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LETTER OF TRANSMITTAL

Date: September 22, 2014 Project No: C1165-0301

To: Erica Bergman, NJDEP

From: Phil Goodrum, Integral Consulting Inc.

Re: Greenwich Public Water System Quarter 3 Sampling Results (NJ 0807001)
Solvay West Deptford Plant
10 Leonard Lane
West Deptford, NJ 08086-2150

The following is enclosed: ☐ for your use ☒ for your files ☐ per your request

Quantity	Item
2	**Data Report, Quarter 3, 2014 – Greenwich PWS Sampling on July 9, 2014**
2	**CDs, including:** - **Data Report** - **Eurofins Laboratory Reports** - **TestAmerica Laboratory Reports** - **EDDs**

Remarks:

On behalf of Solvay Specialty Polymers USA, LLC (Solvay), please find enclosed the sampling results for perfluoroalkyl compounds (PFCs) from the Greenwich public water system (PWS). Enclosed are two copies of the data in New Jersey Department of Environmental Protection (NJDEP) electronic data delivery (EDD) format and a summary report for your internal distribution. These EDDs were verified by Solvay to be complete and free of errors with NJDEP's online tool, Electronic Data Submittal Applications (EDSA7) version 7.1.5.

The report includes a description of the wells that were sampled, a figure illustrating

where samples were collected within the distribution system, a set of tables summarizing the laboratory results, and a copy of the data validation report prepared by an independent validator. In addition, the report includes a table that summarizes some of the current state and federal interim drinking water guidelines for PFCs. While these guidelines are non-binding at this time, they may provide Greenwich PWS with a helpful perspective to facilitate communication of findings to the community. A table summarizing the Quarter 3 detected PFC concentrations compared with past sampling events is included. Finally, a table is included to summarize the results of a screening of NJDEP drinking water criteria and groundwater criteria for other target analytes.

This enclosure for Greenwich constitutes the data report for the third round of sampling (Quarter 3), conducted on July 9, 2014. Data reports from the first and second rounds of sampling were submitted on March 20 and July 22, 2014. A fourth round of sampling will be conducted at the Greenwich PWS in October 2014.

At the Department's request, Integral sent information regarding the proposed sampling locations to Sandy Krietzman on July 7 (prior to the July 9 event). The samples collected largely reflect the plans that were presented. Details regarding the status of the treatment and distribution systems during the sampling events are presented in the report.

Solvay has adopted a rigorous quality assurance protocol for sampling, chain of custody documentation, analysis, and reporting of results. Each PWS sampling event includes field duplicates, laboratory quality control samples, and third party (independent) data validation. Please feel free to contact Mitch Gertz with any questions.

Sent via:

- ☐ U.S. Mail
- ☐ Fax
- ☐ Other
- ☒ Federal Express
- ☐ Courier

cc: Robert Schoch, Greenwich Public Works Supervisor
Mitch Gertz, Solvay Specialty Polymers USA, LLC
Thomas Buggey, LSRP, Roux Associates Inc.
Nidal Azzam, U.S. Environmental Protection Agency
Andrew Park, U.S. Environmental Protection Agency
Chris Roe, Fox Rothschild LLP

integral consulting inc.

DATA REPORT
QUARTER 3, 2014

Greenwich PWS Sampling on July 9, 2014

Prepared for
Solvay Specialty Polymers USA, LLC
10 Leonard Lane
West Deptford, NJ 08086

Prepared by
Integral Consulting Inc.
200 Harry S. Truman Parkway
Suite 330
Annapolis, MD 21401

September 22, 2014

DATA REPORT
QUARTER 3, 2014

Greenwich PWS
Sampling on July 9, 2014

Prepared for
Solvay Specialty Polymers USA, LLC
10 Leonard Lane
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200 Harry S. Truman Parkway
Suite 330
Annapolis, MD 21401

September 22, 2014

On July 9, 2014, Integral Consulting Inc. (Integral), consultant to Solvay Specialty Polymers USA, LLC (Solvay), continued Quarter 3 sampling by collecting water samples representative of three supply wells maintained by the Greenwich public water system (PWS). The samples were submitted to Eurofins Eaton Analytical, Inc. (Monrovia, CA), a New Jersey-certified analytical testing laboratory for analysis of perfluoroalkyl compounds (PFCs). In addition, split samples were submitted to TestAmerica Laboratories, Inc. (Edison, NJ[1]), also a New Jersey-certified analytical laboratory, for analysis of conventional parameters.

Figure 1 illustrates where samples were collected within the Greenwich PWS treatment system. Based on our understanding of Greenwich PWS operations, Well #4a and Well #6 were active during the July 9 sampling event. The water from these two wells flowed to a common treatment plant. A treated water sample was collected from the effluent of this treatment plant. In addition, a raw water sample was collected from Well #5. Since April 2014, the township has elected to not activate Well #5 because perfluorooctanoate acid (PFOA) concentrations in the range of 31 to 42 parts per trillion (ppt) and perfluorononanoic acid (PFNA) concentrations in the range of 23 to 32 ppt were detected during previous quarterly sampling events (see Table 1). Therefore, during the July 9, 2014 sampling event, Well #5 was turned on, but water was redirected to the sanitary sewer. Distribution point samples were not collected during Quarter 3 sampling.

RESULTS FROM JULY 9 SAMPLING EVENT

Table 1 summarizes the concentrations of PFCs measured in each raw and treated sample collected on July 9, 2014 (Quarter 3), as well as prior sampling events on February 6, 2014 (Quarter 1) and April 24, 2014 (Quarter 2). Table 2 summarizes all detected PFC concentrations across Quarter 1, Quarter 2, and Quarter 3, while Table 3 presents method detection limits (MDLs) and method reporting limits (MRLs). Data from Tables 1–3 are also provided in electronic files, using the electronic data delivery (EDD) format specified by New Jersey Department of Environmental Protection (NJDEP). These EDDs were verified by Solvay to be complete and free of errors with NJDEP's online tool, Electronic Data Submittal Applications (EDSA7) version 7.1.5, available at www.state.nj.us/dep/srp/hazsite/software/edsa/. Laboratory results for the samples collected on July 9, 2014 were validated by Laboratory Data Consultants, Inc. (Carlsbad, CA), an independent third party validator.

The laboratory report prepared by Eurofins and included in this submission summarizes the quality control sample results (i.e., matrix spike [MS] and matrix spike duplicate [MSD]). For

[1] Non-PFC constituents are analyzed at multiple TestAmerica laboratories. TestAmerica St. Louis (Earth City, MO) performs analyses of radium; TestAmerica Savannah (GA) performs analyses of herbicides, anions (barium, chloride, fluoride, and sulfate), cations (calcium, iron, magnesium, potassium, sodium), and total hardness; TestAmerica Edison (NJ) performs analyses of the remaining non-PFCs listed in the "Expanded Analyte Summary" section of this report.

the sample delivery group (SDG) reported here, additional volume was not collected to run MS/MSD samples. Instead, Eurofins performed MS/MSD analyses on non-project samples following method specifications. All of the quality control samples results are within the advisory limits specified by U.S. Environmental Protection Agency (EPA) Method 537.

PFCs are currently unregulated in drinking water. Table 4 summarizes a range of nonbinding drinking water guidelines for PFOA and perfluorooctanesulfonic acid (PFOS) available from EPA, New Jersey, North Carolina, and Minnesota. For the Quarter 3 sampling at Greenwich, all samples were below the New Jersey drinking water guideline for PFOA (i.e., 40 parts per trillion or ppt) with detected concentrations ranging from 9.4 – 34 ppt. PFOS was detected below 6.0 ppt in all samples during Quarter 3.

Two additional PFCs were detected during Quarter 3 sampling for which drinking water guidelines have not been established - perfluorononanoic acid (PFNA) and perfluorodecanoic acid (PFDA). PFNA was detected in all three samples during Quarter 3. At Well #5, PFNA was measured at 23 ppt in raw water. PFNA in the treated sample containing water from Wells #4a and #6 was detected at 12 and 11 ppt for the parent and duplicate samples, respectively. These detections are above the MDL and MRL for PFNA. PFDA was detected in Well #5 at an estimated concentration of 0.45 ppt, which is above the MDL, but below the MRL (J-flagged). PFDA was not detected in the treated sample representing Wells #4a and #6.

Variability in PFC Results Across Sampling Events

Concentrations across the three sampling events were relatively consistent for PFNA, PFOA, and PFOS at Well #5 and the treated sample representing a blend of Wells #4a and #6. Table 5 summarizes the range, arithmetic mean, and relative percent difference (RPD) for each of these PFCs and wells across all sampling events.

For Well #5, concentrations varied by less than 3.5 ppt for PFOS, and by 11 ppt or less for PFOA and PFNA. PFOA was measured at 34 ppt during Quarter 3 sampling, with concentrations ranging from 31 to 42 ppt with an average concentration of 35.3 ppt and an RPD of 20 percent across all sampling events. PFOS was measured at 5.9 ppt during Quarter 3 sampling, and ranged from 5.9 to 9.0 ppt across all sampling events, with an average concentration of 7.2 ppt and an RPD of 37 percent. PFNA was measured at 23 ppt during Quarter 3 sampling, with concentrations ranging from 22 to 32 ppt and an average concentration of 25.9 ppt and an RPD of 26 percent across all sampling events.

For treated samples containing water from Wells #4a and #6, concentrations varied by less than 3.0 ppt for PFOS, PFOA, and PFNA. PFOA was measured at 9.5 ppt during Quarter 3 sampling, with concentrations ranging from 7.1 to 9.6 ppt, with an average concentration of 8.6 ppt and an RPD of 21 percent across all sampling events. PFOS was measured at an estimated concentration of 2.4 ppt during Quarter 3 sampling, and ranged from 2.0 to 2.4 ppt

across all sampling events, with an average concentration of 2.2 ppt and an RPD of 16 percent. PFNA was measured at 12 ppt during Quarter 3 sampling, with concentrations ranging from 9.8 to 12 ppt and an average concentration of 11.4 ppt and an RPD of 10 percent across all sampling events.

For the remaining PFCs that were measured, perfluorododecanoic acid (PFDoDA) and perfluorotridecanoic acid (PFTrDA) concentrations were not detected at concentrations greater than their respective MDLs (i.e., nondetect) for all three sampling events. PFDA and perfluoroundecanoic acid (PFUnDA) concentrations for all three sampling events were either below their respective MDLs (i.e., nondetect), or estimated as concentrations less than their respective MRLs (i.e., J flag). Table 3 summarizes the MDLs and MRLs.

Drinking Water Results

One detected constituent exceeded current drinking water criteria and is summarized in Table 6. At Well #5, pH was measured at 6.3 SU (standard units) in raw water, which is slightly below the target range of 6.5 to 8.5 SU.

Groundwater Results

One detected constituent exceeded current groundwater criteria and is summarized in Table 6. At Well #5, pH was measured at 6.3 SU in raw water, which is slightly below the target range of 6.5 to 8.5 SU.

Table 1. Greenwich PWS PFC Concentrations by Well, both Detects and Nondetects [a,b]

Well or Tap Location	Sample No.	Sample Type	Field Duplicate	Sample Date	Units	PFOA	PFOS	PFNA	PFDA	PFUnDA	PFDoDA	PFTrDA
DW 1 - Greenwich Lake Park	GW0119	Drinking water		4/24/2014	ng/L	32	0.94 J	53	0.50 J	0.4 U	0.6 U	0.8 U
	GW0120	Drinking water	X	4/24/2014	ng/L	28	0.88 J	51	0.38 J	0.4 U	0.6 U	0.8 U
DW2 - LL Fields	GW0121	Drinking water		4/24/2014	ng/L	9.9	2.5	12	0.3 U	0.4 U	0.6 U	0.8 U
FieldBlank	FB0002	QA/QC		4/24/2014	ng/L	0.2 U	0.2 U	0.4 U	0.3 U	0.4 U	0.6 U	0.8 U
	FB0003	QA/QC		7/9/2014	ng/L	0.2 U	0.2 U	0.4 U	0.3 U	0.4 U	0.6 U	0.8 U
Well #4a (GR-PWS-4A)	GW0063	Raw water		2/6/2014	ng/L	9.9	2.7	8.3	0.3 U	0.4 U	0.6 U	0.8 U
	GW0113	Raw water		4/24/2014	ng/L	12	3.0	7.0	0.3 U	0.4 U	0.6 U	0.8 U
Well #5 (GR-PWS-5)	GW0065	Treated water		2/6/2014	ng/L	32	6.4	24	0.74 J	0.50 J	0.6 U	0.8 U
	GW0066	Treated water	X	2/6/2014	ng/L	31	6.5	23	0.66 J	0.47 J	0.6 U	0.8 U
	GW0117	Treated water		4/24/2014	ng/L	42	8.6	31	0.85 J	0.48 J	0.6 U	0.8 U
	GW0118	Treated water	X	4/24/2014	ng/L	40	9.0	32	0.99 J	0.78 J	0.6 U	0.8 U
	GW0067	Raw water		2/6/2014	ng/L	33	6.2	22	0.65 J	0.42 J	0.6 U	0.8 U
	GW0116	Raw water		4/24/2014	ng/L	35	7.7	26	0.66 J	0.48 J	0.6 U	0.8 U
	GW0173	Raw water		7/9/2014	ng/L	34	5.9	23	0.45 J	0.4 U	0.6 U	0.8 U
Well #6 (GR-PWS-6)	GW0064	Raw water		2/6/2014	ng/L	8.2	1.5 J	12	0.3 U	0.4 U	0.6 U	0.8 U
	GW0114	Raw water		4/24/2014	ng/L	9.8	2.4 J	13	0.3 U	0.4 U	0.6 U	0.8 U
Well #4a/6 (GR-PWS-4A/6) [c]	GW0060	Treated water [d]		2/6/2014	ng/L	8.3	2.0 J	12	0.3 U	0.4 U	0.6 U	0.8 U
	GW0061	Treated water [d]	X	2/6/2014	ng/L	7.1	2.0 J	9.8	0.3 U	0.4 U	0.6 U	0.8 U
	GW0115	Treated water [d]		4/24/2014	ng/L	8.8	2.3 J	12	0.3 U	0.4 U	0.6 U	0.8 U
	GW0172	Treated water		7/9/2014	ng/L	9.6	2.3 J	12	0.3 U	0.4 U	0.6 U	0.8 U
	GW0174	Treated water	X	7/9/2014	ng/L	9.4	2.4 J	11	0.3 U	0.4 U	0.6 U	0.8 U

Notes:

PFC = perfluoroalkyl compound
PFDA = perfluorodecanoic acid
PFDoDA = perfluorododecanoic acid
PFNA = perfluorononanoic acid
PFOA = perfluorooctanoate acid
PFOS = perfluorooctanesulfonic acid
PFTrDA = perfluorotridecanoic acid
PFUnDA = perfluoroundecanoic acid
PWS = public water system
QA/QC = quality assurance and quality control

Drinking water = water supplied to the community represented by sample collected from the system after mixing of treated water from multiple wells and sampled from distr bution point
Raw water = raw water sample collected from well (prior to treatment)
Treated water = sample collected from well after treatment but before mixing with water from other wells

J = result was detected at or greater than the method detection limit and less than method reporting limit
U = result was not detected at the stated detection limit

[a] Laboratories reported detected concentrations to two significant figures, while nondetects are reported as the method detection limit, which were reported to one significant figure. Units for all results are reported here as nanograms per liter (ng/L) or parts per trillion (ppt).
[b] Results reported by Eurofins Eaton Analytical, Inc.
[c] The sample location Well #4a/6 corresponds to the location Office Tap from Quarter 1 and Quarter 2 reports. The name has been updated to more accurately describe the sample location.
[d] Samples collected from the office tap represent a blend of treated water from Wells #4a and #6 because water from these two wells is mixed before distribution.

Table 2. Greenwich PWS PFC Concentrations by Well, Detected Analytes Only [a,b]

Well or Tap Location	Sample No.	Sample Type	Field Duplicate	Sample Date	Units	PFOA	PFOS	PFNA	PFDA	PFUnDA
DW 1 - Greenwich Lake Park	GW0119	Drinking water		4/24/2014	ng/L	32	0.94 J	53	0.50 J	--
	GW0120	Drinking water	X	4/24/2014	ng/L	28	0.88 J	51	0.38 J	--
DW2 - LL Fields	GW0121	Drinking water		4/24/2014	ng/L	9.9	2.5	12	--	--
Well #4a (GR-PWS-4A)	GW0063	Raw water		2/6/2014	ng/L	9.9	2.7	8.3	--	--
	GW0113	Raw water		4/24/2014	ng/L	12	3.0	7.0	--	--
Well #5	GW0065	Treated water		2/6/2014	ng/L	32	6.4	24	0.74 J	0.50 J
	GW0066	Treated water	X	2/6/2014	ng/L	31	6.5	23	0.66 J	0.47 J
	GW0117	Treated water		4/24/2014	ng/L	42	8.6	31	0.85 J	0.48 J
	GW0118	Treated water	X	4/24/2014	ng/L	40	9.0	32	0.99 J	0.78 J
	GW0067	Raw water		2/6/2014	ng/L	33	6.2	22	0.65 J	0.42 J
	GW0116	Raw water		4/24/2014	ng/L	35	7.7	26	0.66 J	0.48 J
	GW0173	Raw water		7/9/2014	ng/L	34	5.9	23	0.45 J	--
Well #6 (GR-PWS-6)	GW0064	Raw water		2/6/2014	ng/L	8.2	1.5 J	12	--	--
	GW0114	Raw water		4/24/2014	ng/L	9.8	2.4 J	13	--	--
Well #4a/6 (GR-PWS-4A/6) [c]	GW0060	Treated water [d]		2/6/2014	ng/L	8.3	2.0 J	12	--	--
	GW0061	Treated water [d]	X	2/6/2014	ng/L	7.1	2.0 J	9.8	--	--
	GW0115	Treated water [d]		4/24/2014	ng/L	8.8	2.3 J	12	--	--
	GW0172	Treated water		7/9/2014	ng/L	9.6	2.3 J	12	--	--
	GW0174	Treated water	X	7/9/2014	ng/L	9.4	2.4 J	11	--	--

Notes:

PFC = perfluoroalkyl compound
PFDA = perfluorodecanoic acid
PFNA = perfluorononanoic acid
PFOA = perfluorooctanoate acid
PFOS = perfluorooctanesulfonic acid
PFUnDA = perfluoroundecanoic acid
PWS = public water system
-- = not applicable

Drinking water = water supplied to the community represented by sample collected from the system after mixing of treated water from multiple wells and sampled from distribution point.
Raw water = raw water sample collected from well (prior to treatment)
Treated water = sample collected from well after treatment but before mixing with water from other wells or supplemental water

J = result was detected at or greater than the method detection limit and less than method reporting limit

[a] Laboratories reported detected concentrations to two significant figures, while nondetects are reported as the method detection limit, which were reported to one significant figure. Units for all results are reported here as nanograms per liter (ng/L) or parts per trillion (ppt).
[b] Results reported by Eurofins Eaton Analytical, Inc.
[c] The sample location Well #4a/6 corresponds to the location Office Tap from Quarter 1 and Quarter 2 reports. The name has been updated to more accurately describe the sample location.
[d] Samples collected from the office tap represent a blend of treated water from Wells #4a and #6 because water from these two wells is mixed before distribution.

Table 3. Greenwich PWS PFC Detection Limits by Well for Samples Collected July 9, 2014 [a,b]

Well or Tap Location	Sample No.	Sample Type	Field Duplicate	Sample Date	Units	PFOA		PFOS		PFNA		PFDA		PFUnDA		PFDoDA		PFTrDA	
						MDL	MRL	MDL	MRL	MDL	MRL	MDL	MRL	MDL	MRL	MDL	MRL	MDL	MRL
FieldBlank	FB0003	QA/QC		7/9/2014	ng/L	0.2	2.5	0.2	2.5	0.4	2.5	0.3	2.5	0.4	2.5	0.6	2.5	0.8	2.5
Well #5 (GR-PWS-5)	GW0173	Raw water		7/9/2014	ng/L	0.2	2.5	0.2	2.5	0.4	2.5	0.3	2.5	0.4	2.5	0.6	2.5	0.8	2.5
Well #4a/6	GW0172	Treated water		7/9/2014	ng/L	0.2	2.5	0.2	2.5	0.4	2.5	0.3	2.5	0.4	2.5	0.6	2.5	0.8	2.5
(GR-PWS-4A/6) [c]	GW0174	Treated water	X	7/9/2014	ng/L	0.2	2.5	0.2	2.5	0.4	2.5	0.3	2.5	0.4	2.5	0.6	2.5	0.8	2.5

Notes:
MDL = method detection limit
MRL = method reporting limit
PFC = perfluoroalkyl compound
PFDA = perfluorodecanoic acid
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PWS = public water system
QA/QC = quality assurance and quality control

Raw water = raw water sample collected from well (prior to treatment)
Treated water = sample collected from well after treatment but before mixing with water from other wells or supplemental water

[a] Units for all results are nanograms per liter (ng/L) or parts per trillion (ppt). Laboratories reported MDLs to one significant figure and MRLs to two significant figures.
[b] Results reported by Eurofins Eaton Analytical, Inc.
[c] The sample location Well #4a/6 corresponds to the location Office Tap from Quarter 1 and Quarter 2 reports. The name has been updated to more accurately describe the sample location.

Table 4. Federal and State PFC Guidelines for Drinking Water

Agency	Units	Chemical Name [a]						
		PFOA	PFOS	PFNA	PFDA	PFUnDA	PFDoDA	PFTrDA
U.S. Environmental Protection Agency [b]	ng/L	400	200	--	--	--	--	--
North Carolina Department of Environmental and Natural Resources [c]	ng/L	200	--	--	--	--	--	--
New Jersey Department of Environmental Protection [d]	ng/L	40	--	--	--	--	--	--
Minnesota Department of Health [e]	ng/L	300	300	--	--	--	--	--

Sources:

MDH. 2013. Health guidelines for perfluorochemicals (PFCs) in drinking water. www.health.state.mn.us/divs/eh/hazardous/topics/pfcs/drinkingwater.html. Minnesota Department of Health, Environmental Health Division, St. Paul, MN.

NCDENR. 2013. Appendix #1: Interim maximum allowable concentrations (IMACs). pp. 23-24. In: North Carolina Administrative Code Title 15A - Classifications and Water Quality Standards Applicable to the Groundwaters of North Carolina. Last amended April 1. Available at: http://portal.ncdenr.org/web/wq/ps/csu/gwstandards. North Carolina Department of Environmental and Natural Resources, Division of Water Quality, Raleigh, NC. 31 pp.

NJDEP. 2007. Determination of perfluorooctanoic acid (PFOA) in aqueous samples. Final Report. New Jersey Department of Environmental Protection, Division of Water Supply, Bureau of Safe Drinking Water, Trenton, NJ. 17 pp. January.

USEPA. 2009. Provisional health advisories for perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS). Available at: http://water.epa.gov/action/advisories/drinking/upload/2009_01_15_criteria_drinking_pha-PFOA_PFOS.pdf. U.S. Environmental Protection Agency. 5 pp. January 8.

Notes:

PFC = perfluoroalkyl compound
PFDA = perfluorodecanoic acid
PFDoDA = perfluorododecanoic acid
PFNA = perfluorononanoic acid
PFOA = perfluorooctanoate acid
PFOS = perfluorooctanesulfonic acid
PFTrDA = perfluorotridecanoic acid
PFUnDA = perfluoroundecanoic acid
-- = provisional guidelines are not available for drinking water

[a] Units are nanograms per liter (ng/L) or parts per trillion (ppt).
[b] USEPA (2009) provisional drinking water advisory for short-term exposure.
[c] NCDENR (2013) recommended interim maximum allowable concentration (IMAC) in drinking water, effective date December 6, 2006.
[d] NJDEP (2007) health-based guidance value intended to protect for chronic (lifetime) exposure.
[e] MDH (2011) health risk limit (HRL) in drinking water for chronic exposure.

Table 5. Quarter 3 PWS Detected Concentrations for PFCs Compared with Past Sampling Events [a]

Chemical	Location	Sample Material	Quarter 3 Concentration [b] (ng/L)	Range of Detected Values Across Sampling Events	Mean of Detected Values Across Sampling Events	Range Difference Across Sampling Events	RPD
PFOA	Well #4a/6 (GR-PWS-4A/6) [c]	Treated water	9.5	7.1 – 9.6	8.6	2.5	21%
	Well #5 (GR-PWS-5)	Raw/Treated water	34	31 – 42	35	11	20%
PFOS	Well #4a/6 (GR-PWS-4A/6) [c]	Treated water	2.4 J	2.0 J – 2.4 J	2.2	0.4	16%
	Well #5 (GR-PWS-5)	Raw/Treated water	5.9	5.9 – 9.0	7.2	3.1	37%
PFNA	Well #4a/6 (GR-PWS-4A/6) [c]	Treated water	12	9.8 – 12	11	2.2	10%
	Well #5 (GR-PWS-5)	Raw/Treated water	23	22 – 32	26	10	26%
PFDA	Well #5 (GR-PWS-5)	Raw/Treated water	0.45 J	0.45 J – 0.99 J	0.71	0.54	58%

Notes:
PFC = perfluoroalkyl compound
PFDA = perfluorodecanoic acid
PFNA = perfluorononanoic acid
PFOA = perfluorooctanoate acid
PFOS = perfluorooctanesulfonic acid
PWS = public water system
RPD = relative percent difference

J = result was detected at or greater than the method detec ion limit and less than method reporting limit

[a] Units for all results are nanograms per liter (ng/L) or parts per trillion (ppt). Laboratories reported concentrations to two significant figures.
[b] Parent and duplicate samples are averaged for purposes of reporting the Quarter 3 concentrations.
[c] The sample location Well #4a/6 corresponds to the location Office Tap from Quarter 1 and Quarter 2 reports. The name has been updated to more accurately describe the sample location.

Table 6. Greenwich PWS Groundwater and Drinking Water Standard Exceedances, Detected Analytes Only

	Screening Standards			Greenwich PWS Results Exceeding Standards by Well and Sample Number [a]
Chemical Group/ Analyte	NJDEP Ground Water Quality Standard [b] Class IIA	NJDEP Drinking Water Standard	Units	Well #5 (GR-PWS-5) GW0173 Raw Water
Conventionals				
pH	6.5 – 8.5	6.5 – 8.5	SU	6.32 HF

Sources:

NJDEP. 2011. Ground water quality standards - Class IIA by constituent. Available at: www.nj.gov/dep/standards/ground%20water.pdf. New Jersey Department of Environmental Protection, NJ. 7 pp. July 27.

NJDEP. 2009. Drinking water standards by constituents. Available at: www.nj.gov/dep/standards/drinking%20water.pdf. New Jersey Department of Environmental Protection, NJ. 4 pp. October 13.

Notes:

NJDEP = New Jersey Department of Environmental Protection
PWS = public water system
SU = standard units

HF = analysis exceeded sample hold time

[a] Results were validated by TestAmerica, but data were not submitted for third party validation.

[b] NJDEP Ground Water Quality Standards for Class IIA constituents. Standards were selected as the higher of the method detection limit and the ground water quality standard.

Eurofins Laboratory Reports

- LDC Validation Report – Greenwich (489248)
- Eurofins Laboratory Report (489248 7/29/2014)
- Eurofins Laboratory Report (LCMS 7/16/2014)

LDC Validation Report

– Greenwich (48924)

LABORATORY DATA CONSULTANTS, INC.

2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

Integral Consulting Inc.
1205 West Bay Drive NW
Olympia, WA 98502
ATTN: Mr. Craig Hutchings

August 22, 2014

SUBJECT: Revised PFCs, Project #C1165, Data Validation

Dear Mr. Hutchings,

Enclosed are the revised validation reports for the fraction listed below. Please replace the previously submitted reports with the enclosed revised reports.

LDC Project #32318:

SDG#	Fraction
489248	Perfluorinated Alkyl Acids
490330	

Please feel free to contact us if you have any questions.

Sincerely,

Stella S. Cuenco
Operations Manager/Senior Chemist

LDC Report# 32318A96_RV1

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: PFCs, Project #C1165

LDC Report Date: August 22, 2014

Matrix: Water

Parameters: Perfluorinated Alkyl Acids

Validation Level: Stage 2B

Laboratory: Eurofins

Sample Delivery Group (SDG): 489248

Sample Identification	Collection Date	Laboratory Sample Identification
GW0172	07/09/14	201407110100
GW0174	07/09/14	201407110102
GW0173	07/09/14	201407110103
FB0003	07/09/14	201407110104

Introduction

This data review covers 4 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA Method 537 for Perfluorinated Alkyl Acids.

This review follows the Site Specific Quality Assurance Project Plan (QAPP) dated November 15, 2013 and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected.

J+ Data are qualified as estimated, with a high bias likely to occur.

J- Data are qualified as estimated, with a low bias likely to occur.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

B The compound or analyte was found in an associated blank as well as in the sample.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

Qualification Codes

1 Holding Times
2 Sample Preservation (Cooler Temp)
3 Sample Custody
4 Missing Deliverables
5 Calibration
6 Field Blanks
7 Laboratory Blanks
8 Matrix Spike (%)
9 Matrix Spike Duplicate (RPD or Duplicate Sample Analysis)
10 Laboratory Control Sample
11 ICP Interference Check
12 RPD Between Two Columns
13 Surrogates
14 Field Duplicates
15 Peak Resolution
16 ICP Serial Dilution
17 Chemical Recoveries
18 Trip Blanks
19 Internal Standards
20 Linear Range Exceeded
21 Potential False Positives
22 Do not use, other result more technically sound
23 Estimated Maximum Possible Concentration
24 Less than reporting limit
25 Other

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. Cooler temperatures for samples in this SDG were reported at 9°C upon receipt by the laboratory. No data was qualified based on cooler temperature.

II. LC/MS Instrument Performance Check

Instrument performance was checked as applicable.

All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed as required by the method.

A curve fit, based on the initial calibration, was established for quantitation. The coefficient of determination (r^2) was greater than or equal to 0.990.

IV. Continuing Calibration

Continuing calibration was performed at required frequencies.

The percent differences (%D) were within QC limits for all compounds.

The percent differences (%D) of the second source calibration standard were within QC limits for all compounds.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No perfluorinated alkyl acid contaminants were found in the method blanks.

Sample FB0003 was identified as a field blank. No perfluorinated alkyl acid contaminants were found.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QAPP limits.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. The MS/MSD analysis was performed on a non-client sample. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QAPP limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

Raw data were not reviewed for this SDG.

XII. Compound Quantitation

Raw data were not reviewed for this SDG.

XIII. System Performance

Raw data were not reviewed for this SDG.

XIV. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XV. Field Duplicates

Samples GW0172 and GW0174 were identified as field duplicates. No perfluorinated alkyl acids were detected in any of the samples with the following exceptions:

Compound	Concentration (ug/L)		RPD (Limits)
	GW0172	GW0174	
Perfluorononanoic acid	0.012	0.011	9 (≤35)
Perfluorooctanesulfonic acid	0.0023	0.0024	4 (≤35)
Perfluorooctanoic acid	0.0096	0.0094	2 (≤35)

PFCs, Project #C1165
Perfluorinated Alkyl Acids - Data Qualification Summary - SDG 489248

No Sample Data Qualified in this SDG

PFCs, Project #C1165
Perfluorinated Alkyl Acids - Laboratory Blank Data Qualification Summary - SDG 489248

No Sample Data Qualified in this SDG

PFCs, Project #C1165
Perfluorinated Alkyl Acids - Field Blank Data Qualification Summary - SDG 489248

No Sample Data Qualified in this SDG

LDC #: 32318A96
SDG #: 489248
Laboratory: Eurofins

VALIDATION COMPLETENESS WORKSHEET
Level III

Date: 8/4/14
Page: 1 of 1
Reviewer: n
2nd Reviewer: SM

METHOD: LCMS Perfluorinated Alkyl Acids (EPA Method 537)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments cooler temp
I.	Technical holding times	SW	Sampling dates: 7/9/14 9°C (text)
II.	LC/MS Instrument performance check	A	
III.	Initial calibration	A	r2
IV.	Continuing calibration/ICV	A	CCV/ICV ≤ QC limits
V.	Blanks	A	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	A ~~SW~~	non-client
VIII.	Laboratory control samples	A	LCS/D
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	N	
XII.	Compound quantitation/CRQLs	N	
XIII.	System performance	N	
XIV.	Overall assessment of data	A	
XV.	Field duplicates	SW	D = 1 + 2
XVI.	Field blanks	ND	~~FB~~ = 4

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples: W

1	GW0172	11		21		31	
2	GW0174	12		22		32	
3	GW0173	13		23		33	
4	FB0003	14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

LDC#: 32318A96

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Page: 1 of 1
Reviewer:
2nd Reviewer:

METHOD: LC MS PFACs (EPA Method 537)

Y N NA Were field duplicate pairs identified in this SDG?
Y N NA Were target analytes detected in the field duplicate pairs?

Compound	Concentration (µg/L)		RPD (≤ 35)
	1	2	
Perfluorononanoic acid	0.012	0.011	9
Perfluorooctanesulfonic acid	0.0023	0.0024	4
Perfluorooctanoic acid	0.0096	0.0094	2

V:\FIELD DUPLICATES\32318A96.wpd

EUROFINS LABORATORY REPORT

– 489248 7/29/2014

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750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: (626) 386-1100
Fax: (626) 386-1101
1 800 566 LABS (1 800 566 5227)

NELAP ACCREDITED TNI LABORATORY
ORELAP 4034

ilac-MRA

ACLASS ACCREDITED TESTING
AT-1807

Laboratory Report

for

Integral Consulting Inc.
1205 West Bay Drive NW
Victorian house on the right
Olympia, WA 98502
Attention: Craig Hutchings
Fax: 360-705-3669

Date of Issue
07/29/2014

Linda Geddes
EUROFINS EATON ANALYTICAL

LXG: Linda Geddes

Project Manager

Report: 489248
Project: PFC
Group: PFCs

* Accredited in accordance with **TNI 2009 and ISO/IEC 17025:2005.**
* Laboratory certifies that the test results meet all **TNI 2009 and ISO/IEC 17025:2005** requirements unless noted under the individual analysis.
* Following the cover page are State Certification List, ISO 17025 Accredited Method List, Acknowledgement of Samples Received, Comments, Hits Report, Data Report, QC Summary, QC Report and Regulatory Forms, as applicable.
* Test results relate only to the sample(s) tested.

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STATE CERTIFICATION LIST

State	Certification Number	State	Certification Number
Alabama	41060	Mississippi	Certified
Alaska	CA00006	Montana	Cert 0035
Arizona	AZ0778	Nebraska	Certified
Arkansas	Certified	Nevada	CA00006-2014-1
California-Monrovia-ELAP	2813	New Hampshire *	2959
California-Colton- ELAP	2812	New Jersey *	CA 008
California-Folsom- ELAP	2820	New Mexico	Certified
Colorado	Certified	New York *	11320
Connecticut	PH-0107	North Carolina	06701
Delaware	CA 006	North Dakota	R-009
Florida *	E871024	Oregon (Primary AB) *	ORELAP 4034
Georgia	947	Pennsylvania *	68-565
Guam	14-003r	Rhode Island	LAO00326
Hawaii	Certified	South Carolina	87016
Idaho	Certified	South Dakota	Certified
Illinois *	200033	Tennessee	TN02839
Indiana	C-CA-01	Texas *	T104704230-14-6
Kansas *	E-10268	Utah *	CA000062014-7
Kentucky	90107	Vermont	VT0114
Louisiana *	LA140009	Virginia *	460260
Maine	CA0006	Washington	C838
Maryland	224	West Virginia	9943 C
Commonwealth of Northern Marianas Is.	MP0004	Wisconsin	998316660
Massachusetts	M-CA006	Wyoming	8TMS-L
Michigan	9906	EPA Region 5	Certified
Los Angeles County Sanitation Districts	10264		

* NELAP/TNI Recognized Accreditation Bodies

The tests listed below are accredited and meet the requirements of ISO 17025 as verified by the ANSI-ASQ National Accreditation Board/ACLASS.
Refer to Certificate and scope of accreditation (AT 1807) found at: http://www.eatonanalytical.com

SPECIFIC TESTS	METHOD OR TECHNIQUE USED	Drinking Water	Food & Beverage	Waste Water
1,4-Dioxane	EPA 522	x	x	
2,3,7,8-TCDD	Modified EPA 1613B	x	x	
Acrylamide	In House Method	x	x	
Alkalinity	SM 2320B	x	x	x
Ammonia	EPA 350.1		x	x
Ammonia	SM 4500-NH3 H (18th)		x	x
Anions and DBPs by IC	EPA 300.0	x	x	x
Anions and DBPs by IC	EPA 300.1	x	x	
Asbestos	EPA 100.2	x		
Bicarbonate Alkalinity as HCO3	SM 2330B	x	x	x
BOD / CBOD	SM 5210B		x	x
Bromate	In House Method	x	x	
Carbamates	EPA 531.2	x	x	
Carbonate as CO3	SM 2330B	x	x	x
Carbonyls	EPA 556	x	x	
COD	EPA 410.4 / SM 5220D			x
Chloramines	SM 4500-CL G	x	x	x
Chlorinated Acids	EPA 515.4	x	x	
Chlorinated Acids	EPA 555	x	x	
Chlorine Dioxide	SM 4500-CLO2 D	x	x	
Chlorine -Total/Free/ Combined Residual	SM 4500-Cl G	x	x	x
Conductivity	EPA 120.1			x
Conductivity	SM 2510B	x	x	x
Corrosivity (Langelier Index)	SM 2330B	x	x	
Cyanide, Amenable	SM 4500-CN G	x		x
Cyanide, Free	SM 4500CN F	x	x	x
Cyanide, Total	EPA 335.4	x	x	x
Cyanogen Chloride (screen)	In House Method	x	x	
Diquat and Paraquat	EPA 549.2	x	x	
DBP/HAA	SM 6251B	x	x	
Dissolved Oxygen	SM 4500-O G		x	x
E. Coli	(MTF/EC+MUG)	x		
E. Coli	CFR 141.21(f)(6)(i)		x	x
E. Coli	SM 9223			x
E. Coli (Enumeration)	SM 9221B.1/ SM 9221F	x	x	
E. Coli (Enumeration)	SM 9223B	x	x	
EDB/DCBP	EPA 504.1	x		
EDB/DBCP and DBP	EPA 551.1	x	x	
EDTA and NTA	In House Method	x	x	
Endothall	EPA 548.1	x	x	
Enterococci	SM 9230B	x		x
Fecal Coliform	SM 9221 E (MTF/EC)	x		
Fecal Coliform	SM 9221C, E (MTF/EC)			x
Fecal Coliform (Enumeration)	SM 9221E (MTF/EC)	x	x	
Fecal Coliform with Chlorine Present	SM 9221E			x
Fecal Streptococci	SM 9230B	x		x
Fluoride	SM 4500-F C	x	x	x
Glyphosate	EPA 547	x	x	
Gross Alpha/Beta	EPA 900.0	x	x	x
HAAs/ Dalapon	EPA 552.3	x	x	
Hardness	SM 2340B	x	x	x
Heterotrophic Bacteria	In House Method	x	x	
Heterotrophic Bacteria	SM 9215 B	x	x	
Hexavalent Chromium	EPA 218.6	x	x	x
Hexavalent Chromium	EPA 218.7	x	x	
Hexavalent Chromium	SM 3500-Cr B or C (20th)			x

SPECIFIC TESTS	METHOD OR TECHNIQUE USED	Drinking Water	Food & Beverage	Waste Water
Hormones	EPA 539	x	x	
Hydroxide as OH Calc.	SM 2330B	x	x	
Kjeldahl Nitrogen	EPA 351.2			x
Mercury	EPA 245.1	x	x	x
Metals	EPA 200.7 / 200.8	x	x	x
Microcystin LR	ELISA	x	x	
NDMA	EPA 521	x	x	
Nitrate/Nitrite Nitrogen	EPA 353.2	x	x	x
OCL, Pesticides/PCB	EPA 505	x	x	
Ortho Phosphate	EPA 365.1	x	x	
Ortho Phosphate and Total Phosphorous	EPA 365.1/SM 4500-P E			x
Ortho Phosphorous	SM 4500P E	x	x	
Oxyhalides Disinfection Byproducts	EPA 317.0	x	x	
Perchlorate	EPA 331.0	x	x	
Perchlorate	EPA 314.0	x	x	
Perfluorinated Alkyl Acids	EPA 537	x	x	
pH	EPA 150.1	x		
pH	SM 4500-H+B	x	x	x
Phenylurea Pesticides/ Herbicides	In House Method	x	x	
Pseudomonas	IDEXX Pseudalert	x	x	
Radium-226	RA-226 GA	x	x	
Radium-228	RA-228 GA	x	x	
Radon-222	SM 7500RN	x	x	
Residue, Filterable	SM 2540C	x	x	x
Residue, Non-filterable	SM 2540D			x
Residue, Total	SM 2540B		x	x
Residue, Volatile	EPA 160.4			x
Semi-VOC	EPA 525.2	x	x	
Semi-VOC	EPA 625	x	x	x
Silica	SM 4500-Si D	x	x	x
Silica	SM 4500-SiO2 C	x		x
Sulfide	SM 4500-$S^{=}$ D			x
Sulfite	SM 4500-SO^3B	x	x	x
Surfactants	SM 5540C	x	x	x
Taste and Odor Analytes	SM 6040E	x	x	
Total Coliform	SM 9221 A, B	x	x	
Total Coliform (Enumeration)	SM 9221 A, B, C	x	x	
Total Coliform / E. coli	Colisure	x	x	
Total Coliform	SM 9221B			x
Total Coliform with Chlorine Present	SM 9221B			x
Total Coliform / E.coli	SM 9223	x	x	
TOC	SM 5310C		x	x
TOC/DOC	SM 5310C	x	x	
TOX	SM 5320B			x
Total Phenols	EPA 420.1			x
Total Phenols	EPA 420.4	x	x	x
Total Phosphorous	SM 4500 P F			x
Turbidity	EPA 180.1	x	x	x
Turbidity	SM 2130B	x		x
Uranium by ICP/MS	EPA 200.8	x	x	
UV 254	SM 5910B	x		
VOC	EPA 524.2/EPA 524.3	x	x	
VOC	EPA 624	x	x	x
VOC	EPA SW 846 8260	x	x	
VOC	In House Method	x	x	
Yeast and Mold	SM 9610	x	x	

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Acknowledgement of Samples Received

Addr: **Integral Consulting Inc.**
1205 West Bay Drive NW
Victorian house on the right
Olympia, WA 98502

Attn: Craig Hutchings
Phone: 360-705-3534 x 417

Client ID: INTEGRAL-OLYMP
Folder #: 489248
Project: PFC
Sample Group: PFCs

Project Manager: Linda Geddes
Phone: (626) 386-1163

The following ample were received from you on **July 10, 2014** at **1600** They have been cheduled for the te t listed below each sample. If this information is incorrect, please contact your service representative. Thank you for using Eurofins Eaton Analytical.

Sample #	Sample ID	Sample Date
201407110100	GW0172	07/09/2014 0915
	Variable ID: C1165	
	@537-INTEGRAL	
201407110102	GW0174	07/09/2014 0925
	Variable ID: C1165	
	@537-INTEGRAL	
201407110103	GW0173	07/09/2014 0950
	Variable ID: C1165	
	@537-INTEGRAL	
201407110104	FB0003	07/09/2014 1000
	Variable ID: C1165	
	@537-INTEGRAL FB	

Test Description

@537-INTEGRAL -- Perfluorinated Alkyl Acids

@537-INTEGRAL FB -- Perfluorinated Alkyl Acids

750 Royal Oaks Drive, Suite 100, Monrovia, CA 91016 Tel (626) 386-1100 Fax (626) 386-1101 http://www.EatonAnalytical.com

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CHAIN OF CUSTODY RECORD

TX# 8044 66

489248

750 Royal Oaks Drive, Suite 100
Monrovia, CA 91016-3629

Phone: 626 386 1100
Fax: 626 386 1101

800 566 LABS (800 566 5227)

EUROFINS EATON ANALYTICAL USE ONLY:

LOGIN COMMENTS: _____

SAMPLES CHECKED AGAINST COC BY: _____

SAMPLES LOGGED IN BY: _____

SAMPLES REC'D DAY OF COLLECTION? [ ] (check for yes)

SAMPLE TEMP RECEIVED AT:

[ ] Colton / No. California / Arizona _____ °C (Compliance: 4 ± 2 °C)

[X] Monrovia 0.0 °C (Compliance: 4 ± 2 °C)

CONDITION OF BLUE ICE: Frozen _____ Partially Frozen _____ Thawed X Wet Ice _____ No Ice _____

METHOD OF SHIPMENT: Pick-Up / Walk-In / FedEx / UPS / DHL / Area Fast / Top Line / Other: _____

TO BE COMPLETED BY SAMPLER:

COMPANY/AGENCY NAME: Integral Consulting Inc.

PROJECT CODE: C1165-0301

EEA CLIENT CODE:

COC ID:

SAMPLE GROUP:

TAT requested: rush by adv notice only RUSH STD ___ 1 wk ___ 3 day ___ 2 day ___ 1 day ___

COMPLIANCE SAMPLES [ ] (check for yes) - Requires state forms [ ]

NON-COMPLIANCE SAMPLES [ ] (check for yes)

REGULATION INVOLVED: _____

Type of samples (circle one): ROUTINE SPECIAL CONFIRMATION (eg. SDWA, Phase V, NPDES, FDA,...)

SEE ATTACHED BOTTLE ORDER FOR ANALYSES [ ] (check for yes), OK

list ANALYSES REQUIRED (enter number of bottles sent for each test for each sample)

SAMPLE DATE	SAMPLE TIME	SAMPLE ID	TAG # ~~CLIENT LAB ID~~	MATRIX *	FIELD DATA	FIELD DATA	PFCs	537													SAMPLER COMMENTS
7/9	9:15	GW0172	1201, 1202	RGW			X														
7/9	9:25	GW0174	1203, 1204	RGW			X														
7/9	9:50	GW0173	1205, 1206	RGW			X														
7/9	10:00	FB0003	1207	O			X	@	537- INTEGRAL TB Rec Empty (JE) 7/10/19												
7/9	9:15	GW0171	1101, 1102	RGW			X														
7/9	9:30	GW0170	1103, 1104	RGW			X														
7/9	9:55	GW0169	1105, 1106	RGW			X														
7/9	10:05	GW0168	1107, 1108	RGW			X														
7/9	10:40	GW0167	1109, 1110	RGW			X														
7/9	11:00	FB0002	1111, 1112	O			X	@	537- INTEGRAL TB Rec Empty (JE) 7/10/19												

*** MATRIX TYPES:** RSW = Raw Surface Water, RGW = Raw Ground Water, CFW = Chlor(am)inated Finished Water, FW = Other Finished Water, SEAW = Sea Water, WW = Waste Water, BW = Bottled Water, SW = Storm Water, SO = Soil, SL = Sludge, O = Other - Please Identify

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
SAMPLED BY:	[signature]	Jake Wilhelm	Integral / Research Asst.	7/9/19	
RELINQUISHED BY:	[signature]	Jake Wilhelm	Integral / Research Asst.	7/9/19	
RECEIVED BY:	[signature]	Rey Brosh	EEA	7/10/19	
RELINQUISHED BY:					
RECEIVED BY:					

QA FO 0029 (06/26/2013)

PAGE ___ OF ___

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CHAIN OF CUSTODY RECORD

750 Royal Oaks Drive, Suite 100
Monrovia, CA 91016-3629

Phone: 626 386 1100
Fax: 626 386 1101

800 566 LABS (800 566 5227)

EUROFINS EATON ANALYTICAL USE ONLY:

LOGIN COMMENTS: _____

SAMPLES CHECKED AGAINST COC BY: _____

SAMPLES LOGGED IN BY: _____

SAMPLES REC'D DAY OF COLLECTION? [ ] (check for yes)

SAMPLE TEMP RECEIVED AT:

[ ] Colton / No. California / Arizona _____ °C (Compliance: 4 ± 2 °C)

[X] Monrovia 9.0 °C (Compliance: 4 ± 2 °C)

CONDITION OF BLUE ICE: Frozen _____ Partially Frozen _____ Thawed X Wet Ice _____ No Ice _____

METHOD OF SHIPMENT: Pick-Up / Walk-In / FedEx / UPS / DHL / Area Fast / Top Line / Other: _____

TO BE COMPLETED BY SAMPLER:

COMPANY/AGENCY NAME: Integral Consulting Inc.

PROJECT CODE: C1165 - 1101

EEA CLIENT CODE:

COC ID:

SAMPLE GROUP:

TAT requested: rush by adv notice only RUSH STD ___ 1 wk ___ 3 day ___ 2 day ___ 1 day ___

COMPLIANCE SAMPLES [ ] (check for yes) - Requires state forms [ ]

NON-COMPLIANCE SAMPLES [ ] (check for yes)

REGULATION INVOLVED:

Type of samples (circle one): ROUTINE SPECIAL CONFIRMATION (eg. SDWA, Phase V, NPDES, FDA...)

SEE ATTACHED BOTTLE ORDER FOR ANALYSES [ ] (check for yes), OK

list ANALYSES REQUIRED (enter number of bottles sent for each test for each sample)

SAMPLE DATE	SAMPLE TIME	SAMPLE ID	CLIENT LAB ID	MATRIX *	FIELD DATA	FIELD DATA	PFCs	537														SAMPLER COMMENTS
7/9	8:00	PW00119 ✓		RGW			X															
7/9	8:15	FB0002 ✓		O			X	@ 537 INTEGRAL TB Rec Supply (PE) 7-10-19														
7/9	12:00	PW00103 ✓		RGW			X															

JRW 7/9/2019

* **MATRIX TYPES:** **RSW** = Raw Surface Water **RGW** = Raw Ground Water **CFW** = Chlor(am)inated Finished Water **FW** = Other Finished Water **SEAW** = Sea Water **WW** = Waste Water **BW** = Bottled Water **SW** = Storm Water **SO** = Soil **SL** = Sludge **O** = Other - Please Identify

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
SAMPLED BY:	[signature]	Jake Wilhelm	Integral / Research Assistant	7/9/2019	
RELINQUISHED BY:	[signature]	Jake Wilhelm	Integral / Research Assistant	7/9/2019	
RECEIVED BY:	[signature]	Fay Ebrahim Jr	EEA	7/10/19	
RELINQUISHED BY:					
RECEIVED BY:					

QA FO 0029 (06/26/2013)

PAGE ___ OF ___

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: (626) 386-1100
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1 800 566 LABS (1 800 566 5227)

Laboratory Comments
Report: 489248

Integral Consulting Inc.
Craig Hutchings
1205 West Bay Drive NW
Victorian house on the right
Olympia, WA 98502

The Comments Report may be blank if there are no comments for this report.

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750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: (626) 386-1100
Fax: (626) 386-1101
1 800 566 LABS (1 800 566 5227)

Laboratory Hits
Report: 489248

Integral Consulting Inc.
Craig Hutchings
1205 West Bay Drive NW
Victorian house on the right
Olympia, WA 98502

Samples Received on:
07/10/2014 1600

Analyzed	Analyte	Sample ID	Result	Federal MCL	Units	MRL
	201407110100	**GW0172**				
07/17/2014 05:30	Perfluorononanoic acid		0.012		ug/L	0.0025
07/17/2014 05:30	Perfluorooctanoic acid		0.0096		ug/L	0.0025
	201407110102	**GW0174**				
07/17/2014 05:55	Perfluorononanoic acid		0.011		ug/L	0.0025
07/17/2014 05 55	Perfluorooctanoic acid		0 0094		ug/L	0 0025
	201407110103	**GW0173**				
07/17/2014 06:21	Perfluorononanoic acid		0.023		ug/L	0.0025
07/17/2014 06:21	Perfluorooctanesulfonic acid		0.0059		ug/L	0.0025
07/17/2014 06:21	Perfluorooctanoic acid		0.034		ug/L	0.0025

SUMMARY OF POSITIVE DATA ONLY

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750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: (626) 386-1100
Fax: (626) 386-1101
1 800 566 LABS (1 800 566 5227)

Laboratory Data
Report: 489248

Integral Consulting Inc.
Craig Hutchings
1205 West Bay Drive NW
Victorian house on the right
Olympia, WA 98502

Samples Received on:
07/10/2014 1600

Prepared	Analyzed		QC Ref #	Method	Analyte	Result	Units	MDL	MRL	Dilution
GW0172 (201407110100)							**Sampled on 07/09/2014 0915**			
	Variable ID: C1165									
				EPA 537 - Perfluorinated Alkyl Acids						
7/14/2014	07/17/2014	05:30	781237	(EPA 537)	Perfluorodecanoic acid	ND	ug/L	0.00028	0.0025	1
7/14/2014	07/17/2014	05:30	781237	(EPA 537)	Perfluorododecanoic acid	ND	ug/L	0.00064	0.0025	1
7/14/2014	07/17/2014	05:30	781237	(EPA 537)	Perfluorononanoic acid	0.012	ug/L	0.00035	0.0025	1
7/14/2014	07/17/2014	05:30	781237	(EPA 537)	Perfluorooctanesulfonic acid	0.0023J	ug/L	0.00020	0.0025	1
7/14/2014	07/17/2014	05:30	781237	(EPA 537)	Perfluorooctanoic acid	0.0096	ug/L	0.00023	0.0025	1
7/14/2014	07/17/2014	05:30	781237	(EPA 537)	Perfluorotetradecanoic acid	ND	ug/L	0.0014	0.0025	1
7/14/2014	07/17/2014	05:30	781237	(EPA 537)	Perfluorotridecanoic acid	ND	ug/L	0.00083	0.0025	1
7/14/2014	07/17/2014	05:30	781237	(EPA 537)	Perfluoroundecanoic acid	ND	ug/L	0.00044	0.0025	1
7/14/2014	07/17/2014	05:30	781237	(EPA 537)	13C-PFDA	96	%			1
7/14/2014	07/17/2014	05:30	781237	(EPA 537)	13C-PFOA	95	%			1
7/14/2014	07/17/2014	05:30	781237	(EPA 537)	13C-PFOS	107	%			1

Rounding on totals after summation.
(c) - Indicates calculated results.
ND - Analyte was not detected at the calculated MDL.
J - The analyte was either detected at or greater than the MDL and less than the MRL, or did not meet any one of the required QC criteria.

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Report: 489248

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Craig Hutchings
1205 West Bay Drive NW
Victorian house on the right
Olympia, WA 98502

Samples Received on:
07/10/2014 1600

Prepared	Analyzed		QC Ref #	Method	Analyte	Result	Units	MDL	MRL	Dilution
GW0174 (201407110102)								**Sampled on 07/09/2014 0925**		
	Variable ID: C1165									
				EPA 537 - Perfluorinated Alkyl Acids						
7/14/2014	07/17/2014	05:55	781237	(EPA 537)	Perfluorodecanoic acid	ND	ug/L	0.00028	0.0025	1
7/14/2014	07/17/2014	05:55	781237	(EPA 537)	Perfluorododecanoic acid	ND	ug/L	0.00064	0.0025	1
7/14/2014	07/17/2014	05:55	781237	(EPA 537)	Perfluorononanoic acid	0.011	ug/L	0.00035	0.0025	1
7/14/2014	07/17/2014	05:55	781237	(EPA 537)	Perfluorooctanesulfonic acid	0.0024J	ug/L	0.00020	0.0025	1
7/14/2014	07/17/2014	05:55	781237	(EPA 537)	Perfluorooctanoic acid	0.0094	ug/L	0.00023	0.0025	1
7/14/2014	07/17/2014	05:55	781237	(EPA 537)	Perfluorotetradecanoic acid	ND	ug/L	0.0014	0.0025	1
7/14/2014	07/17/2014	05:55	781237	(EPA 537)	Perfluorotridecanoic acid	ND	ug/L	0.00083	0.0025	1
7/14/2014	07/17/2014	05:55	781237	(EPA 537)	Perfluoroundecanoic acid	ND	ug/L	0.00044	0.0025	1
7/14/2014	07/17/2014	05:55	781237	(EPA 537)	13C-PFDA	96	%			1
7/14/2014	07/17/2014	05:55	781237	(EPA 537)	13C-PFOA	93	%			1
7/14/2014	07/17/2014	05:55	781237	(EPA 537)	13C-PFOS	105	%			1

Rounding on totals after summation.
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Olympia, WA 98502

Samples Received on:
07/10/2014 1600

GW0173 (201407110103) **Sampled on 07/09/2014 0950**

Variable ID: C1165

EPA 537 - Perfluorinated Alkyl Acids

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MDL	MRL	Dilution
7/14/2014	07/17/2014 06:21	781237	(EPA 537)	Perfluorodecanoic acid	0.00045J	ug/L	0.00028	0.0025	1
7/14/2014	07/17/2014 06:21	781237	(EPA 537)	Perfluorododecanoic acid	ND	ug/L	0.00064	0.0025	1
7/14/2014	07/17/2014 06:21	781237	(EPA 537)	Perfluorononanoic acid	0.023	ug/L	0.00035	0.0025	1
7/14/2014	07/17/2014 06:21	781237	(EPA 537)	Perfluorooctanesulfonic acid	0.0059	ug/L	0.00020	0.0025	1
7/14/2014	07/17/2014 06:21	781237	(EPA 537)	Perfluorooctanoic acid	0.034	ug/L	0.00023	0.0025	1
7/14/2014	07/17/2014 06:21	781237	(EPA 537)	Perfluorotetradecanoic acid	ND	ug/L	0.0014	0.0025	1
7/14/2014	07/17/2014 06:21	781237	(EPA 537)	Perfluorotridecanoic acid	ND	ug/L	0.00083	0.0025	1
7/14/2014	07/17/2014 06:21	781237	(EPA 537)	Perfluoroundecanoic acid	ND	ug/L	0.00044	0.0025	1
7/14/2014	07/17/2014 06:21	781237	(EPA 537)	13C-PFDA	84	%			1
7/14/2014	07/17/2014 06:21	781237	(EPA 537)	13C-PFOA	98	%			1
7/14/2014	07/17/2014 06:21	781237	(EPA 537)	13C-PFOS	107	%			1

Rounding on totals after summation.
(c) - Indicates calculated results.
ND - Analyte was not detected at the calculated MDL.
J - The analyte was either detected at or greater than the MDL and less than the MRL, or did not meet any one of the required QC criteria.

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Craig Hutchings
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Victorian house on the right
Olympia, WA 98502

Samples Received on:
07/10/2014 1600

Prepared	Analyzed		QC Ref #	Method	Analyte	Result	Units	MDL	MRL	Dilution
FB0003 (201407110104)							**Sampled on 07/09/2014 1000**			
	Variable ID: C1165									
	EPA 537 - Perfluorinated Alkyl Acids									
7/14/2014	07/17/2014	00:48	781237	(EPA 537)	Perfluorodecanoic acid	ND	ug/L	0.00028	0.0025	1
7/14/2014	07/17/2014	00:48	781237	(EPA 537)	Perfluorododecanoic acid	ND	ug/L	0.00064	0.0025	1
7/14/2014	07/17/2014	00:48	781237	(EPA 537)	Perfluorononanoic acid	ND	ug/L	0.00035	0.0025	1
7/14/2014	07/17/2014	00:48	781237	(EPA 537)	Perfluorooctanesulfonic acid	ND	ug/L	0.00020	0.0025	1
7/14/2014	07/17/2014	00:48	781237	(EPA 537)	Perfluorooctanoic acid	ND	ug/L	0.00023	0.0025	1
7/14/2014	07/17/2014	00:48	781237	(EPA 537)	Perfluorotetradecanoic acid	ND	ug/L	0.0014	0.0025	1
7/14/2014	07/17/2014	00:48	781237	(EPA 537)	Perfluorotridecanoic acid	ND	ug/L	0.00083	0.0025	1
7/14/2014	07/17/2014	00:48	781237	(EPA 537)	Perfluoroundecanoic acid	ND	ug/L	0.00044	0.0025	1
7/14/2014	07/17/2014	00:48	781237	(EPA 537)	13C-PFDA	95	%			1
7/14/2014	07/17/2014	00:48	781237	(EPA 537)	13C-PFOA	95	%			1
7/14/2014	07/17/2014	00:48	781237	(EPA 537)	13C-PFOS	99	%			1

Rounding on totals after summation.
(c) - Indicates calculated results.
ND - Analyte was not detected at the calculated MDL.
J - The analyte was either detected at or greater than the MDL and less than the MRL, or did not meet any one of the required QC criteria.

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Laboratory
QC Summary: 489248

Integral Consulting Inc.

QC Ref # 781237 - Perfluorinated Alkyl Acids **Analysis Date: 07/17/2014**

201407110100	GW0172	Analyzed by: LHZ
201407110102	GW0174	Analyzed by: LHZ
201407110103	GW0173	Analyzed by: LHZ
201407110104	FB0003	Analyzed by: LHZ

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Laboratory QC
Report: 489248

Integral Consulting Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
QC Ref# 781237 - Perfluorinated Alkyl Acids by EPA 537						**Analysis Date: 07/16/2014**			
LCS1	13C-PFDA (S)			100	%	100	(70-130)		
LCS2	13C-PFDA (S)			99.2	%	99	(70-130)		
MBLK	13C-PFDA (S)			95.9	%	96	(70-130)		
MRL_CHK	13C-PFDA (S)			96.3	%	96	(70-130)		
MS_201407140016	13C-PFDA (S)			100	%	100	(70-130)		
MSD_201407140016	13C-PFDA (S)			99.8	%	100	(70-130)		
LCS1	13C-PFOA (I)			99.9	%	100	(50-150)		
LCS2	13C-PFOA (I)			100	%	100	(50-150)		
MBLK	13C-PFOA (I)			102	%	102	(50-150)		
MRL_CHK	13C-PFOA (I)			101	%	101	(50-150)		
MS_201407140016	13C-PFOA (I)			97.8	%	98	(50-150)		
MSD_201407140016	13C-PFOA (I)			98.4	%	98	(50-150)		
LCS1	13C-PFOS (I)			101	%	101	(50-150)		
LCS2	13C-PFOS (I)			102	%	102	(50-150)		
MBLK	13C-PFOS (I)			102	%	102	(50-150)		
MRL_CHK	13C-PFOS (I)			102	%	102	(50-150)		
MS_201407140016	13C-PFOS (I)			100	%	100	(50-150)		
MSD_201407140016	13C-PFOS (I)			102	%	102	(50-150)		
LCS1	Perfluorodecanoic acid		0.025	0.0256	ug/L	103	(70-130)		
LCS2	Perfluorodecanoic acid		0.025	0.0248	ug/L	99	(70-130)	30	2.8
MBLK	Perfluorodecanoic acid			<0.00083	ug/L				
MRL_CHK	Perfluorodecanoic acid		0.0025	0.00237	ug/L	95	(50-150)		
MS_201407140016	Perfluorodecanoic acid	ND	0.0025	0.00275	ug/L	108	(50-150)		
MSD_201407140016	Perfluorodecanoic acid	ND	0.0025	0.00266	ug/L	104	(50-150)	50	3.3
LCS1	Perfluorododecanoic acid		0.025	0.0229	ug/L	92	(70-130)		
LCS2	Perfluorododecanoic acid		0.025	0.0195	ug/L	78	(70-130)	30	16
MBLK	Perfluorododecanoic acid			<0.00083	ug/L				
MRL_CHK	Perfluorododecanoic acid		0.0025	0.00218	ug/L	87	(50-150)		
MS_201407140016	Perfluorododecanoic acid	ND	0.0025	0.00242	ug/L	96	(50-150)		
MSD_201407140016	Perfluorododecanoic acid	ND	0.0025	0.00217	ug/L	86	(50-150)	50	11
LCS1	Perfluorononanoic acid		0.025	0.0248	ug/L	99	(70-130)		
LCS2	Perfluorononanoic acid		0.025	0.0257	ug/L	103	(70-130)	30	3.6
MBLK	Perfluorononanoic acid			<0.00083	ug/L				
MRL_CHK	Perfluorononanoic acid		0.0025	0.00263	ug/L	105	(50-150)		
MS_201407140016	Perfluorononanoic acid	ND	0.0025	0.00294	ug/L	110	(50-150)		
MSD_201407140016	Perfluorononanoic acid	ND	0.0025	0.00297	ug/L	111	(50-150)	50	1.0

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
(S) - Indicates surrogate compound.
(I) - Indicates internal standard compound.

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Laboratory QC
Report: 489248

Integral Consulting Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS1	Perfluorooctanesulfonic acid		0.024	0.0225	ug/L	94	(70-130)		
LCS2	Perfluorooctanesulfonic acid		0.024	0.0228	ug/L	95	(70-130)	30	1.3
MBLK	Perfluorooctanesulfonic acid			<0.0008	ug/L				
MRL_CHK	Perfluorooctanesulfonic acid		0.0024	0.00231	ug/L	96	(50-150)		
MS_201407140016	Perfluorooctanesulfonic acid	ND	0.0024	0.00365	ug/L	92	(50-150)		
MSD_201407140016	Perfluorooctanesulfonic acid	ND	0.0024	0.00378	ug/L	97	(50-150)	50	3.5
LCS1	Perfluorooctanoic acid		0.025	0.0247	ug/L	99	(70-130)		
LCS2	Perfluorooctanoic acid		0.025	0.0243	ug/L	97	(70-130)	30	1.6
MBLK	Perfluorooctanoic acid			<0.00083	ug/L				
MRL_CHK	Perfluorooctanoic acid		0.0025	0.00250	ug/L	100	(50-150)		
MS_201407140016	Perfluorooctanoic acid	ND	0.0025	0.00394	ug/L	93	(50-150)		
MSD_201407140016	Perfluorooctanoic acid	ND	0.0025	0.00420	ug/L	104	(50-150)	50	6.4
LCS1	Perfluorotetradecanoic acid		0.025	0.0229	ug/L	92	(70-130)		
LCS2	Perfluorotetradecanoic acid		0.025	0.0207	ug/L	83	(70-130)	30	10
MBLK	Perfluorotetradecanoic acid			<0.00083	ug/L				
MRL_CHK	Perfluorotetradecanoic acid		0.0025	0.00198	ug/L	79	(50-150)		
MS_201407140016	Perfluorotetradecanoic acid	ND	0.0025	0.00242	ug/L	96	(50-150)		
MSD_201407140016	Perfluorotetradecanoic acid	ND	0.0025	0.00225	ug/L	89	(50-150)	50	7.3
LCS1	Perfluorotridecanoic acid		0.025	0.0236	ug/L	95	(70-130)		
LCS2	Perfluorotridecanoic acid		0.025	0.0203	ug/L	81	(70-130)	30	15
MBLK	Perfluorotridecanoic acid			<0.00083	ug/L				
MRL_CHK	Perfluorotridecanoic acid		0.0025	0.00204	ug/L	82	(50-150)		
MS_201407140016	Perfluorotridecanoic acid	ND	0.0025	0.00250	ug/L	100	(50-150)		
MSD_201407140016	Perfluorotridecanoic acid	ND	0.0025	0.00234	ug/L	93	(50-150)	50	6.6
LCS1	Perfluoroundecanoic acid		0.025	0.0256	ug/L	102	(70-130)		
LCS2	Perfluoroundecanoic acid		0.025	0.0242	ug/L	97	(70-130)	30	5.6
MBLK	Perfluoroundecanoic acid			<0.00083	ug/L				
MRL_CHK	Perfluoroundecanoic acid		0.0025	0.00244	ug/L	98	(50-150)		
MS_201407140016	Perfluoroundecanoic acid	ND	0.0025	0.00278	ug/L	110	(50-150)		
MSD_201407140016	Perfluoroundecanoic acid	ND	0.0025	0.00249	ug/L	99	(50-150)	50	11

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
(S) - Indicates surrogate compound.
(I) - Indicates internal standard compound.

EUROFINS LABORATORY REPORT

– 489248 LCMS 7/16/2014

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Data ID: Form 0001
Rev Date: 07/08/2013
Rev #: 01

Scan Prep Sheet

Box ID #: _____
For Scanning DEPT

Lab Batch Number: LCMS3 (Instrument ID) 071614 (Analysis Date) LHZ (Analyst SLIMS Initials)

Lab Test Type: C537

Batch Prep Date: 07/14/14 — 07/15/14

Calibration Date: 07/16/14

QIR Number: _____

Reruns: _____

Prep: 780662 Run: 781237 Due Date: _____ Rush: ☐

Prep: _____ Run: _____ Due Date: _____ Rush: ☐

Notes: _____

Approved By: TL Date: 7/17/14

LCMS-FO-UCMR3 537-0004A

Attachment VIII: 537 Data Review Checklist

LHZ 07/16/14

~~UCMR3~~ Method 537 Checklist

Analysis Date: 07/16/14 **Analyst:** LHZ **Instrument ID:** LCMS3
Submitted by: LHZ **Date:** 07/17/14 **QC'd by:** ZL **Date:** 7/17/14 **Eluent Prepared Date:** 07/16/14 by LHZ Exp. 07/18/14

Initial Calibration (ICAL):

✓ Unique File Name: C537-Batch#780662-071614-CalCurve.pdf
✓ Calibration contains a minimum of 5 standard concentrations from =/< MRL to high point.
✓ Each point is back-calculated against curve.
  ✓ *Back calculation passes with the lowest level standard being within 50-150% of its true value.*
  ✓ *All other points in the back calculation are within 70-130% of its true value.*
✓ IS must be within 70-140% compared to the average IS response in ICAL.
✓ < 20% RPD among IS responses in the lowest and highest CAL stds.
✓ Peak asymmetry ratio performed at a mid-level CAL std. must be 0.8-1.5 for first two eluent peaks.
✓ Surrogate recoveries must be within control limits of 70-130%.

Internal Standards (IS and Surrogates) for all QCs and Samples:

✓ IS must be within 70-140% compared to the response in the most recent CCC
✓ IS must be within 50-150% compared to the average IS response in ICAL.
✓ Surrogate recoveries must be within 70-130%.

Quality Control Sample (QCS):

✓ A QCS is from a source different than that used to prepare CAL stds.
✓ A QCS is analyzed after each preparation of new analyte primary dilution standards and at least quarterly.
✓ QCS is at mid level, and results are within ±30% of the true value.
✓ IS and surrogate recoveries are within QC limits.

Continuing Calibration Verification Check Standard (CCC):

✓ A low-level CCC is analyzed at the beginning of each analysis batch.
✓ Subsequent CCC's are analyzed following every 10 field samples and at the end of the batch.
✓ Subsequent CCC's are analyzed at rotating mid & high levels.
✓ The low-level CCC is within ±50% of the true value.
✓ Mid and high-level CCC's are within ±30% of the true value.
✓ IS and surrogate recoveries are within QC limits.

Laboratory Reagent Blank (LRB/Method Blank):

✓ An LRB is analyzed with each extraction/analysis batch.
✓ All target analytes must be ≤ 1/3 MRL.
✓ IS and surrogate recoveries are within QC limits.

Laboratory Fortified Blank (LFB):

✓ An LFB≤ MRL level is processed per extraction batch and analyzed per each analysis batch prior to analyzing filed samples.
NA Low-level LFB recovery is 50-150% of the true value for each target analyte.
✓ IS and surrogate recoveries are within QC limits.
ZL ~~NA~~ ✓ If run, LFBs at mid & high levels must have recoveries within 70-130% of the true value for each target analyte.
7/17/14

Laboratory Fortified Sample Matrix (LFSM/LFSMD/MS/MSD) or Field Duplicates (FD/DUP):

✓ One LFSM must be analyzed per analysis batch at rotating low & mid levels.
✓ Analyze at least one LFSMD or FD per analysis batch.
✓ Low-level spike concentration is ±50% of the MRL level.
NA Mid-level spike concentration is ±20% of the mid-level calibration standard.
✓ Analyte recovery for low-level should be within ±50% of the true value for LFSM and LFSMD.
NA Analyte recovery for mid-level should be within ±30% of the true value for LFSM and LFSMD.
✓ Analyte relative percent difference (RPD) should be ≤50% for low-level or ≤30% for mid-level.
✓ IS and surrogate recoveries are within QC limits.

Samples:

✓ pH 6.5-7.5.
✓ Free chlorine <0.1 mg/L.
✓ 20 samples or less in **an analytical batch**.

Attachment VIII: 537 Data Review Checklist (cont'd)

✓ IS and surrogate recoveries are within QC limits.
✓ Hits are correctly identified.
✓ Mass Spectrum is printed for each analyte above MRL (even if false).

Field Reagent Blank (FRB):

NA To be analyzed when there are sample hits.
NA All target analytes ≤ 1/3 MRL.
NA If FRB is contaminated, samples are invalidated.
NA IS and surrogate recoveries are within QC limits.

Data Files:

✓ Are the data files (quantitation report) and method files consistent with one another?
✓ Are file ID's the same on both the hard copies and the electronic files?
NA Are all manual integrations (MI) documentation completed?
NA Printouts of before and after MI with analyst and reviewer signatures and the date
NA Reason for MI
NA QIR filled out if necessary (QIR number: _____)

EEA Folder No.: 488755, 489248, 489249, & 489232

Table of Contents

Level I deliverables include the following:

A. Case Narrative if applicable

- Client's sample identification and the corresponding laboratory identification
- Parameters analyzed and methodology used
- Holding time met or exceeded
- Detailed description of all analytical and/or sample receipt problems encountered
- Discussion of reasons for any QA/QC sample result exceedances
- Discussion of any manual integrations
- Observations regarding any occurrences which may adversely impact sample integrity or data quality.

B. Laboratory Report

- Cover page
- State Certification List
- List of ISO 17025 Accredited Methods
- Acknowledgment of samples received
- **Chain of Custody Documentation**
  - FedEx Air Bill/Method of Shipment Documentation
  - Sample Cooler Checklist
  - Purchase Requisition
- **Laboratory Comments Report**
  - Group Comments
  - Definition of Data Qualification
- **Laboratory Hits Report**
  - Sample ID
  - Analysis Date
  - Analyte
  - Result and units
  - Federal Maximum Contamination Limit (MCL) if available
  - Minimum Reporting Limit (MRL)
- **Laboratory Data Report**
  - Client's sample ID and corresponding lab ID
  - Sampled on (Date and time of sample collection)
  - Prepared (Date of sample preparation) as applicable
  - Analyzed (Date and time of analysis)
  - QC Ref # (QC Reference #)
  - Analyte and Method
  - Result (Analytical results) and Units
  - MRL

✓ = Items included in the data package
NA = Not applicable; items not included in the data package.

Level II deliverables include Level I and the following:

- Laboratory QC Report (Part of Laboratory Report)
  - QC Ref # - Analyte/Method
  - Analysis Date
  - QC Types, as applicable
    - CCCL/ CCCM/CCCH (Continuing Calibration Check at Low/Mid/High level
    - DUP (Sample Duplicate)
    - LCS (Laboratory Control Sample)
    - MBLK (Method Blank)
    - MRL_CHK (Minimum Reporting Limit Check)
    - MS/MSD (Matrix Spike/ MS Duplicate)
  - QC Types include the following, as applicable
    - Analyte
    - Native (Native Result)
    - Spiked (Spiked level)
    - Recovered (Spiked sample result)
    - Units
    - Yield % (Yield in % recovery)
    - Limits % (Acceptance limits)
    - RPD Limit (%) (Relative Percent Difference Limit in %)
    - RPD %

✓ = Items included in the data package
NA = Not applicable; items not included in the data package.

LEVEL III DELIVERABLES

ORGANICS

Analyte/ Method Reference: @537 Prepared by: MB
EEA Folder No.: 488755, 489248, 489249, D489232 Date Prepared: 07/17/14
QC Ref #: 781237
Sample Analysis Date: 07/16/14

Level III deliverables include Level I, Level II, and the following:

Raw Data
INITIAL CALIBRATION (ICAL)

- ✓ Primary Analyses
- ✓ Confirmation Analyses , if applicable
- ✓ Sequence log
- NA Instrument Tune (DFTPP or BFB) showing abundance criteria and result if applicable
- NA DDT/Endrin breakdown or tailings check information for tune file as required by the method, as applicable
- ✓ Instrument blank or method blank- Area printouts, quantitation reports, chromatogram
- ✓ Quantitation reports and chromatograms for all calibration levels
- ✓ Initial Calibration Summary including all points and regression plots
- ✓ Second source standard Quantitation Report and Chromatogram if required
- ✓ IS (Internal Standard) results if applicable
- ✓ Surrogate results if applicable
- NA Peak resolution, as applicable
- NA Retention time window determination, as applicable
- NA Manual integration (before and after) if applicable

SAMPLE /QC ANALYSES

- ✓ Primary Analysis
- ✓ Confirmation Analysis, if applicable
- ✓ Data Review Checklist
- ✓ QIR (Quality Investigation Report) if applicable
- ✓ Sample preparation logs if applicable
- ✓ Analysis Sequence Log/ Injection Log
  - NA Instrument Tune (DFTPP or BFB) showing abundance criteria and result
  - NA Breakdown or tailing check information for instrument tune if required by the method

✓ = Items included in the data package
NA = Not applicable; items not included in the data package.

- ✓ Continuing calibration standard (Area printouts, quantitation report, chromatogram, and % deviation including regression plots)
- ✓ Initial Calibration (See above for ICAL)
- ✓ Laboratory reagent blank (LRB)/Method Blank (MB) – Area printouts, quantitation report, and chromatogram.
- NA TIC's (Tentatively Identified Compounds) for LRB if necessary
- ✓ MRL (Method Reporting Limit) check
- ✓ LCS (Laboratory Control Sample) spike recoveries, area printouts, quantitation report, and chromatogram
- ✓ MS/MSD (Matrix Spike/ Matrix Spike Duplicate) spike recoveries or Lab duplicate, area printouts, quantitation report, and chromatogram
- ✓ Closing standard(s)- Area printouts, quantitation report, and chromatogram (and % deviation including regression plots), as applicable
- NA Peak resolution, as applicable
- NA Ion Scans and Enhanced Spectra/ extracted ion current profile (EICP) of target analytes and TICs with the associated best match spectra, if applicable
- ✓ All relevant clients data including Area printouts, quantitation report, chromatogram spectra, and TIC's
- ✓ 2nd Source standards/LCS
- ✓ IS (Internal Standard) results if applicable
- ✓ Surrogate results if applicable

NA Manual integration (before and after) if applicable

✓ = Items included in the data package
NA = Not applicable; items not included in the data package.

LEVEL IV DELIVERABLES

ORGANICS

Analyte/ Method Reference: 8537 Prepared by: HB
EEA Folder No.: 488755, 489248, 489249, & 489232 Date Prepared: 07/17/14
QC Ref #: 781237
Sample Analysis Date: 07/16/14

Level IV deliverables to include Levels I, II, III, and the following:

✓ Certificates of analysis for standards, IS, Surrogate and spiking solutions used on sample preparation or in analysis.

✓ Copy of the standard log for all prepared/diluted solutions of standards, IS and surrogates used in preparation, extraction or analysis of samples.

✓ = Items included in the data package
NA = Not applicable; items not included in the data package.

- Dilution factor (Dilution)
- Surrogate recoveries if applicable
- MDL (Minimum Detection Limit) if applicable

- Laboratory QC Summary
  - QC Ref # (Batch QC Reports)
  - Analyte/Method
  - Lab ID and corresponding client's sample ID
  - Analysis Date
  - Analyst by (Analyst Initials)

✓ = Items included in the data package
NA = Not applicable; items not included in the data package.

537-MPFOA-140115-01
Rec'd: 7/15/14

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

As IS stock standard

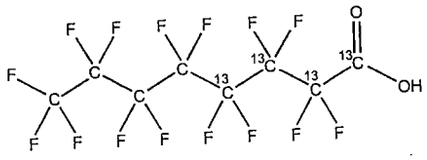
PRODUCT CODE: MPFOA

COMPOUND: Perfluoro-n-[1,2,3,4-$^{13}C_4$]octanoic acid

LOT NUMBER: MPFOA1013

CAS #: Not available

STRUCTURE:



MOLECULAR FORMULA: $^{13}C_4{}^{12}C_4HF_{15}O_2$

CONCENTRATION: 50 ± 2.5 µg/ml

MOLECULAR WEIGHT: 418.04

SOLVENT(S): Methanol
Water (<1%)

ISOTOPIC PURITY: ≥99% ^{13}C (1,2,3,4-$^{13}C_4$)

CHEMICAL PURITY: >98%

LAST TESTED: (mm/dd/yyyy) 10/11/2013

EXPIRY DATE: (mm/dd/yyyy) 10/11/2018

RECOMMENDED STORAGE: Store ampoule in a cool, dark place

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~ 0.1% of native perfluoro-n-octanoic acid (PFOA).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 10/18/2013 (mm/dd/yyyy)

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Form#:27, Issued 2004-11-10
Revision#:2, Revised 2012-06-13

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. They are designed to be used as reference standards for the identification and/or quantification of specific chemical compound(s).

HAZARDS:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Material Safety Data Sheets (MSDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Where possible, all of our products are synthesized using single-product, unambiguous routes. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, x-ray crystallography and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS and/or LC/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly tested by an external, ISO/IEC 17025:2005 accredited calibration company. In addition, their calibration is verified prior to each weighing using NIST and/or NRC traceable external weights. All volumetric glassware used is of Class A tolerance and has been tested according to the appropriate ASTM procedures, which are ultimately traceable to NIST. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration for the period of time specified by the expiry date in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

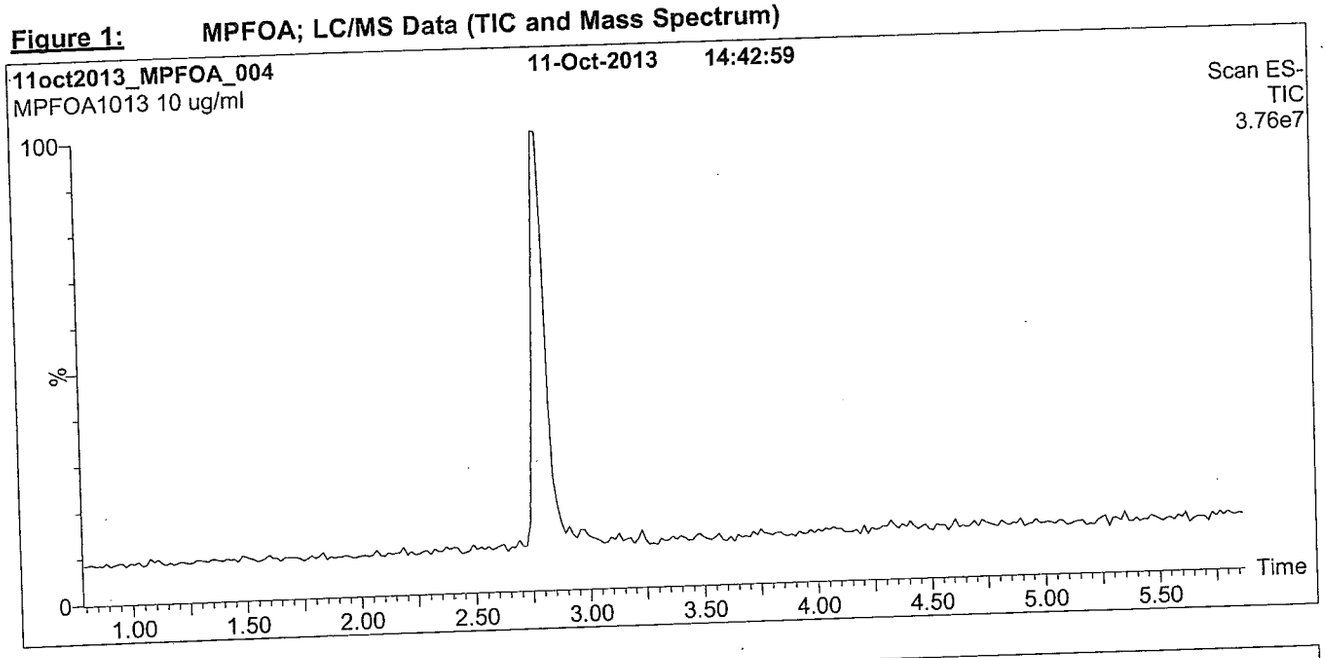
This product was produced using a Quality Management System registered to ISO 9001:2008 by SAI Global, ISO/IEC 17025:2005 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO GUIDE 34:2009 by ACLASS (certificate number AR-1523).

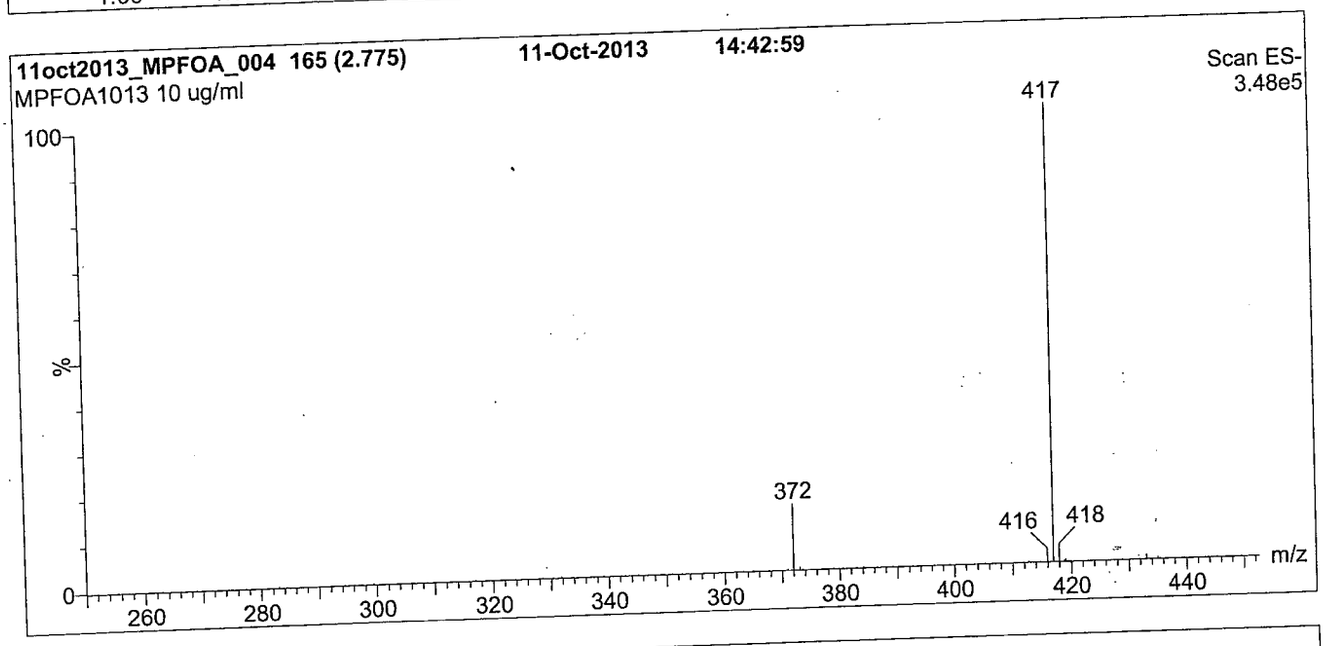
CALA Testing Accreditation No. A 1226

ACLASS ACCREDITED REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Figure 1: MPFOA; LC/MS Data (TIC and Mass Spectrum)





Conditions for Figure 1:

LC: Waters Acquity Ultra Performance LC
MS: Micromass Quattro *micro* API MS

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 55% (80:20 MeOH:ACN) / 45% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7.5 min and hold for 1 min before returning to initial conditions in 0.5 min.
Time: 10 min

Flow: 300 µl/min

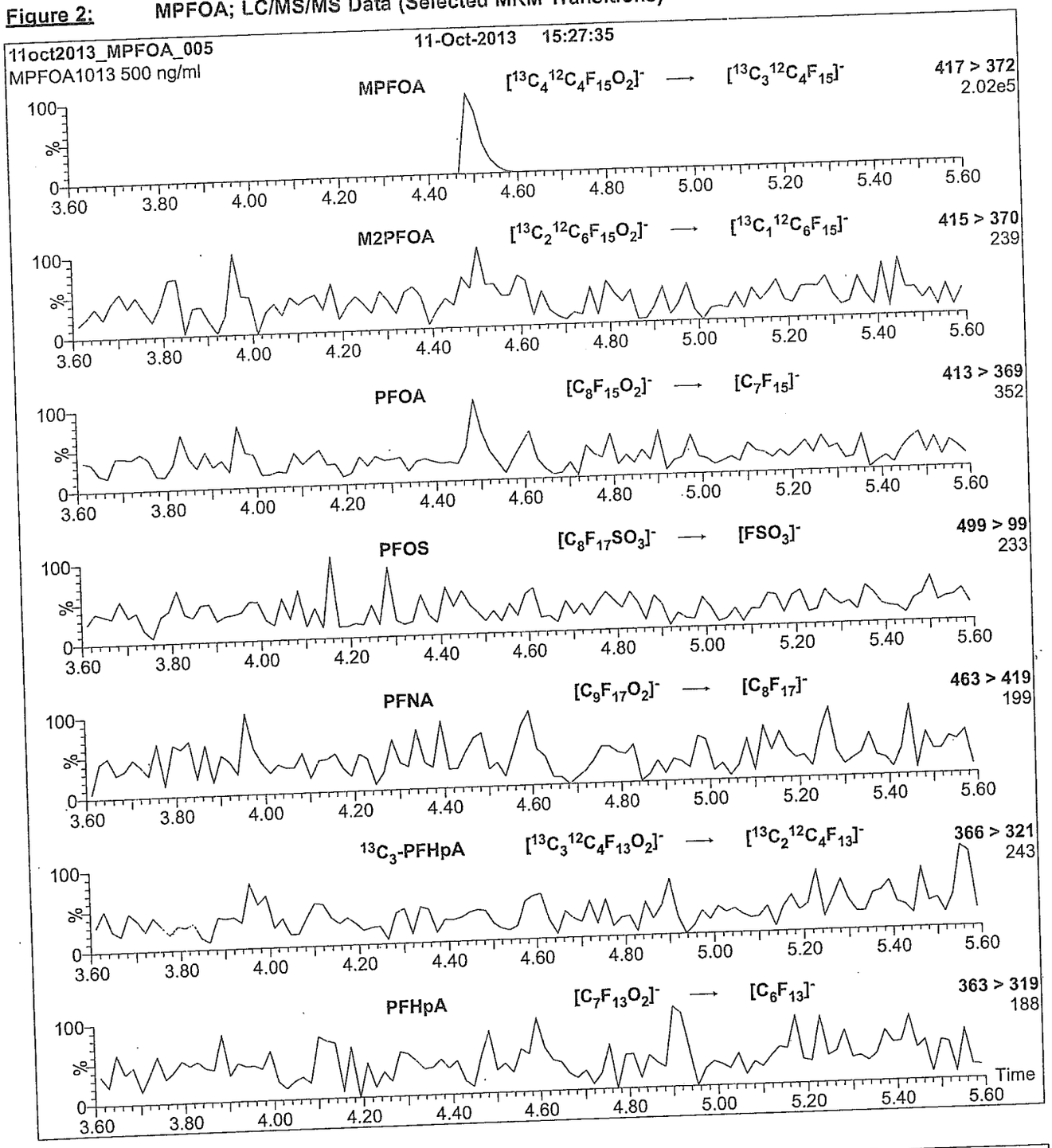
MS Parameters

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 15.00
Cone Gas Flow (l/hr) = 100
Desolvation Gas Flow (l/hr) = 750

Form#:27, Issued 2004-11-10
Revision#:2, Revised 2012-06-13

Figure 2: MPFOA; LC/MS/MS Data (Selected MRM Transitions)



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml MPFOA)

Mobile phase: Isocratic 80% (80:20 MeOH:ACN) / 20% H_2O
(both with 10 mM NH_4OAc buffer)

Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 3.13e-3
Collision Energy (eV) = 11

Form#:27, Issued 2004-11-10
Revision#:2, Revised 2012-06-13

Rec'd 4/28/14
537-MPFOS-140428

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

As IS stock standard

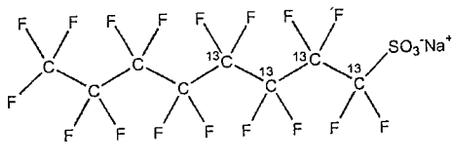
PRODUCT CODE: MPFOS

LOT NUMBER: MPFOS0314

COMPOUND: Sodium perfluoro-1-[1,2,3,4-$^{13}C_4$]octanesulfonate

CAS #: Not available

STRUCTURE:



MOLECULAR FORMULA: $^{13}C_4{}^{12}C_4F_{17}SO_3Na$

MOLECULAR WEIGHT: 526.08

CONCENTRATION: 50.0 ± 2.5 µg/ml (Na salt)
47.8 ± 2.4 µg/ml (MPFOS anion)

SOLVENT(S): Methanol

CHEMICAL PURITY: >98%

ISOTOPIC PURITY: ≥99% ^{13}C (1,2,3,4-$^{13}C_4$)

LAST TESTED: (mm/dd/yyyy) 03/10/2014

EXPIRY DATE: (mm/dd/yyyy) 03/10/2019

RECOMMENDED STORAGE: Store ampoule in a cool, dark place

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains ~ 0.5% Sodium perfluoro-1-[1,2,3-$^{13}C_3$]heptanesulfonate.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 03/19/2014 (mm/dd/yyyy)

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Form#:27, Issued 2004-11-10
Revision#:2, Revised 2012-06-13

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. They are designed to be used as reference standards for the identification and/or quantification of specific chemical compound(s).

HAZARDS:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Material Safety Data Sheets (MSDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Where possible, all of our products are synthesized using single-product, unambiguous routes. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, x-ray crystallography and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS and/or LC/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}.$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly tested by an external, ISO/IEC 17025:2005 accredited calibration company. In addition, their calibration is verified prior to each weighing using NIST and/or NRC traceable external weights. All volumetric glassware used is of Class A tolerance and has been tested according to the appropriate ASTM procedures, which are ultimately traceable to NIST. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration for the period of time specified by the expiry date in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

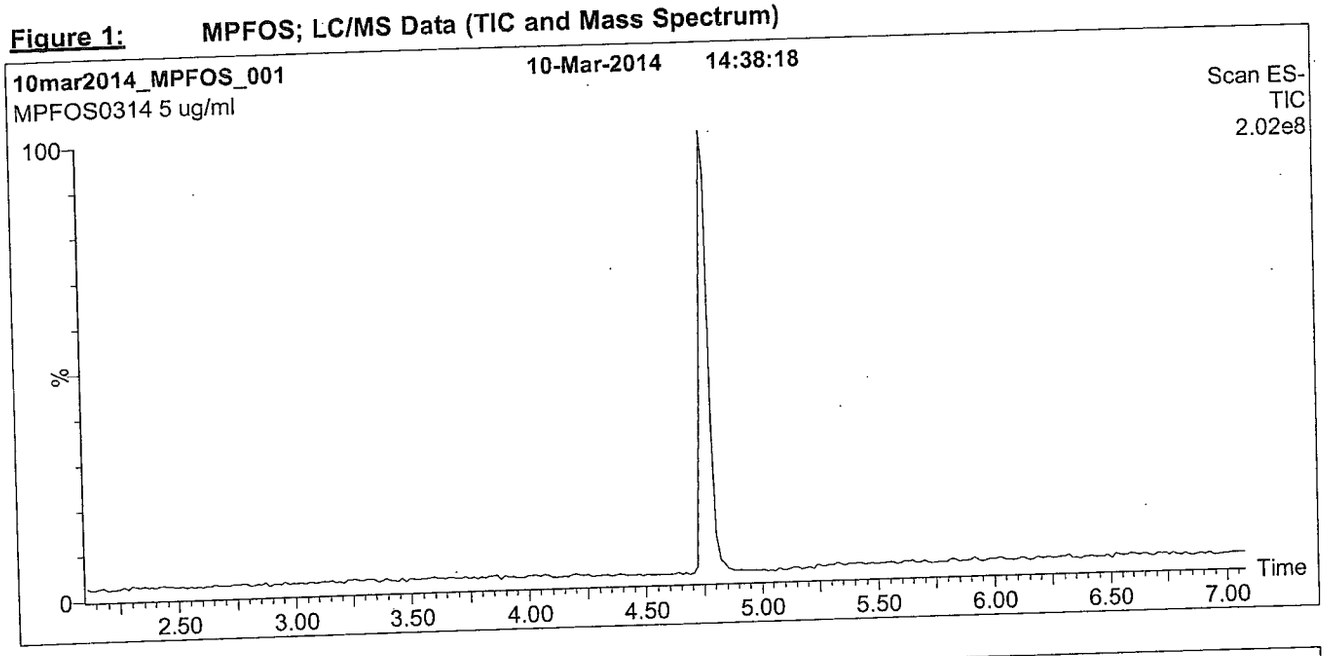
This product was produced using a Quality Management System registered to ISO 9001:2008 by SAI Global, ISO/IEC 17025:2005 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO GUIDE 34:2009 by ACLASS (certificate number AR-1523).

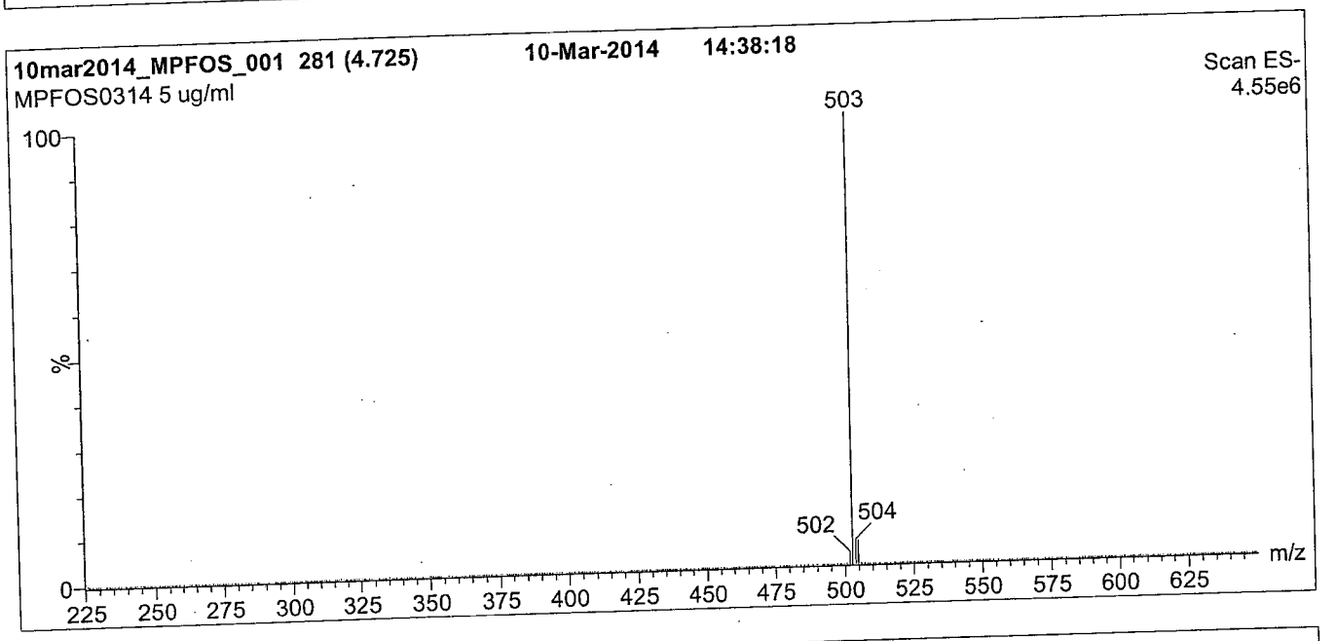
CALA Testing Accreditation No. A1226

ACLASS ACCREDITED REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Figure 1: MPFOS; LC/MS Data (TIC and Mass Spectrum)





Conditions for Figure 1:

LC: Waters Acquity Ultra Performance LC
MS: Micromass Quattro *micro* API MS

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% (80:20 MeOH:ACN) / 50% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7 min and hold for
2 min before returning to initial conditions in 0.5 min.
Time: 10 min

Flow: 300 µl/min

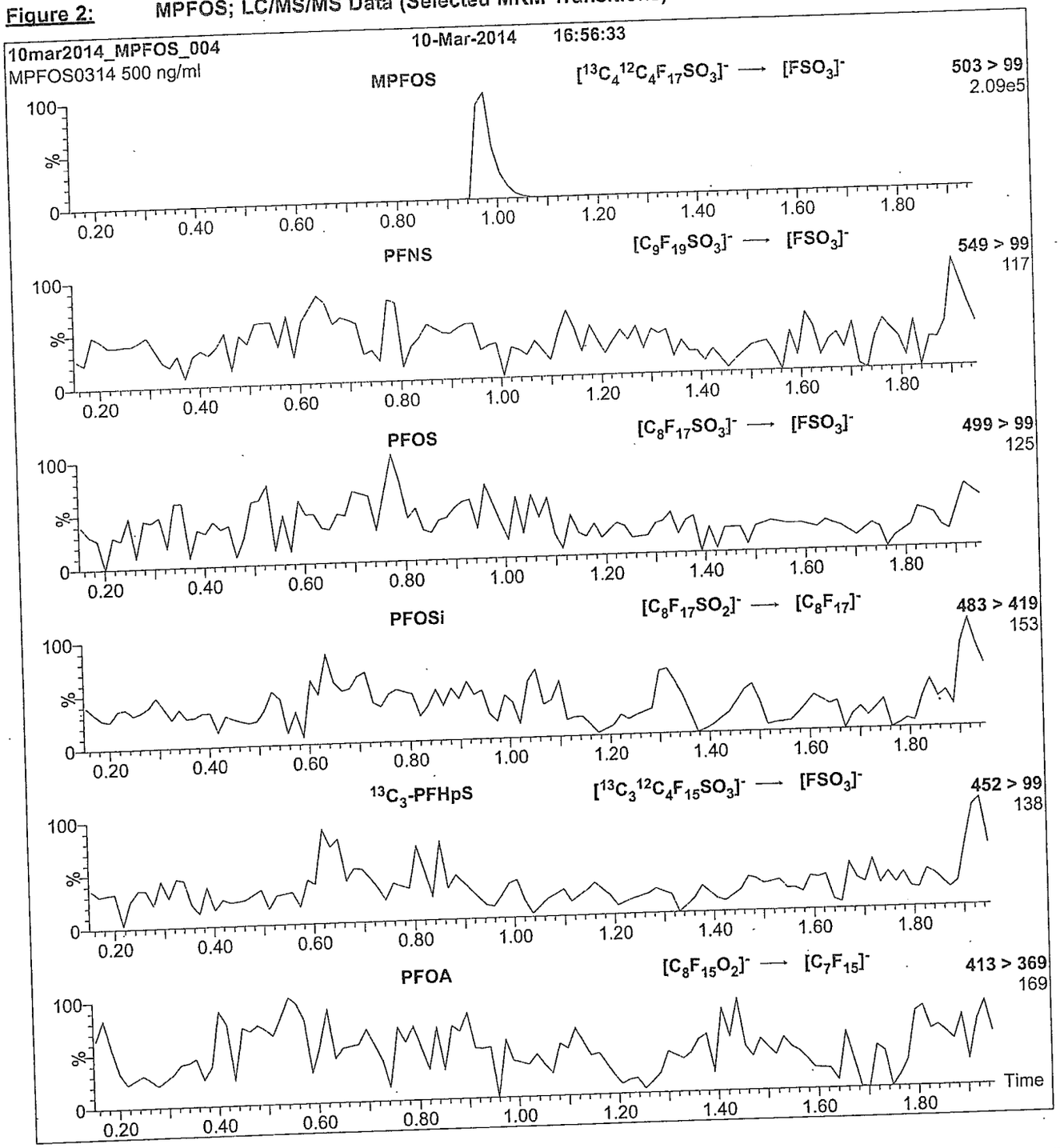
MS Parameters

Experiment: Full Scan (225 - 950 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 60.00
Cone Gas Flow (l/hr) = 50
Desolvation Gas Flow (l/hr) = 750

Form#:27, Issued 2004-11-10
Revision#:2, Revised 2012-06-13

Figure 2: MPFOS; LC/MS/MS Data (Selected MRM Transitions)



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml MPFOS)

Mobile phase: Isocratic 80% (80:20 MeOH:ACN) / 20% H_2O
(both with 10 mM NH_4OAc buffer)

Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 3.46e-3
Collision Energy (eV) = 40.

Form#:27, Issued 2004-11-10
Revision#:2, Revised 2012-06-13

Recd = 6/18/13 ZL

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

As surrogate stock standard.

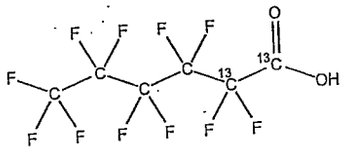
LOT NUMBER: MPFHxA0213

PRODUCT CODE: MPFHxA

COMPOUND: Perfluoro-n-[1,2-$^{13}C_2$]hexanoic acid

CAS #: Not available

STRUCTURE:



MOLECULAR FORMULA: $^{13}C_2{}^{12}C_4HF_{11}O_2$

MOLECULAR WEIGHT: 316.04

CONCENTRATION: 50 ± 2.5 µg/ml

SOLVENT(S): Methanol, Water (<1%)

ISOTOPIC PURITY: ≥99% ^{13}C (1,2-$^{13}C_2$)

CHEMICAL PURITY: >98%

LAST TESTED: (mm/dd/yyyy) 02/14/2013

EXPIRY DATE: (mm/dd/yyyy) 02/14/2018

RECOMMENDED STORAGE: Store ampoule in a cool, dark place

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains < 0.1% of perfluoro-n-hexanoic acid and ~ 0.3% of perfluoro-n-octanoic acid.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim Date: 02/20/2013 (mm/dd/yyyy)

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Form#:27, Issued 2004-11-10
Revision#:2, Revised 2012-06-13

INTENDED USE:

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HAZARDS:

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TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly tested by an external, ISO/IEC 17025:2005 accredited calibration company. In addition, their calibration is verified prior to each weighing using NIST and/or NRC traceable external weights. All volumetric glassware used is of Class A tolerance and has been tested according to the appropriate ASTM procedures, which are ultimately traceable to NIST. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration for the period of time specified by the expiry date in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

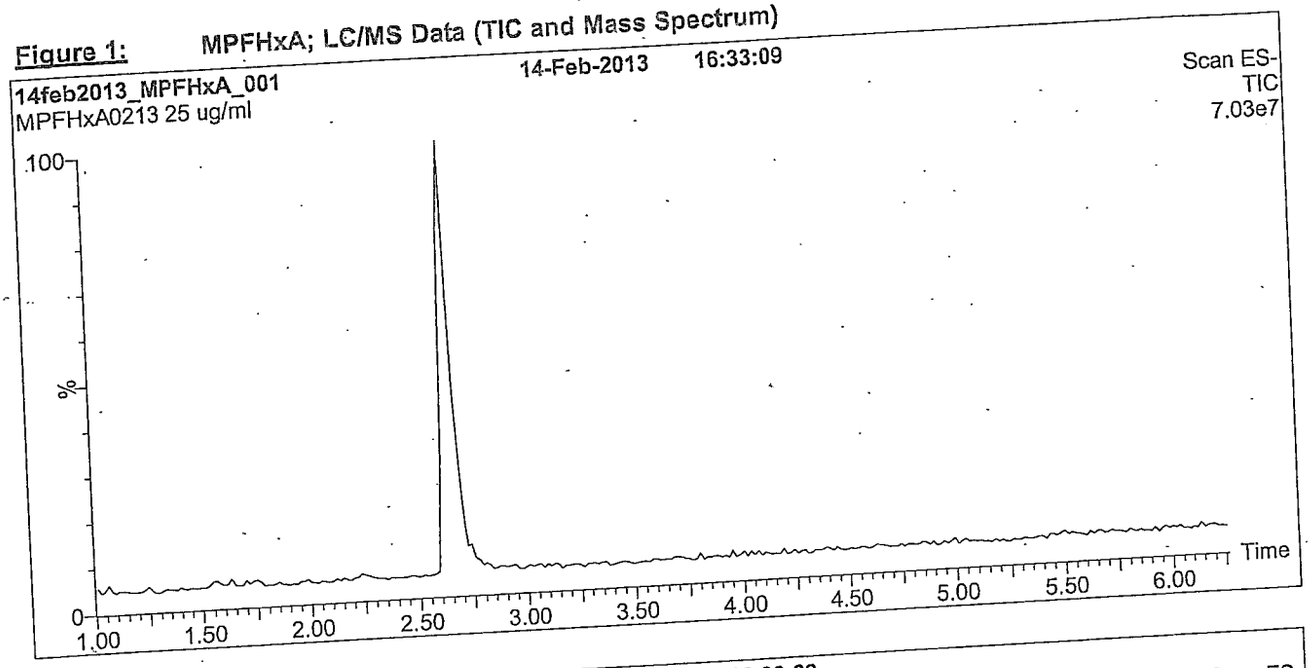
This product was produced using a Quality Management System registered to ISO 9001:2008 by SAI Global, ISO/IEC 17025:2005 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO GUIDE 34:2009 by ACLASS (certificate number AR-1523).

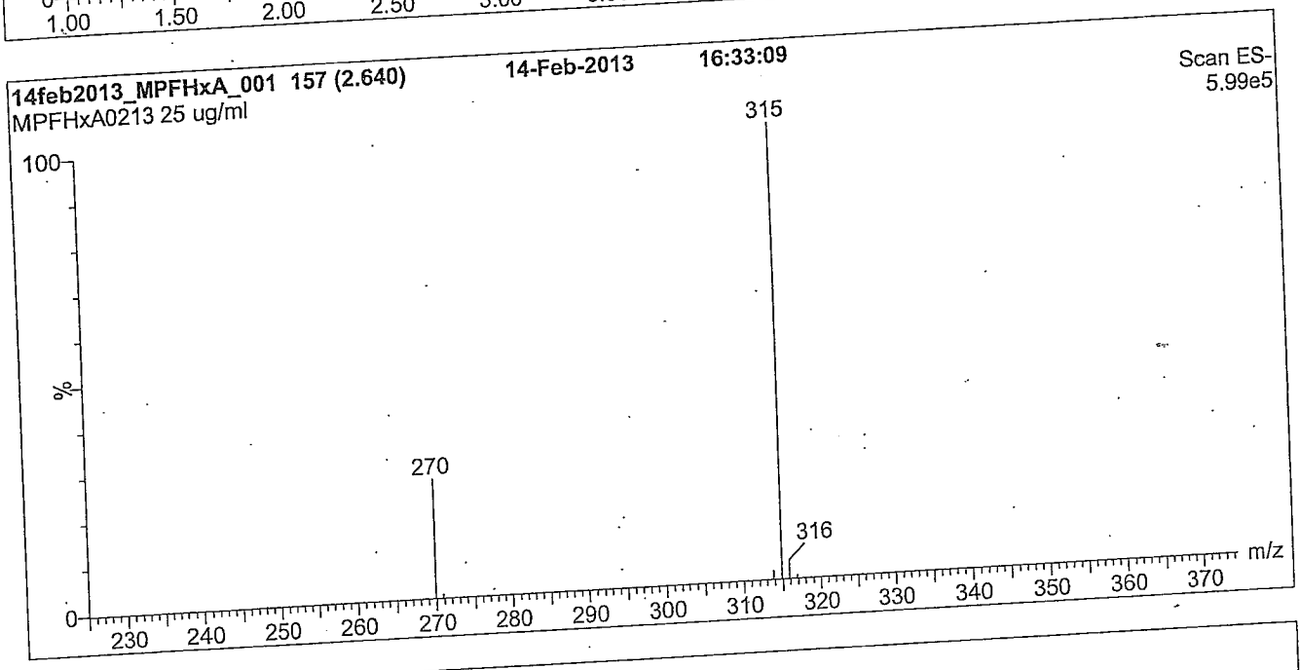
CALA Testing Accreditation No. A1226

ACLASS ACCREDITED REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Figure 1: MPFHxA; LC/MS Data (TIC and Mass Spectrum)





Conditions for Figure 1:

LC: Waters Acquity Ultra Performance LC
MS: Micromass Quattro *micro* API MS

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% (80:20 MeOH:ACN) / 60% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7 min and hold for 2 min before returning to initial conditions over 0.5 min.
Time: 10 min

Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 15.00
Cone Gas Flow (l/hr) = 100
Desolvation Gas Flow (l/hr) = 750

Form#:27, Issued 2004-11-10
Revision#:2, Revised 2012-06-13

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

As surrogate stock standard

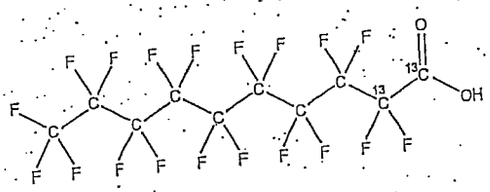
LOT NUMBER: MPFDA0912

PRODUCT CODE: MPFDA

COMPOUND: Perfluoro-n-[1,2-$^{13}C_2$]decanoic acid

CAS #: Not available

STRUCTURE:



MOLECULAR FORMULA: $^{13}C_2{}^{12}C_8HF_{19}O_2$

MOLECULAR WEIGHT: 516.07

CONCENTRATION: 50 ± 2.5 µg/ml

SOLVENT(S): Methanol, Water (<1%)

CHEMICAL PURITY: >98%

ISOTOPIC PURITY: ≥99% ^{13}C (1,2-$^{13}C_2$)

LAST TESTED: (mm/dd/yyyy) 09/13/2012

EXPIRY DATE: (mm/dd/yyyy) 09/13/2017

RECOMMENDED STORAGE: Store ampoule in a cool, dark place

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~ 0.1% of $^{13}C_1$-PFNA.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim

Date: 01/09/2013 (mm/dd/yyyy)

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Form#:27, Issued 2004-11-10

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. They are designed to be used as reference standards for the identification and/or quantification of specific chemical compound(s).

HAZARDS:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Material Safety Data Sheets (MSDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

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HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS and/or LC/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly tested by an external, ISO/IEC 17025:2005 accredited calibration company. In addition, their calibration is verified prior to each weighing using NIST and/or NRC traceable external weights. All volumetric glassware used is of Class A tolerance and has been tested according to the appropriate ASTM procedures, which are ultimately traceable to NIST. For certain products, traceability to International interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

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LIMITED WARRANTY:

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QUALITY MANAGEMENT:

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CALA

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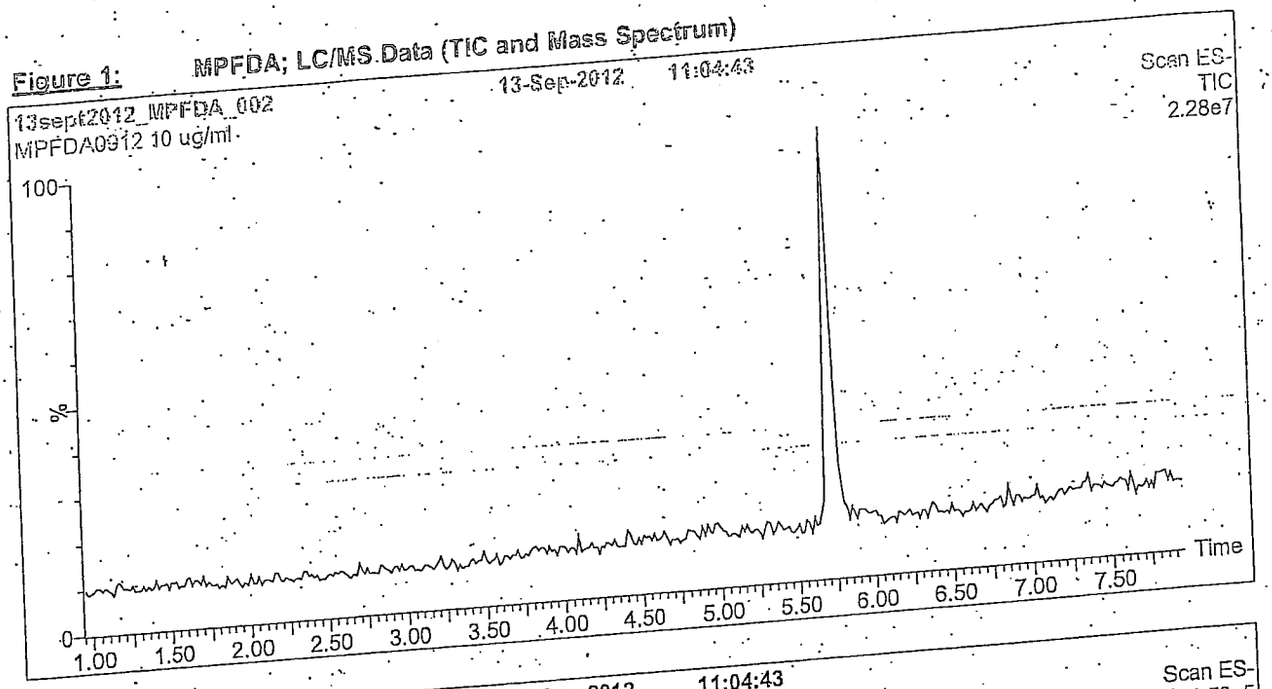
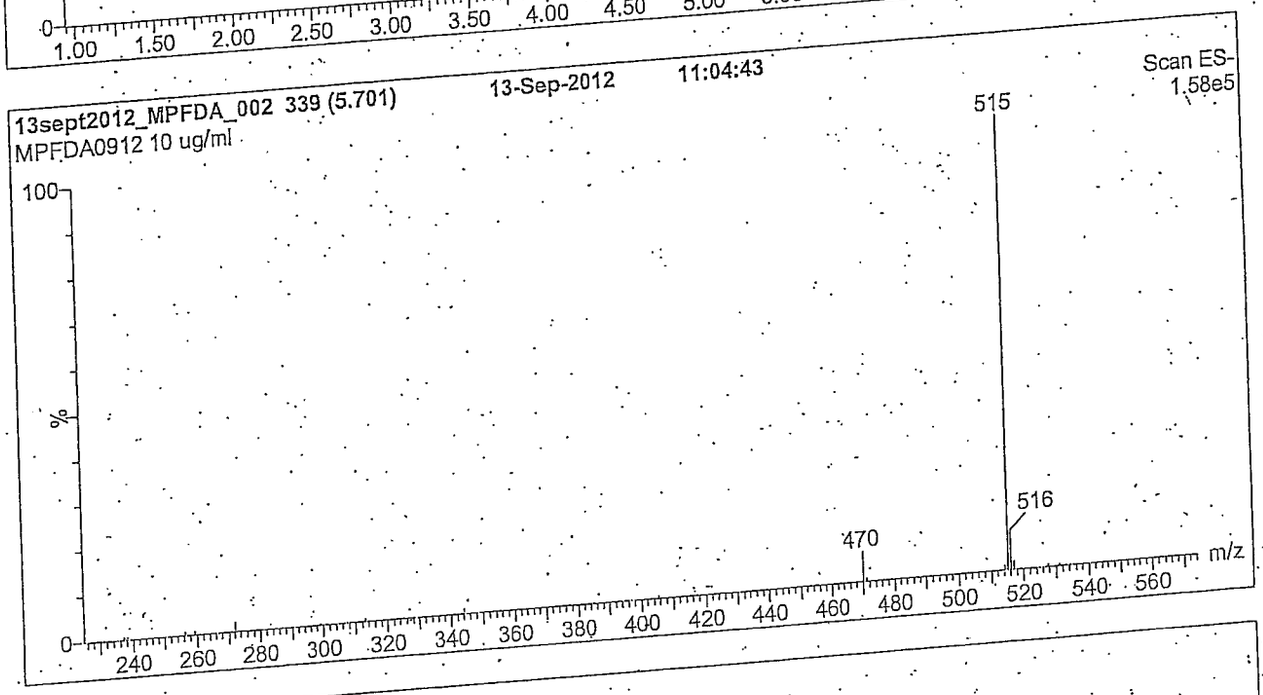
Figure 1: MPFDA; LC/MS Data (TIC and Mass Spectrum)





Conditions for Figure 1:

LC: Waters Acquity Ultra Performance LC
MS: Micromass Quattro *micro* API MS

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% (80:20 MeOH:ACN) / 60% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7 min and hold for 2 min
before returning to initial conditions in 0.5 min.
Time: 10 min

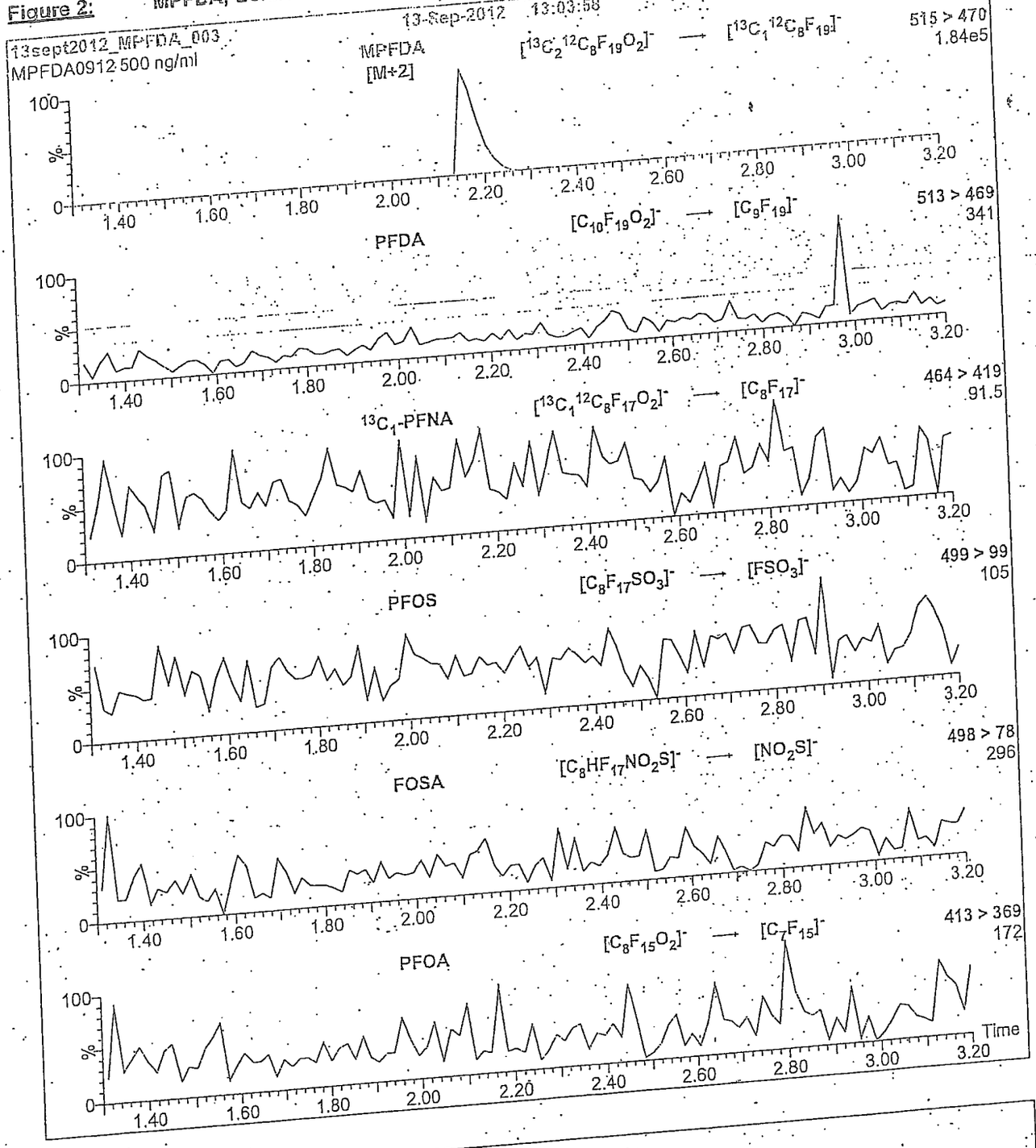
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 15.00
Cone Gas Flow (l/hr) = 50
Desolvation Gas Flow (l/hr) = 750

Figure 2: MPFDA; LC/MS/MS Data (Selected MRM Transitions)



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml MPFDA)

Mobile phase: Isocratic 80% (80:20 MeOH:ACN) / 20% H_2O
(both with 10 mM NH_4OAc buffer)

Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 3.62e-3
Collision Energy (eV) = 13

ID# @537-PFAC-MXB-140212-01
Rec. 05/12/14 by LHB
Opened: 05/01/14 by LHB

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PFAC-MXB

Solution/Mixture of Native Perfluoroalkylcarboxylic Acids and Native Perfluoroalkylsulfonates

Primary Standards
As ~~and Source standards~~. LHB 05/07/14

PRODUCT CODE:	PFAC-MXB ✓
LOT NUMBER:	PFACMXB0913 ✓
SOLVENT(S):	Methanol / Water (<1%)
DATE PREPARED: (mm/dd/yyyy)	09/12/2013
LAST TESTED: (mm/dd/yyyy)	09/13/2013
EXPIRY DATE: (mm/dd/yyyy)	09/13/2018 ✓
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place

DESCRIPTION:

PFAC-MXB is a solution/mixture of thirteen native perfluoroalkylcarboxylic acids (C_4-C_{14}, C_{16}, and C_{18}) and four native perfluoroalkylsulfonates (C_4, C_6, C_8 and C_{10}). The full name, abbreviation and concentration for each of the components are given in Table A.

The individual perfluoroalkylcarboxylic acids and perfluoroalkylsulfonates all have chemical purities of >98%.

DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR).
Figure 2: LC/MS/MS Data (Selected MRM Transitions)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

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INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. They are designed to be used as reference standards for the identification and/or quantification of specific chemical compound(s).

HAZARDS:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Material Safety Data Sheets (MSDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

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HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS and/or LC/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly tested by an external, ISO/IEC 17025:2005 accredited calibration company. In addition, their calibration is verified prior to each weighing using NIST and/or NRC traceable external weights. All volumetric glassware used is of Class A tolerance and has been tested according to the appropriate ASTM procedures, which are ultimately traceable to NIST. For certain products, traceability to international interlaboratory studies has also been established.

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LIMITED WARRANTY:

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QUALITY MANAGEMENT:

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Table A: PFAC-MXB; Components and Concentrations (ng/ml, ± 5% in Methanol / Water (<1%))

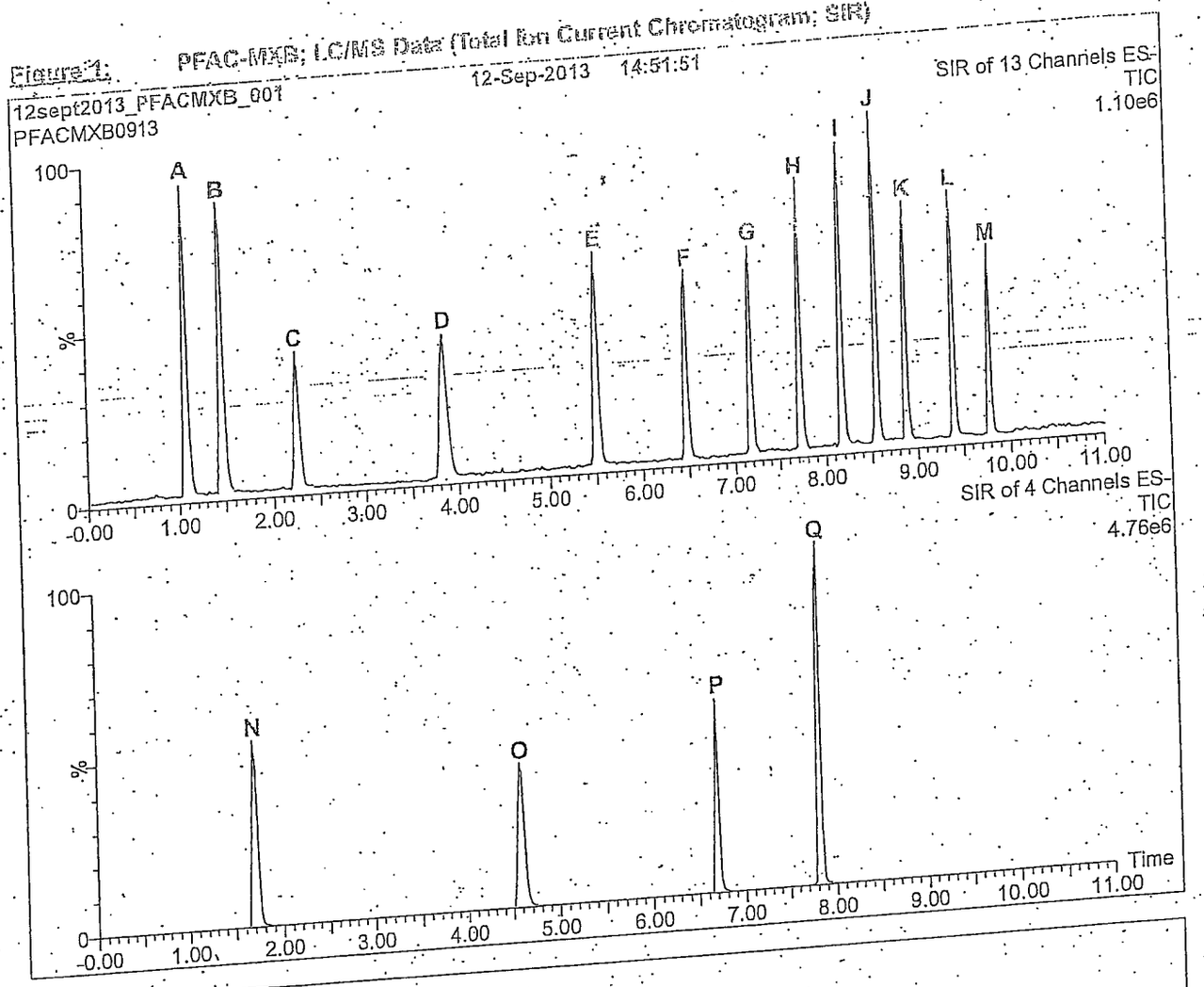
Name	Abbreviation	Concentration (ng/ml)	Peak Assignment in Figure 1
Perfluoro-n-butanoic acid	PFBA	2000	A
Perfluoro-n-pentanoic acid	PFPeA	2000	B
Perfluoro-n-hexanoic acid	PFHxA	2000	C
Perfluoro-n-heptanoic acid	PFHpA	2000	D
Perfluoro-n-octanoic acid	PFOA	2000	E
Perfluoro-n-nonanoic acid	PFNA	2000	F
Perfluoro-n-decanoic acid	PFDA	2000	G
Perfluoro-n-undecanoic acid	PFUdA	2000	H
Perfluoro-n-dodecanoic acid	PFDoA	2000	I
Perfluoro-n-tridecanoic acid	PFTrDA	2000	J
Perfluoro-n-tetradecanoic acid	PFTeDA	2000	K
Perfluoro-n-hexadecanoic acid	PFHxDA	2000	L
Perfluoro-n-octadecanoic acid	PFODA	2000	M

Name	Abbreviation	Concentration (ng/ml)		Peak Assignment in Figure 1
		as the salt	as the anion	
Potassium perfluoro-1-butanesulfonate	L-PFBS	2000	1770	N
Sodium perfluoro-1-hexanesulfonate	L-PFHxS	2000	1890	O
Sodium perfluoro-1-octanesulfonate	L-PFOS	2000	1930	P
Sodium perfluoro-1-decanesulfonate	L-PFDS	2000		Q

Certified By: B.G. Chittim

Date: 09/24/2013 (mm/dd/yyyy)

Figure 1: PFAC-MXB; LC/MS Data (Total Ion Current Chromatogram; SIR)



Conditions for Figure 1:

LC: Waters Acquity Ultra Performance LC
MS: Micromass Quattro *micro* API MS

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% H_2O / 50% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 100% organic over 7 min and hold for 2 min before returning to initial conditions in 0.5 min.

Time: 15 min

Flow: 300 µl/min

MS Parameters

Experiment:
Function 1: SIR of 13 Channels
Function 2: SIR of 4 Channels

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.50
Cone Voltage (V) = variable (10-70)
Cone Gas Flow (l/hr) = 100
Desolvation Gas Flow (l/hr) = 750

Figure 2: PFAC-MXB; LC/MS/MS Data (Selected MRM Transitions)

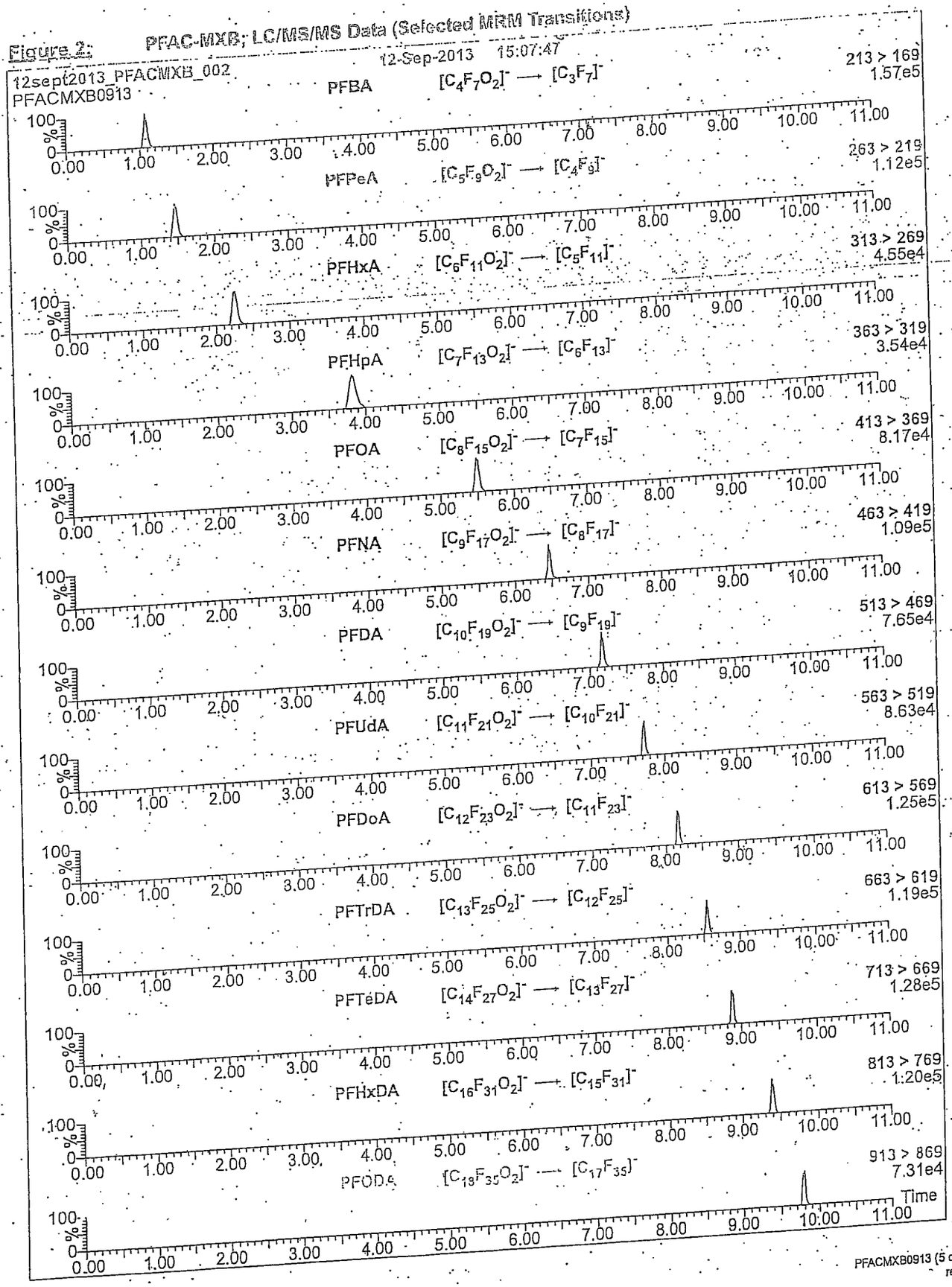
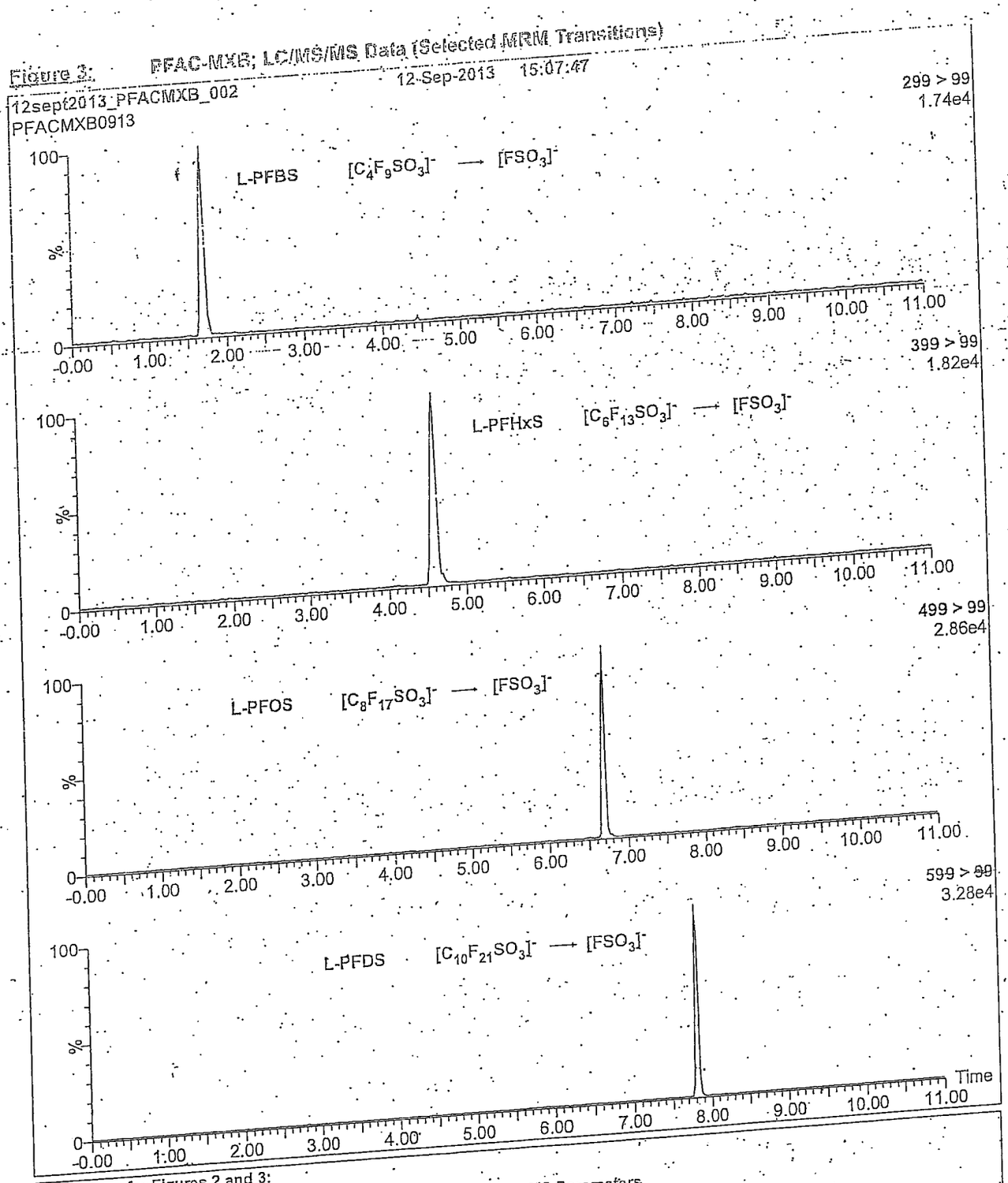


Figure 3: PFAC-MXB; LC/MS/MS Data (Selected MRM Transitions)



Conditions for Figures 2 and 3:

Injection: on-column (PFAC-MXB)

Mobile phase: Same as Figure 1

Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 3.13e-3

Collision Energy (eV) = 9-50 (variable)

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

2nd Source standards
As ~~primary standards~~ HB 05/07/14
(older lot)

PFAC-MXB

Solution/Mixture of Native Perfluoroalkylcarboxylic Acids and Native Perfluoroalkylsulfonates

PRODUCT CODE:	PFAC-MXB
LOT NUMBER:	PFACMXB0312 ✓
SOLVENT(S):	Methanol / Water (≤1%)
DATE PREPARED: (mm/dd/yyyy)	03/07/2012
LAST TESTED: (mm/dd/yyyy)	03/08/2012
EXPIRY DATE: (mm/dd/yyyy)	03/08/2015 ✓
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place

DESCRIPTION:

PFAC-MXB is a solution/mixture of thirteen native perfluoroalkylcarboxylic acids (C_4-C_{14}, C_{16}, and C_{18}) and four native perfluoroalkylsulfonates (C_4, C_6, C_8 and C_{10}). The full name, abbreviation and concentration for each of the components are given in Table A.

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DOCUMENTATION/ DATA ATTACHED:

- Table A: Components and Concentrations of the Solution/Mixture
- Figure 1: LC/MS Data (SIR)
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- Figure 3: LC/MS/MS data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

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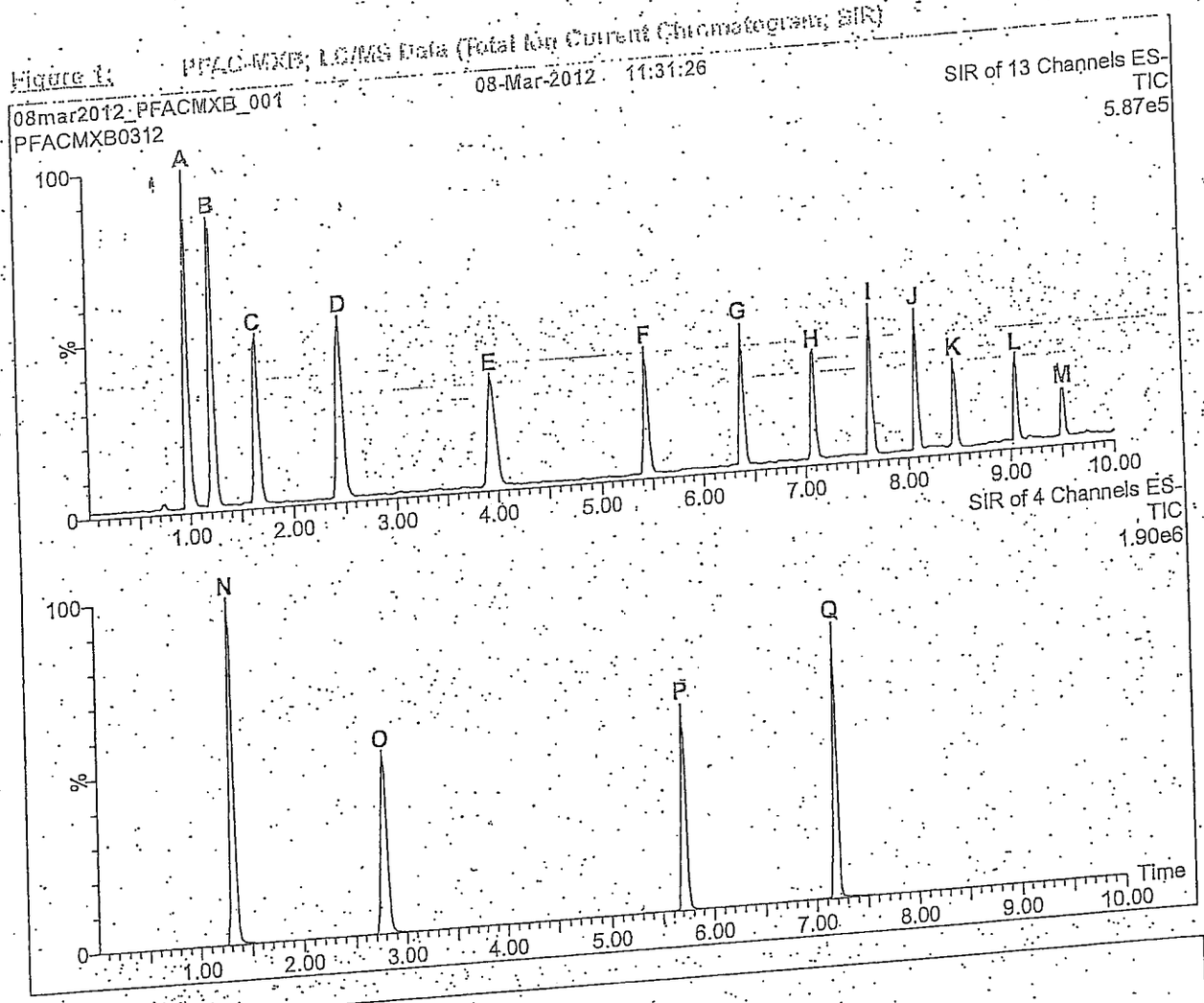
Perfluoro-n-pentanoic acid	PFPeA	2000	B
Perfluoro-n-hexanoic acid	PFHxA	2000	C
Perfluoro-n-heptanoic acid	PFHpA	2000	D
Perfluoro-n-octanoic acid	PFOA	2000	E
Perfluoro-n-nonanoic acid	PFNA	2000	F
Perfluoro-n-decanoic acid	PFDA	2000	G
Perfluoro-n-undecanoic acid	PFUdA	2000	H
Perfluoro-n-dodecanoic acid	PFDoA	2000	I
Perfluoro-n-tridecanoic acid	PFTrDA	2000	J
Perfluoro-n-tetradecanoic acid	PFTeDA	2000	K
Perfluoro-n-hexadecanoic acid	PFHxDA	2000	L
Perfluoro-n-octadecanoic acid	PFODA	2000	M

Name	Abbreviation	Concentration (ng/ml)		Peak Assignment in Figure 1
		as the salt	as the anion	
Potassium perfluoro-1-butanesulfonate	L-PFBS	2000	1770	N
Sodium perfluoro-1-hexanesulfonate	L-PFHxS	2000	1890	O
Sodium perfluoro-1-octanesulfonate	L-PFOS	2000	1910	P
Sodium perfluoro-1-decanesulfonate	L-PFDS	2000	1930	Q

Certified By: B.G. Chittim

Date: 03/19/2012 (mm/dd/yyyy)

Figure 1: PFAC-MXB; LC/MS Data (Total Ion Current Chromatogram, SIR)



Conditions for Figure 1:

LC: Waters Acquity Ultra Performance LC

MS: Micromass Quattro *micro* API MS

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% H_2O / 50% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Hold for 3 min; ramp to 100% organic over 7 min,
hold for 2 min, then return to initial conditions in 0.5 min.

Time: 15 min

Flow: 300 µl/min

MS Parameters

Experiment:
Function 1: SIR of 13 Channels
Function 2: SIR of 4 Channels

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.50
Cone Voltage (V) = variable (10-70)
Cone Gas Flow (l/hr) = 100
Desolvation Gas Flow (l/hr) = 750

Figure 2: PFAC-MXB; LC/MS/MS Data (Selected MRM Transitions)

08mar2012_PFACMXB_004 08-Mar-2012 12:19:20

PFACMXB0312

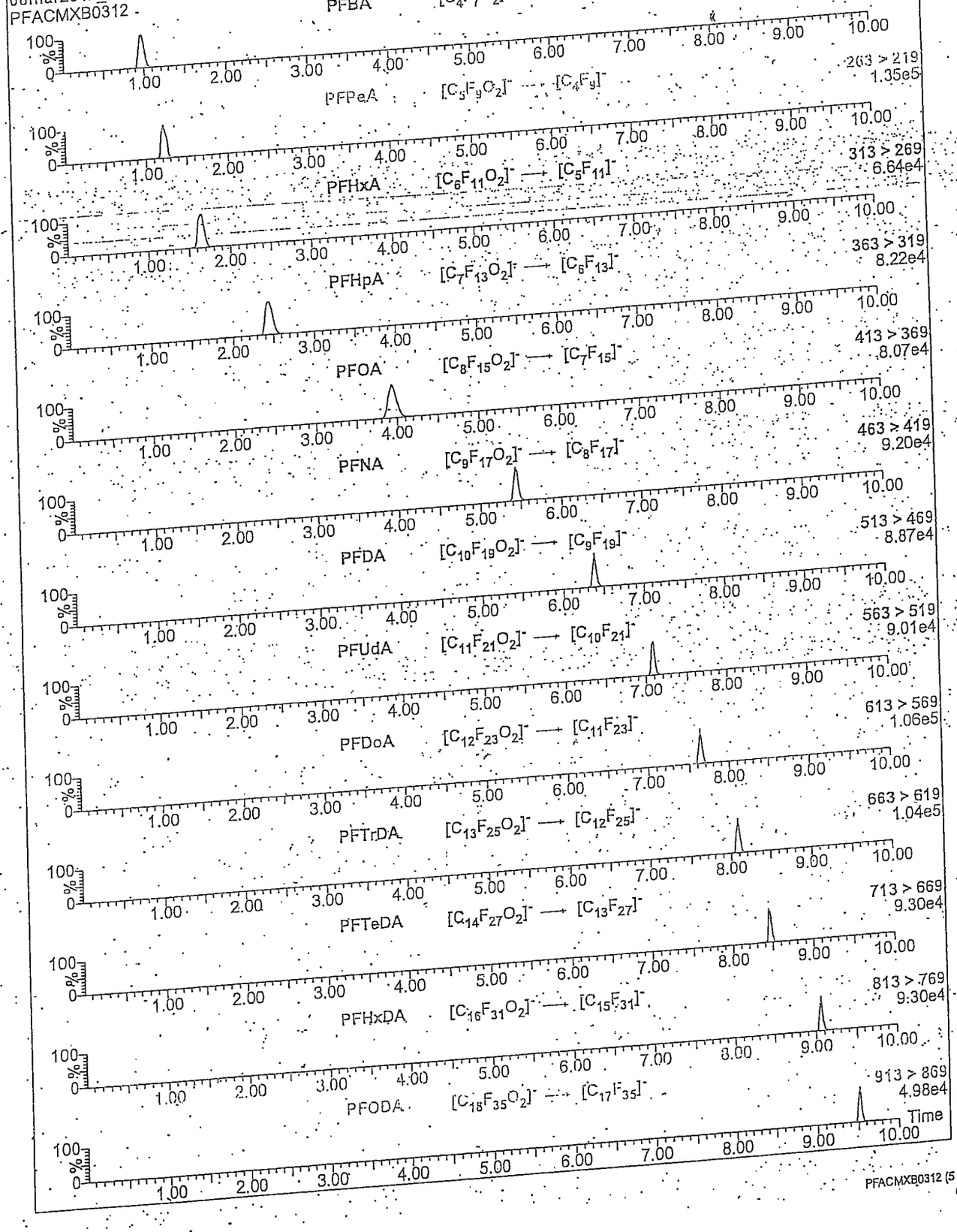
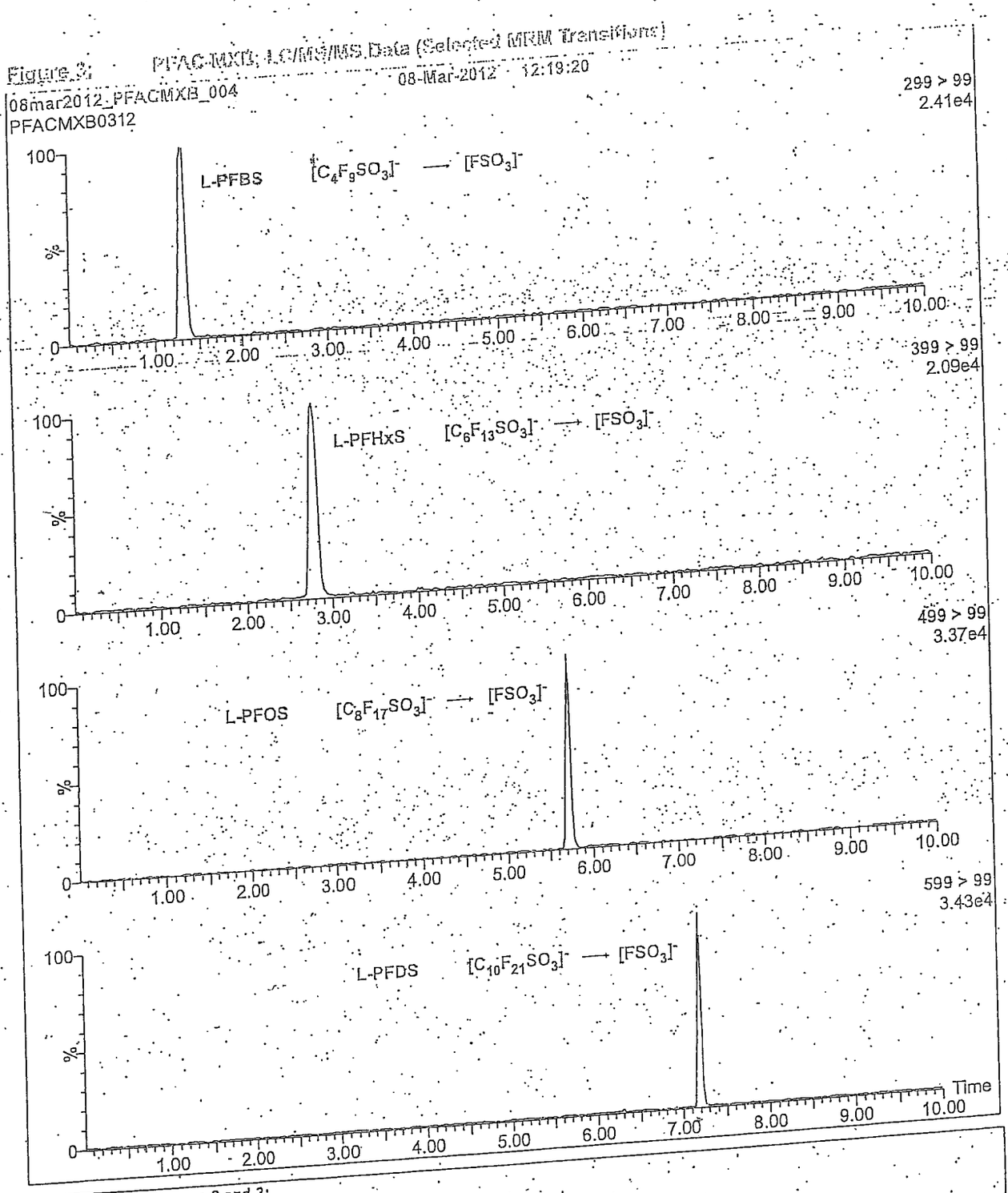


Figure 3: PFAC-MXB; LC/MS/MS Data (Selected MRM Transitions)

08mar2012_PFACMXB_004 08-Mar-2012 12:19:20

PFACMXB0312



Conditions for Figures 2 and 3:

Injection: on-column (PFAC-MXB)

Mobile phase: Same as Figure 1

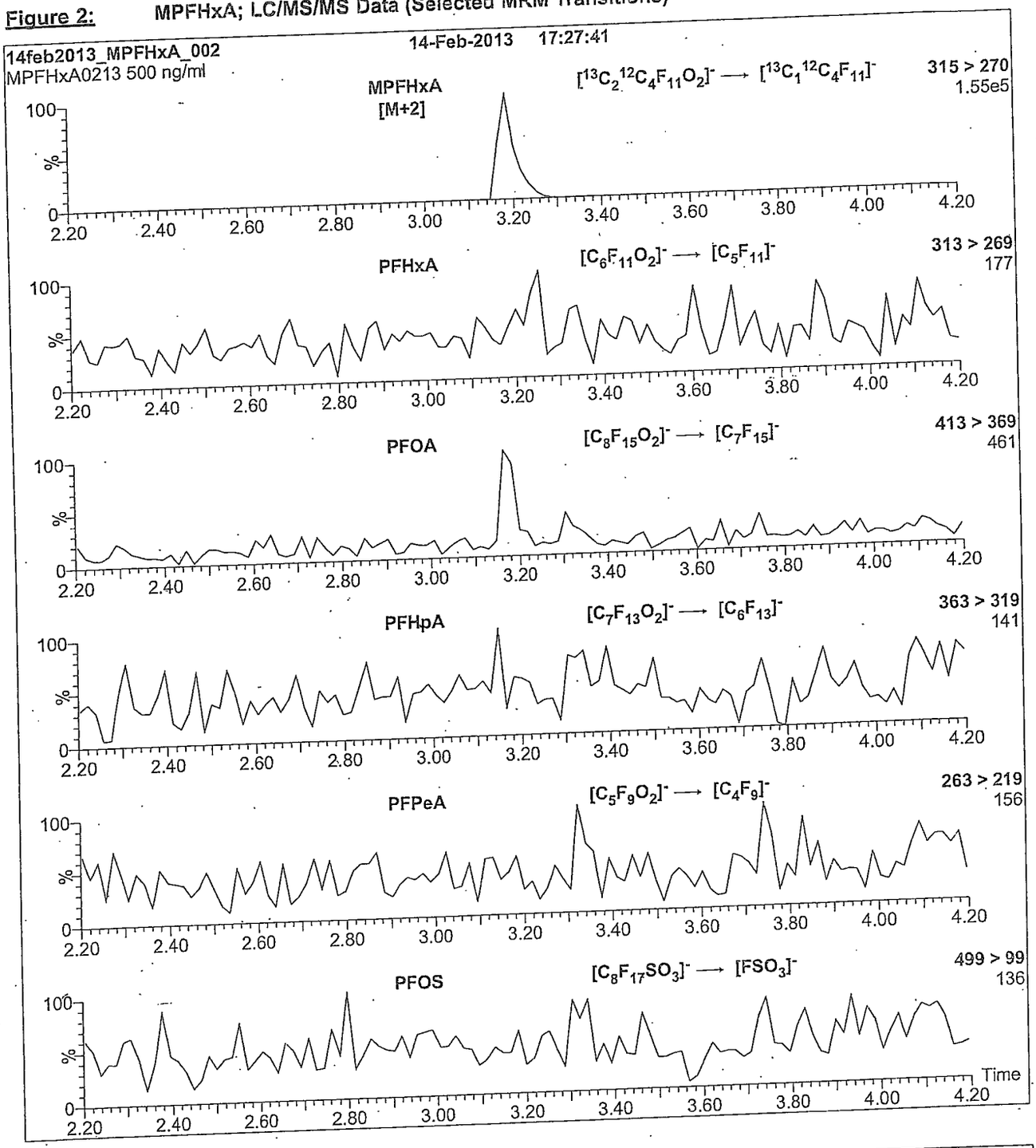
Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 3.17e-3

Collision Energy (eV) = 9-50 (variable)

Figure 2: MPFHxA; LC/MS/MS Data (Selected MRM Transitions)



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml MPFHxA)

Mobile phase: Isocratic 80% (80:20 MeOH:ACN) / 20% H_2O
(both with 10 mM NH_4OAc buffer)

Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 3.43e-3
Collision Energy (eV) = 10

Form#:27, Issued 2004-11-10
Revision#:2, Revised 2012-06-13

5/13/14 @UCMR3-539: MeOH/HPLC-H2O (50:50) mixture solvent
ZL MeOH: MeOH-050814-04: 250 mL.
HPLC-H2O: H2O-050914-01: 250 mL.

5/13/14 @UCMR3-537-25-PDS-051314-ZL.
ZL 500 uL of MPFOA 1013 (537-MPFOA-140428) @ 50ppm from Wellington Lab. Exp. 10/11/18
1500 uL of MPFOS 0913 (537-MPFOS-140130-02,03) @ 50ppm from Welling Lab. Exp. 09/18/18
diluted to 25 mL in a class A volumetric flask with MeOH/HPLC-H2O (96:4) Prep @ 5/5/14 by ZL. mix well.
Exp. 9/13/14.

5/13/14 @UCMR3-537-Surr-PDS-051314-ZL.
ZL. 500 uL of MPFHxA 0213 @ 50ppm from Wellington Lab. Exp 2/14/18
500 uL of MPFDA 0912 @ 50ppm from Wellington Lab. Exp 9/13/17
diluted to 25 mL in a class A volumetric flask with MeOH/HPLC-H2O (96:4) Prep @ 5/5/14 by ZL. mix well
Exp 11/13/14

5/14/14 @UCMR3-537: MeOH/HPLC-H2O (96:4) mixture solvent
ZL MeOH: MeOH-050814-03: 480 mL
HPLC-H2O: H2O-050714-02: 20 mL
mix well.

5/14/14 @UCMR3-539: MeOH/HPLC-H2O (50:50) mixture solvent.
ZL MeOH: MeOH-050814-03: 30 mL
HPLC-H2O: H2O-050714-02: 30 mL
mix well.

6/30/14 @UCMR3-537: Calibration Standards — Exp. 7/13/14
ZL

STD NO.	@UCMR3-537-Analytes-PDS-042814-ZL Exp. 10/28/14 (mL)	@UCMR3-537-25-PDS-051314-ZL Exp. 7/13/14 (mL)	@UCMR3-537-Surr-PDS-051314-ZL Exp 11/13/14 (mL)	Vol. of MeOH/HPLC-H2O (96:4) Prep. @ 6/30/14 by ZL (mL)
ICAL-0	0	10	10	980
ICAL-1	10	10	10	970
ICAL-2	20	10	10	960
ICAL-3	40	10	10	940
ICAL-4	60	10	10	920
ICAL-5	80	10	10	900
ICAL-6	120	10	10	860

6/30/14 @UCMR3-537: QCS standard — Exp. 7/13/14
ZL
@UCMR3-537-2nd source-PDS-052914-ZL. — Exp. 11/29/14: 50 µL
@UCMR3-537-IS-PDS-051314-ZL — Exp. 7/13/14: 10 µL
@UCMR3-537-Surr-PDS-051314-ZL — Exp. 11/13/14: 10 µL
Vol. of MeOH/HPLC-H2O (96:4) Prep. @ 6/30/14 by ZL : 930 µL
Reviewed by IHB 06/30/14

7/3/14 @UCMR3-537: MeOH/HPLC-H2O : 96/4 mixture solvent.
ZL
MeOH: MeOH-060914-06 : 240 mL
HPLC-H2O: H2O-070114-02 : 10 mL mix well

7/8/14 @UCMR3-537: MeOH/HPLC-H2O: 96/4 mixture solvent.
ZL
MeOH: MeOH-060914-05 : 240 mL
HPLC-H2O: H2O-070114-03 : 10 mL. mix well

7/8/14 @UCMR3-537-Surr-PDS-070814-ZL — Exp. 1/8/15
ZL
200 µL of MPFHxA 0213 @ 50 ppm from Wellington Lab exp. 2/14/1
200 µL of MPFDA 0912 @ 50 ppm from Wellington Lab. exp. 9/13/1
diluted to 10 mL in a class A volumetric flask with
MeOH/HPLC-H2O (96:4) Prep. by ZL @ 7/8/14. mix well.

7/8/14 @UCMR3-539-IS-PDS-070814-ZL. Exp. 9/8/14
ZL ✓ 200 uL of MPFOA 1013 (539-MPFOA-140428) @50ppm from Wellington Lab. exp. 10/11/18
600 uL of MPFOS 0316 (539-MPFOS-140428-01) @ 50ppm from Wellington Lab. exp. ~~09/15/14~~ 3/10/19 ZL 7/8/14
diluted to 10 mL in a class A volumetric flask with MeOH/HPLC-H2O (96:4) Prep @ 7/8/14 by ZL. mix well.

7/9/14 @UCMR3-539 : MeOH/HPLC-H2O (50:50) mixture solvent
ZL MeOH : MeOH-060914-06 : 30mL.
HPLC-H2O : H2O-070114-04 : 30mL. mix well

7/9/14 @UCMR3-539 : Calibration Standards Exp: 7/23/14
ZL

STD NO	@UCMR3-539-Analyte-PDS-061214-ZL Exp. 9/12/14 (uL)	@UCMR3-539-IS-PDS-050714-ZL Exp. 11/9/14 (uL)	@UCMR3-539-Surr-PDS-050714-ZL Exp. 9/11/14 (uL)	Vol. of MeOH/HPLC-H2O (50:50) prep. @ 7/9/14 by ZL (uL)
ICAL-0	0	10	10	980
ICAL-1	5	10	10	975
ICAL-2	10	10	10	990
ICAL-3	20	10	10	960
ICAL-4	40	10	10	940
ICAL-5	100	10	10	880
ICAL-6	200	10	10	780

7/9/14 @UCMR3-539: QCS standard. Exp. 7/23/14
ZL @UCMR3-539-2nd source-PDS-061214-ZL Exp. 9/12/14 : 40 uL
@UCMR3-539-IS-PDS-050714-ZL Exp. 11/9/14 : 10 uL
@UCMR3-539-Surr-PDS-050714-ZL Exp. 9/11/14 : 10 uL
Vol. of MeOH/HPLC-H2O (50:50) prep @ 7/9/14. by ZL : 940 uL

Reviewed by LHZ 07/09/14

05/01/14 LHZ

@537 : 2nd Source PDS @ 100ppb

Take 250µl (by microsyringe) of PFAC-MXB (Wellington P/N: PFAC-MXB, Lot# PFACMXB0312, @2.0mg/mL, Exp. 03/08/2015) to 5-mL class A volumetric flask, diluted to volume with 96:4 = MeOH:H2O mixture (Prep. 04/11/14 by EL), mix well

Lot# @537 2nd Source @ 100ppb-050114-LHZ

Exp. 11/01/14 6 months

05/02/14 LHZ

@532-LCMS : Primary Dilution Solvent (PDS) (*) @ 1ppm

Take 50µl of @532-LCMS 2nd Source Stock standard mix (Lot# @532-LCMS 2nd Source Stock Mixture @ 200ppm-070313-LHZ, Exp. 07/ to a class A 10-ml volumetric flask, diluted to volume with Me (ID# MeOH-040114-02, opened 04/30/14 by EL), mix well.

Lot# @532-LCMS PDS @ 1ppm-050214-LHZ, Exp. 07/03/14

05/02/14 LHZ

@532-LCMS : Primary Dilution Solvent (PDS) (*) @ 0.1ppm

Take 1ml of @532-LCMS PDS @ 1ppm (by microsyringe) (Lot# @ -LCMS PDS @ 1ppm-050214-LHZ, Exp. 07/03/14) to a class A volu flask @ 10-ml, diluted to volume with methanol (ID# Me 040114-02, opened 04/30/14 by EL), mix well.

Lot# @532-LCMS PDS @ 0.1ppm-050214-LHZ, Exp. 07/03/1

(*) NOTE :

07/01/14 LHB

C537: Primary Dilution Standard (PDS) @ 250 ppb

Take 625 ul (by microsyringe) of PFC stock standard (Wellington, ID# C537-PFAC-MXB-140212-01, opened 05/01/14 by LHB, Exp. 09/13/2018) to a 5ml volumetric flask, diluted to volume with 96:4 = MeOH: H2O mixture (prep. 06/30/14 by EL), mix well

Lot# C537-PDS-STD@250ppb-070114-LHB

Exp. 01/01/2015 Good for 6 months

07/01/14 LHB

C537: Primary Dilution Standard (PDS) @ 25 ppb

Take 500ul (by microsyringe) of C537-PDS-STD@250 ppb (Lot# C537-PDS-STD@250ppb-070114-LHB, Exp. 01/01/2015) to a 5ml volumetric flask, diluted to volume with 96:4 = MeOH:H2O mixture (prep. by EL @ 06/30/14), mix well

Exp. 01/01/2015 Good for 6 months

Lot# C537-PDS-STD@25ppb-070114-LHB

07/01/14 LHB

C537: 2nd Source Primary Dilution Std @ 100 ppm LHB 07/01/14

Take 250ul (by micro syringe) of customer made C537 stock standard (Elemental Scientific, ID# C537-2nd Source-STD-140791-01, opened 07/01/2014 by LHB) to a 5ml volumetric flask, diluted to volume with 96:4 = MeOH: H2O mixture (prep. 06/30/14 by EL), mix well

Lot# C537-2nd Source-PDS-STD@100 ppm-070114-LHB LHB 07/01/14

Exp. 01/01/2015

Good for 6 months

Elemental Scientific
1500 N 24th Street
Omaha, NE 68110 USA
1.402.991.7000
www.icpms.com

Not for Human Consumption
For Research Use Only
Made in USA

Date Opened: 07/01/14 LHB

Cat. No: O2M-S3611RH06-5X1 Lot No 231001
Custom PFC Mix, 12-6311M, 200 mg/L, 5 x 1 ml ID# 537-2nd Source-STD-140791-01
Exp: 6/19/2016 Solvent: Methanol:Water 96%:4% Storage: ≤ -10 °C

07/02/14
LHB

@532-LCMS: Primary Stock standard #3
Propanil @2000 ppm

Dissolve 0.02 gms of neat propanil standard (Fluke, ID# 532LCMS-130703-03, Exp. 03/17/2015) to a 10ml volumetric flask, add ~6ml of methanol (ID# MeOH-060914-03) to sonicate for about 20 minutes, diluted to volume with the same methanol. The standard is stored in a 12-ml amber glass vial @4°C.

Lot# @532-LCMS Stock #3 - Propanil @2000ppm
-070214-LHB
Exp. 03/17/15 (1Yr)
Balance ID: Fisher Scientific, A-250, S/N: 24276

07/02/14
LHB

@532-LCMS: Primary Stock Standard #4
Pyriproxifen @2000 ppm

Dissolve 0.02 gms of neat pyriproxifen standard (Fluke, ID# 532LCMS-130703-04, opened 07/07/13 by LHB) to a 10ml volumetric flask, add ~6ml of methanol (ID# MeOH-060914-03) to sonicate for about 20 minutes, diluted to volume with the same methanol. The standard is stored in a 12-ml amber glass vial @ < 4°C.

Lot# @532-LCMS Stock #4 - Pyriproxifen @2000 ppm - 070214 - LHB
Balance ID# Fisher Scientific. A-250, S/N: 24276 Exp. 07/02/15

07/02/14
LHB

@537: 2nd Source Primary Dilution Std (PDS) @100 ppb

Take 50ml of @537 2nd Source PDS @10.0 ppm (Lot# @537 2nd Source-PDS-STD @10ppm-070114-LHB, Exp. 01/01/15) to a 5ml volumetric flask, bring to volume with 96:4 = MeOH:H2O mixture (prep. 06/30/14 by EL), mix well.

Lot# @537-2nd Source-PDS-STD @100ppb - 070214 - LHB
Exp. ~~07~~ 01/01/15
LHB 07/02/14 6 months.

07/16/14 C537: 20mM Ammonium Acetate MP A1

LHZ

1:00 p.m Dissolve 0.7905 gms of ammonium acetate (Alltrach. ID# NH4OAC-052214-02, opened 06/24/14 by LHZ) to 500 ml of HPLC H2O (ID# HW-071114-01, opened 07/14/14 by LHZ), mix well.

Exp. 07/18/14 1:00 p.m (48 hrs)

Balance ID: Fisher Scientific, A-250, S/N: 24276

07/16/14 C537: Calibration Standards

LHZ

C537 Calibration Std		C537 PDS Stds		CUCMR3-537 IS	CUCMR3-537-SURR	Volume of
		~~C25 ppb~~	~~C250 ppb~~	Lot# CUCMR3-537	Lot# CUCMR3-537	96:4 = MeOH : H2O
Actual Concentration	Concentration For 250ml Extraction Volume	Lot# ~~C537-PDS-STD C25ppb~~ -070114-LHZ	Lot# ~~C537-PDS-STD C250ppb~~ -070114-LHZ	-IS-PDS-070814 -EL	SURR-PDS-051314-EL	Mixture Prep. 07/03/14 by EL
				④ of ⑨	⑨ of ⑩	
		Exp. 01/01/15	Exp. 01/01/15	Exp. 09/08/14	Exp. 11/13/14	
(ppb)	(ppt)	(ul)	(ul)	(ul)	(ul)	(ul)
0	0	—	—	10	10	980
0.0025	0.625	25	—	10	10	955
0.005	1.25	—	5	10	10	975
0.01	2.5	—	10	10	10	970
0.02	5	—	20	10	10	960
0.04	10	—	40	10	10	940
0.08	20	—	80	10	10	900

~~Lot# C537 Cal 071614 - LHZ~~, ~~Exp. 07/30/14~~

Good for 2 WKS

7/16/14
LHB

@537: 2nd Source DCS @0.02 ppb

@537 2nd Source DCS Std		@537 2nd Source PDS	CUCMR3-537 IS	CUCMR3-537 SURR	Volume of
Actual Concentration	Concentration For 250mL/L Extraction Volume	Lot#@537 2nd Source PDS @100ppb-050114-LHB Exp. 11/01/14	Lot#CUCMR3-537-IS-PDS-070814-EL (4) of (9) Exp. 09/08/14	Lot#CUCMR3-537-SURR-PDS-0513-14-EL (9) of (10) Exp. 11/13/14	96:4=MeOH:H2O Mixture Prep. 07/03/14 by EL
(ppb)	(ppt)	(µl)	(µl)	(µl)	(µl)
0.02	5	50	10	10	930

Lot# @537 2nd Source DCS-071614-LHB, Exp. 07/30/14
Good for 2 wks

07/16/14
LHB

~~@537: 2nd Source DCS @0.02 ppb~~ (*)

@537 2nd Source DCS Std		@537 2nd Source	CUCMR3-537 IS	CUCMR3-537 SURR	Volume of
Actual Concentration	Concentration For 250mL/L Extraction Volume	Lot#@537 2nd Source PDS @100 ppb -070214-LHB Exp. 01/01/15	Lot#CUCMR3-537-IS-PDS-070814-EL (4) of (9) Exp. 09/08/14	Lot#CUCMR3-537-SURR-PDS-0513-14-EL (9) of (10) Exp. 11/13/14	96:4=MeOH:H2O Mixture Prep. 07/03/14 by EL
(ppb)	(ppt)	(µl)	(µl)	(µl)	(µl)
0.02	5	50	10	10	930

Lot# @537 2nd Source DCS (EL. Sci) - 071614-LHB
Exp. 07/30/14 2wks

(*): New source of stock standard from Elemental Scientific. Currently used for verification only. It is a potential second source supply.

LHB 07/16/14

LHB 07/16/14

Sheet For Run # 780662

Referenced Methods:	**LCMS 537**				
Start Date:	07/14/2014	**Time:**	0600	**Init:**	FAM
Comp Date:	07/15/2014	**Time:**	1200	**Init:**	fam
Reviewed:	07/15/2014	RGMc 07/15/14		**Init:**	FAM

Matrix: Water

	Standard ID	Inj Vol	Units	Exp. Date
Surr Soln:	UCMR3537SURRPDS051314EL(4)	10	UL	11/13/2014
MRL Spk Soln:	@537STD@25PPB070114LHZ	25	UL	01/01/2015
	NA	NA	NA	NA
LCS Soln:	@537STD@250PPB070114LHZ	25	NA	01/01/2015
	NA	NA	NA	NA
MS Soln:	@537STD@25PPB070114LHZ	25	UL	01/01/2015
	NA	NA	NA	NA
Solutions:	UCMR3537ISPDS070814EL(4)	10	UL	09/08/2014
	MEOH:HPLC(96:4)061614EL	NA	NA	NA
	NA	NA	NA	NA
	NA	NA	NA	NA
	NA	NA	NA	NA

	ID	mfg/lot
Reagent H2O:	NANOPURE	LAB
Solvent:	MEOH	EMD/53270
	NA	NA
	NA	NA
Salt:	NA	NA
Syringe:	NA	NA
	NA	NA
	NA	NA
	NA	NA
Disk:	STRATA SDB-L	PHENOMENEX/S214-56
Preservatives:	TRIZMA 5G/L	SIGMA/011M5401V
	NA	NA
	NA	NA
	NA	NA
	PH STRIPS	BDH/5113
	CL STRIPS	SENSAFE/101013D
	ZYMARK TURBOVAP LV	7

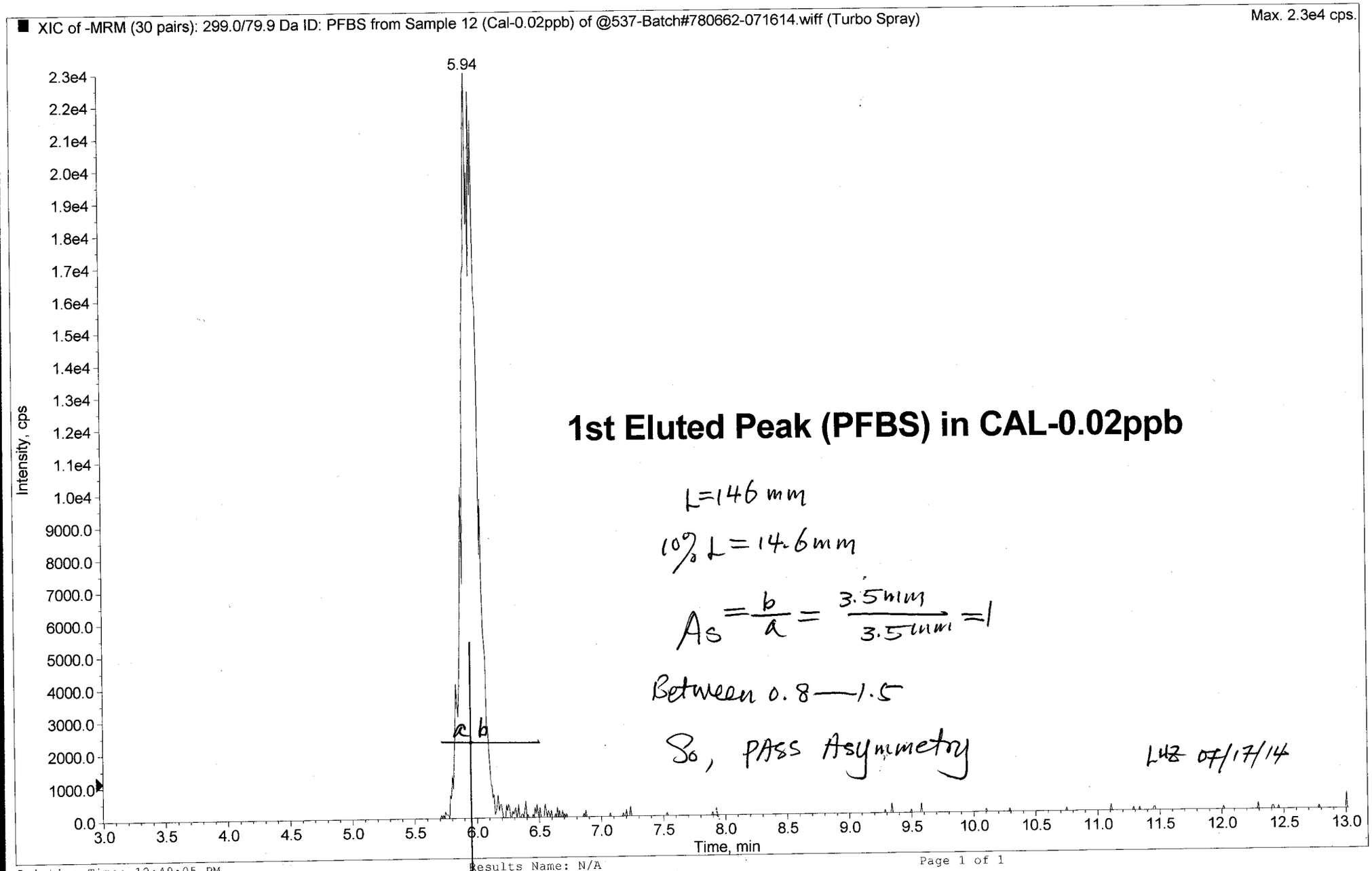
Room Temp: 21.0 **Water Bath/Heating Block Temp:** 55

	Folder #	Ordno	Client Code	Sample ID	Test	Vi (mL)	Vf (mL)	pH I	pH F	Cl-ppm
1	488755	201407090596	INTEGRAL-OLYMP	GW0161	@537-INTEGRAL	250	1	7	7	<0.1
	Comment: bottle 2 dirty						**Flags:**			
2	488755	201407090597	INTEGRAL-OLYMP	GW0162	@537-INTEGRAL	250	1	7	7	<0.1
	Comment: bottle 2						**Flags:**			
3	488755	201407090598	INTEGRAL-OLYMP	GW0163	@537-INTEGRAL	250	1	7	7	<0.1
	Comment: bottle 2						**Flags:**			
4	488755	201407090599	INTEGRAL-OLYMP	GW0164	@537-INTEGRAL	250	1	7	7	<0.1
	Comment: bottle 2						**Flags:**			
5	488755	201407090600	INTEGRAL-OLYMP	GW0165	@537-INTEGRAL	250	1	7	7	<0.1
	Comment: bottle 2						**Flags:**			
6	488755	201407090601	INTEGRAL-OLYMP	GW0166	@537-INTEGRAL	250	1	7	7	<0.1
	Comment: bottle 2						**Flags:**			
7	488755	201407090602	INTEGRAL-OLYMP	FB0001	@537-INTEGRAL FB	250	1	7	7	<0.1
	Comment: bottle 1						**Flags:**			
8	489248	201407110100	INTEGRAL-OLYMP	GW0172	@537-INTEGRAL	250	1	7	7	<0.1
	Comment: bottle 2						**Flags:**			
9	489248	201407110102	INTEGRAL-OLYMP	GW0174	@537-INTEGRAL	250	1	7	7	<0.1
	Comment: bottle 2						**Flags:**			
10	489248	201407110103	INTEGRAL-OLYMP	GW0173	@537-INTEGRAL	250	1	7	7	<0.1
	Comment: bottle 1						**Flags:**			
11	489248	201407110104	INTEGRAL-OLYMP	FB0003	@537-INTEGRAL FB	250	1	7	7	<0.1
	Comment: bottle 1						**Flags:**			
12	489249	201407110105	INTEGRAL-OLYMP	GW0171	@537-INTEGRAL	250	1	7	7	<0.1
	Comment: bottle 2						**Flags:**			
13	489249	201407110106	INTEGRAL-OLYMP	GW0170	@537-INTEGRAL	250	1	7	7	<0.1
	Comment: bottle 2						**Flags:**			
14	489249	201407110107	INTEGRAL-OLYMP	GW0169	@537-INTEGRAL	250	1	7	7	<0.1
	Comment: bottle 1						**Flags:**			
15	489249	201407110108	INTEGRAL-OLYMP	GW0168	@537-INTEGRAL	250	1	7	7	<0.1
	Comment: bottle 1						**Flags:**			
16	489249	201407110109	INTEGRAL-OLYMP	GW0167	@537-INTEGRAL	250	1	7	7	<0.1
	Comment: bottle 2						**Flags:**			
17	489232	201407110111	INTEGRAL-OLYMP	PW00119	@537-INTEGRAL	250	1	7	7	<0.1
	Comment: bottle 2 dirty						**Flags:**			
18	489232	201407110112	INTEGRAL-OLYMP	FB0002	@537-INTEGRAL FB	250	1	7	7	<0.1
	Comment: bottle 1						**Flags:**			
19	489232	201407110113	INTEGRAL-OLYMP	PW00103	@537-INTEGRAL	250	1	7	7	<0.1
	Comment: bottle 1						**Flags:**			
20	489386	201407140016	MIKE	Monrovia Water	@537	250	1	7	7	<0.1
	Comment:						**Flags:**			
21	Q126586	Q126586001		LCS1	Default	250	1	7	7	<0.1
	Comment:						**Flags:**			
22	Q126586	Q126586002		LCS2	Default	250	1	7	7	<0.1
	Comment:						**Flags:**			
23	Q126586	Q126586003		MBLK	Default	250	1	7	7	<0.1
	Comment:						**Flags:**			
24	Q126586	Q126586004		MRL_CHK	Default	250	1	7	7	<0.1
	Comment:						**Flags:**			
25	Q126586	Q126586005		MS (201407140016)	Default	250	1	7	7	<0.1
	Comment:						**Flags:**			
26	Q126586	Q126586006		MSD (201407140016)	Default	250	1	7	7	<0.1
	Comment:						**Flags:**			

Run Comments:

Operator: Lisa Zhao

Project: EPA537
Method Name: N/A
Batch Name: @537-Batch#780662-071614.dab



1st Eluted Peak (PFBS) in CAL-0.02ppb

L=146 mm

10% L = 14.6mm

$A_s = \frac{b}{a} = \frac{3.5mm}{3.5mm} = 1$

Between 0.8—1.5

So, PASS Asymmetry

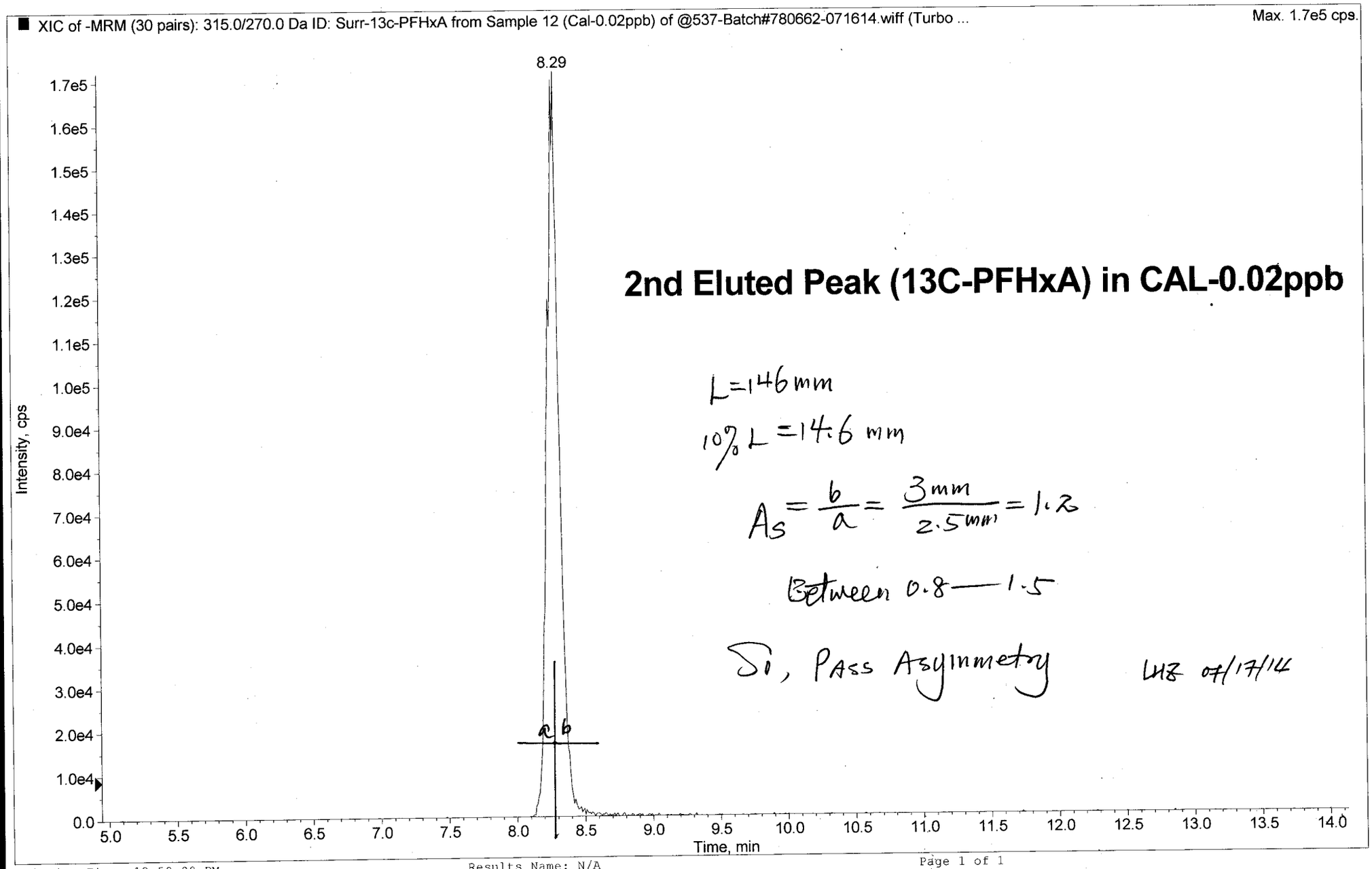
LHZ 07/17/14

Printing Time: 12:49:05 PM
Printing Date: Thursday, July 17, 2014

Results Name: N/A

Operator: Lisa Zhao

Project: EPA537
Method Name: N/A
Batch Name: @537-Batch#780662-071614.dab



2nd Eluted Peak (13C-PFHxA) in CAL-0.02ppb

L=146mm

10% L = 14.6 mm

$A_s = \frac{b}{a} = \frac{3mm}{2.5mm} = 1.2$

Between 0.8 — 1.5

So, Pass Asymmetry

LHZ 07/17/14

Printing Time: 12:50:09 PM
Printing Date: Thursday, July 17, 2014

Results Name: N/A

@537 IS RECOVERIES COMPARE WITH NEAREST CCCs AND IS RPD

@537-Batch#780662-071614

Analytical Run @07/16/2014 By LHZ LCMS3

Extracted @ 07/14/2014 - 07/15/2014 by FAM

LCMS3-FO-0001A

SOP ID#: LCMS 11 version 0.0

RAW DATA FROM RESULTS FILE			IS RPD	
Sample Name	IS-13C-PFOA Peak Area	IS-13C-PFOS Peak Area	13C-PFOA (%)	13C-PFOS (%)
Cal-0ppb	960054	1334547		
Cal-0.0025ppb	936072	1310556	3.48%	4.94%
Cal-0.005ppb	928318 Low	1273688 Low		
Cal-0.01ppb	961238 Hi	1338227 Hi		
Cal-0.02ppb	951956	1322240		
Cal-0.04ppb	952626	1293124		
Cal-0.08ppb	956772	1295406		
CCCL	960557	1306993	100.40%	100.89%
QCS_0.02ppb	977964	1338616	101.81%	102.42%
QCS_0.02ppb New Source(Elemental0	1028169	1411118	107.04%	107.97%
MBLK	966453	1333824	100.61%	102.05%
MRL_CHK	959450	1328746	99.88%	101.66%
LCS1	947314	1322199	98.62%	101.16%
LCS2	951249	1337882	99.03%	102.36%
201407140016MS	927034	1309916	96.51%	100.22%
201407140016MSD	933229	1328718	97.15%	101.66%
201407140016	920016	1323390	95.78%	101.25%
201407090602	891379	1299106	92.80%	99.40%
201407110104	895812	1288086	93.26%	98.55%
201407110112	911446	1295957	94.89%	99.16%
201407110113	909879	1251568	94.72%	95.76%
201407110111	900927	1293651	93.79%	98.98%
201407090596	913300	1309523	95.08%	100.19%
201407090597	884727	1290417	92.11%	98.73%
201407090598	920410	1319960	95.82%	100.99%
201407090599	900114	1292635	93.71%	98.90%
CCCM	972900	1398455	101.28%	107.00%
201407090600	915033	1329000	94.05%	95.03%
201407090601	933782	1345732	95.98%	96.23%
201407110100	900396	1402002	92.55%	100.25%
201407110102	877505	1369171	90.19%	97.91%
201407110103	931818	1392013	95.78%	99.54%
201407110105	938977	1435993	96.51%	102.68%
201407110106	949576	1506519	97.60%	107.73%
201407110107	937142	1437803	96.32%	102.81%
201407110108	924488	1466221	95.02%	104.85%
*DNR-201407110109	998194	1504283	102.60%	107.57%
CCCH	991706	1510265	101.93%	108.00%
CCCL	888751	1416106	89.62%	93.77%
CCCL	1040908	1500586	104.96%	99.36%
201407110109	965949	1457304	92.80%	97.12%
DNR-201407090597_Reinject	956335	1453463	91.88%	96.86%
201407090596A_X5 Dilution	1077268	1549849	103.49%	103.28%
201407090598A_X5 Dilution	1052074	1555036	101.07%	103.63%
CCCM	1018586	1549103	97.86%	103.23%

IS RECOVERY AGAINST NEAREST CCCs

All IS RPDs <20% PASS

*DNR: Data Not Reported and The incorrect sample (CCCH) was injected instead of the real sample(see run sequence).

@537 IS RECOVERIES AGAINST AVERAGE ICAL IS

@537-Batch#780662-071614

LCMS3-FO-0002A

Analytical Run @07/16/2014 By LHZ LCMS3

Extracted @ 07/14/2014 to 07/15/2014by FAM

SOP ID#: LCMS 11 Version 0.0

RAW DATA FROM RESULTS FILE		
Sample Name	IS 13C-PFOA RECOVERY WITH ICAL AVE. (%)	IS 13C-PFOS RECOVERY WITH ICAL AVE. (%)
Cal-0ppb	101.29	102.22
Cal-0.0025ppb	98.76	100.38
Cal-0.005ppb	97.94	97.56
Cal-0.01ppb	101.41	102.50
Cal-0.02ppb	100.44	101.28
Cal-0.04ppb	100.51	99.05
Cal-0.08ppb	100.94	99.22
CCCL	101.34	100.11
QCS_0.02ppb	103.18	102.53
QCS_0.02ppb New Source(Elemental0	108.48	108.09
MBLK	101.96	102.17
MRL_CHK	101.23	101.78
LCS1	99.95	101.28
LCS2	100.36	102.48
201407140016MS	97.81	100.34
201407140016MSD	98.46	101.78
201407140016	97.07	101.37
201407090602	94.04	99.51
201407110104	94.51	98.66
201407110112	96.16	99.27
201407110113	96.00	95.87
201407110111	95.05	99.09
201407090596	96.36	100.31
201407090597	93.34	98.84
201407090598	97.11	101.10
201407090599	94.97	99.01
CCCM	102.64	107.12
201407090600	96.54	101.80
201407090601	98.52	103.08
201407110100	95.00	107.39
201407110102	92.58	104.87
201407110103	98.31	106.62
201407110105	99.07	109.99
201407110106	100.18	115.39
201407110107	98.87	110.13
201407110108	97.54	112.31
DNR-201407110109	105.31	115.22
CCCH	104.63	115.68
CCCL	93.77	108.47
CCCL	109.82	114.94
201407110109	101.91	111.62
DNR-201407090597_Reinject	100.90	111.33
201407090596A_X5 Dilution	568.28/5=113.656	593.57/5=118.714
201407090598A_X5 Dilution	554.99/110.998	595.55/5=119.11
CCCM	107.47	118.66

In ICAL, all points in the back calculation are within 70%-130% So, PASS

For all samples, IS recoveries are within 50%-150%% compared to the average IS response in ICAL So, PASS

*DNR: Data Not Reported and The incorrect sample (CCCH) was injected instead of the real sample(see run sequence).

@537: SURROGATE RECOVERIES

@537-Batch#780662-071614

LCMS3-FO-0003A

Analytical Run @07/16/2014 By LHZ LCMS3

Extracted @ 07/14/2014 to 07/15/2014 by FAM

SOP ID#: LCMS 11 Version 0.0

RAW DATA FROM RESULTS FILE		
Sample Name	Surrogate Recovery 13c-PFHxA	Surrogate Recovery 13c-PFDA
Cal-0ppb	97.83	98.26
Cal-0.0025ppb	103.14	102.26
Cal-0.005ppb	96.41	98.33
Cal-0.01ppb	101.92	101.65
Cal-0.02ppb	103.14	100.61
Cal-0.04ppb	97.90	100.58
Cal-0.08ppb	97.48	96.57
CCCL	101.67	100.43
QCS_0.02ppb	102.68	103.98
QCS_0.02ppb New Source(Elemental0	106.46	100.93
MBLK	97.28	95.93
MRL_CHK	95.26	96.29
LCS1	102.95	100.35
LCS2	99.99	99.17
201407140016MS	101.74	99.95
201407140016MSD	99.92	99.77
201407140016	106.26	101.10
201407090602	102.22	97.75
201407110104	98.77	94.88
201407110112	97.67	93.07
201407110113	96.61	87.88
201407110111	103.10	85.19
201407090596	100.97	80.81
201407090597	100.24	95.08
201407090598	98.61	80.44
201407090599	97.38	83.37
CCCM	102.68	90.62
201407090600	97.26	93.92
201407090601	96.93	87.92
201407110100	96.21	96.10
201407110102	100.68	95.67
201407110103	92.55	84.16
201407110105	102.86	92.32
201407110106	100.06	84.10
201407110107	98.85	79.24
201407110108	102.51	88.49
DNR-201407110109	97.00	89.82
CCCH	103.10	89.15
CCCL	100.04	94.82
CCCL	98.44	91.99
201407110109	99.69	95.02
DNR-201407090597_Reinject	96.00	88.29
201407090596A_X5 Dilution	85.92	68.36
201407090598A_X5 Dilution	87.48	80.25
CCCM	95.89	99.43

Surrogate Recoveries are within 70%-130% , So PASS

*DNR: Data Not Reported and The incorrect sample (CCCH) was injected instead of the real sample(see run sequence).

Operator: Lisa Zhao

Run Sequence For @537

Project: n/a
Method Name: n/a
Batch Name: n/a

LHZ 07/17/14

		Start Time	Sample Name	Plate Position	Vial Position	Status	Method	Batch	Data File	Project
1	✓	7/16/2014 5:07:58 PM	Cal-0ppb	1	1	Acquired	@537-ShortRun-110613-Ali	@537-Batch#780662-071614	@537-Batch#780662-071614	2014_07_16
2	✓	7/16/2014 5:33:33 PM	Cal-0.0025ppb	1	2	Acquired	@537-ShortRun-110613-Ali	@537-Batch#780662-071614	@537-Batch#780662-071614	2014_07_16
3	✓	7/16/2014 5:59:07 PM	Cal-0.005ppb	1	3	Acquired	@537-ShortRun-110613-Ali	@537-Batch#780662-071614	@537-Batch#780662-071614	2014_07_16
4	✓	7/16/2014 6:24:42 PM	Cal-0.01ppb	1	4	Acquired	@537-ShortRun-110613-Ali	@537-Batch#780662-071614	@537-Batch#780662-071614	2014_07_16
5	✓	7/16/2014 6:50:17 PM	Cal-0.02ppb	1	5	Acquired	@537-ShortRun-110613-Ali	@537-Batch#780662-071614	@537-Batch#780662-071614	2014_07_16
6	✓	7/16/2014 7:15:52 PM	Cal-0.04ppb	1	6	Acquired	@537-ShortRun-110613-Ali	@537-Batch#780662-071614	@537-Batch#780662-071614	2014_07_16
7	✓	7/16/2014 7:41:27 PM	Cal-0.08ppb	1	7	Acquired	@537-ShortRun-110613-Ali	@537-Batch#780662-071614	@537-Batch#780662-071614	2014_07_16
8	✓	7/16/2014 8:07:02 PM	CCCL	1	2	Acquired	@537-ShortRun-110613-Ali	@537-Batch#780662-071614	@537-Batch#780662-071614	2014_07_16
9	✓	7/16/2014 8:32:37 PM	QCS_0.02ppb	1	8	Acquired	@537-ShortRun-110613-Ali	@537-Batch#780662-071614	@537-Batch#780662-071614	2014_07_16
10	✓	7/16/2014 8:58:13 PM	QCS_0.02ppb New Source(Elemental0	1	9	Acquired	@537-ShortRun-110613-Ali	@537-Batch#780662-071614	@537-Batch#780662-071614	2014_07_16
11	✓	7/16/2014 9:23:48 PM	MBLK	1	10	Acquired	@537-ShortRun-110613-Ali	@537-Batch#780662-071614	@537-Batch#780662-071614	2014_07_16
12	✓	7/16/2014 9:49:23 PM	MRL_CHK	1	11	Acquired	@537-ShortRun-110613-Ali	@537-Batch#780662-071614	@537-Batch#780662-071614	2014_07_16
13	✓	7/16/2014 10:14:58 PM	LCS1	1	12	Acquired	@537-ShortRun-110613-Ali	@537-Batch#780662-071614	@537-Batch#780662-071614	2014_07_16
14	✓	7/16/2014 10:40:33 PM	LCS2	1	13	Acquired	@537-ShortRun-110613-Ali	@537-Batch#780662-071614	@537-Batch#780662-071614	2014_07_16
15	✓	7/16/2014 11:06:08 PM	201407140016MS	1	14	Acquired	@537-ShortRun-110613-Ali	@537-Batch#780662-071614	@537-Batch#780662-071614	2014_07_16
16	✓	7/16/2014 11:31:44 PM	201407140016MSD	1	15	Acquired	@537-ShortRun-110613-Ali	@537-Batch#780662-071614	@537-Batch#780662-071614	2014_07_16
17	✓	7/16/2014 11:57:20 PM	201407140016	1	16	Acquired	@537-ShortRun-110613-Ali	@537-Batch#780662-071614	@537-Batch#780662-071614	2014_07_16
18	✓	7/17/2014 12:22:55 AM	201407090602	1	17	Acquired	@537-ShortRun-110613-Ali	@537-Batch#780662-071614	@537-Batch#780662-071614	2014_07_16
19	✓	7/17/2014 12:48:30 AM	201407110104	1	18	Acquired	@537-ShortRun-110613-Ali	@537-Batch#780662-071614	@537-Batch#780662-071614	2014_07_16
20	✓	7/17/2014 1:14:05 AM	201407110112	1	19	Acquired	@537-ShortRun-110613-Ali	@537-Batch#780662-071614	@537-Batch#780662-071614	2014_07_16

Printing Time: 2:11:16 PM
Printing Date: Thursday, July 17, 2014

Results Name: n/a

LHZ 07/17/14

Operator: Lisa Zhao

Run Sequence For @537

Project: n/a
Method Name: n/a
Batch Name: n/a

		Start Time	Sample Name	Plate Position	Vial Position	Status	Method	Batch	Data File	Project
21	✓	7/17/2014 1:39:41 AM	201407110113	1	20	Acquired	@537-ShortRun-110613-Ali	@537-Batch#780662-071614	@537-Batch#780662-071614	2014_07_16
22	✓	7/17/2014 2:05:16 AM	201407110111	1	21	Acquired	@537-ShortRun-110613-Ali	@537-Batch#780662-071614	@537-Batch#780662-071614	2014_07_16
23	✓	7/17/2014 2:30:52 AM	201407090596	1	22	Acquired	@537-ShortRun-110613-Ali	@537-Batch#780662-071614	@537-Batch#780662-071614	2014_07_16
24	✓	7/17/2014 2:56:27 AM	201407090597	1	23	Acquired	@537-ShortRun-110613-Ali	@537-Batch#780662-071614	@537-Batch#780662-071614	2014_07_16
25	✓	7/17/2014 3:22:02 AM	201407090598	1	24	Acquired	@537-ShortRun-110613-Ali	@537-Batch#780662-071614	@537-Batch#780662-071614	2014_07_16
26	✓	7/17/2014 3:47:38 AM	201407090599	1	25	Acquired	@537-ShortRun-110613-Ali	@537-Batch#780662-071614	@537-Batch#780662-071614	2014_07_16
27	✓	7/17/2014 4:13:14 AM	CCCM	1	5	Acquired	@537-ShortRun-110613-Ali	@537-Batch#780662-071614	@537-Batch#780662-071614	2014_07_16
28	✓	7/17/2014 4:38:49 AM	201407090600	1	26	Acquired	@537-ShortRun-110613-Ali	@537-Batch#780662-071614	@537-Batch#780662-071614	2014_07_16
29	✓	7/17/2014 5:04:25 AM	201407090601	1	27	Acquired	@537-ShortRun-110613-Ali	@537-Batch#780662-071614	@537-Batch#780662-071614	2014_07_16
30	✓	7/17/2014 5:30:00 AM	201407110100	1	28	Acquired	@537-ShortRun-110613-Ali	@537-Batch#780662-071614	@537-Batch#780662-071614	2014_07_16
31	✓	7/17/2014 5:55:36 AM	201407110102	1	29	Acquired	@537-ShortRun-110613-Ali	@537-Batch#780662-071614	@537-Batch#780662-071614	2014_07_16
32	✓	7/17/2014 6:21:12 AM	201407110103	1	30	Acquired	@537-ShortRun-110613-Ali	@537-Batch#780662-071614	@537-Batch#780662-071614	2014_07_16
33	✓	7/17/2014 6:46:48 AM	201407110105	1	31	Acquired	@537-ShortRun-110613-Ali	@537-Batch#780662-071614	@537-Batch#780662-071614	2014_07_16
34	✓	7/17/2014 7:12:24 AM	201407110106	1	32	Acquired	@537-ShortRun-110613-Ali	@537-Batch#780662-071614	@537-Batch#780662-071614	2014_07_16
35	✓	7/17/2014 7:38:00 AM	201407110107	1	33	Acquired	@537-ShortRun-110613-Ali	@537-Batch#780662-071614	@537-Batch#780662-071614	2014_07_16
36	✓	7/17/2014 8:03:37 AM	201407110108	1	34	Acquired	@537-ShortRun-110613-Ali	@537-Batch#780662-071614	@537-Batch#780662-071614	2014_07_16
37 DNR	✓	7/17/2014 8:29:13 AM	201407110109	1	6	Acquired	@537-ShortRun-110613-Ali	@537-Batch#780662-071614	@537-Batch#780662-071614	2014_07_16
38	✓	7/17/2014 8:54:48 AM	CCCH	1	6	Acquired	@537-ShortRun-110613-Ali	@537-Batch#780662-071614	@537-Batch#780662-071614	2014_07_16
39 DNR	✓	7/17/2014 10:24:03 AM	CCCL	1	2	Acquired	@537-ShortRun-110613-Ali	@537-Batch#780662-071614	@537-Batch#780662-071614	2014_07_16
40	✓	7/17/2014 10:49:38 AM	CCCL	1	2	Acquired	@537-ShortRun-110613-Ali	@537-Batch#780662-071614	@537-Batch#780662-071614	2014_07_16

DNR: The incorrect sample (CCCH) was injected instead of sample 201407110109. The sample reinjected after. CCCL was injected twice to ensure the system is stabilized.

LHZ 07/17/14

Operator: Lisa Zhao

Run Sequence For @537

Project: n/a
Method Name: n/a
Batch Name: n/a

LHB
07/17/14

		Start Time	Sample Name	Plate Position	Vial Position	Status	Method	Batch	Data File	Project
41	✓	7/17/2014 11:15:22 AM	201407110109	1	35	Acquired	@537-ShortRun-110613-Ali	@537-Batch#780662-071614	@537-Batch#780662-071614	2014_07_16
42	✓	7/17/2014 11:41:01 AM	201407090597_Reinject	1	23	Acquired	@537-ShortRun-110613-Ali	@537-Batch#780662-071614	@537-Batch#780662-071614	2014_07_16
43	✓	7/17/2014 12:06:37 PM	201407090596_X5 Dilution	1	36	Acquired	@537-ShortRun-110613-Ali	@537-Batch#780662-071614	@537-Batch#780662-071614	2014_07_16
44	✓	7/17/2014 12:32:12 PM	201407090598_X5 Dilution	1	37	Acquired	@537-ShortRun-110613-Ali	@537-Batch#780662-071614	@537-Batch#780662-071614	2014_07_16
45	✓	7/17/2014 12:57:47 PM	CCCM	1	5	Acquired	@537-ShortRun-110613-Ali	@537-Batch#780662-071614	@537-Batch#780662-071614	2014_07_16

LHZ
07/17/14

Operator: Lisa Zhao

Project: EPA537
Method Name: @537-122211-LHZ.qmf
Batch Name: @537-Batch#780662-071614.dab

Run Sequence For 537

	Sample Name	Sample Type	Sample Comment	Acquisition Date
1	Cal-0ppb	Quality Control	Lot#@537Cal-071614-LHZ, Exp.07/30/14	7/16/2014 5:07:58 PM
2	Cal-0.0025ppb	Standard	Lot#@537Cal-071614-LHZ, Exp.07/30/14	7/16/2014 5:33:33 PM
3	Cal-0.005ppb	Standard	Lot#@537Cal-071614-LHZ, Exp.07/30/14	7/16/2014 5:59:07 PM
4	Cal-0.01ppb	Standard	Lot#@537Cal-071614-LHZ, Exp.07/30/14	7/16/2014 6:24:42 PM
5	Cal-0.02ppb	Standard	Lot#@537Cal-071614-LHZ, Exp.07/30/14	7/16/2014 6:50:17 PM
6	Cal-0.04ppb	Standard	Lot#@537Cal-071614-LHZ, Exp.07/30/14	7/16/2014 7:15:52 PM
7	Cal-0.08ppb	Standard	Lot#@537Cal-071614-LHZ, Exp.07/30/14	7/16/2014 7:41:27 PM
8	CCCL	Quality Control	Lot#@537Cal-071614-LHZ, Exp.07/30/14	7/16/2014 8:07:02 PM
9	QCS_0.02ppb	Quality Control	lot#@5372ndSource(QCS)-071614-LHZ, Exp. 07/30/14	7/16/2014 8:32:37 PM
10	QCS_0.02ppb New Source(Elemental0	Quality Control	lot#@5372ndSource(QCS)-071614-LHZ, Exp. 07/30/14	7/16/2014 8:58:12 PM
11	MBLK	Quality Control	Prep. By FAM@07/14/2014	7/16/2014 9:23:48 PM
12	MRL_CHK	Quality Control	Prep. By FAM@07/14/2014	7/16/2014 9:49:23 PM
13	LCS1	Quality Control	Prep. By FAM@07/14/2014	7/16/2014 10:14:58 PM
14	LCS2	Quality Control	Prep. By FAM@07/14/2014	7/16/2014 10:40:33 PM
15	201407140016MS	Quality Control	Prep. By FAM@07/14/2014	7/16/2014 11:06:08 PM
16	201407140016MSD	Quality Control	Prep. By FAM@07/14/2014	7/16/2014 11:31:44 PM
17	201407140016	Quality Control	Prep. By FAM@07/14/2014	7/16/2014 11:57:19 PM
18	201407090602	Quality Control	Prep. By FAM@07/14/2014	7/17/2014 12:22:55 AM
19	201407110104	Quality Control	Prep. By FAM@07/14/2014	7/17/2014 12:48:30 AM
20	201407110112	Quality Control	Prep. By FAM@07/14/2014	7/17/2014 1:14:05 AM
21	201407110113	Quality Control	Prep. By FAM@07/14/2014	7/17/2014 1:39:41 AM
22	201407110111	Quality Control	Prep. By FAM@07/14/2014	7/17/2014 2:05:16 AM
23	201407090596	Quality Control	Prep. By FAM@07/14/2014	7/17/2014 2:30:52 AM
24	201407090597	Quality Control	Prep. By FAM@07/14/2014	7/17/2014 2:56:27 AM
25	201407090598	Quality Control	Prep. By FAM@07/14/2014	7/17/2014 3:22:02 AM
26	201407090599	Quality Control	Prep. By FAM@07/14/2014	7/17/2014 3:47:38 AM
27	CCCM	Quality Control	Lot#@537Cal-071614-LHZ, Exp.07/30/14	7/17/2014 4:13:14 AM
28	201407090600	Quality Control	Prep. By FAM@07/14/2014	7/17/2014 4:38:49 AM
29	201407090601	Quality Control	Prep. By FAM@07/14/2014	7/17/2014 5:04:25 AM
30	201407110100	Quality Control	Prep. By FAM@07/14/2014	7/17/2014 5:30:00 AM
31	201407110102	Quality Control	Prep. By FAM@07/14/2014	7/17/2014 5:55:36 AM
32	201407110103	Quality Control	Prep. By FAM@07/14/2014	7/17/2014 6:21:12 AM
33	201407110105	Quality Control	Prep. By FAM@07/14/2014	7/17/2014 6:46:48 AM
34	201407110106	Quality Control	Prep. By FAM@07/14/2014	7/17/2014 7:12:24 AM
35	201407110107	Quality Control	Prep. By FAM@07/14/2014	7/17/2014 7:38:00 AM
36	201407110108	Quality Control	Prep. By FAM@07/14/2014	7/17/2014 8:03:37 AM
37 DNR	201407110109	Quality Control	Prep. By FAM@07/14/2014	7/17/2014 8:29:13 AM
38	CCCH	Quality Control	Lot#@537Cal-071614-LHZ, Exp.07/30/14	7/17/2014 8:54:48 AM

DNR: Incorrect vial was injected and correct sample was injected later.
LHZ 07/17/14

LHZ
07/17/14

Operator: Lisa Zhao

Project: EPA537
Method Name: @537-122211-LHZ.qmf
Batch Name: @537-Batch#780662-071614.dab

Run Sequence For @537

	Sample Name	Sample Type	Sample Comment	Acquisition Date
39	CCCL	Quality Control	Lot#@537Cal-071614-LHZ, Exp.07/30/14	7/17/2014 10:24:03 AM
40	CCCL	Quality Control	Lot#@537Cal-071614-LHZ, Exp.07/30/14	7/17/2014 10:49:38 AM
41	201407110109	Quality Control	Prep. By FAM@07/14/2014	7/17/2014 11:15:21 AM
42	201407090597_Reinject	Quality Control	Prep. By FAM@07/14/2014	7/17/2014 11:41:01 AM
43	201407090596_X5 Dilutio	Quality Control	Prep. By FAM@07/14/2014	7/17/2014 12:06:37 PM
44	201407090598_X5 Dilutio	Quality Control	Prep. By FAM@07/14/2014	7/17/2014 12:32:12 PM
45	CCCM	Quality Control	Lot#@537Cal-071614-LHZ, Exp.07/30/14	7/17/2014 12:57:47 PM

Created with Analyst Reporter
Printed: 17/07/2014 1:46:06 PM

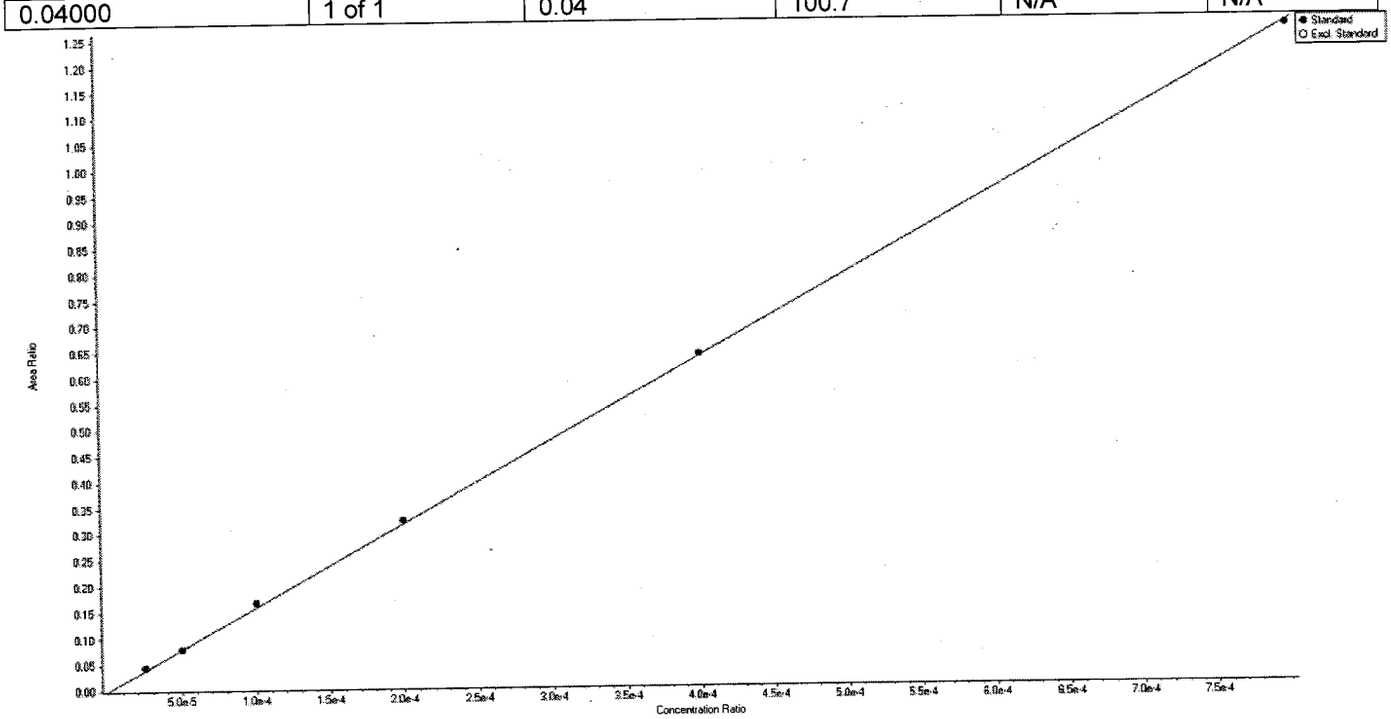
LHZ
07/17/14

Analyte Name: PFHxA
Internal Standard: IS-13C-PFOA
Report File: @537-Batch#780662-071614-Calcurve.pdf

Data File	@537-Batch#780662-071614.wiff	**Result Table**	@537-Batch#780662-071614
Acquisition Date	7/16/2014 5:07:58 PM	**Algorithm Used**	MQ4
Acquisition Method	@537-ShortRun-110613-Ali.dam	**Instrument Name**	API 4000
Project	EPA537\2014_07_16		

Regression Equation: y = 1586.70611 x (r = 0.99997) (weighting: None)

Expected Concentration	Number of Values	Mean Calculated Concentration	% Accuracy	Std. Deviation	%CV
0.00250	1 of 1	0.00	111.5	N/A	N/A
0.00500	1 of 1	0.00	99.9	N/A	N/A
0.01000	1 of 1	0.01	105.1	N/A	N/A
0.02000	1 of 1	0.02	102.4	N/A	N/A
0.04000	1 of 1	0.04	100.7	N/A	N/A

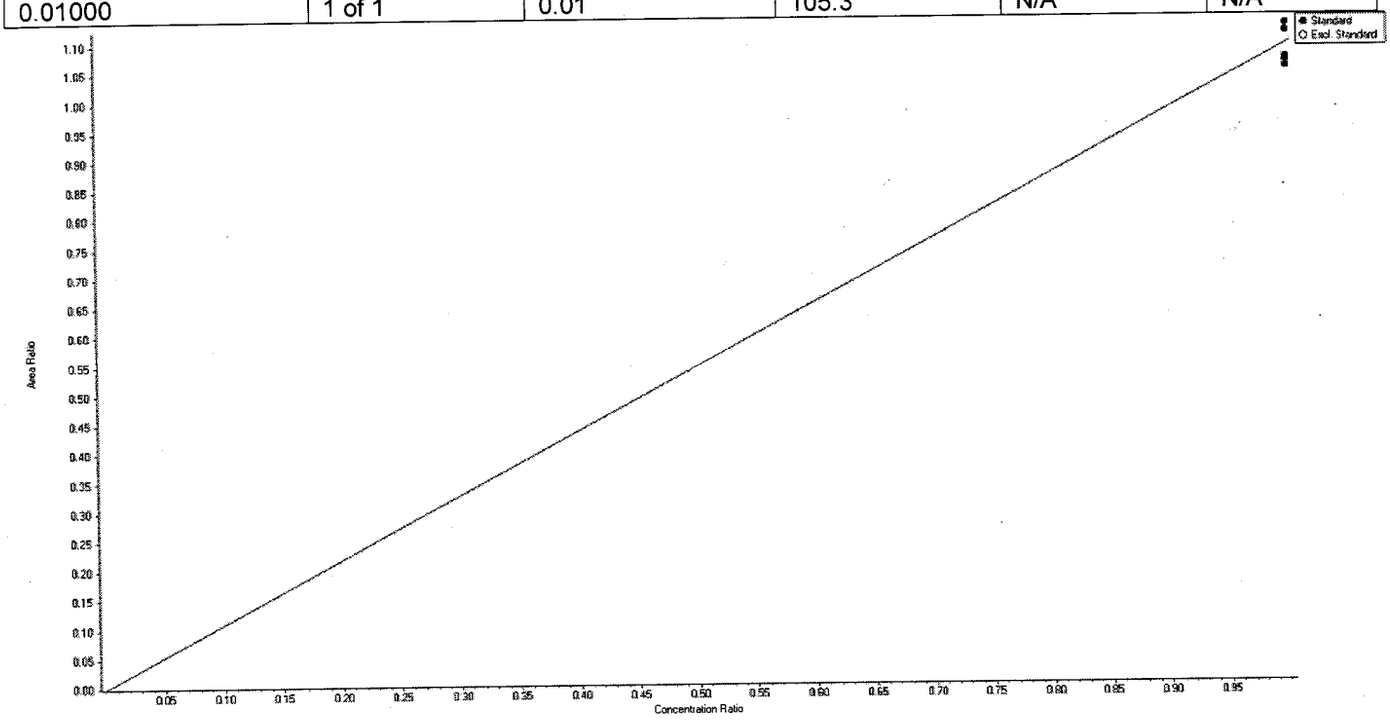


Analyte Name: Surr-13c-PFHxA
Internal Standard: IS-13C-PFOA

Data File	@537-Batch#780662-071614.wiff	**Result Table**	@537-Batch#780662-071614
Acquisition Date	7/16/2014 5:07:58 PM	**Algorithm Used**	MQ4
Acquisition Method	@537-ShortRun-110613-Ali.dam	**Instrument Name**	API 4000
Project	EPA537\2014_07_16		

Regression Equation: y = 1.08985 x (std. dev. = 0.03345) (weighting: None)

Expected Concentration	Number of Values	Mean Calculated Concentration	% Accuracy	Std. Deviation	%CV
0.08000	1 of 1	0.08	99.6	N/A	N/A
100.00000	6 of 6	100.00	100.0	3.07	3.1
0.00250	1 of 1	0.00	111.7	N/A	N/A
0.00500	1 of 1	0.01	105.9	N/A	N/A
0.01000	1 of 1	0.01	105.3	N/A	N/A

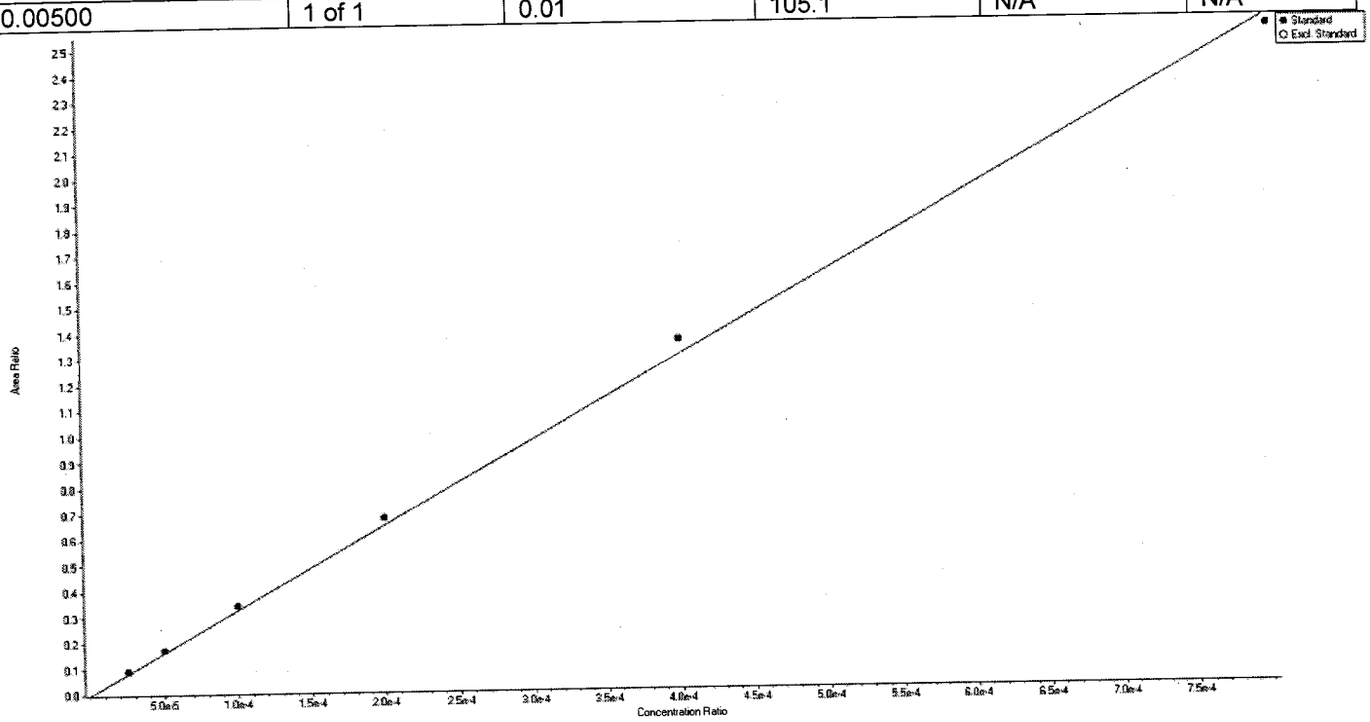


Analyte Name: PFHpA
Internal Standard: IS-13C-PFOA

Data File	@537-Batch#780662-071614.wiff	**Result Table**	@537-Batch#780662-071614
Acquisition Date	7/16/2014 5:07:58 PM	**Algorithm Used**	MQ4
Acquisition Method	@537-ShortRun-110613-Ali.dam	**Instrument Name**	API 4000
Project	EPA537\2014_07_16		

Regression Equation: y = 3239.59135 x (r = 0.99954) (weighting: None)

Expected Concentration	Number of Values	Mean Calculated Concentration	% Accuracy	Std. Deviation	%CV
0.02000	1 of 1	0.02	104.2	N/A	N/A
0.04000	1 of 1	0.04	104.6	N/A	N/A
0.08000	1 of 1	0.08	98.5	N/A	N/A
0.00250	1 of 1	0.00	98.5	N/A	N/A
0.00500	1 of 1	0.01	105.1	N/A	N/A

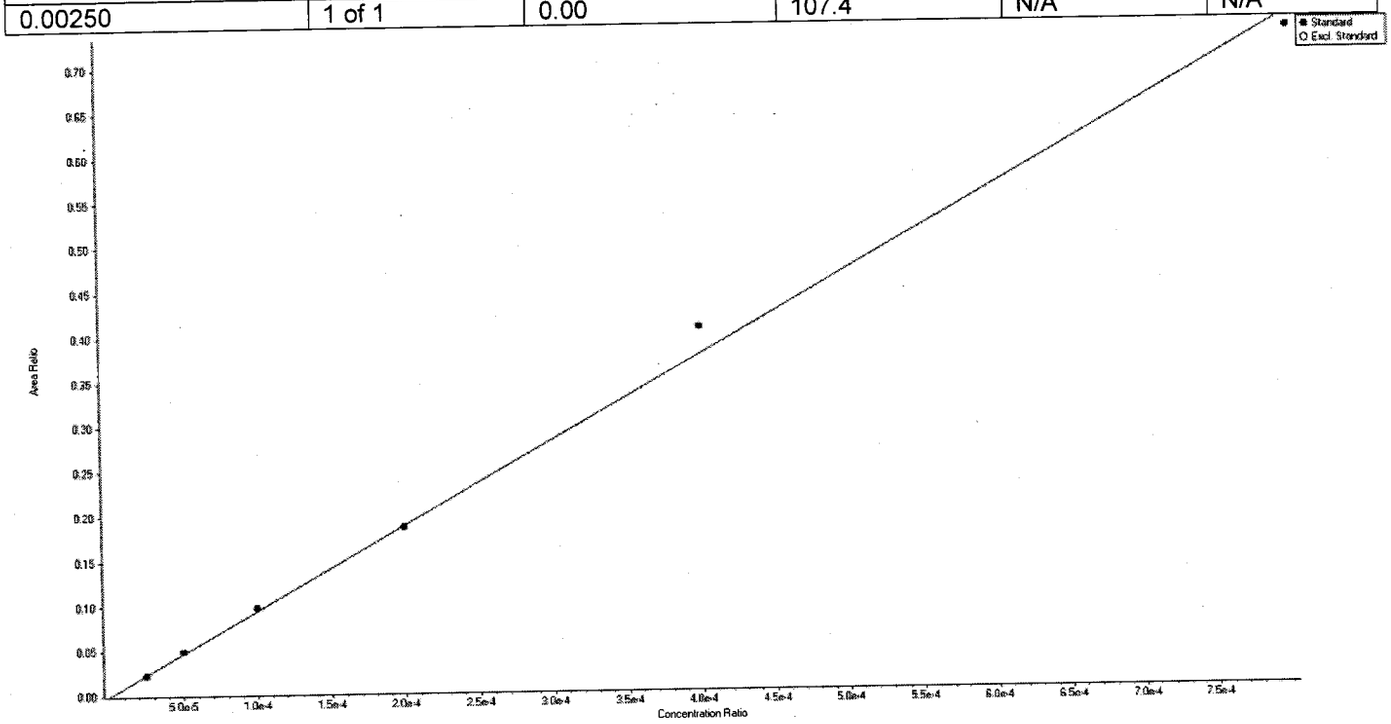


Analyte Name: PFHpA 2
Internal Standard: IS-13C-PFOA

Data File	@537-Batch#780662-071614.wiff	**Result Table**	@537-Batch#780662-071614
Acquisition Date	7/16/2014 5:07:58 PM	**Algorithm Used**	MQ4
Acquisition Method	@537-ShortRun-110613-Ali.dam	**Instrument Name**	API 4000
Project	EPA537\2014_07_16		

Regression Equation: y = 938.14742 x (r = 0.99850) (weighting: None)

Expected Concentration	Number of Values	Mean Calculated Concentration	% Accuracy	Std. Deviation	%CV
0.01000	1 of 1	0.01	103.7	N/A	N/A
0.02000	1 of 1	0.02	99.0	N/A	N/A
0.04000	1 of 1	0.04	108.4	N/A	N/A
0.08000	1 of 1	0.08	97.9	N/A	N/A
0.00250	1 of 1	0.00	107.4	N/A	N/A

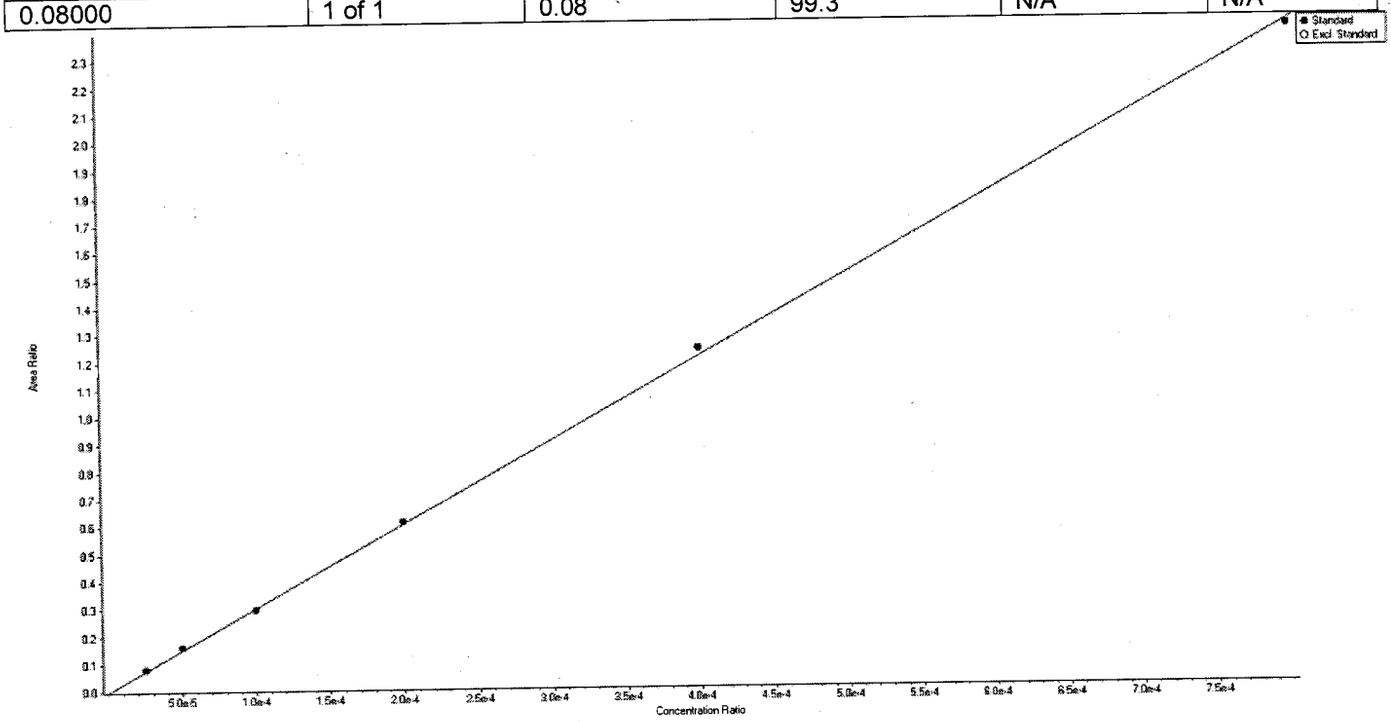


Analyte Name: PFOA
Internal Standard: IS-13C-PFOA

Data File	@537-Batch#780662-071614.wiff	**Result Table**	@537-Batch#780662-071614
Acquisition Date	7/16/2014 5:07:58 PM	**Algorithm Used**	MQ4
Acquisition Method	@537-ShortRun-110613-Ali.dam	**Instrument Name**	API 4000
Project	EPA537\2014_07_16		

Regression Equation: y = 3017.00276 x (r = 0.99987) (weighting: None)

Expected Concentration	Number of Values	Mean Calculated Concentration	% Accuracy	Std. Deviation	%CV
0.00500	1 of 1	0.01	106.2	N/A	N/A
0.01000	1 of 1	0.01	98.6	N/A	N/A
0.02000	1 of 1	0.02	101.4	N/A	N/A
0.04000	1 of 1	0.04	102.4	N/A	N/A
0.08000	1 of 1	0.08	99.3	N/A	N/A

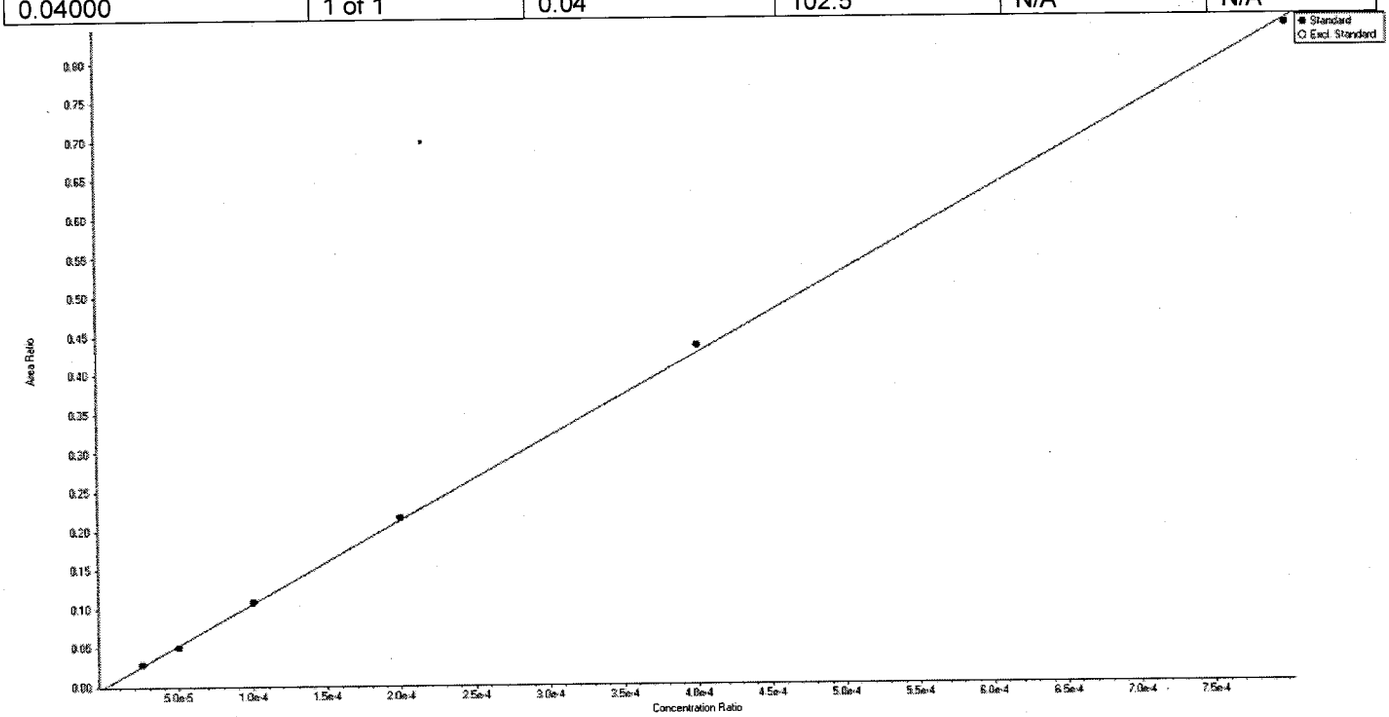


Analyte Name: PFOA 2
Internal Standard: IS-13C-PFOA

Data File	@537-Batch#780662-071614.wiff	**Result Table**	@537-Batch#780662-071614
Acquisition Date	7/16/2014 5:07:58 PM	**Algorithm Used**	MQ4
Acquisition Method	@537-ShortRun-110613-Ali.dam	**Instrument Name**	API 4000
Project	EPA537\2014_07_16		

Regression Equation: y = 1062.58133 x (r = 0.99985) (weighting: None)

Expected Concentration	Number of Values	Mean Calculated Concentration	% Accuracy	Std. Deviation	%CV
0.00250	1 of 1	0.00	108.5	N/A	N/A
0.00500	1 of 1	0.00	95.0	N/A	N/A
0.01000	1 of 1	0.01	101.7	N/A	N/A
0.02000	1 of 1	0.02	101.5	N/A	N/A
0.04000	1 of 1	0.04	102.5	N/A	N/A

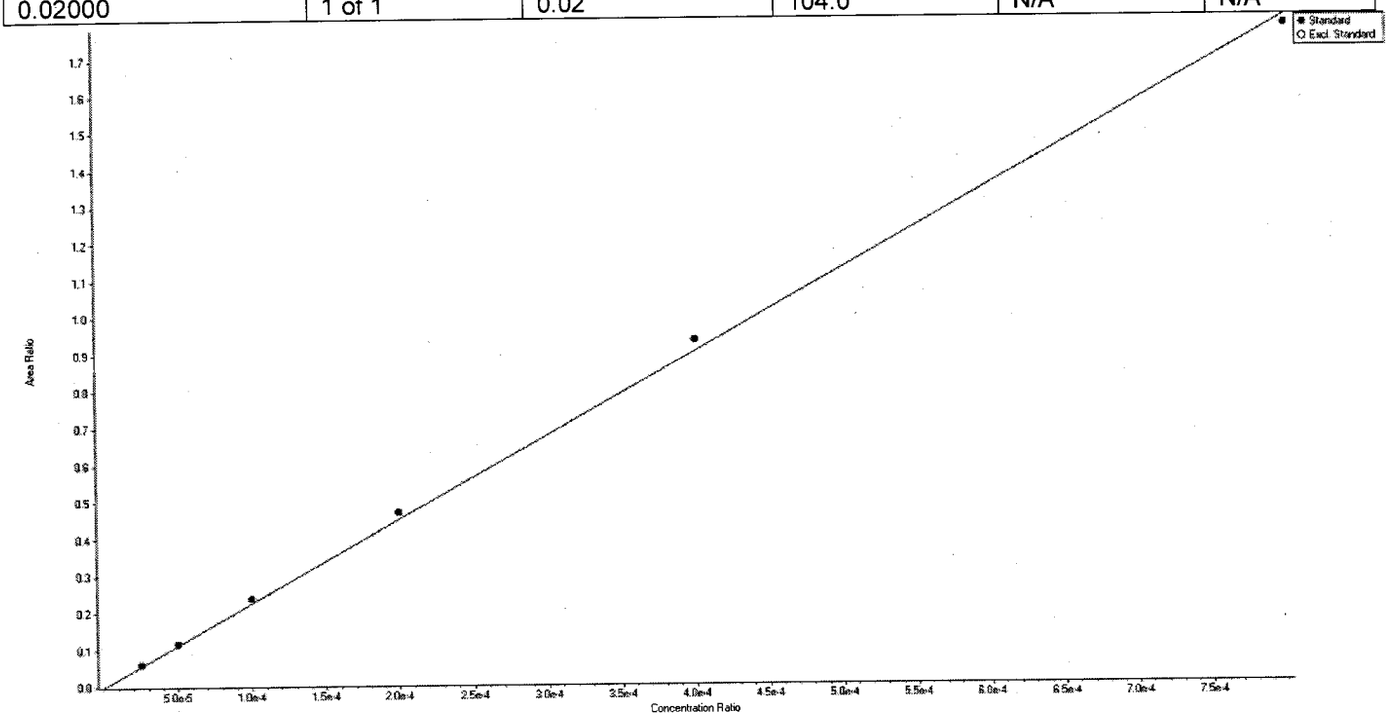


Analyte Name: PFNA
Internal Standard: IS-13C-PFOA

Data File	@537-Batch#780662-071614.wiff	**Result Table**	@537-Batch#780662-071614
Acquisition Date	7/16/2014 5:07:58 PM	**Algorithm Used**	MQ4
Acquisition Method	@537-ShortRun-110613-Ali.dam	**Instrument Name**	API 4000
Project	EPA537\2014_07_16		

Regression Equation: y = 2256.76438 x (r = 0.99969) (weighting: None)

Expected Concentration	Number of Values	Mean Calculated Concentration	% Accuracy	Std. Deviation	%CV
0.08000	1 of 1	0.08	99.3	N/A	N/A
0.00250	1 of 1	0.00	108.5	N/A	N/A
0.00500	1 of 1	0.01	103.0	N/A	N/A
0.01000	1 of 1	0.01	105.5	N/A	N/A
0.02000	1 of 1	0.02	104.0	N/A	N/A

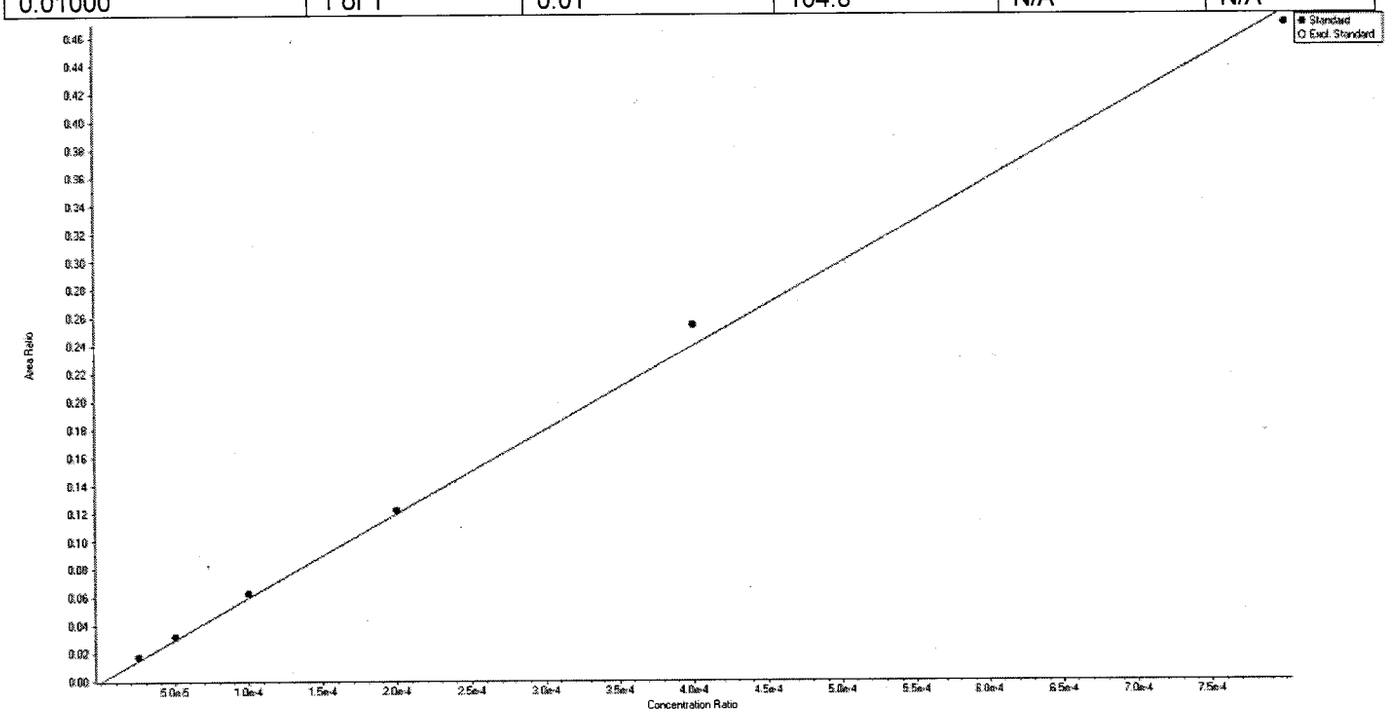


Analyte Name: PFNA 2
Internal Standard: IS-13C-PFOA

Data File	@537-Batch#780662-071614.wiff	**Result Table**	@537-Batch#780662-071614
Acquisition Date	7/16/2014 5:07:58 PM	**Algorithm Used**	MQ4
Acquisition Method	@537-ShortRun-110613-Ali.dam	**Instrument Name**	API 4000
Project	EPA537\2014_07_16		

Regression Equation: y = 597.79567 x (r = 0.99921) (weighting: None)

Expected Concentration	Number of Values	Mean Calculated Concentration	% Accuracy	Std. Deviation	%CV
0.04000	1 of 1	0.04	103.6	N/A	N/A
0.08000	1 of 1	0.08	98.7	N/A	N/A
0.00250	1 of 1	0.00	118.5	N/A	N/A
0.00500	1 of 1	0.01	106.4	N/A	N/A
0.01000	1 of 1	0.01	104.8	N/A	N/A

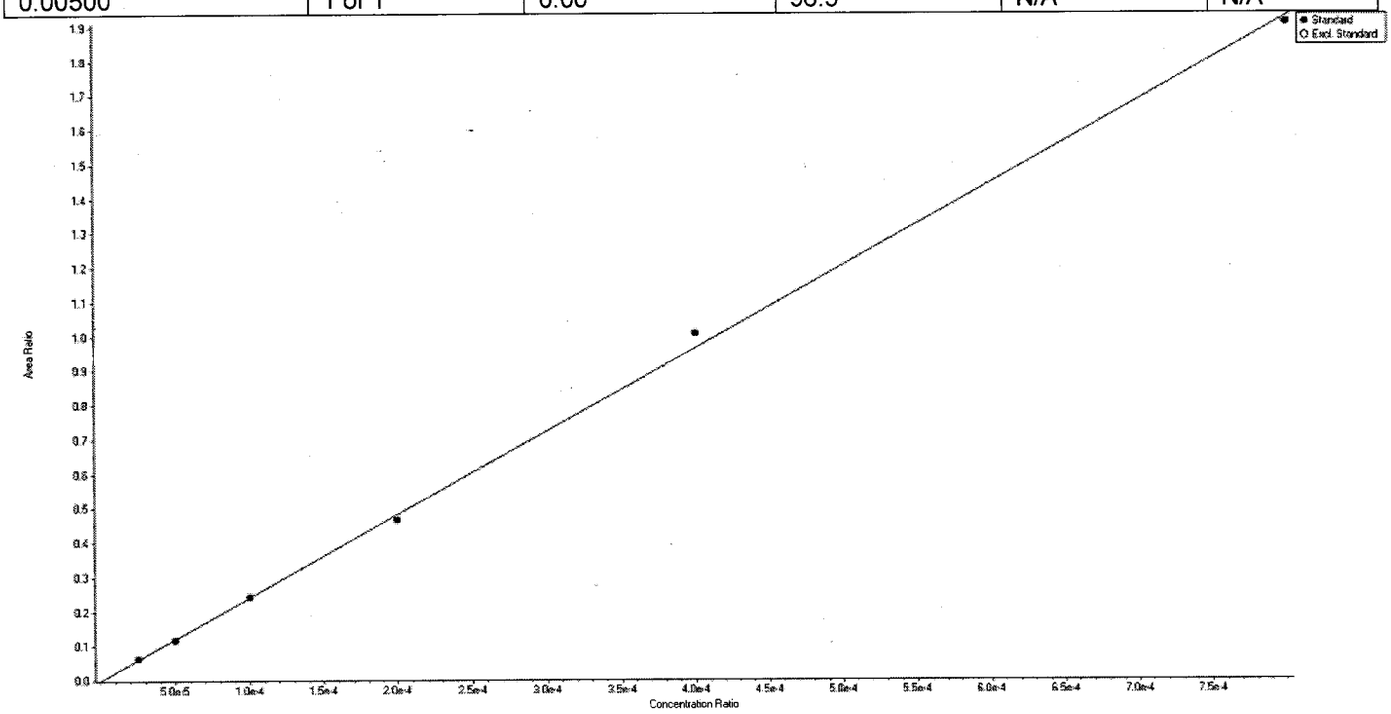


Analyte Name: PFDA
Internal Standard: IS-13C-PFOA

Data File	@537-Batch#780662-071614.wiff	**Result Table**	@537-Batch#780662-071614
Acquisition Date	7/16/2014 5:07:58 PM	**Algorithm Used**	MQ4
Acquisition Method	@537-ShortRun-110613-Ali.dam	**Instrument Name**	API 4000
Project	EPA537\2014_07_16		

Regression Equation: y = 2408.91275 x (r = 0.99953) (weighting: None)

Expected Concentration	Number of Values	Mean Calculated Concentration	% Accuracy	Std. Deviation	%CV
0.02000	1 of 1	0.02	102.0	N/A	N/A
0.04000	1 of 1	0.04	106.3	N/A	N/A
0.08000	1 of 1	0.08	98.2	N/A	N/A
0.00250	1 of 1	0.00	105.5	N/A	N/A
0.00500	1 of 1	0.00	96.5	N/A	N/A

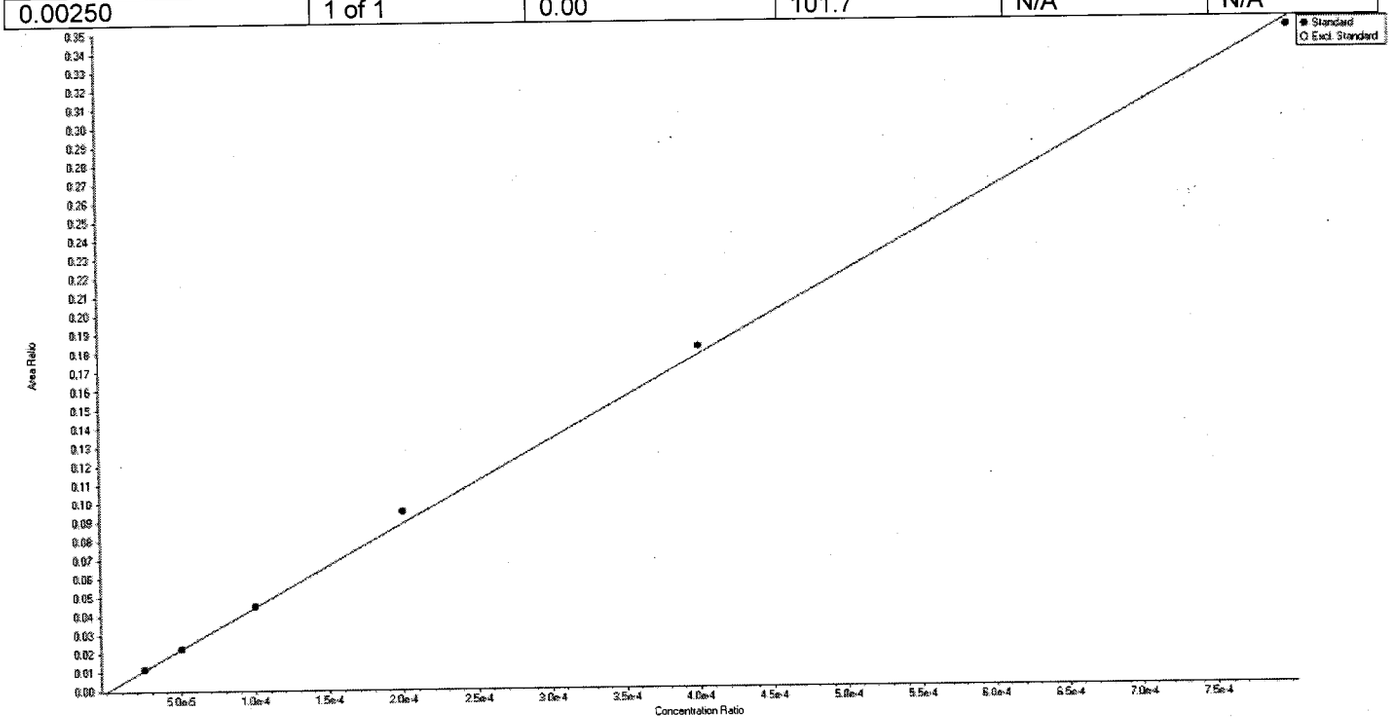


Analyte Name: PFDA 2
Internal Standard: IS-13C-PFOA

Data File	@537-Batch#780662-071614.wiff	**Result Table**	@537-Batch#780662-071614
Acquisition Date	7/16/2014 5:07:58 PM	**Algorithm Used**	MQ4
Acquisition Method	@537-ShortRun-110613-Ali.dam	**Instrument Name**	API 4000
Project	EPA537\2014_07_16		

Regression Equation: y = 442.97329 x (r = 0.99966) (weighting: None)

Expected Concentration	Number of Values	Mean Calculated Concentration	% Accuracy	Std. Deviation	%CV
0.01000	1 of 1	0.01	100.6	N/A	N/A
0.02000	1 of 1	0.02	96.4	N/A	N/A
0.04000	1 of 1	0.04	104.4	N/A	N/A
0.08000	1 of 1	0.08	99.1	N/A	N/A
0.00250	1 of 1	0.00	101.7	N/A	N/A

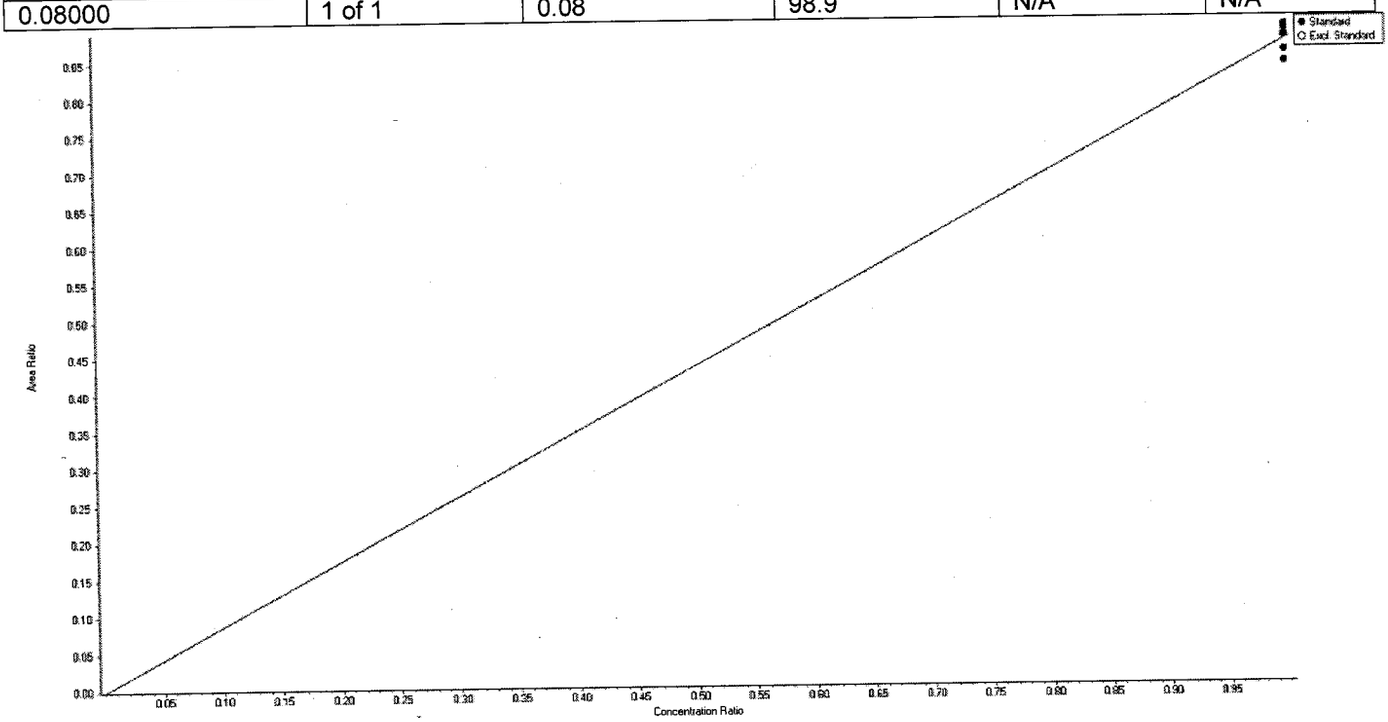


Analyte Name: Surr-13c-PFDA
Internal Standard: IS-13C-PFOA

Data File	@537-Batch#780662-071614.wiff	**Result Table**	@537-Batch#780662-071614
Acquisition Date	7/16/2014 5:07:58 PM	**Algorithm Used**	MQ4
Acquisition Method	@537-ShortRun-110613-Ali.dam	**Instrument Name**	API 4000
Project	EPA537\2014_07_16		

Regression Equation: y = 0.87022 x (std. dev. = 0.01868) (weighting: None)

Expected Concentration	Number of Values	Mean Calculated Concentration	% Accuracy	Std. Deviation	%CV
0.00500	1 of 1	0.01	100.4	N/A	N/A
0.01000	1 of 1	0.01	101.0	N/A	N/A
0.02000	1 of 1	0.02	107.3	N/A	N/A
0.04000	1 of 1	0.04	102.5	N/A	N/A
0.08000	1 of 1	0.08	98.9	N/A	N/A

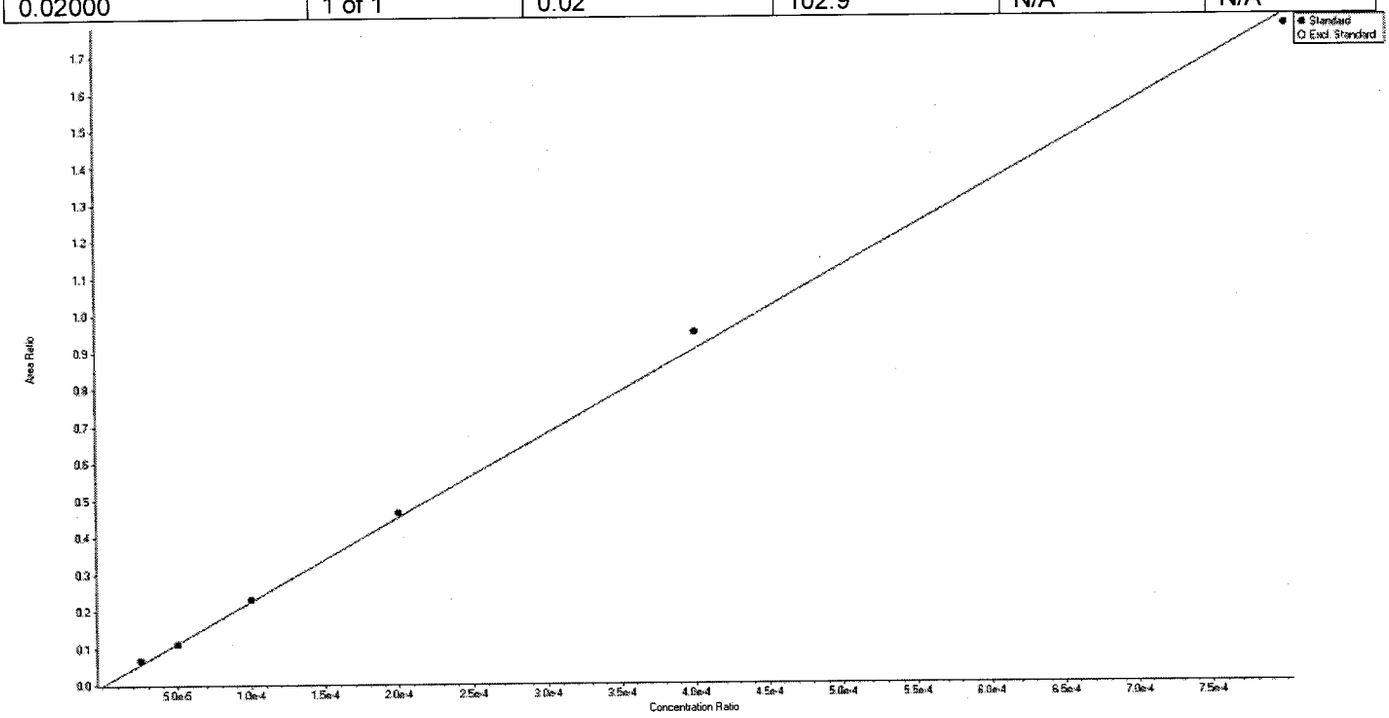


Analyte Name: PFUnA
Internal Standard: IS-13C-PFOA

Data File	@537-Batch#780662-071614.wiff	**Result Table**	@537-Batch#780662-071614
Acquisition Date	7/16/2014 5:07:58 PM	**Algorithm Used**	MQ4
Acquisition Method	@537-ShortRun-110613-Ali.dam	**Instrument Name**	API 4000
Project	EPA537\2014_07_16		

Regression Equation: y = 2258.12727 x (r = 0.99939) (weighting: None)

Expected Concentration	Number of Values	Mean Calculated Concentration	% Accuracy	Std. Deviation	%CV
100.00000	6 of 6	100.00	100.0	2.15	2.2
0.00250	1 of 1	0.00	117.9	N/A	N/A
0.00500	1 of 1	0.00	98.8	N/A	N/A
0.01000	1 of 1	0.01	101.8	N/A	N/A
0.02000	1 of 1	0.02	102.9	N/A	N/A

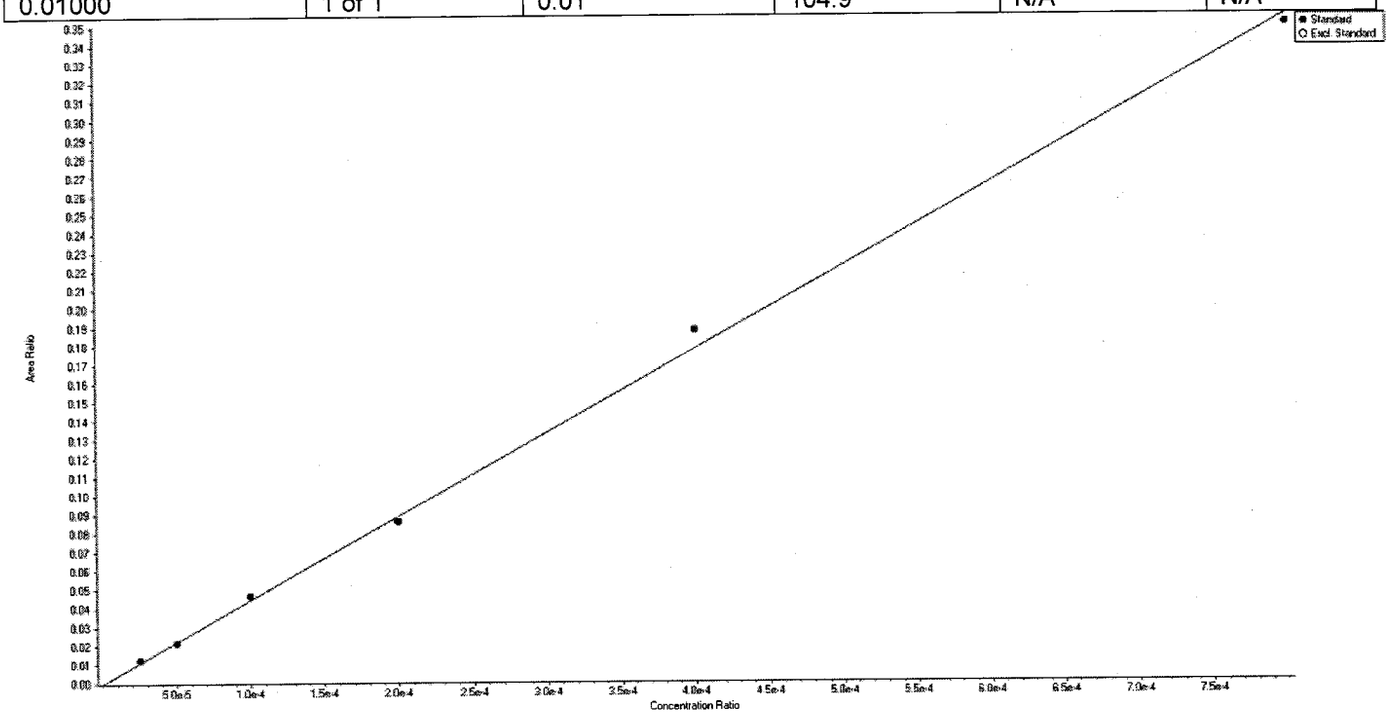


Analyte Name: PFUnA 2
Internal Standard: IS-13C-PFOA

Data File	@537-Batch#780662-071614.wiff	**Result Table**	@537-Batch#780662-071614
Acquisition Date	7/16/2014 5:07:58 PM	**Algorithm Used**	MQ4
Acquisition Method	@537-ShortRun-110613-Ali.dam	**Instrument Name**	API 4000
Project	EPA537\2014_07_16		

Regression Equation: y = 444.02728 x (r = 0.99924) (weighting: None)

Expected Concentration	Number of Values	Mean Calculated Concentration	% Accuracy	Std. Deviation	%CV
0.04000	1 of 1	0.04	105.3	N/A	N/A
0.08000	1 of 1	0.08	98.5	N/A	N/A
0.00250	1 of 1	0.00	110.9	N/A	N/A
0.00500	1 of 1	0.00	97.3	N/A	N/A
0.01000	1 of 1	0.01	104.9	N/A	N/A

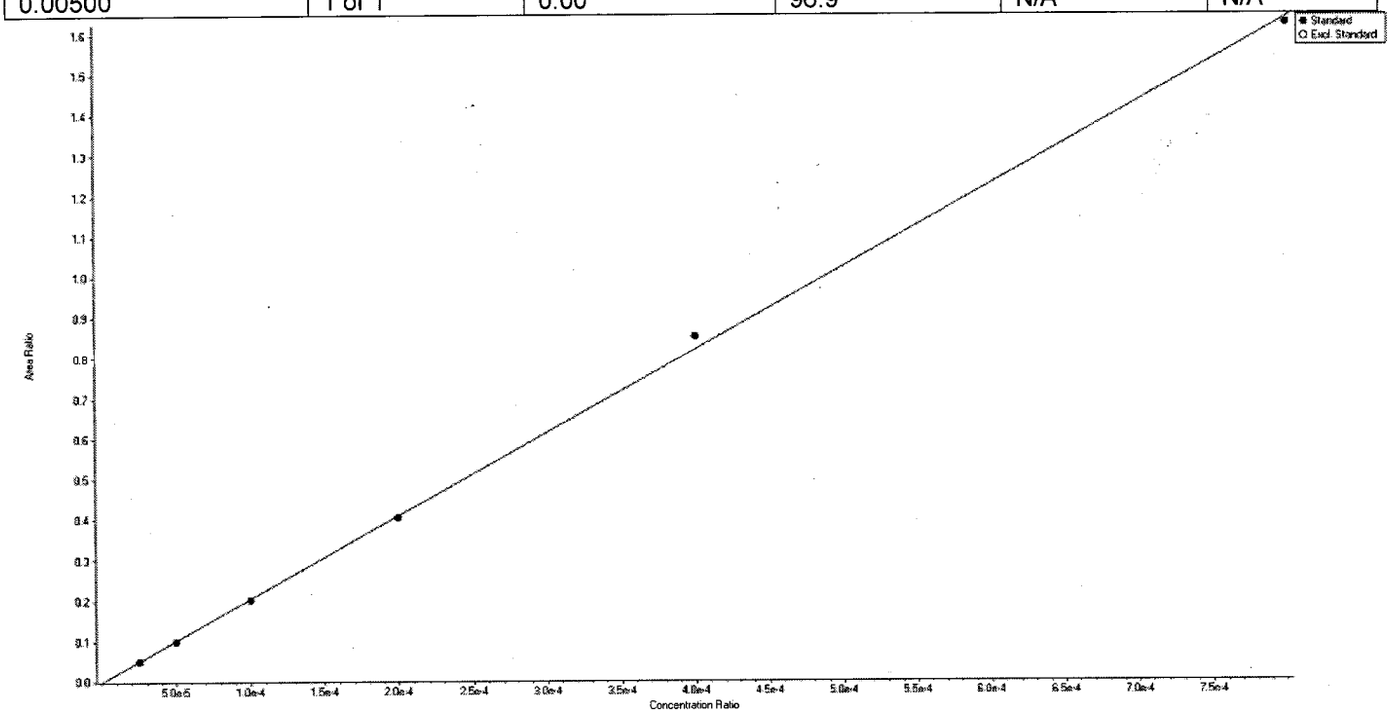


Analyte Name: PFDoA
Internal Standard: IS-13C-PFOA

Data File	@537-Batch#780662-071614.wiff	**Result Table**	@537-Batch#780662-071614
Acquisition Date	7/16/2014 5:07:58 PM	**Algorithm Used**	MQ4
Acquisition Method	@537-ShortRun-110613-Ali.dam	**Instrument Name**	API 4000
Project	EPA537\2014_07_16		

Regression Equation: y = 2048.92517 x (r = 0.99967) (weighting: None)

Expected Concentration	Number of Values	Mean Calculated Concentration	% Accuracy	Std. Deviation	%CV
0.02000	1 of 1	0.02	96.5	N/A	N/A
0.04000	1 of 1	0.04	105.7	N/A	N/A
0.08000	1 of 1	0.08	98.7	N/A	N/A
0.00250	1 of 1	0.00	101.7	N/A	N/A
0.00500	1 of 1	0.00	96.9	N/A	N/A

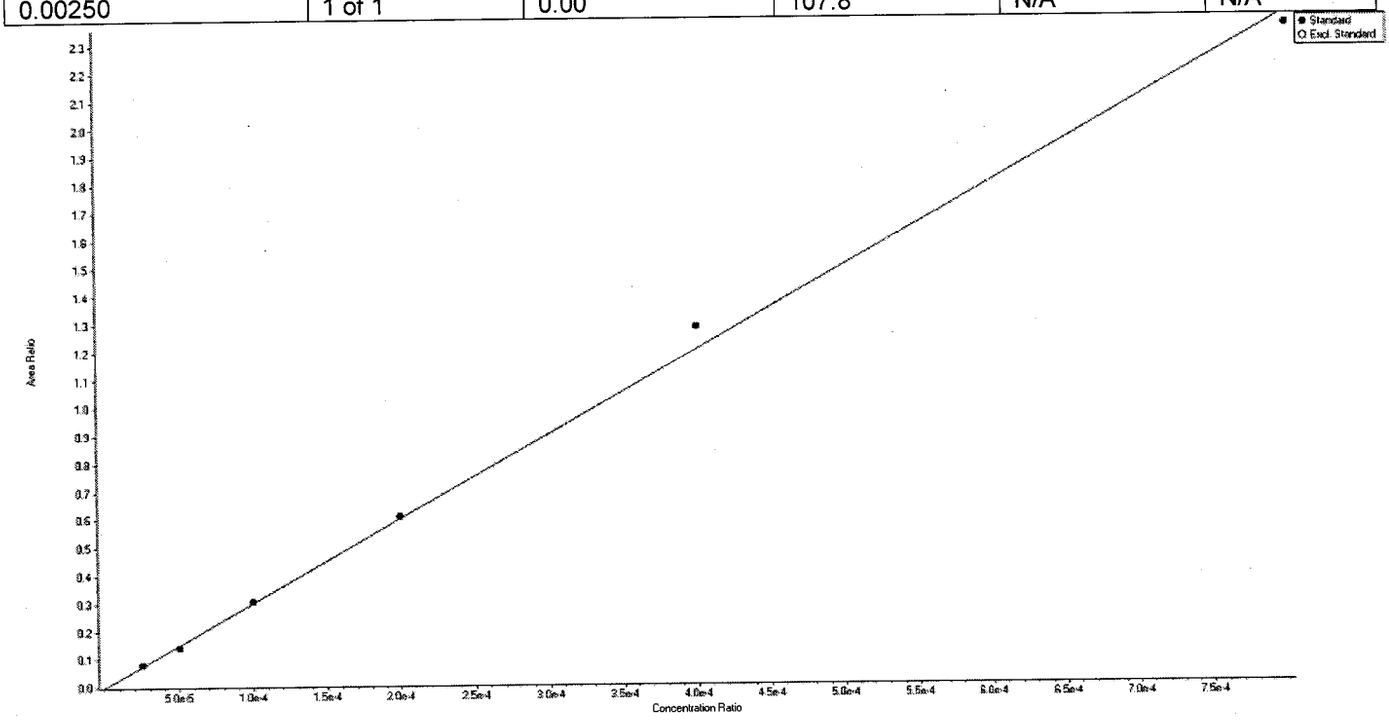


Analyte Name: PFTrDA
Internal Standard: IS-13C-PFOA

Data File	@537-Batch#780662-071614.wiff	**Result Table**	@537-Batch#780662-071614
Acquisition Date	7/16/2014 5:07:58 PM	**Algorithm Used**	MQ4
Acquisition Method	@537-ShortRun-110613-Ali.dam	**Instrument Name**	API 4000
Project	EPA537\2014_07_16		

Regression Equation: y = 3001.34533 x (r = 0.99895) (weighting: None)

Expected Concentration	Number of Values	Mean Calculated Concentration	% Accuracy	Std. Deviation	%CV
0.01000	1 of 1	0.01	97.9	N/A	N/A
0.02000	1 of 1	0.02	98.9	N/A	N/A
0.04000	1 of 1	0.04	103.8	N/A	N/A
0.08000	1 of 1	0.08	99.2	N/A	N/A
0.00250	1 of 1	0.00	107.8	N/A	N/A

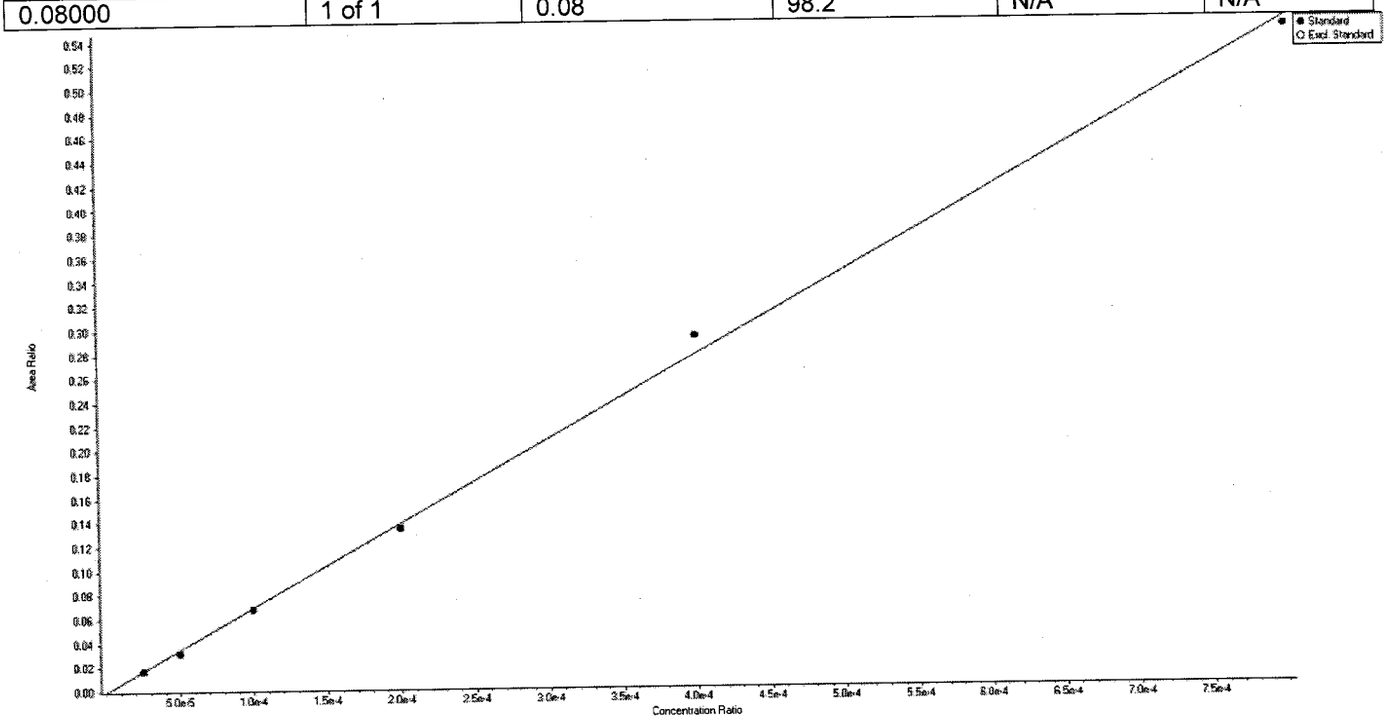


Analyte Name: PFTrDA 2
Internal Standard: IS-13C-PFOA

Data File	@537-Batch#780662-071614.wiff	**Result Table**	@537-Batch#780662-071614
Acquisition Date	7/16/2014 5:07:58 PM	**Algorithm Used**	MQ4
Acquisition Method	@537-ShortRun-110613-Ali.dam	**Instrument Name**	API 4000
Project	EPA537\2014_07_16		

Regression Equation: y = 691.56985 x (r = 0.99925) (weighting: None)

Expected Concentration	Number of Values	Mean Calculated Concentration	% Accuracy	Std. Deviation	%CV
0.00500	1 of 1	0.00	94.2	N/A	N/A
0.01000	1 of 1	0.01	102.0	N/A	N/A
0.02000	1 of 1	0.02	101.1	N/A	N/A
0.04000	1 of 1	0.04	106.9	N/A	N/A
0.08000	1 of 1	0.08	98.2	N/A	N/A

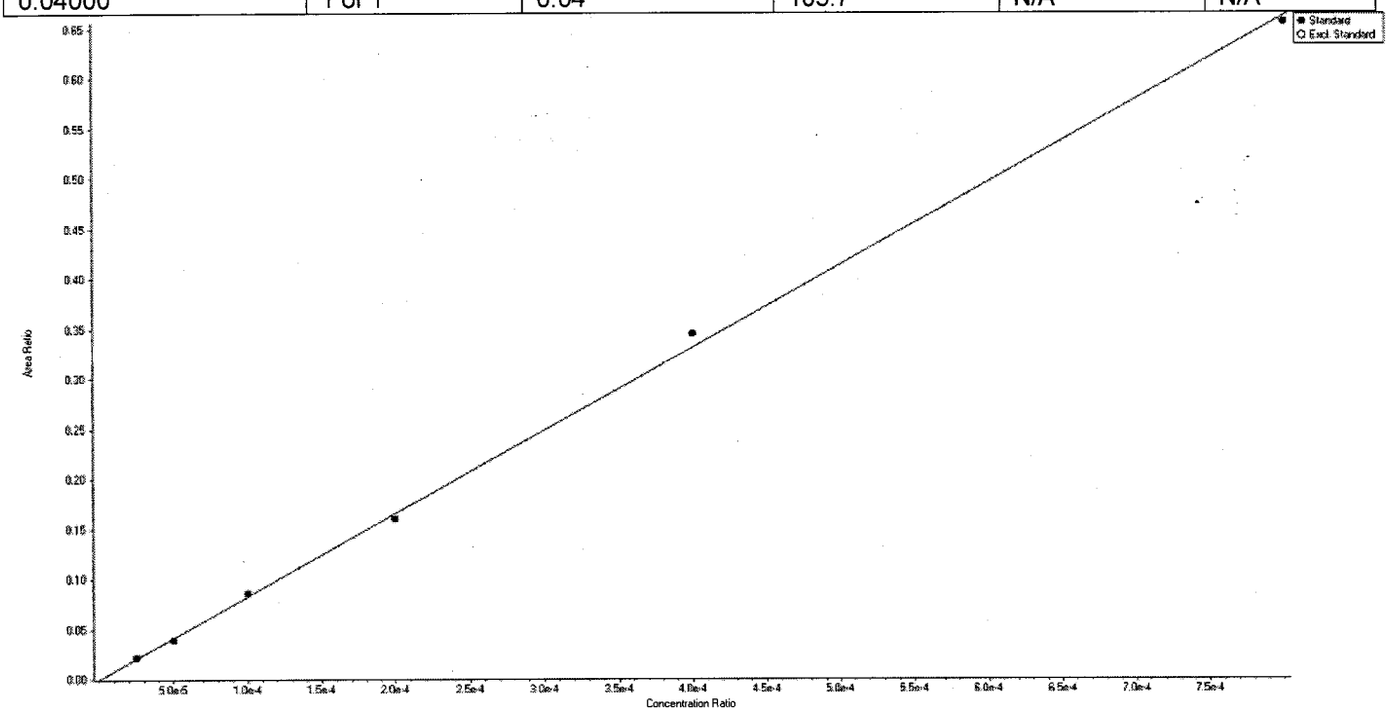


Analyte Name: PFTA
Internal Standard: IS-13C-PFOA

Data File	@537-Batch#780662-071614.wiff	**Result Table**	@537-Batch#780662-071614
Acquisition Date	7/16/2014 5:07:58 PM	**Algorithm Used**	MQ4
Acquisition Method	@537-ShortRun-110613-Ali.dam	**Instrument Name**	API 4000
Project	EPA537\2014_07_16		

Regression Equation: y = 827.67478 x (r = 0.99957) (weighting: None)

Expected Concentration	Number of Values	Mean Calculated Concentration	% Accuracy	Std. Deviation	%CV
0.00250	1 of 1	0.00	97.6	N/A	N/A
0.00500	1 of 1	0.00	89.7	N/A	N/A
0.01000	1 of 1	0.01	98.5	N/A	N/A
0.02000	1 of 1	0.02	97.1	N/A	N/A
0.04000	1 of 1	0.04	105.7	N/A	N/A

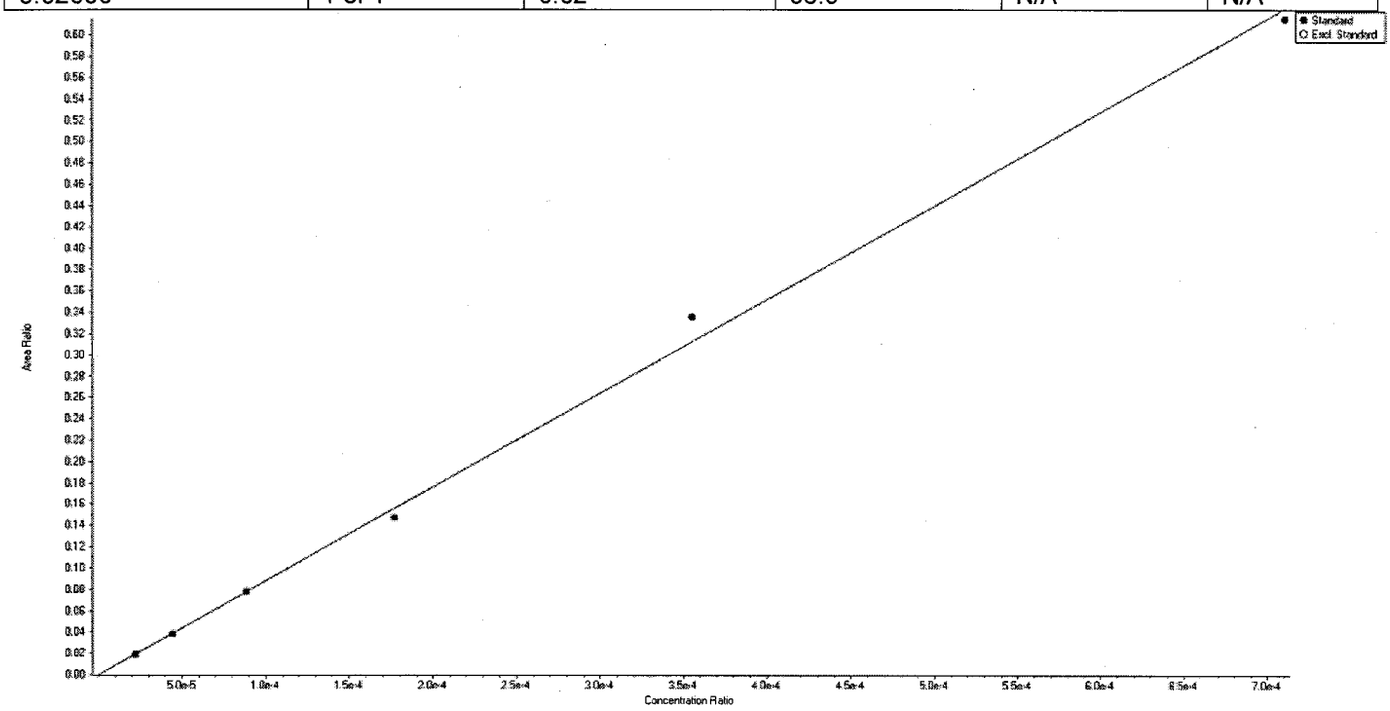


Analyte Name: PFBS
Internal Standard: IS-13C-PFOS

Data File	@537-Batch#780662-071614.wiff	**Result Table**	@537-Batch#780662-071614
Acquisition Date	7/16/2014 5:07:58 PM	**Algorithm Used**	MQ4
Acquisition Method	@537-ShortRun-110613-Ali.dam	**Instrument Name**	API 4000
Project	EPA537\2014_07_16		

Regression Equation: y = 879.85959 x (r = 0.99866) (weighting: None)

Expected Concentration	Number of Values	Mean Calculated Concentration	% Accuracy	Std. Deviation	%CV
0.08000	1 of 1	0.08	98.8	N/A	N/A
0.00250	1 of 1	0.00	103.3	N/A	N/A
0.00500	1 of 1	0.00	94.1	N/A	N/A
0.01000	1 of 1	0.01	104.5	N/A	N/A
0.02000	1 of 1	0.02	96.9	N/A	N/A

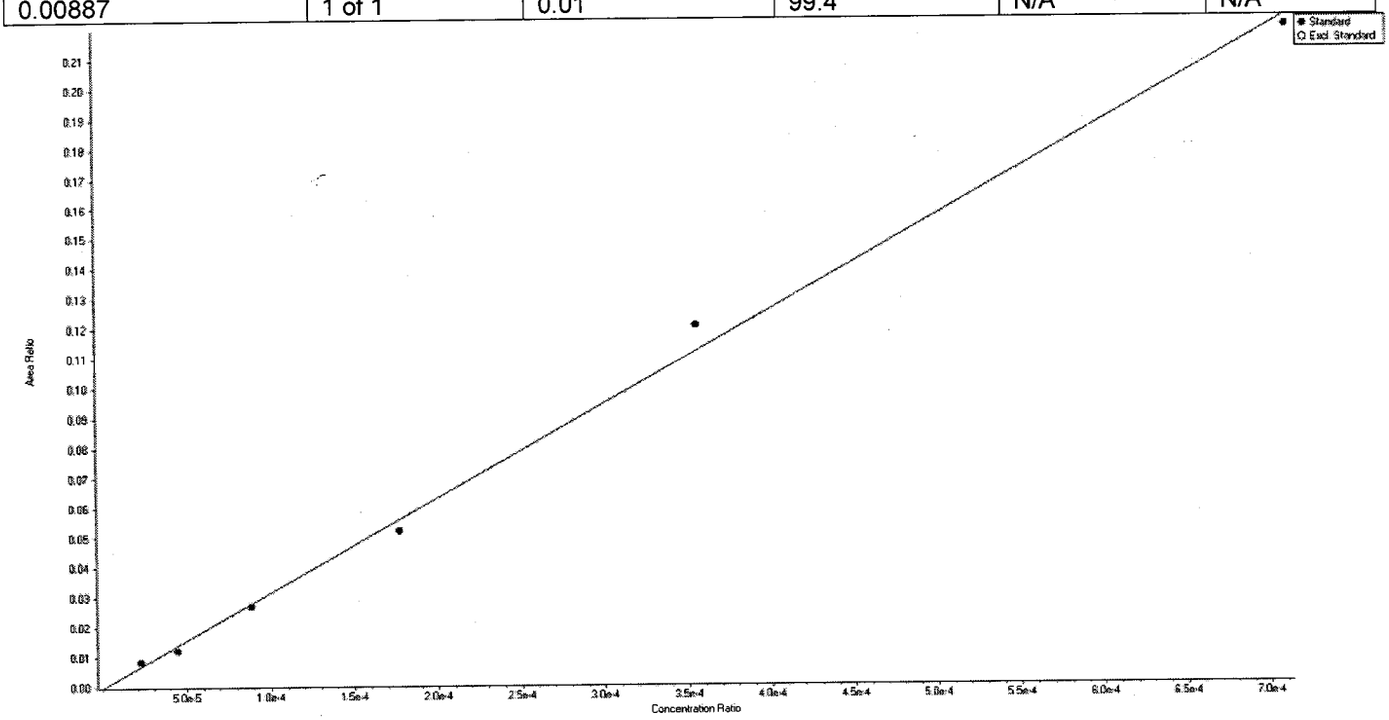


Analyte Name: PFBS 2
Internal Standard: IS-13C-PFOS

Data File	@537-Batch#780662-071614.wiff	**Result Table**	@537-Batch#780662-071614
Acquisition Date	7/16/2014 5:07:58 PM	**Algorithm Used**	MQ4
Acquisition Method	@537-ShortRun-110613-Ali.dam	**Instrument Name**	API 4000
Project	EPA537\2014_07_16		

Regression Equation: y = 314.41443 x (r = 0.99851) (weighting: None)

Expected Concentration	Number of Values	Mean Calculated Concentration	% Accuracy	Std. Deviation	%CV
0.04000	1 of 1	0.04	104.1	N/A	N/A
0.08000	1 of 1	0.08	99.1	N/A	N/A
0.00222	1 of 1	0.00	97.5	N/A	N/A
0.00443	1 of 1	0.00	100.0	N/A	N/A
0.00887	1 of 1	0.01	99.4	N/A	N/A

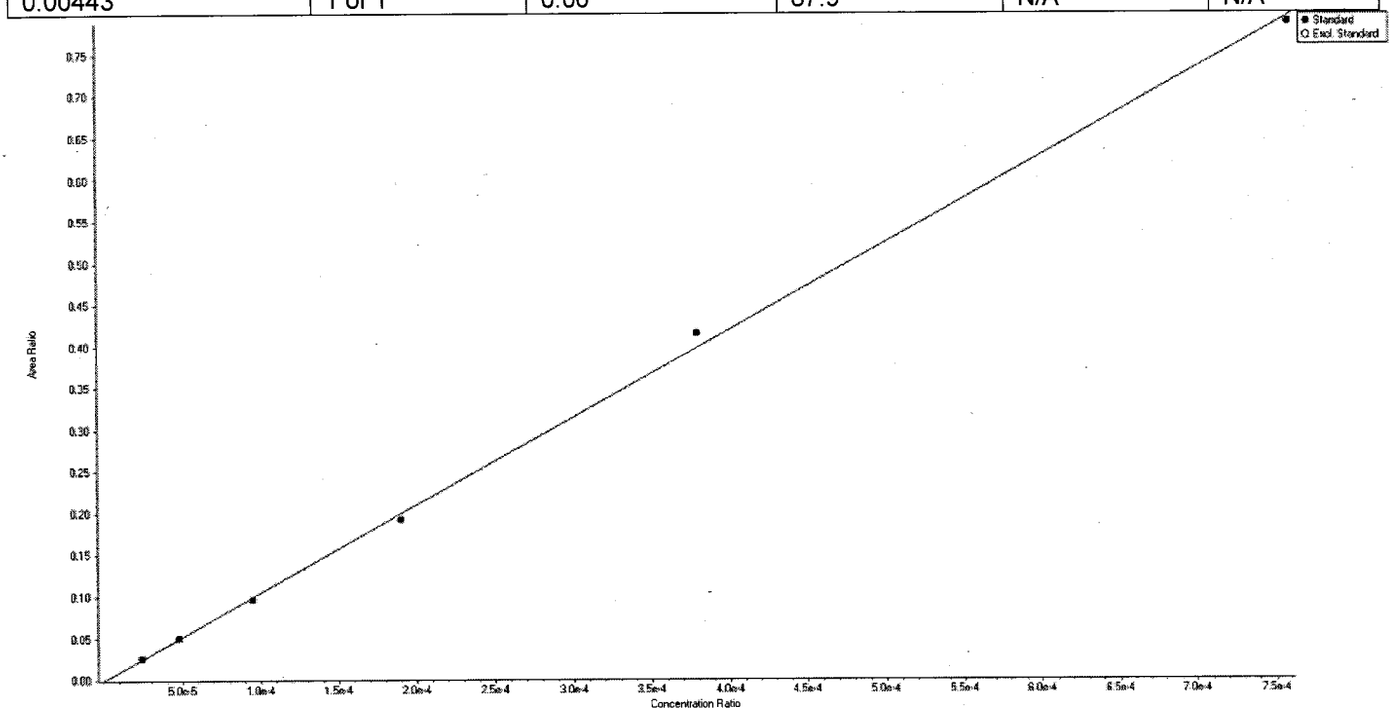


Analyte Name: PFHxS
Internal Standard: IS-13C-PFOS

Data File	@537-Batch#780662-071614.wiff	**Result Table**	@537-Batch#780662-071614
Acquisition Date	7/16/2014 5:07:58 PM	**Algorithm Used**	MQ4
Acquisition Method	@537-ShortRun-110613-Ali.dam	**Instrument Name**	API 4000
Project	EPA537\2014_07_16		

Regression Equation: y = 1048.44417 x (r = 0.99951) (weighting: None)

Expected Concentration	Number of Values	Mean Calculated Concentration	% Accuracy	Std. Deviation	%CV
0.01770	1 of 1	0.02	94.6	N/A	N/A
0.03550	1 of 1	0.04	107.6	N/A	N/A
0.07100	1 of 1	0.07	98.5	N/A	N/A
0.00222	1 of 1	0.00	122.8	N/A	N/A
0.00443	1 of 1	0.00	87.9	N/A	N/A

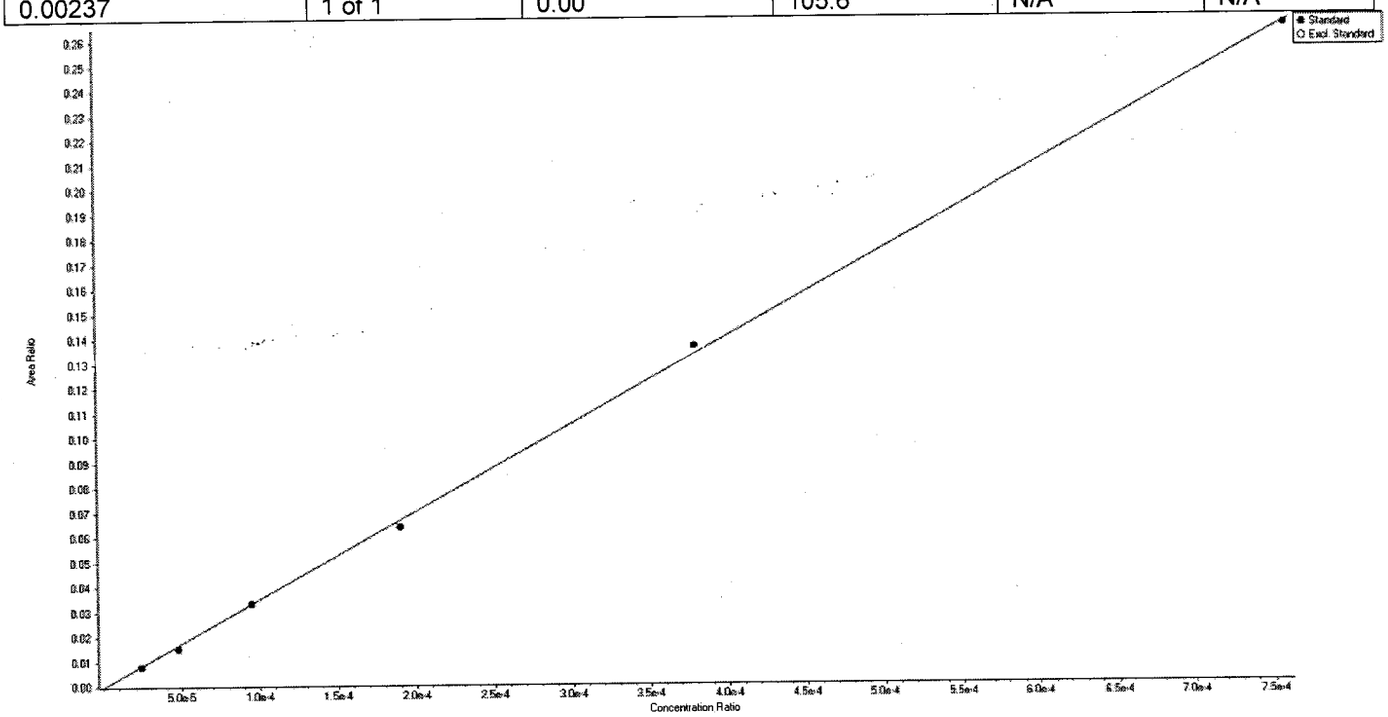


Analyte Name: PFHxS 2
Internal Standard: IS-13C-PFOS

Data File	@537-Batch#780662-071614.wiff	**Result Table**	@537-Batch#780662-071614
Acquisition Date	7/16/2014 5:07:58 PM	**Algorithm Used**	MQ4
Acquisition Method	@537-ShortRun-110613-Ali.dam	**Instrument Name**	API 4000
Project	EPA537\2014_07_16		

Regression Equation: y = 350.75990 x (r = 0.99978) (weighting: None)

Expected Concentration	Number of Values	Mean Calculated Concentration	% Accuracy	Std. Deviation	%CV
0.00887	1 of 1	0.01	97.2	N/A	N/A
0.01770	1 of 1	0.02	93.6	N/A	N/A
0.03550	1 of 1	0.04	107.7	N/A	N/A
0.07100	1 of 1	0.07	98.6	N/A	N/A
0.00237	1 of 1	0.00	105.6	N/A	N/A

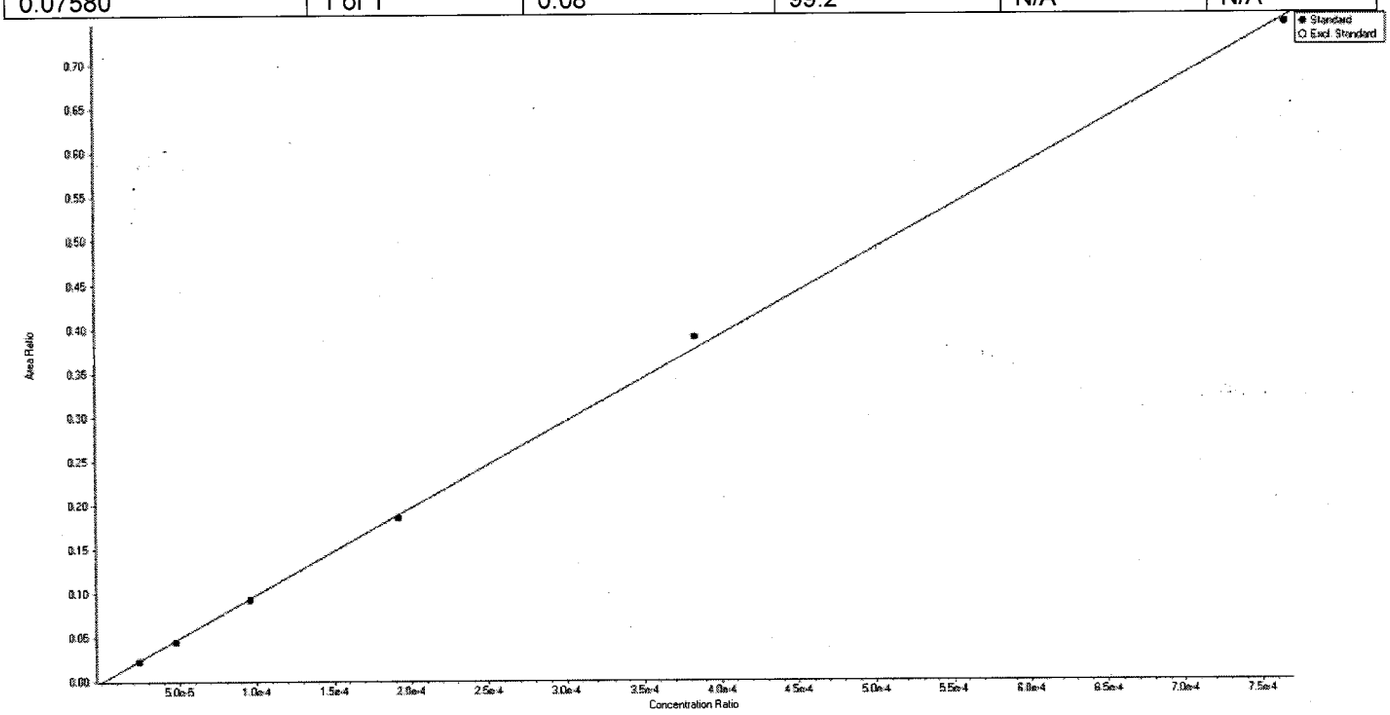


Analyte Name: PFOS
Internal Standard: IS-13C-PFOS

Data File	@537-Batch#780662-071614.wiff	**Result Table**	@537-Batch#780662-071614
Acquisition Date	7/16/2014 5:07:58 PM	**Algorithm Used**	MQ4
Acquisition Method	@537-ShortRun-110613-Ali.dam	**Instrument Name**	API 4000
Project	EPA537\2014_07_16		

Regression Equation: y = 981.51821 x (r = 0.99967) (weighting: None)

Expected Concentration	Number of Values	Mean Calculated Concentration	% Accuracy	Std. Deviation	%CV
0.00474	1 of 1	0.00	100.7	N/A	N/A
0.00948	1 of 1	0.01	96.6	N/A	N/A
0.01900	1 of 1	0.02	96.5	N/A	N/A
0.03790	1 of 1	0.04	104.5	N/A	N/A
0.07580	1 of 1	0.08	99.2	N/A	N/A

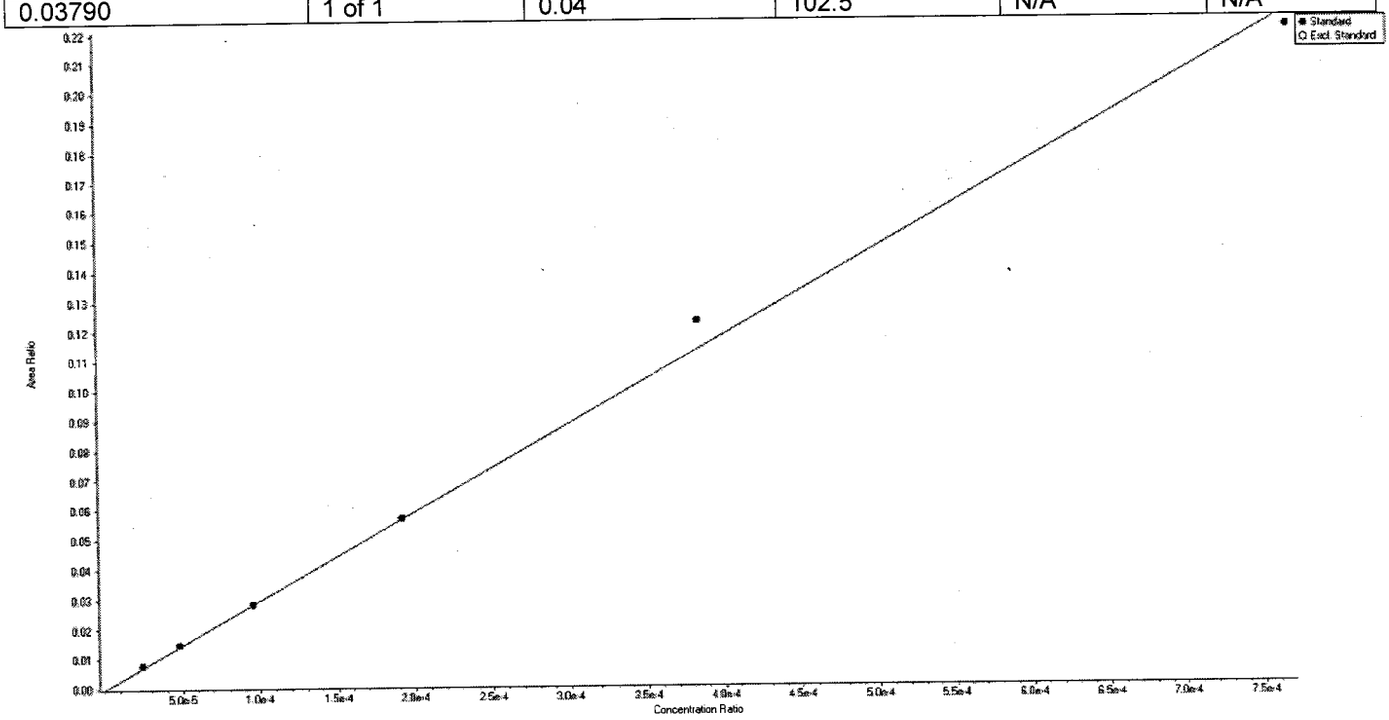


Analyte Name: PFOS 2
Internal Standard: IS-13C-PFOS

Data File	@537-Batch#780662-071614.wiff	**Result Table**	@537-Batch#780662-071614
Acquisition Date	7/16/2014 5:07:58 PM	**Algorithm Used**	MQ4
Acquisition Method	@537-ShortRun-110613-Ali.dam	**Instrument Name**	API 4000
Project	EPA537\2014_07_16		

Regression Equation: y = 294.85015 x (r = 0.99844) (weighting: None)

Expected Concentration	Number of Values	Mean Calculated Concentration	% Accuracy	Std. Deviation	%CV
0.00237	1 of 1	0.00	96.3	N/A	N/A
0.00474	1 of 1	0.00	90.3	N/A	N/A
0.00948	1 of 1	0.01	100.3	N/A	N/A
0.01900	1 of 1	0.02	95.7	N/A	N/A
0.03790	1 of 1	0.04	102.5	N/A	N/A

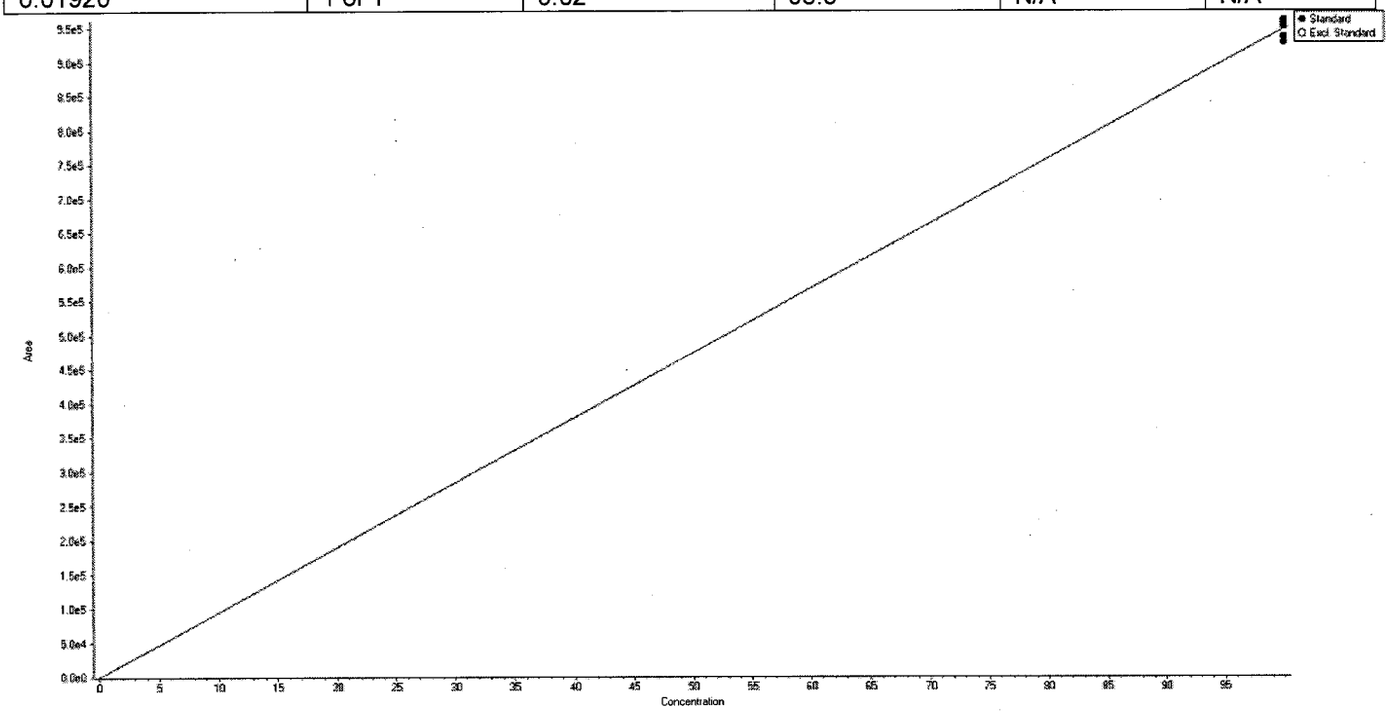


Analyte Name: 13C-PFOA
Internal Standard: N/A

Data File	@537-Batch#780662-071614.wiff	**Result Table**	@537-Batch#780662-071614
Acquisition Date	7/16/2014 5:07:58 PM	**Algorithm Used**	MQ4
Acquisition Method	@537-ShortRun-110613-Ali.dam	**Instrument Name**	API 4000
Project	EPA537\2014_07_16		

Regression Equation: y = 9478.30242 x (std. dev. = 127.96243) (weighting: None)

Expected Concentration	Number of Values	Mean Calculated Concentration	% Accuracy	Std. Deviation	%CV
0.07580	1 of 1	0.08	99.7	N/A	N/A
0.00240	1 of 1	0.00	96.1	N/A	N/A
0.00479	1 of 1	0.00	95.0	N/A	N/A
0.00958	1 of 1	0.01	98.7	N/A	N/A
0.01920	1 of 1	0.02	98.3	N/A	N/A

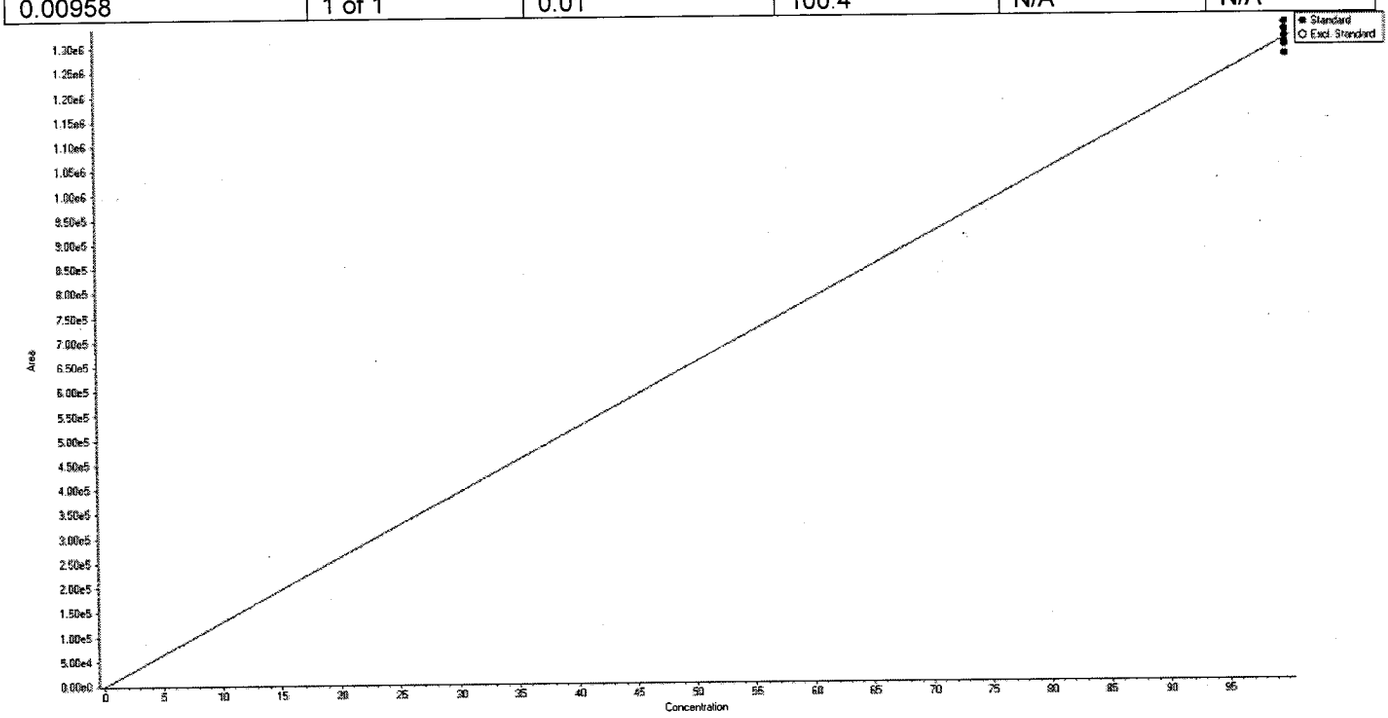


Analyte Name: 13C-PFOS
Internal Standard: N/A

Data File	@537-Batch#780662-071614.wiff	**Result Table**	@537-Batch#780662-071614
Acquisition Date	7/16/2014 5:07:58 PM	**Algorithm Used**	MQ4
Acquisition Method	@537-ShortRun-110613-Ali.dam	**Instrument Name**	API 4000
Project	EPA537\2014_07_16		

Regression Equation: y = 13055.40125 x (std. dev. = 229.95317) (weighting: None)

Expected Concentration	Number of Values	Mean Calculated Concentration	% Accuracy	Std. Deviation	%CV
0.03830	1 of 1	0.04	103.8	N/A	N/A
0.07660	1 of 1	0.08	99.2	N/A	N/A
0.00240	1 of 1	0.00	109.5	N/A	N/A
0.00479	1 of 1	0.01	105.0	N/A	N/A
0.00958	1 of 1	0.01	100.4	N/A	N/A



LHZ
07/17/14

AB SCIEX

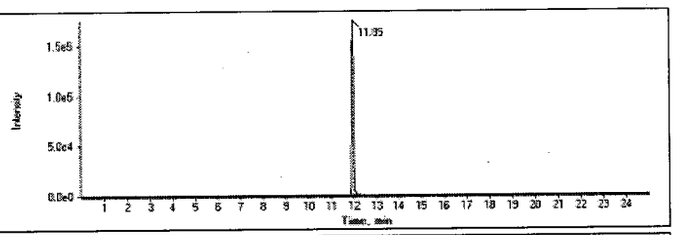
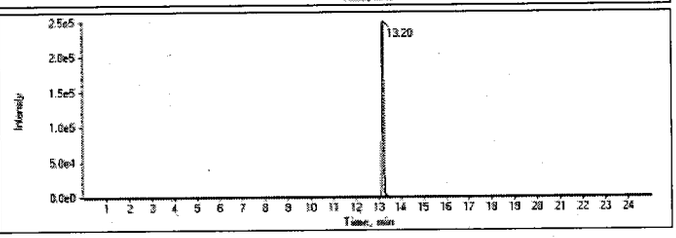
Created with Analyst Reporter
Printed: 17/07/2014 1:42:50 PM

Report File: @537-Batch#780662-071614-SampleReport1.pdf

Sample Name	Cal-0ppb	**Injection Vial**	1
Sample ID		**Injection Volume**	5.00
Sample Type	Quality Control	**Algorithm Used**	MQ4
Acquisition Date	7/16/2014 5:07:58 PM	**Dilution Factor**	1.00
Acquisition Method	@537-ShortRun-110613-Ali.dam	**Weight to Volume**	N/A
Project	EPA537\2014_07_16	**Instrument Name**	API 4000
Data File	@537-Batch#780662-071614.wiff		
Result Table	@537-Batch#780662-071614		
Sample Comment	Lot#@537Cal-071614-LHZ, Exp.07/30/14		

Internal Standard	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
IS-13C-PFOA	960054	11.95	100.00000	-
IS-13C-PFOS	1334547	13.20	100.00000	-

Target Analyte	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
PFHxA	2.940e+02	8.30	0.00000	0.000019
Surr-13c-PFHxA	1.024e+06	8.27	100.00000	97.830939
PFHpA	3.920e+02	10.40	0.00000	0.000013
PFHpA 2	N/A	N/A	0.00000	N/A
PFOA	1.079e+03	11.96	0.00000	0.000037
PFOA 2	7.840e+02	11.95	0.00000	0.000077
PFNA	5.880e+02	13.21	0.00000	0.000027
PFNA 2	2.450e+02	13.16	0.00000	0.000043
PFDA	2.450e+02	14.30	0.00000	0.000011
PFDA 2	N/A	N/A	0.00000	N/A
Surr-13c-PFDA	8.209e+05	14.25	100.00000	98.256912
PFUnA	3.430e+02	15.16	0.00000	0.000016
PFUnA 2	9.800e+01	14.69	0.00000	0.000023
PFDoA	2.450e+02	15.86	0.00000	0.000012
PFTrDA	1.470e+02	16.58	0.00000	0.000005
PFTrDA 2	2.450e+02	16.54	0.00000	0.000037
PFTA	1.960e+02	17.27	0.00000	0.000025
PFBS	9.800e+01	6.02	0.00000	0.000008
PFBS 2	1.470e+02	6.04	0.00000	0.000035
PFHxS	N/A	N/A	0.00000	N/A
PFHxS 2	9.800e+01	10.58	0.00000	0.000021
PFOS	1.470e+02	13.21	0.00000	0.000011
PFOS 2	N/A	N/A	0.00000	N/A
13C-PFOA	9.601e+05	11.95	100.00000	101.289689
13C-PFOS	1.335e+06	13.20	100.00000	102.221852

IS-13C-PFOA (Internal Standard) RT (Exp. RT): 11.95(11.96) min Concentration: 100.00000 Sample Type: (Quality Control)	
IS-13C-PFOS (Internal Standard) RT (Exp. RT): 13.20(13.22) min Concentration: 100.00000 Sample Type: (Quality Control)	

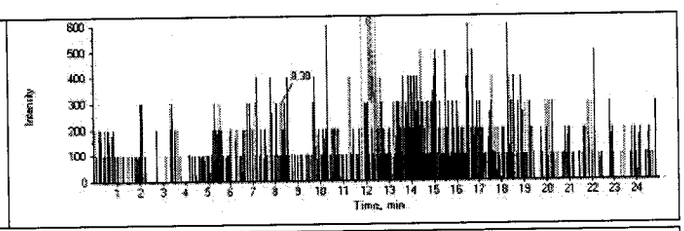
PFHxA (313.0 / 268.8)

RT (Exp. RT): 8.30 (8.28) min

Calculated conc: 0.000019

Area Ratio: 3.065e-4

Sample Type: (Quality Control)



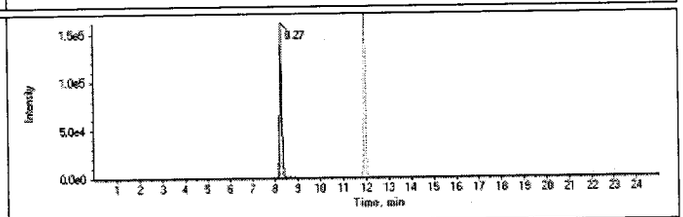
Surr-13c-PFHxA (315.0 / 270.0)

RT (Exp. RT): 8.27 (8.28) min

Calculated conc: 97.830939

Area Ratio: 1.066e0

Sample Type: (Quality Control)



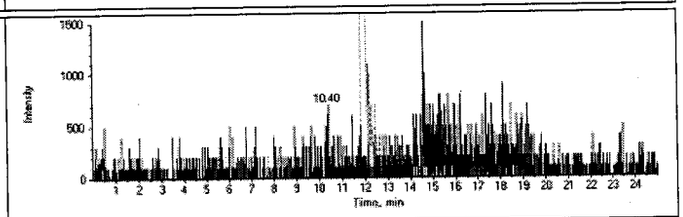
PFHpA (363.0 / 318.9)

RT (Exp. RT): 10.40 (10.40) min

Calculated conc: 0.000013

Area Ratio: 4.084e-4

Sample Type: (Quality Control)



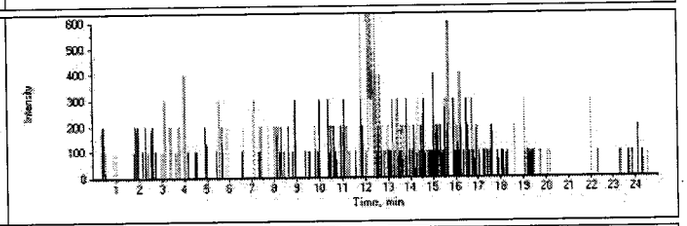
PFHpA 2 (363.0 / 168.9)

RT (Exp. RT): N/A (10.40) min

Calculated conc: N/A

Area Ratio: N/A

Sample Type: (Quality Control)



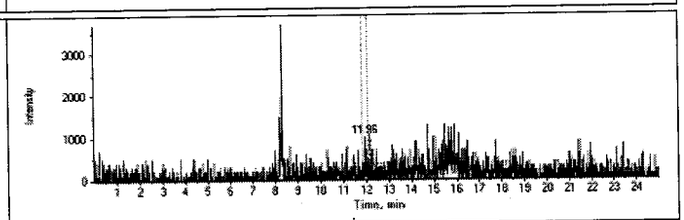
PFOA (413.0 / 368.9)

RT (Exp. RT): 11.96 (11.97) min

Calculated conc: 0.000037

Area Ratio: 1.123e-3

Sample Type: (Quality Control)



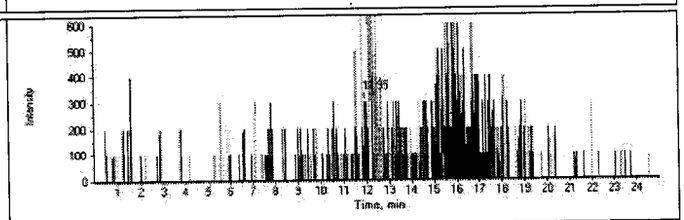
PFOA 2 (413.0 / 168.8)

RT (Exp. RT): 11.95 (11.96) min

Calculated conc: 0.000077

Area Ratio: 8.169e-4

Sample Type: (Quality Control)



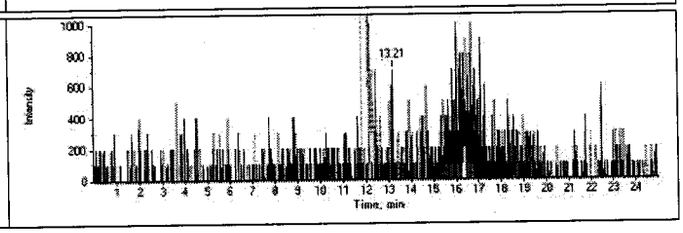
PFNA (463.0 / 419.0)

RT (Exp. RT): 13.21 (13.22) min

Calculated conc: 0.000027

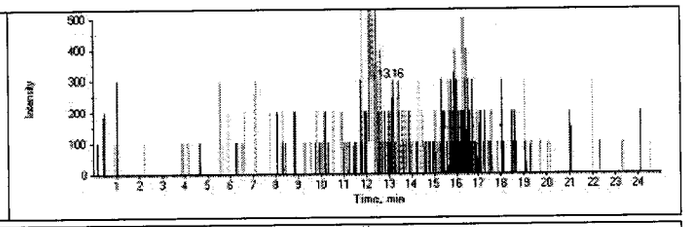
Area Ratio: 6.128e-4

Sample Type: (Quality Control)



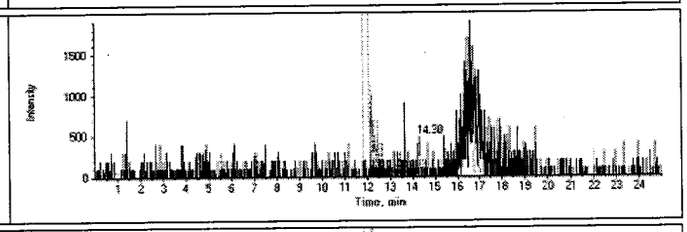
PFNA 2 (463.0 / 218.9)

RT (Exp. RT): 13.16 (13.21) min
Calculated conc: 0.000043
Area Ratio: 2.555e-4
Sample Type: (Quality Control)



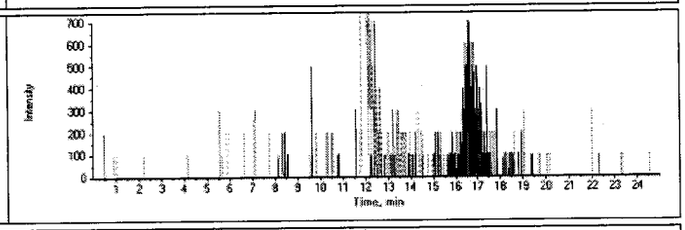
PFDA (513.0 / 469.0)

RT (Exp. RT): 14.30 (14.26) min
Calculated conc: 0.000011
Area Ratio: 2.555e-4
Sample Type: (Quality Control)



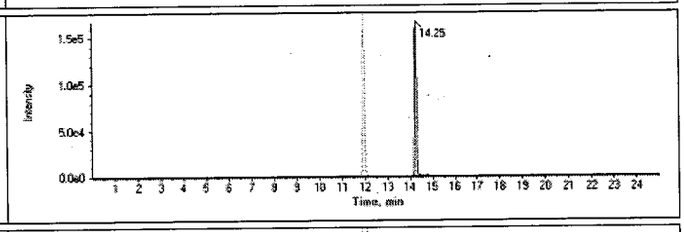
PFDA 2 (513.0 / 218.8)

RT (Exp. RT): N/A (14.26) min
Calculated conc: N/A
Area Ratio: N/A
Sample Type: (Quality Control)



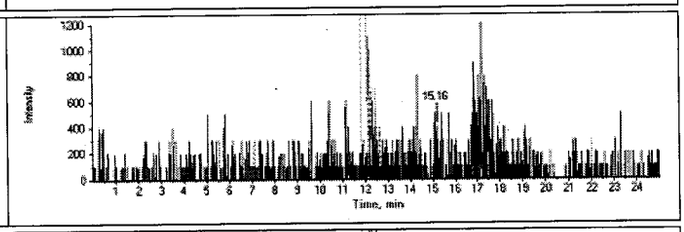
Surr-13c-PFDA (515.0 / 470.0)

RT (Exp. RT): 14.25 (14.26) min
Calculated conc: 98.256912
Area Ratio: 8.551e-1
Sample Type: (Quality Control)



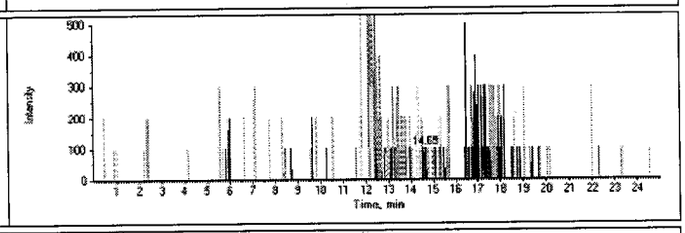
PFUnA (563.0 / 519.0)

RT (Exp. RT): 15.16 (15.14) min
Calculated conc: 0.000016
Area Ratio: 3.576e-4
Sample Type: (Quality Control)



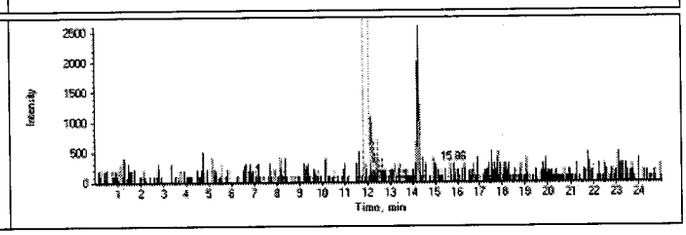
PFUnA 2 (563.0 / 268.8)

RT (Exp. RT): 14.69 (15.14) min
Calculated conc: 0.000023
Area Ratio: 1.021e-4
Sample Type: (Quality Control)



PFDoA (612.8 / 569.0)

RT (Exp. RT): 15.86 (15.90) min
Calculated conc: 0.000012
Area Ratio: 2.552e-4
Sample Type: (Quality Control)



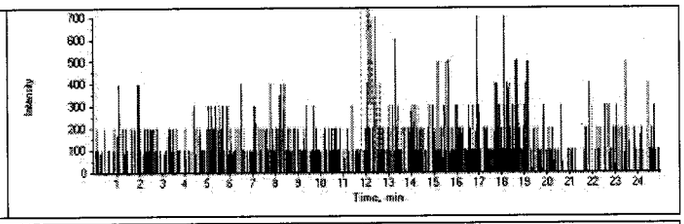
PFTrDA (662.9 / 619.0)

RT (Exp. RT): 16.58 (16.55) min

Calculated conc: 0.000005

Area Ratio: 1.532e-4

Sample Type: (Quality Control)



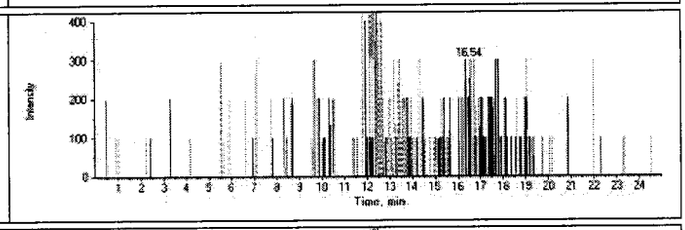
PFTrDA 2 (662.9 / 168.9)

RT (Exp. RT): 16.54 (16.55) min

Calculated conc: 0.000037

Area Ratio: 2.556e-4

Sample Type: (Quality Control)



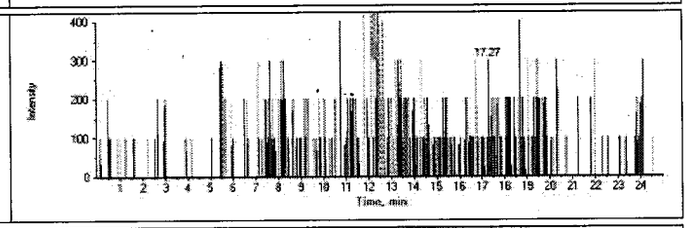
PFTA (713.3 / 669.0)

RT (Exp. RT): 17.27 (17.11) min

Calculated conc: 0.000025

Area Ratio: 2.042e-4

Sample Type: (Quality Control)



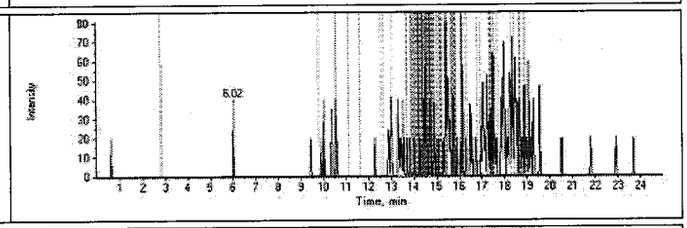
PFBS (299.0 / 79.9)

RT (Exp. RT): 6.02 (5.96) min

Calculated conc: 0.000008

Area Ratio: 7.349e-5

Sample Type: (Quality Control)



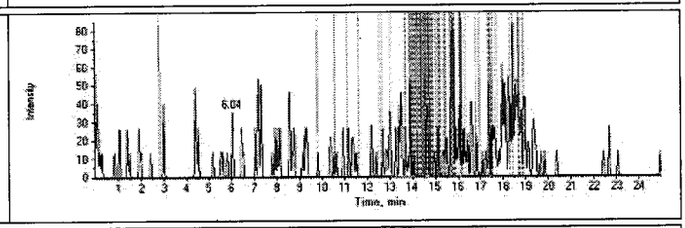
PFBS 2 (299.0 / 99.0)

RT (Exp. RT): 6.04 (5.97) min

Calculated conc: 0.000035

Area Ratio: 1.102e-4

Sample Type: (Quality Control)



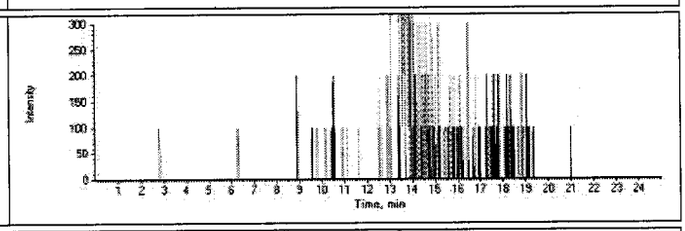
PFHxS (398.9 / 80.0)

RT (Exp. RT): N/A (10.55) min

Calculated conc: N/A

Area Ratio: N/A

Sample Type: (Quality Control)



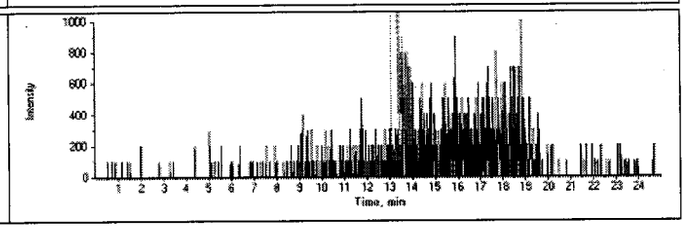
PFHxS 2 (398.9 / 99.0)

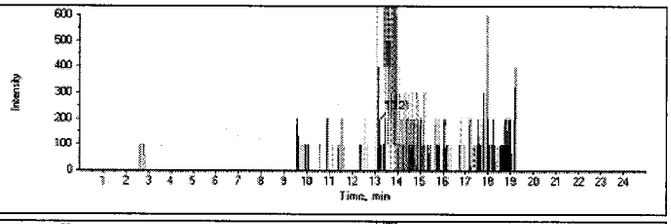
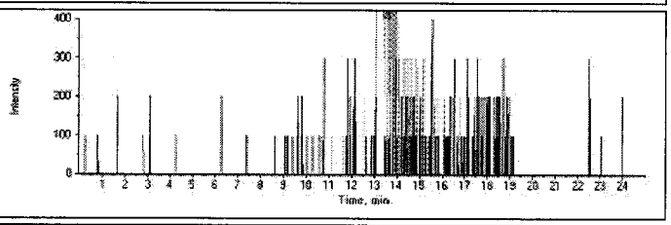
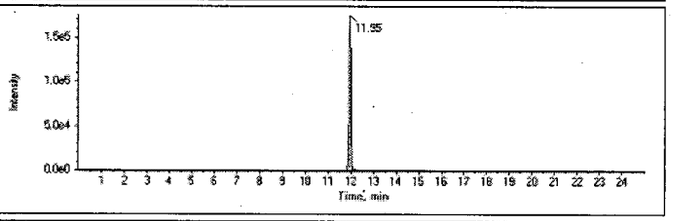
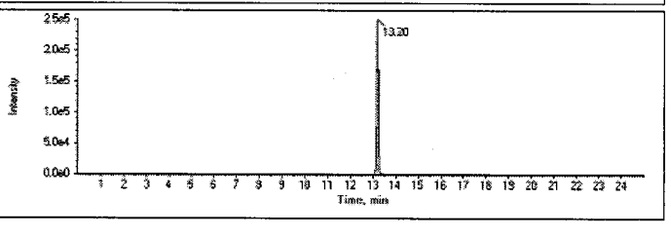
RT (Exp. RT): 10.58 (10.54) min

Calculated conc: 0.000021

Area Ratio: 7.347e-5

Sample Type: (Quality Control)

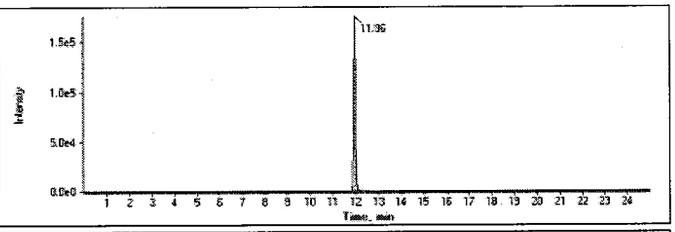
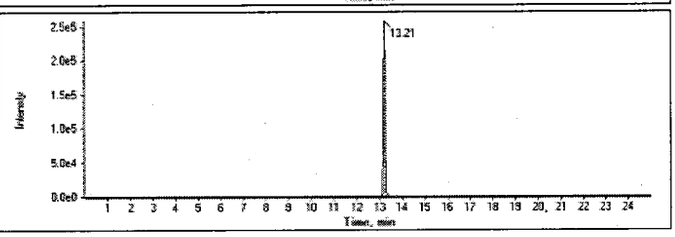


PFOS (499.0 / 79.9) RT (Exp. RT): 13.21 (13.22) min Calculated conc: 0.000011 Area Ratio: 1.102e-4 Sample Type: (Quality Control)	
PFOS 2 (499.0 / 99.0) RT (Exp. RT): N/A (13.21) min Calculated conc: N/A Area Ratio: N/A Sample Type: (Quality Control)	
13C-PFOA (417.0 / 372.0) RT (Exp. RT): 11.95 (11.96) min Calculated conc: 101.289689 Area Ratio: N/A Sample Type: (Quality Control)	
13C-PFOS (503.0 / 80.0) RT (Exp. RT): 13.20 (13.22) min Calculated conc: 102.221852 Area Ratio: N/A Sample Type: (Quality Control)	

Sample Name	Cal-0.0025ppb	**Injection Vial**	2
Sample ID		**Injection Volume**	5.00
Sample Type	Standard	**Algorithm Used**	MQ4
Acquisition Date	7/16/2014 5:33:33 PM	**Dilution Factor**	1.00
Acquisition Method	@537-ShortRun-110613-Ali.dam	**Weight to Volume**	N/A
Project	EPA537\2014_07_16	**Instrument Name**	API 4000
Data File	@537-Batch#780662-071614.wiff		
Result Table	@537-Batch#780662-071614		
Sample Comment	Lot#@537Cal-071614-LHZ, Exp.07/30/14		

Internal Standard	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
IS-13C-PFOA	936072	11.96	100.00000	-
IS-13C-PFOS	1310556	13.21	100.00000	-

Target Analyte	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
PFHxA	4.139e+04	8.27	0.00250	0.002786
Surr-13c-PFHxA	1.052e+06	8.28	100.00000	103.144042
PFHpA	8.470e+04	10.40	0.00250	0.002793
PFHpA 2	2.163e+04	10.39	0.00250	0.002463
PFOA	7.582e+04	11.96	0.00250	0.002685
PFOA 2	2.697e+04	11.96	0.00250	0.002712
PFNA	5.728e+04	13.22	0.00250	0.002712
PFNA 2	1.658e+04	13.22	0.00250	0.002962
PFDA	5.949e+04	14.26	0.00250	0.002638
PFDA 2	1.054e+04	14.26	0.00250	0.002543
Surr-13c-PFDA	8.330e+05	14.26	100.00000	102.257272
PFUnA	6.228e+04	15.15	0.00250	0.002947
PFUnA 2	1.153e+04	15.15	0.00250	0.002773
PFDoA	4.875e+04	15.90	0.00250	0.002542
PFTrDA	7.572e+04	16.55	0.00250	0.002695
PFTrDA 2	1.579e+04	16.55	0.00250	0.002439
PFTA	2.001e+04	17.12	0.00250	0.002583
PFBS	2.496e+04	5.96	0.00222	0.002165
PFBS 2	1.123e+04	5.96	0.00222	0.002725
PFHxS	3.438e+04	10.55	0.00237	0.002502
PFHxS 2	1.049e+04	10.55	0.00237	0.002283
PFOS	2.967e+04	13.21	0.00240	0.002306
PFOS 2	1.015e+04	13.21	0.00240	0.002627
13C-PFOA	9.361e+05	11.96	100.00000	98.759489
13C-PFOS	1.311e+06	13.21	100.00000	100.384215

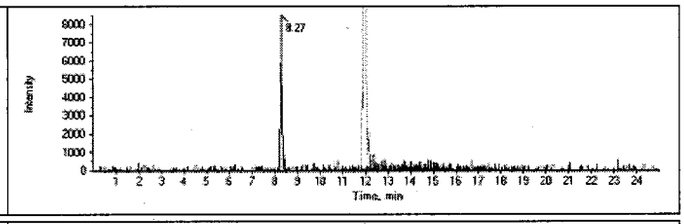
IS-13C-PFOA (Internal Standard) RT (Exp. RT): 11.96(11.96) min Concentration: 100.00000 Sample Type: (Standard)	
IS-13C-PFOS (Internal Standard) RT (Exp. RT): 13.21(13.22) min Concentration: 100.00000 Sample Type: (Standard)	

PFHxA (313.0 / 268.8)

RT (Exp. RT): 8.27 (8.28) min

Calculated conc: 0.002786

Area Ratio: 4.421e-2
Sample Type: (Standard)

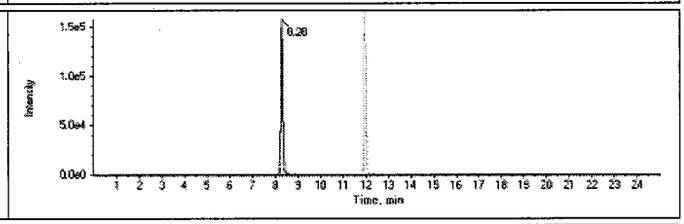


Surr-13c-PFHxA (315.0 / 270.0)

RT (Exp. RT): 8.28 (8.28) min

Calculated conc: 103.144042

Area Ratio: 1.124e0
Sample Type: (Standard)

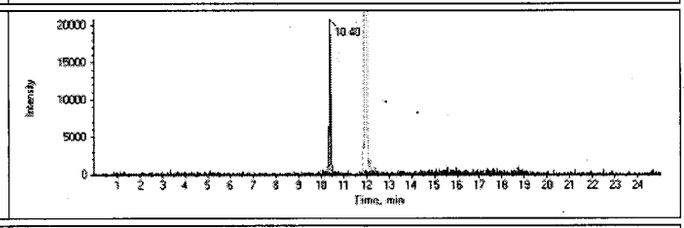


PFHpA (363.0 / 318.9)

RT (Exp. RT): 10.40 (10.40) min

Calculated conc: 0.002793

Area Ratio: 9.048e-2
Sample Type: (Standard)

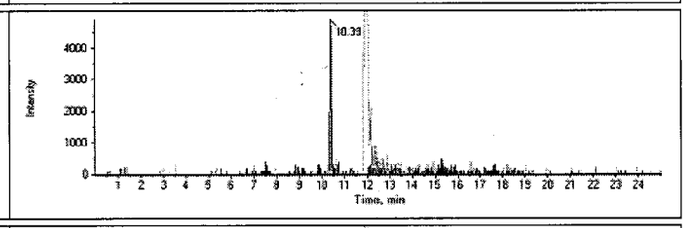


PFHpA 2 (363.0 / 168.9)

RT (Exp. RT): 10.39 (10.40) min

Calculated conc: 0.002463

Area Ratio: 2.310e-2
Sample Type: (Standard)

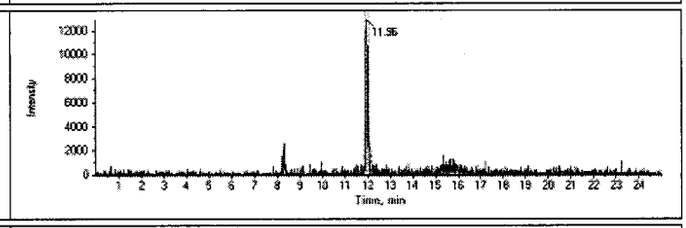


PFOA (413.0 / 368.9)

RT (Exp. RT): 11.96 (11.97) min

Calculated conc: 0.002685

Area Ratio: 8.099e-2
Sample Type: (Standard)

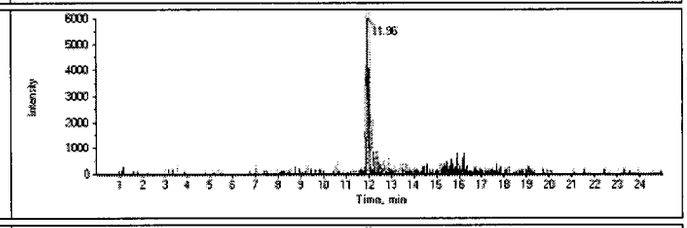


PFOA 2 (413.0 / 168.8)

RT (Exp. RT): 11.96 (11.96) min

Calculated conc: 0.002712

Area Ratio: 2.881e-2
Sample Type: (Standard)

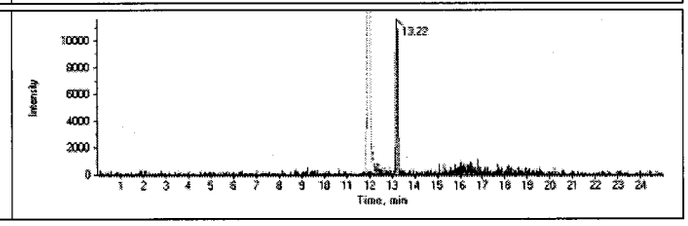


PFNA (463.0 / 419.0)

RT (Exp. RT): 13.22 (13.22) min

Calculated conc: 0.002712

Area Ratio: 6.119e-2
Sample Type: (Standard)

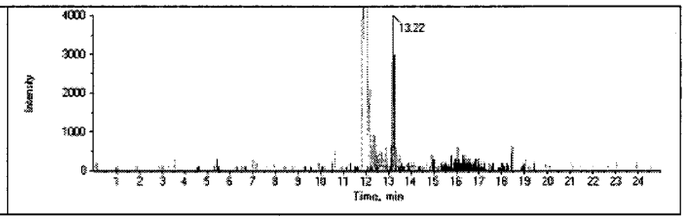


PFNA 2 (463.0 / 218.9)

RT (Exp. RT): 13.22 (13.21) min

Calculated conc: 0.002962

Area Ratio: 1.771e-2
Sample Type: (Standard)

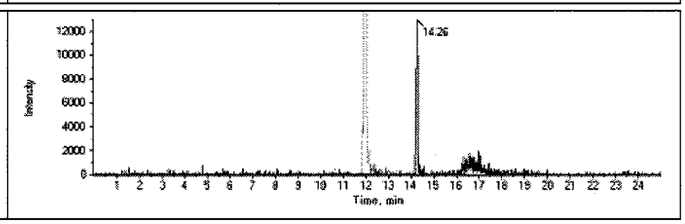


PFDA (513.0 / 469.0)

RT (Exp. RT): 14.26 (14.26) min

Calculated conc: 0.002638

Area Ratio: 6.355e-2
Sample Type: (Standard)

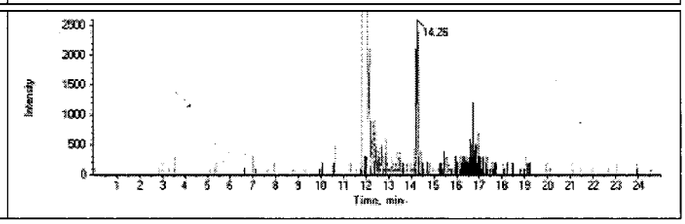


PFDA 2 (513.0 / 218.8)

RT (Exp. RT): 14.26 (14.26) min

Calculated conc: 0.002543

Area Ratio: 1.126e-2
Sample Type: (Standard)

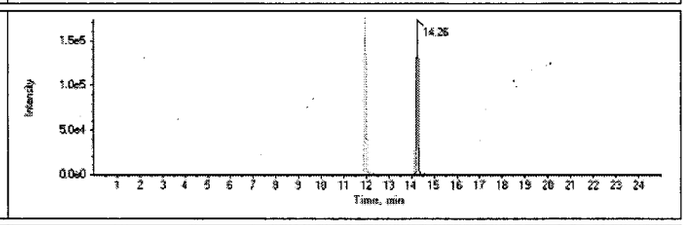


Surr-13c-PFDA (515.0 / 470.0)

RT (Exp. RT): 14.26 (14.26) min

Calculated conc: 102.257272

Area Ratio: 8.899e-1
Sample Type: (Standard)

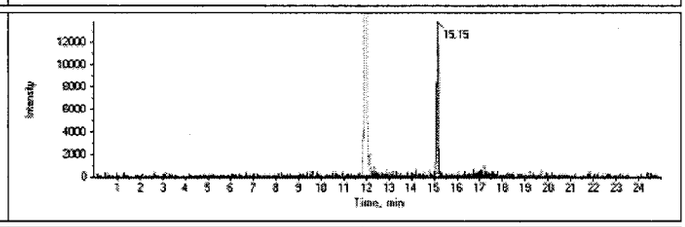


PFUnA (563.0 / 519.0)

RT (Exp. RT): 15.15 (15.14) min

Calculated conc: 0.002947

Area Ratio: 6.654e-2
Sample Type: (Standard)

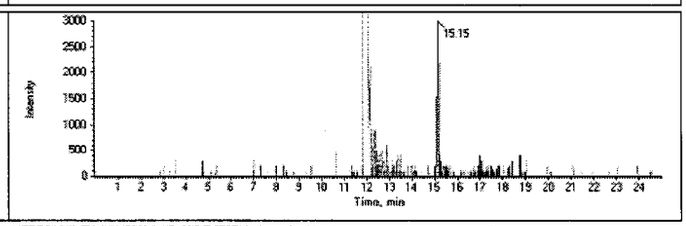


PFUnA 2 (563.0 / 268.8)

RT (Exp. RT): 15.15 (15.14) min

Calculated conc: 0.002773

Area Ratio: 1.231e-2
Sample Type: (Standard)

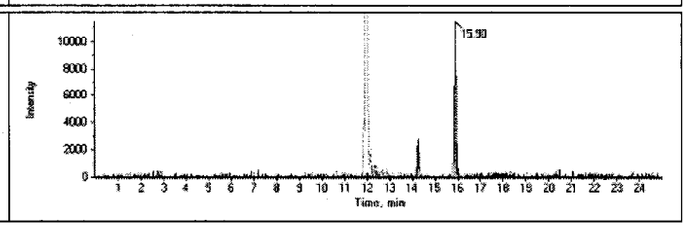


PFDoA (612.8 / 569.0)

RT (Exp. RT): 15.90 (15.90) min

Calculated conc: 0.002542

Area Ratio: 5.208e-2
Sample Type: (Standard)

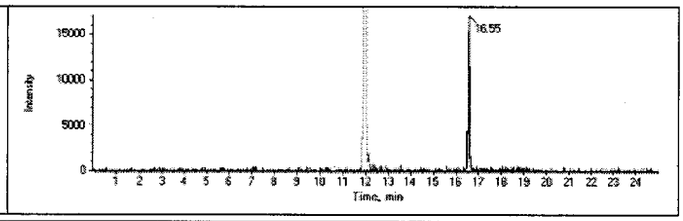


PFTrDA (662.9 / 619.0)

RT (Exp. RT): 16.55 (16.55) min

Calculated conc: 0.002695

Area Ratio: 8.089e-2
Sample Type: (Standard)

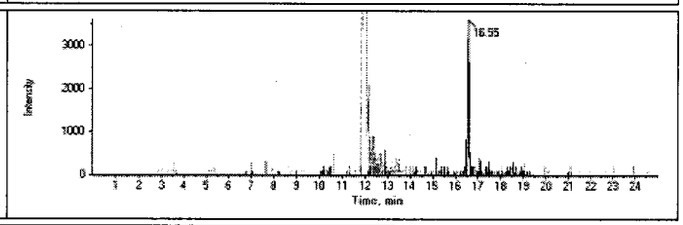


PFTrDA 2 (662.9 / 168.9)

RT (Exp. RT): 16.55 (16.55) min

Calculated conc: 0.002439

Area Ratio: 1.687e-2
Sample Type: (Standard)

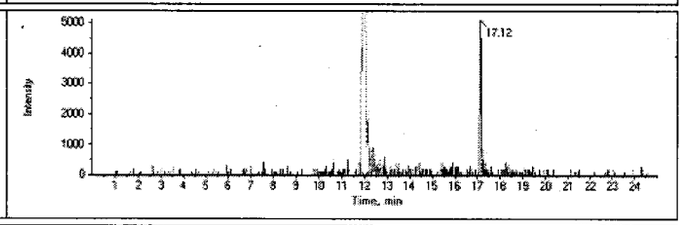


PFTA (713.3 / 669.0)

RT (Exp. RT): 17.12 (17.11) min

Calculated conc: 0.002583

Area Ratio: 2.138e-2
Sample Type: (Standard)

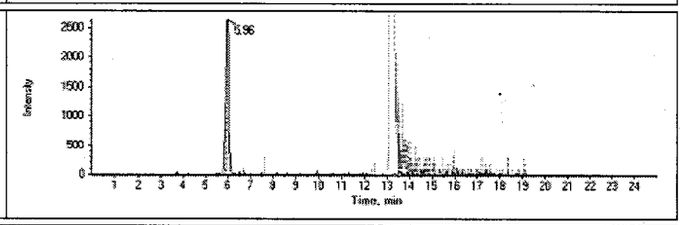


PFBS (299.0 / 79.9)

RT (Exp. RT): 5.96 (5.96) min

Calculated conc: 0.002165

Area Ratio: 1.905e-2
Sample Type: (Standard)

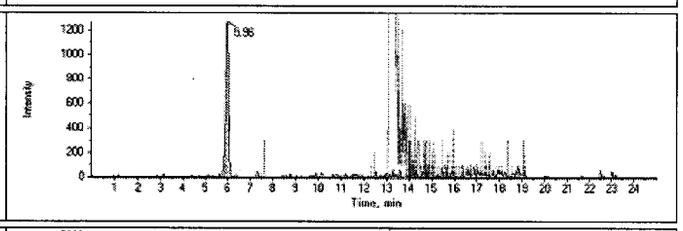


PFBS 2 (299.0 / 99.0)

RT (Exp. RT): 5.96 (5.97) min

Calculated conc: 0.002725

Area Ratio: 8.569e-3
Sample Type: (Standard)

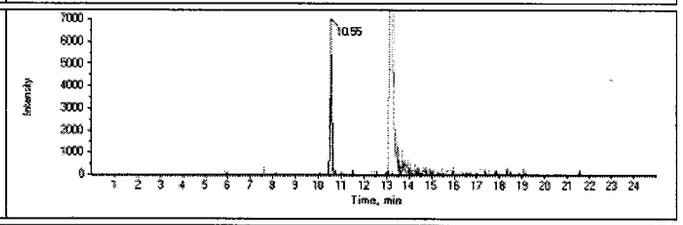


PFHxS (398.9 / 80.0)

RT (Exp. RT): 10.55 (10.55) min

Calculated conc: 0.002502

Area Ratio: 2.623e-2
Sample Type: (Standard)

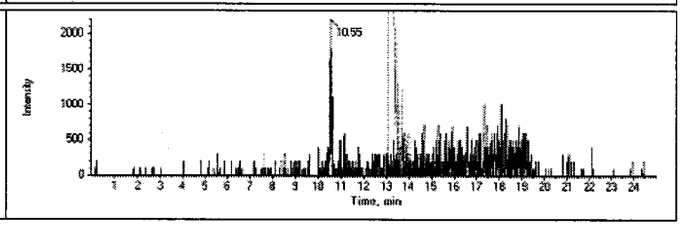


PFHxS 2 (398.9 / 99.0)

RT (Exp. RT): 10.55 (10.54) min

Calculated conc: 0.002283

Area Ratio: 8.007e-3
Sample Type: (Standard)

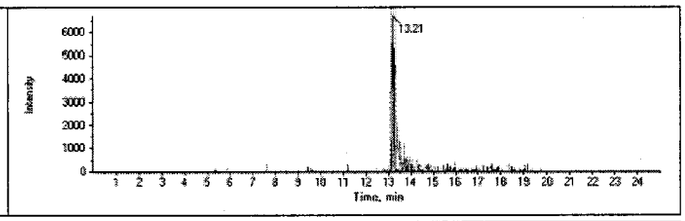


PFOS (499.0 / 79.9)

RT (Exp. RT): 13.21 (13.22) min

Calculated conc: 0.002306

Area Ratio: 2.264e-2
Sample Type: (Standard)

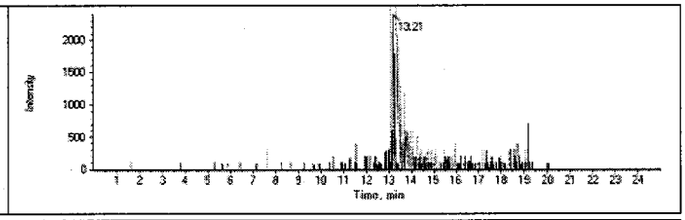


PFOS 2 (499.0 / 99.0)

RT (Exp. RT): 13.21 (13.21) min

Calculated conc: 0.002627

Area Ratio: 7.747e-3
Sample Type: (Standard)

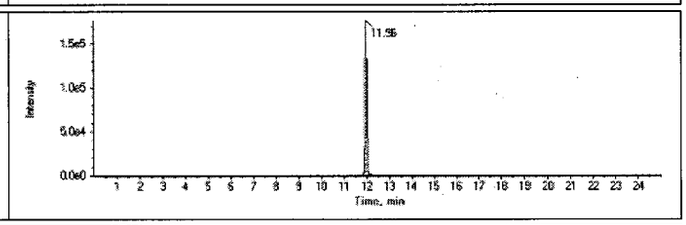


13C-PFOA (417.0 / 372.0)

RT (Exp. RT): 11.96 (11.96) min

Calculated conc: 98.759489

Area Ratio: N/A
Sample Type: (Standard)

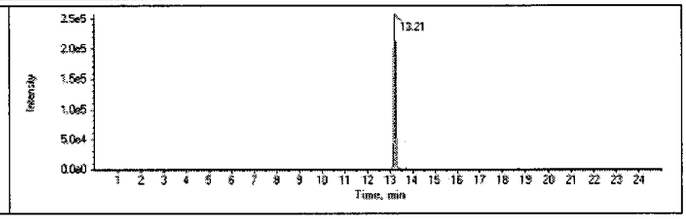


13C-PFOS (503.0 / 80.0)

RT (Exp. RT): 13.21 (13.22) min

Calculated conc: 100.384215

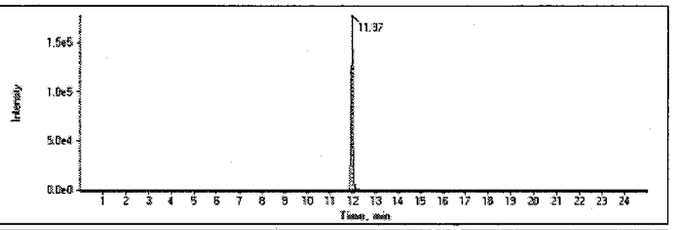
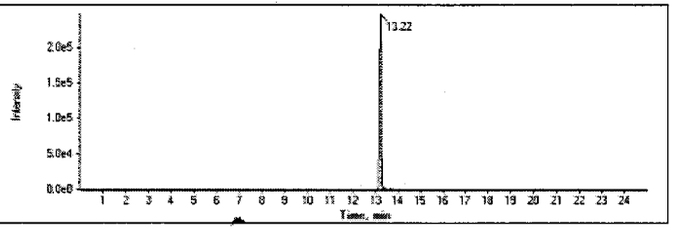
Area Ratio: N/A
Sample Type: (Standard)



Sample Name	Cal-0.005ppb	**Injection Vial**	3
Sample ID		**Injection Volume**	5.00
Sample Type	Standard	**Algorithm Used**	MQ4
Acquisition Date	7/16/2014 5:59:07 PM	**Dilution Factor**	1.00
Acquisition Method	@537-ShortRun-110613-Ali.dam	**Weight to Volume**	N/A
Project	EPA537\2014_07_16	**Instrument Name**	API 4000
Data File	@537-Batch#780662-071614.wiff		
Result Table	@537-Batch#780662-071614		
Sample Comment	Lot#@537Cal-071614-LHZ, Exp.07/30/14		

Internal Standard	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
IS-13C-PFOA	928318	11.97	100.00000	-
IS-13C-PFOS	1273688	13.22	100.00000	-

Target Analyte	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
PFHxA	7.360e+04	8.29	0.00500	0.004997
Surr-13c-PFHxA	9.754e+05	8.28	100.00000	96.411875
PFHpA	1.593e+05	10.40	0.00500	0.005296
PFHpA 2	4.575e+04	10.40	0.00500	0.005253
PFOA	1.487e+05	11.97	0.00500	0.005310
PFOA 2	4.683e+04	11.97	0.00500	0.004747
PFNA	1.079e+05	13.22	0.00500	0.005150
PFNA 2	2.952e+04	13.21	0.00500	0.005320
PFDA	1.079e+05	14.26	0.00500	0.004824
PFDA 2	2.064e+04	14.27	0.00500	0.005020
Surr-13c-PFDA	7.944e+05	14.26	100.00000	98.333322
PFUnA	1.036e+05	15.14	0.00500	0.004940
PFUnA 2	2.006e+04	15.15	0.00500	0.004866
PFDoA	9.214e+04	15.90	0.00500	0.004844
PFTrDA	1.313e+05	16.55	0.00500	0.004711
PFTrDA 2	2.879e+04	16.55	0.00500	0.004485
PFTA	3.614e+04	17.12	0.00500	0.004704
PFBS	4.963e+04	5.96	0.00443	0.004428
PFBS 2	1.560e+04	5.96	0.00443	0.003896
PFHxS	6.375e+04	10.55	0.00474	0.004774
PFHxS 2	1.913e+04	10.55	0.00474	0.004281
PFOS	5.686e+04	13.22	0.00479	0.004548
PFOS 2	1.888e+04	13.22	0.00479	0.005027
13C-PFOA	9.283e+05	11.97	100.00000	97.941346
13C-PFOS	1.274e+06	13.22	100.00000	97.560199

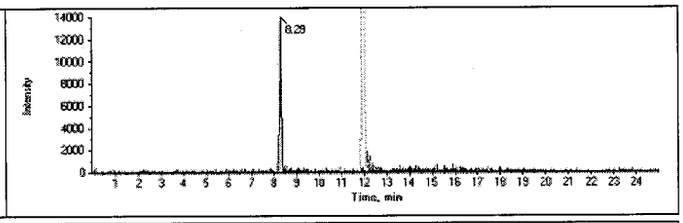
IS-13C-PFOA (Internal Standard) RT (Exp. RT): 11.97(11.96) min Concentration: 100.00000 Sample Type: (Standard)	
IS-13C-PFOS (Internal Standard) RT (Exp. RT): 13.22(13.22) min Concentration: 100.00000 Sample Type: (Standard)	

PFHxA (313.0 / 268.8)

RT (Exp. RT): 8.29 (8.28) min

Calculated conc: 0.004997

Area Ratio: 7.929e-2
Sample Type: (Standard)

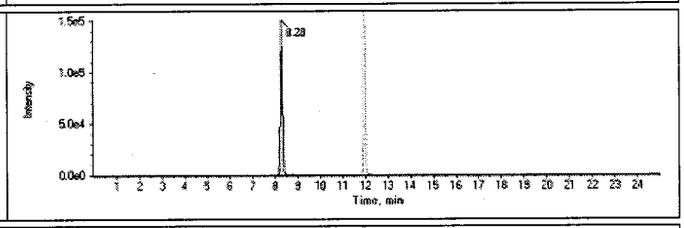


Surr-13c-PFHxA (315.0 / 270.0)

RT (Exp. RT): 8.28 (8.28) min

Calculated conc: 96.411875

Area Ratio: 1.051e0
Sample Type: (Standard)

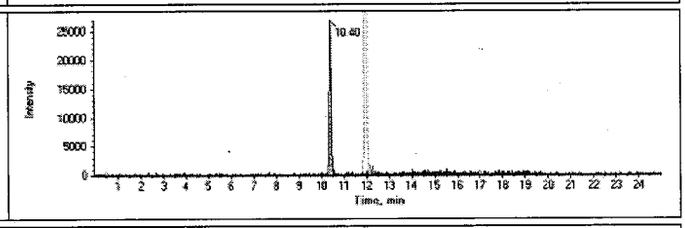


PFHpA (363.0 / 318.9)

RT (Exp. RT): 10.40 (10.40) min

Calculated conc: 0.005296

Area Ratio: 1.716e-1
Sample Type: (Standard)

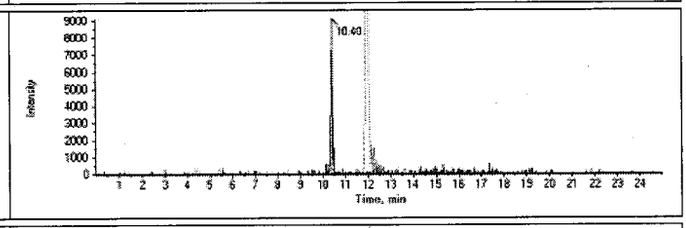


PFHpA 2 (363.0 / 168.9)

RT (Exp. RT): 10.40 (10.40) min

Calculated conc: 0.005253

Area Ratio: 4.929e-2
Sample Type: (Standard)

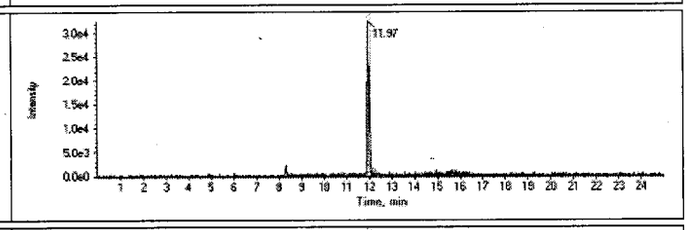


PFOA (413.0 / 368.9)

RT (Exp. RT): 11.97 (11.97) min

Calculated conc: 0.005310

Area Ratio: 1.602e-1
Sample Type: (Standard)

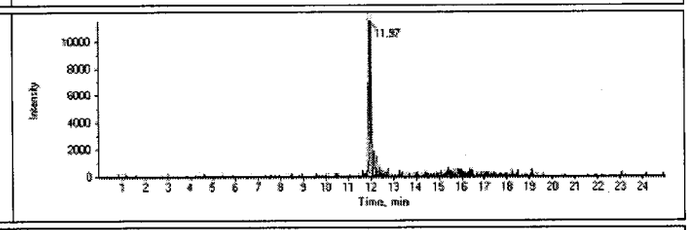


PFOA 2 (413.0 / 168.8)

RT (Exp. RT): 11.97 (11.96) min

Calculated conc: 0.004747

Area Ratio: 5.044e-2
Sample Type: (Standard)

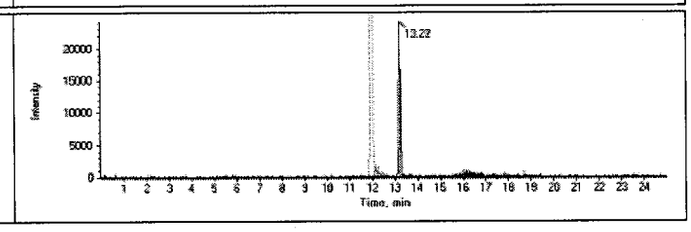


PFNA (463.0 / 419.0)

RT (Exp. RT): 13.22 (13.22) min

Calculated conc: 0.005150

Area Ratio: 1.162e-1
Sample Type: (Standard)

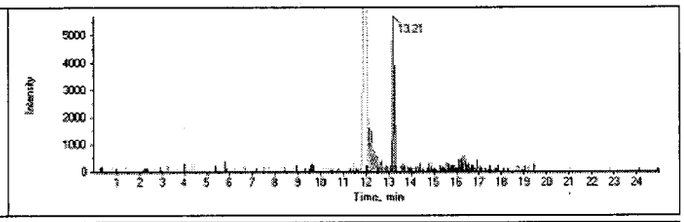


PFNA 2 (463.0 / 218.9)

RT (Exp. RT): 13.21 (13.21) min

Calculated conc: 0.005320

Area Ratio: 3.180e-2
Sample Type: (Standard)

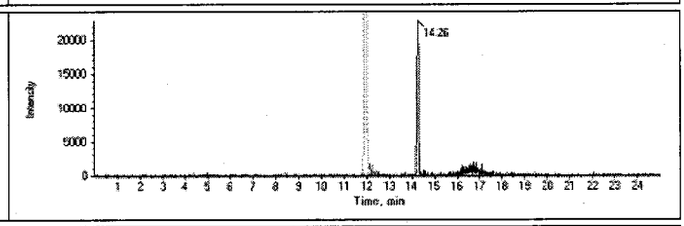


PFDA (513.0 / 469.0)

RT (Exp. RT): 14.26 (14.26) min

Calculated conc: 0.004824

Area Ratio: 1.162e-1
Sample Type: (Standard)

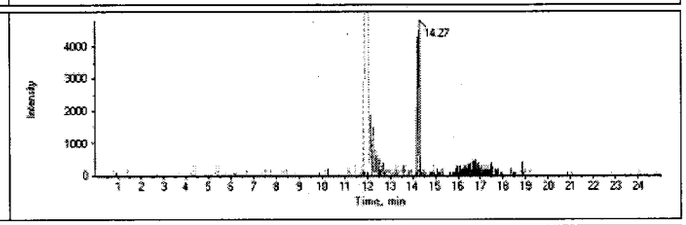


PFDA 2 (513.0 / 218.8)

RT (Exp. RT): 14.27 (14.26) min

Calculated conc: 0.005020

Area Ratio: 2.224e-2
Sample Type: (Standard)

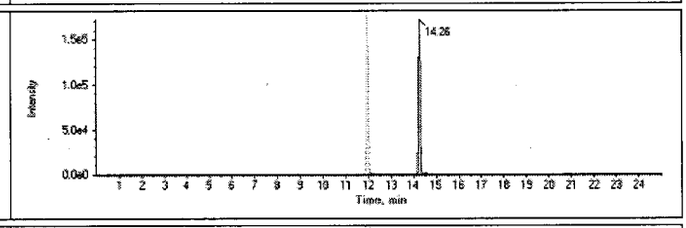


Surr-13c-PFDA (515.0 / 470.0)

RT (Exp. RT): 14.26 (14.26) min

Calculated conc: 98.333322

Area Ratio: 8.557e-1
Sample Type: (Standard)

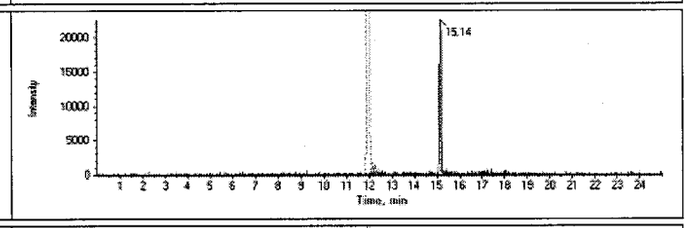


PFUnA (563.0 / 519.0)

RT (Exp. RT): 15.14 (15.14) min

Calculated conc: 0.004940

Area Ratio: 1.116e-1
Sample Type: (Standard)

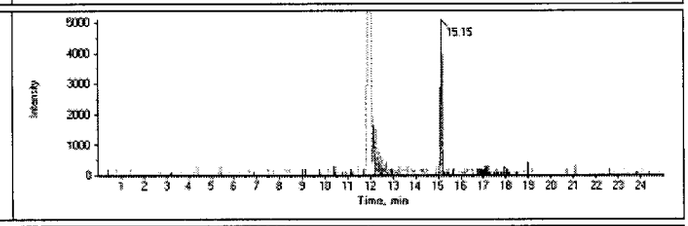


PFUnA 2 (563.0 / 268.8)

RT (Exp. RT): 15.15 (15.14) min

Calculated conc: 0.004866

Area Ratio: 2.160e-2
Sample Type: (Standard)

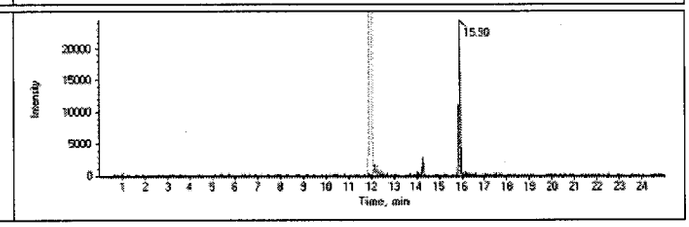


PFDoA (612.8 / 569.0)

RT (Exp. RT): 15.90 (15.90) min

Calculated conc: 0.004844

Area Ratio: 9.925e-2
Sample Type: (Standard)



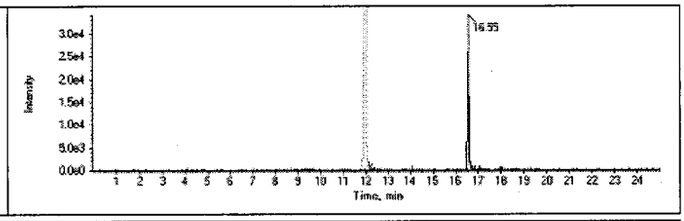
PFTrDA (662.9 / 619.0)

RT (Exp. RT): 16.55 (16.55) min

Calculated conc: 0.004711

Area Ratio: 1.414e-1

Sample Type: (Standard)



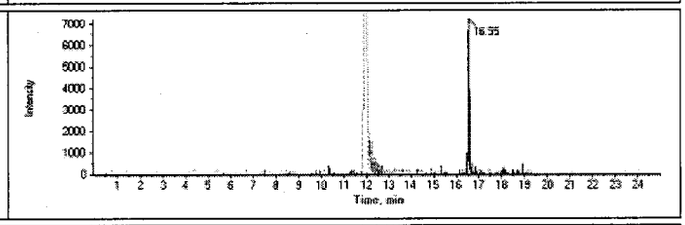
PFTrDA 2 (662.9 / 168.9)

RT (Exp. RT): 16.55 (16.55) min

Calculated conc: 0.004485

Area Ratio: 3.102e-2

Sample Type: (Standard)



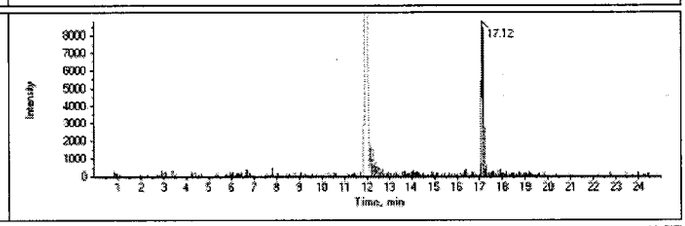
PFTA (713.3 / 669.0)

RT (Exp. RT): 17.12 (17.11) min

Calculated conc: 0.004704

Area Ratio: 3.893e-2

Sample Type: (Standard)



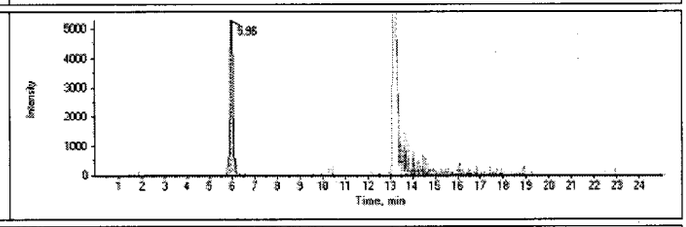
PFBS (299.0 / 79.9)

RT (Exp. RT): 5.96 (5.96) min

Calculated conc: 0.004428

Area Ratio: 3.896e-2

Sample Type: (Standard)



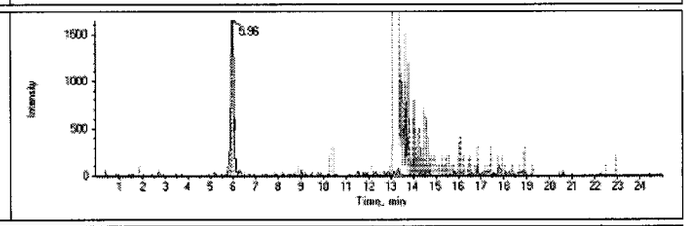
PFBS 2 (299.0 / 99.0)

RT (Exp. RT): 5.96 (5.97) min

Calculated conc: 0.003896

Area Ratio: 1.225e-2

Sample Type: (Standard)



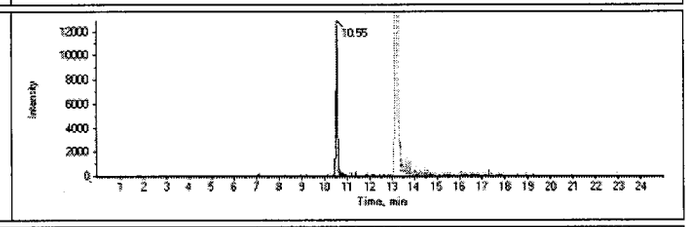
PFHxS (398.9 / 80.0)

RT (Exp. RT): 10.55 (10.55) min

Calculated conc: 0.004774

Area Ratio: 5.005e-2

Sample Type: (Standard)



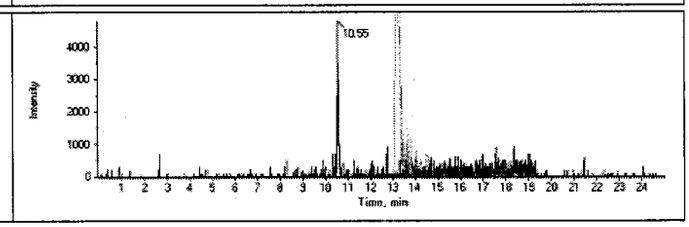
PFHxS 2 (398.9 / 99.0)

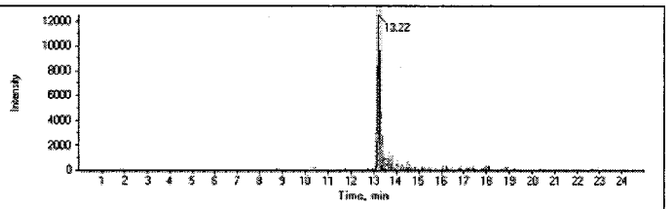
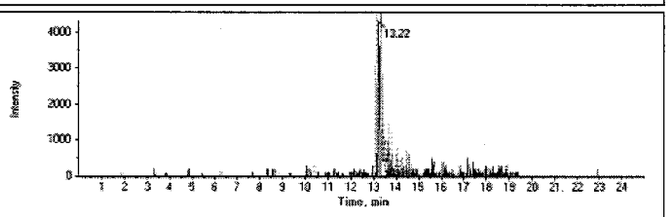
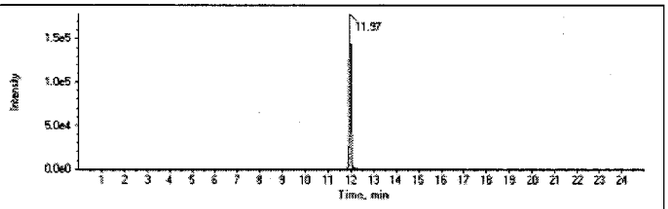
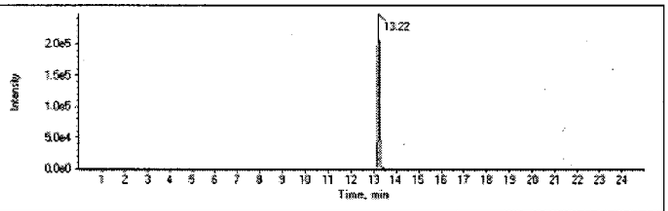
RT (Exp. RT): 10.55 (10.54) min

Calculated conc: 0.004281

Area Ratio: 1.502e-2

Sample Type: (Standard)

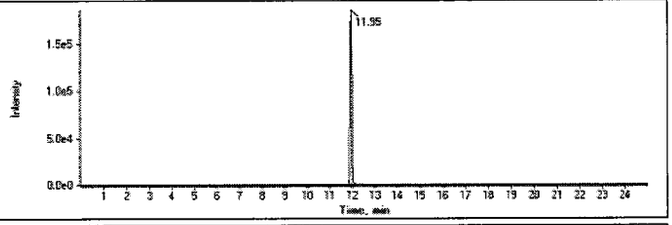
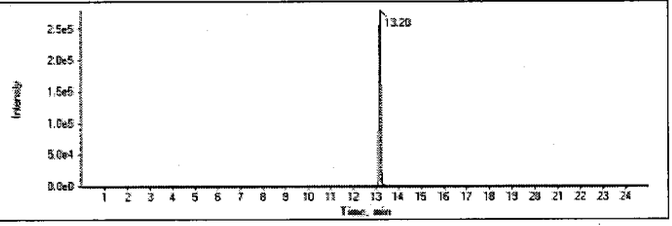


PFOS (499.0 / 79.9) RT (Exp. RT): 13.22 (13.22) min Calculated conc: 0.004548 Area Ratio: 4.464e-2 Sample Type: (Standard)	
PFOS 2 (499.0 / 99.0) RT (Exp. RT): 13.22 (13.21) min Calculated conc: 0.005027 Area Ratio: 1.482e-2 Sample Type: (Standard)	
13C-PFOA (417.0 / 372.0) RT (Exp. RT): 11.97 (11.96) min Calculated conc: 97.941346 Area Ratio: N/A Sample Type: (Standard)	
13C-PFOS (503.0 / 80.0) RT (Exp. RT): 13.22 (13.22) min Calculated conc: 97.560199 Area Ratio: N/A Sample Type: (Standard)	

Sample Name	Cal-0.01ppb	**Injection Vial**	4
Sample ID		**Injection Volume**	5.00
Sample Type	Standard	**Algorithm Used**	MQ4
Acquisition Date	7/16/2014 6:24:42 PM	**Dilution Factor**	1.00
Acquisition Method	@537-ShortRun-110613-Ali.dam	**Weight to Volume**	N/A
Project	EPA537\2014_07_16	**Instrument Name**	API 4000
Data File	@537-Batch#780662-071614.wiff		
Result Table	@537-Batch#780662-071614		
Sample Comment	Lot#@537Cal-071614-LHZ, Exp.07/30/14		

Internal Standard	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
IS-13C-PFOA	961238	11.95	100.00000	-
IS-13C-PFOS	1338227	13.20	100.00000	-

Target Analyte	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
PFHxA	1.603e+05	8.27	0.01000	0.010508
Surr-13c-PFHxA	1.068e+06	8.27	100.00000	101.923051
PFHpA	3.279e+05	10.38	0.01000	0.010529
PFHpA 2	9.353e+04	10.38	0.01000	0.010372
PFOA	2.859e+05	11.95	0.01000	0.009859
PFOA 2	1.039e+05	11.94	0.01000	0.010174
PFNA	2.290e+05	13.20	0.01000	0.010554
PFNA 2	6.022e+04	13.20	0.01000	0.010480
PFDA	2.329e+05	14.24	0.01000	0.010059
PFDA 2	4.301e+04	14.25	0.01000	0.010102
Surr-13c-PFDA	8.503e+05	14.25	100.00000	101.648736
PFUnA	2.209e+05	15.13	0.01000	0.010177
PFUnA 2	4.476e+04	15.13	0.01000	0.010486
PFDoA	1.929e+05	15.88	0.01000	0.009793
PFTrDA	2.943e+05	16.54	0.01000	0.010201
PFTrDA 2	6.551e+04	16.53	0.01000	0.009854
PFTA	8.312e+04	17.10	0.01000	0.010448
PFBS	1.038e+05	5.95	0.00887	0.008815
PFBS 2	3.626e+04	5.95	0.00887	0.008617
PFHxS	1.285e+05	10.54	0.00948	0.009160
PFHxS 2	4.462e+04	10.53	0.00948	0.009506
PFOS	1.242e+05	13.20	0.00958	0.009457
PFOS 2	3.796e+04	13.20	0.00958	0.009619
13C-PFOA	9.612e+05	11.95	100.00000	101.414526
13C-PFOS	1.338e+06	13.20	100.00000	102.503728

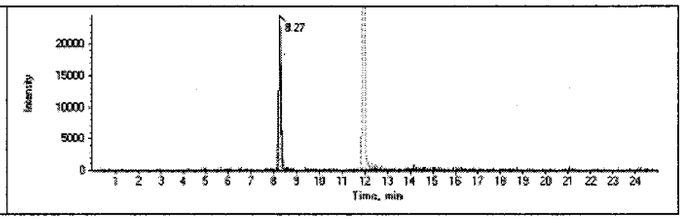
IS-13C-PFOA (Internal Standard) RT (Exp. RT): 11.95(11.96) min Concentration: 100.00000 Sample Type: (Standard)	
IS-13C-PFOS (Internal Standard) RT (Exp. RT): 13.20(13.22) min Concentration: 100.00000 Sample Type: (Standard)	

PFHxA (313.0 / 268.8)

RT (Exp. RT): 8.27 (8.28) min

Calculated conc: 0.010508

Area Ratio: 1.667e-1
Sample Type: (Standard)

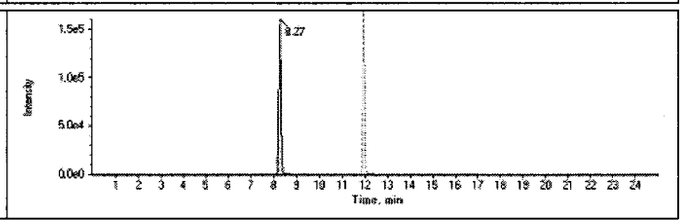


Surr-13c-PFHxA (315.0 / 270.0)

RT (Exp. RT): 8.27 (8.28) min

Calculated conc: 101.923051

Area Ratio: 1.111e0
Sample Type: (Standard)

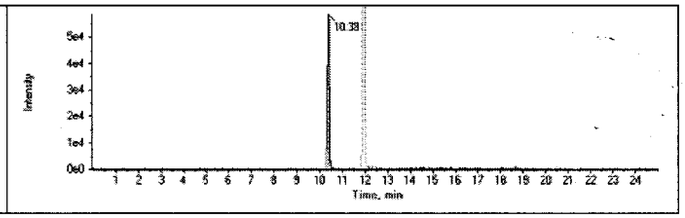


PFHpA (363.0 / 318.9)

RT (Exp. RT): 10.38 (10.40) min

Calculated conc: 0.010529

Area Ratio: 3.411e-1
Sample Type: (Standard)

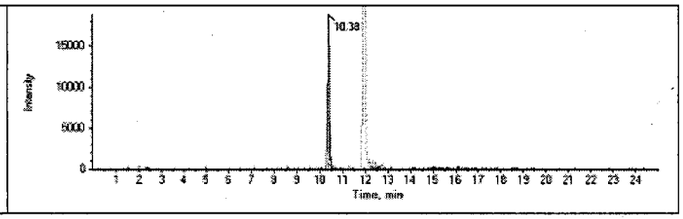


PFHpA 2 (363.0 / 168.9)

RT (Exp. RT): 10.38 (10.40) min

Calculated conc: 0.010372

Area Ratio: 9.730e-2
Sample Type: (Standard)

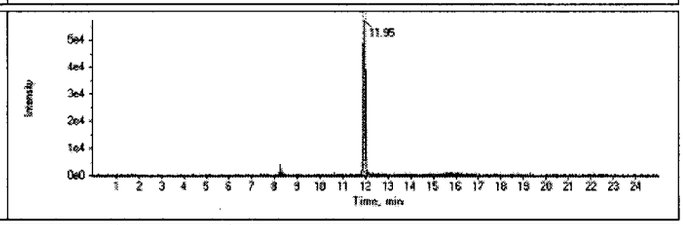


PFOA (413.0 / 368.9)

RT (Exp. RT): 11.95 (11.97) min

Calculated conc: 0.009859

Area Ratio: 2.974e-1
Sample Type: (Standard)

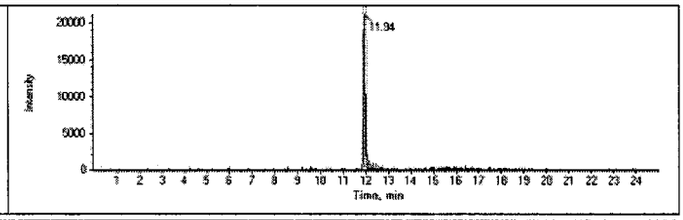


PFOA 2 (413.0 / 168.8)

RT (Exp. RT): 11.94 (11.96) min

Calculated conc: 0.010174

Area Ratio: 1.081e-1
Sample Type: (Standard)

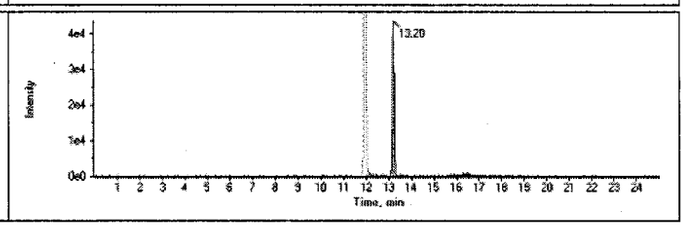


PFNA (463.0 / 419.0)

RT (Exp. RT): 13.20 (13.22) min

Calculated conc: 0.010554

Area Ratio: 2.382e-1
Sample Type: (Standard)



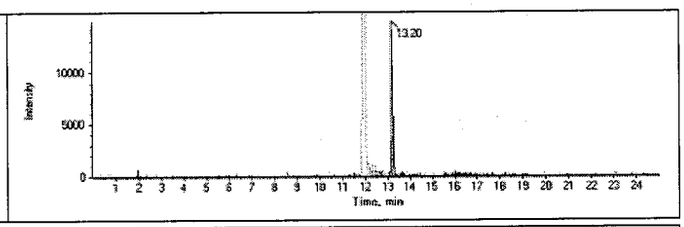
PFNA 2 (463.0 / 218.9)

RT (Exp. RT): 13.20 (13.21) min

Calculated conc: 0.010480

Area Ratio: 6.265e-2

Sample Type: (Standard)



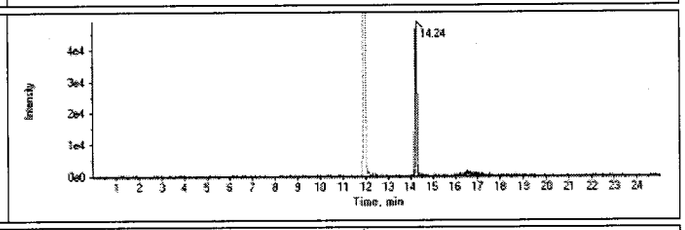
PFDA (513.0 / 469.0)

RT (Exp. RT): 14.24 (14.26) min

Calculated conc: 0.010059

Area Ratio: 2.423e-1

Sample Type: (Standard)



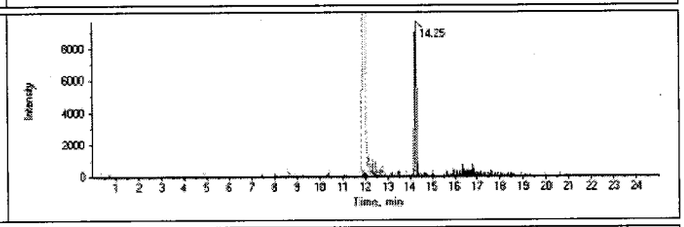
PFDA 2 (513.0 / 218.8)

RT (Exp. RT): 14.25 (14.26) min

Calculated conc: 0.010102

Area Ratio: 4.475e-2

Sample Type: (Standard)



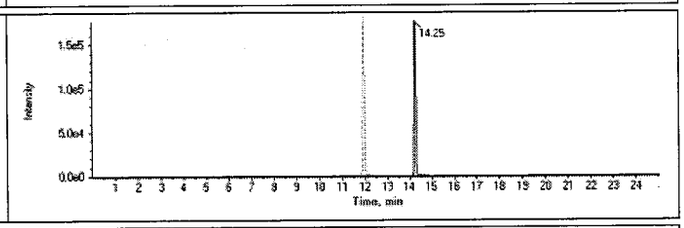
Surr-13c-PFDA (515.0 / 470.0)

RT (Exp. RT): 14.25 (14.26) min

Calculated conc: 101.648736

Area Ratio: 8.846e-1

Sample Type: (Standard)



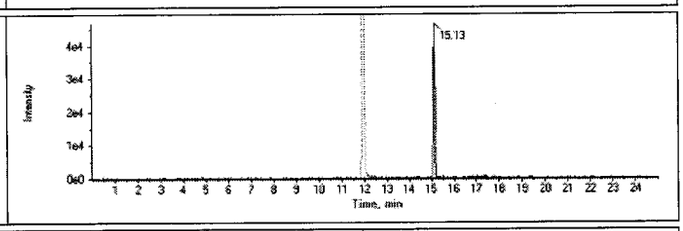
PFUnA (563.0 / 519.0)

RT (Exp. RT): 15.13 (15.14) min

Calculated conc: 0.010177

Area Ratio: 2.298e-1

Sample Type: (Standard)



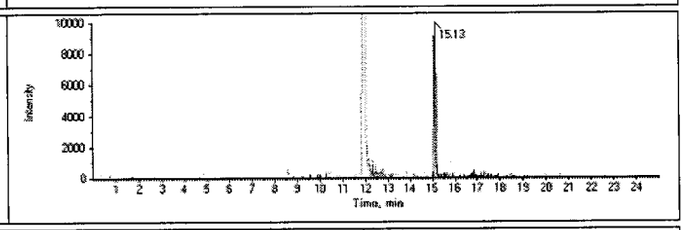
PFUnA 2 (563.0 / 268.8)

RT (Exp. RT): 15.13 (15.14) min

Calculated conc: 0.010486

Area Ratio: 4.656e-2

Sample Type: (Standard)



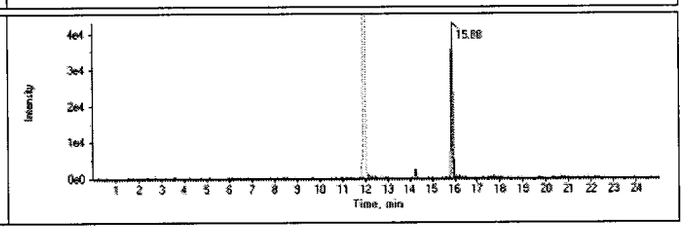
PFDoA (612.8 / 569.0)

RT (Exp. RT): 15.88 (15.90) min

Calculated conc: 0.009793

Area Ratio: 2.006e-1

Sample Type: (Standard)

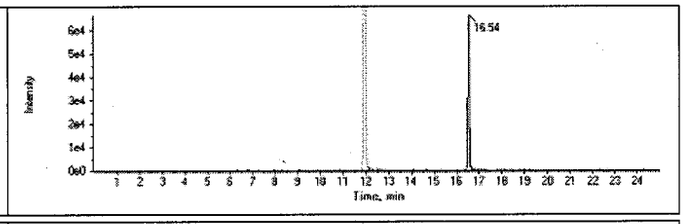


PFTrDA (662.9 / 619.0)

RT (Exp. RT): 16.54 (16.55) min

Calculated conc: 0.010201

Area Ratio: 3.062e-1
Sample Type: (Standard)

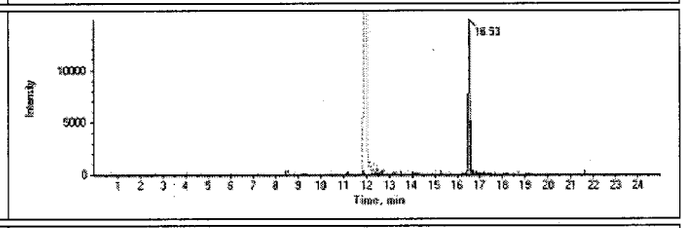


PFTrDA 2 (662.9 / 168.9)

RT (Exp. RT): 16.53 (16.55) min

Calculated conc: 0.009854

Area Ratio: 6.815e-2
Sample Type: (Standard)

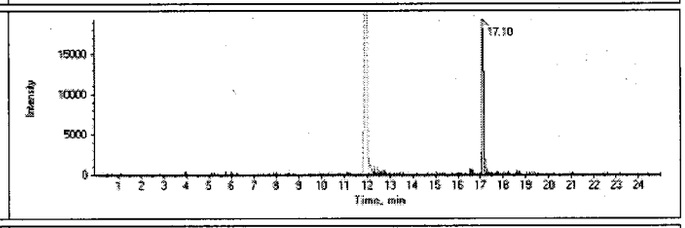


PFTA (713.3 / 669.0)

RT (Exp. RT): 17.10 (17.11) min

Calculated conc: 0.010448

Area Ratio: 8.647e-2
Sample Type: (Standard)

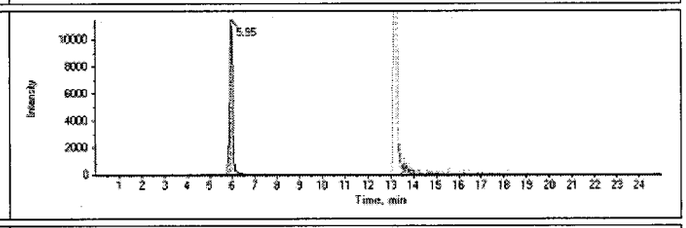


PFBS (299.0 / 79.9)

RT (Exp. RT): 5.95 (5.96) min

Calculated conc: 0.008815

Area Ratio: 7.756e-2
Sample Type: (Standard)

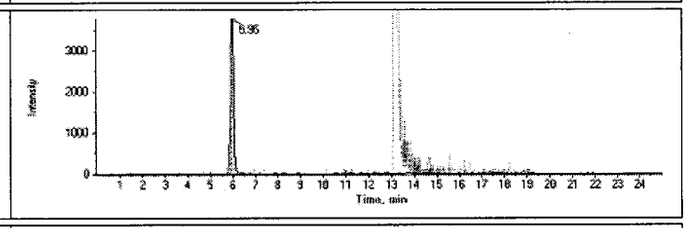


PFBS 2 (299.0 / 99.0)

RT (Exp. RT): 5.95 (5.97) min

Calculated conc: 0.008617

Area Ratio: 2.709e-2
Sample Type: (Standard)

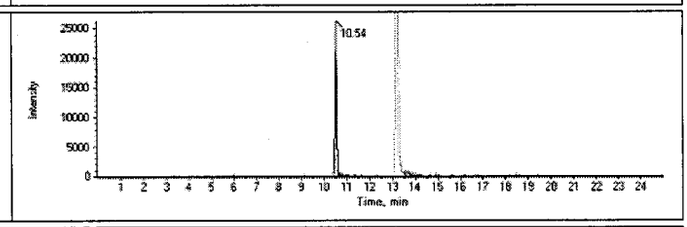


PFHxS (398.9 / 80.0)

RT (Exp. RT): 10.54 (10.55) min

Calculated conc: 0.009160

Area Ratio: 9.604e-2
Sample Type: (Standard)

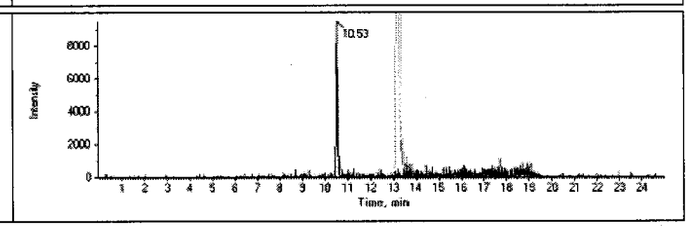


PFHxS 2 (398.9 / 99.0)

RT (Exp. RT): 10.53 (10.54) min

Calculated conc: 0.009506

Area Ratio: 3.334e-2
Sample Type: (Standard)

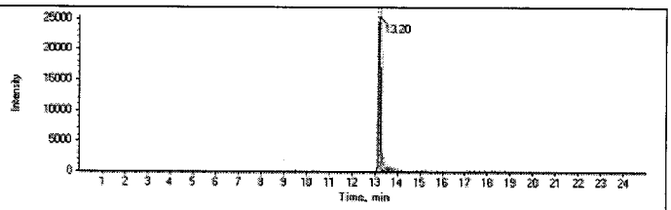


PFOS (499.0 / 79.9)

RT (Exp. RT): 13.20 (13.22) min

Calculated conc: 0.009457

Area Ratio: 9.282e-2
Sample Type: (Standard)

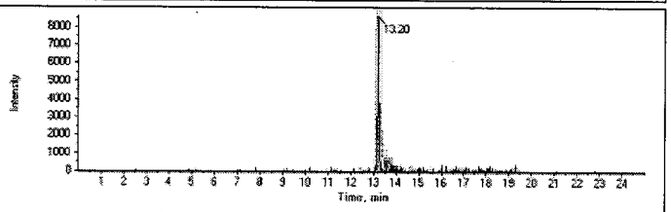


PFOS 2 (499.0 / 99.0)

RT (Exp. RT): 13.20 (13.21) min

Calculated conc: 0.009619

Area Ratio: 2.836e-2
Sample Type: (Standard)

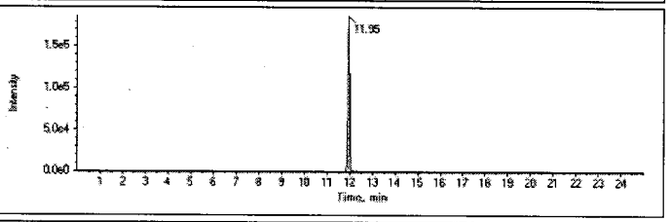


13C-PFOA (417.0 / 372.0)

RT (Exp. RT): 11.95 (11.96) min

Calculated conc: 101.414526

Area Ratio: N/A
Sample Type: (Standard)

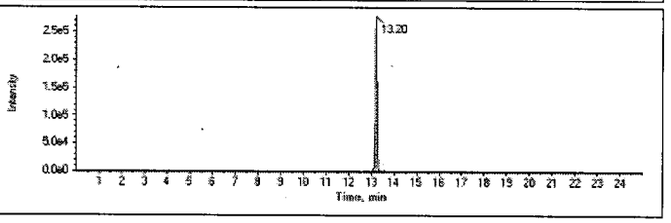


13C-PFOS (503.0 / 80.0)

RT (Exp. RT): 13.20 (13.22) min

Calculated conc: 102.503728

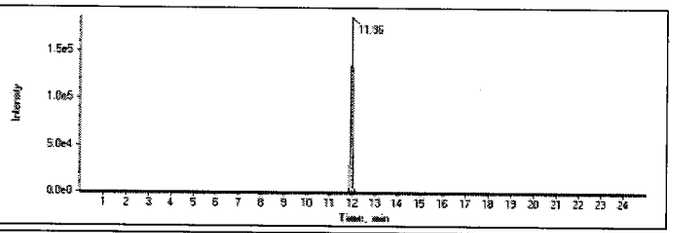
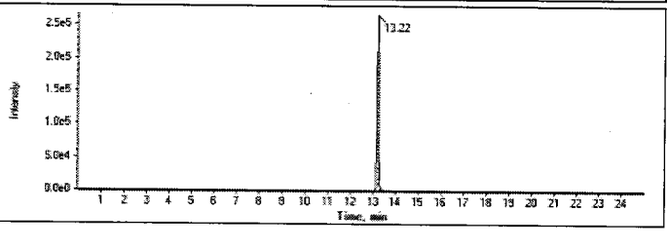
Area Ratio: N/A
Sample Type: (Standard)



Sample Name	Cal-0.02ppb	**Injection Vial**	5
Sample ID		**Injection Volume**	5.00
Sample Type	Standard	**Algorithm Used**	MQ4
Acquisition Date	7/16/2014 6:50:17 PM	**Dilution Factor**	1.00
Acquisition Method	@537-ShortRun-110613-Ali.dam	**Weight to Volume**	N/A
Project	EPA537\2014_07_16	**Instrument Name**	API 4000
Data File	@537-Batch#780662-071614.wiff		
Result Table	@537-Batch#780662-071614		
Sample Comment	Lot#@537Cal-071614-LHZ, Exp.07/30/14		

Internal Standard	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
IS-13C-PFOA	951956	11.96	100.00000	-
IS-13C-PFOS	1322240	13.22	100.00000	-

Target Analyte	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
PFHxA	3.092e+05	8.28	0.02000	0.020470
Surr-13c-PFHxA	1.070e+06	8.28	100.00000	103.142250
PFHpA	6.424e+05	10.40	0.02000	0.020830
PFHpA 2	1.769e+05	10.40	0.02000	0.019805
PFOA	5.825e+05	11.97	0.02000	0.020280
PFOA 2	2.054e+05	11.96	0.02000	0.020303
PFNA	4.470e+05	13.22	0.02000	0.020808
PFNA 2	1.161e+05	13.21	0.02000	0.020405
PFDA	4.421e+05	14.26	0.02000	0.019280
PFDA 2	9.045e+04	14.26	0.02000	0.021450
Surr-13c-PFDA	8.335e+05	14.26	100.00000	100.613009
PFUnA	4.423e+05	15.14	0.02000	0.020574
PFUnA 2	8.160e+04	15.14	0.02000	0.019304
PFDoA	3.857e+05	15.90	0.02000	0.019774
PFTrDA	5.774e+05	16.55	0.02000	0.020210
PFTrDA 2	1.279e+05	16.55	0.02000	0.019427
PFTA	1.526e+05	17.11	0.02000	0.019369
PFBS	1.949e+05	5.96	0.01770	0.016749
PFBS 2	6.890e+04	5.97	0.01770	0.016574
PFHxS	2.541e+05	10.55	0.01900	0.018331
PFHxS 2	8.430e+04	10.54	0.01900	0.018175
PFOS	2.450e+05	13.22	0.01920	0.018879
PFOS 2	7.547e+04	13.21	0.01920	0.019357
13C-PFOA	9.520e+05	11.96	100.00000	100.435253
13C-PFOS	1.322e+06	13.22	100.00000	101.279116

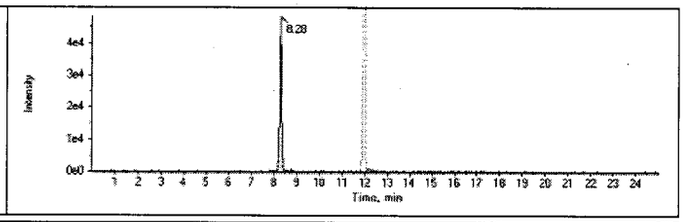
IS-13C-PFOA (Internal Standard) RT (Exp. RT): 11.96(11.96) min Concentration: 100.00000 Sample Type: (Standard)	
IS-13C-PFOS (Internal Standard) RT (Exp. RT): 13.22(13.22) min Concentration: 100.00000 Sample Type: (Standard)	

PFHxA (313.0 / 268.8)

RT (Exp. RT): 8.28 (8.28) min

Calculated conc: 0.020470

Area Ratio: 3.248e-1
Sample Type: (Standard)

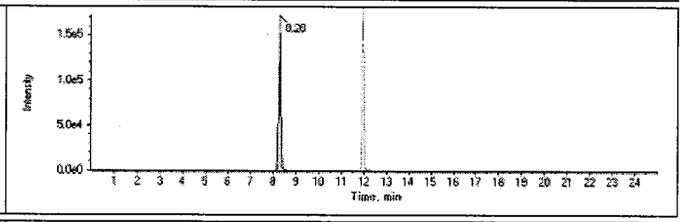


Surr-13c-PFHxA (315.0 / 270.0)

RT (Exp. RT): 8.28 (8.28) min

Calculated conc: 103.142250

Area Ratio: 1.124e0
Sample Type: (Standard)

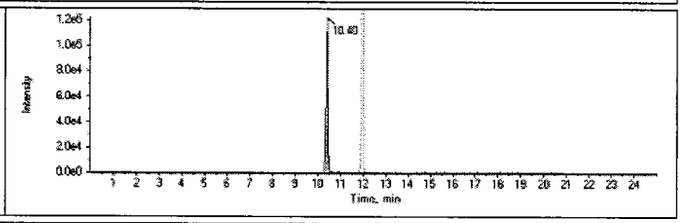


PFHpA (363.0 / 318.9)

RT (Exp. RT): 10.40 (10.40) min

Calculated conc: 0.020830

Area Ratio: 6.748e-1
Sample Type: (Standard)

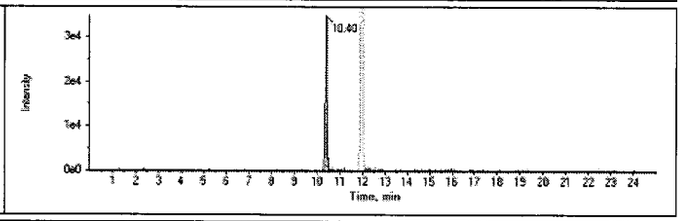


PFHpA 2 (363.0 / 168.9)

RT (Exp. RT): 10.40 (10.40) min

Calculated conc: 0.019805

Area Ratio: 1.858e-1
Sample Type: (Standard)

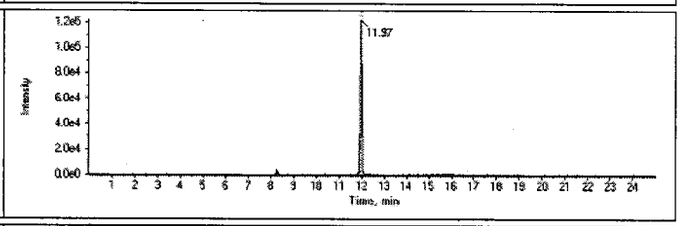


PFOA (413.0 / 368.9)

RT (Exp. RT): 11.97 (11.97) min

Calculated conc: 0.020280

Area Ratio: 6.118e-1
Sample Type: (Standard)

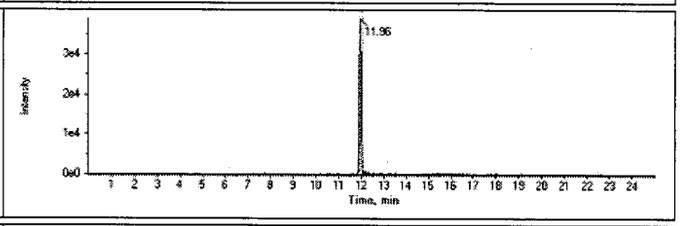


PFOA 2 (413.0 / 168.8)

RT (Exp. RT): 11.96 (11.96) min

Calculated conc: 0.020303

Area Ratio: 2.157e-1
Sample Type: (Standard)

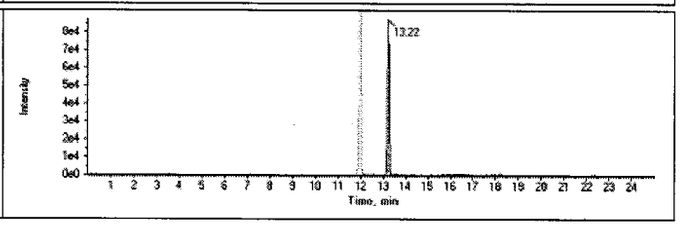


PFNA (463.0 / 419.0)

RT (Exp. RT): 13.22 (13.22) min

Calculated conc: 0.020808

Area Ratio: 4.696e-1
Sample Type: (Standard)

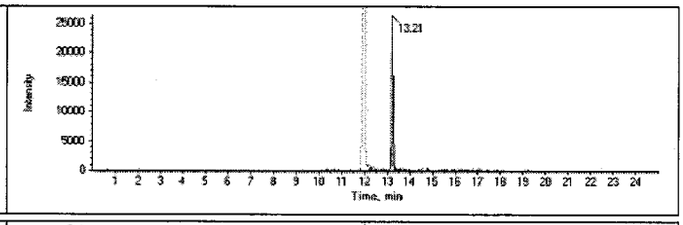


PFNA 2 (463.0 / 218.9)

RT (Exp. RT): 13.21 (13.21) min

Calculated conc: 0.020405

Area Ratio: 1.220e-1
Sample Type: (Standard)

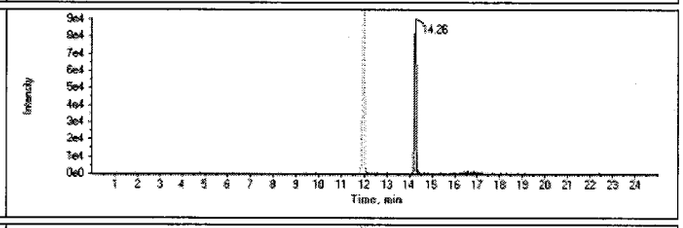


PFDA (513.0 / 469.0)

RT (Exp. RT): 14.26 (14.26) min

Calculated conc: 0.019280

Area Ratio: 4.644e-1
Sample Type: (Standard)

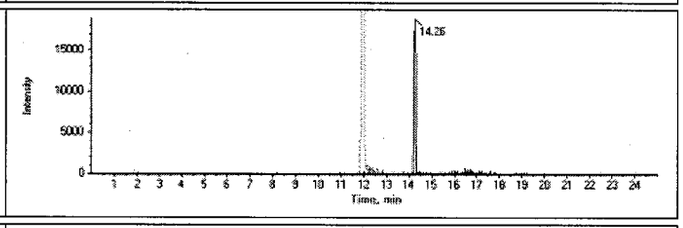


PFDA 2 (513.0 / 218.8)

RT (Exp. RT): 14.26 (14.26) min

Calculated conc: 0.021450

Area Ratio: 9.502e-2
Sample Type: (Standard)

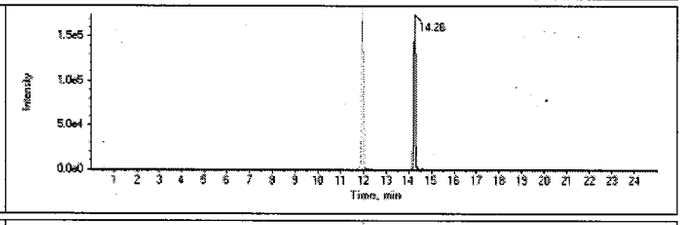


Surr-13c-PFDA (515.0 / 470.0)

RT (Exp. RT): 14.26 (14.26) min

Calculated conc: 100.613009

Area Ratio: 8.756e-1
Sample Type: (Standard)

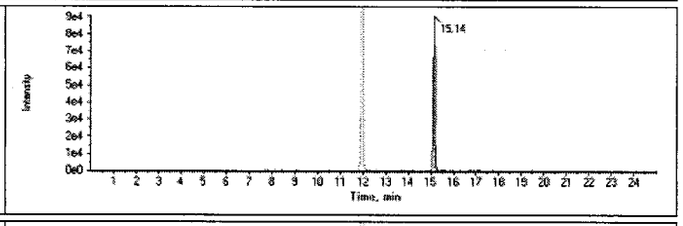


PFUnA (563.0 / 519.0)

RT (Exp. RT): 15.14 (15.14) min

Calculated conc: 0.020574

Area Ratio: 4.646e-1
Sample Type: (Standard)

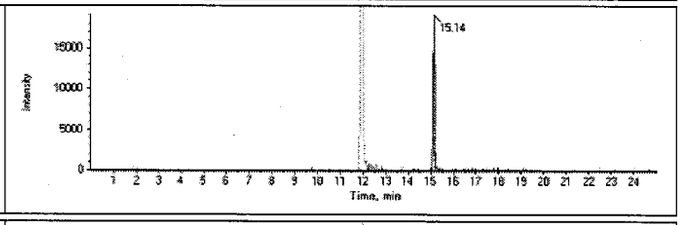


PFUnA 2 (563.0 / 268.8)

RT (Exp. RT): 15.14 (15.14) min

Calculated conc: 0.019304

Area Ratio: 8.572e-2
Sample Type: (Standard)

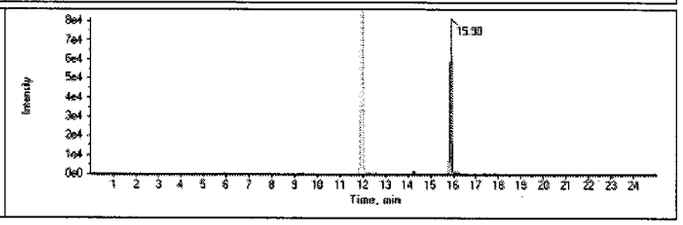


PFDoA (612.8 / 569.0)

RT (Exp. RT): 15.90 (15.90) min

Calculated conc: 0.019774

Area Ratio: 4.052e-1
Sample Type: (Standard)



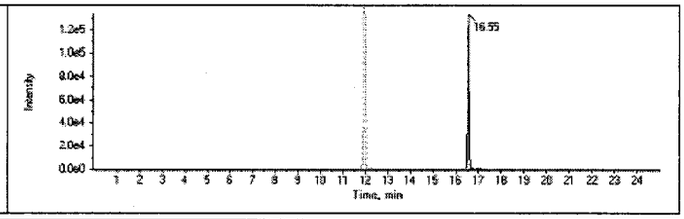
PFTrDA (662.9 / 619.0)

RT (Exp. RT): 16.55 (16.55) min

Calculated conc: 0.020210

Area Ratio: 6.066e-1

Sample Type: (Standard)



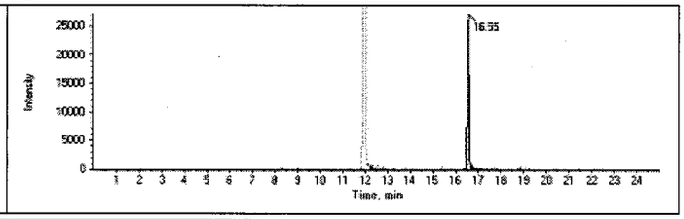
PFTrDA 2 (662.9 / 168.9)

RT (Exp. RT): 16.55 (16.55) min

Calculated conc: 0.019427

Area Ratio: 1.344e-1

Sample Type: (Standard)



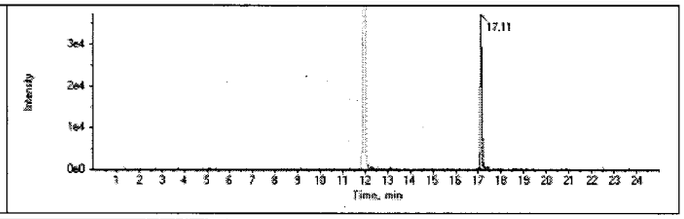
PFTA (713.3 / 669.0)

RT (Exp. RT): 17.11 (17.11) min

Calculated conc: 0.019369

Area Ratio: 1.603e-1

Sample Type: (Standard)



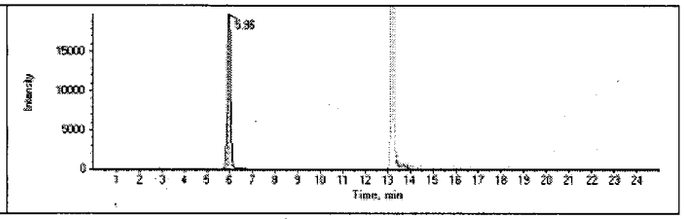
PFBS (299.0 / 79.9)

RT (Exp. RT): 5.96 (5.96) min

Calculated conc: 0.016749

Area Ratio: 1.474e-1

Sample Type: (Standard)



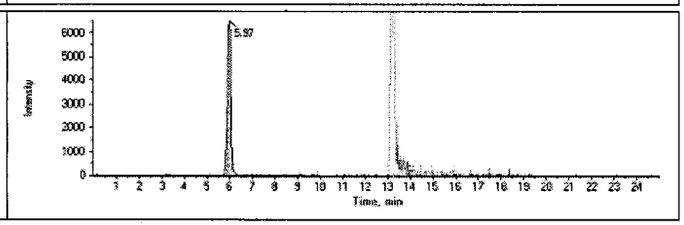
PFBS 2 (299.0 / 99.0)

RT (Exp. RT): 5.97 (5.97) min

Calculated conc: 0.016574

Area Ratio: 5.211e-2

Sample Type: (Standard)



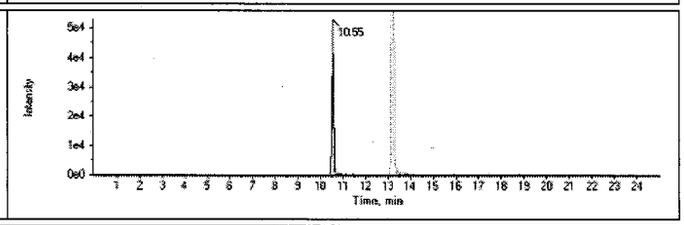
PFHxS (398.9 / 80.0)

RT (Exp. RT): 10.55 (10.55) min

Calculated conc: 0.018331

Area Ratio: 1.922e-1

Sample Type: (Standard)



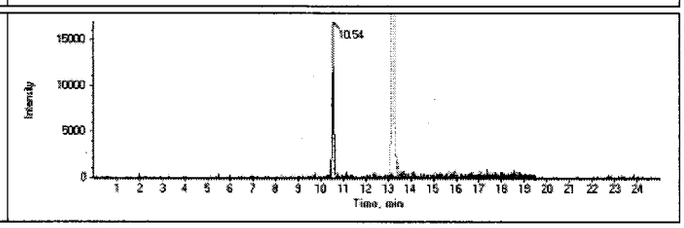
PFHxS 2 (398.9 / 99.0)

RT (Exp. RT): 10.54 (10.54) min

Calculated conc: 0.018175

Area Ratio: 6.375e-2

Sample Type: (Standard)



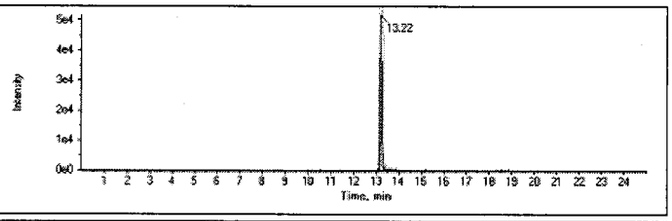
PFOS (499.0 / 79.9)

RT (Exp. RT): 13.22 (13.22) min

Calculated conc: 0.018879

Area Ratio: 1.853e-1

Sample Type: (Standard)



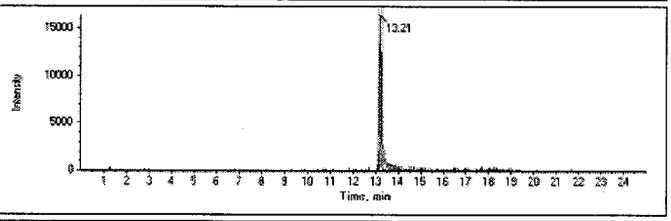
PFOS 2 (499.0 / 99.0)

RT (Exp. RT): 13.21 (13.21) min

Calculated conc: 0.019357

Area Ratio: 5.707e-2

Sample Type: (Standard)



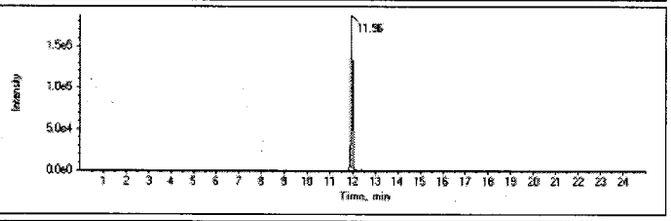
13C-PFOA (417.0 / 372.0)

RT (Exp. RT): 11.96 (11.96) min

Calculated conc: 100.435253

Area Ratio: N/A

Sample Type: (Standard)



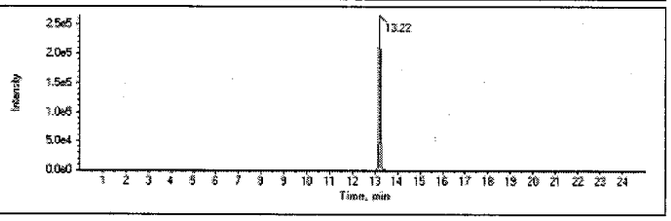
13C-PFOS (503.0 / 80.0)

RT (Exp. RT): 13.22 (13.22) min

Calculated conc: 101.279116

Area Ratio: N/A

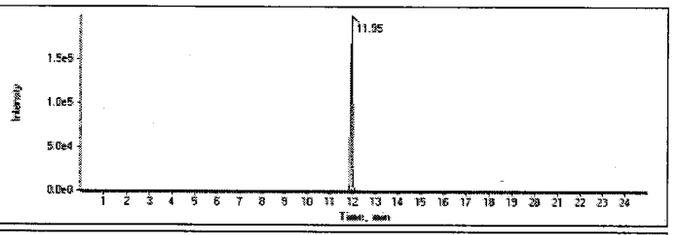
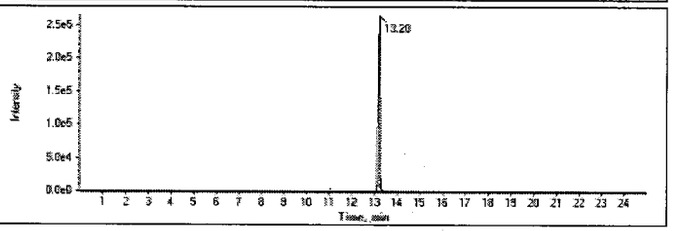
Sample Type: (Standard)



Sample Name	Cal-0.04ppb	**Injection Vial**	6
Sample ID		**Injection Volume**	5.00
Sample Type	Standard	**Algorithm Used**	MQ4
Acquisition Date	7/16/2014 7:15:52 PM	**Dilution Factor**	1.00
Acquisition Method	@537-ShortRun-110613-Ali.dam	**Weight to Volume**	N/A
Project	EPA537\2014_07_16	**Instrument Name**	API 4000
Data File	@537-Batch#780662-071614.wiff		
Result Table	@537-Batch#780662-071614		
Sample Comment	Lot#@537Cal-071614-LHZ, Exp.07/30/14		

Internal Standard	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
IS-13C-PFOA	952626	11.95	100.00000	-
IS-13C-PFOS	1293124	13.20	100.00000	-

Target Analyte	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
PFHxA	6.087e+05	8.27	0.04000	0.040272
Surr-13c-PFHxA	1.016e+06	8.27	100.00000	97.895882
PFHpA	1.292e+06	10.38	0.04000	0.041853
PFHpA 2	3.873e+05	10.39	0.04000	0.043341
PFOA	1.177e+06	11.95	0.04000	0.040950
PFOA 2	4.150e+05	11.95	0.04000	0.040999
PFNA	8.909e+05	13.20	0.04000	0.041442
PFNA 2	2.421e+05	13.20	0.04000	0.042519
PFDA	9.581e+05	14.24	0.04000	0.041751
PFDA 2	1.731e+05	14.24	0.04000	0.041017
Surr-13c-PFDA	8.338e+05	14.24	100.00000	100.575175
PFUnA	9.059e+05	15.13	0.04000	0.042111
PFUnA 2	1.788e+05	15.13	0.04000	0.042279
PFDoA	8.107e+05	15.88	0.04000	0.041535
PFTrDA	1.223e+06	16.54	0.04000	0.042765
PFTrDA 2	2.785e+05	16.54	0.04000	0.042267
PFTA	3.283e+05	17.10	0.04000	0.041641
PFBS	4.344e+05	5.95	0.03550	0.038183
PFBS 2	1.554e+05	5.95	0.03550	0.038223
PFHxS	5.368e+05	10.53	0.03790	0.039597
PFHxS 2	1.762e+05	10.53	0.03790	0.038857
PFOS	5.045e+05	13.20	0.03830	0.039747
PFOS 2	1.586e+05	13.20	0.03830	0.041592
13C-PFOA	9.526e+05	11.95	100.00000	100.506004
13C-PFOS	1.293e+06	13.20	100.00000	99.048993

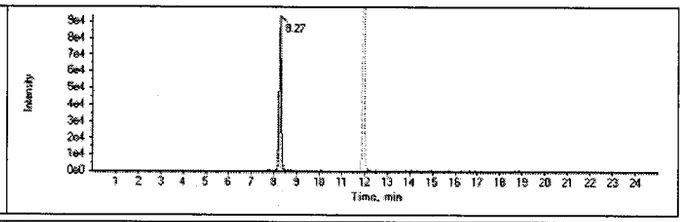
IS-13C-PFOA (Internal Standard) RT (Exp. RT): 11.95(11.96) min Concentration: 100.00000 Sample Type: (Standard)	
IS-13C-PFOS (Internal Standard) RT (Exp. RT): 13.20(13.22) min Concentration: 100.00000 Sample Type: (Standard)	

PFHxA (313.0 / 268.8)

RT (Exp. RT): 8.27 (8.28) min

Calculated conc: 0.040272

Area Ratio: 6.390e-1
Sample Type: (Standard)

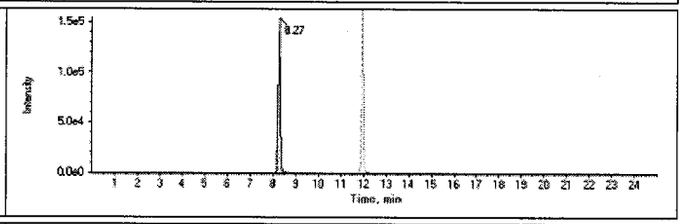


Surr-13c-PFHxA (315.0 / 270.0)

RT (Exp. RT): 8.27 (8.28) min

Calculated conc: 97.895882

Area Ratio: 1.067e0
Sample Type: (Standard)

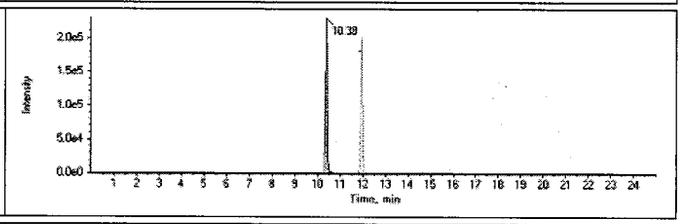


PFHpA (363.0 / 318.9)

RT (Exp. RT): 10.38 (10.40) min

Calculated conc: 0.041853

Area Ratio: 1.356e0
Sample Type: (Standard)

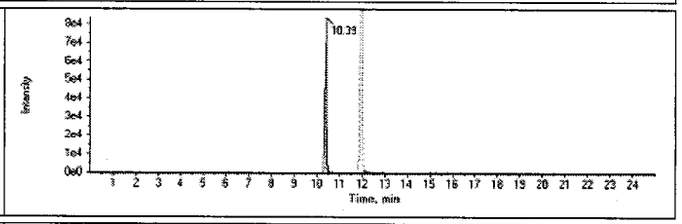


PFHpA 2 (363.0 / 168.9)

RT (Exp. RT): 10.39 (10.40) min

Calculated conc: 0.043341

Area Ratio: 4.066e-1
Sample Type: (Standard)

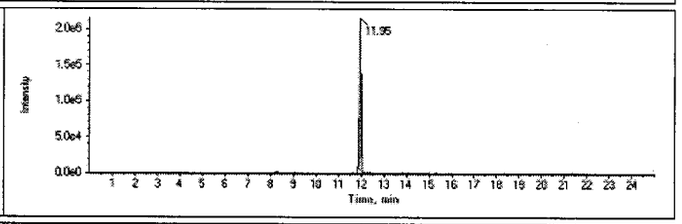


PFOA (413.0 / 368.9)

RT (Exp. RT): 11.95 (11.97) min

Calculated conc: 0.040950

Area Ratio: 1.235e0
Sample Type: (Standard)

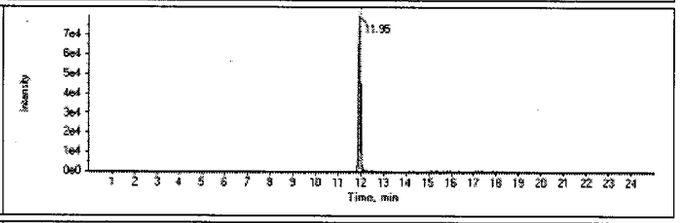


PFOA 2 (413.0 / 168.8)

RT (Exp. RT): 11.95 (11.96) min

Calculated conc: 0.040999

Area Ratio: 4.356e-1
Sample Type: (Standard)

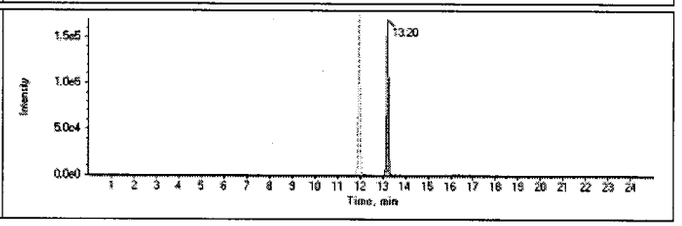


PFNA (463.0 / 419.0)

RT (Exp. RT): 13.20 (13.22) min

Calculated conc: 0.041442

Area Ratio: 9.352e-1
Sample Type: (Standard)

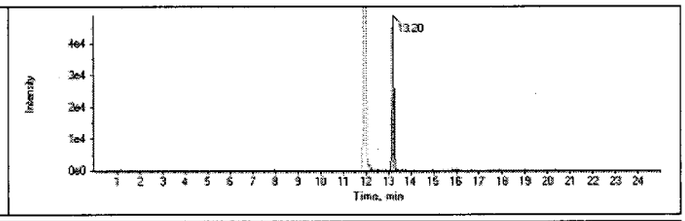


PFNA 2 (463.0 / 218.9)

RT (Exp. RT): 13.20 (13.21) min

Calculated conc: 0.042519

Area Ratio: 2.542e-1
Sample Type: (Standard)

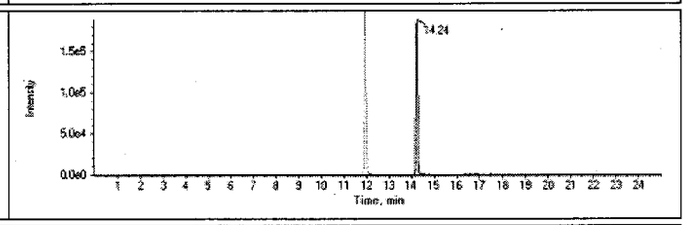


PFDA (513.0 / 469.0)

RT (Exp. RT): 14.24 (14.26) min

Calculated conc: 0.041751

Area Ratio: 1.006e0
Sample Type: (Standard)

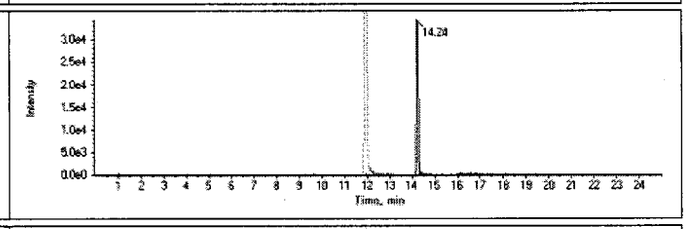


PFDA 2 (513.0 / 218.8)

RT (Exp. RT): 14.24 (14.26) min

Calculated conc: 0.041017

Area Ratio: 1.817e-1
Sample Type: (Standard)

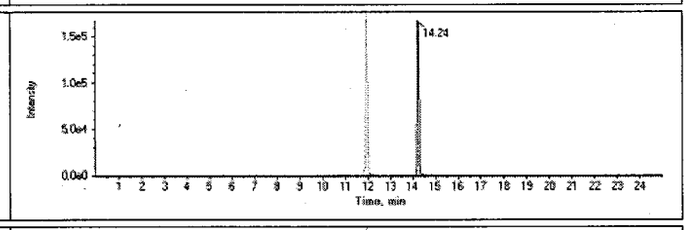


Surr-13c-PFDA (515.0 / 470.0)

RT (Exp. RT): 14.24 (14.26) min

Calculated conc: 100.575175

Area Ratio: 8.752e-1
Sample Type: (Standard)

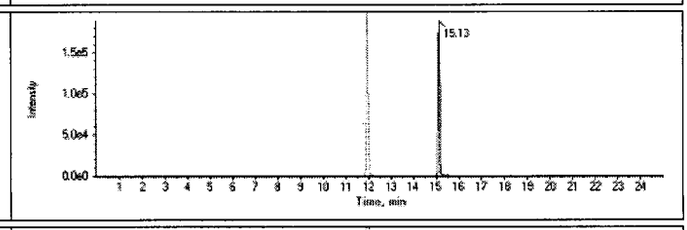


PFUnA (563.0 / 519.0)

RT (Exp. RT): 15.13 (15.14) min

Calculated conc: 0.042111

Area Ratio: 9.509e-1
Sample Type: (Standard)

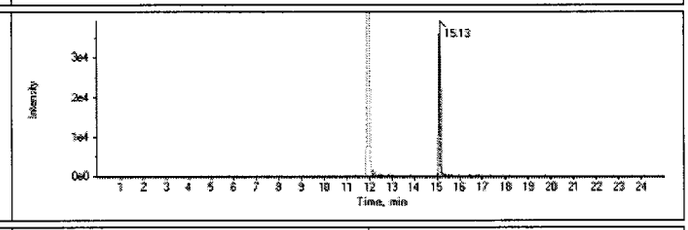


PFUnA 2 (563.0 / 268.8)

RT (Exp. RT): 15.13 (15.14) min

Calculated conc: 0.042279

Area Ratio: 1.877e-1
Sample Type: (Standard)

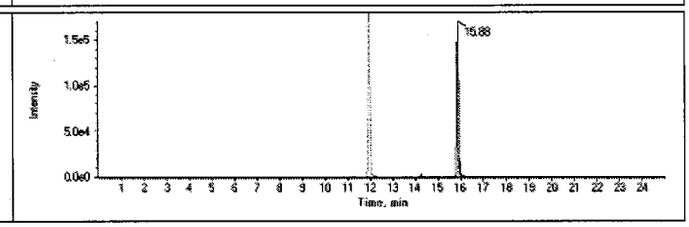


PFDoA (612.8 / 569.0)

RT (Exp. RT): 15.88 (15.90) min

Calculated conc: 0.041535

Area Ratio: 8.510e-1
Sample Type: (Standard)

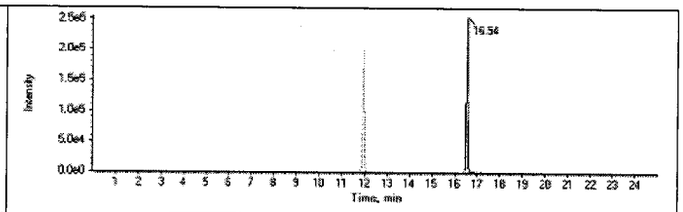


PFTrDA (662.9 / 619.0)

RT (Exp. RT): 16.54 (16.55) min

Calculated conc: 0.042765

Area Ratio: 1.284e0
Sample Type: (Standard)

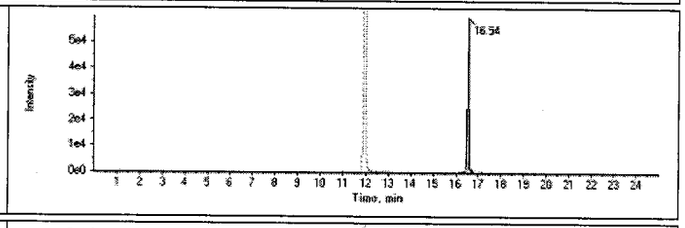


PFTrDA 2 (662.9 / 168.9)

RT (Exp. RT): 16.54 (16.55) min

Calculated conc: 0.042267

Area Ratio: 2.923e-1
Sample Type: (Standard)

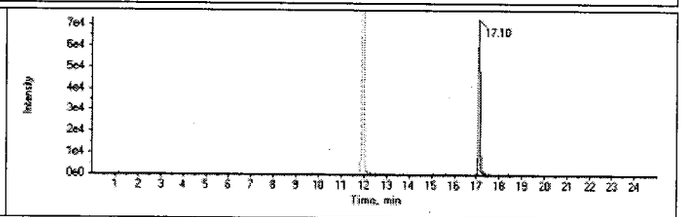


PFTA (713.3 / 669.0)

RT (Exp. RT): 17.10 (17.11) min

Calculated conc: 0.041641

Area Ratio: 3.447e-1
Sample Type: (Standard)

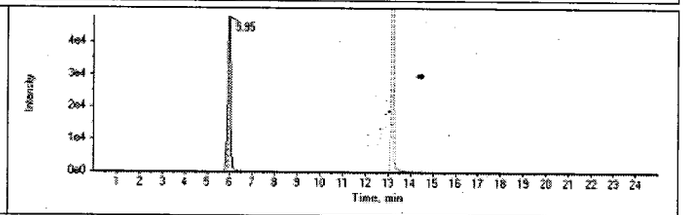


PFBS (299.0 / 79.9)

RT (Exp. RT): 5.95 (5.96) min

Calculated conc: 0.038183

Area Ratio: 3.360e-1
Sample Type: (Standard)

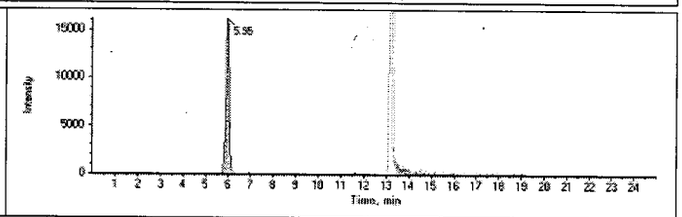


PFBS 2 (299.0 / 99.0)

RT (Exp. RT): 5.95 (5.97) min

Calculated conc: 0.038223

Area Ratio: 1.202e-1
Sample Type: (Standard)

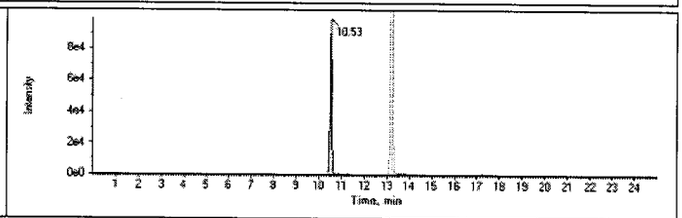


PFHxS (398.9 / 80.0)

RT (Exp. RT): 10.53 (10.55) min

Calculated conc: 0.039597

Area Ratio: 4.152e-1
Sample Type: (Standard)

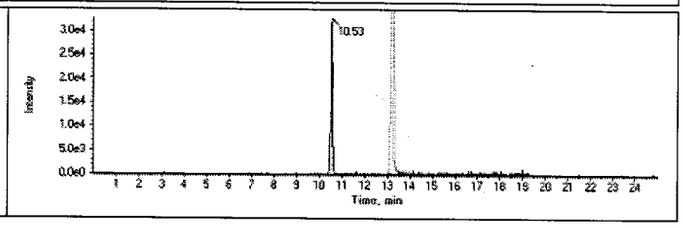


PFHxS 2 (398.9 / 99.0)

RT (Exp. RT): 10.53 (10.54) min

Calculated conc: 0.038857

Area Ratio: 1.363e-1
Sample Type: (Standard)

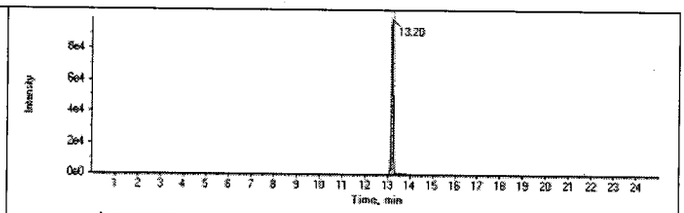


PFOS (499.0 / 79.9)

RT (Exp. RT): 13.20 (13.22) min

Calculated conc: 0.039747

Area Ratio: 3.901e-1
Sample Type: (Standard)

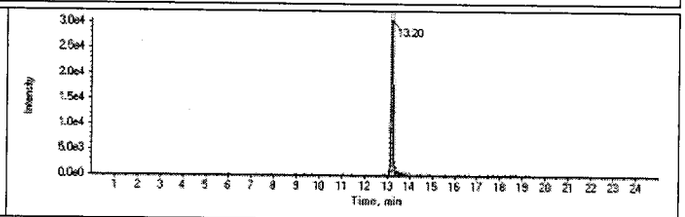


PFOS 2 (499.0 / 99.0)

RT (Exp. RT): 13.20 (13.21) min

Calculated conc: 0.041592

Area Ratio: 1.226e-1
Sample Type: (Standard)

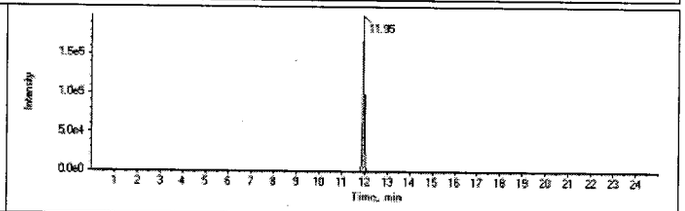


13C-PFOA (417.0 / 372.0)

RT (Exp. RT): 11.95 (11.96) min

Calculated conc: 100.506004

Area Ratio: N/A
Sample Type: (Standard)

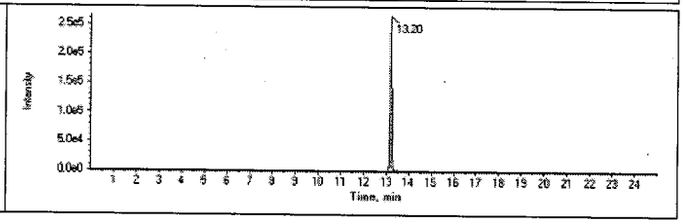


13C-PFOS (503.0 / 80.0)

RT (Exp. RT): 13.20 (13.22) min

Calculated conc: 99.048993

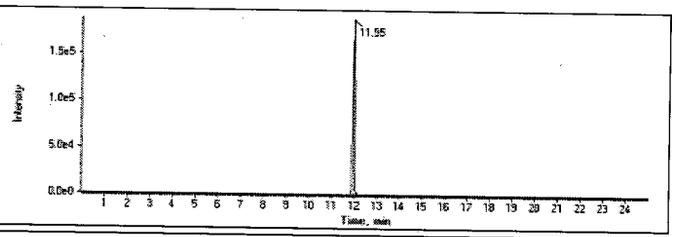
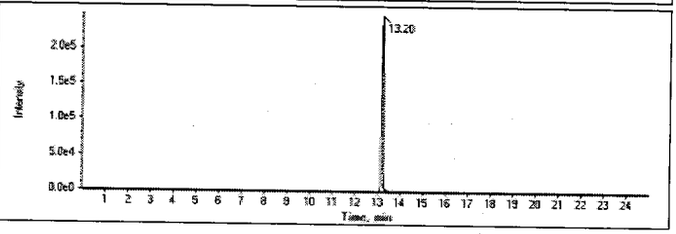
Area Ratio: N/A
Sample Type: (Standard)



Sample Name	Cal-0.08ppb	**Injection Vial**	7
Sample ID		**Injection Volume**	5.00
Sample Type	Standard	**Algorithm Used**	MQ4
Acquisition Date	7/16/2014 7:41:27 PM	**Dilution Factor**	1.00
Acquisition Method	@537-ShortRun-110613-Ali.dam	**Weight to Volume**	N/A
Project	EPA537\2014_07_16	**Instrument Name**	API 4000
Data File	@537-Batch#780662-071614.wiff		
Result Table	@537-Batch#780662-071614		
Sample Comment	Lot#@537Cal-071614-LHZ, Exp.07/30/14		

Internal Standard	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
IS-13C-PFOA	956772	11.95	100.00000	-
IS-13C-PFOS	1295406	13.20	100.00000	-

Target Analyte	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
PFHxA	1.210e+06	8.27	0.08000	0.079674
Surr-13c-PFHxA	1.016e+06	8.27	100.00000	97.482900
PFHpA	2.442e+06	10.38	0.08000	0.078772
PFHpA 2	7.030e+05	10.39	0.08000	0.078317
PFOA	2.293e+06	11.95	0.08000	0.079447
PFOA 2	8.073e+05	11.95	0.08000	0.079412
PFNA	1.706e+06	13.20	0.08000	0.078992
PFNA 2	4.492e+05	13.20	0.08000	0.078545
PFDA	1.828e+06	14.25	0.08000	0.079304
PFDA 2	3.353e+05	14.25	0.08000	0.079114
Surr-13c-PFDA	8.041e+05	14.25	100.00000	96.572485
PFUnA	1.702e+06	15.13	0.08000	0.078769
PFUnA 2	3.355e+05	15.13	0.08000	0.078974
PFDoA	1.555e+06	15.89	0.08000	0.079324
PFTrDA	2.256e+06	16.54	0.08000	0.078552
PFTrDA 2	5.231e+05	16.54	0.08000	0.079062
PFTA	6.280e+05	17.10	0.08000	0.079297
PFBS	7.968e+05	5.95	0.07100	0.069905
PFBS 2	2.850e+05	5.95	0.07100	0.069968
PFHxS	1.021e+06	10.54	0.07580	0.075153
PFHxS 2	3.433e+05	10.54	0.07580	0.075556
PFOS	9.662e+05	13.20	0.07660	0.075991
PFOS 2	2.860e+05	13.20	0.07660	0.074888
13C-PFOA	9.568e+05	11.95	100.00000	100.943382
13C-PFOS	1.295e+06	13.20	100.00000	99.223748

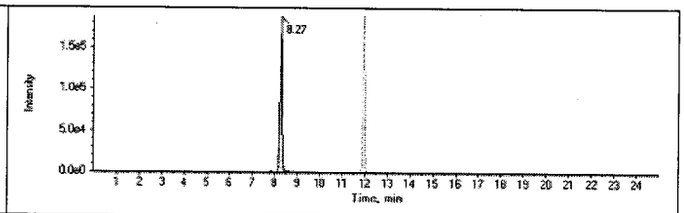
IS-13C-PFOA (Internal Standard) RT (Exp. RT): 11.95(11.96) min Concentration: 100.00000 Sample Type: (Standard)	
IS-13C-PFOS (Internal Standard) RT (Exp. RT): 13.20(13.22) min Concentration: 100.00000 Sample Type: (Standard)	

PFHxA (313.0 / 268.8)

RT (Exp. RT): 8.27 (8.28) min

Calculated conc: 0.079674

Area Ratio: 1.264e0
Sample Type: (Standard)

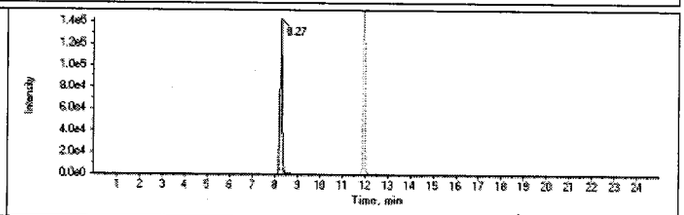


Surr-13c-PFHxA (315.0 / 270.0)

RT (Exp. RT): 8.27 (8.28) min

Calculated conc: 97.482900

Area Ratio: 1.062e0
Sample Type: (Standard)

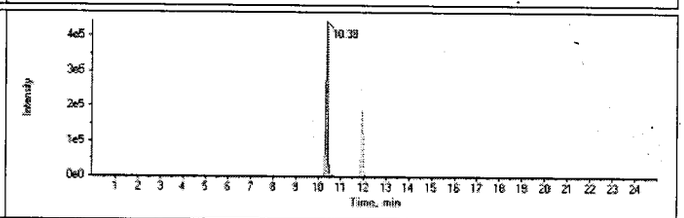


PFHpA (363.0 / 318.9)

RT (Exp. RT): 10.38 (10.40) min

Calculated conc: 0.078772

Area Ratio: 2.552e0
Sample Type: (Standard)

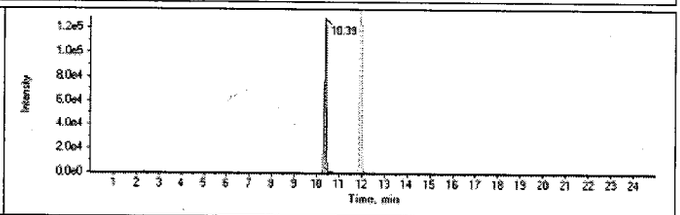


PFHpA 2 (363.0 / 168.9)

RT (Exp. RT): 10.39 (10.40) min

Calculated conc: 0.078317

Area Ratio: 7.347e-1
Sample Type: (Standard)

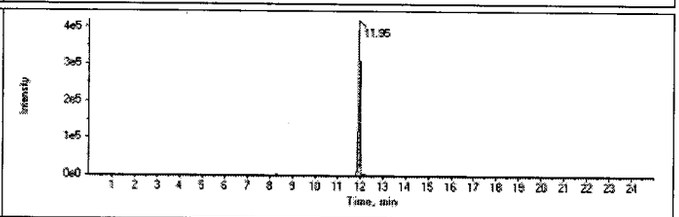


PFOA (413.0 / 368.9)

RT (Exp. RT): 11.95 (11.97) min

Calculated conc: 0.079447

Area Ratio: 2.397e0
Sample Type: (Standard)

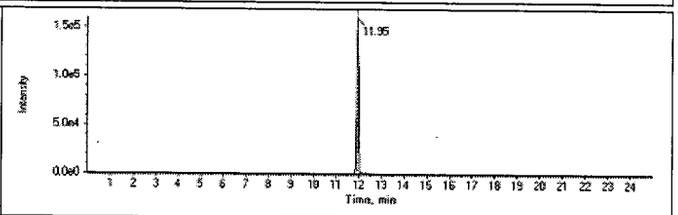


PFOA 2 (413.0 / 168.8)

RT (Exp. RT): 11.95 (11.96) min

Calculated conc: 0.079412

Area Ratio: 8.438e-1
Sample Type: (Standard)

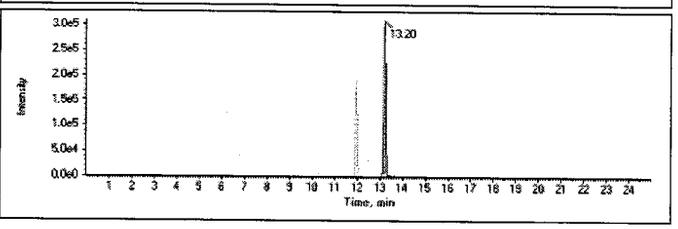


PFNA (463.0 / 419.0)

RT (Exp. RT): 13.20 (13.22) min

Calculated conc: 0.078992

Area Ratio: 1.783e0
Sample Type: (Standard)

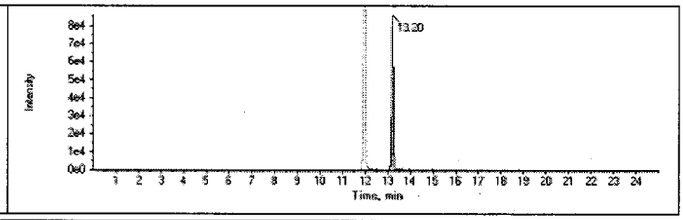


PFNA 2 (463.0 / 218.9)

RT (Exp. RT): 13.20 (13.21) min

Calculated conc: 0.078545

Area Ratio: 4.695e-1
Sample Type: (Standard)

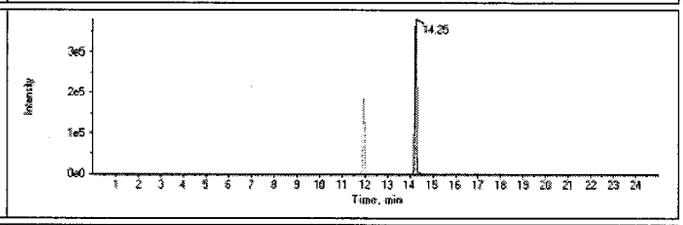


PFDA (513.0 / 469.0)

RT (Exp. RT): 14.25 (14.26) min

Calculated conc: 0.079304

Area Ratio: 1.910e0
Sample Type: (Standard)

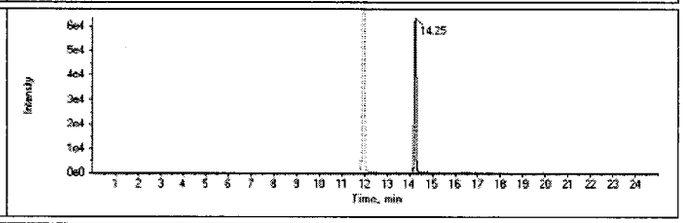


PFDA 2 (513.0 / 218.8)

RT (Exp. RT): 14.25 (14.26) min

Calculated conc: 0.079114

Area Ratio: 3.505e-1
Sample Type: (Standard)

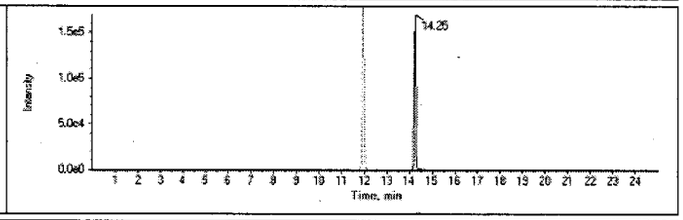


Surr-13c-PFDA (515.0 / 470.0)

RT (Exp. RT): 14.25 (14.26) min

Calculated conc: 96.572485

Area Ratio: 8.404e-1
Sample Type: (Standard)

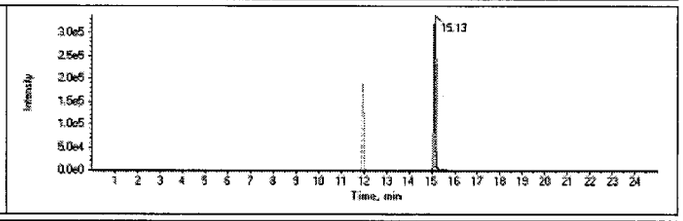


PFUnA (563.0 / 519.0)

RT (Exp. RT): 15.13 (15.14) min

Calculated conc: 0.078769

Area Ratio: 1.779e0
Sample Type: (Standard)

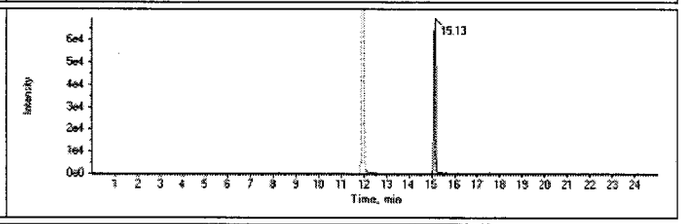


PFUnA 2 (563.0 / 268.8)

RT (Exp. RT): 15.13 (15.14) min

Calculated conc: 0.078974

Area Ratio: 3.507e-1
Sample Type: (Standard)

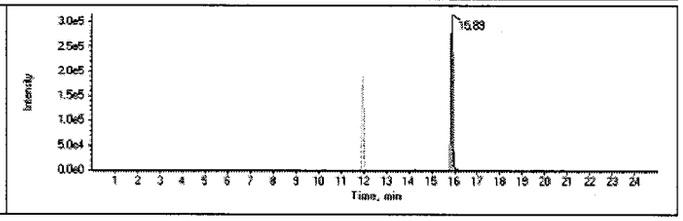


PFDoA (612.8 / 569.0)

RT (Exp. RT): 15.89 (15.90) min

Calculated conc: 0.079324

Area Ratio: 1.625e0
Sample Type: (Standard)

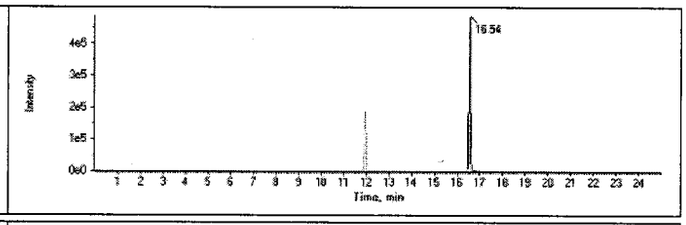


PFTrDA (662.9 / 619.0)

RT (Exp. RT): 16.54 (16.55) min

Calculated conc: 0.078552

Area Ratio: 2.358e0
Sample Type: (Standard)

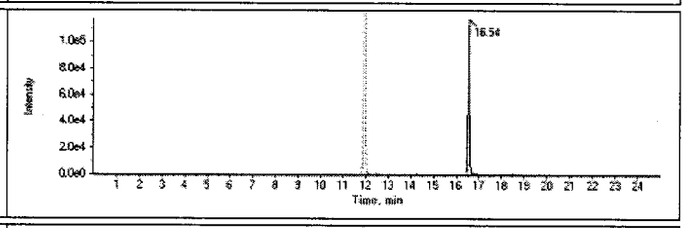


PFTrDA 2 (662.9 / 168.9)

RT (Exp. RT): 16.54 (16.55) min

Calculated conc: 0.079062

Area Ratio: 5.468e-1
Sample Type: (Standard)

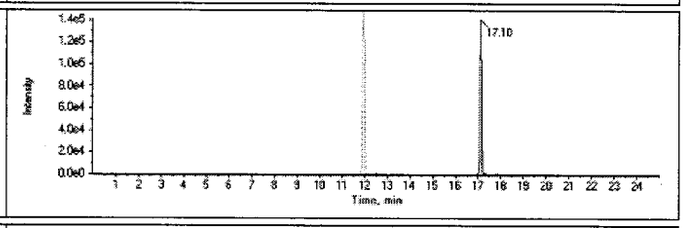


PFTA (713.3 / 669.0)

RT (Exp. RT): 17.10 (17.11) min

Calculated conc: 0.079297

Area Ratio: 6.563e-1
Sample Type: (Standard)

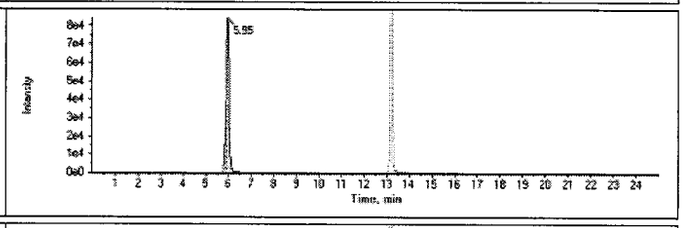


PFBS (299.0 / 79.9)

RT (Exp. RT): 5.95 (5.96) min

Calculated conc: 0.069905

Area Ratio: 6.151e-1
Sample Type: (Standard)

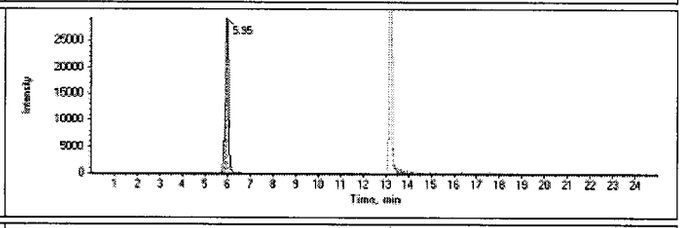


PFBS 2 (299.0 / 99.0)

RT (Exp. RT): 5.95 (5.97) min

Calculated conc: 0.069968

Area Ratio: 2.200e-1
Sample Type: (Standard)

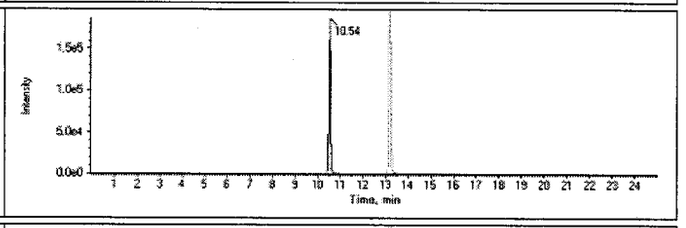


PFHxS (398.9 / 80.0)

RT (Exp. RT): 10.54 (10.55) min

Calculated conc: 0.075153

Area Ratio: 7.879e-1
Sample Type: (Standard)

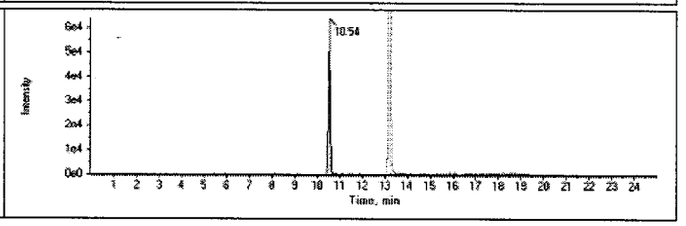


PFHxS 2 (398.9 / 99.0)

RT (Exp. RT): 10.54 (10.54) min

Calculated conc: 0.075556

Area Ratio: 2.650e-1
Sample Type: (Standard)

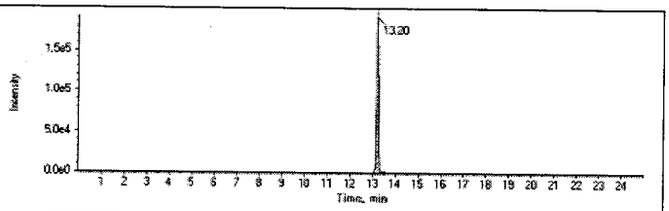


PFOS (499.0 / 79.9)

RT (Exp. RT): 13.20 (13.22) min

Calculated conc: 0.075991

Area Ratio: 7.459e-1
Sample Type: (Standard)

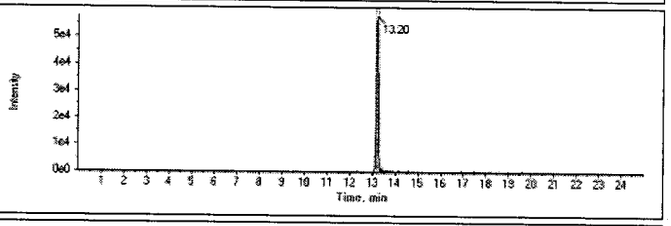


PFOS 2 (499.0 / 99.0)

RT (Exp. RT): 13.20 (13.21) min

Calculated conc: 0.074888

Area Ratio: 2.208e-1
Sample Type: (Standard)

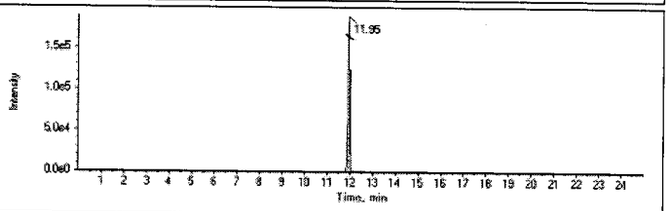


13C-PFOA (417.0 / 372.0)

RT (Exp. RT): 11.95 (11.96) min

Calculated conc: 100.943382

Area Ratio: N/A
Sample Type: (Standard)

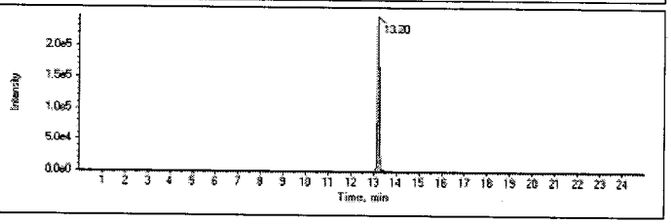


13C-PFOS (503.0 / 80.0)

RT (Exp. RT): 13.20 (13.22) min

Calculated conc: 99.223748

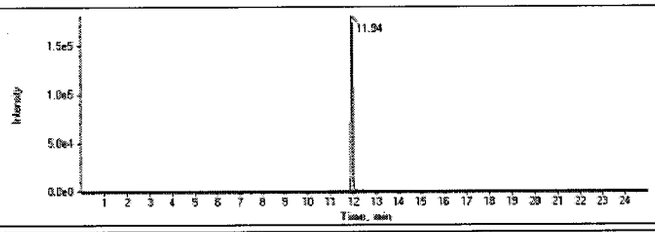
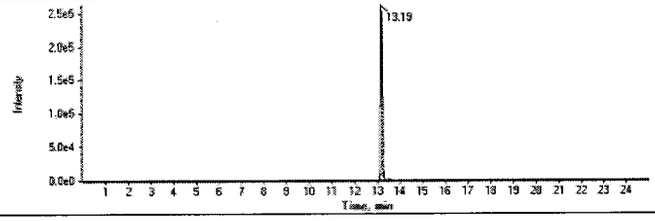
Area Ratio: N/A
Sample Type: (Standard)



Sample Name	CCCL	**Injection Vial**	2
Sample ID		**Injection Volume**	5.00
Sample Type	Quality Control	**Algorithm Used**	MQ4
Acquisition Date	7/16/2014 8:07:02 PM	**Dilution Factor**	1.00
Acquisition Method	@537-ShortRun-110613-Ali.dam	**Weight to Volume**	N/A
Project	EPA537\2014_07_16	**Instrument Name**	API 4000
Data File	@537-Batch#780662-071614.wiff		
Result Table	@537-Batch#780662-071614		
Sample Comment	Lot#@537Cal-071614-LHZ, Exp.07/30/14		

Internal Standard	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
IS-13C-PFOA	960557	11.94	100.00000	-
IS-13C-PFOS	1306993	13.19	100.00000	-

Target Analyte	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
PFHxA	3.673e+04	8.26	0.00250	0.002410
Surr-13c-PFHxA	1.064e+06	8.26	100.00000	101.669033
PFHpA	8.082e+04	10.37	0.00250	0.002597
PFHpA 2	2.271e+04	10.38	0.00250	0.002520
PFOA	8.435e+04	11.94	0.00250	0.002911
PFOA 2	2.516e+04	11.94	0.00250	0.002465
PFNA	5.723e+04	13.19	0.00250	0.002640
PFNA 2	1.344e+04	13.20	0.00250	0.002340
PFDA	5.949e+04	14.23	0.00250	0.002571
PFDA 2	1.108e+04	14.23	0.00250	0.002605
Surr-13c-PFDA	8.395e+05	14.24	100.00000	100.426133
PFUnA	6.042e+04	15.12	0.00250	0.002785
PFUnA 2	1.108e+04	15.11	0.00250	0.002598
PFDoA	4.977e+04	15.88	0.00250	0.002529
PFTrDA	8.194e+04	16.53	0.00250	0.002842
PFTrDA 2	2.045e+04	16.54	0.00250	0.003078
PFTA	2.172e+04	17.10	0.00250	0.002732
PFBS	2.158e+04	5.94	0.00222	0.001877
PFBS 2	9.807e+03	5.93	0.00222	0.002387
PFHxS	3.448e+04	10.52	0.00237	0.002516
PFHxS 2	1.148e+04	10.54	0.00237	0.002503
PFOS	3.168e+04	13.20	0.00240	0.002469
PFOS 2	9.464e+03	13.19	0.00240	0.002456
13C-PFOA	9.606e+05	11.94	100.00000	101.342699
13C-PFOS	1.307e+06	13.19	100.00000	100.111316

IS-13C-PFOA (Internal Standard) RT (Exp. RT): 11.94(11.96) min Concentration: 100.00000 Sample Type: (Quality Control)	
IS-13C-PFOS (Internal Standard) RT (Exp. RT): 13.19(13.22) min Concentration: 100.00000 Sample Type: (Quality Control)	

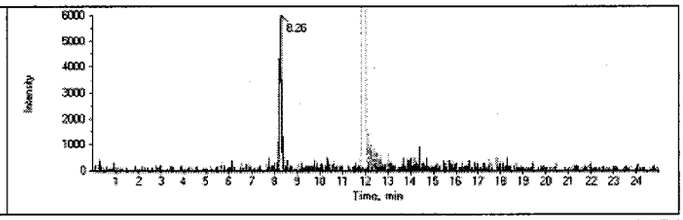
PFHxA (313.0 / 268.8)

RT (Exp. RT): 8.26 (8.28) min

Calculated conc: 0.002410

Area Ratio: 3.824e-2

Sample Type: (Quality Control)



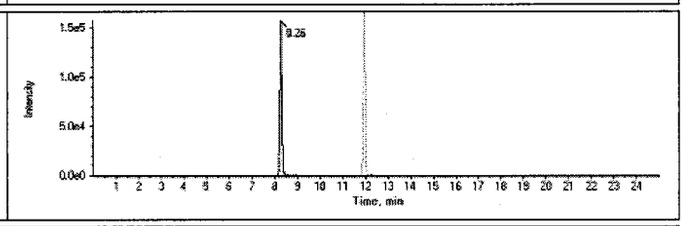
Surr-13c-PFHxA (315.0 / 270.0)

RT (Exp. RT): 8.26 (8.28) min

Calculated conc: 101.669033

Area Ratio: 1.108e0

Sample Type: (Quality Control)



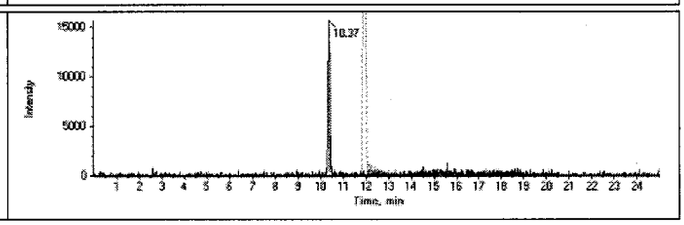
PFHpA (363.0 / 318.9)

RT (Exp. RT): 10.37 (10.40) min

Calculated conc: 0.002597

Area Ratio: 8.414e-2

Sample Type: (Quality Control)



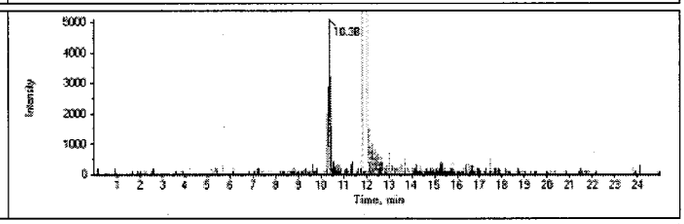
PFHpA 2 (363.0 / 168.9)

RT (Exp. RT): 10.38 (10.40) min

Calculated conc: 0.002520

Area Ratio: 2.364e-2

Sample Type: (Quality Control)



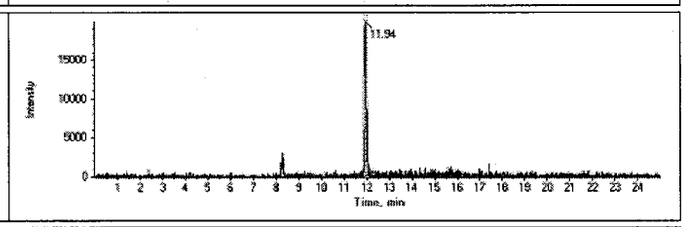
PFOA (413.0 / 368.9)

RT (Exp. RT): 11.94 (11.97) min

Calculated conc: 0.002911

Area Ratio: 8.781e-2

Sample Type: (Quality Control)



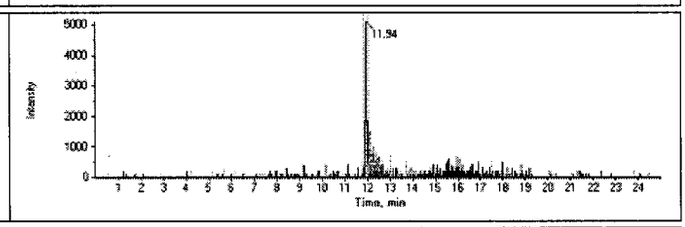
PFOA 2 (413.0 / 168.8)

RT (Exp. RT): 11.94 (11.96) min

Calculated conc: 0.002465

Area Ratio: 2.619e-2

Sample Type: (Quality Control)



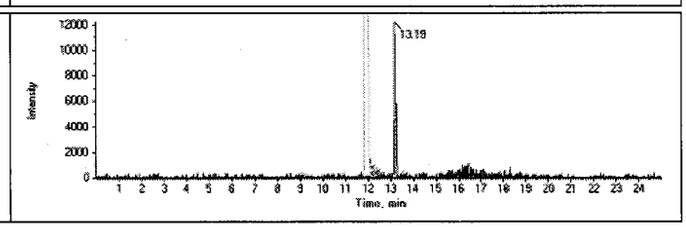
PFNA (463.0 / 419.0)

RT (Exp. RT): 13.19 (13.22) min

Calculated conc: 0.002640

Area Ratio: 5.958e-2

Sample Type: (Quality Control)

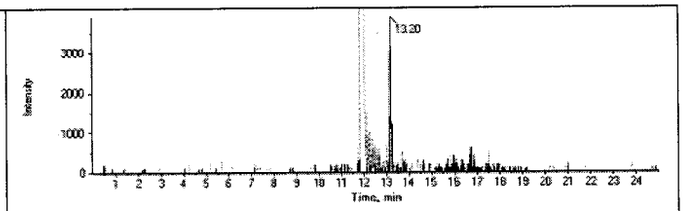


PFNA 2 (463.0 / 218.9)

RT (Exp. RT): 13.20 (13.21) min

Calculated conc: 0.002340

Area Ratio: 1.399e-2
Sample Type: (Quality Control)

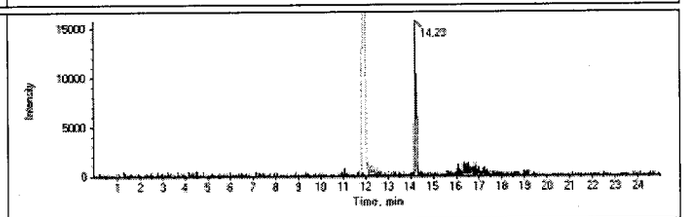


PFDA (513.0 / 469.0)

RT (Exp. RT): 14.23 (14.26) min

Calculated conc: 0.002571

Area Ratio: 6.193e-2
Sample Type: (Quality Control)

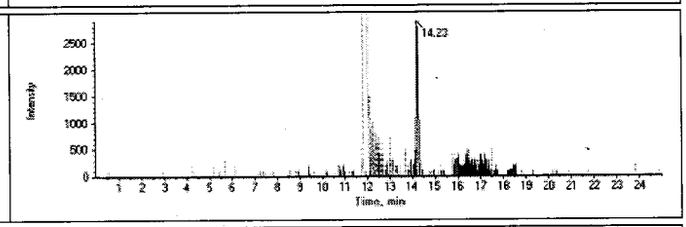


PFDA 2 (513.0 / 218.8)

RT (Exp. RT): 14.23 (14.26) min

Calculated conc: 0.002605

Area Ratio: 1.154e-2
Sample Type: (Quality Control)

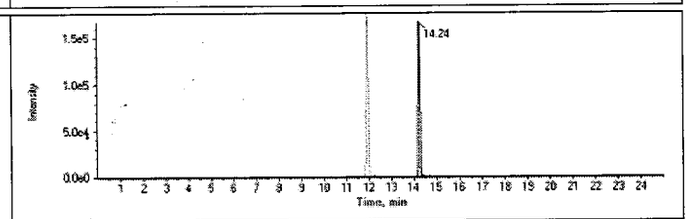


Surr-13c-PFDA (515.0 / 470.0)

RT (Exp. RT): 14.24 (14.26) min

Calculated conc: 100.426133

Area Ratio: 8.739e-1
Sample Type: (Quality Control)

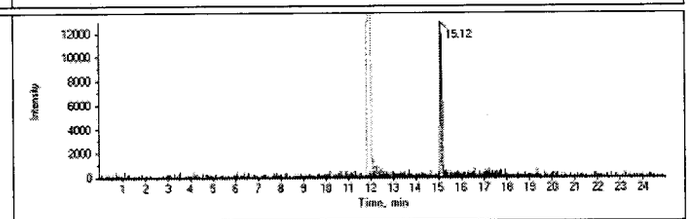


PFUnA (563.0 / 519.0)

RT (Exp. RT): 15.12 (15.14) min

Calculated conc: 0.002785

Area Ratio: 6.290e-2
Sample Type: (Quality Control)

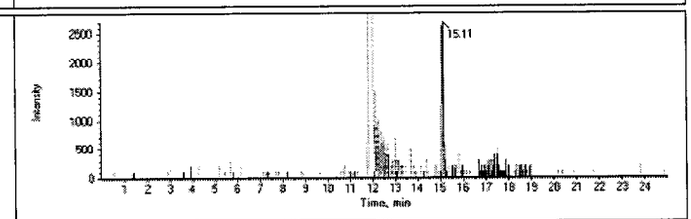


PFUnA 2 (563.0 / 268.8)

RT (Exp. RT): 15.11 (15.14) min

Calculated conc: 0.002598

Area Ratio: 1.154e-2
Sample Type: (Quality Control)

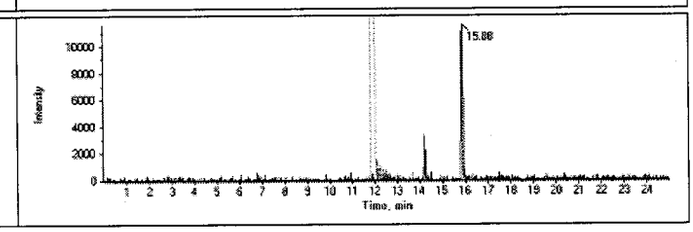


PFDoA (612.8 / 569.0)

RT (Exp. RT): 15.88 (15.90) min

Calculated conc: 0.002529

Area Ratio: 5.181e-2
Sample Type: (Quality Control)



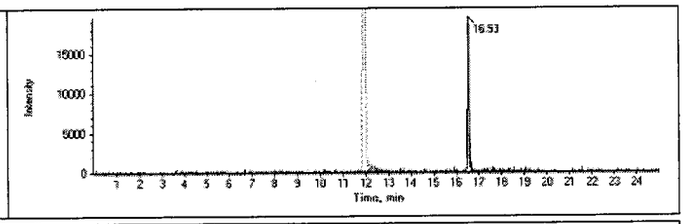
PFTrDA (662.9 / 619.0)

RT (Exp. RT): 16.53 (16.55) min

Calculated conc: 0.002842

Area Ratio: 8.530e-2

Sample Type: (Quality Control)



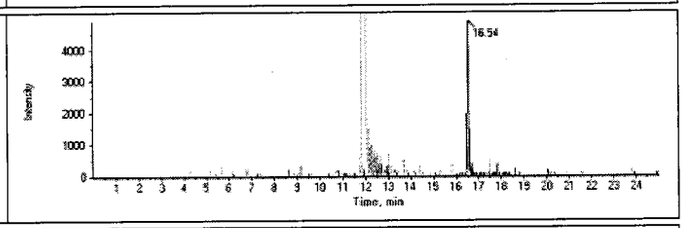
PFTrDA 2 (662.9 / 168.9)

RT (Exp. RT): 16.54 (16.55) min

Calculated conc: 0.003078

Area Ratio: 2.129e-2

Sample Type: (Quality Control)



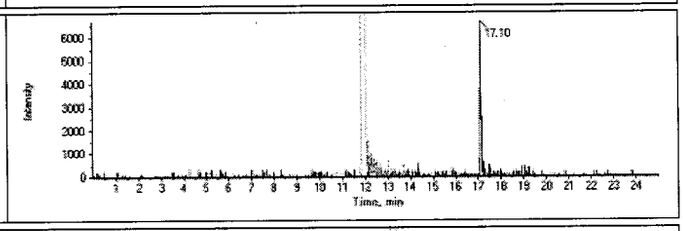
PFTA (713.3 / 669.0)

RT (Exp. RT): 17.10 (17.11) min

Calculated conc: 0.002732

Area Ratio: 2.261e-2

Sample Type: (Quality Control)



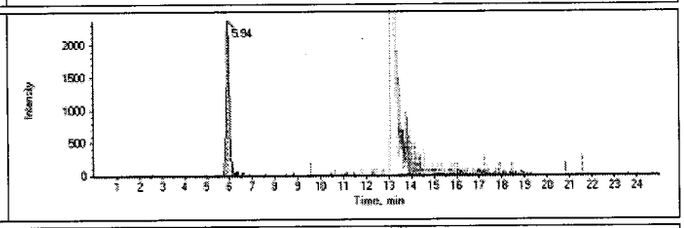
PFBS (299.0 / 79.9)

RT (Exp. RT): 5.94 (5.96) min

Calculated conc: 0.001877

Area Ratio: 1.651e-2

Sample Type: (Quality Control)



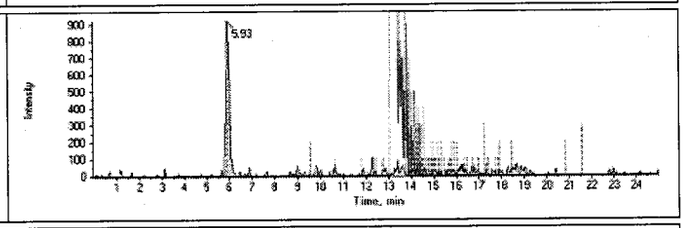
PFBS 2 (299.0 / 99.0)

RT (Exp. RT): 5.93 (5.97) min

Calculated conc: 0.002387

Area Ratio: 7.504e-3

Sample Type: (Quality Control)



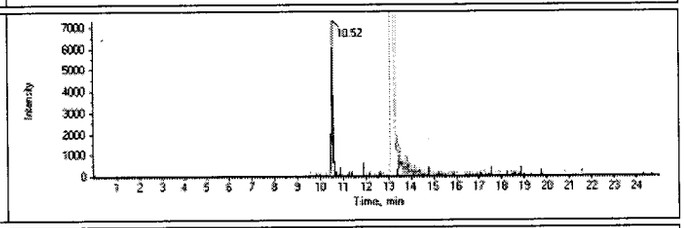
PFHxS (398.9 / 80.0)

RT (Exp. RT): 10.52 (10.55) min

Calculated conc: 0.002516

Area Ratio: 2.638e-2

Sample Type: (Quality Control)



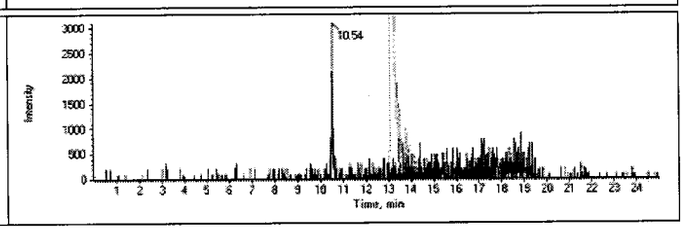
PFHxS 2 (398.9 / 99.0)

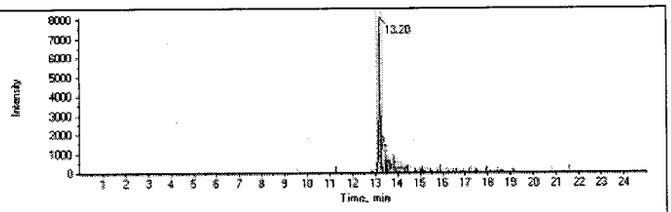
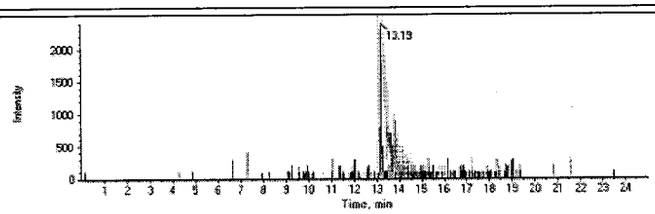
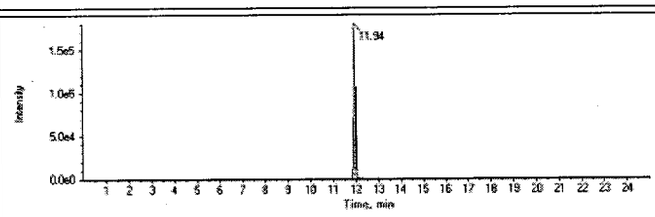
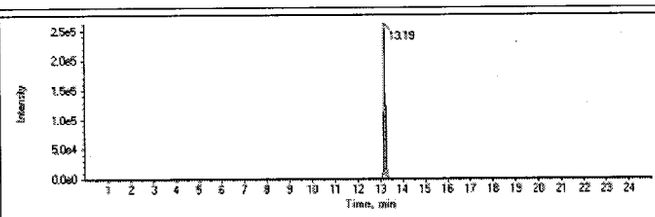
RT (Exp. RT): 10.54 (10.54) min

Calculated conc: 0.002503

Area Ratio: 8.780e-3

Sample Type: (Quality Control)

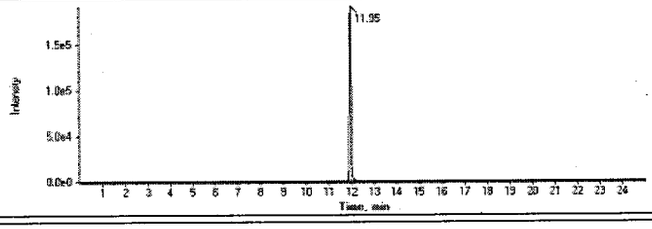
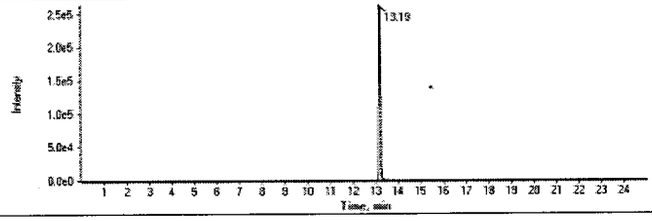


PFOS (499.0 / 79.9) RT (Exp. RT): 13.20 (13.22) min Calculated conc: 0.002469 Area Ratio: 2.424e-2 Sample Type: (Quality Control)	
PFOS 2 (499.0 / 99.0) RT (Exp. RT): 13.19 (13.21) min Calculated conc: 0.002456 Area Ratio: 7.241e-3 Sample Type: (Quality Control)	
13C-PFOA (417.0 / 372.0) RT (Exp. RT): 11.94 (11.96) min Calculated conc: 101.342699 Area Ratio: N/A Sample Type: (Quality Control)	
13C-PFOS (503.0 / 80.0) RT (Exp. RT): 13.19 (13.22) min Calculated conc: 100.111316 Area Ratio: N/A Sample Type: (Quality Control)	

Sample Name	QCS_0.02ppb	**Injection Vial**	8
Sample ID		**Injection Volume**	5.00
Sample Type	Quality Control	**Algorithm Used**	MQ4
Acquisition Date	7/16/2014 8:32:37 PM	**Dilution Factor**	1.00
Acquisition Method	@537-ShortRun-110613-Ali.dam	**Weight to Volume**	N/A
Project	EPA537\2014_07_16	**Instrument Name**	API 4000
Data File	@537-Batch#780662-071614.wiff		
Result Table	@537-Batch#780662-071614		
Sample Comment	lot#@5372ndSource(QCS)-071614-LHZ, Exp. 07/30/14		

Internal Standard	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
IS-13C-PFOA	977964	11.95	100.00000	-
IS-13C-PFOS	1338616	13.19	100.00000	-

Target Analyte	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
PFHxA	2.981e+05	8.26	0.02000	0.019213
Surr-13c-PFHxA	1.094e+06	8.26	100.00000	102.679626
PFHpA	6.886e+05	10.38	0.02000	0.021734
PFHpA 2	1.906e+05	10.38	0.02000	0.020777
PFOA	5.885e+05	11.95	0.02000	0.019945
PFOA 2	2.077e+05	11.95	0.02000	0.019985
PFNA	4.537e+05	13.20	0.02000	0.020557
PFNA 2	1.229e+05	13.20	0.02000	0.021018
PFDA	4.909e+05	14.24	0.02000	0.020839
PFDA 2	8.390e+04	14.24	0.02000	0.019367
Surr-13c-PFDA	8.849e+05	14.24	100.00000	103.978712
PFUnA	4.950e+05	15.12	0.02000	0.022413
PFUnA 2	9.705e+04	15.13	0.02000	0.022350
PFDoA	4.177e+05	15.88	0.02000	0.020847
PFTrDA	6.148e+05	16.53	0.02000	0.020947
PFTrDA 2	1.466e+05	16.53	0.02000	0.021669
PFTA	1.727e+05	17.10	0.02000	0.021332
PFBS	2.048e+05	5.94	0.01770	0.017387
PFBS 2	7.187e+04	5.95	0.01770	0.017075
PFHxS	2.869e+05	10.53	0.01900	0.020446
PFHxS 2	8.988e+04	10.54	0.01900	0.019143
PFOS	2.577e+05	13.19	0.01920	0.019612
PFOS 2	7.683e+04	13.19	0.01920	0.019467
13C-PFOA	9.780e+05	11.95	100.00000	103.179225
13C-PFOS	1.339e+06	13.19	100.00000	102.533467

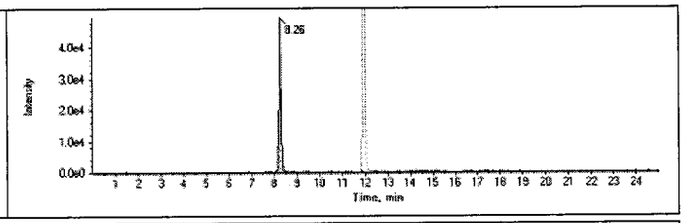
IS-13C-PFOA (Internal Standard) RT (Exp. RT): 11.95(11.96) min Concentration: 100.00000 Sample Type: (Quality Control)	
IS-13C-PFOS (Internal Standard) RT (Exp. RT): 13.19(13.22) min Concentration: 100.00000 Sample Type: (Quality Control)	

PFHxA (313.0 / 268.8)

RT (Exp. RT): 8.26 (8.28) min

Calculated conc: 0.019213

Area Ratio: 3.049e-1
Sample Type: (Quality Control)

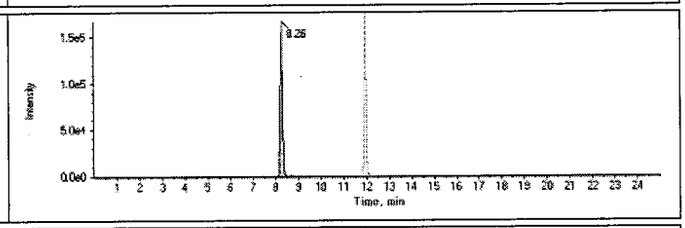


Surr-13c-PFHxA (315.0 / 270.0)

RT (Exp. RT): 8.26 (8.28) min

Calculated conc: 102.679626

Area Ratio: 1.119e0
Sample Type: (Quality Control)

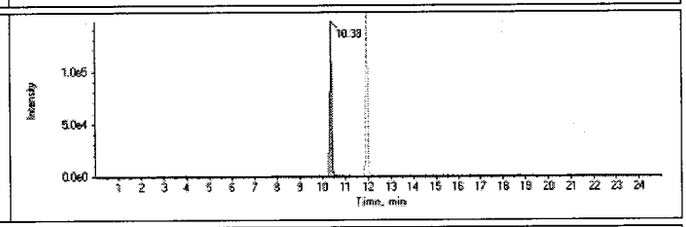


PFHpA (363.0 / 318.9)

RT (Exp. RT): 10.38 (10.40) min

Calculated conc: 0.021734

Area Ratio: 7.041e-1
Sample Type: (Quality Control)

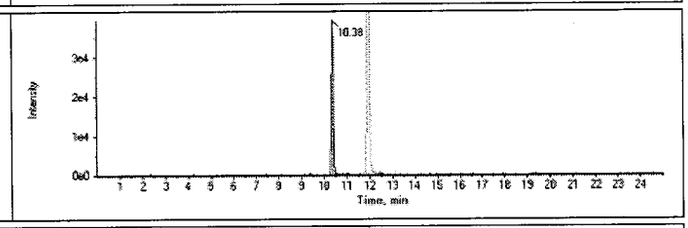


PFHpA 2 (363.0 / 168.9)

RT (Exp. RT): 10.38 (10.40) min

Calculated conc: 0.020777

Area Ratio: 1.949e-1
Sample Type: (Quality Control)

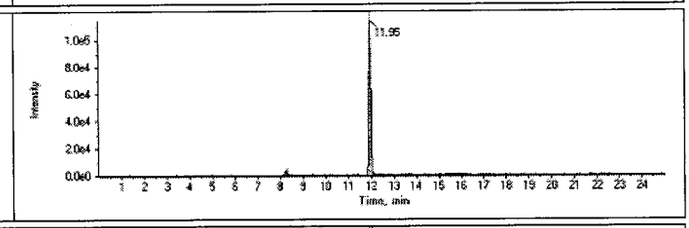


PFOA (413.0 / 368.9)

RT (Exp. RT): 11.95 (11.97) min

Calculated conc: 0.019945

Area Ratio: 6.017e-1
Sample Type: (Quality Control)

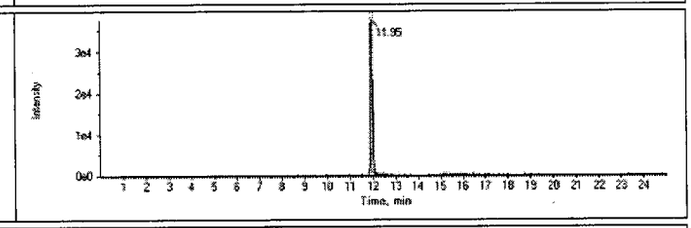


PFOA 2 (413.0 / 168.8)

RT (Exp. RT): 11.95 (11.96) min

Calculated conc: 0.019985

Area Ratio: 2.124e-1
Sample Type: (Quality Control)

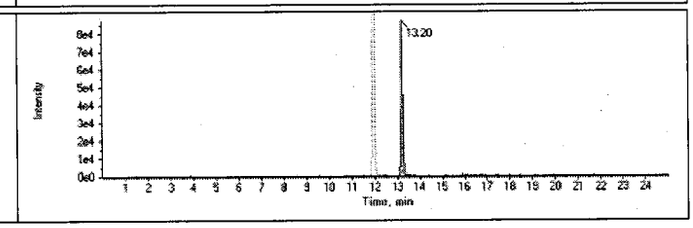


PFNA (463.0 / 419.0)

RT (Exp. RT): 13.20 (13.22) min

Calculated conc: 0.020557

Area Ratio: 4.639e-1
Sample Type: (Quality Control)



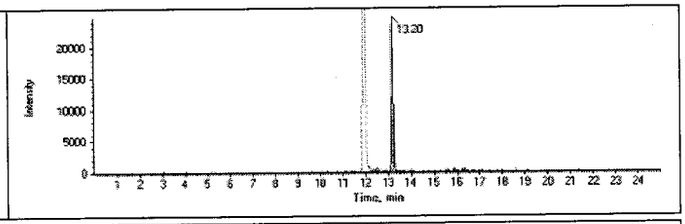
PFNA 2 (463.0 / 218.9)

RT (Exp. RT): 13.20 (13.21) min

Calculated conc: 0.021018

Area Ratio: 1.256e-1

Sample Type: (Quality Control)



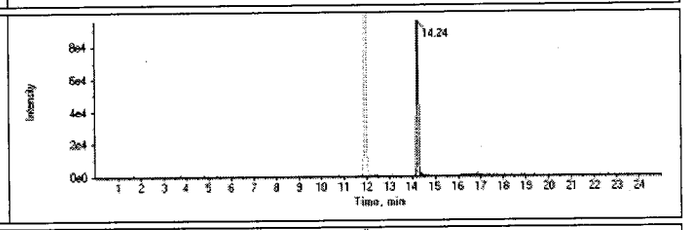
PFDA (513.0 / 469.0)

RT (Exp. RT): 14.24 (14.26) min

Calculated conc: 0.020839

Area Ratio: 5.020e-1

Sample Type: (Quality Control)



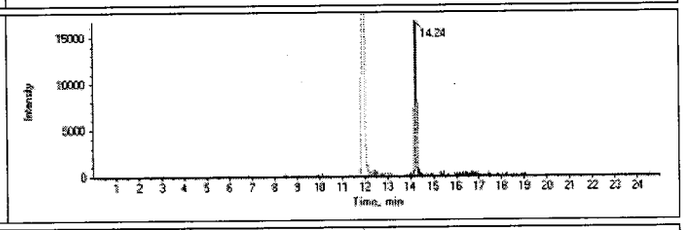
PFDA 2 (513.0 / 218.8)

RT (Exp. RT): 14.24 (14.26) min

Calculated conc: 0.019367

Area Ratio: 8.579e-2

Sample Type: (Quality Control)



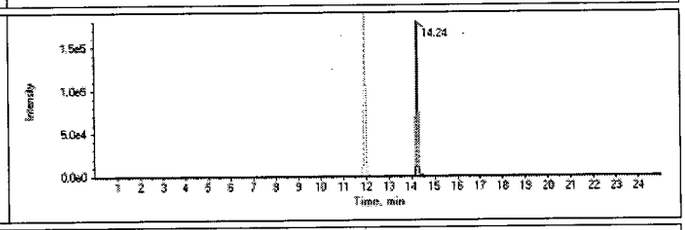
Surr-13c-PFDA (515.0 / 470.0)

RT (Exp. RT): 14.24 (14.26) min

Calculated conc: 103.978712

Area Ratio: 9.048e-1

Sample Type: (Quality Control)



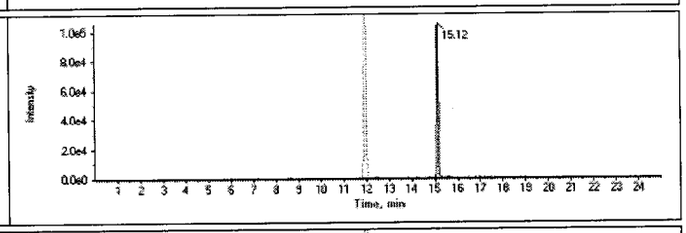
PFUnA (563.0 / 519.0)

RT (Exp. RT): 15.12 (15.14) min

Calculated conc: 0.022413

Area Ratio: 5.061e-1

Sample Type: (Quality Control)



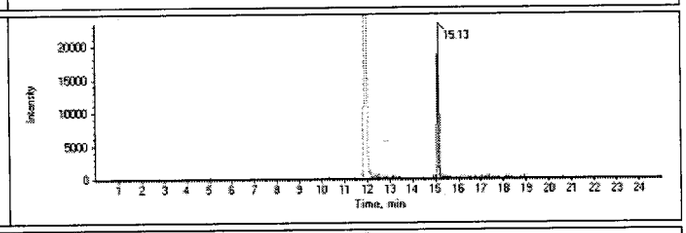
PFUnA 2 (563.0 / 268.8)

RT (Exp. RT): 15.13 (15.14) min

Calculated conc: 0.022350

Area Ratio: 9.924e-2

Sample Type: (Quality Control)



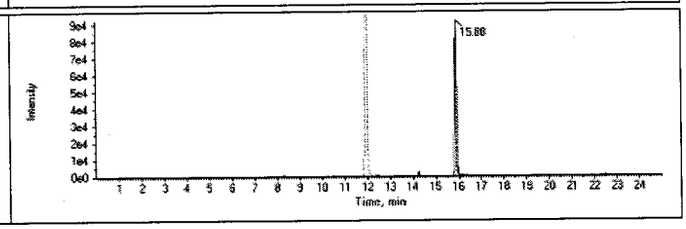
PFDoA (612.8 / 569.0)

RT (Exp. RT): 15.88 (15.90) min

Calculated conc: 0.020847

Area Ratio: 4.271e-1

Sample Type: (Quality Control)

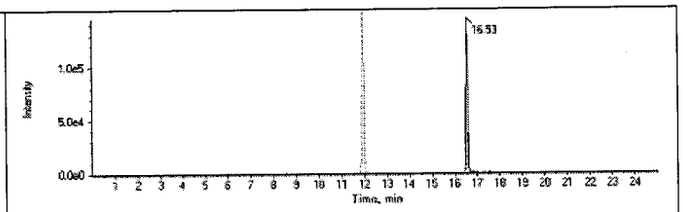


PFTrDA (662.9 / 619.0)

RT (Exp. RT): 16.53 (16.55) min

Calculated conc: 0.020947

Area Ratio: 6.287e-1
Sample Type: (Quality Control)

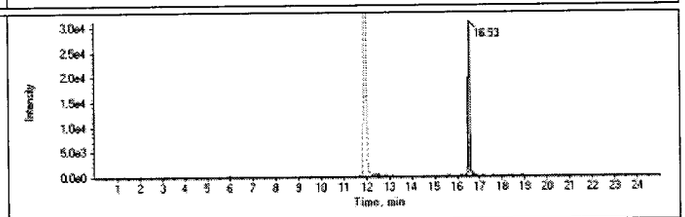


PFTrDA 2 (662.9 / 168.9)

RT (Exp. RT): 16.53 (16.55) min

Calculated conc: 0.021669

Area Ratio: 1.499e-1
Sample Type: (Quality Control)

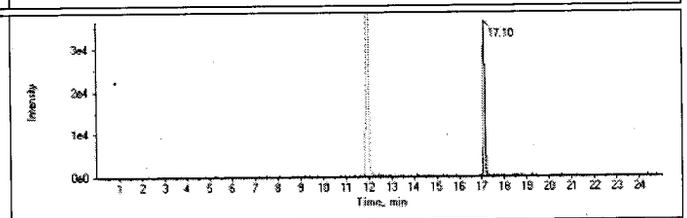


PFTA (713.3 / 669.0)

RT (Exp. RT): 17.10 (17.11) min

Calculated conc: 0.021332

Area Ratio: 1.766e-1
Sample Type: (Quality Control)

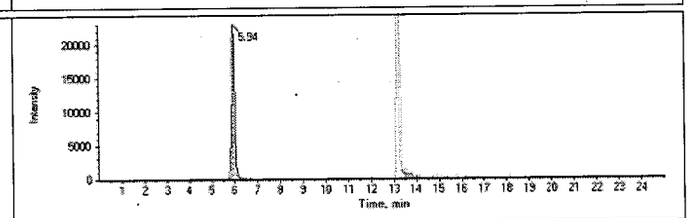


PFBS (299.0 / 79.9)

RT (Exp. RT): 5.94 (5.96) min

Calculated conc: 0.017387

Area Ratio: 1.530e-1
Sample Type: (Quality Control)

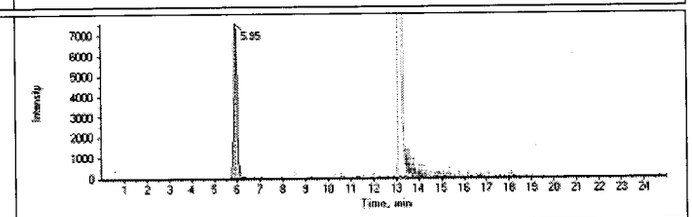


PFBS 2 (299.0 / 99.0)

RT (Exp. RT): 5.95 (5.97) min

Calculated conc: 0.017075

Area Ratio: 5.369e-2
Sample Type: (Quality Control)

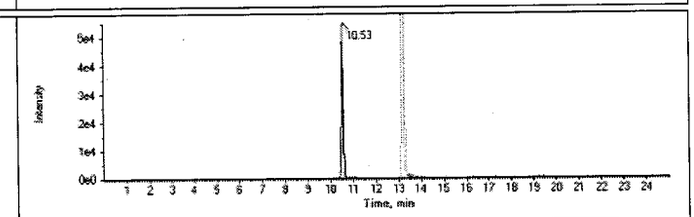


PFHxS (398.9 / 80.0)

RT (Exp. RT): 10.53 (10.55) min

Calculated conc: 0.020446

Area Ratio: 2.144e-1
Sample Type: (Quality Control)

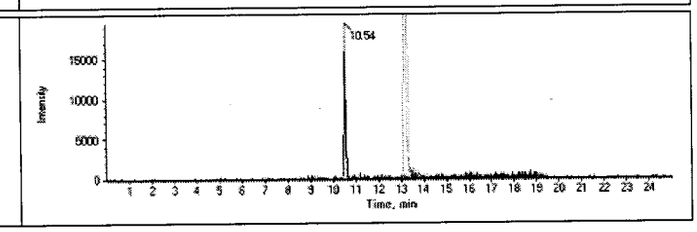


PFHxS 2 (398.9 / 99.0)

RT (Exp. RT): 10.54 (10.54) min

Calculated conc: 0.019143

Area Ratio: 6.715e-2
Sample Type: (Quality Control)

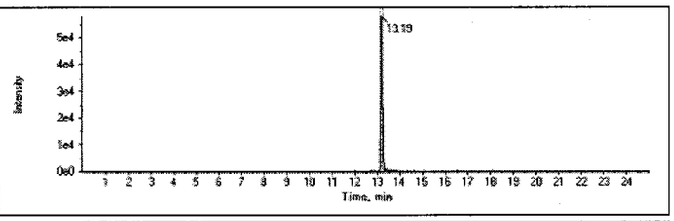


PFOS (499.0 / 79.9)

RT (Exp. RT): 13.19 (13.22) min

Calculated conc: 0.019612

Area Ratio: 1.925e-1
Sample Type: (Quality Control)

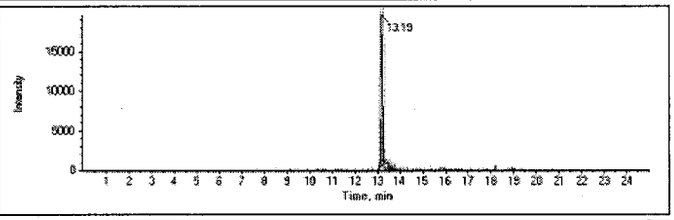


PFOS 2 (499.0 / 99.0)

RT (Exp. RT): 13.19 (13.21) min

Calculated conc: 0.019467

Area Ratio: 5.740e-2
Sample Type: (Quality Control)

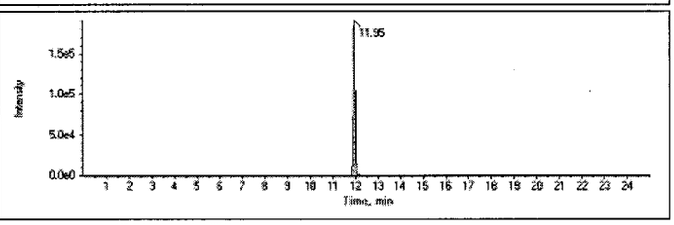


13C-PFOA (417.0 / 372.0)

RT (Exp. RT): 11.95 (11.96) min

Calculated conc: 103.179225

Area Ratio: N/A
Sample Type: (Quality Control)

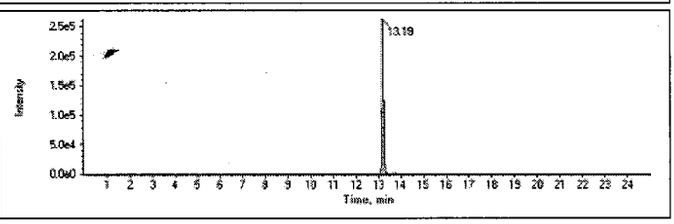


13C-PFOS (503.0 / 80.0)

RT (Exp. RT): 13.19 (13.22) min

Calculated conc: 102.533467

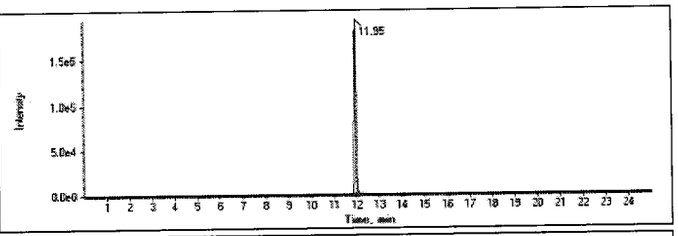
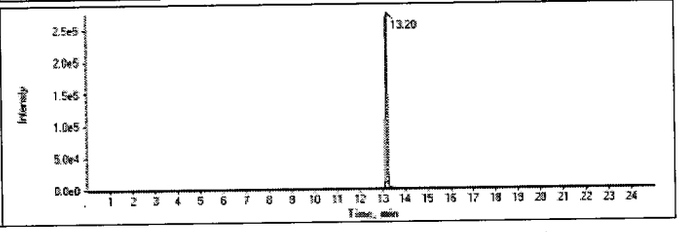
Area Ratio: N/A
Sample Type: (Quality Control)



Sample Name	QCS_0.02ppb New Source(Elemental0	**Injection Vial**	9
Sample ID		**Injection Volume**	5.00
Sample Type	Quality Control	**Algorithm Used**	MQ4
Acquisition Date	7/16/2014 8:58:12 PM	**Dilution Factor**	1.00
Acquisition Method	@537-ShortRun-110613-Ali.dam	**Weight to Volume**	N/A
Project	EPA537\2014_07_16	**Instrument Name**	API 4000
Data File	@537-Batch#780662-071614.wiff		
Result Table	@537-Batch#780662-071614		
Sample Comment	lot#@5372ndSource(QCS)-071614-LHZ, Exp. 07/30/14		

Internal Standard	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
IS-13C-PFOA	1028169	11.95	100.00000	-
IS-13C-PFOS	1411118	13.20	100.00000	-

Target Analyte	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
PFHxA	2.584e+05	8.26	0.02000	0.015842
Surr-13c-PFHxA	1.193e+06	8.26	100.00000	106.458649
PFHpA	5.581e+05	10.38	0.02000	0.016755
PFHpA 2	1.639e+05	10.38	0.02000	0.016993
PFOA	4.695e+05	11.95	0.02000	0.015135
PFOA 2	1.633e+05	11.95	0.02000	0.014949
PFNA	4.056e+05	13.20	0.02000	0.017479
PFNA 2	1.061e+05	13.20	0.02000	0.017256
PFDA	4.224e+05	14.24	0.02000	0.017054
PFDA 2	7.802e+04	14.24	0.02000	0.017130
Surr-13c-PFDA	9.031e+05	14.24	100.00000	100.930304
PFUnA	4.168e+05	15.13	0.02000	0.017950
PFUnA 2	8.222e+04	15.12	0.02000	0.018010
PFDoA	3.397e+05	15.88	0.02000	0.016125
PFTrDA	4.626e+05	16.53	0.02000	0.014991
PFTrDA 2	1.079e+05	16.53	0.02000	0.015178
PFTA	1.456e+05	17.10	0.02000	0.017104
PFBS	1.663e+05	5.94	0.01770	0.013396
PFBS 2	5.635e+04	5.94	0.01770	0.012702
PFHxS	2.507e+05	10.53	0.01900	0.016948
PFHxS 2	9.048e+04	10.53	0.01900	0.018280
PFOS	1.884e+05	13.20	0.01920	0.013602
PFOS 2	6.595e+04	13.19	0.01920	0.015851
13C-PFOA	1.028e+06	11.95	100.00000	108.476107
13C-PFOS	1.411e+06	13.20	100.00000	108.086881

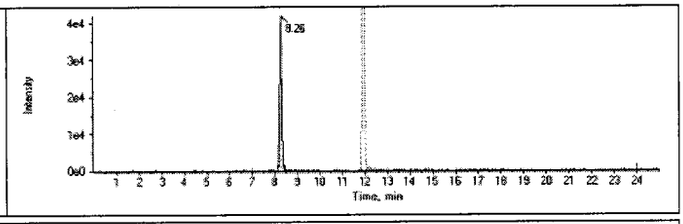
IS-13C-PFOA (Internal Standard) RT (Exp. RT): 11.95(11.96) min Concentration: 100.00000 Sample Type: (Quality Control)	
IS-13C-PFOS (Internal Standard) RT (Exp. RT): 13.20(13.22) min Concentration: 100.00000 Sample Type: (Quality Control)	

PFHxA (313.0 / 268.8)

RT (Exp. RT): 8.26 (8.28) min

Calculated conc: 0.015842

Area Ratio: 2.514e-1
Sample Type: (Quality Control)

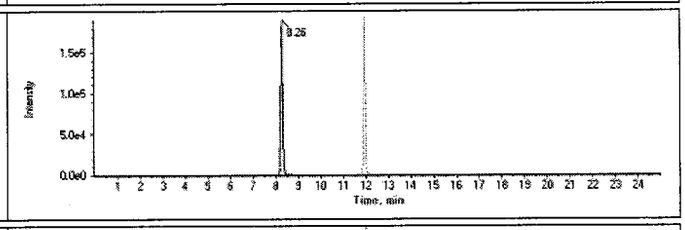


Surr-13c-PFHxA (315.0 / 270.0)

RT (Exp. RT): 8.26 (8.28) min

Calculated conc: 106.458649

Area Ratio: 1.160e0
Sample Type: (Quality Control)

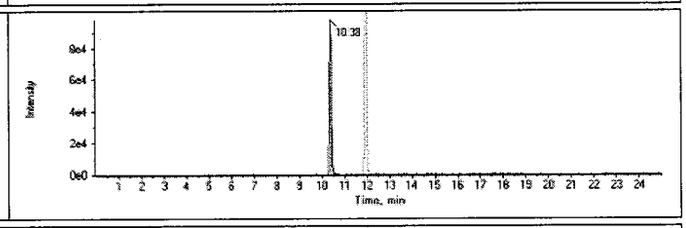


PFHpA (363.0 / 318.9)

RT (Exp. RT): 10.38 (10.40) min

Calculated conc: 0.016755

Area Ratio: 5.428e-1
Sample Type: (Quality Control)

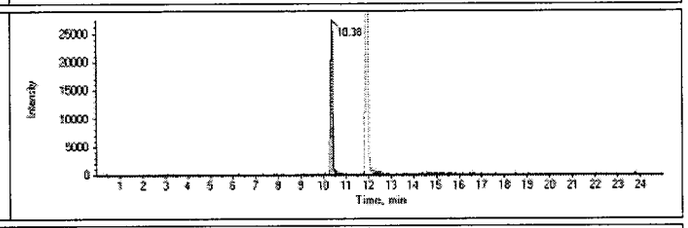


PFHpA 2 (363.0 / 168.9)

RT (Exp. RT): 10.38 (10.40) min

Calculated conc: 0.016993

Area Ratio: 1.594e-1
Sample Type: (Quality Control)

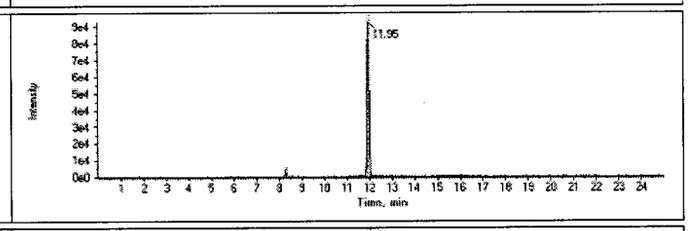


PFOA (413.0 / 368.9)

RT (Exp. RT): 11.95 (11.97) min

Calculated conc: 0.015135

Area Ratio: 4.566e-1
Sample Type: (Quality Control)

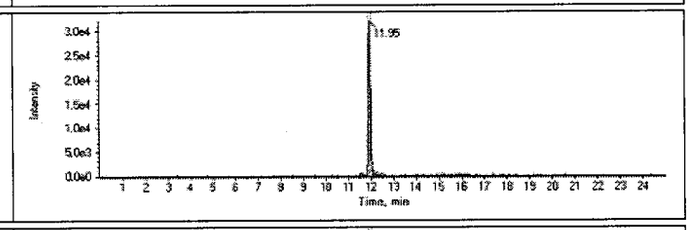


PFOA 2 (413.0 / 168.8)

RT (Exp. RT): 11.95 (11.96) min

Calculated conc: 0.014949

Area Ratio: 1.588e-1
Sample Type: (Quality Control)

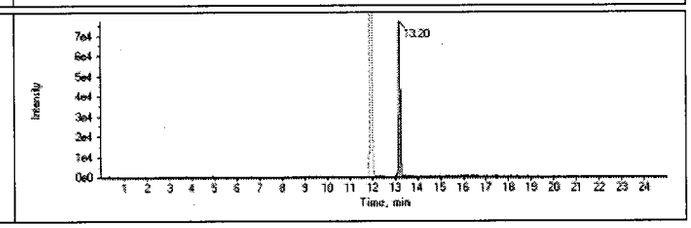


PFNA (463.0 / 419.0)

RT (Exp. RT): 13.20 (13.22) min

Calculated conc: 0.017479

Area Ratio: 3.945e-1
Sample Type: (Quality Control)

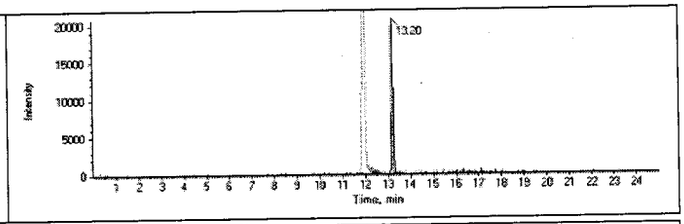


PFNA 2 (463.0 / 218.9)

RT (Exp. RT): 13.20 (13.21) min

Calculated conc: 0.017256

Area Ratio: 1.032e-1
Sample Type: (Quality Control)

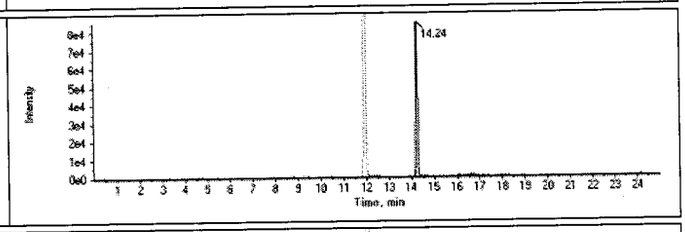


PFDA (513.0 / 469.0)

RT (Exp. RT): 14.24 (14.26) min

Calculated conc: 0.017054

Area Ratio: 4.108e-1
Sample Type: (Quality Control)

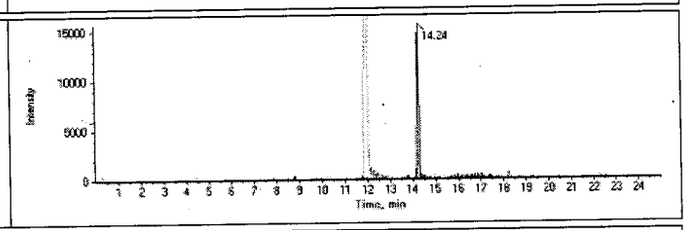


PFDA 2 (513.0 / 218.8)

RT (Exp. RT): 14.24 (14.26) min

Calculated conc: 0.017130

Area Ratio: 7.588e-2
Sample Type: (Quality Control)

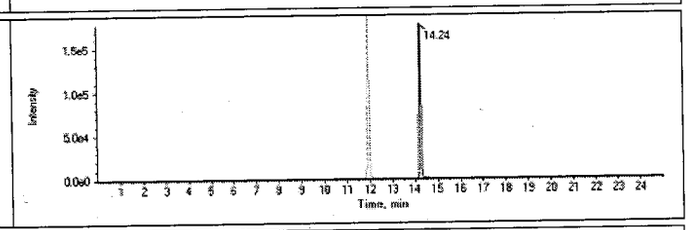


Surr-13c-PFDA (515.0 / 470.0)

RT (Exp. RT): 14.24 (14.26) min

Calculated conc: 100.930304

Area Ratio: 8.783e-1
Sample Type: (Quality Control)

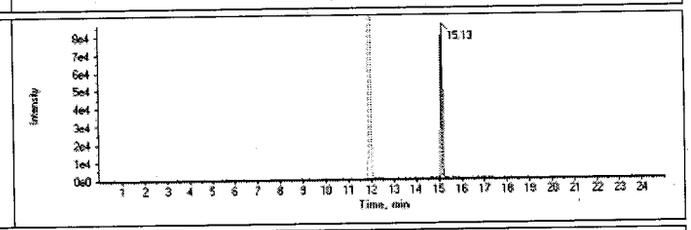


PFUnA (563.0 / 519.0)

RT (Exp. RT): 15.13 (15.14) min

Calculated conc: 0.017950

Area Ratio: 4.053e-1
Sample Type: (Quality Control)

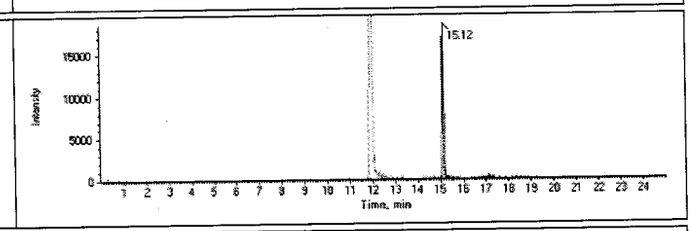


PFUnA 2 (563.0 / 268.8)

RT (Exp. RT): 15.12 (15.14) min

Calculated conc: 0.018010

Area Ratio: 7.997e-2
Sample Type: (Quality Control)

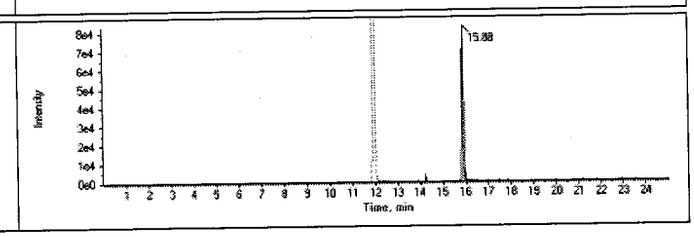


PFDoA (612.8 / 569.0)

RT (Exp. RT): 15.88 (15.90) min

Calculated conc: 0.016125

Area Ratio: 3.304e-1
Sample Type: (Quality Control)

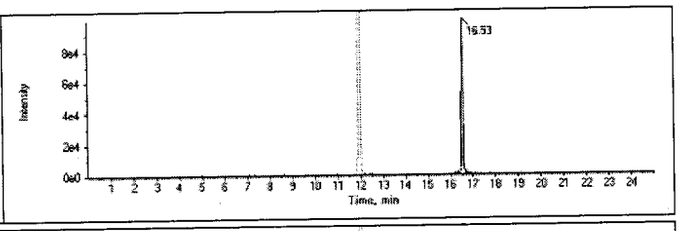


PFTrDA (662.9 / 619.0)

RT (Exp. RT): 16.53 (16.55) min

Calculated conc: 0.014991

Area Ratio: 4.499e-1
Sample Type: (Quality Control)

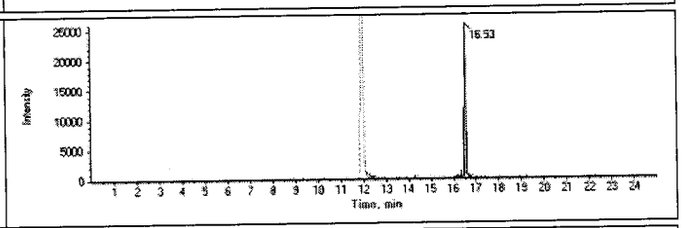


PFTrDA 2 (662.9 / 168.9)

RT (Exp. RT): 16.53 (16.55) min

Calculated conc: 0.015178

Area Ratio: 1.050e-1
Sample Type: (Quality Control)

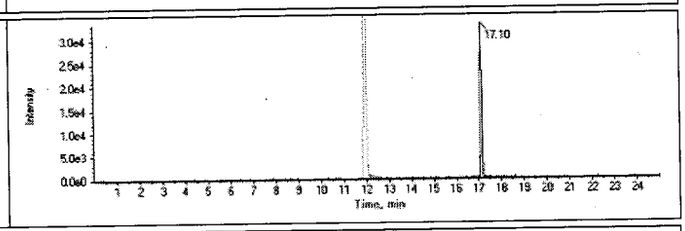


PFTA (713.3 / 669.0)

RT (Exp. RT): 17.10 (17.11) min

Calculated conc: 0.017104

Area Ratio: 1.416e-1
Sample Type: (Quality Control)

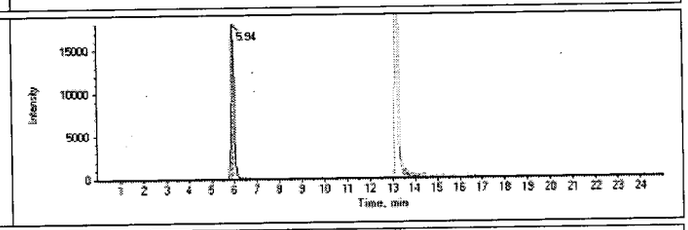


PFBS (299.0 / 79.9)

RT (Exp. RT): 5.94 (5.96) min

Calculated conc: 0.013396

Area Ratio: 1.179e-1
Sample Type: (Quality Control)

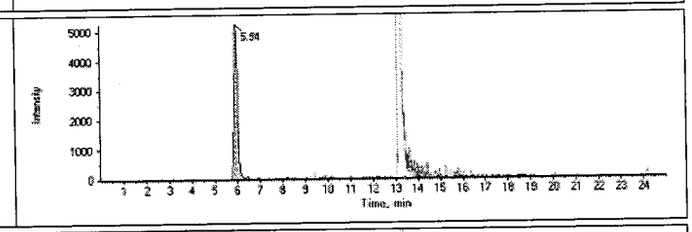


PFBS 2 (299.0 / 99.0)

RT (Exp. RT): 5.94 (5.97) min

Calculated conc: 0.012702

Area Ratio: 3.994e-2
Sample Type: (Quality Control)

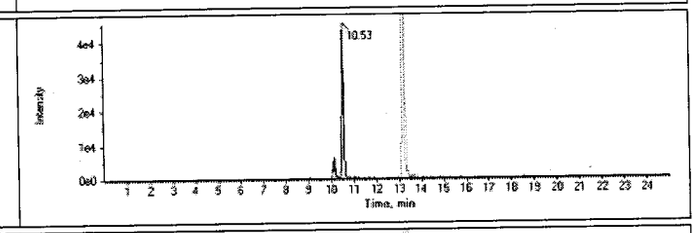


PFHxS (398.9 / 80.0)

RT (Exp. RT): 10.53 (10.55) min

Calculated conc: 0.016948

Area Ratio: 1.777e-1
Sample Type: (Quality Control)

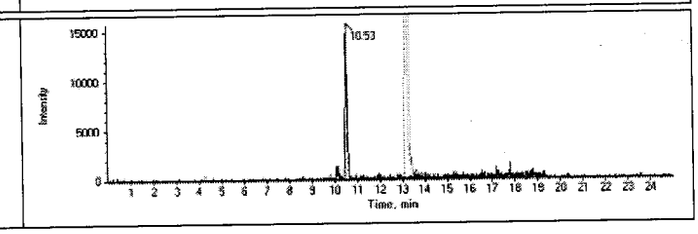


PFHxS 2 (398.9 / 99.0)

RT (Exp. RT): 10.53 (10.54) min

Calculated conc: 0.018280

Area Ratio: 6.412e-2
Sample Type: (Quality Control)



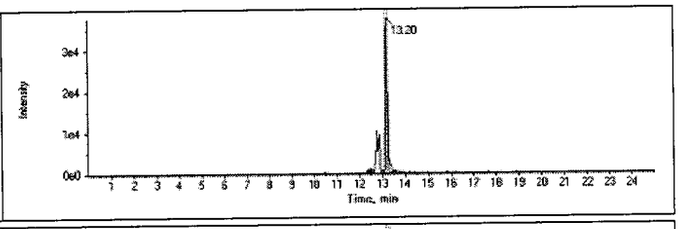
PFOS (499.0 / 79.9)

RT (Exp. RT): 13.20 (13.22) min

Calculated conc: 0.013602

Area Ratio: 1.335e-1

Sample Type: (Quality Control)



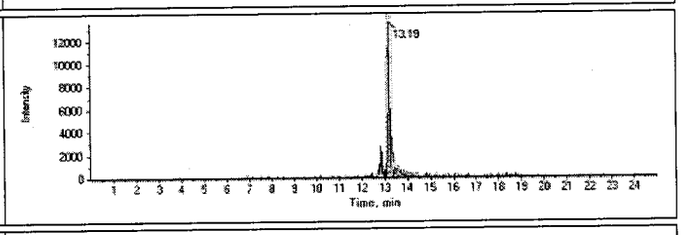
PFOS 2 (499.0 / 99.0)

RT (Exp. RT): 13.19 (13.21) min

Calculated conc: 0.015851

Area Ratio: 4.674e-2

Sample Type: (Quality Control)



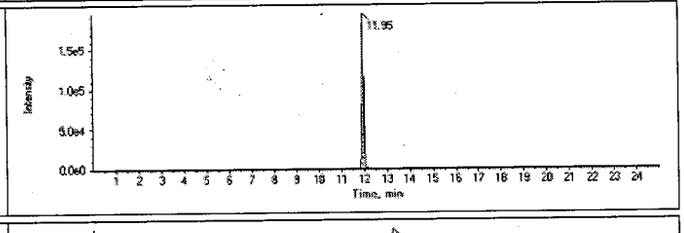
13C-PFOA (417.0 / 372.0)

RT (Exp. RT): 11.95 (11.96) min

Calculated conc: 108.476107

Area Ratio: N/A

Sample Type: (Quality Control)



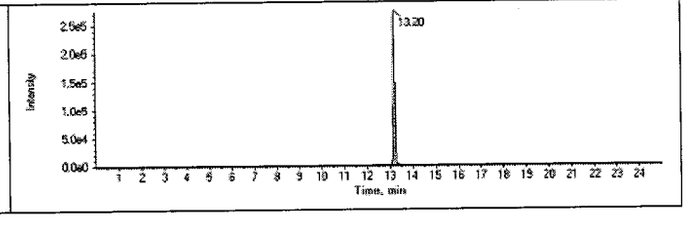
13C-PFOS (503.0 / 80.0)

RT (Exp. RT): 13.20 (13.22) min

Calculated conc: 108.086881

Area Ratio: N/A

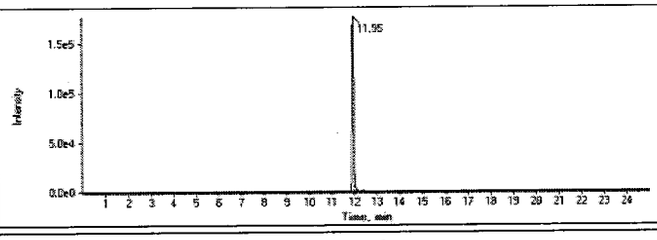
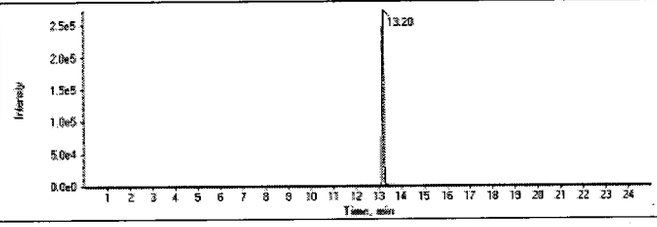
Sample Type: (Quality Control)



Sample Name	MBLK	**Injection Vial**	10
Sample ID		**Injection Volume**	5.00
Sample Type	Quality Control	**Algorithm Used**	MQ4
Acquisition Date	7/16/2014 9:23:48 PM	**Dilution Factor**	1.00
Acquisition Method	@537-ShortRun-110613-Ali.dam	**Weight to Volume**	N/A
Project	EPA537\2014_07_16	**Instrument Name**	API 4000
Data File	@537-Batch#780662-071614.wiff		
Result Table	@537-Batch#780662-071614		
Sample Comment	Prep. By FAM@07/14/2014		

Internal Standard	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
IS-13C-PFOA	966453	11.95	100.00000	-
IS-13C-PFOS	1333824	13.20	100.00000	-

Target Analyte	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
PFHxA	1.960e+02	8.28	0.00000	0.000013
Surr-13c-PFHxA	1.025e+06	8.27	100.00000	97.282394
PFHpA	1.128e+03	10.38	0.00000	0.000036
PFHpA 2	2.450e+02	10.37	0.00000	0.000027
PFOA	6.963e+03	11.94	0.00000	0.000239
PFOA 2	1.618e+03	11.96	0.00000	0.000158
PFNA	5.880e+02	13.22	0.00000	0.000027
PFNA 2	1.960e+02	13.20	0.00000	0.000034
PFDA	1.079e+03	14.24	0.00000	0.000046
PFDA 2	2.450e+02	14.25	0.00000	0.000057
Surr-13c-PFDA	8.068e+05	14.25	100.00000	95.933760
PFUnA	1.030e+03	15.16	0.00000	0.000047
PFUnA 2	N/A	N/A	0.00000	N/A
PFDoA	6.860e+02	15.89	0.00000	0.000035
PFTrDA	9.810e+02	16.53	0.00000	0.000034
PFTrDA 2	1.960e+02	16.52	0.00000	0.000029
PFTA	3.920e+02	17.13	0.00000	0.000049
PFBS	1.470e+02	5.90	0.00000	0.000013
PFBS 2	1.470e+02	5.95	0.00000	0.000035
PFHxS	9.800e+01	10.55	0.00000	0.000007
PFHxS 2	2.450e+02	10.55	0.00000	0.000052
PFOS	2.450e+02	13.22	0.00000	0.000019
PFOS 2	1.470e+02	13.17	0.00000	0.000037
13C-PFOA	9.665e+05	11.95	100.00000	101.964799
13C-PFOS	1.334e+06	13.20	100.00000	102.166439

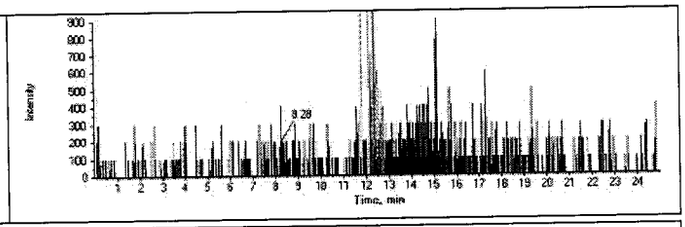
IS-13C-PFOA (Internal Standard) RT (Exp. RT): 11.95(11.96) min Concentration: 100.00000 Sample Type: (Quality Control)	
IS-13C-PFOS (Internal Standard) RT (Exp. RT): 13.20(13.22) min Concentration: 100.00000 Sample Type: (Quality Control)	

PFHxA (313.0 / 268.8)

RT (Exp. RT): 8.28 (8.28) min

Calculated conc: 0.000013

Area Ratio: 2.030e-4
Sample Type: (Quality Control)

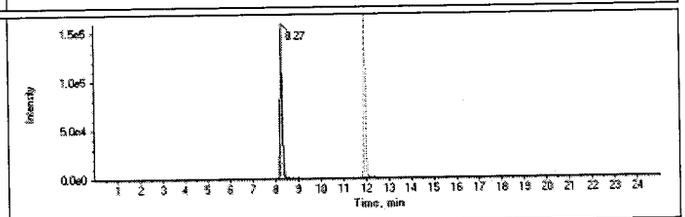


Surr-13c-PFHxA (315.0 / 270.0)

RT (Exp. RT): 8.27 (8.28) min

Calculated conc: 97.282394

Area Ratio: 1.060e0
Sample Type: (Quality Control)

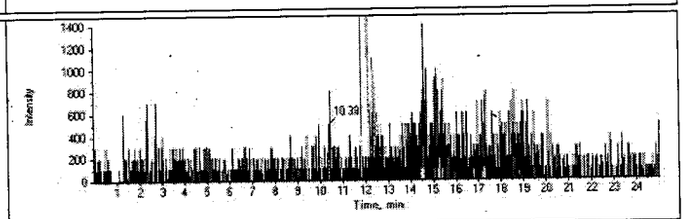


PFHpA (363.0 / 318.9)

RT (Exp. RT): 10.38 (10.40) min

Calculated conc: 0.000036

Area Ratio: 1.167e-3
Sample Type: (Quality Control)

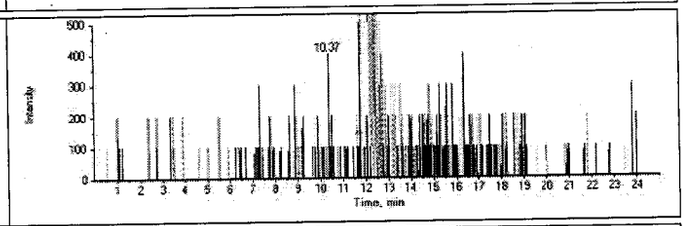


PFHpA 2 (363.0 / 168.9)

RT (Exp. RT): 10.37 (10.40) min

Calculated conc: 0.000027

Area Ratio: 2.538e-4
Sample Type: (Quality Control)

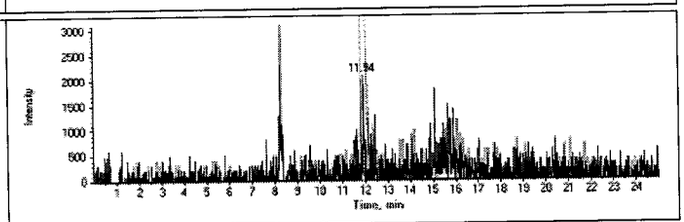


PFOA (413.0 / 368.9)

RT (Exp. RT): 11.94 (11.97) min

Calculated conc: 0.000239

Area Ratio: 7.205e-3
Sample Type: (Quality Control)

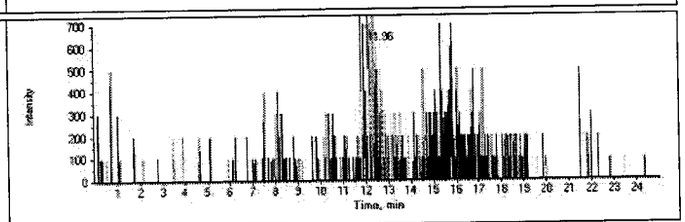


PFOA 2 (413.0 / 168.8)

RT (Exp. RT): 11.96 (11.96) min

Calculated conc: 0.000158

Area Ratio: 1.674e-3
Sample Type: (Quality Control)

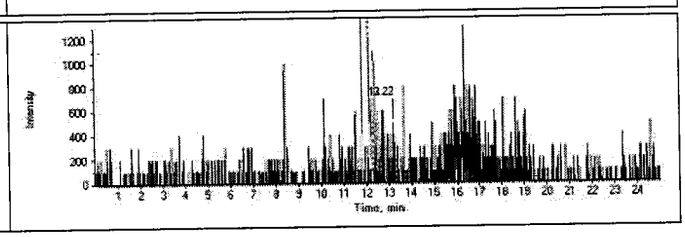


PFNA (463.0 / 419.0)

RT (Exp. RT): 13.22 (13.22) min

Calculated conc: 0.000027

Area Ratio: 6.089e-4
Sample Type: (Quality Control)



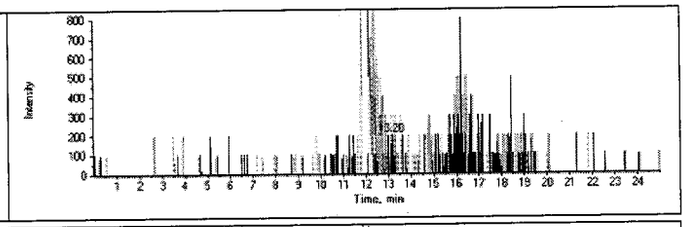
PFNA 2 (463.0 / 218.9)

RT (Exp. RT): 13.20 (13.21) min

Calculated conc: 0.000034

Area Ratio: 2.030e-4

Sample Type: (Quality Control)



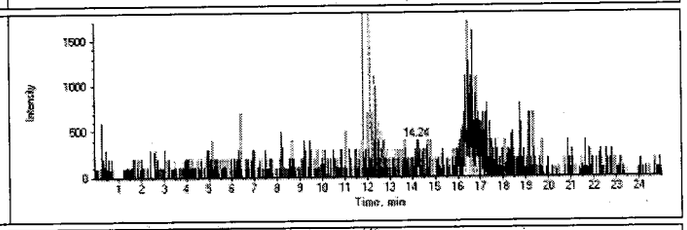
PFDA (513.0 / 469.0)

RT (Exp. RT): 14.24 (14.26) min

Calculated conc: 0.000046

Area Ratio: 1.116e-3

Sample Type: (Quality Control)



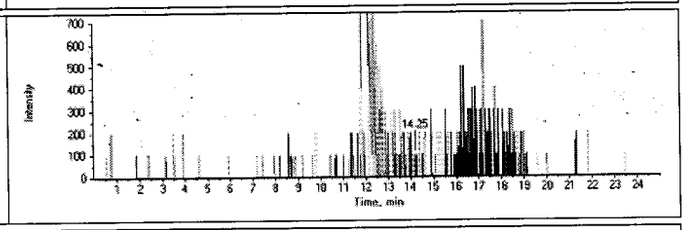
PFDA 2 (513.0 / 218.8)

RT (Exp. RT): 14.25 (14.26) min

Calculated conc: 0.000057

Area Ratio: 2.537e-4

Sample Type: (Quality Control)



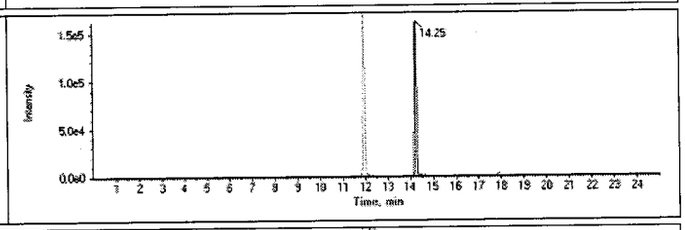
Surr-13c-PFDA (515.0 / 470.0)

RT (Exp. RT): 14.25 (14.26) min

Calculated conc: 95.933760

Area Ratio: 8.348e-1

Sample Type: (Quality Control)



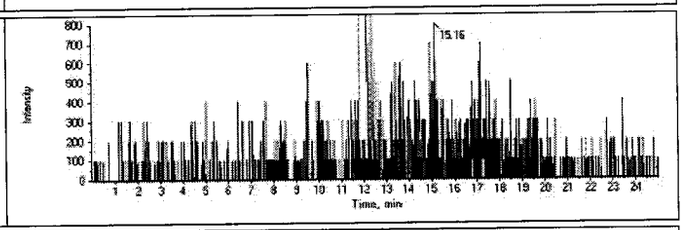
PFUnA (563.0 / 519.0)

RT (Exp. RT): 15.16 (15.14) min

Calculated conc: 0.000047

Area Ratio: 1.066e-3

Sample Type: (Quality Control)



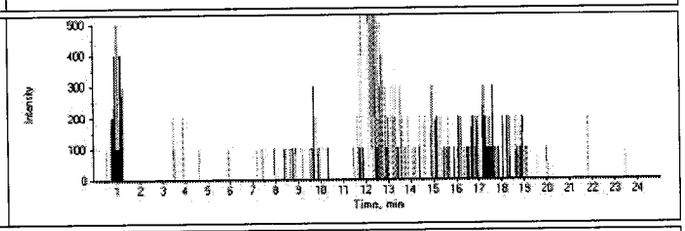
PFUnA 2 (563.0 / 268.8)

RT (Exp. RT): N/A (15.14) min

Calculated conc: N/A

Area Ratio: N/A

Sample Type: (Quality Control)



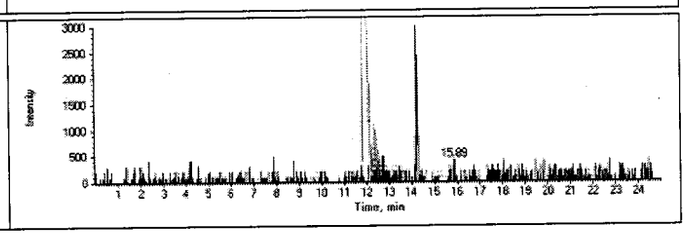
PFDoA (612.8 / 569.0)

RT (Exp. RT): 15.89 (15.90) min

Calculated conc: 0.000035

Area Ratio: 7.103e-4

Sample Type: (Quality Control)



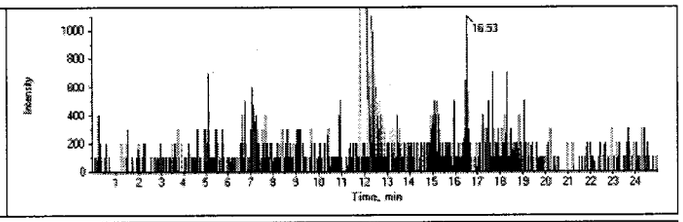
PFTrDA (662.9 / 619.0)

RT (Exp. RT): 16.53 (16.55) min

Calculated conc: 0.000034

Area Ratio: 1.015e-3

Sample Type: (Quality Control)



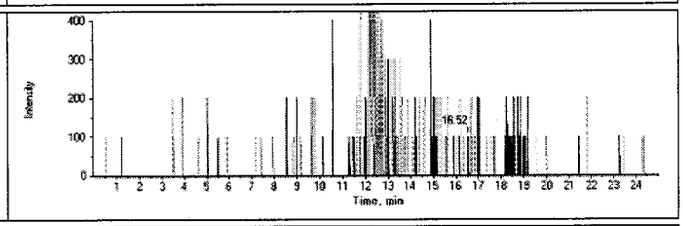
PFTrDA 2 (662.9 / 168.9)

RT (Exp. RT): 16.52 (16.55) min

Calculated conc: 0.000029

Area Ratio: 2.030e-4

Sample Type: (Quality Control)



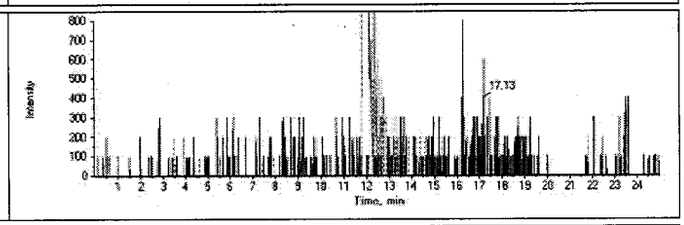
PFTA (713.3 / 669.0)

RT (Exp. RT): 17.13 (17.11) min

Calculated conc: 0.000049

Area Ratio: 4.057e-4

Sample Type: (Quality Control)



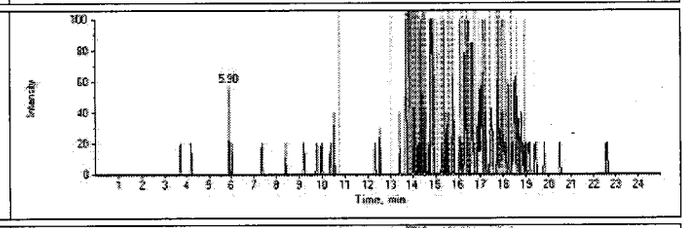
PFBS (299.0 / 79.9)

RT (Exp. RT): 5.90 (5.96) min

Calculated conc: 0.000013

Area Ratio: 1.103e-4

Sample Type: (Quality Control)



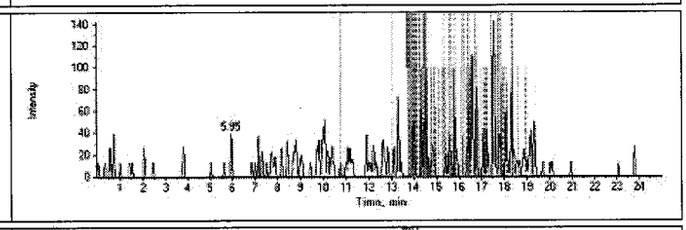
PFBS 2 (299.0 / 99.0)

RT (Exp. RT): 5.95 (5.97) min

Calculated conc: 0.000035

Area Ratio: 1.103e-4

Sample Type: (Quality Control)



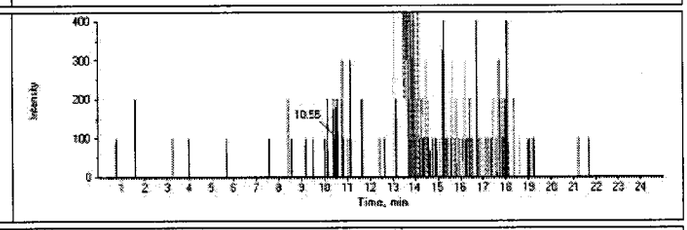
PFHxS (398.9 / 80.0)

RT (Exp. RT): 10.55 (10.55) min

Calculated conc: 0.000007

Area Ratio: 7.351e-5

Sample Type: (Quality Control)



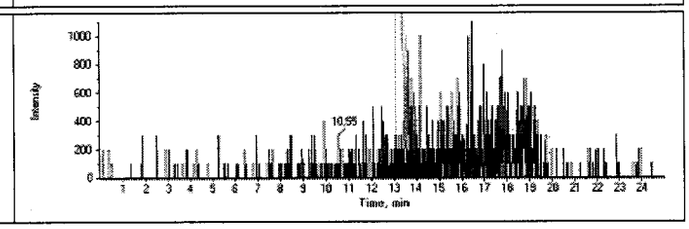
PFHxS 2 (398.9 / 99.0)

RT (Exp. RT): 10.55 (10.54) min

Calculated conc: 0.000052

Area Ratio: 1.839e-4

Sample Type: (Quality Control)



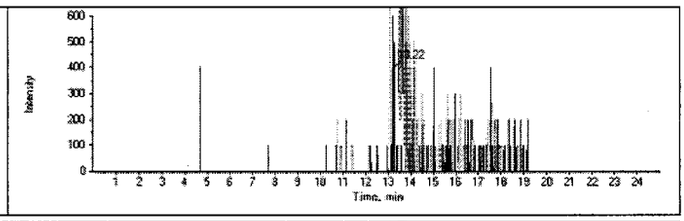
PFOS (499.0 / 79.9)

RT (Exp. RT): 13.22 (13.22) min

Calculated conc: 0.000019

Area Ratio: 1.840e-4

Sample Type: (Quality Control)



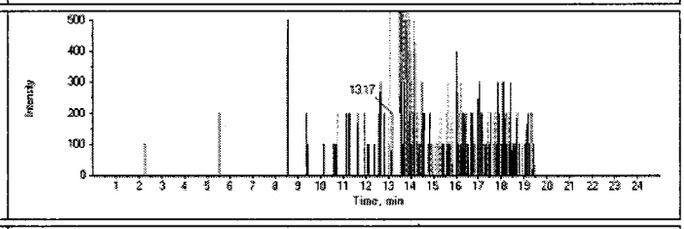
PFOS 2 (499.0 / 99.0)

RT (Exp. RT): 13.17 (13.21) min

Calculated conc: 0.000037

Area Ratio: 1.103e-4

Sample Type: (Quality Control)



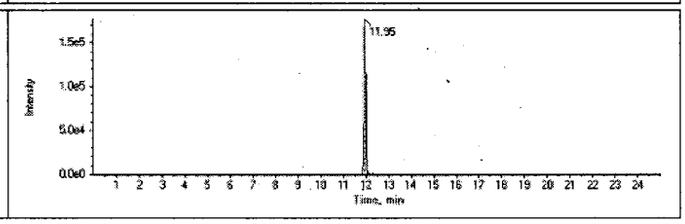
13C-PFOA (417.0 / 372.0)

RT (Exp. RT): 11.95 (11.96) min

Calculated conc: 101.964799

Area Ratio: N/A

Sample Type: (Quality Control)



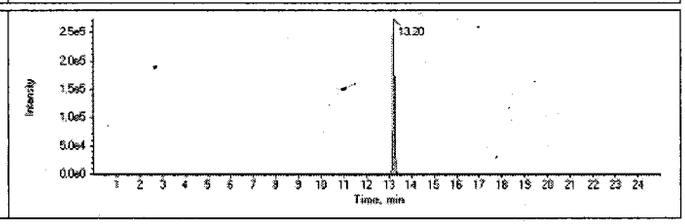
13C-PFOS (503.0 / 80.0)

RT (Exp. RT): 13.20 (13.22) min

Calculated conc: 102.166439

Area Ratio: N/A

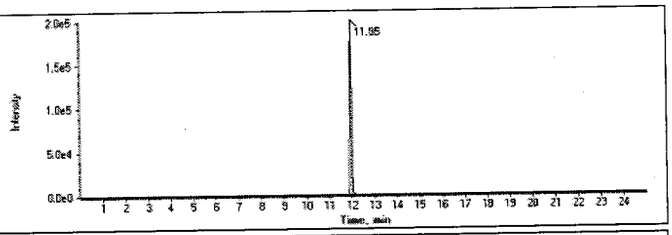
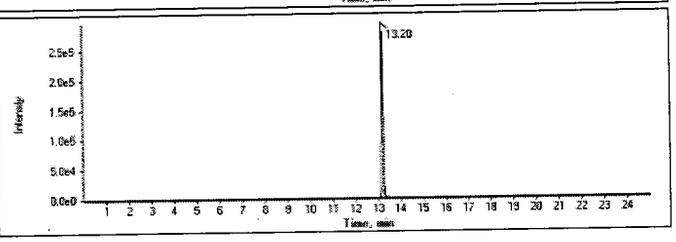
Sample Type: (Quality Control)



Sample Name	MRL_CHK	**Injection Vial**	11
Sample ID		**Injection Volume**	5.00
Sample Type	Quality Control	**Algorithm Used**	MQ4
Acquisition Date	7/16/2014 9:49:23 PM	**Dilution Factor**	1.00
Acquisition Method	@537-ShortRun-110613-Ali.dam	**Weight to Volume**	N/A
Project	EPA537\2014_07_16	**Instrument Name**	API 4000
Data File	@537-Batch#780662-071614.wiff		
Result Table	@537-Batch#780662-071614		
Sample Comment	Prep. By FAM@07/14/2014		

Internal Standard	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
IS-13C-PFOA	959450	11.95	100.00000	-
IS-13C-PFOS	1328746	13.20	100.00000	-

Target Analyte	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
PFHxA	3.391e+04	8.27	0.00250	0.002228
Surr-13c-PFHxA	9.961e+05	8.27	100.00000	95.258800
PFHpA	8.042e+04	10.38	0.00250	0.002587
PFHpA 2	2.153e+04	10.38	0.00250	0.002392
PFOA	7.225e+04	11.95	0.00250	0.002496
PFOA 2	2.770e+04	11.95	0.00250	0.002717
PFNA	5.704e+04	13.20	0.00250	0.002634
PFNA 2	1.339e+04	13.20	0.00250	0.002334
PFDA	5.483e+04	14.24	0.00250	0.002372
PFDA 2	1.123e+04	14.24	0.00250	0.002643
Surr-13c-PFDA	8.040e+05	14.24	100.00000	96.291560
PFUnA	5.281e+04	15.13	0.00250	0.002438
PFUnA 2	9.023e+03	15.12	0.00250	0.002118
PFDoA	4.291e+04	15.88	0.00250	0.002183
PFTrDA	5.870e+04	16.54	0.00250	0.002038
PFTrDA 2	1.383e+04	16.53	0.00250	0.002084
PFTA	1.574e+04	17.11	0.00250	0.001982
PFBS	2.431e+04	5.95	0.00222	0.002079
PFBS 2	9.612e+03	5.95	0.00222	0.002301
PFHxS	3.251e+04	10.53	0.00237	0.002334
PFHxS 2	8.484e+03	10.53	0.00237	0.001820
PFOS	3.011e+04	13.20	0.00240	0.002309
PFOS 2	8.289e+03	13.19	0.00240	0.002116
13C-PFOA	9.595e+05	11.95	100.00000	101.225917
13C-PFOS	1.329e+06	13.20	100.00000	101.777465

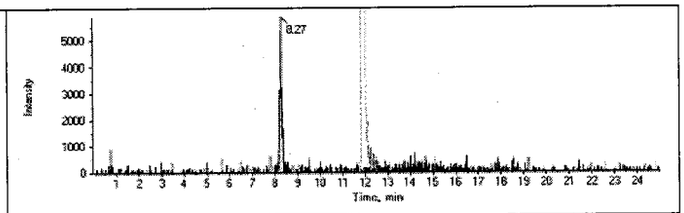
IS-13C-PFOA (Internal Standard) RT (Exp. RT): 11.95(11.96) min Concentration: 100.00000 Sample Type: (Quality Control)	
IS-13C-PFOS (Internal Standard) RT (Exp. RT): 13.20(13.22) min Concentration: 100.00000 Sample Type: (Quality Control)	

PFHxA (313.0 / 268.8)

RT (Exp. RT): 8.27 (8.28) min

Calculated conc: 0.002228

Area Ratio: 3.534e-2
Sample Type: (Quality Control)

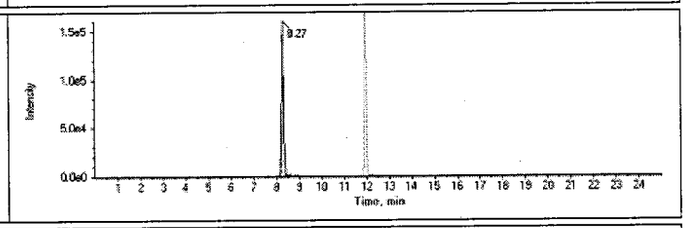


Surr-13c-PFHxA (315.0 / 270.0)

RT (Exp. RT): 8.27 (8.28) min

Calculated conc: 95.258800

Area Ratio: 1.038e0
Sample Type: (Quality Control)

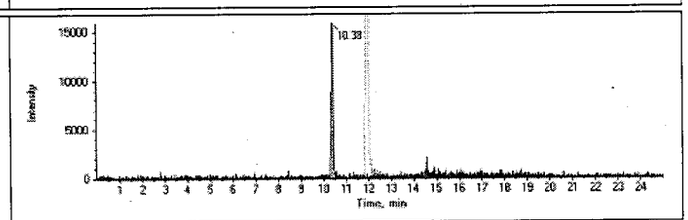


PFHpA (363.0 / 318.9)

RT (Exp. RT): 10.38 (10.40) min

Calculated conc: 0.002587

Area Ratio: 8.382e-2
Sample Type: (Quality Control)

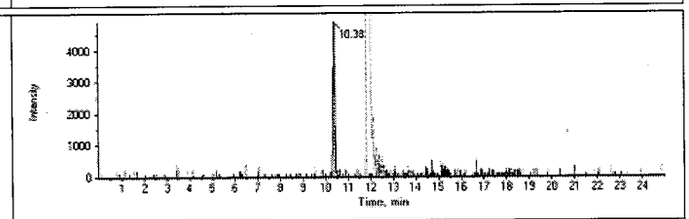


PFHpA 2 (363.0 / 168.9)

RT (Exp. RT): 10.38 (10.40) min

Calculated conc: 0.002392

Area Ratio: 2.244e-2
Sample Type: (Quality Control)

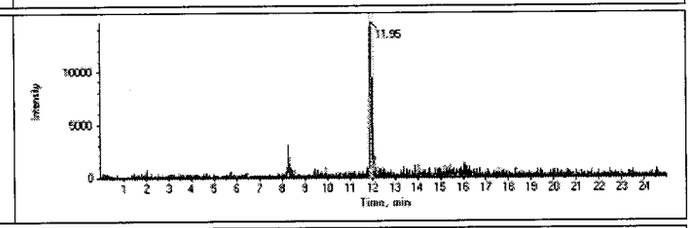


PFOA (413.0 / 368.9)

RT (Exp. RT): 11.95 (11.97) min

Calculated conc: 0.002496

Area Ratio: 7.531e-2
Sample Type: (Quality Control)

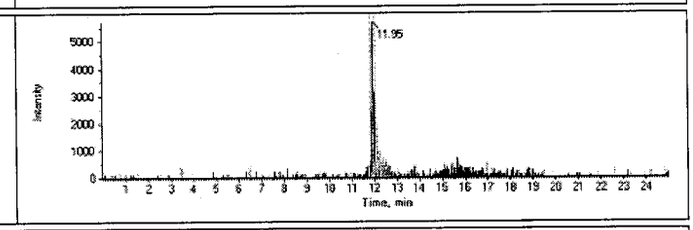


PFOA 2 (413.0 / 168.8)

RT (Exp. RT): 11.95 (11.96) min

Calculated conc: 0.002717

Area Ratio: 2.887e-2
Sample Type: (Quality Control)

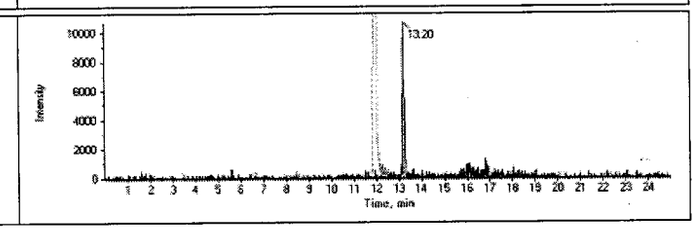


PFNA (463.0 / 419.0)

RT (Exp. RT): 13.20 (13.22) min

Calculated conc: 0.002634

Area Ratio: 5.945e-2
Sample Type: (Quality Control)

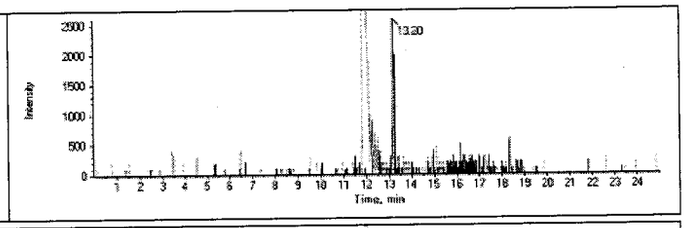


PFNA 2 (463.0 / 218.9)

RT (Exp. RT): 13.20 (13.21) min

Calculated conc: 0.002334

Area Ratio: 1.396e-2
Sample Type: (Quality Control)

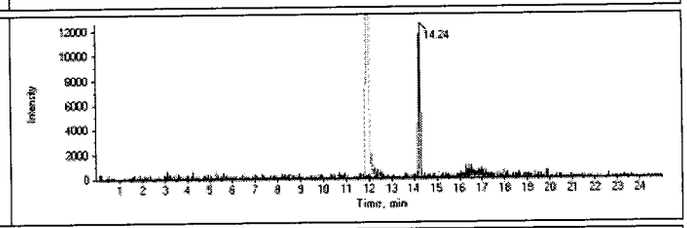


PFDA (513.0 / 469.0)

RT (Exp. RT): 14.24 (14.26) min

Calculated conc: 0.002372

Area Ratio: 5.715e-2
Sample Type: (Quality Control)

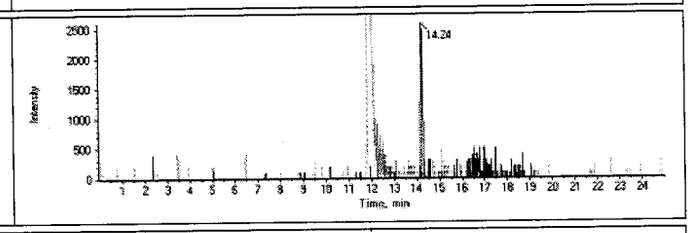


PFDA 2 (513.0 / 218.8)

RT (Exp. RT): 14.24 (14.26) min

Calculated conc: 0.002643

Area Ratio: 1.171e-2
Sample Type: (Quality Control)

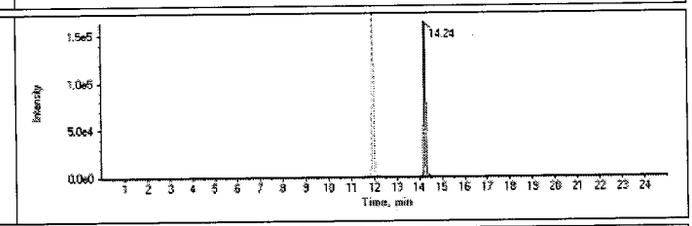


Surr-13c-PFDA (515.0 / 470.0)

RT (Exp. RT): 14.24 (14.26) min

Calculated conc: 96.291560

Area Ratio: 8.379e-1
Sample Type: (Quality Control)

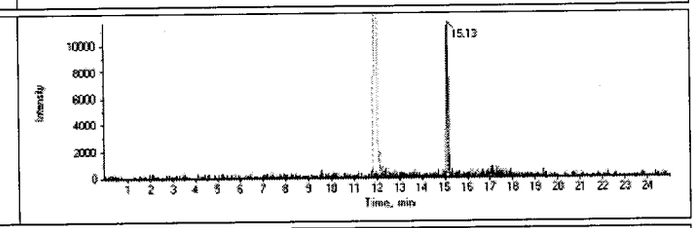


PFUnA (563.0 / 519.0)

RT (Exp. RT): 15.13 (15.14) min

Calculated conc: 0.002438

Area Ratio: 5.504e-2
Sample Type: (Quality Control)

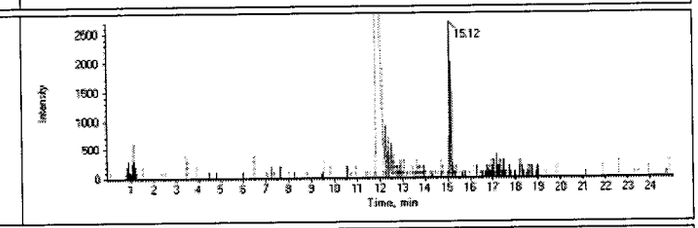


PFUnA 2 (563.0 / 268.8)

RT (Exp. RT): 15.12 (15.14) min

Calculated conc: 0.002118

Area Ratio: 9.404e-3
Sample Type: (Quality Control)

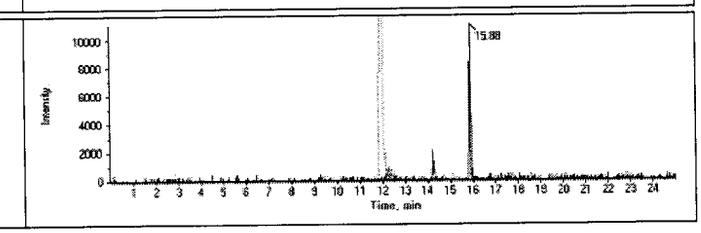


PFDoA (612.8 / 569.0)

RT (Exp. RT): 15.88 (15.90) min

Calculated conc: 0.002183

Area Ratio: 4.473e-2
Sample Type: (Quality Control)

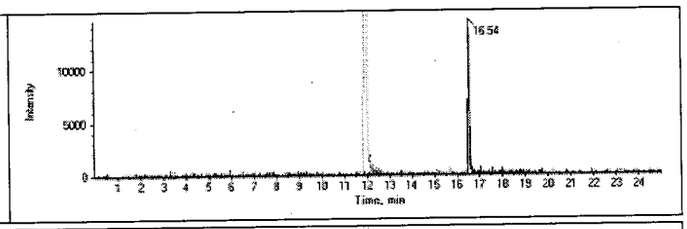


PFTrDA (662.9 / 619.0)

RT (Exp. RT): 16.54 (16.55) min

Calculated conc: 0.002038

Area Ratio: 6.118e-2
Sample Type: (Quality Control)

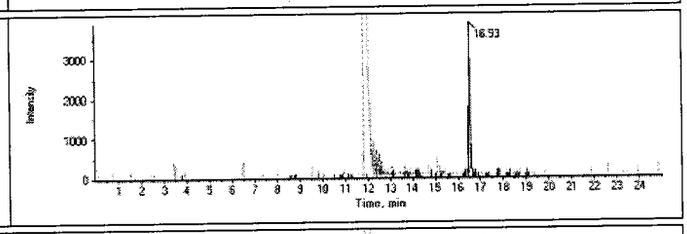


PFTrDA 2 (662.9 / 168.9)

RT (Exp. RT): 16.53 (16.55) min

Calculated conc: 0.002084

Area Ratio: 1.441e-2
Sample Type: (Quality Control)

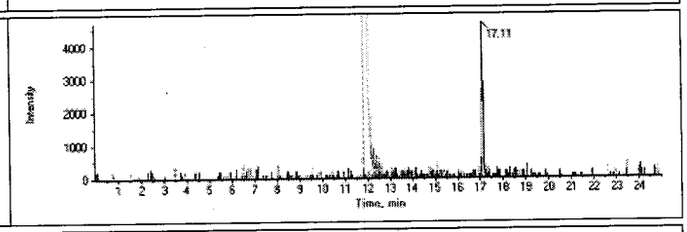


PFTA (713.3 / 669.0)

RT (Exp. RT): 17.11 (17.11) min

Calculated conc: 0.001982

Area Ratio: 1.640e-2
Sample Type: (Quality Control)

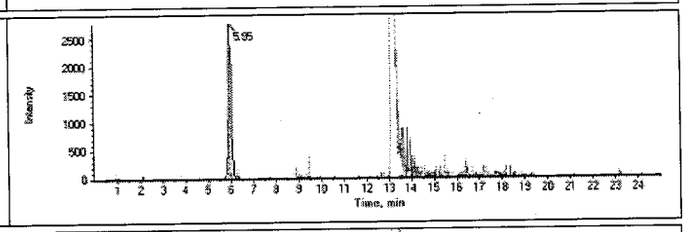


PFBS (299.0 / 79.9)

RT (Exp. RT): 5.95 (5.96) min

Calculated conc: 0.002079

Area Ratio: 1.829e-2
Sample Type: (Quality Control)

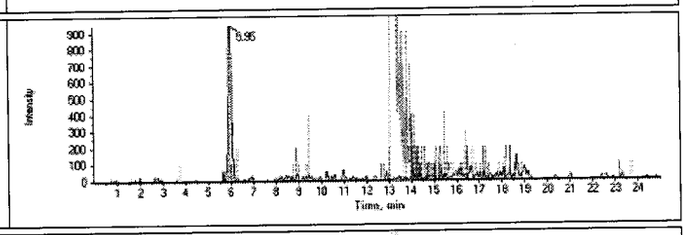


PFBS 2 (299.0 / 99.0)

RT (Exp. RT): 5.95 (5.97) min

Calculated conc: 0.002301

Area Ratio: 7.234e-3
Sample Type: (Quality Control)

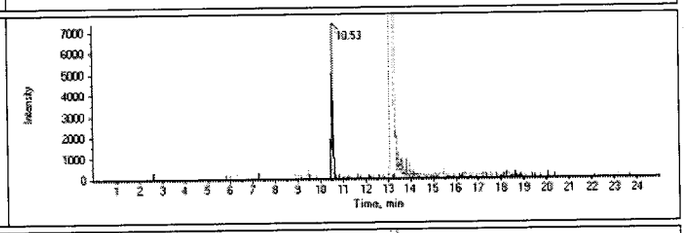


PFHxS (398.9 / 80.0)

RT (Exp. RT): 10.53 (10.55) min

Calculated conc: 0.002334

Area Ratio: 2.447e-2
Sample Type: (Quality Control)

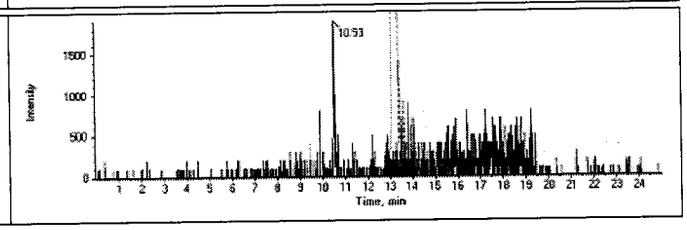


PFHxS 2 (398.9 / 99.0)

RT (Exp. RT): 10.53 (10.54) min

Calculated conc: 0.001820

Area Ratio: 6.385e-3
Sample Type: (Quality Control)



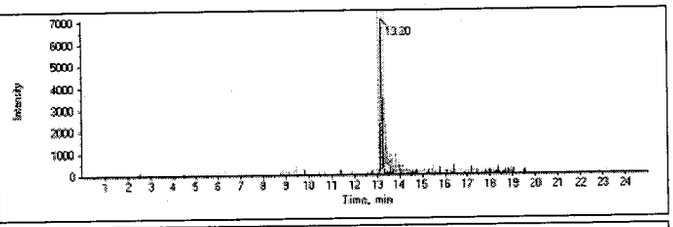
PFOS (499.0 / 79.9)

RT (Exp. RT): 13.20 (13.22) min

Calculated conc: 0.002309

Area Ratio: 2.266e-2

Sample Type: (Quality Control)



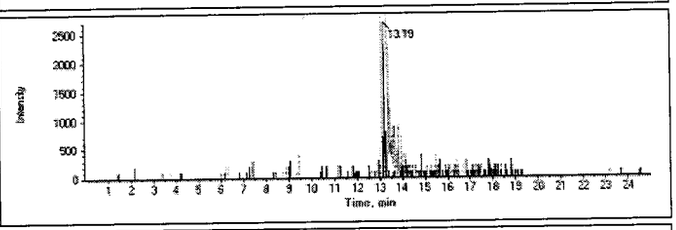
PFOS 2 (499.0 / 99.0)

RT (Exp. RT): 13.19 (13.21) min

Calculated conc: 0.002116

Area Ratio: 6.238e-3

Sample Type: (Quality Control)



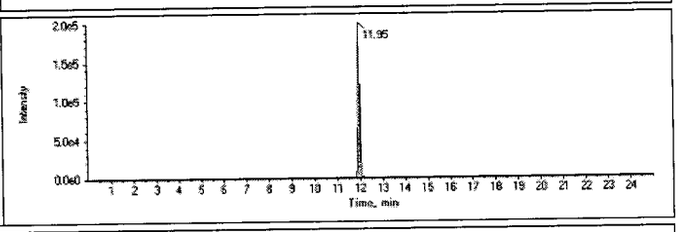
13C-PFOA (417.0 / 372.0)

RT (Exp. RT): 11.95 (11.96) min

Calculated conc: 101.225917

Area Ratio: N/A

Sample Type: (Quality Control)



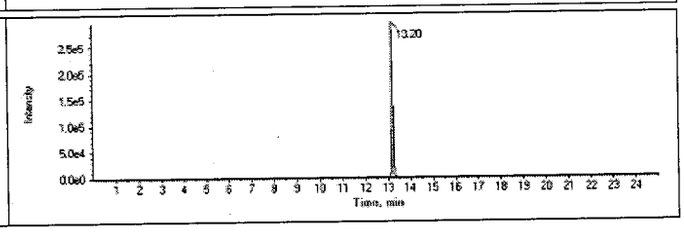
13C-PFOS (503.0 / 80.0)

RT (Exp. RT): 13.20 (13.22) min

Calculated conc: 101.777465

Area Ratio: N/A

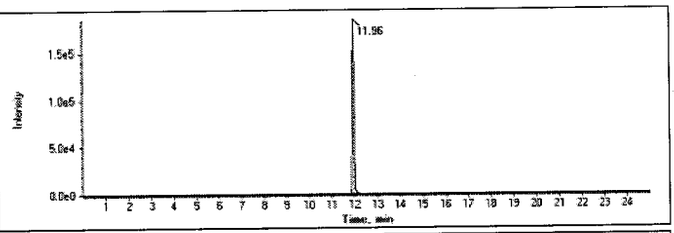
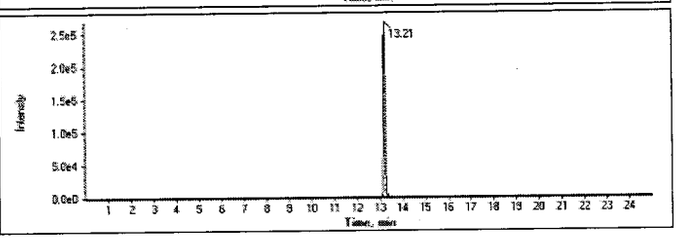
Sample Type: (Quality Control)



Sample Name	LCS1	**Injection Vial**	12
Sample ID		**Injection Volume**	5.00
Sample Type	Quality Control	**Algorithm Used**	MQ4
Acquisition Date	7/16/2014 10:14:58 PM	**Dilution Factor**	1.00
Acquisition Method	@537-ShortRun-110613-Ali.dam	**Weight to Volume**	N/A
Project	EPA537\2014_07_16	**Instrument Name**	API 4000
Data File	@537-Batch#780662-071614.wiff		
Result Table	@537-Batch#780662-071614		
Sample Comment	Prep. By FAM@07/14/2014		

Internal Standard	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
IS-13C-PFOA	947314	11.96	100.00000	-
IS-13C-PFOS	1322199	13.21	100.00000	-

Target Analyte	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
PFHxA	3.502e+05	8.27	0.02500	0.023299
Surr-13c-PFHxA	1.063e+06	8.27	100.00000	102.947816
PFHpA	7.790e+05	10.39	0.02500	0.025383
PFHpA 2	2.321e+05	10.39	0.02500	0.026115
PFOA	7.065e+05	11.96	0.02500	0.024718
PFOA 2	2.531e+05	11.96	0.02500	0.025148
PFNA	5.306e+05	13.21	0.02500	0.024821
PFNA 2	1.544e+05	13.21	0.02500	0.027257
PFDA	5.852e+05	14.25	0.02500	0.025646
PFDA 2	1.091e+05	14.25	0.02500	0.026000
Surr-13c-PFDA	8.272e+05	14.25	100.00000	100.346032
PFUnA	5.481e+05	15.14	0.02500	0.025623
PFUnA 2	1.060e+05	15.13	0.02500	0.025207
PFDoA	4.452e+05	15.89	0.02500	0.022937
PFTrDA	6.714e+05	16.54	0.02500	0.023616
PFTrDA 2	1.564e+05	16.54	0.02500	0.023868
PFTA	1.795e+05	17.11	0.02500	0.022892
PFBS	2.352e+05	5.95	0.02220	0.020218
PFBS 2	8.572e+04	5.96	0.02220	0.020621
PFHxS	3.327e+05	10.54	0.02370	0.023998
PFHxS 2	1.036e+05	10.54	0.02370	0.022342
PFOS	2.926e+05	13.21	0.02400	0.022545
PFOS 2	9.370e+04	13.21	0.02400	0.024036
13C-PFOA	9.473e+05	11.96	100.00000	99.945492
13C-PFOS	1.322e+06	13.21	100.00000	101.276033

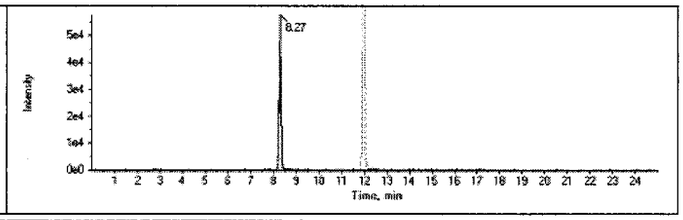
IS-13C-PFOA (Internal Standard) RT (Exp. RT): 11.96(11.96) min Concentration: 100.00000 Sample Type: (Quality Control)	
IS-13C-PFOS (Internal Standard) RT (Exp. RT): 13.21(13.22) min Concentration: 100.00000 Sample Type: (Quality Control)	

PFHxA (313.0 / 268.8)

RT (Exp. RT): 8.27 (8.28) min

Calculated conc: 0.023299

Area Ratio: 3.697e-1
Sample Type: (Quality Control)

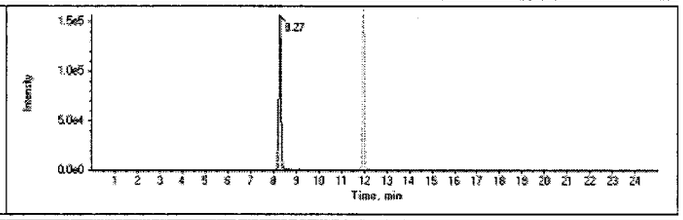


Surr-13c-PFHxA (315.0 / 270.0)

RT (Exp. RT): 8.27 (8.28) min

Calculated conc: 102.947816

Area Ratio: 1.122e0
Sample Type: (Quality Control)

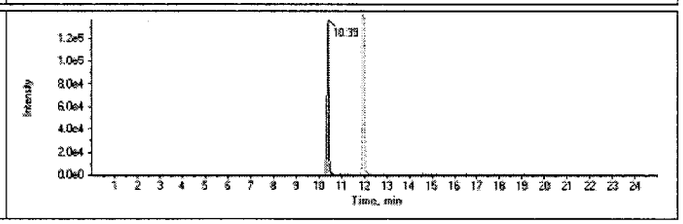


PFHpA (363.0 / 318.9)

RT (Exp. RT): 10.39 (10.40) min

Calculated conc: 0.025383

Area Ratio: 8.223e-1
Sample Type: (Quality Control)

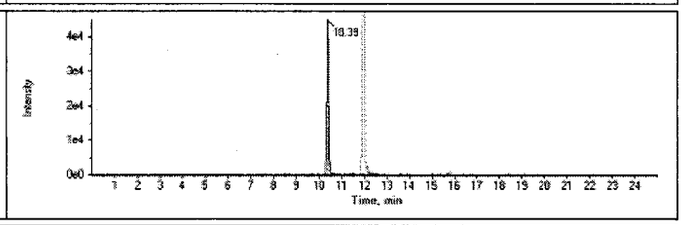


PFHpA 2 (363.0 / 168.9)

RT (Exp. RT): 10.39 (10.40) min

Calculated conc: 0.026115

Area Ratio: 2.450e-1
Sample Type: (Quality Control)

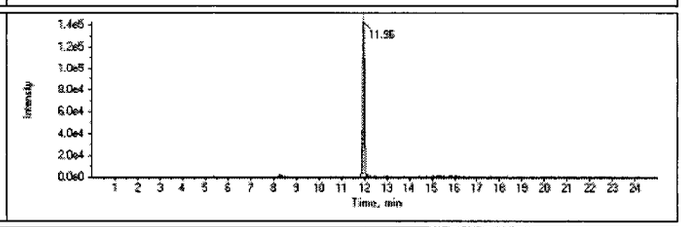


PFOA (413.0 / 368.9)

RT (Exp. RT): 11.96 (11.97) min

Calculated conc: 0.024718

Area Ratio: 7.458e-1
Sample Type: (Quality Control)

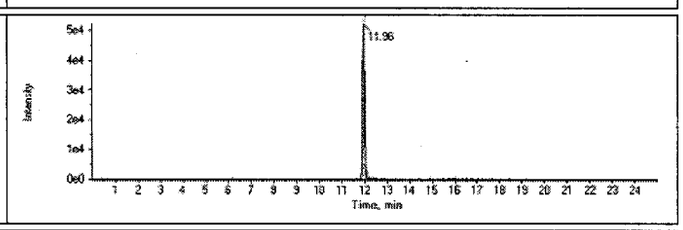


PFOA 2 (413.0 / 168.8)

RT (Exp. RT): 11.96 (11.96) min

Calculated conc: 0.025148

Area Ratio: 2.672e-1
Sample Type: (Quality Control)

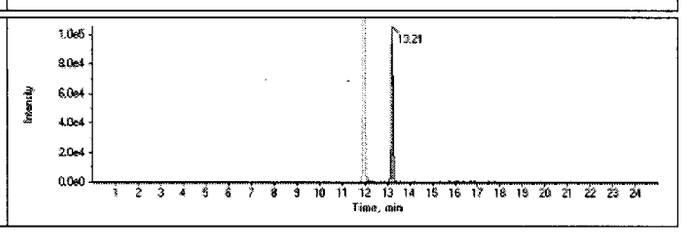


PFNA (463.0 / 419.0)

RT (Exp. RT): 13.21 (13.22) min

Calculated conc: 0.024821

Area Ratio: 5.601e-1
Sample Type: (Quality Control)



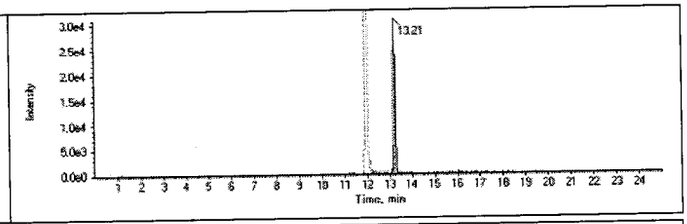
PFNA 2 (463.0 / 218.9)

RT (Exp. RT): 13.21 (13.21) min

Calculated conc: 0.027257

Area Ratio: 1.629e-1

Sample Type: (Quality Control)



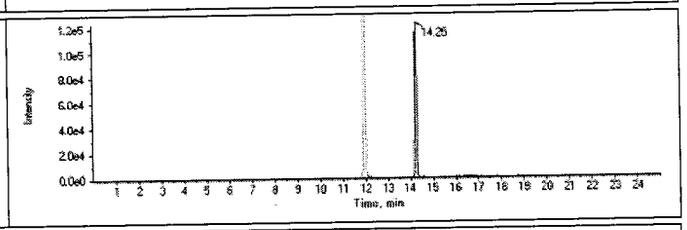
PFDA (513.0 / 469.0)

RT (Exp. RT): 14.25 (14.26) min

Calculated conc: 0.025646

Area Ratio: 6.178e-1

Sample Type: (Quality Control)



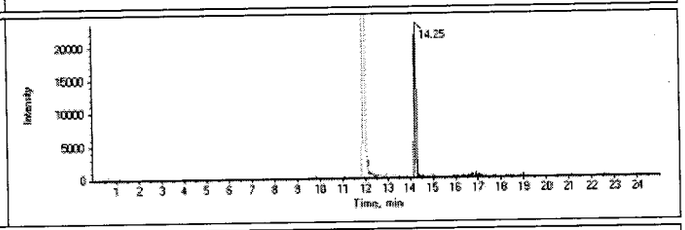
PFDA 2 (513.0 / 218.8)

RT (Exp. RT): 14.25 (14.26) min

Calculated conc: 0.026000

Area Ratio: 1.152e-1

Sample Type: (Quality Control)



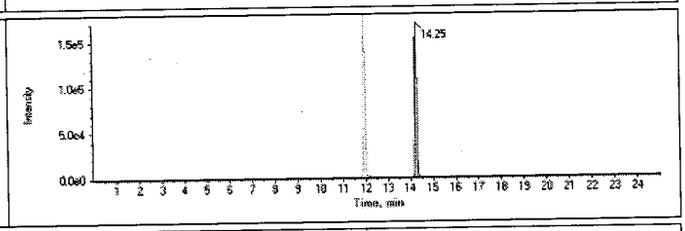
Surr-13c-PFDA (515.0 / 470.0)

RT (Exp. RT): 14.25 (14.26) min

Calculated conc: 100.346032

Area Ratio: 8.732e-1

Sample Type: (Quality Control)



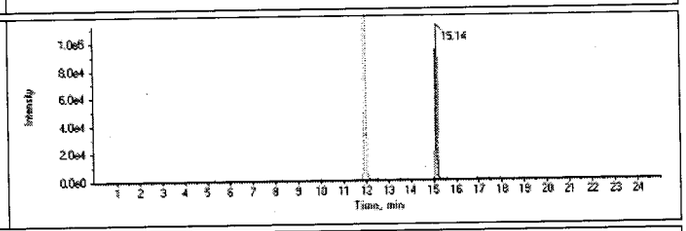
PFUnA (563.0 / 519.0)

RT (Exp. RT): 15.14 (15.14) min

Calculated conc: 0.025623

Area Ratio: 5.786e-1

Sample Type: (Quality Control)



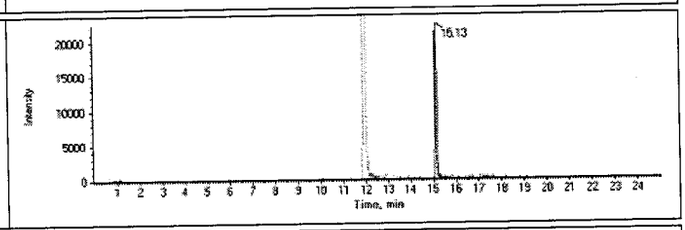
PFUnA 2 (563.0 / 268.8)

RT (Exp. RT): 15.13 (15.14) min

Calculated conc: 0.025207

Area Ratio: 1.119e-1

Sample Type: (Quality Control)



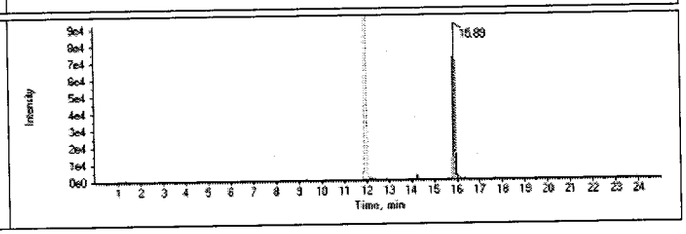
PFDoA (612.8 / 569.0)

RT (Exp. RT): 15.89 (15.90) min

Calculated conc: 0.022937

Area Ratio: 4.700e-1

Sample Type: (Quality Control)

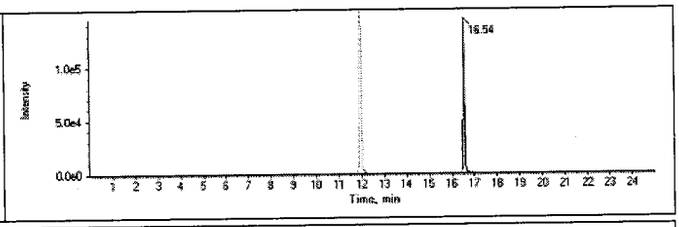


PFTrDA (662.9 / 619.0)

RT (Exp. RT): 16.54 (16.55) min

Calculated conc: 0.023616

Area Ratio: 7.088e-1
Sample Type: (Quality Control)

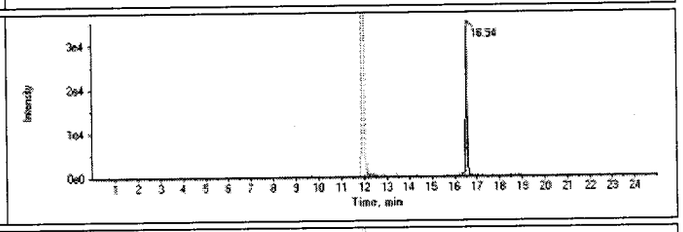


PFTrDA 2 (662.9 / 168.9)

RT (Exp. RT): 16.54 (16.55) min

Calculated conc: 0.023868

Area Ratio: 1.651e-1
Sample Type: (Quality Control)

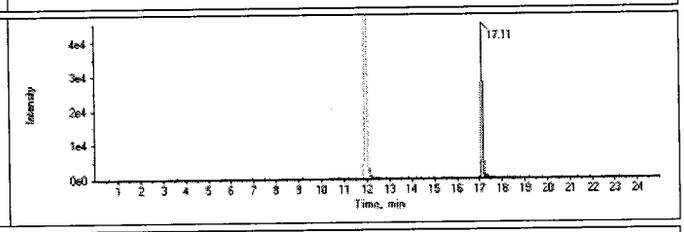


PFTA (713.3 / 669.0)

RT (Exp. RT): 17.11 (17.11) min

Calculated conc: 0.022892

Area Ratio: 1.895e-1
Sample Type: (Quality Control)

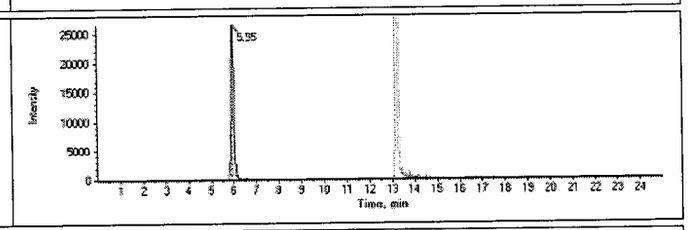


PFBS (299.0 / 79.9)

RT (Exp. RT): 5.95 (5.96) min

Calculated conc: 0.020218

Area Ratio: 1.779e-1
Sample Type: (Quality Control)

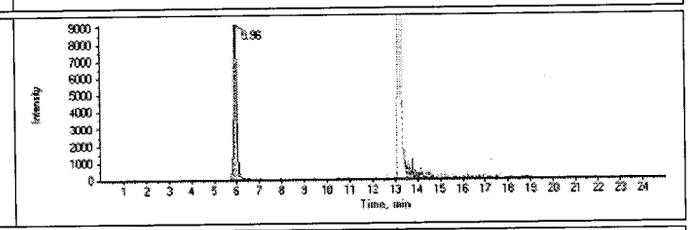


PFBS 2 (299.0 / 99.0)

RT (Exp. RT): 5.96 (5.97) min

Calculated conc: 0.020621

Area Ratio: 6.483e-2
Sample Type: (Quality Control)

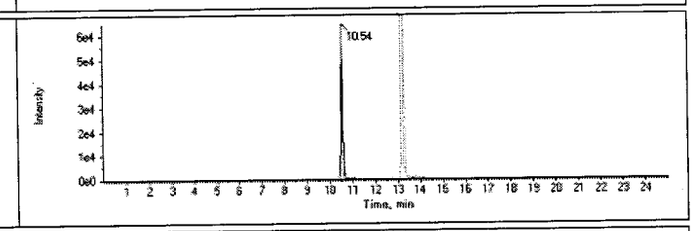


PFHxS (398.9 / 80.0)

RT (Exp. RT): 10.54 (10.55) min

Calculated conc: 0.023998

Area Ratio: 2.516e-1
Sample Type: (Quality Control)

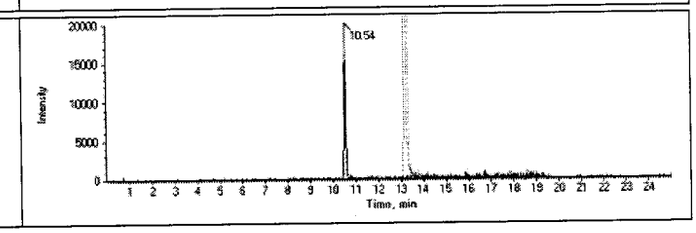


PFHxS 2 (398.9 / 99.0)

RT (Exp. RT): 10.54 (10.54) min

Calculated conc: 0.022342

Area Ratio: 7.837e-2
Sample Type: (Quality Control)



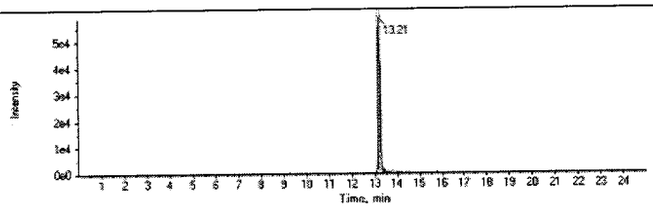
PFOS (499.0 / 79.9)

RT (Exp. RT): 13.21 (13.22) min

Calculated conc: 0.022545

Area Ratio: 2.213e-1

Sample Type: (Quality Control)



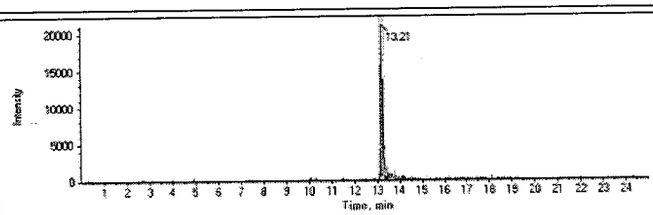
PFOS 2 (499.0 / 99.0)

RT (Exp. RT): 13.21 (13.21) min

Calculated conc: 0.024036

Area Ratio: 7.087e-2

Sample Type: (Quality Control)



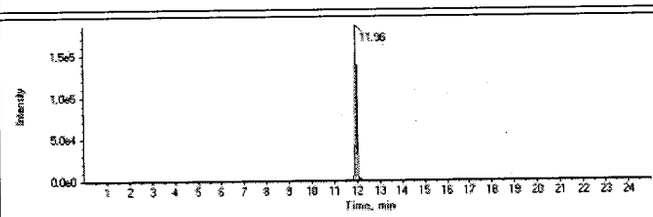
13C-PFOA (417.0 / 372.0)

RT (Exp. RT): 11.96 (11.96) min

Calculated conc: 99.945492

Area Ratio: N/A

Sample Type: (Quality Control)



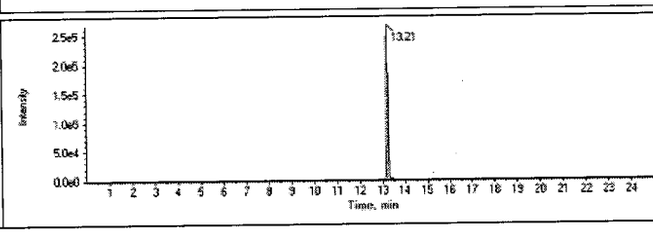
13C-PFOS (503.0 / 80.0)

RT (Exp. RT): 13.21 (13.22) min

Calculated conc: 101.276033

Area Ratio: N/A

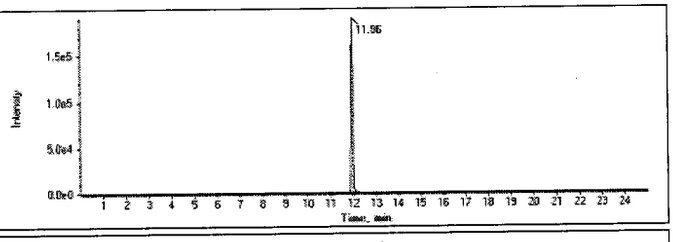
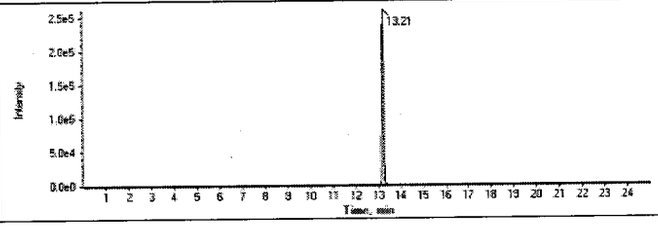
Sample Type: (Quality Control)



Sample Name	LCS2	**Injection Vial**	13
Sample ID		**Injection Volume**	5.00
Sample Type	Quality Control	**Algorithm Used**	MQ4
Acquisition Date	7/16/2014 10:40:33 PM	**Dilution Factor**	1.00
Acquisition Method	@537-ShortRun-110613-Ali.dam	**Weight to Volume**	N/A
Project	EPA537\2014_07_16	**Instrument Name**	API 4000
Data File	@537-Batch#780662-071614.wiff		
Result Table	@537-Batch#780662-071614		
Sample Comment	Prep. By FAM@07/14/2014		

Internal Standard	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
IS-13C-PFOA	951249	11.96	100.00000	-
IS-13C-PFOS	1337882	13.21	100.00000	-

Target Analyte	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
PFHxA	3.529e+05	8.28	0.02500	0.023381
Surr-13c-PFHxA	1.037e+06	8.28	100.00000	99.985711
PFHpA	7.934e+05	10.39	0.02500	0.025745
PFHpA 2	2.196e+05	10.39	0.02500	0.024607
PFOA	6.976e+05	11.96	0.02500	0.024307
PFOA 2	2.591e+05	11.96	0.02500	0.025634
PFNA	5.510e+05	13.21	0.02500	0.025666
PFNA 2	1.382e+05	13.21	0.02500	0.024312
PFDA	5.695e+05	14.25	0.02500	0.024853
PFDA 2	1.020e+05	14.25	0.02500	0.024207
Surr-13c-PFDA	8.209e+05	14.24	100.00000	99.169549
PFUnA	5.198e+05	15.13	0.02500	0.024199
PFUnA 2	9.746e+04	15.13	0.02500	0.023073
PFDoA	3.804e+05	15.88	0.02500	0.019518
PFTrDA	5.807e+05	16.54	0.02500	0.020339
PFTrDA 2	1.356e+05	16.53	0.02500	0.020608
PFTA	1.632e+05	17.10	0.02500	0.020732
PFBS	2.444e+05	5.96	0.02220	0.020758
PFBS 2	9.135e+04	5.96	0.02220	0.021717
PFHxS	3.103e+05	10.54	0.02370	0.022121
PFHxS 2	1.070e+05	10.54	0.02370	0.022793
PFOS	3.000e+05	13.21	0.02400	0.022849
PFOS 2	9.367e+04	13.21	0.02400	0.023746
13C-PFOA	9.512e+05	11.96	100.00000	100.360646
13C-PFOS	1.338e+06	13.21	100.00000	102.477245

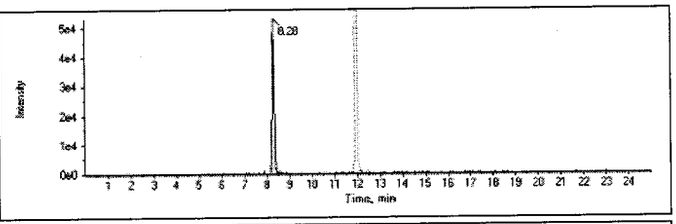
IS-13C-PFOA (Internal Standard) RT (Exp. RT): 11.96(11.96) min Concentration: 100.00000 Sample Type: (Quality Control)	
IS-13C-PFOS (Internal Standard) RT (Exp. RT): 13.21(13.22) min Concentration: 100.00000 Sample Type: (Quality Control)	

PFHxA (313.0 / 268.8)

RT (Exp. RT): 8.28 (8.28) min

Calculated conc: 0.023381

Area Ratio: 3.710e-1
Sample Type: (Quality Control)

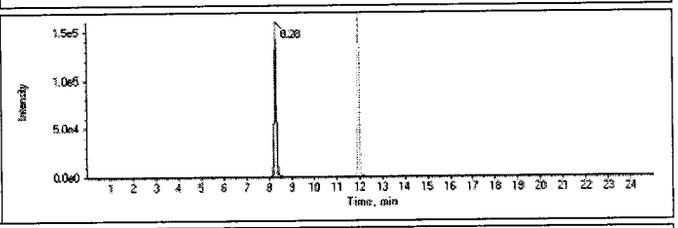


Surr-13c-PFHxA (315.0 / 270.0)

RT (Exp. RT): 8.28 (8.28) min

Calculated conc: 99.985711

Area Ratio: 1.090e0
Sample Type: (Quality Control)

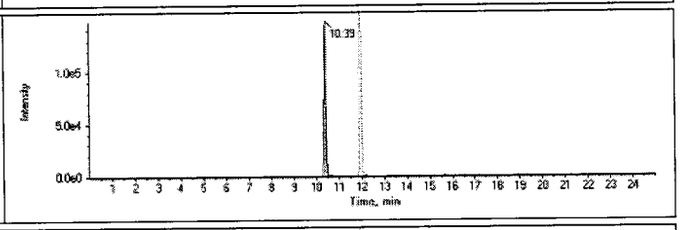


PFHpA (363.0 / 318.9)

RT (Exp. RT): 10.39 (10.40) min

Calculated conc: 0.025745

Area Ratio: 8.340e-1
Sample Type: (Quality Control)

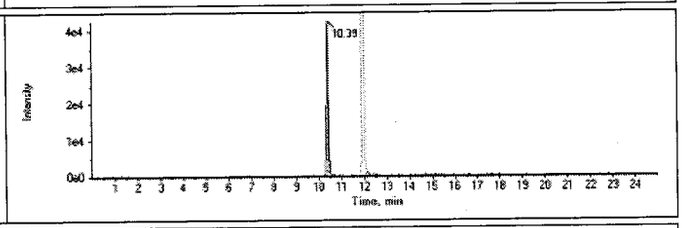


PFHpA 2 (363.0 / 168.9)

RT (Exp. RT): 10.39 (10.40) min

Calculated conc: 0.024607

Area Ratio: 2.309e-1
Sample Type: (Quality Control)

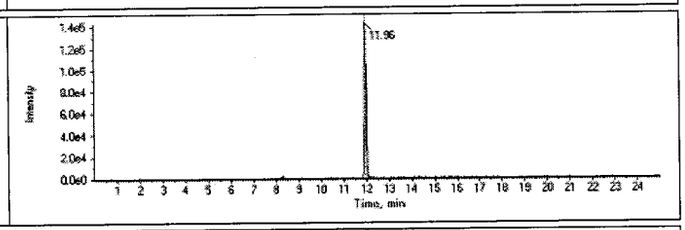


PFOA (413.0 / 368.9)

RT (Exp. RT): 11.96 (11.97) min

Calculated conc: 0.024307

Area Ratio: 7.333e-1
Sample Type: (Quality Control)

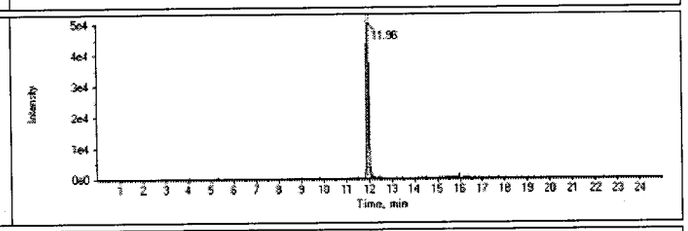


PFOA 2 (413.0 / 168.8)

RT (Exp. RT): 11.96 (11.96) min

Calculated conc: 0.025634

Area Ratio: 2.724e-1
Sample Type: (Quality Control)

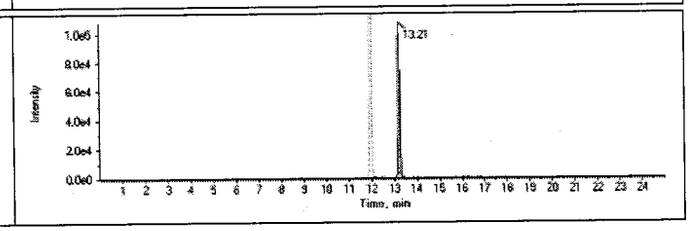


PFNA (463.0 / 419.0)

RT (Exp. RT): 13.21 (13.22) min

Calculated conc: 0.025666

Area Ratio: 5.792e-1
Sample Type: (Quality Control)

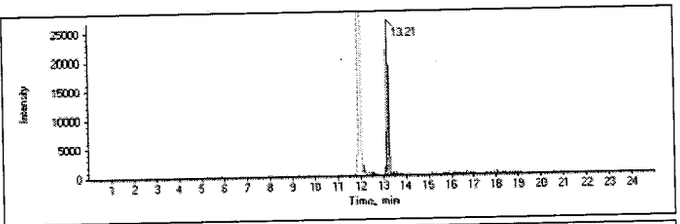


PFNA 2 (463.0 / 218.9)

RT (Exp. RT): 13.21 (13.21) min

Calculated conc: 0.024312

Area Ratio: 1.453e-1
Sample Type: (Quality Control)

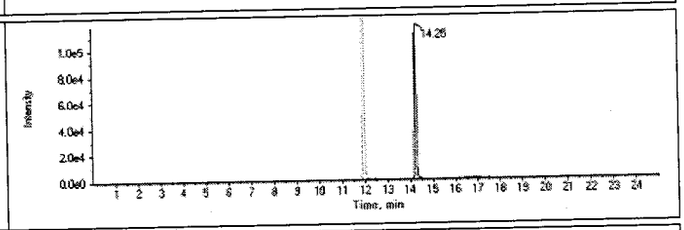


PFDA (513.0 / 469.0)

RT (Exp. RT): 14.25 (14.26) min

Calculated conc: 0.024853

Area Ratio: 5.987e-1
Sample Type: (Quality Control)

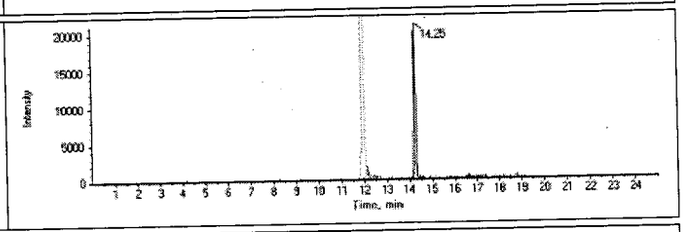


PFDA 2 (513.0 / 218.8)

RT (Exp. RT): 14.25 (14.26) min

Calculated conc: 0.024207

Area Ratio: 1.072e-1
Sample Type: (Quality Control)

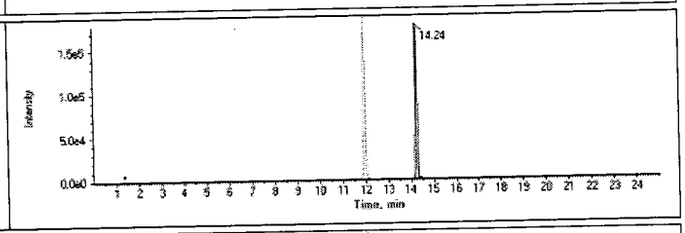


Surr-13c-PFDA (515.0 / 470.0)

RT (Exp. RT): 14.24 (14.26) min

Calculated conc: 99.169549

Area Ratio: 8.630e-1
Sample Type: (Quality Control)

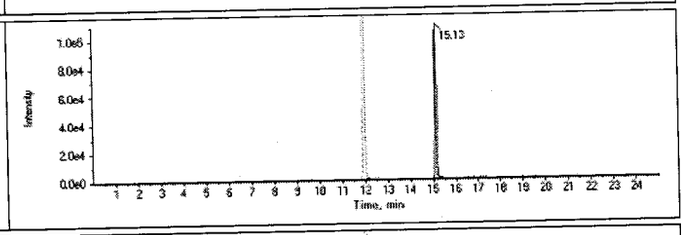


PFUnA (563.0 / 519.0)

RT (Exp. RT): 15.13 (15.14) min

Calculated conc: 0.024199

Area Ratio: 5.464e-1
Sample Type: (Quality Control)

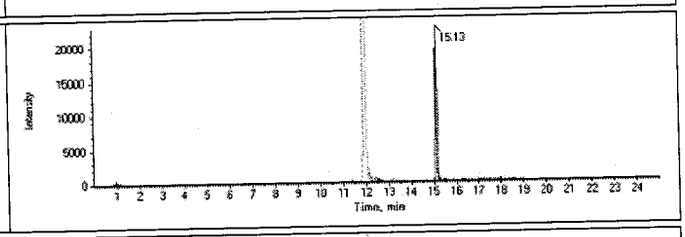


PFUnA 2 (563.0 / 268.8)

RT (Exp. RT): 15.13 (15.14) min

Calculated conc: 0.023073

Area Ratio: 1.025e-1
Sample Type: (Quality Control)

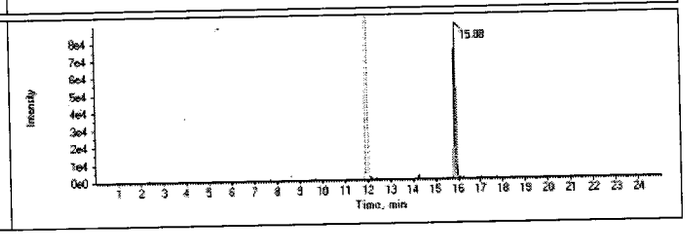


PFDoA (612.8 / 569.0)

RT (Exp. RT): 15.88 (15.90) min

Calculated conc: 0.019518

Area Ratio: 3.999e-1
Sample Type: (Quality Control)

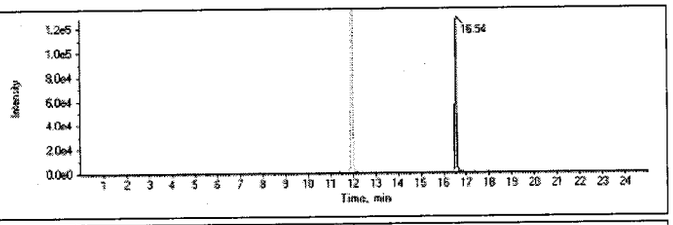


PFTrDA (662.9 / 619.0)

RT (Exp. RT): 16.54 (16.55) min

Calculated conc: 0.020339

Area Ratio: 6.104e-1
Sample Type: (Quality Control)

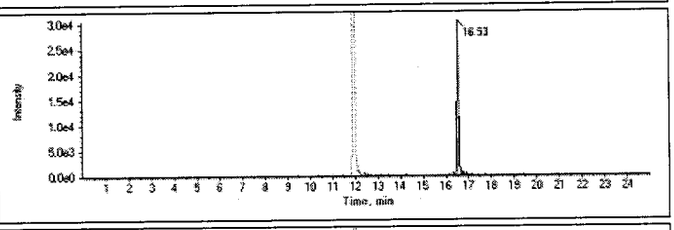


PFTrDA 2 (662.9 / 168.9)

RT (Exp. RT): 16.53 (16.55) min

Calculated conc: 0.020608

Area Ratio: 1.425e-1
Sample Type: (Quality Control)

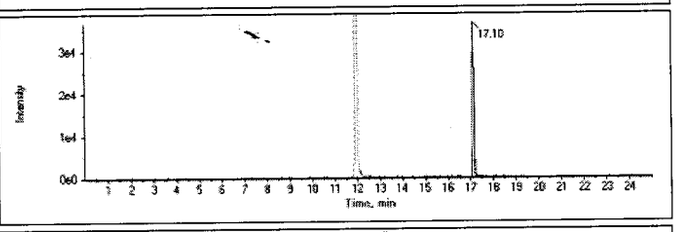


PFTA (713.3 / 669.0)

RT (Exp. RT): 17.10 (17.11) min

Calculated conc: 0.020732

Area Ratio: 1.716e-1
Sample Type: (Quality Control)

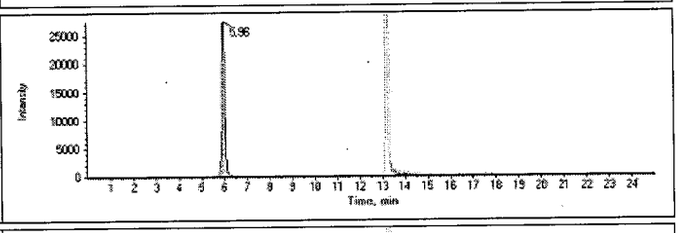


PFBS (299.0 / 79.9)

RT (Exp. RT): 5.96 (5.96) min

Calculated conc: 0.020758

Area Ratio: 1.826e-1
Sample Type: (Quality Control)

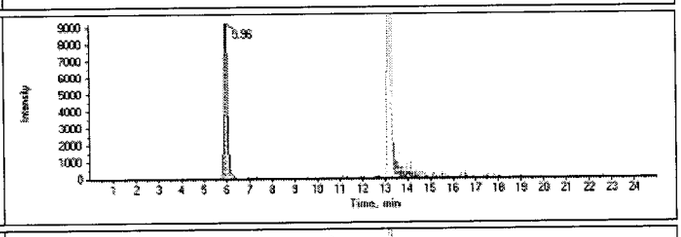


PFBS 2 (299.0 / 99.0)

RT (Exp. RT): 5.96 (5.97) min

Calculated conc: 0.021717

Area Ratio: 6.828e-2
Sample Type: (Quality Control)

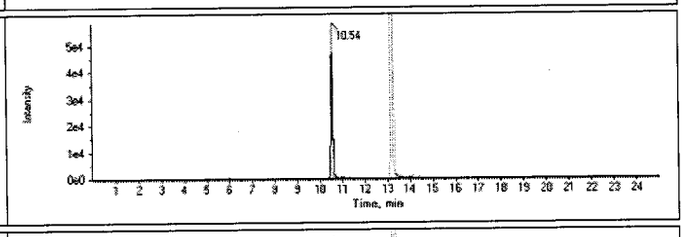


PFHxS (398.9 / 80.0)

RT (Exp. RT): 10.54 (10.55) min

Calculated conc: 0.022121

Area Ratio: 2.319e-1
Sample Type: (Quality Control)

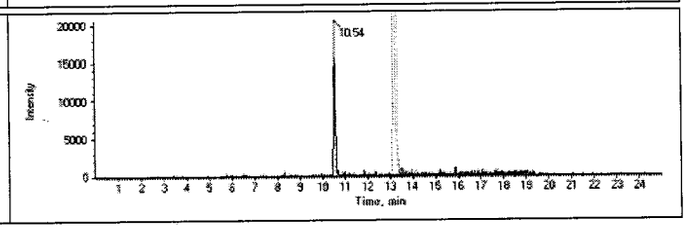


PFHxS 2 (398.9 / 99.0)

RT (Exp. RT): 10.54 (10.54) min

Calculated conc: 0.022793

Area Ratio: 7.995e-2
Sample Type: (Quality Control)

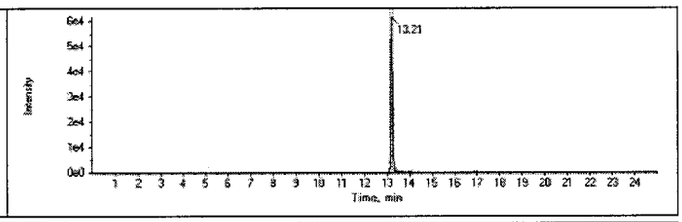


PFOS (499.0 / 79.9)

RT (Exp. RT): 13.21 (13.22) min

Calculated conc: 0.022849

Area Ratio: 2.243e-1
Sample Type: (Quality Control)

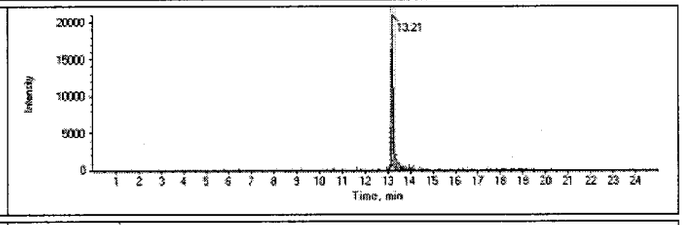


PFOS 2 (499.0 / 99.0)

RT (Exp. RT): 13.21 (13.21) min

Calculated conc: 0.023746

Area Ratio: 7.002e-2
Sample Type: (Quality Control)

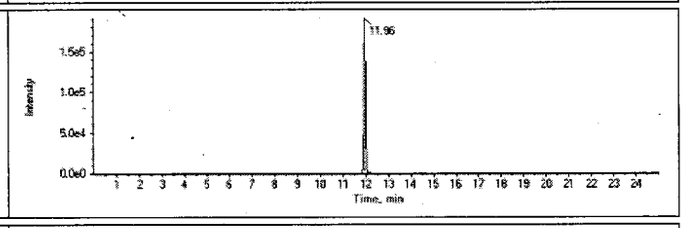


13C-PFOA (417.0 / 372.0)

RT (Exp. RT): 11.96 (11.96) min

Calculated conc: 100.360646

Area Ratio: N/A
Sample Type: (Quality Control)

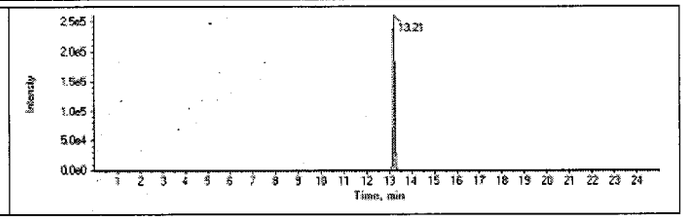


13C-PFOS (503.0 / 80.0)

RT (Exp. RT): 13.21 (13.22) min

Calculated conc: 102.477245

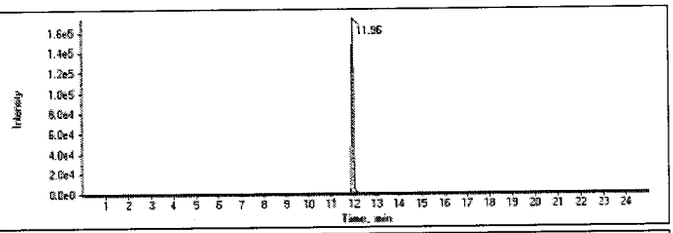
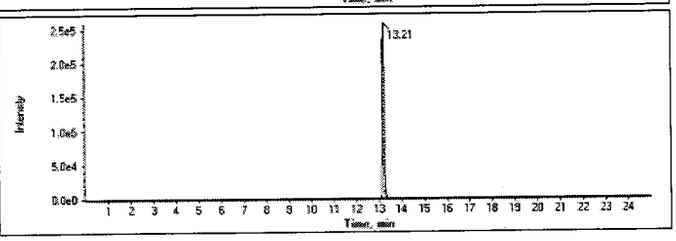
Area Ratio: N/A
Sample Type: (Quality Control)



Sample Name	201407140016MS	**Injection Vial**	14
Sample ID		**Injection Volume**	5.00
Sample Type	Quality Control	**Algorithm Used**	MQ4
Acquisition Date	7/16/2014 11:06:08 PM	**Dilution Factor**	1.00
Acquisition Method	@537-ShortRun-110613-Ali.dam	**Weight to Volume**	N/A
Project	EPA537\2014_07_16	**Instrument Name**	API 4000
Data File	@537-Batch#780662-071614.wiff		
Result Table	@537-Batch#780662-071614		
Sample Comment	Prep. By FAM@07/14/2014		

Internal Standard	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
IS-13C-PFOA	927034	11.96	100.00000	-
IS-13C-PFOS	1309916	13.21	100.00000	-

Target Analyte	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
PFHxA	6.404e+04	8.28	0.00250	0.004354
Surr-13c-PFHxA	1.028e+06	8.27	100.00000	101.737033
PFHpA	9.204e+04	10.39	0.00250	0.003065
PFHpA 2	2.761e+04	10.39	0.00250	0.003174
PFOA	1.104e+05	11.96	0.00250	0.003946
PFOA 2	3.982e+04	11.95	0.00250	0.004042
PFNA	6.156e+04	13.21	0.00250	0.002942
PFNA 2	1.761e+04	13.21	0.00250	0.003177
PFDA	6.145e+04	14.25	0.00250	0.002752
PFDA 2	1.010e+04	14.25	0.00250	0.002460
Surr-13c-PFDA	8.063e+05	14.25	100.00000	99.951018
PFUnA	5.814e+04	15.13	0.00250	0.002777
PFUnA 2	1.148e+04	15.12	0.00250	0.002788
PFDoA	4.600e+04	15.89	0.00250	0.002422
PFTrDA	6.959e+04	16.53	0.00250	0.002501
PFTrDA 2	1.437e+04	16.53	0.00250	0.002241
PFTA	1.853e+04	17.11	0.00250	0.002416
PFBS	2.771e+04	5.96	0.00222	0.002404
PFBS 2	1.025e+04	5.95	0.00222	0.002488
PFHxS	4.879e+04	10.54	0.00237	0.003553
PFHxS 2	1.476e+04	10.54	0.00237	0.003213
PFOS	4.689e+04	13.20	0.00240	0.003647
PFOS 2	1.501e+04	13.20	0.00240	0.003886
13C-PFOA	9.270e+05	11.96	100.00000	97.805953
13C-PFOS	1.310e+06	13.21	100.00000	100.335204

IS-13C-PFOA (Internal Standard) RT (Exp. RT): 11.96(11.96) min Concentration: 100.00000 Sample Type: (Quality Control)	
IS-13C-PFOS (Internal Standard) RT (Exp. RT): 13.21(13.22) min Concentration: 100.00000 Sample Type: (Quality Control)	

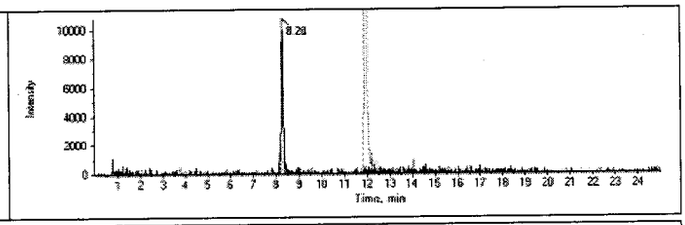
PFHxA (313.0 / 268.8)

RT (Exp. RT): 8.28 (8.28) min

Calculated conc: 0.004354

Area Ratio: 6.908e-2

Sample Type: (Quality Control)



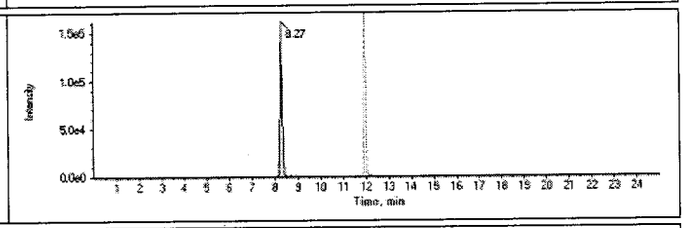
Surr-13c-PFHxA (315.0 / 270.0)

RT (Exp. RT): 8.27 (8.28) min

Calculated conc: 101.737033

Area Ratio: 1.109e0

Sample Type: (Quality Control)



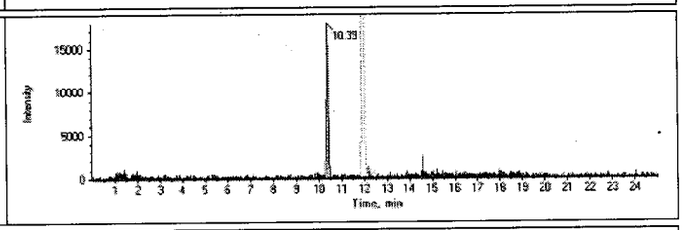
PFHpA (363.0 / 318.9)

RT (Exp. RT): 10.39 (10.40) min

Calculated conc: 0.003065

Area Ratio: 9.928e-2

Sample Type: (Quality Control)



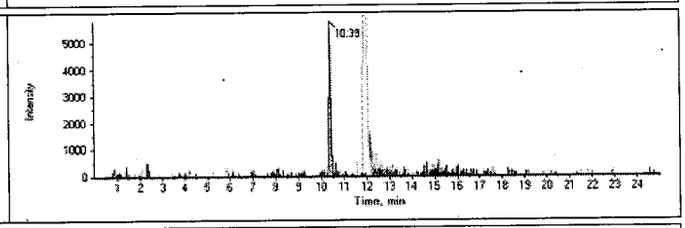
PFHpA 2 (363.0 / 168.9)

RT (Exp. RT): 10.39 (10.40) min

Calculated conc: 0.003174

Area Ratio: 2.978e-2

Sample Type: (Quality Control)



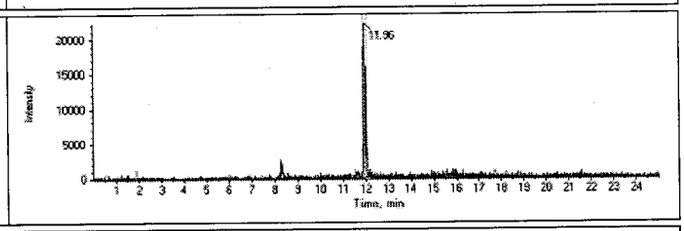
PFOA (413.0 / 368.9)

RT (Exp. RT): 11.96 (11.97) min

Calculated conc: 0.003946

Area Ratio: 1.190e-1

Sample Type: (Quality Control)



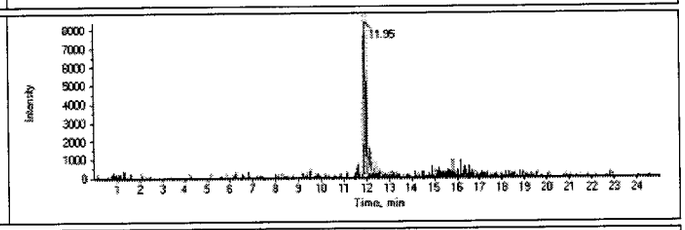
PFOA 2 (413.0 / 168.8)

RT (Exp. RT): 11.95 (11.96) min

Calculated conc: 0.004042

Area Ratio: 4.295e-2

Sample Type: (Quality Control)



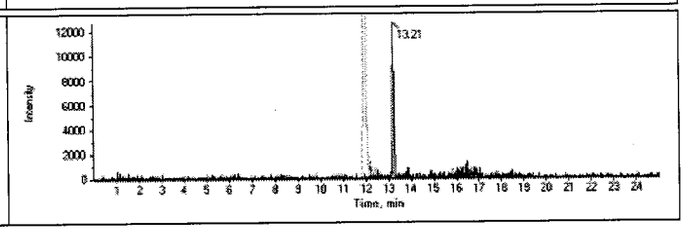
PFNA (463.0 / 419.0)

RT (Exp. RT): 13.21 (13.22) min

Calculated conc: 0.002942

Area Ratio: 6.640e-2

Sample Type: (Quality Control)

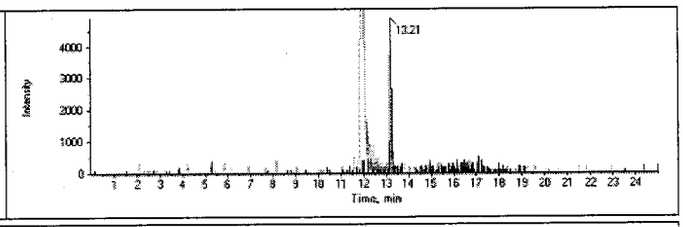


PFNA 2 (463.0 / 218.9)

RT (Exp. RT): 13.21 (13.21) min

Calculated conc: 0.003177

Area Ratio: 1.899e-2
Sample Type: (Quality Control)

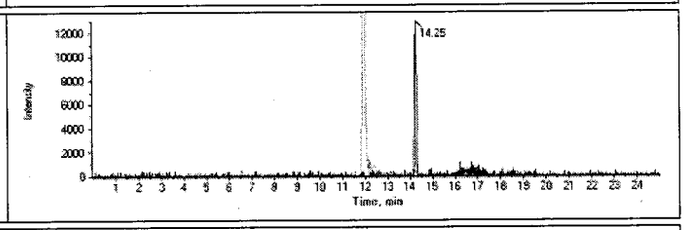


PFDA (513.0 / 469.0)

RT (Exp. RT): 14.25 (14.26) min

Calculated conc: 0.002752

Area Ratio: 6.629e-2
Sample Type: (Quality Control)

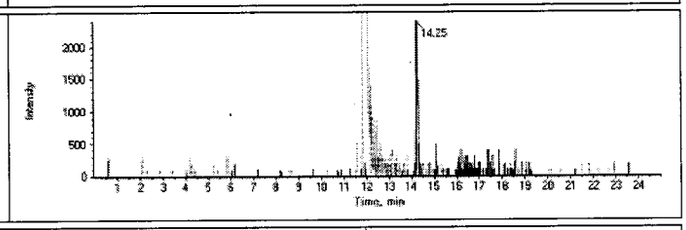


PFDA 2 (513.0 / 218.8)

RT (Exp. RT): 14.25 (14.26) min

Calculated conc: 0.002460

Area Ratio: 1.090e-2
Sample Type: (Quality Control)

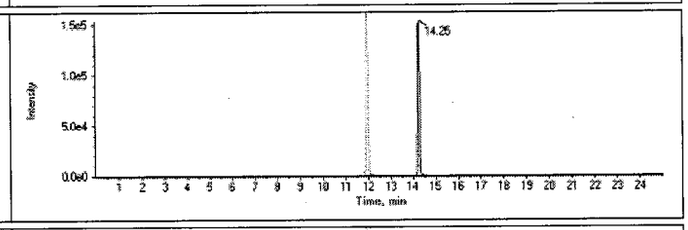


Surr-13c-PFDA (515.0 / 470.0)

RT (Exp. RT): 14.25 (14.26) min

Calculated conc: 99.951018

Area Ratio: 8.698e-1
Sample Type: (Quality Control)

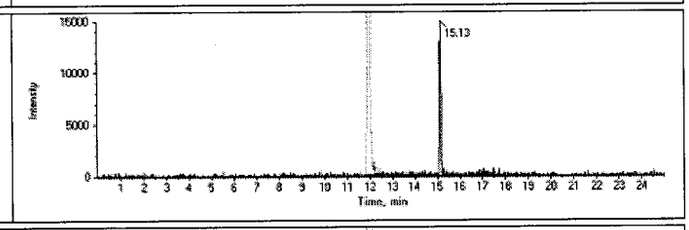


PFUnA (563.0 / 519.0)

RT (Exp. RT): 15.13 (15.14) min

Calculated conc: 0.002777

Area Ratio: 6.271e-2
Sample Type: (Quality Control)

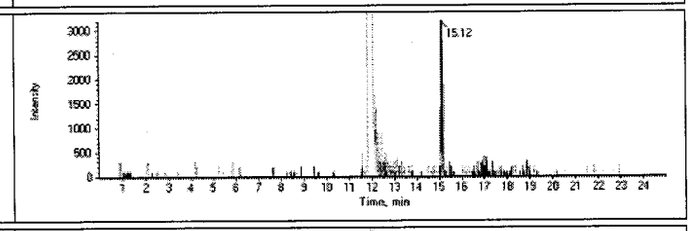


PFUnA 2 (563.0 / 268.8)

RT (Exp. RT): 15.12 (15.14) min

Calculated conc: 0.002788

Area Ratio: 1.238e-2
Sample Type: (Quality Control)

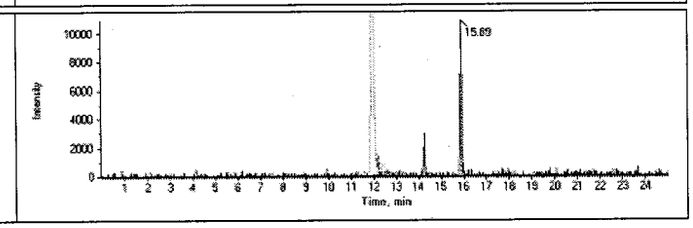


PFDoA (612.8 / 569.0)

RT (Exp. RT): 15.89 (15.90) min

Calculated conc: 0.002422

Area Ratio: 4.962e-2
Sample Type: (Quality Control)

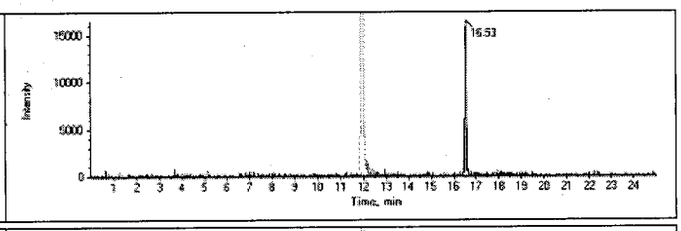


PFTrDA (662.9 / 619.0)

RT (Exp. RT): 16.53 (16.55) min

Calculated conc: 0.002501

Area Ratio: 7.507e-2
Sample Type: (Quality Control)

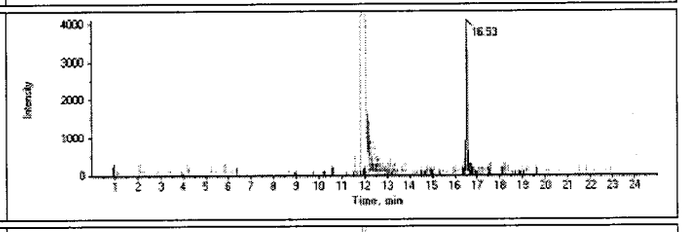


PFTrDA 2 (662.9 / 168.9)

RT (Exp. RT): 16.53 (16.55) min

Calculated conc: 0.002241

Area Ratio: 1.550e-2
Sample Type: (Quality Control)

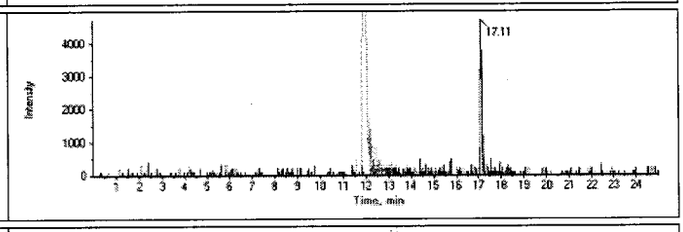


PFTA (713.3 / 669.0)

RT (Exp. RT): 17.11 (17.11) min

Calculated conc: 0.002416

Area Ratio: 1.999e-2
Sample Type: (Quality Control)

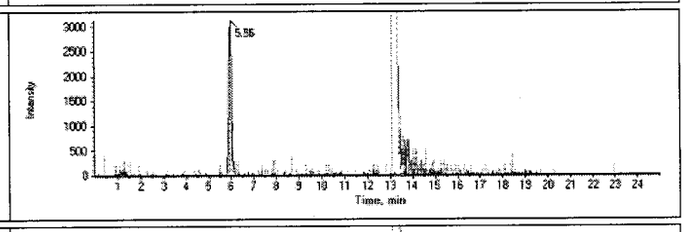


PFBS (299.0 / 79.9)

RT (Exp. RT): 5.96 (5.96) min

Calculated conc: 0.002404

Area Ratio: 2.115e-2
Sample Type: (Quality Control)

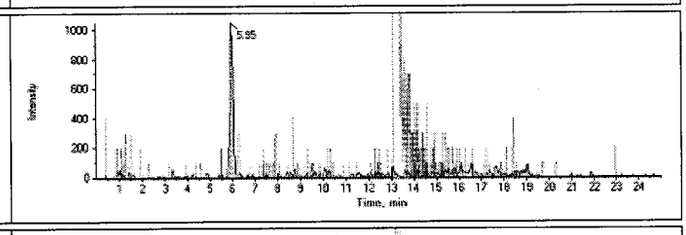


PFBS 2 (299.0 / 99.0)

RT (Exp. RT): 5.95 (5.97) min

Calculated conc: 0.002488

Area Ratio: 7.823e-3
Sample Type: (Quality Control)

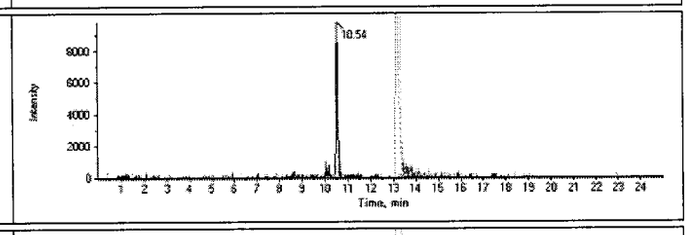


PFHxS (398.9 / 80.0)

RT (Exp. RT): 10.54 (10.55) min

Calculated conc: 0.003553

Area Ratio: 3.725e-2
Sample Type: (Quality Control)

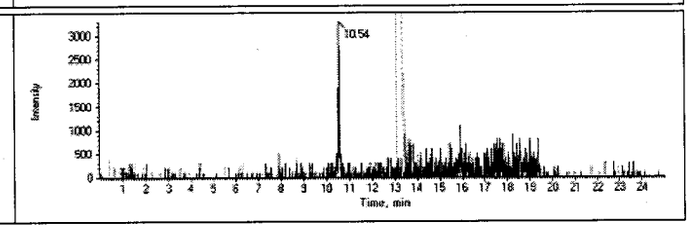


PFHxS 2 (398.9 / 99.0)

RT (Exp. RT): 10.54 (10.54) min

Calculated conc: 0.003213

Area Ratio: 1.127e-2
Sample Type: (Quality Control)



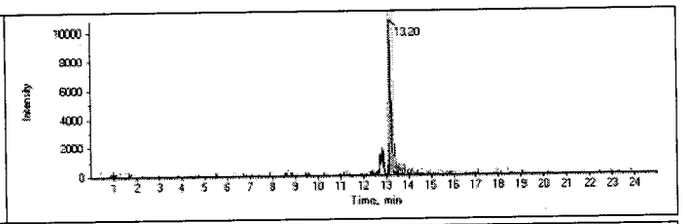
PFOS (499.0 / 79.9)

RT (Exp. RT): 13.20 (13.22) min

Calculated conc: 0.003647

Area Ratio: 3.580e-2

Sample Type: (Quality Control)



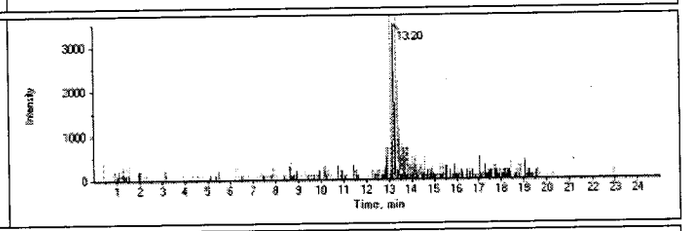
PFOS 2 (499.0 / 99.0)

RT (Exp. RT): 13.20 (13.21) min

Calculated conc: 0.003886

Area Ratio: 1.146e-2

Sample Type: (Quality Control)



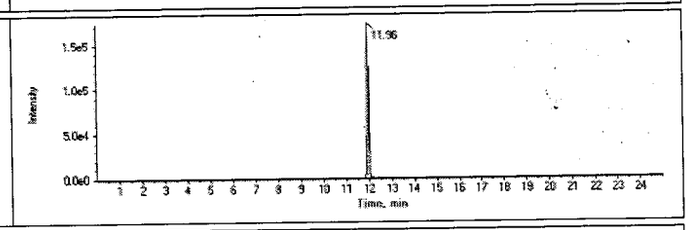
13C-PFOA (417.0 / 372.0)

RT (Exp. RT): 11.96 (11.96) min

Calculated conc: 97.805953

Area Ratio: N/A

Sample Type: (Quality Control)



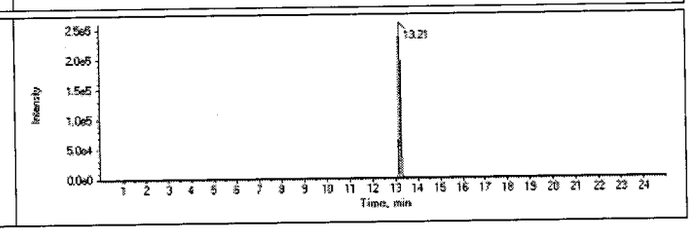
13C-PFOS (503.0 / 80.0)

RT (Exp. RT): 13.21 (13.22) min

Calculated conc: 100.335204

Area Ratio: N/A

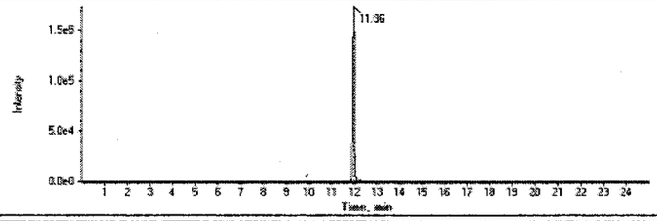
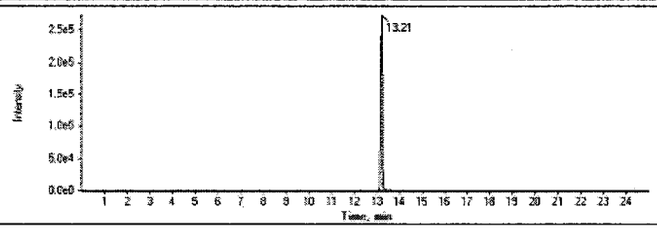
Sample Type: (Quality Control)



Sample Name	201407140016MSD	**Injection Vial**	15
Sample ID		**Injection Volume**	5.00
Sample Type	Quality Control	**Algorithm Used**	MQ4
Acquisition Date	7/16/2014 11:31:44 PM	**Dilution Factor**	1.00
Acquisition Method	@537-ShortRun-110613-Ali.dam	**Weight to Volume**	N/A
Project	EPA537\2014_07_16	**Instrument Name**	API 4000
Data File	@537-Batch#780662-071614.wiff		
Result Table	@537-Batch#780662-071614		
Sample Comment	Prep. By FAM@07/14/2014		

Internal Standard	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
IS-13C-PFOA	933229	11.96	100.00000	-
IS-13C-PFOS	1328718	13.21	100.00000	-

Target Analyte	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
PFHxA	6.247e+04	8.28	0.00250	0.004219
Surr-13c-PFHxA	1.016e+06	8.28	100.00000	99.918354
PFHpA	9.635e+04	10.39	0.00250	0.003187
PFHpA 2	2.707e+04	10.40	0.00250	0.003091
PFOA	1.184e+05	11.96	0.00250	0.004206
PFOA 2	4.212e+04	11.96	0.00250	0.004248
PFNA	6.257e+04	13.21	0.00250	0.002971
PFNA 2	1.648e+04	13.21	0.00250	0.002954
PFDA	5.980e+04	14.25	0.00250	0.002660
PFDA 2	1.152e+04	14.25	0.00250	0.002787
Surr-13c-PFDA	8.103e+05	14.25	100.00000	99.773706
PFUnA	5.242e+04	15.13	0.00250	0.002487
PFUnA 2	1.005e+04	15.14	0.00250	0.002426
PFDoA	4.158e+04	15.88	0.00250	0.002175
PFTrDA	6.562e+04	16.54	0.00250	0.002343
PFTrDA 2	1.202e+04	16.54	0.00250	0.001862
PFTA	1.741e+04	17.11	0.00250	0.002254
PFBS	2.918e+04	5.96	0.00222	0.002496
PFBS 2	1.005e+04	5.97	0.00222	0.002406
PFHxS	4.531e+04	10.54	0.00237	0.003252
PFHxS 2	1.520e+04	10.54	0.00237	0.003262
PFOS	4.928e+04	13.21	0.00240	0.003779
PFOS 2	1.555e+04	13.21	0.00240	0.003968
13C-PFOA	9.332e+05	11.96	100.00000	98.459546
13C-PFOS	1.329e+06	13.21	100.00000	101.775348

IS-13C-PFOA (Internal Standard) RT (Exp. RT): 11.96(11.96) min Concentration: 100.00000 Sample Type: (Quality Control)	
IS-13C-PFOS (Internal Standard) RT (Exp. RT): 13.21(13.22) min Concentration: 100.00000 Sample Type: (Quality Control)	

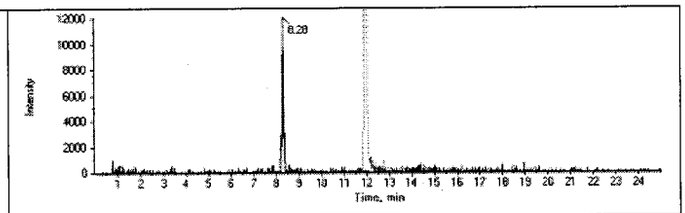
PFHxA (313.0 / 268.8)

RT (Exp. RT): 8.28 (8.28) min

Calculated conc: 0.004219

Area Ratio: 6.694e-2

Sample Type: (Quality Control)



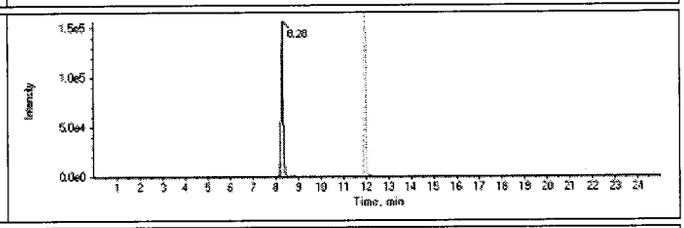
Surr-13c-PFHxA (315.0 / 270.0)

RT (Exp. RT): 8.28 (8.28) min

Calculated conc: 99.918354

Area Ratio: 1.089e0

Sample Type: (Quality Control)



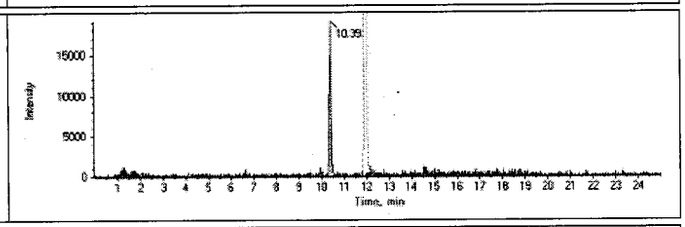
PFHpA (363.0 / 318.9)

RT (Exp. RT): 10.39 (10.40) min

Calculated conc: 0.003187

Area Ratio: 1.032e-1

Sample Type: (Quality Control)



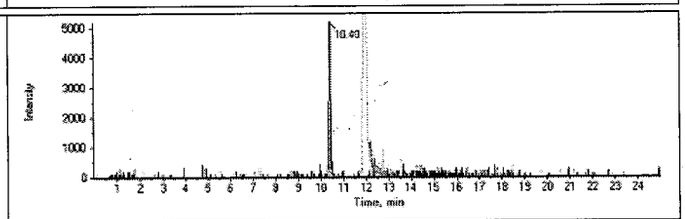
PFHpA 2 (363.0 / 168.9)

RT (Exp. RT): 10.40 (10.40) min

Calculated conc: 0.003091

Area Ratio: 2.900e-2

Sample Type: (Quality Control)



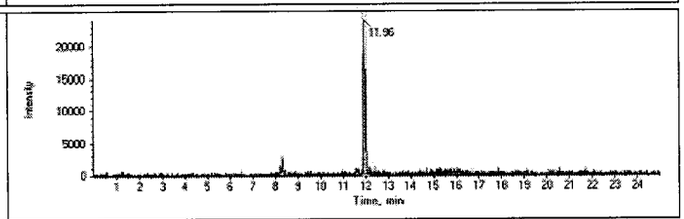
PFOA (413.0 / 368.9)

RT (Exp. RT): 11.96 (11.97) min

Calculated conc: 0.004206

Area Ratio: 1.269e-1

Sample Type: (Quality Control)



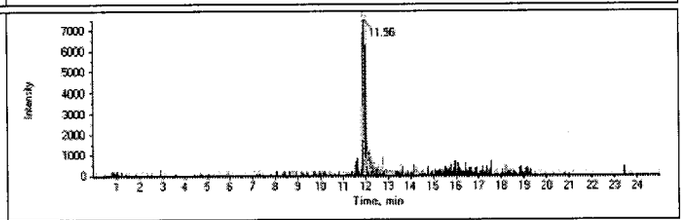
PFOA 2 (413.0 / 168.8)

RT (Exp. RT): 11.96 (11.96) min

Calculated conc: 0.004248

Area Ratio: 4.513e-2

Sample Type: (Quality Control)



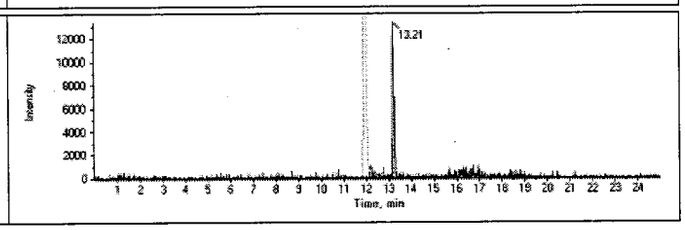
PFNA (463.0 / 419.0)

RT (Exp. RT): 13.21 (13.22) min

Calculated conc: 0.002971

Area Ratio: 6.705e-2

Sample Type: (Quality Control)

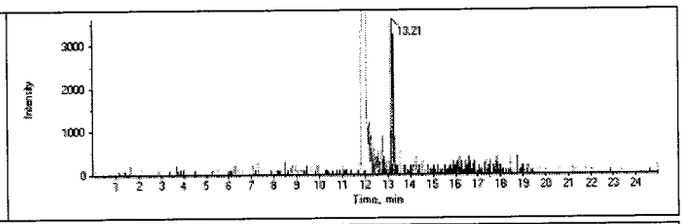


PFNA 2 (463.0 / 218.9)

RT (Exp. RT): 13.21 (13.21) min

Calculated conc: 0.002954

Area Ratio: 1.766e-2
Sample Type: (Quality Control)

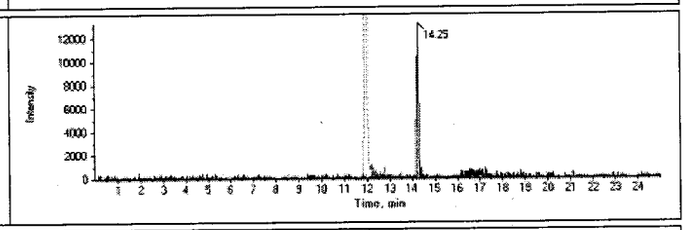


PFDA (513.0 / 469.0)

RT (Exp. RT): 14.25 (14.26) min

Calculated conc: 0.002660

Area Ratio: 6.408e-2
Sample Type: (Quality Control)

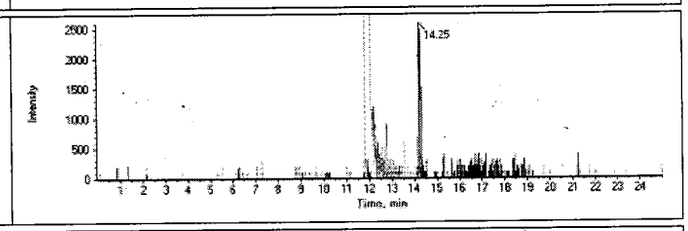


PFDA 2 (513.0 / 218.8)

RT (Exp. RT): 14.25 (14.26) min

Calculated conc: 0.002787

Area Ratio: 1.235e-2
Sample Type: (Quality Control)

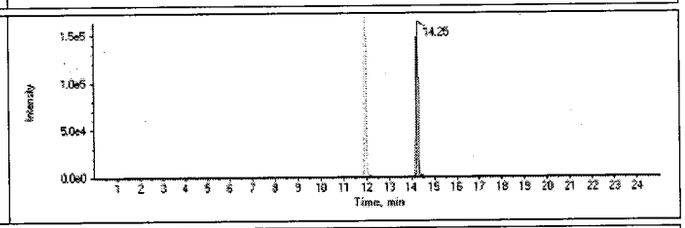


Surr-13c-PFDA (515.0 / 470.0)

RT (Exp. RT): 14.25 (14.26) min

Calculated conc: 99.773706

Area Ratio: 8.683e-1
Sample Type: (Quality Control)

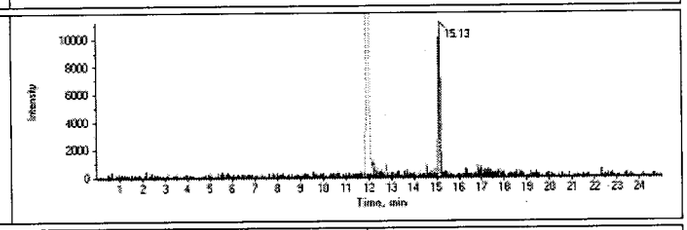


PFUnA (563.0 / 519.0)

RT (Exp. RT): 15.13 (15.14) min

Calculated conc: 0.002487

Area Ratio: 5.617e-2
Sample Type: (Quality Control)

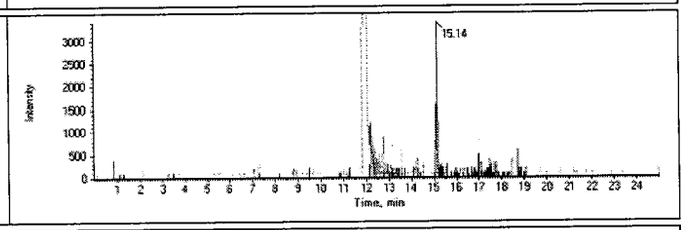


PFUnA 2 (563.0 / 268.8)

RT (Exp. RT): 15.14 (15.14) min

Calculated conc: 0.002426

Area Ratio: 1.077e-2
Sample Type: (Quality Control)

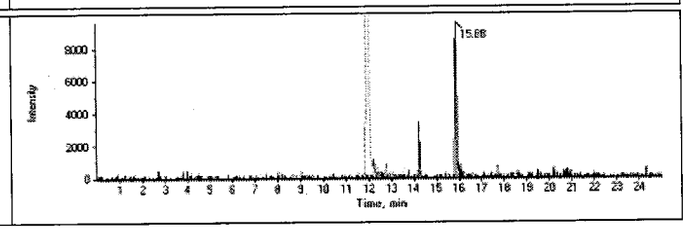


PFDoA (612.8 / 569.0)

RT (Exp. RT): 15.88 (15.90) min

Calculated conc: 0.002175

Area Ratio: 4.456e-2
Sample Type: (Quality Control)



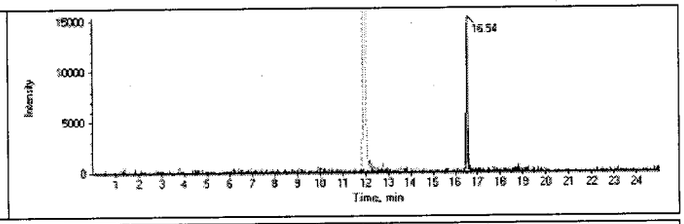
PFTrDA (662.9 / 619.0)

RT (Exp. RT): 16.54 (16.55) min

Calculated conc: 0.002343

Area Ratio: 7.032e-2

Sample Type: (Quality Control)



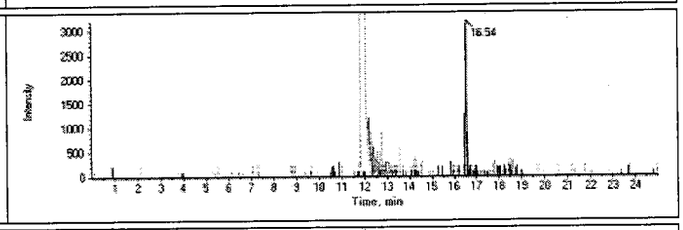
PFTrDA 2 (662.9 / 168.9)

RT (Exp. RT): 16.54 (16.55) min

Calculated conc: 0.001862

Area Ratio: 1.287e-2

Sample Type: (Quality Control)



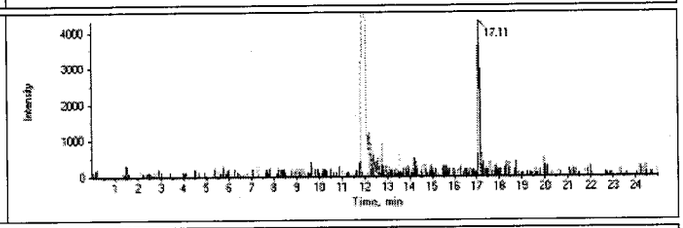
PFTA (713.3 / 669.0)

RT (Exp. RT): 17.11 (17.11) min

Calculated conc: 0.002254

Area Ratio: 1.865e-2

Sample Type: (Quality Control)



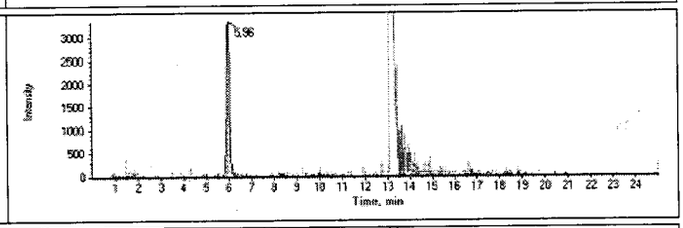
PFBS (299.0 / 79.9)

RT (Exp. RT): 5.96 (5.96) min

Calculated conc: 0.002496

Area Ratio: 2.196e-2

Sample Type: (Quality Control)



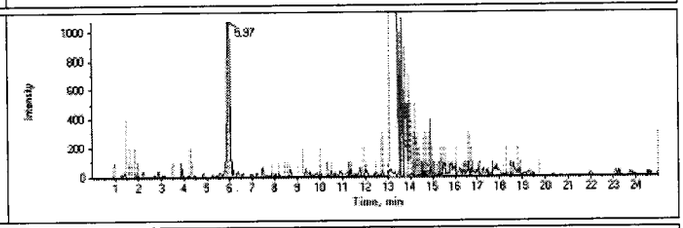
PFBS 2 (299.0 / 99.0)

RT (Exp. RT): 5.97 (5.97) min

Calculated conc: 0.002406

Area Ratio: 7.565e-3

Sample Type: (Quality Control)



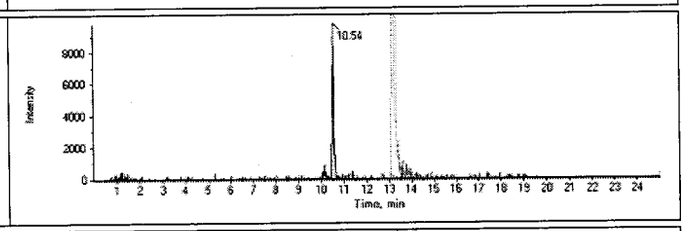
PFHxS (398.9 / 80.0)

RT (Exp. RT): 10.54 (10.55) min

Calculated conc: 0.003252

Area Ratio: 3.410e-2

Sample Type: (Quality Control)



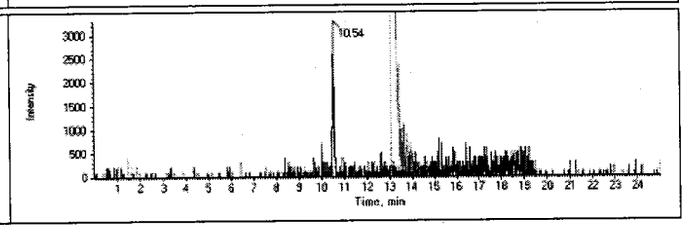
PFHxS 2 (398.9 / 99.0)

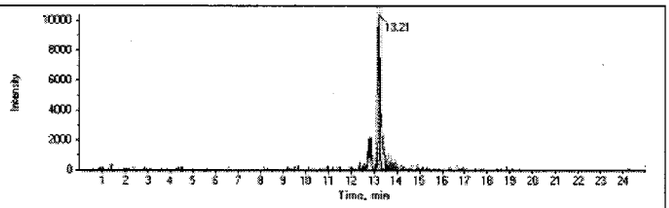
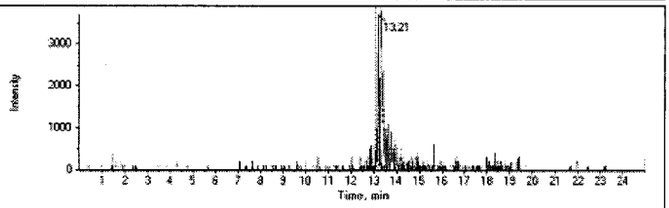
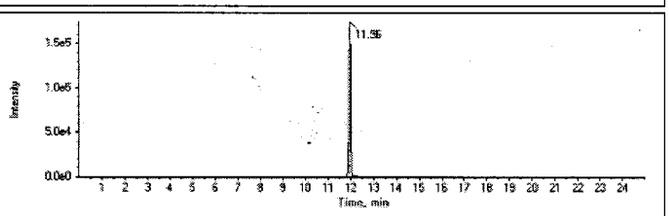
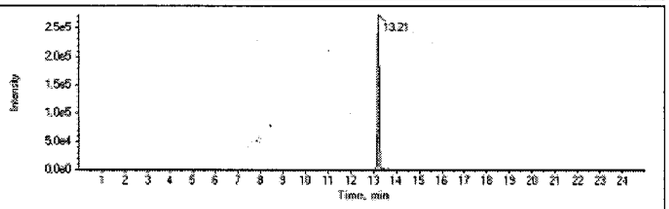
RT (Exp. RT): 10.54 (10.54) min

Calculated conc: 0.003262

Area Ratio: 1.144e-2

Sample Type: (Quality Control)

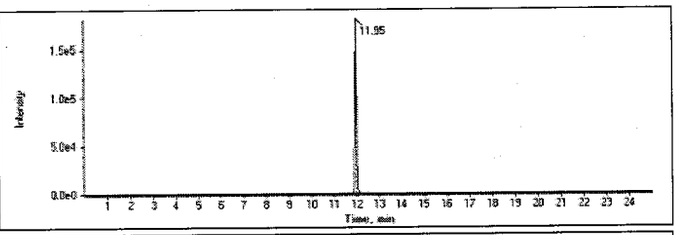
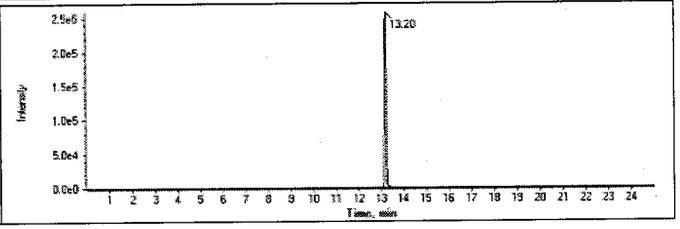


PFOS (499.0 / 79.9) RT (Exp. RT): 13.21 (13.22) min Calculated conc: 0.003779 Area Ratio: 3.709e-2 Sample Type: (Quality Control)	
PFOS 2 (499.0 / 99.0) RT (Exp. RT): 13.21 (13.21) min Calculated conc: 0.003968 Area Ratio: 1.170e-2 Sample Type: (Quality Control)	
13C-PFOA (417.0 / 372.0) RT (Exp. RT): 11.96 (11.96) min Calculated conc: 98.459546 Area Ratio: N/A Sample Type: (Quality Control)	
13C-PFOS (503.0 / 80.0) RT (Exp. RT): 13.21 (13.22) min Calculated conc: 101.775348 Area Ratio: N/A Sample Type: (Quality Control)	

Sample Name	201407140016	**Injection Vial**	16
Sample ID		**Injection Volume**	5.00
Sample Type	Quality Control	**Algorithm Used**	MQ4
Acquisition Date	7/16/2014 11:57:19 PM	**Dilution Factor**	1.00
Acquisition Method	@537-ShortRun-110613-Ali.dam	**Weight to Volume**	N/A
Project	EPA537\2014_07_16	**Instrument Name**	API 4000
Data File	@537-Batch#780662-071614.wiff		
Result Table	@537-Batch#780662-071614		
Sample Comment	Prep. By FAM@07/14/2014		

Internal Standard	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
IS-13C-PFOA	920016	11.95	100.00000	-
IS-13C-PFOS	1323390	13.20	100.00000	-

Target Analyte	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
PFHxA	2.614e+04	8.28	0.00000	0.001791
Surr-13c-PFHxA	1.065e+06	8.27	100.00000	106.259197
PFHpA	1.461e+04	10.38	0.00000	0.000490
PFHpA 2	4.659e+03	10.39	0.00000	0.000540
PFOA	4.488e+04	11.96	0.00000	0.001617
PFOA 2	1.525e+04	11.95	0.00000	0.001560
PFNA	3.972e+03	13.20	0.00000	0.000191
PFNA 2	7.850e+02	13.19	0.00000	0.000143
PFDA	1.275e+03	14.24	0.00000	0.000058
PFDA 2	1.470e+02	13.80	0.00000	0.000036
Surr-13c-PFDA	8.095e+05	14.25	100.00000	101.104335
PFUnA	4.410e+02	15.15	0.00000	0.000021
PFUnA 2	N/A	N/A	0.00000	N/A
PFDoA	3.920e+02	15.91	0.00000	0.000021
PFTrDA	2.450e+02	16.53	0.00000	0.000009
PFTrDA 2	1.960e+02	16.51	0.00000	0.000031
PFTA	1.470e+02	17.02	0.00000	0.000019
PFBS	7.061e+03	5.95	0.00000	0.000606
PFBS 2	2.304e+03	5.98	0.00000	0.000554
PFHxS	1.878e+04	10.55	0.00000	0.001354
PFHxS 2	6.179e+03	10.55	0.00000	0.001331
PFOS	1.878e+04	13.20	0.00000	0.001446
PFOS 2	5.836e+03	13.21	0.00000	0.001496
13C-PFOA	9.200e+05	11.95	100.00000	97.065509
13C-PFOS	1.323e+06	13.20	100.00000	101.367252

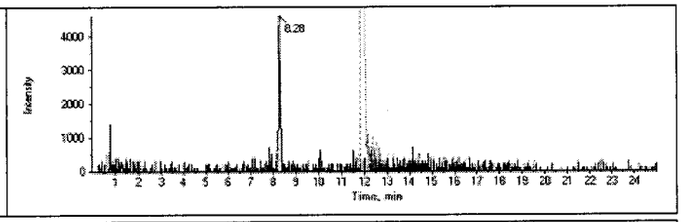
IS-13C-PFOA (Internal Standard) RT (Exp. RT): 11.95(11.96) min Concentration: 100.00000 Sample Type: (Quality Control)	
IS-13C-PFOS (Internal Standard) RT (Exp. RT): 13.20(13.22) min Concentration: 100.00000 Sample Type: (Quality Control)	

PFHxA (313.0 / 268.8)

RT (Exp. RT): 8.28 (8.28) min

Calculated conc: 0.001791

Area Ratio: 2.841e-2
Sample Type: (Quality Control)

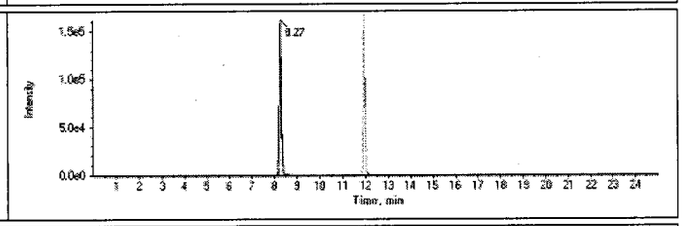


Surr-13c-PFHxA (315.0 / 270.0)

RT (Exp. RT): 8.27 (8.28) min

Calculated conc: 106.259197

Area Ratio: 1.158e0
Sample Type: (Quality Control)

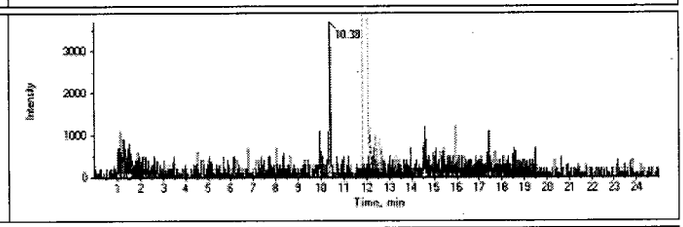


PFHpA (363.0 / 318.9)

RT (Exp. RT): 10.38 (10.40) min

Calculated conc: 0.000490

Area Ratio: 1.588e-2
Sample Type: (Quality Control)

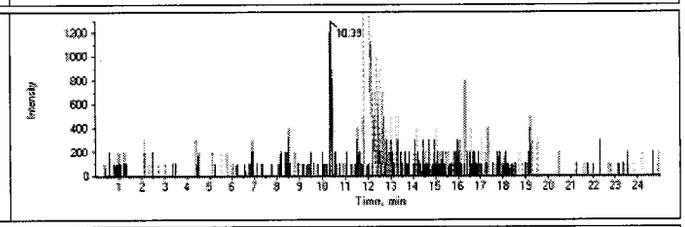


PFHpA 2 (363.0 / 168.9)

RT (Exp. RT): 10.39 (10.40) min

Calculated conc: 0.000540

Area Ratio: 5.064e-3
Sample Type: (Quality Control)

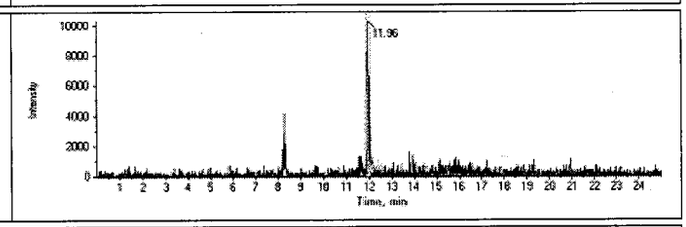


PFOA (413.0 / 368.9)

RT (Exp. RT): 11.96 (11.97) min

Calculated conc: 0.001617

Area Ratio: 4.878e-2
Sample Type: (Quality Control)

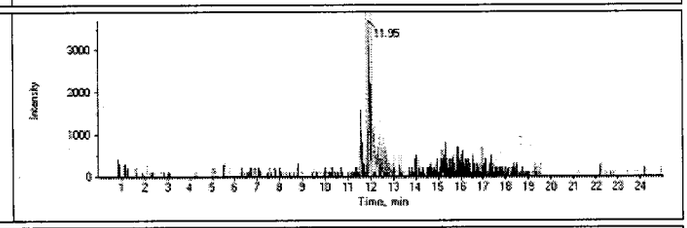


PFOA 2 (413.0 / 168.8)

RT (Exp. RT): 11.95 (11.96) min

Calculated conc: 0.001560

Area Ratio: 1.658e-2
Sample Type: (Quality Control)

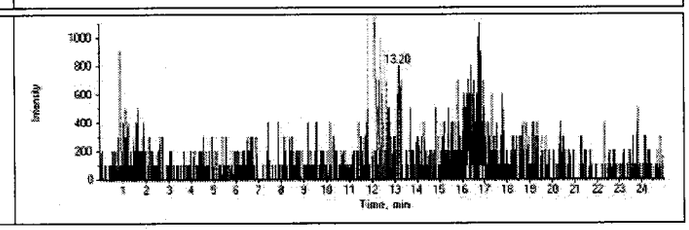


PFNA (463.0 / 419.0)

RT (Exp. RT): 13.20 (13.22) min

Calculated conc: 0.000191

Area Ratio: 4.317e-3
Sample Type: (Quality Control)



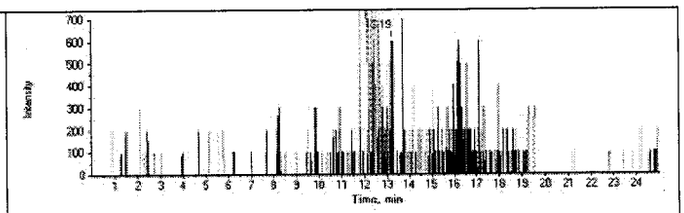
PFNA 2 (463.0 / 218.9)

RT (Exp. RT): 13.19 (13.21) min

Calculated conc: 0.000143

Area Ratio: 8.529e-4

Sample Type: (Quality Control)



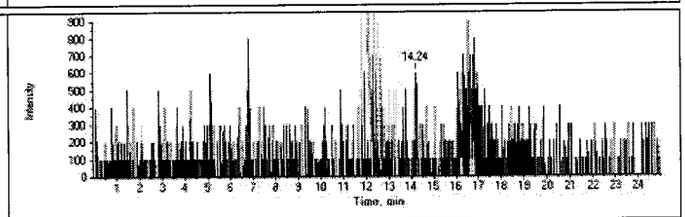
PFDA (513.0 / 469.0)

RT (Exp. RT): 14.24 (14.26) min

Calculated conc: 0.000058

Area Ratio: 1.386e-3

Sample Type: (Quality Control)



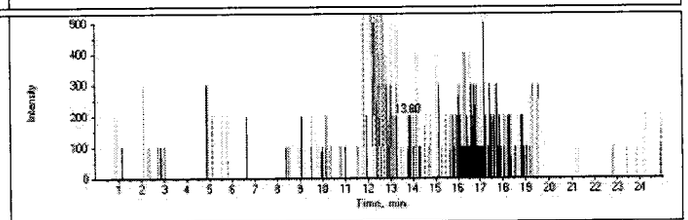
PFDA 2 (513.0 / 218.8)

RT (Exp. RT): 13.80 (14.26) min

Calculated conc: 0.000036

Area Ratio: 1.598e-4

Sample Type: (Quality Control)



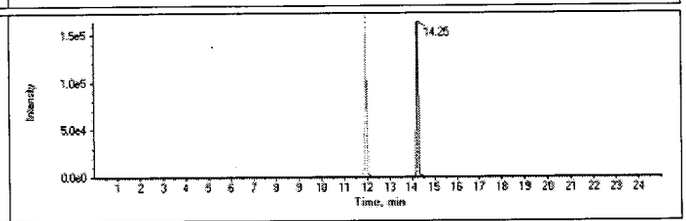
Surr-13c-PFDA (515.0 / 470.0)

RT (Exp. RT): 14.25 (14.26) min

Calculated conc: 101.104335

Area Ratio: 8.798e-1

Sample Type: (Quality Control)



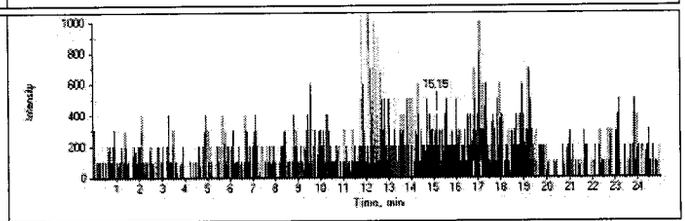
PFUnA (563.0 / 519.0)

RT (Exp. RT): 15.15 (15.14) min

Calculated conc: 0.000021

Area Ratio: 4.798e-4

Sample Type: (Quality Control)



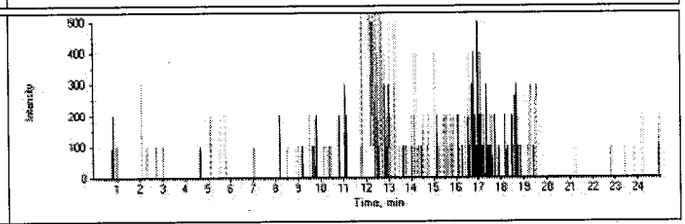
PFUnA 2 (563.0 / 268.8)

RT (Exp. RT): N/A (15.14) min

Calculated conc: N/A

Area Ratio: N/A

Sample Type: (Quality Control)



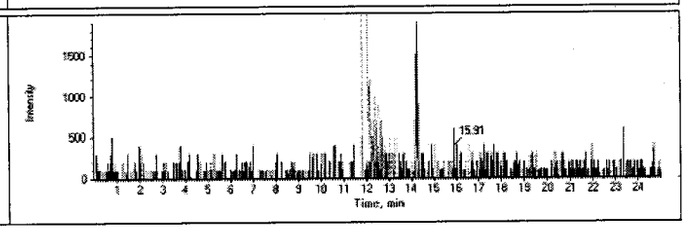
PFDoA (612.8 / 569.0)

RT (Exp. RT): 15.91 (15.90) min

Calculated conc: 0.000021

Area Ratio: 4.265e-4

Sample Type: (Quality Control)



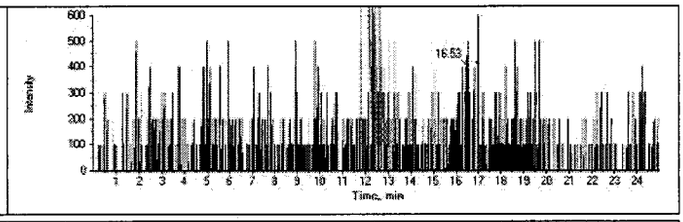
PFTrDA (662.9 / 619.0)

RT (Exp. RT): 16.53 (16.55) min

Calculated conc: 0.000009

Area Ratio: 2.666e-4

Sample Type: (Quality Control)



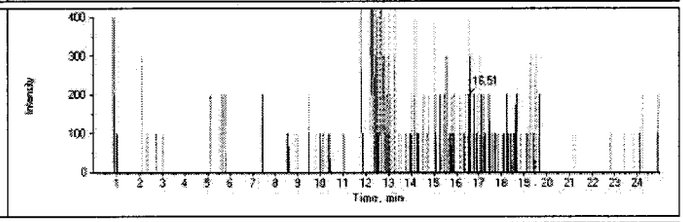
PFTrDA 2 (662.9 / 168.9)

RT (Exp. RT): 16.51 (16.55) min

Calculated conc: 0.000031

Area Ratio: 2.131e-4

Sample Type: (Quality Control)



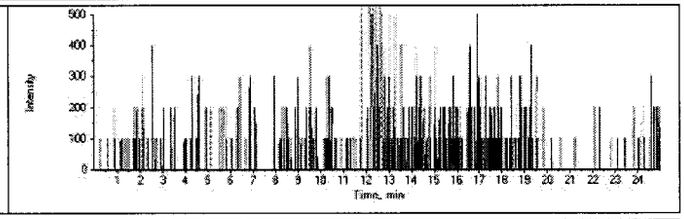
PFTA (713.3 / 669.0)

RT (Exp. RT): 17.02 (17.11) min

Calculated conc: 0.000019

Area Ratio: 1.599e-4

Sample Type: (Quality Control)



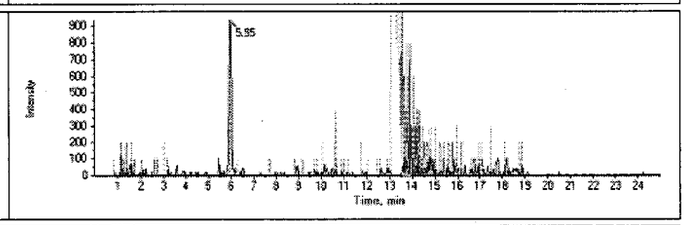
PFBS (299.0 / 79.9)

RT (Exp. RT): 5.95 (5.96) min

Calculated conc: 0.000606

Area Ratio: 5.335e-3

Sample Type: (Quality Control)



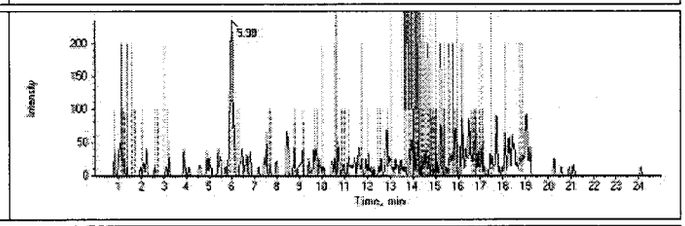
PFBS 2 (299.0 / 99.0)

RT (Exp. RT): 5.98 (5.97) min

Calculated conc: 0.000554

Area Ratio: 1.741e-3

Sample Type: (Quality Control)



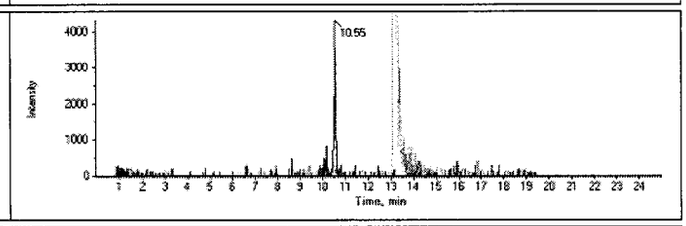
PFHxS (398.9 / 80.0)

RT (Exp. RT): 10.55 (10.55) min

Calculated conc: 0.001354

Area Ratio: 1.419e-2

Sample Type: (Quality Control)



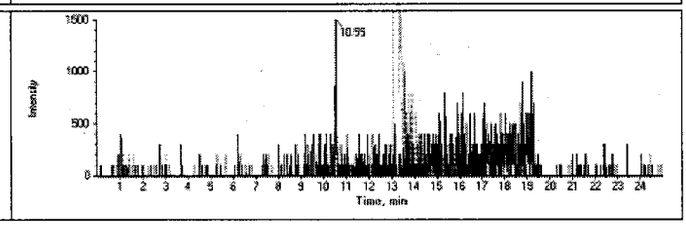
PFHxS 2 (398.9 / 99.0)

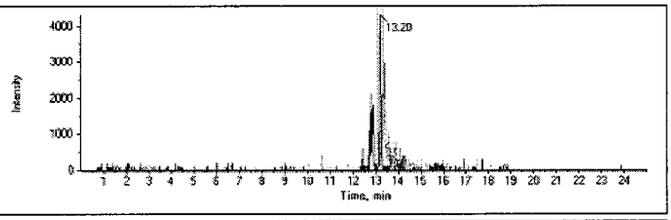
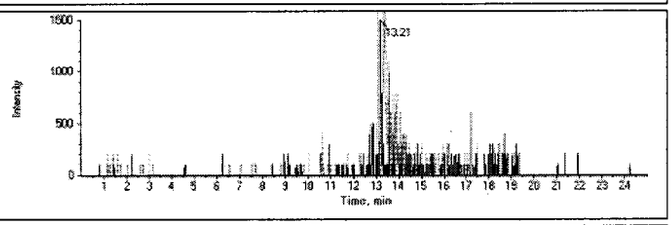
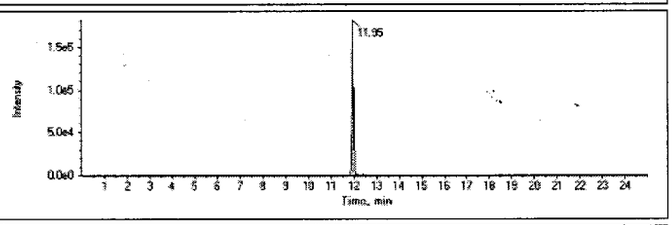
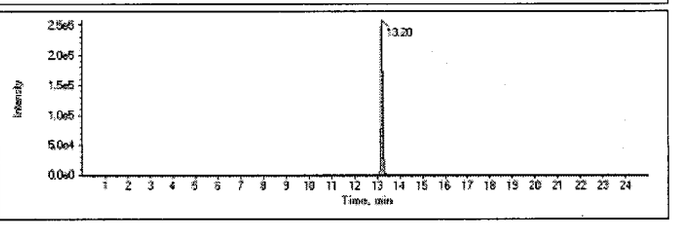
RT (Exp. RT): 10.55 (10.54) min

Calculated conc: 0.001331

Area Ratio: 4.669e-3

Sample Type: (Quality Control)

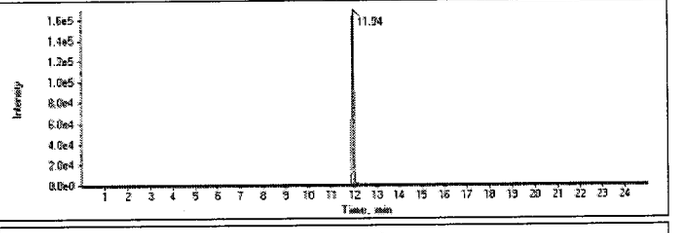
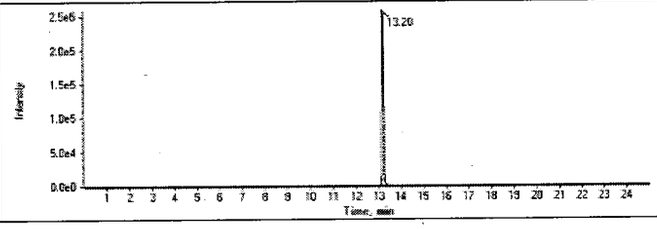


PFOS (499.0 / 79.9) RT (Exp. RT): 13.20 (13.22) min Calculated conc: 0.001446 Area Ratio: 1.419e-2 Sample Type: (Quality Control)	
PFOS 2 (499.0 / 99.0) RT (Exp. RT): 13.21 (13.21) min Calculated conc: 0.001496 Area Ratio: 4.410e-3 Sample Type: (Quality Control)	
13C-PFOA (417.0 / 372.0) RT (Exp. RT): 11.95 (11.96) min Calculated conc: 97.065509 Area Ratio: N/A Sample Type: (Quality Control)	
13C-PFOS (503.0 / 80.0) RT (Exp. RT): 13.20 (13.22) min Calculated conc: 101.367252 Area Ratio: N/A Sample Type: (Quality Control)	

Sample Name	201407090602	**Injection Vial**	17
Sample ID		**Injection Volume**	5.00
Sample Type	Quality Control	**Algorithm Used**	MQ4
Acquisition Date	7/17/2014 12:22:55 AM	**Dilution Factor**	1.00
Acquisition Method	@537-ShortRun-110613-Ali.dam	**Weight to Volume**	N/A
Project	EPA537\2014_07_16	**Instrument Name**	API 4000
Data File	@537-Batch#780662-071614.wiff		
Result Table	@537-Batch#780662-071614		
Sample Comment	Prep. By FAM@07/14/2014		

Internal Standard	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
IS-13C-PFOA	891379	11.94	100.00000	-
IS-13C-PFOS	1299106	13.20	100.00000	-

Target Analyte	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
PFHxA	1.960e+02	8.25	0.00000	0.000014
Surr-13c-PFHxA	9.930e+05	8.27	100.00000	102.215870
PFHpA	9.800e+01	10.40	0.00000	0.000003
PFHpA 2	N/A	N/A	0.00000	N/A
PFOA	4.806e+03	11.94	0.00000	0.000179
PFOA 2	1.079e+03	11.93	0.00000	0.000114
PFNA	6.370e+02	13.20	0.00000	0.000032
PFNA 2	9.800e+01	13.19	0.00000	0.000018
PFDA	4.900e+02	14.28	0.00000	0.000023
PFDA 2	N/A	N/A	0.00000	N/A
Surr-13c-PFDA	7.582e+05	14.24	100.00000	97.750421
PFUnA	4.900e+02	15.14	0.00000	0.000024
PFUnA 2	9.800e+01	15.09	0.00000	0.000025
PFDoA	1.960e+02	15.90	0.00000	0.000011
PFTrDA	2.450e+02	16.58	0.00000	0.000009
PFTrDA 2	9.800e+01	16.53	0.00000	0.000016
PFTA	3.430e+02	17.08	0.00000	0.000047
PFBS	4.900e+01	5.78	0.00000	0.000004
PFBS 2	2.450e+02	5.89	0.00000	0.000060
PFHxS	N/A	N/A	0.00000	N/A
PFHxS 2	9.800e+01	10.67	0.00000	0.000022
PFOS	2.940e+02	13.21	0.00000	0.000023
PFOS 2	2.450e+02	13.48	0.00000	0.000064
13C-PFOA	8.914e+05	11.94	100.00000	94.044166
13C-PFOS	1.299e+06	13.20	100.00000	99.507179

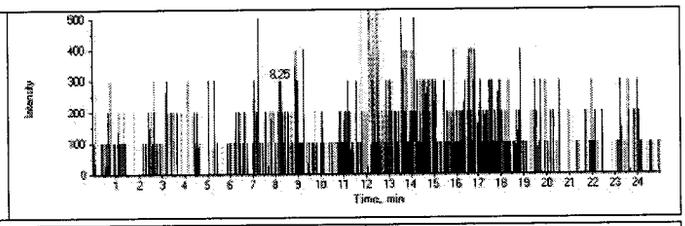
IS-13C-PFOA (Internal Standard) RT (Exp. RT): 11.94(11.96) min Concentration: 100.00000 Sample Type: (Quality Control)	
IS-13C-PFOS (Internal Standard) RT (Exp. RT): 13.20(13.22) min Concentration: 100.00000 Sample Type: (Quality Control)	

PFHxA (313.0 / 268.8)

RT (Exp. RT): 8.25 (8.28) min

Calculated conc: 0.000014

Area Ratio: 2.201e-4
Sample Type: (Quality Control)

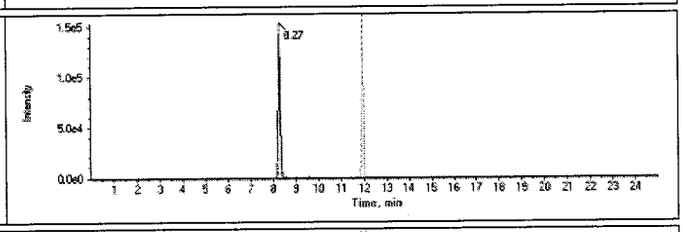


Surr-13c-PFHxA (315.0 / 270.0)

RT (Exp. RT): 8.27 (8.28) min

Calculated conc: 102.215870

Area Ratio: 1.114e0
Sample Type: (Quality Control)

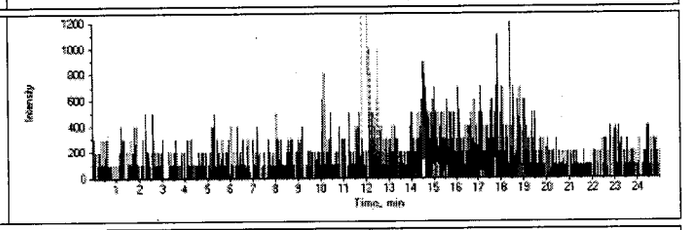


PFHpA (363.0 / 318.9)

RT (Exp. RT): 10.40 (10.40) min

Calculated conc: 0.000003

Area Ratio: 1.101e-4
Sample Type: (Quality Control)

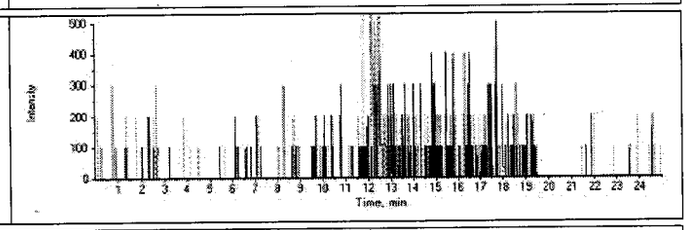


PFHpA 2 (363.0 / 168.9)

RT (Exp. RT): N/A (10.40) min

Calculated conc: N/A

Area Ratio: N/A
Sample Type: (Quality Control)

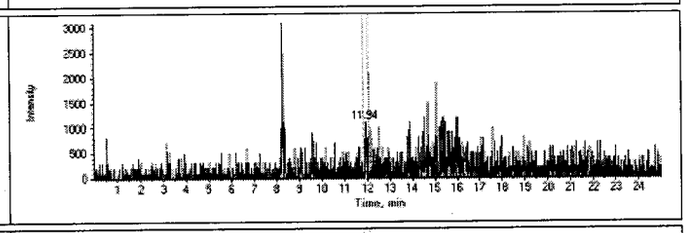


PFOA (413.0 / 368.9)

RT (Exp. RT): 11.94 (11.97) min

Calculated conc: 0.000179

Area Ratio: 5.391e-3
Sample Type: (Quality Control)

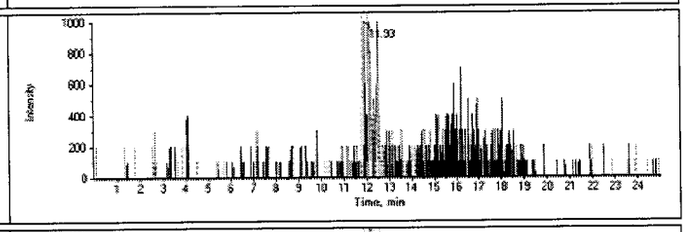


PFOA 2 (413.0 / 168.8)

RT (Exp. RT): 11.93 (11.96) min

Calculated conc: 0.000114

Area Ratio: 1.210e-3
Sample Type: (Quality Control)

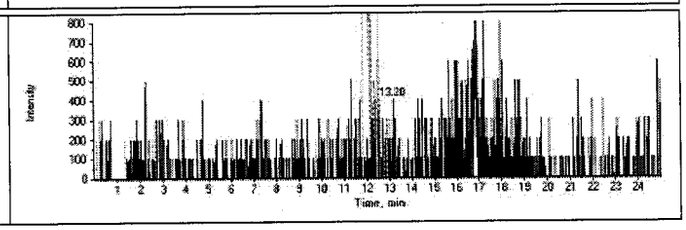


PFNA (463.0 / 419.0)

RT (Exp. RT): 13.20 (13.22) min

Calculated conc: 0.000032

Area Ratio: 7.151e-4
Sample Type: (Quality Control)



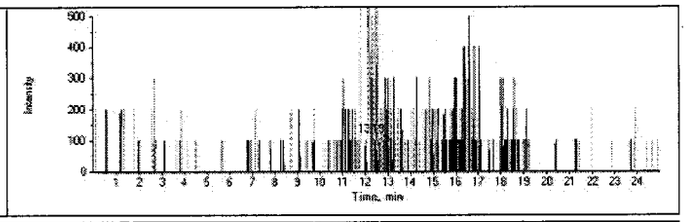
PFNA 2 (463.0 / 218.9)

RT (Exp. RT): 13.19 (13.21) min

Calculated conc: 0.000018

Area Ratio: 1.099e-4

Sample Type: (Quality Control)



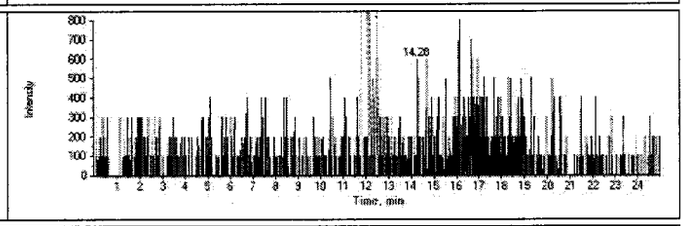
PFDA (513.0 / 469.0)

RT (Exp. RT): 14.28 (14.26) min

Calculated conc: 0.000023

Area Ratio: 5.499e-4

Sample Type: (Quality Control)



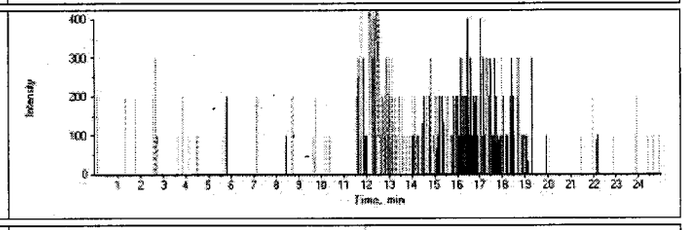
PFDA 2 (513.0 / 218.8)

RT (Exp. RT): N/A (14.26) min

Calculated conc: N/A

Area Ratio: N/A

Sample Type: (Quality Control)



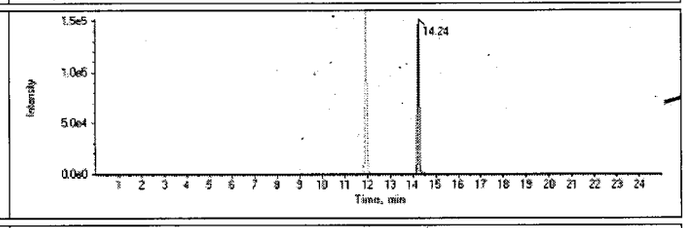
Surr-13c-PFDA (515.0 / 470.0)

RT (Exp. RT): 14.24 (14.26) min

Calculated conc: 97.750421

Area Ratio: 8.506e-1

Sample Type: (Quality Control)



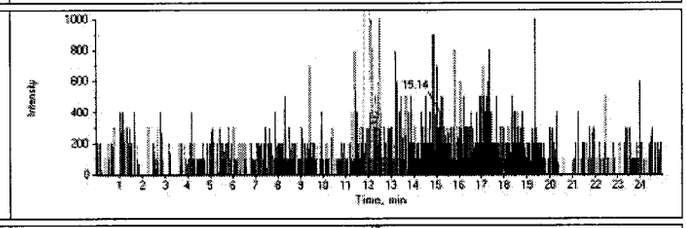
PFUnA (563.0 / 519.0)

RT (Exp. RT): 15.14 (15.14) min

Calculated conc: 0.000024

Area Ratio: 5.500e-4

Sample Type: (Quality Control)



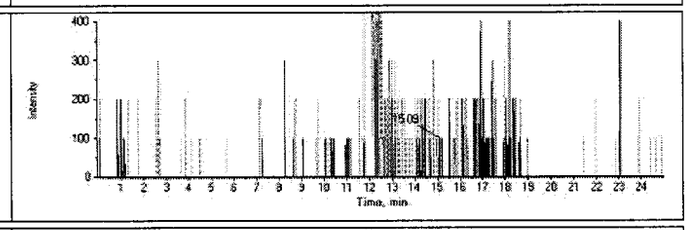
PFUnA 2 (563.0 / 268.8)

RT (Exp. RT): 15.09 (15.14) min

Calculated conc: 0.000025

Area Ratio: 1.101e-4

Sample Type: (Quality Control)



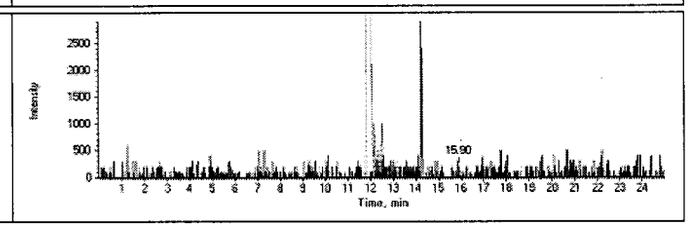
PFDoA (612.8 / 569.0)

RT (Exp. RT): 15.90 (15.90) min

Calculated conc: 0.000011

Area Ratio: 2.200e-4

Sample Type: (Quality Control)



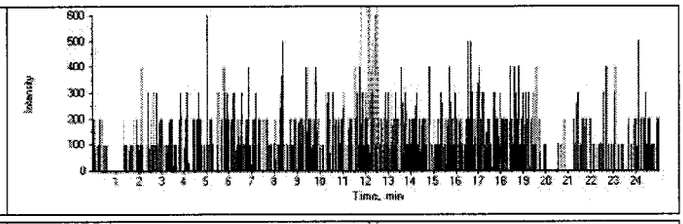
PFTrDA (662.9 / 619.0)

RT (Exp. RT): 16.58 (16.55) min

Calculated conc: 0.000009

Area Ratio: 2.751e-4

Sample Type: (Quality Control)



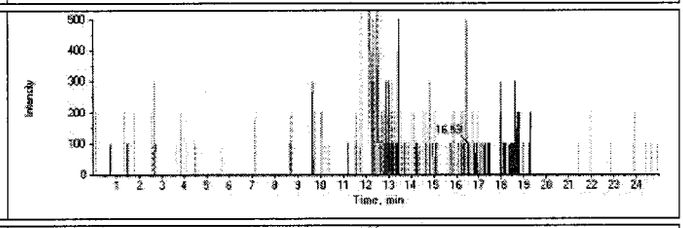
PFTrDA 2 (662.9 / 168.9)

RT (Exp. RT): 16.53 (16.55) min

Calculated conc: 0.000016

Area Ratio: 1.101e-4

Sample Type: (Quality Control)



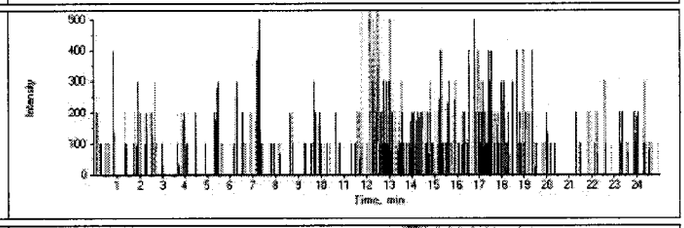
PFTA (713.3 / 669.0)

RT (Exp. RT): 17.08 (17.11) min

Calculated conc: 0.000047

Area Ratio: 3.852e-4

Sample Type: (Quality Control)



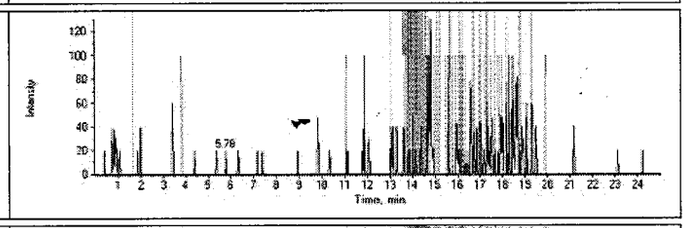
PFBS (299.0 / 79.9)

RT (Exp. RT): 5.78 (5.96) min

Calculated conc: 0.000004

Area Ratio: 3.776e-5

Sample Type: (Quality Control)



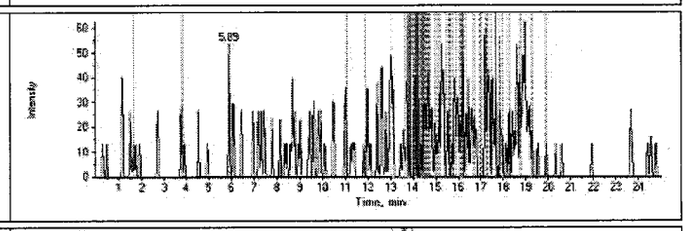
PFBS 2 (299.0 / 99.0)

RT (Exp. RT): 5.89 (5.97) min

Calculated conc: 0.000060

Area Ratio: 1.888e-4

Sample Type: (Quality Control)



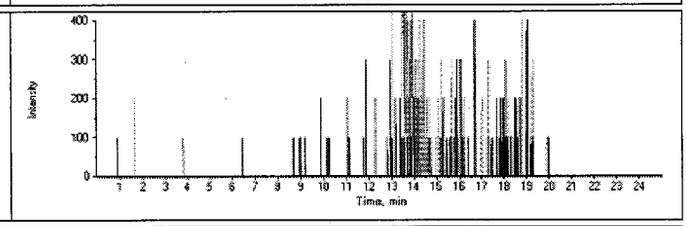
PFHxS (398.9 / 80.0)

RT (Exp. RT): N/A (10.55) min

Calculated conc: N/A

Area Ratio: N/A

Sample Type: (Quality Control)



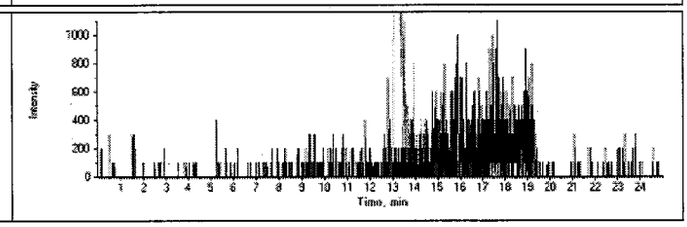
PFHxS 2 (398.9 / 99.0)

RT (Exp. RT): 10.67 (10.54) min

Calculated conc: 0.000022

Area Ratio: 7.547e-5

Sample Type: (Quality Control)

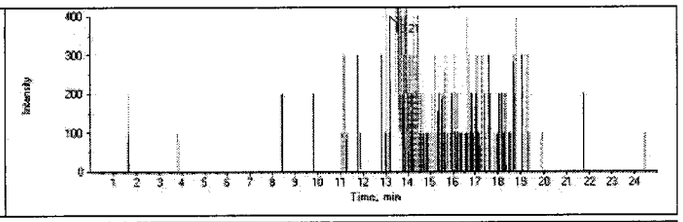


PFOS (499.0 / 79.9)

RT (Exp. RT): 13.21 (13.22) min

Calculated conc: 0.000023

Area Ratio: 2.266e-4
Sample Type: (Quality Control)

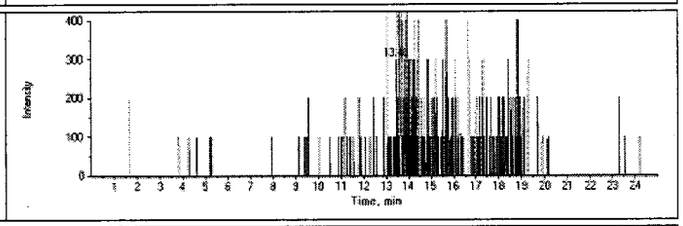


PFOS 2 (499.0 / 99.0)

RT (Exp. RT): 13.48 (13.21) min

Calculated conc: 0.000064

Area Ratio: 1.888e-4
Sample Type: (Quality Control)

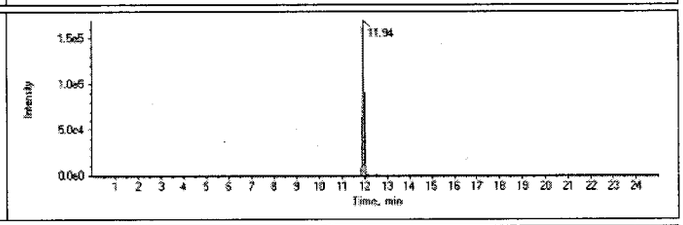


13C-PFOA (417.0 / 372.0)

RT (Exp. RT): 11.94 (11.96) min

Calculated conc: 94.044166

Area Ratio: N/A
Sample Type: (Quality Control)

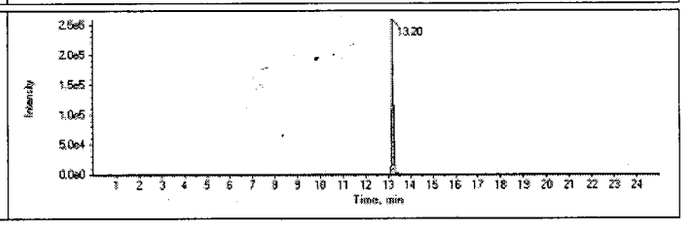


13C-PFOS (503.0 / 80.0)

RT (Exp. RT): 13.20 (13.22) min

Calculated conc: 99.507179

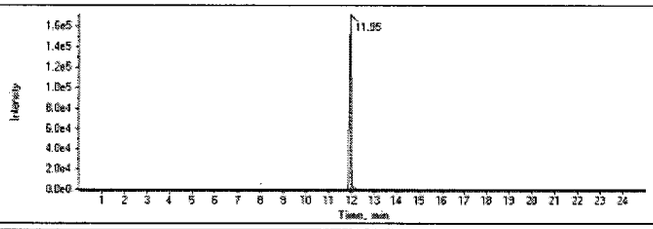
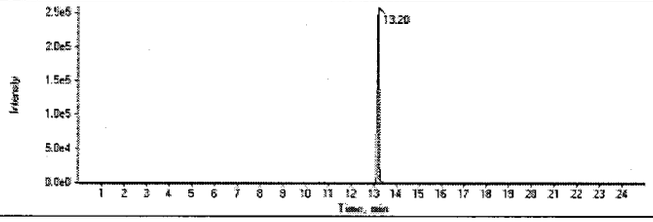
Area Ratio: N/A
Sample Type: (Quality Control)



Sample Name	201407110104	**Injection Vial**	18
Sample ID		**Injection Volume**	5.00
Sample Type	Quality Control	**Algorithm Used**	MQ4
Acquisition Date	7/17/2014 12:48:30 AM	**Dilution Factor**	1.00
Acquisition Method	@537-ShortRun-110613-Ali.dam	**Weight to Volume**	N/A
Project	EPA537\2014_07_16	**Instrument Name**	API 4000
Data File	@537-Batch#780662-071614.wiff		
Result Table	@537-Batch#780662-071614		
Sample Comment	Prep. By FAM@07/14/2014		

Internal Standard	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
IS-13C-PFOA	895812	11.95	100.00000	-
IS-13C-PFOS	1288086	13.20	100.00000	-

Target Analyte	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
PFHxA	1.960e+02	8.29	0.00000	0.000014
Surr-13c-PFHxA	9.643e+05	8.27	100.00000	98.770850
PFHpA	4.900e+02	10.43	0.00000	0.000017
PFHpA 2	1.470e+02	10.27	0.00000	0.000018
PFOA	5.566e+03	11.97	0.00000	0.000206
PFOA 2	2.256e+03	11.95	0.00000	0.000237
PFNA	1.470e+02	13.22	0.00000	0.000007
PFNA 2	2.450e+02	13.18	0.00000	0.000046
PFDA	2.450e+02	14.28	0.00000	0.000011
PFDA 2	N/A	N/A	0.00000	N/A
Surr-13c-PFDA	7.396e+05	14.24	100.00000	94.875475
PFUnA	9.800e+01	15.14	0.00000	0.000005
PFUnA 2	3.920e+02	15.58	0.00000	0.000099
PFDoA	1.470e+02	15.86	0.00000	0.000008
PFTrDA	4.910e+02	16.50	0.00000	0.000018
PFTrDA 2	9.800e+01	16.55	0.00000	0.000016
PFTA	2.450e+02	17.15	0.00000	0.000033
PFBS	N/A	N/A	0.00000	N/A
PFBS 2	4.900e+01	5.98	0.00000	0.000012
PFHxS	N/A	N/A	0.00000	N/A
PFHxS 2	9.800e+01	10.46	0.00000	0.000022
PFOS	4.410e+02	13.18	0.00000	0.000035
PFOS 2	1.470e+02	13.04	0.00000	0.000039
13C-PFOA	8.958e+05	11.95	100.00000	94.511903
13C-PFOS	1.288e+06	13.20	100.00000	98.663038

IS-13C-PFOA (Internal Standard) RT (Exp. RT): 11.95(11.96) min Concentration: 100.00000 Sample Type: (Quality Control)	
IS-13C-PFOS (Internal Standard) RT (Exp. RT): 13.20(13.22) min Concentration: 100.00000 Sample Type: (Quality Control)	

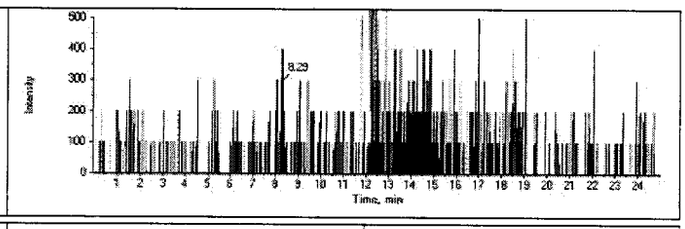
PFHxA (313.0 / 268.8)

RT (Exp. RT): 8.29 (8.28) min

Calculated conc: 0.000014

Area Ratio: 2.190e-4

Sample Type: (Quality Control)



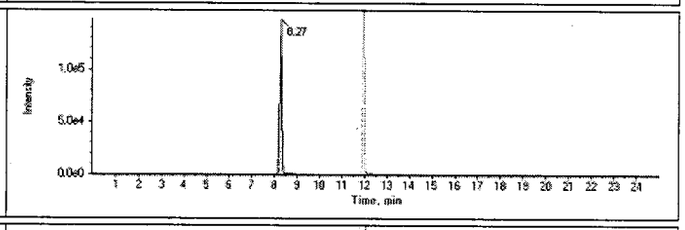
Surr-13c-PFHxA (315.0 / 270.0)

RT (Exp. RT): 8.27 (8.28) min

Calculated conc: 98.770850

Area Ratio: 1.076e0

Sample Type: (Quality Control)



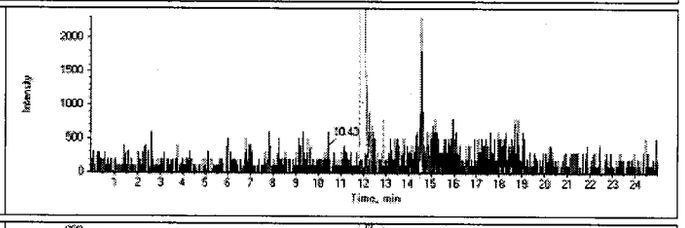
PFHpA (363.0 / 318.9)

RT (Exp. RT): 10.43 (10.40) min

Calculated conc: 0.000017

Area Ratio: 5.474e-4

Sample Type: (Quality Control)



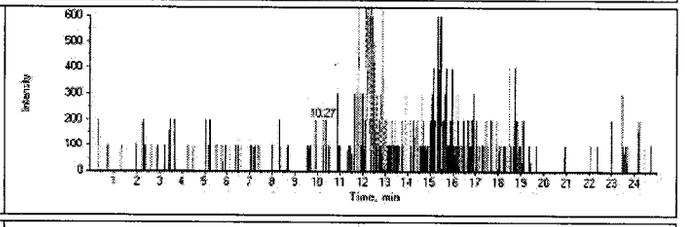
PFHpA 2 (363.0 / 168.9)

RT (Exp. RT): 10.27 (10.40) min

Calculated conc: 0.000018

Area Ratio: 1.643e-4

Sample Type: (Quality Control)



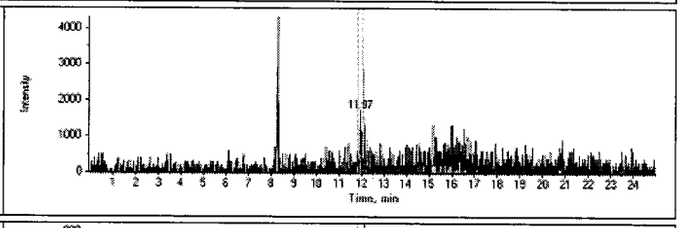
PFOA (413.0 / 368.9)

RT (Exp. RT): 11.97 (11.97) min

Calculated conc: 0.000206

Area Ratio: 6.213e-3

Sample Type: (Quality Control)



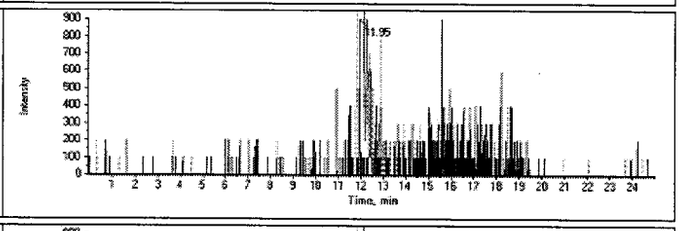
PFOA 2 (413.0 / 168.8)

RT (Exp. RT): 11.95 (11.96) min

Calculated conc: 0.000237

Area Ratio: 2.518e-3

Sample Type: (Quality Control)



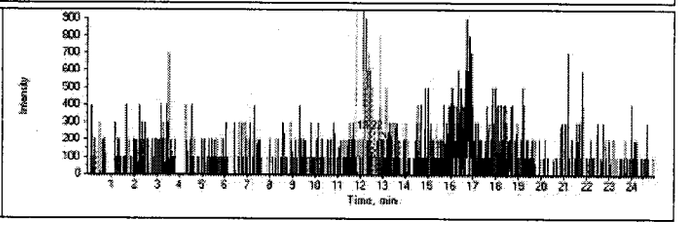
PFNA (463.0 / 419.0)

RT (Exp. RT): 13.22 (13.22) min

Calculated conc: 0.000007

Area Ratio: 1.642e-4

Sample Type: (Quality Control)

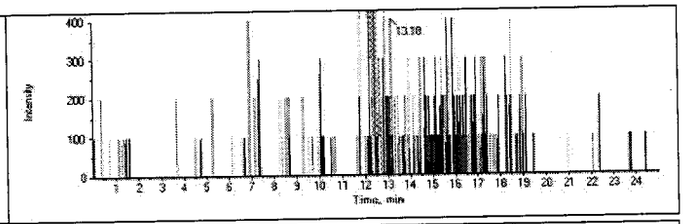


PFNA 2 (463.0 / 218.9)

RT (Exp. RT): 13.18 (13.21) min

Calculated conc: 0.000046

Area Ratio: 2.736e-4
Sample Type: (Quality Control)

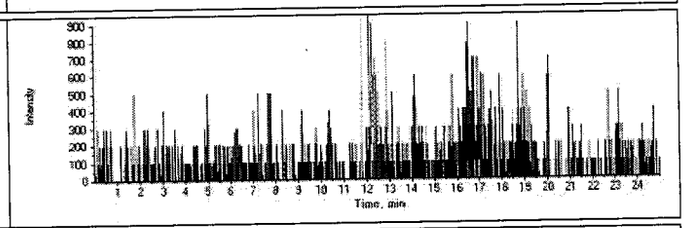


PFDA (513.0 / 469.0)

RT (Exp. RT): 14.28 (14.26) min

Calculated conc: 0.000011

Area Ratio: 2.737e-4
Sample Type: (Quality Control)

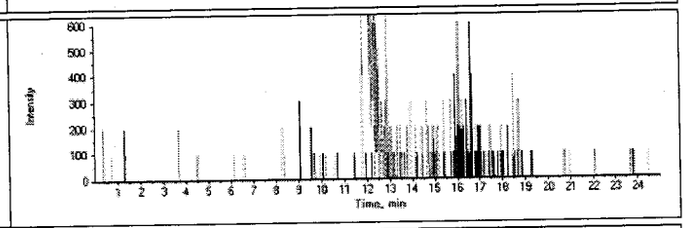


PFDA 2 (513.0 / 218.8)

RT (Exp. RT): N/A (14.26) min

Calculated conc: N/A

Area Ratio: N/A
Sample Type: (Quality Control)

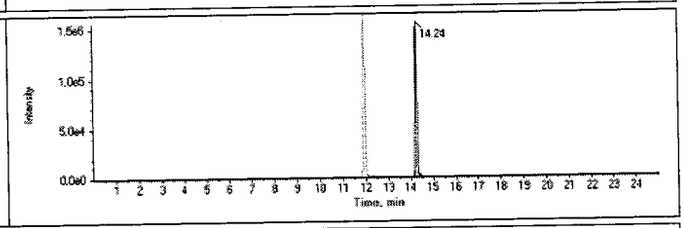


Surr-13c-PFDA (515.0 / 470.0)

RT (Exp. RT): 14.24 (14.26) min

Calculated conc: 94.875475

Area Ratio: 8.256e-1
Sample Type: (Quality Control)

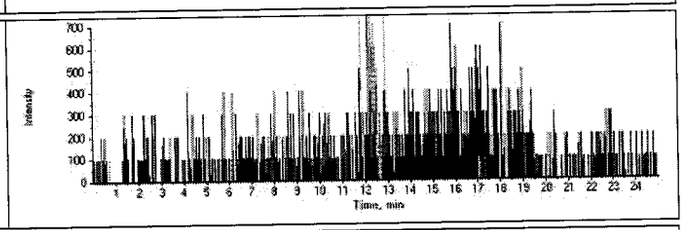


PFUnA (563.0 / 519.0)

RT (Exp. RT): 15.14 (15.14) min

Calculated conc: 0.000005

Area Ratio: 1.095e-4
Sample Type: (Quality Control)

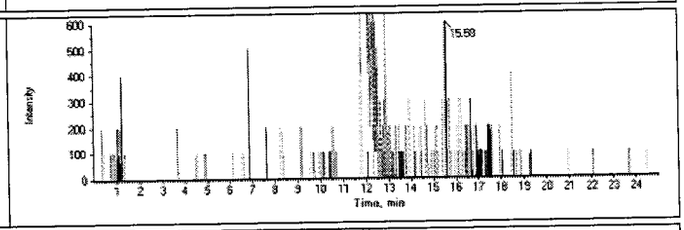


PFUnA 2 (563.0 / 268.8)

RT (Exp. RT): 15.58 (15.14) min

Calculated conc: 0.000099

Area Ratio: 4.377e-4
Sample Type: (Quality Control)

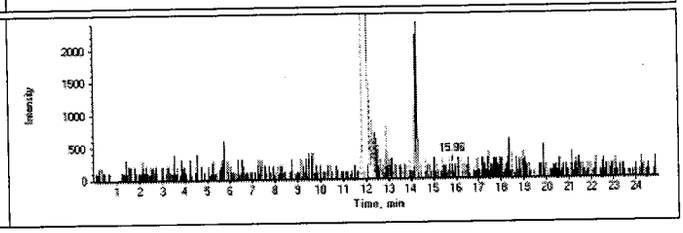


PFDoA (612.8 / 569.0)

RT (Exp. RT): 15.86 (15.90) min

Calculated conc: 0.000008

Area Ratio: 1.643e-4
Sample Type: (Quality Control)



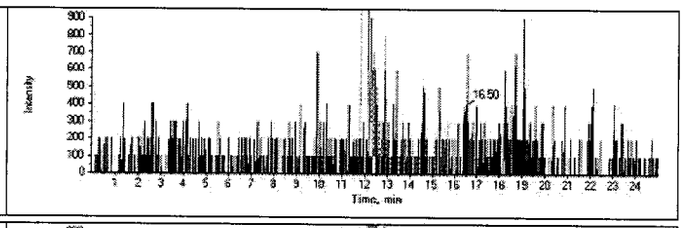
PFTrDA (662.9 / 619.0)

RT (Exp. RT): 16.50 (16.55) min

Calculated conc: 0.000018

Area Ratio: 5.477e-4

Sample Type: (Quality Control)



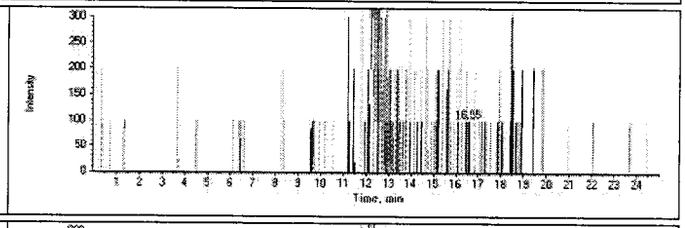
PFTrDA 2 (662.9 / 168.9)

RT (Exp. RT): 16.55 (16.55) min

Calculated conc: 0.000016

Area Ratio: 1.095e-4

Sample Type: (Quality Control)



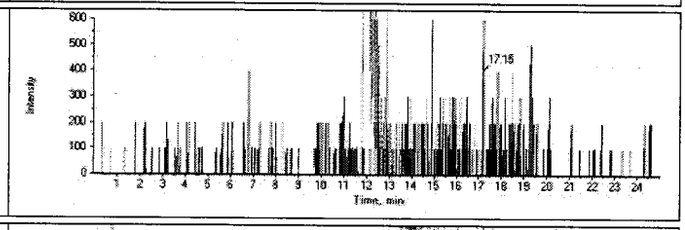
PFTA (713.3 / 669.0)

RT (Exp. RT): 17.15 (17.11) min

Calculated conc: 0.000033

Area Ratio: 2.738e-4

Sample Type: (Quality Control)



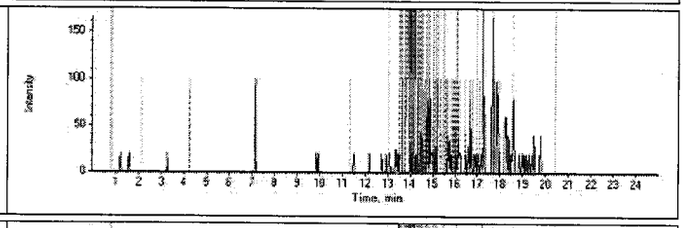
PFBS (299.0 / 79.9)

RT (Exp. RT): N/A (5.96) min

Calculated conc: N/A

Area Ratio: N/A

Sample Type: (Quality Control)



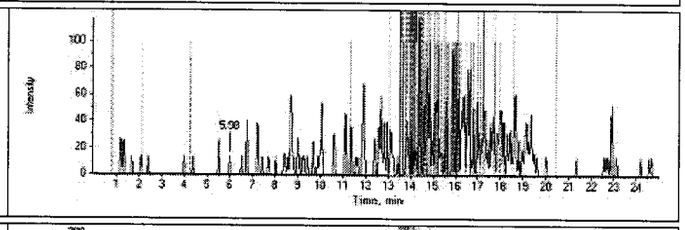
PFBS 2 (299.0 / 99.0)

RT (Exp. RT): 5.98 (5.97) min

Calculated conc: 0.000012

Area Ratio: 3.807e-5

Sample Type: (Quality Control)



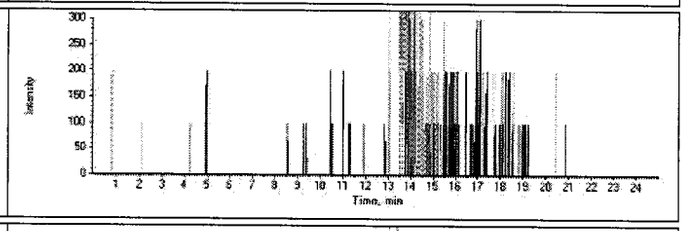
PFHxS (398.9 / 80.0)

RT (Exp. RT): N/A (10.55) min

Calculated conc: N/A

Area Ratio: N/A

Sample Type: (Quality Control)



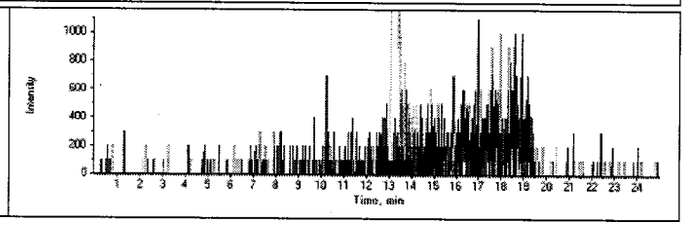
PFHxS 2 (398.9 / 99.0)

RT (Exp. RT): 10.46 (10.54) min

Calculated conc: 0.000022

Area Ratio: 7.616e-5

Sample Type: (Quality Control)

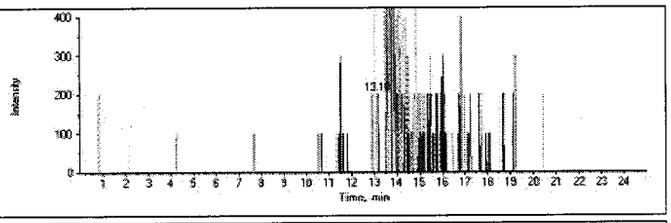


PFOS (499.0 / 79.9)

RT (Exp. RT): 13.18 (13.22) min

Calculated conc: 0.000035

Area Ratio: 3.427e-4
Sample Type: (Quality Control)

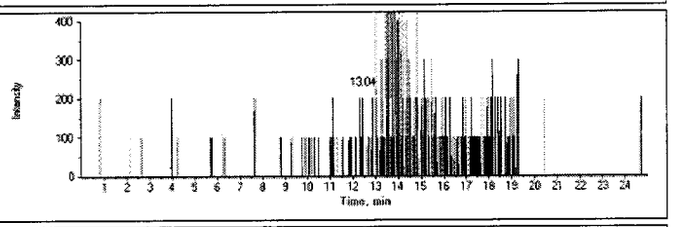


PFOS 2 (499.0 / 99.0)

RT (Exp. RT): 13.04 (13.21) min

Calculated conc: 0.000039

Area Ratio: 1.142e-4
Sample Type: (Quality Control)

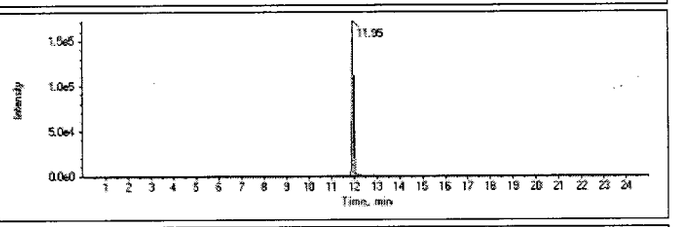


13C-PFOA (417.0 / 372.0)

RT (Exp. RT): 11.95 (11.96) min

Calculated conc: 94.511903

Area Ratio: N/A
Sample Type: (Quality Control)

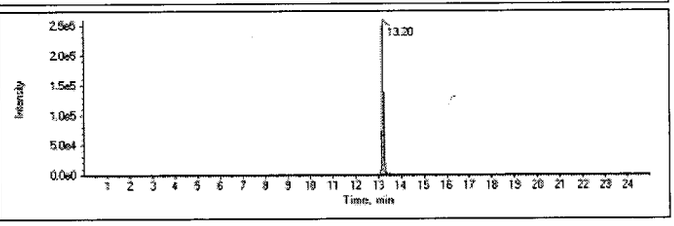


13C-PFOS (503.0 / 80.0)

RT (Exp. RT): 13.20 (13.22) min

Calculated conc: 98.663038

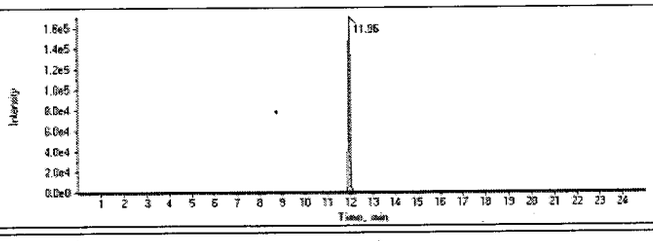
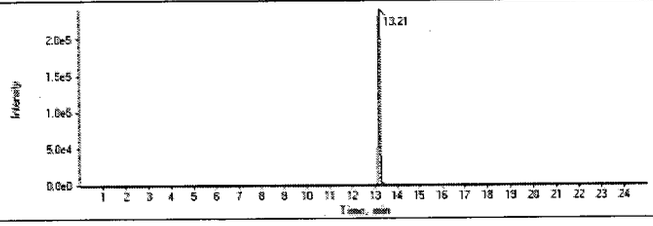
Area Ratio: N/A
Sample Type: (Quality Control)



Sample Name	201407110112	**Injection Vial**	19
Sample ID		**Injection Volume**	5.00
Sample Type	Quality Control	**Algorithm Used**	MQ4
Acquisition Date	7/17/2014 1:14:05 AM	**Dilution Factor**	1.00
Acquisition Method	@537-ShortRun-110613-Ali.dam	**Weight to Volume**	N/A
Project	EPA537\2014_07_16	**Instrument Name**	API 4000
Data File	@537-Batch#780662-071614.wiff		
Result Table	@537-Batch#780662-071614		
Sample Comment	Prep. By FAM@07/14/2014		

Internal Standard	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
IS-13C-PFOA	911446	11.96	100.00000	-
IS-13C-PFOS	1295957	13.21	100.00000	-

Target Analyte	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
PFHxA	3.430e+02	8.28	0.00000	0.000024
Surr-13c-PFHxA	9.702e+05	8.29	100.00000	97.673103
PFHpA	3.920e+02	10.44	0.00000	0.000013
PFHpA 2	1.960e+02	10.56	0.00000	0.000023
PFOA	5.223e+03	11.96	0.00000	0.000190
PFOA 2	1.569e+03	11.97	0.00000	0.000162
PFNA	1.470e+02	13.21	0.00000	0.000007
PFNA 2	N/A	N/A	0.00000	N/A
PFDA	3.430e+02	14.28	0.00000	0.000016
PFDA 2	N/A	N/A	0.00000	N/A
Surr-13c-PFDA	7.382e+05	14.26	100.00000	93.069004
PFUnA	4.410e+02	15.17	0.00000	0.000021
PFUnA 2	N/A	N/A	0.00000	N/A
PFDoA	9.800e+01	15.89	0.00000	0.000005
PFTrDA	3.920e+02	16.57	0.00000	0.000014
PFTrDA 2	N/A	N/A	0.00000	N/A
PFTA	9.800e+01	17.13	0.00000	0.000013
PFBS	N/A	N/A	0.00000	N/A
PFBS 2	1.470e+02	5.92	0.00000	0.000036
PFHxS	N/A	N/A	0.00000	N/A
PFHxS 2	9.800e+01	10.67	0.00000	0.000022
PFOS	4.420e+02	13.20	0.00000	0.000035
PFOS 2	4.910e+02	13.20	0.00000	0.000128
13C-PFOA	9.114e+05	11.96	100.00000	96.161265
13C-PFOS	1.296e+06	13.21	100.00000	99.265976

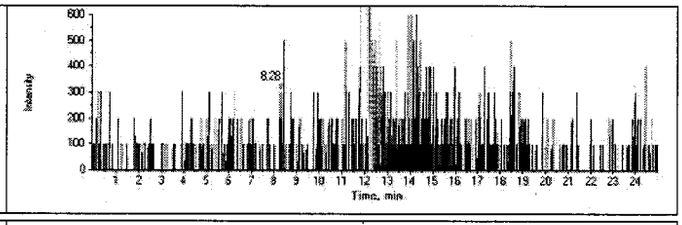
IS-13C-PFOA (Internal Standard) RT (Exp. RT): 11.96(11.96) min Concentration: 100.00000 Sample Type: (Quality Control)	
IS-13C-PFOS (Internal Standard) RT (Exp. RT): 13.21(13.22) min Concentration: 100.00000 Sample Type: (Quality Control)	

PFHxA (313.0 / 268.8)

RT (Exp. RT): 8.28 (8.28) min

Calculated conc: 0.000024

Area Ratio: 3.767e-4
Sample Type: (Quality Control)

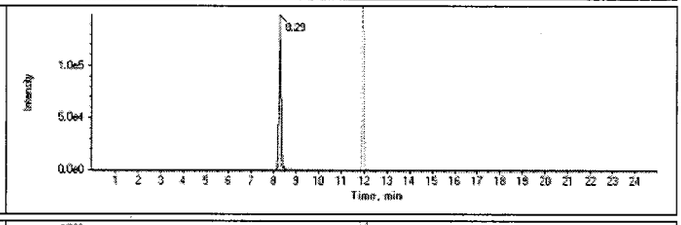


Surr-13c-PFHxA (315.0 / 270.0)

RT (Exp. RT): 8.29 (8.28) min

Calculated conc: 97.673103

Area Ratio: 1.064e0
Sample Type: (Quality Control)

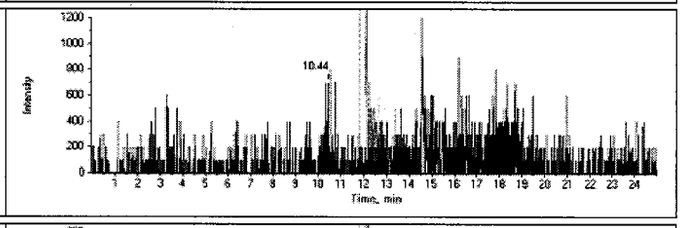


PFHpA (363.0 / 318.9)

RT (Exp. RT): 10.44 (10.40) min

Calculated conc: 0.000013

Area Ratio: 4.305e-4
Sample Type: (Quality Control)

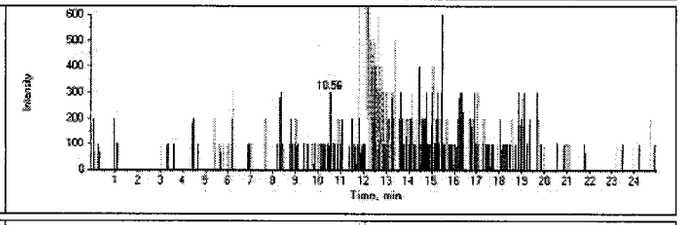


PFHpA 2 (363.0 / 168.9)

RT (Exp. RT): 10.56 (10.40) min

Calculated conc: 0.000023

Area Ratio: 2.151e-4
Sample Type: (Quality Control)

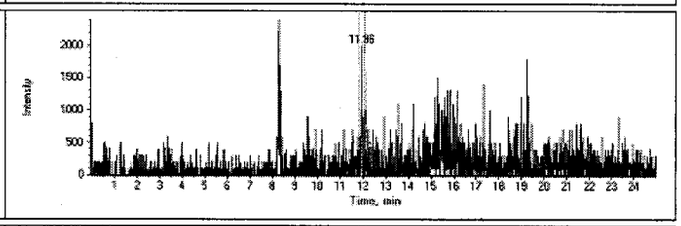


PFOA (413.0 / 368.9)

RT (Exp. RT): 11.96 (11.97) min

Calculated conc: 0.000190

Area Ratio: 5.730e-3
Sample Type: (Quality Control)

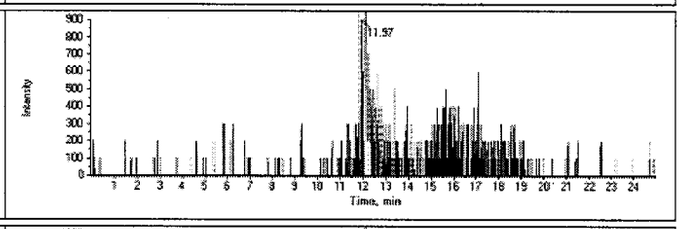


PFOA 2 (413.0 / 168.8)

RT (Exp. RT): 11.97 (11.96) min

Calculated conc: 0.000162

Area Ratio: 1.722e-3
Sample Type: (Quality Control)

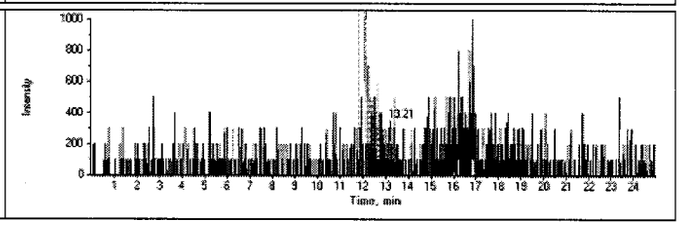


PFNA (463.0 / 419.0)

RT (Exp. RT): 13.21 (13.22) min

Calculated conc: 0.000007

Area Ratio: 1.615e-4
Sample Type: (Quality Control)



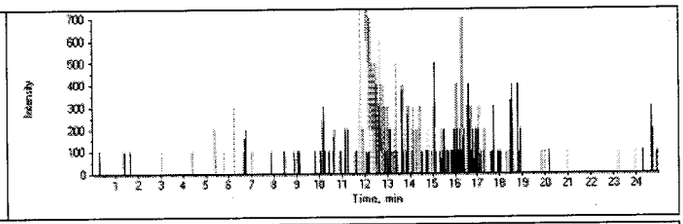
PFNA 2 (463.0 / 218.9)

RT (Exp. RT): N/A (13.21) min

Calculated conc: N/A

Area Ratio: N/A

Sample Type: (Quality Control)



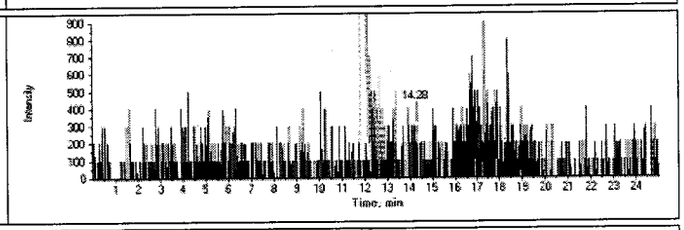
PFDA (513.0 / 469.0)

RT (Exp. RT): 14.28 (14.26) min

Calculated conc: 0.000016

Area Ratio: 3.765e-4

Sample Type: (Quality Control)



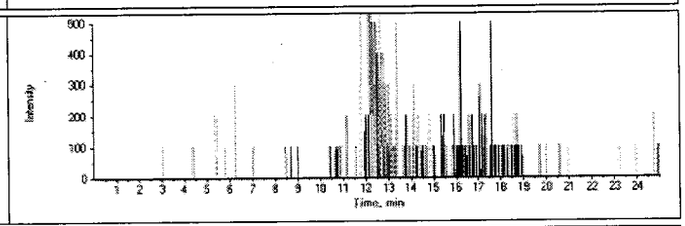
PFDA 2 (513.0 / 218.8)

RT (Exp. RT): N/A (14.26) min

Calculated conc: N/A

Area Ratio: N/A

Sample Type: (Quality Control)



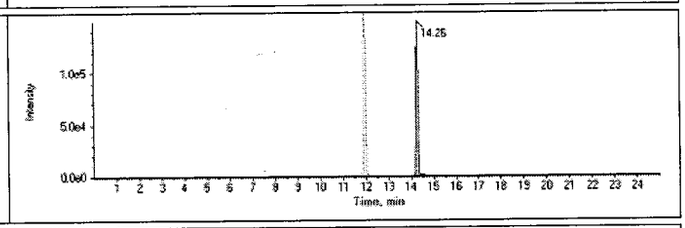
Surr-13c-PFDA (515.0 / 470.0)

RT (Exp. RT): 14.26 (14.26) min

Calculated conc: 93.069004

Area Ratio: 8.099e-1

Sample Type: (Quality Control)



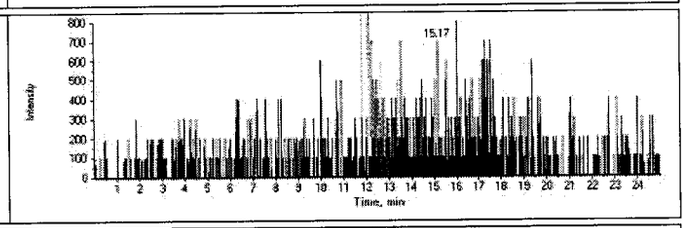
PFUnA (563.0 / 519.0)

RT (Exp. RT): 15.17 (15.14) min

Calculated conc: 0.000021

Area Ratio: 4.843e-4

Sample Type: (Quality Control)



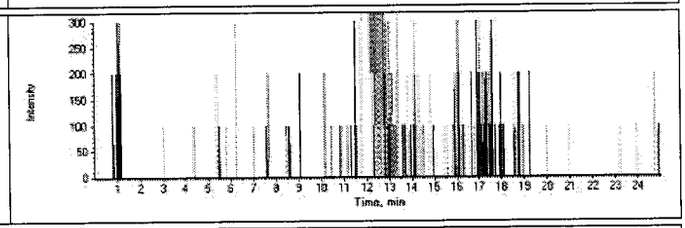
PFUnA 2 (563.0 / 268.8)

RT (Exp. RT): N/A (15.14) min

Calculated conc: N/A

Area Ratio: N/A

Sample Type: (Quality Control)



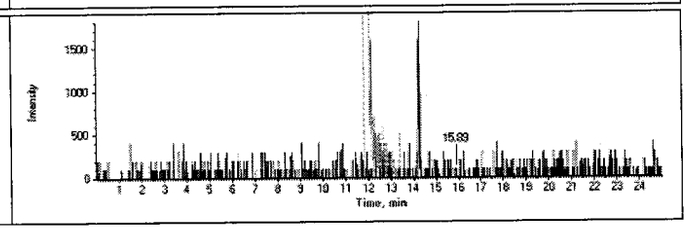
PFDoA (612.8 / 569.0)

RT (Exp. RT): 15.89 (15.90) min

Calculated conc: 0.000005

Area Ratio: 1.076e-4

Sample Type: (Quality Control)



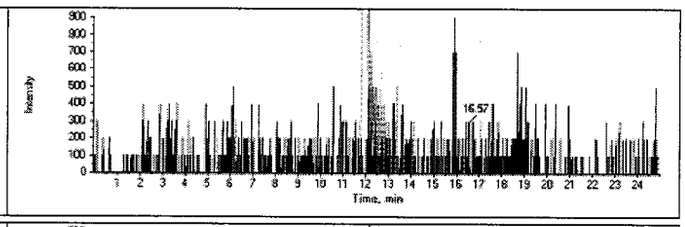
PFTrDA (662.9 / 619.0)

RT (Exp. RT): 16.57 (16.55) min

Calculated conc: 0.000014

Area Ratio: 4.305e-4

Sample Type: (Quality Control)



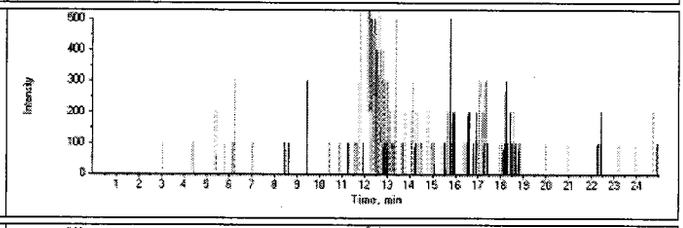
PFTrDA 2 (662.9 / 168.9)

RT (Exp. RT): N/A (16.55) min

Calculated conc: N/A

Area Ratio: N/A

Sample Type: (Quality Control)



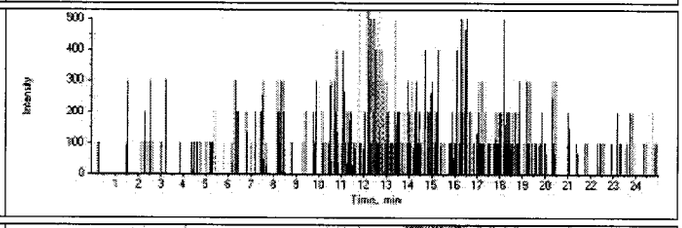
PFTA (713.3 / 669.0)

RT (Exp. RT): 17.13 (17.11) min

Calculated conc: 0.000013

Area Ratio: 1.077e-4

Sample Type: (Quality Control)



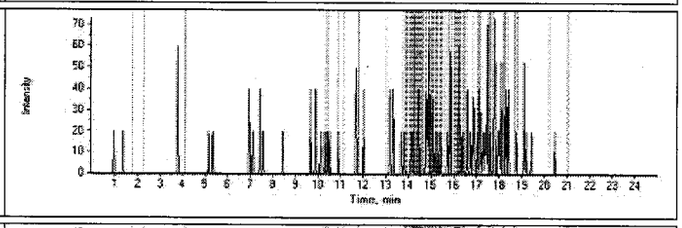
PFBS (299.0 / 79.9)

RT (Exp. RT): N/A (5.96) min

Calculated conc: N/A

Area Ratio: N/A

Sample Type: (Quality Control)



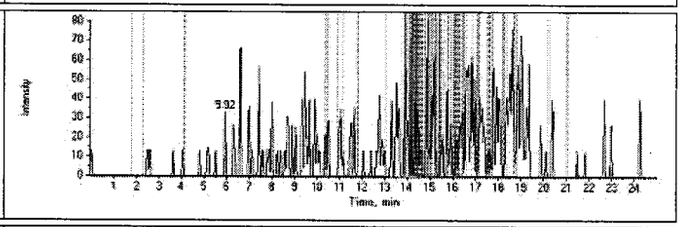
PFBS 2 (299.0 / 99.0)

RT (Exp. RT): 5.92 (5.97) min

Calculated conc: 0.000036

Area Ratio: 1.135e-4

Sample Type: (Quality Control)



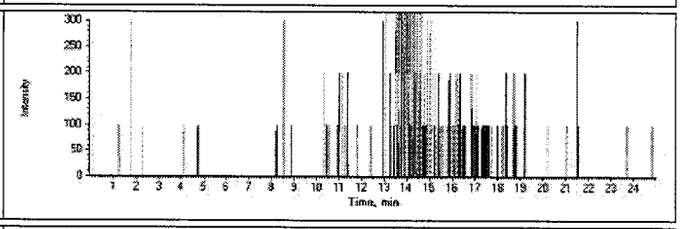
PFHxS (398.9 / 80.0)

RT (Exp. RT): N/A (10.55) min

Calculated conc: N/A

Area Ratio: N/A

Sample Type: (Quality Control)



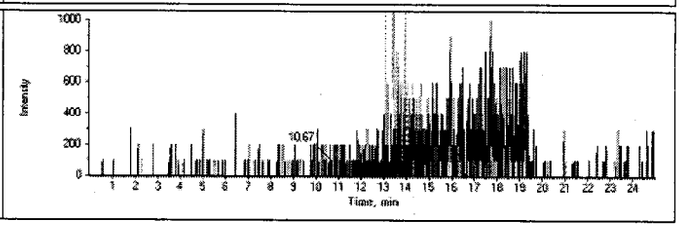
PFHxS 2 (398.9 / 99.0)

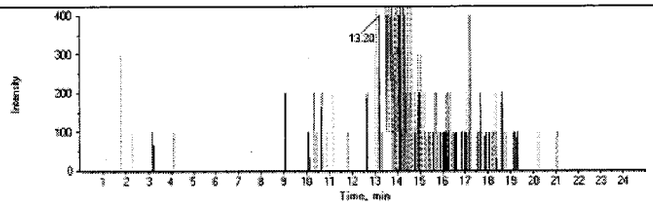
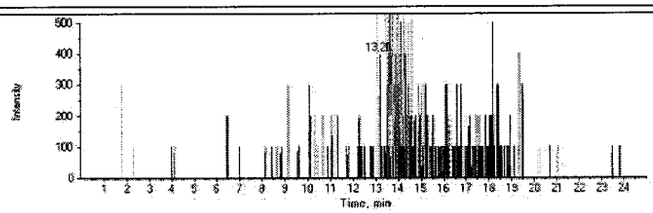
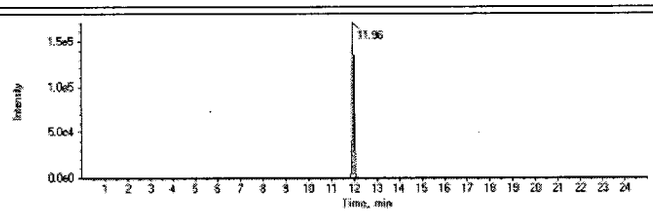
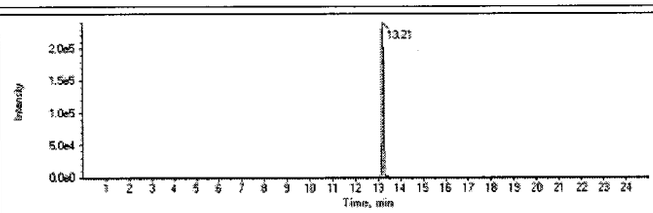
RT (Exp. RT): 10.67 (10.54) min

Calculated conc: 0.000022

Area Ratio: 7.566e-5

Sample Type: (Quality Control)

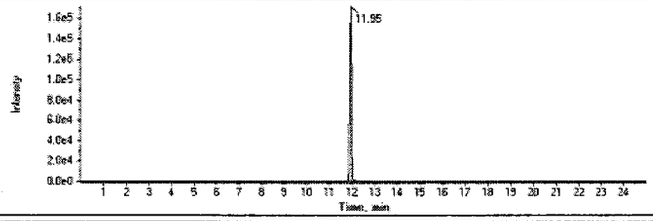
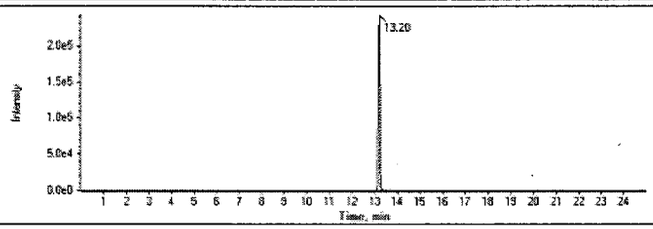


PFOS (499.0 / 79.9) RT (Exp. RT): 13.20 (13.22) min Calculated conc: 0.000035 Area Ratio: 3.407e-4 Sample Type: (Quality Control)	
PFOS 2 (499.0 / 99.0) RT (Exp. RT): 13.20 (13.21) min Calculated conc: 0.000128 Area Ratio: 3.785e-4 Sample Type: (Quality Control)	
13C-PFOA (417.0 / 372.0) RT (Exp. RT): 11.96 (11.96) min Calculated conc: 96.161265 Area Ratio: N/A Sample Type: (Quality Control)	
13C-PFOS (503.0 / 80.0) RT (Exp. RT): 13.21 (13.22) min Calculated conc: 99.265976 Area Ratio: N/A Sample Type: (Quality Control)	

Sample Name	201407110113	**Injection Vial**	20
Sample ID		**Injection Volume**	5.00
Sample Type	Quality Control	**Algorithm Used**	MQ4
Acquisition Date	7/17/2014 1:39:41 AM	**Dilution Factor**	1.00
Acquisition Method	@537-ShortRun-110613-Ali.dam	**Weight to Volume**	N/A
Project	EPA537\2014_07_16	**Instrument Name**	API 4000
Data File	@537-Batch#780662-071614.wiff		
Result Table	@537-Batch#780662-071614		
Sample Comment	Prep. By FAM@07/14/2014		

Internal Standard	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
IS-13C-PFOA	909879	11.95	100.00000	-
IS-13C-PFOS	1251568	13.20	100.00000	-

Target Analyte	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
PFHxA	1.192e+04	8.28	0.00000	0.000825
Surr-13c-PFHxA	9.581e+05	8.27	100.00000	96.614555
PFHpA	9.770e+04	10.39	0.00000	0.003315
PFHpA 2	2.584e+04	10.39	0.00000	0.003027
PFOA	1.389e+05	11.95	0.00000	0.005059
PFOA 2	4.653e+04	11.95	0.00000	0.004813
PFNA	5.892e+05	13.20	0.00000	0.028696
PFNA 2	1.502e+05	13.20	0.00000	0.027610
PFDA	1.960e+02	14.24	0.00000	0.000009
PFDA 2	N/A	N/A	0.00000	N/A
Surr-13c-PFDA	6.959e+05	14.24	100.00000	87.883406
PFUnA	3.920e+02	15.14	0.00000	0.000019
PFUnA 2	N/A	N/A	0.00000	N/A
PFDoA	1.470e+02	16.08	0.00000	0.000008
PFTrDA	2.940e+02	16.57	0.00000	0.000011
PFTrDA 2	N/A	N/A	0.00000	N/A
PFTA	2.450e+02	17.06	0.00000	0.000033
PFBS	8.340e+02	5.95	0.00000	0.000076
PFBS 2	3.420e+02	6.00	0.00000	0.000087
PFHxS	1.717e+03	10.53	0.00000	0.000131
PFHxS 2	3.680e+02	10.54	0.00000	0.000084
PFOS	2.940e+02	13.23	0.00000	0.000024
PFOS 2	1.960e+02	13.21	0.00000	0.000053
13C-PFOA	9.099e+05	11.95	100.00000	95.995982
13C-PFOS	1.252e+06	13.20	100.00000	95.865947

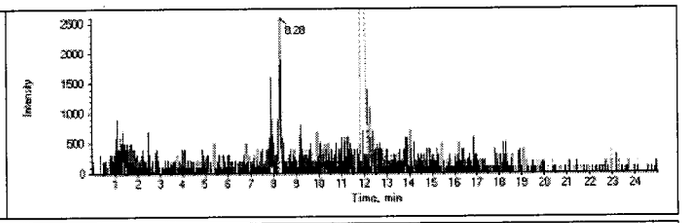
IS-13C-PFOA (Internal Standard) RT (Exp. RT): 11.95(11.96) min Concentration: 100.00000 Sample Type: (Quality Control)	
IS-13C-PFOS (Internal Standard) RT (Exp. RT): 13.20(13.22) min Concentration: 100.00000 Sample Type: (Quality Control)	

PFHxA (313.0 / 268.8)

RT (Exp. RT): 8.28 (8.28) min

Calculated conc: 0.000825

Area Ratio: 1.310e-2
Sample Type: (Quality Control)

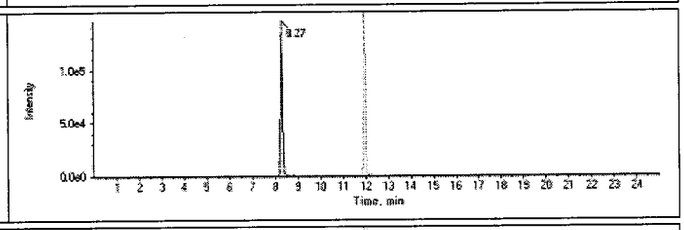


Surr-13c-PFHxA (315.0 / 270.0)

RT (Exp. RT): 8.27 (8.28) min

Calculated conc: 96.614555

Area Ratio: 1.053e0
Sample Type: (Quality Control)

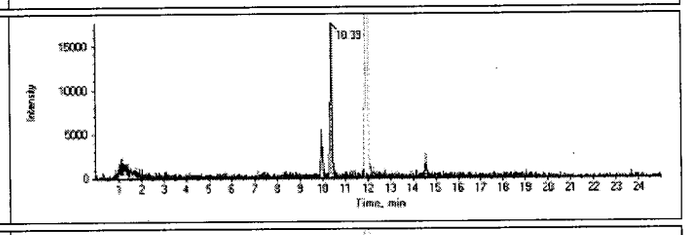


PFHpA (363.0 / 318.9)

RT (Exp. RT): 10.39 (10.40) min

Calculated conc: 0.003315

Area Ratio: 1.074e-1
Sample Type: (Quality Control)

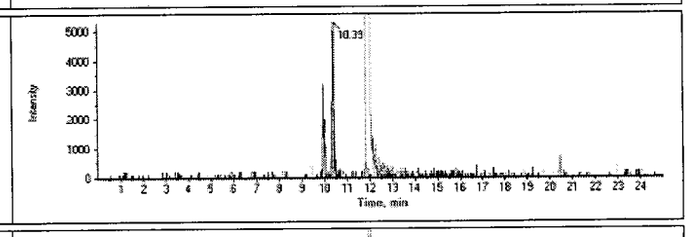


PFHpA 2 (363.0 / 168.9)

RT (Exp. RT): 10.39 (10.40) min

Calculated conc: 0.003027

Area Ratio: 2.840e-2
Sample Type: (Quality Control)

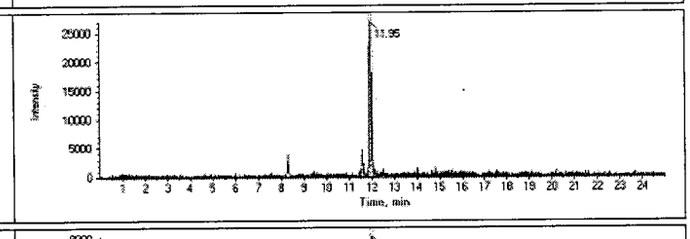


PFOA (413.0 / 368.9)

RT (Exp. RT): 11.95 (11.97) min

Calculated conc: 0.005059

Area Ratio: 1.526e-1
Sample Type: (Quality Control)

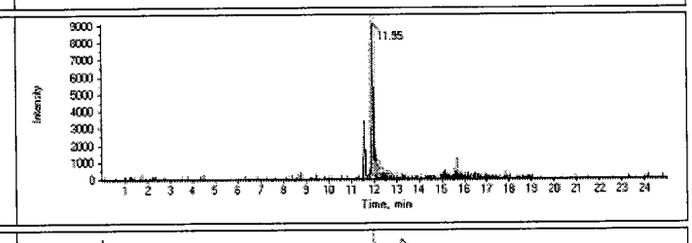


PFOA 2 (413.0 / 168.8)

RT (Exp. RT): 11.95 (11.96) min

Calculated conc: 0.004813

Area Ratio: 5.114e-2
Sample Type: (Quality Control)

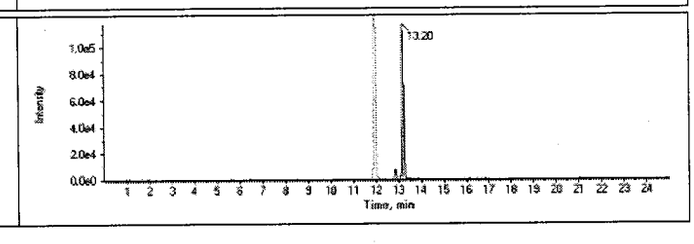


PFNA (463.0 / 419.0)

RT (Exp. RT): 13.20 (13.22) min

Calculated conc: 0.028696

Area Ratio: 6.476e-1
Sample Type: (Quality Control)

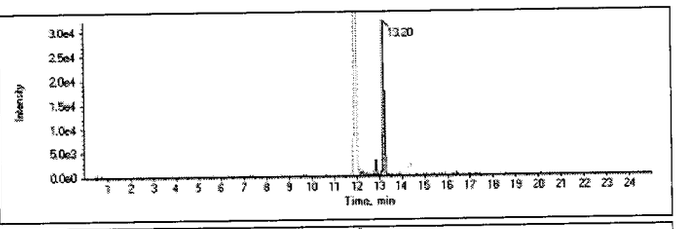


PFNA 2 (463.0 / 218.9)

RT (Exp. RT): 13.20 (13.21) min

Calculated conc: 0.027610

Area Ratio: 1.650e-1
Sample Type: (Quality Control)

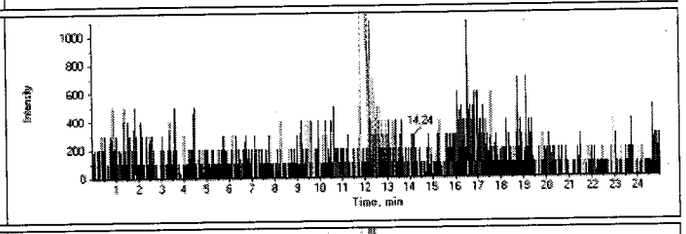


PFDA (513.0 / 469.0)

RT (Exp. RT): 14.24 (14.26) min

Calculated conc: 0.000009

Area Ratio: 2.156e-4
Sample Type: (Quality Control)

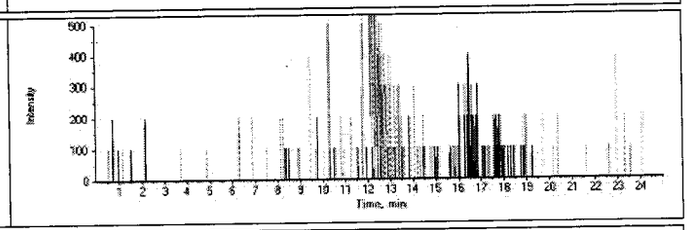


PFDA 2 (513.0 / 218.8)

RT (Exp. RT): N/A (14.26) min

Calculated conc: N/A

Area Ratio: N/A
Sample Type: (Quality Control)

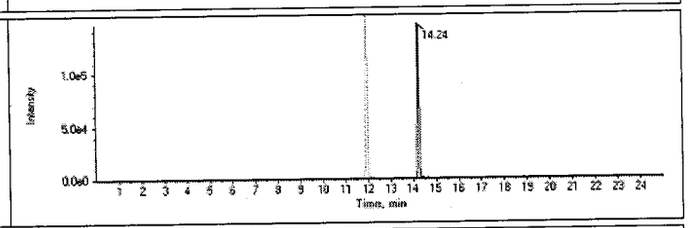


Surr-13c-PFDA (515.0 / 470.0)

RT (Exp. RT): 14.24 (14.26) min

Calculated conc: 87.883406

Area Ratio: 7.648e-1
Sample Type: (Quality Control)

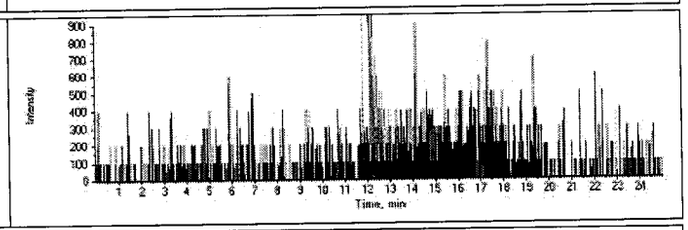


PFUnA (563.0 / 519.0)

RT (Exp. RT): 15.14 (15.14) min

Calculated conc: 0.000019

Area Ratio: 4.312e-4
Sample Type: (Quality Control)

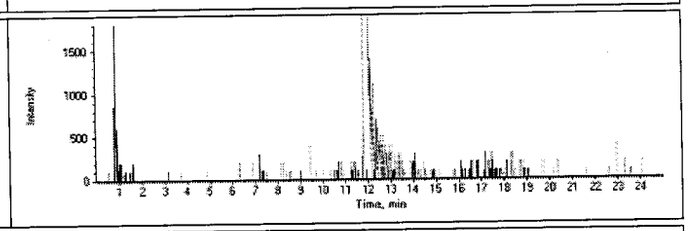


PFUnA 2 (563.0 / 268.8)

RT (Exp. RT): N/A (15.14) min

Calculated conc: N/A

Area Ratio: N/A
Sample Type: (Quality Control)

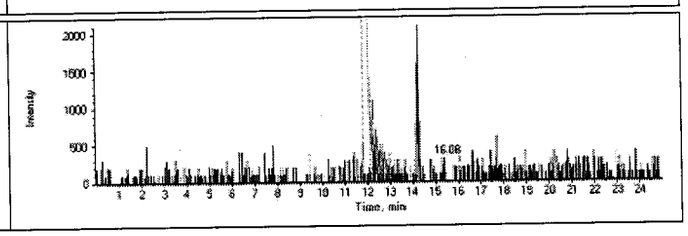


PFDoA (612.8 / 569.0)

RT (Exp. RT): 16.08 (15.90) min

Calculated conc: 0.000008

Area Ratio: 1.617e-4
Sample Type: (Quality Control)



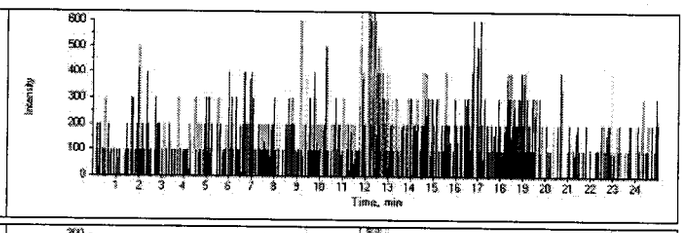
PFTrDA (662.9 / 619.0)

RT (Exp. RT): 16.57 (16.55) min

Calculated conc: 0.000011

Area Ratio: 3.234e-4

Sample Type: (Quality Control)



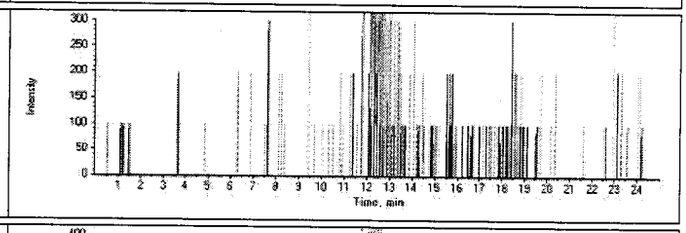
PFTrDA 2 (662.9 / 168.9)

RT (Exp. RT): N/A (16.55) min

Calculated conc: N/A

Area Ratio: N/A

Sample Type: (Quality Control)



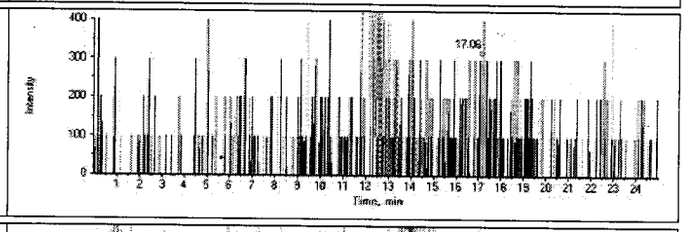
PFTA (713.3 / 669.0)

RT (Exp. RT): 17.06 (17.11) min

Calculated conc: 0.000033

Area Ratio: 2.694e-4

Sample Type: (Quality Control)



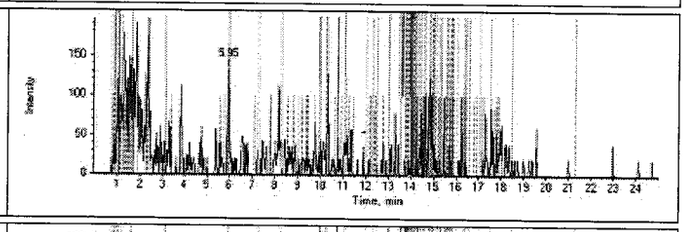
PFBS (299.0 / 79.9)

RT (Exp. RT): 5.95 (5.96) min

Calculated conc: 0.000076

Area Ratio: 6.660e-4

Sample Type: (Quality Control)



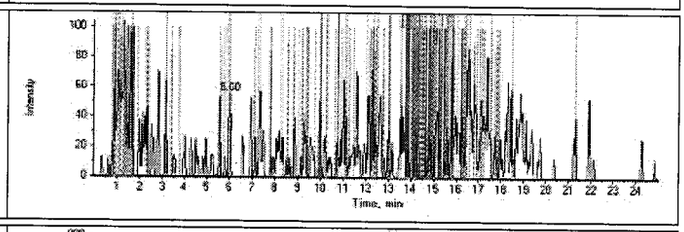
PFBS 2 (299.0 / 99.0)

RT (Exp. RT): 6.00 (5.97) min

Calculated conc: 0.000087

Area Ratio: 2.736e-4

Sample Type: (Quality Control)



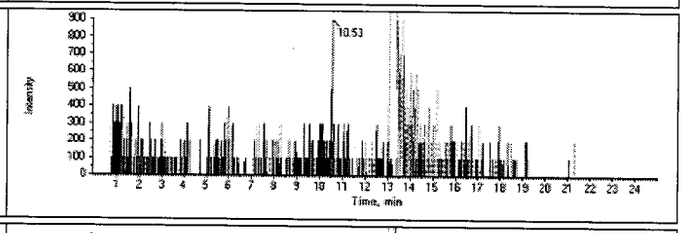
PFHxS (398.9 / 80.0)

RT (Exp. RT): 10.53 (10.55) min

Calculated conc: 0.000131

Area Ratio: 1.372e-3

Sample Type: (Quality Control)



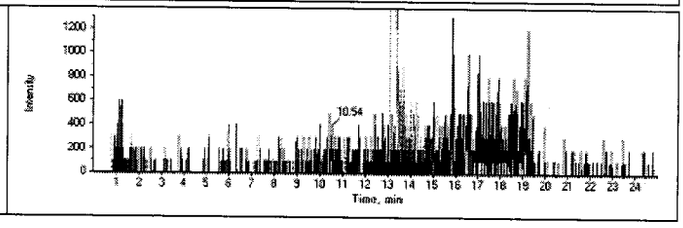
PFHxS 2 (398.9 / 99.0)

RT (Exp. RT): 10.54 (10.54) min

Calculated conc: 0.000084

Area Ratio: 2.938e-4

Sample Type: (Quality Control)



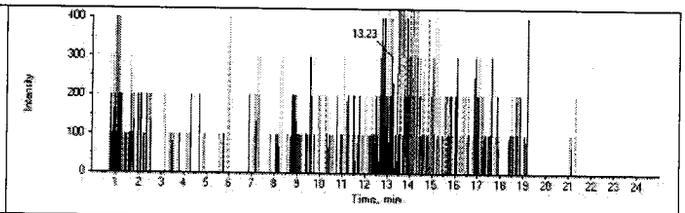
PFOS (499.0 / 79.9)

RT (Exp. RT): 13.23 (13.22) min

Calculated conc: 0.000024

Area Ratio: 2.351e-4

Sample Type: (Quality Control)



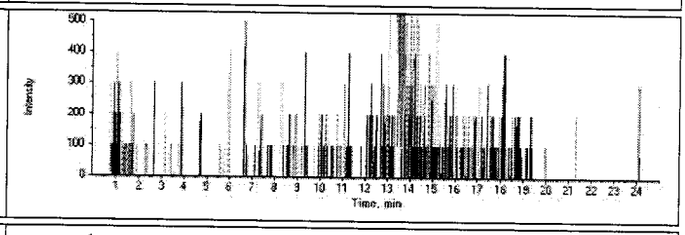
PFOS 2 (499.0 / 99.0)

RT (Exp. RT): 13.21 (13.21) min

Calculated conc: 0.000053

Area Ratio: 1.567e-4

Sample Type: (Quality Control)



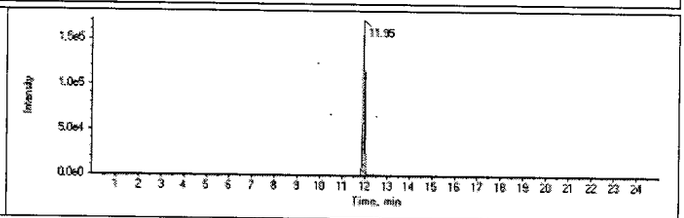
13C-PFOA (417.0 / 372.0)

RT (Exp. RT): 11.95 (11.96) min

Calculated conc: 95.995982

Area Ratio: N/A

Sample Type: (Quality Control)



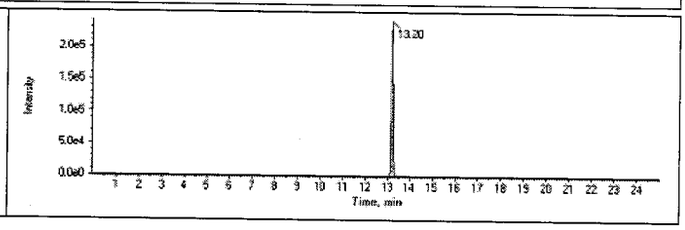
13C-PFOS (503.0 / 80.0)

RT (Exp. RT): 13.20 (13.22) min

Calculated conc: 95.865947

Area Ratio: N/A

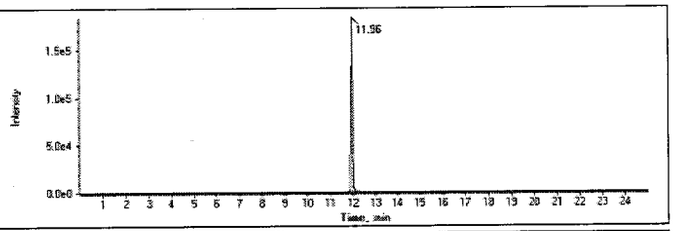
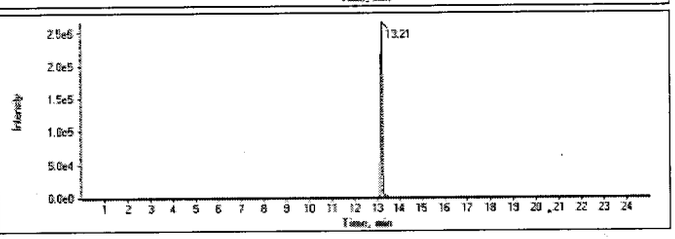
Sample Type: (Quality Control)



Sample Name	201407110111	**Injection Vial**	21
Sample ID		**Injection Volume**	5.00
Sample Type	Quality Control	**Algorithm Used**	MQ4
Acquisition Date	7/17/2014 2:05:16 AM	**Dilution Factor**	1.00
Acquisition Method	@537-ShortRun-110613-Ali.dam	**Weight to Volume**	N/A
Project	EPA537\2014_07_16	**Instrument Name**	API 4000
Data File	@537-Batch#780662-071614.wiff		
Result Table	@537-Batch#780662-071614		
Sample Comment	Prep. By FAM@07/14/2014		

Internal Standard	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
IS-13C-PFOA	900927	11.96	100.00000	-
IS-13C-PFOS	1293651	13.21	100.00000	-

Target Analyte	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
PFHxA	4.507e+04	8.29	0.00000	0.003153
Surr-13c-PFHxA	1.012e+06	8.28	100.00000	103.104710
PFHpA	7.380e+04	10.39	0.00000	0.002529
PFHpA 2	2.231e+04	10.40	0.00000	0.002640
PFOA	2.492e+05	11.96	0.00000	0.009166
PFOA 2	8.665e+04	11.95	0.00000	0.009052
PFNA	2.655e+05	13.21	0.00000	0.013060
PFNA 2	6.840e+04	13.21	0.00000	0.012701
PFDA	2.940e+02	14.28	0.00000	0.000014
PFDA 2	9.800e+01	13.82	0.00000	0.000025
Surr-13c-PFDA	6.679e+05	14.25	100.00000	85.188615
PFUnA	3.920e+02	15.16	0.00000	0.000019
PFUnA 2	N/A	N/A	0.00000	N/A
PFDoA	1.960e+02	15.87	0.00000	0.000011
PFTrDA	2.940e+02	16.57	0.00000	0.000011
PFTrDA 2	1.470e+02	16.57	0.00000	0.000024
PFTA	9.800e+01	17.04	0.00000	0.000013
PFBS	3.074e+03	5.94	0.00000	0.000270
PFBS 2	2.520e+02	5.98	0.00000	0.000062
PFHxS	7.404e+03	10.55	0.00000	0.000546
PFHxS 2	3.236e+03	10.56	0.00000	0.000713
PFOS	9.800e+01	13.23	0.00000	0.000008
PFOS 2	2.450e+02	13.20	0.00000	0.000064
13C-PFOA	9.009e+05	11.96	100.00000	95.051493
13C-PFOS	1.294e+06	13.21	100.00000	99.089333

IS-13C-PFOA (Internal Standard) RT (Exp. RT): 11.96(11.96) min Concentration: 100.00000 Sample Type: (Quality Control)	
IS-13C-PFOS (Internal Standard) RT (Exp. RT): 13.21(13.22) min Concentration: 100.00000 Sample Type: (Quality Control)	

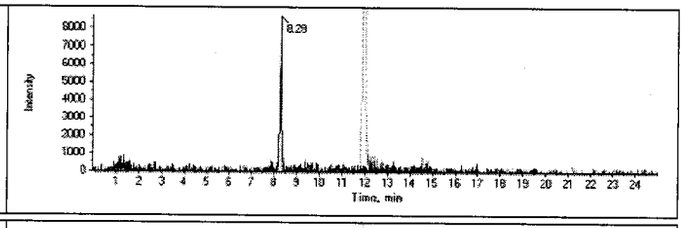
PFHxA (313.0 / 268.8)

RT (Exp. RT): 8.29 (8.28) min

Calculated conc: 0.003153

Area Ratio: 5.003e-2

Sample Type: (Quality Control)



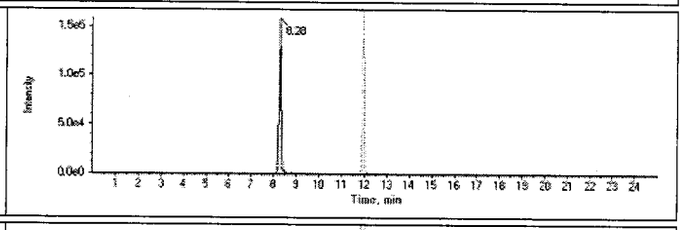
Surr-13c-PFHxA (315.0 / 270.0)

RT (Exp. RT): 8.28 (8.28) min

Calculated conc: 103.104710

Area Ratio: 1.124e0

Sample Type: (Quality Control)



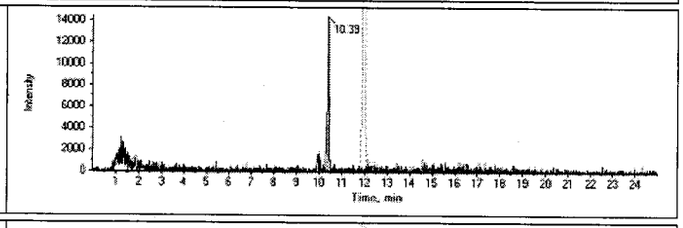
PFHpA (363.0 / 318.9)

RT (Exp. RT): 10.39 (10.40) min

Calculated conc: 0.002529

Area Ratio: 8.192e-2

Sample Type: (Quality Control)



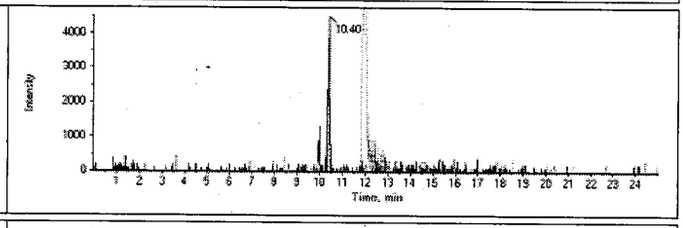
PFHpA 2 (363.0 / 168.9)

RT (Exp. RT): 10.40 (10.40) min

Calculated conc: 0.002640

Area Ratio: 2.476e-2

Sample Type: (Quality Control)



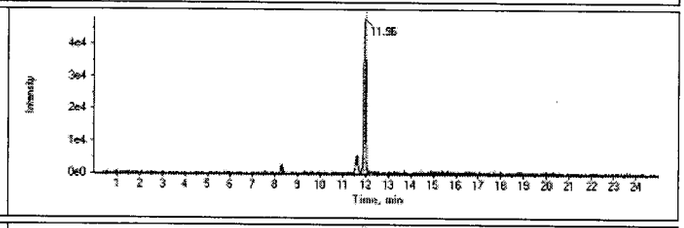
PFOA (413.0 / 368.9)

RT (Exp. RT): 11.96 (11.97) min

Calculated conc: 0.009166

Area Ratio: 2.766e-1

Sample Type: (Quality Control)



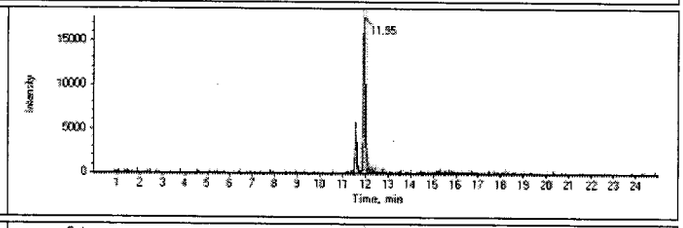
PFOA 2 (413.0 / 168.8)

RT (Exp. RT): 11.95 (11.96) min

Calculated conc: 0.009052

Area Ratio: 9.618e-2

Sample Type: (Quality Control)



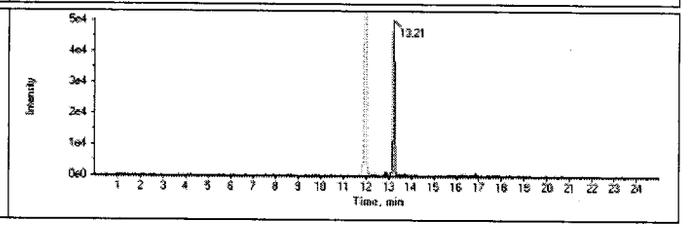
PFNA (463.0 / 419.0)

RT (Exp. RT): 13.21 (13.22) min

Calculated conc: 0.013060

Area Ratio: 2.947e-1

Sample Type: (Quality Control)

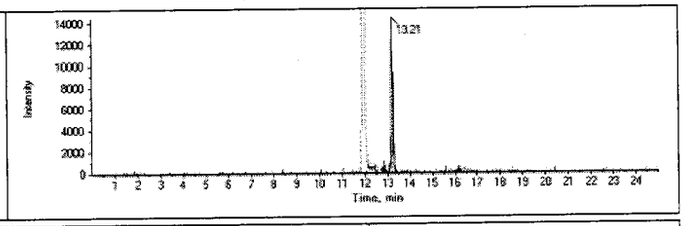


PFNA 2 (463.0 / 218.9)

RT (Exp. RT): 13.21 (13.21) min

Calculated conc: 0.012701

Area Ratio: 7.593e-2
Sample Type: (Quality Control)

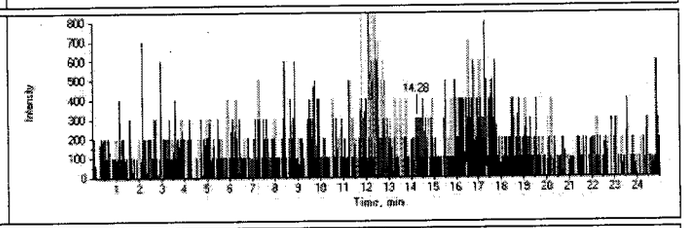


PFDA (513.0 / 469.0)

RT (Exp. RT): 14.28 (14.26) min

Calculated conc: 0.000014

Area Ratio: 3.265e-4
Sample Type: (Quality Control)

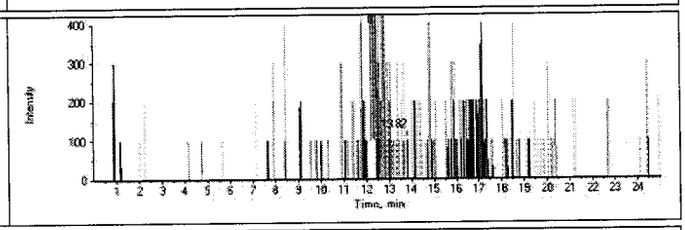


PFDA 2 (513.0 / 218.8)

RT (Exp. RT): 13.82 (14.26) min

Calculated conc: 0.000025

Area Ratio: 1.089e-4
Sample Type: (Quality Control)

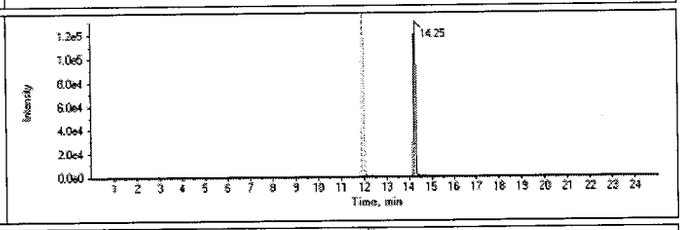


Surr-13c-PFDA (515.0 / 470.0)

RT (Exp. RT): 14.25 (14.26) min

Calculated conc: 85.188615

Area Ratio: 7.413e-1
Sample Type: (Quality Control)

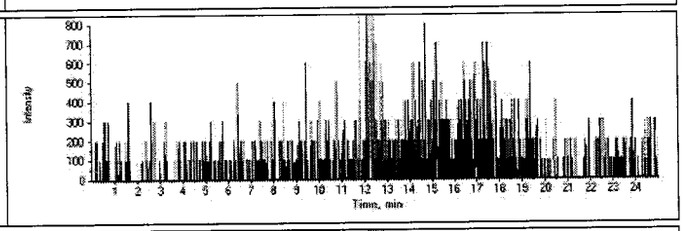


PFUnA (563.0 / 519.0)

RT (Exp. RT): 15.16 (15.14) min

Calculated conc: 0.000019

Area Ratio: 4.353e-4
Sample Type: (Quality Control)

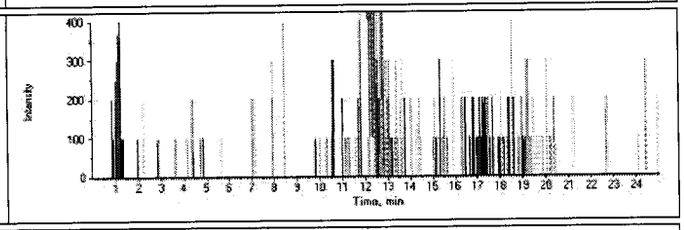


PFUnA 2 (563.0 / 268.8)

RT (Exp. RT): N/A (15.14) min

Calculated conc: N/A

Area Ratio: N/A
Sample Type: (Quality Control)

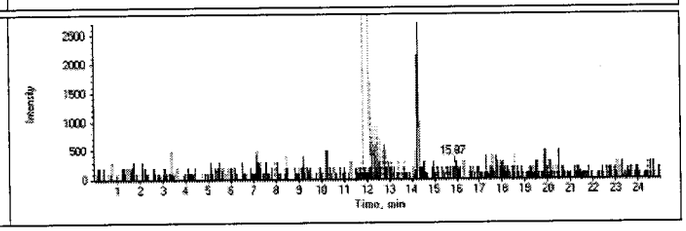


PFDoA (612.8 / 569.0)

RT (Exp. RT): 15.87 (15.90) min

Calculated conc: 0.000011

Area Ratio: 2.176e-4
Sample Type: (Quality Control)

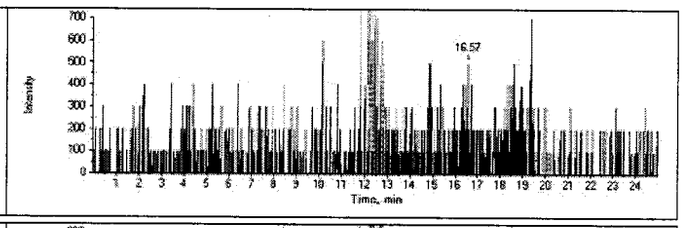


PFTrDA (662.9 / 619.0)

RT (Exp. RT): 16.57 (16.55) min

Calculated conc: 0.000011

Area Ratio: 3.267e-4
Sample Type: (Quality Control)

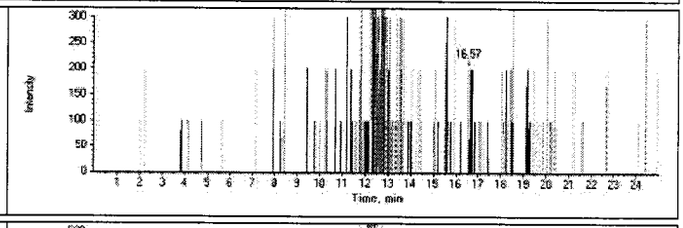


PFTrDA 2 (662.9 / 168.9)

RT (Exp. RT): 16.57 (16.55) min

Calculated conc: 0.000024

Area Ratio: 1.633e-4
Sample Type: (Quality Control)

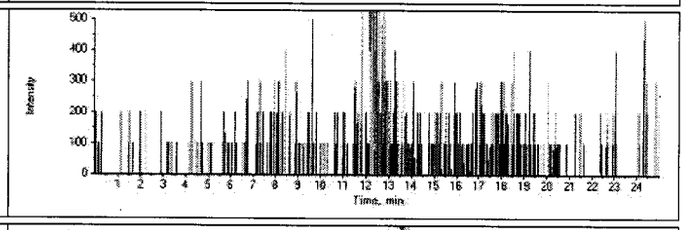


PFTA (713.3 / 669.0)

RT (Exp. RT): 17.04 (17.11) min

Calculated conc: 0.000013

Area Ratio: 1.088e-4
Sample Type: (Quality Control)

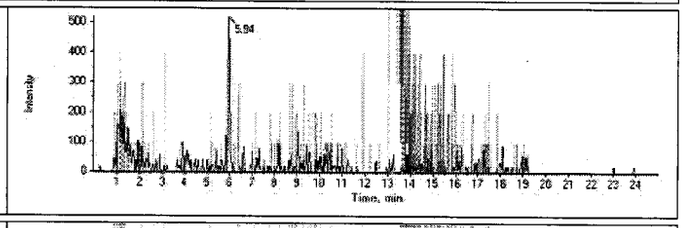


PFBS (299.0 / 79.9)

RT (Exp. RT): 5.94 (5.96) min

Calculated conc: 0.000270

Area Ratio: 2.377e-3
Sample Type: (Quality Control)

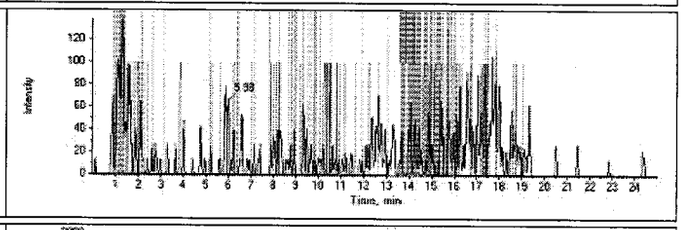


PFBS 2 (299.0 / 99.0)

RT (Exp. RT): 5.98 (5.97) min

Calculated conc: 0.000062

Area Ratio: 1.951e-4
Sample Type: (Quality Control)

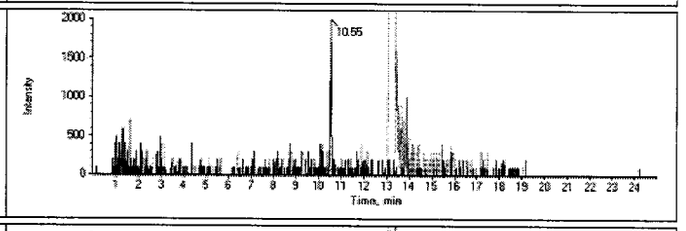


PFHxS (398.9 / 80.0)

RT (Exp. RT): 10.55 (10.55) min

Calculated conc: 0.000546

Area Ratio: 5.723e-3
Sample Type: (Quality Control)

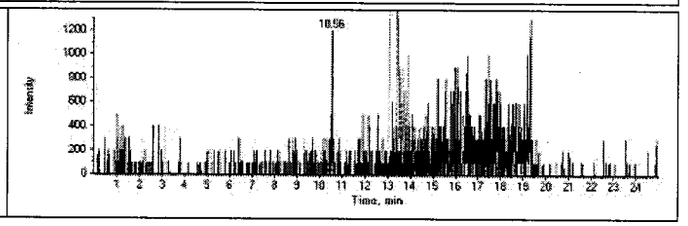


PFHxS 2 (398.9 / 99.0)

RT (Exp. RT): 10.56 (10.54) min

Calculated conc: 0.000713

Area Ratio: 2.502e-3
Sample Type: (Quality Control)

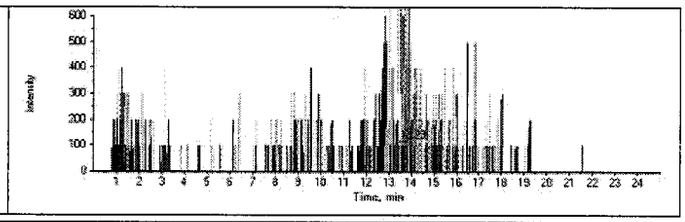


PFOS (499.0 / 79.9)

RT (Exp. RT): 13.23 (13.22) min

Calculated conc: 0.000008

Area Ratio: 7.579e-5
Sample Type: (Quality Control)

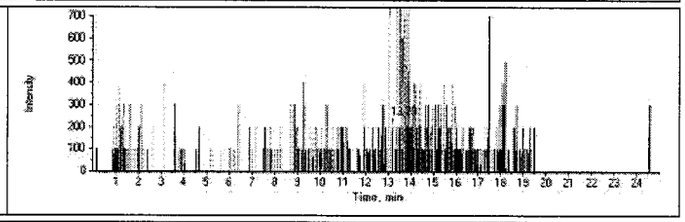


PFOS 2 (499.0 / 99.0)

RT (Exp. RT): 13.20 (13.21) min

Calculated conc: 0.000064

Area Ratio: 1.895e-4
Sample Type: (Quality Control)

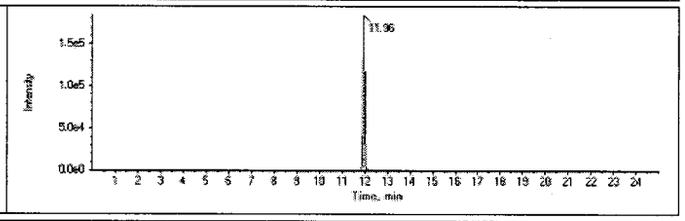


13C-PFOA (417.0 / 372.0)

RT (Exp. RT): 11.96 (11.96) min

Calculated conc: 95.051493

Area Ratio: N/A
Sample Type: (Quality Control)

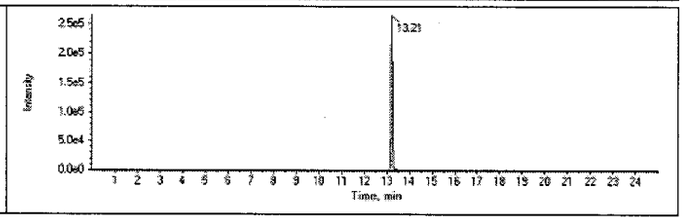


13C-PFOS (503.0 / 80.0)

RT (Exp. RT): 13.21 (13.22) min

Calculated conc: 99.089333

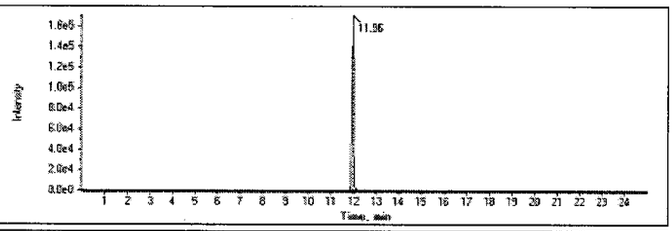
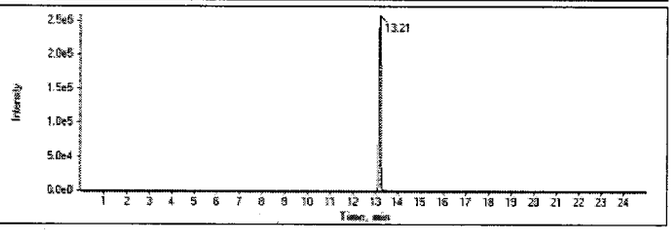
Area Ratio: N/A
Sample Type: (Quality Control)



Sample Name	201407090596	**Injection Vial**	22
Sample ID		**Injection Volume**	5.00
Sample Type	Quality Control	**Algorithm Used**	MQ4
Acquisition Date	7/17/2014 2:30:52 AM	**Dilution Factor**	1.00
Acquisition Method	@537-ShortRun-110613-Ali.dam	**Weight to Volume**	N/A
Project	EPA537\2014_07_16	**Instrument Name**	API 4000
Data File	@537-Batch#780662-071614.wiff		
Result Table	@537-Batch#780662-071614		
Sample Comment	Prep. By FAM@07/14/2014		

Internal Standard	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
IS-13C-PFOA	913300	11.96	100.00000	-
IS-13C-PFOS	1309523	13.21	100.00000	-

Target Analyte	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
PFHxA	8.025e+04	8.28	0.00000	0.005538
Surr-13c-PFHxA	1.005e+06	8.28	100.00000	100.966904
PFHpA	1.362e+05	10.40	0.00000	0.004604
PFHpA 2	3.933e+04	10.40	0.00000	0.004590
PFOA	1.008e+06	11.96	0.00000	0.036578
PFOA 2	3.636e+05	11.96	0.00000	0.037464
PFNA	3.228e+06	13.21	0.00000	0.156638
PFNA 2	8.781e+05	13.21	0.00000	0.160831
PFDA	1.005e+04	14.24	0.00000	0.000457
PFDA 2	2.501e+03	14.24	0.00000	0.000618
Surr-13c-PFDA	6.422e+05	14.25	100.00000	80.807446
PFUnA	1.128e+04	15.13	0.00000	0.000547
PFUnA 2	1.912e+03	15.13	0.00000	0.000472
PFDoA	N/A	N/A	0.00000	N/A
PFTrDA	2.450e+02	16.55	0.00000	0.000009
PFTrDA 2	N/A	N/A	0.00000	N/A
PFTA	1.960e+02	17.08	0.00000	0.000026
PFBS	1.019e+04	5.96	0.00000	0.000885
PFBS 2	4.653e+03	5.98	0.00000	0.001130
PFHxS	6.654e+04	10.55	0.00000	0.004847
PFHxS 2	2.163e+04	10.56	0.00000	0.004708
PFOS	8.254e+04	13.21	0.00000	0.006421
PFOS 2	2.702e+04	13.20	0.00000	0.006998
13C-PFOA	9.133e+05	11.96	100.00000	96.356864
13C-PFOS	1.310e+06	13.21	100.00000	100.305037

IS-13C-PFOA (Internal Standard) RT (Exp. RT): 11.96(11.96) min Concentration: 100.00000 Sample Type: (Quality Control)	
IS-13C-PFOS (Internal Standard) RT (Exp. RT): 13.21(13.22) min Concentration: 100.00000 Sample Type: (Quality Control)	

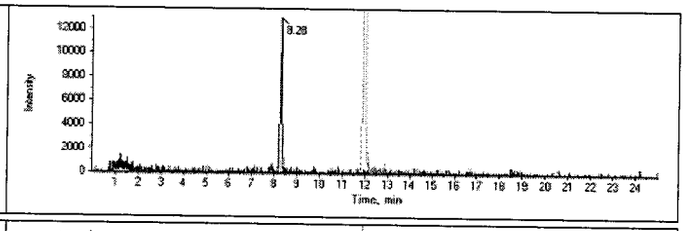
PFHxA (313.0 / 268.8)

RT (Exp. RT): 8.28 (8.28) min

Calculated conc: 0.005538

Area Ratio: 8.787e-2

Sample Type: (Quality Control)



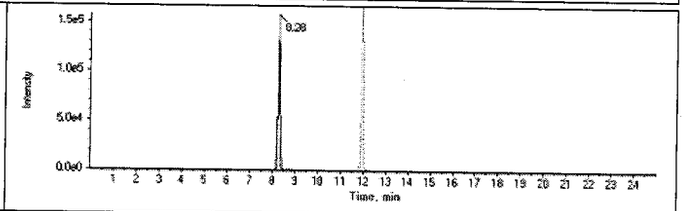
Surr-13c-PFHxA (315.0 / 270.0)

RT (Exp. RT): 8.28 (8.28) min

Calculated conc: 100.966904

Area Ratio: 1.100e0

Sample Type: (Quality Control)



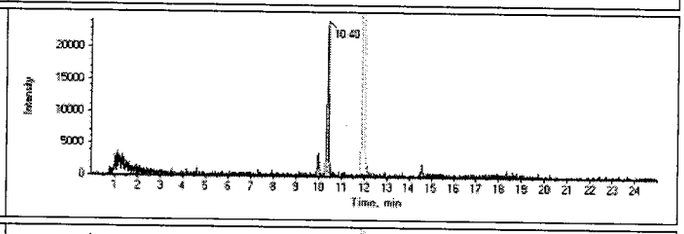
PFHpA (363.0 / 318.9)

RT (Exp. RT): 10.40 (10.40) min

Calculated conc: 0.004604

Area Ratio: 1.492e-1

Sample Type: (Quality Control)



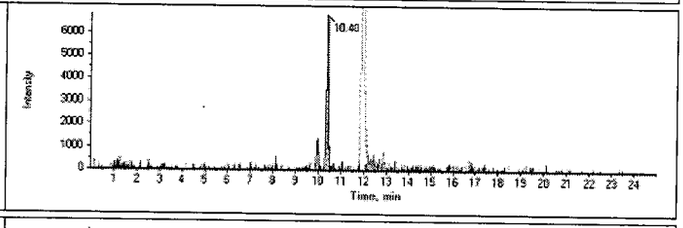
PFHpA 2 (363.0 / 168.9)

RT (Exp. RT): 10.40 (10.40) min

Calculated conc: 0.004590

Area Ratio: 4.306e-2

Sample Type: (Quality Control)



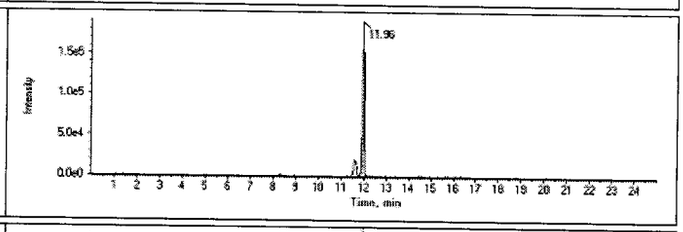
PFOA (413.0 / 368.9)

RT (Exp. RT): 11.96 (11.97) min

Calculated conc: 0.036578

Area Ratio: 1.104e0

Sample Type: (Quality Control)



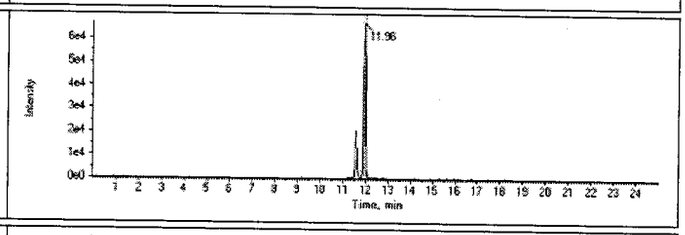
PFOA 2 (413.0 / 168.8)

RT (Exp. RT): 11.96 (11.96) min

Calculated conc: 0.037464

Area Ratio: 3.981e-1

Sample Type: (Quality Control)



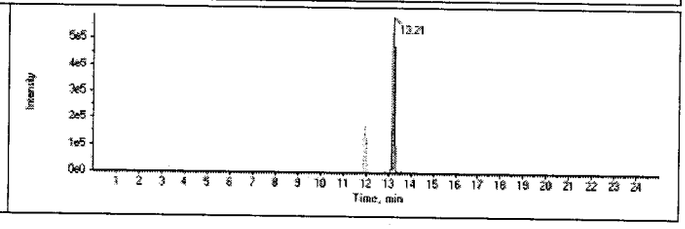
PFNA (463.0 / 419.0)

RT (Exp. RT): 13.21 (13.22) min

Calculated conc: 0.156638

Area Ratio: 3.535e0

Sample Type: (Quality Control)

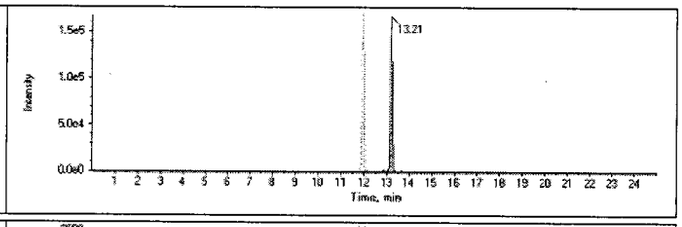


PFNA 2 (463.0 / 218.9)

RT (Exp. RT): 13.21 (13.21) min

Calculated conc: 0.160831

Area Ratio: 9.614e-1
Sample Type: (Quality Control)

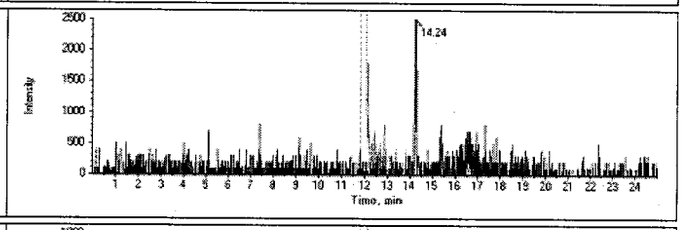


PFDA (513.0 / 469.0)

RT (Exp. RT): 14.24 (14.26) min

Calculated conc: 0.000457

Area Ratio: 1.101e-2
Sample Type: (Quality Control)

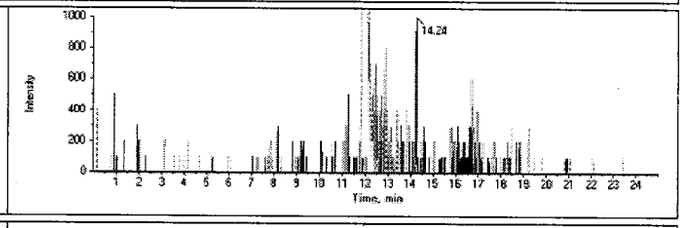


PFDA 2 (513.0 / 218.8)

RT (Exp. RT): 14.24 (14.26) min

Calculated conc: 0.000618

Area Ratio: 2.738e-3
Sample Type: (Quality Control)

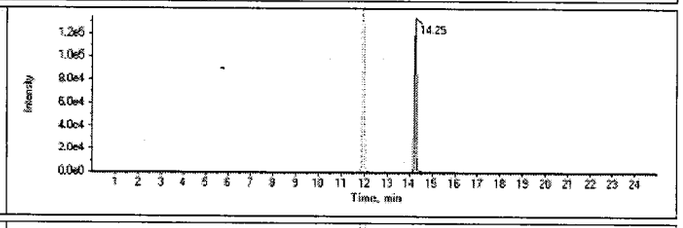


Surr-13c-PFDA (515.0 / 470.0)

RT (Exp. RT): 14.25 (14.26) min

Calculated conc: 80.807446

Area Ratio: 7.032e-1
Sample Type: (Quality Control)

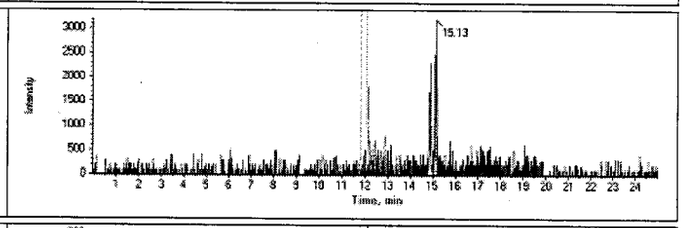


PFUnA (563.0 / 519.0)

RT (Exp. RT): 15.13 (15.14) min

Calculated conc: 0.000547

Area Ratio: 1.235e-2
Sample Type: (Quality Control)

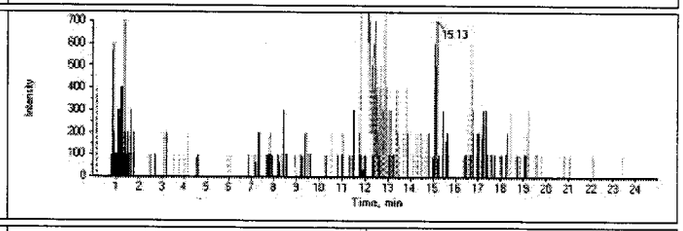


PFUnA 2 (563.0 / 268.8)

RT (Exp. RT): 15.13 (15.14) min

Calculated conc: 0.000472

Area Ratio: 2.094e-3
Sample Type: (Quality Control)

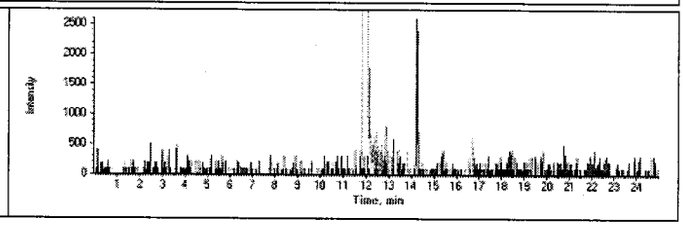


PFDoA (612.8 / 569.0)

RT (Exp. RT): N/A (15.90) min

Calculated conc: N/A

Area Ratio: N/A
Sample Type: (Quality Control)



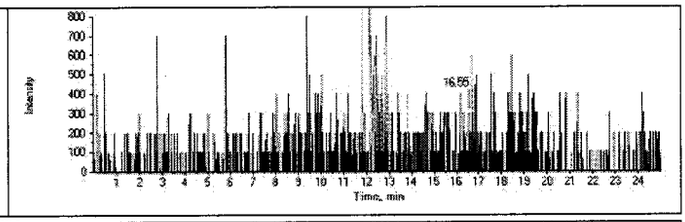
PFTrDA (662.9 / 619.0)

RT (Exp. RT): 16.55 (16.55) min

Calculated conc: 0.000009

Area Ratio: 2.685e-4

Sample Type: (Quality Control)



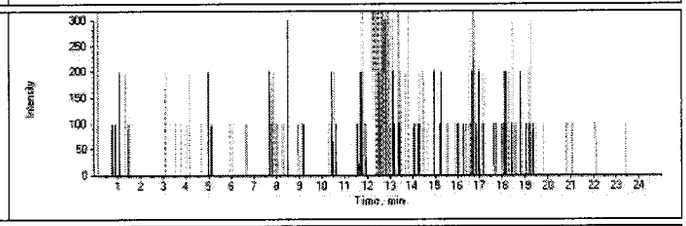
PFTrDA 2 (662.9 / 168.9)

RT (Exp. RT): N/A (16.55) min

Calculated conc: N/A

Area Ratio: N/A

Sample Type: (Quality Control)



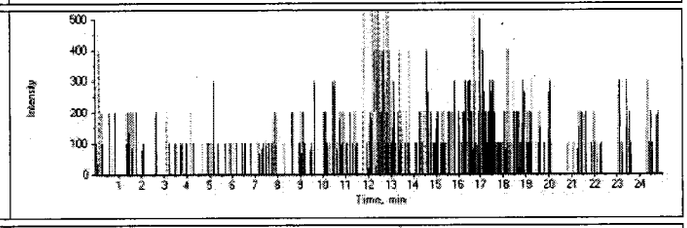
PFTA (713.3 / 669.0)

RT (Exp. RT): 17.08 (17.11) min

Calculated conc: 0.000026

Area Ratio: 2.147e-4

Sample Type: (Quality Control)



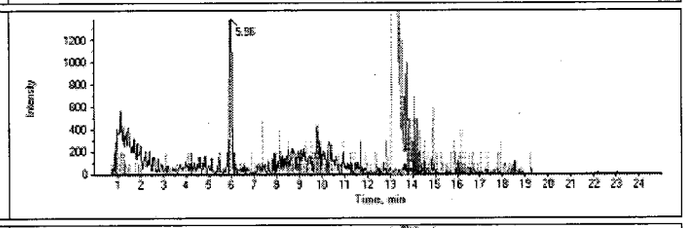
PFBS (299.0 / 79.9)

RT (Exp. RT): 5.96 (5.96) min

Calculated conc: 0.000885

Area Ratio: 7.783e-3

Sample Type: (Quality Control)



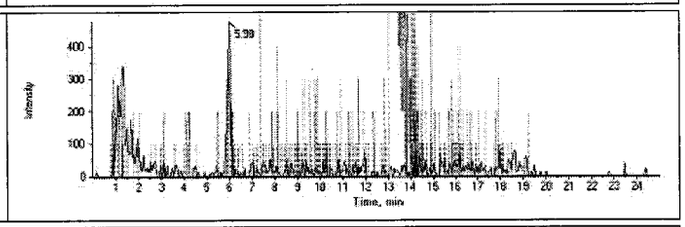
PFBS 2 (299.0 / 99.0)

RT (Exp. RT): 5.98 (5.97) min

Calculated conc: 0.001130

Area Ratio: 3.553e-3

Sample Type: (Quality Control)



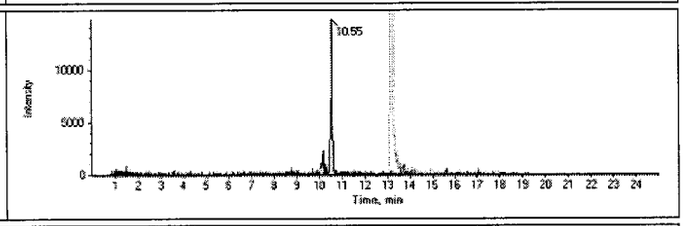
PFHxS (398.9 / 80.0)

RT (Exp. RT): 10.55 (10.55) min

Calculated conc: 0.004847

Area Ratio: 5.082e-2

Sample Type: (Quality Control)



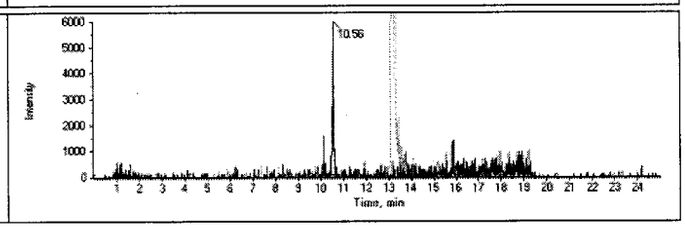
PFHxS 2 (398.9 / 99.0)

RT (Exp. RT): 10.56 (10.54) min

Calculated conc: 0.004708

Area Ratio: 1.652e-2

Sample Type: (Quality Control)



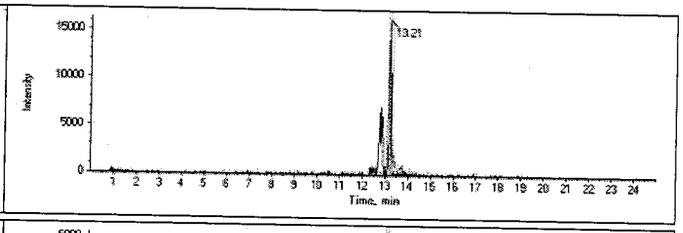
PFOS (499.0 / 79.9)

RT (Exp. RT): 13.21 (13.22) min

Calculated conc: 0.006421

Area Ratio: 6.303e-2

Sample Type: (Quality Control)



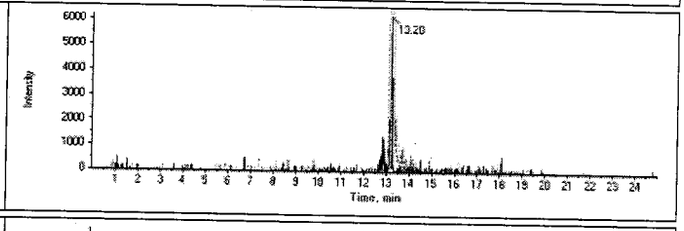
PFOS 2 (499.0 / 99.0)

RT (Exp. RT): 13.20 (13.21) min

Calculated conc: 0.006998

Area Ratio: 2.063e-2

Sample Type: (Quality Control)



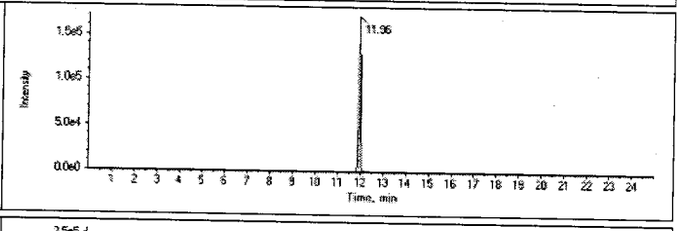
13C-PFOA (417.0 / 372.0)

RT (Exp. RT): 11.96 (11.96) min

Calculated conc: 96.356864

Area Ratio: N/A

Sample Type: (Quality Control)



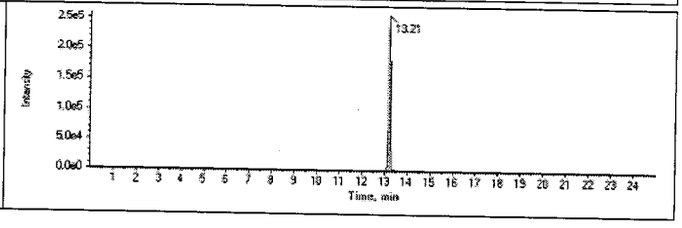
13C-PFOS (503.0 / 80.0)

RT (Exp. RT): 13.21 (13.22) min

Calculated conc: 100.305037

Area Ratio: N/A

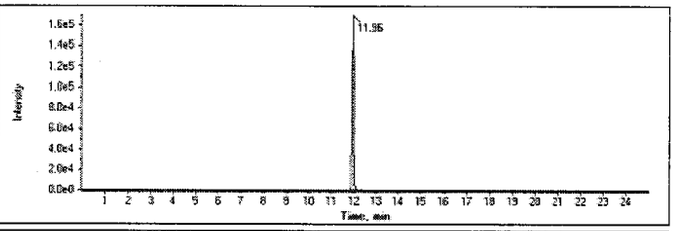
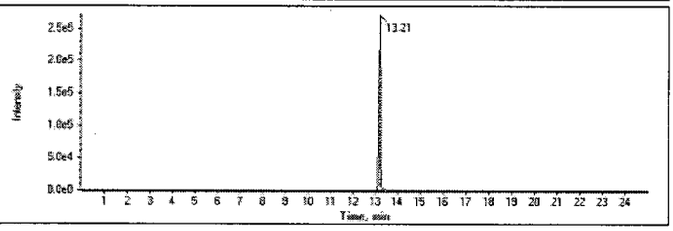
Sample Type: (Quality Control)



Sample Name	201407090597	**Injection Vial**	23
Sample ID		**Injection Volume**	5.00
Sample Type	Quality Control	**Algorithm Used**	MQ4
Acquisition Date	7/17/2014 2:56:27 AM	**Dilution Factor**	1.00
Acquisition Method	@537-ShortRun-110613-Ali.dam	**Weight to Volume**	N/A
Project	EPA537\2014_07_16	**Instrument Name**	API 4000
Data File	@537-Batch#780662-071614.wiff		
Result Table	@537-Batch#780662-071614		
Sample Comment	Prep. By FAM@07/14/2014		

Internal Standard	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
IS-13C-PFOA	884727	11.96	100.00000	-
IS-13C-PFOS	1290417	13.21	100.00000	-

Target Analyte	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
PFHxA	7.346e+04	8.28	0.00000	0.005233
Surr-13c-PFHxA	9.666e+05	8.28	100.00000	100.242446
PFHpA	1.134e+05	10.40	0.00000	0.003957
PFHpA 2	2.942e+04	10.39	0.00000	0.003544
PFOA	4.771e+05	11.96	0.00000	0.017873
PFOA 2	1.795e+05	11.96	0.00000	0.019093
PFNA	3.059e+05	13.21	0.00000	0.015321
PFNA 2	8.415e+04	13.21	0.00000	0.015911
PFDA	9.905e+03	14.24	0.00000	0.000465
PFDA 2	2.450e+02	14.26	0.00000	0.000063
Surr-13c-PFDA	7.321e+05	14.25	100.00000	95.083288
PFUnA	6.522e+03	15.13	0.00000	0.000326
PFUnA 2	5.390e+02	15.13	0.00000	0.000137
PFDoA	1.470e+02	15.88	0.00000	0.000008
PFTrDA	3.430e+02	16.55	0.00000	0.000013
PFTrDA 2	N/A	N/A	0.00000	N/A
PFTA	1.470e+02	17.22	0.00000	0.000020
PFBS	6.280e+03	5.96	0.00000	0.000553
PFBS 2	1.724e+03	5.98	0.00000	0.000425
PFHxS	7.821e+04	10.55	0.00000	0.005781
PFHxS 2	2.369e+04	10.54	0.00000	0.005233
PFOS	9.955e+04	13.21	0.00000	0.007860
PFOS 2	3.065e+04	13.21	0.00000	0.008055
13C-PFOA	8.847e+05	11.96	100.00000	93.342306
13C-PFOS	1.290e+06	13.21	100.00000	98.841642

IS-13C-PFOA (Internal Standard) RT (Exp. RT): 11.96(11.96) min Concentration: 100.00000 Sample Type: (Quality Control)	
IS-13C-PFOS (Internal Standard) RT (Exp. RT): 13.21(13.22) min Concentration: 100.00000 Sample Type: (Quality Control)	

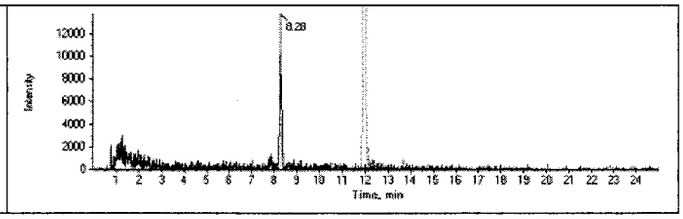
PFHxA (313.0 / 268.8)

RT (Exp. RT): 8.28 (8.28) min

Calculated conc: 0.005233

Area Ratio: 8.303e-2

Sample Type: (Quality Control)



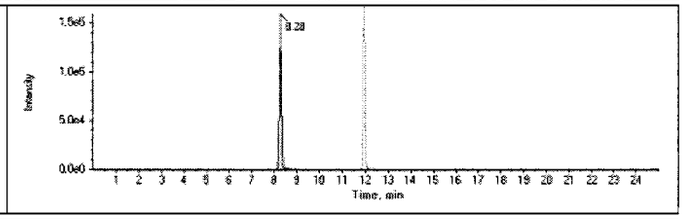
Surr-13c-PFHxA (315.0 / 270.0)

RT (Exp. RT): 8.28 (8.28) min

Calculated conc: 100.242446

Area Ratio: 1.092e0

Sample Type: (Quality Control)



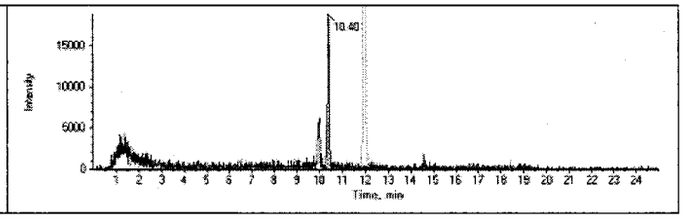
PFHpA (363.0 / 318.9)

RT (Exp. RT): 10.40 (10.40) min

Calculated conc: 0.003957

Area Ratio: 1.282e-1

Sample Type: (Quality Control)



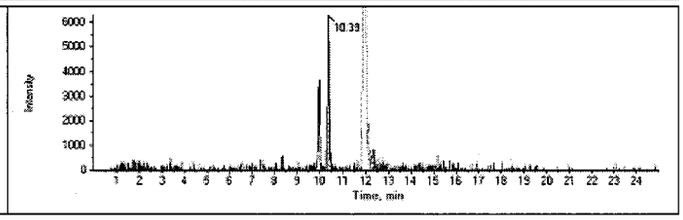
PFHpA 2 (363.0 / 168.9)

RT (Exp. RT): 10.39 (10.40) min

Calculated conc: 0.003544

Area Ratio: 3.325e-2

Sample Type: (Quality Control)



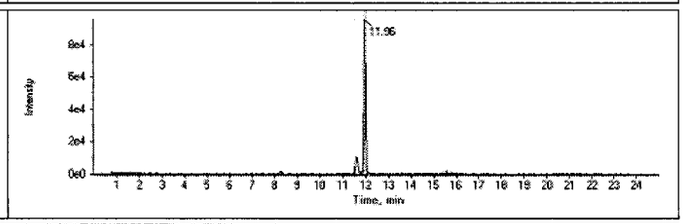
PFOA (413.0 / 368.9)

RT (Exp. RT): 11.96 (11.97) min

Calculated conc: 0.017873

Area Ratio: 5.392e-1

Sample Type: (Quality Control)



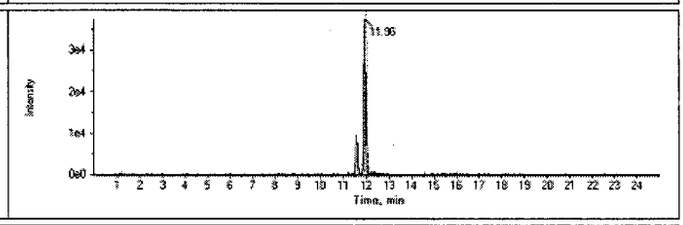
PFOA 2 (413.0 / 168.8)

RT (Exp. RT): 11.96 (11.96) min

Calculated conc: 0.019093

Area Ratio: 2.029e-1

Sample Type: (Quality Control)



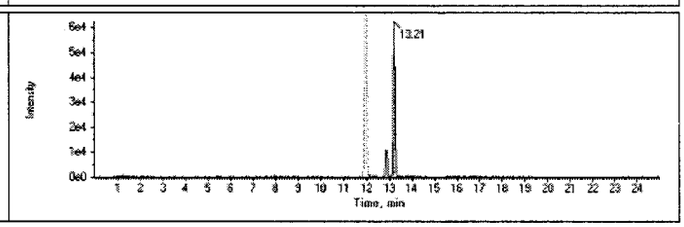
PFNA (463.0 / 419.0)

RT (Exp. RT): 13.21 (13.22) min

Calculated conc: 0.015321

Area Ratio: 3.458e-1

Sample Type: (Quality Control)

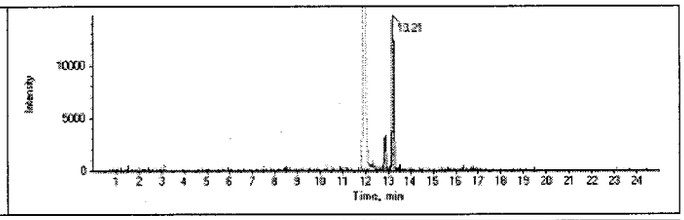


PFNA 2 (463.0 / 218.9)

RT (Exp. RT): 13.21 (13.21) min

Calculated conc: 0.015911

Area Ratio: 9.511e-2
Sample Type: (Quality Control)

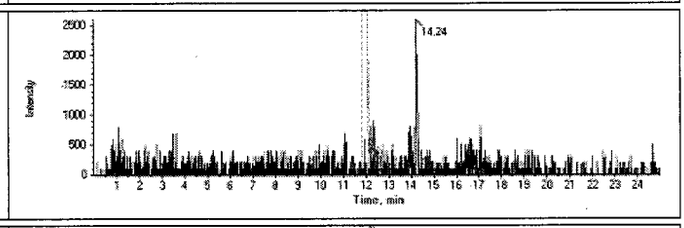


PFDA (513.0 / 469.0)

RT (Exp. RT): 14.24 (14.26) min

Calculated conc: 0.000465

Area Ratio: 1.120e-2
Sample Type: (Quality Control)

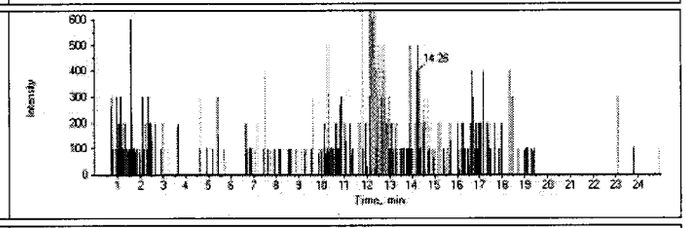


PFDA 2 (513.0 / 218.8)

RT (Exp. RT): 14.26 (14.26) min

Calculated conc: 0.000063

Area Ratio: 2.770e-4
Sample Type: (Quality Control)

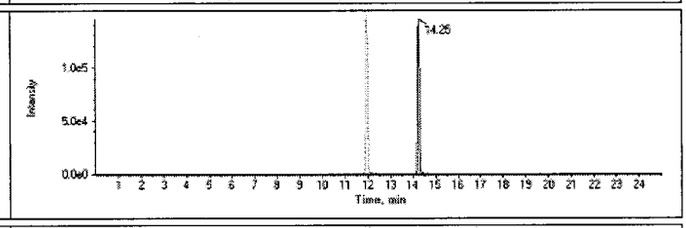


Surr-13c-PFDA (515.0 / 470.0)

RT (Exp. RT): 14.25 (14.26) min

Calculated conc: 95.083288

Area Ratio: 8.274e-1
Sample Type: (Quality Control)

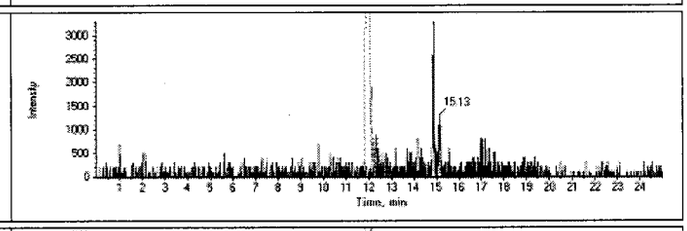


PFUnA (563.0 / 519.0)

RT (Exp. RT): 15.13 (15.14) min

Calculated conc: 0.000326

Area Ratio: 7.371e-3
Sample Type: (Quality Control)

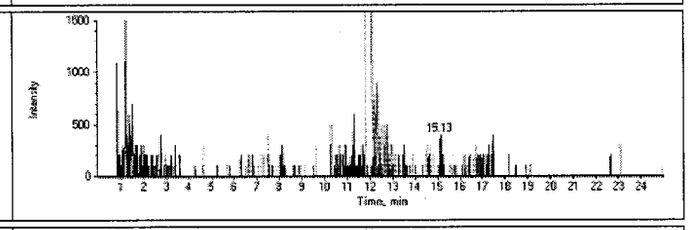


PFUnA 2 (563.0 / 268.8)

RT (Exp. RT): 15.13 (15.14) min

Calculated conc: 0.000137

Area Ratio: 6.098e-4
Sample Type: (Quality Control)

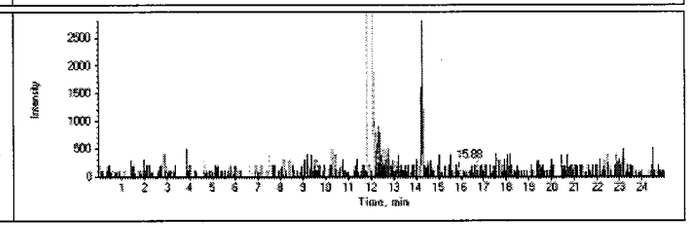


PFDoA (612.8 / 569.0)

RT (Exp. RT): 15.88 (15.90) min

Calculated conc: 0.000008

Area Ratio: 1.663e-4
Sample Type: (Quality Control)



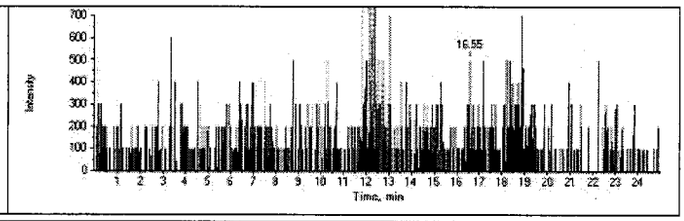
PFTrDA (662.9 / 619.0)

RT (Exp. RT): 16.55 (16.55) min

Calculated conc: 0.000013

Area Ratio: 3.881e-4

Sample Type: (Quality Control)



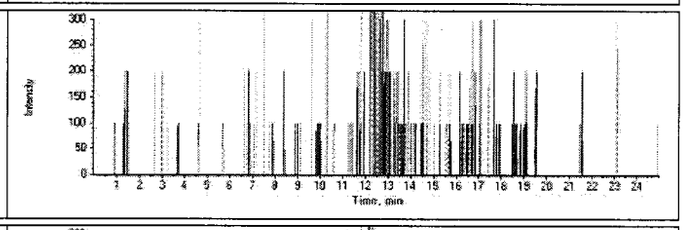
PFTrDA 2 (662.9 / 168.9)

RT (Exp. RT): N/A (16.55) min

Calculated conc: N/A

Area Ratio: N/A

Sample Type: (Quality Control)



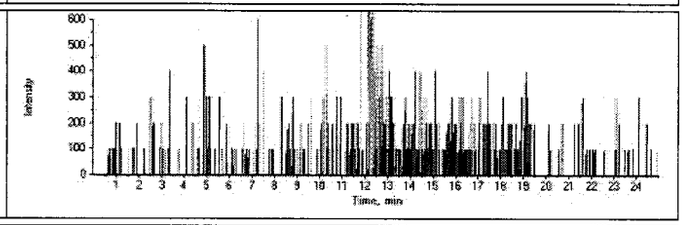
PFTA (713.3 / 669.0)

RT (Exp. RT): 17.22 (17.11) min

Calculated conc: 0.000020

Area Ratio: 1.663e-4

Sample Type: (Quality Control)



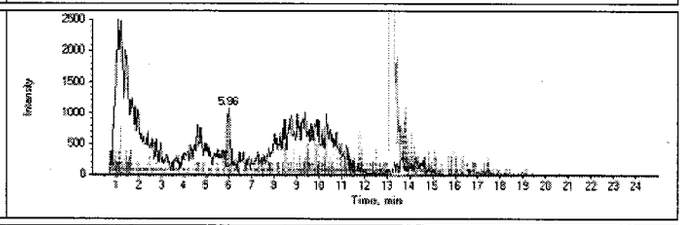
PFBS (299.0 / 79.9)

RT (Exp. RT): 5.96 (5.96) min

Calculated conc: 0.000553

Area Ratio: 4.866e-3

Sample Type: (Quality Control)



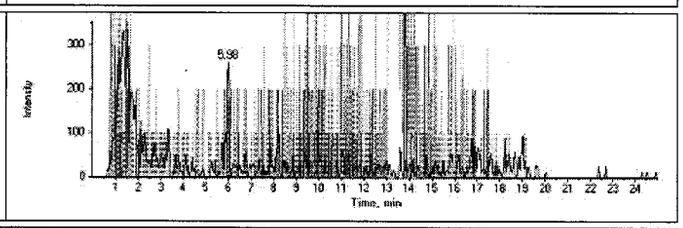
PFBS 2 (299.0 / 99.0)

RT (Exp. RT): 5.98 (5.97) min

Calculated conc: 0.000425

Area Ratio: 1.336e-3

Sample Type: (Quality Control)



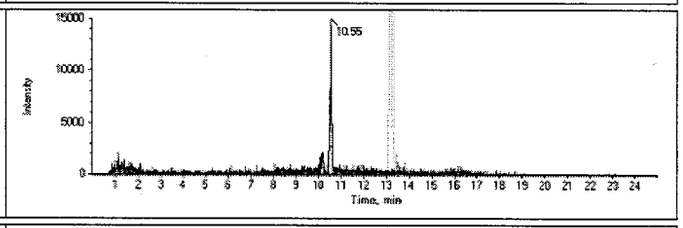
PFHxS (398.9 / 80.0)

RT (Exp. RT): 10.55 (10.55) min

Calculated conc: 0.005781

Area Ratio: 6.061e-2

Sample Type: (Quality Control)



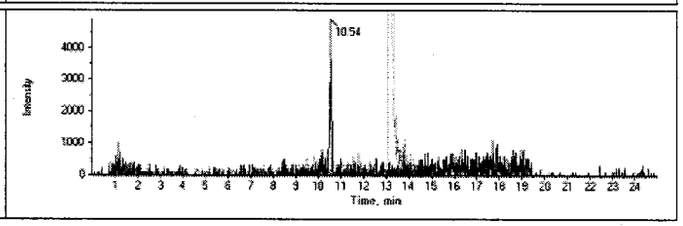
PFHxS 2 (398.9 / 99.0)

RT (Exp. RT): 10.54 (10.54) min

Calculated conc: 0.005233

Area Ratio: 1.836e-2

Sample Type: (Quality Control)

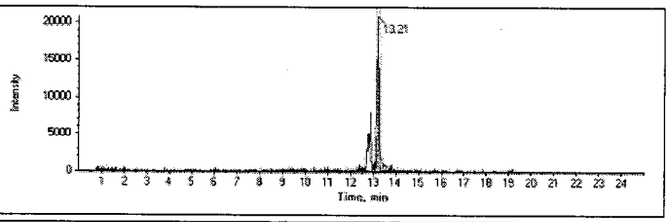


PFOS (499.0 / 79.9)

RT (Exp. RT): 13.21 (13.22) min

Calculated conc: 0.007860

Area Ratio: 7.714e-2
Sample Type: (Quality Control)

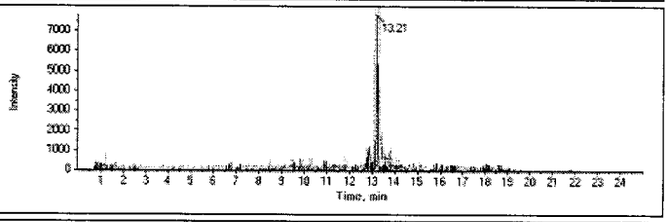


PFOS 2 (499.0 / 99.0)

RT (Exp. RT): 13.21 (13.21) min

Calculated conc: 0.008055

Area Ratio: 2.375e-2
Sample Type: (Quality Control)

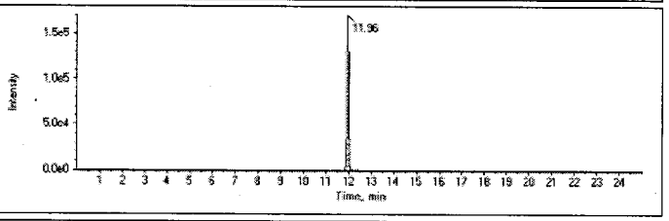


13C-PFOA (417.0 / 372.0)

RT (Exp. RT): 11.96 (11.96) min

Calculated conc: 93.342306

Area Ratio: N/A
Sample Type: (Quality Control)

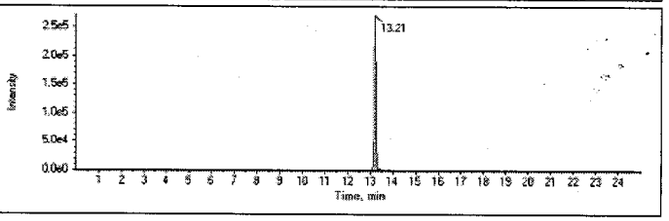


13C-PFOS (503.0 / 80.0)

RT (Exp. RT): 13.21 (13.22) min

Calculated conc: 98.841642

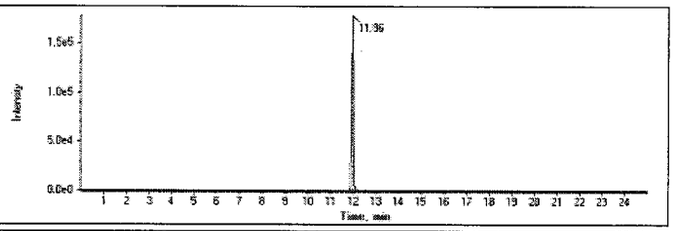
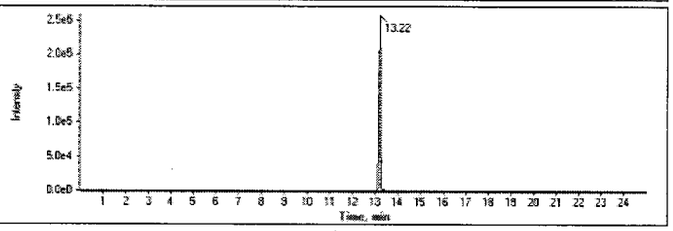
Area Ratio: N/A
Sample Type: (Quality Control)



Sample Name	201407090598	**Injection Vial**	24
Sample ID		**Injection Volume**	5.00
Sample Type	Quality Control	**Algorithm Used**	MQ4
Acquisition Date	7/17/2014 3:22:02 AM	**Dilution Factor**	1.00
Acquisition Method	@537-ShortRun-110613-Ali.dam	**Weight to Volume**	N/A
Project	EPA537\2014_07_16	**Instrument Name**	API 4000
Data File	@537-Batch#780662-071614.wiff		
Result Table	@537-Batch#780662-071614		
Sample Comment	Prep. By FAM@07/14/2014		

Internal Standard	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
IS-13C-PFOA	920410	11.96	100.00000	-
IS-13C-PFOS	1319960	13.22	100.00000	-

Target Analyte	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
PFHxA	7.167e+04	8.30	0.00000	0.004907
Surr-13c-PFHxA	9.892e+05	8.29	100.00000	98.611694
PFHpA	1.336e+05	10.40	0.00000	0.004482
PFHpA 2	3.455e+04	10.40	0.00000	0.004001
PFOA	1.001e+06	11.97	0.00000	0.036032
PFOA 2	3.594e+05	11.96	0.00000	0.036753
PFNA	3.085e+06	13.22	0.00000	0.148532
PFNA 2	8.313e+05	13.22	0.00000	0.151077
PFDA	9.905e+03	14.25	0.00000	0.000447
PFDA 2	1.569e+03	14.24	0.00000	0.000385
Surr-13c-PFDA	6.443e+05	14.26	100.00000	80.442746
PFUnA	6.450e+03	15.12	0.00000	0.000310
PFUnA 2	1.128e+03	15.15	0.00000	0.000276
PFDoA	3.430e+02	15.90	0.00000	0.000018
PFTrDA	3.430e+02	16.56	0.00000	0.000012
PFTrDA 2	N/A	N/A	0.00000	N/A
PFTA	5.890e+02	17.12	0.00000	0.000077
PFBS	6.675e+03	5.94	0.00000	0.000575
PFBS 2	4.412e+03	5.97	0.00000	0.001063
PFHxS	6.615e+04	10.55	0.00000	0.004780
PFHxS 2	2.398e+04	10.54	0.00000	0.005179
PFOS	7.929e+04	13.22	0.00000	0.006120
PFOS 2	2.476e+04	13.22	0.00000	0.006363
13C-PFOA	9.204e+05	11.96	100.00000	97.107094
13C-PFOS	1.320e+06	13.22	100.00000	101.104529

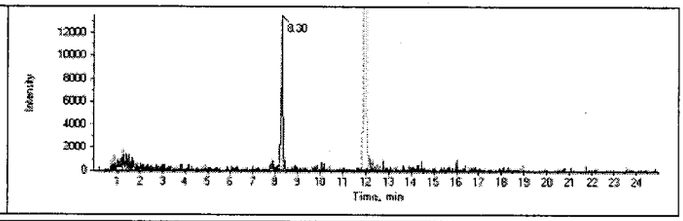
IS-13C-PFOA (Internal Standard) RT (Exp. RT): 11.96(11.96) min Concentration: 100.00000 Sample Type: (Quality Control)	
IS-13C-PFOS (Internal Standard) RT (Exp. RT): 13.22(13.22) min Concentration: 100.00000 Sample Type: (Quality Control)	

PFHxA (313.0 / 268.8)

RT (Exp. RT): 8.30 (8.28) min

Calculated conc: 0.004907

Area Ratio: 7.786e-2
Sample Type: (Quality Control)

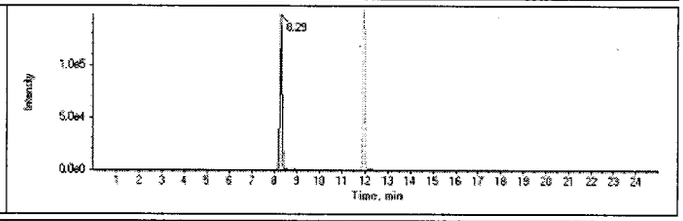


Surr-13c-PFHxA (315.0 / 270.0)

RT (Exp. RT): 8.29 (8.28) min

Calculated conc: 98.611694

Area Ratio: 1.075e0
Sample Type: (Quality Control)

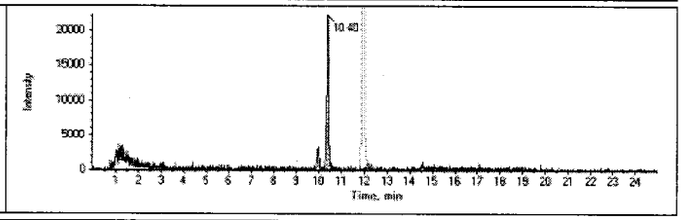


PFHpA (363.0 / 318.9)

RT (Exp. RT): 10.40 (10.40) min

Calculated conc: 0.004482

Area Ratio: 1.452e-1
Sample Type: (Quality Control)

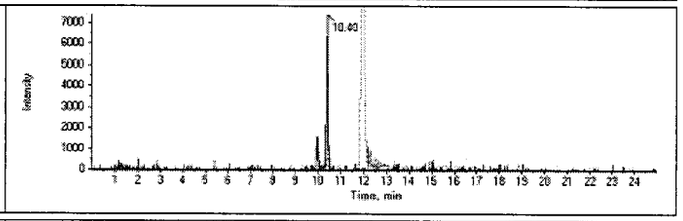


PFHpA 2 (363.0 / 168.9)

RT (Exp. RT): 10.40 (10.40) min

Calculated conc: 0.004001

Area Ratio: 3.753e-2
Sample Type: (Quality Control)

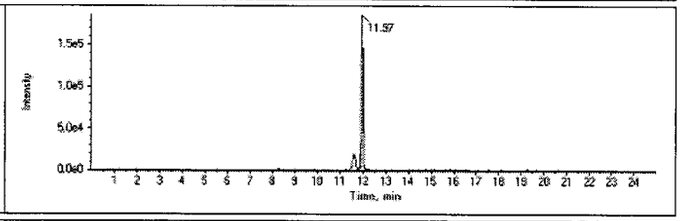


PFOA (413.0 / 368.9)

RT (Exp. RT): 11.97 (11.97) min

Calculated conc: 0.036032

Area Ratio: 1.087e0
Sample Type: (Quality Control)

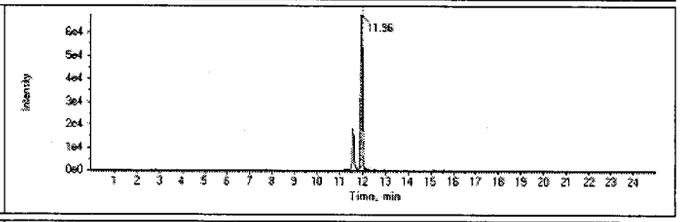


PFOA 2 (413.0 / 168.8)

RT (Exp. RT): 11.96 (11.96) min

Calculated conc: 0.036753

Area Ratio: 3.905e-1
Sample Type: (Quality Control)

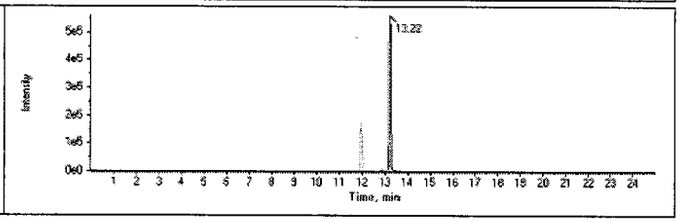


PFNA (463.0 / 419.0)

RT (Exp. RT): 13.22 (13.22) min

Calculated conc: 0.148532

Area Ratio: 3.352e0
Sample Type: (Quality Control)



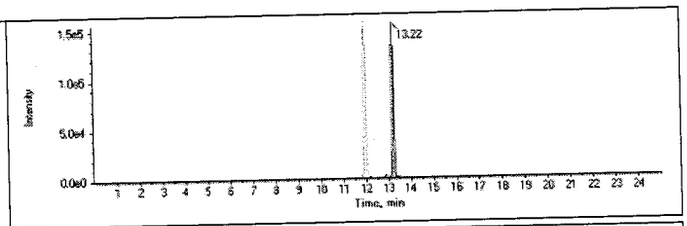
PFNA 2 (463.0 / 218.9)

RT (Exp. RT): 13.22 (13.21) min

Calculated conc: 0.151077

Area Ratio: 9.031e-1

Sample Type: (Quality Control)



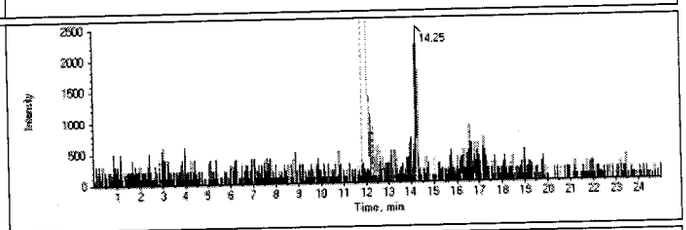
PFDA (513.0 / 469.0)

RT (Exp. RT): 14.25 (14.26) min

Calculated conc: 0.000447

Area Ratio: 1.076e-2

Sample Type: (Quality Control)



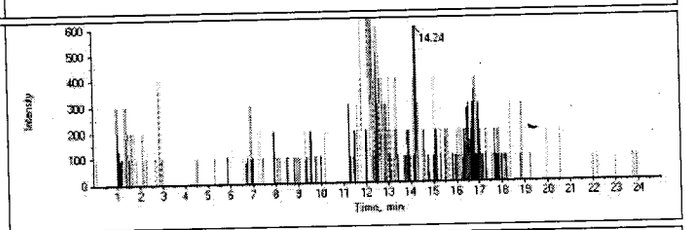
PFDA 2 (513.0 / 218.8)

RT (Exp. RT): 14.24 (14.26) min

Calculated conc: 0.000385

Area Ratio: 1.705e-3

Sample Type: (Quality Control)



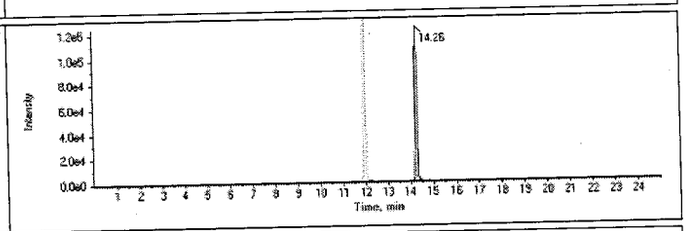
Surr-13c-PFDA (515.0 / 470.0)

RT (Exp. RT): 14.26 (14.26) min

Calculated conc: 80.442746

Area Ratio: 7.000e-1

Sample Type: (Quality Control)



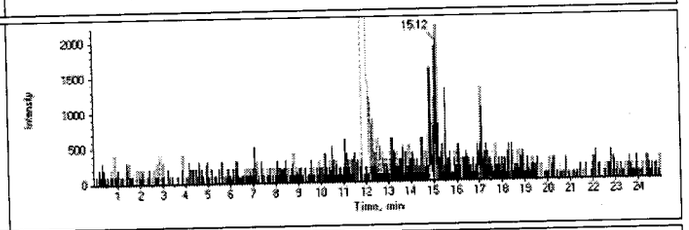
PFUnA (563.0 / 519.0)

RT (Exp. RT): 15.12 (15.14) min

Calculated conc: 0.000310

Area Ratio: 7.008e-3

Sample Type: (Quality Control)



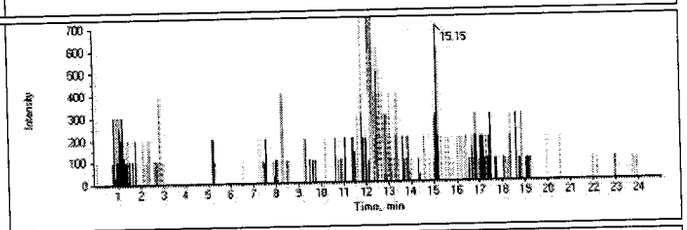
PFUnA 2 (563.0 / 268.8)

RT (Exp. RT): 15.15 (15.14) min

Calculated conc: 0.000276

Area Ratio: 1.225e-3

Sample Type: (Quality Control)



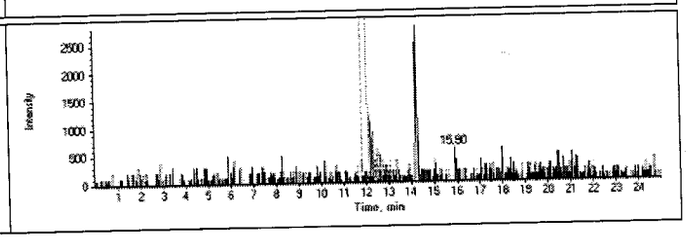
PFDoA (612.8 / 569.0)

RT (Exp. RT): 15.90 (15.90) min

Calculated conc: 0.000018

Area Ratio: 3.730e-4

Sample Type: (Quality Control)

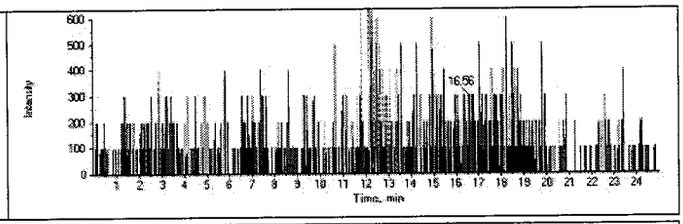


PFTrDA (662.9 / 619.0)

RT (Exp. RT): 16.56 (16.55) min

Calculated conc: 0.000012

Area Ratio: 3.730e-4
Sample Type: (Quality Control)

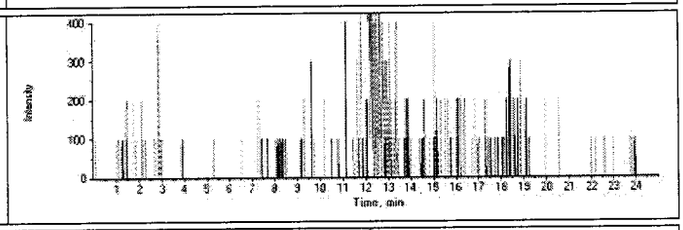


PFTrDA 2 (662.9 / 168.9)

RT (Exp. RT): N/A (16.55) min

Calculated conc: N/A

Area Ratio: N/A
Sample Type: (Quality Control)

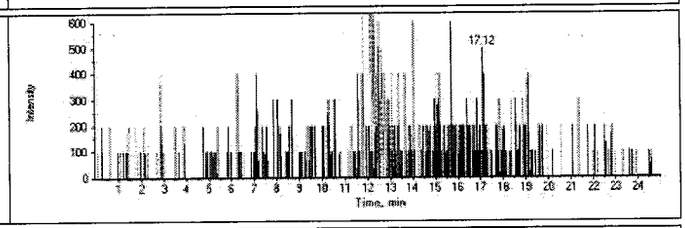


PFTA (713.3 / 669.0)

RT (Exp. RT): 17.12 (17.11) min

Calculated conc: 0.000077

Area Ratio: 6.395e-4
Sample Type: (Quality Control)

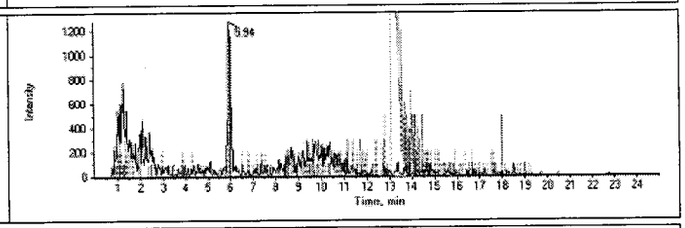


PFBS (299.0 / 79.9)

RT (Exp. RT): 5.94 (5.96) min

Calculated conc: 0.000575

Area Ratio: 5.057e-3
Sample Type: (Quality Control)

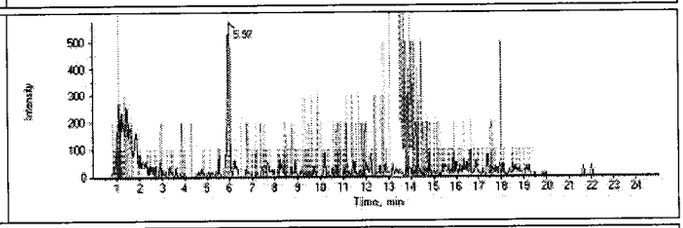


PFBS 2 (299.0 / 99.0)

RT (Exp. RT): 5.97 (5.97) min

Calculated conc: 0.001063

Area Ratio: 3.342e-3
Sample Type: (Quality Control)

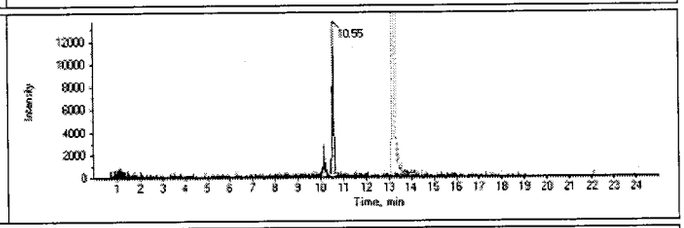


PFHxS (398.9 / 80.0)

RT (Exp. RT): 10.55 (10.55) min

Calculated conc: 0.004780

Area Ratio: 5.011e-2
Sample Type: (Quality Control)

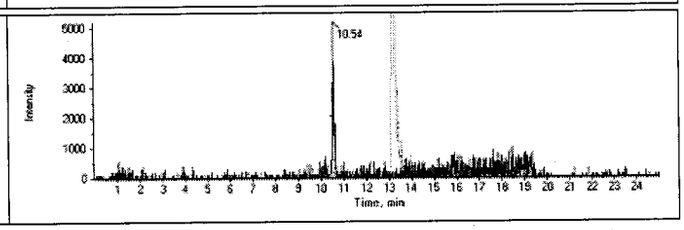


PFHxS 2 (398.9 / 99.0)

RT (Exp. RT): 10.54 (10.54) min

Calculated conc: 0.005179

Area Ratio: 1.817e-2
Sample Type: (Quality Control)

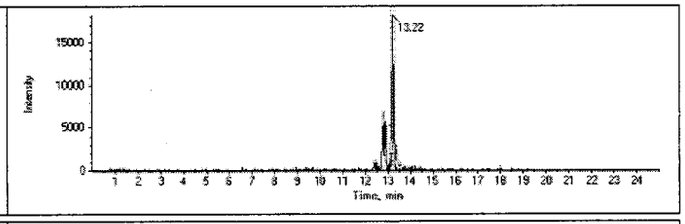


PFOS (499.0 / 79.9)

RT (Exp. RT): 13.22 (13.22) min

Calculated conc: 0.006120

Area Ratio: 6.007e-2
Sample Type: (Quality Control)

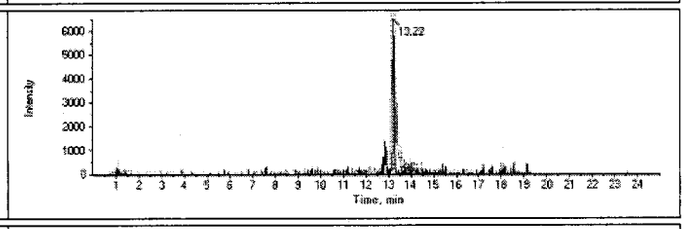


PFOS 2 (499.0 / 99.0)

RT (Exp. RT): 13.22 (13.21) min

Calculated conc: 0.006363

Area Ratio: 1.876e-2
Sample Type: (Quality Control)

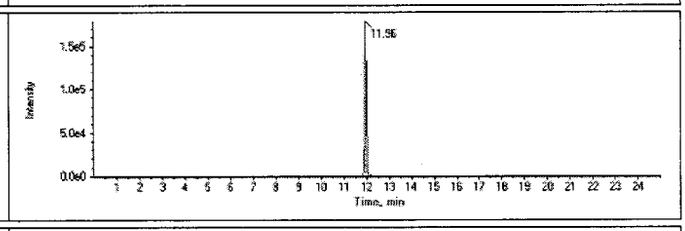


13C-PFOA (417.0 / 372.0)

RT (Exp. RT): 11.96 (11.96) min

Calculated conc: 97.107094

Area Ratio: N/A
Sample Type: (Quality Control)

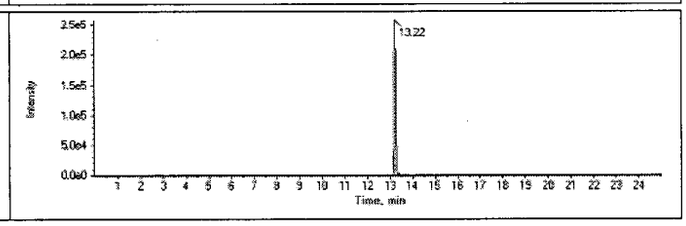


13C-PFOS (503.0 / 80.0)

RT (Exp. RT): 13.22 (13.22) min

Calculated conc: 101.104529

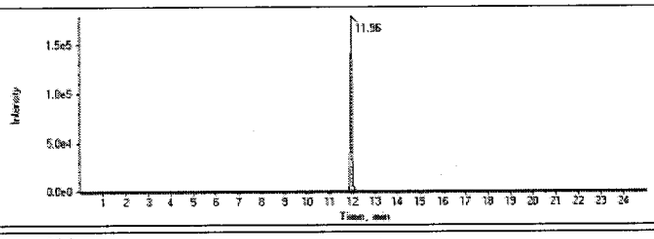
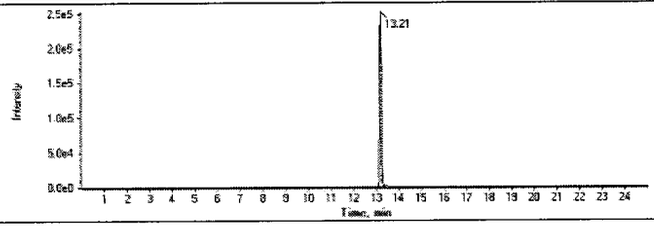
Area Ratio: N/A
Sample Type: (Quality Control)



Sample Name	201407090599	**Injection Vial**	25
Sample ID		**Injection Volume**	5.00
Sample Type	Quality Control	**Algorithm Used**	MQ4
Acquisition Date	7/17/2014 3:47:38 AM	**Dilution Factor**	1.00
Acquisition Method	@537-ShortRun-110613-Ali.dam	**Weight to Volume**	N/A
Project	EPA537\2014_07_16	**Instrument Name**	API 4000
Data File	@537-Batch#780662-071614.wiff		
Result Table	@537-Batch#780662-071614		
Sample Comment	Prep. By FAM@07/14/2014		

Internal Standard	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
IS-13C-PFOA	900114	11.96	100.00000	-
IS-13C-PFOS	1292635	13.21	100.00000	-

Target Analyte	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
PFHxA	9.252e+04	8.29	0.00000	0.006478
Surr-13c-PFHxA	9.553e+05	8.29	100.00000	97.378260
PFHpA	9.721e+04	10.40	0.00000	0.003334
PFHpA 2	2.648e+04	10.40	0.00000	0.003136
PFOA	1.210e+06	11.96	0.00000	0.044552
PFOA 2	4.316e+05	11.96	0.00000	0.045127
PFNA	2.280e+05	13.21	0.00000	0.011223
PFNA 2	6.184e+04	13.21	0.00000	0.011493
PFDA	2.796e+03	14.26	0.00000	0.000129
PFDA 2	1.960e+02	14.29	0.00000	0.000049
Surr-13c-PFDA	6.530e+05	14.25	100.00000	83.365025
PFUnA	1.520e+03	15.16	0.00000	0.000075
PFUnA 2	9.800e+01	15.17	0.00000	0.000025
PFDoA	1.470e+02	15.91	0.00000	0.000008
PFTrDA	1.470e+02	16.54	0.00000	0.000005
PFTrDA 2	N/A	N/A	0.00000	N/A
PFTA	1.470e+02	17.16	0.00000	0.000020
PFBS	5.751e+03	5.95	0.00000	0.000506
PFBS 2	1.495e+03	5.99	0.00000	0.000368
PFHxS	6.155e+04	10.55	0.00000	0.004542
PFHxS 2	1.829e+04	10.55	0.00000	0.004034
PFOS	7.004e+04	13.21	0.00000	0.005520
PFOS 2	2.026e+04	13.20	0.00000	0.005315
13C-PFOA	9.001e+05	11.96	100.00000	94.965766
13C-PFOS	1.293e+06	13.21	100.00000	99.011545

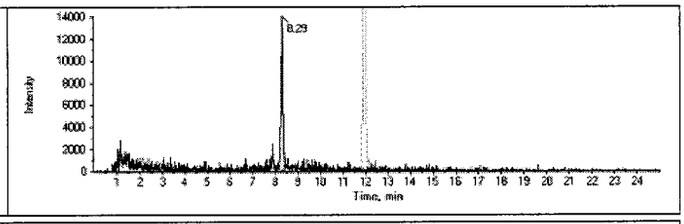
IS-13C-PFOA (Internal Standard) RT (Exp. RT): 11.96(11.96) min Concentration: 100.00000 Sample Type: (Quality Control)	
IS-13C-PFOS (Internal Standard) RT (Exp. RT): 13.21(13.22) min Concentration: 100.00000 Sample Type: (Quality Control)	

PFHxA (313.0 / 268.8)

RT (Exp. RT): 8.29 (8.28) min

Calculated conc: 0.006478

Area Ratio: 1.028e-1
Sample Type: (Quality Control)

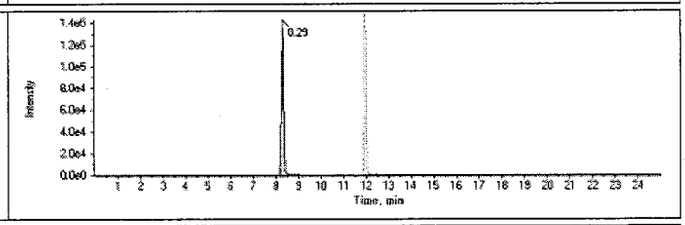


Surr-13c-PFHxA (315.0 / 270.0)

RT (Exp. RT): 8.29 (8.28) min

Calculated conc: 97.378260

Area Ratio: 1.061e0
Sample Type: (Quality Control)

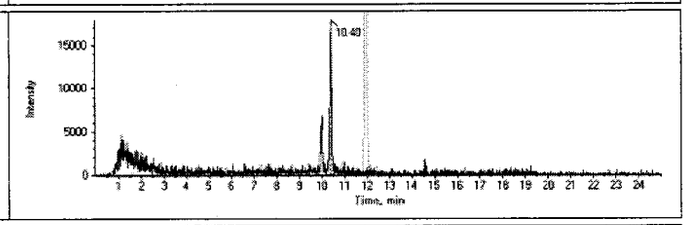


PFHpA (363.0 / 318.9)

RT (Exp. RT): 10.40 (10.40) min

Calculated conc: 0.003334

Area Ratio: 1.080e-1
Sample Type: (Quality Control)

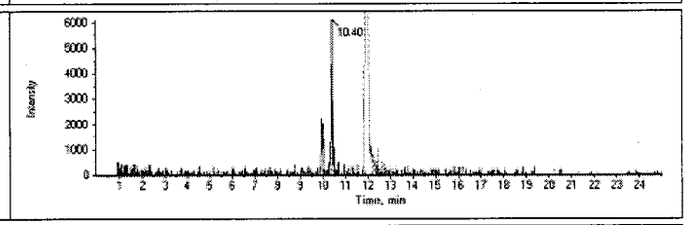


PFHpA 2 (363.0 / 168.9)

RT (Exp. RT): 10.40 (10.40) min

Calculated conc: 0.003136

Area Ratio: 2.942e-2
Sample Type: (Quality Control)

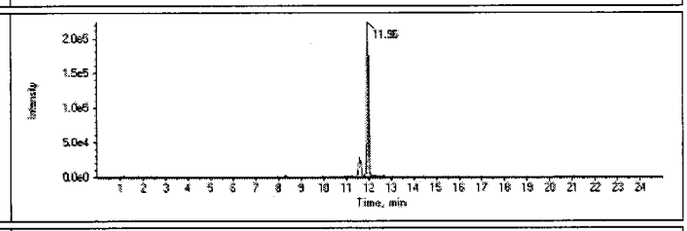


PFOA (413.0 / 368.9)

RT (Exp. RT): 11.96 (11.97) min

Calculated conc: 0.044552

Area Ratio: 1.344e0
Sample Type: (Quality Control)

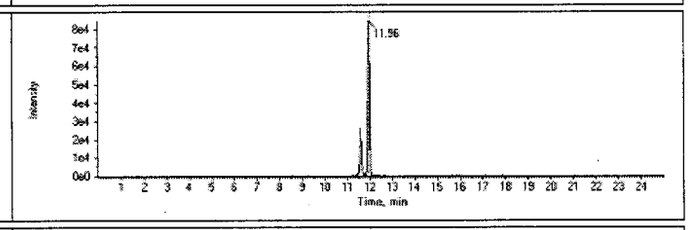


PFOA 2 (413.0 / 168.8)

RT (Exp. RT): 11.96 (11.96) min

Calculated conc: 0.045127

Area Ratio: 4.795e-1
Sample Type: (Quality Control)

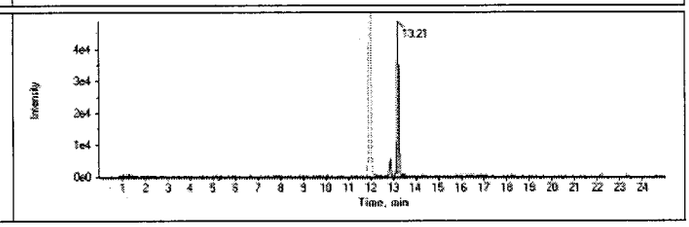


PFNA (463.0 / 419.0)

RT (Exp. RT): 13.21 (13.22) min

Calculated conc: 0.011223

Area Ratio: 2.533e-1
Sample Type: (Quality Control)

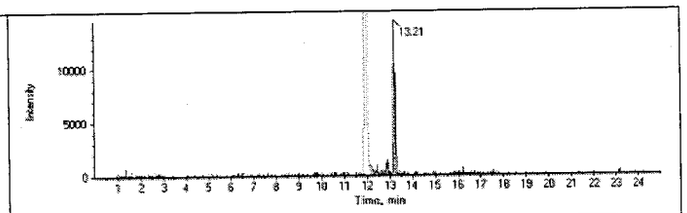


PFNA 2 (463.0 / 218.9)

RT (Exp. RT): 13.21 (13.21) min

Calculated conc: 0.011493

Area Ratio: 6.871e-2
Sample Type: (Quality Control)

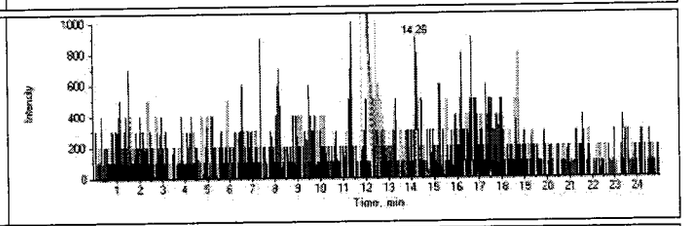


PFDA (513.0 / 469.0)

RT (Exp. RT): 14.26 (14.26) min

Calculated conc: 0.000129

Area Ratio: 3.106e-3
Sample Type: (Quality Control)

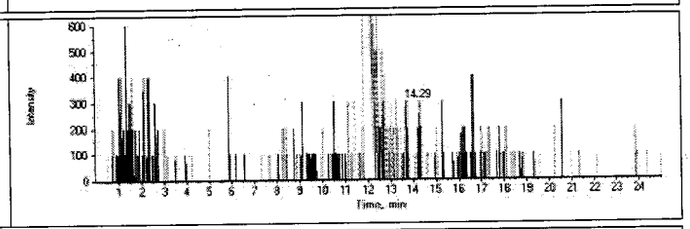


PFDA 2 (513.0 / 218.8)

RT (Exp. RT): 14.29 (14.26) min

Calculated conc: 0.000049

Area Ratio: 2.180e-4
Sample Type: (Quality Control)

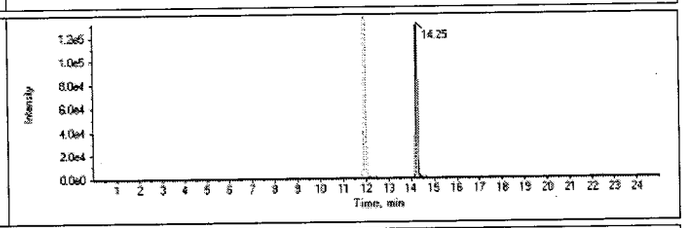


Surr-13c-PFDA (515.0 / 470.0)

RT (Exp. RT): 14.25 (14.26) min

Calculated conc: 83.365025

Area Ratio: 7.255e-1
Sample Type: (Quality Control)

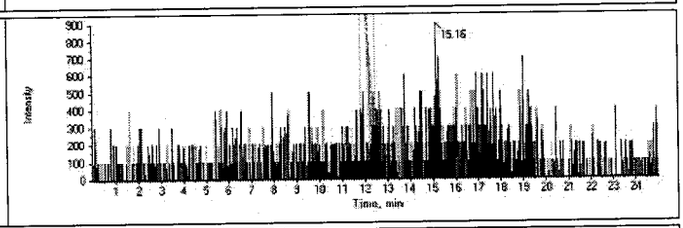


PFUnA (563.0 / 519.0)

RT (Exp. RT): 15.16 (15.14) min

Calculated conc: 0.000075

Area Ratio: 1.688e-3
Sample Type: (Quality Control)

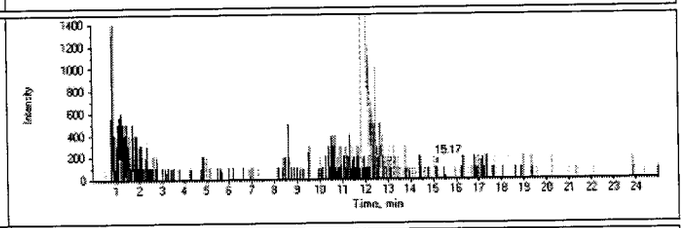


PFUnA 2 (563.0 / 268.8)

RT (Exp. RT): 15.17 (15.14) min

Calculated conc: 0.000025

Area Ratio: 1.090e-4
Sample Type: (Quality Control)

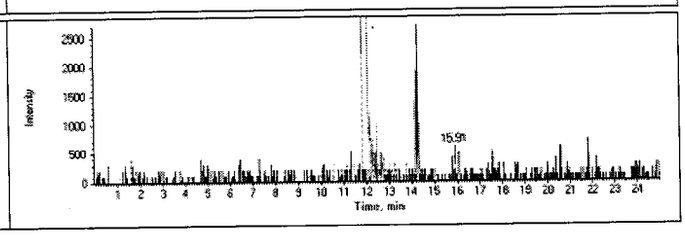


PFDoA (612.8 / 569.0)

RT (Exp. RT): 15.91 (15.90) min

Calculated conc: 0.000008

Area Ratio: 1.634e-4
Sample Type: (Quality Control)



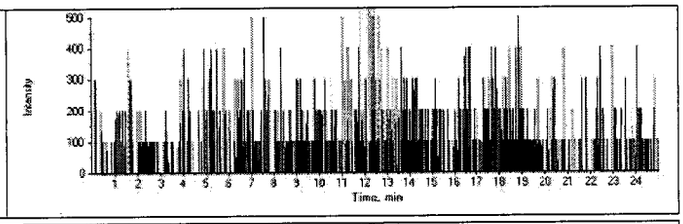
PFTrDA (662.9 / 619.0)

RT (Exp. RT): 16.54 (16.55) min

Calculated conc: 0.000005

Area Ratio: 1.635e-4

Sample Type: (Quality Control)



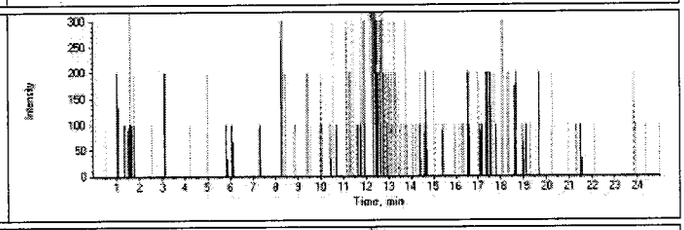
PFTrDA 2 (662.9 / 168.9)

RT (Exp. RT): N/A (16.55) min

Calculated conc: N/A

Area Ratio: N/A

Sample Type: (Quality Control)



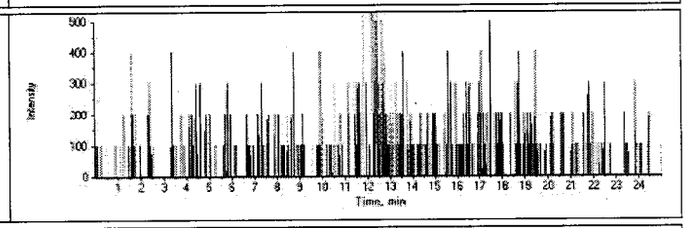
PFTA (713.3 / 669.0)

RT (Exp. RT): 17.16 (17.11) min

Calculated conc: 0.000020

Area Ratio: 1.634e-4

Sample Type: (Quality Control)



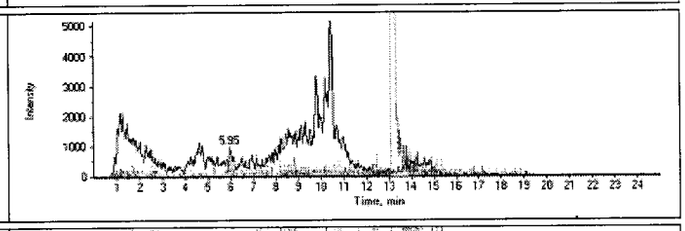
PFBS (299.0 / 79.9)

RT (Exp. RT): 5.95 (5.96) min

Calculated conc: 0.000506

Area Ratio: 4.449e-3

Sample Type: (Quality Control)



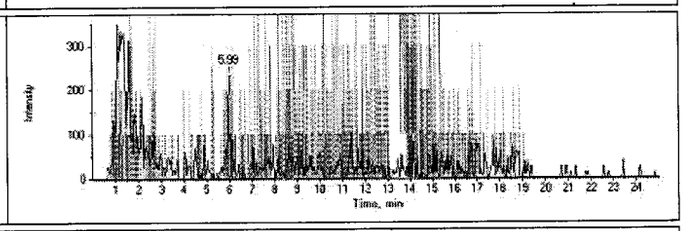
PFBS 2 (299.0 / 99.0)

RT (Exp. RT): 5.99 (5.97) min

Calculated conc: 0.000368

Area Ratio: 1.156e-3

Sample Type: (Quality Control)



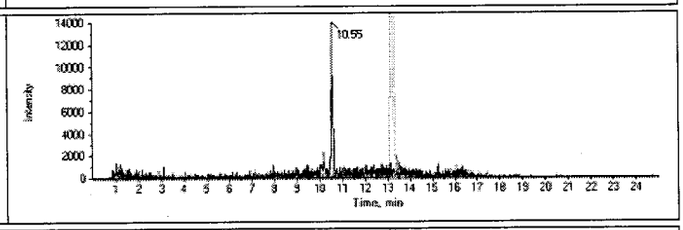
PFHxS (398.9 / 80.0)

RT (Exp. RT): 10.55 (10.55) min

Calculated conc: 0.004542

Area Ratio: 4.762e-2

Sample Type: (Quality Control)



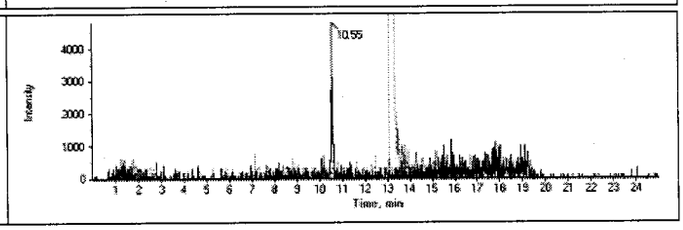
PFHxS 2 (398.9 / 99.0)

RT (Exp. RT): 10.55 (10.54) min

Calculated conc: 0.004034

Area Ratio: 1.415e-2

Sample Type: (Quality Control)

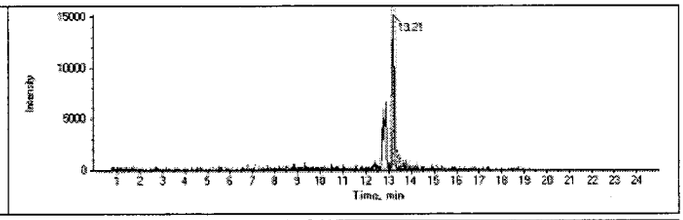


PFOS (499.0 / 79.9)

RT (Exp. RT): 13.21 (13.22) min

Calculated conc: 0.005520

Area Ratio: 5.418e-2
Sample Type: (Quality Control)

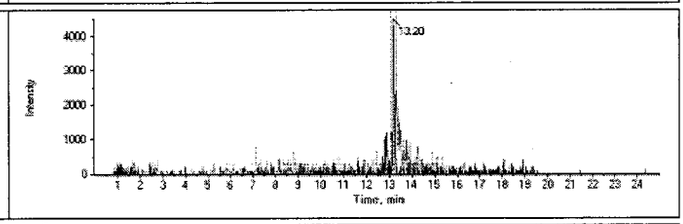


PFOS 2 (499.0 / 99.0)

RT (Exp. RT): 13.20 (13.21) min

Calculated conc: 0.005315

Area Ratio: 1.567e-2
Sample Type: (Quality Control)

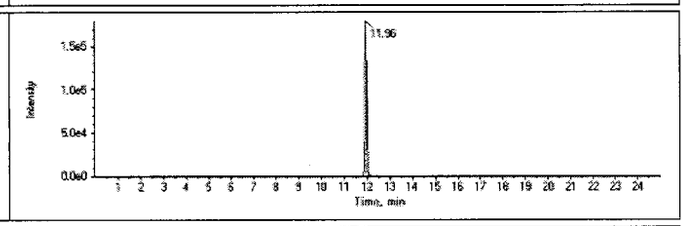


13C-PFOA (417.0 / 372.0)

RT (Exp. RT): 11.96 (11.96) min

Calculated conc: 94.965766

Area Ratio: N/A
Sample Type: (Quality Control)

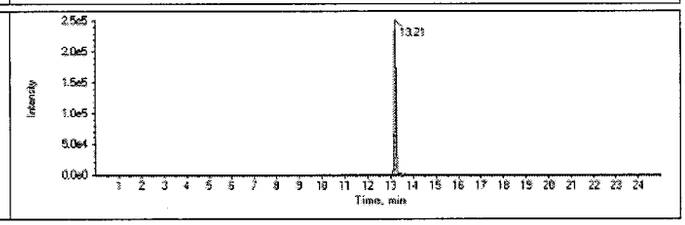


13C-PFOS (503.0 / 80.0)

RT (Exp. RT): 13.21 (13.22) min

Calculated conc: 99.011545

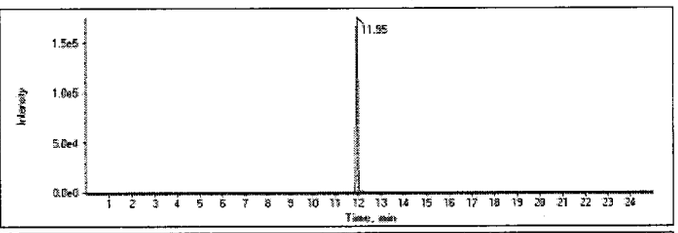
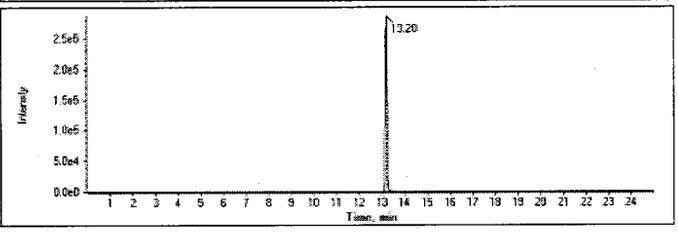
Area Ratio: N/A
Sample Type: (Quality Control)



Sample Name	CCCM	**Injection Vial**	5
Sample ID		**Injection Volume**	5.00
Sample Type	Quality Control	**Algorithm Used**	MQ4
Acquisition Date	7/17/2014 4:13:14 AM	**Dilution Factor**	1.00
Acquisition Method	@537-ShortRun-110613-Ali.dam	**Weight to Volume**	N/A
Project	EPA537\2014_07_16	**Instrument Name**	API 4000
Data File	@537-Batch#780662-071614.wiff		
Result Table	@537-Batch#780662-071614		
Sample Comment	Lot#@537Cal-071614-LHZ, Exp.07/30/14		

Internal Standard	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
IS-13C-PFOA	972900	11.95	100.00000	-
IS-13C-PFOS	1398455	13.20	100.00000	-

Target Analyte	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
PFHxA	2.893e+05	8.27	0.02000	0.018743
Surr-13c-PFHxA	1.089e+06	8.27	100.00000	102.679604
PFHpA	6.440e+05	10.38	0.02000	0.020433
PFHpA 2	1.940e+05	10.38	0.02000	0.021250
PFOA	5.694e+05	11.95	0.02000	0.019398
PFOA 2	2.020e+05	11.95	0.02000	0.019540
PFNA	4.419e+05	13.20	0.02000	0.020126
PFNA 2	1.196e+05	13.20	0.02000	0.020566
PFDA	4.185e+05	14.24	0.02000	0.017855
PFDA 2	7.728e+04	14.24	0.02000	0.017933
Surr-13c-PFDA	7.672e+05	14.24	100.00000	90.621933
PFUnA	3.519e+05	15.12	0.02000	0.016018
PFUnA 2	6.640e+04	15.12	0.02000	0.015371
PFDoA	2.964e+05	15.88	0.02000	0.014872
PFTrDA	4.284e+05	16.53	0.02000	0.014671
PFTrDA 2	9.920e+04	16.53	0.02000	0.014744
PFTA	1.368e+05	17.10	0.02000	0.016991
PFBS	1.965e+05	5.96	0.01770	0.015969
PFBS 2	7.064e+04	5.95	0.01770	0.016067
PFHxS	2.751e+05	10.53	0.01900	0.018764
PFHxS 2	9.020e+04	10.53	0.01900	0.018388
PFOS	2.440e+05	13.20	0.01920	0.017774
PFOS 2	7.587e+04	13.20	0.01920	0.018399
13C-PFOA	9.729e+05	11.95	100.00000	102.644921
13C-PFOS	1.398e+06	13.20	100.00000	107.116976

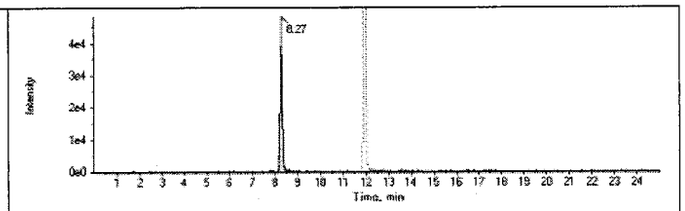
IS-13C-PFOA (Internal Standard) RT (Exp. RT): 11.95(11.96) min Concentration: 100.00000 Sample Type: (Quality Control)	
IS-13C-PFOS (Internal Standard) RT (Exp. RT): 13.20(13.22) min Concentration: 100.00000 Sample Type: (Quality Control)	

PFHxA (313.0 / 268.8)

RT (Exp. RT): 8.27 (8.28) min

Calculated conc: 0.018743

Area Ratio: 2.974e-1
Sample Type: (Quality Control)

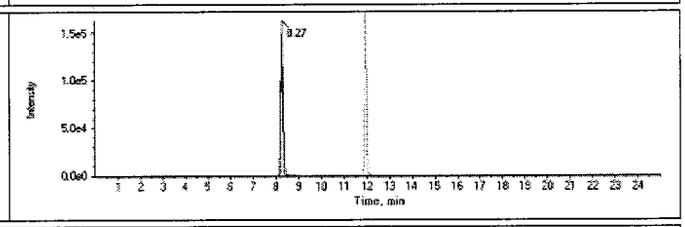


Surr-13c-PFHxA (315.0 / 270.0)

RT (Exp. RT): 8.27 (8.28) min

Calculated conc: 102.679604

Area Ratio: 1.119e0
Sample Type: (Quality Control)

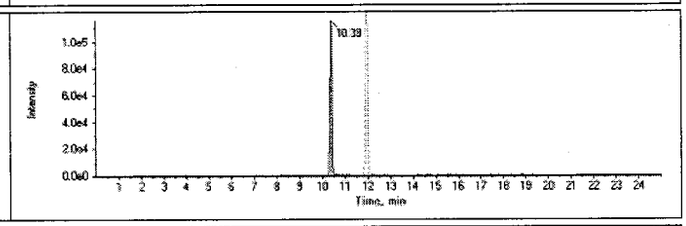


PFHpA (363.0 / 318.9)

RT (Exp. RT): 10.38 (10.40) min

Calculated conc: 0.020433

Area Ratio: 6.619e-1
Sample Type: (Quality Control)

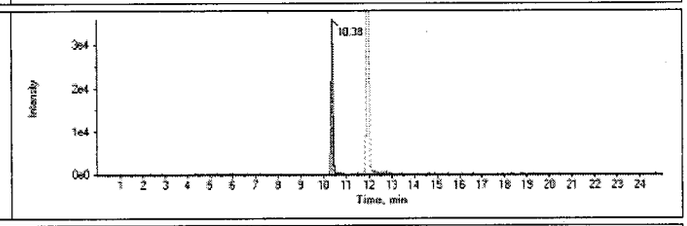


PFHpA 2 (363.0 / 168.9)

RT (Exp. RT): 10.38 (10.40) min

Calculated conc: 0.021250

Area Ratio: 1.994e-1
Sample Type: (Quality Control)

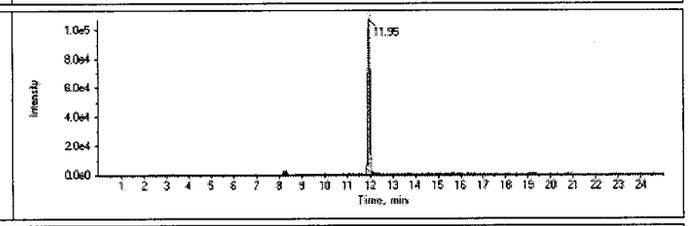


PFOA (413.0 / 368.9)

RT (Exp. RT): 11.95 (11.97) min

Calculated conc: 0.019398

Area Ratio: 5.852e-1
Sample Type: (Quality Control)

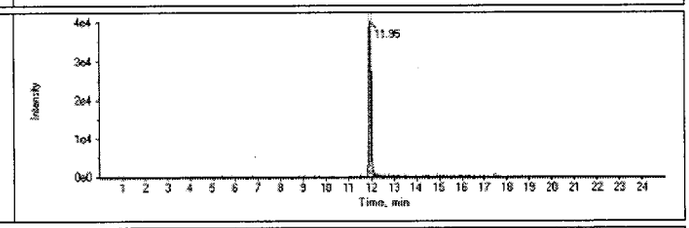


PFOA 2 (413.0 / 168.8)

RT (Exp. RT): 11.95 (11.96) min

Calculated conc: 0.019540

Area Ratio: 2.076e-1
Sample Type: (Quality Control)

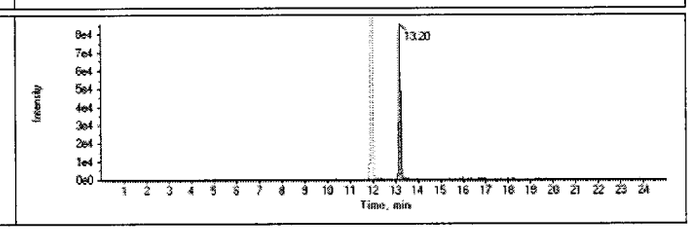


PFNA (463.0 / 419.0)

RT (Exp. RT): 13.20 (13.22) min

Calculated conc: 0.020126

Area Ratio: 4.542e-1
Sample Type: (Quality Control)

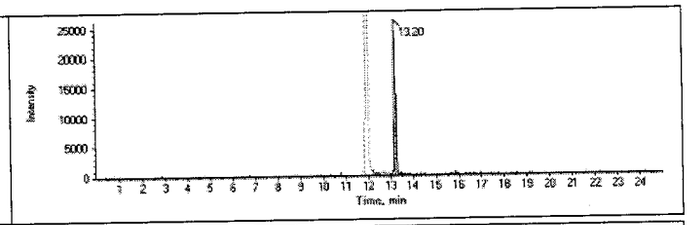


PFNA 2 (463.0 / 218.9)

RT (Exp. RT): 13.20 (13.21) min

Calculated conc: 0.020566

Area Ratio: 1.229e-1
Sample Type: (Quality Control)

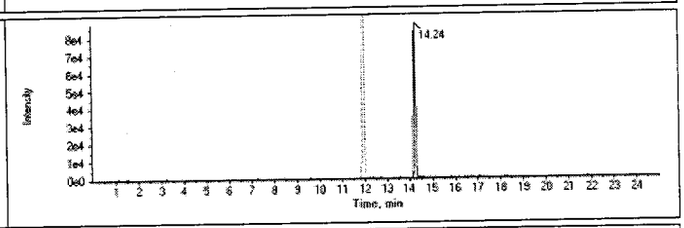


PFDA (513.0 / 469.0)

RT (Exp. RT): 14.24 (14.26) min

Calculated conc: 0.017855

Area Ratio: 4.301e-1
Sample Type: (Quality Control)

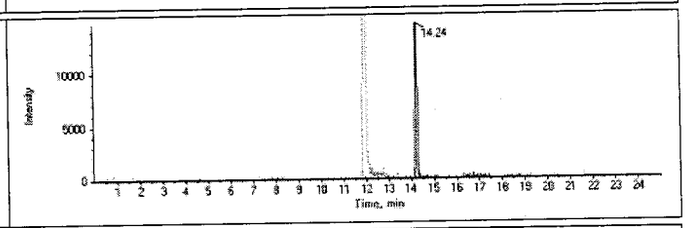


PFDA 2 (513.0 / 218.8)

RT (Exp. RT): 14.24 (14.26) min

Calculated conc: 0.017933

Area Ratio: 7.944e-2
Sample Type: (Quality Control)

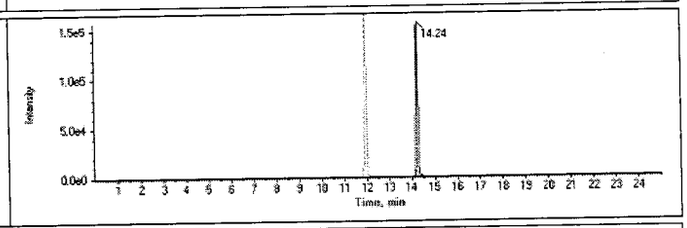


Surr-13c-PFDA (515.0 / 470.0)

RT (Exp. RT): 14.24 (14.26) min

Calculated conc: 90.621933

Area Ratio: 7.886e-1
Sample Type: (Quality Control)

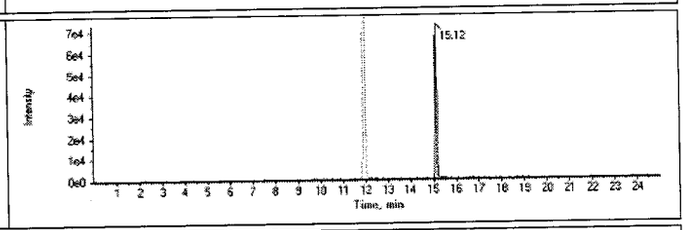


PFUnA (563.0 / 519.0)

RT (Exp. RT): 15.12 (15.14) min

Calculated conc: 0.016018

Area Ratio: 3.617e-1
Sample Type: (Quality Control)

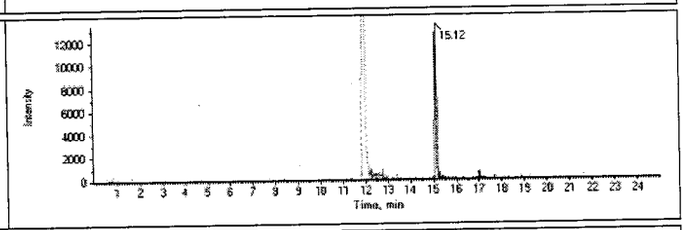


PFUnA 2 (563.0 / 268.8)

RT (Exp. RT): 15.12 (15.14) min

Calculated conc: 0.015371

Area Ratio: 6.825e-2
Sample Type: (Quality Control)

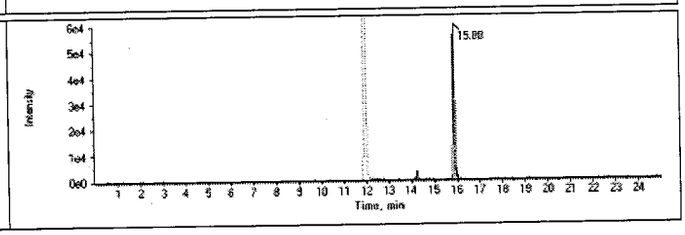


PFDoA (612.8 / 569.0)

RT (Exp. RT): 15.88 (15.90) min

Calculated conc: 0.014872

Area Ratio: 3.047e-1
Sample Type: (Quality Control)

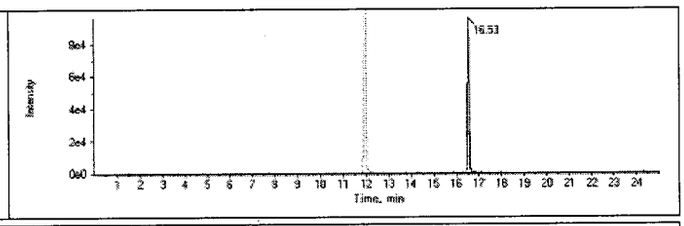


PFTrDA (662.9 / 619.0)

RT (Exp. RT): 16.53 (16.55) min

Calculated conc: 0.014671

Area Ratio: 4.403e-1
Sample Type: (Quality Control)

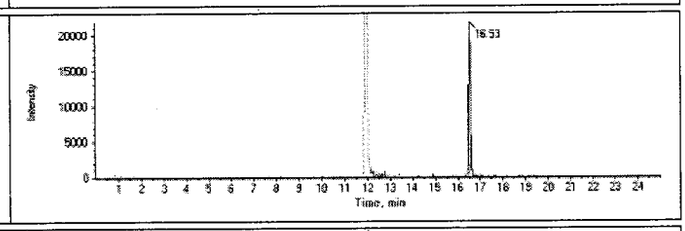


PFTrDA 2 (662.9 / 168.9)

RT (Exp. RT): 16.53 (16.55) min

Calculated conc: 0.014744

Area Ratio: 1.020e-1
Sample Type: (Quality Control)

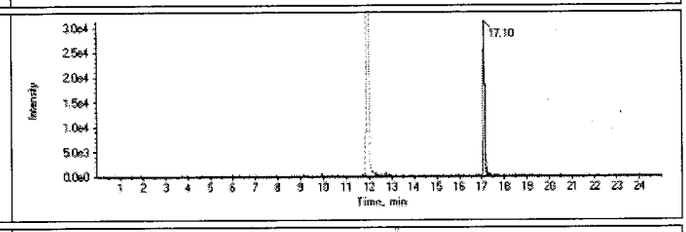


PFTA (713.3 / 669.0)

RT (Exp. RT): 17.10 (17.11) min

Calculated conc: 0.016991

Area Ratio: 1.406e-1
Sample Type: (Quality Control)

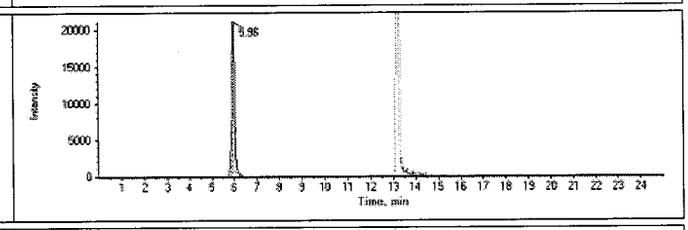


PFBS (299.0 / 79.9)

RT (Exp. RT): 5.96 (5.96) min

Calculated conc: 0.015969

Area Ratio: 1.405e-1
Sample Type: (Quality Control)

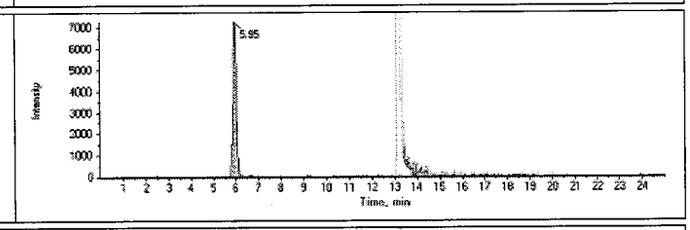


PFBS 2 (299.0 / 99.0)

RT (Exp. RT): 5.95 (5.97) min

Calculated conc: 0.016067

Area Ratio: 5.052e-2
Sample Type: (Quality Control)

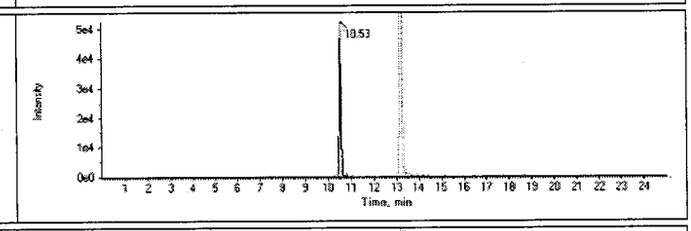


PFHxS (398.9 / 80.0)

RT (Exp. RT): 10.53 (10.55) min

Calculated conc: 0.018764

Area Ratio: 1.967e-1
Sample Type: (Quality Control)

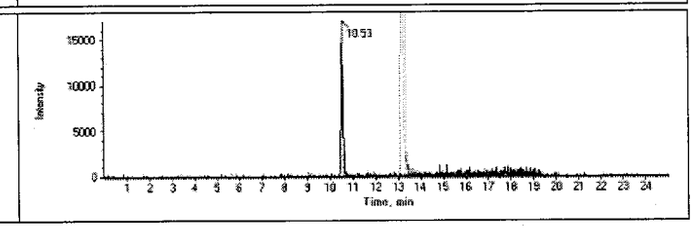


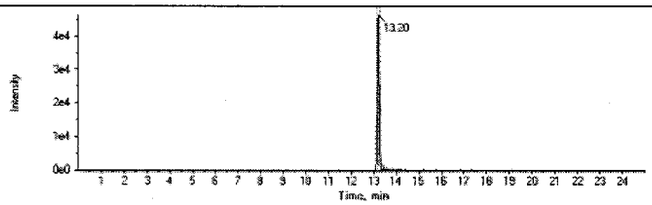
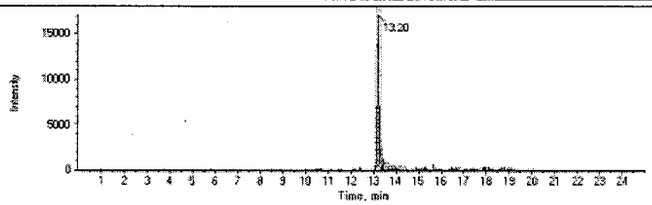
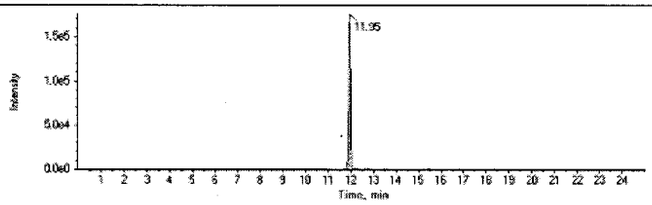
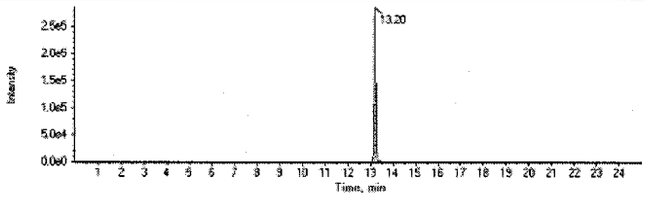
PFHxS 2 (398.9 / 99.0)

RT (Exp. RT): 10.53 (10.54) min

Calculated conc: 0.018388

Area Ratio: 6.450e-2
Sample Type: (Quality Control)

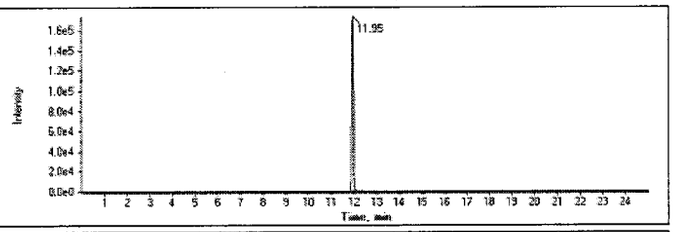
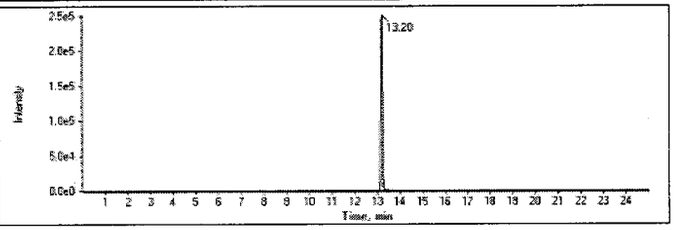


PFOS (499.0 / 79.9) RT (Exp. RT): 13.20 (13.22) min Calculated conc: 0.017774 Area Ratio: 1.745e-1 Sample Type: (Quality Control)	
PFOS 2 (499.0 / 99.0) RT (Exp. RT): 13.20 (13.21) min Calculated conc: 0.018399 Area Ratio: 5.425e-2 Sample Type: (Quality Control)	
13C-PFOA (417.0 / 372.0) RT (Exp. RT): 11.95 (11.96) min Calculated conc: 102.644921 Area Ratio: N/A Sample Type: (Quality Control)	
13C-PFOS (503.0 / 80.0) RT (Exp. RT): 13.20 (13.22) min Calculated conc: 107.116976 Area Ratio: N/A Sample Type: (Quality Control)	

Sample Name	201407090600	**Injection Vial**	26
Sample ID		**Injection Volume**	5.00
Sample Type	Quality Control	**Algorithm Used**	MQ4
Acquisition Date	7/17/2014 4:38:49 AM	**Dilution Factor**	1.00
Acquisition Method	@537-ShortRun-110613-Ali.dam	**Weight to Volume**	N/A
Project	EPA537\2014_07_16	**Instrument Name**	API 4000
Data File	@537-Batch#780662-071614.wiff		
Result Table	@537-Batch#780662-071614		
Sample Comment	Prep. By FAM@07/14/2014		

Internal Standard	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
IS-13C-PFOA	915033	11.95	100.00000	-
IS-13C-PFOS	1329000	13.20	100.00000	-

Target Analyte	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
PFHxA	7.660e+04	8.27	0.00000	0.005276
Surr-13c-PFHxA	9.699e+05	8.27	100.00000	97.261789
PFHpA	1.127e+05	10.38	0.00000	0.003802
PFHpA 2	2.962e+04	10.38	0.00000	0.003451
PFOA	4.726e+05	11.95	0.00000	0.017119
PFOA 2	1.707e+05	11.94	0.00000	0.017559
PFNA	3.188e+05	13.20	0.00000	0.015440
PFNA 2	8.542e+04	13.20	0.00000	0.015616
PFDA	1.251e+04	14.24	0.00000	0.000567
PFDA 2	1.863e+03	14.25	0.00000	0.000460
Surr-13c-PFDA	7.479e+05	14.24	100.00000	93.918950
PFUnA	8.632e+03	15.13	0.00000	0.000418
PFUnA 2	5.880e+02	15.14	0.00000	0.000145
PFDoA	4.900e+02	15.90	0.00000	0.000026
PFTrDA	2.450e+02	16.59	0.00000	0.000009
PFTrDA 2	1.470e+02	16.32	0.00000	0.000023
PFTA	4.900e+02	17.12	0.00000	0.000065
PFBS	6.030e+03	5.92	0.00000	0.000516
PFBS 2	1.158e+03	5.99	0.00000	0.000277
PFHxS	8.038e+04	10.53	0.00000	0.005768
PFHxS 2	2.550e+04	10.52	0.00000	0.005470
PFOS	1.096e+05	13.20	0.00000	0.008406
PFOS 2	3.192e+04	13.20	0.00000	0.008147
13C-PFOA	9.150e+05	11.95	100.00000	96.539782
13C-PFOS	1.329e+06	13.20	100.00000	101.796913

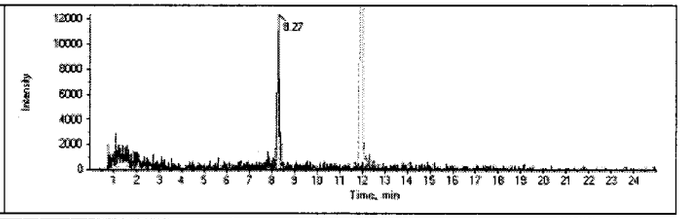
IS-13C-PFOA (Internal Standard) RT (Exp. RT): 11.95(11.96) min Concentration: 100.00000 Sample Type: (Quality Control)	
IS-13C-PFOS (Internal Standard) RT (Exp. RT): 13.20(13.22) min Concentration: 100.00000 Sample Type: (Quality Control)	

PFHxA (313.0 / 268.8)

RT (Exp. RT): 8.27 (8.28) min

Calculated conc: 0.005276

Area Ratio: 8.371e-2
Sample Type: (Quality Control)

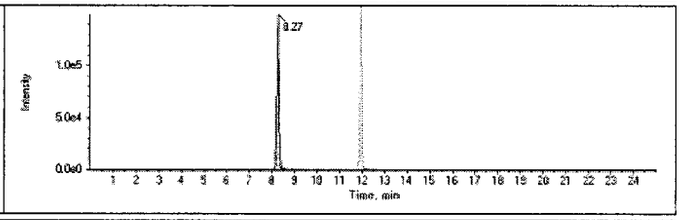


Surr-13c-PFHxA (315.0 / 270.0)

RT (Exp. RT): 8.27 (8.28) min

Calculated conc: 97.261789

Area Ratio: 1.060e0
Sample Type: (Quality Control)

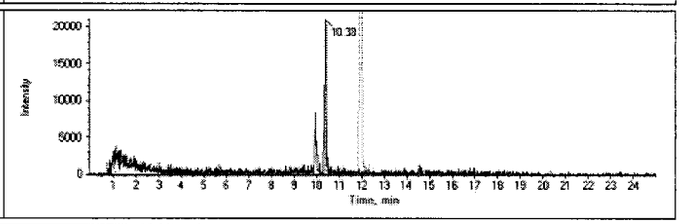


PFHpA (363.0 / 318.9)

RT (Exp. RT): 10.38 (10.40) min

Calculated conc: 0.003802

Area Ratio: 1.232e-1
Sample Type: (Quality Control)

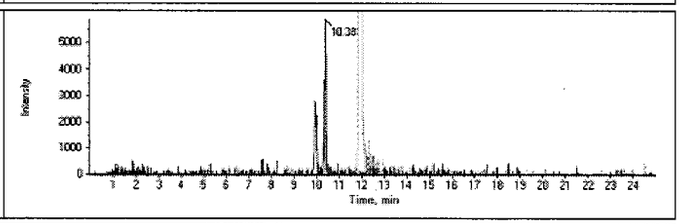


PFHpA 2 (363.0 / 168.9)

RT (Exp. RT): 10.38 (10.40) min

Calculated conc: 0.003451

Area Ratio: 3.237e-2
Sample Type: (Quality Control)

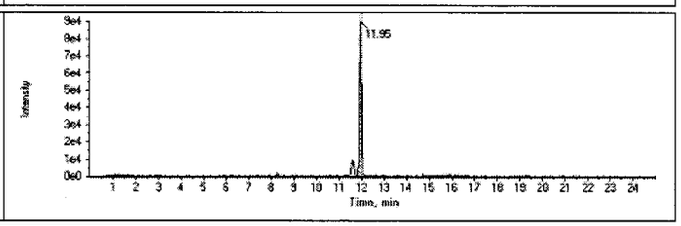


PFOA (413.0 / 368.9)

RT (Exp. RT): 11.95 (11.97) min

Calculated conc: 0.017119

Area Ratio: 5.165e-1
Sample Type: (Quality Control)

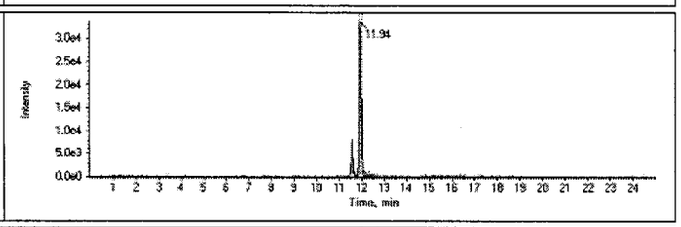


PFOA 2 (413.0 / 168.8)

RT (Exp. RT): 11.94 (11.96) min

Calculated conc: 0.017559

Area Ratio: 1.866e-1
Sample Type: (Quality Control)

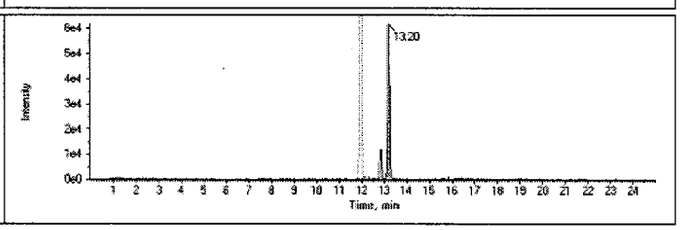


PFNA (463.0 / 419.0)

RT (Exp. RT): 13.20 (13.22) min

Calculated conc: 0.015440

Area Ratio: 3.484e-1
Sample Type: (Quality Control)

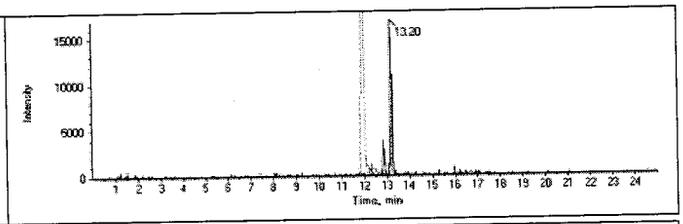


PFNA 2 (463.0 / 218.9)

RT (Exp. RT): 13.20 (13.21) min

Calculated conc: 0.015616

Area Ratio: 9.335e-2
Sample Type: (Quality Control)

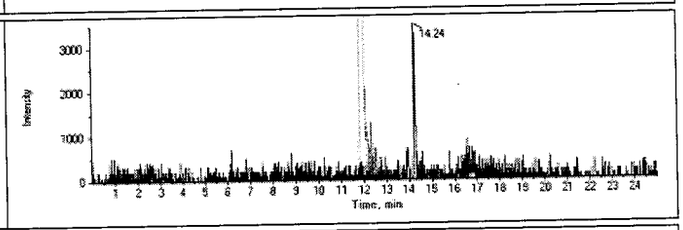


PFDA (513.0 / 469.0)

RT (Exp. RT): 14.24 (14.26) min

Calculated conc: 0.000567

Area Ratio: 1.367e-2
Sample Type: (Quality Control)

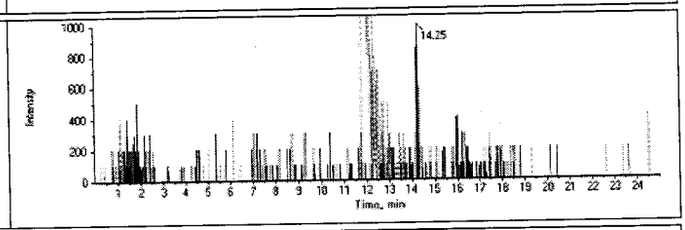


PFDA 2 (513.0 / 218.8)

RT (Exp. RT): 14.25 (14.26) min

Calculated conc: 0.000460

Area Ratio: 2.036e-3
Sample Type: (Quality Control)

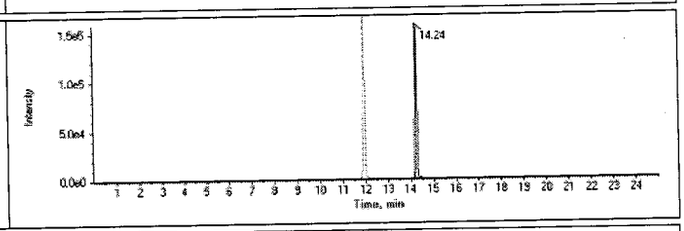


Surr-13c-PFDA (515.0 / 470.0)

RT (Exp. RT): 14.24 (14.26) min

Calculated conc: 93.918950

Area Ratio: 8.173e-1
Sample Type: (Quality Control)

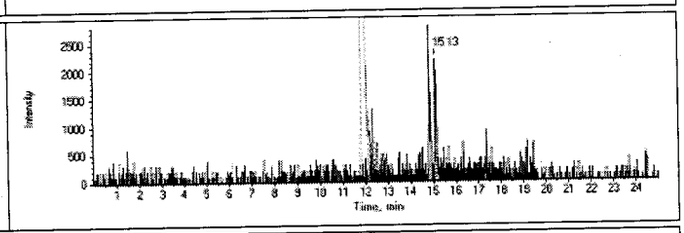


PFUnA (563.0 / 519.0)

RT (Exp. RT): 15.13 (15.14) min

Calculated conc: 0.000418

Area Ratio: 9.433e-3
Sample Type: (Quality Control)

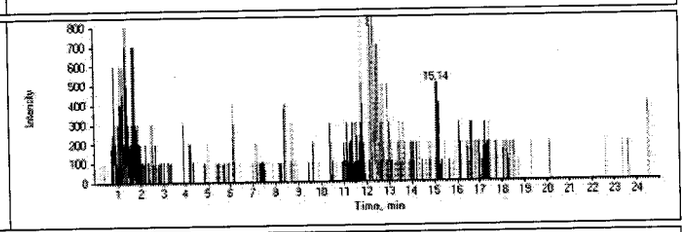


PFUnA 2 (563.0 / 268.8)

RT (Exp. RT): 15.14 (15.14) min

Calculated conc: 0.000145

Area Ratio: 6.430e-4
Sample Type: (Quality Control)

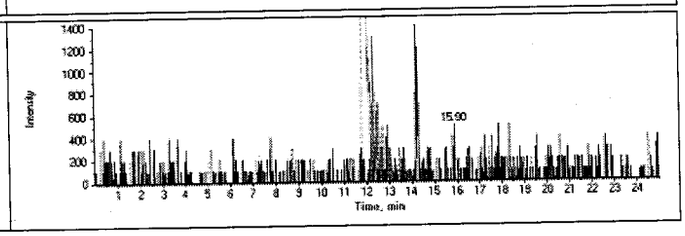


PFDoA (612.8 / 569.0)

RT (Exp. RT): 15.90 (15.90) min

Calculated conc: 0.000026

Area Ratio: 5.360e-4
Sample Type: (Quality Control)



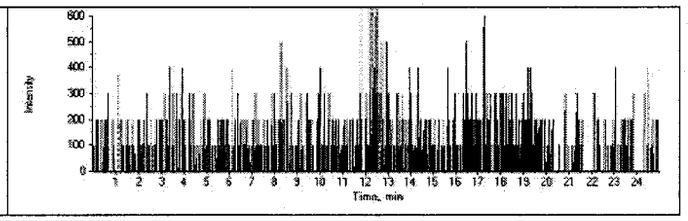
PFTrDA (662.9 / 619.0)

RT (Exp. RT): 16.59 (16.55) min

Calculated conc: 0.000009

Area Ratio: 2.678e-4

Sample Type: (Quality Control)



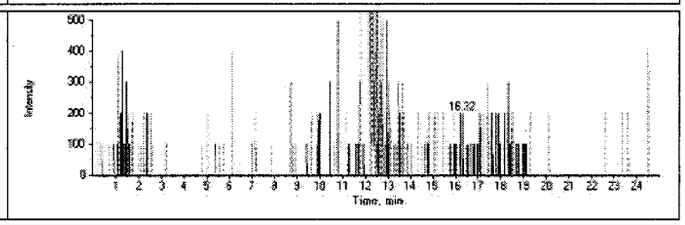
PFTrDA 2 (662.9 / 168.9)

RT (Exp. RT): 16.32 (16.55) min

Calculated conc: 0.000023

Area Ratio: 1.608e-4

Sample Type: (Quality Control)



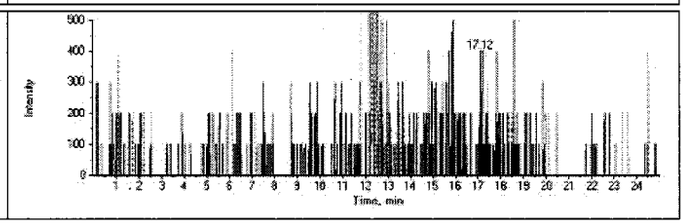
PFTA (713.3 / 669.0)

RT (Exp. RT): 17.12 (17.11) min

Calculated conc: 0.000065

Area Ratio: 5.356e-4

Sample Type: (Quality Control)



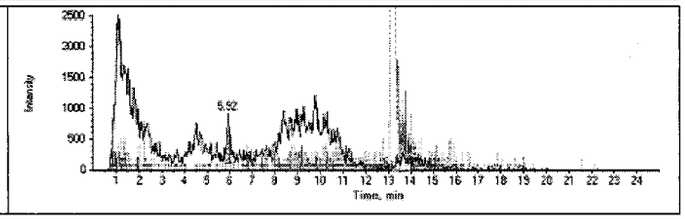
PFBS (299.0 / 79.9)

RT (Exp. RT): 5.92 (5.96) min

Calculated conc: 0.000516

Area Ratio: 4.537e-3

Sample Type: (Quality Control)



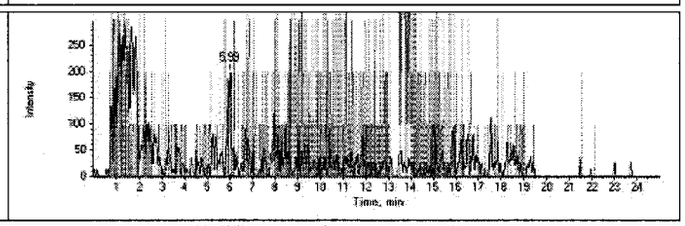
PFBS 2 (299.0 / 99.0)

RT (Exp. RT): 5.99 (5.97) min

Calculated conc: 0.000277

Area Ratio: 8.713e-4

Sample Type: (Quality Control)



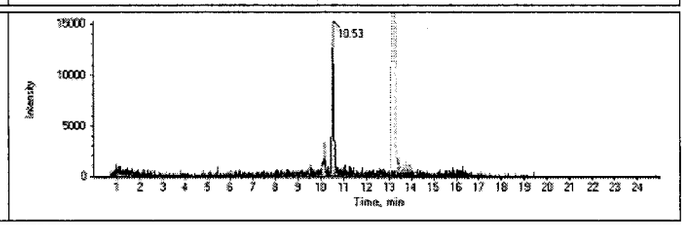
PFHxS (398.9 / 80.0)

RT (Exp. RT): 10.53 (10.55) min

Calculated conc: 0.005768

Area Ratio: 6.048e-2

Sample Type: (Quality Control)



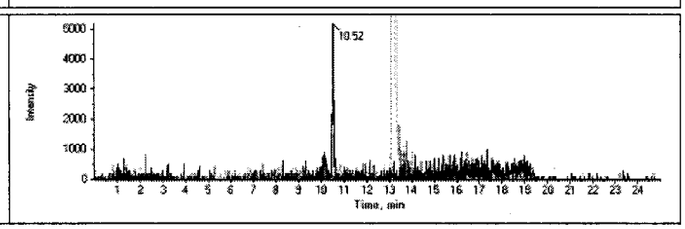
PFHxS 2 (398.9 / 99.0)

RT (Exp. RT): 10.52 (10.54) min

Calculated conc: 0.005470

Area Ratio: 1.919e-2

Sample Type: (Quality Control)

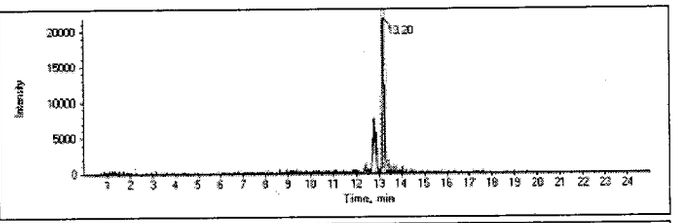


PFOS (499.0 / 79.9)

RT (Exp. RT): 13.20 (13.22) min

Calculated conc: 0.008406

Area Ratio: 8.250e-2
Sample Type: (Quality Control)

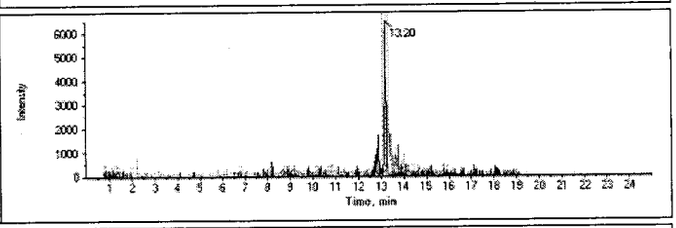


PFOS 2 (499.0 / 99.0)

RT (Exp. RT): 13.20 (13.21) min

Calculated conc: 0.008147

Area Ratio: 2.402e-2
Sample Type: (Quality Control)

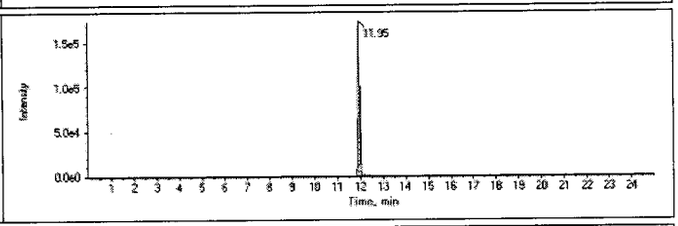


13C-PFOA (417.0 / 372.0)

RT (Exp. RT): 11.95 (11.96) min

Calculated conc: 96.539782

Area Ratio: N/A
Sample Type: (Quality Control)

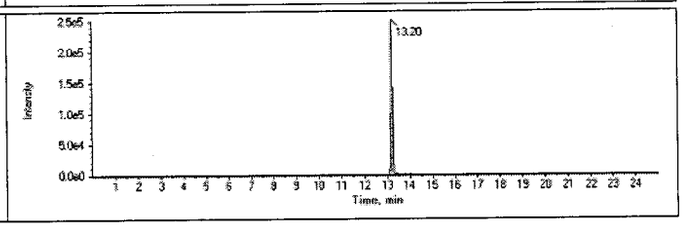


13C-PFOS (503.0 / 80.0)

RT (Exp. RT): 13.20 (13.22) min

Calculated conc: 101.796913

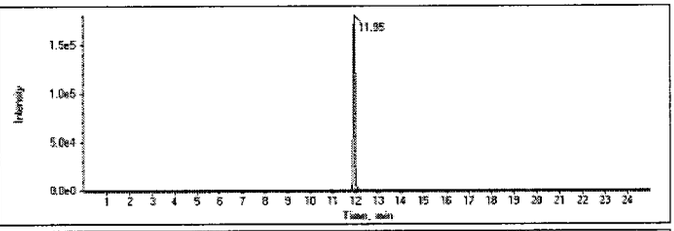
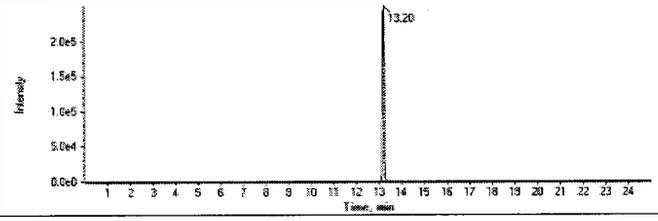
Area Ratio: N/A
Sample Type: (Quality Control)



Sample Name	201407090601	**Injection Vial**	27
Sample ID		**Injection Volume**	5.00
Sample Type	Quality Control	**Algorithm Used**	MQ4
Acquisition Date	7/17/2014 5:04:25 AM	**Dilution Factor**	1.00
Acquisition Method	@537-ShortRun-110613-Ali.dam	**Weight to Volume**	N/A
Project	EPA537\2014_07_16	**Instrument Name**	API 4000
Data File	@537-Batch#780662-071614.wiff		
Result Table	@537-Batch#780662-071614		
Sample Comment	Prep. By FAM@07/14/2014		

Internal Standard	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
IS-13C-PFOA	933782	11.95	100.00000	-
IS-13C-PFOS	1345732	13.20	100.00000	-

Target Analyte	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
PFHxA	7.851e+04	8.27	0.00000	0.005299
Surr-13c-PFHxA	9.865e+05	8.27	100.00000	96.934599
PFHpA	1.075e+05	10.39	0.00000	0.003555
PFHpA 2	2.609e+04	10.39	0.00000	0.002978
PFOA	5.403e+05	11.95	0.00000	0.019179
PFOA 2	1.888e+05	11.95	0.00000	0.019031
PFNA	3.320e+05	13.21	0.00000	0.015756
PFNA 2	8.613e+04	13.21	0.00000	0.015429
PFDA	1.447e+04	14.25	0.00000	0.000643
PFDA 2	2.379e+03	14.25	0.00000	0.000575
Surr-13c-PFDA	7.144e+05	14.25	100.00000	87.919782
PFUnA	7.797e+03	15.13	0.00000	0.000370
PFUnA 2	1.128e+03	15.14	0.00000	0.000272
PFDoA	9.800e+01	15.88	0.00000	0.000005
PFTrDA	2.450e+02	16.53	0.00000	0.000009
PFTrDA 2	N/A	N/A	0.00000	N/A
PFTA	1.470e+02	17.25	0.00000	0.000019
PFBS	8.709e+03	5.93	0.00000	0.000736
PFBS 2	2.582e+03	5.97	0.00000	0.000610
PFHxS	8.013e+04	10.54	0.00000	0.005680
PFHxS 2	2.805e+04	10.54	0.00000	0.005943
PFOS	1.105e+05	13.20	0.00000	0.008362
PFOS 2	3.527e+04	13.21	0.00000	0.008888
13C-PFOA	9.338e+05	11.95	100.00000	98.517805
13C-PFOS	1.346e+06	13.20	100.00000	103.078563

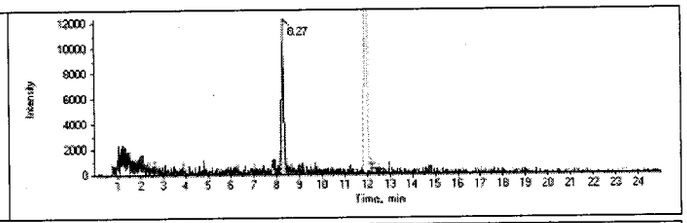
IS-13C-PFOA (Internal Standard) RT (Exp. RT): 11.95(11.96) min Concentration: 100.00000 Sample Type: (Quality Control)	
IS-13C-PFOS (Internal Standard) RT (Exp. RT): 13.20(13.22) min Concentration: 100.00000 Sample Type: (Quality Control)	

PFHxA (313.0 / 268.8)

RT (Exp. RT): 8.27 (8.28) min

Calculated conc: 0.005299

Area Ratio: 8.408e-2
Sample Type: (Quality Control)

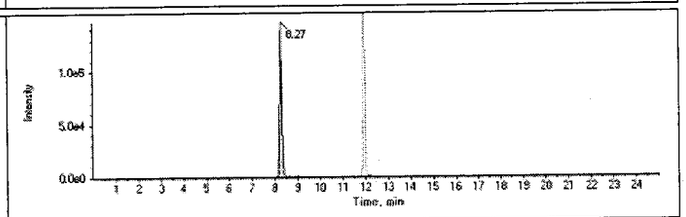


Surr-13c-PFHxA (315.0 / 270.0)

RT (Exp. RT): 8.27 (8.28) min

Calculated conc: 96.934599

Area Ratio: 1.056e0
Sample Type: (Quality Control)

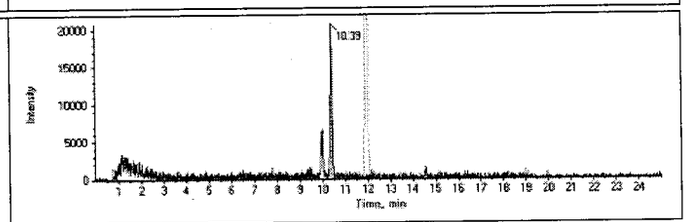


PFHpA (363.0 / 318.9)

RT (Exp. RT): 10.39 (10.40) min

Calculated conc: 0.003555

Area Ratio: 1.152e-1
Sample Type: (Quality Control)

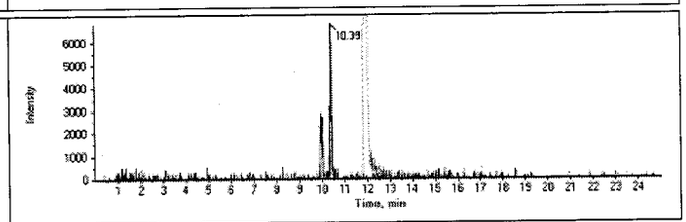


PFHpA 2 (363.0 / 168.9)

RT (Exp. RT): 10.39 (10.40) min

Calculated conc: 0.002978

Area Ratio: 2.794e-2
Sample Type: (Quality Control)

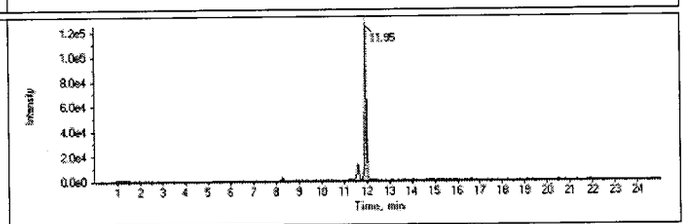


PFOA (413.0 / 368.9)

RT (Exp. RT): 11.95 (11.97) min

Calculated conc: 0.019179

Area Ratio: 5.786e-1
Sample Type: (Quality Control)

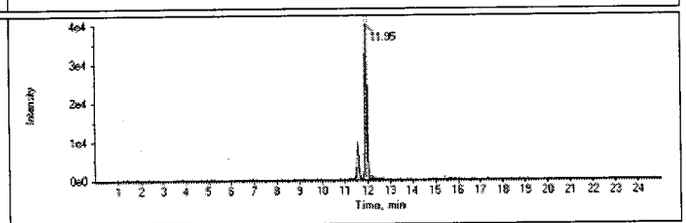


PFOA 2 (413.0 / 168.8)

RT (Exp. RT): 11.95 (11.96) min

Calculated conc: 0.019031

Area Ratio: 2.022e-1
Sample Type: (Quality Control)

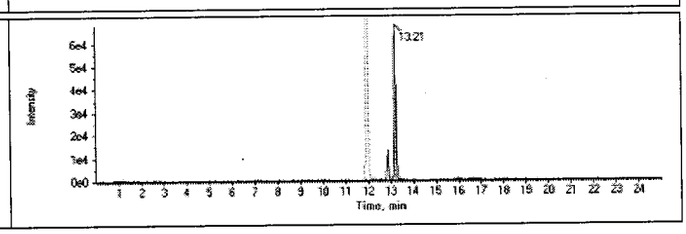


PFNA (463.0 / 419.0)

RT (Exp. RT): 13.21 (13.22) min

Calculated conc: 0.015756

Area Ratio: 3.556e-1
Sample Type: (Quality Control)

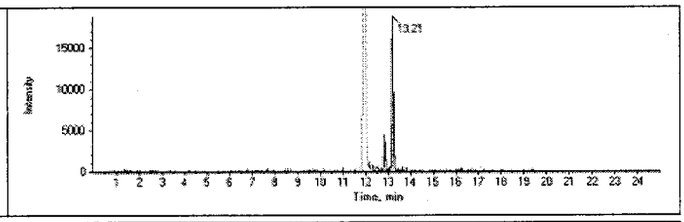


PFNA 2 (463.0 / 218.9)

RT (Exp. RT): 13.21 (13.21) min

Calculated conc: 0.015429

Area Ratio: 9.223e-2
Sample Type: (Quality Control)

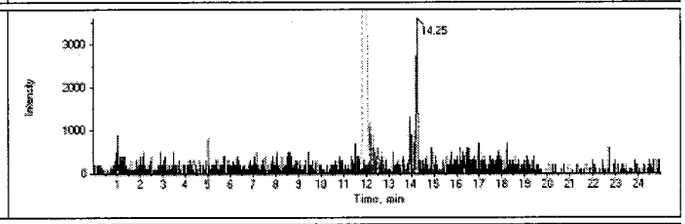


PFDA (513.0 / 469.0)

RT (Exp. RT): 14.25 (14.26) min

Calculated conc: 0.000643

Area Ratio: 1.549e-2
Sample Type: (Quality Control)

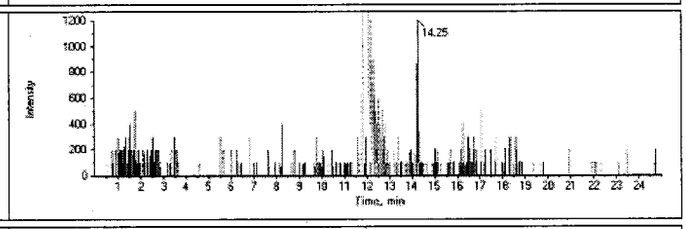


PFDA 2 (513.0 / 218.8)

RT (Exp. RT): 14.25 (14.26) min

Calculated conc: 0.000575

Area Ratio: 2.547e-3
Sample Type: (Quality Control)

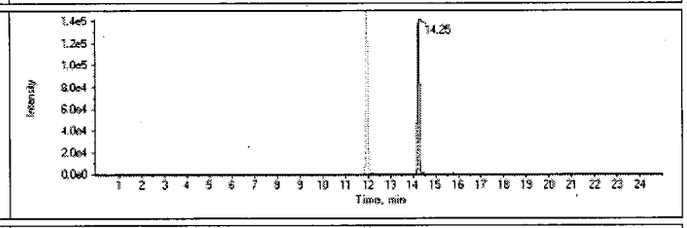


Surr-13c-PFDA (515.0 / 470.0)

RT (Exp. RT): 14.25 (14.26) min

Calculated conc: 87.919782

Area Ratio: 7.651e-1
Sample Type: (Quality Control)

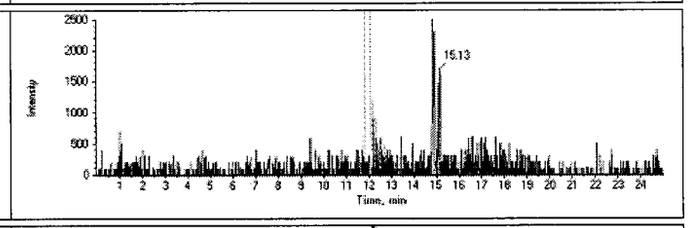


PFUnA (563.0 / 519.0)

RT (Exp. RT): 15.13 (15.14) min

Calculated conc: 0.000370

Area Ratio: 8.349e-3
Sample Type: (Quality Control)

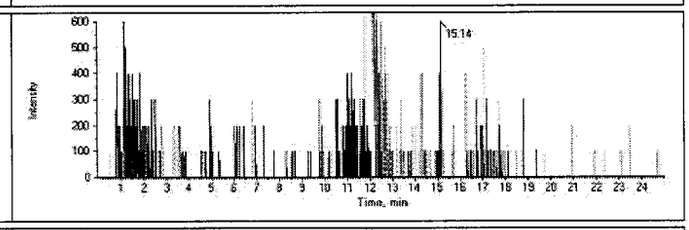


PFUnA 2 (563.0 / 268.8)

RT (Exp. RT): 15.14 (15.14) min

Calculated conc: 0.000272

Area Ratio: 1.208e-3
Sample Type: (Quality Control)

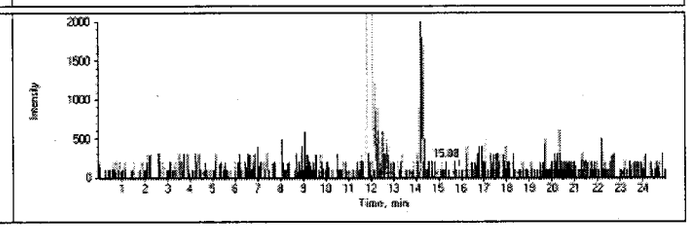


PFDoA (612.8 / 569.0)

RT (Exp. RT): 15.88 (15.90) min

Calculated conc: 0.000005

Area Ratio: 1.051e-4
Sample Type: (Quality Control)



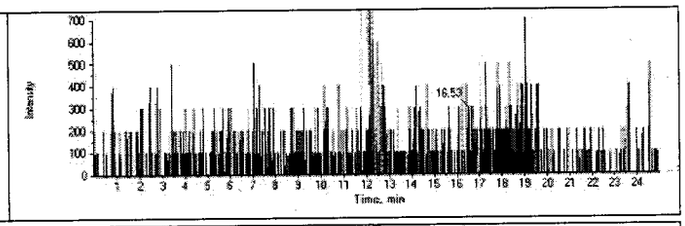
PFTrDA (662.9 / 619.0)

RT (Exp. RT): 16.53 (16.55) min

Calculated conc: 0.000009

Area Ratio: 2.625e-4

Sample Type: (Quality Control)



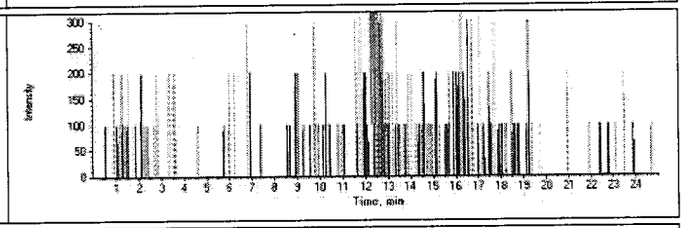
PFTrDA 2 (662.9 / 168.9)

RT (Exp. RT): N/A (16.55) min

Calculated conc: N/A

Area Ratio: N/A

Sample Type: (Quality Control)



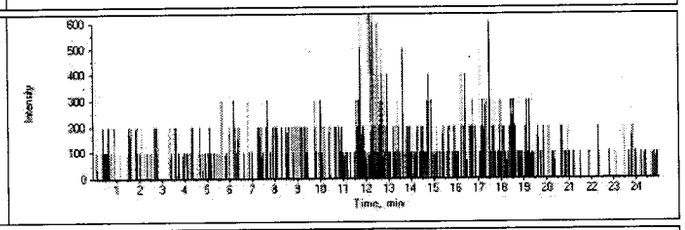
PFTA (713.3 / 669.0)

RT (Exp. RT): 17.25 (17.11) min

Calculated conc: 0.000019

Area Ratio: 1.576e-4

Sample Type: (Quality Control)



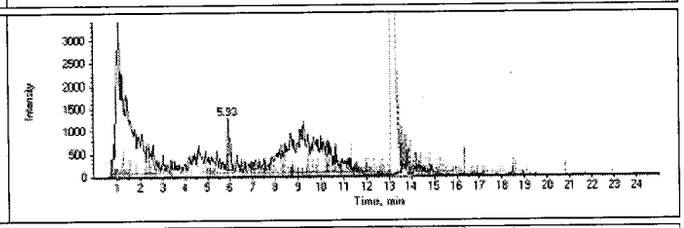
PFBS (299.0 / 79.9)

RT (Exp. RT): 5.93 (5.96) min

Calculated conc: 0.000736

Area Ratio: 6.472e-3

Sample Type: (Quality Control)



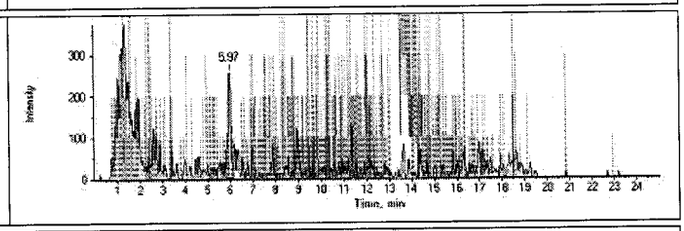
PFBS 2 (299.0 / 99.0)

RT (Exp. RT): 5.97 (5.97) min

Calculated conc: 0.000610

Area Ratio: 1.919e-3

Sample Type: (Quality Control)



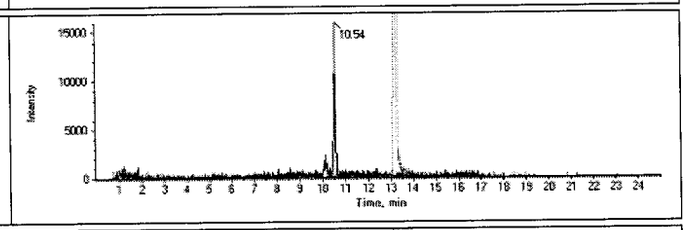
PFHxS (398.9 / 80.0)

RT (Exp. RT): 10.54 (10.55) min

Calculated conc: 0.005680

Area Ratio: 5.955e-2

Sample Type: (Quality Control)



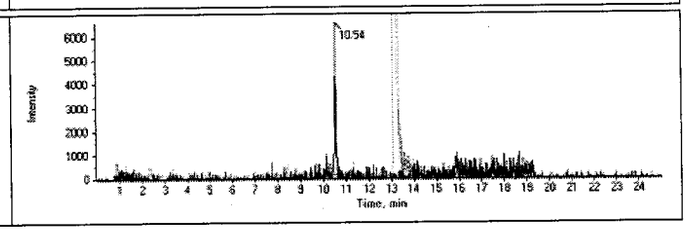
PFHxS 2 (398.9 / 99.0)

RT (Exp. RT): 10.54 (10.54) min

Calculated conc: 0.005943

Area Ratio: 2.085e-2

Sample Type: (Quality Control)

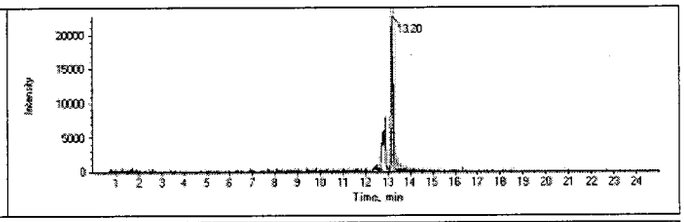


PFOS (499.0 / 79.9)

RT (Exp. RT): 13.20 (13.22) min

Calculated conc: 0.008362

Area Ratio: 8.208e-2
Sample Type: (Quality Control)

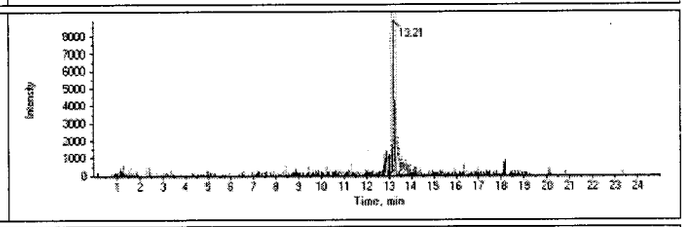


PFOS 2 (499.0 / 99.0)

RT (Exp. RT): 13.21 (13.21) min

Calculated conc: 0.008888

Area Ratio: 2.621e-2
Sample Type: (Quality Control)

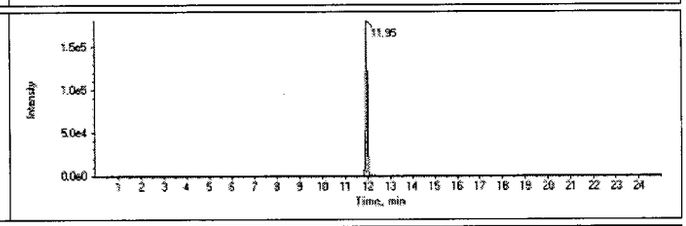


13C-PFOA (417.0 / 372.0)

RT (Exp. RT): 11.95 (11.96) min

Calculated conc: 98.517805

Area Ratio: N/A
Sample Type: (Quality Control)

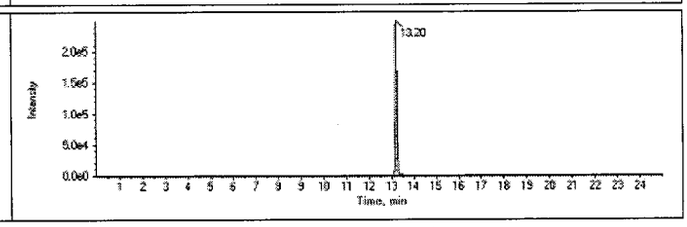


13C-PFOS (503.0 / 80.0)

RT (Exp. RT): 13.20 (13.22) min

Calculated conc: 103.078563

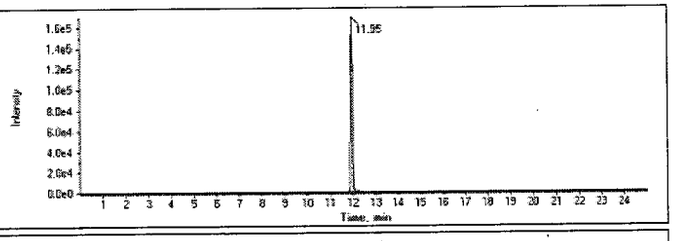
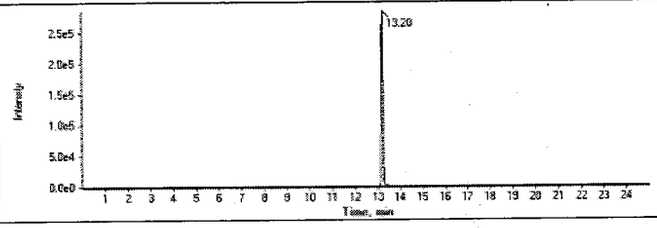
Area Ratio: N/A
Sample Type: (Quality Control)



Sample Name	201407110100	**Injection Vial**	28
Sample ID		**Injection Volume**	5.00
Sample Type	Quality Control	**Algorithm Used**	MQ4
Acquisition Date	7/17/2014 5:30:00 AM	**Dilution Factor**	1.00
Acquisition Method	@537-ShortRun-110613-Ali.dam	**Weight to Volume**	N/A
Project	EPA537\2014_07_16	**Instrument Name**	API 4000
Data File	@537-Batch#780662-071614.wiff		
Result Table	@537-Batch#780662-071614		
Sample Comment	Prep. By FAM@07/14/2014		

Internal Standard	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
IS-13C-PFOA	900396	11.95	100.00000	-
IS-13C-PFOS	1402002	13.20	100.00000	-

Target Analyte	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
PFHxA	8.204e+04	8.27	0.00000	0.005743
Surr-13c-PFHxA	9.441e+05	8.27	100.00000	96.206479
PFHpA	1.057e+05	10.39	0.00000	0.003625
PFHpA 2	2.697e+04	10.39	0.00000	0.003193
PFOA	2.597e+05	11.96	0.00000	0.009560
PFOA 2	8.868e+04	11.95	0.00000	0.009269
PFNA	2.434e+05	13.21	0.00000	0.011980
PFNA 2	6.072e+04	13.21	0.00000	0.011281
PFDA	2.011e+03	14.28	0.00000	0.000093
PFDA 2	2.940e+02	14.24	0.00000	0.000074
Surr-13c-PFDA	7.530e+05	14.25	100.00000	96.098619
PFUnA	2.059e+03	15.12	0.00000	0.000101
PFUnA 2	N/A	N/A	0.00000	N/A
PFDoA	2.450e+02	15.91	0.00000	0.000013
PFTrDA	2.940e+02	16.56	0.00000	0.000011
PFTrDA 2	N/A	N/A	0.00000	N/A
PFTA	1.470e+02	17.20	0.00000	0.000020
PFBS	1.297e+04	5.94	0.00000	0.001051
PFBS 2	5.517e+03	5.96	0.00000	0.001252
PFHxS	9.576e+04	10.54	0.00000	0.006514
PFHxS 2	3.011e+04	10.54	0.00000	0.006123
PFOS	3.217e+04	13.21	0.00000	0.002338
PFOS 2	1.275e+04	13.20	0.00000	0.003085
13C-PFOA	9.004e+05	11.95	100.00000	94.995518
13C-PFOS	1.402e+06	13.20	100.00000	107.388691

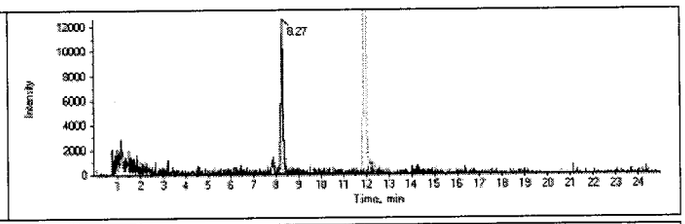
IS-13C-PFOA (Internal Standard) RT (Exp. RT): 11.95(11.96) min Concentration: 100.00000 Sample Type: (Quality Control)	
IS-13C-PFOS (Internal Standard) RT (Exp. RT): 13.20(13.22) min Concentration: 100.00000 Sample Type: (Quality Control)	

PFHxA (313.0 / 268.8)

RT (Exp. RT): 8.27 (8.28) min

Calculated conc: 0.005743

Area Ratio: 9.112e-2
Sample Type: (Quality Control)

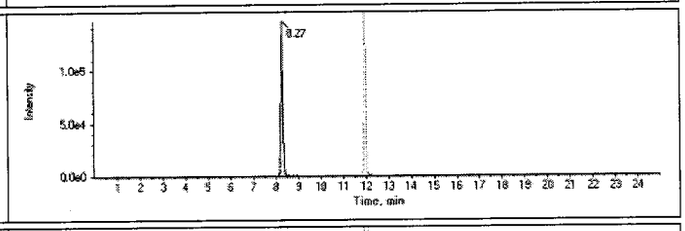


Surr-13c-PFHxA (315.0 / 270.0)

RT (Exp. RT): 8.27 (8.28) min

Calculated conc: 96.206479

Area Ratio: 1.049e0
Sample Type: (Quality Control)

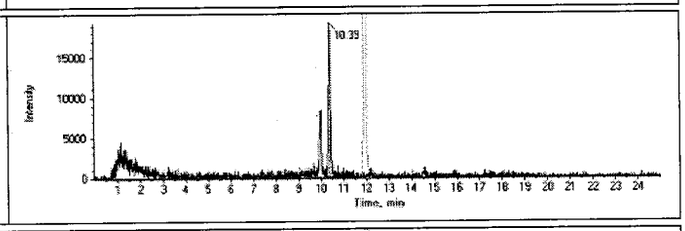


PFHpA (363.0 / 318.9)

RT (Exp. RT): 10.39 (10.40) min

Calculated conc: 0.003625

Area Ratio: 1.174e-1
Sample Type: (Quality Control)

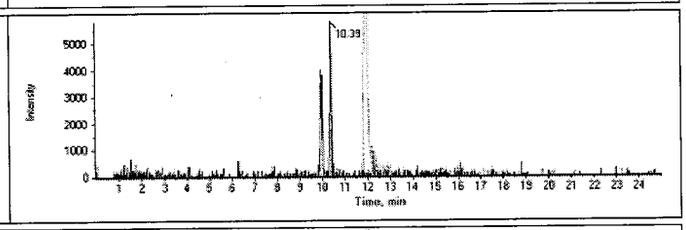


PFHpA 2 (363.0 / 168.9)

RT (Exp. RT): 10.39 (10.40) min

Calculated conc: 0.003193

Area Ratio: 2.995e-2
Sample Type: (Quality Control)

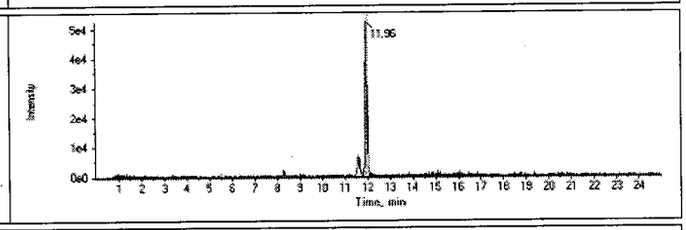


PFOA (413.0 / 368.9)

RT (Exp. RT): 11.96 (11.97) min

Calculated conc: 0.009560

Area Ratio: 2.884e-1
Sample Type: (Quality Control)

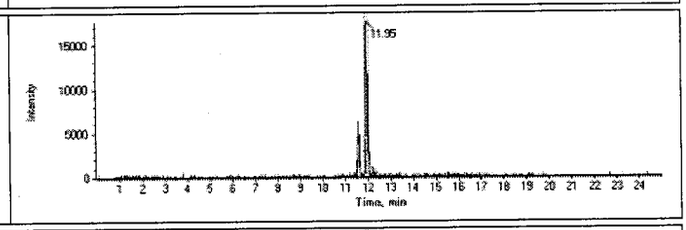


PFOA 2 (413.0 / 168.8)

RT (Exp. RT): 11.95 (11.96) min

Calculated conc: 0.009269

Area Ratio: 9.849e-2
Sample Type: (Quality Control)

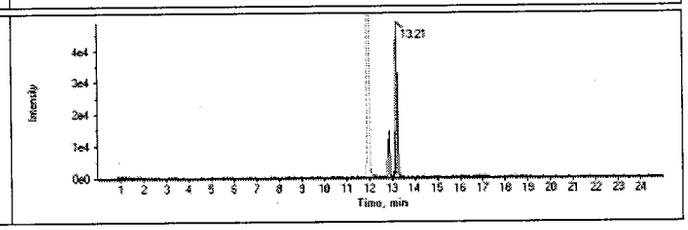


PFNA (463.0 / 419.0)

RT (Exp. RT): 13.21 (13.22) min

Calculated conc: 0.011980

Area Ratio: 2.704e-1
Sample Type: (Quality Control)

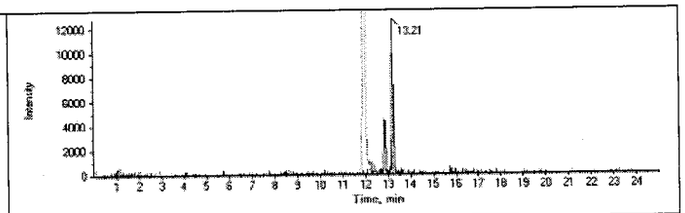


PFNA 2 (463.0 / 218.9)

RT (Exp. RT): 13.21 (13.21) min

Calculated conc: 0.011281

Area Ratio: 6.743e-2
Sample Type: (Quality Control)

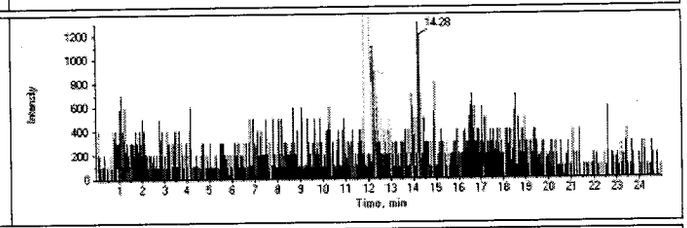


PFDA (513.0 / 469.0)

RT (Exp. RT): 14.28 (14.26) min

Calculated conc: 0.000093

Area Ratio: 2.233e-3
Sample Type: (Quality Control)

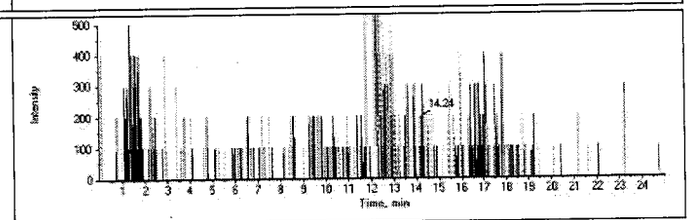


PFDA 2 (513.0 / 218.8)

RT (Exp. RT): 14.24 (14.26) min

Calculated conc: 0.000074

Area Ratio: 3.269e-4
Sample Type: (Quality Control)

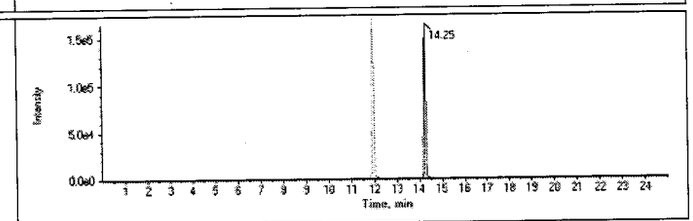


Surr-13c-PFDA (515.0 / 470.0)

RT (Exp. RT): 14.25 (14.26) min

Calculated conc: 96.098619

Area Ratio: 8.363e-1
Sample Type: (Quality Control)

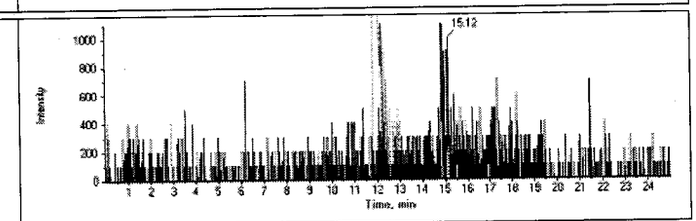


PFUnA (563.0 / 519.0)

RT (Exp. RT): 15.12 (15.14) min

Calculated conc: 0.000101

Area Ratio: 2.287e-3
Sample Type: (Quality Control)

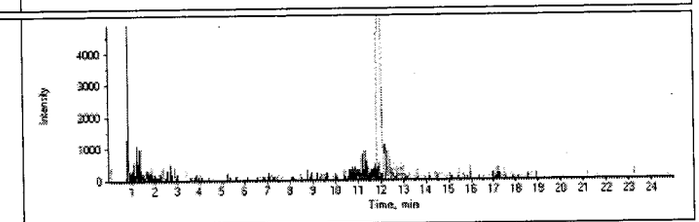


PFUnA 2 (563.0 / 268.8)

RT (Exp. RT): N/A (15.14) min

Calculated conc: N/A

Area Ratio: N/A
Sample Type: (Quality Control)

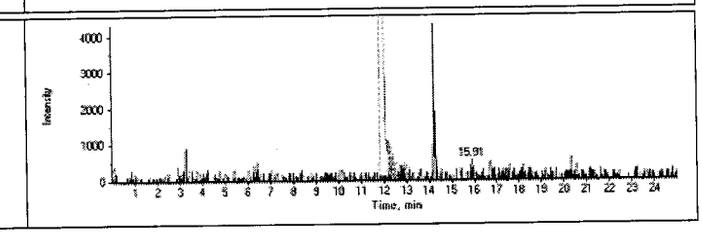


PFDoA (612.8 / 569.0)

RT (Exp. RT): 15.91 (15.90) min

Calculated conc: 0.000013

Area Ratio: 2.723e-4
Sample Type: (Quality Control)



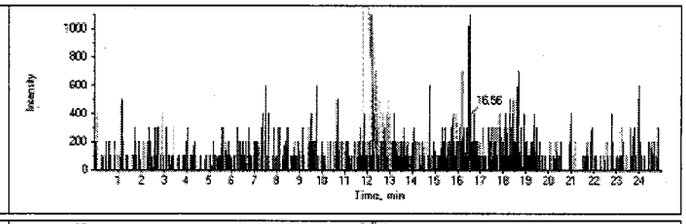
PFTrDA (662.9 / 619.0)

RT (Exp. RT): 16.56 (16.55) min

Calculated conc: 0.000011

Area Ratio: 3.266e-4

Sample Type: (Quality Control)



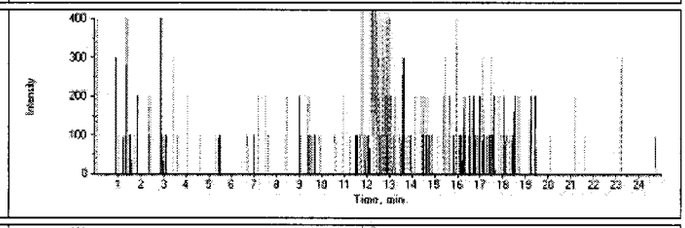
PFTrDA 2 (662.9 / 168.9)

RT (Exp. RT): N/A (16.55) min

Calculated conc: N/A

Area Ratio: N/A

Sample Type: (Quality Control)



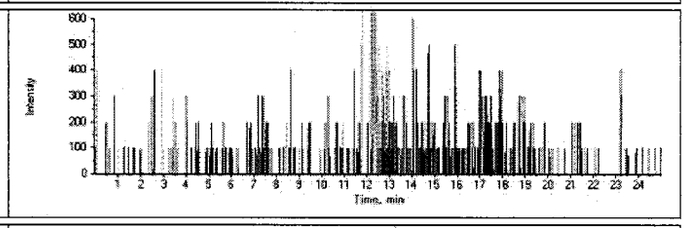
PFTA (713.3 / 669.0)

RT (Exp. RT): 17.20 (17.11) min

Calculated conc: 0.000020

Area Ratio: 1.634e-4

Sample Type: (Quality Control)



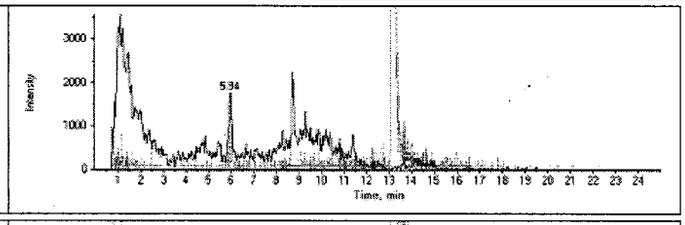
PFBS (299.0 / 79.9)

RT (Exp. RT): 5.94 (5.96) min

Calculated conc: 0.001051

Area Ratio: 9.251e-3

Sample Type: (Quality Control)



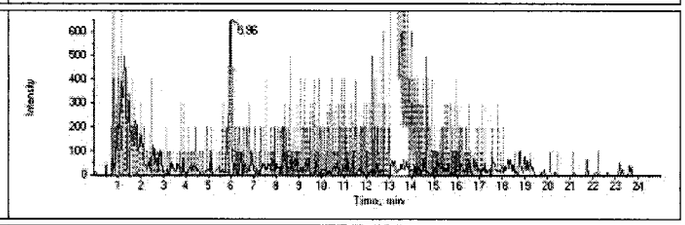
PFBS 2 (299.0 / 99.0)

RT (Exp. RT): 5.96 (5.97) min

Calculated conc: 0.001252

Area Ratio: 3.935e-3

Sample Type: (Quality Control)



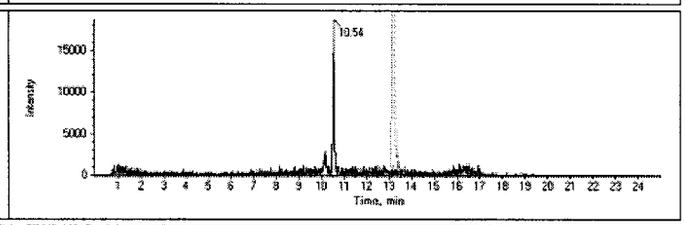
PFHxS (398.9 / 80.0)

RT (Exp. RT): 10.54 (10.55) min

Calculated conc: 0.006514

Area Ratio: 6.830e-2

Sample Type: (Quality Control)



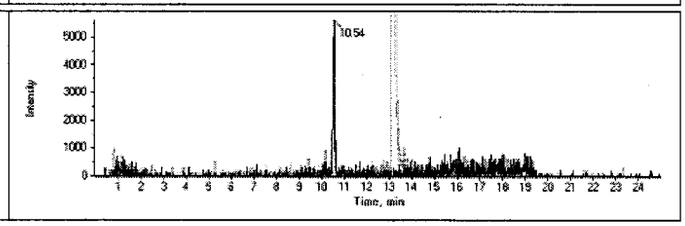
PFHxS 2 (398.9 / 99.0)

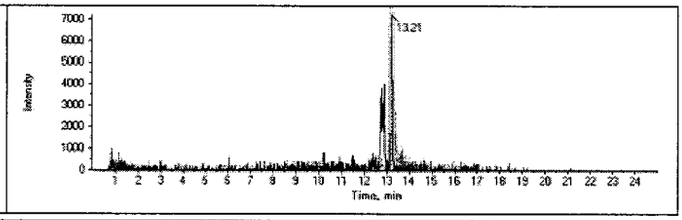
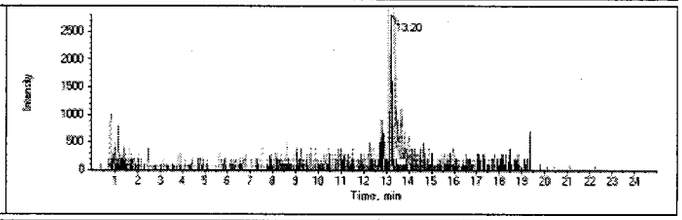
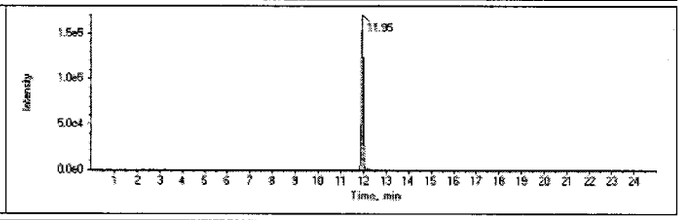
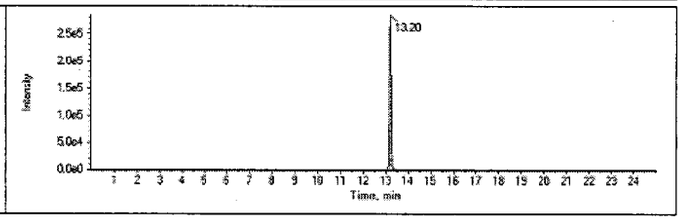
RT (Exp. RT): 10.54 (10.54) min

Calculated conc: 0.006123

Area Ratio: 2.148e-2

Sample Type: (Quality Control)

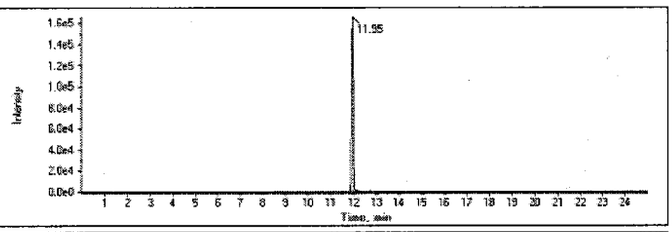
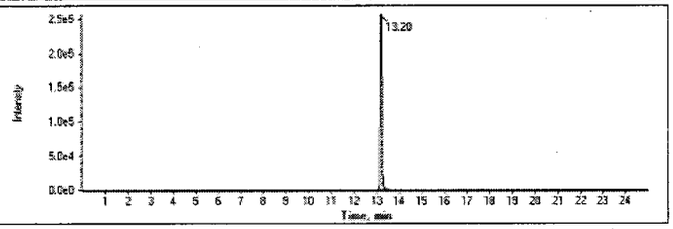


PFOS (499.0 / 79.9) RT (Exp. RT): 13.21 (13.22) min Calculated conc: 0.002338 Area Ratio: 2.295e-2 Sample Type: (Quality Control)	
PFOS 2 (499.0 / 99.0) RT (Exp. RT): 13.20 (13.21) min Calculated conc: 0.003085 Area Ratio: 9.095e-3 Sample Type: (Quality Control)	
13C-PFOA (417.0 / 372.0) RT (Exp. RT): 11.95 (11.96) min Calculated conc: 94.995518 Area Ratio: N/A Sample Type: (Quality Control)	
13C-PFOS (503.0 / 80.0) RT (Exp. RT): 13.20 (13.22) min Calculated conc: 107.388691 Area Ratio: N/A Sample Type: (Quality Control)	

Sample Name	201407110102	**Injection Vial**	29
Sample ID		**Injection Volume**	5.00
Sample Type	Quality Control	**Algorithm Used**	MQ4
Acquisition Date	7/17/2014 5:55:36 AM	**Dilution Factor**	1.00
Acquisition Method	@537-ShortRun-110613-Ali.dam	**Weight to Volume**	N/A
Project	EPA537\2014_07_16	**Instrument Name**	API 4000
Data File	@537-Batch#780662-071614.wiff		
Result Table	@537-Batch#780662-071614		
Sample Comment	Prep. By FAM@07/14/2014		

Internal Standard	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
IS-13C-PFOA	877505	11.95	100.00000	-
IS-13C-PFOS	1369171	13.20	100.00000	-

Target Analyte	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
PFHxA	9.147e+04	8.27	0.00000	0.006569
Surr-13c-PFHxA	9.628e+05	8.27	100.00000	100.675761
PFHpA	1.072e+05	10.39	0.00000	0.003772
PFHpA 2	2.813e+04	10.39	0.00000	0.003416
PFOA	2.503e+05	11.95	0.00000	0.009454
PFOA 2	8.560e+04	11.95	0.00000	0.009180
PFNA	2.240e+05	13.20	0.00000	0.011313
PFNA 2	5.973e+04	13.20	0.00000	0.011387
PFDA	3.727e+03	14.24	0.00000	0.000176
PFDA 2	2.940e+02	14.25	0.00000	0.000076
Surr-13c-PFDA	7.305e+05	14.24	100.00000	95.668612
PFUnA	4.410e+02	15.16	0.00000	0.000022
PFUnA 2	4.900e+02	15.15	0.00000	0.000126
PFDoA	2.450e+02	15.86	0.00000	0.000014
PFTrDA	3.430e+02	16.52	0.00000	0.000013
PFTrDA 2	N/A	N/A	0.00000	N/A
PFTA	2.450e+02	17.10	0.00000	0.000034
PFBS	1.708e+04	5.95	0.00000	0.001417
PFBS 2	3.958e+03	5.94	0.00000	0.000919
PFHxS	8.955e+04	10.53	0.00000	0.006238
PFHxS 2	3.192e+04	10.54	0.00000	0.006647
PFOS	3.207e+04	13.20	0.00000	0.002387
PFOS 2	1.143e+04	13.19	0.00000	0.002830
13C-PFOA	8.775e+05	11.95	100.00000	92.580376
13C-PFOS	1.369e+06	13.20	100.00000	104.873908

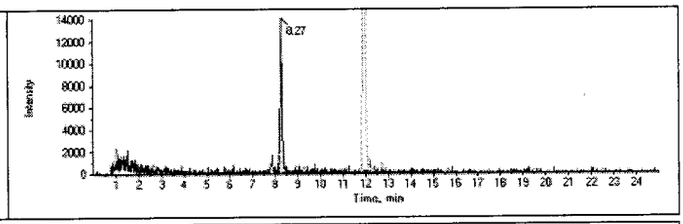
IS-13C-PFOA (Internal Standard) RT (Exp. RT): 11.95(11.96) min Concentration: 100.00000 Sample Type: (Quality Control)	
IS-13C-PFOS (Internal Standard) RT (Exp. RT): 13.20(13.22) min Concentration: 100.00000 Sample Type: (Quality Control)	

PFHxA (313.0 / 268.8)

RT (Exp. RT): 8.27 (8.28) min

Calculated conc: 0.006569

Area Ratio: 1.042e-1
Sample Type: (Quality Control)

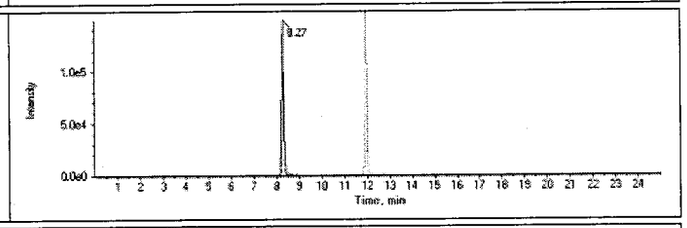


Surr-13c-PFHxA (315.0 / 270.0)

RT (Exp. RT): 8.27 (8.28) min

Calculated conc: 100.675761

Area Ratio: 1.097e0
Sample Type: (Quality Control)

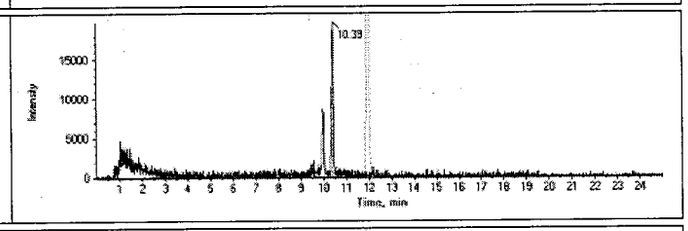


PFHpA (363.0 / 318.9)

RT (Exp. RT): 10.39 (10.40) min

Calculated conc: 0.003772

Area Ratio: 1.222e-1
Sample Type: (Quality Control)

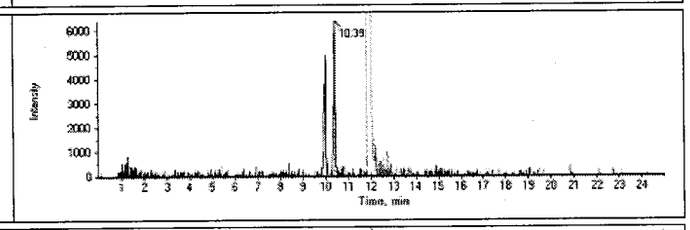


PFHpA 2 (363.0 / 168.9)

RT (Exp. RT): 10.39 (10.40) min

Calculated conc: 0.003416

Area Ratio: 3.205e-2
Sample Type: (Quality Control)

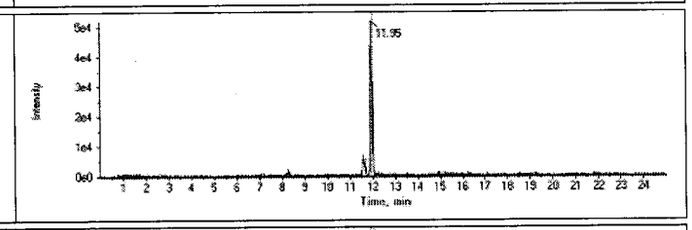


PFOA (413.0 / 368.9)

RT (Exp. RT): 11.95 (11.97) min

Calculated conc: 0.009454

Area Ratio: 2.852e-1
Sample Type: (Quality Control)

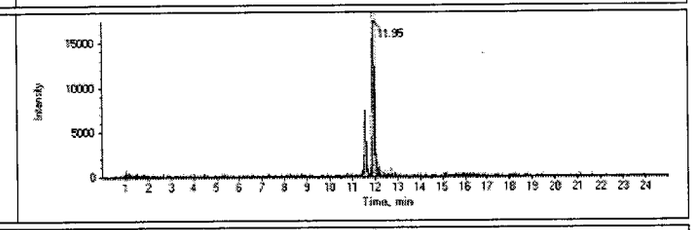


PFOA 2 (413.0 / 168.8)

RT (Exp. RT): 11.95 (11.96) min

Calculated conc: 0.009180

Area Ratio: 9.754e-2
Sample Type: (Quality Control)

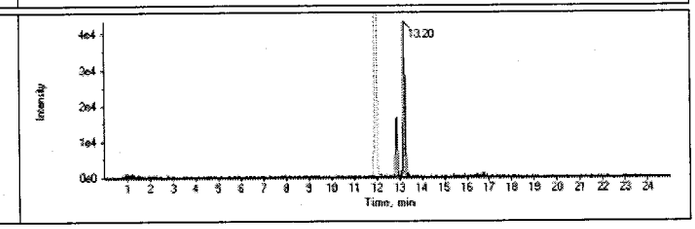


PFNA (463.0 / 419.0)

RT (Exp. RT): 13.20 (13.22) min

Calculated conc: 0.011313

Area Ratio: 2.553e-1
Sample Type: (Quality Control)

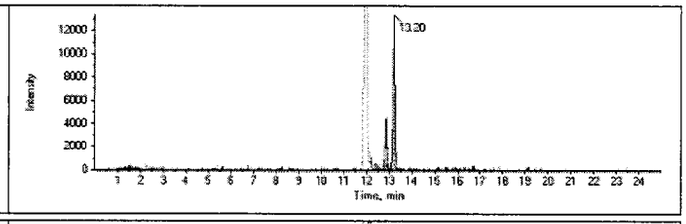


PFNA 2 (463.0 / 218.9)

RT (Exp. RT): 13.20 (13.21) min

Calculated conc: 0.011387

Area Ratio: 6.807e-2
Sample Type: (Quality Control)

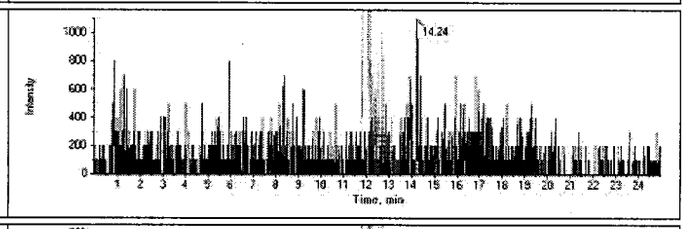


PFDA (513.0 / 469.0)

RT (Exp. RT): 14.24 (14.26) min

Calculated conc: 0.000176

Area Ratio: 4.248e-3
Sample Type: (Quality Control)

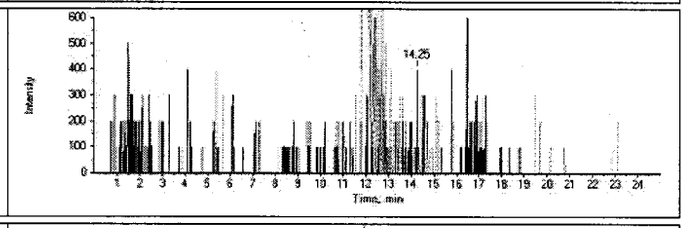


PFDA 2 (513.0 / 218.8)

RT (Exp. RT): 14.25 (14.26) min

Calculated conc: 0.000076

Area Ratio: 3.354e-4
Sample Type: (Quality Control)

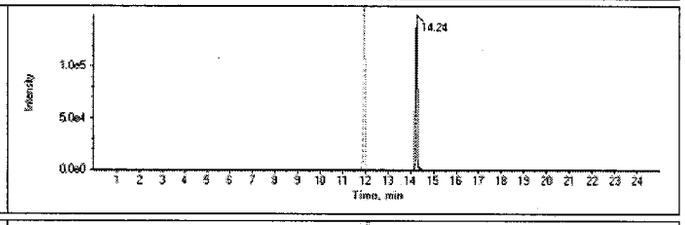


Surr-13c-PFDA (515.0 / 470.0)

RT (Exp. RT): 14.24 (14.26) min

Calculated conc: 95.668612

Area Ratio: 8.325e-1
Sample Type: (Quality Control)

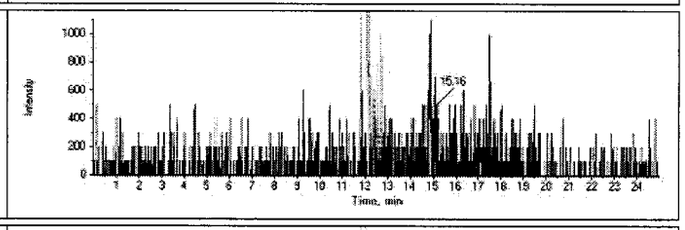


PFUnA (563.0 / 519.0)

RT (Exp. RT): 15.16 (15.14) min

Calculated conc: 0.000022

Area Ratio: 5.031e-4
Sample Type: (Quality Control)

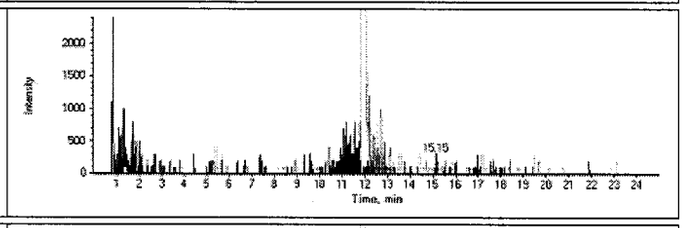


PFUnA 2 (563.0 / 268.8)

RT (Exp. RT): 15.15 (15.14) min

Calculated conc: 0.000126

Area Ratio: 5.587e-4
Sample Type: (Quality Control)

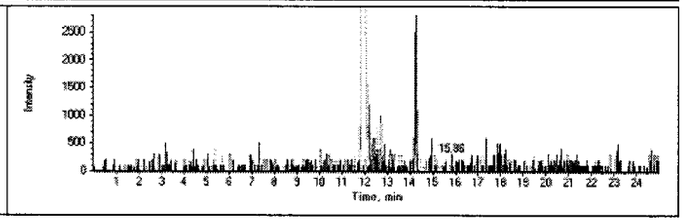


PFDoA (612.8 / 569.0)

RT (Exp. RT): 15.86 (15.90) min

Calculated conc: 0.000014

Area Ratio: 2.795e-4
Sample Type: (Quality Control)



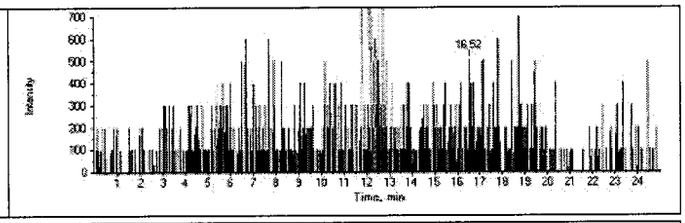
PFTrDA (662.9 / 619.0)

RT (Exp. RT): 16.52 (16.55) min

Calculated conc: 0.000013

Area Ratio: 3.910e-4

Sample Type: (Quality Control)



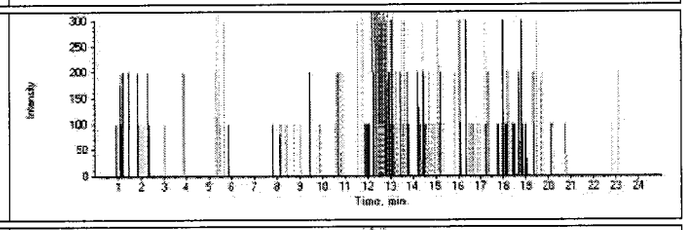
PFTrDA 2 (662.9 / 168.9)

RT (Exp. RT): N/A (16.55) min

Calculated conc: N/A

Area Ratio: N/A

Sample Type: (Quality Control)



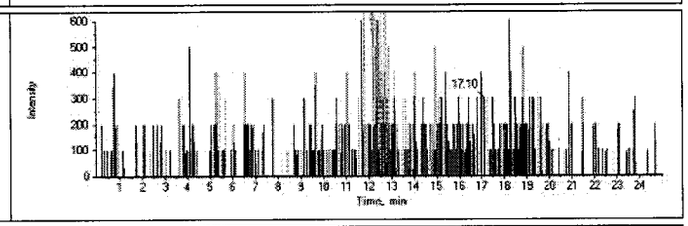
PFTA (713.3 / 669.0)

RT (Exp. RT): 17.10 (17.11) min

Calculated conc: 0.000034

Area Ratio: 2.794e-4

Sample Type: (Quality Control)



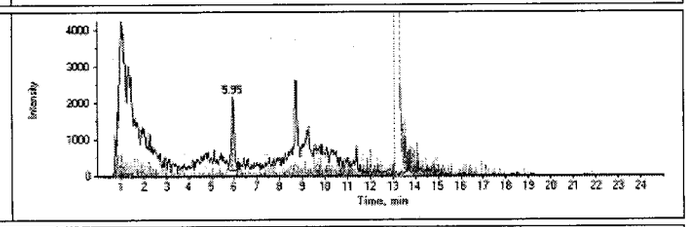
PFBS (299.0 / 79.9)

RT (Exp. RT): 5.95 (5.96) min

Calculated conc: 0.001417

Area Ratio: 1.247e-2

Sample Type: (Quality Control)



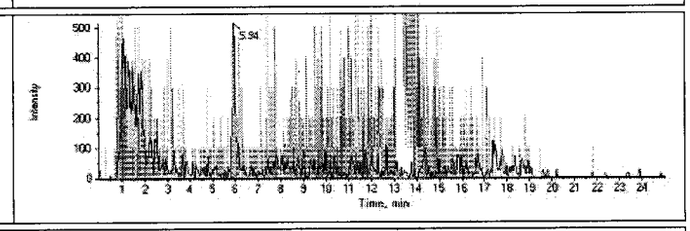
PFBS 2 (299.0 / 99.0)

RT (Exp. RT): 5.94 (5.97) min

Calculated conc: 0.000919

Area Ratio: 2.890e-3

Sample Type: (Quality Control)



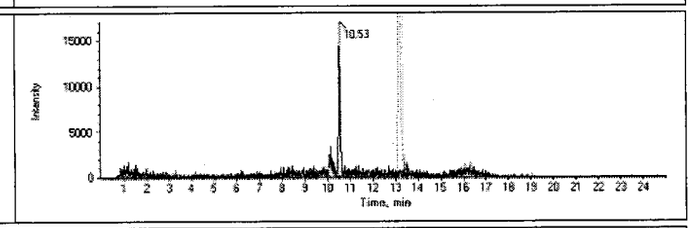
PFHxS (398.9 / 80.0)

RT (Exp. RT): 10.53 (10.55) min

Calculated conc: 0.006238

Area Ratio: 6.540e-2

Sample Type: (Quality Control)



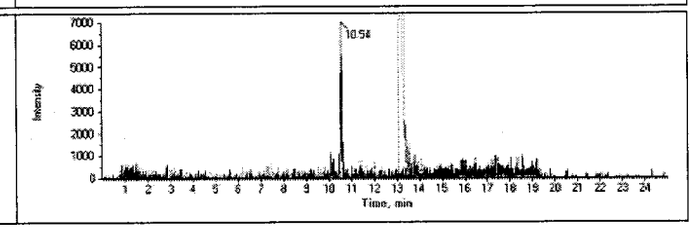
PFHxS 2 (398.9 / 99.0)

RT (Exp. RT): 10.54 (10.54) min

Calculated conc: 0.006647

Area Ratio: 2.332e-2

Sample Type: (Quality Control)

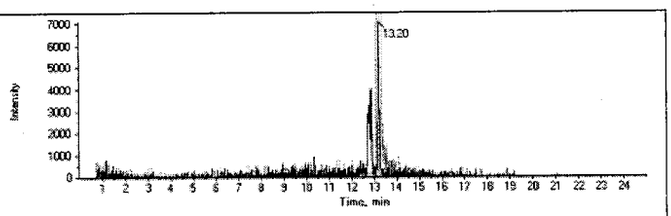


PFOS (499.0 / 79.9)

RT (Exp. RT): 13.20 (13.22) min

Calculated conc: 0.002387

Area Ratio: 2.343e-2
Sample Type: (Quality Control)

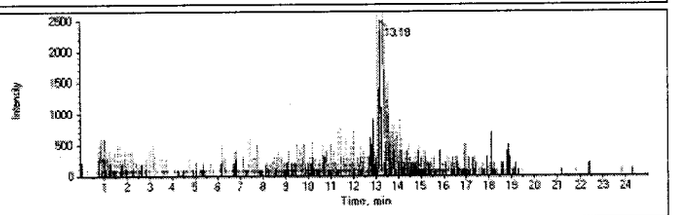


PFOS 2 (499.0 / 99.0)

RT (Exp. RT): 13.19 (13.21) min

Calculated conc: 0.002830

Area Ratio: 8.345e-3
Sample Type: (Quality Control)

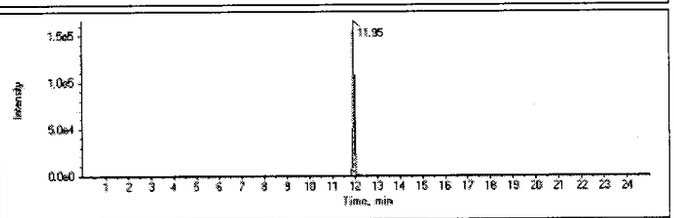


13C-PFOA (417.0 / 372.0)

RT (Exp. RT): 11.95 (11.96) min

Calculated conc: 92.580376

Area Ratio: N/A
Sample Type: (Quality Control)

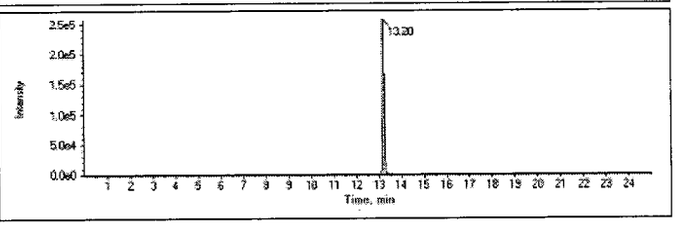


13C-PFOS (503.0 / 80.0)

RT (Exp. RT): 13.20 (13.22) min

Calculated conc: 104.873908

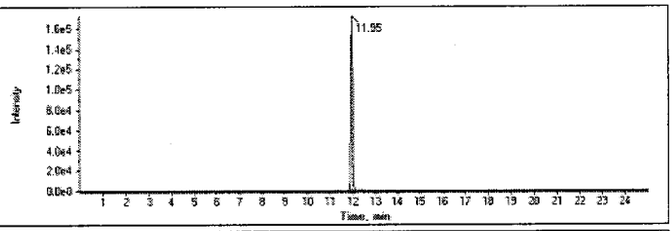
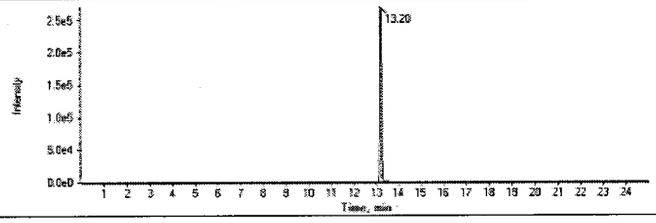
Area Ratio: N/A
Sample Type: (Quality Control)



Sample Name	201407110103	**Injection Vial**	30
Sample ID		**Injection Volume**	5.00
Sample Type	Quality Control	**Algorithm Used**	MQ4
Acquisition Date	7/17/2014 6:21:12 AM	**Dilution Factor**	1.00
Acquisition Method	@537-ShortRun-110613-Ali.dam	**Weight to Volume**	N/A
Project	EPA537\2014_07_16	**Instrument Name**	API 4000
Data File	@537-Batch#780662-071614.wiff		
Result Table	@537-Batch#780662-071614		
Sample Comment	Prep. By FAM@07/14/2014		

Internal Standard	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
IS-13C-PFOA	931818	11.95	100.00000	-
IS-13C-PFOS	1392013	13.20	100.00000	-

Target Analyte	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
PFHxA	2.601e+05	8.27	0.00000	0.017593
Surr-13c-PFHxA	9.398e+05	8.27	100.00000	92.546092
PFHpA	3.898e+05	10.39	0.00000	0.012912
PFHpA 2	1.080e+05	10.39	0.00000	0.012358
PFOA	9.652e+05	11.95	0.00000	0.034335
PFOA 2	3.437e+05	11.96	0.00000	0.034713
PFNA	4.757e+05	13.21	0.00000	0.022620
PFNA 2	1.321e+05	13.21	0.00000	0.023706
PFDA	1.010e+04	14.25	0.00000	0.000450
PFDA 2	1.079e+03	14.26	0.00000	0.000261
Surr-13c-PFDA	6.824e+05	14.25	100.00000	84.160587
PFUnA	5.001e+03	15.14	0.00000	0.000238
PFUnA 2	1.324e+03	15.13	0.00000	0.000320
PFDoA	1.470e+02	16.39	0.00000	0.000008
PFTrDA	4.910e+02	16.54	0.00000	0.000018
PFTrDA 2	2.450e+02	16.36	0.00000	0.000038
PFTA	1.470e+02	17.19	0.00000	0.000019
PFBS	4.344e+04	5.95	0.00000	0.003546
PFBS 2	1.588e+04	5.95	0.00000	0.003629
PFHxS	7.767e+04	10.54	0.00000	0.005322
PFHxS 2	2.726e+04	10.54	0.00000	0.005584
PFOS	8.101e+04	13.21	0.00000	0.005929
PFOS 2	2.476e+04	13.21	0.00000	0.006033
13C-PFOA	9.318e+05	11.95	100.00000	98.310595
13C-PFOS	1.392e+06	13.20	100.00000	106.623544

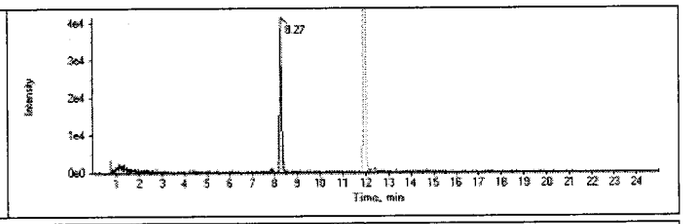
IS-13C-PFOA (Internal Standard) RT (Exp. RT): 11.95(11.96) min Concentration: 100.00000 Sample Type: (Quality Control)	
IS-13C-PFOS (Internal Standard) RT (Exp. RT): 13.20(13.22) min Concentration: 100.00000 Sample Type: (Quality Control)	

PFHxA (313.0 / 268.8)

RT (Exp. RT): 8.27 (8.28) min

Calculated conc: 0.017593

Area Ratio: 2.792e-1
Sample Type: (Quality Control)

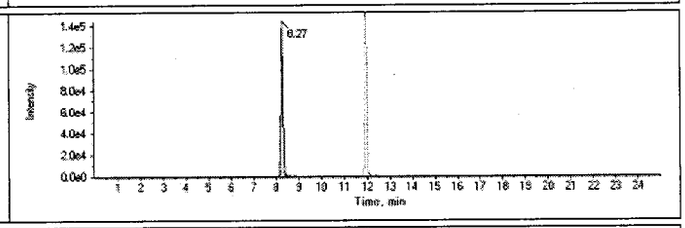


Surr-13c-PFHxA (315.0 / 270.0)

RT (Exp. RT): 8.27 (8.28) min

Calculated conc: 92.546092

Area Ratio: 1.009e0
Sample Type: (Quality Control)

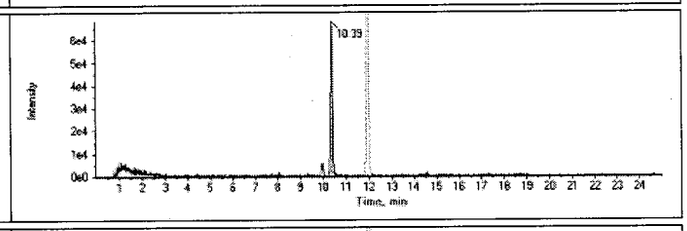


PFHpA (363.0 / 318.9)

RT (Exp. RT): 10.39 (10.40) min

Calculated conc: 0.012912

Area Ratio: 4.183e-1
Sample Type: (Quality Control)

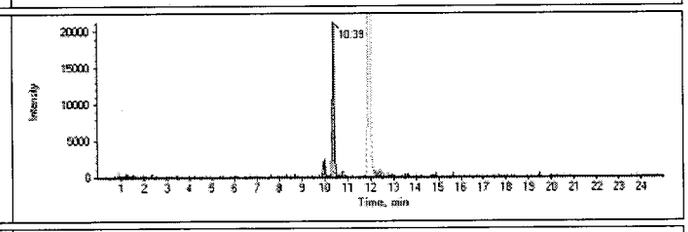


PFHpA 2 (363.0 / 168.9)

RT (Exp. RT): 10.39 (10.40) min

Calculated conc: 0.012358

Area Ratio: 1.159e-1
Sample Type: (Quality Control)

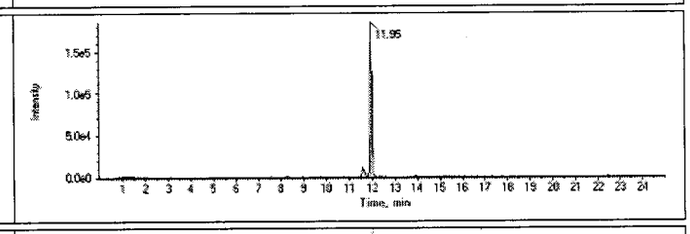


PFOA (413.0 / 368.9)

RT (Exp. RT): 11.95 (11.97) min

Calculated conc: 0.034335

Area Ratio: 1.036e0
Sample Type: (Quality Control)

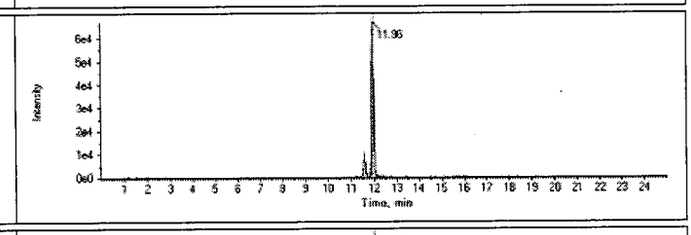


PFOA 2 (413.0 / 168.8)

RT (Exp. RT): 11.96 (11.96) min

Calculated conc: 0.034713

Area Ratio: 3.689e-1
Sample Type: (Quality Control)

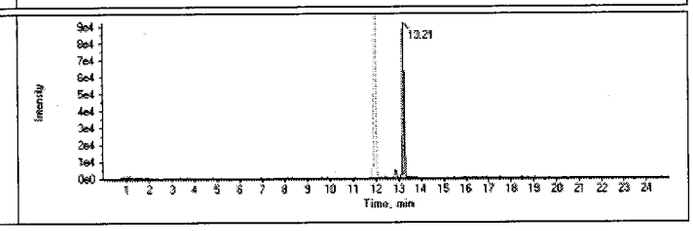


PFNA (463.0 / 419.0)

RT (Exp. RT): 13.21 (13.22) min

Calculated conc: 0.022620

Area Ratio: 5.105e-1
Sample Type: (Quality Control)



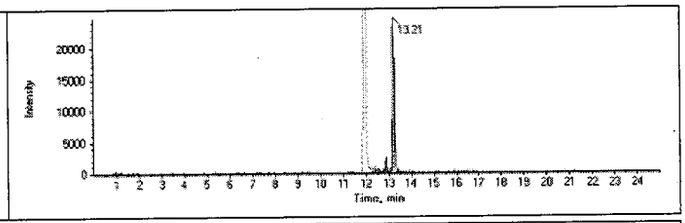
PFNA 2 (463.0 / 218.9)

RT (Exp. RT): 13.21 (13.21) min

Calculated conc: 0.023706

Area Ratio: 1.417e-1

Sample Type: (Quality Control)



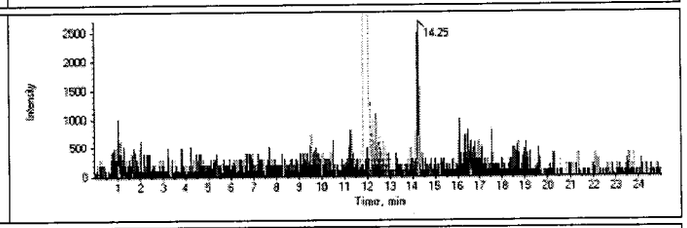
PFDA (513.0 / 469.0)

RT (Exp. RT): 14.25 (14.26) min

Calculated conc: 0.000450

Area Ratio: 1.084e-2

Sample Type: (Quality Control)



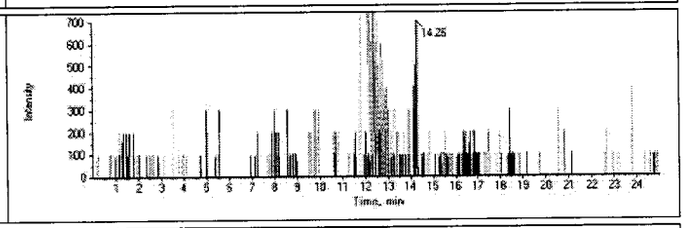
PFDA 2 (513.0 / 218.8)

RT (Exp. RT): 14.26 (14.26) min

Calculated conc: 0.000261

Area Ratio: 1.157e-3

Sample Type: (Quality Control)



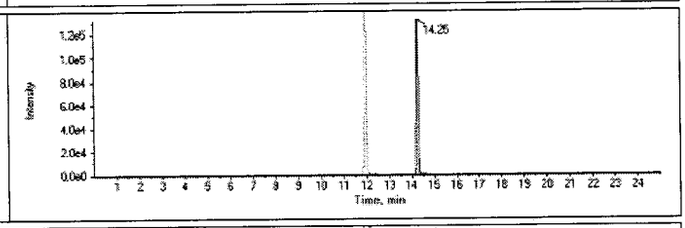
Surr-13c-PFDA (515.0 / 470.0)

RT (Exp. RT): 14.25 (14.26) min

Calculated conc: 84.160587

Area Ratio: 7.324e-1

Sample Type: (Quality Control)



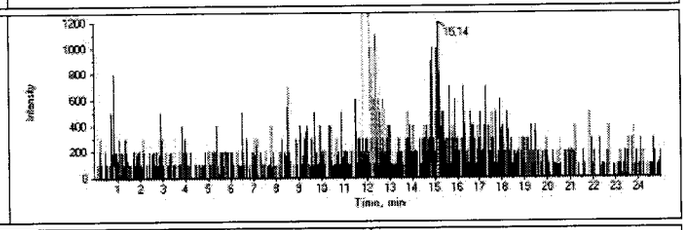
PFUnA (563.0 / 519.0)

RT (Exp. RT): 15.14 (15.14) min

Calculated conc: 0.000238

Area Ratio: 5.367e-3

Sample Type: (Quality Control)



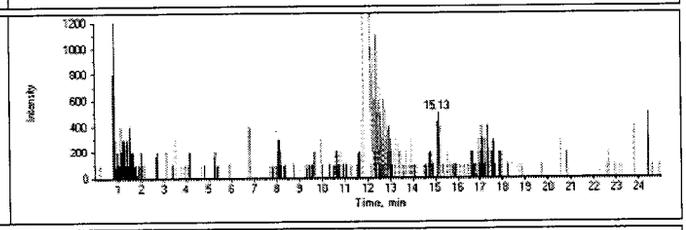
PFUnA 2 (563.0 / 268.8)

RT (Exp. RT): 15.13 (15.14) min

Calculated conc: 0.000320

Area Ratio: 1.421e-3

Sample Type: (Quality Control)



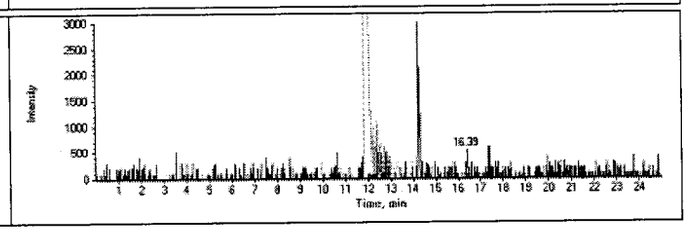
PFDoA (612.8 / 569.0)

RT (Exp. RT): 16.39 (15.90) min

Calculated conc: 0.000008

Area Ratio: 1.579e-4

Sample Type: (Quality Control)



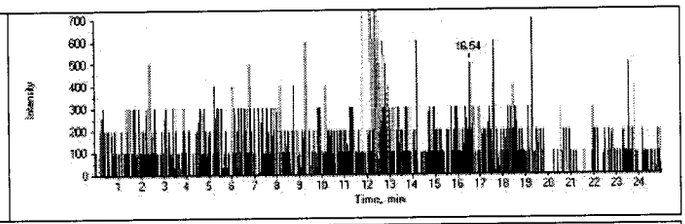
PFTrDA (662.9 / 619.0)

RT (Exp. RT): 16.54 (16.55) min

Calculated conc: 0.000018

Area Ratio: 5.264e-4

Sample Type: (Quality Control)



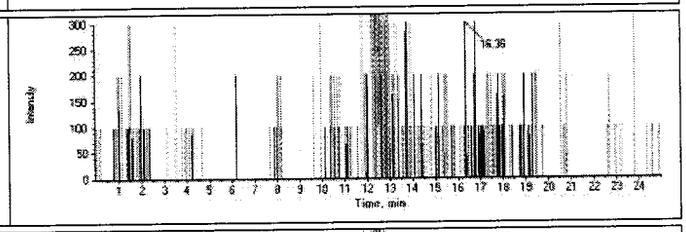
PFTrDA 2 (662.9 / 168.9)

RT (Exp. RT): 16.36 (16.55) min

Calculated conc: 0.000038

Area Ratio: 2.632e-4

Sample Type: (Quality Control)



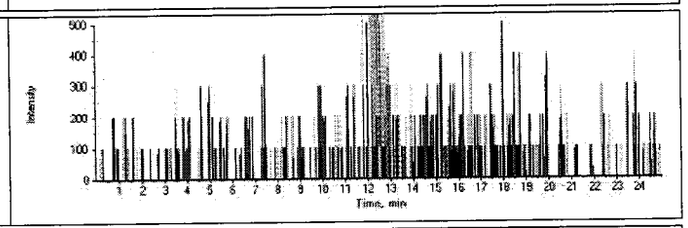
PFTA (713.3 / 669.0)

RT (Exp. RT): 17.19 (17.11) min

Calculated conc: 0.000019

Area Ratio: 1.579e-4

Sample Type: (Quality Control)



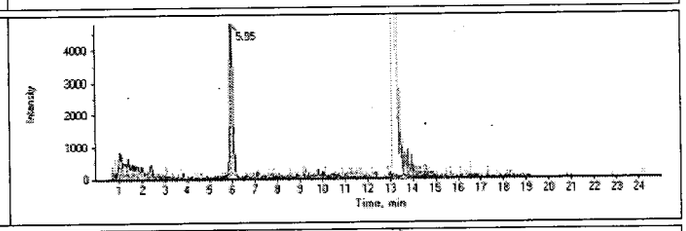
PFBS (299.0 / 79.9)

RT (Exp. RT): 5.95 (5.96) min

Calculated conc: 0.003546

Area Ratio: 3.120e-2

Sample Type: (Quality Control)



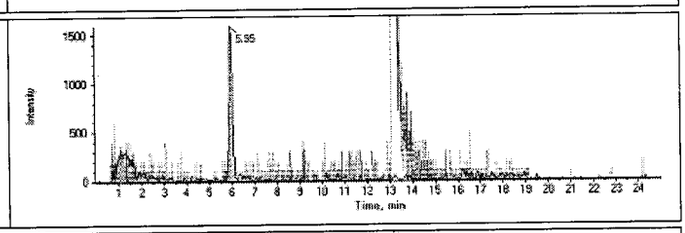
PFBS 2 (299.0 / 99.0)

RT (Exp. RT): 5.95 (5.97) min

Calculated conc: 0.003629

Area Ratio: 1.141e-2

Sample Type: (Quality Control)



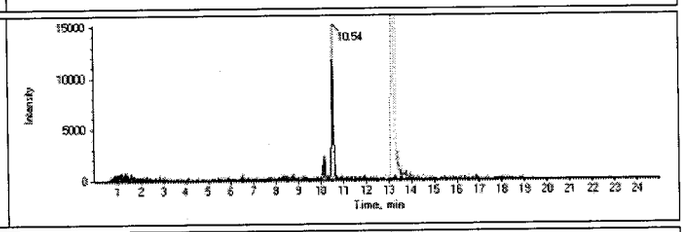
PFHxS (398.9 / 80.0)

RT (Exp. RT): 10.54 (10.55) min

Calculated conc: 0.005322

Area Ratio: 5.579e-2

Sample Type: (Quality Control)



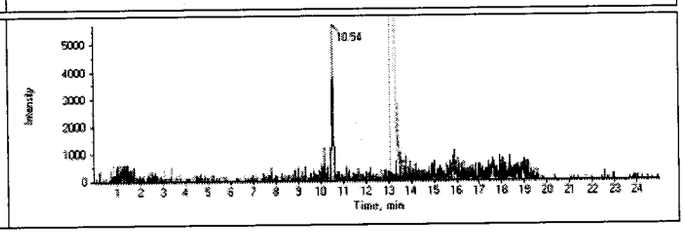
PFHxS 2 (398.9 / 99.0)

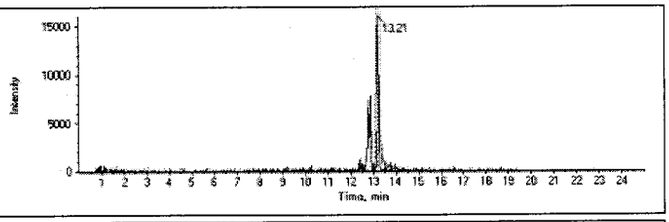
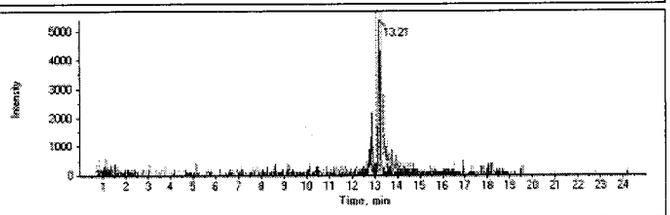
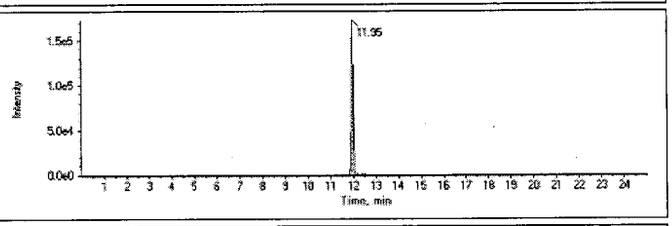
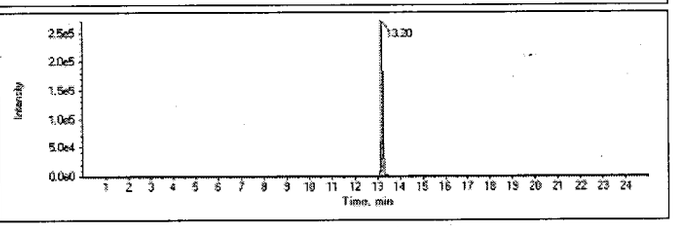
RT (Exp. RT): 10.54 (10.54) min

Calculated conc: 0.005584

Area Ratio: 1.959e-2

Sample Type: (Quality Control)

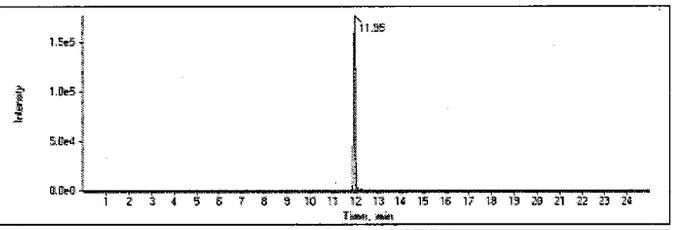
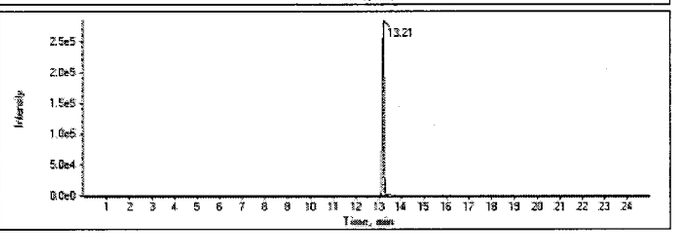


PFOS (499.0 / 79.9) RT (Exp. RT): 13.21 (13.22) min Calculated conc: 0.005929 Area Ratio: 5.819e-2 Sample Type: (Quality Control)	
PFOS 2 (499.0 / 99.0) RT (Exp. RT): 13.21 (13.21) min Calculated conc: 0.006033 Area Ratio: 1.779e-2 Sample Type: (Quality Control)	
13C-PFOA (417.0 / 372.0) RT (Exp. RT): 11.95 (11.96) min Calculated conc: 98.310595 Area Ratio: N/A Sample Type: (Quality Control)	
13C-PFOS (503.0 / 80.0) RT (Exp. RT): 13.20 (13.22) min Calculated conc: 106.623544 Area Ratio: N/A Sample Type: (Quality Control)	

Sample Name	201407110105	**Injection Vial**	31
Sample ID		**Injection Volume**	5.00
Sample Type	Quality Control	**Algorithm Used**	MQ4
Acquisition Date	7/17/2014 6:46:48 AM	**Dilution Factor**	1.00
Acquisition Method	@537-ShortRun-110613-Ali.dam	**Weight to Volume**	N/A
Project	EPA537\2014_07_16	**Instrument Name**	API 4000
Data File	@537-Batch#780662-071614.wiff		
Result Table	@537-Batch#780662-071614		
Sample Comment	Prep. By FAM@07/14/2014		

Internal Standard	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
IS-13C-PFOA	938977	11.95	100.00000	-
IS-13C-PFOS	1435993	13.21	100.00000	-

Target Analyte	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
PFHxA	3.924e+03	8.27	0.00000	0.000263
Surr-13c-PFHxA	1.053e+06	8.27	100.00000	102.863649
PFHpA	6.032e+03	10.39	0.00000	0.000198
PFHpA 2	9.800e+01	10.42	0.00000	0.000011
PFOA	1.372e+04	11.96	0.00000	0.000484
PFOA 2	4.168e+03	11.97	0.00000	0.000418
PFNA	9.320e+02	13.24	0.00000	0.000044
PFNA 2	1.960e+02	13.22	0.00000	0.000035
PFDA	2.450e+02	14.28	0.00000	0.000011
PFDA 2	N/A	N/A	0.00000	N/A
Surr-13c-PFDA	7.544e+05	14.25	100.00000	92.324565
PFUnA	2.940e+02	15.13	0.00000	0.000014
PFUnA 2	N/A	N/A	0.00000	N/A
PFDoA	1.470e+02	15.89	0.00000	0.000008
PFTrDA	4.900e+02	16.54	0.00000	0.000017
PFTrDA 2	1.960e+02	16.60	0.00000	0.000030
PFTA	1.470e+02	17.22	0.00000	0.000019
PFBS	4.670e+02	5.98	0.00000	0.000037
PFBS 2	3.420e+02	5.94	0.00000	0.000076
PFHxS	1.226e+03	10.54	0.00000	0.000081
PFHxS 2	8.330e+02	10.55	0.00000	0.000165
PFOS	3.041e+03	13.20	0.00000	0.000216
PFOS 2	5.880e+02	13.18	0.00000	0.000139
13C-PFOA	9.390e+05	11.95	100.00000	99.065962
13C-PFOS	1.436e+06	13.21	100.00000	109.992242

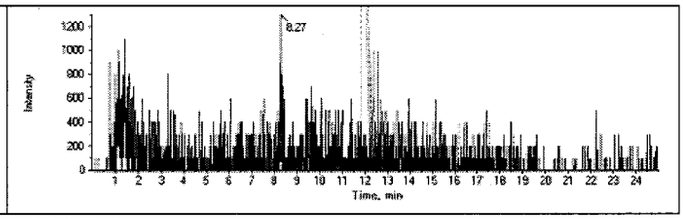
IS-13C-PFOA (Internal Standard) RT (Exp. RT): 11.95(11.96) min Concentration: 100.00000 Sample Type: (Quality Control)	
IS-13C-PFOS (Internal Standard) RT (Exp. RT): 13.21(13.22) min Concentration: 100.00000 Sample Type: (Quality Control)	

PFHxA (313.0 / 268.8)

RT (Exp. RT): 8.27 (8.28) min

Calculated conc: 0.000263

Area Ratio: 4.179e-3
Sample Type: (Quality Control)

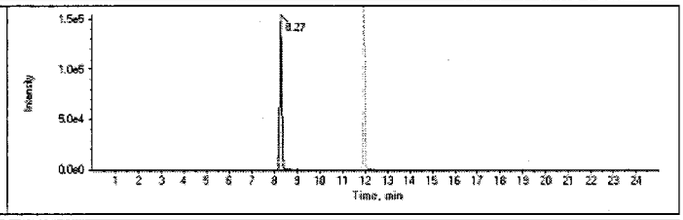


Surr-13c-PFHxA (315.0 / 270.0)

RT (Exp. RT): 8.27 (8.28) min

Calculated conc: 102.863649

Area Ratio: 1.121e0
Sample Type: (Quality Control)

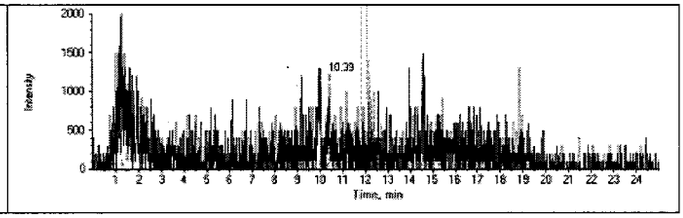


PFHpA (363.0 / 318.9)

RT (Exp. RT): 10.39 (10.40) min

Calculated conc: 0.000198

Area Ratio: 6.424e-3
Sample Type: (Quality Control)

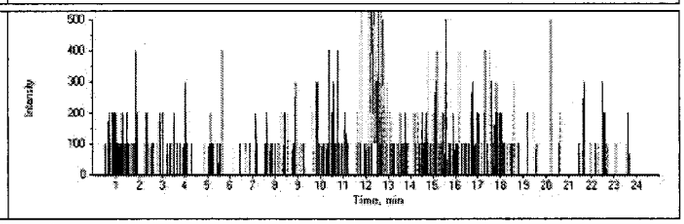


PFHpA 2 (363.0 / 168.9)

RT (Exp. RT): 10.42 (10.40) min

Calculated conc: 0.000011

Area Ratio: 1.044e-4
Sample Type: (Quality Control)

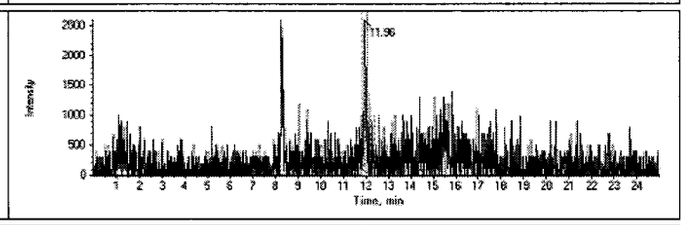


PFOA (413.0 / 368.9)

RT (Exp. RT): 11.96 (11.97) min

Calculated conc: 0.000484

Area Ratio: 1.461e-2
Sample Type: (Quality Control)

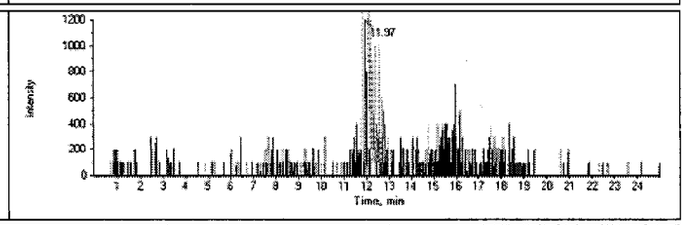


PFOA 2 (413.0 / 168.8)

RT (Exp. RT): 11.97 (11.96) min

Calculated conc: 0.000418

Area Ratio: 4.439e-3
Sample Type: (Quality Control)

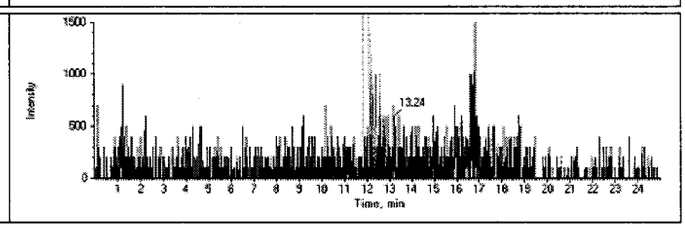


PFNA (463.0 / 419.0)

RT (Exp. RT): 13.24 (13.22) min

Calculated conc: 0.000044

Area Ratio: 9.921e-4
Sample Type: (Quality Control)



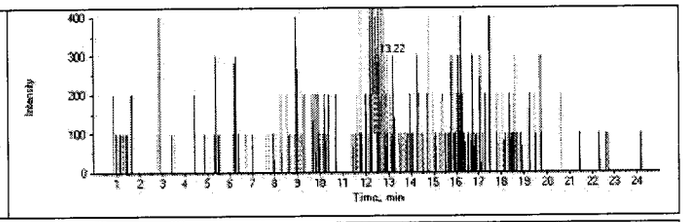
PFNA 2 (463.0 / 218.9)

RT (Exp. RT): 13.22 (13.21) min

Calculated conc: 0.000035

Area Ratio: 2.089e-4

Sample Type: (Quality Control)



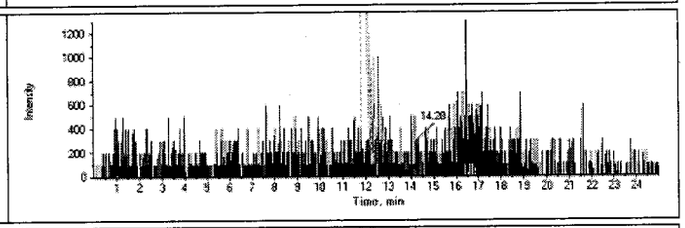
PFDA (513.0 / 469.0)

RT (Exp. RT): 14.28 (14.26) min

Calculated conc: 0.000011

Area Ratio: 2.609e-4

Sample Type: (Quality Control)



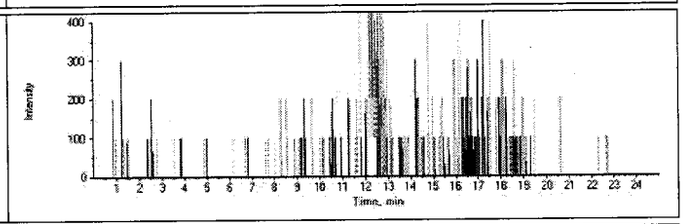
PFDA 2 (513.0 / 218.8)

RT (Exp. RT): N/A (14.26) min

Calculated conc: N/A

Area Ratio: N/A

Sample Type: (Quality Control)



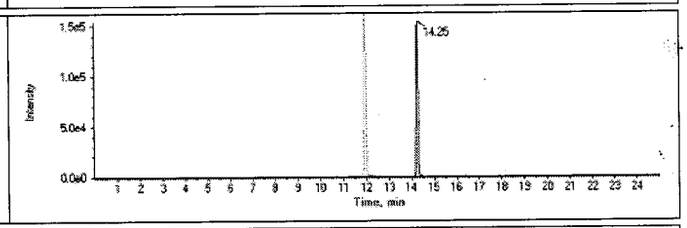
Surr-13c-PFDA (515.0 / 470.0)

RT (Exp. RT): 14.25 (14.26) min

Calculated conc: 92.324565

Area Ratio: 8.034e-1

Sample Type: (Quality Control)



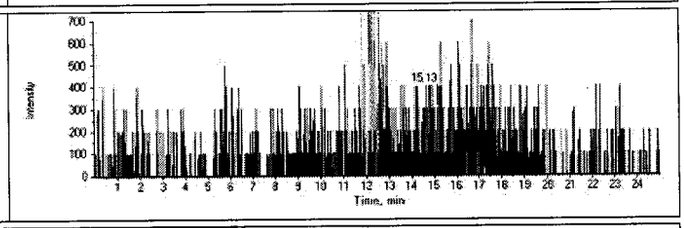
PFUnA (563.0 / 519.0)

RT (Exp. RT): 15.13 (15.14) min

Calculated conc: 0.000014

Area Ratio: 3.133e-4

Sample Type: (Quality Control)



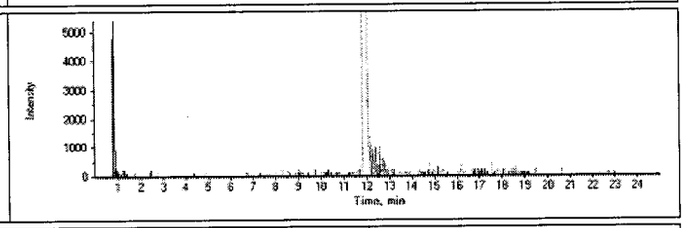
PFUnA 2 (563.0 / 268.8)

RT (Exp. RT): N/A (15.14) min

Calculated conc: N/A

Area Ratio: N/A

Sample Type: (Quality Control)



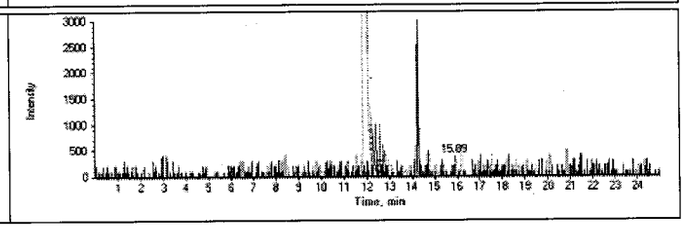
PFDoA (612.8 / 569.0)

RT (Exp. RT): 15.89 (15.90) min

Calculated conc: 0.000008

Area Ratio: 1.567e-4

Sample Type: (Quality Control)

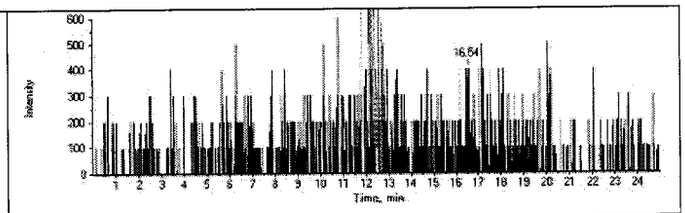


PFTrDA (662.9 / 619.0)

RT (Exp. RT): 16.54 (16.55) min

Calculated conc: 0.000017

Area Ratio: 5.223e-4
Sample Type: (Quality Control)

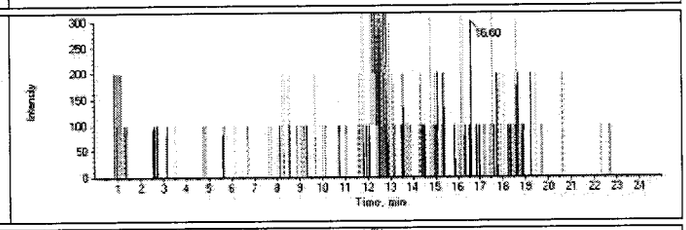


PFTrDA 2 (662.9 / 168.9)

RT (Exp. RT): 16.60 (16.55) min

Calculated conc: 0.000030

Area Ratio: 2.091e-4
Sample Type: (Quality Control)

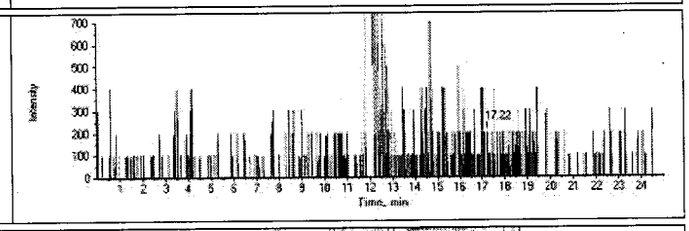


PFTA (713.3 / 669.0)

RT (Exp. RT): 17.22 (17.11) min

Calculated conc: 0.000019

Area Ratio: 1.568e-4
Sample Type: (Quality Control)

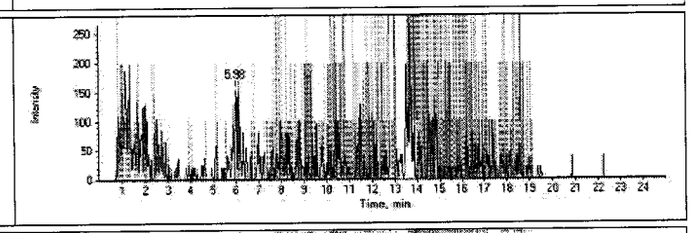


PFBS (299.0 / 79.9)

RT (Exp. RT): 5.98 (5.96) min

Calculated conc: 0.000037

Area Ratio: 3.255e-4
Sample Type: (Quality Control)

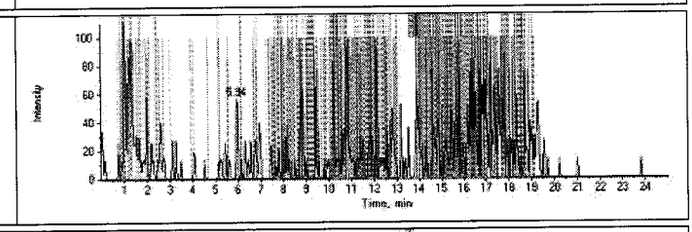


PFBS 2 (299.0 / 99.0)

RT (Exp. RT): 5.94 (5.97) min

Calculated conc: 0.000076

Area Ratio: 2.379e-4
Sample Type: (Quality Control)

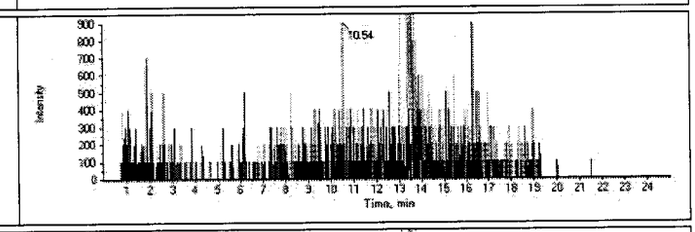


PFHxS (398.9 / 80.0)

RT (Exp. RT): 10.54 (10.55) min

Calculated conc: 0.000081

Area Ratio: 8.536e-4
Sample Type: (Quality Control)

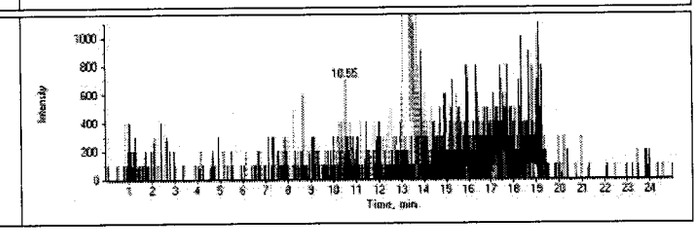


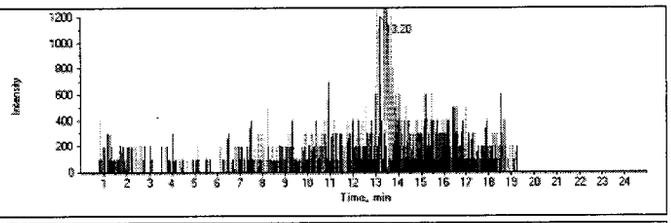
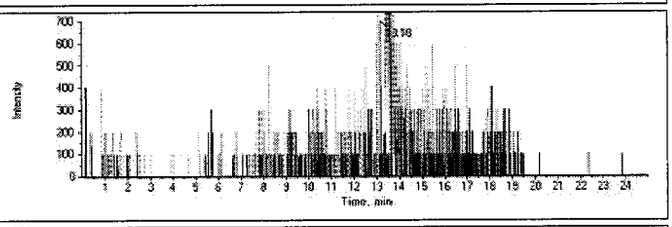
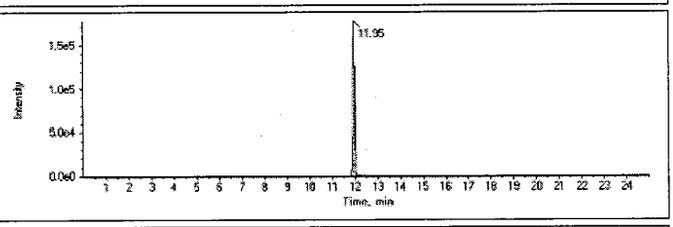
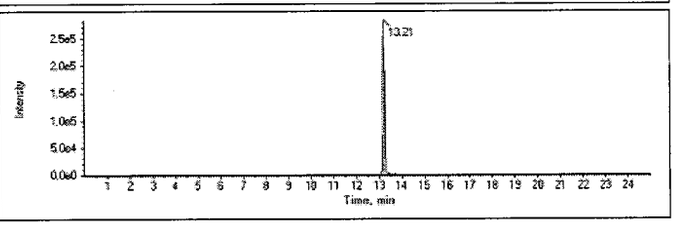
PFHxS 2 (398.9 / 99.0)

RT (Exp. RT): 10.55 (10.54) min

Calculated conc: 0.000165

Area Ratio: 5.803e-4
Sample Type: (Quality Control)

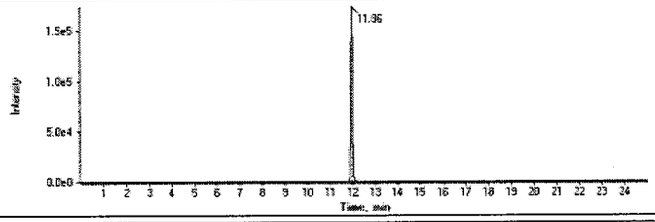
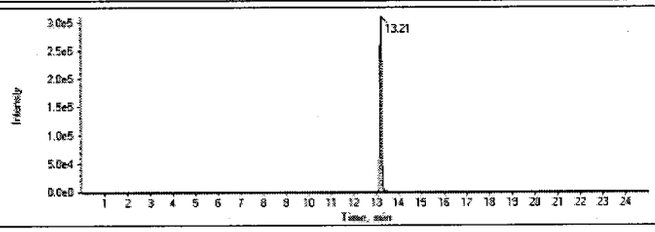


PFOS (499.0 / 79.9) RT (Exp. RT): 13.20 (13.22) min Calculated conc: 0.000216 Area Ratio: 2.117e-3 Sample Type: (Quality Control)	
PFOS 2 (499.0 / 99.0) RT (Exp. RT): 13.18 (13.21) min Calculated conc: 0.000139 Area Ratio: 4.097e-4 Sample Type: (Quality Control)	
13C-PFOA (417.0 / 372.0) RT (Exp. RT): 11.95 (11.96) min Calculated conc: 99.065962 Area Ratio: N/A Sample Type: (Quality Control)	
13C-PFOS (503.0 / 80.0) RT (Exp. RT): 13.21 (13.22) min Calculated conc: 109.992242 Area Ratio: N/A Sample Type: (Quality Control)	

Sample Name	201407110106	**Injection Vial**	32
Sample ID		**Injection Volume**	5.00
Sample Type	Quality Control	**Algorithm Used**	MQ4
Acquisition Date	7/17/2014 7:12:24 AM	**Dilution Factor**	1.00
Acquisition Method	@537-ShortRun-110613-Ali.dam	**Weight to Volume**	N/A
Project	EPA537\2014_07_16	**Instrument Name**	API 4000
Data File	@537-Batch#780662-071614.wiff		
Result Table	@537-Batch#780662-071614		
Sample Comment	Prep. By FAM@07/14/2014		

Internal Standard	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
IS-13C-PFOA	949576	11.96	100.00000	-
IS-13C-PFOS	1506519	13.21	100.00000	-

Target Analyte	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
PFHxA	3.430e+02	8.28	0.00000	0.000023
Surr-13c-PFHxA	1.036e+06	8.28	100.00000	100.061775
PFHpA	3.190e+02	10.39	0.00000	0.000010
PFHpA 2	1.960e+02	10.41	0.00000	0.000022
PFOA	4.806e+03	11.97	0.00000	0.000168
PFOA 2	2.746e+03	11.97	0.00000	0.000272
PFNA	6.870e+02	13.24	0.00000	0.000032
PFNA 2	1.960e+02	13.18	0.00000	0.000035
PFDA	5.400e+02	14.26	0.00000	0.000024
PFDA 2	N/A	N/A	0.00000	N/A
Surr-13c-PFDA	6.950e+05	14.25	100.00000	84.102695
PFUnA	8.830e+02	15.13	0.00000	0.000041
PFUnA 2	N/A	N/A	0.00000	N/A
PFDoA	1.960e+02	15.89	0.00000	0.000010
PFTrDA	1.470e+02	16.57	0.00000	0.000005
PFTrDA 2	9.800e+01	16.54	0.00000	0.000015
PFTA	2.450e+02	17.59	0.00000	0.000031
PFBS	9.800e+01	5.93	0.00000	0.000007
PFBS 2	4.900e+01	5.87	0.00000	0.000010
PFHxS	9.800e+01	10.65	0.00000	0.000006
PFHxS 2	1.470e+02	10.53	0.00000	0.000028
PFOS	3.920e+02	13.23	0.00000	0.000027
PFOS 2	1.960e+02	12.92	0.00000	0.000044
13C-PFOA	9.496e+05	11.96	100.00000	100.184222
13C-PFOS	1.507e+06	13.21	100.00000	115.394328

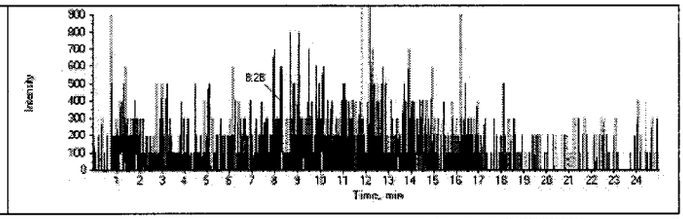
IS-13C-PFOA (Internal Standard) RT (Exp. RT): 11.96(11.96) min Concentration: 100.00000 Sample Type: (Quality Control)	
IS-13C-PFOS (Internal Standard) RT (Exp. RT): 13.21(13.22) min Concentration: 100.00000 Sample Type: (Quality Control)	

PFHxA (313.0 / 268.8)

RT (Exp. RT): 8.28 (8.28) min

Calculated conc: 0.000023

Area Ratio: 3.616e-4
Sample Type: (Quality Control)

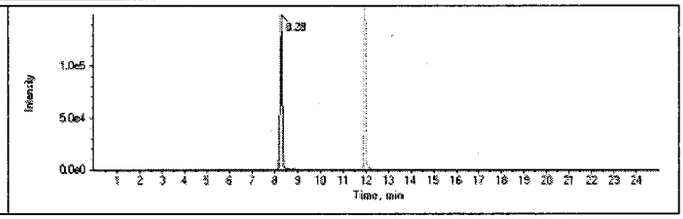


Surr-13c-PFHxA (315.0 / 270.0)

RT (Exp. RT): 8.28 (8.28) min

Calculated conc: 100.061775

Area Ratio: 1.091e0
Sample Type: (Quality Control)

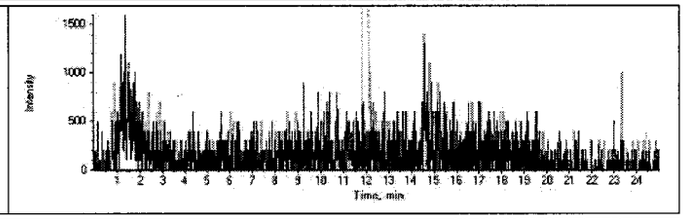


PFHpA (363.0 / 318.9)

RT (Exp. RT): 10.39 (10.40) min

Calculated conc: 0.000010

Area Ratio: 3.356e-4
Sample Type: (Quality Control)

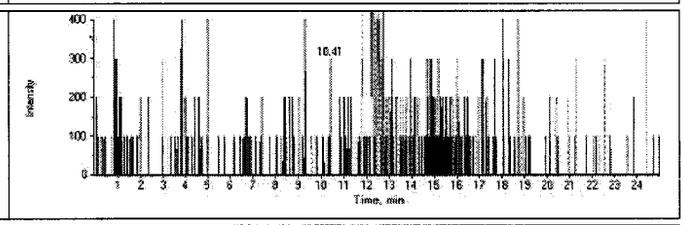


PFHpA 2 (363.0 / 168.9)

RT (Exp. RT): 10.41 (10.40) min

Calculated conc: 0.000022

Area Ratio: 2.066e-4
Sample Type: (Quality Control)

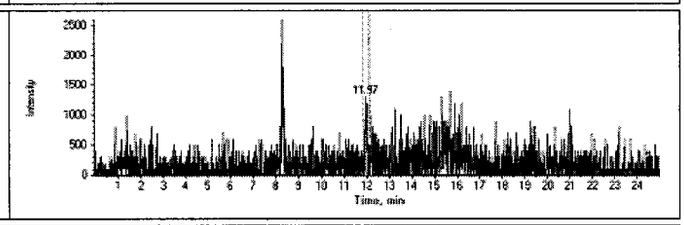


PFOA (413.0 / 368.9)

RT (Exp. RT): 11.97 (11.97) min

Calculated conc: 0.000168

Area Ratio: 5.061e-3
Sample Type: (Quality Control)

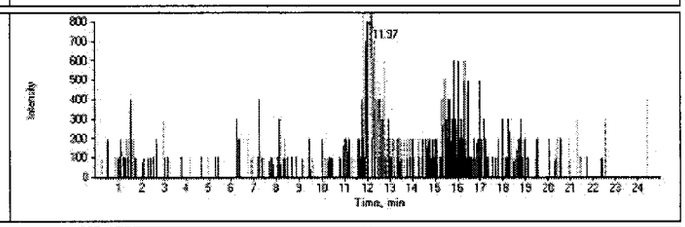


PFOA 2 (413.0 / 168.8)

RT (Exp. RT): 11.97 (11.96) min

Calculated conc: 0.000272

Area Ratio: 2.892e-3
Sample Type: (Quality Control)

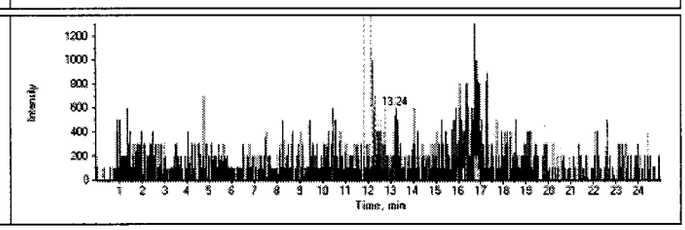


PFNA (463.0 / 419.0)

RT (Exp. RT): 13.24 (13.22) min

Calculated conc: 0.000032

Area Ratio: 7.231e-4
Sample Type: (Quality Control)



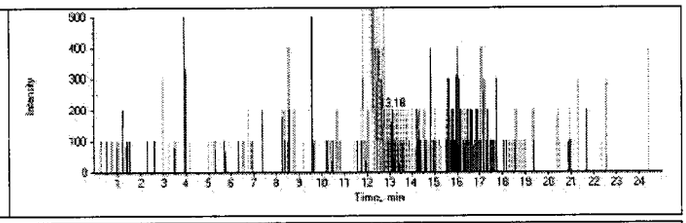
PFNA 2 (463.0 / 218.9)

RT (Exp. RT): 13.18 (13.21) min

Calculated conc: 0.000035

Area Ratio: 2.065e-4

Sample Type: (Quality Control)



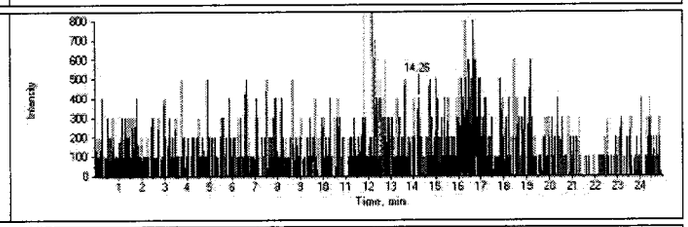
PFDA (513.0 / 469.0)

RT (Exp. RT): 14.26 (14.26) min

Calculated conc: 0.000024

Area Ratio: 5.682e-4

Sample Type: (Quality Control)



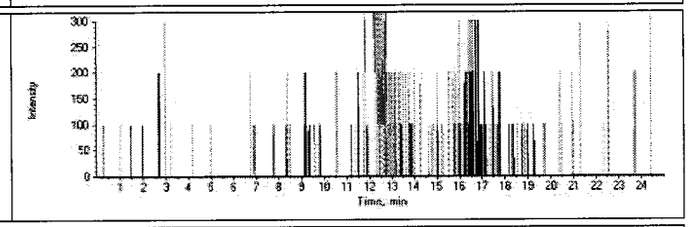
PFDA 2 (513.0 / 218.8)

RT (Exp. RT): N/A (14.26) min

Calculated conc: N/A

Area Ratio: N/A

Sample Type: (Quality Control)



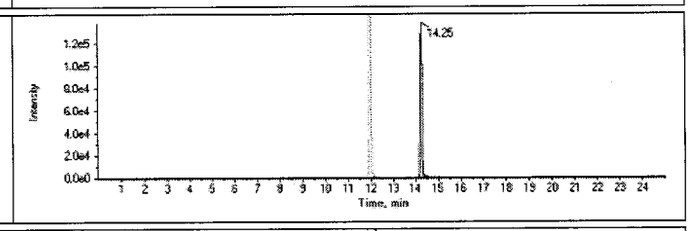
Surr-13c-PFDA (515.0 / 470.0)

RT (Exp. RT): 14.25 (14.26) min

Calculated conc: 84.102695

Area Ratio: 7.319e-1

Sample Type: (Quality Control)



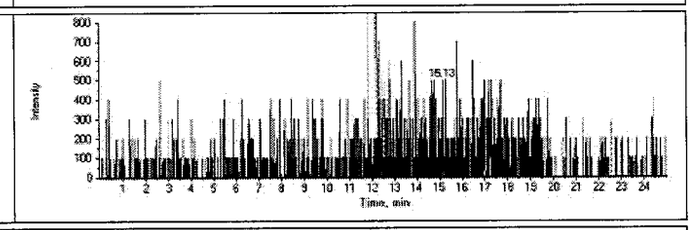
PFUnA (563.0 / 519.0)

RT (Exp. RT): 15.13 (15.14) min

Calculated conc: 0.000041

Area Ratio: 9.295e-4

Sample Type: (Quality Control)



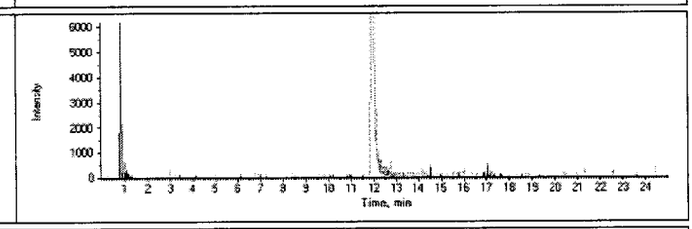
PFUnA 2 (563.0 / 268.8)

RT (Exp. RT): N/A (15.14) min

Calculated conc: N/A

Area Ratio: N/A

Sample Type: (Quality Control)



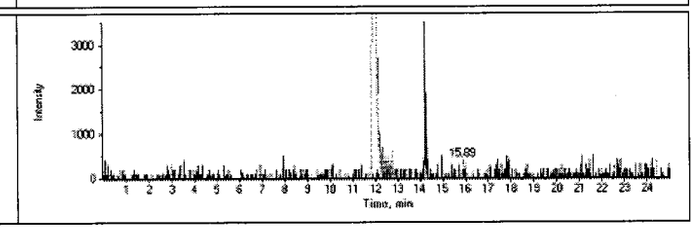
PFDoA (612.8 / 569.0)

RT (Exp. RT): 15.89 (15.90) min

Calculated conc: 0.000010

Area Ratio: 2.065e-4

Sample Type: (Quality Control)

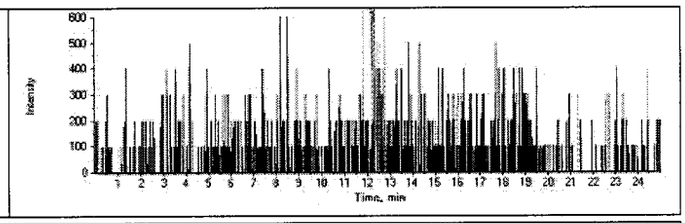


PFTrDA (662.9 / 619.0)

RT (Exp. RT): 16.57 (16.55) min

Calculated conc: 0.000005

Area Ratio: 1.550e-4
Sample Type: (Quality Control)

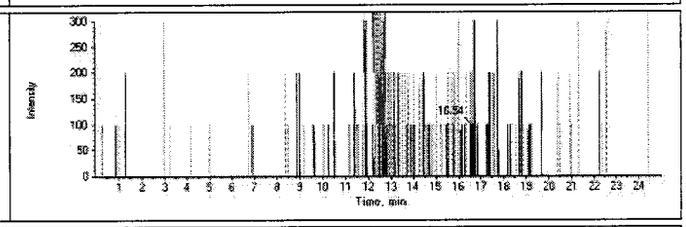


PFTrDA 2 (662.9 / 168.9)

RT (Exp. RT): 16.54 (16.55) min

Calculated conc: 0.000015

Area Ratio: 1.033e-4
Sample Type: (Quality Control)

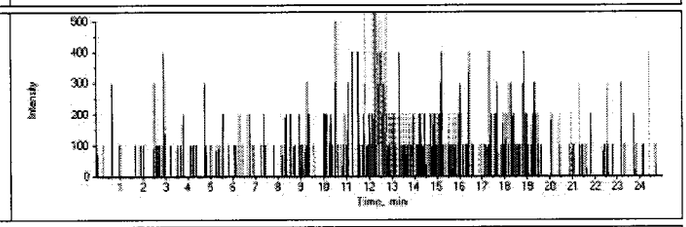


PFTA (713.3 / 669.0)

RT (Exp. RT): 17.59 (17.11) min

Calculated conc: 0.000031

Area Ratio: 2.582e-4
Sample Type: (Quality Control)

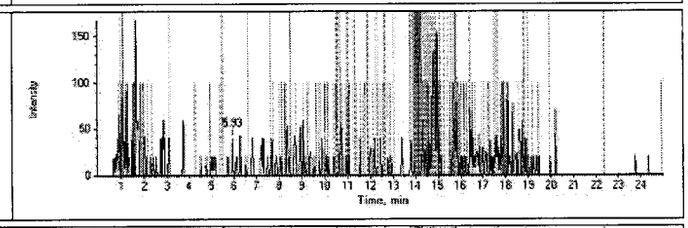


PFBS (299.0 / 79.9)

RT (Exp. RT): 5.93 (5.96) min

Calculated conc: 0.000007

Area Ratio: 6.511e-5
Sample Type: (Quality Control)

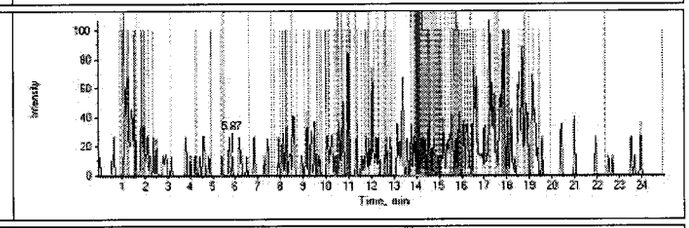


PFBS 2 (299.0 / 99.0)

RT (Exp. RT): 5.87 (5.97) min

Calculated conc: 0.000010

Area Ratio: 3.251e-5
Sample Type: (Quality Control)

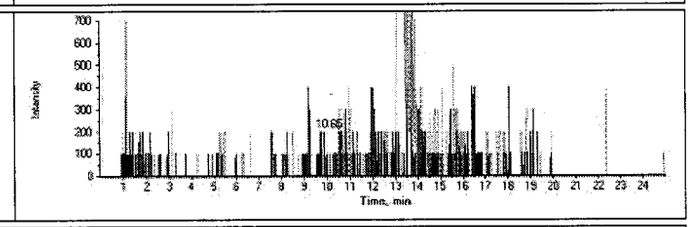


PFHxS (398.9 / 80.0)

RT (Exp. RT): 10.65 (10.55) min

Calculated conc: 0.000006

Area Ratio: 6.508e-5
Sample Type: (Quality Control)

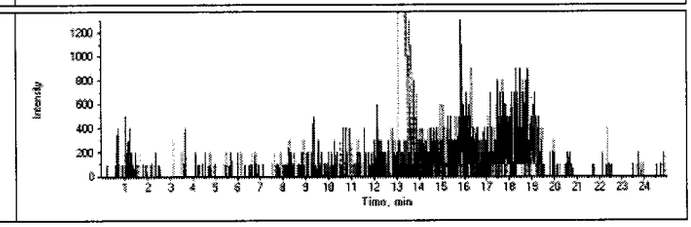


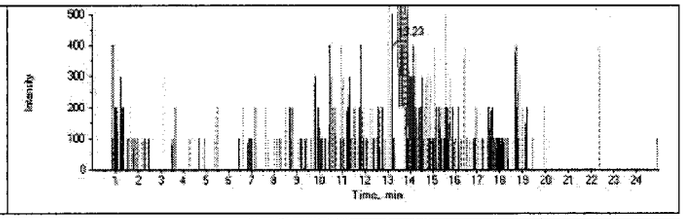
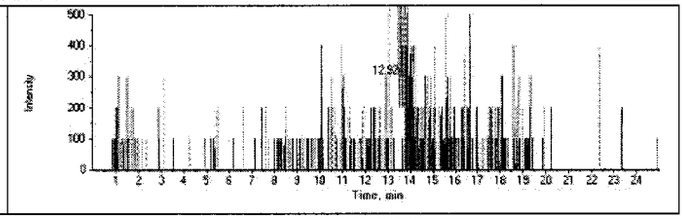
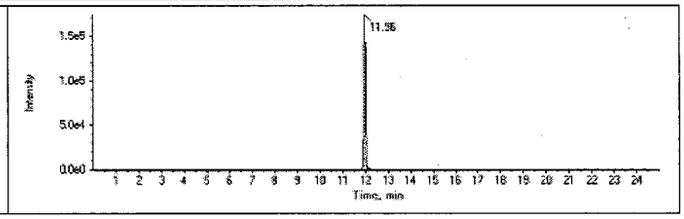
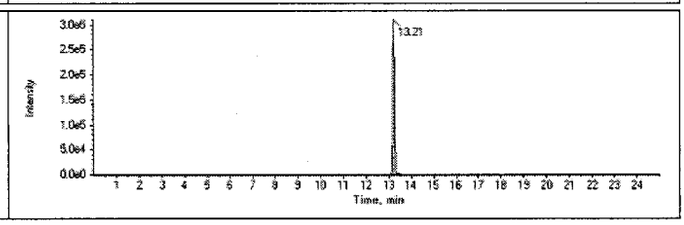
PFHxS 2 (398.9 / 99.0)

RT (Exp. RT): 10.53 (10.54) min

Calculated conc: 0.000028

Area Ratio: 9.761e-5
Sample Type: (Quality Control)

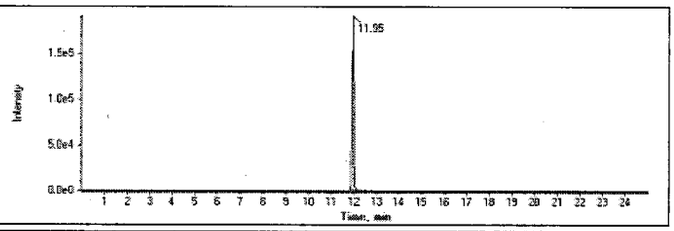
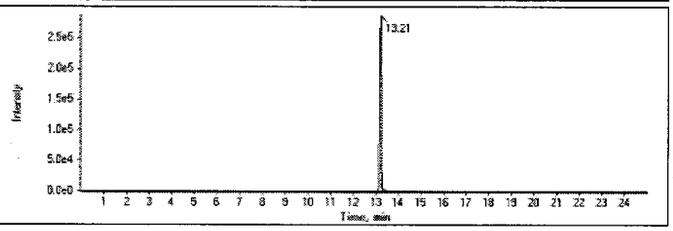


PFOS (499.0 / 79.9) RT (Exp. RT): 13.23 (13.22) min Calculated conc: 0.000027 Area Ratio: 2.603e-4 Sample Type: (Quality Control)	
PFOS 2 (499.0 / 99.0) RT (Exp. RT): 12.92 (13.21) min Calculated conc: 0.000044 Area Ratio: 1.303e-4 Sample Type: (Quality Control)	
13C-PFOA (417.0 / 372.0) RT (Exp. RT): 11.96 (11.96) min Calculated conc: 100.184222 Area Ratio: N/A Sample Type: (Quality Control)	
13C-PFOS (503.0 / 80.0) RT (Exp. RT): 13.21 (13.22) min Calculated conc: 115.394328 Area Ratio: N/A Sample Type: (Quality Control)	

Sample Name	201407110107	**Injection Vial**	33
Sample ID		**Injection Volume**	5.00
Sample Type	Quality Control	**Algorithm Used**	MQ4
Acquisition Date	7/17/2014 7:38:00 AM	**Dilution Factor**	1.00
Acquisition Method	@537-ShortRun-110613-Ali.dam	**Weight to Volume**	N/A
Project	EPA537\2014_07_16	**Instrument Name**	API 4000
Data File	@537-Batch#780662-071614.wiff		
Result Table	@537-Batch#780662-071614		
Sample Comment	Prep. By FAM@07/14/2014		

Internal Standard	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
IS-13C-PFOA	937142	11.95	100.00000	-
IS-13C-PFOS	1437803	13.21	100.00000	-

Target Analyte	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
PFHxA	2.864e+04	8.27	0.00000	0.001926
Surr-13c-PFHxA	1.010e+06	8.27	100.00000	98.852043
PFHpA	5.519e+04	10.39	0.00000	0.001818
PFHpA 2	1.525e+04	10.40	0.00000	0.001735
PFOA	1.722e+05	11.96	0.00000	0.006092
PFOA 2	6.080e+04	11.96	0.00000	0.006106
PFNA	7.357e+05	13.21	0.00000	0.034787
PFNA 2	1.931e+05	13.21	0.00000	0.034462
PFDA	4.659e+03	14.25	0.00000	0.000206
PFDA 2	2.450e+02	14.26	0.00000	0.000059
Surr-13c-PFDA	6.462e+05	14.25	100.00000	79.238937
PFUnA	1.275e+03	15.12	0.00000	0.000060
PFUnA 2	N/A	N/A	0.00000	N/A
PFDoA	5.390e+02	15.86	0.00000	0.000028
PFTrDA	3.430e+02	16.53	0.00000	0.000012
PFTrDA 2	N/A	N/A	0.00000	N/A
PFTA	1.470e+02	17.13	0.00000	0.000019
PFBS	5.867e+03	5.96	0.00000	0.000464
PFBS 2	1.096e+03	5.96	0.00000	0.000243
PFHxS	3.624e+04	10.54	0.00000	0.002404
PFHxS 2	1.123e+04	10.54	0.00000	0.002227
PFOS	6.252e+04	13.21	0.00000	0.004430
PFOS 2	2.006e+04	13.20	0.00000	0.004731
13C-PFOA	9.371e+05	11.95	100.00000	98.872315
13C-PFOS	1.438e+06	13.21	100.00000	110.130897

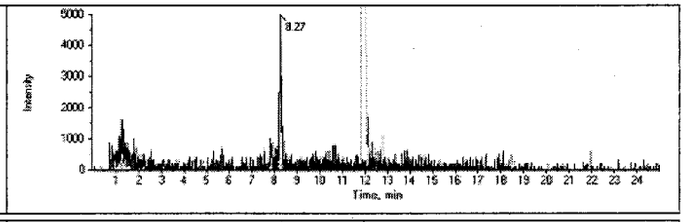
IS-13C-PFOA (Internal Standard) RT (Exp. RT): 11.95(11.96) min Concentration: 100.00000 Sample Type: (Quality Control)	
IS-13C-PFOS (Internal Standard) RT (Exp. RT): 13.21(13.22) min Concentration: 100.00000 Sample Type: (Quality Control)	

PFHxA (313.0 / 268.8)

RT (Exp. RT): 8.27 (8.28) min

Calculated conc: 0.001926

Area Ratio: 3.056e-2
Sample Type: (Quality Control)

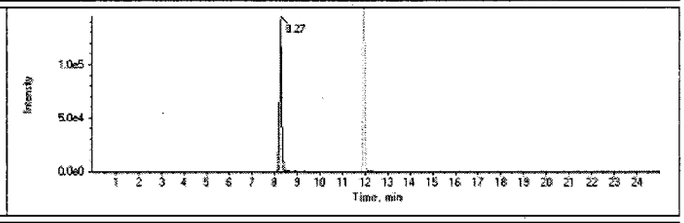


Surr-13c-PFHxA (315.0 / 270.0)

RT (Exp. RT): 8.27 (8.28) min

Calculated conc: 98.852043

Area Ratio: 1.077e0
Sample Type: (Quality Control)

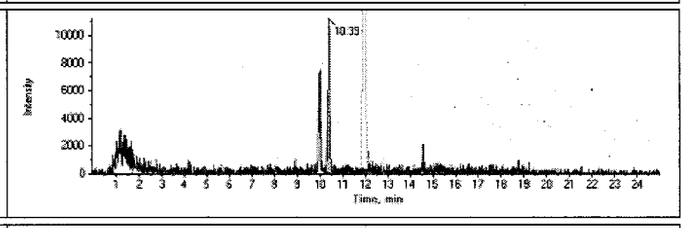


PFHpA (363.0 / 318.9)

RT (Exp. RT): 10.39 (10.40) min

Calculated conc: 0.001818

Area Ratio: 5.889e-2
Sample Type: (Quality Control)

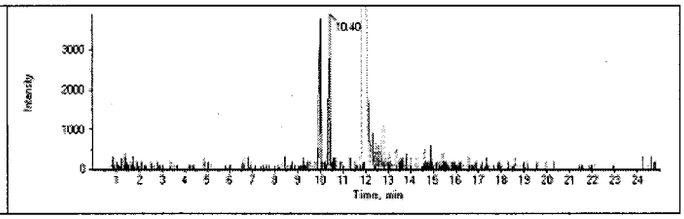


PFHpA 2 (363.0 / 168.9)

RT (Exp. RT): 10.40 (10.40) min

Calculated conc: 0.001735

Area Ratio: 1.627e-2
Sample Type: (Quality Control)

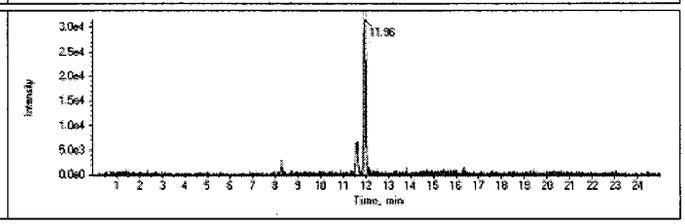


PFOA (413.0 / 368.9)

RT (Exp. RT): 11.96 (11.97) min

Calculated conc: 0.006092

Area Ratio: 1.838e-1
Sample Type: (Quality Control)

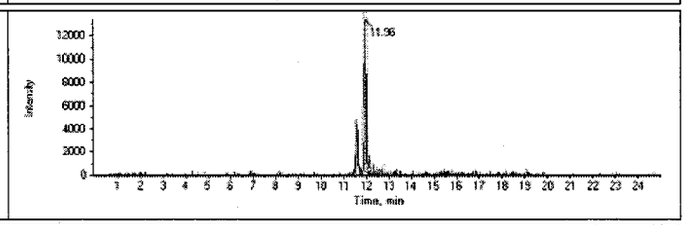


PFOA 2 (413.0 / 168.8)

RT (Exp. RT): 11.96 (11.96) min

Calculated conc: 0.006106

Area Ratio: 6.488e-2
Sample Type: (Quality Control)

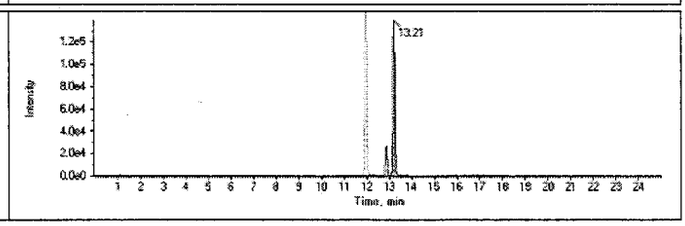


PFNA (463.0 / 419.0)

RT (Exp. RT): 13.21 (13.22) min

Calculated conc: 0.034787

Area Ratio: 7.851e-1
Sample Type: (Quality Control)



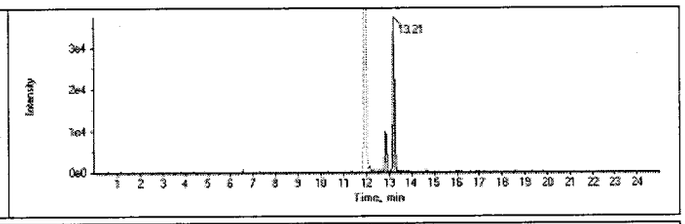
PFNA 2 (463.0 / 218.9)

RT (Exp. RT): 13.21 (13.21) min

Calculated conc: 0.034462

Area Ratio: 2.060e-1

Sample Type: (Quality Control)



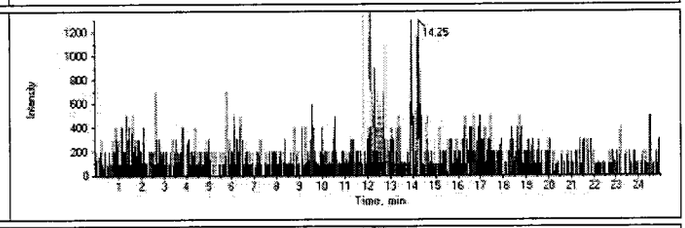
PFDA (513.0 / 469.0)

RT (Exp. RT): 14.25 (14.26) min

Calculated conc: 0.000206

Area Ratio: 4.972e-3

Sample Type: (Quality Control)



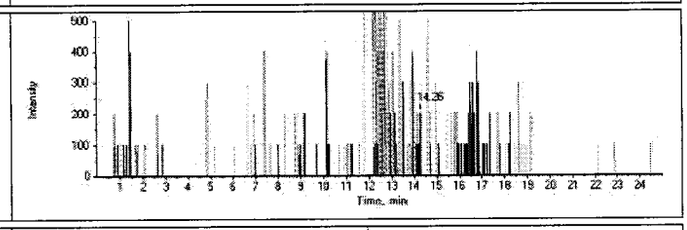
PFDA 2 (513.0 / 218.8)

RT (Exp. RT): 14.26 (14.26) min

Calculated conc: 0.000059

Area Ratio: 2.616e-4

Sample Type: (Quality Control)



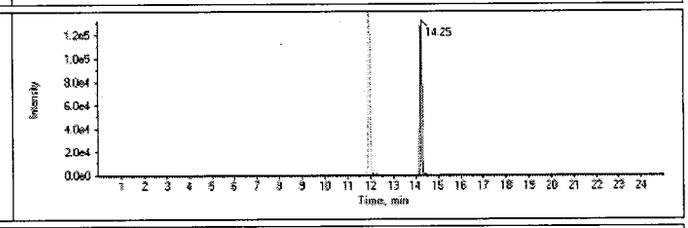
Surr-13c-PFDA (515.0 / 470.0)

RT (Exp. RT): 14.25 (14.26) min

Calculated conc: 79.238937

Area Ratio: 6.896e-1

Sample Type: (Quality Control)



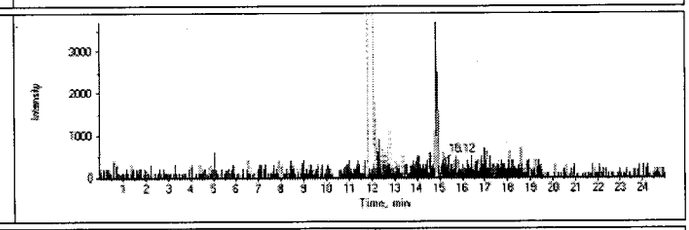
PFUnA (563.0 / 519.0)

RT (Exp. RT): 15.12 (15.14) min

Calculated conc: 0.000060

Area Ratio: 1.361e-3

Sample Type: (Quality Control)



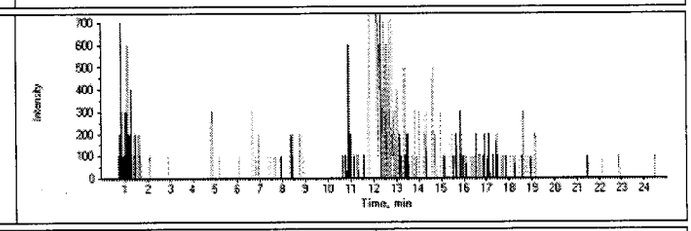
PFUnA 2 (563.0 / 268.8)

RT (Exp. RT): N/A (15.14) min

Calculated conc: N/A

Area Ratio: N/A

Sample Type: (Quality Control)



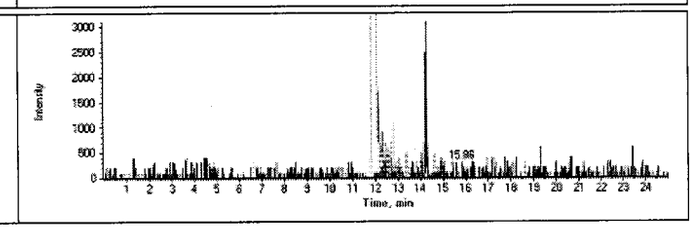
PFDoA (612.8 / 569.0)

RT (Exp. RT): 15.86 (15.90) min

Calculated conc: 0.000028

Area Ratio: 5.756e-4

Sample Type: (Quality Control)



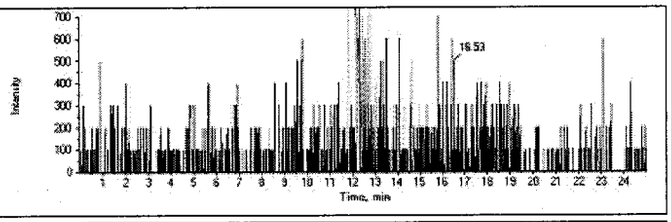
PFTrDA (662.9 / 619.0)

RT (Exp. RT): 16.53 (16.55) min

Calculated conc: 0.000012

Area Ratio: 3.664e-4

Sample Type: (Quality Control)



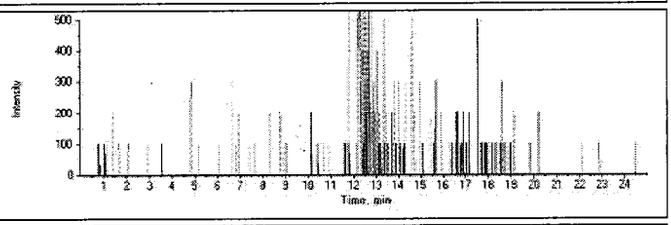
PFTrDA 2 (662.9 / 168.9)

RT (Exp. RT): N/A (16.55) min

Calculated conc: N/A

Area Ratio: N/A

Sample Type: (Quality Control)



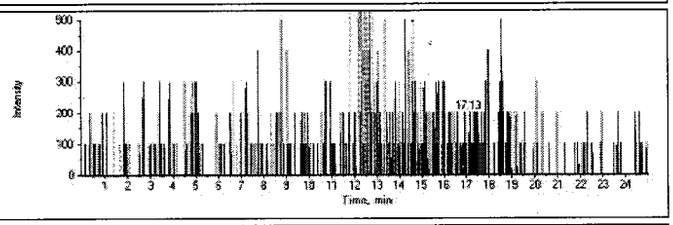
PFTA (713.3 / 669.0)

RT (Exp. RT): 17.13 (17.11) min

Calculated conc: 0.000019

Area Ratio: 1.569e-4

Sample Type: (Quality Control)



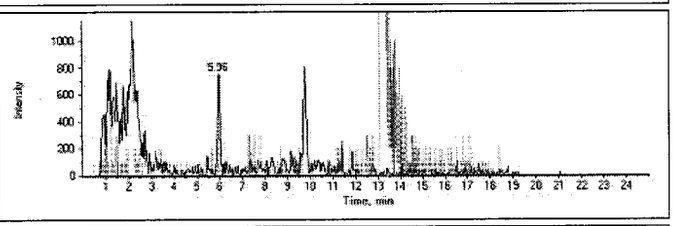
PFBS (299.0 / 79.9)

RT (Exp. RT): 5.96 (5.96) min

Calculated conc: 0.000464

Area Ratio: 4.080e-3

Sample Type: (Quality Control)



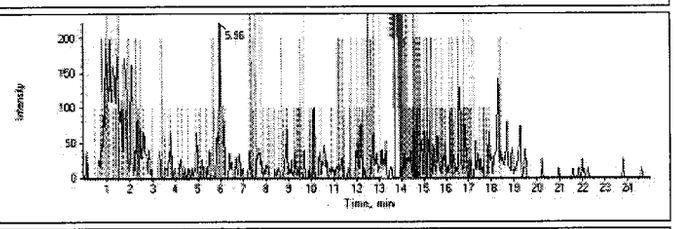
PFBS 2 (299.0 / 99.0)

RT (Exp. RT): 5.96 (5.97) min

Calculated conc: 0.000243

Area Ratio: 7.626e-4

Sample Type: (Quality Control)



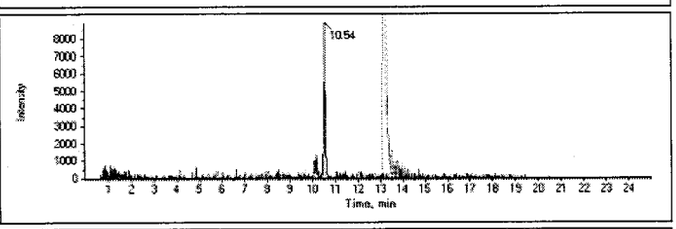
PFHxS (398.9 / 80.0)

RT (Exp. RT): 10.54 (10.55) min

Calculated conc: 0.002404

Area Ratio: 2.520e-2

Sample Type: (Quality Control)



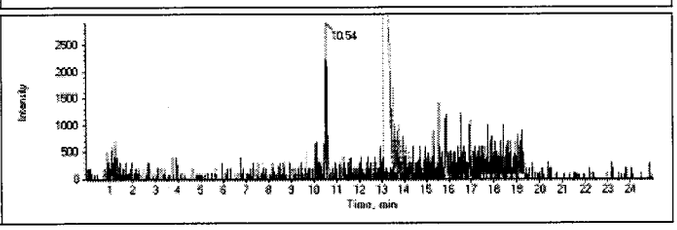
PFHxS 2 (398.9 / 99.0)

RT (Exp. RT): 10.54 (10.54) min

Calculated conc: 0.002227

Area Ratio: 7.811e-3

Sample Type: (Quality Control)

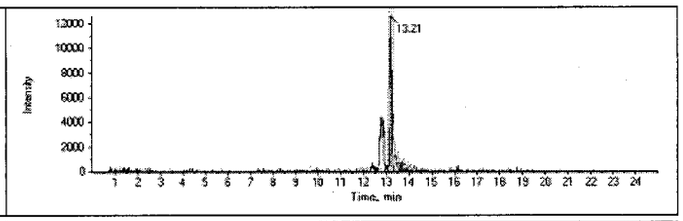


PFOS (499.0 / 79.9)

RT (Exp. RT): 13.21 (13.22) min

Calculated conc: 0.004430

Area Ratio: 4.348e-2
Sample Type: (Quality Control)

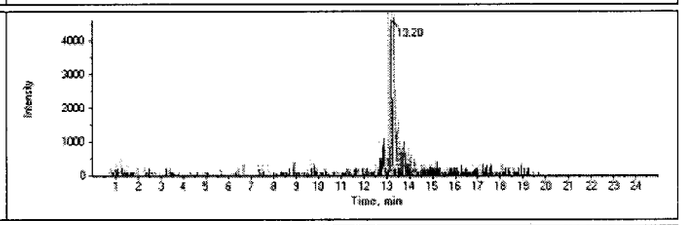


PFOS 2 (499.0 / 99.0)

RT (Exp. RT): 13.20 (13.21) min

Calculated conc: 0.004731

Area Ratio: 1.395e-2
Sample Type: (Quality Control)

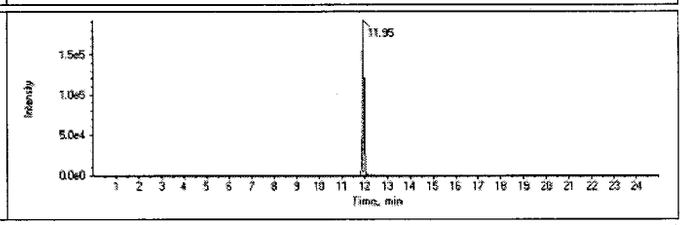


13C-PFOA (417.0 / 372.0)

RT (Exp. RT): 11.95 (11.96) min

Calculated conc: 98.872315

Area Ratio: N/A
Sample Type: (Quality Control)

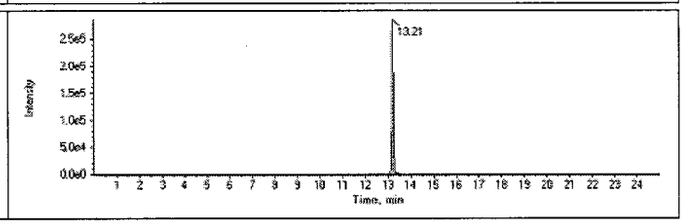


13C-PFOS (503.0 / 80.0)

RT (Exp. RT): 13.21 (13.22) min

Calculated conc: 110.130897

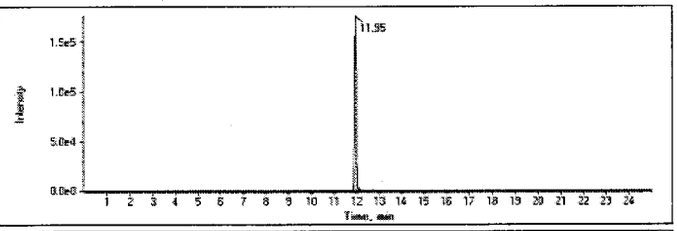
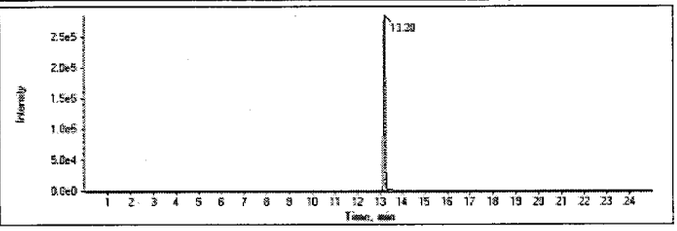
Area Ratio: N/A
Sample Type: (Quality Control)



Sample Name	201407110108	**Injection Vial**	34
Sample ID		**Injection Volume**	5.00
Sample Type	Quality Control	**Algorithm Used**	MQ4
Acquisition Date	7/17/2014 8:03:37 AM	**Dilution Factor**	1.00
Acquisition Method	@537-ShortRun-110613-Ali.dam	**Weight to Volume**	N/A
Project	EPA537\2014_07_16	**Instrument Name**	API 4000
Data File	@537-Batch#780662-071614.wiff		
Result Table	@537-Batch#780662-071614		
Sample Comment	Prep. By FAM@07/14/2014		

Internal Standard	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
IS-13C-PFOA	924488	11.95	100.00000	-
IS-13C-PFOS	1466221	13.20	100.00000	-

Target Analyte	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
PFHxA	3.124e+04	8.27	0.00000	0.002130
Surr-13c-PFHxA	1.033e+06	8.28	100.00000	102.514554
PFHpA	5.706e+04	10.39	0.00000	0.001905
PFHpA 2	1.510e+04	10.39	0.00000	0.001741
PFOA	1.806e+05	11.96	0.00000	0.006474
PFOA 2	6.179e+04	11.96	0.00000	0.006290
PFNA	7.369e+05	13.21	0.00000	0.035318
PFNA 2	1.959e+05	13.20	0.00000	0.035455
PFDA	5.149e+03	14.24	0.00000	0.000231
PFDA 2	2.450e+02	14.24	0.00000	0.000060
Surr-13c-PFDA	7.119e+05	14.25	100.00000	88.487214
PFUnA	1.471e+03	15.13	0.00000	0.000070
PFUnA 2	N/A	N/A	0.00000	N/A
PFDoA	1.470e+02	15.83	0.00000	0.000008
PFTrDA	2.450e+02	16.50	0.00000	0.000009
PFTrDA 2	9.800e+01	16.55	0.00000	0.000015
PFTA	9.800e+01	17.25	0.00000	0.000013
PFBS	6.101e+03	5.95	0.00000	0.000473
PFBS 2	2.598e+03	5.93	0.00000	0.000564
PFHxS	3.492e+04	10.54	0.00000	0.002271
PFHxS 2	1.437e+04	10.54	0.00000	0.002794
PFOS	6.811e+04	13.20	0.00000	0.004733
PFOS 2	2.256e+04	13.20	0.00000	0.005217
13C-PFOA	9.245e+05	11.95	100.00000	97.537313
13C-PFOS	1.466e+06	13.20	100.00000	112.307624

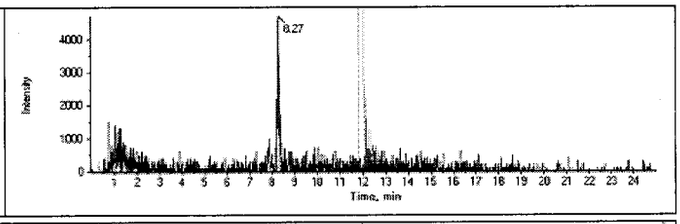
IS-13C-PFOA (Internal Standard) RT (Exp. RT): 11.95(11.96) min Concentration: 100.00000 Sample Type: (Quality Control)	
IS-13C-PFOS (Internal Standard) RT (Exp. RT): 13.20(13.22) min Concentration: 100.00000 Sample Type: (Quality Control)	

PFHxA (313.0 / 268.8)

RT (Exp. RT): 8.27 (8.28) min

Calculated conc: 0.002130

Area Ratio: 3.379e-2
Sample Type: (Quality Control)

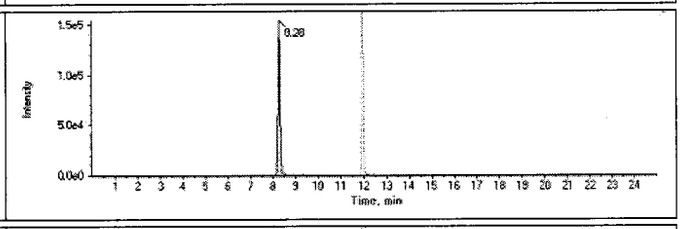


Surr-13c-PFHxA (315.0 / 270.0)

RT (Exp. RT): 8.28 (8.28) min

Calculated conc: 102.514554

Area Ratio: 1.117e0
Sample Type: (Quality Control)

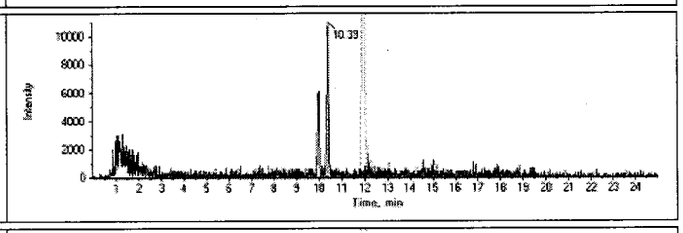


PFHpA (363.0 / 318.9)

RT (Exp. RT): 10.39 (10.40) min

Calculated conc: 0.001905

Area Ratio: 6.172e-2
Sample Type: (Quality Control)

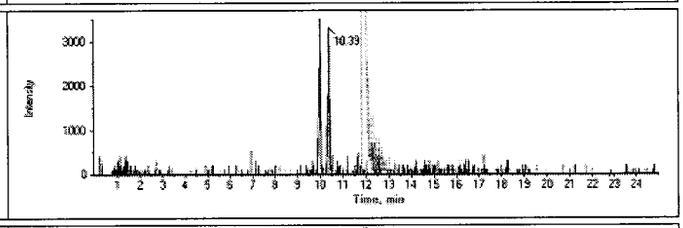


PFHpA 2 (363.0 / 168.9)

RT (Exp. RT): 10.39 (10.40) min

Calculated conc: 0.001741

Area Ratio: 1.634e-2
Sample Type: (Quality Control)

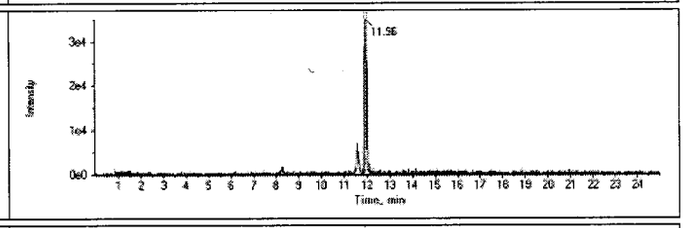


PFOA (413.0 / 368.9)

RT (Exp. RT): 11.96 (11.97) min

Calculated conc: 0.006474

Area Ratio: 1.953e-1
Sample Type: (Quality Control)

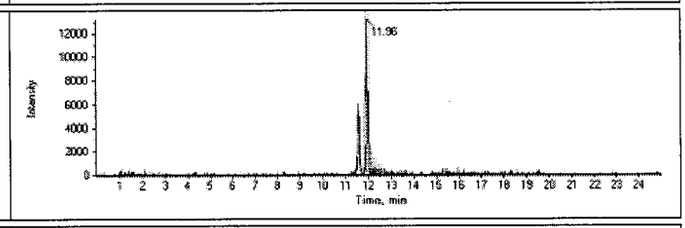


PFOA 2 (413.0 / 168.8)

RT (Exp. RT): 11.96 (11.96) min

Calculated conc: 0.006290

Area Ratio: 6.684e-2
Sample Type: (Quality Control)

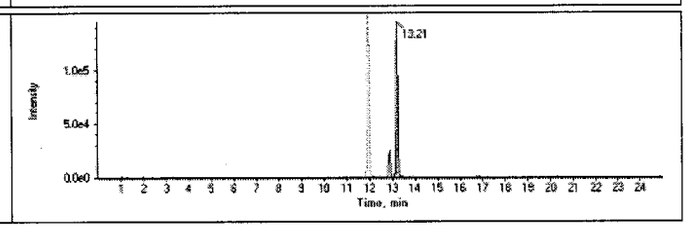


PFNA (463.0 / 419.0)

RT (Exp. RT): 13.21 (13.22) min

Calculated conc: 0.035318

Area Ratio: 7.970e-1
Sample Type: (Quality Control)

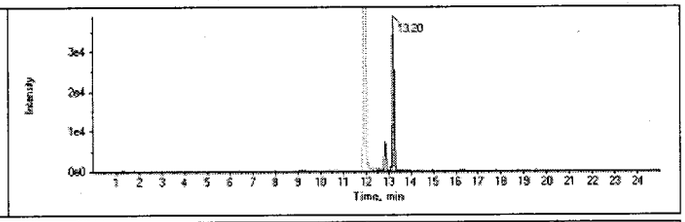


PFNA 2 (463.0 / 218.9)

RT (Exp. RT): 13.20 (13.21) min

Calculated conc: 0.035455

Area Ratio: 2.120e-1
Sample Type: (Quality Control)

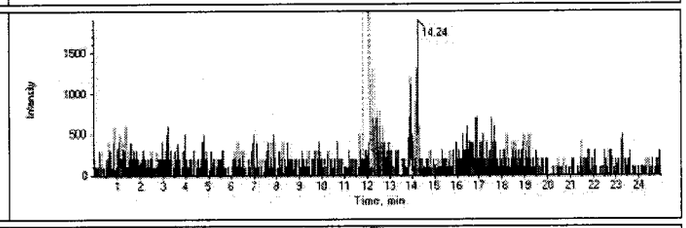


PFDA (513.0 / 469.0)

RT (Exp. RT): 14.24 (14.26) min

Calculated conc: 0.000231

Area Ratio: 5.569e-3
Sample Type: (Quality Control)

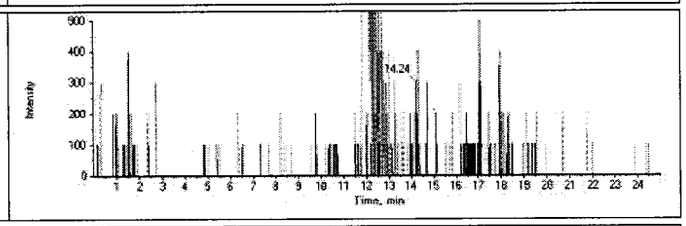


PFDA 2 (513.0 / 218.8)

RT (Exp. RT): 14.24 (14.26) min

Calculated conc: 0.000060

Area Ratio: 2.651e-4
Sample Type: (Quality Control)

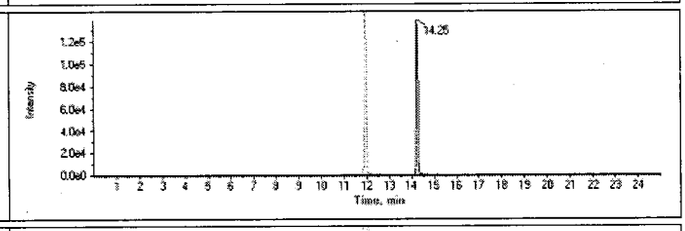


Surr-13c-PFDA (515.0 / 470.0)

RT (Exp. RT): 14.25 (14.26) min

Calculated conc: 88.487214

Area Ratio: 7.700e-1
Sample Type: (Quality Control)

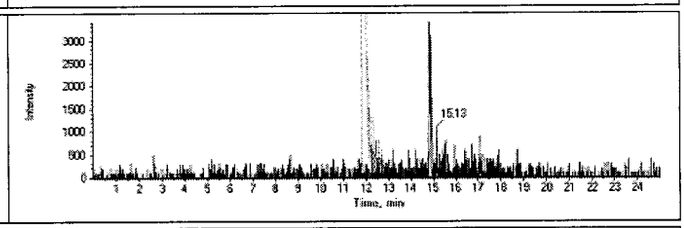


PFUnA (563.0 / 519.0)

RT (Exp. RT): 15.13 (15.14) min

Calculated conc: 0.000070

Area Ratio: 1.591e-3
Sample Type: (Quality Control)

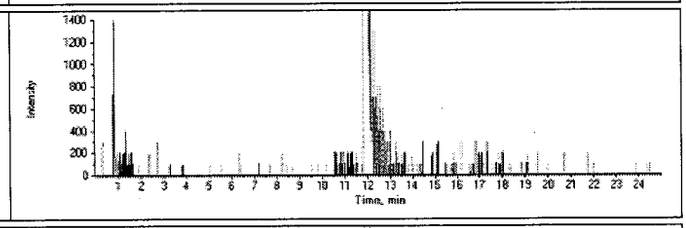


PFUnA 2 (563.0 / 268.8)

RT (Exp. RT): N/A (15.14) min

Calculated conc: N/A

Area Ratio: N/A
Sample Type: (Quality Control)

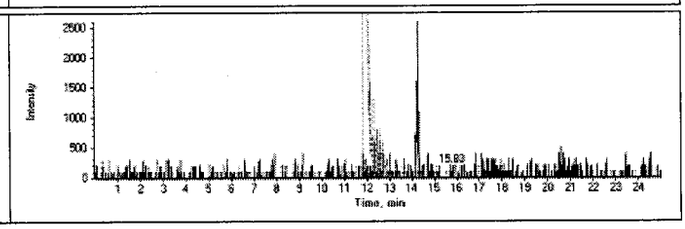


PFDoA (612.8 / 569.0)

RT (Exp. RT): 15.83 (15.90) min

Calculated conc: 0.000008

Area Ratio: 1.591e-4
Sample Type: (Quality Control)



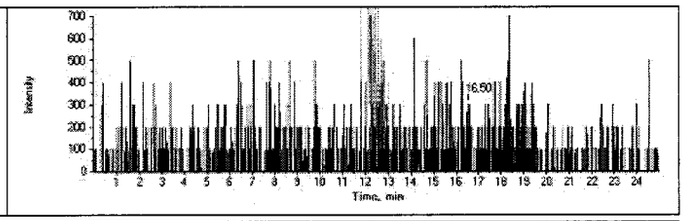
PFTrDA (662.9 / 619.0)

RT (Exp. RT): 16.50 (16.55) min

Calculated conc: 0.000009

Area Ratio: 2.654e-4

Sample Type: (Quality Control)



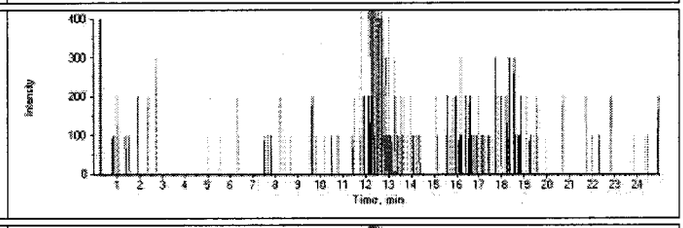
PFTrDA 2 (662.9 / 168.9)

RT (Exp. RT): 16.55 (16.55) min

Calculated conc: 0.000015

Area Ratio: 1.061e-4

Sample Type: (Quality Control)



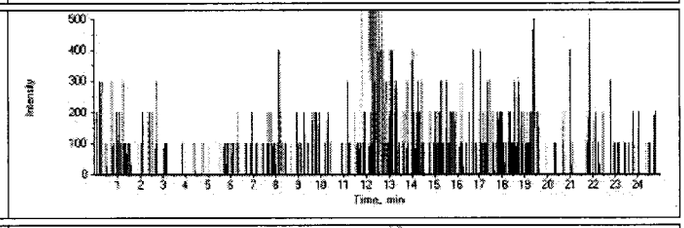
PFTA (713.3 / 669.0)

RT (Exp. RT): 17.25 (17.11) min

Calculated conc: 0.000013

Area Ratio: 1.061e-4

Sample Type: (Quality Control)



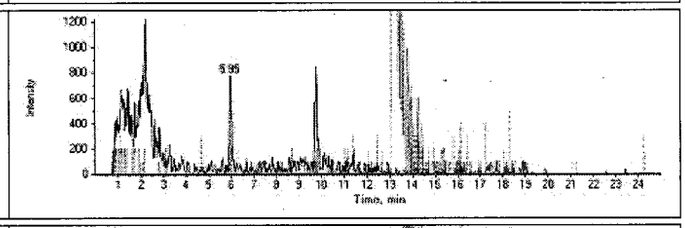
PFBS (299.0 / 79.9)

RT (Exp. RT): 5.95 (5.96) min

Calculated conc: 0.000473

Area Ratio: 4.161e-3

Sample Type: (Quality Control)



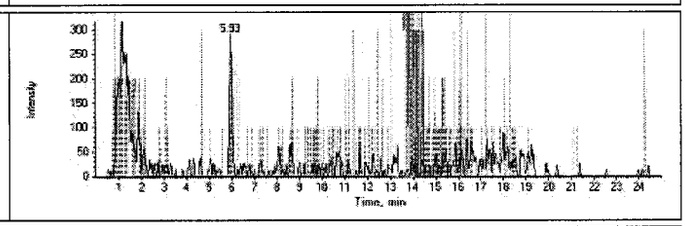
PFBS 2 (299.0 / 99.0)

RT (Exp. RT): 5.93 (5.97) min

Calculated conc: 0.000564

Area Ratio: 1.772e-3

Sample Type: (Quality Control)



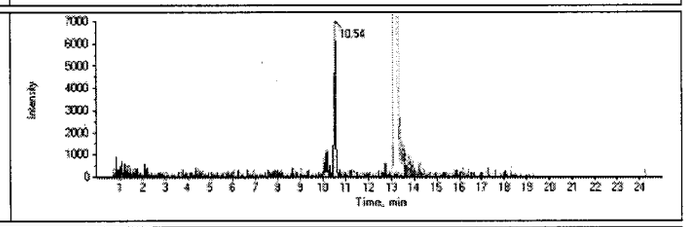
PFHxS (398.9 / 80.0)

RT (Exp. RT): 10.54 (10.55) min

Calculated conc: 0.002271

Area Ratio: 2.381e-2

Sample Type: (Quality Control)



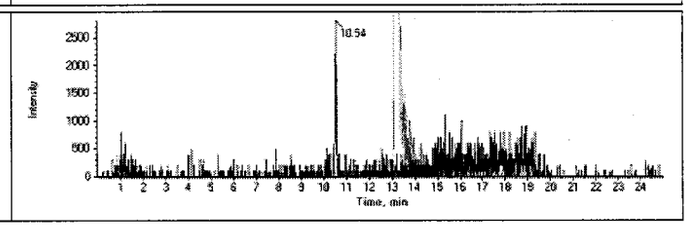
PFHxS 2 (398.9 / 99.0)

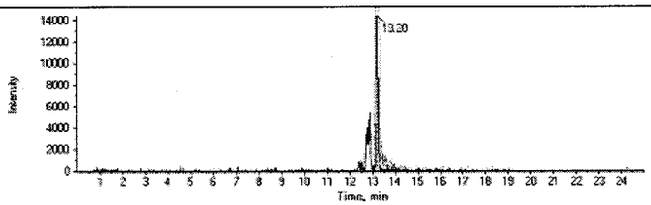
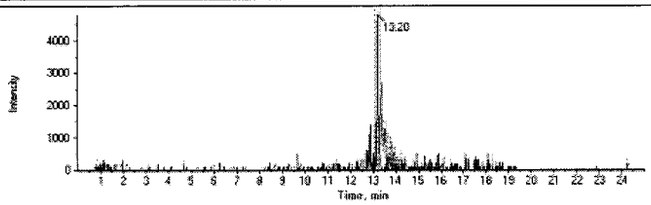
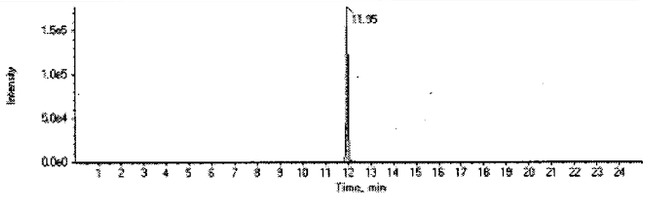
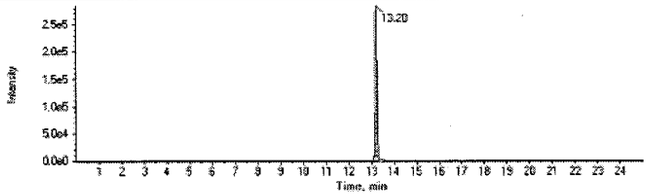
RT (Exp. RT): 10.54 (10.54) min

Calculated conc: 0.002794

Area Ratio: 9.800e-3

Sample Type: (Quality Control)

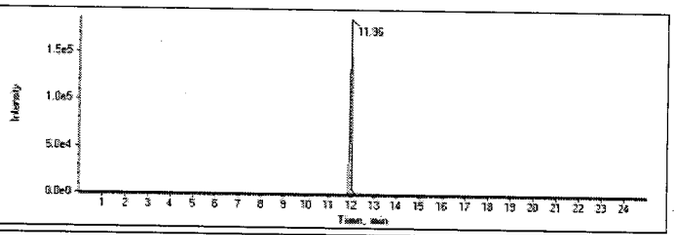
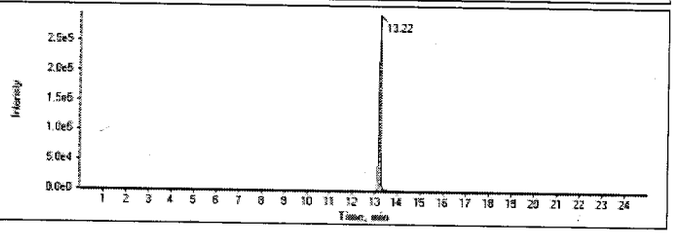


PFOS (499.0 / 79.9) RT (Exp. RT): 13.20 (13.22) min Calculated conc: 0.004733 Area Ratio: 4.645e-2 Sample Type: (Quality Control)	
PFOS 2 (499.0 / 99.0) RT (Exp. RT): 13.20 (13.21) min Calculated conc: 0.005217 Area Ratio: 1.538e-2 Sample Type: (Quality Control)	
13C-PFOA (417.0 / 372.0) RT (Exp. RT): 11.95 (11.96) min Calculated conc: 97.537313 Area Ratio: N/A Sample Type: (Quality Control)	
13C-PFOS (503.0 / 80.0) RT (Exp. RT): 13.20 (13.22) min Calculated conc: 112.307624 Area Ratio: N/A Sample Type: (Quality Control)	

Sample Name	DNR-201407110109	**Injection Vial**	6
Sample ID		**Injection Volume**	5.00
Sample Type	Quality Control	**Algorithm Used**	MQ4
Acquisition Date	7/17/2014 8:29:13 AM	**Dilution Factor**	1.00
Acquisition Method	@537-ShortRun-110613-Ali.dam	**Weight to Volume**	N/A
Project	EPA537\2014_07_16	**Instrument Name**	API 4000
Data File	@537-Batch#780662-071614.wiff		
Result Table	@537-Batch#780662-071614		
Sample Comment	Prep. By FAM@07/14/2014		

Internal Standard	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
IS-13C-PFOA	998194	11.96	100.00000	-
IS-13C-PFOS	1504283	13.22	100.00000	-

Target Analyte	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
PFHxA	5.606e+05	8.29	0.00000	0.035397
Surr-13c-PFHxA	1.055e+06	8.29	100.00000	96.996272
PFHpA	1.386e+06	10.40	0.00000	0.042854
PFHpA 2	3.969e+05	10.40	0.00000	0.042385
PFOA	1.195e+06	11.96	0.00000	0.039694
PFOA 2	4.267e+05	11.96	0.00000	0.040227
PFNA	9.111e+05	13.22	0.00000	0.040446
PFNA 2	2.430e+05	13.22	0.00000	0.040726
PFDA	8.653e+05	14.26	0.00000	0.035986
PFDA 2	1.595e+05	14.26	0.00000	0.036071
Surr-13c-PFDA	7.802e+05	14.26	100.00000	89.818561
PFUnA	6.998e+05	15.14	0.00000	0.031046
PFUnA 2	1.291e+05	15.14	0.00000	0.029135
PFDoA	5.054e+05	15.90	0.00000	0.024710
PFTrDA	8.584e+05	16.55	0.00000	0.028651
PFTrDA 2	1.995e+05	16.55	0.00000	0.028907
PFTA	2.718e+05	17.12	0.00000	0.032896
PFBS	4.180e+05	5.97	0.00000	0.031579
PFBS 2	1.579e+05	5.97	0.00000	0.033393
PFHxS	6.013e+05	10.55	0.00000	0.038125
PFHxS 2	1.966e+05	10.55	0.00000	0.037267
PFOS	5.718e+05	13.22	0.00000	0.038725
PFOS 2	1.697e+05	13.22	0.00000	0.038272
13C-PFOA	9.982e+05	11.96	100.00000	105.313605
13C-PFOS	1.504e+06	13.22	100.00000	115.223012

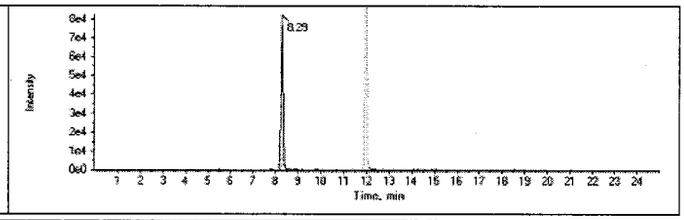
IS-13C-PFOA (Internal Standard) RT (Exp. RT): 11.96(11.96) min Concentration: 100.00000 Sample Type: (Quality Control)	
IS-13C-PFOS (Internal Standard) RT (Exp. RT): 13.22(13.22) min Concentration: 100.00000 Sample Type: (Quality Control)	

PFHxA (313.0 / 268.8)

RT (Exp. RT): 8.29 (8.28) min

Calculated conc: 0.035397

Area Ratio: 5.616e-1
Sample Type: (Quality Control)

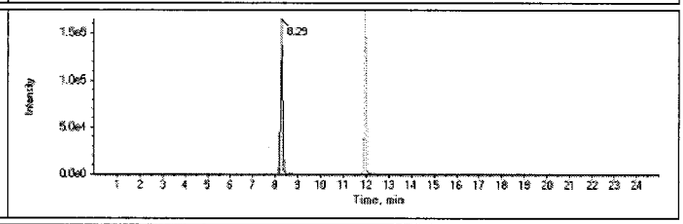


Surr-13c-PFHxA (315.0 / 270.0)

RT (Exp. RT): 8.29 (8.28) min

Calculated conc: 96.996272

Area Ratio: 1.057e0
Sample Type: (Quality Control)

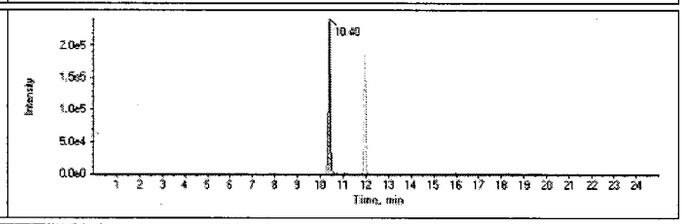


PFHpA (363.0 / 318.9)

RT (Exp. RT): 10.40 (10.40) min

Calculated conc: 0.042854

Area Ratio: 1.388e0
Sample Type: (Quality Control)

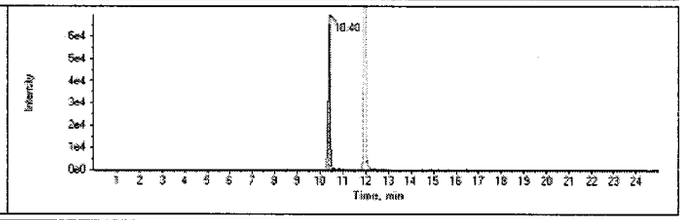


PFHpA 2 (363.0 / 168.9)

RT (Exp. RT): 10.40 (10.40) min

Calculated conc: 0.042385

Area Ratio: 3.976e-1
Sample Type: (Quality Control)

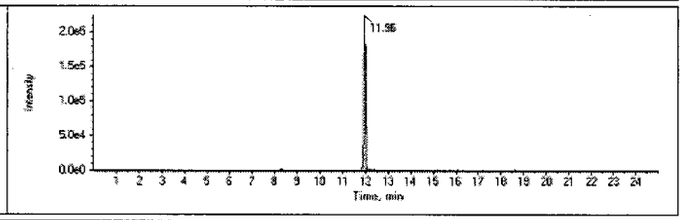


PFOA (413.0 / 368.9)

RT (Exp. RT): 11.96 (11.97) min

Calculated conc: 0.039694

Area Ratio: 1.198e0
Sample Type: (Quality Control)

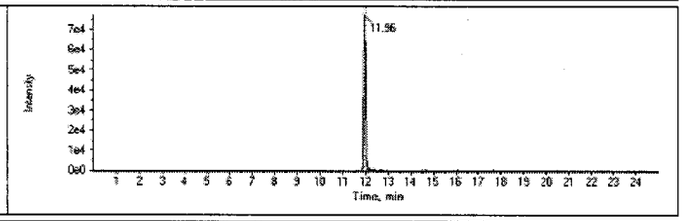


PFOA 2 (413.0 / 168.8)

RT (Exp. RT): 11.96 (11.96) min

Calculated conc: 0.040227

Area Ratio: 4.274e-1
Sample Type: (Quality Control)

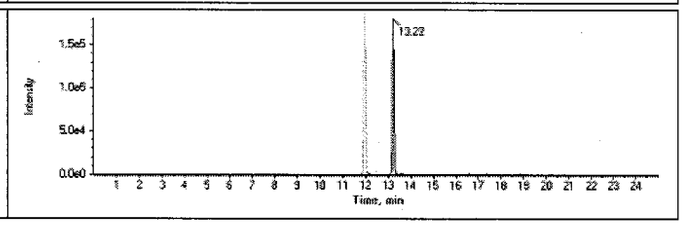


PFNA (463.0 / 419.0)

RT (Exp. RT): 13.22 (13.22) min

Calculated conc: 0.040446

Area Ratio: 9.128e-1
Sample Type: (Quality Control)

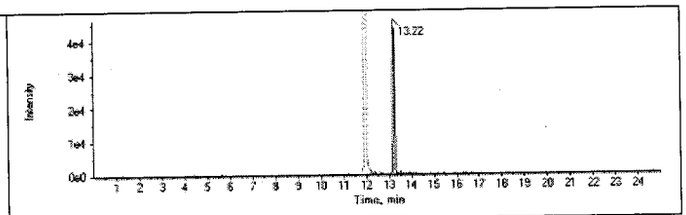


PFNA 2 (463.0 / 218.9)

RT (Exp. RT): 13.22 (13.21) min

Calculated conc: 0.040726

Area Ratio: 2.435e-1
Sample Type: (Quality Control)

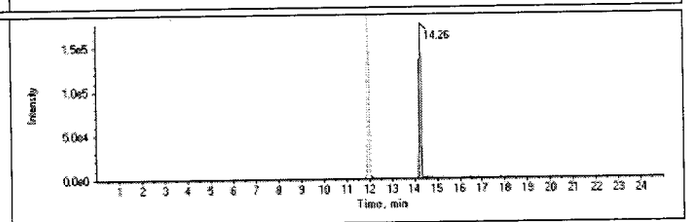


PFDA (513.0 / 469.0)

RT (Exp. RT): 14.26 (14.26) min

Calculated conc: 0.035986

Area Ratio: 8.669e-1
Sample Type: (Quality Control)

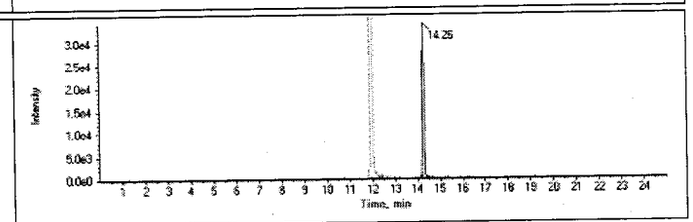


PFDA 2 (513.0 / 218.8)

RT (Exp. RT): 14.26 (14.26) min

Calculated conc: 0.036071

Area Ratio: 1.598e-1
Sample Type: (Quality Control)

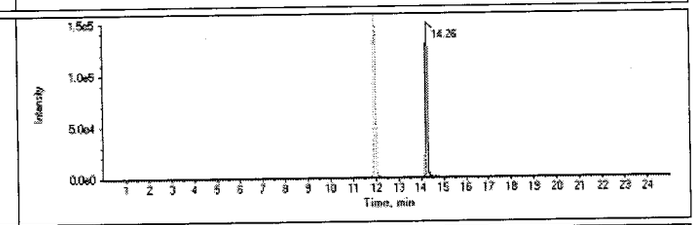


Surr-13c-PFDA (515.0 / 470.0)

RT (Exp. RT): 14.26 (14.26) min

Calculated conc: 89.818561

Area Ratio: 7.816e-1
Sample Type: (Quality Control)

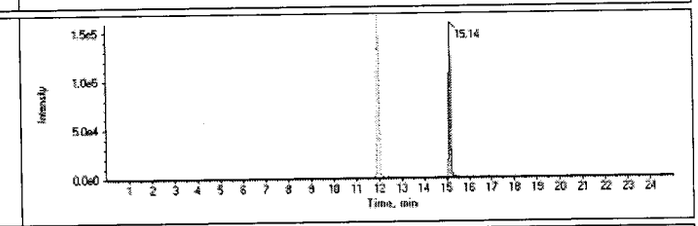


PFUnA (563.0 / 519.0)

RT (Exp. RT): 15.14 (15.14) min

Calculated conc: 0.031046

Area Ratio: 7.011e-1
Sample Type: (Quality Control)

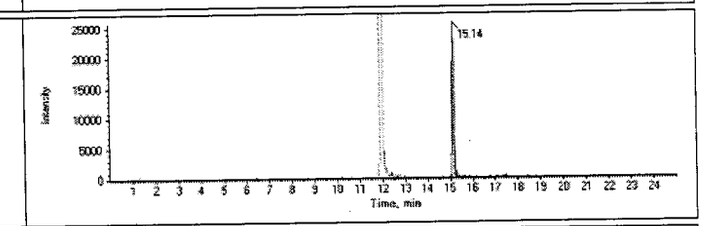


PFUnA 2 (563.0 / 268.8)

RT (Exp. RT): 15.14 (15.14) min

Calculated conc: 0.029135

Area Ratio: 1.294e-1
Sample Type: (Quality Control)

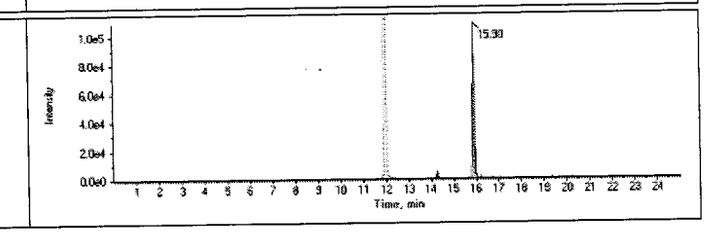


PFDoA (612.8 / 569.0)

RT (Exp. RT): 15.90 (15.90) min

Calculated conc: 0.024710

Area Ratio: 5.063e-1
Sample Type: (Quality Control)

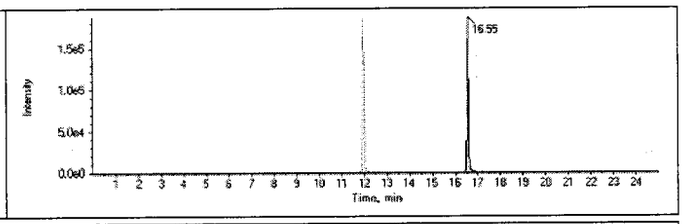


PFTrDA (662.9 / 619.0)

RT (Exp. RT): 16.55 (16.55) min

Calculated conc: 0.028651

Area Ratio: 8.599e-1
Sample Type: (Quality Control)

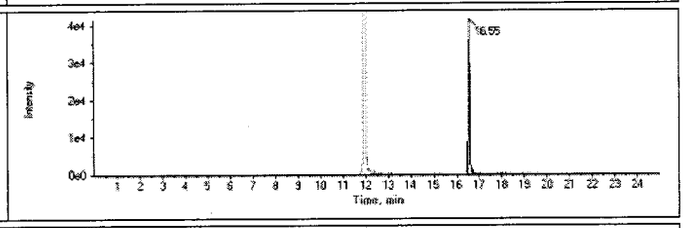


PFTrDA 2 (662.9 / 168.9)

RT (Exp. RT): 16.55 (16.55) min

Calculated conc: 0.028907

Area Ratio: 1.999e-1
Sample Type: (Quality Control)

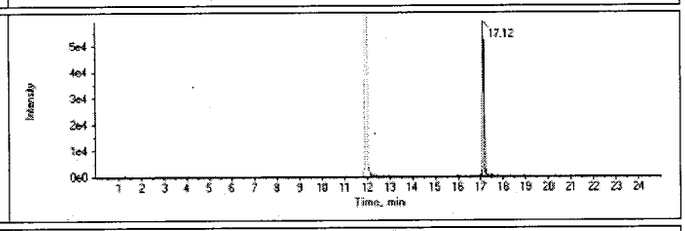


PFTA (713.3 / 669.0)

RT (Exp. RT): 17.12 (17.11) min

Calculated conc: 0.032896

Area Ratio: 2.723e-1
Sample Type: (Quality Control)

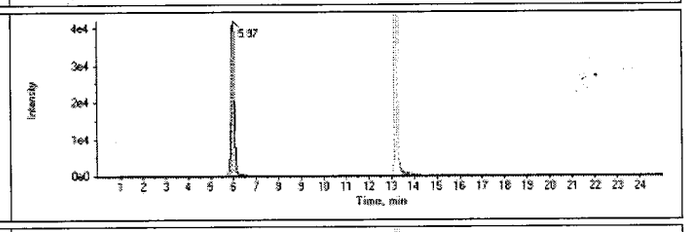


PFBS (299.0 / 79.9)

RT (Exp. RT): 5.97 (5.96) min

Calculated conc: 0.031579

Area Ratio: 2.778e-1
Sample Type: (Quality Control)

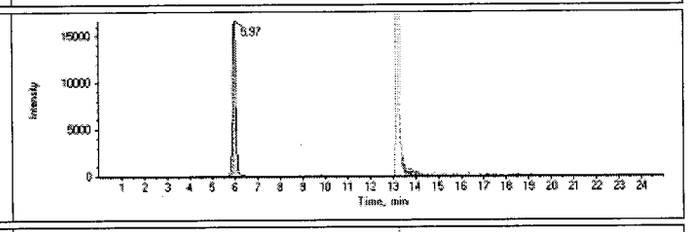


PFBS 2 (299.0 / 99.0)

RT (Exp. RT): 5.97 (5.97) min

Calculated conc: 0.033393

Area Ratio: 1.050e-1
Sample Type: (Quality Control)

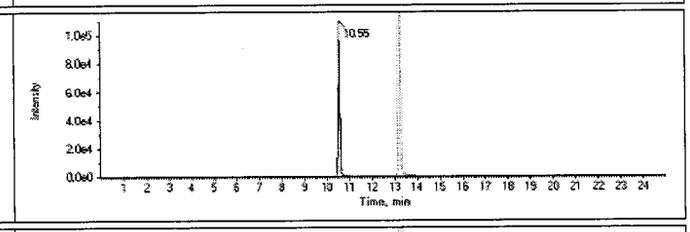


PFHxS (398.9 / 80.0)

RT (Exp. RT): 10.55 (10.55) min

Calculated conc: 0.038125

Area Ratio: 3.997e-1
Sample Type: (Quality Control)

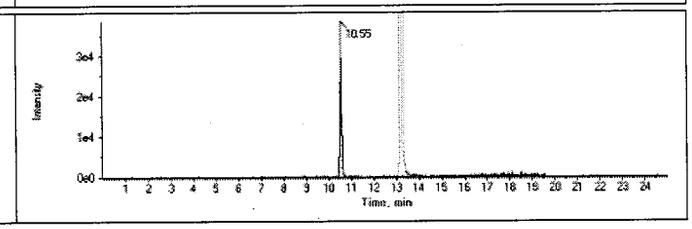


PFHxS 2 (398.9 / 99.0)

RT (Exp. RT): 10.55 (10.54) min

Calculated conc: 0.037267

Area Ratio: 1.307e-1
Sample Type: (Quality Control)



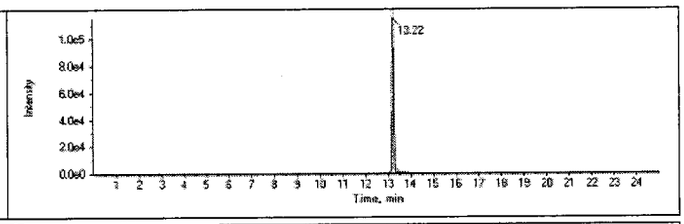
PFOS (499.0 / 79.9)

RT (Exp. RT): 13.22 (13.22) min

Calculated conc: 0.038725

Area Ratio: 3.801e-1

Sample Type: (Quality Control)



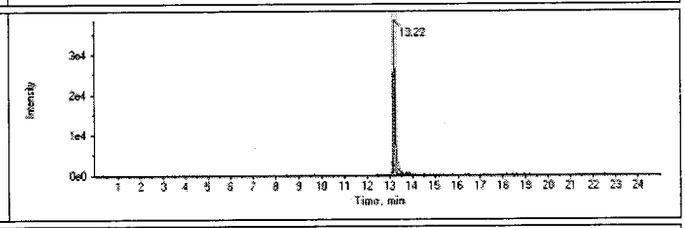
PFOS 2 (499.0 / 99.0)

RT (Exp. RT): 13.22 (13.21) min

Calculated conc: 0.038272

Area Ratio: 1.128e-1

Sample Type: (Quality Control)



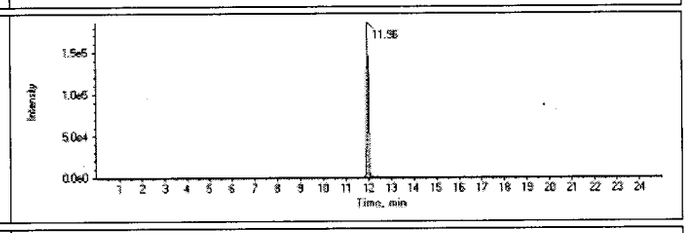
13C-PFOA (417.0 / 372.0)

RT (Exp. RT): 11.96 (11.96) min

Calculated conc: 105.313605

Area Ratio: N/A

Sample Type: (Quality Control)



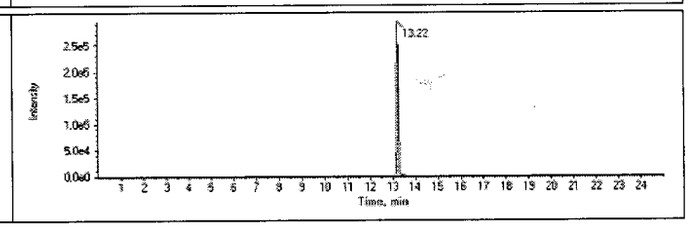
13C-PFOS (503.0 / 80.0)

RT (Exp. RT): 13.22 (13.22) min

Calculated conc: 115.223012

Area Ratio: N/A

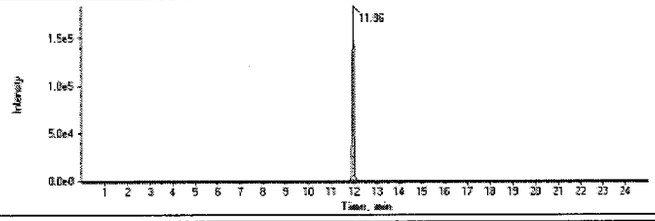
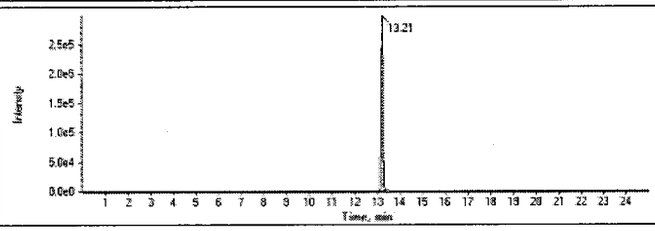
Sample Type: (Quality Control)



Sample Name	CCCH	**Injection Vial**	6
Sample ID		**Injection Volume**	5.00
Sample Type	Quality Control	**Algorithm Used**	MQ4
Acquisition Date	7/17/2014 8:54:48 AM	**Dilution Factor**	1.00
Acquisition Method	@537-ShortRun-110613-Ali.dam	**Weight to Volume**	N/A
Project	EPA537\2014_07_16	**Instrument Name**	API 4000
Data File	@537-Batch#780662-071614.wiff		
Result Table	@537-Batch#780662-071614		
Sample Comment	Lot#@537Cal-071614-LHZ, Exp.07/30/14		

Internal Standard	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
IS-13C-PFOA	991706	11.96	100.00000	-
IS-13C-PFOS	1510265	13.21	100.00000	-

Target Analyte	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
PFHxA	5.974e+05	8.29	0.04000	0.037968
Surr-13c-PFHxA	1.114e+06	8.28	100.00000	103.100749
PFHpA	1.403e+06	10.40	0.04000	0.043685
PFHpA 2	4.025e+05	10.40	0.04000	0.043261
PFOA	1.242e+06	11.96	0.04000	0.041527
PFOA 2	4.318e+05	11.96	0.04000	0.040976
PFNA	9.097e+05	13.21	0.04000	0.040647
PFNA 2	2.356e+05	13.21	0.04000	0.039749
PFDA	8.891e+05	14.25	0.04000	0.037216
PFDA 2	1.673e+05	14.26	0.04000	0.038078
Surr-13c-PFDA	7.694e+05	14.25	100.00000	89.148605
PFUnA	7.241e+05	15.14	0.04000	0.032336
PFUnA 2	1.334e+05	15.14	0.04000	0.030303
PFDoA	5.857e+05	15.89	0.04000	0.028824
PFTrDA	9.003e+05	16.55	0.04000	0.030248
PFTrDA 2	2.088e+05	16.55	0.04000	0.030445
PFTA	2.817e+05	17.11	0.04000	0.034321
PFBS	4.555e+05	5.96	0.03550	0.034279
PFBS 2	1.593e+05	5.97	0.03550	0.033553
PFHxS	6.468e+05	10.55	0.03790	0.040847
PFHxS 2	2.150e+05	10.55	0.03790	0.040578
PFOS	5.682e+05	13.21	0.03830	0.038333
PFOS 2	1.741e+05	13.21	0.03830	0.039086
13C-PFOA	9.917e+05	11.96	100.00000	104.629031
13C-PFOS	1.510e+06	13.21	100.00000	115.681266

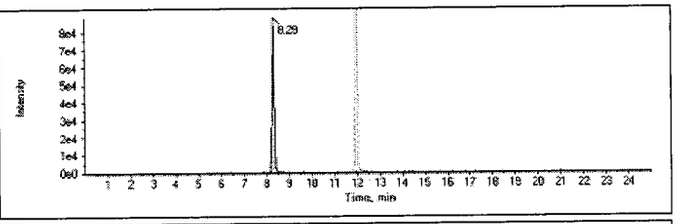
IS-13C-PFOA (Internal Standard) RT (Exp. RT): 11.96(11.96) min Concentration: 100.00000 Sample Type: (Quality Control)	
IS-13C-PFOS (Internal Standard) RT (Exp. RT): 13.21(13.22) min Concentration: 100.00000 Sample Type: (Quality Control)	

PFHxA (313.0 / 268.8)

RT (Exp. RT): 8.29 (8.28) min

Calculated conc: 0.037968

Area Ratio: 6.024e-1
Sample Type: (Quality Control)

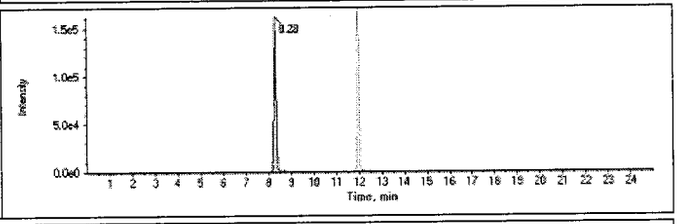


Surr-13c-PFHxA (315.0 / 270.0)

RT (Exp. RT): 8.28 (8.28) min

Calculated conc: 103.100749

Area Ratio: 1.124e0
Sample Type: (Quality Control)

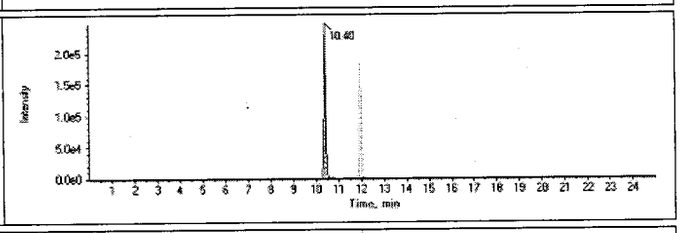


PFHpA (363.0 / 318.9)

RT (Exp. RT): 10.40 (10.40) min

Calculated conc: 0.043685

Area Ratio: 1.415e0
Sample Type: (Quality Control)

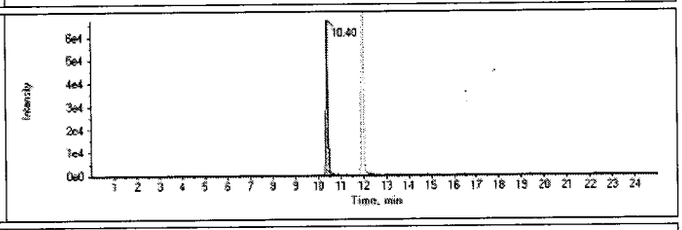


PFHpA 2 (363.0 / 168.9)

RT (Exp. RT): 10.40 (10.40) min

Calculated conc: 0.043261

Area Ratio: 4.059e-1
Sample Type: (Quality Control)

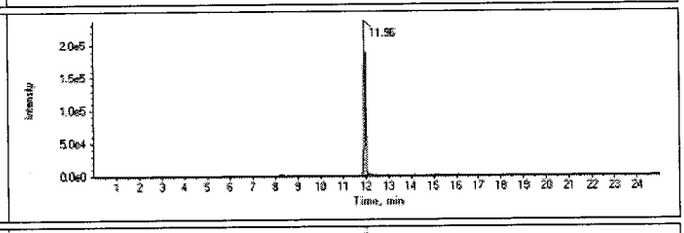


PFOA (413.0 / 368.9)

RT (Exp. RT): 11.96 (11.97) min

Calculated conc: 0.041527

Area Ratio: 1.253e0
Sample Type: (Quality Control)

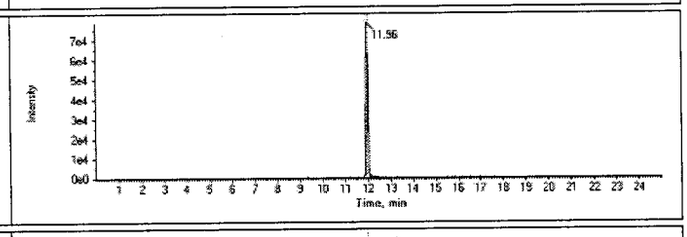


PFOA 2 (413.0 / 168.8)

RT (Exp. RT): 11.96 (11.96) min

Calculated conc: 0.040976

Area Ratio: 4.354e-1
Sample Type: (Quality Control)

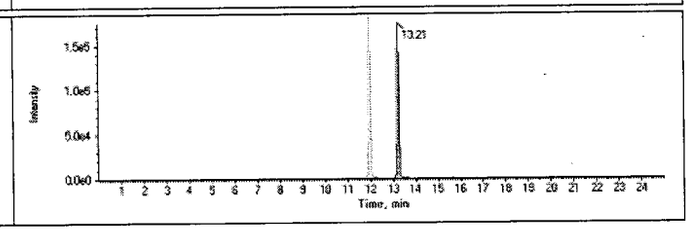


PFNA (463.0 / 419.0)

RT (Exp. RT): 13.21 (13.22) min

Calculated conc: 0.040647

Area Ratio: 9.173e-1
Sample Type: (Quality Control)

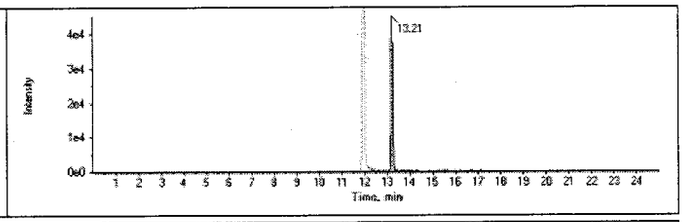


PFNA 2 (463.0 / 218.9)

RT (Exp. RT): 13.21 (13.21) min

Calculated conc: 0.039749

Area Ratio: 2.376e-1
Sample Type: (Quality Control)

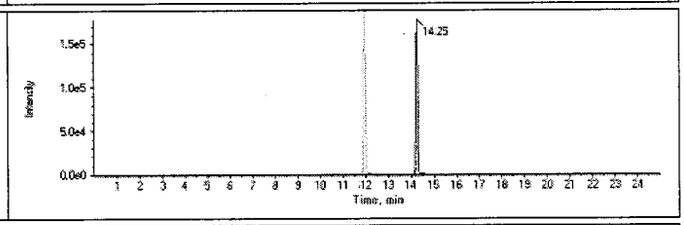


PFDA (513.0 / 469.0)

RT (Exp. RT): 14.25 (14.26) min

Calculated conc: 0.037216

Area Ratio: 8.965e-1
Sample Type: (Quality Control)

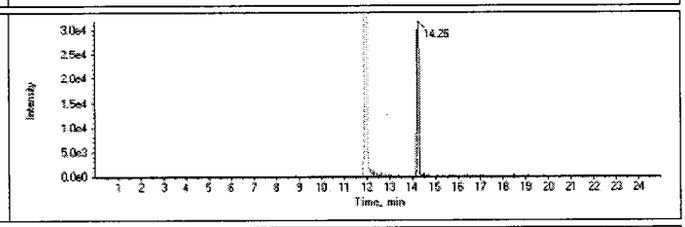


PFDA 2 (513.0 / 218.8)

RT (Exp. RT): 14.26 (14.26) min

Calculated conc: 0.038078

Area Ratio: 1.687e-1
Sample Type: (Quality Control)

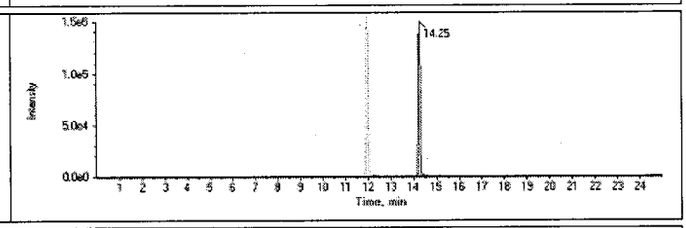


Surr-13c-PFDA (515.0 / 470.0)

RT (Exp. RT): 14.25 (14.26) min

Calculated conc: 89.148605

Area Ratio: 7.758e-1
Sample Type: (Quality Control)

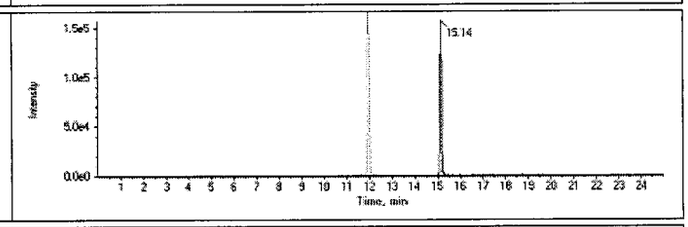


PFUnA (563.0 / 519.0)

RT (Exp. RT): 15.14 (15.14) min

Calculated conc: 0.032336

Area Ratio: 7.302e-1
Sample Type: (Quality Control)

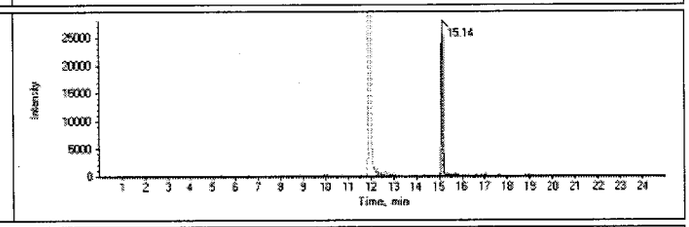


PFUnA 2 (563.0 / 268.8)

RT (Exp. RT): 15.14 (15.14) min

Calculated conc: 0.030303

Area Ratio: 1.346e-1
Sample Type: (Quality Control)

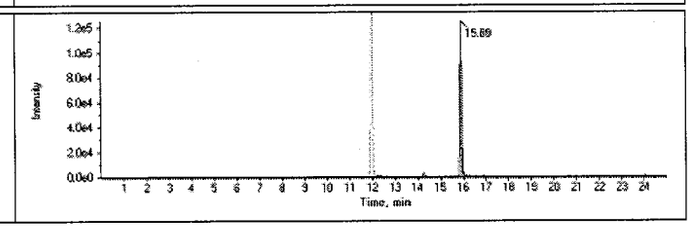


PFDoA (612.8 / 569.0)

RT (Exp. RT): 15.89 (15.90) min

Calculated conc: 0.028824

Area Ratio: 5.906e-1
Sample Type: (Quality Control)

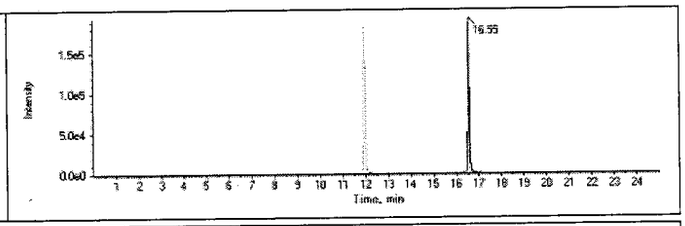


PFTrDA (662.9 / 619.0)

RT (Exp. RT): 16.55 (16.55) min

Calculated conc: 0.030248

Area Ratio: 9.079e-1
Sample Type: (Quality Control)

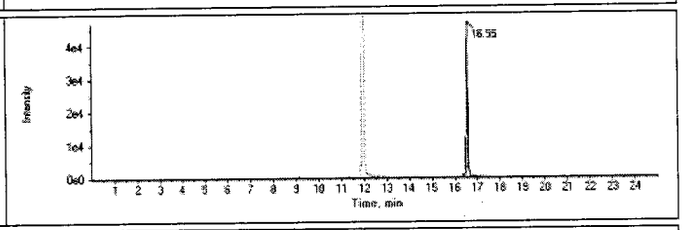


PFTrDA 2 (662.9 / 168.9)

RT (Exp. RT): 16.55 (16.55) min

Calculated conc: 0.030445

Area Ratio: 2.105e-1
Sample Type: (Quality Control)

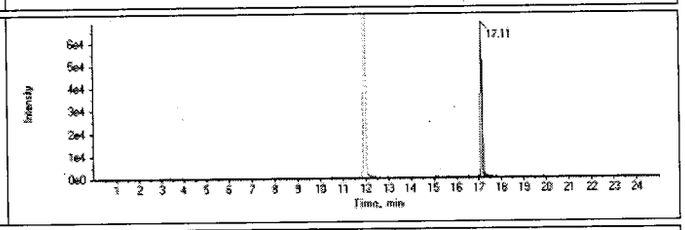


PFTA (713.3 / 669.0)

RT (Exp. RT): 17.11 (17.11) min

Calculated conc: 0.034321

Area Ratio: 2.841e-1
Sample Type: (Quality Control)

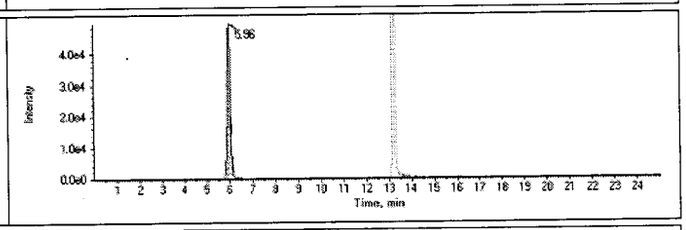


PFBS (299.0 / 79.9)

RT (Exp. RT): 5.96 (5.96) min

Calculated conc: 0.034279

Area Ratio: 3.016e-1
Sample Type: (Quality Control)

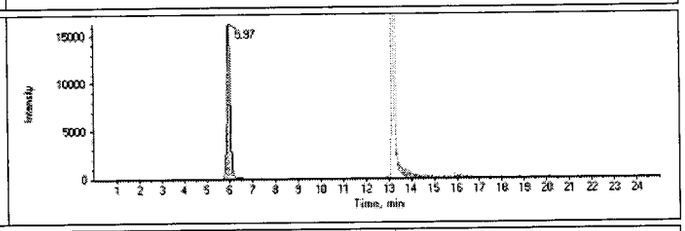


PFBS 2 (299.0 / 99.0)

RT (Exp. RT): 5.97 (5.97) min

Calculated conc: 0.033553

Area Ratio: 1.055e-1
Sample Type: (Quality Control)

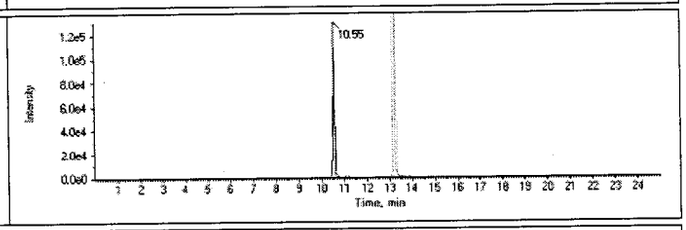


PFHxS (398.9 / 80.0)

RT (Exp. RT): 10.55 (10.55) min

Calculated conc: 0.040847

Area Ratio: 4.283e-1
Sample Type: (Quality Control)

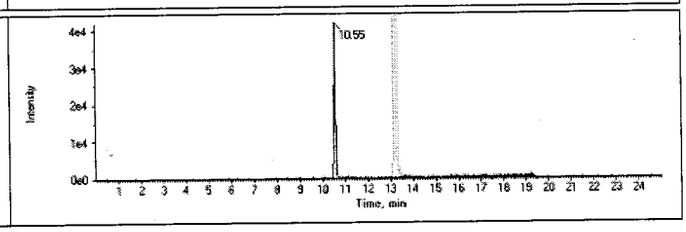


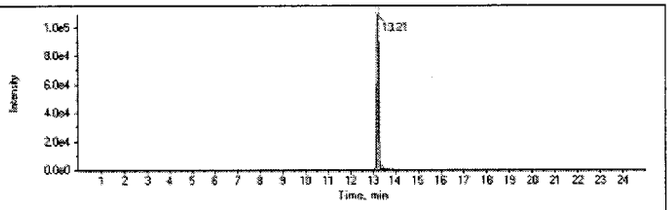
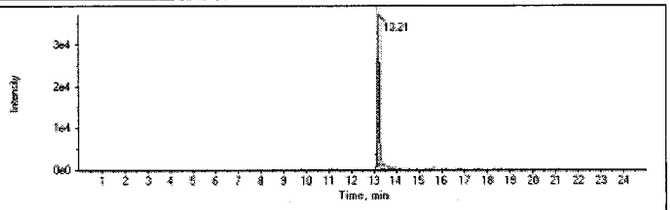
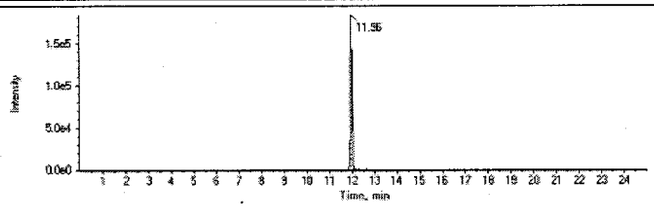
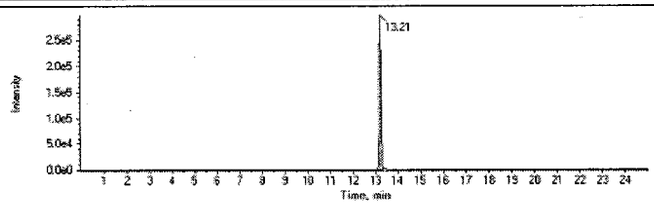
PFHxS 2 (398.9 / 99.0)

RT (Exp. RT): 10.55 (10.54) min

Calculated conc: 0.040578

Area Ratio: 1.423e-1
Sample Type: (Quality Control)

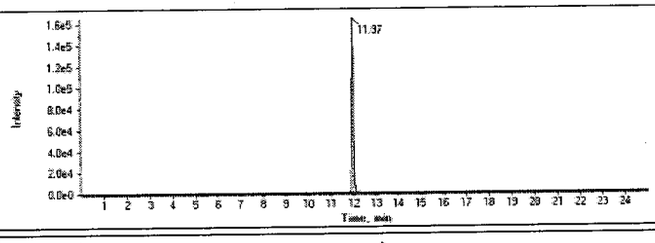
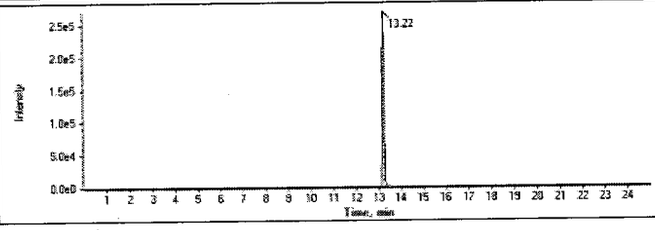


PFOS (499.0 / 79.9) RT (Exp. RT): 13.21 (13.22) min Calculated conc: 0.038333 Area Ratio: 3.762e-1 Sample Type: (Quality Control)	
PFOS 2 (499.0 / 99.0) RT (Exp. RT): 13.21 (13.21) min Calculated conc: 0.039086 Area Ratio: 1.152e-1 Sample Type: (Quality Control)	
13C-PFOA (417.0 / 372.0) RT (Exp. RT): 11.96 (11.96) min Calculated conc: 104.629031 Area Ratio: N/A Sample Type: (Quality Control)	
13C-PFOS (503.0 / 80.0) RT (Exp. RT): 13.21 (13.22) min Calculated conc: 115.681266 Area Ratio: N/A Sample Type: (Quality Control)	

Sample Name	CCCL	**Injection Vial**	2
Sample ID		**Injection Volume**	5.00
Sample Type	Quality Control	**Algorithm Used**	MQ4
Acquisition Date	7/17/2014 10:24:03 AM	**Dilution Factor**	1.00
Acquisition Method	@537-ShortRun-110613-Ali.dam	**Weight to Volume**	N/A
Project	EPA537\2014_07_16	**Instrument Name**	API 4000
Data File	@537-Batch#780662-071614.wiff		
Result Table	@537-Batch#780662-071614		
Sample Comment	Lot#@537Cal-071614-LHZ, Exp.07/30/14		

Internal Standard	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
IS-13C-PFOA	888751	11.97	100.00000	-
IS-13C-PFOS	1416106	13.22	100.00000	-

Target Analyte	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
PFHxA	3.084e+04	8.32	0.00250	0.002187
Surr-13c-PFHxA	9.690e+05	8.31	100.00000	100.040965
PFHpA	7.885e+04	10.41	0.00250	0.002739
PFHpA 2	2.020e+04	10.41	0.00250	0.002423
PFOA	7.518e+04	11.97	0.00250	0.002804
PFOA 2	2.231e+04	11.97	0.00250	0.002363
PFNA	5.801e+04	13.22	0.00250	0.002892
PFNA 2	1.329e+04	13.23	0.00250	0.002501
PFDA	5.385e+04	14.26	0.00250	0.002515
PFDA 2	9.954e+03	14.26	0.00250	0.002528
Surr-13c-PFDA	7.333e+05	14.26	100.00000	94.815719
PFUnA	4.370e+04	15.14	0.00250	0.002177
PFUnA 2	9.072e+03	15.15	0.00250	0.002299
PFDoA	3.074e+04	15.89	0.00250	0.001688
PFTrDA	4.826e+04	16.55	0.00250	0.001809
PFTrDA 2	1.118e+04	16.56	0.00250	0.001819
PFTA	1.913e+04	17.11	0.00250	0.002600
PFBS	2.779e+04	6.02	0.00222	0.002231
PFBS 2	8.695e+03	6.02	0.00222	0.001953
PFHxS	4.006e+04	10.56	0.00237	0.002698
PFHxS 2	1.089e+04	10.56	0.00237	0.002192
PFOS	3.496e+04	13.21	0.00240	0.002516
PFOS 2	9.759e+03	13.22	0.00240	0.002337
13C-PFOA	8.888e+05	11.97	100.00000	93.766939
13C-PFOS	1.416e+06	13.22	100.00000	108.468987

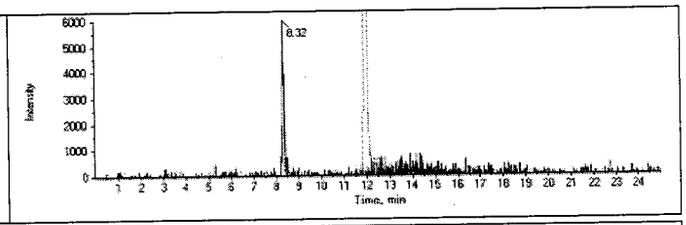
IS-13C-PFOA (Internal Standard) RT (Exp. RT): 11.97(11.96) min Concentration: 100.00000 Sample Type: (Quality Control)	
IS-13C-PFOS (Internal Standard) RT (Exp. RT): 13.22(13.22) min Concentration: 100.00000 Sample Type: (Quality Control)	

PFHxA (313.0 / 268.8)

RT (Exp. RT): 8.32 (8.28) min

Calculated conc: 0.002187

Area Ratio: 3.470e-2
Sample Type: (Quality Control)

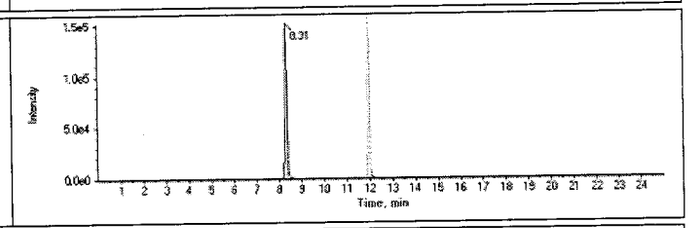


Surr-13c-PFHxA (315.0 / 270.0)

RT (Exp. RT): 8.31 (8.28) min

Calculated conc: 100.040965

Area Ratio: 1.090e0
Sample Type: (Quality Control)

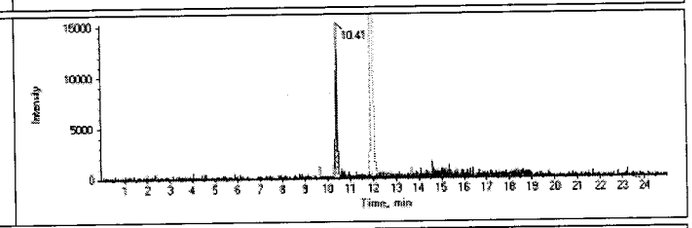


PFHpA (363.0 / 318.9)

RT (Exp. RT): 10.41 (10.40) min

Calculated conc: 0.002739

Area Ratio: 8.872e-2
Sample Type: (Quality Control)

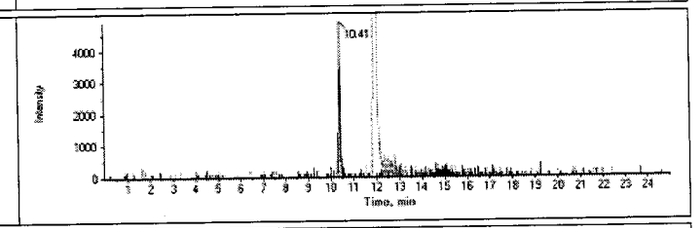


PFHpA 2 (363.0 / 168.9)

RT (Exp. RT): 10.41 (10.40) min

Calculated conc: 0.002423

Area Ratio: 2.273e-2
Sample Type: (Quality Control)

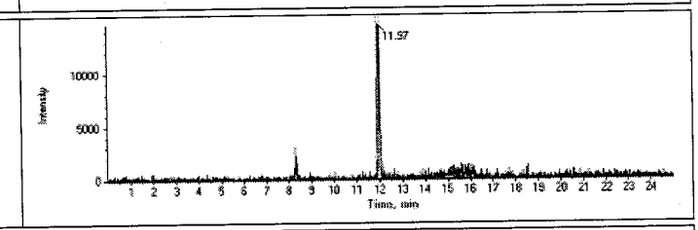


PFOA (413.0 / 368.9)

RT (Exp. RT): 11.97 (11.97) min

Calculated conc: 0.002804

Area Ratio: 8.459e-2
Sample Type: (Quality Control)

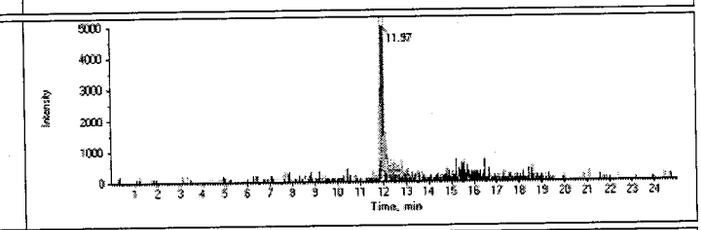


PFOA 2 (413.0 / 168.8)

RT (Exp. RT): 11.97 (11.96) min

Calculated conc: 0.002363

Area Ratio: 2.511e-2
Sample Type: (Quality Control)

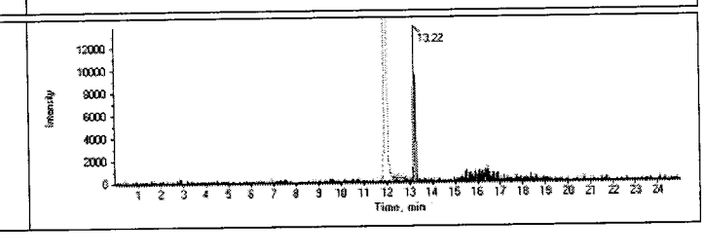


PFNA (463.0 / 419.0)

RT (Exp. RT): 13.22 (13.22) min

Calculated conc: 0.002892

Area Ratio: 6.527e-2
Sample Type: (Quality Control)

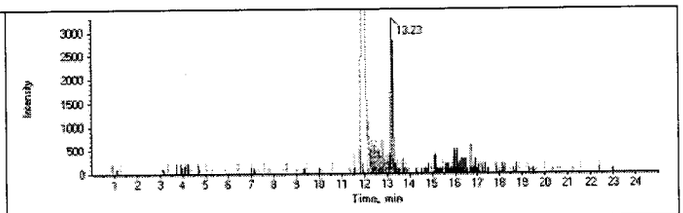


PFNA 2 (463.0 / 218.9)

RT (Exp. RT): 13.23 (13.21) min

Calculated conc: 0.002501

Area Ratio: 1.495e-2
Sample Type: (Quality Control)

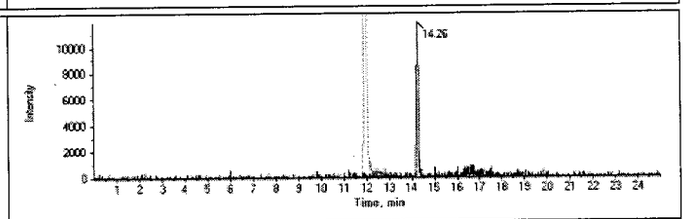


PFDA (513.0 / 469.0)

RT (Exp. RT): 14.26 (14.26) min

Calculated conc: 0.002515

Area Ratio: 6.059e-2
Sample Type: (Quality Control)

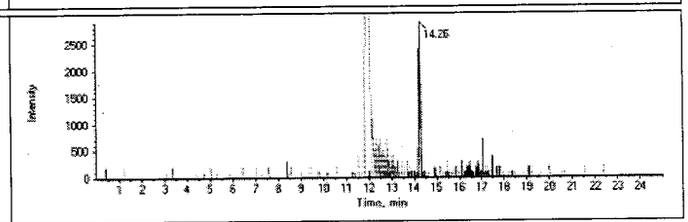


PFDA 2 (513.0 / 218.8)

RT (Exp. RT): 14.26 (14.26) min

Calculated conc: 0.002528

Area Ratio: 1.120e-2
Sample Type: (Quality Control)

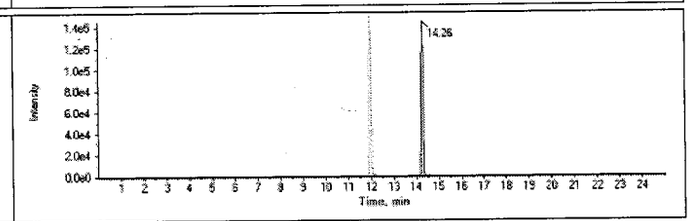


Surr-13c-PFDA (515.0 / 470.0)

RT (Exp. RT): 14.26 (14.26) min

Calculated conc: 94.815719

Area Ratio: 8.251e-1
Sample Type: (Quality Control)

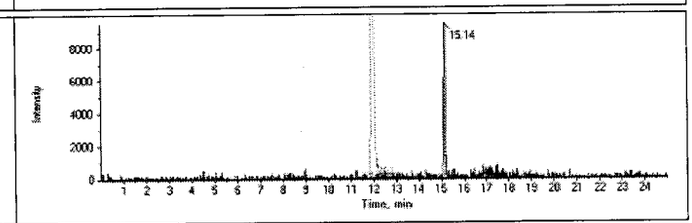


PFUnA (563.0 / 519.0)

RT (Exp. RT): 15.14 (15.14) min

Calculated conc: 0.002177

Area Ratio: 4.916e-2
Sample Type: (Quality Control)

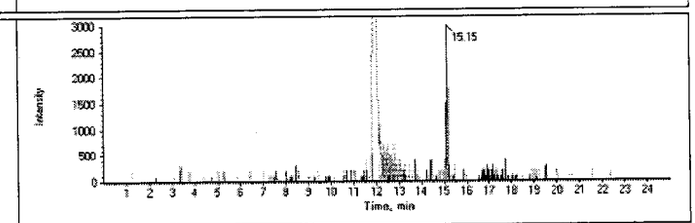


PFUnA 2 (563.0 / 268.8)

RT (Exp. RT): 15.15 (15.14) min

Calculated conc: 0.002299

Area Ratio: 1.021e-2
Sample Type: (Quality Control)

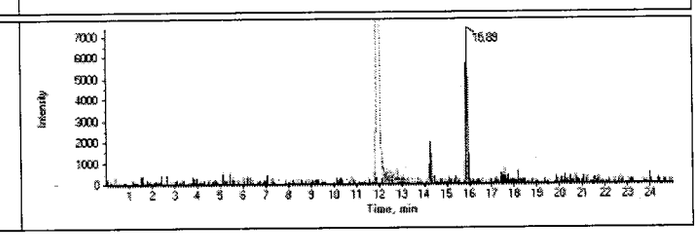


PFDoA (612.8 / 569.0)

RT (Exp. RT): 15.89 (15.90) min

Calculated conc: 0.001688

Area Ratio: 3.459e-2
Sample Type: (Quality Control)

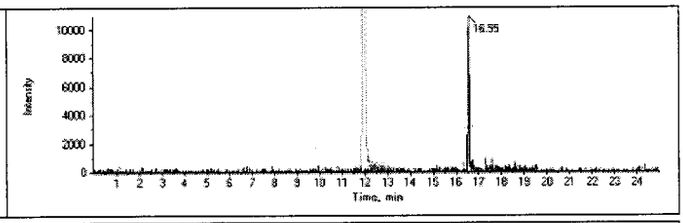


PFTrDA (662.9 / 619.0)

RT (Exp. RT): 16.55 (16.55) min

Calculated conc: 0.001809

Area Ratio: 5.430e-2
Sample Type: (Quality Control)

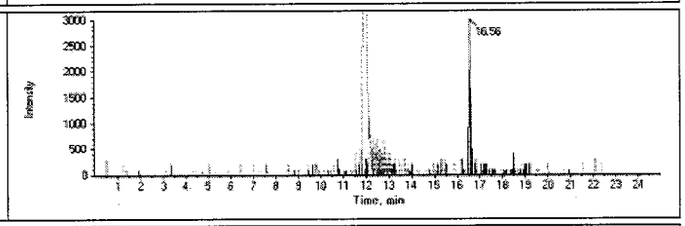


PFTrDA 2 (662.9 / 168.9)

RT (Exp. RT): 16.56 (16.55) min

Calculated conc: 0.001819

Area Ratio: 1.258e-2
Sample Type: (Quality Control)

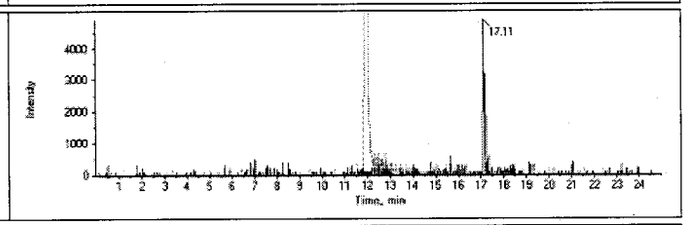


PFTA (713.3 / 669.0)

RT (Exp. RT): 17.11 (17.11) min

Calculated conc: 0.002600

Area Ratio: 2.152e-2
Sample Type: (Quality Control)

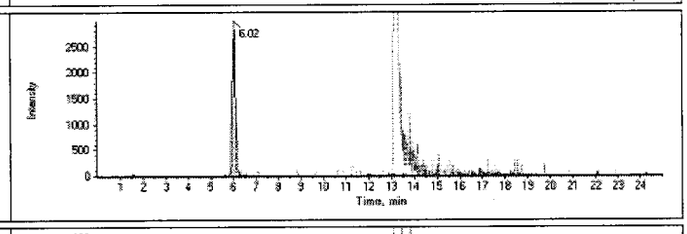


PFBS (299.0 / 79.9)

RT (Exp. RT): 6.02 (5.96) min

Calculated conc: 0.002231

Area Ratio: 1.963e-2
Sample Type: (Quality Control)

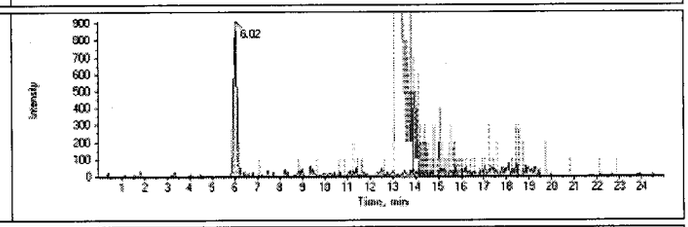


PFBS 2 (299.0 / 99.0)

RT (Exp. RT): 6.02 (5.97) min

Calculated conc: 0.001953

Area Ratio: 6.140e-3
Sample Type: (Quality Control)

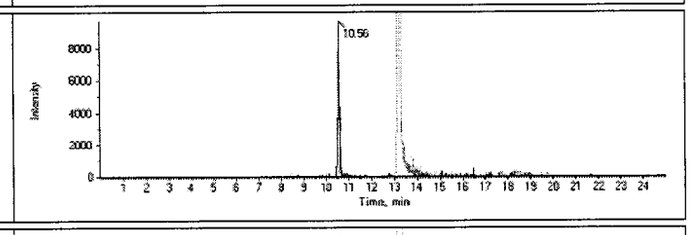


PFHxS (398.9 / 80.0)

RT (Exp. RT): 10.56 (10.55) min

Calculated conc: 0.002698

Area Ratio: 2.829e-2
Sample Type: (Quality Control)

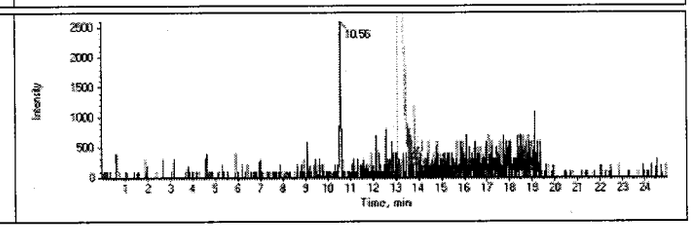


PFHxS 2 (398.9 / 99.0)

RT (Exp. RT): 10.56 (10.54) min

Calculated conc: 0.002192

Area Ratio: 7.687e-3
Sample Type: (Quality Control)

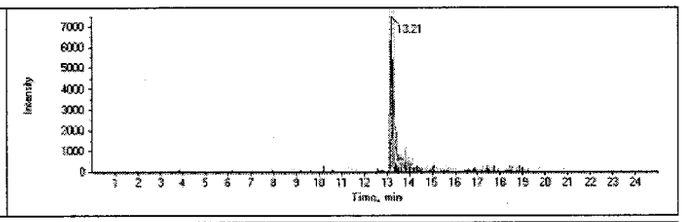


PFOS (499.0 / 79.9)

RT (Exp. RT): 13.21 (13.22) min

Calculated conc: 0.002516

Area Ratio: 2.469e-2
Sample Type: (Quality Control)

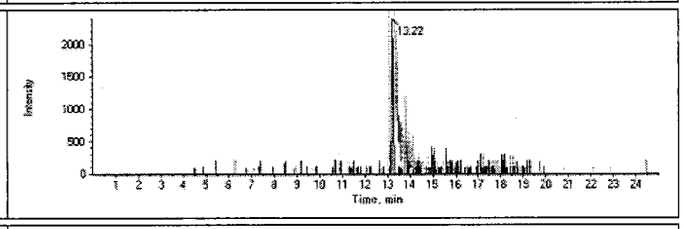


PFOS 2 (499.0 / 99.0)

RT (Exp. RT): 13.22 (13.21) min

Calculated conc: 0.002337

Area Ratio: 6.891e-3
Sample Type: (Quality Control)

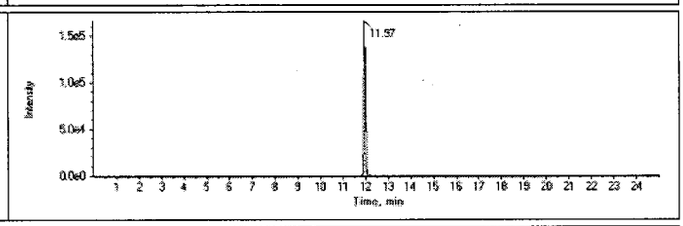


13C-PFOA (417.0 / 372.0)

RT (Exp. RT): 11.97 (11.96) min

Calculated conc: 93.766939

Area Ratio: N/A
Sample Type: (Quality Control)

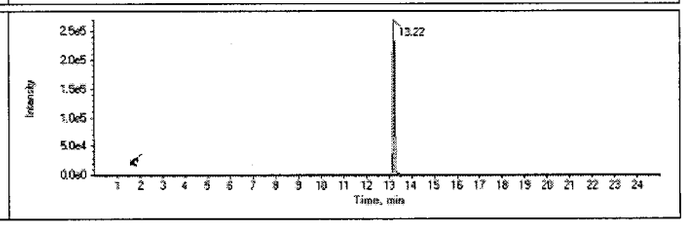


13C-PFOS (503.0 / 80.0)

RT (Exp. RT): 13.22 (13.22) min

Calculated conc: 108.468987

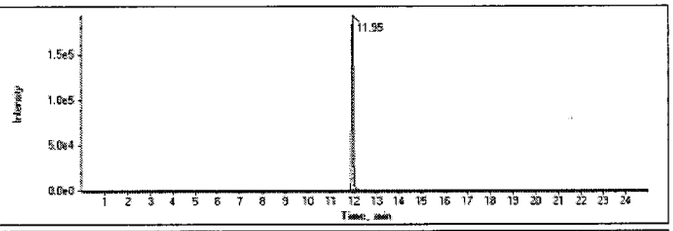
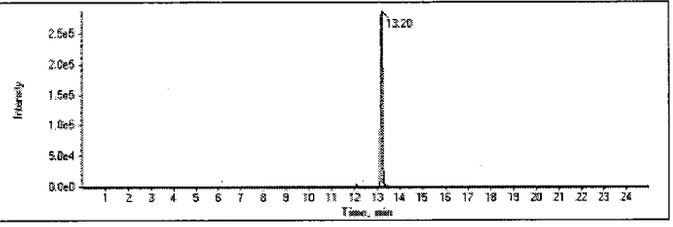
Area Ratio: N/A
Sample Type: (Quality Control)



Sample Name	CCCL	**Injection Vial**	2
Sample ID		**Injection Volume**	5.00
Sample Type	Quality Control	**Algorithm Used**	MQ4
Acquisition Date	7/17/2014 10:49:38 AM	**Dilution Factor**	1.00
Acquisition Method	@537-ShortRun-110613-Ali.dam	**Weight to Volume**	N/A
Project	EPA537\2014_07_16	**Instrument Name**	API 4000
Data File	@537-Batch#780662-071614.wiff		
Result Table	@537-Batch#780662-071614		
Sample Comment	Lot#@537Cal-071614-LHZ, Exp.07/30/14		

Internal Standard	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
IS-13C-PFOA	1040908	11.95	100.00000	-
IS-13C-PFOS	1500586	13.20	100.00000	-

Target Analyte	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
PFHxA	3.555e+04	8.28	0.00250	0.002152
Surr-13c-PFHxA	1.117e+06	8.27	100.00000	98.438321
PFHpA	9.096e+04	10.39	0.00250	0.002697
PFHpA 2	2.420e+04	10.39	0.00250	0.002478
PFOA	8.100e+04	11.95	0.00250	0.002579
PFOA 2	2.971e+04	11.95	0.00250	0.002686
PFNA	6.345e+04	13.20	0.00250	0.002701
PFNA 2	1.638e+04	13.21	0.00250	0.002632
PFDA	5.732e+04	14.25	0.00250	0.002286
PFDA 2	9.905e+03	14.24	0.00250	0.002148
Surr-13c-PFDA	8.333e+05	14.25	100.00000	91.994963
PFUnA	5.536e+04	15.13	0.00250	0.002355
PFUnA 2	9.463e+03	15.13	0.00250	0.002047
PFDoA	3.879e+04	15.89	0.00250	0.001819
PFTrDA	5.610e+04	16.54	0.00250	0.001796
PFTrDA 2	1.206e+04	16.53	0.00250	0.001676
PFTA	1.937e+04	17.10	0.00250	0.002248
PFBS	2.783e+04	5.96	0.00222	0.002108
PFBS 2	1.064e+04	5.94	0.00222	0.002255
PFHxS	3.791e+04	10.54	0.00237	0.002410
PFHxS 2	1.300e+04	10.53	0.00237	0.002469
PFOS	3.614e+04	13.20	0.00240	0.002454
PFOS 2	1.035e+04	13.20	0.00240	0.002338
13C-PFOA	1.041e+06	11.95	100.00000	109.820082
13C-PFOS	1.501e+06	13.20	100.00000	114.939822

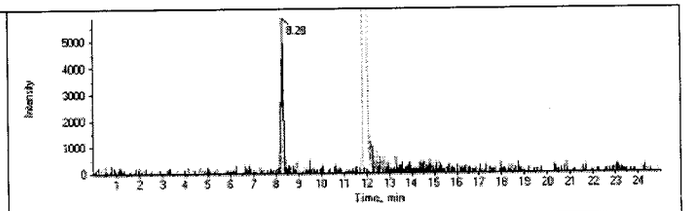
IS-13C-PFOA (Internal Standard) RT (Exp. RT): 11.95(11.96) min Concentration: 100.00000 Sample Type: (Quality Control)	
IS-13C-PFOS (Internal Standard) RT (Exp. RT): 13.20(13.22) min Concentration: 100.00000 Sample Type: (Quality Control)	

PFHxA (313.0 / 268.8)

RT (Exp. RT): 8.28 (8.28) min

Calculated conc: 0.002152

Area Ratio: 3.415e-2
Sample Type: (Quality Control)

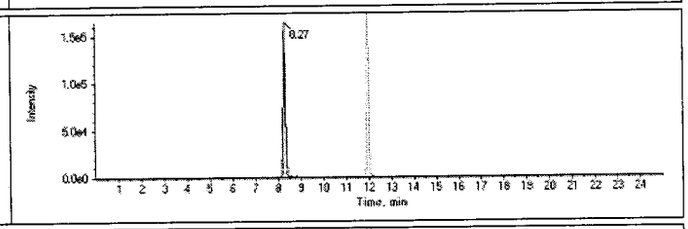


Surr-13c-PFHxA (315.0 / 270.0)

RT (Exp. RT): 8.27 (8.28) min

Calculated conc: 98.438321

Area Ratio: 1.073e0
Sample Type: (Quality Control)

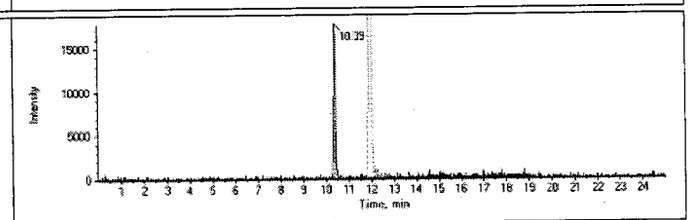


PFHpA (363.0 / 318.9)

RT (Exp. RT): 10.39 (10.40) min

Calculated conc: 0.002697

Area Ratio: 8.739e-2
Sample Type: (Quality Control)

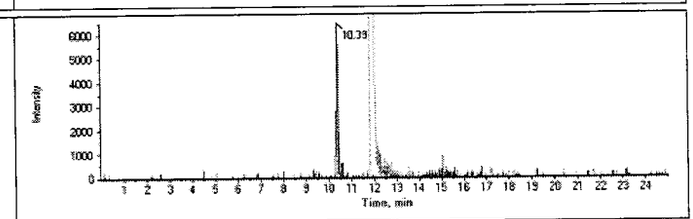


PFHpA 2 (363.0 / 168.9)

RT (Exp. RT): 10.39 (10.40) min

Calculated conc: 0.002478

Area Ratio: 2.325e-2
Sample Type: (Quality Control)

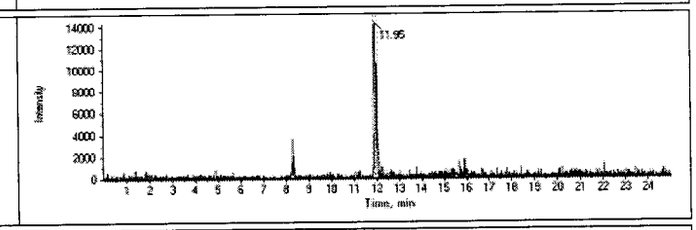


PFOA (413.0 / 368.9)

RT (Exp. RT): 11.95 (11.97) min

Calculated conc: 0.002579

Area Ratio: 7.782e-2
Sample Type: (Quality Control)

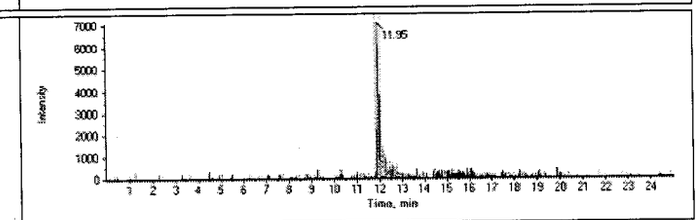


PFOA 2 (413.0 / 168.8)

RT (Exp. RT): 11.95 (11.96) min

Calculated conc: 0.002686

Area Ratio: 2.855e-2
Sample Type: (Quality Control)

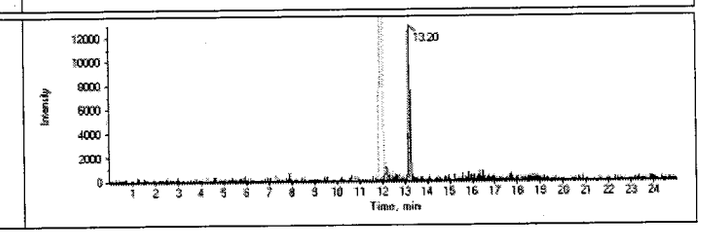


PFNA (463.0 / 419.0)

RT (Exp. RT): 13.20 (13.22) min

Calculated conc: 0.002701

Area Ratio: 6.096e-2
Sample Type: (Quality Control)

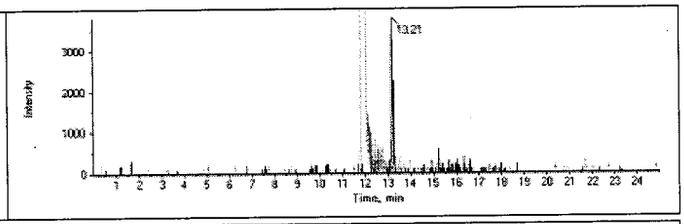


PFNA 2 (463.0 / 218.9)

RT (Exp. RT): 13.21 (13.21) min

Calculated conc: 0.002632

Area Ratio: 1.574e-2
Sample Type: (Quality Control)

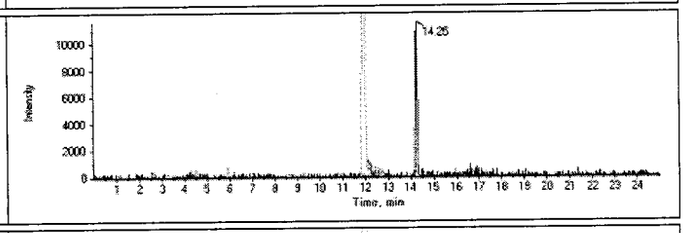


PFDA (513.0 / 469.0)

RT (Exp. RT): 14.25 (14.26) min

Calculated conc: 0.002286

Area Ratio: 5.507e-2
Sample Type: (Quality Control)

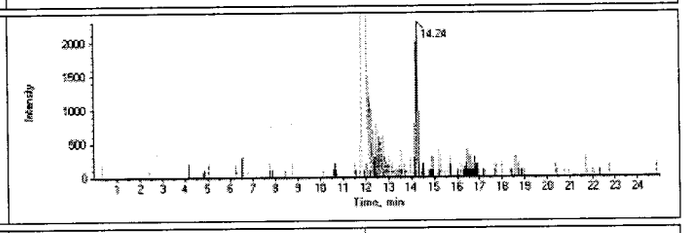


PFDA 2 (513.0 / 218.8)

RT (Exp. RT): 14.24 (14.26) min

Calculated conc: 0.002148

Area Ratio: 9.516e-3
Sample Type: (Quality Control)

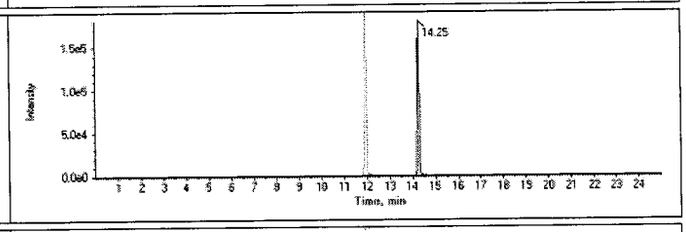


Surr-13c-PFDA (515.0 / 470.0)

RT (Exp. RT): 14.25 (14.26) min

Calculated conc: 91.994963

Area Ratio: 8.006e-1
Sample Type: (Quality Control)

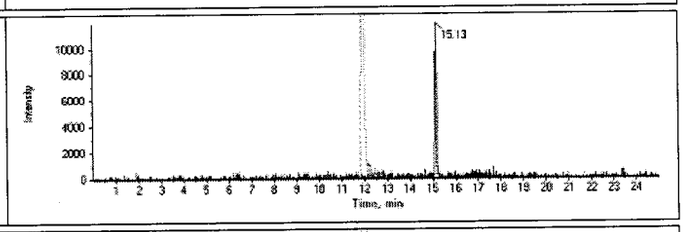


PFUnA (563.0 / 519.0)

RT (Exp. RT): 15.13 (15.14) min

Calculated conc: 0.002355

Area Ratio: 5.318e-2
Sample Type: (Quality Control)

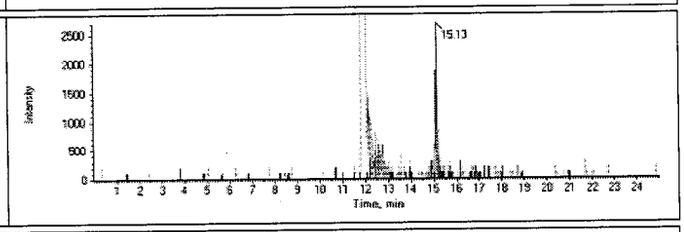


PFUnA 2 (563.0 / 268.8)

RT (Exp. RT): 15.13 (15.14) min

Calculated conc: 0.002047

Area Ratio: 9.091e-3
Sample Type: (Quality Control)

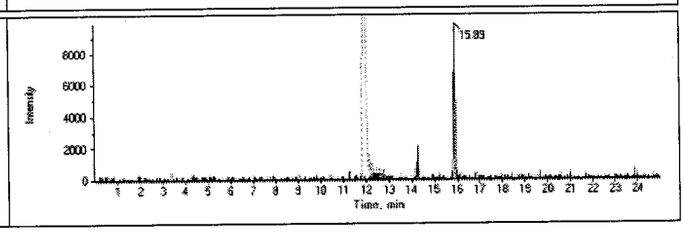


PFDoA (612.8 / 569.0)

RT (Exp. RT): 15.89 (15.90) min

Calculated conc: 0.001819

Area Ratio: 3.727e-2
Sample Type: (Quality Control)

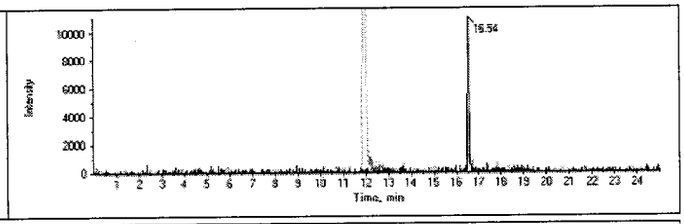


PFTrDA (662.9 / 619.0)

RT (Exp. RT): 16.54 (16.55) min

Calculated conc: 0.001796

Area Ratio: 5.390e-2
Sample Type: (Quality Control)

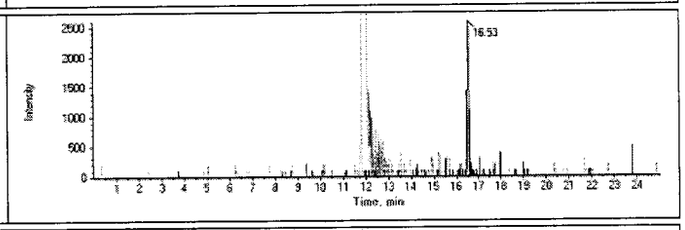


PFTrDA 2 (662.9 / 168.9)

RT (Exp. RT): 16.53 (16.55) min

Calculated conc: 0.001676

Area Ratio: 1.159e-2
Sample Type: (Quality Control)

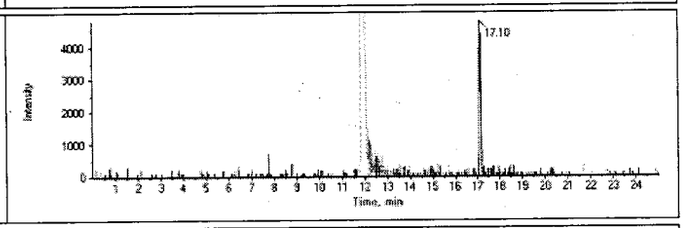


PFTA (713.3 / 669.0)

RT (Exp. RT): 17.10 (17.11) min

Calculated conc: 0.002248

Area Ratio: 1.861e-2
Sample Type: (Quality Control)

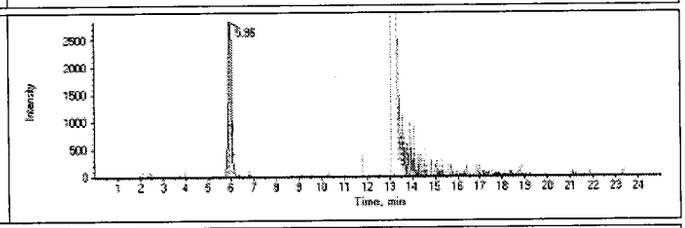


PFBS (299.0 / 79.9)

RT (Exp. RT): 5.96 (5.96) min

Calculated conc: 0.002108

Area Ratio: 1.855e-2
Sample Type: (Quality Control)

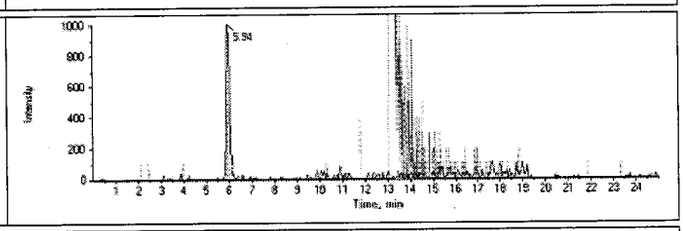


PFBS 2 (299.0 / 99.0)

RT (Exp. RT): 5.94 (5.97) min

Calculated conc: 0.002255

Area Ratio: 7.091e-3
Sample Type: (Quality Control)

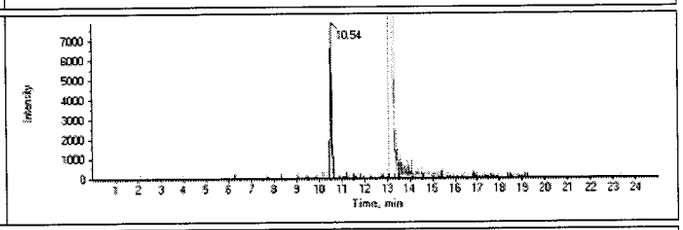


PFHxS (398.9 / 80.0)

RT (Exp. RT): 10.54 (10.55) min

Calculated conc: 0.002410

Area Ratio: 2.526e-2
Sample Type: (Quality Control)

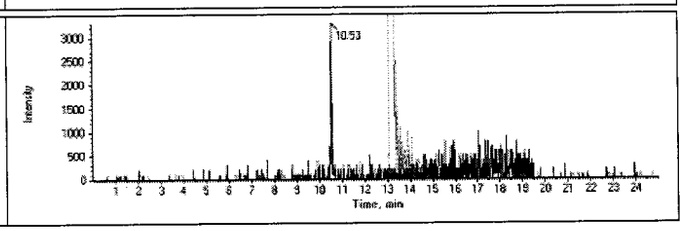


PFHxS 2 (398.9 / 99.0)

RT (Exp. RT): 10.53 (10.54) min

Calculated conc: 0.002469

Area Ratio: 8.660e-3
Sample Type: (Quality Control)

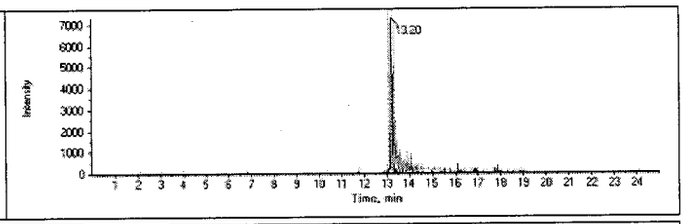


PFOS (499.0 / 79.9)

RT (Exp. RT): 13.20 (13.22) min

Calculated conc: 0.002454

Area Ratio: 2.408e-2
Sample Type: (Quality Control)

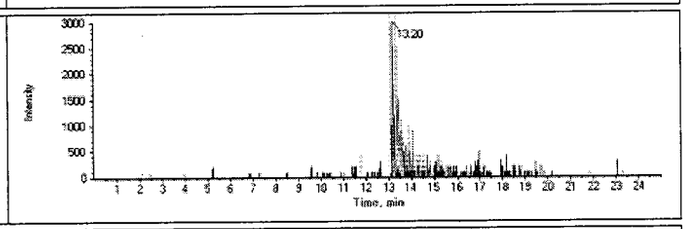


PFOS 2 (499.0 / 99.0)

RT (Exp. RT): 13.20 (13.21) min

Calculated conc: 0.002338

Area Ratio: 6.895e-3
Sample Type: (Quality Control)

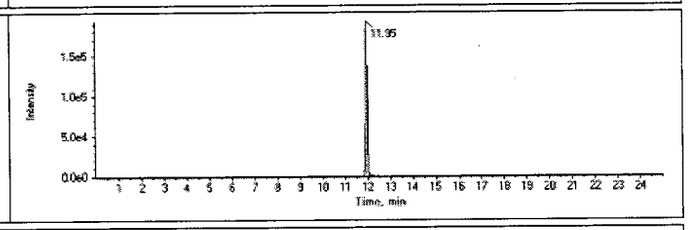


13C-PFOA (417.0 / 372.0)

RT (Exp. RT): 11.95 (11.96) min

Calculated conc: 109.820082

Area Ratio: N/A
Sample Type: (Quality Control)

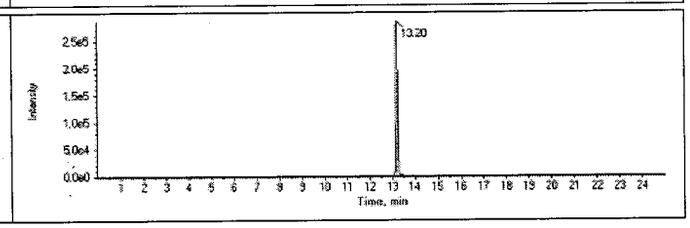


13C-PFOS (503.0 / 80.0)

RT (Exp. RT): 13.20 (13.22) min

Calculated conc: 114.939822

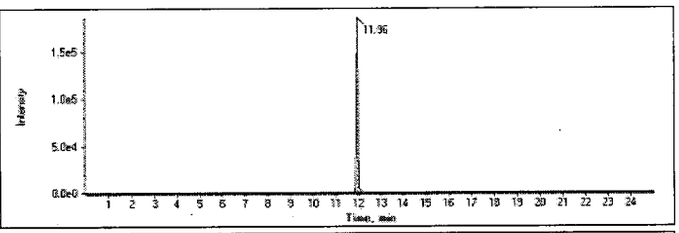
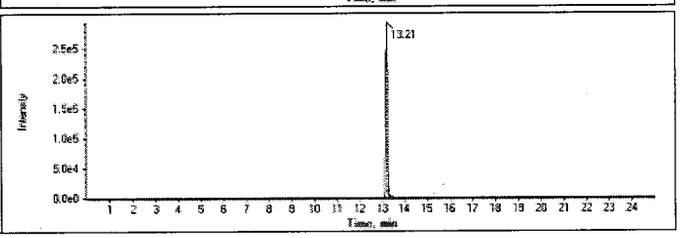
Area Ratio: N/A
Sample Type: (Quality Control)



Sample Name	201407110109	**Injection Vial**	35
Sample ID		**Injection Volume**	5.00
Sample Type	Quality Control	**Algorithm Used**	MQ4
Acquisition Date	7/17/2014 11:15:21 AM	**Dilution Factor**	1.00
Acquisition Method	@537-ShortRun-110613-Ali.dam	**Weight to Volume**	N/A
Project	EPA537\2014_07_16	**Instrument Name**	API 4000
Data File	@537-Batch#780662-071614.wiff		
Result Table	@537-Batch#780662-071614		
Sample Comment	Prep. By FAM@07/14/2014		

Internal Standard	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
IS-13C-PFOA	965949	11.96	100.00000	-
IS-13C-PFOS	1457304	13.21	100.00000	-

Target Analyte	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
PFHxA	2.992e+03	8.28	0.00000	0.000195
Surr-13c-PFHxA	1.049e+06	8.28	100.00000	99.685738
PFHpA	1.128e+03	10.38	0.00000	0.000036
PFHpA 2	4.410e+02	10.40	0.00000	0.000049
PFOA	5.124e+03	11.96	0.00000	0.000176
PFOA 2	1.275e+03	11.97	0.00000	0.000124
PFNA	5.400e+02	13.24	0.00000	0.000025
PFNA 2	1.470e+02	13.20	0.00000	0.000025
PFDA	1.470e+02	14.26	0.00000	0.000006
PFDA 2	N/A	N/A	0.00000	N/A
Surr-13c-PFDA	7.987e+05	14.25	100.00000	95.020798
PFUnA	9.800e+01	15.18	0.00000	0.000004
PFUnA 2	N/A	N/A	0.00000	N/A
PFDoA	9.800e+01	15.92	0.00000	0.000005
PFTrDA	3.920e+02	16.59	0.00000	0.000014
PFTrDA 2	9.800e+01	16.54	0.00000	0.000015
PFTA	9.800e+01	17.24	0.00000	0.000012
PFBS	1.130e+03	5.94	0.00000	0.000088
PFBS 2	1.970e+02	5.91	0.00000	0.000043
PFHxS	1.765e+03	10.54	0.00000	0.000116
PFHxS 2	1.470e+02	10.52	0.00000	0.000029
PFOS	1.470e+02	13.23	0.00000	0.000010
PFOS 2	9.800e+01	13.19	0.00000	0.000023
13C-PFOA	9.659e+05	11.96	100.00000	101.911562
13C-PFOS	1.457e+06	13.21	100.00000	111.624574

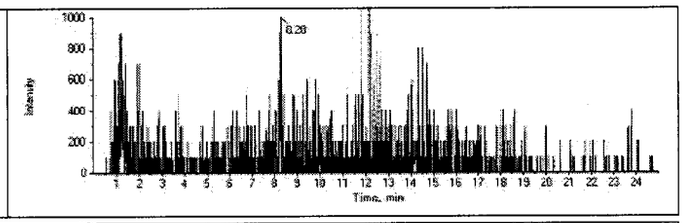
IS-13C-PFOA (Internal Standard) RT (Exp. RT): 11.96(11.96) min Concentration: 100.00000 Sample Type: (Quality Control)	
IS-13C-PFOS (Internal Standard) RT (Exp. RT): 13.21(13.22) min Concentration: 100.00000 Sample Type: (Quality Control)	

PFHxA (313.0 / 268.8)

RT (Exp. RT): 8.28 (8.28) min

Calculated conc: 0.000195

Area Ratio: 3.097e-3
Sample Type: (Quality Control)

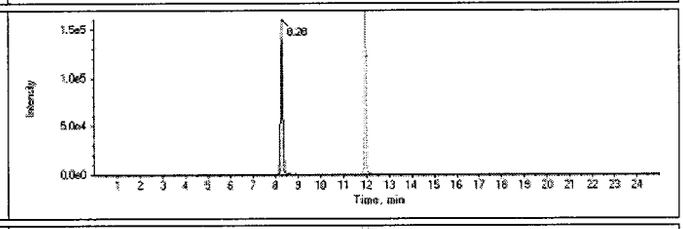


Surr-13c-PFHxA (315.0 / 270.0)

RT (Exp. RT): 8.28 (8.28) min

Calculated conc: 99.685738

Area Ratio: 1.086e0
Sample Type: (Quality Control)

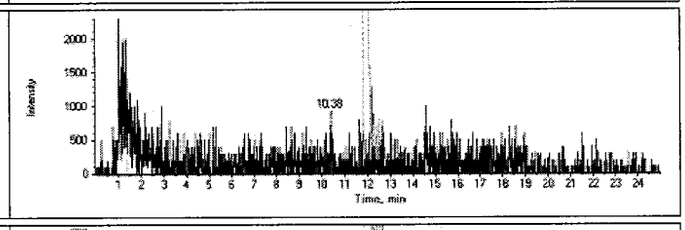


PFHpA (363.0 / 318.9)

RT (Exp. RT): 10.38 (10.40) min

Calculated conc: 0.000036

Area Ratio: 1.168e-3
Sample Type: (Quality Control)

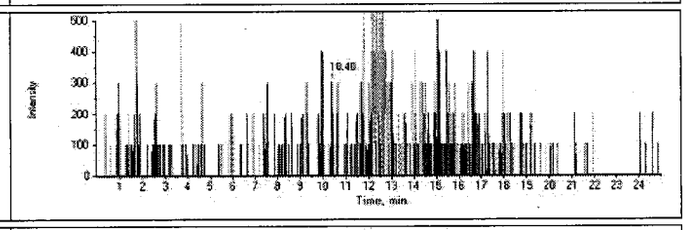


PFHpA 2 (363.0 / 168.9)

RT (Exp. RT): 10.40 (10.40) min

Calculated conc: 0.000049

Area Ratio: 4.569e-4
Sample Type: (Quality Control)

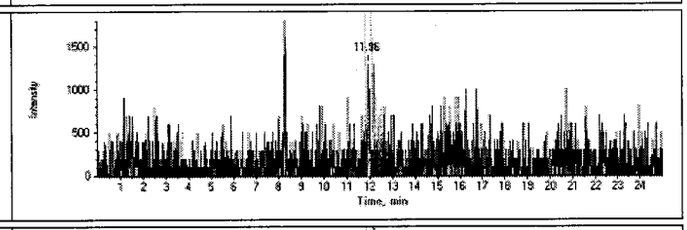


PFOA (413.0 / 368.9)

RT (Exp. RT): 11.96 (11.97) min

Calculated conc: 0.000176

Area Ratio: 5.304e-3
Sample Type: (Quality Control)

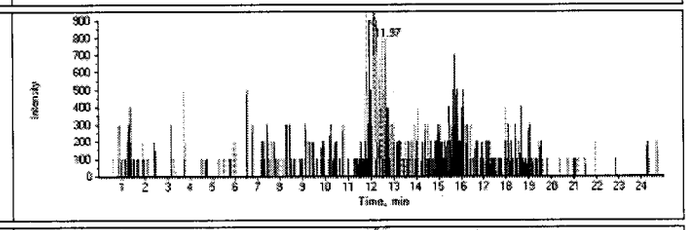


PFOA 2 (413.0 / 168.8)

RT (Exp. RT): 11.97 (11.96) min

Calculated conc: 0.000124

Area Ratio: 1.320e-3
Sample Type: (Quality Control)

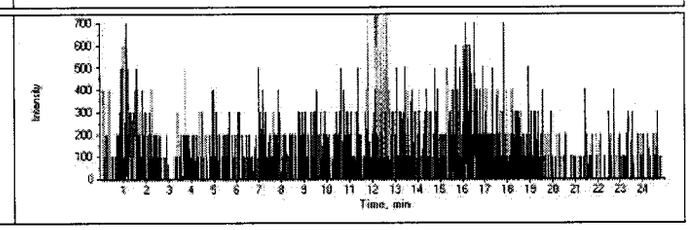


PFNA (463.0 / 419.0)

RT (Exp. RT): 13.24 (13.22) min

Calculated conc: 0.000025

Area Ratio: 5.586e-4
Sample Type: (Quality Control)



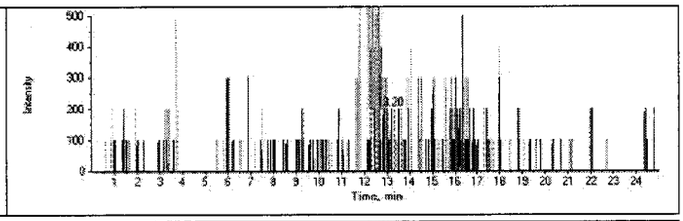
PFNA 2 (463.0 / 218.9)

RT (Exp. RT): 13.20 (13.21) min

Calculated conc: 0.000025

Area Ratio: 1.523e-4

Sample Type: (Quality Control)



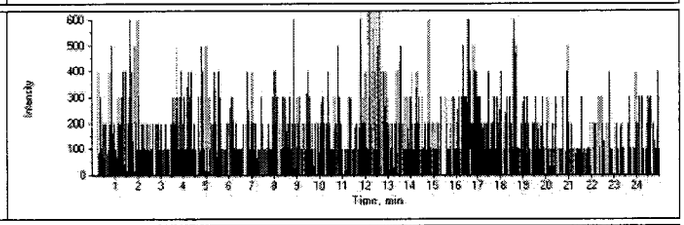
PFDA (513.0 / 469.0)

RT (Exp. RT): 14.26 (14.26) min

Calculated conc: 0.000006

Area Ratio: 1.523e-4

Sample Type: (Quality Control)



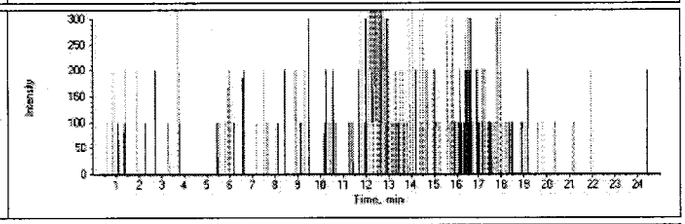
PFDA 2 (513.0 / 218.8)

RT (Exp. RT): N/A (14.26) min

Calculated conc: N/A

Area Ratio: N/A

Sample Type: (Quality Control)



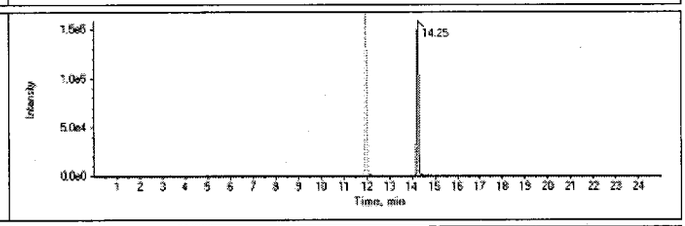
Surr-13c-PFDA (515.0 / 470.0)

RT (Exp. RT): 14.25 (14.26) min

Calculated conc: 95.020798

Area Ratio: 8.269e-1

Sample Type: (Quality Control)



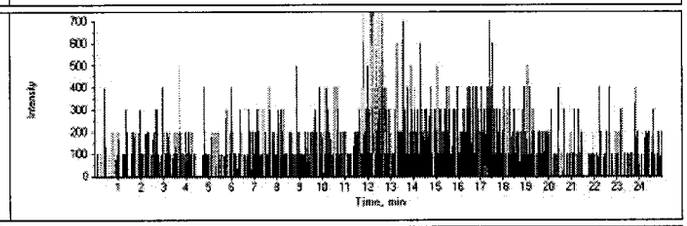
PFUnA (563.0 / 519.0)

RT (Exp. RT): 15.18 (15.14) min

Calculated conc: 0.000004

Area Ratio: 1.016e-4

Sample Type: (Quality Control)



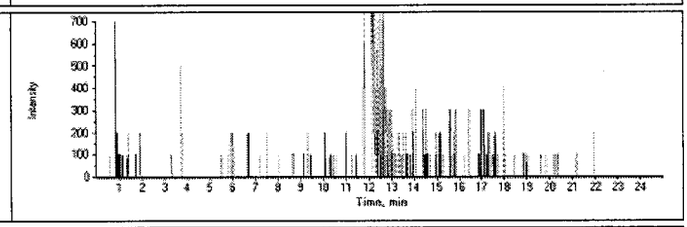
PFUnA 2 (563.0 / 268.8)

RT (Exp. RT): N/A (15.14) min

Calculated conc: N/A

Area Ratio: N/A

Sample Type: (Quality Control)



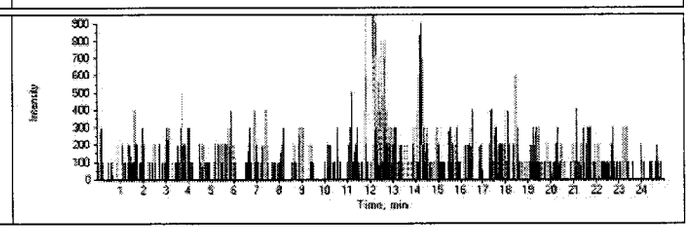
PFDoA (612.8 / 569.0)

RT (Exp. RT): 15.92 (15.90) min

Calculated conc: 0.000005

Area Ratio: 1.016e-4

Sample Type: (Quality Control)



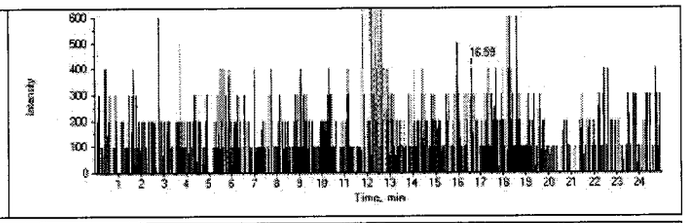
PFTrDA (662.9 / 619.0)

RT (Exp. RT): 16.59 (16.55) min

Calculated conc: 0.000014

Area Ratio: 4.062e-4

Sample Type: (Quality Control)



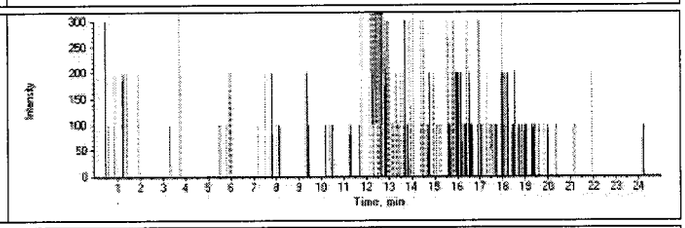
PFTrDA 2 (662.9 / 168.9)

RT (Exp. RT): 16.54 (16.55) min

Calculated conc: 0.000015

Area Ratio: 1.016e-4

Sample Type: (Quality Control)



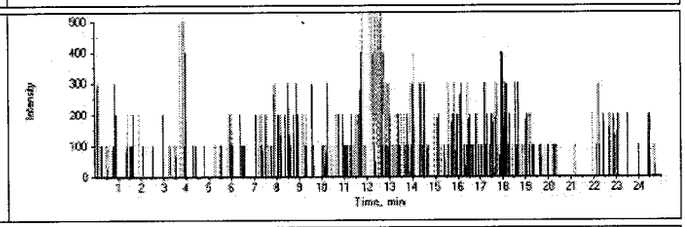
PFTA (713.3 / 669.0)

RT (Exp. RT): 17.24 (17.11) min

Calculated conc: 0.000012

Area Ratio: 1.016e-4

Sample Type: (Quality Control)



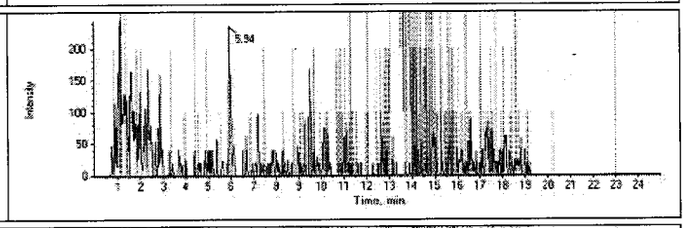
PFBS (299.0 / 79.9)

RT (Exp. RT): 5.94 (5.96) min

Calculated conc: 0.000088

Area Ratio: 7.756e-4

Sample Type: (Quality Control)



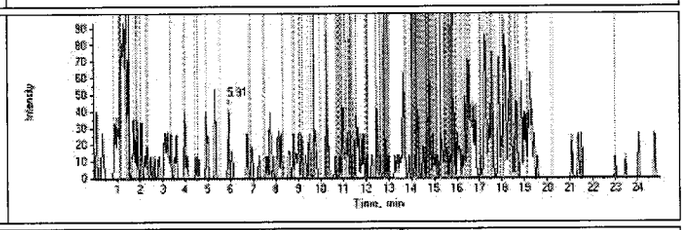
PFBS 2 (299.0 / 99.0)

RT (Exp. RT): 5.91 (5.97) min

Calculated conc: 0.000043

Area Ratio: 1.354e-4

Sample Type: (Quality Control)



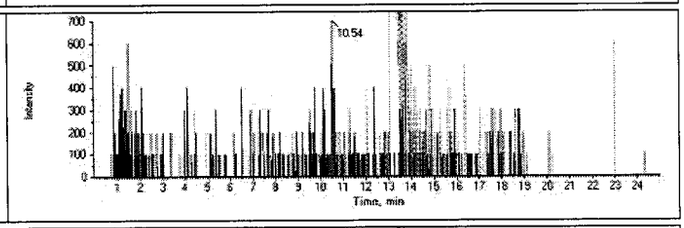
PFHxS (398.9 / 80.0)

RT (Exp. RT): 10.54 (10.55) min

Calculated conc: 0.000116

Area Ratio: 1.211e-3

Sample Type: (Quality Control)



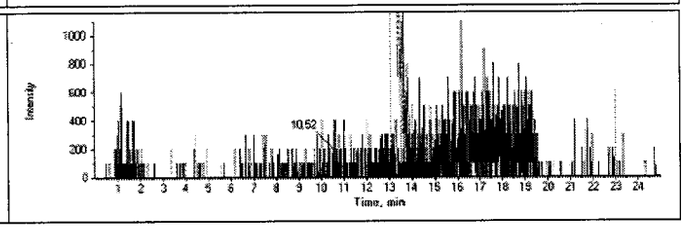
PFHxS 2 (398.9 / 99.0)

RT (Exp. RT): 10.52 (10.54) min

Calculated conc: 0.000029

Area Ratio: 1.009e-4

Sample Type: (Quality Control)



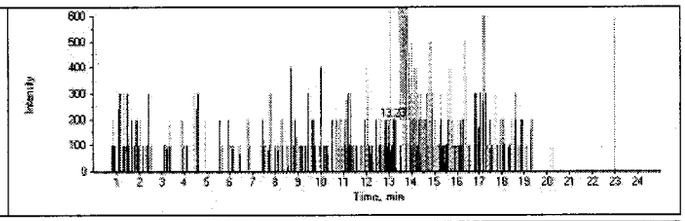
PFOS (499.0 / 79.9)

RT (Exp. RT): 13.23 (13.22) min

Calculated conc: 0.000010

Area Ratio: 1.010e-4

Sample Type: (Quality Control)



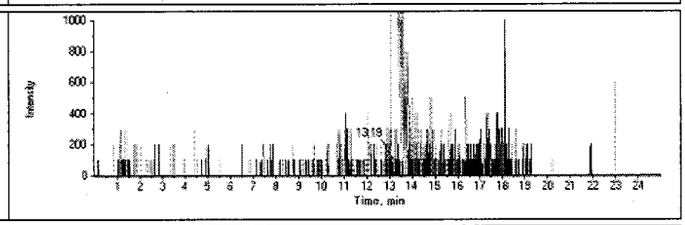
PFOS 2 (499.0 / 99.0)

RT (Exp. RT): 13.19 (13.21) min

Calculated conc: 0.000023

Area Ratio: 6.725e-5

Sample Type: (Quality Control)



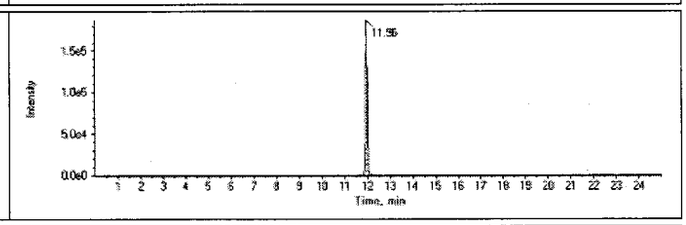
13C-PFOA (417.0 / 372.0)

RT (Exp. RT): 11.96 (11.96) min

Calculated conc: 101.911562

Area Ratio: N/A

Sample Type: (Quality Control)



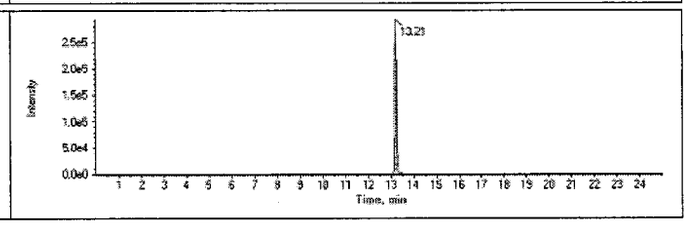
13C-PFOS (503.0 / 80.0)

RT (Exp. RT): 13.21 (13.22) min

Calculated conc: 111.624574

Area Ratio: N/A

Sample Type: (Quality Control)



AB SCIEX

Created with Analyst Reporter
Printed: 17/07/2014 1:42:50 PM

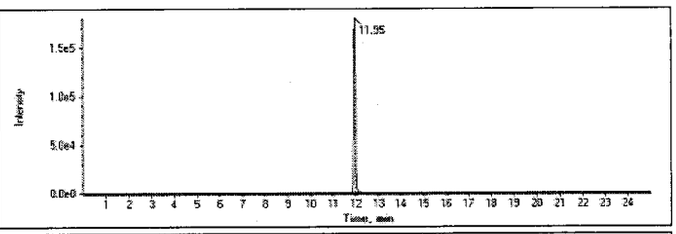
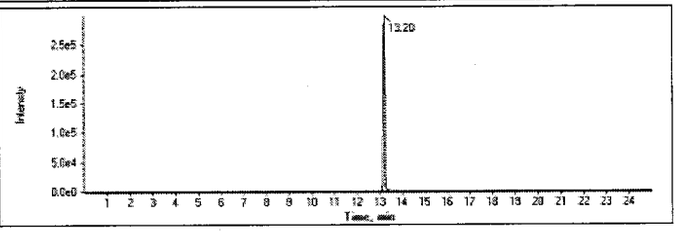
Sample Name	DNR-201407090597_Reinject	**Injection Vial**	23
Sample ID		**Injection Volume**	5.00
Sample Type	Quality Control	**Algorithm Used**	MQ4
Acquisition Date	7/17/2014 11:41:01 AM	**Dilution Factor**	1.00
Acquisition Method	@537-ShortRun-110613-Ali.dam	**Weight to Volume**	N/A
Project	EPA537\2014_07_16	**Instrument Name**	API 4000
Data File	@537-Batch#780662-071614.wiff		
Result Table	@537-Batch#780662-071614		
Sample Comment	Prep. By FAM@07/14/2014		

Internal Standard	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
IS-13C-PFOA	956335	11.95	100.00000	-
IS-13C-PFOS	1453463	13.20	100.00000	-

Target Analyte	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
PFHxA	7.969e+04	8.27	0.00000	0.005252
Surr-13c-PFHxA	1.001e+06	8.27	100.00000	95.998947
PFHpA	1.185e+05	10.39	0.00000	0.003825
PFHpA 2	2.933e+04	10.38	0.00000	0.003269
PFOA	5.266e+05	11.95	0.00000	0.018251
PFOA 2	1.707e+05	11.95	0.00000	0.016801
PFNA	3.275e+05	13.20	0.00000	0.015173
PFNA 2	8.690e+04	13.20	0.00000	0.015200
PFDA	1.045e+04	14.25	0.00000	0.000453
PFDA 2	1.716e+03	14.25	0.00000	0.000405
Surr-13c-PFDA	7.348e+05	14.24	100.00000	88.290529
PFUnA	7.356e+03	15.12	0.00000	0.000341
PFUnA 2	1.520e+03	15.14	0.00000	0.000358
PFDoA	3.430e+02	15.90	0.00000	0.000018
PFTrDA	2.940e+02	16.54	0.00000	0.000010
PFTrDA 2	N/A	N/A	0.00000	N/A
PFTA	1.470e+02	17.08	0.00000	0.000019
PFBS	7.209e+03	5.94	0.00000	0.000564
PFBS 2	3.540e+03	5.97	0.00000	0.000775
PFHxS	8.645e+04	10.54	0.00000	0.005673
PFHxS 2	2.834e+04	10.54	0.00000	0.005559
PFOS	1.183e+05	13.20	0.00000	0.008291
PFOS 2	3.129e+04	13.20	0.00000	0.007300
13C-PFOA	9.563e+05	11.95	100.00000	100.897324
13C-PFOS	1.453e+06	13.20	100.00000	111.330393

DNR: The sample was analyzed original after a dirty sample (PFNA), reinjected to confirm the hit for PFNA.

LHZ 07/17/14

IS-13C-PFOA (Internal Standard) RT (Exp. RT): 11.95(11.96) min Concentration: 100.00000 Sample Type: (Quality Control)	
IS-13C-PFOS (Internal Standard) RT (Exp. RT): 13.20(13.22) min Concentration: 100.00000 Sample Type: (Quality Control)	

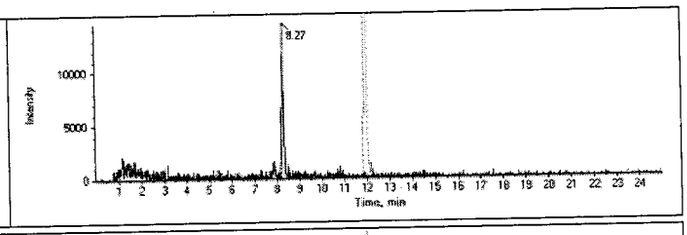
PFHxA (313.0 / 268.8)

RT (Exp. RT): 8.27 (8.28) min

Calculated conc: 0.005252

Area Ratio: 8.333e-2

Sample Type: (Quality Control)



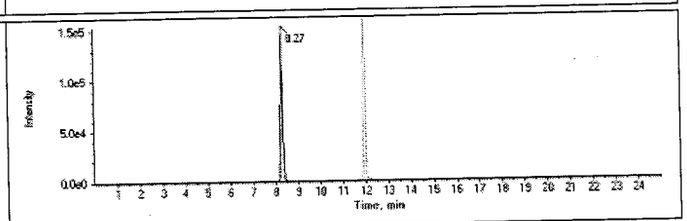
Surr-13c-PFHxA (315.0 / 270.0)

RT (Exp. RT): 8.27 (8.28) min

Calculated conc: 95.998947

Area Ratio: 1.046e0

Sample Type: (Quality Control)



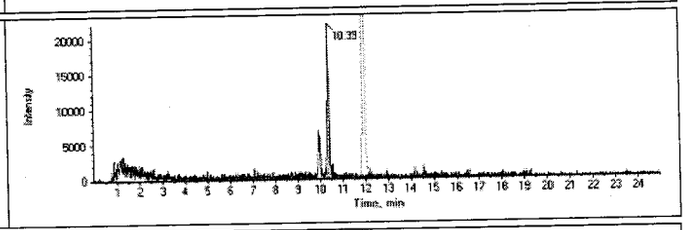
PFHpA (363.0 / 318.9)

RT (Exp. RT): 10.39 (10.40) min

Calculated conc: 0.003825

Area Ratio: 1.239e-1

Sample Type: (Quality Control)



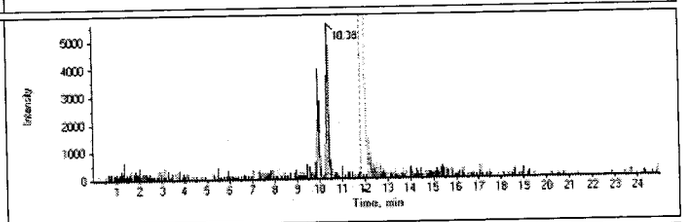
PFHpA 2 (363.0 / 168.9)

RT (Exp. RT): 10.38 (10.40) min

Calculated conc: 0.003269

Area Ratio: 3.067e-2

Sample Type: (Quality Control)



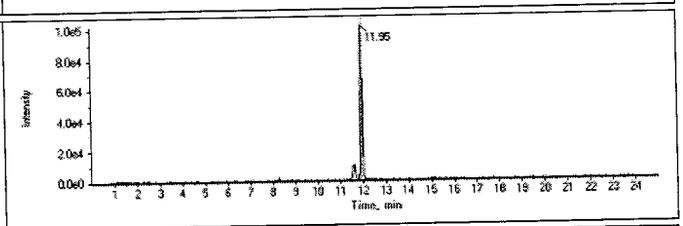
PFOA (413.0 / 368.9)

RT (Exp. RT): 11.95 (11.97) min

Calculated conc: 0.018251

Area Ratio: 5.506e-1

Sample Type: (Quality Control)



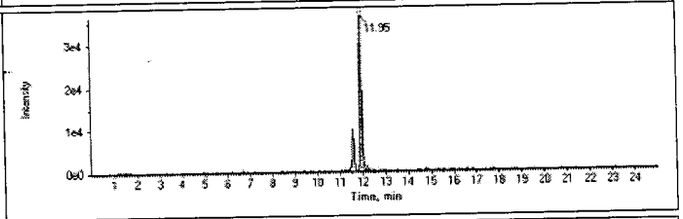
PFOA 2 (413.0 / 168.8)

RT (Exp. RT): 11.95 (11.96) min

Calculated conc: 0.016801

Area Ratio: 1.785e-1

Sample Type: (Quality Control)



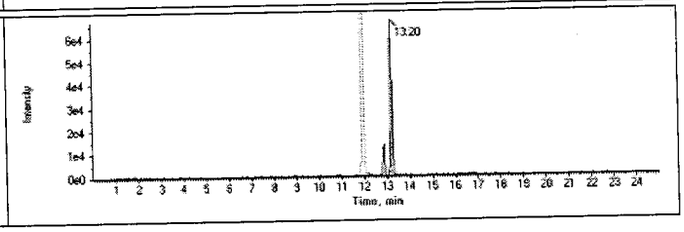
PFNA (463.0 / 419.0)

RT (Exp. RT): 13.20 (13.22) min

Calculated conc: 0.015173

Area Ratio: 3.424e-1

Sample Type: (Quality Control)



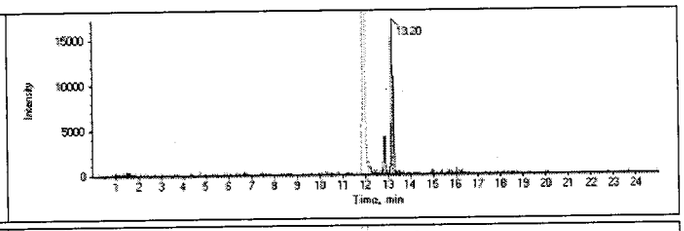
PFNA 2 (463.0 / 218.9)

RT (Exp. RT): 13.20 (13.21) min

Calculated conc: 0.015200

Area Ratio: 9.086e-2

Sample Type: (Quality Control)



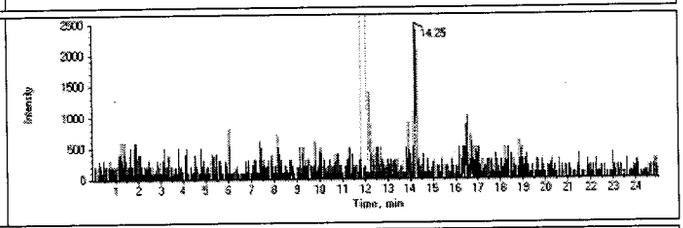
PFDA (513.0 / 469.0)

RT (Exp. RT): 14.25 (14.26) min

Calculated conc: 0.000453

Area Ratio: 1.092e-2

Sample Type: (Quality Control)



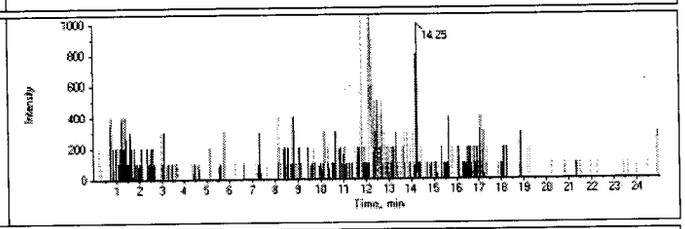
PFDA 2 (513.0 / 218.8)

RT (Exp. RT): 14.25 (14.26) min

Calculated conc: 0.000405

Area Ratio: 1.794e-3

Sample Type: (Quality Control)



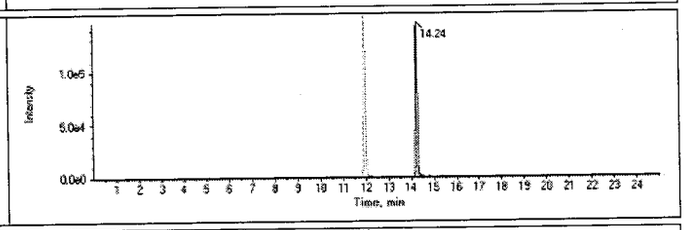
Surr-13c-PFDA (515.0 / 470.0)

RT (Exp. RT): 14.24 (14.26) min

Calculated conc: 88.290529

Area Ratio: 7.683e-1

Sample Type: (Quality Control)



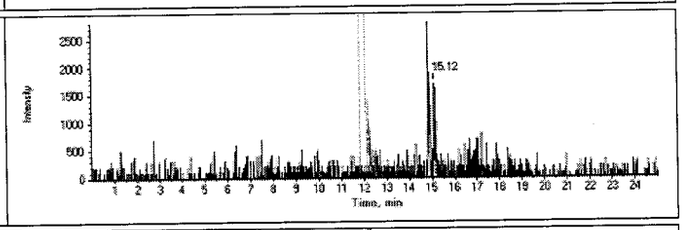
PFUnA (563.0 / 519.0)

RT (Exp. RT): 15.12 (15.14) min

Calculated conc: 0.000341

Area Ratio: 7.692e-3

Sample Type: (Quality Control)



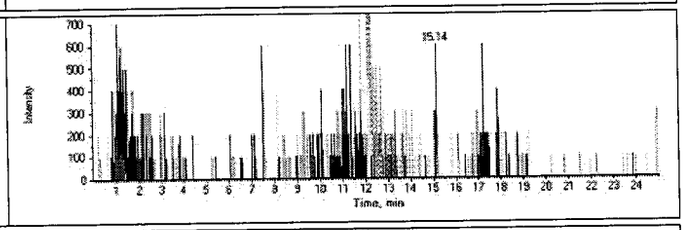
PFUnA 2 (563.0 / 268.8)

RT (Exp. RT): 15.14 (15.14) min

Calculated conc: 0.000358

Area Ratio: 1.590e-3

Sample Type: (Quality Control)



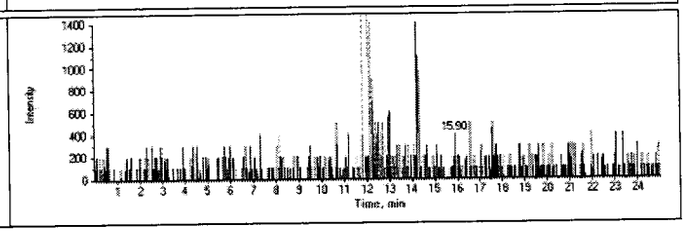
PFDoA (612.8 / 569.0)

RT (Exp. RT): 15.90 (15.90) min

Calculated conc: 0.000018

Area Ratio: 3.589e-4

Sample Type: (Quality Control)



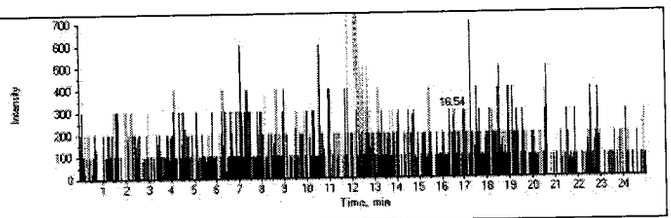
PFTrDA (662.9 / 619.0)

RT (Exp. RT): 16.54 (16.55) min

Calculated conc: 0.000010

Area Ratio: 3.075e-4

Sample Type: (Quality Control)



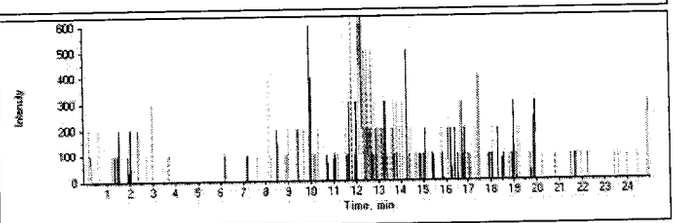
PFTrDA 2 (662.9 / 168.9)

RT (Exp. RT): N/A (16.55) min

Calculated conc: N/A

Area Ratio: N/A

Sample Type: (Quality Control)



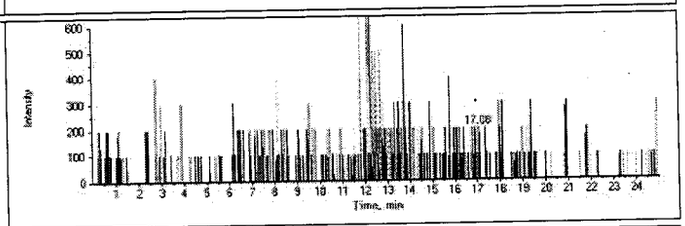
PFTA (713.3 / 669.0)

RT (Exp. RT): 17.08 (17.11) min

Calculated conc: 0.000019

Area Ratio: 1.538e-4

Sample Type: (Quality Control)



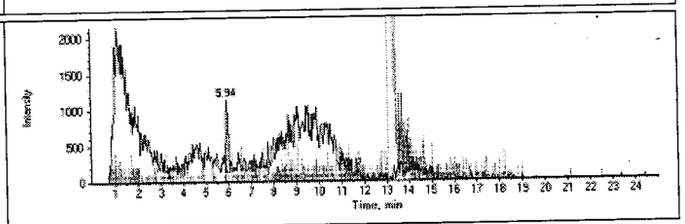
PFBS (299.0 / 79.9)

RT (Exp. RT): 5.94 (5.96) min

Calculated conc: 0.000564

Area Ratio: 4.960e-3

Sample Type: (Quality Control)



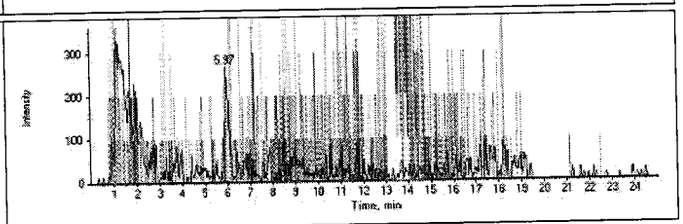
PFBS 2 (299.0 / 99.0)

RT (Exp. RT): 5.97 (5.97) min

Calculated conc: 0.000775

Area Ratio: 2.435e-3

Sample Type: (Quality Control)



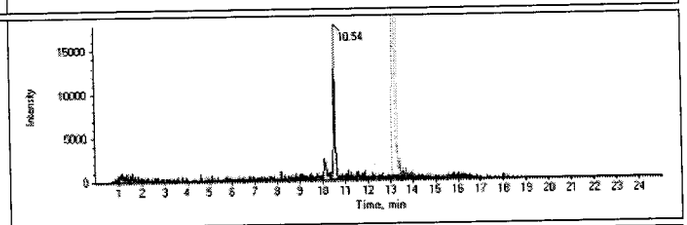
PFHxS (398.9 / 80.0)

RT (Exp. RT): 10.54 (10.55) min

Calculated conc: 0.005673

Area Ratio: 5.948e-2

Sample Type: (Quality Control)



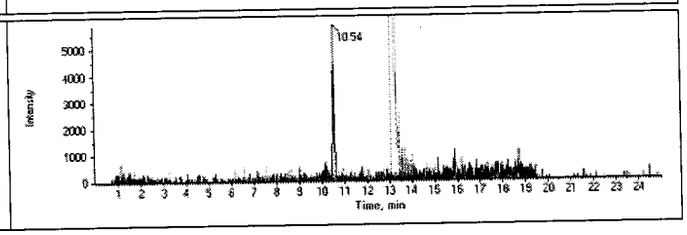
PFHxS 2 (398.9 / 99.0)

RT (Exp. RT): 10.54 (10.54) min

Calculated conc: 0.005559

Area Ratio: 1.950e-2

Sample Type: (Quality Control)



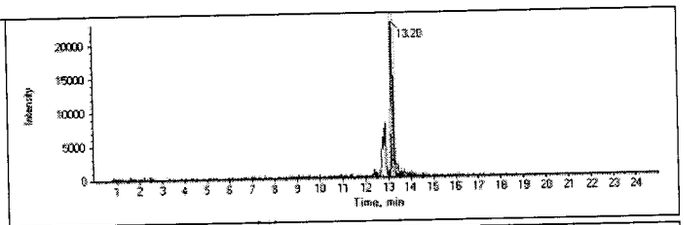
PFOS (499.0 / 79.9)

RT (Exp. RT): 13.20 (13.22) min

Calculated conc: 0.008291

Area Ratio: 8.137e-2

Sample Type: (Quality Control)



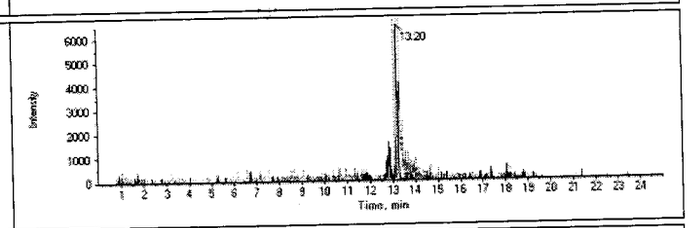
PFOS 2 (499.0 / 99.0)

RT (Exp. RT): 13.20 (13.21) min

Calculated conc: 0.007300

Area Ratio: 2.152e-2

Sample Type: (Quality Control)



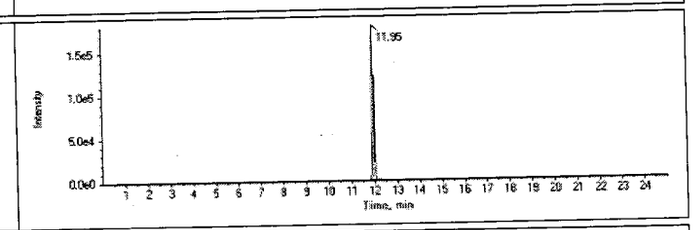
13C-PFOA (417.0 / 372.0)

RT (Exp. RT): 11.95 (11.96) min

Calculated conc: 100.897324

Area Ratio: N/A

Sample Type: (Quality Control)



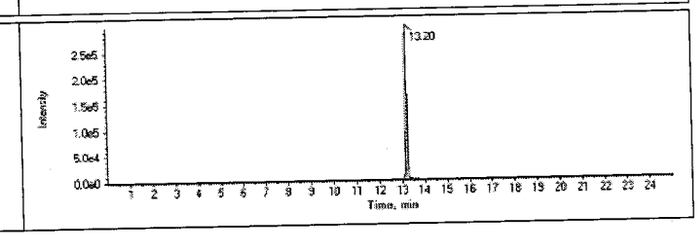
13C-PFOS (503.0 / 80.0)

RT (Exp. RT): 13.20 (13.22) min

Calculated conc: 111.330393

Area Ratio: N/A

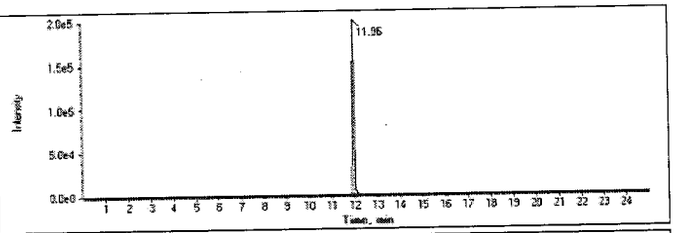
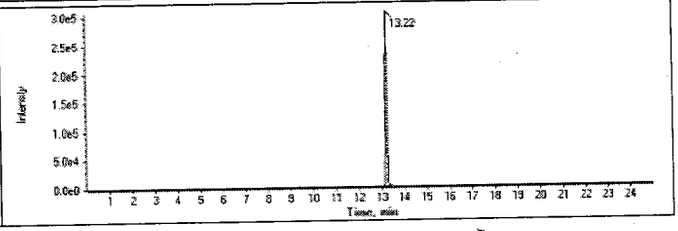
Sample Type: (Quality Control)



Sample Name	201407090596A_X5 Dilution	**Injection Vial**	36
Sample ID		**Injection Volume**	5.00
Sample Type	Quality Control	**Algorithm Used**	MQ4
Acquisition Date	7/17/2014 12:06:37 PM	**Dilution Factor**	8.00
Acquisition Method	@537-ShortRun-110613-Ali.dam	**Weight to Volume**	N/A
Project	EPA537\2014_07_16	**Instrument Name**	API 4000
Data File	@537-Batch#780662-071614.wiff		
Result Table	@537-Batch#780662-071614		
Sample Comment	Prep. By FAM@07/14/2014		

Internal Standard	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
IS-13C-PFOA	1077268	11.96	100.00000	-
IS-13C-PFOS	1549849	13.22	100.00000	-

Target Analyte	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
PFHxA	1.589e+04	8.28	0.00000	0.004648
Surr-13c-PFHxA	2.018e+05	8.28	100.00000	85.923805
PFHpA	3.055e+04	10.40	0.00000	0.004377
PFHpA 2	5.736e+03	10.39	0.00000	0.002838
PFOA	2.115e+05	11.96	0.00000	0.032536
PFOA 2	7.664e+04	11.96	0.00000	0.033478
PFNA	6.989e+05	13.22	0.00000	0.143730
PFNA 2	1.849e+05	13.22	0.00000	0.143561
PFDA	1.422e+03	14.25	0.00000	0.000274
PFDA 2	3.430e+02	14.30	0.00000	0.000360
Surr-13c-PFDA	1.282e+05	14.26	100.00000	68.360745
PFUnA	2.353e+03	15.14	0.00000	0.000484
PFUnA 2	N/A	N/A	0.00000	N/A
PFDoA	N/A	N/A	0.00000	N/A
PFTrDA	9.800e+01	16.56	0.00000	0.000015
PFTrDA 2	N/A	N/A	0.00000	N/A
PFTA	1.470e+02	17.02	0.00000	0.000083
PFBS	7.320e+02	5.95	0.00000	0.000268
PFBS 2	2.540e+02	5.97	0.00000	0.000260
PFHxS	1.236e+04	10.55	0.00000	0.003802
PFHxS 2	4.412e+03	10.56	0.00000	0.004058
PFOS	1.795e+04	13.22	0.00000	0.005898
PFOS 2	5.688e+03	13.21	0.00000	0.006223
13C-PFOA	1.077e+06	11.96	100.00000	568.281034
13C-PFOS	1.550e+06	13.22	100.00000	593.566054

IS-13C-PFOA (Internal Standard) RT (Exp. RT): 11.96(11.96) min Concentration: 100.00000 Sample Type: (Quality Control)	
IS-13C-PFOS (Internal Standard) RT (Exp. RT): 13.22(13.22) min Concentration: 100.00000 Sample Type: (Quality Control)	

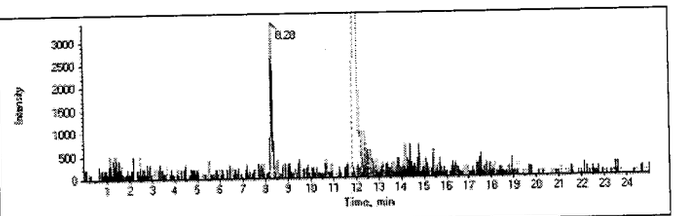
PFHxA (313.0 / 268.8)

RT (Exp. RT): 8.28 (8.28) min

Calculated conc: 0.004648

Area Ratio: 1.475e-2

Sample Type: (Quality Control)



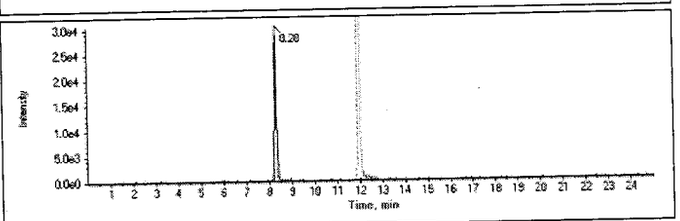
Surr-13c-PFHxA (315.0 / 270.0)

RT (Exp. RT): 8.28 (8.28) min

Calculated conc: 85.923805

Area Ratio: 1.873e-1

Sample Type: (Quality Control)



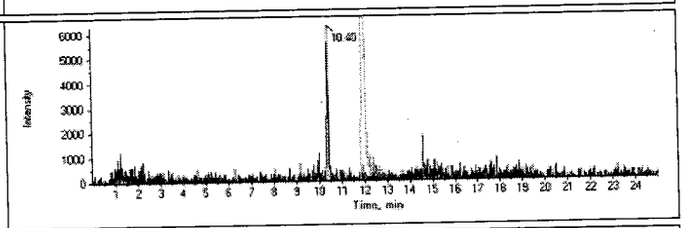
PFHpA (363.0 / 318.9)

RT (Exp. RT): 10.40 (10.40) min

Calculated conc: 0.004377

Area Ratio: 2.836e-2

Sample Type: (Quality Control)



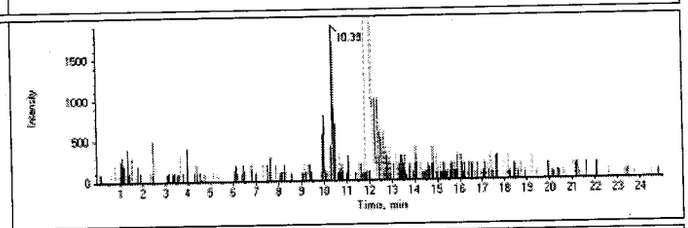
PFHpA 2 (363.0 / 168.9)

RT (Exp. RT): 10.39 (10.40) min

Calculated conc: 0.002838

Area Ratio: 5.325e-3

Sample Type: (Quality Control)



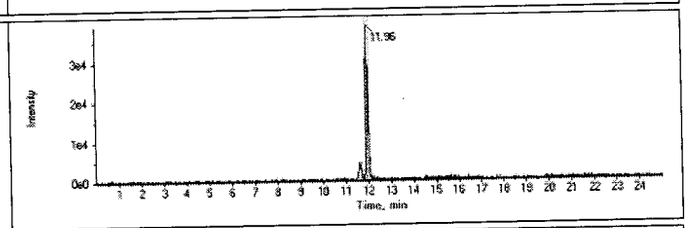
PFOA (413.0 / 368.9)

RT (Exp. RT): 11.96 (11.97) min

Calculated conc: 0.032536

Area Ratio: 1.963e-1

Sample Type: (Quality Control)



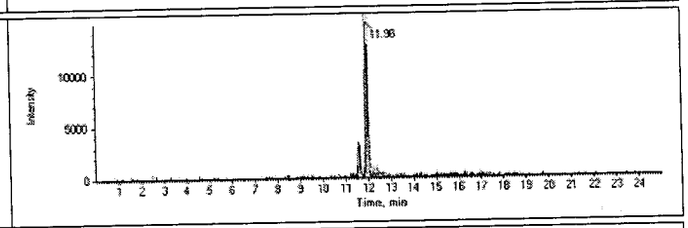
PFOA 2 (413.0 / 168.8)

RT (Exp. RT): 11.96 (11.96) min

Calculated conc: 0.033478

Area Ratio: 7.115e-2

Sample Type: (Quality Control)



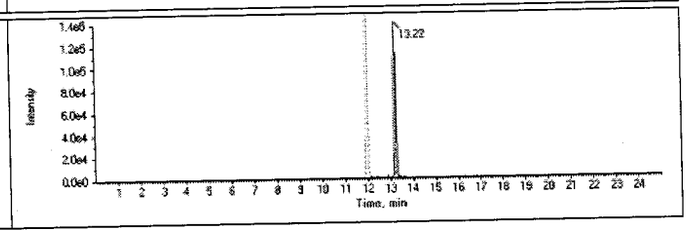
PFNA (463.0 / 419.0)

RT (Exp. RT): 13.22 (13.22) min

Calculated conc: 0.143730

Area Ratio: 6.487e-1

Sample Type: (Quality Control)



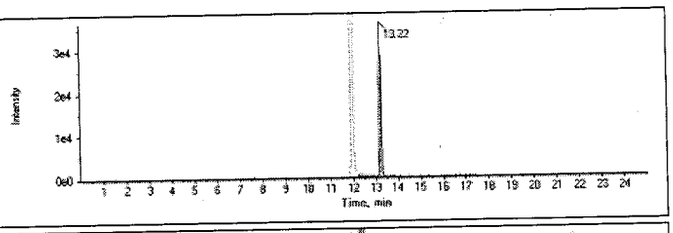
PFNA 2 (463.0 / 218.9)

RT (Exp. RT): 13.22 (13.21) min

Calculated conc: 0.143561

Area Ratio: 1.716e-1

Sample Type: (Quality Control)



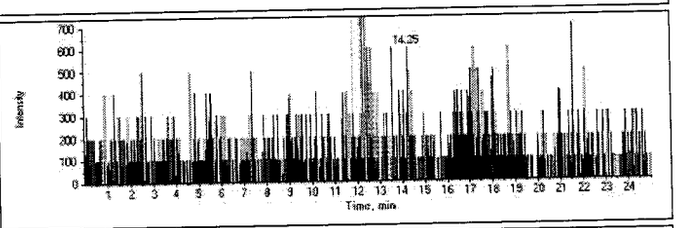
PFDA (513.0 / 469.0)

RT (Exp. RT): 14.25 (14.26) min

Calculated conc: 0.000274

Area Ratio: 1.320e-3

Sample Type: (Quality Control)



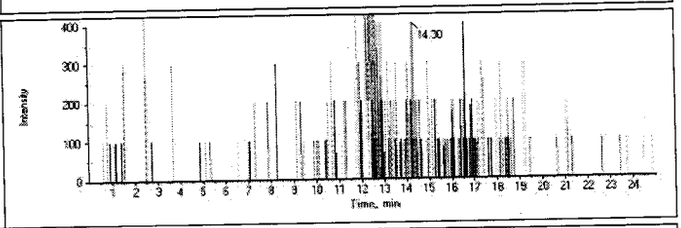
PFDA 2 (513.0 / 218.8)

RT (Exp. RT): 14.30 (14.26) min

Calculated conc: 0.000360

Area Ratio: 3.187e-4

Sample Type: (Quality Control)



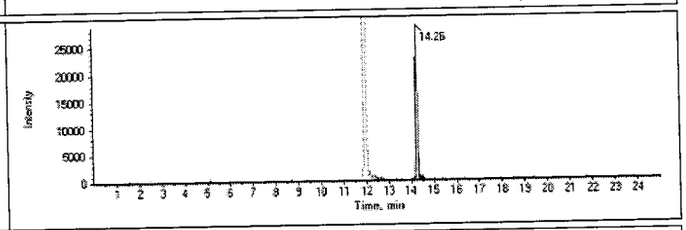
Surr-13c-PFDA (515.0 / 470.0)

RT (Exp. RT): 14.26 (14.26) min

Calculated conc: 68.360745

Area Ratio: 1.190e-1

Sample Type: (Quality Control)



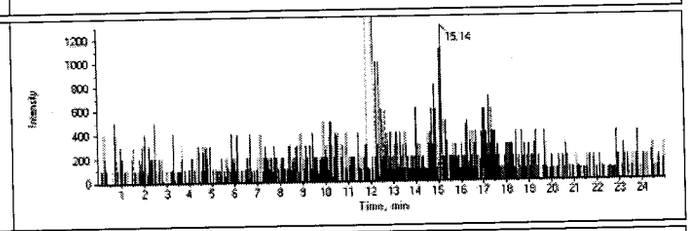
PFUnA (563.0 / 519.0)

RT (Exp. RT): 15.14 (15.14) min

Calculated conc: 0.000484

Area Ratio: 2.185e-3

Sample Type: (Quality Control)



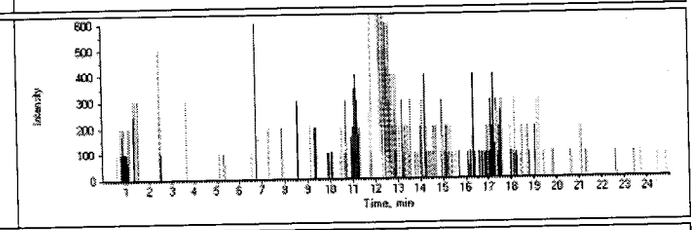
PFUnA 2 (563.0 / 268.8)

RT (Exp. RT): N/A (15.14) min

Calculated conc: N/A

Area Ratio: N/A

Sample Type: (Quality Control)



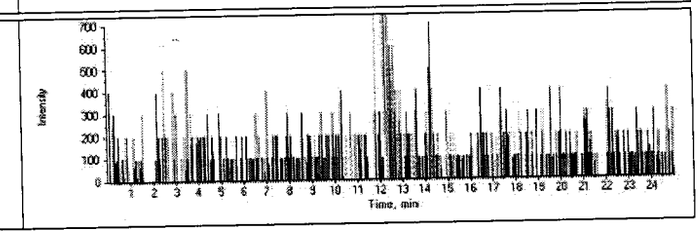
PFDoA (612.8 / 569.0)

RT (Exp. RT): N/A (15.90) min

Calculated conc: N/A

Area Ratio: N/A

Sample Type: (Quality Control)



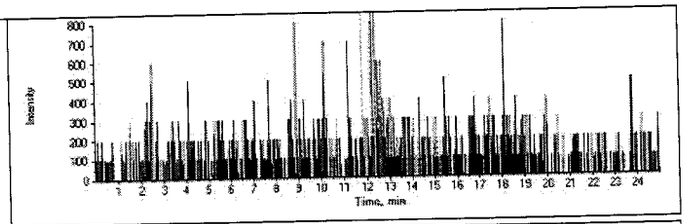
PFTrDA (662.9 / 619.0)

RT (Exp. RT): 16.56 (16.55) min

Calculated conc: 0.000015

Area Ratio: 9.102e-5

Sample Type: (Quality Control)



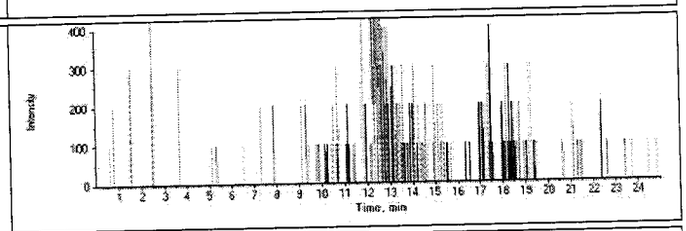
PFTrDA 2 (662.9 / 168.9)

RT (Exp. RT): N/A (16.55) min

Calculated conc: N/A

Area Ratio: N/A

Sample Type: (Quality Control)



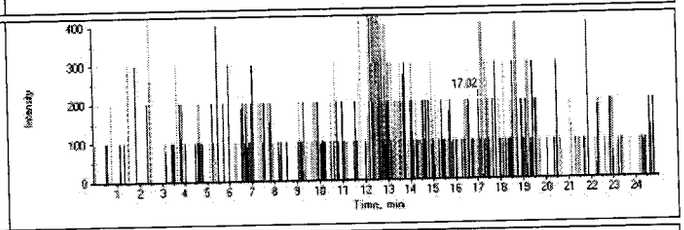
PFTA (713.3 / 669.0)

RT (Exp. RT): 17.02 (17.11) min

Calculated conc: 0.000083

Area Ratio: 1.366e-4

Sample Type: (Quality Control)



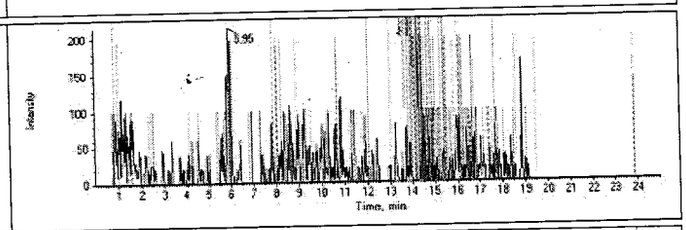
PFBS (299.0 / 79.9)

RT (Exp. RT): 5.95 (5.96) min

Calculated conc: 0.000268

Area Ratio: 4.723e-4

Sample Type: (Quality Control)



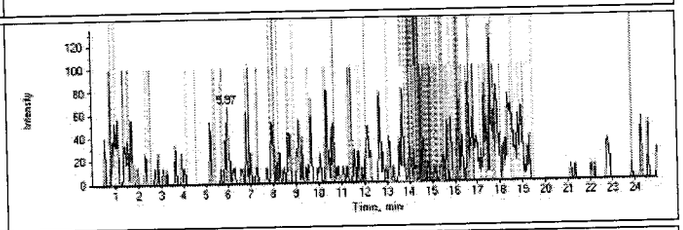
PFBS 2 (299.0 / 99.0)

RT (Exp. RT): 5.97 (5.97) min

Calculated conc: 0.000260

Area Ratio: 1.637e-4

Sample Type: (Quality Control)



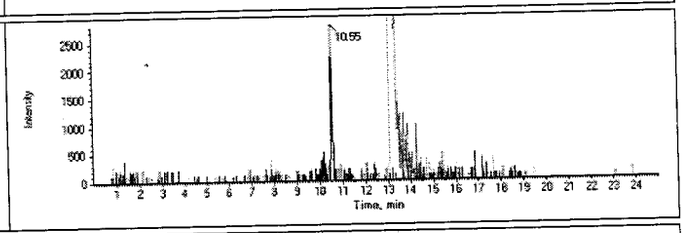
PFHxS (398.9 / 80.0)

RT (Exp. RT): 10.55 (10.55) min

Calculated conc: 0.003802

Area Ratio: 7.973e-3

Sample Type: (Quality Control)



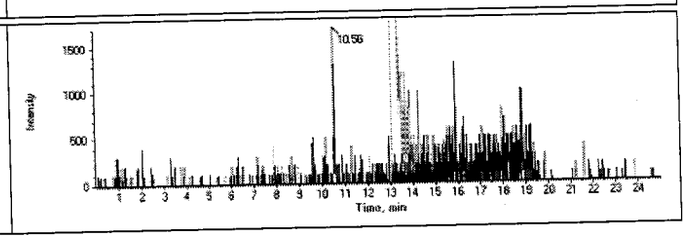
PFHxS 2 (398.9 / 99.0)

RT (Exp. RT): 10.56 (10.54) min

Calculated conc: 0.004058

Area Ratio: 2.847e-3

Sample Type: (Quality Control)

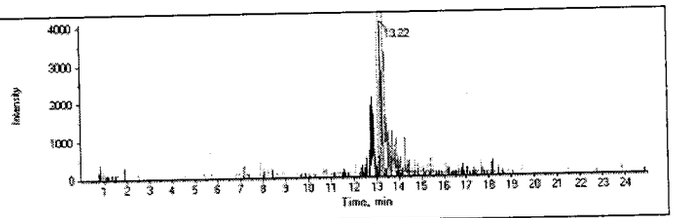


PFOS (499.0 / 79.9)

RT (Exp. RT): 13.22 (13.22) min

Calculated conc: 0.005898

Area Ratio: 1.158e-2
Sample Type: (Quality Control)

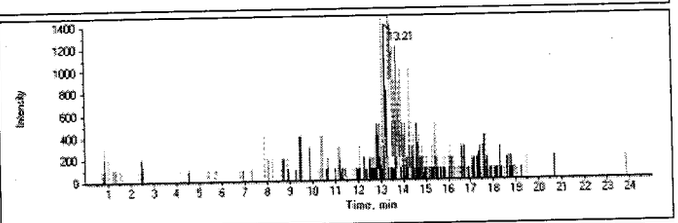


PFOS 2 (499.0 / 99.0)

RT (Exp. RT): 13.21 (13.21) min

Calculated conc: 0.006223

Area Ratio: 3.670e-3
Sample Type: (Quality Control)

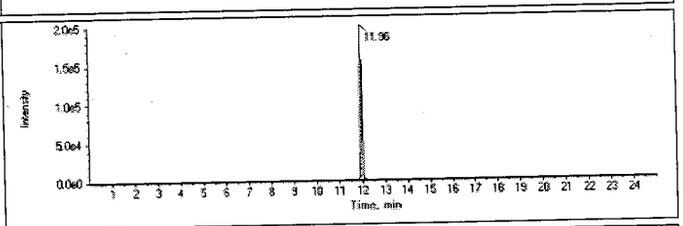


13C-PFOA (417.0 / 372.0)

RT (Exp. RT): 11.96 (11.96) min

Calculated conc: 568.281034

Area Ratio: N/A
Sample Type: (Quality Control)

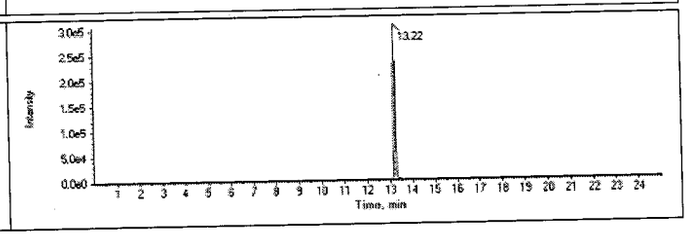


13C-PFOS (503.0 / 80.0)

RT (Exp. RT): 13.22 (13.22) min

Calculated conc: 593.566054

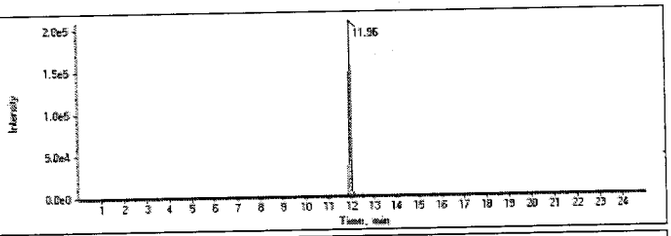
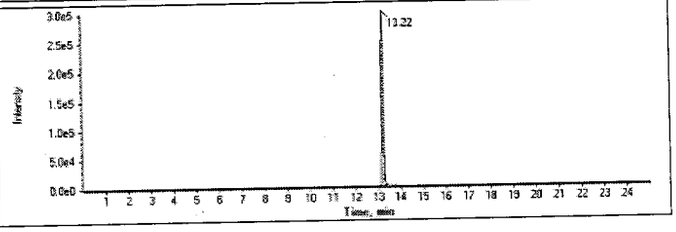
Area Ratio: N/A
Sample Type: (Quality Control)



Sample Name	201407090598A_X5 Dilution	**Injection Vial**	37
Sample ID		**Injection Volume**	5.00
Sample Type	Quality Control	**Algorithm Used**	MQ4
Acquisition Date	7/17/2014 12:32:12 PM	**Dilution Factor**	5.00
Acquisition Method	@537-ShortRun-110613-Ali.dam	**Weight to Volume**	N/A
Project	EPA537\2014_07_16	**Instrument Name**	API 4000
Data File	@537-Batch#780662-071614.wiff		
Result Table	@537-Batch#780662-071614		
Sample Comment	Prep. By FAM@07/14/2014		

Internal Standard	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
IS-13C-PFOA	1052074	11.96	100.00000	-
IS-13C-PFOS	1555036	13.22	100.00000	-

Target Analyte	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
PFHxA	9.980e+03	8.30	0.00000	0.002989
Surr-13c-PFHxA	2.006e+05	8.29	100.00000	87.476012
PFHpA	2.472e+04	10.40	0.00000	0.003626
PFHpA 2	6.571e+03	10.40	0.00000	0.003329
PFOA	2.043e+05	11.96	0.00000	0.032175
PFOA 2	7.258e+04	11.96	0.00000	0.032463
PFNA	6.911e+05	13.22	0.00000	0.145535
PFNA 2	1.831e+05	13.22	0.00000	0.145578
PFDA	2.550e+03	14.25	0.00000	0.000503
PFDA 2	3.920e+02	14.26	0.00000	0.000421
Surr-13c-PFDA	1.469e+05	14.26	100.00000	80.249138
PFUnA	3.531e+03	15.14	0.00000	0.000743
PFUnA 2	1.960e+02	15.16	0.00000	0.000210
PFDoA	3.430e+02	15.89	0.00000	0.000080
PFTrDA	5.390e+02	16.54	0.00000	0.000085
PFTrDA 2	N/A	N/A	0.00000	N/A
PFTA	3.430e+02	17.08	0.00000	0.000197
PFBS	7.000e+02	5.95	0.00000	0.000256
PFBS 2	8.830e+02	5.96	0.00000	0.000903
PFHxS	1.275e+04	10.55	0.00000	0.003909
PFHxS 2	5.050e+03	10.56	0.00000	0.004630
PFOS	1.623e+04	13.21	0.00000	0.005318
PFOS 2	4.904e+03	13.21	0.00000	0.005347
13C-PFOA	1.052e+06	11.96	100.00000	554.990970
13C-PFOS	1.555e+06	13.22	100.00000	595.552818

IS-13C-PFOA (Internal Standard) RT (Exp. RT): 11.96(11.96) min Concentration: 100.00000 Sample Type: (Quality Control)	
IS-13C-PFOS (Internal Standard) RT (Exp. RT): 13.22(13.22) min Concentration: 100.00000 Sample Type: (Quality Control)	

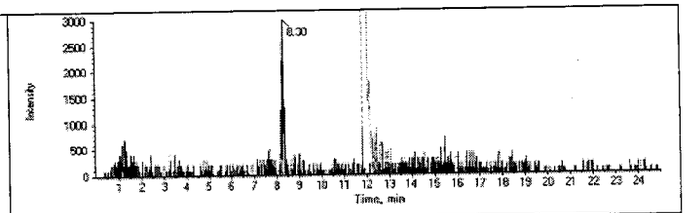
PFHxA (313.0 / 268.8)

RT (Exp. RT): 8.30 (8.28) min

Calculated conc: 0.002989

Area Ratio: 9.486e-3

Sample Type: (Quality Control)



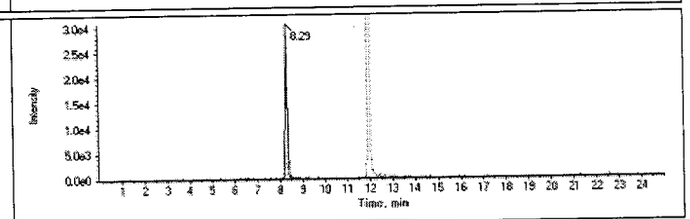
Surr-13c-PFHxA (315.0 / 270.0)

RT (Exp. RT): 8.29 (8.28) min

Calculated conc: 87.476012

Area Ratio: 1.907e-1

Sample Type: (Quality Control)



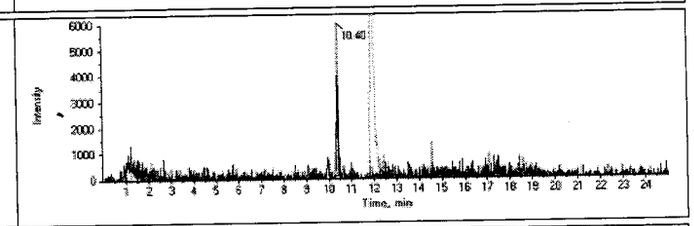
PFHpA (363.0 / 318.9)

RT (Exp. RT): 10.40 (10.40) min

Calculated conc: 0.003626

Area Ratio: 2.349e-2

Sample Type: (Quality Control)



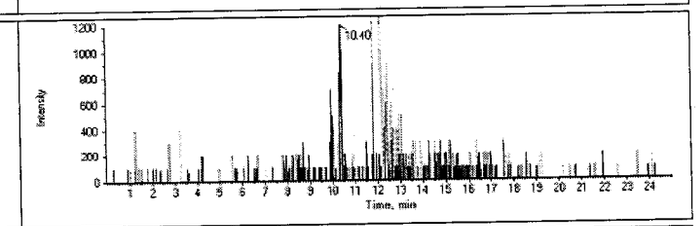
PFHpA 2 (363.0 / 168.9)

RT (Exp. RT): 10.40 (10.40) min

Calculated conc: 0.003329

Area Ratio: 6.246e-3

Sample Type: (Quality Control)



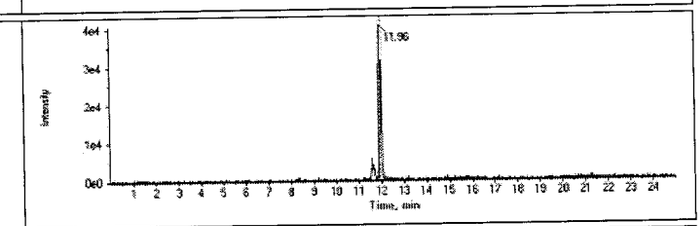
PFOA (413.0 / 368.9)

RT (Exp. RT): 11.96 (11.97) min

Calculated conc: 0.032175

Area Ratio: 1.941e-1

Sample Type: (Quality Control)



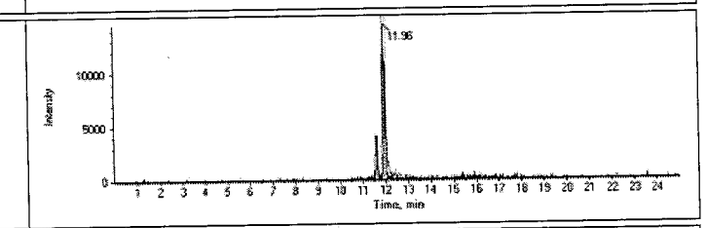
PFOA 2 (413.0 / 168.8)

RT (Exp. RT): 11.96 (11.96) min

Calculated conc: 0.032463

Area Ratio: 6.899e-2

Sample Type: (Quality Control)



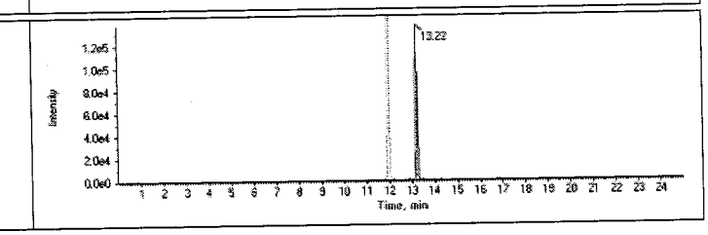
PFNA (463.0 / 419.0)

RT (Exp. RT): 13.22 (13.22) min

Calculated conc: 0.145535

Area Ratio: 6.569e-1

Sample Type: (Quality Control)

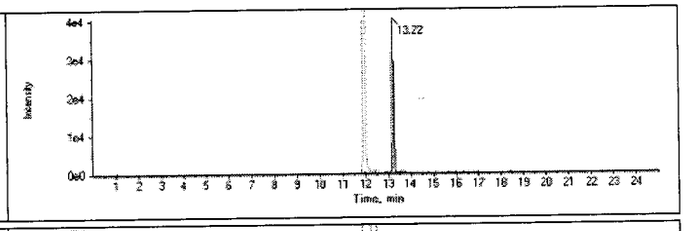


PFNA 2 (463.0 / 218.9)

RT (Exp. RT): 13.22 (13.21) min

Calculated conc: 0.145578

Area Ratio: 1.741e-1
Sample Type: (Quality Control)

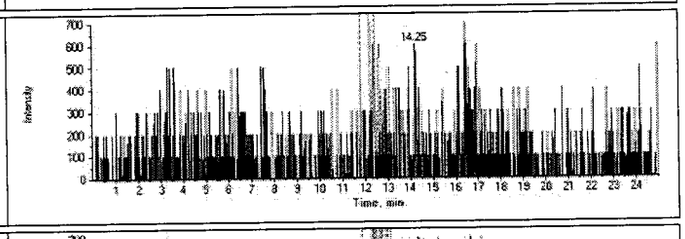


PFDA (513.0 / 469.0)

RT (Exp. RT): 14.25 (14.26) min

Calculated conc: 0.000503

Area Ratio: 2.424e-3
Sample Type: (Quality Control)

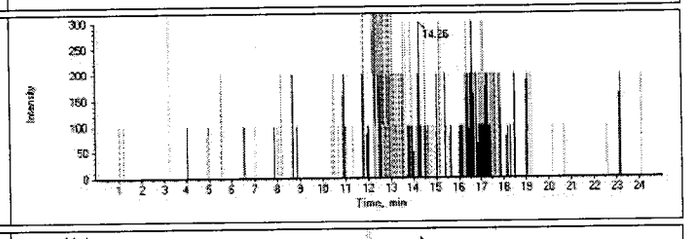


PFDA 2 (513.0 / 218.8)

RT (Exp. RT): 14.26 (14.26) min

Calculated conc: 0.000421

Area Ratio: 3.729e-4
Sample Type: (Quality Control)

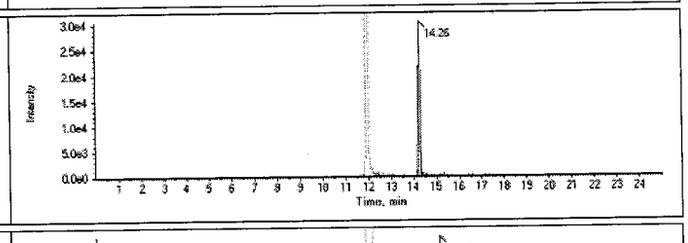


Surr-13c-PFDA (515.0 / 470.0)

RT (Exp. RT): 14.26 (14.26) min

Calculated conc: 80.249138

Area Ratio: 1.397e-1
Sample Type: (Quality Control)

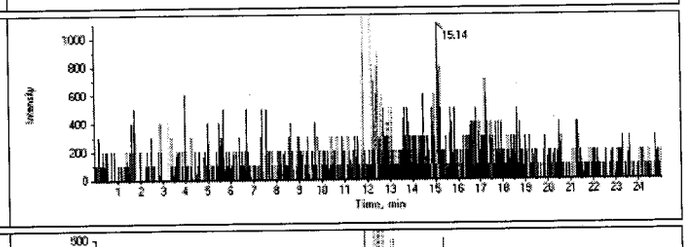


PFUnA (563.0 / 519.0)

RT (Exp. RT): 15.14 (15.14) min

Calculated conc: 0.000743

Area Ratio: 3.356e-3
Sample Type: (Quality Control)

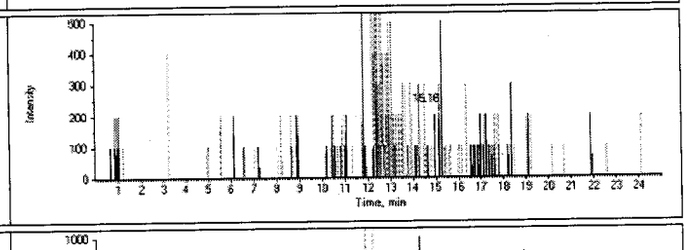


PFUnA 2 (563.0 / 268.8)

RT (Exp. RT): 15.16 (15.14) min

Calculated conc: 0.000210

Area Ratio: 1.864e-4
Sample Type: (Quality Control)

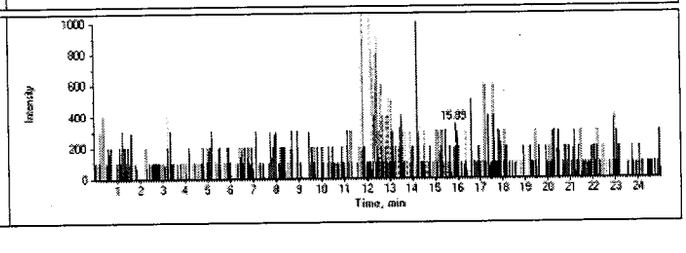


PFDoA (612.8 / 569.0)

RT (Exp. RT): 15.89 (15.90) min

Calculated conc: 0.000080

Area Ratio: 3.263e-4
Sample Type: (Quality Control)

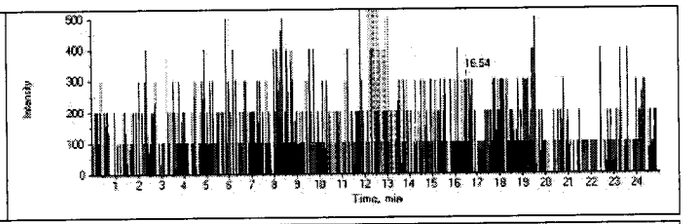


PFTrDA (662.9 / 619.0)

RT (Exp. RT): 16.54 (16.55) min

Calculated conc: 0.000085

Area Ratio: 5.127e-4
Sample Type: (Quality Control)

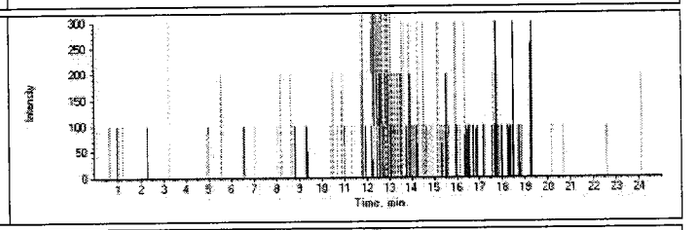


PFTrDA 2 (662.9 / 168.9)

RT (Exp. RT): N/A (16.55) min

Calculated conc: N/A

Area Ratio: N/A
Sample Type: (Quality Control)

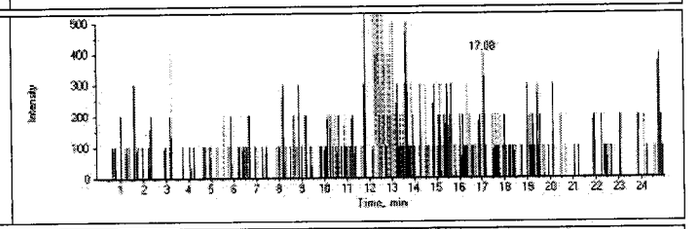


PFTA (713.3 / 669.0)

RT (Exp. RT): 17.08 (17.11) min

Calculated conc: 0.000197

Area Ratio: 3.264e-4
Sample Type: (Quality Control)

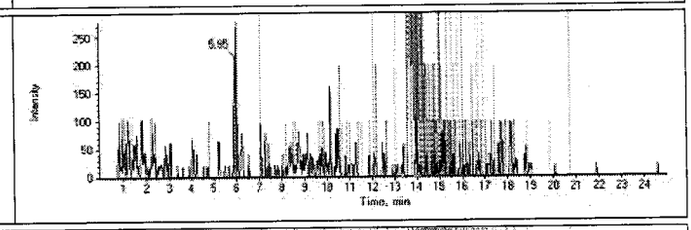


PFBS (299.0 / 79.9)

RT (Exp. RT): 5.95 (5.96) min

Calculated conc: 0.000256

Area Ratio: 4.503e-4
Sample Type: (Quality Control)

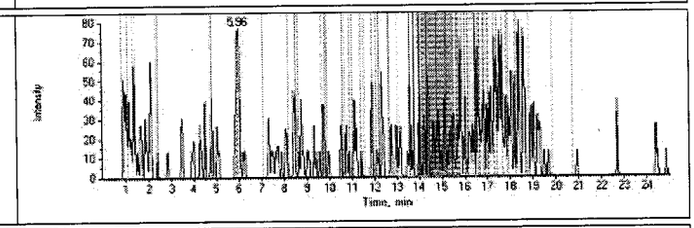


PFBS 2 (299.0 / 99.0)

RT (Exp. RT): 5.96 (5.97) min

Calculated conc: 0.000903

Area Ratio: 5.676e-4
Sample Type: (Quality Control)

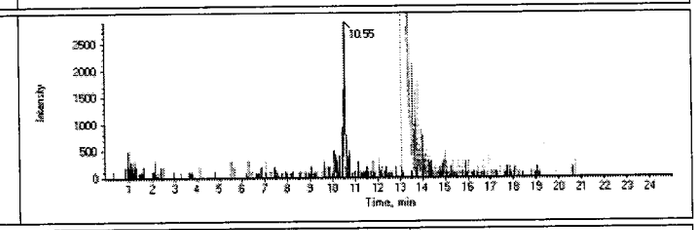


PFHxS (398.9 / 80.0)

RT (Exp. RT): 10.55 (10.55) min

Calculated conc: 0.003909

Area Ratio: 8.198e-3
Sample Type: (Quality Control)

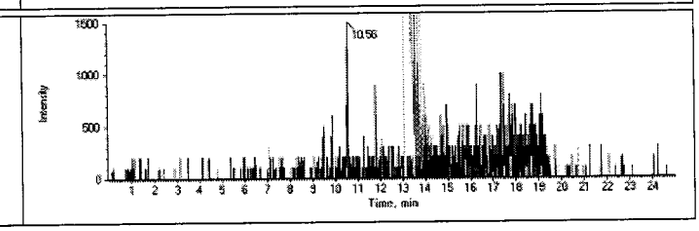


PFHxS 2 (398.9 / 99.0)

RT (Exp. RT): 10.56 (10.54) min

Calculated conc: 0.004630

Area Ratio: 3.248e-3
Sample Type: (Quality Control)

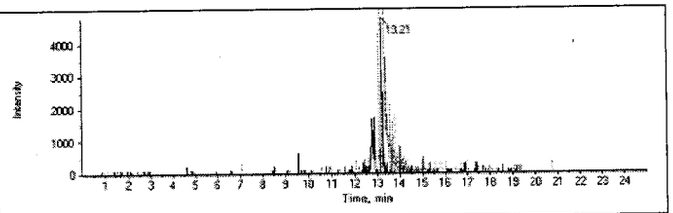


PFOS (499.0 / 79.9)

RT (Exp. RT): 13.21 (13.22) min

Calculated conc: 0.005318

Area Ratio: 1.044e-2
Sample Type: (Quality Control)

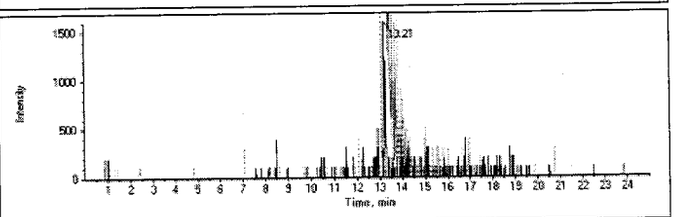


PFOS 2 (499.0 / 99.0)

RT (Exp. RT): 13.21 (13.21) min

Calculated conc: 0.005347

Area Ratio: 3.153e-3
Sample Type: (Quality Control)

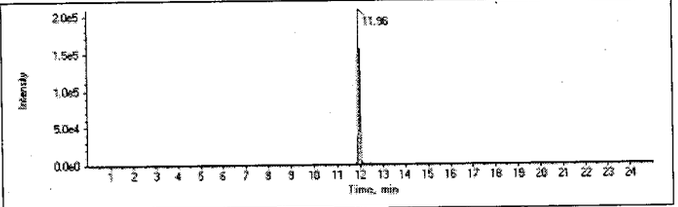


13C-PFOA (417.0 / 372.0)

RT (Exp. RT): 11.96 (11.96) min

Calculated conc: 554.990970

Area Ratio: N/A
Sample Type: (Quality Control)

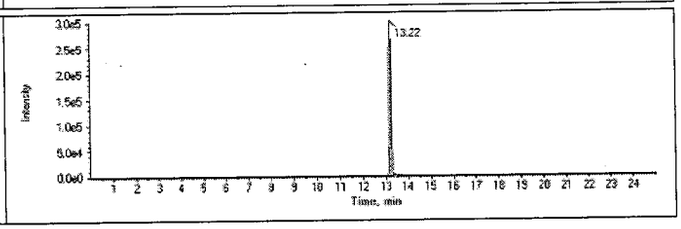


13C-PFOS (503.0 / 80.0)

RT (Exp. RT): 13.22 (13.22) min

Calculated conc: 595.552818

Area Ratio: N/A
Sample Type: (Quality Control)



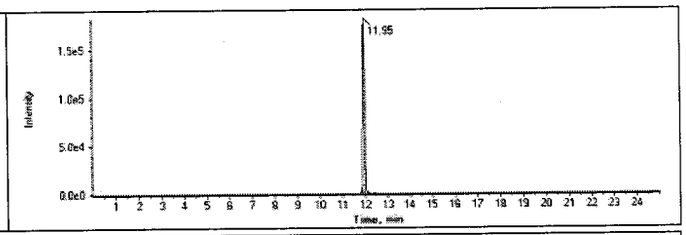
Sample Name	CCCM	**Injection Vial**	5
Sample ID		**Injection Volume**	5.00
Sample Type	Quality Control	**Algorithm Used**	MQ4
Acquisition Date	7/17/2014 12:57:47 PM	**Dilution Factor**	1.00
Acquisition Method	@537-ShortRun-110613-Ali.dam	**Weight to Volume**	N/A
Project	EPA537\2014_07_16	**Instrument Name**	API 4000
Data File	@537-Batch#780662-071614.wiff		
Result Table	@537-Batch#780662-071614		
Sample Comment	Lot#@537Cal-071614-LHZ, Exp.07/30/14		

Internal Standard	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
IS-13C-PFOA	1018586	11.95	100.00000	-
IS-13C-PFOS	1549103	13.20	100.00000	-

Target Analyte	Area (cps)	RT (min)	Target conc. ()	Calc. Conc. ()
PFHxA	2.780e+05	8.27	0.02000	0.017198
Surr-13c-PFHxA	1.065e+06	8.27	100.00000	95.893508
PFHpA	6.873e+05	10.38	0.02000	0.020830
PFHpA 2	1.871e+05	10.38	0.02000	0.019576
PFOA	6.129e+05	11.95	0.02000	0.019944
PFOA 2	2.112e+05	11.95	0.02000	0.019515
PFNA	4.703e+05	13.20	0.02000	0.020460
PFNA 2	1.210e+05	13.20	0.02000	0.019876
PFDA	4.842e+05	14.25	0.02000	0.019733
PFDA 2	8.601e+04	14.24	0.02000	0.019063
Surr-13c-PFDA	8.813e+05	14.25	100.00000	99.426716
PFUnA	4.726e+05	15.13	0.02000	0.020547
PFUnA 2	8.803e+04	15.13	0.02000	0.019462
PFDoA	4.095e+05	15.89	0.02000	0.019622
PFTrDA	6.283e+05	16.54	0.02000	0.020553
PFTrDA 2	1.457e+05	16.54	0.02000	0.020681
PFTA	1.896e+05	17.11	0.02000	0.022484
PFBS	2.027e+05	5.95	0.01770	0.014870
PFBS 2	7.337e+04	5.95	0.01770	0.015064
PFHxS	3.111e+05	10.53	0.01900	0.019157
PFHxS 2	9.998e+04	10.53	0.01900	0.018401
PFOS	2.911e+05	13.20	0.01920	0.019148
PFOS 2	8.699e+04	13.20	0.01920	0.019046
13C-PFOA	1.019e+06	11.95	100.00000	107.465051
13C-PFOS	1.549e+06	13.20	100.00000	118.656066

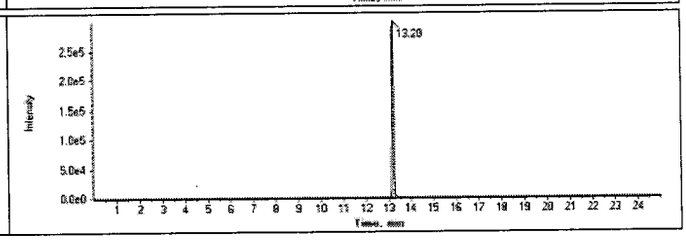
IS-13C-PFOA (Internal Standard)

RT (Exp. RT): 11.95(11.96) min
Concentration: 100.00000
Sample Type: (Quality Control)



IS-13C-PFOS (Internal Standard)

RT (Exp. RT): 13.20(13.22) min
Concentration: 100.00000
Sample Type: (Quality Control)

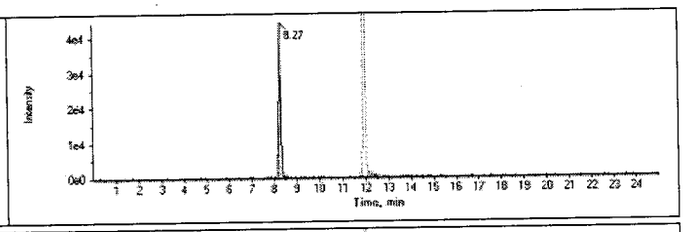


PFHxA (313.0 / 268.8)

RT (Exp. RT): 8.27 (8.28) min

Calculated conc: 0.017198

Area Ratio: 2.729e-1
Sample Type: (Quality Control)

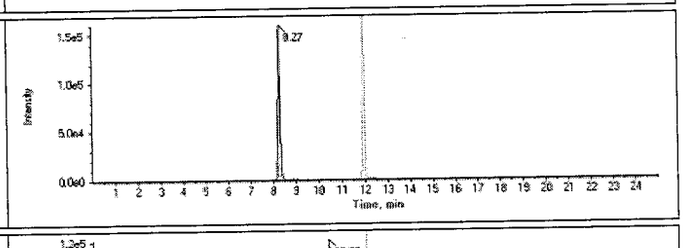


Surr-13c-PFHxA (315.0 / 270.0)

RT (Exp. RT): 8.27 (8.28) min

Calculated conc: 95.893508

Area Ratio: 1.045e0
Sample Type: (Quality Control)

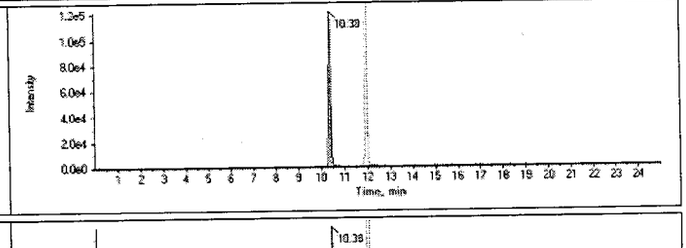


PFHpA (363.0 / 318.9)

RT (Exp. RT): 10.38 (10.40) min

Calculated conc: 0.020830

Area Ratio: 6.748e-1
Sample Type: (Quality Control)

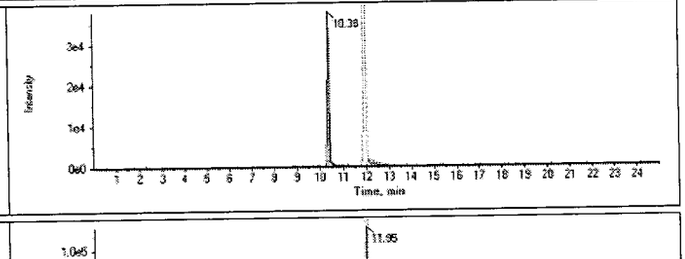


PFHpA 2 (363.0 / 168.9)

RT (Exp. RT): 10.38 (10.40) min

Calculated conc: 0.019576

Area Ratio: 1.837e-1
Sample Type: (Quality Control)

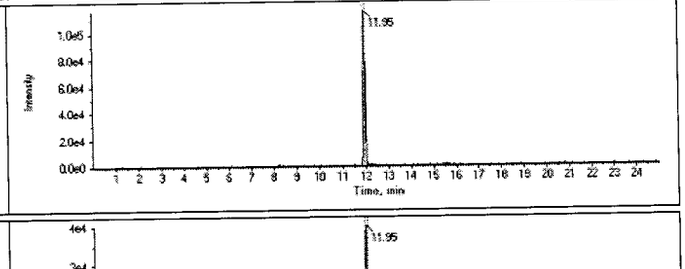


PFOA (413.0 / 368.9)

RT (Exp. RT): 11.95 (11.97) min

Calculated conc: 0.019944

Area Ratio: 6.017e-1
Sample Type: (Quality Control)

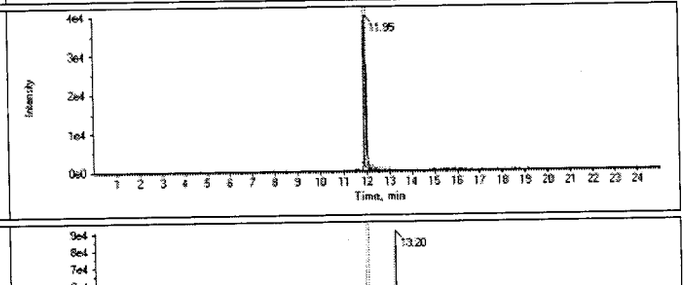


PFOA 2 (413.0 / 168.8)

RT (Exp. RT): 11.95 (11.96) min

Calculated conc: 0.019515

Area Ratio: 2.074e-1
Sample Type: (Quality Control)

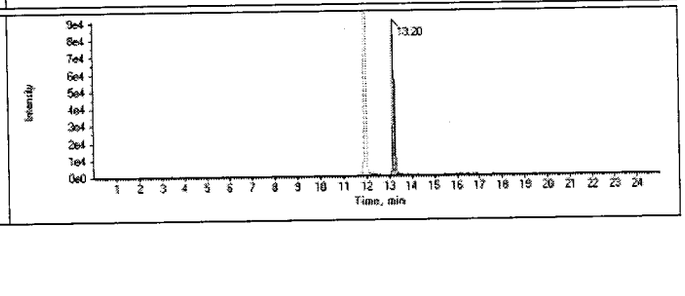


PFNA (463.0 / 419.0)

RT (Exp. RT): 13.20 (13.22) min

Calculated conc: 0.020460

Area Ratio: 4.617e-1
Sample Type: (Quality Control)

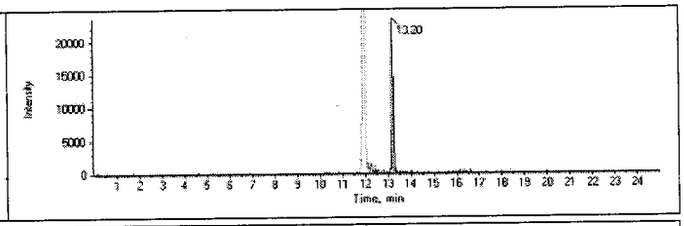


PFNA 2 (463.0 / 218.9)

RT (Exp. RT): 13.20 (13.21) min

Calculated conc: 0.019876

Area Ratio: 1.188e-1
Sample Type: (Quality Control)

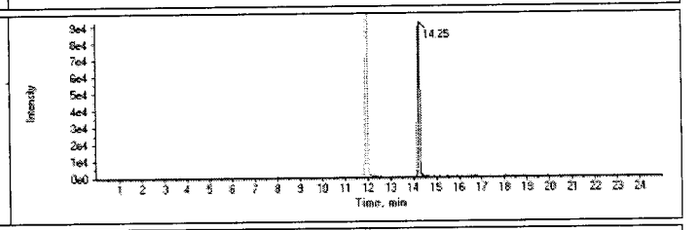


PFDA (513.0 / 469.0)

RT (Exp. RT): 14.25 (14.26) min

Calculated conc: 0.019733

Area Ratio: 4.754e-1
Sample Type: (Quality Control)

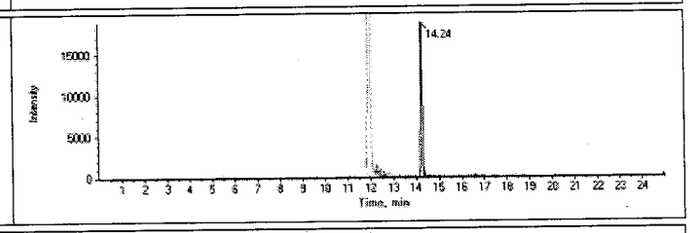


PFDA 2 (513.0 / 218.8)

RT (Exp. RT): 14.24 (14.26) min

Calculated conc: 0.019063

Area Ratio: 8.444e-2
Sample Type: (Quality Control)

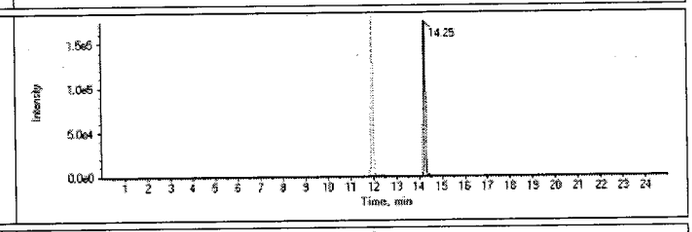


Surr-13c-PFDA (515.0 / 470.0)

RT (Exp. RT): 14.25 (14.26) min

Calculated conc: 99.426716

Area Ratio: 8.652e-1
Sample Type: (Quality Control)

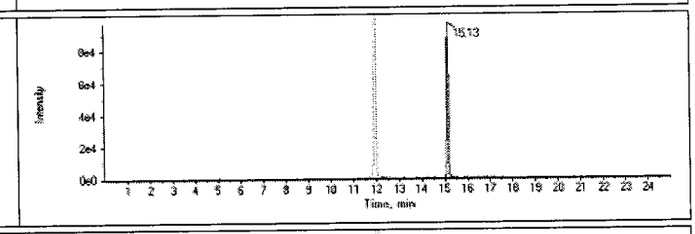


PFUnA (563.0 / 519.0)

RT (Exp. RT): 15.13 (15.14) min

Calculated conc: 0.020547

Area Ratio: 4.640e-1
Sample Type: (Quality Control)

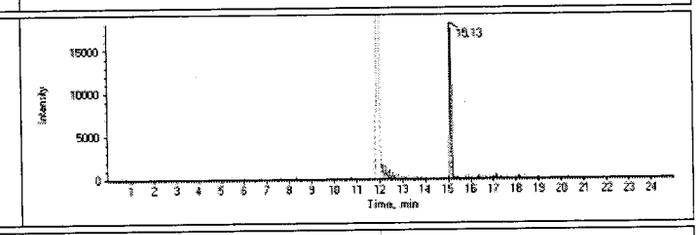


PFUnA 2 (563.0 / 268.8)

RT (Exp. RT): 15.13 (15.14) min

Calculated conc: 0.019462

Area Ratio: 8.642e-2
Sample Type: (Quality Control)

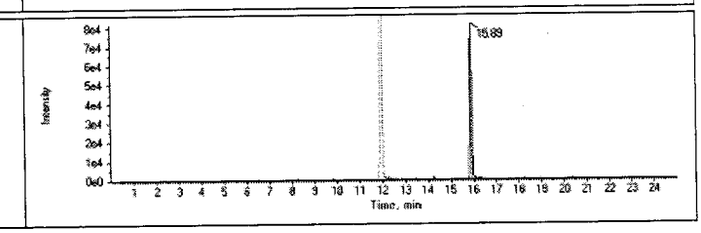


PFDoA (612.8 / 569.0)

RT (Exp. RT): 15.89 (15.90) min

Calculated conc: 0.019622

Area Ratio: 4.020e-1
Sample Type: (Quality Control)



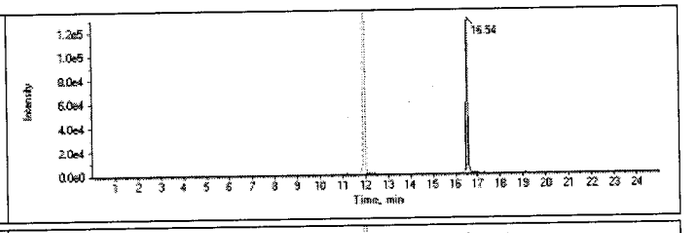
PFTrDA (662.9 / 619.0)

RT (Exp. RT): 16.54 (16.55) min

Calculated conc: 0.020553

Area Ratio: 6.169e-1

Sample Type: (Quality Control)



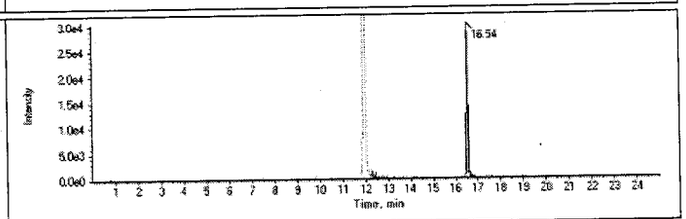
PFTrDA 2 (662.9 / 168.9)

RT (Exp. RT): 16.54 (16.55) min

Calculated conc: 0.020681

Area Ratio: 1.430e-1

Sample Type: (Quality Control)



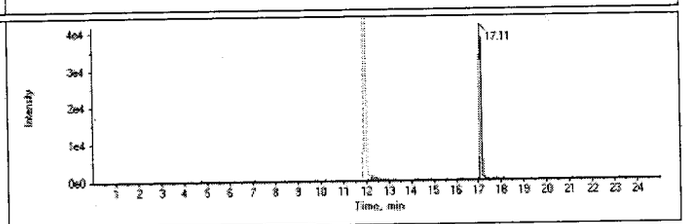
PFTA (713.3 / 669.0)

RT (Exp. RT): 17.11 (17.11) min

Calculated conc: 0.022484

Area Ratio: 1.861e-1

Sample Type: (Quality Control)



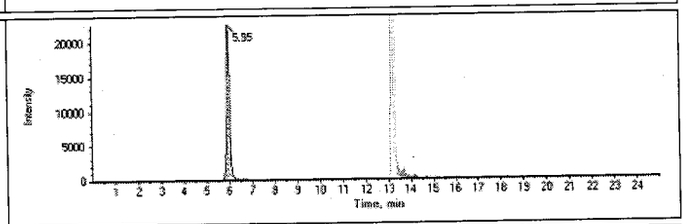
PFBS (299.0 / 79.9)

RT (Exp. RT): 5.95 (5.96) min

Calculated conc: 0.014870

Area Ratio: 1.308e-1

Sample Type: (Quality Control)



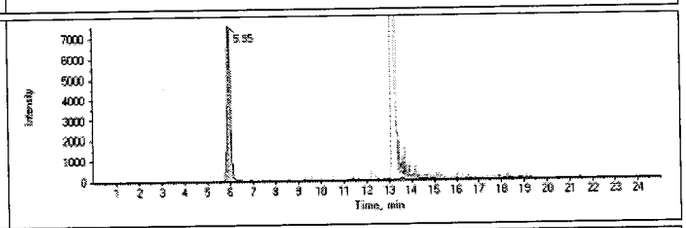
PFBS 2 (299.0 / 99.0)

RT (Exp. RT): 5.95 (5.97) min

Calculated conc: 0.015064

Area Ratio: 4.736e-2

Sample Type: (Quality Control)



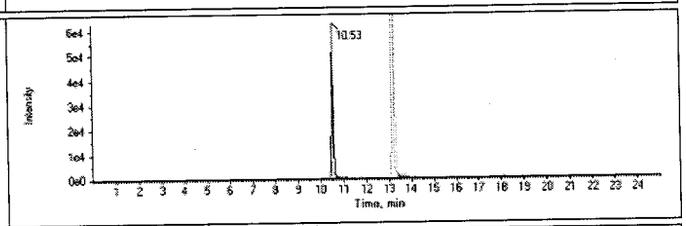
PFHxS (398.9 / 80.0)

RT (Exp. RT): 10.53 (10.55) min

Calculated conc: 0.019157

Area Ratio: 2.008e-1

Sample Type: (Quality Control)



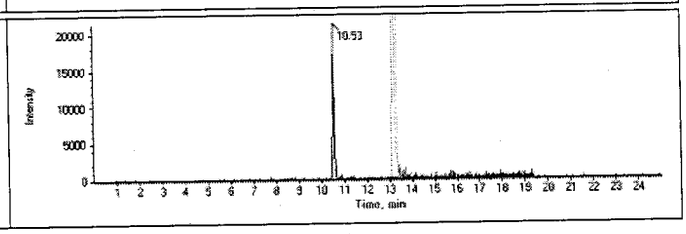
PFHxS 2 (398.9 / 99.0)

RT (Exp. RT): 10.53 (10.54) min

Calculated conc: 0.018401

Area Ratio: 6.454e-2

Sample Type: (Quality Control)



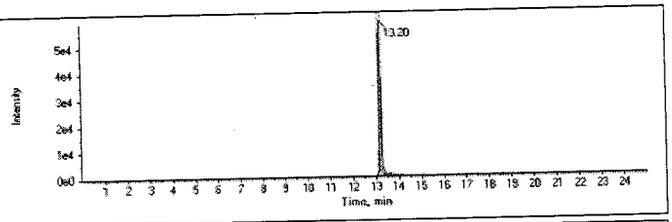
PFOS (499.0 / 79.9)

RT (Exp. RT): 13.20 (13.22) min

Calculated conc: 0.019148

Area Ratio: 1.879e-1

Sample Type: (Quality Control)



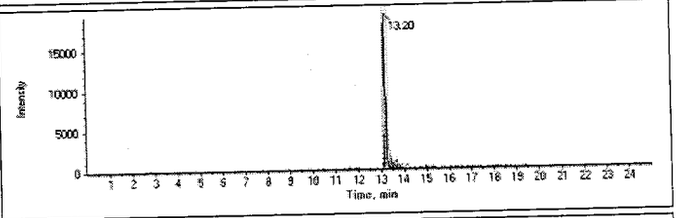
PFOS 2 (499.0 / 99.0)

RT (Exp. RT): 13.20 (13.21) min

Calculated conc: 0.019046

Area Ratio: 5.616e-2

Sample Type: (Quality Control)



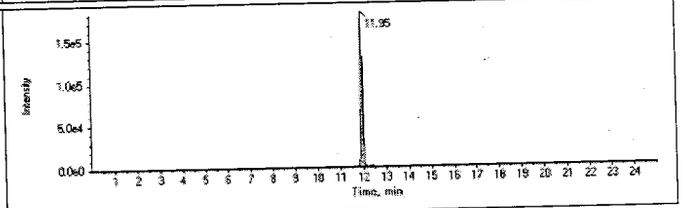
13C-PFOA (417.0 / 372.0)

RT (Exp. RT): 11.95 (11.96) min

Calculated conc: 107.465051

Area Ratio: N/A

Sample Type: (Quality Control)



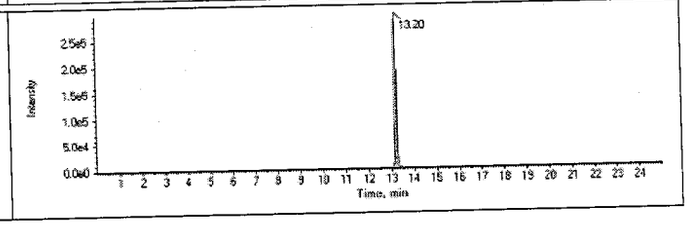
13C-PFOS (503.0 / 80.0)

RT (Exp. RT): 13.20 (13.22) min

Calculated conc: 118.656066

Area Ratio: N/A

Sample Type: (Quality Control)



TestAmerica Laboratory Reports

– TestAmerica Laboratory Report (460-79113-1 7/24/2014)

TestAmerica Laboratory Report

– 460-79093-1 8/12/2014

ANALYTICAL REPORT

Job Number: 460-79113-1

Job Description: NJ Site Drinking Water

For:
Integral Consulting Inc
1205 W Bay Drive NW
Olympia, WA 98502

Attention: Craig Hutchings

Approved for release.
Janet Mosley
Manager of Project Management Assistants
7/24/2014 1:59 PM

Designee for
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07/24/2014

The test results in this report meet all NELAP requirements unless specified within the case narrative. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Edison Project Manager.

TestAmerica Edison Certifications and Approvals: Connecticut: CTDOH #PH-0200, New Jersey: NJDEP (NELAP) #12028, New York: NYDOH (NELAP) #11452, NYDOH (ELAP) #11452, Pennsylvania: PADEP (NELAP) 68-00522 and Rhode Island: RIDOH LAO00132

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Qualifiers

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.

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 ac ivity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detec ion 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: Integral Consulting Inc

Project: NJ Site Drinking Water

Report Number: 460-79113-1

This case narrative is in the form of an exception report, where only the anomalies related to this report, method specific performance and/or QA/QC issues are discussed. If there are no issues to report, this narrative will include a statement that documents that there are no relevant data issues.

It should be noted that samples with elevated Reporting Limits (RLs) as a result of a dilution may not be able to satisfy customer reporting limits in some cases. Such increases in the RLs are unavoidable but acceptable consequence of sample dilution that enables quantification of target analytes or interferences which exceed the calibration range of the instrument.

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.

RECEIPT
The samples were received on 7/9/2014 8:45 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 7 coolers at receipt time were 2.6º C, 2.7º C, 2.9º C, 2.9º C, 3.3º C, 3.4º C and 3.8º C.

Note: All samples which require thermal preservation are considered acceptable if the arrival temperature is within 2C of the required temperature or method specified range. For samples with a specified temperature of 4C, samples with a temperature ranging from just above freezing temperature of water to 6C shall be acceptable. Samples that are hand delivered immediately following collection may not meet these criteria, however they will be deemed acceptable according to NELAC standards, if there is evidence that the chilling process has begun, such as arrival on ice, etc.

ALKALINITY
Samples GW0172 (460-79113-1), GW0173 (460-79113-2), GW0174 (460-79113-3) and FB0003 (460-79113-4) were analyzed for a kalinity in accordance with SM 2320B. The samples were analyzed on 07/14/2014.

No difficulties were encountered during the alkalinity analysis.

All quality control parameters were within the acceptance limits.

HARDNESS
Samples GW0172 (460-79113-1), GW0173 (460-79113-2), GW0174 (460-79113-3) and FB0003 (460-79113-4) were analyzed for hardness in accordance with SM 2340C. The samples were analyzed on 07/21/2014.

No difficulties were encountered during the hardness analysis.

All quality control parameters were within the acceptance limits.

TOTAL SUSPENDED SOLIDS
Samples GW0172 (460-79113-1), GW0173 (460-79113-2), GW0174 (460-79113-3) and FB0003 (460-79113-4) were analyzed for total suspended solids in accordance with SM 2540D. The samples were analyzed on 07/15/2014.

No difficulties were encountered during the TSS analysis.

All quality control parameters were within the acceptance limits.

ANIONS
Samples GW0172 (460-79113-1), GW0173 (460-79113-2), GW0174 (460-79113-3) and FB0003 (460-79113-4) were analyzed for anions in accordance with EPA Method 300_ORGFM_28D Anions by Ion Chromatograph. The samples were analyzed on 07/16/2014 and 07/17/2014.

Samples GW0172 (460-79113-1)[5X], GW0173 (460-79113-2)[2X] and GW0174 (460-79113-3)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No difficulties were encountered during the anions analysis.

All quality control parameters were within the acceptance limits.

NITRATE-NITRITE AS NITROGEN

Samples GW0172 (460-79113-1), GW0173 (460-79113-2), GW0174 (460-79113-3) and FB0003 (460-79113-4) were analyzed for nitrate-nitrite as nitrogen in accordance with EPA Method 353.2. The samples were analyzed on 07/11/2014.

Sample GW0173 (460-79113-2)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No difficulties were encountered during the nitrate-nitrite analysis.

All quality control parameters were within the acceptance limits.

ORTHOPHOSPHATE AS P

Samples GW0172 (460-79113-1), GW0173 (460-79113-2), GW0174 (460-79113-3) and FB0003 (460-79113-4) were analyzed for orthophosphate as P in accordance with SM 4500 P E. The samples were analyzed on 07/12/2014.

The following sample(s) was analyzed outside of analytical holding time due to analyst error: FB0003 (460-79113-4), GW0172 (460-79113-1), GW0173 (460-79113-2), GW0174 (460-79113-3).

No difficulties were encountered during the orthophosphate analysis.

All quality control parameters were within the acceptance limits.

PH

Samples GW0172 (460-79113-1), GW0173 (460-79113-2), GW0174 (460-79113-3) and FB0003 (460-79113-4) were analyzed for pH in accordance with SM 4500 H+. The samples were analyzed on 07/18/2014.

No difficulties were encountered during the pH analysis.

All quality control parameters were within the acceptance limits.

AMMONIA

Samples GW0172 (460-79113-1), GW0173 (460-79113-2), GW0174 (460-79113-3) and FB0003 (460-79113-4) were analyzed for ammonia in accordance with SM 4500 NH3 G. The samples were prepared and analyzed on 07/21/2014.

No difficulties were encountered during the ammonia analysis.

All quality control parameters were within the acceptance limits.

TOTAL ORGANIC CARBON

Samples GW0172 (460-79113-1), GW0173 (460-79113-2), GW0174 (460-79113-3) and FB0003 (460-79113-4) were analyzed for total organic carbon in accordance with SM 5310B. The samples were analyzed on 07/14/2014 and 07/15/2014.

No difficulties were encountered during the TOC analysis.

All quality control parameters were within the acceptance limits.

Detection Summary

Client: Integral Consulting Inc
Project/Site: NJ Site Drinking Water

TestAmerica Job ID: 460-79113-1

Client Sample ID: GW0172 — Lab Sample ID: 460-79113-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	211		2.50	1.25	mg/L	5		300.0	Total/NA
Fluoride	0.19		0.10	0.025	mg/L	1		300.0	Total/NA
Chloride	46.7		0.50	0.25	mg/L	1		300.0	Total/NA
Nitrate Nitrite as N	1.1		0.10	0.047	mg/L	1		353.2	Total/NA
Bicarbonate Alkalinity as CaCO3	24.3		5.0	5.0	mg/L	1		SM 2320B	Total/NA
Alkalinity	24.3		5.0	5.0	mg/L	1		SM 2320B	Total/NA
Hardness as calcium carbonate	73.3		5.0	5.0	mg/L	1		SM 2340C	Total/NA
pH	7.56	HF			SU	1		SM 4500 H+ B	Total/NA
Total Organic Carbon	0.80	J	1.0	0.30	mg/L	1		SM 5310B	Total/NA

Client Sample ID: GW0173 — Lab Sample ID: 460-79113-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	23.4		0.50	0.25	mg/L	1		300.0	Total/NA
Fluoride	0.054	J	0.10	0.025	mg/L	1		300.0	Total/NA
Chloride	60.6		1.00	0.50	mg/L	2		300.0	Total/NA
Nitrate Nitrite as N	4.0		0.50	0.24	mg/L	5		353.2	Total/NA
Bicarbonate Alkalinity as CaCO3	30.2		5.0	5.0	mg/L	1		SM 2320B	Total/NA
Alkalinity	30.2		5.0	5.0	mg/L	1		SM 2320B	Total/NA
Hardness as calcium carbonate	51.5		5.0	5.0	mg/L	1		SM 2340C	Total/NA
Total Suspended Solids	2.0		1.3	1.3	mg/L	1		SM 2540D	Total/NA
pH	6.32	HF			SU	1		SM 4500 H+ B	Total/NA
Ammonia	0.095	J	0.10	0.080	mg/L	1		SM 4500 NH3 G	Total/NA
Total Organic Carbon	1.2		1.0	0.30	mg/L	1		SM 5310B	Total/NA

Client Sample ID: GW0174 — Lab Sample ID: 460-79113-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	212		2.50	1.25	mg/L	5		300.0	Total/NA
Fluoride	0.19		0.10	0.025	mg/L	1		300.0	Total/NA
Chloride	46.8		0.50	0.25	mg/L	1		300.0	Total/NA
Nitrate Nitrite as N	1.1		0.10	0.047	mg/L	1		353.2	Total/NA
Bicarbonate Alkalinity as CaCO3	24.8		5.0	5.0	mg/L	1		SM 2320B	Total/NA
Alkalinity	24.8		5.0	5.0	mg/L	1		SM 2320B	Total/NA
Hardness as calcium carbonate	63.4		5.0	5.0	mg/L	1		SM 2340C	Total/NA
pH	7.49	HF			SU	1		SM 4500 H+ B	Total/NA
Total Organic Carbon	0.80	J	1.0	0.30	mg/L	1		SM 5310B	Total/NA

Client Sample ID: FB0003 — Lab Sample ID: 460-79113-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	0.32	J	0.50	0.25	mg/L	1		300.0	Total/NA
pH	5.86	HF			SU	1		SM 4500 H+ B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Integral Consulting Inc
Project/Site: NJ Site Drinking Water

TestAmerica Job ID: 460-79113-1

Client Sample ID: GW0172

Lab Sample ID: 460-79113-1

Date Collected: 07/09/14 09:15

Matrix: Water

Date Received: 07/09/14 20:45

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**211**		2.50	1.25	mg/L			07/17/14 13:54	5
Fluoride	**0.19**		0.10	0.025	mg/L			07/16/14 19:07	1
Chloride	**46.7**		0.50	0.25	mg/L			07/16/14 19:07	1
Bromide	0.25	U	0.50	0.25	mg/L			07/16/14 19:07	1

General Chemi try

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N	**1.1**		0.10	0.047	mg/L			07/11/14 07:34	1
Bicarbonate Alkalinity as CaCO3	**24.3**		5.0	5.0	mg/L			07/14/14 11:07	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	5.0	mg/L			07/14/14 11:07	1
Alkalinity	**24.3**		5 0	5 0	mg/L			07/14/14 11 07	1
Hydroxide Alkalinity	5 0	U	5 0	5 0	mg/L			07/14/14 11 07	1
Hardness as calcium carbonate	**73.3**		5 0	5 0	mg/L			07/21/14 12 30	1
Total Suspended Solids	1.3	U	1.3	1.3	mg/L			07/15/14 07:34	1
pH	**7.56**	**HF**			SU			07/18/14 14:29	1
Ammonia	0.080	U	0.10	0.080	mg/L		07/21/14 06:00	07/21/14 13:03	1
Orthophosphate as P	0.010	U H	0.030	0.010	mg/L			07/12/14 12:11	1
Total Organic Carbon	**0.80**	**J**	1.0	0.30	mg/L			07/15/14 10:57	1

Client Sample ID: GW0173

Lab Sample ID: 460-79113-2

Date Collected: 07/09/14 09:50

Matrix: Water

Date Received: 07/09/14 20:45

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**23.4**		0.50	0.25	mg/L			07/16/14 19:23	1
Fluoride	**0.054**	**J**	0.10	0.025	mg/L			07/16/14 19:23	1
Chloride	**60.6**		1.00	0.50	mg/L			07/17/14 14:40	2
Bromide	0.25	U	0.50	0.25	mg/L			07/16/14 19:23	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N	**4.0**		0.50	0.24	mg/L			07/11/14 07:49	5
Bicarbonate Alkalinity as CaCO3	**30.2**		5.0	5.0	mg/L			07/14/14 10:54	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	5.0	mg/L			07/14/14 10:54	1
Alkalinity	**30.2**		5.0	5.0	mg/L			07/14/14 10:54	1
Hydroxide Alkalinity	5.0	U	5.0	5.0	mg/L			07/14/14 10:54	1
Hardness as calcium carbonate	**51.5**		5.0	5.0	mg/L			07/21/14 12:30	1
Total Suspended Solids	**2.0**		1.3	1.3	mg/L			07/15/14 07:34	1
pH	**6.32**	**HF**			SU			07/18/14 14:31	1
Ammonia	**0.095**	**J**	0.10	0.080	mg/L		07/21/14 06:00	07/21/14 13:04	1
Orthophosphate as P	0.010	U H	0.030	0.010	mg/L			07/12/14 12:11	1
Total Organic Carbon	**1.2**		1.0	0.30	mg/L			07/14/14 22:10	1

Client Sample Results

Client: Integral Consulting Inc
Project/Site: NJ Site Drinking Water

TestAmerica Job ID: 460-79113-1

Client Sample ID: GW0174

Lab Sample ID: 460-79113-3

Date Collected: 07/09/14 09:25
Matrix: Water
Date Received: 07/09/14 20:45

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**212**		2.50	1.25	mg/L			07/17/14 15:26	5
Fluoride	**0.19**		0.10	0.025	mg/L			07/16/14 19:38	1
Chloride	**46.8**		0.50	0.25	mg/L			07/16/14 19:38	1
Bromide	0.25	U	0.50	0.25	mg/L			07/16/14 19:38	1

General Chemi try

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N	**1.1**		0.10	0.047	mg/L			07/11/14 07:37	1
Bicarbonate Alkalinity as CaCO3	**24.8**		5.0	5.0	mg/L			07/14/14 11:13	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	5.0	mg/L			07/14/14 11:13	1
Alkalinity	**24.8**		5 0	5 0	mg/L			07/14/14 11 13	1
Hydroxide Alkalinity	5 0	U	5 0	5 0	mg/L			07/14/14 11 13	1
Hardness as calcium carbonate	**63.4**		5 0	5 0	mg/L			07/21/14 12 30	1
Total Suspended Solids	1.3	U	1.3	1.3	mg/L			07/15/14 07:34	1
pH	**7.49**	**HF**			SU			07/18/14 14:33	1
Ammonia	0.080	U	0.10	0.080	mg/L		07/21/14 06:00	07/21/14 13:06	1
Orthophosphate as P	0.010	U H	0.030	0.010	mg/L			07/12/14 12:11	1
Total Organic Carbon	**0.80**	**J**	1.0	0.30	mg/L			07/14/14 22:30	1

Client Sample ID: FB0003

Lab Sample ID: 460-79113-4

Date Collected: 07/09/14 10:00
Matrix: Water
Date Received: 07/09/14 20:45

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**0.32**	**J**	0.50	0.25	mg/L			07/16/14 19:53	1
Fluoride	0.025	U	0.10	0.025	mg/L			07/16/14 19:53	1
Chloride	0.25	U	0.50	0.25	mg/L			07/16/14 19:53	1
Bromide	0.25	U	0.50	0.25	mg/L			07/16/14 19:53	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N	0.047	U	0.10	0.047	mg/L			07/11/14 07:39	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	5.0	mg/L			07/14/14 11:19	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	5.0	mg/L			07/14/14 11:19	1
Alkalinity	5.0	U	5.0	5.0	mg/L			07/14/14 11:19	1
Hydroxide Alkalinity	5.0	U	5.0	5.0	mg/L			07/14/14 11:19	1
Hardness as calcium carbonate	5.0	U	5.0	5.0	mg/L			07/21/14 12:30	1
Total Suspended Solids	1.3	U	1.3	1.3	mg/L			07/15/14 07:34	1
pH	**5.86**	**HF**			SU			07/18/14 14:35	1
Ammonia	0.080	U	0.10	0.080	mg/L		07/21/14 06:00	07/21/14 13:11	1
Orthophosphate as P	0.010	U H	0.030	0.010	mg/L			07/12/14 12:11	1
Total Organic Carbon	0.30	U	1.0	0.30	mg/L			07/14/14 22:49	1

Default Detection Limits

Client: Integral Consulting Inc
Project/Site: NJ Site Drinking Water

TestAmerica Job ID: 460-79113-1

Method: 300.0 - Anions, Ion Chromatography

Analyte	RL	MDL	Units	Method
Bromide	0.50	0.25	mg/L	300.0
Chloride	0.50	0.25	mg/L	300.0
Fluoride	0.10	0.025	mg/L	300.0
Sulfate	0.50	0.25	mg/L	300.0

General Chemistry

Analyte	RL	MDL	Units	Method
Nitrate Nitrite as N	0.10	0.047	mg/L	353.2
Alkalinity	5.0	5.0	mg/L	SM 2320B
Bicarbonate Alkalinity as CaCO3	5.0	5.0	mg/L	SM 2320B
Carbonate Alkalinity as CaCO3	5.0	5.0	mg/L	SM 2320B
Hydroxide Alkalinity	5.0	5.0	mg/L	SM 2320B
Hardness as calcium carbonate	5.0	5.0	mg/L	SM 2340C
Total Suspended Solids	10.0	10.0	mg/L	SM 2540D
Ammonia	0.10	0.080	mg/L	SM 4500 NH3 G
Orthophosphate as P	0.030	0.010	mg/L	SM 4500 P E
Total Organic Carbon	1.0	0.30	mg/L	SM 5310B

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 680-339289/29 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 339289

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	0.25	U	0.50	0.25	mg/L			07/16/14 18:06	1
Fluoride	0.025	U	0.10	0.025	mg/L			07/16/14 18:06	1
Chloride	0.25	U	0.50	0.25	mg/L			07/16/14 18:06	1
Bromide	0.25	U	0.50	0.25	mg/L			07/16/14 18:06	1

Lab Sample ID: LCS 680-339289/30 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 339289

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	10.0	9.955		mg/L		100	90 - 110
Fluoride	2.00	2.031		mg/L		102	90 - 110
Chloride	10.0	9.681		mg/L		97	90 - 110
Bromide	10.0	10.15		mg/L		101	90 - 110

Lab Sample ID: LCSD 680-339289/31 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 339289

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	10.0	10.00		mg/L		100	90 - 110	0	30
Fluoride	2.00	2.036		mg/L		102	90 - 110	0	30
Chloride	10.0	9.717		mg/L		97	90 - 110	0	30
Bromide	10.0	10.17		mg/L		102	90 - 110	0	30

Lab Sample ID: 680-103212-A-2 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 339289

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	0.68		10.0	10.48		mg/L		98	80 - 120
Fluoride	0.076		2.00	2.076		mg/L		100	80 - 120
Chloride	6.23		10.0	15.79		mg/L		96	80 - 120
Bromide	0.25		10.0	9.999		mg/L		100	80 - 120

Lab Sample ID: 680-103212-A-2 MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 339289

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	0.68		10.0	10.54		mg/L		99	80 - 120	1	30
Fluoride	0.076		2.00	2.085		mg/L		100	80 - 120	0	30
Chloride	6.23		10.0	15.84		mg/L		96	80 - 120	0	30
Bromide	0.25		10.0	10.04		mg/L		100	80 - 120	0	30

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 680-339475/2 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 339475

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	0.25	U	0.50	0.25	mg/L			07/17/14 10:34	1
Chloride	0.25	U	0.50	0.25	mg/L			07/17/14 10:34	1

Lab Sample ID: LCS 680-339475/3 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 339475

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	10.0	10.10		mg/L		101	90 - 110
Chloride	10.0	9.875		mg/L		99	90 - 110

Lab Sample ID LCSD 680 339475/4 — **Client Sample ID Lab Control Sample Dup**
Matrix Water — **Prep Type Total/NA**
Analy i Batch 339475

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	10.0	10.12		mg/L		101	90 110	0	30
Chloride	10.0	9.888		mg/L		99	90 110	0	30

Lab Sample ID: 460-79113-2 MS — **Client Sample ID: GW0173**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 339475

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	24.0		20.0	44.02		mg/L		100	80 - 120
Fluoride	0.075		4.00	4.067		mg/L		100	80 - 120
Chloride	60.6		20.0	79.16		mg/L		93	80 - 120
Bromide	0.50		20.0	20.54		mg/L		103	80 - 120

Lab Sample ID: 460-79113-2 MSD — **Client Sample ID: GW0173**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 339475

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	24.0		20.0	44.21		mg/L		101	80 - 120	0	30
Fluoride	0.075		4.00	4.081		mg/L		100	80 - 120	0	30
Chloride	60.6		20.0	79.43		mg/L		94	80 - 120	0	30
Bromide	0.50		20.0	20.62		mg/L		103	80 - 120	0	30

Method: 353.2 - Nitrogen, Nitrate-Nitrite

Lab Sample ID: MB 460-235724/9 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 235724

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N	0.047	U	0.10	0.047	mg/L			07/11/14 07:25	1

Method: 353.2 - Nitrogen, Nitrate-Nitrite (Continued)

Lab Sample ID: LCSSRM 460-235724/10 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 235724

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	1.51	1.56		mg/L		103.6	87.4 - 112.6
Nitrate Nitrite as N	1.51	1.56		mg/L		103.6	85.4 - 109.9

Lab Sample ID: LCSSRM 460-235724/11 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 235724

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrite as N	0.612	0.620		mg/L		101.3	88.9 - 110.5

Lab Sample ID: 460-79108-J-1 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 235724

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	0.047		0.500	0.510		mg/L		102	67 - 130
Nitrate Nitrite as N	0.047		1.00	1.01		mg/L		101	66 - 124
Nitrite as N	0.0094		0.500	0.499		mg/L		98	84 - 109

Lab Sample ID: 460-79108-J-1 MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 235724

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as N	0.047		0.500	0.513		mg/L		103	67 - 130	1	34
Nitrate Nitrite as N	0.047		1.00	1.01		mg/L		101	66 - 124	0	19
Nitrite as N	0.0094		0.500	0.496		mg/L		97	84 - 109	1	10

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 460-236180/13 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 236180

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	5.0	mg/L			07/14/14 10:28	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	5.0	mg/L			07/14/14 10:28	1
Alkalinity	5.0	U	5.0	5.0	mg/L			07/14/14 10:28	1
Hydroxide Alkalinity	5.0	U	5.0	5.0	mg/L			07/14/14 10:28	1

Lab Sample ID: LCSSRM 460-236180/14 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 236180

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity	36.5	39.31		mg/L		107.7	90.3 - 107.9

Method: SM 2320B - Alkalinity (Continued)

Lab Sample ID: 460-79113-2 DU — **Client Sample ID: GW0173**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 236180

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Bicarbonate Alkalinity as CaCO3	30.2		24.06		mg/L		23	27
Carbonate Alkalinity as CaCO3	5.0	U	5.0	U	mg/L		NC	27
Alkalinity	30.2		24.06		mg/L		23	27
Hydroxide Alkalinity	5.0	U	5.0	U	mg/L		NC	27

Method: SM 2340C - Hardness, Total (mg/l as CaC03)

Lab Sample ID: MB 460-237639/1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 237639

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness as calcium carbonate	5.0	U	5.0	5.0	mg/L			07/21/14 12:30	1

Lab Sample ID: LCSSRM 460-237639/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 237639

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Hardness as calcium carbonate	109	110.9		mg/L		101.7	91.4 - 109.2

Lab Sample ID: 460-79060-B-3 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 237639

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Hardness as calcium carbonate	69.3		69.30		mg/L		0	10

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 460-236315/1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 236315

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	1.0	U	1.0	1.0	mg/L			07/15/14 07:34	1

Lab Sample ID: LCSSRM 460-236315/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 236315

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	46.7	50.00		mg/L		107.1	82.7 - 107.9

Method: SM 2540D - Solids, Total Suspended (TSS) (Continued)

Lab Sample ID: 460-79153-A-1 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 236315

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Suspended Solids	224			234.0		mg/L				4	5

Method: SM 4500 H+ B - pH

Lab Sample ID: MB 460-237234/2 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 237234

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	5.840				SU			07/18/14 14:04	1

Lab Sample ID: LCSSRM 460-237234/3 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 237234

Analyte			Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits		
pH			7.03	7.010		SU		99.7	98.0 - 102.0		

Lab Sample ID: 460-79093-P-1 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 237234

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
pH	8.20			8.190		SU				0.1	10

Method: SM 4500 NH3 G - Ammonia

Lab Sample ID: MB 460-237544/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 237633 — **Prep Batch: 237544**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	0.080	U	0.10	0.080	mg/L		07/21/14 06:00	07/21/14 12:36	1

Lab Sample ID: LCS 460-237544/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 237633 — **Prep Batch: 237544**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Ammonia			1.00	1.02		mg/L		102	85 - 117		

Lab Sample ID: 460-79062-M-1-B MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 237633 — **Prep Batch: 237544**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Ammonia	1.4		1.00	2.27		mg/L		85	60 - 147		

Method: SM 4500 NH3 G - Ammonia (Continued)

Lab Sample ID: 460-79062-M-1-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 237633 — **Prep Batch: 237544**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ammonia	1.4		1.00	2.07		mg/L		64	60 - 147	9	16

Method: SM 4500 P E - Orthophosphate

Lab Sample ID: MB 460-236042/3 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 236042

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Orthophosphate as P	0.010	U	0.030	0.010	mg/L			07/12/14 12:11	1

Lab Sample ID: LCSSRM 460-236042/4 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 236042

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Orthophosphate as P	0.214	0.217		mg/L		101.6	86.1 - 109.0

Lab Sample ID: 460-79113-1 MS — **Client Sample ID: GW0172**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 236042

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Orthophosphate as P	0.010	U H	0.200	0.206		mg/L		103	82 - 118

Lab Sample ID: 460-79113-1 MSD — **Client Sample ID: GW0172**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 236042

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Orthophosphate as P	0.010	U H	0.200	0.201		mg/L		100	82 - 118	3	10

Method: SM 5310B - Organic Carbon, Total (TOC)

Lab Sample ID: MB 460-236382/3 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 236382

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	0.30	U	1.0	0.30	mg/L			07/14/14 15:27	1

Lab Sample ID: MB 460-236382/31 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 236382

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	0.30	U	1.0	0.30	mg/L			07/15/14 02:36	1

Method: SM 5310B - Organic Carbon, Total (TOC) (Continued)

Lab Sample ID: LCSSRM 460-236382/32 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 236382

Analyte			Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Organic Carbon			46.5	49.58		mg/L		106.6	87.1 - 112.9		

Lab Sample ID: LCSSRM 460-236382/4 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 236382

Analyte			Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Organic Carbon			46.5	49.73		mg/L		106.9	87.1 - 112.9		

Lab Sample ID: 460-79073-H-1 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 236382

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Organic Carbon	0.30		50.0	52.52		mg/L		105	80 - 120		

Lab Sample ID: 460-79073-H-1 MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 236382

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Carbon	0.30		50.0	52.70		mg/L		105	80 - 120	0	10

Lab Sample ID: 460-79253-H-1 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 236382

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Organic Carbon	3.0		50.0	55.26		mg/L		104	80 - 120		

Lab Sample ID: 460-79253-H-1 MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 236382

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Carbon	3.0		50.0	55.02		mg/L		104	80 - 120	0	10

QC Association Summary

Client: Integral Consulting Inc
Project/Site: NJ Site Drinking Water

TestAmerica Job ID: 460-79113-1

HPLC/IC

Analysis Batch: 339289

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-79113-1	GW0172	Total/NA	Water	300.0	
460-79113-2	GW0173	Total/NA	Water	300.0	
460-79113-3	GW0174	Total/NA	Water	300.0	
460-79113-4	FB0003	Total/NA	Water	300.0	
680-103212-A-2 MS	Matrix Spike	Total/NA	Water	300.0	
680-103212-A-2 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	
LCS 680-339289/30	Lab Control Sample	Total/NA	Water	300.0	
LCSD 680-339289/31	Lab Control Sample Dup	Total/NA	Water	300.0	
MB 680-339289/29	Method Blank	Total/NA	Water	300.0	

Analy i Batch 339475

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460 79113 1	GW0172	Total/NA	Water	300 0	
460 79113 2	GW0173	Total/NA	Water	300 0	
460 79113 2 M	GW0173	Total/NA	Water	300 0	
460-79113-2 MSD	GW0173	Total/NA	Water	300.0	
460-79113-3	GW0174	Total/NA	Water	300.0	
LCS 680-339475/3	Lab Control Sample	Total/NA	Water	300.0	
LCSD 680-339475/4	Lab Control Sample Dup	Total/NA	Water	300.0	
MB 680-339475/2	Method Blank	Total/NA	Water	300.0	

General Chemistry

Analysis Batch: 235724

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-79108-J-1 MS	Matrix Spike	Total/NA	Water	353.2	
460-79108-J-1 MSD	Matrix Spike Duplicate	Total/NA	Water	353.2	
460-79113-1	GW0172	Total/NA	Water	353.2	
460-79113-2	GW0173	Total/NA	Water	353.2	
460-79113-3	GW0174	Total/NA	Water	353.2	
460-79113-4	FB0003	Total/NA	Water	353.2	
LCSSRM 460-235724/10	Lab Control Sample	Total/NA	Water	353.2	
LCSSRM 460-235724/11	Lab Control Sample	Total/NA	Water	353.2	
MB 460-235724/9	Method Blank	Total/NA	Water	353.2	

Analysis Batch: 236042

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-79113-1	GW0172	Total/NA	Water	SM 4500 P E	
460-79113-1 MS	GW0172	Total/NA	Water	SM 4500 P E	
460-79113-1 MSD	GW0172	Total/NA	Water	SM 4500 P E	
460-79113-2	GW0173	Total/NA	Water	SM 4500 P E	
460-79113-3	GW0174	Total/NA	Water	SM 4500 P E	
460-79113-4	FB0003	Total/NA	Water	SM 4500 P E	
LCSSRM 460-236042/4	Lab Control Sample	Total/NA	Water	SM 4500 P E	
MB 460-236042/3	Method Blank	Total/NA	Water	SM 4500 P E	

Analysis Batch: 236180

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-79113-1	GW0172	Total/NA	Water	SM 2320B	
460-79113-2	GW0173	Total/NA	Water	SM 2320B	

General Chemistry (Continued)

Analysis Batch: 236180 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-79113-2 DU	GW0173	Total/NA	Water	SM 2320B	
460-79113-3	GW0174	Total/NA	Water	SM 2320B	
460-79113-4	FB0003	Total/NA	Water	SM 2320B	
LCSSRM 460-236180/14	Lab Control Sample	Total/NA	Water	SM 2320B	
MB 460-236180/13	Method Blank	Total/NA	Water	SM 2320B	

Analysis Batch: 236315

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-79113-1	GW0172	Total/NA	Water	SM 2540D	
460-79113-2	GW0173	Total/NA	Water	SM 2540D	
460-79113-3	GW0174	Total/NA	Water	SM 2540D	
460 79113 4	FB0003	Total/NA	Water	M 2540D	
460 79153 A 1 DU	Duplicate	Total/NA	Water	M 2540D	
LC RM 460 236315/2	Lab Control ample	Total/NA	Water	M 2540D	
MB 460-236315/1	Method Blank	Total/NA	Water	SM 2540D	

Analysis Batch: 236382

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-79073-H-1 MS	Matrix Spike	Total/NA	Water	SM 5310B	
460-79073-H-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 5310B	
460-79113-1	GW0172	Total/NA	Water	SM 5310B	
460-79113-2	GW0173	Total/NA	Water	SM 5310B	
460-79113-3	GW0174	Total/NA	Water	SM 5310B	
460-79113-4	FB0003	Total/NA	Water	SM 5310B	
460-79253-H-1 MS	Matrix Spike	Total/NA	Water	SM 5310B	
460-79253-H-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 5310B	
LCSSRM 460-236382/32	Lab Control Sample	Total/NA	Water	SM 5310B	
LCSSRM 460-236382/4	Lab Control Sample	Total/NA	Water	SM 5310B	
MB 460-236382/3	Method Blank	Total/NA	Water	SM 5310B	
MB 460-236382/31	Method Blank	Total/NA	Water	SM 5310B	

Analysis Batch: 237234

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-79093-P-1 DU	Duplicate	Total/NA	Water	SM 4500 H+ B	
460-79113-1	GW0172	Total/NA	Water	SM 4500 H+ B	
460-79113-2	GW0173	Total/NA	Water	SM 4500 H+ B	
460-79113-3	GW0174	Total/NA	Water	SM 4500 H+ B	
460-79113-4	FB0003	Total/NA	Water	SM 4500 H+ B	
LCSSRM 460-237234/3	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	
MB 460-237234/2	Method Blank	Total/NA	Water	SM 4500 H+ B	

Prep Batch: 237544

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-79062-M-1-B MS	Matrix Spike	Total/NA	Water	SM 4500 NH3 B	
460-79062-M-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 NH3 B	
460-79113-1	GW0172	Total/NA	Water	SM 4500 NH3 B	
460-79113-2	GW0173	Total/NA	Water	SM 4500 NH3 B	
460-79113-3	GW0174	Total/NA	Water	SM 4500 NH3 B	
460-79113-4	FB0003	Total/NA	Water	SM 4500 NH3 B	
LCS 460-237544/2-A	Lab Control Sample	Total/NA	Water	SM 4500 NH3 B	
MB 460-237544/1-A	Method Blank	Total/NA	Water	SM 4500 NH3 B	

General Chemistry (Continued)

Analysis Batch: 237633

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-79062-M-1-B MS	Matrix Spike	Total/NA	Water	SM 4500 NH3 G	237544
460-79062-M-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 NH3 G	237544
460-79113-1	GW0172	Total/NA	Water	SM 4500 NH3 G	237544
460-79113-2	GW0173	Total/NA	Water	SM 4500 NH3 G	237544
460-79113-3	GW0174	Total/NA	Water	SM 4500 NH3 G	237544
460-79113-4	FB0003	Total/NA	Water	SM 4500 NH3 G	237544
LCS 460-237544/2-A	Lab Control Sample	Total/NA	Water	SM 4500 NH3 G	237544
MB 460-237544/1-A	Method Blank	Total/NA	Water	SM 4500 NH3 G	237544

Analysis Batch: 237639

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-79060-B-3 DU	Duplicate	Total/NA	Water	SM 2340C	
460-79113-1	GW0172	Total/NA	Water	SM 2340C	
460-79113-2	GW0173	Total/NA	Water	SM 2340C	
460-79113-3	GW0174	Total/NA	Water	SM 2340C	
460-79113-4	FB0003	Total/NA	Water	SM 2340C	
LCSSRM 460-237639/2	Lab Control Sample	Total/NA	Water	SM 2340C	
MB 460-237639/1	Method Blank	Total/NA	Water	SM 2340C	

Client Sample ID: GW0172 — Lab Sample ID: 460-79113-1

Date Collected: 07/09/14 09:15
Matrix: Water
Date Received: 07/09/14 20:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	339289	07/16/14 19:07	DAS	TAL SAV
Total/NA	Analysis	300.0		5	339475	07/17/14 13:54	DAS	TAL SAV
Total/NA	Analysis	353.2		1	235724	07/11/14 07:34	RAK	TAL EDI
Total/NA	Analysis	SM 2320B		1	236180	07/14/14 11:07	MCC	TAL EDI
Total/NA	Analysis	SM 2340C		1	237639	07/21/14 12:30	IAA	TAL EDI
Total/NA	Analysis	SM 2540D		1	236315	07/15/14 07:34	PLS	TAL EDI
Total/NA	Analysis	SM 4500 H+ B		1	237234	07/18/14 14:29	YAH	TAL EDI
Total/NA	Prep	SM 4500 NH3 B			237544	07/21/14 06:00	JAK	TAL EDI
Total/NA	Analysis	SM 4500 NH3 G		1	237633	07/21/14 13:03	HTV	TAL EDI
Total/NA	Analysis	SM 4500 P E		1	236042	07/12/14 12:11	MAL	TAL EDI
Total/NA	Analysis	SM 5310B		1	236382	07/15/14 10:57	HTV	TAL EDI

Client Sample ID: GW0173 — Lab Sample ID: 460-79113-2

Date Collected: 07/09/14 09:50
Matrix: Water
Date Received: 07/09/14 20:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	339289	07/16/14 19:23	DAS	TAL SAV
Total/NA	Analysis	300.0		2	339475	07/17/14 14:40	DAS	TAL SAV
Total/NA	Analysis	353.2		5	235724	07/11/14 07:49	RAK	TAL EDI
Total/NA	Analysis	SM 2320B		1	236180	07/14/14 10:54	MCC	TAL EDI
Total/NA	Analysis	SM 2340C		1	237639	07/21/14 12:30	IAA	TAL EDI
Total/NA	Analysis	SM 2540D		1	236315	07/15/14 07:34	PLS	TAL EDI
Total/NA	Analysis	SM 4500 H+ B		1	237234	07/18/14 14:31	YAH	TAL EDI
Total/NA	Prep	SM 4500 NH3 B			237544	07/21/14 06:00	JAK	TAL EDI
Total/NA	Analysis	SM 4500 NH3 G		1	237633	07/21/14 13:04	HTV	TAL EDI
Total/NA	Analysis	SM 4500 P E		1	236042	07/12/14 12:11	MAL	TAL EDI
Total/NA	Analysis	SM 5310B		1	236382	07/14/14 22:10	HTV	TAL EDI

Client Sample ID: GW0174 — Lab Sample ID: 460-79113-3

Date Collected: 07/09/14 09:25
Matrix: Water
Date Received: 07/09/14 20:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	339289	07/16/14 19:38	DAS	TAL SAV
Total/NA	Analysis	300.0		5	339475	07/17/14 15:26	DAS	TAL SAV
Total/NA	Analysis	353.2		1	235724	07/11/14 07:37	RAK	TAL EDI
Total/NA	Analysis	SM 2320B		1	236180	07/14/14 11:13	MCC	TAL EDI
Total/NA	Analysis	SM 2340C		1	237639	07/21/14 12:30	IAA	TAL EDI
Total/NA	Analysis	SM 2540D		1	236315	07/15/14 07:34	PLS	TAL EDI

Lab Chronicle

Client: Integral Consulting Inc
Project/Site: NJ Site Drinking Water

TestAmerica Job ID: 460-79113-1

Client Sample ID: GW0174

Lab Sample ID: 460-79113-3

Date Collected: 07/09/14 09:25

Matrix: Water

Date Received: 07/09/14 20:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 H+ B		1	237234	07/18/14 14:33	YAH	TAL EDI
Total/NA	Prep	SM 4500 NH3 B			237544	07/21/14 06:00	JAK	TAL EDI
Total/NA	Analysis	SM 4500 NH3 G		1	237633	07/21/14 13:06	HTV	TAL EDI
Total/NA	Analysis	SM 4500 P E		1	236042	07/12/14 12:11	MAL	TAL EDI
Total/NA	Analysis	SM 5310B		1	236382	07/14/14 22:30	HTV	TAL EDI

Client Sample ID: FB0003

Lab Sample ID: 460-79113-4

Date Collected: 07/09/14 10:00

Matrix: Water

Date Received: 07/09/14 20:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	339289	07/16/14 19:53	DAS	TAL SAV
Total/NA	Analysis	353.2		1	235724	07/11/14 07:39	RAK	TAL EDI
Total/NA	Analysis	SM 2320B		1	236180	07/14/14 11:19	MCC	TAL EDI
Total/NA	Analysis	SM 2340C		1	237639	07/21/14 12:30	IAA	TAL EDI
Total/NA	Analysis	SM 2540D		1	236315	07/15/14 07:34	PLS	TAL EDI
Total/NA	Analysis	SM 4500 H+ B		1	237234	07/18/14 14:35	YAH	TAL EDI
Total/NA	Prep	SM 4500 NH3 B			237544	07/21/14 06:00	JAK	TAL EDI
Total/NA	Analysis	SM 4500 NH3 G		1	237633	07/21/14 13:11	HTV	TAL EDI
Total/NA	Analysis	SM 4500 P E		1	236042	07/12/14 12:11	MAL	TAL EDI
Total/NA	Analysis	SM 5310B		1	236382	07/14/14 22:49	HTV	TAL EDI

Laboratory References:

TAL EDI = TestAmerica Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Certification Summary

Client: Integral Consulting Inc
Project/Site: NJ Site Drinking Water

TestAmerica Job ID: 460-79113-1

Laboratory: TestAmerica Edison

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
New Jersey	NELAP	2	12028	06-30-15

Laboratory: TestAmerica Savannah

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
New Jersey	NELAP	2	GA769	06-30-15

Method Summary

Client: Integral Consulting Inc
Project/Site: NJ Site Drinking Water

TestAmerica Job ID: 460-79113-1

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL SAV
353.2	Nitrogen, Nitrate-Nitrite	MCAWW	TAL EDI
SM 2320B	Alkalinity	SM	TAL EDI
SM 2340C	Hardness, Total (mg/l as CaC03)	SM	TAL EDI
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL EDI
SM 4500 H+ B	pH	SM	TAL EDI
SM 4500 NH3 G	Ammonia	SM	TAL EDI
SM 4500 P E	Orthophosphate	SM	TAL EDI
SM 5310B	Organic Carbon, Total (TOC)	SM	TAL EDI

Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater",

Laboratory References:

TAL EDI = TestAmerica Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Sample Summary

Client: Integral Consulting Inc
Project/Site: NJ Site Drinking Water

TestAmerica Job ID: 460-79113-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
460-79113-1	GW0172	Water	07/09/14 09:15	07/09/14 20:45
460-79113-2	GW0173	Water	07/09/14 09:50	07/09/14 20:45
460-79113-3	GW0174	Water	07/09/14 09:25	07/09/14 20:45
460-79113-4	FB0003	Water	07/09/14 10:00	07/09/14 20:45

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Savannah Job No.: 460-79113-1

SDG No.:

Instrument ID: CICK Analysis Batch Number: 339289

Lab Sample ID: 460-79113-1 Client Sample ID: GW0172

Date Analyzed: 07/16/14 19:07 Lab File ID: 0716141907-37.d GC Column: Dionex AS18 ID: 4(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Bromide	7.28	Baseline	seabrooks d	07/17/14 08:17

Lab Sample ID: 460-79113-2 Client Sample ID: GW0173

Date Analyzed: 07/16/14 19:23 Lab File ID: 0716141923-38.d GC Column: Dionex AS18 ID: 4(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Fluoride	3.27	Split Peak	brazellc	07/20/14 10:56

300.0

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Edison Job No.: 460-79113-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
WTalkLCS_00109	03/31/17	ERA, Lot P226-506			(Purchased Reagent)		Alkalinity	36.5 mg/L
WTamnIM1_00036	12/11/14	06/11/14	Deionized H2O, Lot DI water	100 mL	WTamnSP1_00010	10 mL	Ammonia	100 mg/L
.WTamnSP1_00010	01/30/15	ERACal, Lot 040113			(Purchased Reagent)		Ammonia	1000 mg/L
WTamnSS1_00007	01/30/15	ERA, Lot 050113			(Purchased Reagent)		Ammonia	1000 mg/L
WThardLCS0001_00014	07/31/16	ERA, Lot P219-507			(Purchased Reagent)		Hardness as calcium carbonate	109 mg/L
WTno3+2IM1_00274	07/15/14	07/08/14	Deionized H2O, Lot DI water	100 mL	WTntratSP1_00007	1 mL	Nitrate as N	10 mg/L
							Nitrate Nitrite as N	20 mg/L
					WTntritSP1_00006	1 mL	Nitrate Nitrite as N	20 mg/L
							Nitrite as N	10 mg/L
.WTntratSP1_00007	06/30/15	ERA, Lot 320613			(Purchased Reagent)		Nitrate as N	1000 mg/L
							Nitrate Nitrite as N	1000 mg/L
.WTntritSP1_00006	03/02/15	AccuSPEC, Lot S131121017			(Purchased Reagent)		Nitrate Nitrite as N	1000 mg/L
							Nitrite as N	1000 mg/L
WTno3+2IM2_00276	07/15/14	07/08/14	Deionized H2O, Lot DI water	100 mL	WTntratSS1_00010	1 mL	Nitrate as N	10 mg/L
							Nitrate Nitrite as N	20 mg/L
					WTntritSS1_00008	1 mL	Nitrate Nitrite as N	20 mg/L
							Nitrite as N	10 mg/L
.WTntratSS1_00010	01/16/15	AccuSpec, Lot S131004007			(Purchased Reagent)		Nitrate as N	1000 mg/L
							Nitrate Nitrite as N	1000 mg/L
.WTntritSS1_00008	09/30/14	ERA, Lot 210912			(Purchased Reagent)		Nitrate Nitrite as N	1000 mg/L
							Nitrite as N	1000 mg/L
WTno3LCS_00018	10/02/14	ERA, Lot P203-505			(Purchased Reagent)		Nitrate as N	1.51 mg/L
							Nitrate Nitrite as N	1.51 mg/L
WTntritLCS_00024	10/02/14	ERA, Lot S182-695			(Purchased Reagent)		Nitrite as N	0.612 mg/L
WTophosLCS_00004	03/31/15	ERA, Lot P203-505			(Purchased Reagent)		Orthophosphate as P	5.34 mg/L
WTpHCCV_00022	02/29/16	FISHER, Lot 140782			(Purchased Reagent)		pH	7 SU
WTpHLCS_00015	09/30/14	ERA, Lot P195-977			(Purchased Reagent)		pH	7.03 SU
WTphosSP1_00021	08/14/14	JT Baker, Lot 29471			(Purchased Reagent)		Orthophosphate as P	50 mg/L
WTphosSS1_00019	08/14/14	FISHER, Lot 124970			(Purchased Reagent)		Orthophosphate as P	50 mg/L
WTtocLCS_00027	08/31/16	ERA, Lot P220-516			(Purchased Reagent)		Total Organic Carbon	46.5 mg/L
WTtocSP1_00023	12/04/14	Fisher, Lot 110559			(Purchased Reagent)		Total Organic Carbon	2000 mg/L
WTtocSP2_00021	12/04/14	Fisher, Lot 090618			(Purchased Reagent)		Total Organic Carbon	2000 mg/L
WTtssLCS_00050	10/31/16	ERA, Lot P221-507			(Purchased Reagent)		Total Suspended Solids	46.7 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Savannah Job No.: 460-79113-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
All_Anions_00051	11/14/14	inorganic ventures, Lot H2-MEB510012			(Purchased Reagent)		Bromide	1000 ug/mL
							Chloride	1000 ug/mL
							Fluoride	200 ug/mL
							Sulfate	1000 ug/mL
IC_Anion-1_00009	09/10/14	06/10/14	DI H20, Lot N/A	100 mL	Bromide_00034	50 uL	Bromide	0.5 mg/L
					Chloride_00012	50 uL	Chloride	0.5 mg/L
					Fluoride_00010	10 uL	Fluoride	0.1 mg/L
					Sulfate_00012	50 uL	Sulfate	0.5 mg/L
.Bromide_00034	09/25/14	Environmental express, Lot 1401002			(Purchased Reagent)		Bromide	1000 ug/mL
.Chloride_00012	12/10/14	Environmental Express, Lot 1401001			(Purchased Reagent)		Chloride	1000 mg/L
.Fluoride_00010	08/21/15	Environmental Express, Lot 1327306			(Purchased Reagent)		Fluoride	1000 mg/L
.Sulfate_00012	12/10/14	Environmental Express, Lot 1302312			(Purchased Reagent)		Sulfate	1000 mg/L
IC_Anion-2_00009	09/10/14	06/10/14	DI H20, Lot 2	100 mL	Bromide_00034	100 uL	Bromide	1 mg/L
					Chloride_00012	100 uL	Chloride	1 mg/L
					Fluoride_00010	20 uL	Fluoride	0.2 mg/L
					Sulfate_00012	100 uL	Sulfate	1 mg/L
.Bromide_00034	09/25/14	Environmental express, Lot 1401002			(Purchased Reagent)		Bromide	1000 ug/mL
.Chloride_00012	12/10/14	Environmental Express, Lot 1401001			(Purchased Reagent)		Chloride	1000 mg/L
.Fluoride_00010	08/21/15	Environmental Express, Lot 1327306			(Purchased Reagent)		Fluoride	1000 mg/L
.Sulfate_00012	12/10/14	Environmental Express, Lot 1302312			(Purchased Reagent)		Sulfate	1000 mg/L
IC_Anion-3_00009	09/10/14	06/10/14	DI H20, Lot N/A	100 mL	Bromide_00034	250 uL	Bromide	2.5 mg/L
					Chloride_00012	250 uL	Chloride	2.5 mg/L
					Fluoride_00010	50 uL	Fluoride	0.5 mg/L
					Sulfate_00012	250 uL	Sulfate	2.5 mg/L
.Bromide_00034	09/25/14	Environmental express, Lot 1401002			(Purchased Reagent)		Bromide	1000 ug/mL
.Chloride_00012	12/10/14	Environmental Express, Lot 1401001			(Purchased Reagent)		Chloride	1000 mg/L
.Fluoride_00010	08/21/15	Environmental Express, Lot 1327306			(Purchased Reagent)		Fluoride	1000 mg/L
.Sulfate_00012	12/10/14	Environmental Express, Lot 1302312			(Purchased Reagent)		Sulfate	1000 mg/L
IC_Anion-4_00011	09/10/14	06/10/14	DI H20, Lot N/A	100 mL	Bromide_00034	500 uL	Bromide	5 mg/L
					Chloride_00012	500 uL	Chloride	5 mg/L
					Fluoride_00010	100 uL	Fluoride	1 mg/L
					Sulfate_00012	500 uL	Sulfate	5 mg/L
.Bromide_00034	09/25/14	Environmental express, Lot 1401002			(Purchased Reagent)		Bromide	1000 ug/mL
.Chloride_00012	12/10/14	Environmental Express, Lot 1401001			(Purchased Reagent)		Chloride	1000 mg/L
.Fluoride_00010	08/21/15	Environmental Express, Lot 1327306			(Purchased Reagent)		Fluoride	1000 mg/L
.Sulfate_00012	12/10/14	Environmental Express, Lot 1302312			(Purchased Reagent)		Sulfate	1000 mg/L
IC_Anion-5_00017	09/10/14	06/10/14	DI H20, Lot 5	100 mL	Bromide_00034	1 mL	Bromide	10 mg/L
					Chloride_00012	1 mL	Chloride	10 mg/L
					Fluoride_00010	200 uL	Fluoride	2 mg/L
					Sulfate_00012	1 mL	Sulfate	10 mg/L
.Bromide_00034	09/25/14	Environmental express, Lot 1401002			(Purchased Reagent)		Bromide	1000 ug/mL
.Chloride_00012	12/10/14	Environmental Express, Lot 1401001			(Purchased Reagent)		Chloride	1000 mg/L
.Fluoride_00010	08/21/15	Environmental Express, Lot 1327306			(Purchased Reagent)		Fluoride	1000 mg/L
.Sulfate_00012	12/10/14	Environmental Express, Lot 1302312			(Purchased Reagent)		Sulfate	1000 mg/L
IC_Anion-6_00009	09/10/14	06/10/14	DI H20, Lot N/A	100 mL	Bromide_00034	2 mL	Bromide	20 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Savannah Job No.: 460-79113-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					Chloride_00012	2 mL	Chloride	20 mg/L
					Fluoride_00010	400 uL	Fluoride	4 mg/L
					Sulfate_00012	2 mL	Sulfate	20 mg/L
.Bromide_00034	09/25/14	Environmental express, Lot 1401002			(Purchased Reagent)		Bromide	1000 ug/mL
.Chloride_00012	12/10/14	Environmental Express, Lot 1401001			(Purchased Reagent)		Chloride	1000 mg/L
.Fluoride_00010	08/21/15	Environmental Express, Lot 1327306			(Purchased Reagent)		Fluoride	1000 mg/L
.Sulfate_00012	12/10/14	Environmental Express, Lot 1302312			(Purchased Reagent)		Sulfate	1000 mg/L
IC_Anion-7_00009	09/10/14	06/10/14	DI H20, Lot N/A	100 mL	Bromide_00033	5 mL	Bromide	50 mg/L
					Chloride_00012	5 mL	Chloride	50 mg/L
					Fluoride_00010	800 uL	Fluoride	8 mg/L
					Sulfate_00012	5 mL	Sulfate	50 mg/L
.Bromide_00033	08/27/14	Environmental express, Lot 1303708			(Purchased Reagent)		Bromide	1000 ug/mL
.Chloride_00012	12/10/14	Environmental Express, Lot 1401001			(Purchased Reagent)		Chloride	1000 mg/L
.Fluoride_00010	08/21/15	Environmental Express, Lot 1327306			(Purchased Reagent)		Fluoride	1000 mg/L
.Sulfate_00012	12/10/14	Environmental Express, Lot 1302312			(Purchased Reagent)		Sulfate	1000 mg/L
IC_Anion-ICV_00014	09/10/14	06/10/14	DI H20, Lot N/A	100 mL	All_Anions_00051	1 mL	Bromide	10 mg/L
							Chloride	10 mg/L
							Fluoride	2 mg/L
							Sulfate	10 mg/L
.All_Anions_00051	11/14/14	inorganic ventures, Lot H2-MEB510012			(Purchased Reagent)		Bromide	1000 ug/mL
							Chloride	1000 ug/mL
							Fluoride	200 ug/mL
							Sulfate	1000 ug/mL

Reagent

All_Anions_00051

INORGANIC VENTURES™
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info@inorganicventures.com

CERTIFICATE OF ANALYSIS

1.0 **INORGANIC VENTURES** is an ISO Guide 34 "General Requirements for the Competence of Reference Material Producers" and ISO 9001 registered manufacturer. Our manufacturing laboratory is accredited to ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories."

ACCREDITED Testing Laboratory Certificate 883.01 · ACCREDITED Reference Material Producer Certificate 883.02

2.0 **DESCRIPTION OF CRM** **Ion Chromatography** **Custom Solution**

Catalog No.: STLGA-ICAL-1

Lot Number: **H2-MEB510012**

Matrix: H2O

3576126
ID: All_Anions_00051
Exp: 06/01/15 Prpd: CMB
All_anions

1,000 µg/mL ea:
Bromide, Chloride, Sulfate,

200 µg/mL ea:
Fluoride

Reviewed KB 05.14.14

3.0 **CERTIFIED VALUES AND UNCERTAINTIES**

ION	CERTIFIED VALUE	ION	CERTIFIED VALUE	ION	CERTIFIED VALUE
Bromide	1,000 ± 6 µg/mL	Chloride	1,000 ± 7 µg/mL	Fluoride	200.1 ± 1.0 µg/mL
Sulfate	1,000 ± 5 µg/mL				

Certified Density: 1.004 g/mL (measured at 20 ± 1°C)

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Certified Value $(\bar{x}) = \frac{\sum x_i}{n}$

$(\bar{x})$ = mean
x_i = individual results
n = number of measurements

Uncertainty (±) = $2\,[\,\Sigma(s_i)^2\,]^{1/2}$

2 = the coverage factor.
$[\,\Sigma(s_i)^2\,]^{1/2}$ = The square root of the sum of the squares of the most common errors (where 's' stands for the standard deviation) from instrumental measurement, density, NIST SRM uncertainty, weighing, dilution to volume, homogeneity, long term stability and short term stability.

4.0 **TRACEABILITY TO NIST AND VALUES OBTAINED BY INDEPENDENT METHODS**

· "Property of the result of a measurement or the value of a standard whereby it can be related to stated references, usually national or international standards, through an unbroken chain of comparisons all having stated uncertainties." (ISO VIM, 2nd ed., 1993, definition 6.10)

· This product is Traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRMs are available, the term 'in-house std.' is specified.

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a NIST SRM/RM. See section 4.2 for balance traceability.

11.0 DATE OF CERTIFICATION AND PERIOD OF VALIDITY

11.1 Shelf Life - The period of time during which the concentration of the analyte(s) in a properly packaged, unopened, and unused standard stored under environmentally controlled and monitored conditions will remain within the specified uncertainty range. Shelf life is limited primarily by transpiration (loss of water from the solution) and infrequently, by chemical instability.

11.2 Expiration Date - The date after which a CRM should not be used. Routine laboratory use of a CRM increases transpiration losses and the chance of contamination which affect the integrity of the CRM and limit its useful life. Manufacturer concurs with state and federal regulatory agencies' recommendations that solution standards be assigned a one-year expiration date.

11.3 Chemical Stability - Studies have been conducted on this or similar CRMs and it has been demonstrated that this CRM is chemically stable for a period of not less than two years provided the "Storage & Handling" conditions are followed that are described in section 7.0.

Certification Date: January 06, 2014

Expiration Date: EXPIRES 1/2015

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:	Christy Shortridge Product Documentation Technician	Christy Shortridge
Certificate Approved By:	Brian Alexander PhD., Technical Process Director	Brian Alexander
Certifying Officer:	Paul Gaines PhD., Senior Technical Director	Paul R Gaines

Reagent

Bromide_00033

ENVIRONMENTAL EXPRESS

Certificate of Analysis

3434853
ID: Bromide_00033
Exp: 07/01/15 Prpd: CMB
Bromide 2ND SOURCE

Product Description:

Name:	Bromide	Source Material:	Sodium Bromide
Part Number:	**IC-BR-M**	Material Purity:	99.995%
Lot Number:	**1303708**	Matrix:	H_2O

Certified Value:

Bromide 1000 µg/mL ± 5 µg/mL

The Certified value is based on gravimetric and volumetric preparation, and confirmed against SRM 3184 (lot number 020701) by ion chromatography (IC) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2.

Preparation Information:

The standard solution is prepared using high purity materials and assayed by analytical methods for conformity prior to use. This standard was prepared using the methods developed at NIST for SRM Spectrometric Standard Solutions under appropriate laboratory conditions. The matrix is 18 megaohm deionized water.
Stability of this product is based upon rigorous short term and long term testing of the solution for the certified value. This testing includes, but is not limited to, the effect of temperature and packaging on the product.

Intended Use:

This Certified Reference Material (CRM) is intended for use as a calibration standard for the quantitative determination of bromide, calibration of instruments such as ion chromatography (IC), and validation of analytical methods. It also can be used in EPA, ASTM and other methods.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

a. **Standard Weight and Analytical Balance**
The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.
The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**
The calibration of volumetric vessels is checked annually using the NBS 602 method.

c. **Thermometer**
The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards:**
The Calibration Standard is directly traceable to SRM 3100 Series Spectrometric Standard Solutions.

Lot No.: 1303708
Rev. No.: 3.1.0
Page 1 of 2

High-Purity Standards is certified to ISO 9001:2008 and accredited to ISO/IEC 17025:2005 and ISO Guide 34:2009.

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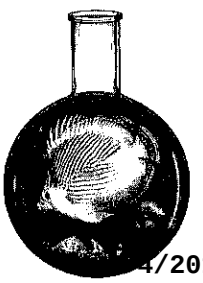

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Refer to Material Safety Datasheet (MSDS) for hazardous information.

Expiration Information:

The expiry date is guaranteed to be valid for eighteen months from the shipping date provided. For this reason, standards from the same lot may have different expiration dates.

Preparation Date:	**February 6, 2013**
Shipped Date:	**12/31/2013**
Expiration Date:	**7/1/2015**
Certificate Issue Date:	**March 19, 2013**

Kim Phuong Tran

Kim-Phuong Tran,
Organic Laboratory Manager

Angel Sellers

Angel Sellers
Quality Manager

NOTICE: HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The data and information as stated was furnished by the manufacturer of the product. The information provided in this certificate pertains only to the lot number specified. None of the information provided in this certificate may be used, reproduced or transmitted in any form or by any means without written approval from High Purity Standards.

High-Purity Standards is certified to ISO 9001:2008
and accredited to ISO/IEC 17025:2005 and ISO Guide 34:2009.

Reagent

Bromide_00034

Reviewed
KB 03.25.14

ENVIRONMENTAL EXPRESS

Certificate of Analysis

3502865
ID: Bromide_00034
Exp:03/25/14 Prpd:CMB Opn:03/25/14
Bromide 2ND SOURCE

Product Description:

Name:	Bromide	Source Material:	Sodium Bromide
Part Number:	**IC-BR-M**	Material Purity:	99.5%
Lot Number:	**1401002**	Matrix:	H_2O

Bromide_00034

Certified Value:

Bromide 1000 μg/mL ± 5 μg/mL

The Certified value is based on gravimetric and volumetric preparation, and confirmed against SRM 3184 (lot number 020701) by ion chromatography (IC) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2.

Preparation Information:

The standard solution is prepared using high purity materials and assayed by analytical methods for conformity prior to use. This standard was prepared using the methods developed at NIST for SRM Spectrometric Standard Solutions under appropriate laboratory conditions. The matrix is 18 megaohm deionized water.
Stability of this product is based upon rigorous short term and long term testing of the solution for the certified value. This testing includes, but is not limited to, the effect of temperature and packaging on the product.

Intended Use:

This Certified Reference Material (CRM) is intended for use as a calibration standard for the quantitative determination of bromide, calibration of instruments such as ion chromatography (IC), and validation of analytical methods. It also can be used in EPA, ASTM and other methods.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

a. **Standard Weight and Analytical Balance**
The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.
The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**
The calibration of volumetric vessels is checked annually using the ASTM method E542.

c. **Thermometer**
The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards:**
The Calibration Standard is directly traceable to SRM 3100 Series Spectrometric Standard Solutions.

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

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Lot No.: 1401002
Rev. No.: 5.2.0
Page 1 of 2

High-Purity Standards is certified to ISO 9001:2008 and accredited to ISO/IEC 17025:2005 and ISO Guide 34:2009

Refer to Material Safety Datasheet (MSDS) for hazardous information.

Expiration Information:

The expiry date is guaranteed to be valid for eighteen months from the shipping date provided. For this reason, standards from the same lot may have different expiration dates.

Preparation Date:	**January 10, 2014**
Shipped Date:	3/14/14
Expiration Date:	9/14/15
Certificate Issue Date:	**January 24, 2014**

Quality Information:

ISO/IEC 17025:2005 Accreditation
Certificate Number AT-1529

Kim-Phuong Tran,
Organic Laboratory Manager

ISO Guide 34:2009 (RMP) Accreditation
Certificate Number AR-1436

Angel Sellers
Quality Manager

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High-Purity Standards is certified to ISO 9001:2008 and accredited to ISO/IEC 17025:2005 and ISO Guide 34:2009.

Reagent

Chloride_00012

3618507
ID: Chloride_00012
Exp:12/10/14 Prpd:DAS Opn:06/10/14
Chloride standard for Ica

ENVIRONMENTAL EXPRESS

Certificate of Analysis

Product Description:

Name:	Chloride	Source Material:	Sodium Chloride
Part Number:	**IC-CL-M**	Material Purity:	99.9%
Lot Number:	**1401001**	Matrix:	H_2O

Received 6-10-14 AY

Certified Value:

Chloride 1000 µg/mL ± 5 µg/mL

The Certified value is based on gravimetric and volumetric preparation, and confirmed against SRM 3182 (lot number 060925) by ion chromatography (IC) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2.

Preparation Information:

The standard solution is prepared using high purity materials and assayed by analytical methods for conformity prior to use. This standard was prepared using the methods developed at NIST for SRM Spectrometric Standard Solutions under appropriate laboratory conditions. The matrix is 18 megaohm deionized water.
Stability of this product is based upon rigorous short term and long term testing of the solution for the certified value. This testing includes, but is not limited to, the effect of temperature and packaging on the product.

Intended Use:

This Certified Reference Material (CRM) is intended for use as a calibration standard for the quantitative determination of chloride, calibration of instruments such as ion chromatography (IC), and validation of analytical methods. It also can be used in EPA, ASTM and other methods.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

a. **Standard Weight and Analytical Balance**
The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.
The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**
The calibration of volumetric vessels is checked annually using the ASTM method E542.

c. **Thermometer**
The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards:**
The Calibration Standard is directly traceable to SRM 3100 Series Spectrometric Standard Solutions.

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4/2014

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Refer to Material Safety Datasheet (MSDS) for hazardous information.

Expiration Information:

The expiry date is guaranteed to be valid for eighteen months from the shipping date provided. For this reason, standards from the same lot may have different expiration dates.

Preparation Date:	**January 10, 2014**
Shipped Date:	**6/2/2014**
Expire Date:	**12/2/2015**
Certificate Issue Date:	**January 20, 2014**

Quality Information:

ISO/IEC 17025:2005 Accreditation
Certificate Number AT-1529

Kim Phuong Tran

Kim-Phuong Tran,
Organic Laboratory Manager

ISO Guide 34:2009 (RMP) Accreditation
Certificate Number AR-1436

Angel Sellers

Angel Sellers
Quality Manager

NOTICE: HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The data and information as stated was furnished by the manufacturer of the product. The information provided in this certificate pertains only to the lot number specified. None of the information provided in this certificate may be used, reproduced or transmitted in any form or by any means without written approval from High Purity Standards.

Reagent

Fluoride_00010

ENVIRONMENTAL EXPRESS

Certificate of Analysis

Product Description:

Name:	Fluoride	Source Material:	Sodium Fluoride
Part Number:	**IC-FF-M**	Material Purity:	100%
Lot Number:	**1327306**	Matrix:	H_2O

3434852
ID: Fluoride_00010
Exp: 07/01/15 Prpd: CMB
Fluoride standard for the

Certified Value:

Fluoride 1000 µg/mL ± 6 µg/mL

The Certified value is based on gravimetric and volumetric preparation, and confirmed against SRM 3183 (lot number 050721) by ion chromatography (IC) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor k is about 2.

Preparation Information:

The standard solution is prepared using high purity materials and assayed by analytical methods for conformity prior to use. This standard was prepared using the methods developed at NIST for SRM Spectrometric Standard Solutions under appropriate laboratory conditions. The matrix is 18 megaohm deionized water.

Stability of this product is based upon rigorous short term and long term testing of the solution for the certified value. This testing includes, but is not limited to, the effect of temperature and packaging on the product.

Intended Use:

This Certified Reference Material (CRM) is intended for use as a calibration standard for the quantitative determination of fluoride, calibration of instruments such as ion chromatography (IC), and validation of analytical methods. It also can be used in EPA, ASTM and other methods.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

a. **Standard Weight and Analytical Balance**
The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.
The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**
The calibration of volumetric vessels is checked annually using the ASTM method E542.

c. **Thermometer**
The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards:**
The Calibration Standard is directly traceable to SRM 3100 Series Spectrometric Standard Solutions.

High-Purity Standards is certified to ISO 9001:2008 and accredited to ISO/IEC 17025:2005 and ISO Guide 34:2009.

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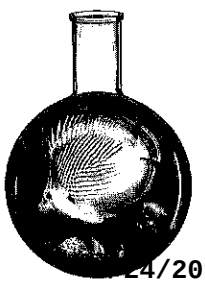

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Refer to Material Safety Datasheet (MSDS) for hazardous information.

Expiration Information:

The expiry date is guaranteed to be valid for eighteen months from the shipping date provided. For this reason, standards from the same lot may have different expiration dates.

Preparation Date:	**September 30, 2013**
Shipped Date:	**12/31/2013**
Expiration Date:	**7/1/2015**
Certificate Issue Date:	**October 15, 2013**

Kim Phuong Tran

Kim-Phuong Tran,
Organic Laboratory Manager

Angel Sellers

Angel Sellers
Quality Manager

NOTICE: HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The data and information as stated was furnished by the manufacturer of the product. The information provided in this certificate pertains only to the lot number specified. None of the information provided in this certificate may be used, reproduced or transmitted in any form or by any means without written approval from High Purity Standards.

High-Purity Standards is certified to ISO 9001:2008 and accredited to ISO/IEC 17025:2005 and ISO Guide 34:2009.

Reagent

Sulfate_00012

3618523
ID: Sulfate_00012
Exp:12/10/14 Prpd:DAS Opn:06/10/1
Sulfate standard

ENVIRONMENTAL EXPRESS

Certificate of Analysis

Reviewed by 6-10-14

Product Description:

Name:	Sulfate	Source Material:	Sodium Sulfate
Part Number:	**IC-SS-M**	Material Purity:	ACS grade
Lot Number:	**1302312**	Matrix:	H_2O

Certified Value:

Sulfate 1000 µg/mL ± 5 µg/mL

The Certified value is based on gravimetric and volumetric preparation, and confirmed against SRM 3181 (lot number 080603) by ion chromatography (IC) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2.

Preparation Information:

The standard solution is prepared using high purity materials and assayed by analytical methods for conformity prior to use. This standard was prepared using the methods developed at NIST for SRM Spectrometric Standard Solutions under appropriate laboratory conditions. The matrix is 18 megaohm deionized water.
Stability of this product is based upon rigorous short term and long term testing of the solution for the certified value. This testing includes, but is not limited to, the effect of temperature and packaging on the product.

Intended Use:

This Certified Reference Material (CRM) is intended for use as a calibration standard for the quantitative determination of sulfate, calibration of instruments such as ion chromatography (IC), and validation of analytical methods. It also can be used in EPA, ASTM and other methods.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

a. **Standard Weight and Analytical Balance**
The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.
The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**
The calibration of volumetric vessels is checked annually using the NBS 602 method.

c. **Thermometer**
The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards:**
The Calibration Standard is directly traceable to SRM 3100 Series Spectrometric Standard Solutions

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Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Refer to Material Safety Datasheet (MSDS) for hazardous information.

Expiration Information:

The expiry date is guaranteed to be valid for eighteen months from the shipping date provided. For this reason, standards from the same lot may have different expiration dates.

Preparation Date:	**January 23, 2013**
Shipped Date:	**6/2/2014**
Expire Date:	**12/2/2015**
Certificate Issue Date:	**February 6, 2013**

Quality Information:

ISO/IEC 17025:2005 Accreditation
Certificate Number AT-1529

Kim Phuong Tran

Kim-Phuong Tran,
Organic Laboratory Manager

ISO Guide 34:2009 (RMP) Accreditation
Certificate Number AR-1436

Angel Sellers

Angel Sellers
Quality Manager

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High-Purity Standards is certified to ISO 9001:2008 and accredited to ISO/IEC 17025:2005 and ISO Guide 34:2009.

300_ORGFM_28D

Anions, Ion Chromatography

FORM III
HPLC/IC LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 460-79113-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 0716141821-34.d

Lab ID: LCS 680-339289/30 Client ID:

COMPOUND	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC	QC LIMITS REC	#
Sulfate	10.0	9.955	100	90-110	
Fluoride	2.00	2.031	102	90-110	
Chloride	10.0	9.681	97	90-110	
Bromide	10.0	10.15	101	90-110	

Column to be used to flag recovery and RPD values

FORM III 300.0

FORM III
HPLC/IC LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 460-79113-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 0717141050-7.d

Lab ID: LCS 680-339475/3 Client ID:

COMPOUND	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC	QC LIMITS REC	#
Sulfate	10.0	10.10	101	90-110	
Chloride	10.0	9.875	99	90-110	

Column to be used to flag recovery and RPD values

FORM III 300.0

FORM III
HPLC/IC LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 460-79113-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 0716141837-35.d

Lab ID: LCSD 680-339289/31 Client ID:

COMPOUND	SPIKE ADDED (mg/L)	LCSD CONCENTRATION (mg/L)	LCSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
Sulfate	10.0	10.00	100	0	30	90-110	
Fluoride	2.00	2.036	102	0	30	90-110	
Chloride	10.0	9.717	97	0	30	90-110	
Bromide	10.0	10.17	102	0	30	90-110	

Column to be used to flag recovery and RPD values

FORM III 300.0

FORM III
HPLC/IC LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 460-79113-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 0717141105-8.d

Lab ID: LCSD 680-339475/4 Client ID:

COMPOUND	SPIKE ADDED (mg/L)	LCSD CONCENTRATION (mg/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Sulfate	10.0	10.12	101	0	30	90-110	
Chloride	10.0	9.888	99	0	30	90-110	

Column to be used to flag recovery and RPD values

FORM III 300.0

FORM III
HPLC/IC MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 460-79113-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 0717141455-23.d

Lab ID: 460-79113-2 MS Client ID: GW0173 MS

COMPOUND	SPIKE ADDED (mg/L)	SAMPLE CONCENTRATION (mg/L)	MS CONCENTRATION (mg/L)	MS % REC	QC LIMITS REC	#
Sulfate	20.0	24.0	44.02	100	80-120	
Fluoride	4.00	0.075 J	4.067	100	80-120	
Chloride	20.0	60.6	79.16	93	80-120	
Bromide	20.0	0.50 U	20.54	103	80-120	

Column to be used to flag recovery and RPD values

FORM III 300.0

FORM III
HPLC/IC MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 460-79113-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 0716142312-53.d

Lab ID: 680-103212-A-2 MS Client ID:

COMPOUND	SPIKE ADDED (mg/L)	SAMPLE CONCENTRATION (mg/L)	MS CONCENTRATION (mg/L)	MS % REC	QC LIMITS REC	#
Sulfate	10.0	0.68	10.48	98	80-120	
Fluoride	2.00	0.076 J	2.076	100	80-120	
Chloride	10.0	6.23	15.79	96	80-120	
Bromide	10.0	0.25 U	9.999	100	80-120	

Column to be used to flag recovery and RPD values

FORM III 300.0

FORM III
HPLC/IC MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 460-79113-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 0717141510-24.d

Lab ID: 460-79113-2 MSD Client ID: GW0173 MSD

COMPOUND	SPIKE ADDED (mg/L)	MSD CONCENTRATION (mg/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Sulfate	20.0	44.21	101	0	30	80-120	
Fluoride	4.00	4.081	100	0	30	80-120	
Chloride	20.0	79.43	94	0	30	80-120	
Bromide	20.0	20.62	103	0	30	80-120	

Column to be used to flag recovery and RPD values

FORM III 300.0

FORM III
HPLC/IC MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 460-79113-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 0716142328-54.d

Lab ID: 680-103212-A-2 MSD Client ID:

COMPOUND	SPIKE ADDED (mg/L)	MSD CONCENTRATION (mg/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Sulfate	10.0	10.54	99	1	30	80-120	
Fluoride	2.00	2.085	100	0	30	80-120	
Chloride	10.0	15.84	96	0	30	80-120	
Bromide	10.0	10.04	100	0	30	80-120	

Column to be used to flag recovery and RPD values

FORM III 300.0

FORM IV
HPLC/IC METHOD BLANK SUMMARY

Lab Name: TestAmerica Savannah Job No.: 460-79113-1

SDG No.:

Lab File ID: 0716141806-33.d Lab Sample ID: MB 680-339289/29

Matrix: Water Date Extracted:

Instrument ID: CICK Date Analyzed: 07/16/2014 18:06

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 680-339289/30	0716141821-34.d	07/16/2014 18:21
	LCSD 680-339289/31	0716141837-35.d	07/16/2014 18:37
GW0172	460-79113-1	0716141907-37.d	07/16/2014 19:07
GW0173	460-79113-2	0716141923-38.d	07/16/2014 19:23
GW0174	460-79113-3	0716141938-39.d	07/16/2014 19:38
FB0003	460-79113-4	0716141953-40.d	07/16/2014 19:53
	CCB 680-339289/43	0716142141-47.d	07/16/2014 21:41
	680-103212-A-2 MS	0716142312-53.d	07/16/2014 23:12
	680-103212-A-2 MSD	0716142328-54.d	07/16/2014 23:28
	CCB 680-339289/53	0717140014-57.d	07/17/2014 00:14

FORM IV
HPLC/IC METHOD BLANK SUMMARY

Lab Name: TestAmerica Savannah Job No.: 460-79113-1

SDG No.:

Lab File ID: 0717141034-6.d Lab Sample ID: MB 680-339475/2

Matrix: Water Date Extracted:

Instrument ID: CICK Date Analyzed: 07/17/2014 10:34

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 680-339475/3	0717141050-7.d	07/17/2014 10:50
	LCSD 680-339475/4	0717141105-8.d	07/17/2014 11:05
GW0172	460-79113-1	0717141354-19.d	07/17/2014 13:54
	CCB 680-339475/17	0717141424-21.d	07/17/2014 14:24
GW0173	460-79113-2	0717141440-22.d	07/17/2014 14:40
GW0173 MS	460-79113-2 MS	0717141455-23.d	07/17/2014 14:55
GW0173 MSD	460-79113-2 MSD	0717141510-24.d	07/17/2014 15:10
GW0174	460-79113-3	0717141526-25.d	07/17/2014 15:26
	CCB 680-339475/23	0717141556-27.d	07/17/2014 15:56

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah
Job No.: 460-79113-1
SDG No.:
Client Sample ID: GW0172
Lab Sample ID: 460-79113-1
Matrix: Water
Lab File ID: 0716141907-37.d
Analysis Method: 300.0
Date Collected: 07/09/2014 09:15
Extraction Method:
Date Extracted:
Sample wt/vol: 1(mL)
Date Analyzed: 07/16/2014 19:07
Con. Extract Vol.: 1(mL)
Dilution Factor: 1
Injection Volume: 25(uL)
GC Column: Dionex AS18 ID: 4(mm)
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 339289
Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
16984-48-8	Fluoride	0.19		0.10	0.025
16887-00-6	Chloride	46.7		0.50	0.25
24959-67-9	Bromide	0.25	U	0.50	0.25

TestAmerica Savannah
Target Compound Quantitation Report

Data File:	\\SAVCHROM\ChromData\CICK\20140716-11038.b\0716141907-37.d				
Lims ID:	460-79113-A-1	Lab Sample ID:	680-79113-1		
Client ID:	GW0172				
Sample Type:	Client				
Inject. Date:	16-Jul-2014 19:07:00	ALS Bottle#:	0	Worklist Smp#:	33
Injection Vol:	25.0 ul	Dil. Factor:	1.0000		
Sample Info:	460-79113-A-1 2K071614 1K082812A				
Misc. Info.:	35				
Operator ID:		Instrument ID:	CICK		
Method:	\\SAVCHROM\ChromData\CICK\20140716-11038.b\300.0_9056A_CICK.m				
Limit Group:	Anions - 28D - ORGFRMS				
Last Update:	17-Jul-2014 08:22:38	Calib Date:	11-Jul-2014 12:37:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\SAVCHROM\ChromData\CICK\20140711-10925.b\0711141237-11.d				
Column 1 :	Dionex Ion Pac AS18 (4.00 mm)		Det: 0118131406-12		
Process Host:	XAWRK033				
First Level Reviewer: seabrooksd		Date:	17-Jul-2014 08:17:18		

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1 Fluoride	3.258	3.275	-0.017	4790987	0.1862	
2 Chloride	4.492	4.500	-0.008	901795762	46.7	
3 Sulfate	5.808	5.992	-0.184	2755421673	200.8	E
4 Bromide	7.283	7.350	-0.067	6804	0.1618	M

QC Flag Legend

Processing Flags
E - Exceeded Maximum Amount

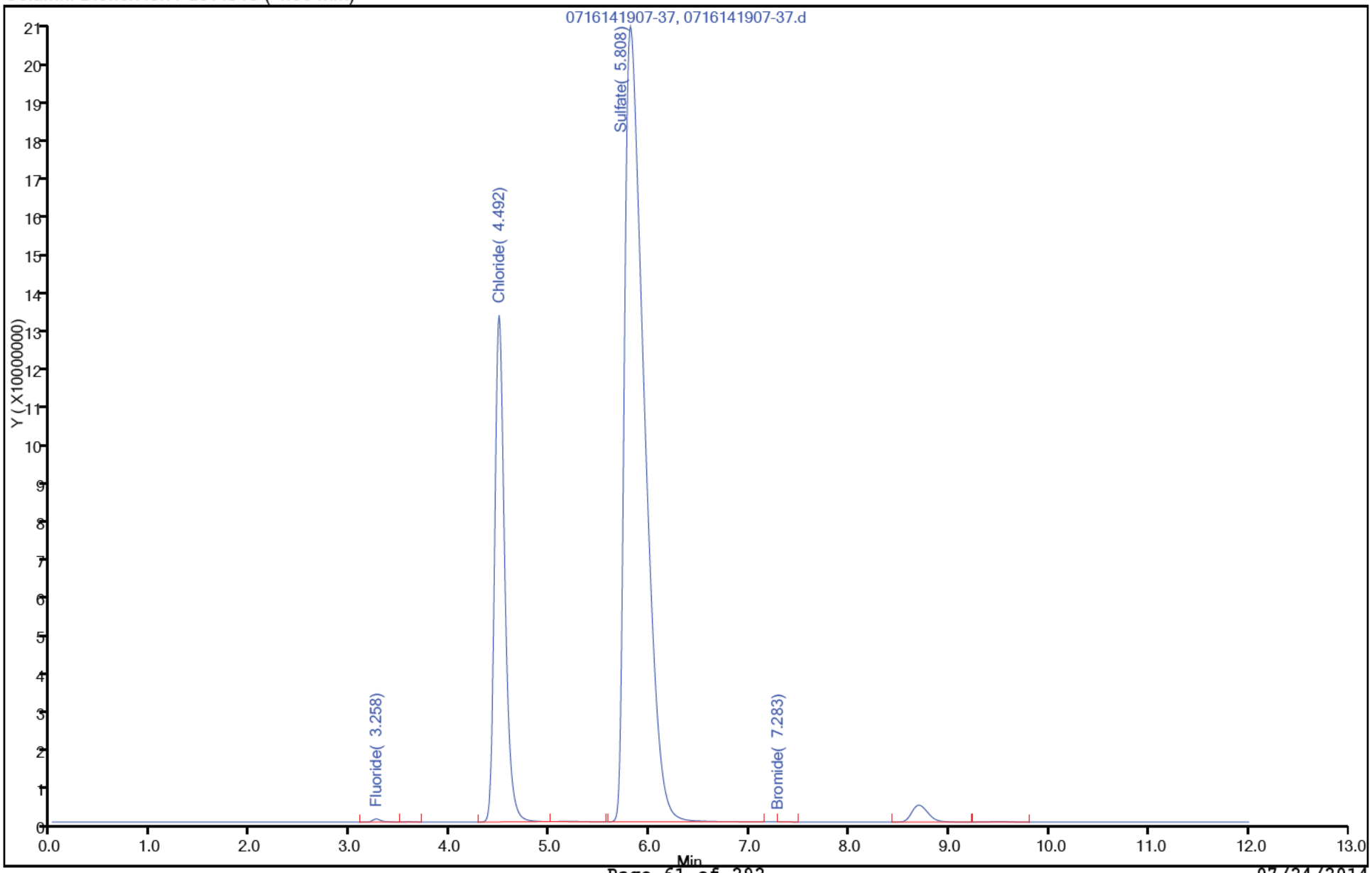
Review Flags
M - Manually Integrated

Report Date: 17-Jul-2014 08:22:40 Chrom Revision: 2.2 24-Jun-2014 07:21:42

TestAmerica Savannah

Data File:	\\SAVCHROM\ChromData\CICK\20140716-11038.b\0716141907-37.d				
Injection Date:	16-Jul-2014 19:07:00	Instrument ID:	CICK	Operator ID:	
Lims ID:	460-79113-A-1	Lab Sample ID:	680-79113-1	Worklist Smp#:	33
Client ID:	GW0172				
Injection Vol:	25.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300.0_9056A_CICK	Limit Group:	Anions - 28D - ORGFRMS		

Column: Dionex Ion Pac AS18 (4.00 mm)



Manual Integration/User Assign Peak Report

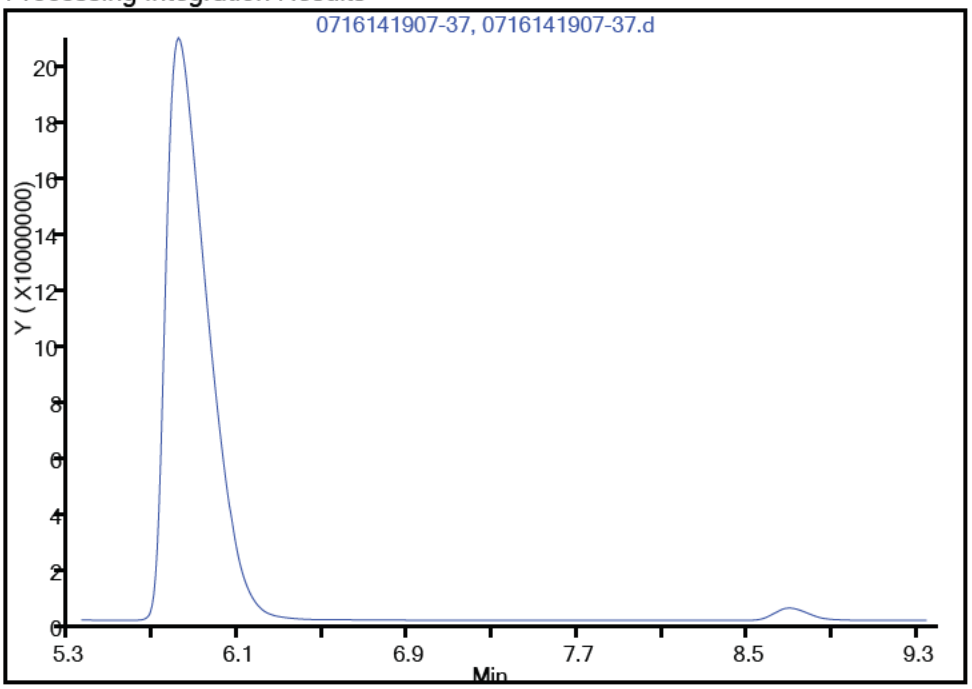
TestAmerica Savannah

Data File:	\\SAVCHROM\ChromData\CICK\20140716-11038.b\0716141907-37.d				
Injection Date:	16-Jul-2014 19:07:00	Instrument ID:	CICK		
Lims ID:	460-79113-A-1	Lab Sample ID:	680-79113-1		
Client ID:	GW0172				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	33
Injection Vol:	25.0 ul	Dil. Factor:	1.0000		
Method:	300.0_9056A_CICK	Limit Group:	Anions - 28D - ORGFRMS		
Column:	Dionex Ion Pac AS18 (4.00 mm)	Detector	0118131406-12		

4 Bromide, CAS: 24959-67-9

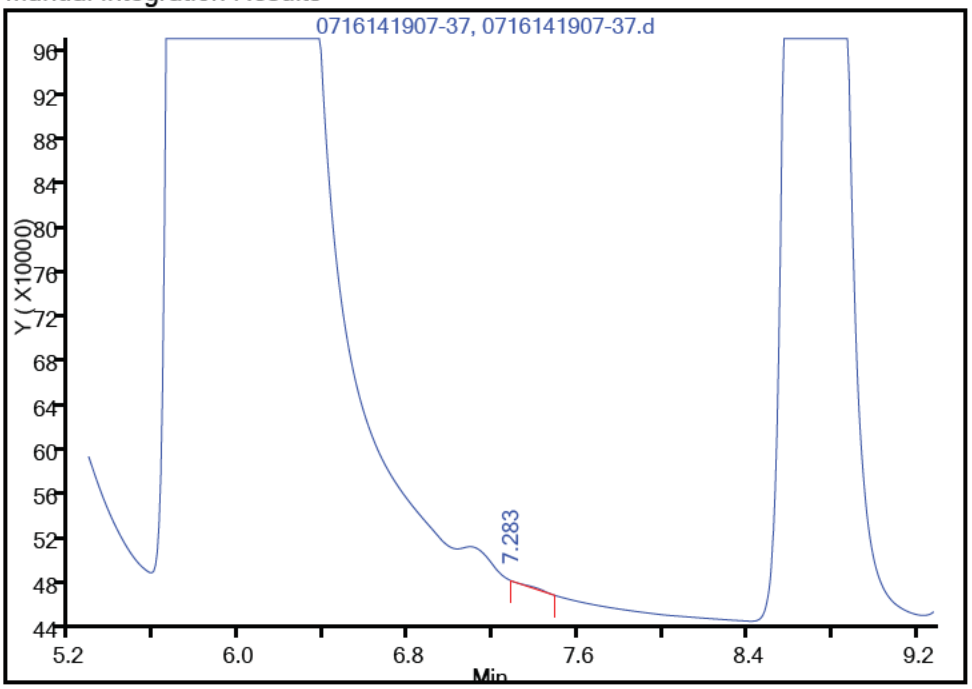
Not Detected
Expected RT: 7.35

Processing Integration Results



RT: 7.28
Response: 6804
Amount: 0.161780

Manual Integration Results



Reviewer: seabrooksd, 17-Jul-2014 08:17:18
Audit Action: Manually Integrated/Assigned Compound ID
Audit Reason: Baseline

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah
Job No.: 460-79113-1
SDG No.:
Client Sample ID: GW0172
Lab Sample ID: 460-79113-1
Matrix: Water
Lab File ID: 0717141354-19.d
Analysis Method: 300.0
Date Collected: 07/09/2014 09:15
Extraction Method:
Date Extracted:
Sample wt/vol: 1(mL)
Date Analyzed: 07/17/2014 13:54
Con. Extract Vol.: 1(mL)
Dilution Factor: 5
Injection Volume: 25(uL)
GC Column: Dionex AS18 ID: 4(mm)
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 339475
Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14808-79-8	Sulfate	211		2.50	1.25

TestAmerica Savannah
Target Compound Quantitation Report

Data File:	\\SAVCHROM\ChromData\CICK\20140717-11077.b\0717141354-19.d				
Lims ID:	460-79113-A-1	Lab Sample ID:	680-79113-1		
Client ID:	GW0172				
Sample Type:	Client				
Inject. Date:	17-Jul-2014 13:54:00	ALS Bottle#:	0	Worklist Smp#:	15
Injection Vol:	25.0 ul	Dil. Factor:	5.0000		
Sample Info:	460-79113-A-1 1K071714 1K082812A				
Misc. Info.:	19 SO4				
Operator ID:		Instrument ID:	CICK		
Method:	\\SAVCHROM\ChromData\CICK\20140717-11077.b\300.0_9056A_CICK.m				
Limit Group:	Anions - 28D - ORGFRMS				
Last Update:	18-Jul-2014 11:23:45	Calib Date:	11-Jul-2014 12:37:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\SAVCHROM\ChromData\CICK\20140711-10925.b\0711141237-11.d				
Column 1 :	Dionex Ion Pac AS18 (4.00 mm)		Det: 0118131406-12		
Process Host:	XAWRK026				

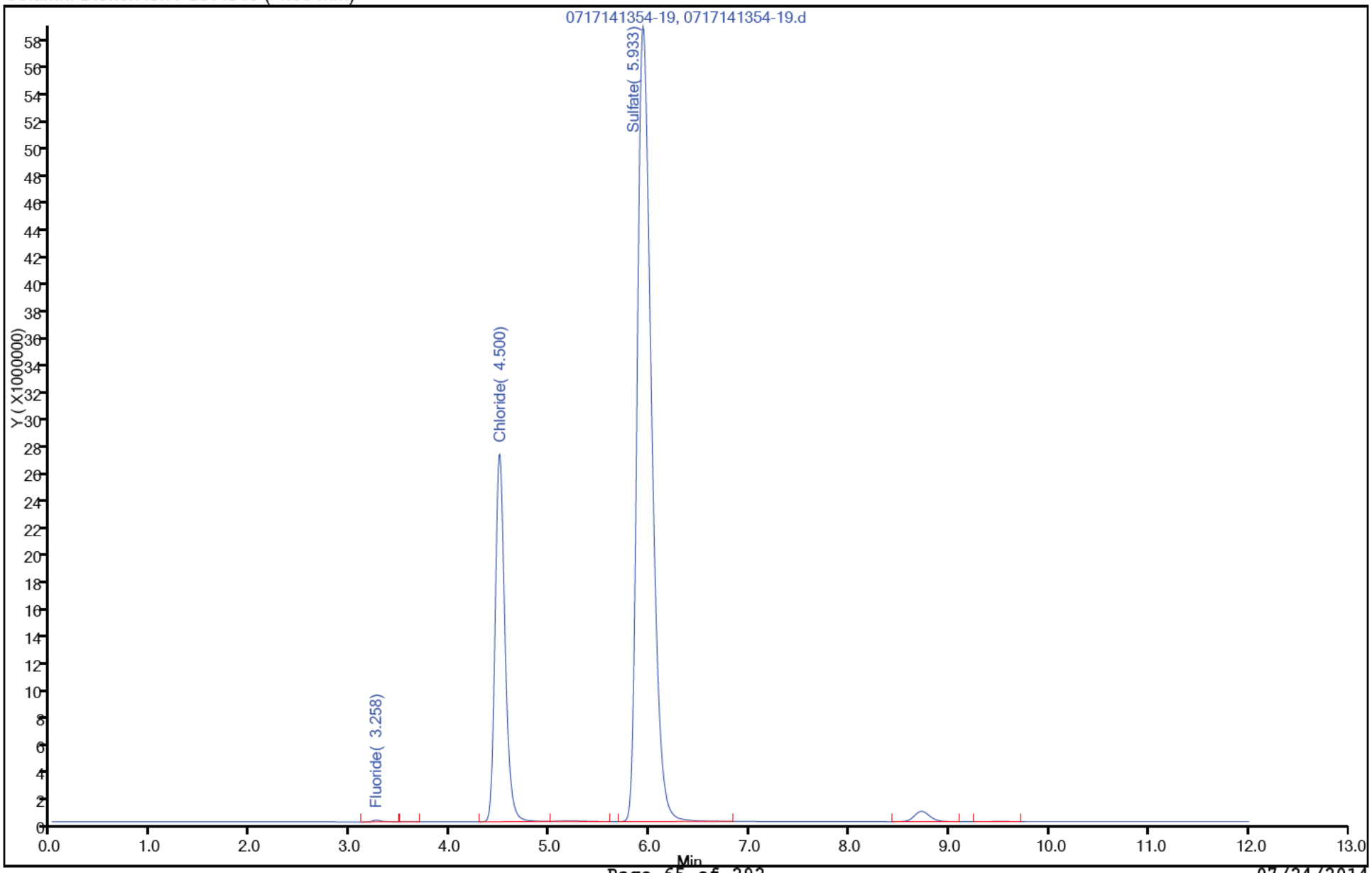
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1 Fluoride	3.258	3.267	-0.009	887947	0.0560	
2 Chloride	4.500	4.492	0.008	184824023	9.67	
3 Sulfate	5.933	5.967	-0.034	578468899	42.3	

Report Date: 18-Jul-2014 11:23:48 Chrom Revision: 2.2 24-Jun-2014 07:21:42

TestAmerica Savannah

Data File:	\\SAVCHROM\ChromData\CICK\20140717-11077.b\0717141354-19.d				
Injection Date:	17-Jul-2014 13:54:00	Instrument ID:	CICK	Operator ID:	
Lims ID:	460-79113-A-1	Lab Sample ID:	680-79113-1	Worklist Smp#:	15
Client ID:	GW0172				
Injection Vol:	25.0 ul	Dil. Factor:	5.0000	ALS Bottle#:	0
Method:	300.0_9056A_CICK	Limit Group:	Anions - 28D - ORGFRMS		

Column: Dionex Ion Pac AS18 (4.00 mm)



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah
Job No.: 460-79113-1
SDG No.:
Client Sample ID: GW0173
Lab Sample ID: 460-79113-2
Matrix: Water
Lab File ID: 0716141923-38.d
Analysis Method: 300.0
Date Collected: 07/09/2014 09:50
Extraction Method:
Date Extracted:
Sample wt/vol: 1(mL)
Date Analyzed: 07/16/2014 19:23
Con. Extract Vol.: 1(mL)
Dilution Factor: 1
Injection Volume: 25(uL)
GC Column: Dionex AS18 ID: 4(mm)
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 339289
Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14808-79-8	Sulfate	23.4		0.50	0.25
16984-48-8	Fluoride	0.054	J	0.10	0.025
24959-67-9	Bromide	0.25	U	0.50	0.25

TestAmerica Savannah
Target Compound Quantitation Report

Data File:	\\SAVCHROM\ChromData\CICK\20140716-11038.b\0716141923-38.d				
Lims ID:	460-79113-A-2	Lab Sample ID:	680-79113-2		
Client ID:	GW0173				
Sample Type:	Client				
Inject. Date:	16-Jul-2014 19:23:00	ALS Bottle#:	0	Worklist Smp#:	34
Injection Vol:	25.0 ul	Dil. Factor:	1.0000		
Sample Info:	460-79113-A-2 2K071614 1K082812A				
Misc. Info.:	36				
Operator ID:		Instrument ID:	CICK		
Method:	\\SAVCHROM\ChromData\CICK\20140716-11038.b\300.0_9056A_CICK.m				
Limit Group:	Anions - 28D - ORGFRMS				
Last Update:	20-Jul-2014 10:56:34	Calib Date:	11-Jul-2014 12:37:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\SAVCHROM\ChromData\CICK\20140711-10925.b\0711141237-11.d				
Column 1 :	Dionex Ion Pac AS18 (4.00 mm)		Det: 0118131406-12		
Process Host:	XAWRK026				
First Level Reviewer: brazellc		Date:	20-Jul-2014 10:56:23		

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1 Fluoride	3.267	3.267	0.000	816946	0.0537	M
2 Chloride	4.492	4.500	-0.008	1137121334	58.9	E
3 Sulfate	5.975	5.975	0.000	318905353	23.4	
4 Bromide	7.375	7.350	0.025	194481	0.1856	

QC Flag Legend

Processing Flags
E - Exceeded Maximum Amount

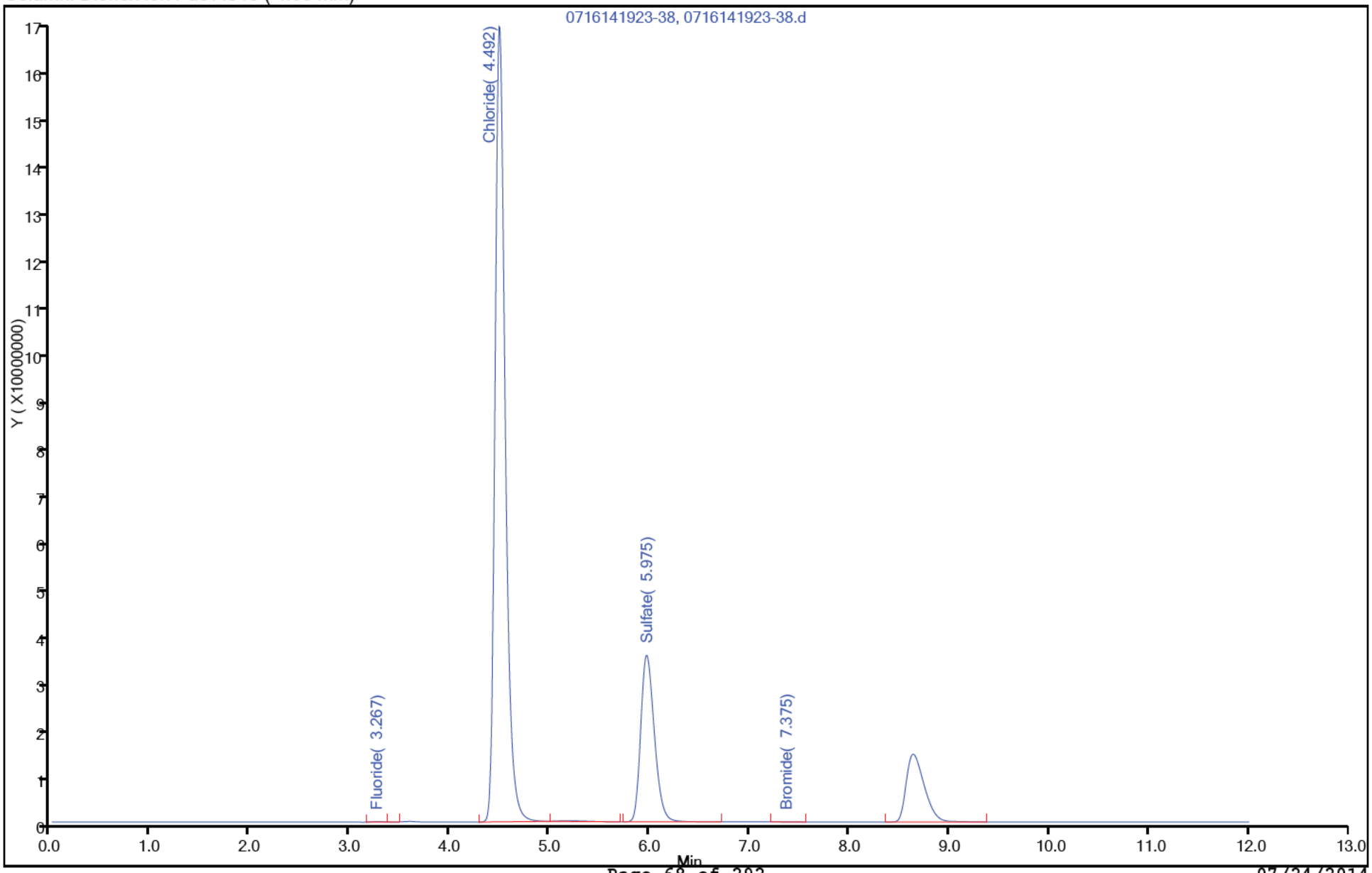
Review Flags
M - Manually Integrated

Report Date: 20-Jul-2014 10:56:44 Chrom Revision: 2.2 24-Jun-2014 07:21:42

TestAmerica Savannah

Data File:	\\SAVCHROM\ChromData\CICK\20140716-11038.b\0716141923-38.d				
Injection Date:	16-Jul-2014 19:23:00	Instrument ID:	CICK	Operator ID:	
Lims ID:	460-79113-A-2	Lab Sample ID:	680-79113-2	Worklist Smp#:	34
Client ID:	GW0173				
Injection Vol:	25.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300.0_9056A_CICK	Limit Group:	Anions - 28D - ORGFRMS		

Column: Dionex Ion Pac AS18 (4.00 mm)



Manual Integration/User Assign Peak Report

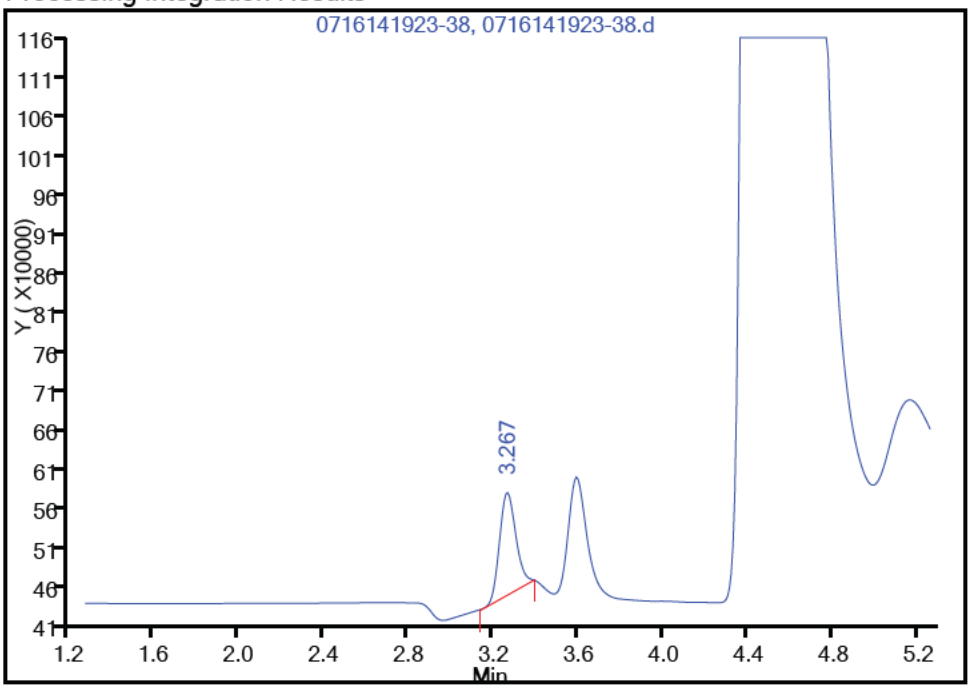
TestAmerica Savannah

Data File:	\\SAVCHROM\ChromData\CICK\20140716-11038.b\0716141923-38.d				
Injection Date:	16-Jul-2014 19:23:00	Instrument ID:	CICK		
Lims ID:	460-79113-A-2	Lab Sample ID:	680-79113-2		
Client ID:	GW0173				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	34
Injection Vol:	25.0 ul	Dil. Factor:	1.0000		
Method:	300.0_9056A_CICK	Limit Group:	Anions - 28D - ORGFRMS		
Column:	Dionex Ion Pac AS18 (4.00 mm)	Detector	0118131406-12		

1 Fluoride, CAS: 16984-48-8

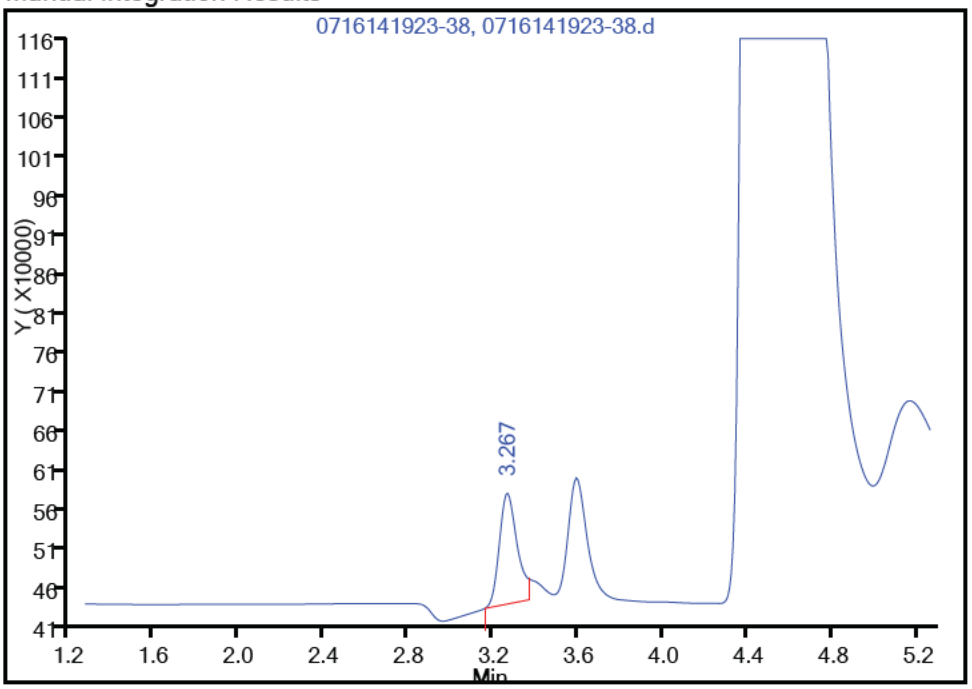
Processing Integration Results

RT: 3.27
Response: 699617
Amount: 0.049750



Manual Integration Results

RT: 3.27
Response: 816946
Amount: 0.053662



Reviewer: brazellc, 20-Jul-2014 10:56:23
Audit Action: Split an Integrated Peak
Audit Reason: Split Peak

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah
Job No.: 460-79113-1
SDG No.:
Client Sample ID: GW0173
Lab Sample ID: 460-79113-2
Matrix: Water
Lab File ID: 0717141440-22.d
Analysis Method: 300.0
Date Collected: 07/09/2014 09:50
Extraction Method:
Date Extracted:
Sample wt/vol: 1(mL)
Date Analyzed: 07/17/2014 14:40
Con. Extract Vol.: 1(mL)
Dilution Factor: 2
Injection Volume: 25(uL)
GC Column: Dionex AS18 ID: 4(mm)
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 339475
Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
16887-00-6	Chloride	60.6		1.00	0.50

TestAmerica Savannah
Target Compound Quantitation Report

Data File:	\\SAVCHROM\ChromData\CICK\20140717-11077.b\0717141440-22.d				
Lims ID:	460-79113-A-2	Lab Sample ID:	680-79113-2		
Client ID:	GW0173				
Sample Type:	Client				
Inject. Date:	17-Jul-2014 14:40:00	ALS Bottle#:	0	Worklist Smp#:	18
Injection Vol:	25.0 ul	Dil. Factor:	2.0000		
Sample Info:	460-79113-A-2 1K071714 1K082812A				
Misc. Info.:	22 CL				
Operator ID:		Instrument ID:	CICK		
Method:	\\SAVCHROM\ChromData\CICK\20140717-11077.b\300.0_9056A_CICK.m				
Limit Group:	Anions - 28D - ORGFRMS				
Last Update:	18-Jul-2014 11:23:49	Calib Date:	11-Jul-2014 12:37:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\SAVCHROM\ChromData\CICK\20140711-10925.b\0711141237-11.d				
Column 1 :	Dionex Ion Pac AS18 (4.00 mm)		Det: 0118131406-12		
Process Host:	XAWRK026				

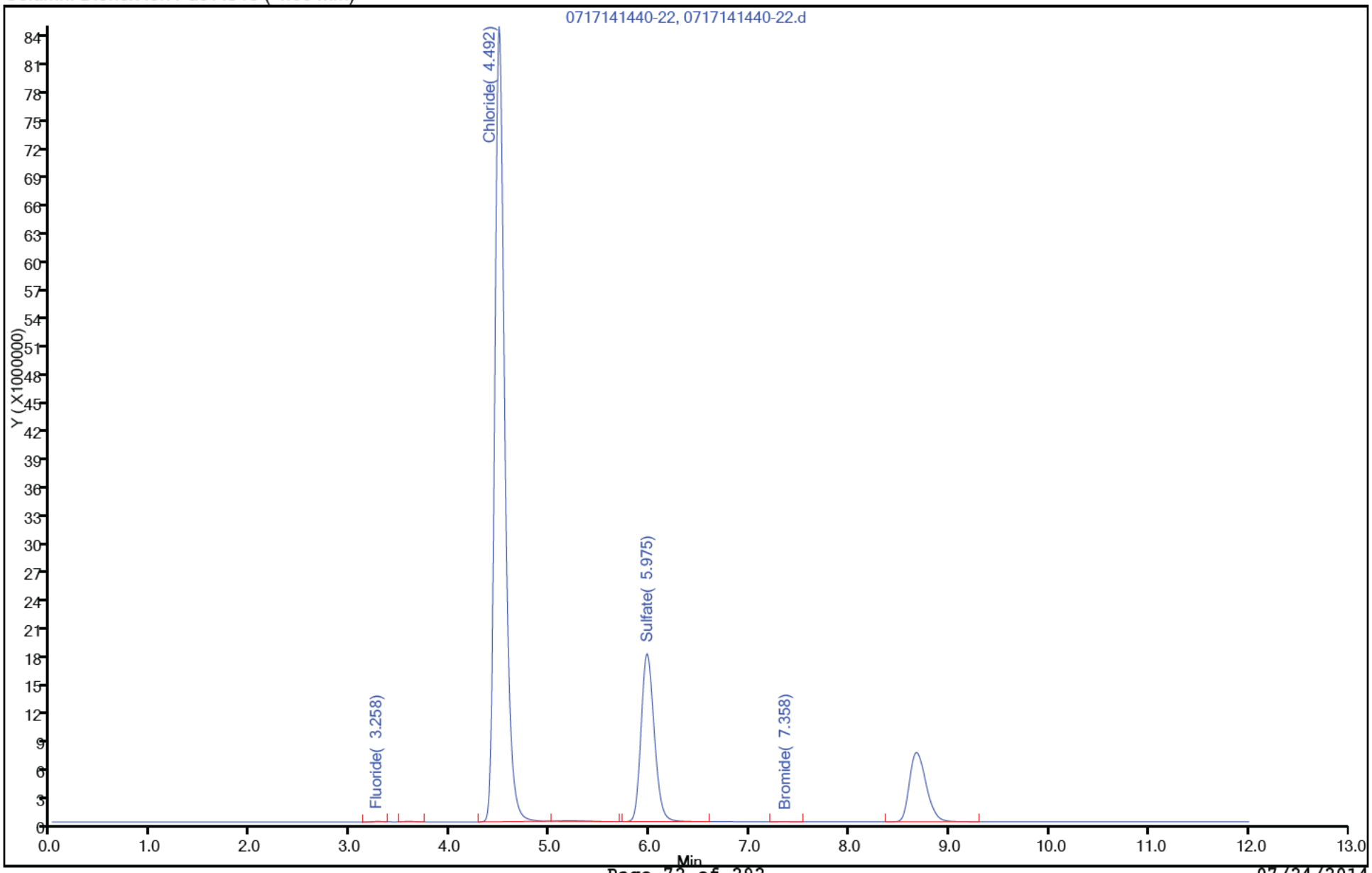
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1 Fluoride	3.258	3.267	-0.009	329012	0.0374	
2 Chloride	4.492	4.500	-0.008	583840570	30.3	
3 Sulfate	5.975	5.975	0.000	162385428	12.0	
4 Bromide	7.358	7.342	0.016	97868	0.1734	

Report Date: 18-Jul-2014 11:23:49 Chrom Revision: 2.2 24-Jun-2014 07:21:42

TestAmerica Savannah

Data File:	\\SAVCHROM\ChromData\CICK\20140717-11077.b\0717141440-22.d				
Injection Date:	17-Jul-2014 14:40:00	Instrument ID:	CICK	Operator ID:	
Lims ID:	460-79113-A-2	Lab Sample ID:	680-79113-2	Worklist Smp#:	18
Client ID:	GW0173				
Injection Vol:	25.0 ul	Dil. Factor:	2.0000	ALS Bottle#:	0
Method:	300.0_9056A_CICK	Limit Group:	Anions - 28D - ORGFRMS		

Column: Dionex Ion Pac AS18 (4.00 mm)



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah
Job No.: 460-79113-1
SDG No.:
Client Sample ID: GW0174
Lab Sample ID: 460-79113-3
Matrix: Water
Lab File ID: 0716141938-39.d
Analysis Method: 300.0
Date Collected: 07/09/2014 09:25
Extraction Method:
Date Extracted:
Sample wt/vol: 1(mL)
Date Analyzed: 07/16/2014 19:38
Con. Extract Vol.: 1(mL)
Dilution Factor: 1
Injection Volume: 25(uL)
GC Column: Dionex AS18 ID: 4(mm)
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 339289
Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
16984-48-8	Fluoride	0.19		0.10	0.025
16887-00-6	Chloride	46.8		0.50	0.25
24959-67-9	Bromide	0.25	U	0.50	0.25

TestAmerica Savannah
Target Compound Quantitation Report

Data File:	\\SAVCHROM\ChromData\CICK\20140716-11038.b\0716141938-39.d				
Lims ID:	460-79113-A-3	Lab Sample ID:	680-79113-3		
Client ID:	GW0174				
Sample Type:	Client				
Inject. Date:	16-Jul-2014 19:38:00	ALS Bottle#:	0	Worklist Smp#:	35
Injection Vol:	25.0 ul	Dil. Factor:	1.0000		
Sample Info:	460-79113-A-3 2K071614 1K082812A				
Misc. Info.:	37				
Operator ID:		Instrument ID:	CICK		
Method:	\\SAVCHROM\ChromData\CICK\20140716-11038.b\300.0_9056A_CICK.m				
Limit Group:	Anions - 28D - ORGFRMS				
Last Update:	17-Jul-2014 08:22:38	Calib Date:	11-Jul-2014 12:37:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\SAVCHROM\ChromData\CICK\20140711-10925.b\0711141237-11.d				
Column 1 :	Dionex Ion Pac AS18 (4.00 mm)		Det: 0118131406-12		
Process Host:	XAWRK033				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1 Fluoride	3.267	3.275	-0.008	4792394	0.1862	
2 Chloride	4.492	4.500	-0.008	904067314	46.8	
3 Sulfate	5.808	5.992	-0.184	2767342805	201.7	E

QC Flag Legend

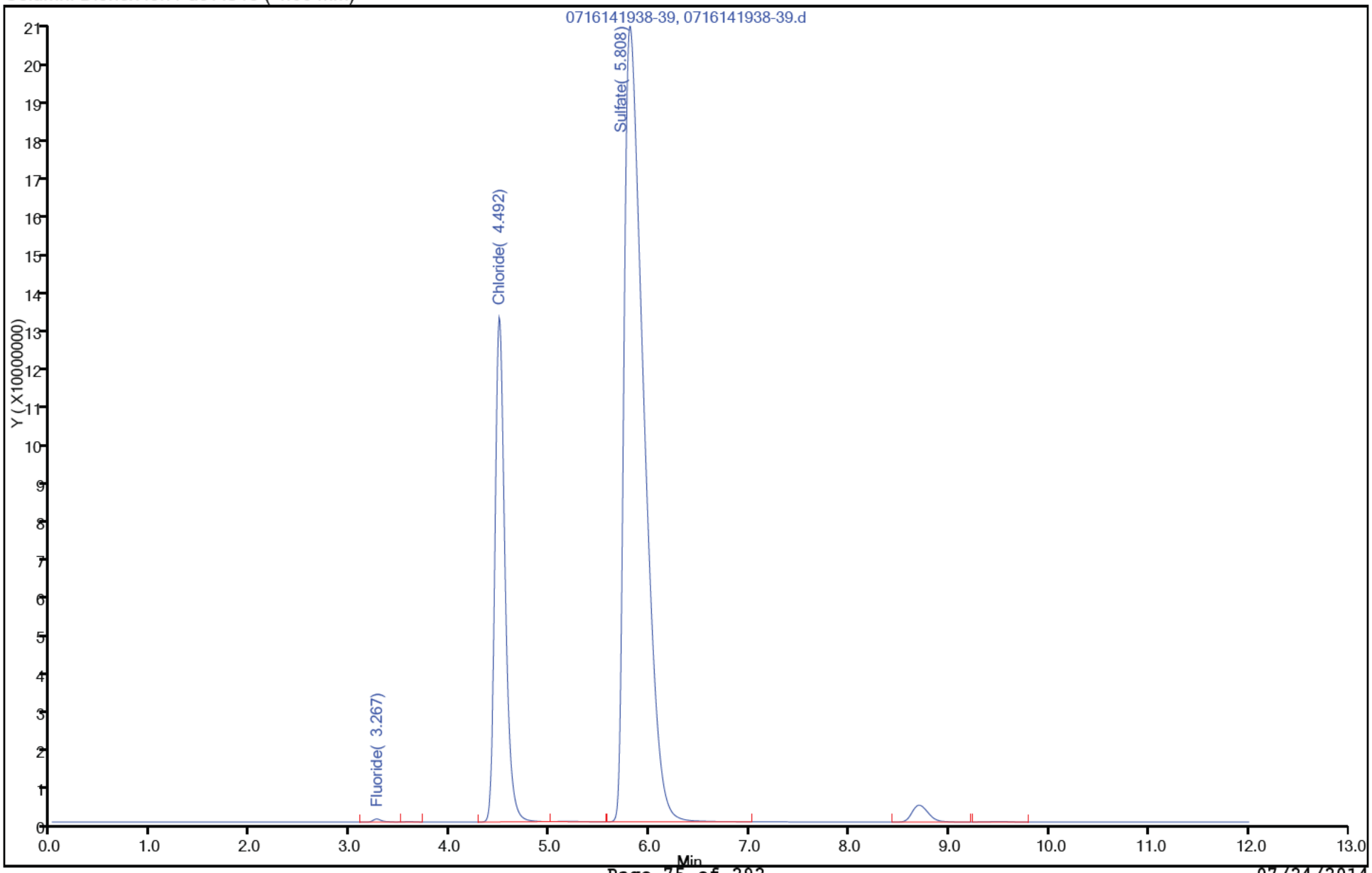
Processing Flags
E - Exceeded Maximum Amount

Report Date: 17-Jul-2014 08:22:40 Chrom Revision: 2.2 24-Jun-2014 07:21:42

TestAmerica Savannah

Data File:	\\SAVCHROM\ChromData\CICK\20140716-11038.b\0716141938-39.d				
Injection Date:	16-Jul-2014 19:38:00	Instrument ID:	CICK	Operator ID:	
Lims ID:	460-79113-A-3	Lab Sample ID:	680-79113-3	Worklist Smp#:	35
Client ID:	GW0174				
Injection Vol:	25.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300.0_9056A_CICK	Limit Group:	Anions - 28D - ORGFRMS		

Column: Dionex Ion Pac AS18 (4.00 mm)



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah
Job No.: 460-79113-1
SDG No.:
Client Sample ID: GW0174
Lab Sample ID: 460-79113-3
Matrix: Water
Lab File ID: 0717141526-25.d
Analysis Method: 300.0
Date Collected: 07/09/2014 09:25
Extraction Method:
Date Extracted:
Sample wt/vol: 1(mL)
Date Analyzed: 07/17/2014 15:26
Con. Extract Vol.: 1(mL)
Dilution Factor: 5
Injection Volume: 25(uL)
GC Column: Dionex AS18 ID: 4(mm)
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 339475
Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14808-79-8	Sulfate	212		2.50	1.25

TestAmerica Savannah
Target Compound Quantitation Report

Data File:	\\SAVCHROM\ChromData\CICK\20140717-11077.b\0717141526-25.d				
Lims ID:	460-79113-A-3	Lab Sample ID:	680-79113-3		
Client ID:	GW0174				
Sample Type:	Client				
Inject. Date:	17-Jul-2014 15:26:00	ALS Bottle#:	0	Worklist Smp#:	21
Injection Vol:	25.0 ul	Dil. Factor:	5.0000		
Sample Info:	460-79113-A-3 1K071714 1K082812A				
Misc. Info.:	25 SO4				
Operator ID:		Instrument ID:	CICK		
Method:	\\SAVCHROM\ChromData\CICK\20140717-11077.b\300.0_9056A_CICK.m				
Limit Group:	Anions - 28D - ORGFRMS				
Last Update:	18-Jul-2014 11:23:49	Calib Date:	11-Jul-2014 12:37:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\SAVCHROM\ChromData\CICK\20140711-10925.b\0711141237-11.d				
Column 1 :	Dionex Ion Pac AS18 (4.00 mm)		Det: 0118131406-12		
Process Host:	XAWRK026				

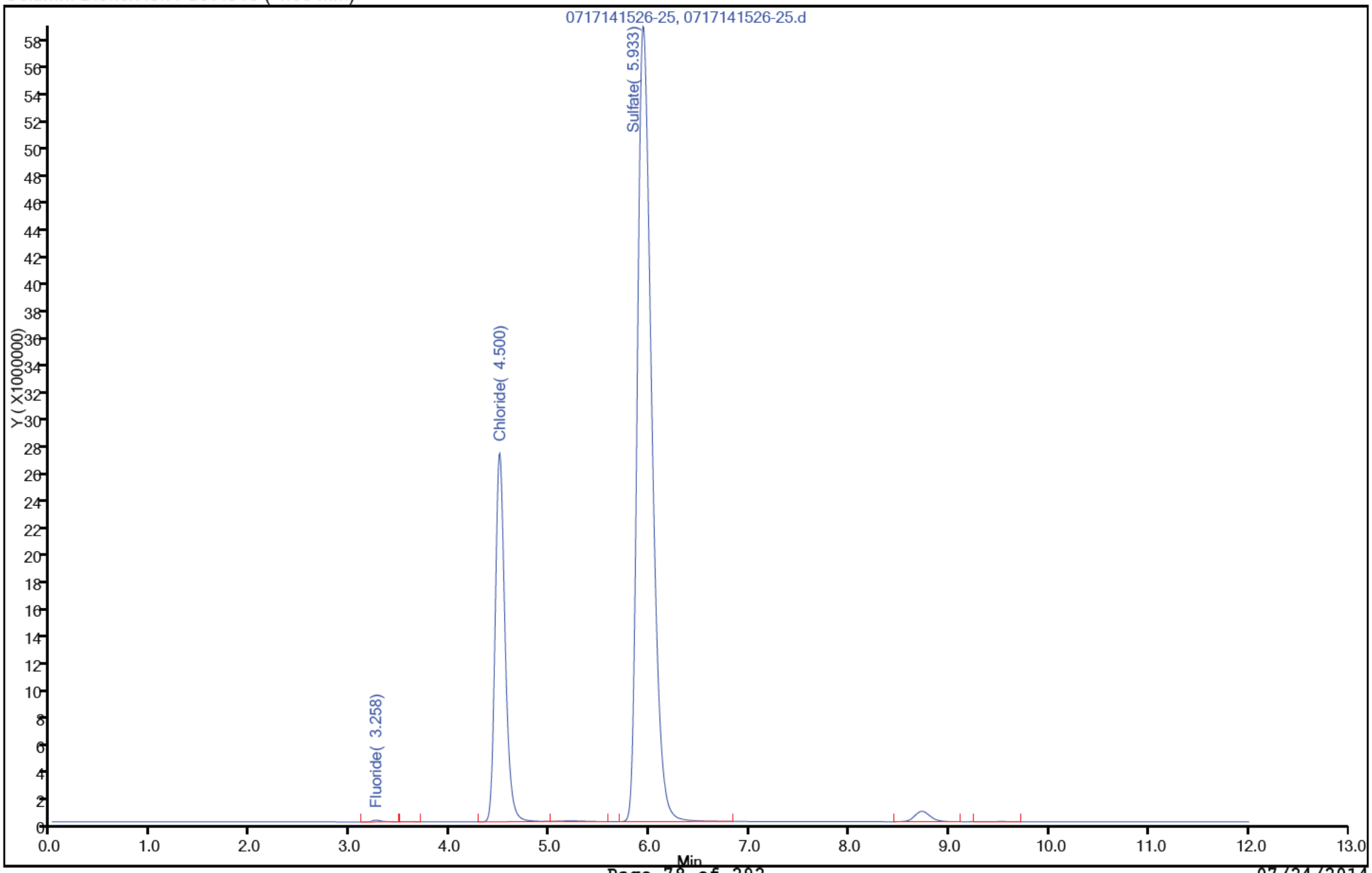
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1 Fluoride	3.258	3.267	-0.009	890728	0.0561	
2 Chloride	4.500	4.500	0.000	184851906	9.67	
3 Sulfate	5.933	5.975	-0.042	579154256	42.3	

Report Date: 18-Jul-2014 11:23:50 Chrom Revision: 2.2 24-Jun-2014 07:21:42

TestAmerica Savannah

Data File:	\\SAVCHROM\ChromData\CICK\20140717-11077.b\0717141526-25.d				
Injection Date:	17-Jul-2014 15:26:00	Instrument ID:	CICK	Operator ID:	
Lims ID:	460-79113-A-3	Lab Sample ID:	680-79113-3	Worklist Smp#:	21
Client ID:	GW0174				
Injection Vol:	25.0 ul	Dil. Factor:	5.0000	ALS Bottle#:	0
Method:	300.0_9056A_CICK	Limit Group:	Anions - 28D - ORGFRMS		

Column: Dionex Ion Pac AS18 (4.00 mm)



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah
Job No.: 460-79113-1
SDG No.:
Client Sample ID: FB0003
Lab Sample ID: 460-79113-4
Matrix: Water
Lab File ID: 0716141953-40.d
Analysis Method: 300.0
Date Collected: 07/09/2014 10:00
Extraction Method:
Date Extracted:
Sample wt/vol: 1(mL)
Date Analyzed: 07/16/2014 19:53
Con. Extract Vol.: 1(mL)
Dilution Factor: 1
Injection Volume: 25(uL)
GC Column: Dionex AS18 ID: 4(mm)
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 339289
Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14808-79-8	Sulfate	0.32	J	0.50	0.25
16984-48-8	Fluoride	0.025	U	0.10	0.025
16887-00-6	Chloride	0.25	U	0.50	0.25
24959-67-9	Bromide	0.25	U	0.50	0.25

TestAmerica Savannah
Target Compound Quantitation Report

Data File:	\\SAVCHROM\ChromData\CICK\20140716-11038.b\0716141953-40.d				
Lims ID:	460-79113-A-4	Lab Sample ID:	680-79113-4		
Client ID:	FB0003				
Sample Type:	Client				
Inject. Date:	16-Jul-2014 19:53:00	ALS Bottle#:	0	Worklist Smp#:	36
Injection Vol:	25.0 ul	Dil. Factor:	1.0000		
Sample Info:	460-79113-A-4 2K071614 1K082812A				
Misc. Info.:	38				
Operator ID:		Instrument ID:	CICK		
Method:	\\SAVCHROM\ChromData\CICK\20140716-11038.b\300.0_9056A_CICK.m				
Limit Group:	Anions - 28D - ORGFRMS				
Last Update:	20-Jul-2014 10:56:34	Calib Date:	11-Jul-2014 12:37:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\SAVCHROM\ChromData\CICK\20140711-10925.b\0711141237-11.d				
Column 1 :	Dionex Ion Pac AS18 (4.00 mm)		Det: 0118131406-12		
Process Host:	XAWRK026				

First Level Reviewer: brazellc Date: 20-Jul-2014 10:56:34

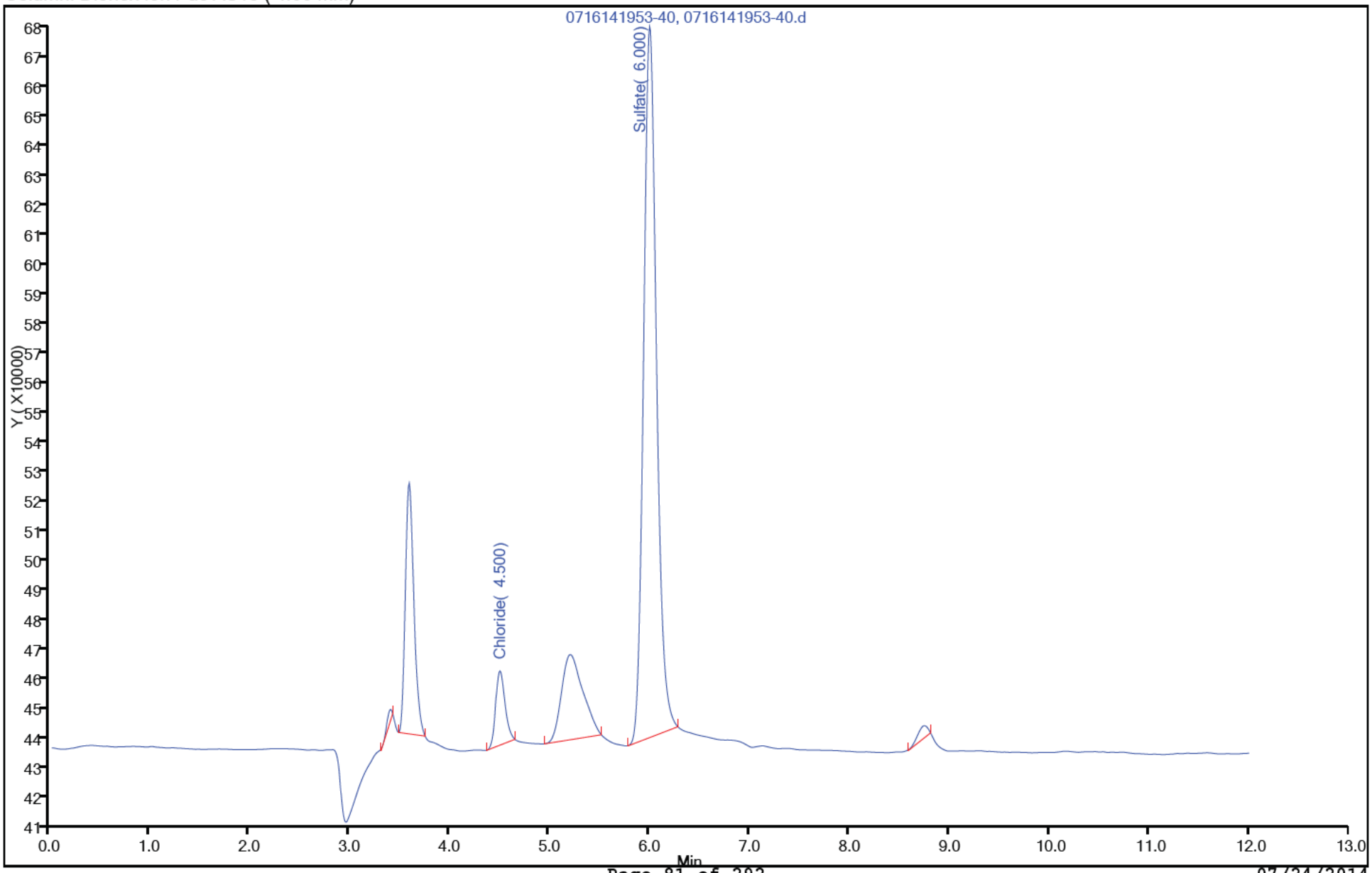
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	4.500	4.500	0.000	156316	0.1244	
3 Sulfate	6.000	5.975	0.025	2060074	0.3240	

Report Date: 20-Jul-2014 10:56:44 Chrom Revision: 2.2 24-Jun-2014 07:21:42

TestAmerica Savannah

Data File:	\\SAVCHROM\ChromData\CICK\20140716-11038.b\0716141953-40.d				
Injection Date:	16-Jul-2014 19:53:00	Instrument ID:	CICK	Operator ID:	
Lims ID:	460-79113-A-4	Lab Sample ID:	680-79113-4	Worklist Smp#:	36
Client ID:	FB0003				
Injection Vol:	25.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300.0_9056A_CICK	Limit Group:	Anions - 28D - ORGFRMS		

Column: Dionex Ion Pac AS18 (4.00 mm)



FORM VI
HPLC/IC INITIAL CALIBRATION DATA
EXTERNAL STANDARD RETENTION TIME SUMMARY

Lab Name: TestAmerica Savannah Job No.: 460-79113-1 Analy Batch No.: 338674

SDG No.:

Instrument ID: CICK GC Column: Dionex AS18 ID: 4(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/11/2014 11:05 Calibration End Date: 07/11/2014 12:37 Calibration ID: 32059

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-338674/1	0711141105-5.d
Level 2	IC 680-338674/2	0711141120-6.d
Level 3	IC 680-338674/3	0711141135-7.d
Level 4	IC 680-338674/4	0711141151-8.d
Level 5	IC 680-338674/5	0711141206-9.d
Level 6	IC 680-338674/6	0711141221-10.d
Level 7	IC 680-338674/7	0711141237-11.d

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7				RT WINDOW	AVG RT
Fluoride	3.258	3.258	3.267	3.258	3.267	3.267	3.275				3.017 - 3.517	3.264
Chloride	4.500	4.500	4.500	4.500	4.500	4.500	4.492				4.250 - 4.750	4.499
Sulfate	6.008	6.000	6.008	6.000	5.992	5.983	5.942				5.733 - 6.233	5.990
Bromide	7.375	7.375	7.375	7.367	7.358	7.342	+++++				7.117 - 7.617	7.365

FORM VI
HPLC/IC INITIAL CALIBRATION DATA
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Savannah Job No.: 460-79113-1 Analy Batch No.: 338674

SDG No.:

Instrument ID: CICK GC Column: Dionex AS18 ID: 4(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/11/2014 11:05 Calibration End Date: 07/11/2014 12:37 Calibration ID: 32059

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-338674/1	0711141105-5.d
Level 2	IC 680-338674/2	0711141120-6.d
Level 3	IC 680-338674/3	0711141135-7.d
Level 4	IC 680-338674/4	0711141151-8.d
Level 5	IC 680-338674/5	0711141206-9.d
Level 6	IC 680-338674/6	0711141221-10.d
Level 7	IC 680-338674/7	0711141237-11.d

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2 LVL 6	LVL 3 LVL 7	LVL 4		B	M1	M2								
Fluoride	23220810 30823664	23868840 30430799	27345168 29399695	29914627	Lin2	-792636.57	29994945.4							0.9970		0.9900
Chloride	15460322 19134877	17012335 19453413	17713581 19280471	18678611	Lin	-2251884.1	19355317.8							1.0000		0.9900
Sulfate	9381512 13712509	10758007 14097353	12113868 14093203	12975935	Lin2	-2390353.7	13734860.1							0.9980		0.9900
Bromide	5590642 8026498	6244012 8163908	6928703 +++++	7516325	Lin2	-1266376.5	7869833.33							0.9970		0.9900

Note: The m1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
HPLC/IC INITIAL CALIBRATION DATA
EXTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Savannah Job No.: 460-79113-1 Analy Batch No.: 338674

SDG No.:

Instrument ID: CICK GC Column: Dionex AS18 ID: 4(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/11/2014 11:05 Calibration End Date: 07/11/2014 12:37 Calibration ID: 32059

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-338674/1	0711141105-5.d
Level 2	IC 680-338674/2	0711141120-6.d
Level 3	IC 680-338674/3	0711141135-7.d
Level 4	IC 680-338674/4	0711141151-8.d
Level 5	IC 680-338674/5	0711141206-9.d
Level 6	IC 680-338674/6	0711141221-10.d
Level 7	IC 680-338674/7	0711141237-11.d

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
		LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Fluoride	Lin2	2322081 121723196	4773768 235197559	13672584	29914627	61647327	0.100 4.00	0.200 8.00	0.500	1.00	2.00
Chloride	Lin	7730161 389068254	17012335 964023561	44283952	93393057	191348772	0.500 20.0	1.00 50.0	2.50	5.00	10.0
Sulfate	Lin2	4690756 281947065	10758007 704660160	30284670	64879675	137125086	0.500 20.0	1.00 50.0	2.50	5.00	10.0
Bromide	Lin2	2795321 163278162	6244012 +++++	17321758	37581626	80264976	0.500 20.0	1.00 +++++	2.50	5.00	10.0

Curve Type Legend:

Lin = Linear
Lin2 = Linear 1/conc^2

TestAmerica Savannah
Target Compound Quantitation Report

Data File:	\\SAVCHROM\ChromData\CICK\20140711-10925.b\0711141105-5.d				
Lims ID:	IC				
Client ID:					
Sample Type:	IC	Calib Level:	1		
Inject. Date:	11-Jul-2014 11:05:00	ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	25.0 ul	Dil. Factor:	1.0000		
Sample Info:	IC 1K071114 1K082812A				
Misc. Info.:	5 3618578				
Operator ID:		Instrument ID:	CICK		
Sublist:	chrom-300.0_9056A_CICK*sub1				
Method:	\\SAVCHROM\ChromData\CICK\20140711-10925.b\300.0_9056A_CICK.m				
Limit Group:	Anions - 28D - ORGFRMS				
Last Update:	14-Jul-2014 13:04:12	Calib Date:	11-Jul-2014 12:37:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\SAVCHROM\ChromData\CICK\20140711-10925.b\0711141237-11.d				
Column 1 :	Dionex Ion Pac AS18 (4.00 mm)		Det: 0118131406-12		
Process Host:	XAWRK016				
First Level Reviewer: seabrooksd		Date:	11-Jul-2014 14:25:06		

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.258	3.267	-0.009	2322081	0.1000	0.1038	
2 Chloride	4.500	4.500	0.000	7730161	0.5000	0.5157	
3 Sulfate	6.008	5.983	0.025	4690756	0.5000	0.5156	
4 Bromide	7.375	7.367	0.008	2795321	0.5000	0.5161	

Reagents:

IC_Anion-1_00009 Amount Added: 1.00 Units: mL

Report Date: 14-Jul-2014 13:04:12 Chrom Revision: 2.2 24-Jun-2014 07:21:42

TestAmerica Savannah

Data File: \\SAVCHROM\ChromData\CICK\20140711-10925.b\0711141105-5.d

Injection Date: 11-Jul-2014 11:05:00 Instrument ID: CICK Operator ID:

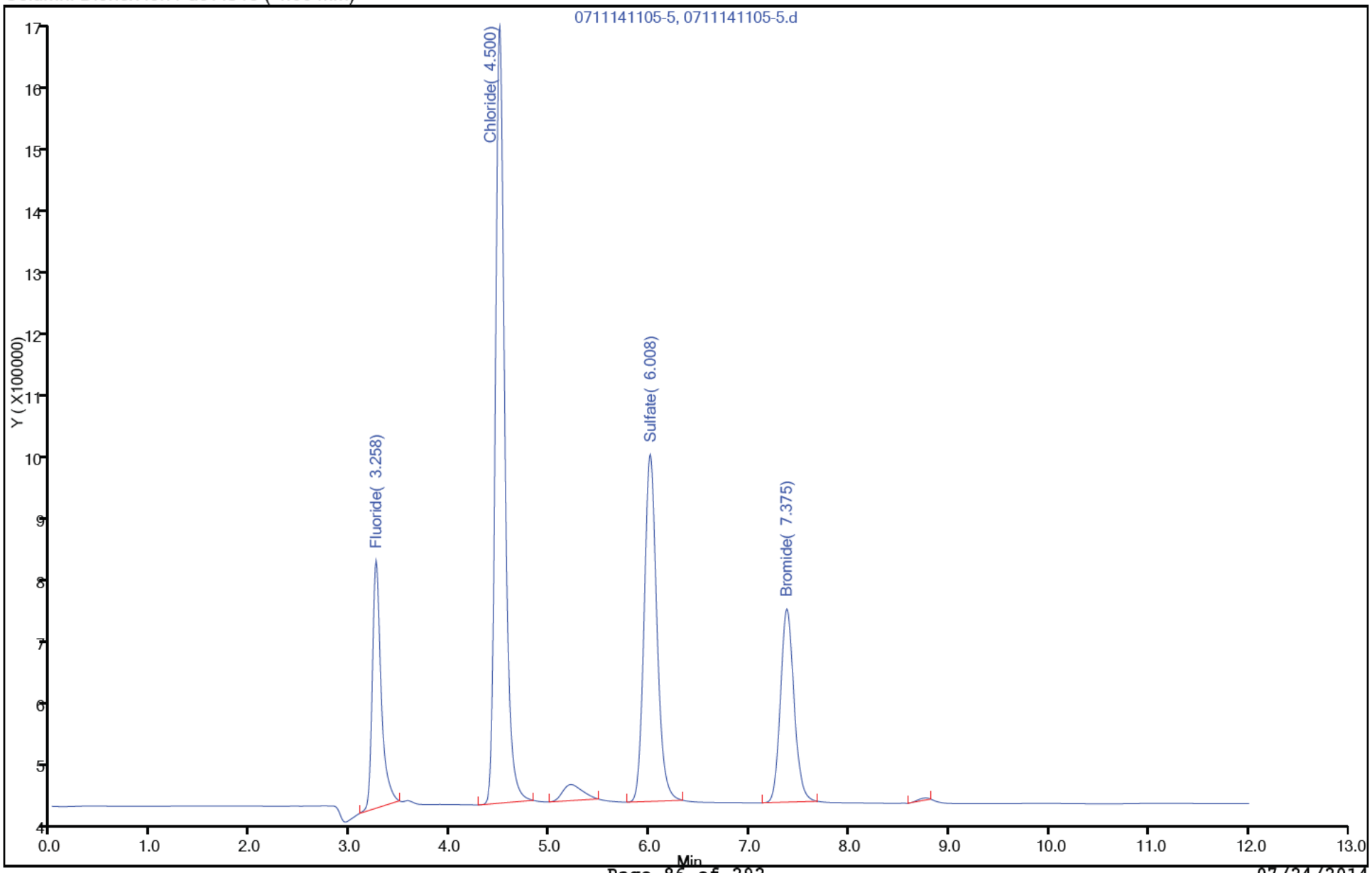
Lims ID: IC Worklist Smp#: 1

Client ID:

Injection Vol: 25.0 ul Dil. Factor: 1.0000 ALS Bottle#: 0

Method: 300.0_9056A_CICK Limit Group: Anions - 28D - ORGFRMS

Column: Dionex Ion Pac AS18 (4.00 mm)



TestAmerica Savannah
Target Compound Quantitation Report

Data File:	\\SAVCHROM\ChromData\CICK\20140711-10925.b\0711141120-6.d				
Lims ID:	IC				
Client ID:					
Sample Type:	IC	Calib Level:	2		
Inject. Date:	11-Jul-2014 11:20:00	ALS Bottle#:	0	Worklist Smp#:	2
Injection Vol:	25.0 ul	Dil. Factor:	1.0000		
Sample Info:	IC 1K071114 1K082812A				
Misc. Info.:	6 3618622				
Operator ID:		Instrument ID:	CICK		
Sublist:	chrom-300.0_9056A_CICK*sub1				
Method:	\\SAVCHROM\ChromData\CICK\20140711-10925.b\300.0_9056A_CICK.m				
Limit Group:	Anions - 28D - ORGFRMS				
Last Update:	14-Jul-2014 13:02:44	Calib Date:	11-Jul-2014 12:37:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\SAVCHROM\ChromData\CICK\20140711-10925.b\0711141237-11.d				
Column 1 :	Dionex Ion Pac AS18 (4.00 mm)		Det: 0118131406-12		
Process Host:	XAWRK016				

First Level Reviewer: seabrooksd Date: 11-Jul-2014 14:24:12

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.258	3.267	-0.009	4773768	0.2000	0.1856	
2 Chloride	4.500	4.500	0.000	17012335	1.00	1.00	
3 Sulfate	6.000	5.983	0.017	10758007	1.00	0.9573	
4 Bromide	7.375	7.367	0.008	6244012	1.00	0.9543	

Reagents:

IC_Anion-2_00009 Amount Added: 1.00 Units: mL

Report Date: 14-Jul-2014 13:02:44 Chrom Revision: 2.2 24-Jun-2014 07:21:42

TestAmerica Savannah

Data File: \\SAVCHROM\ChromData\CICK\20140711-10925.b\0711141120-6.d

Injection Date: 11-Jul-2014 11:20:00 Instrument ID: CICK Operator ID:

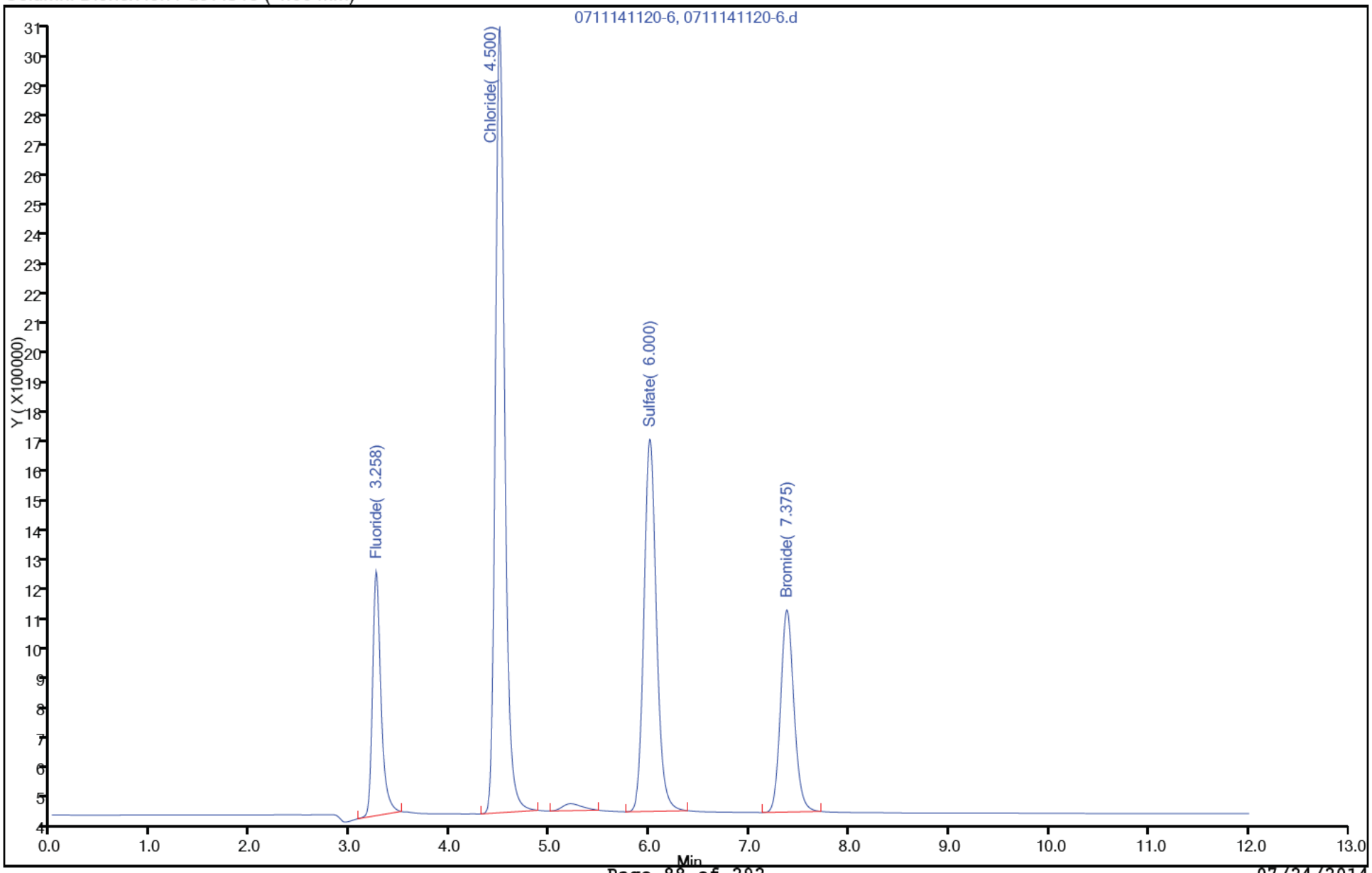
Lims ID: IC Worklist Smp#: 2

Client ID:

Injection Vol: 25.0 ul Dil. Factor: 1.0000 ALS Bottle#: 0

Method: 300.0_9056A_CICK Limit Group: Anions - 28D - ORGFRMS

Column: Dionex Ion Pac AS18 (4.00 mm)



TestAmerica Savannah
Target Compound Quantitation Report

Data File:	\\SAVCHROM\ChromData\CICK\20140711-10925.b\0711141135-7.d				
Lims ID:	IC				
Client ID:					
Sample Type:	IC	Calib Level:	3		
Inject. Date:	11-Jul-2014 11:35:00	ALS Bottle#:	0	Worklist Smp#:	3
Injection Vol:	25.0 ul	Dil. Factor:	1.0000		
Sample Info:	IC 1K071114 1K082812A				
Misc. Info.:	7 3618655				
Operator ID:		Instrument ID:	CICK		
Sublist:	chrom-300.0_9056A_CICK*sub1				
Method:	\\SAVCHROM\ChromData\CICK\20140711-10925.b\300.0_9056A_CICK.m				
Limit Group:	Anions - 28D - ORGFRMS				
Last Update:	14-Jul-2014 13:04:12	Calib Date:	11-Jul-2014 12:37:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\SAVCHROM\ChromData\CICK\20140711-10925.b\0711141237-11.d				
Column 1 :	Dionex Ion Pac AS18 (4.00 mm)		Det: 0118131406-12		
Process Host:	XAWRK016				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.267	3.267	0.000	13672584	0.5000	0.4823	
2 Chloride	4.500	4.500	0.000	44283952	2.50	2.40	
3 Sulfate	6.008	5.983	0.025	30284670	2.50	2.38	
4 Bromide	7.375	7.367	0.008	17321758	2.50	2.36	

Reagents:

IC_Anion-3_00009 Amount Added: 1.00 Units: mL

Report Date: 14-Jul-2014 13:04:12 Chrom Revision: 2.2 24-Jun-2014 07:21:42

TestAmerica Savannah

Data File: \\SAVCHROM\ChromData\CICK\20140711-10925.b\0711141135-7.d

Injection Date: 11-Jul-2014 11:35:00 Instrument ID: CICK Operator ID:

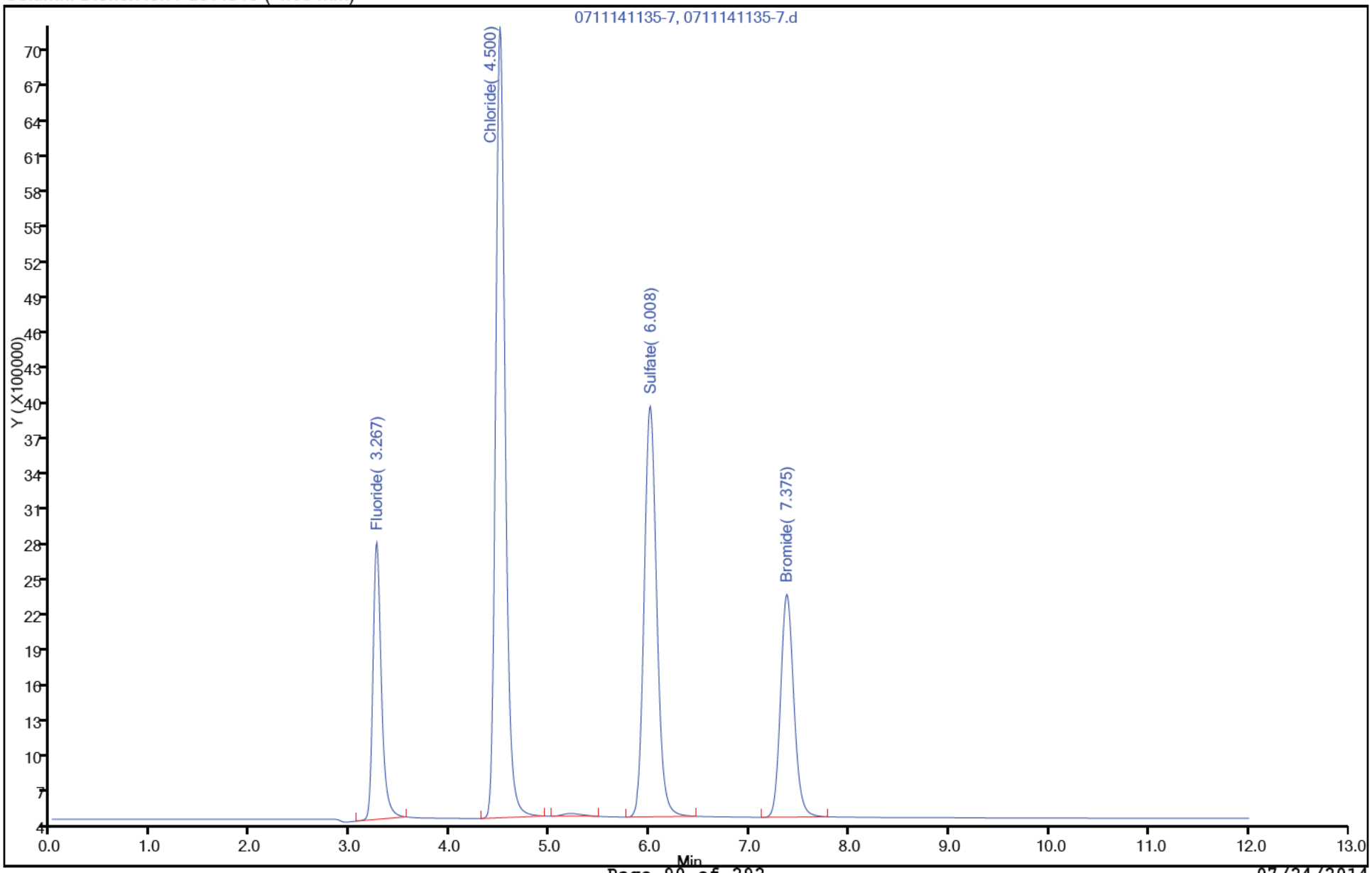
Lims ID: IC Worklist Smp#: 3

Client ID:

Injection Vol: 25.0 ul Dil. Factor: 1.0000 ALS Bottle#: 0

Method: 300.0_9056A_CICK Limit Group: Anions - 28D - ORGFRMS

Column: Dionex Ion Pac AS18 (4.00 mm)



TestAmerica Savannah
Target Compound Quantitation Report

Data File:	\\SAVCHROM\ChromData\CICK\20140711-10925.b\0711141151-8.d				
Lims ID:	IC				
Client ID:					
Sample Type:	IC	Calib Level:	4		
Inject. Date:	11-Jul-2014 11:51:00	ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	25.0 ul	Dil. Factor:	1.0000		
Sample Info:	IC 1K071114 1K082812A				
Misc. Info.:	8 3618688				
Operator ID:		Instrument ID:	CICK		
Sublist:	chrom-300.0_9056A_CICK*sub1				
Method:	\\SAVCHROM\ChromData\CICK\20140711-10925.b\300.0_9056A_CICK.m				
Limit Group:	Anions - 28D - ORGFRMS				
Last Update:	14-Jul-2014 13:04:12	Calib Date:	11-Jul-2014 12:37:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\SAVCHROM\ChromData\CICK\20140711-10925.b\0711141237-11.d				
Column 1 :	Dionex Ion Pac AS18 (4.00 mm)		Det: 0118131406-12		
Process Host:	XAWRK016				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.258	3.258	0.000	29914627	1.00	1.02	
2 Chloride	4.500	4.500	0.000	93393057	5.00	4.94	
3 Sulfate	6.000	6.000	0.000	64879675	5.00	4.90	
4 Bromide	7.367	7.367	0.000	37581626	5.00	4.94	

Reagents:

IC_Anion-4_00011 Amount Added: 1.00 Units: mL

Report Date: 14-Jul-2014 13:04:12 Chrom Revision: 2.2 24-Jun-2014 07:21:42

TestAmerica Savannah

Data File: \\SAVCHROM\ChromData\CICK\20140711-10925.b\0711141151-8.d

Injection Date: 11-Jul-2014 11:51:00 Instrument ID: CICK Operator ID:

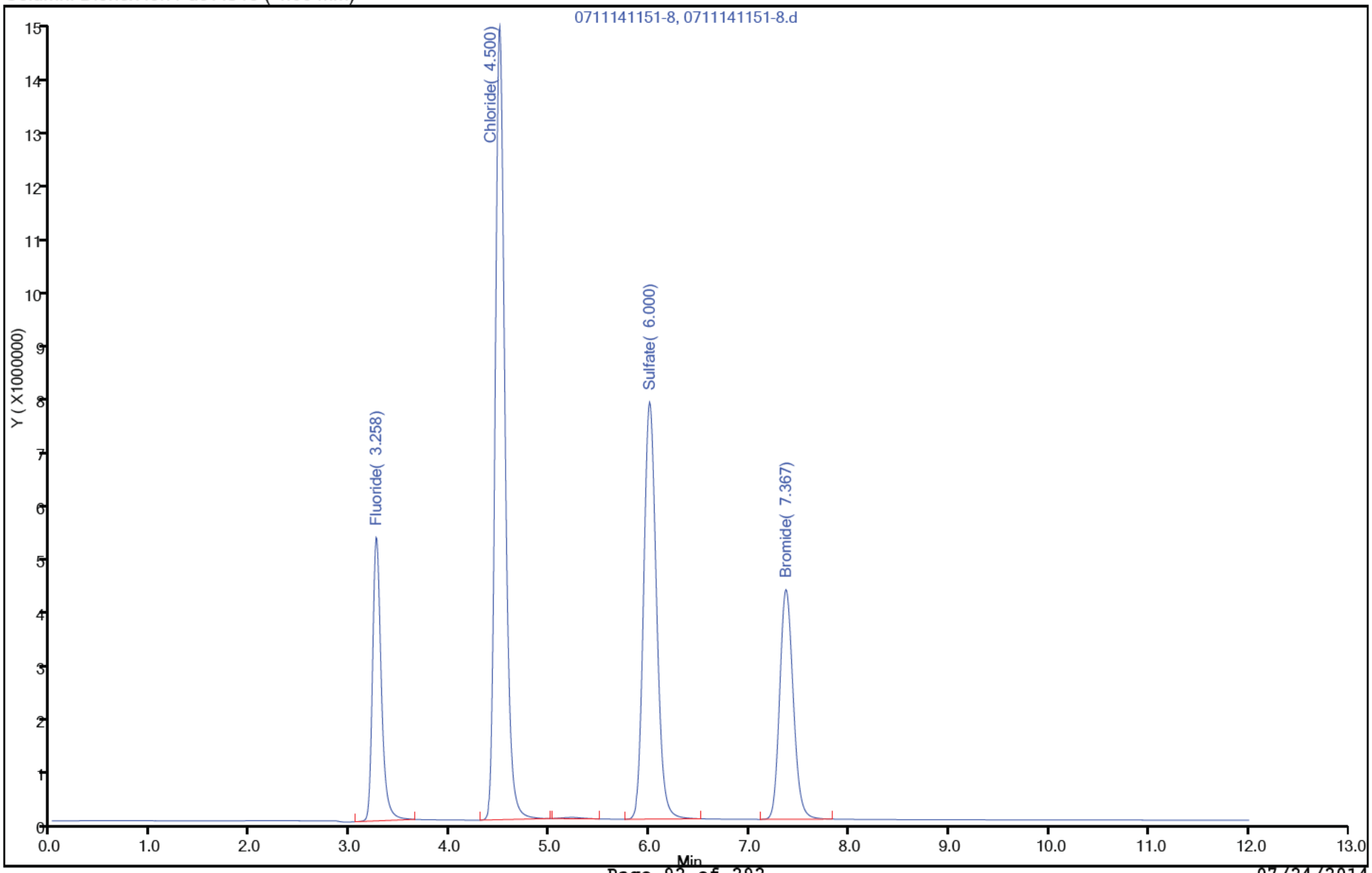
Lims ID: IC Worklist Smp#: 4

Client ID:

Injection Vol: 25.0 ul Dil. Factor: 1.0000 ALS Bottle#: 0

Method: 300.0_9056A_CICK Limit Group: Anions - 28D - ORGFRMS

Column: Dionex Ion Pac AS18 (4.00 mm)



TestAmerica Savannah
Target Compound Quantitation Report

Data File:	\\SAVCHROM\ChromData\CICK\20140711-10925.b\0711141206-9.d				
Lims ID:	IC				
Client ID:					
Sample Type:	IC	Calib Level:	5		
Inject. Date:	11-Jul-2014 12:06:00	ALS Bottle#:	0	Worklist Smp#:	5
Injection Vol:	25.0 ul	Dil. Factor:	1.0000		
Sample Info:	IC 1K071114 1K082812A				
Misc. Info.:	9 3618710				
Operator ID:		Instrument ID:	CICK		
Sublist:	chrom-300.0_9056A_CICK*sub1				
Method:	\\SAVCHROM\ChromData\CICK\20140711-10925.b\300.0_9056A_CICK.m				
Limit Group:	Anions - 28D - ORGFRMS				
Last Update:	14-Jul-2014 13:04:12	Calib Date:	11-Jul-2014 12:37:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\SAVCHROM\ChromData\CICK\20140711-10925.b\0711141237-11.d				
Column 1 :	Dionex Ion Pac AS18 (4.00 mm)		Det: 0118131406-12		
Process Host:	XAWRK016				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.267	3.258	0.009	61647327	2.00	2.08	
2 Chloride	4.500	4.500	0.000	191348772	10.0	10.0	
3 Sulfate	5.992	6.000	-0.008	137125086	10.0	10.2	
4 Bromide	7.358	7.367	-0.009	80264976	10.0	10.4	

Reagents:

IC_Anion-5_00017 Amount Added: 1.00 Units: mL

Report Date: 14-Jul-2014 13:04:12 Chrom Revision: 2.2 24-Jun-2014 07:21:42

TestAmerica Savannah

Data File: \\SAVCHROM\ChromData\CICK\20140711-10925.b\0711141206-9.d

Injection Date: 11-Jul-2014 12:06:00 Instrument ID: CICK Operator ID:

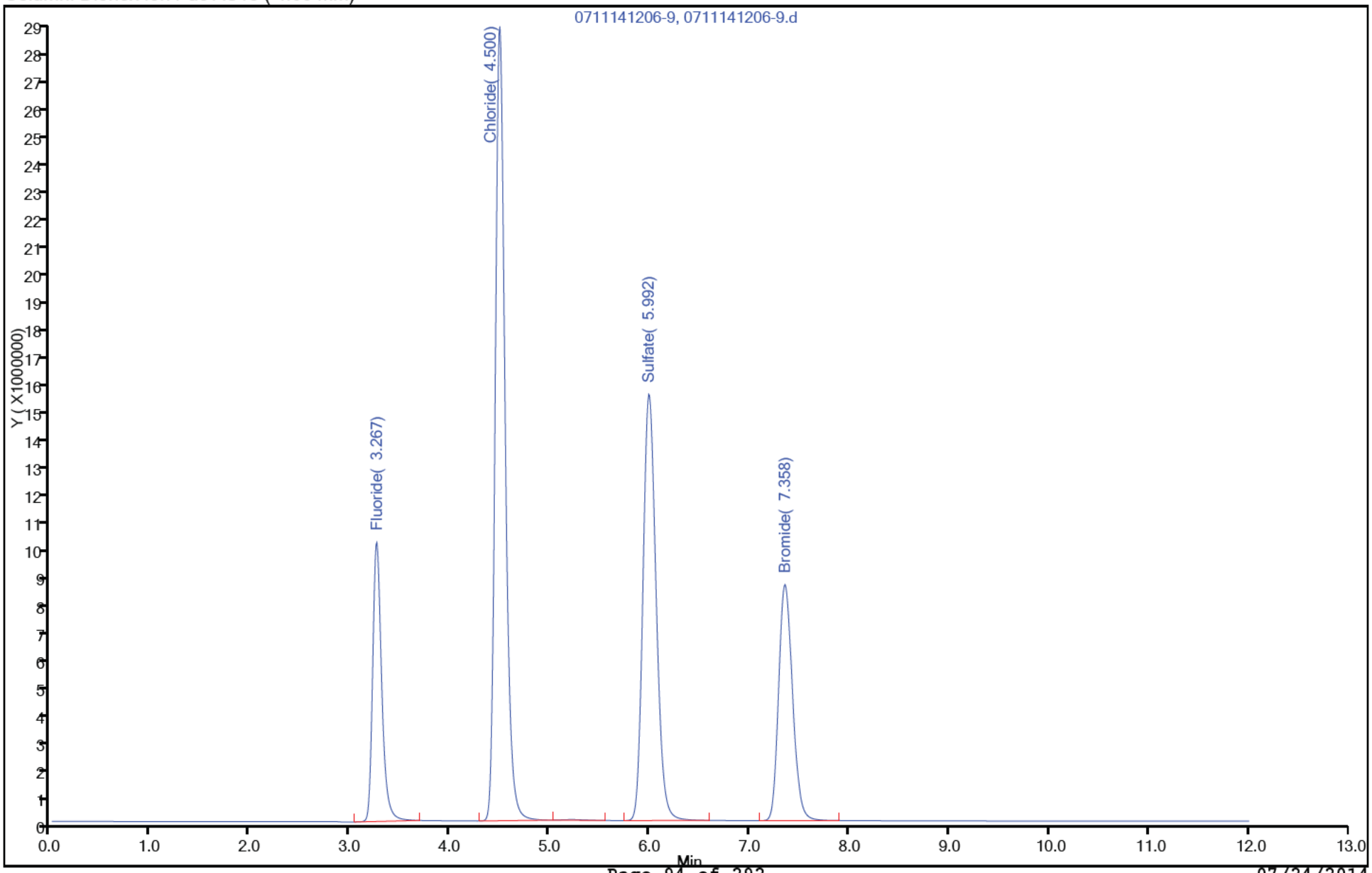
Lims ID: IC Worklist Smp#: 5

Client ID:

Injection Vol: 25.0 ul Dil. Factor: 1.0000 ALS Bottle#: 0

Method: 300.0_9056A_CICK Limit Group: Anions - 28D - ORGFRMS

Column: Dionex Ion Pac AS18 (4.00 mm)



TestAmerica Savannah
Target Compound Quantitation Report

Data File:	\\SAVCHROM\ChromData\CICK\20140711-10925.b\0711141221-10.d				
Lims ID:	IC				
Client ID:					
Sample Type:	IC	Calib Level:	6		
Inject. Date:	11-Jul-2014 12:21:00	ALS Bottle#:	0	Worklist Smp#:	6
Injection Vol:	25.0 ul	Dil. Factor:	1.0000		
Sample Info:	IC 1K071114 1K082812A				
Misc. Info.:	10 3618738				
Operator ID:		Instrument ID:	CICK		
Sublist:	chrom-300.0_9056A_CICK*sub1				
Method:	\\SAVCHROM\ChromData\CICK\20140711-10925.b\300.0_9056A_CICK.m				
Limit Group:	Anions - 28D - ORGFRMS				
Last Update:	14-Jul-2014 13:04:13	Calib Date:	11-Jul-2014 12:37:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\SAVCHROM\ChromData\CICK\20140711-10925.b\0711141237-11.d				
Column 1 :	Dionex Ion Pac AS18 (4.00 mm)		Det: 0118131406-12		
Process Host:	XAWRK016				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.267	3.258	0.009	121723196	4.00	4.08	
2 Chloride	4.500	4.500	0.000	389068254	20.0	20.2	
3 Sulfate	5.983	6.000	-0.017	281947065	20.0	20.7	
4 Bromide	7.342	7.367	-0.025	163278162	20.0	20.9	

Reagents:

IC_Anion-6_00009 Amount Added: 1.00 Units: mL

Report Date: 14-Jul-2014 13:04:13 Chrom Revision: 2.2 24-Jun-2014 07:21:42

TestAmerica Savannah

Data File: \\SAVCHROM\ChromData\CICK\20140711-10925.b\0711141221-10.d

Injection Date: 11-Jul-2014 12:21:00 Instrument ID: CICK Operator ID:

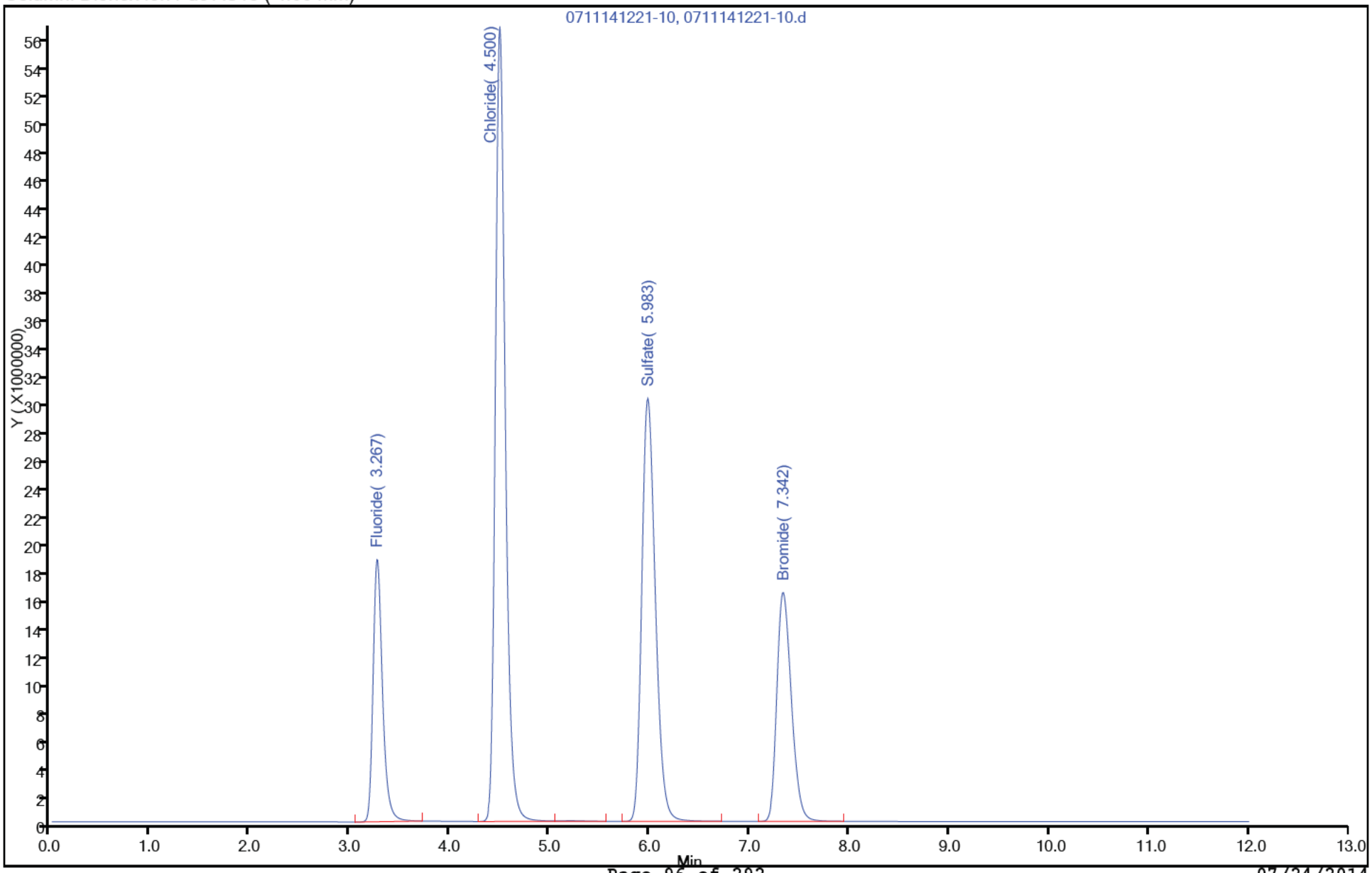
Lims ID: IC Worklist Smp#: 6

Client ID:

Injection Vol: 25.0 ul Dil. Factor: 1.0000 ALS Bottle#: 0

Method: 300.0_9056A_CICK Limit Group: Anions - 28D - ORGFRMS

Column: Dionex Ion Pac AS18 (4.00 mm)



TestAmerica Savannah
Target Compound Quantitation Report

Data File:	\\SAVCHROM\ChromData\CICK\20140711-10925.b\0711141237-11.d				
Lims ID:	IC				
Client ID:					
Sample Type:	IC	Calib Level:	7		
Inject. Date:	11-Jul-2014 12:37:00	ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	25.0 ul	Dil. Factor:	1.0000		
Sample Info:	IC 1K071114 1K082812A				
Misc. Info.:	11 3618763				
Operator ID:		Instrument ID:	CICK		
Sublist:	chrom-300.0_9056A_CICK*sub1				
Method:	\\SAVCHROM\ChromData\CICK\20140711-10925.b\300.0_9056A_CICK.m				
Limit Group:	Anions - 28D - ORGFRMS				
Last Update:	14-Jul-2014 13:04:13	Calib Date:	11-Jul-2014 12:37:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\SAVCHROM\ChromData\CICK\20140711-10925.b\0711141237-11.d				
Column 1 :	Dionex Ion Pac AS18 (4.00 mm)		Det: 0118131406-12		
Process Host:	XAWRK016				

First Level Reviewer: seabrooksd Date: 14-Jul-2014 08:57:12

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.275	3.258	0.017	235197559	8.00	7.87	
2 Chloride	4.492	4.500	-0.008	964023561	50.0	49.9	
3 Sulfate	5.942	6.000	-0.058	704660160	50.0	51.5	
4 Bromide	7.283	7.367	-0.084	418767029	50.0	53.4	

Reagents:

IC_Anion-7_00009 Amount Added: 1.00 Units: mL

Report Date: 14-Jul-2014 13:04:13 Chrom Revision: 2.2 24-Jun-2014 07:21:42

TestAmerica Savannah

Data File: \\SAVCHROM\ChromData\CICK\20140711-10925.b\0711141237-11.d

Injection Date: 11-Jul-2014 12:37:00 Instrument ID: CICK Operator ID:

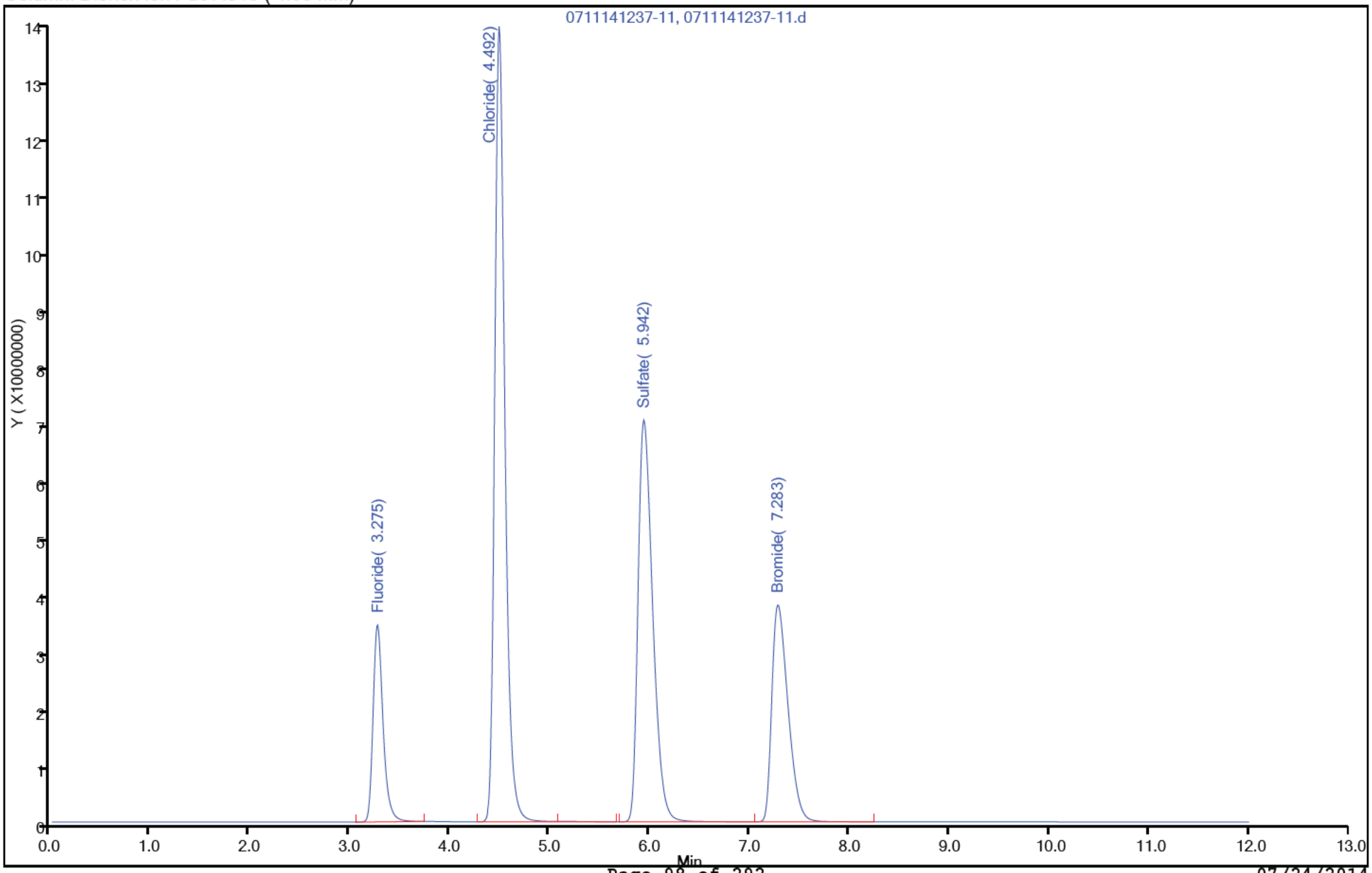
Lims ID: IC Worklist Smp#: 7

Client ID:

Injection Vol: 25.0 ul Dil. Factor: 1.0000 ALS Bottle#: 0

Method: 300.0_9056A_CICK Limit Group: Anions - 28D - ORGFRMS

Column: Dionex Ion Pac AS18 (4.00 mm)



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 460-79113-1

SDG No.:

Lab Sample ID: ICV 680-338674/1009 Calibration Date: 07/11/2014 13:07

Instrument ID: CICK Calib Start Date: 07/11/2014 11:05

GC Column: Dionex AS18 ID: 4.00(mm) Calib End Date: 07/11/2014 12:37

Lab File ID: 0711141307-13-ICV.d Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fluoride	Lin2		30166546		2.04	2.00	1.9	10.0
Chloride	Lin		18679651		9.77	10.0	-2.3	10.0
Sulfate	Lin2		13539605		10.0	10.0	0.3	10.0
Bromide	Lin2		7913920		10.2	10.0	2.2	10.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Savannah Job No.: 460-79113-1

SDG No.:

Lab Sample ID: ICV 680-338674/1009 Calibration Date: 07/11/2014 13:07

Instrument ID: CICK Calib Start Date: 07/11/2014 11:05

GC Column: Dionex AS18 ID: 4.00(mm) Calib End Date: 07/11/2014 12:37

Lab File ID: 0711141307-13-ICV.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fluoride	3.27	3.01	3.51
Chloride	4.50	4.25	4.75
Sulfate	6.00	5.75	6.25
Bromide	7.36	7.12	7.62

TestAmerica Laboratories
Target Compound Quantitation Report

Data File:	\\SAVCHROM\ChromData\CICK\20140711-10925.b\0711141307-13-ICV.d				
Lims ID:	ICV				
Client ID:					
Sample Type:	ICV				
Inject. Date:	11-Jul-2014 13:07:00	ALS Bottle#:	0	Worklist Smp#:	1009
Injection Vol:	25.0 ul	Dil. Factor:	1.0000		
Sample Info:	LCS 1K071114 1K082812A				
Misc. Info.:	13 3618765				
Operator ID:		Instrument ID:	CICK		
Sublist:					

Method:	\\SAVCHROM\ChromData\CICK\20140711-10925.b\300.0_9056A_CICK.m		
Limit Group:	Anions - 28D - ORGFRMS		
Last Update:	14-Jul-2014 13:04:13	Calib Date:	11-Jul-2014 12:37:00
Integrator:	Falcon		
Quant Method:	External Standard	Quant By:	Initial Calibration
Last ICal File:	\\SAVCHROM\ChromData\CICK\20140711-10925.b\0711141237-11.d		

Column 1 :	Dionex Ion Pac AS18 (4.00 mm)	Det: 0118131406-12
Process Host:	XAWRK016	

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.267	3.258	0.009	60333091	2.00	2.04	
2 Chloride	4.500	4.500	0.000	186796514	10.0	9.77	
3 Sulfate	6.000	6.000	0.000	135396046	10.0	10.0	
4 Bromide	7.358	7.367	-0.009	79139204	10.0	10.2	

Reagents:

IC_Anion-ICV_00014 Amount Added: 1.00 Units: mL

Report Date: 14-Jul-2014 13:04:15 Chrom Revision: 2.2 24-Jun-2014 07:21:42

TestAmerica Laboratories

Data File: \\SAVCHROM\ChromData\CICK\20140711-10925.b\0711141307-13-ICV.d

Injection Date: 11-Jul-2014 13:07:00 Instrument ID: CICK Operator ID:

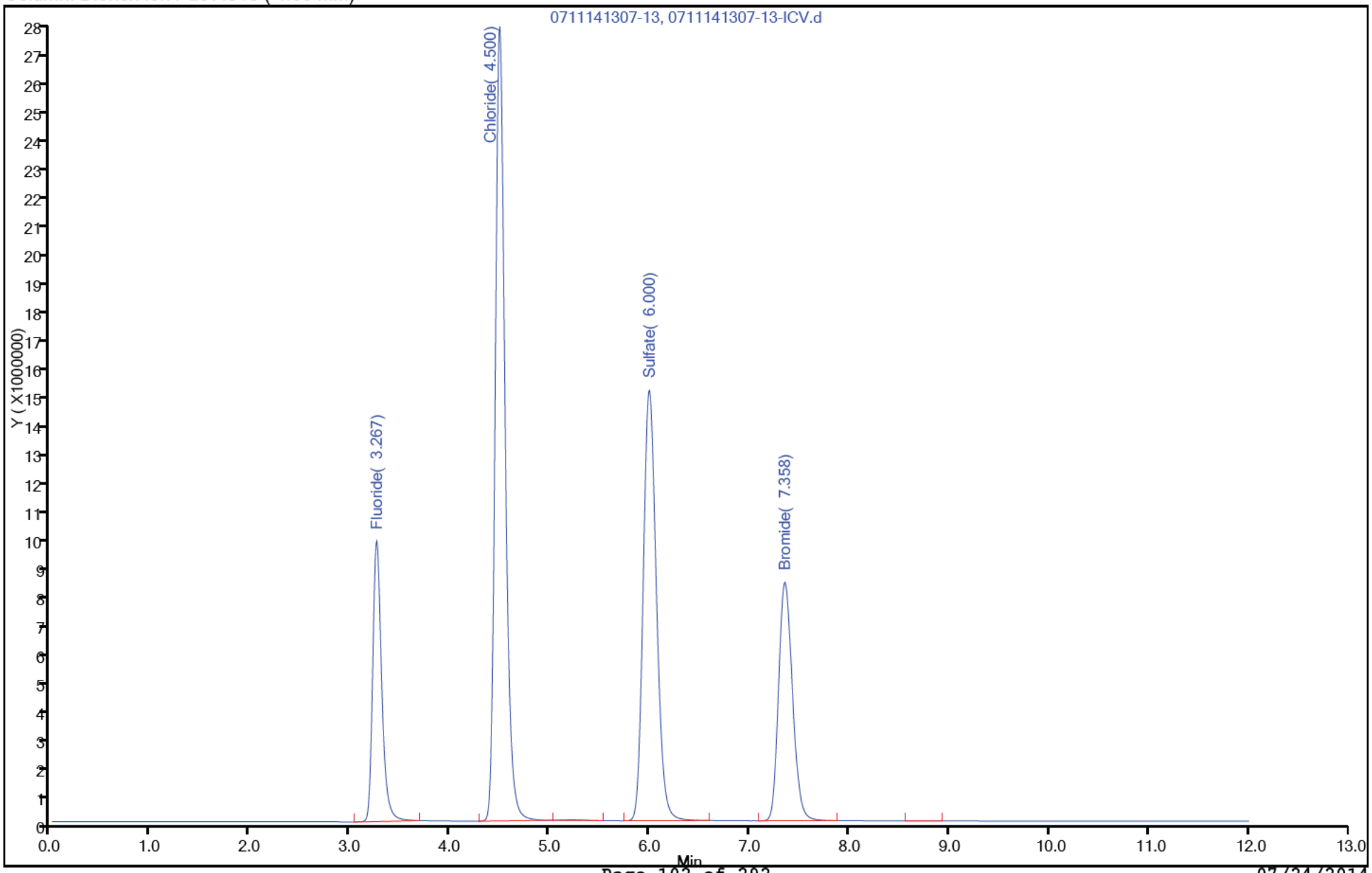
Lims ID: ICV Worklist Smp#: 1009

Client ID:

Injection Vol: 25.0 ul Dil. Factor: 1.0000 ALS Bottle#: 0

Method: 300.0_9056A_CICK Limit Group: Anions - 28D - ORGFRMS

Column: Dionex Ion Pac AS18 (4.00 mm)



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 460-79113-1

SDG No.:

Lab Sample ID: CCV 680-339289/28 Calibration Date: 07/16/2014 17:51

Instrument ID: CICK Calib Start Date: 07/11/2014 11:05

GC Column: Dionex AS18 ID: 4.00(mm) Calib End Date: 07/11/2014 12:37

Lab File ID: 0716141751-32.d Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fluoride	Lin2		30497661		2.06	2.00	3.0	10.0
Chloride	Lin		18814113		9.84	10.0	-1.6	10.0
Sulfate	Lin2		13573275		10.1	10.0	0.6	10.0
Bromide	Lin2		7915680		10.2	10.0	2.2	10.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Savannah Job No.: 460-79113-1

SDG No.:

Lab Sample ID: CCV 680-339289/28 Calibration Date: 07/16/2014 17:51

Instrument ID: CICK Calib Start Date: 07/11/2014 11:05

GC Column: Dionex AS18 ID: 4.00(mm) Calib End Date: 07/11/2014 12:37

Lab File ID: 0716141751-32.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fluoride	3.28	3.03	3.53
Chloride	4.50	4.25	4.75
Sulfate	5.99	5.74	6.24
Bromide	7.35	7.10	7.60

TestAmerica Savannah
Target Compound Quantitation Report

Data File:	\\SAVCHROM\ChromData\CICK\20140716-11038.b\0716141751-32.d				
Lims ID:	CCV				
Client ID:					
Sample Type:	CCV				
Inject. Date:	16-Jul-2014 17:51:00	ALS Bottle#:	0	Worklist Smp#:	28
Injection Vol:	25.0 ul	Dil. Factor:	1.0000		
Sample Info:	IC_ANION-5 2K071614 1K082812A				
Misc. Info.:	30 3618710				
Operator ID:		Instrument ID:	CICK		
Sublist:	chrom-300.0_9056A_CICK*sub1				
Method:	\\SAVCHROM\ChromData\CICK\20140716-11038.b\300.0_9056A_CICK.m				
Limit Group:	Anions - 28D - ORGFRMS				
Last Update:	17-Jul-2014 08:22:38	Calib Date:	11-Jul-2014 12:37:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\SAVCHROM\ChromData\CICK\20140711-10925.b\0711141237-11.d				
Column 1 :	Dionex Ion Pac AS18 (4.00 mm)		Det: 0118131406-12		
Process Host:	XAWRK033				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.275	3.275	0.000	60995322	2.00	2.06	
2 Chloride	4.500	4.500	0.000	188141125	10.0	9.84	
3 Sulfate	5.992	5.992	0.000	135732745	10.0	10.1	
4 Bromide	7.350	7.350	0.000	79156799	10.0	10.2	

Reagents:

IC_Anion-5_00017 Amount Added: 1.00 Units: mL

Report Date: 17-Jul-2014 08:22:38 Chrom Revision: 2.2 24-Jun-2014 07:21:42

TestAmerica Savannah

Data File: \\SAVCHROM\ChromData\CICK\20140716-11038.b\0716141751-32.d

Injection Date: 16-Jul-2014 17:51:00 Instrument ID: CICK Operator ID:

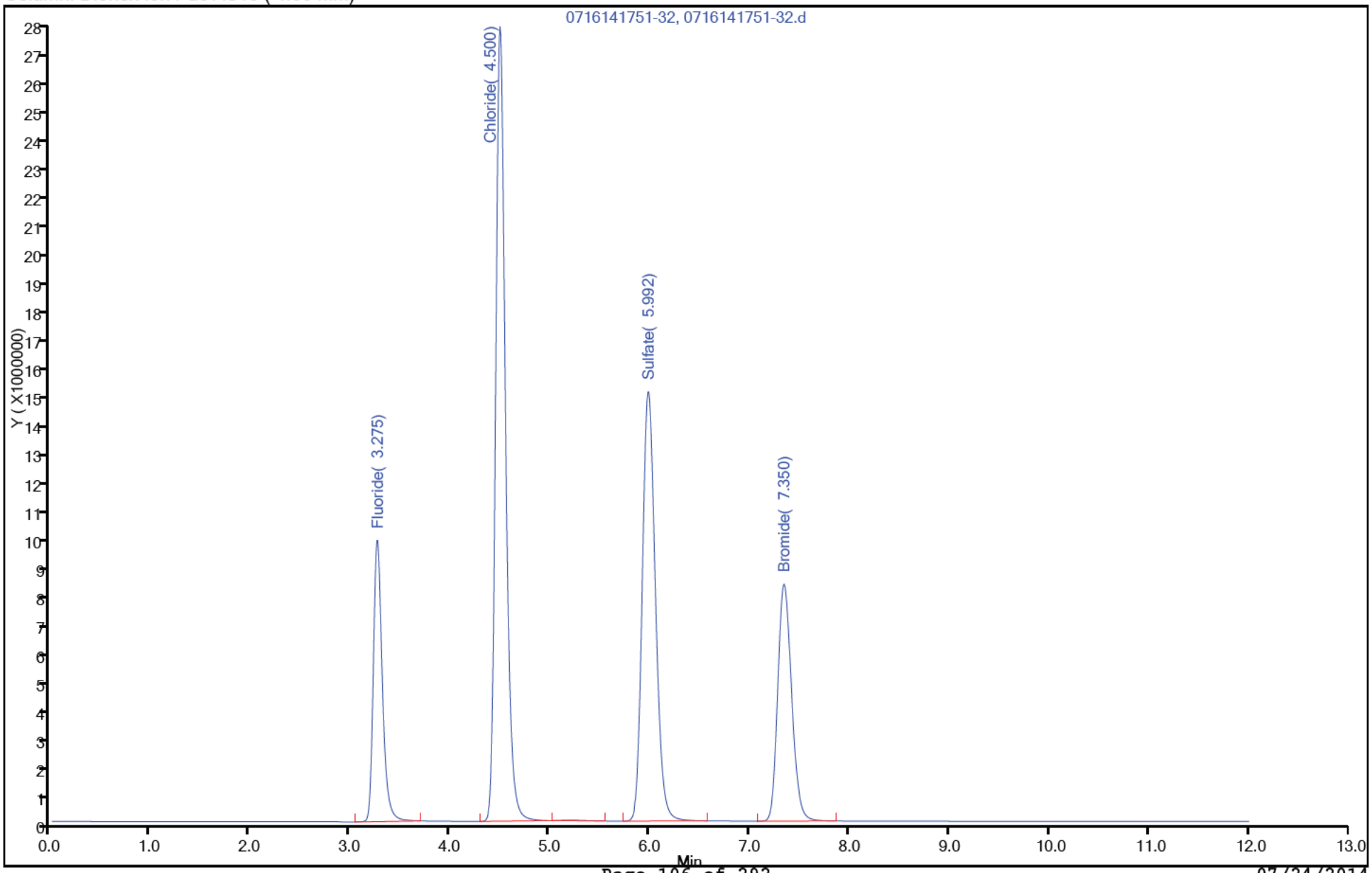
Lims ID: CCV Worklist Smp#: 28

Client ID:

Injection Vol: 25.0 ul Dil. Factor: 1.0000 ALS Bottle#: 0

Method: 300.0_9056A_CICK Limit Group: Anions - 28D - ORGFRMS

Column: Dionex Ion Pac AS18 (4.00 mm)



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 460-79113-1

SDG No.:

Lab Sample ID: CCV 680-339289/42 Calibration Date: 07/16/2014 21:25

Instrument ID: CICK Calib Start Date: 07/11/2014 11:05

GC Column: Dionex AS18 ID: 4.00(mm) Calib End Date: 07/11/2014 12:37

Lab File ID: 0716142125-46.d Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fluoride	Lin2		29953247		2.02	2.00	1.2	10.0
Chloride	Lin		18512081		9.68	10.0	-3.2	10.0
Sulfate	Lin2		13359787		9.90	10.0	-1.0	10.0
Bromide	Lin2		7771120		10.0	10.0	0.4	10.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Savannah Job No.: 460-79113-1

SDG No.:

Lab Sample ID: CCV 680-339289/42 Calibration Date: 07/16/2014 21:25

Instrument ID: CICK Calib Start Date: 07/11/2014 11:05

GC Column: Dionex AS18 ID: 4.00(mm) Calib End Date: 07/11/2014 12:37

Lab File ID: 0716142125-46.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fluoride	3.28	3.03	3.53
Chloride	4.50	4.25	4.75
Sulfate	5.98	5.73	6.23
Bromide	7.36	7.11	7.61

TestAmerica Savannah
Target Compound Quantitation Report

Data File:	\\SAVCHROM\ChromData\CICK\20140716-11038.b\0716142125-46.d				
Lims ID:	CCV				
Client ID:					
Sample Type:	CCV				
Inject. Date:	16-Jul-2014 21:25:00	ALS Bottle#:	0	Worklist Smp#:	42
Injection Vol:	25.0 ul	Dil. Factor:	1.0000		
Sample Info:	IC_ANION-5 2K071614 1K082812A				
Misc. Info.:	13920 3618710				
Operator ID:		Instrument ID:	CICK		
Sublist:	chrom-300.0_9056A_CICK*sub1				
Method:	\\SAVCHROM\ChromData\CICK\20140716-11038.b\300.0_9056A_CICK.m				
Limit Group:	Anions - 28D - ORGFRMS				
Last Update:	17-Jul-2014 08:22:42	Calib Date:	11-Jul-2014 12:37:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\SAVCHROM\ChromData\CICK\20140711-10925.b\0711141237-11.d				
Column 1 :	Dionex Ion Pac AS18 (4.00 mm)		Det: 0118131406-12		
Process Host:	XAWRK033				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.275	3.275	0.000	59906494	2.00	2.02	
2 Chloride	4.500	4.500	0.000	185120814	10.0	9.68	
3 Sulfate	5.983	5.983	0.000	133597867	10.0	9.90	
4 Bromide	7.358	7.358	0.000	77711197	10.0	10.0	

Reagents:

IC_Anion-5_00017 Amount Added: 1.00 Units: mL

Report Date: 17-Jul-2014 08:22:42 Chrom Revision: 2.2 24-Jun-2014 07:21:42

TestAmerica Savannah

Data File: \\SAVCHROM\ChromData\CICK\20140716-11038.b\0716142125-46.d

Injection Date: 16-Jul-2014 21:25:00 Instrument ID: CICK Operator ID:

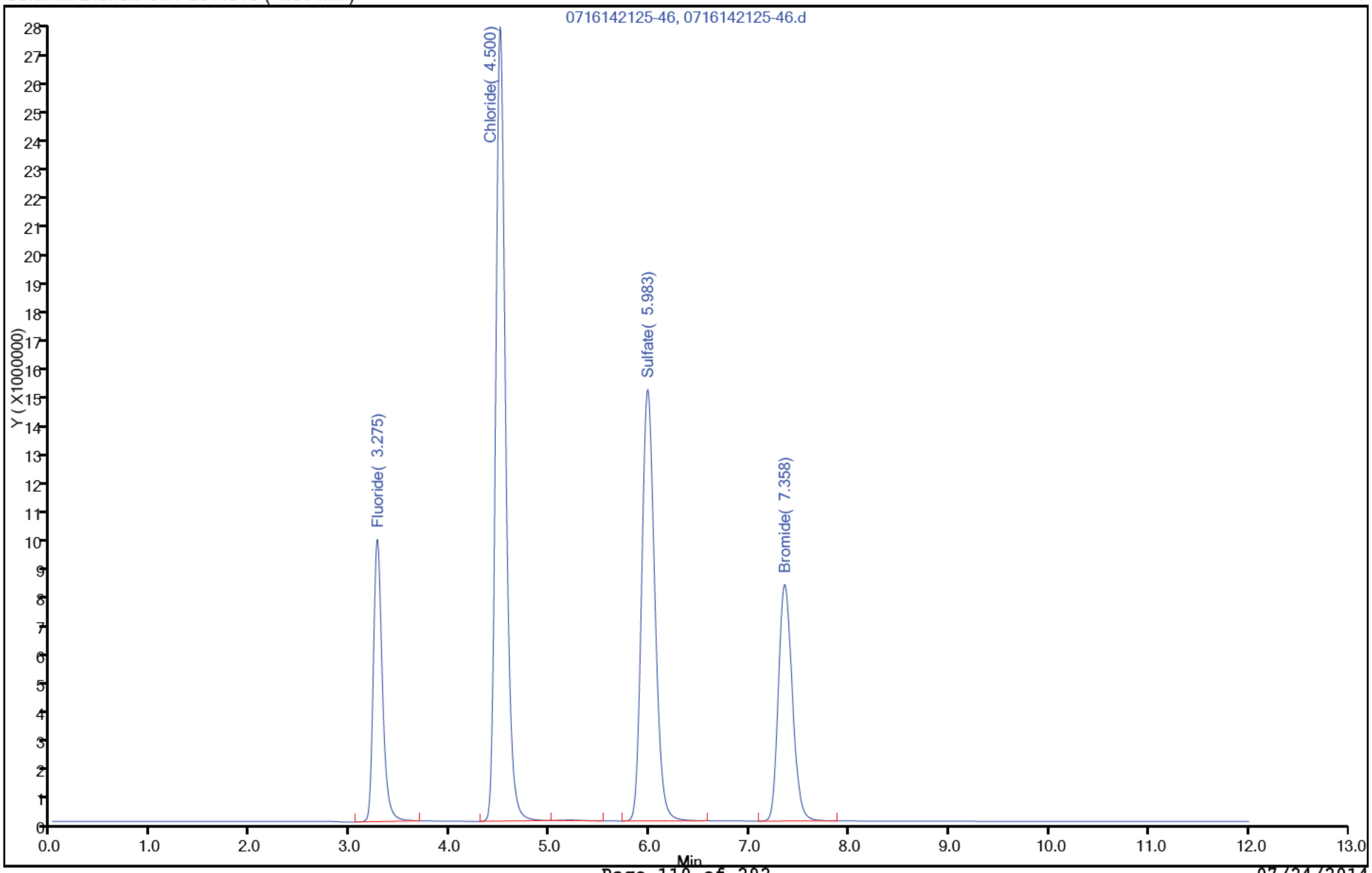
Lims ID: CCV Worklist Smp#: 42

Client ID:

Injection Vol: 25.0 ul Dil. Factor: 1.0000 ALS Bottle#: 0

Method: 300.0_9056A_CICK Limit Group: Anions - 28D - ORGFRMS

Column: Dionex Ion Pac AS18 (4.00 mm)



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 460-79113-1

SDG No.:

Lab Sample ID: CCV 680-339289/52 Calibration Date: 07/16/2014 23:58

Instrument ID: CICK Calib Start Date: 07/11/2014 11:05

GC Column: Dionex AS18 ID: 4.00(mm) Calib End Date: 07/11/2014 12:37

Lab File ID: 0716142358-56.d Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fluoride	Lin2		29779804		2.01	2.00	0.6	10.0
Chloride	Lin		18358057		9.60	10.0	-4.0	10.0
Sulfate	Lin2		13245302		9.82	10.0	-1.8	10.0
Bromide	Lin2		7705788		9.95	10.0	-0.5	10.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Savannah Job No.: 460-79113-1

SDG No.:

Lab Sample ID: CCV 680-339289/52 Calibration Date: 07/16/2014 23:58

Instrument ID: CICK Calib Start Date: 07/11/2014 11:05

GC Column: Dionex AS18 ID: 4.00(mm) Calib End Date: 07/11/2014 12:37

Lab File ID: 0716142358-56.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fluoride	3.27	3.02	3.52
Chloride	4.50	4.25	4.75
Sulfate	5.98	5.73	6.23
Bromide	7.35	7.10	7.60

TestAmerica Savannah
Target Compound Quantitation Report

Data File:	\\SAVCHROM\ChromData\CICK\20140716-11038.b\0716142358-56.d				
Lims ID:	CCV				
Client ID:					
Sample Type:	CCV				
Inject. Date:	16-Jul-2014 23:58:00	ALS Bottle#:	0	Worklist Smp#:	52
Injection Vol:	25.0 ul	Dil. Factor:	1.0000		
Sample Info:	IC_ANION-5 2K071614 1K082812A				
Misc. Info.:	26752 3618710				
Operator ID:		Instrument ID:	CICK		
Sublist:	chrom-300.0_9056A_CICK*sub1				
Method:	\\SAVCHROM\ChromData\CICK\20140716-11038.b\300.0_9056A_CICK.m				
Limit Group:	Anions - 28D - ORGFRMS				
Last Update:	17-Jul-2014 08:22:45	Calib Date:	11-Jul-2014 12:37:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\SAVCHROM\ChromData\CICK\20140711-10925.b\0711141237-11.d				
Column 1 :	Dionex Ion Pac AS18 (4.00 mm)		Det: 0118131406-12		
Process Host:	XAWRK033				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.267	3.267	0.000	59559608	2.00	2.01	
2 Chloride	4.500	4.500	0.000	183580573	10.0	9.60	
3 Sulfate	5.975	5.975	0.000	132453024	10.0	9.82	
4 Bromide	7.350	7.350	0.000	77057879	10.0	9.95	

Reagents:

IC_Anion-5_00017 Amount Added: 1.00 Units: mL

Report Date: 17-Jul-2014 08:22:45 Chrom Revision: 2.2 24-Jun-2014 07:21:42

TestAmerica Savannah

Data File: \\SAVCHROM\ChromData\CICK\20140716-11038.b\0716142358-56.d

Injection Date: 16-Jul-2014 23:58:00 Instrument ID: CICK Operator ID:

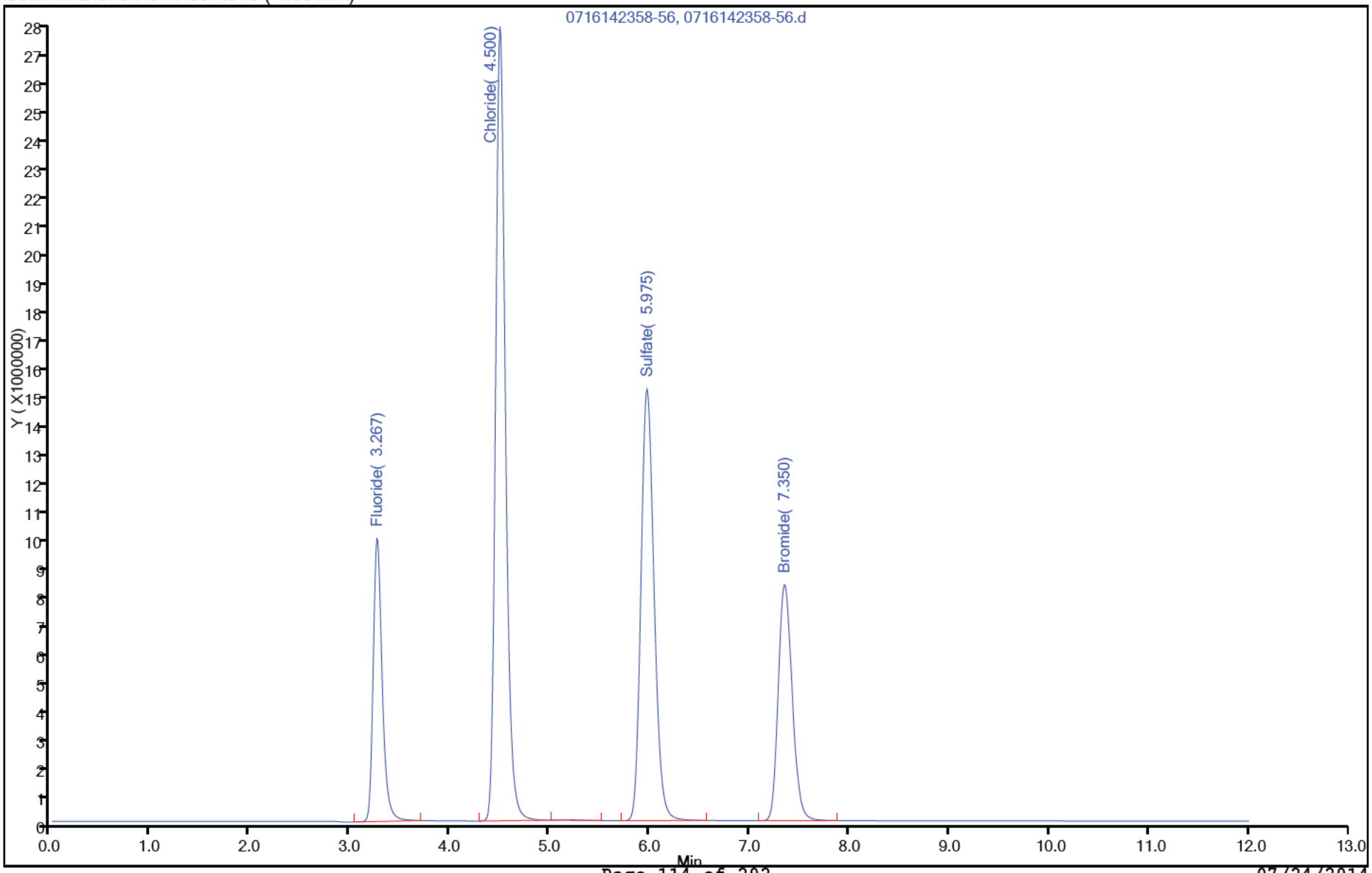
Lims ID: CCV Worklist Smp#: 52

Client ID:

Injection Vol: 25.0 ul Dil. Factor: 1.0000 ALS Bottle#: 0

Method: 300.0_9056A_CICK Limit Group: Anions - 28D - ORGFRMS

Column: Dionex Ion Pac AS18 (4.00 mm)



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 460-79113-1

SDG No.:

Lab Sample ID: CCV 680-339475/1 Calibration Date: 07/17/2014 10:19

Instrument ID: CICK Calib Start Date: 07/11/2014 11:05

GC Column: Dionex AS18 ID: 4.00(mm) Calib End Date: 07/11/2014 12:37

Lab File ID: 0717141019-5.d Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fluoride	Lin2		30924520		2.09	2.00	4.4	10.0
Chloride	Lin		19137265		10.0	10.0	0.0	10.0
Sulfate	Lin2		13736286		10.2	10.0	1.8	10.0
Bromide	Lin2		8041807		10.4	10.0	3.8	10.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Savannah Job No.: 460-79113-1

SDG No.:

Lab Sample ID: CCV 680-339475/1 Calibration Date: 07/17/2014 10:19

Instrument ID: CICK Calib Start Date: 07/11/2014 11:05

GC Column: Dionex AS18 ID: 4.00(mm) Calib End Date: 07/11/2014 12:37

Lab File ID: 0717141019-5.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fluoride	3.27	3.02	3.52
Chloride	4.49	4.24	4.74
Sulfate	5.97	5.72	6.22
Bromide	7.33	7.08	7.58

TestAmerica Savannah
Target Compound Quantitation Report

Data File: \\SAVCHROM\ChromData\CICK\20140717-11077.b\0717141019-5.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 17-Jul-2014 10:19:00 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 25.0 ul Dil. Factor: 1.0000
Sample Info: IC_ANION-5 1K071714 1K082812A
Misc. Info.: 5 3618710
Operator ID: Instrument ID: CICK
Sublist: chrom-300.0_9056A_CICK*sub1

Method: \\SAVCHROM\ChromData\CICK\20140717-11077.b\300.0_9056A_CICK.m
Limit Group: Anions - 28D - ORGFRMS
Last Update: 18-Jul-2014 11:23:45 Calib Date: 11-Jul-2014 12:37:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\SAVCHROM\ChromData\CICK\20140711-10925.b\0711141237-11.d

Column 1 : Dionex Ion Pac AS18 (4.00 mm) Det: 0118131406-12
Process Host: XAWRK026

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.267	3.267	0.000	61849039	2.00	2.09	
2 Chloride	4.492	4.492	0.000	191372653	10.0	10.0	
3 Sulfate	5.967	5.967	0.000	137362857	10.0	10.2	
4 Bromide	7.333	7.333	0.000	80418074	10.0	10.4	

Reagents:

IC_Anion-5_00017 Amount Added: 1.00 Units: mL

Report Date: 18-Jul-2014 11:23:45 Chrom Revision: 2.2 24-Jun-2014 07:21:42

TestAmerica Savannah

Data File: \\SAVCHROM\ChromData\CICK\20140717-11077.b\0717141019-5.d

Injection Date: 17-Jul-2014 10:19:00 Instrument ID: CICK Operator ID:

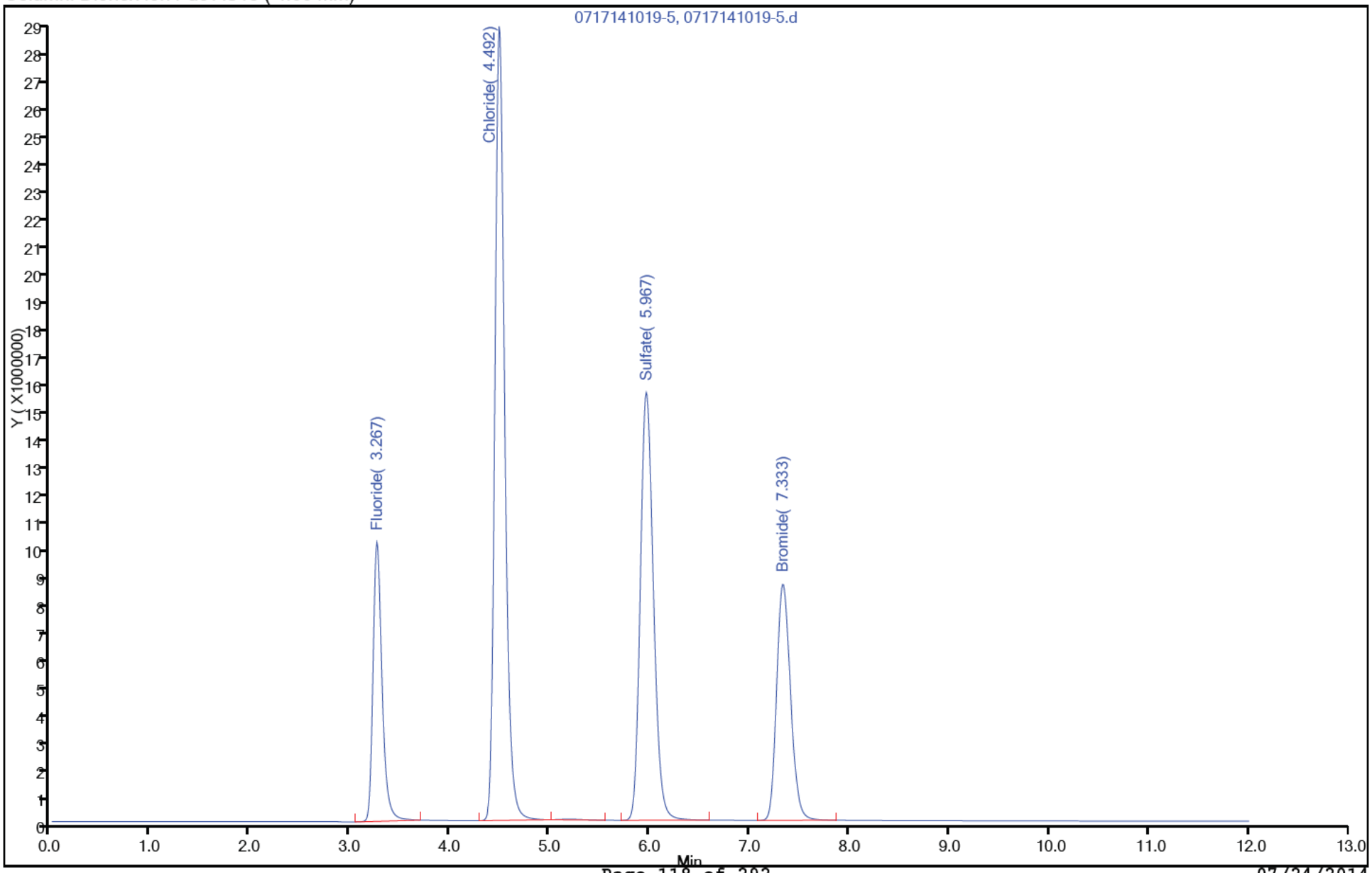
Lims ID: CCV Worklist Smp#: 1

Client ID:

Injection Vol: 25.0 ul Dil. Factor: 1.0000 ALS Bottle#: 0

Method: 300.0_9056A_CICK Limit Group: Anions - 28D - ORGFRMS

Column: Dionex Ion Pac AS18 (4.00 mm)



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 460-79113-1

SDG No.:

Lab Sample ID: CCV 680-339475/16 Calibration Date: 07/17/2014 14:09

Instrument ID: CICK Calib Start Date: 07/11/2014 11:05

GC Column: Dionex AS18 ID: 4.00(mm) Calib End Date: 07/11/2014 12:37

Lab File ID: 0717141409-20.d Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fluoride	Lin2		30872731		2.09	2.00	4.2	10.0
Chloride	Lin		19077584		9.97	10.0	-0.3	10.0
Sulfate	Lin2		13735064		10.2	10.0	1.7	10.0
Bromide	Lin2		8023462		10.4	10.0	3.6	10.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Savannah Job No.: 460-79113-1

SDG No.:

Lab Sample ID: CCV 680-339475/16 Calibration Date: 07/17/2014 14:09

Instrument ID: CICK Calib Start Date: 07/11/2014 11:05

GC Column: Dionex AS18 ID: 4.00(mm) Calib End Date: 07/11/2014 12:37

Lab File ID: 0717141409-20.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fluoride	3.27	3.02	3.52
Chloride	4.50	4.25	4.75
Sulfate	5.98	5.73	6.23
Bromide	7.34	7.09	7.59

TestAmerica Savannah
Target Compound Quantitation Report

Data File:	\\SAVCHROM\ChromData\CICK\20140717-11077.b\0717141409-20.d				
Lims ID:	CCV				
Client ID:					
Sample Type:	CCV				
Inject. Date:	17-Jul-2014 14:09:00	ALS Bottle#:	0	Worklist Smp#:	16
Injection Vol:	25.0 ul	Dil. Factor:	1.0000		
Sample Info:	IC_ANION-5 1K071714 1K082812A				
Misc. Info.:	20 3618710				
Operator ID:		Instrument ID:	CICK		
Sublist:	chrom-300.0_9056A_CICK*sub1				
Method:	\\SAVCHROM\ChromData\CICK\20140717-11077.b\300.0_9056A_CICK.m				
Limit Group:	Anions - 28D - ORGFRMS				
Last Update:	18-Jul-2014 11:23:49	Calib Date:	11-Jul-2014 12:37:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\SAVCHROM\ChromData\CICK\20140711-10925.b\0711141237-11.d				
Column 1 :	Dionex Ion Pac AS18 (4.00 mm)		Det: 0118131406-12		
Process Host:	XAWRK026				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.267	3.267	0.000	61745462	2.00	2.08	
2 Chloride	4.500	4.500	0.000	190775842	10.0	9.97	
3 Sulfate	5.975	5.975	0.000	137350643	10.0	10.2	
4 Bromide	7.342	7.342	0.000	80234619	10.0	10.4	

Reagents:

IC_Anion-5_00017 Amount Added: 1.00 Units: mL

Report Date: 18-Jul-2014 11:23:49 Chrom Revision: 2.2 24-Jun-2014 07:21:42

TestAmerica Savannah

Data File: \\SAVCHROM\ChromData\CICK\20140717-11077.b\0717141409-20.d

Injection Date: 17-Jul-2014 14:09:00 Instrument ID: CICK Operator ID:

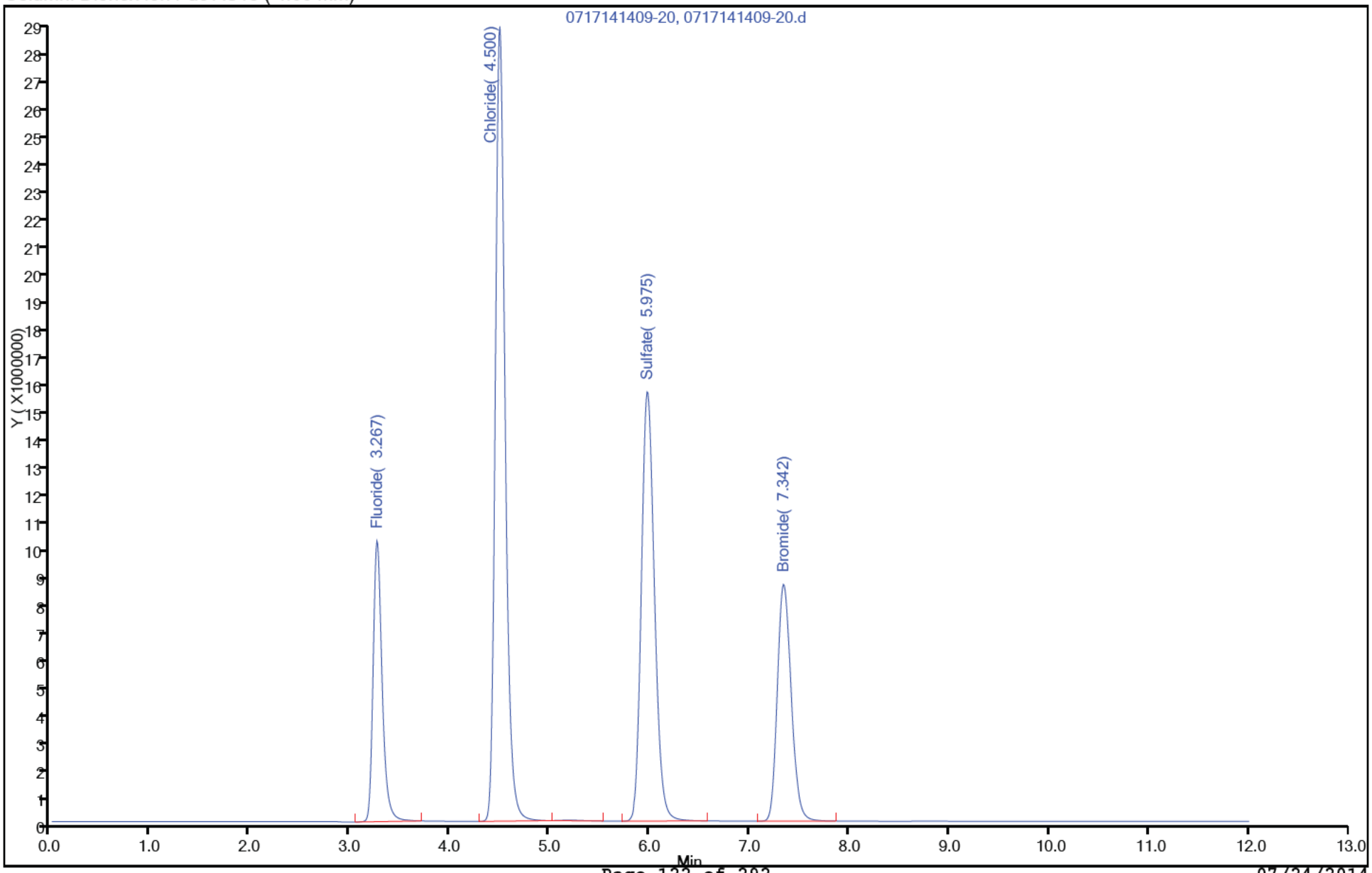
Lims ID: CCV Worklist Smp#: 16

Client ID:

Injection Vol: 25.0 ul Dil. Factor: 1.0000 ALS Bottle#: 0

Method: 300.0_9056A_CICK Limit Group: Anions - 28D - ORGFRMS

Column: Dionex Ion Pac AS18 (4.00 mm)



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 460-79113-1

SDG No.:

Lab Sample ID: CCV 680-339475/22 Calibration Date: 07/17/2014 15:41

Instrument ID: CICK Calib Start Date: 07/11/2014 11:05

GC Column: Dionex AS18 ID: 4.00(mm) Calib End Date: 07/11/2014 12:37

Lab File ID: 0717141541-26.d Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fluoride	Lin2		30803513		2.08	2.00	4.0	10.0
Chloride	Lin		19065717		9.97	10.0	-0.3	10.0
Sulfate	Lin2		13726544		10.2	10.0	1.7	10.0
Bromide	Lin2		8010609		10.3	10.0	3.4	10.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Savannah Job No.: 460-79113-1

SDG No.:

Lab Sample ID: CCV 680-339475/22 Calibration Date: 07/17/2014 15:41

Instrument ID: CICK Calib Start Date: 07/11/2014 11:05

GC Column: Dionex AS18 ID: 4.00(mm) Calib End Date: 07/11/2014 12:37

Lab File ID: 0717141541-26.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fluoride	3.27	3.02	3.52
Chloride	4.50	4.25	4.75
Sulfate	5.98	5.73	6.23
Bromide	7.34	7.09	7.59

TestAmerica Savannah
Target Compound Quantitation Report

Data File:	\\SAVCHROM\ChromData\CICK\20140717-11077.b\0717141541-26.d				
Lims ID:	CCV				
Client ID:					
Sample Type:	CCV				
Inject. Date:	17-Jul-2014 15:41:00	ALS Bottle#:	0	Worklist Smp#:	22
Injection Vol:	25.0 ul	Dil. Factor:	1.0000		
Sample Info:	IC_ANION-5 2K071614 1K082812A				
Misc. Info.:	32 3618710				
Operator ID:		Instrument ID:	CICK		
Sublist:	chrom-300.0_9056A_CICK*sub1				
Method:	\\SAVCHROM\ChromData\CICK\20140717-11077.b\300.0_9056A_CICK.m				
Limit Group:	Anions - 28D - ORGFRMS				
Last Update:	18-Jul-2014 11:23:50	Calib Date:	11-Jul-2014 12:37:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\SAVCHROM\ChromData\CICK\20140711-10925.b\0711141237-11.d				
Column 1 :	Dionex Ion Pac AS18 (4.00 mm)		Det: 0118131406-12		
Process Host:	XAWRK026				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.267	3.267	0.000	61607025	2.00	2.08	
2 Chloride	4.500	4.500	0.000	190657168	10.0	9.97	
3 Sulfate	5.983	5.983	0.000	137265438	10.0	10.2	
4 Bromide	7.342	7.342	0.000	80106085	10.0	10.3	

Reagents:

IC_Anion-5_00017 Amount Added: 1.00 Units: mL

Report Date: 18-Jul-2014 11:23:50 Chrom Revision: 2.2 24-Jun-2014 07:21:42

TestAmerica Savannah

Data File: \\SAVCHROM\ChromData\CICK\20140717-11077.b\0717141541-26.d

Injection Date: 17-Jul-2014 15:41:00 Instrument ID: CICK Operator ID:

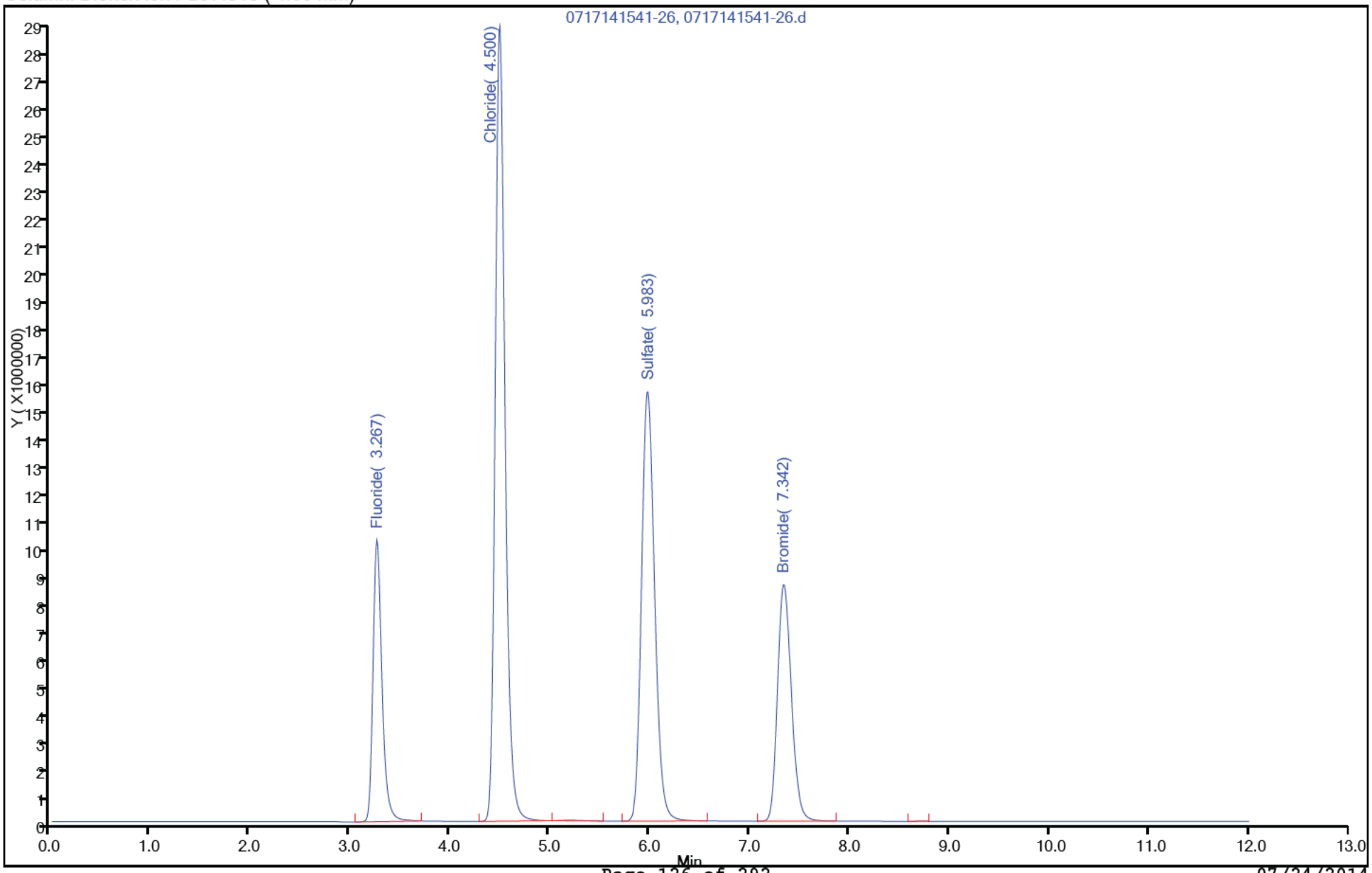
Lims ID: CCV Worklist Smp#: 22

Client ID:

Injection Vol: 25.0 ul Dil. Factor: 1.0000 ALS Bottle#: 0

Method: 300.0_9056A_CICK Limit Group: Anions - 28D - ORGFRMS

Column: Dionex Ion Pac AS18 (4.00 mm)



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah
Job No.: 460-79113-1
SDG No.:
Client Sample ID:
Lab Sample ID: MB 680-339289/29
Matrix: Water
Lab File ID: 0716141806-33.d
Analysis Method: 300.0
Date Collected:
Extraction Method:
Date Extracted:
Sample wt/vol: 1(mL)
Date Analyzed: 07/16/2014 18:06
Con. Extract Vol.: 1(mL)
Dilution Factor: 1
Injection Volume: 25(uL)
GC Column: Dionex AS18 ID: 4(mm)
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 339289
Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14808-79-8	Sulfate	0.25	U	0.50	0.25
16984-48-8	Fluoride	0.025	U	0.10	0.025
16887-00-6	Chloride	0.25	U	0.50	0.25
24959-67-9	Bromide	0.25	U	0.50	0.25

TestAmerica Savannah
Target Compound Quantitation Report

Data File:	\\SAVCHROM\ChromData\CICK\20140716-11038.b\0716141806-33.d				
Lims ID:	CCB				
Client ID:					
Sample Type:	CCB				
Inject. Date:	16-Jul-2014 18:06:00	ALS Bottle#:	0	Worklist Smp#:	29
Injection Vol:	25.0 ul	Dil. Factor:	1.0000		
Sample Info:	CCB 2K071614 1K082812A				
Misc. Info.:	31				
Operator ID:		Instrument ID:	CICK		
Method:	\\SAVCHROM\ChromData\CICK\20140716-11038.b\300.0_9056A_CICK.m				
Limit Group:	Anions - 28D - ORGFRMS				
Last Update:	17-Jul-2014 08:22:38	Calib Date:	11-Jul-2014 12:37:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\SAVCHROM\ChromData\CICK\20140711-10925.b\0711141237-11.d				
Column 1 :	Dionex Ion Pac AS18 (4.00 mm)		Det: 0118131406-12		
Process Host:	XAWRK033				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
2 Chloride	4.500	4.500	0.000	34340		0.1181	

Report Date: 17-Jul-2014 08:22:39 Chrom Revision: 2.2 24-Jun-2014 07:21:42

TestAmerica Savannah

Data File: \\SAVCHROM\ChromData\CICK\20140716-11038.b\0716141806-33.d

Injection Date: 16-Jul-2014 18:06:00 Instrument ID: CICK Operator ID:

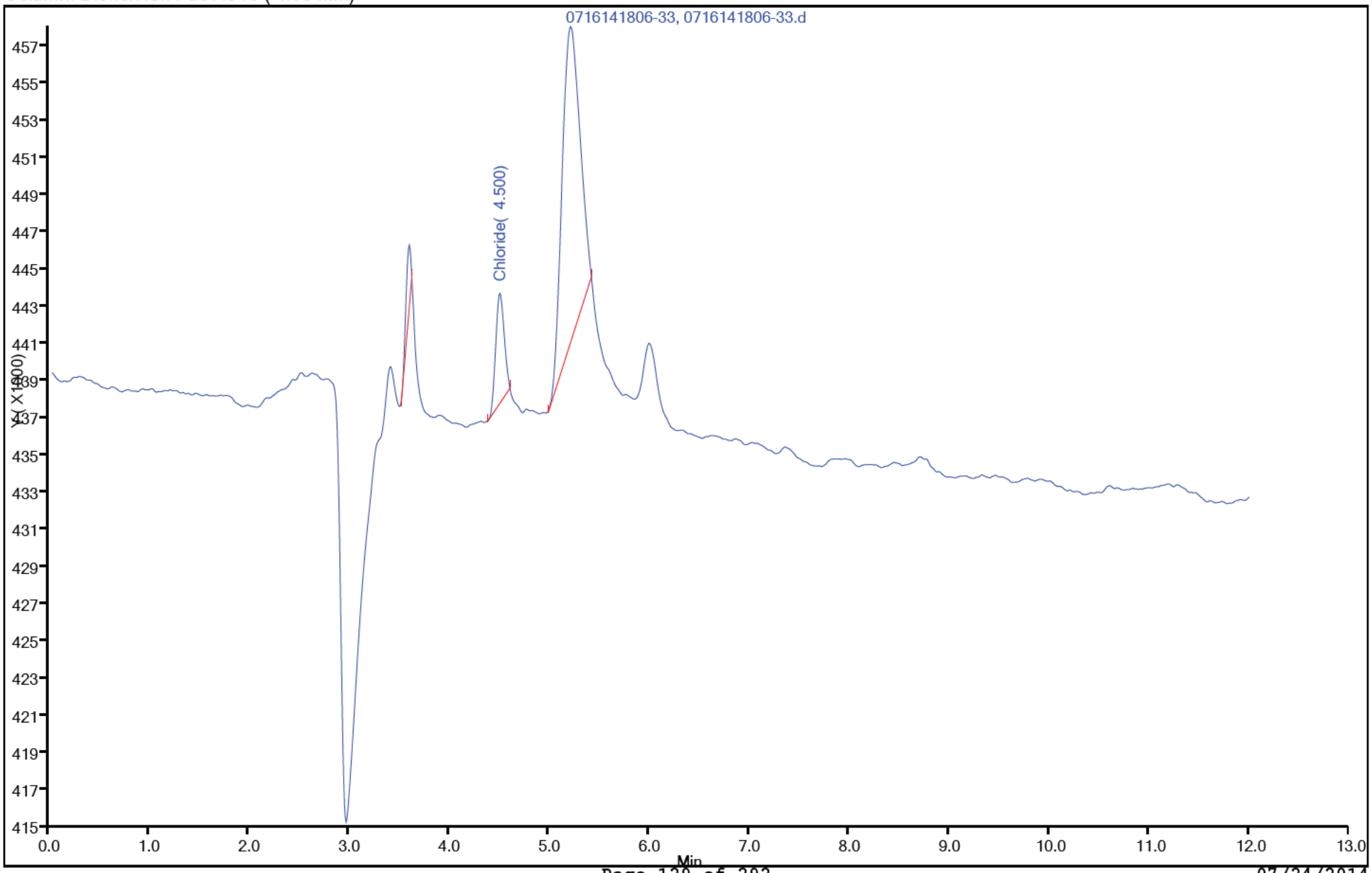
Lims ID: CCB Worklist Smp#: 29

Client ID:

Injection Vol: 25.0 ul Dil. Factor: 1.0000 ALS Bottle#: 0

Method: 300.0_9056A_CICK Limit Group: Anions - 28D - ORGFRMS

Column: Dionex Ion Pac AS18 (4.00 mm)



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah
Job No.: 460-79113-1
SDG No.:
Client Sample ID:
Lab Sample ID: MB 680-339475/2
Matrix: Water
Lab File ID: 0717141034-6.d
Analysis Method: 300.0
Date Collected:
Extraction Method:
Date Extracted:
Sample wt/vol: 1(mL)
Date Analyzed: 07/17/2014 10:34
Con. Extract Vol.: 1(mL)
Dilution Factor: 1
Injection Volume: 25(uL)
GC Column: Dionex AS18 ID: 4(mm)
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 339475
Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14808-79-8	Sulfate	0.25	U	0.50	0.25
16887-00-6	Chloride	0.25	U	0.50	0.25

TestAmerica Savannah
Target Compound Quantitation Report

Data File:	\\SAVCHROM\ChromData\CICK\20140717-11077.b\0717141034-6.d				
Lims ID:	MB				
Client ID:					
Sample Type:	MB				
Inject. Date:	17-Jul-2014 10:34:00	ALS Bottle#:	0	Worklist Smp#:	2
Injection Vol:	25.0 ul	Dil. Factor:	1.0000		
Sample Info:	MB 1K071714 1K082812A				
Operator ID:		Instrument ID:	CICK		
Method:	\\SAVCHROM\ChromData\CICK\20140717-11077.b\300.0_9056A_CICK.m				
Limit Group:	Anions - 28D - ORGFRMS				
Last Update:	18-Jul-2014 11:23:45	Calib Date:	11-Jul-2014 12:37:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\SAVCHROM\ChromData\CICK\20140711-10925.b\0711141237-11.d				
Column 1 :	Dionex Ion Pac AS18 (4.00 mm)		Det: 0118131406-12		
Process Host:	XAWRK026				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
2 Chloride	4.492	4.492	0.000	15995		0.1172	

Report Date: 18-Jul-2014 11:23:45 Chrom Revision: 2.2 24-Jun-2014 07:21:42

TestAmerica Savannah

Data File: \\SAVCHROM\ChromData\CICK\20140717-11077.b\0717141034-6.d

Injection Date: 17-Jul-2014 10:34:00 Instrument ID: CICK Operator ID:

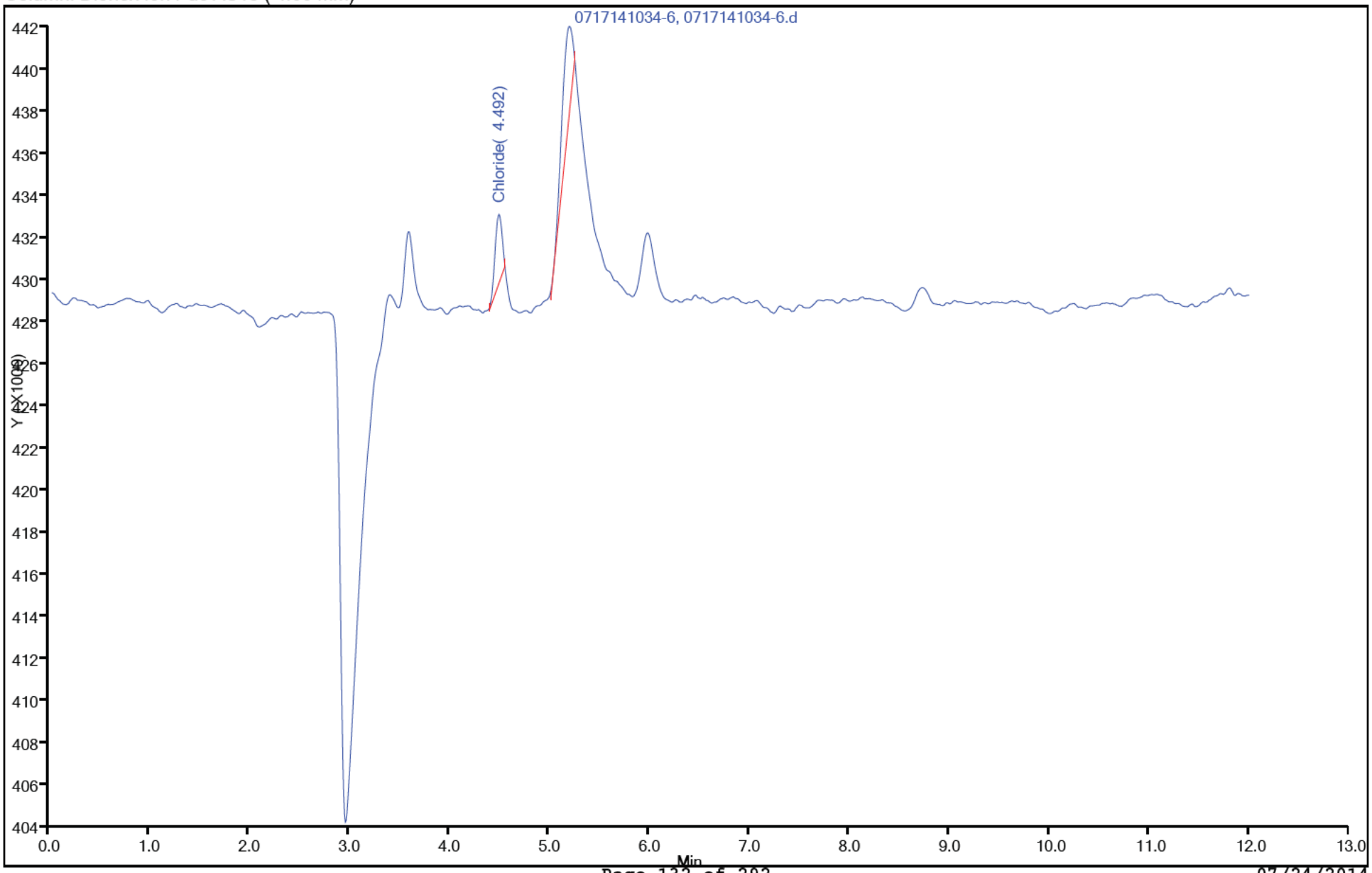
Lims ID: MB Worklist Smp#: 2

Client ID:

Injection Vol: 25.0 ul Dil. Factor: 1.0000 ALS Bottle#: 0

Method: 300.0_9056A_CICK Limit Group: Anions - 28D - ORGFRMS

Column: Dionex Ion Pac AS18 (4.00 mm)



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah
Job No.: 460-79113-1
SDG No.:
Client Sample ID:
Lab Sample ID: CCB 680-339289/43
Matrix: Water
Lab File ID: 0716142141-47.d
Analysis Method: 300.0
Date Collected:
Extraction Method:
Date Extracted:
Sample wt/vol: 1(mL)
Date Analyzed: 07/16/2014 21:41
Con. Extract Vol.: 1(mL)
Dilution Factor: 1
Injection Volume: 25(uL)
GC Column: Dionex AS18 ID: 4(mm)
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 339289
Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14808-79-8	Sulfate	0.25	U	0.50	0.25
16984-48-8	Fluoride	0.025	U	0.10	0.025
16887-00-6	Chloride	0.25	U	0.50	0.25
24959-67-9	Bromide	0.25	U	0.50	0.25

TestAmerica Savannah
Target Compound Quantitation Report

Data File:	\\SAVCHROM\ChromData\CICK\20140716-11038.b\0716142141-47.d				
Lims ID:	CCB				
Client ID:					
Sample Type:	CCB				
Inject. Date:	16-Jul-2014 21:41:00	ALS Bottle#:	0	Worklist Smp#:	43
Injection Vol:	25.0 ul	Dil. Factor:	1.0000		
Sample Info:	CCB 2K071614 1K082812A				
Misc. Info.:	28935				
Operator ID:		Instrument ID:	CICK		
Method:	\\SAVCHROM\ChromData\CICK\20140716-11038.b\300.0_9056A_CICK.m				
Limit Group:	Anions - 28D - ORGFRMS				
Last Update:	17-Jul-2014 08:22:42	Calib Date:	11-Jul-2014 12:37:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\SAVCHROM\ChromData\CICK\20140711-10925.b\0711141237-11.d				
Column 1 :	Dionex Ion Pac AS18 (4.00 mm)		Det: 0118131406-12		
Process Host:	XAWRK033				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
2 Chloride	4.500	4.500	0.000	81866		0.1206	
3 Sulfate	6.000	5.983	0.017	53271		0.1779	

Report Date: 17-Jul-2014 08:22:43 Chrom Revision: 2.2 24-Jun-2014 07:21:42

TestAmerica Savannah

Data File: \\SAVCHROM\ChromData\CICK\20140716-11038.b\0716142141-47.d

Injection Date: 16-Jul-2014 21:41:00 Instrument ID: CICK Operator ID:

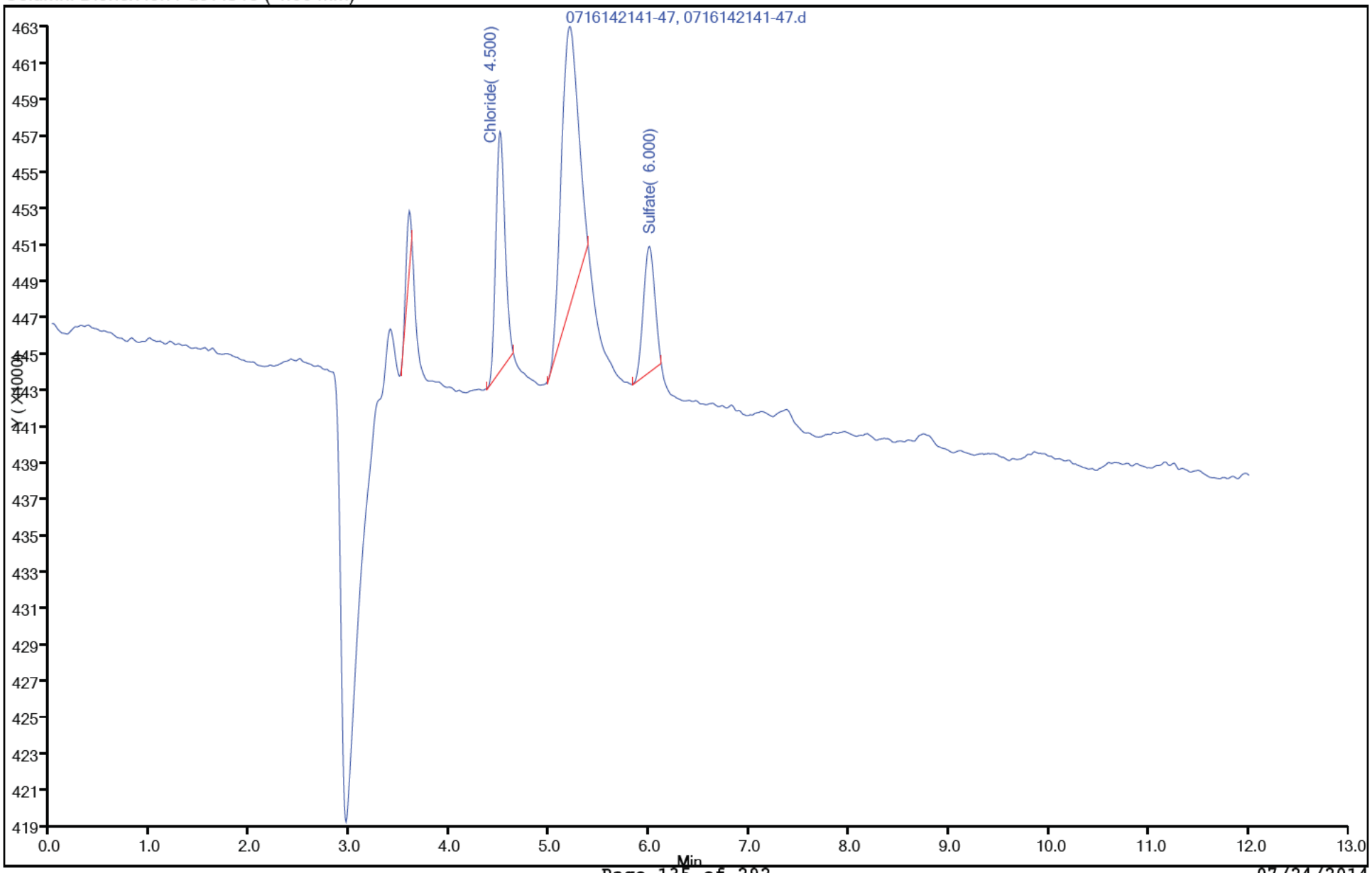
Lims ID: CCB Worklist Smp#: 43

Client ID:

Injection Vol: 25.0 ul Dil. Factor: 1.0000 ALS Bottle#: 0

Method: 300.0_9056A_CICK Limit Group: Anions - 28D - ORGFRMS

Column: Dionex Ion Pac AS18 (4.00 mm)



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah
Job No.: 460-79113-1
SDG No.:
Client Sample ID:
Lab Sample ID: CCB 680-339289/53
Matrix: Water
Lab File ID: 0717140014-57.d
Analysis Method: 300.0
Date Collected:
Extraction Method:
Date Extracted:
Sample wt/vol: 1(mL)
Date Analyzed: 07/17/2014 00:14
Con. Extract Vol.: 1(mL)
Dilution Factor: 1
Injection Volume: 25(uL)
GC Column: Dionex AS18 ID: 4(mm)
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 339289
Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14808-79-8	Sulfate	0.25	U	0.50	0.25
16984-48-8	Fluoride	0.025	U	0.10	0.025
16887-00-6	Chloride	0.25	U	0.50	0.25
24959-67-9	Bromide	0.25	U	0.50	0.25

TestAmerica Savannah
Target Compound Quantitation Report

Data File:	\\SAVCHROM\ChromData\CICK\20140716-11038.b\0717140014-57.d				
Lims ID:	CCB				
Client ID:					
Sample Type:	CCB				
Inject. Date:	17-Jul-2014 00:14:00	ALS Bottle#:	0	Worklist Smp#:	53
Injection Vol:	25.0 ul	Dil. Factor:	1.0000		
Sample Info:	CCB 2K071614 1K082812A				
Misc. Info.:	5334				
Operator ID:		Instrument ID:	CICK		
Method:	\\SAVCHROM\ChromData\CICK\20140716-11038.b\300.0_9056A_CICK.m				
Limit Group:	Anions - 28D - ORGFRMS				
Last Update:	17-Jul-2014 08:22:45	Calib Date:	11-Jul-2014 12:37:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\SAVCHROM\ChromData\CICK\20140711-10925.b\0711141237-11.d				
Column 1 :	Dionex Ion Pac AS18 (4.00 mm)		Det: 0118131406-12		
Process Host:	XAWRK033				
First Level Reviewer: seabrooksd		Date:	17-Jul-2014 08:22:35		

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
2 Chloride	4.500	4.500	0.000	34401		0.1181	

Report Date: 17-Jul-2014 15:48:29 Chrom Revision: 2.2 24-Jun-2014 07:21:42

TestAmerica Savannah

Data File: \\SAVCHROM\ChromData\CICK\20140716-11038.b\0717140014-57.d

Injection Date: 17-Jul-2014 00:14:00 Instrument ID: CICK Operator ID:

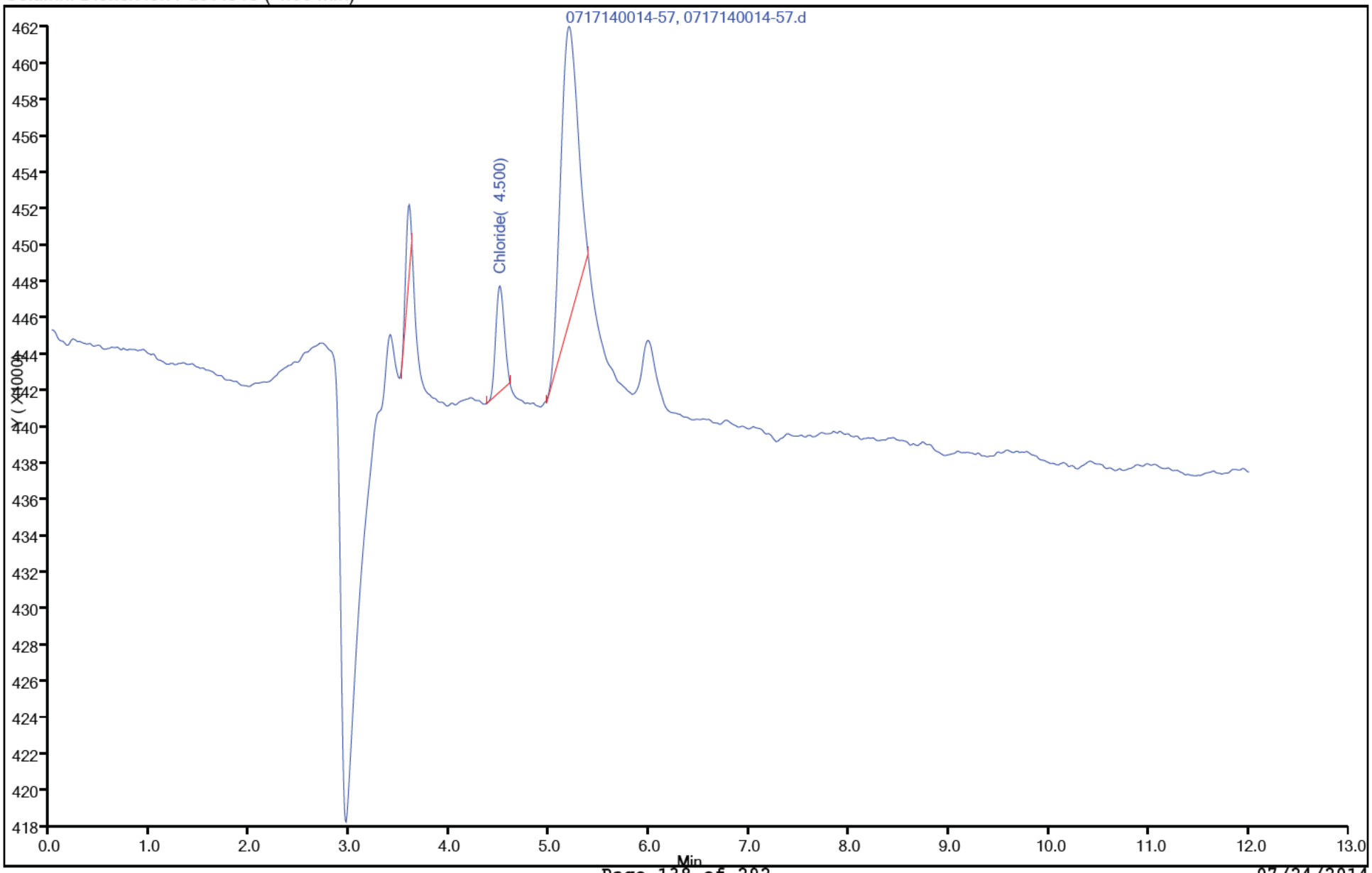
Lims ID: CCB Worklist Smp#: 53

Client ID:

Injection Vol: 25.0 ul Dil. Factor: 1.0000 ALS Bottle#: 0

Method: 300.0_9056A_CICK Limit Group: Anions - 28D - ORGFRMS

Column: Dionex Ion Pac AS18 (4.00 mm)



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah
Job No.: 460-79113-1
SDG No.:
Client Sample ID:
Lab Sample ID: CCB 680-339475/17
Matrix: Water
Lab File ID: 0717141424-21.d
Analysis Method: 300.0
Date Collected:
Extraction Method:
Date Extracted:
Sample wt/vol: 1(mL)
Date Analyzed: 07/17/2014 14:24
Con. Extract Vol.: 1(mL)
Dilution Factor: 1
Injection Volume: 25(uL)
GC Column: Dionex AS18 ID: 4(mm)
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 339475
Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14808-79-8	Sulfate	0.25	U	0.50	0.25
16887-00-6	Chloride	0.25	U	0.50	0.25

TestAmerica Savannah
Target Compound Quantitation Report

Data File:	\\SAVCHROM\ChromData\CICK\20140717-11077.b\0717141424-21.d				
Lims ID:	CCB				
Client ID:					
Sample Type:	CCB				
Inject. Date:	17-Jul-2014 14:24:00	ALS Bottle#:	0	Worklist Smp#:	17
Injection Vol:	25.0 ul	Dil. Factor:	1.0000		
Sample Info:	CCB 1K071714 1K082812A				
Misc. Info.:	21				
Operator ID:		Instrument ID:	CICK		
Method:	\\SAVCHROM\ChromData\CICK\20140717-11077.b\300.0_9056A_CICK.m				
Limit Group:	Anions - 28D - ORGFRMS				
Last Update:	18-Jul-2014 11:23:49	Calib Date:	11-Jul-2014 12:37:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\SAVCHROM\ChromData\CICK\20140711-10925.b\0711141237-11.d				
Column 1 :	Dionex Ion Pac AS18 (4.00 mm)		Det: 0118131406-12		
Process Host:	XAWRK026				
First Level Reviewer: seabrooksd		Date:	17-Jul-2014 15:04:17		

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
2 Chloride	4.500	4.500	0.000	233480		0.1284	
3 Sulfate	5.992	5.975	0.017	124415		0.1831	

Report Date: 18-Jul-2014 11:23:49 Chrom Revision: 2.2 24-Jun-2014 07:21:42

TestAmerica Savannah

Data File: \\SAVCHROM\ChromData\CICK\20140717-11077.b\0717141424-21.d

Injection Date: 17-Jul-2014 14:24:00 Instrument ID: CICK Operator ID:

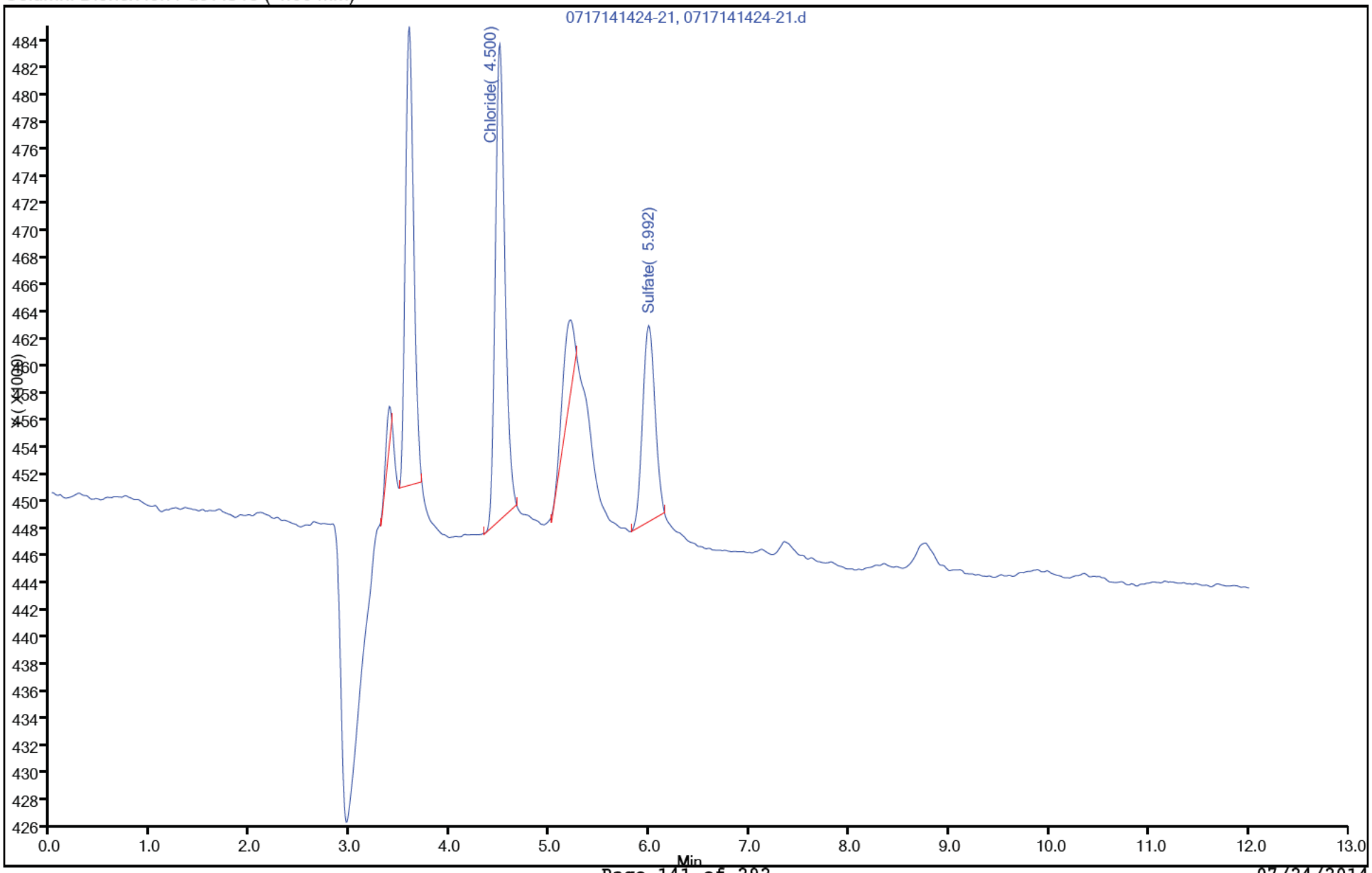
Lims ID: CCB Worklist Smp#: 17

Client ID:

Injection Vol: 25.0 ul Dil. Factor: 1.0000 ALS Bottle#: 0

Method: 300.0_9056A_CICK Limit Group: Anions - 28D - ORGFRMS

Column: Dionex Ion Pac AS18 (4.00 mm)



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah
Job No.: 460-79113-1
SDG No.:
Client Sample ID:
Lab Sample ID: CCB 680-339475/23
Matrix: Water
Lab File ID: 0717141556-27.d
Analysis Method: 300.0
Date Collected:
Extraction Method:
Date Extracted:
Sample wt/vol: 1(mL)
Date Analyzed: 07/17/2014 15:56
Con. Extract Vol.: 1(mL)
Dilution Factor: 1
Injection Volume: 25(uL)
GC Column: Dionex AS18 ID: 4(mm)
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 339475
Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14808-79-8	Sulfate	0.25	U	0.50	0.25
16887-00-6	Chloride	0.25	U	0.50	0.25

TestAmerica Savannah
Target Compound Quantitation Report

Data File:	\\SAVCHROM\ChromData\CICK\20140717-11077.b\0717141556-27.d				
Lims ID:	CCB				
Client ID:					
Sample Type:	CCB				
Inject. Date:	17-Jul-2014 15:56:00	ALS Bottle#:	0	Worklist Smp#:	23
Injection Vol:	25.0 ul	Dil. Factor:	1.0000		
Sample Info:	CCB 2K071614 1K082812A				
Misc. Info.:	33				
Operator ID:		Instrument ID:	CICK		
Method:	\\SAVCHROM\ChromData\CICK\20140717-11077.b\300.0_9056A_CICK.m				
Limit Group:	Anions - 28D - ORGFRMS				
Last Update:	18-Jul-2014 11:23:50	Calib Date:	11-Jul-2014 12:37:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\SAVCHROM\ChromData\CICK\20140711-10925.b\0711141237-11.d				
Column 1 :	Dionex Ion Pac AS18 (4.00 mm)		Det: 0118131406-12		
Process Host:	XAWRK026				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
2 Chloride	4.492	4.500	-0.008	188777		0.1261	
3 Sulfate	5.992	5.983	0.009	129066		0.1834	

Report Date: 18-Jul-2014 11:23:51 Chrom Revision: 2.2 24-Jun-2014 07:21:42

TestAmerica Savannah

Data File: \\SAVCHROM\ChromData\CICK\20140717-11077.b\0717141556-27.d

Injection Date: 17-Jul-2014 15:56:00 Instrument ID: CICK Operator ID:

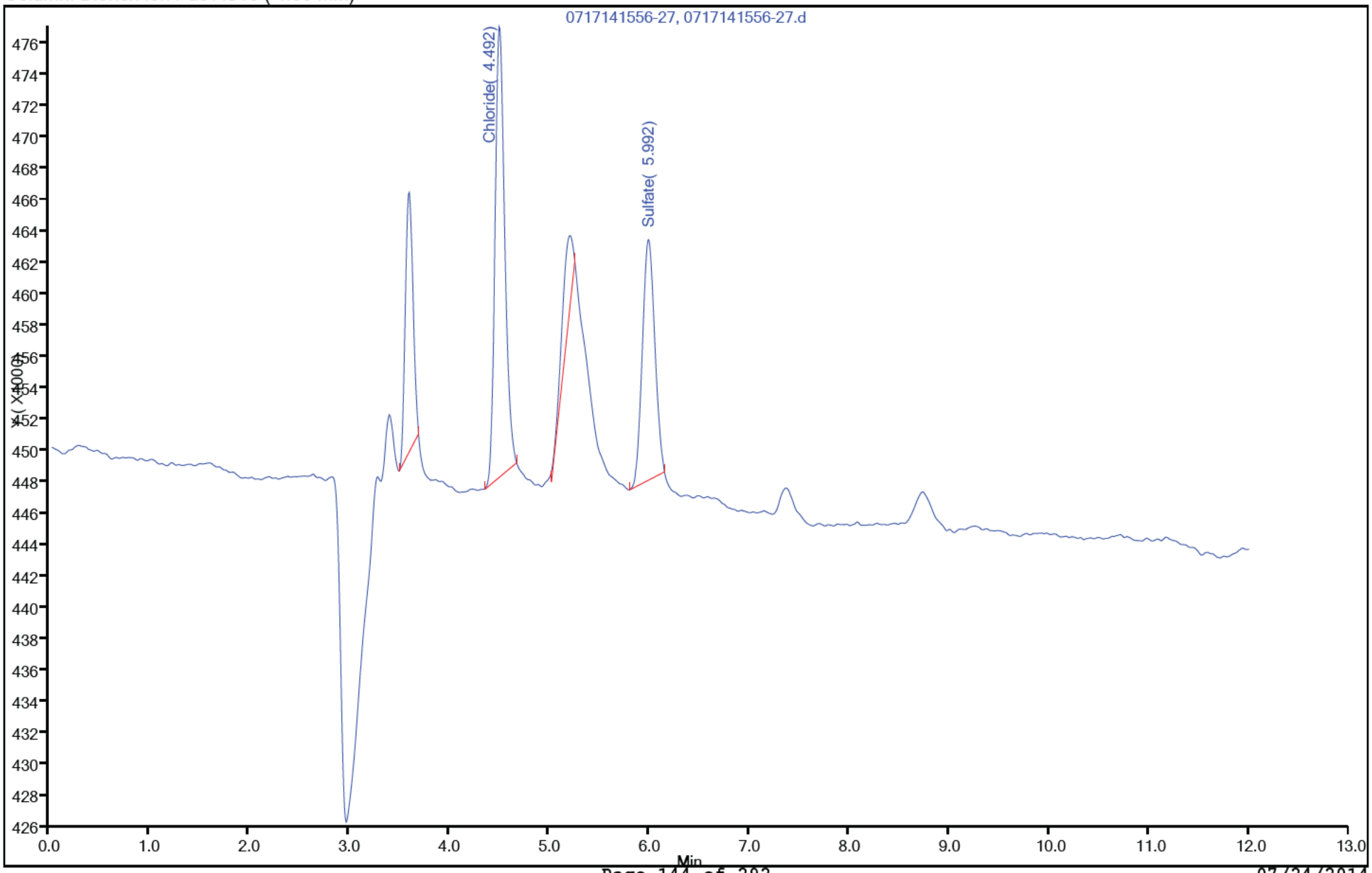
Lims ID: CCB Worklist Smp#: 23

Client ID:

Injection Vol: 25.0 ul Dil. Factor: 1.0000 ALS Bottle#: 0

Method: 300.0_9056A_CICK Limit Group: Anions - 28D - ORGFRMS

Column: Dionex Ion Pac AS18 (4.00 mm)



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah
Job No.: 460-79113-1
SDG No.:
Client Sample ID:
Lab Sample ID: ICB 680-338674/1008
Matrix: Water
Lab File ID: 0711141252-12-ICB.d
Analysis Method: 300.0
Date Collected:
Extraction Method:
Date Extracted:
Sample wt/vol: 1(mL)
Date Analyzed: 07/11/2014 12:52
Con. Extract Vol.: 1(mL)
Dilution Factor: 1
Injection Volume: 25(uL)
GC Column: Dionex AS18 ID: 4(mm)
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 338674
Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14808-79-8	Sulfate	0.25	U	0.50	0.25
16984-48-8	Fluoride	0.025	U	0.10	0.025
16887-00-6	Chloride	0.25	U	0.50	0.25
24959-67-9	Bromide	0.25	U	0.50	0.25

TestAmerica Laboratories
Target Compound Quantitation Report

Data File:	\\SAVCHROM\ChromData\CICK\20140711-10925.b\0711141252-12-ICB.d				
Lims ID:	ICB				
Client ID:					
Sample Type:	ICB				
Inject. Date:	11-Jul-2014 12:52:00	ALS Bottle#:	0	Worklist Smp#:	1008
Injection Vol:	25.0 ul	Dil. Factor:	1.0000		
Sample Info:	MB 1K071114 1K082812A				
Misc. Info.:	12				
Operator ID:		Instrument ID:	CICK		
Method:	\\SAVCHROM\ChromData\CICK\20140711-10925.b\300.0_9056A_CICK.m				
Limit Group:	Anions - 28D - ORGFRMS				
Last Update:	14-Jul-2014 13:04:13	Calib Date:	11-Jul-2014 12:37:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\SAVCHROM\ChromData\CICK\20140711-10925.b\0711141237-11.d				
Column 1 :	Dionex Ion Pac AS18 (4.00 mm)		Det: 0118131406-12		
Process Host:	XAWRK016				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
2 Chloride	4.500	4.500	0.000	43606		0.1186	
3 Sulfate	6.008	6.000	0.008	19950		0.1755	

Report Date: 14-Jul-2014 13:04:14 Chrom Revision: 2.2 24-Jun-2014 07:21:42

TestAmerica Laboratories

Data File: \\SAVCHROM\ChromData\CICK\20140711-10925.b\0711141252-12-ICB.d

Injection Date: 11-Jul-2014 12:52:00 Instrument ID: CICK Operator ID:

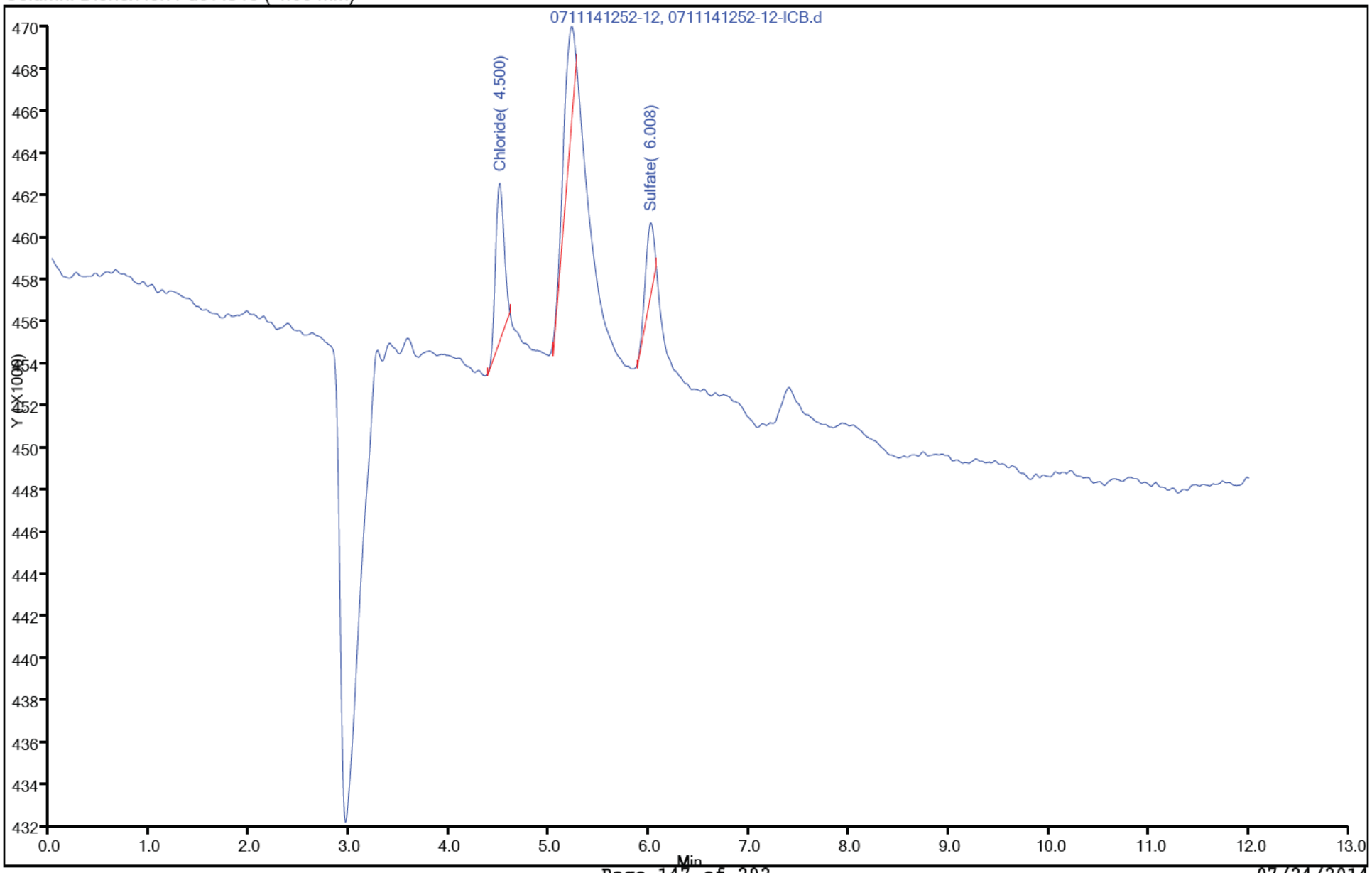
Lims ID: ICB Worklist Smp#: 1008

Client ID:

Injection Vol: 25.0 ul Dil. Factor: 1.0000 ALS Bottle#: 0

Method: 300.0_9056A_CICK Limit Group: Anions - 28D - ORGFRMS

Column: Dionex Ion Pac AS18 (4.00 mm)



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah
Job No.: 460-79113-1
SDG No.:
Client Sample ID:
Lab Sample ID: LCS 680-339289/30
Matrix: Water
Lab File ID: 0716141821-34.d
Analysis Method: 300.0
Date Collected:
Extraction Method:
Date Extracted:
Sample wt/vol: 1(mL)
Date Analyzed: 07/16/2014 18:21
Con. Extract Vol.: 1(mL)
Dilution Factor: 1
Injection Volume: 25(uL)
GC Column: Dionex AS18 ID: 4(mm)
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 339289
Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14808-79-8	Sulfate	9.955		0.50	0.25
16984-48-8	Fluoride	2.031		0.10	0.025
16887-00-6	Chloride	9.681		0.50	0.25
24959-67-9	Bromide	10.15		0.50	0.25

TestAmerica Savannah
Target Compound Quantitation Report

Data File: \\SAVCHROM\ChromData\CICK\20140716-11038.b\0716141821-34.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 16-Jul-2014 18:21:00 ALS Bottle#: 0 Worklist Smp#: 30
Injection Vol: 25.0 ul Dil. Factor: 1.0000
Sample Info: LCS 2K071614 1K082812A
Misc. Info.: 32 3618765
Operator ID: Instrument ID: CICK

Method: \\SAVCHROM\ChromData\CICK\20140716-11038.b\300.0_9056A_CICK.m
Limit Group: Anions - 28D - ORGFRMS
Last Update: 17-Jul-2014 08:22:38 Calib Date: 11-Jul-2014 12:37:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\SAVCHROM\ChromData\CICK\20140711-10925.b\0711141237-11.d

Column 1 : Dionex Ion Pac AS18 (4.00 mm) Det: 0118131406-12
Process Host: XAWRK033

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.275	3.275	0.000	60118635	2.00	2.03	
2 Chloride	4.500	4.500	0.000	185136297	10.0	9.68	
3 Sulfate	5.992	5.992	0.000	134337757	10.0	9.95	
4 Bromide	7.350	7.350	0.000	78595232	10.0	10.1	

Reagents:

IC_Anion-ICV_00014 Amount Added: 1.00 Units: mL

Report Date: 17-Jul-2014 08:22:39 Chrom Revision: 2.2 24-Jun-2014 07:21:42

TestAmerica Savannah

Data File: \\SAVCHROM\ChromData\CICK\20140716-11038.b\0716141821-34.d

Injection Date: 16-Jul-2014 18:21:00 Instrument ID: CICK Operator ID:

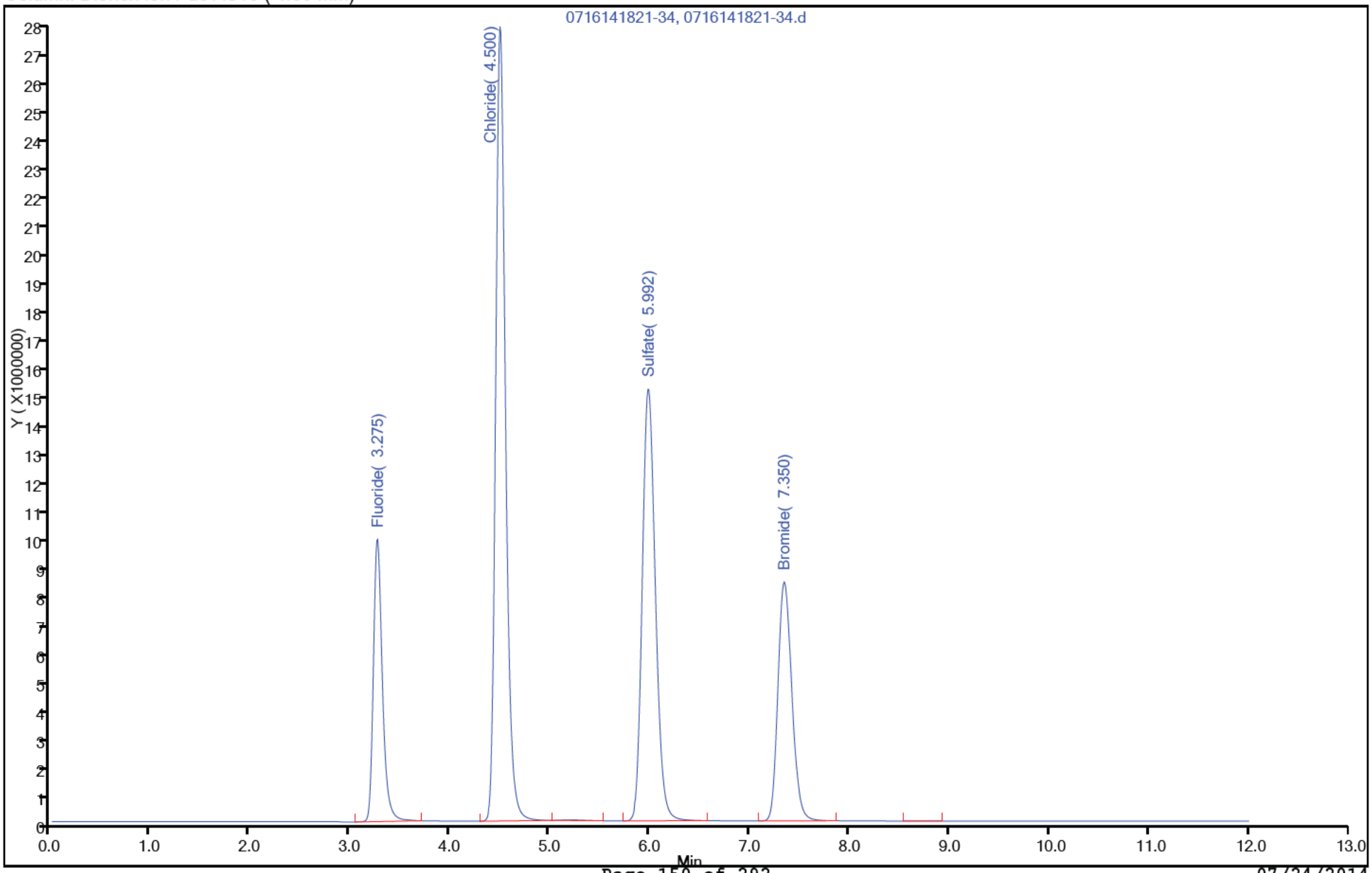
Lims ID: LCS Worklist Smp#: 30

Client ID:

Injection Vol: 25.0 ul Dil. Factor: 1.0000 ALS Bottle#: 0

Method: 300.0_9056A_CICK Limit Group: Anions - 28D - ORGFRMS

Column: Dionex Ion Pac AS18 (4.00 mm)



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah
Job No.: 460-79113-1
SDG No.:
Client Sample ID:
Lab Sample ID: LCS 680-339475/3
Matrix: Water
Lab File ID: 0717141050-7.d
Analysis Method: 300.0
Date Collected:
Extraction Method:
Date Extracted:
Sample wt/vol: 1(mL)
Date Analyzed: 07/17/2014 10:50
Con. Extract Vol.: 1(mL)
Dilution Factor: 1
Injection Volume: 25(uL)
GC Column: Dionex AS18 ID: 4(mm)
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 339475
Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14808-79-8	Sulfate	10.10		0.50	0.25
16887-00-6	Chloride	9.875		0.50	0.25

TestAmerica Savannah
Target Compound Quantitation Report

Data File: \\SAVCHROM\ChromData\CICK\20140717-11077.b\0717141050-7.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 17-Jul-2014 10:50:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 25.0 ul Dil. Factor: 1.0000
Sample Info: LCS 1K071714 1K082812A
Misc. Info.: 7 3618765
Operator ID: Instrument ID: CICK

Method: \\SAVCHROM\ChromData\CICK\20140717-11077.b\300.0_9056A_CICK.m
Limit Group: Anions - 28D - ORGFRMS
Last Update: 18-Jul-2014 11:23:45 Calib Date: 11-Jul-2014 12:37:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\SAVCHROM\ChromData\CICK\20140711-10925.b\0711141237-11.d

Column 1 : Dionex Ion Pac AS18 (4.00 mm) Det: 0118131406-12
Process Host: XAWRK026

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.267	3.267	0.000	61156422	2.00	2.07	
2 Chloride	4.492	4.492	0.000	188875862	10.0	9.87	
3 Sulfate	5.967	5.967	0.000	136276930	10.0	10.1	
4 Bromide	7.342	7.333	0.009	80102907	10.0	10.3	

Reagents:

IC_Anion-ICV_00014 Amount Added: 1.00 Units: mL

Report Date: 18-Jul-2014 11:23:45 Chrom Revision: 2.2 24-Jun-2014 07:21:42

TestAmerica Savannah

Data File: \\SAVCHROM\ChromData\CICK\20140717-11077.b\0717141050-7.d

Injection Date: 17-Jul-2014 10:50:00 Instrument ID: CICK Operator ID:

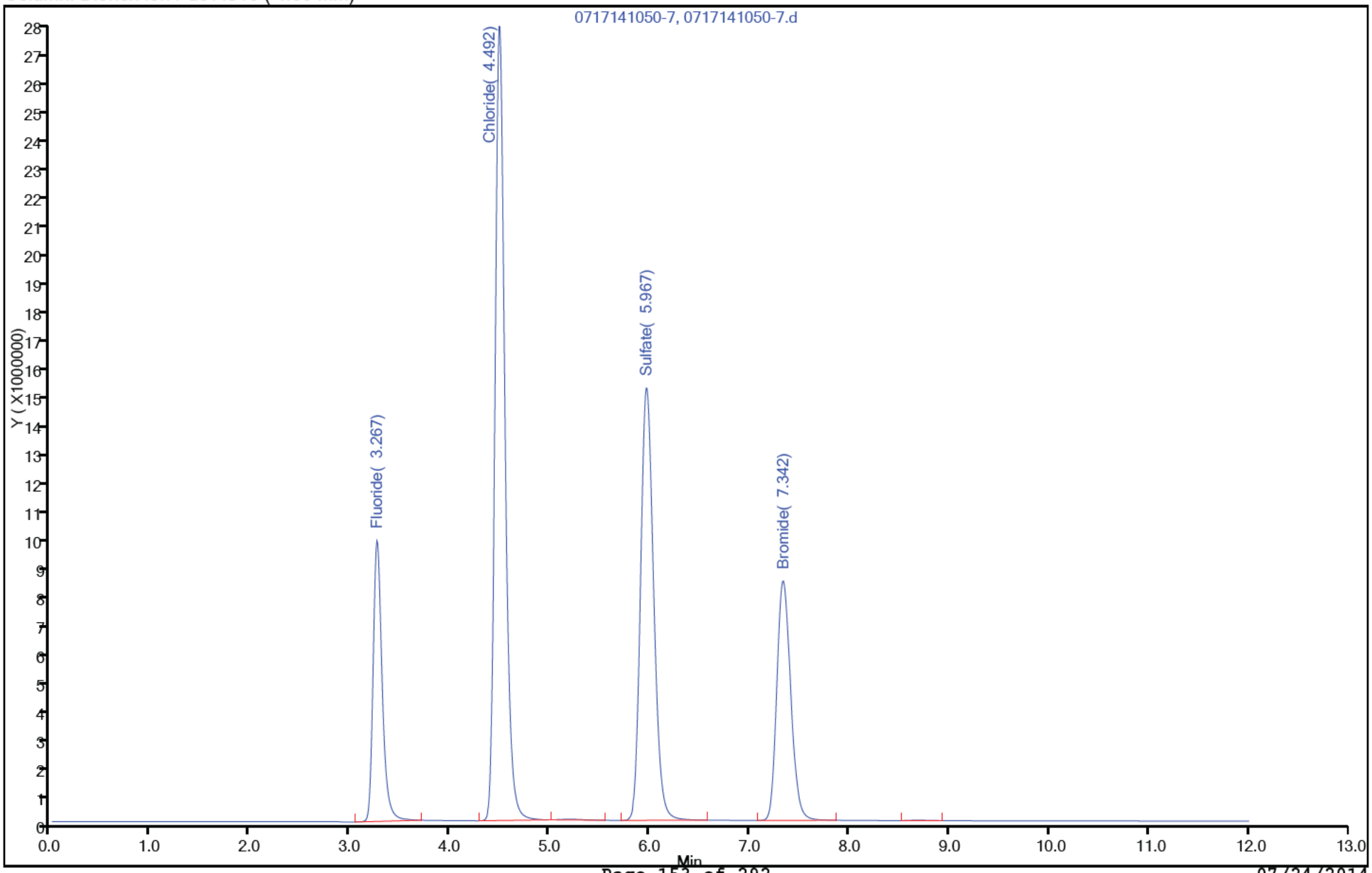
Lims ID: LCS Worklist Smp#: 3

Client ID:

Injection Vol: 25.0 ul Dil. Factor: 1.0000 ALS Bottle#: 0

Method: 300.0_9056A_CICK Limit Group: Anions - 28D - ORGFRMS

Column: Dionex Ion Pac AS18 (4.00 mm)



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah
Job No.: 460-79113-1
SDG No.:
Client Sample ID:
Lab Sample ID: LCSD 680-339289/31
Matrix: Water
Lab File ID: 0716141837-35.d
Analysis Method: 300.0
Date Collected:
Extraction Method:
Date Extracted:
Sample wt/vol: 1(mL)
Date Analyzed: 07/16/2014 18:37
Con. Extract Vol.: 1(mL)
Dilution Factor: 1
Injection Volume: 25(uL)
GC Column: Dionex AS18 ID: 4(mm)
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 339289
Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14808-79-8	Sulfate	10.00		0.50	0.25
16984-48-8	Fluoride	2.036		0.10	0.025
16887-00-6	Chloride	9.717		0.50	0.25
24959-67-9	Bromide	10.17		0.50	0.25

TestAmerica Savannah
Target Compound Quantitation Report

Data File: \\SAVCHROM\ChromData\CICK\20140716-11038.b\0716141837-35.d
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 16-Jul-2014 18:37:00 ALS Bottle#: 0 Worklist Smp#: 31
Injection Vol: 25.0 ul Dil. Factor: 1.0000
Sample Info: LCSD 2K071614 1K082812A
Misc. Info.: 33 3618765
Operator ID: Instrument ID: CICK

Method: \\SAVCHROM\ChromData\CICK\20140716-11038.b\300.0_9056A_CICK.m
Limit Group: Anions - 28D - ORGFRMS
Last Update: 17-Jul-2014 08:22:38 Calib Date: 11-Jul-2014 12:37:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\SAVCHROM\ChromData\CICK\20140711-10925.b\0711141237-11.d

Column 1 : Dionex Ion Pac AS18 (4.00 mm) Det: 0118131406-12
Process Host: XAWRK033

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.267	3.275	-0.008	60281688	2.00	2.04	
2 Chloride	4.500	4.500	0.000	185829863	10.0	9.72	
3 Sulfate	5.983	5.992	-0.009	134968709	10.0	10.0	
4 Bromide	7.350	7.350	0.000	78796521	10.0	10.2	

Reagents:

IC_Anion-ICV_00014 Amount Added: 1.00 Units: mL

Report Date: 17-Jul-2014 08:22:39 Chrom Revision: 2.2 24-Jun-2014 07:21:42

TestAmerica Savannah

Data File: \\SAVCHROM\ChromData\CICK\20140716-11038.b\0716141837-35.d

Injection Date: 16-Jul-2014 18:37:00 Instrument ID: CICK Operator ID:

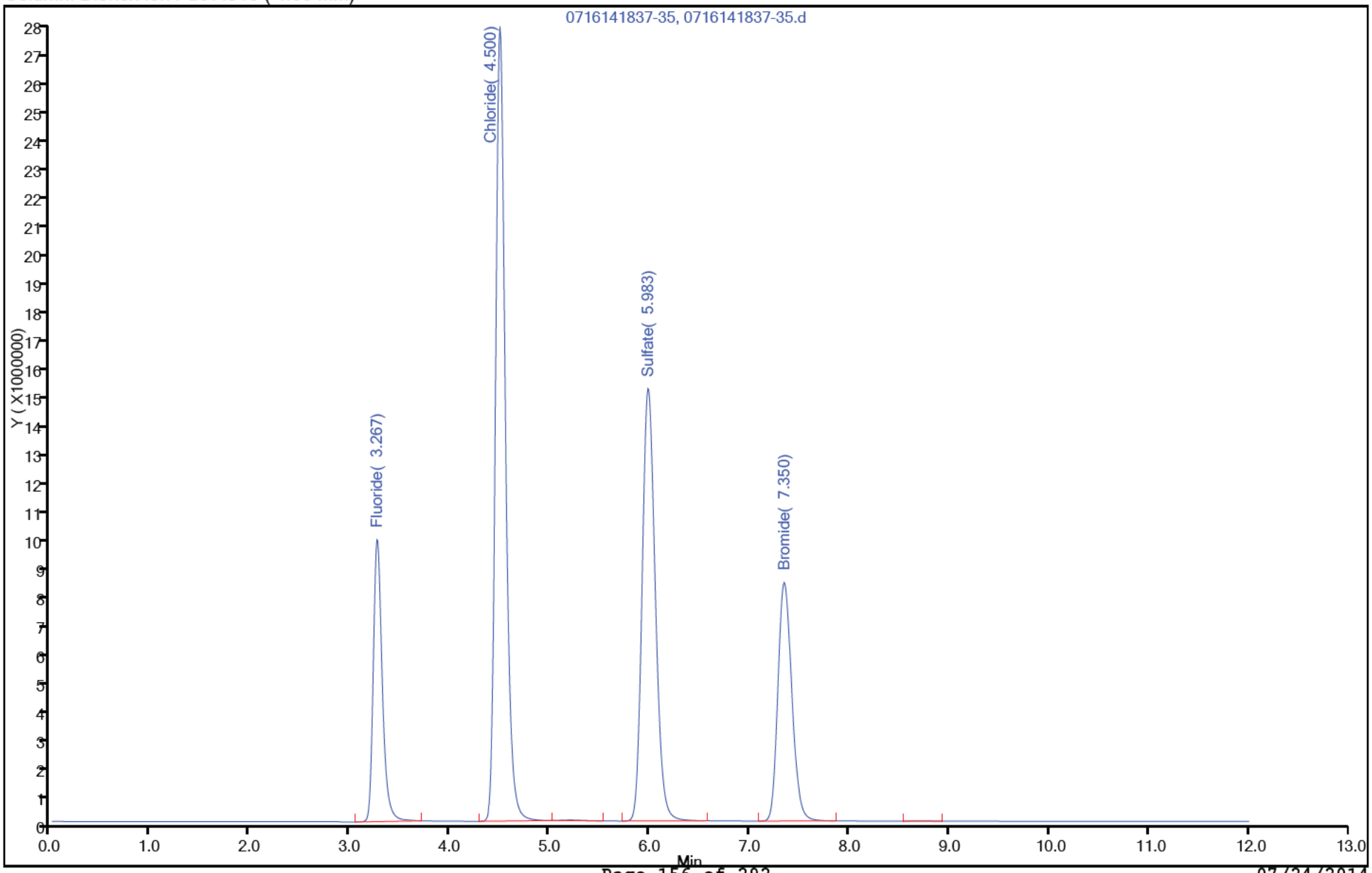
Lims ID: LCSD Worklist Smp#: 31

Client ID:

Injection Vol: 25.0 ul Dil. Factor: 1.0000 ALS Bottle#: 0

Method: 300.0_9056A_CICK Limit Group: Anions - 28D - ORGFRMS

Column: Dionex Ion Pac AS18 (4.00 mm)



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah
Job No.: 460-79113-1
SDG No.:
Client Sample ID:
Lab Sample ID: LCSD 680-339475/4
Matrix: Water
Lab File ID: 0717141105-8.d
Analysis Method: 300.0
Date Collected:
Extraction Method:
Date Extracted:
Sample wt/vol: 1(mL)
Date Analyzed: 07/17/2014 11:05
Con. Extract Vol.: 1(mL)
Dilution Factor: 1
Injection Volume: 25(uL)
GC Column: Dionex AS18 ID: 4(mm)
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 339475
Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14808-79-8	Sulfate	10.12		0.50	0.25
16887-00-6	Chloride	9.888		0.50	0.25

TestAmerica Savannah
Target Compound Quantitation Report

Data File:	\\SAVCHROM\ChromData\CICK\20140717-11077.b\0717141105-8.d				
Lims ID:	LCSD				
Client ID:					
Sample Type:	LCSD				
Inject. Date:	17-Jul-2014 11:05:00	ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	25.0 ul	Dil. Factor:	1.0000		
Sample Info:	LCSD 1K071714 1K082812A				
Misc. Info.:	8 3618765				
Operator ID:		Instrument ID:	CICK		
Method:	\\SAVCHROM\ChromData\CICK\20140717-11077.b\300.0_9056A_CICK.m				
Limit Group:	Anions - 28D - ORGFRMS				
Last Update:	18-Jul-2014 11:23:45	Calib Date:	11-Jul-2014 12:37:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\SAVCHROM\ChromData\CICK\20140711-10925.b\0711141237-11.d				
Column 1 :	Dionex Ion Pac AS18 (4.00 mm)		Det: 0118131406-12		
Process Host:	XAWRK026				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.267	3.267	0.000	61124288	2.00	2.06	
2 Chloride	4.492	4.492	0.000	189131929	10.0	9.89	
3 Sulfate	5.967	5.967	0.000	136581175	10.0	10.1	
4 Bromide	7.333	7.333	0.000	80198323	10.0	10.4	

Reagents:

IC_Anion-ICV_00014 Amount Added: 1.00 Units: mL

Report Date: 18-Jul-2014 11:23:46 Chrom Revision: 2.2 24-Jun-2014 07:21:42

TestAmerica Savannah

Data File: \\SAVCHROM\ChromData\CICK\20140717-11077.b\0717141105-8.d

Injection Date: 17-Jul-2014 11:05:00 Instrument ID: CICK Operator ID:

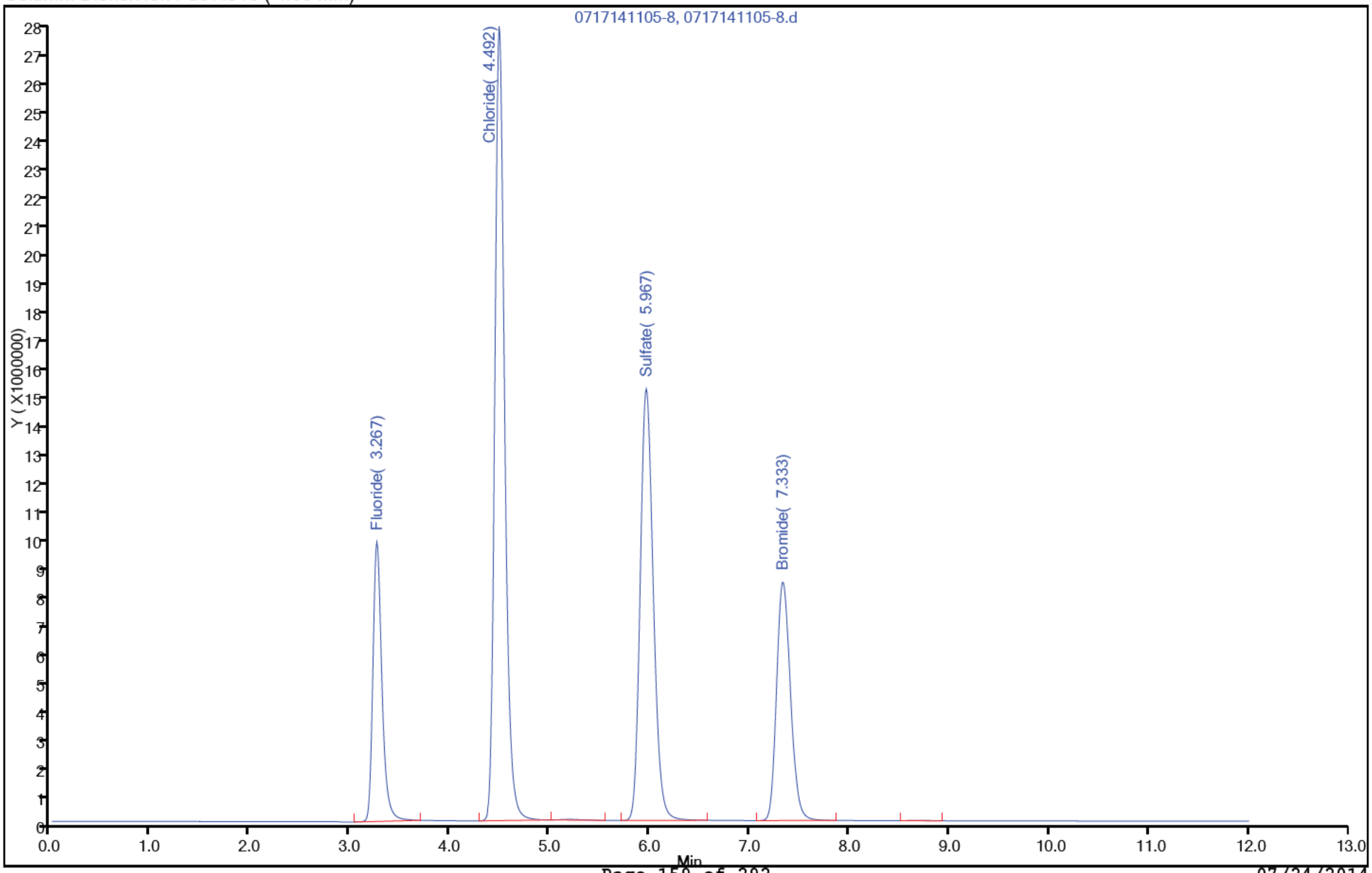
Lims ID: LCSD Worklist Smp#: 4

Client ID:

Injection Vol: 25.0 ul Dil. Factor: 1.0000 ALS Bottle#: 0

Method: 300.0_9056A_CICK Limit Group: Anions - 28D - ORGFRMS

Column: Dionex Ion Pac AS18 (4.00 mm)



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah Job No.: 460-79113-1

SDG No.:

Client Sample ID: GW0173 MS Lab Sample ID: 460-79113-2 MS

Matrix: Water Lab File ID: 0717141455-23.d

Analysis Method: 300.0 Date Collected: 07/09/2014 09:50

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 07/17/2014 14:55

Con. Extract Vol.: 5(mL) Dilution Factor: 2

Injection Volume: 25(uL) GC Column: Dionex AS18 ID: 4(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 339475 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14808-79-8	Sulfate	44.02		1.00	0.50
16984-48-8	Fluoride	4.067		0.20	0.050
16887-00-6	Chloride	79.16		1.00	0.50
24959-67-9	Bromide	20.54		1.00	0.50

TestAmerica Savannah
Target Compound Quantitation Report

Data File: \\SAVCHROM\ChromData\CICK\20140717-11077.b\0717141455-23.d
Lims ID: 460-79113-A-2 MS
Client ID:
Sample Type: MS
Inject. Date: 17-Jul-2014 14:55:00 ALS Bottle#: 0 Worklist Smp#: 19
Injection Vol: 25.0 ul Dil. Factor: 2.0000
Sample Info: 460-79113-A-2 MS 1K071714 1K082812A
Misc. Info.: 23 3576126
Operator ID: Instrument ID: CICK

Method: \\SAVCHROM\ChromData\CICK\20140717-11077.b\300.0_9056A_CICK.m
Limit Group: Anions - 28D - ORGFRMS
Last Update: 18-Jul-2014 11:23:49 Calib Date: 11-Jul-2014 12:37:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\SAVCHROM\ChromData\CICK\20140711-10925.b\0711141237-11.d

Column 1 : Dionex Ion Pac AS18 (4.00 mm) Det: 0118131406-12
Process Host: XAWRK026

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.267	3.267	0.000	60206586	2.00	2.03	
2 Chloride	4.492	4.500	-0.008	763854250	10.0	39.6	
3 Sulfate	5.967	5.975	-0.008	299935628	10.0	22.0	
4 Bromide	7.342	7.342	0.000	79560631	10.0	10.3	

Reagents:

All_Anions_00051 Amount Added: 0.05 Units: mL

Report Date: 18-Jul-2014 11:23:50 Chrom Revision: 2.2 24-Jun-2014 07:21:42

TestAmerica Savannah

Data File: \\SAVCHROM\ChromData\CICK\20140717-11077.b\0717141455-23.d

Injection Date: 17-Jul-2014 14:55:00 Instrument ID: CICK Operator ID:

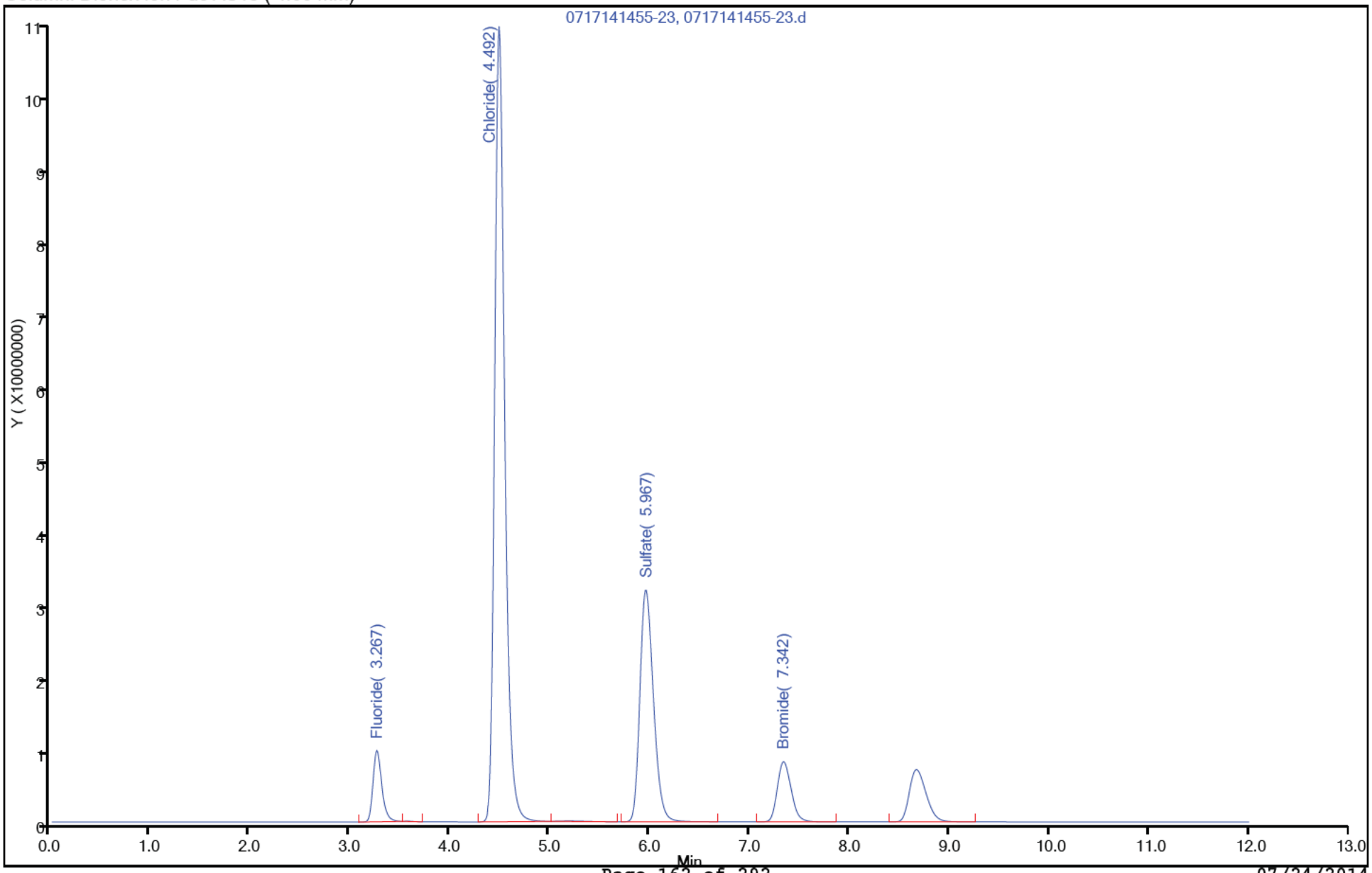
Lims ID: 460-79113-A-2 MS Worklist Smp#: 19

Client ID:

Injection Vol: 25.0 ul Dil. Factor: 2.0000 ALS Bottle#: 0

Method: 300.0_9056A_CICK Limit Group: Anions - 28D - ORGFRMS

Column: Dionex Ion Pac AS18 (4.00 mm)



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah
Job No.: 460-79113-1
SDG No.:
Client Sample ID:
Lab Sample ID: 680-103212-A-2 MS
Matrix: Water
Lab File ID: 0716142312-53.d
Analysis Method: 300.0
Date Collected: 07/09/2014 09:10
Extraction Method:
Date Extracted:
Sample wt/vol: 1(mL)
Date Analyzed: 07/16/2014 23:12
Con. Extract Vol.: 5(mL)
Dilution Factor: 1
Injection Volume: 25(uL)
GC Column: Dionex AS18 ID: 4(mm)
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 339289
Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14808-79-8	Sulfate	10.48		0.50	0.25
16984-48-8	Fluoride	2.076		0.10	0.025
16887-00-6	Chloride	15.79		0.50	0.25
24959-67-9	Bromide	9.999		0.50	0.25

TestAmerica Savannah
Target Compound Quantitation Report

Data File: \\SAVCHROM\ChromData\CICK\20140716-11038.b\0716142312-53.d
Lims ID: 680-103212-A-2 MS
Client ID:
Sample Type: MS
Inject. Date: 16-Jul-2014 23:12:00 ALS Bottle#: 0 Worklist Smp#: 49
Injection Vol: 25.0 ul Dil. Factor: 1.0000
Sample Info: 680-103212-A-2 MS 2K071614 1K082812A
Misc. Info.: 24397 027612(
Operator ID: Instrument ID: CICK

Method: \\SAVCHROM\ChromData\CICK\20140716-11038.b\300.0_9056A_CICK.m
Limit Group: Anions - 28D - ORGFRMS
Last Update: 17-Jul-2014 08:22:42 Calib Date: 11-Jul-2014 12:37:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\SAVCHROM\ChromData\CICK\20140711-10925.b\0711141237-11.d

Column 1 : Dionex Ion Pac AS18 (4.00 mm) Det: 0118131406-12
Process Host: XAWRK033

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.275	3.275	0.000	61481567	2.00	2.08	
2 Chloride	4.500	4.500	0.000	303401254	10.0	15.8	
3 Sulfate	5.975	5.983	-0.008	141498401	10.0	10.5	
4 Bromide	7.358	7.358	0.000	77426677	10.0	10.0	

Reagents:

All_Anions_00051 Amount Added: 0.05 Units: mL

Report Date: 17-Jul-2014 08:22:44 Chrom Revision: 2.2 24-Jun-2014 07:21:42

TestAmerica Savannah

Data File: \\SAVCHROM\ChromData\CICK\20140716-11038.b\0716142312-53.d

Injection Date: 16-Jul-2014 23:12:00 Instrument ID: CICK Operator ID:

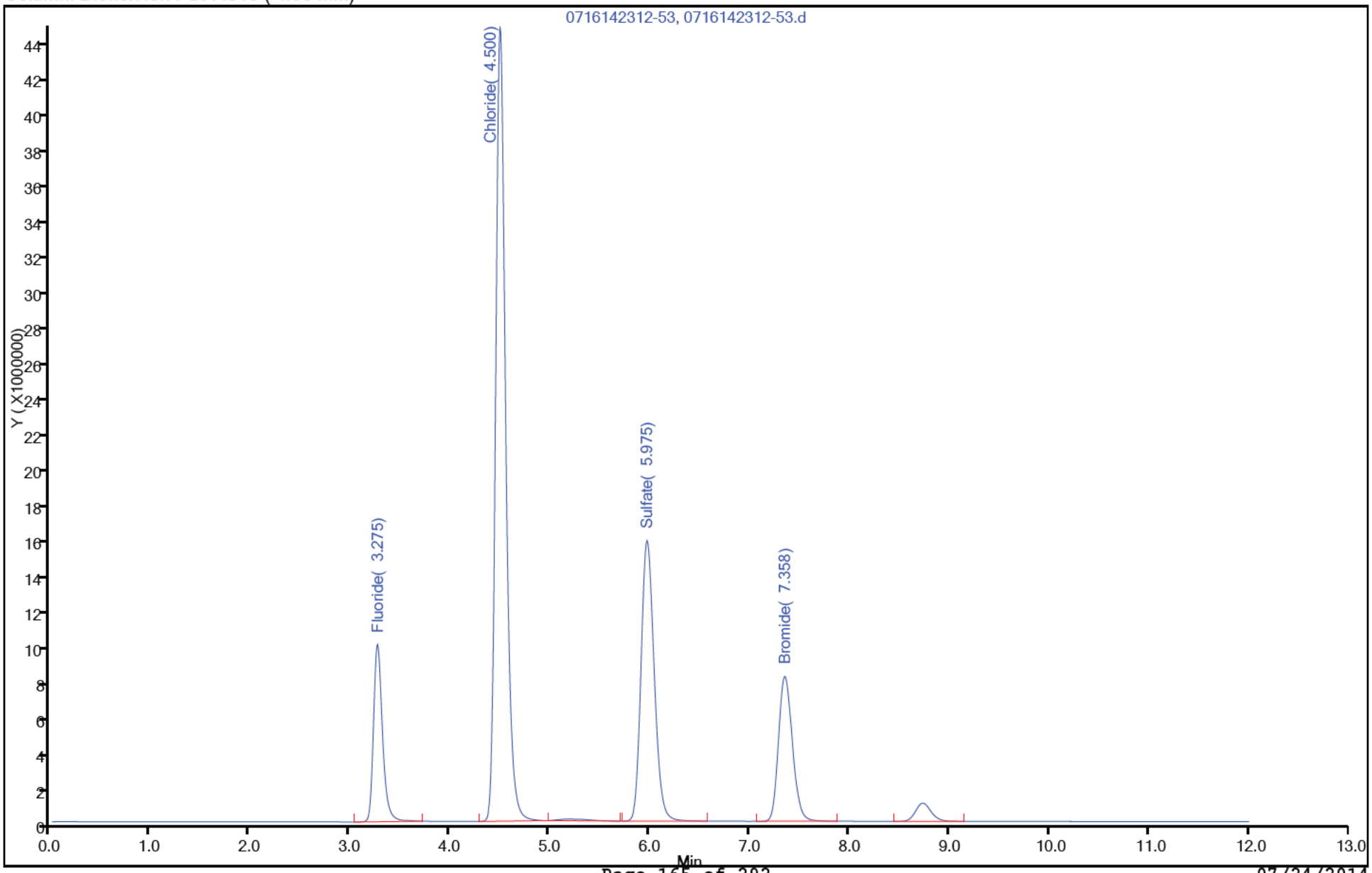
Lims ID: 680-103212-A-2 MS Worklist Smp#: 49

Client ID:

Injection Vol: 25.0 ul Dil. Factor: 1.0000 ALS Bottle#: 0

Method: 300.0_9056A_CICK Limit Group: Anions - 28D - ORGFRMS

Column: Dionex Ion Pac AS18 (4.00 mm)



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah
Job No.: 460-79113-1
SDG No.:
Client Sample ID: GW0173 MSD
Lab Sample ID: 460-79113-2 MSD
Matrix: Water
Lab File ID: 0717141510-24.d
Analysis Method: 300.0
Date Collected: 07/09/2014 09:50
Extraction Method:
Date Extracted:
Sample wt/vol: 1(mL)
Date Analyzed: 07/17/2014 15:10
Con. Extract Vol.: 5(mL)
Dilution Factor: 2
Injection Volume: 25(uL)
GC Column: Dionex AS18 ID: 4(mm)
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 339475
Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14808-79-8	Sulfate	44.21		1.00	0.50
16984-48-8	Fluoride	4.081		0.20	0.050
16887-00-6	Chloride	79.43		1.00	0.50
24959-67-9	Bromide	20.62		1.00	0.50

TestAmerica Savannah
Target Compound Quantitation Report

Data File: \\SAVCHROM\ChromData\CICK\20140717-11077.b\0717141510-24.d
Lims ID: 460-79113-A-2 MSD
Client ID:
Sample Type: MSD
Inject. Date: 17-Jul-2014 15:10:00 ALS Bottle#: 0 Worklist Smp#: 20
Injection Vol: 25.0 ul Dil. Factor: 2.0000
Sample Info: 460-79113-A-2 MSD 1K071714 1K082812A
Misc. Info.: 24 3576126
Operator ID: Instrument ID: CICK

Method: \\SAVCHROM\ChromData\CICK\20140717-11077.b\300.0_9056A_CICK.m
Limit Group: Anions - 28D - ORGFRMS
Last Update: 18-Jul-2014 11:23:49 Calib Date: 11-Jul-2014 12:37:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\SAVCHROM\ChromData\CICK\20140711-10925.b\0711141237-11.d

Column 1 : Dionex Ion Pac AS18 (4.00 mm) Det: 0118131406-12
Process Host: XAWRK026

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.267	3.267	0.000	60407279	2.00	2.04	
2 Chloride	4.492	4.500	-0.008	766401842	10.0	39.7	
3 Sulfate	5.958	5.975	-0.017	301226855	10.0	22.1	
4 Bromide	7.342	7.342	0.000	79861328	10.0	10.3	

Reagents:

All_Anions_00051 Amount Added: 0.05 Units: mL

Report Date: 18-Jul-2014 11:23:50 Chrom Revision: 2.2 24-Jun-2014 07:21:42

TestAmerica Savannah

Data File: \\SAVCHROM\ChromData\CICK\20140717-11077.b\0717141510-24.d

Injection Date: 17-Jul-2014 15:10:00 Instrument ID: CICK Operator ID:

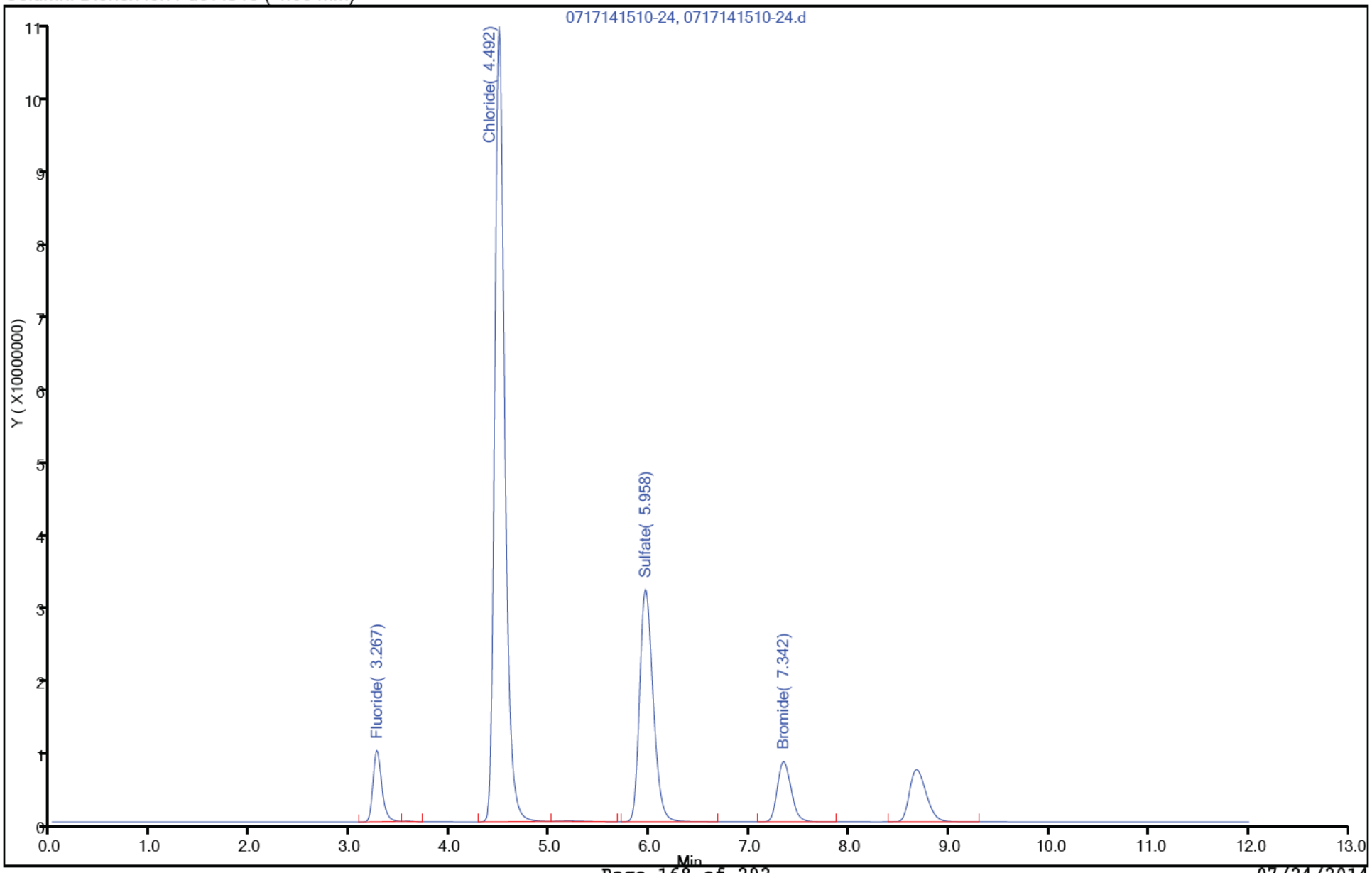
Lims ID: 460-79113-A-2 MSD Worklist Smp#: 20

Client ID:

Injection Vol: 25.0 ul Dil. Factor: 2.0000 ALS Bottle#: 0

Method: 300.0_9056A_CICK Limit Group: Anions - 28D - ORGFRMS

Column: Dionex Ion Pac AS18 (4.00 mm)



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah
Job No.: 460-79113-1
SDG No.:
Client Sample ID:
Lab Sample ID: 680-103212-A-2 MSD
Matrix: Water
Lab File ID: 0716142328-54.d
Analysis Method: 300.0
Date Collected: 07/09/2014 09:10
Extraction Method:
Date Extracted:
Sample wt/vol: 1(mL)
Date Analyzed: 07/16/2014 23:28
Con. Extract Vol.: 5(mL)
Dilution Factor: 1
Injection Volume: 25(uL)
GC Column: Dionex AS18 ID: 4(mm)
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 339289
Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14808-79-8	Sulfate	10.54		0.50	0.25
16984-48-8	Fluoride	2.085		0.10	0.025
16887-00-6	Chloride	15.84		0.50	0.25
24959-67-9	Bromide	10.04		0.50	0.25

TestAmerica Savannah
Target Compound Quantitation Report

Data File: \\SAVCHROM\ChromData\CICK\20140716-11038.b\0716142328-54.d
Lims ID: 680-103212-A-2 MSD
Client ID:
Sample Type: MSD
Inject. Date: 16-Jul-2014 23:28:00 ALS Bottle#: 0 Worklist Smp#: 50
Injection Vol: 25.0 ul Dil. Factor: 1.0000
Sample Info: 680-103212-A-2 MSD 2K071614 1K082812A
Misc. Info.: 17508 3576126
Operator ID: Instrument ID: CICK

Method: \\SAVCHROM\ChromData\CICK\20140716-11038.b\300.0_9056A_CICK.m
Limit Group: Anions - 28D - ORGFRMS
Last Update: 17-Jul-2014 08:22:42 Calib Date: 11-Jul-2014 12:37:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\SAVCHROM\ChromData\CICK\20140711-10925.b\0711141237-11.d

Column 1 : Dionex Ion Pac AS18 (4.00 mm) Det: 0118131406-12
Process Host: XAWRK033

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.267	3.275	-0.008	61760204	2.00	2.09	
2 Chloride	4.500	4.500	0.000	304368095	10.0	15.8	
3 Sulfate	5.975	5.983	-0.008	142335644	10.0	10.5	
4 Bromide	7.350	7.358	-0.008	77752965	10.0	10.0	

Reagents:

All_Anions_00051 Amount Added: 0.05 Units: mL

Report Date: 17-Jul-2014 08:22:45 Chrom Revision: 2.2 24-Jun-2014 07:21:42

TestAmerica Savannah

Data File: \\SAVCHROM\ChromData\CICK\20140716-11038.b\0716142328-54.d

Injection Date: 16-Jul-2014 23:28:00 Instrument ID: CICK Operator ID:

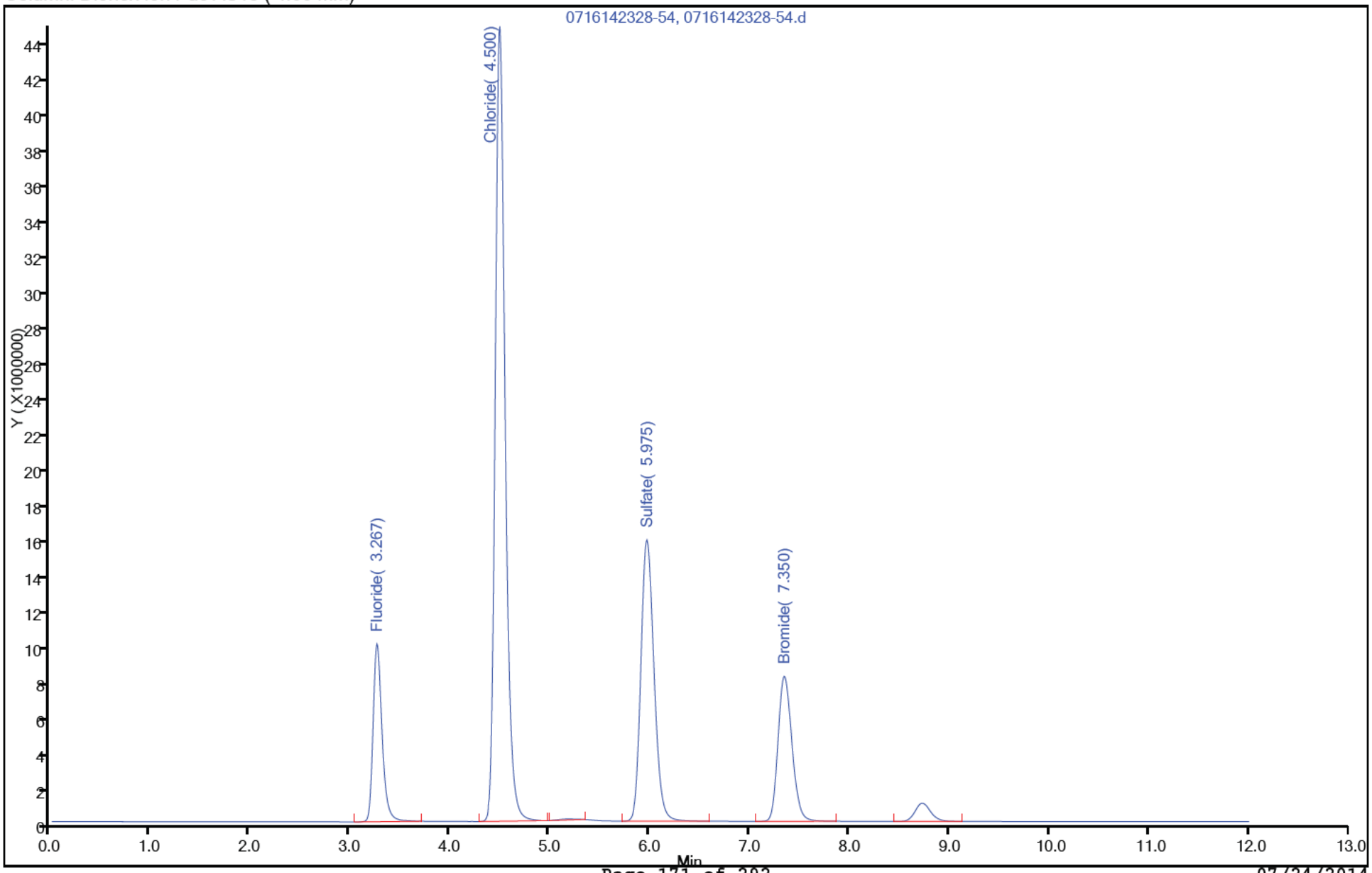
Lims ID: 680-103212-A-2 MSD Worklist Smp#: 50

Client ID:

Injection Vol: 25.0 ul Dil. Factor: 1.0000 ALS Bottle#: 0

Method: 300.0_9056A_CICK Limit Group: Anions - 28D - ORGFRMS

Column: Dionex Ion Pac AS18 (4.00 mm)



HPLC/IC ANALYSIS RUN LOG

Lab Name: TestAmerica Savannah Job No.: 460-79113-1

SDG No.:

Instrument ID: CICK Start Date: 07/11/2014 11:05

Analysis Batch Number: 338674 End Date: 07/11/2014 18:44

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
IC 680-338674/1		07/11/2014 11:05	1	0711141105-5.d	Dionex AS18 4(mm)
IC 680-338674/2		07/11/2014 11:20	1	0711141120-6.d	Dionex AS18 4(mm)
IC 680-338674/3		07/11/2014 11:35	1	0711141135-7.d	Dionex AS18 4(mm)
IC 680-338674/4		07/11/2014 11:51	1	0711141151-8.d	Dionex AS18 4(mm)
IC 680-338674/5		07/11/2014 12:06	1	0711141206-9.d	Dionex AS18 4(mm)
IC 680-338674/6		07/11/2014 12:21	1	0711141221-10.d	Dionex AS18 4(mm)
IC 680-338674/7		07/11/2014 12:37	1	0711141237-11.d	Dionex AS18 4(mm)
ZZZZZ		07/11/2014 12:52	1		Dionex AS18 4(mm)
ICB 680-338674/1008		07/11/2014 12:52	1	0711141252-12-ICB.d	Dionex AS18 4(mm)
ZZZZZ		07/11/2014 13:07	1		Dionex AS18 4(mm)
ICV 680-338674/1009		07/11/2014 13:07	1	0711141307-13-ICV.d	Dionex AS18 4(mm)
ZZZZZ		07/11/2014 13:22	1		Dionex AS18 4(mm)
ZZZZZ		07/11/2014 13:53	1		Dionex AS18 4(mm)
ZZZZZ		07/11/2014 14:08	2		Dionex AS18 4(mm)
ZZZZZ		07/11/2014 14:24	2		Dionex AS18 4(mm)
ZZZZZ		07/11/2014 14:39	1		Dionex AS18 4(mm)
ZZZZZ		07/11/2014 14:54	1		Dionex AS18 4(mm)
ZZZZZ		07/11/2014 15:10	1		Dionex AS18 4(mm)
ZZZZZ		07/11/2014 15:25	1		Dionex AS18 4(mm)
ZZZZZ		07/11/2014 15:40	1		Dionex AS18 4(mm)
ZZZZZ		07/11/2014 15:56	1		Dionex AS18 4(mm)
ZZZZZ		07/11/2014 16:11	1		Dionex AS18 4(mm)
CCV 680-338674/22		07/11/2014 16:26	1		Dionex AS18 4(mm)
CCB 680-338674/23		07/11/2014 16:42	1		Dionex AS18 4(mm)
ZZZZZ		07/11/2014 16:57	1		Dionex AS18 4(mm)
ZZZZZ		07/11/2014 17:12	1		Dionex AS18 4(mm)
ZZZZZ		07/11/2014 17:28	2		Dionex AS18 4(mm)
ZZZZZ		07/11/2014 17:43	2		Dionex AS18 4(mm)
ZZZZZ		07/11/2014 17:58	2		Dionex AS18 4(mm)
CCV 680-338674/30		07/11/2014 18:29	1		Dionex AS18 4(mm)
CCB 680-338674/31		07/11/2014 18:44	1		Dionex AS18 4(mm)

HPLC/IC ANALYSIS RUN LOG

Lab Name: TestAmerica Savannah Job No.: 460-79113-1

SDG No.:

Instrument ID: CICK Start Date: 07/16/2014 17:51

Analysis Batch Number: 339289 End Date: 07/17/2014 00:14

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 680-339289/28		07/16/2014 17:51	1	0716141751-32.d	Dionex AS18 4(mm)
MB 680-339289/29		07/16/2014 18:06	1	0716141806-33.d	Dionex AS18 4(mm)
LCS 680-339289/30		07/16/2014 18:21	1	0716141821-34.d	Dionex AS18 4(mm)
LCSD 680-339289/31		07/16/2014 18:37	1	0716141837-35.d	Dionex AS18 4(mm)
ZZZZZ		07/16/2014 18:52	1		Dionex AS18 4(mm)
460-79113-1	GW0172	07/16/2014 19:07	1	0716141907-37.d	Dionex AS18 4(mm)
460-79113-2	GW0173	07/16/2014 19:23	1	0716141923-38.d	Dionex AS18 4(mm)
460-79113-3	GW0174	07/16/2014 19:38	1	0716141938-39.d	Dionex AS18 4(mm)
460-79113-4	FB0003	07/16/2014 19:53	1	0716141953-40.d	Dionex AS18 4(mm)
ZZZZZ		07/16/2014 20:09	4		Dionex AS18 4(mm)
ZZZZZ		07/16/2014 20:24	5		Dionex AS18 4(mm)
ZZZZZ		07/16/2014 20:39	4		Dionex AS18 4(mm)
ZZZZZ		07/16/2014 20:55	4		Dionex AS18 4(mm)
ZZZZZ		07/16/2014 21:10	4		Dionex AS18 4(mm)
CCV 680-339289/42		07/16/2014 21:25	1	0716142125-46.d	Dionex AS18 4(mm)
CCB 680-339289/43		07/16/2014 21:41	1	0716142141-47.d	Dionex AS18 4(mm)
ZZZZZ		07/16/2014 21:56	1		Dionex AS18 4(mm)
ZZZZZ		07/16/2014 22:11	1		Dionex AS18 4(mm)
ZZZZZ		07/16/2014 22:26	1		Dionex AS18 4(mm)
ZZZZZ		07/16/2014 22:42	1		Dionex AS18 4(mm)
ZZZZZ		07/16/2014 22:57	1		Dionex AS18 4(mm)
680-103212-A-2 MS		07/16/2014 23:12	1	0716142312-53.d	Dionex AS18 4(mm)
680-103212-A-2 MSD		07/16/2014 23:28	1	0716142328-54.d	Dionex AS18 4(mm)
ZZZZZ		07/16/2014 23:43	1		Dionex AS18 4(mm)
CCV 680-339289/52		07/16/2014 23:58	1	0716142358-56.d	Dionex AS18 4(mm)
CCB 680-339289/53		07/17/2014 00:14	1	0717140014-57.d	Dionex AS18 4(mm)

300.0

HPLC/IC ANALYSIS RUN LOG

Lab Name: TestAmerica Savannah Job No.: 460-79113-1

SDG No.:

Instrument ID: CICK Start Date: 07/17/2014 10:19

Analysis Batch Number: 339475 End Date: 07/17/2014 15:56

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 680-339475/1		07/17/2014 10:19	1	0717141019-5.d	Dionex AS18 4(mm)
MB 680-339475/2		07/17/2014 10:34	1	0717141034-6.d	Dionex AS18 4(mm)
LCS 680-339475/3		07/17/2014 10:50	1	0717141050-7.d	Dionex AS18 4(mm)
LCSD 680-339475/4		07/17/2014 11:05	1	0717141105-8.d	Dionex AS18 4(mm)
ZZZZZ		07/17/2014 11:36	1		Dionex AS18 4(mm)
ZZZZZ		07/17/2014 11:51	1		Dionex AS18 4(mm)
ZZZZZ		07/17/2014 12:06	1		Dionex AS18 4(mm)
ZZZZZ		07/17/2014 12:22	1		Dionex AS18 4(mm)
ZZZZZ		07/17/2014 12:37	1		Dionex AS18 4(mm)
ZZZZZ		07/17/2014 12:52	1		Dionex AS18 4(mm)
ZZZZZ		07/17/2014 13:08	1		Dionex AS18 4(mm)
ZZZZZ		07/17/2014 13:23	2		Dionex AS18 4(mm)
ZZZZZ		07/17/2014 13:38	2		Dionex AS18 4(mm)
460-79113-1	GW0172	07/17/2014 13:54	5	0717141354-19.d	Dionex AS18 4(mm)
CCV 680-339475/16		07/17/2014 14:09	1	0717141409-20.d	Dionex AS18 4(mm)
CCB 680-339475/17		07/17/2014 14:24	1	0717141424-21.d	Dionex AS18 4(mm)
460-79113-2	GW0173	07/17/2014 14:40	2	0717141440-22.d	Dionex AS18 4(mm)
460-79113-2 MS	GW0173 MS	07/17/2014 14:55	2	0717141455-23.d	Dionex AS18 4(mm)
460-79113-2 MSD	GW0173 MSD	07/17/2014 15:10	2	0717141510-24.d	Dionex AS18 4(mm)
460-79113-3	GW0174	07/17/2014 15:26	5	0717141526-25.d	Dionex AS18 4(mm)
CCV 680-339475/22		07/17/2014 15:41	1	0717141541-26.d	Dionex AS18 4(mm)
CCB 680-339475/23		07/17/2014 15:56	1	0717141556-27.d	Dionex AS18 4(mm)

300.0

GENERAL CHEMISTRY

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Edison Job Number: 460-79113-1

SDG No.:

Project: NJ Site Drinking Water

Client Sample ID	Lab Sample ID
GW0172	460-79113-1
GW0173	460-79113-2
GW0174	460-79113-3
FB0003	460-79113-4

Comments:

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: GW0172
Lab Sample ID: 460-79113-1
Lab Name: TestAmerica Edison
Job No.: 460-79113-1
SDG ID.:
Matrix: Water
Date Sampled: 07/09/2014 09:15
Reporting Basis: WET
Date Received: 07/09/2014 20:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Nitrate Nitrite as N	1.1	0.10	0.047	mg/L			1	353.2
	Hardness as calcium carbonate	73.3	5.0	5.0	mg/L			1	SM 2340C
	Bicarbonate Alkalinity as CaCO3	24.3	5.0	5.0	mg/L			1	SM 2320B
	Carbonate Alkalinity as CaCO3	5.0	5.0	5.0	mg/L	U		1	SM 2320B
	Alkalinity	24.3	5.0	5.0	mg/L			1	SM 2320B
	Hydroxide Alkalinity	5.0	5.0	5.0	mg/L	U		1	SM 2320B
	Total Suspended Solids	1.3	1.3	1.3	mg/L	U		1	SM 2540D
7664-41-7	Ammonia	0.080	0.10	0.080	mg/L	U		1	SM 4500 NH3 G
	Orthophosphate as P	0.010	0.030	0.010	mg/L	U	H	1	SM 4500 P E
7440-44-0	Total Organic Carbon	0.80	1.0	0.30	mg/L	J		1	SM 5310B
	pH	7.56			SU		HF	1	SM 4500 H+ B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: GW0173
Lab Sample ID: 460-79113-2
Lab Name: TestAmerica Edison
Job No.: 460-79113-1
SDG ID.:
Matrix: Water
Date Sampled: 07/09/2014 09:50
Reporting Basis: WET
Date Received: 07/09/2014 20:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Nitrate Nitrite as N	4.0	0.50	0.24	mg/L			5	353.2
	Hardness as calcium carbonate	51.5	5.0	5.0	mg/L			1	SM 2340C
	Bicarbonate Alkalinity as CaCO3	30.2	5.0	5.0	mg/L			1	SM 2320B
	Carbonate Alkalinity as CaCO3	5.0	5.0	5.0	mg/L	U		1	SM 2320B
	Alkalinity	30.2	5.0	5.0	mg/L			1	SM 2320B
	Hydroxide Alkalinity	5.0	5.0	5.0	mg/L	U		1	SM 2320B
	Total Suspended Solids	2.0	1.3	1.3	mg/L			1	SM 2540D
7664-41-7	Ammonia	0.095	0.10	0.080	mg/L	J		1	SM 4500 NH3 G
	Orthophosphate as P	0.010	0.030	0.010	mg/L	U	H	1	SM 4500 P E
7440-44-0	Total Organic Carbon	1.2	1.0	0.30	mg/L			1	SM 5310B
	pH	6.32			SU		HF	1	SM 4500 H+ B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: GW0174 | Lab Sample ID: 460-79113-3

Lab Name: TestAmerica Edison | Job No.: 460-79113-1

SDG ID.:

Matrix: Water | Date Sampled: 07/09/2014 09:25

Reporting Basis: WET | Date Received: 07/09/2014 20:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Nitrate Nitrite as N	1.1	0.10	0.047	mg/L			1	353.2
	Hardness as calcium carbonate	63.4	5.0	5.0	mg/L			1	SM 2340C
	Bicarbonate Alkalinity as CaCO3	24.8	5.0	5.0	mg/L			1	SM 2320B
	Carbonate Alkalinity as CaCO3	5.0	5.0	5.0	mg/L	U		1	SM 2320B
	Alkalinity	24.8	5.0	5.0	mg/L			1	SM 2320B
	Hydroxide Alkalinity	5.0	5.0	5.0	mg/L	U		1	SM 2320B
	Total Suspended Solids	1.3	1.3	1.3	mg/L	U		1	SM 2540D
7664-41-7	Ammonia	0.080	0.10	0.080	mg/L	U		1	SM 4500 NH3 G
	Orthophosphate as P	0.010	0.030	0.010	mg/L	U	H	1	SM 4500 P E
7440-44-0	Total Organic Carbon	0.80	1.0	0.30	mg/L	J		1	SM 5310B
	pH	7.49			SU		HF	1	SM 4500 H+ B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: FB0003 | Lab Sample ID: 460-79113-4

Lab Name: TestAmerica Edison | Job No.: 460-79113-1

SDG ID.:

Matrix: Water | Date Sampled: 07/09/2014 10:00

Reporting Basis: WET | Date Received: 07/09/2014 20:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Nitrate Nitrite as N	0.047	0.10	0.047	mg/L	U		1	353.2
	Hardness as calcium carbonate	5.0	5.0	5.0	mg/L	U		1	SM 2340C
	Bicarbonate Alkalinity as CaCO3	5.0	5.0	5.0	mg/L	U		1	SM 2320B
	Carbonate Alkalinity as CaCO3	5.0	5.0	5.0	mg/L	U		1	SM 2320B
	Alkalinity	5.0	5.0	5.0	mg/L	U		1	SM 2320B
	Hydroxide Alkalinity	5.0	5.0	5.0	mg/L	U		1	SM 2320B
	Total Suspended Solids	1.3	1.3	1.3	mg/L	U		1	SM 2540D
7664-41-7	Ammonia	0.080	0.10	0.080	mg/L	U		1	SM 4500 NH3 G
	Orthophosphate as P	0.010	0.030	0.010	mg/L	U	H	1	SM 4500 P E
7440-44-0	Total Organic Carbon	0.30	1.0	0.30	mg/L	U		1	SM 5310B
	pH	5.86			SU		HF	1	SM 4500 H+ B

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Edison Job No.: 460-79113-1

SDG No.:

Analyst: RAK Batch Start Date: 07/11/2014

Reporting Units: mg/L Analytical Batch No.: 235724

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
7	ICV	07:22	Nitrate Nitrite as N	1.02	1.00	102	90-110		WTno3+2IM2_00276
8	ICB	07:24	Nitrate Nitrite as N	0.047				U	
19	CCV	07:40	Nitrate Nitrite as N	1.03	1.00	103	90-110		WTno3+2IM2_00276
20	CCB	07:41	Nitrate Nitrite as N	0.047				U	
26	CCV	07:50	Nitrate Nitrite as N	1.03	1.00	103	90-110		WTno3+2IM2_00276
27	CCB	07:52	Nitrate Nitrite as N	0.047				U	

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

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Edison Job No.: 460-79113-1

SDG No.:

Analyst: HTV Batch Start Date: 07/21/2014

Reporting Units: mg/L Analytical Batch No.: 237633

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
7	ICV	12:33	Ammonia	2.01	2.00	101	90-110		WTamnSS1_00007
8	ICB	12:35	Ammonia	0.080				U	
17	CCV	12:48	Ammonia	1.99	2.00	100	90-110		WTamnSS1_00007
18	CCB	12:50	Ammonia	0.080				U	
29	CCV	13:07	Ammonia	1.99	2.00	99	90-110		WTamnSS1_00007
30	CCB	13:09	Ammonia	0.080				U	
33	CCV	13:14	Ammonia	1.99	2.00	100	90-110		WTamnSS1_00007
34	CCB	13:16	Ammonia	0.080				U	

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

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Edison Job No.: 460-79113-1

SDG No.:

Analyst: MAL Batch Start Date: 07/12/2014

Reporting Units: mg/L Analytical Batch No.: 236042

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	ICV	12:11	Orthophosphate as P	0.199	0.200	100	90-110		WTphosSS1_00019
2	ICB	12:11	Orthophosphate as P	0.010				U	
11	CCV	12:11	Orthophosphate as P	0.199	0.200	100	90-110		WTphosSS1_00019
12	CCB	12:11	Orthophosphate as P	0.010				U	

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

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Edison Job No.: 460-79113-1

SDG No.:

Analyst: HTV Batch Start Date: 07/14/2014

Reporting Units: mg/L Analytical Batch No.: 236382

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	ICV	14:45	Total Organic Carbon	51.19	50.0	102	90-110		WTtocSP2_00021
2	ICB	15:05	Total Organic Carbon	0.30				U	
13	CCV	20:23	Total Organic Carbon	51.19	50.0	102	90-110		WTtocSP2_00021
14	CCB	20:43	Total Organic Carbon	0.30				U	
25	CCV	00:32	Total Organic Carbon	50.20	50.0	100	90-110		WTtocSP2_00021
26	CCB	00:52	Total Organic Carbon	0.30				U	
37	CCV	04:45	Total Organic Carbon	51.98	50.0	104	90-110		WTtocSP2_00021
38	CCB	05:05	Total Organic Carbon	0.30				U	
49	CCV	08:46	Total Organic Carbon	51.96	50.0	104	90-110		WTtocSP2_00021
50	CCB	09:06	Total Organic Carbon	0.30				U	
60	CCV	12:38	Total Organic Carbon	52.65	50.0	105	90-110		WTtocSP2_00021
61	CCB	12:57	Total Organic Carbon	0.30				U	

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

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Edison Job No.: 460-79113-1

SDG No.:

Analyst: YAH Batch Start Date: 07/18/2014

Reporting Units: SU Analytical Batch No.: 237234

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
11	CCV	14:26	pH	6.980	7.00	100	99-101		WTpHCCV_00022
22	CCV	14:53	pH	6.990	7.00	100	99-101		WTpHCCV_00022
27	CCV	15:07	pH	6.990	7.00	100	99-101		WTpHCCV_00022

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

FORM II-IN

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: TestAmerica Edison Job No.: 460-79113-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 235724 Date: 07/11/2014 07:25							
353.2	MB 460-235724/9	Nitrate as N	0.047	U	mg/L	0.10	1
353.2	MB 460-235724/9	Nitrate Nitrite as N	0.047	U	mg/L	0.10	1
353.2	MB 460-235724/9	Nitrite as N	0.0041	U	mg/L	0.10	1
Batch ID: 236180 Date: 07/14/2014 10:28							
SM 2320B	MB 460-236180/13	Bicarbonate Alkalinity as CaCO3	5.0	U	mg/L	5.0	1
SM 2320B	MB 460-236180/13	Carbonate Alkalinity as CaCO3	5.0	U	mg/L	5.0	1
SM 2320B	MB 460-236180/13	Alkalinity	5.0	U	mg/L	5.0	1
SM 2320B	MB 460-236180/13	Hydroxide Alkalinity	5.0	U	mg/L	5.0	1
Batch ID: 237639 Date: 07/21/2014 12:30							
SM 2340C	MB 460-237639/1	Hardness as calcium carbonate	5.0	U	mg/L	5.0	1
Batch ID: 236315 Date: 07/15/2014 07:34							
SM 2540D	MB 460-236315/1	Total Suspended Solids	1.0	U	mg/L	1.0	1
Batch ID: 237234 Date: 07/18/2014 14:04							
SM 4500 H+ B	MB 460-237234/2	pH	5.840		SU		1
Batch ID: 237633 Date: 07/21/2014 12:36 Prep Batch: 237544 Date: 07/21/2014 06:00							
SM 4500 NH3 G	MB 460-237544/1-A	Ammonia	0.080	U	mg/L	0.10	1
Batch ID: 236042 Date: 07/12/2014 12:11							
SM 4500 P E	MB 460-236042/3	Orthophosphate as P	0.010	U	mg/L	0.030	1
Batch ID: 236382 Date: 07/14/2014 15:27							
SM 5310B	MB 460-236382/3	Total Organic Carbon	0.30	U	mg/L	1.0	1
Batch ID: 236382 Date: 07/15/2014 02:36							
SM 5310B	MB 460-236382/31	Total Organic Carbon	0.30	U	mg/L	1.0	1

FORM III-IN

5-IN
MATRIX SPIKE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Edison Job No.: 460-79113-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 235724	Date: 07/11/2014 07:46										
353.2	460-79108-J-1	Nitrate as N	0.047	U	mg/L						
353.2	460-79108-J-1 MS	Nitrate as N	0.510		mg/L	0.500	102	67-130			
353.2	460-79108-J-1	Nitrate Nitrite as N	0.047	U	mg/L						
353.2	460-79108-J-1 MS	Nitrate Nitrite as N	1.01		mg/L	1.00	101	66-124			
353.2	460-79108-J-1	Nitrite as N	0.0094	J	mg/L						
353.2	460-79108-J-1 MS	Nitrite as N	0.499		mg/L	0.500	98	84-109			
Batch ID: 237633	Date: 07/21/2014 12:41	Prep Batch: 237544	Date: 07/21/2014 06:00								
SM 4500 NH3 G	460-79062-M-1 -B	Ammonia	1.4		mg/L						
SM 4500 NH3 G	460-79062-M-1 -B MS	Ammonia	2.27		mg/L	1.00	85	60-147			
Batch ID: 236042	Date: 07/12/2014 12:11										
SM 4500 P E	460-79113-1	Orthophosphate as P	0.010	U	mg/L						H
SM 4500 P E	460-79113-1 MS	Orthophosphate as P	0.206		mg/L	0.200	103	82-118			
Batch ID: 236382	Date: 07/14/2014 17:08										
SM 5310B	460-79073-H-1	Total Organic Carbon	0.30	U	mg/L						
SM 5310B	460-79073-H-1 MS	Total Organic Carbon	52.52		mg/L	50.0	105	80-120			
Batch ID: 236382	Date: 07/15/2014 03:41										
SM 5310B	460-79253-H-1	Total Organic Carbon	3.0		mg/L						
SM 5310B	460-79253-H-1 MS	Total Organic Carbon	55.26		mg/L	50.0	104	80-120			

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

FORM V-IN

5-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Edison Job No.: 460-79113-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 235724 Date: 07/11/2014 07:47											
353.2	460-79108-J-1 MSD	Nitrate as N	0.513		mg/L	0.500	103	67-130	1	34	
353.2	460-79108-J-1 MSD	Nitrate Nitrite as N	1.01		mg/L	1.00	101	66-124	0	19	
353.2	460-79108-J-1 MSD	Nitrite as N	0.496		mg/L	0.500	97	84-109	1	10	
Batch ID: 237633 Date: 07/21/2014 12:42 Prep Batch: 237544 Date: 07/21/2014 06:00											
SM 4500 NH3 G	460-79062-M-1 -C MSD	Ammonia	2.07		mg/L	1.00	64	60-147	9	16	
Batch ID: 236042 Date: 07/12/2014 12:11											
SM 4500 P E	460-79113-1 MSD	Orthophosphate as P	0.201		mg/L	0.200	100	82-118	3	10	
Batch ID: 236382 Date: 07/14/2014 17:30											
SM 5310B	460-79073-H-1 MSD	Total Organic Carbon	52.70		mg/L	50.0	105	80-120	0	10	
Batch ID: 236382 Date: 07/15/2014 04:03											
SM 5310B	460-79253-H-1 MSD	Total Organic Carbon	55.02		mg/L	50.0	104	80-120	0	10	

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

FORM V-IN

6-IN
DUPLICATE
GENERAL CHEMISTRY

Lab Name: TestAmerica Edison Job No.: 460-79113-1

SDG No.:

Matrix: Water

Method	Client Sample ID	Lab Sample ID	Analyte	Result	Unit	RPD	RPD Limit	Qual
Batch ID: 236180	Date: 07/14/2014 11:01							
SM 2320B	GW0173	460-79113-2	Bicarbonate Alkalinity as CaCO3	30.2	mg/L			
SM 2320B	GW0173	460-79113-2 DU	Bicarbonate Alkalinity as CaCO3	24.06	mg/L	23	27	
SM 2320B	GW0173	460-79113-2	Carbonate Alkalinity as CaCO3	5.0	mg/L			U
SM 2320B	GW0173	460-79113-2 DU	Carbonate Alkalinity as CaCO3	5.0	mg/L	NC	27	U
SM 2320B	GW0173	460-79113-2	Alkalinity	30.2	mg/L			
SM 2320B	GW0173	460-79113-2 DU	Alkalinity	24.06	mg/L	23	27	
SM 2320B	GW0173	460-79113-2	Hydroxide Alkalinity	5.0	mg/L			U
SM 2320B	GW0173	460-79113-2 DU	Hydroxide Alkalinity	5.0	mg/L	NC	27	U
Batch ID: 237639	Date: 07/21/2014 12:30							
SM 2340C		460-79060-B-3	Hardness as calcium carbonate	69.3	mg/L			
SM 2340C		460-79060-B-3 DU	Hardness as calcium carbonate	69.30	mg/L	0	10	
Batch ID: 236315	Date: 07/15/2014 07:34							
SM 2540D		460-79153-A-1	Total Suspended Solids	224	mg/L			
SM 2540D		460-79153-A-1 DU	Total Suspended Solids	234.0	mg/L	4	5	
Batch ID: 237234	Date: 07/18/2014 14:12							
SM 4500 H+ B		460-79093-P-1	pH	8.20	SU			
SM 4500 H+ B		460-79093-P-1 DU	pH	8.190	SU	0.1	10	

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

FORM VI-IN

7A-IN
LAB CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: TestAmerica Edison Job No.: 460-79113-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 237633	Date: 07/21/2014 12:38		Prep Batch: 237544			Date: 07/21/2014 06:00					
						LCS Source: WTamnIM1_00036					
SM 4500 NH3 G	LCS 460-237544/2-A	Ammonia	1.02		mg/L	1.00	102	85-117			

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

FORM VIIA-IN

7A-IN
LCS-CERTIFIED REFERENCE MATERIAL
GENERAL CHEMISTRY

Lab Name: TestAmerica Edison Job No.: 460-79113-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 235724	Date: 07/11/2014 07:27										
						LCS Source:	WTno3LCS_00018				
353.2	LCSSRM 460-235724/10	Nitrate as N	1.56		mg/L	1.51	103.6	87.4-11 2.6			
353.2	LCSSRM 460-235724/10	Nitrate Nitrite as N	1.56		mg/L	1.51	103.6	85.4-10 9.9			
Batch ID: 235724	Date: 07/11/2014 07:28										
						LCS Source:	WTntritLCS_00024				
353.2	LCSSRM 460-235724/11	Nitrite as N	0.620		mg/L	0.612	101.3	88.9-11 0.5			
Batch ID: 236180	Date: 07/14/2014 10:34										
						LCS Source:	WTalkLCS_00109				
SM 2320B	LCSSRM 460-236180/14	Alkalinity	39.31		mg/L	36.5	107.7	90.3-10 7.9			
Batch ID: 237639	Date: 07/21/2014 12:30										
						LCS Source:	WThardLCS0001_00014				
SM 2340C	LCSSRM 460-237639/2	Hardness as calcium carbonate	110.9		mg/L	109	101.7	91.4-10 9.2			
Batch ID: 236315	Date: 07/15/2014 07:34										
						LCS Source:	WTtssLCS_00050				
SM 2540D	LCSSRM 460-236315/2	Total Suspended Solids	50.00		mg/L	46.7	107.1	82.7-10 7.9			
Batch ID: 237234	Date: 07/18/2014 14:06										
						LCS Source:	WTpHLCS_00015				
SM 4500 H+ B	LCSSRM 460-237234/3	pH	7.010		SU	7.03	99.7	98.0-10 2.0			
Batch ID: 236042	Date: 07/12/2014 12:11										
						LCS Source:	WTophosLCS_00004				
SM 4500 P E	LCSSRM 460-236042/4	Orthophosphate as P	0.217		mg/L	0.214	101.6	86.1-10 9.0			
Batch ID: 236382	Date: 07/14/2014 15:47										
						LCS Source:	WTtocLCS_00027				
SM 5310B	LCSSRM 460-236382/4	Total Organic Carbon	49.73		mg/L	46.5	106.9	87.1-11 2.9			
Batch ID: 236382	Date: 07/15/2014 02:57										
						LCS Source:	WTtocLCS_00027				
SM 5310B	LCSSRM 460-236382/32	Total Organic Carbon	49.58		mg/L	46.5	106.6	87.1-11 2.9			

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

FORM VIIA-IN

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Edison Job Number: 460-79113-1

SDG Number:

Matrix: Water Instrument ID: Lachat1

Method: 353.2 MDL Date: 04/22/2013 11:28

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Nitrate Nitrite as N		0.1	0.0474

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Edison Job Number: 460-79113-1

SDG Number:

Matrix: Water Instrument ID: Lachat1

Method: 353.2 XMDL Date: 04/22/2013 11:29

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Nitrate Nitrite as N		0.1	0.0474

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Edison Job Number: 460-79113-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: SM 2340C MDL Date: 02/11/2014 10:10

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Hardness as calcium carbonate		5	5

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Edison Job Number: 460-79113-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: SM 2340C XMDL Date: 02/11/2014 10:53

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Hardness as calcium carbonate		5	5

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Edison Job Number: 460-79113-1

SDG Number:

Matrix: Water Instrument ID: Auto_Titrator

Method: SM 2320B MDL Date: 02/11/2014 10:14

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Alkalinity		5	5
Bicarbonate Alkalinity as CaCO3		5	5
Carbonate Alkalinity as CaCO3		5	5
Hydroxide Alkalinity		5	5

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Edison Job Number: 460-79113-1

SDG Number:

Matrix: Water Instrument ID: Auto_Titrator

Method: SM 2320B XMDL Date: 02/11/2014 10:48

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Alkalinity		5	5
Bicarbonate Alkalinity as CaCO3		5	5
Carbonate Alkalinity as CaCO3		5	5
Hydroxide Alkalinity		5	5

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Edison Job Number: 460-79113-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: SM 2540D MDL Date: 02/11/2014 10:20

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Total Suspended Solids		10	10

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Edison Job Number: 460-79113-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: SM 2540D XMDL Date: 02/11/2014 10:55

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Total Suspended Solids		10	10

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Edison Job Number: 460-79113-1

SDG Number:

Matrix: Water Instrument ID: Lachat2

Method: SM 4500 NH3 G MDL Date: 02/07/2013 21:40

Prep Method: SM 4500 NH3 B

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Ammonia		0.1	0.08

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Edison Job Number: 460-79113-1

SDG Number:

Matrix: Water Instrument ID: Lachat2

Method: SM 4500 NH3 G XMDL Date: 02/07/2013 21:40

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Ammonia		0.1	0.08

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Edison Job Number: 460-79113-1

SDG Number:

Matrix: Water Instrument ID: WetPhosSpec

Method: SM 4500 P E MDL Date: 01/04/2013 09:20

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Orthophosphate as P		0.03	0.01

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Edison Job Number: 460-79113-1

SDG Number:

Matrix: Water Instrument ID: WetPhosSpec

Method: SM 4500 P E XMDL Date: 01/04/2013 09:21

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Orthophosphate as P		0.03	0.01

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Edison Job Number: 460-79113-1

SDG Number:

Matrix: Water Instrument ID: TOC_Shimadzu3

Method: SM 5310B MDL Date: 10/16/2012 11:56

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Total Organic Carbon		1	0.296

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Edison Job Number: 460-79113-1

SDG Number:

Matrix: Water Instrument ID: TOC_Shimadzu3

Method: SM 5310B XMDL Date: 10/16/2012 11:57

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Total Organic Carbon		1	0.296

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Edison Job Number: 460-79113-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: SM 4500 H+ B RL Date: 01/01/2007 10:02

Analyte	Wavelength/ Mass	RL (SU)	
pH		0.1	

12-IN
PREPARATION LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Edison Job No.: 460-79113-1

SDG No.:

Prep Method: SM 4500 NH3 B

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 460-237544/1-A	07/21/2014 06:00	237544		50	50
LCS 460-237544/2-A	07/21/2014 06:00	237544		50	50
460-79062-M-1-B MS	07/21/2014 06:00	237544		50	50
460-79062-M-1-C MSD	07/21/2014 06:00	237544		50	50
460-79113-1	07/21/2014 06:00	237544		50	50
460-79113-2	07/21/2014 06:00	237544		50	50
460-79113-3	07/21/2014 06:00	237544		50	50
460-79113-4	07/21/2014 06:00	237544		50	50

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Edison Job No.: 460-79113-1

SDG No.:

Instrument ID: Lachat1 Analysis Method: 353.2

Start Date: 07/11/2014 07:12 End Date: 07/11/2014 07:52

Lab Sample Id	D/F	Type	Time	Analytes																							
				N-No2	NNO32	NO3																					
ZZZZZZ			07:12																								
ZZZZZZ			07:13																								
ZZZZZZ			07:15																								
ZZZZZZ			07:16																								
ZZZZZZ			07:18																								
ZZZZZZ			07:19																								
ICV 460-235724/7	1		07:22	X	X	X																					
ICB 460-235724/8	1		07:24		X																						
MB 460-235724/9	1	T	07:25		X																						
LCSSRM 460-235724/10	1	T	07:27		X	X																					
LCSSRM 460-235724/11	1	T	07:28	X	X																						
ZZZZZZ			07:30																								
ZZZZZZ			07:31																								
ZZZZZZ			07:33																								
460-79113-1	1	T	07:34		X																						
ZZZZZZ			07:36																								
460-79113-3	1	T	07:37		X																						
460-79113-4	1	T	07:39		X																						
CCV 460-235724/19	1		07:40	X	X	X																					
CCB 460-235724/20	1		07:41		X																						
ZZZZZZ			07:43																								
ZZZZZZ			07:44																								
460-79108-J-1 MS	1	T	07:46	X	X	X																					
460-79108-J-1 MSD	1	T	07:47	X	X	X																					
460-79113-2	5	T	07:49		X																						
CCV 460-235724/26	1		07:50	X	X	X																					
CCB 460-235724/27	1		07:52		X																						

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Edison Job No.: 460-79113-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: SM 2340C

Start Date: 07/21/2014 12:30 End Date: 07/21/2014 14:55

Lab Sample Id	D/F	Type	Time	Analytes																								
				HardCC																								
MB 460-237639/1	1	T	12:30	X																								
LCSSRM 460-237639/2	1	T	12:30	X																								
ZZZZZZ			12:30																									
460-79060-B-3 DU	1	T	12:30	X																								
ZZZZZZ			12:30																									
ZZZZZZ			12:30																									
460-79113-1	1	T	12:30	X																								
460-79113-2	1	T	12:30	X																								
460-79113-3	1	T	12:30	X																								
460-79113-4	1	T	12:30	X																								
ZZZZZZ			14:55																									
ZZZZZZ			14:55																									

Prep Types:
T = Total/NA

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Edison Job No.: 460-79113-1

SDG No.:

Instrument ID: Auto_Titrator Analysis Method: SM 2320B

Start Date: 07/14/2014 07:07 End Date: 07/14/2014 13:02

Lab Sample Id	D/F	Type	Time	Analytes																								
				Alk	BALKCC	CarAlk	OHAlk																					
RINSE 460-236180/1			07:07																									
ZZZZZZ			07:14																									
ZZZZZZ			07:20																									
RINSE 460-236180/4			07:35																									
ZZZZZZ			07:42																									
RINSE 460-236180/6			07:55																									
ZZZZZZ			08:02																									
ZZZZZZ			08:08																									
RINSE 460-236180/9			08:19																									
ZZZZZZ			08:26																									
ZZZZZZ			08:32																									
RINSE 460-236180/12			10:21																									
MB 460-236180/13	1	T	10:28	X	X	X	X																					
LCSSRM 460-236180/14	1	T	10:34	X	X	X	X																					
460-79113-2	1	T	10:54	X	X	X	X																					
460-79113-2 DU	1	T	11:01	X	X	X	X																					
460-79113-1	1	T	11:07	X	X	X	X																					
460-79113-3	1	T	11:13	X	X	X	X																					
460-79113-4	1	T	11:19	X	X	X	X																					
ZZZZZZ			11:26																									
ZZZZZZ			11:33																									
ZZZZZZ			11:40																									
ZZZZZZ			11:46																									
ZZZZZZ			11:53																									
ZZZZZZ			12:00																									
ZZZZZZ			12:06																									
ZZZZZZ			12:14																									
ZZZZZZ			12:20																									
ZZZZZZ			12:26																									
ZZZZZZ			12:31																									
ZZZZZZ			12:36																									
ZZZZZZ			12:43																									
ZZZZZZ			12:49																									
ZZZZZZ			12:55																									
ZZZZZZ			13:02																									

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Edison Job No.: 460-79113-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: SM 2540D

Start Date: 07/15/2014 07:34 End Date: 07/15/2014 07:34

Lab Sample Id	D/F	Type	Time	Analytes																							
				TSS																							
MB 460-236315/1	1	T	07:34	X																							
LCSSRM 460-236315/2	1	T	07:34	X																							
ZZZZZZ			07:34																								
ZZZZZZ			07:34																								
ZZZZZZ			07:34																								
ZZZZZZ			07:34																								
ZZZZZZ			07:34																								
ZZZZZZ			07:34																								
ZZZZZZ			07:34																								
ZZZZZZ			07:34																								
ZZZZZZ			07:34																								
ZZZZZZ			07:34																								
ZZZZZZ			07:34																								
ZZZZZZ			07:34																								
460-79153-A-1 DU	1	T	07:34	X																							
ZZZZZZ			07:34																								
460-79113-1	1	T	07:34	X																							
460-79113-2	1	T	07:34	X																							
460-79113-3	1	T	07:34	X																							
460-79113-4	1	T	07:34	X																							
ZZZZZZ			07:34																								
ZZZZZZ			07:34																								
ZZZZZZ			07:34																								
ZZZZZZ			07:34																								

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Edison Job No.: 460-79113-1

SDG No.:

Instrument ID: Lachat2 Analysis Method: SM 4500 NH3 G

Start Date: 07/21/2014 12:23 End Date: 07/21/2014 13:16

Lab Sample Id	D/F	Type	Time	Analytes																							
				NH3																							
ZZZZZZ			12:23																								
ZZZZZZ			12:25																								
ZZZZZZ			12:26																								
ZZZZZZ			12:28																								
ZZZZZZ			12:29																								
ZZZZZZ			12:31																								
ICV 460-237633/7	1		12:33	X																							
ICB 460-237633/8	1		12:35	X																							
MB 460-237544/1-A	1	T	12:36	X																							
LCS 460-237544/2-A	1	T	12:38	X																							
ZZZZZZ			12:39																								
460-79062-M-1-B MS	1	T	12:41	X																							
460-79062-M-1-C MSD	1	T	12:42	X																							
ZZZZZZ			12:44																								
ZZZZZZ			12:45																								
ZZZZZZ			12:47																								
CCV 460-237633/17	1		12:48	X																							
CCB 460-237633/18	1		12:50	X																							
ZZZZZZ			12:52																								
ZZZZZZ			12:54																								
ZZZZZZ			12:55																								
ZZZZZZ			12:57																								
ZZZZZZ			12:58																								
ZZZZZZ			13:00																								
ZZZZZZ			13:01																								
460-79113-1	1	T	13:03	X																							
460-79113-2	1	T	13:04	X																							
460-79113-3	1	T	13:06	X																							
CCV 460-237633/29	1		13:07	X																							
CCB 460-237633/30	1		13:09	X																							
460-79113-4	1	T	13:11	X																							
ZZZZZZ			13:13																								
CCV 460-237633/33	1		13:14	X																							
CCB 460-237633/34	1		13:16	X																							

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Edison Job No.: 460-79113-1

SDG No.:

Instrument ID: WetPhosSpec Analysis Method: SM 4500 P E

Start Date: 07/12/2014 12:11 End Date: 07/12/2014 12:11

Lab Sample Id	D/F	Type	Time	Analytes																							
				Orthophosasp																							
ICV 460-236042/1	1		12:11	X																							
ICB 460-236042/2	1		12:11	X																							
MB 460-236042/3	1	T	12:11	X																							
LCSSRM 460-236042/4	1	T	12:11	X																							
460-79113-1	1	T	12:11	X																							
460-79113-1 MS	1	T	12:11	X																							
460-79113-1 MSD	1	T	12:11	X																							
460-79113-2	1	T	12:11	X																							
460-79113-3	1	T	12:11	X																							
460-79113-4	1	T	12:11	X																							
CCV 460-236042/11	1		12:11	X																							
CCB 460-236042/12	1		12:11	X																							

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Edison Job No.: 460-79113-1

SDG No.:

Instrument ID: TOC_Shimadzu3 Analysis Method: SM 5310B

Start Date: 07/14/2014 14:45 End Date: 07/15/2014 12:57

Lab Sample Id	D/F	Type	Time	Analytes																							
				TOC																							
ICV 460-236382/1	1		14:45	X																							
ICB 460-236382/2	1		15:05	X																							
MB 460-236382/3	1	T	15:27	X																							
LCSSRM 460-236382/4	1	T	15:47	X																							
ZZZZZZ			16:48																								
460-79073-H-1 MS	1	T	17:08	X																							
460-79073-H-1 MSD	1	T	17:30	X																							
ZZZZZZ			18:00																								
ZZZZZZ			18:59																								
ZZZZZZ			19:20																								
ZZZZZZ			19:40																								
ZZZZZZ			20:01																								
CCV 460-236382/13	1		20:23	X																							
CCB 460-236382/14	1		20:43	X																							
ZZZZZZ			21:04																								
ZZZZZZ			21:26																								
ZZZZZZ			21:48																								
460-79113-2	1	T	22:10	X																							
460-79113-3	1	T	22:30	X																							
460-79113-4	1	T	22:49	X																							
ZZZZZZ			23:09																								
ZZZZZZ			23:29																								
ZZZZZZ			23:50																								
ZZZZZZ			00:10																								
CCV 460-236382/25	1		00:32	X																							
CCB 460-236382/26	1		00:52	X																							
ZZZZZZ			01:13																								
ZZZZZZ			01:35																								
ZZZZZZ			01:56																								
ZZZZZZ			02:16																								
MB 460-236382/31	1	T	02:36	X																							
LCSSRM 460-236382/32	1	T	02:57	X																							
ZZZZZZ			03:19																								
460-79253-H-1 MS	1	T	03:41	X																							
460-79253-H-1 MSD	1	T	04:03	X																							
ZZZZZZ			04:24																								
CCV 460-236382/37	1		04:45	X																							
CCB 460-236382/38	1		05:05	X																							
ZZZZZZ			05:24																								
ZZZZZZ			05:44																								
ZZZZZZ			06:04																								

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Edison Job No.: 460-79113-1

SDG No.:

Instrument ID: TOC_Shimadzu3 Analysis Method: SM 5310B

Start Date: 07/14/2014 14:45 End Date: 07/15/2014 12:57

Lab Sample Id	D/F	Type	Time	Analytes																							
				TOC																							
ZZZZZZ			06:24																								
ZZZZZZ			06:46																								
ZZZZZZ			07:06																								
ZZZZZZ			07:26																								
ZZZZZZ			07:45																								
ZZZZZZ			08:05																								
ZZZZZZ			08:25																								
CCV 460-236382/49	1		08:46	X																							
CCB 460-236382/50	1		09:06	X																							
ZZZZZZ			09:38																								
ZZZZZZ			09:57																								
ZZZZZZ			10:16																								
ZZZZZZ			10:36																								
460-79113-1	1	T	10:57	X																							
ZZZZZZ			11:17																								
ZZZZZZ			11:37																								
ZZZZZZ			11:57																								
ZZZZZZ			12:17																								
CCV 460-236382/60	1		12:38	X																							
CCB 460-236382/61	1		12:57	X																							

Prep Types:
T = Total/NA

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Edison Job No.: 460-79113-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: SM 4500 H+ B

Start Date: 07/18/2014 14:00 End Date: 07/18/2014 15:07

Lab Sample Id	D/F	Type	Time	Analytes																							
				pH																							
CCV 460-237234/1			14:00																								
MB 460-237234/2	1	T	14:04	X																							
LCSSRM 460-237234/3	1	T	14:06	X																							
ZZZZZZ			14:09																								
460-79093-P-1 DU	1	T	14:12	X																							
ZZZZZZ			14:15																								
ZZZZZZ			14:17																								
ZZZZZZ			14:19																								
ZZZZZZ			14:21																								
ZZZZZZ			14:24																								
CCV 460-237234/11	1		14:26	X																							
460-79113-1	1	T	14:29	X																							
460-79113-2	1	T	14:31	X																							
460-79113-3	1	T	14:33	X																							
460-79113-4	1	T	14:35	X																							
ZZZZZZ			14:38																								
ZZZZZZ			14:40																								
ZZZZZZ			14:42																								
ZZZZZZ			14:45																								
ZZZZZZ			14:48																								
ZZZZZZ			14:50																								
CCV 460-237234/22	1		14:53	X																							
ZZZZZZ			14:56																								
ZZZZZZ			14:59																								
ZZZZZZ			15:02																								
ZZZZZZ			15:05																								
CCV 460-237234/27	1		15:07	X																							

Prep Types:
T = Total/NA

FORM XIII-IN

OPERATOR:	raisa	Method - Ch. 1 (NO3+NO2)
ACQ. TIME:	Jul 11, 2014 7:12:27	
DATA FILENAME:?TION:	C:\OMNION\DATA\NITRATE\2014DA~1\N140711.FDT	
METHOD FILENAME:	C:\OMNION\METHODS\NO3NO2A.MET	
TRAY FILENAME:	Jul 10, 2014 8:45:46	
NO3+NO2a.met		
TRAY DESCRIPTION:		
Created:'TE DATA:	Oct 18, 2013 14:04:36	
Modified:lame:	Jul 11, 2014 7:43:14	
360 trayration Units:	mg /L	
DATA DESCRIPTION:	Direct	
Created: Peak Start (s):	Jul 11, 2014 7:12:27	
Modified:: Width (s):	Jul 11, 2014 7:12:27	
% Width Tolerance:	100.000	
Threshold:	1371.000	
Autodilution Trigger:	Off	
QuikChem Method:	10-107-04-1-C	

CALIBRATION DATA:

Levels:

1 : 2.000 2 : 1.500 3 : 1.000 4 : 0.500
5 : 0.100 6 : 0.000

Calibration Rep Handling:	Average
Calibration Fit Type:	1st Order Poly
Force Though Zero:	No
Weighting Method:	None
Concentration Scaling:	None

SAMPLER TIMING:

Method Cycle Period:	90.0
Min. Probe in Wash Period:	14.0
Probe in Sample Period:	25.0

*** Prep Sequence Not Enabled ***

VALVE TIMING:

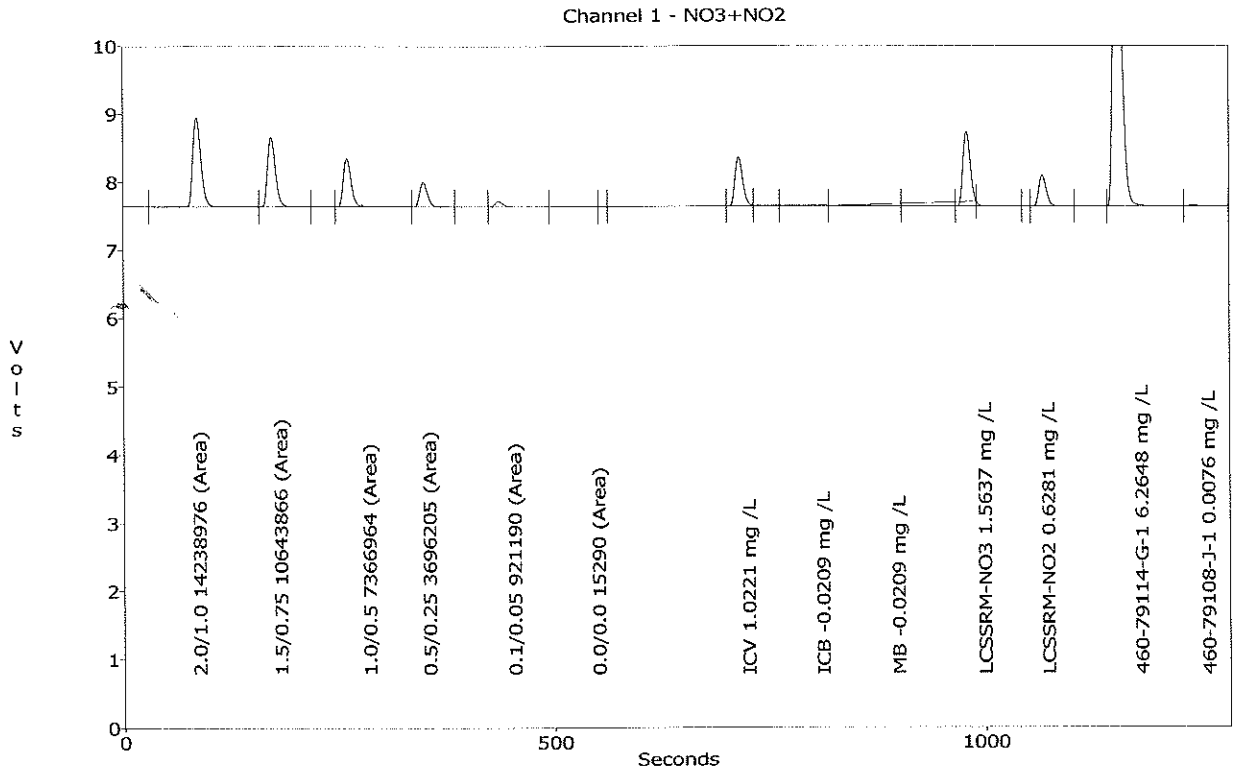
Method Cycle Period:	90.0
Sample Reaches 1st Valve:	37.0
Valve:	On
Load Time:	0.0
Load Period:	10.0
Inject Period:	80.0

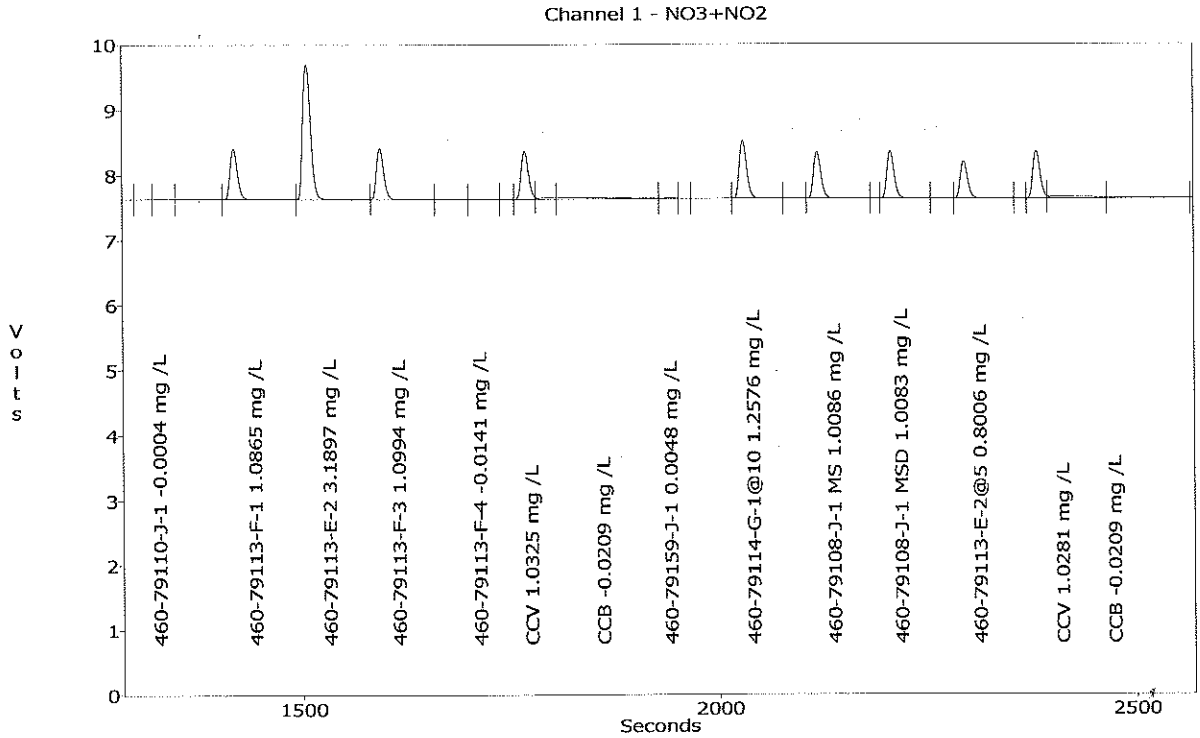
Multi-Channel Table
Type: Calibration Standards
Channel Range: 1 to 8 -- Cup Range: 1 to 50

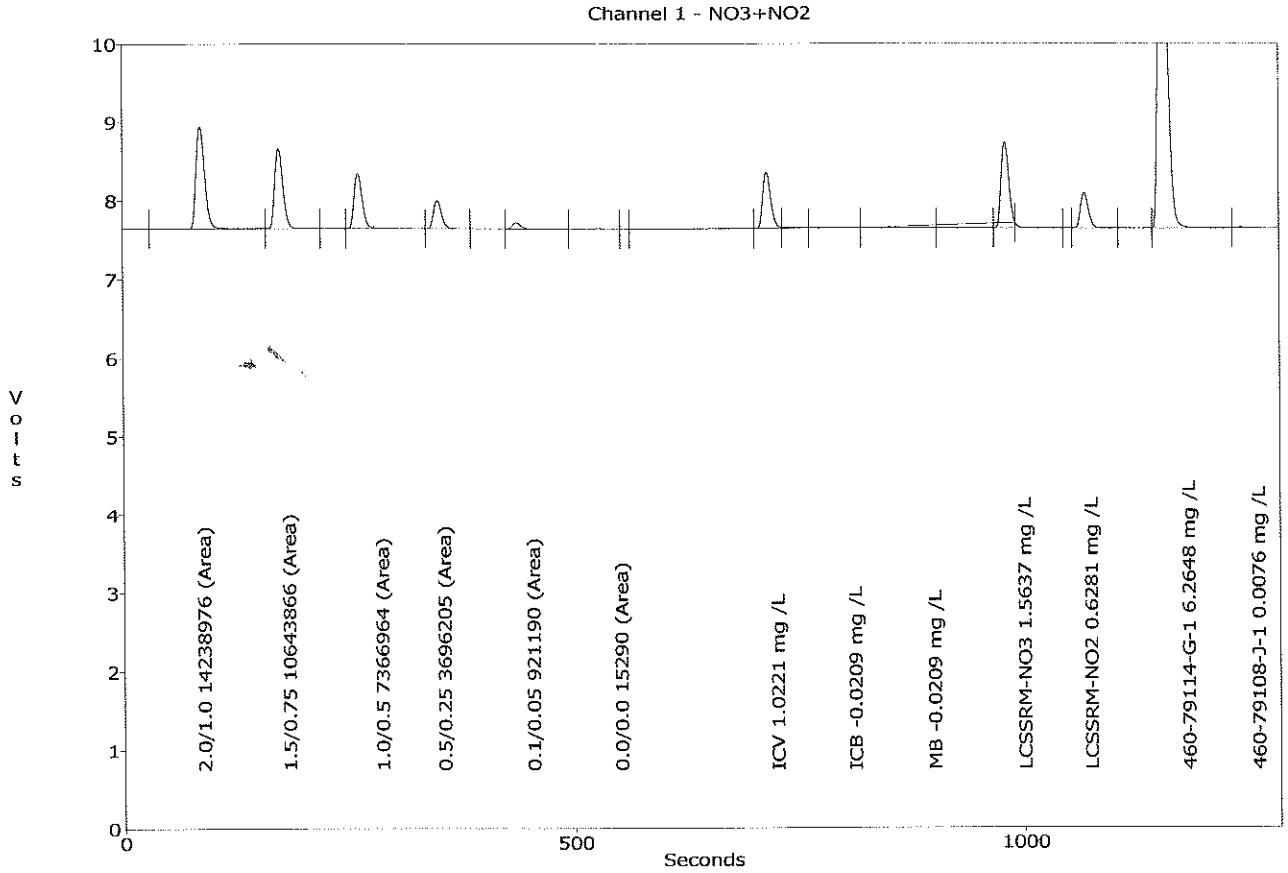
Cup	Sample ID	Sampling Date	Sampling Time	# of Reps	NO3+NO2 (uv-s)	NO2 (uv-s)	Man Dil Factor	Auto Dil Factor	Weight	Unit
1	2.0/1.0	11 Jul 2014	07:12:29	1	14238976.00	10601048.00	1.0	1.00	1.00000	g
2	1.5/0.75	11 Jul 2014	07:13:56	1	10643866.00	7818066.00	1.0	1.00	1.00000	g
3	1.0/0.5	11 Jul 2014	07:15:24	1	7366964.00	5246948.00	1.0	1.00	1.00000	g
4	0.5/0.25	11 Jul 2014	07:16:53	1	3696205.00	2595681.00	1.0	1.00	1.00000	g
5	0.1/0.05	11 Jul 2014	07:18:21	1	921190.00	563614.00	1.0	1.00	1.00000	g
6	0.0/0.0	11 Jul 2014	07:19:50	1	15290.00	86718.00	1.0	1.00	1.00000	g

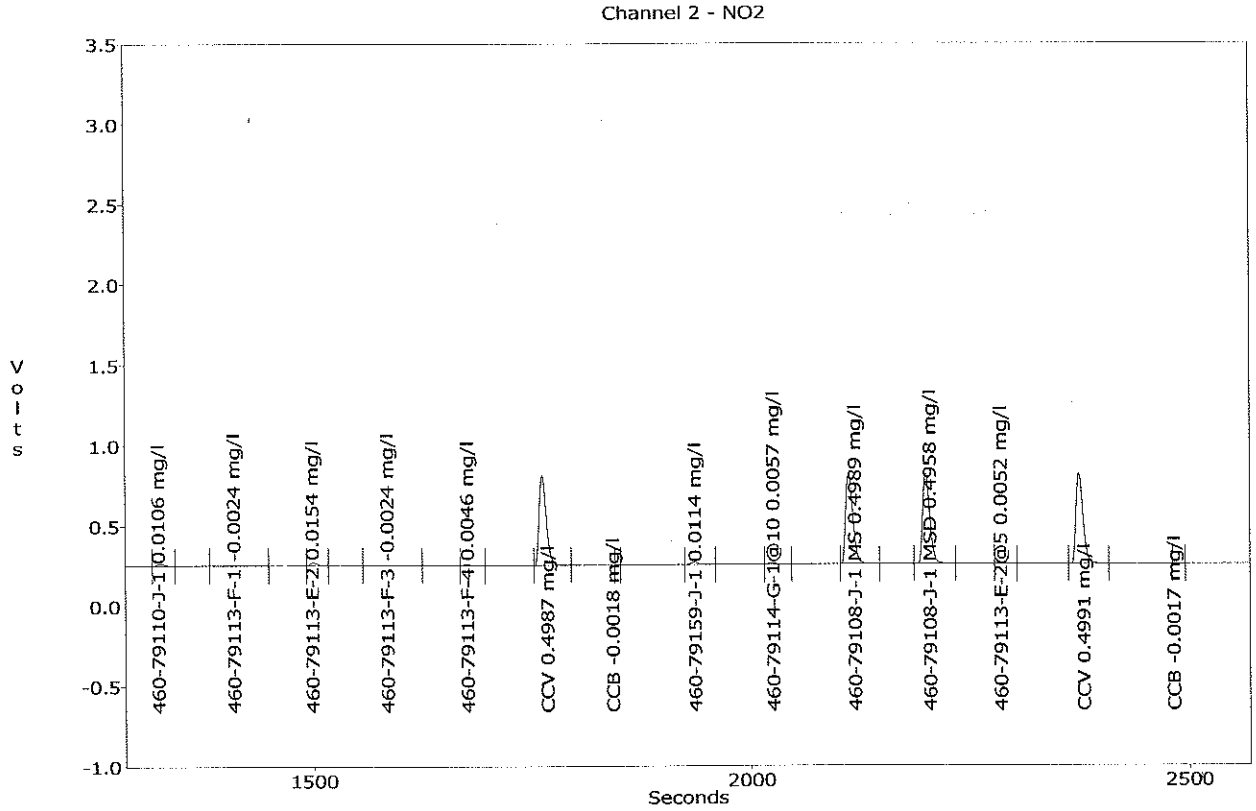
Multi-Channel Table
Type: Unknowns
Channel Range: 1 to 8 -- Cup Range: 1 to 50

Cup	Sample ID	Sampling Date	Sampling Time	# of Reps	NO3+NO2 (mg /L)	NO2 (mg/l)	Man Dil Factor	Auto Dil Factor	Weight	Unit
1	ICV	11 Jul 2014	07:22:59	1	1.0221	0.4928	1.0	1.00	1.00000	g
2	ICB	11 Jul 2014	07:24:27	1	-0.0209	-0.0020	1.0	1.00	1.00000	g
3	MB	11 Jul 2014	07:25:55	1	-0.0209	-0.0024	1.0	1.00	1.00000	g
4	LCSSRM-NO3	11 Jul 2014	07:27:23	1	1.5637	-0.0013	1.0	1.00	1.00000	g
5	LCSSRM-NO2	11 Jul 2014	07:28:50	1	0.6281	0.6197	1.0	1.00	1.00000	g
6	460-79114-G-1	11 Jul 2014	07:30:18	1	6.2648	0.0255	1.0	1.00	1.00000	g
7	460-79108-J-1	11 Jul 2014	07:31:46	1	0.0076	0.0094	1.0	1.00	1.00000	g
8	460-79110-J-1	11 Jul 2014	07:33:13	1	-0.0004	0.0106	1.0	1.00	1.00000	g
9	460-79113-F-1	11 Jul 2014	07:34:41	1	1.0865	-0.0024	1.0	1.00	1.00000	g
10	460-79113-E-2	11 Jul 2014	07:36:09	1	3.1897	0.0154	1.0	1.00	1.00000	g
11	460-79113-F-3	11 Jul 2014	07:37:36	1	1.0994	-0.0024	1.0	1.00	1.00000	g
12	460-79113-F-4	11 Jul 2014	07:39:03	1	-0.0141	0.0046	1.0	1.00	1.00000	g
13	CCV	11 Jul 2014	07:40:30	1	1.0325	0.4987	1.0	1.00	1.00000	g
14	CCB	11 Jul 2014	07:41:56	1	-0.0209	-0.0018	1.0	1.00	1.00000	g
15	460-79159-J-1	11 Jul 2014	07:43:23	1	0.0048	0.0114	1.0	1.00	1.00000	g
16	460-79114-G-1@10	11 Jul 2014	07:44:51	1	1.2576	0.0057	1.0	1.00	1.00000	g
17	460-79108-J-1 MS	11 Jul 2014	07:46:20	1	1.0086	0.4989	1.0	1.00	1.00000	g
18	460-79108-J-1 MSD	11 Jul 2014	07:47:47	1	1.0083	0.4958	1.0	1.00	1.00000	g
19	460-79113-E-2@5	11 Jul 2014	07:49:15	1	0.8006	0.0052	1.0	1.00	1.00000	g
25	CCV	11 Jul 2014	07:50:42	1	1.0281	0.4991	1.0	1.00	1.00000	g
26	CCB	11 Jul 2014	07:52:10	1	-0.0209	-0.0017	1.0	1.00	1.00000	g


Channel 1 - NO3+NO2
Volts
Seconds
0
500
1000
2.0/1.0 14238976 (Area)
1.5/0.75 10643866 (Area)
1.0/0.5 7366964 (Area)
0.5/0.25 3696205 (Area)
0.1/0.05 921190 (Area)
0.0/0.0 15290 (Area)
ICV 1.0221 mg /L
ICB -0.0209 mg /L
MB -0.0209 mg /L
LCSSRM-NO3 1.5637 mg /L
LCSSRM-NO2 0.6281 mg /L
460-79114-G-1 6.2648 mg /L
460-79108-J-1 0.0076 mg /L


Channel 1 - NO3+NO2
Volts
Seconds
1500
2000
2500
460-79110-J-1 -0.0004 mg /L
460-79113-F-1 1.0865 mg /L
460-79113-E-2 3.1897 mg /L
460-79113-F-3 1.0994 mg /L
460-79113-F-4 -0.0141 mg /L
CCV 1.0325 mg /L
CCB -0.0209 mg /L
460-79159-J-1 0.0048 mg /L
460-79114-G-1@10 1.2576 mg /L
460-79108-J-1 MS 1.0086 mg /L
460-79108-J-1 MSD 1.0083 mg /L
460-79113-E-2@5 0.8006 mg /L
CCV 1.0281 mg /L
CCB -0.0209 mg /L

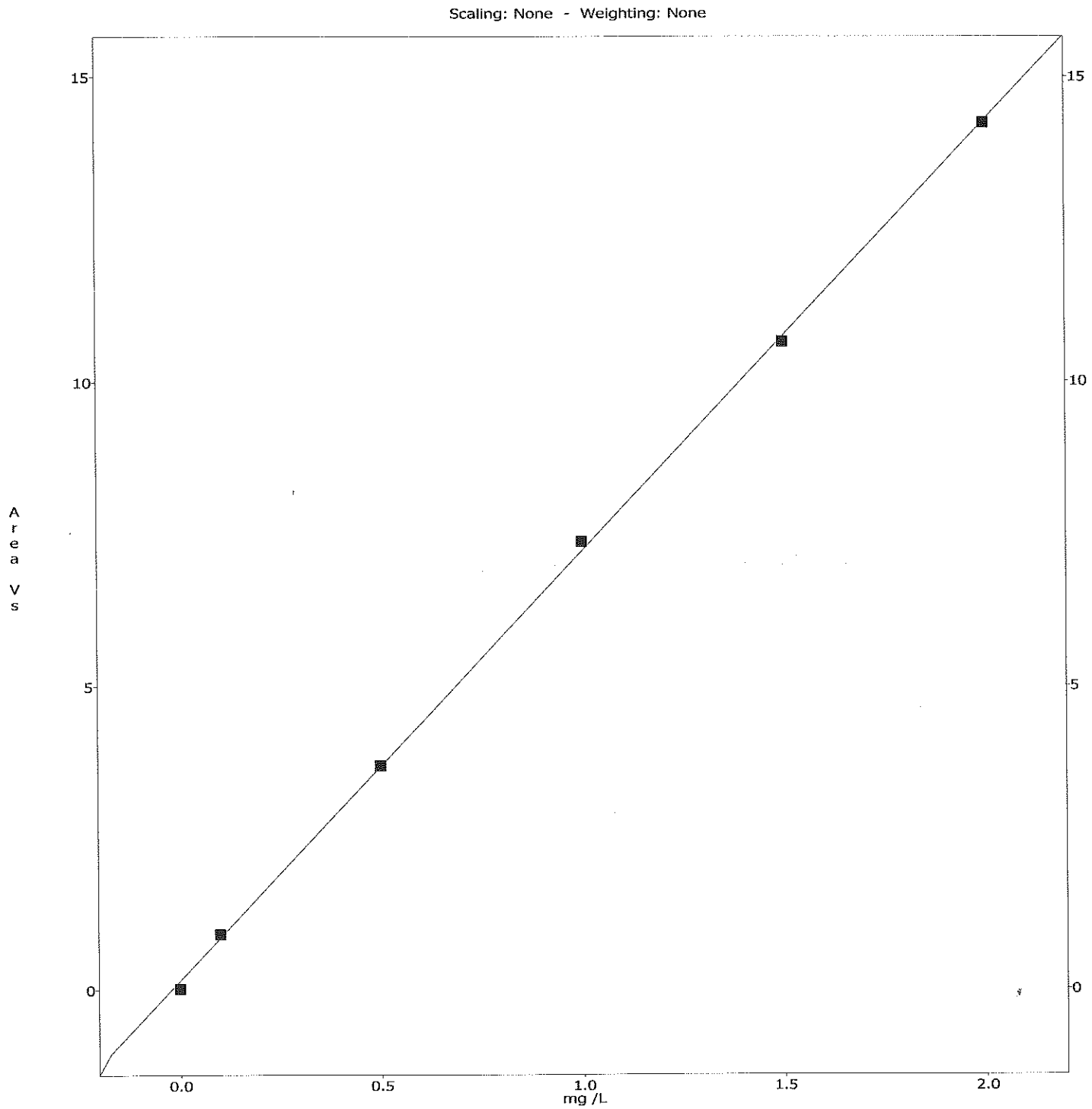

Channel 1 - NO3+NO2
Volts
Seconds
2.0/1.0 14238976 (Area)
1.5/0.75 10643866 (Area)
1.0/0.5 7366964 (Area)
0.5/0.25 3696205 (Area)
0.1/0.05 921190 (Area)
0.0/0.0 15290 (Area)
ICV 1.0221 mg /L
ICB -0.0209 mg /L
MB -0.0209 mg /L
LCSSRM-NO3 1.5637 mg /L
LCSSRM-NO2 0.6281 mg /L
460-79114-G-1 6.2648 mg /L
460-79108-J-1 0.0076 mg /L


Channel 2 - NO2
Volts
Seconds
460-79110-J-1 0.0106 mg/l
460-79113-F-1 -0.0024 mg/l
460-79113-E-2 0.0154 mg/l
460-79113-F-3 -0.0024 mg/l
460-79113-F-4 0.0046 mg/l
CCV 0.4987 mg/l
CCB -0.0018 mg/l
460-79159-J-1 0.0114 mg/l
460-79114-G-1@10 0.0057 mg/l
460-79108-J-1 MS 0.4989 mg/l
460-79108-J-1 MSD 0.4958 mg/l
460-79113-E-2@5 0.0052 mg/l
CCV 0.4991 mg/l
CCB -0.0017 mg/l

NO3+NO2

Lvl	Area	mg /L	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Replic STD	Replic % RSD	Residual 1st Poly
1	14238976	2.0	14238976					0.0	0.0	0.2
2	10643866	1.5	10643866					0.0	0.0	0.9
3	7366964	1.0	7366964					0.0	0.0	-2.3
4	3696205	0.5	3696205					0.0	0.0	-0.5
5	921190	0.1	921190					0.0	0.0	-9.6
6	15290	0.0	15290					0.0	0.0	

1st Order Poly
Conc = 1.417e-007 Area - 2.095e-002
r = 0.9998



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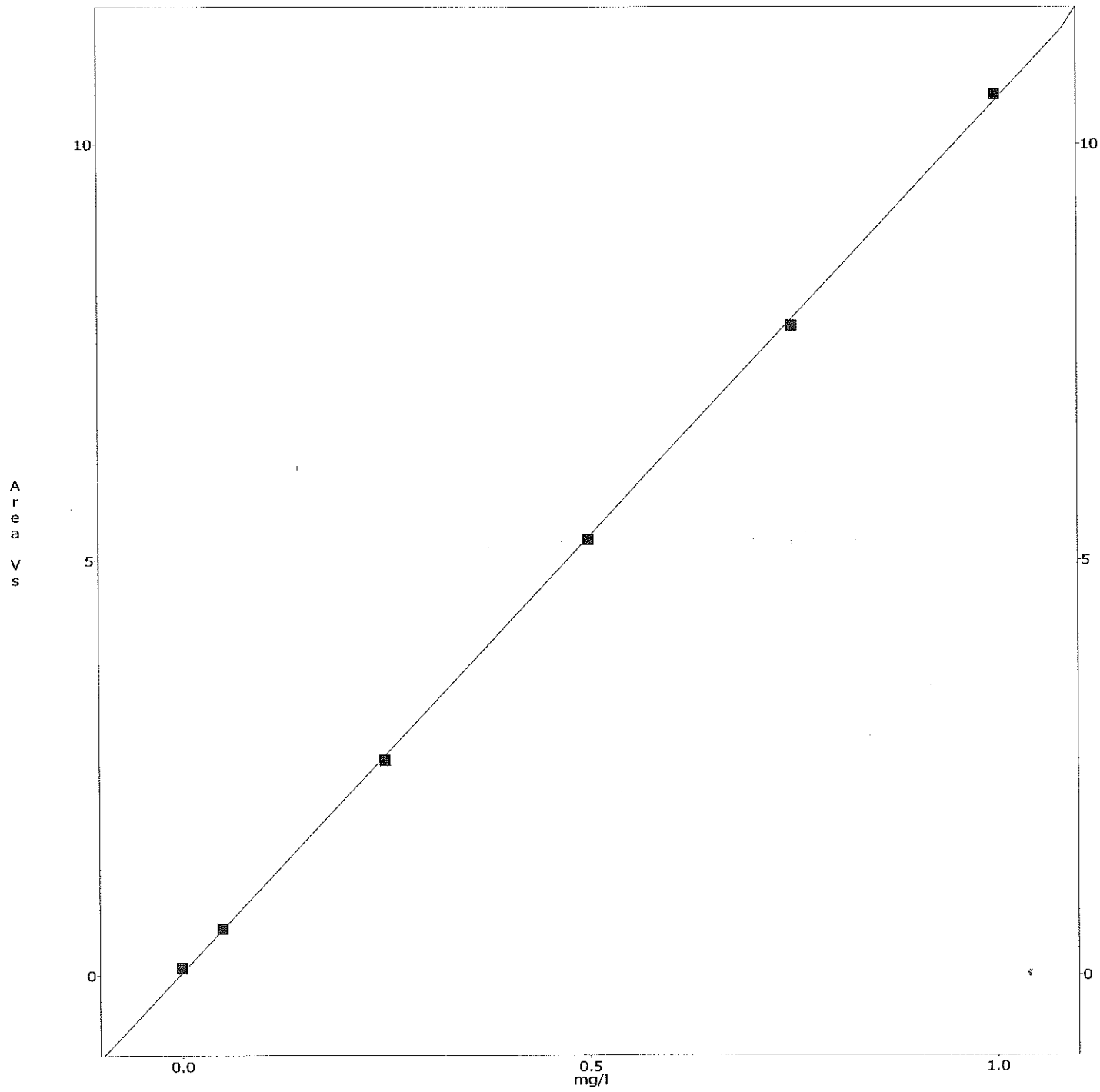
NO2

Lvl	Area	mg/l	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Replic STD	Replic % RSD	Residual 1st Poly
1	10601048	1.00	10601048					0.0	0.0	-0.8
2	7818066	0.75	7818066					0.0	0.0	1.0
3	5246948	0.50	5246948					0.0	0.0	0.5
4	2595681	0.25	2595681					0.0	0.0	2.0
5	563614	0.05	563614					0.0	0.0	-2.6
6	86718	0.00	86718					0.0	0.0	

1st Order Poly
Conc = 9.529e-008 Area - 2.428e-003
r = 0.9999

Scaling: None - Weighting: None



Printed: Friday, July 11, 2014 - 07:58 AM

Dilution Form
Wet Chemistry

Method No.: SM 4500 NO3 F

Analyst: RE

Prep Batch:

Analysis Date: 7/11/14

Analytical Batch: 235724

Job/Sample Number	Dilution Factor	Sample Volume (ml)	Final Volume (ml)	Diluent
79114-1	101	5	50	DI
79113-2	52	10	1	1

TA EDISON- HISTORICAL DATA

Total Alkalinity (SM 2320B), Free Co2 (4500CO2-D)

SampleID	Run Number	RunDate	RunTime	Temp	pH	pH2	palk (mg/L) as CaCO3	talk (mg/L) as CaCO3	bcarb (mg/L) as CaCO3	carb (mg/L) as CaCO3	hydr (mg/L) as CaCO3	Free CO2 (mg/L) as CaCO3	(mL) H2S04 @ 8.3	(mL) H2S04 @ 4.5	(mL) H2S04 @ 4.2
rinse	*4857*	7/14/2014	7:07 AM	19.34	5.032	.00	0.000	26.740	26.740	0.000	0.000	496.417	0.0000	0.6519	1.2131
mb	*4857*	7/14/2014	7:14 AM	18.76	5.252	.00	0.000	0.502	0.502	0.000	0.000	5.627	0.0000	0.0568	0.1013
lcssrm	*4857*	7/14/2014	7:20 AM	19.18	8.987	.00	15.755	72.626	41.115	31.511	0.000	0.085	0.3841	1.7707	1.8802
rinse	*4858*	7/14/2014	7:35 AM	21.28	5.383	.00	0.000	1.891	1.891	0.000	0.000	15.664	0.0000	0.0827	0.1192
mb	*4858*	7/14/2014	7:42 AM	21.14	5.140	.00	0.000	-0.056	-0.056	0.000	0.000	-0.814	0.0000	0.0515	0.1045
rinse	*4859*	7/14/2014	7:55 AM	20.56	5.547	.00	0.000	0.453	0.453	0.000	0.000	2.568	0.0000	0.0560	0.1009
mb	*4859*	7/14/2014	8:02 AM	20.51	5.514	.00	0.000	0.528	0.528	0.000	0.000	3.236	0.0000	0.0575	0.1022
lcssrm	*4859*	7/14/2014	8:08 AM	19.17	9.006	.00	11.432	44.243	21.378	22.864	0.000	0.042	0.2787	1.0787	1.1418
rinse	*4860*	7/14/2014	8:19 AM	20.11	5.514	.00	0.000	0.460	0.460	0.000	0.000	2.821	0.0000	0.0593	0.1074
mb	*4860*	7/14/2014	8:26 AM	20.29	5.502	.00	0.000	1.429	1.429	0.000	0.000	8.995	0.0000	0.0713	0.1077
lcssrm	*4860*	7/14/2014	8:32 AM	19.80	9.046	.00	18.710	86.886	49.466	37.421	0.000	0.089	0.4562	2.1183	2.2496
rinse	*4861*	7/14/2014	10:21 AM	19.26	5.555	.00	0.000	139.892	139.892	0.000	0.000	779.137	0.0000	3.4107	4.3479
mb	*4861*	7/14/2014	10:28 AM	19.11	5.513	.00	0.000	0.586	0.586	0.000	0.000	3.597	0.0000	0.0550	0.0957
lcssrm	*4861*	7/14/2014	10:34 AM	18.27	9.010	.00	10.723	39.310	17.864	21.446	0.000	0.035	0.2614	0.9584	1.0134
460-79113-F-2	*4862*	7/14/2014	10:54 AM	17.12	6.187	.00	0.000	30.233	30.233	0.000	0.000	39.298	0.0000	0.7371	0.8452
460-79113-F-2du	*4862*	7/14/2014	11:01 AM	17.05	6.183	.00	0.000	24.059	24.059	0.000	0.000	31.586	0.0000	0.5866	0.6699
460-79113-E-1	*4862*	7/14/2014	11:07 AM	17.25	7.525	.00	0.000	24.336	24.336	0.000	0.000	1.454	0.0000	0.5933	0.6408
460-79113-E-3	*4862*	7/14/2014	11:13 AM	17.19	7.537	.00	0.000	24.799	24.799	0.000	0.000	1.439	0.0000	0.6046	0.6509
460-79113-E-4	*4862*	7/14/2014	11:19 AM	17.64	5.528	.00	0.000	0.548	0.548	0.000	0.000	3.249	0.0000	0.0547	0.0961
460-79159-J-1	*4862*	7/14/2014	11:26 AM	18.19	7.795	.00	0.000	335.819	335.819	0.000	0.000	10.768	0.0000	8.1875	8.6467
460-79108-J-1	*4862*	7/14/2014	11:33 AM	18.13	7.923	.00	0.000	107.277	107.277	0.000	0.000	2.562	0.0000	2.6155	2.7825
460-79110-J-1	*4862*	7/14/2014	11:40 AM	17.81	7.951	.00	0.000	160.605	160.605	0.000	0.000	3.594	0.0000	3.9157	4.1254
460-79097-Q-1	*4862*	7/14/2014	11:46 AM	18.15	5.573	.00	0.000	0.356	0.356	0.000	0.000	1.906	0.0000	0.0569	0.1051
460-79105-Q-1	*4862*	7/14/2014	11:53 AM	18.25	7.914	.00	0.000	119.312	119.312	0.000	0.000	2.908	0.0000	2.9089	3.0718
460-79071-Q-1	*4862*	7/14/2014	12:00 PM	18.45	7.153	.00	0.000	4.884	4.884	0.000	0.000	0.688	0.0000	0.1642	0.2093
460-79073-Q-1	*4862*	7/14/2014	12:06 PM	18.63	5.533	.00	0.000	0.546	0.546	0.000	0.000	3.199	0.0000	0.0548	0.0963
460-79093-Q-1	*4862*	7/14/2014	12:14 PM	18.59	8.191	.00	0.000	152.639	152.639	0.000	0.000	1.966	0.0000	3.7215	3.9236

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SampleID	Run Number	RunDate	RunTime	Temp	pH	pH2	palk (mg/L) as CaCO3	talk (mg/L) as CaCO3	bcarb (mg/L) as CaCO3	carb (mg/L) as CaCO3	hydr (mg/L) as CaCO3	Free CO2 (mg/L) as CaCO3	(mL) H2S04 @ 8.3	(mL) H2S04 @ 4.5	(mL) H2S04 @ 4.2
460-79095-P-1	*4862*	7/14/2014	12:20 PM	18.37	7.723	.00	0.000	85.425	85.425	0.000	0.000	3.230	0.0000	2.0827	2.2089
460-79049-L-1	*4862*	7/14/2014	12:26 PM	18.37	3.832	.00	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.0000	0.0000
460-79051-P-1	*4862*	7/14/2014	12:31 PM	18.39	3.799	.00	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.0000	0.0000
460-79062-L-1	*4862*	7/14/2014	12:36 PM	18.32	4.157	.00	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.0000	0.0000
460-79039-L-1	*4862*	7/14/2014	12:43 PM	18.38	7.161	.00	0.000	4.237	4.237	0.000	0.000	0.585	0.0000	0.1453	0.1872
460-79046-L-1	*4862*	7/14/2014	12:49 PM	18.76	6.923	.00	0.000	4.105	4.105	0.000	0.000	0.981	0.0000	0.1411	0.1822
460-78980-E-1	*4862*	7/14/2014	12:55 PM	18.62	8.252	.00	0.000	205.335	205.335	0.000	0.000	2.301	0.0000	5.0062	5.5032
460-79280-E-1	*4862*	7/14/2014	1:02 PM	18.40	7.297	.00	0.000	278.356	278.356	0.000	0.000	28.108	0.0000	6.7865	7.1745

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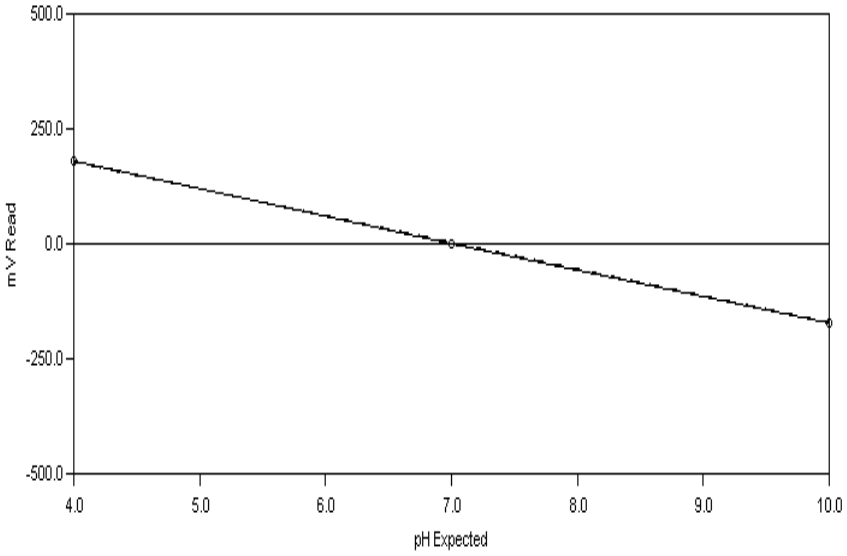
PC-TitratION PLUS
Calibration Report

Calibration Record # 1243



Calibration Settings

Calibration ID	PH CAL 4-7-10	Date	07/14/2014	
Channel	1	Time	6:48 AM	
Probe Type	pH	Temperature	291.40 K	18.25 C
Probe ID	PH ELECTRODE	Analysis Type	Single Line Fit	

Calibration Results

Slope	-58.347	CorrCoeff	1.0000
Intercept	2.927	Equation: Y = (-58.347) X + (2.927)	

Calibration Validity **True** Operator

	Result	Minimum	Maximum
Slope	-58.347	-65.00	-53.00
Intercept	2.927	-100.00	100.00
Correlation Coefficient	1.0000	0.99	1.00

Note: "True" means the calibration was within the specified ranges
"False" means the calibration was NOT within the specified ranges

Calibration Data	**Standard**	**Reading**
	4.00	178.58
	7.00	1.70
	10.00	-171.50

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OPERATOR:	huan
ACQ. TIME:	Jul 21, 2014 12:23:50
DATA FILENAME:	C:\OMNION\DATA\AMMONIA\2014DA~1\A140721.FDT
METHOD FILENAME:	C:\OMNION\METHODS\AMMONIA.MET
TRAY FILENAME:	

TRAY DESCRIPTION:

Created:	Apr 7, 2014 16:44:52
Modified:	Jul 21, 2014 11:45:37

DATA DESCRIPTION:

Created:	Jul 21, 2014 12:23:50
Modified:	Jul 21, 2014 12:23:50

Method - Ch. 1 (ammonia)

METHOD DESCRIPTION:

Created:	Oct 20, 2012 10:22:20
Modified:	Jul 16, 2014 17:27:02

ammonia

ANALYTE DATA:

Analyte Name:	ammonia
Concentration Units:	mg/l
Chemistry:	Direct
Inject to Peak Start (s):	22.0
Peak Base Width (s):	45.567
% Width Tolerance:	100.000
Threshold:	300.000
Autodilution Trigger:	Off
QuikChem Method:	10-107-06-1-c

CALIBRATION DATA:

Levels:

1 : 4.000 2 : 2.000 3 : 1.000 4 : 0.500
5 : 0.100 6 : 0.000

Calibration Rep Handling:	Replace
Calibration Fit Type:	1st Order Poly
Force Though Zero:	No
Weighting Method:	None
Concentration Scaling:	None

SAMPLER TIMING:

Method Cycle Period:	90.0
Min. Probe in Wash Period:	5.0
Probe in Sample Period:	24.0

*** Prep Sequence Not Enabled ***

VALVE TIMING:

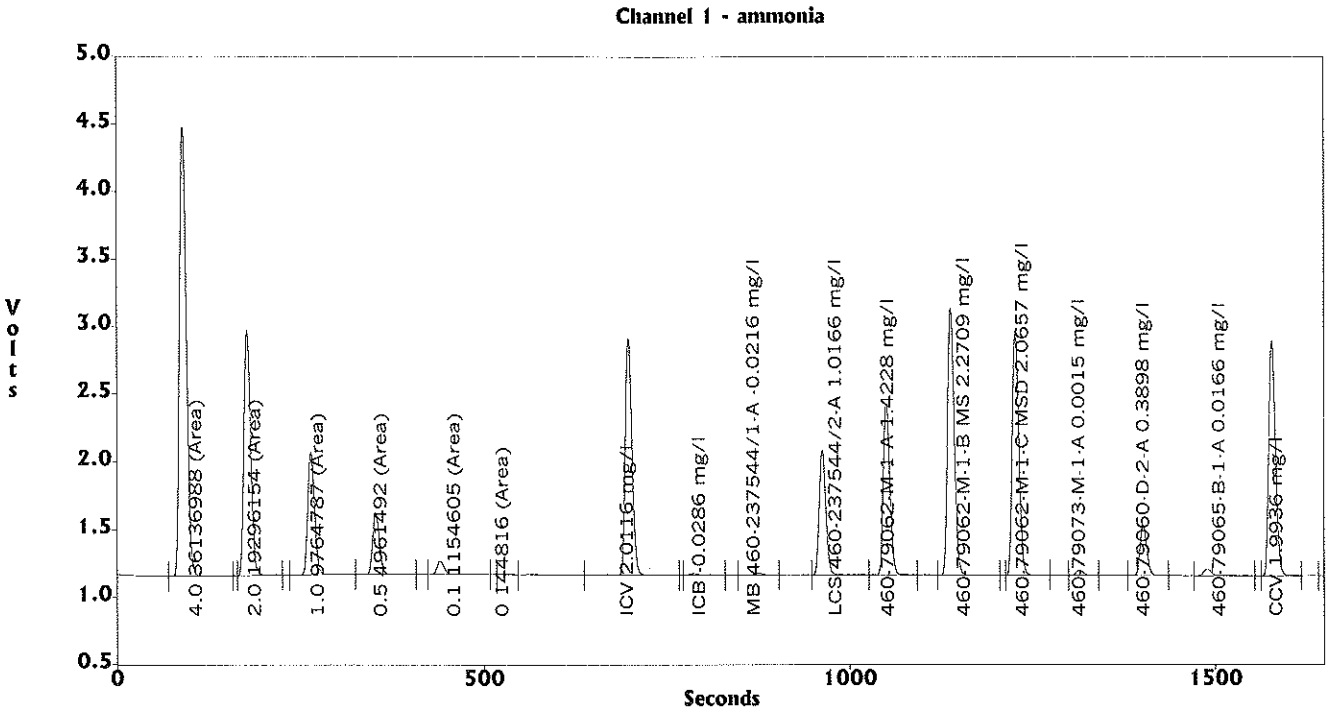
Method Cycle Period:	90.0
Sample Reaches 1st Valve:	30.0
Valve:	On
Load Time:	0.0
Load Period:	18.0
Inject Period:	72.0

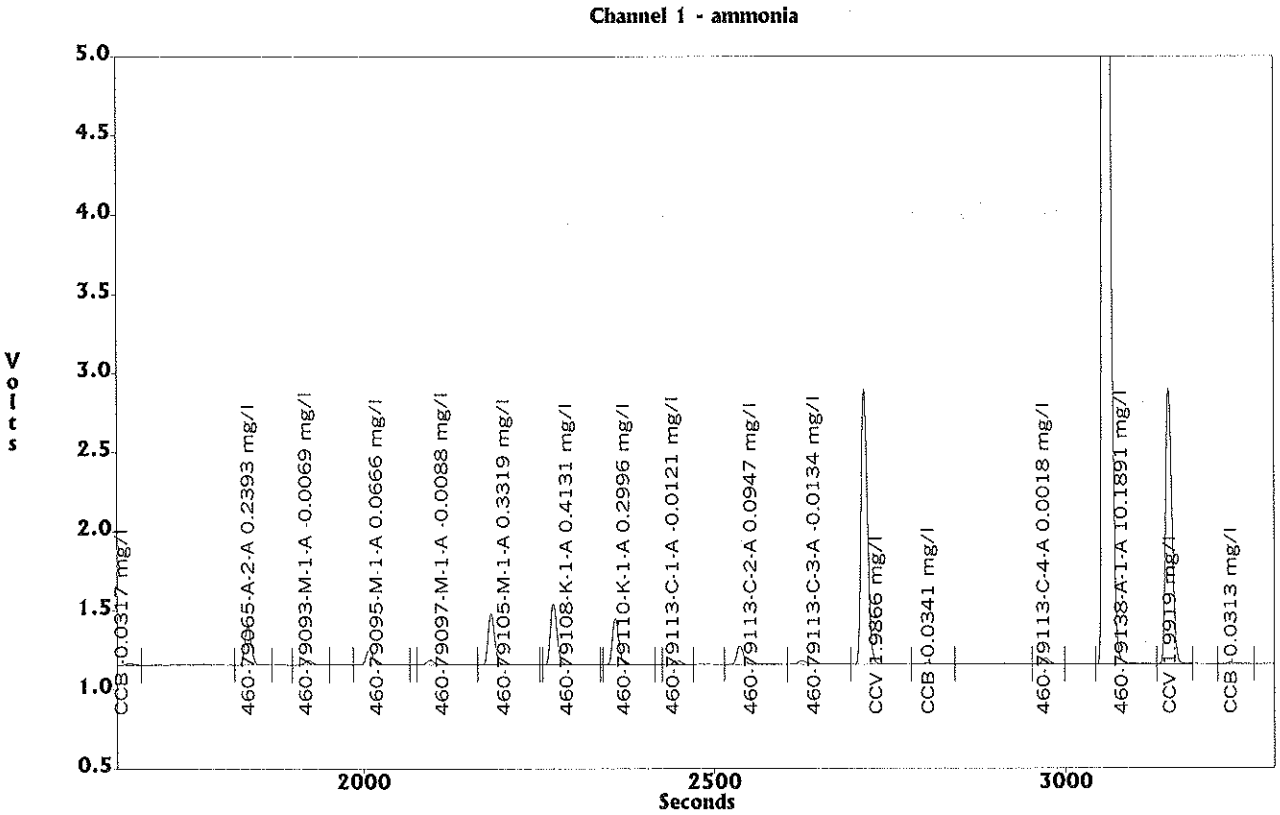
Multi-Channel Table
Type: Calibration Standards
Channel Range: 1 to 1 -- Cup Range: 1 to 8

Cup	Sample ID	Sampling Date	Sampling Time	# of Reps	ammonia (uv-s)	Man Dil Factor	Weight	Unit
1	4.0	21 Jul 2014	12:23:51	1	36136988.00	1.0	1.00000	g
2	2.0	21 Jul 2014	12:25:18	1	19296154.00	1.0	1.00000	g
3	1.0	21 Jul 2014	12:26:45	1	9764787.00	1.0	1.00000	g
4	0.5	21 Jul 2014	12:28:14	1	4961492.00	1.0	1.00000	g
5	0.1	21 Jul 2014	12:29:42	1	1154605.00	1.0	1.00000	g
6	0	21 Jul 2014	12:31:11	1	144816.00	1.0	1.00000	g

Multi-Channel Table
Type: Unknowns
Channel Range: 1 to 1 -- Cup Range: 1 to 46

Cup	Sample ID	Sampling Date	Sampling Time	Rep #	ammonia (mg/l)	Man Dil Factor	Auto Dil Factor	Weight	Unit
1	ICV	21 Jul 2014	12:33:59	1	2.0116	1.0	1.00	1.00000	g
2	ICB	21 Jul 2014	12:35:28	1	-0.0286	1.0	1.00	1.00000	g
3	MB 460-237544/1-A	21 Jul 2014	12:36:57	1	-0.0216	1.0	1.00	1.00000	g
4	LCS 460-237544/2-A	21 Jul 2014	12:38:24	1	1.0166	1.0	1.00	1.00000	g
5	460-79062-M-1-A	21 Jul 2014	12:39:52	1	1.4228	1.0	1.00	1.00000	g
6	460-79062-M-1-B MS	21 Jul 2014	12:41:20	1	2.2709	1.0	1.00	1.00000	g
7	460-79062-M-1-C MSD	21 Jul 2014	12:42:47	1	2.0657	1.0	1.00	1.00000	g
8	460-79073-M-1-A	21 Jul 2014	12:44:15	1	0.0015	1.0	1.00	1.00000	g
9	460-79060-D-2-A	21 Jul 2014	12:45:42	1	0.3898	1.0	1.00	1.00000	g
10	460-79065-B-1-A	21 Jul 2014	12:47:10	1	0.0166	1.0	1.00	1.00000	g
11	460-79065-A-2-A	21 Jul 2014	12:52:57	1	0.2393	1.0	1.00	1.00000	g
12	460-79093-M-1-A	21 Jul 2014	12:54:24	1	-0.0069	1.0	1.00	1.00000	g
13	460-79095-M-1-A	21 Jul 2014	12:55:50	1	0.0666	1.0	1.00	1.00000	g
14	460-79097-M-1-A	21 Jul 2014	12:57:17	1	-0.0088	1.0	1.00	1.00000	g
15	460-79105-M-1-A	21 Jul 2014	12:58:43	1	0.3319	1.0	1.00	1.00000	g
16	460-79108-K-1-A	21 Jul 2014	13:00:12	1	0.4131	1.0	1.00	1.00000	g
17	460-79110-K-1-A	21 Jul 2014	13:01:41	1	0.2996	1.0	1.00	1.00000	g
18	460-79113-C-1-A	21 Jul 2014	13:03:10	1	-0.0121	1.0	1.00	1.00000	g
19	460-79113-C-2-A	21 Jul 2014	13:04:38	1	0.0947	1.0	1.00	1.00000	g
20	460-79113-C-3-A	21 Jul 2014	13:06:07	1	-0.0134	1.0	1.00	1.00000	g
21	460-79113-C-4-A	21 Jul 2014	13:11:54	1	0.0018	1.0	1.00	1.00000	g
22	460-79138-A-1-A	21 Jul 2014	13:13:21	1	10.1891	1.0	1.00	1.00000	g


Channel 1 - ammonia
Volts
Seconds
4.0 36136988 (Area)
2.0 19296154 (Area)
1.0 9764787 (Area)
0.5 4961492 (Area)
0.1 1154605 (Area)
0 174816 (Area)
ICV 2.0116 mg/l
ICB 0.0286 mg/l
MB 460-237544/1-A 0.0216 mg/l
LCS 460-237544/2-A 1.0166 mg/l
460-79062-M-1-A-1 4.228 mg/l
460-79062-M-1-B MS 2.2709 mg/l
460-79062-M-1-C MSD 2.0657 mg/l
460-79073-M-1-A 0.0015 mg/l
460-79060-D-2-A 0.3898 mg/l
460-79065-B-1-A 0.0166 mg/l
CCV 1.9936 mg/l


Channel 1 - ammonia
Volts
Seconds
CCB 0.0317 mg/l
460-79065-A-2-A 0.2393 mg/l
460-79093-M-1-A -0.0069 mg/l
460-79095-M-1-A 0.0666 mg/l
460-79097-M-1-A -0.0088 mg/l
460-79105-M-1-A 0.3319 mg/l
460-79108-K-1-A 0.4131 mg/l
460-79110-K-1-A 0.2996 mg/l
460-79113-C-1-A -0.0121 mg/l
460-79113-C-2-A 0.0947 mg/l
460-79113-C-3-A -0.0134 mg/l
CCV 1.9866 mg/l
CCB 0.0341 mg/l
460-79113-C-4-A 0.0018 mg/l
460-79138-A-1-A 10.1891 mg/l
CCV 1.9919 mg/l
CCB 0.0313 mg/l

Multi-Channel Table
Type: DQM
Channel Range: 1 to 8 -- Cup Range: 1 to 50

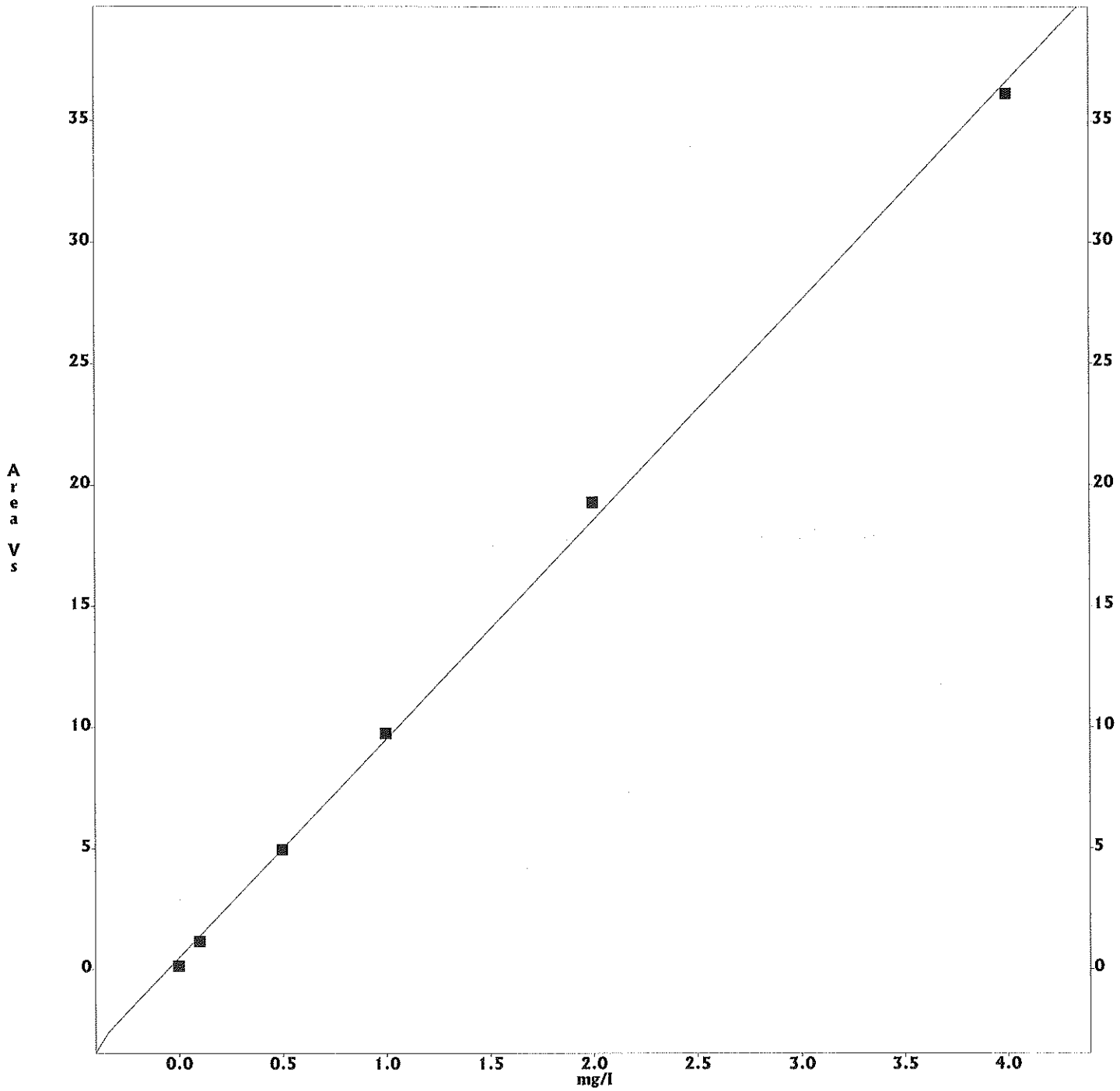
Cup	Sample ID	Sample Type	Sampling Date	Sampling Time	Rep #	ammonia (mg/l)	Man Dil Factor	Auto Dil Factor	Weight	Unit
15	CCV	RelChkStd	21 Jul 2014	12:48:40	1	1.99	1.0	1.00	1.00000	g
				Known Concentration:		2.00				
				% Difference:		-0.32				
15	CCV	RelChkStd	21 Jul 2014	13:07:36	1	1.99	1.0	1.00	1.00000	g
				Known Concentration:		2.00				
				% Difference:		-0.67				
15	CCV	RelChkStd	21 Jul 2014	13:14:51	1	1.99	1.0	1.00	1.00000	g
				Known Concentration:		2.00				
				% Difference:		-0.40				
16	CCB	Blank	21 Jul 2014	12:50:10	1	-0.03	1.0	1.00	1.00000	g
16	CCB	Blank	21 Jul 2014	13:09:06	1	-0.03	1.0	1.00	1.00000	g
16	CCB	Blank	21 Jul 2014	13:16:21	1	-0.03	1.0	1.00	1.00000	g

ammonia

Lvl	Area	mg/l	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Replic STD	Replic % RSD	Residual 1st Poly
1	36136988	4.0	36136988					0.0	0.0	1.3
2	19296154	2.0	19296154					0.0	0.0	-4.2
3	9764787	1.0	9764787					0.0	0.0	-2.9
4	4961492	0.5	4961492					0.0	0.0	0.5
5	1154605	0.1	1154605					0.0	0.0	23.8
6	144816	0.0	144816					0.0	0.0	

1st Order Poly
Conc = 1.107e-007 Area - 5.162e-002
r = 0.9995

Scaling: None - Weighting: None



Printed: Monday, July 21, 2014 - 01:42 PM

BATCH	JOB	SAMPLE	DIL	ABS	BC	RESULT	SPIKE	% REC	TIME
		0		0					
		0.03		0.020					
		0.05		0.034					
		0.10		0.071					
		0.20		0.147					
		0.50		0.369					
		ICV		0.144		0.197	0.200	98.5%	11:00A
		ICB		0		ND			11:01
		MB		0		ND			11:02
		LCS		0.160		5.46	5.34	102%	11:04
211031	71958	71958-7a		1.458		—			11:05
		71958-7a	2.5/50	0.180		4.91			11:06
		71958-7a MS	2/50	0.293		9.94	5.0	101%	11:08
		71958-7a MSD	2/50	0.291		9.88	5.0	99.4%	11:10
		MDL1		0.019		0.0282			11:11
		MDL2		0.020		0.0296			11:12
		MDL3		0.019		0.0282			11:13
		MDL4		0.019		0.0282			11:14
		CCV		0.144		0.197	0.200	98.5%	11:16
		CCB		0		ND			11:17
		MDL5		0.020		0.0296			11:18
		MDL6		0.021		0.0309			11:19
		MDL7		0.019		0.0282			11:20
		MDLV		0.009		0.0147			11:21
		CCV		0.143		0.195	0.200	97.5%	11:24
		CCB		0		ND			11:25A

	Exp
# Calibration on 03/06/14	(08/14/14)
# B-3100-14: 5N H_2SO_4	(08/20/14)
# B-3110-14: Ascorbic Acid	(03/13/14)
# LCS (1200 - 505): 5.34 ppm (4.60-5.82)	(03/31/15)

MDL = 0.03 mL of WT phosSPL-21 → 50 mL DI H_2O (0.03 ppm)
MDLV = 0.015 mL of WT phosSPL-21 → 50 mL DI H_2O (0.015 ppm)

Continued on Page

Read and Understood By

Signed: [illegible] Date: 03/06/14 Signed: Date:

Curve Type:	Linear
Weighting:	None
Origin:	None
Dependency:	Concentration
Calib Mode:	ESTD
RF Rounding:	0

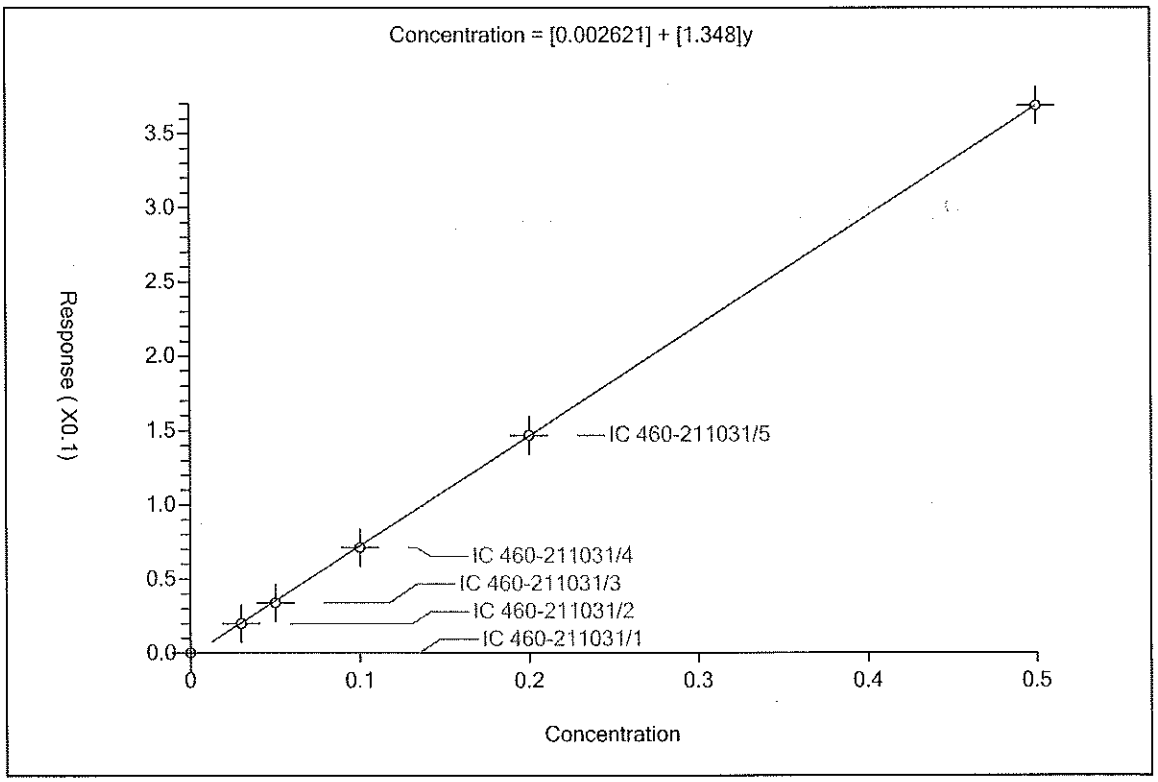
Curve Coefficients

Intercept:	0.002621
Slope:	1.348

Error Coefficients

Standard Error:	0.00179
Relative Standard Error:	NC
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	1.000 (1.000)

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 460-211031/10.0		0.0			NaN	Y
2	IC 460-211031/20.03		0.02			0.666667	Y
3	IC 460-211031/30.05		0.034			0.68	Y
4	IC 460-211031/40.1		0.071			0.71	Y
5	IC 460-211031/50.2		0.147			0.735	Y
6	IC 460-211031/60.5		0.369			0.738	Y



Dilution Form
Wet Chemistry

Method No.: 4500 P-E ORTHO

Analyst: HW

Prep Batch:

Analysis Date: 02/06/14

Analytical Batch: 211031

Job/Sample Number	Dilution Factor	Sample Volume (ml)	Final Volume (ml)	Diluent
71958-7a	20	2.5	50	DI H2O
71958-7a MS	25	2	50	↓
71958-7a MSD	25	2	50	↓

71958-7

NQ

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Instructions for WP - Nutrients 1 (Simple)

SAMPLE DESCRIPTION

- Provided as a >20 mL concentrate in water contained in a 23 mL clear glass vial.
- ~~The concentrate should be stored at 4±2°C.~~

GENERAL INFORMATION

- The concentrate must be diluted prior to analysis.
- The diluted standard will contain the analytes within the required concentration range.
- Store any remaining standard at 4±2°C.
- It is recommended to save any remaining standard until final reports have been sent.

ADDITIONAL INFORMATION

- Report your Ammonia result as N, your Nitrate result as N, your Phosphate result as P, and your Nitrate + Nitrite result as N.

INSTRUCTIONS

- The standard should be brought to room temperature when used.
- Add 800-900 mL of deionized water to a clean 1000 mL class A volumetric flask.
- Using a clean, dry, class A pipet, volumetrically pipet 10.0 mL of the concentrate into the 1000 mL volumetric flask.
- Bring the flask to the final volume with deionized water.
- Mix the solution by inverting the volumetric flask a minimum of three times.
- Immediately analyze the diluted sample by your normal procedures.
- Report results in mg/L.

Please take all necessary safety precautions when handling this product. Phenova products are intended for use by laboratory professionals only and may be hazardous. Buyer/user shall ensure sufficient knowledge, training, facilities and skills necessary to safely handle and store products provided. Material Safety Data Sheets (MSDS) for all Phenova products are available upon request.

witnessed by Izabella Afremova 03/06/14

Prepared by Raisa Kamenetskaya 3/6/14

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Dilution Log
Wet Chemistry

Method No.: SM 5310B

Analyst: HW

Prep Batch:

Analysis Date: 07/14/14 & 07/15/14

Analytical Batch: 236392

Job/Sample Number	Dilution Factor	Sample Volume (ml)	Final Volume (ml)	Diluent
79293-2k	5	10	50	DI H2O

EDS-WI-101, Rev 0
05/24/11

Instr.Information

Catalyst Regular Sensitivity

Sample

Sample Name: Untitled
Sample ID: ICV
Object ID 0L-10000101016-04900389-13352AA22D2A-0000
Origin: 5310b met
Status Completed
Chk. Result

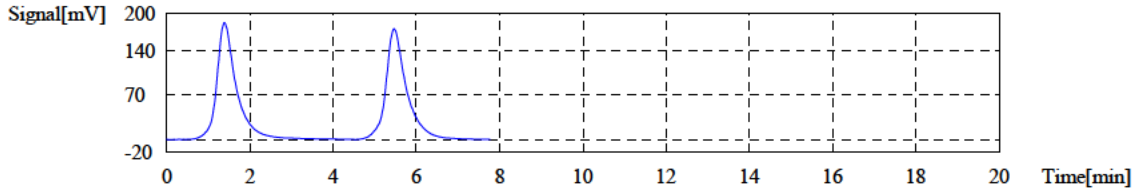
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1 000	NPOC 51 18mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	610 3	51 26mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/14/2014 2:45:30 PM
2	608 5	51 11mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/14/2014 2:49:28 PM

Mean Area 609 4
Mean Conc. 51 18mg/L
Vial 1



Sample

Sample Name: Untitled
Sample ID: ICB
Object ID 0L-10000101016-04900389-13352AA22D2A-0001
Origin: 5310b met
Status Completed
Chk. Result

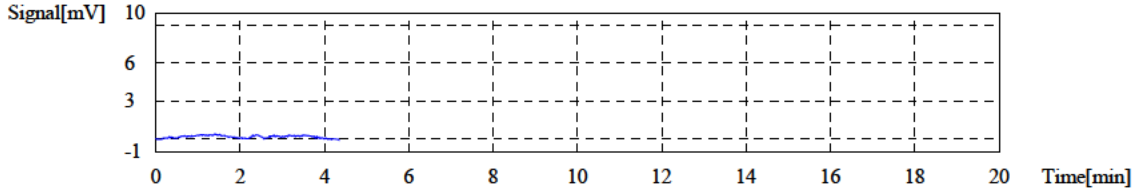
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1 000	NPOC:-0 3644mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1 994	-0 3825mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/14/2014 3:05:42 PM
2	2 420	-0 3464mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/14/2014 3:08:12 PM

Mean Area 2 207
Mean Conc. -0 3644mg/L
Vial 2



Sample

Sample Name: Untitled
Sample ID: MB
Object ID 0L-10000101016-04900389-13352AA22D2A-0002
Origin: 5310b met
Status Completed
Chk. Result

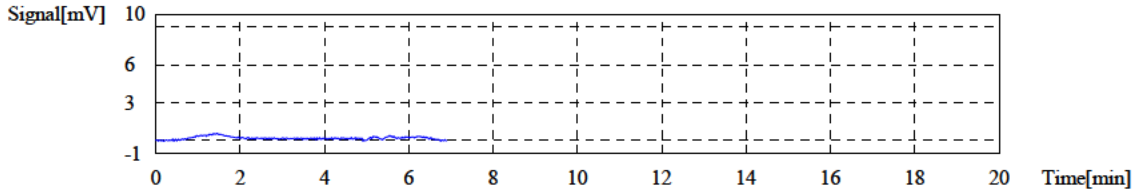
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1 000	NPOC:-0 3091mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	3 467	-0 2575mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/14/2014 3:27:12 PM
2	2 252	-0 3606mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/14/2014 3:29:27 PM

Mean Area 2 860
Mean Conc. -0 3091mg/L
Vial 3



Sample

Sample Name: Untitled
Sample ID: LCSSRM
Object ID 0L-10000101016-04900389-13352AA22D2A-0003
Origin: 5310b met
Status Completed
Chk. Result

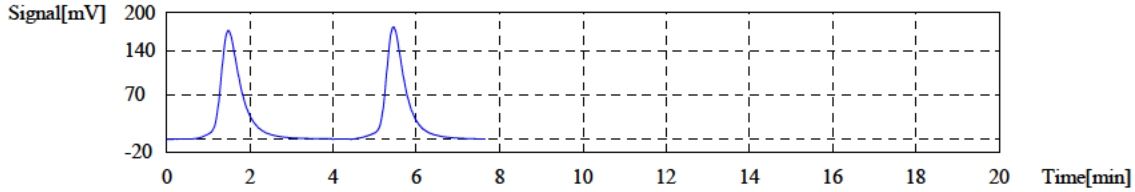
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1 000	NPOC:49 73mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	596 0	50 05mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/14/2014 3:47:31 PM
2	588 5	49 41mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/14/2014 3:51:29 PM

Mean Area 592 3
Mean Conc. 49 73mg/L
Vial 4



Sample

Sample Name: Untitled
Sample ID: 460-79073-h-1
Object ID 0L-10000101016-04900389-13352AA27C61-0000
Origin: 5310b met
Status Completed
Chk. Result

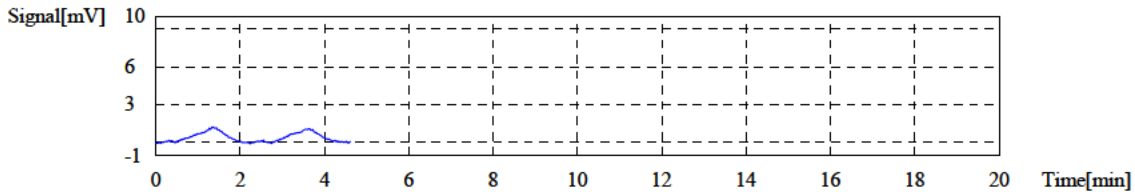
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1 000	NPOC:-0 08200mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	5 961	-0 04575mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/14/2014 4:48 01 PM
2	5 107	-0 1182mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/14/2014 4:50:40 PM

Mean Area 5 534
Mean Conc. -0 08200mg/L
Vial 5



Sample

Sample Name: Untitled
Sample ID: 460-79073-h-1 MS
Object ID 0L-10000101016-04900389-13352AA27C61-0001
Origin: 5310b met
Status Completed
Chk. Result

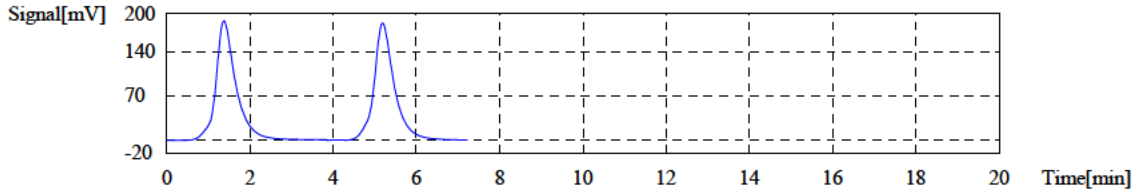
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1 000	NPOC 52 52mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	627 3	52 70mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/14/2014 5:08:36 PM
2	623 0	52 34mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/14/2014 5:12:15 PM

Mean Area 625 2
Mean Conc. 52 52mg/L
Vial 6



Sample

Sample Name: Untitled
Sample ID: 460-79073-h-1 MSD
Object ID 0L-10000101016-04900389-13352AA27C61-0002
Origin: 5310b met
Status Completed
Chk. Result

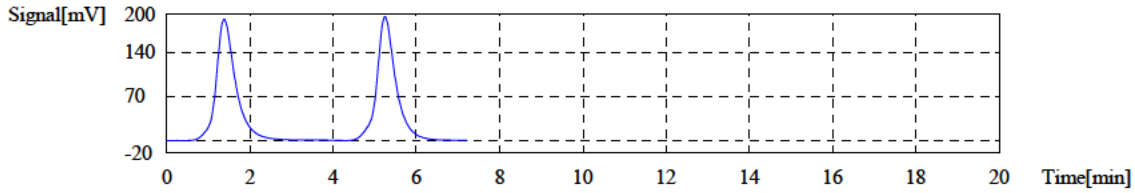
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1 000	NPOC 52 70mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	630 0	52 93mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/14/2014 5:30:13 PM
2	624 5	52 47mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/14/2014 5:33 58 PM

Mean Area 627 3
Mean Conc. 52 70mg/L
Vial 7



Sample

Sample Name: Untitled
Sample ID: 460-79224-c-1
Object ID 0L-10000101016-04900389-13352AA27C61-0003
Origin: 5310b met
Status Completed
Chk. Result

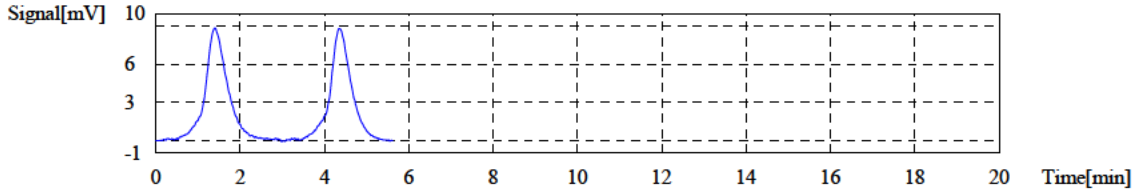
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1 000	NPOC:2 185mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	32 51	2 208mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/14/2014 6:00:18 PM
2	31 97	2 162mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/14/2014 6:03:38 PM

Mean Area 32 24
Mean Conc. 2 185mg/L
Vial 8



Sample

Sample Name: Untitled
Sample ID: 460-79293-k-2@5
Object ID 0L-10000101016-04900389-13352AA27C61-0004
Origin: 5310b met
Status Completed
Chk. Result

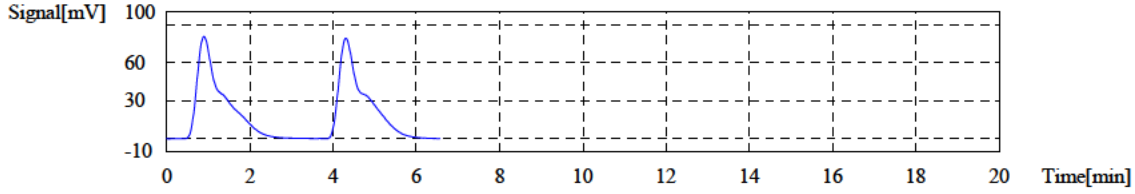
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1 000	NPOC:28 09mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	340 2	28 33mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/14/2014 6:59:27 PM
2	334 6	27 85mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/14/2014 7:02 53 PM

Mean Area 337 4
Mean Conc. 28 09mg/L
Vial 9



Sample

Sample Name:	Untitled
Sample ID:	460-79293-k-4@5
Object ID	0L-10000101016-04900389-13352AA27C61-0005
Origin:	5310b met
Status	Completed
Chk. Result	

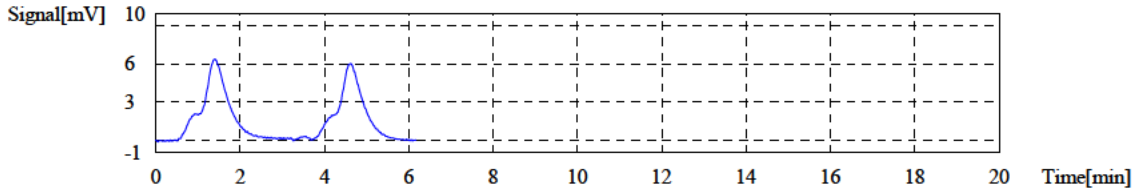
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1 000	NPOC:1 691mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	27 64	1 795mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/14/2014 7:20:14 PM
2	25 20	1 588mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/14/2014 7:23:25 PM

Mean Area	26 42
Mean Conc.	1 691mg/L
Vial	10



Sample

Sample Name:	Untitled
Sample ID:	460-79293-k-6
Object ID	0L-10000101016-04900389-13352AA27C61-0006
Origin:	5310b met
Status	Completed
Chk. Result	

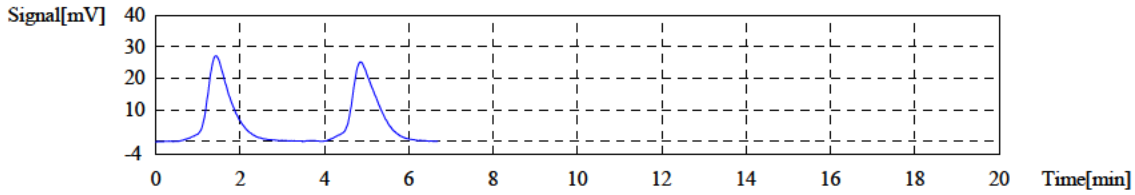
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1 000	NPOC 8 392mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	105 8	8 430mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/14/2014 7:40 59 PM
2	104 9	8 354mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/14/2014 7:44:30 PM

Mean Area	105 4
Mean Conc.	8 392mg/L
Vial	11



Sample

Sample Name:	Untitled
Sample ID:	460-79293-k-8
Object ID	0L-10000101016-04900389-13352AA27C62-0000
Origin:	5310b met
Status	Completed
Chk. Result	

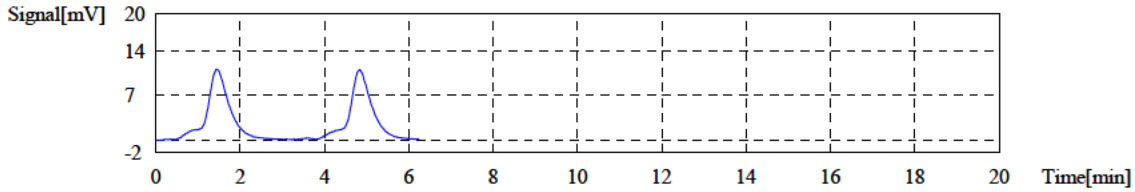
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1 000	NPOC:2 918mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	42 14	3 026mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/14/2014 8:01 58 PM
2	39 60	2 810mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/14/2014 8:05 09 PM

Mean Area 40 87
Mean Conc. 2 918mg/L
Vial 12



Sample

Sample Name: Untitled
Sample ID: CCV
Object ID 0L-10000101016-04900389-13352AA27C62-0001
Origin: 5310b met
Status Completed
Chk. Result

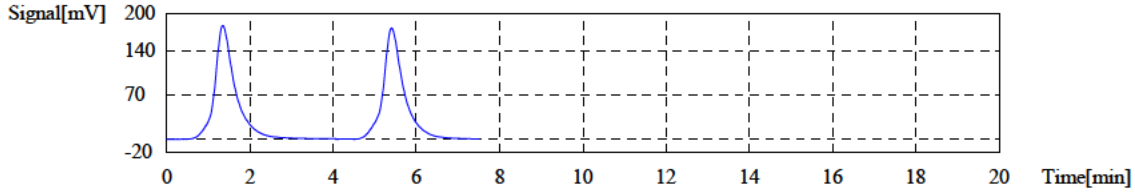
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1 000	NPOC 51 19mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	614 3	51 60mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/14/2014 8:23:19 PM
2	604 7	50 78mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/14/2014 8:27 00 PM

Mean Area 609 5
Mean Conc. 51 19mg/L
Vial 13



Sample

Sample Name: Untitled
Sample ID: CCB
Object ID 0L-10000101016-04900389-13352AA27C62-0002
Origin: 5310b met
Status Completed
Chk. Result

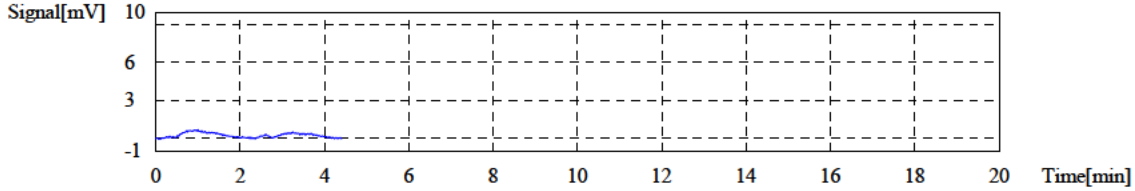
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1 000	NPOC:-0 2956mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	3 566	-0 2491mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/14/2014 8:43:25 PM
2	2 469	-0 3422mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/14/2014 8:45:44 PM

Mean Area 3 018
Mean Conc. -0 2956mg/L
Vial 14



Sample

Sample Name: Untitled
Sample ID: 460-79293-k-10
Object ID 0L-10000101016-04900389-13352AA27C62-0003
Origin: 5310b met
Status Completed
Chk. Result

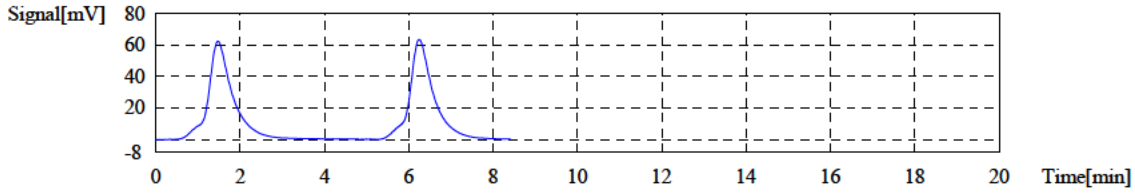
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1 000	NPOC:20 71mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	252 3	20 87mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/14/2014 9:04:38 PM
2	248 6	20 55mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/14/2014 9:08:30 PM

Mean Area 250 5
Mean Conc. 20 71mg/L
Vial 15



Sample

Sample Name: Untitled
Sample ID: 460-79293-k-12
Object ID 0L-10000101016-04900389-13352AA27C62-0004
Origin: 5310b met
Status Completed
Chk. Result

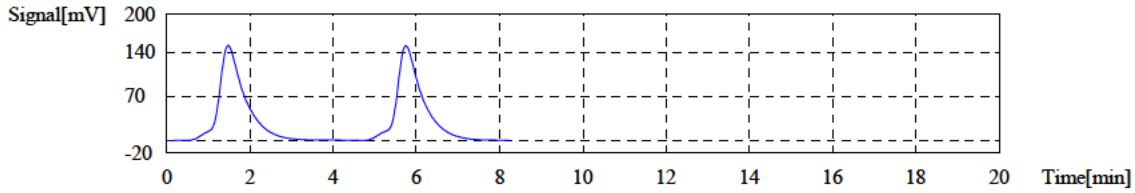
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1 000	NPOC 54 17mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	647 3	54 40mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/14/2014 9:26 54 PM
2	641 8	53 93mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/14/2014 9:31:12 PM

Mean Area 644 6
Mean Conc. 54 17mg/L
Vial 16



Sample

Sample Name: Untitled
Sample ID: 460-79113-b-1
Object ID 0L-10000101016-04900389-13352AA27C62-0005
Origin: 5310b met
Status Completed
Chk. Result

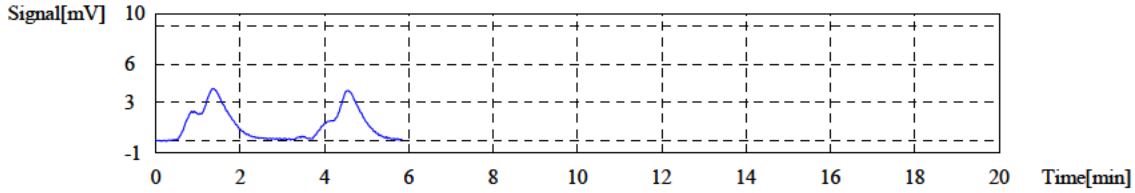
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1 000	NPOC:1 144mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	21 84	1 302mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/14/2014 9:48:30 PM
2	18 12	0 9865mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/14/2014 9:51:24 PM

Mean Area 19 98
Mean Conc. 1 144mg/L
Vial 17



Sample

Sample Name: Untitled
Sample ID: 460-79113-b-2
Object ID 0L-10000101016-04900389-13352AA27C62-0006
Origin: 5310b met
Status Completed
Chk. Result

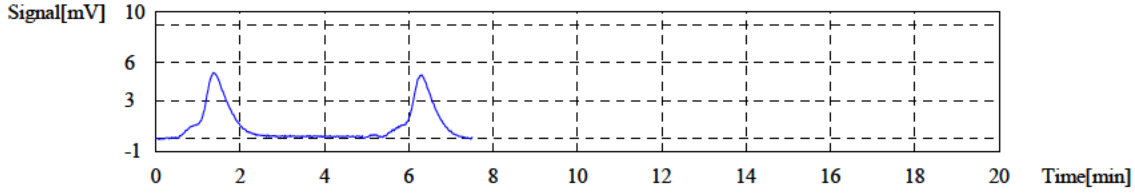
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1 000	NPOC:1 224mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	21 49	1 273mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/14/2014 10:10:25 PM
2	20 35	1 176mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/14/2014 10:13:17 PM

Mean Area 20 92
Mean Conc. 1 224mg/L
Vial 18



Sample

Sample Name: Untitled
Sample ID: 460-79113-b-3
Object ID 0L-10000101016-04900389-13352AA27C62-0007
Origin: 5310b met
Status Completed
Chk. Result

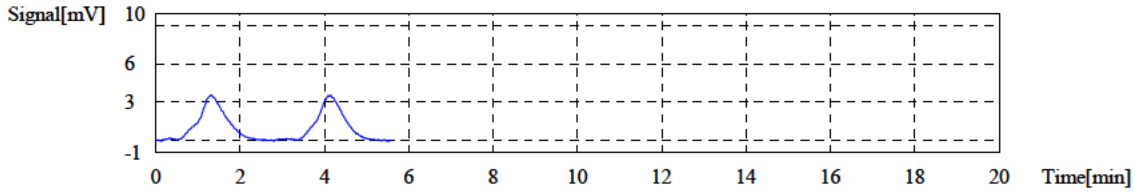
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1 000	NPOC 0 7976mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	16 30	0 8320mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/14/2014 10:30:13 PM
2	15 49	0 7632mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/14/2014 10:33:16 PM

Mean Area 15 90
Mean Conc. 0 7976mg/L
Vial 19



Sample

Sample Name: Untitled
Sample ID: 460-79113-b-4
Object ID 0L-10000101016-04900389-13352AA27C62-0008
Origin: 5310b met
Status Completed
Chk. Result

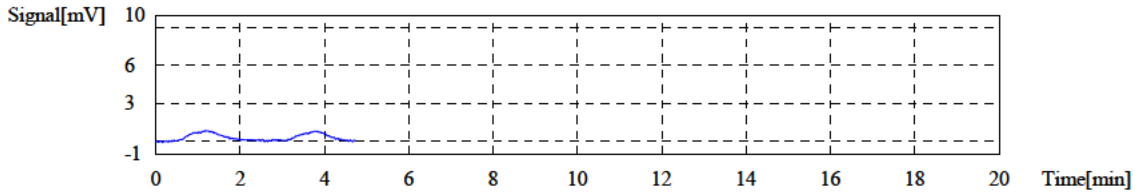
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1 000	NPOC:-0 1736mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	4 806	-0 1438mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/14/2014 10:49 57 PM
2	4 104	-0 2034mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/14/2014 10:52:24 PM

Mean Area 4 455
Mean Conc. -0 1736mg/L
Vial 20



Sample

Sample Name: Untitled
Sample ID: 460-79108-h-1
Object ID 0L-10000101016-04900389-13352AA27C62-0009
Origin: 5310b met
Status Completed
Chk. Result

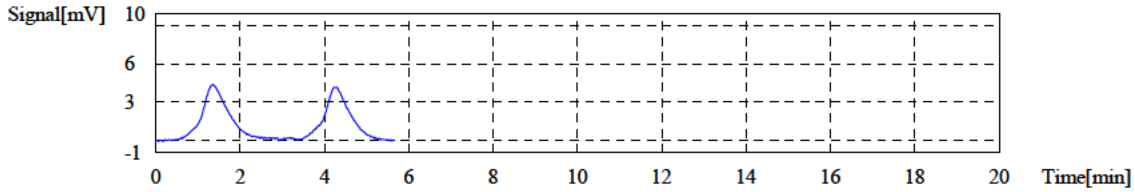
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1 000	NPOC:1 030mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	19 02	1 063mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/14/2014 11:09:25 PM
2	18 24	0 9967mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/14/2014 11:12:26 PM

Mean Area 18 63
Mean Conc. 1 030mg/L
Vial 21



Sample

Sample Name: Untitled
Sample ID: 460-79110-h-1
Object ID 0L-10000101016-04900389-13352AA27C62-000A
Origin: 5310b met
Status Completed
Chk. Result

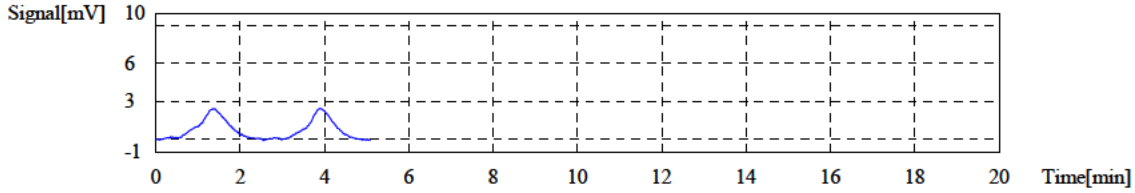
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1 000	NPOC 0 4143mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	11 66	0 4381mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/14/2014 11:29 05 PM
2	11 10	0 3905mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/14/2014 11:31 52 PM

Mean Area 11 38
Mean Conc. 0 4143mg/L
Vial 22



Sample

Sample Name: Untitled
Sample ID: 460-79185-a-3
Object ID 0L-10000101016-04900389-13352AA27C62-000B
Origin: 5310b met
Status Completed
Chk. Result

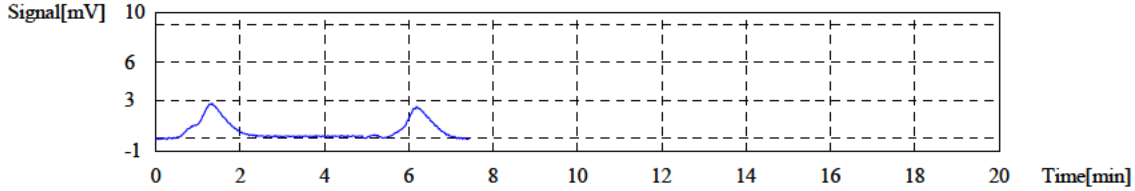
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1 000	NPOC 0 4657mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	12 88	0 5416mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/14/2014 11:50 57 PM
2	11 09	0 3897mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/14/2014 11:53:43 PM

Mean Area 11 98
Mean Conc. 0 4657mg/L
Vial 23



Sample

Sample Name: Untitled
Sample ID: 460-79228-d-1
Object ID 0L-10000101016-04900389-13352AA27C62-000C
Origin: 5310b met
Status Completed
Chk. Result

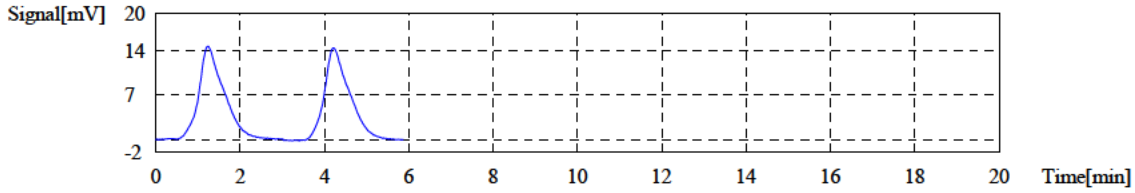
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1 000	NPOC:4 612mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	61 02	4 629mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 12:10 52 AM
2	60 63	4 595mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 12:14:14 AM

Mean Area 60 83
Mean Conc. 4 612mg/L
Vial 24



Sample

Sample Name: Untitled
Sample ID: CCV
Object ID 0L-10000101016-04900389-13352AA27C63-0000
Origin: 5310b met
Status Completed
Chk. Result

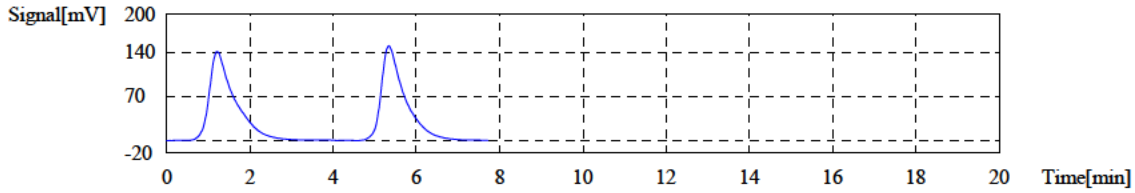
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1 000	NPOC 50 20mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	601 9	50 55mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 12:32:30 AM
2	593 7	49 85mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 12:36:24 AM

Mean Area 597 8
Mean Conc. 50 20mg/L
Vial 25



Sample

Sample Name: Untitled
Sample ID: CCB
Object ID 0L-10000101016-04900389-13352AA27C63-0001
Origin: 5310b met
Status Completed
Chk. Result

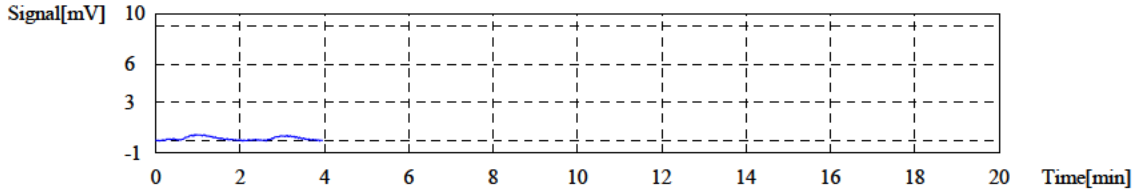
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1 000	NPOC:-0 3980mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2 252	-0 3606mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 12:52:33 AM
2	1 372	-0 4353mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 12:54:45 AM

Mean Area 1 812
Mean Conc. -0 3980mg/L
Vial 26



Sample

Sample Name: Untitled
Sample ID: 460-79245-k-2
Object ID 0L-10000101016-04900389-13352AA27C63-0002
Origin: 5310b met
Status Completed
Chk. Result

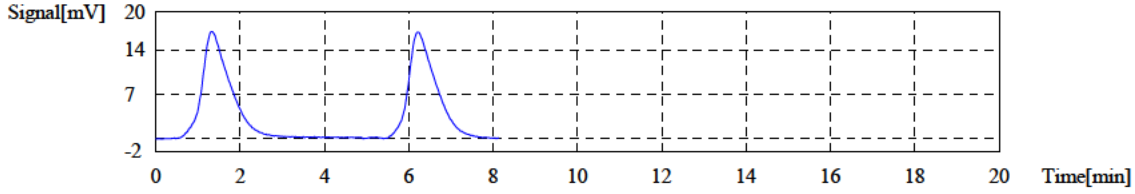
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1 000	NPOC 6 062mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	79 25	6 176mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 1:13 53 AM
2	76 57	5 949mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 1:17:23 AM

Mean Area 77 91
Mean Conc. 6 062mg/L
Vial 27



Sample

Sample Name:	Untitled
Sample ID:	460-79245-k-6
Object ID	0L-10000101016-04900389-13352AA27C63-0003
Origin:	5310b met
Status	Completed
Chk. Result	

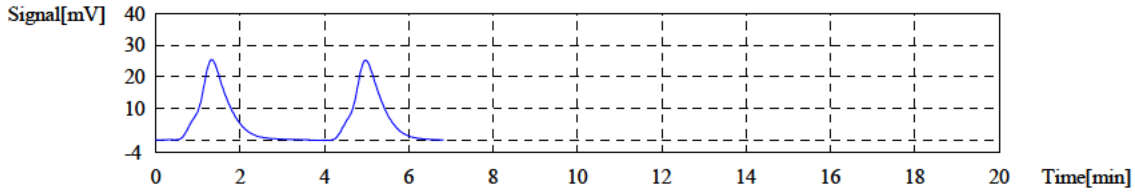
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1 000	NPOC:9 148mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	115 2	9 228mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 1:35 09 AM
2	113 3	9 067mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 1:38:35 AM

Mean Area	114 3
Mean Conc.	9 148mg/L
Vial	28



Sample

Sample Name:	Untitled
Sample ID:	460-79245-k-10
Object ID	0L-10000101016-04900389-13352AA27C63-0004
Origin:	5310b met
Status	Completed
Chk. Result	

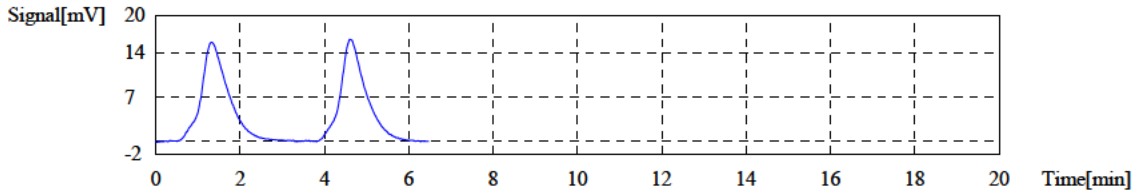
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1 000	NPOC 5 320mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	70 19	5 407mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 1:56 00 AM
2	68 13	5 232mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 1:59:26 AM

Mean Area	69 16
Mean Conc.	5 320mg/L
Vial	29



Sample

Sample Name:	Untitled
Sample ID:	460-79245-k-4
Object ID	0L-10000101016-04900389-13352AA27C63-0005
Origin:	5310b met
Status	Completed
Chk. Result	

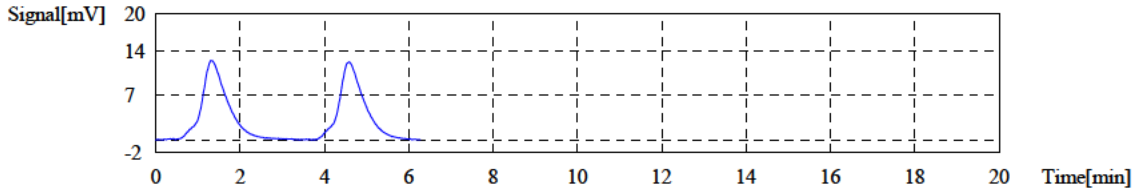
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1 000	NPOC:3 827mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	52 19	3 879mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 2:16 50 AM
2	50 96	3 774mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 2:20:12 AM

Mean Area 51 58
Mean Conc. 3 827mg/L
Vial 30



Sample

Sample Name: Untitled
Sample ID: MB
Object ID 0L-10000101016-04900389-13352AA27C63-0006
Origin: 5310b met
Status Completed
Chk. Result

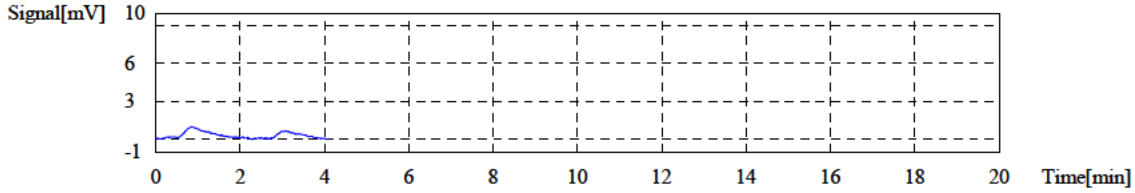
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1 000	NPOC:-0 2945mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	3 805	-0 2288mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 2:36:31 AM
2	2 257	-0 3602mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 2:38:43 AM

Mean Area 3 031
Mean Conc. -0 2945mg/L
Vial 31



Sample

Sample Name: Untitled
Sample ID: LCSSRM
Object ID 0L-10000101016-04900389-13352AA27C63-0007
Origin: 5310b met
Status Completed
Chk. Result

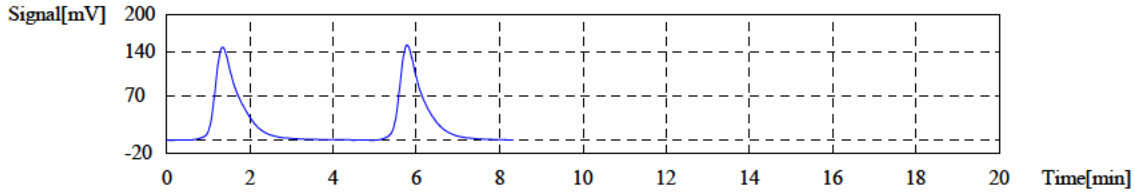
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1 000	NPOC:49 58mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	593 9	49 87mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 2:57:17 AM
2	587 0	49 28mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 3:01:24 AM

Mean Area 590 5
Mean Conc. 49 58mg/L
Vial 32



Sample

Sample Name: Untitled
Sample ID: 460-79253-h-1
Object ID 0L-10000101016-04900389-13352AA2A7B1-0000
Origin: 5310b met
Status Completed
Chk. Result

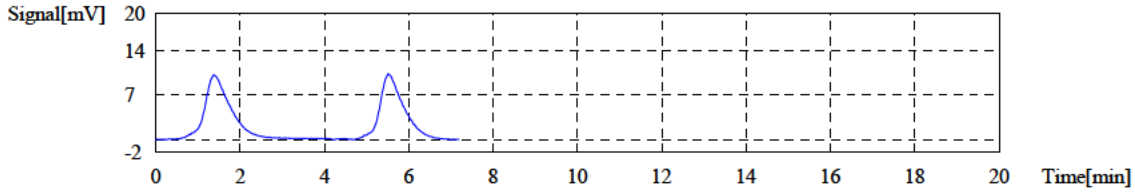
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1 000	NPOC:3 036mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	43 55	3 145mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 3:19:41 AM
2	40 97	2 926mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 3:22 59 AM

Mean Area 42 26
Mean Conc. 3 036mg/L
Vial 33



Sample

Sample Name: Untitled
Sample ID: 460-79253-h-1 MS
Object ID 0L-10000101016-04900389-13352AA2A7B1-0001
Origin: 5310b met
Status Completed
Chk. Result

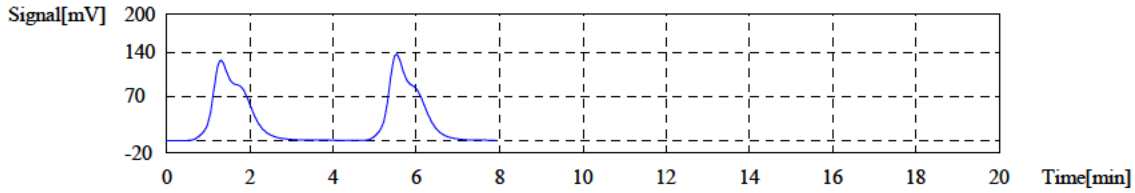
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1 000	NPOC 55 25mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	659 1	55 40mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 3:41:18 AM
2	655 6	55 11mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 3:45:17 AM

Mean Area 657 4
Mean Conc. 55 25mg/L
Vial 34



Sample

Sample Name: Untitled
Sample ID: 460-79253-h-1 MSD
Object ID 0L-10000101016-04900389-13352AA2A7B1-0002
Origin: 5310b met
Status Completed
Chk. Result

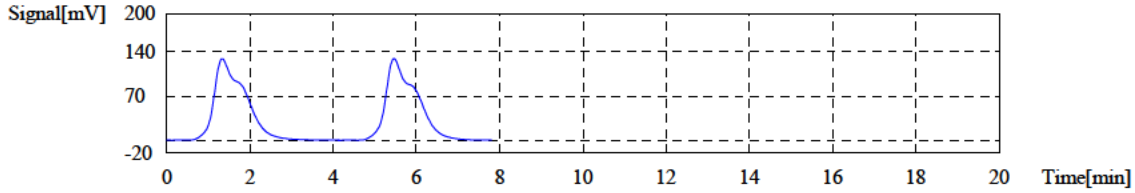
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1 000	NPOC 55 01mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	657 6	55 28mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 4:03:32 AM
2	651 4	54 75mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 4:07:28 AM

Mean Area 654 5
Mean Conc. 55 01mg/L
Vial 35



Sample

Sample Name: Untitled
Sample ID: 460-79253-e-2
Object ID 0L-10000101016-04900389-13352AA2A7B1-0003
Origin: 5310b met
Status Completed
Chk. Result

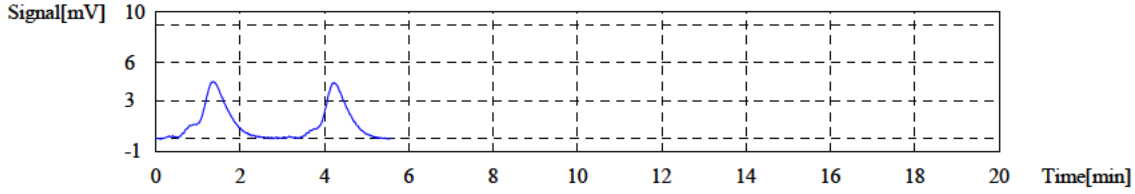
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1 000	NPOC:1 001mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	19 33	1 089mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 4:24:27 AM
2	17 24	0 9118mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 4:27:23 AM

Mean Area 18 29
Mean Conc. 1 001mg/L
Vial 36



Sample

Sample Name: Untitled
Sample ID: CCV
Object ID 0L-10000101016-04900389-13352AA2A7B1-0004
Origin: 5310b met
Status Completed
Chk. Result

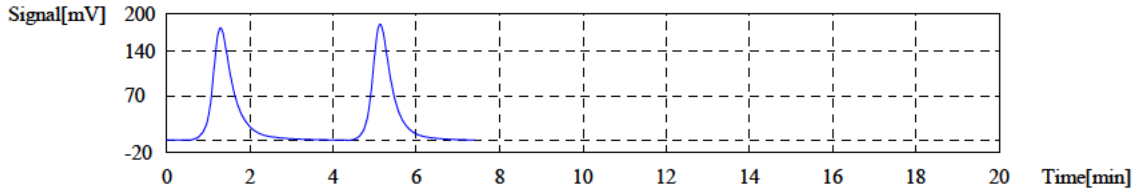
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1 000	NPOC 51 98mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	622 9	52 33mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 4:45:21 AM
2	614 6	51 63mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 4:49:11 AM

Mean Area 618 8
Mean Conc. 51 98mg/L
Vial 37



Sample

Sample Name: Untitled
Sample ID: CCB
Object ID 0L-10000101016-04900389-13352AA2A7B1-0005
Origin: 5310b met
Status Completed
Chk. Result

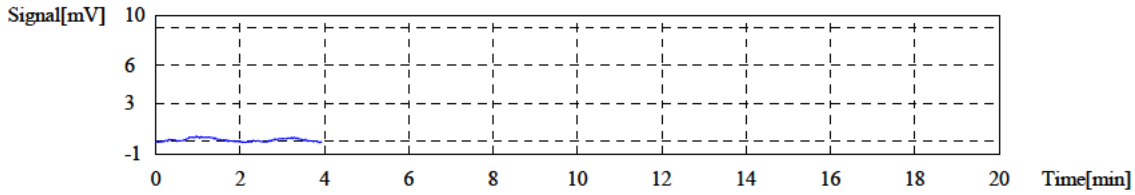
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1 000	NPOC:-0 3840mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2 236	-0 3620mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 5:05:21 AM
2	1 717	-0 4060mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 5:07:28 AM

Mean Area 1 977
Mean Conc. -0 3840mg/L
Vial 38



Sample

Sample Name: Untitled
Sample ID: 460-79253-e-3
Object ID 0L-10000101016-04900389-13352AA2A7B2-0000
Origin: 5310b met
Status Completed
Chk. Result

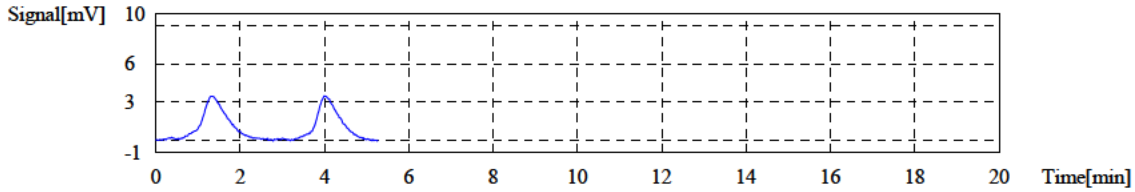
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1 000	NPOC 0 6121mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	13 93	0 6308mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 5:24:19 AM
2	13 49	0 5934mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 5:27:10 AM

Mean Area 13 71
Mean Conc. 0 6121mg/L
Vial 39



Sample

Sample Name: Untitled
Sample ID: 460-79253-e-4
Object ID 0L-10000101016-04900389-13352AA2A7B2-0001
Origin: 5310b met
Status Completed
Chk. Result

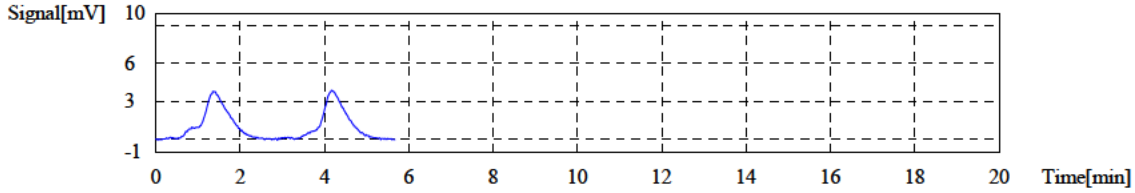
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1 000	NPOC 0 8269mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	16 73	0 8685mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 5:44 06 AM
2	15 75	0 7853mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 5:47:13 AM

Mean Area 16 24
Mean Conc. 0 8269mg/L
Vial 40



Sample

Sample Name: Untitled
Sample ID: 460-79253-h-5
Object ID 0L-10000101016-04900389-13352AA2A7B2-0002
Origin: 5310b met
Status Completed
Chk. Result

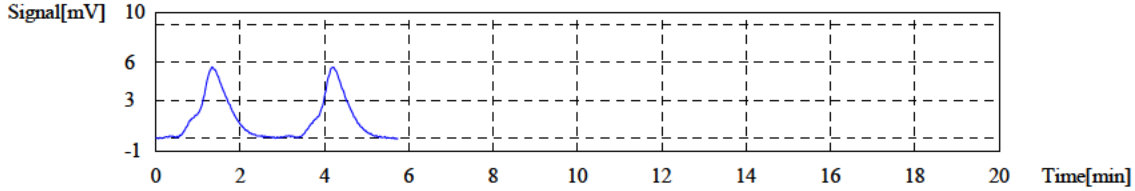
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1 000	NPOC:1 552mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	25 86	1 644mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 6:04:13 AM
2	23 71	1 461mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 6:07:21 AM

Mean Area 24 79
Mean Conc. 1 552mg/L
Vial 41



Sample

Sample Name: Untitled
Sample ID: 460-79253-e-6
Object ID 0L-10000101016-04900389-13352AA2A7B2-0003
Origin: 5310b met
Status Completed
Chk. Result

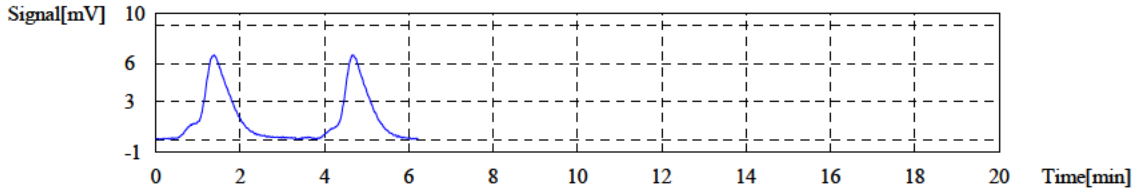
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1 000	NPOC:1 838mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	29 37	1 942mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 6:24:49 AM
2	26 93	1 734mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 6:27 59 AM

Mean Area 28 15
Mean Conc. 1 838mg/L
Vial 42



Sample

Sample Name: Untitled
Sample ID: 460-79253-e-7
Object ID 0L-10000101016-04900389-13352AA2A7B2-0004
Origin: 5310b met
Status Completed
Chk. Result

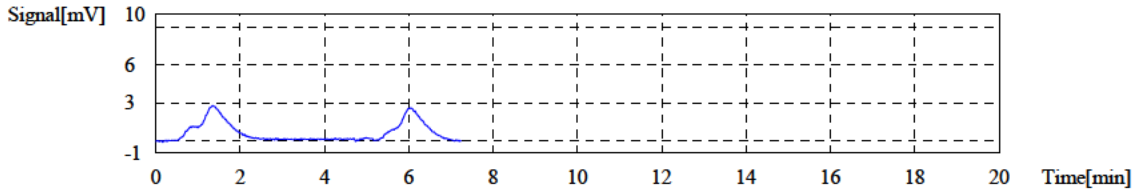
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1 000	NPOC 0 5467mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	14 17	0 6512mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 6:46 51 AM
2	11 71	0 4423mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 6:49:38 AM

Mean Area 12 94
Mean Conc. 0 5467mg/L
Vial 43



Sample

Sample Name: Untitled
Sample ID: 460-79253-e-8
Object ID 0L-10000101016-04900389-13352AA2A7B2-0005
Origin: 5310b met
Status Completed
Chk. Result

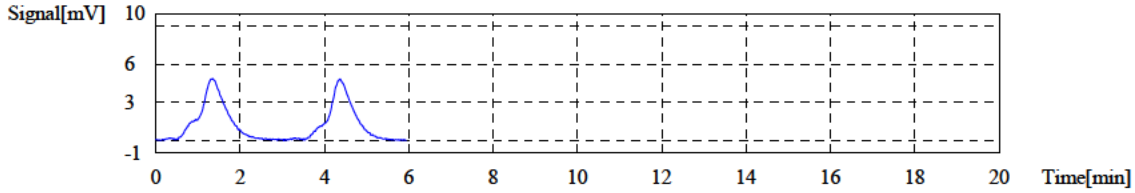
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1 000	NPOC:1 164mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	20 94	1 226mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 7:06:47 AM
2	19 49	1 103mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 7:09 56 AM

Mean Area 20 22
Mean Conc. 1 164mg/L
Vial 44



Sample

Sample Name: Untitled
Sample ID: 460-79253-h-9
Object ID 0L-10000101016-04900389-13352AA2A7B2-0006
Origin: 5310b met
Status Completed
Chk. Result

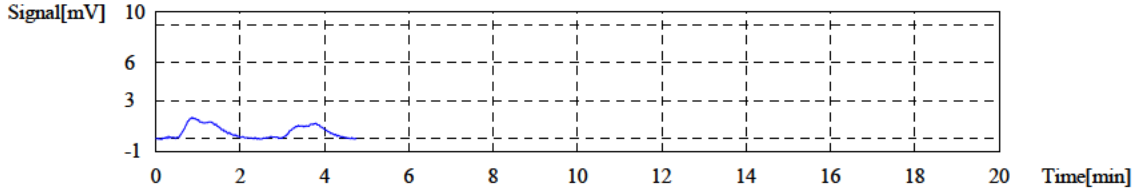
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1 000	NPOC 0 08839mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8 611	0 1792mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 7:26:31 AM
2	6 471	-0 00245mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 7:29 03 AM

Mean Area 7 541
Mean Conc. 0 08839mg/L
Vial 45



Sample

Sample Name: Untitled
Sample ID: 460-79277-h-1
Object ID 0L-10000101016-04900389-13352AA2A7B2-0007
Origin: 5310b met
Status Completed
Chk. Result

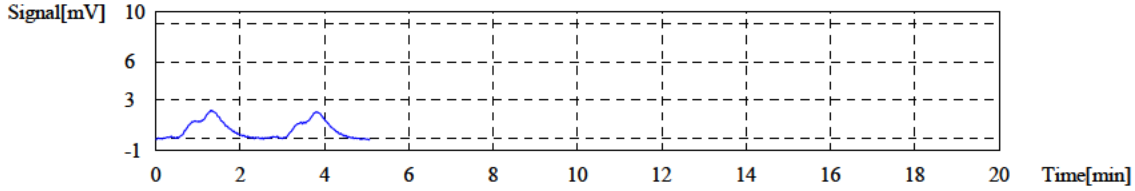
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1 000	NPOC 0 3612mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	10 96	0 3786mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 7:45:41 AM
2	10 55	0 3438mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 7:48:29 AM

Mean Area 10 76
Mean Conc. 0 3612mg/L
Vial 46



Sample

Sample Name: Untitled
Sample ID: 460-79277-h-4
Object ID 0L-10000101016-04900389-13352AA2A7B2-0008
Origin: 5310b met
Status Completed
Chk. Result

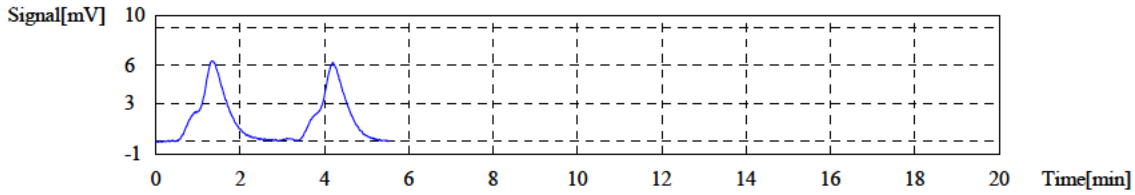
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1 000	NPOC:1 704mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	27 17	1 755mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 8:05:30 AM
2	25 98	1 654mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 8:08:26 AM

Mean Area 26 58
Mean Conc. 1 704mg/L
Vial 47



Sample

Sample Name: Untitled
Sample ID: 460-79277-h-5
Object ID 0L-10000101016-04900389-13352AA2A7B2-0009
Origin: 5310b met
Status Completed
Chk. Result

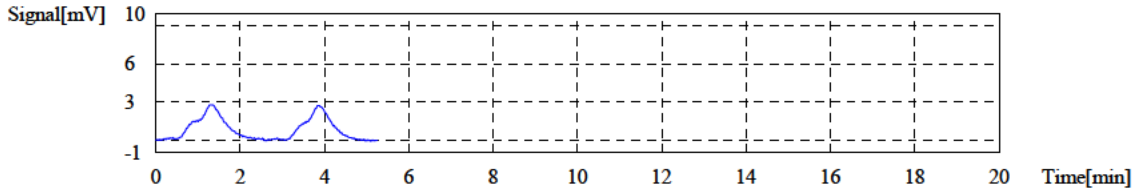
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1 000	NPOC 0 5141mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	13 03	0 5544mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 8:25 09 AM
2	12 08	0 4737mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 8:28 05 AM

Mean Area 12 56
Mean Conc. 0 5141mg/L
Vial 48



Sample

Sample Name: Untitled
Sample ID: CCV
Object ID 0L-10000101016-04900389-13352AA2A7B2-000A
Origin: 5310b met
Status Completed
Chk. Result

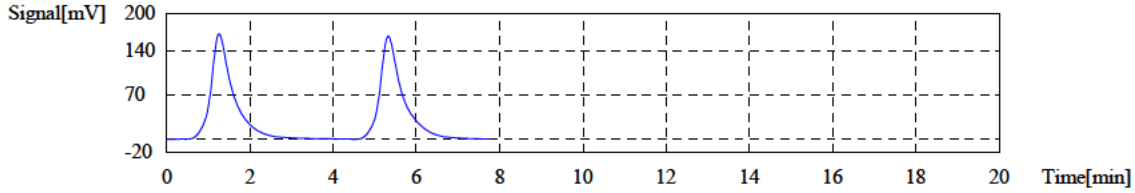
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1 000	NPOC 51 96mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	621 7	52 23mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 8:46:18 AM
2	615 4	51 69mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 8:50:16 AM

Mean Area 618 5
Mean Conc. 51 96mg/L
Vial 49



Sample

Sample Name: Untitled
Sample ID: CCB
Object ID 0L-10000101016-04900389-13352AA2A7B2-000B
Origin: 5310b met
Status Completed
Chk. Result

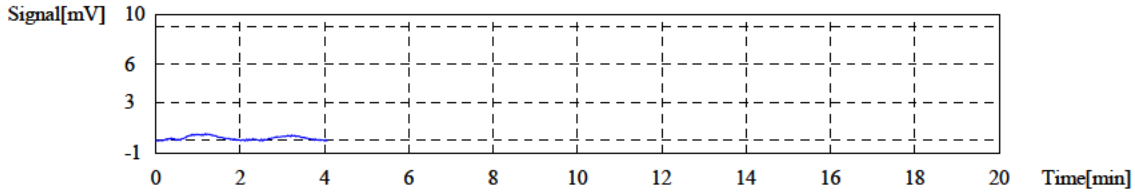
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1 000	NPOC:-0 3536mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2 511	-0 3386mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 9:06:27 AM
2	2 159	-0 3685mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 9:08:47 AM

Mean Area 2 335
Mean Conc. -0 3536mg/L
Vial 50



Sample

Sample Name: Untitled
Sample ID: 460-79277-h-7
Object ID 0L-10000101016-04900389-13352AA2A7B2-000C
Origin: 5310b met
Status Completed
Chk. Result

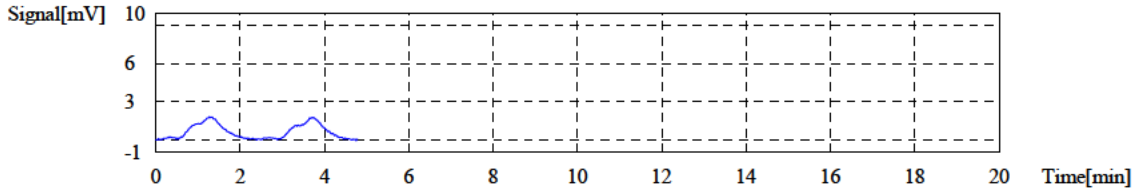
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1 000	NPOC 0 1850mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8 937	0 2069mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 9:38:16 AM
2	8 422	0 1632mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 9:40 53 AM

Mean Area 8 680
Mean Conc. 0 1850mg/L
Vial 51



Sample

Sample Name: Untitled
Sample ID: 460-79277-h-8
Object ID 0L-10000101016-04900389-13352AA2A7B2-000D
Origin: 5310b met
Status Completed
Chk. Result

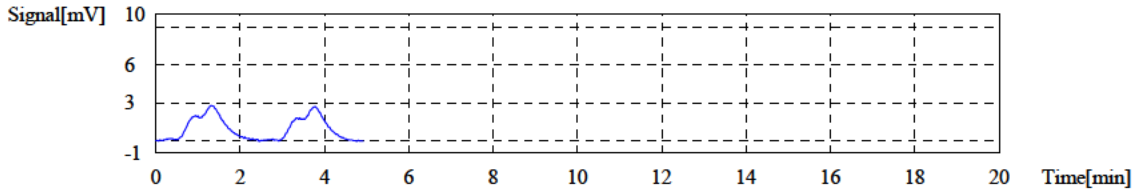
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1 000	NPOC 0 5582mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	13 16	0 5654mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 9:57:27 AM
2	12 99	0 5510mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 10:00:12 AM

Mean Area 13 07
Mean Conc. 0 5582mg/L
Vial 52



Sample

Sample Name: Untitled
Sample ID: 460-79277-h-9
Object ID 0L-10000101016-04900389-13352AA2A7B2-000E
Origin: 5310b met
Status Completed
Chk. Result

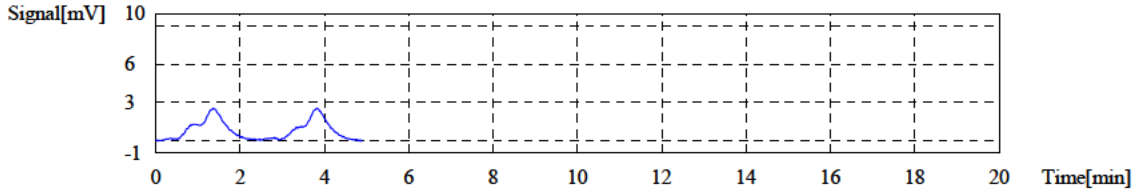
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1 000	NPOC 0 3837mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	11 50	0 4245mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 10:16:47 AM
2	10 54	0 3430mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 10:19:27 AM

Mean Area 11 02
Mean Conc. 0 3837mg/L
Vial 53



Sample

Sample Name: Untitled
Sample ID: 460-79293-k-4
Object ID 0L-10000101016-04900389-13352AA2A7B2-000F
Origin: 5310b met
Status Completed
Chk. Result

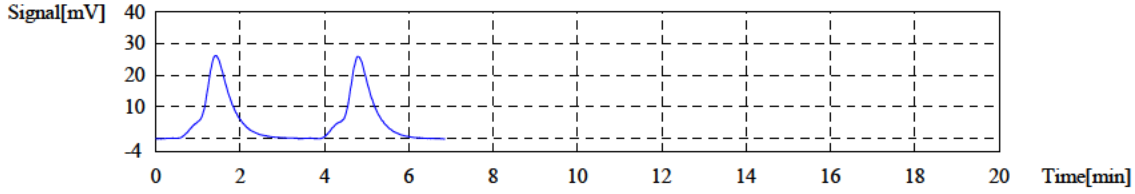
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1 000	NPOC 8 575mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	108 8	8 685mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 10:36 58 AM
2	106 2	8 464mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 10:40:41 AM

Mean Area 107 5
Mean Conc. 8 575mg/L
Vial 54



Sample

Sample Name: Untitled
Sample ID: 460-79113-b-1
Object ID 0L-10000101016-04900389-13352AA2A7B2-0010
Origin: 5310b met
Status Completed
Chk. Result

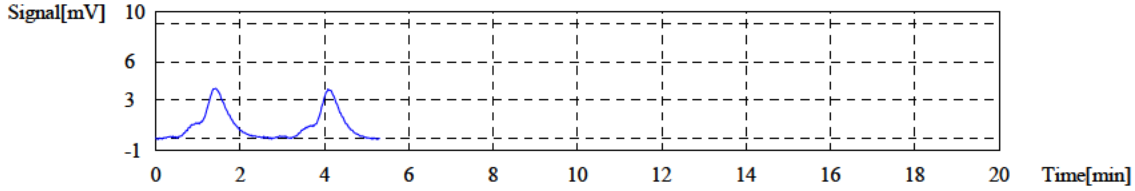
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1 000	NPOC 0 8040mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	16 38	0 8388mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 10:57:30 AM
2	15 56	0 7692mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 11:00:21 AM

Mean Area 15 97
Mean Conc. 0 8040mg/L
Vial 55



Sample

Sample Name: Untitled
Sample ID: 460-79253-e-2
Object ID 0L-10000101016-04900389-13352AA2A7B2-0011
Origin: 5310b met
Status Completed
Chk. Result

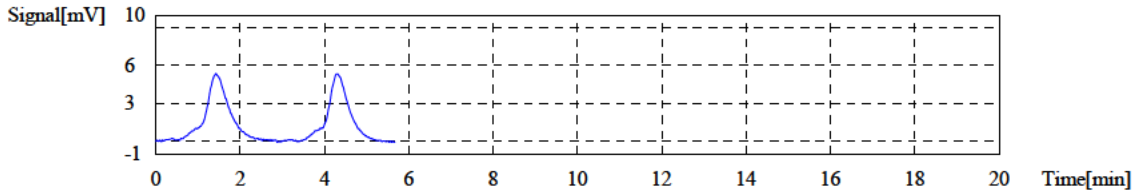
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1 000	NPOC:1 157mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	20 69	1 205mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 11:17:21 AM
2	19 57	1 110mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 11:20:23 AM

Mean Area 20 13
Mean Conc. 1 157mg/L
Vial 56



Sample

Sample Name: Untitled
Sample ID: 460-79253-h-5
Object ID 0L-10000101016-04900389-13352AA2A7B2-0012
Origin: 5310b met
Status Completed
Chk. Result

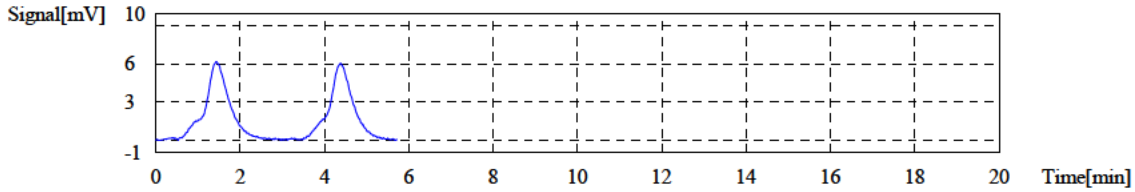
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1 000	NPOC:1 524mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	24 90	1 562mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 11:37:27 AM
2	24 00	1 486mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 11:40:27 AM

Mean Area 24 45
Mean Conc. 1 524mg/L
Vial 57



Sample

Sample Name: Untitled
Sample ID: 460-79253-e-6
Object ID 0L-10000101016-04900389-13352AA2A7B3-0000
Origin: 5310b met
Status Completed
Chk. Result

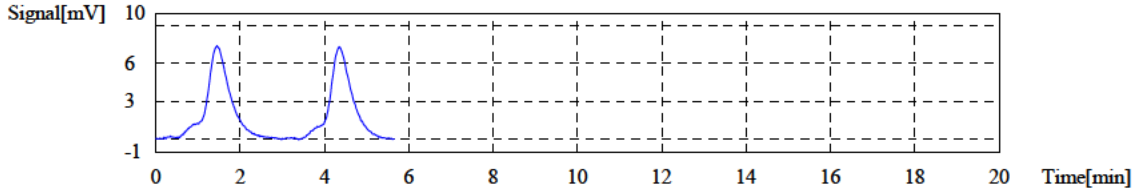
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1 000	NPOC:1 785mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	28 48	1 866mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 11:57:29 AM
2	26 58	1 705mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 12:00:27 PM

Mean Area 27 53
Mean Conc. 1 785mg/L
Vial 58



Sample

Sample Name: Untitled
Sample ID: 460-79253-e-8
Object ID 0L-10000101016-04900389-13352AA2A7B3-0001
Origin: 5310b met
Status Completed
Chk. Result

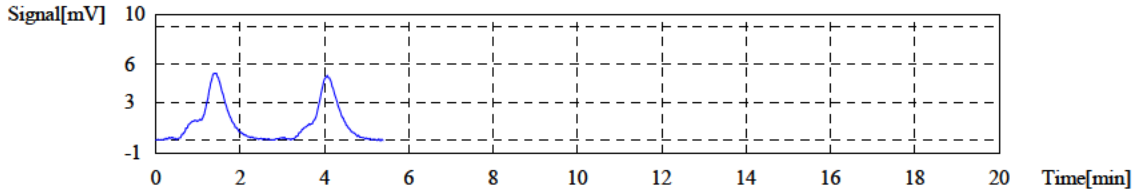
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1 000	NPOC:1 132mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	20 16	1 160mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 12:17:16 PM
2	19 51	1 105mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 12:20:11 PM

Mean Area 19 84
Mean Conc. 1 132mg/L
Vial 59



Sample

Sample Name: Untitled
Sample ID: CCV
Object ID 0L-10000101016-04900389-13352AA2A7B3-0002
Origin: 5310b met
Status Completed
Chk. Result

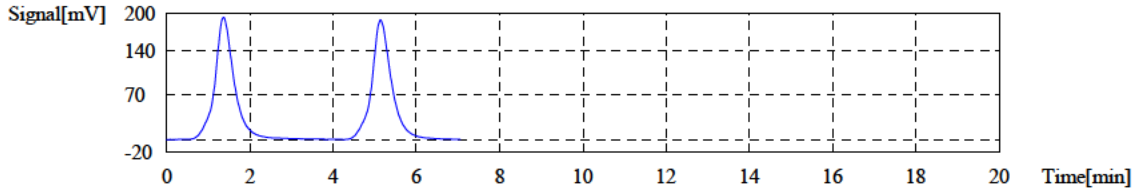
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1 000	NPOC 52 65mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	629 4	52 88mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 12:38 07 PM
2	624 0	52 42mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 12:41:39 PM

Mean Area 626 7
Mean Conc. 52 65mg/L
Vial 60



Sample

Sample Name: Untitled
Sample ID: CCB
Object ID 0L-10000101016-04900389-13352AB16761-0000
Origin: 5310b met
Status Completed
Chk. Result

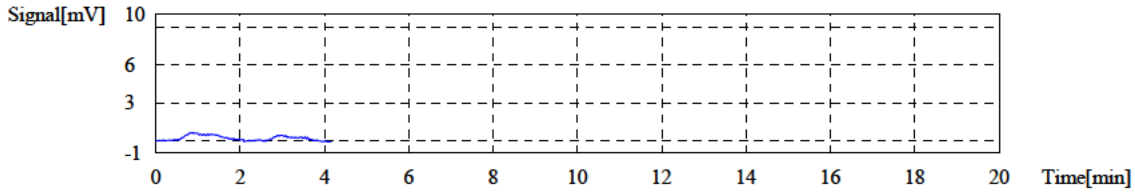
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1 000	NPOC:-0 3384mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2 950	-0 3014mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 12:57 54 PM
2	2 077	-0 3755mg/L	150uL	1 000		HV140626 2014_06_26_14_19_09 cal	7/15/2014 1:00:21 PM

Mean Area	2 514
Mean Conc.	-0 3384mg/L
Vial	61



	Sample ID	Origin	Manual Diluti	Result	Status	Date / Time	Vial
1	ICV	5310b.met	1.000	NPOC:51.18	Completed	7/14/2014 2:	1
2	ICB	5310b.met	1.000	NPOC:-0.36	Completed	7/14/2014 3:	2
3	MB	5310b.met	1.000	NPOC:-0.30	Completed	7/14/2014 3:	3
4	LCSSRM	5310b.met	1.000	NPOC:49.73	Completed	7/14/2014 3:	4
5	460-79073-h-1	5310b.met	1.000	NPOC:-0.08	Completed	7/14/2014 4:	5
6	460-79073-h-1 MS	5310b.met	1.000	NPOC:52.52	Completed	7/14/2014 5:	6
7	460-79073-h-1 MSD	5310b.met	1.000	NPOC:52.70	Completed	7/14/2014 5:	7
8	460-79224-c-1	5310b.met	1.000	NPOC:2.185	Completed	7/14/2014 6:	8
9	460-79293-k-2@5	5310b.met	1.000	NPOC:28.09	Completed	7/14/2014 7:	9
10	460-79293-k-4@5	5310b.met	1.000	NPOC:1.691	Completed	7/14/2014 7:	10
11	460-79293-k-6	5310b.met	1.000	NPOC:8.392	Completed	7/14/2014 7:	11
12	460-79293-k-8	5310b.met	1.000	NPOC:2.918	Completed	7/14/2014 8:	12
13	CCV	5310b.met	1.000	NPOC:51.19	Completed	7/14/2014 8:	13
14	CCB	5310b.met	1.000	NPOC:-0.29	Completed	7/14/2014 8:	14
15	460-79293-k-10	5310b.met	1.000	NPOC:20.71	Completed	7/14/2014 9:	15
16	460-79293-k-12	5310b.met	1.000	NPOC:54.17	Completed	7/14/2014 9:	16
17	460-79113-b-1	5310b.met	1.000	NPOC:1.144	Completed	7/14/2014 9:	17
18	460-79113-b-2	5310b.met	1.000	NPOC:1.224	Completed	7/14/2014 10	18
19	460-79113-b-3	5310b.met	1.000	NPOC:0.797	Completed	7/14/2014 10	19
20	460-79113-b-4	5310b.met	1.000	NPOC:-0.17	Completed	7/14/2014 10	20
21	460-79108-h-1	5310b.met	1.000	NPOC:1.030	Completed	7/14/2014 11	21
22	460-79110-h-1	5310b.met	1.000	NPOC:0.414	Completed	7/14/2014 11	22
23	460-79185-a-3	5310b.met	1.000	NPOC:0.465	Completed	7/14/2014 11	23
24	460-79228-d-1	5310b.met	1.000	NPOC:4.612	Completed	7/15/2014 12	24
25	CCV	5310b.met	1.000	NPOC:50.20	Completed	7/15/2014 12	25
26	CCB	5310b.met	1.000	NPOC:-0.39	Completed	7/15/2014 12	26
27	460-79245-k-2	5310b.met	1.000	NPOC:6.062	Completed	7/15/2014 1:	27
28	460-79245-k-6	5310b.met	1.000	NPOC:9.148	Completed	7/15/2014 1:	28
29	460-79245-k-10	5310b.met	1.000	NPOC:5.320	Completed	7/15/2014 1:	29
30	460-79245-k-4	5310b.met	1.000	NPOC:3.827	Completed	7/15/2014 2:	30
31	MB	5310b.met	1.000	NPOC:-0.29	Completed	7/15/2014 2:	31
32	LCSSRM	5310b.met	1.000	NPOC:49.58	Completed	7/15/2014 3:	32
33	460-79253-h-1	5310b.met	1.000	NPOC:3.036	Completed	7/15/2014 3:	33
34	460-79253-h-1 MS	5310b.met	1.000	NPOC:55.25	Completed	7/15/2014 3:	34
35	460-79253-h-1 MSD	5310b.met	1.000	NPOC:55.01	Completed	7/15/2014 4:	35
36	460-79253-e-2	5310b.met	1.000	NPOC:1.001	Completed	7/15/2014 4:	36
37	CCV	5310b.met	1.000	NPOC:51.98	Completed	7/15/2014 4:	37
38	CCB	5310b.met	1.000	NPOC:-0.38	Completed	7/15/2014 5:	38
39	460-79253-e-3	5310b.met	1.000	NPOC:0.612	Completed	7/15/2014 5:	39
40	460-79253-e-4	5310b.met	1.000	NPOC:0.826	Completed	7/15/2014 5:	40
41	460-79253-h-5	5310b.met	1.000	NPOC:1.552	Completed	7/15/2014 6:	41
42	460-79253-e-6	5310b.met	1.000	NPOC:1.838	Completed	7/15/2014 6:	42
43	460-79253-e-7	5310b.met	1.000	NPOC:0.546	Completed	7/15/2014 6:	43
44	460-79253-e-8	5310b.met	1.000	NPOC:1.164	Completed	7/15/2014 7:	44
45	460-79253-h-9	5310b.met	1.000	NPOC:0.088	Completed	7/15/2014 7:	45
46	460-79277-h-1	5310b.met	1.000	NPOC:0.361	Completed	7/15/2014 7:	46
47	460-79277-h-4	5310b.met	1.000	NPOC:1.704	Completed	7/15/2014 8:	47
48	460-79277-h-5	5310b.met	1.000	NPOC:0.514	Completed	7/15/2014 8:	48
49	CCV	5310b.met	1.000	NPOC:51.96	Completed	7/15/2014 8:	49
50	CCB	5310b.met	1.000	NPOC:-0.35	Completed	7/15/2014 9:	50
51	460-79277-h-7	5310b.met	1.000	NPOC:0.185	Completed	7/15/2014 9:	51
52	460-79277-h-8	5310b.met	1.000	NPOC:0.558	Completed	7/15/2014 10	52
53	460-79277-h-9	5310b.met	1.000	NPOC:0.383	Completed	7/15/2014 10	53

	Sample ID	Origin	Manual Diluti	Result	Status	Date / Time	Vial
54	460-79293-k-4	5310b.met	1.000	NPOC:8.575	Completed	7/15/2014 10	54
55	460-79113-b-1	5310b.met	1.000	NPOC:0.804	Completed	7/15/2014 11	55
56	460-79253-e-2	5310b.met	1.000	NPOC:1.157	Completed	7/15/2014 11	56
57	460-79253-h-5	5310b.met	1.000	NPOC:1.524	Completed	7/15/2014 11	57
58	460-79253-e-6	5310b.met	1.000	NPOC:1.785	Completed	7/15/2014 12	58
59	460-79253-e-8	5310b.met	1.000	NPOC:1.132	Completed	7/15/2014 12	59
60	CCV	5310b.met	1.000	NPOC:52.65	Completed	7/15/2014 12	60
61	CCB	5310b.met	1.000	NPOC:-0.33	Completed	7/15/2014 1:	61

Instr.Information

Catalyst Regular Sensitivity

Cal. Curve

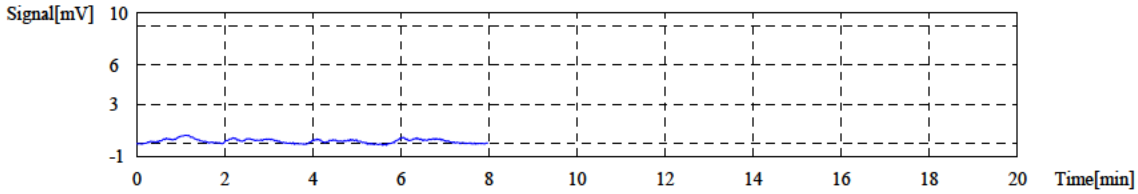
Sample Name: Untitled
Sample ID: Untitled
Object ID 0L-10000101016-04900389-133525222928-0000
Cal. Curve: HV140626 2014 06 26 14 19 09 cal
Status Completed

Type	Anal.
Standard	NPOC

Conc: 0.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	2 726	50uL	1 000	*******		6/26/2014 2:35:20 PM
2	2 050	50uL	1 000	*******		6/26/2014 2:37:31 PM
3	1 930	50uL	1 000	*******		6/26/2014 2:39:41 PM
4	2 514	50uL	1 000	*******		6/26/2014 2:42:10 PM

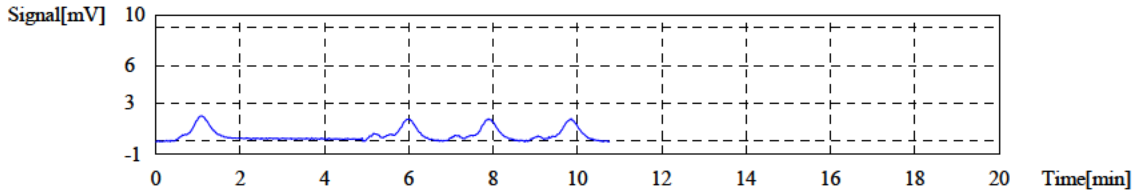
Acid Add. 1 500%
Sparge Gas Flow 80ml
Sp. Time 600 0sec
Mean Area 2 305



Conc: 1.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	8 464	50uL	1 000	T******		6/26/2014 3:01:28 PM
2	6 512	50uL	1 000	*******		6/26/2014 3:03:39 PM
3	6 247	50uL	1 000	*******		6/26/2014 3:05:49 PM
4	6 382	50uL	1 000	*******		6/26/2014 3:08:02 PM

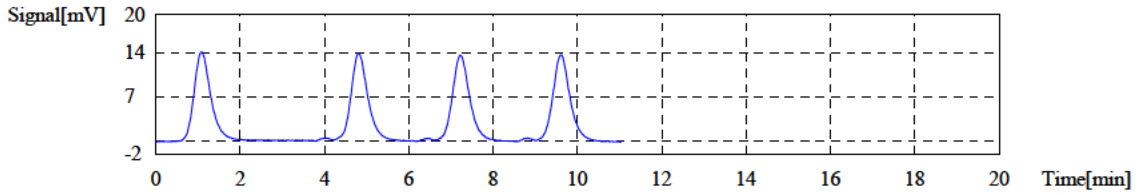
Acid Add. 1 500%
Sparge Gas Flow 80ml
Sp. Time 600 0sec
Mean Area 6 901



Conc: 10.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	40 42	50uL	1 000	*******		6/26/2014 3:26:10 PM
2	39 87	50uL	1 000	*******		6/26/2014 3:28:49 PM
3	40 49	50uL	1 000	*******		6/26/2014 3:31:25 PM
4	40 77	50uL	1 000	*******		6/26/2014 3:34:10 PM

Acid Add. 1 500%
Sparge Gas Flow 80ml
Sp. Time 600 0sec
Mean Area 40 39



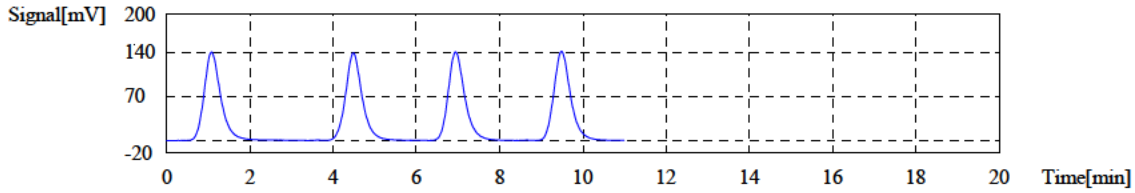
Conc: 100 0mg/L

TOC-Control L Report

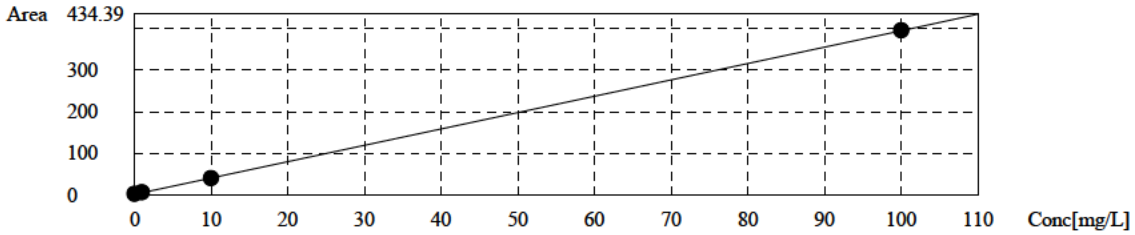
Test America, INC
140626 tlx

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	395 6	50uL	1 000	*******		6/26/2014 3:51:55 PM
2	390 0	50uL	1 000	*******		6/26/2014 3:54:41 PM
3	393 6	50uL	1 000	*******		6/26/2014 3:57:35 PM
4	400 4	50uL	1 000	*******		6/26/2014 4:00:25 PM

Acid Add.	1 500%
Sparge Gas Flow	80ml
Sp. Time	600 0sec
Mean Area	394 9



Slope:	3 926
Intercept	2 167
r^2	1 0000
r	1 0000
Zero Shift	No



PROJECT pH / Corrosivity

Notebook No. 6567

Continued from Page

Buffer	Batch	Job	Sample	Matrix	DIL	PH1	PH2	Temp	Time
4.03		CCV				6.99	6.99	23.5	2200
6.97		MB				5.85	5.84	22.6	2204
9.99		LCSSRM				7.01	7.01	23.6	2206
		79093-1P		H_2O		8.19	8.20	22.9	2209
		-1P Dup				8.19	8.19	22.7	2212
		79095-1Q				7.79	7.79	22.2	2215
		79097-1P				5.98	5.98	22.4	2217
		79105-1L				7.97	7.98	22.4	2219
		79108-1N				7.81	7.83	22.0	2221
		79110-1O				8.07	8.09	22.4	2224
		CCV				6.98	6.98	23.7	2226
		79113-1F				7.55	7.56	22.5	2229
		-2F				6.32	6.32	22.4	2231
		-3F				7.47	7.49	22.5	2233
		-4F				5.87	5.86	22.3	2235
		79188-1D				8.02	8.03	22.3	2238
		79285-1A				9.00	9.00	23.5	2240
		-2A				8.98	8.98	23.6	2242
		-3A				9.47	9.49	23.6	2245
		-4A				9.07	9.04	23.8	2248
		79428-95J				5.75	5.76	22.4	2250
		CCV				6.99	6.99	23.8	2253
		79434-1B				6.90	6.89	22.7	2256
		-2B				6.92	6.92	22.4	2259
		79529-1A				7.56	7.56	22.4	3202
		79590-1D				7.51	7.50	22.5	3205
		CCV				6.99	6.99	23.8	3207

237234

pH meter is reagent in TALS

Continued on Page

Read and Understood By

Signed: [signature] Date: 7/18/14

Signed: Date:

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Edison Job No.: 460-79113-1

SDG No.:

Batch Number: 235724 Batch Start Date: 07/11/14 07:12 Batch Analyst: Kamenetskaya, Raisa

Batch Method: 353.2 Batch End Date: 07/11/14 08:15

Lab Sample ID	Client Sample ID	Method Chain	Basis	FinalAmount	WTno3+2IM1 00274	WTno3+2IM2 00276	WTno3LCS 00018	WTntritLCS 00024	AnalysisComment
ICV 460-235724/7		353.2		100 mL		5 mL			
LCSSRM 460-235724/10		353.2		10 mL			10 mL		
LCSSRM 460-235724/11		353.2		10 mL				10 mL	
460-79113-E-2	GW0173	353.2	T						rerun 5x dil
CCV 460-235724/19		353.2		100 mL		5 mL			
460-79108-J-1 MS		353.2	T	50 mL	2.5 mL				
460-79108-J-1 MSD		353.2	T	50 mL	2.5 mL				
CCV 460-235724/26		353.2		100 mL		5 mL			

Batch Notes	
Batch Comment	A (59762-59769)14, CCV A (59770)14 exp 7/15/14
Buffer Solution ID	C 0733-14 exp 1/8/15
Color Reagent ID Number	C 0734-14 exp 8/8/14

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Edison Job No.: 460-79113-1

SDG No.:

Batch Number: 237639 Batch Start Date: 07/21/14 12:30 Batch Analyst: Afremova, Izabella

Batch Method: SM 2340C Batch End Date: 07/21/14 14:55

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	BuretStart1	BuretStop1	TitrantVolume1	CalcMsg
MB 460-237639/1		SM 2340C		50.0 mL	50.0 mL	0 mL	0.05 mL	0.05 mL	OK
LCSSRM 460-237639/2		SM 2340C		25.0 mL	50.0 mL	0 mL	2.8 mL	2.8 mL	OK
460-79060-B-3 DU		SM 2340C	T	50.0 mL	50.0 mL	0 mL	3.5 mL	3.5 mL	OK
460-79113-D-1	GW0172	SM 2340C	T	50.0 mL	50.0 mL	0 mL	3.7 mL	3.7 mL	OK
460-79113-D-2	GW0173	SM 2340C	T	50.0 mL	50.0 mL	0 mL	2.6 mL	2.6 mL	OK
460-79113-D-3	GW0174	SM 2340C	T	50.0 mL	50.0 mL	0 mL	3.2 mL	3.2 mL	OK
460-79113-D-4	FB0003	SM 2340C	T	50.0 mL	50.0 mL	0 mL	0.05 mL	0.05 mL	OK

Lab Sample ID	Client Sample ID	Method Chain	Basis	WThardLCS0001 00014					
MB 460-237639/1		SM 2340C							
LCSSRM 460-237639/2		SM 2340C		25 mL					
460-79060-B-3 DU		SM 2340C	T						
460-79113-D-1	GW0172	SM 2340C	T						
460-79113-D-2	GW0173	SM 2340C	T						
460-79113-D-3	GW0174	SM 2340C	T						
460-79113-D-4	FB0003	SM 2340C	T						

Batch Notes	
Buffer Lot #	Fischer/132206 exp.05/31/15
EDTA Lot Number	AQUA Solutions/4030539 exp.09/30/15
Indicator Lot	Eriochrome Black-T indicator # C - 0472-14 exp.10/21/14
Nominal Amount Used	50 mL
Perform Calculation (0=No, 1=Yes)	1
Normality of first Titrant	0.0198 N
Titrant Standardization Date	STD 06/03/14 STD 09/03/14

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Edison Job No.: 460-79113-1

SDG No.:

Batch Number: 237639 Batch Start Date: 07/21/14 12:30 Batch Analyst: Afremova, Izabella

Batch Method: SM 2340C Batch End Date: 07/21/14 14:55

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Edison Job No.: 460-79113-1

SDG No.:

Batch Number: 236180 Batch Start Date: 07/14/14 07:07 Batch Analyst: Cabanganan, Maria

Batch Method: SM 2320B Batch End Date: 07/14/14 13:02

Lab Sample ID	Client Sample ID	Method Chain	Basis	CalcMsg	FinalAmount	WTalkLCS 00109			
MB 460-236180/13		SM 2320B		InitialAmount is blank					
LCSSRM 460-236180/14		SM 2320B		InitialAmount is blank	25 mL	25 mL			
460-79113-F-2	GW0173	SM 2320B	T	InitialAmount is blank					
460-79113-F-2 DU	GW0173	SM 2320B	T	InitialAmount is blank					
460-79113-E-1	GW0172	SM 2320B	T	InitialAmount is blank					
460-79113-E-3	GW0174	SM 2320B	T	InitialAmount is blank					
460-79113-E-4	FB0003	SM 2320B	T	InitialAmount is blank					

Batch Notes	
pH Buffer 1 ID	7buffer: Fisher/ 140782 exp. 02/2016
pH Buffer 2 ID	4buffer: Thermo/ 910104 exp. 01/2016
pH Buffer 3 ID	10buffer: Fisher/ 137979 exp. 11/2015
Lot # of hydrochloric acid	A4091 exp. 01/2016
HCl Vendor	HACH
Nominal Amount Used	25 mL
Normality of first Titrant	0.0205087 N
Titrant Standardization Date	prep: 05/30/14 exp. 08/30/14

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Edison Job No.: 460-79113-1

SDG No.:

Batch Number: 236315 Batch Start Date: 07/15/14 07:34 Batch Analyst: Staib, Patricia L

Batch Method: SM 2540D Batch End Date: 07/15/14 13:21

Lab Sample ID	Client Sample ID	Method Chain	Basis	FinalAmount	CrucibleID	TareWeight	InitialAmount	Weight1	Weight2
MB 460-236315/1		SM 2540D		100 mL	a3TJ6 0.1179	0.1179 g	1000 mL	0.1180 g	0.1179 g
LCSSRM 460-236315/2		SM 2540D		100 mL	a3TJ7 0.1181	0.1181 g	50 mL	0.1206 g	0.1206 g
460-79153-A-1 DU		SM 2540D	T	100 mL	TJK	0.1180 g	50 mL	0.1298 g	0.1297 g
460-79113-E-1	GW0172	SM 2540D	T	100 mL	TJM	0.1142 g	800 mL	0.1149 g	0.1146 g
460-79113-F-2	GW0173	SM 2540D	T	100 mL	a3TJN 0.1152	0.1152 g	750 mL	0.1163 g	0.1167 g
460-79113-E-3	GW0174	SM 2540D	T	100 mL	a3TJO 0.1173	0.1173 g	800 mL	0.1176 g	0.1177
460-79113-E-4	FB0003	SM 2540D	T	100 mL	a3TJP 0.1141	0.1141 g	800 mL	0.1147 g	0.1148 g

Lab Sample ID	Client Sample ID	Method Chain	Basis	Weight3	WeightOne%Diff	Residue	Residue2	ResDishWt	DishWeight
MB 460-236315/1		SM 2540D		0 g	PASS <0.5mg	0.0001 g	0 g	0.1179 g	0.1179 g
LCSSRM 460-236315/2		SM 2540D		0 g	PASS <0.5mg	0.0025 g	0.0025 g	0.1206 g	0.1181 g
460-79153-A-1 DU		SM 2540D	T	0 g	PASS <0.5mg	0.0118 g	0.0117 g	0.1297 g	0.118 g
460-79113-E-1	GW0172	SM 2540D	T	0 g	PASS <0.5mg	0.0007 g	0.0004 g	0.1146 g	0.1142 g
460-79113-F-2	GW0173	SM 2540D	T	0 g	PASS <0.5mg	0.0011 g	0.0015 g	0.1167 g	0.1152 g
460-79113-E-3	GW0174	SM 2540D	T	0 g	PASS <0.5mg	0.0003 g	0.0004 g	0.1177 g	0.1173 g
460-79113-E-4	FB0003	SM 2540D	T	0 g	PASS <0.5mg	0.0006 g	0.0007 g	0.1148 g	0.1141 g

Lab Sample ID	Client Sample ID	Method Chain	Basis	WTtssLCS 00050					
MB 460-236315/1		SM 2540D							
LCSSRM 460-236315/2		SM 2540D		50 mL					
460-79153-A-1 DU		SM 2540D	T						
460-79113-E-1	GW0172	SM 2540D	T						
460-79113-F-2	GW0173	SM 2540D	T						
460-79113-E-3	GW0174	SM 2540D	T						
460-79113-E-4	FB0003	SM 2540D	T						

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Edison Job No.: 460-79113-1

SDG No.:

Batch Number: 236315 Batch Start Date: 07/15/14 07:34 Batch Analyst: Staib, Patricia L

Batch Method: SM 2540D Batch End Date: 07/15/14 13:21

Batch Notes	
Balance ID	27
Constant Weight (WT2) Date/Time in Oven	7-15-14@10;06
Constant Weight (WT2) Date/Time Out	7-15-14@11:18
Constant Weight (WT2) Temp In	104 Celsius
Constant Weight (WT2) Temp Out	104 Celsius
Uncorrected CW (Wt2) Temp In	105 Celsius
Uncorrected CW (Wt2) Temp Out	104 Celsius
Filter Paper Lot Number	EnviroExpress 4171R2
Date samples were placed in the oven	7-15-14@8:18
Oven Temp when samples are put in oven	107 Celsius
Nominal Amount Used	100 mL
Date samples were removed from oven	7-15-14@9:31
Oven Temp when samples removed from oven	104 Celsius
Oven ID	36233
Perform Calculation (0=No, 1=Yes)	1
Uncorrected In Temperature	104 Celsius
Uncorrected Out Temperature	107 Celsius

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Edison Job No.: 460-79113-1

SDG No.:

Batch Number: 237544 Batch Start Date: 07/21/14 06:00 Batch Analyst: Kowalski, Joseph A

Batch Method: SM 4500 NH3 B Batch End Date: 07/21/14 08:30

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Final pH	WTamnIM1 00036		
MB 460-237544/1		SM 4500 NH3 B, SM 4500 NH3 G		50 mL	50 mL	9.50 SU			
LCS 460-237544/2		SM 4500 NH3 B, SM 4500 NH3 G		50 mL	50 mL	9.50 SU	0.5 mL		
460-79062-M-1 MS		SM 4500 NH3 B, SM 4500 NH3 G	T	50 mL	50 mL	9.50 SU	0.5 mL		
460-79062-M-1 MSD		SM 4500 NH3 B, SM 4500 NH3 G	T	50 mL	50 mL	9.50 SU	0.5 mL		
460-79113-C-1	GW0172	SM 4500 NH3 B, SM 4500 NH3 G	T	50 mL	50 mL	9.50 SU			
460-79113-C-2	GW0173	SM 4500 NH3 B, SM 4500 NH3 G	T	50 mL	50 mL	9.50 SU			
460-79113-C-3	GW0174	SM 4500 NH3 B, SM 4500 NH3 G	T	50 mL	50 mL	9.50 SU			
460-79113-C-4	FB0003	SM 4500 NH3 B, SM 4500 NH3 G	T	50 mL	50 mL	9.50 SU			

Batch Notes	
Acid used for pH adjustment	11 N H2SO4 # B - 3193-14 exp.10/24/14
Base used for pH adjustment	15 N NaOH # C - 0357-14 exp.09/04/14
Buffer Reagent ID Number	# C - 0352-14 exp.09/04/14
Distillation End Time	08:30
Distillation Start Time	07:00
Distillation Temperature	210
Sulfuric Acid Lot Number	Macron/53267
NaOH Lot #	Fisher/135180
Sulfuric Acid Reagent ID Number	0.04 N H2SO4 # C - 0746-14 exp. 10/10/14

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Edison Job No.: 460-79113-1

SDG No.:

Batch Number: 237544 Batch Start Date: 07/21/14 06:00 Batch Analyst: Kowalski, Joseph A

Batch Method: SM 4500 NH3 B Batch End Date: 07/21/14 08:30

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Edison Job No.: 460-79113-1

SDG No.:

Batch Number: 237633 Batch Start Date: 07/21/14 12:23 Batch Analyst: Vu, Huan

Batch Method: SM 4500 NH3 G Batch End Date: 07/21/14 14:35

Lab Sample ID	Client Sample ID	Method Chain	Basis	FinalAmount	CalcMsg	WTamnSS1 00007			
ICV 460-237633/7		SM 4500 NH3 G		100 mL	Not Calculated. Perform Calculation not set to Run.	0.2 mL			
ICB 460-237633/8		SM 4500 NH3 G			Not Calculated. Perform Calculation not set to Run.				
MB 460-237544/1-A		SM 4500 NH3 G			Not Calculated. Perform Calculation not set to Run.				
LCS 460-237544/2-A		SM 4500 NH3 G			Not Calculated. Perform Calculation not set to Run.				
460-79062-M-1-B MS		SM 4500 NH3 G	T		Not Calculated. Perform Calculation not set to Run.				
460-79062-M-1-C MSD		SM 4500 NH3 G	T		Not Calculated. Perform Calculation not set to Run.				
CCV 460-237633/17		SM 4500 NH3 G		100 mL	Not Calculated. Perform Calculation not set to Run.	0.2 mL			
CCB 460-237633/18		SM 4500 NH3 G			Not Calculated. Perform Calculation not set to Run.				
460-79113-C-1-A	GW0172	SM 4500 NH3 G	T		Not Calculated. Perform Calculation not set to Run.				
460-79113-C-2-A	GW0173	SM 4500 NH3 G	T		Not Calculated. Perform Calculation not set to Run.				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Edison Job No.: 460-79113-1

SDG No.:

Batch Number: 237633 Batch Start Date: 07/21/14 12:23 Batch Analyst: Vu, Huan

Batch Method: SM 4500 NH3 G Batch End Date: 07/21/14 14:35

Lab Sample ID	Client Sample ID	Method Chain	Basis	FinalAmount	CalcMsg	WTamnSS1 00007			
460-79113-C-3-A	GW0174	SM 4500 NH3 G	T		Not Calculated. Perform Calculation not set to Run.				
CCV 460-237633/29		SM 4500 NH3 G		100 mL	Not Calculated. Perform Calculation not set to Run.	0.2 mL			
CCB 460-237633/30		SM 4500 NH3 G			Not Calculated. Perform Calculation not set to Run.				
460-79113-C-4-A	FB0003	SM 4500 NH3 G	T		Not Calculated. Perform Calculation not set to Run.				
CCV 460-237633/33		SM 4500 NH3 G		100 mL	Not Calculated. Perform Calculation not set to Run.	0.2 mL			
CCB 460-237633/34		SM 4500 NH3 G			Not Calculated. Perform Calculation not set to Run.				

Batch Notes	
Batch Comment	A(00010-00015)-14 CAL exp;07/28/14
Buffer Reagent ID Number	C-0781-14 exp;08/21/14
EDTA Lot Number	C-0780-14 : 0.04 N H2SO4 exp;01/21/15
Hypochlorite Reagent ID Number	C-0731-14 exp;08/08/14
Sodium Nitroprusside Reagent ID	C-0769-14 exp;08/17/14
Perform Calculation (0=No, 1=Yes)	0
Sodium Phenolate Reagent ID Number	C-0768-14 exp;08/17/14
Sulfuric Acid Reagent ID Number	A(00016)-14 : CCV exp:07/21/14

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Edison Job No.: 460-79113-1

SDG No.:

Batch Number: 211031 Batch Start Date: 03/06/14 10:30 Batch Analyst: Vu, Huan

Batch Method: SM 4500 P E Batch End Date: 03/06/14 13:15

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	WTphosSP1 00021			
IC 460-211031/1		SM 4500 P E			50 mL				
IC 460-211031/2		SM 4500 P E		0.03 mL	50 mL	0.03 mL			
IC 460-211031/3		SM 4500 P E		0.05 mL	50 mL	0.05 mL			
IC 460-211031/4		SM 4500 P E		0.1 mL	50 mL	0.1 mL			
IC 460-211031/5		SM 4500 P E		0.2 mL	50 mL	0.2 mL			
IC 460-211031/6		SM 4500 P E		0.5 mL	50 mL	0.5 mL			

Batch Notes	
Ammonium Molybdate Reagent ID Number	B-3065-14 exp;08/27/14
Ascorbic Acid Reagent ID Number	B-3118-14 exp;03/13/14
Batch Comment	Calibration on 03/06/14 / Cal curve exp;08/14/14
Potassium Antimonyl Tartrate Reagent ID	B-3049-14 exp;08/20/14
Sulfuric Acid Reagent ID Number	B-3100-14 : 5N exp;08/20/14

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Edison Job No.: 460-79113-1

SDG No.:

Batch Number: 236042 Batch Start Date: 07/12/14 11:47 Batch Analyst: Leye, Mamadou

Batch Method: SM 4500 P E Batch End Date: 07/12/14 12:11

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	WTophosLCS 00004	WTphosSP1 00021	WTphosSS1 00019	
ICV 460-236042/1		SM 4500 P E		50 mL	50 mL			0.2 mL	
ICB 460-236042/2		SM 4500 P E		50 mL	50 mL				
MB 460-236042/3		SM 4500 P E		50 mL	50 mL				
LCSSRM 460-236042/4		SM 4500 P E		2 mL	50 mL	2 mL			
460-79113-E-1	GW0172	SM 4500 P E	T	50 mL	50 mL				
460-79113-E-1 MS	GW0172	SM 4500 P E	T	50 mL	50 mL		0.2 mL		
460-79113-E-1 MSD	GW0172	SM 4500 P E	T	50 mL	50 mL		0.2 mL		
460-79113-E-2	GW0173	SM 4500 P E	T	50 mL	50 mL				
460-79113-E-3	GW0174	SM 4500 P E	T	50 mL	50 mL				
460-79113-E-4	FB0003	SM 4500 P E	T	50 mL	50 mL				
CCV 460-236042/11		SM 4500 P E		50 mL	50 mL			0.2 mL	
CCB 460-236042/12		SM 4500 P E		50 mL	50 mL				

Batch Notes	
Ammonium Molybdate Reagent ID Number	B-3204-14 exp;11/01/14
Ascorbic Acid Reagent ID Number	B 3310-14 exp 7/19/14
Batch Comment	See batch 211031 for Cal. info. / Cal curve exp;08/14/14
Potassium Antimonyl Tartrate Reagent ID	B-3099-14 exp;08/20/14
Sulfuric Acid Reagent ID Number	5N H2SO4 B 3269-14 exp 12/13/14

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Edison Job No.: 460-79113-1

SDG No.:

Batch Number: 236382 Batch Start Date: 07/14/14 14:45 Batch Analyst: Vu, Huan

Batch Method: SM 5310B Batch End Date: 07/15/14 13:25

Lab Sample ID	Client Sample ID	Method Chain	Basis	FinalAmount	WTtocLCS 00027	WTtocSP1 00023	WTtocSP2 00021		
ICV 460-236382/1		SM 5310B		50 mL			1.25 mL		
ICB 460-236382/2		SM 5310B		50 mL					
MB 460-236382/3		SM 5310B		50 mL					
LCSSRM 460-236382/4		SM 5310B		50 mL	50 mL				
460-79073-H-1 MS		SM 5310B	T	50 mL		1.25 mL			
460-79073-H-1 MSD		SM 5310B	T	50 mL		1.25 mL			
CCV 460-236382/13		SM 5310B		50 mL			1.25 mL		
CCB 460-236382/14		SM 5310B		50 mL					
460-79113-B-2	GW0173	SM 5310B	T	50 mL					
460-79113-B-3	GW0174	SM 5310B	T	50 mL					
460-79113-B-4	FB0003	SM 5310B	T	50 mL					
CCV 460-236382/25		SM 5310B		50 mL			1.25 mL		
CCB 460-236382/26		SM 5310B		50 mL					
MB 460-236382/31		SM 5310B		50 mL					
LCSSRM 460-236382/32		SM 5310B		50 mL	50 mL				
460-79253-H-1 MS		SM 5310B	T	50 mL		1.25 mL			
460-79253-H-1 MSD		SM 5310B	T	50 mL		1.25 mL			
CCV 460-236382/37		SM 5310B		50 mL			1.25 mL		
CCB 460-236382/38		SM 5310B		50 mL					
CCV 460-236382/49		SM 5310B		50 mL			1.25 mL		
CCB 460-236382/50		SM 5310B		50 mL					
460-79113-B-1	GW0172	SM 5310B	T	50 mL					
CCV 460-236382/60		SM 5310B		50 mL			1.25 mL		

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Edison Job No.: 460-79113-1

SDG No.:

Batch Number: 236382 Batch Start Date: 07/14/14 14:45 Batch Analyst: Vu, Huan

Batch Method: SM 5310B Batch End Date: 07/15/14 13:25

Lab Sample ID	Client Sample ID	Method Chain	Basis	FinalAmount	WTtocLCS 00027	WTtocSP1 00023	WTtocSP2 00021		
CCB 460-236382/61		SM 5310B		50 mL					

Batch Notes	
Batch Comment	T(1457-1460)-14 CAL exp;09/26/14 / H2SO4 : 56441

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Edison Job No.: 460-79113-1

SDG No.:

Batch Number: 237234 Batch Start Date: 07/18/14 14:00 Batch Analyst: Hu, Youhao

Batch Method: SM 4500 H+ B Batch End Date: 07/18/14 15:09

Lab Sample ID	Client Sample ID	Method Chain	Basis	FinalAmount	SampleTemp	pHRead1	pHRead2	CalcMsg	WTpHCCV 00022
MB 460-237234/2		SM 4500 H+ B		20 mL	22.6 Celsius	5.85 SU	5.84 SU	Read 2 Pass	
LCSSRM 460-237234/3		SM 4500 H+ B		20 mL	23.6 Celsius	7.01 SU	7.01 SU	Read 2 Pass	
460-79093-P-1 DU		SM 4500 H+ B	T	20 mL	22.7 Celsius	8.19 SU	8.19 SU	Read 2 Pass	
CCV 460-237234/11		SM 4500 H+ B		20 mL	23.7 Celsius	6.98 SU	6.98 SU	Read 2 Pass	20 mL
460-79113-F-1	GW0172	SM 4500 H+ B	T	20 mL	22.5 Celsius	7.55 SU	7.56 SU	Read 2 Pass	
460-79113-F-2	GW0173	SM 4500 H+ B	T	20 mL	22.4 Celsius	6.32 SU	6.32 SU	Read 2 Pass	
460-79113-F-3	GW0174	SM 4500 H+ B	T	20 mL	22.5 Celsius	7.47 SU	7.49 SU	Read 2 Pass	
460-79113-F-4	FB0003	SM 4500 H+ B	T	20 mL	22.3 Celsius	5.87 SU	5.86 SU	Read 2 Pass	
CCV 460-237234/22		SM 4500 H+ B		20 mL	23.8 Celsius	6.99 SU	6.99 SU	Read 2 Pass	20 mL
CCV 460-237234/27		SM 4500 H+ B		20 mL	23.8 Celsius	6.99 SU	6.99 SU	Read 2 Pass	20 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	WTpHLCS 00015					
MB 460-237234/2		SM 4500 H+ B							
LCSSRM 460-237234/3		SM 4500 H+ B		20 mL					
460-79093-P-1 DU		SM 4500 H+ B	T						
CCV 460-237234/11		SM 4500 H+ B							
460-79113-F-1	GW0172	SM 4500 H+ B	T						
460-79113-F-2	GW0173	SM 4500 H+ B	T						
460-79113-F-3	GW0174	SM 4500 H+ B	T						
460-79113-F-4	FB0003	SM 4500 H+ B	T						
CCV 460-237234/22		SM 4500 H+ B							
CCV 460-237234/27		SM 4500 H+ B							

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Edison Job No.: 460-79113-1

SDG No.:

Batch Number: 237234 Batch Start Date: 07/18/14 14:00 Batch Analyst: Hu, Youhao

Batch Method: SM 4500 H+ B Batch End Date: 07/18/14 15:09

Batch Notes	
pH Buffer 1 ID	4buffer: Thermo/ 910104 exp. 10/2015
pH Buffer 2 ID	7buffer: Fisher/ 140782 exp. 02/2016
pH Buffer 3 ID	10buffer: Fisher/ 137979 exp. 11/2015
Instrument ID	PH meter: D

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Shipping and Receiving Documents

TestAmerica South Jersey
3000 Lincoln Drive East Suite A
Marlton, NJ 08053
Phone (856) 334-1030 Fax (856) 222-1984

Chain of Custo

460-79113 Chain of Custody

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

07/24/2014

Client Information	Sampler: Matt Behum, Jake Wilhelm	Lab PM: Beebe, Kristin M	COC No: 460-48145-30069.1
Client Contact: Craig Hutchings	Phone:	E-Mail: kristin.beebe@testamericainc.com	Page: Page 1 of 2
Company: Integral Consulting Inc			Job #: 79813
Address: 1205 W Bay Drive NW	Due Date Requested:		
City: Olympia	TAT Requested (days):		
State, Zip: WA, 98502			
Phone: 360-705-3534(Tel)	PO #: Purchase Order not required		
Email: chutchings@integral-corp.com	WO #:		
Project Name: NJ Site Drinking Water	Project #: 46014548		
Site:	SSOW#:		

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA
M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	904.0 - Radium 228 - Standard Target List	903.0 - Radium 226Combined Radium226 & Radium228	8270D - Target Compound List for BNA updated SOM	SM4500NH3_G - Ammonia	2540C, SM4500_H+	~~300.0, 245.1~~ Hardness	SM5310B - Organic Carbon, Total (TOC)	524.2_Preserved - 524.2 Regular Full List + TBA	2540D - Total Suspended Solids	2320B, 353.2, 4500_P_E_Ortho pH	8082A - PCBs	8081B - Target Compound List for Pesticides	300_ORGFM_28D - Br, Cl, SO4 & Fl	Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	X	D	D	N	S	N	D	S	A	N	N	N	N	N	X	
GW 0172	7/9/14	9:15	G	Water						X		X	X		X	X			X		Tag #1201 1
GW 0173	7/9/14	9:50	G	Water						X		X	X		X	X			X		#1205 2
GW 0174	7/9/14	9:25	G	Water						X		X	X		X	X			X		#1203 3
FB 0003	7/9/14	10:00	G	Water						X		X	X		X	X			X		#1207 4
				Water																	
				Water																	
				Water																	

JKW
7/9/2014

SHORT HOLD

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

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

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by: Jake Wilhelm	Date: 7/9/2014	Time: 13:00	Method of Shipment: Cooler		
Relinquished by: Jake Wilhelm	Date/Time: 13:00	Company: Integral	Received by:	Date/Time: 7-9-14 1500	Company: TA
Relinquished by:	Date/Time: 7-9-14	Company: TA	Received by:	Date/Time: 7/9 1740	Company: TA
Relinquished by:	Date/Time: 7/9	Company: TA	Received by:	Date/Time: 7/9 1905	Company: TA

Custody Seals Intact: Δ Yes Δ No | Custody Seal No: 341275

Cooler Temperature(s) °C and Other Remarks: 1/2.9°C 1.4°C 3.3°C 1.5°C 3.4°C 1°C 2.9 1.9/3.4 .8/2.7°C

7/9 2045 .7°C 2.6

2045 7/9/14 TAED

TestAmerica Edison
Receipt Temperature and pH Log

Job Number: 79113

Number of Coolers: 7 IR Gun # 5

Cooler Temperatures

	RAW	CORRECTED		RAW	CORRECTED		RAW	CORRECTED
Cooler #1:	.7 °C	2.6 °C	Cooler #4:	1.5 °C	3.4 °C	Cooler #7:	-.8 °C	2.7 °C
Cooler #2:	1 °C	2.9 °C	Cooler #5:	1 °C	2.9 °C	Cooler #8:	°C	°C
Cooler #3:	1.4 °C	3.3 °C	Cooler #6:	1.9 °C	3.8 °C	Cooler #9:	°C	°C

TALS Sample Number	Ammonia (pH<2)	COD (pH<2)	Nitrate Nitrite (pH<2)	Metals* (pH<2)	Hardness (pH<2)	Pest (pH 5-9)	EPH or QAM (pH<2)	Phenols (pH<2)	Sulfide (pH>9)	TKN (pH<2)	TOC (pH<2)	Total Cyanide (pH>12)	Total Phos (pH<2)	Other	Other
1	<2			<2							<2				
2	<2			<2							<2				
3	<2			<2							<2				
4	<2			<2							<2				

If pH adjustments are required record the information below:

Sample No(s). adjusted: _____

Preservative Name/Conc.: _____ Volume of Preservative used (ml): _____

Lot # of Preservative(s): _____ Expiration Date: _____

The appropriate Project Manager and Department Manager should be notified about the samples which were pH adjusted.

** Samples for Metal analysis which are out of compliance must be acidified at least 24 hours prior to analysis.*

Initials: K.L Date: 7/9/14

Login Sample Receipt Checklist

Client: Integral Consulting Inc

Job Number: 460-79113-1

Login Number: 79113

List Source: TestAmerica Edison

List Number: 1

Creator: Elvie, Cloide

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
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	2.6, 2.9, 3.3, 3.4,2.9,3.8,2.7 IR#5
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.	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.	True	
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").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Integral Consulting Inc

Job Number: 460-79113-1

Login Number: 79113
List Number: 2
Creator: Conner, Keaton

List Source: TestAmerica Savannah
List Creation: 07/11/14 04:35 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
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?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	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.	True	
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	