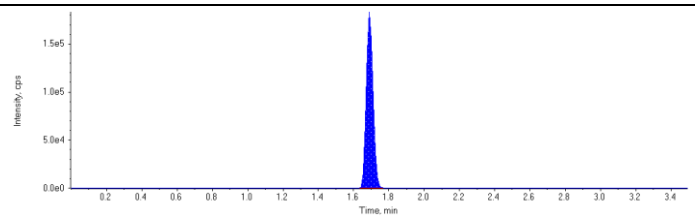
13C4-PFHpA (366.900/322.000 Da)

RT (Exp. RT): 1.69 (1.69) min

Calculated Conc: 98.8 ng/L

Area Ratio: 0.190

Sample Type: (Quality Control)



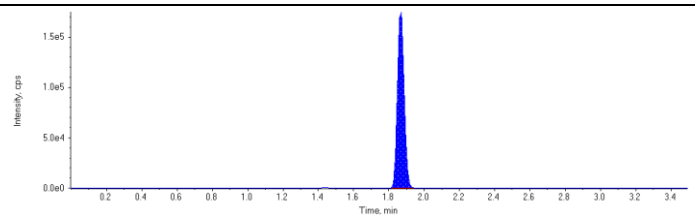
13C4-PFOA (416.900/372.000 Da)

RT (Exp. RT): 1.87 (1.88) min

Calculated Conc: 109. ng/L

Area Ratio: 0.182

Sample Type: (Quality Control)



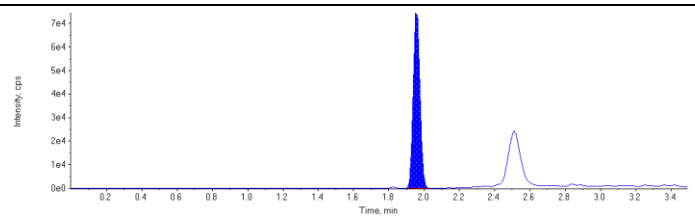
13C4-PFOS (502.900/79.900 Da)

RT (Exp. RT): 1.96 (1.97) min

Calculated Conc: 99.0 ng/L

Area Ratio: 0.0780

Sample Type: (Quality Control)



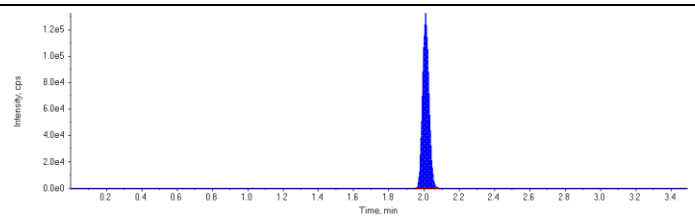
13C5-PFNA (467.900/423.000 Da)

RT (Exp. RT): 2.01 (2.02) min

Calculated Conc: 98.3 ng/L

Area Ratio: 0.132

Sample Type: (Quality Control)



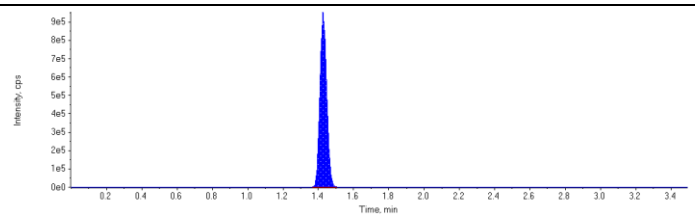
13C6-PFHxA (318.900/274.000 Da)

RT (Exp. RT): 1.43 (1.42) min

Calculated Conc: 103. ng/L

Area Ratio: 0.00

Sample Type: (Quality Control)



DoD Projects - Internal Data Validation Checklist

Run date: 2016/02/25

Worksheet # (s): 4393242

	Analysis:	1st 100% review			*2nd 100%
	Primary review by the analyst - 1st 100 % analysis review	yes	no	n/a	review
1	Sample analyses meet hold time criteria	✓			✓
2	Analysis set-up meets method criteria	✓			✓
3	Tuning and correct calibration used - criteria meets method criteria	✓			✓
4	SQC/Control Charts updated, analysis in statistical/method control CM 2016/2/26	X		✓	✓
5	Internal area counts checked (if applicable)	✓			✓
6	LCS, SRM are within acceptance criteria	✓			✓
7	Surrogate Recovery(s) is within acceptance criteria	✓			✓
8	Method Blank meets acceptance criteria	✓			✓
9	Matrix Spike recovery(s) meets acceptance criteria	✓			✓
10	Duplicate precision meets acceptance criteria	✓			✓
11	QC is documented on the run logs	✓			✓
12	Runs checked for carryover	✓			✓
13	Prep log / worksheet(s) are present, signed / dated by a prep / instrument analysts	✓			✓
14	Initial weights, splits, impringer volumes (where applicable) are documented	✓			✓
15	Standards and reagents traceable to Certificates of Analysis	✓			✓
16	Samples above calibration range diluted and reanalyzed			✓	✓
17	Dilution factors (where justified) have been checked for correctness and entered	✓			✓
18.	Analytical observations/anomalies documented in LIMS	✓			✓
19	Random calculation checked and in correct units	✓			✓
20	If corrective actions were applied they are documented, initialed & dated			✓	✓
21	Manual integration – before & after data with a reason included, initialed & dated			✓	✓
22	Transferred data is validated in LIMS for correctness	✓			✓
23	Data package assembled (where required)				✓

Reviewed by: CM Date: 2016/02/26

Comments:

	Secondary Supervisor/Qualified Data Review Staff - 2nd 100% verification review	yes	no	n/a
1	Repeats documented and referenced			✓
2	Method and sample deviations noted, anomalies described (if applicable)			✓
3	Data and QC validated in LIMS	✓		
4	Random calculation checked	✓		
5	Benchsheet (s) signed and dated	✓		
6	Data Package (if required) checked for completeness	✓		

Reviewed by: BM Date: 2016/02/26

Comments:

*Note: 2nd 100% verification review documented by secondary qualified data review
Primary and Secondary Internal Data Review Check must be performed by a different person

Worksheet Data Validation Checklist - Extractable Organics

Worksheet # 4393242 | Testcode: PFOSLOW-W

	Sample Preparation	yes	no	n/a
1	Samples extracted within hold time	✓		
2	Client sample ID verified against Lab ID (waters & oils)	✓		
3	Parameter list and Client comments reviewed, (Spiking solutions matched to parameter list)	✓		
4	Height of sediment or if sample was decanted, recorded on worksheet	✓		
5	Method required QC processed with samples, maximum batch size = 20 client samples.	✓		
6	Sample, duplicate, matrix spike appear similar, initial sample as well as final extract	✓		
7	Sample weight or initial volume and extract final volume, aliquot factor clearly recorded.	✓		
8	If performed any additional dilution clearly recorded	✓		
9	Matrix spike / Duplicate performed on IOL samples if present			✓
10	Spiking solutions valid (haven't expired), ID and volume used clearly identified on worksheet	✓		
11	Spiking process witnessed and signed off	✓		
12	Extraction type recorded (N3A2B = neutral, 3 x acidic, 2 x basic)			✓
13	Sample prep deviations documented within CompliantPro as a Policy Deviation			✓
14	Job Remarks reviewed on 2nd page of worksheet.	✓		
15	Worksheet and reagent tracking record completed and authorized.	✓		

Reviewed by: EH | Date: 2016/02/24

Comments:

	Worksheet Approval	yes	no	n/a
1	Verified the position of the vials in autosampler against sequence list; signed off sequence list	✓		
2	Calibration and CCV standards valid (haven't expired)	✓		
3	Initial calibration curve and DFTPP tune (if applicable) acceptable	✓		
4	Continuing and Final CCV and DFTPP tune (if applicable) acceptable	✓		
5	System performance check acceptable (if applicable)	✓		
6	Internal standard responses acceptable	✓		
7	Method blank meets acceptance criteria	✓		
8	Lab Control Samples recoveries meets acceptance criteria	✓		
9	Duplicate RPD meets acceptance criteria	✓		
10	Matrix spike recoveries meets acceptance criteria	✓		
11	Surrogate recoveries meets acceptance criteria	✓		
12	Appropriate control charts updated			✓
13	Samples above calibration range diluted and reanalyzed			✓
14	Dilutions clearly documented on tracking record, inst file and verified during data upload	✓		
15	Samples following high level samples checked for carryover.			✓
16	Mass spectra ion ratios acceptable for positive results, hardcopy in file.			✓
17	Analytical observations / anomalies documented	✓		
18	DQW comments entered in LIMS, hardcopy in file			✓
19	Sample Prep section (above) reviewed and verified.	✓		
20	WS Approval performed in LIMS	✓		

Reviewed by: CM | Date: 2016/02/26

Comments:

	Worksheet Validation	yes	no	n/a
1	Calibration, QC and sample results reviewed and determined acceptable	✓		
2	Manual integrations verified			✓
3	Random calculation checked	✓		
4	Data and QC validated in LIMS	✓		
5	Comments reviewed for appropriateness	✓		
6	Reworks / relogs documented in file	✓		
7	Worksheet signed and dated,	✓		✓
8	Worksheet approved and validated within LIMS	✓		

Reviewed by: SC | Date: 2016/02/26

Comments:

WS# : 4393242

Page #: 1/2

RUSH

Report Name : Worksheet - (Liquids and Solids)

Assignment Date : Wednesday, February 24, 2016

Assigned to : Emily Henderson

Test Code : PFOSLOW-W

Instrument Id:

Test Description : Low level PFOS and PFOA in water by LC-MS/MS

Job Number	Sample Number	D	Sample ID	F	% Moisture (Sediment)	Wt (mL) or Vol (mL)	Final Vol	DF or AF	# Cont	Expiry Date	Test DeadLine	Criteria	Extract Date
	MTRX SPK	0	PFOSL BWH295-01		Ø	125	0.3	1x					2016/02/24
	MTRX SPK	1	PFOSL BWH295-01		Ø	125	0.3	1x					2016/02/24
	SPIKE		PFOSL		Ø	125	0.3	1x					2016/02/24
	BLANK				Ø	125	0.3	1x					2016/02/24
B630787*	*BVX741-01R		117 DOLAN AVE		Ø	6.25	0.3	1x	4	2016/02/25	2016/02/19 18:00		2016/02/24
B630787*	*BVX743-01R		148 TATE RD (HO*		Ø	6.25	0.3	1x	2	2016/02/25	2016/02/19 18:00		2016/02/24
B630789*	*BVX748-01R		OF-FB24-0216		Ø	125	0.3	1x	2	2016/02/24	2016/02/23 18:00		2016/02/24
B630789*	*BVX749-01R		OF-RW24-0216		Ø	125	0.3	1x	2	2016/02/24	2016/02/23 18:00		2016/02/24
B630789*	*BVX750-01R		OF-FB31-0216		Ø	125	0.3	1x	2	2016/02/24	2016/02/23 18:00		2016/02/24
B630789*	*BVX751-01R		OF-RW31-0216		Ø	125	0.3	1x	2	2016/02/24	2016/02/23 18:00		2016/02/24
B632557*	*BWH289-01R		55 MT VIEW WAY		<0.1	125	0.3	1x	2	2016/02/29	2016/02/23 18:00		2016/02/24
B632557*	*BWH290-01R		190 MT VIEW WAY		Ø	125	0.3	1x	2	2016/02/29	2016/02/23 18:00		2016/02/24
B632557*	*BWH291-01R		171 MT VIEW WAY		Ø	125	0.3	1x	2	2016/02/29	2016/02/23 18:00		2016/02/24
B632557*	*BWH292-01R		133 MT VIEW WAY		Ø	125	0.3	1x	2	2016/02/29	2016/02/23 18:00		2016/02/24
B632557*	*BWH293-01R		195 MT VIEW WAY		Ø	125	0.3	1x	2	2016/02/29	2016/02/23 18:00		2016/02/24
B632557*	*BWH294-01R		311 HILL ROAD		Ø	125	0.3	1x	2	2016/02/29	2016/02/23 18:00		2016/02/24
B632557*	*BWH295-01R	0	30 HILL ROAD (3)		Ø	125	0.3	1x	6	2016/02/29	2016/02/23 18:00		2016/02/24
B632557*	*BWH295-01R	1	30 HILL ROAD (3)		Ø	125	0.3	1x	6	2016/02/29	2016/02/23 18:00		2016/02/24
B632557*	*BWH296-01R		80 HEWITTS ROA*		Ø	125	0.3	1x	2	2016/02/29	2016/02/23 18:00		2016/02/24
B632557*	*BWH297-01R		80 HEWITTS ROA*		Ø	125	0.3	1x	2	2016/02/29	2016/02/23 18:00		2016/02/24
B632557*	*BWH298-01R		383 HILL ROAD		Ø	125	0.3	1x	2	2016/02/29	2016/02/23 18:00		2016/02/24
B632557*	*BWR413-01R		77 HILL RD		Ø	125	0.3	1x	2	2016/02/29	2016/02/23 18:00		2016/02/24
B632557*	*BWR422-01R		95 HILL RD		<0.1	125	0.3	1x	2	2016/02/29	2016/02/23 18:00		2016/02/24
B632557*	*BWR424-01R		454 Breese Hollow *		<0.1	125	0.3	1x	2	2016/02/29	2016/02/23 18:00		2016/02/24
					EH	2016/02/24							

Remarks:

Samples extracted by: Emily Henderson EH

Instrumentation performed by: [signature] Date: 2016/02/25

Calculations performed by: [signature] Date: 2016/02/26

Validated by: [signature] Date: 2016/02/26

Job No.	Rep / Client Name / Remarks	Contact	Client Tier	National
GB630787	MDG TestAmerica NREG PFOSLOW-W Level IV required Please run MS/MSD on sample BVX741 **note sample BVX742 is additional volume for BVX741 for the MS/MSD** Project #: 480-95250	Judy Stone	Tier 1 (Air.)	Test America
GB630789	MDG TestAmerica NREG PFOSLOW-W Level IV required Project #: 320-17278	PFC Reporting Group	Tier 1 (Air.)	Test America
GB632557	MDG TestAmerica NREG PFOSLOW-W MS/MSD required on BWH295. Please also do a lab dup on BWH295. Level IV required Samples contained in non-Maxxam about 500mL plastic bottles. Project #: 480-95286	Judy Stone	Tier 1 (Air.)	Test America

Surrogates/Spikes	Method Spike	Spikes	Samples

Sample	Preparation Remarks		
	Amount of MeOH (mL)	Amount Spiked (mL)	
S1	~~8800~~ 2825	25	SK6220
S2	EJH 2016/02/04 2800	50	
S3	2700	150	
S4	2813	37.5	I4675
S5	2775	75	
S6	2725	125	
ICV	2788	62.5 →	I4676

Sample	Instrumentation Remarks
	EJH 2016/02/12

Worksheet Number: **4393242**

Low level PFOS and PFOA in water - Water

ng/L

Parameter Name	Units	MTRX SPK	MTRX SPK Dup1	SPIKE	BLANK	DL	B630787 BVX741 ReWork
Perfluorobutanoic acid	ng/L	N/A*******	N/A*******	N/A*******	N/A*******		N/A*******
Perfluorobutane Sulfonate (PFBS)	ng/L	89.20000	95.80000	101.80000	0	2	15.10000
Perfluorodecane Sulfonate	ng/L	N/A*******	N/A*******	N/A*******	N/A*******		N/A*******
Perfluoroheptanoic Acid (PFHpA)	ng/L	101.00000	112.60000	110.00000	0	2	19.90000
Perfluoroheptane sulfonate	ng/L	N/A*******	N/A*******	N/A*******	N/A*******		N/A*******
Perfluorohexanoic Acid (PFHxA)	ng/L	N/A*******	N/A*******	N/A*******	N/A*******		N/A*******
Perfluorohexane Sulfonate (PFHxS)	ng/L	99.80000	108.20000	114.80000	0	2	0
Perfluorononanoic Acid (PFNA)	ng/L	103.80000	120.60000	118.00000	0	2	0
Perfluoropentanoic Acid (PFPeA)	ng/L	N/A*******	N/A*******	N/A*******	N/A*******		N/A*******
Perfluorotetradecanoic Acid	ng/L	N/A*******	N/A*******	N/A*******	N/A*******		N/A*******
Perfluorotridecanoic Acid	ng/L	N/A*******	N/A*******	N/A*******	N/A*******		N/A*******
Perfluoroundecanoic Acid (PFUnA)	ng/L	N/A*******	N/A*******	N/A*******	N/A*******		N/A*******
Perfluorodecanoic Acid (PFDA)	ng/L	N/A*******	N/A*******	N/A*******	N/A*******		N/A*******
Perfluorododecanoic Acid (PFDoA)	ng/L	N/A*******	N/A*******	N/A*******	N/A*******		N/A*******
Perfluoro-n-Octanoic Acid (PFOA)	ng/L	103.36000	111.96000	118.40000	0	2	515.00000
Perfluorooctane Sulfonate (PFOS)	ng/L	97.60000	117.60000	109.80000	0	2	0
13C2-perfluorotetradecanoic acid	ng/L	N/A*******	N/A*******	N/A*******	N/A*******		N/A*******
13C4-Perfluorobutanoic acid	ng/L	N/A*******	N/A*******	N/A*******	N/A*******		N/A*******
13C5-Perfluorononanoic acid	ng/L	90.1	92.1	84.3	91.1		78.1
13C2-Perfluorodecanoic acid	ng/L	N/A*******	N/A*******	N/A*******	N/A*******		N/A*******
13C2-Perfluorododecanoic acid	ng/L	N/A*******	N/A*******	N/A*******	N/A*******		N/A*******
13C2-Perfluorohexanoic acid	ng/L	N/A*******	N/A*******	N/A*******	N/A*******		N/A*******
13C2-Perfluoroundecanoic acid	ng/L	N/A*******	N/A*******	N/A*******	N/A*******		N/A*******
13C4-Perfluoroheptanoic acid	ng/L	89.4	94.2	88.3	92.8		79.8
13C4-Perfluorooctanoic acid	ng/L	92.6	101.	88.7	96.1		88.1
13C4-Perfluorooctanesulfonate	ng/L	89.5	92.2	88.0	89.1		77.1
13C5-Perfluoropentanoic acid	ng/L	N/A*******	N/A*******	N/A*******	N/A*******		N/A*******
18O2-Perfluorohexanesulfonate	ng/L	97.2	109.	89.3	89.2		81.1

Parameter Name	B630787 BVX743 ReWork	DL	B630789 BVX748	B630789 BVX749	B630789 BVX750	B630789 BVX751	B632557 BWH289
Perfluorobutanoic acid	N/A*******	40	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******
Perfluorobutane Sulfonate (PFBS)	0	40	0	0	0	4.31000	0.718
Perfluorodecane Sulfonate	N/A*******	40	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******
Perfluoroheptanoic Acid (PFHpA)	13.60000	40	0	0	0	1.00000	0
Perfluoroheptane sulfonate	N/A*******	40	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******
Perfluorohexanoic Acid (PFHxA)	N/A*******	40	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******
Perfluorohexane Sulfonate (PFHxS)	0	40	0	0	0	1.36000	0
Perfluorononanoic Acid (PFNA)	0	40	0	0	0	0.69700	0
Perfluoropentanoic Acid (PFPeA)	N/A*******	40	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******
Perfluorotetradecanoic Acid	N/A*******	40	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******
Perfluorotridecanoic Acid	N/A*******	40	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******
Perfluoroundecanoic Acid (PFUnA)	N/A*******	40	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******
Perfluorodecanoic Acid (PFDA)	N/A*******	40	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******
Perfluorododecanoic Acid (PFDoA)	N/A*******	40	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******
Perfluoro-n-Octanoic Acid (PFOA)	371.00000	40	0	0	0	4.14000	0
Perfluorooctane Sulfonate (PFOS)	0	40	0	0.89500	0	2.74000	0
13C2-perfluorotetradecanoic acid	N/A*******		N/A*******	N/A*******	N/A*******	N/A*******	N/A*******
13C4-Perfluorobutanoic acid	N/A*******		N/A*******	N/A*******	N/A*******	N/A*******	N/A*******
13C5-Perfluorononanoic acid	86.5		64.5	II 45.2	58.4	64.3	77.2
13C2-Perfluorodecanoic acid	N/A*******		N/A*******	N/A*******	N/A*******	N/A*******	N/A*******
13C2-Perfluorododecanoic acid	N/A*******		N/A*******	N/A*******	N/A*******	N/A*******	N/A*******
13C2-Perfluorohexanoic acid	N/A*******		N/A*******	N/A*******	N/A*******	N/A*******	N/A*******
13C2-Perfluoroundecanoic acid	N/A*******		N/A*******	N/A*******	N/A*******	N/A*******	N/A*******
13C4-Perfluoroheptanoic acid	86.7		64.2	II 48.2	63.2	70.5	86.5
13C4-Perfluorooctanoic acid	90.5		66.6	52.8	62.8	69.3	93.6
13C4-Perfluorooctanesulfonate	85.6		63.2	51.8	62.4	68.6	84.7
13C5-Perfluoropentanoic acid	N/A*******		N/A*******	N/A*******	N/A*******	N/A*******	N/A*******
18O2-Perfluorohexanesulfonate	90.7		63.1	54.7	64.2	81.0	93.6

Low level PFOS and PFOA in water - Water
ng/L

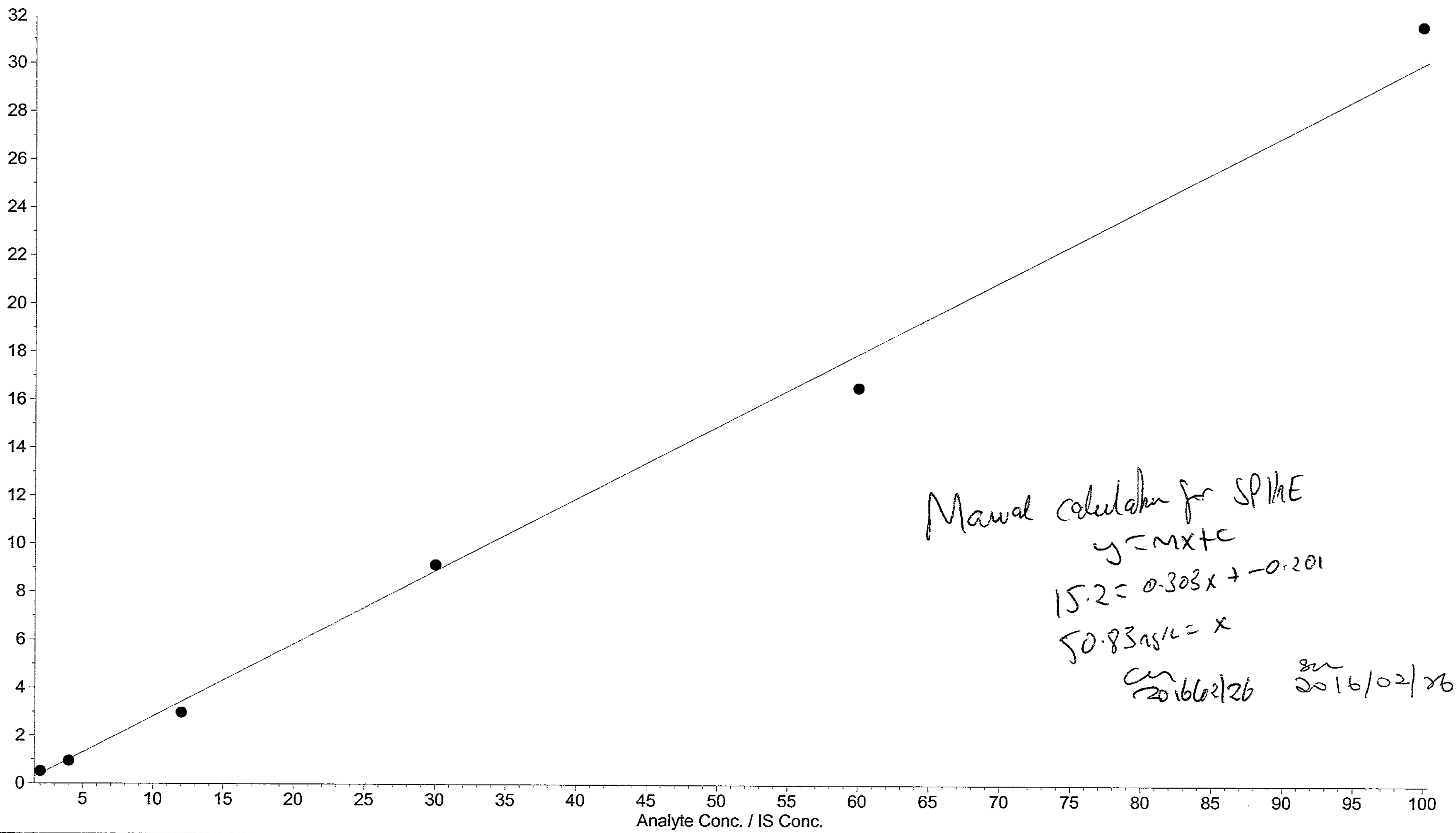
Parameter Name	B632557 BWH290	B632557 BWH291	B632557 BWH292	B632557 BWH293	B632557 BWH294	B632557 BWH295	B632557 BWH295 Dup1
Perfluorobutanoic acid	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******
Perfluorobutane Sulfonate (PFBS)	0.74300	0	0	0	0	0	0
Perfluorodecane Sulfonate	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******
Perfluoroheptanoic Acid (PFHpA)	2.03000	0	0	0	0	0	0
Perfluoroheptane sulfonate	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******
Perfluorohexanoic Acid (PFHxA)	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******
Perfluorohexane Sulfonate (PFHxS)	0.43400	0	0	0	0	0	0
Perfluorononanoic Acid (PFNA)	0.36700	0	0	0	0	0	0
Perfluoropentanoic Acid (PFPeA)	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******
Perfluorotetradecanoic Acid	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******
Perfluorotridecanoic Acid	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******
Perfluoroundecanoic Acid (PFUnA)	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******
Perfluorodecanoic Acid (PFDA)	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******
Perfluorododecanoic Acid (PFDoA)	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******
Perfluoro-n-Octanoic Acid (PFOA)	53.40000	0	0.371	6.20000	0.88500	1.02000	0.87600
Perfluorooctane Sulfonate (PFOS)	2.12000	0	0.74200	0	0	0	0
13C2-perfluorotetradecanoic acid	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******
13C4-Perfluorobutanoic acid	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******
13C5-Perfluorononanoic acid	75.2	83.4	86.4	82.9	82.0	93.1	87.7
13C2-Perfluorodecanoic acid	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******
13C2-Perfluorododecanoic acid	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******
13C2-Perfluorohexanoic acid	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******
13C2-Perfluoroundecanoic acid	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******
13C4-Perfluoroheptanoic acid	75.8	84.4	86.9	89.5	84.8	91.5	96.1
13C4-Perfluorooctanoic acid	77.0	85.4	92.0	89.6	90.0	91.2	94.6
13C4-Perfluorooctanesulfonate	78.7	90.6	87.1	86.8	86.2	87.6	89.9
13C5-Perfluoropentanoic acid	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******
18O2-Perfluorohexanesulfonate	85.9	87.3	93.7	92.8	95.6	90.8	99.8

Parameter Name	B632557 BWH296	B632557 BWH297	B632557 BWH298	B632557 BWR413	B632557 BWR422	B632557 BWR424	DL
Perfluorobutanoic acid	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	2
Perfluorobutane Sulfonate (PFBS)	0	0.937	0	0	1.46000	0	2
Perfluorodecane Sulfonate	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	2
Perfluoroheptanoic Acid (PFHpA)	0	2.52000	0	0	3.40000	0	2
Perfluoroheptane sulfonate	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	2
Perfluorohexanoic Acid (PFHxA)	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	2
Perfluorohexane Sulfonate (PFHxS)	0	0	0	0	0.65600	0	2
Perfluorononanoic Acid (PFNA)	0	0	0	0	0.37100	0	2
Perfluoropentanoic Acid (PFPeA)	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	2
Perfluorotetradecanoic Acid	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	2
Perfluorotridecanoic Acid	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	2
Perfluoroundecanoic Acid (PFUnA)	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	2
Perfluorodecanoic Acid (PFDA)	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	2
Perfluorododecanoic Acid (PFDoA)	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	2
Perfluoro-n-Octanoic Acid (PFOA)	5.06000	33.70000	0	0	64.00000	0	2
Perfluorooctane Sulfonate (PFOS)	0	0	0	0	1.10000	0	2
13C2-perfluorotetradecanoic acid	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	
13C4-Perfluorobutanoic acid	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	
13C5-Perfluorononanoic acid	83.0	73.0	85.6	86.1	74.6	85.5	
13C2-Perfluorodecanoic acid	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	
13C2-Perfluorododecanoic acid	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	
13C2-Perfluorohexanoic acid	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	
13C2-Perfluoroundecanoic acid	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	
13C4-Perfluoroheptanoic acid	96.2	70.1	88.7	88.2	79.2	88.1	
13C4-Perfluorooctanoic acid	93.5	73.3	89.9	89.8	75.1	94.1	
13C4-Perfluorooctanesulfonate	85.2	76.5	86.1	83.1	72.6	85.7	
13C5-Perfluoropentanoic acid	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	
18O2-Perfluorohexanesulfonate	101.	82.1	92.1	95.7	89.3	87.9	

Low level PFOS and PFOA in water - Water
ng/L

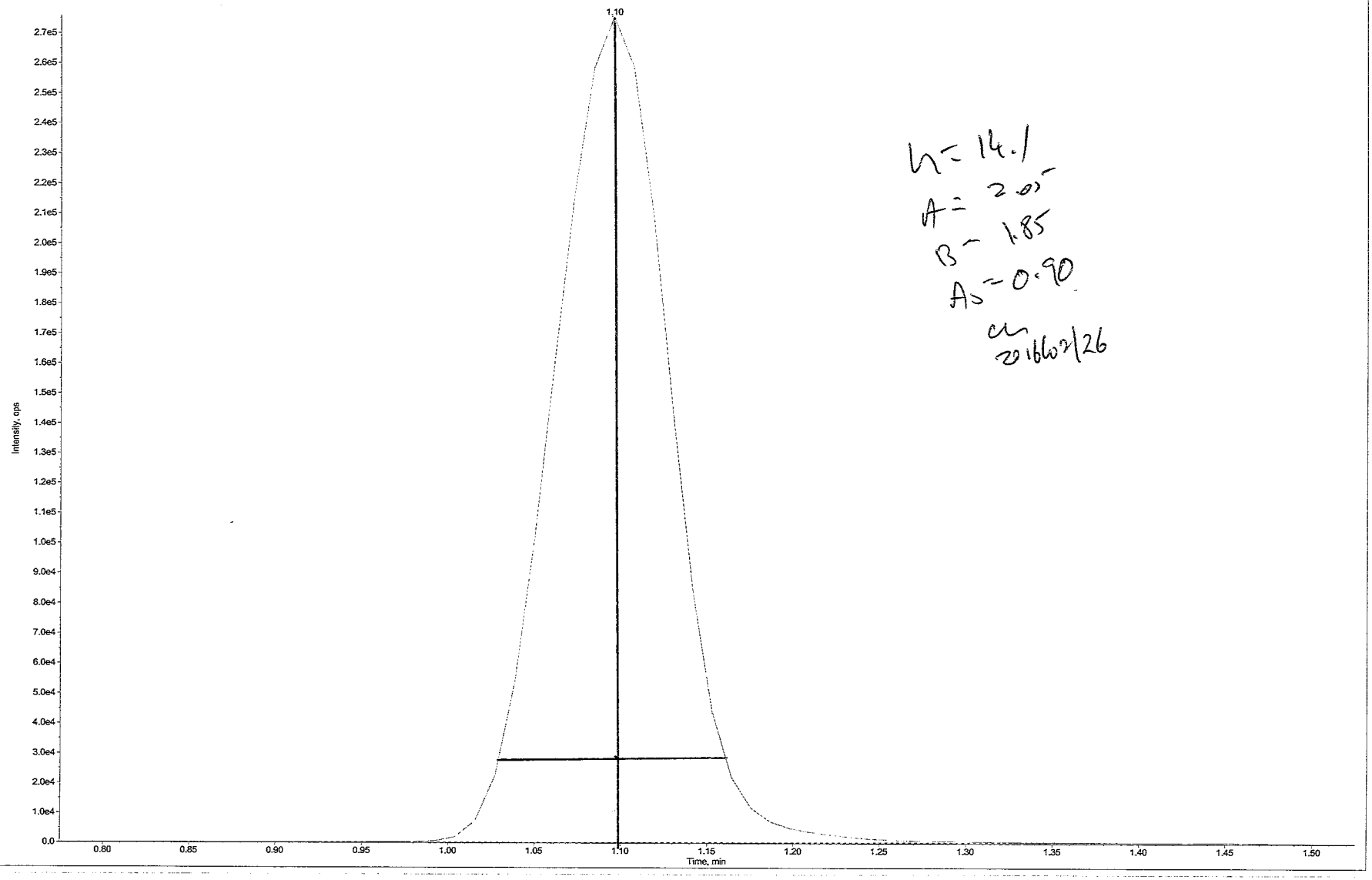
Parameter Name	RDL	MDL	IDL				
Perfluorobutanoic acid	2	0.41	0				
Perfluorobutane Sulfonate (PFBS)	2	0.27	0				
Perfluorodecane Sulfonate	2	0.38	0				
Perfluoroheptanoic Acid (PFHpA)	2	0.39	0				
Perfluoroheptane sulfonate	2	0.4	0				
Perfluorohexanoic Acid (PFHxA)	2	0.42	0				
Perfluorohexane Sulfonate (PFHxS)	2	0.4	0				
Perfluorononanoic Acid (PFNA)	2	0.33	0				
Perfluoropentanoic Acid (PFPeA)	2	0.46	0				
Perfluorotetradecanoic Acid	2	0.61	0				
Perfluorotridecanoic Acid	2	0.6	0				
Perfluoroundecanoic Acid (PFUnA)	2	0.5	0				
Perfluorodecanoic Acid (PFDA)	2	0.24	0				
Perfluorododecanoic Acid (PFDoA)	2	0.63	0				
Perfluoro-n-Octanoic Acid (PFOA)	2	0.39	0				
Perfluorooctane Sulfonate (PFOS)	2	0.3	0				
13C2-perfluorotetradecanoic acid							
13C4-Perfluorobutanoic acid							
13C5-Perfluorononanoic acid							
13C2-Perfluorodecanoic acid							
13C2-Perfluorododecanoic acid							
13C2-Perfluorohexanoic acid							
13C2-Perfluoroundecanoic acid							
13C4-Perfluoroheptanoic acid							
13C4-Perfluorooctanoic acid							
13C4-Perfluorooctanesulfonate							
13C5-Perfluoropentanoic acid							
18O2-Perfluorohexanesulfonate							

PFC_Water_160225_4393242_ULow.rdb (PFBS 1): "Linear" Regression ("1 / x" weighting): y = 0.303 x + -0.201 (r = 0.9973)



Sample Name: "STD 4" Sample ID: "" File: "WS#4393242.wiff"
Peak Name: "PFBS 1" Mass(es): "298.900/79.900 Da"
Comment: "" Annotation: ""

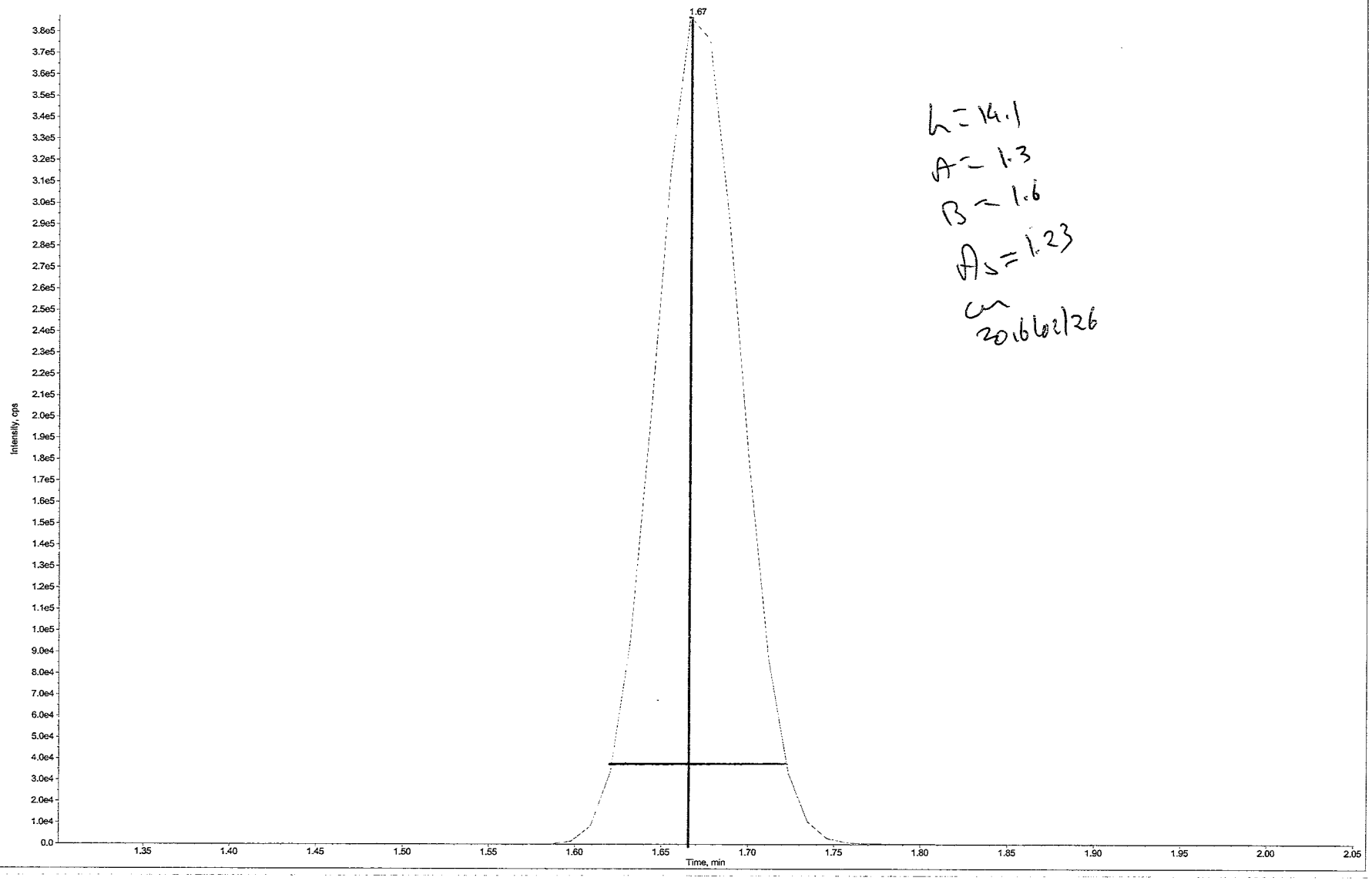
Sample Index:	6	
Sample Type:	Standard	
Concentration:	30.0	ng/L
Calculated Conc:	30.8	ng/L
Acq. Date:	2016/02/25	
Acq. Time:	5:23:11 PM	
Modified:	No	
Proc. Algorithm:	Analyst Classic	
Bunching Factor:	1	
Noise Threshold:	20.00	cps
Area Threshold:	2000.00	cps
,Num. Smooths:	5	
Sep. Width:	0.00	
Sep. Height:	0.00	
Exp. Peak Ratio:	5.00	
Exp. Adj. Ratio:	4.00	
Exp. Val. Ratio:	3.00	
RT Window:	10.0	sec
Expected RT:	1.15	min
Use Relative RT:	No	
Int. Type:	Base To Base	
Retention Time:	1.10	min
Area:	1300000.	counts
Height:	2.76e+005	cps
Start Time:	0.902	min
End Time:	1.39	min



h = 14.1
A = 2.05
B = 1.85
As = 0.90
cm
2016/02/26

Sample Name: "STD 4" Sample ID: "" File: "WS#4393242.wiff"
Peak Name: "PFHxS 1" Mass(es): "398.900/79.900 Da"
Comment: "" Annotation: ""

Sample Index:	6	
Sample Type:	Standard	
Concentration:	30.0	ng/L
Calculated Conc:	32.0	ng/L
Acq. Date:	2016/02/25	
Acq. Time:	5:23:11 PM	
Modified:	No	
Proc. Algorithm:	Analyst Classic	
Bunching Factor:	1	
Noise Threshold:	20.00	cps
Area Threshold:	5000.00	cps
,Num. Smooths:	6	
Sep. Width:	0.00	
Sep. Height:	0.00	
Exp. Peak Ratio:	5.00	
Exp. Adj. Ratio:	4.00	
Exp. Val. Ratio:	3.00	
RT Window:	30.0	sec
Expected RT:	1.68	min
Use Relative RT:	No	
Int. Type:	Base To Base	
Retention Time:	1.67	min
Area:	1380000.	counts
Height:	3.93e+005	cps
Start Time:	1.54	min
End Time:	1.85	min



h = 14.1
A = 1.3
B = 1.6
As = 1.23
CM 2016/02/26

Report Name: Worksheet - Parameter Lists

Report Date: 2016/02/24

Test Code: **PFOSLOW-W**

Worksheet Number: **4393242**

Sample Number	Parameter
BVX741-01	Perfluoro-n-Octanoic Acid (PFOA)
BVX743-01	
BVX748-01	Perfluorobutane Sulfonate (PFBS)
BVX749-01	Perfluoroheptanoic Acid (PFHpA)
BVX750-01	Perfluorohexane Sulfonate (PFHxS)
BVX751-01	Perfluorononanoic Acid (PFNA)
BWH289-01	Perfluoro-n-Octanoic Acid (PFOA)
BWH290-01	Perfluorooctane Sulfonate (PFOS)
BWH291-01	
BWH292-01	
BWH293-01	
BWH294-01	
BWH295-01	
BWH296-01	
BWH297-01	
BWH298-01	
BWR413-01	
BWR422-01	
BWR424-01	

1.	4393242:MTRX SPK	MTRX SPK
2.	4393242:MTRX SPK:D1	MTRX SPK :D1
3.	4393242:SPIKE	SPIKE
4.	4393242:BLANK	BLANK
5.	4393242:BVX741-01	117 DOLAN AVE
6.	4393242:BVX743-01	148 TATE RD (HOUSE SPRING
7.	4393242:BVX748-01	OF-FB24-0216
8.	4393242:BVX749-01	OF-RW24-0216
9.	4393242:BVX750-01	OF-FB31-0216
10.	4393242:BVX751-01	OF-RW31-0216
11.	4393242:BWH289-01	55 MT VIEW WAY
12.	4393242:BWH290-01	190 MT VIEW WAY
13.	4393242:BWH291-01	171 MT VIEW WAY
14.	4393242:BWH292-01	133 MT VIEW WAY
15.	4393242:BWH293-01	195 MT VIEW WAY
16.	4393242:BWH294-01	311 HILL ROAD
17.	4393242:BWH295-01	30 HILL ROAD (3)
18.	4393242:BWH295-01:D1	30 HILL ROAD (3) :D1
19.	4393242:BWH296-01	80 HEWITTS ROAD HOUSE
20.	4393242:BWH297-01	80 HEWITTS ROAD BARN
21.	4393242:BWH298-01	383 HILL ROAD
22.	4393242:BWR413-01	77 HILL RD
23.	4393242:BWR422-01	95 HILL RD
24.	4393242:BWR424-01	454 Breese Hollow Rd

Worksheet Reagent Tracking Record Worksheet # 4393242

Surrogate/Spike solutions	√	Solution ID #	Conc.	Volume (µL) Blk-Spk Solid	Blk-Spk Liquid	MS Solid	MS Liquid	Samples Solid	Samples Liquid
DGT Spike			100 ug/mL	60	30	60	30	NA	NA
Diquat Dibromide			50 ug/mL	NA	350	NA	350	NA	NA
Explosives Spiking solution A			20 ug/mL	250	100	250	100	NA	NA
Explosives Spiking solution B			20/80 ug/mL	250	100	250	100	NA	NA
Formaldehyde Spike			100 ug/mL	25	25	25	25	NA	NA
Glyphosate Spike			25 ug/mL	500	20	500	20	NA	NA
Nonylphenol Ethoxylate Spike			100 ug/mL	100	100	100	100	NA	NA
Nonylphenol Spike			10 ug/mL	100	100	100	100	NA	NA
Paraquat Cl Tetrahydrate			20 ug/mL	NA	125	NA	125	NA	NA
Perchlorate Standard Spike			10 ng/mL	NA	100	NA	100	NA	NA
Perchlorate Standard Spike			500 ng/mL	40	NA	40	NA	NA	NA
Perchlorate O-18 Internal Standard			0.10 ng/uL	20	20	20	20	20	20
Morpholine Intermediate Std.			5 ug/mL	NA	50	NA	20	NA	NA
Morpholine-D8 Internal Standard			10 ug/mL	NA	100	NA	100	NA	100
Comp. PFC Spiking Solution A			1ug/mL	62.5	NA	62.5	NA	NA	NA
Comp. PFC Spiking Solution B			250 ng/mL	NA	40 75	NA	40 75	NA	NA
Comp. PFC Spiking Solution C	✓	SK 6229	100 ng/mL	125	(62.5) ~~NA~~	125	(62.5) ~~NA~~	NA	NA
Internal Standard Solution A	✓	SI 6010 (4/4)	50 ng/mL	50	~~100~~ (15)	50	~~100~~ (15)	50	~~100~~ (15)
Internal Standard Solution B			250ng/mL	50	NA	50	NA	50	NA
(ICV)/CCV	✓	I 4676	1 ug/mL		62.5				

Solvent/Reagent	Supplier	√	Lot No.	Date Opened	Solvent/Reagent	√	Lot No.	Date Opened/ Prepared
DCM	Fisher				50% NaOH			
Hexane	Fisher				20mM TBAS			
Acetone	Fisher				o-Phosphoric Acid			
Ottawa Sand	Fisher				Borax			
Methanol	~~Fisher~~	✓	SHBG 6076V	2016/02/23	Calcium Chloride			
2-Propanol (IPA)	Fisher				EDTA			
Acetonitrile	Fisher				Phosphate Buffer			
MTBE	Fisher				Sodium Thiosulphate			
Sodium Sulfate	Fisher				DNPH			
Recon Solution					5M Acetate Buffer			
DCM:Ethyl Ether (75:25)					FMOC			
Hexane:IPA (98:2)					0.25M Na_2CO_3			
2% Formic Acid		✓	PRLRE	87-131	0.5M TBAS			
0.2% Formic Acid		✓	PRLRE	87-114	1% NH_4OH 0.2%	✓	PRLRE	87-209
0.05M KOH					Leachate Fluid			
0.05M HCl					Reagent Water	✓	SHBG 5572V	2016/02/24

*Spiked by: EHL

Spike Date: 2016/02/24

Spike Syringe ID#: M23487B

Int. Std Syringe ID#: M23487B

*Spiking Witnessed by: GSZ

Final pH:

Equipment	ID#	√	Equipment	ID#	√	Equipment	Lot #
Pipettor	P29746D	✓	SPE Cartridge	0026352259	✓	10 mL Serological Pipet	
	K19609D	✓	Filter			QC Balance ID	
Dispenser			Centrifuge			Thermometer ID &Temp	140559167 45°C
Syringe			Sonicator				

Bottle Tracking: Bottle# 14991 Cap# 14443

Systems plus Lot#: 16-01-06

Comments: Pipettor # M15944C, I16295B
60:40 (H_2O:MeOH) → PRLRE 87-190
Inject IS: SI 6039

* - SPIKING OF QC's & SAMPLES MUST BE WITNESSED AT ALL TIMES.

Worksheet: 4393242

Dilution and Column Cleanup Worksheet

Job Number	Sample ID	Sample: Initial Final Volume	Dilution Required	Sample added mL	Solvent Added mL	Int Stan Added uL	New Effective Final Volume (mL)	INITIAL DATE	Column Clean Up
B630787	BVX741-01R	N/A	20x	6.25	118.75	15	125	EH 2016/02/24	—
B630787	BVX743-01R	N/A	20x	6.25	118.75	15	125	EH 2016/02/24	—

EH 2016/02/24

H_2O used : SABG5572V

pipettor : I16295B

Project: D:\Analyst Data\Projects\Enviro\PFOS Batch:PFC_160225A Tab:Sample Set:SET1 AcqMethod:PFC_Water_Low.dam
Sample

	Sample Name	Rack Code	Rack Position	Plate Code	Plate Position	Vial Position	Data File	Inj.Volume (µl)
1	RINSE	2 Well Plate	1	*54VialPlate	2	1	PFC_160225\WS\#4393242	3.000
2	4393242~BLANK	2 Well Plate	1	*54VialPlate	2	2	PFC_160225\WS\#4393242	3.000
3	STD 1	2 Well Plate	1	*54VialPlate	2	3	PFC_160225\WS\#4393242	3.000
4	STD 2	2 Well Plate	1	*54VialPlate	2	4	PFC_160225\WS\#4393242	3.000
5	STD 3	2 Well Plate	1	*54VialPlate	2	5	PFC_160225\WS\#4393242	3.000
6	STD 4	2 Well Plate	1	*54VialPlate	2	6	PFC_160225\WS\#4393242	3.000
7	STD 5	2 Well Plate	1	*54VialPlate	2	7	PFC_160225\WS\#4393242	3.000
8	STD 6	2 Well Plate	1	*54VialPlate	2	8	PFC_160225\WS\#4393242	3.000
9	ICV	2 Well Plate	1	*54VialPlate	2	9	PFC_160225\WS\#4393242	3.000
10	CCV	2 Well Plate	1	*54VialPlate	2	6	PFC_160225\WS\#4393242	3.000
11	4393242~MTRX SPK	2 Well Plate	1	*54VialPlate	2	10	PFC_160225\WS\#4393242	3.000
12	4393242~MTRX SPK:D1	2 Well Plate	1	*54VialPlate	2	11	PFC_160225\WS\#4393242	3.000
13	4393242~SPIKE	2 Well Plate	1	*54VialPlate	2	12	PFC_160225\WS\#4393242	3.000
14	4393242~BVX741-01	2 Well Plate	1	*54VialPlate	2	13	PFC_160225\WS\#4393242	3.000
15	4393242~BVX743-01	2 Well Plate	1	*54VialPlate	2	14	PFC_160225\WS\#4393242	3.000
16	4393242~BVX748-01	2 Well Plate	1	*54VialPlate	2	15	PFC_160225\WS\#4393242	3.000
17	4393242~BVX749-01	2 Well Plate	1	*54VialPlate	2	16	PFC_160225\WS\#4393242	3.000
18	4393242~BVX750-01	2 Well Plate	1	*54VialPlate	2	17	PFC_160225\WS\#4393242	3.000
19	4393242~BVX751-01	2 Well Plate	1	*54VialPlate	2	18	PFC_160225\WS\#4393242	3.000
20	4393242~BWH289-01	2 Well Plate	1	*54VialPlate	2	19	PFC_160225\WS\#4393242	3.000
21	4393242~BWH290-01	2 Well Plate	1	*54VialPlate	2	20	PFC_160225\WS\#4393242	3.000
22	4393242~BWH291-01	2 Well Plate	1	*54VialPlate	2	21	PFC_160225\WS\#4393242	3.000
23	4393242~BWH292-01	2 Well Plate	1	*54VialPlate	2	22	PFC_160225\WS\#4393242	3.000
24	CCV	2 Well Plate	1	*54VialPlate	2	6	PFC_160225\WS\#4393242	3.000
25	4393242~BWH293-01	2 Well Plate	1	*54VialPlate	2	23	PFC_160225\WS\#4393242	3.000
26	4393242~BWH294-01	2 Well Plate	1	*54VialPlate	2	24	PFC_160225\WS\#4393242	3.000
27	4393242~BWH295-01	2 Well Plate	1	*54VialPlate	2	25	PFC_160225\WS\#4393242	3.000
28	4393242~BWH295-01:D1	2 Well Plate	1	*54VialPlate	2	26	PFC_160225\WS\#4393242	3.000
29	4393242~BWH296-01	2 Well Plate	1	*54VialPlate	2	27	PFC_160225\WS\#4393242	3.000
30	4393242~BWH297-01	2 Well Plate	1	*54VialPlate	2	28	PFC_160225\WS\#4393242	3.000
31	4393242~BWH298-01	2 Well Plate	1	*54VialPlate	2	29	PFC_160225\WS\#4393242	3.000
32	4393242~BWR413-01	2 Well Plate	1	*54VialPlate	2	30	PFC_160225\WS\#4393242	3.000
33	4393242~BWR422-01	2 Well Plate	1	*54VialPlate	2	31	PFC_160225\WS\#4393242	3.000
34	4393242~BWR424-01	2 Well Plate	1	*54VialPlate	2	32	PFC_160225\WS\#4393242	3.000
35	CCV	2 Well Plate	1	*54VialPlate	2	6	PFC_160225\WS\#4393242	3.000

Column # 123

MPA = Soln # 513, PBRE17

MPB = Methanol
Fisher lot # 158013.

BR 2016/02/25.

	Sample ID	Acquisition Date	Acquisition Method	File Name	Rack Type	Rack Position	Vial Position	Plate Type	Plate Position
1	4393242~BLANK	2016/02/25 5:02:47 PM	PFC_Water_Low.dam	PFC_160225\WS#4393242.wiff	2 Well Plates	1	2	*54VialPlate*	2
2	STD 1	2016/02/25 5:07:53 PM	PFC_Water_Low.dam	PFC_160225\WS#4393242.wiff	2 Well Plates	1	3	*54VialPlate*	2
3	STD 2	2016/02/25 5:12:59 PM	PFC_Water_Low.dam	PFC_160225\WS#4393242.wiff	2 Well Plates	1	4	*54VialPlate*	2
4	STD 3	2016/02/25 5:18:05 PM	PFC_Water_Low.dam	PFC_160225\WS#4393242.wiff	2 Well Plates	1	5	*54VialPlate*	2
5	STD 4	2016/02/25 5:23:11 PM	PFC_Water_Low.dam	PFC_160225\WS#4393242.wiff	2 Well Plates	1	6	*54VialPlate*	2
6	STD 5	2016/02/25 5:28:16 PM	PFC_Water_Low.dam	PFC_160225\WS#4393242.wiff	2 Well Plates	1	7	*54VialPlate*	2
7	STD 6	2016/02/25 5:33:23 PM	PFC_Water_Low.dam	PFC_160225\WS#4393242.wiff	2 Well Plates	1	8	*54VialPlate*	2
8	ICV	2016/02/25 5:38:29 PM	PFC_Water_Low.dam	PFC_160225\WS#4393242.wiff	2 Well Plates	1	9	*54VialPlate*	2
9	CCV	2016/02/25 5:43:34 PM	PFC_Water_Low.dam	PFC_160225\WS#4393242.wiff	2 Well Plates	1	6	*54VialPlate*	2
10	4393242~MTRX SPK (BWH295)	2016/02/25 5:48:40 PM	PFC_Water_Low.dam	PFC_160225\WS#4393242.wiff	2 Well Plates	1	10	*54VialPlate*	2
11	4393242~MTRX SPK:D1 (BWH295)	2016/02/25 5:53:46 PM	PFC_Water_Low.dam	PFC_160225\WS#4393242.wiff	2 Well Plates	1	11	*54VialPlate*	2
12	4393242~SPIKE	2016/02/25 5:58:52 PM	PFC_Water_Low.dam	PFC_160225\WS#4393242.wiff	2 Well Plates	1	12	*54VialPlate*	2
13	4393242~BVX741-01 (20x)	2016/02/25 6:03:57 PM	PFC_Water_Low.dam	PFC_160225\WS#4393242.wiff	2 Well Plates	1	13	*54VialPlate*	2
14	4393242~BVX743-01 (20x)	2016/02/25 6:09:04 PM	PFC_Water_Low.dam	PFC_160225\WS#4393242.wiff	2 Well Plates	1	14	*54VialPlate*	2
15	4393242~BVX748-01	2016/02/25 6:14:10 PM	PFC_Water_Low.dam	PFC_160225\WS#4393242.wiff	2 Well Plates	1	15	*54VialPlate*	2
16	4393242~BVX749-01	2016/02/25 6:19:16 PM	PFC_Water_Low.dam	PFC_160225\WS#4393242.wiff	2 Well Plates	1	16	*54VialPlate*	2
17	4393242~BVX750-01	2016/02/25 6:24:21 PM	PFC_Water_Low.dam	PFC_160225\WS#4393242.wiff	2 Well Plates	1	17	*54VialPlate*	2
18	4393242~BVX751-01	2016/02/25 6:29:27 PM	PFC_Water_Low.dam	PFC_160225\WS#4393242.wiff	2 Well Plates	1	18	*54VialPlate*	2
19	4393242~BWH289-01	2016/02/25 6:34:33 PM	PFC_Water_Low.dam	PFC_160225\WS#4393242.wiff	2 Well Plates	1	19	*54VialPlate*	2
20	4393242~BWH290-01	2016/02/25 6:39:39 PM	PFC_Water_Low.dam	PFC_160225\WS#4393242.wiff	2 Well Plates	1	20	*54VialPlate*	2
21	4393242~BWH291-01	2016/02/25 6:44:45 PM	PFC_Water_Low.dam	PFC_160225\WS#4393242.wiff	2 Well Plates	1	21	*54VialPlate*	2
22	4393242~BWH292-01	2016/02/25 6:49:51 PM	PFC_Water_Low.dam	PFC_160225\WS#4393242.wiff	2 Well Plates	1	22	*54VialPlate*	2
23	CCV	2016/02/25 6:54:57 PM	PFC_Water_Low.dam	PFC_160225\WS#4393242.wiff	2 Well Plates	1	6	*54VialPlate*	2
24	4393242~BWH293-01	2016/02/25 7:00:03 PM	PFC_Water_Low.dam	PFC_160225\WS#4393242.wiff	2 Well Plates	1	23	*54VialPlate*	2
25	4393242~BWH294-01	2016/02/25 7:05:09 PM	PFC_Water_Low.dam	PFC_160225\WS#4393242.wiff	2 Well Plates	1	24	*54VialPlate*	2
26	4393242~BWH295-01	2016/02/25 7:10:15 PM	PFC_Water_Low.dam	PFC_160225\WS#4393242.wiff	2 Well Plates	1	25	*54VialPlate*	2
27	4393242~BWH295-01:D1	2016/02/25 7:15:22 PM	PFC_Water_Low.dam	PFC_160225\WS#4393242.wiff	2 Well Plates	1	26	*54VialPlate*	2
28	4393242~BWH296-01	2016/02/25 7:20:28 PM	PFC_Water_Low.dam	PFC_160225\WS#4393242.wiff	2 Well Plates	1	27	*54VialPlate*	2
29	4393242~BWH297-01	2016/02/25 7:25:34 PM	PFC_Water_Low.dam	PFC_160225\WS#4393242.wiff	2 Well Plates	1	28	*54VialPlate*	2
30	4393242~BWH298-01	2016/02/25 7:30:40 PM	PFC_Water_Low.dam	PFC_160225\WS#4393242.wiff	2 Well Plates	1	29	*54VialPlate*	2
31	4393242~BWR413-01	2016/02/25 7:35:46 PM	PFC_Water_Low.dam	PFC_160225\WS#4393242.wiff	2 Well Plates	1	30	*54VialPlate*	2
32	4393242~BWR422-01	2016/02/25 7:40:52 PM	PFC_Water_Low.dam	PFC_160225\WS#4393242.wiff	2 Well Plates	1	31	*54VialPlate*	2
33	4393242~BWR424-01	2016/02/25 7:45:58 PM	PFC_Water_Low.dam	PFC_160225\WS#4393242.wiff	2 Well Plates	1	32	*54VialPlate*	2
34	CCV	2016/02/25 7:51:04 PM	PFC_Water_Low.dam	PFC_160225\WS#4393242.wiff	2 Well Plates	1	6	*54VialPlate*	2
35	CCV	2016/02/26 7:53:09 AM	PFC_Water_Low.dam	PFC_160225\WS#4393242.wiff	2 Well Plates	1	6	*54VialPlate*	2
36	4393242~BVX749-01	2016/02/26 7:58:16 AM	PFC_Water_Low.dam	PFC_160225\WS#4393242.wiff	2 Well Plates	1	16	*54VialPlate*	2
37	CCV	2016/02/26 8:03:22 AM	PFC_Water_Low.dam	PFC_160225\WS#4393242.wiff	2 Well Plates	1	6	*54VialPlate*	2

DoD Projects - Internal Data Validation Checklist

Run date: 20160226

Worksheet # (s): 4394558

Analysis: PFOS/PFOA-W

	Primary review by the analyst - 1st 100 % analysis review	1st 100% review yes	no	n/a	*2nd 100% review
1	Sample analyses meet hold time criteria		—		✓
2	Analysis set-up meets method criteria	—			✓
3	Tuning and correct calibration used - criteria meets method criteria	—			✓
4	SQC/Control Charts updated, analysis in statistical/method control 20160229	✗		—	✓
5	Internal area counts checked (if applicable)	—			✓
6	LCS, SRM are within acceptance criteria	—			✓
7	Surrogate Recovery(s) is within acceptance criteria	—			✓
8	Method Blank meets acceptance criteria	—			✓
9	Matrix Spike recovery(s) meets acceptance criteria	—			✓
10	Duplicate precision meets acceptance criteria	—			✓
11	QC is documented on the run logs	—			✓
12	Runs checked for carryover	—			✓
13	Prep log / worksheet(s) are present, signed / dated by a prep / instrument analysts	—			✓
14	Initial weights, splits, impringer volumes (where applicable) are documented	—			✓
15	Standards and reagents traceable to Certificates of Analysis	—			✓
16	Samples above calibration range diluted and reanalyzed			—	✓
17	Dilution factors (where justified) have been checked for correctness and entered	—			✓
18	Analytical observations/anomalies documented in LIMS	—			✓
19	Random calculation checked and in correct units	—			✓
20	If corrective actions were applied they are documented, initialed & dated			—	✓
21	Manual integration – before & after data with a reason included, initialed & dated			—	✓
22	Transferred data is validated in LIMS for correctness	—			✓
23	Data package assembled (where required)	—			✓

Reviewed by: [signature] Date: 20160229

Comments:

	Secondary Supervisor/Qualified Data Review Staff - 2nd 100% verification review	yes	no	n/a
1	Repeats documented and referenced			✓
2	Method and sample deviations noted, anomalies described (if applicable)			✓
3	Data and QC validated in LIMS	✓		
4	Random calculation checked	✓		
5	Benchsheet (s) signed and dated	✓		
6	Data Package (if required) checked for completeness	✓		

Reviewed by: [signature] Date: 2016/02/29

Comments:

*Note: 2nd 100% verification review documented by secondary qualified data review
Primary and Secondary Internal Data Review Check must be performed by a different person

Worksheet Data Validation Checklist - Extractable Organics

Worksheet # 4394558 Testcode: ABSLOW-W

Sample Preparation		yes	no	n/a
1	Samples extracted within hold time	✓*	✓	
2	Client sample ID verified against Lab ID (waters & oils)	✓		
3	Parameter list and Client comments reviewed, (Spiking solutions matched to parameter list)	✓		
4	Height of sediment or if sample was decanted, recorded on worksheet	✓		
5	Method required QC processed with samples, maximum batch size = 20 client samples.	✓		
6	Sample, duplicate, matrix spike appear similar, initial sample as well as final extract	✓		
7	Sample weight or initial volume and extract final volume, aliquot factor clearly recorded.	✓		
8	If performed any additional dilution clearly recorded	✓		
9	Matrix spike / Duplicate performed on IOL samples if present			✓
10	Spiking solutions valid (haven't expired), ID and volume used clearly identified on worksheet	✓		
11	Spiking process witnessed and signed off	✓		
12	Extraction type recorded (N3A2B = neutral, 3 x acidic, 2 x basic)			✓
13	Sample prep deviations documented within CompliantPro as a Policy Deviation			✓
14	Job Remarks reviewed on 2nd page of worksheet.	✓		
15	Worksheet and reagent tracking record completed and authorized.	✓		

Reviewed by: MM Date: 2016/02/25

Comments:
B630791 / B630799 : Samples are already expired. Re-analysis done past hold time. Reported dilution required. See copy of e-mail.

Worksheet Approval		yes	no	n/a
1	Verified the position of the vials in autosampler against sequence list; signed off sequence list	✓		
2	Calibration and CCV standards valid (haven't expired)	✓		
3	Initial calibration curve and DFTPP tune (if applicable) acceptable	✓		
4	Continuing and Final CCV and DFTPP tune (if applicable) acceptable	✓		
5	System performance check acceptable (if applicable)	✓		
6	Internal standard responses acceptable	✓		
7	Method blank meets acceptance criteria	✓		
8	Lab Control Samples recoveries meets acceptance criteria	✓		
9	Duplicate RPD meets acceptance criteria	✓		
10	Matrix spike recoveries meets acceptance criteria	✓		
11	Surrogate recoveries meets acceptance criteria	✓		
12	Appropriate control charts updated			✓
13	Samples above calibration range diluted and reanalyzed			✓
14	Dilutions clearly documented on tracking record, inst file and verified during data upload	✓		
15	Samples following high level samples checked for carryover.	✓		
16	Mass spectra ion ratios acceptable for positive results, hardcopy in file.			✓
17	Analytical observations / anomalies documented	✓		
18	DQW comments entered in LIMS, hardcopy in file			✓
19	Sample Prep section (above) reviewed and verified.	✓		
20	WS Approval performed in LIMS	✓		

Reviewed by: CM Date: 2016/02/29

Comments:

Worksheet Validation		yes	no	n/a
1	Calibration, QC and sample results reviewed and determined acceptable	✓		
2	Manual integrations verified			✓
3	Random calculation checked	✓		
4	Data and QC validated in LIMS	✓		
5	Comments reviewed for appropriateness	✓		
6	Reworks / relogs documented in file			✓
7	Worksheet signed and dated,	✓		
8	Worksheet approved and validated within LIMS	✓		

Reviewed by: SL Date: 2016/02/29

Comments:

WS# : 4394558

Page #: 1/2

RUSH

Report Name : Worksheet - (Liquids and Solids)

Assignment Date : Thursday, February 25, 2016

Assigned to : Melinda Molina

Test Code : PFOSLOW-W

Instrument Id:

Test Description : Low level PFOS and PFOA in water by LC-MS/MS

Job Number	Sample Number	ID	Sample ID	F	Moisture	Wt or Vol	Final Vol	DE or AF	# Cont	Expiry Date	Test DeadLine	Criteria	Extract Date
	MTRX SPK	0	PFOSL BVX752-01		0	12.5	0.3	1X					2016/02/25
	MTRX SPK	1	PFOSL BVX752-01		0	12.5	0.3	1X					2016/02/25
	SPIKE		PFOSL		0	12.5	0.3	1X					2016/02/25
	BLANK				0	12.5	0.3	1X					2016/02/25
B630788	*BVX747-01R		ZWICKLBAVER	✓	0	12.5	0.3	1X	2	2016/02/25	2016/03/01 18:00		2016/02/25
B630789*	*BVX752-01R		OF-FB60-0216	✓	0	12.5	0.3	1X	2	2016/02/25	2016/02/23 18:00		2016/02/25
B630789*	*BVX753-01R		OF-RW60-0216	✓	0	12.5	0.3	1X	2	2016/02/25	2016/02/23 18:00		2016/02/25
B630789*	*BVX754-01R		OF-RW60P-0216	✓	<0.1	12.5	0.3	1X	2	2016/02/25	2016/02/23 18:00		2016/02/25
B630789*	*BVX755-01R		OF-FB46-0216	✓	0	12.5	0.3	1X	2	2016/02/25	2016/02/23 18:00		2016/02/25
B630789*	*BVX756-01R		OF-RW46-0216	✓	<0.1	12.5	0.3	1X	2	2016/02/25	2016/02/23 18:00		2016/02/25
B630791*	*BVX770-01R		OF-RW08-0216	✓	0	12.5	0.3	1X	1	2016/02/18	2016/02/23 18:00		2016/02/25
B630791*	*BVX771-01R		OF-RW08P-0216	✓	0	12.5	0.3	1X	1	2016/02/18	2016/02/23 18:00		2016/02/25
B630799*	*BVX844-01R		OF-RW44-0216	✓	0	2.5	0.3	1X	1	2016/02/22	2016/02/23 18:00		2016/02/25
B630799*	*BVX845-01R		OF-RW44P-0216	✓	0	2.5	0.3	1X	1	2016/02/22	2016/02/23 18:00		2016/02/25

Melinda Molina 2016/02/25

Remarks:

Samples extracted by: Melinda Molina 2016/02/25

Instrumentation performed by: Date: 2016/02/25

Calculations performed by: Date: 2016/02/29

Validated by: Date: 2016/02/29

Job No.	Rep / Client Name / Remarks	Contact	Client Tier	National
GB630788	MDG TestAmerica NREG PFOSLOW-W Project #: 32007578	PFC Reporting Group	Tier 1 (Air.)	Test America
GB630789	MDG TestAmerica NREG PFOSLOW-W Level IV required Project #: 320-17278	PFC Reporting Group	Tier 1 (Air.)	Test America
GB630791	MDG TestAmerica NREG PFOSLOW-W MS/MSD required on BVX776 Level IV required Project #: 320-17185	PFC Reporting Group	Tier 1 (Air.)	Test America
GB630799	MDG TestAmerica NREG PFOSLOW-W MS/MSD required on BVX847 Level IV required Project #: 320-17236	PFC Reporting Group	Tier 1 (Air.)	Test America

Surrogates/Spikes	Method Spike	Spikes	Samples

Sample	Preparation Remarks
	Vol (mL) Amt. Spiked (mL) Conc. Reln Lot#
SJ1	2825 25
SJ2	2800 50 100ng/mL — JK 62290
SJ3	2700 150 mmd 2016/02/25
SJ4	2813 37.5
SJ5	2775 75 1 mg/mL — I467F
SJ6	2775 125
CCV	2788 62.5 — 1 mg/mL — I4676

Sample	Instrumentation Remarks
	mmd 2016/02/25

Worksheet Number: **4394558**

Low level PFOS and PFOA in water - Water

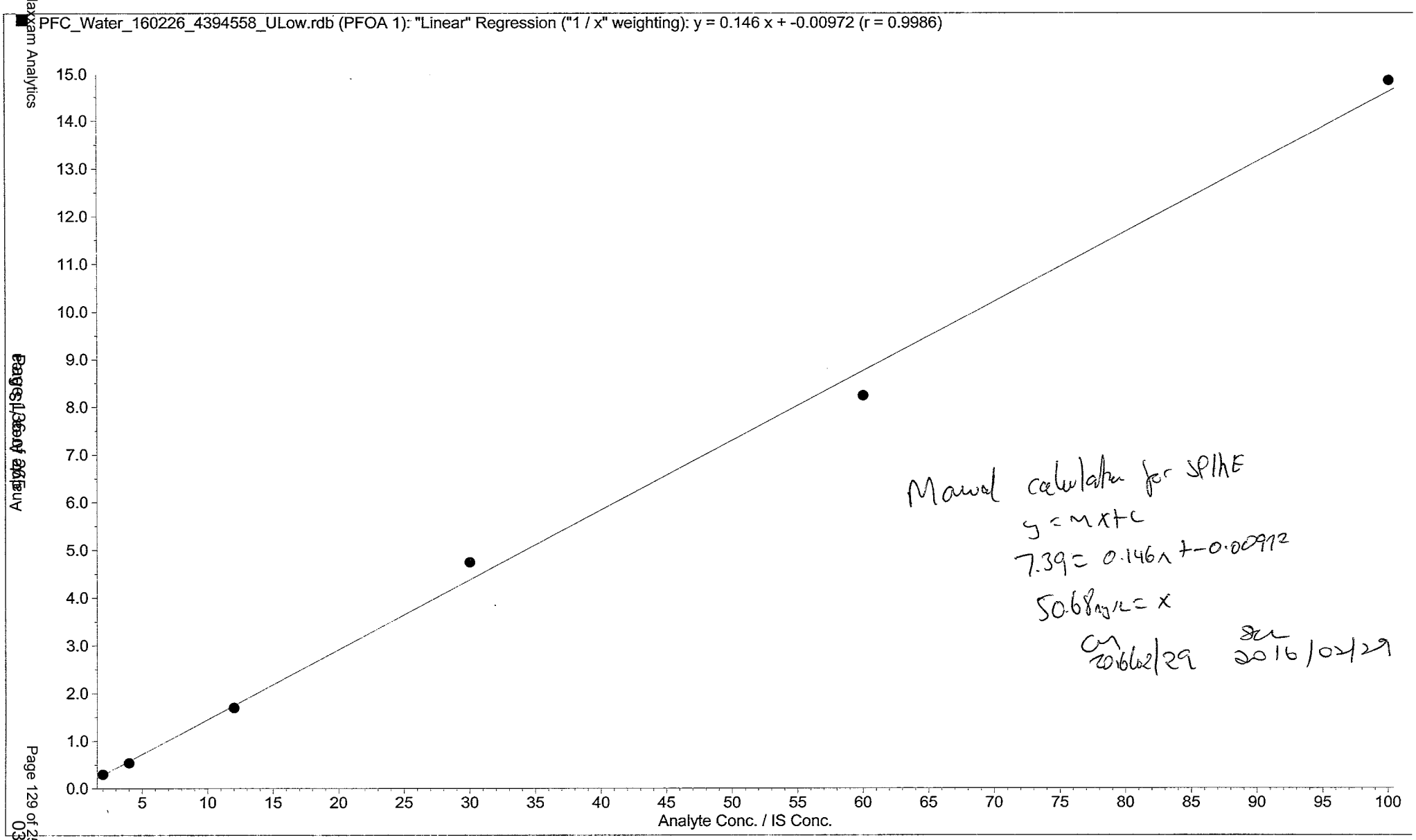
ng/L

Parameter Name	Units	MTRX SPK	MTRX SPK Dup1	SPIKE	BLANK	B630788 BVX747 ReWork	B630789 BVX752
Perfluorobutanoic acid	ng/L	102.80000	113.20000	84.20000	0	0	0
Perfluorobutane Sulfonate (PFBS)	ng/L	114.80000	102.40000	98.40000	0	0	0
Perfluorodecane Sulfonate	ng/L	120.80000	118.00000	117.20000	0	0	0
Perfluoroheptanoic Acid (PFHpA)	ng/L	108.80000	105.80000	108.40000	0	0	0
Perfluoroheptane sulfonate	ng/L	120.40000	118.60000	112.60000	0	0	0
Perfluorohexanoic Acid (PFHxA)	ng/L	119.78400	106.18400	105.20000	0	0	0.30800
Perfluorohexane Sulfonate (PFHxS)	ng/L	123.20000	109.60000	102.20000	0	0.32100	0
Perfluorononanoic Acid (PFNA)	ng/L	130.20000	118.80000	117.80000	0	0	0
Perfluoropentanoic Acid (PFPeA)	ng/L	130.20000	111.00000	107.00000	0	0	0
Perfluorotetradecanoic Acid	ng/L	124.60000	121.40000	112.40000	0	0.33500	0
Perfluorotridecanoic Acid	ng/L	108.04600	105.84600	110.20000	0	0.14400	0.17700
Perfluoroundecanoic Acid (PFUnA)	ng/L	124.20000	121.00000	114.80000	0	0	0
Perfluorodecanoic Acid (PFDA)	ng/L	128.20000	123.20000	107.40000	0	0	0
Perfluorododecanoic Acid (PFDoA)	ng/L	121.63200	121.03200	120.20000	0	0.11800	0.18400
Perfluoro-n-Octanoic Acid (PFOA)	ng/L	115.60000	102.40000	101.20000	0	0	0
Perfluorooctane Sulfonate (PFOS)	ng/L	125.80000	111.20000	112.80000	0	0	0
13C2-perfluorotetradecanoic acid	ng/L	81.4	83.3	99.1	88.1	87.4	84.5
13C4-Perfluorobutanoic acid	ng/L	77.2	74.9	92.1	80.7	71.8	85.2
13C5-Perfluorononanoic acid	ng/L	93.4	102.	98.3	90.8	98.0	98.4
13C2-Perfluorodecanoic acid	ng/L	83.0	82.2	96.6	87.5	93.3	96.7
13C2-Perfluorododecanoic acid	ng/L	76.9	71.2	90.1	85.9	76.4	86.3
13C2-Perfluorohexanoic acid	ng/L	88.7	97.6	97.0	90.7	94.4	103.
13C2-Perfluoroundecanoic acid	ng/L	74.1	81.6	99.7	89.7	83.3	89.8
13C4-Perfluoroheptanoic acid	ng/L	96.1	96.2	98.8	97.6	99.0	104.
13C4-Perfluorooctanoic acid	ng/L	102.	109.	109.	96.9	103.	110.
13C4-Perfluorooctanesulfonate	ng/L	94.8	101.	99.0	83.2	96.2	103.
13C5-Perfluoropentanoic acid	ng/L	83.8	88.4	93.5	95.2	95.6	96.6
18O2-Perfluorohexanesulfonate	ng/L	92.3	104.	108.	89.4	103.	108.

Parameter Name	B630789 BVX753	B630789 BVX754	B630789 BVX755	B630789 BVX756	DL	B630791 BVX770 ReWork	B630791 BVX771 ReWork
Perfluorobutanoic acid	2.84000	2.41000	0	0	2	0	0
Perfluorobutane Sulfonate (PFBS)	0.72000	0.84800	0	0	2	9.09000	8.27000
Perfluorodecane Sulfonate	0	0.03690	0	0	2	0	0
Perfluoroheptanoic Acid (PFHpA)	0.57200	0.61900	0	0	2	3.17000	3.85000
Perfluoroheptane sulfonate	0.68700	0.69200	0.66900	0	2	7.65000	7.76000
Perfluorohexanoic Acid (PFHxA)	0.61700	0.42700	0	0.26200	2	7.25000	8.56000
Perfluorohexane Sulfonate (PFHxS)	0.98700	1.12000	0	0	2	53.00000	51.20000
Perfluorononanoic Acid (PFNA)	0.67300	0.69300	0	0	2	0	0
Perfluoropentanoic Acid (PFPeA)	0	0	0	0	2	0	0
Perfluorotetradecanoic Acid	0	0.19900	0	0	2	0	0
Perfluorotridecanoic Acid	0	0	0	0	2	0	0
Perfluoroundecanoic Acid (PFUnA)	0	0	0	0	2	0	0
Perfluorodecanoic Acid (PFDA)	0	0	0	0	2	0	0
Perfluorododecanoic Acid (PFDoA)	0	0	0	0	2	0	0
Perfluoro-n-Octanoic Acid (PFOA)	1.70000	1.49000	0.20900	0.23800	2	13.90000	13.90000
Perfluorooctane Sulfonate (PFOS)	2.13000	1.92000	0	0	2	181.00000	173.00000
13C2-perfluorotetradecanoic acid	64.3	73.3	84.9	78.9		78.7	77.1
13C4-Perfluorobutanoic acid	59.5	57.3	95.7	II 41.8		99.4	74.0
13C5-Perfluorononanoic acid	58.1	66.8	101.	72.7		93.9	86.2
13C2-Perfluorodecanoic acid	78.5	80.1	95.8	93.1		86.2	87.3
13C2-Perfluorododecanoic acid	53.5	66.9	79.2	85.0		72.7	79.2
13C2-Perfluorohexanoic acid	61.8	68.8	113.	74.3		91.9	80.3
13C2-Perfluoroundecanoic acid	76.5	83.5	84.8	79.7		82.3	83.2
13C4-Perfluoroheptanoic acid	70.8	69.3	120.	76.5		95.8	89.7
13C4-Perfluorooctanoic acid	66.6	70.2	125.	81.6		100.	98.1
13C4-Perfluorooctanesulfonate	57.1	65.2	106.	69.0		88.8	88.3
13C5-Perfluoropentanoic acid	69.6	77.7	105.	64.8		87.7	85.2
18O2-Perfluorohexanesulfonate	73.8	72.4	113.	69.0		96.2	89.4

Low level PFOS and PFOA in water - Water
ng/L

Parameter Name	DL	B630799 BVX844 ReWork	B630799 BVX845 ReWork	DL	RDL	MDL	IDL
Perfluorobutanoic acid	20	0	0	100	2	0.41	0
Perfluorobutane Sulfonate (PFBS)	20	45.00000	46.00000	100	2	0.27	0
Perfluorodecane Sulfonate	20	0	0	100	2	0.38	0
Perfluoroheptanoic Acid (PFHpA)	20	23.10000	27.80000	100	2	0.39	0
Perfluoroheptane sulfonate	20	47.60000	51.30000	100	2	0.4	0
Perfluorohexanoic Acid (PFHxA)	20	68.80000	77.50000	100	2	0.42	0
Perfluorohexane Sulfonate (PFHxS)	20	521.00000	576.00000	100	2	0.4	0
Perfluorononanoic Acid (PFNA)	20	7.95000	7.35000	100	2	0.33	0
Perfluoropentanoic Acid (PFPeA)	20	37.80000	37.90000	100	2	0.46	0
Perfluorotetradecanoic Acid	20	0	0	100	2	0.61	0
Perfluorotridecanoic Acid	20	0	0	100	2	0.6	0
Perfluoroundecanoic Acid (PFUnA)	20	0	0	100	2	0.5	0
Perfluorodecanoic Acid (PFDA)	20	0	0	100	2	0.24	0
Perfluorododecanoic Acid (PFDoA)	20	0	0	100	2	0.63	0
Perfluoro-n-Octanoic Acid (PFOA)	20	409.00000	462.00000	100	2	0.39	0
Perfluorooctane Sulfonate (PFOS)	20	1070.00000	1180.00000	100	2	0.3	0
13C2-perfluorotetradecanoic acid		64.2	71.9				
13C4-Perfluorobutanoic acid		112.	76.2				
13C5-Perfluorononanoic acid		95.7	95.9				
13C2-Perfluorodecanoic acid		88.9	84.6				
13C2-Perfluorododecanoic acid		74.7	66.7				
13C2-Perfluorohexanoic acid		98.6	90.0				
13C2-Perfluoroundecanoic acid		78.7	78.5				
13C4-Perfluoroheptanoic acid		99.4	93.1				
13C4-Perfluorooctanoic acid		101.	97.9				
13C4-Perfluorooctanesulfonate		96.4	95.0				
13C5-Perfluoropentanoic acid		88.5	87.7				
18O2-Perfluorohexanesulfonate		95.3	92.7				



Manual calculation for SPIKE

$y = mx + c$

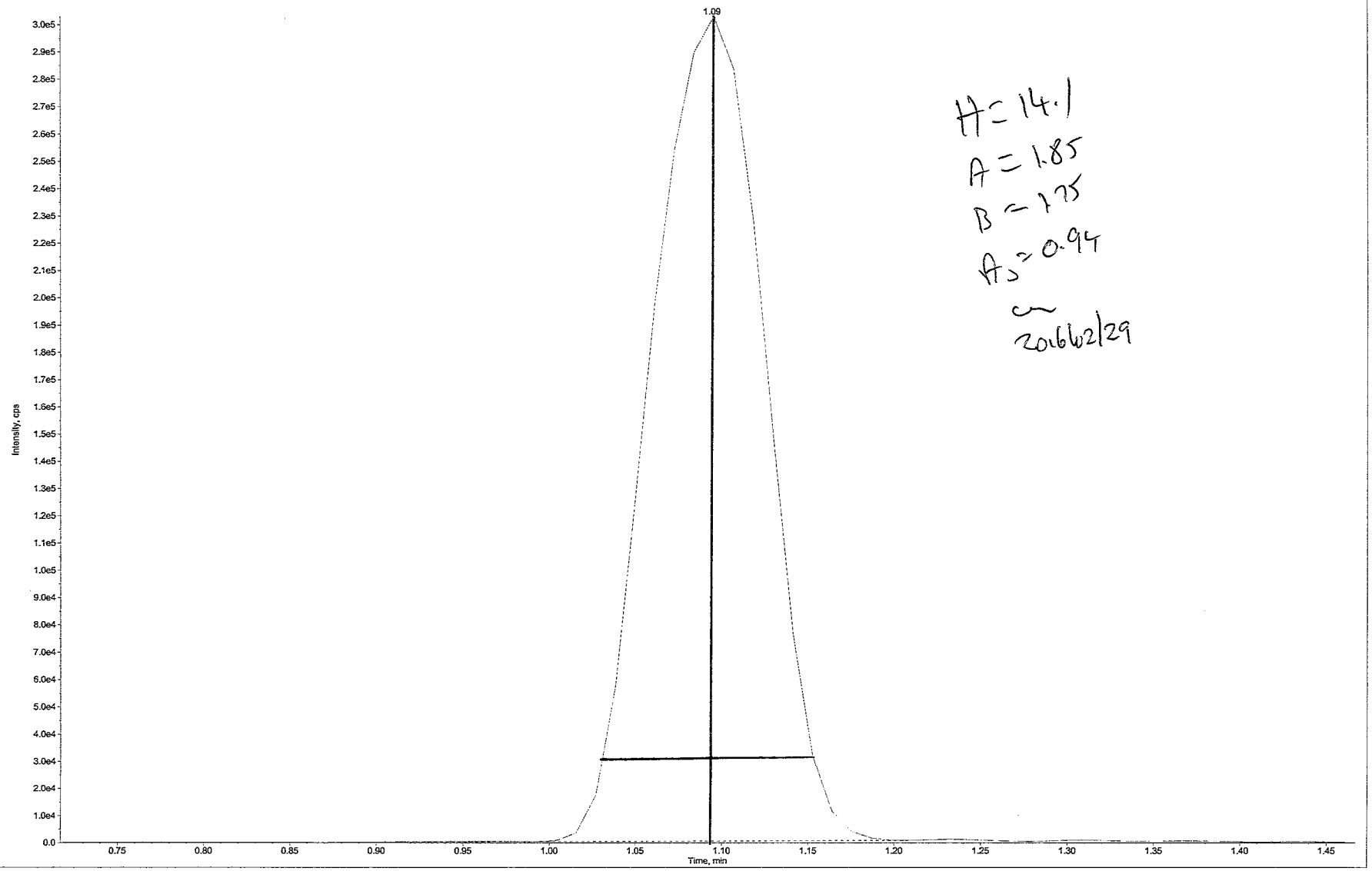
$7.39 = 0.146x + 0.00972$

$50.68 \text{ ng/L} = x$

On 2016/02/29 Jen 2016/02/29

Sample Name: "STD 4" Sample ID: "" File: "WS#4394551.wiff"
Peak Name: "PFBS 1" Mass(es): "298.900/79.900 Da"
Comment: "" Annotation: ""

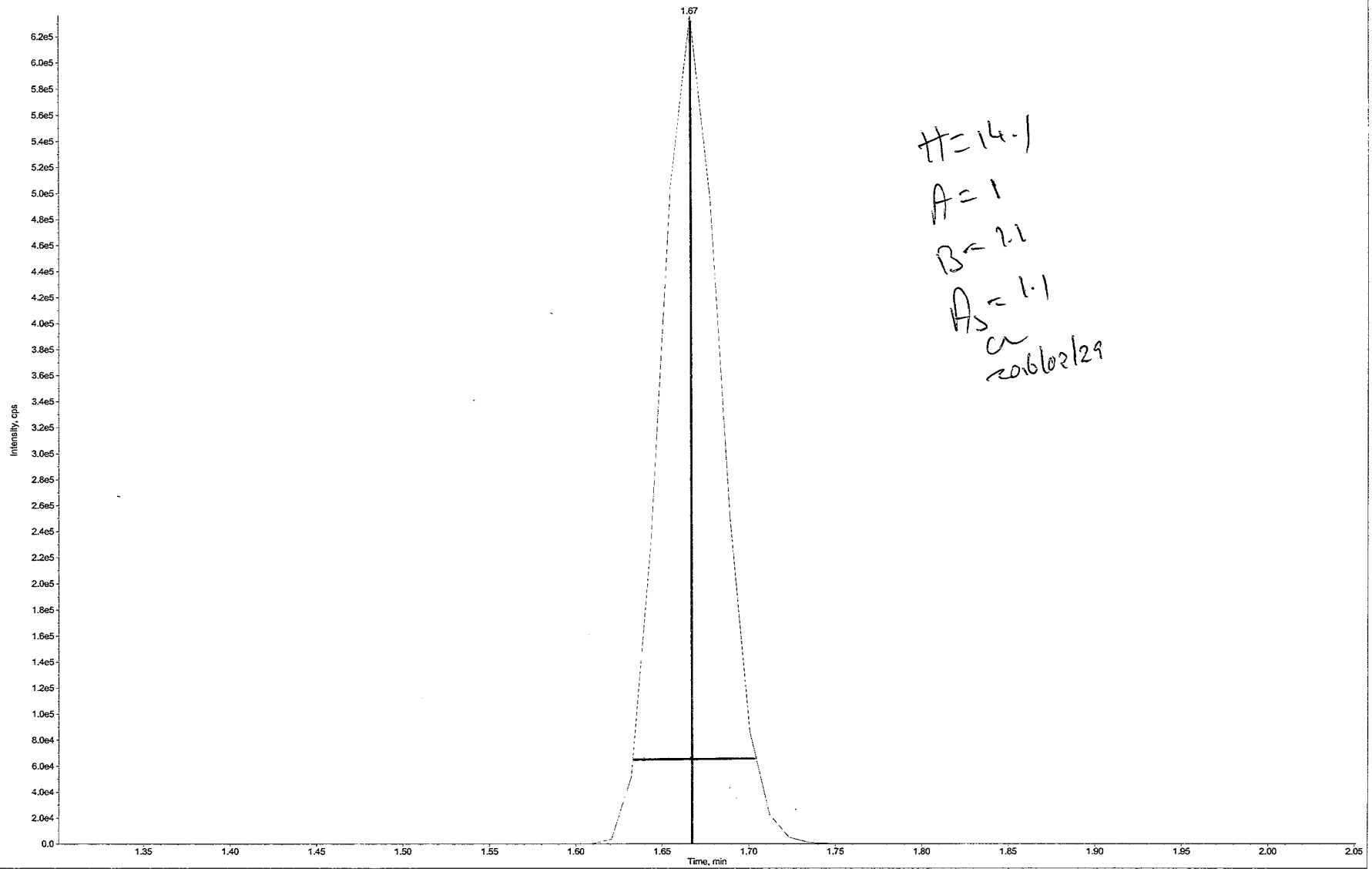
Sample Index:	74
Sample Type:	Standard
Concentration:	30.0 ng/L
Calculated Conc:	29.9 ng/L
Acq. Date:	2016/02/29
Acq. Time:	9:16:09 AM
Modified:	No
Proc. Algorithm:	Analyst Classic
Bunching Factor:	1
Noise Threshold:	20.00 cps
Area Threshold:	2500.00 cps
,Num. Smooths:	2
Sep. Width:	0.00
Sep. Height:	0.00
Exp. Peak Ratio:	5.00
Exp. Adj. Ratio:	4.00
Exp. Val. Ratio:	3.00
RT Window:	30.0 sec
Expected RT:	1.09 min
Use Relative RT:	No
Int. Type:	Base To Base
Retention Time:	1.09 min
Area:	1390000. counts
Height:	3.03e+005 cps
Start Time:	0.879 min
End Time:	1.21 min



H = 14.1
A = 1.85
B = 1.75
A_s = 0.94
2016/02/29

Sample Name: "STD 4" Sample ID: "" File: "WS#4394551.wiff"
Peak Name: "PFHxS 1" Mass(es): "398.900/79.900 Da"
Comment: "" Annotation: ""

Sample Index:	74
Sample Type:	Standard
Concentration:	30.0 ng/L
Calculated Conc:	32.4 ng/L
Acq. Date:	2016/02/29
Acq. Time:	9:16:09 AM
Modified:	No
Proc. Algorithm:	Analyst Classic
Bunching Factor:	1
Noise Threshold:	20.00 cps
Area Threshold:	2000.00 cps
Num. Smooths:	2
Sep. Width:	0.00
Sep. Height:	0.00
Exp. Peak Ratio:	5.00
Exp. Adj. Ratio:	4.00
Exp. Val. Ratio:	3.00
RT Window:	30.0 sec
Expected RT:	1.68 min
Use Relative RT:	No
Int. Type:	Base To Base
Retention Time:	1.67 min
Area:	1570000. counts
Height:	6.36e+005 cps
Start Time:	1.60 min
End Time:	1.76 min



Tt = 14.1
A = 1
B = 1.1
As = 1.1
@
20160229

Manually Integrated

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03/14/2016

Report Name: Worksheet - Parameter Lists

Report Date: 2016/02/25

Test Code: **PFOSLOW-W**

Worksheet Number: **4394558**

Sample Number	Parameter
BVX747-01	Perfluorobutanoic acid
	Perfluorobutane Sulfonate (PFBS)
	Perfluorodecanoic Acid (PFDA)
	Perfluorododecanoic Acid (PFDoA)
	Perfluorodecane Sulfonate
	Perfluoroheptanoic Acid (PFHpA)
	Perfluoroheptane sulfonate
	Perfluorohexanoic Acid (PFHxA)
	Perfluorohexane Sulfonate (PFHxS)
	Perfluorononanoic Acid (PFNA)
	Perfluoro-n-Octanoic Acid (PFOA)
	Perfluorooctane Sulfonate (PFOS)
	Perfluoropentanoic Acid (PFPeA)
	Perfluorotetradecanoic Acid
	Perfluorotridecanoic Acid
	Perfluoroundecanoic Acid (PFUnA)
BVX752-01	Perfluorobutane Sulfonate (PFBS)
BVX753-01	Perfluoroheptanoic Acid (PFHpA)
BVX754-01	Perfluorohexane Sulfonate (PFHxS)
BVX755-01	Perfluorononanoic Acid (PFNA)
BVX756-01	Perfluoro-n-Octanoic Acid (PFOA)
	Perfluorooctane Sulfonate (PFOS)
BVX770-01	Perfluorooctane Sulfonate (PFOS)
BVX771-01	
BVX844-01	Perfluorohexane Sulfonate (PFHxS)
BVX845-01	Perfluoro-n-Octanoic Acid (PFOA)
	Perfluorooctane Sulfonate (PFOS)

Worksheet Reagent Tracking Record Worksheet # 4354558

Volume (µL)

Surrogate/Spike solutions	√	Solution ID #	Conc.	Blk-Spk		MS		Samples	
				Solid	Liquid	Solid	Liquid	Solid	Liquid
DGT Spike			100 ug/mL	60	30	60	30	NA	NA
Diquat Dibromide			50 ug/mL	NA	350	NA	350	NA	NA
Explosives Spiking solution A			20 ug/mL	250	100	250	100	NA	NA
Explosives Spiking solution B			20/80 ug/mL	250	100	250	100	NA	NA
Formaldehyde Spike			100 ug/mL	25	25	25	25	NA	NA
Glyphosate Spike			25 ug/mL	500	20	500	20	NA	NA
Nonylphenol Ethoxylate Spike			100 ug/mL	100	100	100	100	NA	NA
Nonylphenol Spike			10 ug/mL	100	100	100	100	NA	NA
Paraquat Cl Tetrahydrate			20 ug/mL	NA	125	NA	125	NA	NA
Perchlorate Standard Spike			10 ng/mL	NA	100	NA	100	NA	NA
Perchlorate Standard Spike			500 ng/mL	40	NA	40	NA	NA	NA
Perchlorate O-18 Internal Standard			0.10 ng/uL	20	20	20	20	20	20
Morpholine Intermediate Std.			5 ug/mL	NA	50	NA	20	NA	NA
Morpholine-D8 Internal Standard			10 ug/mL	NA	100	NA	100	NA	100
Comp. PFC Spiking Solution A			1ug/mL	62.5	NA	62.5	NA	NA	NA
Comp. PFC Spiking Solution B			250 ng/mL	NA	40 75	NA	40 75	NA	NA
Comp. PFC Spiking Solution C	✓	SK6229	100 ng/mL	125	NA 62.5	125	NA 62.5	NA	NA
Internal Standard Solution A	✓	SI 6010 (4/4)	50 ng/mL	50	100 IS	50	100 IS	50	100 IS
Internal Standard Solution B			250ng/mL	50	NA	50	NA	50	NA
ICV/CCV	✓	I 4076	1ug/mL		62.5				

Solvent/Reagent	Supplier	√	Lot No.	Date Opened	Solvent/Reagent	√	Lot No.	Date Opened/ Prepared
DCM	Fisher				50% NaOH			
Hexane	Fisher				20mM TBAS			
Acetone	Fisher				o-Phosphoric Acid			
Ottawa Sand	Fisher				Borax			
Methanol	Fisher	✓	SHBG6076V	2016/01/25	Calcium Chloride			
2-Propanol (IPA)	Fisher				EDTA			
Acetonitrile	Fisher				Phosphate Buffer			
MTBE	Fisher				Sodium Thiosulphate			
Sodium Sulfate	Fisher				DNPH			
Recon Solution					5M Acetate Buffer			
DCM:Ethyl Ether (75:25)					FMOC			
Hexane:IPA (98:2)					0.25M Na_2CO_3			
2% Formic Acid		✓	PRLRE87-131		0.5M TBAS			
0.2% Formic Acid		✓	PRLRE87-114		1% NH_4OH 0.2% NH_4OH		PRLRE87-211	
0.05M KOH					Leachate Fluid			
0.05M HCl					Reagent Water	✓	SHBG5172V	2016/02/25

*Spiked by: MM

Spike Date: 2016/02/25

Spike Syringe ID#: M23487B

Int. Std Syringe ID#: M23487B

*Spiking Witnessed by: SSV

Final pH:

Equipment	ID#	√	Equipment	ID#	√	Equipment	Lot #
Pipettor 1mL	P297460	✓	SPE Cartridge	0002635315A	✓	10 mL Serological Pipet	
Pipettor 200uL	P460090	✓	Filter			QC Balance ID	
Dispenser 100 mL	M23487B	✓	Centrifuge			Thermometer ID &Temp	
Syringe			Sonicator				

Bottle Tracking	
Bottle#	14991
Cap#	14443
Systems plus Lot#	16-01-06

Comments: (60:40 (H2O : MeOH) PRLRE87-190
Inj. I.S. (20uL) SI 6039

* - SPIKING OF SAMPLES MUST BE WITNESSED AT ALL TIMES.

Worksheet: 4394558

Dilution and Column Cleanup Worksheet

Job Number	Sample ID	Sample: Initial Final Volume	Dilution Required	Sample added mL	Solvent Added mL	Int Stan Added uL	New Effective Final Volume	INITIAL DATE	Column Clean Up
B630791	BVX770-01R	1X	10X	12.5	112.5	15	125	mma 2016/02/25	-
	BVX771-01R	1X	10X	12.5	112.5	15	125	mma 2016/02/25	-
B630799	BVX844-01R	1X	50X	2.5	122.5	15	125	mma 2016/02/25	-
	BVX845-01R	1X	50X	2.5	122.5	15	125	mma 2016/02/25	-
H2O used: SHBG 5372 V									
Pipette: (10mL) I16205B									
125 mL ref. bottle.									
				mma	2016/02/25				

PFOSLOW-W Re-works

Colm McNamara
Sent: Tuesday, February 23, 2016 7:25 AM
To: Melinda Molina; Geoffrey Sanchez; Emily Henderson
Cc: Adam Robinson; Araya Belay; Cristian Ginj; Sin Chii Chia; Melissa DiGrazia

Hi,

The following samples require re-work with dilutions.

WS# 4387619
B630787
BVX741 20x
BVX743 20x

WS#4389346
B630799
BVX844 50x
BVX845 50x

Colm McNamara
Analyst II, Liquid Chromatography
Secretary, Joint Health and Safety Committee

Office 905 817 5700, ext. 4009
Toll free 800 563 6266
6740 Campobello Road / Mississauga, ON Canada L5N 2L8

PFOSLOW-W Re-works

Colm McNamara
Sent: Friday, February 19, 2016 11:07 AM
To: Melinda Molina; Geoffrey Sanchez; Emily Henderson
Cc: Adam Robinson; Araya Belay; Cristian Ginj; Sin Chii Chia

Hi,

WS#4386408

BVX770 10x
BVX771 10x

Colm McNamara
Analyst II, Liquid Chromatography
Secretary, Joint Health and Safety Committee

Office 905 817 5700, ext. 4009
Toll free 800 563 6266
6740 Campobello Road / Mississauga, ON Canada L5N 2L8

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Success Through Science®. maxxam.ca

1.	4394558:MTRX SPK	MTRX SPK
2.	4394558:MTRX SPK:D1	MTRX SPK :D1
3.	4394558:SPIKE	SPIKE
4.	4394558:BLANK	BLANK
5.	4394558:BVX747-01	ZWICKLBAVER
6.	4394558:BVX752-01	OF-FB60-0216
7.	4394558:BVX753-01	OF-RW60-0216
8.	4394558:BVX754-01	OF-RW60P-0216
9.	4394558:BVX755-01	OF-FB46-0216
10.	4394558:BVX756-01	OF-RW46-0216
11.	4394558:BVX770-01	OF-RW08-0216
12.	4394558:BVX771-01	OF-RW08P-0216
13.	4394558:BVX844-01	OF-RW44-0216
14.	4394558:BVX845-01	OF-RW44P-0216

Project: D:\Analyst Data\Projects\Enviro\PFOS Batch:PFC_160226 Tab:Sample Set:SET1 AcqMethod:PFC_Water_Low.dam
Sample

	Sample Name	Rack Code	Rack Position	Plate Code	Plate Position	Vial Position	Data File	Inj.Volume (µl)
1	RINSE	2 Well Plate	1	*54VialPlate	2	1	PFC_160226\WS#4394551	3.000
2	4394551~BLANK	2 Well Plate	1	*54VialPlate	2	2	PFC_160226\WS#4394551	3.000
3	STD 1	2 Well Plate	1	*54VialPlate	2	3	PFC_160226\WS#4394551	3.000
4	STD 2	2 Well Plate	1	*54VialPlate	2	4	PFC_160226\WS#4394551	3.000
5	STD 3	2 Well Plate	1	*54VialPlate	2	5	PFC_160226\WS#4394551	3.000
6	STD 4	2 Well Plate	1	*54VialPlate	2	6	PFC_160226\WS#4394551	3.000
7	STD 5	2 Well Plate	1	*54VialPlate	2	7	PFC_160226\WS#4394551	3.000
8	STD 6	2 Well Plate	1	*54VialPlate	2	8	PFC_160226\WS#4394551	3.000
9	ICV	2 Well Plate	1	*54VialPlate	2	9	PFC_160226\WS#4394551	3.000
10	CCV	2 Well Plate	1	*54VialPlate	2	6	PFC_160226\WS#4394551	3.000
11	4394551~MTRX SPK	2 Well Plate	1	*54VialPlate	2	10	PFC_160226\WS#4394551	3.000
12	4394551~MTRX SPK:D1	2 Well Plate	1	*54VialPlate	2	11	PFC_160226\WS#4394551	3.000
13	4394551~SPIKE	2 Well Plate	1	*54VialPlate	2	12	PFC_160226\WS#4394551	3.000
14	4394551~BVX757-01	2 Well Plate	1	*54VialPlate	2	13	PFC_160226\WS#4394551	3.000
15	4394551~BVX758-01	2 Well Plate	1	*54VialPlate	2	14	PFC_160226\WS#4394551	3.000
16	4394551~BVX759-01	2 Well Plate	1	*54VialPlate	2	15	PFC_160226\WS#4394551	3.000
17	4394551~BVX760-01	2 Well Plate	1	*54VialPlate	2	16	PFC_160226\WS#4394551	3.000
18	4394551~BVX761-01	2 Well Plate	1	*54VialPlate	2	17	PFC_160226\WS#4394551	3.000
19	4394551~BVX762-01(50X)	2 Well Plate	1	*54VialPlate	2	18	PFC_160226\WS#4394551	3.000
20	4394551~BVX763-01	2 Well Plate	1	*54VialPlate	2	19	PFC_160226\WS#4394551	3.000
21	4394551~BVX764-01	2 Well Plate	1	*54VialPlate	2	20	PFC_160226\WS#4394551	3.000
22	4394551~BVX765-01	2 Well Plate	1	*54VialPlate	2	21	PFC_160226\WS#4394551	3.000
23	4394551~BVX766-01	2 Well Plate	1	*54VialPlate	2	22	PFC_160226\WS#4394551	3.000
24	CCV	2 Well Plate	1	*54VialPlate	2	6	PFC_160226\WS#4394551	3.000
25	4394551~BVX767-01	2 Well Plate	1	*54VialPlate	2	23	PFC_160226\WS#4394551	3.000
26	4394551~BVX768-01	2 Well Plate	1	*54VialPlate	2	24	PFC_160226\WS#4394551	3.000
27	4394551~BVX762-01(10X)	2 Well Plate	1	*54VialPlate	2	25	PFC_160226\WS#4394551	3.000
28	4394551~BVX762-01	2 Well Plate	1	*54VialPlate	2	26	PFC_160226\WS#4394551	3.000
29	CCV	2 Well Plate	1	*54VialPlate	2	6	PFC_160226\WS#4394558	3.000
30	4394558~BLANK	2 Well Plate	1	*54VialPlate	2	27	PFC_160226\WS#4394558	3.000
31	4394558~MTRX SPK	2 Well Plate	1	*54VialPlate	2	28	PFC_160226\WS#4394558	3.000
32	4394558~MTRX SPK:D1	2 Well Plate	1	*54VialPlate	2	29	PFC_160226\WS#4394558	3.000
33	4394558~SPIKE	2 Well Plate	1	*54VialPlate	2	30	PFC_160226\WS#4394558	3.000
34	4394558~BVX747-01	2 Well Plate	1	*54VialPlate	2	31	PFC_160226\WS#4394558	3.000
35	4394558~BVX752-01	2 Well Plate	1	*54VialPlate	2	32	PFC_160226\WS#4394558	3.000
36	4394558~BVX753-01	2 Well Plate	1	*54VialPlate	2	33	PFC_160226\WS#4394558	3.000
37	4394558~BVX754-01	2 Well Plate	1	*54VialPlate	2	34	PFC_160226\WS#4394558	3.000
38	4394558~BVX755-01	2 Well Plate	1	*54VialPlate	2	35	PFC_160226\WS#4394558	3.000
39	4394558~BVX756-01	2 Well Plate	1	*54VialPlate	2	36	PFC_160226\WS#4394558	3.000
40	4394558~BVX770-01(10X)	2 Well Plate	1	*54VialPlate	2	37	PFC_160226\WS#4394558	3.000
41	4394558~BVX771-01(10X)	2 Well Plate	1	*54VialPlate	2	38	PFC_160226\WS#4394558	3.000
42	4394558~BVX844-01(50X)	2 Well Plate	1	*54VialPlate	2	39	PFC_160226\WS#4394558	3.000
43	4394558~BVX845-01(50X)	2 Well Plate	1	*54VialPlate	2	40	PFC_160226\WS#4394558	3.000
44	CCV	2 Well Plate	1	*54VialPlate	2	6	PFC_160226\WS#4394558	3.000
45	RINSE	2 Well Plate	1	*54VialPlate	2	1	PFC_160226\WS#4395833	3.000
46	4395833~BLANK	2 Well Plate	1	*54VialPlate	1	1	PFC_160226\WS#4395833	3.000
47	STD 1	2 Well Plate	1	*54VialPlate	1	2	PFC_160226\WS#4395833	3.000
48	STD 2	2 Well Plate	1	*54VialPlate	1	3	PFC_160226\WS#4395833	3.000
49	STD 3	2 Well Plate	1	*54VialPlate	1	4	PFC_160226\WS#4395833	3.000
50	STD 4	2 Well Plate	1	*54VialPlate	1	5	PFC_160226\WS#4395833	3.000
51	STD 5	2 Well Plate	1	*54VialPlate	1	6	PFC_160226\WS#4395833	3.000
52	STD 6	2 Well Plate	1	*54VialPlate	1	7	PFC_160226\WS#4395833	3.000
53	ICV	2 Well Plate	1	*54VialPlate	1	8	PFC_160226\WS#4395833	3.000
54	CCV	2 Well Plate	1	*54VialPlate	1	5	PFC_160226\WS#4395833	3.000
55	4395833~MTRX SPK	2 Well Plate	1	*54VialPlate	1	9	PFC_160226\WS#4395833	3.000
56	4395833~MTRX SPK:D1	2 Well Plate	1	*54VialPlate	1	10	PFC_160226\WS#4395833	3.000
57	4395833~SPIKE	2 Well Plate	1	*54VialPlate	1	11	PFC_160226\WS#4395833	3.000
58	4395833~BVX702-01	2 Well Plate	1	*54VialPlate	1	12	PFC_160226\WS#4395833	3.000
59	4395833~BVX703-01	2 Well Plate	1	*54VialPlate	1	13	PFC_160226\WS#4395833	3.000
60	4395833~BVX704-01	2 Well Plate	1	*54VialPlate	1	14	PFC_160226\WS#4395833	3.000
61	4395833~BVX705-01	2 Well Plate	1	*54VialPlate	1	15	PFC_160226\WS#4395833	3.000
62	4395833~BVX706-01	2 Well Plate	1	*54VialPlate	1	16	PFC_160226\WS#4395833	3.000
63	4395833~BVX707-01	2 Well Plate	1	*54VialPlate	1	17	PFC_160226\WS#4395833	3.000
64	4395833~BVX708-01	2 Well Plate	1	*54VialPlate	1	18	PFC_160226\WS#4395833	3.000
65	4395833~BVX709-01	2 Well Plate	1	*54VialPlate	1	19	PFC_160226\WS#4395833	3.000
66	4395833~BVX710-01	2 Well Plate	1	*54VialPlate	1	20	PFC_160226\WS#4395833	3.000
67	4395833~BVX711-01	2 Well Plate	1	*54VialPlate	1	21	PFC_160226\WS#4395833	3.000
68	CCV	2 Well Plate	1	*54VialPlate	1	5	PFC_160226\WS#4395833	3.000
69	4395833~BVX712-01	2 Well Plate	1	*54VialPlate	1	22	PFC_160226\WS#4395833	3.000
70	4395833~BVX713-01	2 Well Plate	1	*54VialPlate	1	23	PFC_160226\WS#4395833	3.000
71	4395833~BVX714-01 (10x)	2 Well Plate	1	*54VialPlate	1	24	PFC_160226\WS#4395833	3.000
72	4395833~BVX715-01	2 Well Plate	1	*54VialPlate	1	25	PFC_160226\WS#4395833	3.000
73	4395833~BVX716-01	2 Well Plate	1	*54VialPlate	1	26	PFC_160226\WS#4395833	3.000
74	4395833~BVX717-01 (10x)	2 Well Plate	1	*54VialPlate	1	27	PFC_160226\WS#4395833	3.000
75	4395833~BVX718-01	2 Well Plate	1	*54VialPlate	1	28	PFC_160226\WS#4395833	3.000
76	4395833~BVX719-01	2 Well Plate	1	*54VialPlate	1	29	PFC_160226\WS#4395833	3.000
77	4395833~BVX720-01	2 Well Plate	1	*54VialPlate	1	30	PFC_160226\WS#4395833	3.000
78	4395833~BVX721-01	2 Well Plate	1	*54VialPlate	1	31	PFC_160226\WS#4395833	3.000
79	CCV	2 Well Plate	1	*54VialPlate	1	5	PFC_160226\WS#4395833	3.000
80	4395833~BVX714-01	2 Well Plate	1	*54VialPlate	1	32	PFC_160226\WS#4395833	3.000
81	4395833~BVX717-01	2 Well Plate	1	*54VialPlate	1	33	PFC_160226\WS#4395833	3.000
82	CCV	2 Well Plate	1	*54VialPlate	1	5	PFC_160226\WS#4395833	3.000

Column #123

MPA = soln #513, FSRE17

MPB = Methanol
Fisher lot# 158013

SCN 2016/02/26

	Sample ID	Acquisition Date	Acquisition Method	File Name	Rack Type	Rack Position	Vial Position	Plate Type	Plate Position
1	4394558~BLANK	2016/02/29 8:55:42 AM	PFC_Water_Low.dam	PFC_160226\WS#4394558.wiff	2 Well Plates	1	27	*54VialPlate*	2
2	STD 1	2016/02/29 9:00:47 AM	PFC_Water_Low.dam	PFC_160226\WS#4394551.wiff	2 Well Plates	1	3	*54VialPlate*	2
3	STD 2	2016/02/29 9:05:58 AM	PFC_Water_Low.dam	PFC_160226\WS#4394551.wiff	2 Well Plates	1	4	*54VialPlate*	2
4	STD 3	2016/02/29 9:11:03 AM	PFC_Water_Low.dam	PFC_160226\WS#4394551.wiff	2 Well Plates	1	5	*54VialPlate*	2
5	STD 4	2016/02/29 9:16:09 AM	PFC_Water_Low.dam	PFC_160226\WS#4394551.wiff	2 Well Plates	1	6	*54VialPlate*	2
6	STD 5	2016/02/29 9:21:15 AM	PFC_Water_Low.dam	PFC_160226\WS#4394551.wiff	2 Well Plates	1	7	*54VialPlate*	2
7	STD 6	2016/02/29 9:26:22 AM	PFC_Water_Low.dam	PFC_160226\WS#4394551.wiff	2 Well Plates	1	8	*54VialPlate*	2
8	ICV	2016/02/29 9:41:39 AM	PFC_Water_Low.dam	PFC_160226\WS#4394551.wiff	2 Well Plates	1	9	*54VialPlate*	2
9	CCV	2016/02/29 9:46:45 AM	PFC_Water_Low.dam	PFC_160226\WS#4394558.wiff	2 Well Plates	1	6	*54VialPlate*	2
10	4394558~MTRX SPK	2016/02/29 10:09:47 AM	PFC_Water_Low.dam	PFC_160226\WS#4394558.wiff	2 Well Plates	1	28	*54VialPlate*	2
11	4394558~MTRX SPK:D1	2016/02/29 10:14:52 AM	PFC_Water_Low.dam	PFC_160226\WS#4394558.wiff	2 Well Plates	1	29	*54VialPlate*	2
12	4394558~SPIKE	2016/02/29 10:19:58 AM	PFC_Water_Low.dam	PFC_160226\WS#4394558.wiff	2 Well Plates	1	30	*54VialPlate*	2
13	4394558~BVX747-01	2016/02/29 10:25:08 AM	PFC_Water_Low.dam	PFC_160226\WS#4394558.wiff	2 Well Plates	1	31	*54VialPlate*	2
14	4394558~BVX752-01	2016/02/29 10:30:15 AM	PFC_Water_Low.dam	PFC_160226\WS#4394558.wiff	2 Well Plates	1	32	*54VialPlate*	2
15	4394558~BVX753-01	2016/02/29 10:35:21 AM	PFC_Water_Low.dam	PFC_160226\WS#4394558.wiff	2 Well Plates	1	33	*54VialPlate*	2
16	4394558~BVX754-01	2016/02/29 10:40:27 AM	PFC_Water_Low.dam	PFC_160226\WS#4394558.wiff	2 Well Plates	1	34	*54VialPlate*	2
17	4394558~BVX755-01	2016/02/29 10:45:33 AM	PFC_Water_Low.dam	PFC_160226\WS#4394558.wiff	2 Well Plates	1	35	*54VialPlate*	2
18	4394558~BVX756-01	2016/02/29 10:50:39 AM	PFC_Water_Low.dam	PFC_160226\WS#4394558.wiff	2 Well Plates	1	36	*54VialPlate*	2
19	4394558~BVX770-01(10X)	2016/02/29 10:55:45 AM	PFC_Water_Low.dam	PFC_160226\WS#4394558.wiff	2 Well Plates	1	37	*54VialPlate*	2
20	4394558~BVX771-01(10X)	2016/02/29 11:00:50 AM	PFC_Water_Low.dam	PFC_160226\WS#4394558.wiff	2 Well Plates	1	38	*54VialPlate*	2
21	4394558~BVX844-01(50X)	2016/02/29 11:05:56 AM	PFC_Water_Low.dam	PFC_160226\WS#4394558.wiff	2 Well Plates	1	39	*54VialPlate*	2
22	4394558~BVX845-01(50X)	2016/02/29 11:11:02 AM	PFC_Water_Low.dam	PFC_160226\WS#4394558.wiff	2 Well Plates	1	40	*54VialPlate*	2
23	CCV	2016/02/29 11:21:13 AM	PFC_Water_Low.dam	PFC_160226\WS#4394558.wiff	2 Well Plates	1	6	*54VialPlate*	2
24	4394558~MTRX SPK	2016/02/29 11:26:22 AM	PFC_Water_Low.dam	PFC_160226\WS#4394558.wiff	2 Well Plates	1	28	*54VialPlate*	2
25	4394558~MTRX SPK:D1	2016/02/29 11:31:29 AM	PFC_Water_Low.dam	PFC_160226\WS#4394558.wiff	2 Well Plates	1	29	*54VialPlate*	2
26	CCV	2016/02/29 11:36:34 AM	PFC_Water_Low.dam	PFC_160226\WS#4394558.wiff	2 Well Plates	1	6	*54VialPlate*	2

5. Initial Calibration

Maxxam Analytics International
6740 Campobello Rd
Mississauga, Ontario, Canada
L5N 2L8
1-800-668-0639
www.maxxamanalytics.com

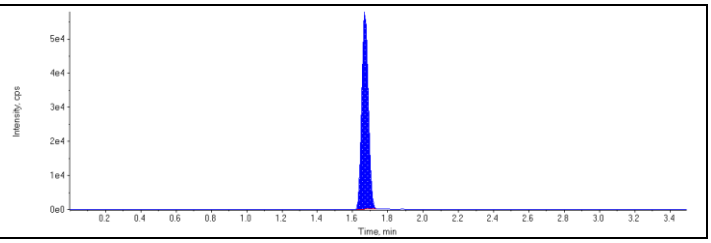
Sample Name	**STD 1**	**Injection Vial**	3
Sample ID	STD 1	**Injection Volume (µL)**	3
Sample Type	Standard	**Algorithm Used**	Analyst Classic
Acquisition Date	2016/02/25 5:07:53 PM	**Dilution Factor**	1.00
Acquisition Method	PFC_Water_Low.dam	**Sample Annotation**	-
Project	Enviro\PFOS	**Instrument Name**	LCMS03
Data File	PFC_160225\WS#4393242.wiff		
Result Table	PFC_Water_160225_4393242_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	149000.	1.67	1.00	-
MPFHpA	488000.	1.69	1.00	-
MPFOA	456000.	1.87	1.00	-
MPFOS	204000.	1.96	1.00	-
MPFNA	392000.	2.01	1.00	-
13C6-PFHxA IS	2420000.	1.42	1.00	-
N/A	N/A	N/A	N/A	-

Target Analyte	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)	Accuracy (%)
PFBS 1	76200	1.10	2.00	2.35	118.0
PFHxS 1	79400	1.67	2.00	2.01	101.0
PFHpA 1	105000	1.69	2.00	2.09	105.0
PFOA 1	128000	1.87	2.00	2.04	102.0
PFOS 1	58400	1.96	2.00	2.16	108.0
PFNA 1	97300	2.01	2.00	2.12	106.0
18O2-PFHxS	149000	1.67	100.	98.2	98.2
13C4-PFHpA	488000	1.69	100.	93.0	93.0
13C4-PFOA	456000	1.87	100.	96.2	96.2
13C4-PFOS	204000	1.96	100.	97.5	97.5
13C5-PFNA	392000	2.01	100.	97.9	97.9
13C6-PFHxA	2420000	1.42	100.	105.	105.0

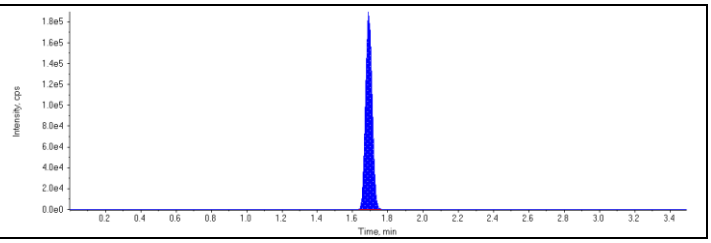
MPFHxS (Internal Standard)

RT (Exp. RT): 1.67(1.68) min
Concentration: 1.00 ng/L
Sample Type: (Standard)



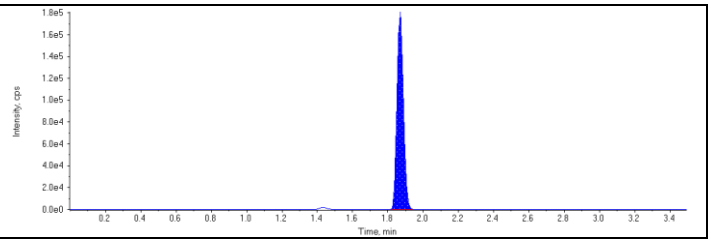
MPFHpA (Internal Standard)

RT (Exp. RT): 1.69(1.69) min
Concentration: 1.00 ng/L
Sample Type: (Standard)



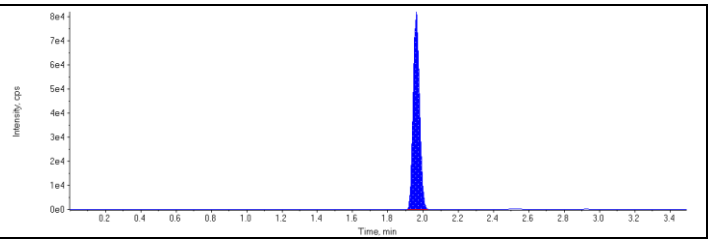
MPFOA (Internal Standard)

RT (Exp. RT): 1.87(1.88) min
Concentration: 1.00 ng/L
Sample Type: (Standard)



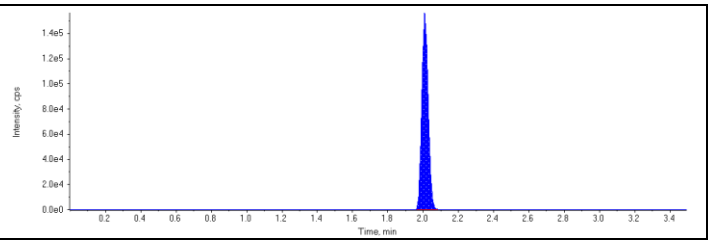
MPFOS (Internal Standard)

RT (Exp. RT): 1.96(1.97) min
Concentration: 1.00 ng/L
Sample Type: (Standard)



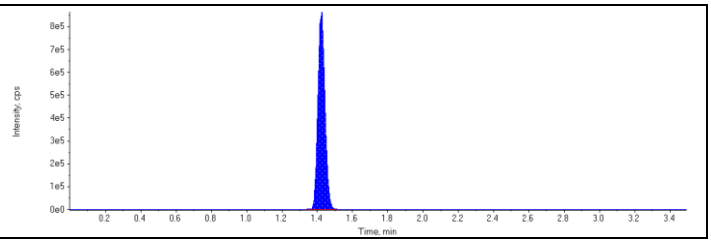
MPFNA (Internal Standard)

RT (Exp. RT): 2.01(2.02) min
Concentration: 1.00 ng/L
Sample Type: (Standard)



13C6-PFHxA IS (Internal Standard)

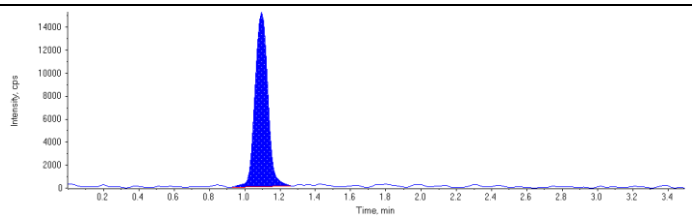
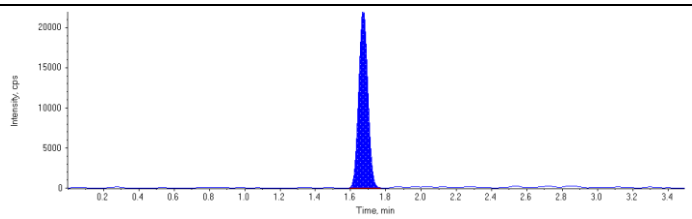
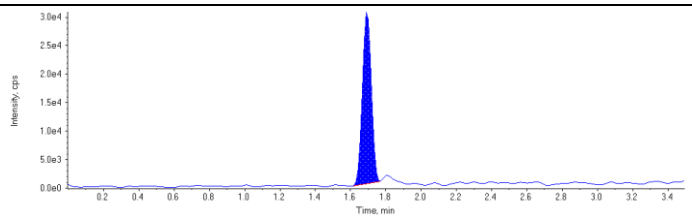
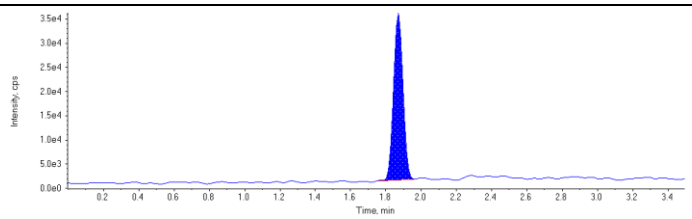
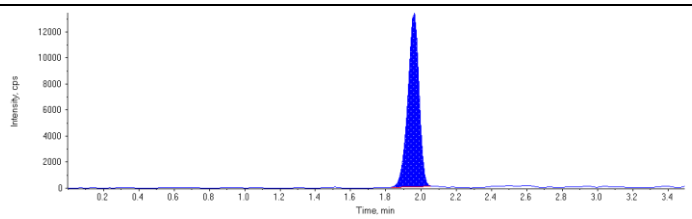
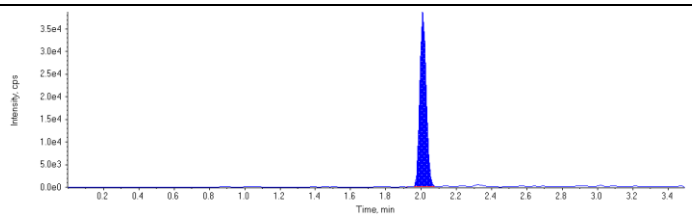
RT (Exp. RT): 1.42(1.42) min
Concentration: 1.00 ng/L
Sample Type: (Standard)

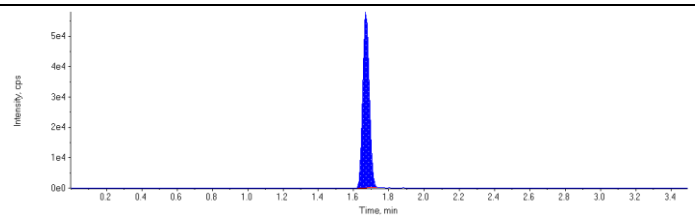
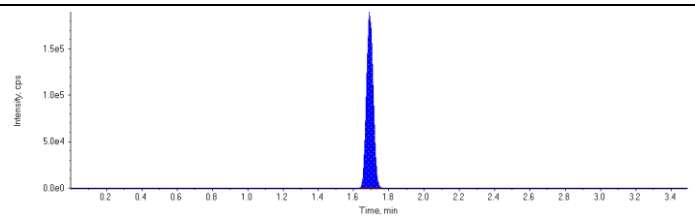
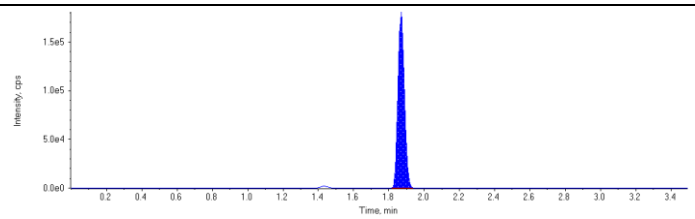
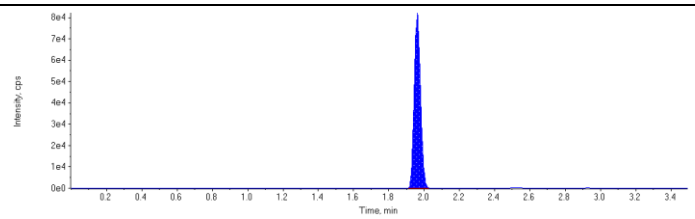
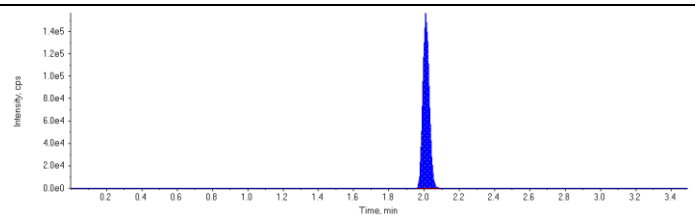
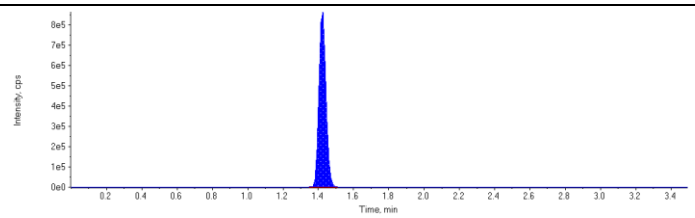


N/A (Internal Standard)

RT (Exp. RT): N/A(N/A) min
Concentration: N/A N/A
Sample Type: (Standard)

This image is not available

PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.10 (1.09) min Calculated Conc: 2.35 ng/L Area Ratio: 0.512 Sample Type: (Standard)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 2.01 ng/L Area Ratio: 0.534 Sample Type: (Standard)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.69 (1.75) min Calculated Conc: 2.09 ng/L Area Ratio: 0.216 Sample Type: (Standard)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.87 (1.92) min Calculated Conc: 2.04 ng/L Area Ratio: 0.280 Sample Type: (Standard)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 2.16 ng/L Area Ratio: 0.287 Sample Type: (Standard)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 2.12 ng/L Area Ratio: 0.249 Sample Type: (Standard)	

18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 98.2 ng/L Area Ratio: 0.0615 Sample Type: (Standard)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.69 (1.69) min Calculated Conc: 93.0 ng/L Area Ratio: 0.202 Sample Type: (Standard)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 96.2 ng/L Area Ratio: 0.188 Sample Type: (Standard)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 97.5 ng/L Area Ratio: 0.0842 Sample Type: (Standard)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 97.9 ng/L Area Ratio: 0.162 Sample Type: (Standard)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.42 (1.42) min Calculated Conc: 105. ng/L Area Ratio: 0.00 Sample Type: (Standard)	

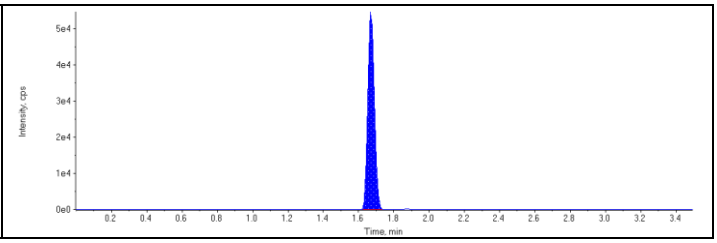
Sample Name	**STD 2**	**Injection Vial**	4
Sample ID	STD 2	**Injection Volume (µL)**	3
Sample Type	Standard	**Algorithm Used**	Analyst Classic
Acquisition Date	2016/02/25 5:12:59 PM	**Dilution Factor**	1.00
Acquisition Method	PFC_Water_Low.dam	**Sample Annotation**	-
Project	Enviro\PFOS	**Instrument Name**	LCMS03
Data File	PFC_160225\WS#4393242.wiff		
Result Table	PFC_Water_160225_4393242_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	142000.	1.67	1.00	-
MPFHpA	510000.	1.69	1.00	-
MPFOA	464000.	1.87	1.00	-
MPFOS	202000.	1.96	1.00	-
MPFNA	376000.	2.01	1.00	-
13C6-PFHxA IS	2280000.	1.42	1.00	-
N/A	N/A	N/A	N/A	-

Target Analyte	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)	Accuracy (%)
PFBS 1	134000	1.09	4.00	3.79	94.8
PFHxS 1	169000	1.67	4.00	4.16	104.0
PFHpA 1	213000	1.69	4.00	3.80	95.0
PFOA 1	244000	1.87	4.00	3.81	95.3
PFOS 1	113000	1.96	4.00	3.94	98.4
PFNA 1	180000	2.01	4.00	3.90	97.5
18O2-PFHxS	142000	1.67	100.	99.2	99.2
13C4-PFHpA	510000	1.69	100.	103.	103.0
13C4-PFOA	464000	1.87	100.	104.	104.0
13C4-PFOS	202000	1.96	100.	102.	102.0
13C5-PFNA	376000	2.01	100.	99.7	99.7
13C6-PFHxA	2280000	1.42	100.	98.6	98.6

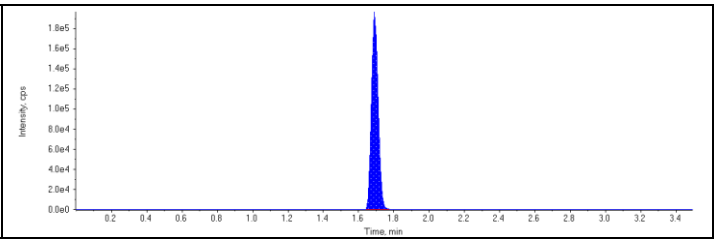
MPFHxS (Internal Standard)

RT (Exp. RT): 1.67(1.68) min
Concentration: 1.00 ng/L
Sample Type: (Standard)



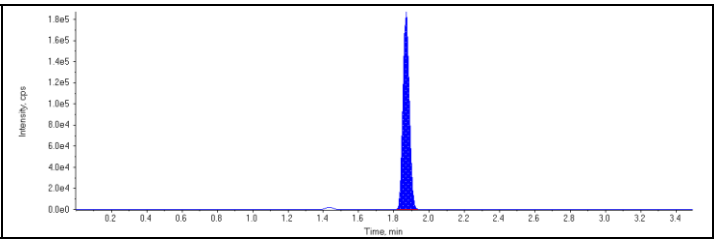
MPFHpA (Internal Standard)

RT (Exp. RT): 1.69(1.69) min
Concentration: 1.00 ng/L
Sample Type: (Standard)



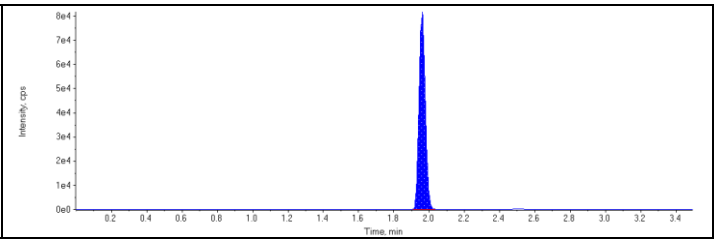
MPFOA (Internal Standard)

RT (Exp. RT): 1.87(1.88) min
Concentration: 1.00 ng/L
Sample Type: (Standard)



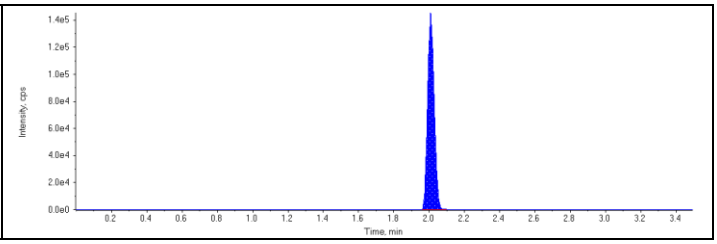
MPFOS (Internal Standard)

RT (Exp. RT): 1.96(1.97) min
Concentration: 1.00 ng/L
Sample Type: (Standard)



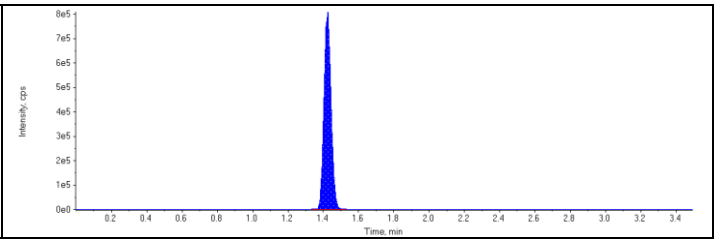
MPFNA (Internal Standard)

RT (Exp. RT): 2.01(2.02) min
Concentration: 1.00 ng/L
Sample Type: (Standard)



13C6-PFHxA IS (Internal Standard)

RT (Exp. RT): 1.42(1.42) min
Concentration: 1.00 ng/L
Sample Type: (Standard)



N/A (Internal Standard)

RT (Exp. RT): N/A(N/A) min
Concentration: N/A N/A
Sample Type: (Standard)

This image is not available

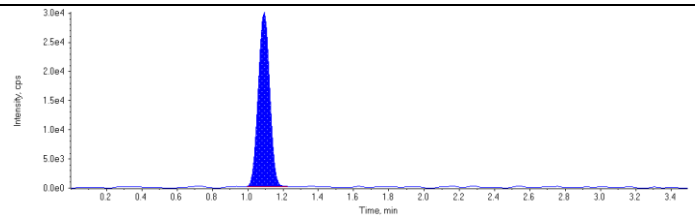
PFBS 1 (298.900/79.900 Da)

RT (Exp. RT): 1.09 (1.09) min

Calculated Conc: 3.79 ng/L

Area Ratio: 0.948

Sample Type: (Standard)



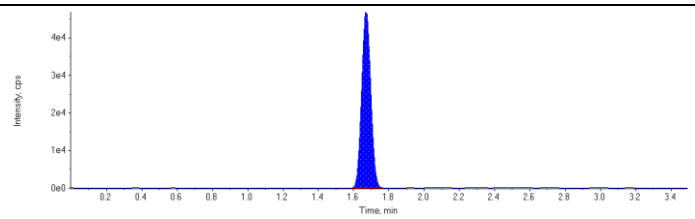
PFHxS 1 (398.900/79.900 Da)

RT (Exp. RT): 1.67 (1.68) min

Calculated Conc: 4.16 ng/L

Area Ratio: 1.19

Sample Type: (Standard)



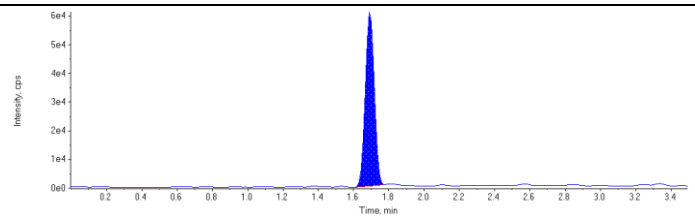
PFHpA 1 (363.000/319.000 Da)

RT (Exp. RT): 1.69 (1.75) min

Calculated Conc: 3.80 ng/L

Area Ratio: 0.418

Sample Type: (Standard)



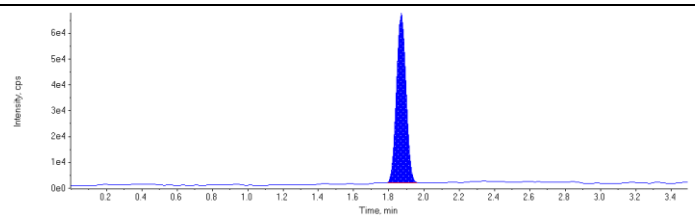
PFOA 1 (413.100/369.000 Da)

RT (Exp. RT): 1.87 (1.92) min

Calculated Conc: 3.81 ng/L

Area Ratio: 0.526

Sample Type: (Standard)



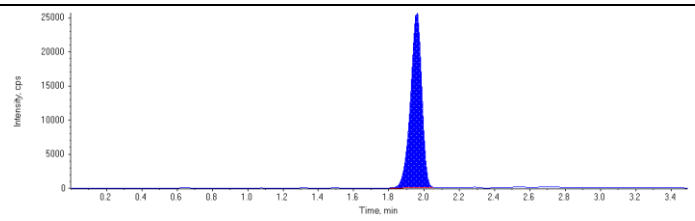
PFOS 1 (498.900/79.900 Da)

RT (Exp. RT): 1.96 (1.97) min

Calculated Conc: 3.94 ng/L

Area Ratio: 0.560

Sample Type: (Standard)



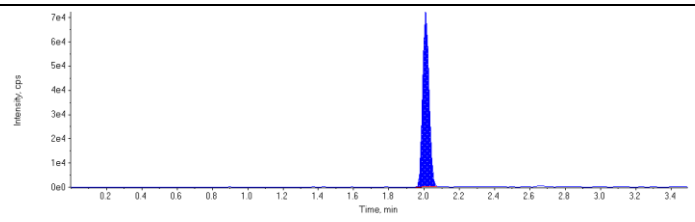
PFNA 1 (462.900/419.000 Da)

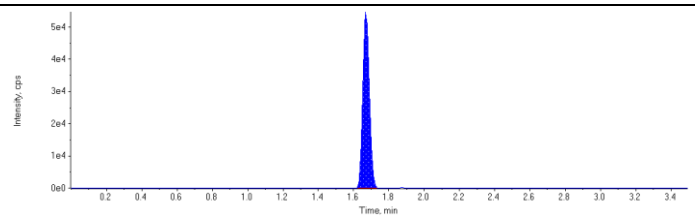
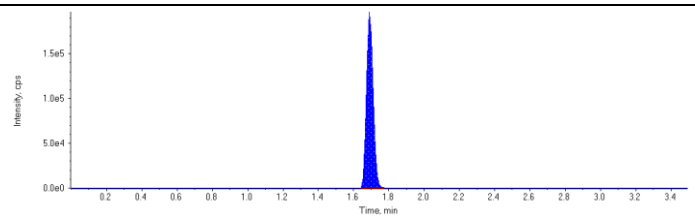
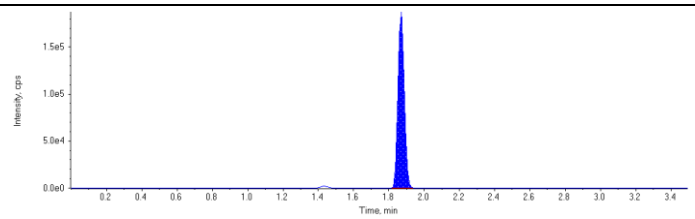
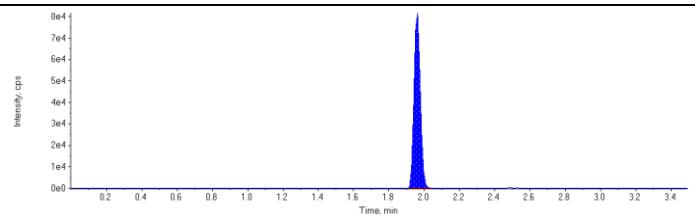
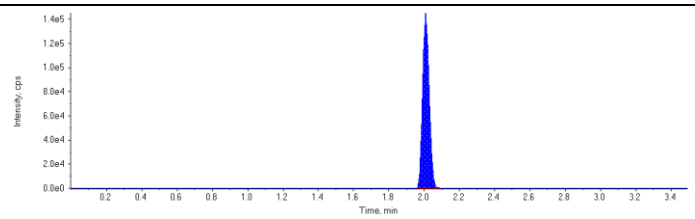
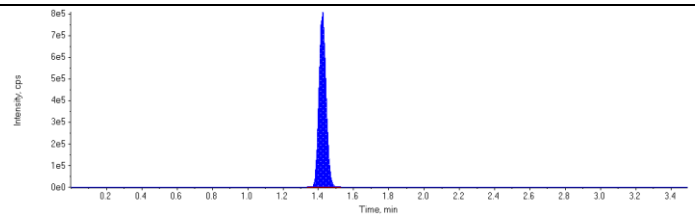
RT (Exp. RT): 2.01 (2.02) min

Calculated Conc: 3.90 ng/L

Area Ratio: 0.477

Sample Type: (Standard)



18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 99.2 ng/L Area Ratio: 0.0621 Sample Type: (Standard)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.69 (1.69) min Calculated Conc: 103. ng/L Area Ratio: 0.223 Sample Type: (Standard)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 104. ng/L Area Ratio: 0.203 Sample Type: (Standard)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 102. ng/L Area Ratio: 0.0883 Sample Type: (Standard)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 99.7 ng/L Area Ratio: 0.165 Sample Type: (Standard)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.42 (1.42) min Calculated Conc: 98.6 ng/L Area Ratio: 0.00 Sample Type: (Standard)	

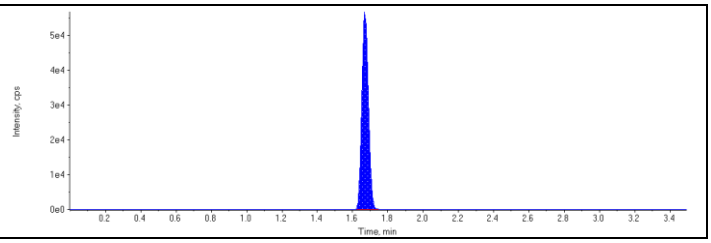
Sample Name	**STD 3**	**Injection Vial**	5
Sample ID	STD 3	**Injection Volume (µL)**	3
Sample Type	Standard	**Algorithm Used**	Analyst Classic
Acquisition Date	2016/02/25 5:18:05 PM	**Dilution Factor**	1.00
Acquisition Method	PFC_Water_Low.dam	**Sample Annotation**	-
Project	Enviro\PFOS	**Instrument Name**	LCMS03
Data File	PFC_160225\WS#4393242.wiff		
Result Table	PFC_Water_160225_4393242_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	147000.	1.67	1.00	-
MPFHpA	502000.	1.69	1.00	-
MPFOA	451000.	1.87	1.00	-
MPFOS	200000.	1.96	1.00	-
MPFNA	382000.	2.01	1.00	-
13C6-PFHxA IS	2190000.	1.42	1.00	-
N/A	N/A	N/A	N/A	-

Target Analyte	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)	Accuracy (%)
PFBS 1	437000	1.10	12.0	10.5	87.4
PFHxS 1	491000	1.67	12.0	11.2	93.3
PFHpA 1	668000	1.69	12.0	11.5	95.8
PFOA 1	722000	1.87	12.0	11.6	96.4
PFOS 1	327000	1.96	12.0	10.9	90.9
PFNA 1	531000	2.01	12.0	11.0	91.6
18O2-PFHxS	147000	1.67	100.	107.	107.0
13C4-PFHpA	502000	1.69	100.	106.	106.0
13C4-PFOA	451000	1.87	100.	105.	105.0
13C4-PFOS	200000	1.96	100.	106.	106.0
13C5-PFNA	382000	2.01	100.	106.	106.0
13C6-PFHxA	2190000	1.42	100.	94.6	94.6

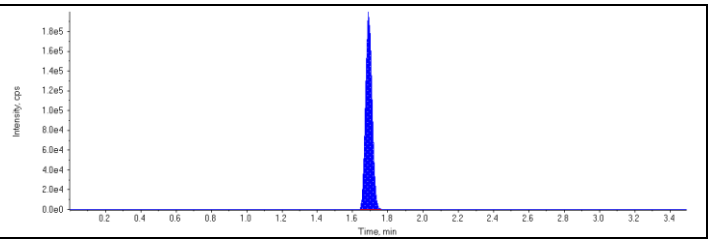
MPFHxS (Internal Standard)

RT (Exp. RT): 1.67(1.68) min
Concentration: 1.00 ng/L
Sample Type: (Standard)



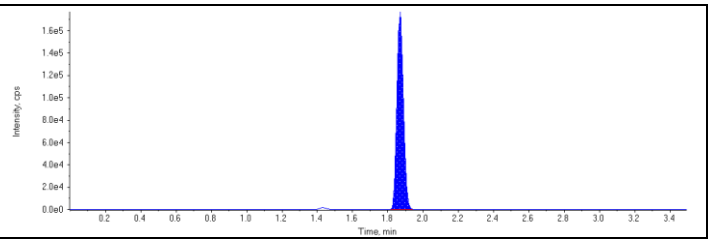
MPFHpA (Internal Standard)

RT (Exp. RT): 1.69(1.69) min
Concentration: 1.00 ng/L
Sample Type: (Standard)



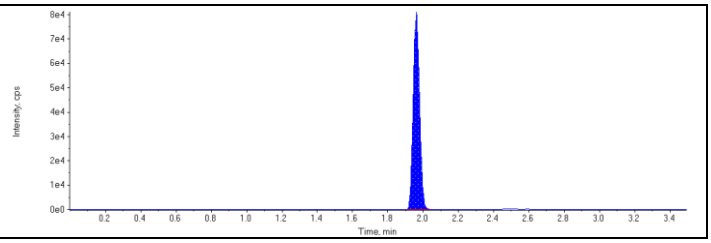
MPFOA (Internal Standard)

RT (Exp. RT): 1.87(1.88) min
Concentration: 1.00 ng/L
Sample Type: (Standard)



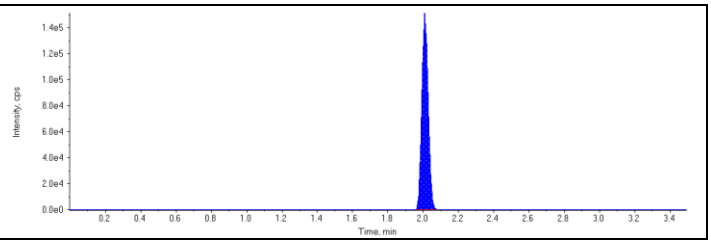
MPFOS (Internal Standard)

RT (Exp. RT): 1.96(1.97) min
Concentration: 1.00 ng/L
Sample Type: (Standard)



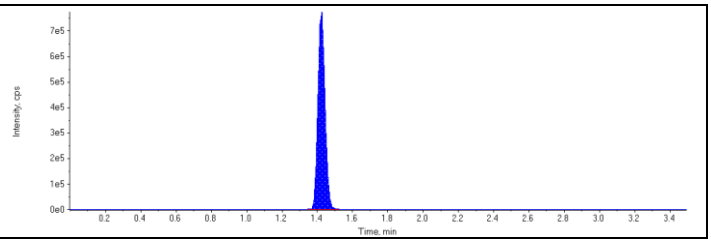
MPFNA (Internal Standard)

RT (Exp. RT): 2.01(2.02) min
Concentration: 1.00 ng/L
Sample Type: (Standard)



13C6-PFHxA IS (Internal Standard)

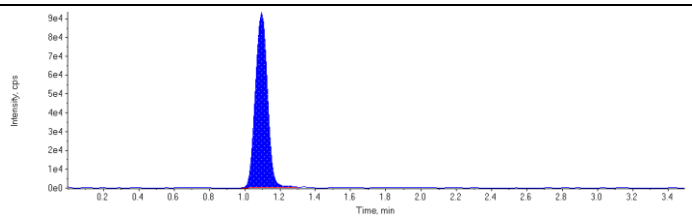
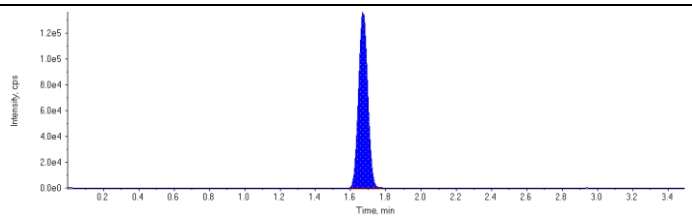
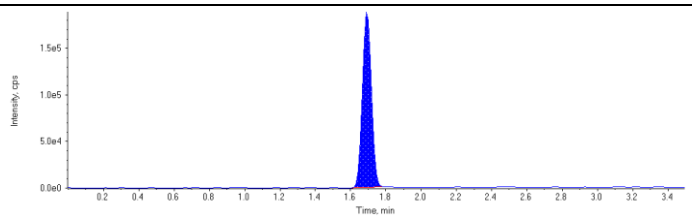
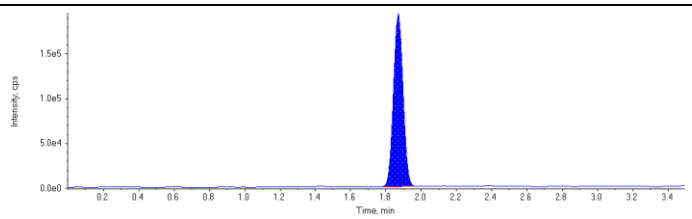
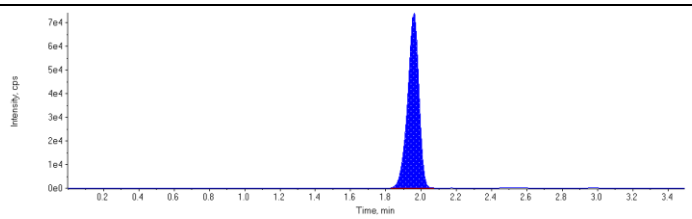
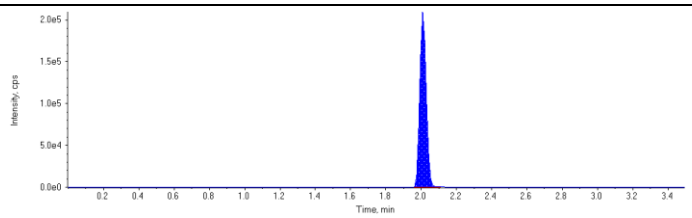
RT (Exp. RT): 1.42(1.42) min
Concentration: 1.00 ng/L
Sample Type: (Standard)

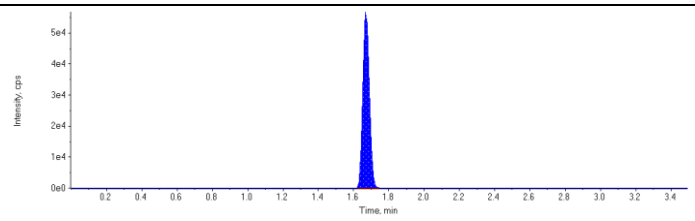
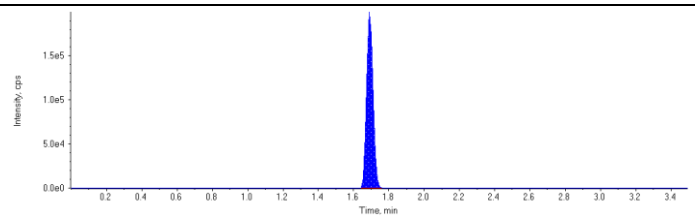
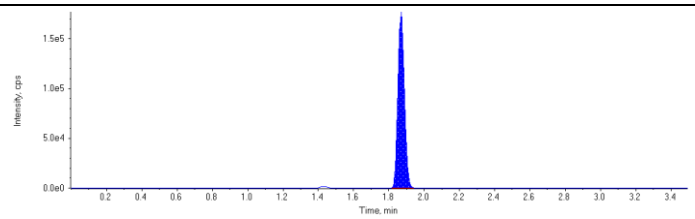
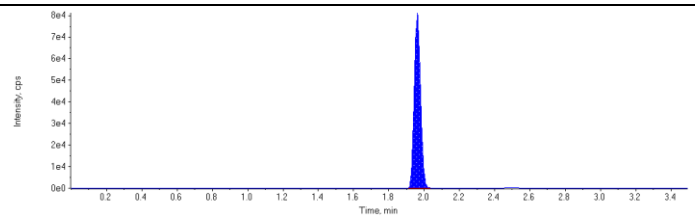
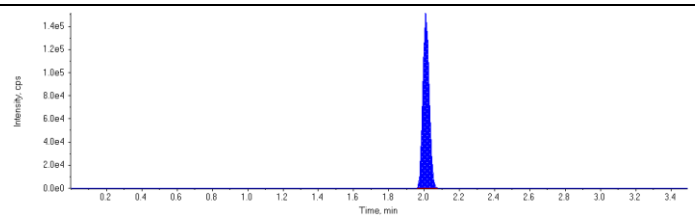
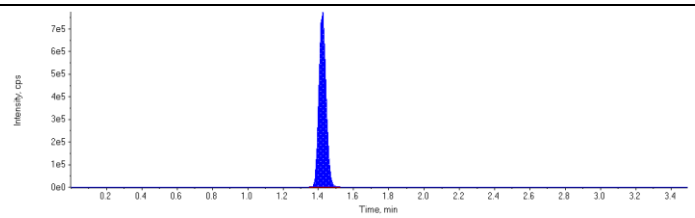


N/A (Internal Standard)

RT (Exp. RT): N/A(N/A) min
Concentration: N/A N/A
Sample Type: (Standard)

This image is not available

PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.10 (1.09) min Calculated Conc: 10.5 ng/L Area Ratio: 2.98 Sample Type: (Standard)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 11.2 ng/L Area Ratio: 3.35 Sample Type: (Standard)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.69 (1.75) min Calculated Conc: 11.5 ng/L Area Ratio: 1.33 Sample Type: (Standard)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.87 (1.92) min Calculated Conc: 11.6 ng/L Area Ratio: 1.60 Sample Type: (Standard)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 10.9 ng/L Area Ratio: 1.63 Sample Type: (Standard)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 11.0 ng/L Area Ratio: 1.39 Sample Type: (Standard)	

18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 107. ng/L Area Ratio: 0.0670 Sample Type: (Standard)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.69 (1.69) min Calculated Conc: 106. ng/L Area Ratio: 0.229 Sample Type: (Standard)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 105. ng/L Area Ratio: 0.206 Sample Type: (Standard)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 106. ng/L Area Ratio: 0.0915 Sample Type: (Standard)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 106. ng/L Area Ratio: 0.174 Sample Type: (Standard)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.42 (1.42) min Calculated Conc: 94.6 ng/L Area Ratio: 0.00 Sample Type: (Standard)	

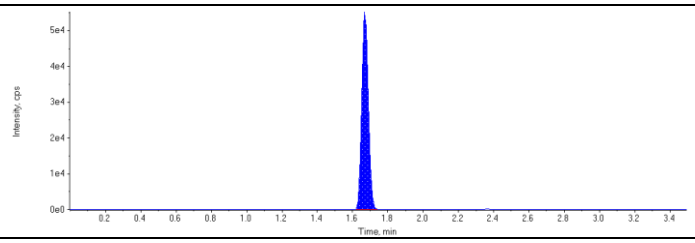
Sample Name	**STD 4**	**Injection Vial**	6
Sample ID	STD 4	**Injection Volume (µL)**	3
Sample Type	Standard	**Algorithm Used**	Analyst Classic
Acquisition Date	2016/02/25 5:23:11 PM	**Dilution Factor**	1.00
Acquisition Method	PFC_Water_Low.dam	**Sample Annotation**	-
Project	Enviro\PFOS	**Instrument Name**	LCMS03
Data File	PFC_160225\WS#4393242.wiff		
Result Table	PFC_Water_160225_4393242_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	142000.	1.67	1.00	-
MPFHpA	521000.	1.69	1.00	-
MPFOA	459000.	1.87	1.00	-
MPFOS	193000.	1.96	1.00	-
MPFNA	392000.	2.01	1.00	-
13C6-PFHxA IS	2330000.	1.42	1.00	-
N/A	N/A	N/A	N/A	-

Target Analyte	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)	Accuracy (%)
PFBS 1	1300000	1.10	30.0	30.8	103.0
PFHxS 1	1380000	1.67	30.0	32.0	107.0
PFHpA 1	1900000	1.69	30.0	31.0	103.0
PFOA 1	2040000	1.87	30.0	32.1	107.0
PFOS 1	930000	1.96	30.0	31.6	105.0
PFNA 1	1610000	2.01	30.0	32.2	107.0
18O2-PFHxS	142000	1.67	100.	97.7	97.7
13C4-PFHpA	521000	1.69	100.	103.	103.0
13C4-PFOA	459000	1.87	100.	101.	101.0
13C4-PFOS	193000	1.96	100.	96.1	96.1
13C5-PFNA	392000	2.01	100.	102.	102.0
13C6-PFHxA	2330000	1.42	100.	100.	100.0

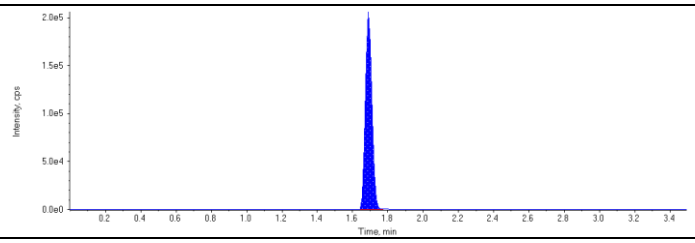
MPFHxS (Internal Standard)

RT (Exp. RT): 1.67(1.68) min
Concentration: 1.00 ng/L
Sample Type: (Standard)



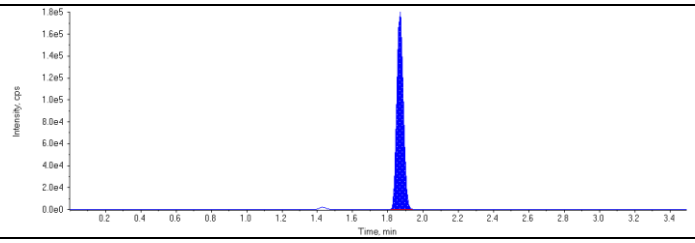
MPFHpA (Internal Standard)

RT (Exp. RT): 1.69(1.69) min
Concentration: 1.00 ng/L
Sample Type: (Standard)



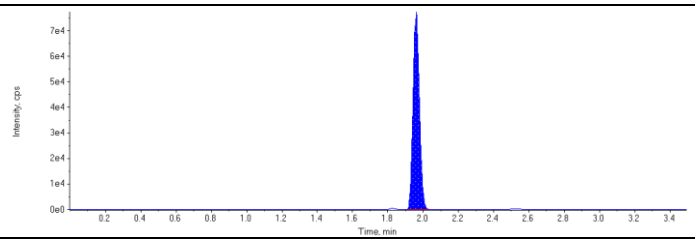
MPFOA (Internal Standard)

RT (Exp. RT): 1.87(1.88) min
Concentration: 1.00 ng/L
Sample Type: (Standard)



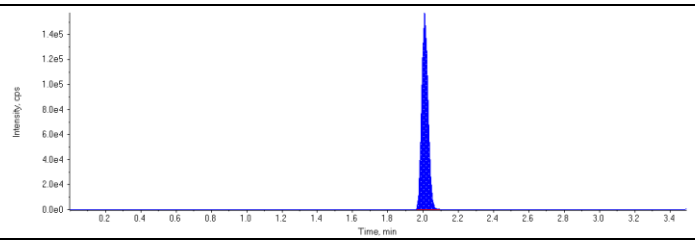
MPFOS (Internal Standard)

RT (Exp. RT): 1.96(1.97) min
Concentration: 1.00 ng/L
Sample Type: (Standard)



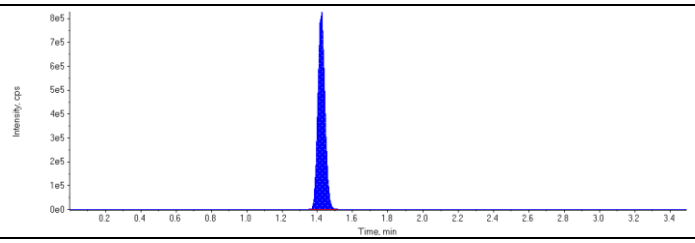
MPFNA (Internal Standard)

RT (Exp. RT): 2.01(2.02) min
Concentration: 1.00 ng/L
Sample Type: (Standard)



13C6-PFHxA IS (Internal Standard)

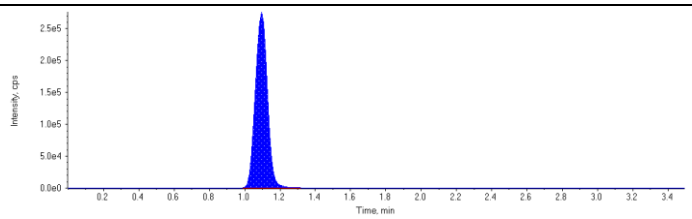
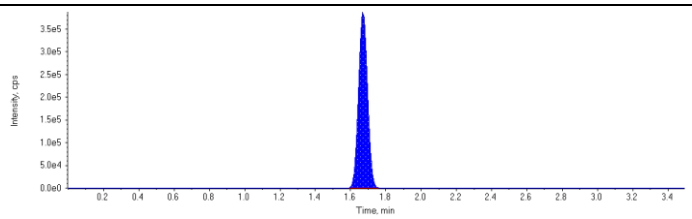
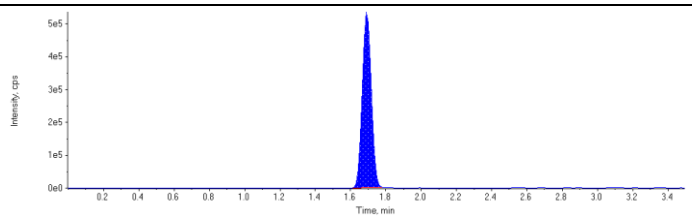
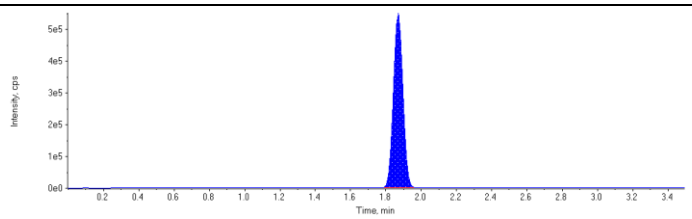
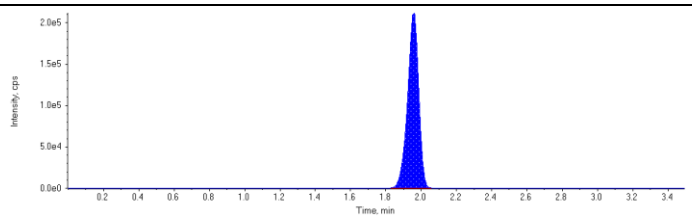
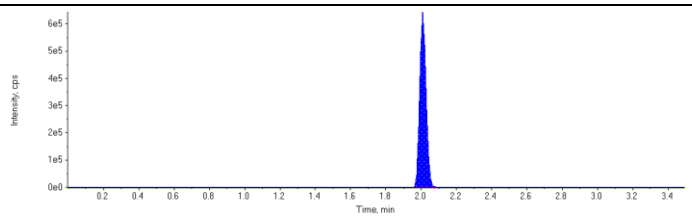
RT (Exp. RT): 1.42(1.42) min
Concentration: 1.00 ng/L
Sample Type: (Standard)

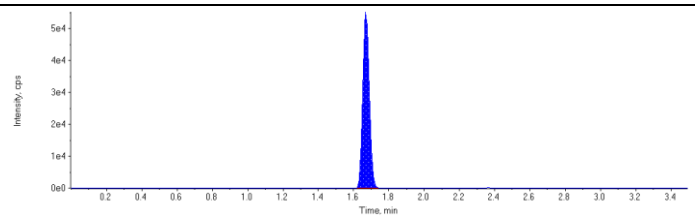
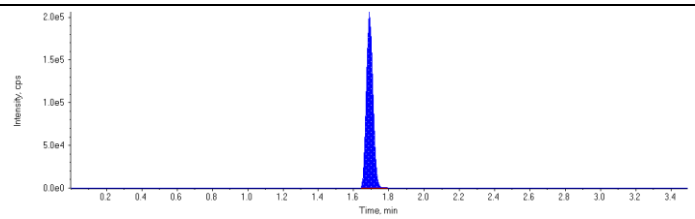
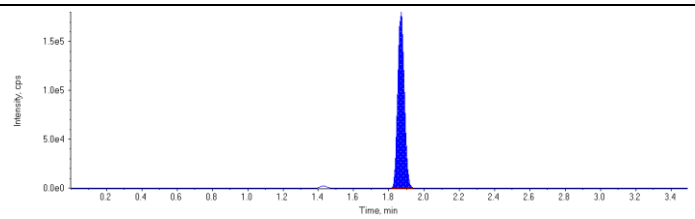
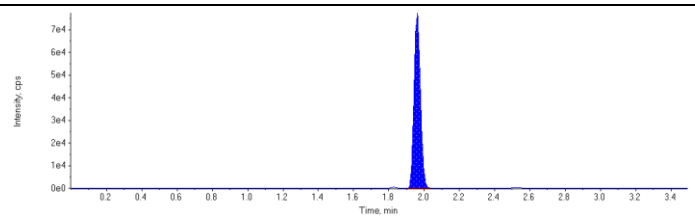
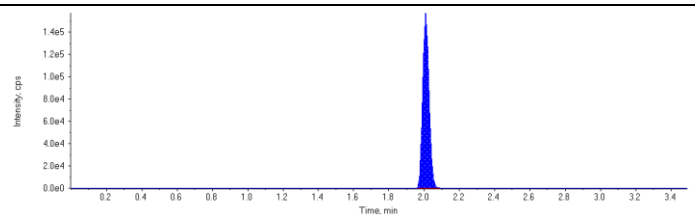
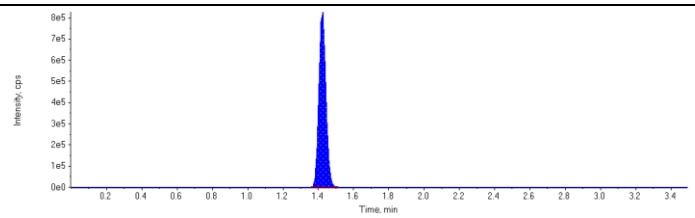


N/A (Internal Standard)

RT (Exp. RT): N/A(N/A) min
Concentration: N/A N/A
Sample Type: (Standard)

This image is not available

PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.10 (1.09) min Calculated Conc: 30.8 ng/L Area Ratio: 9.13 Sample Type: (Standard)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 32.0 ng/L Area Ratio: 9.70 Sample Type: (Standard)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.69 (1.75) min Calculated Conc: 31.0 ng/L Area Ratio: 3.64 Sample Type: (Standard)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.87 (1.92) min Calculated Conc: 32.1 ng/L Area Ratio: 4.45 Sample Type: (Standard)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 31.6 ng/L Area Ratio: 4.82 Sample Type: (Standard)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 32.2 ng/L Area Ratio: 4.12 Sample Type: (Standard)	

18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 97.7 ng/L Area Ratio: 0.0612 Sample Type: (Standard)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.69 (1.69) min Calculated Conc: 103. ng/L Area Ratio: 0.224 Sample Type: (Standard)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 101. ng/L Area Ratio: 0.197 Sample Type: (Standard)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 96.1 ng/L Area Ratio: 0.0829 Sample Type: (Standard)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 102. ng/L Area Ratio: 0.168 Sample Type: (Standard)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.42 (1.42) min Calculated Conc: 100. ng/L Area Ratio: 0.00 Sample Type: (Standard)	

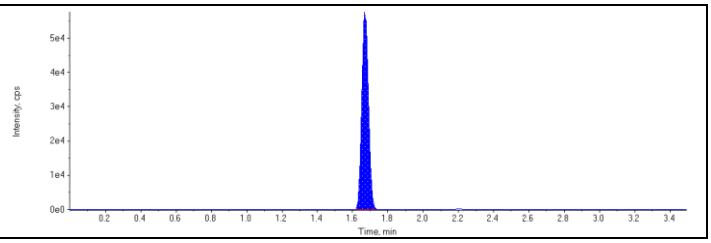
Sample Name	**STD 5**	**Injection Vial**	7
Sample ID	STD 5	**Injection Volume (µL)**	3
Sample Type	Standard	**Algorithm Used**	Analyst Classic
Acquisition Date	2016/02/25 5:28:16 PM	**Dilution Factor**	1.00
Acquisition Method	PFC_Water_Low.dam	**Sample Annotation**	-
Project	Enviro\PFOS	**Instrument Name**	LCMS03
Data File	PFC_160225\WS#4393242.wiff		
Result Table	PFC_Water_160225_4393242_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	150000.	1.67	1.00	-
MPFHpA	486000.	1.69	1.00	-
MPFOA	446000.	1.87	1.00	-
MPFOS	197000.	1.96	1.00	-
MPFNA	382000.	2.01	1.00	-
13C6-PFHxA IS	2240000.	1.42	1.00	-
N/A	N/A	N/A	N/A	-

Target Analyte	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)	Accuracy (%)
PFBS 1	2490000	1.09	60.0	55.4	92.3
PFHxS 1	2530000	1.67	60.0	55.3	92.1
PFHpA 1	3580000	1.69	60.0	62.5	104.0
PFOA 1	3770000	1.87	60.0	61.0	102.0
PFOS 1	1720000	1.96	60.0	57.0	95.0
PFNA 1	2840000	2.01	60.0	58.0	96.7
18O2-PFHxS	150000	1.67	100.	107.	107.0
13C4-PFHpA	486000	1.69	100.	100.	100.0
13C4-PFOA	446000	1.87	100.	102.	102.0
13C4-PFOS	197000	1.96	100.	102.	102.0
13C5-PFNA	382000	2.01	100.	103.	103.0
13C6-PFHxA	2240000	1.42	100.	96.7	96.7

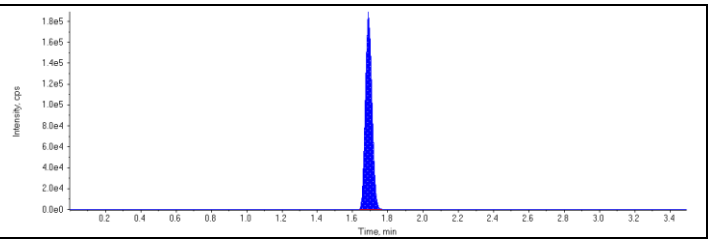
MPFHxS (Internal Standard)

RT (Exp. RT): 1.67(1.68) min
Concentration: 1.00 ng/L
Sample Type: (Standard)



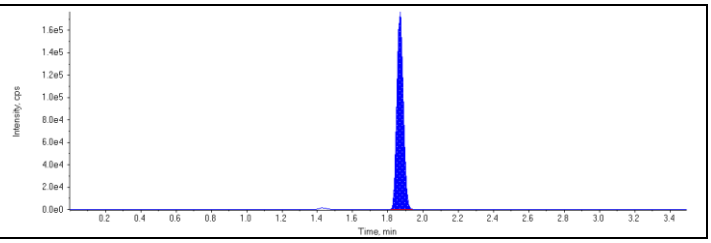
MPFHpA (Internal Standard)

RT (Exp. RT): 1.69(1.69) min
Concentration: 1.00 ng/L
Sample Type: (Standard)



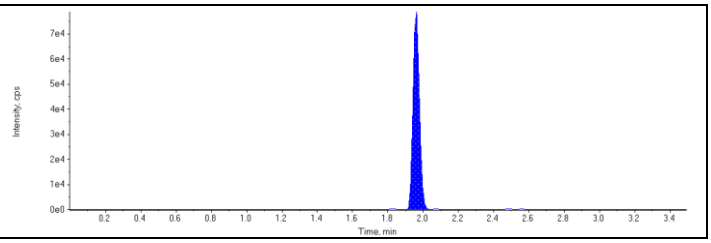
MPFOA (Internal Standard)

RT (Exp. RT): 1.87(1.88) min
Concentration: 1.00 ng/L
Sample Type: (Standard)



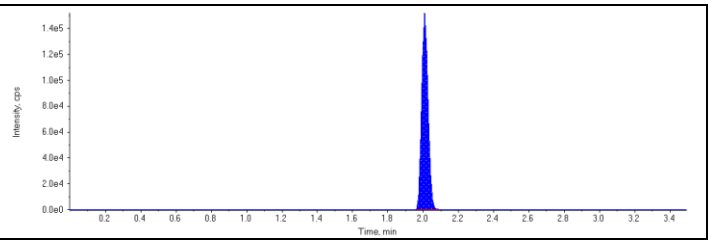
MPFOS (Internal Standard)

RT (Exp. RT): 1.96(1.97) min
Concentration: 1.00 ng/L
Sample Type: (Standard)



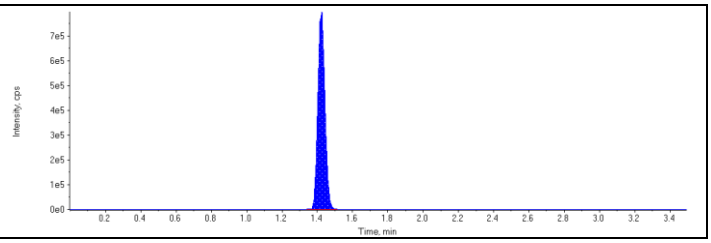
MPFNA (Internal Standard)

RT (Exp. RT): 2.01(2.02) min
Concentration: 1.00 ng/L
Sample Type: (Standard)



13C6-PFHxA IS (Internal Standard)

RT (Exp. RT): 1.42(1.42) min
Concentration: 1.00 ng/L
Sample Type: (Standard)



N/A (Internal Standard)

RT (Exp. RT): N/A(N/A) min
Concentration: N/A N/A
Sample Type: (Standard)

This image is not available

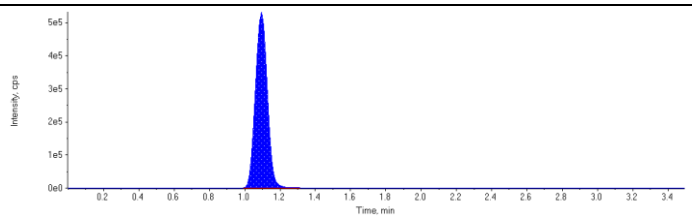
PFBS 1 (298.900/79.900 Da)

RT (Exp. RT): 1.09 (1.09) min

Calculated Conc: 55.4 ng/L

Area Ratio: 16.6

Sample Type: (Standard)



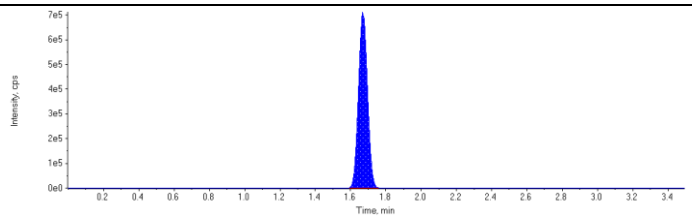
PFHxS 1 (398.900/79.900 Da)

RT (Exp. RT): 1.67 (1.68) min

Calculated Conc: 55.3 ng/L

Area Ratio: 16.8

Sample Type: (Standard)



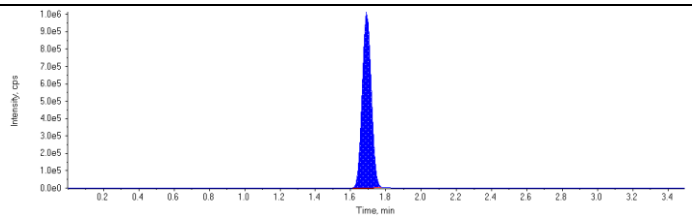
PFHpA 1 (363.000/319.000 Da)

RT (Exp. RT): 1.69 (1.75) min

Calculated Conc: 62.5 ng/L

Area Ratio: 7.38

Sample Type: (Standard)



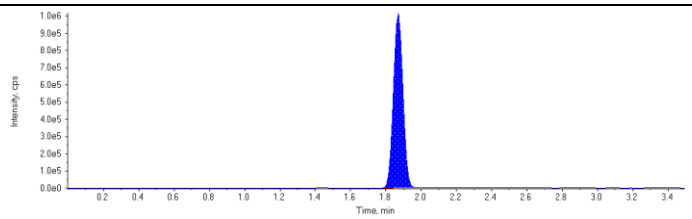
PFOA 1 (413.100/369.000 Da)

RT (Exp. RT): 1.87 (1.92) min

Calculated Conc: 61.0 ng/L

Area Ratio: 8.46

Sample Type: (Standard)



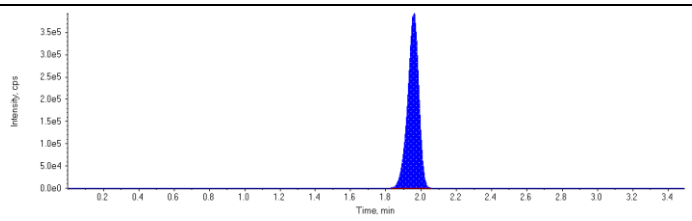
PFOS 1 (498.900/79.900 Da)

RT (Exp. RT): 1.96 (1.97) min

Calculated Conc: 57.0 ng/L

Area Ratio: 8.73

Sample Type: (Standard)



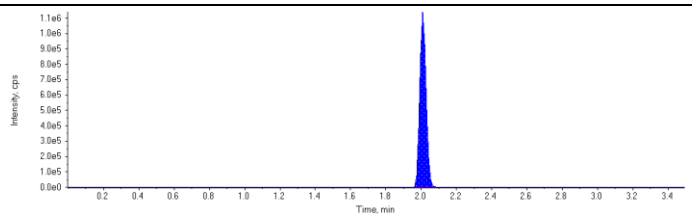
PFNA 1 (462.900/419.000 Da)

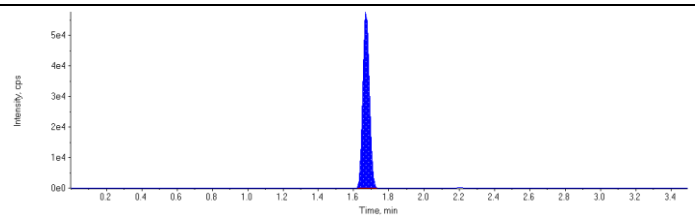
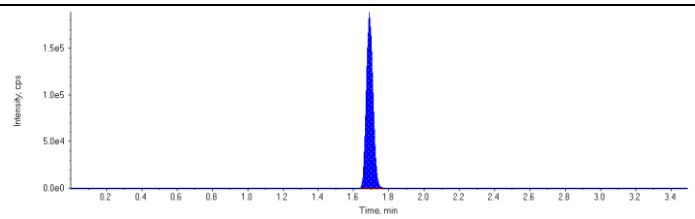
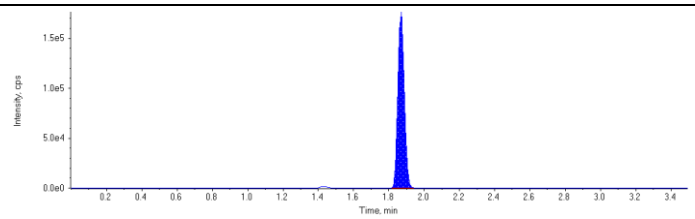
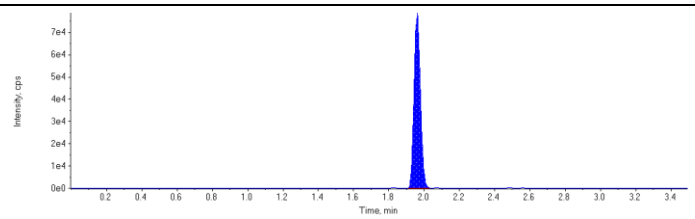
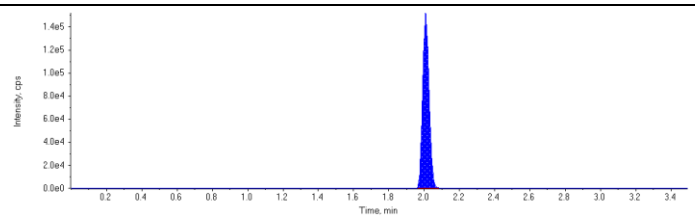
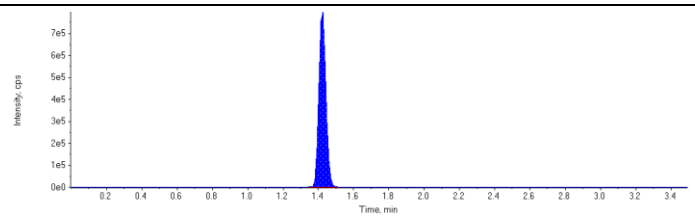
RT (Exp. RT): 2.01 (2.02) min

Calculated Conc: 58.0 ng/L

Area Ratio: 7.44

Sample Type: (Standard)



18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 107. ng/L Area Ratio: 0.0671 Sample Type: (Standard)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.69 (1.69) min Calculated Conc: 100. ng/L Area Ratio: 0.217 Sample Type: (Standard)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 102. ng/L Area Ratio: 0.199 Sample Type: (Standard)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 102. ng/L Area Ratio: 0.0878 Sample Type: (Standard)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 103. ng/L Area Ratio: 0.171 Sample Type: (Standard)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.42 (1.42) min Calculated Conc: 96.7 ng/L Area Ratio: 0.00 Sample Type: (Standard)	

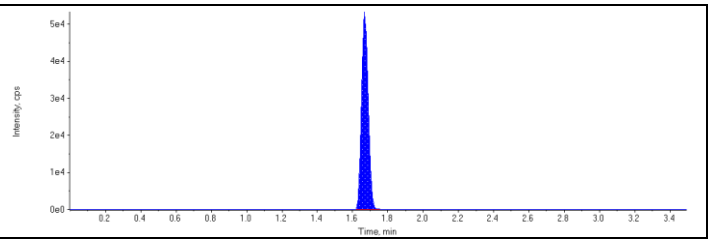
Sample Name	**STD 6**	**Injection Vial**	8
Sample ID	STD 6	**Injection Volume (µL)**	3
Sample Type	Standard	**Algorithm Used**	Analyst Classic
Acquisition Date	2016/02/25 5:33:23 PM	**Dilution Factor**	1.00
Acquisition Method	PFC_Water_Low.dam	**Sample Annotation**	-
Project	Enviro\PFOS	**Instrument Name**	LCMS03
Data File	PFC_160225\WS#4393242.wiff		
Result Table	PFC_Water_160225_4393242_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	139000.	1.67	1.00	-
MPFHpA	499000.	1.69	1.00	-
MPFOA	442000.	1.87	1.00	-
MPFOS	202000.	1.96	1.00	-
MPFNA	368000.	2.01	1.00	-
13C6-PFHxA IS	2430000.	1.42	1.00	-
N/A	N/A	N/A	N/A	-

Target Analyte	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)	Accuracy (%)
PFBS 1	4390000	1.09	100.	105.	105.0
PFHxS 1	4380000	1.67	100.	103.	103.0
PFHpA 1	5730000	1.69	100.	97.1	97.1
PFOA 1	5970000	1.87	100.	97.5	97.5
PFOS 1	3180000	1.96	100.	102.	102.0
PFNA 1	4760000	2.01	100.	101.	101.0
18O2-PFHxS	139000	1.67	100.	91.0	91.0
13C4-PFHpA	499000	1.69	100.	94.7	94.7
13C4-PFOA	442000	1.87	100.	92.7	92.7
13C4-PFOS	202000	1.96	100.	96.3	96.3
13C5-PFNA	368000	2.01	100.	91.5	91.5
13C6-PFHxA	2430000	1.42	100.	105.	105.0

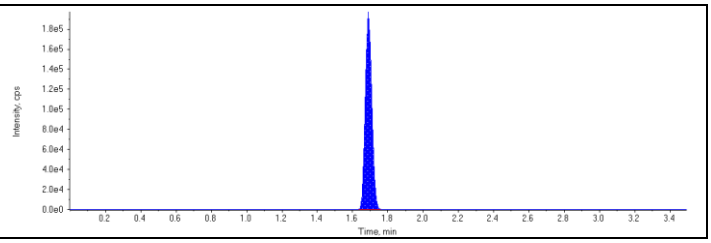
MPFHxS (Internal Standard)

RT (Exp. RT): 1.67(1.68) min
Concentration: 1.00 ng/L
Sample Type: (Standard)



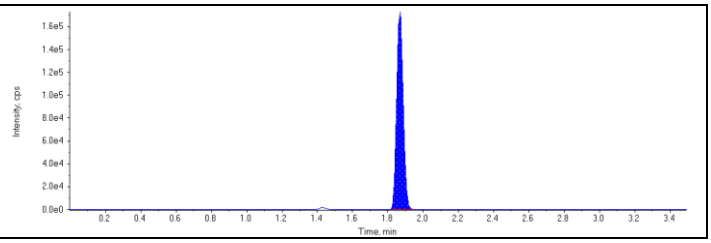
MPFHpA (Internal Standard)

RT (Exp. RT): 1.69(1.69) min
Concentration: 1.00 ng/L
Sample Type: (Standard)



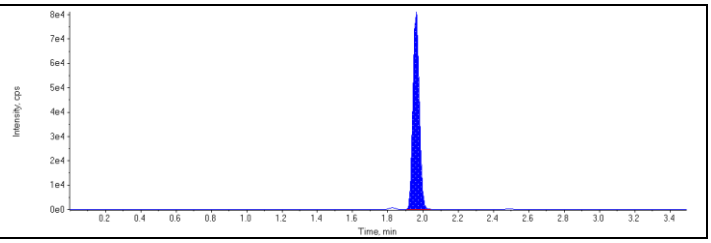
MPFOA (Internal Standard)

RT (Exp. RT): 1.87(1.88) min
Concentration: 1.00 ng/L
Sample Type: (Standard)



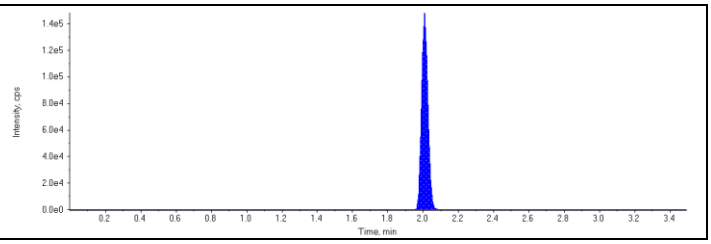
MPFOS (Internal Standard)

RT (Exp. RT): 1.96(1.97) min
Concentration: 1.00 ng/L
Sample Type: (Standard)



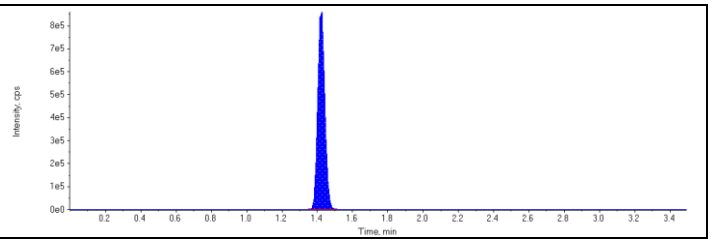
MPFNA (Internal Standard)

RT (Exp. RT): 2.01(2.02) min
Concentration: 1.00 ng/L
Sample Type: (Standard)



13C6-PFHxA IS (Internal Standard)

RT (Exp. RT): 1.42(1.42) min
Concentration: 1.00 ng/L
Sample Type: (Standard)



N/A (Internal Standard)

RT (Exp. RT): N/A(N/A) min
Concentration: N/A N/A
Sample Type: (Standard)

This image is not available

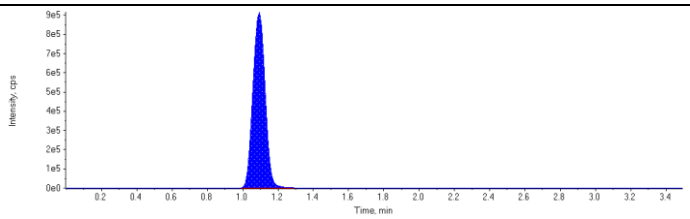
PFBS 1 (298.900/79.900 Da)

RT (Exp. RT): 1.09 (1.09) min

Calculated Conc: 105. ng/L

Area Ratio: 31.7

Sample Type: (Standard)



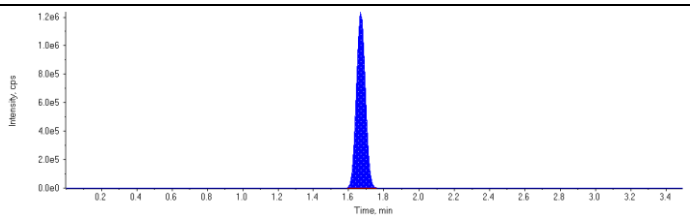
PFHxS 1 (398.900/79.900 Da)

RT (Exp. RT): 1.67 (1.68) min

Calculated Conc: 103. ng/L

Area Ratio: 31.6

Sample Type: (Standard)



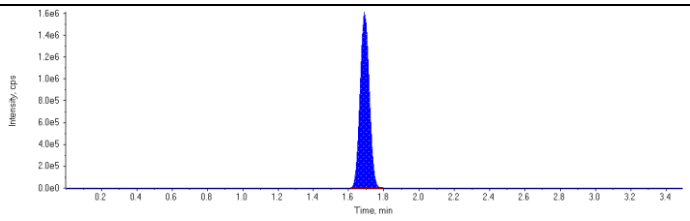
PFHpA 1 (363.000/319.000 Da)

RT (Exp. RT): 1.69 (1.75) min

Calculated Conc: 97.1 ng/L

Area Ratio: 11.5

Sample Type: (Standard)



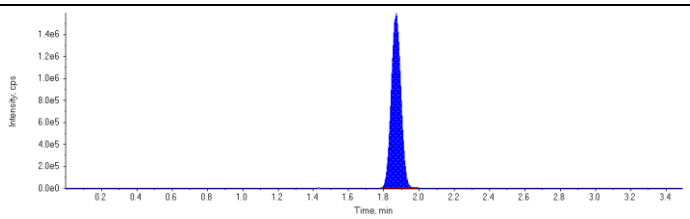
PFOA 1 (413.100/369.000 Da)

RT (Exp. RT): 1.87 (1.92) min

Calculated Conc: 97.5 ng/L

Area Ratio: 13.5

Sample Type: (Standard)



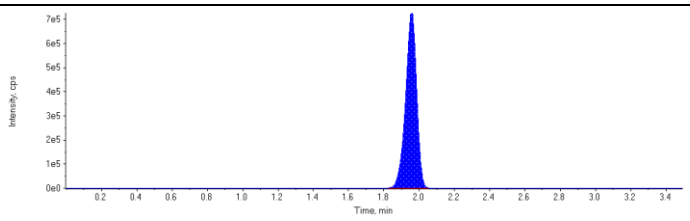
PFOS 1 (498.900/79.900 Da)

RT (Exp. RT): 1.96 (1.97) min

Calculated Conc: 102. ng/L

Area Ratio: 15.7

Sample Type: (Standard)



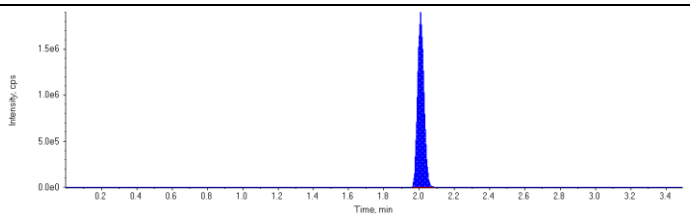
PFNA 1 (462.900/419.000 Da)

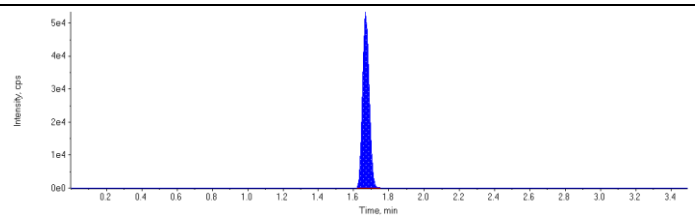
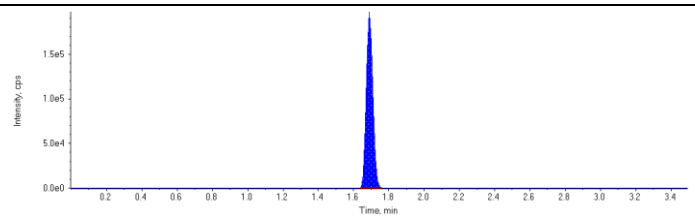
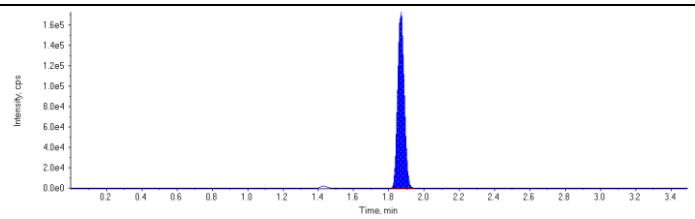
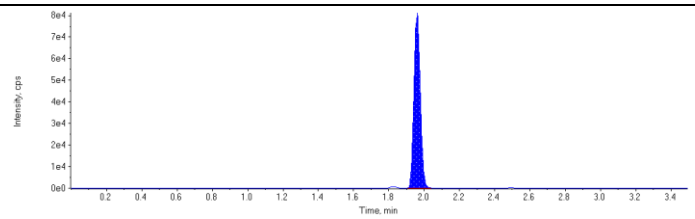
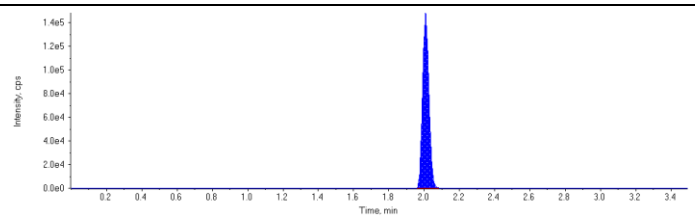
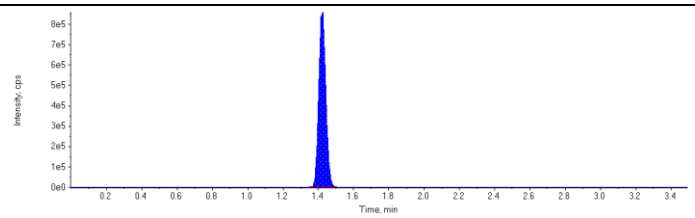
RT (Exp. RT): 2.01 (2.02) min

Calculated Conc: 101. ng/L

Area Ratio: 12.9

Sample Type: (Standard)



18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 91.0 ng/L Area Ratio: 0.0570 Sample Type: (Standard)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.69 (1.69) min Calculated Conc: 94.7 ng/L Area Ratio: 0.205 Sample Type: (Standard)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 92.7 ng/L Area Ratio: 0.182 Sample Type: (Standard)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 96.3 ng/L Area Ratio: 0.0831 Sample Type: (Standard)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 91.5 ng/L Area Ratio: 0.151 Sample Type: (Standard)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.42 (1.42) min Calculated Conc: 105. ng/L Area Ratio: 0.00 Sample Type: (Standard)	

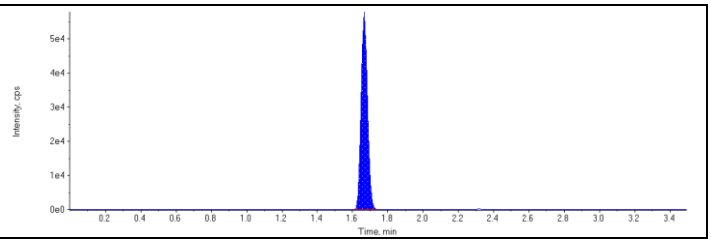
Sample Name	**STD 1**	**Injection Vial**	3
Sample ID	STD 1	**Injection Volume (µL)**	3
Sample Type	Standard	**Algorithm Used**	Analyst Classic
Acquisition Date	2016/02/29 9:00:47 AM	**Dilution Factor**	1.00
Acquisition Method	PFC_Water_Low.dam	**Sample Annotation**	-
Project	Enviro\PFOS	**Instrument Name**	LCMS03
Data File	PFC_160226\WS#4394551.wiff		
Result Table	PFC_Water_160226_4394558_ULow_6.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	143000.	1.67	1.00	-
MPFHpA	491000.	1.69	1.00	-
MPFOA	404000.	1.87	1.00	-
MPFOS	192000.	1.96	1.00	-
MPFNA	325000.	2.01	1.00	-
13C6-PFHxA IS	2590000.	1.42	1.00	-
N/A	N/A	N/A	N/A	-

Target Analyte	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)	Accuracy (%)
PFBS 1	83500	1.09	2.00	2.50	125.0
PFHxS 1	88300	1.67	2.00	2.37	119.0
PFHpA 1	116000	1.69	2.00	2.07	104.0
PFOA 1	120000	1.87	2.00	2.10	105.0
PFOS 1	56300	1.96	2.00	2.26	113.0
PFNA 1	89800	2.01	2.00	2.08	104.0
18O2-PFHxS	143000	1.67	100.	85.3	85.3
13C4-PFHpA	491000	1.69	100.	98.9	98.9
13C4-PFOA	404000	1.87	100.	93.3	93.3
13C4-PFOS	192000	1.96	100.	93.9	93.9
13C5-PFNA	325000	2.01	100.	93.9	93.9
13C6-PFHxA	2590000	1.42	100.	104.	104.0

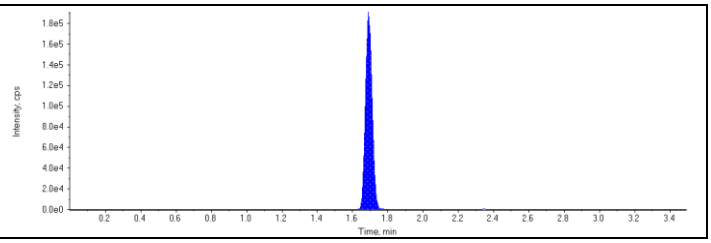
MPFHxS (Internal Standard)

RT (Exp. RT): 1.67(1.68) min
Concentration: 1.00 ng/L
Sample Type: (Standard)



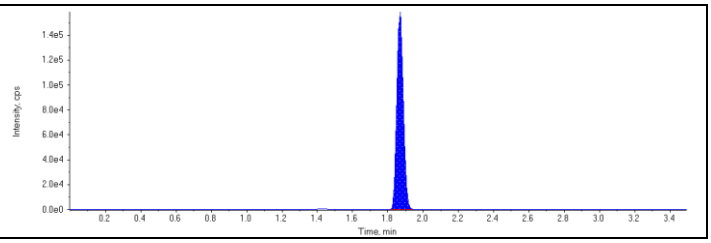
MPFHpA (Internal Standard)

RT (Exp. RT): 1.69(1.69) min
Concentration: 1.00 ng/L
Sample Type: (Standard)



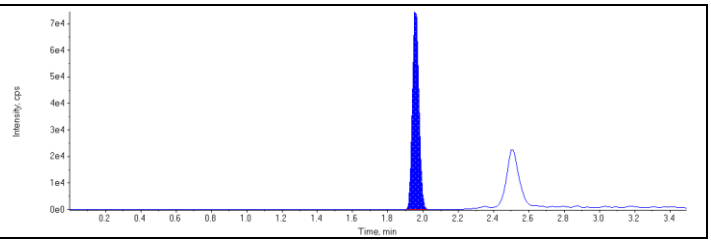
MPFOA (Internal Standard)

RT (Exp. RT): 1.87(1.88) min
Concentration: 1.00 ng/L
Sample Type: (Standard)



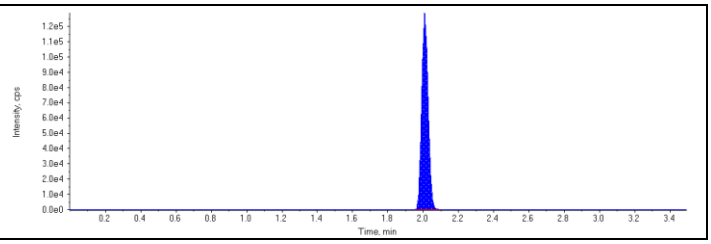
MPFOS (Internal Standard)

RT (Exp. RT): 1.96(1.97) min
Concentration: 1.00 ng/L
Sample Type: (Standard)



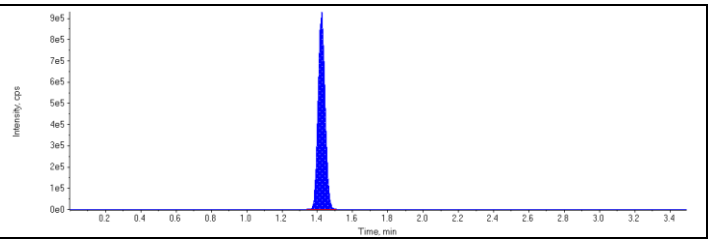
MPFNA (Internal Standard)

RT (Exp. RT): 2.01(2.02) min
Concentration: 1.00 ng/L
Sample Type: (Standard)



13C6-PFHxA IS (Internal Standard)

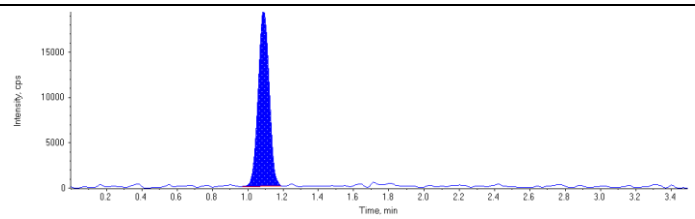
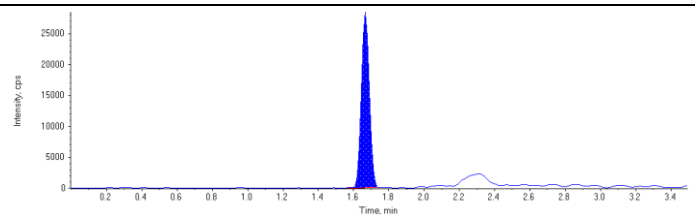
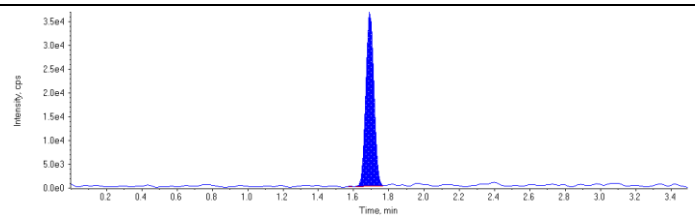
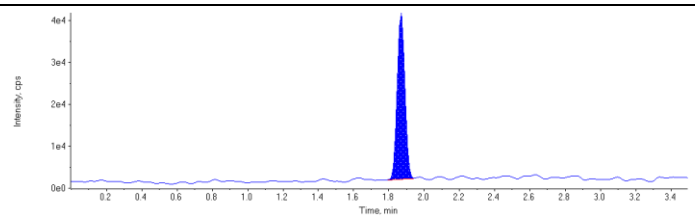
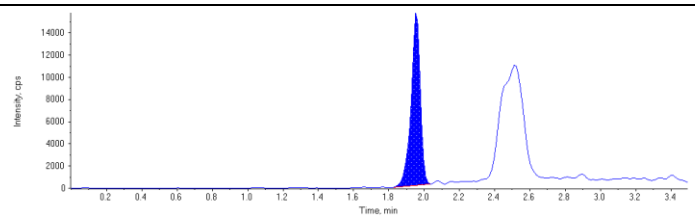
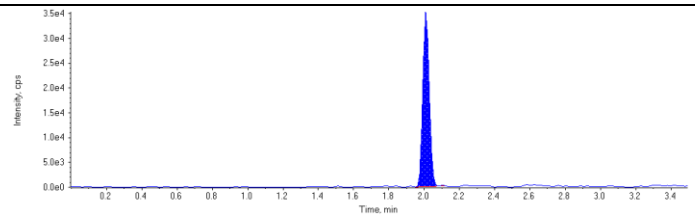
RT (Exp. RT): 1.42(1.42) min
Concentration: 1.00 ng/L
Sample Type: (Standard)

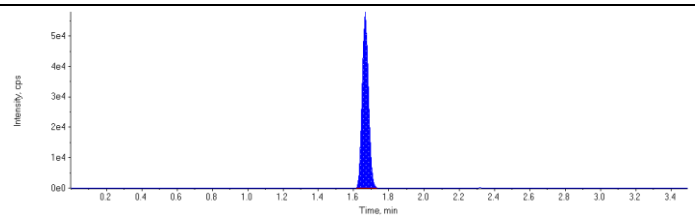
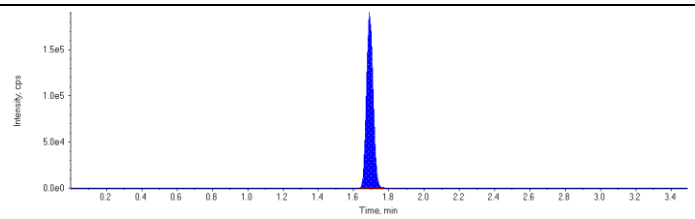
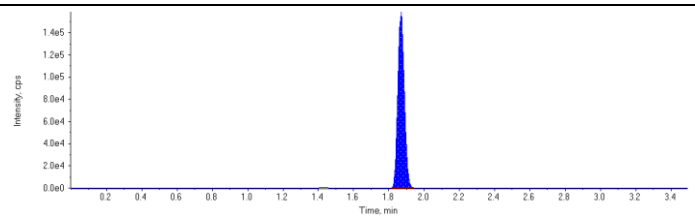
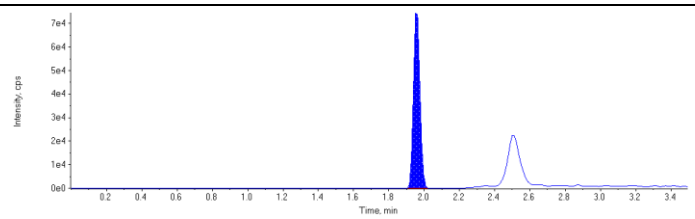
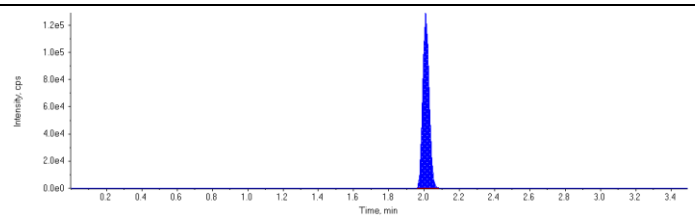
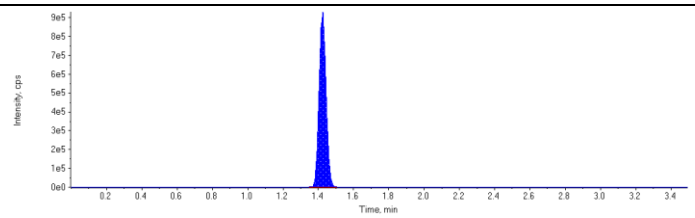


N/A (Internal Standard)

RT (Exp. RT): N/A(N/A) min
Concentration: N/A N/A
Sample Type: (Standard)

This image is not available

PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.09 (1.09) min Calculated Conc: 2.50 ng/L Area Ratio: 0.586 Sample Type: (Standard)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 2.37 ng/L Area Ratio: 0.620 Sample Type: (Standard)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.69 (1.70) min Calculated Conc: 2.07 ng/L Area Ratio: 0.236 Sample Type: (Standard)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 2.10 ng/L Area Ratio: 0.297 Sample Type: (Standard)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 2.26 ng/L Area Ratio: 0.294 Sample Type: (Standard)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 2.08 ng/L Area Ratio: 0.276 Sample Type: (Standard)	

18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 85.3 ng/L Area Ratio: 0.0551 Sample Type: (Standard)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.69 (1.69) min Calculated Conc: 98.9 ng/L Area Ratio: 0.190 Sample Type: (Standard)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 93.3 ng/L Area Ratio: 0.156 Sample Type: (Standard)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 93.9 ng/L Area Ratio: 0.0740 Sample Type: (Standard)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 93.9 ng/L Area Ratio: 0.126 Sample Type: (Standard)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.42 (1.42) min Calculated Conc: 104. ng/L Area Ratio: 0.00 Sample Type: (Standard)	

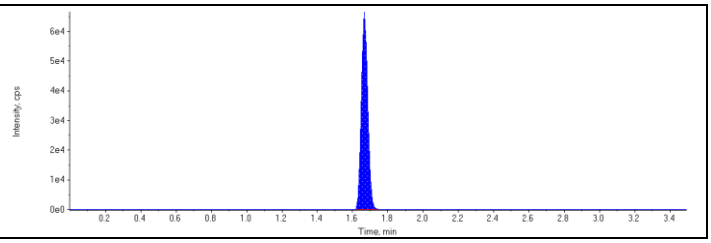
Sample Name	**STD 2**	**Injection Vial**	4
Sample ID	STD 2	**Injection Volume (µL)**	3
Sample Type	Standard	**Algorithm Used**	Analyst Classic
Acquisition Date	2016/02/29 9:05:58 AM	**Dilution Factor**	1.00
Acquisition Method	PFC_Water_Low.dam	**Sample Annotation**	-
Project	Enviro\PFOS	**Instrument Name**	LCMS03
Data File	PFC_160226\WS#4394551.wiff		
Result Table	PFC_Water_160226_4394558_ULow_6.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	165000.	1.67	1.00	-
MPFHpA	475000.	1.69	1.00	-
MPFOA	434000.	1.87	1.00	-
MPFOS	198000.	1.96	1.00	-
MPFNA	328000.	2.01	1.00	-
13C6-PFHxA IS	2530000.	1.43	1.00	-
N/A	N/A	N/A	N/A	-

Target Analyte	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)	Accuracy (%)
PFBS 1	149000	1.10	4.00	3.62	90.5
PFHxS 1	157000	1.67	4.00	3.50	87.5
PFHpA 1	221000	1.69	4.00	3.99	99.7
PFOA 1	234000	1.87	4.00	3.75	93.8
PFOS 1	104000	1.96	4.00	3.72	93.0
PFNA 1	173000	2.01	4.00	3.97	99.3
18O2-PFHxS	165000	1.67	100.	101.	101.0
13C4-PFHpA	475000	1.69	100.	98.0	98.0
13C4-PFOA	434000	1.87	100.	103.	103.0
13C4-PFOS	198000	1.96	100.	99.7	99.7
13C5-PFNA	328000	2.01	100.	97.1	97.1
13C6-PFHxA	2530000	1.43	100.	102.	102.0

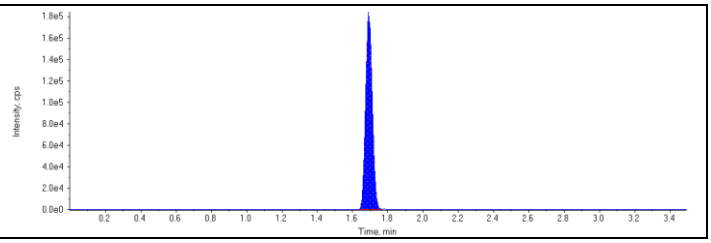
MPFHxS (Internal Standard)

RT (Exp. RT): 1.67(1.68) min
Concentration: 1.00 ng/L
Sample Type: (Standard)



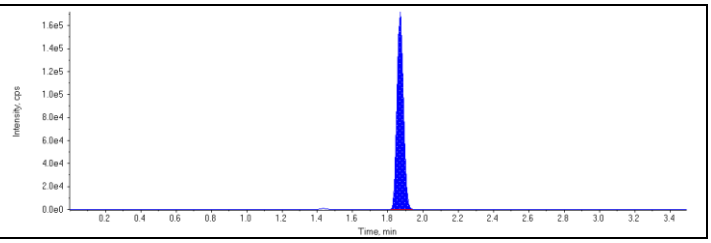
MPFHpA (Internal Standard)

RT (Exp. RT): 1.69(1.69) min
Concentration: 1.00 ng/L
Sample Type: (Standard)



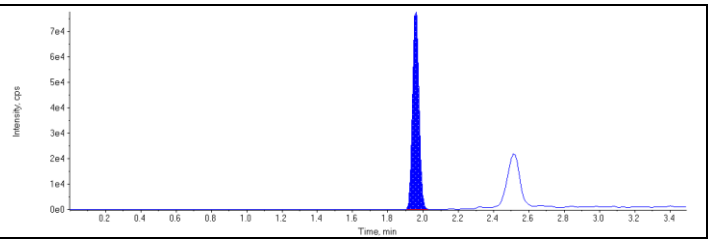
MPFOA (Internal Standard)

RT (Exp. RT): 1.87(1.88) min
Concentration: 1.00 ng/L
Sample Type: (Standard)



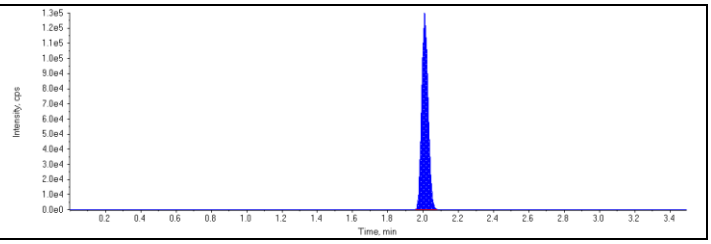
MPFOS (Internal Standard)

RT (Exp. RT): 1.96(1.97) min
Concentration: 1.00 ng/L
Sample Type: (Standard)



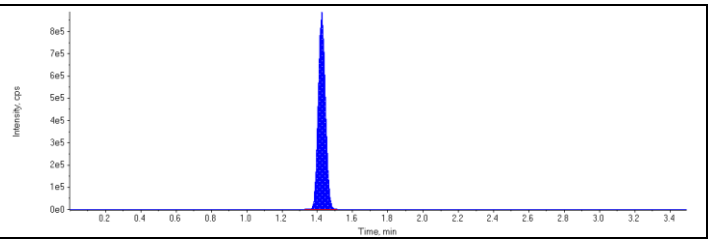
MPFNA (Internal Standard)

RT (Exp. RT): 2.01(2.02) min
Concentration: 1.00 ng/L
Sample Type: (Standard)



13C6-PFHxA IS (Internal Standard)

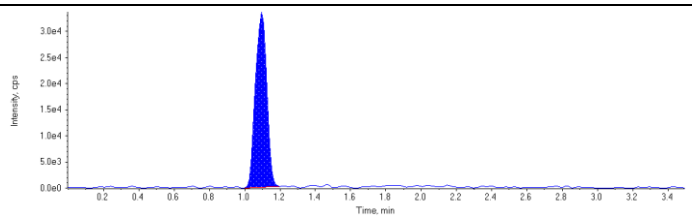
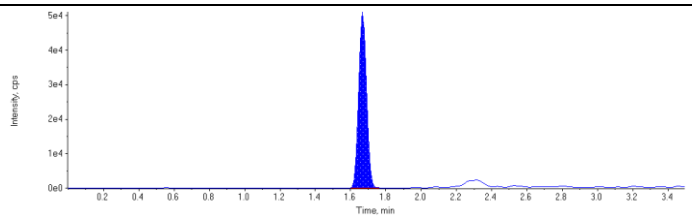
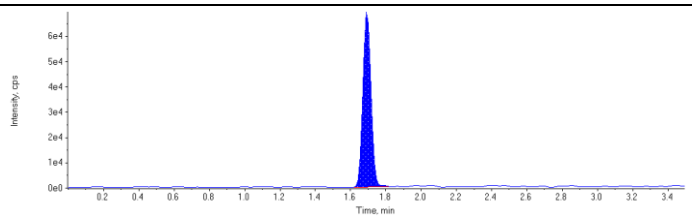
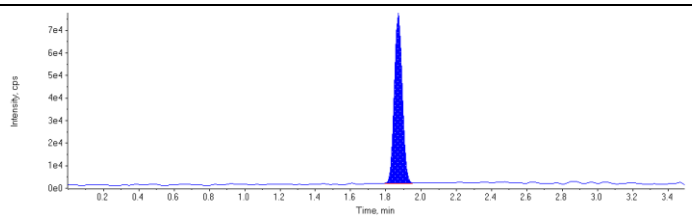
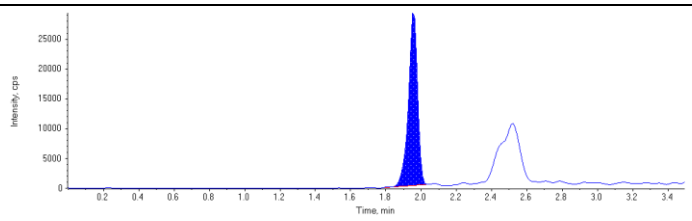
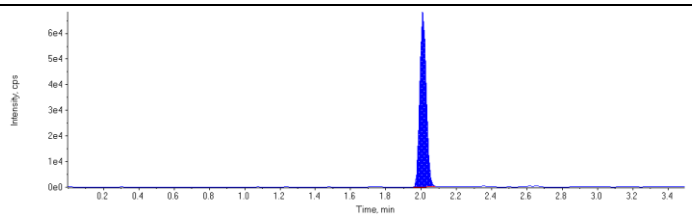
RT (Exp. RT): 1.43(1.42) min
Concentration: 1.00 ng/L
Sample Type: (Standard)

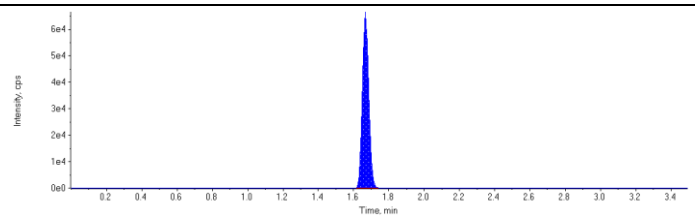
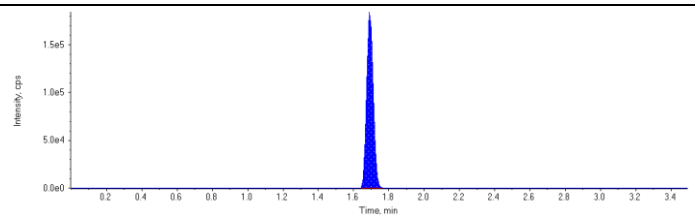
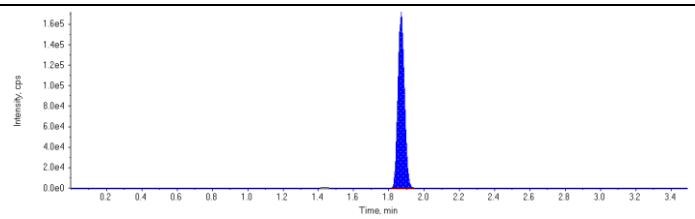
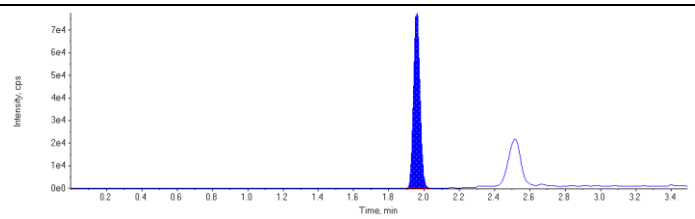
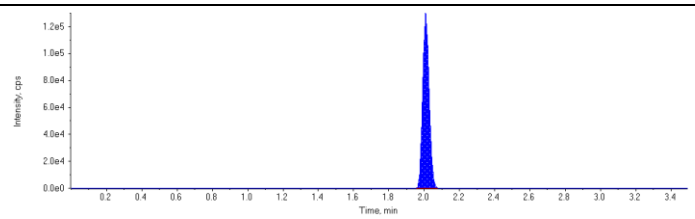
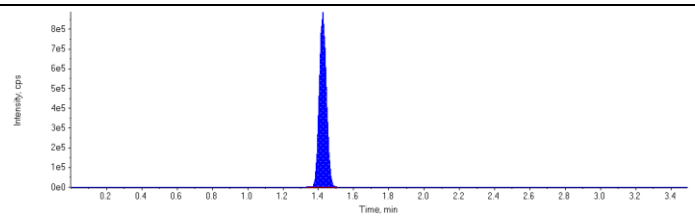


N/A (Internal Standard)

RT (Exp. RT): N/A(N/A) min
Concentration: N/A N/A
Sample Type: (Standard)

This image is not available

PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.10 (1.09) min Calculated Conc: 3.62 ng/L Area Ratio: 0.903 Sample Type: (Standard)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 3.50 ng/L Area Ratio: 0.948 Sample Type: (Standard)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.69 (1.70) min Calculated Conc: 3.99 ng/L Area Ratio: 0.466 Sample Type: (Standard)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 3.75 ng/L Area Ratio: 0.539 Sample Type: (Standard)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 3.72 ng/L Area Ratio: 0.523 Sample Type: (Standard)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 3.97 ng/L Area Ratio: 0.526 Sample Type: (Standard)	

18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 101. ng/L Area Ratio: 0.0655 Sample Type: (Standard)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.69 (1.69) min Calculated Conc: 98.0 ng/L Area Ratio: 0.188 Sample Type: (Standard)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 103. ng/L Area Ratio: 0.172 Sample Type: (Standard)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 99.7 ng/L Area Ratio: 0.0786 Sample Type: (Standard)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 97.1 ng/L Area Ratio: 0.130 Sample Type: (Standard)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.43 (1.42) min Calculated Conc: 102. ng/L Area Ratio: 0.00 Sample Type: (Standard)	

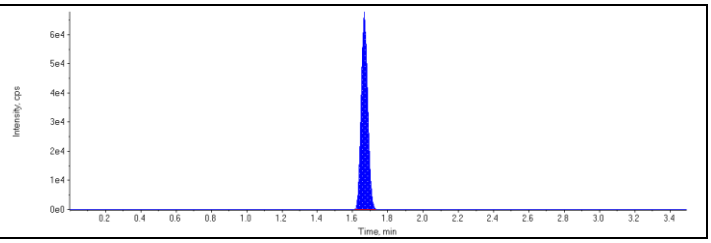
Sample Name	**STD 3**	**Injection Vial**	5
Sample ID	STD 3	**Injection Volume (µL)**	3
Sample Type	Standard	**Algorithm Used**	Analyst Classic
Acquisition Date	2016/02/29 9:11:03 AM	**Dilution Factor**	1.00
Acquisition Method	PFC_Water_Low.dam	**Sample Annotation**	-
Project	Enviro\PFOS	**Instrument Name**	LCMS03
Data File	PFC_160226\WS#4394551.wiff		
Result Table	PFC_Water_160226_4394558_ULow_6.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	171000.	1.67	1.00	-
MPFHpA	484000.	1.69	1.00	-
MPFOA	424000.	1.87	1.00	-
MPFOS	204000.	1.96	1.00	-
MPFNA	340000.	2.01	1.00	-
13C6-PFHxA IS	2270000.	1.42	1.00	-
N/A	N/A	N/A	N/A	-

Target Analyte	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)	Accuracy (%)
PFBS 1	490000	1.10	12.0	10.5	87.8
PFHxS 1	526000	1.67	12.0	10.8	89.9
PFHpA 1	633000	1.69	12.0	11.0	91.7
PFOA 1	719000	1.87	12.0	11.7	97.3
PFOS 1	342000	1.96	12.0	11.1	92.6
PFNA 1	527000	2.01	12.0	11.7	97.7
18O2-PFHxS	171000	1.67	100.	117.	117.0
13C4-PFHpA	484000	1.69	100.	111.	111.0
13C4-PFOA	424000	1.87	100.	111.	111.0
13C4-PFOS	204000	1.96	100.	114.	114.0
13C5-PFNA	340000	2.01	100.	112.	112.0
13C6-PFHxA	2270000	1.42	100.	91.7	91.7

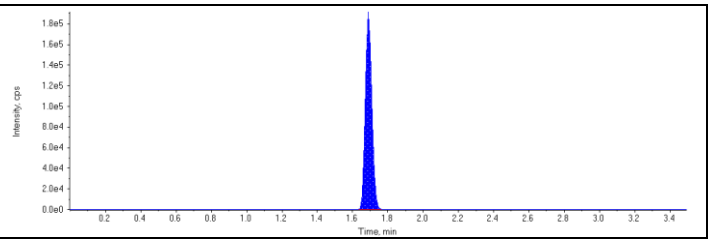
MPFHxS (Internal Standard)

RT (Exp. RT): 1.67(1.68) min
Concentration: 1.00 ng/L
Sample Type: (Standard)



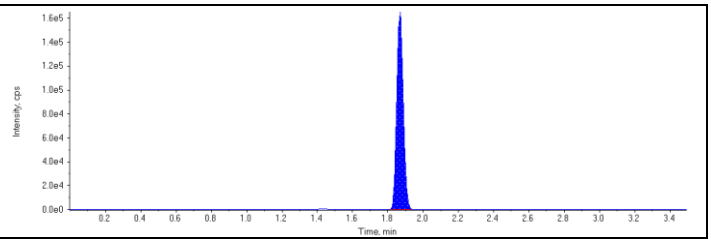
MPFHpA (Internal Standard)

RT (Exp. RT): 1.69(1.69) min
Concentration: 1.00 ng/L
Sample Type: (Standard)



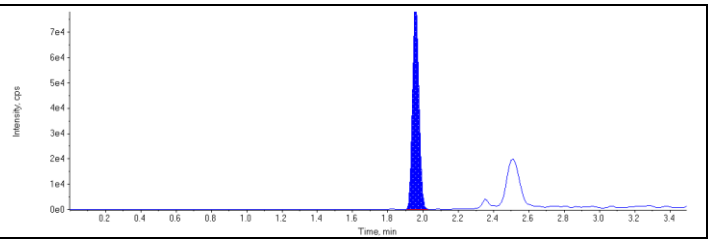
MPFOA (Internal Standard)

RT (Exp. RT): 1.87(1.88) min
Concentration: 1.00 ng/L
Sample Type: (Standard)



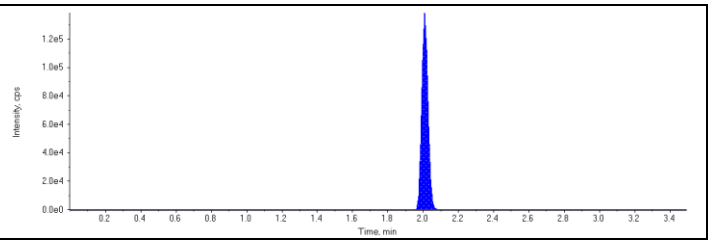
MPFOS (Internal Standard)

RT (Exp. RT): 1.96(1.97) min
Concentration: 1.00 ng/L
Sample Type: (Standard)



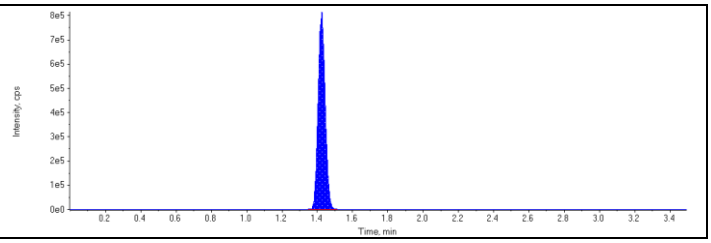
MPFNA (Internal Standard)

RT (Exp. RT): 2.01(2.02) min
Concentration: 1.00 ng/L
Sample Type: (Standard)



13C6-PFHxA IS (Internal Standard)

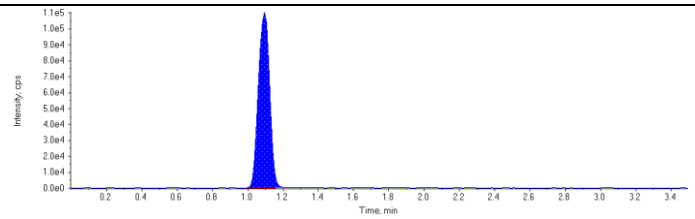
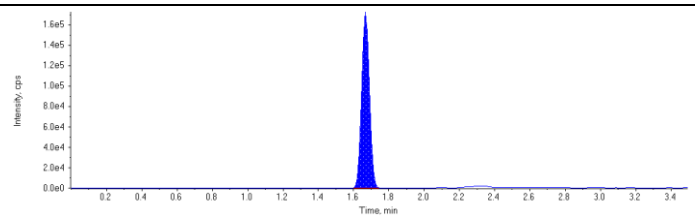
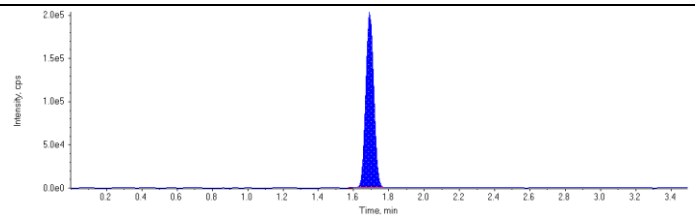
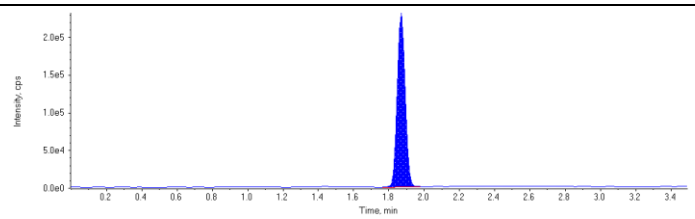
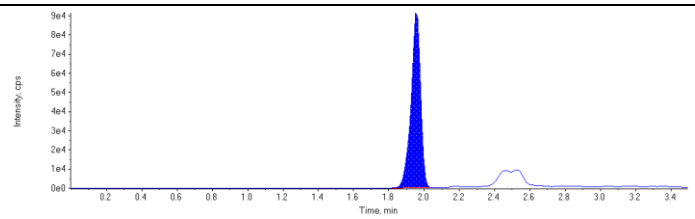
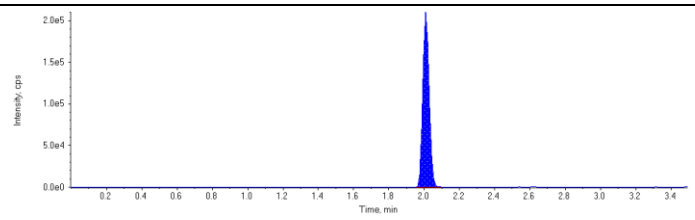
RT (Exp. RT): 1.42(1.42) min
Concentration: 1.00 ng/L
Sample Type: (Standard)



N/A (Internal Standard)

RT (Exp. RT): N/A(N/A) min
Concentration: N/A N/A
Sample Type: (Standard)

This image is not available

PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.10 (1.09) min Calculated Conc: 10.5 ng/L Area Ratio: 2.86 Sample Type: (Standard)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 10.8 ng/L Area Ratio: 3.07 Sample Type: (Standard)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.69 (1.70) min Calculated Conc: 11.0 ng/L Area Ratio: 1.31 Sample Type: (Standard)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 11.7 ng/L Area Ratio: 1.70 Sample Type: (Standard)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 11.1 ng/L Area Ratio: 1.68 Sample Type: (Standard)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 11.7 ng/L Area Ratio: 1.55 Sample Type: (Standard)	

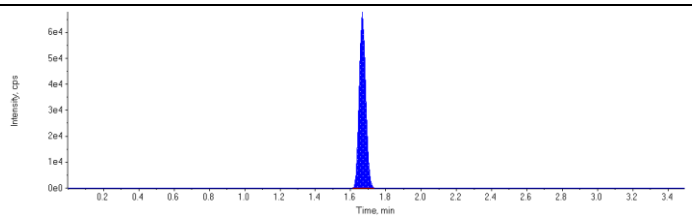
18O2-PFHxS (402.900/84.000 Da)

RT (Exp. RT): 1.67 (1.68) min

Calculated Conc: 117. ng/L

Area Ratio: 0.0754

Sample Type: (Standard)



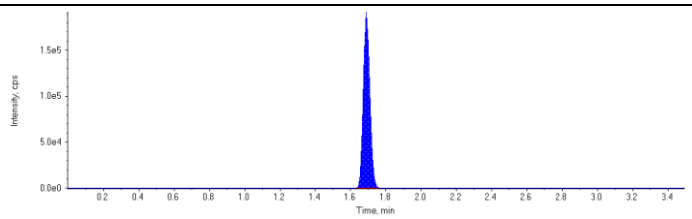
13C4-PFHpA (366.900/322.000 Da)

RT (Exp. RT): 1.69 (1.69) min

Calculated Conc: 111. ng/L

Area Ratio: 0.213

Sample Type: (Standard)



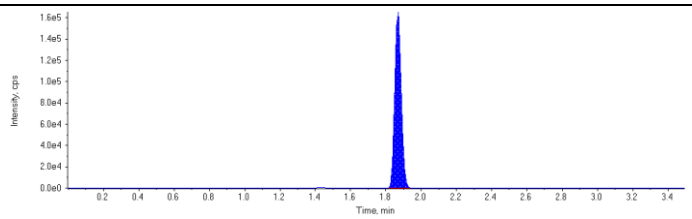
13C4-PFOA (416.900/372.000 Da)

RT (Exp. RT): 1.87 (1.88) min

Calculated Conc: 111. ng/L

Area Ratio: 0.186

Sample Type: (Standard)



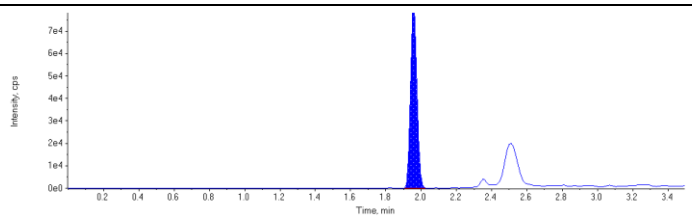
13C4-PFOS (502.900/79.900 Da)

RT (Exp. RT): 1.96 (1.97) min

Calculated Conc: 114. ng/L

Area Ratio: 0.0897

Sample Type: (Standard)



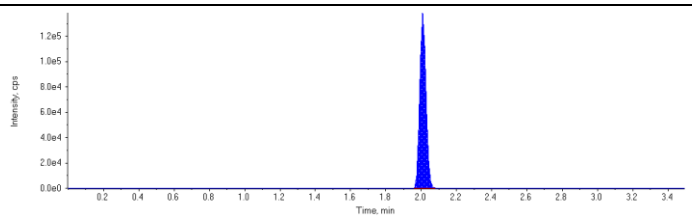
13C5-PFNA (467.900/423.000 Da)

RT (Exp. RT): 2.01 (2.02) min

Calculated Conc: 112. ng/L

Area Ratio: 0.150

Sample Type: (Standard)



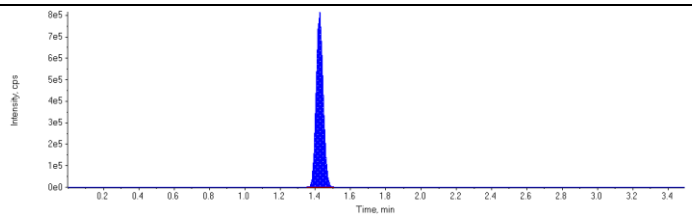
13C6-PFHxA (318.900/274.000 Da)

RT (Exp. RT): 1.42 (1.42) min

Calculated Conc: 91.7 ng/L

Area Ratio: 0.00

Sample Type: (Standard)



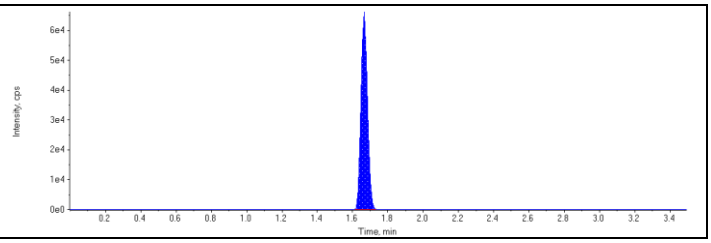
Sample Name	**STD 4**	**Injection Vial**	6
Sample ID	STD 4	**Injection Volume (µL)**	3
Sample Type	Standard	**Algorithm Used**	Analyst Classic
Acquisition Date	2016/02/29 9:16:09 AM	**Dilution Factor**	1.00
Acquisition Method	PFC_Water_Low.dam	**Sample Annotation**	-
Project	Enviro\PFOS	**Instrument Name**	LCMS03
Data File	PFC_160226\WS#4394551.wiff		
Result Table	PFC_Water_160226_4394558_ULow_6.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	167000.	1.67	1.00	-
MPFHpA	516000.	1.69	1.00	-
MPFOA	425000.	1.87	1.00	-
MPFOS	214000.	1.96	1.00	-
MPFNA	359000.	2.01	1.00	-
13C6-PFHxA IS	2530000.	1.42	1.00	-
N/A	N/A	N/A	N/A	-

Target Analyte	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)	Accuracy (%)
PFBS 1	1390000	1.09	30.0	29.9	99.5
PFHxS 1	1570000	1.67	30.0	32.4	108.0
PFHpA 1	1950000	1.69	30.0	31.6	105.0
PFOA 1	2020000	1.87	30.0	32.5	108.0
PFOS 1	1010000	1.96	30.0	30.5	102.0
PFNA 1	1420000	2.01	30.0	30.0	100.0
18O2-PFHxS	167000	1.67	100.	102.	102.0
13C4-PFHpA	516000	1.69	100.	106.	106.0
13C4-PFOA	425000	1.87	100.	100.	100.0
13C4-PFOS	214000	1.96	100.	107.	107.0
13C5-PFNA	359000	2.01	100.	106.	106.0
13C6-PFHxA	2530000	1.42	100.	102.	102.0

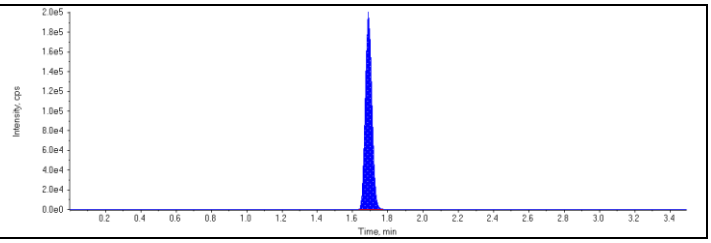
MPFHxS (Internal Standard)

RT (Exp. RT): 1.67(1.68) min
Concentration: 1.00 ng/L
Sample Type: (Standard)



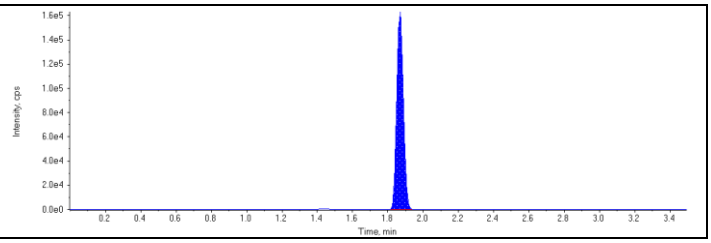
MPFHpA (Internal Standard)

RT (Exp. RT): 1.69(1.69) min
Concentration: 1.00 ng/L
Sample Type: (Standard)



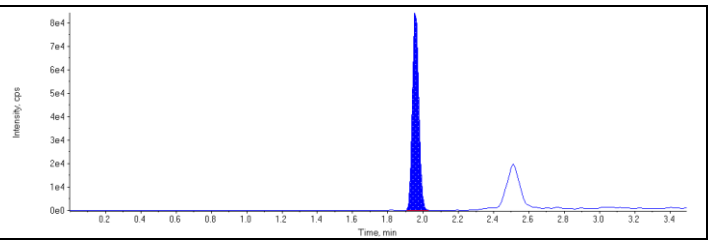
MPFOA (Internal Standard)

RT (Exp. RT): 1.87(1.88) min
Concentration: 1.00 ng/L
Sample Type: (Standard)



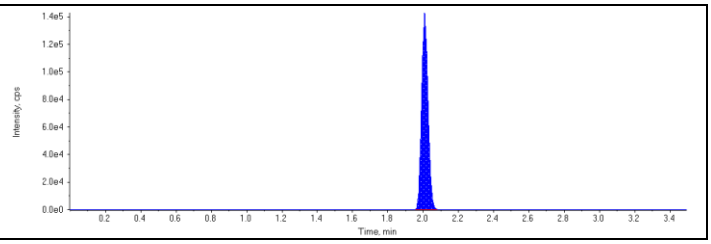
MPFOS (Internal Standard)

RT (Exp. RT): 1.96(1.97) min
Concentration: 1.00 ng/L
Sample Type: (Standard)



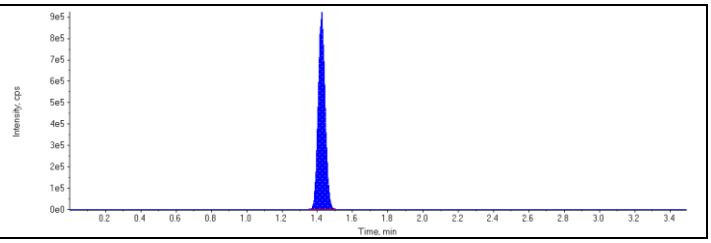
MPFNA (Internal Standard)

RT (Exp. RT): 2.01(2.02) min
Concentration: 1.00 ng/L
Sample Type: (Standard)



13C6-PFHxA IS (Internal Standard)

RT (Exp. RT): 1.42(1.42) min
Concentration: 1.00 ng/L
Sample Type: (Standard)



N/A (Internal Standard)

RT (Exp. RT): N/A(N/A) min
Concentration: N/A N/A
Sample Type: (Standard)

This image is not available

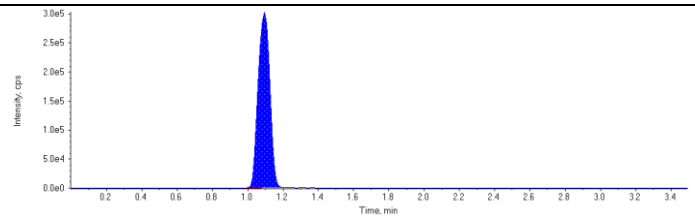
PFBS 1 (298.900/79.900 Da)

RT (Exp. RT): 1.09 (1.09) min

Calculated Conc: 29.9 ng/L

Area Ratio: 8.31

Sample Type: (Standard)



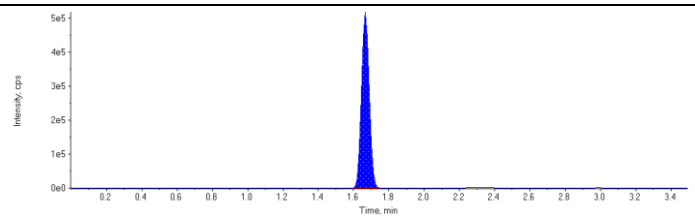
PFHxS 1 (398.900/79.900 Da)

RT (Exp. RT): 1.67 (1.68) min

Calculated Conc: 32.4 ng/L

Area Ratio: 9.37

Sample Type: (Standard)



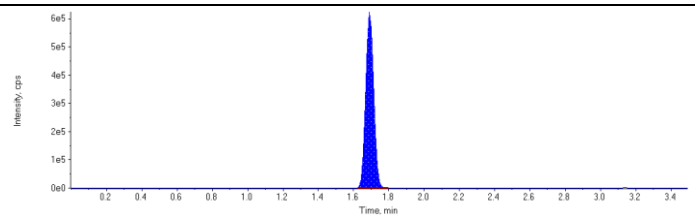
PFHpA 1 (363.000/319.000 Da)

RT (Exp. RT): 1.69 (1.70) min

Calculated Conc: 31.6 ng/L

Area Ratio: 3.77

Sample Type: (Standard)



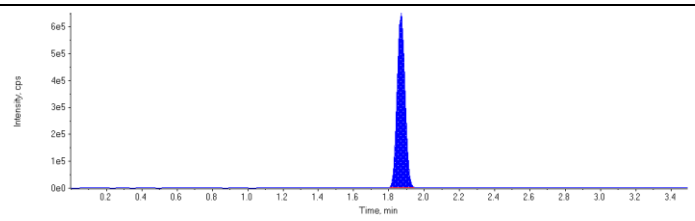
PFOA 1 (413.100/369.000 Da)

RT (Exp. RT): 1.87 (1.88) min

Calculated Conc: 32.5 ng/L

Area Ratio: 4.74

Sample Type: (Standard)



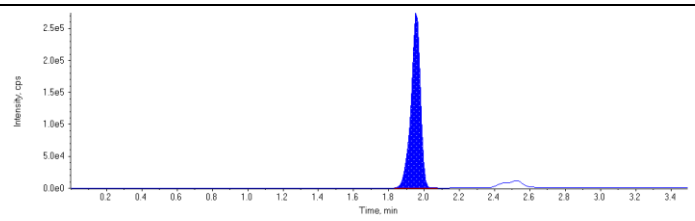
PFOS 1 (498.900/79.900 Da)

RT (Exp. RT): 1.96 (1.97) min

Calculated Conc: 30.5 ng/L

Area Ratio: 4.71

Sample Type: (Standard)



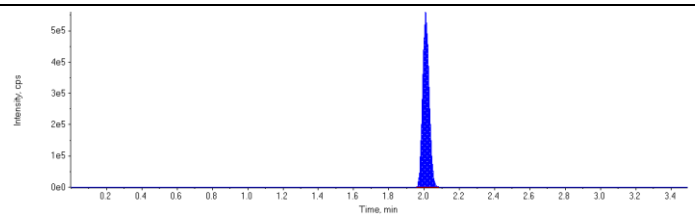
PFNA 1 (462.900/419.000 Da)

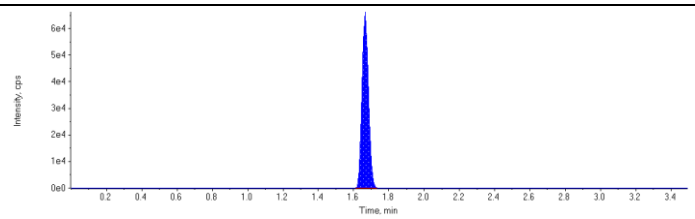
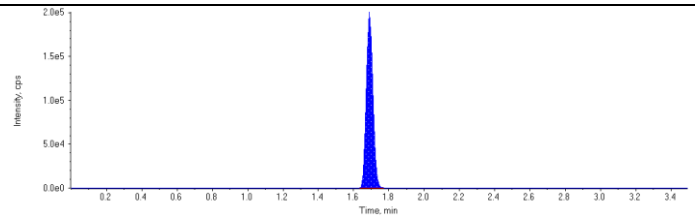
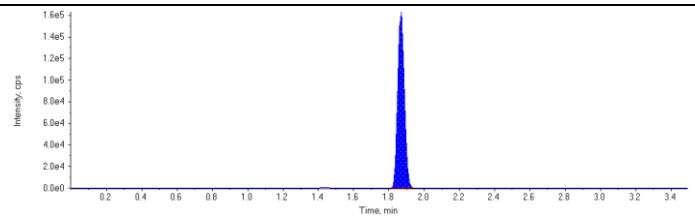
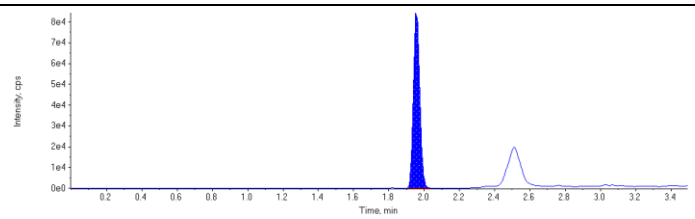
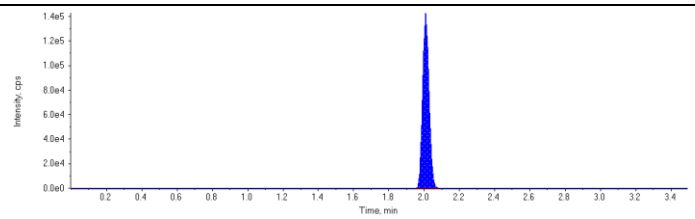
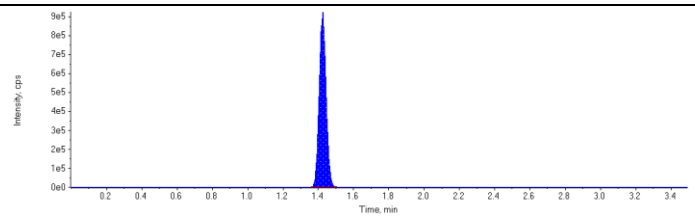
RT (Exp. RT): 2.01 (2.02) min

Calculated Conc: 30.0 ng/L

Area Ratio: 3.97

Sample Type: (Standard)



18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 102. ng/L Area Ratio: 0.0660 Sample Type: (Standard)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.69 (1.69) min Calculated Conc: 106. ng/L Area Ratio: 0.204 Sample Type: (Standard)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 100. ng/L Area Ratio: 0.168 Sample Type: (Standard)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 107. ng/L Area Ratio: 0.0844 Sample Type: (Standard)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 106. ng/L Area Ratio: 0.142 Sample Type: (Standard)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.42 (1.42) min Calculated Conc: 102. ng/L Area Ratio: 0.00 Sample Type: (Standard)	

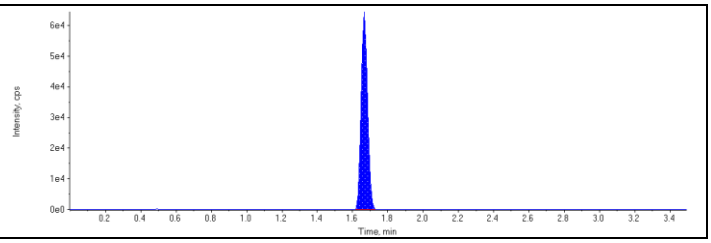
Sample Name	**STD 5**	**Injection Vial**	7
Sample ID	STD 5	**Injection Volume (µL)**	3
Sample Type	Standard	**Algorithm Used**	Analyst Classic
Acquisition Date	2016/02/29 9:21:15 AM	**Dilution Factor**	1.00
Acquisition Method	PFC_Water_Low.dam	**Sample Annotation**	-
Project	Enviro\PFOS	**Instrument Name**	LCMS03
Data File	PFC_160226\WS#4394551.wiff		
Result Table	PFC_Water_160226_4394558_ULow_6.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	160000.	1.67	1.00	-
MPFHpA	431000.	1.69	1.00	-
MPFOA	409000.	1.87	1.00	-
MPFOS	177000.	1.96	1.00	-
MPFNA	316000.	2.01	1.00	-
13C6-PFHxA IS	2470000.	1.42	1.00	-
N/A	N/A	N/A	N/A	-

Target Analyte	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)	Accuracy (%)
PFBS 1	2410000	1.10	60.0	53.6	89.3
PFHxS 1	2580000	1.67	60.0	55.6	92.6
PFHpA 1	3110000	1.69	60.0	60.5	101.0
PFOA 1	3370000	1.87	60.0	56.4	94.0
PFOS 1	1630000	1.96	60.0	59.0	98.4
PFNA 1	2430000	2.01	60.0	58.2	97.0
18O2-PFHxS	160000	1.67	100.	101.	101.0
13C4-PFHpA	431000	1.69	100.	90.9	90.9
13C4-PFOA	409000	1.87	100.	99.0	99.0
13C4-PFOS	177000	1.96	100.	91.2	91.2
13C5-PFNA	316000	2.01	100.	95.6	95.6
13C6-PFHxA	2470000	1.42	100.	99.6	99.6

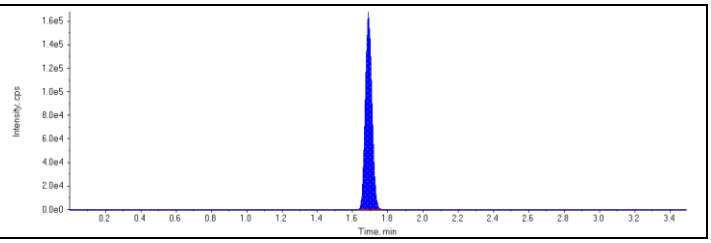
MPFHxS (Internal Standard)

RT (Exp. RT): 1.67(1.68) min
Concentration: 1.00 ng/L
Sample Type: (Standard)



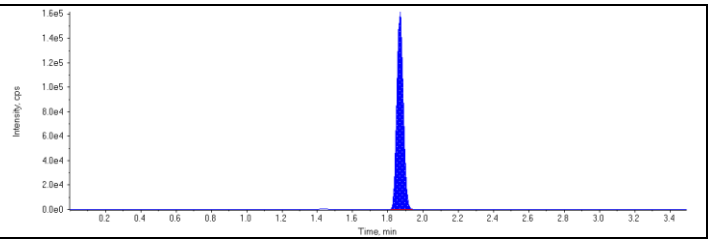
MPFHpA (Internal Standard)

RT (Exp. RT): 1.69(1.69) min
Concentration: 1.00 ng/L
Sample Type: (Standard)



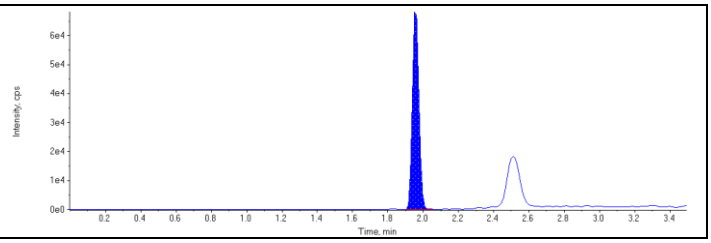
MPFOA (Internal Standard)

RT (Exp. RT): 1.87(1.88) min
Concentration: 1.00 ng/L
Sample Type: (Standard)



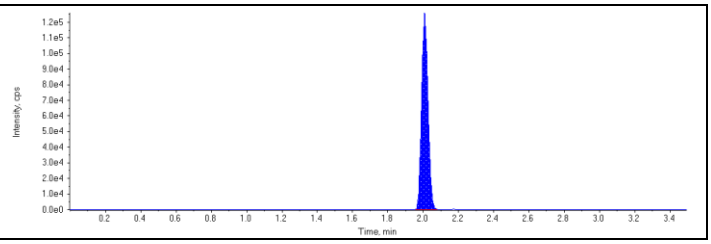
MPFOS (Internal Standard)

RT (Exp. RT): 1.96(1.97) min
Concentration: 1.00 ng/L
Sample Type: (Standard)



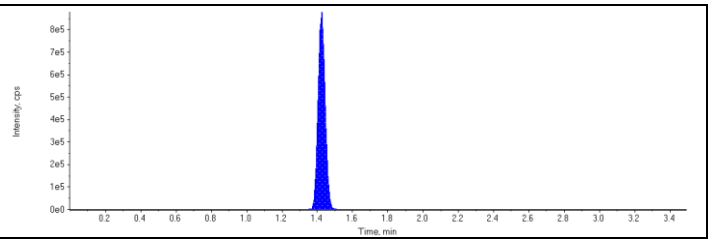
MPFNA (Internal Standard)

RT (Exp. RT): 2.01(2.02) min
Concentration: 1.00 ng/L
Sample Type: (Standard)



13C6-PFHxA IS (Internal Standard)

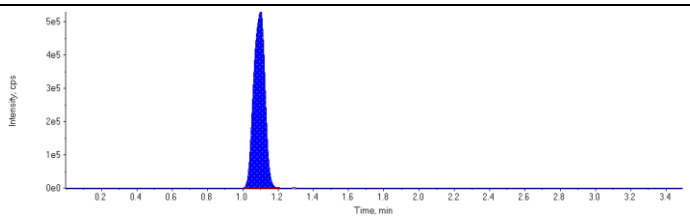
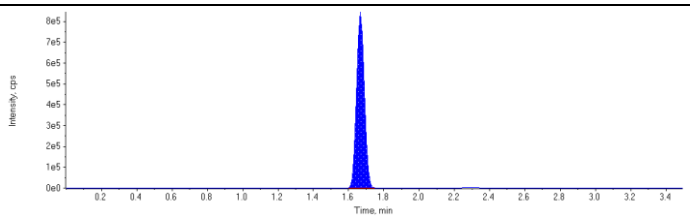
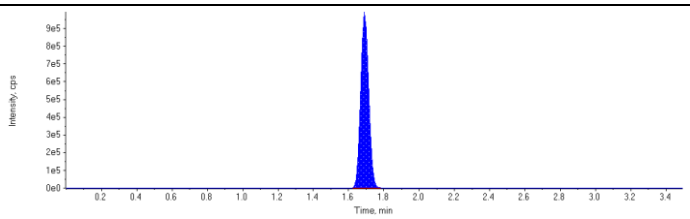
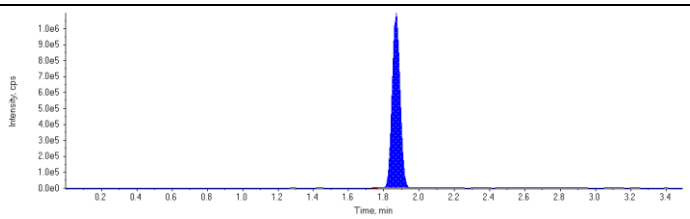
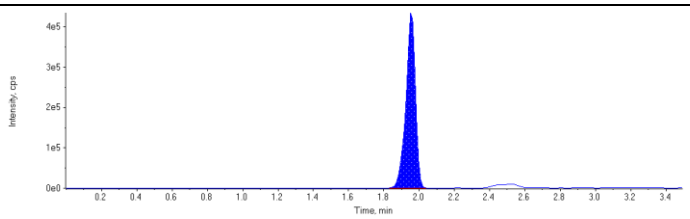
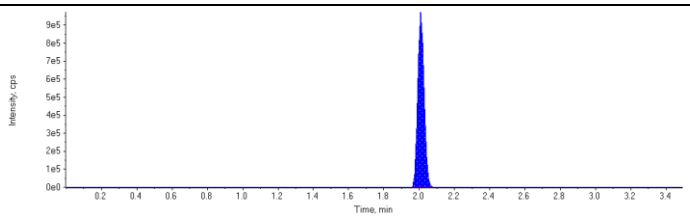
RT (Exp. RT): 1.42(1.42) min
Concentration: 1.00 ng/L
Sample Type: (Standard)

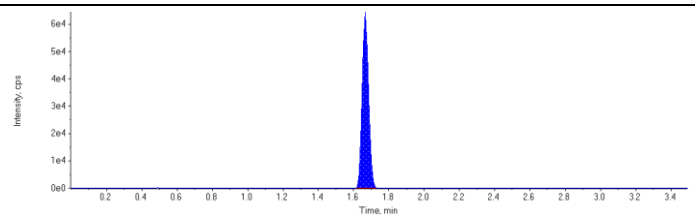
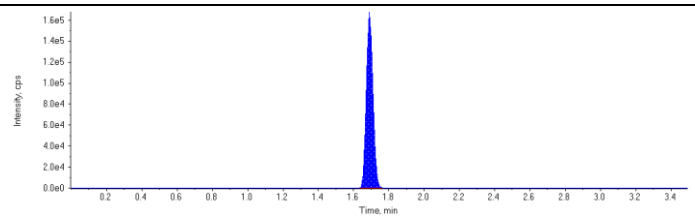
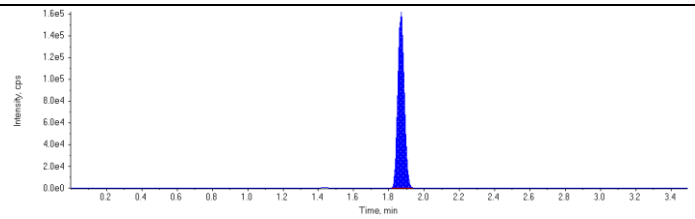
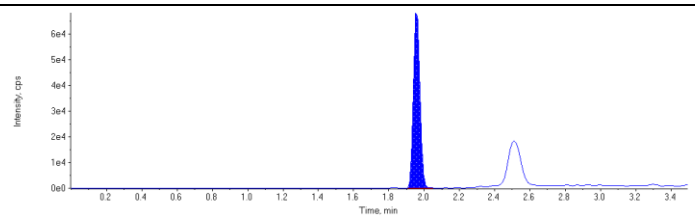
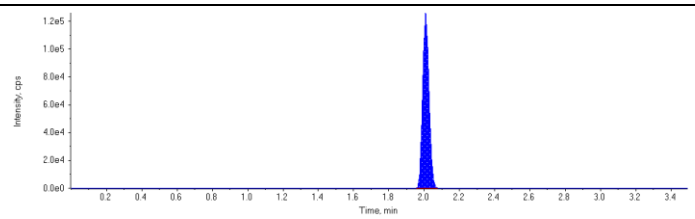
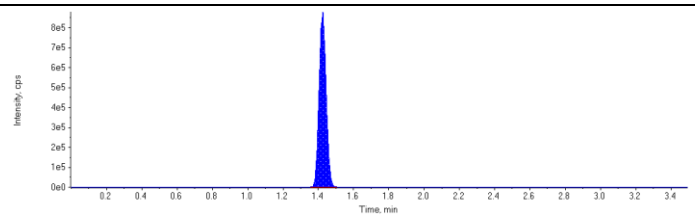


N/A (Internal Standard)

RT (Exp. RT): N/A(N/A) min
Concentration: N/A N/A
Sample Type: (Standard)

This image is not available

PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.10 (1.09) min Calculated Conc: 53.6 ng/L Area Ratio: 15.0 Sample Type: (Standard)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 55.6 ng/L Area Ratio: 16.1 Sample Type: (Standard)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.69 (1.70) min Calculated Conc: 60.5 ng/L Area Ratio: 7.23 Sample Type: (Standard)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 56.4 ng/L Area Ratio: 8.24 Sample Type: (Standard)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 59.0 ng/L Area Ratio: 9.17 Sample Type: (Standard)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 58.2 ng/L Area Ratio: 7.70 Sample Type: (Standard)	

18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 101. ng/L Area Ratio: 0.0650 Sample Type: (Standard)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.69 (1.69) min Calculated Conc: 90.9 ng/L Area Ratio: 0.174 Sample Type: (Standard)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 99.0 ng/L Area Ratio: 0.166 Sample Type: (Standard)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 91.2 ng/L Area Ratio: 0.0719 Sample Type: (Standard)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 95.6 ng/L Area Ratio: 0.128 Sample Type: (Standard)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.42 (1.42) min Calculated Conc: 99.6 ng/L Area Ratio: 0.00 Sample Type: (Standard)	

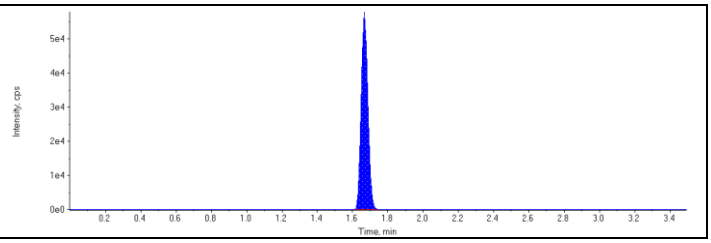
Sample Name	**STD 6**	**Injection Vial**	8
Sample ID	STD 6	**Injection Volume (µL)**	3
Sample Type	Standard	**Algorithm Used**	Analyst Classic
Acquisition Date	2016/02/29 9:26:22 AM	**Dilution Factor**	1.00
Acquisition Method	PFC_Water_Low.dam	**Sample Annotation**	-
Project	Enviro\PFOS	**Instrument Name**	LCMS03
Data File	PFC_160226\WS#4394551.wiff		
Result Table	PFC_Water_160226_4394558_ULow_6.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	150000.	1.67	1.00	-
MPFHpA	453000.	1.69	1.00	-
MPFOA	386000.	1.87	1.00	-
MPFOS	185000.	1.96	1.00	-
MPFNA	318000.	2.01	1.00	-
13C6-PFHxA IS	2480000.	1.42	1.00	-
N/A	N/A	N/A	N/A	-

Target Analyte	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)	Accuracy (%)
PFBS 1	4540000	1.10	100.	108.	108.0
PFHxS 1	4500000	1.67	100.	103.	103.0
PFHpA 1	5360000	1.69	100.	98.9	98.9
PFOA 1	5740000	1.87	100.	102.	102.0
PFOS 1	2920000	1.96	100.	101.	101.0
PFNA 1	4290000	2.01	100.	102.	102.0
18O2-PFHxS	150000	1.67	100.	93.4	93.4
13C4-PFHpA	453000	1.69	100.	95.1	95.1
13C4-PFOA	386000	1.87	100.	93.1	93.1
13C4-PFOS	185000	1.96	100.	94.4	94.4
13C5-PFNA	318000	2.01	100.	95.8	95.8
13C6-PFHxA	2480000	1.42	100.	100.	100.0

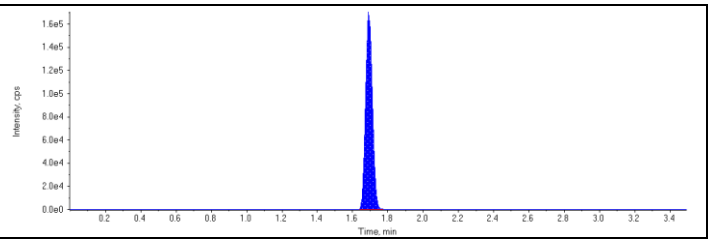
MPFHxS (Internal Standard)

RT (Exp. RT): 1.67(1.68) min
Concentration: 1.00 ng/L
Sample Type: (Standard)



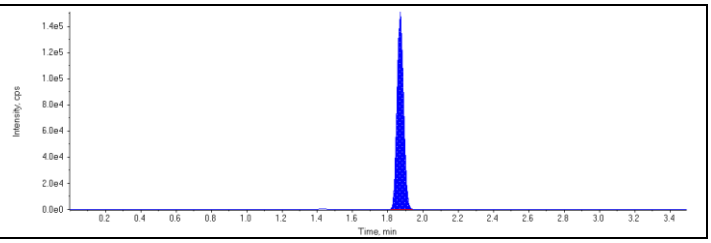
MPFHpA (Internal Standard)

RT (Exp. RT): 1.69(1.69) min
Concentration: 1.00 ng/L
Sample Type: (Standard)



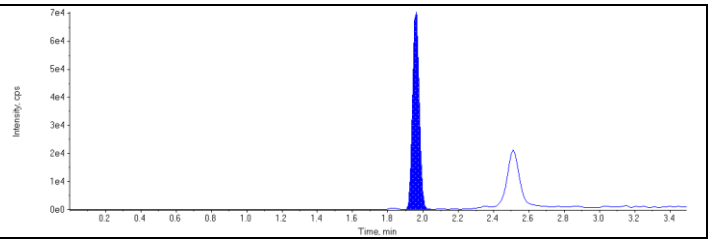
MPFOA (Internal Standard)

RT (Exp. RT): 1.87(1.88) min
Concentration: 1.00 ng/L
Sample Type: (Standard)



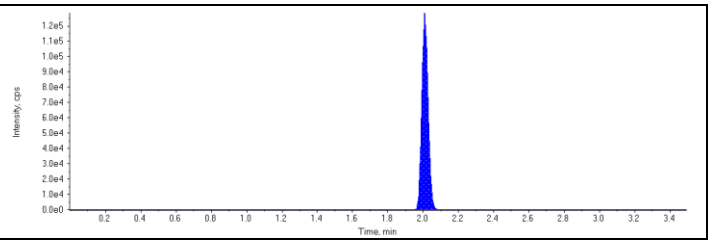
MPFOS (Internal Standard)

RT (Exp. RT): 1.96(1.97) min
Concentration: 1.00 ng/L
Sample Type: (Standard)



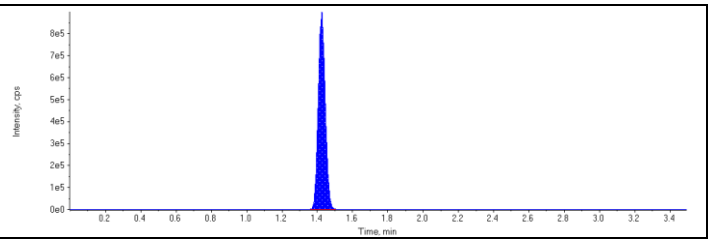
MPFNA (Internal Standard)

RT (Exp. RT): 2.01(2.02) min
Concentration: 1.00 ng/L
Sample Type: (Standard)



13C6-PFHxA IS (Internal Standard)

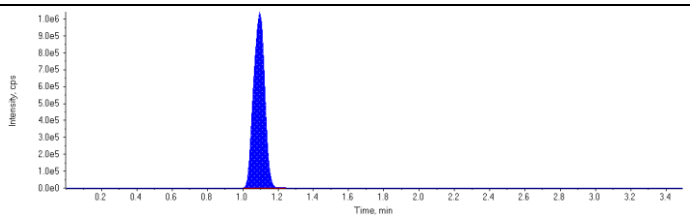
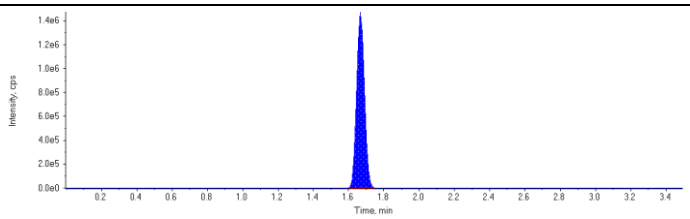
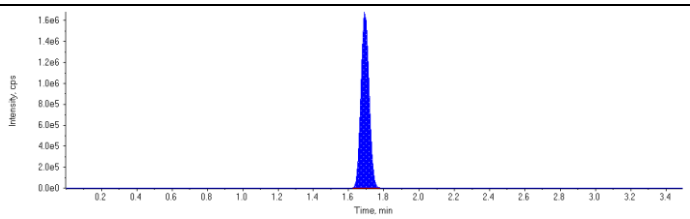
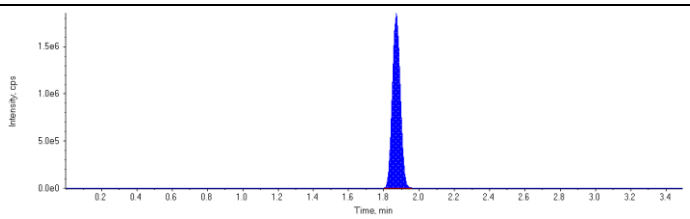
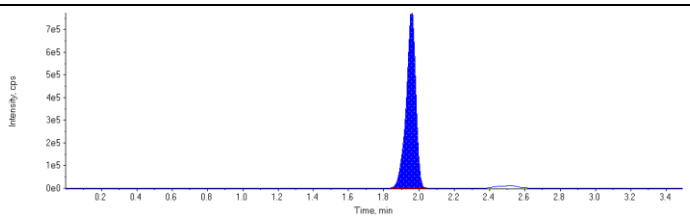
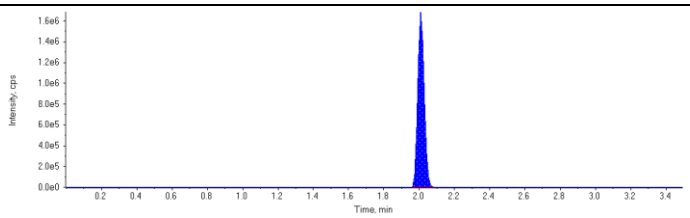
RT (Exp. RT): 1.42(1.42) min
Concentration: 1.00 ng/L
Sample Type: (Standard)

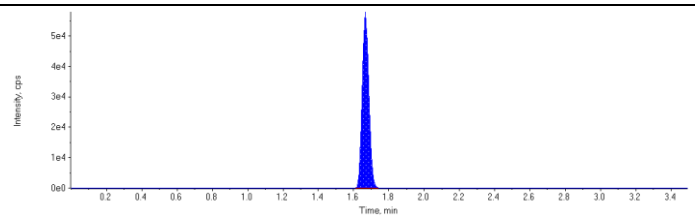
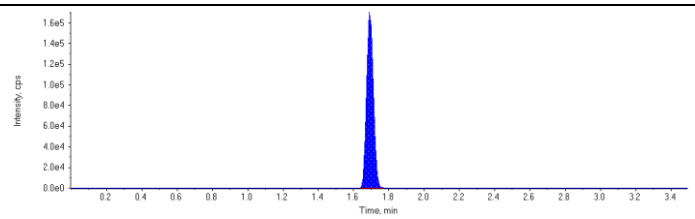
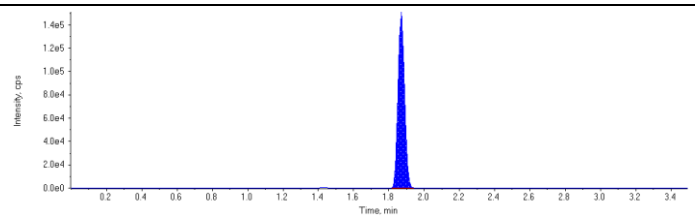
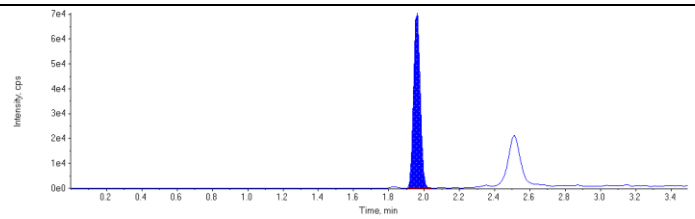
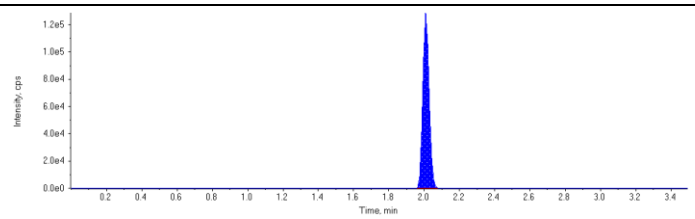
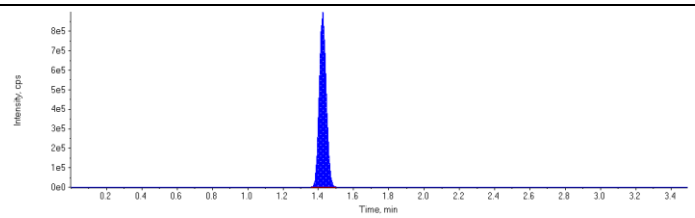


N/A (Internal Standard)

RT (Exp. RT): N/A(N/A) min
Concentration: N/A N/A
Sample Type: (Standard)

This image is not available

PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.10 (1.09) min Calculated Conc: 108. ng/L Area Ratio: 30.3 Sample Type: (Standard)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 103. ng/L Area Ratio: 30.1 Sample Type: (Standard)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.69 (1.70) min Calculated Conc: 98.9 ng/L Area Ratio: 11.8 Sample Type: (Standard)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 102. ng/L Area Ratio: 14.8 Sample Type: (Standard)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 101. ng/L Area Ratio: 15.8 Sample Type: (Standard)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 102. ng/L Area Ratio: 13.5 Sample Type: (Standard)	

18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 93.4 ng/L Area Ratio: 0.0603 Sample Type: (Standard)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.69 (1.69) min Calculated Conc: 95.1 ng/L Area Ratio: 0.182 Sample Type: (Standard)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 93.1 ng/L Area Ratio: 0.156 Sample Type: (Standard)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 94.4 ng/L Area Ratio: 0.0744 Sample Type: (Standard)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 95.8 ng/L Area Ratio: 0.128 Sample Type: (Standard)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.42 (1.42) min Calculated Conc: 100. ng/L Area Ratio: 0.00 Sample Type: (Standard)	

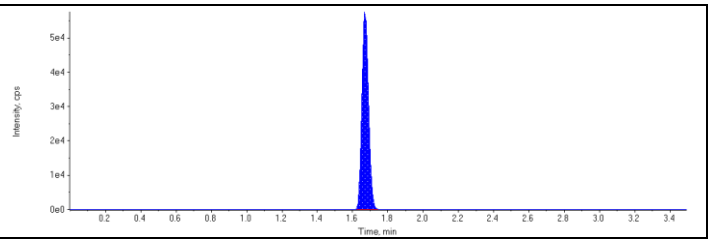
Sample Name	**ICV**	**Injection Vial**	9
Sample ID	ICV	**Injection Volume (µL)**	3
Sample Type	Quality Control	**Algorithm Used**	Analyst Classic
Acquisition Date	2016/02/25 5:38:29 PM	**Dilution Factor**	1.00
Acquisition Method	PFC_Water_Low.dam	**Sample Annotation**	-
Project	Enviro\PFOS	**Instrument Name**	LCMS03
Data File	PFC_160225\WS#4393242.wiff		
Result Table	PFC_Water_160225_4393242_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	150000.	1.67	1.00	-
MPFHpA	507000.	1.69	1.00	-
MPFOA	460000.	1.87	1.00	-
MPFOS	212000.	1.96	1.00	-
MPFNA	407000.	2.01	1.00	-
13C6-PFHxA IS	2390000.	1.42	1.00	-
N/A	N/A	N/A	N/A	-

Target Analyte	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)	Accuracy (%)
PFBS 1	2100000	1.10	50.0	46.8	93.6
PFHxS 1	2290000	1.67	50.0	50.0	100.0
PFHpA 1	2810000	1.69	50.0	47.0	94.1
PFOA 1	3130000	1.87	50.0	49.0	98.0
PFOS 1	1510000	1.96	50.0	46.4	92.7
PFNA 1	2350000	2.01	50.0	45.1	90.2
18O2-PFHxS	150000	1.67	100.	100.	100.0
13C4-PFHpA	507000	1.69	100.	98.1	98.1
13C4-PFOA	460000	1.87	100.	98.5	98.5
13C4-PFOS	212000	1.96	100.	103.	103.0
13C5-PFNA	407000	2.01	100.	103.	103.0
13C6-PFHxA	2390000	1.42	100.	103.	103.0

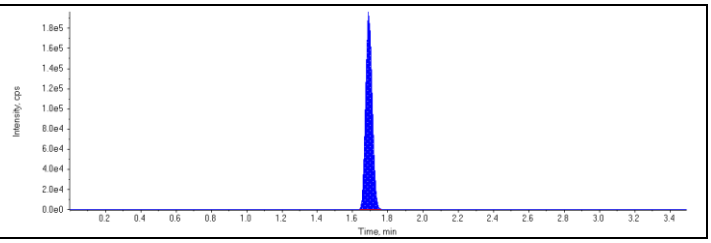
MPFHxS (Internal Standard)

RT (Exp. RT): 1.67(1.68) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



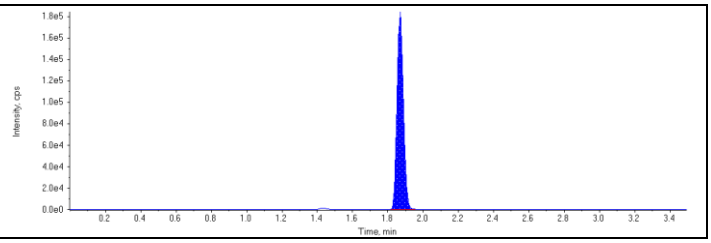
MPFHpA (Internal Standard)

RT (Exp. RT): 1.69(1.69) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



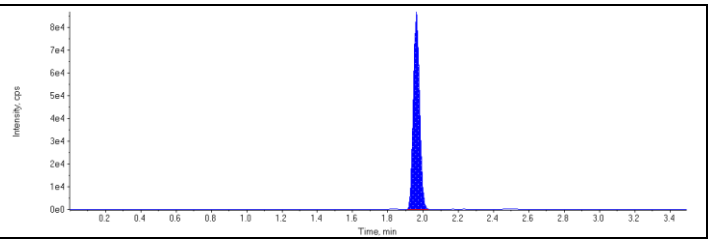
MPFOA (Internal Standard)

RT (Exp. RT): 1.87(1.88) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



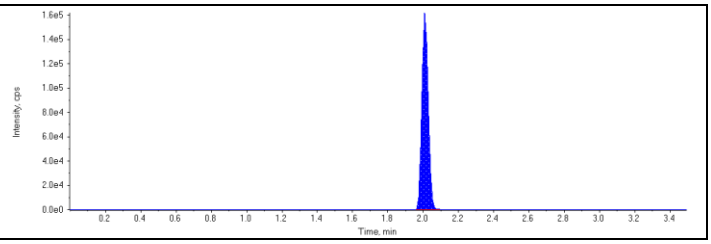
MPFOS (Internal Standard)

RT (Exp. RT): 1.96(1.97) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



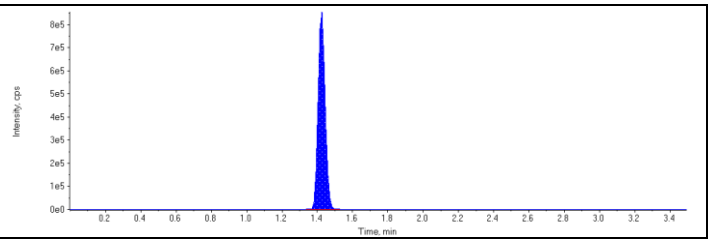
MPFNA (Internal Standard)

RT (Exp. RT): 2.01(2.02) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



13C6-PFHxA IS (Internal Standard)

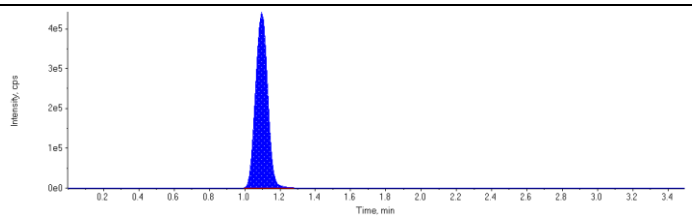
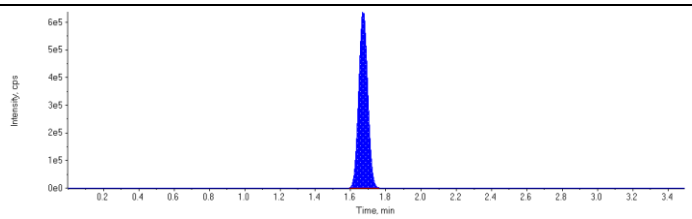
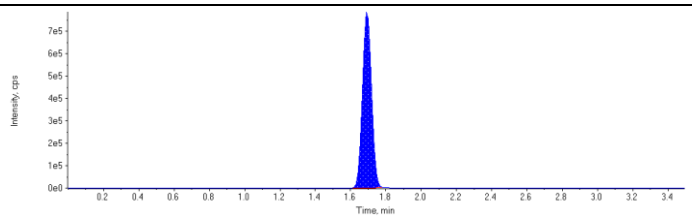
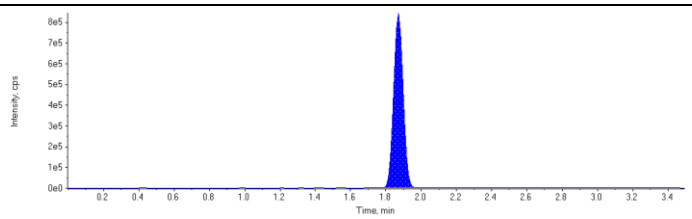
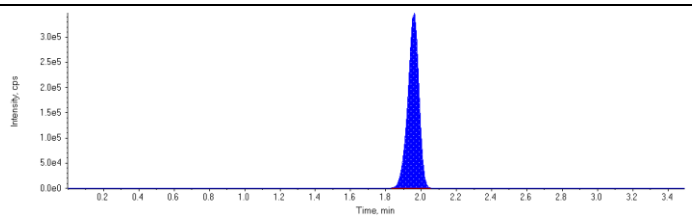
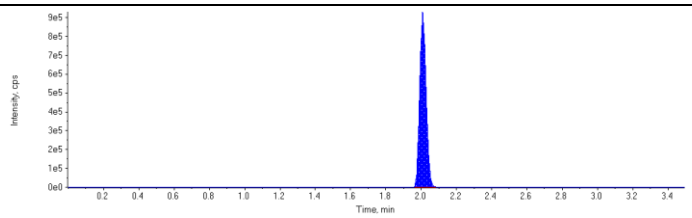
RT (Exp. RT): 1.42(1.42) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)

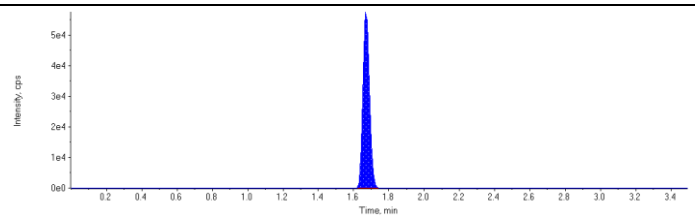
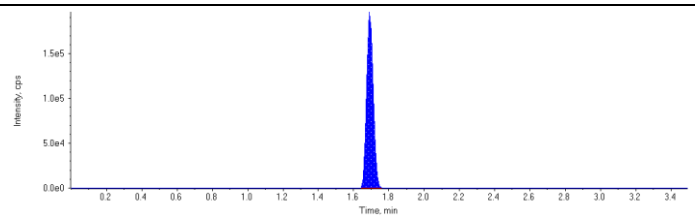
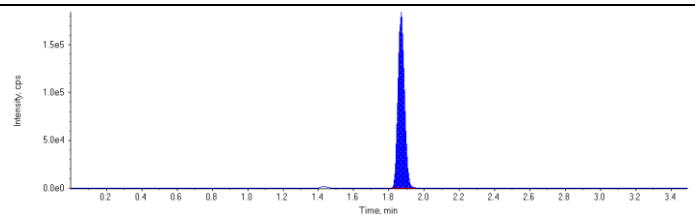
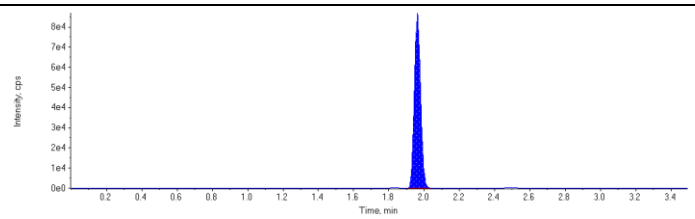
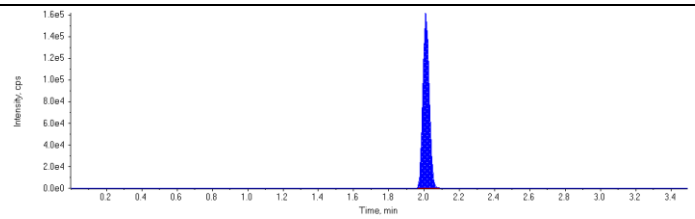
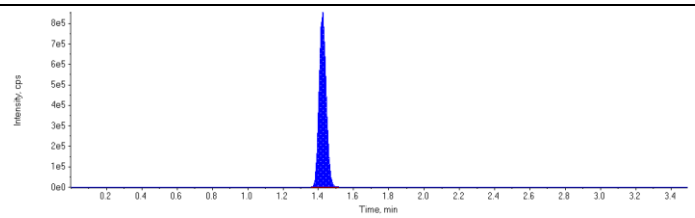


N/A (Internal Standard)

RT (Exp. RT): N/A(N/A) min
Concentration: N/A N/A
Sample Type: (Quality Control)

This image is not available

PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.10 (1.09) min Calculated Conc: 46.8 ng/L Area Ratio: 14.0 Sample Type: (Quality Control)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 50.0 ng/L Area Ratio: 15.2 Sample Type: (Quality Control)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.69 (1.75) min Calculated Conc: 47.0 ng/L Area Ratio: 5.54 Sample Type: (Quality Control)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.87 (1.92) min Calculated Conc: 49.0 ng/L Area Ratio: 6.79 Sample Type: (Quality Control)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 46.4 ng/L Area Ratio: 7.09 Sample Type: (Quality Control)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 45.1 ng/L Area Ratio: 5.78 Sample Type: (Quality Control)	

18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 100. ng/L Area Ratio: 0.0630 Sample Type: (Quality Control)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.69 (1.69) min Calculated Conc: 98.1 ng/L Area Ratio: 0.213 Sample Type: (Quality Control)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 98.5 ng/L Area Ratio: 0.193 Sample Type: (Quality Control)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 103. ng/L Area Ratio: 0.0891 Sample Type: (Quality Control)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 103. ng/L Area Ratio: 0.171 Sample Type: (Quality Control)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.42 (1.42) min Calculated Conc: 103. ng/L Area Ratio: 0.00 Sample Type: (Quality Control)	

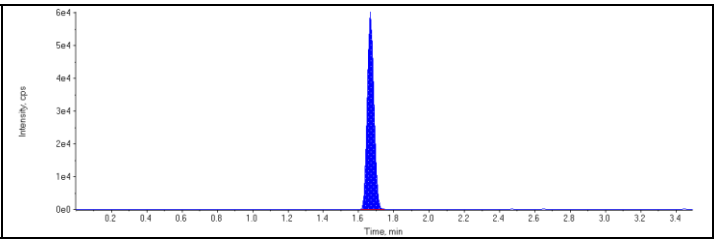
Sample Name	**ICV**	**Injection Vial**	9
Sample ID	ICV	**Injection Volume (µL)**	3
Sample Type	Quality Control	**Algorithm Used**	Analyst Classic
Acquisition Date	2016/02/29 9:41:39 AM	**Dilution Factor**	1.00
Acquisition Method	PFC_Water_Low.dam	**Sample Annotation**	-
Project	Enviro\PFOS	**Instrument Name**	LCMS03
Data File	PFC_160226\WS#4394551.wiff		
Result Table	PFC_Water_160226_4394558_ULow_6.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	156000.	1.67	1.00	-
MPFHpA	489000.	1.69	1.00	-
MPFOA	406000.	1.87	1.00	-
MPFOS	186000.	1.96	1.00	-
MPFNA	338000.	2.01	1.00	-
13C6-PFHxA IS	2180000.	1.42	1.00	-
N/A	N/A	N/A	N/A	-

Target Analyte	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)	Accuracy (%)
PFBS 1	2090000	1.10	50.0	47.9	95.9
PFHxS 1	2190000	1.67	50.0	48.6	97.2
PFHpA 1	2650000	1.69	50.0	45.3	90.7
PFOA 1	2580000	1.87	50.0	43.5	87.0
PFOS 1	1340000	1.96	50.0	46.4	92.8
PFNA 1	2170000	2.01	50.0	48.4	96.9
18O2-PFHxS	156000	1.67	100.	111.	111.0
13C4-PFHpA	489000	1.69	100.	117.	117.0
13C4-PFOA	406000	1.87	100.	112.	112.0
13C4-PFOS	186000	1.96	100.	108.	108.0
13C5-PFNA	338000	2.01	100.	116.	116.0
13C6-PFHxA	2180000	1.42	100.	87.9	87.9

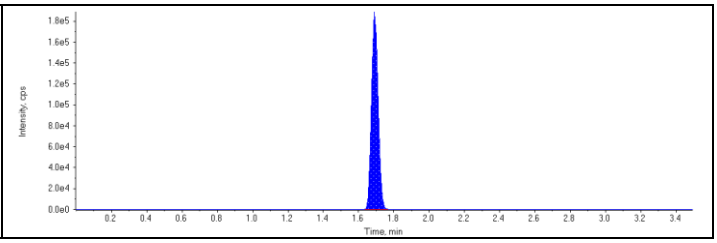
MPFHxS (Internal Standard)

RT (Exp. RT): 1.67(1.68) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



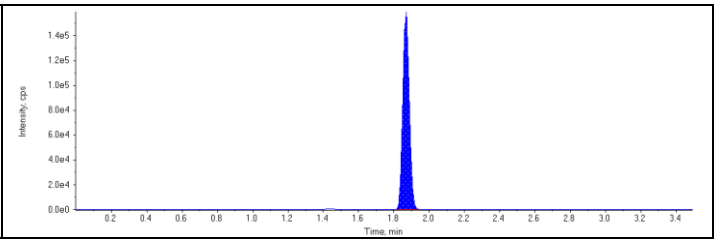
MPFHpA (Internal Standard)

RT (Exp. RT): 1.69(1.69) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



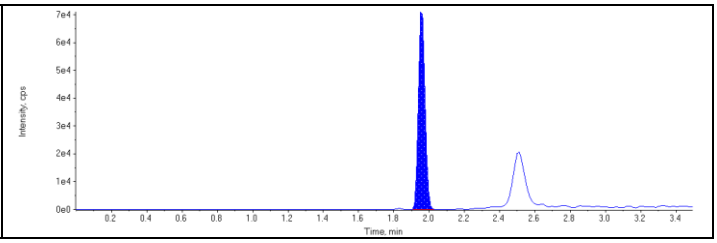
MPFOA (Internal Standard)

RT (Exp. RT): 1.87(1.88) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



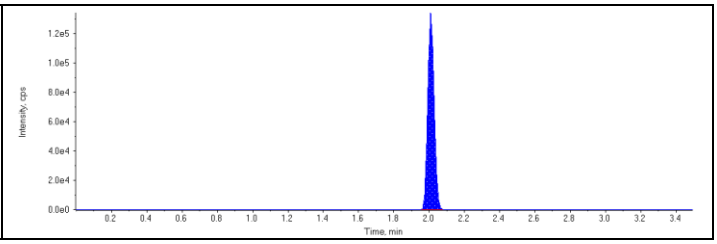
MPFOS (Internal Standard)

RT (Exp. RT): 1.96(1.97) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



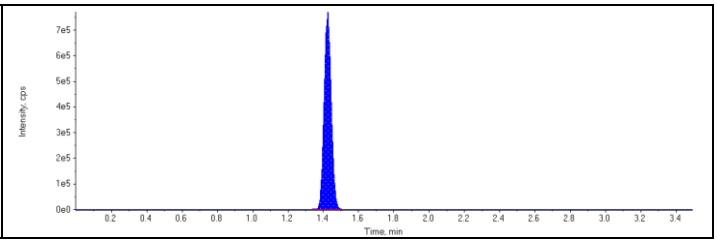
MPFNA (Internal Standard)

RT (Exp. RT): 2.01(2.02) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



13C6-PFHxA IS (Internal Standard)

RT (Exp. RT): 1.42(1.42) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



N/A (Internal Standard)

RT (Exp. RT): N/A(N/A) min
Concentration: N/A N/A
Sample Type: (Quality Control)

This image is not available

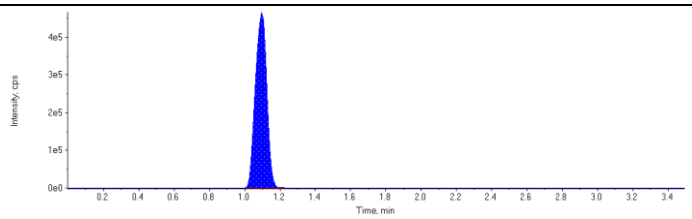
PFBS 1 (298.900/79.900 Da)

RT (Exp. RT): 1.10 (1.09) min

Calculated Conc: 47.9 ng/L

Area Ratio: 13.4

Sample Type: (Quality Control)



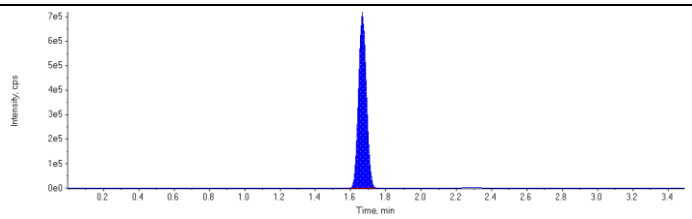
PFHxS 1 (398.900/79.900 Da)

RT (Exp. RT): 1.67 (1.68) min

Calculated Conc: 48.6 ng/L

Area Ratio: 14.1

Sample Type: (Quality Control)



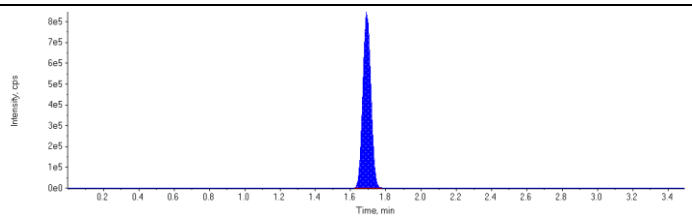
PFHpA 1 (363.000/319.000 Da)

RT (Exp. RT): 1.69 (1.70) min

Calculated Conc: 45.3 ng/L

Area Ratio: 5.42

Sample Type: (Quality Control)



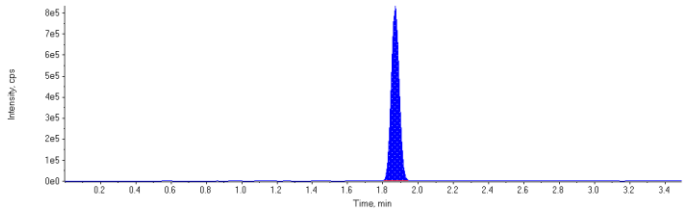
PFOA 1 (413.100/369.000 Da)

RT (Exp. RT): 1.87 (1.88) min

Calculated Conc: 43.5 ng/L

Area Ratio: 6.35

Sample Type: (Quality Control)



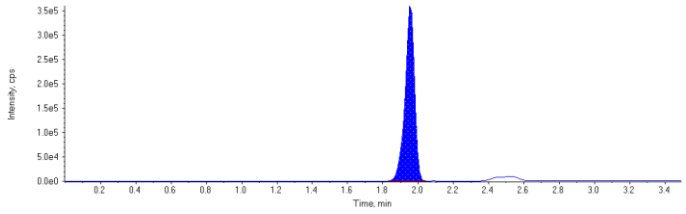
PFOS 1 (498.900/79.900 Da)

RT (Exp. RT): 1.96 (1.97) min

Calculated Conc: 46.4 ng/L

Area Ratio: 7.20

Sample Type: (Quality Control)



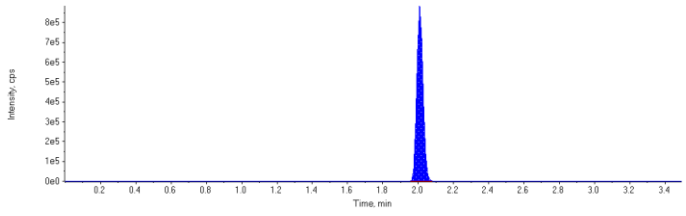
PFNA 1 (462.900/419.000 Da)

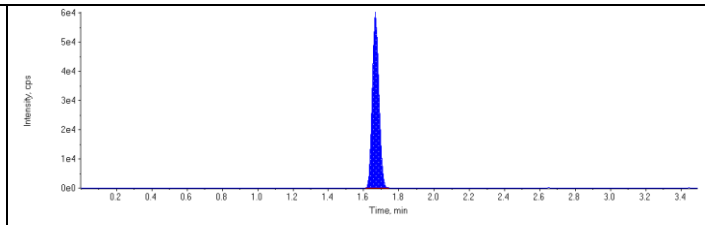
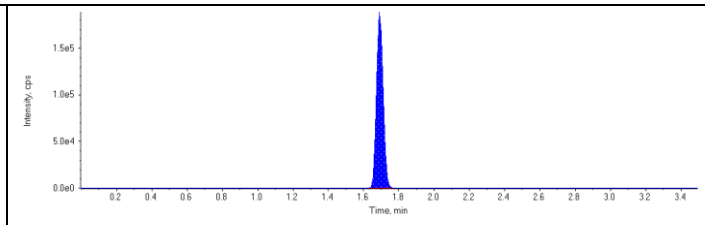
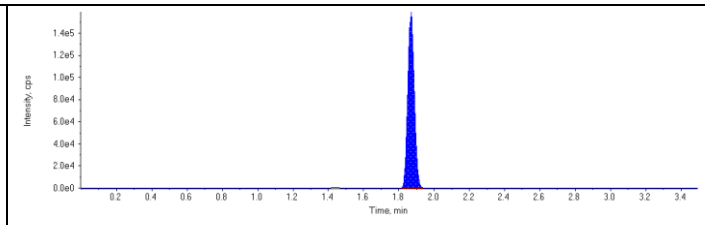
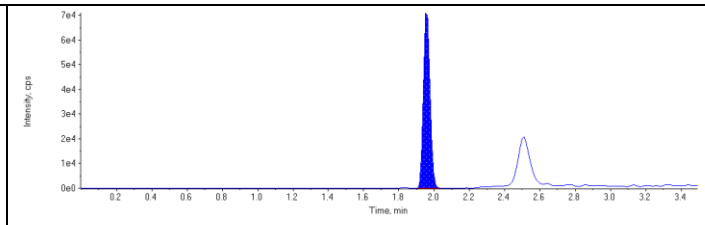
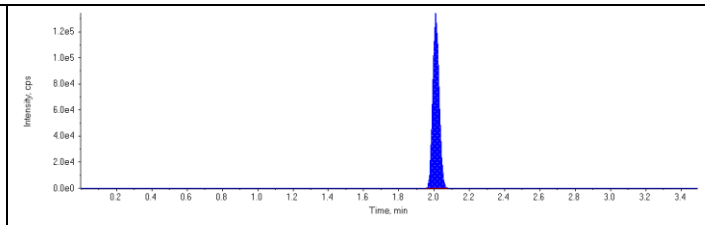
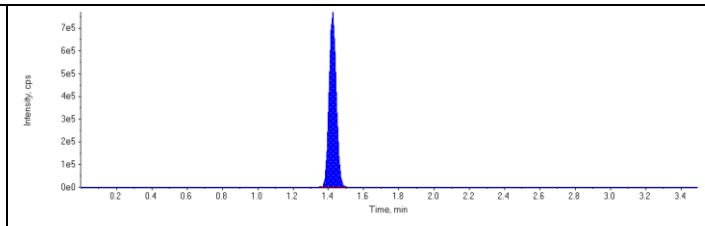
RT (Exp. RT): 2.01 (2.02) min

Calculated Conc: 48.4 ng/L

Area Ratio: 6.41

Sample Type: (Quality Control)



18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 111. ng/L Area Ratio: 0.0715 Sample Type: (Quality Control)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.69 (1.69) min Calculated Conc: 117. ng/L Area Ratio: 0.225 Sample Type: (Quality Control)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 112. ng/L Area Ratio: 0.187 Sample Type: (Quality Control)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 108. ng/L Area Ratio: 0.0855 Sample Type: (Quality Control)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 116. ng/L Area Ratio: 0.155 Sample Type: (Quality Control)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.42 (1.42) min Calculated Conc: 87.9 ng/L Area Ratio: 0.00 Sample Type: (Quality Control)	

Perfluorinated Compound Internal Standard (IS) Evaluation

Sample Name	Analyte	PFBS		PFHxS		PFHpA		PFOA		PFOS		PFNA	
	Mass labeled IS	MPFHxS		MPFHxS		MPFHpA		MPFOA		MPFOS		MPFNA	
	Average IS Area in ICAL	144833		144833		501000		453000		199667		382000	
		IS Peak Area	IS %R (ICAL)	IS Peak Area	IS %R (ICAL)	IS Peak Area	IS %R (ICAL)	IS Peak Area	IS %R (ICAL)	IS Peak Area	IS %R (ICAL)	IS Peak Area	IS %R (ICAL)
4393242~BLANK		132000	91	132000	91	475000	95	445000	98	181000	91	355000	93
STD 1		149000	103	149000	103	488000	97	456000	101	204000	102	392000	103
STD 2		142000	98	142000	98	510000	102	464000	102	202000	101	376000	98
STD 3		147000	101	147000	101	502000	100	451000	100	200000	100	382000	100
STD 4		142000	98	142000	98	521000	104	459000	101	193000	97	392000	103
STD 5		150000	104	150000	104	486000	97	446000	98	197000	99	382000	100
STD 6		139000	96	139000	96	499000	100	442000	98	202000	101	368000	96
ICV		150000	104	150000	104	507000	101	460000	102	212000	106	407000	107
CCV		158000	109	158000	109	508000	101	460000	102	198000	99	400000	105
4393242~MTRX SPK		144000	99	144000	99	457000	91	428000	94	182000	91	352000	92
4393242~MTRX SPK:D1		154000	106	154000	106	458000	91	445000	98	178000	89	341000	89
4393242~SPIKE		134000	93	134000	93	459000	92	416000	92	182000	91	334000	87
4393242~BVX741-01 (20x)		117000	81	117000	81	397000	79	396000	87	153000	77	296000	77
4393242~BVX743-01 (20x)		121000	84	121000	84	400000	80	377000	83	157000	79	305000	80
4393242~BVX748-01		90100	62	90100	62	317000	63	297000	66	124000	62	243000	64
4393242~BVX749-01		124000	86	124000	86	412000	82	380000	84	139000	70	273000	71
4393242~BVX750-01		107000	74	107000	74	364000	73	327000	72	143000	72	256000	67
4393242~BVX751-01		160000	110	160000	110	482000	96	429000	95	187000	94	335000	88
4393242~BWH289-01		123000	85	123000	85	392000	78	383000	85	153000	77	267000	70
4393242~BWH290-01		128000	88	128000	88	390000	78	359000	79	161000	81	295000	77
4393242~BWH291-01		131000	90	131000	90	437000	87	400000	88	187000	94	329000	86
4393242~BWH292-01		134000	93	134000	93	431000	86	412000	91	172000	86	326000	85
CCV		142000	98	142000	98	493000	98	468000	103	201000	101	383000	100
4393242~BWH293-01		131000	90	131000	90	438000	87	397000	88	169000	85	309000	81
4393242~BWH294-01		136000	94	136000	94	417000	83	400000	88	169000	85	307000	80
4393242~BWH295-01		129000	89	129000	89	448000	89	404000	89	171000	86	348000	91
4393242~BWH295-01:D1		139000	96	139000	96	463000	92	412000	91	172000	86	322000	84
4393242~BWH296-01		143000	99	143000	99	470000	94	413000	91	166000	83	309000	81
4393242~BWH297-01		124000	86	124000	86	365000	73	345000	76	159000	80	290000	76
4393242~BWH298-01		133000	92	133000	92	445000	89	407000	90	172000	86	327000	86
4393242~BWR413-01		137000	95	137000	95	437000	87	402000	89	164000	82	325000	85
4393242~BWR422-01		153000	106	153000	106	470000	94	402000	89	171000	86	337000	88
4393242~BWR424-01		120000	83	120000	83	417000	83	403000	89	162000	81	309000	81
CCV		153000	106	153000	106	497000	99	452000	100	208000	104	390000	102
CCV		152000	105	152000	105	400000	80	405000	89	201000	101	329000	86
4393242~BVX749-01		111000	77	111000	77	339000	68	335000	74	145000	73	242000	63
CCV		157000	108	157000	108	471000	94	441000	97	205000	103	356000	93

Perfluorinated Compound Internal Standard (IS) Evaluation

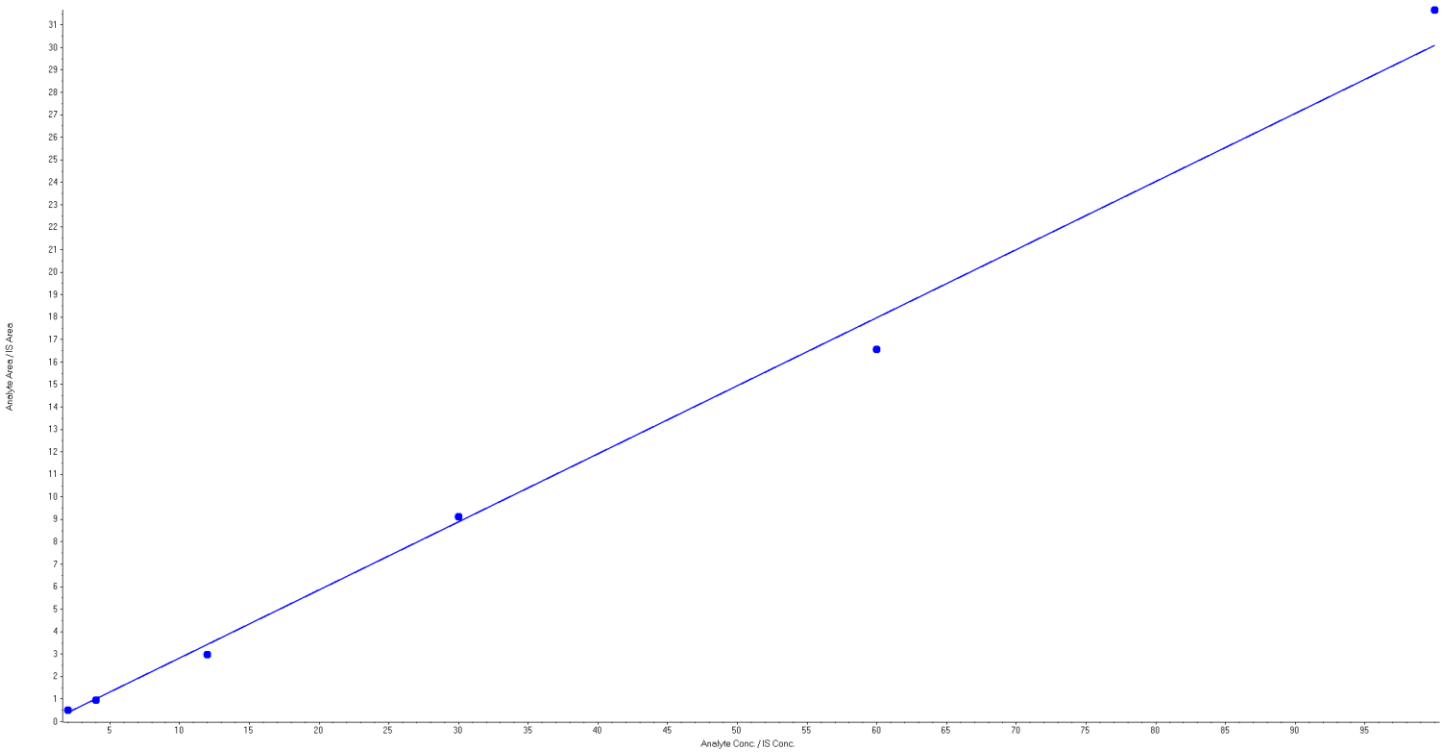
Sample Name	Analyte	PFBS		PFHxS		PFHpA		PFOA		PFOS		PFNA	
	Mass labeled IS	MPFHxS		MPFHxS		MPFHpA		MPFOA		MPFOS		MPFNA	
	Average IS Area in ICAL	159333		159333		475000		413667		195000		331000	
		IS Peak Area	IS %R (ICAL)	IS Peak Area	IS %R (ICAL)	IS Peak Area	IS %R (ICAL)	IS Peak Area	IS %R (ICAL)	IS Peak Area	IS %R (ICAL)	IS Peak Area	IS %R (ICAL)
4394558~BLANK		166000	104	166000	104	539000	113	466000	113	189000	97	350000	106
STD 1		143000	90	143000	90	491000	103	404000	98	192000	98	325000	98
STD 2		165000	104	165000	104	475000	100	434000	105	198000	102	328000	99
STD 3		171000	107	171000	107	484000	102	424000	102	204000	105	340000	103
STD 4		167000	105	167000	105	516000	109	425000	103	214000	110	359000	108
STD 5		160000	100	160000	100	431000	91	409000	99	177000	91	316000	95
STD 6		150000	94	150000	94	453000	95	386000	93	185000	95	318000	96
ICV		156000	98	156000	98	489000	103	406000	98	186000	95	338000	102
CCV		166000	104	166000	104	500000	105	470000	114	215000	110	366000	111
4394558~MTRX SPK		180000	113	180000	113	422000	89	348000	84	155000	79	261000	79
4394558~MTRX SPK:D1		153000	96	153000	96	434000	91	376000	91	161000	83	275000	83
4394558~SPIKE		178000	112	178000	112	483000	102	464000	112	199000	102	335000	101
4394558~BVX747-01		145000	91	145000	91	416000	88	379000	92	166000	85	287000	87
4394558~BVX752-01		156000	98	156000	98	446000	94	412000	100	182000	93	295000	89
4394558~BVX753-01		139000	87	139000	87	396000	83	325000	79	131000	67	227000	69
4394558~BVX754-01		143000	90	143000	90	407000	86	359000	87	157000	81	274000	83
4394558~BVX755-01		158000	99	158000	99	500000	105	455000	110	182000	93	294000	89
4394558~BVX756-01		146000	92	146000	92	482000	101	448000	108	178000	91	319000	96
4394558~BVX770-01(10X)		164000	103	164000	103	486000	102	443000	107	185000	95	332000	100
4394558~BVX771-01(10X)		144000	90	144000	90	430000	91	410000	99	174000	89	288000	87
4394558~BVX844-01(50X)		144000	90	144000	90	445000	94	396000	96	177000	91	299000	90
4394558~BVX845-01(50X)		150000	94	150000	94	447000	94	410000	99	187000	96	321000	97
CCV		162000	102	162000	102	482000	101	419000	101	204000	105	340000	103
4394558~MTRX SPK		131000	82	131000	82	405000	85	373000	90	164000	84	275000	83
4394558~MTRX SPK:D1		146000	92	146000	92	404000	85	398000	96	174000	89	298000	90
CCV		159000	100	159000	100	477000	100	425000	103	223000	114	354000	107

Analyte Name: PFBS 1
Internal Standard: MPFHxS

Data File	PFC_160225\WS#4393242.wiff	**Result Table**	PFC_Water_160225_4393242_ULow.rdb
Acquisition Date	2016/02/25 5:02:47 PM	**Project**	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	**Instrument Name**	LCMS03

Regression Equation: y = 0.303 x + -0.201 (r = 0.9973)

Expected Concentration (ng/L)	Number of Values	Calculated Concentration (ng/L)	% Accuracy
2	1	2.35	117.6
4	1	3.79	94.8
12	1	10.49	87.4
30	1	30.80	102.7
60	1	55.38	92.3
100	1	105.19	105.2

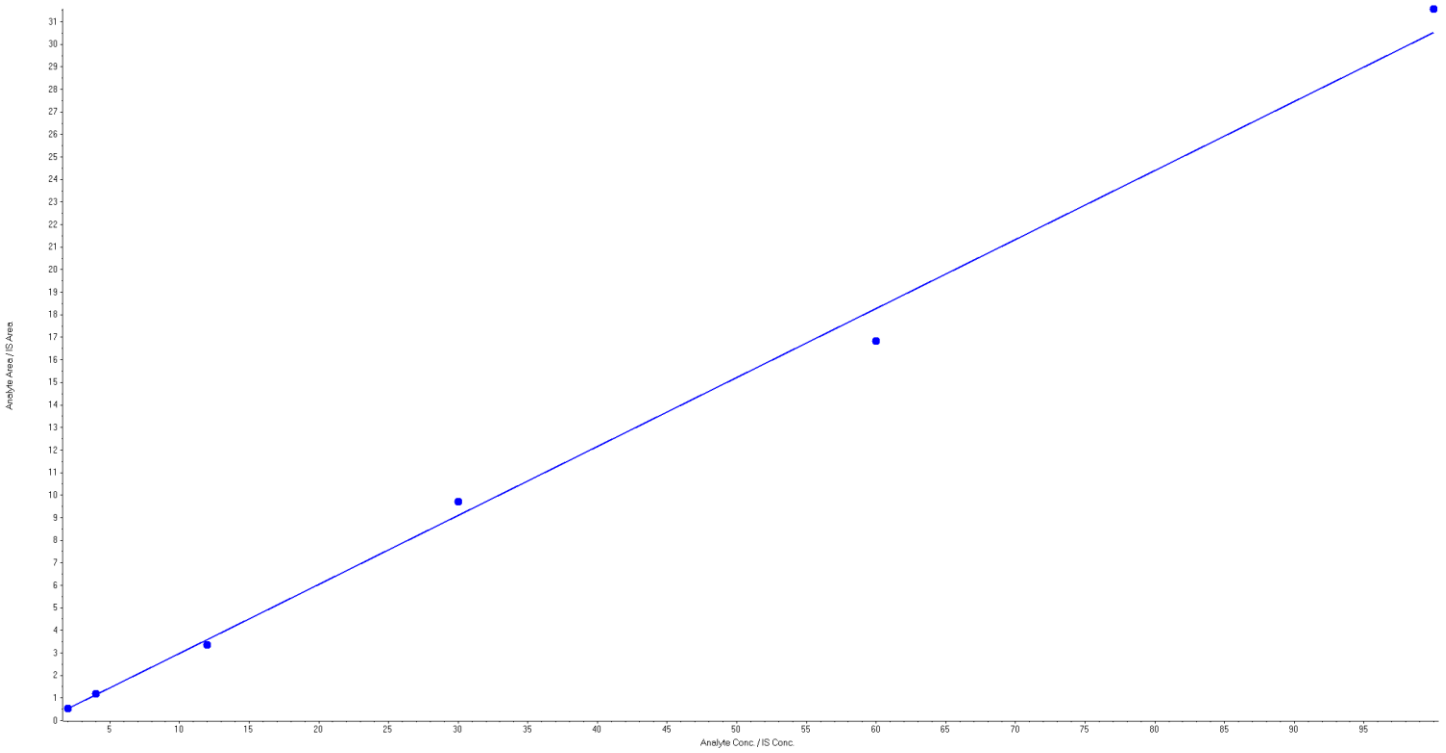


Analyte Name: PFHxS 1
Internal Standard: MPFHxS

Data File	PFC_160225\WS#4393242.wiff	**Result Table**	PFC_Water_160225_4393242_ULow.rdb
Acquisition Date	2016/02/25 5:02:47 PM	**Project**	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	**Instrument Name**	LCMS03

Regression Equation: y = 0.306 x + -0.0818 (r = 0.9980)

Expected Concentration (ng/L)	Number of Values	Calculated Concentration (ng/L)	% Accuracy
2	1	2.01	100.5
4	1	4.16	104.1
12	1	11.20	93.3
30	1	31.96	106.5
60	1	55.27	92.1
100	1	103.40	103.4

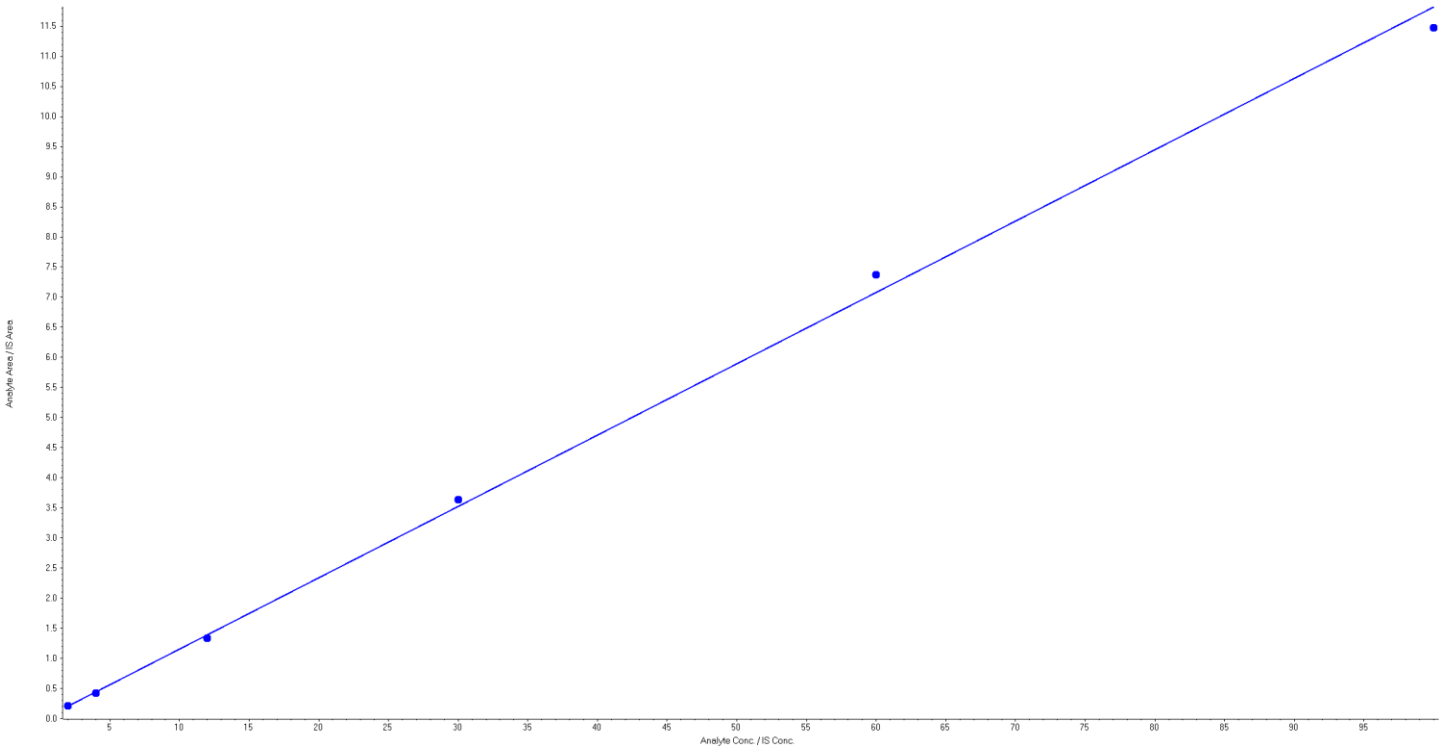


Analyte Name: PFHpA 1
Internal Standard: MPFHpA

Data File	PFC_160225\WS#4393242.wiff	**Result Table**	PFC_Water_160225_4393242_ULow.rdb
Acquisition Date	2016/02/25 5:02:47 PM	**Project**	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	**Instrument Name**	LCMS03

Regression Equation: y = 0.119 x + -0.0321 (r = 0.9992)

Expected Concentration (ng/L)	Number of Values	Calculated Concentration (ng/L)	% Accuracy
2	1	2.09	104.6
4	1	3.80	95.0
12	1	11.49	95.8
30	1	30.99	103.3
60	1	62.51	104.2
100	1	97.12	97.1

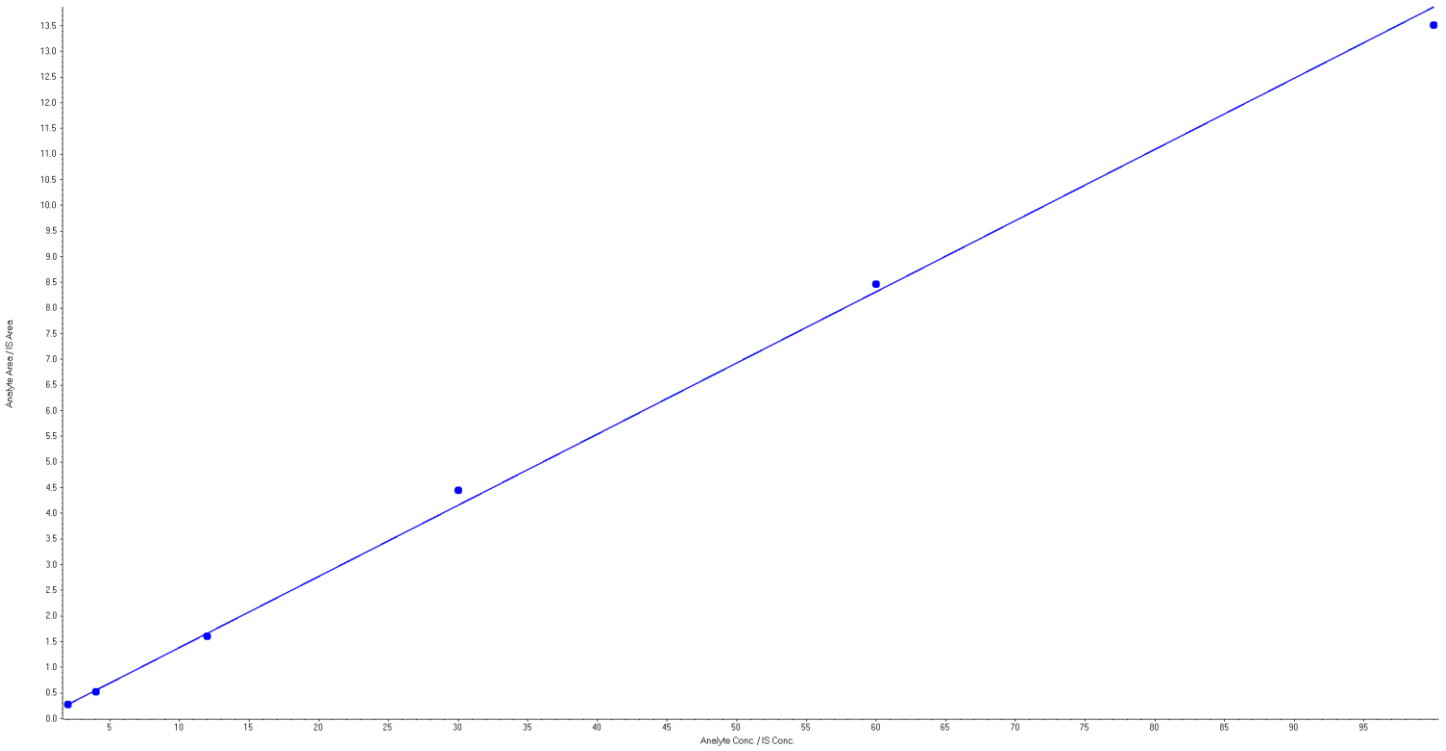


Analyte Name: PFOA 1
Internal Standard: MPFOA

Data File	PFC_160225\WS#4393242.wiff	**Result Table**	PFC_Water_160225_4393242_ULow.rdb
Acquisition Date	2016/02/25 5:02:47 PM	**Project**	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	**Instrument Name**	LCMS03

Regression Equation: y = 0.139 x + -0.0028 (r = 0.9992)

Expected Concentration (ng/L)	Number of Values	Calculated Concentration (ng/L)	% Accuracy
2	1	2.04	102.1
4	1	3.81	95.3
12	1	11.57	96.4
30	1	32.11	107.0
60	1	61.02	101.7
100	1	97.45	97.5

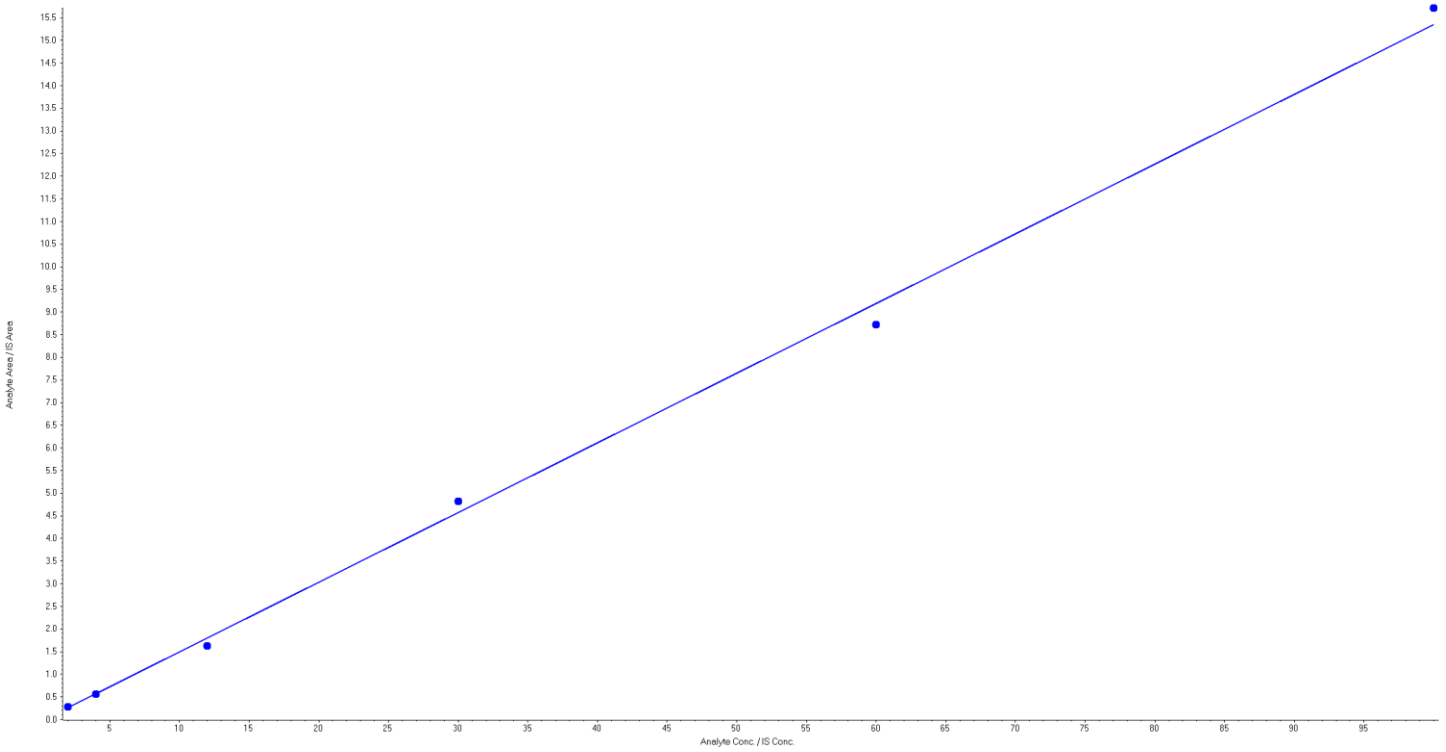


Analyte Name: PFOS 1
Internal Standard: MPFOS

Data File	PFC_160225\WS#4393242.wiff	**Result Table**	PFC_Water_160225_4393242_ULow.rdb
Acquisition Date	2016/02/25 5:02:47 PM	**Project**	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	**Instrument Name**	LCMS03

Regression Equation: y = 0.154 x + -0.0456 (r = 0.9988)

Expected Concentration (ng/L)	Number of Values	Calculated Concentration (ng/L)	% Accuracy
2	1	2.16	107.9
4	1	3.94	98.4
12	1	10.90	90.9
30	1	31.61	105.4
60	1	57.00	95.0
100	1	102.39	102.4

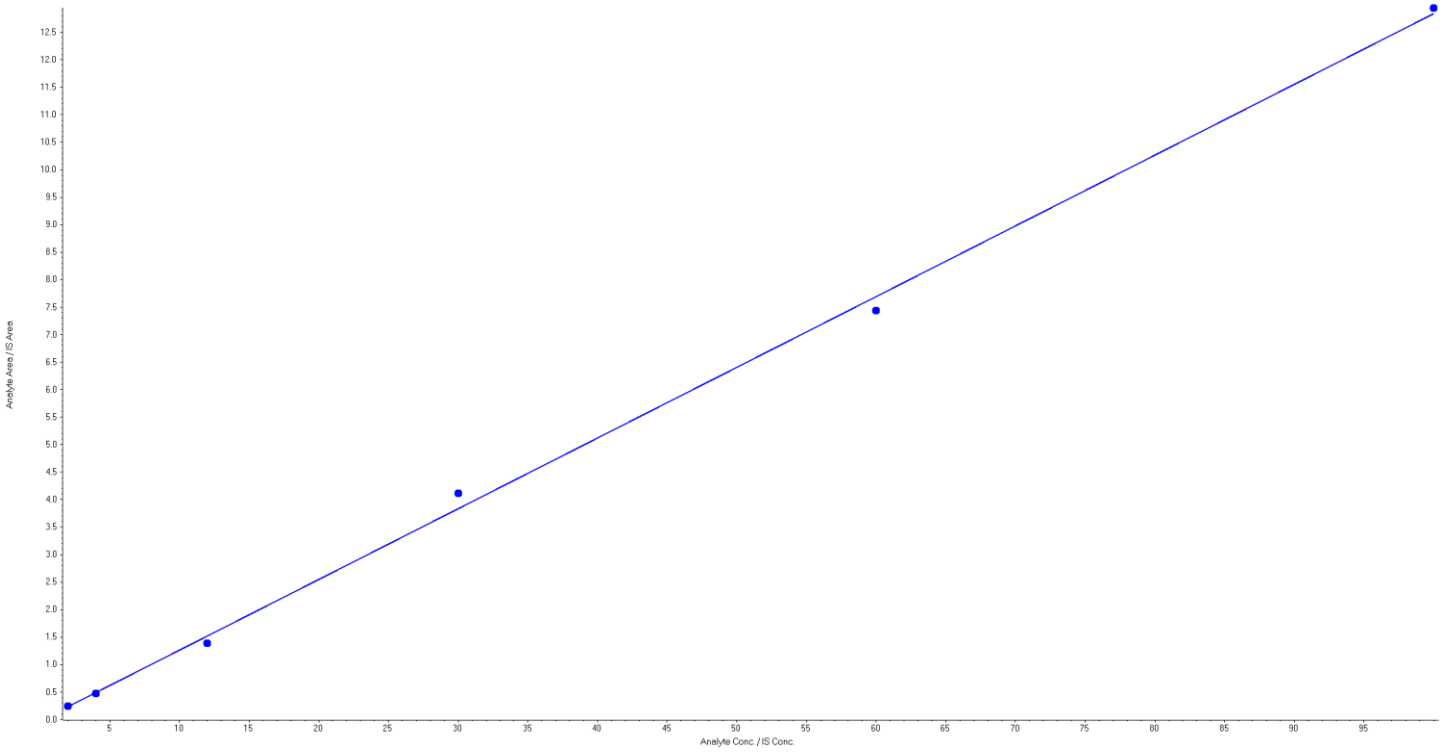


Analyte Name: PFNA 1
Internal Standard: MPFNA

Data File	PFC_160225\WS#4393242.wiff	**Result Table**	PFC_Water_160225_4393242_ULow.rdb
Acquisition Date	2016/02/25 5:02:47 PM	**Project**	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	**Instrument Name**	LCMS03

Regression Equation: y = 0.129 x + -0.0244 (r = 0.9990)

Expected Concentration (ng/L)	Number of Values	Calculated Concentration (ng/L)	% Accuracy
2	1	2.12	106.1
4	1	3.90	97.5
12	1	10.99	91.6
30	1	32.19	107.3
60	1	58.00	96.7
100	1	100.80	100.8

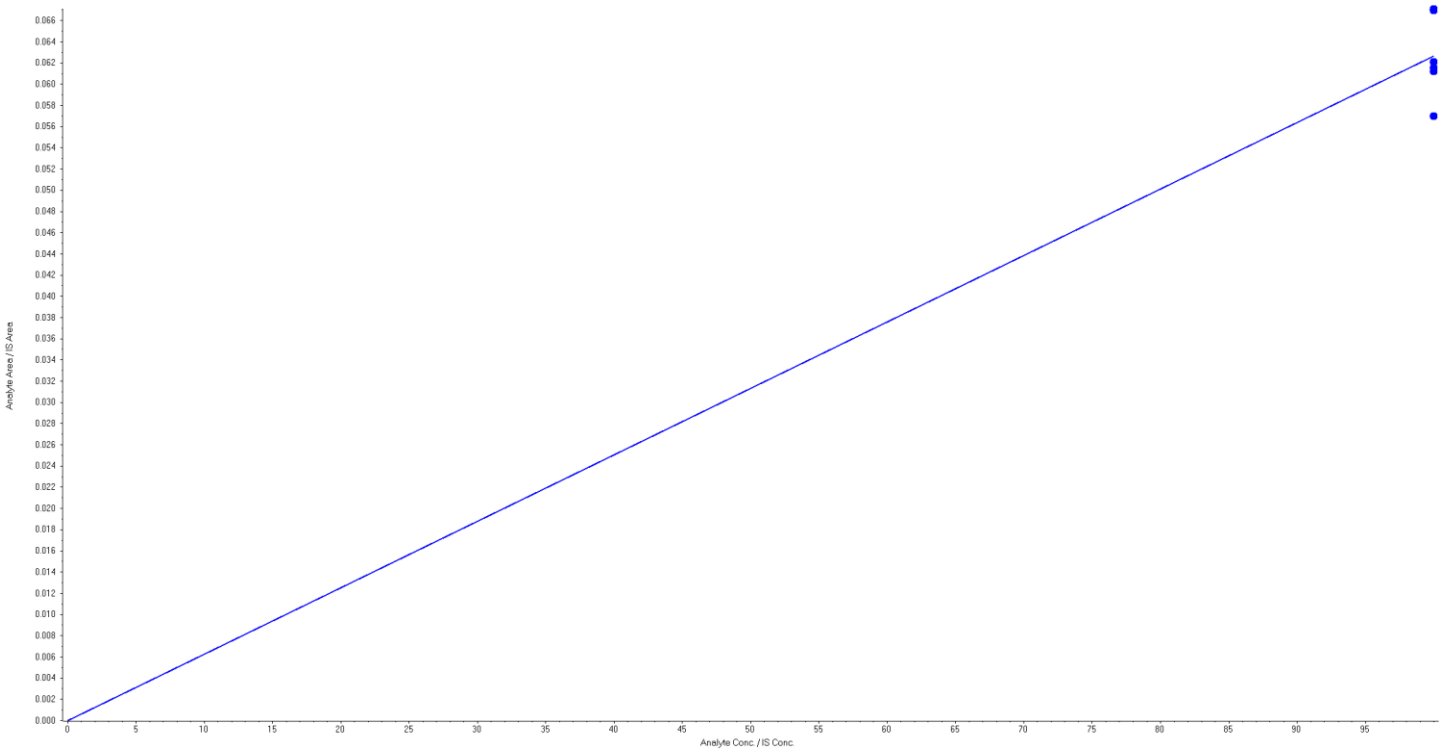


Analyte Name: 18O2-PFHxS
Internal Standard: 13C6-PFHxA IS

Data File	PFC_160225\WS#4393242.wiff	**Result Table**	PFC_Water_160225_4393242_ULow.rdb
Acquisition Date	2016/02/25 5:02:47 PM	**Project**	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	**Instrument Name**	LCMS03

Regression Equation: y = 0.000627 x (r = 0.9984)

Expected Concentration (ng/L)	Number of Values	Calculated Concentration (ng/L)	% Accuracy
100	6	100.00	100.0

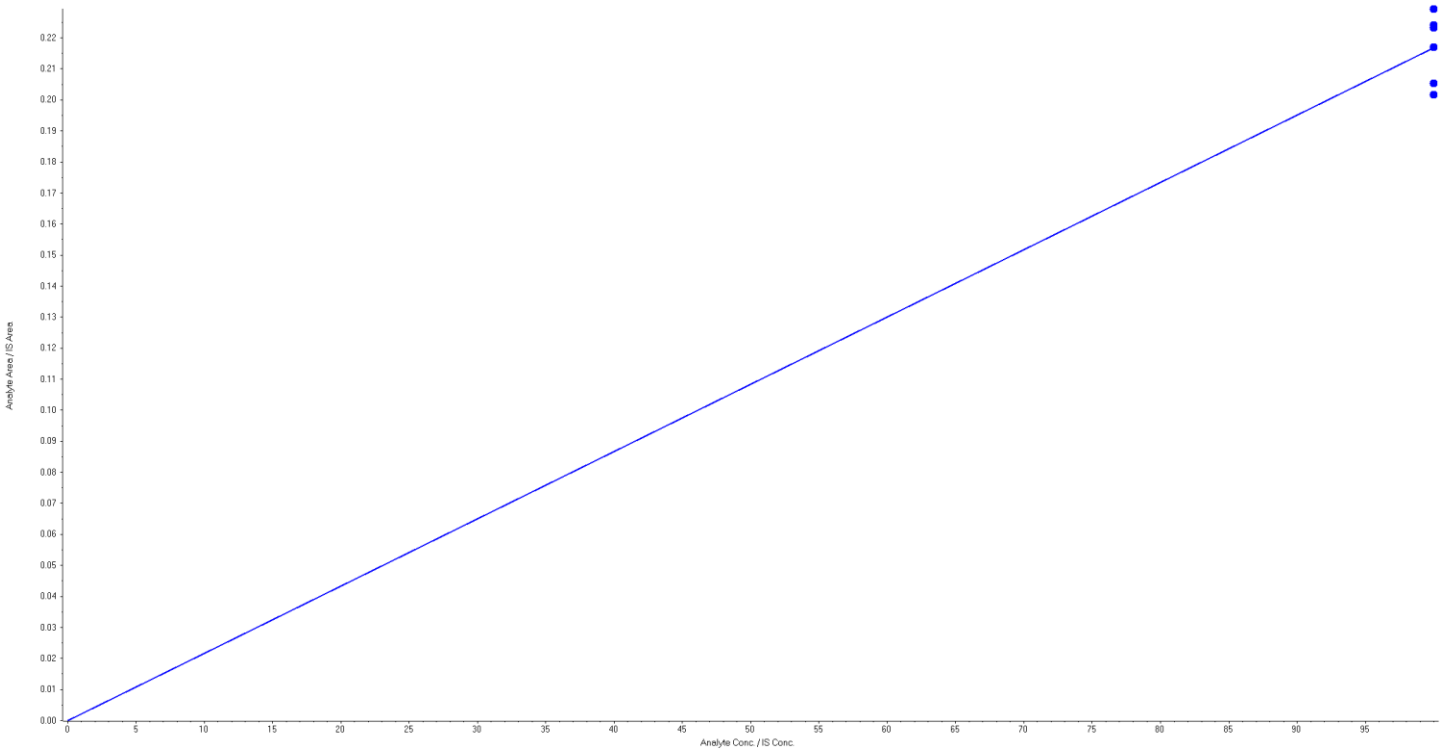


Analyte Name: 13C4-PFHpA
Internal Standard: 13C6-PFHxA IS

Data File	PFC_160225\WS#4393242.wiff	**Result Table**	PFC_Water_160225_4393242_ULow.rdb
Acquisition Date	2016/02/25 5:02:47 PM	**Project**	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	**Instrument Name**	LCMS03

Regression Equation: y = 0.00217 x (r = 0.9989)

Expected Concentration (ng/L)	Number of Values	Calculated Concentration (ng/L)	% Accuracy
100	6	100.00	100.0

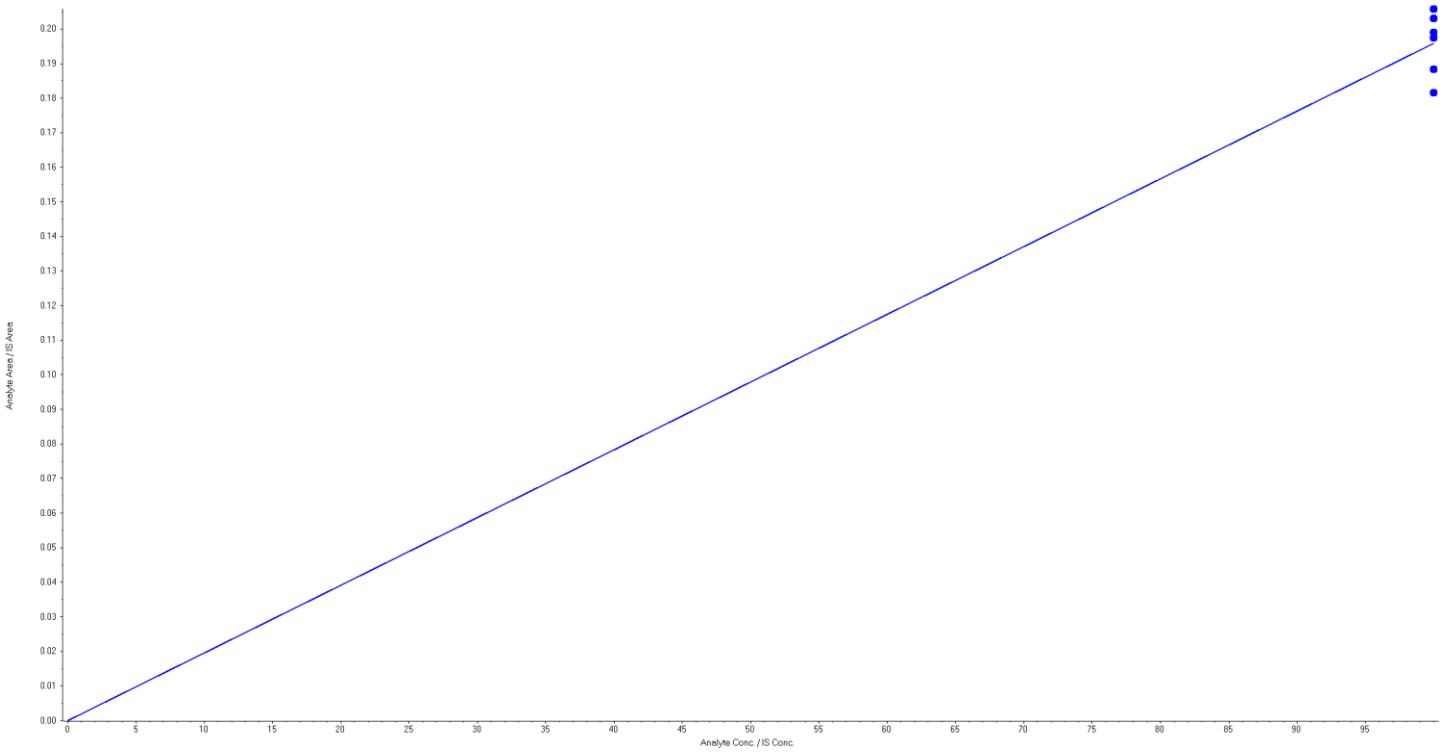


Analyte Name: 13C4-PFOA
Internal Standard: 13C6-PFHxA IS

Data File	PFC_160225\WS#4393242.wiff	**Result Table**	PFC_Water_160225_4393242_ULow.rdb
Acquisition Date	2016/02/25 5:02:47 PM	**Project**	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	**Instrument Name**	LCMS03

Regression Equation: y = 0.00196 x (r = 0.9991)

Expected Concentration (ng/L)	Number of Values	Calculated Concentration (ng/L)	% Accuracy
100	6	100.00	100.0

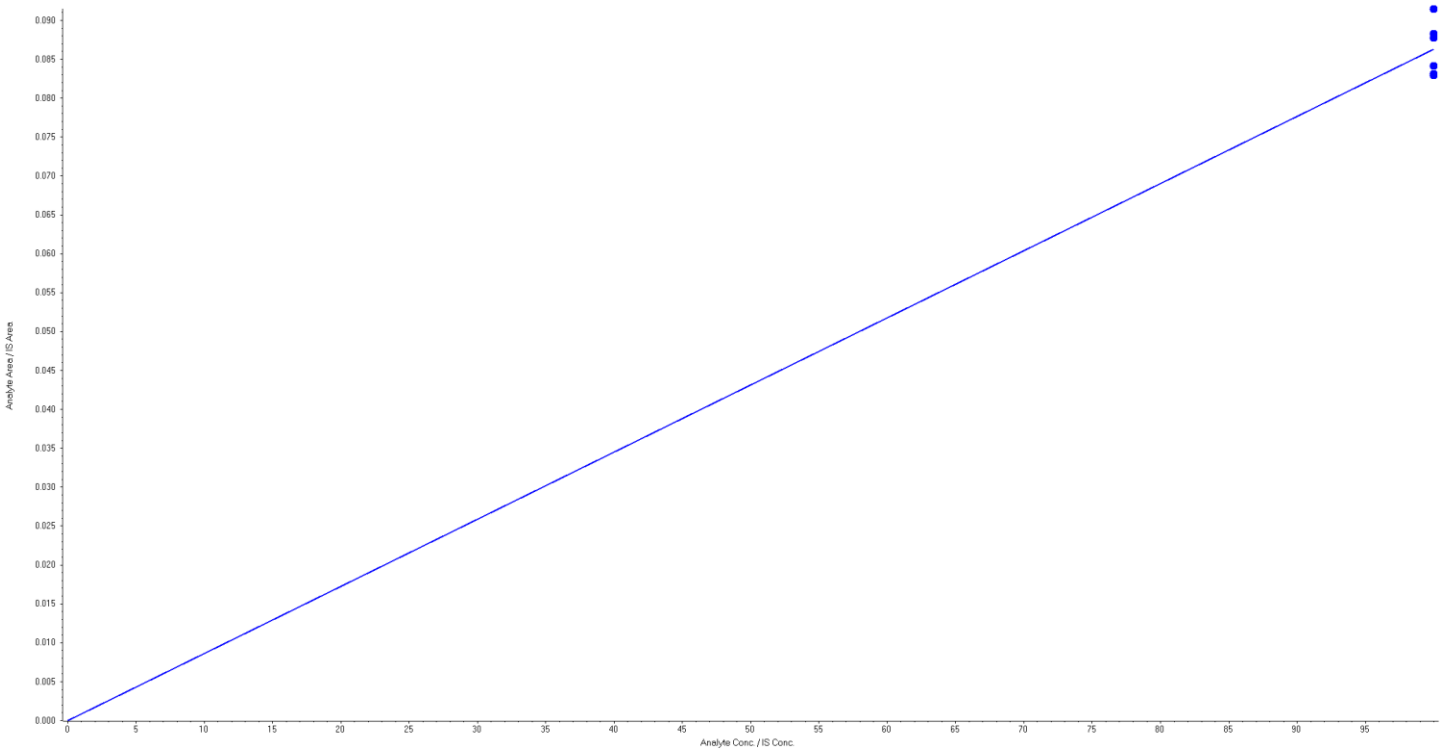


Analyte Name: 13C4-PFOS
Internal Standard: 13C6-PFHxA IS

Data File	PFC_160225\WS#4393242.wiff	**Result Table**	PFC_Water_160225_4393242_ULow.rdb
Acquisition Date	2016/02/25 5:02:47 PM	**Project**	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	**Instrument Name**	LCMS03

Regression Equation: y = 0.000863 x (r = 0.9993)

Expected Concentration (ng/L)	Number of Values	Calculated Concentration (ng/L)	% Accuracy
100	6	100.00	100.0

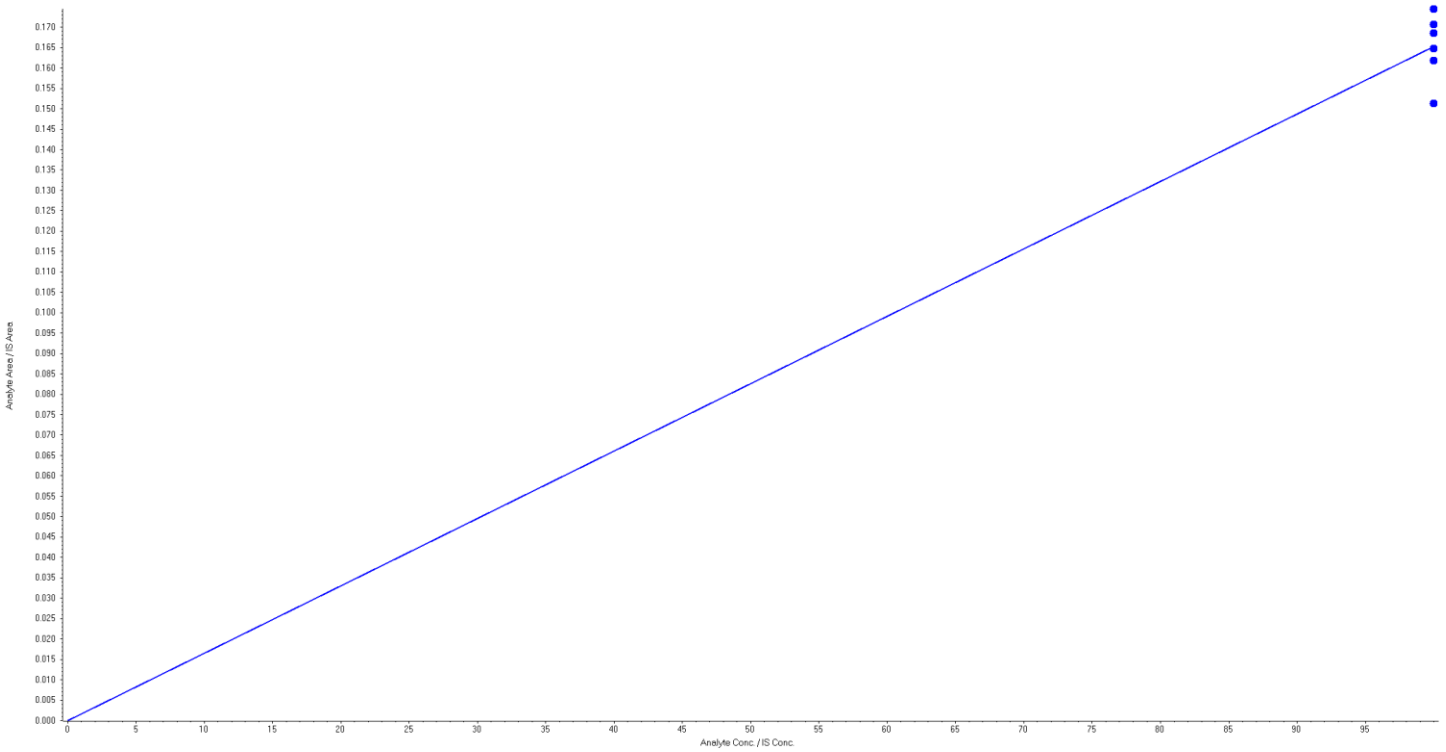


Analyte Name: 13C5-PFNA
Internal Standard: 13C6-PFHxA IS

Data File	PFC_160225\WS#4393242.wiff	**Result Table**	PFC_Water_160225_4393242_ULow.rdb
Acquisition Date	2016/02/25 5:02:47 PM	**Project**	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	**Instrument Name**	LCMS03

Regression Equation: y = 0.00165 x (r = 0.9990)

Expected Concentration (ng/L)	Number of Values	Calculated Concentration (ng/L)	% Accuracy
100	6	100.00	100.0

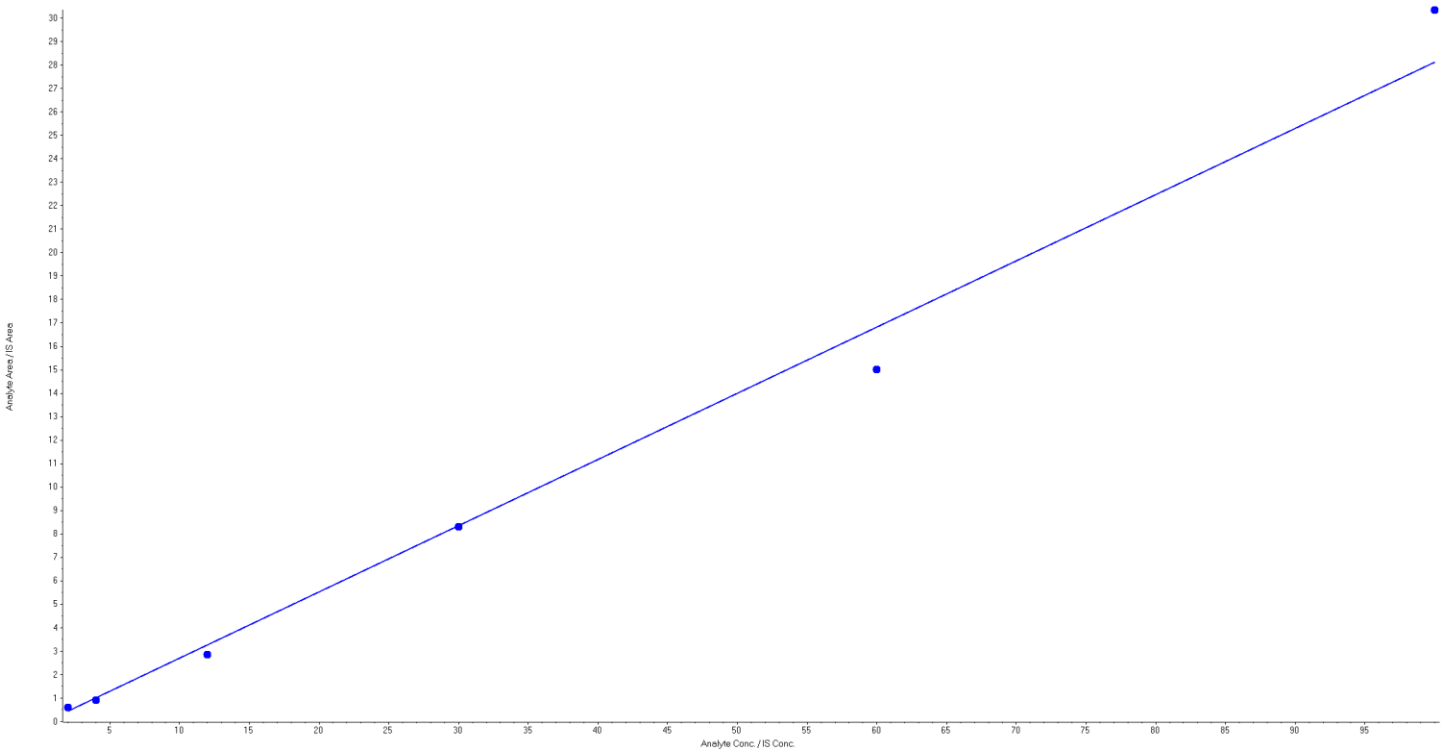


Analyte Name: PFBS 1
Internal Standard: MPFHxS

Data File	PFC_160226\WS#4394558.wiff	**Result Table**	PFC_Water_160226_4394558_ULow_6.rdb
Acquisition Date	2016/02/29 8:55:42 AM	**Project**	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	**Instrument Name**	LCMS03

Regression Equation: y = 0.282 x + -0.119 (r = 0.9951)

Expected Concentration (ng/L)	Number of Values	Calculated Concentration (ng/L)	% Accuracy
2	1	2.50	124.9
4	1	3.62	90.5
12	1	10.54	87.8
30	1	29.86	99.5
60	1	53.60	89.3
100	1	107.88	107.9

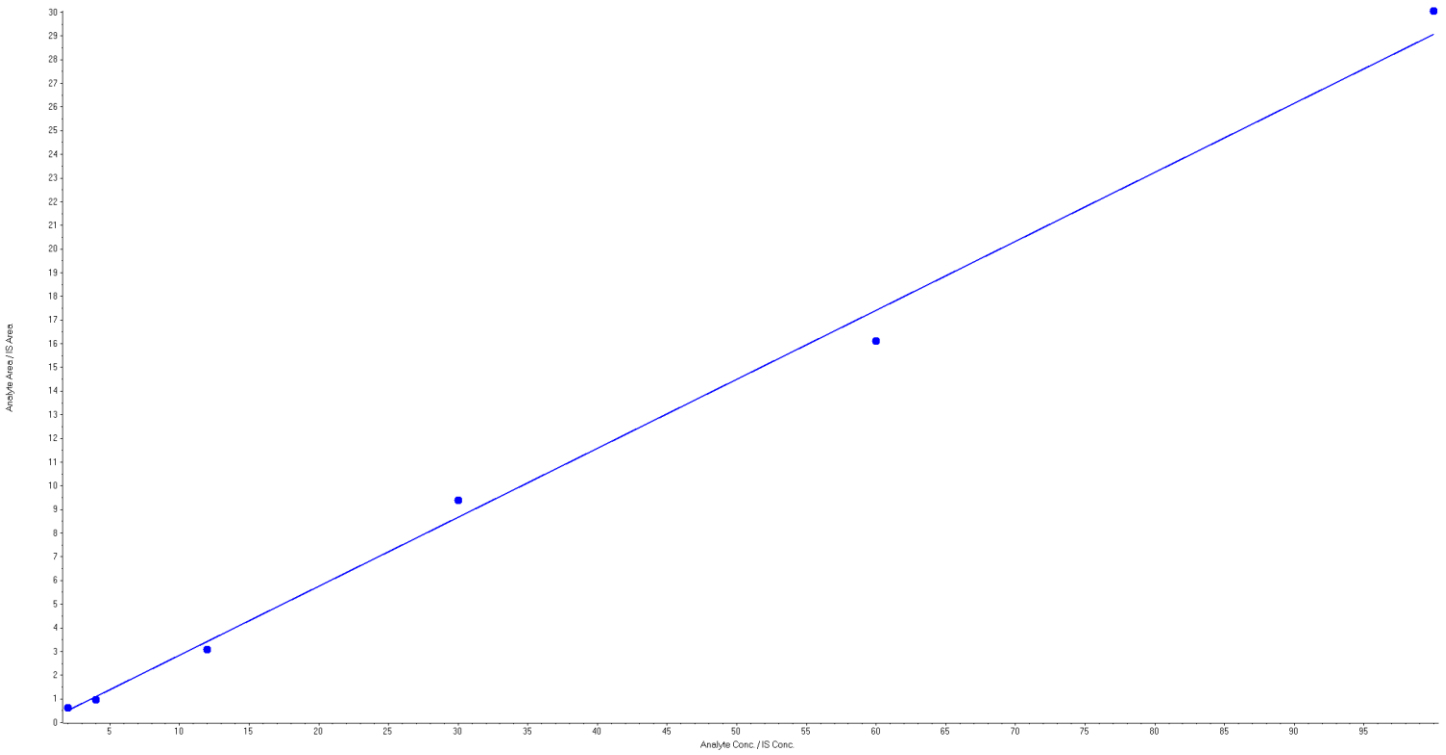


Analyte Name: PFHxS 1
Internal Standard: MPFHxS

Data File	PFC_160226\WS#4394558.wiff	**Result Table**	PFC_Water_160226_4394558_ULow_6.rdb
Acquisition Date	2016/02/29 8:55:42 AM	**Project**	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	**Instrument Name**	LCMS03

Regression Equation: y = 0.291 x + -0.0719 (r = 0.9974)

Expected Concentration (ng/L)	Number of Values	Calculated Concentration (ng/L)	% Accuracy
2	1	2.37	118.7
4	1	3.50	87.5
12	1	10.78	89.9
30	1	32.41	108.0
60	1	55.56	92.6
100	1	103.37	103.4

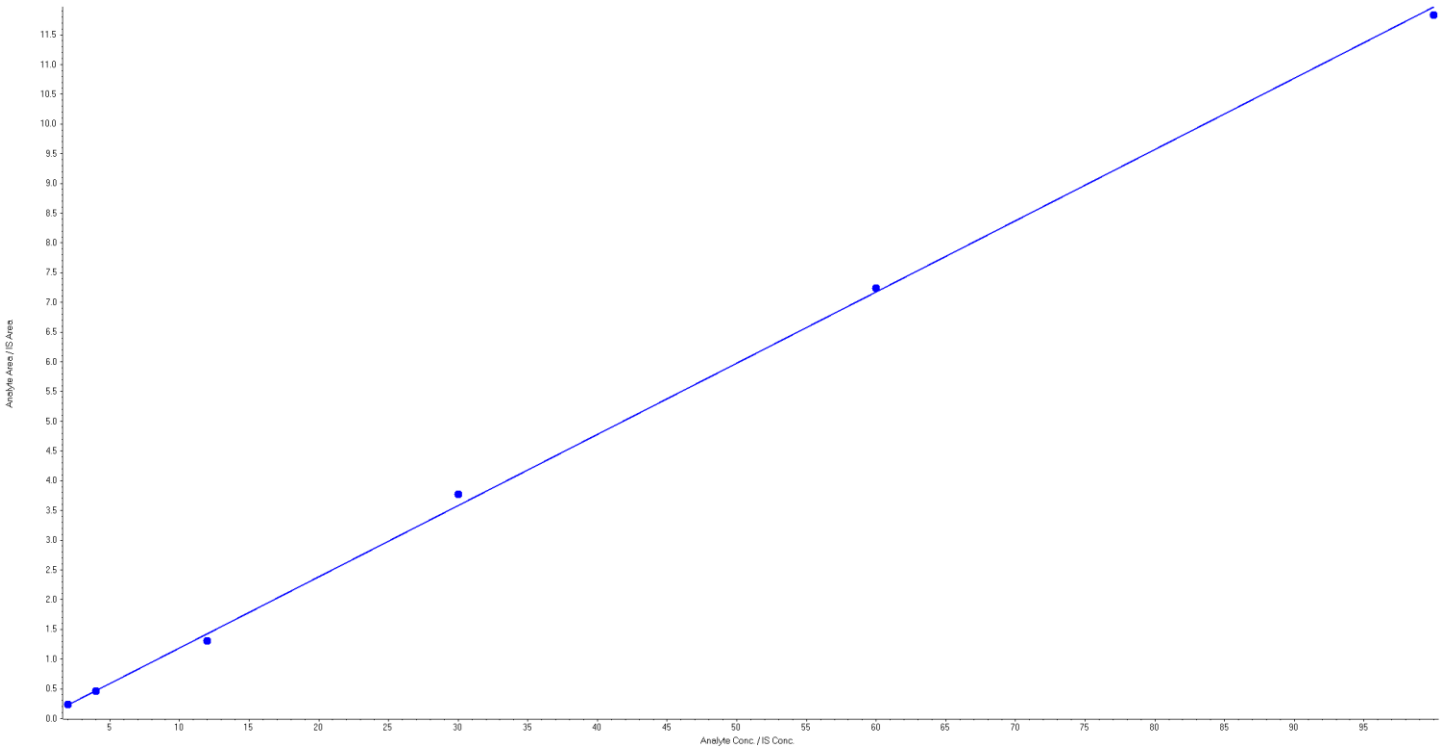


Analyte Name: PFHpA 1
Internal Standard: MPFHpA

Data File	PFC_160226\WS#4394558.wiff	**Result Table**	PFC_Water_160226_4394558_ULow_6.rdb
Acquisition Date	2016/02/29 8:55:42 AM	**Project**	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	**Instrument Name**	LCMS03

Regression Equation: y = 0.12 x + -0.0118 (r = 0.9994)

Expected Concentration (ng/L)	Number of Values	Calculated Concentration (ng/L)	% Accuracy
2	1	2.07	103.6
4	1	3.99	99.7
12	1	11.00	91.7
30	1	31.59	105.3
60	1	60.49	100.8
100	1	98.86	98.9

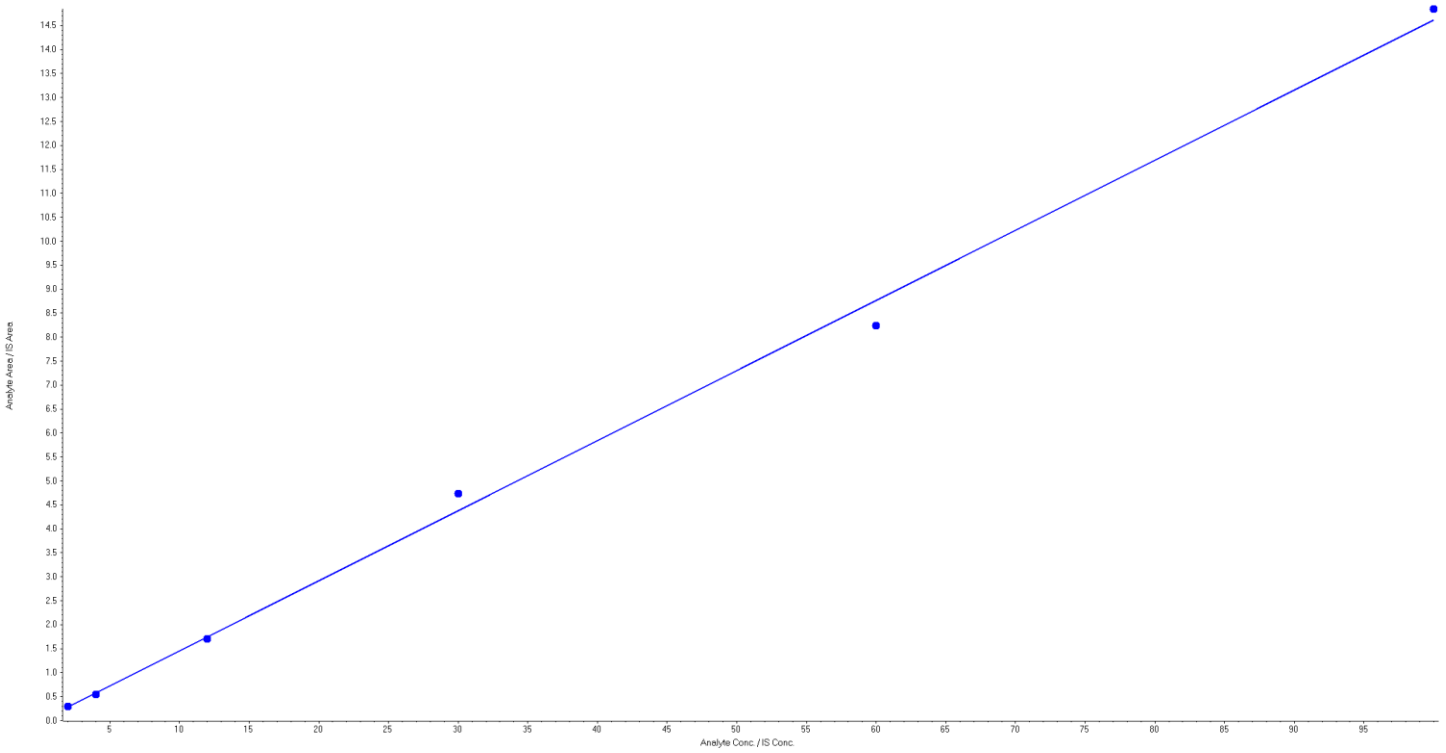


Analyte Name: PFOA 1
Internal Standard: MPFOA

Data File	PFC_160226\WS#4394558.wiff	**Result Table**	PFC_Water_160226_4394558_ULow_6.rdb
Acquisition Date	2016/02/29 8:55:42 AM	**Project**	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	**Instrument Name**	LCMS03

Regression Equation: y = 0.146 x + -0.00972 (r = 0.9986)

Expected Concentration (ng/L)	Number of Values	Calculated Concentration (ng/L)	% Accuracy
2	1	2.10	105.0
4	1	3.75	93.8
12	1	11.67	97.3
30	1	32.48	108.3
60	1	56.42	94.0
100	1	101.57	101.6

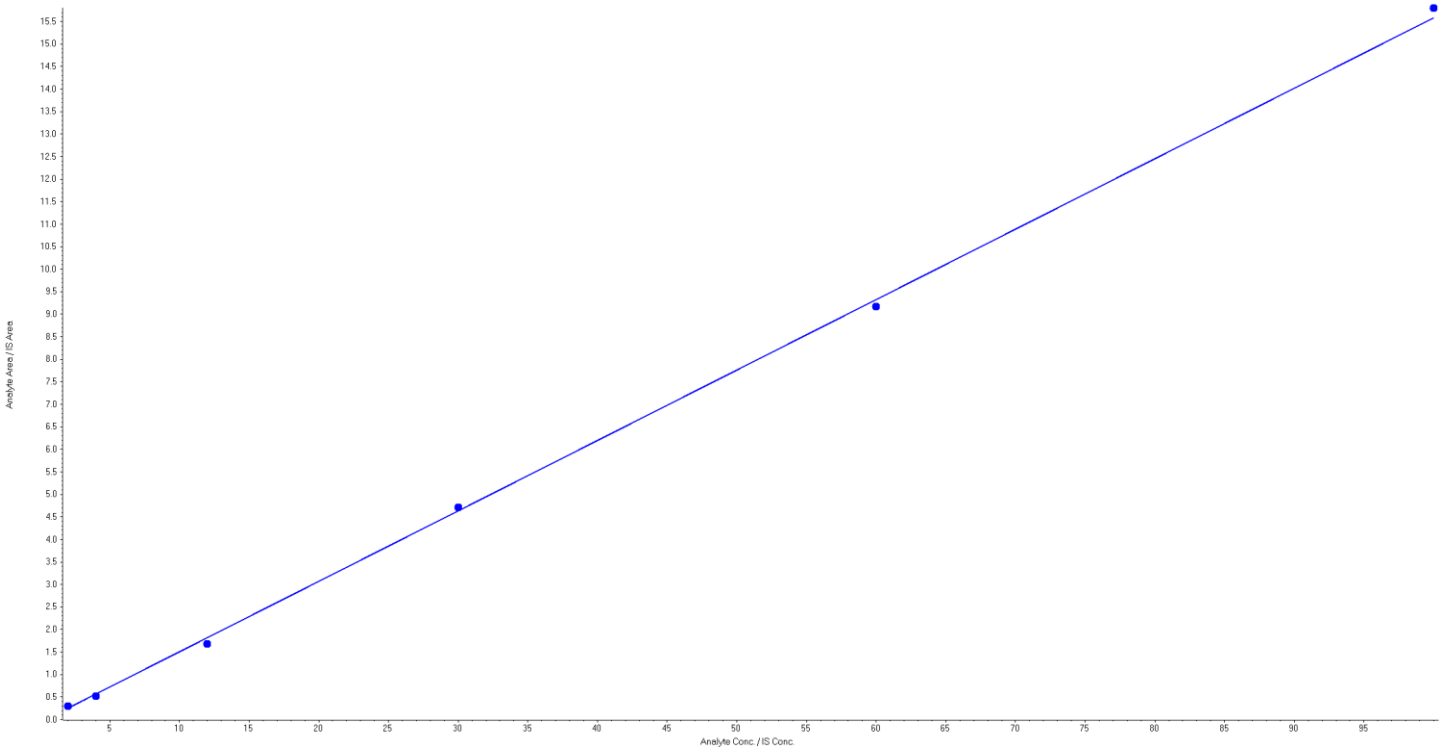


Analyte Name: PFOS 1
Internal Standard: MPFOS

Data File	PFC_160226\WS#4394558.wiff	**Result Table**	PFC_Water_160226_4394558_ULow_6.rdb
Acquisition Date	2016/02/29 8:55:42 AM	**Project**	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	**Instrument Name**	LCMS03

Regression Equation: y = 0.156 x + -0.0591 (r = 0.9995)

Expected Concentration (ng/L)	Number of Values	Calculated Concentration (ng/L)	% Accuracy
2	1	2.26	112.9
4	1	3.72	93.0
12	1	11.12	92.6
30	1	30.50	101.7
60	1	59.01	98.4
100	1	101.39	101.4

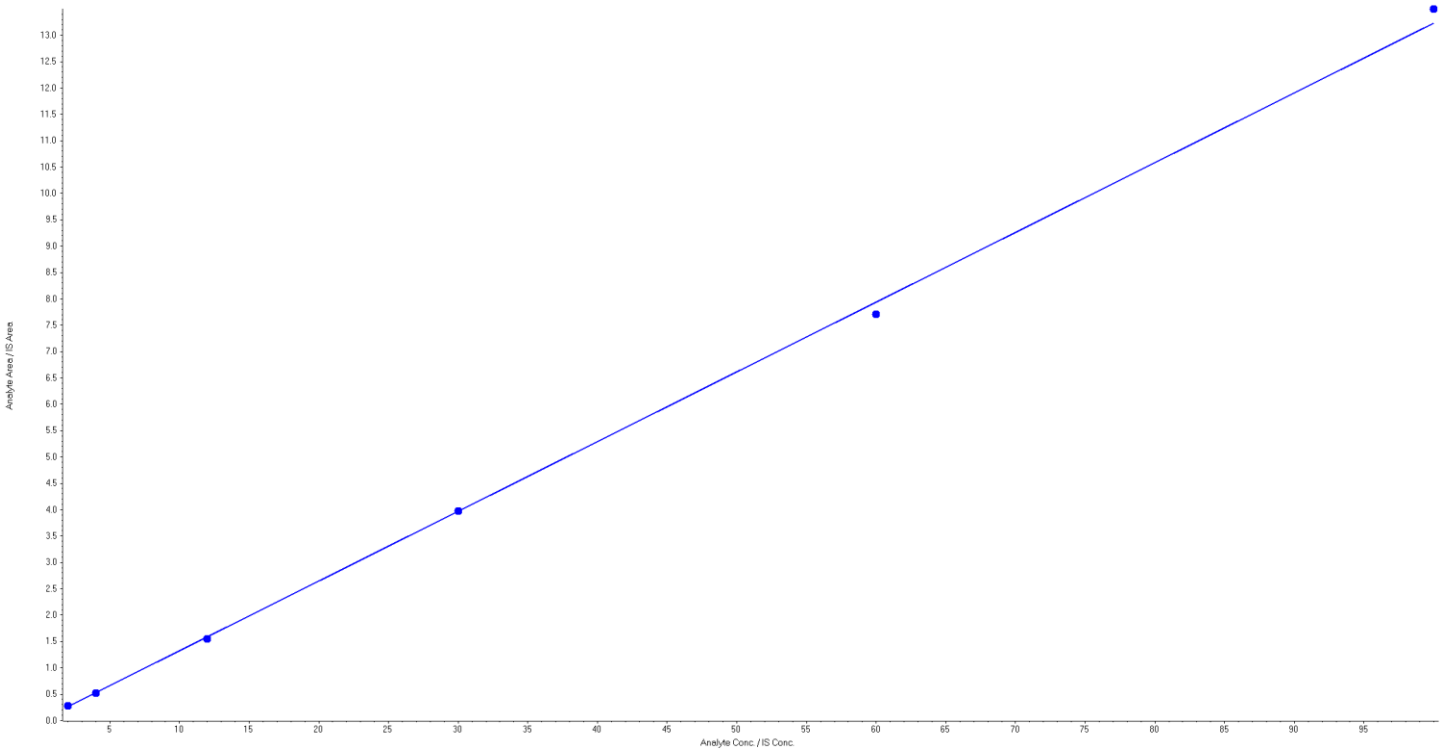


Analyte Name: PFNA 1
Internal Standard: MPFNA

Data File	PFC_160226\WS#4394558.wiff	**Result Table**	PFC_Water_160226_4394558_ULow_6.rdb
Acquisition Date	2016/02/29 8:55:42 AM	**Project**	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	**Instrument Name**	LCMS03

Regression Equation: y = 0.132 x + 0.000931 (r = 0.9997)

Expected Concentration (ng/L)	Number of Values	Calculated Concentration (ng/L)	% Accuracy
2	1	2.08	104.1
4	1	3.97	99.3
12	1	11.72	97.7
30	1	29.99	100.0
60	1	58.21	97.0
100	1	102.03	102.0

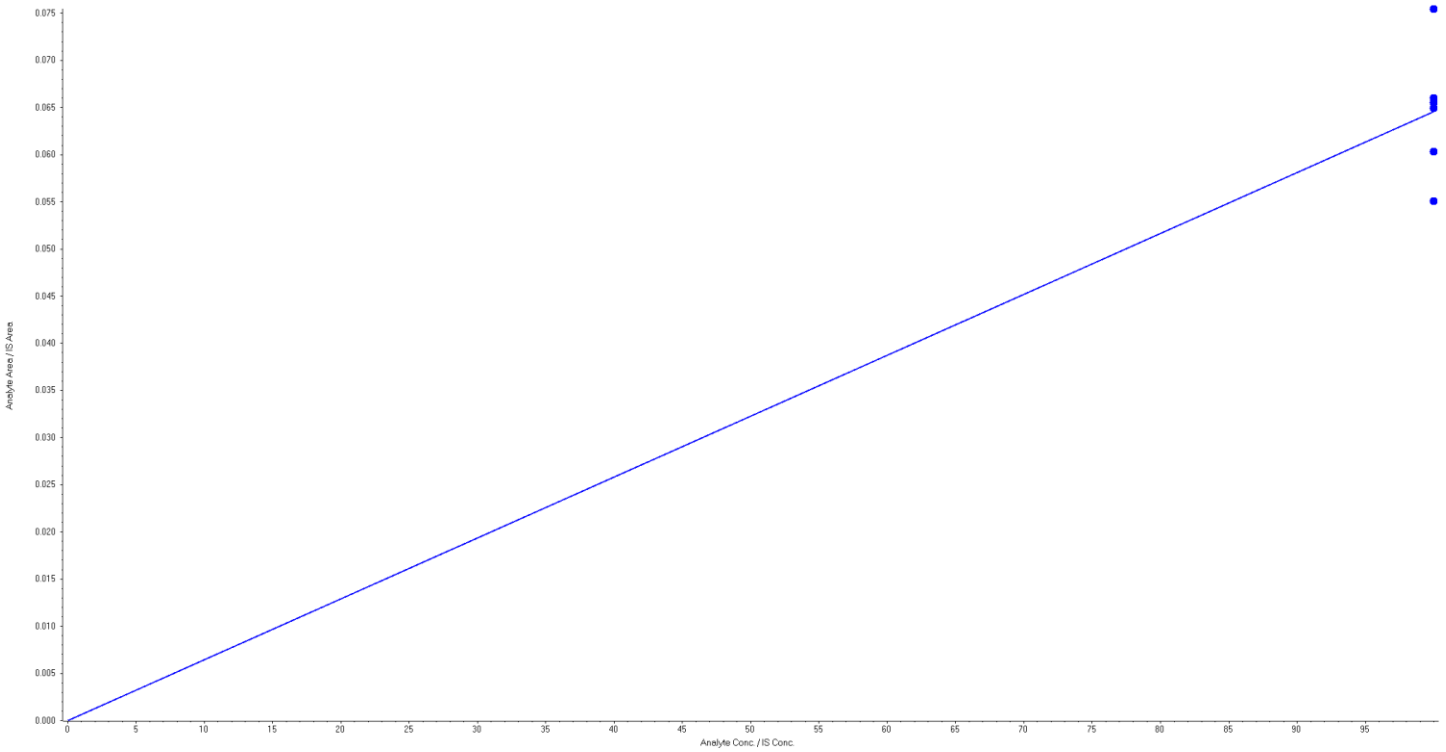


Analyte Name: 18O2-PFHxS
Internal Standard: 13C6-PFHxA IS

Data File	PFC_160226\WS#4394558.wiff	**Result Table**	PFC_Water_160226_4394558_ULow_6.rdb
Acquisition Date	2016/02/29 8:55:42 AM	**Project**	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	**Instrument Name**	LCMS03

Regression Equation: y = 0.000646 x (r = 0.9954)

Expected Concentration (ng/L)	Number of Values	Calculated Concentration (ng/L)	% Accuracy
100	6	100.00	100.0

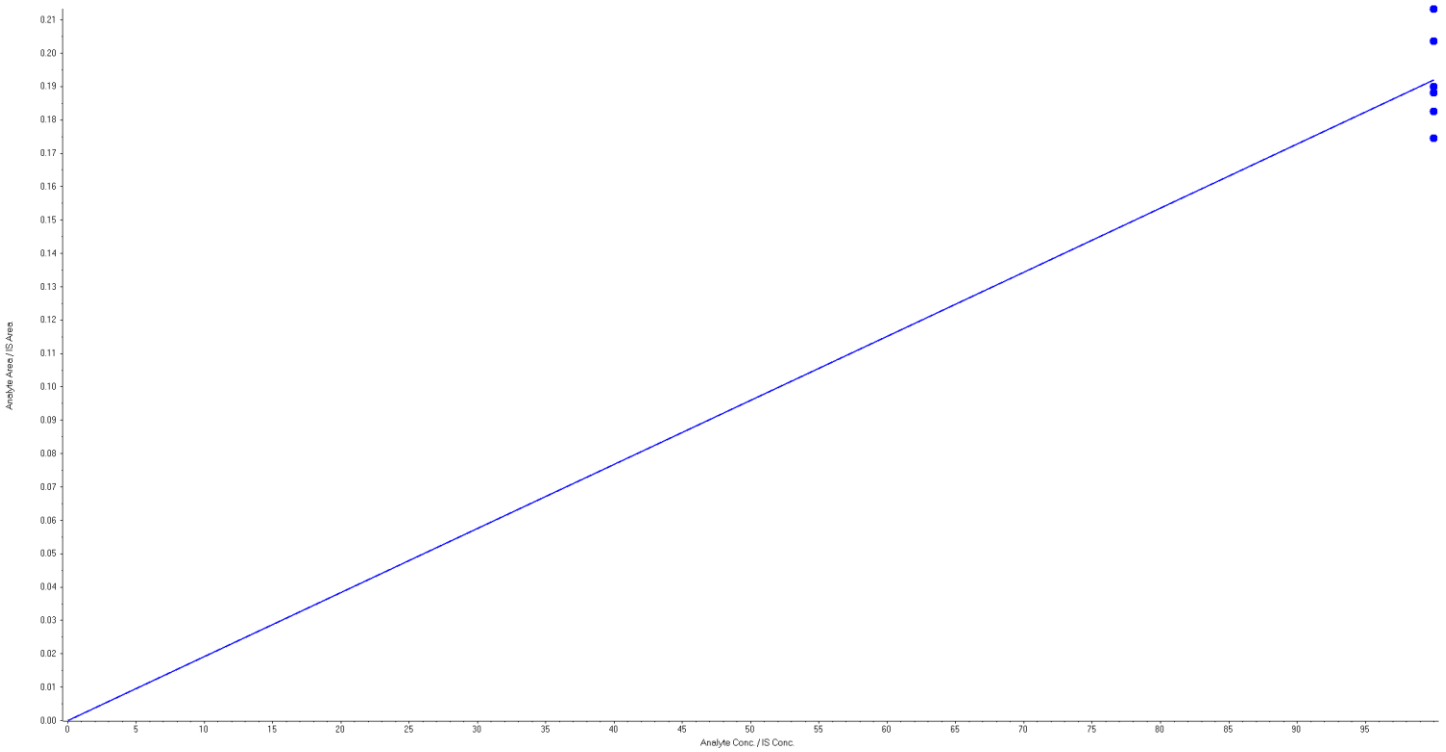


Analyte Name: 13C4-PFHpA
Internal Standard: 13C6-PFHxA IS

Data File	PFC_160226\WS#4394558.wiff	**Result Table**	PFC_Water_160226_4394558_ULow_6.rdb
Acquisition Date	2016/02/29 8:55:42 AM	**Project**	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	**Instrument Name**	LCMS03

Regression Equation: y = 0.00192 x (r = 0.9977)

Expected Concentration (ng/L)	Number of Values	Calculated Concentration (ng/L)	% Accuracy
100	6	100.00	100.0

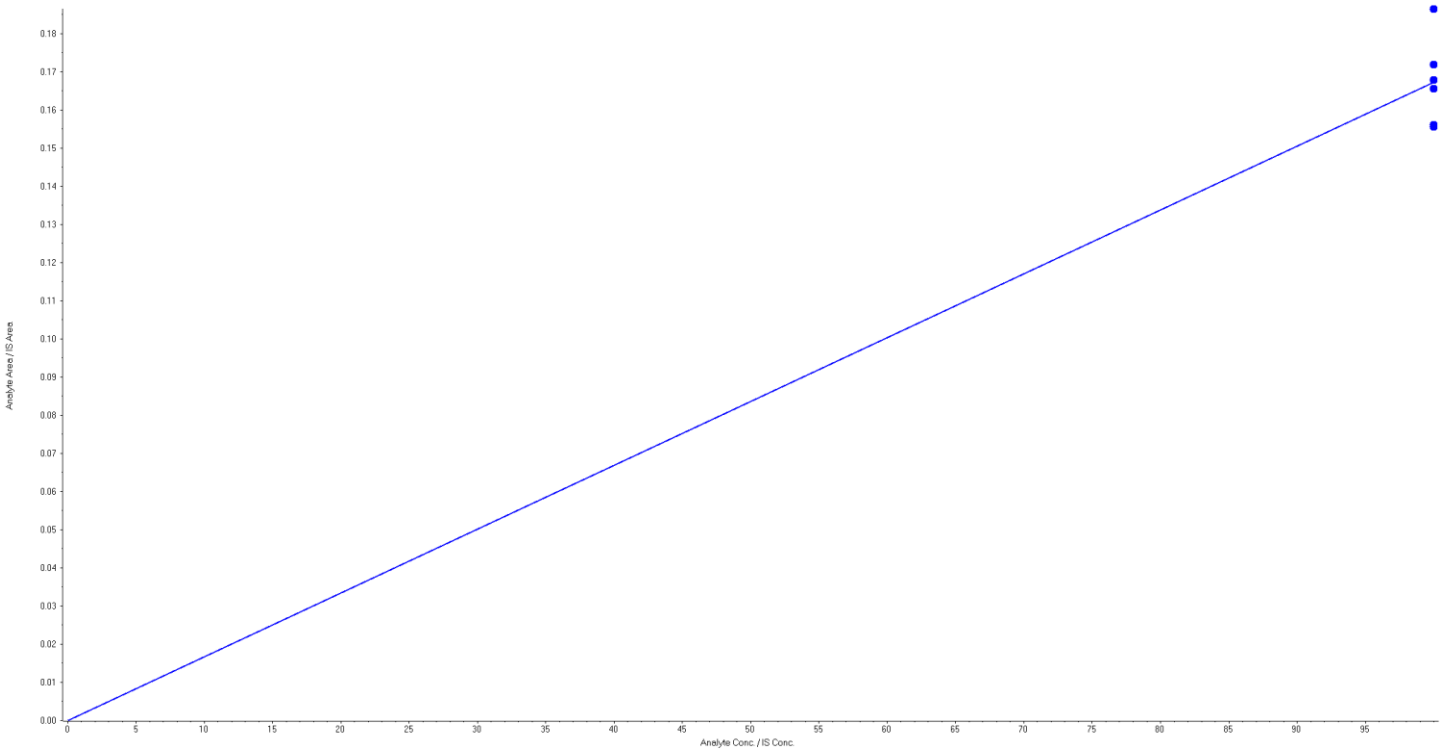


Analyte Name: 13C4-PFOA
Internal Standard: 13C6-PFHxA IS

Data File	PFC_160226\WS#4394558.wiff	**Result Table**	PFC_Water_160226_4394558_ULow_6.rdb
Acquisition Date	2016/02/29 8:55:42 AM	**Project**	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	**Instrument Name**	LCMS03

Regression Equation: y = 0.00167 x (r = 0.9981)

Expected Concentration (ng/L)	Number of Values	Calculated Concentration (ng/L)	% Accuracy
100	6	100.00	100.0

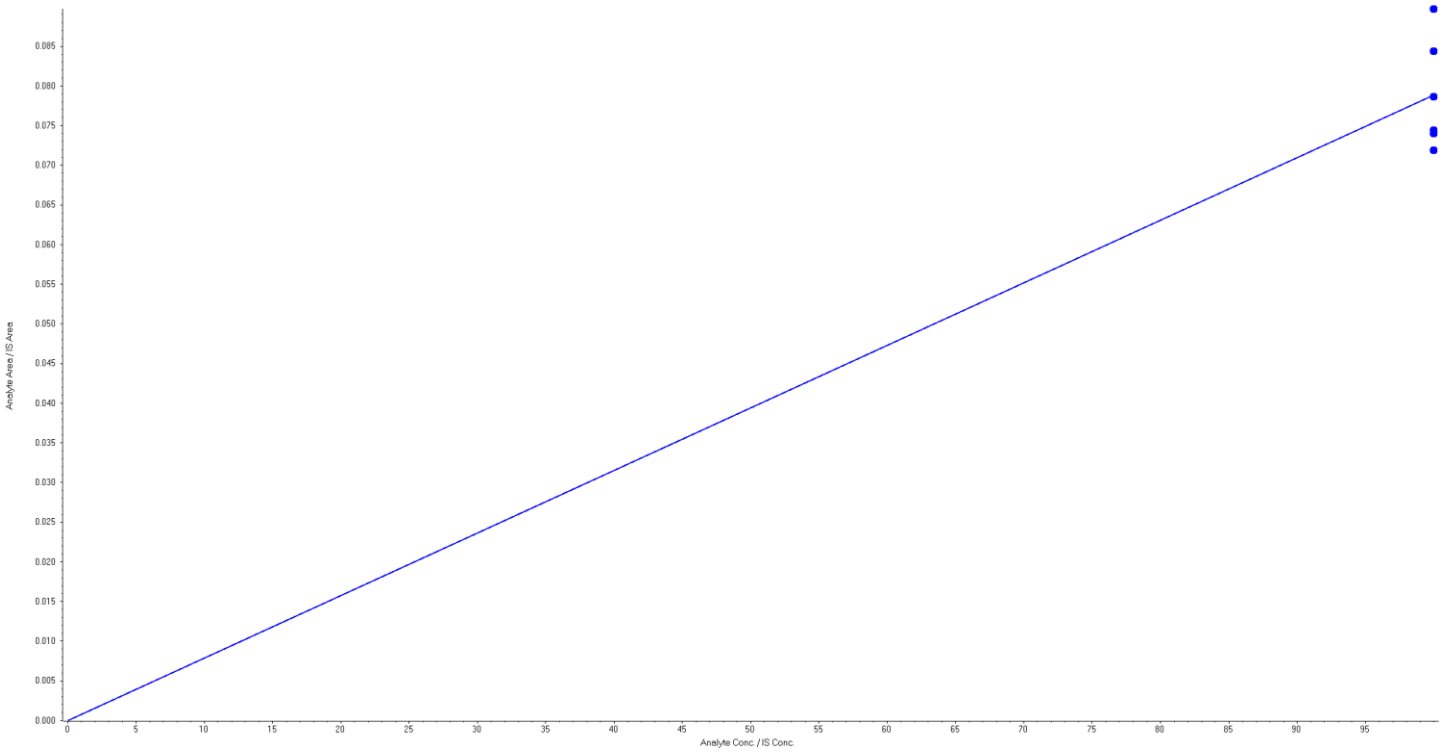


Analyte Name: 13C4-PFOS
Internal Standard: 13C6-PFHxA IS

Data File	PFC_160226\WS#4394558.wiff	**Result Table**	PFC_Water_160226_4394558_ULow_6.rdb
Acquisition Date	2016/02/29 8:55:42 AM	**Project**	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	**Instrument Name**	LCMS03

Regression Equation: y = 0.000788 x (r = 0.9968)

Expected Concentration (ng/L)	Number of Values	Calculated Concentration (ng/L)	% Accuracy
100	6	100.00	100.0

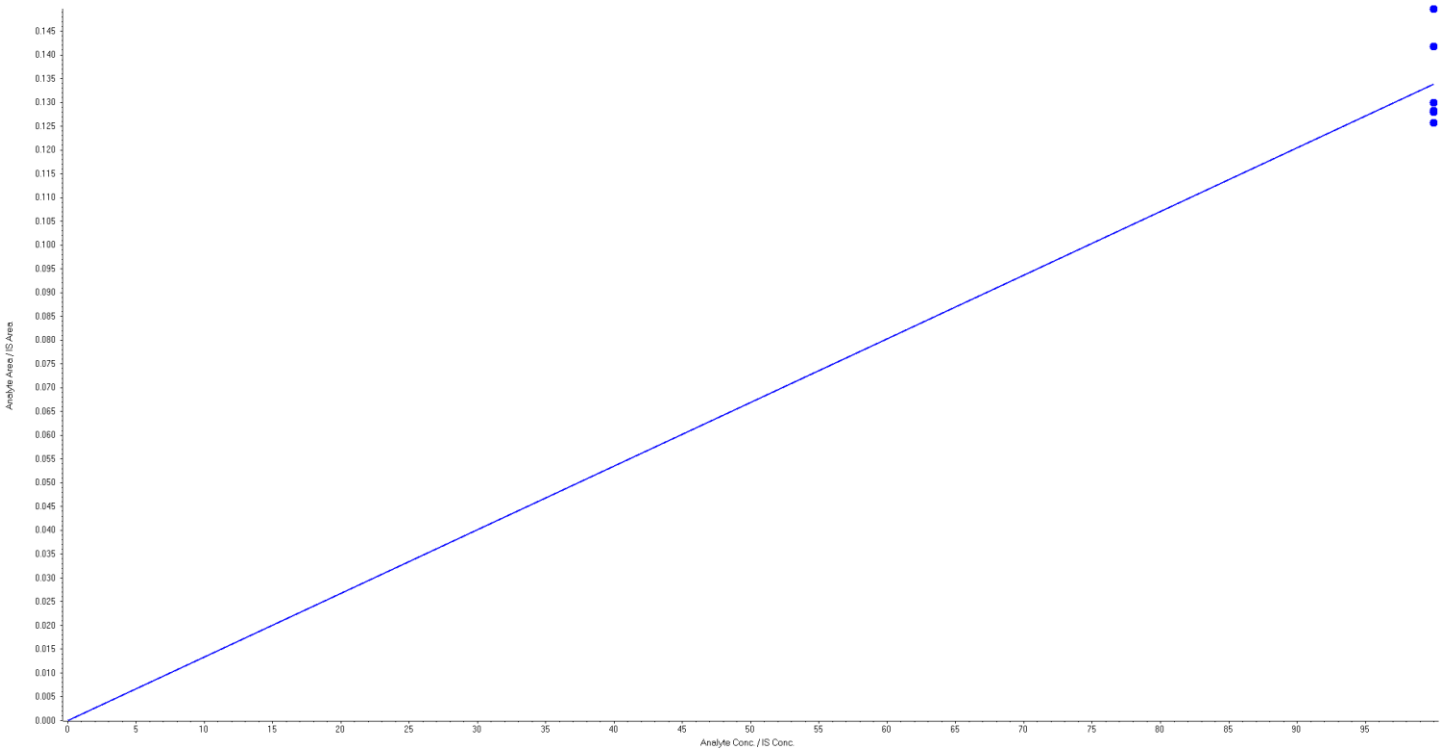


Analyte Name: 13C5-PFNA
Internal Standard: 13C6-PFHxA IS

Data File	PFC_160226\WS#4394558.wiff	**Result Table**	PFC_Water_160226_4394558_ULow_6.rdb
Acquisition Date	2016/02/29 8:55:42 AM	**Project**	Enviro\PFOS
Acquisition Method	PFC_Water_Low.dam	**Instrument Name**	LCMS03

Regression Equation: y = 0.00134 x (r = 0.9979)

Expected Concentration (ng/L)	Number of Values	Calculated Concentration (ng/L)	% Accuracy
100	6	100.00	100.0



6. Continuing Calibration

Maxxam Analytics International
6740 Campobello Rd
Mississauga, Ontario, Canada
L5N 2L8
1-800-668-0639
www.maxxamanalytics.com

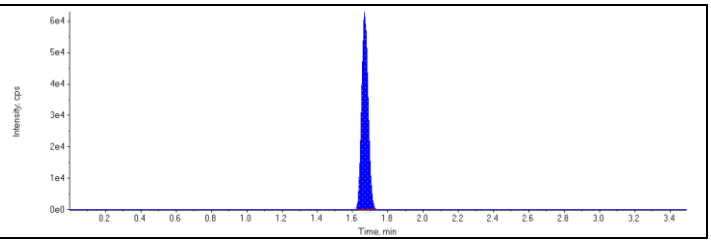
Sample Name	**CCV**	**Injection Vial**	6
Sample ID	CCV	**Injection Volume (µL)**	3
Sample Type	Quality Control	**Algorithm Used**	Analyst Classic
Acquisition Date	2016/02/25 5:43:34 PM	**Dilution Factor**	1.00
Acquisition Method	PFC_Water_Low.dam	**Sample Annotation**	-
Project	Enviro\PFOS	**Instrument Name**	LCMS03
Data File	PFC_160225\WS#4393242.wiff		
Result Table	PFC_Water_160225_4393242_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	158000.	1.67	1.00	-
MPFHpA	508000.	1.69	1.00	-
MPFOA	460000.	1.87	1.00	-
MPFOS	198000.	1.96	1.00	-
MPFNA	400000.	2.01	1.00	-
13C6-PFHxA IS	2370000.	1.42	1.00	-
N/A	N/A	N/A	N/A	-

Target Analyte	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)	Accuracy (%)
PFBS 1	1370000	1.09	30.0	29.3	97.8
PFHxS 1	1510000	1.67	30.0	31.6	105.0
PFHpA 1	1810000	1.69	30.0	30.3	101.0
PFOA 1	2100000	1.87	30.0	32.9	110.0
PFOS 1	1020000	1.96	30.0	33.8	113.0
PFNA 1	1600000	2.01	30.0	31.4	105.0
18O2-PFHxS	158000	1.67	100.	106.	106.0
13C4-PFHpA	508000	1.69	100.	99.1	99.1
13C4-PFOA	460000	1.87	100.	99.1	99.1
13C4-PFOS	198000	1.96	100.	96.9	96.9
13C5-PFNA	400000	2.01	100.	102.	102.0
13C6-PFHxA	2370000	1.42	100.	102.	102.0

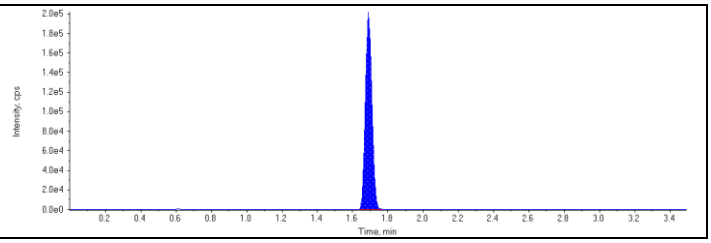
MPFHxS (Internal Standard)

RT (Exp. RT): 1.67(1.68) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



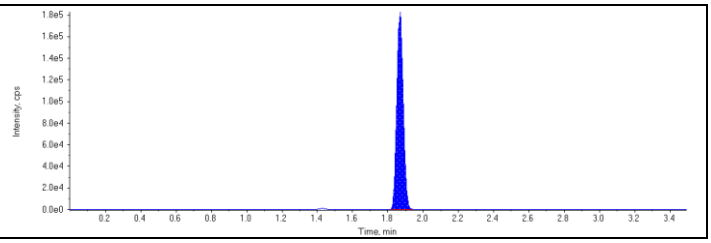
MPFHpA (Internal Standard)

RT (Exp. RT): 1.69(1.69) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



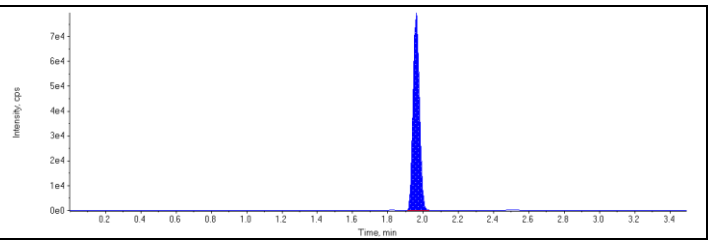
MPFOA (Internal Standard)

RT (Exp. RT): 1.87(1.88) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



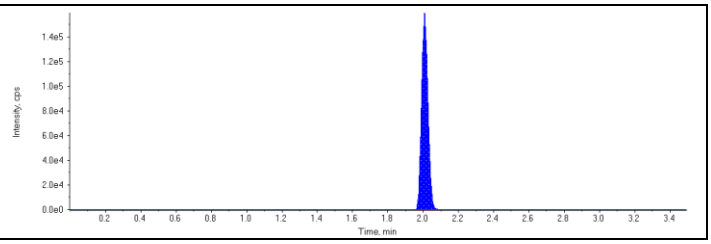
MPFOS (Internal Standard)

RT (Exp. RT): 1.96(1.97) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



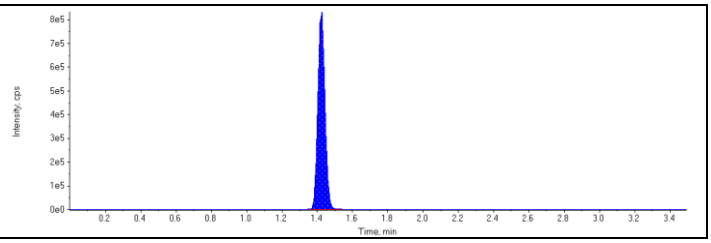
MPFNA (Internal Standard)

RT (Exp. RT): 2.01(2.02) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



13C6-PFHxA IS (Internal Standard)

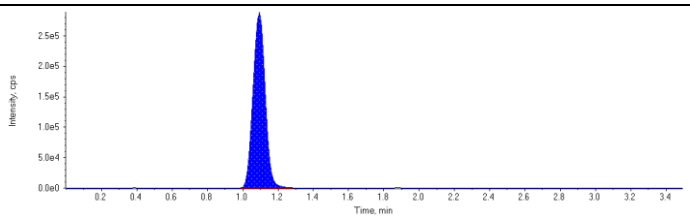
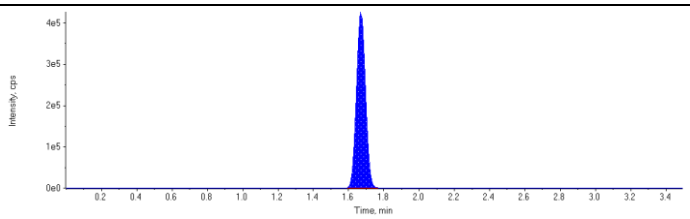
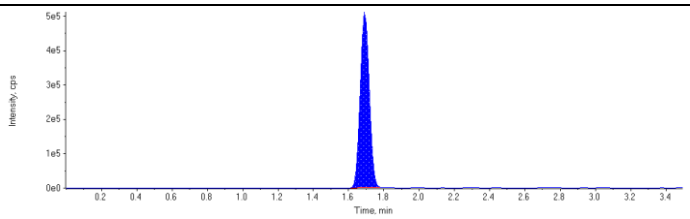
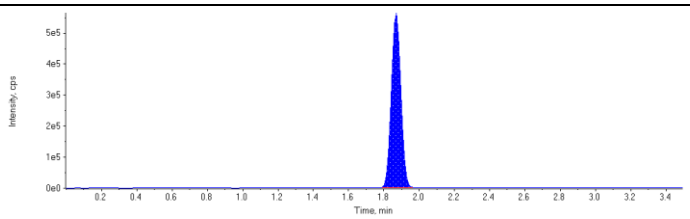
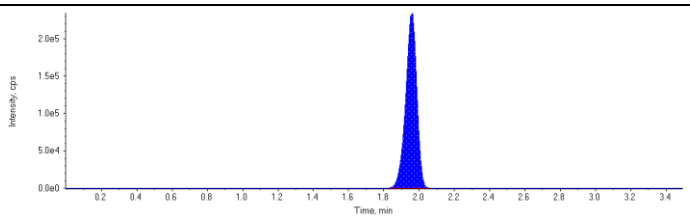
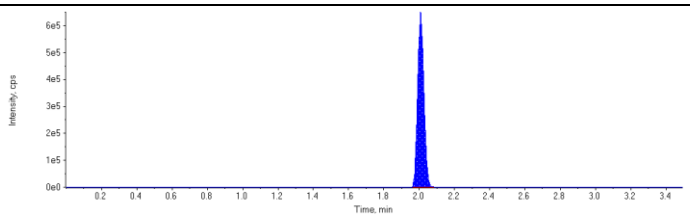
RT (Exp. RT): 1.42(1.42) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)

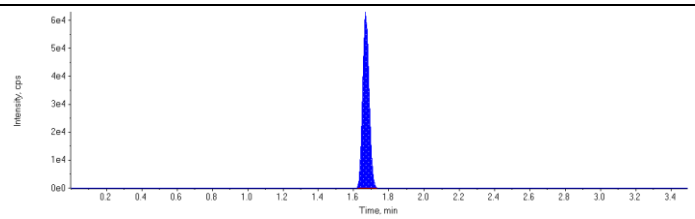
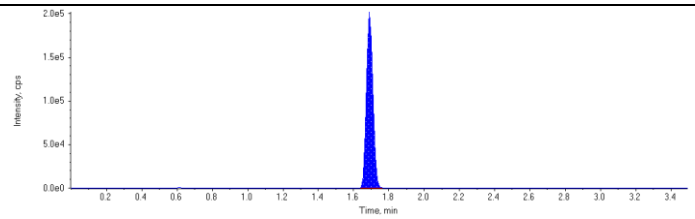
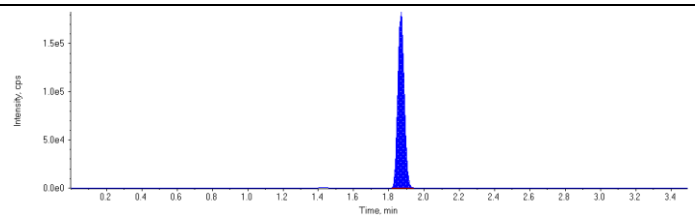
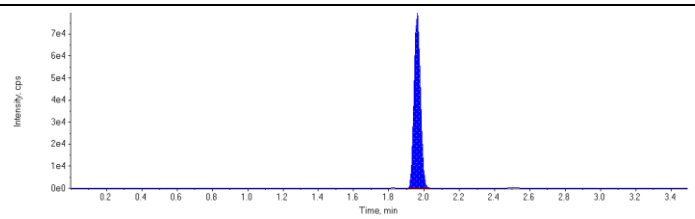
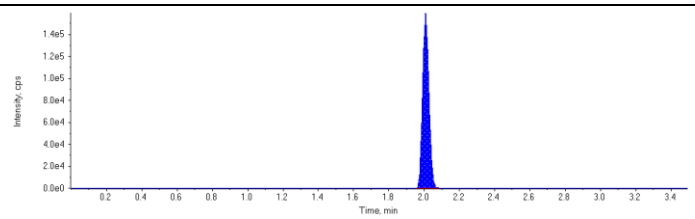
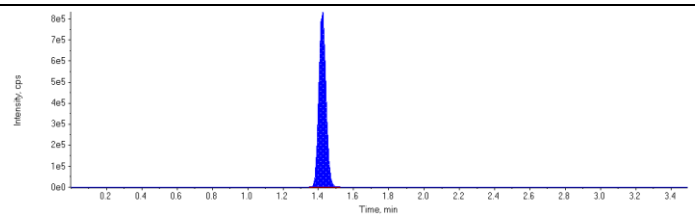


N/A (Internal Standard)

RT (Exp. RT): N/A(N/A) min
Concentration: N/A N/A
Sample Type: (Quality Control)

This image is not available

PFBS 1 (298.900/79.900 Da) RT (Exp. RT): 1.09 (1.09) min Calculated Conc: 29.3 ng/L Area Ratio: 8.69 Sample Type: (Quality Control)	
PFHxS 1 (398.900/79.900 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 31.6 ng/L Area Ratio: 9.59 Sample Type: (Quality Control)	
PFHpA 1 (363.000/319.000 Da) RT (Exp. RT): 1.69 (1.75) min Calculated Conc: 30.3 ng/L Area Ratio: 3.56 Sample Type: (Quality Control)	
PFOA 1 (413.100/369.000 Da) RT (Exp. RT): 1.87 (1.92) min Calculated Conc: 32.9 ng/L Area Ratio: 4.57 Sample Type: (Quality Control)	
PFOS 1 (498.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 33.8 ng/L Area Ratio: 5.15 Sample Type: (Quality Control)	
PFNA 1 (462.900/419.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 31.4 ng/L Area Ratio: 4.01 Sample Type: (Quality Control)	

18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 106. ng/L Area Ratio: 0.0667 Sample Type: (Quality Control)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.69 (1.69) min Calculated Conc: 99.1 ng/L Area Ratio: 0.215 Sample Type: (Quality Control)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 99.1 ng/L Area Ratio: 0.194 Sample Type: (Quality Control)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 96.9 ng/L Area Ratio: 0.0836 Sample Type: (Quality Control)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 102. ng/L Area Ratio: 0.169 Sample Type: (Quality Control)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.42 (1.42) min Calculated Conc: 102. ng/L Area Ratio: 0.00 Sample Type: (Quality Control)	

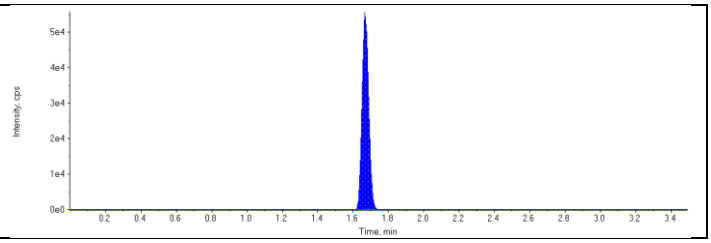
Sample Name	**CCV**	**Injection Vial**	6
Sample ID	CCV	**Injection Volume (µL)**	3
Sample Type	Quality Control	**Algorithm Used**	Analyst Classic
Acquisition Date	2016/02/25 6:54:57 PM	**Dilution Factor**	1.00
Acquisition Method	PFC_Water_Low.dam	**Sample Annotation**	-
Project	Enviro\PFOS	**Instrument Name**	LCMS03
Data File	PFC_160225\WS#4393242.wiff		
Result Table	PFC_Water_160225_4393242_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	142000.	1.67	1.00	-
MPFHpA	493000.	1.69	1.00	-
MPFOA	468000.	1.87	1.00	-
MPFOS	201000.	1.96	1.00	-
MPFNA	383000.	2.01	1.00	-
13C6-PFHxA IS	2250000.	1.42	1.00	-
N/A	N/A	N/A	N/A	-

Target Analyte	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)	Accuracy (%)
PFBS 1	1350000	1.10	30.0	32.0	107.0
PFHxS 1	1340000	1.67	30.0	31.2	104.0
PFHpA 1	1890000	1.69	30.0	32.6	109.0
PFOA 1	2080000	1.87	30.0	32.1	107.0
PFOS 1	980000	1.96	30.0	32.0	107.0
PFNA 1	1580000	2.01	30.0	32.4	108.0
18O2-PFHxS	142000	1.67	100.	101.	101.0
13C4-PFHpA	493000	1.69	100.	101.	101.0
13C4-PFOA	468000	1.87	100.	106.	106.0
13C4-PFOS	201000	1.96	100.	103.	103.0
13C5-PFNA	383000	2.01	100.	103.	103.0
13C6-PFHxA	2250000	1.42	100.	97.1	97.1

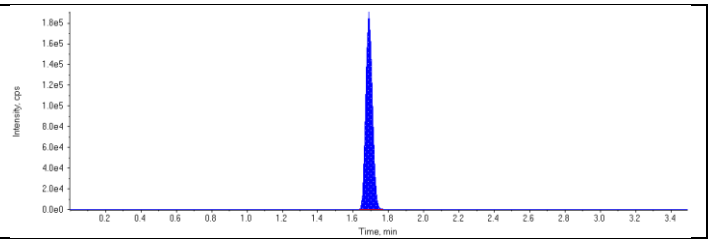
MPFHxS (Internal Standard)

RT (Exp. RT): 1.67(1.68) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



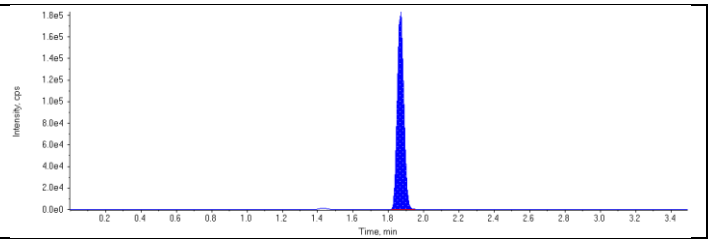
MPFHpA (Internal Standard)

RT (Exp. RT): 1.69(1.69) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



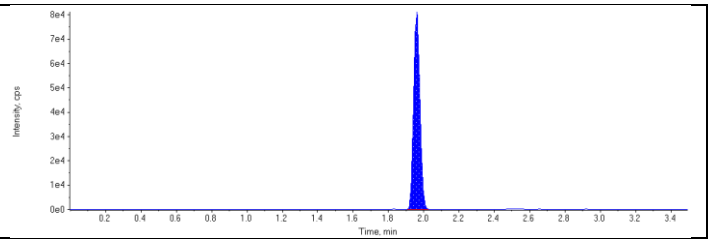
MPFOA (Internal Standard)

RT (Exp. RT): 1.87(1.88) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



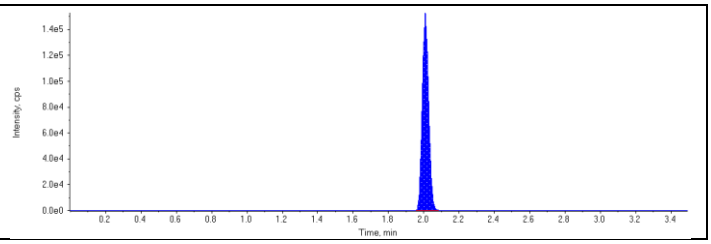
MPFOS (Internal Standard)

RT (Exp. RT): 1.96(1.97) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



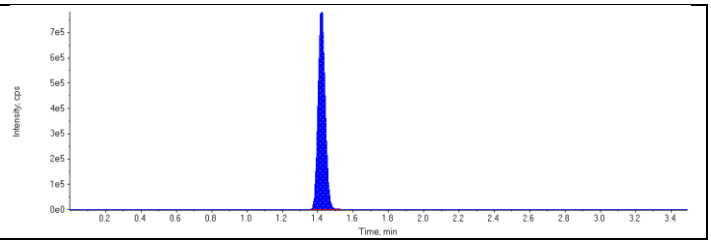
MPFNA (Internal Standard)

RT (Exp. RT): 2.01(2.02) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



13C6-PFHxA IS (Internal Standard)

RT (Exp. RT): 1.42(1.42) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



N/A (Internal Standard)

RT (Exp. RT): N/A(N/A) min
Concentration: N/A N/A
Sample Type: (Quality Control)

This image is not available

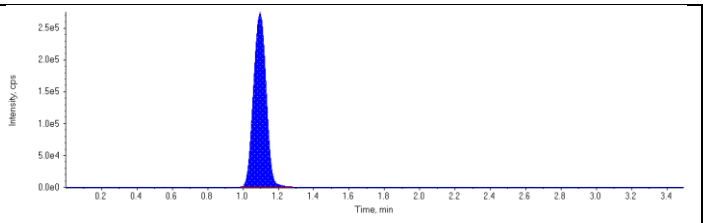
PFBS 1 (298.900/79.900 Da)

RT (Exp. RT): 1.10 (1.09) min

Calculated Conc: 32.0 ng/L

Area Ratio: 9.49

Sample Type: (Quality Control)



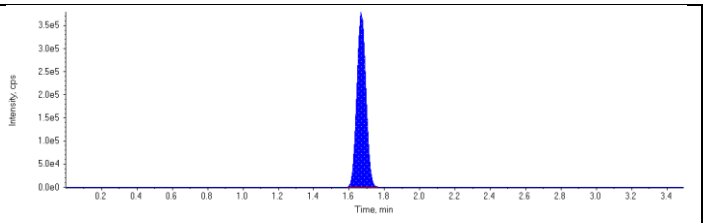
PFHxS 1 (398.900/79.900 Da)

RT (Exp. RT): 1.67 (1.68) min

Calculated Conc: 31.2 ng/L

Area Ratio: 9.47

Sample Type: (Quality Control)



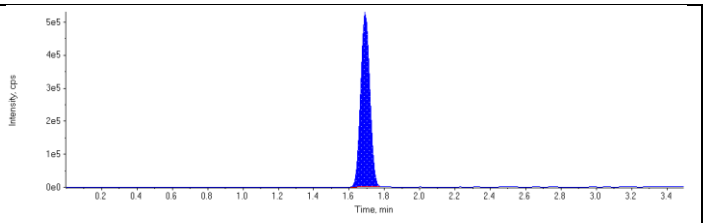
PFHpA 1 (363.000/319.000 Da)

RT (Exp. RT): 1.69 (1.75) min

Calculated Conc: 32.6 ng/L

Area Ratio: 3.83

Sample Type: (Quality Control)



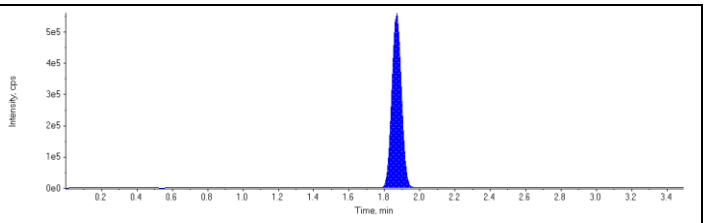
PFOA 1 (413.100/369.000 Da)

RT (Exp. RT): 1.87 (1.92) min

Calculated Conc: 32.1 ng/L

Area Ratio: 4.45

Sample Type: (Quality Control)



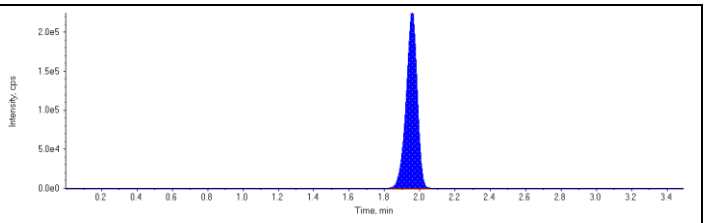
PFOS 1 (498.900/79.900 Da)

RT (Exp. RT): 1.96 (1.97) min

Calculated Conc: 32.0 ng/L

Area Ratio: 4.89

Sample Type: (Quality Control)



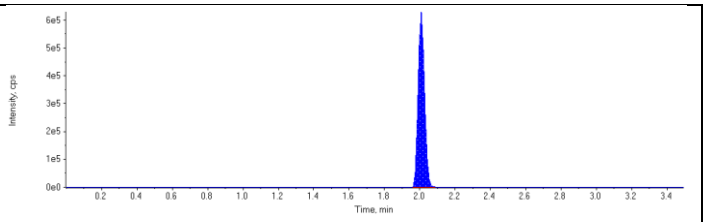
PFNA 1 (462.900/419.000 Da)

RT (Exp. RT): 2.01 (2.02) min

Calculated Conc: 32.4 ng/L

Area Ratio: 4.14

Sample Type: (Quality Control)



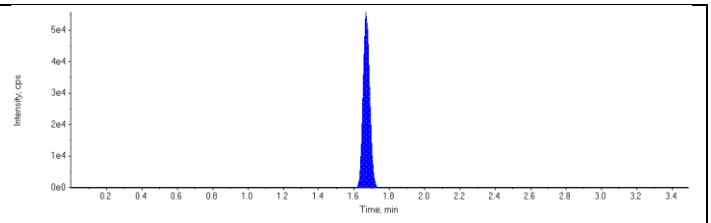
18O2-PFHxS (402.900/84.000 Da)

RT (Exp. RT): 1.67 (1.68) min

Calculated Conc: 101. ng/L

Area Ratio: 0.0631

Sample Type: (Quality Control)



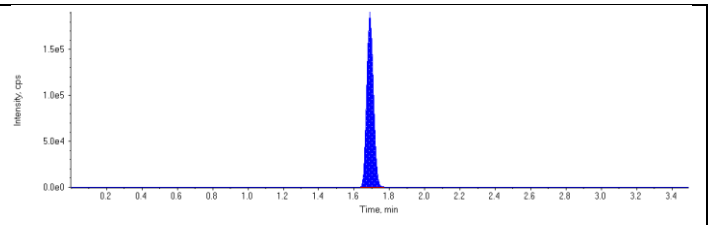
13C4-PFHpA (366.900/322.000 Da)

RT (Exp. RT): 1.69 (1.69) min

Calculated Conc: 101. ng/L

Area Ratio: 0.219

Sample Type: (Quality Control)



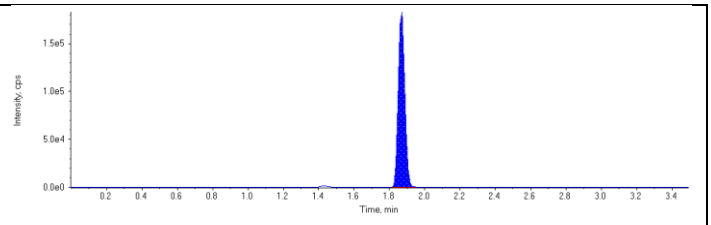
13C4-PFOA (416.900/372.000 Da)

RT (Exp. RT): 1.87 (1.88) min

Calculated Conc: 106. ng/L

Area Ratio: 0.208

Sample Type: (Quality Control)



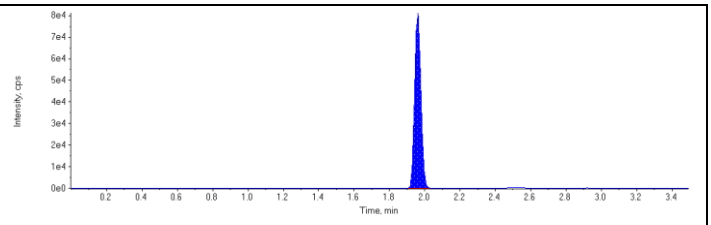
13C4-PFOS (502.900/79.900 Da)

RT (Exp. RT): 1.96 (1.97) min

Calculated Conc: 103. ng/L

Area Ratio: 0.0892

Sample Type: (Quality Control)



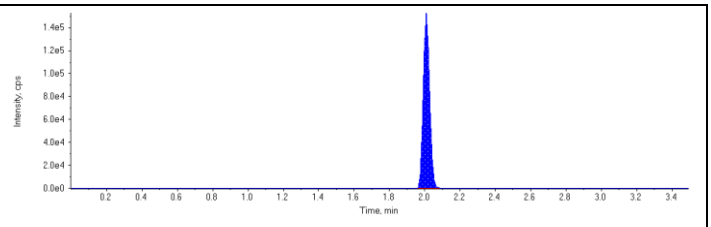
13C5-PFNA (467.900/423.000 Da)

RT (Exp. RT): 2.01 (2.02) min

Calculated Conc: 103. ng/L

Area Ratio: 0.170

Sample Type: (Quality Control)



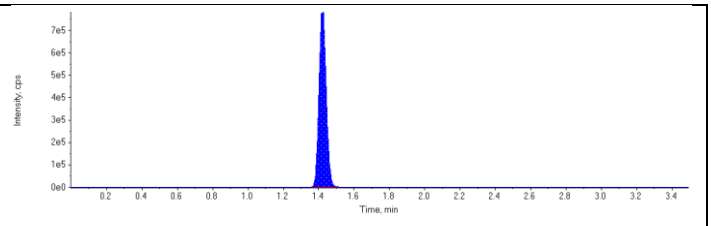
13C6-PFHxA (318.900/274.000 Da)

RT (Exp. RT): 1.42 (1.42) min

Calculated Conc: 97.1 ng/L

Area Ratio: 0.00

Sample Type: (Quality Control)



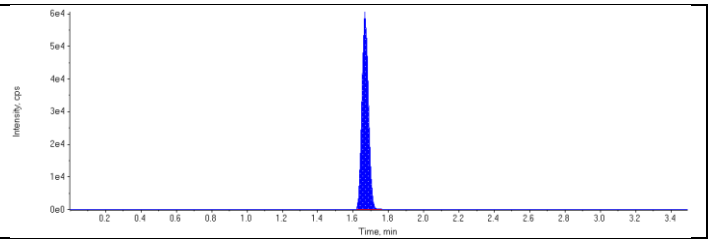
Sample Name	**CCV**	**Injection Vial**	6
Sample ID	CCV	**Injection Volume (µL)**	3
Sample Type	Quality Control	**Algorithm Used**	Analyst Classic
Acquisition Date	2016/02/25 7:51:04 PM	**Dilution Factor**	1.00
Acquisition Method	PFC_Water_Low.dam	**Sample Annotation**	-
Project	Enviro\PFOS	**Instrument Name**	LCMS03
Data File	PFC_160225\WS#4393242.wiff		
Result Table	PFC_Water_160225_4393242_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	153000.	1.67	1.00	-
MPFHpA	497000.	1.69	1.00	-
MPFOA	452000.	1.87	1.00	-
MPFOS	208000.	1.96	1.00	-
MPFNA	390000.	2.01	1.00	-
13C6-PFHxA IS	2290000.	1.42	1.00	-
N/A	N/A	N/A	N/A	-

Target Analyte	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)	Accuracy (%)
PFBS 1	1290000	1.09	30.0	28.5	95.1
PFHxS 1	1420000	1.67	30.0	30.6	102.0
PFHpA 1	1880000	1.69	30.0	32.2	107.0
PFOA 1	2030000	1.87	30.0	32.4	108.0
PFOS 1	963000	1.96	30.0	30.4	101.0
PFNA 1	1560000	2.01	30.0	31.2	104.0
18O2-PFHxS	153000	1.67	100.	106.	106.0
13C4-PFHpA	497000	1.69	100.	100.	100.0
13C4-PFOA	452000	1.87	100.	101.	101.0
13C4-PFOS	208000	1.96	100.	105.	105.0
13C5-PFNA	390000	2.01	100.	103.	103.0
13C6-PFHxA	2290000	1.42	100.	99.1	99.1

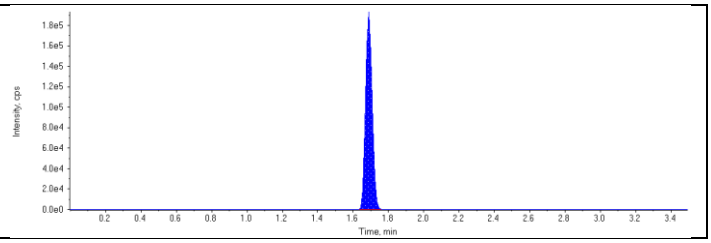
MPFHxS (Internal Standard)

RT (Exp. RT): 1.67(1.68) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



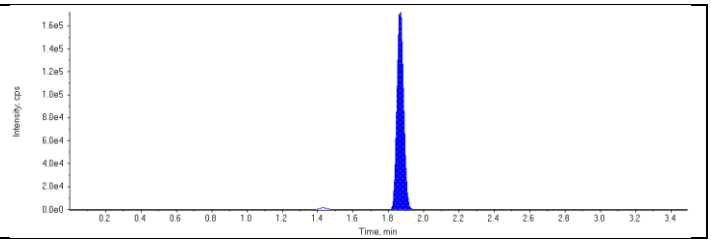
MPFHpA (Internal Standard)

RT (Exp. RT): 1.69(1.69) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



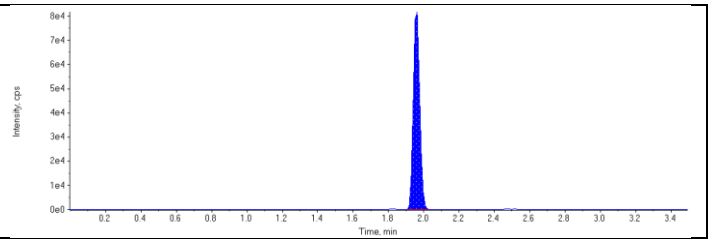
MPFOA (Internal Standard)

RT (Exp. RT): 1.87(1.88) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



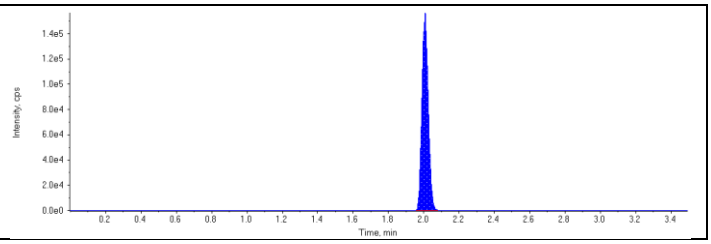
MPFOS (Internal Standard)

RT (Exp. RT): 1.96(1.97) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



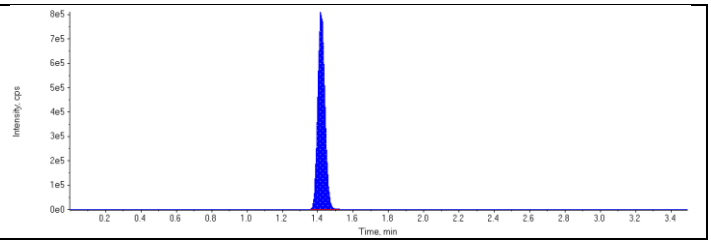
MPFNA (Internal Standard)

RT (Exp. RT): 2.01(2.02) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



13C6-PFHxA IS (Internal Standard)

RT (Exp. RT): 1.42(1.42) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



N/A (Internal Standard)

RT (Exp. RT): N/A(N/A) min
Concentration: N/A N/A
Sample Type: (Quality Control)

This image is not available

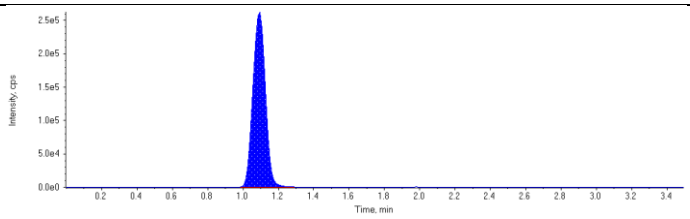
PFBS 1 (298.900/79.900 Da)

RT (Exp. RT): 1.09 (1.09) min

Calculated Conc: 28.5 ng/L

Area Ratio: 8.44

Sample Type: (Quality Control)



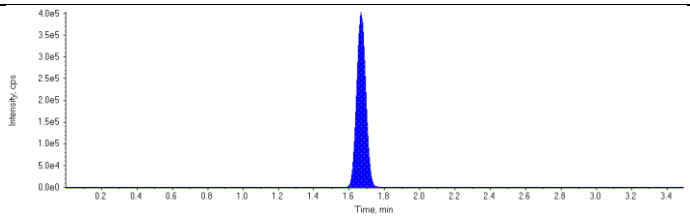
PFHxS 1 (398.900/79.900 Da)

RT (Exp. RT): 1.67 (1.68) min

Calculated Conc: 30.6 ng/L

Area Ratio: 9.30

Sample Type: (Quality Control)



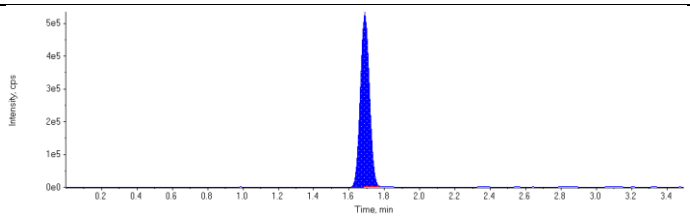
PFHpA 1 (363.000/319.000 Da)

RT (Exp. RT): 1.69 (1.75) min

Calculated Conc: 32.2 ng/L

Area Ratio: 3.78

Sample Type: (Quality Control)



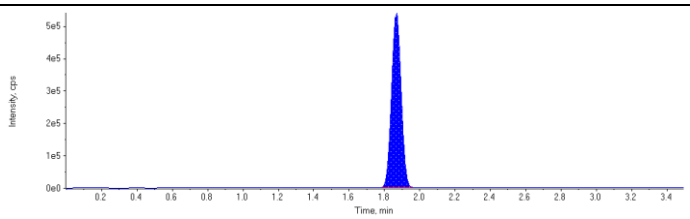
PFOA 1 (413.100/369.000 Da)

RT (Exp. RT): 1.87 (1.92) min

Calculated Conc: 32.4 ng/L

Area Ratio: 4.49

Sample Type: (Quality Control)



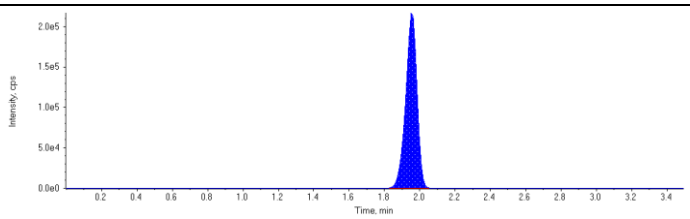
PFOS 1 (498.900/79.900 Da)

RT (Exp. RT): 1.96 (1.97) min

Calculated Conc: 30.4 ng/L

Area Ratio: 4.63

Sample Type: (Quality Control)



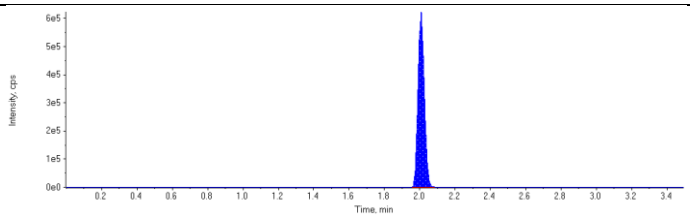
PFNA 1 (462.900/419.000 Da)

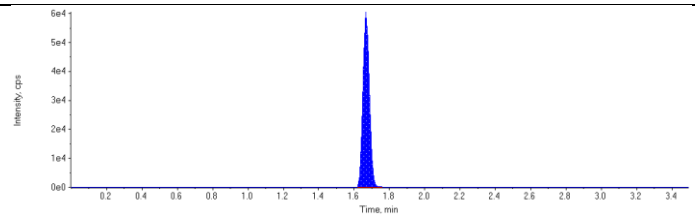
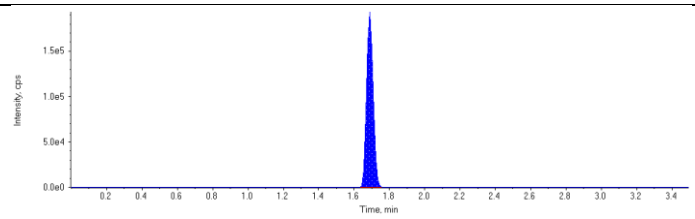
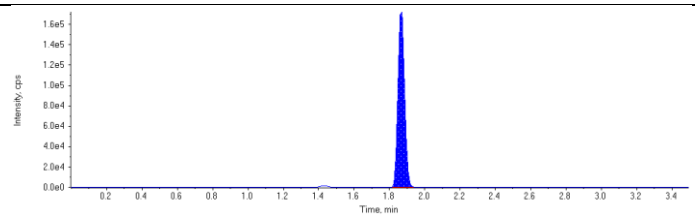
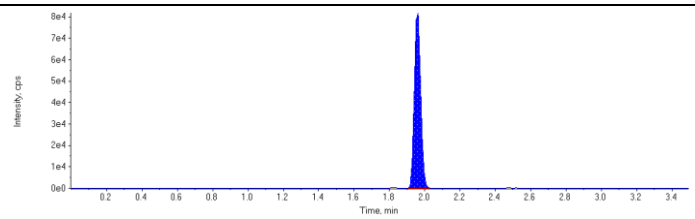
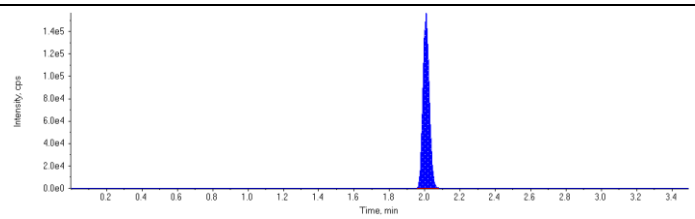
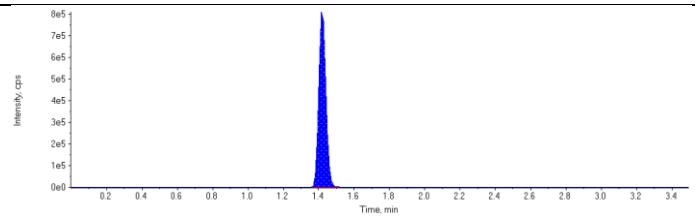
RT (Exp. RT): 2.01 (2.02) min

Calculated Conc: 31.2 ng/L

Area Ratio: 3.99

Sample Type: (Quality Control)



18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 106. ng/L Area Ratio: 0.0666 Sample Type: (Quality Control)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.69 (1.69) min Calculated Conc: 100. ng/L Area Ratio: 0.217 Sample Type: (Quality Control)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.87 (1.88) min Calculated Conc: 101. ng/L Area Ratio: 0.197 Sample Type: (Quality Control)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 105. ng/L Area Ratio: 0.0906 Sample Type: (Quality Control)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 103. ng/L Area Ratio: 0.170 Sample Type: (Quality Control)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.42 (1.42) min Calculated Conc: 99.1 ng/L Area Ratio: 0.00 Sample Type: (Quality Control)	

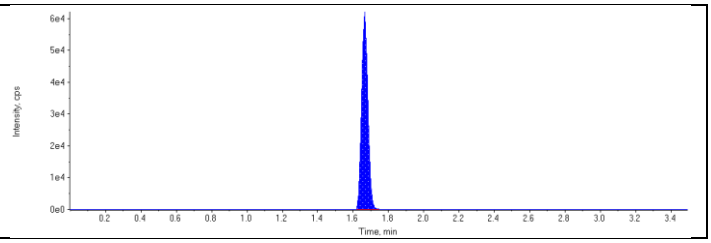
Sample Name	**CCV**	**Injection Vial**	6
Sample ID	CCV	**Injection Volume (µL)**	3
Sample Type	Quality Control	**Algorithm Used**	Analyst Classic
Acquisition Date	2016/02/26 7:53:09 AM	**Dilution Factor**	1.00
Acquisition Method	PFC_Water_Low.dam	**Sample Annotation**	-
Project	Enviro\PFOS	**Instrument Name**	LCMS03
Data File	PFC_160225\WS#4393242.wiff		
Result Table	PFC_Water_160225_4393242_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	152000.	1.67	1.00	-
MPFHpA	400000.	1.69	1.00	-
MPFOA	405000.	1.86	1.00	-
MPFOS	201000.	1.96	1.00	-
MPFNA	329000.	2.01	1.00	-
13C6-PFHxA IS	1970000.	1.42	1.00	-
N/A	N/A	N/A	N/A	-

Target Analyte	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)	Accuracy (%)
PFBS 1	1060000	1.09	30.0	23.8	79.3
PFHxS 1	1320000	1.67	30.0	28.7	95.6
PFHpA 1	1610000	1.69	30.0	34.4	115.0
PFOA 1	1850000	1.87	30.0	32.9	110.0
PFOS 1	936000	1.95	30.0	30.6	102.0
PFNA 1	1420000	2.01	30.0	33.8	113.0
18O2-PFHxS	152000	1.67	100.	123.	123.0
13C4-PFHpA	400000	1.69	100.	93.6	93.6
13C4-PFOA	405000	1.86	100.	105.	105.0
13C4-PFOS	201000	1.96	100.	118.	118.0
13C5-PFNA	329000	2.01	100.	101.	101.0
13C6-PFHxA	1970000	1.42	100.	85.1	85.1

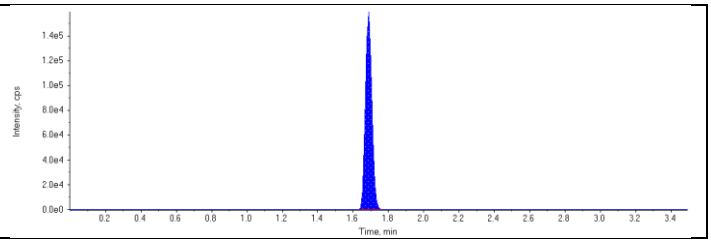
MPFHxS (Internal Standard)

RT (Exp. RT): 1.67(1.68) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



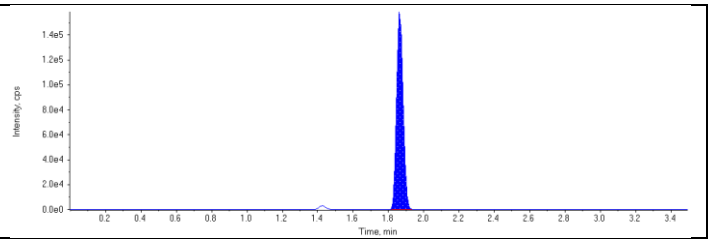
MPFHpA (Internal Standard)

RT (Exp. RT): 1.69(1.69) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



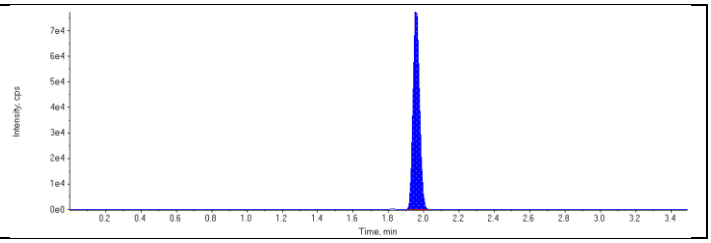
MPFOA (Internal Standard)

RT (Exp. RT): 1.86(1.88) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



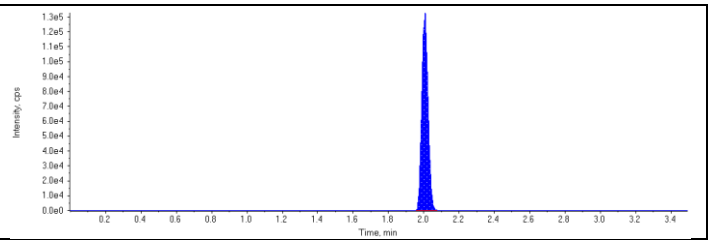
MPFOS (Internal Standard)

RT (Exp. RT): 1.96(1.97) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



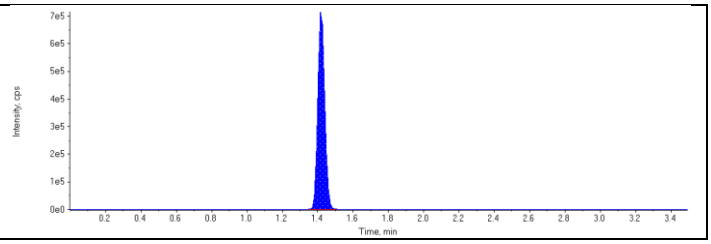
MPFNA (Internal Standard)

RT (Exp. RT): 2.01(2.02) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



13C6-PFHxA IS (Internal Standard)

RT (Exp. RT): 1.42(1.42) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



N/A (Internal Standard)

RT (Exp. RT): N/A(N/A) min
Concentration: N/A N/A
Sample Type: (Quality Control)

This image is not available

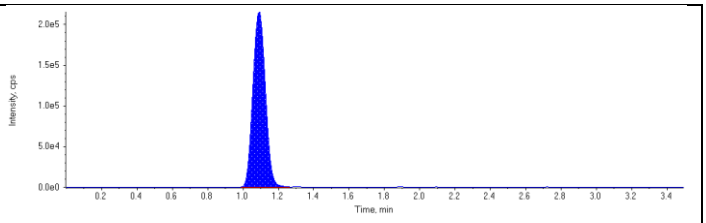
PFBS 1 (298.900/79.900 Da)

RT (Exp. RT): 1.09 (1.09) min

Calculated Conc: 23.8 ng/L

Area Ratio: 7.00

Sample Type: (Quality Control)



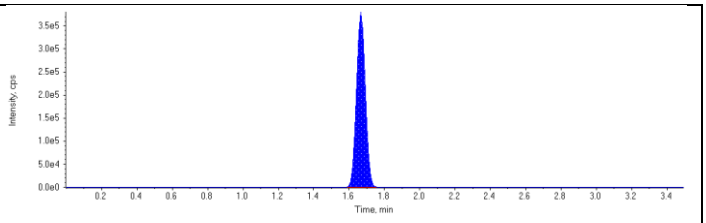
PFHxS 1 (398.900/79.900 Da)

RT (Exp. RT): 1.67 (1.68) min

Calculated Conc: 28.7 ng/L

Area Ratio: 8.69

Sample Type: (Quality Control)



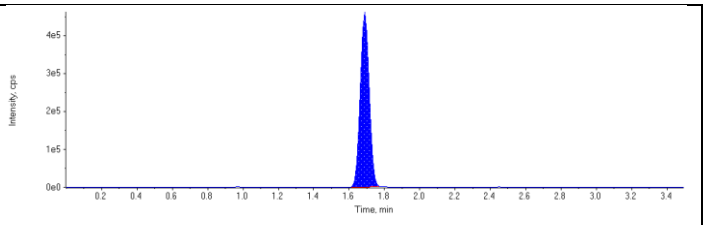
PFHpA 1 (363.000/319.000 Da)

RT (Exp. RT): 1.69 (1.75) min

Calculated Conc: 34.4 ng/L

Area Ratio: 4.04

Sample Type: (Quality Control)



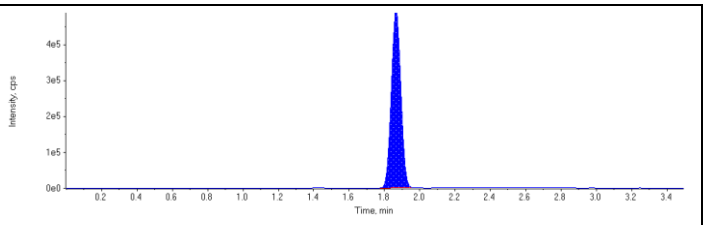
PFOA 1 (413.100/369.000 Da)

RT (Exp. RT): 1.87 (1.92) min

Calculated Conc: 32.9 ng/L

Area Ratio: 4.56

Sample Type: (Quality Control)



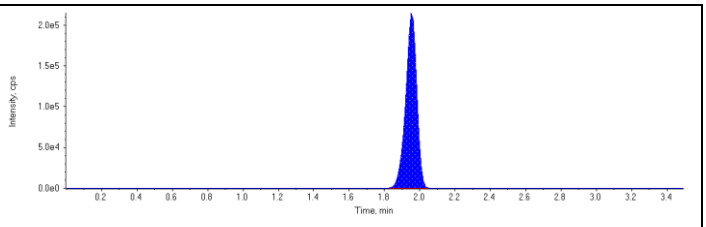
PFOS 1 (498.900/79.900 Da)

RT (Exp. RT): 1.95 (1.97) min

Calculated Conc: 30.6 ng/L

Area Ratio: 4.66

Sample Type: (Quality Control)



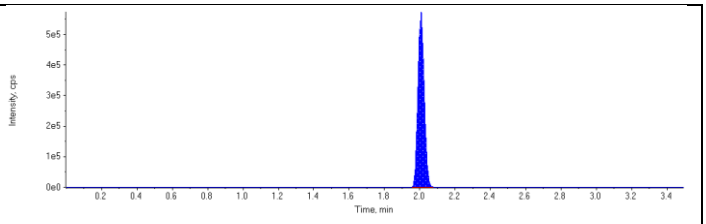
PFNA 1 (462.900/419.000 Da)

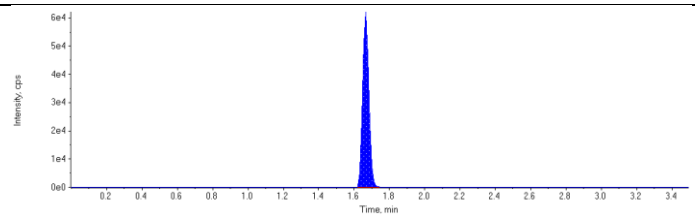
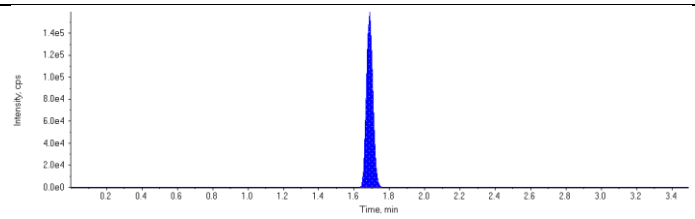
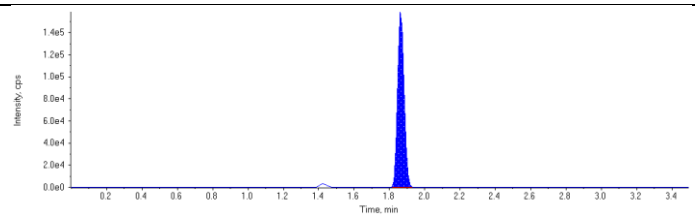
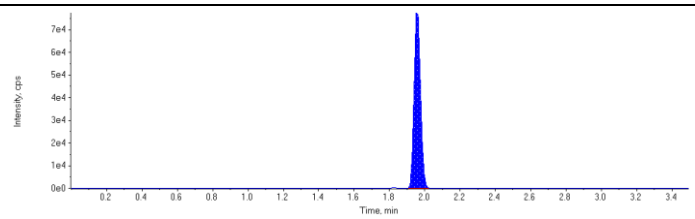
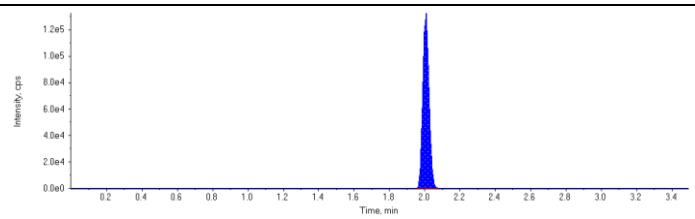
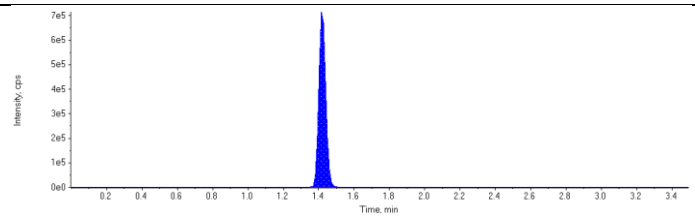
RT (Exp. RT): 2.01 (2.02) min

Calculated Conc: 33.8 ng/L

Area Ratio: 4.33

Sample Type: (Quality Control)



18O2-PFHxS (402.900/84.000 Da) RT (Exp. RT): 1.67 (1.68) min Calculated Conc: 123. ng/L Area Ratio: 0.0769 Sample Type: (Quality Control)	
13C4-PFHpA (366.900/322.000 Da) RT (Exp. RT): 1.69 (1.69) min Calculated Conc: 93.6 ng/L Area Ratio: 0.203 Sample Type: (Quality Control)	
13C4-PFOA (416.900/372.000 Da) RT (Exp. RT): 1.86 (1.88) min Calculated Conc: 105. ng/L Area Ratio: 0.206 Sample Type: (Quality Control)	
13C4-PFOS (502.900/79.900 Da) RT (Exp. RT): 1.96 (1.97) min Calculated Conc: 118. ng/L Area Ratio: 0.102 Sample Type: (Quality Control)	
13C5-PFNA (467.900/423.000 Da) RT (Exp. RT): 2.01 (2.02) min Calculated Conc: 101. ng/L Area Ratio: 0.167 Sample Type: (Quality Control)	
13C6-PFHxA (318.900/274.000 Da) RT (Exp. RT): 1.42 (1.42) min Calculated Conc: 85.1 ng/L Area Ratio: 0.00 Sample Type: (Quality Control)	

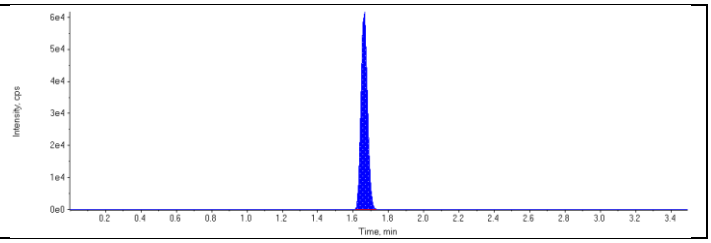
Sample Name	**CCV**	**Injection Vial**	6
Sample ID	CCV	**Injection Volume (µL)**	3
Sample Type	Quality Control	**Algorithm Used**	Analyst Classic
Acquisition Date	2016/02/26 8:03:22 AM	**Dilution Factor**	1.00
Acquisition Method	PFC_Water_Low.dam	**Sample Annotation**	-
Project	Enviro\PFOS	**Instrument Name**	LCMS03
Data File	PFC_160225\WS#4393242.wiff		
Result Table	PFC_Water_160225_4393242_ULow.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	157000.	1.66	1.00	-
MPFHpA	471000.	1.68	1.00	-
MPFOA	441000.	1.86	1.00	-
MPFOS	205000.	1.95	1.00	-
MPFNA	356000.	2.00	1.00	-
13C6-PFHxA IS	2470000.	1.41	1.00	-
N/A	N/A	N/A	N/A	-

Target Analyte	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)	Accuracy (%)
PFBS 1	1350000	1.09	30.0	29.0	96.8
PFHxS 1	1380000	1.66	30.0	28.9	96.4
PFHpA 1	1920000	1.68	30.0	34.7	116.0
PFOA 1	2180000	1.86	30.0	35.6	119.0
PFOS 1	1010000	1.95	30.0	32.4	108.0
PFNA 1	1570000	2.00	30.0	34.5	115.0
18O2-PFHxS	157000	1.66	100.	101.	101.0
13C4-PFHpA	471000	1.68	100.	87.8	87.8
13C4-PFOA	441000	1.86	100.	91.1	91.1
13C4-PFOS	205000	1.95	100.	95.9	95.9
13C5-PFNA	356000	2.00	100.	87.1	87.1
13C6-PFHxA	2470000	1.41	100.	107.	107.0

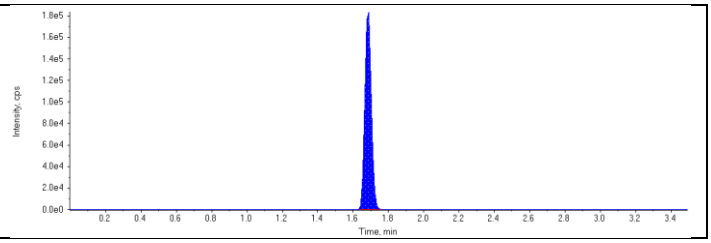
MPFHxS (Internal Standard)

RT (Exp. RT): 1.66(1.68) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



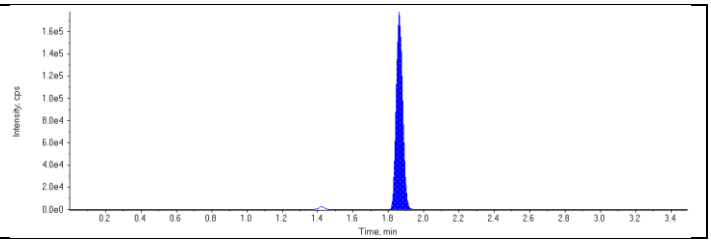
MPFHpA (Internal Standard)

RT (Exp. RT): 1.68(1.69) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



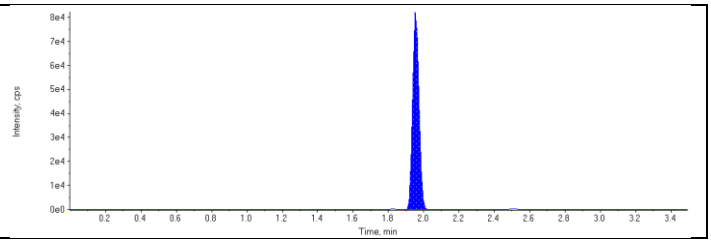
MPFOA (Internal Standard)

RT (Exp. RT): 1.86(1.88) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



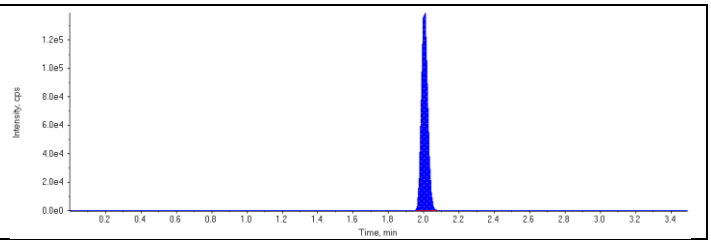
MPFOS (Internal Standard)

RT (Exp. RT): 1.95(1.97) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



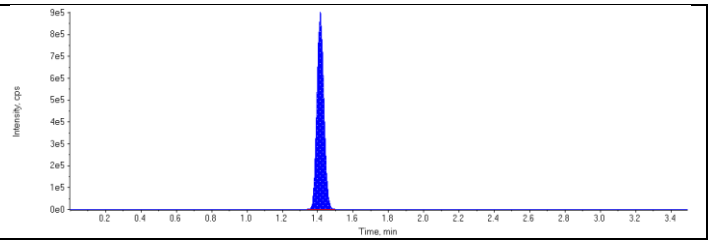
MPFNA (Internal Standard)

RT (Exp. RT): 2.00(2.02) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



13C6-PFHxA IS (Internal Standard)

RT (Exp. RT): 1.41(1.42) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



N/A (Internal Standard)

RT (Exp. RT): N/A(N/A) min
Concentration: N/A N/A
Sample Type: (Quality Control)

This image is not available

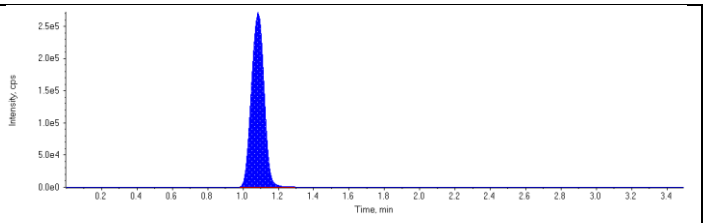
PFBS 1 (298.900/79.900 Da)

RT (Exp. RT): 1.09 (1.09) min

Calculated Conc: 29.0 ng/L

Area Ratio: 8.59

Sample Type: (Quality Control)



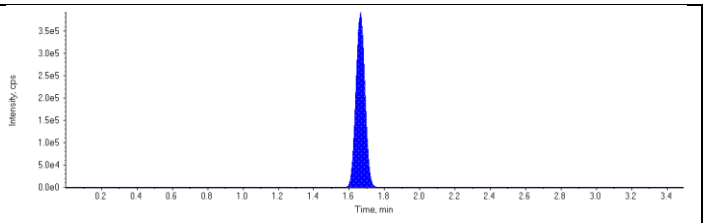
PFHxS 1 (398.900/79.900 Da)

RT (Exp. RT): 1.66 (1.68) min

Calculated Conc: 28.9 ng/L

Area Ratio: 8.77

Sample Type: (Quality Control)



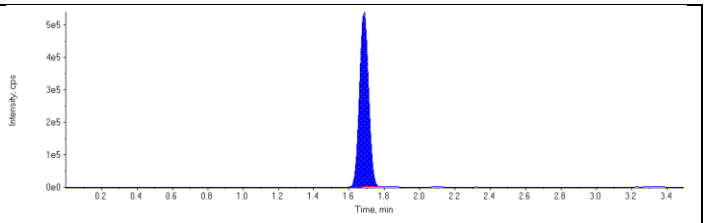
PFHpA 1 (363.000/319.000 Da)

RT (Exp. RT): 1.68 (1.75) min

Calculated Conc: 34.7 ng/L

Area Ratio: 4.08

Sample Type: (Quality Control)



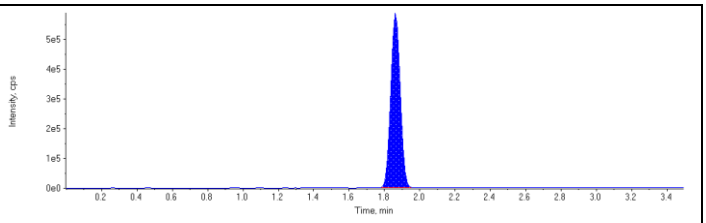
PFOA 1 (413.100/369.000 Da)

RT (Exp. RT): 1.86 (1.92) min

Calculated Conc: 35.6 ng/L

Area Ratio: 4.93

Sample Type: (Quality Control)



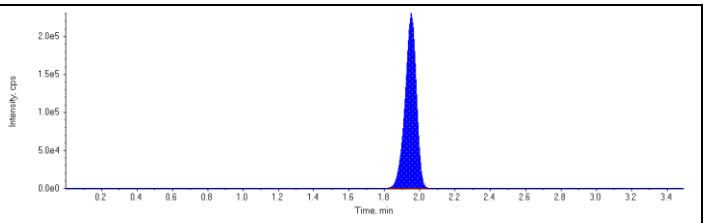
PFOS 1 (498.900/79.900 Da)

RT (Exp. RT): 1.95 (1.97) min

Calculated Conc: 32.4 ng/L

Area Ratio: 4.94

Sample Type: (Quality Control)



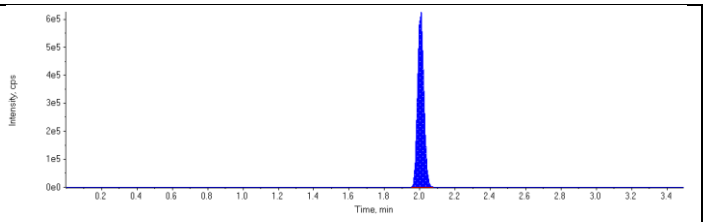
PFNA 1 (462.900/419.000 Da)

RT (Exp. RT): 2.00 (2.02) min

Calculated Conc: 34.5 ng/L

Area Ratio: 4.41

Sample Type: (Quality Control)



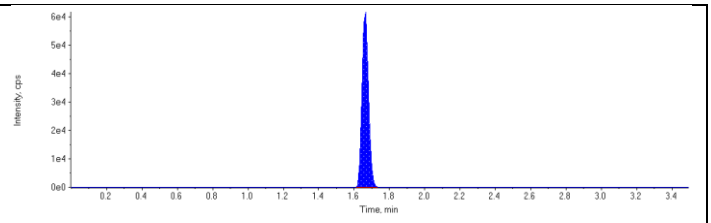
18O2-PFHxS (402.900/84.000 Da)

RT (Exp. RT): 1.66 (1.68) min

Calculated Conc: 101. ng/L

Area Ratio: 0.0636

Sample Type: (Quality Control)



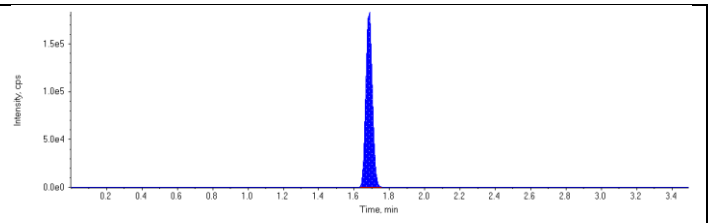
13C4-PFHpA (366.900/322.000 Da)

RT (Exp. RT): 1.68 (1.69) min

Calculated Conc: 87.8 ng/L

Area Ratio: 0.190

Sample Type: (Quality Control)



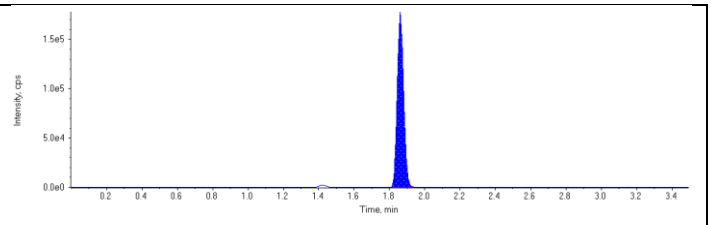
13C4-PFOA (416.900/372.000 Da)

RT (Exp. RT): 1.86 (1.88) min

Calculated Conc: 91.1 ng/L

Area Ratio: 0.178

Sample Type: (Quality Control)



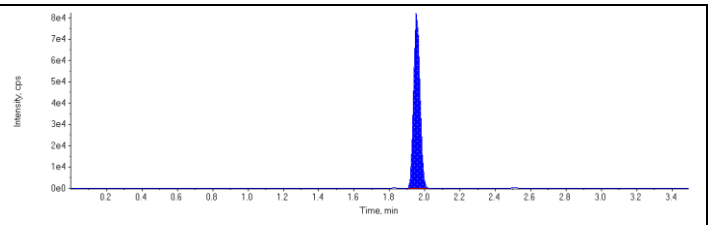
13C4-PFOS (502.900/79.900 Da)

RT (Exp. RT): 1.95 (1.97) min

Calculated Conc: 95.9 ng/L

Area Ratio: 0.0827

Sample Type: (Quality Control)



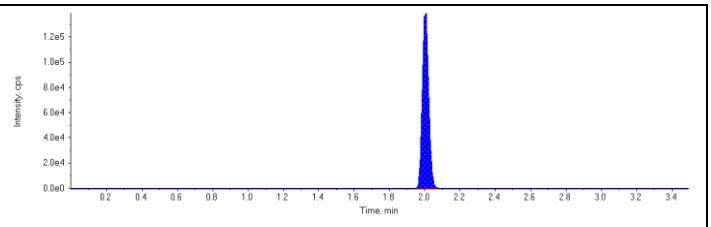
13C5-PFNA (467.900/423.000 Da)

RT (Exp. RT): 2.00 (2.02) min

Calculated Conc: 87.1 ng/L

Area Ratio: 0.144

Sample Type: (Quality Control)



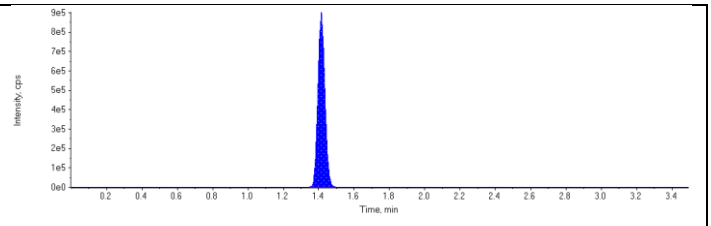
13C6-PFHxA (318.900/274.000 Da)

RT (Exp. RT): 1.41 (1.42) min

Calculated Conc: 107. ng/L

Area Ratio: 0.00

Sample Type: (Quality Control)



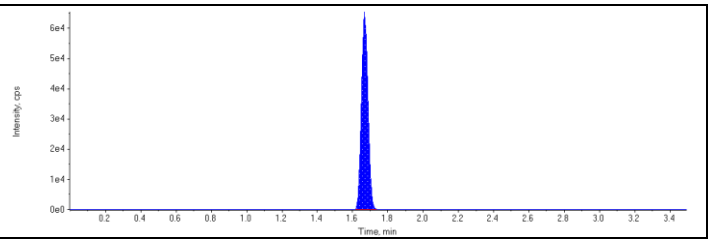
Sample Name	**CCV**	**Injection Vial**	6
Sample ID	CCV	**Injection Volume (µL)**	3
Sample Type	Quality Control	**Algorithm Used**	Analyst Classic
Acquisition Date	2016/02/29 9:46:45 AM	**Dilution Factor**	1.00
Acquisition Method	PFC_Water_Low.dam	**Sample Annotation**	-
Project	Enviro\PFOS	**Instrument Name**	LCMS03
Data File	PFC_160226\WS#4394558.wiff		
Result Table	PFC_Water_160226_4394558_ULow_6.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	166000.	1.67	1.00	-
MPFHpA	500000.	1.69	1.00	-
MPFOA	470000.	1.87	1.00	-
MPFOS	215000.	1.96	1.00	-
MPFNA	366000.	2.01	1.00	-
13C6-PFHxA IS	2530000.	1.42	1.00	-
N/A	N/A	N/A	N/A	-

Target Analyte	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)	Accuracy (%)
PFBS 1	1510000	1.10	30.0	32.6	109.0
PFHxS 1	1430000	1.67	30.0	29.6	98.8
PFHpA 1	1950000	1.69	30.0	32.6	109.0
PFOA 1	2090000	1.87	30.0	30.4	101.0
PFOS 1	978000	1.96	30.0	29.4	98.0
PFNA 1	1470000	2.01	30.0	30.4	101.0
18O2-PFHxS	166000	1.67	100.	102.	102.0
13C4-PFHpA	500000	1.69	100.	103.	103.0
13C4-PFOA	470000	1.87	100.	111.	111.0
13C4-PFOS	215000	1.96	100.	108.	108.0
13C5-PFNA	366000	2.01	100.	108.	108.0
13C6-PFHxA	2530000	1.42	100.	102.	102.0

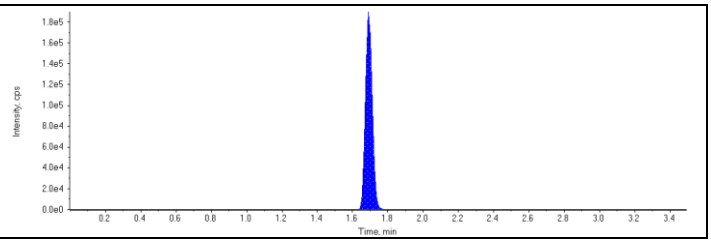
MPFHxS (Internal Standard)

RT (Exp. RT): 1.67(1.68) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



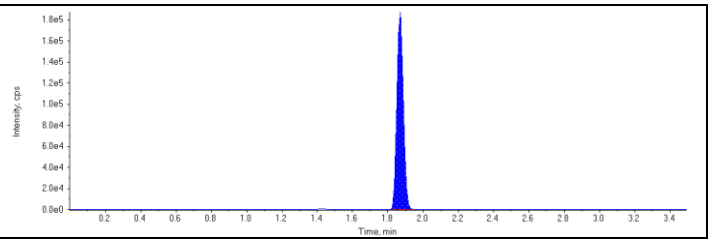
MPFHpA (Internal Standard)

RT (Exp. RT): 1.69(1.69) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



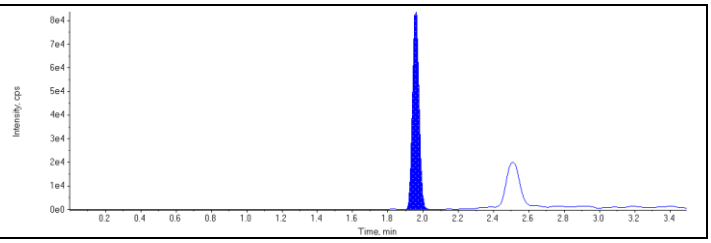
MPFOA (Internal Standard)

RT (Exp. RT): 1.87(1.88) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



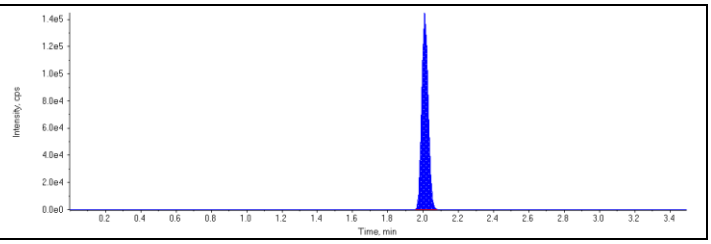
MPFOS (Internal Standard)

RT (Exp. RT): 1.96(1.97) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



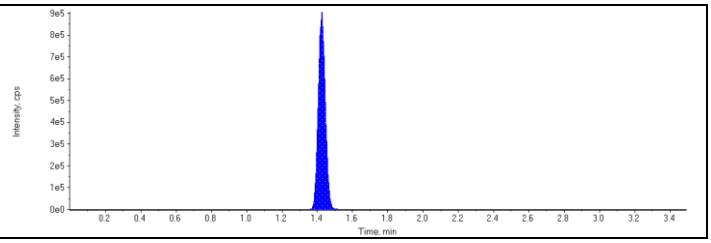
MPFNA (Internal Standard)

RT (Exp. RT): 2.01(2.02) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



13C6-PFHxA IS (Internal Standard)

RT (Exp. RT): 1.42(1.42) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



N/A (Internal Standard)

RT (Exp. RT): N/A(N/A) min
Concentration: N/A N/A
Sample Type: (Quality Control)

This image is not available

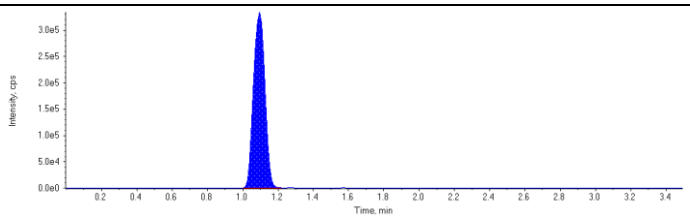
PFBS 1 (298.900/79.900 Da)

RT (Exp. RT): 1.10 (1.09) min

Calculated Conc: 32.6 ng/L

Area Ratio: 9.08

Sample Type: (Quality Control)



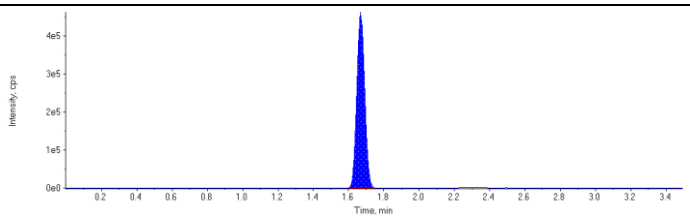
PFHxS 1 (398.900/79.900 Da)

RT (Exp. RT): 1.67 (1.68) min

Calculated Conc: 29.6 ng/L

Area Ratio: 8.57

Sample Type: (Quality Control)



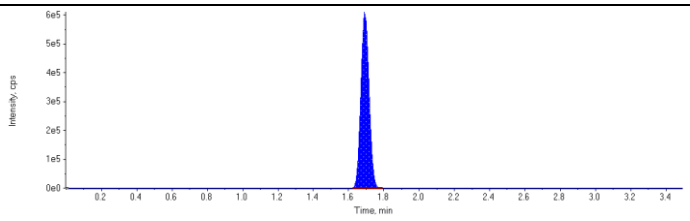
PFHpA 1 (363.000/319.000 Da)

RT (Exp. RT): 1.69 (1.70) min

Calculated Conc: 32.6 ng/L

Area Ratio: 3.90

Sample Type: (Quality Control)



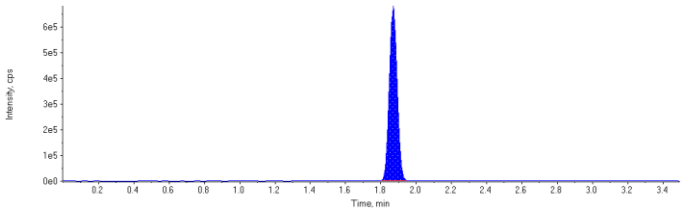
PFOA 1 (413.100/369.000 Da)

RT (Exp. RT): 1.87 (1.88) min

Calculated Conc: 30.4 ng/L

Area Ratio: 4.44

Sample Type: (Quality Control)



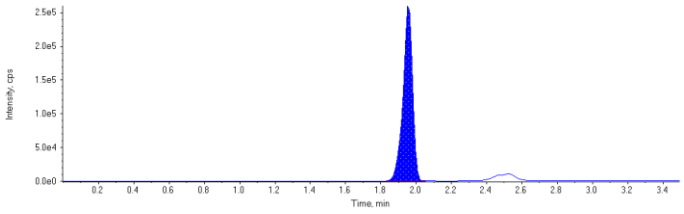
PFOS 1 (498.900/79.900 Da)

RT (Exp. RT): 1.96 (1.97) min

Calculated Conc: 29.4 ng/L

Area Ratio: 4.54

Sample Type: (Quality Control)



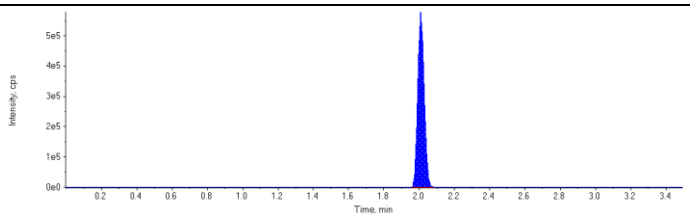
PFNA 1 (462.900/419.000 Da)

RT (Exp. RT): 2.01 (2.02) min

Calculated Conc: 30.4 ng/L

Area Ratio: 4.02

Sample Type: (Quality Control)



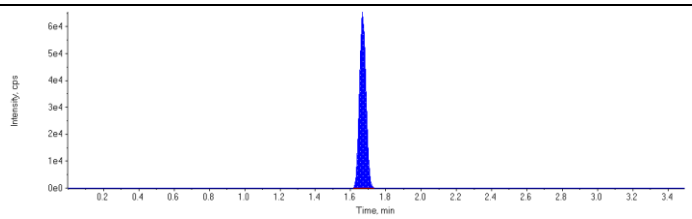
18O2-PFHxS (402.900/84.000 Da)

RT (Exp. RT): 1.67 (1.68) min

Calculated Conc: 102. ng/L

Area Ratio: 0.0659

Sample Type: (Quality Control)



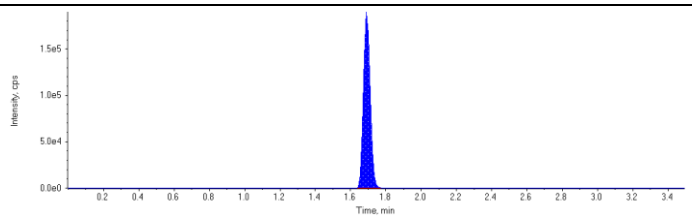
13C4-PFHpA (366.900/322.000 Da)

RT (Exp. RT): 1.69 (1.69) min

Calculated Conc: 103. ng/L

Area Ratio: 0.198

Sample Type: (Quality Control)



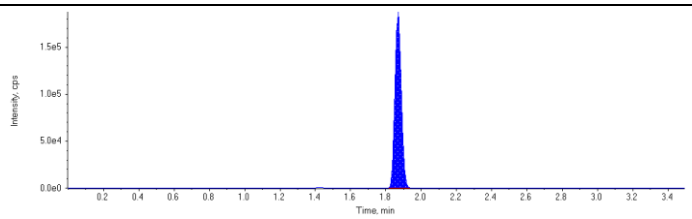
13C4-PFOA (416.900/372.000 Da)

RT (Exp. RT): 1.87 (1.88) min

Calculated Conc: 111. ng/L

Area Ratio: 0.186

Sample Type: (Quality Control)



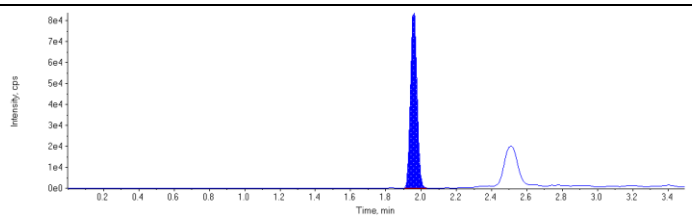
13C4-PFOS (502.900/79.900 Da)

RT (Exp. RT): 1.96 (1.97) min

Calculated Conc: 108. ng/L

Area Ratio: 0.0853

Sample Type: (Quality Control)



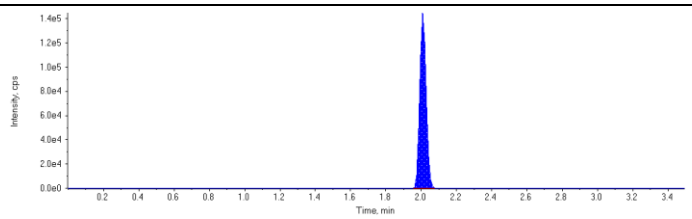
13C5-PFNA (467.900/423.000 Da)

RT (Exp. RT): 2.01 (2.02) min

Calculated Conc: 108. ng/L

Area Ratio: 0.145

Sample Type: (Quality Control)



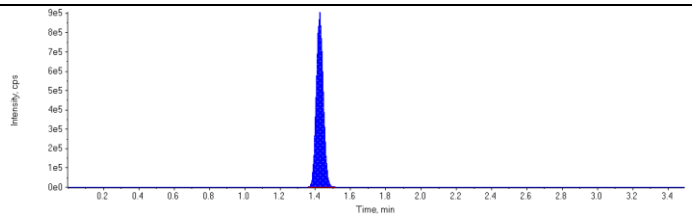
13C6-PFHxA (318.900/274.000 Da)

RT (Exp. RT): 1.42 (1.42) min

Calculated Conc: 102. ng/L

Area Ratio: 0.00

Sample Type: (Quality Control)



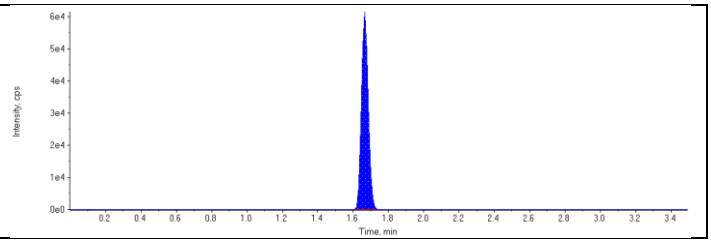
Sample Name	**CCV**	**Injection Vial**	6
Sample ID	CCV	**Injection Volume (µL)**	3
Sample Type	Quality Control	**Algorithm Used**	Analyst Classic
Acquisition Date	2016/02/29 11:21:13 AM	**Dilution Factor**	1.00
Acquisition Method	PFC_Water_Low.dam	**Sample Annotation**	-
Project	Enviro\PFOS	**Instrument Name**	LCMS03
Data File	PFC_160226\WS#4394558.wiff		
Result Table	PFC_Water_160226_4394558_ULow_6.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	162000.	1.67	1.00	-
MPFHpA	482000.	1.69	1.00	-
MPFOA	419000.	1.87	1.00	-
MPFOS	204000.	1.96	1.00	-
MPFNA	340000.	2.01	1.00	-
13C6-PFHxA IS	2290000.	1.42	1.00	-
N/A	N/A	N/A	N/A	-

Target Analyte	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)	Accuracy (%)
PFBS 1	1340000	1.09	30.0	29.7	99.1
PFHxS 1	1450000	1.67	30.0	30.9	103.0
PFHpA 1	1800000	1.69	30.0	31.3	104.0
PFOA 1	1980000	1.87	30.0	32.3	108.0
PFOS 1	963000	1.96	30.0	30.5	102.0
PFNA 1	1450000	2.01	30.0	32.1	107.0
18O2-PFHxS	162000	1.67	100.	110.	110.0
13C4-PFHpA	482000	1.69	100.	110.	110.0
13C4-PFOA	419000	1.87	100.	110.	110.0
13C4-PFOS	204000	1.96	100.	113.	113.0
13C5-PFNA	340000	2.01	100.	111.	111.0
13C6-PFHxA	2290000	1.42	100.	92.3	92.3

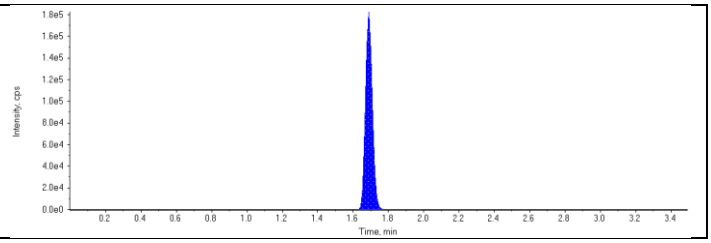
MPFHxS (Internal Standard)

RT (Exp. RT): 1.67(1.68) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



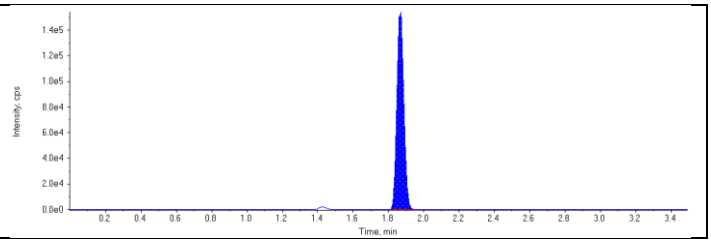
MPFHpA (Internal Standard)

RT (Exp. RT): 1.69(1.69) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



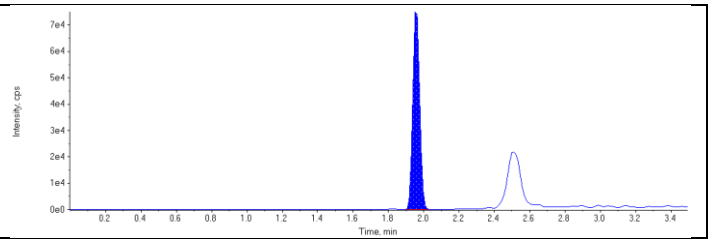
MPFOA (Internal Standard)

RT (Exp. RT): 1.87(1.88) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



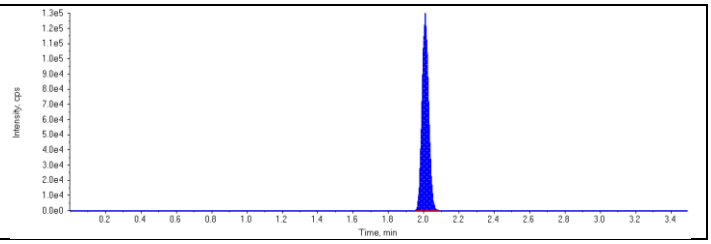
MPFOS (Internal Standard)

RT (Exp. RT): 1.96(1.97) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



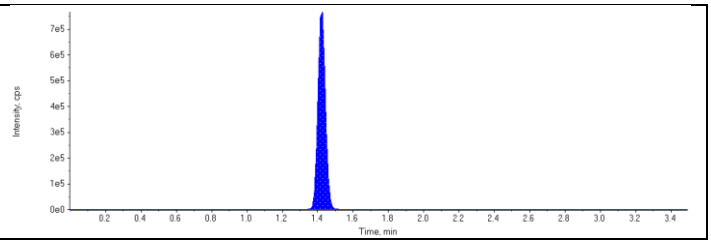
MPFNA (Internal Standard)

RT (Exp. RT): 2.01(2.02) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



13C6-PFHxA IS (Internal Standard)

RT (Exp. RT): 1.42(1.42) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



N/A (Internal Standard)

RT (Exp. RT): N/A(N/A) min
Concentration: N/A N/A
Sample Type: (Quality Control)

This image is not available

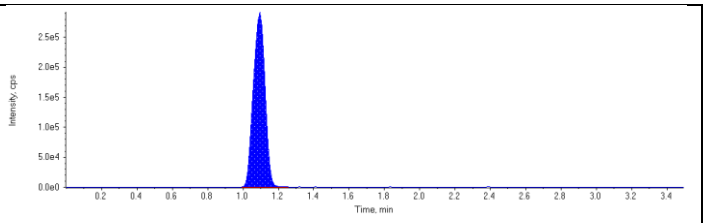
PFBS 1 (298.900/79.900 Da)

RT (Exp. RT): 1.09 (1.09) min

Calculated Conc: 29.7 ng/L

Area Ratio: 8.28

Sample Type: (Quality Control)



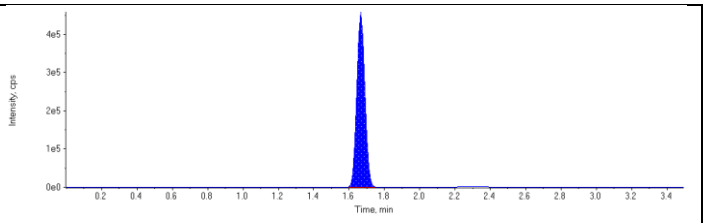
PFHxS 1 (398.900/79.900 Da)

RT (Exp. RT): 1.67 (1.68) min

Calculated Conc: 30.9 ng/L

Area Ratio: 8.94

Sample Type: (Quality Control)



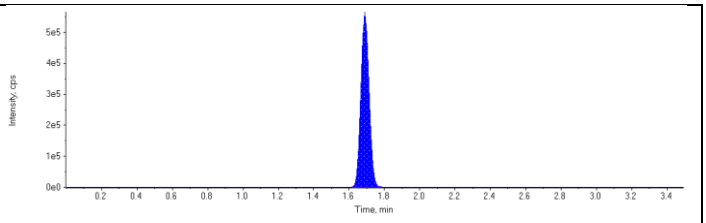
PFHpA 1 (363.000/319.000 Da)

RT (Exp. RT): 1.69 (1.70) min

Calculated Conc: 31.3 ng/L

Area Ratio: 3.74

Sample Type: (Quality Control)



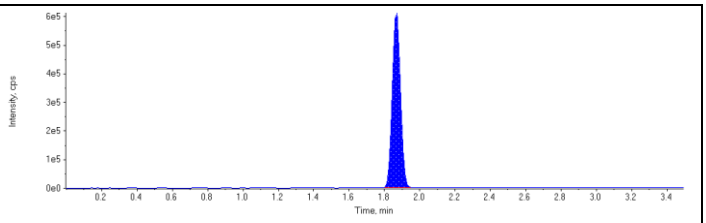
PFOA 1 (413.100/369.000 Da)

RT (Exp. RT): 1.87 (1.88) min

Calculated Conc: 32.3 ng/L

Area Ratio: 4.71

Sample Type: (Quality Control)



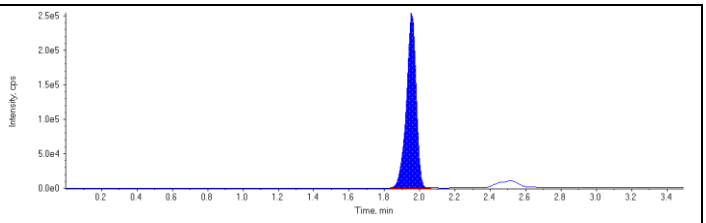
PFOS 1 (498.900/79.900 Da)

RT (Exp. RT): 1.96 (1.97) min

Calculated Conc: 30.5 ng/L

Area Ratio: 4.71

Sample Type: (Quality Control)



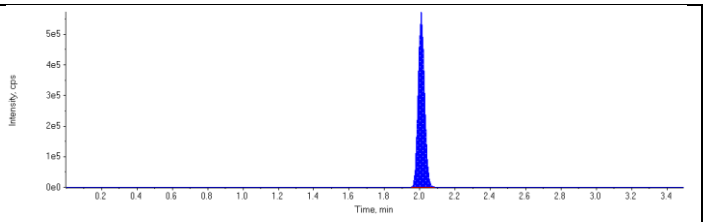
PFNA 1 (462.900/419.000 Da)

RT (Exp. RT): 2.01 (2.02) min

Calculated Conc: 32.1 ng/L

Area Ratio: 4.25

Sample Type: (Quality Control)



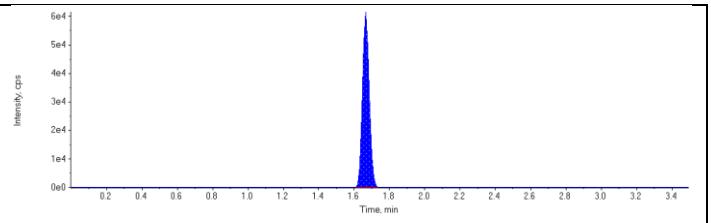
18O2-PFHxS (402.900/84.000 Da)

RT (Exp. RT): 1.67 (1.68) min

Calculated Conc: 110. ng/L

Area Ratio: 0.0708

Sample Type: (Quality Control)



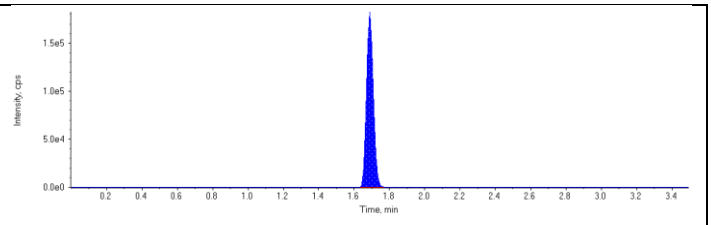
13C4-PFHpA (366.900/322.000 Da)

RT (Exp. RT): 1.69 (1.69) min

Calculated Conc: 110. ng/L

Area Ratio: 0.211

Sample Type: (Quality Control)



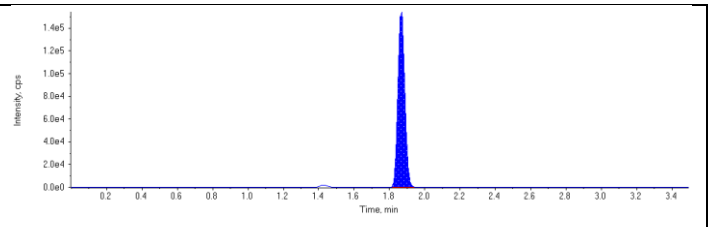
13C4-PFOA (416.900/372.000 Da)

RT (Exp. RT): 1.87 (1.88) min

Calculated Conc: 110. ng/L

Area Ratio: 0.183

Sample Type: (Quality Control)



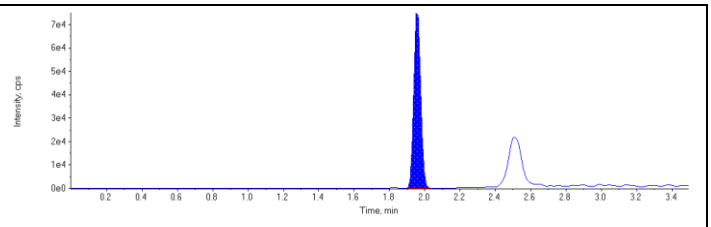
13C4-PFOS (502.900/79.900 Da)

RT (Exp. RT): 1.96 (1.97) min

Calculated Conc: 113. ng/L

Area Ratio: 0.0893

Sample Type: (Quality Control)



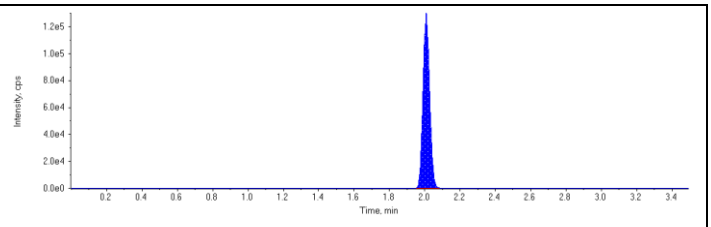
13C5-PFNA (467.900/423.000 Da)

RT (Exp. RT): 2.01 (2.02) min

Calculated Conc: 111. ng/L

Area Ratio: 0.149

Sample Type: (Quality Control)



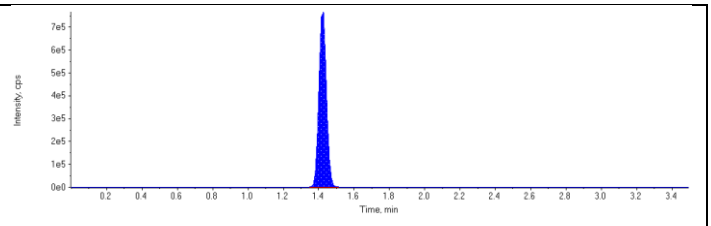
13C6-PFHxA (318.900/274.000 Da)

RT (Exp. RT): 1.42 (1.42) min

Calculated Conc: 92.3 ng/L

Area Ratio: 0.00

Sample Type: (Quality Control)



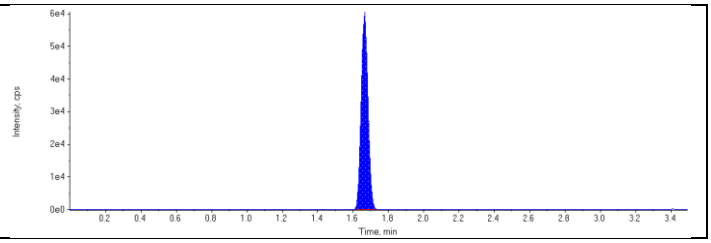
Sample Name	**CCV**	**Injection Vial**	6
Sample ID	CCV	**Injection Volume (µL)**	3
Sample Type	Quality Control	**Algorithm Used**	Analyst Classic
Acquisition Date	2016/02/29 11:36:34 AM	**Dilution Factor**	1.00
Acquisition Method	PFC_Water_Low.dam	**Sample Annotation**	-
Project	Enviro\PFOS	**Instrument Name**	LCMS03
Data File	PFC_160226\WS#4394558.wiff		
Result Table	PFC_Water_160226_4394558_ULow_6.rdb		

Internal Standard	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)
MPFHxS	159000.	1.66	1.00	-
MPFHpA	477000.	1.69	1.00	-
MPFOA	425000.	1.87	1.00	-
MPFOS	223000.	1.96	1.00	-
MPFNA	354000.	2.01	1.00	-
13C6-PFHxA IS	2390000.	1.42	1.00	-
N/A	N/A	N/A	N/A	-

Target Analyte	Area (cps)	RT (min)	Target Conc. (ng/L)	Calc. Conc. (ng/L)	Accuracy (%)
PFBS 1	1320000	1.09	30.0	29.7	99.1
PFHxS 1	1410000	1.67	30.0	30.6	102.0
PFHpA 1	1720000	1.69	30.0	30.2	101.0
PFOA 1	1910000	1.87	30.0	30.8	103.0
PFOS 1	1020000	1.95	30.0	29.6	98.6
PFNA 1	1370000	2.01	30.0	29.2	97.4
18O2-PFHxS	159000	1.66	100.	103.	103.0
13C4-PFHpA	477000	1.69	100.	104.	104.0
13C4-PFOA	425000	1.87	100.	106.	106.0
13C4-PFOS	223000	1.96	100.	119.	119.0
13C5-PFNA	354000	2.01	100.	111.	111.0
13C6-PFHxA	2390000	1.42	100.	96.3	96.3

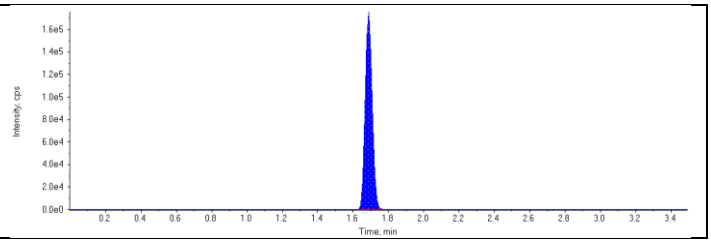
MPFHxS (Internal Standard)

RT (Exp. RT): 1.66(1.68) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



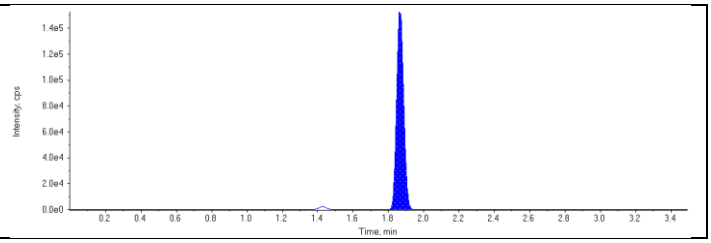
MPFHpA (Internal Standard)

RT (Exp. RT): 1.69(1.69) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



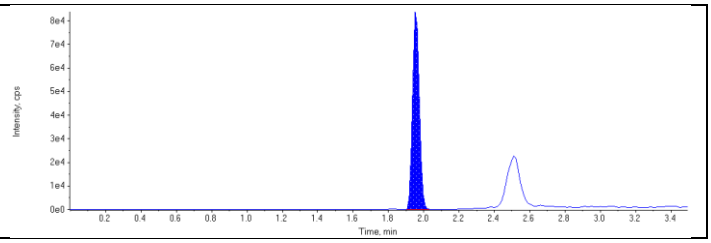
MPFOA (Internal Standard)

RT (Exp. RT): 1.87(1.88) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



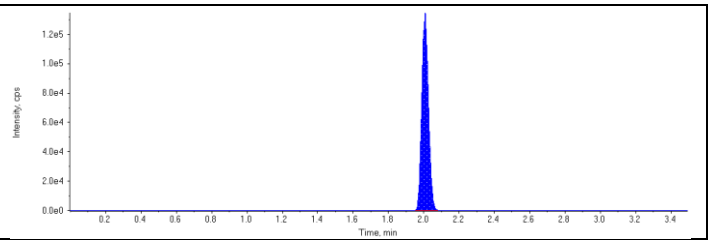
MPFOS (Internal Standard)

RT (Exp. RT): 1.96(1.97) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



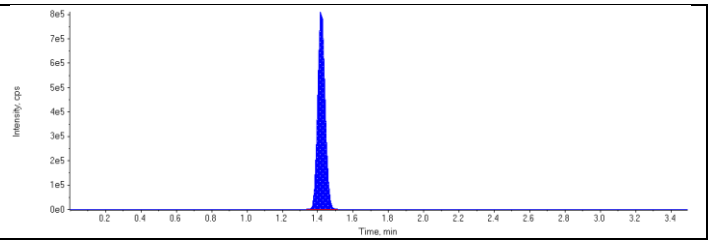
MPFNA (Internal Standard)

RT (Exp. RT): 2.01(2.02) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



13C6-PFHxA IS (Internal Standard)

RT (Exp. RT): 1.42(1.42) min
Concentration: 1.00 ng/L
Sample Type: (Quality Control)



N/A (Internal Standard)

RT (Exp. RT): N/A(N/A) min
Concentration: N/A N/A
Sample Type: (Quality Control)

This image is not available

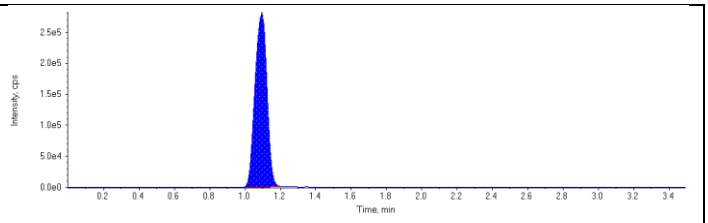
PFBS 1 (298.900/79.900 Da)

RT (Exp. RT): 1.09 (1.09) min

Calculated Conc: 29.7 ng/L

Area Ratio: 8.28

Sample Type: (Quality Control)



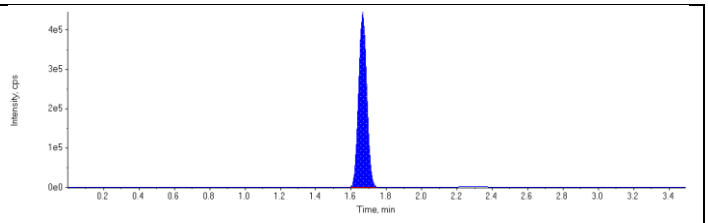
PFHxS 1 (398.900/79.900 Da)

RT (Exp. RT): 1.67 (1.68) min

Calculated Conc: 30.6 ng/L

Area Ratio: 8.86

Sample Type: (Quality Control)



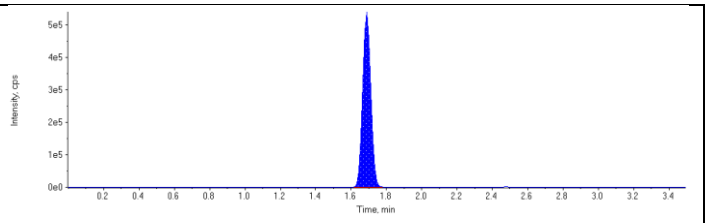
PFHpA 1 (363.000/319.000 Da)

RT (Exp. RT): 1.69 (1.70) min

Calculated Conc: 30.2 ng/L

Area Ratio: 3.61

Sample Type: (Quality Control)



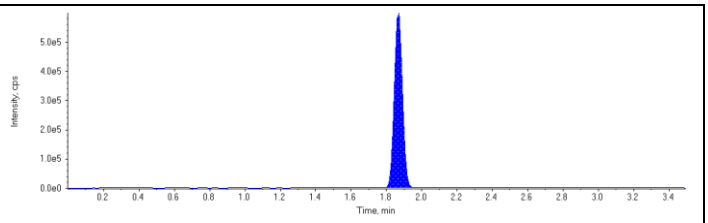
PFOA 1 (413.100/369.000 Da)

RT (Exp. RT): 1.87 (1.88) min

Calculated Conc: 30.8 ng/L

Area Ratio: 4.49

Sample Type: (Quality Control)



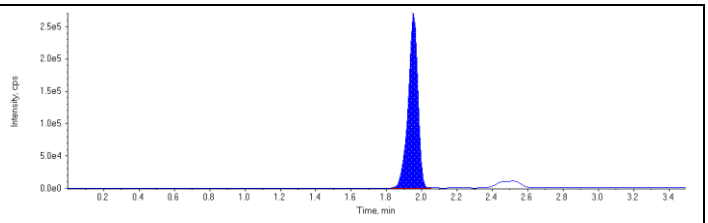
PFOS 1 (498.900/79.900 Da)

RT (Exp. RT): 1.95 (1.97) min

Calculated Conc: 29.6 ng/L

Area Ratio: 4.57

Sample Type: (Quality Control)



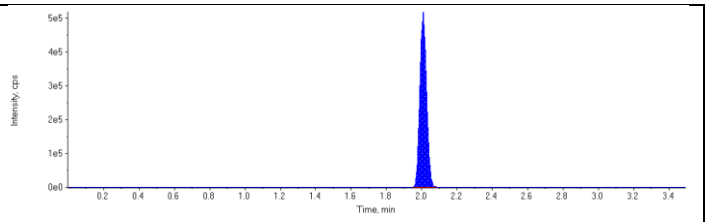
PFNA 1 (462.900/419.000 Da)

RT (Exp. RT): 2.01 (2.02) min

Calculated Conc: 29.2 ng/L

Area Ratio: 3.86

Sample Type: (Quality Control)



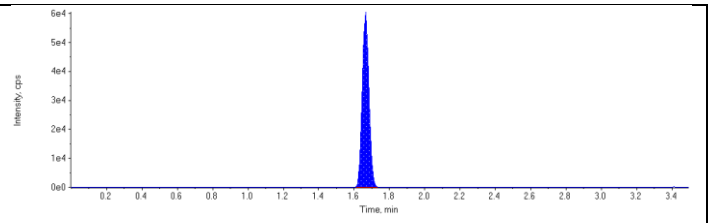
18O2-PFHxS (402.900/84.000 Da)

RT (Exp. RT): 1.66 (1.68) min

Calculated Conc: 103. ng/L

Area Ratio: 0.0666

Sample Type: (Quality Control)



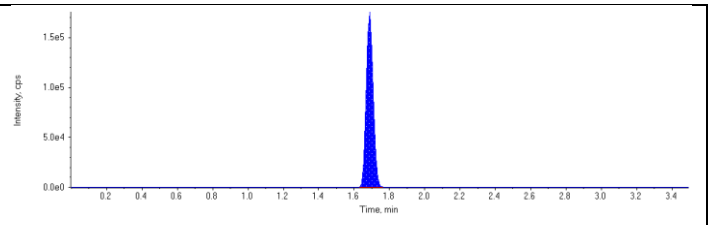
13C4-PFHpA (366.900/322.000 Da)

RT (Exp. RT): 1.69 (1.69) min

Calculated Conc: 104. ng/L

Area Ratio: 0.200

Sample Type: (Quality Control)



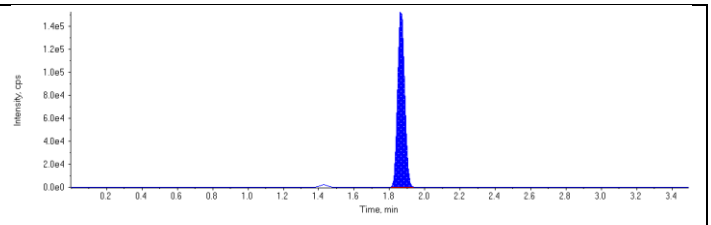
13C4-PFOA (416.900/372.000 Da)

RT (Exp. RT): 1.87 (1.88) min

Calculated Conc: 106. ng/L

Area Ratio: 0.178

Sample Type: (Quality Control)



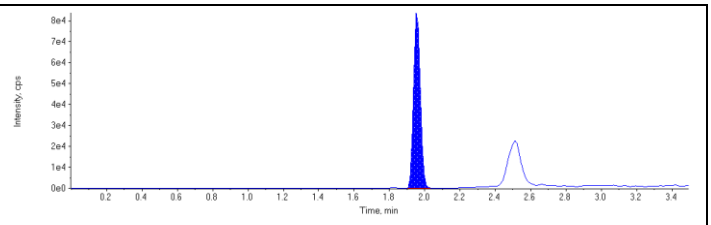
13C4-PFOS (502.900/79.900 Da)

RT (Exp. RT): 1.96 (1.97) min

Calculated Conc: 119. ng/L

Area Ratio: 0.0935

Sample Type: (Quality Control)



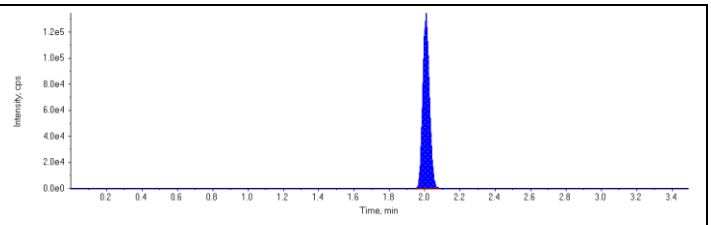
13C5-PFNA (467.900/423.000 Da)

RT (Exp. RT): 2.01 (2.02) min

Calculated Conc: 111. ng/L

Area Ratio: 0.148

Sample Type: (Quality Control)



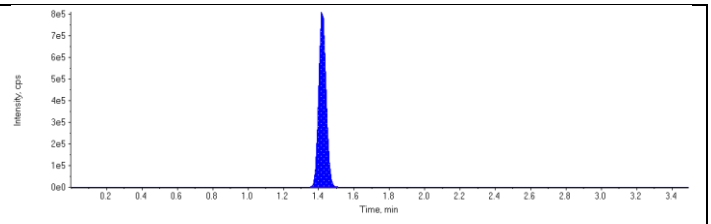
13C6-PFHxA (318.900/274.000 Da)

RT (Exp. RT): 1.42 (1.42) min

Calculated Conc: 96.3 ng/L

Area Ratio: 0.00

Sample Type: (Quality Control)



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Maxxam Analytics International
6740 Campobello Rd.
Mississauga, Ontario, Canada
L5N 2L8
1-800-668-0639
www.maxxamanalytics.com

Shipping and Receiving Documents

Chain of Custody Record

Temperature on Receipt 3.4°C

Drinking Water? Yes ☒ No ☐

320-17278 Chain of Custody

GTO WE76

TAL-4124 (1007)

Client	Project Manager	Date	Chain of Custody Number
CH2M Hill	Bill Friedmann	02/10/16	283624
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page** 1 of 1
5701 Cleveland St, Suite 200	757-671-6223		
City / **State** / **Zip Code**	**Site Contact**	**Lab Contact**	
Virginia Beach / VA / 23462			
Project Name and Location (State)	**Carrier/Waybill Number**		
GTO WE76 PFC Sampling	FedEx		
Contract/Purchase Order/Quote No.			
PO# 10006-7-104000			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis (Attach list if more space is needed): Select PFCs	Special Instructions/ Conditions of Receipt
OF-FB24-0216	02/10/16	1005		X			X						2	collected 02/10/16
OF-RW24-0216	02/10/16	1012		X			X						2	collected 02/10/16
OF-FB31-0216	02/10/16	1305		X			X						2	collected 02/10/16
OF-RW31-0216	02/10/16	1312		X			X						2	collected 02/10/16
OF-FB60-0216	02/11/16	1120		X			X						2	
OF-RW60-0216	02/11/16	1123		X			X						2	
OF-RW60P-0216	02/11/16	1125		X			X						2	
OF-FB46-0216	02/11/16	1320		X			X						2	
OF-RW46-0216	02/11/16	1325		X			X						2	

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
(A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By	02/11/16	1500	1. Received By	2/12/16	910
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Chain of Custody Record

Temperature on Receipt 3.4°C

Drinking Water? Yes ☒ No ☐

320-17278 Chain of Custody

CTO WE76

Due 2/22

13-Feb-16 13:40
Hongmei Zhao (Grace)
B630789

AKP ENV-1090

[redacted] Fax Number

Lab Contact

Date 02/10/16

Chain of Custody Number 283624

Lab Number

Page 1 of 1

Analysis (Attach list if more space is needed)

Special Instructions/ Conditions of Receipt

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/ NaOH	Select BTEX	Special Instructions/ Conditions of Receipt
OF-FB24-0216	02/10/16	1005		X			X						2	collected 02/10/16
OF-RW24-0216	02/10/16	1012		X			X						2	collected 02/10/16
OF-FB31-0216	02/10/16	1305		X			X						2	collected 02/10/16
OF-RW31-0216	02/10/16	1312		X			X						2	collected 02/10/16
OF-FB60-0216	02/11/16	1120		X			X						2	
OF-RW60-0216	02/11/16	1123		X			X						2	
OF-RW60P-0216	02/11/16	1125		X			X						2	
OF-FB46-0216	02/11/16	1320		X			X						2	
OF-RW46-0216	02/11/16	1325		X			X						2	

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By	02/11/16	1500	1. Received By	2/12/16	910
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By	02/12/16	13:40

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Login Sample Receipt Checklist

Client: CH2M Hill, Inc.

Job Number: 320-17278-1
SDG Number: CTO WE7G PFC Sampling

Login Number: 17278
List Number: 1
Creator: Nelson, Kym D

List Source: TestAmerica Sacramento

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Contract_ID	DO_CTO_Number	Phase	Installation_ID	Sample_Name	CH2M_Code	Analysis_Group	Analytical_Method	PRC_Code	Lab_Code	Lab_Name	Leachate_Method	Sample_Basis	Extraction_Method	Result_Type	Lab_QC_Type	Sample_Medium	QC_Level	DateTime_Collected	Date_Received	Leachate_Date	Leachate_Time	Extraction_Date	Extraction_Time	Analysis_Date	Analysis_Time	Lab_Sample_ID	Dilution	Run_Number	Percent_Moisture	Percent_Lipid	Chem_Name	Analyte_ID	Analyte_Value	Original_Analyte_Value	Result_Units	Lab_Qualifier	Validator_Qualifier	GC_Column_Type	Analysis_Result_Type	Result_Narrative	QC_Control_Limit_Code	QC_Accuracy_Upper	QC_Accuracy_Lower	Control_Limit_Date	QC_Narrative	MDL	Detection_Limit	QSM_Version	DL	LOD	LOQ	SDG	Analysis_Batch	Validator_Name	Val_Date
N6247011D8012	WE7G		OCEANA_NAS	OF-RW34-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 10:47	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-10	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.001	0.001	UG_L	U	U	PR	TRG					00000000				5.0	0.00027	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW34-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 10:47	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-10	1	1			Perfluoroheptanoic acid (PFHpA)	375-85-9	0.001	0.001	UG_L	U	U	PR	TRG					00000000				5.0	0.00039	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW34-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 10:47	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-10	1	1			Perfluorohexanesulfonic acid (PFHxS)	355-46-4	0.001	0.001	UG_L	U	U	PR	TRG					00000000				5.0	0.0004	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW34-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 10:47	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-10	1	1			Perfluorononanoic acid (PFNA)	375-95-1	0.001	0.001	UG_L	U	U	PR	TRG					00000000				5.0	0.00033	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW34-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 10:47	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-10	1	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1	0.001	0.001	UG_L	U	U	PR	TRG					00000000				5.0	0.0003	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW34-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 10:47	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-10	1	1			Perfluorooctanoic acid (PFOA)	335-67-1	0.001	0.001	UG_L	U	U	PR	TRG					00000000				5.0	0.00039	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW38-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 17:16	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-12	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.001	0.001	UG_L	U	U	PR	TRG					00000000				5.0	0.00027	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW38-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 17:16	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-12	1	1			Perfluoroheptanoic acid (PFHpA)	375-85-9	0.001	0.001	UG_L	U	U	PR	TRG					00000000				5.0	0.00039	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW38-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 17:16	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-12	1	1			Perfluorohexanesulfonic acid (PFHxS)	355-46-4	0.001	0.001	UG_L	U	U	PR	TRG					00000000				5.0	0.0004	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW38-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 17:16	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-12	1	1			Perfluorononanoic acid (PFNA)	375-95-1	0.001	0.001	UG_L	U	U	PR	TRG					00000000				5.0	0.00033	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW38-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 17:16	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-12	1	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1	0.001	0.001	UG_L	U	U	PR	TRG					00000000				5.0	0.0003	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW38-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 17:16	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-12	1	1			Perfluorooctanoic acid (PFOA)	335-67-1	0.001	0.001	UG_L	U	U	PR	TRG					00000000				5.0	0.00039	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW50-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 17:42	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-8	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.001	0.001	UG_L	U	U	PR	TRG					00000000				5.0	0.00027	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW50-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 17:42	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-8	1	1			Perfluoroheptanoic acid (PFHpA)	375-85-9	0.001	0.001	UG_L	U	U	PR	TRG					00000000				5.0	0.00039	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW50-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 17:42	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-8	1	1			Perfluorohexanesulfonic acid (PFHxS)	355-46-4	0.001	0.001	UG_L	U	U	PR	TRG					00000000				5.0	0.0004	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW50-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 17:42	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-8	1	1			Perfluorononanoic acid (PFNA)	375-95-1	0.001	0.001	UG_L	U	U	PR	TRG					00000000				5.0	0.00033	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW50-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 17:42	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-8	1	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1	0.001	0.001	UG_L	U	U	PR	TRG					00000000				5.0	0.0003	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW50-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 17:42	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-8	1	1			Perfluorooctanoic acid (PFOA)	335-67-1	0.001	0.001	UG_L	U	U	PR	TRG					00000000				5.0	0.00039	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW59-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 14:40	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-6	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.019	0.019	UG_L			PR	TRG					00000000				5.0	0.00027	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW59-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 14:40	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-6	1	1			Perfluoroheptanoic acid (PFHpA)	375-85-9	0.007	0.007	UG_L			PR	TRG					00000000				5.0	0.00039	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW59-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 14:40	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-6	10	1			Perfluorohexanesulfonic acid (PFHxS)	355-46-4	0.36	0.36	UG_L	D	D	PR	TRG					00000000				5.0	0.004	0.01	0.02	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW59-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 14:40	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-6	1	1			Perfluorononanoic acid (PFNA)	375-95-1	0.00080	0.00080	UG_L	J	J	PR	TRG					00000000				5.0	0.00033	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW59-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 14:40	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-6	10	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1	0.580	0.580	UG_L	D	D	PR	TRG					00000000				5.0	0.003	0.01	0.02	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW59-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 14:40	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-6	1	1			Perfluorooctanoic acid (PFOA)	335-67-1	0.087	0.087	UG_L			PR	TRG					00000000				5.0	0.00039	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW62-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 09:20	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-2	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.001	0.001	UG_L	U	U	PR	TRG					00000000				5.0	0.00027	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW62-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 09:20	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-2	1	1			Perfluoroheptanoic acid (PFHpA)	375-85-9	0.001	0.001	UG_L	U	U	PR	TRG					00000000				5.0	0.00039	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW62-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 09:20	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-2	1	1			Perfluorohexanesulfonic acid (PFHxS)	355-46-4	0.00075	0.00075	UG_L	J	J	PR	TRG					00000000				5.0	0.0004	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW62-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 09:20	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-2	1	1			Perfluorononanoic acid (PFNA)	375-95-1	0.001	0.001	UG_L	U	U	PR	TRG					00000000				5.0	0.00033	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW62-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 09:20	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-2	1	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1	0.0015	0.0015	UG_L	J	J	PR	TRG					00000000				5.0	0.0003	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW62-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 09:20	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-2	1	1			Perfluorooctanoic acid (PFOA)	335-67-1	0.001	0.001	UG_L	U	U	PR	TRG					00000000				5.0	0.00039	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW63-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 09:50	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-4	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.0065	0.0065	UG_L			PR	TRG					00000000				5.0	0.00027	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW63-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 09:50	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-4	1	1			Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0058	0.0058	UG_L			PR	TRG					00000000				5.0	0.00039	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW63-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 09:50	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-4	1	1			Perfluorohexanesulfonic acid (PFHxS)	355-46-4	0.022	0.022	UG_L			PR	TRG					00000000				5.0	0.0004	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW63-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 09:50	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-4	1	1			Perfluorononanoic acid (PFNA)	375-95-1	0.0011	0.0011	UG_L	J	J	PR	TRG					00000000				5.0	0.00033	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW63-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 09:50	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-4	1	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1	0.044	0.044	UG_L			PR	TRG					00000000				5.0	0.0003	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW63-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 09:50	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-4	1	1			Perfluorooctanoic acid (PFOA)	335-67-1	0.03	0.03	UG_L			PR	TRG					00000000				5.0	0.00039	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-FB62-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 09:15	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-1	1	1			13C4 PFOA	13C4 PFOA	104	104	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW62-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 09:20	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-2	1	1			13C4 PFOA	13C4 PFOA	86	86	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-FB63-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 09:40	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-3	1	1			13C4 PFOA	13C4 PFOA	107	107	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW63-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 09:50	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-4	1	1			13C4 PFOA	13C4 PFOA	81	81	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-FB59-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 14:30	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-5	1	1			13C4 PFOA	13C4 PFOA	107	107	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW59-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 14:40	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-6	1	1			13C4 PFOA	13C4 PFOA	96	96	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-FB50-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 17:35	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-7	1	1			13C4 PFOA	13C4 PFOA	125	125	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW50-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 17:42	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-8	1	1			13C4 PFOA	13C4 PFOA	68	68	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-FB34-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 10:40	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-9	1	1			13C4 PFOA	13C4 PFOA	113	113	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW34-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 10:47	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-10	1	1			13C4 PFOA	13C4 PFOA	91	91	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-FB38-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 17:10	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-11	1	1			13C4 PFOA	13C4 PFOA	130	130	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW38-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 17:16	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-12	1	1			13C4 PFOA	13C4 PFOA	79	79	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	4394551-BLK	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	LB1	W	4	02/25/2016 00:00	02/25/2016			20160225	00:00:00	20160229	00:00:00	4394551-BLK	1	1			13C4 PFOA	13C4 PFOA	114	114	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	4394551-LCS	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	BS	W	4	02/25/2016 00:00	02/25/2016			20160225	00:00:00	20160229	00:00:00	4394551-LCS	1	1			13C4 PFOA	13C4 PFOA	140	140	PCT_REC	C	C	PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW63-0216 MS	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	MS	W	4	02/25/2016 00:00	02/25/2016			20160225	00:00:00	20160229	00:00:00	4394551-MS	1	1			13C4 PFOA	13C4 PFOA	75	75	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW63-0216 MSD	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	MSD	W	4	02/25/2016 00:00	02/25/2016			20160225	00:00:00	20160229	00:00:00	4394551-MS Dup	1	1			13C4 PFOA	13C4 PFOA	83	83	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-FB62-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 09:15	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-1	1	1			13C4 PFOS	13C4 PFOS	110	110	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW62-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 09:20	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-2	1	1			13C4 PFOS	13C4 PFOS	71	71	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-FB63-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 09:40	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-3	1	1			13C4 PFOS	13C4 PFOS	103	103	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW63-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 09:50	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-4	1	1			13C4 PFOS	13C4 PFOS	72	72	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-FB59-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 14:30	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-5	1	1			13C4 PFOS	13C4 PFOS	105	105	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW59-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 14:40	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-6	1	1			13C4 PFOS	13C4 PFOS	105	105	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-FB50-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 17:35	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-7	1	1			13C4 PFOS	13C4 PFOS	102	102	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW50-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 17:42	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-8	1	1			13C4 PFOS	13C4 PFOS	53	53	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-FB34-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 10:40	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-9	1	1			13C4 PFOS	13C4 PFOS	107	107	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW34-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 10:47	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-10	1	1			13C4 PFOS	13C4 PFOS	81	81	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-FB38-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 17:10	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-11	1	1			13C4 PFOS	13C4 PFOS	136	136	PCT_REC	C	C	PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW38-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 17:16	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-12	1	1			13C4 PFOS	13C4 PFOS	75	75	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	4394551-BLK	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	LB1	W	4	02/25/2016 00:00	02/25/2016			20160225	00:00:00	20160229	00:00:00	4394551-BLK	1	1			13C4 PFOS	13C4 PFOS	107	107	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	4394551-LCS	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	BS	W	4	02/25/2016 00:00	02/25/2016			20160225	00:00:00	20160229	00:00:00	4394551-LCS	1	1			13C4 PFOS	13C4 PFOS	132	132	PCT_REC	C	C	PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW63-0216 MS	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	MS	W	4	02/25/2016 00:00	02/25/2016			20160225	00:00:00	20160229	00:00:00	4394551-MS	1	1			13C4 PFOS	13C4 PFOS	66	66	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW63-0216 MSD	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	MSD	W	4	02/25/2016 00:00	02/25/2016			20160225	00:00:00	20160229	00:00:00	4394551-MS Dup	1	1			13C4 PFOS	13C4 PFOS	71	71	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-FB62-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 09:15	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-1	1	1			13C4-PFHPA	13C4-PFHPA	116	116	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW62-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 09:20	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-2	1	1			13C4-PFHPA	13C4-PFHPA	84	84	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-FB63-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 09:40	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-3	1	1			13C4-PFHPA	13C4-PFHPA	105	105	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW63-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 09:50	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-4	1	1			13C4-PFHPA	13C4-PFHPA	76	76	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-FB59-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 14:30	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-5	1	1			13C4-PFHPA	13C4-PFHPA	108	108	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW59-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 14:40	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-6	1	1			13C4-PFHPA	13C4-PFHPA	83	83	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-FB50-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 17:35	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-7	1	1			13C4-PFHPA	13C4-PFHPA	104	104	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW50-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 17:42	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-8	1	1			13C4-PFHPA	13C4-PFHPA	68	68	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-FB34-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 10:40	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-9	1	1			13C4-PFHPA	13C4-PFHPA	105	105	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW34-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 10:47	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-10	1	1			13C4-PFHPA	13C4-PFHPA	86	86	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-FB38-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 17:10	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-11	1	1			13C4-PFHPA	13C4-PFHPA	120	120	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW38-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 17:16	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-12	1	1			13C4-PFHPA	13C4-PFHPA	79	79	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	4394551-BLK	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	LB1	W	4	02/25/2016 00:00	02/25/2016			20160225	00:00:00	20160229	00:00:00	4394551-BLK	1	1			13C4-PFHPA	13C4-PFHPA	102	102	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	4394551-LCS	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	BS	W	4	02/25/2016 00:00	02/25/2016			20160225	00:00:00	20160229	00:00:00	4394551-LCS	1	1			13C4-PFHPA	13C4-PFHPA	137	137	PCT_REC	C	C	PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW63-0216 MS	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	MS	W	4	02/25/2016 00:00	02/25/2016			20160225	00:00:00	20160229	00:00:00	4394551-MS	1	1			13C4-PFHPA	13C4-PFHPA	69	69	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW63-0216 MSD	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	MSD	W	4	02/25/2016 00:00	02/25/2016			20160225	00:00:00	20160229	00:00:00	4394551-MS Dup	1	1			13C4-PFHPA	13C4-PFHPA	81	81	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-FB62-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 09:15	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-1	1	1			13C5 PFNA	13C5 PFNA	104	104	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW62-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 09:20	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-2	1	1			13C5 PFNA	13C5 PFNA	79	79	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-FB63-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 09:40	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-3	1	1			13C5 PFNA	13C5 PFNA	94	94	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW63-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 09:50	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-4	1	1			13C5 PFNA	13C5 PFNA	75	75	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-FB59-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 14:30	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-5	1	1			13C5 PFNA	13C5 PFNA	106	106	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW59-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 14:40	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-6	1	1			13C5 PFNA	13C5 PFNA	91	91	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-FB50-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 17:35	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-7	1	1			13C5 PFNA	13C5 PFNA	119	119	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW50-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 17:42	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-8	1	1			13C5 PFNA	13C5 PFNA	68	68	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-FB34-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 10:40	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-9	1	1			13C5 PFNA	13C5 PFNA	105	105	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW34-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 10:47	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-10	1	1			13C5 PFNA	13C5 PFNA	81	81	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-FB38-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 17:10	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-11	1	1			13C5 PFNA	13C5 PFNA	121	121	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW38-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 17:16	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-12	1	1			13C5 PFNA	13C5 PFNA	80	80	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	4394551-BLK	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	LB1	W	4	02/25/2016 00:00	02/25/2016			20160225	00:00:00	20160229	00:00:00	4394551-BLK	1	1			13C5 PFNA	13C5 PFNA	103	103	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	4394551-LCS	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	BS	W	4	02/25/2016 00:00	02/25/2016			20160225	00:00:00	20160229	00:00:00	4394551-LCS	1	1			13C5 PFNA	13C5 PFNA	136	136	PCT_REC	C	C	PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW63-0216 MS	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	MS	W	4	02/25/2016 00:00	02/25/2016			20160225	00:00:00	20160229	00:00:00	4394551-MS	1	1			13C5 PFNA	13C5 PFNA	69	69	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW63-0216 MSD	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	MSD	W	4	02/25/2016 00:00	02/25/2016			20160225	00:00:00	20160229	00:00:00	4394551-MS Dup	1	1			13C5 PFNA	13C5 PFNA	82	82	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-FB62-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 09:15	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-1	1	1			18O2 PFHXS	18O2 PFHXS	103	103	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW62-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 09:20	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-2	1	1			18O2 PFHXS	18O2 PFHXS	85	85	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-FB63-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 09:40	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-3	1	1			18O2 PFHXS	18O2 PFHXS	101	101	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW63-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 09:50	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-4	1	1			18O2 PFHXS	18O2 PFHXS	74	74	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-FB59-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 14:30	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-5	1	1			18O2 PFHXS	18O2 PFHXS	95	95	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW59-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 14:40	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-6	1	1			18O2 PFHXS	18O2 PFHXS	105	105	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-FB50-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 17:35	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-7	1	1			18O2 PFHXS	18O2 PFHXS	101	101	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW50-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 17:42	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-8	1	1			18O2 PFHXS	18O2 PFHXS	67	67	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-FB34-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 10:40	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-9	1	1			18O2 PFHXS	18O2 PFHXS	106	106	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW34-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 10:47	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-10	1	1			18O2 PFHXS	18O2 PFHXS	88	88	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-FB38-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 17:10	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-11	1	1			18O2 PFHXS	18O2 PFHXS	117	117	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW38-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 17:16	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-12	1	1			18O2 PFHXS	18O2 PFHXS	79	79	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	4394551-BLK	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	LB1	W	4	02/25/2016 00:00	02/25/2016			20160225	00:00:00	20160229	00:00:00	4394551-BLK	1	1			18O2 PFHXS	18O2 PFHXS	99	99	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	4394551-LCS	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	BS	W	4	02/25/2016 00:00	02/25/2016			20160225	00:00:00	20160229	00:00:00	4394551-LCS	1	1			18O2 PFHXS	18O2 PFHXS	137	137	PCT_REC	C	C	PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW63-0216 MS	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	MS	W	4	02/25/2016 00:00	02/25/2016			20160225	00:00:00	20160229	00:00:00	4394551-MS	1	1			18O2 PFHXS	18O2 PFHXS	77	77	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW63-0216 MSD	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	MSD	W	4	02/25/2016 00:00	02/25/2016			20160225	00:00:00	20160229	00:00:00	4394551-MS Dup	1	1			18O2 PFHXS	18O2 PFHXS	84	84	PCT_REC			PR	SURR		SLSA	130	50	00000000				5.0				320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-FB34-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 10:40	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-9	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.001	0.001	UG_L	U	U	PR	TRG					00000000				5.0	0.00027	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-FB38-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 17:10	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-11	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.001	0.001	UG_L	U	U	PR	TRG					00000000				5.0	0.00027	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	4394551-BLK	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	LB1	W	4	02/25/2016 00:00	02/25/2016			20160225	00:00:00	20160229	00:00:00	4394551-BLK	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.001	0.001	UG_L	U	U	PR	TRG					00000000				5.0	0.00027	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-FB50-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 17:35	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-7	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.001	0.001	UG_L	U	U	PR	TRG					00000000				5.0	0.00027	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-FB59-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 14:30	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-5	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.001	0.001	UG_L	U	U	PR	TRG					00000000				5.0	0.00027	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-FB62-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 09:15	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-1	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.001	0.001	UG_L	U	U	PR	TRG					00000000				5.0	0.00027	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-FB63-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 09:40	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-3	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.001	0.001	UG_L	U	U	PR	TRG					00000000				5.0	0.00027	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	4394551-LCS	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	BS	W	4	02/25/2016 00:00	02/25/2016			20160225	00:00:00	20160229	00:00:00	4394551-LCS	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5	91	91	PCT_REC			PR	TRG		LSA	130	70	00000000				5.0	0.00027	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW63-0216 MS	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	MS	W	4	02/25/2016 00:00	02/25/2016			20160225	00:00:00	20160229	00:00:00	4394551-MS	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5	146	146	PCT_REC	C	C	PR	TRG		MSA	130	70	00000000				5.0	0.00027	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW63-0216 MSD	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	MSD	W	4	02/25/2016 00:00	02/25/2016			20160225	00:00:00	20160229	00:00:00	4394551-MS Dup	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5	147	147	PCT_REC	C	C	PR	TRG		MSP	130	70	00000000				5.0	0.00027	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-FB34-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 10:40	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-9	1	1			Perfluoroheptanoic acid (PFHpA)	375-85-9	0.001	0.001	UG_L	U	U	PR	TRG					00000000				5.0	0.00039	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-FB38-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 17:10	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-11	1	1			Perfluoroheptanoic acid (PFHpA)	375-85-9	0.001	0.001	UG_L	U	U	PR	TRG					00000000				5.0	0.00039	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-FB50-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 17:35	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-7	1	1			Perfluoroheptanoic acid (PFHpA)	375-85-9	0.001	0.001	UG_L	U	U	PR	TRG					00000000				5.0	0.00039	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-FB59-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 14:30	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-5	1	1			Perfluoroheptanoic acid (PFHpA)	375-85-9	0.001	0.001	UG_L	U	U	PR	TRG					00000000				5.0	0.00039	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-FB62-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 09:15	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-1	1	1			Perfluoroheptanoic acid (PFHpA)	375-85-9	0.001	0.001	UG_L	U	U	PR	TRG					00000000				5.0	0.00039	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-FB63-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 09:40	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-3	1	1			Perfluoroheptanoic acid (PFHpA)	375-85-9	0.001	0.001	UG_L	U	U	PR	TRG					00000000				5.0	0.00039	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	4394551-BLK	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	LB1	W	4	02/25/2016 00:00	02/25/2016			20160225	00:00:00	20160229	00:00:00	4394551-BLK	1	1			Perfluoroheptanoic acid (PFHpA)	375-85-9	0.001	0.001	UG_L	U	U	PR	TRG					00000000				5.0	0.00039	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	4394551-LCS	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	BS	W	4	02/25/2016 00:00	02/25/2016			20160225	00:00:00	20160229	00:00:00	4394551-LCS	1	1			Perfluoroheptanoic acid (PFHpA)	375-85-9	92	92	PCT_REC			PR	TRG		LSA	130	70	00000000				5.0	0.00039	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW63-0216 MS	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	MS	W	4	02/25/2016 00:00	02/25/2016			20160225	00:00:00	20160229	00:00:00	4394551-MS	1	1			Perfluoroheptanoic acid (PFHpA)	375-85-9	118	118	PCT_REC			PR	TRG		MSA	130	70	00000000				5.0	0.00039	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW63-0216 MSD	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	MSD	W	4	02/25/2016 00:00	02/25/2016			20160225	00:00:00	20160229	00:00:00	4394551-MS Dup	1	1			Perfluoroheptanoic acid (PFHpA)	375-85-9	111	111	PCT_REC			PR	TRG		MSP	130	70	00000000				5.0	0.00039	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-FB34-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 10:40	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-9	1	1			Perfluorohexanesulfonic acid (PFHxS)	355-46-4	0.001	0.001	UG_L	U	U	PR	TRG					00000000				5.0	0.0004	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-FB38-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 17:10	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-11	1	1			Perfluorohexanesulfonic acid (PFHxS)	355-46-4	0.001	0.001	UG_L	U	U	PR	TRG					00000000				5.0	0.0004	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-FB50-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 17:35	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-7	1	1			Perfluorohexanesulfonic acid (PFHxS)	355-46-4	0.001	0.001	UG_L	U	U	PR	TRG					00000000				5.0	0.0004	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-FB59-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 14:30	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-5	1	1			Perfluorohexanesulfonic acid (PFHxS)	355-46-4	0.001	0.001	UG_L	U	U	PR	TRG					00000000				5.0	0.0004	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-FB62-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 09:15	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-1	1	1			Perfluorohexanesulfonic acid (PFHxS)	355-46-4	0.001	0.001	UG_L	U	U	PR	TRG					00000000				5.0	0.0004	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-FB63-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 09:40	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-3	1	1			Perfluorohexanesulfonic acid (PFHxS)	355-46-4	0.001	0.001	UG_L	U	U	PR	TRG					00000000				5.0	0.0004	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	4394551-BLK	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	LB1	W	4	02/25/2016 00:00	02/25/2016			20160225	00:00:00	20160229	00:00:00	4394551-BLK	1	1			Perfluorohexanesulfonic acid (PFHxS)	355-46-4	0.001	0.001	UG_L	U	U	PR	TRG					00000000				5.0	0.0004	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	4394551-LCS	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	BS	W	4	02/25/2016 00:00	02/25/2016			20160225	00:00:00	20160229	00:00:00	4394551-LCS	1	1			Perfluorohexanesulfonic acid (PFHxS)	355-46-4	96	96	PCT_REC			PR	TRG		LSA	130	70	00000000				5.0	0.0004	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW63-0216 MS	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	MS	W	4	02/25/2016 00:00	02/25/2016			20160225	00:00:00	20160229	00:00:00	4394551-MS	1	1			Perfluorohexanesulfonic acid (PFHxS)	355-46-4	122	122	PCT_REC			PR	TRG		MSA	130	70	00000000				5.0	0.0004	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW63-0216 MSD	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	MSD	W	4	02/25/2016 00:00	02/25/2016			20160225	00:00:00	20160229	00:00:00	4394551-MS Dup	1	1			Perfluorohexanesulfonic acid (PFHxS)	355-46-4	133	133	PCT_REC	C	C	PR	TRG		MSP	130	70	00000000				5.0	0.0004	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-FB34-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 10:40	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-9	1	1			Perfluorononanoic acid (PFNA)	375-95-1	0.001	0.001	UG_L	U	U	PR	TRG					00000000				5.0	0.00033	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-FB38-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 17:10	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-11	1	1			Perfluorononanoic acid (PFNA)	375-95-1	0.001	0.001	UG_L	U	U	PR	TRG					00000000				5.0	0.00033	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-FB50-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 17:35	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-7	1	1			Perfluorononanoic acid (PFNA)	375-95-1	0.001	0.001	UG_L	U	U	PR	TRG					00000000				5.0	0.00033	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-FB59-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 14:30	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-5	1	1			Perfluorononanoic acid (PFNA)	375-95-1	0.001	0.001	UG_L	U	U	PR	TRG					00000000				5.0	0.00033	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-FB62-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 09:15	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-1	1	1			Perfluorononanoic acid (PFNA)	375-95-1	0.001	0.001	UG_L	U	U	PR	TRG					00000000				5.0	0.00033	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-FB63-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 09:40	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-3	1	1			Perfluorononanoic acid (PFNA)	375-95-1	0.001	0.001	UG_L	U	U	PR	TRG					00000000				5.0	0.00033	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	4394551-BLK	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	LB1	W	4	02/25/2016 00:00	02/25/2016			20160225	00:00:00	20160229	00:00:00	4394551-BLK	1	1			Perfluorononanoic acid (PFNA)	375-95-1	0.001	0.001	UG_L	U	U	PR	TRG					00000000				5.0	0.00033	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	4394551-LCS	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	BS	W	4	02/25/2016 00:00	02/25/2016			20160225	00:00:00	20160229	00:00:00	4394551-LCS	1	1			Perfluorononanoic acid (PFNA)	375-95-1	101	101	PCT_REC			PR	TRG		LSA	130	70	00000000				5.0	0.00033	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW63-0216 MS	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	MS	W	4	02/25/2016 00:00	02/25/2016			20160225	00:00:00	20160229	00:00:00	4394551-MS	1	1			Perfluorononanoic acid (PFNA)	375-95-1	127	127	PCT_REC			PR	TRG		MSA	130	70	00000000				5.0	0.00033	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW63-0216 MSD	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	MSD	W	4	02/25/2016 00:00	02/25/2016			20160225	00:00:00	20160229	00:00:00	4394551-MS Dup	1	1			Perfluorononanoic acid (PFNA)	375-95-1	119	119	PCT_REC			PR	TRG		MSP	130	70	00000000				5.0	0.00033	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-FB34-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 10:40	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-9	1	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1	0.001	0.001	UG_L	U	U	PR	TRG					00000000				5.0	0.0003	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-FB38-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 17:10	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-11	1	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1	0.001	0.001	UG_L	U	U	PR	TRG					00000000				5.0	0.0003	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-FB50-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 17:35	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-7	1	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1	0.001	0.001	UG_L	U	U	PR	TRG					00000000				5.0	0.0003	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-FB59-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 14:30	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-5	1	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1	0.001	0.001	UG_L	U	U	PR	TRG					00000000				5.0	0.0003	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	4394551-BLK	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	LB1	W	4	02/25/2016 00:00	02/25/2016			20160225	00:00:00	20160229	00:00:00	4394551-BLK	1	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1	0.001	0.001	UG_L	U	U	PR	TRG					00000000				5.0	0.0003	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-FB62-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 09:15	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-1	1	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1	0.001	0.001	UG_L	U	U	PR	TRG					00000000				5.0	0.0003	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-FB63-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 09:40	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-3	1	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1	0.001	0.001	UG_L	U	U	PR	TRG					00000000				5.0	0.0003	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	4394551-LCS	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	BS	W	4	02/25/2016 00:00	02/25/2016			20160225	00:00:00	20160229	00:00:00	4394551-LCS	1	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1	102	102	PCT_REC			PR	TRG		LSA	130	70	00000000				5.0	0.0003	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW63-0216 MS	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	MS	W	4	02/25/2016 00:00	02/25/2016			20160225	00:00:00	20160229	00:00:00	4394551-MS	1	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1	NC	NC	PCT_REC	U	U	PR	TRG		MSA	130	70	00000000				5.0	0.0003	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW63-0216 MSD	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	MSD	W	4	02/25/2016 00:00	02/25/2016			20160225	00:00:00	20160229	00:00:00	4394551-MS Dup	1	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1	NC	NC	PCT_REC	C	C	PR	TRG		MSP	130	70	00000000				5.0	0.0003	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-FB34-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 10:40	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-9	1	1			Perfluorooctanoic acid (PFOA)	335-67-1	0.001	0.001	UG_L	U	U	PR	TRG					00000000				5.0	0.00039	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-FB38-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 17:10	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-11	1	1			Perfluorooctanoic acid (PFOA)	335-67-1	0.001	0.001	UG_L	U	U	PR	TRG					00000000				5.0	0.00039	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-FB50-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 17:35	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-7	1	1			Perfluorooctanoic acid (PFOA)	335-67-1	0.001	0.001	UG_L	U	U	PR	TRG					00000000				5.0	0.00039	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-FB59-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 14:30	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-5	1	1			Perfluorooctanoic acid (PFOA)	335-67-1	0.001	0.001	UG_L	U	U	PR	TRG					00000000				5.0	0.00039	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-FB62-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 09:15	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-1	1	1			Perfluorooctanoic acid (PFOA)	335-67-1	0.001	0.001	UG_L	U	U	PR	TRG					00000000				5.0	0.00039	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-FB63-0216	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	REG	W	4	02/09/2016 09:40	02/10/2016			20160225	00:00:00	20160229	00:00:00	320-17241-3	1	1			Perfluorooctanoic acid (PFOA)	335-67-1	0.001	0.001	UG_L	U	U	PR	TRG					00000000				5.0	0.00039	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	4394551-BLK	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	LB1	W	4	02/25/2016 00:00	02/25/2016			20160225	00:00:00	20160229	00:00:00	4394551-BLK	1	1			Perfluorooctanoic acid (PFOA)	335-67-1	0.001	0.001	UG_L	U	U	PR	TRG					00000000				5.0	0.00039	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	4394551-LCS	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	BS	W	4	02/25/2016 00:00	02/25/2016			20160225	00:00:00	20160229	00:00:00	4394551-LCS	1	1			Perfluorooctanoic acid (PFOA)	335-67-1	93	93	PCT_REC			PR	TRG		LSA	130	70	00000000				5.0	0.00039	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW63-0216 MS	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	MS	W	4	02/25/2016 00:00	02/25/2016			20160225	00:00:00	20160229	00:00:00	4394551-MS	1	1			Perfluorooctanoic acid (PFOA)	335-67-1	NC	NC	PCT_REC	U	U	PR	TRG		MSA	130	70	00000000				5.0	0.00039	0.001	0.002	320-17241	100272-4394551		
N6247011D8012	WE7G		OCEANA_NAS	OF-RW63-0216 MSD	NONS	SVOA	537_MOD	ORG	MA	MAXXAM ANALYTICAL	NONE	NA	METHOD	000	MSD	W	4	02/25/2016 00:00	02/25/2016			20160225	00:00:00	20160229	00:00:00	4394551-MS Dup	1	1			Perfluorooctanoic acid (PFOA)	335-67-1	NC	NC	PCT_REC	C	C	PR	TRG		MSP	130	70	00000000				5.0	0.00039	0.001	0.002	320-17241	100272-4394551		

Data Validation Summary

Oceana CTO-WE44, NALF Fentress

TO: Juliana Dean/VBO

Anita Dodson/VBO

FROM: Tiffany McGlynn/GNV

CC: Herb Kelly/GNV

DATE: March 18, 2016

Introduction

The following data validation report discusses the data validation process and findings for TestAmerica Laboratories and Maxxam Laboratories in the Sample Delivery Groups (SDGs) listed in the table below.

Samples were analyzed using the following analytical methods:

- WS-LC-0025 & 537 MOD Perfluorinated Hydrocarbons

The samples included in these SDGs are listed in the table below.

SDG	Sample Name	Matrix
320-17150	OF-RW42B-0216	Water
320-17150	OF-RW39-0216	Water
320-17150	OF-FB40-0216	Water
320-17150	OF-RW40-0216	Water
320-17150	OF-FB43-0216	Water
320-17150	OF-RW43-0216	Water
320-17150	OF-FB42B-0216	Water
320-17150	OF-RW42A-0216	Water
320-17150	OF-FB42A-0216	Water
320-17150	OF-RW35-0216	Water
320-17150	OF-FB35-0216	Water

SDG	Sample Name	Matrix
320-17150	OF-RW58-0216	Water
320-17150	OF-FB58-0216	Water
320-17150	OF-FB39-0216	Water
320-17154	OF-FB09-0216	Water
320-17154	OF-FB67-0216	Water
320-17154	OF-RW09-0216	Water
320-17154	OF-FB37-0216	Water
320-17154	OF-RW37-0216	Water
320-17154	OF-RW11-0216	Water
320-17154	OF-FB11-0216	Water
320-17154	OF-RW28-0216	Water
320-17154	OF-FB28-0216	Water
320-17154	OF-RW67-0216	Water
320-17183	OF-RW66-0216	Water
320-17183	OF-FB27-0216	Water
320-17183	OF-FB66-0216	Water
320-17183	OF-RW49-0216	Water
320-17183	OF-FB49-0216	Water
320-17183	OF-RW36A-0216	Water
320-17183	OF-FB36A-0216	Water
320-17183	OF-RW51A-0216	Water
320-17183	OF-FB51A-0216	Water
320-17183	OF-RW27-0216	Water
320-17184	OF-RW20-0216	Water
320-17184	OF-FB30-0216	Water
320-17184	OF-FB69-0216	Water
320-17184	OF-RW69-0216	Water
320-17184	OF-FB26-0216	Water
320-17184	OF-RW26-0216	Water
320-17184	OF-FB20-0216	Water
320-17184	OF-RW55-0216	Water
320-17184	OF-FB55-0216	Water
320-17184	OF-RW54-0216	Water
320-17184	OF-FB54-0216	Water
320-17184	OF-RW68-0216	Water
320-17184	OF-FB68-0216	Water
320-17184	OF-RW30-0216	Water
320-17185	OF-FB08-0216	Water
320-17185	OF-RW51-0216	Water
320-17185	OF-RW51P-0216	Water

SDG	Sample Name	Matrix
320-17185	OF-RW08-0216	Water
320-17185	OF-RW08P-0216	Water
320-17185	OF-FB41-0216	Water
320-17185	OF-RW41-0216	Water
320-17185	OF-RW41P-0216	Water
320-17185	OF-FB56-0216	Water
320-17185	OF-RW56-0216	Water
320-17185	OF-FB51-0216	Water
320-17190	OF-FB12-0216	Water
320-17190	OF-RW12-0216	Water
320-17190	OF-FB57-0216	Water
320-17190	OF-RW57-0216	Water
320-17190	OF-RW57P-0216	Water
320-17190	OF-FB25-0216	Water
320-17190	OF-RW25-0216	Water
320-17190	OF-FB16-0216	Water
320-17190	OF-RW16-0216	Water
320-17219	OF-FB47-0216	Water
320-17219	OF-RW47-0216	Water
320-17219	OF-FB47A-0216	Water
320-17219	OF-RW47A-0216	Water
320-17219	OF-FB48-0216	Water
320-17219	OF-RW48-0216	Water
320-17236	OF-FB70-0216	Water
320-17236	OF-RW70-0216	Water
320-17236	OF-FB44-0216	Water
320-17236	OF-RW44-0216	Water
320-17236	OF-RW44P-0216	Water
320-17236	OF-FB65-0216	Water
320-17236	OF-RW65-0216	Water
320-17236	OF-FB21-0216	Water
320-17236	OF-RW21-0216	Water
320-17241	OF-FB62-0216	Water
320-17241	OF-RW34-0216	Water
320-17241	OF-FB38-0216	Water
320-17241	OF-RW38-0216	Water
320-17241	OF-RW62-0216	Water
320-17241	OF-FB63-0216	Water
320-17241	OF-RW63-0216	Water
320-17241	OF-FB59-0216	Water

SDG	Sample Name	Matrix
320-17241	OF-RW59-0216	Water
320-17241	OF-FB50-0216	Water
320-17241	OF-RW50-0216	Water
320-17241	OF-FB34-0216	Water
320-17278	OF-FB24-0216	Water
320-17278	OF-RW24-0216	Water
320-17278	OF-FB31-0216	Water
320-17278	OF-RW31-0216	Water
320-17278	OF-FB60-0216	Water
320-17278	OF-RW60-0216	Water
320-17278	OF-RW60P-0216	Water
320-17278	OF-FB46-0216	Water
320-17278	OF-RW46-0216	Water
320-17321	OF-FB02-0216	Water
320-17321	OF-RW02-0216	Water
320-17321	OF-FB15-0216	Water
320-17321	OF-RW15-0216	Water
320-17321	OF-FB18-0216	Water
320-17321	OF-RW18-0216	Water
320-17859	OF-FB07-0316	Water
320-17859	OF-RW07-0316	Water
320-17859	OF-HPFB01-0316	Water
320-17859	OF-HP01-0316	Water

Data Evaluation

Data was evaluated in accordance with the analytical methods and with the criteria found in the following guidance documents: Sampling and Analysis Plan Perfluorinated Compound Investigation, Naval Auxiliary Landing Field Fentress, Chesapeake, Virginia Contract Task Order WE44 (December 2015) and National Functional Guidelines for Organic Data Review (August 2014) with Region 3 Modification (Use of 'B' qualifier) as applicable. The samples were evaluated based on the following criteria:

- Data Completeness
- Technical Holding Times
- Tuning Instrument
- Initial/Continuing Calibrations
- Blanks

- Internal Standards
- Laboratory Control Samples
- Isotope Dilution Analyte
- Field Duplicates
- Identification/Quantitation
- Reporting Limits

Overall Evaluation of Data/Potential Usability Issues

Specific details regarding qualification of the data are addressed in the sections below. If an issue is not addressed there were no actions required based on unmet quality criteria. When more than one qualifier is associated with a compound/analyte, the validator has chosen the qualifier that best indicates possible bias in the results and qualified these data accordingly.

Data Completeness

The SDG was received complete and intact.

Technical Holding Times

According to the chain of custody records, sampling was performed on 2/3/16 through 2/16/16. Samples were received at the laboratory 2/4/16 through 2/17/16. All sample preparation and analyses were performed within holding time requirements with the exception of the samples listed below. Affected data are summarized in **Attachment 1**.

Sample Name	SDG
OF-RW42B-0216	320-17150
OF-RW08-0216	320-17185
OF-RW08P-0216	320-17185
OF-FB62-0216	320-17241
OF-RW34-0216	320-17241
OF-FB38-0216	320-17241
OF-RW38-0216	320-17241
OF-RW62-0216	320-17241
OF-FB63-0216	320-17241
OF-RW63-0216	320-17241
OF-FB59-0216	320-17241

Sample Name	SDG
OF-RW59-0216	320-17241
OF-FB50-0216	320-17241
OF-RW50-0216	320-17241
OF-FB34-0216	320-17241

Blanks

Several compounds were detected in the field blanks and method blanks as listed below. Affected data are summarized in **Attachment 1**.

SDG	Blank ID	Compound	Conc.	Units
320-17183	OF-FB49-0216	Perfluorohexanesulfonic acid (PFHxS)	0.00068	UG_L
320-17183	OF-FB36A-0216	Perfluorooctane Sulfonate (PFOS)	0.00042	UG_L
320-17185	OF-FB51-0216	Perfluorobutanesulfonic acid (PFBS)	0.00063	UG_L
320-17190	OF-FB12-0216	Perfluorohexanesulfonic acid (PFHxS)	0.00079	UG_L
320-17190	OF-FB57-0216	Perfluorohexanesulfonic acid (PFHxS)	0.00083	UG_L
320-17190	OF-FB25-0216	Perfluorobutanesulfonic acid (PFBS)	0.00092	UG_L
320-17190	OF-FB16-0216	Perfluorobutanesulfonic acid (PFBS)	0.0011	UG_L
320-17190	MB 320-100277/1-A	Perfluorobutanesulfonic acid (PFBS)	0.00103	UG_L
320-17190	MB 320-100277/1-A	Perfluorohexanesulfonic acid (PFHxS)	0.00102	UG_L
320-17190	MB 320-100277/1-A	Perfluorooctane Sulfonate (PFOS)	0.00144	UG_L
320-17859	MB 320-104553/1-A	Perfluorooctanoic acid (PFOA)	0.00217	UG_L

Field Duplicate Precision

Perfluoroheptanoic acid (PFHpA) did not meet required precision criteria in native sample OF-RW51-0216 and field duplicate OF-RW51P-0216. Affected data are summarized in **Attachment 1**.

Matrix Spike/Spike Duplicate

For spiked sample OF-RW56-0216 in SDG 320-17185, perfluorobutanesulfonic acid (PFBS) exhibited high recoveries in the MS/MSD. Affected data are summarized in **Attachment 1**.

Surrogates

Surrogates for the samples listed below exhibited low recoveries. Affected data are summarized in **Attachment 1**.

Sample Name	SDG
OF-RW67-0216	320-17154
OF-RW47-0216	320-17219
OF-RW70-0216	320-17236

Sample Name	SDG
OF-RW24-0216	320-17278

Internal Standards

Internal standards exhibited low recoveries for the samples listed below. Affected data are summarized in **Attachment 1**.

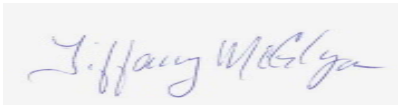
Sample Name	SDG
OF-RW37-0216	320-17154
OF-FB56-0216	320-17185

Conclusion

These data can be used in the project decision-making process as qualified by the data quality evaluation process.

Please do not hesitate to contact us about this validation report.

Sincerely,



Tiffany McGlynn

Qualification Flags

Exclude	More appropriate data exist for this analyte.
R	Data were rejected for use.
UL	Analyte not detected, quantitation limit is potentially biased low.
UJ	Analyte not detected, estimated quantitation limit.
U	Analyte not detected.
B	Not detected substantially above the level reported in laboratory or field blanks.
L	Analyte present, estimated value potentially biased low.
K	Analyte present, estimated value potentially biased high.
N	Analyte identification presumptive; no second column analysis performed or GC/MS tentative identification.
J	Analyte present, estimated value.
NJ	Analysis indicates the presence of an analyte that was "tentatively identified" and the associated value represents its approximate concentration.
None	Placeholder for calculating quality control issues that do not require flagging.
=	Analyte was detected at a concentration greater than the quantitation limit.

Qualifier Code Reference

Value	Description
%SOL	High Moisture content
2C	Second Column – Poor Dual Column Reproducibility
2S	Second Source – Bad reproducibility between tandem detectors
BD	Blank Spike/Blank Spike Duplicate(LCS/LCSD) Precision
BRL	Below Reporting Limit
BSH	Blank Spike/LCS – High Recovery
BSL	Blank Spike/LCS – Low Recovery
CC	Continuing Calibration
CCBL	Continuing Calibration Blank Contamination
CCH	Continuing Calibration Verification – High Recovery
CCL	Continuing Calibration Verification – Low Recovery
DL	Redundant Result – due to Dilution
EBL	Equipment Blank Contamination
EMPC	Estimated Possible Maximum Concentration
ESH	Extraction Standard - High Recovery
ESL	Extraction Standard - Low Recovery
FBL	Field Blank Contamination
FD	Field Duplicate
HT	Holding Time
ICB	Initial Calibration – Bad Linearity or Curve Function
ICH	Initial Calibration – High Relative Response Factors
ICL	Initial Calibration – Low Relative Response Factors
IR15	Ion ratio exceeds +/- 15% difference
ISH	Internal Standard – High Recovery
ISL	Internal Standard – Low Recovery
LD	Lab Duplicate Reproducibility
LR	Concentration Exceeds Linear Range
MBL	Method Blank Contamination
MDP	Matrix Spike/Matrix Spike Duplicate Precision
MI	Matrix interference obscuring the raw data

Value	Description
MSH	Matrix Spike and/or Matrix Spike Duplicate – High Recovery
MSL	Matrix Spike and/or Matrix Spike Duplicate – Low Recovery
OT	Other
PD	Pesticide Degradation
RE	Redundant Result - due to Reanalysis or Re-extraction
SD	Serial Dilution Reproducibility
SSH	Spiked Surrogate – High Recovery
SSL	Spiked Surrogate – Low Recovery
TBL	Trip Blank Contamination
TN	Tune

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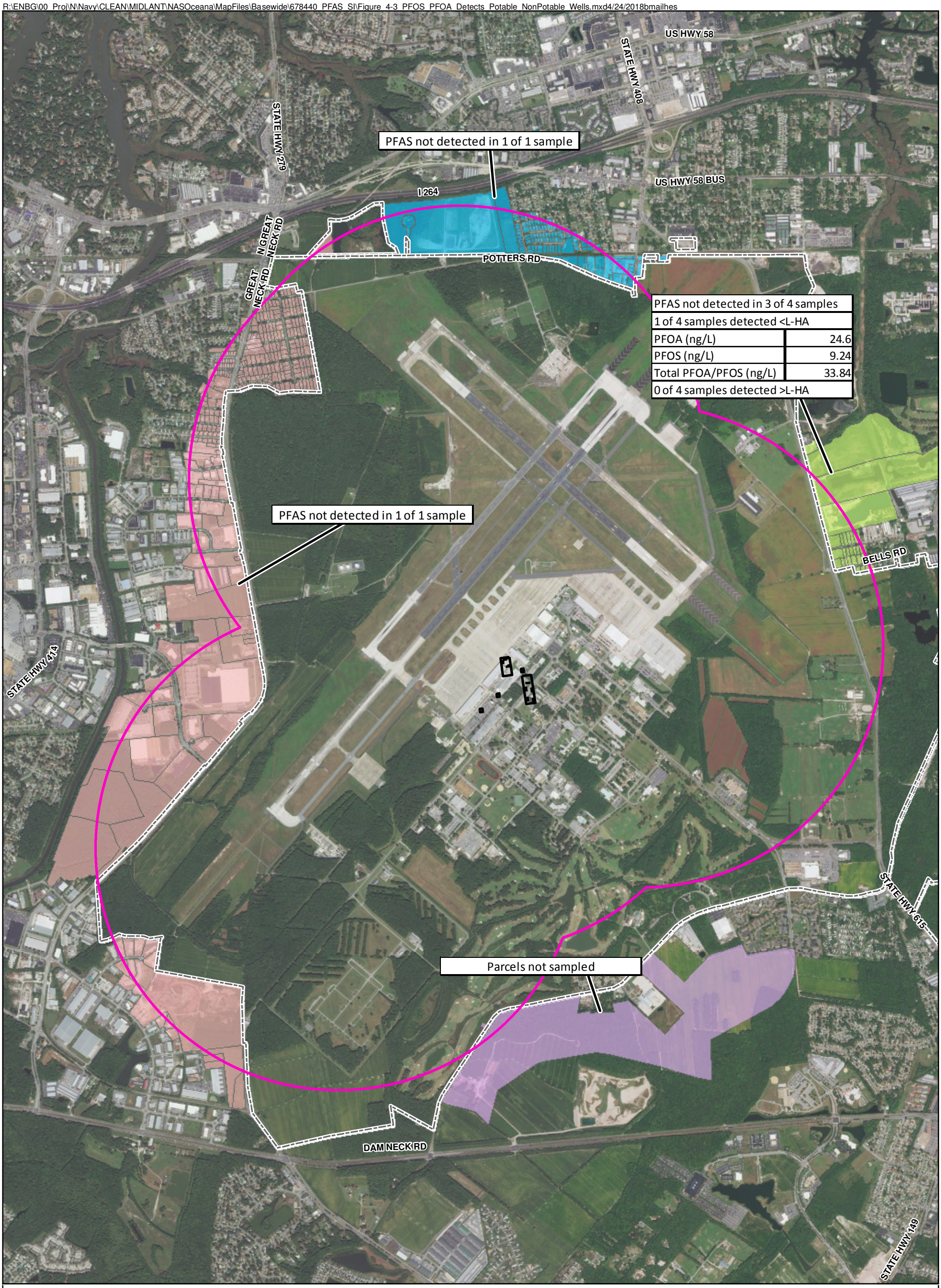

Legend

- Non-Core Target Treatment Area (2004)
- Core Target Treatment Area (2004) (Core)
- Sampling Area
- Installation Boundary

Off-Base Parcels

- East
- North
- South
- West

N
W E
S

0 1,000 2,000 4,000 Feet

Imagery Source: ©2017 Esri

Figure 4-3
COCs Detections in Potable Wells Sampled from Parcels Located Off-Base
Basewide Per- and Polyfluoroalkyl Substances Site Inspection Report
NAS Oceana, Virginia Beach, Virginia

ch2m