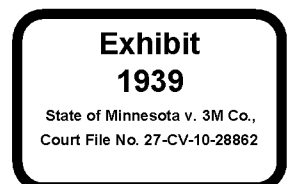


**TOXICITY TEST
FINAL REPORT
EVENT 2**

E04-0126

February 25, 2004





March 9, 2004

Ms. Susan Beach
 Minnesota Mining and Manufacturing
 Environmental Technology and Safety
 935 Bush Avenue, Building 2-3E-09
 St. Paul, MN 55106

Cc: Ms. Tina Galloway
 3M Cottage Grove
 10746 Innovation Road
 Building 145
 Cottage Grove, Minnesota 55016

Ms. Beach,

The tables below summarize the chemical and toxicological results for the tests conducted with the 3M Cottage Grove facility samples received by Era on February 26, 2004. The tests were conducted as outlined in the 3M GPO dated February 9, 2004 and the IJMS number E04-0126.

Briefly, each sample was tested at 100% concentration with two replicate test chambers per sample. Ten 15 day old fish were exposed per replicate and test temperature was maintained at 25°C ± 1°C. Solutions were renewed at the 48 hour test interval using the original sample that had been stored in darkness at 1-4°C. Test duration was 96 hours, and per your guidance, the tests were conducted in darkness.

Sample Identification	Sampling Date	Sampling Time	Arrival Date	Arrival Time	Arrival Temp. (°C)	Arrival Ammonia (mg/L)	Arrival TRC (mg/L)
Influent 1/2	2/25/2004	10:46	2/26/2004	10:12	0.5	0.6	<0.02
Port 1A	2/25/2004	10:56	2/26/2004	10:12	0.5	0.5	<0.02
Port 4A	2/25/2004	11:11	2/26/2004	10:12	0.5	0.5	<0.02
Port 1B	2/25/2004	11:03	2/26/2004	10:12	0.5	0.5	<0.02
Port 4B	2/25/2004	11:25	2/26/2004	10:12	0.5	0.5	<0.02
Combined Effluent	2/25/2004	11:37	2/26/2004	10:12	0.5	0.8	<0.02

None of the samples contained total residual chlorine (TRC) concentrations above the method detection limit of 0.02 mg/L. Ammonia concentrations for the samples ranged from 0.5 mg/L to 0.8 mg/L. The measured ammonia concentrations were not anticipated to cause acute adverse effects to the fish and therefore the tests were not pH adjusted. Arrival temperature for each of the samples was 0.5°C.

Results for the toxicity exposures are shown in the table below.

Sample Identification	24 Hour Mean Percentage Survival	48 Hour Mean Percentage Survival	72 Hour Mean Percentage Survival	96 Hour Mean Percentage Survival	pH Range (s.u.)	DO Range (mg/L)	Cond Range (μ mhos/cm)
MHRW Control	100	100	100	100	7.9-8.0	7.6-8.4	330-335
Influent 1/2	0	0	0	0	7.9-8.0	5.2-7.0	1227 ^a
Port 1A	95	90	85	80	7.7-8.4	6.1-7.2	1189-1196
Port 4A	90	75	65	60	7.7-8.5	6.1-7.3	1211-1260
Port 1B	95	95	95	90	7.7-8.5	6.7-8.1	1227-1258
Port 4B	95	95	95	95	7.8-8.5	6.9-8.1	1223-1253
Combined Effluent	95	95	85	75	7.9-8.5	6.7-8.1	1213 ^a

^a No Range Obtained

The moderately hard reconstituted water (MHRW) supported 100% fish survival for the duration of the test indicating the fish and test methods were acceptable for assessing toxicity. The Influent 1/2 sample was observed to cause complete (100%) fish mortality within 24 hours of test initiation. The sample identified as Port 1A was found to support mean 96 hour fish survival of 80%, and the sample identified as Port 4A was observed to support mean 96 hour fish survival of 60%. Port 1B and Port 4B samples supported mean 96 hour fish survival of 90% and 95%, respectively. The Combined Effluent sample supported mean 96 hour fish survival of 75%. Intermediate test interval mean fish survival values are shown in the table above.

None of the routine chemistry parameters (pH, dissolve oxygen, conductivity) measured during the test were abnormal for this type of study.

Please call or mail me if you have any questions.

Sincerely,

Era Laboratories, Inc.



Joe Dierkes,
Project Manager, Eco-Toxicology

Era Laboratories, Inc.

Client: 3M ⁰¹²⁶ (~~E04-0120~~)

Era Project #: 017983

Test: Fathead Minnow Acute Toxicity Tests

Test Initiation Date: 2/26/04

Test Termination Date: 3/1/04

TOXICITY TEST RENEWAL FORM

CLIENT: 3MERA PROJECT #: 017983TEST: Acute Toxicity EvaluationTEST INITIATION DATE: 2/26/04ORGANISM: Fathead MinnowTEST TERMINATION DATE: 3/1/04

TEST DAY	0 Test Initiation	1	2	3	4
DATE	2-26-04	2-27-04	2-28-04	2-29-04	3-1-04
TIME OF RENEWAL	1430	1240	1515	1300	1235
TIME OF FEEDING	NA	NA	1220	NA	NA
CONTROL WATER	MHRW	MHRW	MHRW	MHRW	MHRW
INITIALS	BL	BL	AG	AG	BL

INITIAL CHEMISTRIES

CLIENT: 3M
 ERA PROJECT #: 017983
 TEST: Acute Toxicity Evaluation
 TEST INITIATION DATE: 2/26/04
 ORGANISM(S): Fathead Minnow
 TEST TERMINATION DATE: 3/1/04

Sample	Date/Initials				Date/Initials			
	pH (SU)	Cond. (µmhos/cm)	Temp. (°C)	D.O. (mg/L)	pH (SU)	Cond. (µmhos/cm)	Temp. (°C)	D.O. (mg/L)
MHRW	8.02	335 335	25.2	8.4	8.00	330	24.5	8.2
INF 1/2	7.89	1227	25.2	7.0	8.28 0144 7.70	1196 <i>AN Diesel</i>	24.5	7.2
Part 1A	7.82	1189	25.3	6.1	7.72	1211	24.6	7.3
Part 1A	7.84	1260	25.3	6.1	7.73	1227	24.5	8.1
Part 1B	7.87	1258	25.4	6.7	7.77	1223	24.6	8.1
Part 4B	7.89	1253	25.4	7.3	7.85	1213	24.6	8.1
Com Eff	7.97	728	25.3	6.7				
		<i>likely error</i>						

Laboratory Report - In House Only

SUSAN BEACH
 MINNESOTA MINING AND MANUFACTURING
 ENVIRONMENTAL TECHNOLOGY AND SAFETY
 935 BUSH AVE, BUILDING 2-3E-09
 ST. PAUL MN 55106

Project Number: 017983
 COC Number: 3M
 Temperature (°C): 0.5
 Date Received: 2/26/2004
 Report Date: 3/ 8/2004

Site: INFLUENT PHASE 1/2	Date: 02/25/2004	Time: 10:46	Matrix: Wastewater
Parameter: Acute, Fathead Minnow Nitrogen, Ammonia Residual Chlorine	Results: done 0.56 done	Units: mg/L	Date Analyzed: 3/ 7/2004 2/26/2004 3/ 7/2004
QC Comments:			
Site: UNIT 1 PORT A LEAD	Date: 02/25/2004	Time: 10:56	Matrix: Wastewater
Parameter: Acute, Fathead Minnow Nitrogen, Ammonia Residual Chlorine	Results: done 0.48 done	Units: mg/L	Date Analyzed: 3/ 7/2004 2/26/2004 3/ 7/2004
QC Comments:			
Site: UNIT 4 PORT A LEAD	Date: 02/25/2004	Time: 11:11	Matrix: Wastewater
Parameter: Acute, Fathead Minnow Nitrogen, Ammonia Residual Chlorine	Results: done 0.50 done	Units: mg/L	Date Analyzed: 3/ 7/2004 2/26/2004 3/ 7/2004
QC Comments:			
Site: UNIT 1 PORT B LEAD	Date: 02/25/2004	Time: 11:03	Matrix: Wastewater
Parameter: Acute, Fathead Minnow Nitrogen, Ammonia Residual Chlorine	Results: done 0.52 done	Units: mg/L	Date Analyzed: 3/ 7/2004 2/26/2004 3/ 7/2004
QC Comments:			
Site: UNIT 4 PORT B LEAD	Date: 02/25/2004	Time: 11:25	Matrix: Wastewater
Parameter: Acute, Fathead Minnow Nitrogen, Ammonia Residual Chlorine	Results: done 0.50 done	Units: mg/L	Date Analyzed: 3/ 7/2004 2/26/2004 3/ 7/2004
QC Comments:			
Site: COMBINED EFFLUENT PHASE 1/2	Date: 02/25/2004	Time: 11:37	Matrix: Wastewater
Parameter: Acute, Fathead Minnow Nitrogen, Ammonia Residual Chlorine	Results: done 0.76 done	Units: mg/L	Date Analyzed: 3/ 7/2004 2/26/2004 3/ 7/2004
QC Comments:			

**Conventional Pollutants
FINAL REPORT
EVENT 2**

E04-0126

February 25, 2004

1085104

ST

3M Environmental Laboratory

Chain of Custody /Request for Laboratory Analytical

3M Env. Lab Project #

For Internal Use Only

Shipping Address: 3M Bldg 7-3F-02, 135 Union Avenue, St. Paul, MN 55108

Telephone: Sample Receiving: (651) 778-4226, Analytical: (651) 778-8751, Fax: (651) 778-6378

Project ID/Project Name: 3M Cottage Grove Activated Carbon Testing

Template #: Project Lead: Brian Mader, Dept. # (main): 112583

Final Report Due Date: Internal Due Date: Class/Job/Project #

E04-01206

RP 3/1/04

Report Results to: Contact Name: Brian Mader, Company: 3M Environmental Laboratory, Mailing Address: Bldg. 2-03-09 935 Bush Ave., City, State, Zip: St. Paul, MN 55144, Telephone #: (651) 778-6750, FAX #: (651) 778-4226

Special Instructions and/or Specific Regulatory Requirements: Analysis Requested: Complete below. Attach only as specified abbreviation. - See Attached Lab Req -

Table with columns: Item #, Client Sample Identification, 3M LIMS#, Date Sampled, Time Sampled, Matrix, Method, Enter no. number of containers of each, HPLC, IGC, HCO, VOA, HCl, HCN, None, Other, Total Number of Containers. Rows include Influent Phase 1/2, Unit 1 Port A Lead, Unit 4 Port A Lead, Unit 1 Port B Lead, Unit 4 Port B Lead, Combined Effluent 1/2, and Field Blank.

Chain of Custody: Collected by (print): MAH McDermott, Collector's signature: [Signature], Item #, Relinquished by/Affiliation, Time, Date, Shipped Via, Received by/Affiliation, Time, Date

Sample Condition Upon Receipt: [X] Acceptable, [] Other, Temperature: 22 C, Received on ice, Other Analytical Codes

CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

3M_MN01539164



COOLER RECEIPT / SAMPLE LOG-IN SHEET

COOLER RECEIPT / SAMPLE LOG-IN SHEET (115-ATT2.WB1) / SWL-GA-115 REV 5.0 / GA-115-CRLOGIN.F

LAB NAME: PACE ANALYTICAL SERVICES, INC.

PAGE 1 OF 1

RECEIVED BY (PRINT NAME): JASON SPRIGGS

REC'D DATE 03/03/04

RECEIVED BY (SIGNATURE): *[Signature]*

TIME REC'D 09:45

LOGGED IN BY (SIGNATURE): *[Signature]*

LOG-IN DATE 2004-03-03 12:51

PROJECT: INTER-LAB	Client Sample #	Sample Fraction @	Assigned LAB#	Cooler I.D.	pH Check	ACID/BASE LOT#	REMARKS: CONDITION OF SAMPLE SHIPMENT, ETC.
EPISODE: 53988							
SAMPLE DELIVERY GROUP: 53988							
Remarks	105362743	I	53988.01	03/03/04-1	N		3.6c
1. CUSTODY SEAL(S): Present/Absent Intact/Broken	105363750	↓	53988.02	03/03/04-1	N		3.6c
2. CUSTODY SEALS NOS.: N/A	105362768		53988.03	03/03/04-1	N		3.6c
	105362776		53988.04	03/03/04-1	N		3.6c
	105362784		53988.05	03/03/04-1	N		3.6c
3. CHAIN-OF CUSTODY: Present/Absent Sealed in Plastic? Yes/ No Taped To Lid? Yes/ No Properly Filled Out (Ink, Signed, ETC.)? Yes/ No	105362792		53988.06	03/03/04-1	N		3.6c
	105362800		53988.07	03/03/04-1	N		3.6c
4. AIRBILL AirBill/ Sticker Present/Absent							
5. AIRBILL NO: 483891945140							
6. COOLER CONDITIONS Enough Ice? Yes/ No Type of Ice? Wet Type of Packing? Bubble Wrap							
7. SAMPLE TAGS Absent							
8. SAMPLE CONDITION: Intact/ Present/Broken/ Leaking Bottles Sealed In Separate Plastic Bags? Yes/ No Correct Containers Used For Tests Indicated? Yes/ No Correct Preservative? Yes/ No Sufficient Sample? Yes/ No Labels Complete (I.D., Date, Time, Signature, Preservative)? Yes/ No VOA Samples Without Bubbles? Yes/ No							
9. Does Information on Custody Records, Labels, Tags Agree? Yes/ No							
10. RAD SCREEN WITH GIEGER COUNTER? Yes/ No							
11. P.O. Called? Yes/ No							

* Contact PO and attach record of resolution
 @ Sample Fractions: B=SV GC/MS, V= VOA GC/MS or GC, P=Pesticide, H=Herbicide, D=Dioxin, A=Air, I=Inorganics, C=Cyanide, M=Metals, R=Radiochemistry
 ~ Note samples with bubbles under remarks section.



Pace Analytical Services, Inc.
1700 West Albany
Broken Arrow, OK 74012
Phone: 918.251.2858
Fax: 918.251.2599

March 8, 2004

Roxanne Patterson
Pace Analytical Services
1700 Elm Street
Suite 200
Minneapolis, MN 55414

Project: Inter Lab/ 1085104
SDG: 53988

Dear Ms. Patterson:

Enclosed please find our standard tabular report for samples received by our laboratory on March 5, 2004. Please see the enclosed SDG Narratives for additional information regarding analysis of these samples.

If, in your review, you should have any questions or require additional information, please do not hesitate to call.

Sincerely,

Randy Staggs
randy.staggs@pacelabs.com
Project Manager

RES/rs

Enclosures

"We certify that the following report meets all required NELAC reporting standards as specified in NELAC 5.13, July 1, 1999. Any deviation or variance is noted in the case narrative(s). Estimated uncertainties regarding these analyses are presented in the Quality Control Section of this report."

1



Pace Analytical Services, Inc.
1700 West Albany
Broken Arrow, OK 74012
Phone: 918.251.2858
Fax: 918.251.2599

SDG NARRATIVE

CLIENT: PACE-MN
PROJECT: INTER-LAB

DATE: March 8, 2004
EPISODE NO.: 53988

INORGANIC FRACTION:

Seven water samples were submitted for dissolved total organic carbon analysis. No major problems occurred during the analysis of these samples. The sample's analyses were completed according to the following:

<u>SWL SOP #</u>	<u>Method Reference</u>	<u>Parameter</u>
SWL-IN-310	SM5310B	Total Organic Carbon

Please refer to *Cooler Receipt / Sample Log-In Sheet* for details of sample conditions at receipt.

There were no hold time violations noted. Samples were filtered using a teflon filter prior to analysis.

Preparation Blank: No target analytes were detected in the preparation blank above the PQL.

Lab Control Spikes: All laboratory control spikes were within QC limits.

Matrix Spikes: No matrix spikes were submitted with this episode.

Duplicates: All LCS and matrix duplicate results were within QC limits.

No further data usability limitations exist for this Inorganic Analysis Data Package.

Explanations of the forms are the following:

Form 1 Sample results

Form 3 Blanks - Provided by the LB Quality Control Data Sheets.

Form 7 Laboratory Control Sample - Provided by the LCS/LCSD Quality Control Data Sheets.

I certify that this data is technically accurate, complete, and in compliance with the terms and conditions of the contract, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager, or his/her designee, as verified by the following signature.

Sincerely,

Susan S. Turner
Wet Chemistry Supervisor

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, Inc.
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Sample Results

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Pace Analytical Services, Inc.
1700 West Albany
Broken Arrow, OK 74012
Phone: 918.251.2858
Fax: 918.251.2599

LAB ID : 53988.01
SAMPLE : E04-0126-67609
SDG : 53988
MATRIX : W
SITE : 1085104

REPORTED : 03/08/2004
SAMPLED : 02/20/2004
SUBMITTED : 03/03/2004

PARAMETER	REPORTING		RESULTS	DATE/TIME		METHOD
	LIMIT	UNITS		ANALYZED	ANALYST REFERENCE	
TOTAL ORGANIC CARBON	1.0	mg/l	57.0	03/04/04 19:59	KAL SW9060	

COMPOUND* = RESULTS REPORTED AS RECEIVED
ND = NOT DETECTED ABOVE QUANTITATION LIMIT
* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS
N/A = NOT APPLICABLE
METHODOLOGY: SM = STANDARD METHODS, 18TH EDITION, 1992/19TH EDITION, 1995
EPA = #EPA600/4-79-020, MARCH 1985
SW = SW 846 Rev. 4 1996

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Broken Arrow, OK 74012
Phone: 918.251.2858
Fax: 918.251.2599

LAB ID : 53988.02
SAMPLE : E04-0126-67610
SDG : 53988
MATRIX : W
SITE : 1085104

REPORTED : 03/08/2004
SAMPLED : 02/20/2004
SUBMITTED : 03/03/2004

PARAMETER	REPORTING		RESULTS	DATE/TIME		METHOD
	LIMIT	UNITS		ANALYZED	ANALYST REFERENCE	
TOTAL ORGANIC CARBON	1.0	mg/l	58.0	03/04/04 20:38	KAL SW9060	

COMPOUND* = RESULTS REPORTED AS RECEIVED
ND = NOT DETECTED ABOVE QUANTITATION LIMIT
* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS
N/A = NOT APPLICABLE
METHODOLOGY: SM = STANDARD METHODS, 18TH EDITION, 1992/19TH EDITION, 1995
EPA = #EPA600/4-79-020, MARCH 1985
SW = SW 846 Rev. 4 1996

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 1700 West Albany
 Broken Arrow, OK 74012
 Phone: 918.251.2858
 Fax: 918.251.2599

LAB ID : 53988.03
 SAMPLE : E04-0126-67611
 SDG : 53988
 MATRIX : W
 SITE : 1085104

REPORTED : 03/08/2004
 SAMPLED : 02/20/2004
 SUBMITTED : 03/03/2004

PARAMETER	REPORTING LIMIT	UNITS	RESULTS	DATE/TIME ANALYZED	METHOD ANALYST REFERENCE
TOTAL ORGANIC CARBON	1.0	mg/l	57.1	03/04/04 20:53	KAL SW9060

COMPOUND* = RESULTS REPORTED AS RECEIVED
 ND = NOT DETECTED ABOVE QUANTITATION LIMIT
 * = SURROGATE RECOVERY OUTSIDE OF QC LIMITS
 N/A = NOT APPLICABLE
 METHODOLOGY: SM = STANDARD METHODS, 18TH EDITION, 1992/19TH EDITION, 1995
 EPA = #EPA600/4-79-020, MARCH 1985
 SW = SW 846 Rev. 4 1996

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Pace Analytical Services, Inc.
 1700 West Albany
 Broken Arrow, OK 74012
 Phone: 918.251.2858
 Fax: 918.251.2599

LAB ID : 53988.04
 SAMPLE : E04-0126-67612
 SDG : 53988
 MATRIX : W
 SITE : 1085104

REPORTED : 03/08/2004
 SAMPLED : 02/20/2004
 SUBMITTED : 03/03/2004

PARAMETER	REPORTING		RESULTS	DATE/TIME		METHOD
	LIMIT	UNITS		ANALYZED	ANALYST REFERENCE	
TOTAL ORGANIC CARBON	1.0	mg/l	57.3	03/04/04 21:04	KAL SW9060	

COMPOUND* = RESULTS REPORTED AS RECEIVED
 ND = NOT DETECTED ABOVE QUANTITATION LIMIT
 * = SURROGATE RECOVERY OUTSIDE OF QC LIMITS
 N/A = NOT APPLICABLE
 METHODOLOGY: SM = STANDARD METHODS, 18TH EDITION, 1992/19TH EDITION, 1995
 EPA = #EPA600/4-79-020, MARCH 1985
 SW = SW 846 Rev. 4 1996

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Pace Analytical Services, Inc.
1700 West Albany
Broken Arrow, OK 74012
Phone: 918.251.2858
Fax: 918.251.2599

LAB ID : 53988.05
SAMPLE : E04-0126-67613
SDG : 53988
MATRIX : W
SITE : 1085104
REPORTED : 03/08/2004
SAMPLED : 02/20/2004
SUBMITTED : 03/03/2004

Table with 5 columns: PARAMETER, REPORTING LIMIT, UNITS, RESULTS, DATE/TIME ANALYZED, METHOD ANALYST REFERENCE. Row 1: TOTAL ORGANIC CARBON, 1.0, mg/l, 58.5, 03/04/04 21:18, KAL SW9060

COMPOUND* = RESULTS REPORTED AS RECEIVED
ND = NOT DETECTED ABOVE QUANTITATION LIMIT
* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS
N/A = NOT APPLICABLE
METHODOLOGY: SM = STANDARD METHODS, 18TH EDITION, 1992/19TH EDITION, 1995
EPA = #EPA600/4-79-020, MARCH 1985
SW = SW 846 Rev. 4 1996

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1700 West Albany
Broken Arrow, OK 74012
Phone: 918.251.2858
Fax: 918.251.2599

LAB ID : 53988.06
SAMPLE : 304-0126-67614
SDG : 53988
MATRIX : W
SITE : 1085104
REPORTED : 03/08/2004
SAMPLED : 02/20/2004
SUBMITTED : 03/03/2004

Table with 5 columns: PARAMETER, REPORTING LIMIT, UNITS, RESULTS, DATE/TIME ANALYZED, METHOD ANALYST REFERENCE. Row 1: TOTAL ORGANIC CARBON, 1.0, mg/l, 58.3, 03/04/04 21:34, KAL SW9060

COMPOUND* = RESULTS REPORTED AS RECEIVED
ND = NOT DETECTED ABOVE QUANTITATION LIMIT
* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS
N/A = NOT APPLICABLE
METHODOLOGY: SM = STANDARD METHODS, 18TH EDITION, 1992/19TH EDITION, 1995
EPA = #EPA600/4-79-020, MARCH 1985
SW = SW 846 Rev. 4 1996

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Pace Analytical Services, Inc.
1700 West Albany
Broken Arrow, OK 74012
Phone: 918.251.2858
Fax: 918.251.2599

LAB ID : 53988.07
SAMPLE : E04-0126-67622
SDG : 53988
MATRIX : W
SITE : 1085104

REPORTED : 03/10/2004
SAMPLED : 02/20/2004
SUBMITTED : 03/03/2004

PARAMETER	RESULTS**	UNITS	DATE PREPARED	DATE ANALYZED	REFERENCE METHOD
TOTAL ORGANIC CARBON	1.0	U mg/l		03/04/04 21:42	SW9060

COMPOUND* = RESULTS REPORTED AS RECEIVED

REPORT OF LABORATORY ANALYSIS

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QC Results

Pace Analytical Services, Inc.
1700 West Albany
Broken Arrow, OK 74012
Phone: 918.251.2858
Fax: 918.251.2599

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, Inc.
 1700 West Albany
 Broken Arrow, OK 74012
 Phone: 918.251.2858
 Fax: 918.251.2599

LAB ID : PEW0403040451 LB1 REPORTED : 03/08/2004
 QAQC : 0403040451 ANALYZED : 03/04/2004 14:34
 MATRIX : W DILUTION : 1

PARAMETER	REPORTING		RESULTS	DATE/TIME		METHOD
	LIMIT	UNITS		ANALYZED	ANALYST	REFERENCE
TOTAL ORGANIC CARBON	1.0	mg/l	ND	03/04/04 14:34	KAL	SW9060

COMPOUND* = RESULTS REPORTED AS RECEIVED
 ND = NOT DETECTED ABOVE QUANTITATION LIMIT
 * = SURROGATE RECOVERY OUTSIDE OF QC LIMITS
 N/A = NOT APPLICABLE
 METHODOLOGY: SM = STANDARD METHODS, 18TH EDITION, 1992/19TH EDITION, 1995
 EPA = #EPA600/4-79-020, MARCH 1985
 SW = SW 846 Rev. 4 1996

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Pace Analytical Services, Inc.
 1700 West Albany
 Broken Arrow, OK 74012
 Phone: 918.251.2858
 Fax: 918.251.2599

LABORATORY CONTROL SPIKE/SPIKE DUPLICATE RECOVERY

MATRIX : W

REPORTED : 03/08/2004

LAB ID	QC BATCH	ANALYZED
LCW0403040451	0403040451	2004-03-04 14:50
LDW0403040451	0403040451	2004-03-04 15:05

Parameter	mg/l	SPIKED AMOUNT	SPIKE CONC.	SPIKE %Rec	DUP CONC.	DUP %Rec	RPD---	RPD %Rec.	MAX LIMITS
TOTAL ORGANIC CARBON		50	49.8	100	49.3	99	1	20	90-110

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, Inc.
1700 West Albany
Broken Arrow, OK 74012
Phone: 918.251.2858
Fax: 918.251.2599

Chain of Custody / Cooler Receipt

REPORT OF LABORATORY ANALYSIS

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1085104

3M Environmental Laboratory

3M Env. Lab. Project #
For Internal Use Only
E04-0120

Chain of Custody / Request for Laboratory Analytical

Project ID/Project Name: **3M Collage Grove Activated Carbon Testing**

Temp: **RP**

Project Lead: **Brian Mader**

Dept. # (Main): **112583**

Classified/Project #

Company: **3M Environmental Laboratory**

Address: **Bldg. 2-03-09 935 Bush Ave.**

City, State, Zip: **St. Paul, MN 55144**

Telephone #: **(651) 778-6750**

Fax #: **(651) 778-4226**

Item #	Client Sample Identification	3M LIMS#	Date Sampled	Time Sampled	Matrix/Media	Preservatives:	Total Number of Containers	Analysis Requested:
1	Influent Phase 1/2 (Inf 1/2)	67607	6/10/04	10:40	WW	HNO ₃ H ₂ SO ₄ VOA, HCl	105 R 627715	See Attached Lab Rec
2	Unit 1 Port A Lead (Port 1A)	67610	6/10/04	10:50	WW	HNO ₃ H ₂ SO ₄ VOA, HCl	105 R 627715	See Attached Lab Rec
3	Unit 4 Port A Lead (Port 4A)	67612	6/10/04	11:11	WW	HNO ₃ H ₂ SO ₄ VOA, HCl	105 R 627715	See Attached Lab Rec
4	Unit 1 Port B Lead (Port 1B)	67611	6/10/04	11:05	WW	HNO ₃ H ₂ SO ₄ VOA, HCl	105 R 627715	See Attached Lab Rec
5	Unit 4 Port B Lead (Port 4B)	67613	6/10/04	11:25	WW	HNO ₃ H ₂ SO ₄ VOA, HCl	105 R 627715	See Attached Lab Rec
6	Combined Effluent 1/2 (Comb Eff)	67614	6/10/04	11:51	WW	HNO ₃ H ₂ SO ₄ VOA, HCl	105 R 627715	See Attached Lab Rec
7	Field Blank	67622	6/10/04	1:00	WW	HNO ₃ H ₂ SO ₄ VOA, HCl	105 R 627715	See Attached Lab Rec
8								
9								
10								

Chain of Custody

Collected by (print): **NAH NORDMOTH**

Revised/Revised by (print): **[Signature]**

Time: **11:30** Date: **6/10/04**

Collector's signature: **[Signature]**

Receiver's signature: **[Signature]**

Date: **6/10/04**

Time: **11:30**

Sample Condition Upon Receipt: Acceptable Other

Temperature: **0**

Other Analytical Data: **362**



LAB NAME: PACE ANALYTICAL SERVICES, INC.

PAGE 1 OF 1

RECEIVED BY (PRINT NAME): JASON SPRIGGS

REC'D DATE 03/03/04

RECEIVED BY (SIGNATURE): *[Signature]*

TIME REC'D 09:45

LOGGED IN BY (SIGNATURE): *[Signature]*

LOG-IN DATE 2004-03-03 12:51

PROJECT: INTER-LAB	Client Sample #	Sample Fraction	Assigned LAB#	Cooler I.D.	pH Check	ACID/BASE LOT#	REMARKS: CONDITION OF SAMPLE SHIPMENT, ETC.
EPISODE: 53988							
SAMPLE DELIVERY GROUP: 53988		@					
Remarks	105362743	I	53988.01	03/03/04-1	N		3.6c
1. CUSTODY SEAL(S): Present/Absent Intact/ Broken	105363750	↓	53988.02	03/03/04-1	N		3.6c
2. CUSTODY SEALS NOS.: N/A	105362768		53988.03	03/03/04-1	N		3.6c
	105362776		53988.04	03/03/04-1	N		3.6c
	105362784		53988.05	03/03/04-1	N		3.6c
3. CHAIN-OF CUSTODY: Present/Absent Sealed in Plastic? Yes/ No Taped To Lid? Yes/ No Properly Filled Out (Ink, Signed, ETC.)? Yes/ No	105362792		53988.06	03/03/04-1	N		3.6c
	105362800		53988.07	03/03/04-1	N		3.6c
4. AIRBILL AirBill/ Sticker Present/Absent							
5. AIRBILL NO: 483891945140							
6. COOLER CONDITIONS Enough Ice? Yes/ No Type of Ice? Wet Type of Packing? Bubble Wrap							
7. SAMPLE TAGS Absent							
8. SAMPLE CONDITION: Intact/ Present/Broken*/ Leaking							
Bottles Sealed In Separate Plastic Bags? Yes/ No Correct Containers Used For Tests Indicated? Yes/ No Correct Preservative? Yes/ No Sufficient Sample? Yes/ No Labels Complete (I.D., Date, Time, Signature, Preservative)? Yes/ No VOA Samples Without Bubbles? Yes/ No							
9. Does Information on Custody Records, Labels, Tags Agree? Yes/ No							
10. RAD SCREEN WITH GIEGER COUNTER? Yes/ No							
11. P.O. Called? Yes/ No							

* Contact PC and attach record of resolution
 @ Sample Fractions: B=SV GC/MS, V= VOA GC/MS or GC, P=Pesticide, H=Herbicide, D=Dioxin, A=Air, I=Inorganics, C=Cyanide, M=Metals, R=Radiochemistry
 ~ Note samples with bubbles under remarks section.



Pace Analytical Services, Inc.
1700 Elm Street, Suite 200
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

March 11, 2004

Mr. Brian Mader
3M Environmental Laboratory
935 Bush Avenue
Bldg. 2-3E-09
St. Paul, MN 55144

RE: Lab Project Number: 1085104
Client Project ID: E04-0126 CG Carbon System Test

Dear Mr. Mader:

Enclosed are the analytical results for sample(s) received by the laboratory on February 25, 2004. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report please feel free to contact me.

Sincerely,

Roxanne Patterson
Roxanne.Patterson@pacelabs.com
Project Manager

Minnesota Certification #: 027-053-137
Wisconsin Certification #: 9999407970

Enclosures



REPORT OF LABORATORY ANALYSIS

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 Minneapolis, MN 55414
 Phone: 612.607.1700
 Fax: 612.607.6444

Lab Project Number: 1085104
 Client Project ID: E04-0126 CG Carbon System Test

Lab Sample No: 105362743 Project Sample Number: 1085104-001 Date Collected: 02/25/04 10:46
 Client Sample ID: E04-0126-67609 Influent Phase 1/2 Matrix: Water Date Received: 02/25/04 18:00

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
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Microbiology

Biochemical Oxygen Demand, 5 d	Prep/Method: / SM 5210B							
BOD, 5 day	14	mg/l	6	03/02/04	JPH1		1	
Date Prepared	02/26/04 10:30			02/26/04 10:30				

Wet Chemistry

Phenolics Total. in Water	Method: EPA 420.4							
Phenol	ND	ug/l	25.0	03/05/04 08:41	VAF	108-95-2		

GC/MS Semivolatiles

625 Wastewater GC/MS SVOA	Prep/Method: EPA 625 / EPA 625							
Phenol	ND	ug/l	11.	03/03/04 19:12	KSK	108-95-2		
bis(2-Chloroethyl) ether	ND	ug/l	11.	03/03/04 19:12	KSK	111-44-4		
2-Chlorophenol	ND	ug/l	11.	03/03/04 19:12	KSK	95-57-8		
1,3-Dichlorobenzene	ND	ug/l	11.	03/03/04 19:12	KSK	541-73-1		
1,4-Dichlorobenzene	ND	ug/l	11.	03/03/04 19:12	KSK	106-46-7		
1,2-Dichlorobenzene	ND	ug/l	11.	03/03/04 19:12	KSK	95-50-1		
bis(2-Chloroisopropyl) ether	ND	ug/l	11.	03/03/04 19:12	KSK	39638-32-9		
N-Nitroso-di-n-propylamine	ND	ug/l	11.	03/03/04 19:12	KSK	621-64-7		
Nitrobenzene	ND	ug/l	11.	03/03/04 19:12	KSK	98-95-3		
Isophorone	ND	ug/l	11.	03/03/04 19:12	KSK	78-59-1		
2-Nitrophenol	ND	ug/l	11.	03/03/04 19:12	KSK	88-75-5		
2,4-Dimethylphenol	ND	ug/l	11.	03/03/04 19:12	KSK	105-67-9		
bis(2-Chloroethoxy)methane	ND	ug/l	11.	03/03/04 19:12	KSK	111-91-1		
2,4-Dichlorophenol	ND	ug/l	11.	03/03/04 19:12	KSK	120-83-2		
1,2,4-Trichlorobenzene	ND	ug/l	11.	03/03/04 19:12	KSK	120-82-1		
Naphthalene	ND	ug/l	11.	03/03/04 19:12	KSK	91-20-3		
Hexachloro-1,3-butadiene	ND	ug/l	11.	03/03/04 19:12	KSK	87-68-3		
4-Chloro-3-methylphenol	ND	ug/l	11.	03/03/04 19:12	KSK	59-50-7		
2,4,6-Trichlorophenol	ND	ug/l	11.	03/03/04 19:12	KSK	88-06-2		
2-Chloronaphthalene	ND	ug/l	11.	03/03/04 19:12	KSK	91-58-7		
Dimethylphthalate	ND	ug/l	11.	03/03/04 19:12	KSK	131-11-3		
Acenaphthylene	ND	ug/l	11.	03/03/04 19:12	KSK	208-96-8		
2,6-Dinitrotoluene	ND	ug/l	11.	03/03/04 19:12	KSK	606-20-2		
Acenaphthene	ND	ug/l	11.	03/03/04 19:12	KSK	83-32-9		
2,4-Dinitrophenol	ND	ug/l	55.	03/03/04 19:12	KSK	51-28-5		
4-Nitrophenol	ND	ug/l	55.	03/03/04 19:12	KSK	100-02-7		
2,4-Dinitrotoluene	ND	ug/l	11.	03/03/04 19:12	KSK	121-14-2		
Diethylphthalate	ND	ug/l	11.	03/03/04 19:12	KSK	84-66-2		

Date: 03/11/04

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 Phone: 612.607.1700
 Fax: 612.607.6444

Lab Project Number: 1085104
 Client Project ID: E04-0126 CG Carbon System Test

Lab Sample No: 105362743 Project Sample Number: 1085104-001 Date Collected: 02/25/04 10:46
 Client Sample ID: E04-0126-67609 Influent Phase 1/2 Matrix: Water Date Received: 02/25/04 18:00

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
4-Chlorophenylphenyl ether	ND	ug/l	11.	03/03/04 19:12	KSK	7005-72-3		
Fluorene	ND	ug/l	11.	03/03/04 19:12	KSK	86-73-7		
4,6-Dinitro-2-methylphenol	ND	ug/l	55.	03/03/04 19:12	KSK	534-52-1		
4-Bromophenylphenyl ether	ND	ug/l	11.	03/03/04 19:12	KSK	101-55-3		
Hexachlorobenzene	ND	ug/l	11.	03/03/04 19:12	KSK	118-74-1		
Pentachlorophenol	ND	ug/l	25.	03/03/04 19:12	KSK	87-86-5		
Phenanthrene	ND	ug/l	11.	03/03/04 19:12	KSK	85-01-8		
Anthracene	ND	ug/l	11.	03/03/04 19:12	KSK	120-12-7		
Di-n-butylphthalate	ND	ug/l	11.	03/03/04 19:12	KSK	84-74-2		
Fluoranthene	ND	ug/l	11.	03/03/04 19:12	KSK	206-44-0		
Pyrene	ND	ug/l	11.	03/03/04 19:12	KSK	129-00-0		
Butylbenzylphthalate	ND	ug/l	11.	03/03/04 19:12	KSK	85-68-7		
3,3'-Dichlorobenzidine	ND	ug/l	22.	03/03/04 19:12	KSK	91-94-1		
Benzo(a)anthracene	ND	ug/l	11.	03/03/04 19:12	KSK	56-55-3		
Chrysene	ND	ug/l	11.	03/03/04 19:12	KSK	218-01-9		
bis(2-Ethylhexyl)phthalate	ND	ug/l	11.	03/03/04 19:12	KSK	117-81-7		
Di-n-octylphthalate	ND	ug/l	11.	03/03/04 19:12	KSK	117-84-0		
Benzo(b)fluoranthene	ND	ug/l	11.	03/03/04 19:12	KSK	205-99-2		
Benzo(k)fluoranthene	ND	ug/l	11.	03/03/04 19:12	KSK	207-08-9		
Benzo(a)pyrene	ND	ug/l	11.	03/03/04 19:12	KSK	50-32-8		
Indeno(1,2,3-cd)pyrene	ND	ug/l	11.	03/03/04 19:12	KSK	193-39-5		
Dibenz(a,h)anthracene	ND	ug/l	11.	03/03/04 19:12	KSK	53-70-3		
Benzo(g,h,i)perylene	ND	ug/l	11.	03/03/04 19:12	KSK	191-24-2		
Hexachloroethane	ND	ug/l	11.	03/03/04 19:12	KSK	67-72-1		
Nitrobenzene-d5 (S)	85	%		03/03/04 19:12	KSK	4165-60-0		
2-Fluorobiphenyl (S)	91	%		03/03/04 19:12	KSK	321-60-8		
Terphenyl-d14 (S)	92	%		03/03/04 19:12	KSK	1718-51-0		
Phenol-d6 (S)	1	%		03/03/04 19:12	KSK	13127-88-3	2	
2-Fluorophenol (S)	0	%		03/03/04 19:12	KSK	367-12-4	2	
2,4,6-Tribromophenol (S)	7	%		03/03/04 19:12	KSK		2	
Date Extracted	03/01/04			03/01/04				

GC/MS Volatiles

Method: EPA 624

Compound	Results	Units	Report Limit	Analyzed	By	CAS No.
Chloromethane	10.	ug/l	1.0	02/27/04 03:08	RJS	74-87-3
Vinyl chloride	ND	ug/l	1.0	02/27/04 03:08	RJS	75-01-4
Bromomethane	7.8	ug/l	1.0	02/27/04 03:08	RJS	74-83-9
Chloroethane	ND	ug/l	1.0	02/27/04 03:08	RJS	75-00-3
Trichlorofluoromethane	ND	ug/l	1.0	02/27/04 03:08	RJS	75-69-4

Date: 03/11/04

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Lab Project Number: 1085104
 Client Project ID: E04-0126 CG Carbon System Test

Lab Sample No: 105362743 Project Sample Number: 1085104-001 Date Collected: 02/25/04 10:46
 Client Sample ID: E04-0126-67609 Influent Phase 1/2 Matrix: Water Date Received: 02/25/04 18:00

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Methylene chloride	ND	ug/l	1.0	02/27/04 03:08	RJS	75-09-2		
1,1-Dichloroethene	ND	ug/l	1.0	02/27/04 03:08	RJS	75-35-4		
trans-1,2-Dichloroethene	ND	ug/l	1.0	02/27/04 03:08	RJS	156-60-5		
1,1-Dichloroethane	ND	ug/l	1.0	02/27/04 03:08	RJS	75-34-3		
Chloroform	ND	ug/l	1.0	02/27/04 03:08	RJS	67-66-3		
1,1,1-Trichloroethane	ND	ug/l	1.0	02/27/04 03:08	RJS	71-55-6		
Carbon tetrachloride	ND	ug/l	1.0	02/27/04 03:08	RJS	56-23-5		
Benzene	2.0	ug/l	1.0	02/27/04 03:08	RJS	71-43-2		
1,2-Dichloroethane	11.	ug/l	1.0	02/27/04 03:08	RJS	107-06-2		
Trichloroethene	ND	ug/l	1.0	02/27/04 03:08	RJS	79-01-6		
1,2-Dichloropropane	ND	ug/l	1.0	02/27/04 03:08	RJS	78-87-5		
Bromodichloromethane	ND	ug/l	1.0	02/27/04 03:08	RJS	75-27-4		
trans-1,3-Dichloropropene	ND	ug/l	1.0	02/27/04 03:08	RJS	10061-02-6		
Toluene	4.2	ug/l	1.0	02/27/04 03:08	RJS	108-88-3		
cis-1,3-Dichloropropene	ND	ug/l	1.0	02/27/04 03:08	RJS	10061-01-5		
1,1,2-Trichloroethane	ND	ug/l	1.0	02/27/04 03:08	RJS	79-00-5		
Tetrachloroethene	ND	ug/l	1.0	02/27/04 03:08	RJS	127-18-4		
Dibromochloromethane	ND	ug/l	1.0	02/27/04 03:08	RJS	124-48-1		
Chlorobenzene	ND	ug/l	1.0	02/27/04 03:08	RJS	108-90-7		
Ethylbenzene	ND	ug/l	1.0	02/27/04 03:08	RJS	100-41-4		
Xylene (Total)	ND	ug/l	3.0	02/27/04 03:08	RJS	1330-20-7		
Bromoform	ND	ug/l	1.0	02/27/04 03:08	RJS	75-25-2		
1,1,2,2-Tetrachloroethane	ND	ug/l	1.0	02/27/04 03:08	RJS	79-34-5		
1,3-Dichlorobenzene	ND	ug/l	1.0	02/27/04 03:08	RJS	541-73-1		
1,4-Dichlorobenzene	ND	ug/l	1.0	02/27/04 03:08	RJS	106-46-7		
1,2-Dichlorobenzene	ND	ug/l	1.0	02/27/04 03:08	RJS	95-50-1		
2-Chloroethylvinyl ether	ND	ug/l	5.0	02/27/04 03:08	RJS	110-75-8		
Dibromofluoromethane (S)	129	%		02/27/04 03:08	RJS	1868-53-7		
Toluene-d8 (S)	104	%		02/27/04 03:08	RJS	2037-26-5		
4-Bromofluorobenzene (S)	105	%		02/27/04 03:08	RJS	460-00-4		
1,2-Dichloroethane-d4 (S)	120	%		02/27/04 03:08	RJS	17060-07-0		



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 Minneapolis, MN 55414
 Phone: 612.607.1700
 Fax: 612.607.6444

Lab Project Number: 1085104
 Client Project ID: E04-0126 CG Carbon System Test

Lab Sample No: 105362750 Project Sample Number: 1085104-002 Date Collected: 02/25/04 10:56
 Client Sample ID: E04-0126-67610 Sample Port Lead 1A Matrix: Water Date Received: 02/25/04 18:00

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
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Microbiology

Biochemical Oxygen Demand, 5 d	Prep/Method: / SM 5210B							
BOD, 5 day	6	mg/l	6	03/02/04	JPH1		1	
Date Prepared	02/26/04 10:30			02/26/04 10:30				

Wet Chemistry

Phenolics Total. in Water	Method: EPA 420.4							
Phenol	ND	ug/l	25.0	03/05/04 08:41	VAF	108-95-2		

GC/MS Semivolatiles

625 Wastewater GC/MS SVOA	Prep/Method: EPA 625 / EPA 625							
Phenol	ND	ug/l	11.	03/03/04 20:05	KSK	108-95-2		
bis(2-Chloroethyl) ether	ND	ug/l	11.	03/03/04 20:05	KSK	111-44-4		
2-Chlorophenol	ND	ug/l	11.	03/03/04 20:05	KSK	95-57-8		
1,3-Dichlorobenzene	ND	ug/l	11.	03/03/04 20:05	KSK	541-73-1		
1,4-Dichlorobenzene	ND	ug/l	11.	03/03/04 20:05	KSK	106-46-7		
1,2-Dichlorobenzene	ND	ug/l	11.	03/03/04 20:05	KSK	95-50-1		
bis(2-Chloroisopropyl) ether	ND	ug/l	11.	03/03/04 20:05	KSK	39638-32-9		
N-Nitroso-di-n-propylamine	ND	ug/l	11.	03/03/04 20:05	KSK	621-64-7		
Nitrobenzene	ND	ug/l	11.	03/03/04 20:05	KSK	98-95-3		
Isophorone	ND	ug/l	11.	03/03/04 20:05	KSK	78-59-1		
2-Nitrophenol	ND	ug/l	11.	03/03/04 20:05	KSK	88-75-5		
2,4-Dimethylphenol	ND	ug/l	11.	03/03/04 20:05	KSK	105-67-9		
bis(2-Chloroethoxy)methane	ND	ug/l	11.	03/03/04 20:05	KSK	111-91-1		
2,4-Dichlorophenol	ND	ug/l	11.	03/03/04 20:05	KSK	120-83-2		
1,2,4-Trichlorobenzene	ND	ug/l	11.	03/03/04 20:05	KSK	120-82-1		
Naphthalene	ND	ug/l	11.	03/03/04 20:05	KSK	91-20-3		
Hexachloro-1,3-butadiene	ND	ug/l	11.	03/03/04 20:05	KSK	87-68-3		
4-Chloro-3-methylphenol	ND	ug/l	11.	03/03/04 20:05	KSK	59-50-7		
2,4,6-Trichlorophenol	ND	ug/l	11.	03/03/04 20:05	KSK	88-06-2		
2-Chloronaphthalene	ND	ug/l	11.	03/03/04 20:05	KSK	91-58-7		
Dimethylphthalate	ND	ug/l	11.	03/03/04 20:05	KSK	131-11-3		
Acenaphthylene	ND	ug/l	11.	03/03/04 20:05	KSK	208-96-8		
2,6-Dinitrotoluene	ND	ug/l	11.	03/03/04 20:05	KSK	606-20-2		
Acenaphthene	ND	ug/l	11.	03/03/04 20:05	KSK	83-32-9		
2,4-Dinitrophenol	ND	ug/l	54.	03/03/04 20:05	KSK	51-28-5		
4-Nitrophenol	ND	ug/l	54.	03/03/04 20:05	KSK	100-02-7		
2,4-Dinitrotoluene	ND	ug/l	11.	03/03/04 20:05	KSK	121-14-2		
Diethylphthalate	ND	ug/l	11.	03/03/04 20:05	KSK	84-66-2		

Date: 03/11/04

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Lab Project Number: 1085104
 Client Project ID: E04-0126 CG Carbon System Test

Lab Sample No: 105362750 Project Sample Number: 1085104-002 Date Collected: 02/25/04 10:56
 Client Sample ID: E04-0126-67610 Sample Port Lead 1A Matrix: Water Date Received: 02/25/04 18:00

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
4-Chlorophenylphenyl ether	ND	ug/l	11.	03/03/04 20:05	KSK	7005-72-3		
Fluorene	ND	ug/l	11.	03/03/04 20:05	KSK	86-73-7		
4,6-Dinitro-2-methylphenol	ND	ug/l	54.	03/03/04 20:05	KSK	534-52-1		
4-Bromophenylphenyl ether	ND	ug/l	11.	03/03/04 20:05	KSK	101-55-3		
Hexachlorobenzene	ND	ug/l	11.	03/03/04 20:05	KSK	118-74-1		
Pentachlorophenol	ND	ug/l	25.	03/03/04 20:05	KSK	87-86-5		
Phenanthrene	ND	ug/l	11.	03/03/04 20:05	KSK	85-01-8		
Anthracene	ND	ug/l	11.	03/03/04 20:05	KSK	120-12-7		
Di-n-butylphthalate	ND	ug/l	11.	03/03/04 20:05	KSK	84-74-2		
Fluoranthene	ND	ug/l	11.	03/03/04 20:05	KSK	206-44-0		
Pyrene	ND	ug/l	11.	03/03/04 20:05	KSK	129-00-0		
Butylbenzylphthalate	ND	ug/l	11.	03/03/04 20:05	KSK	85-68-7		
3,3'-Dichlorobenzidine	ND	ug/l	22.	03/03/04 20:05	KSK	91-94-1		
Benzo(a)anthracene	ND	ug/l	11.	03/03/04 20:05	KSK	56-55-3		
Chrysene	ND	ug/l	11.	03/03/04 20:05	KSK	218-01-9		
bis(2-Ethylhexyl)phthalate	ND	ug/l	11.	03/03/04 20:05	KSK	117-81-7		
Di-n-octylphthalate	ND	ug/l	11.	03/03/04 20:05	KSK	117-84-0		
Benzo(b)fluoranthene	ND	ug/l	11.	03/03/04 20:05	KSK	205-99-2		
Benzo(k)fluoranthene	ND	ug/l	11.	03/03/04 20:05	KSK	207-08-9		
Benzo(a)pyrene	ND	ug/l	11.	03/03/04 20:05	KSK	50-32-8		
Indeno(1,2,3-cd)pyrene	ND	ug/l	11.	03/03/04 20:05	KSK	193-39-5		
Dibenz(a,h)anthracene	ND	ug/l	11.	03/03/04 20:05	KSK	53-70-3		
Benzo(g,h,i)perylene	ND	ug/l	11.	03/03/04 20:05	KSK	191-24-2		
Hexachloroethane	ND	ug/l	11.	03/03/04 20:05	KSK	67-72-1		
Nitrobenzene-d5 (S)	88	%		03/03/04 20:05	KSK	4165-60-0		
2-Fluorobiphenyl (S)	89	%		03/03/04 20:05	KSK	321-60-8		
Terphenyl-d14 (S)	89	%		03/03/04 20:05	KSK	1718-51-0		
Phenol-d6 (S)	0	%		03/03/04 20:05	KSK	13127-88-3	2	
2-Fluorophenol (S)	0	%		03/03/04 20:05	KSK	367-12-4	2	
2,4,6-Tribromophenol (S)	36	%		03/03/04 20:05	KSK		2	
Date Extracted	03/01/04			03/01/04				

GC/MS Volatiles

Method: EPA 624

Parameter	Result	Unit	Report Limit	Analyzed	By	CAS No.
Chloromethane	8.4	ug/l	1.0	02/27/04 03:35	RJS	74-87-3
Vinyl chloride	ND	ug/l	1.0	02/27/04 03:35	RJS	75-01-4
Bromomethane	8.5	ug/l	1.0	02/27/04 03:35	RJS	74-83-9
Chloroethane	ND	ug/l	1.0	02/27/04 03:35	RJS	75-00-3
Trichlorofluoromethane	ND	ug/l	1.0	02/27/04 03:35	RJS	75-69-4

Date: 03/11/04

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 1700 Elm Street, Suite 200
 Minneapolis, MN 55414
 Phone: 612.607.1700
 Fax: 612.607.6444

Lab Project Number: 1085104
 Client Project ID: E04-0126 CG Carbon System Test

Lab Sample No: 105362750 Project Sample Number: 1085104-002 Date Collected: 02/25/04 10:56
 Client Sample ID: E04-0126-67610 Sample Port Lead 1A Matrix: Water Date Received: 02/25/04 18:00

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Methylene chloride	2.1	ug/l	1.0	02/27/04 03:35	RJS	75-09-2		
1,1-Dichloroethene	ND	ug/l	1.0	02/27/04 03:35	RJS	75-35-4		
trans-1,2-Dichloroethene	ND	ug/l	1.0	02/27/04 03:35	RJS	156-60-5		
1,1-Dichloroethane	ND	ug/l	1.0	02/27/04 03:35	RJS	75-34-3		
Chloroform	ND	ug/l	1.0	02/27/04 03:35	RJS	67-66-3		
1,1,1-Trichloroethane	ND	ug/l	1.0	02/27/04 03:35	RJS	71-55-6		
Carbon tetrachloride	ND	ug/l	1.0	02/27/04 03:35	RJS	56-23-5		
Benzene	ND	ug/l	1.0	02/27/04 03:35	RJS	71-43-2		
1,2-Dichloroethane	5.3	ug/l	1.0	02/27/04 03:35	RJS	107-06-2		
Trichloroethene	ND	ug/l	1.0	02/27/04 03:35	RJS	79-01-6		
1,2-Dichloropropane	ND	ug/l	1.0	02/27/04 03:35	RJS	78-87-5		
Bromodichloromethane	ND	ug/l	1.0	02/27/04 03:35	RJS	75-27-4		
trans-1,3-Dichloropropene	ND	ug/l	1.0	02/27/04 03:35	RJS	10061-02-6		
Toluene	ND	ug/l	1.0	02/27/04 03:35	RJS	108-88-3		
cis-1,3-Dichloropropene	ND	ug/l	1.0	02/27/04 03:35	RJS	10061-01-5		
1,1,2-Trichloroethane	ND	ug/l	1.0	02/27/04 03:35	RJS	79-00-5		
Tetrachloroethene	ND	ug/l	1.0	02/27/04 03:35	RJS	127-18-4		
Dibromochloromethane	ND	ug/l	1.0	02/27/04 03:35	RJS	124-48-1		
Chlorobenzene	ND	ug/l	1.0	02/27/04 03:35	RJS	108-90-7		
Ethylbenzene	ND	ug/l	1.0	02/27/04 03:35	RJS	100-41-4		
Xylene (Total)	ND	ug/l	3.0	02/27/04 03:35	RJS	1330-20-7		
Bromoform	ND	ug/l	1.0	02/27/04 03:35	RJS	75-25-2		
1,1,2,2-Tetrachloroethane	ND	ug/l	1.0	02/27/04 03:35	RJS	79-34-5		
1,3-Dichlorobenzene	ND	ug/l	1.0	02/27/04 03:35	RJS	541-73-1		
1,4-Dichlorobenzene	ND	ug/l	1.0	02/27/04 03:35	RJS	106-46-7		
1,2-Dichlorobenzene	ND	ug/l	1.0	02/27/04 03:35	RJS	95-50-1		
2-Chloroethylvinyl ether	ND	ug/l	5.0	02/27/04 03:35	RJS	110-75-8		
Dibromofluoromethane (S)	114	%		02/27/04 03:35	RJS	1868-53-7		
Toluene-d8 (S)	104	%		02/27/04 03:35	RJS	2037-26-5		
4-Bromofluorobenzene (S)	106	%		02/27/04 03:35	RJS	460-00-4		
1,2-Dichloroethane-d4 (S)	110	%		02/27/04 03:35	RJS	17060-07-0		

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 Minneapolis, MN 55414
 Phone: 612.607.1700
 Fax: 612.607.6444

Lab Project Number: 1085104
 Client Project ID: E04-0126 CG Carbon System Test

Lab Sample No: 105362768 Project Sample Number: 1085104-003 Date Collected: 02/25/04 11:03
 Client Sample ID: E04-0126-67611 Sample Port Lead 1B Matrix: Water Date Received: 02/25/04 18:00

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
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Microbiology

Biochemical Oxygen Demand, 5 d	Prep/Method: / SM 5210B							
BOD, 5 day	7	mg/l	6	03/02/04	JPH1		1	
Date Prepared	02/26/04 10:30			02/26/04 10:30				

Wet Chemistry

Phenolics Total. in Water	Method: EPA 420.4							
Phenol	ND	ug/l	25.0	03/05/04 08:41	VAF	108-95-2		

GC/MS Semivolatiles

625 Wastewater GC/MS SVOA	Prep/Method: EPA 625 / EPA 625							
Phenol	ND	ug/l	11.	03/03/04 20:58	KSK	108-95-2		
bis(2-Chloroethyl) ether	ND	ug/l	11.	03/03/04 20:58	KSK	111-44-4		
2-Chlorophenol	ND	ug/l	11.	03/03/04 20:58	KSK	95-57-8		
1,3-Dichlorobenzene	ND	ug/l	11.	03/03/04 20:58	KSK	541-73-1		
1,4-Dichlorobenzene	ND	ug/l	11.	03/03/04 20:58	KSK	106-46-7		
1,2-Dichlorobenzene	ND	ug/l	11.	03/03/04 20:58	KSK	95-50-1		
bis(2-Chloroisopropyl) ether	ND	ug/l	11.	03/03/04 20:58	KSK	39638-32-9		
N-Nitroso-di-n-propylamine	ND	ug/l	11.	03/03/04 20:58	KSK	621-64-7		
Nitrobenzene	ND	ug/l	11.	03/03/04 20:58	KSK	98-95-3		
Isophorone	ND	ug/l	11.	03/03/04 20:58	KSK	78-59-1		
2-Nitrophenol	ND	ug/l	11.	03/03/04 20:58	KSK	88-75-5		
2,4-Dimethylphenol	ND	ug/l	11.	03/03/04 20:58	KSK	105-67-9		
bis(2-Chloroethoxy)methane	ND	ug/l	11.	03/03/04 20:58	KSK	111-91-1		
2,4-Dichlorophenol	ND	ug/l	11.	03/03/04 20:58	KSK	120-83-2		
1,2,4-Trichlorobenzene	ND	ug/l	11.	03/03/04 20:58	KSK	120-82-1		
Naphthalene	ND	ug/l	11.	03/03/04 20:58	KSK	91-20-3		
Hexachloro-1,3-butadiene	ND	ug/l	11.	03/03/04 20:58	KSK	87-68-3		
4-Chloro-3-methylphenol	ND	ug/l	11.	03/03/04 20:58	KSK	59-50-7		
2,4,6-Trichlorophenol	ND	ug/l	11.	03/03/04 20:58	KSK	88-06-2		
2-Chloronaphthalene	ND	ug/l	11.	03/03/04 20:58	KSK	91-58-7		
Dimethylphthalate	ND	ug/l	11.	03/03/04 20:58	KSK	131-11-3		
Acenaphthylene	ND	ug/l	11.	03/03/04 20:58	KSK	208-96-8		
2,6-Dinitrotoluene	ND	ug/l	11.	03/03/04 20:58	KSK	606-20-2		
Acenaphthene	ND	ug/l	11.	03/03/04 20:58	KSK	83-32-9		
2,4-Dinitrophenol	ND	ug/l	56.	03/03/04 20:58	KSK	51-28-5		
4-Nitrophenol	ND	ug/l	56.	03/03/04 20:58	KSK	100-02-7		
2,4-Dinitrotoluene	ND	ug/l	11.	03/03/04 20:58	KSK	121-14-2		
Diethylphthalate	ND	ug/l	11.	03/03/04 20:58	KSK	84-66-2		

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 HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

3M_MN01539191

1939.0040



Pace Analytical Services, Inc.
 1700 Elm Street, Suite 200
 Minneapolis, MN 55414
 Phone: 612.607.1700
 Fax: 612.607.6444

Lab Project Number: 1085104
 Client Project ID: E04-0126 CG Carbon System Test

Lab Sample No: 105362768 Project Sample Number: 1085104-003 Date Collected: 02/25/04 11:03
 Client Sample ID: E04-0126-67611 Sample Port Lead 1B Matrix: Water Date Received: 02/25/04 18:00

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
4-Chlorophenylphenyl ether	ND	ug/l	11.	03/03/04 20:58	KSK	7005-72-3		
Fluorene	ND	ug/l	11.	03/03/04 20:58	KSK	86-73-7		
4,6-Dinitro-2-methylphenol	ND	ug/l	56.	03/03/04 20:58	KSK	534-52-1		
4-Bromophenylphenyl ether	ND	ug/l	11.	03/03/04 20:58	KSK	101-55-3		
Hexachlorobenzene	ND	ug/l	11.	03/03/04 20:58	KSK	118-74-1		
Pentachlorophenol	ND	ug/l	26.	03/03/04 20:58	KSK	87-86-5		
Phenanthrene	ND	ug/l	11.	03/03/04 20:58	KSK	85-01-8		
Anthracene	ND	ug/l	11.	03/03/04 20:58	KSK	120-12-7		
Di-n-butylphthalate	ND	ug/l	11.	03/03/04 20:58	KSK	84-74-2		
Fluoranthene	ND	ug/l	11.	03/03/04 20:58	KSK	206-44-0		
Pyrene	ND	ug/l	11.	03/03/04 20:58	KSK	129-00-0		
Butylbenzylphthalate	ND	ug/l	11.	03/03/04 20:58	KSK	85-68-7		
3,3'-Dichlorobenzidine	ND	ug/l	22.	03/03/04 20:58	KSK	91-94-1		
Benzo(a)anthracene	ND	ug/l	11.	03/03/04 20:58	KSK	56-55-3		
Chrysene	ND	ug/l	11.	03/03/04 20:58	KSK	218-01-9		
bis(2-Ethylhexyl)phthalate	ND	ug/l	11.	03/03/04 20:58	KSK	117-81-7		
Di-n-octylphthalate	ND	ug/l	11.	03/03/04 20:58	KSK	117-84-0		
Benzo(b)fluoranthene	ND	ug/l	11.	03/03/04 20:58	KSK	205-99-2		
Benzo(k)fluoranthene	ND	ug/l	11.	03/03/04 20:58	KSK	207-08-9		
Benzo(a)pyrene	ND	ug/l	11.	03/03/04 20:58	KSK	50-32-8		
Indeno(1,2,3-cd)pyrene	ND	ug/l	11.	03/03/04 20:58	KSK	193-39-5		
Dibenz(a,h)anthracene	ND	ug/l	11.	03/03/04 20:58	KSK	53-70-3		
Benzo(g,h,i)perylene	ND	ug/l	11.	03/03/04 20:58	KSK	191-24-2		
Hexachloroethane	ND	ug/l	11.	03/03/04 20:58	KSK	67-72-1		
Nitrobenzene-d5 (S)	83	%		03/03/04 20:58	KSK	4165-60-0		
2-Fluorobiphenyl (S)	84	%		03/03/04 20:58	KSK	321-60-8		
Terphenyl-d14 (S)	86	%		03/03/04 20:58	KSK	1718-51-0		
Phenol-d6 (S)	1	%		03/03/04 20:58	KSK	13127-88-3	2	
2-Fluorophenol (S)	6	%		03/03/04 20:58	KSK	367-12-4	2	
2,4,6-Tribromophenol (S)	24	%		03/03/04 20:58	KSK		2	
Date Extracted	03/01/04			03/01/04				

GC/MS Volatiles

Method: EPA 624

Chloromethane	7.8	ug/l	1.0	02/27/04 04:03	RJS	74-87-3		
Vinyl chloride	ND	ug/l	1.0	02/27/04 04:03	RJS	75-01-4		
Bromomethane	4.1	ug/l	1.0	02/27/04 04:03	RJS	74-83-9		
Chloroethane	ND	ug/l	1.0	02/27/04 04:03	RJS	75-00-3		
Trichlorofluoromethane	ND	ug/l	1.0	02/27/04 04:03	RJS	75-69-4		

Date: 03/11/04

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 1700 Elm Street, Suite 200
 Minneapolis, MN 55414
 Phone: 612.607.1700
 Fax: 612.607.6444

Lab Project Number: 1085104
 Client Project ID: E04-0126 CG Carbon System Test

Lab Sample No: 105362768 Project Sample Number: 1085104-003 Date Collected: 02/25/04 11:03
 Client Sample ID: E04-0126-67611 Sample Port Lead 1B Matrix: Water Date Received: 02/25/04 18:00

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Methylene chloride	2.6	ug/l	1.0	02/27/04 04:03	RJS	75-09-2		
1,1-Dichloroethene	ND	ug/l	1.0	02/27/04 04:03	RJS	75-35-4		
trans-1,2-Dichloroethene	ND	ug/l	1.0	02/27/04 04:03	RJS	156-60-5		
1,1-Dichloroethane	ND	ug/l	1.0	02/27/04 04:03	RJS	75-34-3		
Chloroform	ND	ug/l	1.0	02/27/04 04:03	RJS	67-66-3		
1,1,1-Trichloroethane	ND	ug/l	1.0	02/27/04 04:03	RJS	71-55-6		
Carbon tetrachloride	ND	ug/l	1.0	02/27/04 04:03	RJS	56-23-5		
Benzene	ND	ug/l	1.0	02/27/04 04:03	RJS	71-43-2		
1,2-Dichloroethane	3.6	ug/l	1.0	02/27/04 04:03	RJS	107-06-2		
Trichloroethene	ND	ug/l	1.0	02/27/04 04:03	RJS	79-01-6		
1,2-Dichloropropane	ND	ug/l	1.0	02/27/04 04:03	RJS	78-87-5		
Bromodichloromethane	ND	ug/l	1.0	02/27/04 04:03	RJS	75-27-4		
trans-1,3-Dichloropropene	ND	ug/l	1.0	02/27/04 04:03	RJS	10061-02-6		
Toluene	ND	ug/l	1.0	02/27/04 04:03	RJS	108-88-3		
cis-1,3-Dichloropropene	ND	ug/l	1.0	02/27/04 04:03	RJS	10061-01-5		
1,1,2-Trichloroethane	ND	ug/l	1.0	02/27/04 04:03	RJS	79-00-5		
Tetrachloroethene	ND	ug/l	1.0	02/27/04 04:03	RJS	127-18-4		
Dibromochloromethane	ND	ug/l	1.0	02/27/04 04:03	RJS	124-48-1		
Chlorobenzene	ND	ug/l	1.0	02/27/04 04:03	RJS	108-90-7		
Ethylbenzene	ND	ug/l	1.0	02/27/04 04:03	RJS	100-41-4		
Xylene (Total)	ND	ug/l	3.0	02/27/04 04:03	RJS	1330-20-7		
Bromoform	ND	ug/l	1.0	02/27/04 04:03	RJS	75-25-2		
1,1,2,2-Tetrachloroethane	ND	ug/l	1.0	02/27/04 04:03	RJS	79-34-5		
1,3-Dichlorobenzene	ND	ug/l	1.0	02/27/04 04:03	RJS	541-73-1		
1,4-Dichlorobenzene	ND	ug/l	1.0	02/27/04 04:03	RJS	106-46-7		
1,2-Dichlorobenzene	ND	ug/l	1.0	02/27/04 04:03	RJS	95-50-1		
2-Chloroethylvinyl ether	ND	ug/l	5.0	02/27/04 04:03	RJS	110-75-8		
Dibromofluoromethane (S)	123	%		02/27/04 04:03	RJS	1868-53-7		
Toluene-d8 (S)	77	%		02/27/04 04:03	RJS	2037-26-5		
4-Bromofluorobenzene (S)	105	%		02/27/04 04:03	RJS	460-00-4		
1,2-Dichloroethane-d4 (S)	117	%		02/27/04 04:03	RJS	17060-07-0		

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3M_MN01539193

1939.0042



Pace Analytical Services, Inc.
 1700 Elm Street, Suite 200
 Minneapolis, MN 55414
 Phone: 612.607.1700
 Fax: 612.607.6444

Lab Project Number: 1085104
 Client Project ID: E04-0126 CG Carbon System Test

Lab Sample No: 105362776 Project Sample Number: 1085104-004 Date Collected: 02/25/04 11:11
 Client Sample ID: E04-0126-67612 Sample Port Lead 4A Matrix: Water Date Received: 02/25/04 18:00

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
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Microbiology

Biochemical Oxygen Demand, 5 d	Prep/Method: / SM 5210B							
BOD, 5 day	7	mg/l	6	03/02/04	JPH1		1	
Date Prepared	02/26/04 10:30			02/26/04 10:30				

Wet Chemistry

Phenolics Total. in Water	Method: EPA 420.4							
Phenol	ND	ug/l	25.0	03/05/04 08:41	VAF	108-95-2		

GC/MS Semivolatiles

625 Wastewater GC/MS SVOA	Prep/Method: EPA 625 / EPA 625							
Phenol	ND	ug/l	10.	03/03/04 21:51	KSK	108-95-2		
bis(2-Chloroethyl) ether	ND	ug/l	10.	03/03/04 21:51	KSK	111-44-4		
2-Chlorophenol	ND	ug/l	10.	03/03/04 21:51	KSK	95-57-8		
1,3-Dichlorobenzene	ND	ug/l	10.	03/03/04 21:51	KSK	541-73-1		
1,4-Dichlorobenzene	ND	ug/l	10.	03/03/04 21:51	KSK	106-46-7		
1,2-Dichlorobenzene	ND	ug/l	10.	03/03/04 21:51	KSK	95-50-1		
bis(2-Chloroisopropyl) ether	ND	ug/l	10.	03/03/04 21:51	KSK	39638-32-9		
N-Nitroso-di-n-propylamine	ND	ug/l	10.	03/03/04 21:51	KSK	621-64-7		
Nitrobenzene	ND	ug/l	10.	03/03/04 21:51	KSK	98-95-3		
Isophorone	ND	ug/l	10.	03/03/04 21:51	KSK	78-59-1		
2-Nitrophenol	ND	ug/l	10.	03/03/04 21:51	KSK	88-75-5		
2,4-Dimethylphenol	ND	ug/l	10.	03/03/04 21:51	KSK	105-67-9		
bis(2-Chloroethoxy)methane	ND	ug/l	10.	03/03/04 21:51	KSK	111-91-1		
2,4-Dichlorophenol	ND	ug/l	10.	03/03/04 21:51	KSK	120-83-2		
1,2,4-Trichlorobenzene	ND	ug/l	10.	03/03/04 21:51	KSK	120-82-1		
Naphthalene	ND	ug/l	10.	03/03/04 21:51	KSK	91-20-3		
Hexachloro-1,3-butadiene	ND	ug/l	10.	03/03/04 21:51	KSK	87-68-3		
4-Chloro-3-methylphenol	ND	ug/l	10.	03/03/04 21:51	KSK	59-50-7		
2,4,6-Trichlorophenol	ND	ug/l	10.	03/03/04 21:51	KSK	88-06-2		
2-Chloronaphthalene	ND	ug/l	10.	03/03/04 21:51	KSK	91-58-7		
Dimethylphthalate	ND	ug/l	10.	03/03/04 21:51	KSK	131-11-3		
Acenaphthylene	ND	ug/l	10.	03/03/04 21:51	KSK	208-96-8		
2,6-Dinitrotoluene	ND	ug/l	10.	03/03/04 21:51	KSK	606-20-2		
Acenaphthene	ND	ug/l	10.	03/03/04 21:51	KSK	83-32-9		
2,4-Dinitrophenol	ND	ug/l	51.	03/03/04 21:51	KSK	51-28-5		
4-Nitrophenol	ND	ug/l	51.	03/03/04 21:51	KSK	100-02-7		
2,4-Dinitrotoluene	ND	ug/l	10.	03/03/04 21:51	KSK	121-14-2		
Diethylphthalate	ND	ug/l	10.	03/03/04 21:51	KSK	84-66-2		

Date: 03/11/04

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REPORT OF LABORATORY ANALYSIS

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CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN
 HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

3M_MN01539194

1939.0043



Pace Analytical Services, Inc.
 1700 Elm Street, Suite 200
 Minneapolis, MN 55414
 Phone: 612.607.1700
 Fax: 612.607.6444

Lab Project Number: 1085104
 Client Project ID: E04-0126 CG Carbon System Test

Lab Sample No: 105362776 Project Sample Number: 1085104-004 Date Collected: 02/25/04 11:11
 Client Sample ID: E04-0126-67612 Sample Port Lead 4A Matrix: Water Date Received: 02/25/04 18:00

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
4-Chlorophenylphenyl ether	ND	ug/l	10.	03/03/04 21:51	KSK	7005-72-3		
Fluorene	ND	ug/l	10.	03/03/04 21:51	KSK	86-73-7		
4,6-Dinitro-2-methylphenol	ND	ug/l	51.	03/03/04 21:51	KSK	534-52-1		
4-Bromophenylphenyl ether	ND	ug/l	10.	03/03/04 21:51	KSK	101-55-3		
Hexachlorobenzene	ND	ug/l	10.	03/03/04 21:51	KSK	118-74-1		
Pentachlorophenol	ND	ug/l	23.	03/03/04 21:51	KSK	87-86-5		
Phenanthrene	ND	ug/l	10.	03/03/04 21:51	KSK	85-01-8		
Anthracene	ND	ug/l	10.	03/03/04 21:51	KSK	120-12-7		
Di-n-butylphthalate	ND	ug/l	10.	03/03/04 21:51	KSK	84-74-2		
Fluoranthene	ND	ug/l	10.	03/03/04 21:51	KSK	206-44-0		
Pyrene	ND	ug/l	10.	03/03/04 21:51	KSK	129-00-0		
Butylbenzylphthalate	ND	ug/l	10.	03/03/04 21:51	KSK	85-68-7		
3,3'-Dichlorobenzidine	ND	ug/l	20.	03/03/04 21:51	KSK	91-94-1		
Benzo(a)anthracene	ND	ug/l	10.	03/03/04 21:51	KSK	56-55-3		
Chrysene	ND	ug/l	10.	03/03/04 21:51	KSK	218-01-9		
bis(2-Ethylhexyl)phthalate	ND	ug/l	10.	03/03/04 21:51	KSK	117-81-7		
Di-n-octylphthalate	ND	ug/l	10.	03/03/04 21:51	KSK	117-84-0		
Benzo(b)fluoranthene	ND	ug/l	10.	03/03/04 21:51	KSK	205-99-2		
Benzo(k)fluoranthene	ND	ug/l	10.	03/03/04 21:51	KSK	207-08-9		
Benzo(a)pyrene	ND	ug/l	10.	03/03/04 21:51	KSK	50-32-8		
Indeno(1,2,3-cd)pyrene	ND	ug/l	10.	03/03/04 21:51	KSK	193-39-5		
Dibenz(a,h)anthracene	ND	ug/l	10.	03/03/04 21:51	KSK	53-70-3		
Benzo(g,h,i)perylene	ND	ug/l	10.	03/03/04 21:51	KSK	191-24-2		
Hexachloroethane	ND	ug/l	10.	03/03/04 21:51	KSK	67-72-1		
Nitrobenzene-d5 (S)	90	%		03/03/04 21:51	KSK	4165-60-0		
2-Fluorobiphenyl (S)	94	%		03/03/04 21:51	KSK	321-60-8		
Terphenyl-d14 (S)	93	%		03/03/04 21:51	KSK	1718-51-0		
Phenol-d6 (S)	0	%		03/03/04 21:51	KSK	13127-88-3	2	
2-Fluorophenol (S)	0	%		03/03/04 21:51	KSK	367-12-4	2	
2,4,6-Tribromophenol (S)	0	%		03/03/04 21:51	KSK		2	
Date Extracted	03/01/04			03/01/04				

GC/MS Volatiles

Method: EPA 624

Volatile GC/MS by 624	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Chloromethane	7.1	ug/l	1.0	02/27/04 04:30	RJS	74-87-3		
Vinyl chloride	ND	ug/l	1.0	02/27/04 04:30	RJS	75-01-4		
Bromomethane	3.9	ug/l	1.0	02/27/04 04:30	RJS	74-83-9		
Chloroethane	ND	ug/l	1.0	02/27/04 04:30	RJS	75-00-3		
Trichlorofluoromethane	ND	ug/l	1.0	02/27/04 04:30	RJS	75-69-4		

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 1700 Elm Street, Suite 200
 Minneapolis, MN 55414
 Phone: 612.607.1700
 Fax: 612.607.6444

Lab Project Number: 1085104
 Client Project ID: E04-0126 CG Carbon System Test

Lab Sample No: 105362776 Project Sample Number: 1085104-004 Date Collected: 02/25/04 11:11
 Client Sample ID: E04-0126-67612 Sample Port Lead 4A Matrix: Water Date Received: 02/25/04 18:00

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Methylene chloride	3.0	ug/l	1.0	02/27/04 04:30	RJS	75-09-2		
1,1-Dichloroethene	ND	ug/l	1.0	02/27/04 04:30	RJS	75-35-4		
trans-1,2-Dichloroethene	ND	ug/l	1.0	02/27/04 04:30	RJS	156-60-5		
1,1-Dichloroethane	ND	ug/l	1.0	02/27/04 04:30	RJS	75-34-3		
Chloroform	ND	ug/l	1.0	02/27/04 04:30	RJS	67-66-3		
1,1,1-Trichloroethane	ND	ug/l	1.0	02/27/04 04:30	RJS	71-55-6		
Carbon tetrachloride	ND	ug/l	1.0	02/27/04 04:30	RJS	56-23-5		
Benzene	ND	ug/l	1.0	02/27/04 04:30	RJS	71-43-2		
1,2-Dichloroethane	3.9	ug/l	1.0	02/27/04 04:30	RJS	107-06-2		
Trichloroethene	ND	ug/l	1.0	02/27/04 04:30	RJS	79-01-6		
1,2-Dichloropropane	ND	ug/l	1.0	02/27/04 04:30	RJS	78-87-5		
Bromodichloromethane	ND	ug/l	1.0	02/27/04 04:30	RJS	75-27-4		
trans-1,3-Dichloropropene	ND	ug/l	1.0	02/27/04 04:30	RJS	10061-02-6		
Toluene	ND	ug/l	1.0	02/27/04 04:30	RJS	108-88-3		
cis-1,3-Dichloropropene	ND	ug/l	1.0	02/27/04 04:30	RJS	10061-01-5		
1,1,2-Trichloroethane	ND	ug/l	1.0	02/27/04 04:30	RJS	79-00-5		
Tetrachloroethene	ND	ug/l	1.0	02/27/04 04:30	RJS	127-18-4		
Dibromochloromethane	ND	ug/l	1.0	02/27/04 04:30	RJS	124-48-1		
Chlorobenzene	ND	ug/l	1.0	02/27/04 04:30	RJS	108-90-7		
Ethylbenzene	ND	ug/l	1.0	02/27/04 04:30	RJS	100-41-4		
Xylene (Total)	ND	ug/l	3.0	02/27/04 04:30	RJS	1330-20-7		
Bromoform	ND	ug/l	1.0	02/27/04 04:30	RJS	75-25-2		
1,1,2,2-Tetrachloroethane	ND	ug/l	1.0	02/27/04 04:30	RJS	79-34-5		
1,3-Dichlorobenzene	ND	ug/l	1.0	02/27/04 04:30	RJS	541-73-1		
1,4-Dichlorobenzene	ND	ug/l	1.0	02/27/04 04:30	RJS	106-46-7		
1,2-Dichlorobenzene	ND	ug/l	1.0	02/27/04 04:30	RJS	95-50-1		
2-Chloroethylvinyl ether	ND	ug/l	5.0	02/27/04 04:30	RJS	110-75-8		
Dibromofluoromethane (S)	124	%		02/27/04 04:30	RJS	1868-53-7		
Toluene-d8 (S)	78	%		02/27/04 04:30	RJS	2037-26-5		
4-Bromofluorobenzene (S)	107	%		02/27/04 04:30	RJS	460-00-4		
1,2-Dichloroethane-d4 (S)	117	%		02/27/04 04:30	RJS	17060-07-0		

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3M_MN01539196

1939.0045



Pace Analytical Services, Inc.
 1700 Elm Street, Suite 200
 Minneapolis, MN 55414
 Phone: 612.607.1700
 Fax: 612.607.6444

Lab Project Number: 1085104
 Client Project ID: E04-0126 CG Carbon System Test

Lab Sample No: 105362784 Project Sample Number: 1085104-005 Date Collected: 02/25/04 11:25
 Client Sample ID: E04-0126-67613 Sample Port Lead 4B Matrix: Water Date Received: 02/25/04 18:00

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
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Microbiology

Biochemical Oxygen Demand, 5 d	Prep/Method: / SM 5210B							
BOD, 5 day	6	mg/l	6	03/02/04	JPH1		1	
Date Prepared	02/26/04 10:30			02/26/04 10:30				

Wet Chemistry

Phenolics Total. in Water	Method: EPA 420.4							
Phenol	ND	ug/l	25.0	03/05/04 08:41	VAF	108-95-2		

GC/MS Semivolatiles

625 Wastewater GC/MS SVOA	Prep/Method: EPA 625 / EPA 625							
Phenol	ND	ug/l	11.	03/03/04 22:44	KSK	108-95-2		
bis(2-Chloroethyl) ether	ND	ug/l	11.	03/03/04 22:44	KSK	111-44-4		
2-Chlorophenol	ND	ug/l	11.	03/03/04 22:44	KSK	95-57-8		
1,3-Dichlorobenzene	ND	ug/l	11.	03/03/04 22:44	KSK	541-73-1		
1,4-Dichlorobenzene	ND	ug/l	11.	03/03/04 22:44	KSK	106-46-7		
1,2-Dichlorobenzene	ND	ug/l	11.	03/03/04 22:44	KSK	95-50-1		
bis(2-Chloroisopropyl) ether	ND	ug/l	11.	03/03/04 22:44	KSK	39638-32-9		
N-Nitroso-di-n-propylamine	ND	ug/l	11.	03/03/04 22:44	KSK	621-64-7		
Nitrobenzene	ND	ug/l	11.	03/03/04 22:44	KSK	98-95-3		
Isophorone	ND	ug/l	11.	03/03/04 22:44	KSK	78-59-1		
2-Nitrophenol	ND	ug/l	11.	03/03/04 22:44	KSK	88-75-5		
2,4-Dimethylphenol	ND	ug/l	11.	03/03/04 22:44	KSK	105-67-9		
bis(2-Chloroethoxy)methane	ND	ug/l	11.	03/03/04 22:44	KSK	111-91-1		
2,4-Dichlorophenol	ND	ug/l	11.	03/03/04 22:44	KSK	120-83-2		
1,2,4-Trichlorobenzene	ND	ug/l	11.	03/03/04 22:44	KSK	120-82-1		
Naphthalene	ND	ug/l	11.	03/03/04 22:44	KSK	91-20-3		
Hexachloro-1,3-butadiene	ND	ug/l	11.	03/03/04 22:44	KSK	87-68-3		
4-Chloro-3-methylphenol	ND	ug/l	11.	03/03/04 22:44	KSK	59-50-7		
2,4,6-Trichlorophenol	ND	ug/l	11.	03/03/04 22:44	KSK	88-06-2		
2-Chloronaphthalene	ND	ug/l	11.	03/03/04 22:44	KSK	91-58-7		
Dimethylphthalate	ND	ug/l	11.	03/03/04 22:44	KSK	131-11-3		
Acenaphthylene	ND	ug/l	11.	03/03/04 22:44	KSK	208-96-8		
2,6-Dinitrotoluene	ND	ug/l	11.	03/03/04 22:44	KSK	606-20-2		
Acenaphthene	ND	ug/l	11.	03/03/04 22:44	KSK	83-32-9		
2,4-Dinitrophenol	ND	ug/l	53.	03/03/04 22:44	KSK	51-28-5		
4-Nitrophenol	ND	ug/l	53.	03/03/04 22:44	KSK	100-02-7		
2,4-Dinitrotoluene	ND	ug/l	11.	03/03/04 22:44	KSK	121-14-2		
Diethylphthalate	ND	ug/l	11.	03/03/04 22:44	KSK	84-66-2		

Date: 03/11/04

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Pace Analytical Services, Inc.
 1700 Elm Street, Suite 200
 Minneapolis, MN 55414
 Phone: 612.607.1700
 Fax: 612.607.6444

Lab Project Number: 1085104
 Client Project ID: E04-0126 CG Carbon System Test

Lab Sample No: 105362784 Project Sample Number: 1085104-005 Date Collected: 02/25/04 11:25
 Client Sample ID: E04-0126-67613 Sample Port Lead 4B Matrix: Water Date Received: 02/25/04 18:00

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
4-Chlorophenylphenyl ether	ND	ug/l	11.	03/03/04 22:44	KSK	7005-72-3		
Fluorene	ND	ug/l	11.	03/03/04 22:44	KSK	86-73-7		
4,6-Dinitro-2-methylphenol	ND	ug/l	53.	03/03/04 22:44	KSK	534-52-1		
4-Bromophenylphenyl ether	ND	ug/l	11.	03/03/04 22:44	KSK	101-55-3		
Hexachlorobenzene	ND	ug/l	11.	03/03/04 22:44	KSK	118-74-1		
Pentachlorophenol	ND	ug/l	24.	03/03/04 22:44	KSK	87-86-5		
Phenanthrene	ND	ug/l	11.	03/03/04 22:44	KSK	85-01-8		
Anthracene	ND	ug/l	11.	03/03/04 22:44	KSK	120-12-7		
Di-n-butylphthalate	ND	ug/l	11.	03/03/04 22:44	KSK	84-74-2		
Fluoranthene	ND	ug/l	11.	03/03/04 22:44	KSK	206-44-0		
Pyrene	ND	ug/l	11.	03/03/04 22:44	KSK	129-00-0		
Butylbenzylphthalate	ND	ug/l	11.	03/03/04 22:44	KSK	85-68-7		
3,3'-Dichlorobenzidine	ND	ug/l	21.	03/03/04 22:44	KSK	91-94-1		
Benzo(a)anthracene	ND	ug/l	11.	03/03/04 22:44	KSK	56-55-3		
Chrysene	ND	ug/l	11.	03/03/04 22:44	KSK	218-01-9		
bis(2-Ethylhexyl)phthalate	ND	ug/l	11.	03/03/04 22:44	KSK	117-81-7		
Di-n-octylphthalate	ND	ug/l	11.	03/03/04 22:44	KSK	117-84-0		
Benzo(b)fluoranthene	ND	ug/l	11.	03/03/04 22:44	KSK	205-99-2		
Benzo(k)fluoranthene	ND	ug/l	11.	03/03/04 22:44	KSK	207-08-9		
Benzo(a)pyrene	ND	ug/l	11.	03/03/04 22:44	KSK	50-32-8		
Indeno(1,2,3-cd)pyrene	ND	ug/l	11.	03/03/04 22:44	KSK	193-39-5		
Dibenz(a,h)anthracene	ND	ug/l	11.	03/03/04 22:44	KSK	53-70-3		
Benzo(g,h,i)perylene	ND	ug/l	11.	03/03/04 22:44	KSK	191-24-2		
Hexachloroethane	ND	ug/l	11.	03/03/04 22:44	KSK	67-72-1		
Nitrobenzene-d5 (S)	90	%		03/03/04 22:44	KSK	4165-60-0		
2-Fluorobiphenyl (S)	91	%		03/03/04 22:44	KSK	321-60-8		
Terphenyl-d14 (S)	92	%		03/03/04 22:44	KSK	1718-51-0		
Phenol-d6 (S)	0	%		03/03/04 22:44	KSK	13127-88-3	2	
2-Fluorophenol (S)	1	%		03/03/04 22:44	KSK	367-12-4	2	
2,4,6-Tribromophenol (S)	19	%		03/03/04 22:44	KSK		2	
Date Extracted	03/01/04			03/01/04				

GC/MS Volatiles

Method: EPA 624

Parameter	Result	Unit	Report Limit	Analyzed	By	CAS No.
Chloromethane	5.7	ug/l	1.0	02/27/04 04:57	RJS	74-87-3
Vinyl chloride	ND	ug/l	1.0	02/27/04 04:57	RJS	75-01-4
Bromomethane	1.9	ug/l	1.0	02/27/04 04:57	RJS	74-83-9
Chloroethane	ND	ug/l	1.0	02/27/04 04:57	RJS	75-00-3
Trichlorofluoromethane	ND	ug/l	1.0	02/27/04 04:57	RJS	75-69-4

Date: 03/11/04

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Pace Analytical Services, Inc.
 1700 Elm Street, Suite 200
 Minneapolis, MN 55414
 Phone: 612.607.1700
 Fax: 612.607.6444

Lab Project Number: 1085104
 Client Project ID: E04-0126 CG Carbon System Test

Lab Sample No: 105362784 Project Sample Number: 1085104-005 Date Collected: 02/25/04 11:25
 Client Sample ID: E04-0126-67613 Sample Port Lead 4B Matrix: Water Date Received: 02/25/04 18:00

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Methylene chloride	3.1	ug/l	1.0	02/27/04 04:57	RJS	75-09-2		
1,1-Dichloroethene	ND	ug/l	1.0	02/27/04 04:57	RJS	75-35-4		
trans-1,2-Dichloroethene	ND	ug/l	1.0	02/27/04 04:57	RJS	156-60-5		
1,1-Dichloroethane	ND	ug/l	1.0	02/27/04 04:57	RJS	75-34-3		
Chloroform	ND	ug/l	1.0	02/27/04 04:57	RJS	67-66-3		
1,1,1-Trichloroethane	ND	ug/l	1.0	02/27/04 04:57	RJS	71-55-6		
Carbon tetrachloride	ND	ug/l	1.0	02/27/04 04:57	RJS	56-23-5		
Benzene	ND	ug/l	1.0	02/27/04 04:57	RJS	71-43-2		
1,2-Dichloroethane	2.3	ug/l	1.0	02/27/04 04:57	RJS	107-06-2		
Trichloroethene	ND	ug/l	1.0	02/27/04 04:57	RJS	79-01-6		
1,2-Dichloropropane	ND	ug/l	1.0	02/27/04 04:57	RJS	78-87-5		
Bromodichloromethane	ND	ug/l	1.0	02/27/04 04:57	RJS	75-27-4		
trans-1,3-Dichloropropene	ND	ug/l	1.0	02/27/04 04:57	RJS	10061-02-6		
Toluene	ND	ug/l	1.0	02/27/04 04:57	RJS	108-88-3		
cis-1,3-Dichloropropene	ND	ug/l	1.0	02/27/04 04:57	RJS	10061-01-5		
1,1,2-Trichloroethane	ND	ug/l	1.0	02/27/04 04:57	RJS	79-00-5		
Tetrachloroethene	ND	ug/l	1.0	02/27/04 04:57	RJS	127-18-4		
Dibromochloromethane	ND	ug/l	1.0	02/27/04 04:57	RJS	124-48-1		
Chlorobenzene	ND	ug/l	1.0	02/27/04 04:57	RJS	108-90-7		
Ethylbenzene	ND	ug/l	1.0	02/27/04 04:57	RJS	100-41-4		
Xylene (Total)	ND	ug/l	3.0	02/27/04 04:57	RJS	1330-20-7		
Bromoform	ND	ug/l	1.0	02/27/04 04:57	RJS	75-25-2		
1,1,2,2-Tetrachloroethane	ND	ug/l	1.0	02/27/04 04:57	RJS	79-34-5		
1,3-Dichlorobenzene	ND	ug/l	1.0	02/27/04 04:57	RJS	541-73-1		
1,4-Dichlorobenzene	ND	ug/l	1.0	02/27/04 04:57	RJS	106-46-7		
1,2-Dichlorobenzene	ND	ug/l	1.0	02/27/04 04:57	RJS	95-50-1		
2-Chloroethylvinyl ether	ND	ug/l	5.0	02/27/04 04:57	RJS	110-75-8		
Dibromofluoromethane (S)	129	%		02/27/04 04:57	RJS	1868-53-7		
Toluene-d8 (S)	78	%		02/27/04 04:57	RJS	2037-26-5		
4-Bromofluorobenzene (S)	106	%		02/27/04 04:57	RJS	460-00-4		
1,2-Dichloroethane-d4 (S)	119	%		02/27/04 04:57	RJS	17060-07-0		

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 1700 Elm Street, Suite 200
 Minneapolis, MN 55414
 Phone: 612.607.1700
 Fax: 612.607.6444

Lab Project Number: 1085104
 Client Project ID: E04-0126 CG Carbon System Test

Lab Sample No: 105362792 Project Sample Number: 1085104-006 Date Collected: 02/25/04 11:37
 Client Sample ID: E04-0126-67614 Comb Effluent 1/2 Matrix: Water Date Received: 02/25/04 18:00

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Microbiology								
Biochemical Oxygen Demand, 5 d	Prep/Method: / SM 5210B							
BOD, 5 day	ND	mg/l	6	03/02/04	JPH1		1	
Date Prepared	02/26/04 10:30			02/26/04 10:30				
Wet Chemistry								
Phenolics Total. in Water	Method: EPA 420.4							
Phenol	ND	ug/l	25.0	03/05/04 08:41	VAF	108-95-2		
GC/MS Semivolatiles								
625 Wastewater GC/MS SVOA	Prep/Method: EPA 625 / EPA 625							
Phenol	ND	ug/l	10.	03/03/04 23:37	KSK	108-95-2		
bis(2-Chloroethyl) ether	ND	ug/l	10.	03/03/04 23:37	KSK	111-44-4		
2-Chlorophenol	ND	ug/l	10.	03/03/04 23:37	KSK	95-57-8		
1,3-Dichlorobenzene	ND	ug/l	10.	03/03/04 23:37	KSK	541-73-1		
1,4-Dichlorobenzene	ND	ug/l	10.	03/03/04 23:37	KSK	106-46-7		
1,2-Dichlorobenzene	ND	ug/l	10.	03/03/04 23:37	KSK	95-50-1		
bis(2-Chloroisopropyl) ether	ND	ug/l	10.	03/03/04 23:37	KSK	39638-32-9		
N-Nitroso-di-n-propylamine	ND	ug/l	10.	03/03/04 23:37	KSK	621-64-7		
Nitrobenzene	ND	ug/l	10.	03/03/04 23:37	KSK	98-95-3		
Isophorone	ND	ug/l	10.	03/03/04 23:37	KSK	78-59-1		
2-Nitrophenol	ND	ug/l	10.	03/03/04 23:37	KSK	88-75-5		
2,4-Dimethylphenol	ND	ug/l	10.	03/03/04 23:37	KSK	105-67-9		
bis(2-Chloroethoxy)methane	ND	ug/l	10.	03/03/04 23:37	KSK	111-91-1		
2,4-Dichlorophenol	ND	ug/l	10.	03/03/04 23:37	KSK	120-83-2		
1,2,4-Trichlorobenzene	ND	ug/l	10.	03/03/04 23:37	KSK	120-82-1		
Naphthalene	ND	ug/l	10.	03/03/04 23:37	KSK	91-20-3		
Hexachloro-1,3-butadiene	ND	ug/l	10.	03/03/04 23:37	KSK	87-68-3		
4-Chloro-3-methylphenol	ND	ug/l	10.	03/03/04 23:37	KSK	59-50-7		
2,4,6-Trichlorophenol	ND	ug/l	10.	03/03/04 23:37	KSK	88-06-2		
2-Chloronaphthalene	ND	ug/l	10.	03/03/04 23:37	KSK	91-58-7		
Dimethylphthalate	ND	ug/l	10.	03/03/04 23:37	KSK	131-11-3		
Acenaphthylene	ND	ug/l	10.	03/03/04 23:37	KSK	208-96-8		
2,6-Dinitrotoluene	ND	ug/l	10.	03/03/04 23:37	KSK	606-20-2		
Acenaphthene	ND	ug/l	10.	03/03/04 23:37	KSK	83-32-9		
2,4-Dinitrophenol	ND	ug/l	51.	03/03/04 23:37	KSK	51-28-5		
4-Nitrophenol	ND	ug/l	51.	03/03/04 23:37	KSK	100-02-7		
2,4-Dinitrotoluene	ND	ug/l	10.	03/03/04 23:37	KSK	121-14-2		
Diethylphthalate	ND	ug/l	10.	03/03/04 23:37	KSK	84-66-2		

Date: 03/11/04

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Pace Analytical Services, Inc.
 1700 Elm Street, Suite 200
 Minneapolis, MN 55414
 Phone: 612.607.1700
 Fax: 612.607.6444

Lab Project Number: 1085104
 Client Project ID: E04-0126 CG Carbon System Test

Lab Sample No: 105362792 Project Sample Number: 1085104-006 Date Collected: 02/25/04 11:37
 Client Sample ID: E04-0126-67614 Comb Effluent 1/2 Matrix: Water Date Received: 02/25/04 18:00

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
4-Chlorophenylphenyl ether	ND	ug/l	10.	03/03/04 23:37	KSK	7005-72-3		
Fluorene	ND	ug/l	10.	03/03/04 23:37	KSK	86-73-7		
4,6-Dinitro-2-methylphenol	ND	ug/l	51.	03/03/04 23:37	KSK	534-52-1		
4-Bromophenylphenyl ether	ND	ug/l	10.	03/03/04 23:37	KSK	101-55-3		
Hexachlorobenzene	ND	ug/l	10.	03/03/04 23:37	KSK	118-74-1		
Pentachlorophenol	ND	ug/l	23.	03/03/04 23:37	KSK	87-86-5		
Phenanthrene	ND	ug/l	10.	03/03/04 23:37	KSK	85-01-8		
Anthracene	ND	ug/l	10.	03/03/04 23:37	KSK	120-12-7		
Di-n-butylphthalate	ND	ug/l	10.	03/03/04 23:37	KSK	84-74-2		
Fluoranthene	ND	ug/l	10.	03/03/04 23:37	KSK	206-44-0		
Pyrene	ND	ug/l	10.	03/03/04 23:37	KSK	129-00-0		
Butylbenzylphthalate	ND	ug/l	10.	03/03/04 23:37	KSK	85-68-7		
3,3'-Dichlorobenzidine	ND	ug/l	20.	03/03/04 23:37	KSK	91-94-1		
Benzo(a)anthracene	ND	ug/l	10.	03/03/04 23:37	KSK	56-55-3		
Chrysene	ND	ug/l	10.	03/03/04 23:37	KSK	218-01-9		
bis(2-Ethylhexyl)phthalate	ND	ug/l	10.	03/03/04 23:37	KSK	117-81-7		
Di-n-octylphthalate	ND	ug/l	10.	03/03/04 23:37	KSK	117-84-0		
Benzo(b)fluoranthene	ND	ug/l	10.	03/03/04 23:37	KSK	205-99-2		
Benzo(k)fluoranthene	ND	ug/l	10.	03/03/04 23:37	KSK	207-08-9		
Benzo(a)pyrene	ND	ug/l	10.	03/03/04 23:37	KSK	50-32-8		
Indeno(1,2,3-cd)pyrene	ND	ug/l	10.	03/03/04 23:37	KSK	193-39-5		
Dibenz(a,h)anthracene	ND	ug/l	10.	03/03/04 23:37	KSK	53-70-3		
Benzo(g,h,i)perylene	ND	ug/l	10.	03/03/04 23:37	KSK	191-24-2		
Hexachloroethane	ND	ug/l	10.	03/03/04 23:37	KSK	67-72-1		
Nitrobenzene-d5 (S)	79	%		03/03/04 23:37	KSK	4165-60-0		
2-Fluorobiphenyl (S)	82	%		03/03/04 23:37	KSK	321-60-8		
Terphenyl-d14 (S)	84	%		03/03/04 23:37	KSK	1718-51-0		
Phenol-d6 (S)	5	%		03/03/04 23:37	KSK	13127-88-3	2	
2-Fluorophenol (S)	19	%		03/03/04 23:37	KSK	367-12-4	2	
2,4,6-Tribromophenol (S)	47	%		03/03/04 23:37	KSK		2	
Date Extracted	03/01/04			03/01/04				

GC/MS Volatiles

Method: EPA 624

Volatile GC/MS by 624	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Chloromethane	2.7	ug/l	1.0	02/27/04 05:24	RJS	74-87-3		
Vinyl chloride	ND	ug/l	1.0	02/27/04 05:24	RJS	75-01-4		
Bromomethane	1.4	ug/l	1.0	02/27/04 05:24	RJS	74-83-9		
Chloroethane	ND	ug/l	1.0	02/27/04 05:24	RJS	75-00-3		
Trichlorofluoromethane	ND	ug/l	1.0	02/27/04 05:24	RJS	75-69-4		

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 1700 Elm Street, Suite 200
 Minneapolis, MN 55414
 Phone: 612.607.1700
 Fax: 612.607.6444

Lab Project Number: 1085104
 Client Project ID: E04-0126 CG Carbon System Test

Lab Sample No: 105362792 Project Sample Number: 1085104-006 Date Collected: 02/25/04 11:37
 Client Sample ID: E04-0126-67614 Comb Effluent 1/2 Matrix: Water Date Received: 02/25/04 18:00

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Methylene chloride	ND	ug/l	1.0	02/27/04 05:24	RJS	75-09-2		
1,1-Dichloroethene	ND	ug/l	1.0	02/27/04 05:24	RJS	75-35-4		
trans-1,2-Dichloroethene	ND	ug/l	1.0	02/27/04 05:24	RJS	156-60-5		
1,1-Dichloroethane	ND	ug/l	1.0	02/27/04 05:24	RJS	75-34-3		
Chloroform	ND	ug/l	1.0	02/27/04 05:24	RJS	67-66-3		
1,1,1-Trichloroethane	ND	ug/l	1.0	02/27/04 05:24	RJS	71-55-6		
Carbon tetrachloride	ND	ug/l	1.0	02/27/04 05:24	RJS	56-23-5		
Benzene	ND	ug/l	1.0	02/27/04 05:24	RJS	71-43-2		
1,2-Dichloroethane	ND	ug/l	1.0	02/27/04 05:24	RJS	107-06-2		
Trichloroethene	ND	ug/l	1.0	02/27/04 05:24	RJS	79-01-6		
1,2-Dichloropropane	ND	ug/l	1.0	02/27/04 05:24	RJS	78-87-5		
Bromodichloromethane	ND	ug/l	1.0	02/27/04 05:24	RJS	75-27-4		
trans-1,3-Dichloropropene	ND	ug/l	1.0	02/27/04 05:24	RJS	10061-02-6		
Toluene	ND	ug/l	1.0	02/27/04 05:24	RJS	108-88-3		
cis-1,3-Dichloropropene	ND	ug/l	1.0	02/27/04 05:24	RJS	10061-01-5		
1,1,2-Trichloroethane	ND	ug/l	1.0	02/27/04 05:24	RJS	79-00-5		
Tetrachloroethene	ND	ug/l	1.0	02/27/04 05:24	RJS	127-18-4		
Dibromochloromethane	ND	ug/l	1.0	02/27/04 05:24	RJS	124-48-1		
Chlorobenzene	ND	ug/l	1.0	02/27/04 05:24	RJS	108-90-7		
Ethylbenzene	ND	ug/l	1.0	02/27/04 05:24	RJS	100-41-4		
Xylene (Total)	ND	ug/l	3.0	02/27/04 05:24	RJS	1330-20-7		
Bromoform	ND	ug/l	1.0	02/27/04 05:24	RJS	75-25-2		
1,1,2,2-Tetrachloroethane	ND	ug/l	1.0	02/27/04 05:24	RJS	79-34-5		
1,3-Dichlorobenzene	ND	ug/l	1.0	02/27/04 05:24	RJS	541-73-1		
1,4-Dichlorobenzene	ND	ug/l	1.0	02/27/04 05:24	RJS	106-46-7		
1,2-Dichlorobenzene	ND	ug/l	1.0	02/27/04 05:24	RJS	95-50-1		
2-Chloroethylvinyl ether	ND	ug/l	5.0	02/27/04 05:24	RJS	110-75-8		
Dibromofluoromethane (S)	127	%		02/27/04 05:24	RJS	1868-53-7		
Toluene-d8 (S)	73	%		02/27/04 05:24	RJS	2037-26-5		
4-Bromofluorobenzene (S)	103	%		02/27/04 05:24	RJS	460-00-4		
1,2-Dichloroethane-d4 (S)	117	%		02/27/04 05:24	RJS	17060-07-0		

Date: 03/11/04

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REPORT OF LABORATORY ANALYSIS

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 HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

3M_MN01539202

1939.0051



Pace Analytical Services, Inc.
 1700 Elm Street, Suite 200
 Minneapolis, MN 55414
 Phone: 612.607.1700
 Fax: 612.607.6444

Lab Project Number: 1085104
 Client Project ID: E04-0126 CG Carbon System Test

Lab Sample No: 105362800 Project Sample Number: 1085104-007 Date Collected: 02/25/04 12:00
 Client Sample ID: E04-0126-67622 Field Blank Matrix: Water Date Received: 02/25/04 18:00

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Microbiology								
Biochemical Oxygen Demand, 5 d	Prep/Method: / SM 5210B							
BOD, 5 day	ND	mg/l	6	03/02/04	JPH1		1	
Date Prepared	02/26/04 10:30			02/26/04 10:30				
Wet Chemistry								
Phenolics Total. in Water	Method: EPA 420.4							
Phenol	ND	ug/l	25.0	03/05/04 08:41	VAF	108-95-2		
GC/MS Semivolatiles								
625 Wastewater GC/MS SVOA	Prep/Method: EPA 625 / EPA 625							
Phenol	ND	ug/l	11.	03/09/04 20:36	KSK	108-95-2		
bis(2-Chloroethyl) ether	ND	ug/l	11.	03/09/04 20:36	KSK	111-44-4		
2-Chlorophenol	ND	ug/l	11.	03/09/04 20:36	KSK	95-57-8		
1,3-Dichlorobenzene	ND	ug/l	11.	03/09/04 20:36	KSK	541-73-1		
1,4-Dichlorobenzene	ND	ug/l	11.	03/09/04 20:36	KSK	106-46-7		
1,2-Dichlorobenzene	ND	ug/l	11.	03/09/04 20:36	KSK	95-50-1		
bis(2-Chloroisopropyl) ether	ND	ug/l	11.	03/09/04 20:36	KSK	39638-32-9		
N-Nitroso-di-n-propylamine	ND	ug/l	11.	03/09/04 20:36	KSK	621-64-7		
Nitrobenzene	ND	ug/l	11.	03/09/04 20:36	KSK	98-95-3		
Isophorone	ND	ug/l	11.	03/09/04 20:36	KSK	78-59-1		
2-Nitrophenol	ND	ug/l	11.	03/09/04 20:36	KSK	88-75-5		
2,4-Dimethylphenol	ND	ug/l	11.	03/09/04 20:36	KSK	105-67-9		
bis(2-Chloroethoxy)methane	ND	ug/l	11.	03/09/04 20:36	KSK	111-91-1		
2,4-Dichlorophenol	ND	ug/l	11.	03/09/04 20:36	KSK	120-83-2		
1,2,4-Trichlorobenzene	ND	ug/l	11.	03/09/04 20:36	KSK	120-82-1		
Naphthalene	ND	ug/l	11.	03/09/04 20:36	KSK	91-20-3		
Hexachloro-1,3-butadiene	ND	ug/l	11.	03/09/04 20:36	KSK	87-68-3		
4-Chloro-3-methylphenol	ND	ug/l	11.	03/09/04 20:36	KSK	59-50-7		
2,4,6-Trichlorophenol	ND	ug/l	11.	03/09/04 20:36	KSK	88-06-2		
2-Chloronaphthalene	ND	ug/l	11.	03/09/04 20:36	KSK	91-58-7		
Dimethylphthalate	ND	ug/l	11.	03/09/04 20:36	KSK	131-11-3		
Acenaphthylene	ND	ug/l	11.	03/09/04 20:36	KSK	208-96-8		
2,6-Dinitrotoluene	ND	ug/l	11.	03/09/04 20:36	KSK	606-20-2		
Acenaphthene	ND	ug/l	11.	03/09/04 20:36	KSK	83-32-9		
2,4-Dinitrophenol	ND	ug/l	55.	03/09/04 20:36	KSK	51-28-5		
4-Nitrophenol	ND	ug/l	55.	03/09/04 20:36	KSK	100-02-7		
2,4-Dinitrotoluene	ND	ug/l	11.	03/09/04 20:36	KSK	121-14-2		
Diethylphthalate	ND	ug/l	11.	03/09/04 20:36	KSK	84-66-2		

Date: 03/11/04

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 1700 Elm Street, Suite 200
 Minneapolis, MN 55414
 Phone: 612.607.1700
 Fax: 612.607.6444

Lab Project Number: 1085104
 Client Project ID: E04-0126 CG Carbon System Test

Lab Sample No: 105362800 Project Sample Number: 1085104-007 Date Collected: 02/25/04 12:00
 Client Sample ID: E04-0126-67622 Field Blank Matrix: Water Date Received: 02/25/04 18:00

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
4-Chlorophenylphenyl ether	ND	ug/l	11.	03/09/04 20:36	KSK	7005-72-3		
Fluorene	ND	ug/l	11.	03/09/04 20:36	KSK	86-73-7		
4,6-Dinitro-2-methylphenol	ND	ug/l	55.	03/09/04 20:36	KSK	534-52-1		
4-Bromophenylphenyl ether	ND	ug/l	11.	03/09/04 20:36	KSK	101-55-3		
Hexachlorobenzene	ND	ug/l	11.	03/09/04 20:36	KSK	118-74-1		
Pentachlorophenol	ND	ug/l	25.	03/09/04 20:36	KSK	87-86-5		
Phenanthrene	ND	ug/l	11.	03/09/04 20:36	KSK	85-01-8		
Anthracene	ND	ug/l	11.	03/09/04 20:36	KSK	120-12-7		
Di-n-butylphthalate	ND	ug/l	11.	03/09/04 20:36	KSK	84-74-2		
Fluoranthene	ND	ug/l	11.	03/09/04 20:36	KSK	206-44-0		
Pyrene	ND	ug/l	11.	03/09/04 20:36	KSK	129-00-0		
Butylbenzylphthalate	ND	ug/l	11.	03/09/04 20:36	KSK	85-68-7		
3,3'-Dichlorobenzidine	ND	ug/l	22.	03/09/04 20:36	KSK	91-94-1		
Benzo(a)anthracene	ND	ug/l	11.	03/09/04 20:36	KSK	56-55-3		
Chrysene	ND	ug/l	11.	03/09/04 20:36	KSK	218-01-9		
bis(2-Ethylhexyl)phthalate	ND	ug/l	11.	03/09/04 20:36	KSK	117-81-7		
Di-n-octylphthalate	ND	ug/l	11.	03/09/04 20:36	KSK	117-84-0		
Benzo(b)fluoranthene	ND	ug/l	11.	03/09/04 20:36	KSK	205-99-2		
Benzo(k)fluoranthene	ND	ug/l	11.	03/09/04 20:36	KSK	207-08-9		
Benzo(a)pyrene	ND	ug/l	11.	03/09/04 20:36	KSK	50-32-8		
Indeno(1,2,3-cd)pyrene	ND	ug/l	11.	03/09/04 20:36	KSK	193-39-5		
Dibenz(a,h)anthracene	ND	ug/l	11.	03/09/04 20:36	KSK	53-70-3		
Benzo(g,h,i)perylene	ND	ug/l	11.	03/09/04 20:36	KSK	191-24-2		
Hexachloroethane	ND	ug/l	11.	03/09/04 20:36	KSK	67-72-1		
Nitrobenzene-d5 (S)	73	%		03/09/04 20:36	KSK	4165-60-0		
2-Fluorobiphenyl (S)	82	%		03/09/04 20:36	KSK	321-60-8		
Terphenyl-d14 (S)	95	%		03/09/04 20:36	KSK	1718-51-0		
Phenol-d6 (S)	77	%		03/09/04 20:36	KSK	13127-88-3		
2-Fluorophenol (S)	73	%		03/09/04 20:36	KSK	367-12-4		
2,4,6-Tribromophenol (S)	80	%		03/09/04 20:36	KSK			
Date Extracted	03/01/04			03/01/04				

GC/MS Volatiles

Volatile GC/MS by 624

Method: EPA 624

Chloromethane	ND	ug/l	1.0	02/27/04 05:51	RJS	74-87-3		
Vinyl chloride	ND	ug/l	1.0	02/27/04 05:51	RJS	75-01-4		
Bromomethane	ND	ug/l	1.0	02/27/04 05:51	RJS	74-83-9		
Chloroethane	ND	ug/l	1.0	02/27/04 05:51	RJS	75-00-3		
Trichlorofluoromethane	ND	ug/l	1.0	02/27/04 05:51	RJS	75-69-4		

Date: 03/11/04

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 1700 Elm Street, Suite 200
 Minneapolis, MN 55414
 Phone: 612.607.1700
 Fax: 612.607.6444

Lab Project Number: 1085104
 Client Project ID: E04-0126 CG Carbon System Test

Lab Sample No: 105362800 Project Sample Number: 1085104-007 Date Collected: 02/25/04 12:00
 Client Sample ID: E04-0126-67622 Field Blank Matrix: Water Date Received: 02/25/04 18:00

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Methylene chloride	ND	ug/l	1.0	02/27/04 05:51	RJS	75-09-2		
1,1-Dichloroethene	ND	ug/l	1.0	02/27/04 05:51	RJS	75-35-4		
trans-1,2-Dichloroethene	ND	ug/l	1.0	02/27/04 05:51	RJS	156-60-5		
1,1-Dichloroethane	ND	ug/l	1.0	02/27/04 05:51	RJS	75-34-3		
Chloroform	ND	ug/l	1.0	02/27/04 05:51	RJS	67-66-3		
1,1,1-Trichloroethane	ND	ug/l	1.0	02/27/04 05:51	RJS	71-55-6		
Carbon tetrachloride	ND	ug/l	1.0	02/27/04 05:51	RJS	56-23-5		
Benzene	ND	ug/l	1.0	02/27/04 05:51	RJS	71-43-2		
1,2-Dichloroethane	ND	ug/l	1.0	02/27/04 05:51	RJS	107-06-2		
Trichloroethene	ND	ug/l	1.0	02/27/04 05:51	RJS	79-01-6		
1,2-Dichloropropane	ND	ug/l	1.0	02/27/04 05:51	RJS	78-87-5		
Bromodichloromethane	ND	ug/l	1.0	02/27/04 05:51	RJS	75-27-4		
trans-1,3-Dichloropropene	ND	ug/l	1.0	02/27/04 05:51	RJS	10061-02-6		
Toluene	ND	ug/l	1.0	02/27/04 05:51	RJS	108-88-3		
cis-1,3-Dichloropropene	ND	ug/l	1.0	02/27/04 05:51	RJS	10061-01-5		
1,1,2-Trichloroethane	ND	ug/l	1.0	02/27/04 05:51	RJS	79-00-5		
Tetrachloroethene	ND	ug/l	1.0	02/27/04 05:51	RJS	127-18-4		
Dibromochloromethane	ND	ug/l	1.0	02/27/04 05:51	RJS	124-48-1		
Chlorobenzene	ND	ug/l	1.0	02/27/04 05:51	RJS	108-90-7		
Ethylbenzene	ND	ug/l	1.0	02/27/04 05:51	RJS	100-41-4		
Xylene (Total)	ND	ug/l	3.0	02/27/04 05:51	RJS	1330-20-7		
Bromoform	ND	ug/l	1.0	02/27/04 05:51	RJS	75-25-2		
1,1,2,2-Tetrachloroethane	ND	ug/l	1.0	02/27/04 05:51	RJS	79-34-5		
1,3-Dichlorobenzene	ND	ug/l	1.0	02/27/04 05:51	RJS	541-73-1		
1,4-Dichlorobenzene	ND	ug/l	1.0	02/27/04 05:51	RJS	106-46-7		
1,2-Dichlorobenzene	ND	ug/l	1.0	02/27/04 05:51	RJS	95-50-1		
2-Chloroethylvinyl ether	ND	ug/l	5.0	02/27/04 05:51	RJS	110-75-8		
Dibromofluoromethane (S)	119	%		02/27/04 05:51	RJS	1868-53-7		
Toluene-d8 (S)	106	%		02/27/04 05:51	RJS	2037-26-5		
4-Bromofluorobenzene (S)	105	%		02/27/04 05:51	RJS	460-00-4		
1,2-Dichloroethane-d4 (S)	114	%		02/27/04 05:51	RJS	17060-07-0		

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3M_MN01539205

1939.0054



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1700 Elm Street, Suite 200
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

Lab Project Number: 1085104
Client Project ID: E04-0126 CG Carbon System Test

PARAMETER FOOTNOTES

- ND Not detected at or above adjusted reporting limit
NC Not Calculable
J Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit
MDL Adjusted Method Detection Limit
(S) Surrogate
[1] The BOD dilution blank QC criterion was not met. Acceptable method performance is based upon the remaining batch QC.
[2] The surrogate recovery was outside of acceptance limits.

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 Minneapolis, MN 55414
 Phone: 612.607.1700
 Fax: 612.607.6444

QUALITY CONTROL DATA

Lab Project Number: 1085104
 Client Project ID: E04-0126 CG Carbon System Test

METHOD BLANK: 105373757

Associated Lab Samples: 105362743 105362750 105362768 105362776 105362784 105362792 105362800

Parameter	Units	Blank	Reporting	Footnotes
		Result	Limit	
4,6-Dinitro-2-methylphenol	ug/l	ND	50.	
4-Bromophenylphenyl ether	ug/l	ND	10.	
Hexachlorobenzene	ug/l	ND	10.	
Pentachlorophenol	ug/l	ND	23.	
Phenanthrene	ug/l	ND	10.	
Anthracene	ug/l	ND	10.	
Di-n-butylphthalate	ug/l	ND	10.	
Fluoranthene	ug/l	ND	10.	
Pyrene	ug/l	ND	10.	
Butylbenzylphthalate	ug/l	ND	10.	
3,3'-Dichlorobenzidine	ug/l	ND	20.	
Benzo(a)anthracene	ug/l	ND	10.	
Chrysene	ug/l	ND	10.	
bis(2-Ethylhexyl)phthalate	ug/l	ND	10.	
Di-n-octylphthalate	ug/l	ND	10.	
Benzo(b)fluoranthene	ug/l	ND	10.	
Benzo(k)fluoranthene	ug/l	ND	10.	
Benzo(a)pyrene	ug/l	ND	10.	
Indeno(1,2,3-cd)pyrene	ug/l	ND	10.	
Dibenz(a,h)anthracene	ug/l	ND	10.	
Benzo(g,h,i)perylene	ug/l	ND	10.	
Hexachloroethane	ug/l	ND	10.	
Nitrobenzene-d5 (S)	%	79		
2-Fluorobiphenyl (S)	%	81		
Terphenyl-d14 (S)	%	91		
Phenol-d6 (S)	%	82		
2-Fluorophenol (S)	%	78		
2,4,6-Tribromophenol (S)	%	84		

LABORATORY CONTROL SAMPLE: 105373765

Parameter	Units	Spike	LCS	LCS	Footnotes
		Conc.	Result	% Rec	
Phenol	ug/l	50.00	42.51	85	
bis(2-Chloroethyl) ether	ug/l	50.00	41.58	83	

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QUALITY CONTROL DATA

Lab Project Number: 1085104
 Client Project ID: E04-0126 CG Carbon System Test

LABORATORY CONTROL SAMPLE: 105373765

<u>Parameter</u>	<u>Units</u>	<u>Spike Conc.</u>	<u>LCS Result</u>	<u>LCS % Rec</u>	<u>Footnotes</u>
2-Chlorophenol	ug/l	50.00	41.34	83	
1,3-Dichlorobenzene	ug/l	50.00	39.64	79	
1,4-Dichlorobenzene	ug/l	50.00	40.08	80	
1,2-Dichlorobenzene	ug/l	50.00	40.57	81	
bis(2-Chloroisopropyl) ether	ug/l	50.00	43.03	86	
N-Nitroso-di-n-propylamine	ug/l	50.00	43.87	88	
Nitrobenzene	ug/l	50.00	45.23	90	
Isophorone	ug/l	50.00	44.35	89	
2-Nitrophenol	ug/l	50.00	40.51	81	
2,4-Dimethylphenol	ug/l	50.00	16.12	32	1
bis(2-Chloroethoxy)methane	ug/l	50.00	42.95	86	
2,4-Dichlorophenol	ug/l	50.00	39.87	80	
1,2,4-Trichlorobenzene	ug/l	50.00	39.98	80	
Naphthalene	ug/l	50.00	41.60	83	
Hexachloro-1,3-butadiene	ug/l	50.00	42.62	85	
4-Chloro-3-methylphenol	ug/l	50.00	43.14	86	
2,4,6-Trichlorophenol	ug/l	50.00	41.26	82	
2-Chloronaphthalene	ug/l	50.00	44.07	88	
Dimethylphthalate	ug/l	50.00	45.04	90	
Acenaphthylene	ug/l	50.00	44.17	88	
2,6-Dinitrotoluene	ug/l	50.00	44.25	88	
Acenaphthene	ug/l	50.00	43.78	88	
2,4-Dinitrophenol	ug/l	50.00	30.01	60	
4-Nitrophenol	ug/l	50.00	39.86	80	
2,4-Dinitrotoluene	ug/l	50.00	41.91	84	
Diethylphthalate	ug/l	50.00	42.08	84	
4-Chlorophenylphenyl ether	ug/l	50.00	44.50	89	
Fluorene	ug/l	50.00	45.01	90	
4,6-Dinitro-2-methylphenol	ug/l	50.00	34.83	70	
4-Bromophenylphenyl ether	ug/l	50.00	46.48	93	
Hexachlorobenzene	ug/l	50.00	47.58	95	
Pentachlorophenol	ug/l	50.00	25.06	50	1
Phenanthrene	ug/l	50.00	43.99	88	
Anthracene	ug/l	50.00	45.12	90	
Di-n-butylphthalate	ug/l	50.00	46.00	92	
Fluoranthene	ug/l	50.00	46.88	94	
Pyrene	ug/l	50.00	42.96	86	

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Fax: 612.607.6444

QUALITY CONTROL DATA

Lab Project Number: 1085104
Client Project ID: E04-0126 CG Carbon System Test

LABORATORY CONTROL SAMPLE: 105373765

Table with 6 columns: Parameter, Units, Spike Conc., LCS Result, LCS % Rec, Footnotes. Lists various chemical compounds and their corresponding test results.



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QUALITY CONTROL DATA

Lab Project Number: 1085104
 Client Project ID: E04-0126 CG Carbon System Test

METHOD BLANK: 105362867

Associated Lab Samples: 105362743 105362750 105362768 105362776 105362784 105362792 105362800

Parameter	Units	Blank	Reporting	Footnotes
		Result	Limit	
1,2-Dichlorobenzene	ug/l	ND	1.0	
2-Chloroethylvinyl ether	ug/l	ND	5.0	
Dibromofluoromethane (S)	%	107		
Toluene-d8 (S)	%	104		
4-Bromofluorobenzene (S)	%	106		
1,2-Dichloroethane-d4 (S)	%	106		

LABORATORY CONTROL SAMPLE: 105362875

Parameter	Units	Spike	LCS	LCS	Footnotes
		Conc.	Result	% Rec	
Chloromethane	ug/l	20.00	21.65	108	
Vinyl chloride	ug/l	20.00	20.88	104	
Bromomethane	ug/l	20.00	27.46	137	
Chloroethane	ug/l	20.00	23.23	116	
Trichlorofluoromethane	ug/l	20.00	20.62	103	
Methylene chloride	ug/l	20.00	21.55	108	
1,1-Dichloroethene	ug/l	20.00	20.16	101	
trans-1,2-Dichloroethene	ug/l	20.00	22.50	113	
1,1-Dichloroethane	ug/l	20.00	20.02	100	
Chloroform	ug/l	20.00	20.88	104	
1,1,1-Trichloroethane	ug/l	20.00	20.65	103	
Carbon tetrachloride	ug/l	20.00	20.71	104	
Benzene	ug/l	20.00	20.39	102	
1,2-Dichloroethane	ug/l	20.00	20.79	104	
Trichloroethene	ug/l	20.00	20.53	103	
1,2-Dichloropropane	ug/l	20.00	20.59	103	
Bromodichloromethane	ug/l	20.00	20.55	103	
trans-1,3-Dichloropropene	ug/l	20.00	20.99	105	
Toluene	ug/l	20.00	20.32	102	
cis-1,3-Dichloropropene	ug/l	20.00	20.24	101	
1,1,2-Trichloroethane	ug/l	20.00	21.08	105	
Tetrachloroethene	ug/l	20.00	19.99	100	
Dibromochloromethane	ug/l	20.00	21.29	106	
Chlorobenzene	ug/l	20.00	19.88	99	

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QUALITY CONTROL DATA

Lab Project Number: 1085104
 Client Project ID: E04-0126 CG Carbon System Test

LABORATORY CONTROL SAMPLE: 105362875

<u>Parameter</u>	<u>Units</u>	<u>Spike Conc.</u>	<u>LCS Result</u>	<u>LCS % Rec</u>	<u>Footnotes</u>
Ethylbenzene	ug/l	20.00	20.32	102	
Xylene (Total)	ug/l	60.00	61.60	103	
Bromoform	ug/l	20.00	19.80	99	
1,1,2,2-Tetrachloroethane	ug/l	20.00	23.73	119	
1,3-Dichlorobenzene	ug/l	20.00	20.16	101	
1,4-Dichlorobenzene	ug/l	20.00	20.25	101	
1,2-Dichlorobenzene	ug/l	20.00	20.70	104	
2-Chloroethylvinyl ether	ug/l	20.00	22.99	115	
Dibromofluoromethane (S)				104	
Toluene-d8 (S)				96	
4-Bromofluorobenzene (S)				97	
1,2-Dichloroethane-d4 (S)				100	

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Fax: 612.607.6444

Lab Project Number: 1085104
Client Project ID: E04-0126 CG Carbon System Test

QUALITY CONTROL DATA PARAMETER FOOTNOTES

Consistent with EPA guidelines, unrounded concentrations are displayed and have been used to calculate % Rec and RPD values.

LCS(D) Laboratory Control Sample (Duplicate)
MS(D) Matrix Spike (Duplicate)
DUP Sample Duplicate
ND Not detected at or above adjusted reporting limit
NC Not Calculable
J Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit
MDL Adjusted Method Detection Limit
RPD Relative Percent Difference
(S) Surrogate
[1] The spike recovery was outside of acceptance limits.
[2] The BOD dilution blank QC criterion was not met. Acceptable method performance is based upon the remaining batch QC.

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3M_MN01539217

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Fluorochemicals
FINAL REPORT
EVENT 2

E04-0126

February 25, 2004

Analytical Report

Fluorochemical Characterization of Aqueous Samples

Cottage Grove Activated Carbon System FC Monitoring (E04-0126)

Exygen Research Laboratory Report No. L0001958

Testing Laboratory

Exygen Research
3058 Research Drive
State College, PA 16801

Project Lead

Brian Mader
3M Environmental, Health, and Safety Operations
935 Bush Avenue
Building 0002-03-E-09
PO Box 33331
St. Paul, MN 55133-3331

1 Introduction

Results are reported for the analysis of aqueous samples received by Exygen Research (Exygen) from the 3M Cottage Grove facility. The Exygen study number assigned to the project is L0001958.

Specific fluorochemical characterization by liquid chromatography / tandem mass spectrometry (LC/MS/MS) was requested for all samples. A total of 23 samples (including field duplicates, blanks, and spikes) were received for analysis.

The samples were prepared and analyzed by LC/MS/MS for the following list of fluorochemicals:

- Table 1: Target Analysis

Compound Name	Acronym
Perfluorobutanesulfonate	C4 Sulfonate (PFBS)
Perfluorohexanesulfonate	C6 Sulfonate (PFHS)
Perfluorooctanesulfonate	C8 Sulfonate (PFOS)
Perfluorohexanoic Acid	C6 Acid (PFHA)
Perfluorooctanoic Acid	C8 Acid (PFOA)

The analytical methods used were originally developed for groundwater samples and were validated by Exygen. The validation protocol and results are on file with Exygen. Only the C8 Sulfonate and C8 Acid were included in the original method validation. It should be noted that the quality control elements included in this analysis demonstrate the applicability of the method to the additional analytes.

2 Sample Receipt

The water samples were submitted in plastic containers. Samples were received on wet ice at a temperature of 0.1°C. Samples were stored at 4°C from receipt until analysis. Twenty-three individual containers were received. Field samples were collected on 2/25/04. Samples were received on 2/26/04. Chain-of-custody information is presented in Attachment C.

3 Holding Times

Field and laboratory spikes of these fluorochemicals have shown stability for periods greater than 90 days. Samples were analyzed within 30 days of collection.

4 Methods - Analytical and Preparatory

4.1 LC/MS/MS

4.1.1 Sample Preparation for LC/MS/MS Analysis

Water samples were initially treated with 200 uL of 250 mg/L sodium thiosulfate solution to remove residual chlorine. Solid phase extraction (SPE) was used to prepare the samples for LC/MS/MS analysis. A portion of sample was diluted to forty-milliliters with Type I water. The dilution was performed prior to extraction in order to lessen the effects of matrix enhancement. This matrix enhancement was observed in earlier samples from this location and from screening runs performed on these samples. The diluted samples were transferred to a C₁₈ SPE cartridge. The cartridge was eluted with 5 mL of 100% methanol. This treatment resulted in an eight-fold concentration of the diluted samples prior to analysis.

4.1.2 Sample Analysis by LC/MS/MS

In HPLC, an aliquot of extract is injected and passed through a liquid-phase chromatographic column. Based on the affinity of the analyte for the stationary phase in the column relative to the liquid mobile phase, the analyte is retained for a characteristic amount of time. Following HPLC separation, ES/MS provides a rapid and accurate means for analyzing a wide range of organic compounds, including fluorochemicals. Electrospray is generally operated at relatively mild temperatures; molecules are ionized, fragmented, and detected. Ions characteristic of known fluorochemicals are observed and quantitated against standards.

A Hewlett-Packard HP1100 HPLC system coupled to a Micromass Ultima MS/MS was used to analyze the sample extracts. Analysis was performed using selected reaction monitoring (SRM). Samples were extracted on 3/5/04. Additional matrix spikes were extracted on 3/17/04. Samples were analyzed between 3/12/04 and 3/18/04. Raw analytical data is provided in Attachment D.

5 Analysis

5.1 Calibration

A 7-point calibration curve was analyzed at the beginning and end of the analytical sequence for the compounds of interest. The calibration points were prepared at 0, 25, 50, 100, 250, 500, and 1000 ng/L (ppt) for LC/MS/MS analysis. The instrument response versus the concentration was plotted for each point. Using linear regression with 1/x weighting, the slope, y-intercept and correlation coefficient (*r*) and coefficient of determination (*r*²) were determined. A calibration curve is acceptable if $r \geq 0.985$ ($r^2 \geq 0.970$).

Calibration standards are prepared using the same SPE procedure used for samples.

Calibration check standards were analyzed periodically (every three to five sample injections) throughout the analysis sequence. Compliance is obtained if the standard analyte concentrations are within +/-20% of the actual value.

All calibration criteria were met for this analysis.

5.2 Blanks

Extraction blanks were prepared and analyzed with every extraction batch of samples. The extraction blanks should not have any target analytes present at or above the concentration of the low-level calibration standard. For these samples, the extraction blanks were compliant.

Instrument blanks in the form of clean methanol solvent were also analyzed after every high-level calibration standard, and after known high-level samples. Again, the blanks should not have any target analytes present at or above the low-level calibration standard. For the samples presented here the instrument blanks are compliant.

5.3 Surrogates

Surrogate spikes are not a component of the LC/MS/MS analytical methods.

5.4 Matrix Spikes

Field and laboratory spikes were prepared using all compounds of interest. Field spikes were prepared by adding a measured volume of field sample to a container spiked with the target analytes by the laboratory prior to shipping containers for sample collection. Laboratory spikes consisted of aliquots of un-spiked field samples that were fortified at the laboratory at the time of extraction. Field blank spikes consisted of laboratory water fortified at the laboratory and shipped with the sample containers to the field and back to the laboratory for analysis. Laboratory control spikes (see section 5.6) are samples of laboratory water spiked at the time of extraction. Each type of spike provides information needed to assess analyte stability, extraction efficiency, and matrix effects that may impact analytical results. Matrix spike recoveries are given in Attachment B. Please see Section 5.7 for additional discussion of matrix spike recoveries.

5.5 Duplicates

Field and laboratory duplicates were prepared for each field sample. Duplicate results are given along with the sample results in Attachment A.

5.6 Laboratory Control Samples

For LC/MS/MS analyses, MilliQ water was spiked with all compounds of interest at 100 and 500 ng/mL during each extraction set. All recoveries for all compounds were between 70-130% in each LCS. Results are given along with the raw data in Attachment D.

5.7 Statement of Accuracy

Based on results of field spikes, laboratory fortified field samples, field blank spikes, and laboratory control spikes, the analytical accuracy of all compounds is $\pm 30\%$, with the exception of PFBS, which has a statement of accuracy of $\pm 50\%$. Several other compounds showed either laboratory or field spike recoveries outside of these ranges. The statement of accuracy is based on an overall assessment of all spike recovery data (field, lab, and control spikes) used for the project. Spike recovery data is included in Attachment B.

6 Data Summary

Please see Attachment A for a detailed listing of the analytical results. Results are reported in parts per billion (ppb) (ng/mL).



7 Data/Sample Retention

Samples are disposed of one month after the report is issued unless otherwise specified. All electronic data is archived on retrievable media and hard copy reports are stored in data folders maintained by Exygen.

8 Attachments

- 8.1 Attachment A: Results
- 8.2 Attachment B: Matrix Spike Recoveries
- 8.3 Attachment C: Chain of Custody
- 8.4 Attachment D: Raw Analytical Data

9 Signatures

	3/22/04
Paul Connolly, Team Leader - ICMS	Date
	3/19/04
John M. Flaherty, Vice President	Date

Other Lab Members Contributing to Data

Karen Smith

SECTION A

Summary of C6 and C8 Acids and C4, C6 and C8 Sulfonates in Water Samples

Sample ID	Analyte Found (ng/mL)	
	C6 Acid PFHA	C8 Acid PFOA
	Perfluorohexanoic Acid	Perfluorooctanoic Acid
Influent 3	45.9	301
Influent 3*	47.3	298
Influent 3 Dup	44.3	319
Comb Effluent 1/2	0.462	0.0835
Comb Effluent 1/2*	0.398	0.114
Comb Effluent 1/2 Dup	0.387	0.111
Port 4A	13.4	5.59
Port 4A*	12.6	5.41
Port 4A Dup	11.9	6.91
Port 4B	15.6	4.42
Port 4B*	15.3	4.64
Port 4B Dup	15.7	4.72
Influent 1/2	3.90	11.6
Influent 1/2*	3.73	13.4
Influent 1/2 Dup	3.77	14.5
Trip Blank	ND	NQ

Sample ID	Analyte Found (ng/mL)		
	C4 Sulfonate PFBS	C6 Sulfonate PFHS	C8 Sulfonate PFOS
	Perfluorobutanesulfonate	Perfluorohexanesulfonate	Perfluorooctanesulfonate
Influent 3	36.9	6.20	37.7
Influent 3*	40.0	6.12	40.5
Influent 3 Dup	32.9	6.34	36.9
Comb Effluent 1/2	0.476	ND	ND
Comb Effluent 1/2*	0.449	ND	ND
Comb Effluent 1/2 Dup	0.482	ND	ND
Port 4A	30.1	1.97	3.44
Port 4A*	29.3	1.96	3.34
Port 4A Dup	23.3	1.95	3.27
Port 4B	21.9	1.48	2.61
Port 4B*	22.7	1.54	2.73
Port 4B Dup	25.2	1.65	2.90
Influent 1/2	42.1	4.63	13.4
Influent 1/2*	45.0	4.55	11.3
Influent 1/2 Dup	46.1	4.56	11.1
Trip Blank	ND	ND	ND

ND = Not detected = Response between 0 and 0.025 ng/mL.

NQ = Not quantifiable = Response between 0.025 ng/mL and LOQ (0.050 ng/mL)

*Laboratory Duplicate

X 3058 Research Drive
State College, PA 16801, USA
T: 814.272.1039
F: 814.231.1580
exygen.com

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CONTRACTS—All contracts are subject to review and approval by Exygen's legal council and must be signed by a corporate officer.

PAYMENT TERMS—Unless otherwise set forth in this Purchase Order, terms of payment are "Net 30 Days." The time allowable for payment shall begin after both: (a) client's receipt of Exygen's invoice; and (b) the satisfactory performance of the services contemplated hereunder. A 1.5% monthly service charge shall be added to all past due balances. Notwithstanding any payment terms to the contrary set forth in this Purchase Order, Exygen, in its sole discretion, reserves the right to request payment in advance from client. In the event of default in payment for services rendered, Exygen shall be entitled to reasonable costs of collection, including, but not limited to, attorneys' fees.

BILLING—All fees and charges are billed directly to the client requesting services. Exygen will not bill a third party without prior notification in writing, via a signed statement acknowledging and accepting responsibility for payment. Exygen will assume that the paperwork submitted with a sample describes the desired testing protocol. Any changes to the protocol must be submitted in writing. Please fax changes to Exygen marked, "URGENT" to your assigned representative. If changes are made after the originally requested testing has been initiated or completed, the client accepts responsibility for payment. Exygen will not be responsible for hold times that are missed due to such changes.

RUSH SERVICE—Exygen routinely offers expedited turnaround times on critical analyses. Rush analysis services are contingent upon availability and prearrangement with an authorized Exygen representative. A surcharge is usually added to the list fee if rush analysis is requested.

MINIMUM FEE—The minimum fee for commercial services is one hundred dollars (\$100).

SAMPLE COLLECTION/SUBMISSION—Client shall be responsible for proper collection, preservation, packing and packaging, and shipment of the sample(s) in accordance with applicable law and good commercial practice. Title and risk of loss with respect to submitted samples shall at all times remain with client prior to acceptance by an Exygen sample custodian. Exygen will initiate a chain-of-custody upon sample receipt unless the client includes one with the sample(s). By request, Exygen will provide chain-of-custody forms for client's use.

All samples submitted must be accompanied by: purchase order, or signed quotation; sample description, including sample type, source, time and date of collection; specific analyses requested; estimated concentration levels; requested report date; current billing address; and other relevant information.

Upon request, Exygen will provide and ship appropriate sample containers to clients. These containers will include the appropriate preservative if particular analyses require one. It is the responsibility of the client to handle these preserved containers safely, and using all appropriate safety precautions. Clients requesting overnight delivery of sample containers will be invoiced for freight. Exygen reserves the right to charge a fee for sample containers.

SAMPLE DISPOSAL—Exygen retains samples for one month after reporting results, then disposes of or returns the sample. Unless the client

requests that the sample(s) be returned, or prior arrangements have been made for long-term storage, Exygen shall dispose of the sample(s). Exygen shall charge a monthly fee for long-term storage. Samples found or suspected to contain hazardous waste, according to definitions in state and/or federal guidelines, will be returned to the client upon completion of the analysis. The cost of returning the sample(s) will be invoiced to the client. Exygen reserves the right to charge a disposal fee for the disposal of any and all samples unless returned by Exygen to client. Exygen shall, unless the nature and character of the sample dictates otherwise, store all samples under locked, temperature-controlled conditions. An internal chain-of-custody is maintained for each lot of samples received.

HAZARD COMMUNICATION—The client has the responsibility to inform the laboratory of any known or suspected hazardous characteristics of the sample, and to provide information on hazard prevention and personal protection as necessary or otherwise required by applicable law.

QUALITY ASSURANCE—Exygen will perform services consistent with its Quality Assurance Standard Operating Procedures (SOPs), the terms of which are expressly incorporated herein by reference; provided, however, it shall be the exclusive responsibility of the client to confirm that Exygen's standard practices will meet the client's needs prior to placing an order for work. In the event client desires an alternative to these SOPs, such requests must be made in writing prior to sample submission and acceptance by Exygen.

ETHICS POLICY—Exygen Research strives to provide its clients with the highest quality data in the fastest realistic turnaround time. We balance the high standards of this goal by insisting that each employee also perform within the guidelines of the highest possible professional ethics. Each Exygen employee is required to sign a statement of personal and professional integrity.

SPECIAL REPORTS—Additional charges may be necessary for custom report formats.

LITIGATION—All costs associated with compliance to any subpoena for documents, for testimony in a court of law, or for any other purpose relating to work performed by Exygen Research shall be invoiced by Exygen and paid by client. These costs shall include, but are not limited to, hourly charges for the persons involved, travel, mileage, and accommodations, and for any and all other expenses associated with said litigation.

INDEMNIFICATION, LIABILITY, AND INSURANCE—Exygen agrees to indemnify, defend, and save the client, its officers, directors, employees, agents, and representatives harmless from all losses, expenses, demands, and claims made against the client, its officers, directors, employees, agents and representatives because of any personal injuries, death, or property damage to the extent caused by the negligence or willful misconduct of Exygen, its employees, agents, or representatives in connection with the performance of services under this agreement, except to the extent such losses, expenses, demands, or claims, occur as a result of the negligent or willful acts or omissions of the client, its officers, directors, employees, agents, and representatives; however, such indemnification and damages shall, in the aggregate, be limited to the amount equal to the lesser of (a) damages suffered by the client as the direct result thereof, or (b) the total amount paid to Exygen for the work herein covered. Exygen will, if requested by the client, furnish certificates of insurance from its carrier evidencing appropriate insurance coverage.

WARRANTY AND LIMITS OF LIABILITY—In accepting analytical work, Exygen guarantees the accuracy of the test results for the sample as submitted within the tolerances set forth in the SOPs. We disclaim any other warranties, expressed or implied by law. Exygen does not accept any legal responsibility for the purposes for which client uses the test results. Exygen will not accept any purchase order or any other order for work that includes conditions that vary from these Standard Conditions.

ACCEPTANCE OF PURCHASE ORDER—This Purchase Order becomes a binding agreement, subject to the specific terms and conditions stated herein, upon Exygen's commencement of work.

SECTION B

Recovery Summary for C6 and C8 Acids and C4, C6 and C8 Sulfonates in Water

Sample Description	C4 Sulfonate PFBS				C6 Sulfonate PFHS			C8 Sulfonate PFOS		
	Amount Spiked (ng/mL)	Amt Found in Sample (ng/mL)	Amount Recovered (ng/mL)	Recovery (%)	Amt Found in Sample (ng/mL)	Amount Recovered (ng/mL)	Recovery (%)	Amt Found in Sample (ng/mL)	Amount Recovered (ng/mL)	Recovery (%)
Influent 3 Low Spk 10 ppb Spike	10	36.9	ND	0	6.20	17.2	110	37.7	46.1	84
Influent 3 High Spk 100 ppb Spike	100	36.9	163	126	6.20	91.9	86	37.7	123	85
Influent 3 Spk C Laboratory Spike	500	36.9	529	98	6.20	488	96	37.7	577	108
Comb Effluent 1/2 Low Spk 10 ppb Spike	10	0.476	8.17	77	ND	8.58	86	ND	8.24	82
Comb Effluent 1/2 High Spk 100 ppb Spike	100	0.476	77.5	77	ND	82.3	82	ND	85.9	86
Comb Effluent 1/2 Spk D Laboratory Spike	10	0.476	10.1	96	ND	10.1	101	ND	9.44	94
Port 4A Low Spk 10 ppb Spike	10	30.1	31.1	10	1.97	10.7	87	3.44	10.9	75
Port 4A High Spk 100 ppb Spike	100	30.1	86.7	57	1.97	76.1	74	3.44	72.1	69
Port 4A Spk E Laboratory Spike	25	30.1	57.2	108	1.97	26.8	99	3.44	27.5	96
Port 4B Low Spk 10 ppb Spike	10	21.9	31.5	96	1.48	10.2	87	2.61	11.0	84
Port 4B High Spk 100 ppb Spike	100	21.9	145	123	1.48	107	106	2.61	111	108
Port 4B Spk F Laboratory Spike	25	21.9	46.8	100	1.48	25.0	94	2.61	25.2	90
Influent 1/2 Low Spk 10 ppb Spike	10	42.1	170	*	4.63	14.6	100	13.4	23.2	98
Influent 1/2 High Spk 100 ppb Spike	100	42.1	191	149	4.63	99.9	95	13.4	112	99
Influent 1/2 Spk G Laboratory Spike	10	42.1	137	*	4.63	12.9	83	13.4	28.3	149
Trip Blank Low Spk 10 ppb Spike	10	ND	8.05	81	NQ	10.1	101	ND	10.9	109
Trip Blank High Spk 100 ppb	100	ND	70.7	71	NQ	95.6	96	ND	104	104

ND = Not detected = Response between 0 and 0.025 ng/mL.

NQ = Not quantifiable = Response between 0.025 ng/mL and LOQ (0.050 ng/mL)

*Sample residue exceeds spiking level significantly; therefore, an accurate recovery cannot be calculated.

X
3058 Research Drive
State College, PA 16801, USA
T: 800.281.3219
F: 814.272.1019
oxygen.com

Recovery Summary for C6 and C8 Acids and C4, C6 and C8 Sulfonates in Water

Sample Description	Amount Spiked (ng/mL)	C6 Acid PFHA			C8 Acid PFOA		
		Amt Found in Sample (ng/mL)	Amount Recovered (ng/mL)	Recovery (%)	Amt Found in Sample (ng/mL)	Amount Recovered (ng/mL)	Recovery (%)
Influent 3 Low Spk 10 ppb Spike	10	45.9	51.5	*	301	318	*
Influent 3 High Spk 100 ppb Spike	100	45.9	129	83	301	363	62
Influent 3 Spk C Laboratory Spike	250	45.9	516	188	301	572	108
Comb Effluent 1/2 Low Spk 10 ppb Spike	10	0.462	7.84	74	0.0835	13.1	130
Comb Effluent 1/2 High Spk 100 ppb Spike	100	0.462	74.7	74	0.0835	130	130
Comb Effluent 1/2 Spk D Laboratory Spike	10	0.462	19.0	185	0.0835	12.0	119
Port 4A Low Spk 10 ppb Spike	10	13.4	20.7	73	5.59	15.2	96
Port 4A High Spk 100 ppb Spike	100	13.4	84.1	71	5.59	107	101
Port 4A Spk E Laboratory Spike	25	13.4	53.6	161	5.59	36.1	122
Port 4B Low Spk 10 ppb Spike	10	15.6	23.8	82	4.42	15.3	109
Port 4B High Spk 100 ppb Spike	100	15.6	107	91	4.42	109	105
Port 4B Spk F Laboratory Spike	25	15.6	56.6	164	4.42	33.6	117
Influent 1/2 Low Spk 10 ppb Spike	10	3.90	14.9	110	11.6	18.4	68
Influent 1/2 High Spk 100 ppb Spike	100	3.90	93.5	90	11.6	120	108
Influent 1/2 Spk G Laboratory Spike	10	3.90	55.1	512	11.6	29.1	175
Trip Blank Low Spk 10 ppb Spike	10	ND	12.5	125	ND	11.6	116
Trip Blank High Spk 100 ppb	100	ND	77.7	78	ND	105	105

ND = Not detected = Response between 0 and 0.025 ng/mL.

NQ = Not quantifiable = Response between 0.025 ng/mL and LOQ (0.050 ng/mL)

*Sample residue exceeds spiking level significantly; therefore, an accurate recovery cannot be calculated.

X 3058 Research Drive
State College, PA 16801, USA
T: 800.281.3219
F: 814.272.1019
exygen.com

SECTION C



3058 Research Drive
State College, PA 16801

Phone: 814-272-1039
Fax: 814-231-1580

Login

Login Group: L0001958

Login #:	2069	Conform COC Sample:	True
Project:	P0000644	Conform COC:	False
Company Name:	3M	Conform Sample:	True
Submitted By:	KENT LINDSTROM	Conform Request:	True
Login Type:	Immediate Receipt of Samples		
Started:	T		
Date Start:	02/26/2004		
Due Date:	03/11/2004		
Received Date:	02/26/2004		
Received By:	AMMERMAN, MARK		
Spread Sample:			
Label:			
Project Title/Type:	Cottage Grove Activated Carbon System Fluorochemical Monitoring / ROUTINE		
Exygen SD/PI:	RISHA, KAREN		
Login Notes:			
Conform Notes:	Client send only 2 of 3 pages of the chain--waiting for the third to finish the login. MSA 02/26/04		

Packages / Containers

<u>Package</u>	<u>Carton</u>	<u>Mail Date / Condition</u>	<u>Shipper / ID</u>	<u>Temp. Control/Temp.</u>	<u>Direction / Handled By</u>
PK0002581		2/26/2004 3:15:26PM Package & Contents Uncompromised	FEDEX 3168015711000001792579 510193201	Wet Ice 0.1	RECEIVED AMMERMAN, MARK

<u>Container #</u>	<u>Gross Weight</u>	<u>pH</u>	<u>Container Type</u>	<u>Preservative</u>	<u>Mfg. Lot</u>	<u>Mfg. ID</u>
C0028072	580.2 g		500 ml Clear Plastic Narrow	NONE		
C0028073	579.0 g		500 ml Clear Plastic Narrow	NONE		
C0028074	258.6 g		500 ml Clear Plastic Narrow	NONE		
C0028075	258.2 g		500 ml Clear Plastic Narrow	NONE		
C0028076	612.1 g		500 ml Clear Plastic Narrow	NONE		
C0028077	601.0 g		500 ml Clear Plastic Narrow	NONE		
C0028078	257.6 g		500 ml Clear Plastic Narrow	NONE		
C0028079	254.9 g		500 ml Clear Plastic Narrow	NONE		
C0028080	611.3 g		500 ml Clear Plastic Narrow	NONE		
C0028081	614.4 g		500 ml Clear Plastic Narrow	NONE		
C0028082	256.4 g		500 ml Clear Plastic Narrow	NONE		
C0028083	255.7 g		500 ml Clear Plastic Narrow	NONE		
C0028084	584.0 g		500 ml Clear Plastic Narrow	NONE		
C0028085	582.2 g		500 ml Clear Plastic Narrow	NONE		
C0028086	253.2 g		500 ml Clear Plastic Narrow	NONE		
C0028087	254.3 g		500 ml Clear Plastic Narrow	NONE		

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Login.rpt

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R0088309



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3M_MN01539231

1939.0080

Login

Login Group: L0001958

Login #: 2069
Project: P0000644

Conform COC Sample: True
Conform COC: False
Conform Sample: True
Conform Request: True

Company Name: 3M
Submitted By: KENT LINDSTROM
Login Type: Immediate Receipt of Samples
Started: T
Date Start: 02/26/2004
Due Date: 03/11/2004
Received Date: 02/26/2004
Received By: AMMERMAN, MARK
Spread Sample:

Label:
Project Title/Type: Cottage Grove Activated Carbon System Fluorochemical Monitoring / ROUTINE
Exygen SD/PI: RISHA, KAREN

Login Notes:
Conform Notes: Client send only 2 of 3 pages of the chain--waiting for the third to finish the login. MSA 02/26/04

Packages / Containers

Package	Carton	Mail Date / Condition	Shipper / ID	Temp. Control/Temp.	Direction / Handled By
PK0002581		2/26/2004 3:15:26PM Package & Contents Uncompromised	FEDEX 3168015711000001792579 510193201	Wet Ice 0.1	RECEIVED AMMERMAN, MARK

Container #	Gross Weight	pH	Container Type	Preservative	Mfg. Lot	Mfg. ID
C0028102	580.3 g		500 ml Clear Plastic Narrow	NONE		
C0028103	593.1 g		500 ml Clear Plastic Narrow	NONE		
C0028104	266.7 g		500 ml Clear Plastic Narrow	NONE		
C0028105	251.6 g		500 ml Clear Plastic Narrow	NONE		
C0028106	258.5 g		500 ml Clear Plastic Narrow	NONE		
C0028107	257.3 g		500 ml Clear Plastic Narrow	NONE		
C0028108	256.9 g		500 ml Clear Plastic Narrow	NONE		

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HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

3M_MN01539232

1939.0081

Login

Samples

<u>Sample ID</u>	<u>Container</u>	<u>Matrix</u>	<u>Fraction</u>	<u>Sample</u>	<u>Date Sampled</u>	<u>Date Received</u>	<u>Date Due</u>
L0001958-0001	C0028072	LIQUID	Water	Influent Phase 1/2 (Inf 1/2)	02/25/2004	02/26/2004	03/11/2004
L0001958-0002	C0028073	LIQUID	Water	Influent Phase 1/2 (Inf 1/2) Dup	02/25/2004	02/26/2004	03/11/2004
L0001958-0003	C0028074	LIQUID	Water	Influent Phase 1/2 (Inf 1/2) Low	02/25/2004	02/26/2004	03/11/2004
L0001958-0004	C0028075	LIQUID	Water	Influent Phase 1/2 (Inf 1/2) High	02/25/2004	02/26/2004	03/11/2004
L0001958-0005	C0028076	LIQUID	Water	Comb Effluent 1/2 (Eff 1/2)	02/25/2004	02/26/2004	03/11/2004
L0001958-0006	C0028077	LIQUID	Water	Comb Effluent 1/2 (Eff 1/2) Dup	02/25/2004	02/26/2004	03/11/2004
L0001958-0007	C0028078	LIQUID	Water	Comb Effluent 1/2 (Eff 1/2) Low	02/25/2004	02/26/2004	03/11/2004
L0001958-0008	C0028079	LIQUID	Water	Comb Effluent 1/2 (Eff 1/2) High	02/25/2004	02/26/2004	03/11/2004
L0001958-0009	C0028080	LIQUID	Water	Unit 4 Port A Lead (Port 4A)	02/25/2004	02/26/2004	03/11/2004
L0001958-0010	C0028081	LIQUID	Water	Unit 4 Port A Lead (Port 4A) Dup	02/25/2004	02/26/2004	03/11/2004
L0001958-0011	C0028082	LIQUID	Water	Unit 4 Port A Lead (Port 4A) Low	02/25/2004	02/26/2004	03/11/2004
L0001958-0012	C0028083	LIQUID	Water	Unit 4 Port A Lead (Port 4A) High	02/25/2004	02/26/2004	03/11/2004
L0001958-0013	C0028084	LIQUID	Water	Unit 4 Port B Lead (Port 4B)	02/25/2004	02/26/2004	03/11/2004
L0001958-0014	C0028085	LIQUID	Water	Unit 4 Port B Lead (Port 4B) Dup	02/25/2004	02/26/2004	03/11/2004
L0001958-0015	C0028086	LIQUID	Water	Unit 4 Port B Lead (Port 4B) Low	02/25/2004	02/26/2004	03/11/2004
L0001958-0016	C0028087	LIQUID	Water	Unit 4 Port B Lead (Port 4B) High	02/25/2004	02/26/2004	03/11/2004
L0001958-0017	C0028102	LIQUID	Water	Influent 3 (Inf 3)	02/25/2004	02/26/2004	03/11/2004
L0001958-0018	C0028103	LIQUID	Water	Influent 3 (Inf 3) Dup	02/25/2004	02/26/2004	03/11/2004
L0001958-0019	C0028104	LIQUID	Water	Influent 3 (Inf 3) High Spike	02/25/2004	02/26/2004	03/11/2004
L0001958-0020	C0028105	LIQUID	Water	Influent 3 (Inf 3) Low Spike	02/25/2004	02/26/2004	03/11/2004

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3M_MN01539233

1939.0082

Login

L0001958-0021	C0028106	LIQUID	Water	Trip Blank	02/26/2004	03/11/2004
L0001958-0022	C0028107	LIQUID	Water	Trip Blank Low Spike	02/26/2004	03/11/2004
L0001958-0023	C0028108	LIQUID	Water	Trip Blank High Spike	02/26/2004	03/11/2004

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3M_MN01539234

1939.0083



CHAIN OF CUSTODY/ANALYSIS REQUEST FORM

Exygen Research Sample Receiving • 3117 Research Drive • State College, PA 16801, USA
 T: 814.231.8032 • F: 814.231.1580 • exygenresearch.com

Page ____ of ____

PROJECT INFORMATION	
Client (name & address): 3M Cottage Grove 10746 Innovation Road Cottage Grove, MN 55016 Phone: 651-768-1206 Fax: 651-458-2029 Sampler:	Project Manager (Name & E-mail Address): Kent Lindstrom krlindstrom@mmm.com Project Name: Cottage Grove Activated Carbon Testing P.O. #: E04-0126-026 Quotation #:

Please fill out this form *completely* to ensure correct analysis and proper handling of your samples.

ANALYSES REQUESTED									
FCs (PFBS, PFHS, PFOS, PFHA, PFOA)									

SAMPLE ANALYSIS								
ExyLIMS#	Client Sample Identification	Collection Date	Collection Time	Grab	Composite	Number of Containers	Specify Matrix	Comments
	Influent Phase 1/2 (Inf 1/2) Dup	2/5/04	10:40	X		1	ww	
	Influent Phase 1/2 (Inf 1/2) Low S		10:40				ww	
	Influent Phase 1/2 (Inf 1/2) High		10:40				ww	
	Comb Effluent 1/2 (Eff 1/2)		11:37				ww	
	Comb Effluent 1/2 (Eff 1/2) Dup						ww	
	Comb Effluent 1/2 (Eff 1/2) Low						ww	
	Comb Effluent 1/2 (Eff 1/2) High						ww	

CHAIN OF CUSTODY			Cooler ID # <u>LK040122</u> Cooler Temp. (°C) <u>0.1</u>		
Reinquished by <u>[Signature]</u>	Date <u>2/5/04</u>	Time <u>11:37</u>	Received By <u>[Signature]</u>	Date <u>2/5/04</u>	Time <u>11:35</u>

PROJECT REQUIREMENTS
Results Deadline: _____
Laboratory Report Options:
<input type="checkbox"/> Sample results only
<input type="checkbox"/> Add case narrative
<input type="checkbox"/> Add quality control summary
<input type="checkbox"/> Add calibration summary
<input type="checkbox"/> Add raw data
<input type="checkbox"/> Other _____

OTHER INFORMATION

CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

3M_MN01539235

Mark Ammerman

From: tmgalloway1@mmm.com
Sent: Friday, February 27, 2004 10:12 AM
To: mark.ammerman@exygen.com
Cc: bmader@mmm.com; krindstrom@mmm.com; piferretti@mmm.com
Subject: CoC 2/25/04



oC Influent Phase
3 2.25.04...

Mark - attached is the CoC for the influent phase 3 sample. Sorry about any confusion this may have caused.

(See attached file: CoC Influent Phase 3 2.25.04 .pdf)

The travel blank was not listed in LIMS, and therefore did not get a CoC created. I spoke with Brian Mader this morning, and the travel blank will be added to the LIMS system. A CoC will be created and enclosed with the next scheduled sampling event (3/8/04).

Once again, sorry for any confusion this may have caused. Thank you for bringing this matter to our attention.

Tina M. Galloway
3M Cottage Grove
145-1 US-MNCG05
Tel: 651-768-1206
Fax: 651-458-2029
email: tmgalloway1@mmm.com

Sample "Condition Upon Receipt" Form

Protocol # NA

Exygen Study # 0000644

Date & Time Received -MHA 02/26/04 11:35

Condition of Samples 6-pt ice - active

Temporary Storage Location D000538

Initials & Date -MHA 02/26/04

Waybill # 7925 7958 0193

Comments: v client did not read the third page
of the chain of custody - waiting to receive
the final page to complete the log in. MHA 02/26/04

May 24, 2002 3

Q: WORD process-log in-SampleConditiononReceipt.doc

X
3058 Research Drive
State College, PA 16801, USA
T: 800.281.3219

SECTION D

RAW DATA REPORT

Sponsor Study No: NA Limit of Quantitation: 50 ppt Set No: 030504A
 Oxygen Study No: L1958 Injection Volume: 15 µL Analyst: Karen Risha
 Analyte: Perfluorooctanoic Acid Matrix: Water Instrument Type: LC/MS/MS Unit # 6
 Ions Monitored: J13 -> 269 Sample Volume: 40.0 mL Extraction Date: 03/05/04
 Site: NA Final Volume: 5.0 mL Analyzed on: 03/12-13/04

Oxygen ID	Sponsor ID	Sample Code	Run No.	Std. Conc. (ppt)	Dilution Factor	Peak Area	Analyte Found (ppt)	Amount Added (ppt)	Recovery (%)
XC030504-0	-	CS	030504A-401	0	-	2645	-	-	-
XC030504-1	-	CS	030504A-402	25	-	7367	-	-	-
XC030504-2	-	CS	030504A-403	50	-	11606	-	-	-
XC030504-3	-	CS	030504A-404	100	-	19540	-	-	-
XC030504-4	-	CS	030504A-405	250	-	41297	-	-	-
XC030504-5	-	CS	030504A-406	500	-	85647	-	-	-
XC030504-6	-	CS	030504A-407	1000	-	151617	-	-	-
Methanol Wash	-	C	030504A-408	-	-	1035	-	-	-
0106020 Control	na	C	030504A-409	-	1	1330	ND	-	-
0106020 Spk A	na	LCS	030504A-410	-	1	9427	43.9	50	88
0106020 Spk B	na	LCS	030504A-411	-	1	83874	532	500	106
L1958-17 Spk C	Influent 3	LF	030504A-412	-	10000	16739	919000	500000	175^
L1958-17 Spk C	Influent 3	LF	030504A-413	-	1000	142778	*	500000	-
L1958-5 Spk D	Comb Effluent 1/2	LF	030504A-414	-	100	30351	18100	10000	176^
L1958-9 Spk E	Port 4A	LF	030504A-415	-	100	84823	53900	25000	162^
L1958-13 Spk F	Port 4B	LF	030504A-416	-	100	82943	52700	25000	148^
L1958-1 Spk G	Influent 1/2	LF	030504A-417	-	100	33284	20100	10000	162^
XC030504-1	-	CS	030504A-418	25	-	5549	-	-	-
L1958-1	Influent 1/2	S	030504A-419	-	200	4280	*	-	-
L1958-1 Rep	Influent 1/2	S	030504A-420	-	200	4466	*	-	-
L1958-2	Influent 1/2 Dup	S	030504A-421	-	200	3898	*	-	-
L1958-1	Influent 1/2	S	030504A-422	-	100	7658	*	-	-
L1958-1 Rep	Influent 1/2	S	030504A-423	-	100	8000	*	-	-
L1958-2	Influent 1/2 Dup	S	030504A-424	-	100	8014	*	-	-
L1958-1	Influent 1/2	S	030504A-425	-	10	62038	3900	-	-
L1958-1 Rep	Influent 1/2	S	030504A-426	-	10	59541	3730	-	-
L1958-2	Influent 1/2 Dup	S	030504A-427	-	10	60149	3770	-	-
L1958-3	Influent 1/2 Low Spk	FF	030504A-428	-	1000	2761	*	10000	-
L1958-3	Influent 1/2 Low Spk	FF	030504A-429	-	100	3272	344	10000	-36^
L1958-4	Influent 1/2 High Spk	FF	030504A-430	-	1000	16978	93500	100000	90
XC030504-2	-	CS	030504A-431	50	-	9474	-	-	-
L1958-5	Comb Effluent 1/2	S	030504A-432	-	1	73122	462	-	-
L1958-5 Rep	Comb Effluent 1/2	S	030504A-433	-	1	63351	398	-	-
L1958-6	Comb Effluent 1/2 Dup	S	030504A-434	-	1	61672	387	-	-
L1958-7	Comb Effluent 1/2 Low Spk	FF	030504A-435	-	100	14680	7840	10000	74
L1958-8	Comb Effluent 1/2 High Spk	FF	030504A-436	-	1000	14120	74700	100000	74
XC030504-3	-	CS	030504A-437	100	-	17416	-	-	-
L1958-9	Port 4A	S	030504A-438	-	100	23099	13400	-	-
L1958-9 Rep	Port 4A	S	030504A-439	-	100	21902	12600	-	-
L1958-10	Port 4A Dup	S	030504A-440	-	100	20937	11900	-	-
L1958-9	Port 4A	S	030504A-441	-	10	192855	*	-	-
L1958-9 Rep	Port 4A	S	030504A-442	-	10	187432	*	-	-
L1958-10	Port 4A Dup	S	030504A-443	-	10	192329	*	-	-
L1958-11	Port 4A Low Spk	FF	030504A-444	-	100	34290	20700	10000	73
L1958-12	Port 4A High Spk	FF	030504A-445	-	1000	15553	84100	100000	71
XC030504-3	-	CS	030504A-446	100	-	16806	-	-	-
L1958-13	Port 4B	S	030504A-447	-	100	26553	15600	-	-
L1958-13 Rep	Port 4B	S	030504A-448	-	100	26093	15300	-	-
L1958-14	Port 4B Dup	S	030504A-449	-	100	26658	15700	-	-
L1958-13	Port 4B	S	030504A-450	-	10	249824	*	-	-
L1958-13 Rep	Port 4B	S	030504A-451	-	10	256171	*	-	-
L1958-14	Port 4B Dup	S	030504A-452	-	10	240487	*	-	-
L1958-15	Port 4B Low Spk	FF	030504A-453	-	100	39005	23800	10000	82
L1958-16	Port 4B High Spk	FF	030504A-454	-	1000	19054	107000	100000	91
XC030504-4	-	CS	030504A-455	250	-	41764	-	-	-
L1958-17	Influent 3	S	030504A-456	-	1000	9049	*	-	-
L1958-17 Rep	Influent 3	S	030504A-457	-	1000	9611	*	-	-
L1958-18	Influent 3 Dup	S	030504A-458	-	1000	10208	*	-	-
L1958-17	Influent 3	S	030504A-459	-	100	72613	45900	-	-
L1958-17 Rep	Influent 3	S	030504A-460	-	100	74708	47300	-	-
L1958-18	Influent 3 Dup	S	030504A-461	-	100	70131	44300	-	-
L1958-17	Influent 3	S	030504A-462	-	10	590326	*	-	-
L1958-17 Rep	Influent 3	S	030504A-463	-	10	598295	*	-	-
L1958-18	Influent 3 Dup	S	030504A-464	-	10	598614	*	-	-
L1958-20	Influent 3 High Spk	FF	030504A-465	-	1000	22428	129000	100000	83
L1958-20	Influent 3 High Spk	FF	030504A-466	-	100	181689	*	100000	-
L1958-19	Influent 3 Low Spk	FF	030504A-467	-	1000	10596	51500	10000	56
XC030504-5	-	CS	030504A-468	500	-	73963	-	-	-
Methanol Wash	-	C	030504A-469	-	-	2030	-	-	-
L1958-21	Trip Blank	S	030504A-470	-	1	2165	ND	-	-
L1958-22	Trip Blank Low Spk	FF	030504A-471	-	100	21838	12500	10000	125
L1958-23	Trip Blank High Spk	FF	030504A-472	-	1000	14584	77700	100000	78
XC030504-6	-	CS	030504A-473	1000	-	129797	-	-	-

Analyte Found (ppt) = (peak area - intercept) / slope x DF
 Standard Curve: Linear (1/x weighted)
 Recovery (%) = $\frac{[\text{analyte found (ppt)} - \text{analyte found in control (ppt)}] \times 100}{\text{amount added (ppt)}}$
 Intercept = 2749.08
 Slope = 152.223
 Coef. Of Det. = 0.995965

CS = Calibration standard
 C = Control sample
 S = Sample
 LF = Lab fortified sample
 FF = Field fortified sample
 LCS = Laboratory Control Spike

Spreadsheet prepared by: *KR* 03/19/04

CK = Check Standard
 ND = Not detected = Response between 0 and 25 ppt
 NQ = Not quantifiable = Response between 25 ppt and LOQ (50 ppt)

*Sample was analyzed with several dilution factors in the same run. The appropriate dilution is reported.
 ^See data set 031704A for re-extraction.

RAW DATA REPORT

Sponsor Study No: NA Limit of Quantitation: 50 ppt Set No: 030504A
 Oxygen Study No: L1958 Injection Volume: 15 µL Analyst: Karen Risha
 Analyte: Perfluorooctanoic Acid Matrix: Water Instrument Type: LC/MS/MS Unit # 6
 Ions Monitored: 413 -> 369 Sample Volume: 40.0 mL Extraction Date: 03/05/04
 Site: NA Final Volume: 5.0 mL Analyzed on: 03/12-13/04

Oxygen ID	Sponsor ID	Sample Code	Run No.	Std. Conc. (ppt)	Dilution Factor	Peak Area	Analyte Found (ppt)	Amount Added (ppt)	Recovery (%)
XC030504-0	-	CS	030504A-401	0	-	1738	-	-	-
XC030504-1	-	CS	030504A-402	25	-	13789	-	-	-
XC030504-2	-	CS	030504A-403	50	-	23558	-	-	-
XC030504-3	-	CS	030504A-404	100	-	42736	-	-	-
XC030504-4	-	CS	030504A-405	250	-	85438	-	-	-
XC030504-5	-	CS	030504A-406	500	-	183327	-	-	-
XC030504-6	-	CS	030504A-407	1000	-	342142	-	-	-
Methanol Wash	-	C	030504A-408	-	-	57617	-	-	-
0106020 Control	na	C	030504A-409	-	1	2290	ND	-	-
0106020 Spk A	na	LCS	030504A-410	-	1	19908	48.2	50	96
0106020 Spk B	na	LCS	030504A-411	-	1	241653	716	500	143
L1958-17 Spk C	Influent 3	LF	030504A-412	-	10000	85028	2440000	500000	428^
L1958-17 Spk C	Influent 3	LF	030504A-413	-	1000	375441	*	590000	-
L1958-5 Spk D	Comb Effluent 1/2	LF	030504A-414	-	100	58932	16600	10600	165^
L1958-9 Spk E	Port 4A	LF	030504A-415	-	100	123658	36100	25000	122
L1958-13 Spk F	Port 4B	LF	030504A-416	-	100	115423	33600	25000	117
L1958-1 Spk G	Influent 1/2	LF	030504A-417	-	100	109917	31900	10000	283^
XC030504-1	-	CS	030504A-418	25	-	10181	-	-	-
L1958-1	Influent 1/2	S	030504A-419	-	200	29298	*	-	-
L1958-1 Rep	Influent 1/2	S	030504A-420	-	200	31322	*	-	-
L1958-2	Influent 1/2 Dup	S	030504A-421	-	200	24224	*	-	-
L1958-1	Influent 1/2	S	030504A-422	-	100	42512	11600	-	-
L1958-1 Rep	Influent 1/2	S	030504A-423	-	100	48556	13400	-	-
L1958-2	Influent 1/2 Dup	S	030504A-424	-	100	52029	14500	-	-
L1958-1	Influent 1/2	S	030504A-425	-	10	322432	*	-	-
L1958-1 Rep	Influent 1/2	S	030504A-426	-	10	297100	*	-	-
L1958-2	Influent 1/2 Dup	S	030504A-427	-	10	298313	*	-	-
L1958-3	Influent 1/2 Low Spk	FF	030504A-428	-	1000	13322	28100	10000	165
L1958-3	Influent 1/2 Low Spk	FF	030504A-429	-	100	16338	*	10000	-
L1958-4	Influent 1/2 High Spk	FF	030504A-430	-	1000	43898	120000	100000	108
XC030504-2	-	CS	030504A-431	50	-	21925	-	-	-
L1958-5	Comb Effluent 1/2	S	030504A-432	-	1	31624	83.5	-	-
L1958-5 Rep	Comb Effluent 1/2	S	030504A-433	-	1	41830	114	-	-
L1958-6	Comb Effluent 1/2 Dup	S	030504A-434	-	1	40608	111	-	-
L1958-7	Comb Effluent 1/2 Low Spk	FF	030504A-435	-	100	47456	13100	10000	130
L1958-8	Comb Effluent 1/2 High Spk	FF	030504A-436	-	1000	47234	130000	100000	130
XC030504-3	-	CS	030504A-437	100	-	38144	-	-	-
L1958-9	Port 4A	S	030504A-438	-	100	38028	*	-	-
L1958-9 Rep	Port 4A	S	030504A-439	-	100	40521	*	-	-
L1958-10	Port 4A Dup	S	030504A-440	-	100	44693	*	-	-
L1958-9	Port 4A	S	030504A-441	-	10	189379	5590	-	-
L1958-9 Rep	Port 4A	S	030504A-442	-	10	183585	5410	-	-
L1958-10	Port 4A Dup	S	030504A-443	-	10	233473	6910	-	-
L1958-11	Port 4A Low Spk	FF	030504A-444	-	100	54279	15200	10000	96
L1958-12	Port 4A High Spk	FF	030504A-445	-	1000	39560	107000	100000	101
XC030504-3	-	CS	030504A-446	100	-	33768	-	-	-
L1958-13	Port 4B	S	030504A-447	-	100	30355	*	-	-
L1958-13 Rep	Port 4B	S	030504A-448	-	100	30518	*	-	-
L1958-14	Port 4B Dup	S	030504A-449	-	100	27973	*	-	-
L1958-13	Port 4B	S	030504A-450	-	10	150817	4420	-	-
L1958-13 Rep	Port 4B	S	030504A-451	-	10	157839	4640	-	-
L1958-14	Port 4B Dup	S	030504A-452	-	10	160551	4720	-	-
L1958-15	Port 4B Low Spk	FF	030504A-453	-	100	54634	15300	10000	109
L1958-16	Port 4B High Spk	FF	030504A-454	-	1000	40009	109000	100000	105
XC030504-4	-	CS	030504A-455	250	-	81448	-	-	-
L1958-17	Influent 3	S	030504A-456	-	1000	103773	301000	-	-
L1958-17 Rep	Influent 3	S	030504A-457	-	1000	102853	298000	-	-
L1958-18	Influent 3 Dup	S	030504A-458	-	1000	109832	319000	-	-
L1958-17	Influent 3	S	030504A-459	-	100	819321	*	-	-
L1958-17 Rep	Influent 3	S	030504A-460	-	100	855949	*	-	-
L1958-18	Influent 3 Dup	S	030504A-461	-	100	795459	*	-	-
L1958-17	Influent 3	S	030504A-462	-	10	6807451	*	-	-
L1958-17 Rep	Influent 3	S	030504A-463	-	10	7057470	*	-	-
L1958-18	Influent 3 Dup	S	030504A-464	-	10	6932879	*	-	-
L1958-20	Influent 3 High Spk	FF	030504A-465	-	1000	124346	363000	100000	62^
L1958-20	Influent 3 High Spk	FF	030504A-466	-	100	963913	*	100000	-
L1958-19	Influent 3 Low Spk	FF	030504A-467	-	1000	109658	318000	10000	170
XC030504-5	-	CS	030504A-468	500	-	165996	-	-	-
Methanol Wash	-	C	030504A-469	-	-	52543	-	-	-
L1958-21	Trip Blank	S	030504A-470	-	1	20182	NQ	-	-
L1958-22	Trip Blank Low Spk	FF	030504A-471	-	100	42479	11600	10000	116
L1958-23	Trip Blank High Spk	FF	030504A-472	-	1000	48475	134000	100000	134^
XC030504-6	-	CS	030504A-473	1000	-	319976	-	-	-

Analyte Found (ppt) = (peak area - intercept) / slope x DF
 Recovery (%) = $\frac{\text{analyte found (ppt)} - \text{analyte found in control (ppt)}}{\text{amount added (ppt)}} \times 100$
 Standard Curve: Linear (1/x weighted)
 Intercept = 3900.44
 Slope = 332.081
 Coef. Of Det. = 0.996490

CS = Calibration standard LF = Lab fortified sample
 C = Control sample FF = Field fortified sample
 S = Sample LCS = Laboratory Control Spike
 CK = Check Standard
 ND = Not detected = Response between 0 and 25 ppt
 NQ = Not quantifiable = Response between 25 ppt and LOQ (50 ppt)

Spreadsheet prepared by: *PR 03/19/04*

*Sample was analyzed with several dilution factors in the same run. The appropriate dilution is reported.
 *See data set 031704A for re-extraction.

RAW DATA REPORT

Sponsor Study No: NA Limit of Quantitation: 50 ppt Set No: 030504A
 Oxygen Study No: L1958 Injection Volume: 15 µL Analyst: Karen Risha
 Analyte: Perfluorobutanesulfonate Matrix: Water Instrument Type: LC/MS/MS Unit # 5
 Ions Monitored: 299 -> 99 Sample Volume: 40.0 mL Extraction Date: 03/05/04
 Site: NA Final Volume: 5.0 mL Analyzed on: 03/12-13/04

Oxygen ID	Sponsor ID	Sample Code	Run No	Std. Conc. (ppt)	Dilution Factor	Peak Area	Analyte Found (ppt)	Amount Added (ppt)	Recovery (%)
XC030504-0	-	CS	030504A-401	0	-	0	-	-	-
XC030504-1	-	CS	030504A-402	25	-	0	-	-	-
XC030504-2	-	CS	030504A-403	50	-	0	-	-	-
XC030504-3	-	CS	030504A-404	100	-	444	-	-	-
XC030504-4	-	CS	030504A-405	250	-	1279	-	-	-
XC030504-5	-	CS	030504A-406	500	-	2511	-	-	-
XC030504-6	-	CS	030504A-407	1000	-	4733	-	-	-
Methanol Wash	-	C	030504A-408	-	-	0	-	-	-
0106020 Control	na	C	030504A-409	-	1	0	ND	-	-
0106020 Spk A	na	LCS	030504A-410	-	1	316	73.3	50	147
0106020 Spk B	na	LCS	030504A-411	-	1	2288	485	500	97
L1958-17 Spk C	Influent 3	LF	030504A-412	-	10000	272	*	500000	-
L1958-17 Spk C	Influent 3	LF	030504A-413	-	1000	2500	529000	500000	98
L1958-5 Spk D	Comb Effluent 1/2	LF	030504A-414	-	100	450	10100	10000	96
L1958-9 Spk E	Port 4A	LF	030504A-415	-	100	2705	57200	25000	108
L1958-13 Spk F	Port 4B	LF	030504A-416	-	100	2207	46800	25000	100
L1958-1 Spk G	Influent 1/2	LF	030504A-417	-	100	1960	41700	10000	46
XC030504-1	-	CS	030504A-418	25	-	0	-	-	-
L1958-1	Influent 1/2	S	030504A-419	-	200	861	*	-	-
L1958-1 Rep	Influent 1/2	S	030504A-420	-	200	874	*	-	-
L1958-2	Influent 1/2 Dup	S	030504A-421	-	200	937	*	-	-
L1958-1	Influent 1/2	S	030504A-422	-	100	1982	42100	-	-
L1958-1 Rep	Influent 1/2	S	030504A-423	-	100	2119	45000	-	-
L1958-2	Influent 1/2 Dup	S	030504A-424	-	100	2172	46100	-	-
L1958-1	Influent 1/2	S	030504A-425	-	10	37158	*	-	-
L1958-1 Rep	Influent 1/2	S	030504A-426	-	10	23235	*	-	-
L1958-2	Influent 1/2 Dup	S	030504A-427	-	10	21405	*	-	-
L1958-3	Influent 1/2 Low Spk	FF	030504A-428	-	1000	0	ND	10000	0
L1958-3	Influent 1/2 Low Spk	FF	030504A-429	-	100	0	-	10000	-
L1958-4	Influent 1/2 High Spk	FF	030504A-430	-	1000	880	191000	100000	149
XC030504-2	-	CS	030504A-431	50	-	223	-	-	-
L1958-5	Comb Effluent 1/2	S	030504A-432	-	1	2244	476	-	-
L1958-5 Rep	Comb Effluent 1/2	S	030504A-433	-	1	2114	449	-	-
L1958-6	Comb Effluent 1/2 Dup	S	030504A-434	-	1	2275	482	-	-
L1958-7	Comb Effluent 1/2 Spk	FF	030504A-435	-	100	356	8170	10000	77
L1958-8	Comb Effluent 1/2 High Spk	FF	030504A-436	-	1000	336	77500	100000	77
XC030504-3	-	CS	030504A-437	100	-	372	-	-	-
L1958-9	Port 4A	S	030504A-438	-	100	1405	30100	-	-
L1958-9 Rep	Port 4A	S	030504A-439	-	100	1370	29300	-	-
L1958-10	Port 4A Dup	S	030504A-440	-	100	1081	23300	-	-
L1958-9	Port 4A	S	030504A-441	-	10	13380	*	-	-
L1958-9 Rep	Port 4A	S	030504A-442	-	10	12420	*	-	-
L1958-10	Port 4A Dup	S	030504A-443	-	10	13765	*	-	-
L1958-11	Port 4A Low Spk	FF	030504A-444	-	100	1454	31100	10000	10
L1958-12	Port 4A High Spk	FF	030504A-445	-	1000	380	86700	100000	57
XC030504-3	-	CS	030504A-446	100	-	0	-	-	-
L1958-13	Port 4B	S	030504A-447	-	100	1013	21900	-	-
L1958-13 Rep	Port 4B	S	030504A-448	-	100	1050	22700	-	-
L1958-14	Port 4B Dup	S	030504A-449	-	100	1170	25200	-	-
L1958-13	Port 4B	S	030504A-450	-	10	12069	*	-	-
L1958-13 Rep	Port 4B	S	030504A-451	-	10	14649	*	-	-
L1958-14	Port 4B Dup	S	030504A-452	-	10	13698	*	-	-
L1958-15	Port 4B Low Spk	FF	030504A-453	-	100	1474	31500	10000	96
L1958-16	Port 4B High Spk	FF	030504A-454	-	1000	661	145000	100000	123
XC030504-4	-	CS	030504A-455	250	-	1150	-	-	-
L1958-17	Influent 3	S	030504A-456	-	1000	0	*	-	-
L1958-17 Rep	Influent 3	S	030504A-457	-	1000	0	*	-	-
L1958-18	Influent 3 Dup	S	030504A-458	-	1000	0	*	-	-
L1958-17	Influent 3	S	030504A-459	-	100	1732	36900	-	-
L1958-17 Rep	Influent 3	S	030504A-460	-	100	1880	40000	-	-
L1958-18	Influent 3 Dup	S	030504A-461	-	100	1541	32900	-	-
L1958-17	Influent 3	S	030504A-462	-	10	17788	*	-	-
L1958-17 Rep	Influent 3	S	030504A-463	-	10	17424	*	-	-
L1958-18	Influent 3 Dup	S	030504A-464	-	10	16181	*	-	-
L1958-20	Influent 3 High Spk	FF	030504A-465	-	1000	745	163000	100000	126
L1958-20	Influent 3 High Spk	FF	030504A-466	-	100	5676	*	100000	-
L1958-19	Influent 3 Low Spk	FF	030504A-467	-	1000	0	ND	10000	0
XC030504-5	-	CS	030504A-468	500	-	2174	-	-	-
Methanol Wash	-	C	030504A-469	-	-	0	-	-	-
L1958-21	Trip Blank	S	030504A-470	-	1	0	ND	-	-
L1958-22	Trip Blank Low Spk	FF	030504A-471	-	100	228	5500	10000	55
L1958-23	Trip Blank High Spk	FF	030504A-472	-	1000	186	46200	100000	46
XC030504-6	-	CS	030504A-473	1000	-	3509	-	-	-

Analyte Found (ppt) = (peak area - intercept) / slope x DF
 Recovery (%) = $\frac{\text{Analyte Found (ppt)} - \text{Analyte Found in Control (ppt)}}{\text{Amount Added (ppt)}} \times 100$
 Standard Curve: Linear (1/x weighted)
 Intercept = -35.1105
 Slope = 4.78826
 Coef. Of Det. = 0.995207

CS = Calibration standard
 C = Control sample
 S = Sample
 LP = Lab fortified sample
 FF = Field fortified sample
 LCS = Laboratory Control Spike
 CK = Check Standard
 ND = Not detected = Response between 0 and 25 ppb
 NQ = Not quantifiable = Response between 25 ppt and LOQ (50 ppt)

Spreadsheet prepared by: *KR 03/19/04*

*Sample was analyzed with several dilution factors in the same run. The appropriate results are reported.
 ^See data set 031704A for re-extraction.

RAW DATA REPORT

Sponsor Study No: NA Limit of Quantitation: 50 ppt Set No: 030504A
 Exogen Study No: L1958 Injection Volume: 15 µL Analyst: Karen Risha
 Analyte: Perfluorohexanesulfonate Matrix: Water Instrument Type: LC/MS/MS Unit # 6
 Ions Monitored: 399 > 80 Sample Volume: 40.0 mL Extraction Date: 03/05/04
 Site: NA Final Volume: 5.0 mL Analyzed on: 03/12-13/04

Exogen ID	Sponsor ID	Sample Code	Run No.	Std. Conc. (ppt)	Dilution Factor	Peak Area	Analyte Found (ppt)	Amount Added (ppt)	Recovery (%)
XC030504-0	-	CS	030504A-401	0	-	0	-	-	-
XC030504-1	-	CS	030504A-402	25	-	1379	-	-	-
XC030504-2	-	CS	030504A-403	50	-	2696	-	-	-
XC030504-3	-	CS	030504A-404	100	-	4914	-	-	-
XC030504-4	-	CS	030504A-405	250	-	11625	-	-	-
XC030504-5	-	CS	030504A-406	500	-	23810	-	-	-
XC030504-6	-	CS	030504A-407	1000	-	48232	-	-	-
Methanol Wash	-	C	030504A-408	-	-	0	-	-	-
0106020 Control	na	C	030504A-409	-	1	0	ND	-	-
0106020 Spk A	na	LCS	030504A-410	-	1	2344	47.2	50	94
0106020 Spk B	na	LCS	030504A-411	-	1	23709	515	300	103
L1958-17 Spk C	Influent 3	LF	030504A-412	-	10000	2476	*	500000	-
L1958-17 Spk C	Influent 3	LF	030504A-413	-	1000	22471	488000	500000	96
L1958-5 Spk D	Comb Effluent 1/2	LF	030504A-414	-	100	4803	10100	10000	101
L1958-9 Spk E	Port 4A	LF	030504A-415	-	100	12414	26800	25000	99
L1958-13 Spk F	Port 4B	LF	030504A-416	-	100	11586	25000	25000	94
L1958-1 Spk G	Influent 1/2	LF	030504A-417	-	100	6090	12900	10000	83
XC030504-1	-	CS	030504A-418	25	-	1160	-	-	-
L1958-1	Influent 1/2	S	030504A-419	-	200	1018	*	-	-
L1958-1 Rep	Influent 1/2	S	030504A-420	-	200	1095	*	-	-
L1958-2	Influent 1/2 Dup	S	030504A-421	-	200	966	*	-	-
L1958-1	Influent 1/2	S	030504A-422	-	100	2035	*	-	-
L1958-1 Rep	Influent 1/2	S	030504A-423	-	100	2137	*	-	-
L1958-2	Influent 1/2 Dup	S	030504A-424	-	100	2284	*	-	-
L1958-1	Influent 1/2	S	030504A-425	-	10	21343	4630	-	-
L1958-1 Rep	Influent 1/2	S	030504A-426	-	10	20984	4550	-	-
L1958-2	Influent 1/2 Dup	S	030504A-427	-	10	21008	4560	-	-
L1958-3	Influent 1/2 Low Spk	FF	030504A-428	-	1000	0	*	10000	-
L1958-3	Influent 1/2 Low Spk	FF	030504A-429	-	100	0	ND	10000	0
L1958-4	Influent 1/2 High Spk	FF	030504A-430	-	1000	4751	99900	100000	95
XC030504-2	-	CS	030504A-431	50	-	2479	-	-	-
L1958-5	Comb Effluent 1/2	S	030504A-432	-	1	0	ND	-	-
L1958-5 Rep	Comb Effluent 1/2	S	030504A-433	-	1	0	ND	-	-
L1958-6	Comb Effluent 1/2 Dup	S	030504A-434	-	1	0	ND	-	-
L1958-7	Comb Effluent 1/2 Low Spk	FF	030504A-435	-	100	4105	8580	10000	86
L1958-8	Comb Effluent 1/2 High Spk	FF	030504A-436	-	1000	3946	82300	100000	82
XC030504-3	-	CS	030504A-437	100	-	5062	-	-	-
L1958-9	Port 4A	S	030504A-438	-	100	1082	*	-	-
L1958-9 Rep	Port 4A	S	030504A-439	-	100	1104	*	-	-
L1958-10	Port 4A Dup	S	030504A-440	-	100	1046	*	-	-
L1958-9	Port 4A	S	030504A-441	-	10	9161	1970	-	-
L1958-9 Rep	Port 4A	S	030504A-442	-	10	9142	1960	-	-
L1958-10	Port 4A Dup	S	030504A-443	-	10	9089	1950	-	-
L1958-11	Port 4A Low Spk	FF	030504A-444	-	100	5091	10700	10000	87
L1958-12	Port 4A High Spk	FF	030504A-445	-	1000	3662	76100	100000	74
XC030504-3	-	CS	030504A-446	100	-	4039	-	-	-
L1958-13	Port 4B	S	030504A-447	-	100	712	*	-	-
L1958-13 Rep	Port 4B	S	030504A-448	-	100	714	*	-	-
L1958-14	Port 4B Dup	S	030504A-449	-	100	735	*	-	-
L1958-13	Port 4B	S	030504A-450	-	10	6943	1480	-	-
L1958-13 Rep	Port 4B	S	030504A-451	-	10	7235	1540	-	-
L1958-14	Port 4B Dup	S	030504A-452	-	10	7703	1650	-	-
L1958-15	Port 4B Low Spk	FF	030504A-453	-	100	4864	10200	10000	87
L1958-16	Port 4B High Spk	FF	030504A-454	-	1000	5090	107000	100000	106
XC030504-4	-	CS	030504A-455	250	-	12417	-	-	-
L1958-17	Influent 3	S	030504A-456	-	1000	339	*	-	-
L1958-17 Rep	Influent 3	S	030504A-457	-	1000	376	*	-	-
L1958-18	Influent 3 Dup	S	030504A-458	-	1000	307	*	-	-
L1958-17	Influent 3	S	030504A-459	-	100	2783	*	-	-
L1958-17 Rep	Influent 3	S	030504A-460	-	100	3481	*	-	-
L1958-18	Influent 3 Dup	S	030504A-461	-	100	3366	*	-	-
L1958-17	Influent 3	S	030504A-462	-	10	28503	6200	-	-
L1958-17 Rep	Influent 3	S	030504A-463	-	10	28142	6120	-	-
L1958-18	Influent 3 Dup	S	030504A-464	-	10	29153	6340	-	-
L1958-20	Influent 3 High Spk	FF	030504A-465	-	1000	4429	*	100000	-
L1958-20	Influent 3 High Spk	FF	030504A-466	-	100	42130	91900	100000	86
L1958-19	Influent 3 Low Spk	FF	030504A-467	-	1000	975	17200	10000	110
XC030504-5	-	CS	030504A-468	500	-	22123	-	-	-
Methanol Wash	-	C	030504A-469	-	-	0	-	-	-
L1958-21	Trip Blank	S	030504A-470	-	1	0	ND	-	-
L1958-22	Trip Blank Low Spk	FF	030504A-471	-	100	4781	10100	10000	101
L1958-23	Trip Blank High Spk	FF	030504A-472	-	1000	4507	95600	100000	96
XC030504-6	-	CS	030504A-473	1000	-	42865	-	-	-

Analyte Found (ppt) = (peak area - intercept) / slope x DF
 Recovery (%) = $\frac{\text{analyte found (ppt)} - \text{analyte found in control (ppt)}}{\text{amount added (ppt)}} \times 100$
 Standard Curve: Linear (1/x weighted)
 Intercept = 187.490
 Slope = 45.6617
 Coef. Of Det. = 0.994244

CS = Calibration standard
 C = Control sample
 S = Sample
 LF = Lab fortified sample
 FF = Field fortified sample
 LCS = Laboratory Control Spike

Spreadsheet prepared by: *BR 03/19/04*

CK = Check Standard
 ND = Not detected = Response between 0 and 25 ppt
 NQ = Not quantifiable = Response between 25 ppt and LOQ (50 ppt)

*Sample was analyzed with several dilution factors in the same run. The appropriate dilution is reported.
 *See data set 031704A for re-extraction.

RAW DATA REPORT

Sponsor Study No: NA Limit of Quantitation: 50 ppt Set No: 030504A
 Exygen Study No: L1958 Injection Volume: 15 µL Analyst: Karen Risha
 Analyte: Perfluorooctanesulfonate Matrix: Water Instrument Type: LCM/MS Unit # 6
 Ions Monitored: 499 -> 59 Sample Volume: 40.0 mL Extraction Date: 03/05/04
 Site: NA Final Volume: 5.0 mL Analyzed on: 03/12-13/04

Exygen ID	Sponsor ID	Sample Code	Run No.	Std. Conc. (ppt)	Dilution Factor	Peak Area	Analyte Found (ppt)	Amount Added (ppt)	Recovery (%)
XC030504-0	-	CS	030504A-401	0	-	0	-	-	-
XC030504-1	-	CS	030504A-402	25	-	728	-	-	-
XC030504-2	-	CS	030504A-403	50	-	1469	-	-	-
XC030504-3	-	CS	030504A-404	100	-	2529	-	-	-
XC030504-4	-	CS	030504A-405	250	-	5985	-	-	-
XC030504-5	-	CS	030504A-406	500	-	12744	-	-	-
XC030504-6	-	CS	030504A-407	1000	-	24695	-	-	-
Methanol Wash	-	C	030504A-408	-	-	0	-	-	-
0106020 Control	na	C	030504A-409	-	1	0	ND	-	-
0106020 Spk A	na	LCS	030504A-410	-	1	1365	53.8	50	108
0106020 Spk B	na	LCS	030504A-411	-	1	12725	524	500	105
L1958-17 Spk C	Influent 3	LF	030504A-412	-	10000	1533	*	500000	-
L1958-17 Spk C	Influent 3	LF	030504A-413	-	1000	13993	577000	500000	108
L1958-5 Spk D	Comb Effluent 1/2	LF	030504A-414	-	100	2345	9440	10000	94
L1958-9 Spk E	Port 4A	LF	030504A-415	-	100	6696	27500	25000	96
L1958-13 Spk F	Port 4B	LF	030504A-416	-	100	6142	25200	25000	90
L1958-1 Spk G	Influent 1/2	LF	030504A-417	-	100	4454	18200	10000	48*
XC030504-1	-	CS	030504A-418	25	-	512	-	-	-
L1958-1	Influent 1/2	S	030504A-419	-	200	1332	*	-	-
L1958-1 Rep	Influent 1/2	S	030504A-420	-	200	1109	*	-	-
L1958-2	Influent 1/2 Dup	S	030504A-421	-	200	1109	*	-	-
L1958-1	Influent 1/2	S	030504A-422	-	100	3293	13400	-	-
L1958-1 Rep	Influent 1/2	S	030504A-423	-	100	2802	11300	-	-
L1958-2	Influent 1/2 Dup	S	030504A-424	-	100	2730	11100	-	-
L1958-1	Influent 1/2	S	030504A-425	-	10	26603	*	-	-
L1958-1 Rep	Influent 1/2	S	030504A-426	-	10	24060	*	-	-
L1958-2	Influent 1/2 Dup	S	030504A-427	-	10	24785	*	-	-
L1958-3	Influent 1/2 Low Spk	FF	030504A-428	-	1000	0	*	10000	-
L1958-3	Influent 1/2 High Spk	FF	030504A-429	-	100	0	ND	10000	0*
L1958-4	Influent 1/2 High Spk	FF	030504A-430	-	1000	2778	112000	160000	99
XC030504-2	-	CS	030504A-431	50	-	1331	-	-	-
L1958-5	Comb Effluent 1/2	S	030504A-432	-	1	186	ND	-	-
L1958-5 Rep	Comb Effluent 1/2	S	030504A-433	-	1	165	ND	-	-
L1958-6	Comb Effluent 1/2 Dup	S	030504A-434	-	1	142	ND	-	-
L1958-7	Comb Effluent 1/2 Low Spk	FF	030504A-435	-	100	2055	8240	10000	82
L1958-8	Comb Effluent 1/2 High Spk	FF	030504A-436	-	1000	2139	85900	100000	86
XC030504-3	-	CS	030504A-437	100	-	2354	-	-	-
L1958-9	Port 4A	S	030504A-438	-	100	917	*	-	-
L1958-9 Rep	Port 4A	S	030504A-439	-	100	898	*	-	-
L1958-10	Port 4A Dup	S	030504A-440	-	100	1100	*	-	-
L1958-9	Port 4A	S	030504A-441	-	10	8371	3440	-	-
L1958-9 Rep	Port 4A	S	030504A-442	-	10	8132	3340	-	-
L1958-10	Port 4A Dup	S	030504A-443	-	10	7946	3270	-	-
L1958-11	Port 4A Low Spk	FF	030504A-444	-	100	2697	10900	10000	75
L1958-12	Port 4A High Spk	FF	030504A-445	-	1000	1808	72100	100000	69
XC030504-3	-	CS	030504A-446	100	-	2512	-	-	-
L1958-13	Port 4B	S	030504A-447	-	100	653	*	-	-
L1958-13 Rep	Port 4B	S	030504A-448	-	100	653	*	-	-
L1958-14	Port 4B Dup	S	030504A-449	-	100	639	*	-	-
L1958-13	Port 4B	S	030504A-450	-	10	6368	2610	-	-
L1958-13 Rep	Port 4B	S	030504A-451	-	10	6657	2730	-	-
L1958-14	Port 4B Dup	S	030504A-452	-	10	7076	2900	-	-
L1958-15	Port 4B Low Spk	FF	030504A-453	-	100	2731	11000	10000	84
L1958-16	Port 4B High Spk	FF	030504A-454	-	1000	2746	111000	100000	108
XC030504-4	-	CS	030504A-455	250	-	5998	-	-	-
L1958-17	Influent 3	S	030504A-456	-	1000	1343	*	-	-
L1958-17 Rep	Influent 3	S	030504A-457	-	1000	986	*	-	-
L1958-18	Influent 3 Dup	S	030504A-458	-	1000	1028	*	-	-
L1958-17	Influent 3	S	030504A-459	-	100	9171	37700	-	-
L1958-17 Rep	Influent 3	S	030504A-460	-	100	9837	40500	-	-
L1958-18	Influent 3 Dup	S	030504A-461	-	100	8968	36900	-	-
L1958-17	Influent 3	S	030504A-462	-	10	83246	*	-	-
L1958-17 Rep	Influent 3	S	030504A-463	-	10	87362	*	-	-
L1958-18	Influent 3 Dup	S	030504A-464	-	10	79712	*	-	-
L1958-20	Influent 3 High Spk	FF	030504A-465	-	1000	3033	123000	100000	85
L1958-20	Influent 3 High Spk	FF	030504A-466	-	100	28897	*	100000	-
L1958-19	Influent 3 Low Spk	FF	030504A-467	-	1000	1179	46100	16000	84
XC030504-3	-	CS	030504A-468	500	-	11691	-	-	-
Methanol Wash	-	C	030504A-469	-	-	0	-	-	-
L1958-21	Trip Blank	S	030504A-470	-	1	0	ND	-	-
L1958-22	Trip Blank Low Spk	FF	030504A-471	-	100	2691	10900	10000	109
L1958-23	Trip Blank High Spk	FF	030504A-472	-	1000	2573	104000	100000	104
XC030504-4	-	CS	030504A-473	1000	-	23653	-	-	-

Analyte Found (ppt) = (peak area - intercept) / slope x DF
 Recovery (%) = $\frac{[\text{analyte found (ppt)} - \text{analyte found in control (ppt)}] \times 100}{\text{amount added (ppt)}}$
 Standard Curve: Linear (1/x weighted)
 Intercept = 66.8162
 Slope = 24.1350
 Coef. Of Det. = 0.998559

CS = Calibration standard
 C = Control sample
 S = Sample
 LF = Lab fortified sample
 FF = Field fortified sample
 LCS = Laboratory Control Spike

Spreadsheet prepared by: *DR 03/19/04*

CK = Check Standard
 ND = Not detected = Response between 0 and 25 ppt
 NQ = Not quantifiable = Response between 25 ppt and LOQ (50 ppt)

*Sample was analyzed with several dilution factors in the same run. The appropriate dilution is reported.
 ^See data set 031704A for re-extraction.



3058 Research Drive
State College, PA 16801

Phone: 814-272-1039
Fax: 814-231-1580

Internal Chain of Custody/Fortification Sheet

Exygen Study Number: L1958 Matrix: Water
Sponsor Study/Protocol No: NA
The samples listed below were removed from refrigerator No. 32
Time 0850 Date 3/5/04 Initials EH

CLIENT SAMPLE ID	EXYGEN ID NUMBER	VOLUME (mL)	FORTIFICATION (ng)
na	0106020 Control	40.0	-
na	0106020 Spk A	40.0	2.0
na	0106020 Spk B	40.0	20.0
Influent 3	L1958-17 Spk C	40.0	ⓐ 20000.0
Comb Effluent 1/2	L1958-5 Spk D	40.0	400.0
Port 4A	L1958-9 Spk E	40.0	1000.0
Port 4B	L1958-13 Spk F	40.0	1000.0
Influent 1/2	L1958-1 Spk G	40.0	400.0
Influent 3	L1958-17	40.0	-
Influent 3	L1958-17 Rep	40.0	-
Influent 3 Dup	L1958-18	40.0	-
Influent 3 Low Spk	L1958-19	40.0	-
Influent 3 High Spk	L1958-20	40.0	-
Comb Effluent 1/2	L1958-5	40.0	-
Comb Effluent 1/2	L1958-5 Rep	40.0	-
Comb Effluent 1/2 Dup	L1958-6	40.0	-
Comb Effluent 1/2 Low Spk	L1958-7	40.0	-
Comb Effluent 1/2 High Spk	L1958-8	40.0	-
Port 4A	L1958-9	40.0	-
Port 4A	L1958-9 Rep	40.0	-
Port 4A Dup	L1958-10	40.0	-
Port 4A Low Spk	L1958-11	40.0	-
Port 4A High Spk	L1958-12	40.0	-

	Spiking Solution Used	Volume Used for Spiking	Initial/Date
0106020 Spk A	F012004-10 (10 ng/mL)	200 µL (200 µL micropipet)	KR / 03/05/04
0106020 Spk B	F012004-9 (100 ng/mL)	200 µL (200 µL micropipet)	KR / 03/05/04
L1958-17 Spk C	F012004-6 (100000 ng/mL)	ⓐ 200 µL (200 µL micropipet)	KR / 03/05/04
L1958-5 Spk D	F012004-8 (1000 ng/mL)	400 µL (200 µL micropipet)	KR / 03/05/04
L1958-9 Spk E	F012004-7 (10000 ng/mL)	100 µL (200 µL micropipet)	KR / 03/05/04
L1958-13 Spk F	F012004-7 (10000 ng/mL)	100 µL (200 µL micropipet)	KR / 03/05/04
L1958-1 Spk G	F012004-8 (1000 ng/mL)	400 µL (200 µL micropipet)	KR / 03/05/04

All samples were measured:
Time 1000 Date 3/5/04 Initials EH

After measuring samples were returned to refrigerator No. 32
Time 1300 Date 3/5/04 Initials EH

Comments: 200 µL of 250 mg/mL sodium thiosulfate was added to all samples before spiking. Initials/Date: KR 03/05/04

Analysis Summary: Data Set: 030504A Initials/Date: KR / 03/12/04
Data Set: - Initials/Date: - / -
Data Set: - Initials/Date: - / -

Set extraction/analysis data verified by: GMF Date: 3/19/04
July 26, 2001/6

ⓐ 200µL was added. KR 03/05/04

SAMPLE EXTRACTION AND ANALYSIS TRACKING SHEET

EXYGEN STUDY NUMBER: L1958
MATRIX: Water

METHOD: SS
ANALYTES: C4, C6, C7 & C8 Acids, C4, C6 & C8 sulfonates

PROTOCOL NUMBER: NA

Client ID	Exygen ID	STEP 1	STEP 2	Dilutions (mL/mL)	STEP 3	Dilutions (mL/mL)	STEP 4	Reagents/Materials	Lot #
na	0106020 Control			-		-		Methanol	43323348
na	0106020 Spk A			-		-		C18 SPE	W331781
na	0106020 Spk B			-		-		Type I Water	NA
Influent 3	L1958-17 Spk C			① 0.1/10, 0.1/10		-		-	-
Comb Effluent 1/2	L1958-5 Spk D			0.1/10		-		-	-
Port 4A	L1958-9 Spk E			0.1/10		-		-	-
Port 4B	L1958-13 Spk F			0.1/10		-		Initials/Date	EH 3/5/04
Influent 1/2	L1958-1 Spk G			0.1/10		-		-	-
Influent 3	L1958-17			① 0.1/10, 0.1/10		-		-	-
Influent 3	L1958-17 Rep			② 0.1/10, 0.1/10		-		-	-
Influent 3 Dup	L1958-18			③ 0.1/10, 0.1/10		-		-	-
Influent 3 Low Spk	L1958-19			④ 0.1/10, 0.1/10		-		-	-
Influent 3 High Spk	L1958-20			⑤ 0.1/10, 0.1/10		-		-	-
Comb Effluent 1/2	L1958-5			-		-		-	-
Comb Effluent 1/2	L1958-5 Rep			-		-		-	-
Comb Effluent 1/2 Dup	L1958-6			-		-		-	-
Comb Effluent 1/2 Low Spk	L1958-7			0.1/10		-		-	-
Comb Effluent 1/2 High Spk	L1958-8			① 0.1/10, 0.1/10		-		-	-
Port 4A	L1958-9			② 0.1/10, 0.1/10		-		HPLC	-
Port 4A	L1958-9 Rep			③ 0.1/10, 0.1/10		-		Methanol	43308315
Port 4A Dup	L1958-10			④ 0.1/10, 0.1/10		-		Ammonium Acetate	V36159
Port 4A Low Spk	L1958-11			0.1/10		-		Type I water	NA
Port 4A High Spk	L1958-12			⑤ 0.1/10, 0.1/10		-		-	-
*Initials/Date		EH 3/5/04	EH 3/5/04	KK 03/05/04	KK 03/12/04	-	-	Initials/Date	03/12/04

STEP 1: SPE column clean-up (omitting 40% wash)
STEP 2: Final volume to 5 mL collected in 15 mL polypropylene tubes
STEP 3: LC/MS/MS analysis
STEP 4: LC/MS/MS reanalysis.

*Initials and date under each step indicates the personnel that performed this step.

SS Method of Analysis for the Determination of Perfluorooctane sulfonate (PFOS), Perfluorooctane sulfonylamide (PFOSA), and Perfluorooctanoate (POAA) in Water

① DF = 1000 and 10,000
② DF = 10, 100 and 1000
③ DF = 100 and 1000
④ DF = 1000
⑤ DF = 10 and 100

KK 03/05/04

⑥ SAMPLES WERE INADVERTENTLY SWITCHED DURING DILUTION.
L1958-19 WAS DILUTED 1000x WHILE
L1958-20 WAS DILUTED 100+1000x.
KK 03/16/04

COMMENTS:

Final extracts stored in refrigerator 32 Initials: EH Date: 3/5/04

July 19, 2001/4



3058 Research Drive
State College, PA 16801

Phone: 814-272-1039
Fax: 814-231-1580

PREPARATION OF EXTRACTED CALIBRATION STANDARDS

Protocol No.: None
Method No.: SS

Exygen Study No.: NA
Analytes: C4,C5,C6,C7 and C8 Acids;
C4, C6 & C8 Sulfonates

Matrix: Type I Water^
Sample Vol: 40 mL

Sponsor Sample ID	Exygen Sample ID	Sample Description	Fort. Solution ID	Fort. Soln. Conc. (ng/mL)	Fort. Volume (uL)	Micropipet used (uL)	Fort. Level (ppt)	Final Solution ID # **	Reagents/ Materials	Lot #
NA	0106020	Type I Water^	-	-	-	-	-	XC030504-0	Methanol	43303348
NA	0106020	Type I Water^	F012004-10	10	100	200	25	XC030504-1	C18 SPE	W331761
NA	0106020	Type I Water^	F012004-10	10	200	200	50	XC030504-2	Type I Water	NA
NA	0106020	Type I Water^	F012004-10	10	400	200	100	XC030504-3	-	-
NA	0106020	Type I Water^	F012004-9	100	100	200	250	XC030504-4	-	-
NA	0106020	Type I Water^	F012004-9	100	200	200	500	XC030504-5	-	-
NA	0106020	Type I Water^	F012004-9	100	400	200	1000	XC030504-6	-	-
-	-	-	-	-	-	-	-	-	-	EH
-	-	-	-	-	-	-	-	-	Initials/Date:	3/5/04

Vertical arrows in a column indicate identical values.

**This must be a unique number. Use this system: Extracted Calibration Soln ID #: XCMMDYY-0,1,2,3, etc.

Samples removed from refrigerator freezer # 32 Time: 0850
40 mL of each sample measured using a 50 mL graduated cylinder.

Initials/Date: EH / 3/5/04

After measuring, samples returned to refrigerator / freezer # 32 Time: 1300

Initials/Date: EH / 3/5/04

Samples fortified: Initials/Date: EH / 03/05/04

Initials/Date: EH / 3/5/04

SPE clean-up (omitting 40% Wash): Initials/Date: EH / 3/5/04

Final volume adjusted to 5 mL: Initials/Date: EH / 3/5/04

Extracts placed in refrigerator # 32 Initials/Date: EH / 3/5/04

STANDARD EXPIRATION DATE: 3/19/04

Comments: ^This type I water has been filtered through a hypercarb filter

SS Method of Analysis for the Determination of Perfluorooctane sulfonate (PFOS), Perfluorooctane sulfonamide (PFOSA), and Perfluorooctanoate (POAA) in Water

July 10, 2001/0

kg 02/12/04

Vial	File Name	LIMS ID	Client ID	Sample Description	Matrix	Sample Type	Conc (ng/L)	Conc B	Conc C	Test ID	DF
1	030504A-401	---	---	XC030504-0, 0 ng/L Standard	---	Standard	0	---	---	0	1
2	030504A-402	---	---	XC030504-1, 25 ng/L Standard	---	Standard	25	---	---	0	1
3	030504A-403	---	---	XC030504-2, 50 ng/L Standard	---	Standard	50	---	---	0	1
4	030504A-404	---	---	XC030504-3, 100 ng/L Standard	---	Standard	100	---	---	0	1
5	030504A-405	---	---	XC030504-4, 250 ng/L Standard	---	Standard	250	---	---	0	1
6	030504A-406	---	---	XC030504-5, 500 ng/L Standard	---	Standard	500	---	---	0	1
7	030504A-407	---	---	XC030504-6, 1000 ng/L Standard	---	Standard	1000	---	---	0	1
8	030504A-408	---	---	Methanol Wash	---	Blank	---	---	---	0	1
9	030504A-409	---	---	0106020 Control	---	Blank	---	---	---	0	1
10	030504A-410	---	---	0106020 Spk A, 50 ng/L	---	QC	50	---	---	0	1
11	030504A-411	---	---	0106020 Spk B, 500 ng/L	---	QC	500	---	---	0	1
12	030504A-412	---	---	L1958-1 Spk C, 250000 ng/L, DF=10000	---	QC	250000	---	---	0	10000
13	030504A-413	---	---	L1958-1 Spk C, 250000 ng/L, DF=1000	---	QC	250000	---	---	0	1000
14	030504A-414	---	---	L1958-5 Spk D, 10000 ng/L, DF=100	---	QC	10000	---	---	0	100
15	030504A-415	---	---	L1958-9 Spk E, 25000 ng/L, DF=100	---	QC	25000	---	---	0	100
16	030504A-416	---	---	L1958-13 Spk F, 25000 ng/L, DF=100	---	QC	25000	---	---	0	100
17	030504A-417	---	---	L1958-1 Spk G, 10000 ng/L, DF=100	---	QC	10000	---	---	0	100
18	030504A-418	---	---	XC030504-1, 25 ng/L Standard	---	Standard	25	---	---	0	1
19	030504A-419	---	---	L1958-1, DF=200	---	Analyte	---	---	---	0	200
20	030504A-420	---	---	L1958-1 Rep, DF=200	---	Analyte	---	---	---	0	200
21	030504A-421	---	---	L1958-2, DF=200	---	Analyte	---	---	---	0	200
22	030504A-422	---	---	L1958-1, DF=100	---	Analyte	---	---	---	0	100
23	030504A-423	---	---	L1958-1 Rep, DF=100	---	Analyte	---	---	---	0	100
24	030504A-424	---	---	L1958-2 , DF=100 L1958-2 <i>kg 03/15/04</i>	---	Analyte	---	---	---	0	100
25	030504A-425	---	---	L1958-1, DF=10	---	Analyte	---	---	---	0	10
26	030504A-426	---	---	L1958-1 Rep, DF=10	---	Analyte	---	---	---	0	10
27	030504A-427	---	---	L1958-2, DF=10	---	Analyte	---	---	---	0	10
28	030504A-428	---	---	L1958-3, DF=1000	---	QC	10000	---	---	0	1000
29	030504A-429	---	---	L1958-3, DF=100	---	QC	10000	---	---	0	100
30	030504A-430	---	---	L1958-4, DF=1000	---	QC	100000	---	---	0	1000
31	030504A-431	---	---	XC030504-2, 50 ng/L Standard	---	Standard	50	---	---	0	1
32	030504A-432	---	---	L1958-5	---	Analyte	---	---	---	0	1
33	030504A-433	---	---	L1958-5 Rep	---	Analyte	---	---	---	0	1
34	030504A-434	---	---	L1958-6	---	Analyte	---	---	---	0	1
35	030504A-435	---	---	L1958-7, DF=100	---	QC	10000	---	---	0	100
36	030504A-436	---	---	L1958-8, DF=1000	---	QC	100000	---	---	0	1000
37	030504A-437	---	---	XC030504-3, 100 ng/L Standard	---	Standard	100	---	---	0	1
38	030504A-438	---	---	L1958-9, DF=100	---	Analyte	---	---	---	0	100
39	030504A-439	---	---	L1958-9 Rep, DF=100 L1958-9 <i>kg 03/15/04</i>	---	Analyte	---	---	---	0	100
40	030504A-440	---	---	L1958-10, DF=100	---	Analyte	---	---	---	0	100
41	030504A-441	---	---	L1958-9, DF=10	---	Analyte	---	---	---	0	10
42	030504A-442	---	---	L1958-9 Rep, DF=10	---	Analyte	---	---	---	0	10
43	030504A-443	---	---	L1958-10, DF=10	---	Analyte	---	---	---	0	10
44	030504A-444	---	---	L1958-11, DF=100	---	QC	10000	---	---	0	100

0.500,000 ng/L (kg 03/15/04)

Masslynx - Sample List

Sample List: C:\MASSLYNX\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM.SPL
Printed: Fri Mar 12 15:42:23 2004

Oxygen STUDY NO.

L195B

03/12/04

	MS Method	HPLC Method	MS Tune File	Inj. Volume
1	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
2	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
3	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
4	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
5	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
6	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
7	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
8	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
9	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
10	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
11	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
12	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
13	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
14	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
15	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
16	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
17	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
18	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
19	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
20	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
21	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
22	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
23	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
24	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
25	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
26	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
27	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
28	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
29	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
30	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
31	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
32	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
33	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
34	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
35	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
36	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
37	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
38	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
39	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
40	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
41	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
42	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
43	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
44	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15

kg 03/12/04

Vial	File Name	LIMS ID	Client ID	Sample Description	Matrix	Sample Type	Conc (ng/L)	Conc B	Conc C	Test ID	DF
45	44	030504A-445	---	L1958-12, DF=1000	---	QC	100000	---	---	0	1000
46	4	030504A-446	---	XC030504-3, 100 ng/L Standard	---	Standard	100	---	---	0	1
47	45	030504A-447	---	L1958-13, DF=100	---	Analyte	---	---	---	0	100
48	46	030504A-448	---	L1958-13 Rep, DF=100	---	Analyte	---	---	---	0	100
49	47	030504A-449	---	L1958-14, DF=100	---	Analyte	---	---	---	0	100
50	48	030504A-450	---	L1958-13, DF=10	---	Analyte	---	---	---	0	10
51	49	030504A-451	---	L1958-13 Rep, DF=10	---	Analyte	---	---	---	0	10
52	50	030504A-452	---	L1958-14, DF=10	---	Analyte	---	---	---	0	10
53	51	030504A-453	---	L1958-15, DF=100	---	QC	10000	---	---	0	100
54	52	030504A-454	---	L1958-16, DF=1000	---	QC	100000	---	---	0	1000
55	5	030504A-455	---	XC030504-4, 250 ng/L Standard	---	Standard	250	---	---	0	1
56	53	030504A-456	---	L1958-17, DF=1000	---	Analyte	---	---	---	0	1000
57	54	030504A-457	---	L1958-17 Rep, DF=1000	---	Analyte	---	---	---	0	1000
58	55	030504A-458	---	L1958-18, DF=1000	---	Analyte	---	---	---	0	1000
59	56	030504A-459	---	L1958-17, DF=100	---	Analyte	---	---	---	0	100
60	57	030504A-460	---	L1958-17 Rep, DF=100	---	Analyte	---	---	---	0	100
61	58	030504A-461	---	L1958-18, DF=100	---	Analyte	---	---	---	0	100
62	59	030504A-462	---	L1958-17, DF=10	---	Analyte	---	---	---	0	10
63	60	030504A-463	---	L1958-17 Rep, DF=10	---	Analyte	---	---	---	0	10
64	61	030504A-464	---	L1958-18, DF=10	---	Analyte	---	---	---	0	10
65	62	030504A-465	---	① L1958-18, DF=1000	---	QC	10000	---	---	0	1000
66	63	030504A-466	---	① L1958-18, DF=100	---	QC	10000	---	---	0	100
67	64	030504A-467	---	② L1958-20, DF=1000	---	QC	100000	---	---	0	1000
68	6	030504A-468	---	XC030504-5, 500 ng/L Standard	---	Standard	500	---	---	0	1
69	92	030504A-469	---	Methanol Wash	---	Blank	---	---	---	0	1
70	65	030504A-470	---	L1958-21	---	Analyte	---	---	---	0	1
71	66	030504A-471	---	L1958-22, DF=100	---	QC	10000	---	---	0	100
72	67	030504A-472	---	L1958-23, DF=1000	---	QC	100000	---	---	0	1000
73	7	030504A-473	---	XC030504-6, 1000 ng/L Standard	---	Standard	1000	---	---	0	1

①-20
 ②-19
 ⑩ kg 03/15/04

Sample List: C:\MASSLYNX\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM.SPL
Printed: Fri Mar 12 15:42:23 2004

Oxygen STUDY NO. 495B

Page Position: (2, 2)

BR 03/12/04

	MS Method	HPLC Method	MS Tune File	Inj. Volume
45	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
46	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
47	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
48	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
49	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
50	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
51	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
52	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
53	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
54	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
55	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
56	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
57	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
58	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
59	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
60	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
61	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
62	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
63	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
64	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
65	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
66	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
67	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
68	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
69	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
70	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
71	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
72	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
73	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15

LC/MS/MS SYSTEM AND OPERATING CONDITIONS

Sponsor Protocol No: NA

Exygen Study No: L1958

Instrument: Micromass Quattro Ultima (LC/MS/MS Unit #6)
Computer: COMPAQ Professional Workstation AP200
Software: Microsoft Windows NT: Version 4 Build 1381: Service Pack 5
Micromass Limited: MassLynx 3.4 Build 004
HPLC Equipment: Hewlett Packard (HP) Series 1100
HP Bin Pump HP Vacuum Degasser
HP Autosampler HP Column Oven
HPLC Column: Genesis C-8, 5 cm x 2.1 mm i.d. x 4 μ (Exygen ID: 74A)
(JONESCHROMATOGRAPHY: Part No. FK5962E)
Mobile Phase (A) : 2 mM Ammonium Acetate in Type I Water
Mobile Phase (B) : Methanol
Analyst: Karen Risha
Exygen Research
3058 Research Drive, State College, PA 16801
Phone: (814) 272-1039 FAX: (814) 231-1580

kg 03/12/04

NOTE: The next 3 pages are computer generated printouts from the masslynx software program. The pages contain the instrument settings used for the analysis of this data set.

All Handwritten Peak ID's by: *kg 03/16/04*

Scanning Method Report

Page 1

Method: C:\MASSLYNX\FLUOROchemicals.PRO\ACQUDE\C6 8 ACIDS C4 6 8 SULF

Last Modified: Mon Jan 20 15:32:38 2003

Printed: Fri Mar 12 15:44:59 2004

Handwritten: KR 03/12/04

Solvent Delay (mins) : 0.00

Analog Channel 4 : Unused

Function : 1 MRM of 5 Mass Pairs (ESP-)

Inter Channel Delay (Secs) : 0.03

Span (Daltons) : 0.00

Start Time (Mins) : 0.00

End Time (Mins) : 12.00

Repeats : 1

Channel	Parent	Daughter	Dwell (Secs)	Coll Energy (eV)	Cone (V)
1	299.00	99.00	0.20	40	49
2	313.00	269.00	0.20	10	20
3	399.00	80.00	0.20	35	50
4	413.00	369.00	0.20	10	10
5	499.00	99.00	0.20	40	30

Method File: c:\masslynx\fluorochemicals.pro\acqddb\pfbs water
Last Modified: Friday, March 12, 2004 15:38:56

Printed: Friday, March 12, 2004 15:45:09

RF 03/12/04

HP1100 LC Pump Initial Conditions

Solvents
A% 90.0
B% 10.0
C% 0.0
D% 0.0

Flow (ml/min) 0.300
Stop Time (mins) 20.0
Min Pressure (bar) 0
Max Pressure (bar) 400
Oven Temperature Left (°C) 35.0
Oven Temperature Right (°C) 35.0

HP1100 LC Pump Gradient Timetable

The gradient Timetable contains 8 entries which are :

Time	A%	B%	C%	D%	Flow	Pressure
0.00	90.0	10.0	0.0	0.0	0.300	400
2.00	90.0	10.0	0.0	0.0	0.300	400
5.00	10.0	90.0	0.0	0.0	0.300	400
9.00	10.0	90.0	0.0	0.0	0.300	400
9.50	0.0	100.0	0.0	0.0	0.300	400
14.00	0.0	100.0	0.0	0.0	0.300	400
14.50	90.0	10.0	0.0	0.0	0.300	400
20.00	90.0	10.0	0.0	0.0	0.300	400

HP1100 LC Pump External Event Timetable

The Timetable contains 6 entries which are :

Time	Column Switch	Contact1	Contact2	Contact3	Contact4
Initial	Off	Off	Off	Off	Off
0.00	Off	On	Off	Off	Off
0.05	Off	Off	Off	Off	Off
0.10	Off	Off	On	Off	Off
11.90	Off	Off	Off	On	Off
12.00	Off	Off	Off	Off	Off

HP1100 Autosampler Initial Conditions

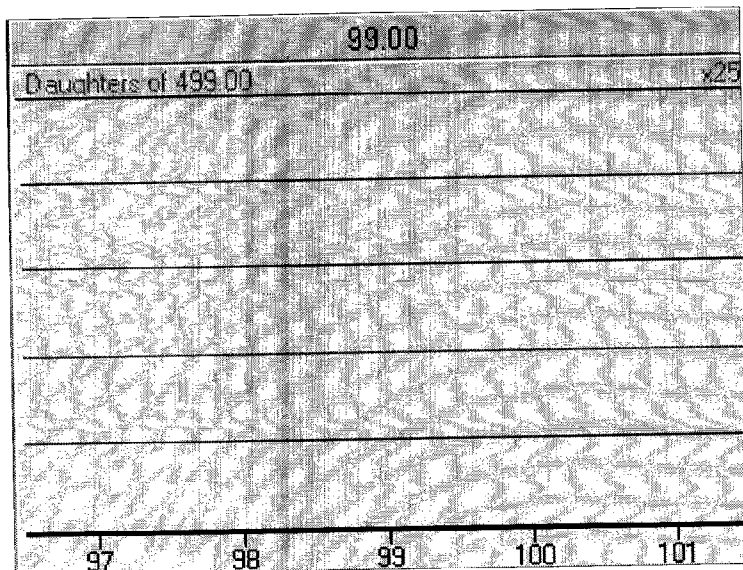
Draw Speed 200.0
Eject Speed (µl/min) 200
Draw Position (mm) 0.00
Stop Time (mins) 20.00
Injection Volume (µl) 15.0
Vial Number 2

Tuning Method Report

Method: C:\MASSLYNX\FLUOROCHEMICALS.PRO\ACQUDB\FLUOROCHEMS

Printed: Fri Mar 12 15:45:22 2004

RF 03/12/04



Dau 499.00

SOURCE (ESP-)	Set	Rdbk	Analyser	Set	Rdbk
Capillary	3.00	-2.93	LM Res 1	14.0	
Cone	20	-20	HM Res 1	14.0	
Hexapole 1	0.0		IEnergy 1	1.0	
Aperture 1	0.0		Entrance	-2	12
Hexapole 2	0.0		Collision	15	14
Source Block Temp.	100	100	Exit	2	16
Desolvation Temp.	300	299	LM Res 2	14.0	
			HM Res 2	14.0	
			IEnergy 2	2.0	
			Multiplier	650	-648
Pressures		Rdbk	Gas Flows		Rdbk
Analysr Vacuum	OFF		Cone Gas	129.9	
Gas Cell	3.0e-3		Desolvation	751.3	

Quantify Calibration Report

Study No.:L1958, Set No.:030504A, Ext.Date:03/05/04, Analyst:K.Risha

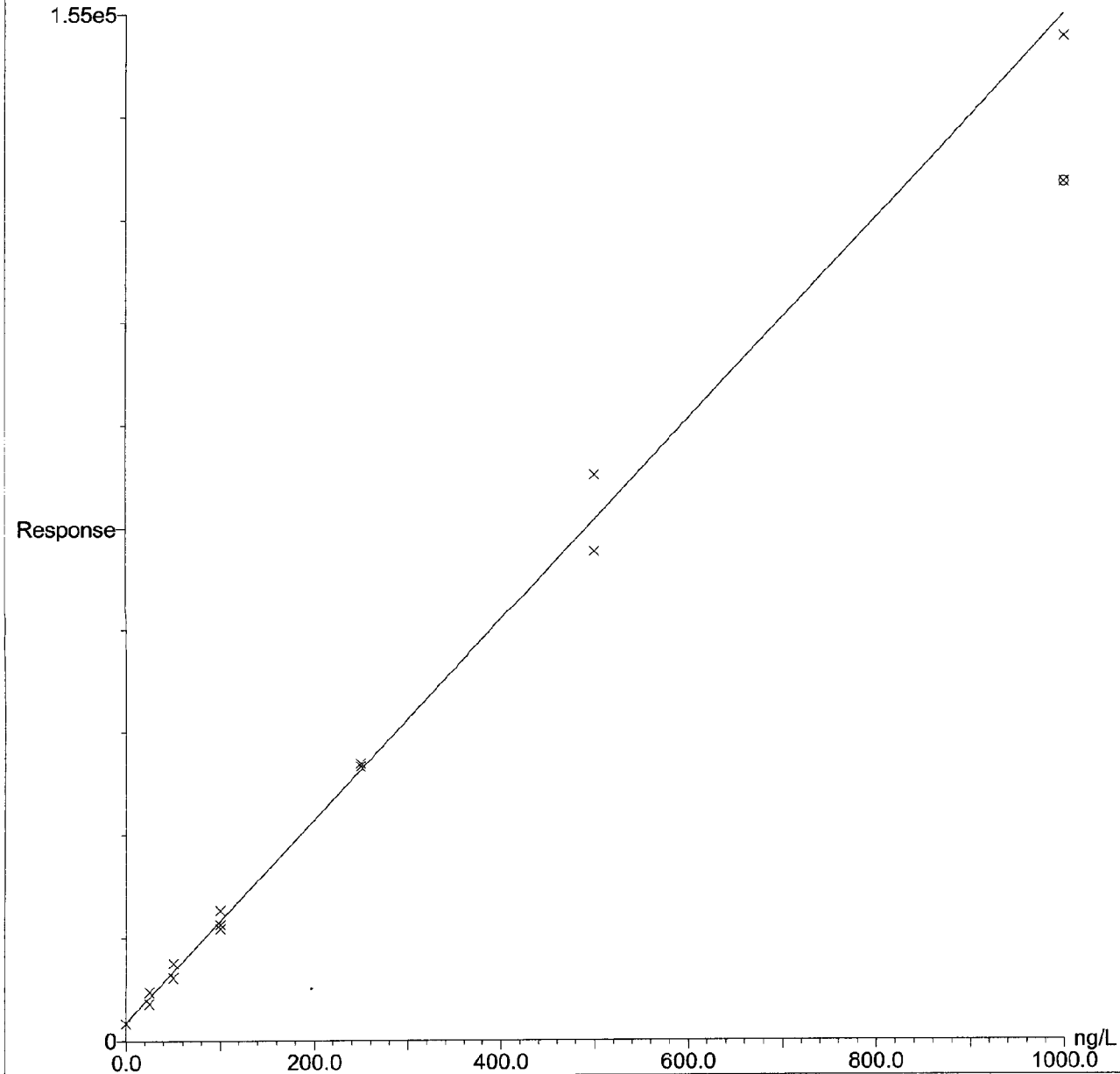
Calibration: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\CurveDB\030504A CG ACSFM

Last modified: Mon Mar 15 13:56:39 2004

Printed: Tue Mar 16 07:26:23 2004

of 03/16/04 pages 1-5

Compound 1 name: C6 Acid PFHA
Coefficient of Determination: 0.995965
Calibration curve: $152.223 * x + 2749.08$
Response type: External Std, Area
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Oxygen Research, 3058 Research Drive, State College, PA 16801

Quantify Calibration Report

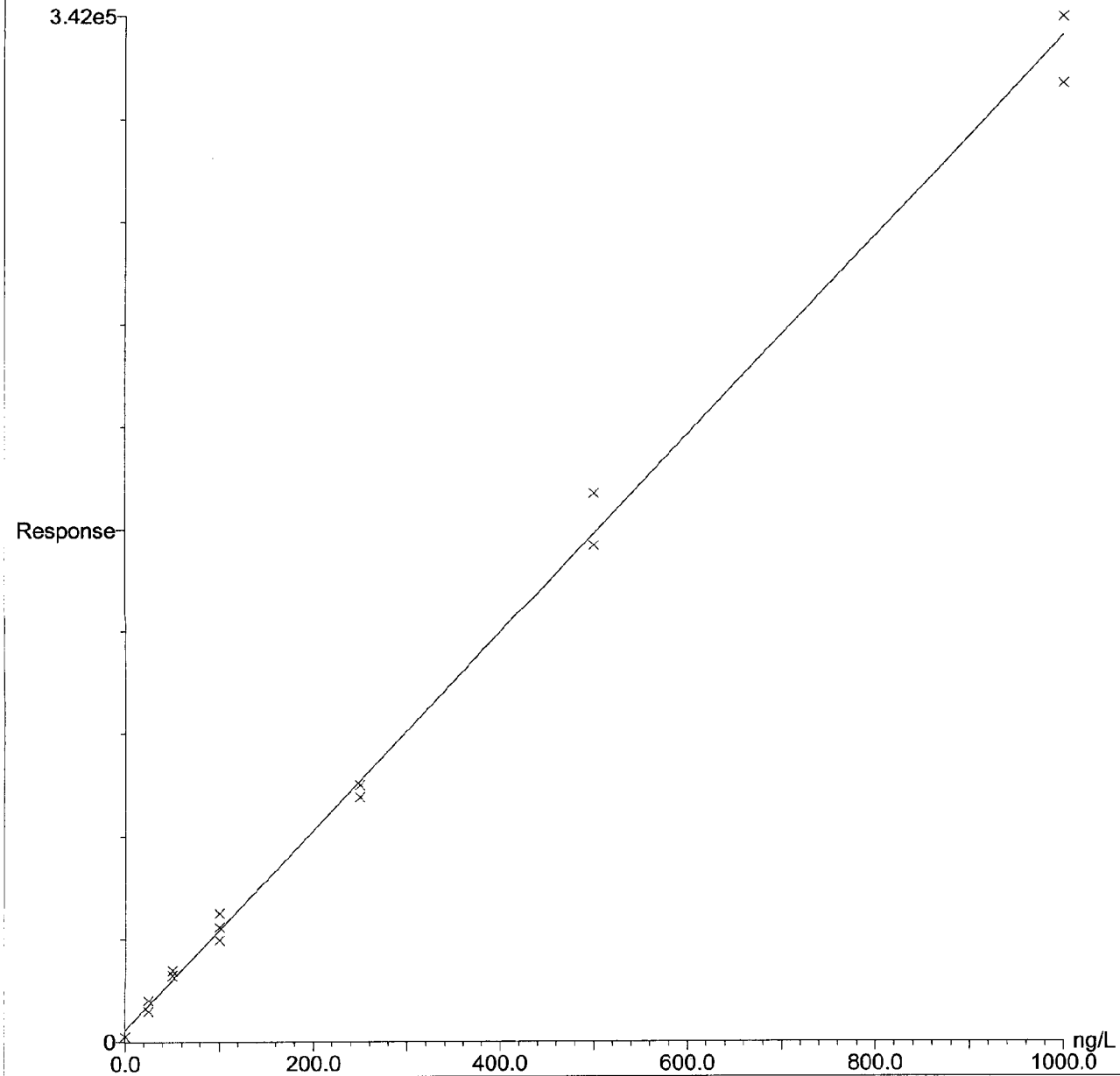
Study No.: L1958, Set No.: 030504A, Ext.Date: 03/05/04, Analyst: K.Risha

Calibration: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\CurveDB\030504A CG ACSFM

Last modified: Mon Mar 15 13:56:39 2004

Printed: Tue Mar 16 07:26:23 2004

Compound 2 name: C8 Acid PFOA
Coefficient of Determination: 0.996490
Calibration curve: $332.081 * x + 3900.44$
Response type: External Std, Area
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Oxygen Research, 3058 Research Drive, State College, PA 16801

Quantify Calibration Report

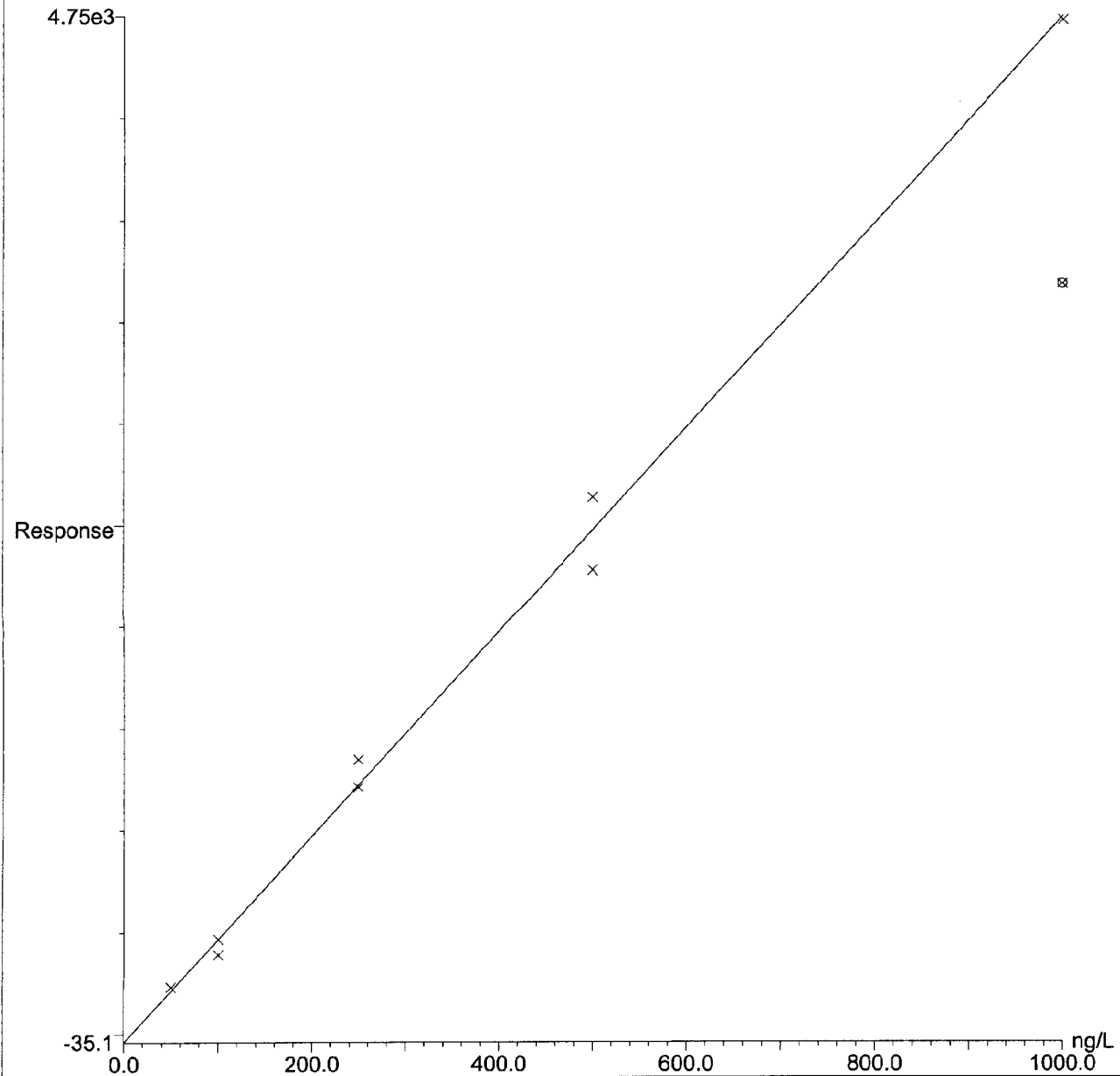
Study No.: L1958, Set No.: 030504A, Ext.Date: 03/05/04, Analyst: K.Risha

Calibration: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\CurveDB\030504A CG ACSFM

Last modified: Mon Mar 15 13:56:39 2004

Printed: Tue Mar 16 07:26:23 2004

Compound 3 name: C4 Sulfonate PFBS
Coefficient of Determination: 0.995207
Calibration curve: $4.78826 \cdot x + -35.1105$
Response type: External Std, Area
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Oxygen Research, 3058 Research Drive, State College, PA 16801

Quantify Calibration Report

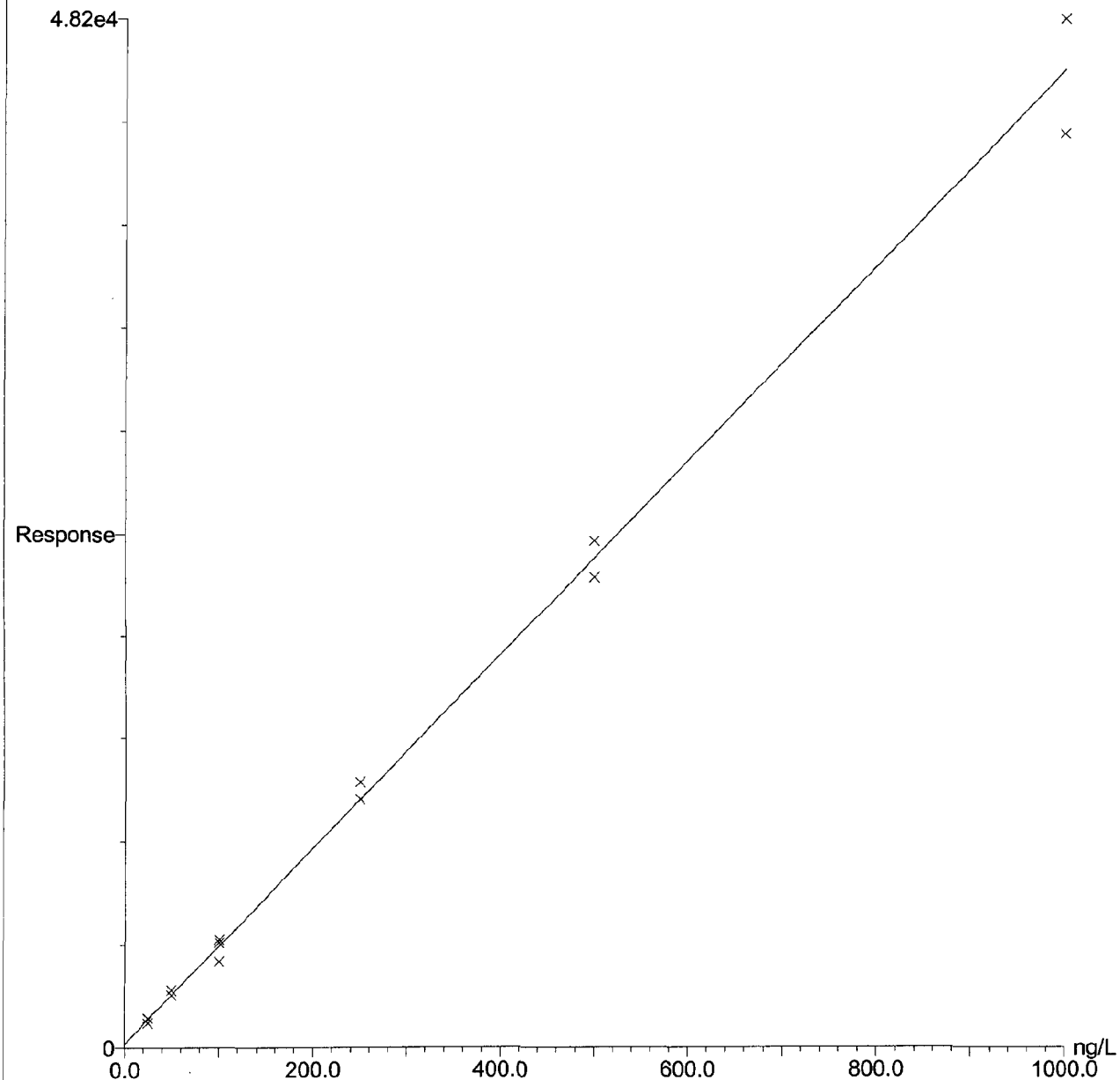
Study No.:L1958, Set No.:030504A, Ext.Date:03/05/04, Analyst:K.Risha

Calibration: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\CurveDB\030504A CG ACSFM

Last modified: Mon Mar 15 13:56:39 2004

Printed: Tue Mar 16 07:26:23 2004

Compound 4 name: C6 Sulfonate PFHS
Coefficient of Determination: 0.994244
Calibration curve: $45.6617 * x + 187.490$
Response type: External Std, Area
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



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Quantify Calibration Report

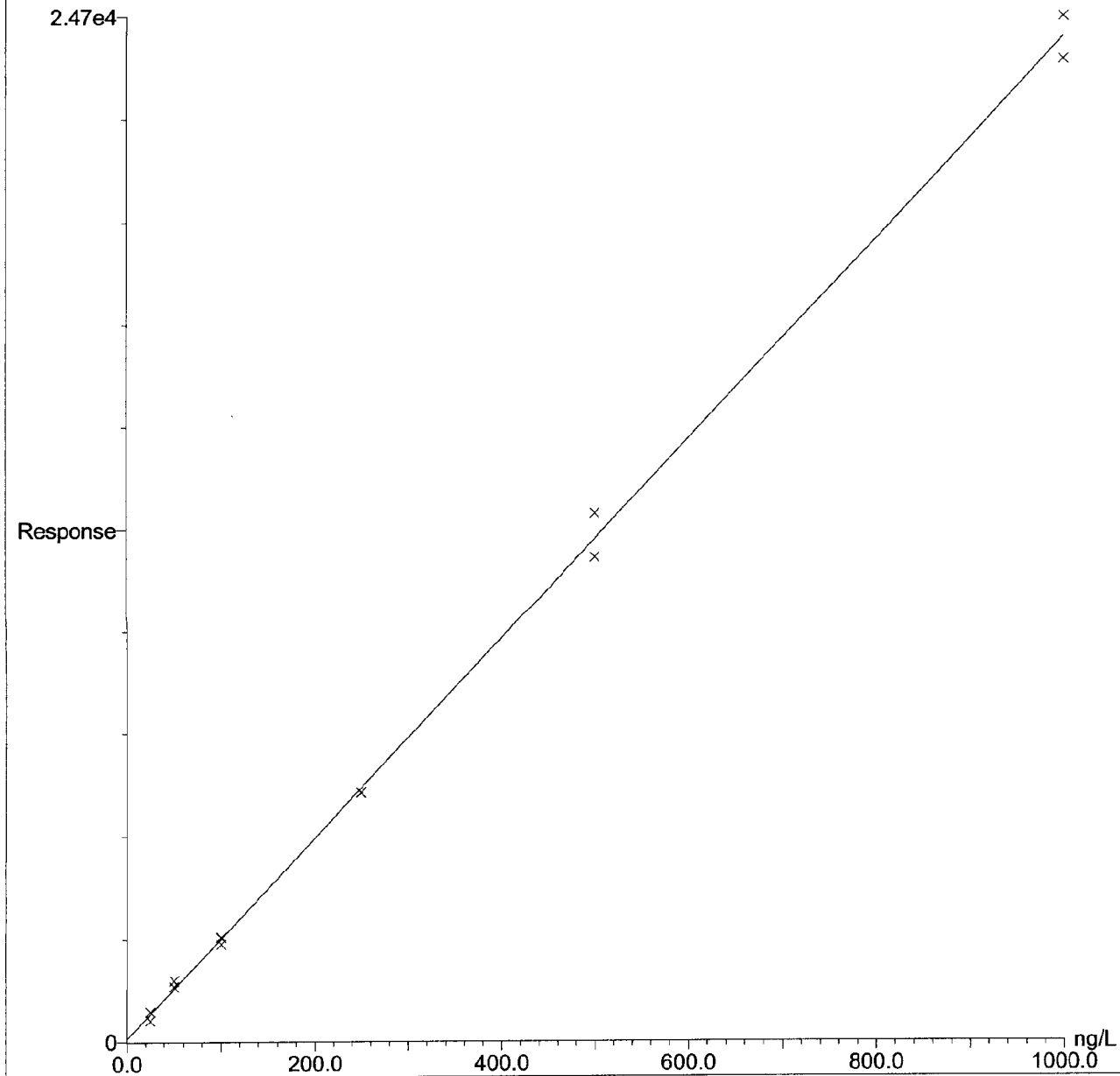
Study No.:L1958, Set No.:030504A, Ext.Date:03/05/04, Analyst:K.Risha

Calibration: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\CurveDB\030504A CG ACSFM

Last modified: Mon Mar 15 13:56:39 2004

Printed: Tue Mar 16 07:26:23 2004

Compound 5 name: C8 Sulfonate PFOS
Coefficient of Determination: 0.998559
Calibration curve: $24.1350 * x + 66.8162$
Response type: External Std, Area
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



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Quantify Sample Report

Study No.: L1958, Set No.: 030504A, Ext.Date: 03/05/04, Analyst: K.Risha

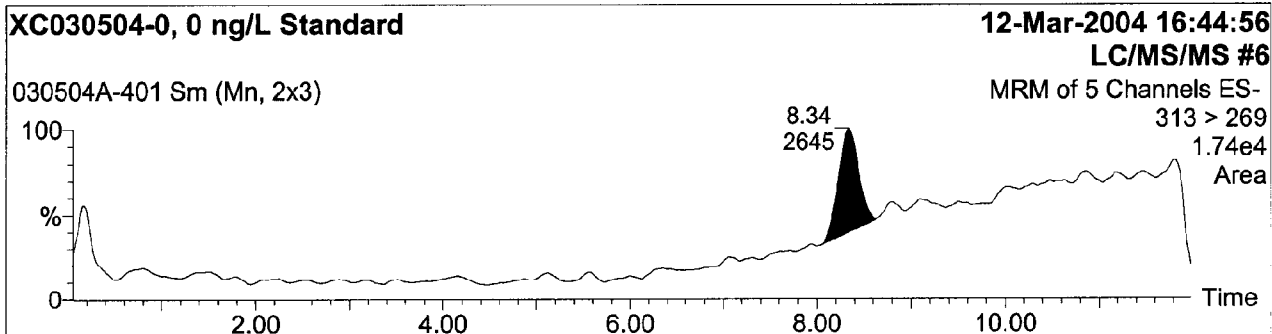
Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDE\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

Printed: Tue Mar 16 07:26:27 2004

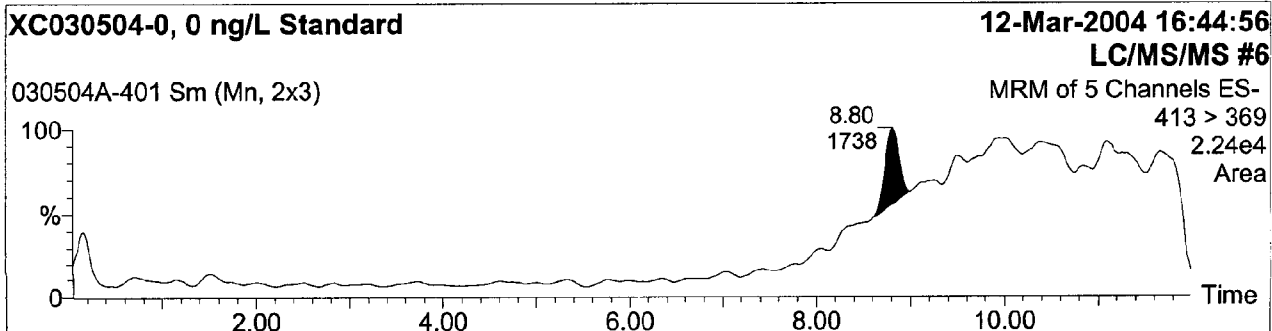
Initials KR
Date 03/16/04
Run# 030504A-401 To 030504A-473

Name: 030504A-401
Text:

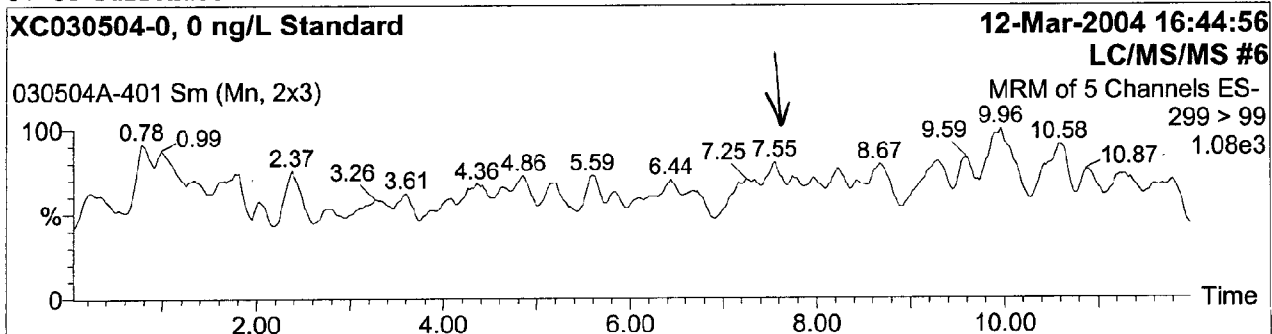
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

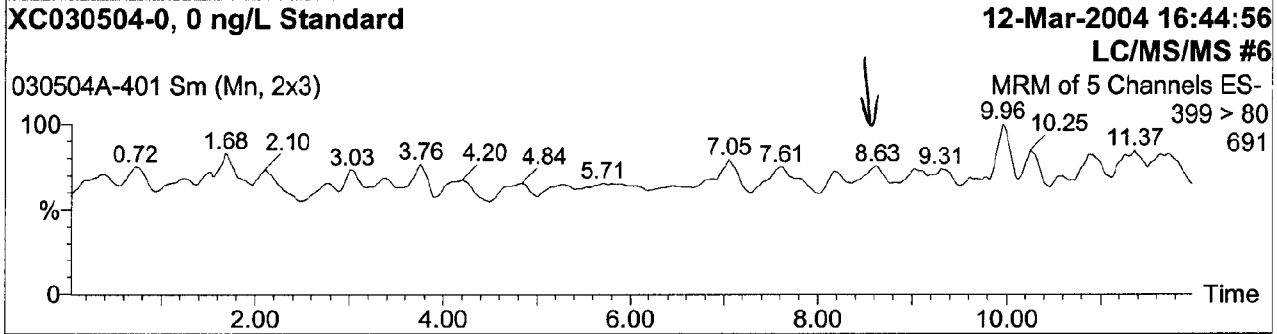
Study No.:L1958, Set No.:030504A, Ext.Date:03/05/04, Analyst:K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDE\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

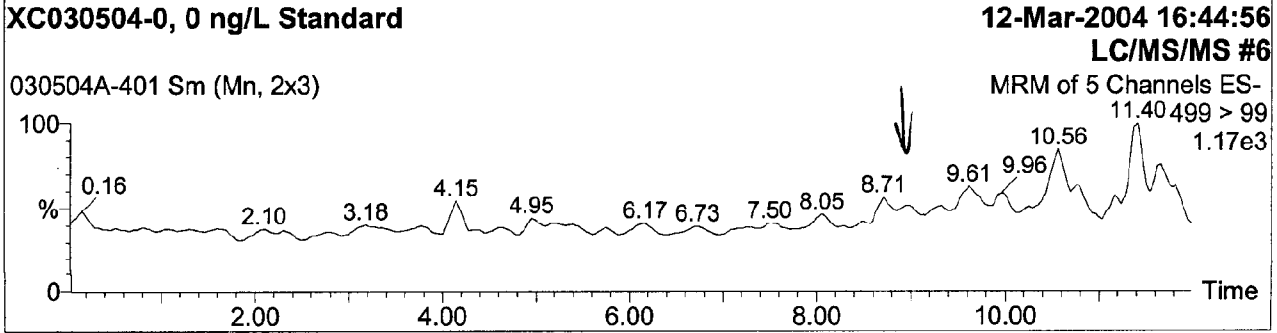
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-401
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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Quantify Sample Report

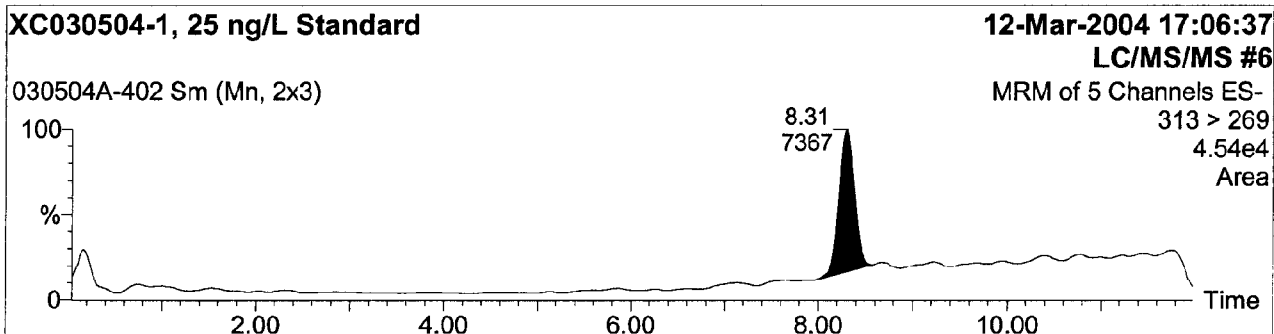
Study No.:L1958, Set No.:030504A, Ext.Date:03/05/04, Analyst:K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

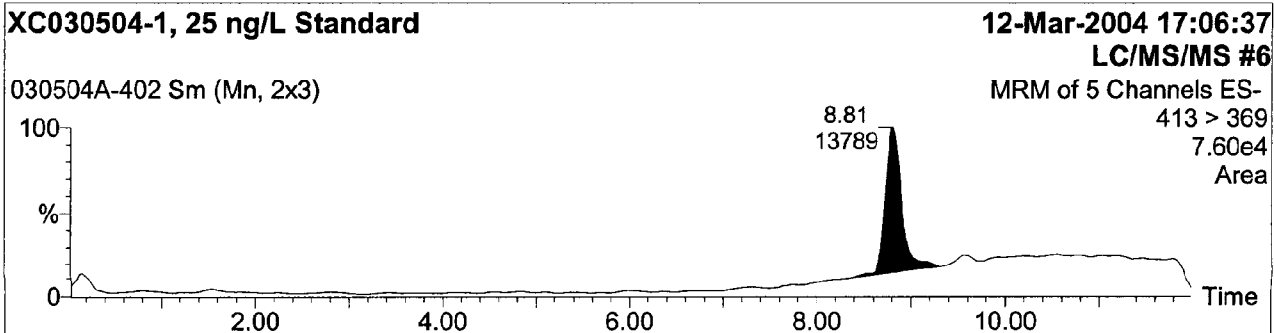
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-402
Text:

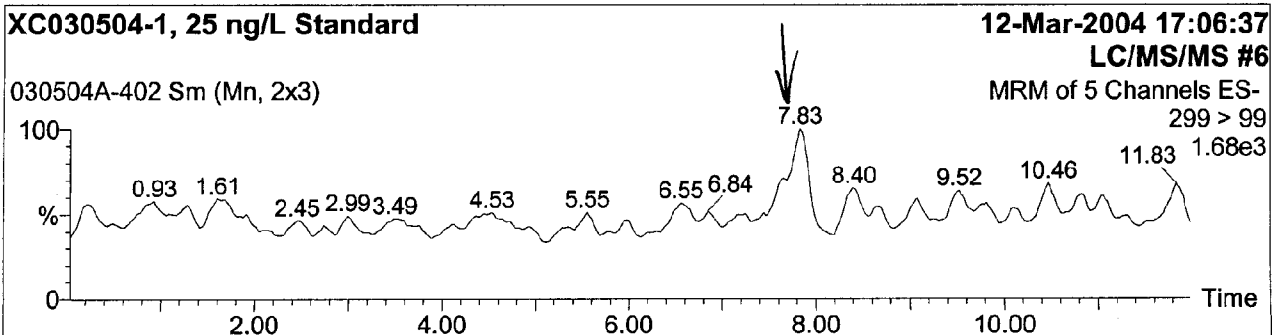
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

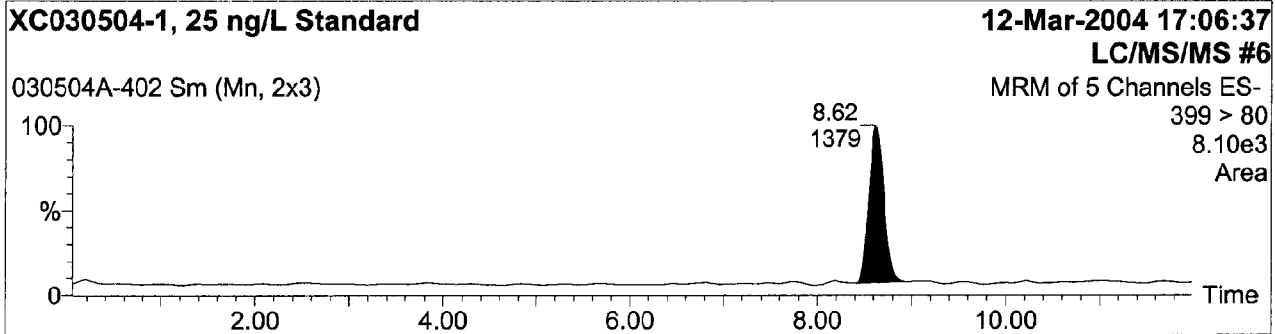
Study No.:L1958, Set No.:030504A, Ext.Date:03/05/04, Analyst:K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

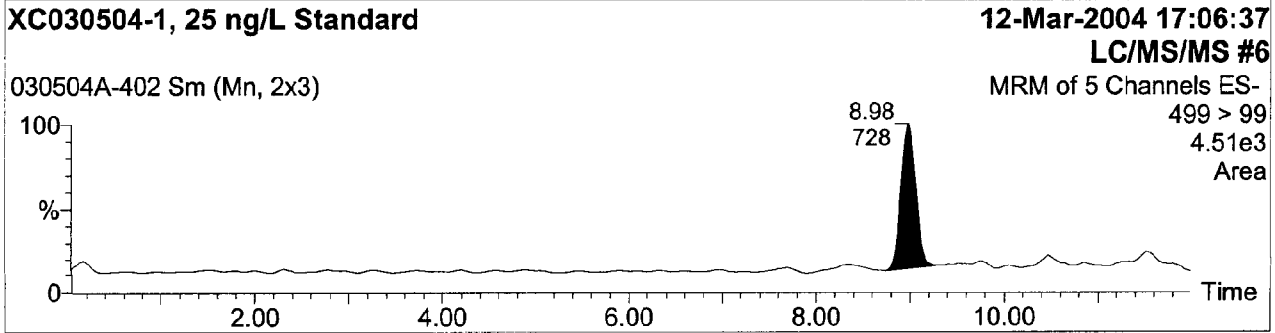
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-402
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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Quantify Sample Report

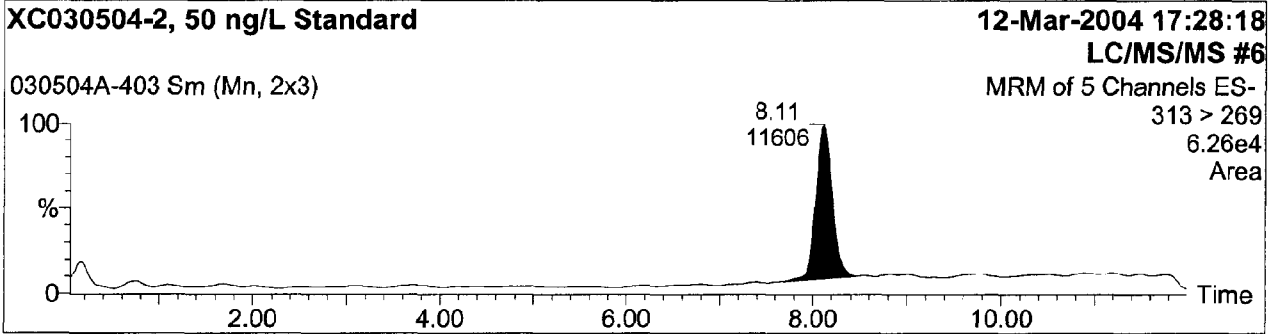
Study No.:L1958, Set No.:030504A, Ext.Date:03/05/04, Analyst:K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

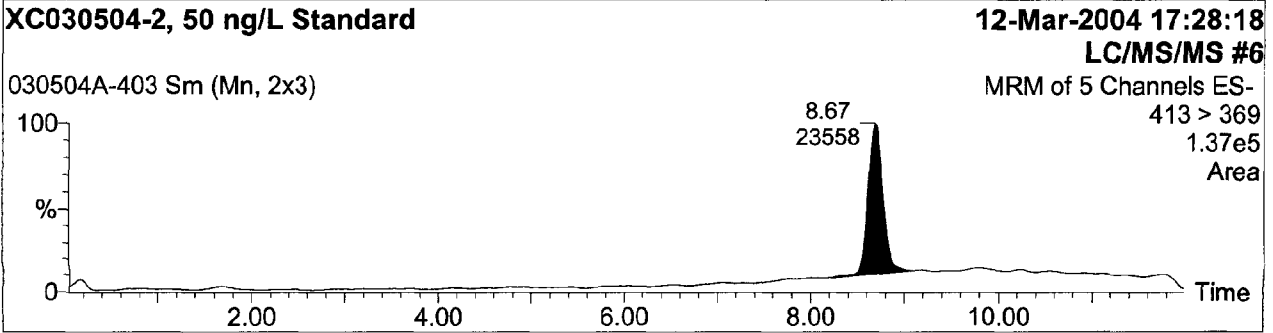
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-403
Text:

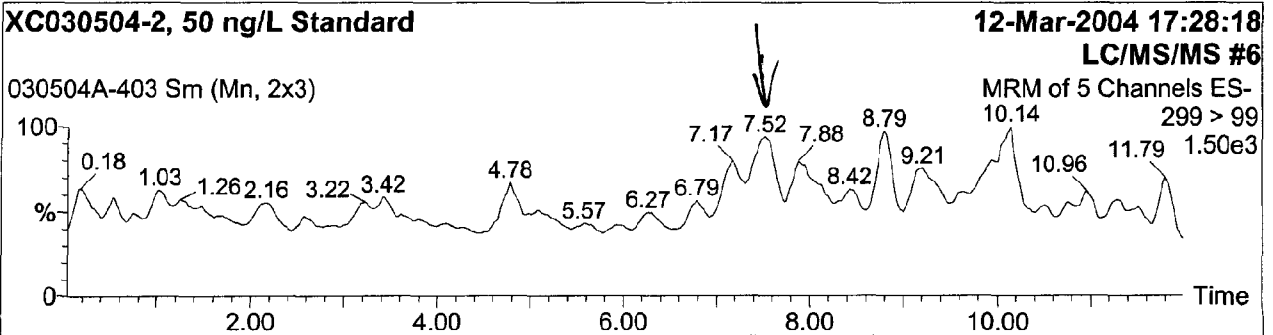
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

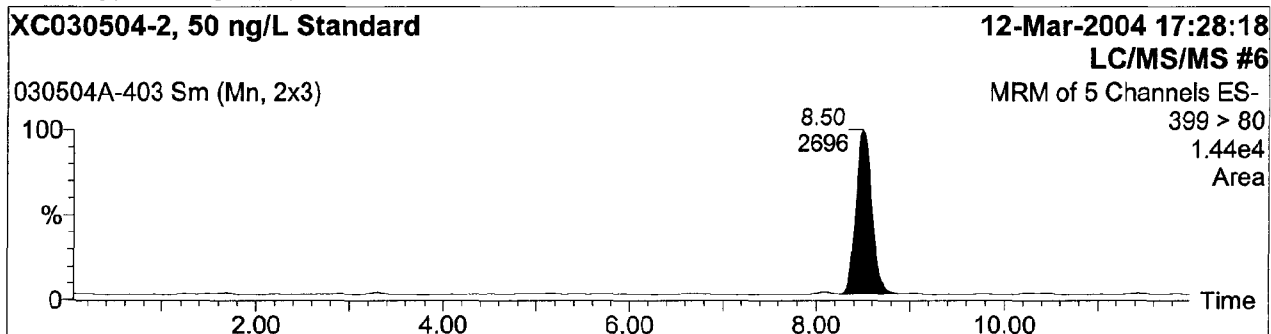
Study No.:L1958, Set No.:030504A, Ext.Date:03/05/04, Analyst:K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

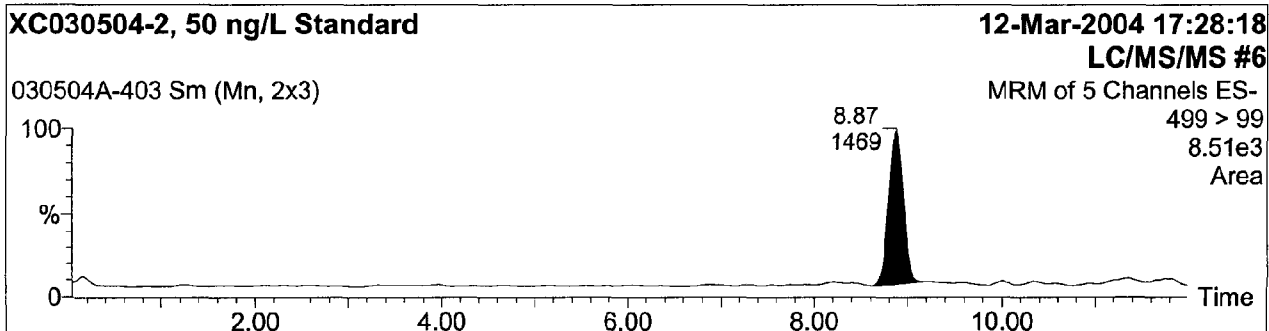
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-403
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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Quantify Sample Report

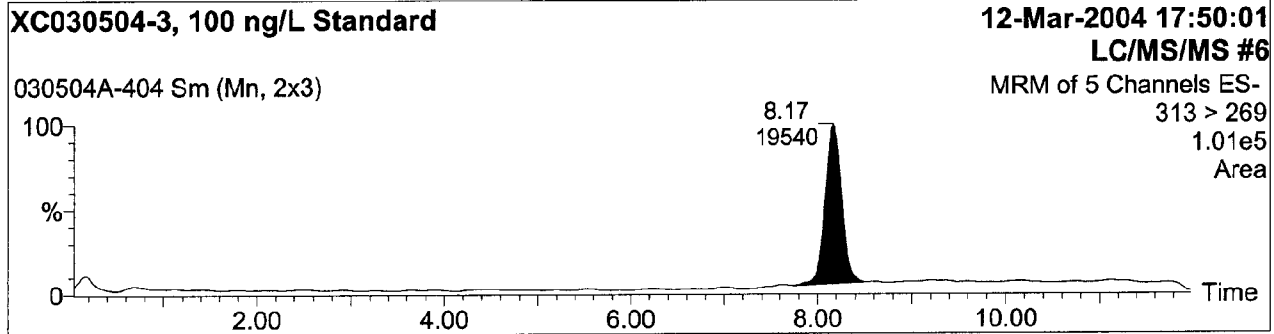
Study No.:L1958, Set No.:030504A, Ext.Date:03/05/04, Analyst:K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

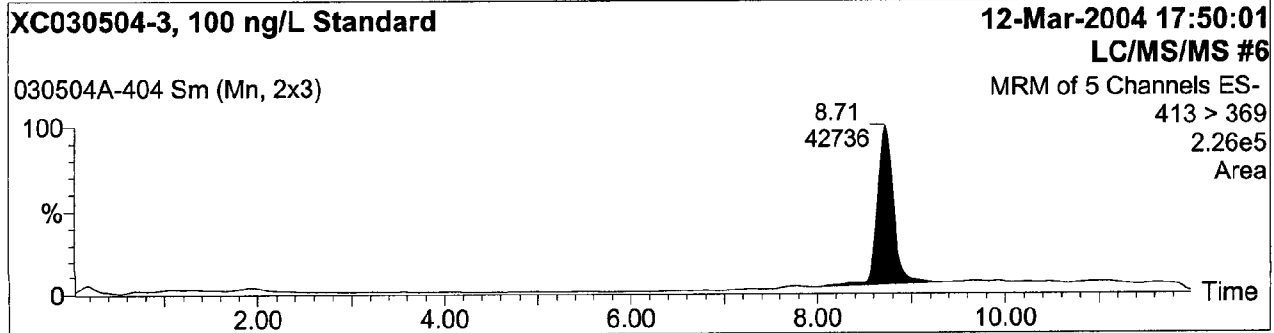
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-404
Text:

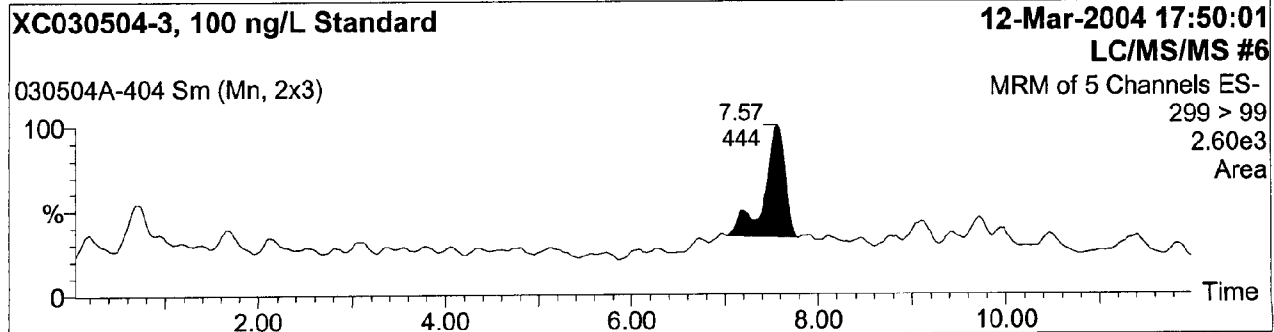
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

Study No.: L1958, Set No.: 030504A, Ext.Date: 03/05/04, Analyst: K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-404
Text:

4: C6 Sulfonate PFHS

XC030504-3, 100 ng/L Standard

12-Mar-2004 17:50:01

LC/MS/MS #6

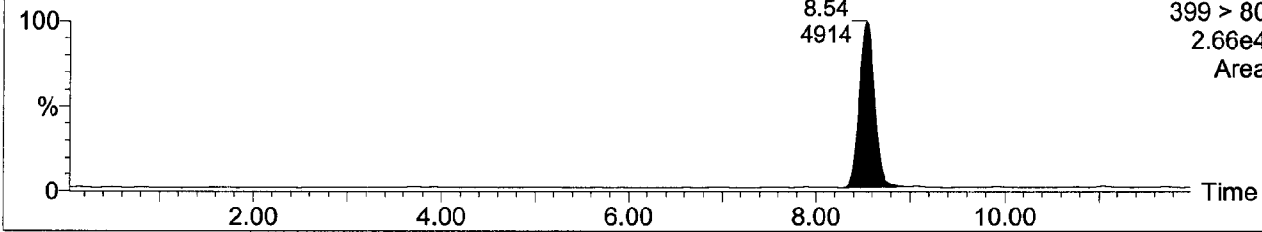
MRM of 5 Channels ES-

399 > 80

2.66e4

Area

030504A-404 Sm (Mn, 2x3)



5: C8 Sulfonate PFOS

XC030504-3, 100 ng/L Standard

12-Mar-2004 17:50:01

LC/MS/MS #6

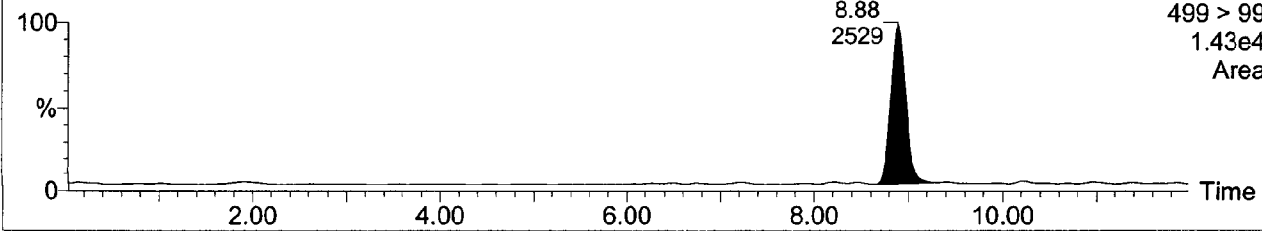
MRM of 5 Channels ES-

499 > 99

1.43e4

Area

030504A-404 Sm (Mn, 2x3)



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Quantify Sample Report

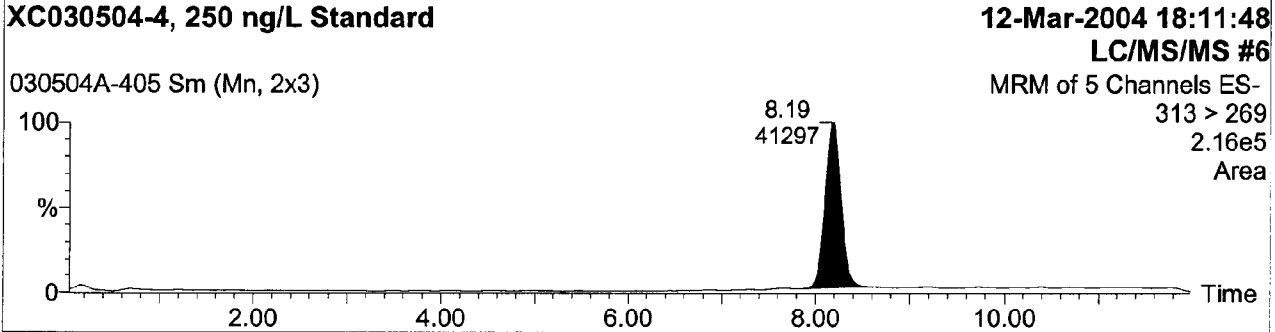
Study No.: L1958, Set No.: 030504A, Ext.Date: 03/05/04, Analyst: K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
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Last modified: Mon Mar 15 13:25:12 2004
Job Code:

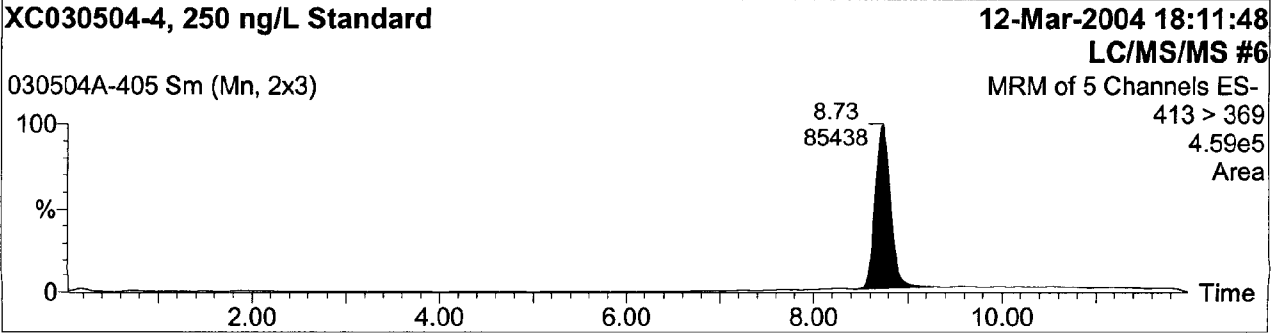
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Text:

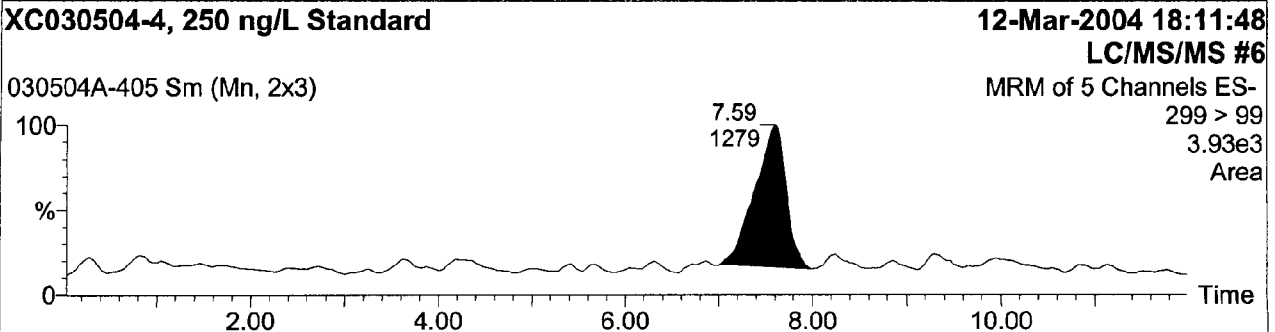
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

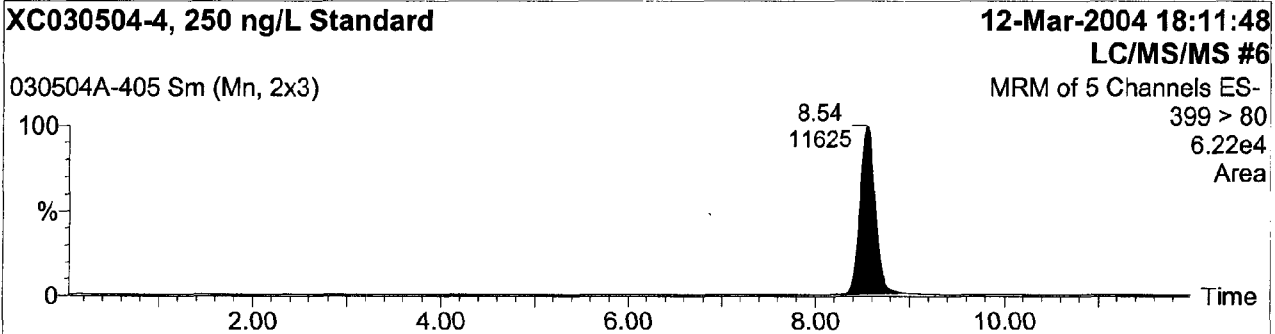
Study No.: L1958, Set No.: 030504A, Ext.Date: 03/05/04, Analyst: K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
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Last modified: Mon Mar 15 13:25:12 2004
Job Code:

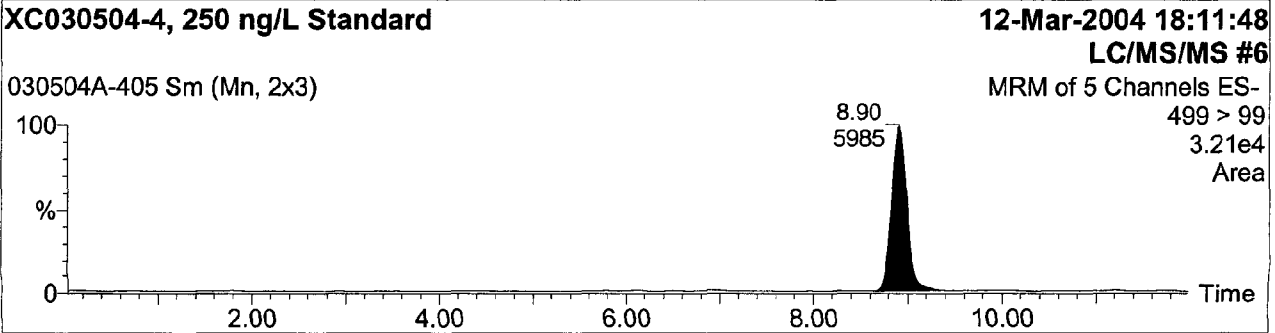
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-405
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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Quantify Sample Report

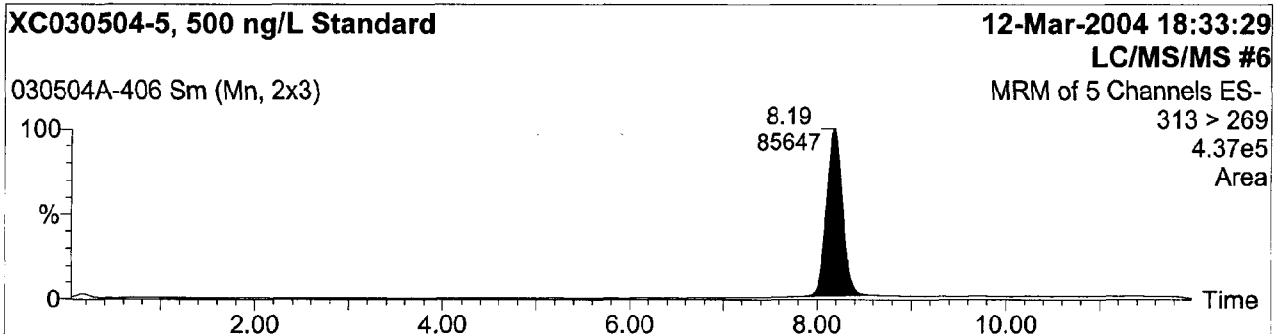
Study No.: L1958, Set No.: 030504A, Ext. Date: 03/05/04, Analyst: K. Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
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Last modified: Mon Mar 15 13:25:12 2004
Job Code:

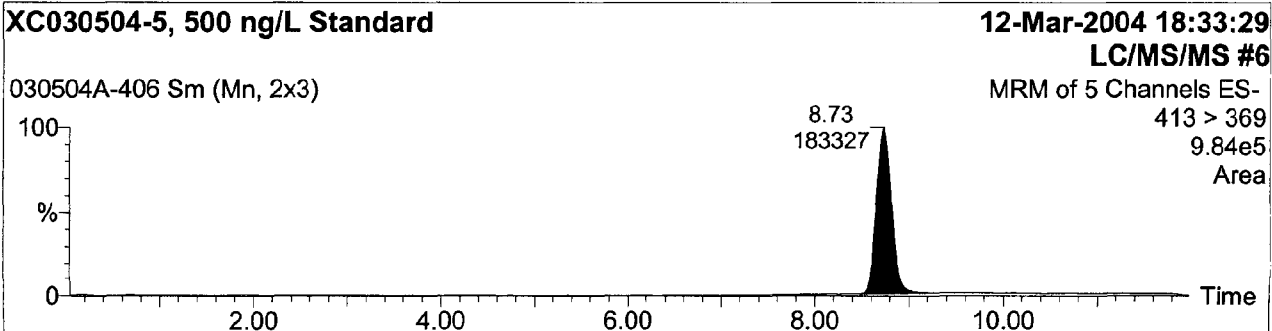
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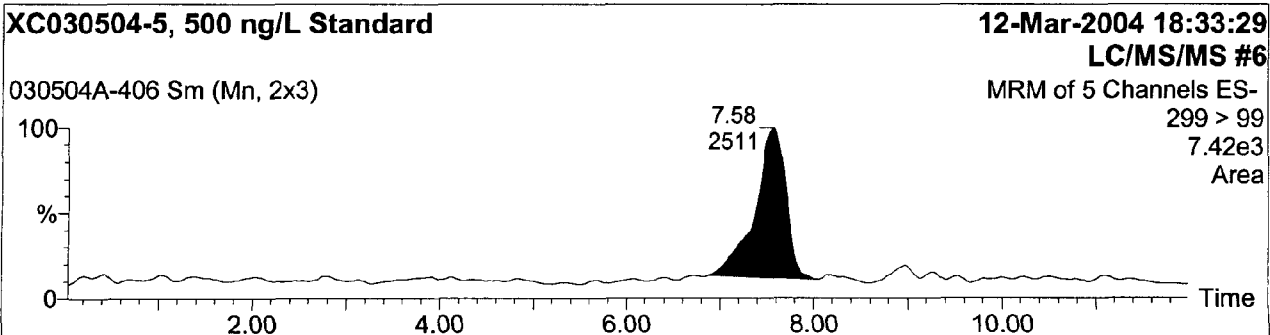
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

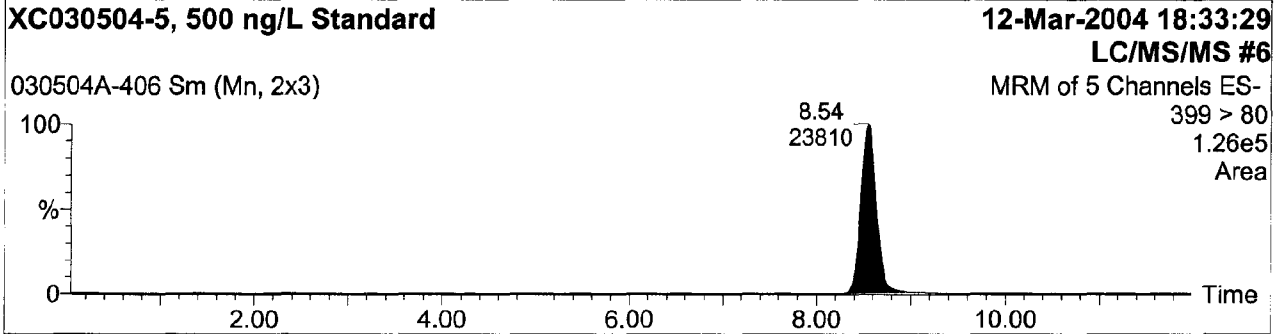
Study No.:L1958, Set No.:030504A, Ext.Date:03/05/04, Analyst:K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
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Last modified: Mon Mar 15 13:25:12 2004
Job Code:

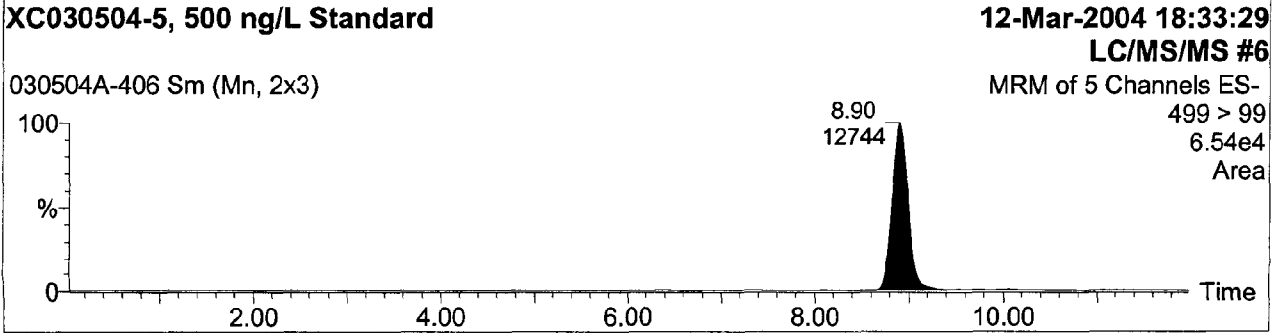
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-406
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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Quantify Sample Report

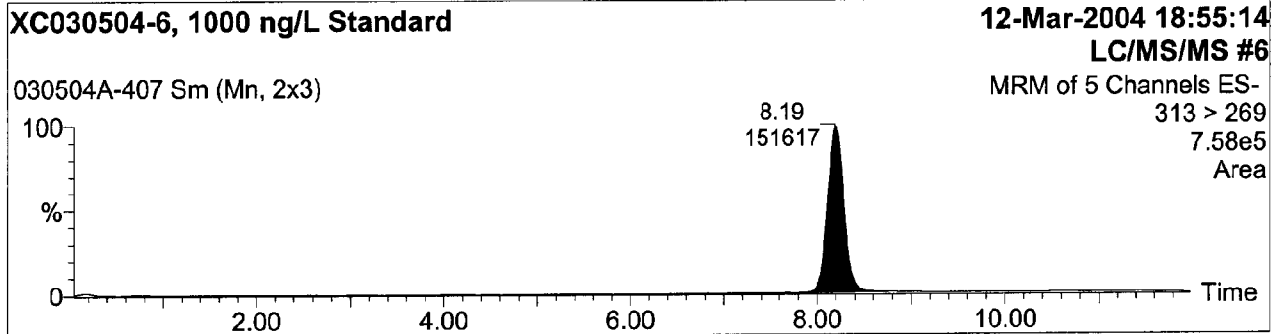
Study No.:L1958, Set No.:030504A, Ext.Date:03/05/04, Analyst:K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
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Last modified: Mon Mar 15 13:25:12 2004
Job Code:

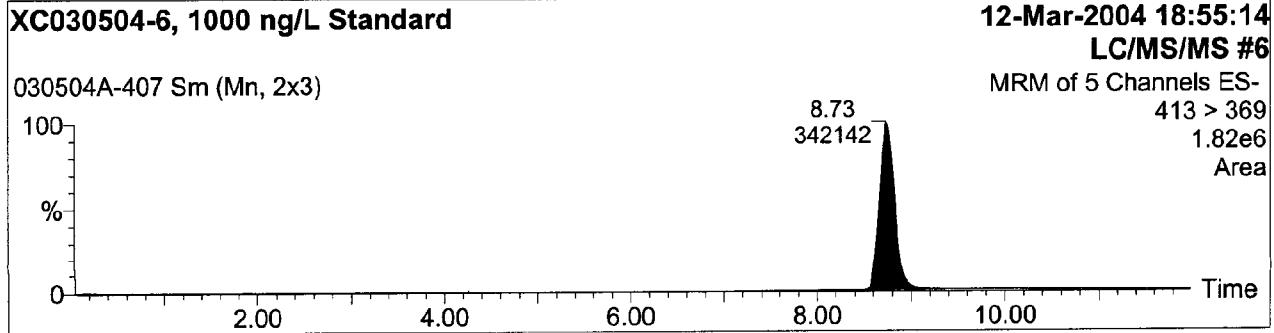
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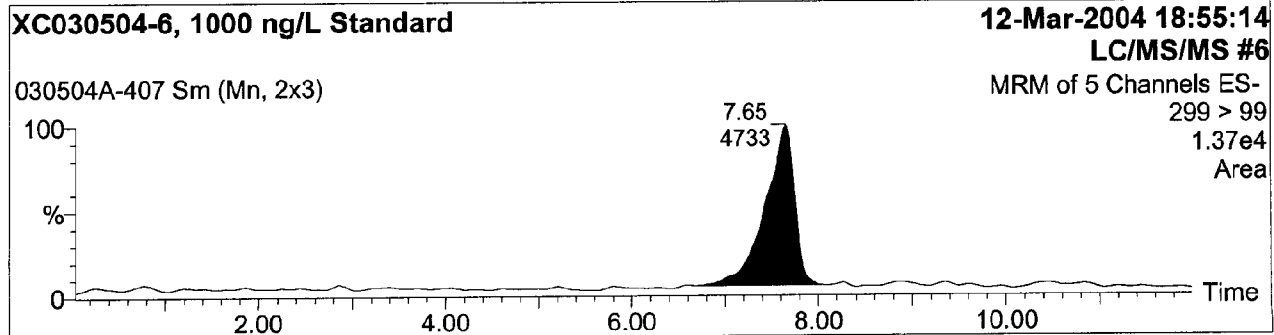
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

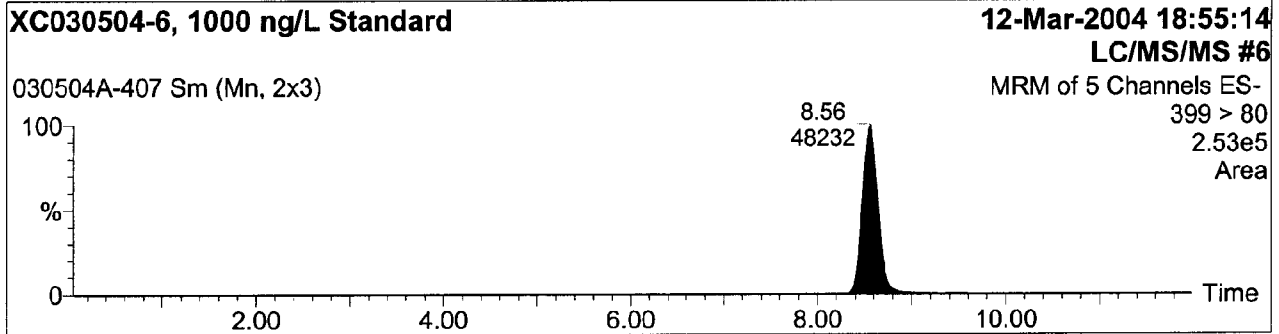
Study No.:L1958, Set No.:030504A, Ext.Date:03/05/04, Analyst:K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
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Job Code:

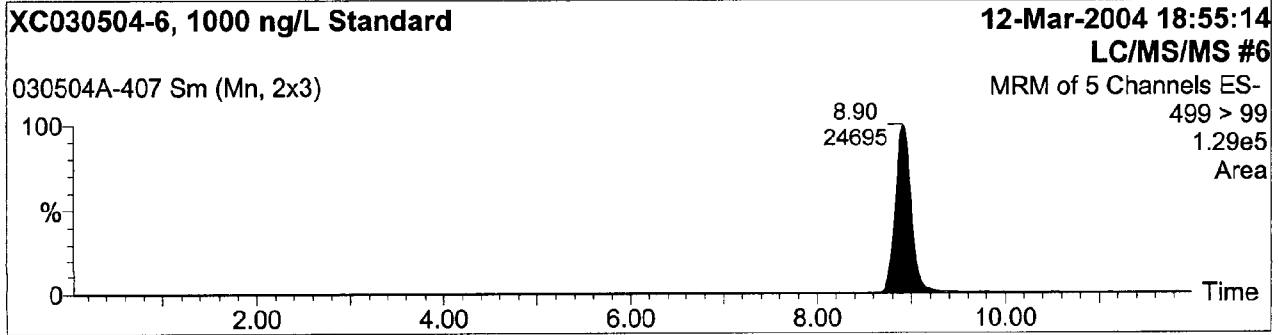
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-407
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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Quantify Sample Report

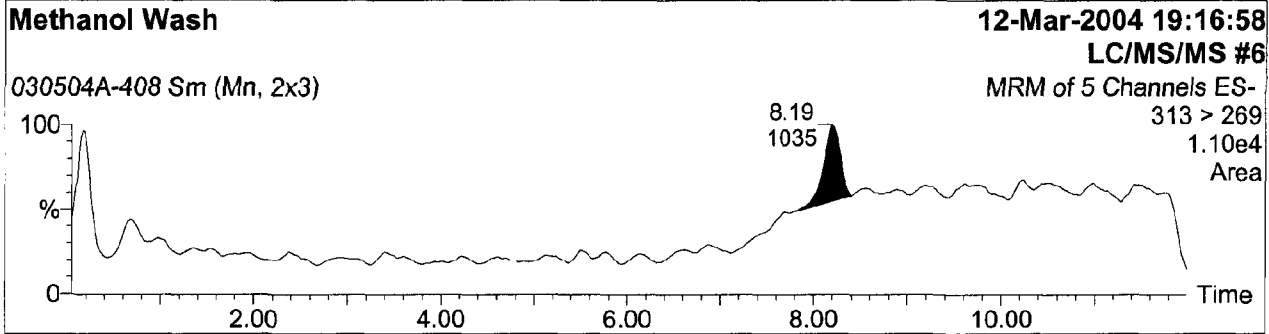
Study No.:L1958, Set No.:030504A, Ext.Date:03/05/04, Analyst:K.Risha

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Last modified: Mon Mar 15 13:22:46 2004
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Job Code:

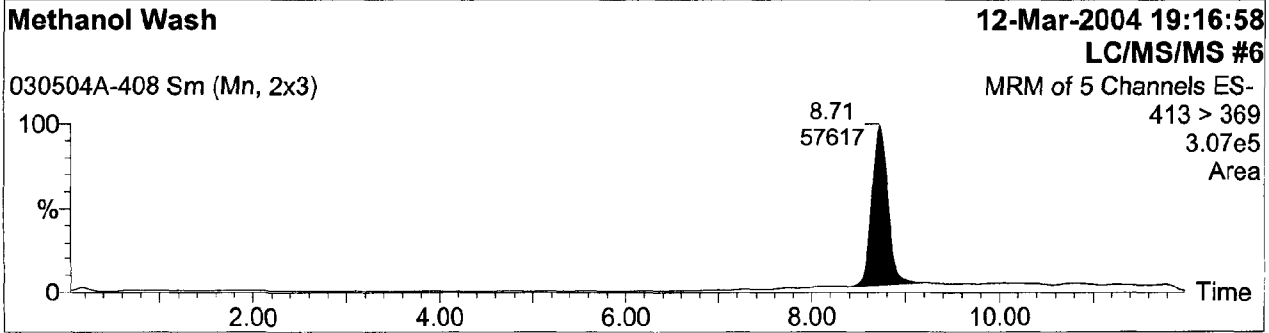
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-408
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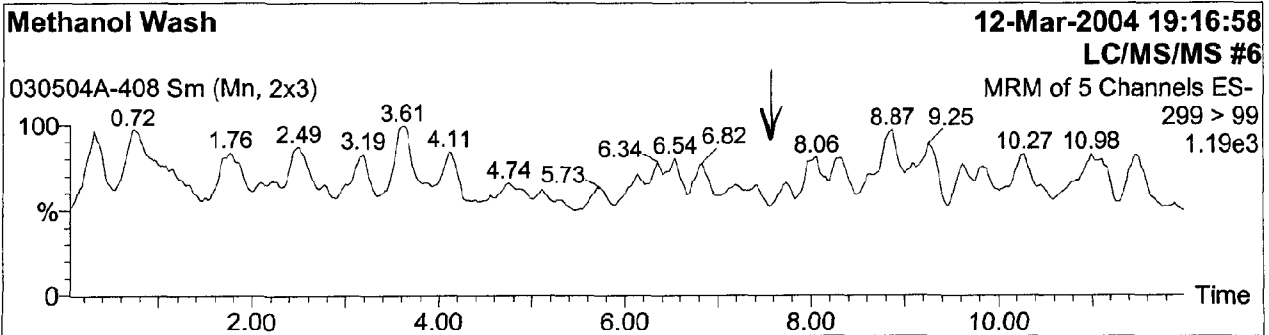
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

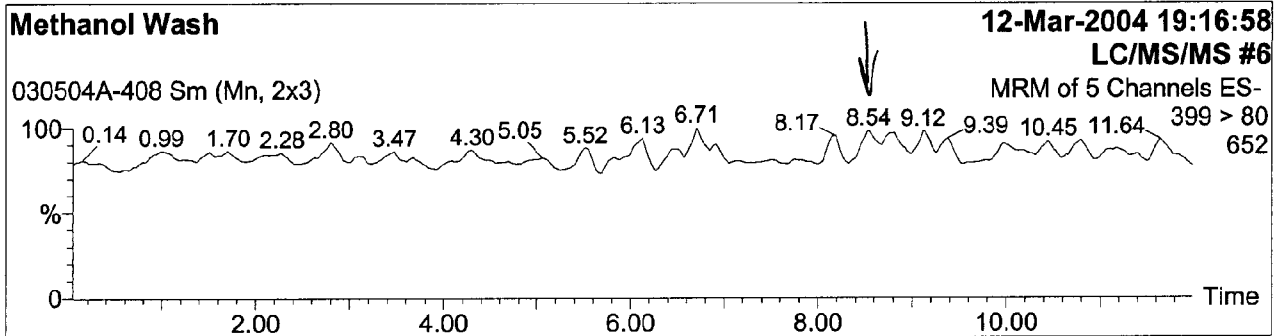
Study No.: L1958, Set No.: 030504A, Ext.Date: 03/05/04, Analyst: K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

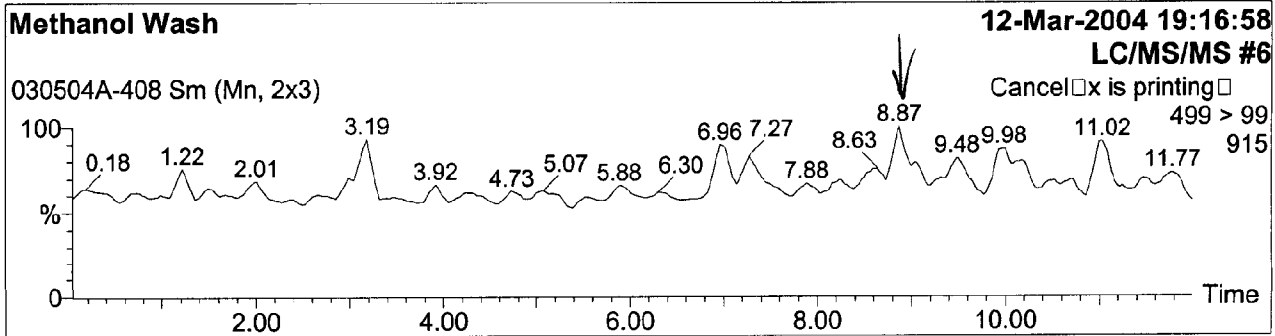
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-408
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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Quantify Sample Report

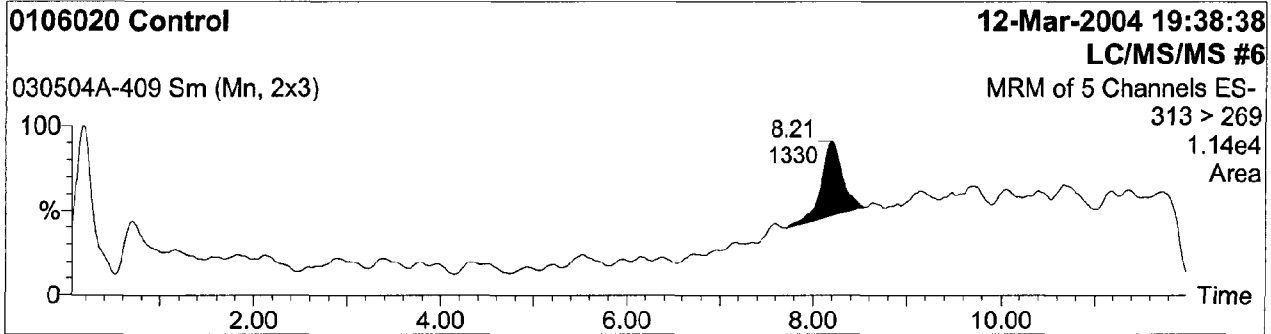
Study No.:L1958, Set No.:030504A, Ext.Date:03/05/04, Analyst:K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
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Last modified: Mon Mar 15 13:25:12 2004
Job Code:

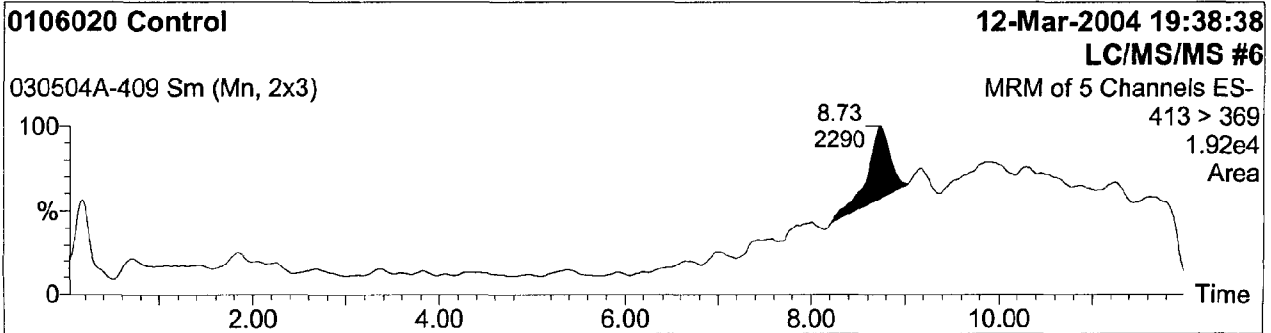
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Name: 030504A-409
Text:

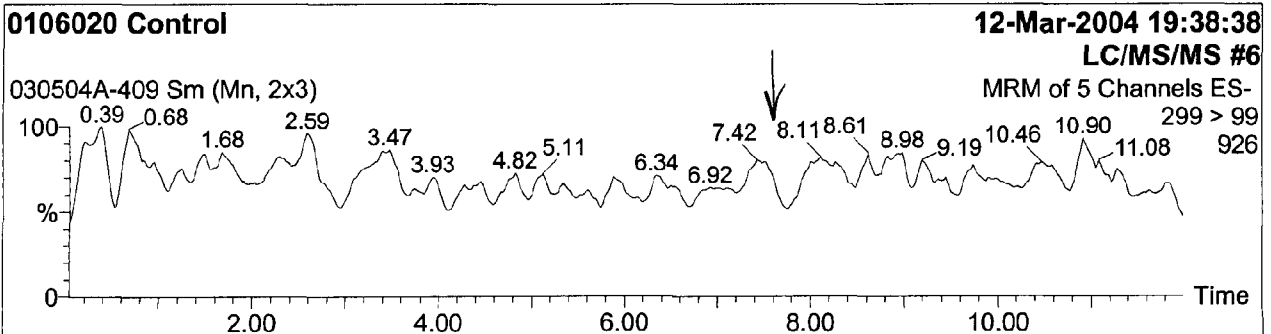
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

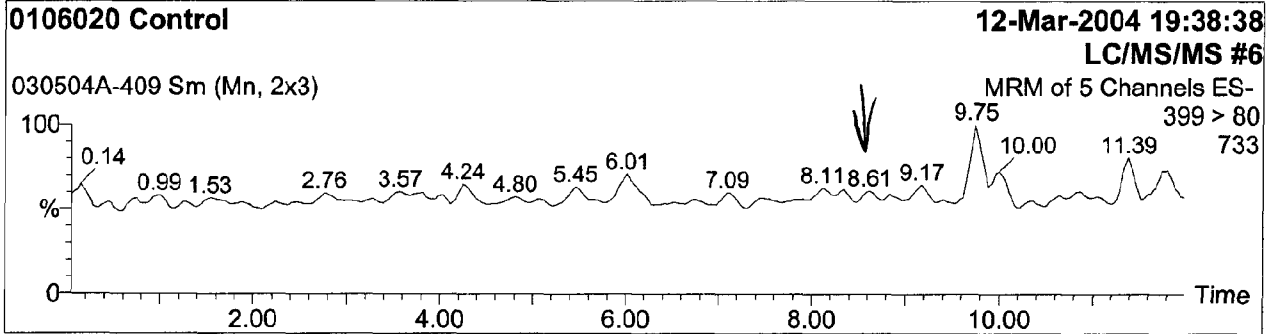
Study No.:L1958, Set No.:030504A, Ext.Date:03/05/04, Analyst:K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDE\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

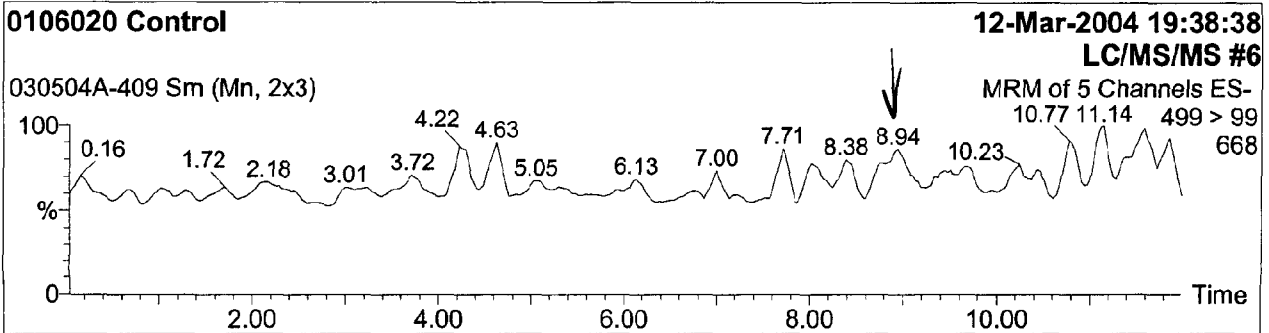
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-409
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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Quantify Sample Report

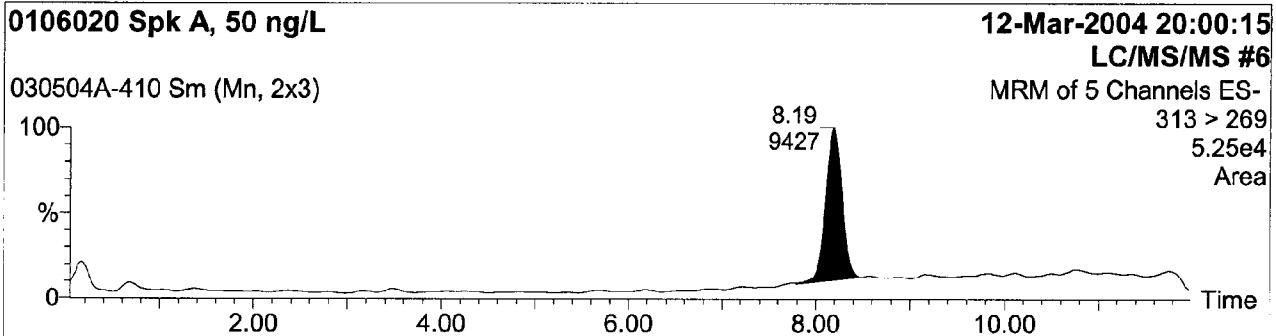
Study No.: L1958, Set No.: 030504A, Ext. Date: 03/05/04, Analyst: K. Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

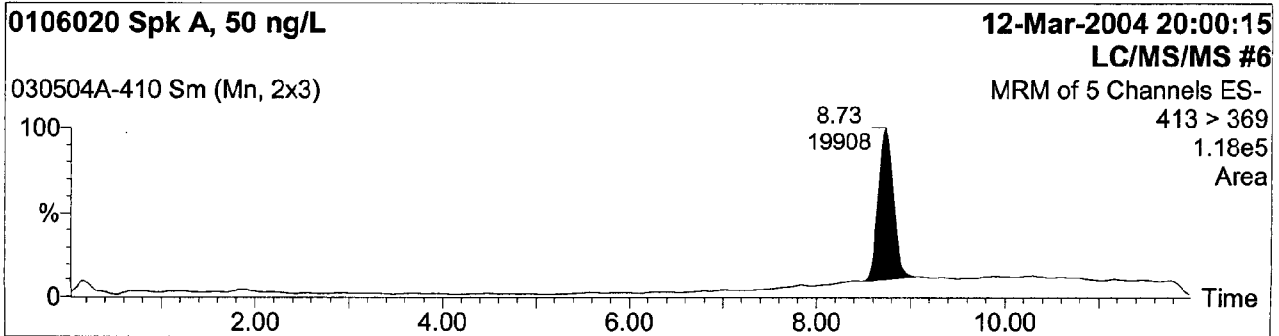
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-410
Text:

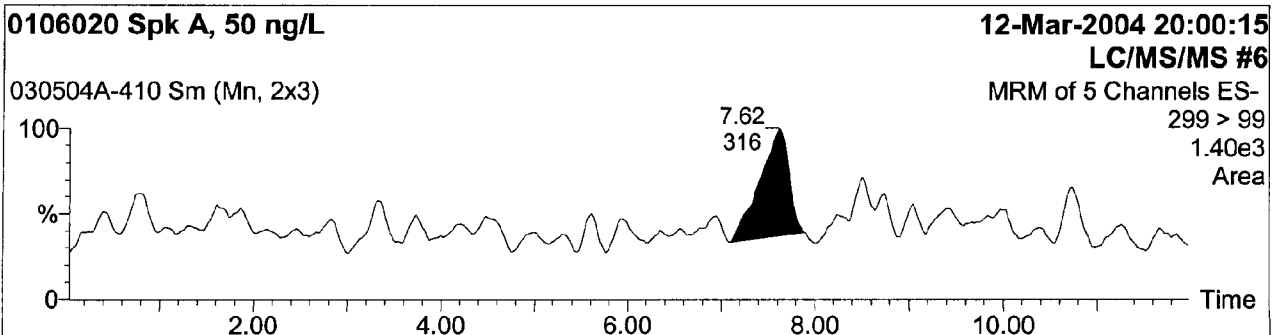
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



Oxygen Research, 3058 Research Drive, State College, PA 16801

Quantify Sample Report

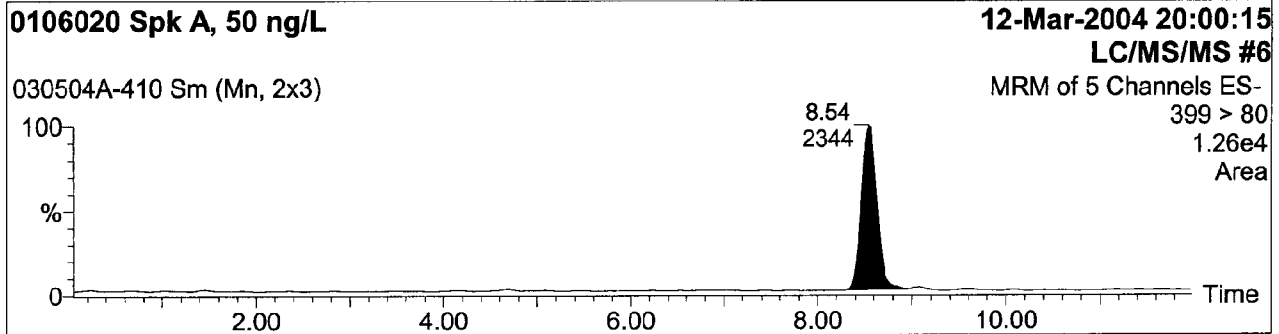
Study No.: L1958, Set No.: 030504A, Ext.Date: 03/05/04, Analyst: K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

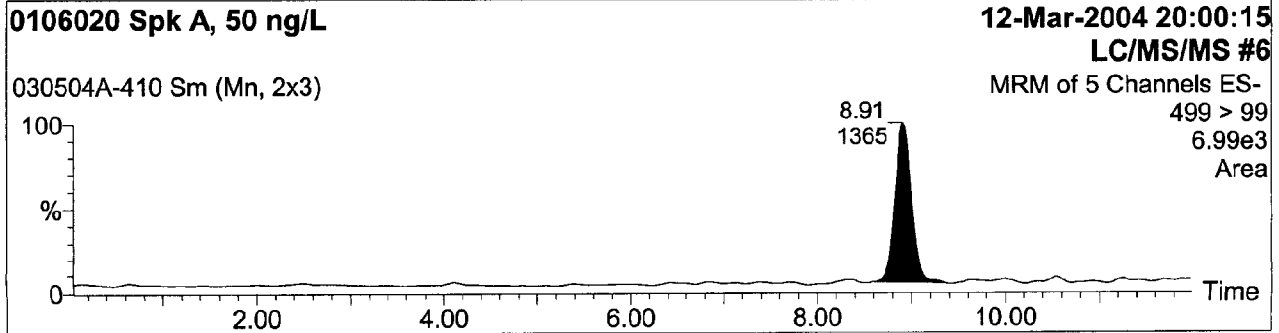
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-410
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



Oxygen Research, 3058 Research Drive, State College, PA 16801

Quantify Sample Report

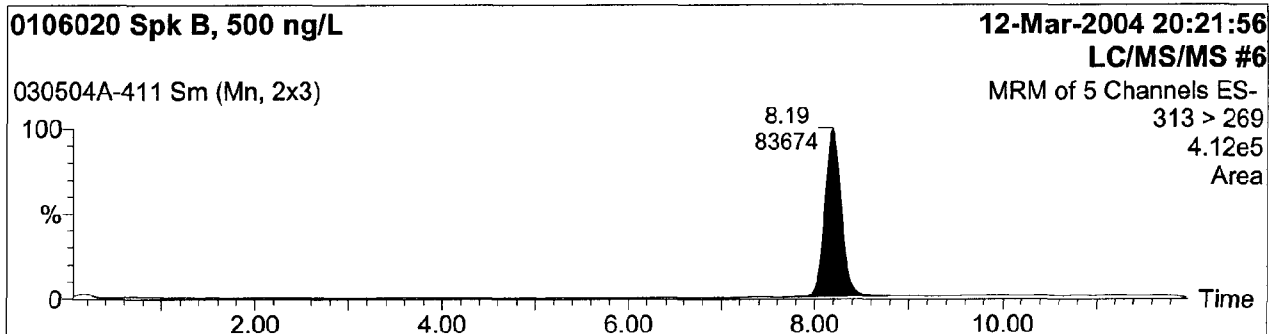
Study No.: L1958, Set No.: 030504A, Ext.Date: 03/05/04, Analyst: K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

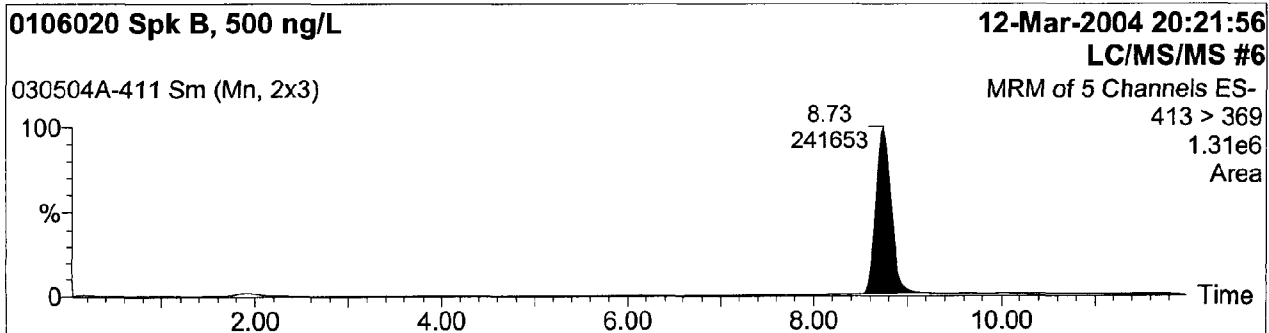
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-411
Text:

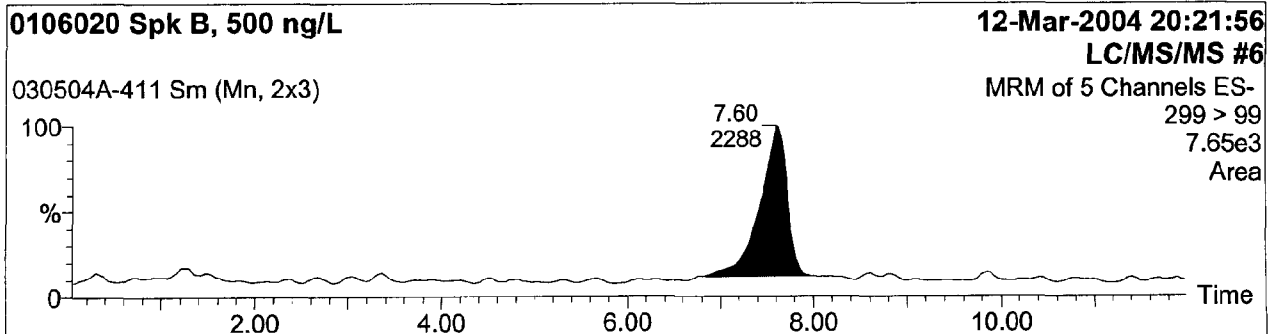
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



Exygen Research, 3058 Research Drive, State College, PA 16801

Quantify Sample Report

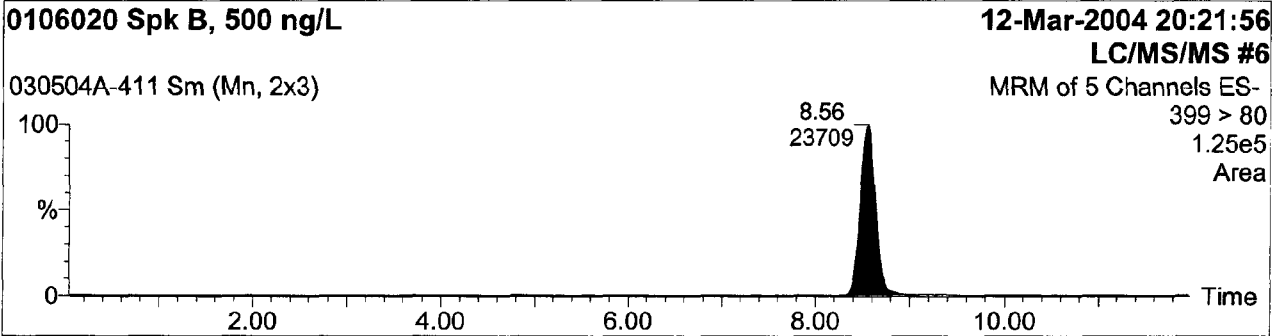
Study No.: L1958, Set No.: 030504A, Ext.Date: 03/05/04, Analyst: K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

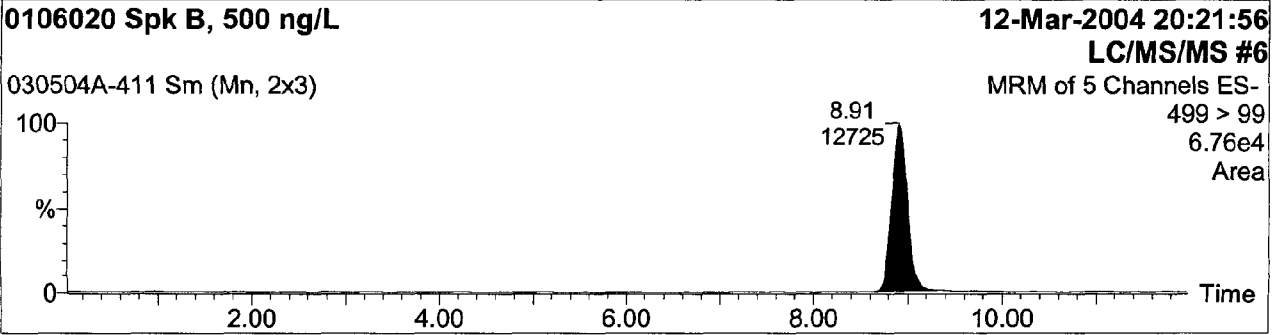
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-411
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



Oxygen Research, 3058 Research Drive, State College, PA 16801

Quantify Sample Report

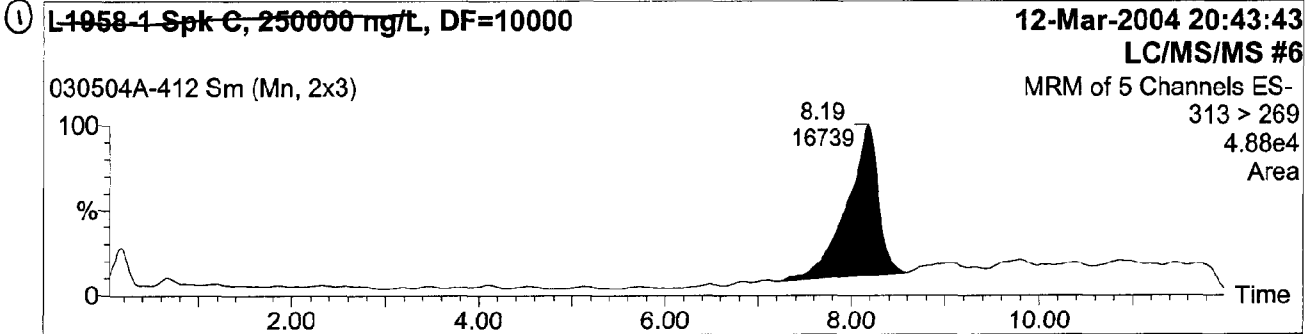
Study No.: L1958, Set No.: 030504A, Ext.Date: 03/05/04, Analyst: K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

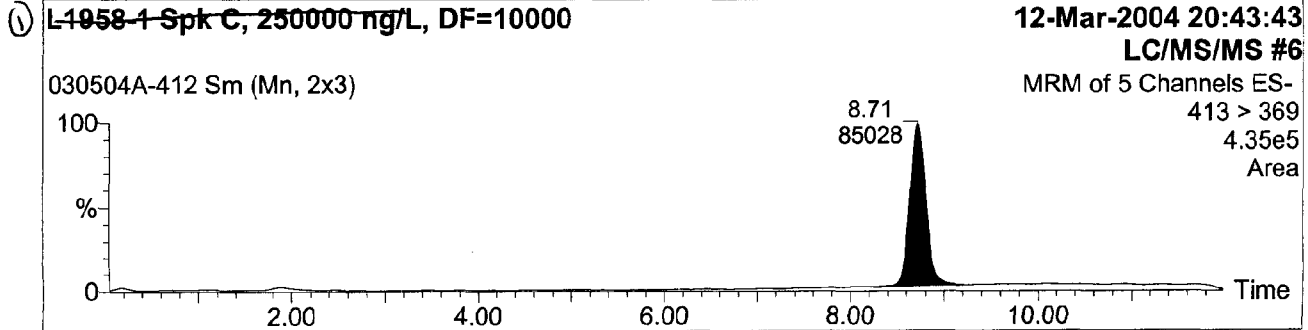
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-412
Text:

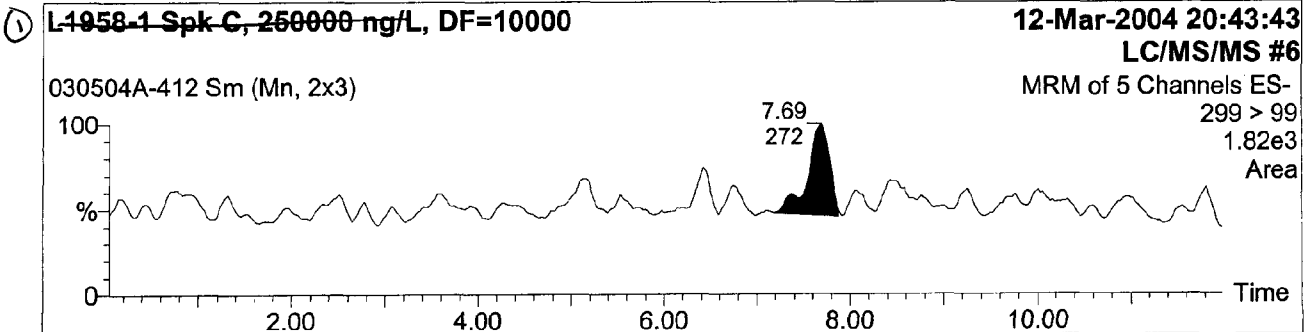
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



① L1958-17 Spk C, 500,000 ng/L @ bf 03/16/04

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Quantify Sample Report

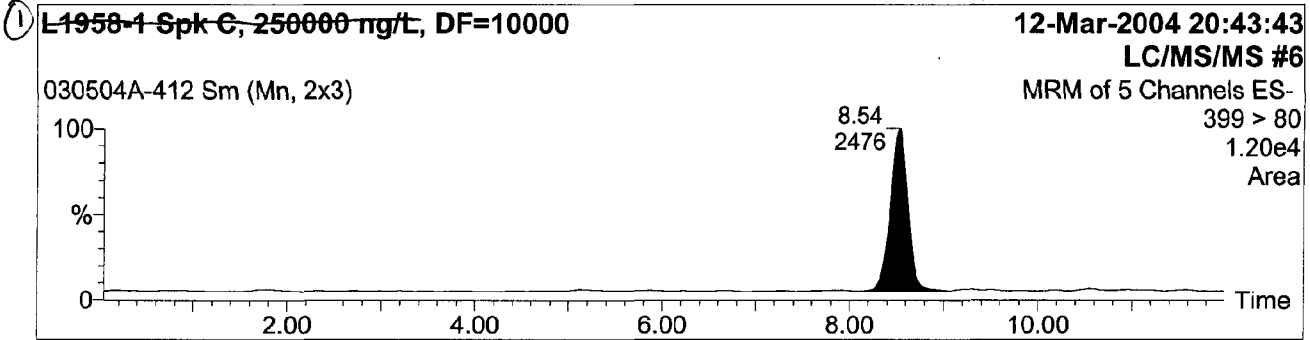
Study No.: L1958, Set No.: 030504A, Ext.Date: 03/05/04, Analyst: K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

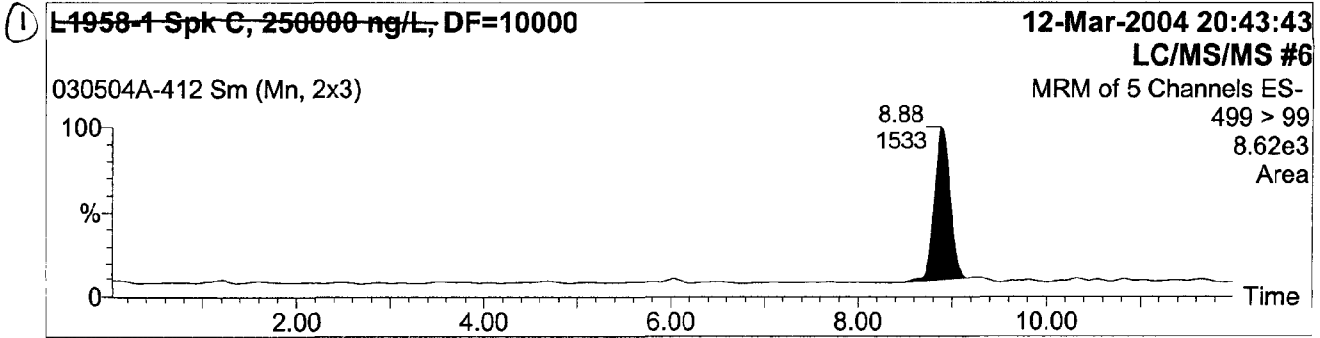
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-412
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



① L1958-175 Spk C, 500,000 ng/L @ re 03/16/04

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Quantify Sample Report

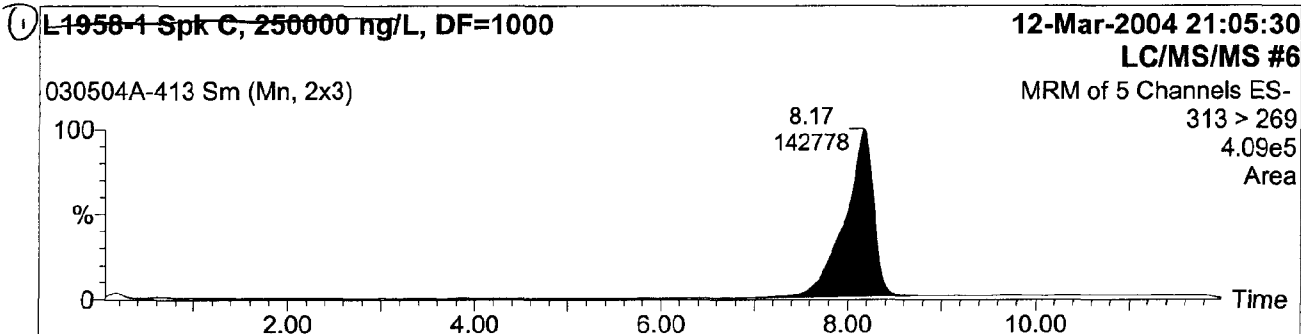
Study No.: L1958, Set No.: 030504A, Ext. Date: 03/05/04, Analyst: K. Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

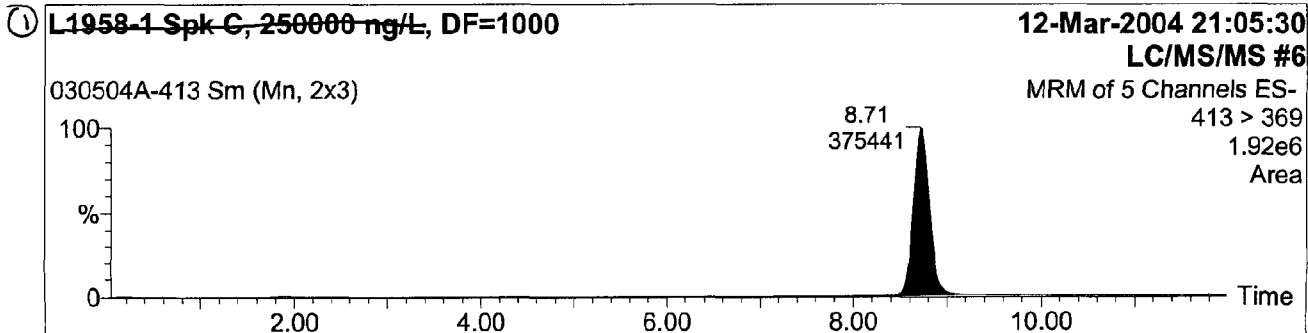
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-413
Text:

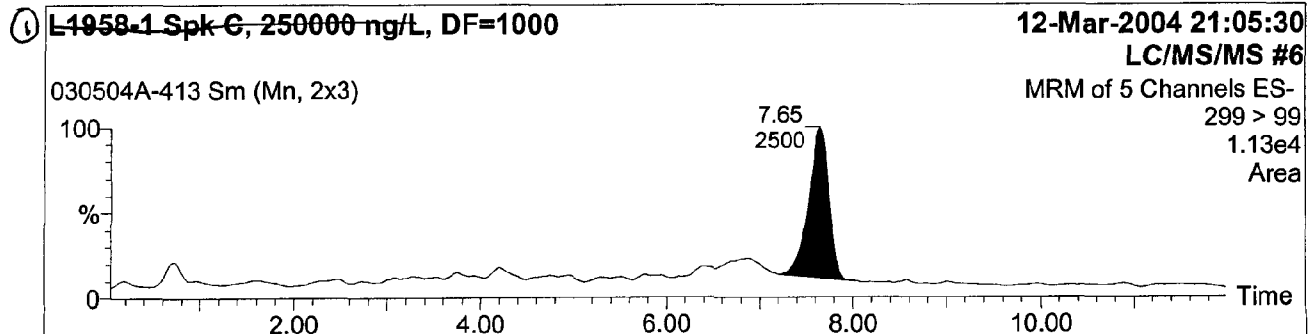
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



① L1958-17 Spk C, 500,000 ng/L @ KJ 03/16/04

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Quantify Sample Report

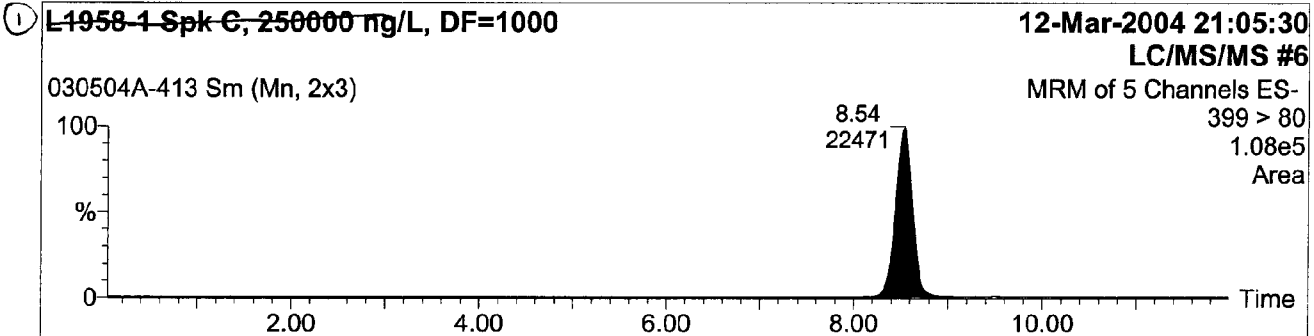
Study No.: L1958, Set No.: 030504A, Ext. Date: 03/05/04, Analyst: K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

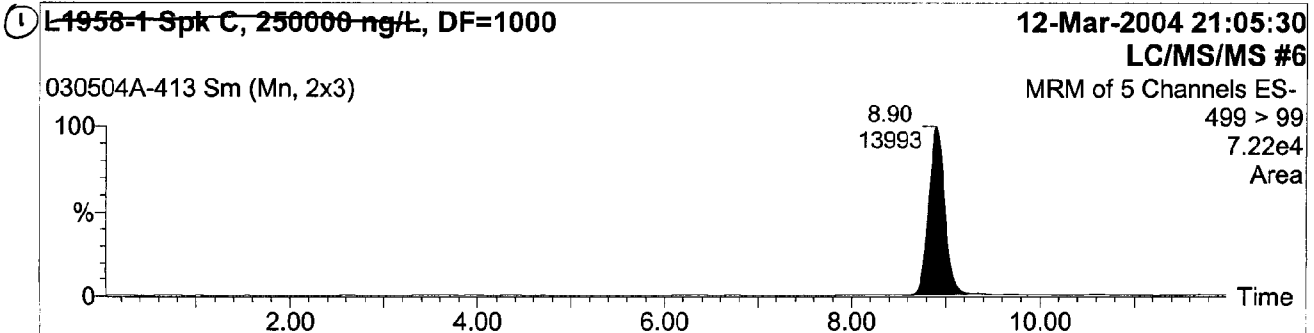
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-413
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



① L1958-17 Spk C, 500,000 ng/L @ 03/16/04

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Quantify Sample Report

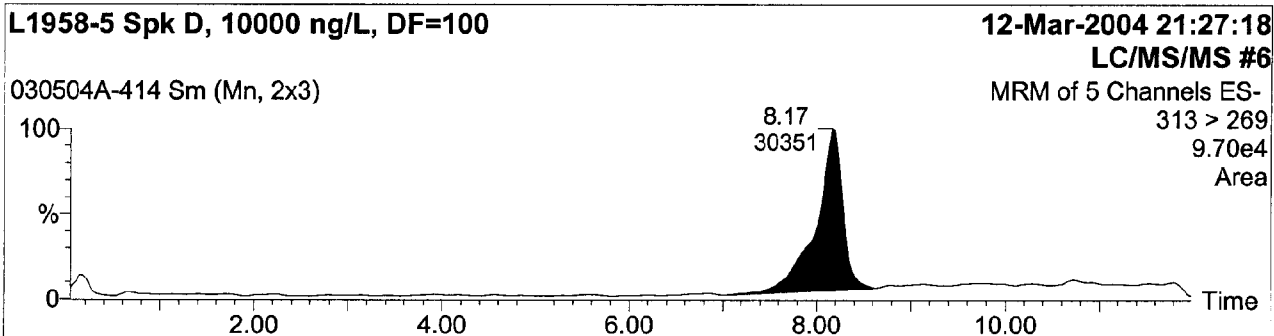
Study No.: L1958, Set No.: 030504A, Ext.Date: 03/05/04, Analyst: K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

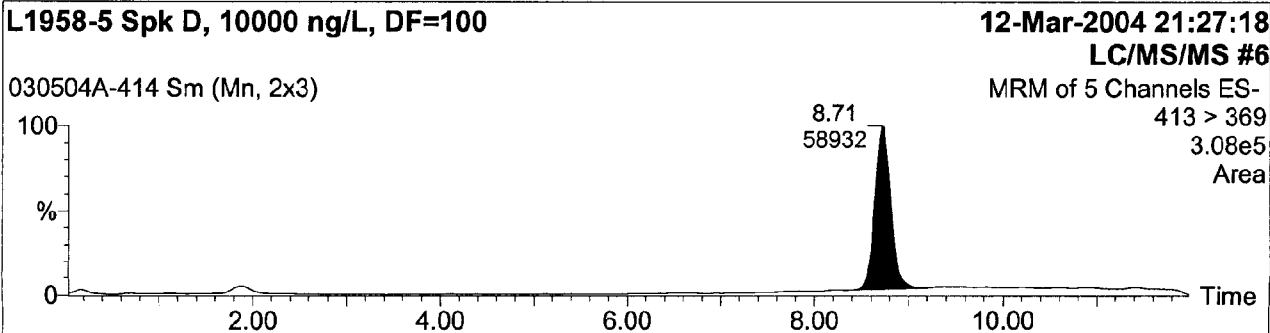
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-414
Text:

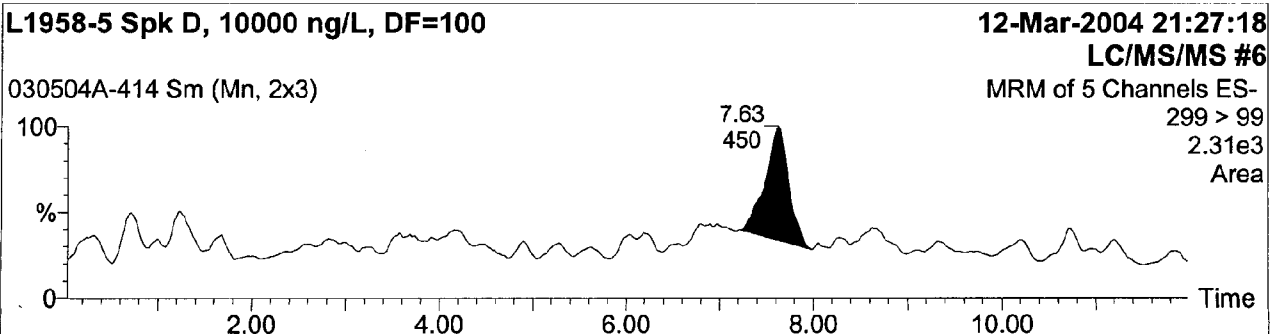
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

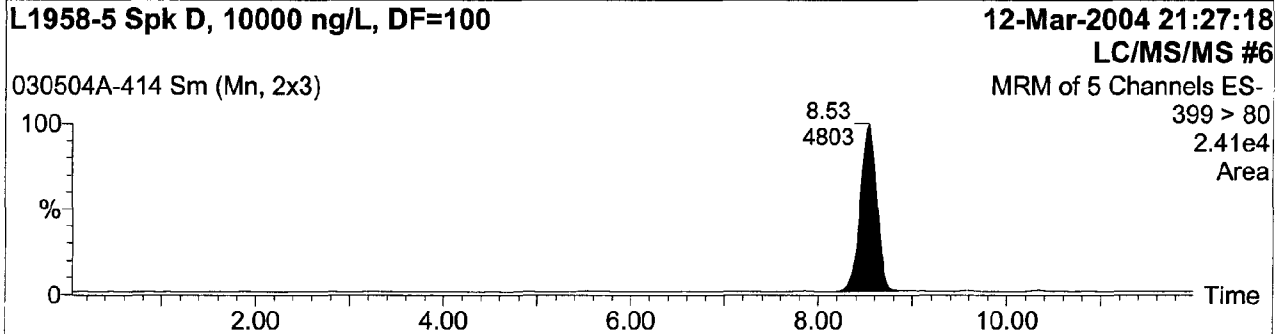
Study No.: L1958, Set No.: 030504A, Ext. Date: 03/05/04, Analyst: K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

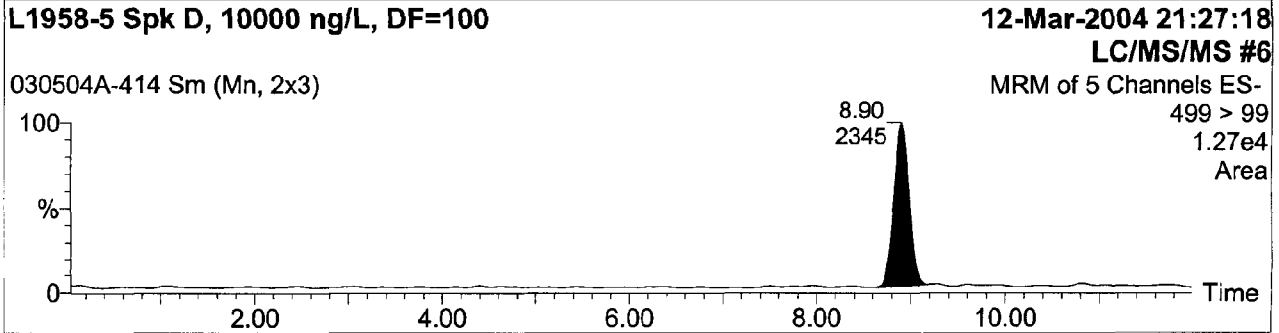
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-414
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



Oxygen Research, 3058 Research Drive, State College, PA 16801

Quantify Sample Report

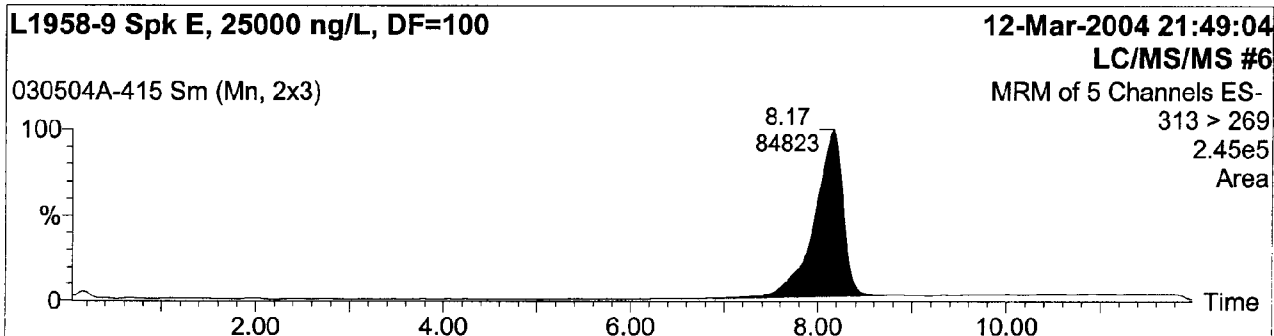
Study No.: L1958, Set No.: 030504A, Ext.Date: 03/05/04, Analyst: K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

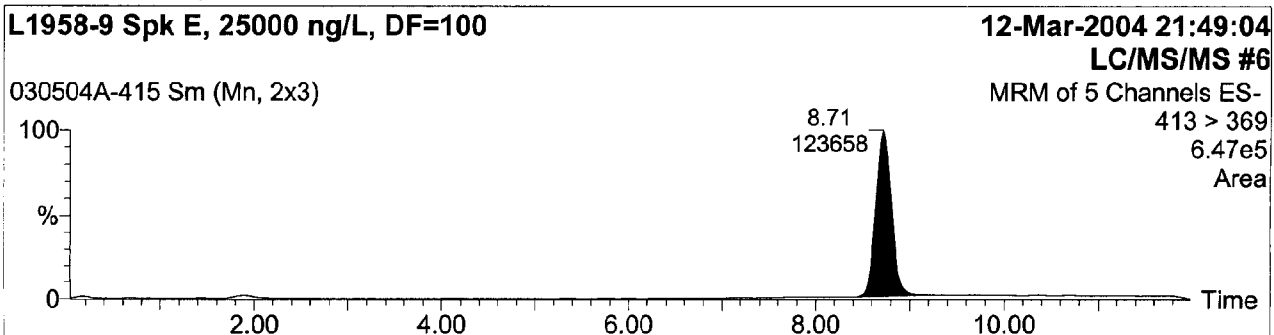
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-415
Text:

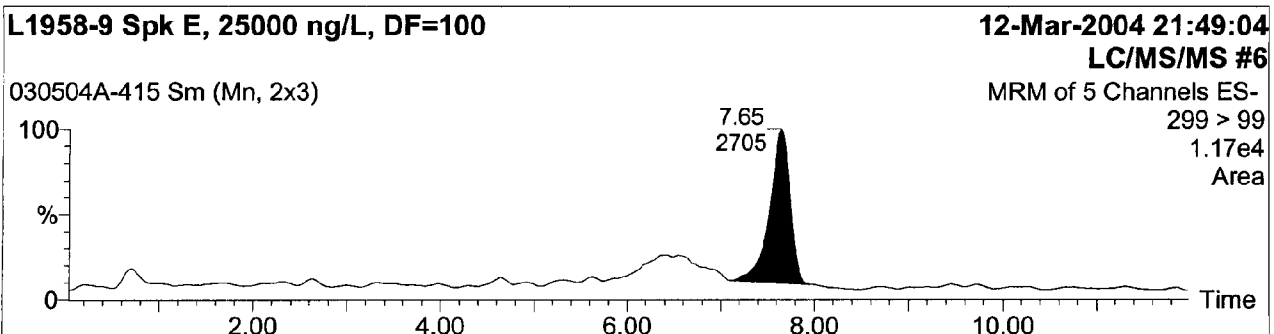
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



Oxygen Research, 3058 Research Drive, State College, PA 16801

Quantify Sample Report

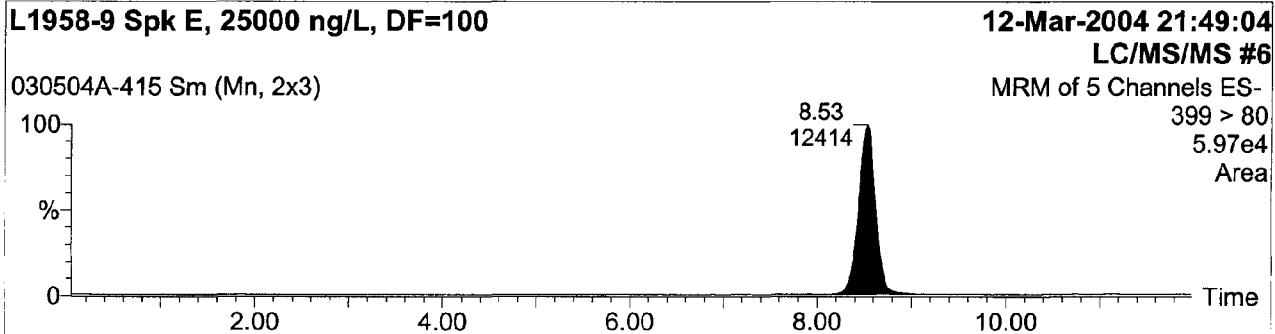
Study No.: L1958, Set No.: 030504A, Ext.Date: 03/05/04, Analyst: K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

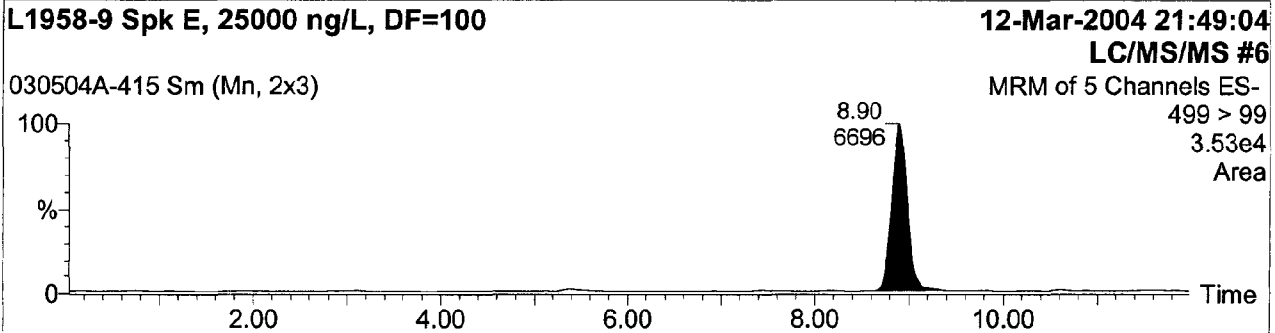
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-415
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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Quantify Sample Report

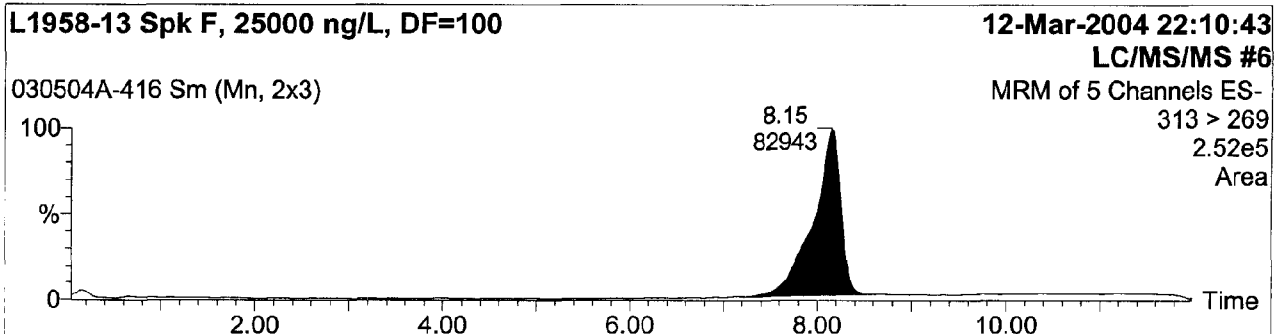
Study No.: L1958, Set No.: 030504A, Ext.Date: 03/05/04, Analyst: K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

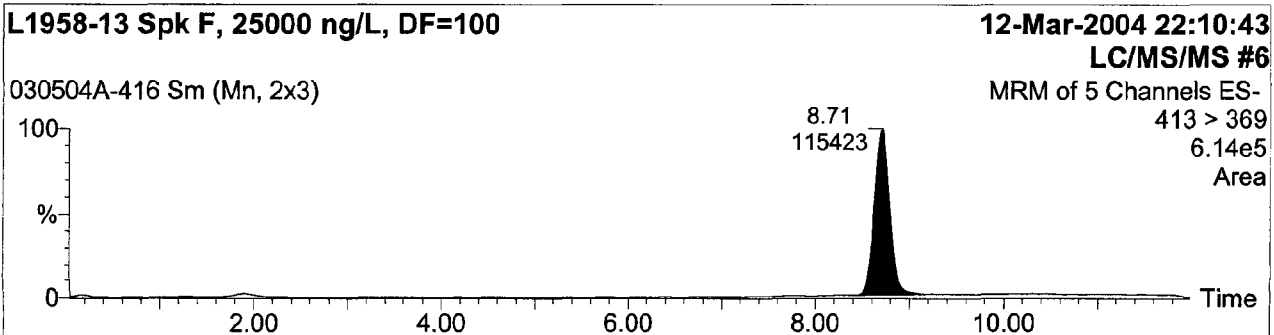
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-416
Text:

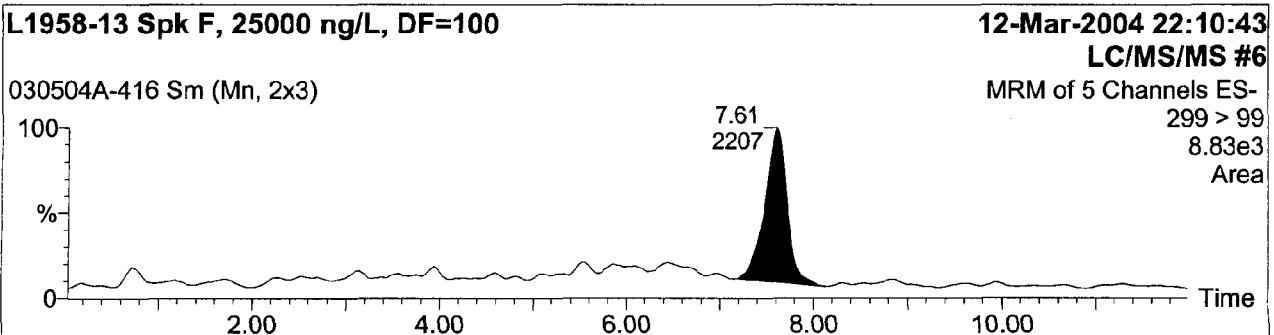
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



Oxygen Research, 3058 Research Drive, State College, PA 16801

Quantify Sample Report

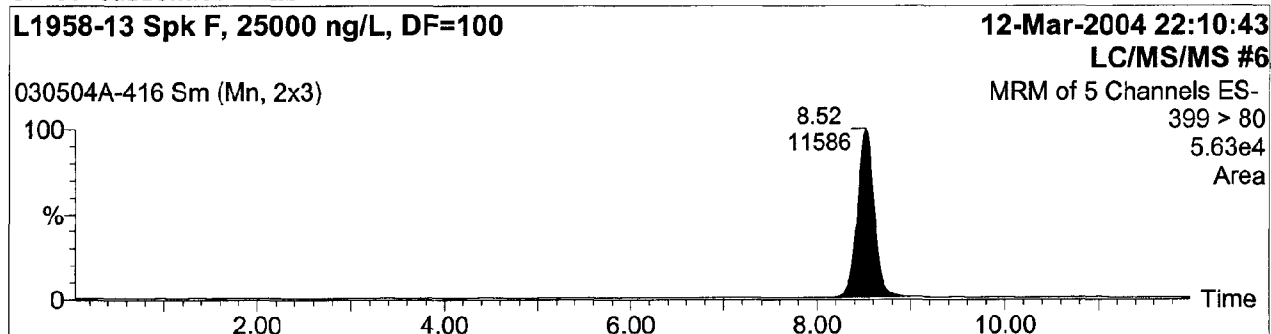
Study No.:L1958, Set No.:030504A, Ext.Date:03/05/04, Analyst:K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

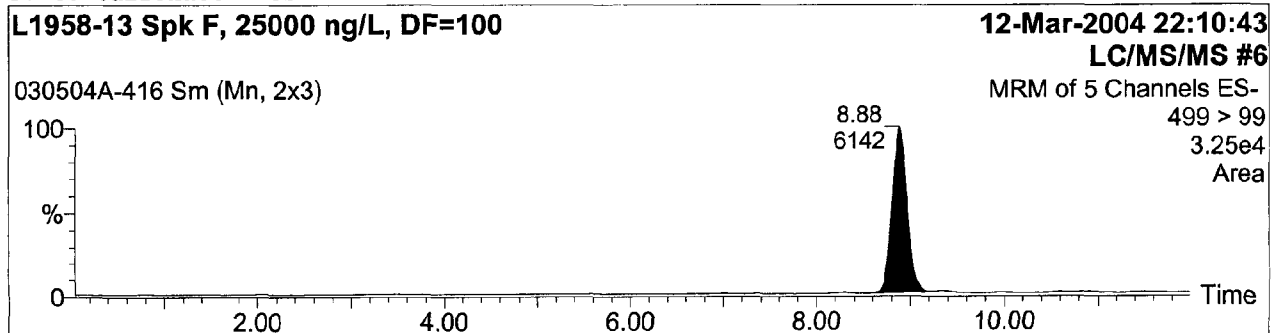
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-416
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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Quantify Sample Report

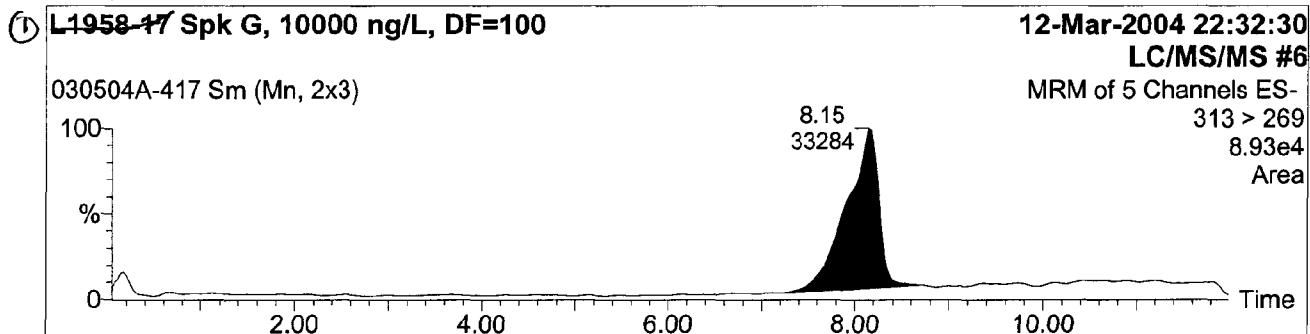
Study No.: L1958, Set No.: 030504A, Ext.Date: 03/05/04, Analyst: K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

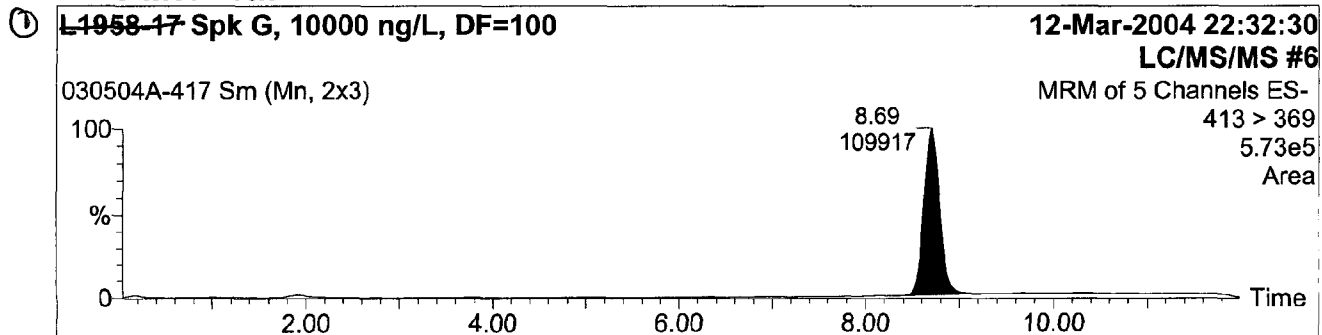
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-417
Text:

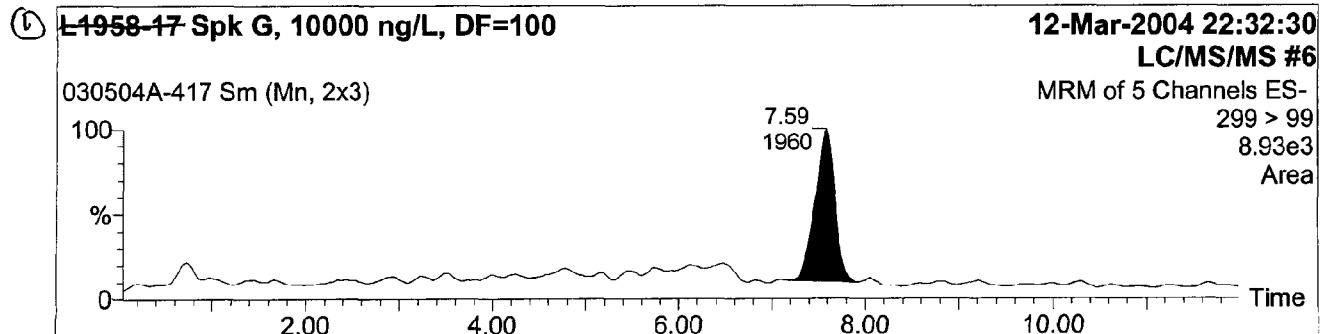
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



L1958-1 @ pf 03/16/04

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Quantify Sample Report

Study No.: L1958, Set No.: 030504A, Ext.Date: 03/05/04, Analyst: K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-417
Text:

4: C6 Sulfonate PFHS

① L1958-17 Spk G, 10000 ng/L, DF=100

12-Mar-2004 22:32:30

LC/MS/MS #6

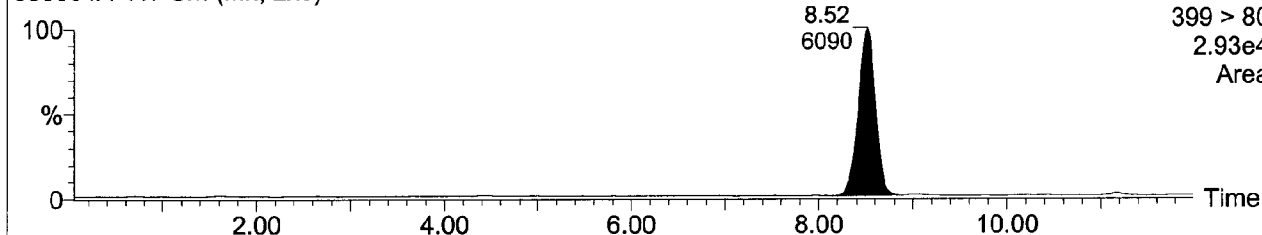
MRM of 5 Channels ES-

399 > 80

2.93e4

Area

030504A-417 Sm (Mn, 2x3)



5: C8 Sulfonate PFOS

① L1958-17 Spk G, 10000 ng/L, DF=100

12-Mar-2004 22:32:30

LC/MS/MS #6

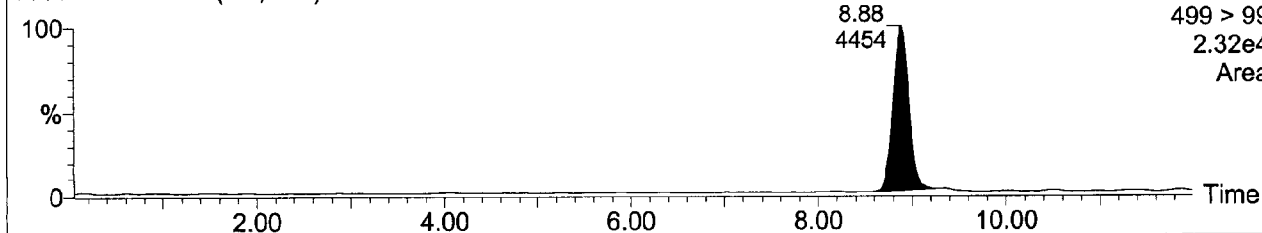
MRM of 5 Channels ES-

499 > 99

2.32e4

Area

030504A-417 Sm (Mn, 2x3)



① L1958-1 ② K 03/16/04

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Quantify Sample Report

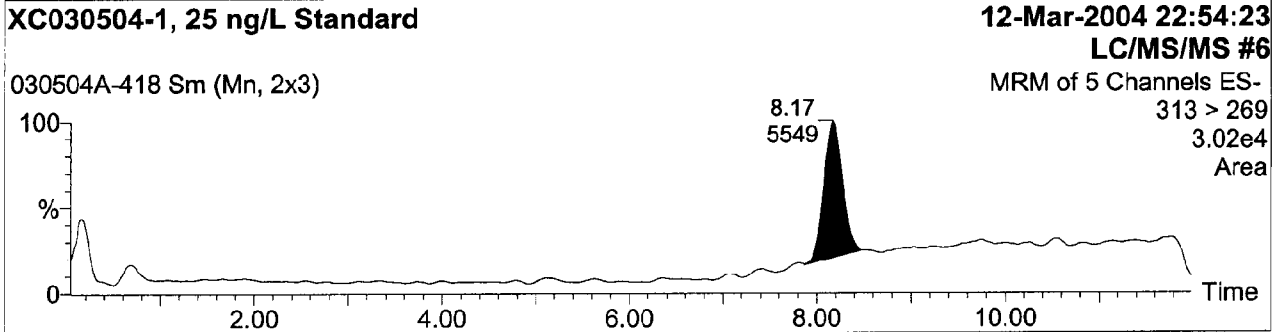
Study No.: L1958, Set No.: 030504A, Ext.Date: 03/05/04, Analyst: K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

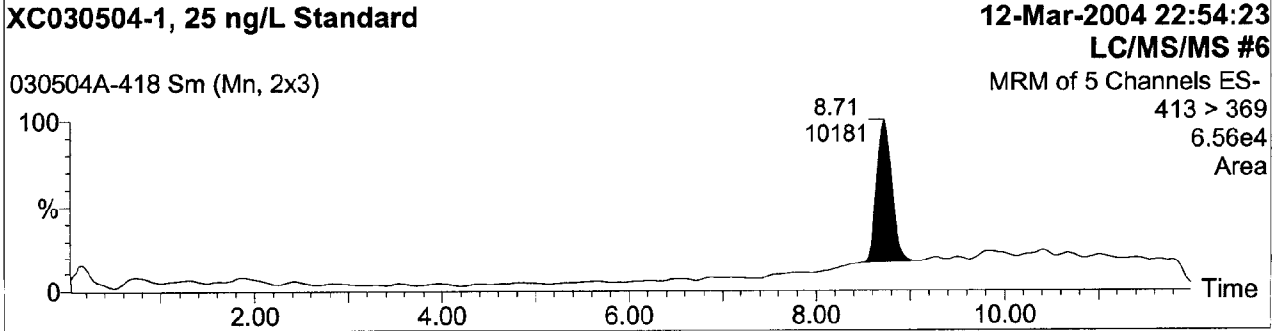
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-418
Text:

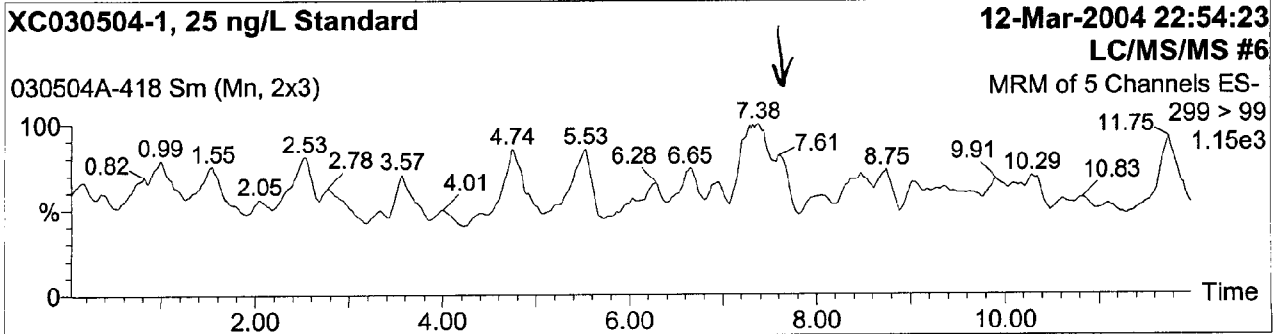
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

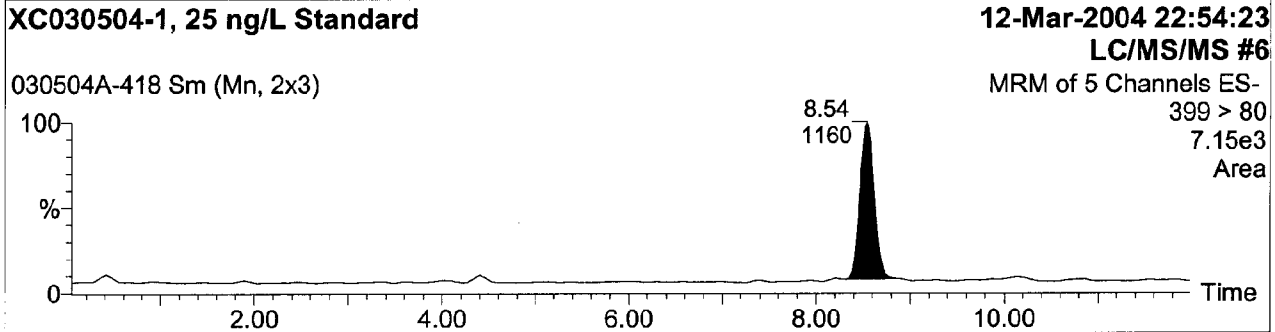
Study No.:L1958, Set No.:030504A, Ext.Date:03/05/04, Analyst:K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

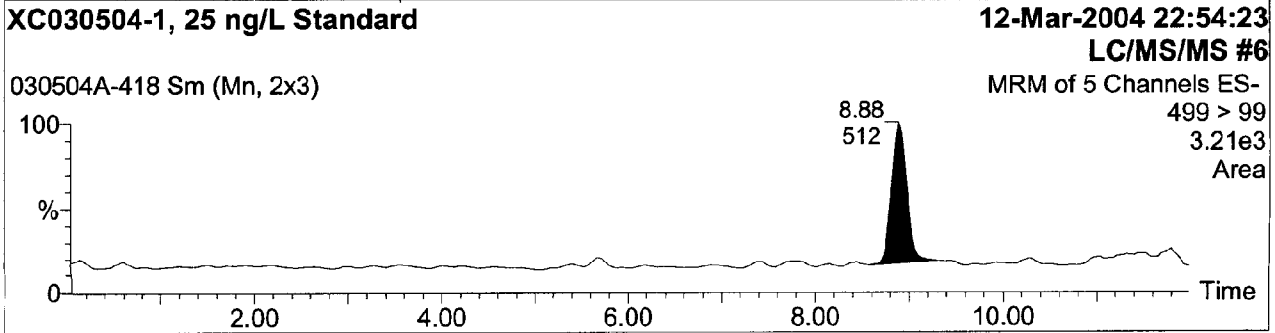
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-418
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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Quantify Sample Report

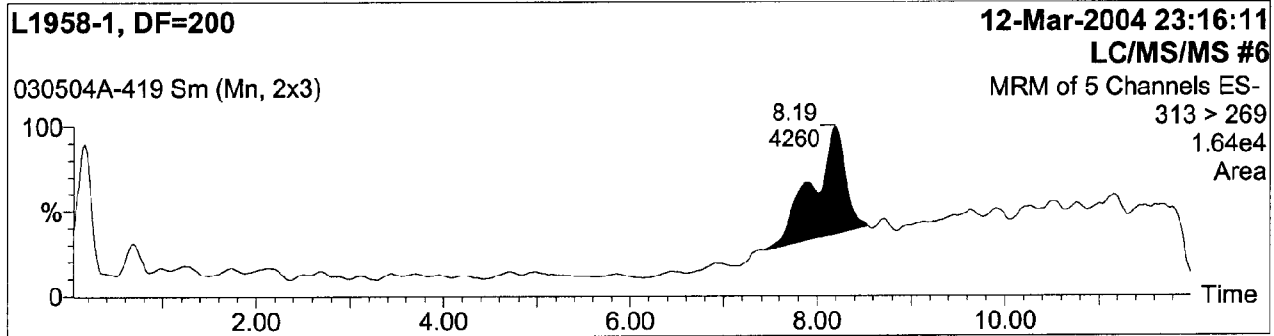
Study No.:L1958, Set No.:030504A, Ext.Date:03/05/04, Analyst:K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

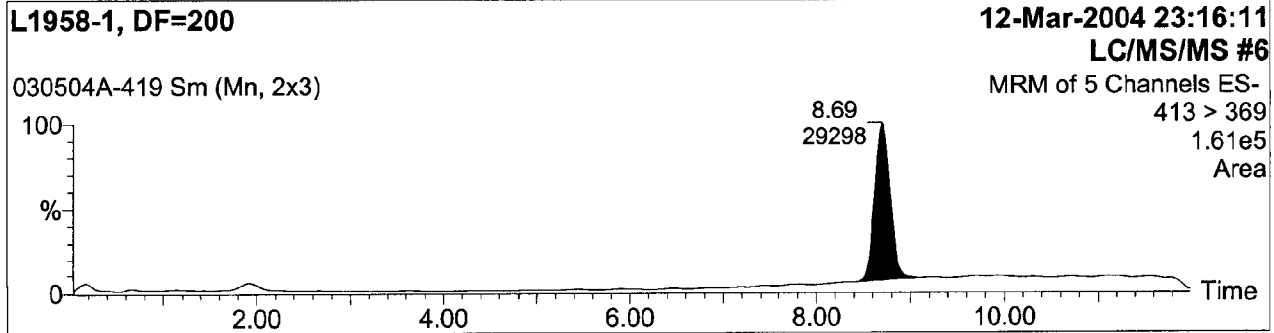
Printed: Tue Mar 16 07:26:27 2004

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Text:

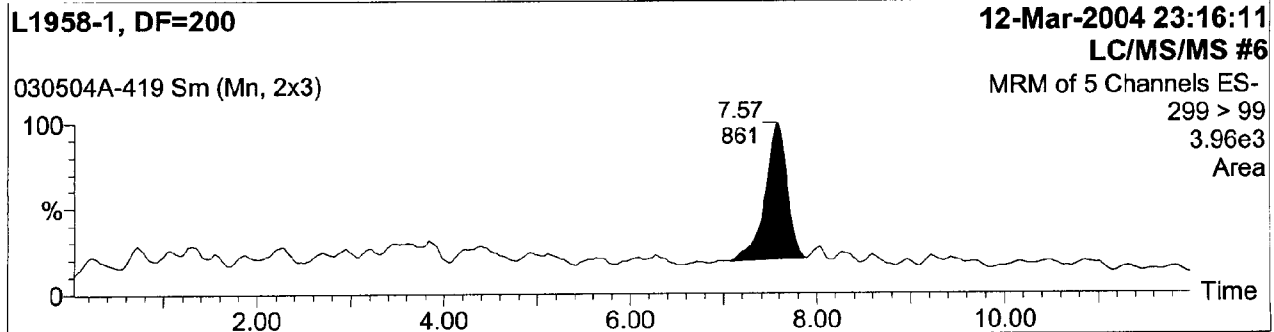
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

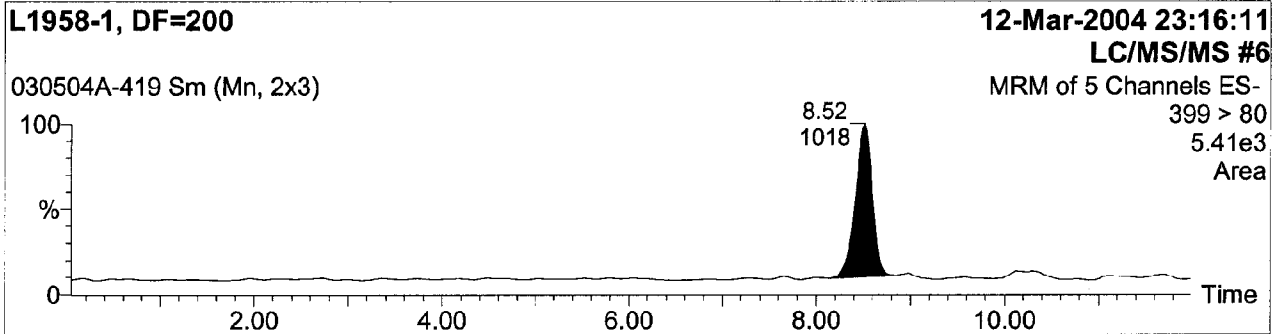
Study No.: L1958, Set No.: 030504A, Ext. Date: 03/05/04, Analyst: K. Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
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Job Code:

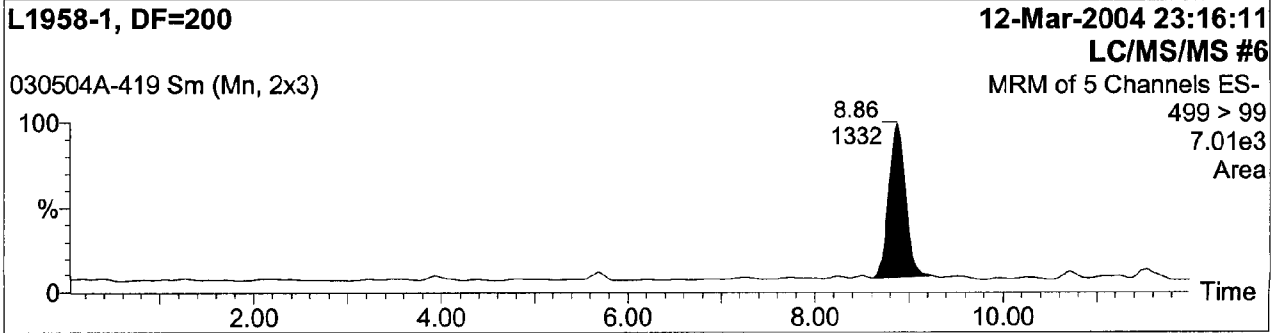
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-419
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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Quantify Sample Report

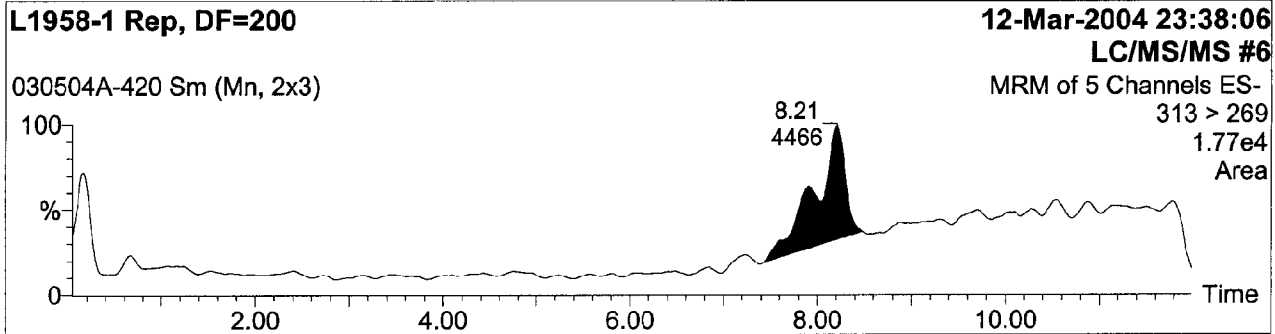
Study No.: L1958, Set No.: 030504A, Ext.Date: 03/05/04, Analyst: K.Risha

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Last modified: Mon Mar 15 13:25:12 2004
Job Code:

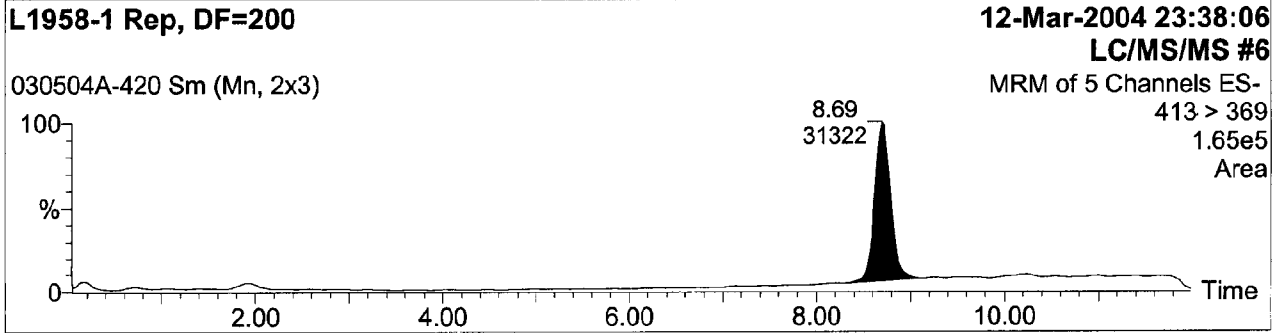
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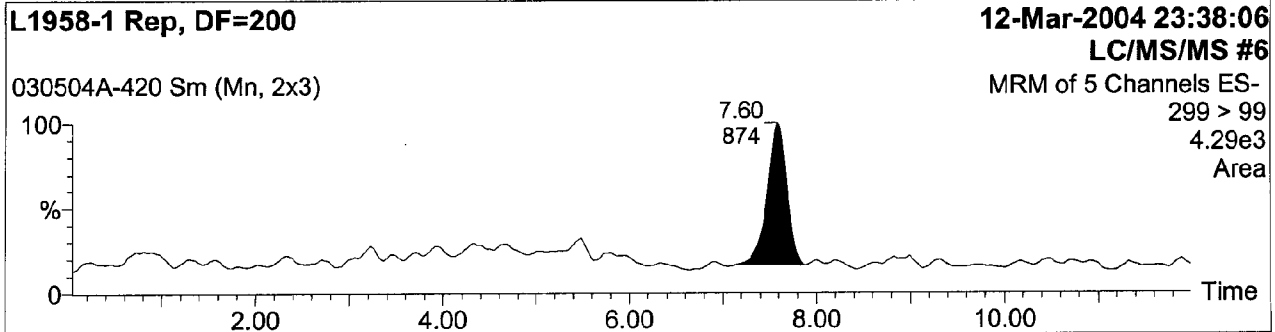
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

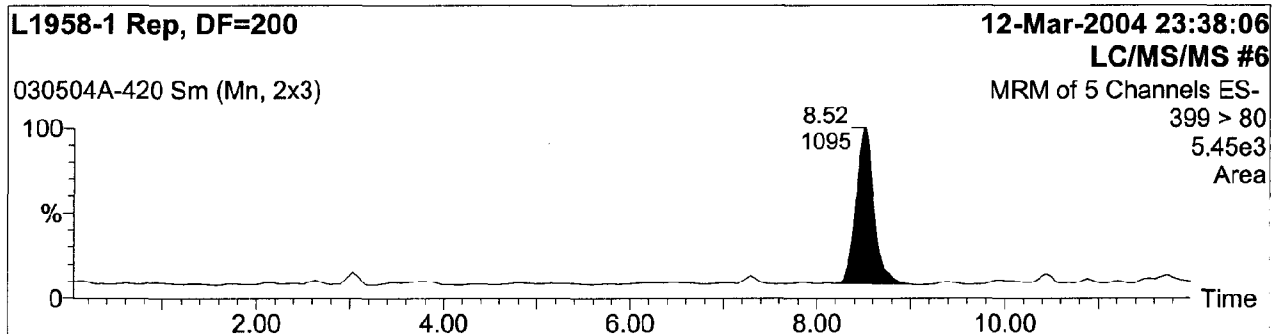
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Job Code:

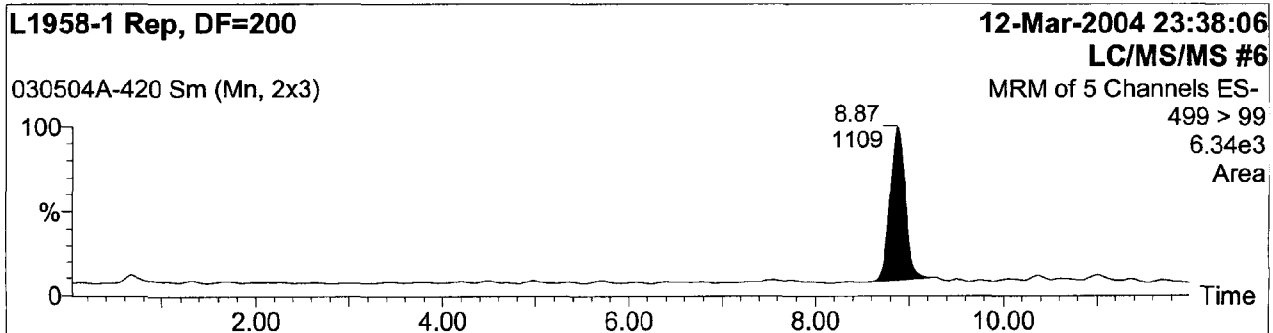
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Name: 030504A-420
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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Quantify Sample Report

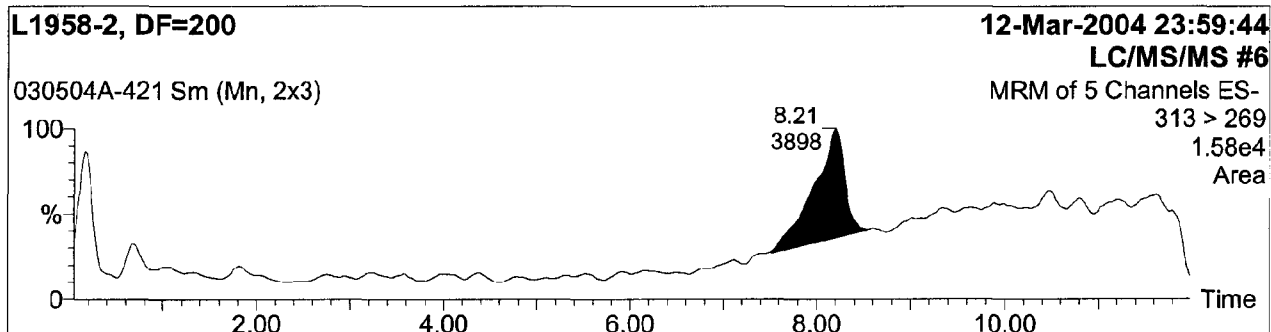
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Job Code:

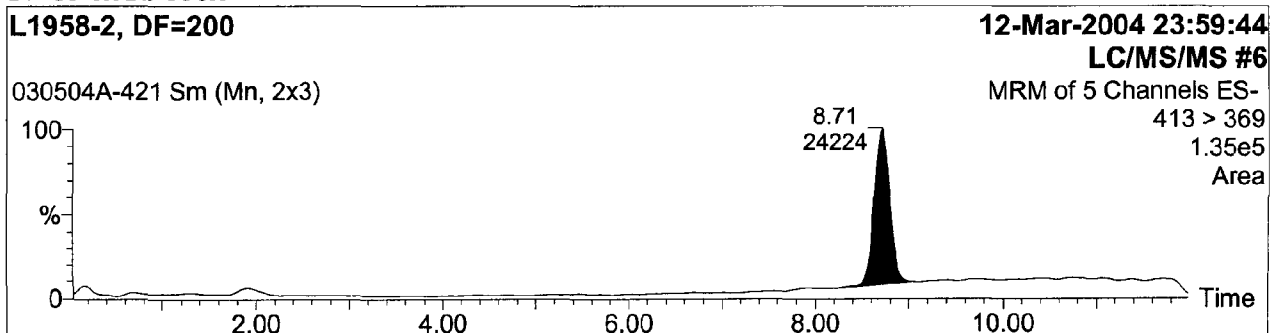
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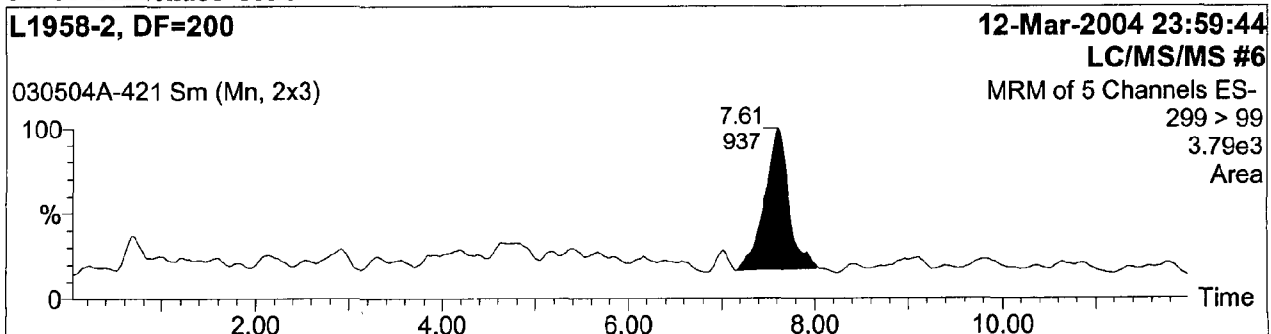
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

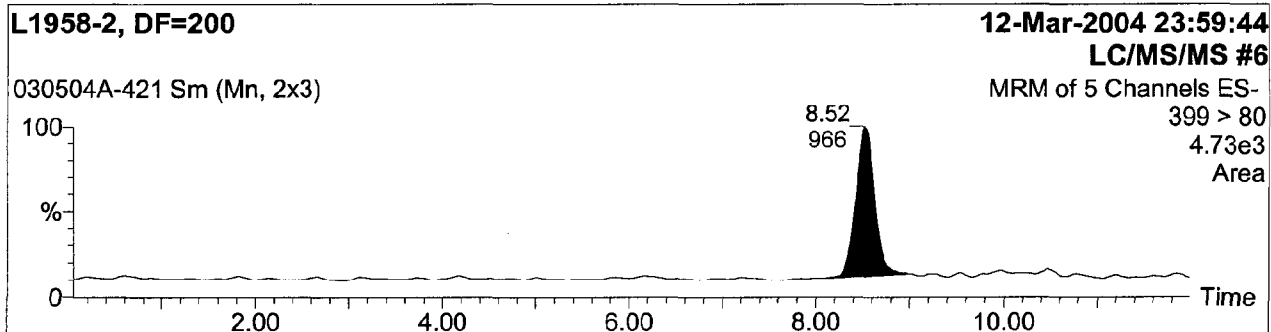
Study No.:L1958, Set No.:030504A, Ext.Date:03/05/04, Analyst:K.Risha

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Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

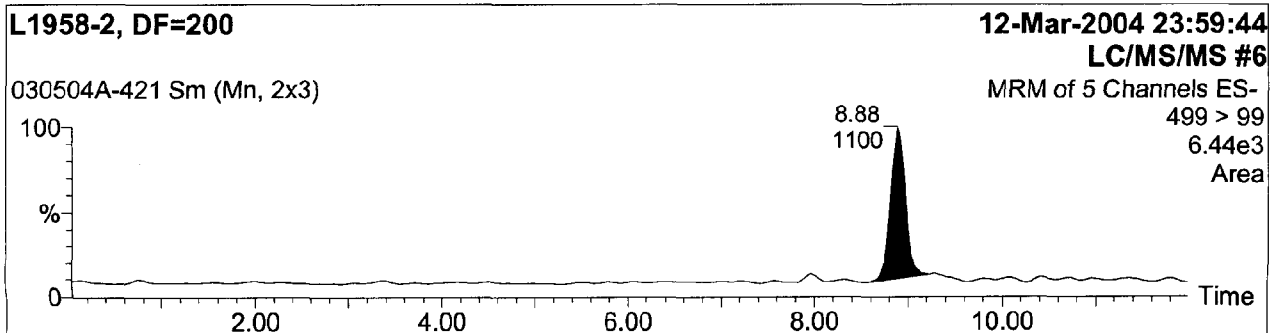
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Name: 030504A-421
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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Quantify Sample Report

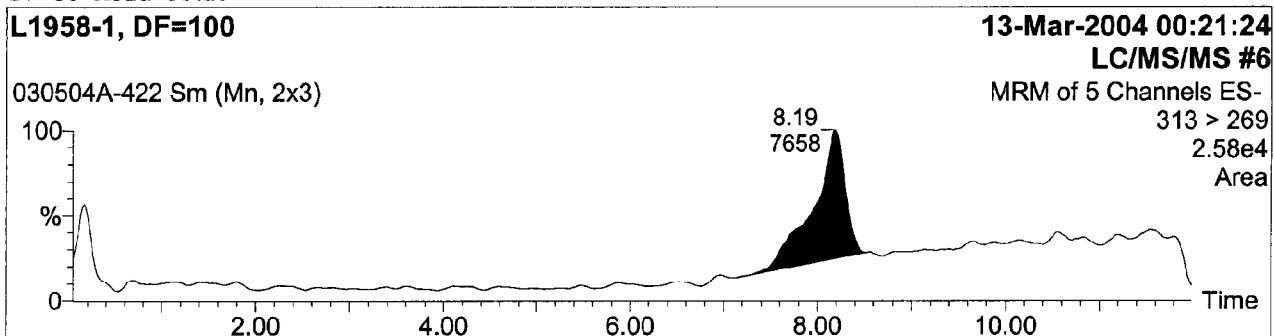
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Last modified: Mon Mar 15 13:22:46 2004
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Job Code:

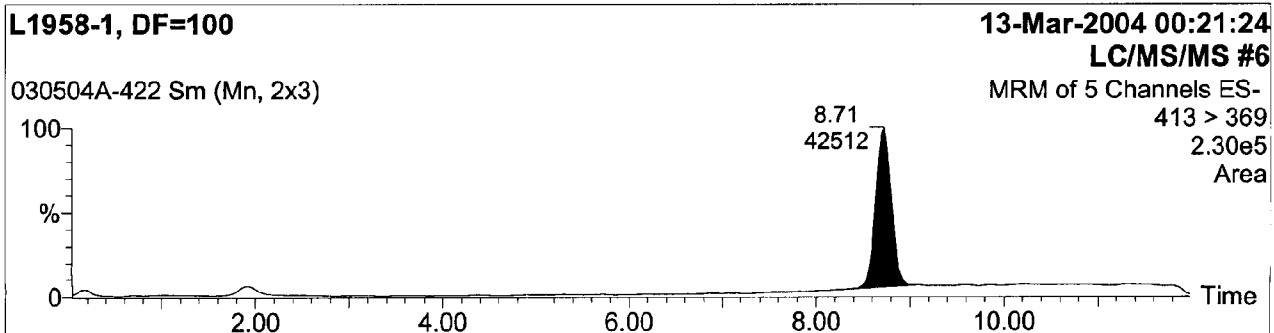
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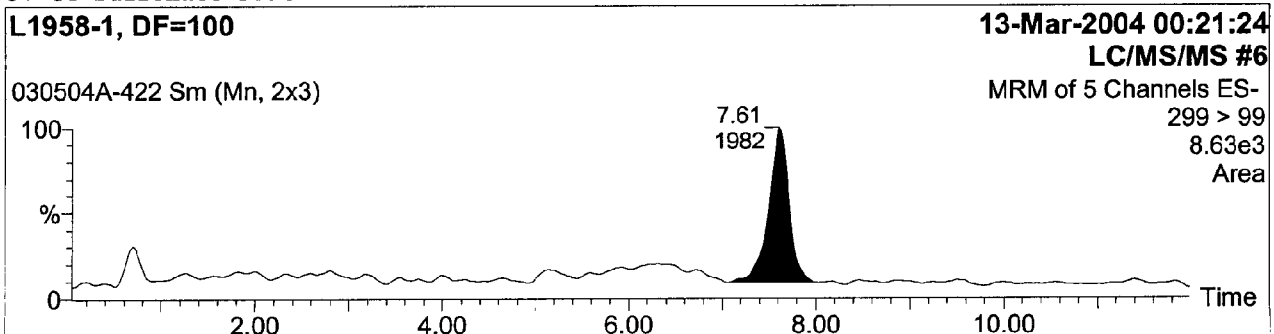
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

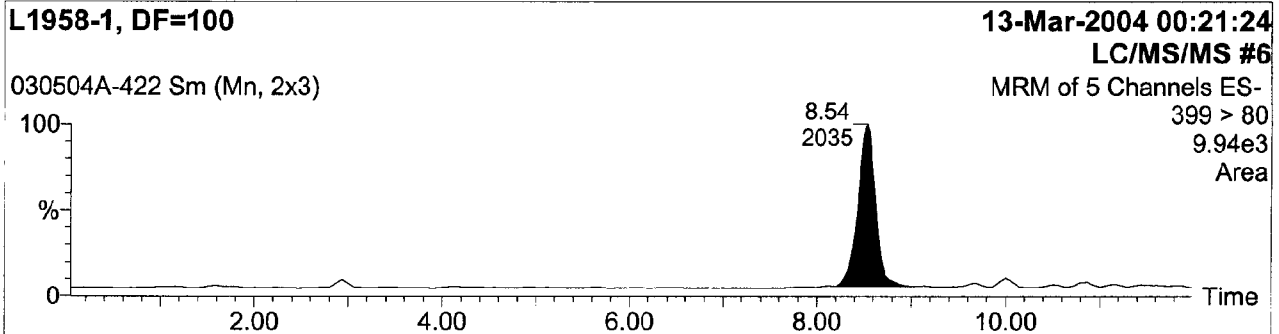
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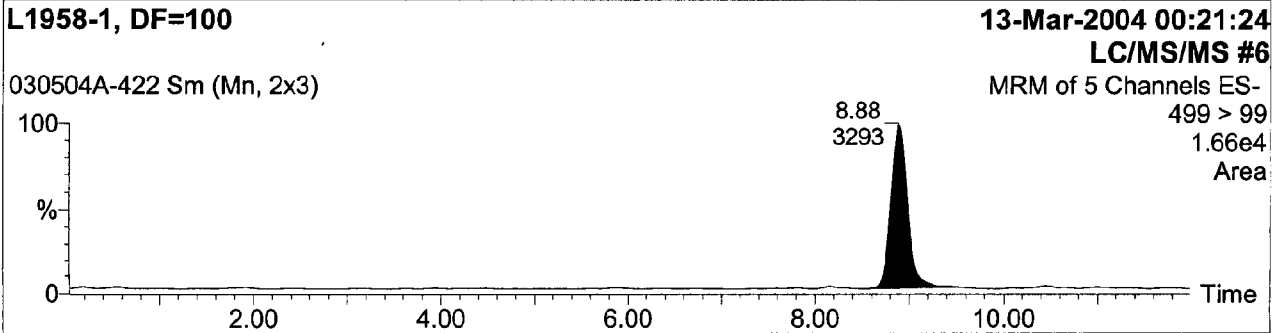
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Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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Quantify Sample Report

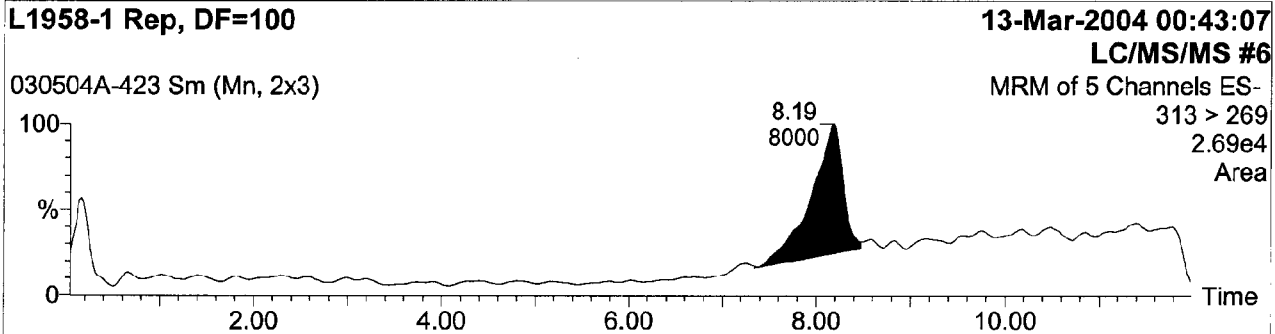
Study No.: L1958, Set No.: 030504A, Ext.Date: 03/05/04, Analyst: K.Risha

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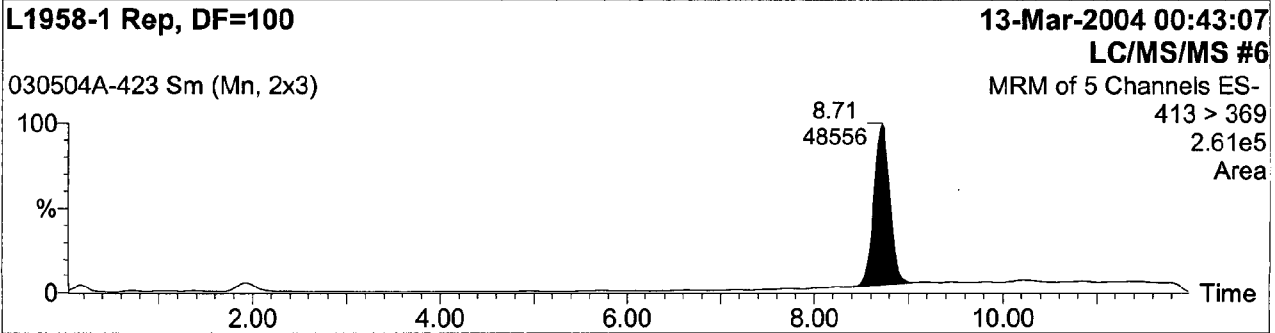
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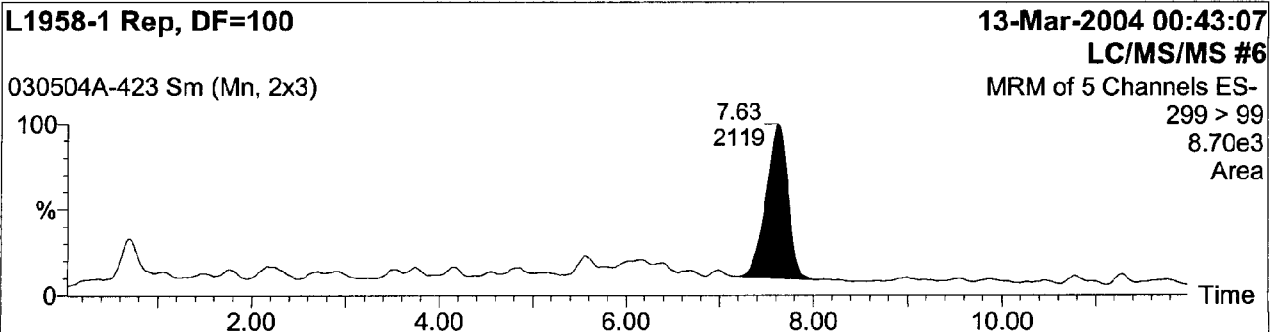
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

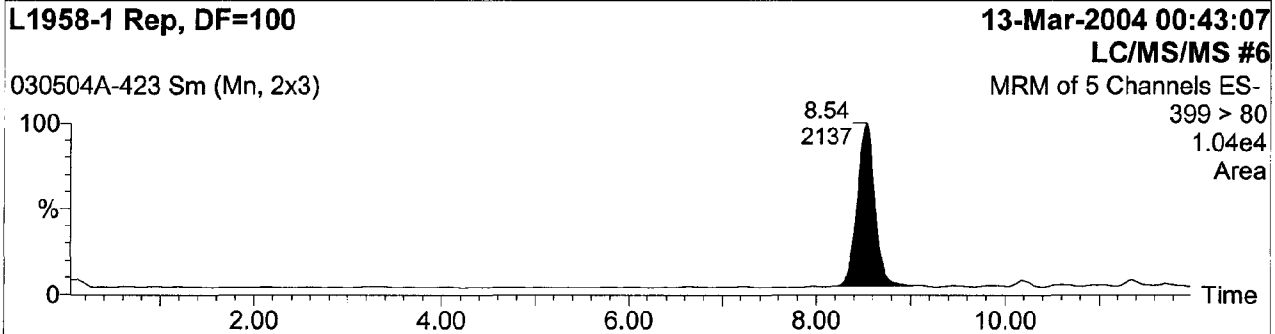
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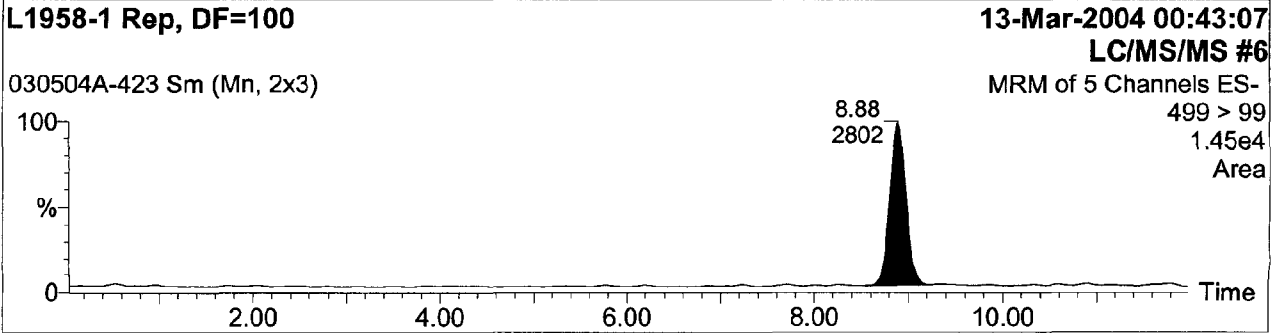
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Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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Quantify Sample Report

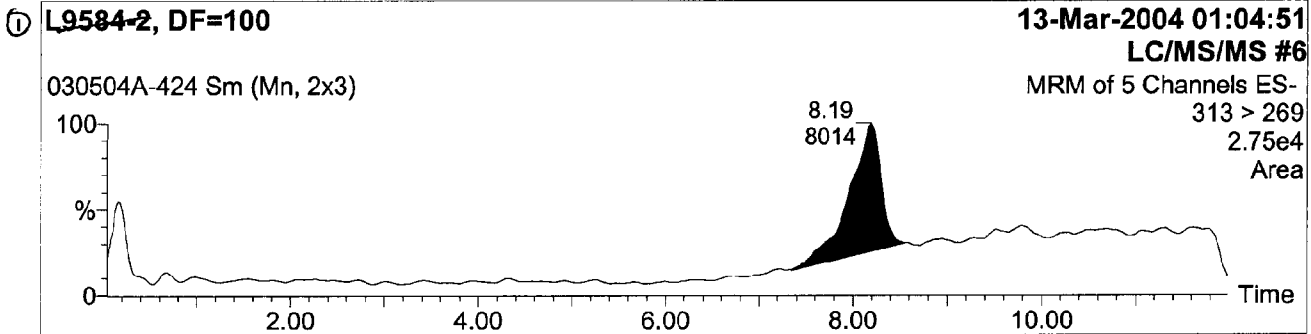
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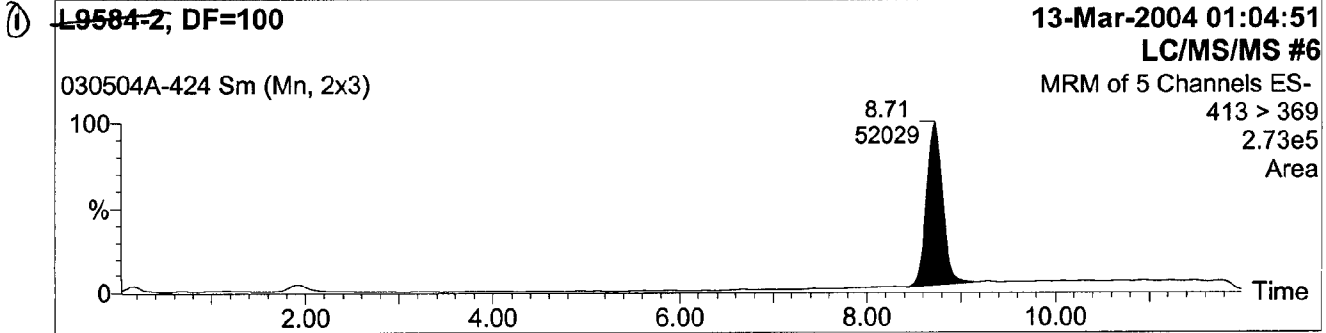
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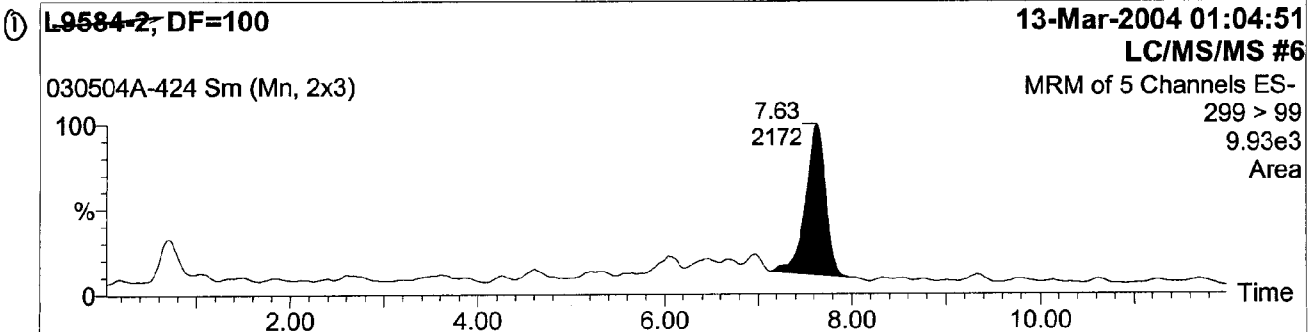
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



DL958-2 @ KR 03/16/04

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Quantify Sample Report

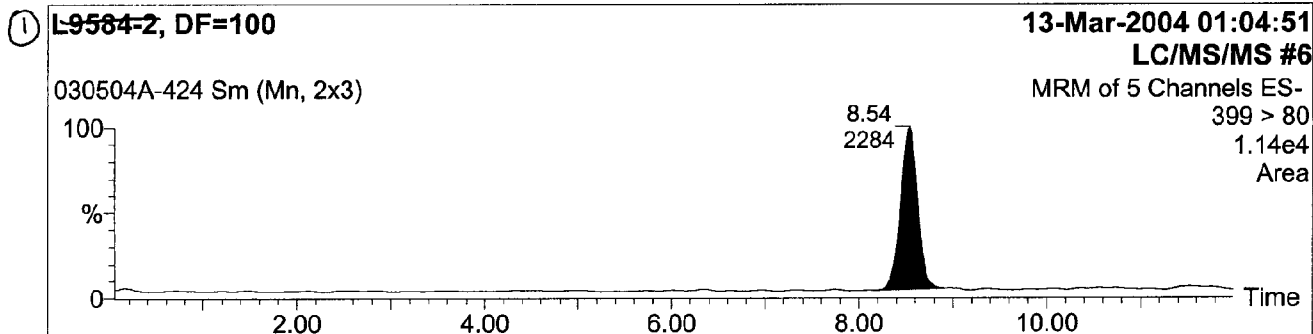
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Job Code:

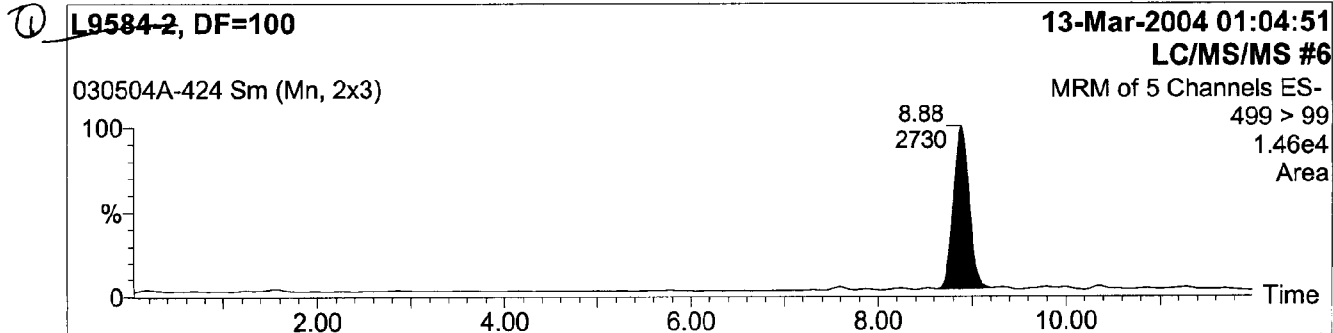
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Name: 030504A-424
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



① L1958-2 @ KR 03/16/04

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Quantify Sample Report

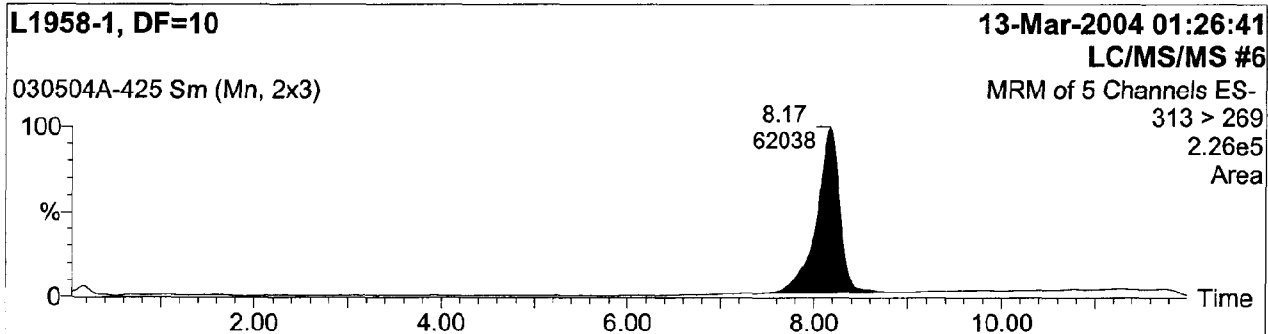
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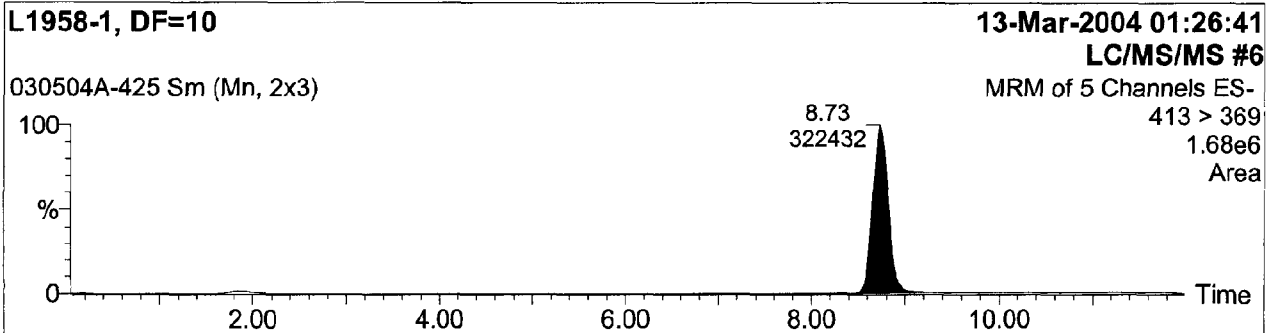
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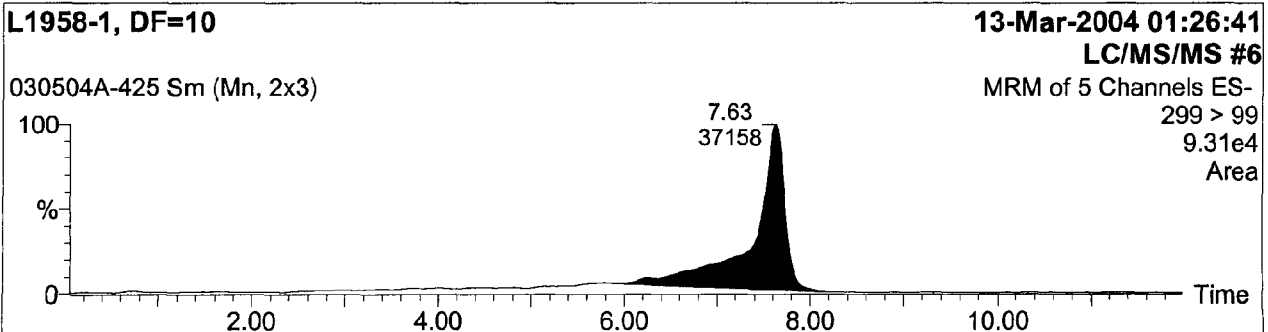
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

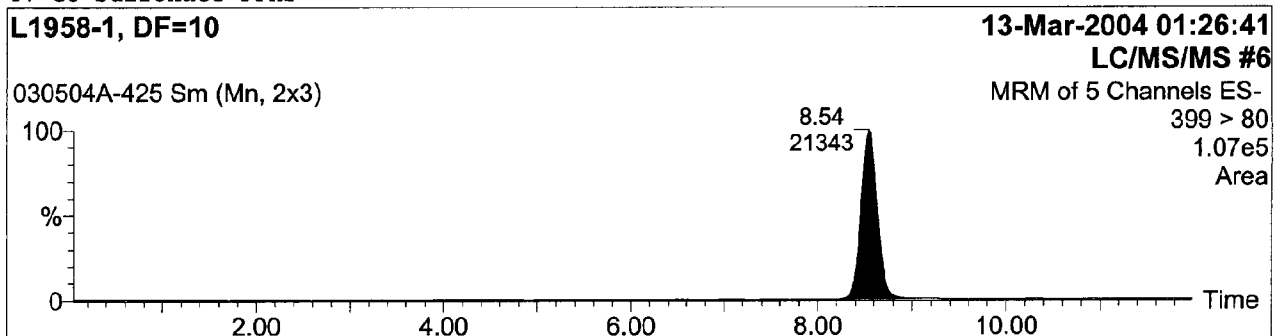
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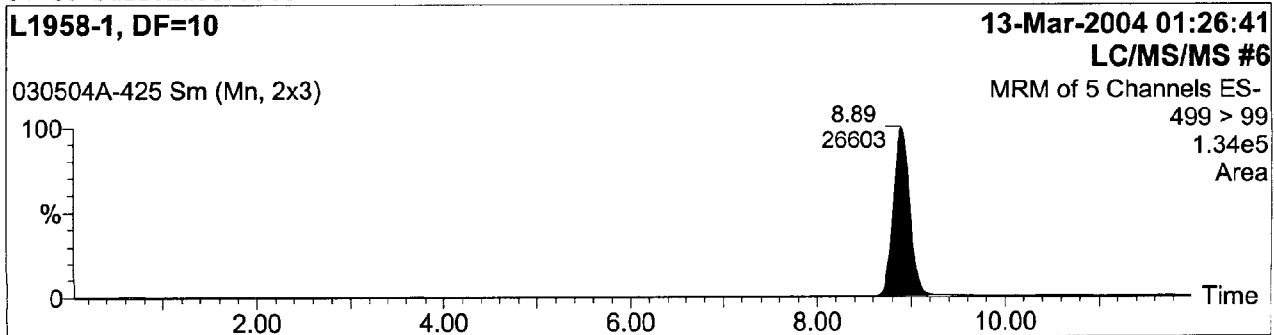
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Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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Quantify Sample Report

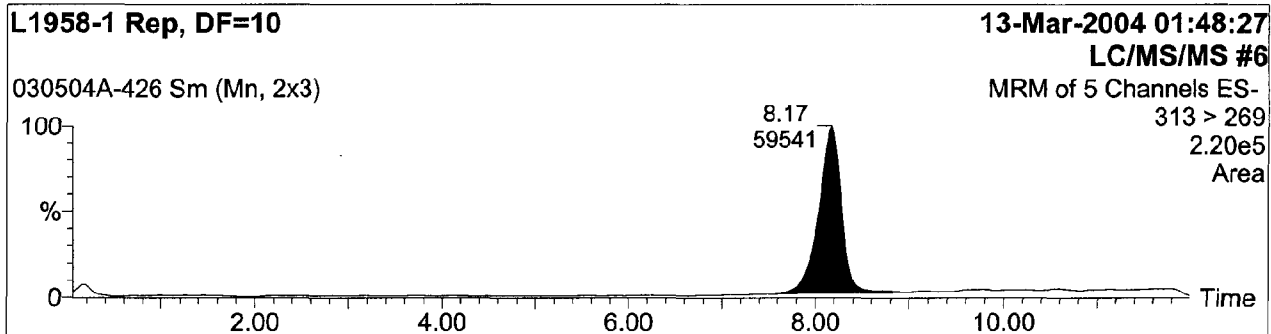
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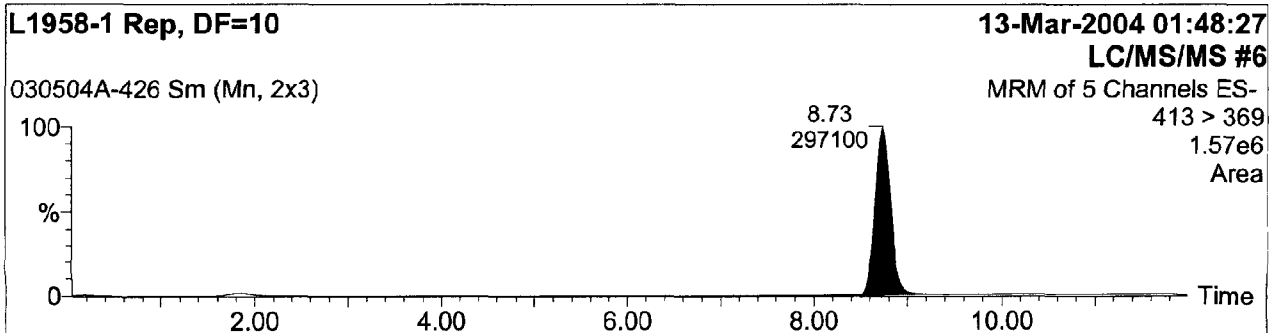
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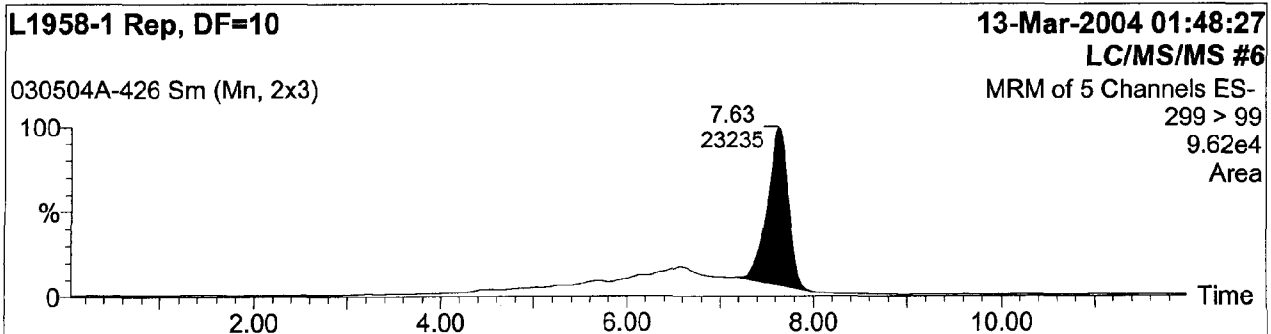
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

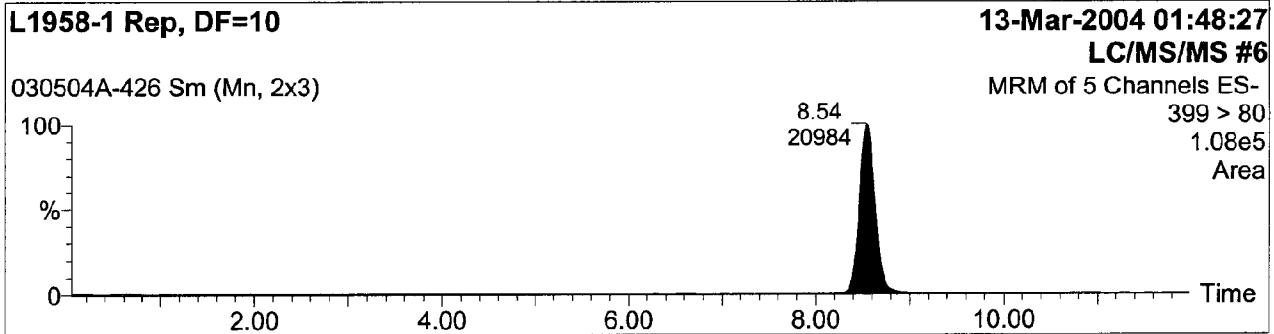
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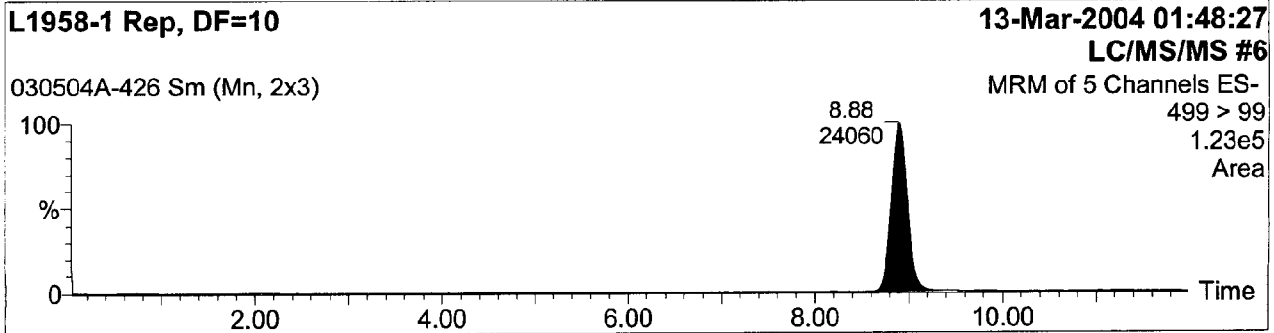
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Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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Quantify Sample Report

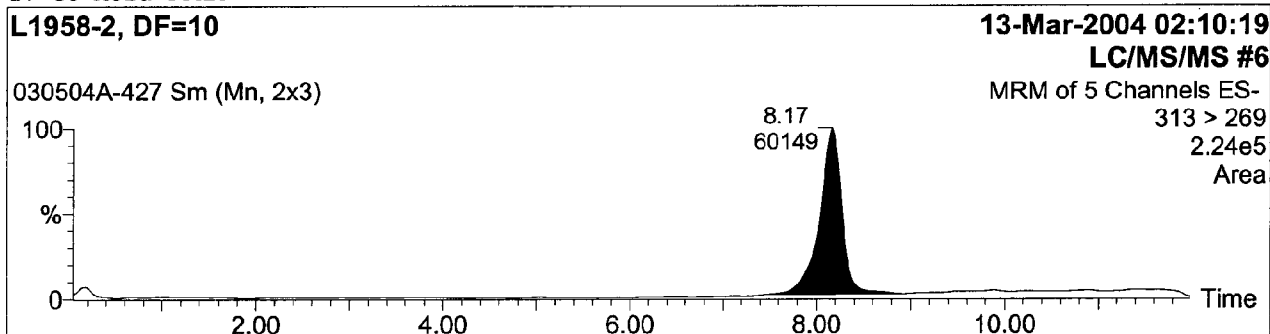
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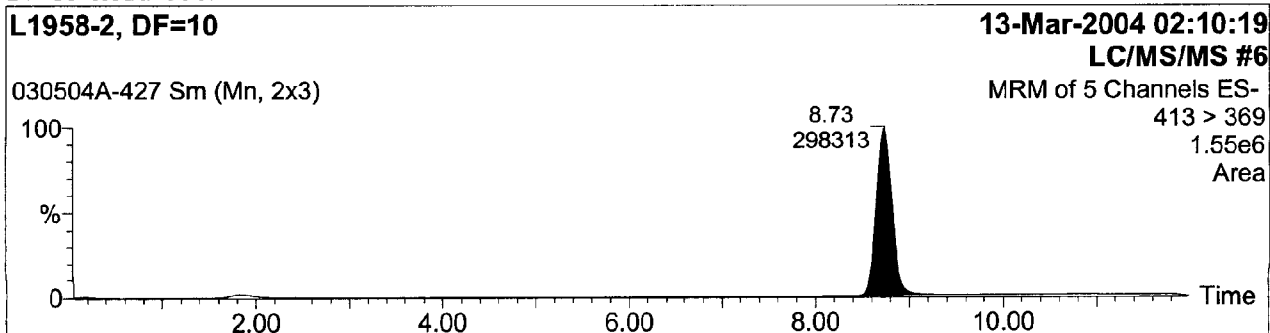
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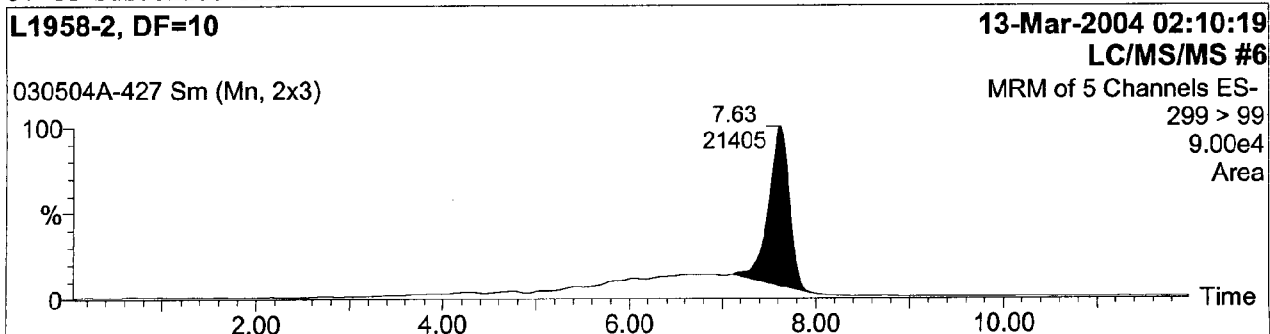
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

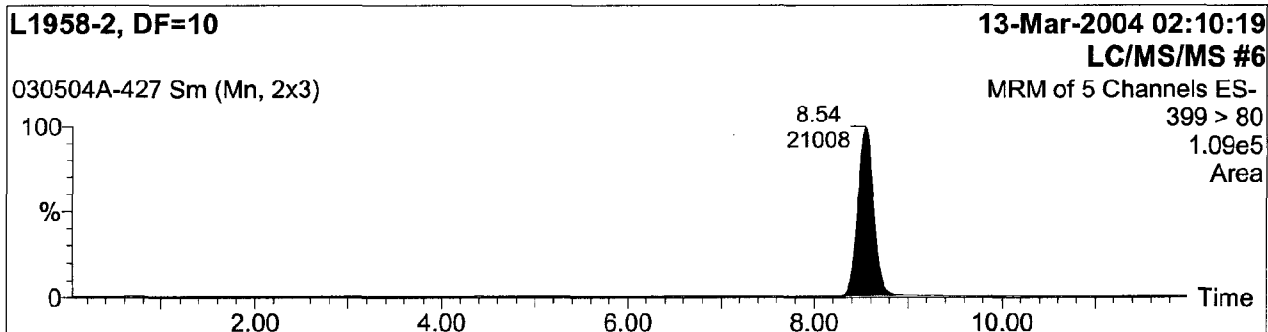
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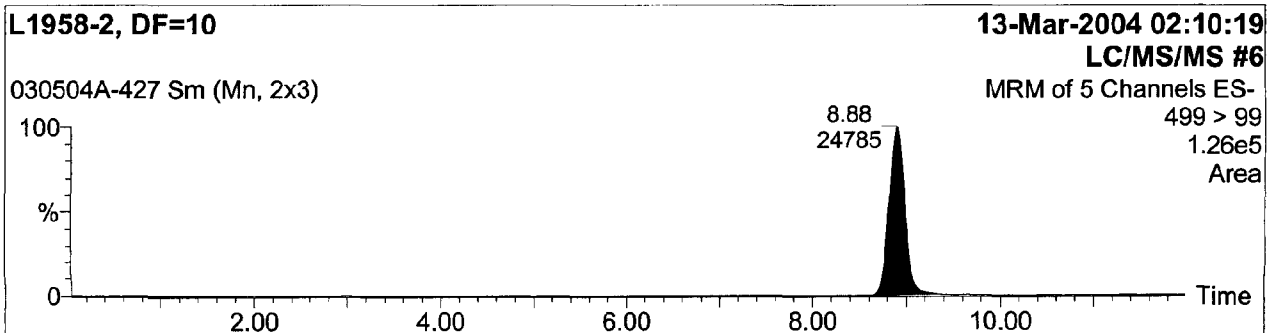
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Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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Quantify Sample Report

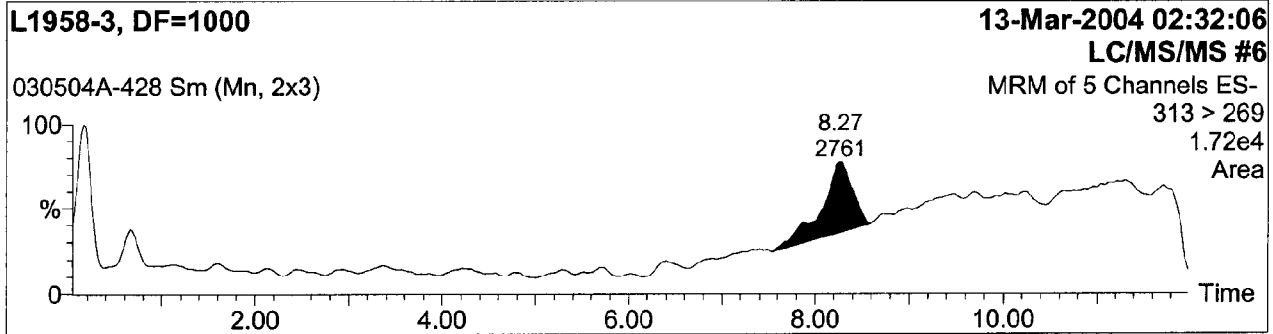
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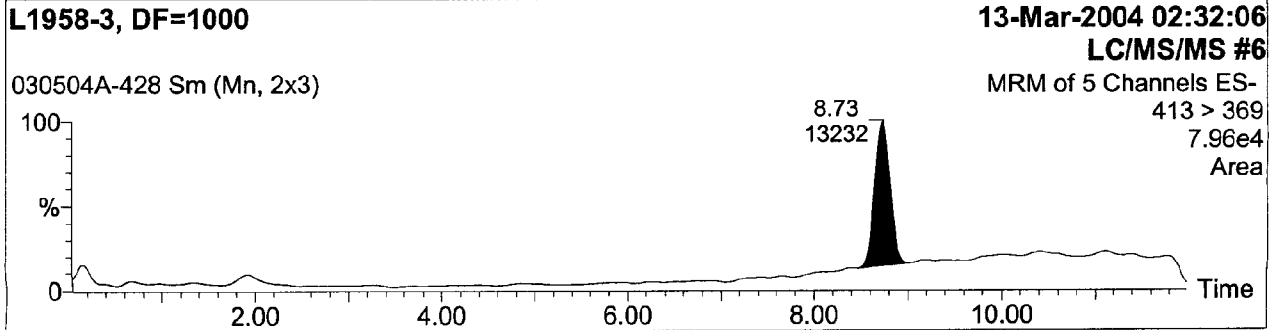
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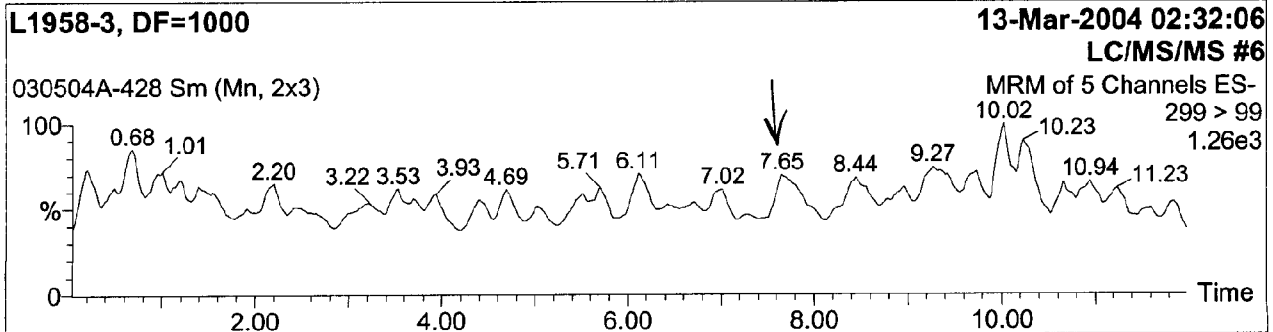
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

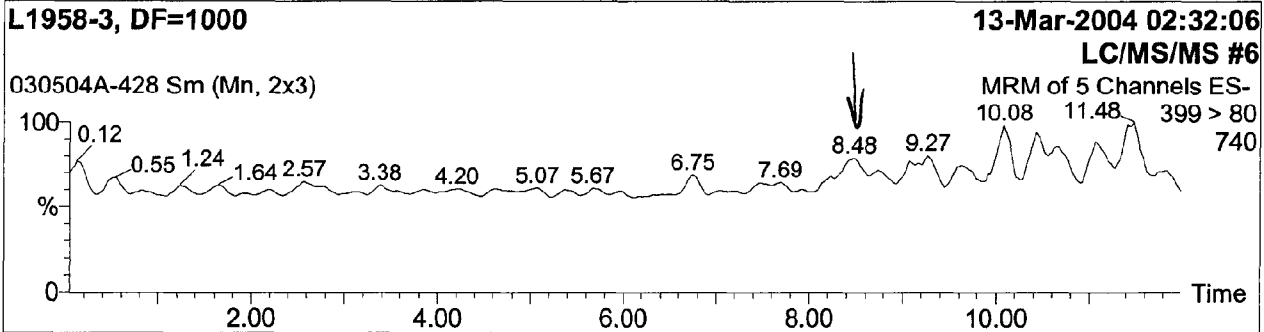
Study No.: L1958, Set No.: 030504A, Ext.Date: 03/05/04, Analyst: K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
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Last modified: Mon Mar 15 13:25:12 2004
Job Code:

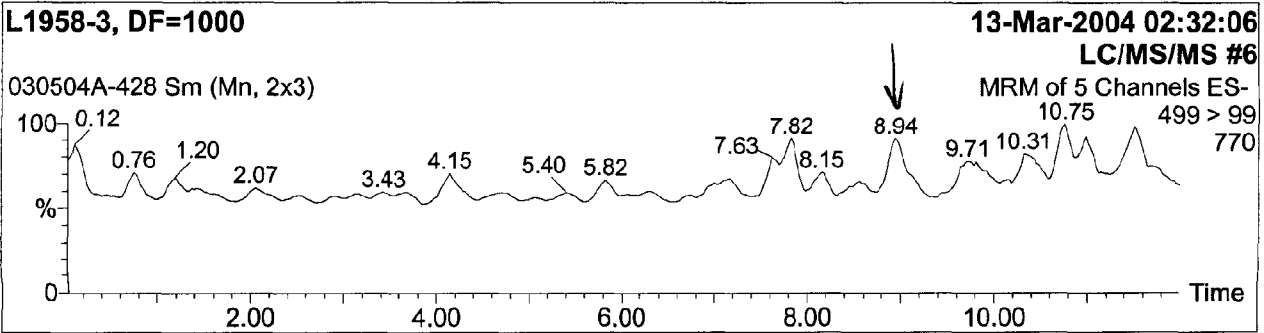
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-428
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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Quantify Sample Report

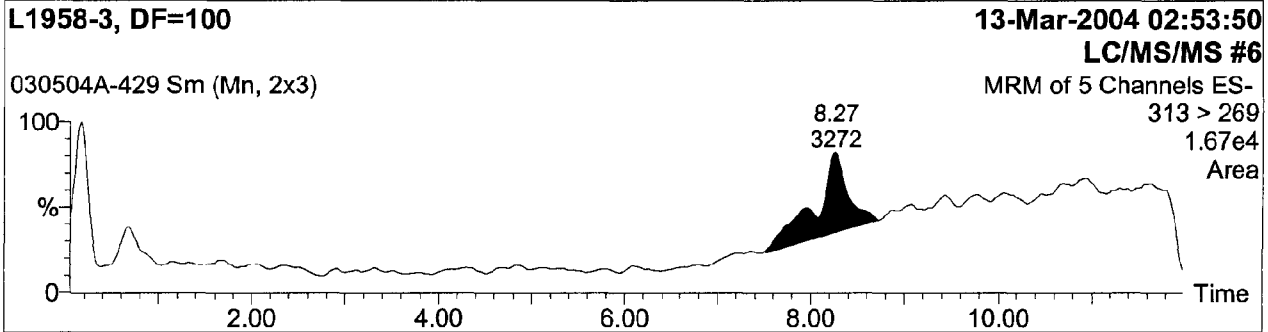
Study No.: L1958, Set No.: 030504A, Ext. Date: 03/05/04, Analyst: K. Risha

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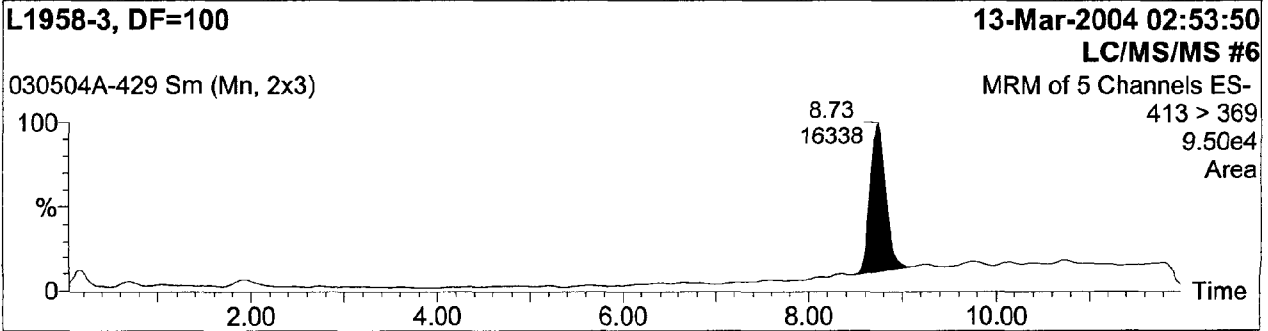
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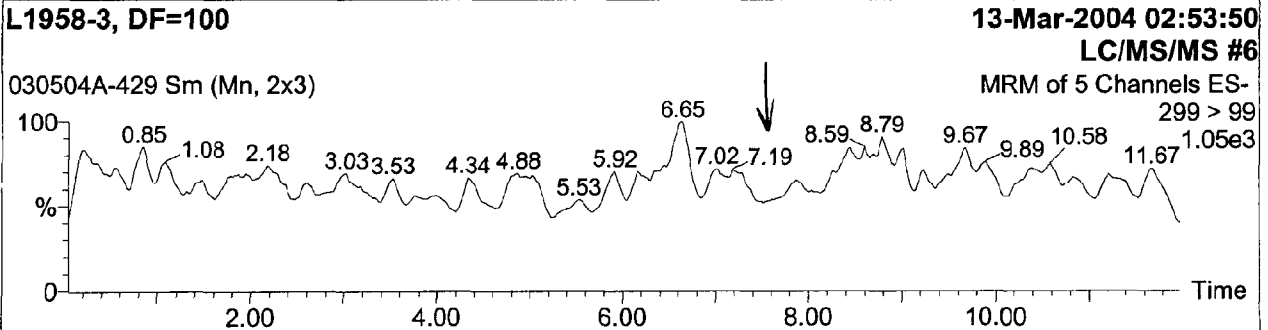
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

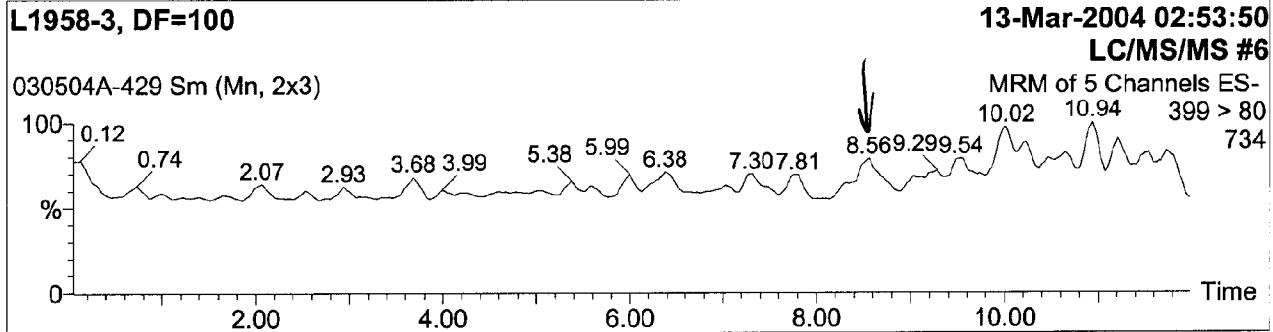
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Job Code:

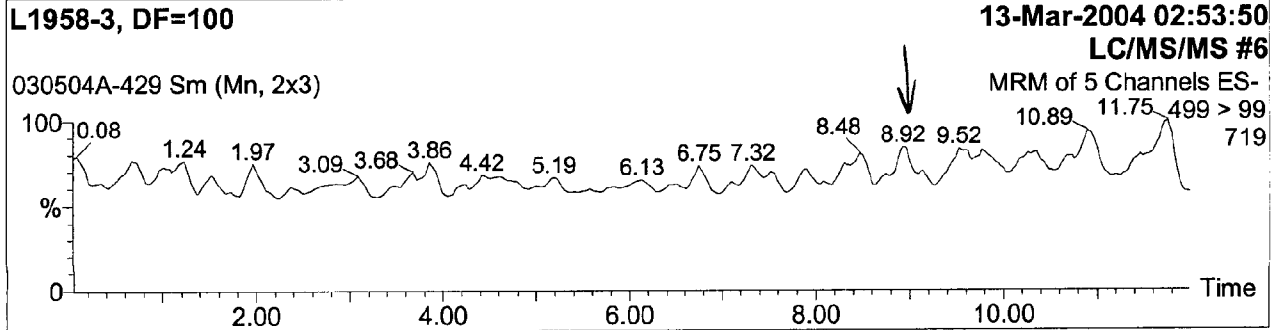
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Name: 030504A-429
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



Oxygen Research, 3058 Research Drive, State College, PA 16801

Quantify Sample Report

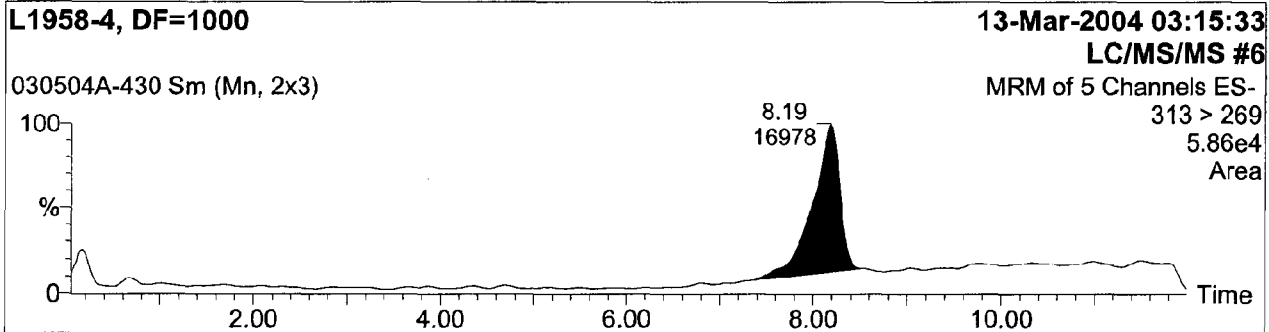
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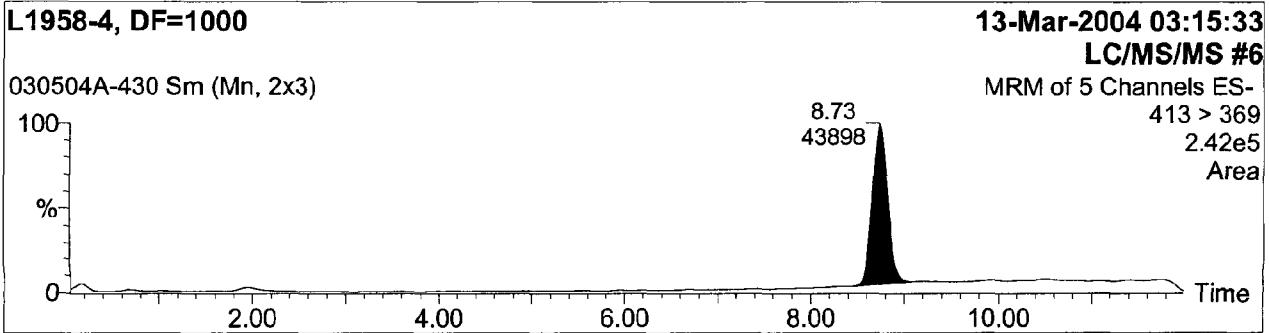
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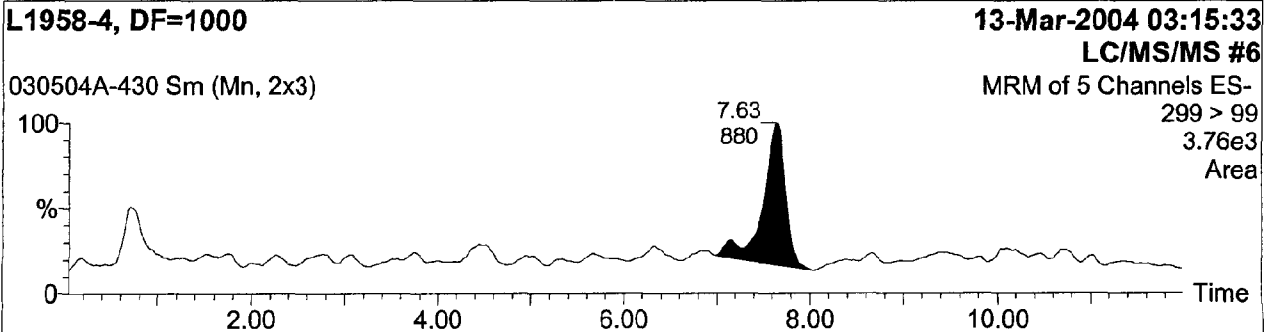
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

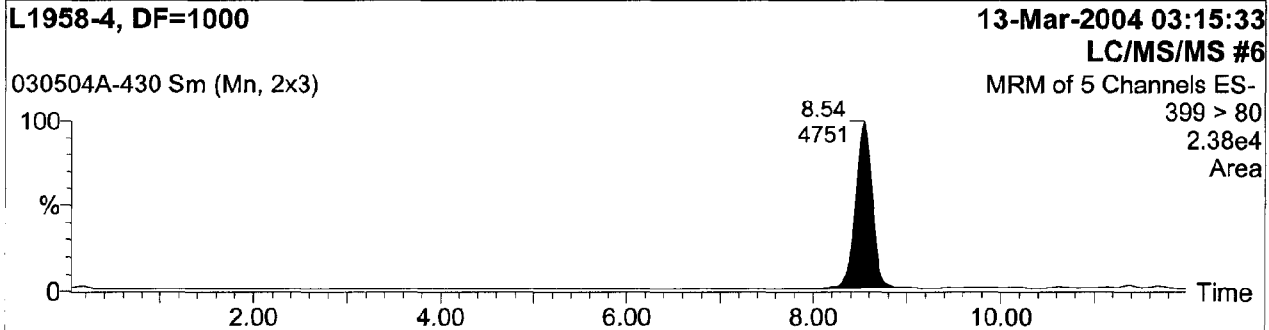
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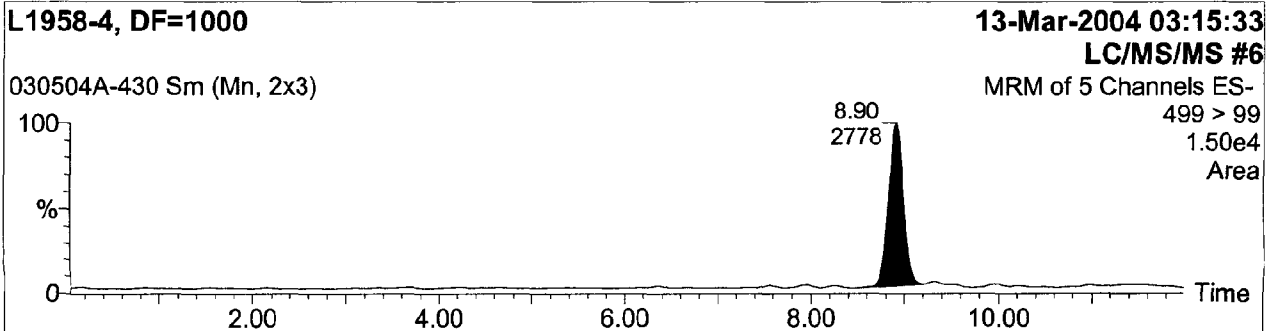
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Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



Exygen Research, 3058 Research Drive, State College, PA 16801

Quantify Sample Report

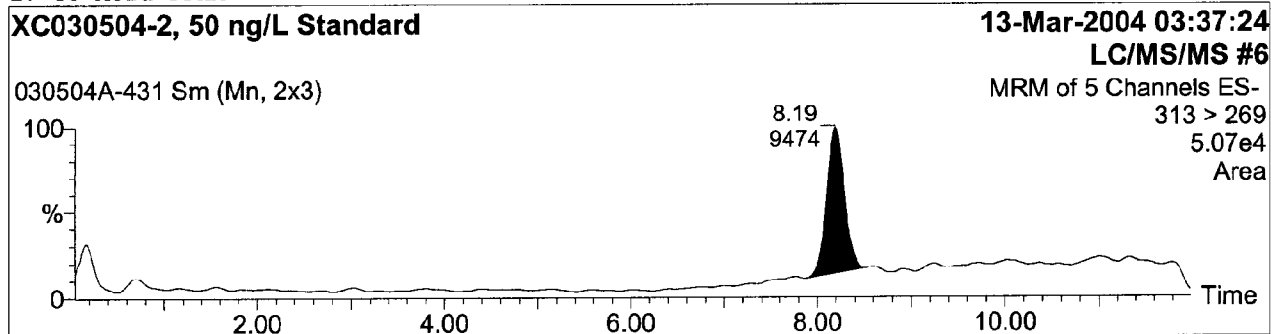
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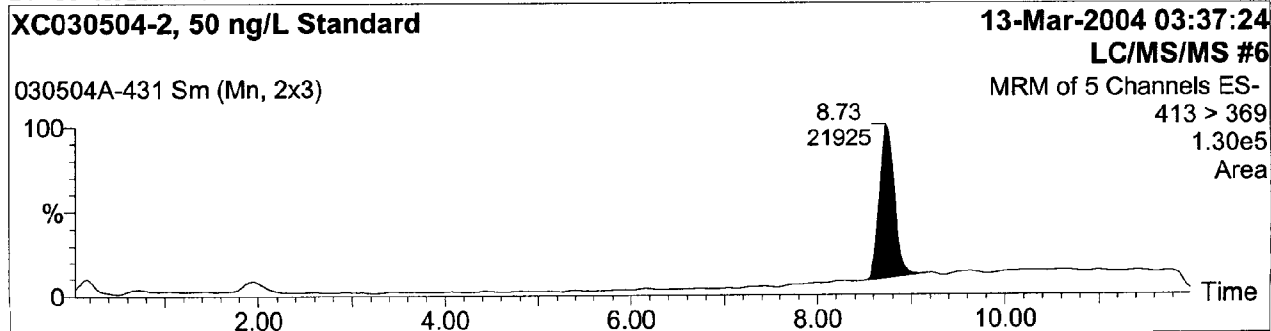
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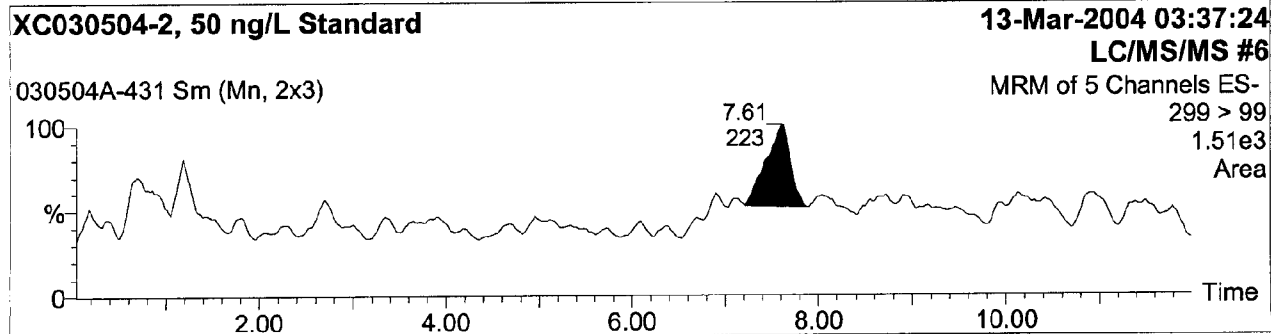
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

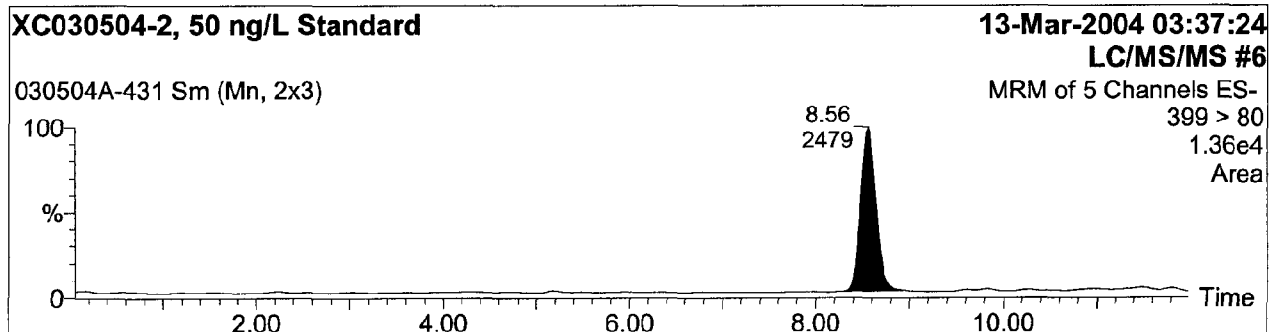
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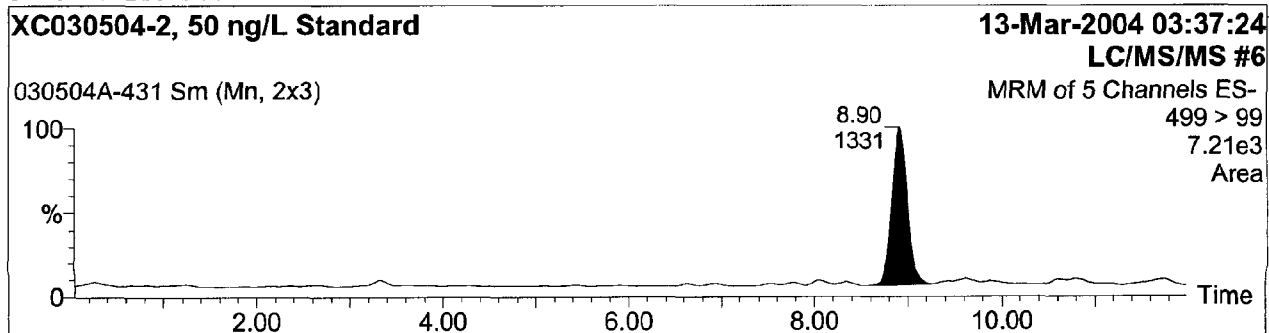
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4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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Quantify Sample Report

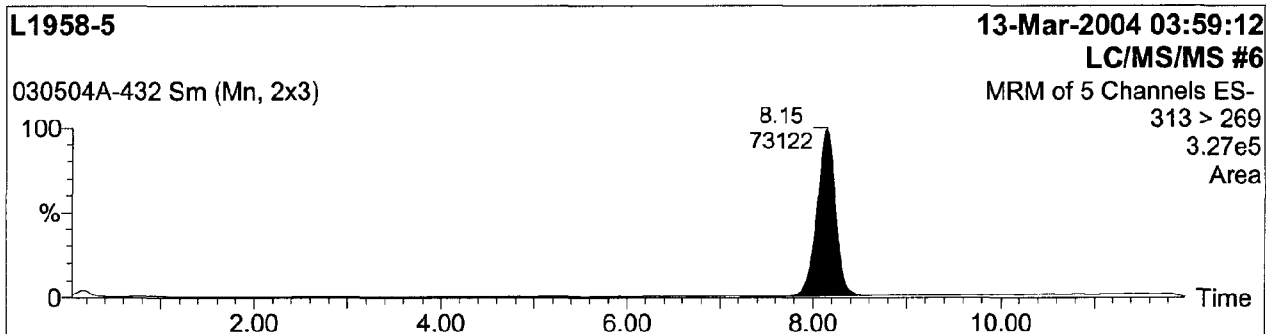
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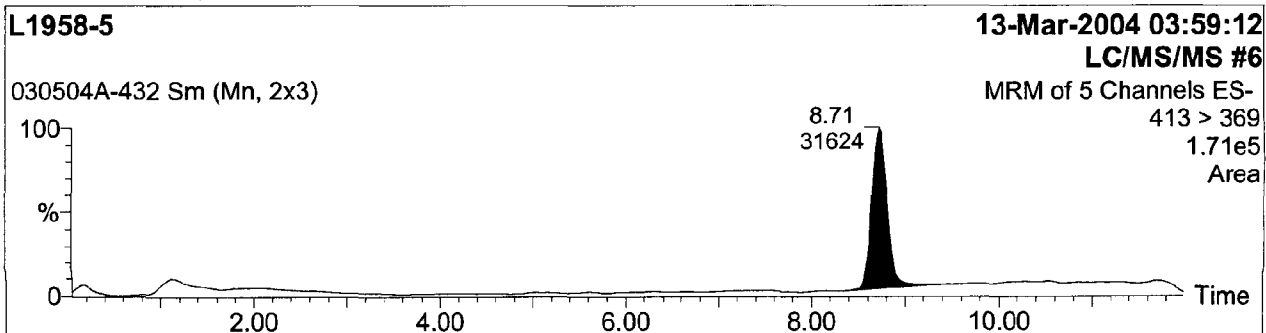
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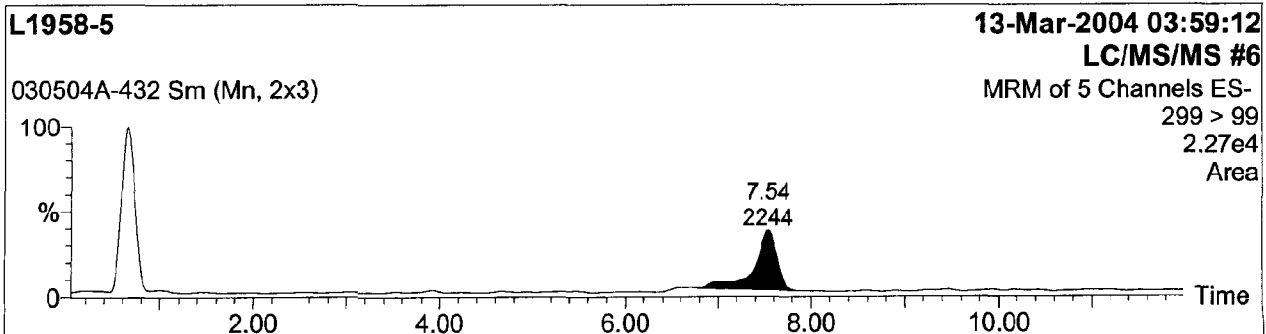
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2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

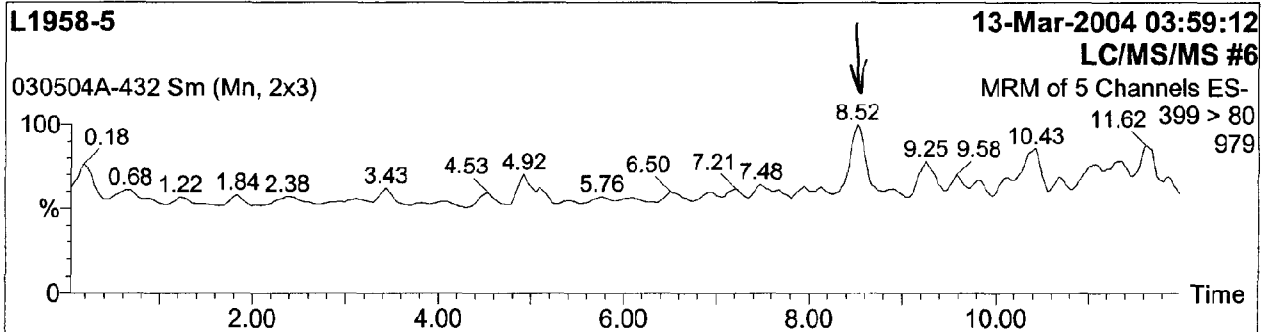
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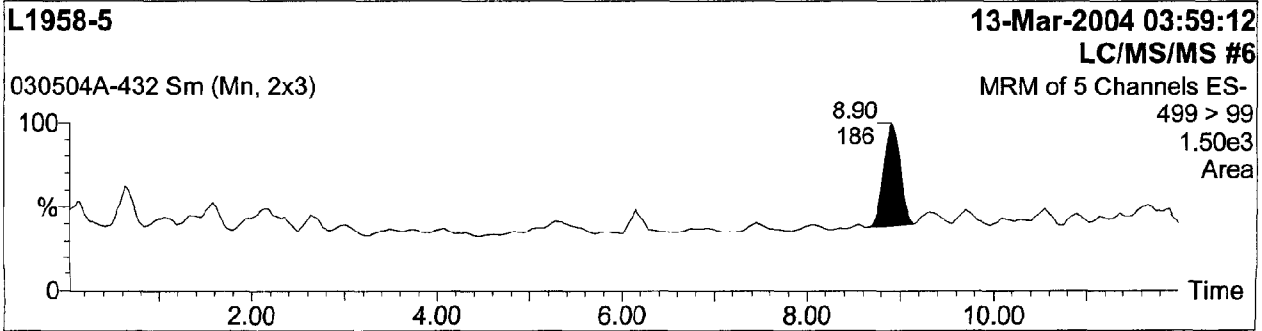
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4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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Quantify Sample Report

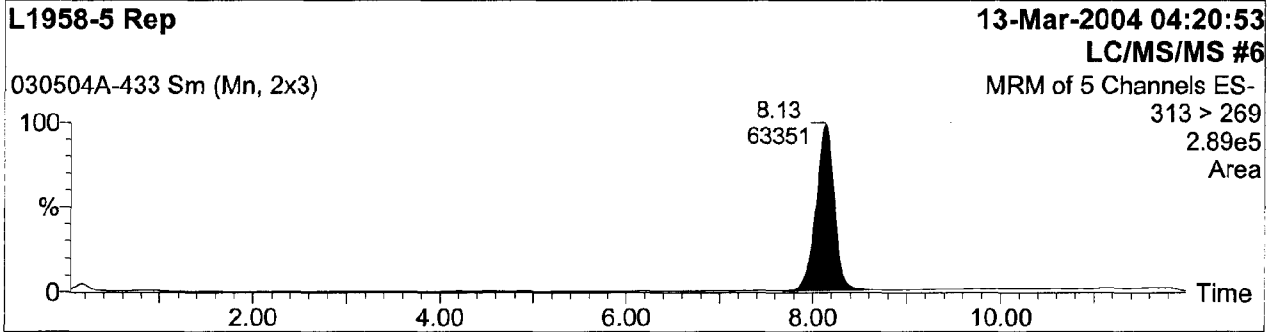
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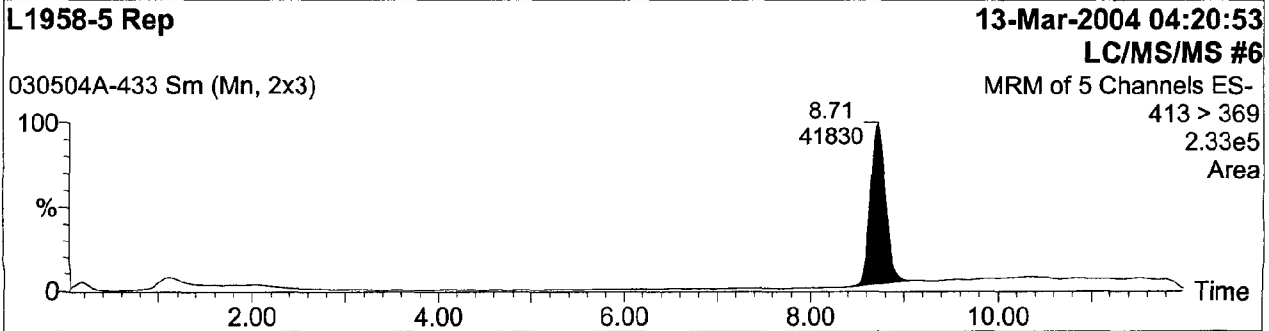
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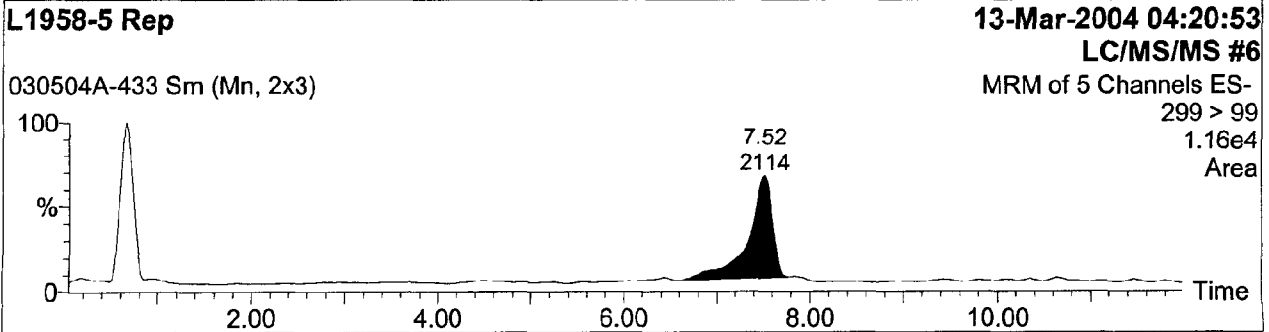
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

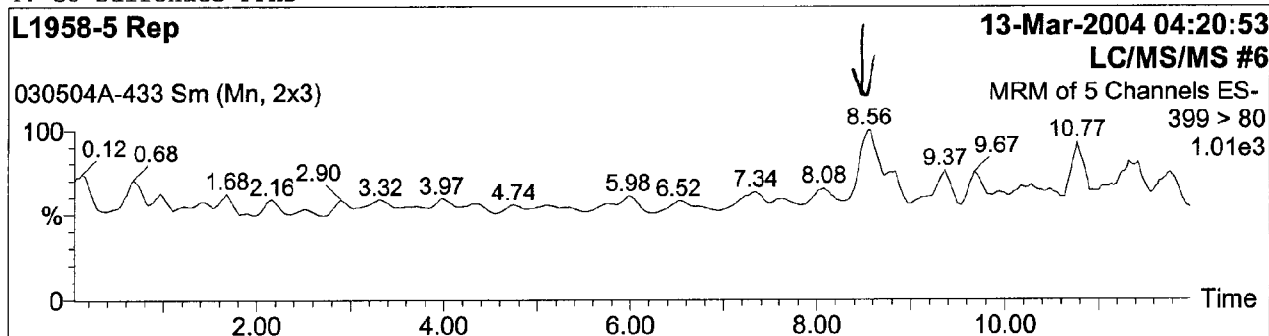
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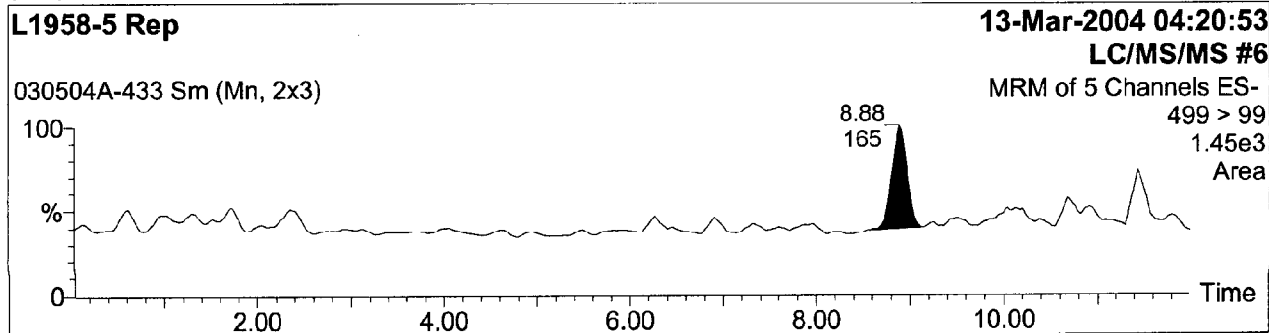
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Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



Oxygen Research, 3058 Research Drive, State College, PA 16801

Quantify Sample Report

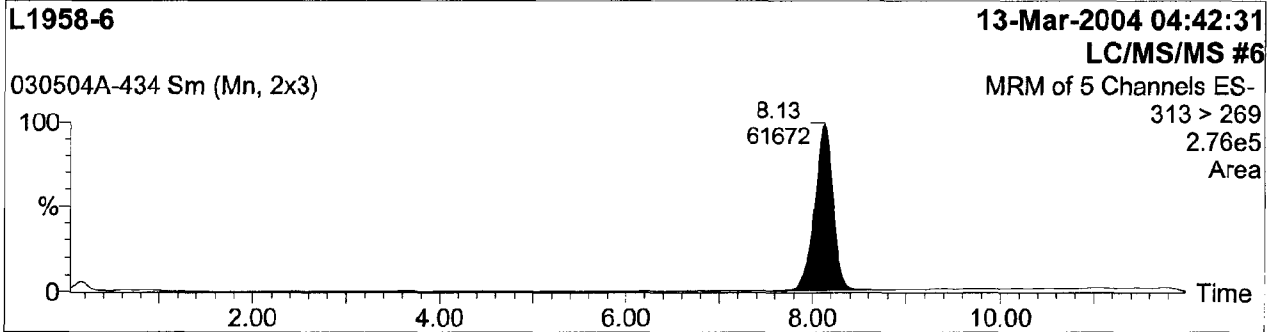
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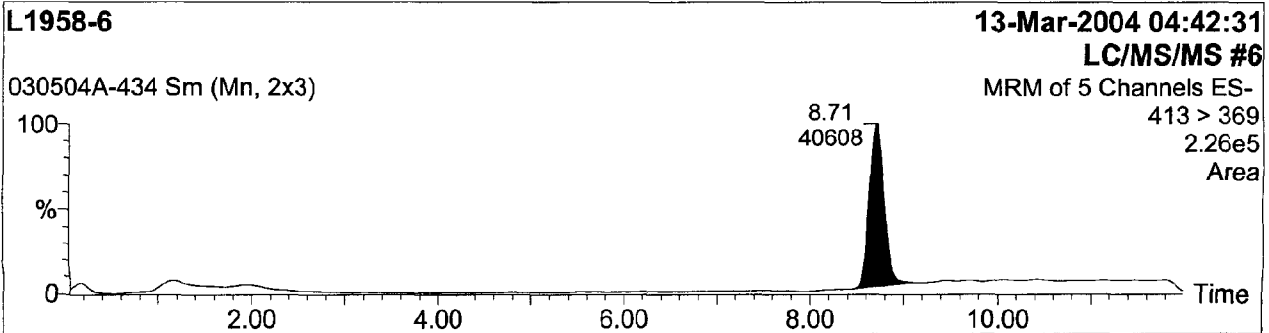
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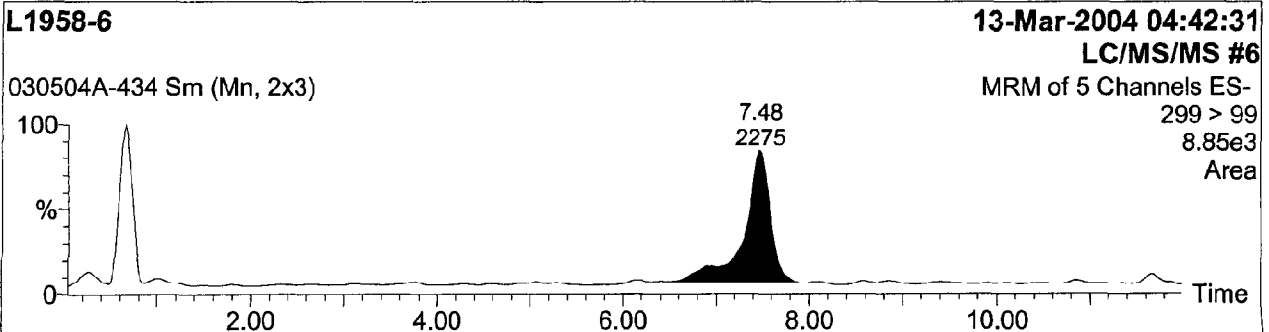
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

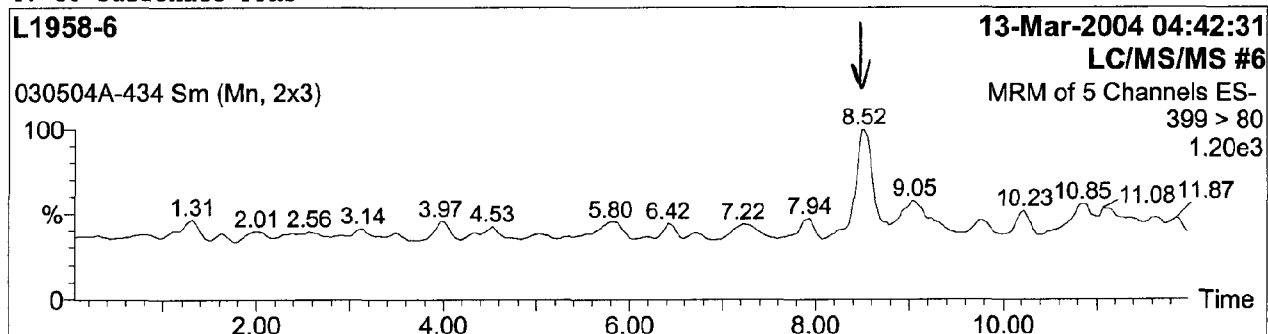
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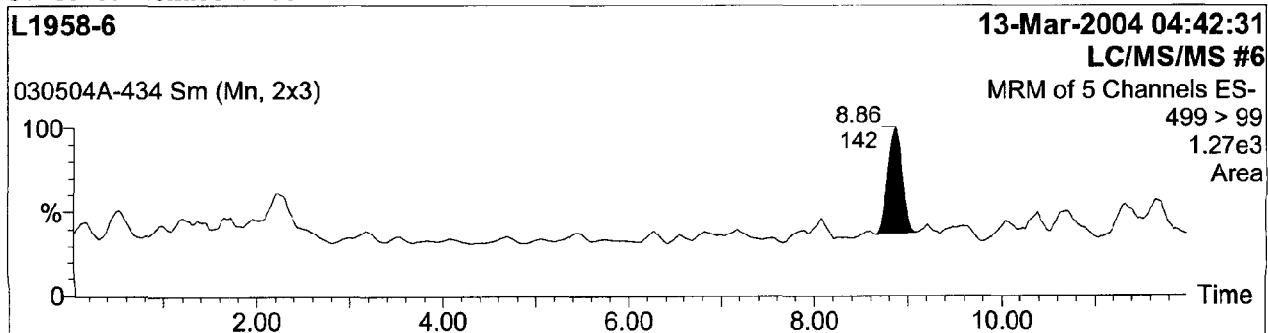
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Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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Quantify Sample Report

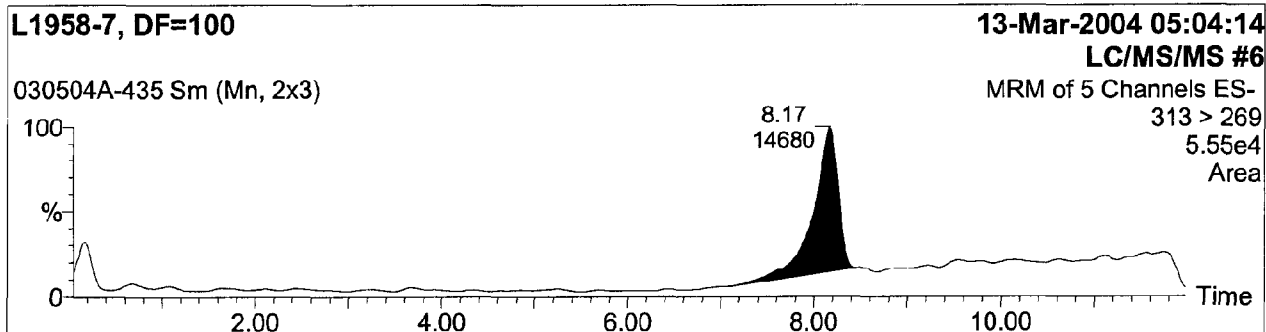
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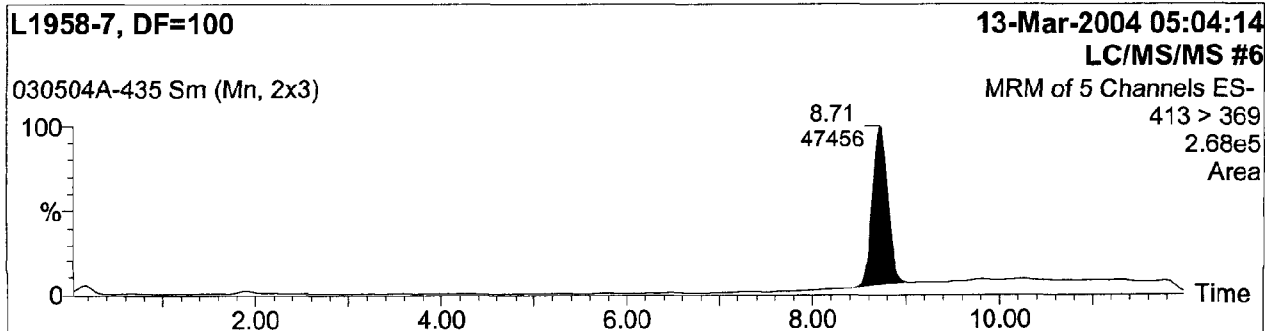
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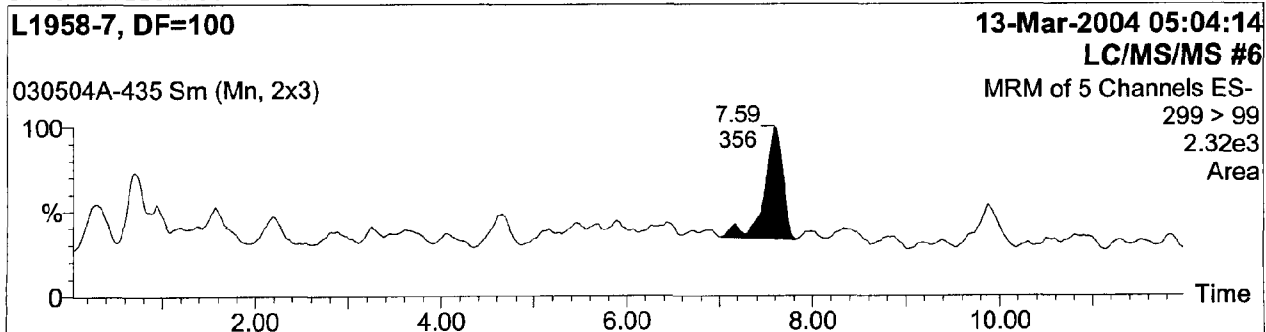
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



Oxygen Research, 3058 Research Drive, State College, PA 16801

Quantify Sample Report

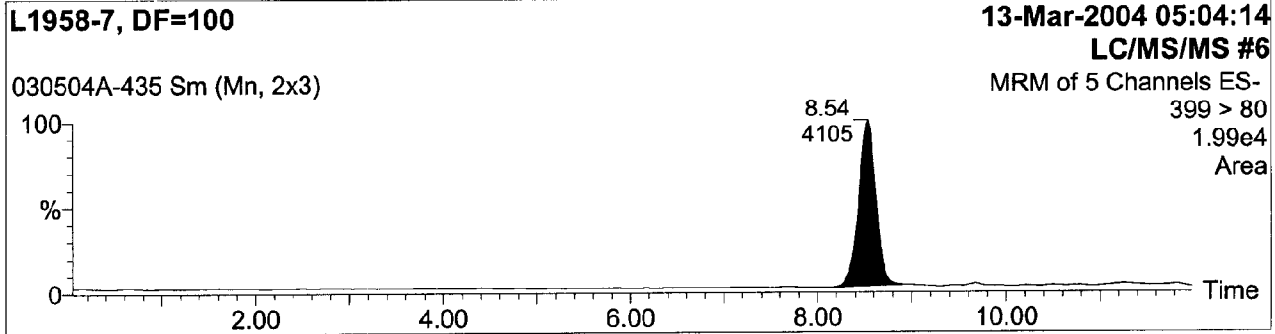
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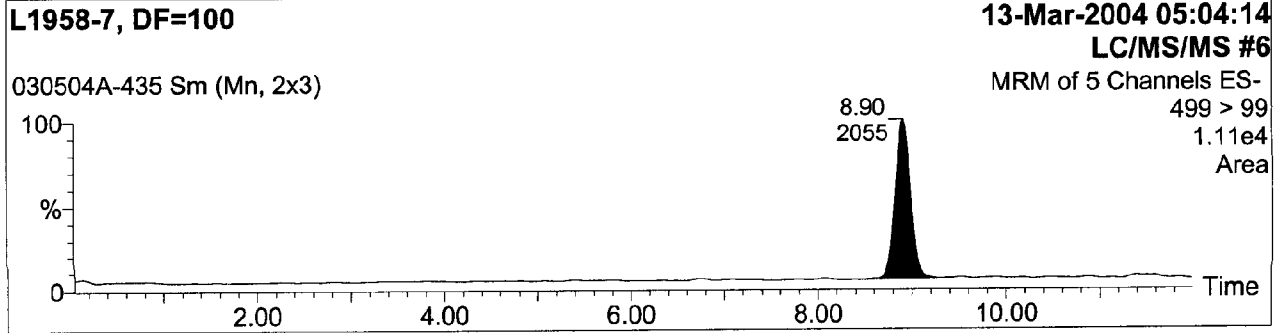
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Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



Oxygen Research, 3058 Research Drive, State College, PA 16801

Quantify Sample Report

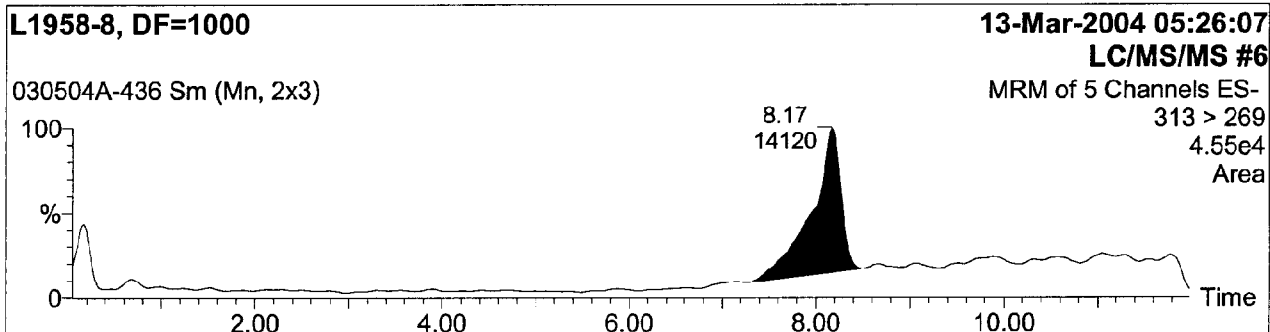
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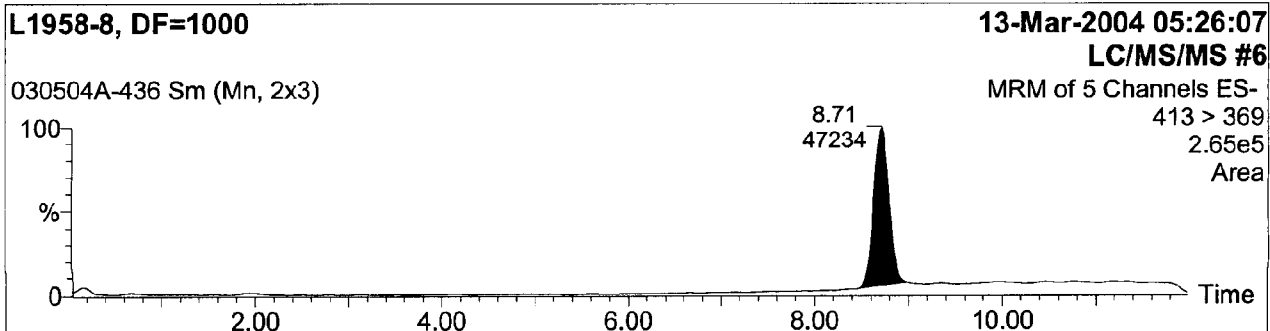
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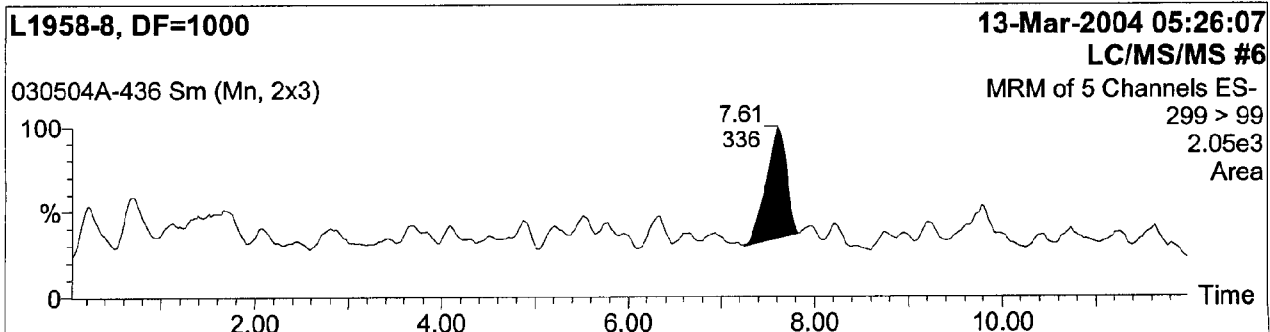
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2: C8 Acid PFOA



3: C4 Sulfonate PFBS



Oxygen Research, 3058 Research Drive, State College, PA 16801

Quantify Sample Report

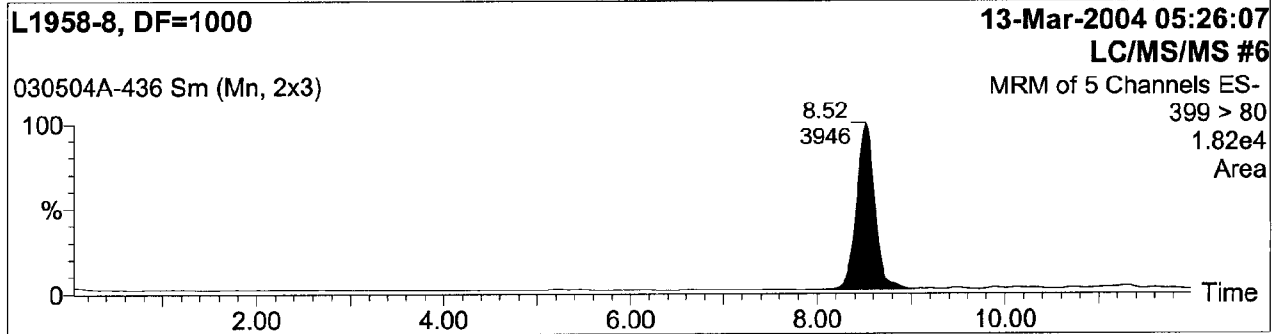
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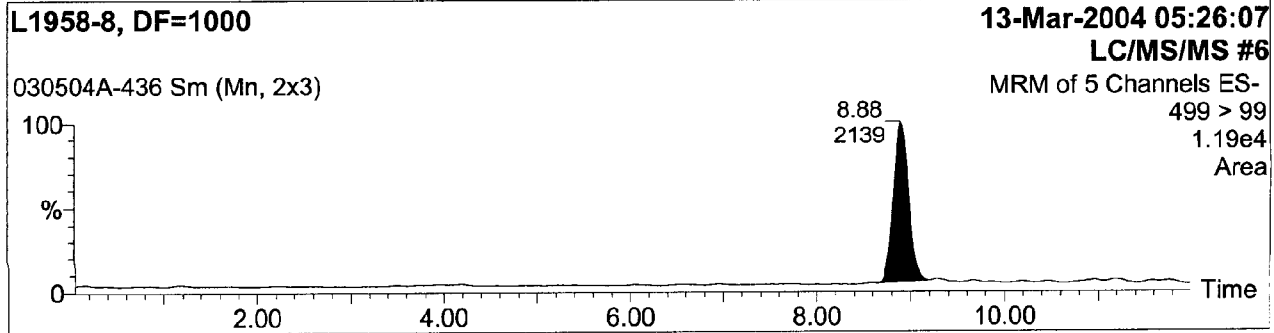
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Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



Oxygen Research, 3058 Research Drive, State College, PA 16801

Quantify Sample Report

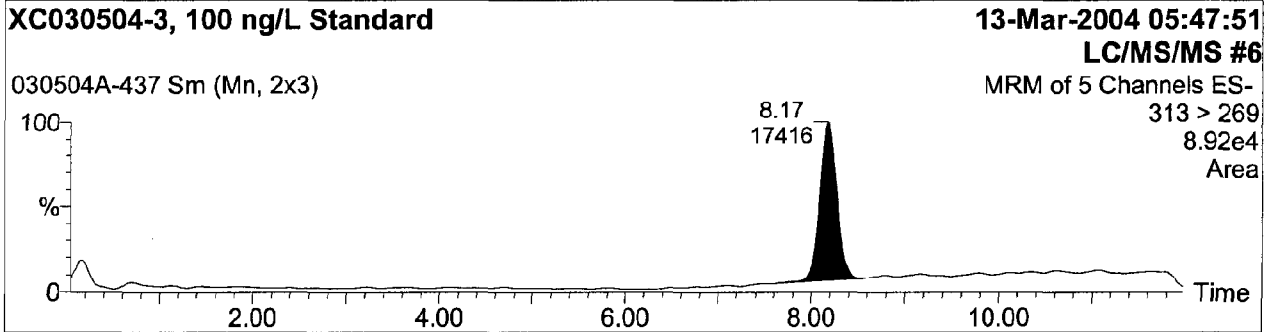
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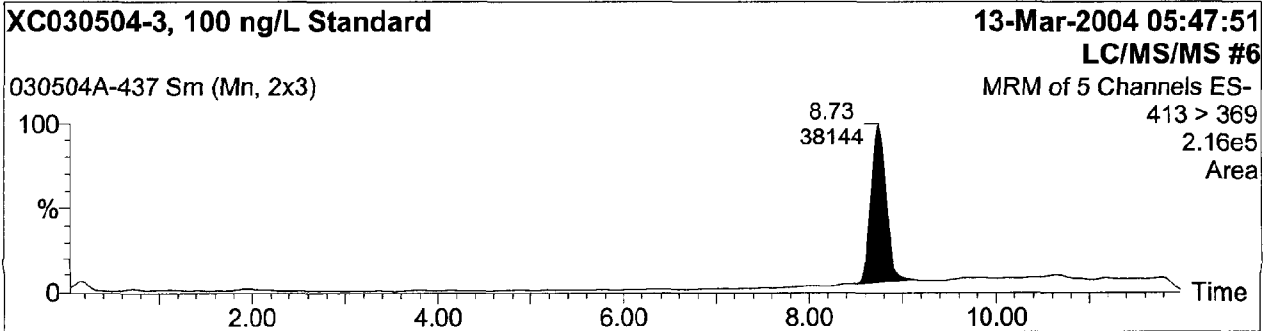
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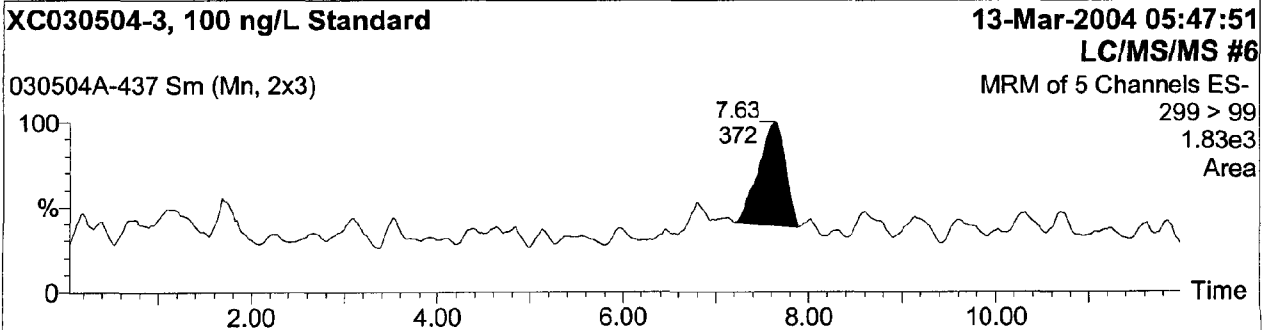
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2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

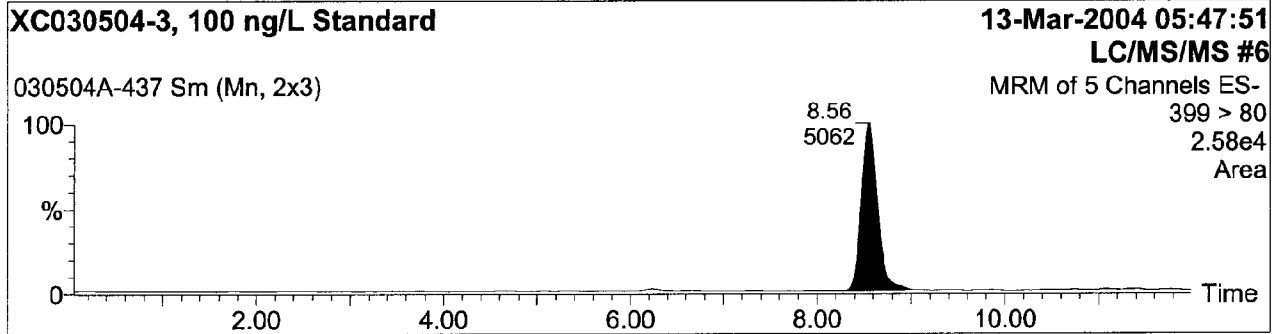
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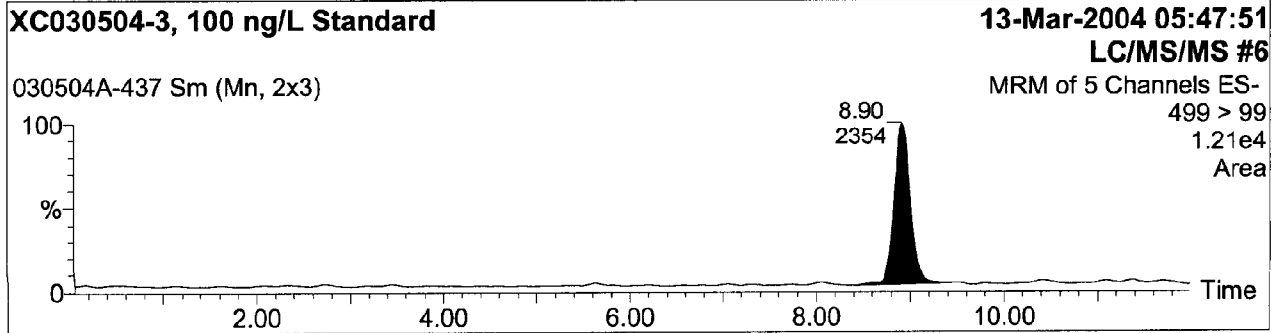
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Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



Exygen Research, 3058 Research Drive, State College, PA 16801

Quantify Sample Report

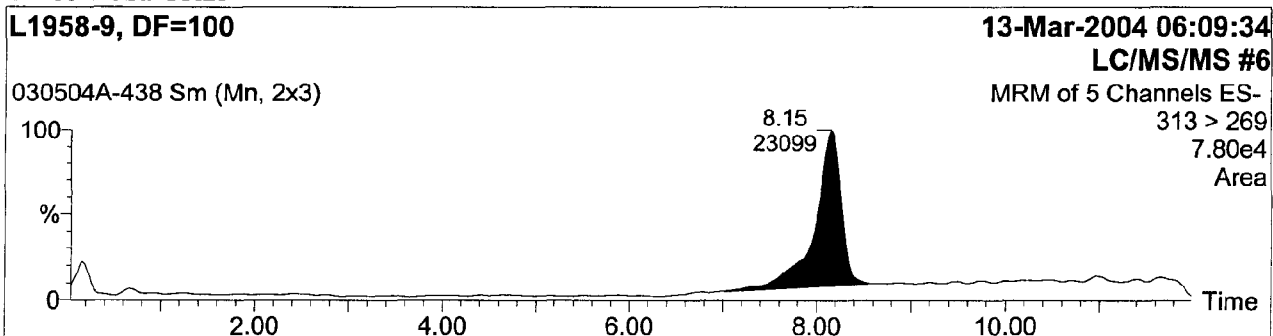
Study No.:L1958, Set No.:030504A, Ext.Date:03/05/04, Analyst:K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

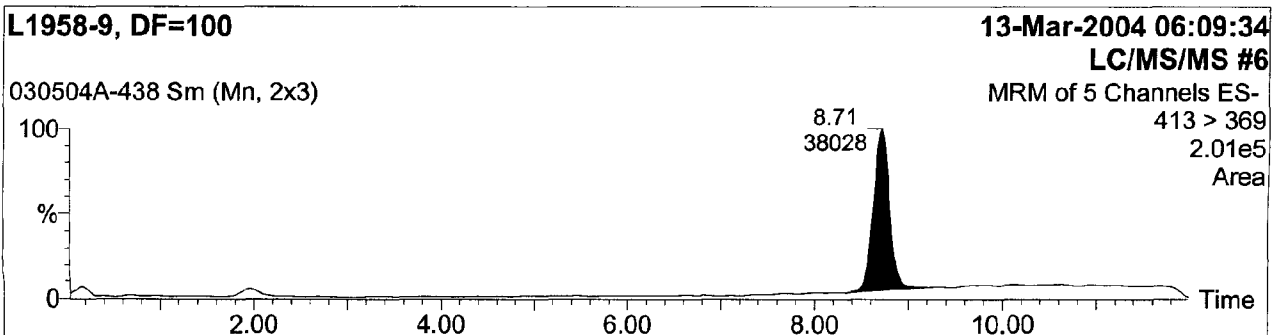
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-438
Text:

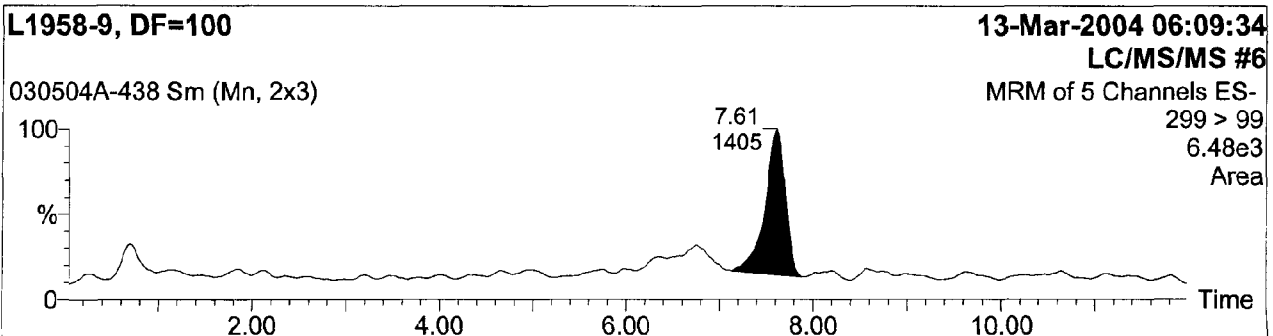
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

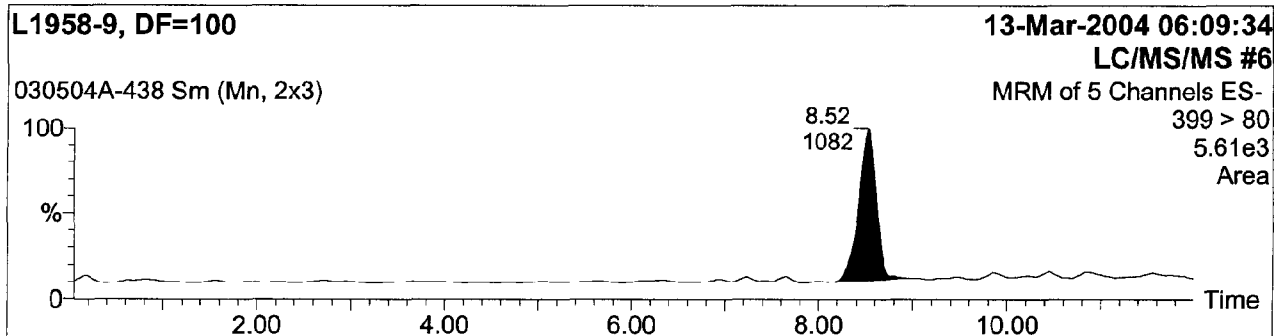
Study No.: L1958, Set No.: 030504A, Ext.Date: 03/05/04, Analyst: K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

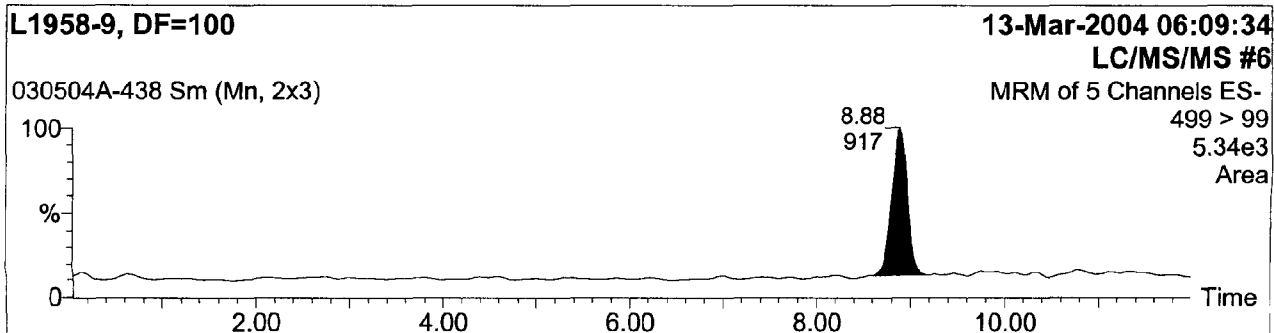
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-438
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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Quantify Sample Report

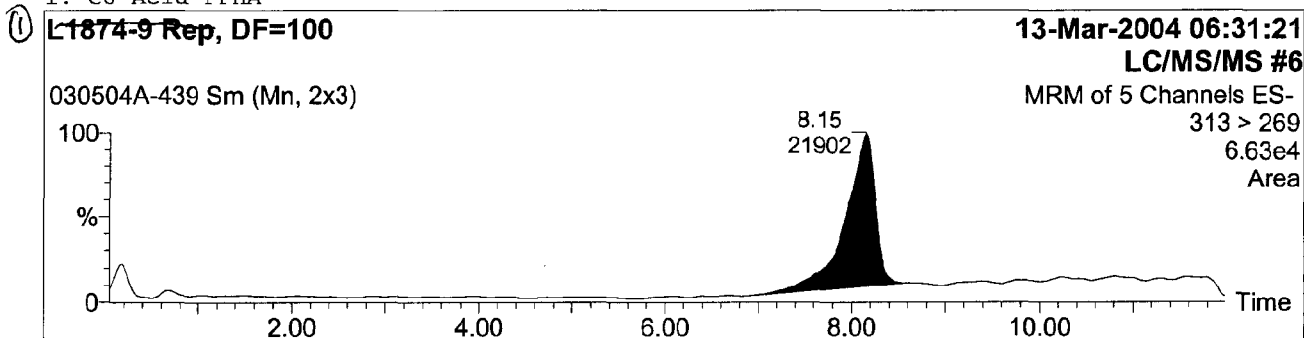
Study No.: L1958, Set No.: 030504A, Ext.Date: 03/05/04, Analyst: K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

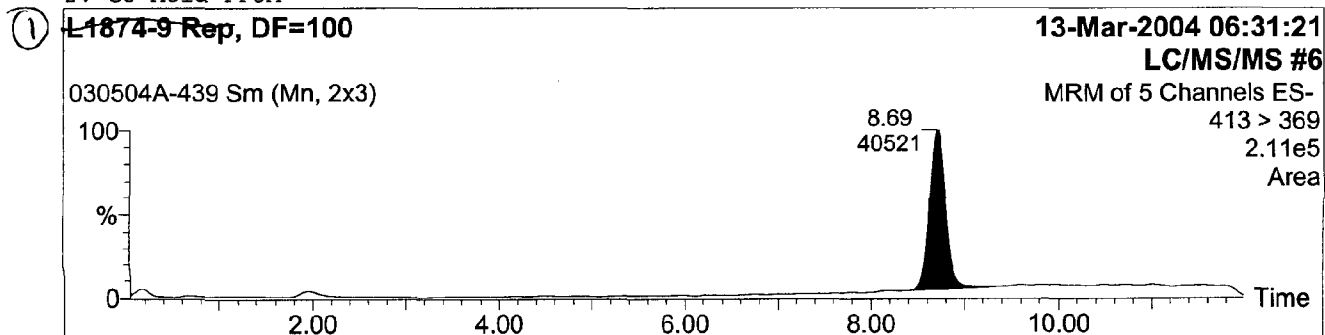
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-439
Text:

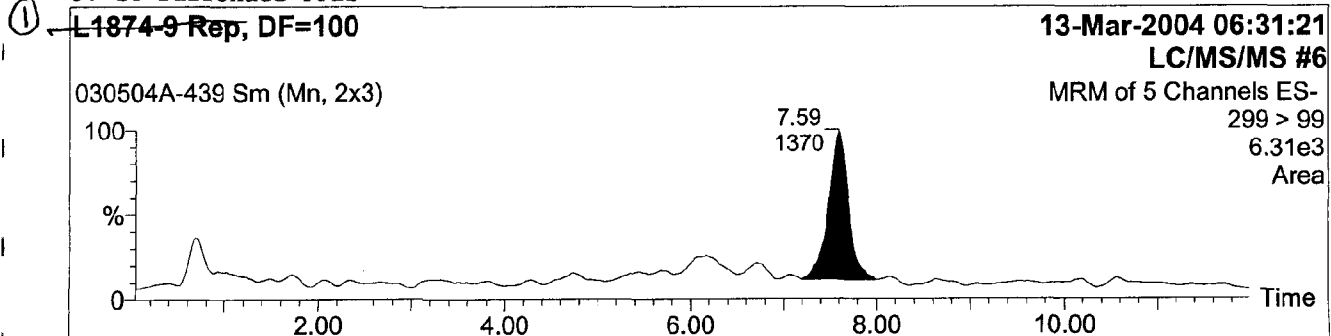
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



① L1958-9 Rep. ② KF 03/16/04

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Quantify Sample Report

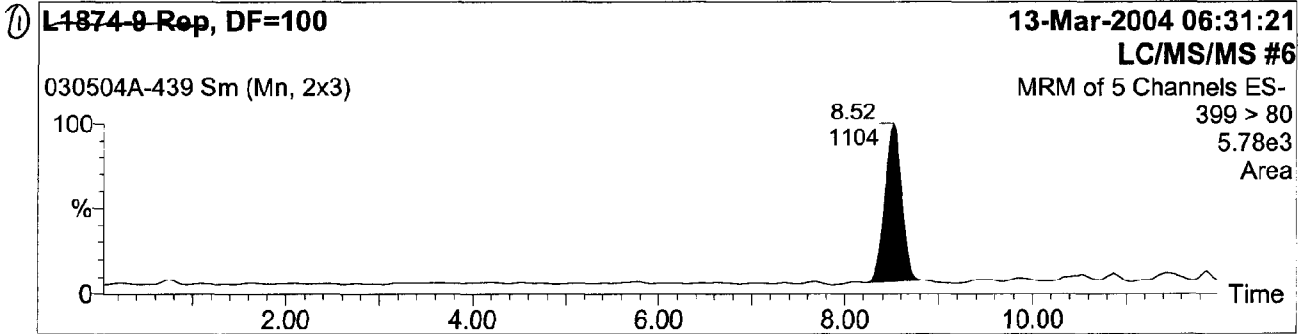
Study No.: L1958, Set No.: 030504A, Ext.Date: 03/05/04, Analyst: K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

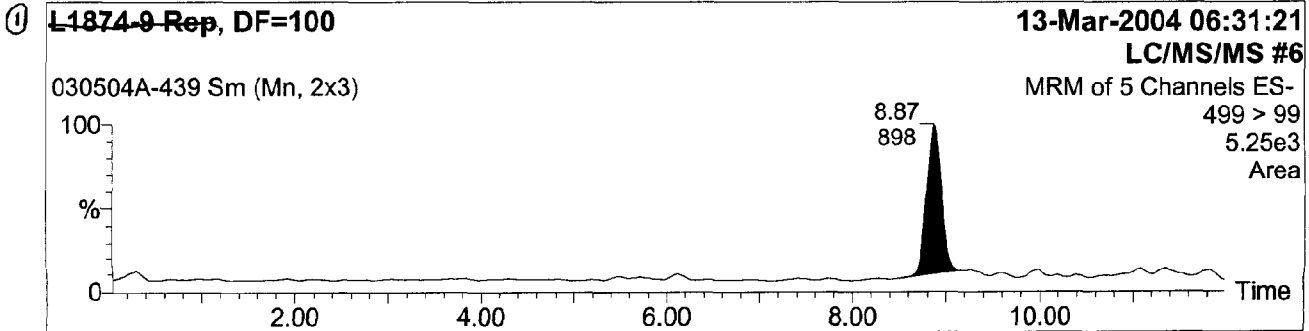
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-439
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



① L1958-9 Rep (re) 03/16/04

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Quantify Sample Report

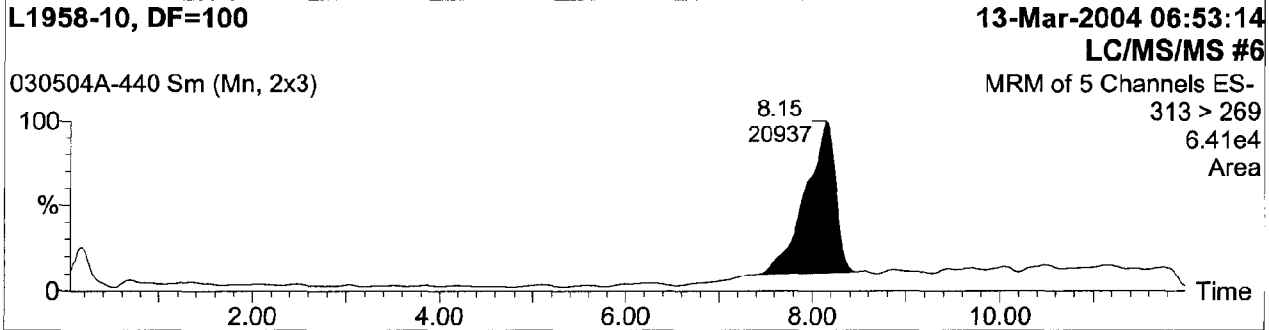
Study No.: L1958, Set No.: 030504A, Ext. Date: 03/05/04, Analyst: K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

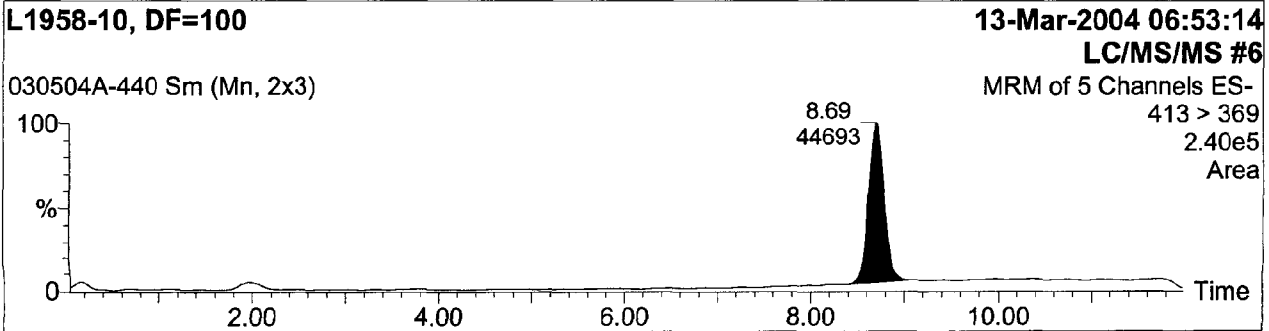
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-440
Text:

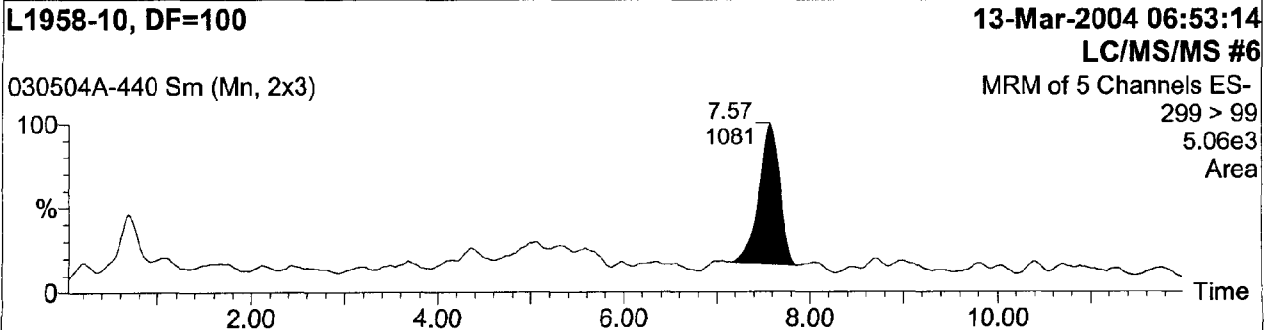
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

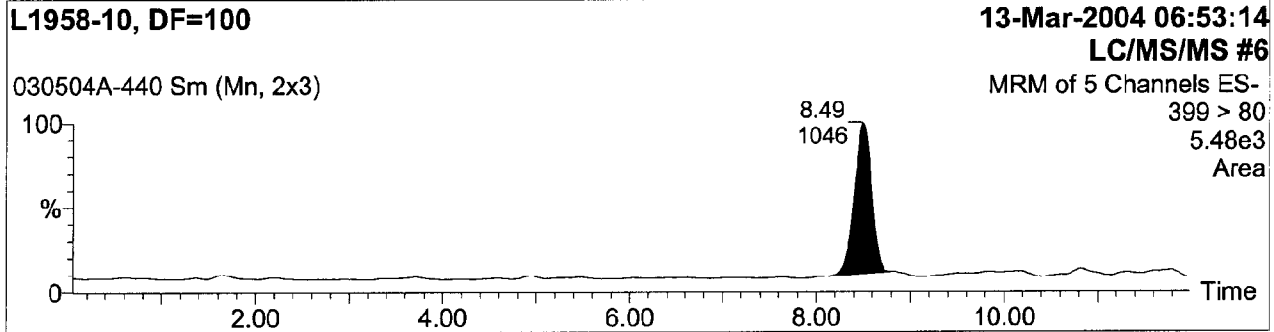
Study No.: L1958, Set No.: 030504A, Ext.Date: 03/05/04, Analyst: K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

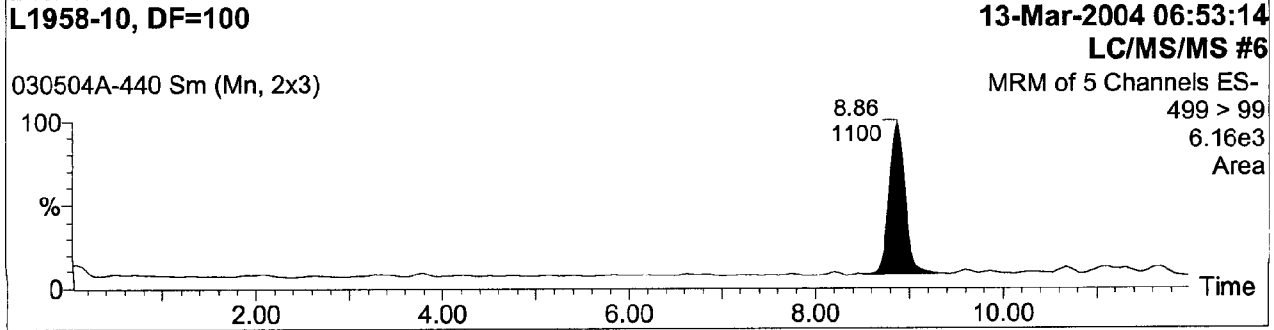
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-440
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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Quantify Sample Report

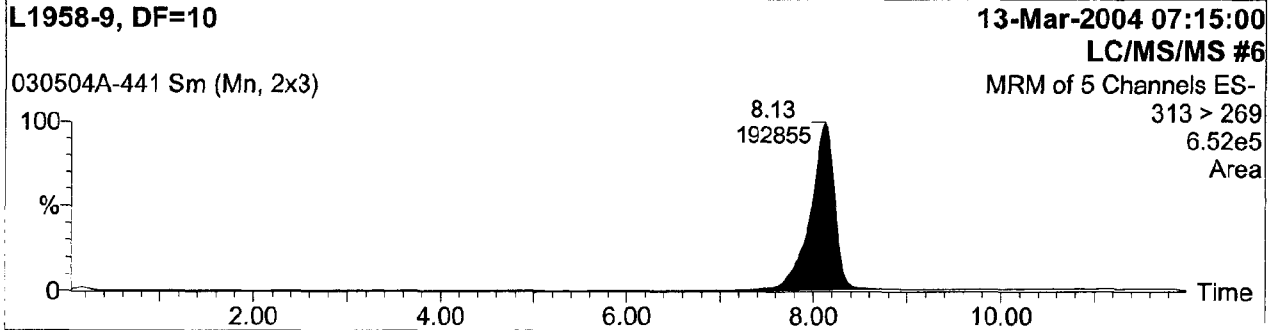
Study No.: L1958, Set No.: 030504A, Ext. Date: 03/05/04, Analyst: K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

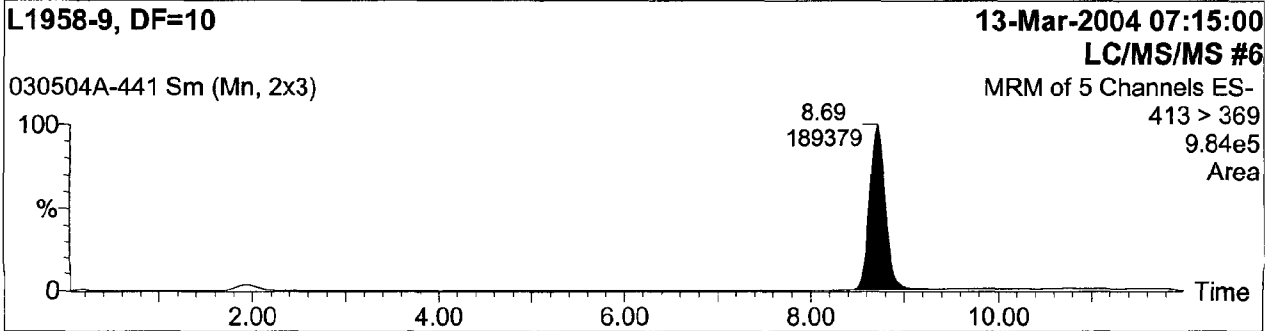
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-441
Text:

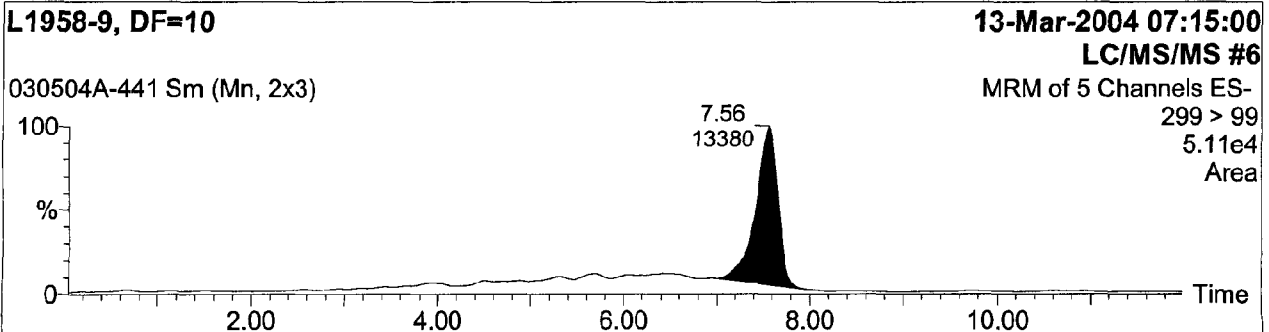
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

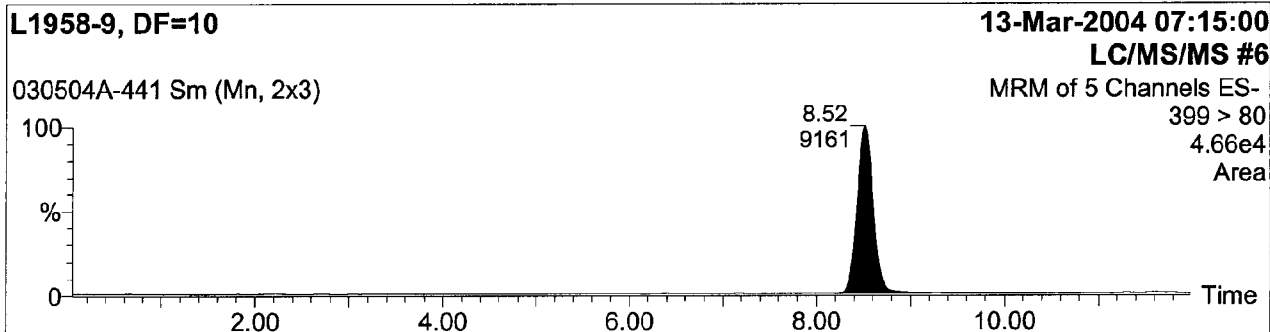
Study No.: L1958, Set No.: 030504A, Ext.Date: 03/05/04, Analyst: K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

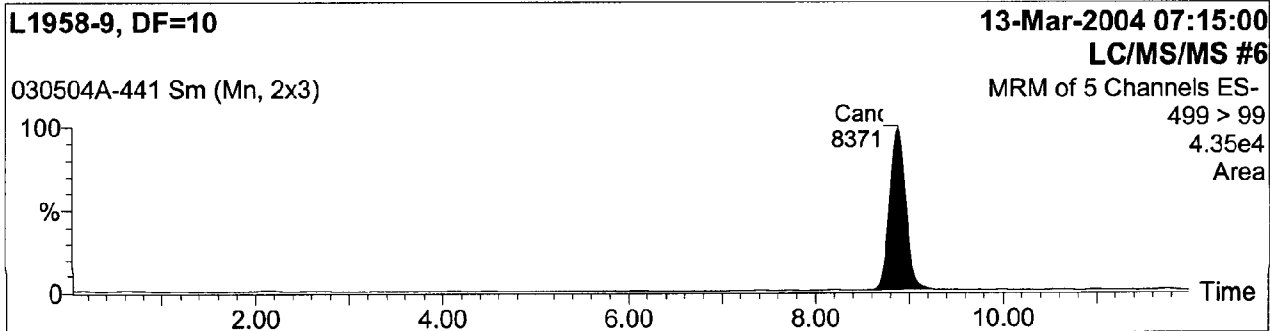
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-441
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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Quantify Sample Report

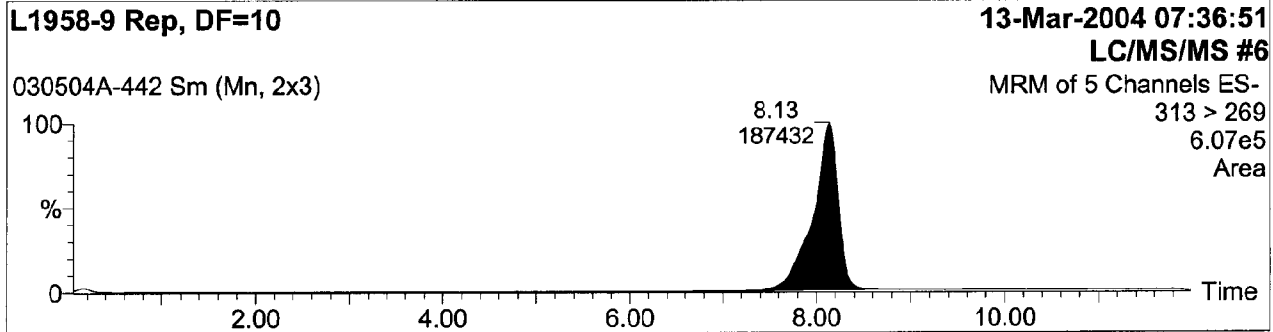
Study No.: L1958, Set No.: 030504A, Ext.Date: 03/05/04, Analyst: K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

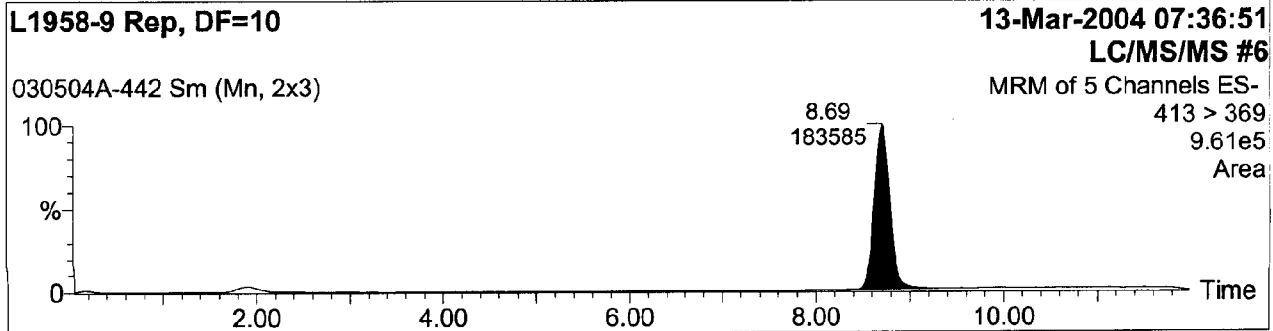
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-442
Text:

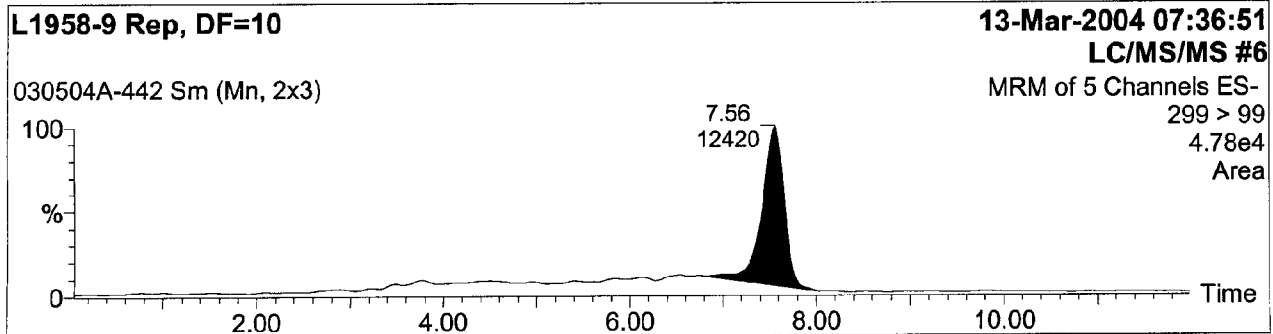
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

Study No.: L1958, Set No.: 030504A, Ext.Date: 03/05/04, Analyst: K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDE\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-442
Text:

4: C6 Sulfonate PFHS

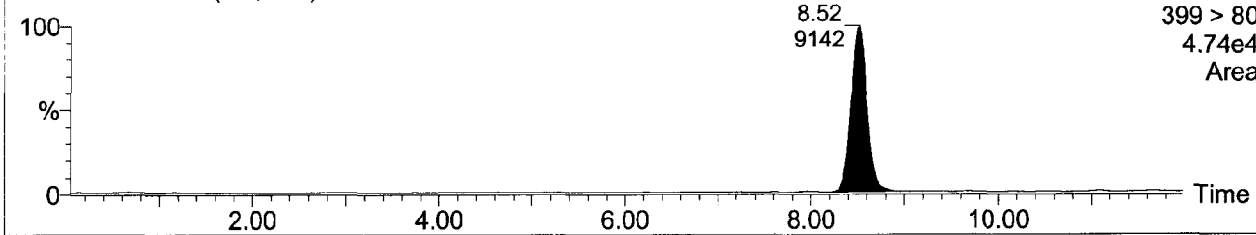
L1958-9 Rep, DF=10

13-Mar-2004 07:36:51

LC/MS/MS #6

030504A-442 Sm (Mn, 2x3)

MRM of 5 Channels ES-
399 > 80
4.74e4
Area



5: C8 Sulfonate PFOS

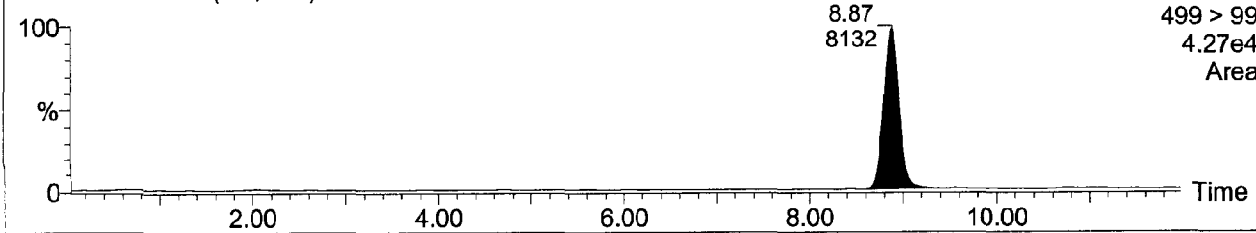
L1958-9 Rep, DF=10

13-Mar-2004 07:36:51

LC/MS/MS #6

030504A-442 Sm (Mn, 2x3)

MRM of 5 Channels ES-
499 > 99
4.27e4
Area



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Quantify Sample Report

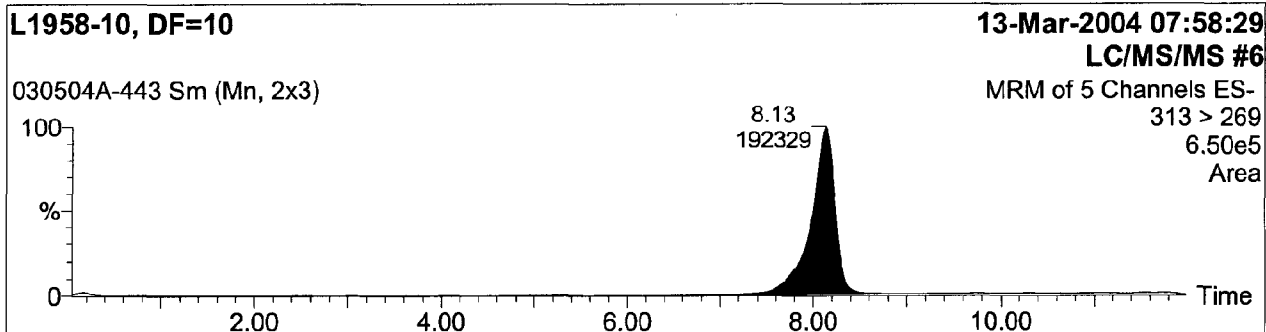
Study No.: L1958, Set No.: 030504A, Ext.Date: 03/05/04, Analyst: K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

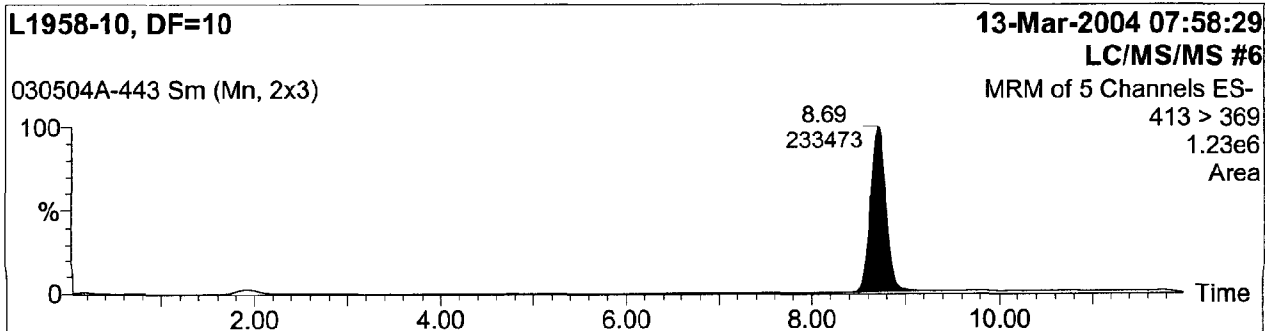
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-443
Text:

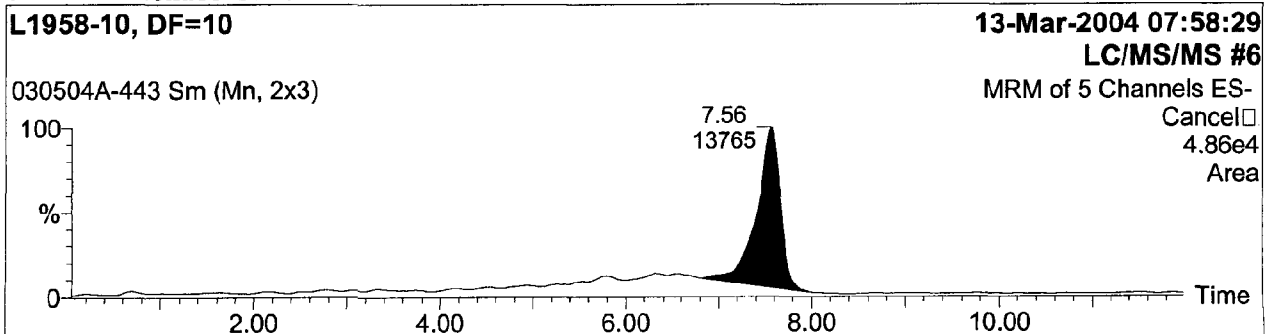
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



Oxygen Research, 3058 Research Drive, State College, PA 16801

Quantify Sample Report

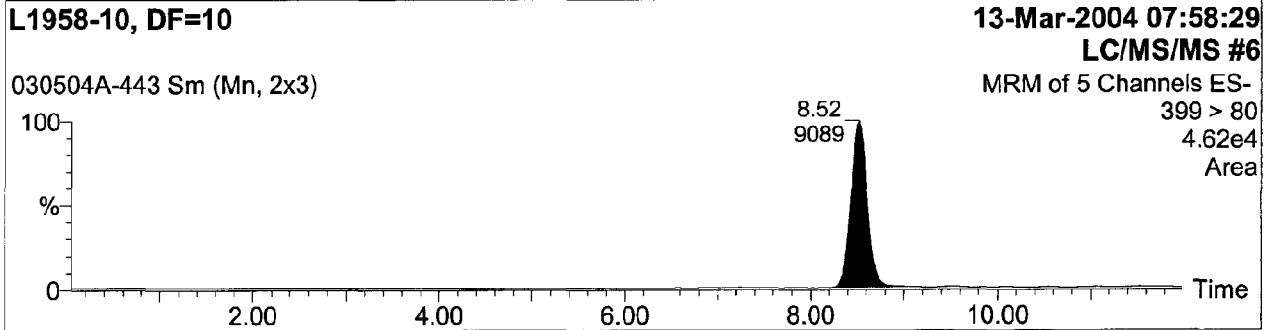
Study No.:L1958, Set No.:030504A, Ext.Date:03/05/04, Analyst:K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

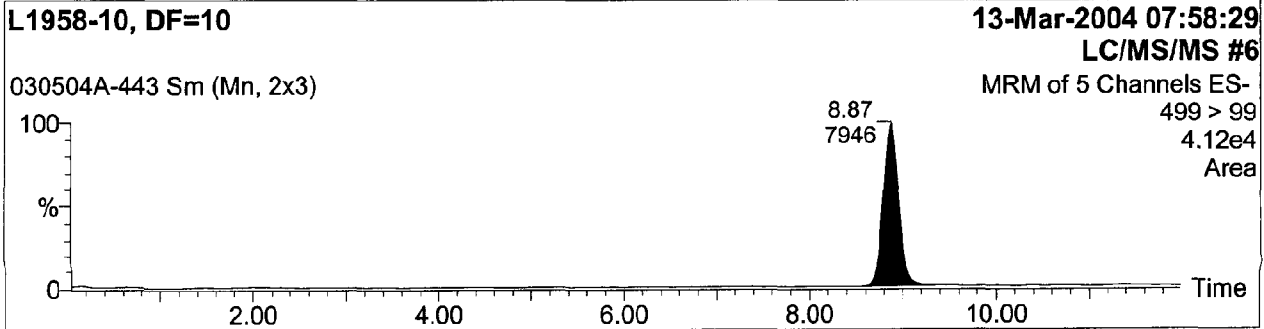
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-443
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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Quantify Sample Report

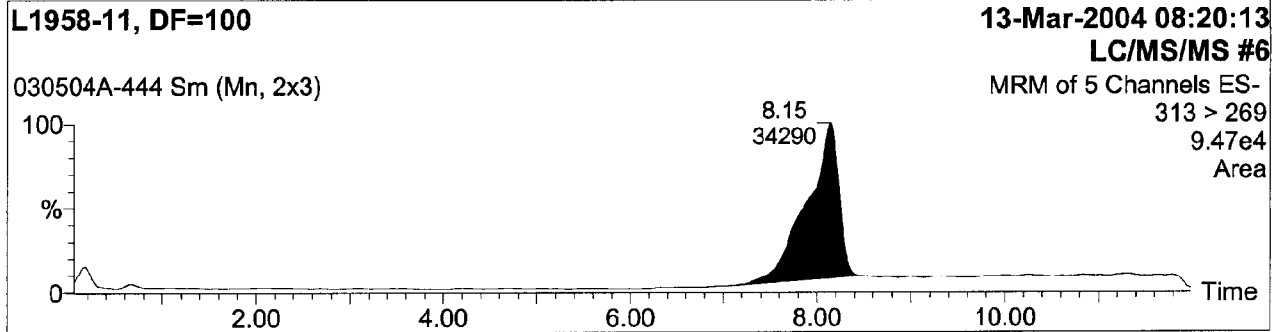
Study No.: L1958, Set No.: 030504A, Ext.Date: 03/05/04, Analyst: K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

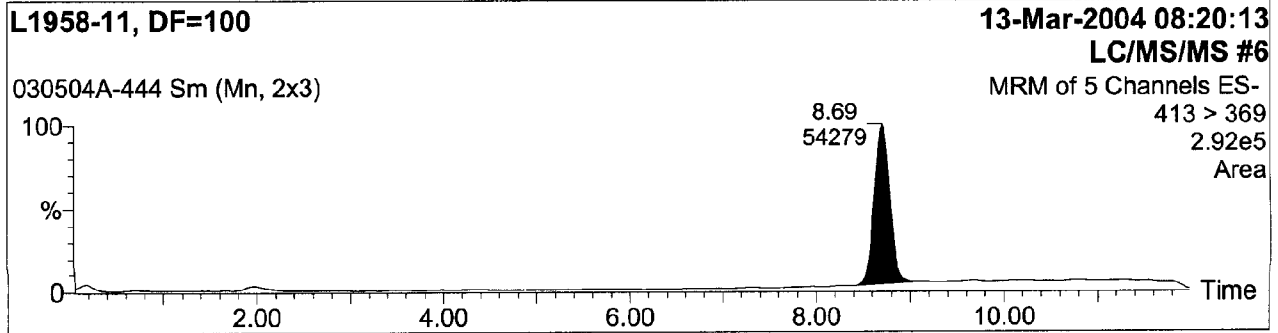
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-444
Text:

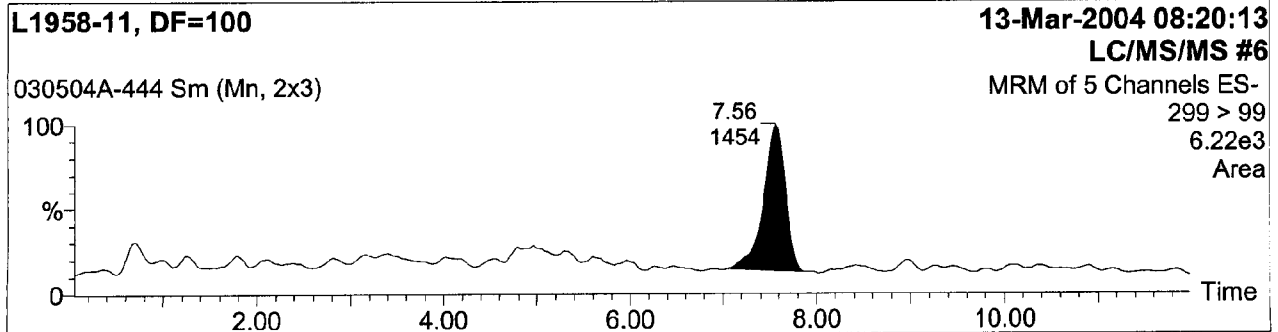
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



Oxygen Research, 3058 Research Drive, State College, PA 16801

Quantify Sample Report

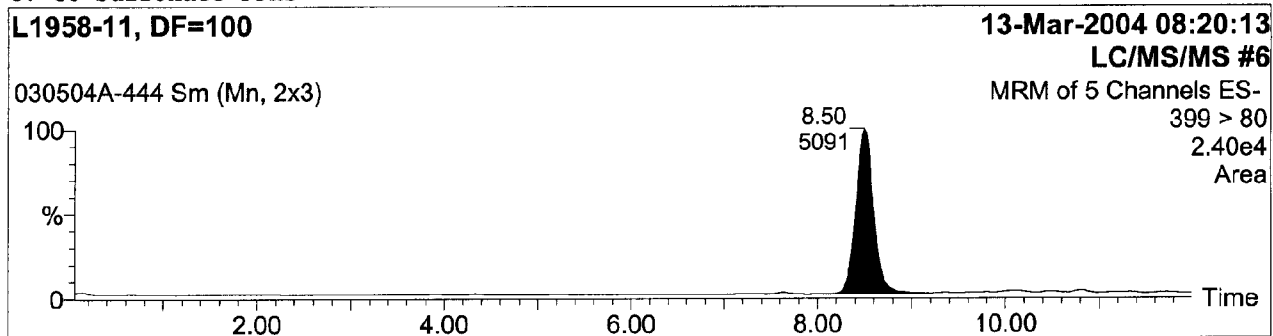
Study No.:L1958, Set No.:030504A, Ext.Date:03/05/04, Analyst:K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

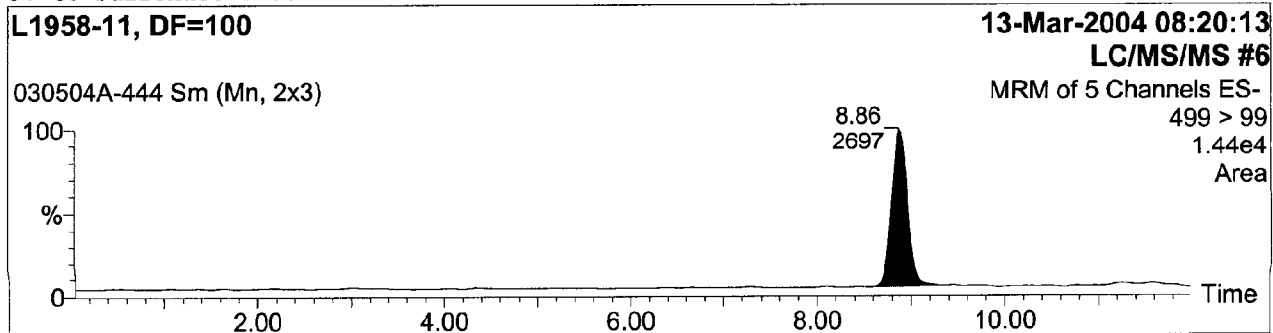
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-444
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



Oxygen Research, 3058 Research Drive, State College, PA 16801

Quantify Sample Report

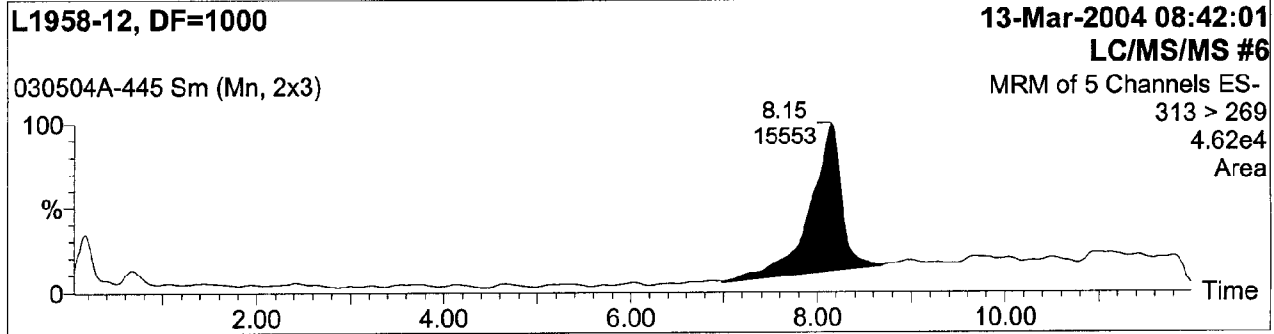
Study No.: L1958, Set No.: 030504A, Ext.Date: 03/05/04, Analyst: K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

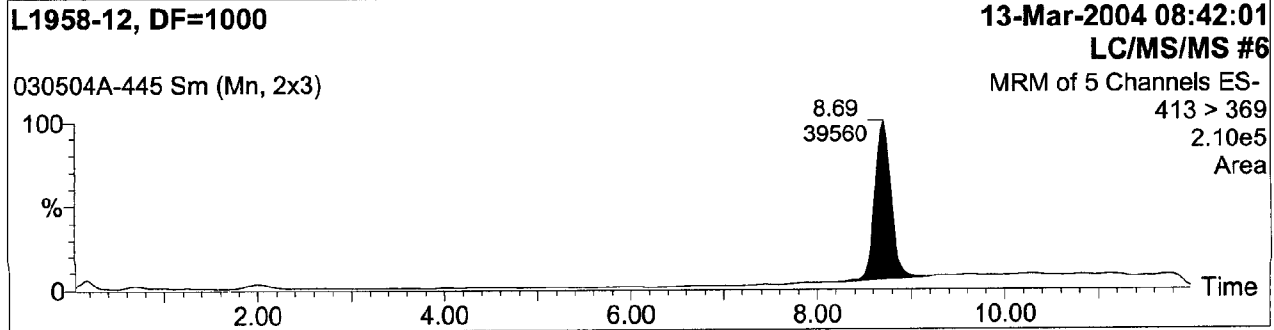
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Name: 030504A-445
Text:

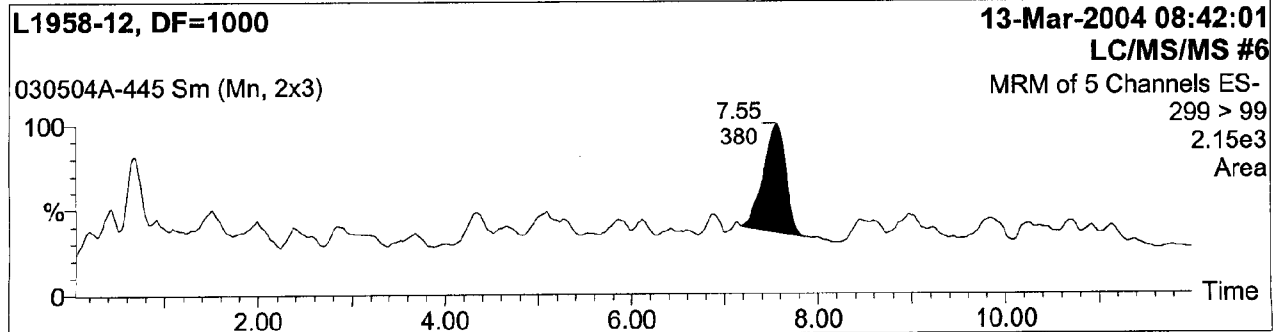
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

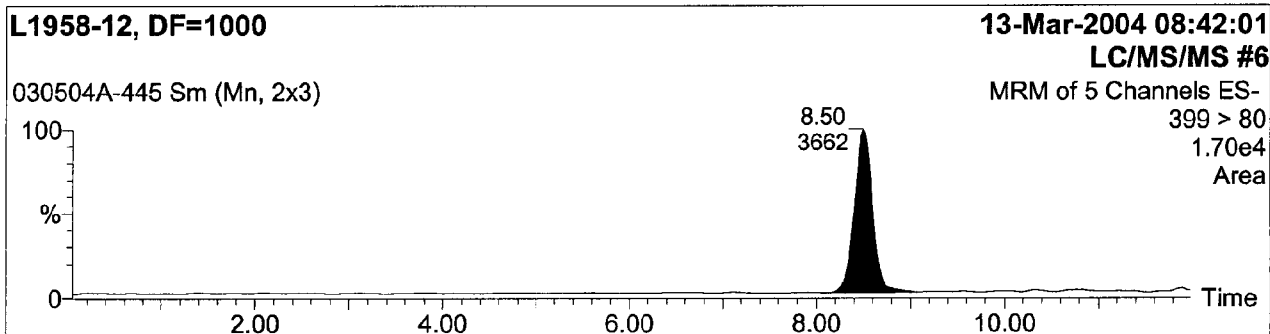
Study No.: L1958, Set No.: 030504A, Ext.Date: 03/05/04, Analyst: K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

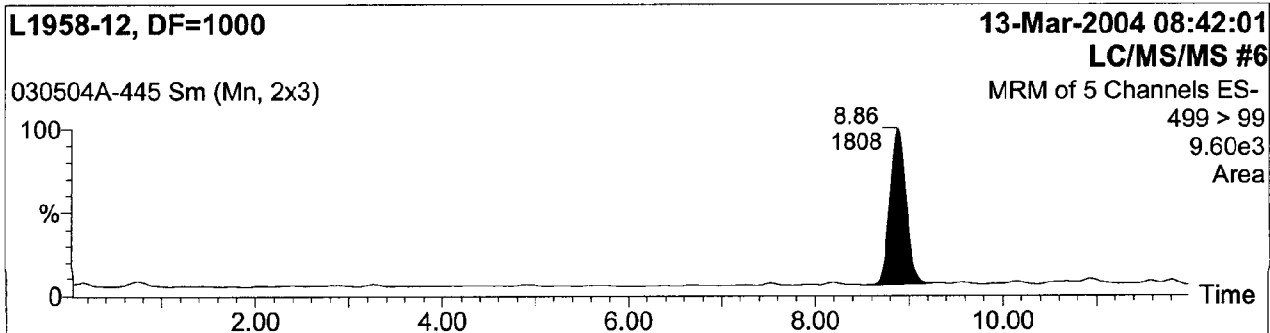
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-445
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



Oxygen Research, 3058 Research Drive, State College, PA 16801

Quantify Sample Report

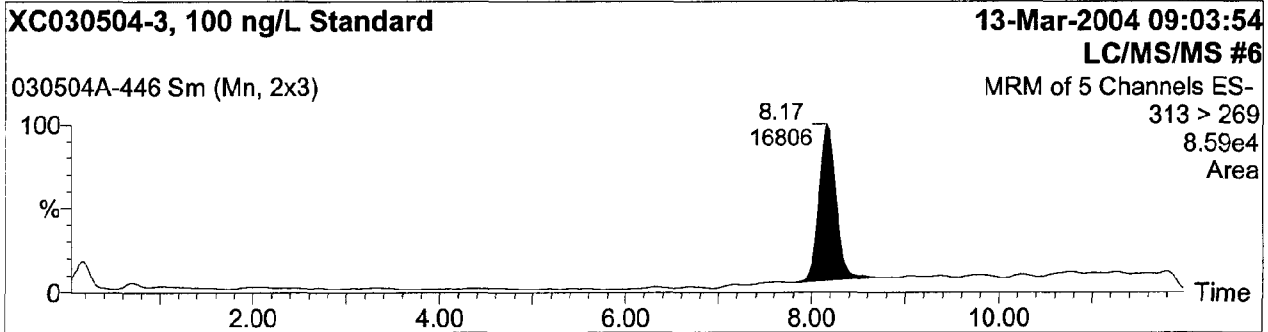
Study No.:L1958, Set No.:030504A, Ext.Date:03/05/04, Analyst:K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDE\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

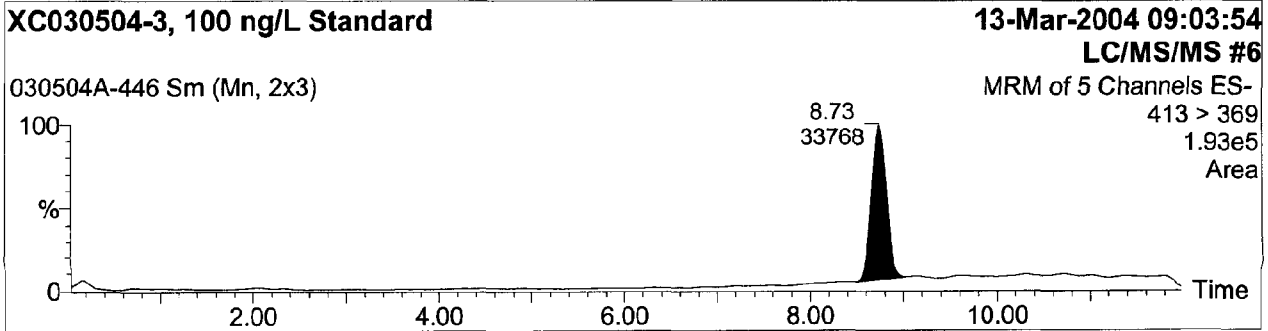
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-446
Text:

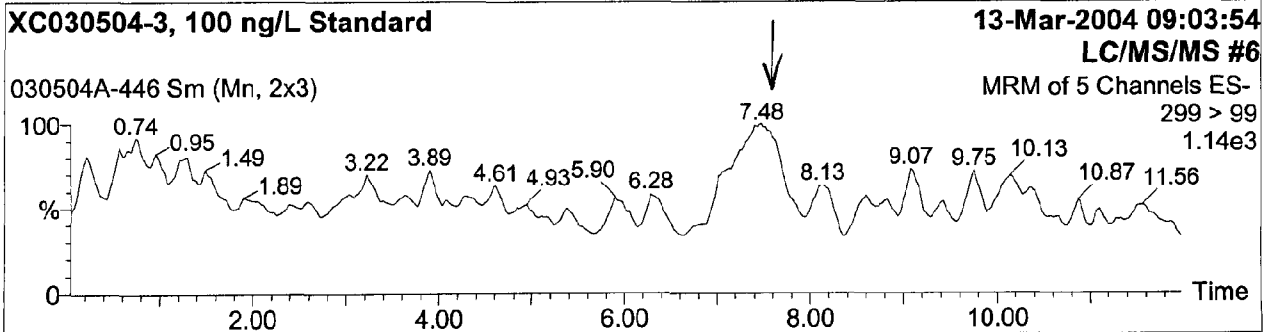
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

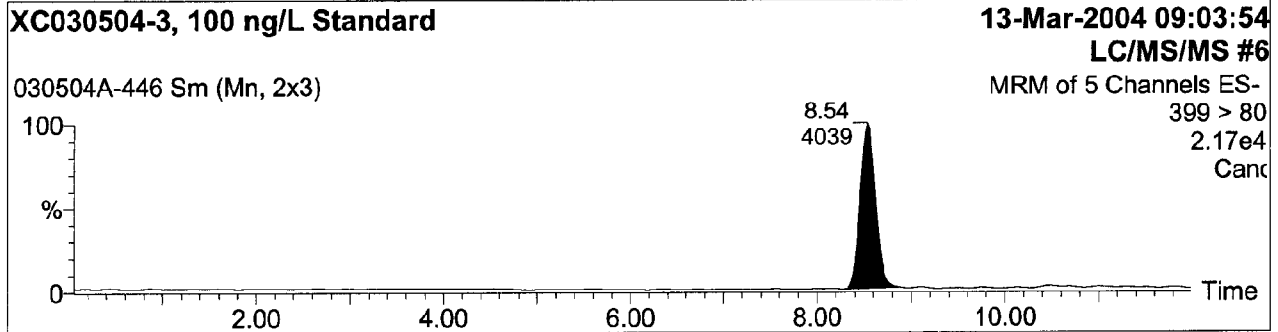
Study No.: L1958, Set No.: 030504A, Ext. Date: 03/05/04, Analyst: K. Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

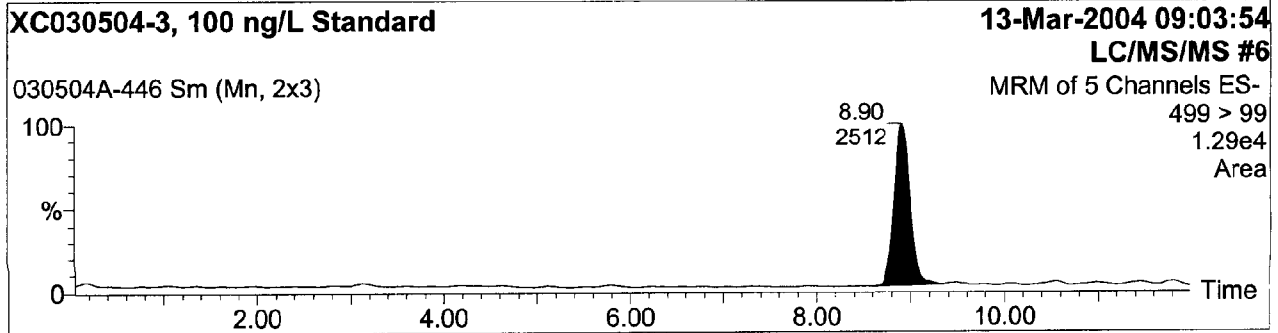
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-446
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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Quantify Sample Report

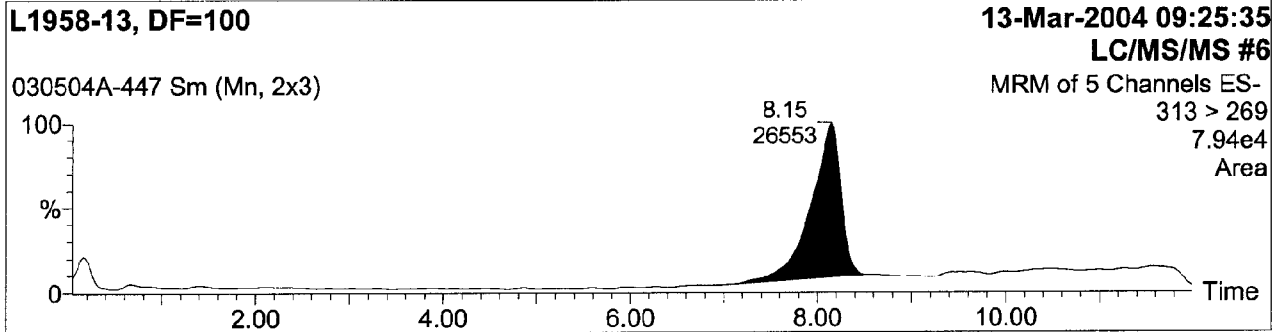
Study No.: L1958, Set No.: 030504A, Ext.Date: 03/05/04, Analyst: K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
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Last modified: Mon Mar 15 13:25:12 2004
Job Code:

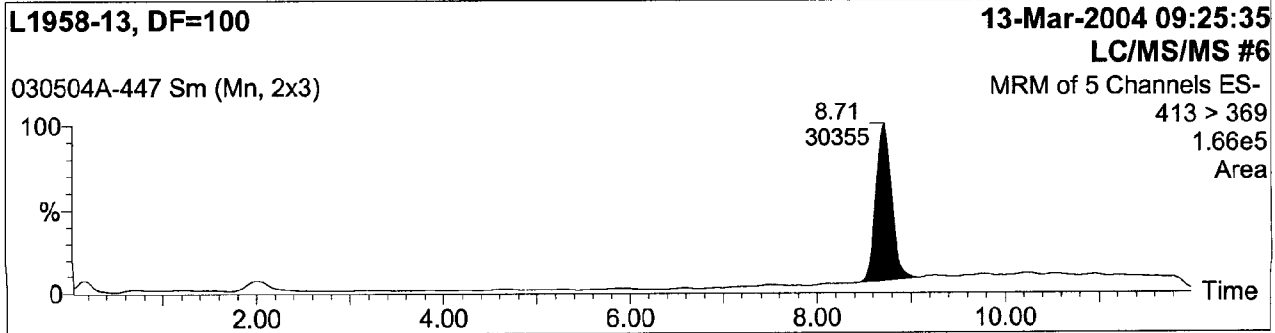
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-447
Text:

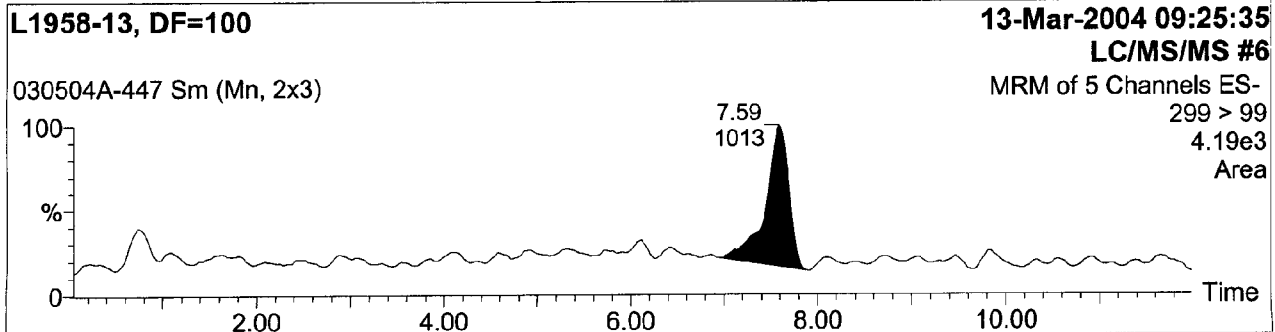
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

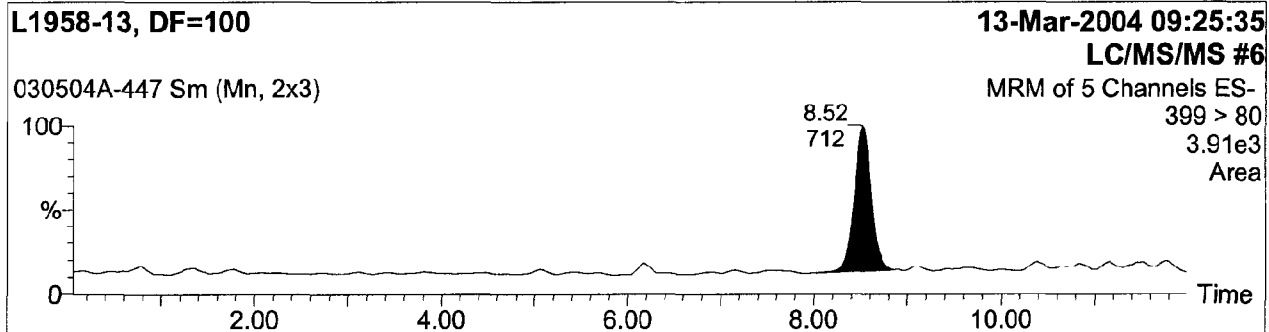
Study No.:L1958, Set No.:030504A, Ext.Date:03/05/04, Analyst:K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
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Last modified: Mon Mar 15 13:25:12 2004
Job Code:

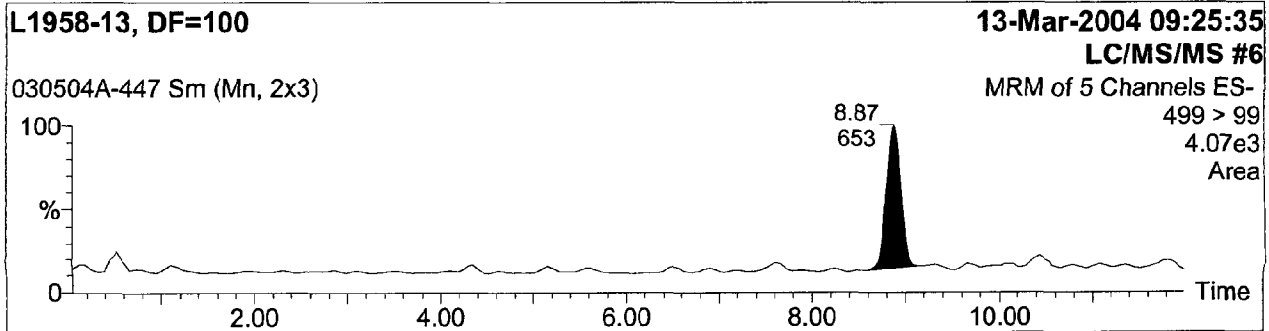
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-447
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



Oxygen Research, 3058 Research Drive, State College, PA 16801

Quantify Sample Report

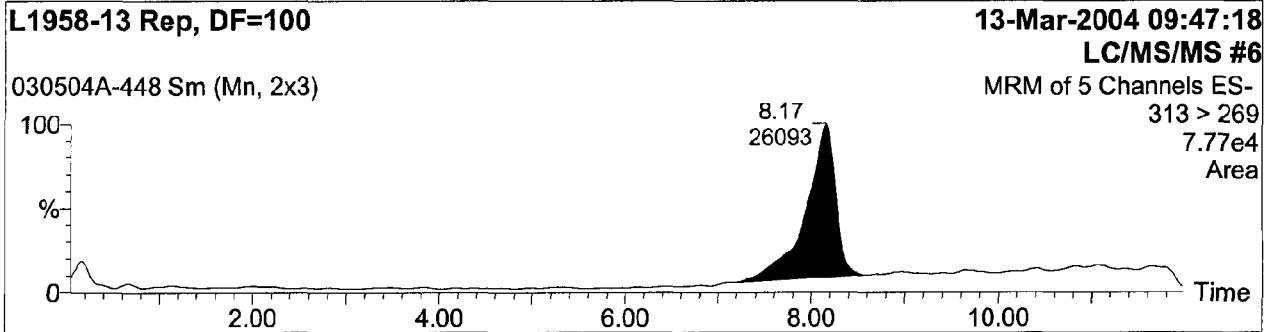
Study No.: L1958, Set No.: 030504A, Ext.Date: 03/05/04, Analyst: K.Risha

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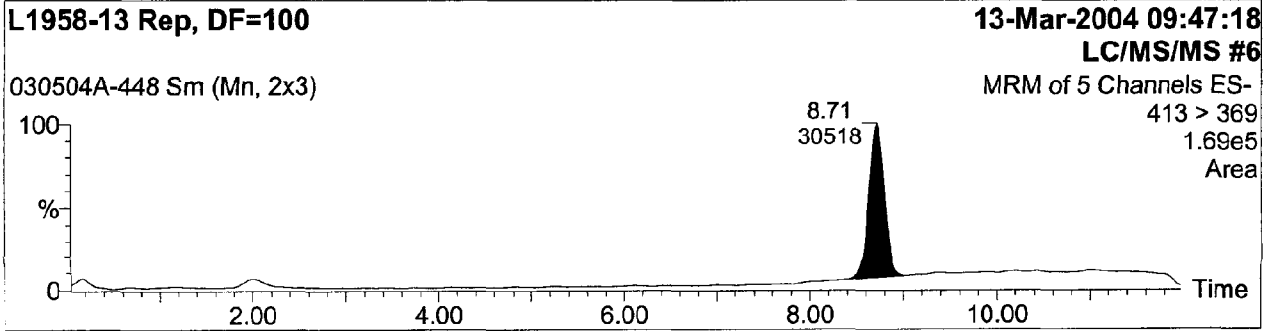
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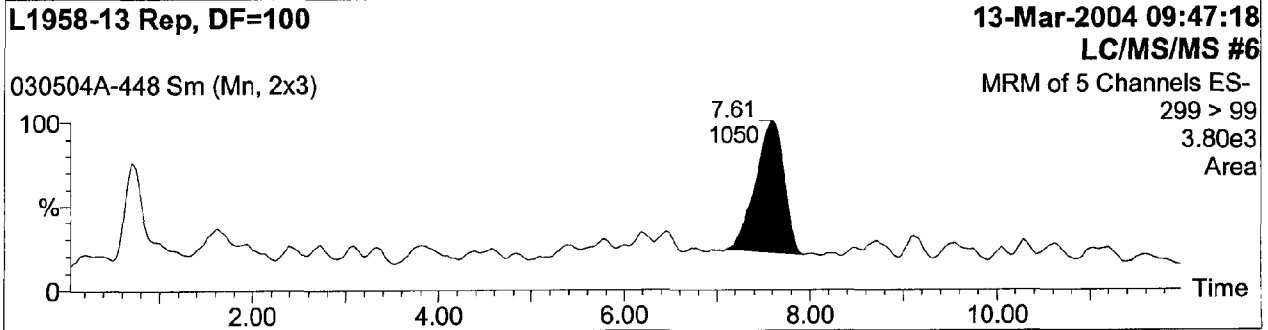
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

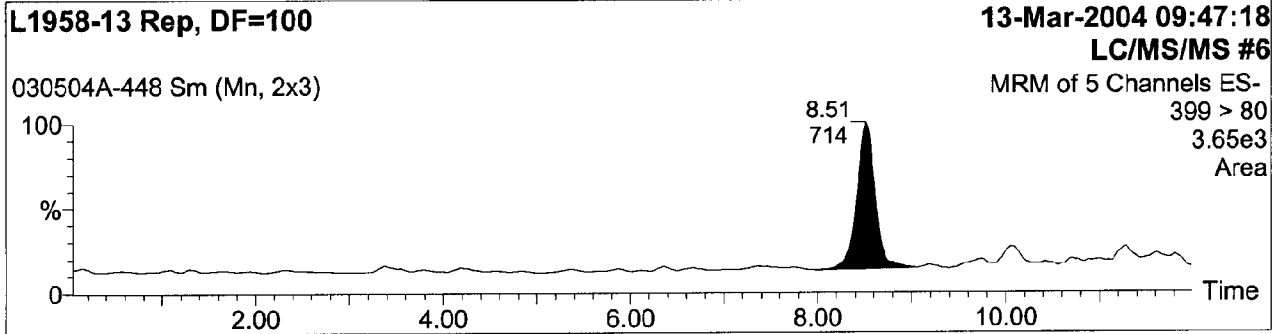
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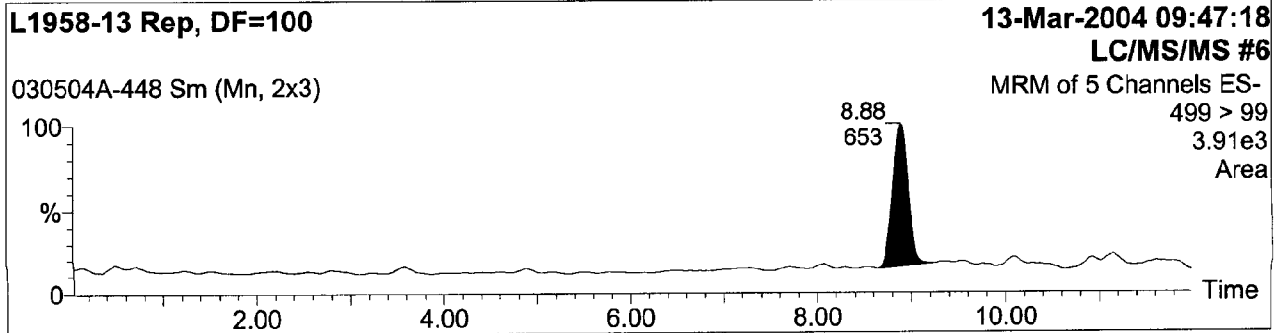
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Name: 030504A-448
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



Oxygen Research, 3058 Research Drive, State College, PA 16801

Quantify Sample Report

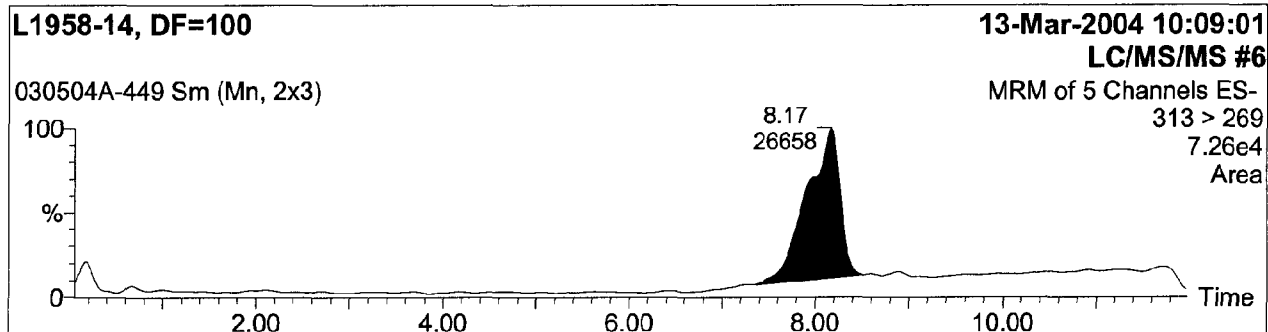
Study No.: L1958, Set No.: 030504A, Ext.Date: 03/05/04, Analyst: K.Risha

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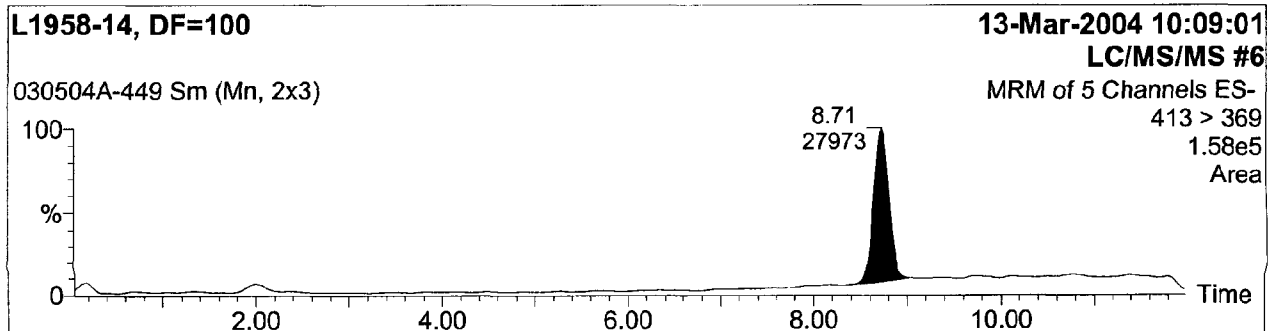
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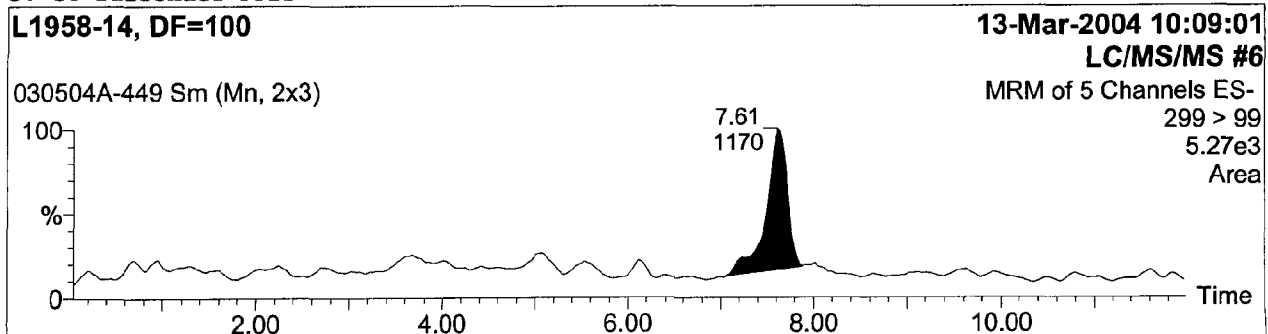
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

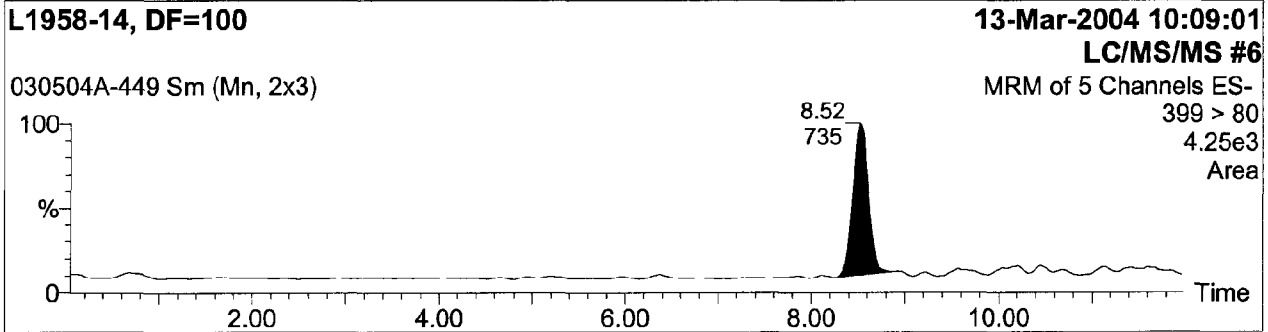
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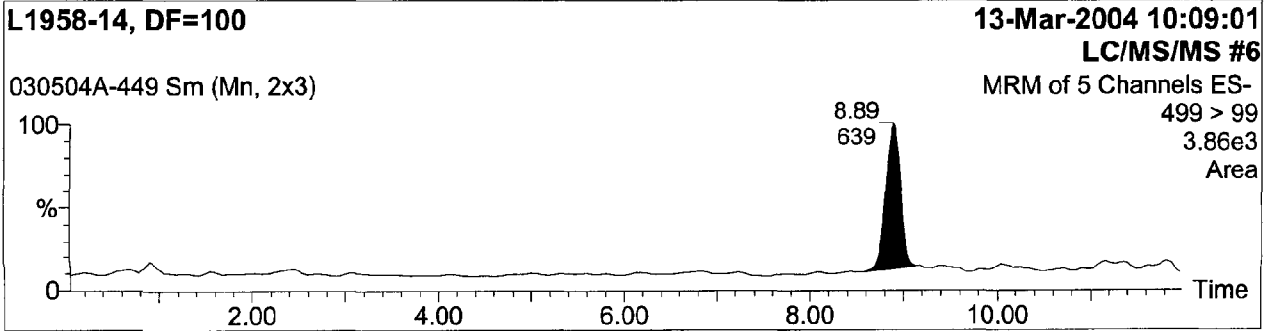
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Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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Quantify Sample Report

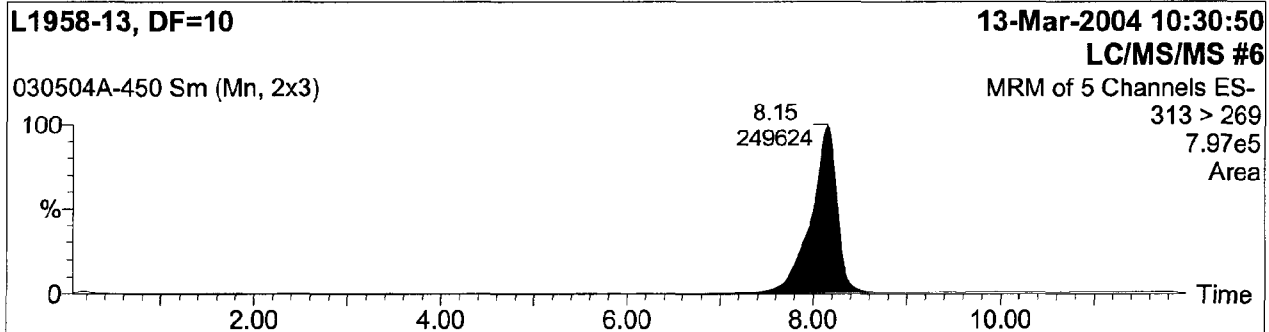
Study No.: L1958, Set No.: 030504A, Ext.Date: 03/05/04, Analyst: K.Risha

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Job Code:

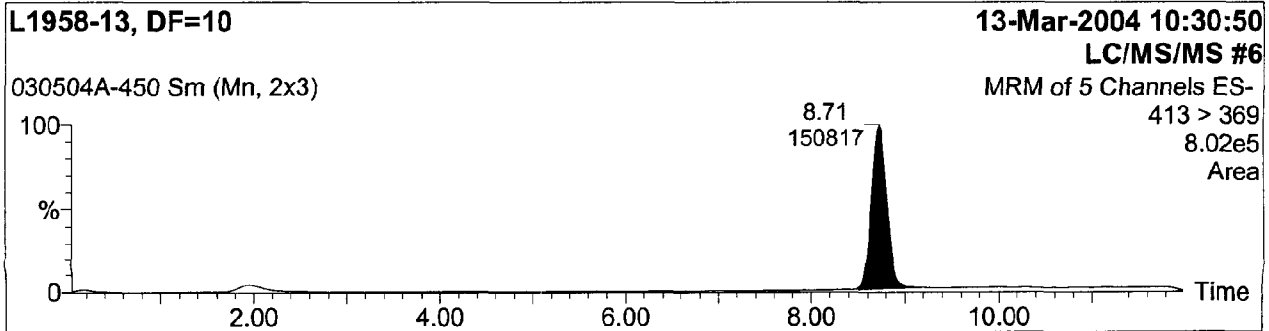
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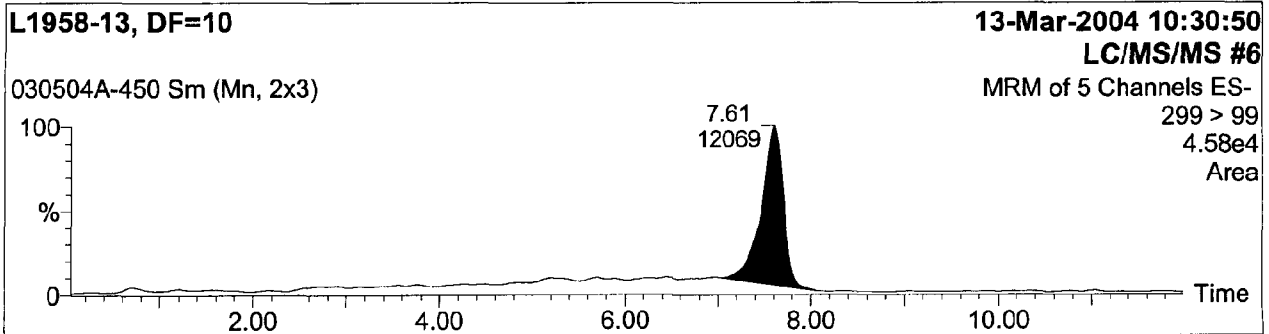
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

Study No.: L1958, Set No.: 030504A, Ext.Date: 03/05/04, Analyst: K.Risha

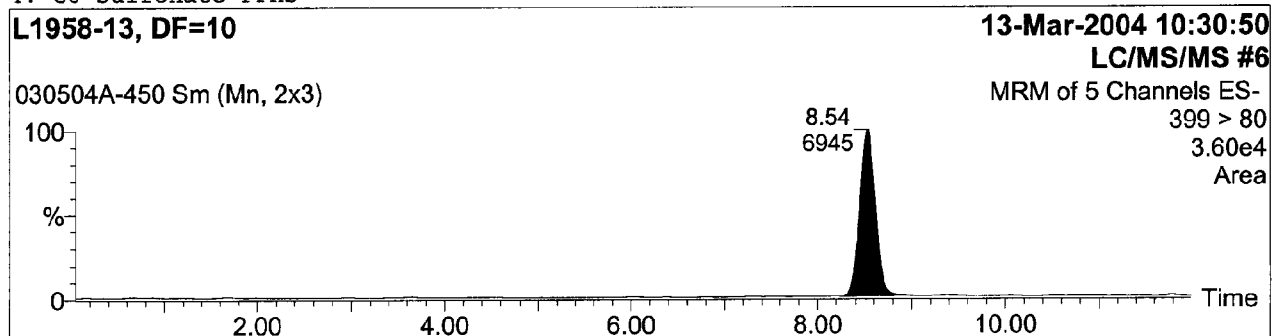
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Job Code:

Printed: Tue Mar 16 07:26:27 2004

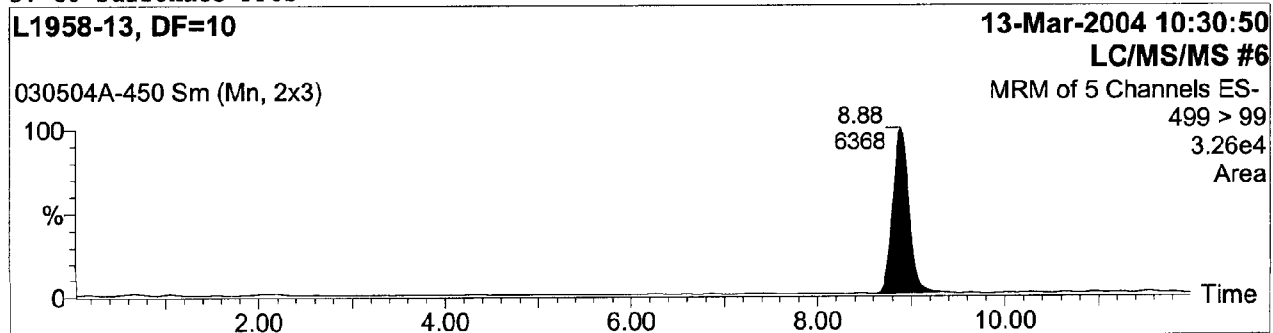
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Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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Quantify Sample Report

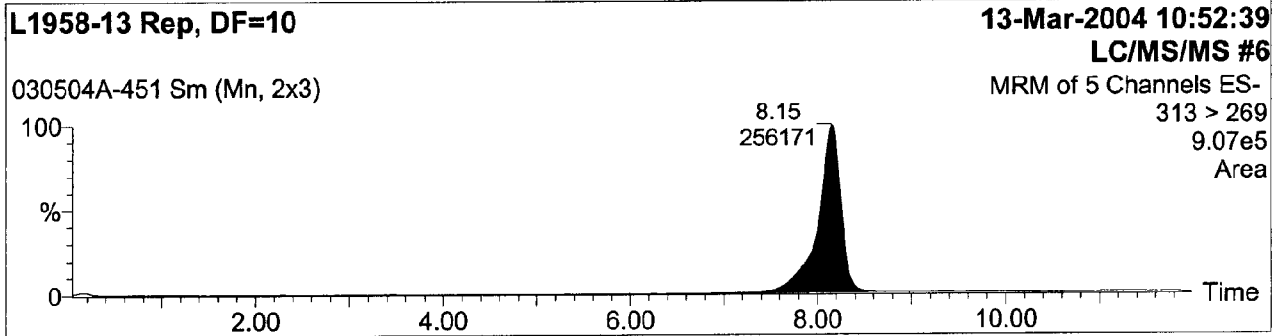
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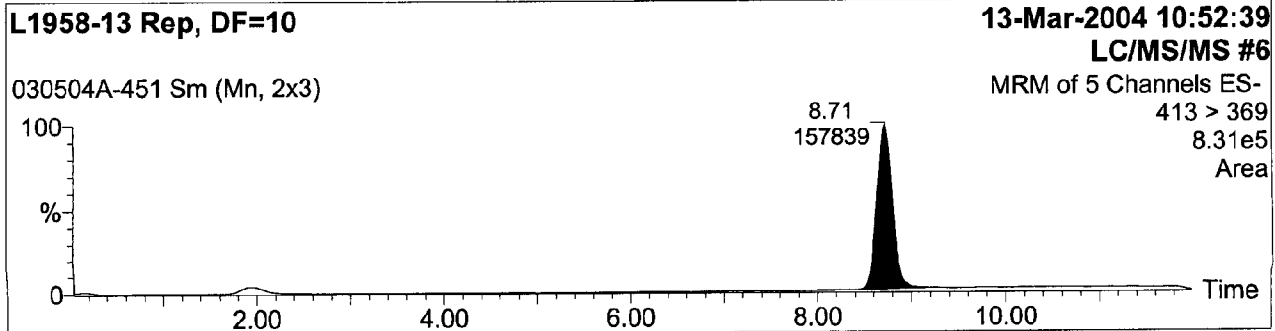
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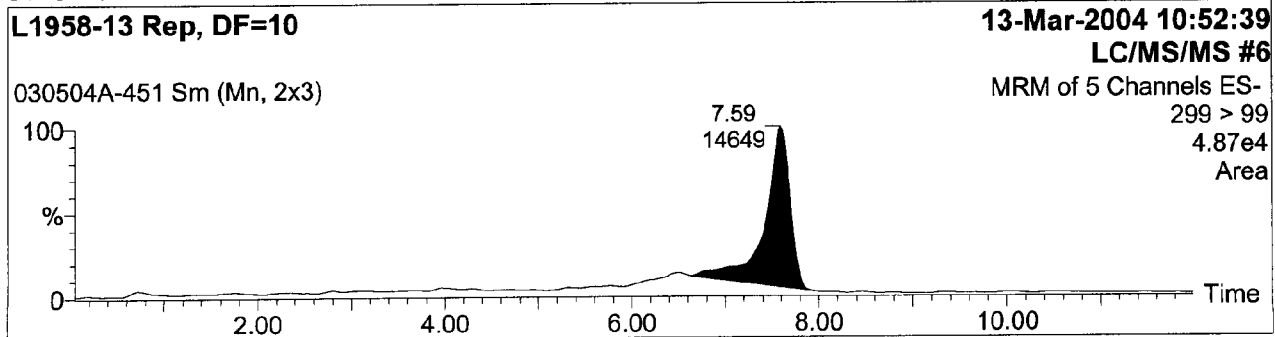
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

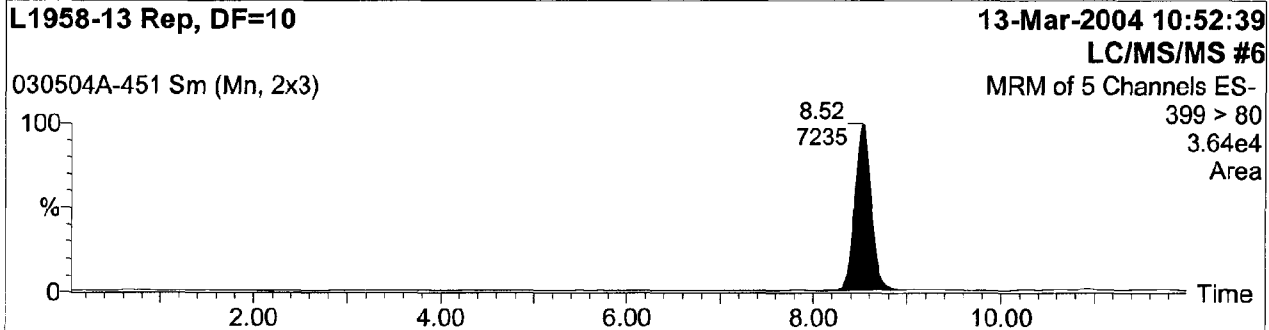
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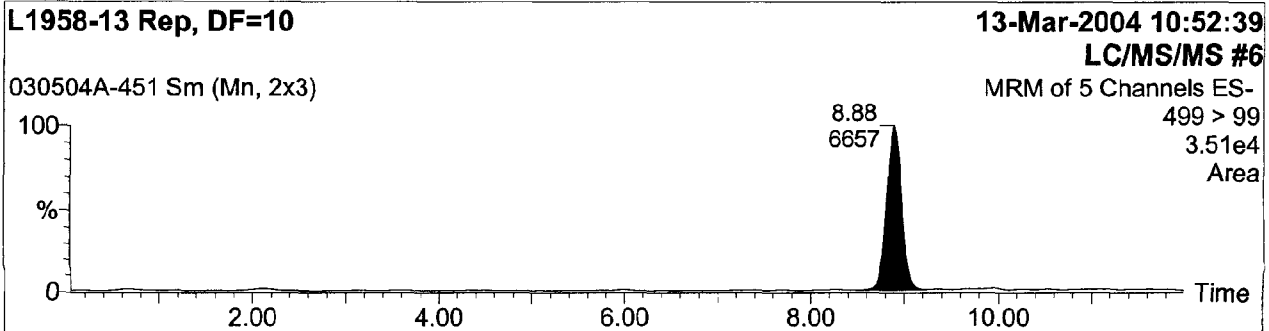
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Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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Quantify Sample Report

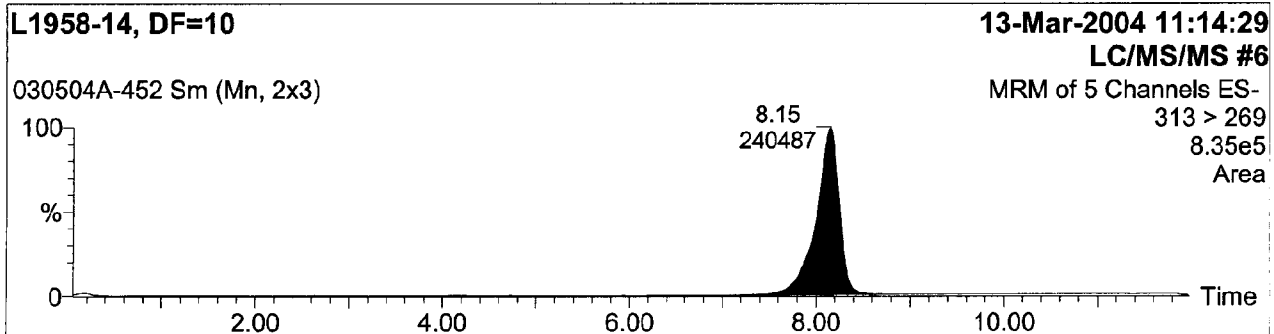
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Last modified: Mon Mar 15 13:25:12 2004
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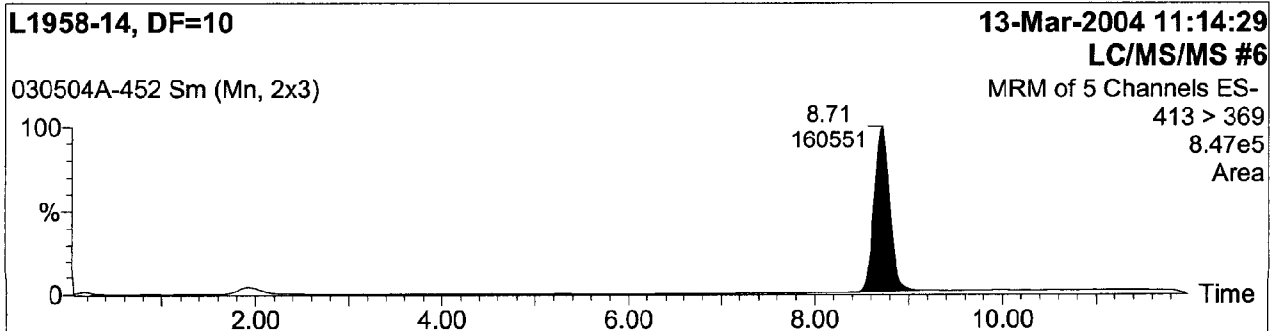
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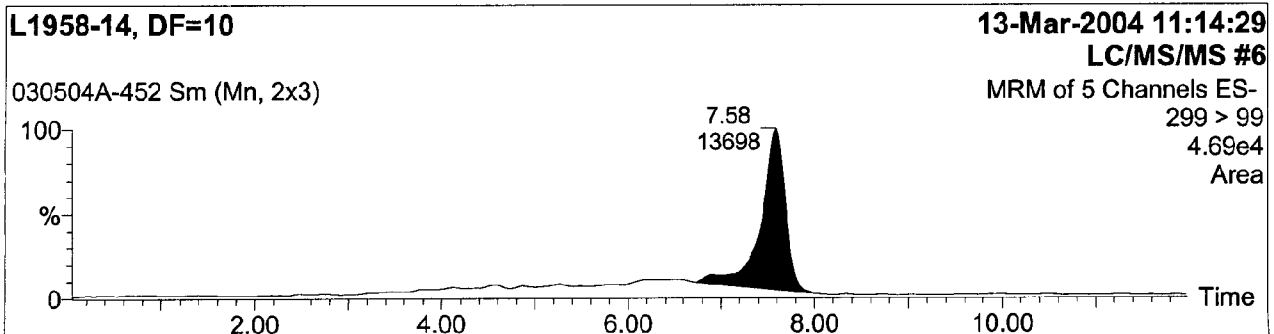
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

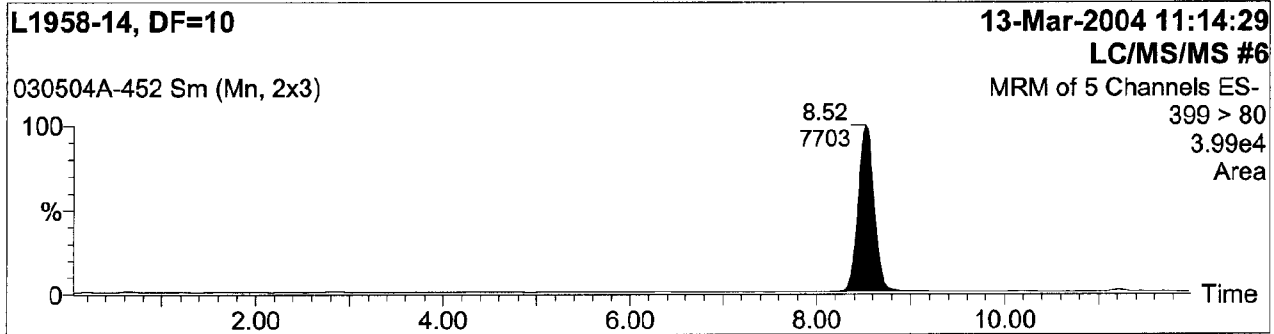
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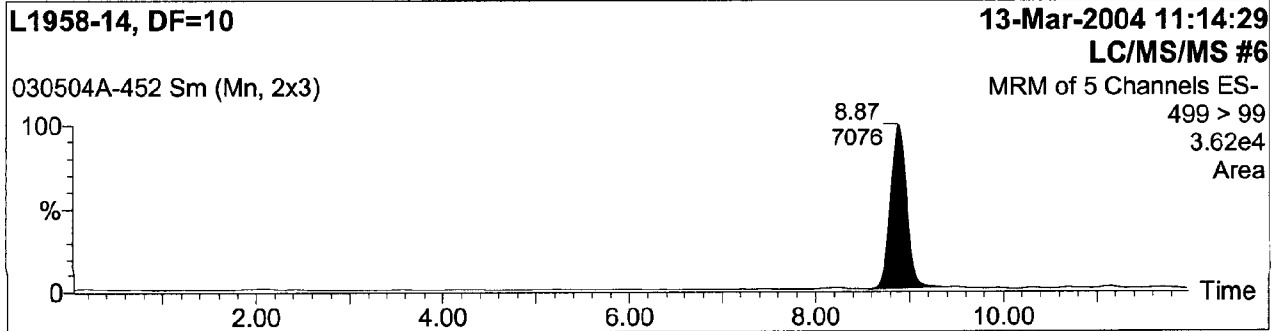
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Name: 030504A-452
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



Oxygen Research, 3058 Research Drive, State College, PA 16801

Quantify Sample Report

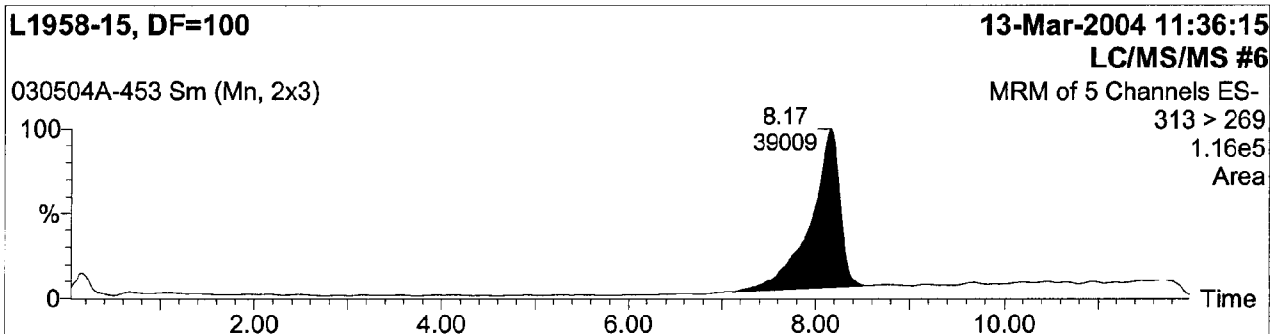
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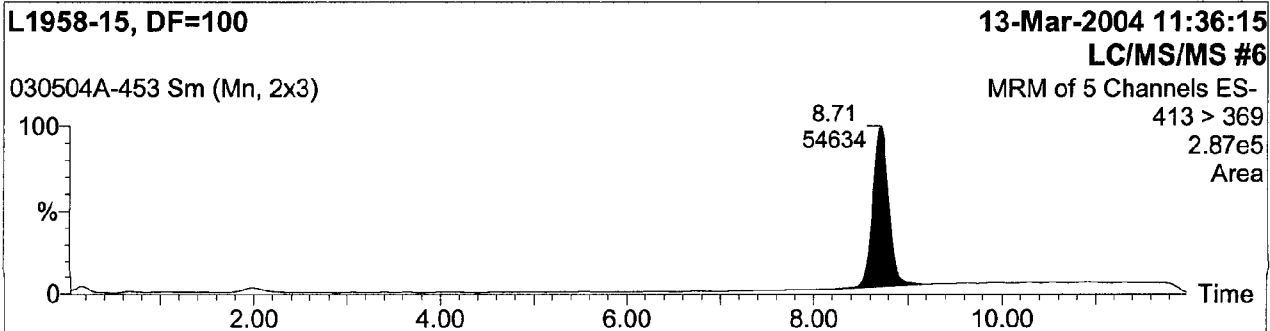
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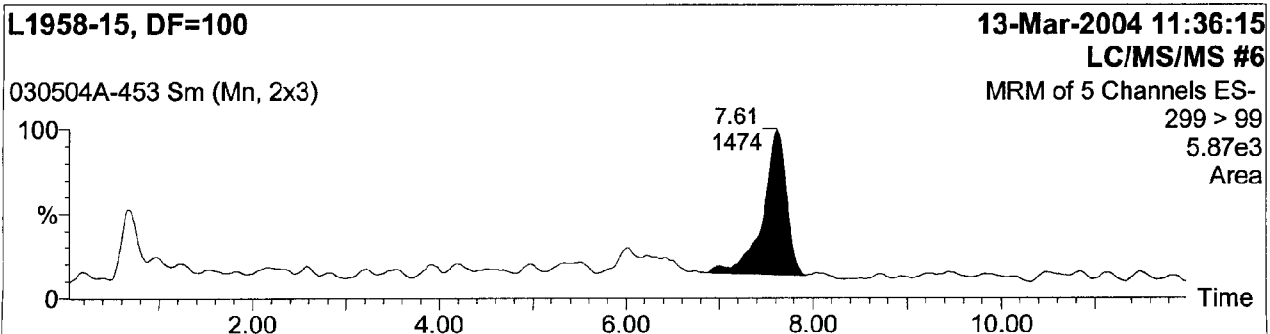
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

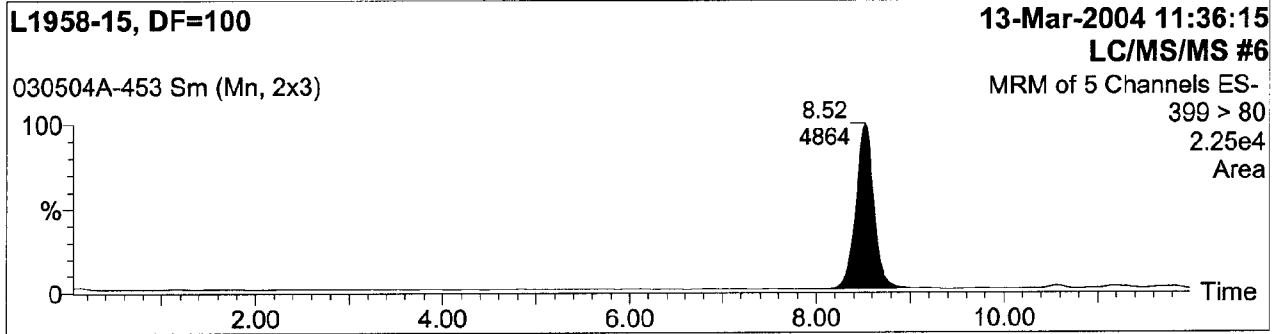
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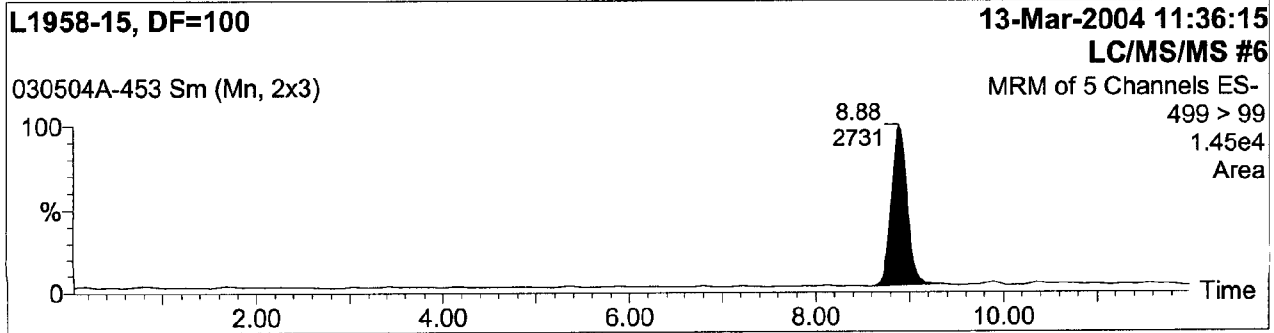
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Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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Quantify Sample Report

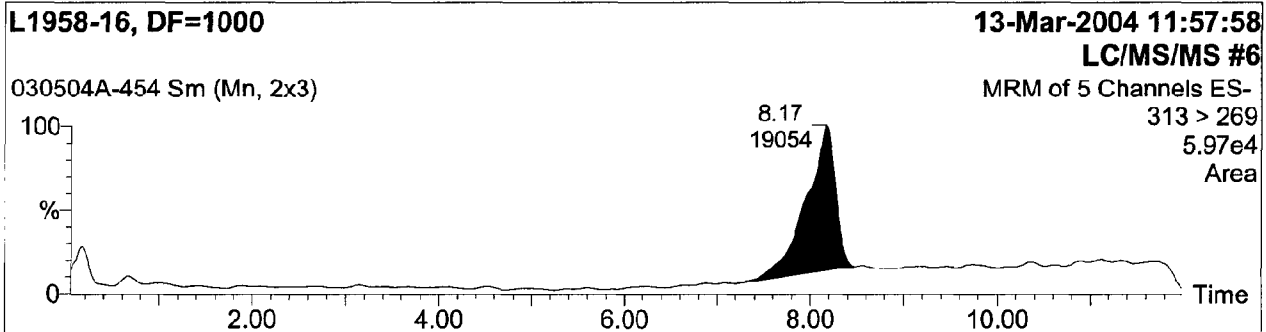
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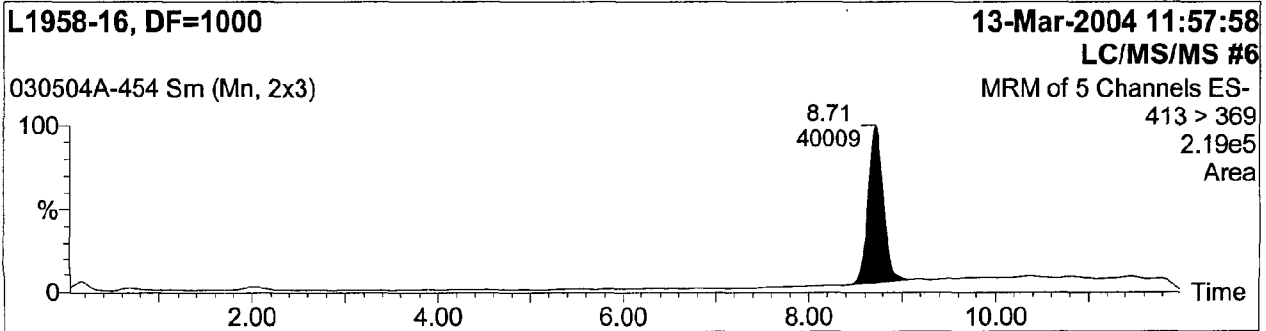
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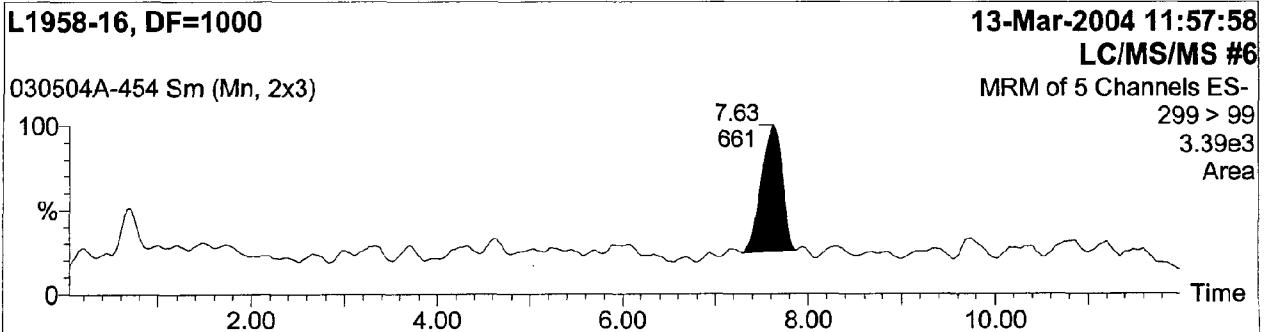
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

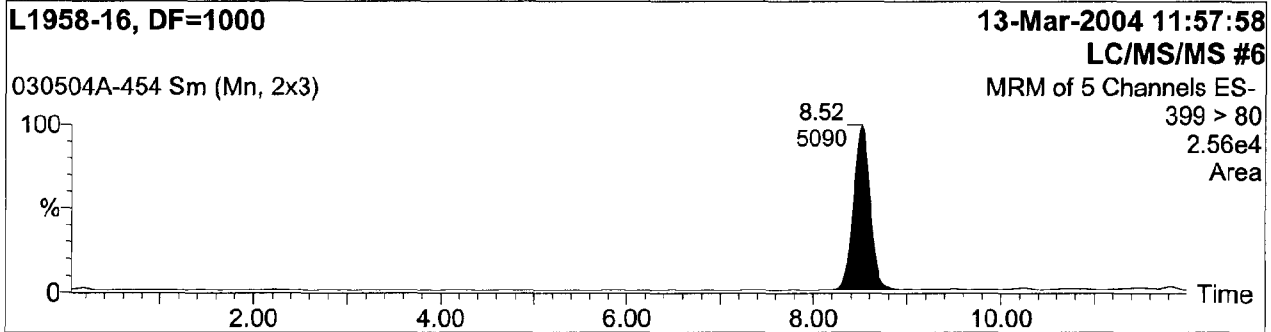
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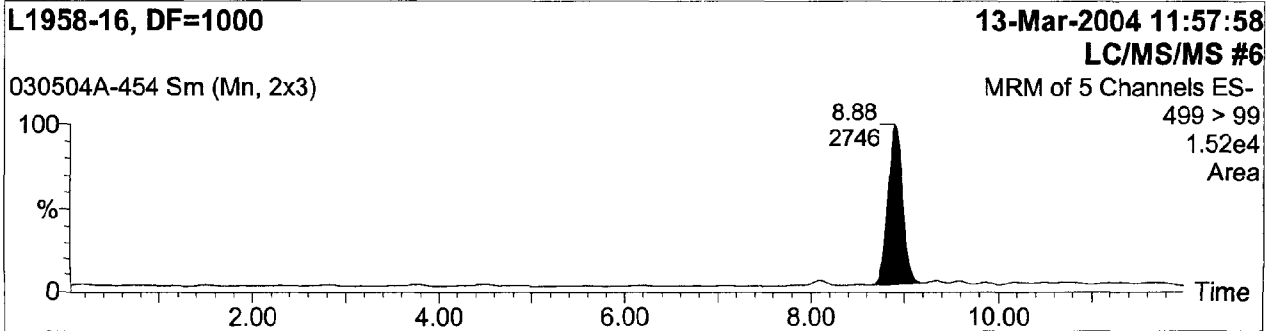
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Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



Exygen Research, 3058 Research Drive, State College, PA 16801

Quantify Sample Report

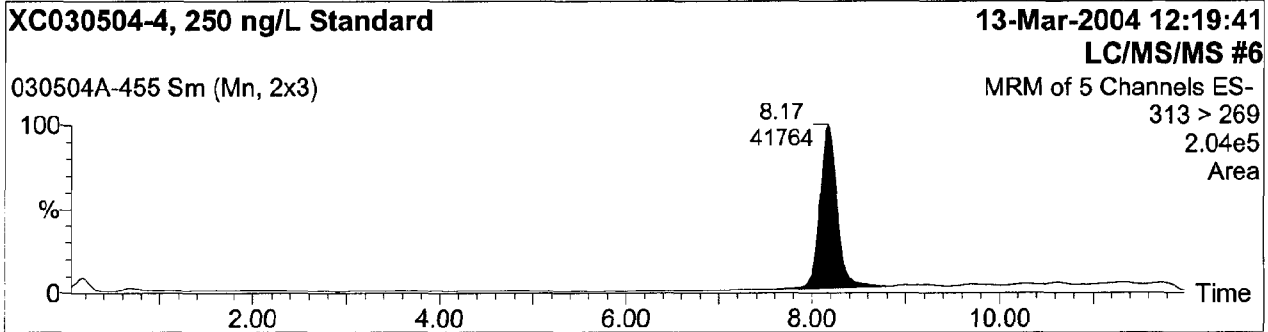
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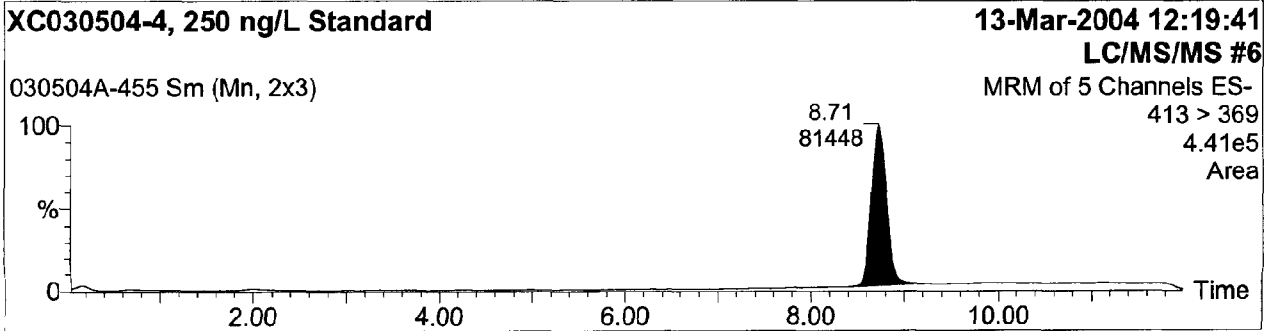
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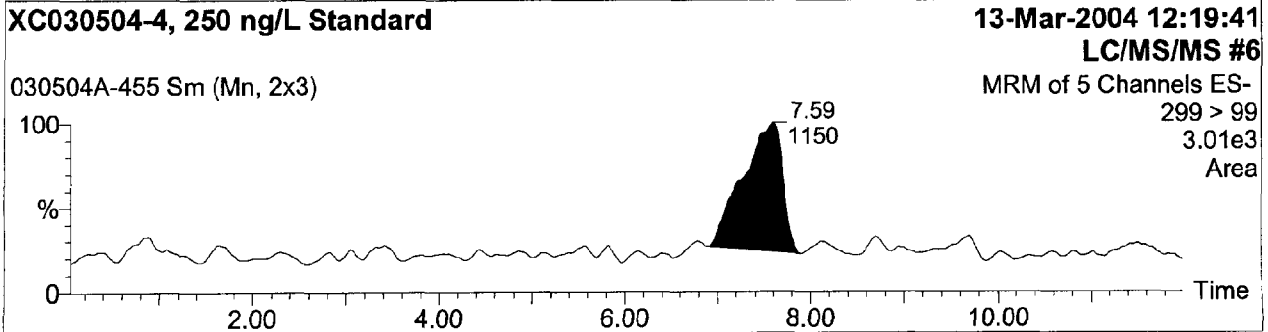
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

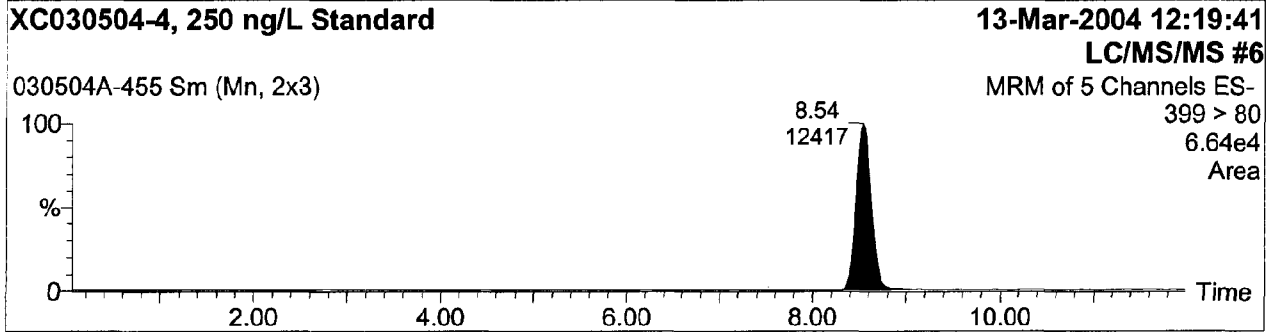
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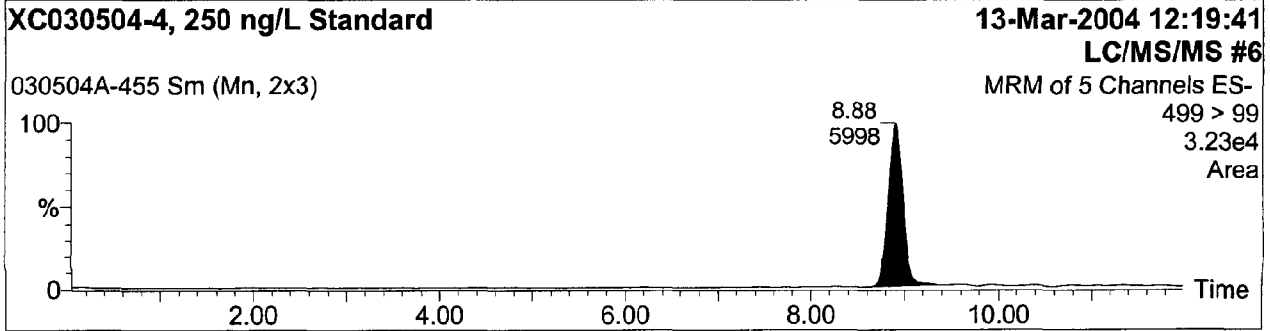
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Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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Quantify Sample Report

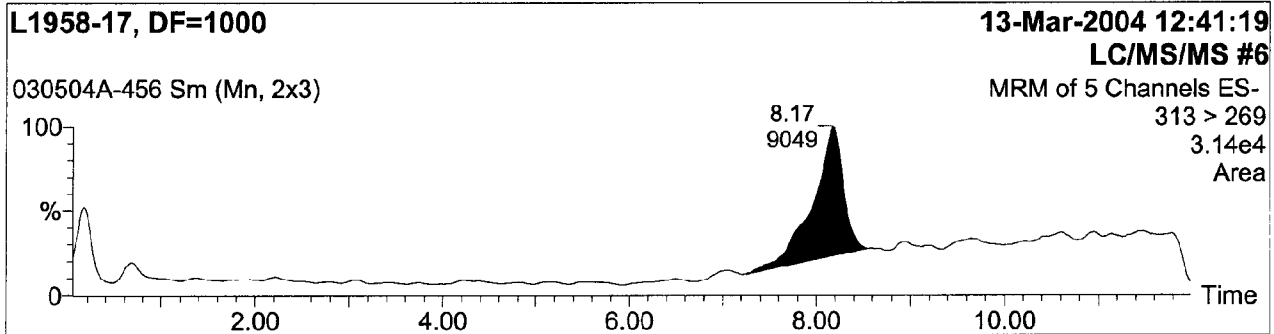
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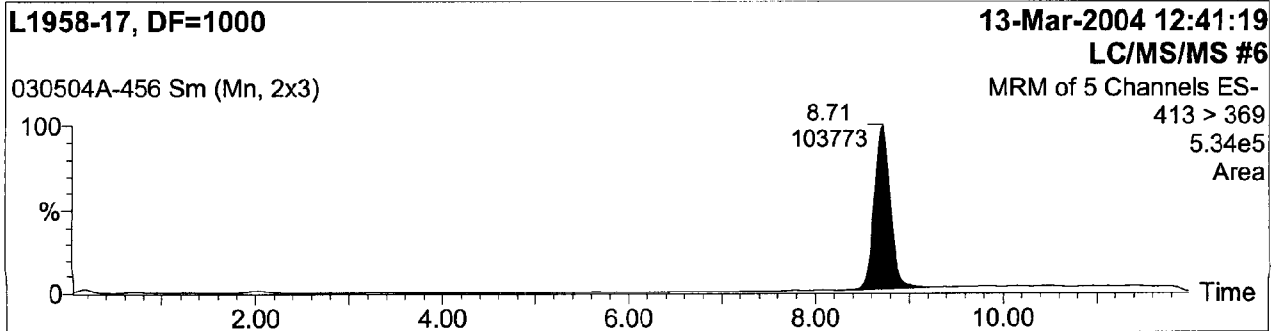
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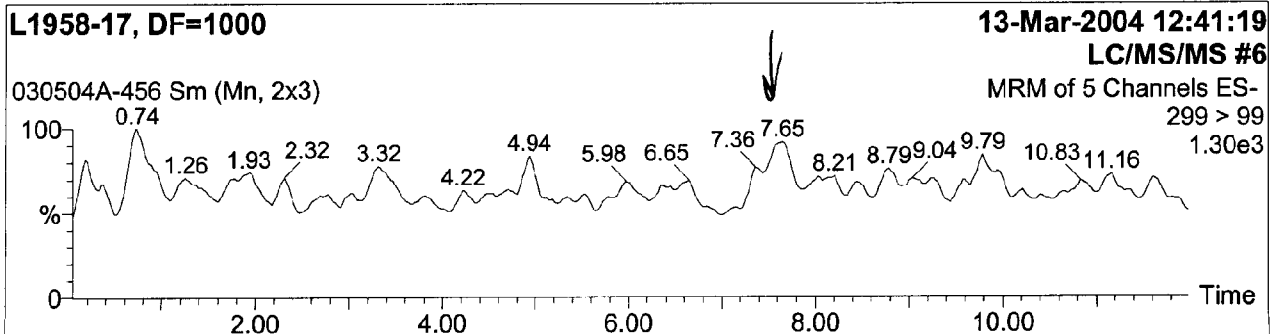
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2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

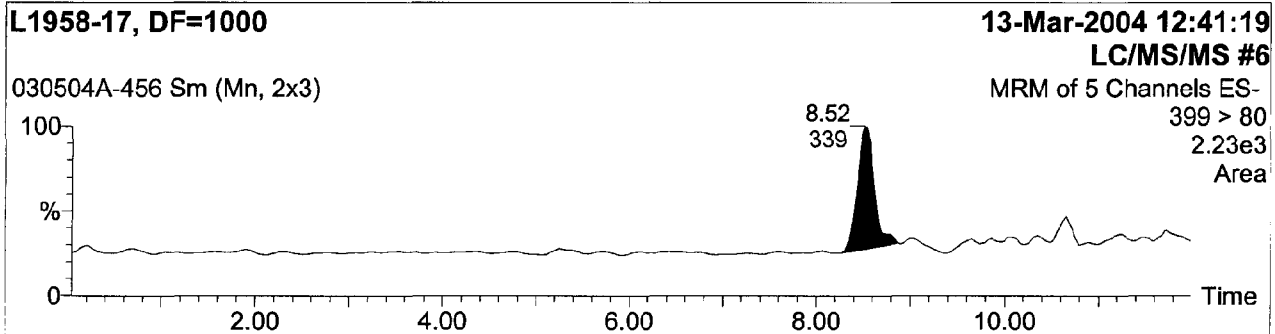
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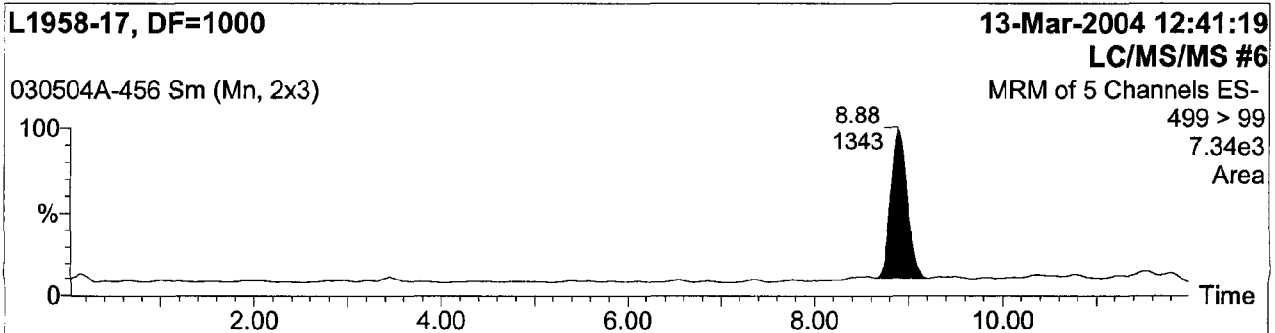
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Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



Exygen Research, 3058 Research Drive, State College, PA 16801

Quantify Sample Report

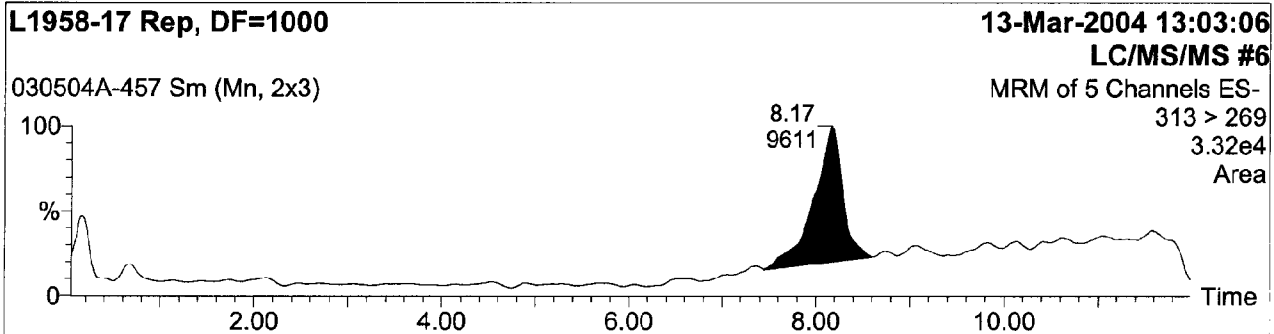
Study No.: L1958, Set No.: 030504A, Ext.Date: 03/05/04, Analyst: K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

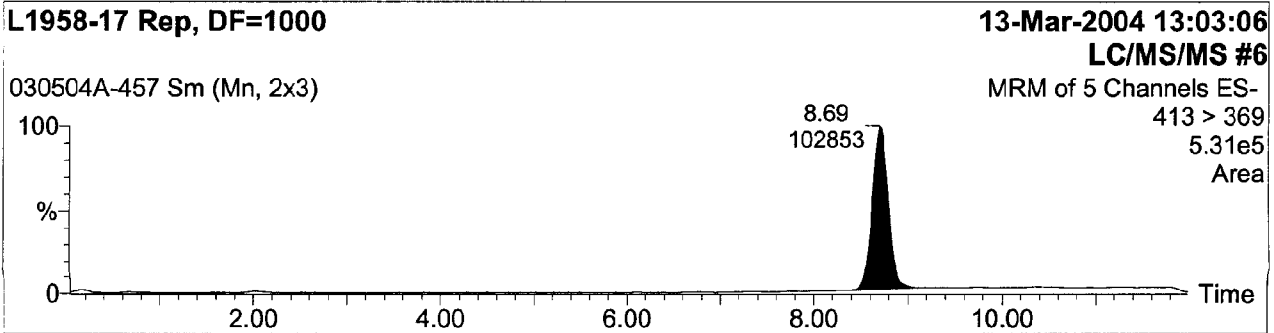
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-457
Text:

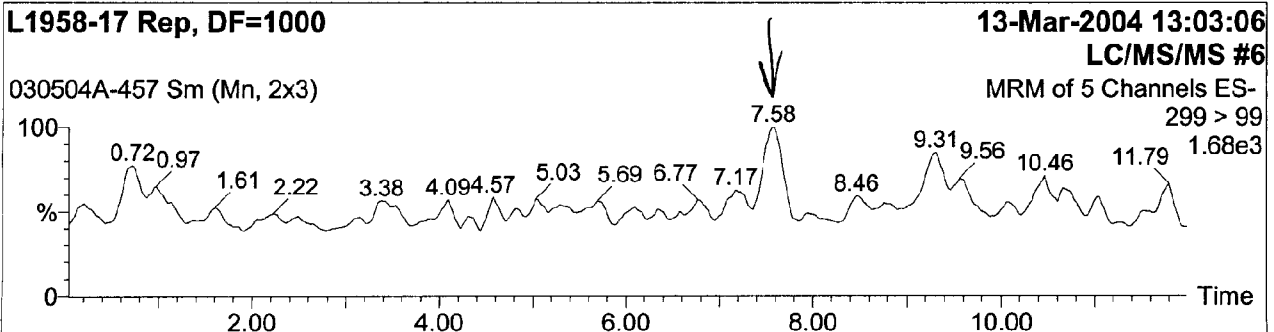
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

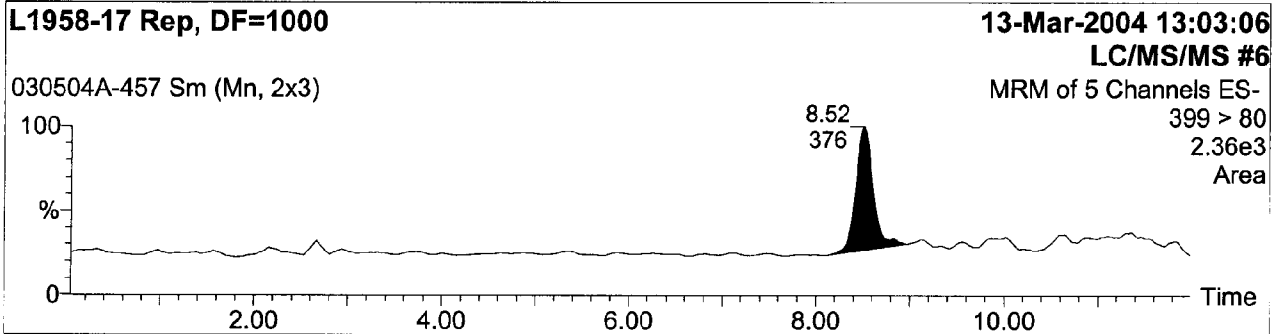
Study No.:L1958, Set No.:030504A, Ext.Date:03/05/04, Analyst:K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

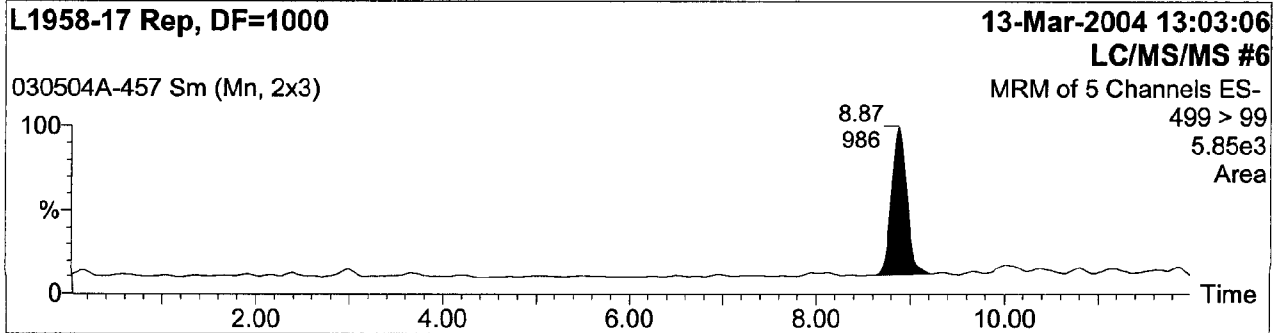
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-457
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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Quantify Sample Report

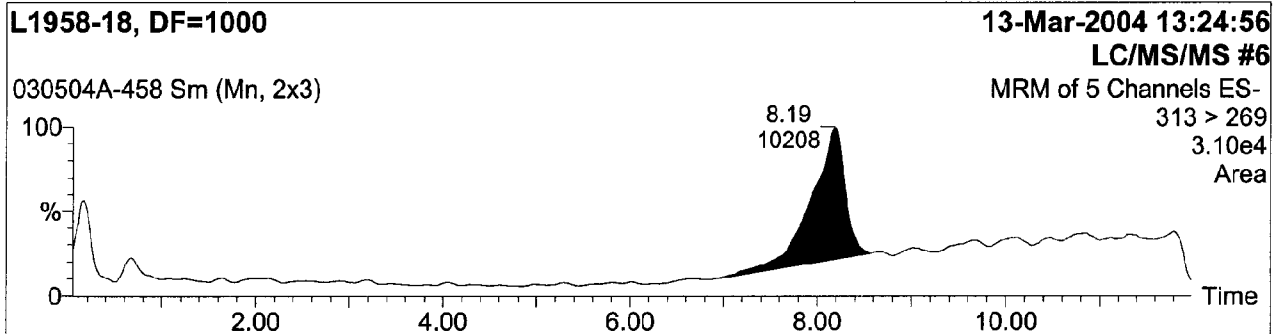
Study No.: L1958, Set No.: 030504A, Ext. Date: 03/05/04, Analyst: K. Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
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Last modified: Mon Mar 15 13:25:12 2004
Job Code:

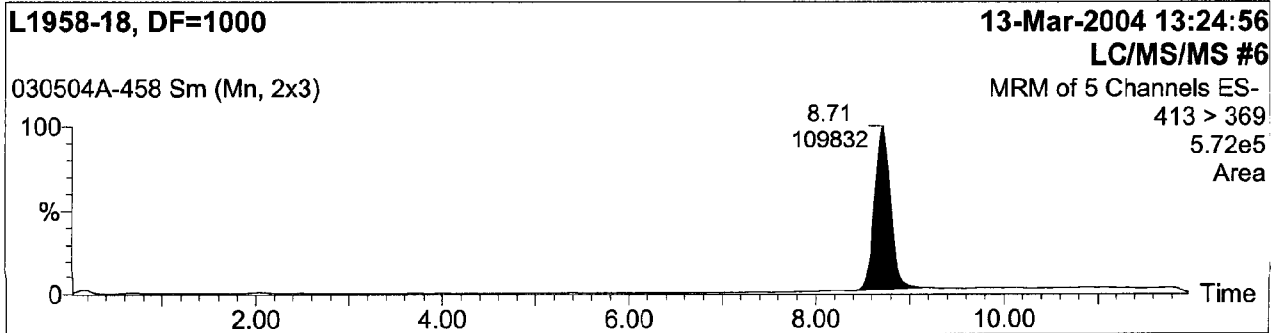
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Name: 030504A-458
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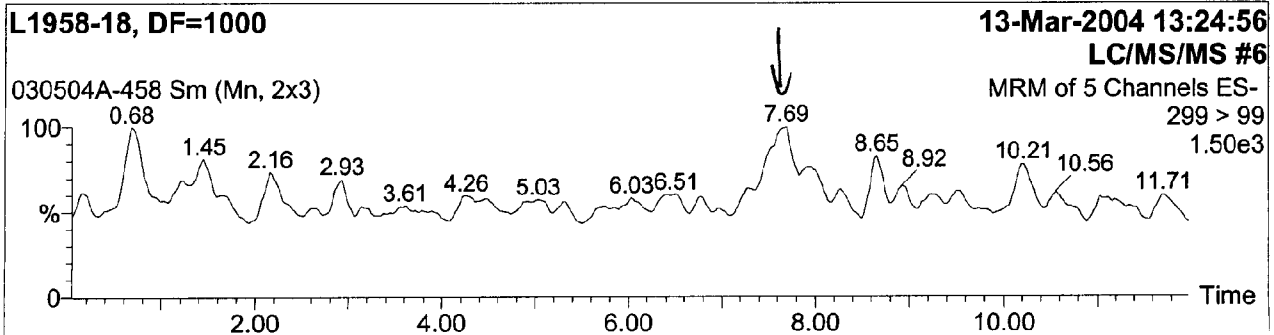
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

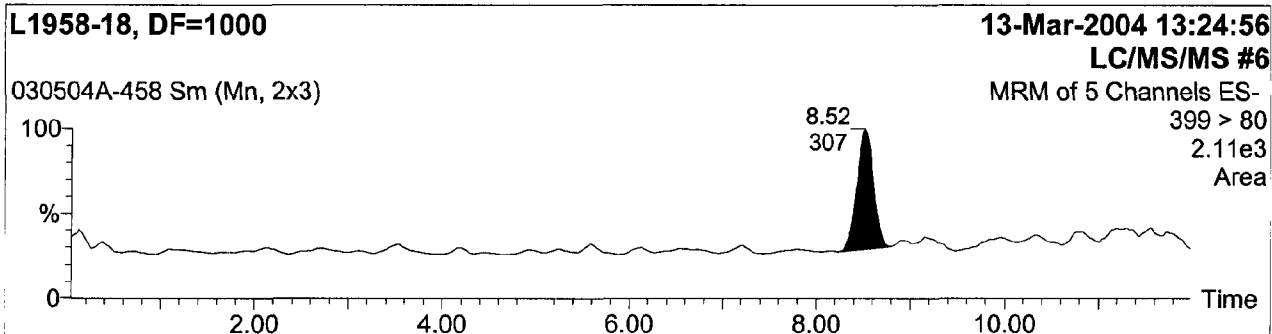
Study No.: L1958, Set No.: 030504A, Ext.Date: 03/05/04, Analyst: K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

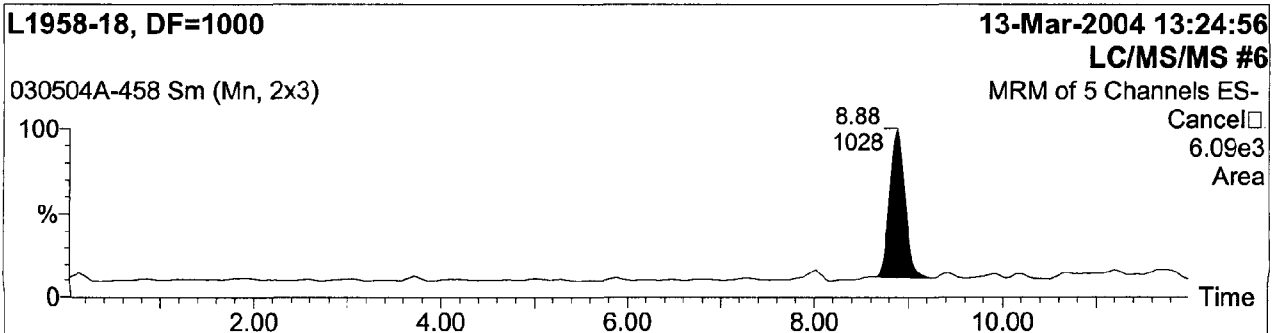
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-458
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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Quantify Sample Report

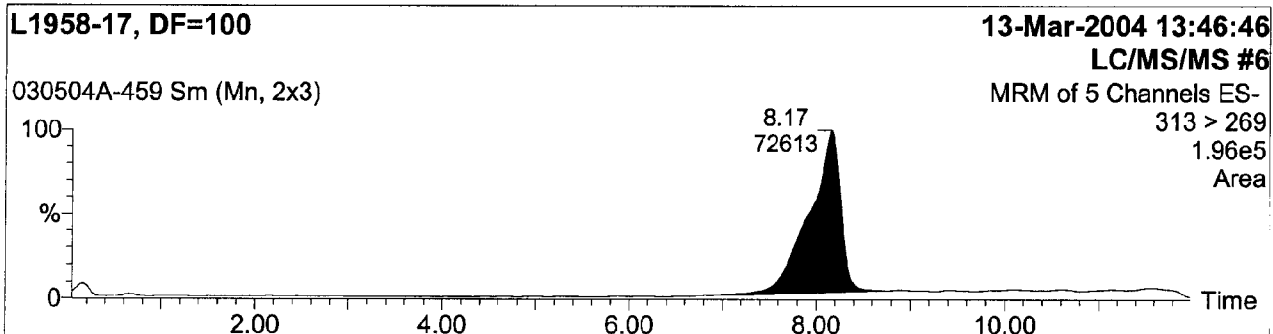
Study No.:L1958, Set No.:030504A, Ext.Date:03/05/04, Analyst:K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
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Last modified: Mon Mar 15 13:25:12 2004
Job Code:

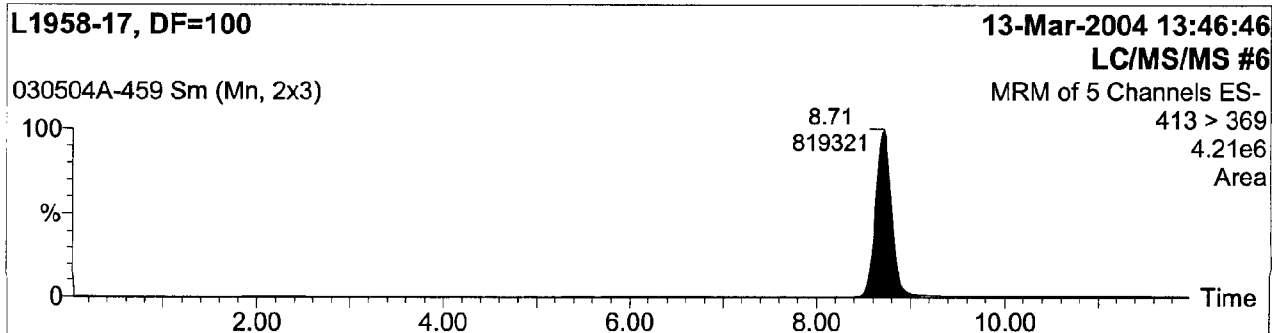
Printed: Tue Mar 16 07:26:27 2004

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Text:

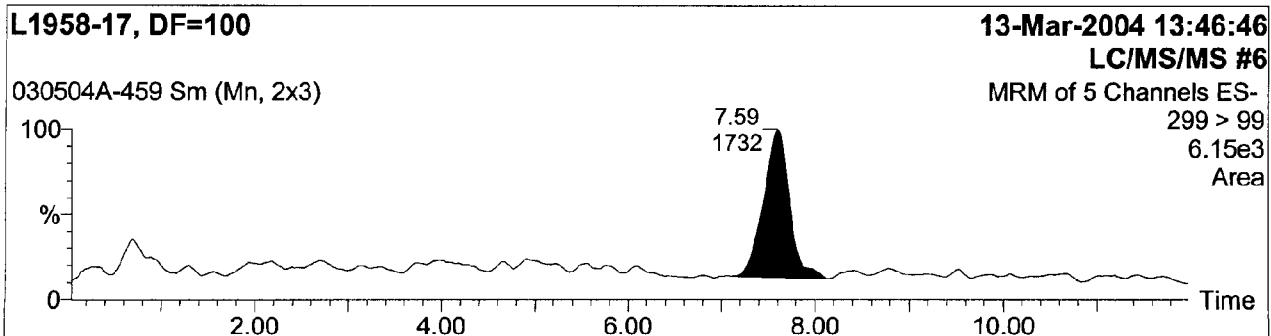
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

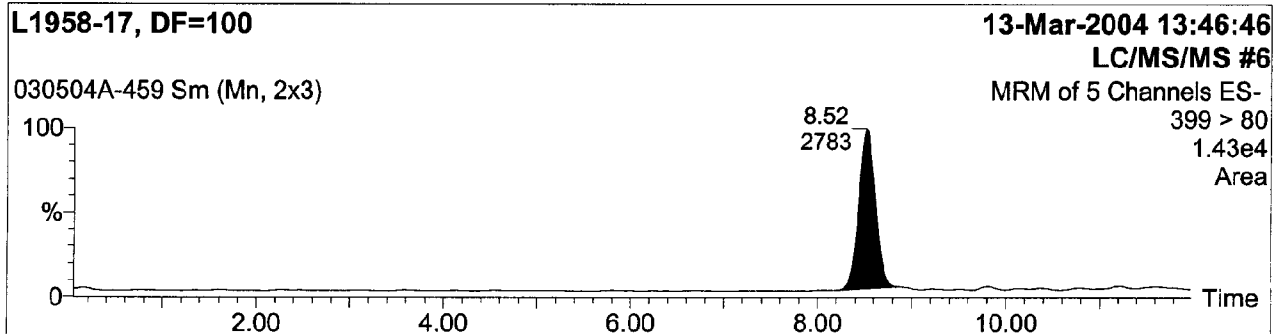
Study No.: L1958, Set No.: 030504A, Ext. Date: 03/05/04, Analyst: K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
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Last modified: Mon Mar 15 13:25:12 2004
Job Code:

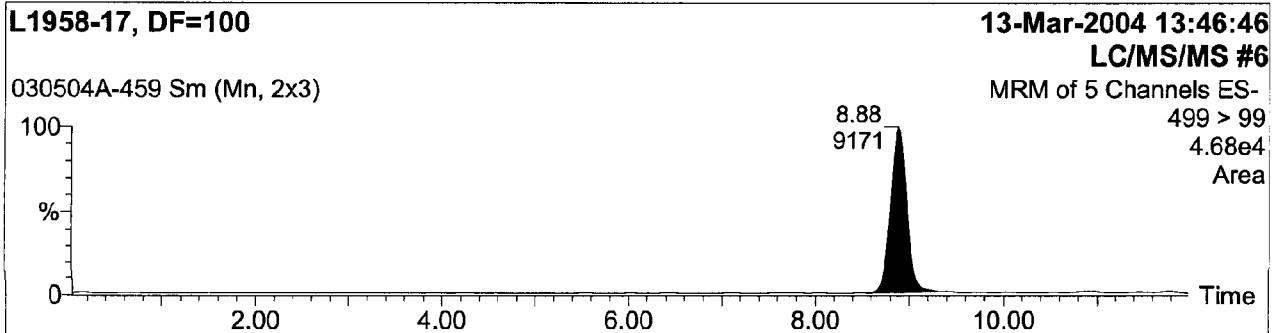
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-459
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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Quantify Sample Report

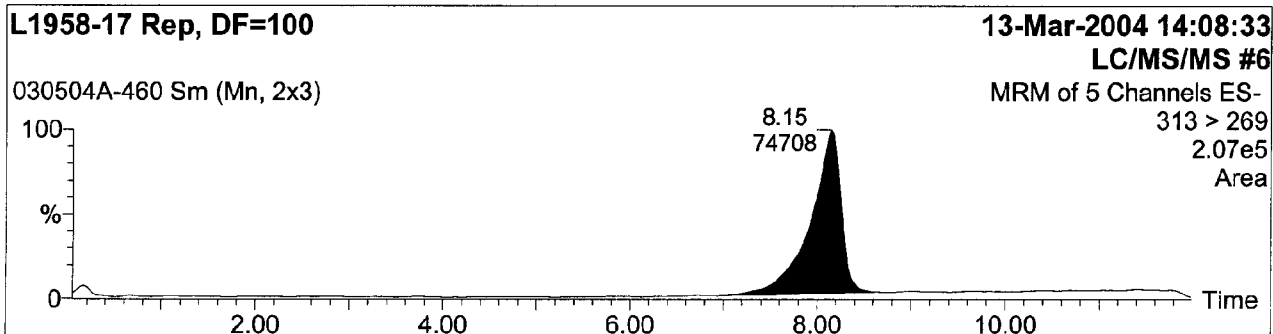
Study No.: L1958, Set No.: 030504A, Ext. Date: 03/05/04, Analyst: K.Risha

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Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

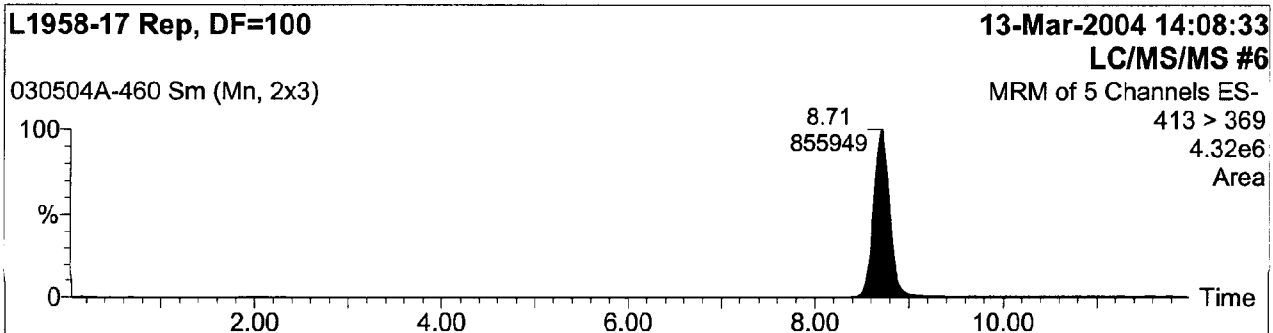
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Name: 030504A-460
Text:

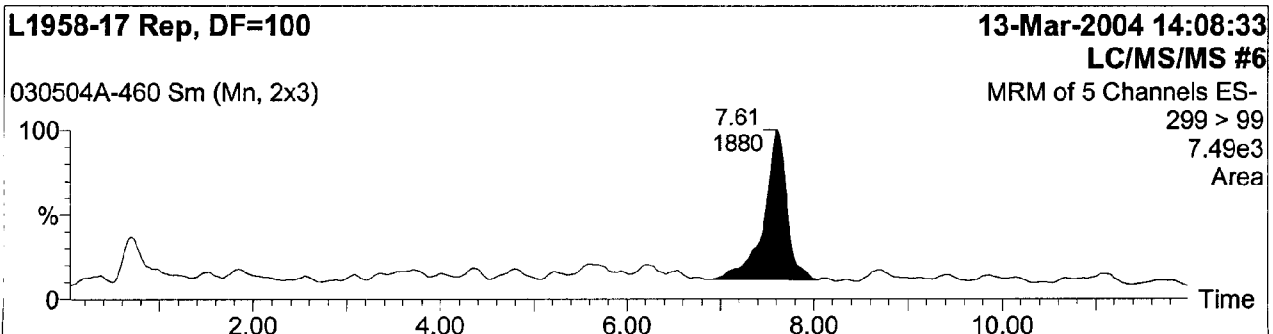
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

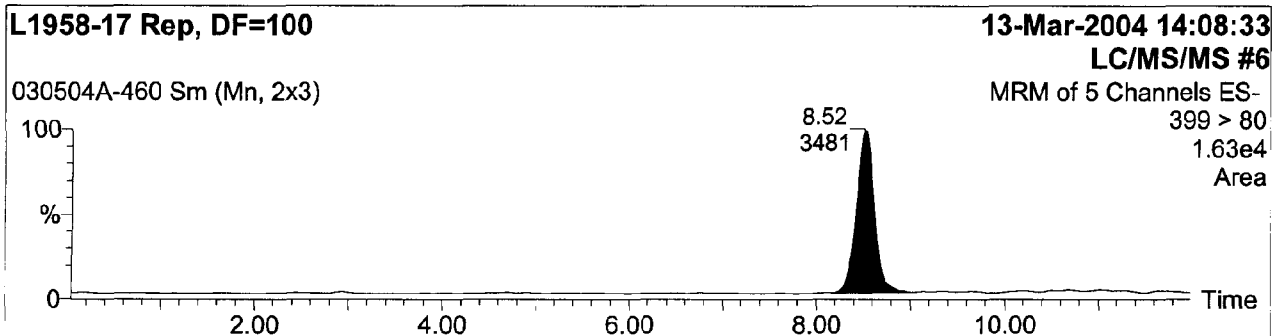
Study No.: L1958, Set No.: 030504A, Ext.Date: 03/05/04, Analyst: K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

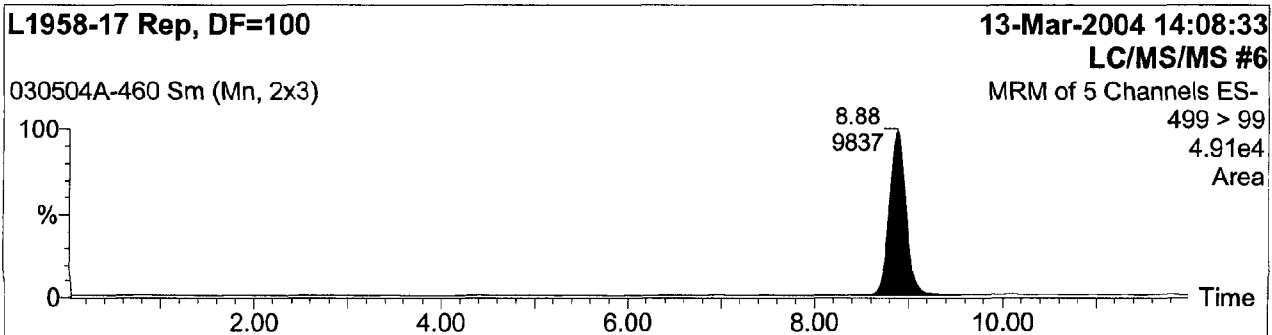
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-460
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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Quantify Sample Report

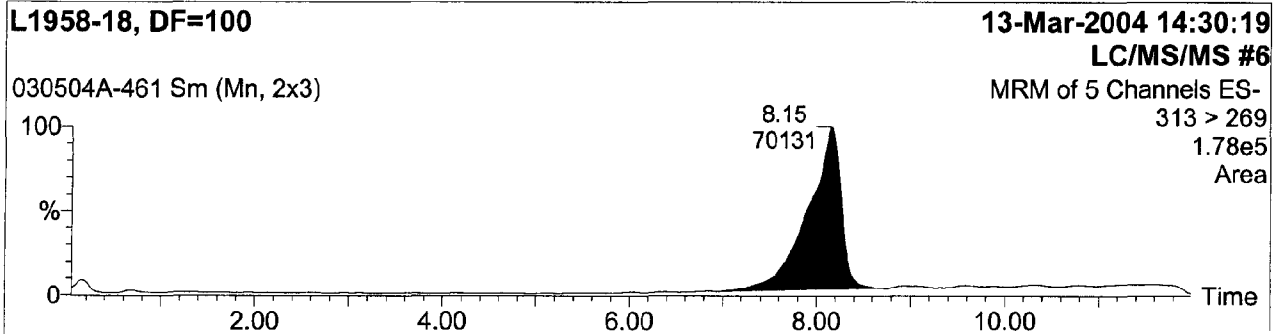
Study No.:L1958, Set No.:030504A, Ext.Date:03/05/04, Analyst:K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

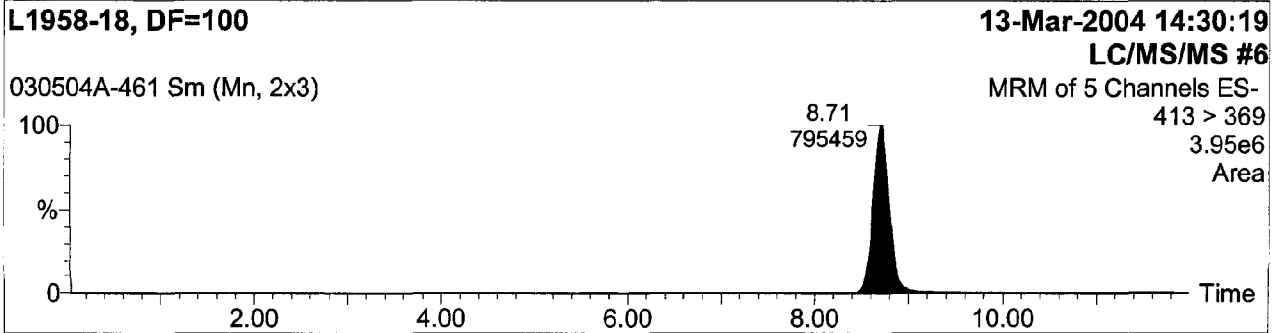
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-461
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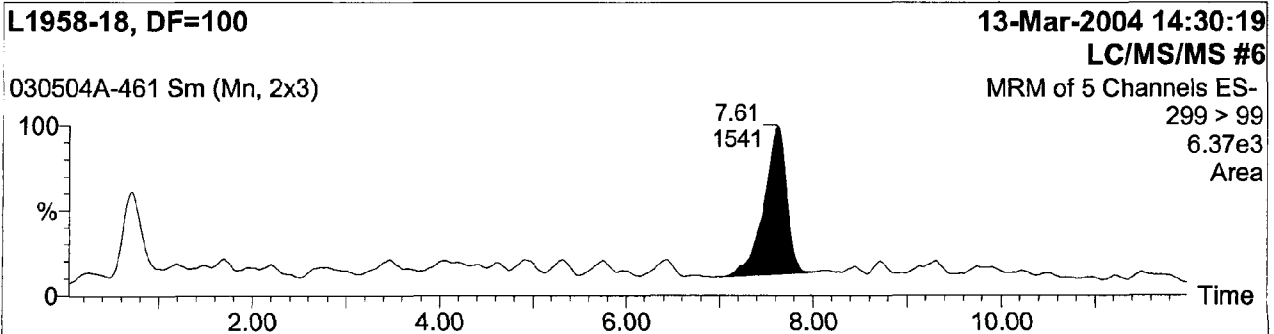
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

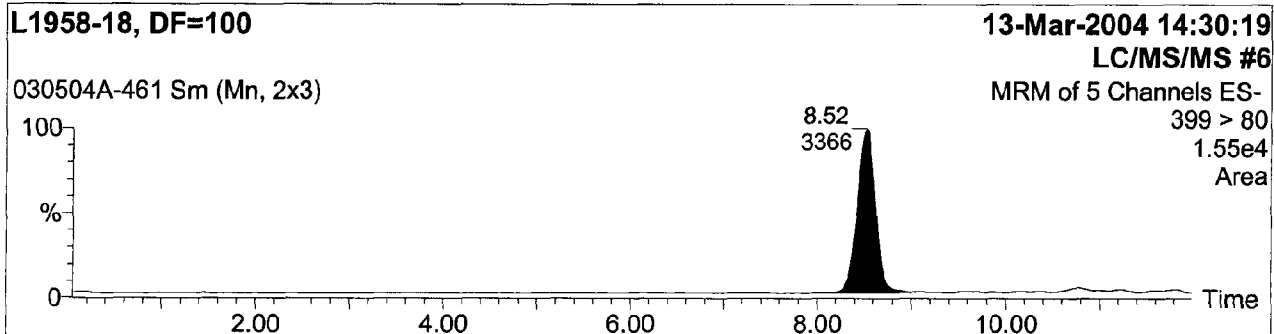
Study No.:L1958, Set No.:030504A, Ext.Date:03/05/04, Analyst:K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

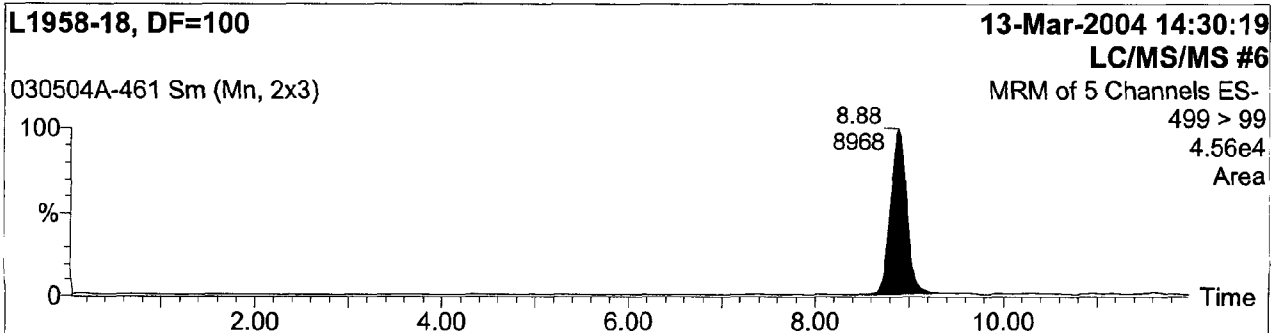
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-461
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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Quantify Sample Report

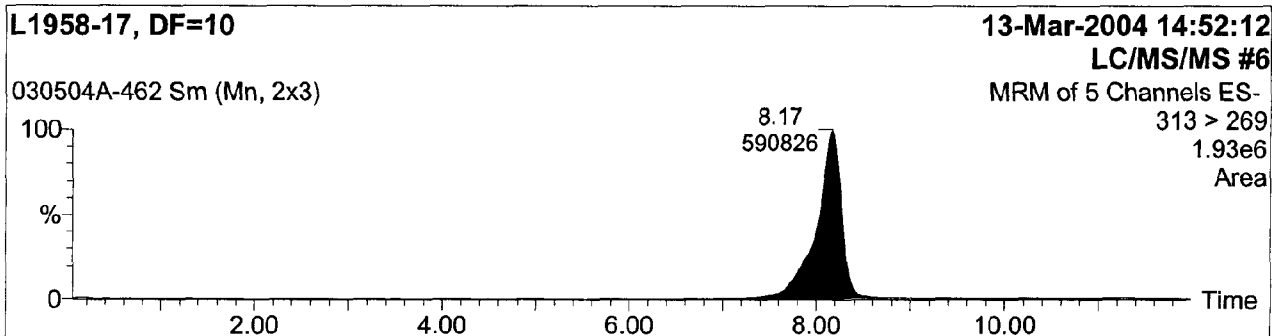
Study No.: L1958, Set No.: 030504A, Ext. Date: 03/05/04, Analyst: K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

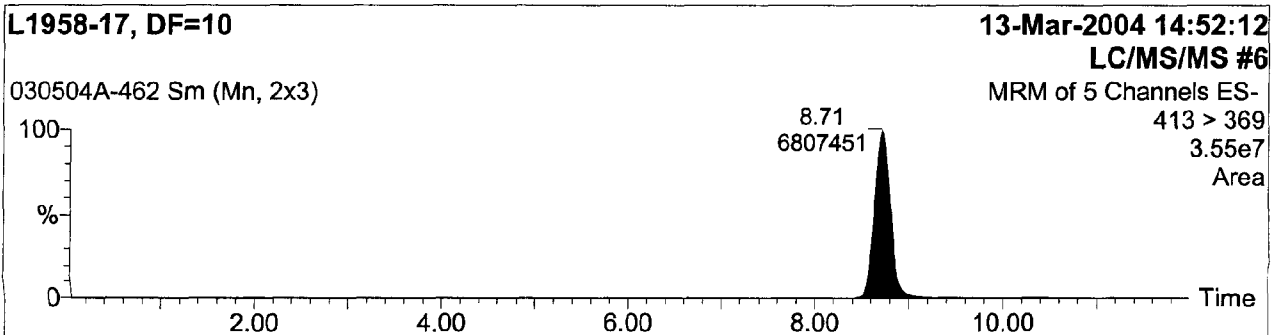
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Text:

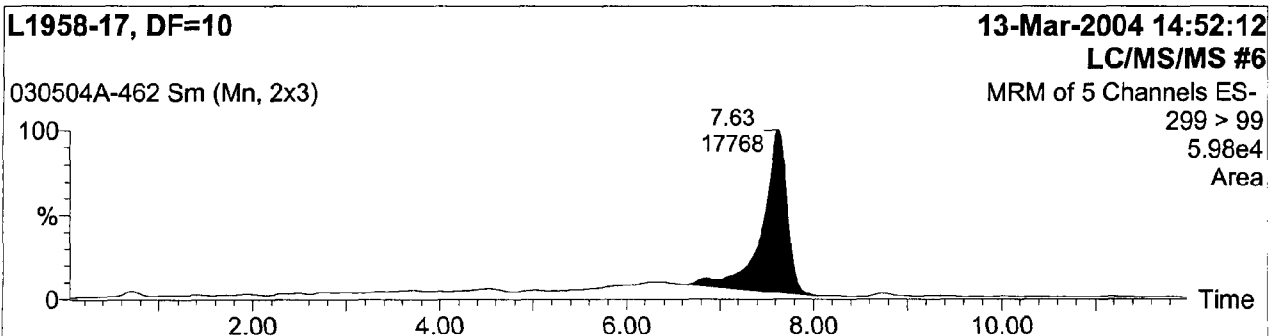
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

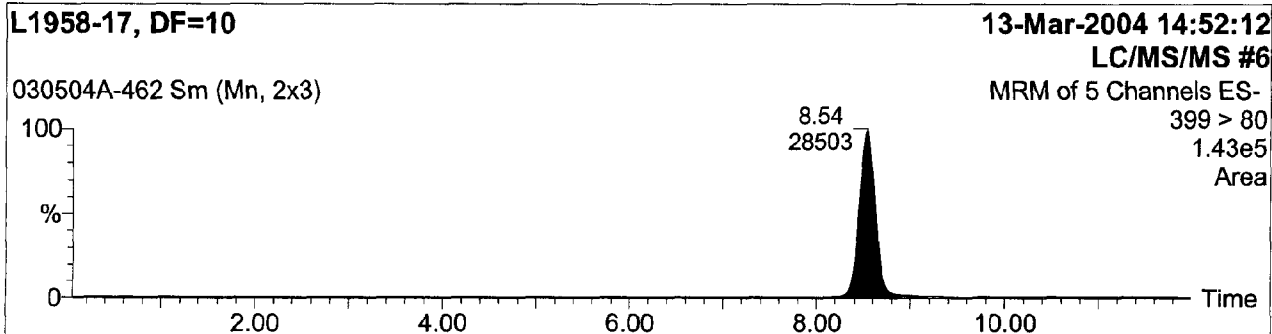
Study No.:L1958, Set No.:030504A, Ext.Date:03/05/04, Analyst:K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

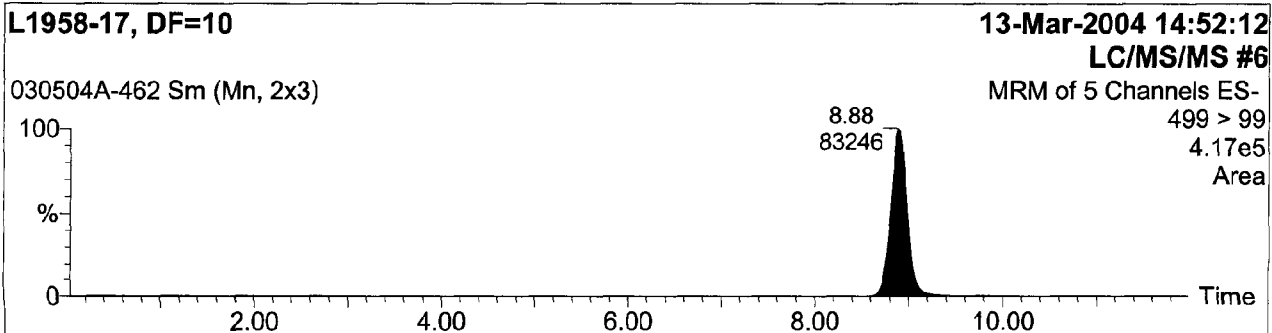
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-462
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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Quantify Sample Report

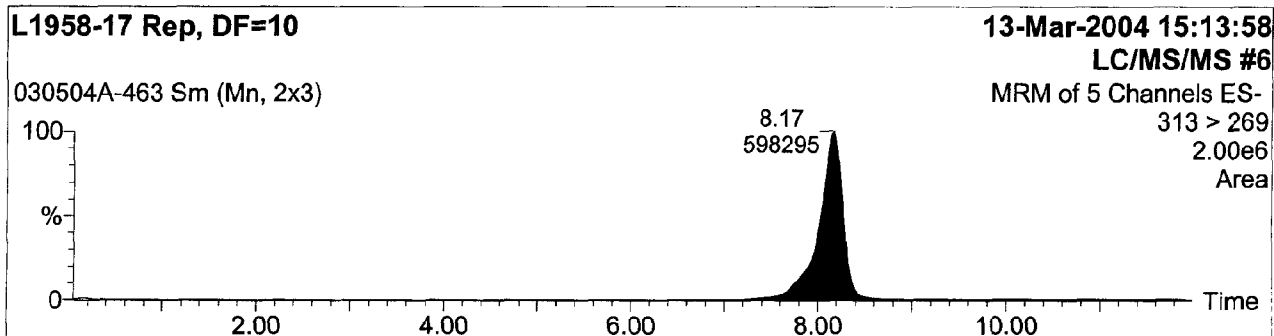
Study No.: L1958, Set No.: 030504A, Ext. Date: 03/05/04, Analyst: K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

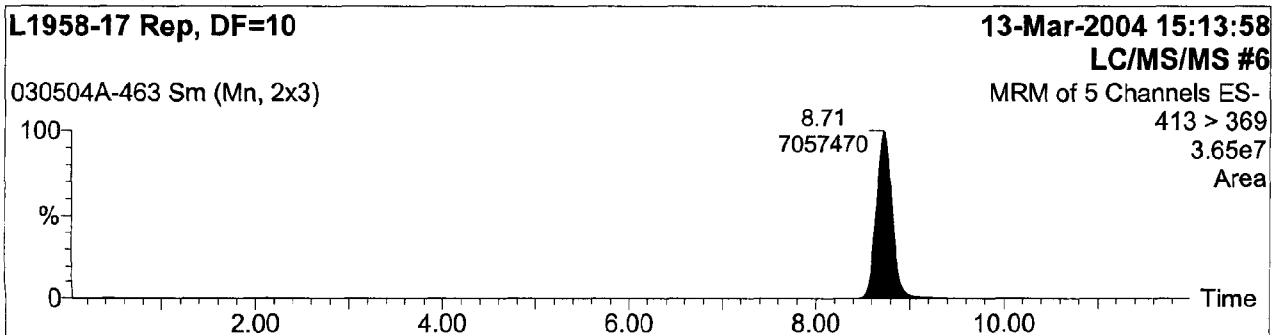
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-463
Text:

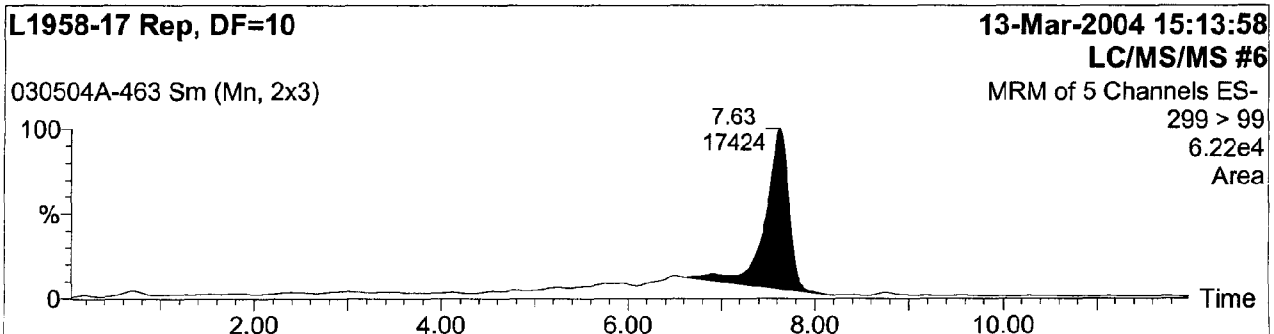
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

Study No.: L1958, Set No.: 030504A, Ext. Date: 03/05/04, Analyst: K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-463
Text:

4: C6 Sulfonate PFHS

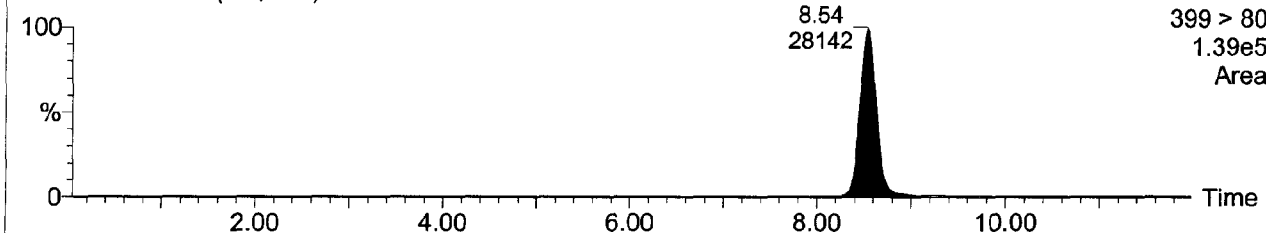
L1958-17 Rep, DF=10

13-Mar-2004 15:13:58

LC/MS/MS #6

030504A-463 Sm (Mn, 2x3)

MRM of 5 Channels ES-



5: C8 Sulfonate PFOS

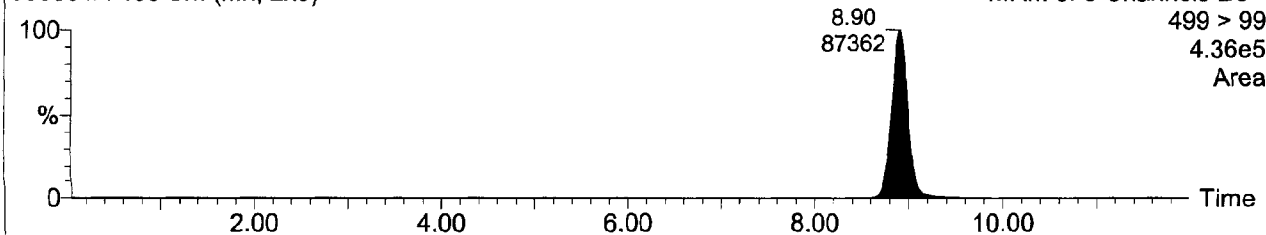
L1958-17 Rep, DF=10

13-Mar-2004 15:13:58

LC/MS/MS #6

030504A-463 Sm (Mn, 2x3)

MRM of 5 Channels ES-



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Quantify Sample Report

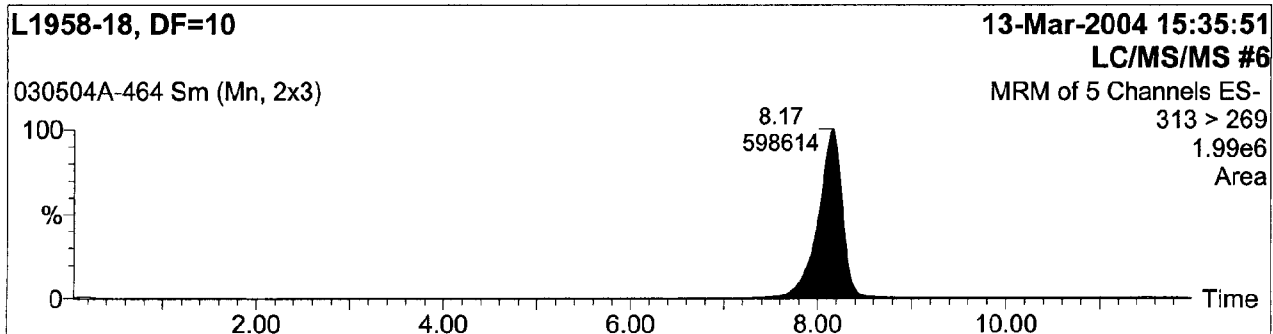
Study No.:L1958, Set No.:030504A, Ext.Date:03/05/04, Analyst:K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

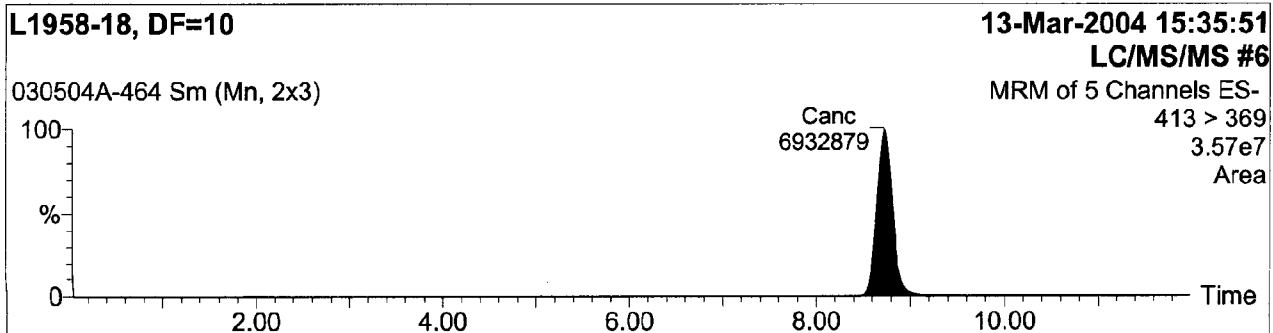
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-464
Text:

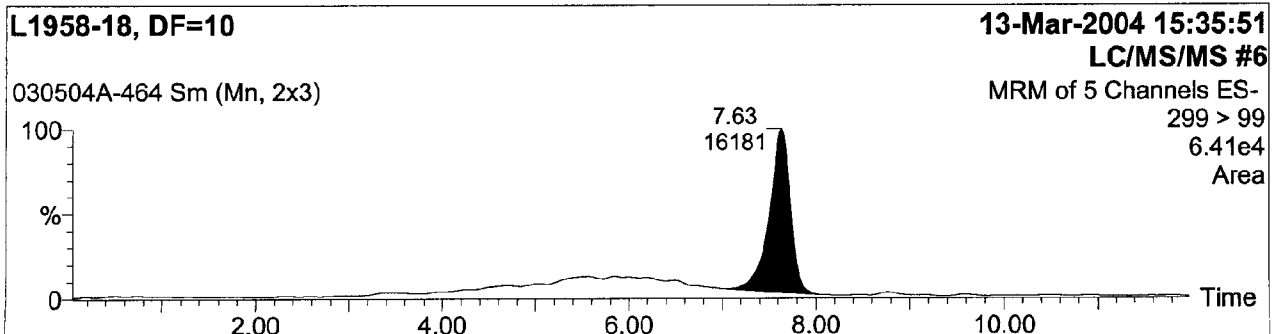
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

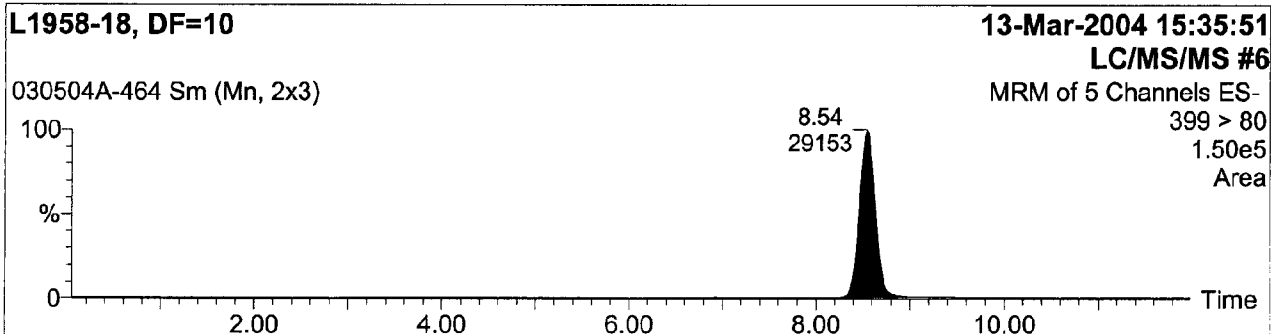
Study No.: L1958, Set No.: 030504A, Ext.Date: 03/05/04, Analyst: K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

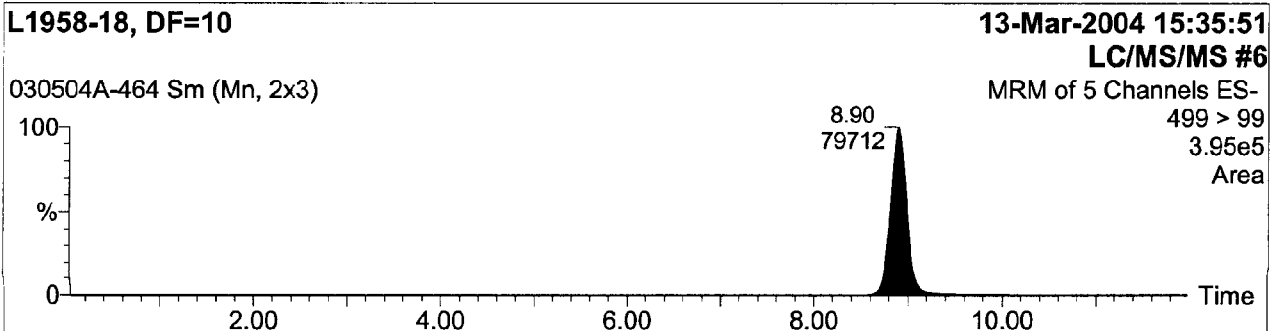
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-464
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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Quantify Sample Report

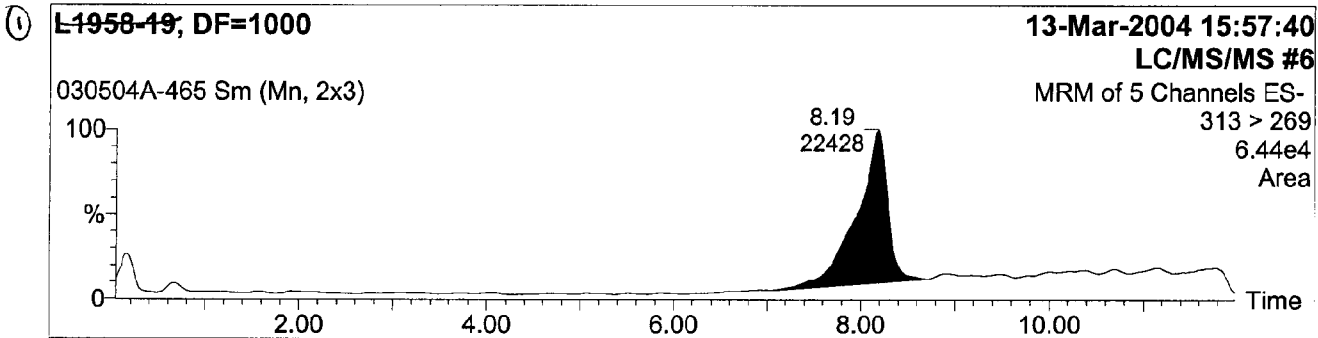
Study No.: L1958, Set No.: 030504A, Ext.Date: 03/05/04, Analyst: K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

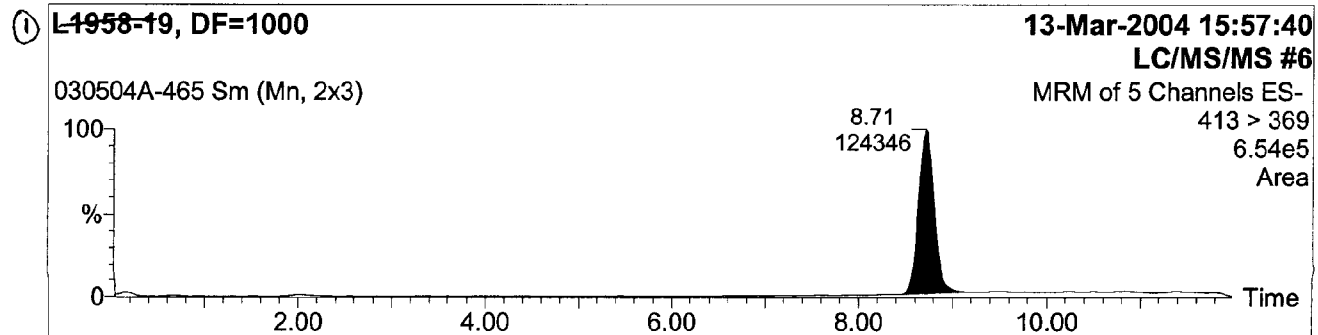
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-465
Text:

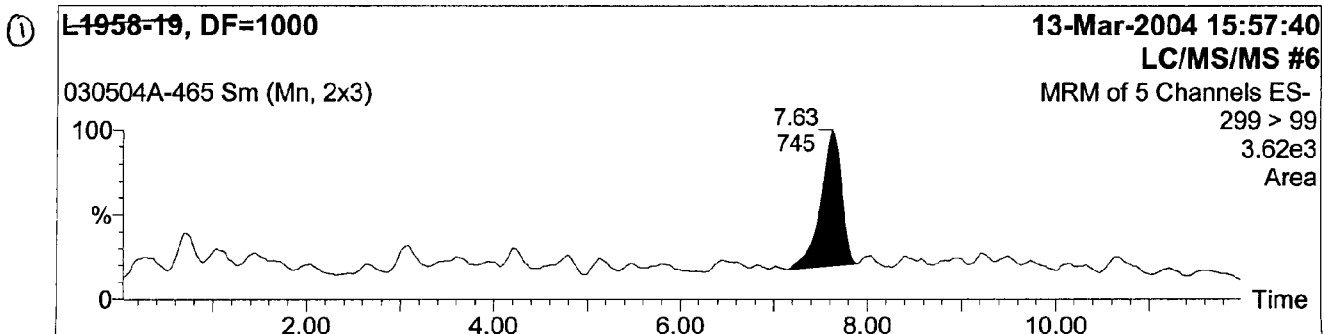
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



① L1958-20 (e) KJ 03/16/04

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Quantify Sample Report

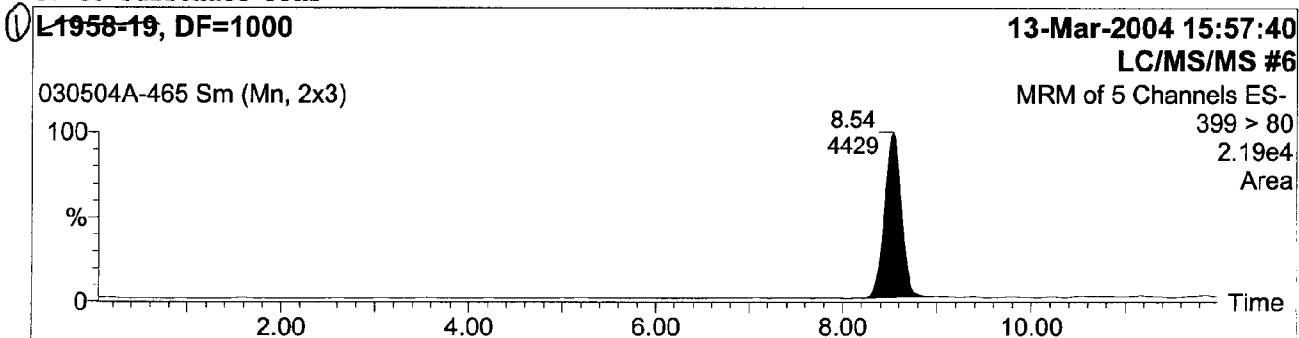
Study No.: L1958, Set No.: 030504A, Ext.Date: 03/05/04, Analyst: K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

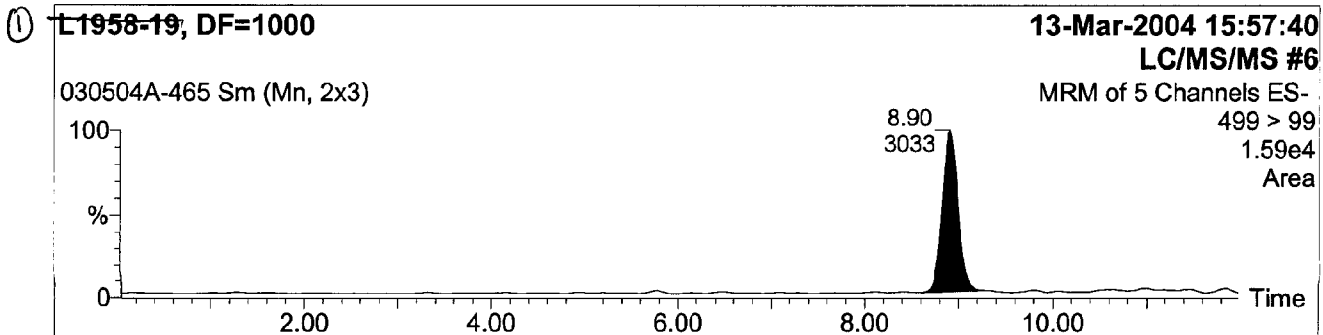
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-465
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



① L1958-20 @ kg 03/16/04

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Quantify Sample Report

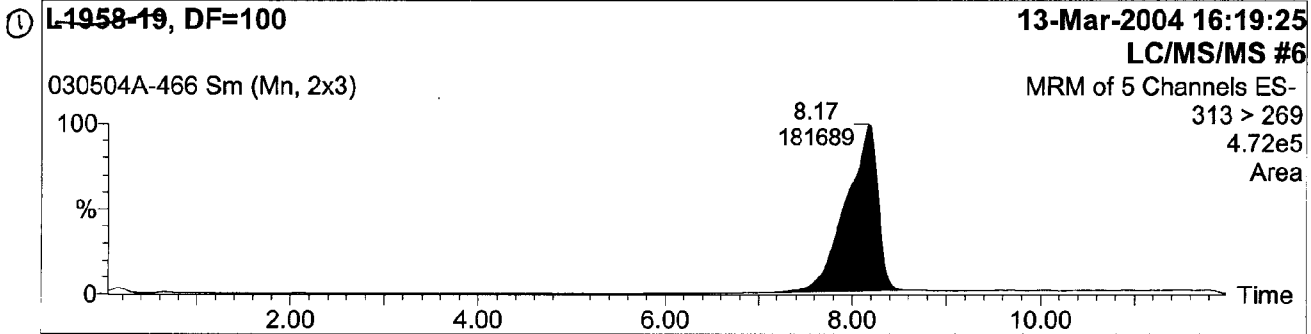
Study No.: L1958, Set No.: 030504A, Ext.Date: 03/05/04, Analyst: K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
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Last modified: Mon Mar 15 13:25:12 2004
Job Code:

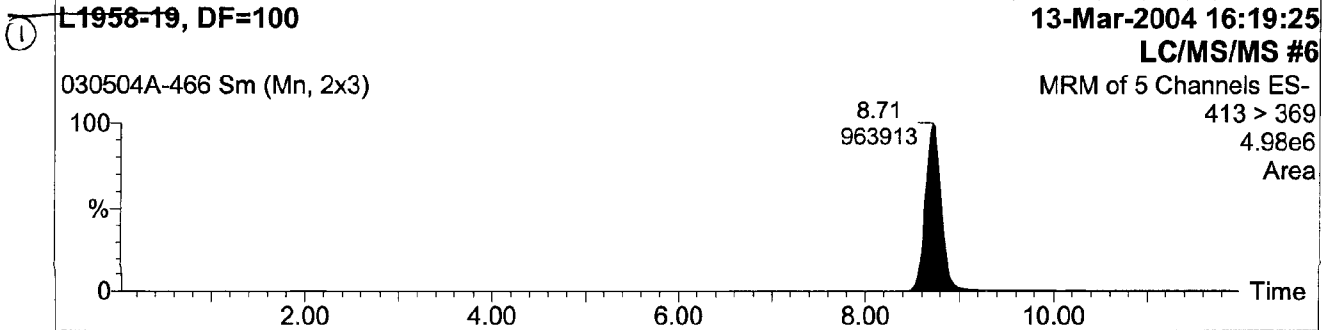
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-466
Text:

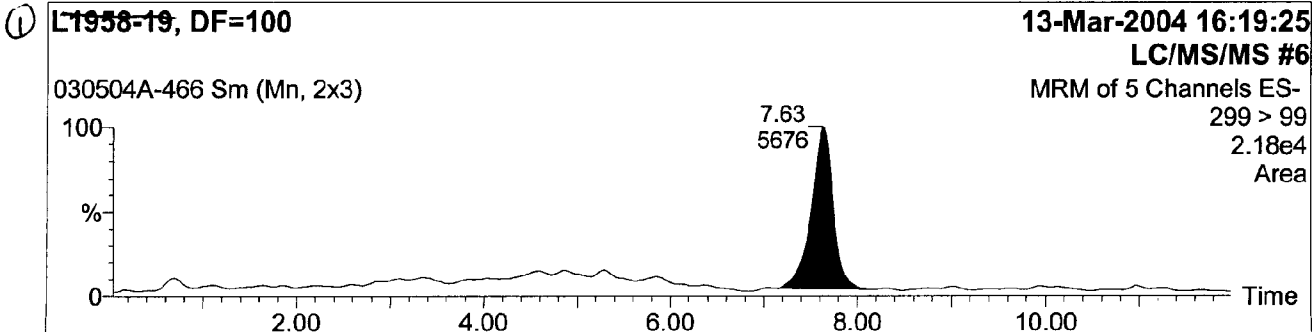
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



① L1958-20 (R) 03/16/04

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Quantify Sample Report

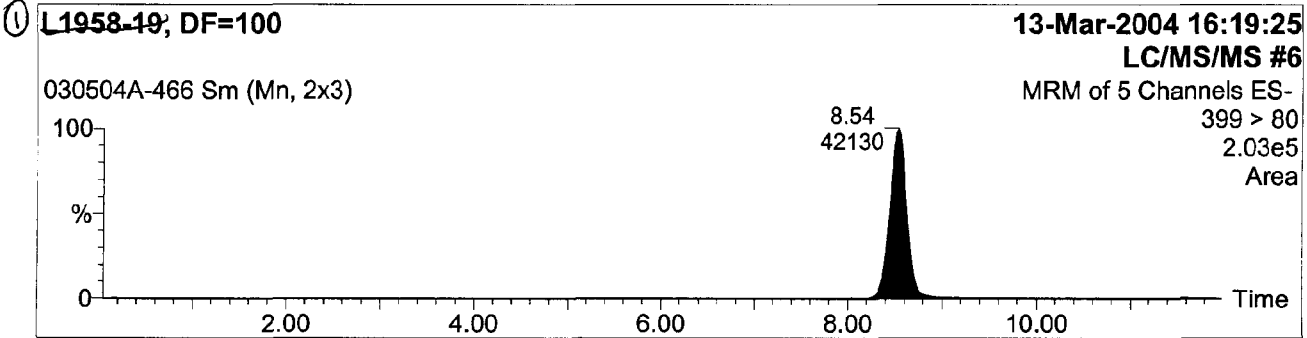
Study No.: L1958, Set No.: 030504A, Ext.Date: 03/05/04, Analyst: K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

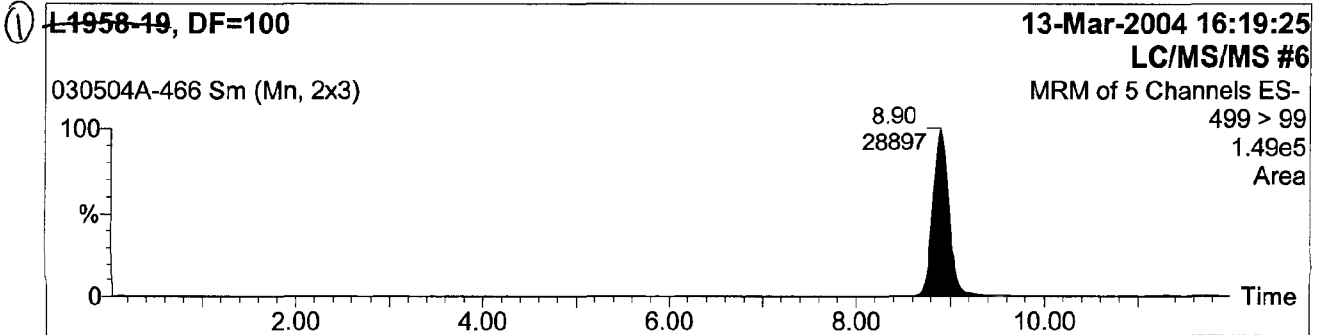
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-466
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



① L1958-20 ⑩ 03/16/04

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Quantify Sample Report

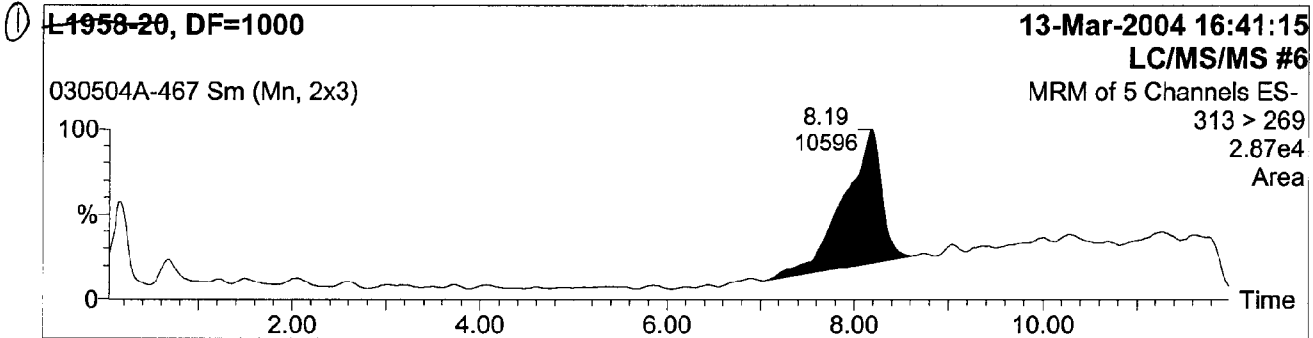
Study No.: L1958, Set No.: 030504A, Ext.Date: 03/05/04, Analyst: K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

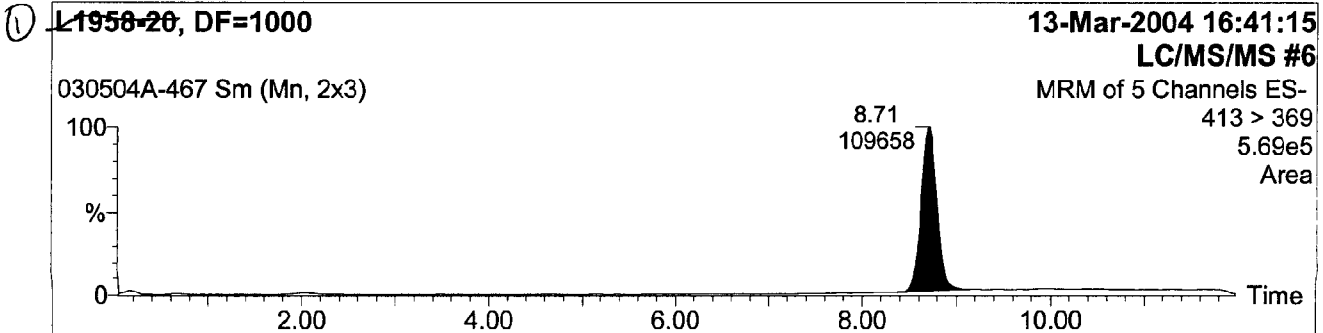
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-467
Text:

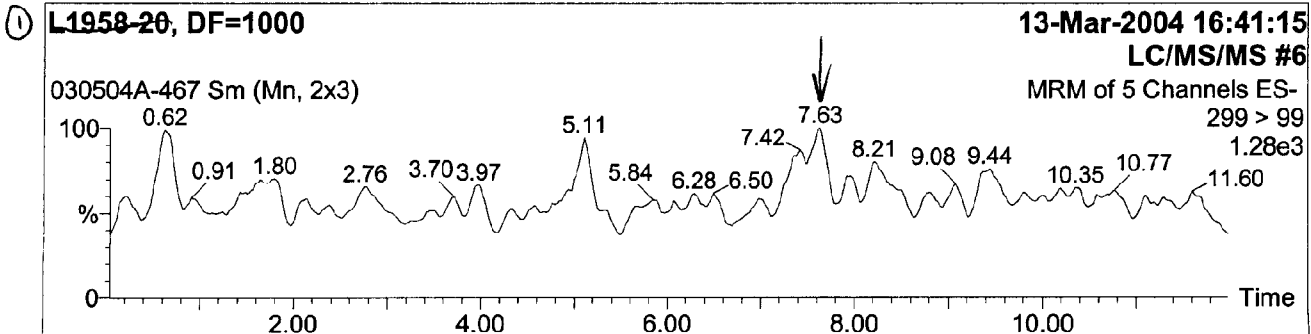
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



① L1958-19 @ K 03/16/04

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Quantify Sample Report

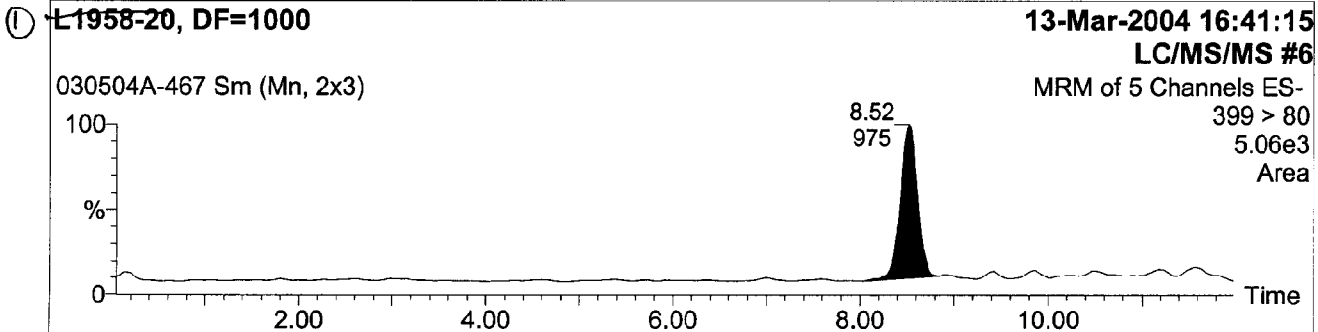
Study No.: L1958, Set No.: 030504A, Ext. Date: 03/05/04, Analyst: K. Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

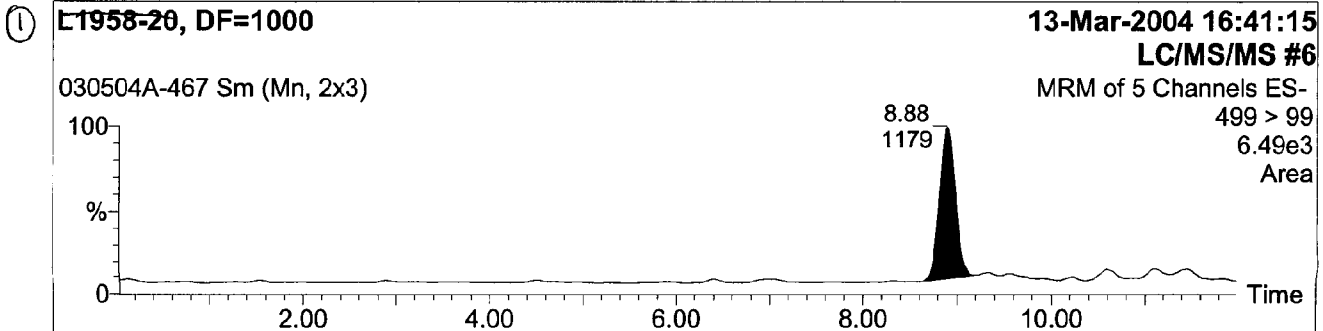
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-467
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



① L1958-19 @ KJ 03/16/04

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Quantify Sample Report

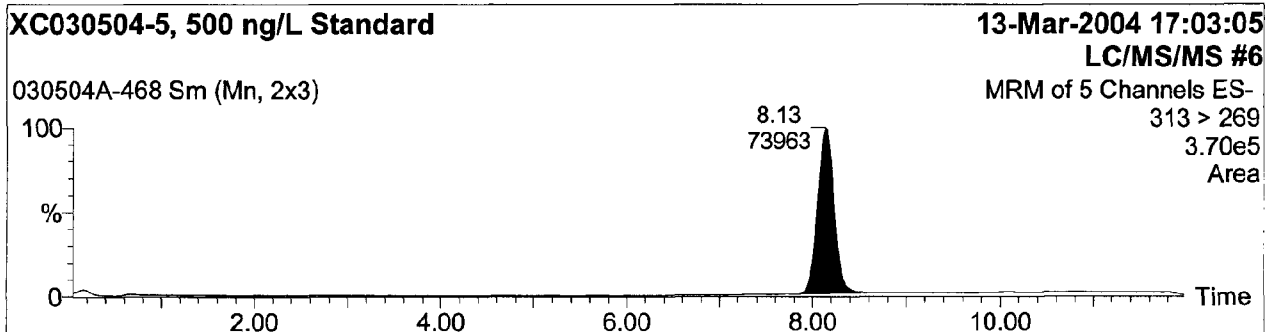
Study No.:L1958, Set No.:030504A, Ext.Date:03/05/04, Analyst:K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

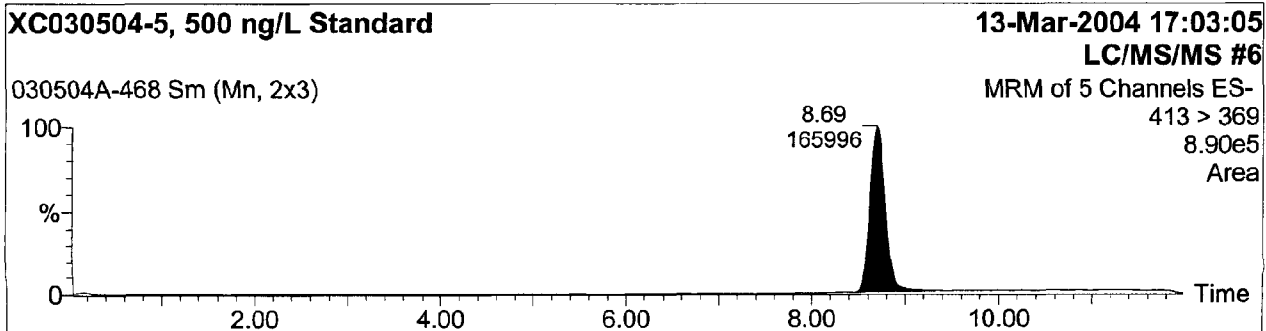
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-468
Text:

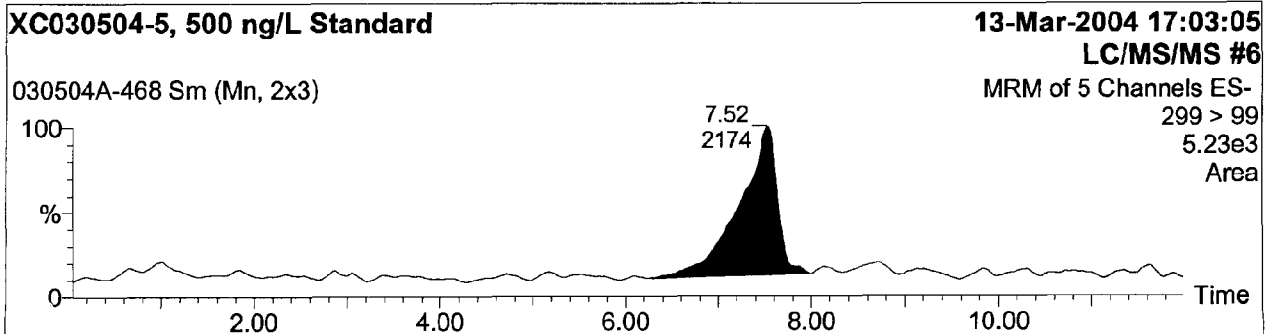
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

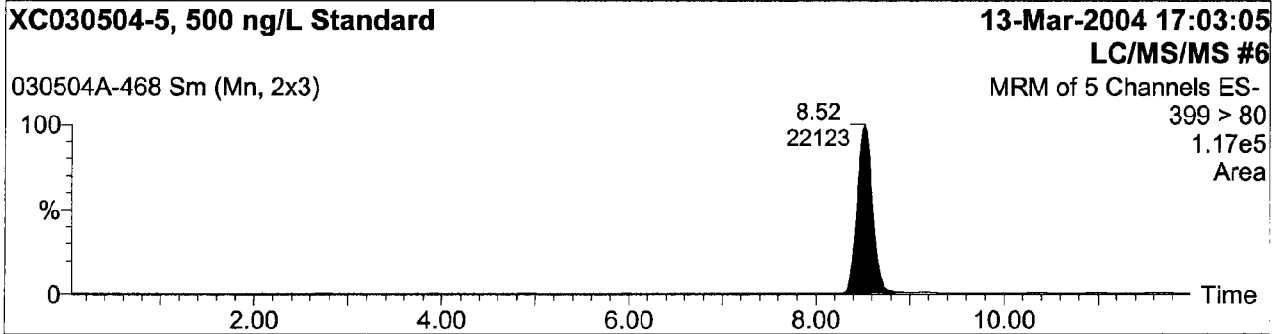
Study No.: L1958, Set No.: 030504A, Ext.Date: 03/05/04, Analyst: K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

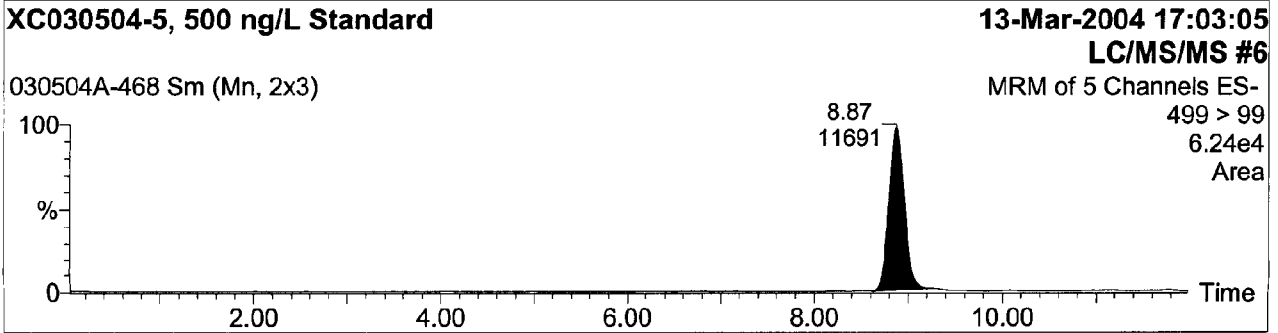
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-468
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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Quantify Sample Report

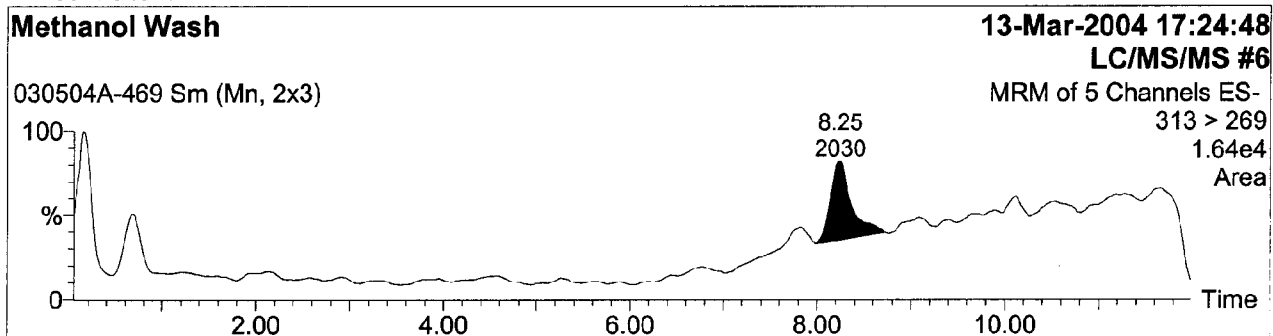
Study No.:L1958, Set No.:030504A, Ext.Date:03/05/04, Analyst:K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

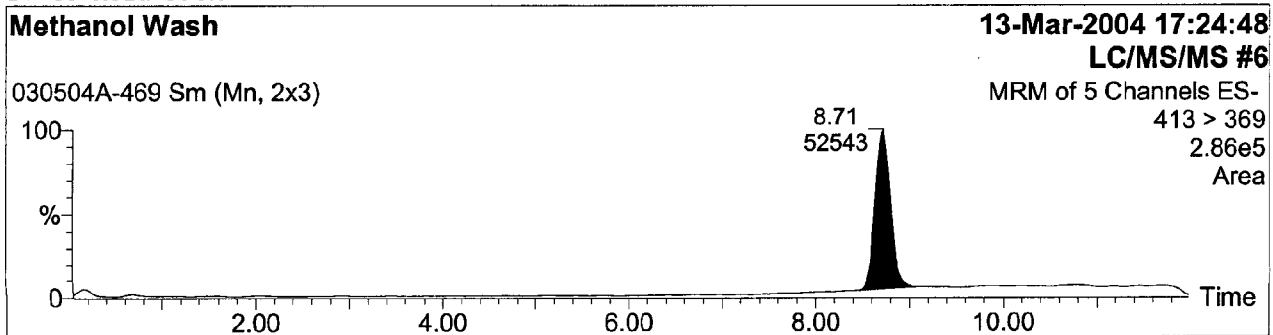
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-469
Text:

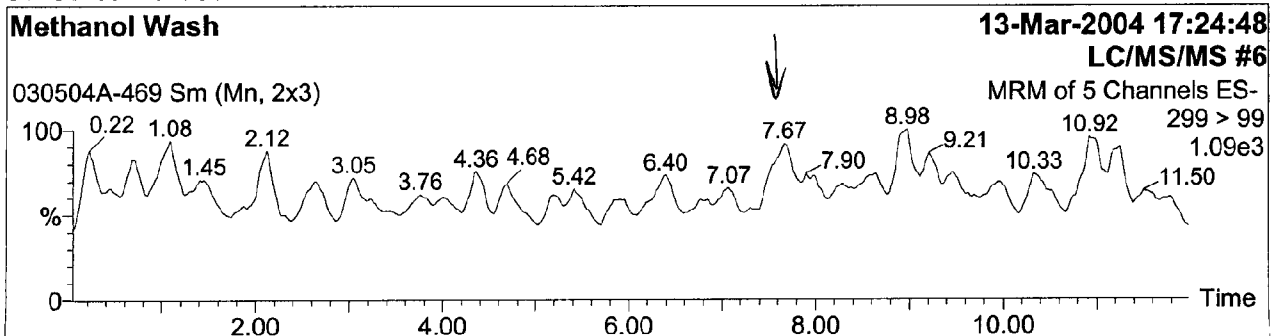
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

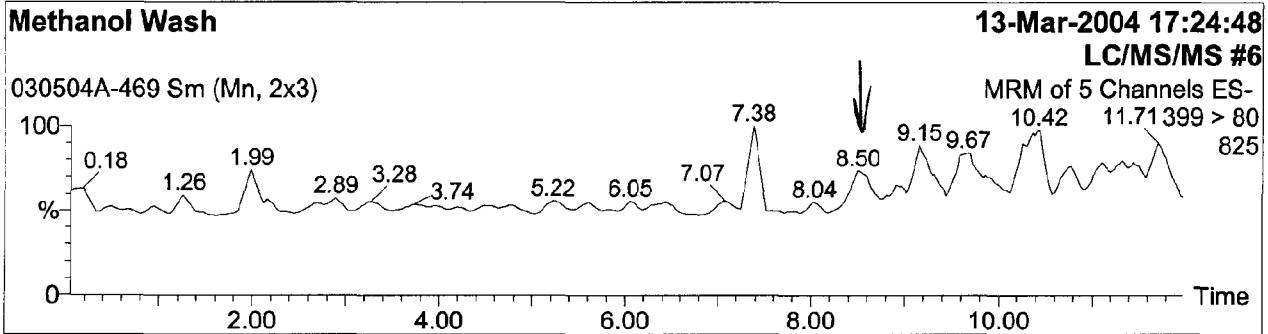
Study No.:L1958, Set No.:030504A, Ext.Date:03/05/04, Analyst:K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

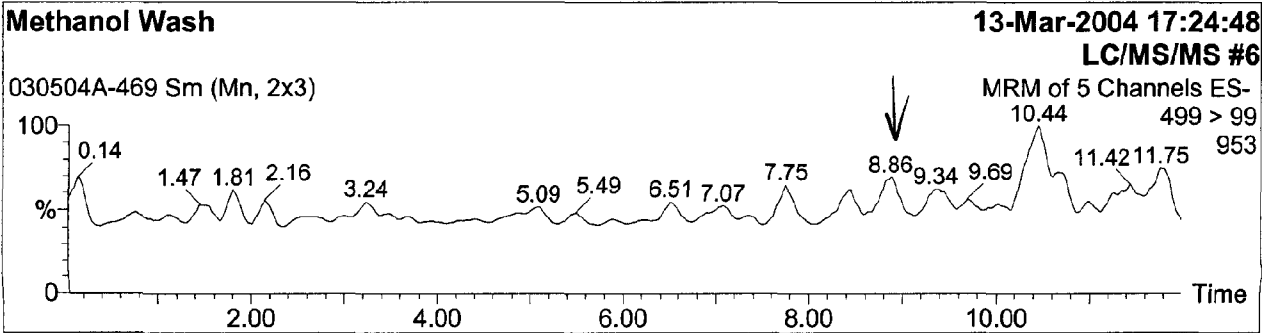
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-469
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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Quantify Sample Report

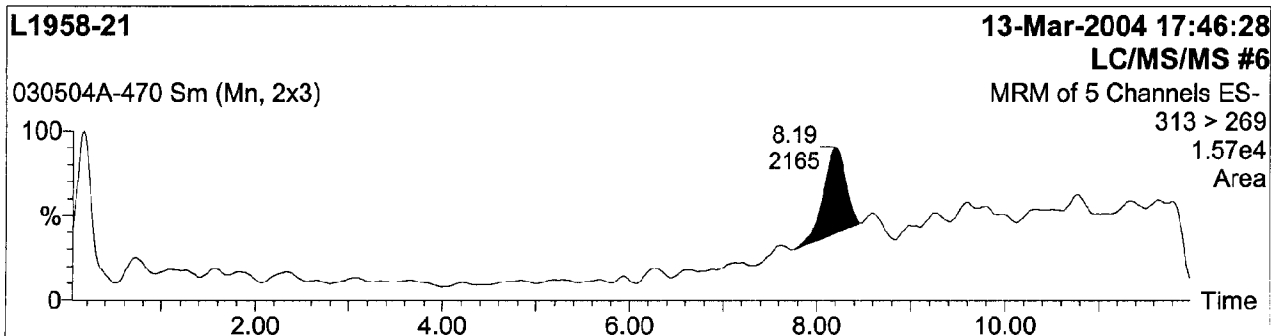
Study No.:L1958, Set No.:030504A, Ext.Date:03/05/04, Analyst:K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

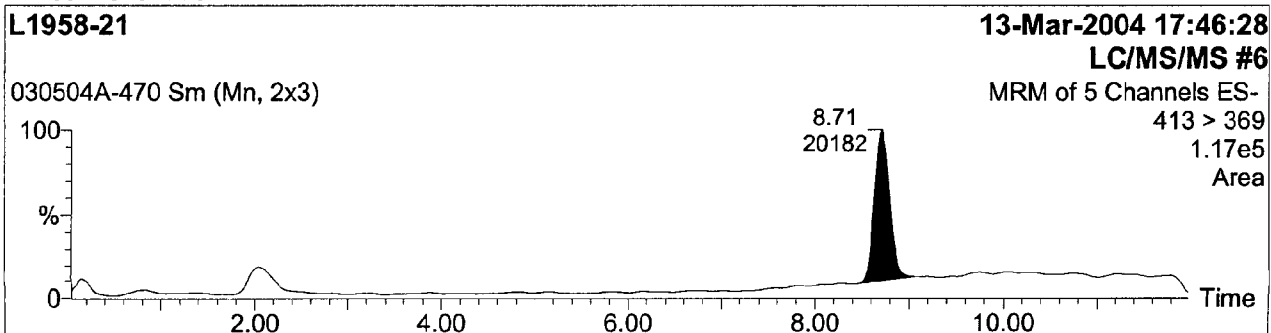
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-470
Text:

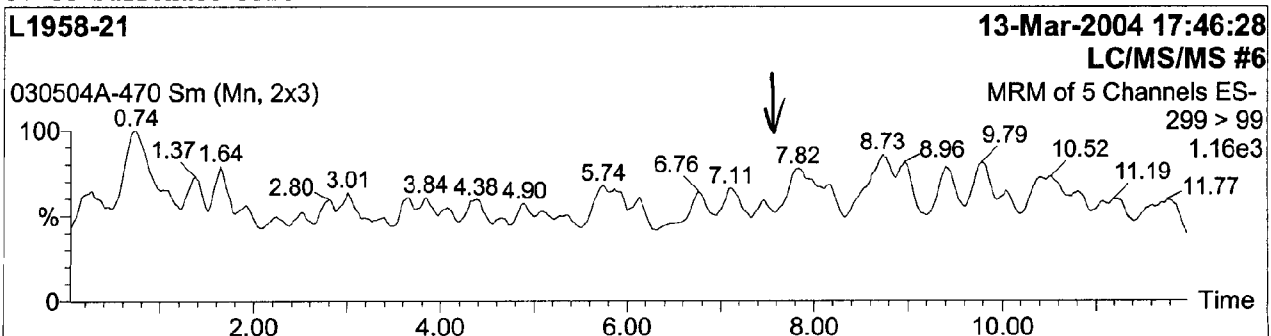
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

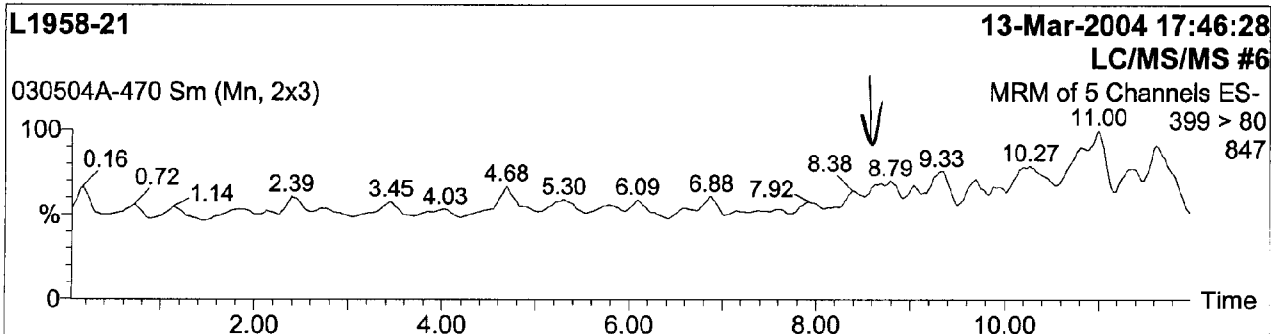
Study No.: L1958, Set No.: 030504A, Ext.Date: 03/05/04, Analyst: K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

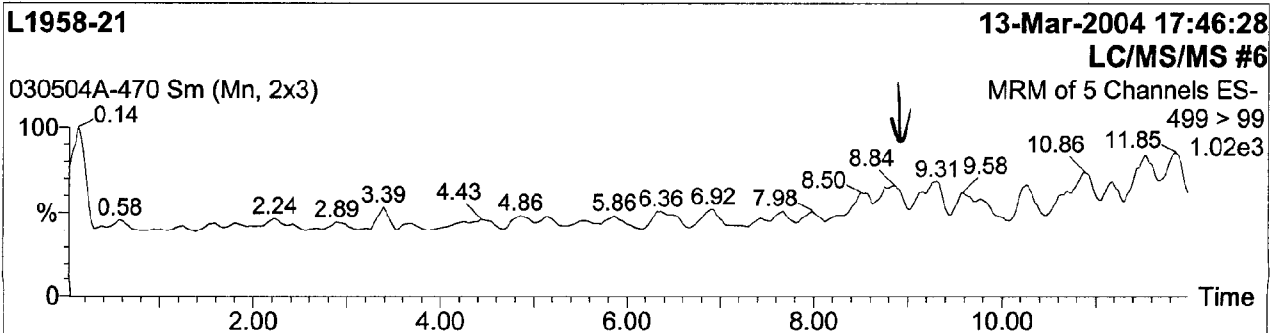
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-470
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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Quantify Sample Report

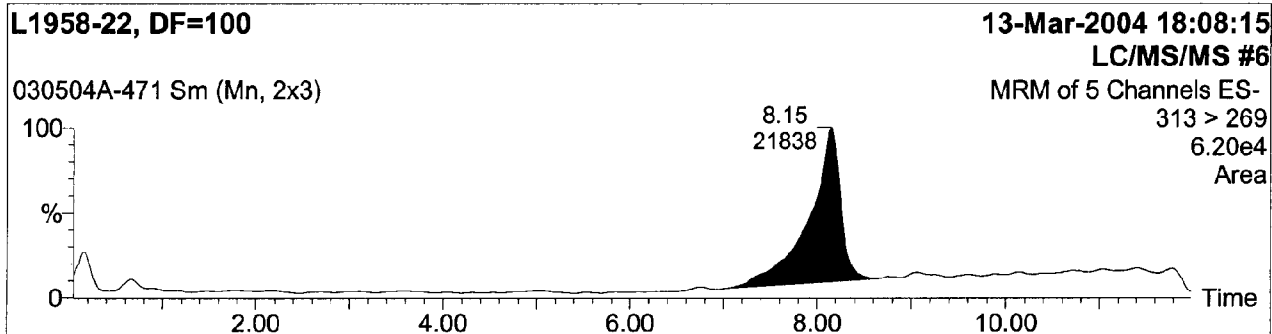
Study No.: L1958, Set No.: 030504A, Ext.Date: 03/05/04, Analyst: K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

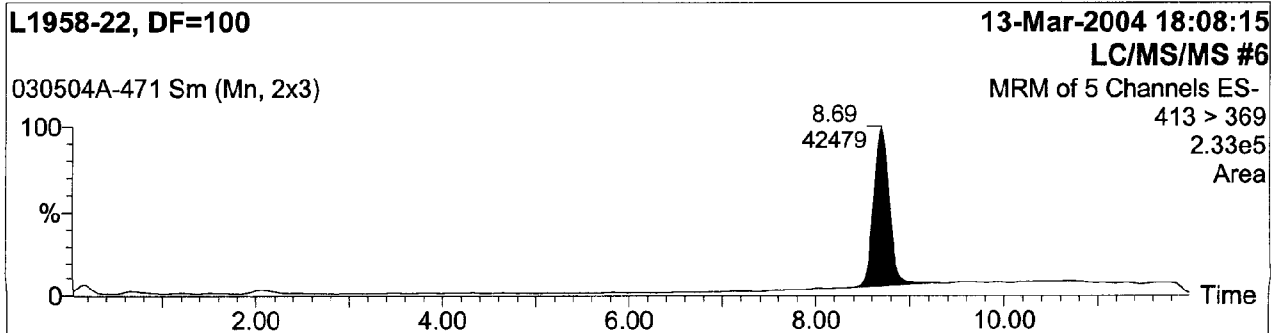
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-471
Text:

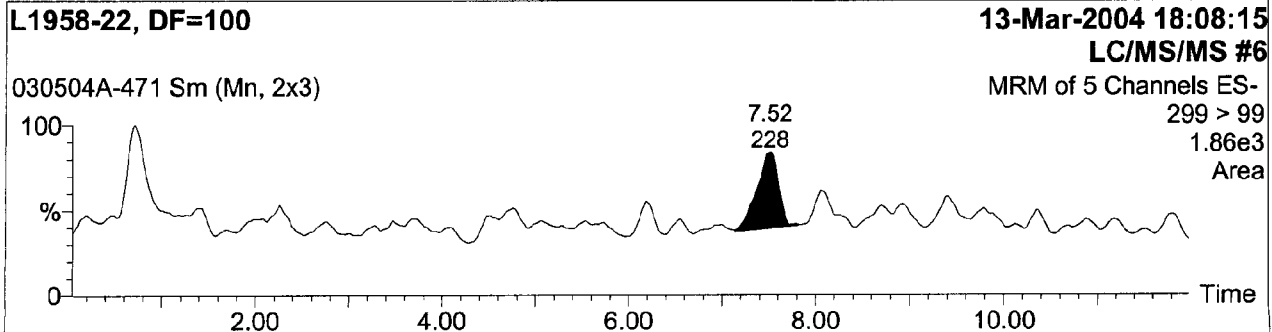
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

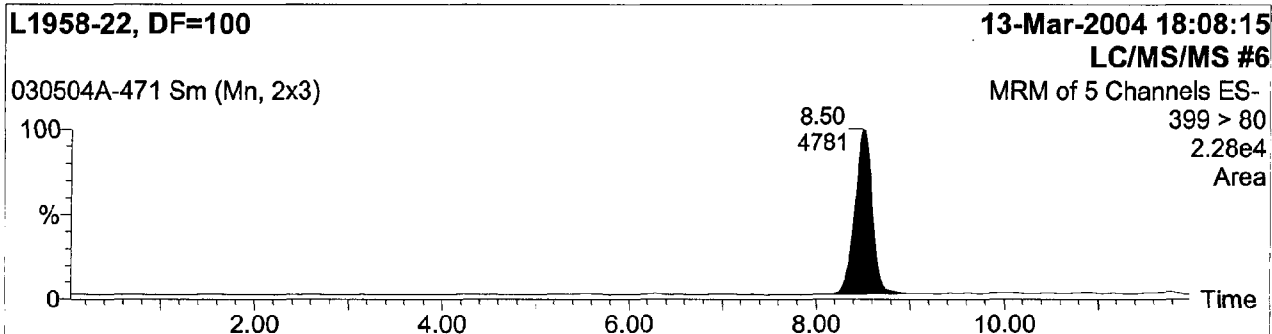
Study No.: L1958, Set No.: 030504A, Ext.Date: 03/05/04, Analyst: K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

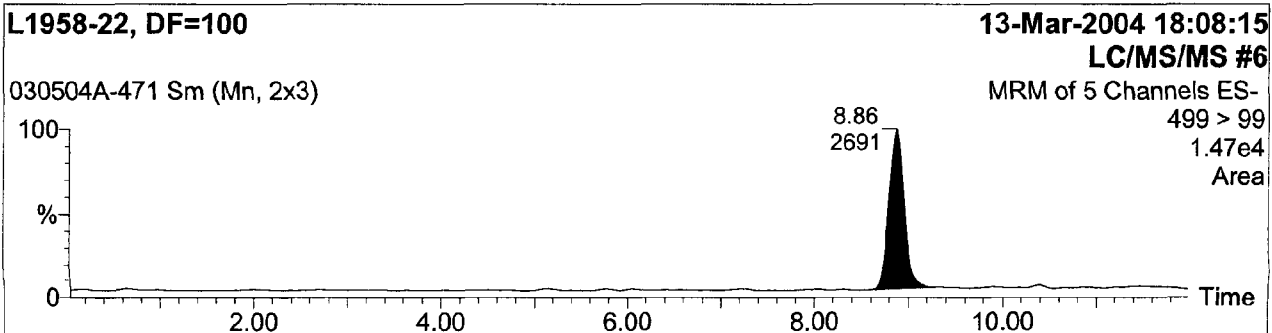
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-471
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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Quantify Sample Report

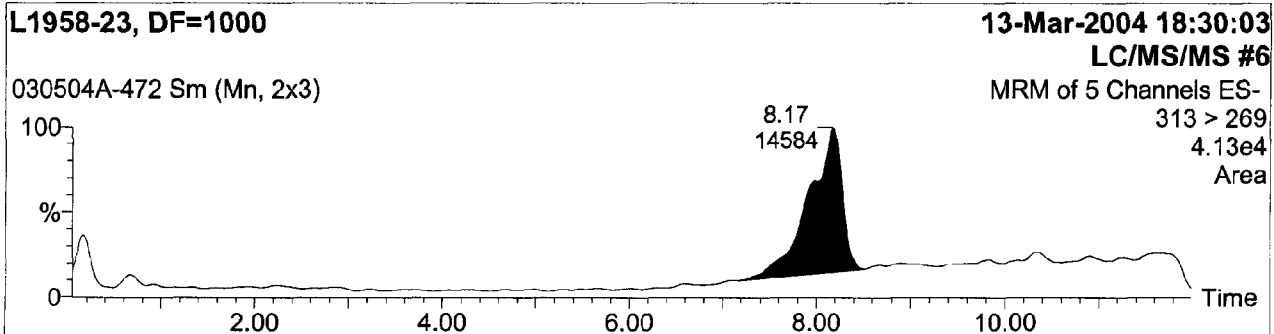
Study No.: L1958, Set No.: 030504A, Ext. Date: 03/05/04, Analyst: K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

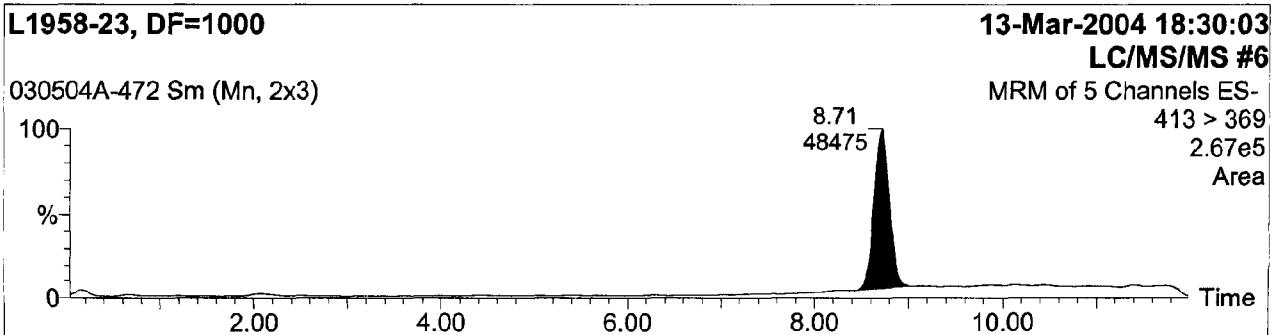
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-472
Text:

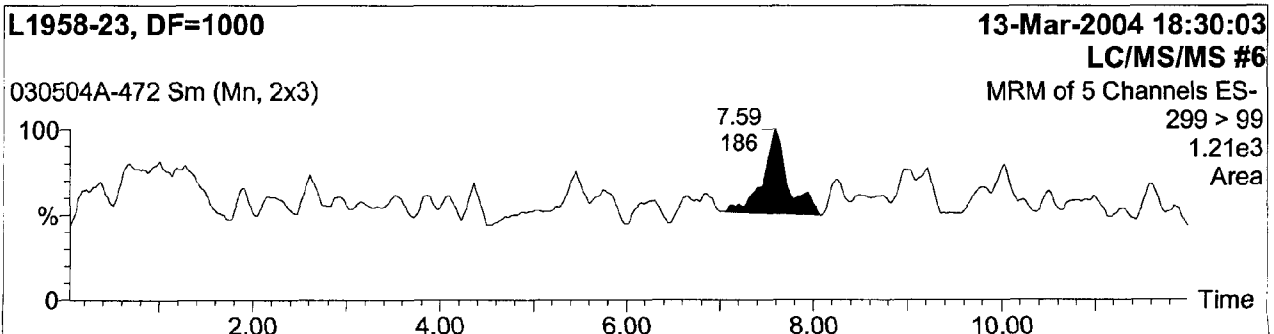
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

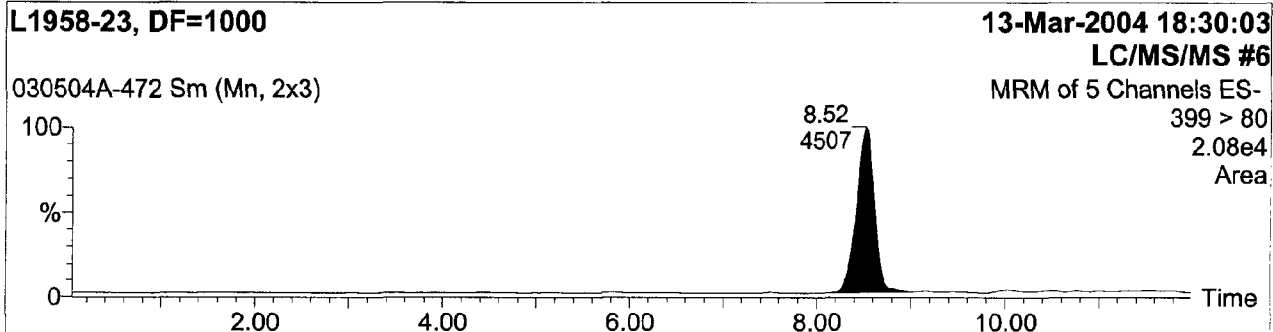
Study No.:L1958, Set No.:030504A, Ext.Date:03/05/04, Analyst:K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

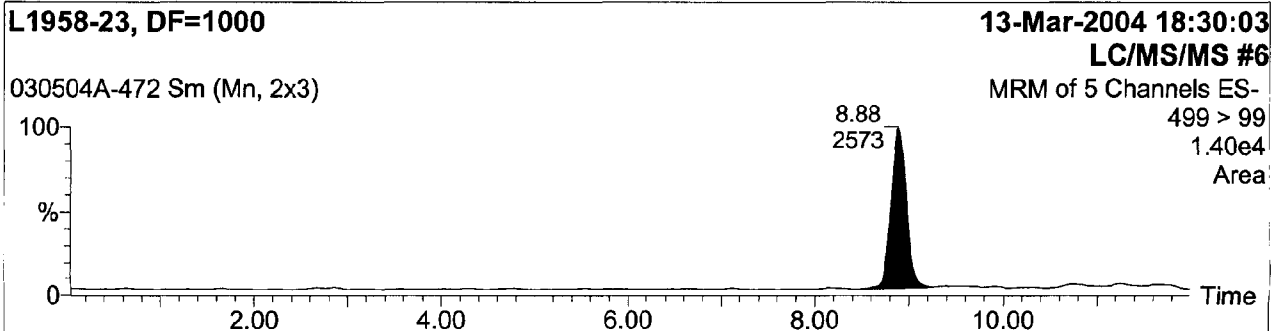
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-472
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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Quantify Sample Report

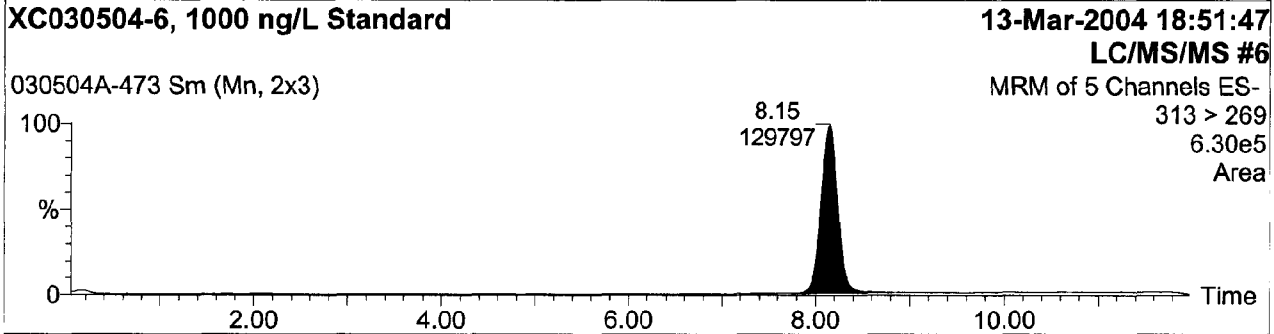
Study No.: L1958, Set No.: 030504A, Ext. Date: 03/05/04, Analyst: K. Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

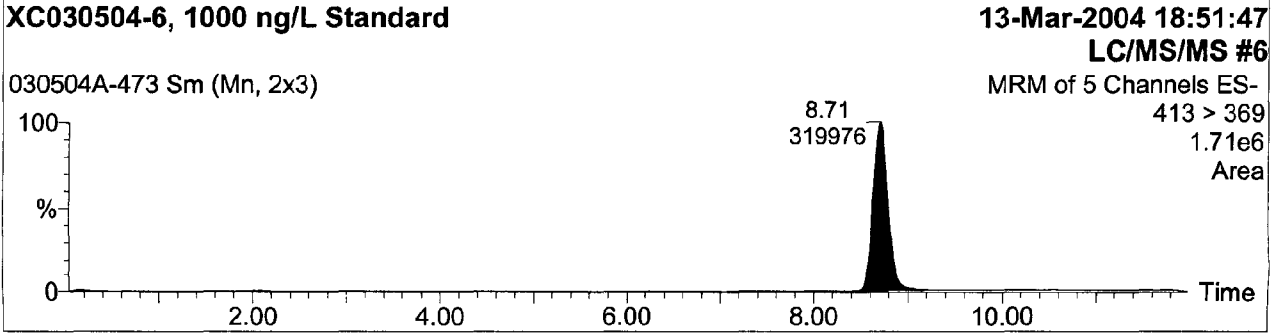
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-473
Text:

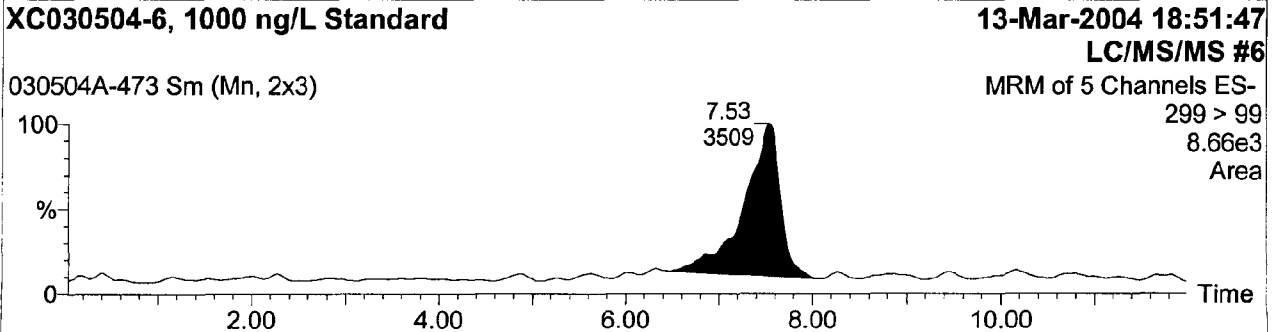
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

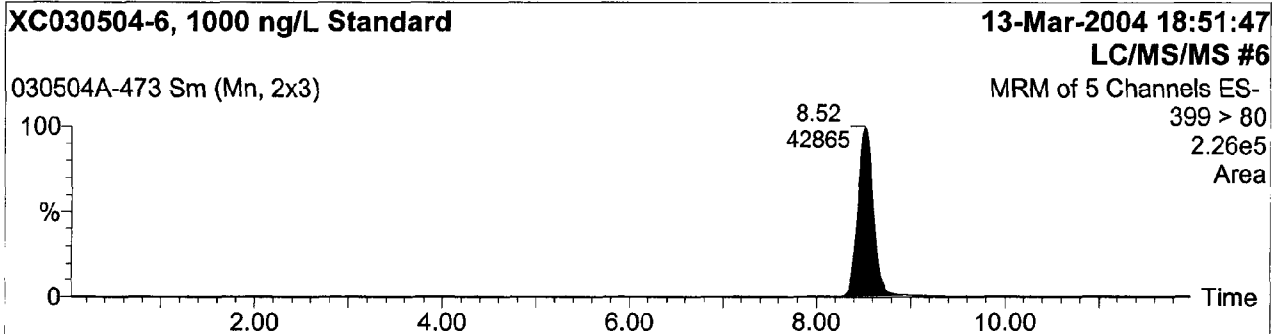
Study No.: L1958, Set No.: 030504A, Ext.Date: 03/05/04, Analyst: K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:22:46 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

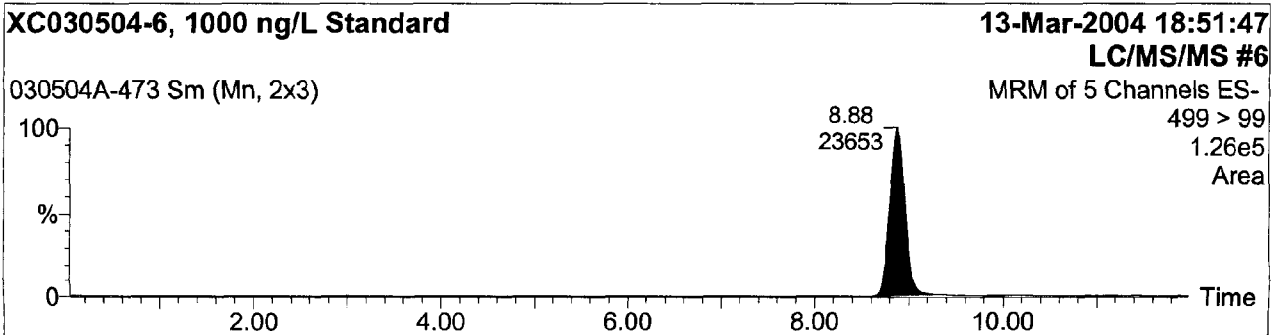
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-473
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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RAW DATA REPORT

Sponsor Study No:	NA	Limit of Quantitation:	50 ppt	Set No:	031704A
Exygen Study No:	L1958	Injection Volume:	15 µL	Analyst:	Karen Risha
Analyte:	Perfluorohexanoic Acid	Matrix:	Water	Instrument Type:	LC/MS/MS Unit # 6
Ions Monitored:	313 -> 269	Sample Volume:	40.0 mL	Extraction Date:	03/17/04
Site:	NA	Final Volume:	5.0 mL	Analyzed on:	03/18/04

Exygen ID	Sponsor ID	Sample Code	Run No.	Std. Conc. (ppt)	Dilution Factor	Peak Area	Analyte Found (ppt)	Amount Added (ppt)	Recovery (%)
XC030504-0	-	CS	031704A-601	0	-	1384	-	-	-
XC030504-1	-	CS	031704A-602	25	-	5637	-	-	-
XC030504-2	-	CS	031704A-603	50	-	9780	-	-	-
XC030504-3	-	CS	031704A-604	100	-	19409	-	-	-
XC030504-4	-	CS	031704A-605	250	-	41045	-	-	-
XC030504-5	-	CS	031704A-606	500	-	86735	-	-	-
XC030504-6	-	CS	031704A-607	1000	-	151544	-	-	-
Methanol Wash	-	C	031704A-608	-	-	1188	-	-	-
0106020 Control	na	C	031704A-609	-	1	1243	ND	-	-
0106020 Spk A	na	LCS	031704A-610	-	1	9223	48.8	50	98
0106020 Spk B	na	LCS	031704A-611	-	1	81477	524	500	105
XC030504-1	-	CS	031704A-612	25	-	5205	-	-	-
XC030504-2	-	CS	031704A-613	50	-	8898	-	-	-
L1958-17 Spk C	Influent 3	LF	031704A-615	-	1000	80237	516000	250000	188
L1958-5 Spk D	Comb Effluent 1/2	LF	031704A-616	-	100	30659	19000	10000	185
L1958-9 Spk E	Port 4A	LF	031704A-617	-	100	83217	53600	25000	161
L1958-13 Spk F	Port 4B	LF	031704A-618	-	100	87895	56600	25000	164
L1958-1 Spk G	Influent 1/2	LF	031704A-619	-	100	85567	55100	10000	512
XC030504-3	-	CS	031704A-620	100	-	17312	-	-	-
XC030504-4	-	CS	031704A-621	250	-	38557	-	-	-
L1958-3	Influent 1/2 Low Spk	FF	031704A-623	-	100	24434	14900	10000	110
XC030504-5	-	CS	031704A-626	500	-	79456	-	-	-
XC030504-6	-	CS	031704A-627	1000	-	143391	-	-	-

Analyte Found (ppt) = (peak area - intercept) / slope x DF

Recovery (%) = $\frac{[\text{analyte found (ppt)} - \text{analyte found in control (ppt)}] \times 100}{\text{amount added (ppt)}}$

Standard Curve : Linear (1/x weighted)

Intercept = 1811.49
Slope = 152.008
Coef. Of Det. = 0.993757

CS = Calibration standard
C = Control sample
S = Sample

LF = Lab fortified sample
FF = Field fortified sample
LCS = Laboratory Control Spike

CK = Check Standard
ND = Not detected = Response between 0 and 25 ppt
NQ = Not quantifiable = Response between 25 ppt and LOQ (50 ppt)

Spreadsheet prepared by: *kr*, 03/19/04

Samples were corrected using the data found in set 030504A.

RAW DATA REPORT

Sponsor Study No:	NA	Limit of Quantitation:	50 ppt	Set No:	031704A
Oxygen Study No:	L1958	Injection Volume:	15 µL	Analyst:	Karen Risha
Analyte:	Perfluorooctanoic Acid	Matrix:	Water	Instrument Type:	LC/MS/MS Unit # 6
Ions Monitored:	413 -> 369	Sample Volume:	40.0 mL	Extraction Date:	03/17/04
Site:	NA	Final Volume:	5.0 mL	Analyzed on:	03/18/04

Oxygen ID	Sponsor ID	Sample Code	Run No.	Std. Conc. (ppt)	Dilution Factor	Peak Area	Analyte Found (ppt)	Amount Added (ppt)	Recovery (%)
XC030504-0	-	CS	031704A-601	0	-	1296	-	-	-
XC030504-1	-	CS	031704A-602	25	-	7657	-	-	-
XC030504-2	-	CS	031704A-603	50	-	14896	-	-	-
XC030504-3	-	CS	031704A-604	100	-	27966	-	-	-
XC030504-4	-	CS	031704A-605	250	-	58208	-	-	-
XC030504-5	-	CS	031704A-606	500	-	119459	-	-	-
XC030504-6	-	CS	031704A-607	1000	-	236685	-	-	-
Methanol Wash	-	C	031704A-608	-	-	40977	-	-	-
0106020 Control	na	C	031704A-609	-	1	1515	ND	-	-
0106020 Spk A	na	LCS	031704A-610	-	1	14001	50.6	50	101
0106020 Spk B	na	LCS	031704A-611	-	1	121791	511	500	102
XC030504-1	-	CS	031704A-612	25	-	7709	-	-	-
XC030504-2	-	CS	031704A-613	50	-	14377	-	-	-
L1958-17 Spk C	Influent 3	LF	031704A-615	-	1000	136155	572000	250000	108
L1958-5 Spk D	Comb Effluent 1/2	LF	031704A-616	-	100	30247	12000	10000	119
L1958-1 Spk G	Influent 1/2	LF	031704A-619	-	100	70266	29100	10000	175
XC030504-3	-	CS	031704A-620	100	-	26988	-	-	-
XC030504-4	-	CS	031704A-621	250	-	60720	-	-	-
L1958-3	Influent 1/2 Low Spk	FF	031704A-623	-	100	45237	18400	10000	68
L1958-23	Trip BlankHigh Spk	FF	031704A-625	-	1000	26721	105000	100000	105
XC030504-5	-	CS	031704A-626	500	-	120185	-	-	-
XC030504-6	-	CS	031704A-627	1000	-	232929	-	-	-

Analyte Found (ppt) = (peak area - intercept) / slope x DF
 Recovery (%) = $\frac{[\text{analyte found (ppt)} - \text{analyte found in control (ppt)}] \times 100}{\text{amount added (ppt)}}$
 Standard Curve : Linear (1/x weighted)
 Intercept = 2135.08
 Slope = 234.327
 Coef. Of Det. = 0.999637

CS = Calibration standard LF = Lab fortified sample
 C = Control sample FF = Field fortified sample
 S = Sample LCS = Laboratory Control Spike
 CK = Check Standard
 ND = Not detected = Response between 0 and 25 ppt
 NQ = Not quantifiable = Response between 25 ppt and LOQ (50 ppt)

Spreadsheet prepared by: *kg, 03/19/04*

Samples were corrected using the data found in set 030504A.

RAW DATA REPORT

Sponsor Study No: NA	Limit of Quantitation: 50 ppt	Set No: 031704A
Exygen Study No: L1958	Injection Volume: 15 µL	Analyst: Karen Risha
Analyte: Perfluorobutanesulfonate	Matrix: Water	Instrument Type: LC/MS/MS Unit # 6
Ions Monitored: 299 -> 99	Sample Volume: 40.0 mL	Extraction Date: 03/17/04
Site: NA	Final Volume: 5.0 mL	Analyzed on: 03/18/04

Exygen ID	Sponsor ID	Sample Code	Run No.	Std. Conc. (ppt)	Dilution Factor	Peak Area	Analyte Found (ppt)	Amount Added (ppt)	Recovery (%)
XC030504-0	-	CS	031704A-601	0	-	0	-	-	-
XC030504-1	-	CS	031704A-602	25	-	0	-	-	-
XC030504-2	-	CS	031704A-603	50	-	384	-	-	-
XC030504-3	-	CS	031704A-604	100	-	611	-	-	-
XC030504-4	-	CS	031704A-605	250	-	1589	-	-	-
XC030504-5	-	CS	031704A-606	500	-	3300	-	-	-
XC030504-6	-	CS	031704A-607	1000	-	5524	-	-	-
Methanol Wash	-	C	031704A-608	-	-	0	-	-	-
0106020 Control	na	C	031704A-609	-	1	0	ND	-	-
0106020 Spk A	na	LCS	031704A-610	-	1	281	39.0	50	78
0106020 Spk B	na	LCS	031704A-611	-	1	3262	553	500	111
XC030504-1	-	CS	031704A-612	25	-	0	-	-	-
XC030504-2	-	CS	031704A-613	50	-	278	-	-	-
L1958-1 Spk G	Influent 1/2	LF	031704A-619	-	100	8001	137000	10000	949
XC030504-3	-	CS	031704A-620	100	-	657	-	-	-
XC030504-4	-	CS	031704A-621	250	-	1501	-	-	-
L1958-3	Influent 1/2 Low Spk	FF	031704A-622	-	1000	1042	170000	10000	1279
L1958-3	Influent 1/2 Low Spk	FF	031704A-623	-	100	9328	-	10000	-
L1958-22	Trip Blank Low Spk	FF	031704A-624	-	100	522	8050	10000	81
L1958-23	Trip BlankHigh Spk	FF	031704A-625	-	1000	465	70700	100000	71
XC030504-5	-	CS	031704A-626	500	-	2945	-	-	-
XC030504-6	-	CS	031704A-627	1000	-	5816	-	-	-

Analyte Found (ppt) = (peak area - intercept) / slope x DF Standard Curve : Linear (1/x weighted)
 Recovery (%) = $\frac{[\text{analyte found (ppt)} - \text{analyte found in control (ppt)}] \times 100}{\text{amount added (ppt)}}$ Intercept = 54.7291
Slope = 5.80467
Coef. Of Det. = 0.993620

CS = Calibration standard LF = Lab fortified sample
 C = Control sample FF = Field fortified sample
 S = Sample LCS = Laboratory Control Spike
 CK = Check Standard
 ND = Not detected = Response between 0 and 25 ppt
 NQ = Not quantifiable = Response between 25 ppt and LOQ (50 ppt)

Spreadsheet prepared by: *KR* 03/19/04

Samples were corrected using the data found in set 030504A.

RAW DATA REPORT

Sponsor Study No:	NA	Limit of Quantitation:	50 ppt	Set No:	031704A
Oxygen Study No:	L1958	Injection Volume:	15 µL	Analyst:	Karen Risha
Analyte:	Perfluorhexanesulfonate	Matrix:	Water	Instrument Type:	LC/MS/MS Unit # 6
Ions Monitored:	399 -> 80	Sample Volume:	40.0 mL	Extraction Date:	03/17/04
Site:	NA	Final Volume:	5.0 mL	Analyzed on:	03/18/04

Oxygen ID	Sponsor ID	Sample Code	Run No.	Std. Conc. (ppt)	Dilution Factor	Peak Area	Analyte Found (ppt)	Amount Added (ppt)	Recovery (%)
XC030504-0	-	CS	031704A-601	0	-	0	-	-	-
XC030504-1	-	CS	031704A-602	25	-	873	-	-	-
XC030504-2	-	CS	031704A-603	50	-	1918	-	-	-
XC030504-3	-	CS	031704A-604	100	-	3759	-	-	-
XC030504-4	-	CS	031704A-605	250	-	8576	-	-	-
XC030504-5	-	CS	031704A-606	500	-	17829	-	-	-
XC030504-6	-	CS	031704A-607	1000	-	35559	-	-	-
Methanol Wash	-	C	031704A-608	-	-	0	-	-	-
0106020 Control	na	C	031704A-609	-	1	0	ND	-	-
0106020 Spk A	na	LCS	031704A-610	-	1	1858	52.3	50	105
0106020 Spk B	na	LCS	031704A-611	-	1	17060	484	500	97
XC030504-1	-	CS	031704A-612	25	-	906	-	-	-
XC030504-2	-	CS	031704A-613	50	-	1733	-	-	-
XC030504-3	-	CS	031704A-620	100	-	3370	-	-	-
XC030504-4	-	CS	031704A-621	250	-	8581	-	-	-
L1958-3	Influent 1/2 Low Spk	FF	031704A-623	-	100	5147	14600	10000	100
XC030504-5	-	CS	031704A-626	500	-	17277	-	-	-
XC030504-6	-	CS	031704A-627	1000	-	35458	-	-	-

Analyte Found (ppt) = (peak area - intercept) / slope x DF
 Recovery (%) = $\frac{[\text{analyte found (ppt)} - \text{analyte found in control (ppt)}] \times 100}{\text{amount added (ppt)}}$
 Standard Curve : Linear (1/x weighted)
 Intercept = 16.7342
 Slope = 35.2308
 Coef. Of Det. = 0.999704

CS = Calibration standard LF = Lab fortified sample
 C = Control sample FF = Field fortified sample
 S = Sample LCS = Laboratory Control Spike
 CK = Check Standard
 ND = Not detected = Response between 0 and 25 ppt
 NQ = Not quantifiable = Response between 25 ppt and LOQ (50 ppt)

Spreadsheet prepared by: *BR* 03/19/04

Samples were corrected using the data found in set 030504A.

RAW DATA REPORT

Sponsor Study No: NA	Limit of Quantitation: 50 ppt	Set No: 031704A
Exygen Study No: L1958	Injection Volume: 15 µL	Analyst: Karen Risha
Analyte: Perfluorooctanesulfonate	Matrix: Water	Instrument Type: LC/MS/MS Unit # 6
Ions Monitored: 499 -> 99	Sample Volume: 40.0 mL	Extraction Date: 03/17/04
Site: NA	Final Volume: 5.0 mL	Analyzed on: 03/18/04

Exygen ID	Sponsor ID	Sample Code	Run No.	Std. Conc. (ppt)	Dilution Factor	Peak Area	Analyte Found (ppt)	Amount Added (ppt)	Recovery (%)
XC030504-0	-	CS	031704A-601	0	-	310	-	-	-
XC030504-1	-	CS	031704A-602	25	-	440	-	-	-
XC030504-2	-	CS	031704A-603	50	-	900	-	-	-
XC030504-3	-	CS	031704A-604	100	-	1583	-	-	-
XC030504-4	-	CS	031704A-605	250	-	3392	-	-	-
XC030504-5	-	CS	031704A-606	500	-	7489	-	-	-
XC030504-6	-	CS	031704A-607	1000	-	13775	-	-	-
Methanol Wash	-	C	031704A-608	-	-	0	-	-	-
0106020 Control	na	C	031704A-609	-	1	0	ND	-	-
0106020 Spk A	na	LCS	031704A-610	-	1	659	34.9	50	70
0106020 Spk B	na	LCS	031704A-611	-	1	7099	525	500	105
XC030504-1	-	CS	031704A-612	25	-	532	-	-	-
XC030504-2	-	CS	031704A-613	50	-	777	-	-	-
L1958-1 Spk G	Influent 1/2	LF	031704A-619	-	100	3927	28300	10000	149
XC030504-3	-	CS	031704A-620	100	-	1421	-	-	-
XC030504-4	-	CS	031704A-621	250	-	3438	-	-	-
L1958-3	Influent 1/2 Low Spk	FF	031704A-623	-	100	3246	23200	10000	98
XC030504-5	-	CS	031704A-626	500	-	6406	-	-	-
XC030504-6	-	CS	031704A-627	1000	-	12885	-	-	-

Analyte Found (ppt) = (peak area - intercept) / slope x DF
 Recovery (%) = $\frac{[\text{analyte found (ppt)} - \text{analyte found in control (ppt)}] \times 100}{\text{amount added (ppt)}}$

Standard Curve : Linear (1/x weighted)
 Intercept = 200.030
 Slope = 13.1525
 Coef. Of Det. = 0.995843

CS = Calibration standard LF = Lab fortified sample
 C = Control sample FF = Field fortified sample
 S = Sample LCS = Laboratory Control Spike
 CK = Check Standard
 ND = Not detected = Response between 0 and 25 ppt
 NQ = Not quantifiable = Response between 25 ppt and LOQ (50 ppt)

Spreadsheet prepared by: *KR* 03/19/04

Samples were corrected using the data found in set 030504A.

03/18/04

Vial	File Name	LIMS ID	Client ID	Sample Description	Matrix	Sample Type	Conc (ng/L)	Conc B	Conc C	Test ID	DF
1	1	031704A-601	---	XC030504-0, 0 ng/L Standard	---	Standard	0	---	---	0	1
2	2	031704A-602	---	XC030504-1, 25 ng/L Standard	---	Standard	25	---	---	0	1
3	3	031704A-603	---	XC030504-2, 50 ng/L Standard	---	Standard	50	---	---	0	1
4	4	031704A-604	---	XC030504-3, 100 ng/L Standard	---	Standard	100	---	---	0	1
5	5	031704A-605	---	XC030504-4, 250 ng/L Standard	---	Standard	250	---	---	0	1
6	6	031704A-606	---	XC030504-5, 500 ng/L Standard	---	Standard	500	---	---	0	1
7	7	031704A-607	---	XC030504-6, 1000 ng/L Standard	---	Standard	1000	---	---	0	1
8	92	031704A-608	---	Methanol Wash	---	Blank	---	---	---	0	1
9	41	031704A-609	---	0106020 Control	---	Blank	---	---	---	0	1
10	42	031704A-610	---	0106020 Spk A, 50 ng/L	---	QC	50	---	---	0	1
11	43	031704A-611	---	0106020 Spk B, 500 ng/L	---	QC	500	---	---	0	1
12	2	031704A-612	---	XC030504-1, 25 ng/L Standard	---	Standard	25	---	---	0	1
13	3	031704A-613	---	XC030504-2, 50 ng/L Standard	---	Standard	50	---	---	0	1
14	44	031704A-614	---	L1958-17 Spk C, 250000 ng/L, DF=10000	---	QC	250000	---	---	0	10000
15	45	031704A-615	---	L1958-17 Spk C, 250000 ng/L, DF=1000	---	QC	250000	---	---	0	1000
16	46	031704A-616	---	L1958-5 Spk D, 10000 ng/L, DF=100	---	QC	10000	---	---	0	100
17	47	031704A-617	---	L1958-9 Spk E, 25000 ng/L, DF=100	---	QC	25000	---	---	0	100
18	48	031704A-618	---	L1958-13 Spk F, 25000 ng/L, DF=100	---	QC	25000	---	---	0	100
19	49	031704A-619	---	L1958-1 Spk G, 10000 ng/L, DF=100	---	QC	10000	---	---	0	100
20	4	031704A-620	---	XC030504-3, 100 ng/L Standard	---	Standard	100	---	---	0	1
21	5	031704A-621	---	XC030504-4, 250 ng/L Standard	---	Standard	250	---	---	0	1
22	50	031704A-622	---	L1958-3, DF=1000	---	QC	10000	---	---	0	1000
23	51	031704A-623	---	L1958-3, DF=100	---	QC	10000	---	---	0	100
24	52	031704A-624	---	L1958-22, DF=100	---	QC	10000	---	---	0	100
25	53	031704A-625	---	L1958-23, DF=1000	---	QC	100000	---	---	0	1000
26	6	031704A-626	---	XC030504-5, 500 ng/L Standard	---	Standard	500	---	---	0	1
27	7	031704A-627	---	XC030504-6, 1000 ng/L Standard	---	Standard	1000	---	---	0	1

Masslynx - Sample List

Sample List: C:\MASSLYNX\Fluorochemicals.PRO\SampleDB\031704A CG ACSFM.SPL
Printed: Thu Mar 18 08:01:22 2004

Oxygen STUDY NO: L1958

03/18/04

	MS Method	HPLC Method	MS Tune File	Inj. Volume
1	C6 8 ACIDS C4 6 8 SULF	pfbz water	Fluorochems	15
2	C6 8 ACIDS C4 6 8 SULF	pfbz water	Fluorochems	15
3	C6 8 ACIDS C4 6 8 SULF	pfbz water	Fluorochems	15
4	C6 8 ACIDS C4 6 8 SULF	pfbz water	Fluorochems	15
5	C6 8 ACIDS C4 6 8 SULF	pfbz water	Fluorochems	15
6	C6 8 ACIDS C4 6 8 SULF	pfbz water	Fluorochems	15
7	C6 8 ACIDS C4 6 8 SULF	pfbz water	Fluorochems	15
8	C6 8 ACIDS C4 6 8 SULF	pfbz water	Fluorochems	15
9	C6 8 ACIDS C4 6 8 SULF	pfbz water	Fluorochems	15
10	C6 8 ACIDS C4 6 8 SULF	pfbz water	Fluorochems	15
11	C6 8 ACIDS C4 6 8 SULF	pfbz water	Fluorochems	15
12	C6 8 ACIDS C4 6 8 SULF	pfbz water	Fluorochems	15
13	C6 8 ACIDS C4 6 8 SULF	pfbz water	Fluorochems	15
14	C6 8 ACIDS C4 6 8 SULF	pfbz water	Fluorochems	15
15	C6 8 ACIDS C4 6 8 SULF	pfbz water	Fluorochems	15
16	C6 8 ACIDS C4 6 8 SULF	pfbz water	Fluorochems	15
17	C6 8 ACIDS C4 6 8 SULF	pfbz water	Fluorochems	15
18	C6 8 ACIDS C4 6 8 SULF	pfbz water	Fluorochems	15
19	C6 8 ACIDS C4 6 8 SULF	pfbz water	Fluorochems	15
20	C6 8 ACIDS C4 6 8 SULF	pfbz water	Fluorochems	15
21	C6 8 ACIDS C4 6 8 SULF	pfbz water	Fluorochems	15
22	C6 8 ACIDS C4 6 8 SULF	pfbz water	Fluorochems	15
23	C6 8 ACIDS C4 6 8 SULF	pfbz water	Fluorochems	15
24	C6 8 ACIDS C4 6 8 SULF	pfbz water	Fluorochems	15
25	C6 8 ACIDS C4 6 8 SULF	pfbz water	Fluorochems	15
26	C6 8 ACIDS C4 6 8 SULF	pfbz water	Fluorochems	15
27	C6 8 ACIDS C4 6 8 SULF	pfbz water	Fluorochems	15

LC/MS/MS SYSTEM AND OPERATING CONDITIONS

Sponsor Protocol No: NA

Exygen Study No: L1958

Instrument: Micromass Quattro Ultima (LC/MS/MS Unit #6)

Computer: COMPAQ Professional Workstation AP200

Software: Microsoft Windows NT: Version 4 Build 1381: Service Pack 5
Micromass Limited: MassLynx 3.4 Build 004

HPLC Equipment: Hewlett Packard (HP) Series 1100
HP Bin Pump HP Vacuum Degasser
HP Autosampler HP Column Oven

HPLC Column: Genesis C-8, 5 cm x 2.1 mm i.d. x 4 μ (Exygen ID: MA0012842)
(JONESCHROMATOGRAPHY: Part No. FK5962E)

Mobile Phase (A) : 2 mM Ammonium Acetate in Type I Water
Mobile Phase (B) : Methanol

Analyst: Karen Risha
Exygen Research
3058 Research Drive, State College, PA 16801
Phone: (814) 272-1039 FAX: (814) 231-1580

KR 03/18/04

NOTE: The next 3 pages are computer generated printouts from the masslynx software program. The pages contain the instrument settings used for the analysis of this data set.

All Handwritten Peak ID's by: *KR 03/19/04*

Scanning Method Report

Page 1

Method: C:\MASSLYNX\FLUOROchemicals.PRO\ACQUDE\C6 8 ACIDS C4 6 8 SULF
Last Modified: Tue Mar 16 15:06:12 2004

Printed: Thu Mar 18 08:01:49 2004

kg 03/18/04

Solvent Delay (mins) : 0.00

Analog Channel 4 : Unused
Function : 1 MRM of 5 Mass Pairs (ESP-)

Inter Channel Delay (Secs) : 0.03
Span (Daltons) : 0.00
Start Time (Mins) : 0.00
End Time (Mins) : 12.00
Repeats : 1

	Channel	Parent	Daughter	Dwell (Secs)	Coll Energy (eV)	Cone (V)
1		299.00	99.00	0.20	40	49
2		313.00	269.00	0.20	10	20
3		399.00	80.00	0.20	35	50
4		413.00	369.00	0.20	10	10
5		499.00	99.00	0.20	30	10

Method File: C:\MASSLYNX\FLUOROCHEMICALS.PRO\ACQUDE\pfbs water
Last Modified: Thursday, March 18, 2004 07:03:06

Printed: Thursday, March 18, 2004 08:02:05

03/18/04

HP1100 LC Pump Initial Conditions

Solvents
A% 90.0
B% 10.0
C% 0.0
D% 0.0

Flow (ml/min) 0.300
Stop Time (mins) 20.0
Min Pressure (bar) 0
Max Pressure (bar) 400
Oven Temperature Left (°C) 35.0
Oven Temperature Right (°C) 35.0

HP1100 LC Pump Gradient Timetable

The gradient Timetable contains 8 entries which are :

Time	A%	B%	C%	D%	Flow	Pressure
0.00	90.0	10.0	0.0	0.0	0.300	400
2.00	90.0	10.0	0.0	0.0	0.300	400
5.00	10.0	90.0	0.0	0.0	0.300	400
9.00	10.0	90.0	0.0	0.0	0.300	400
9.50	0.0	100.0	0.0	0.0	0.300	400
14.00	0.0	100.0	0.0	0.0	0.300	400
14.50	90.0	10.0	0.0	0.0	0.300	400
20.00	90.0	10.0	0.0	0.0	0.300	400

HP1100 LC Pump External Event Timetable

The Timetable contains 6 entries which are :

Time	Column Switch	Contact1	Contact2	Contact3	Contact4
Initial	Off	Off	Off	Off	Off
0.00	Off	On	Off	Off	Off
0.05	Off	Off	Off	Off	Off
0.10	Off	Off	On	Off	Off
11.90	Off	Off	Off	On	Off
12.00	Off	Off	Off	Off	Off

HP1100 Autosampler Initial Conditions

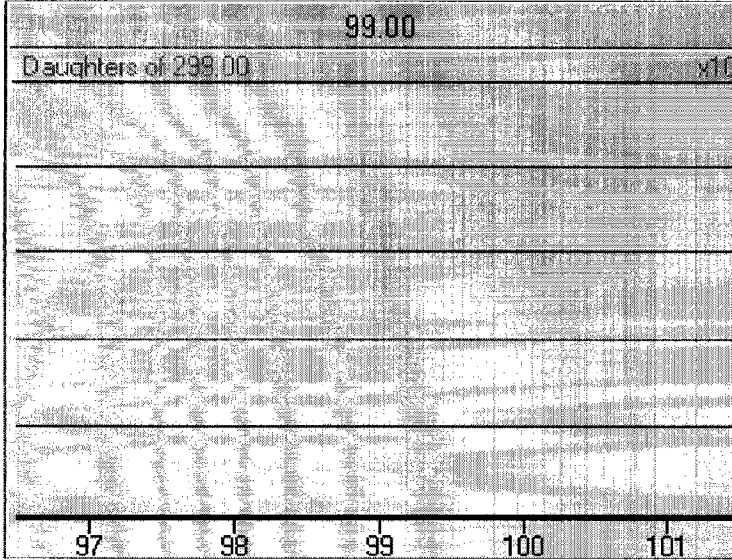
Draw Speed 200.0
Eject Speed (µl/min) 200
Draw Position (mm) 0.00
Stop Time (mins) 20.00
Injection Volume (µl) 15.0
Vial Number 92

Tuning Method Report

Method: C:\MASSLYNX\FLUOROCHEMICALS.PRO\ACQDB\FLUOROCHEMS

Printed: Thu Mar 18 08:02:28 2004

KAP 03/18/04



Dau 299.00

SOURCE (ESP-)	Set	Rdbk	Analyser	Set	Rdbk
Capillary	3.00	-2.93	LM Res 1	14.0	
Cone	10	-11	HM Res 1	14.0	
Hexapole 1	0.0		IEnergy 1	1.0	
Aperture 1	0.0		Entrance	-2	28
Hexapole 2	0.2		Collision	30	29
Source Block Temp.	100	100	Exit	2	31
Desolvation Temp.	300	299	LM Res 2	14.0	
			HM Res 2	14.0	
			IEnergy 2	2.0	
			Multiplier	650	-648
Pressures		Rdbk	Gas Flows		Rdbk
Analyser Vacuum	OFF		Cone Gas	129.6	
Gas Cell	2.8e-3		Desolvation	751.3	

Quantify Calibration Report

Study No.:L1958, Set No.:031704A, Ext.Date:03/17/04, Analyst:K.Risha

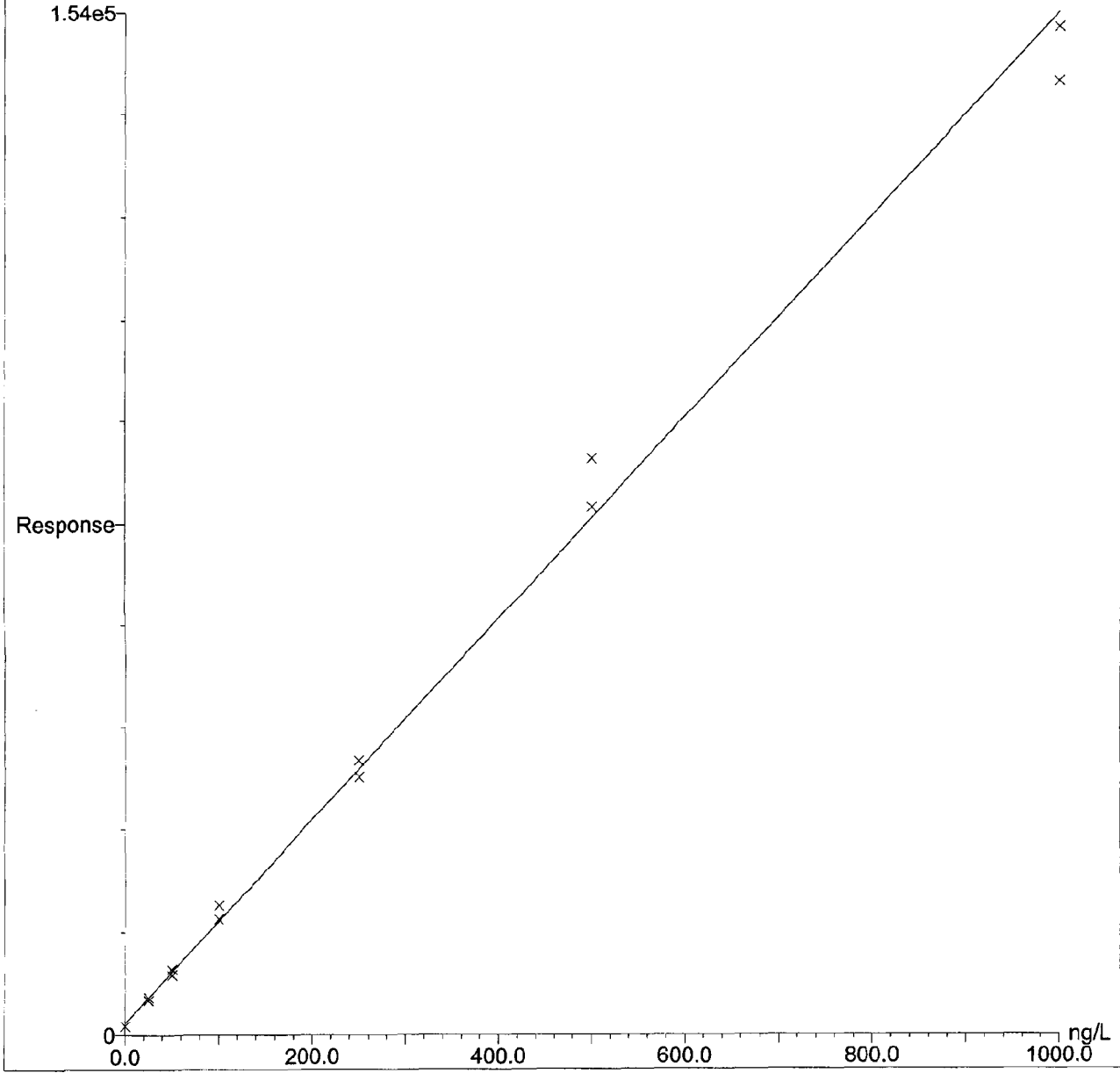
Calibration: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\CurveDB\031704A CG ACSFM

Last modified: Fri Mar 19 11:34:57 2004

Printed: Fri Mar 19 12:24:05 2004

03/19/04 pages 1-5

Compound 1 name: C6 Acid PFHA
Coefficient of Determination: 0.993757
Calibration curve: $152.008 * x + 1811.49$
Response type: External Std, Area
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Oxygen Research, 3058 Research Drive, State College, PA 16801

Quantify Calibration Report

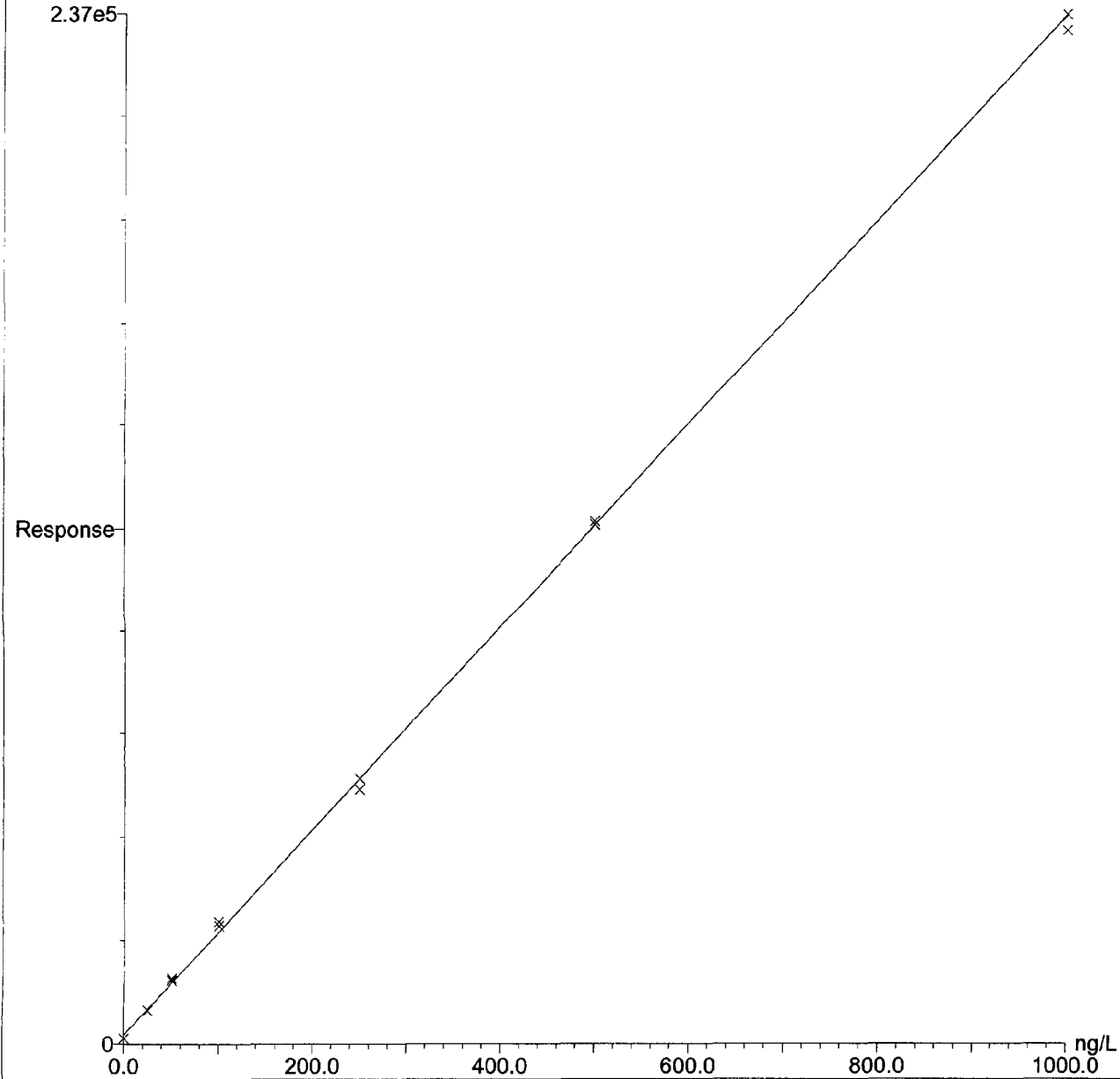
Study No.:L1958, Set No.:031704A, Ext.Date:03/17/04, Analyst:K.Risha

Calibration: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\CurveDB\031704A CG ACSFM

Last modified: Fri Mar 19 11:34:57 2004

Printed: Fri Mar 19 12:24:05 2004

Compound 2 name: C8 Acid PFOA
Coefficient of Determination: 0.999637
Calibration curve: $234.327 * x + 2135.08$
Response type: External Std, Area
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Oxygen Research, 3058 Research Drive, State College, PA 16801

Quantify Calibration Report

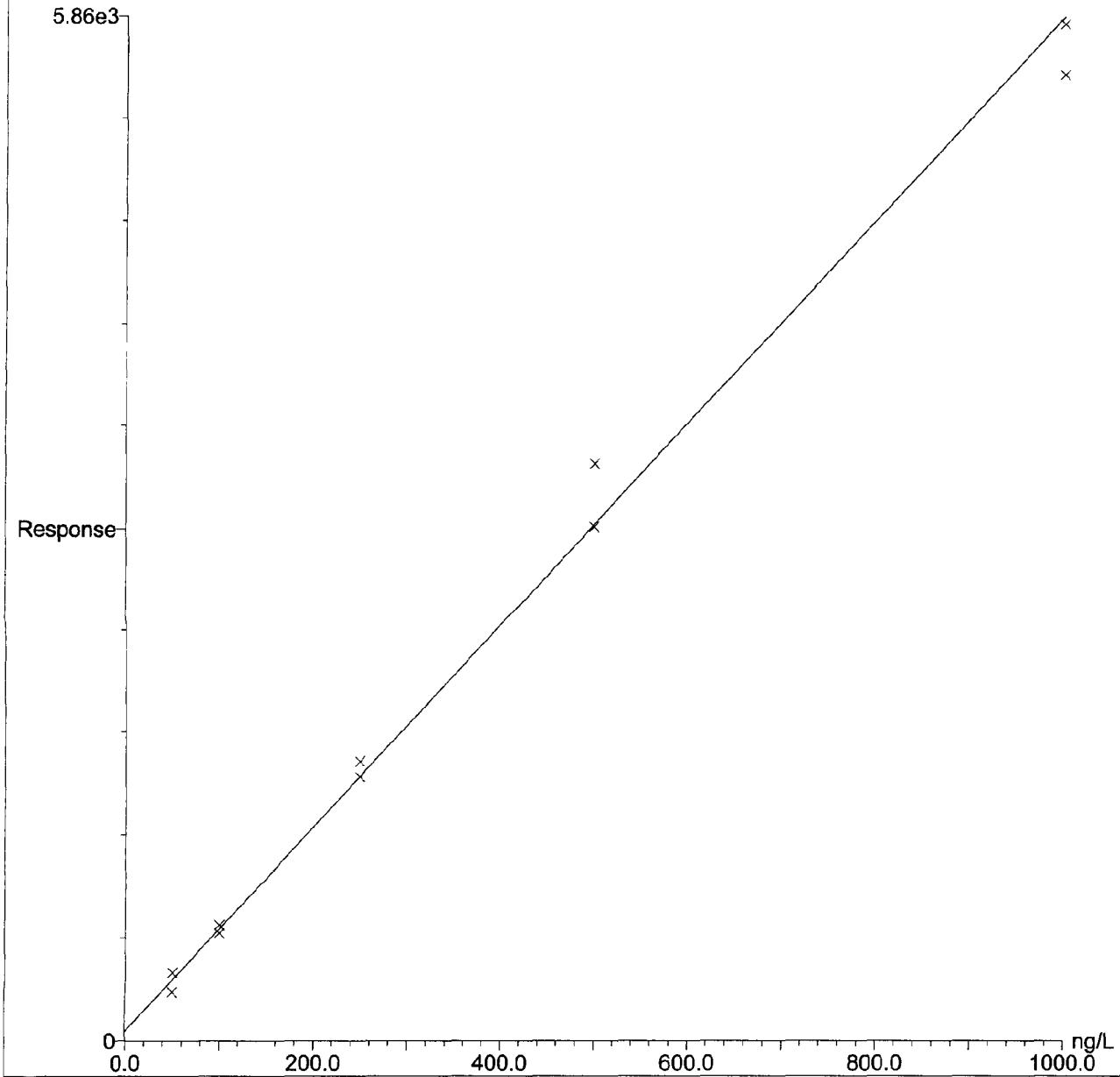
Study No.:L1958, Set No.:031704A, Ext.Date:03/17/04, Analyst:K.Risha

Calibration: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\CurveDB\031704A CG ACSFM

Last modified: Fri Mar 19 11:34:57 2004

Printed: Fri Mar 19 12:24:05 2004

Compound 3 name: C4 Sulfonate PFBS
Coefficient of Determination: 0.993620
Calibration curve: $5.80467 * x + 54.7291$
Response type: External Std, Area
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



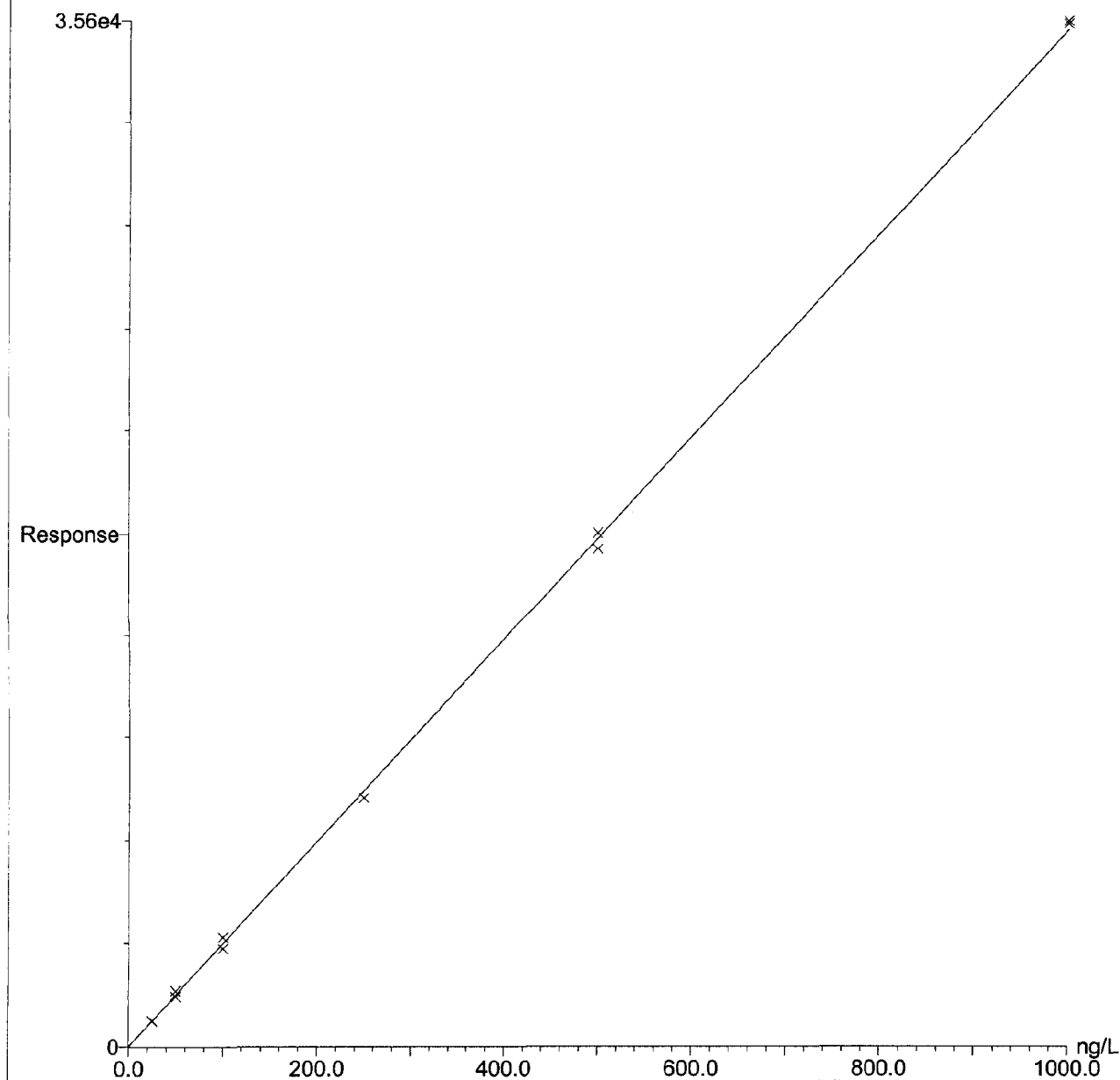
Oxygen Research, 3058 Research Drive, State College, PA 16801

Quantify Calibration Report

Study No.:L1958, Set No.:031704A, Ext.Date:03/17/04, Analyst:K.Risha

Calibration: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\CurveDB\031704A CG ACSFM
Last modified: Fri Mar 19 11:34:57 2004
Printed: Fri Mar 19 12:24:05 2004

Compound 4 name: C6 Sulfonate PFHS
Coefficient of Determination: 0.999704
Calibration curve: $35.2308 * x + 16.7342$
Response type: External Std, Area
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



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Quantify Calibration Report

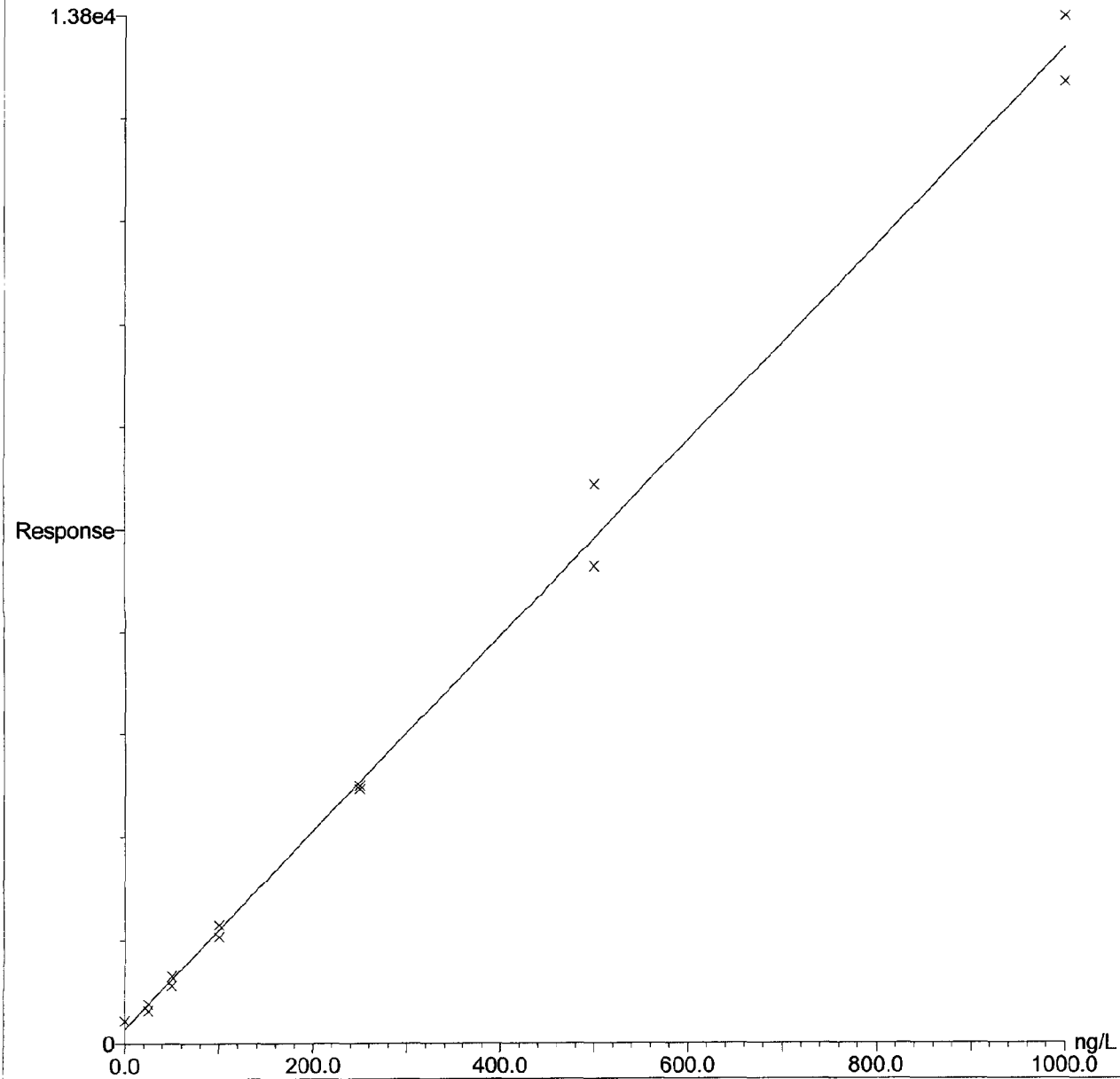
Study No.: L1958, Set No.: 031704A, Ext.Date: 03/17/04, Analyst: K.Risha

Calibration: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\CurveDB\031704A CG ACSFM

Last modified: Fri Mar 19 11:34:57 2004

Printed: Fri Mar 19 12:24:05 2004

Compound 5 name: C8 Sulfonate PFOS
Coefficient of Determination: 0.995843
Calibration curve: $13.1525 * x + 200.030$
Response type: External Std, Area
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



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Quantify Sample Report

Study No.: L1958, Set No.: 031704A, Ext.Date: 03/17/04, Analyst: K.Risha

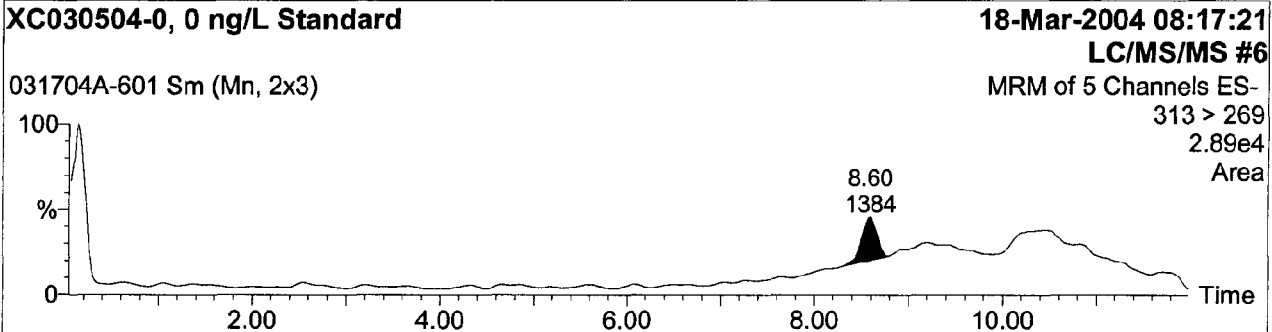
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Last modified: Fri Mar 19 11:30:32 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031604
Last modified: Thu Mar 18 09:51:08 2004
Job Code:

Printed: Fri Mar 19 12:24:08 2004

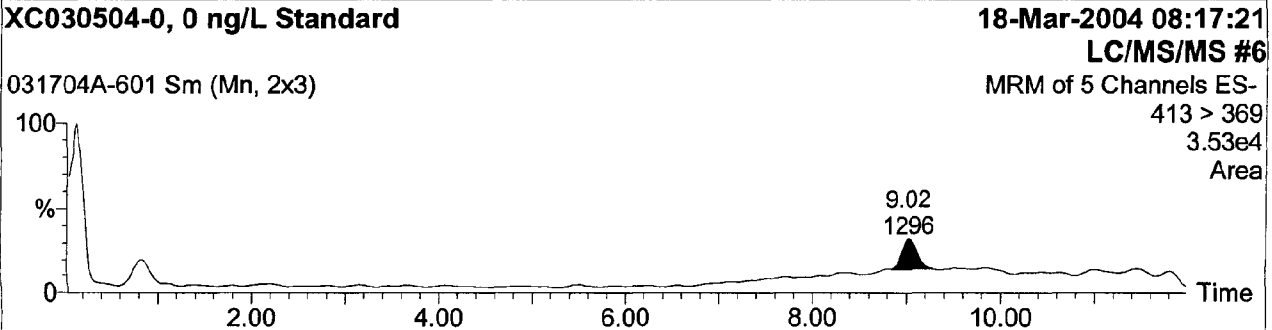
Initials KR
Date 03/19/04
Run# 031704A-601 To 031704A-627

Name: 031704A-601
Text:

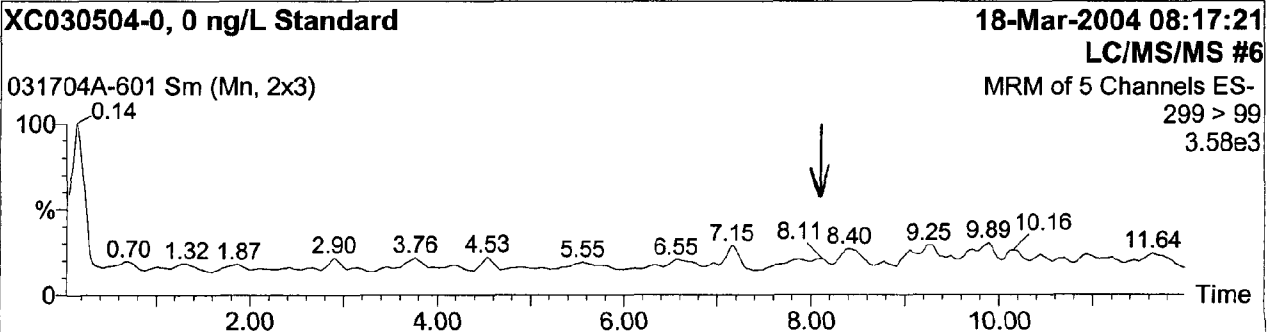
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

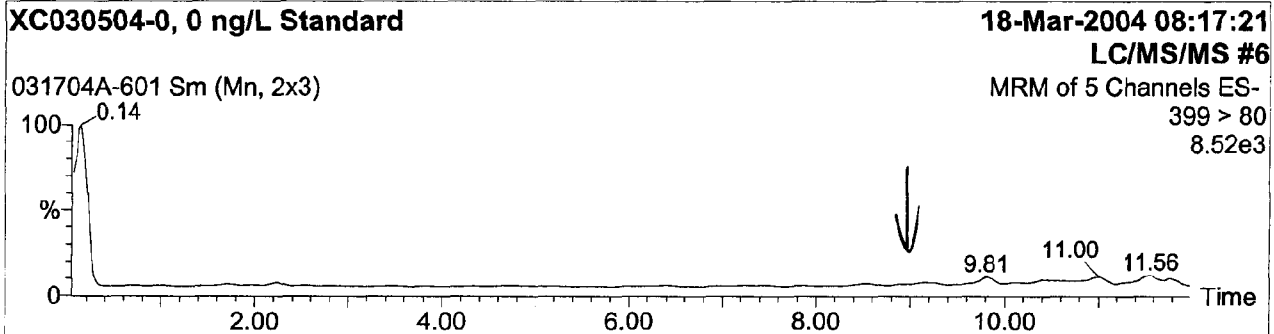
Study No.: L1958, Set No.: 031704A, Ext.Date: 03/17/04, Analyst: K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\031704A CG ACSFM
Last modified: Fri Mar 19 11:30:32 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031604
Last modified: Thu Mar 18 09:51:08 2004
Job Code:

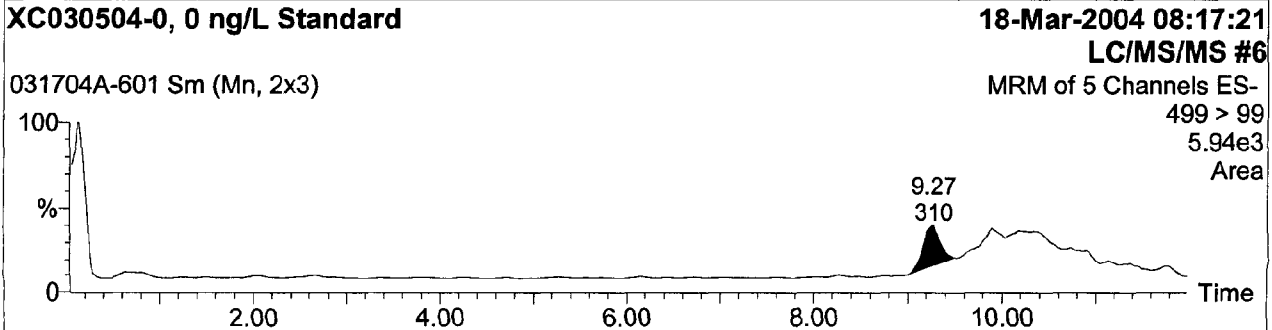
Printed: Fri Mar 19 12:24:08 2004

Name: 031704A-601
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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Quantify Sample Report

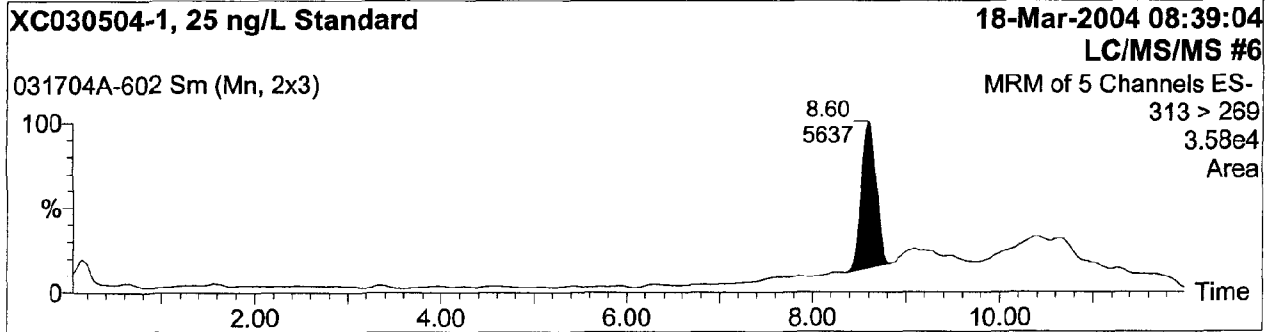
Study No.: L1958, Set No.: 031704A, Ext. Date: 03/17/04, Analyst: K. Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\031704A CG ACSFM
Last modified: Fri Mar 19 11:30:32 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031604
Last modified: Thu Mar 18 09:51:08 2004
Job Code:

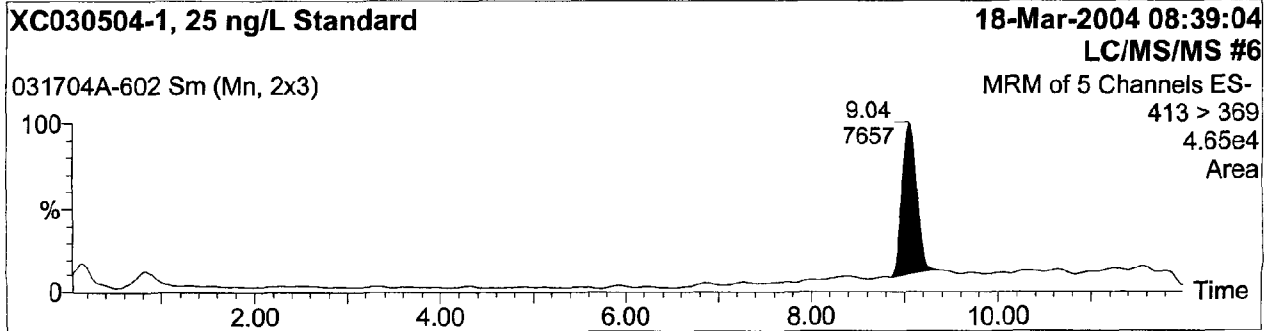
Printed: Fri Mar 19 12:24:08 2004

Name: 031704A-602
Text:

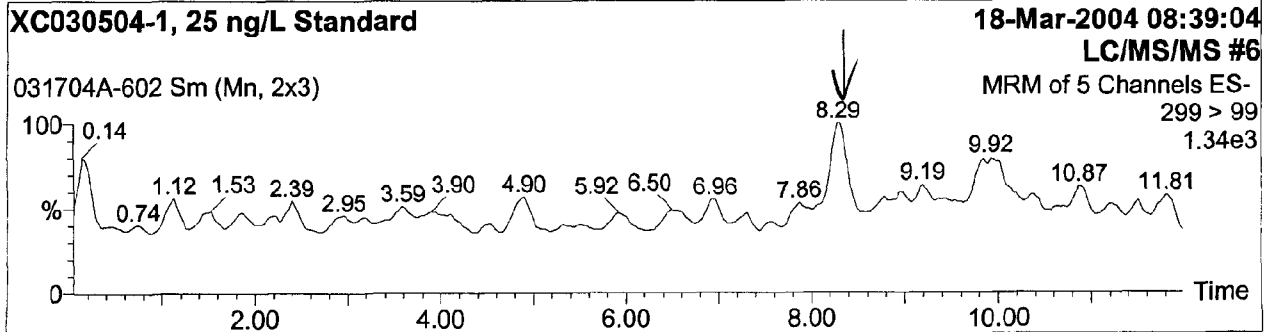
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

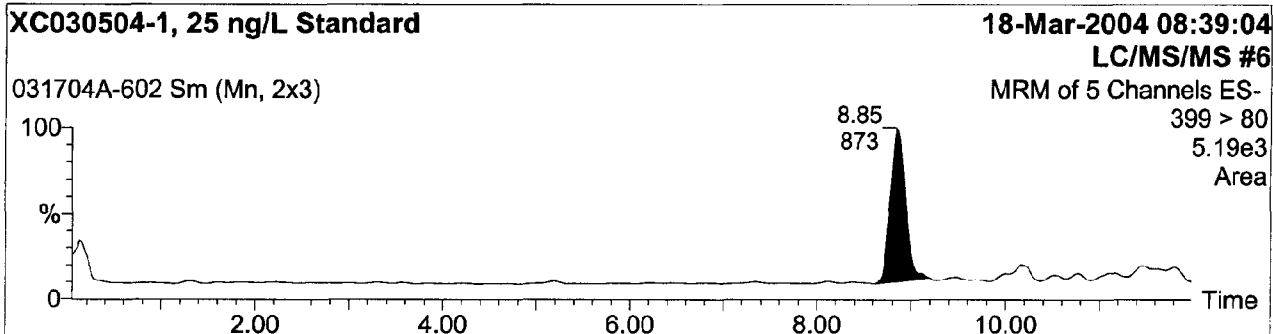
Study No.:L1958, Set No.:031704A, Ext.Date:03/17/04, Analyst:K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\031704A CG ACSFM
Last modified: Fri Mar 19 11:30:32 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031604
Last modified: Thu Mar 18 09:51:08 2004
Job Code:

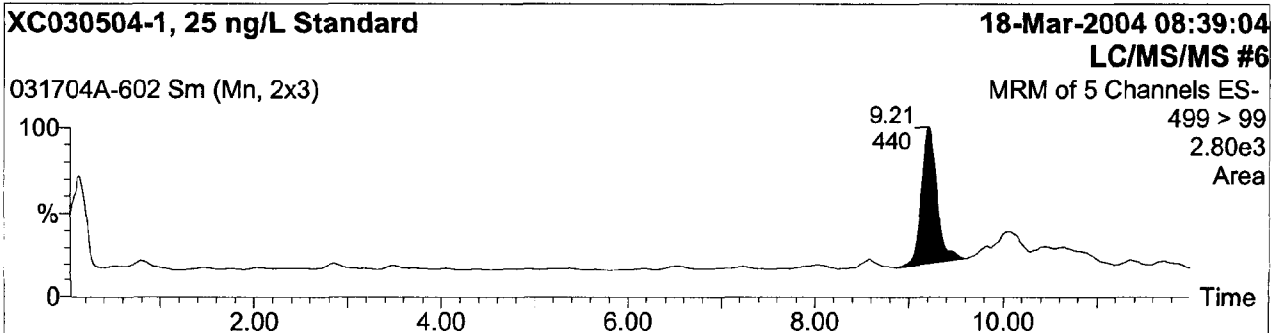
Printed: Fri Mar 19 12:24:08 2004

Name: 031704A-602
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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Quantify Sample Report

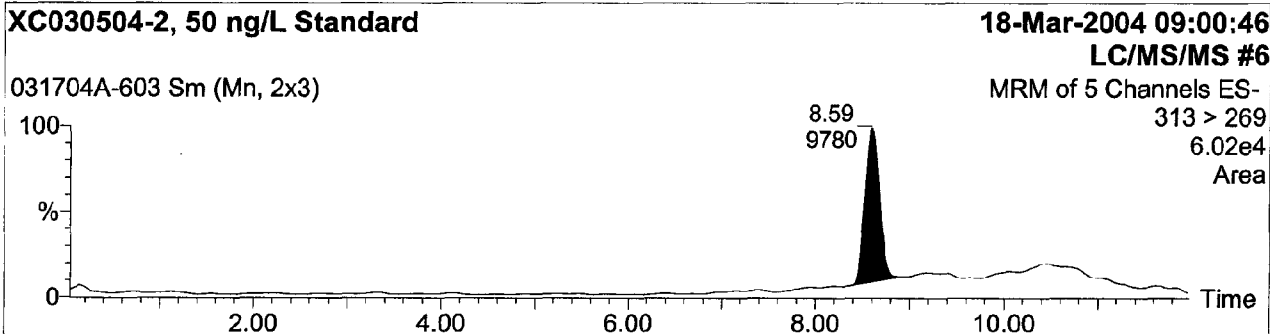
Study No.:L1958, Set No.:031704A, Ext.Date:03/17/04, Analyst:K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\031704A CG ACSFM
Last modified: Fri Mar 19 11:30:32 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031604
Last modified: Thu Mar 18 09:51:08 2004
Job Code:

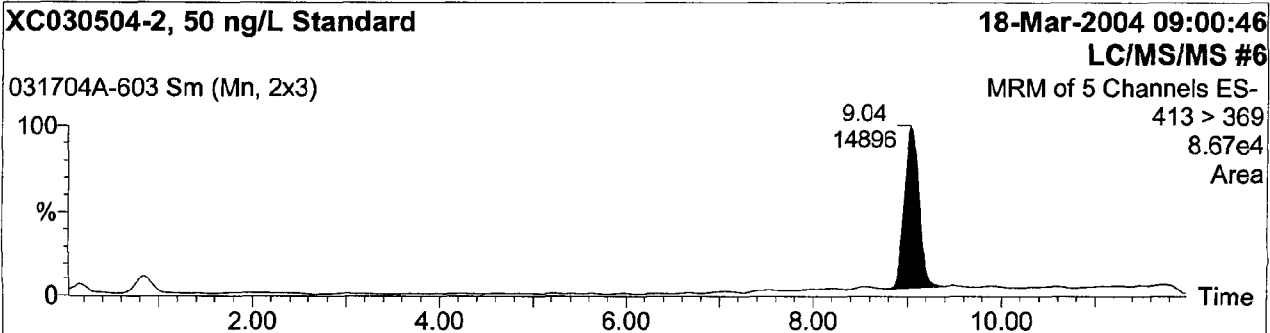
Printed: Fri Mar 19 12:24:08 2004

Name: 031704A-603
Text:

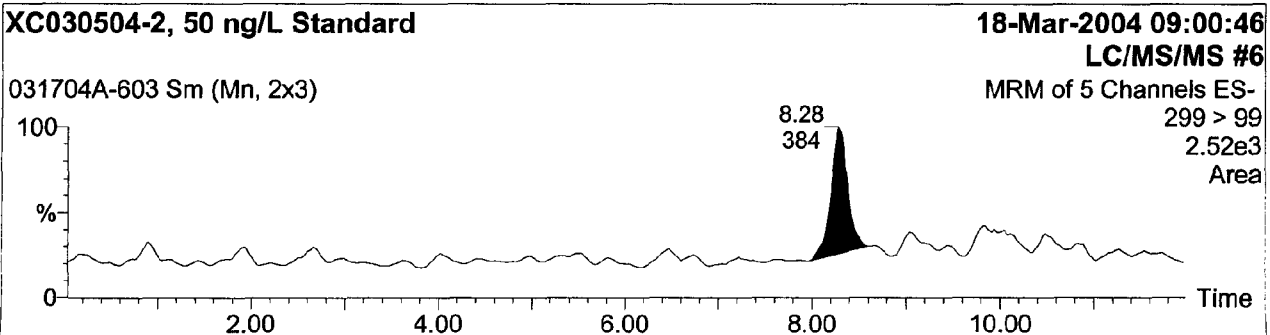
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

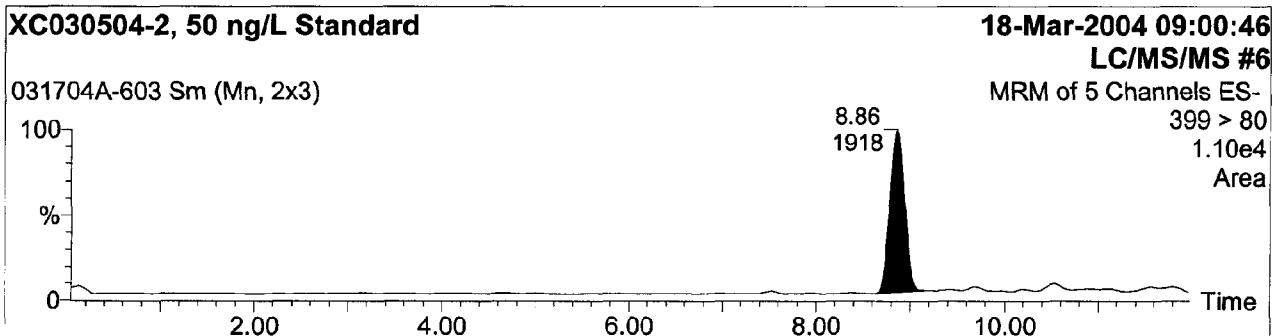
Study No.: L1958, Set No.: 031704A, Ext.Date: 03/17/04, Analyst: K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\031704A CG ACSFM
Last modified: Fri Mar 19 11:30:32 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031604
Last modified: Thu Mar 18 09:51:08 2004
Job Code:

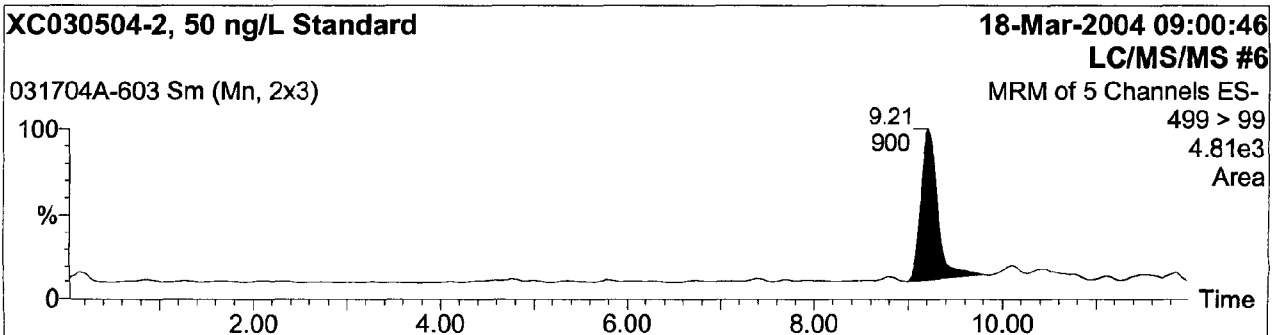
Printed: Fri Mar 19 12:24:08 2004

Name: 031704A-603
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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Quantify Sample Report

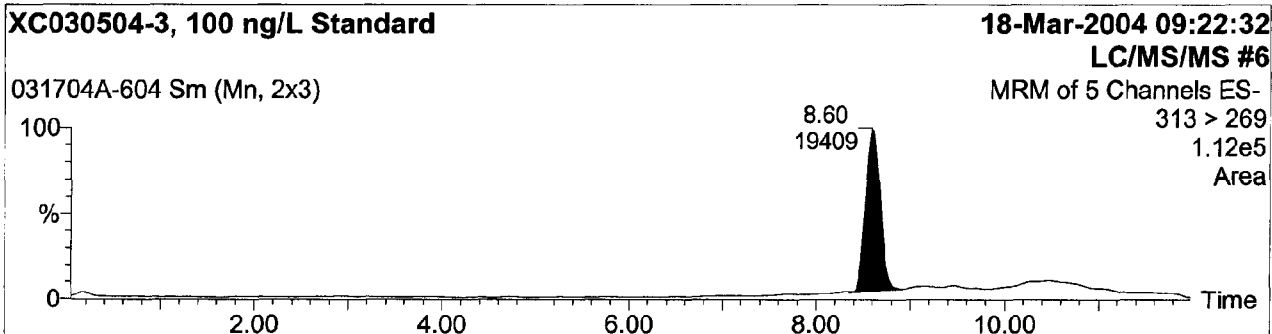
Study No.: L1958, Set No.: 031704A, Ext. Date: 03/17/04, Analyst: K. Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\031704A CG ACSFM
Last modified: Fri Mar 19 11:30:32 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031604
Last modified: Thu Mar 18 09:51:08 2004
Job Code:

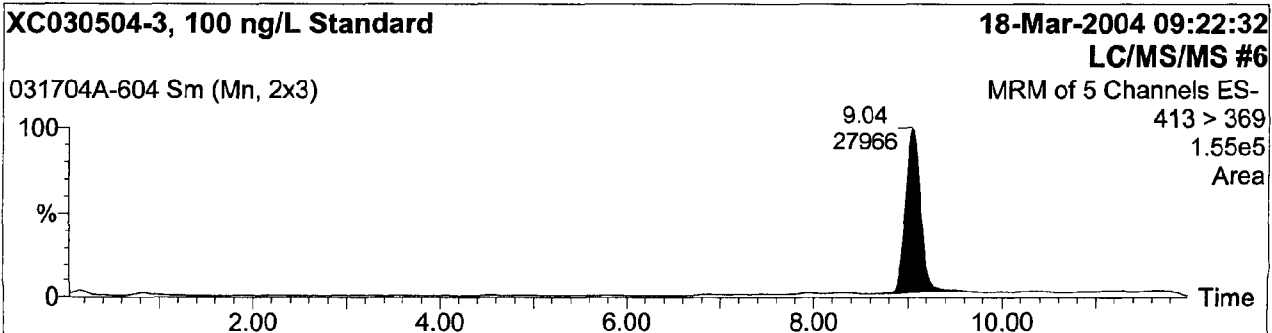
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Name: 031704A-604
Text:

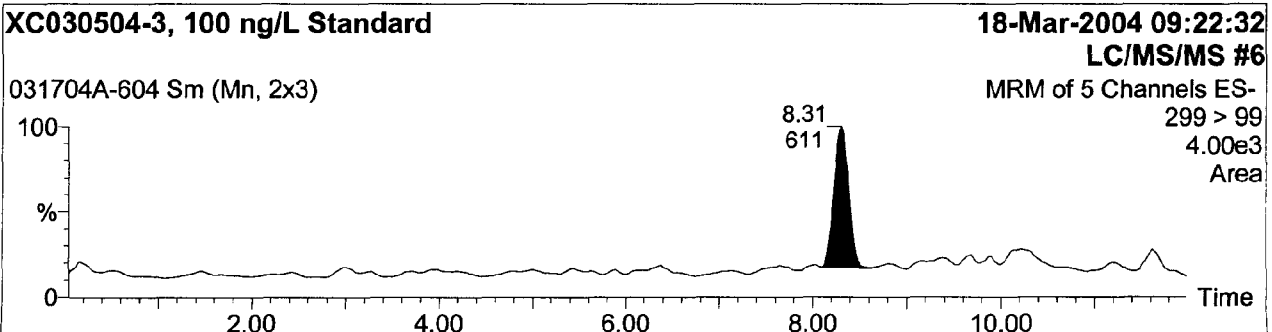
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

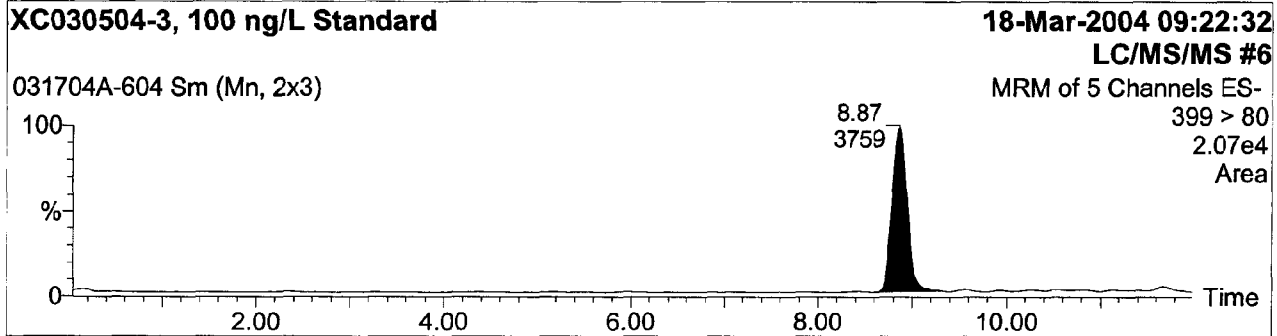
Study No.:L1958, Set No.:031704A, Ext.Date:03/17/04, Analyst:K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\031704A CG ACSFM
Last modified: Fri Mar 19 11:30:32 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031604
Last modified: Thu Mar 18 09:51:08 2004
Job Code:

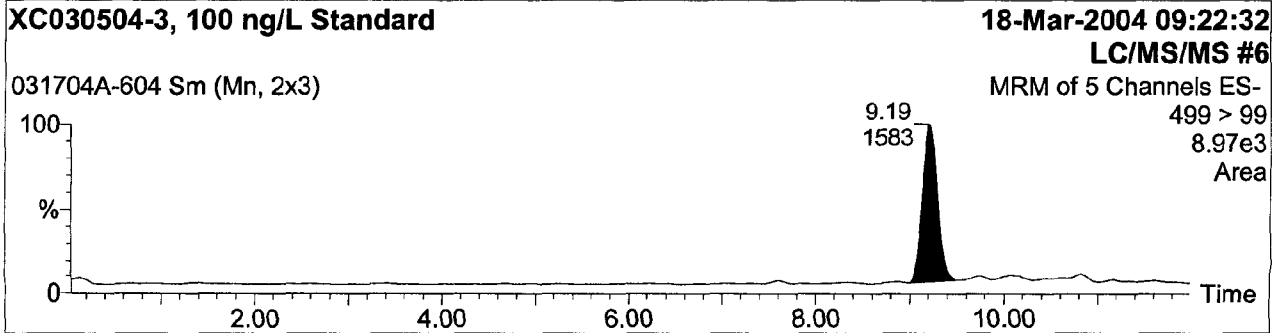
Printed: Fri Mar 19 12:24:08 2004

Name: 031704A-604
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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Quantify Sample Report

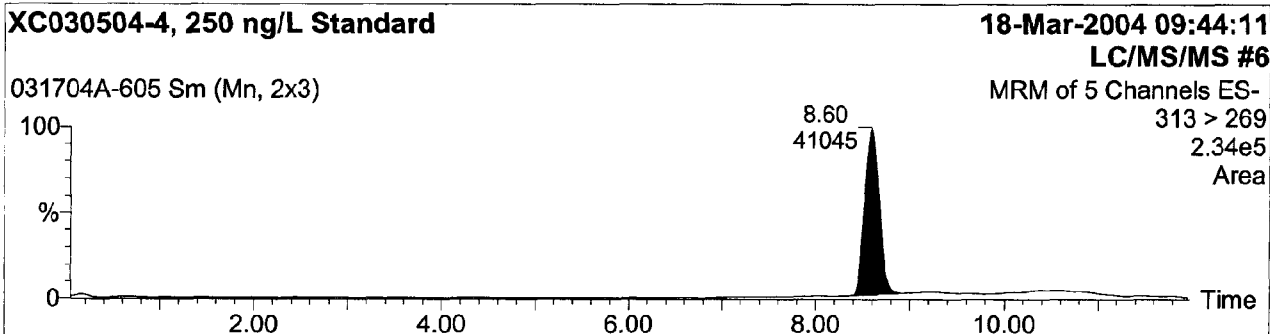
Study No.: L1958, Set No.: 031704A, Ext.Date: 03/17/04, Analyst: K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\031704A CG ACSFM
Last modified: Fri Mar 19 11:30:32 2004
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Last modified: Thu Mar 18 09:51:08 2004
Job Code:

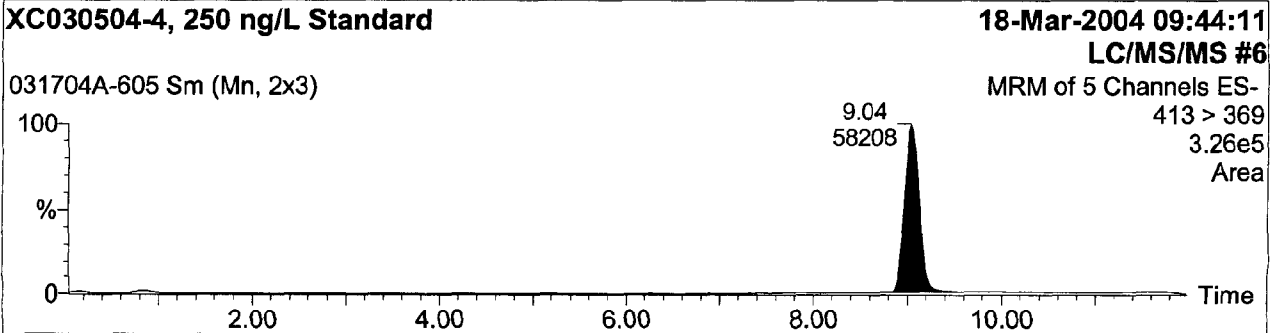
Printed: Fri Mar 19 12:24:08 2004

Name: 031704A-605
Text:

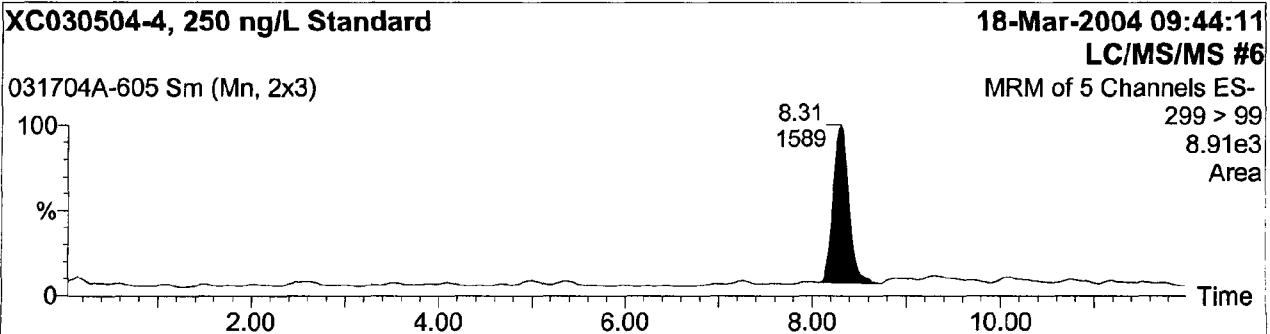
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

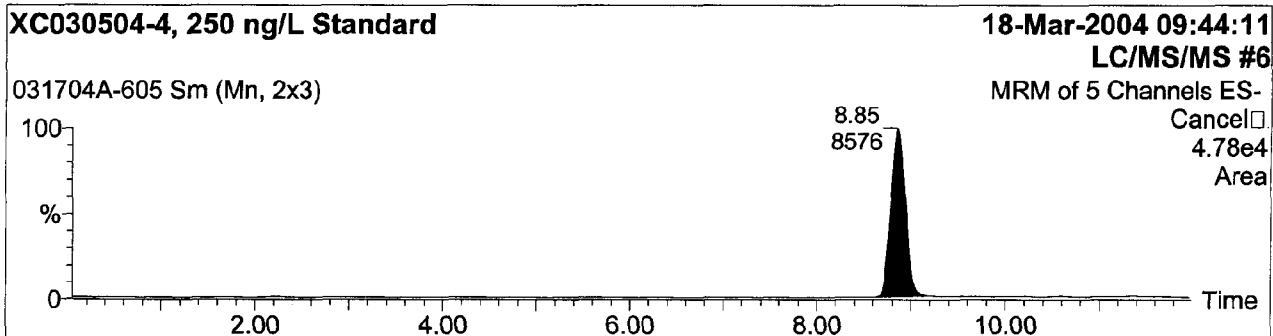
Study No.: L1958, Set No.: 031704A, Ext. Date: 03/17/04, Analyst: K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\031704A CG ACSFM
Last modified: Fri Mar 19 11:30:32 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031604
Last modified: Thu Mar 18 09:51:08 2004
Job Code:

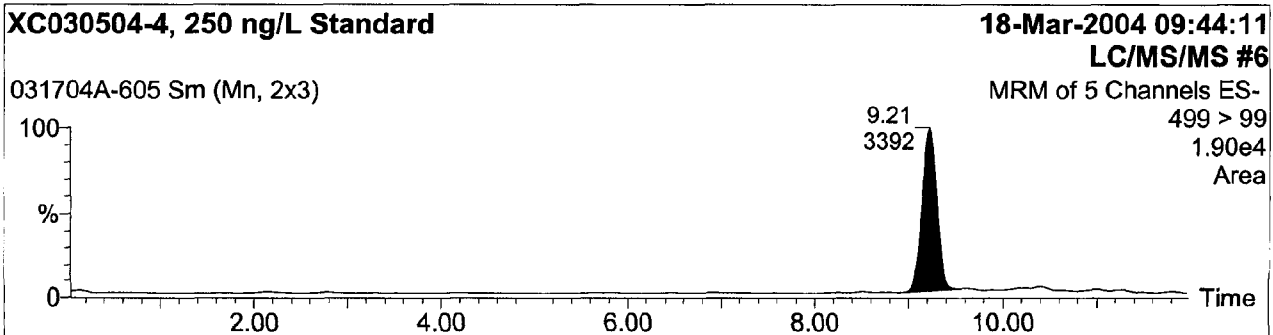
Printed: Fri Mar 19 12:24:08 2004

Name: 031704A-605
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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Quantify Sample Report

Study No.:L1958, Set No.:031704A, Ext.Date:03/17/04, Analyst:K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\031704A CG ACSFM
Last modified: Fri Mar 19 11:30:32 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031604
Last modified: Thu Mar 18 09:51:08 2004
Job Code:

Printed: Fri Mar 19 12:24:08 2004

Name: 031704A-606
Text:

1: C6 Acid PFHA

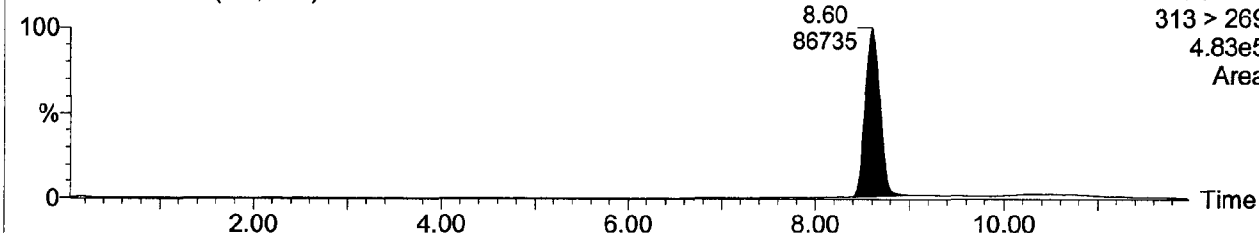
XC030504-5, 500 ng/L Standard

18-Mar-2004 10:05:51

LC/MS/MS #6

MRM of 5 Channels ES-
313 > 269
4.83e5
Area

031704A-606 Sm (Mn, 2x3)



2: C8 Acid PFOA

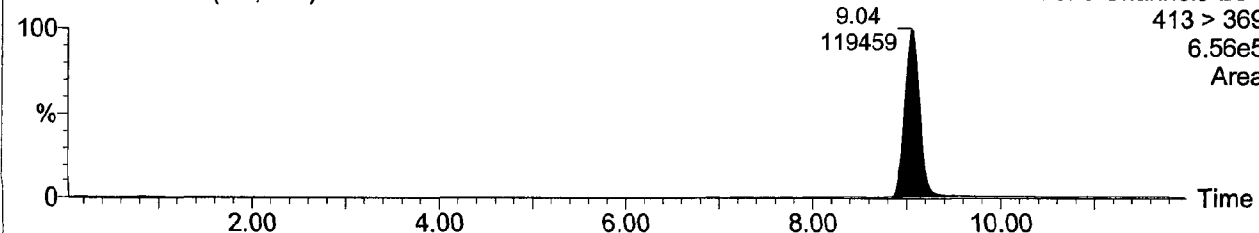
XC030504-5, 500 ng/L Standard

18-Mar-2004 10:05:51

LC/MS/MS #6

MRM of 5 Channels ES-
413 > 369
6.56e5
Area

031704A-606 Sm (Mn, 2x3)



3: C4 Sulfonate PFBS

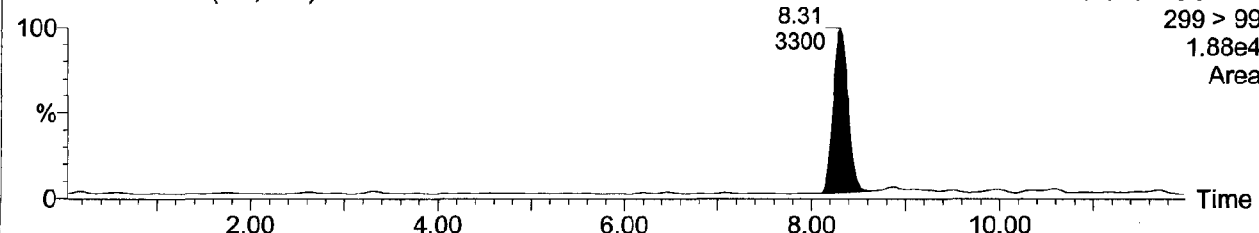
XC030504-5, 500 ng/L Standard

18-Mar-2004 10:05:51

LC/MS/MS #6

MRM of 5 Channels ES-
299 > 99
1.88e4
Area

031704A-606 Sm (Mn, 2x3)



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Quantify Sample Report

Study No.: L1958, Set No.: 031704A, Ext.Date: 03/17/04, Analyst: K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\031704A CG ACSFM
Last modified: Fri Mar 19 11:30:32 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031604
Last modified: Thu Mar 18 09:51:08 2004
Job Code:

Printed: Fri Mar 19 12:24:08 2004

Name: 031704A-606
Text:

4: C6 Sulfonate PFHS

XC030504-5, 500 ng/L Standard

18-Mar-2004 10:05:51

LC/MS/MS #6

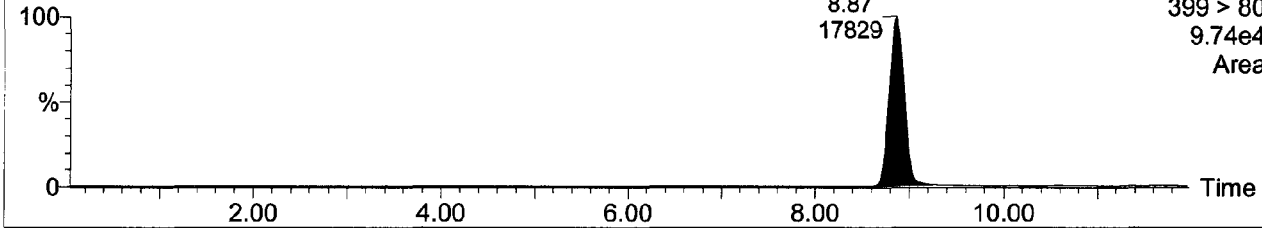
031704A-606 Sm (Mn, 2x3)

MRM of 5 Channels ES-

399 > 80

9.74e4

Area



5: CB Sulfonate PFOS

XC030504-5, 500 ng/L Standard

18-Mar-2004 10:05:51

LC/MS/MS #6

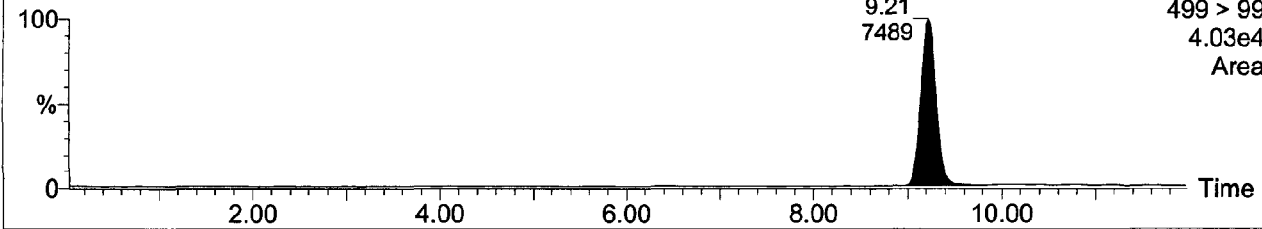
031704A-606 Sm (Mn, 2x3)

MRM of 5 Channels ES-

499 > 99

4.03e4

Area



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Quantify Sample Report

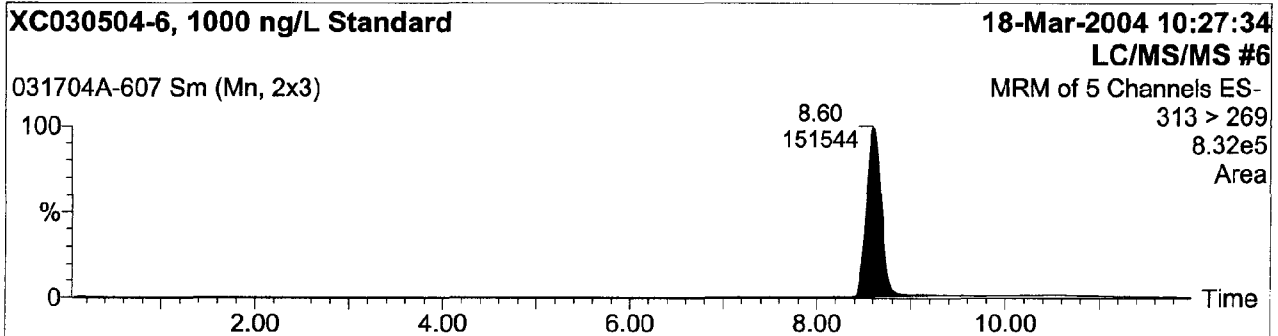
Study No.:L1958, Set No.:031704A, Ext.Date:03/17/04, Analyst:K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\031704A CG ACSFM
Last modified: Fri Mar 19 11:30:32 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031604
Last modified: Thu Mar 18 09:51:08 2004
Job Code:

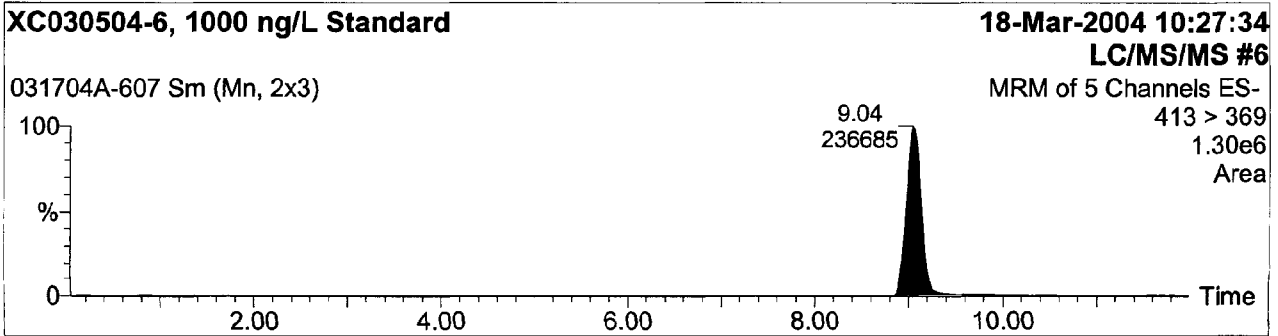
Printed: Fri Mar 19 12:24:08 2004

Name: 031704A-607
Text:

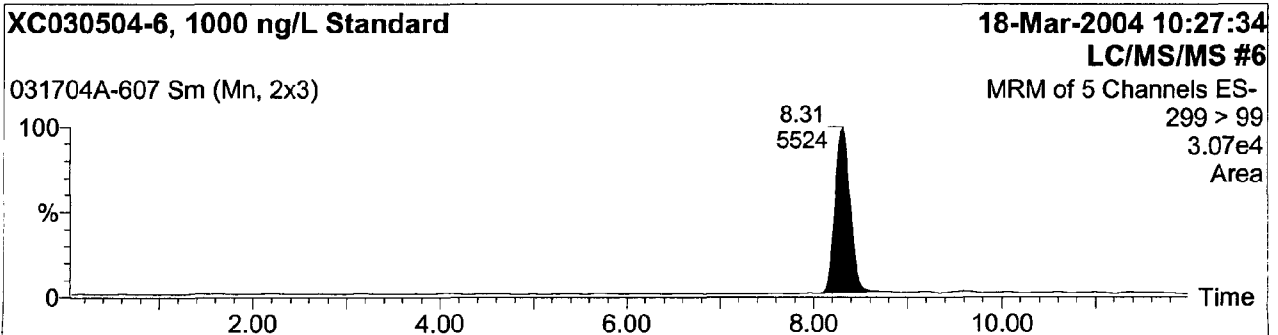
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

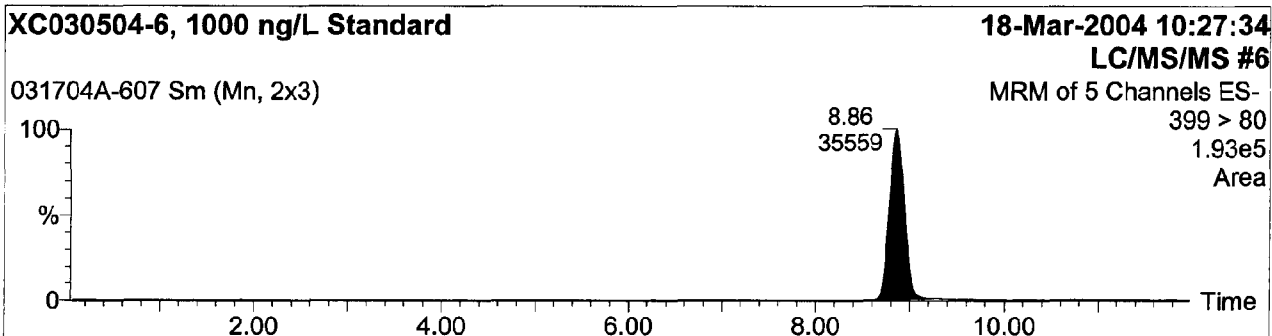
Study No.: L1958, Set No.: 031704A, Ext.Date: 03/17/04, Analyst: K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\031704A CG ACSFM
Last modified: Fri Mar 19 11:30:32 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031604
Last modified: Thu Mar 18 09:51:08 2004
Job Code:

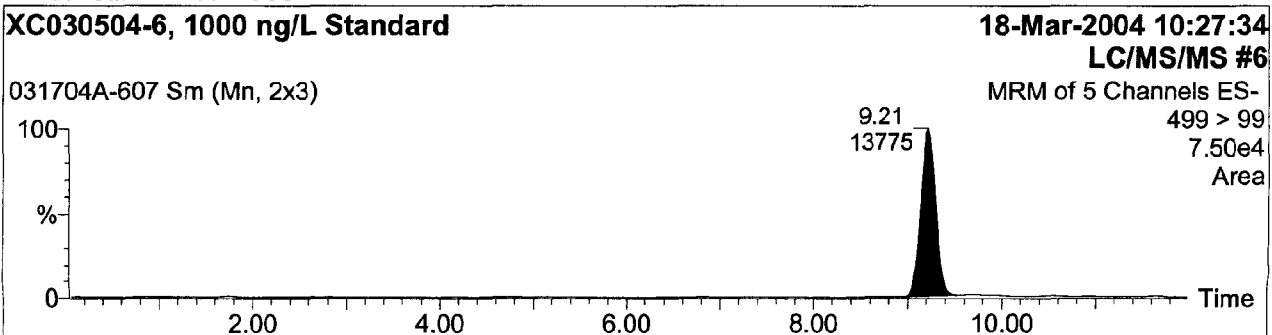
Printed: Fri Mar 19 12:24:08 2004

Name: 031704A-607
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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Quantify Sample Report

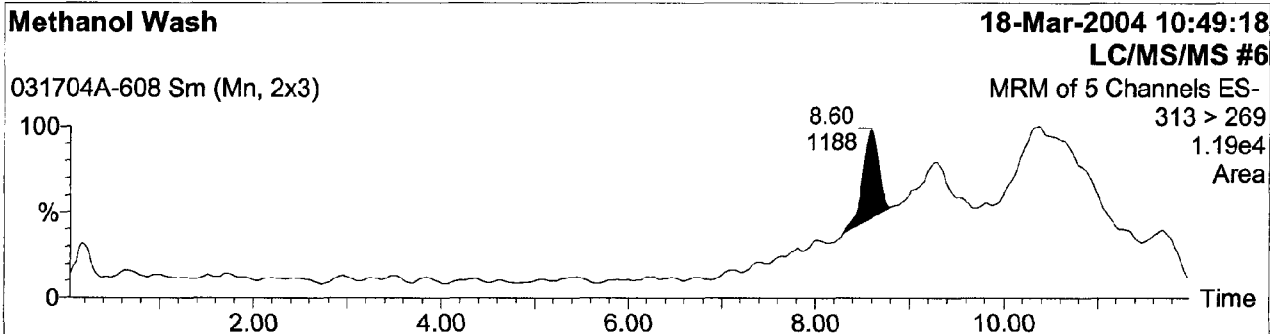
Study No.: L1958, Set No.: 031704A, Ext.Date: 03/17/04, Analyst: K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\031704A CG ACSFM
Last modified: Fri Mar 19 11:30:32 2004
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Last modified: Thu Mar 18 09:51:08 2004
Job Code:

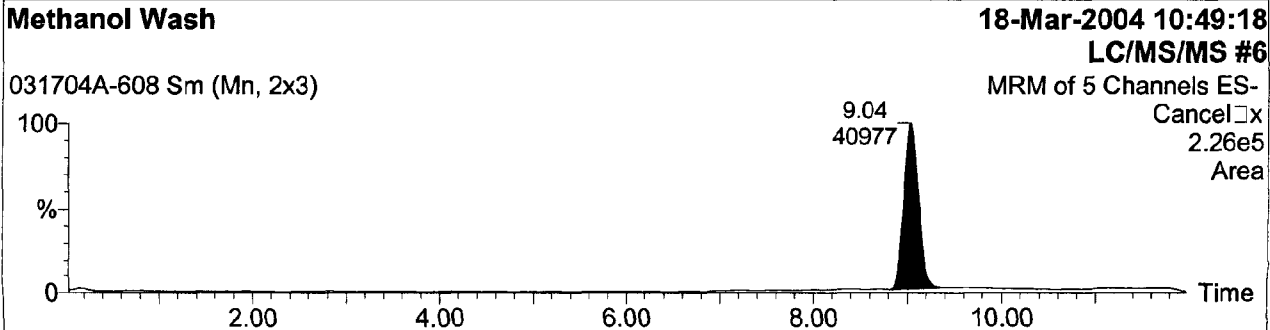
Printed: Fri Mar 19 12:24:08 2004

Name: 031704A-608
Text:

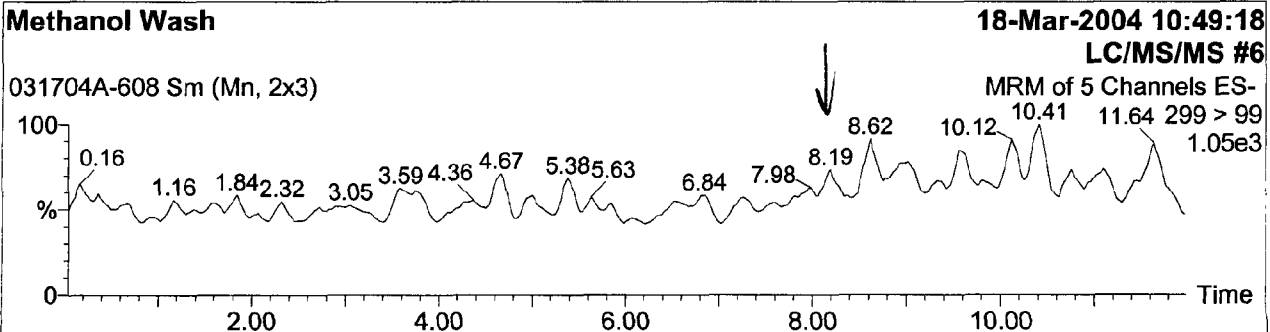
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

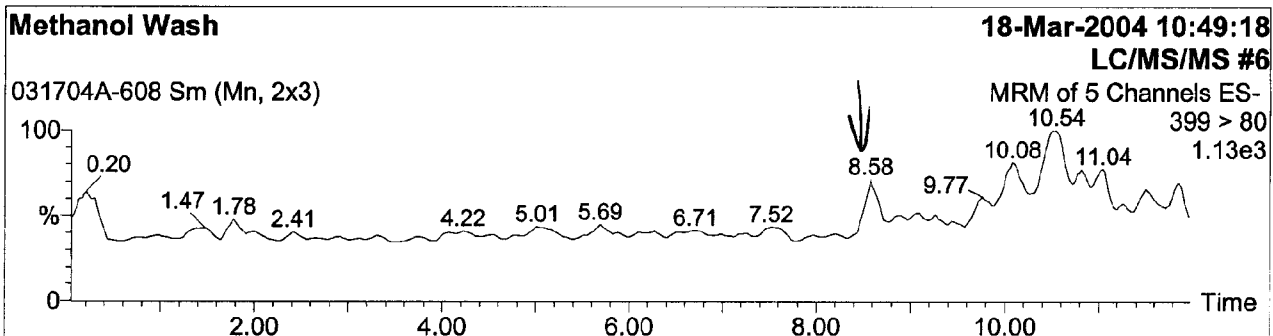
Study No.:L1958, Set No.:031704A, Ext.Date:03/17/04, Analyst:K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\031704A CG ACSFM
Last modified: Fri Mar 19 11:30:32 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031604
Last modified: Thu Mar 18 09:51:08 2004
Job Code:

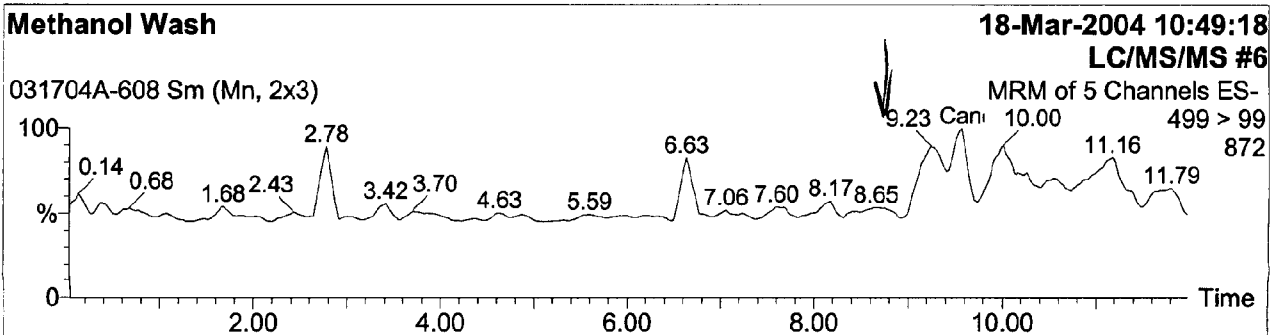
Printed: Fri Mar 19 12:24:08 2004

Name: 031704A-608
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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Quantify Sample Report

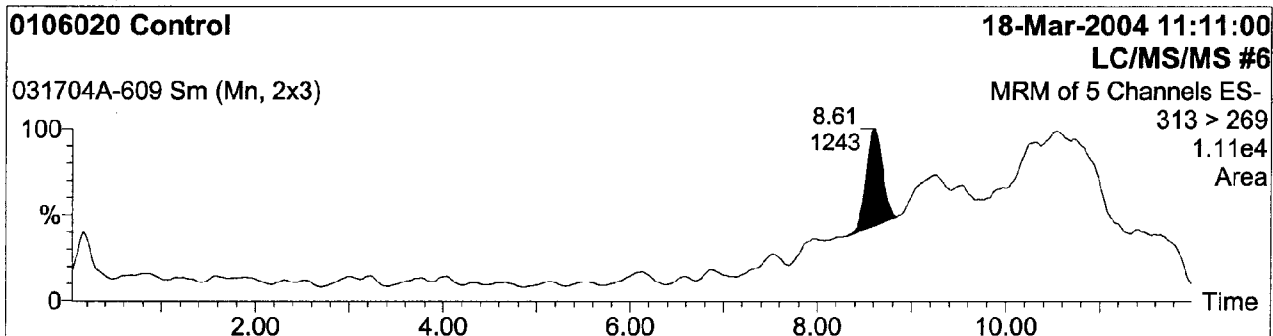
Study No.:L1958, Set No.:031704A, Ext.Date:03/17/04, Analyst:K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\031704A CG ACSFM
Last modified: Fri Mar 19 11:30:32 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031604
Last modified: Thu Mar 18 09:51:08 2004
Job Code:

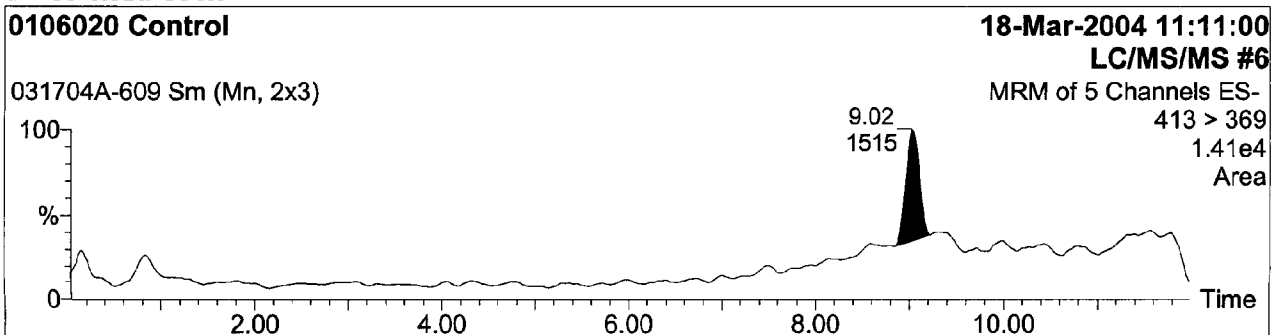
Printed: Fri Mar 19 12:24:08 2004

Name: 031704A-609
Text:

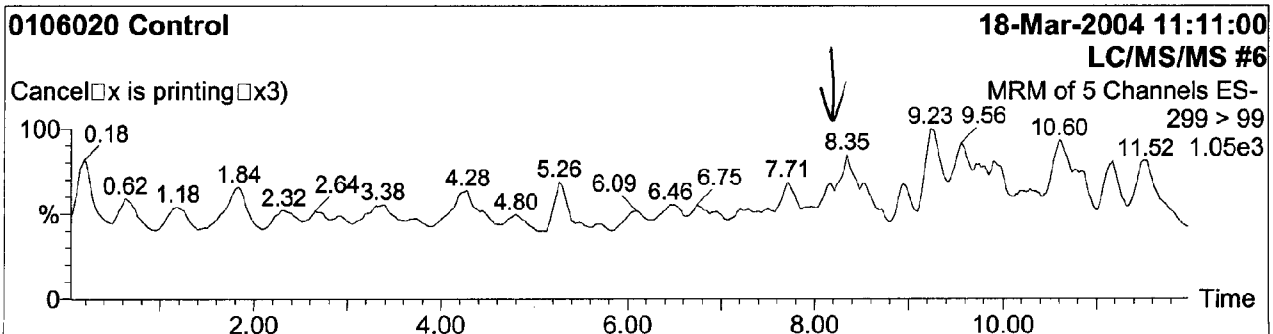
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

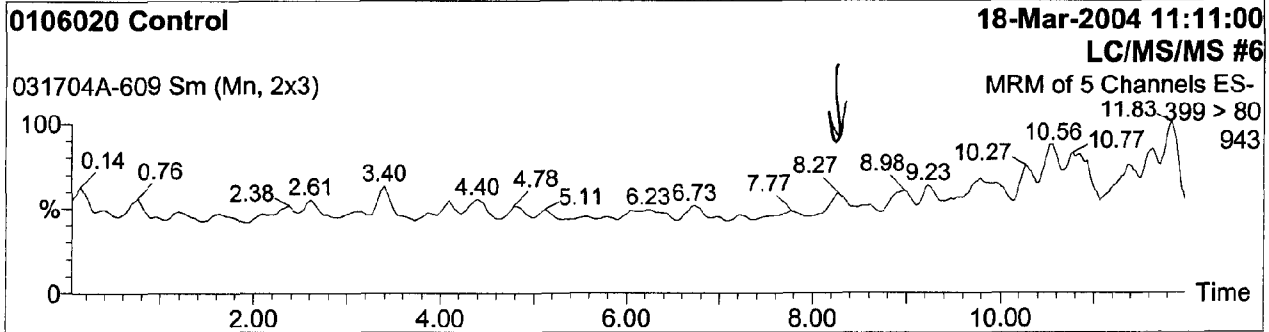
Study No.: L1958, Set No.: 031704A, Ext.Date: 03/17/04, Analyst: K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\031704A CG ACSFM
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Job Code:

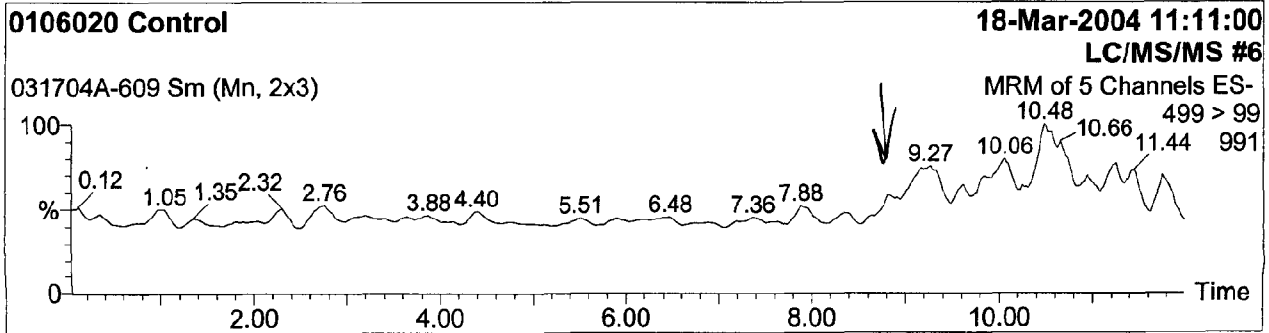
Printed: Fri Mar 19 12:24:08 2004

Name: 031704A-609
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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Quantify Sample Report

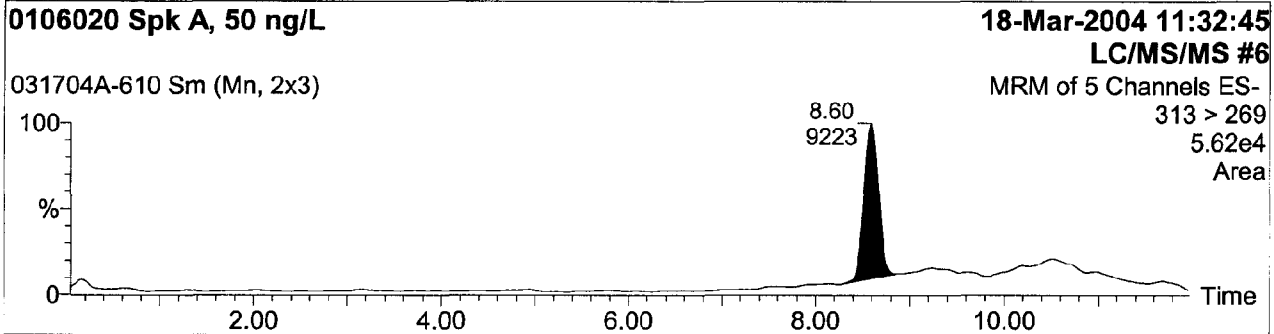
Study No.: L1958, Set No.: 031704A, Ext.Date: 03/17/04, Analyst: K.Risha

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Last modified: Fri Mar 19 11:30:32 2004
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Last modified: Thu Mar 18 09:51:08 2004
Job Code:

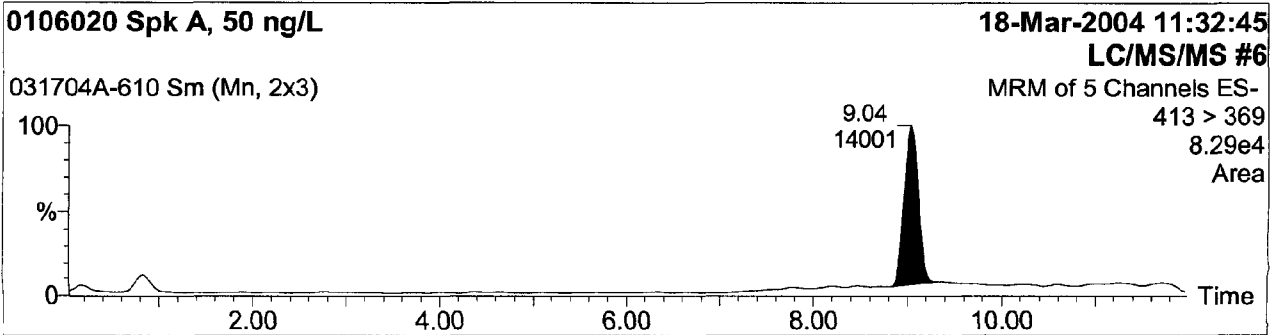
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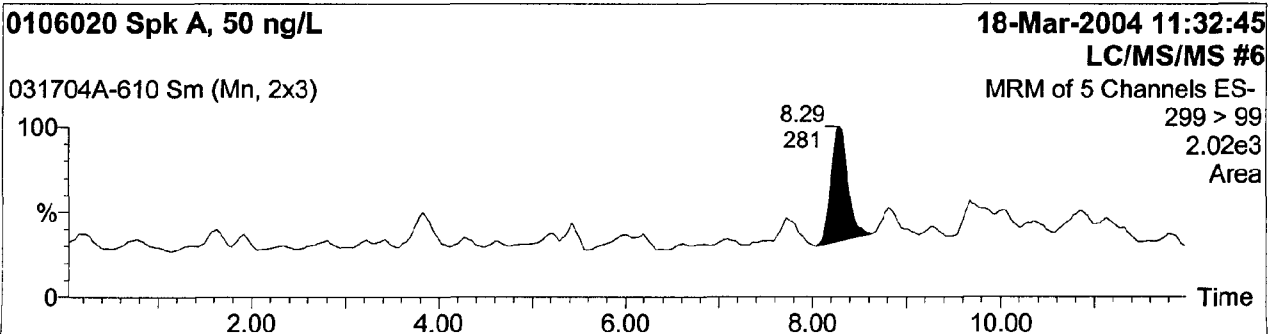
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

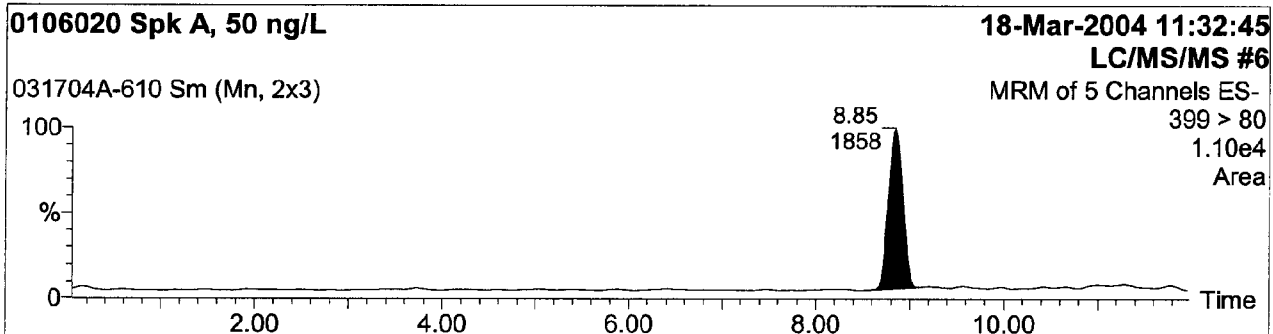
Study No.:L1958, Set No.:031704A, Ext.Date:03/17/04, Analyst:K.Risha

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Last modified: Thu Mar 18 09:51:08 2004
Job Code:

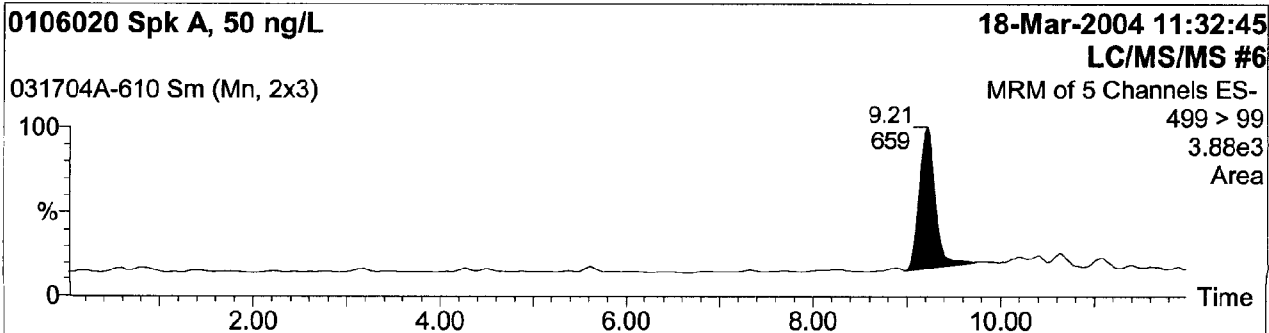
Printed: Fri Mar 19 12:24:08 2004

Name: 031704A-610
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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Quantify Sample Report

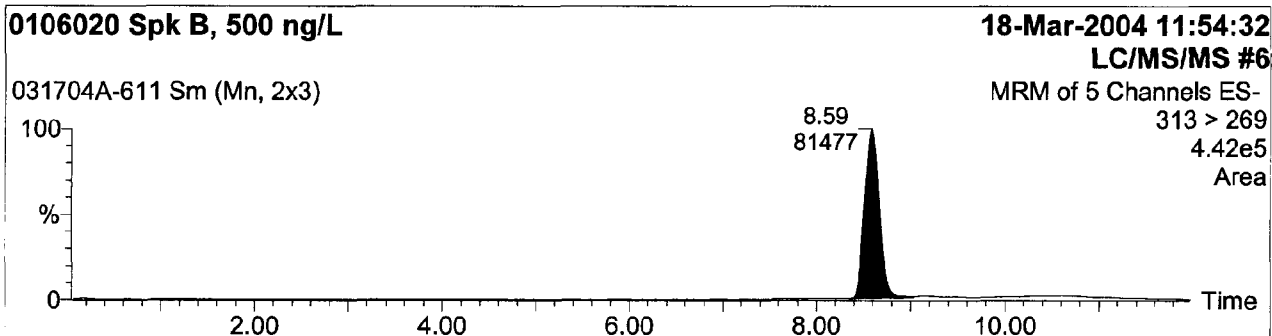
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Last modified: Fri Mar 19 11:30:32 2004
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Last modified: Thu Mar 18 09:51:08 2004
Job Code:

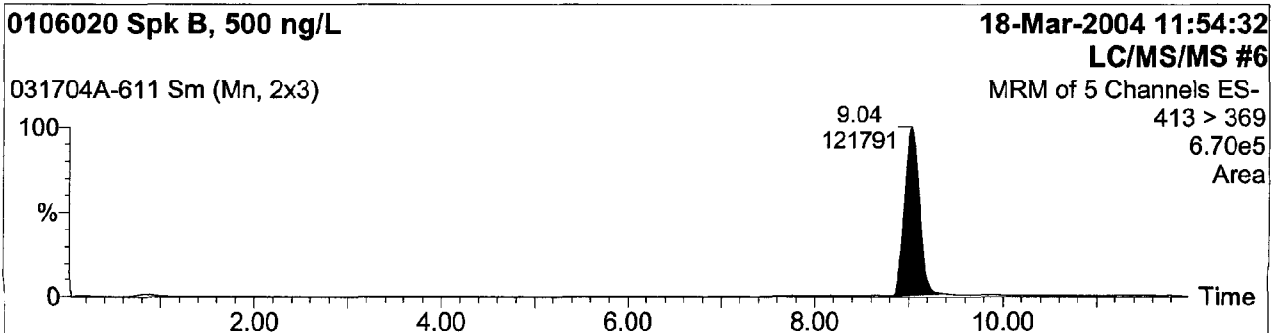
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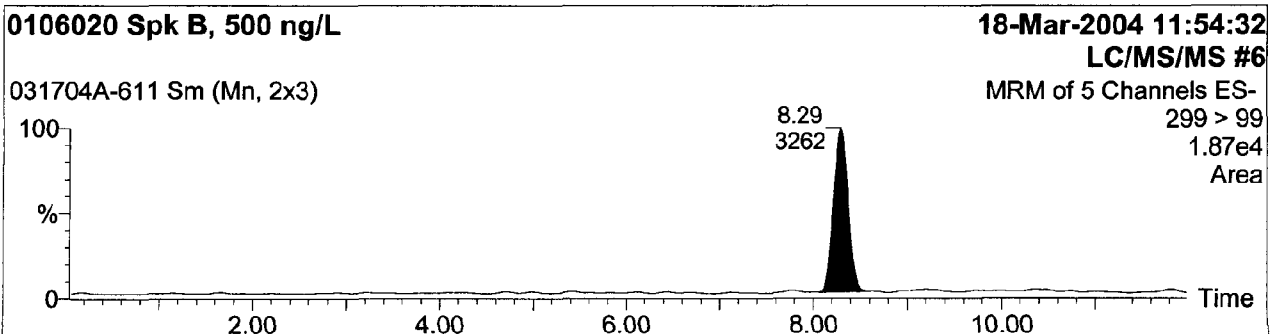
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

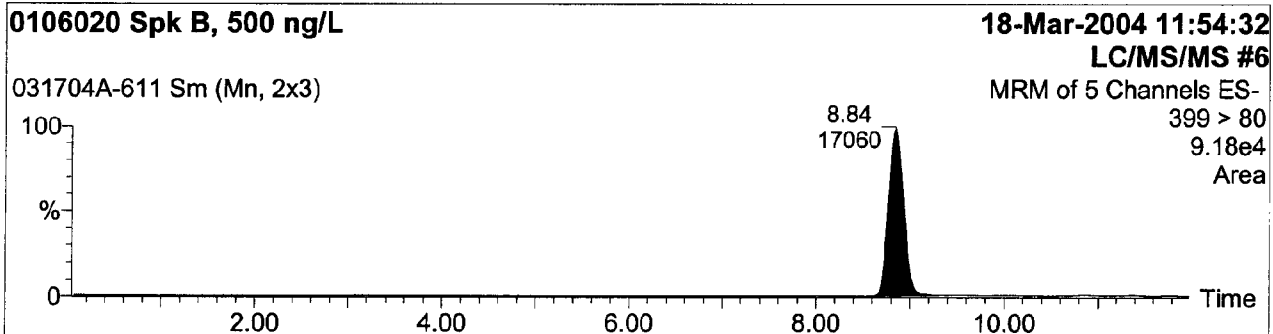
Study No.:L1958, Set No.:031704A, Ext.Date:03/17/04, Analyst:K.Risha

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Last modified: Fri Mar 19 11:30:32 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031604
Last modified: Thu Mar 18 09:51:08 2004
Job Code:

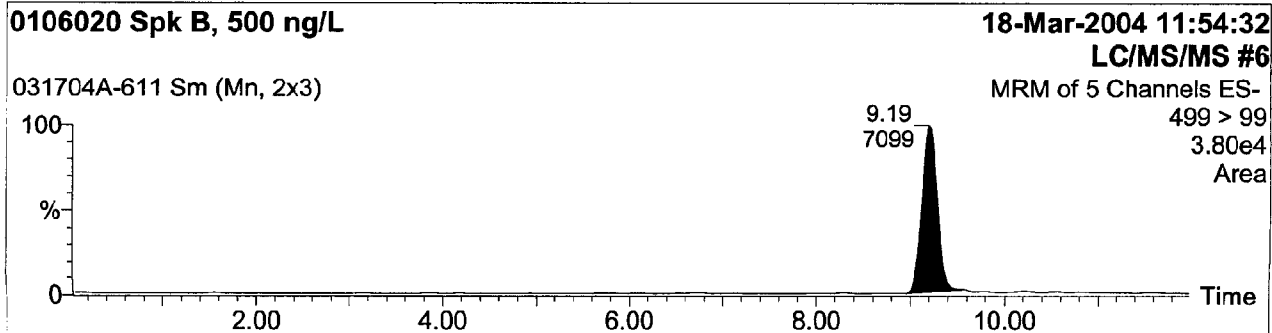
Printed: Fri Mar 19 12:24:08 2004

Name: 031704A-611
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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Quantify Sample Report

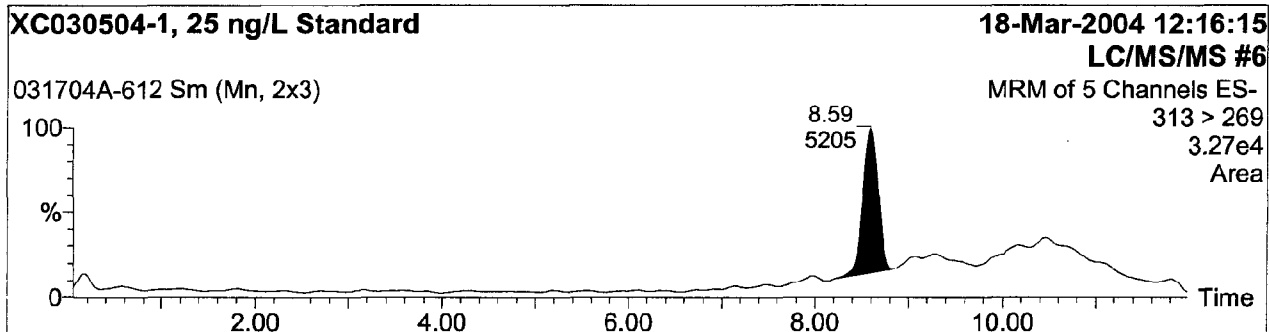
Study No.:L1958, Set No.:031704A, Ext.Date:03/17/04, Analyst:K.Risha

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Last modified: Fri Mar 19 11:30:32 2004
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Last modified: Thu Mar 18 09:51:08 2004
Job Code:

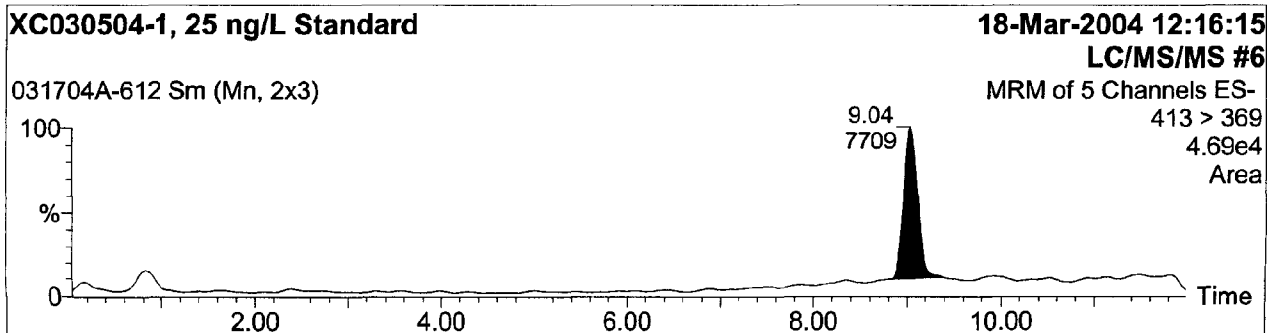
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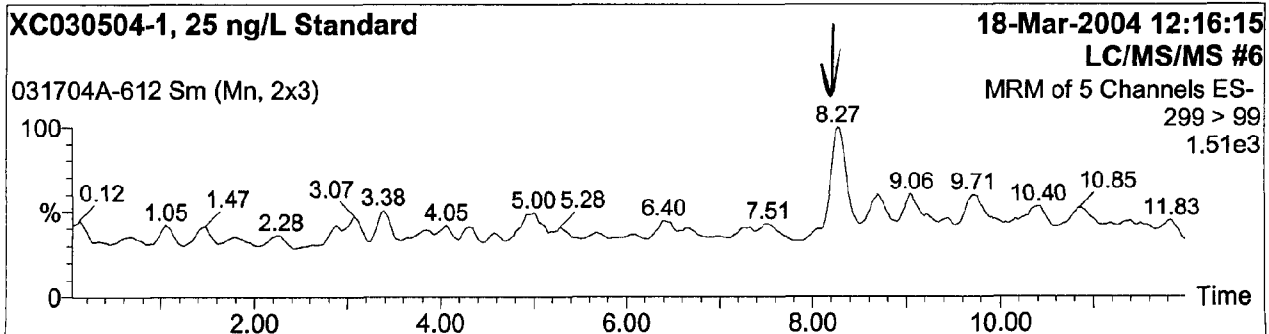
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

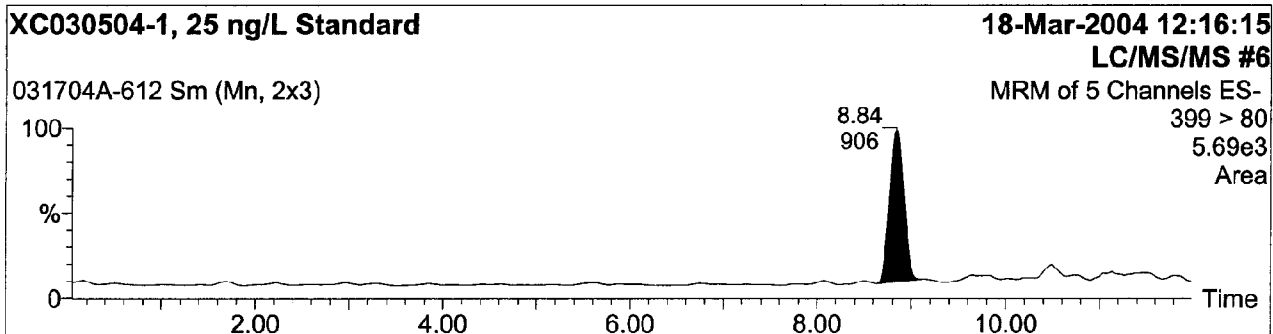
Study No.: L1958, Set No.: 031704A, Ext. Date: 03/17/04, Analyst: K. Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\031704A CG ACSFM
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Job Code:

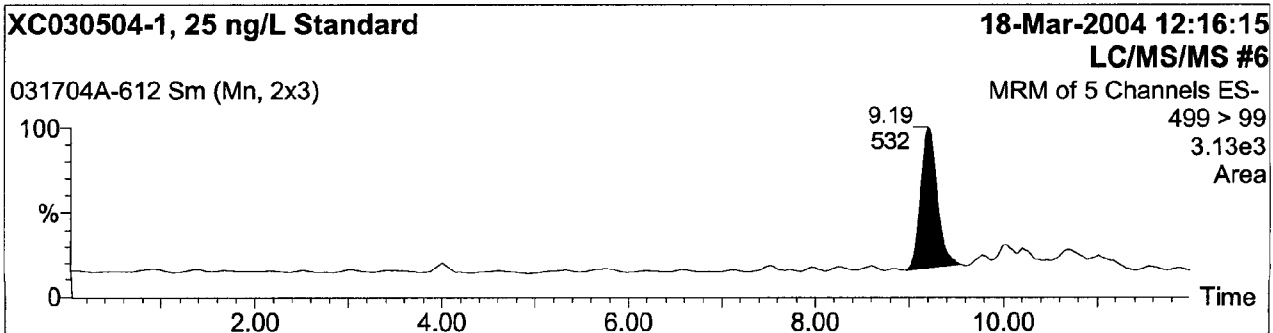
Printed: Fri Mar 19 12:24:08 2004

Name: 031704A-612
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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Quantify Sample Report

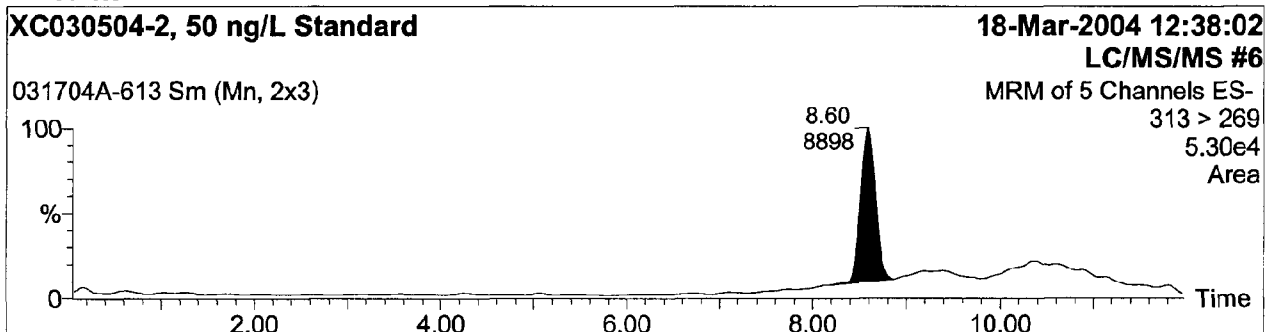
Study No.: L1958, Set No.: 031704A, Ext.Date: 03/17/04, Analyst: K.Risha

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Last modified: Thu Mar 18 09:51:08 2004
Job Code:

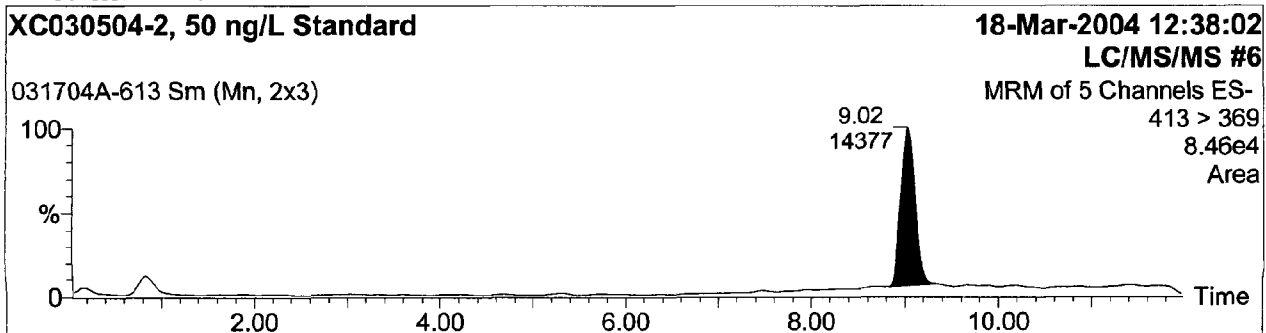
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Text:

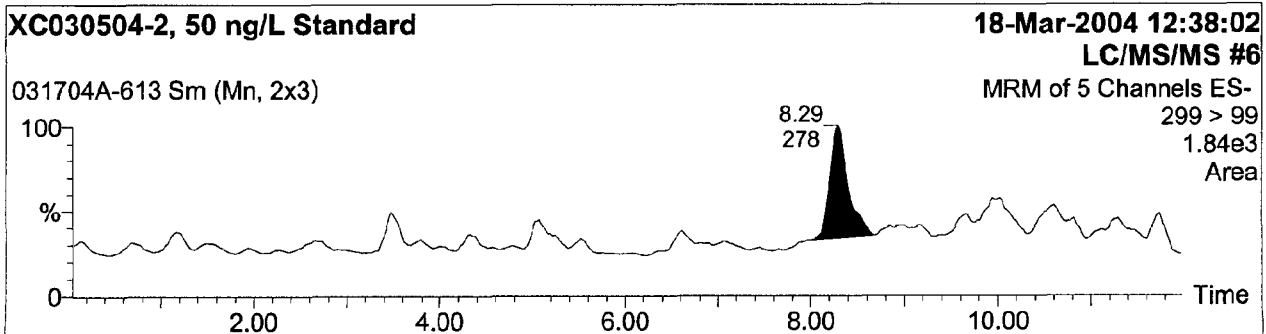
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

Study No.: L1958, Set No.: 031704A, Ext.Date: 03/17/04, Analyst: K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\031704A CG ACSFM
Last modified: Fri Mar 19 11:30:32 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031604
Last modified: Thu Mar 18 09:51:08 2004
Job Code:

Printed: Fri Mar 19 12:24:08 2004

Name: 031704A-613
Text:

4: C6 Sulfonate PFHS

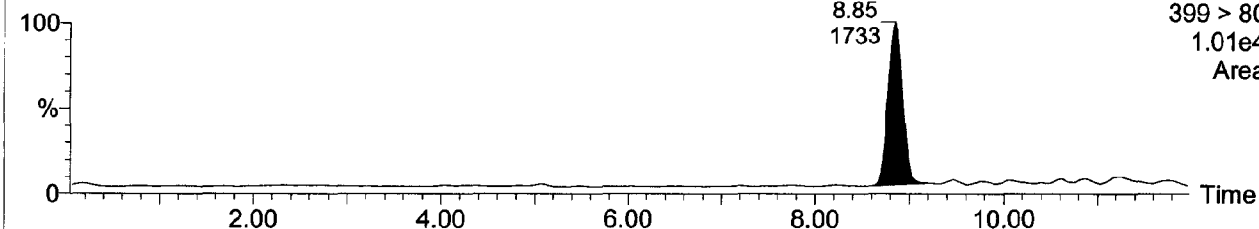
XC030504-2, 50 ng/L Standard

18-Mar-2004 12:38:02

031704A-613 Sm (Mn, 2x3)

LC/MS/MS #6

MRM of 5 Channels ES-



5: C8 Sulfonate PFOS

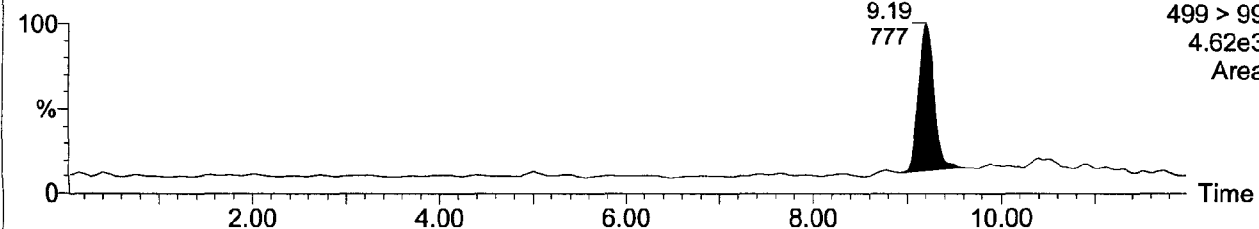
XC030504-2, 50 ng/L Standard

18-Mar-2004 12:38:02

031704A-613 Sm (Mn, 2x3)

LC/MS/MS #6

MRM of 5 Channels ES-



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Quantify Sample Report

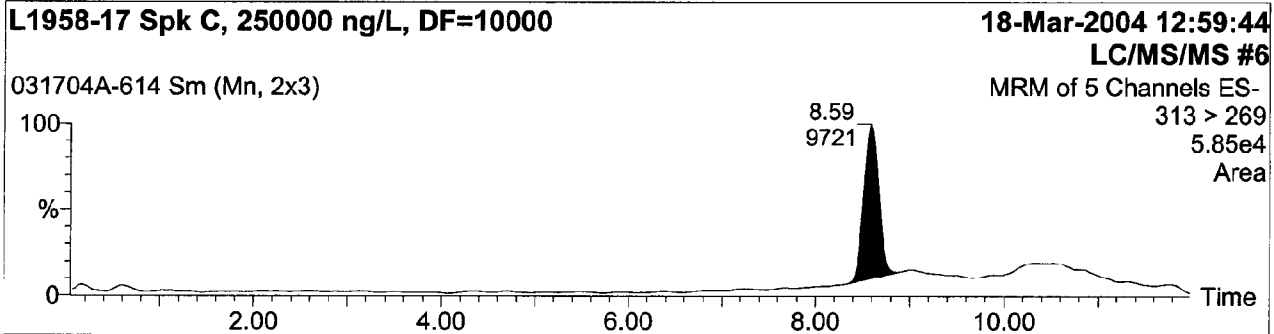
Study No.: L1958, Set No.: 031704A, Ext.Date: 03/17/04, Analyst: K.Risha

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Last modified: Thu Mar 18 09:51:08 2004
Job Code:

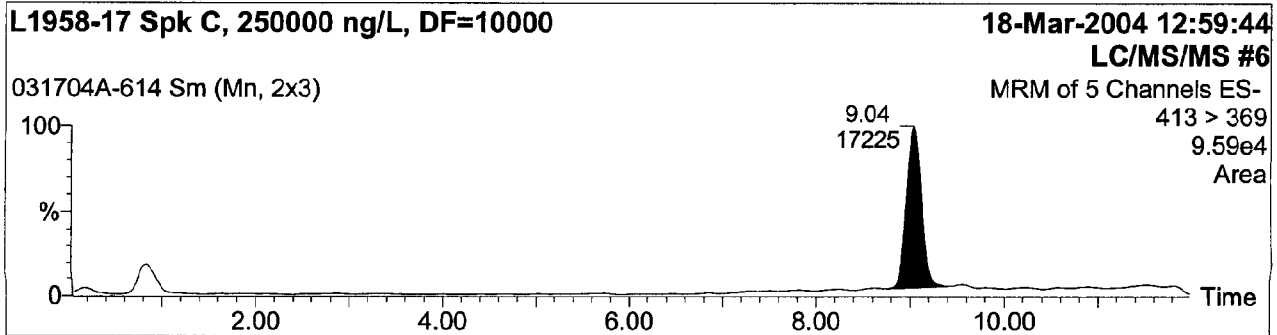
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Name: 031704A-614
Text:

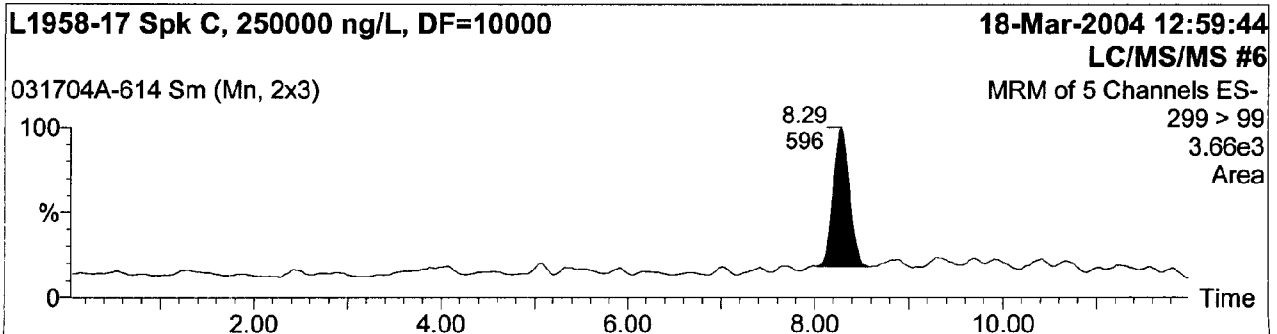
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



Oxygen Research, 3058 Research Drive, State College, PA 16801

Quantify Sample Report

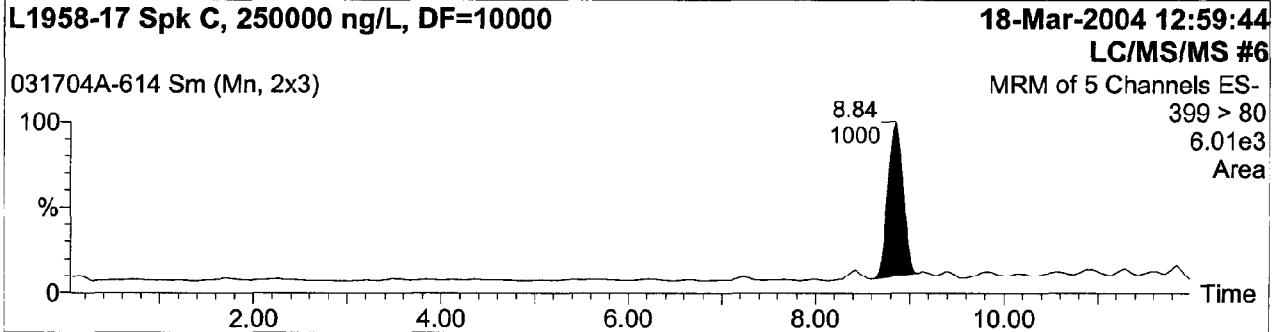
Study No.: L1958, Set No.: 031704A, Ext.Date: 03/17/04, Analyst: K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\031704A CG ACSFM
Last modified: Fri Mar 19 11:30:32 2004
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Last modified: Thu Mar 18 09:51:08 2004
Job Code:

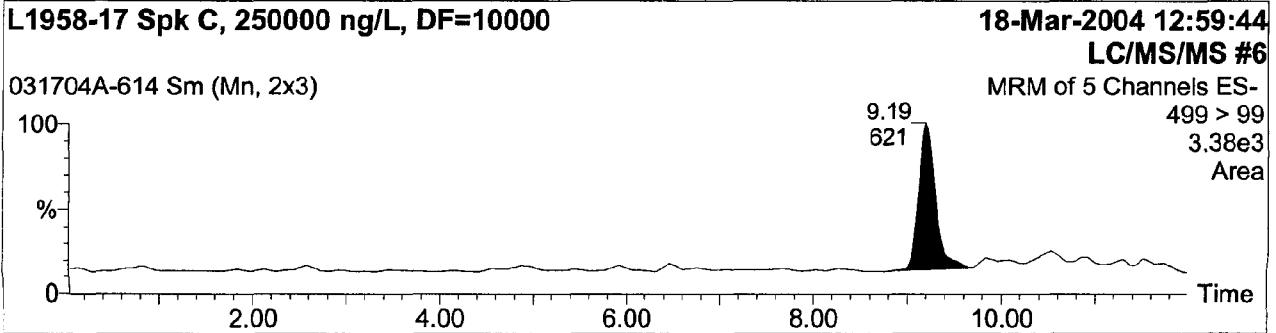
Printed: Fri Mar 19 12:24:08 2004

Name: 031704A-614
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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Quantify Sample Report

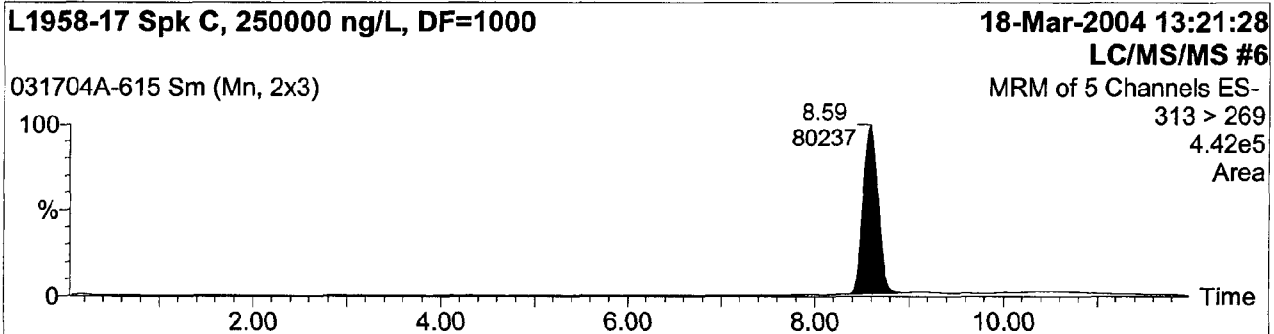
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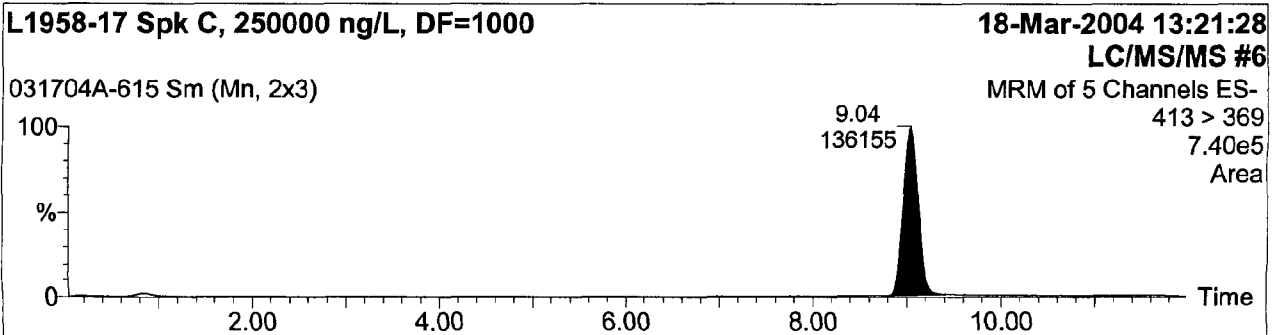
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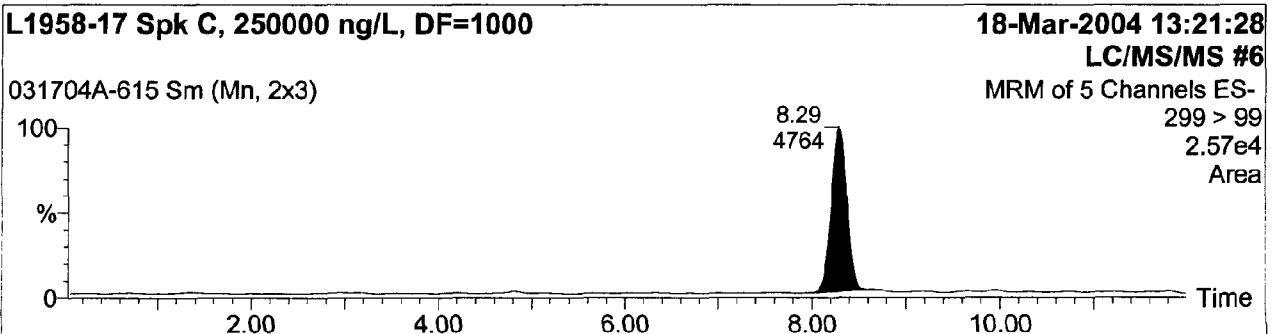
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

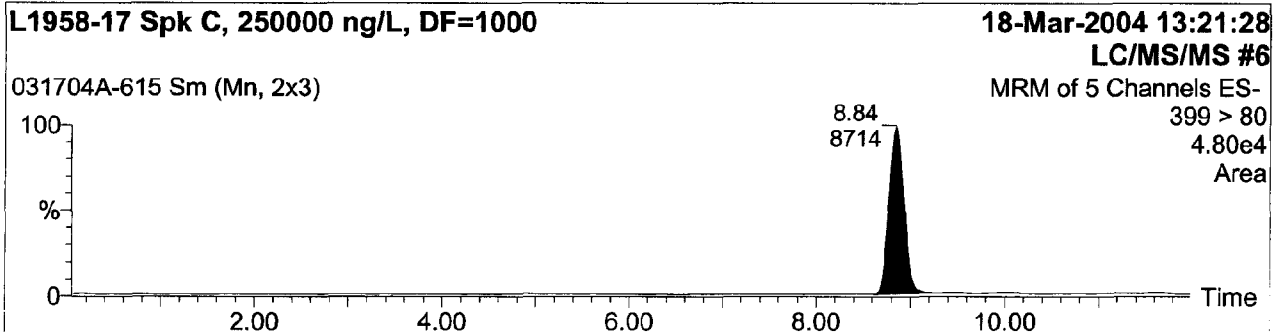
Study No.:L1958, Set No.:031704A, Ext.Date:03/17/04, Analyst:K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\031704A CG ACSFM
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Last modified: Thu Mar 18 09:51:08 2004
Job Code:

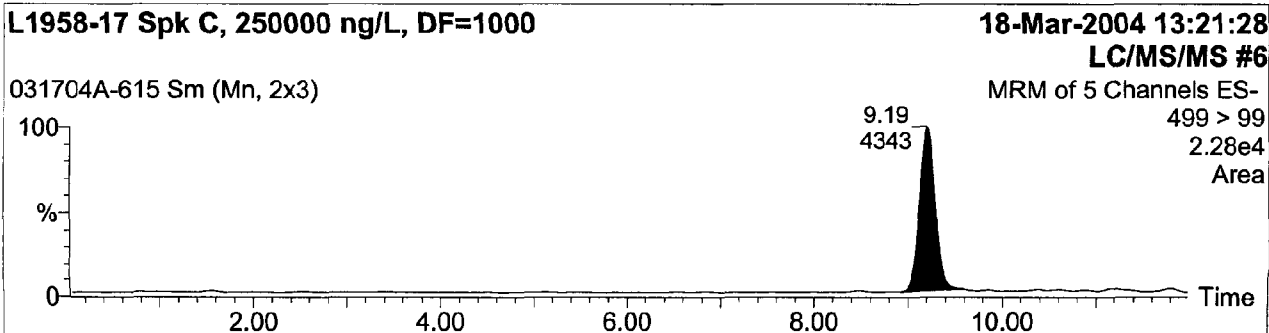
Printed: Fri Mar 19 12:24:08 2004

Name: 031704A-615
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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Quantify Sample Report

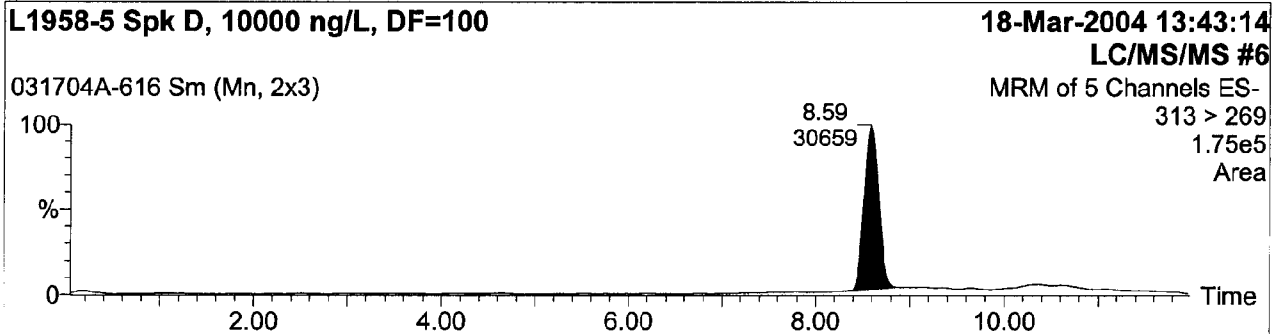
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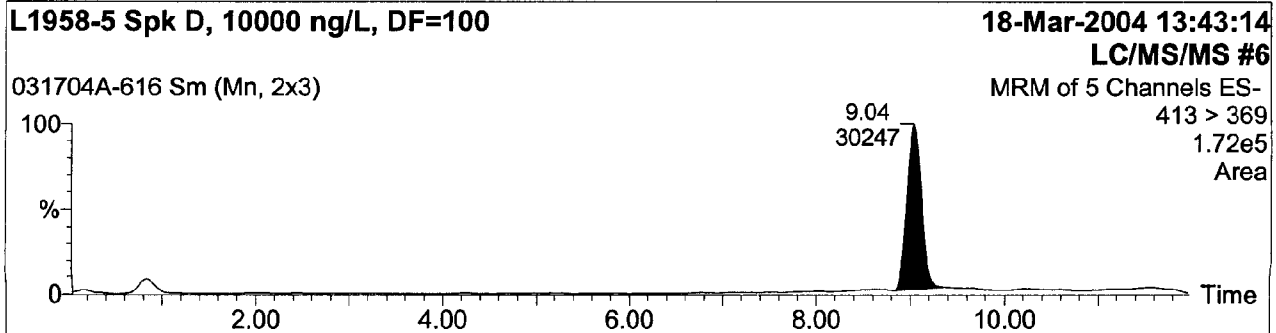
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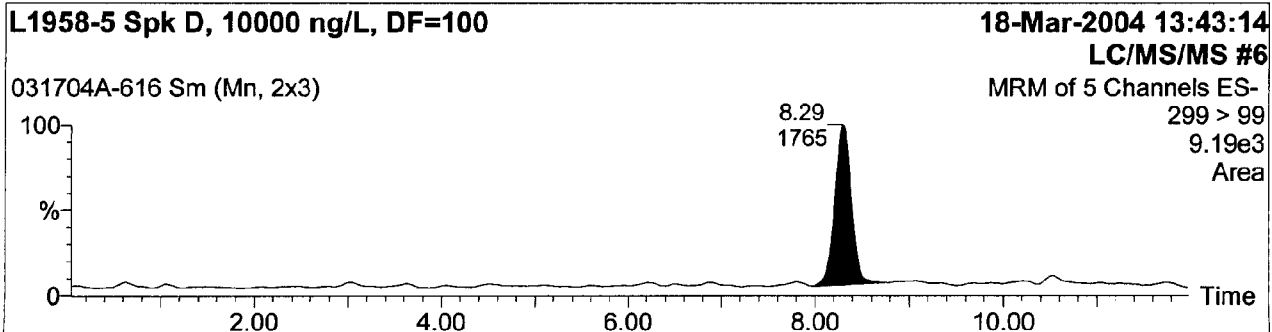
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

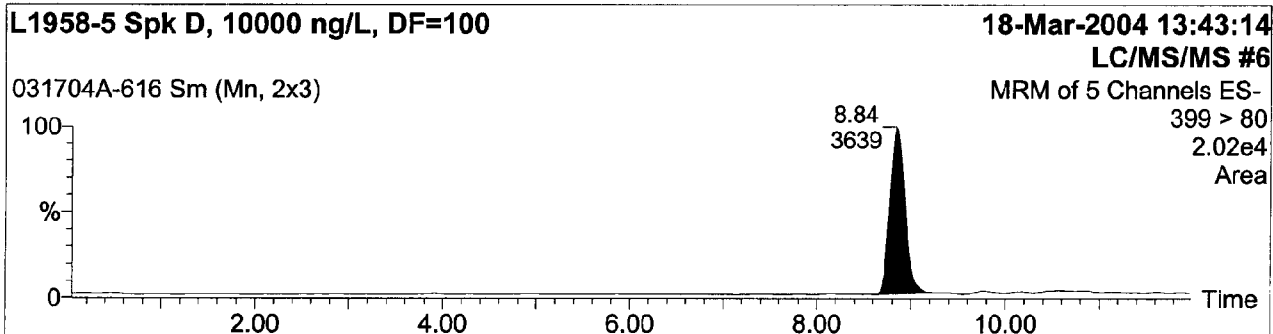
Study No.:L1958, Set No.:031704A, Ext.Date:03/17/04, Analyst:K.Risha

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Job Code:

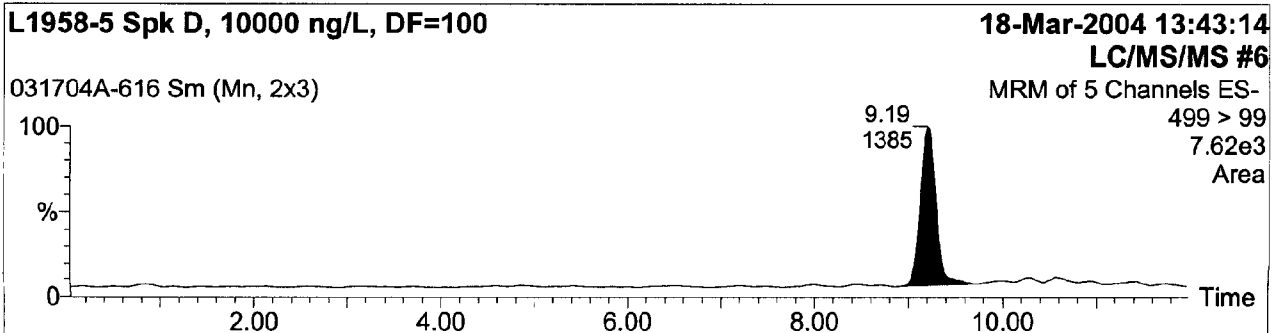
Printed: Fri Mar 19 12:24:08 2004

Name: 031704A-616
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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Quantify Sample Report

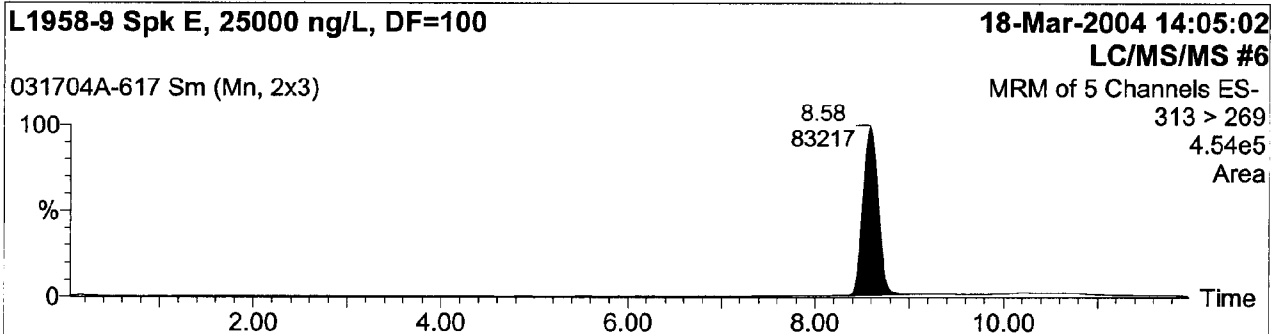
Study No.: L1958, Set No.: 031704A, Ext.Date: 03/17/04, Analyst: K.Risha

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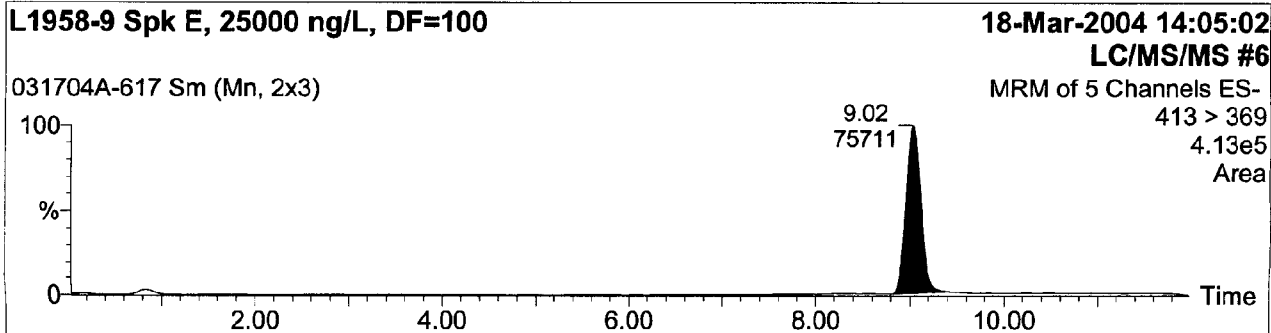
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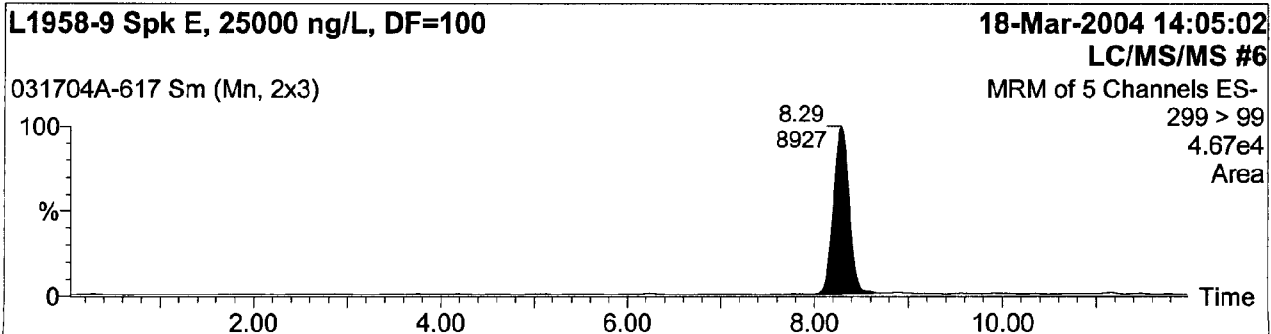
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

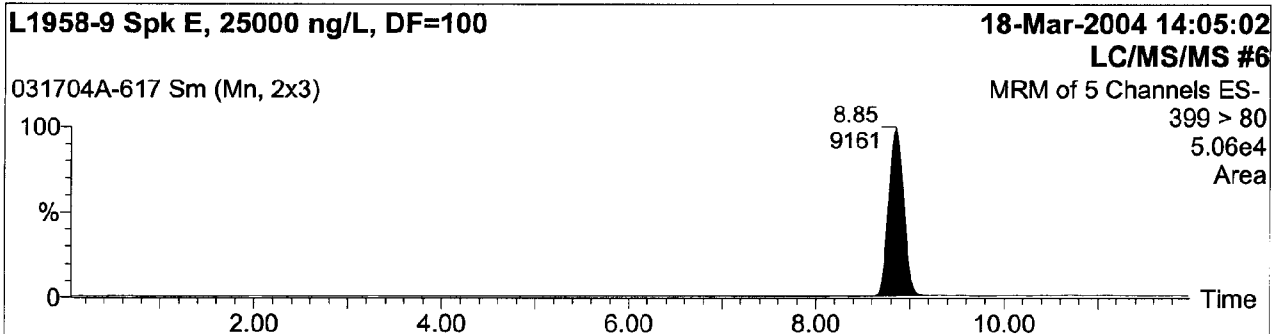
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Last modified: Thu Mar 18 09:51:08 2004
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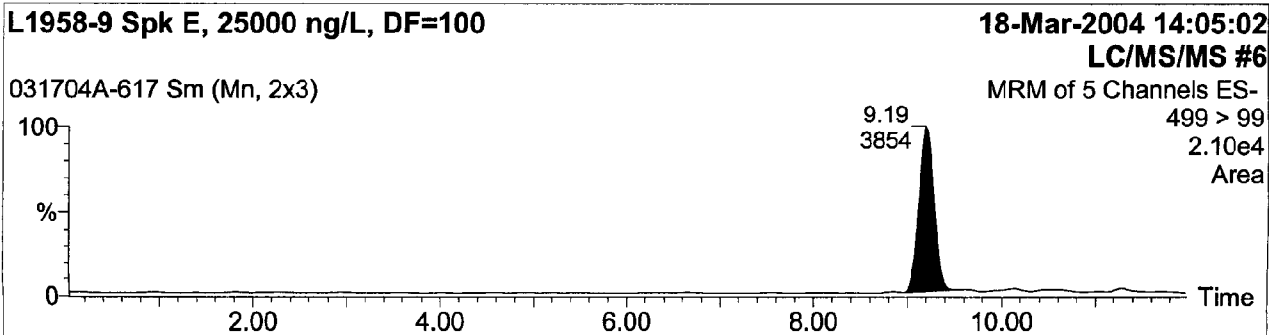
Printed: Fri Mar 19 12:24:08 2004

Name: 031704A-617
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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Quantify Sample Report

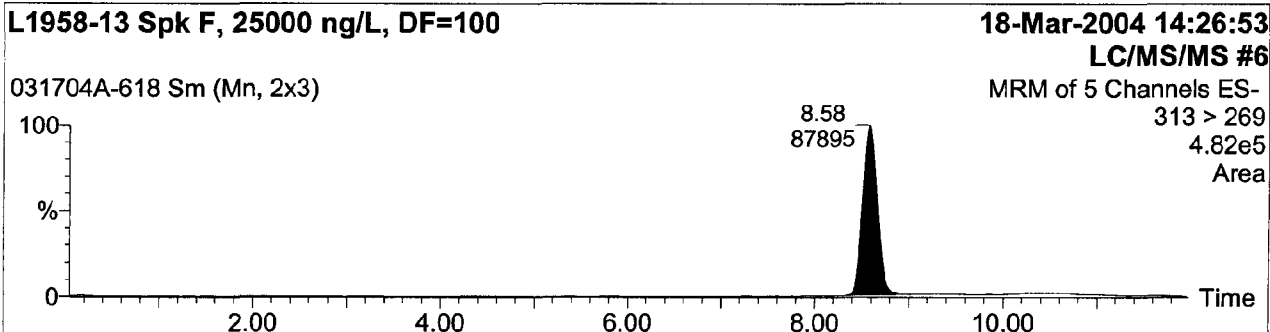
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Job Code:

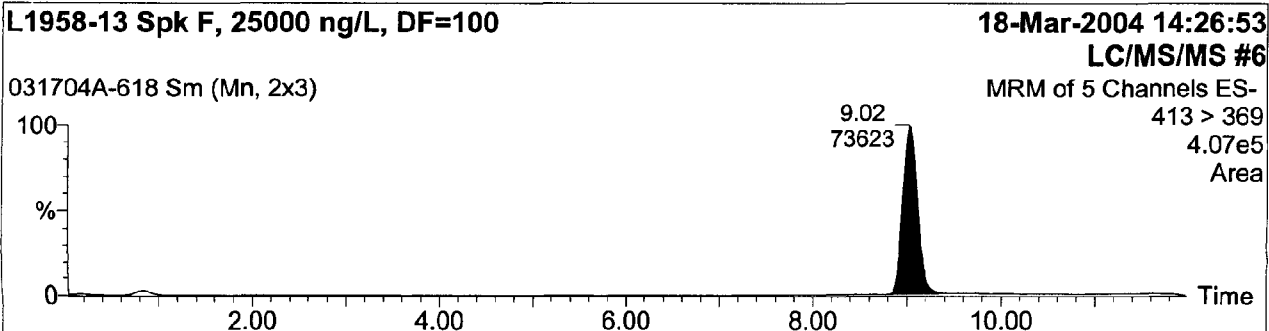
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Name: 031704A-618
Text:

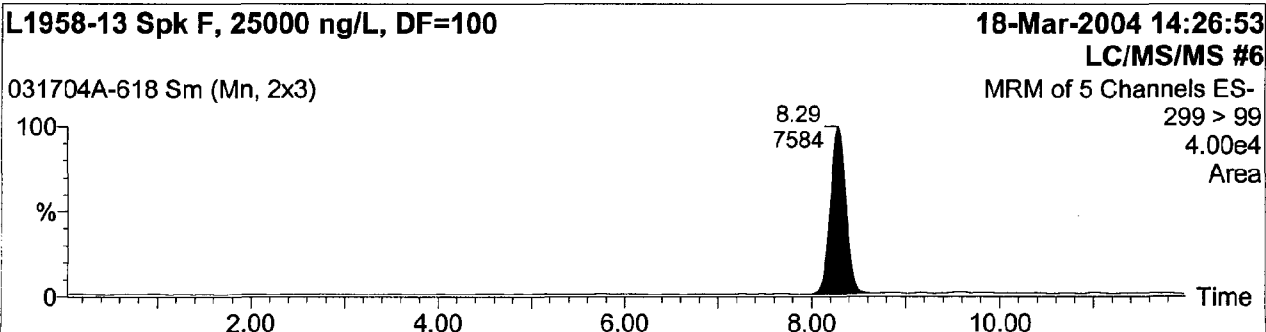
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

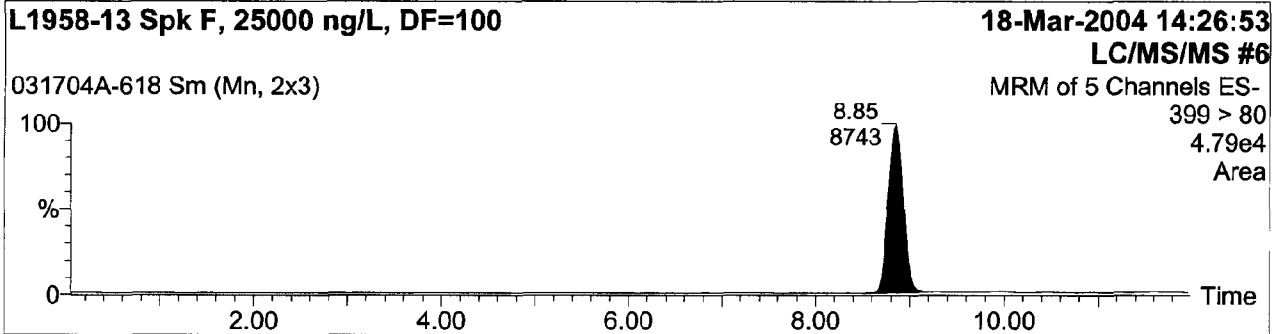
Study No.: L1958, Set No.: 031704A, Ext.Date: 03/17/04, Analyst: K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\031704A CG ACSFM
Last modified: Fri Mar 19 11:30:32 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031604
Last modified: Thu Mar 18 09:51:08 2004
Job Code:

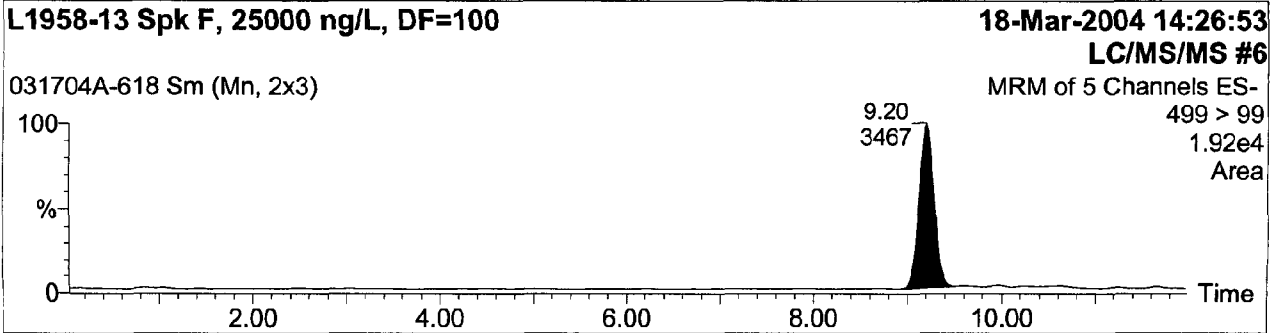
Printed: Fri Mar 19 12:24:08 2004

Name: 031704A-618
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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Quantify Sample Report

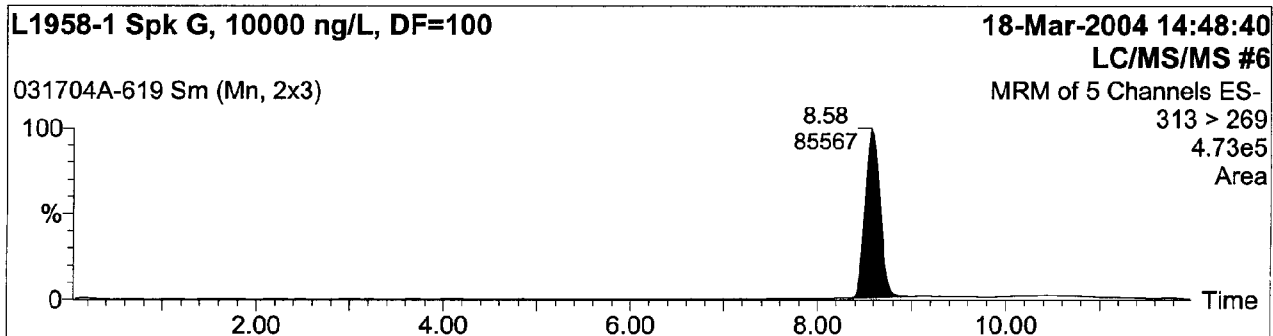
Study No.:L1958, Set No.:031704A, Ext.Date:03/17/04, Analyst:K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\031704A CG ACSFM
Last modified: Fri Mar 19 11:30:32 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031604
Last modified: Thu Mar 18 09:51:08 2004
Job Code:

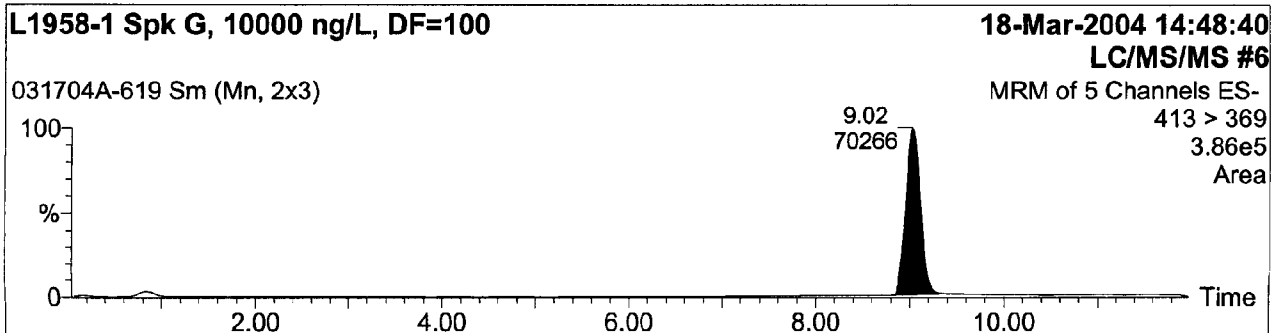
Printed: Fri Mar 19 12:24:08 2004

Name: 031704A-619
Text:

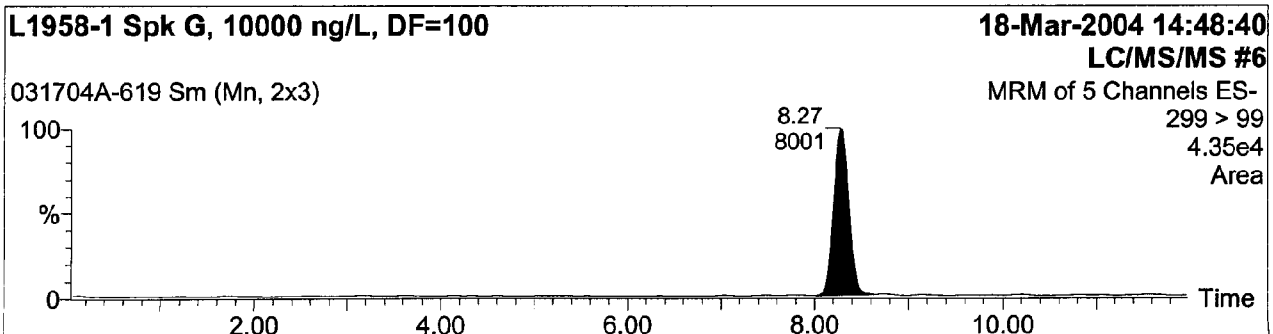
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

Study No.: L1958, Set No.: 031704A, Ext. Date: 03/17/04, Analyst: K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\031704A CG ACSFM
Last modified: Fri Mar 19 11:30:32 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031604
Last modified: Thu Mar 18 09:51:08 2004
Job Code:

Printed: Fri Mar 19 12:24:08 2004

Name: 031704A-619
Text:

4: C6 Sulfonate PFHS

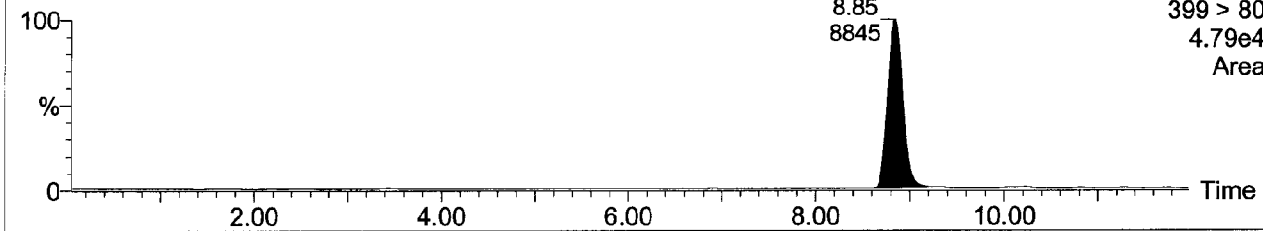
L1958-1 Spk G, 10000 ng/L, DF=100

18-Mar-2004 14:48:40

LC/MS/MS #6

031704A-619 Sm (Mn, 2x3)

MRM of 5 Channels ES-
399 > 80
4.79e4
Area



5: C8 Sulfonate PFOS

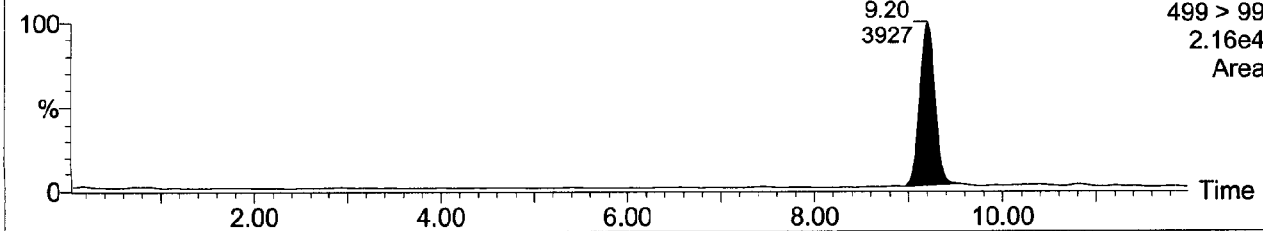
L1958-1 Spk G, 10000 ng/L, DF=100

18-Mar-2004 14:48:40

LC/MS/MS #6

031704A-619 Sm (Mn, 2x3)

MRM of 5 Channels ES-
499 > 99
2.16e4
Area



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Quantify Sample Report

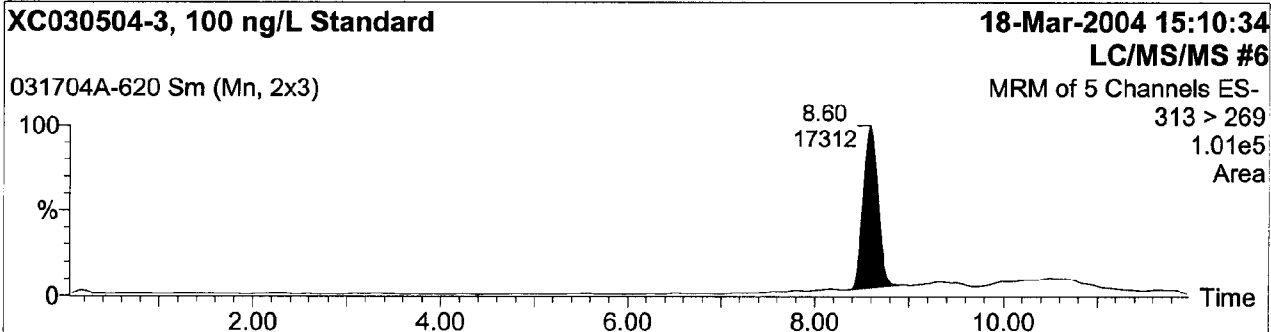
Study No.: L1958, Set No.: 031704A, Ext.Date: 03/17/04, Analyst: K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\031704A CG ACSFM
Last modified: Fri Mar 19 11:30:32 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031604
Last modified: Thu Mar 18 09:51:08 2004
Job Code:

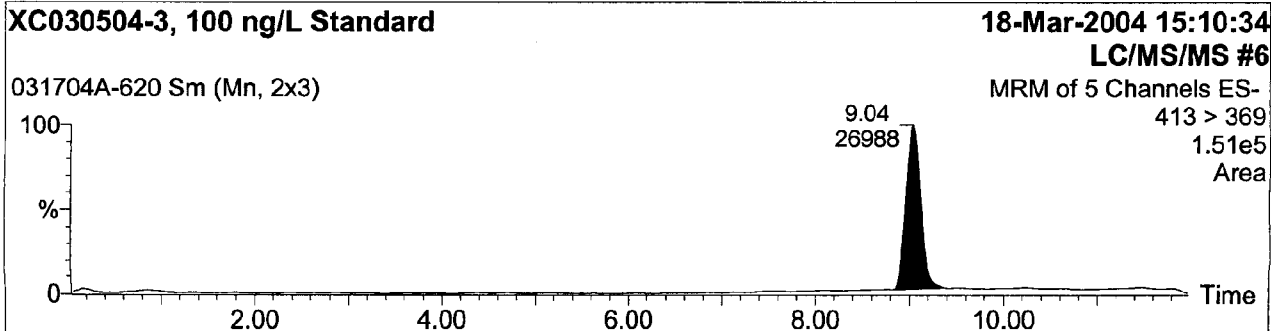
Printed: Fri Mar 19 12:24:08 2004

Name: 031704A-620
Text:

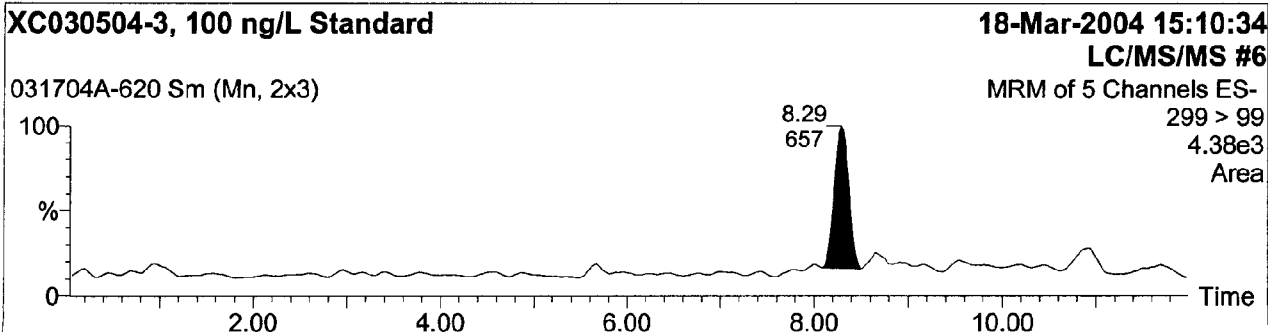
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

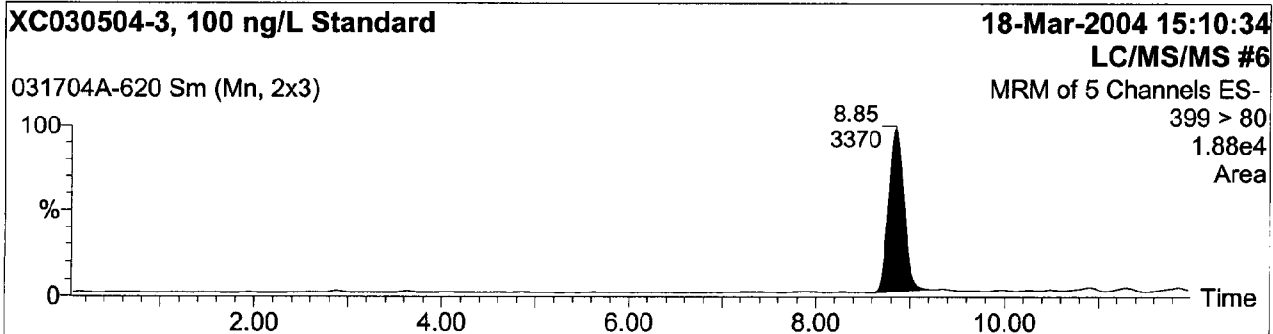
Study No.:L1958, Set No.:031704A, Ext.Date:03/17/04, Analyst:K.Risha

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Last modified: Fri Mar 19 11:30:32 2004
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Last modified: Thu Mar 18 09:51:08 2004
Job Code:

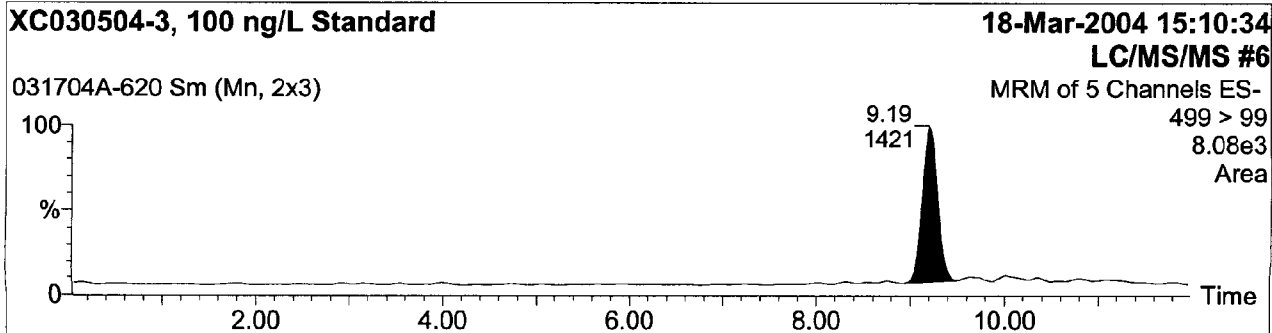
Printed: Fri Mar 19 12:24:08 2004

Name: 031704A-620
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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Quantify Sample Report

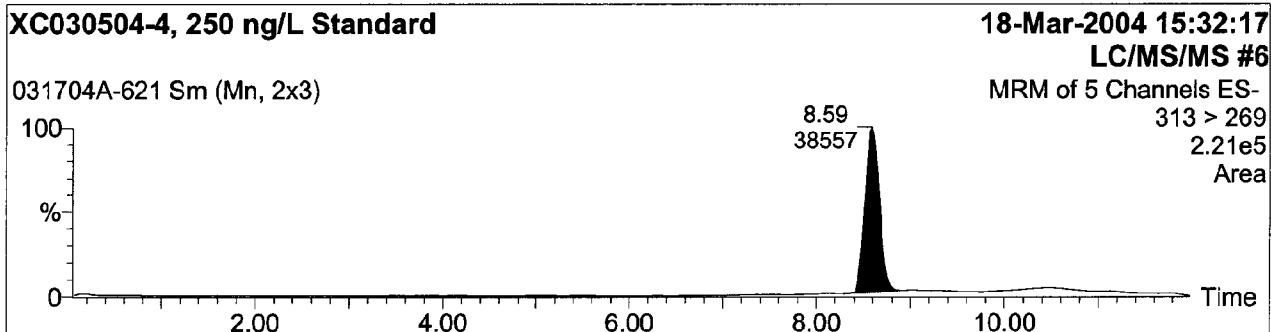
Study No.: L1958, Set No.: 031704A, Ext. Date: 03/17/04, Analyst: K. Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\031704A CG ACSFM
Last modified: Fri Mar 19 11:30:32 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031604
Last modified: Thu Mar 18 09:51:08 2004
Job Code:

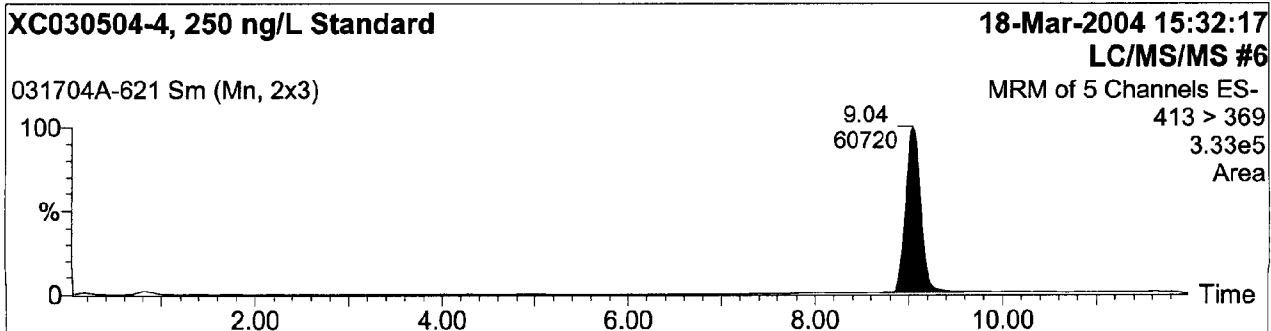
Printed: Fri Mar 19 12:24:08 2004

Name: 031704A-621
Text:

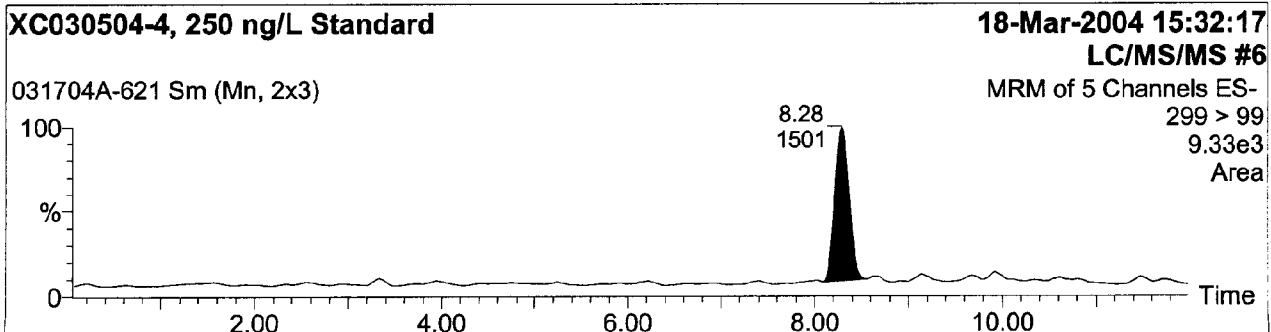
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

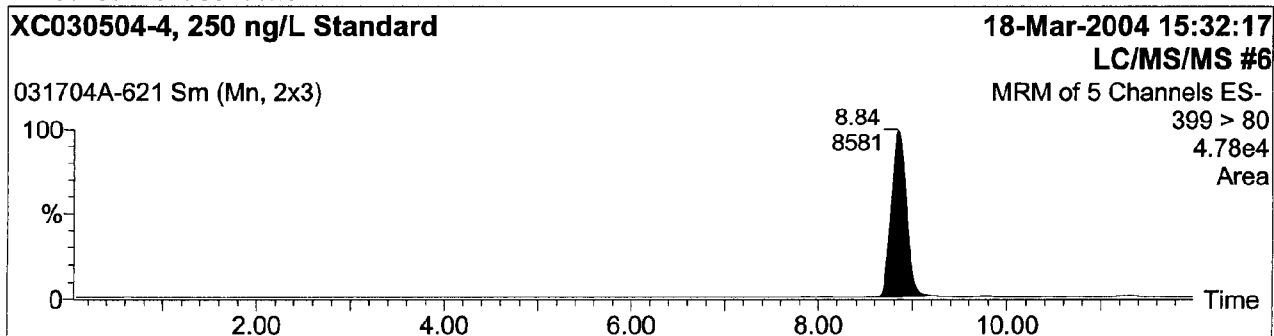
Study No.:L1958, Set No.:031704A, Ext.Date:03/17/04, Analyst:K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\031704A CG ACSFM
Last modified: Fri Mar 19 11:30:32 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031604
Last modified: Thu Mar 18 09:51:08 2004
Job Code:

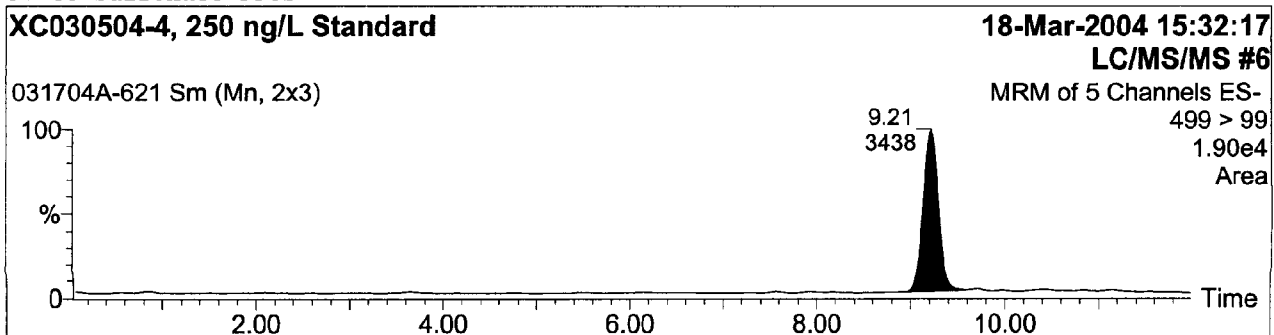
Printed: Fri Mar 19 12:24:08 2004

Name: 031704A-621
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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Quantify Sample Report

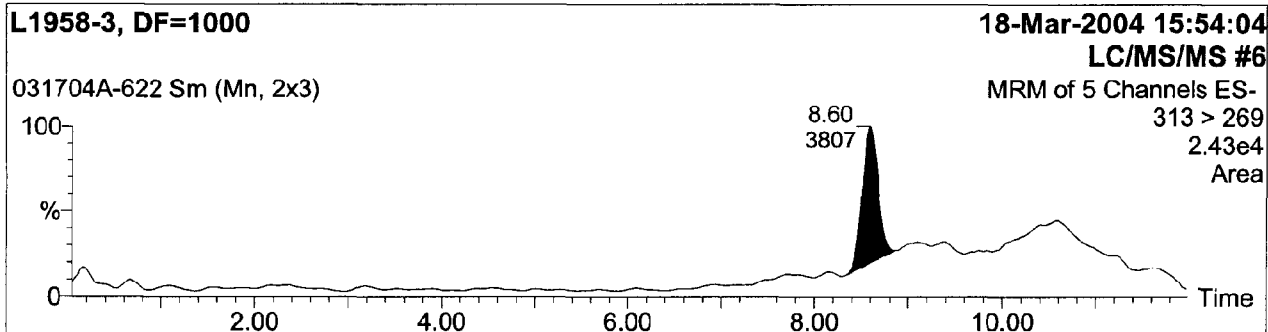
Study No.:L1958, Set No.:031704A, Ext.Date:03/17/04, Analyst:K.Risha

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Last modified: Fri Mar 19 11:30:32 2004
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Last modified: Thu Mar 18 09:51:08 2004
Job Code:

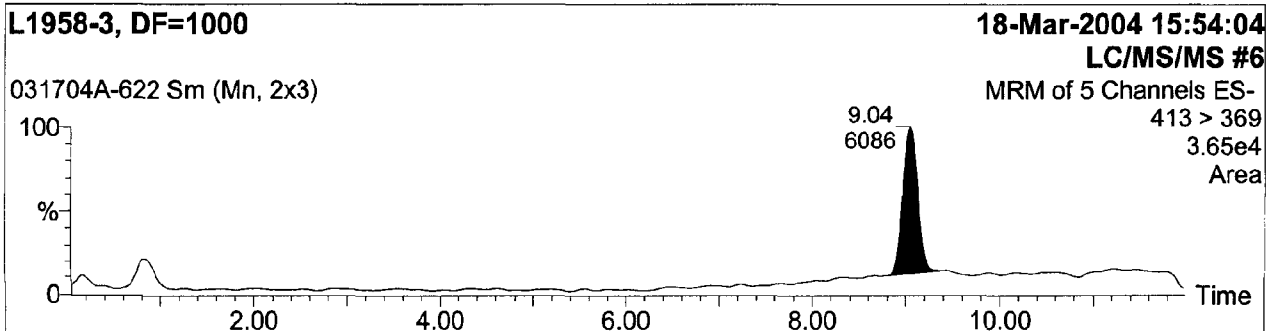
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Text:

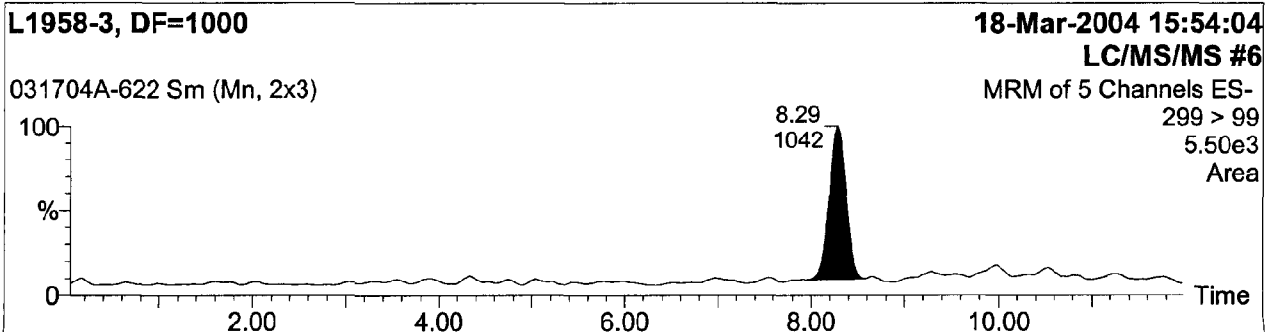
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

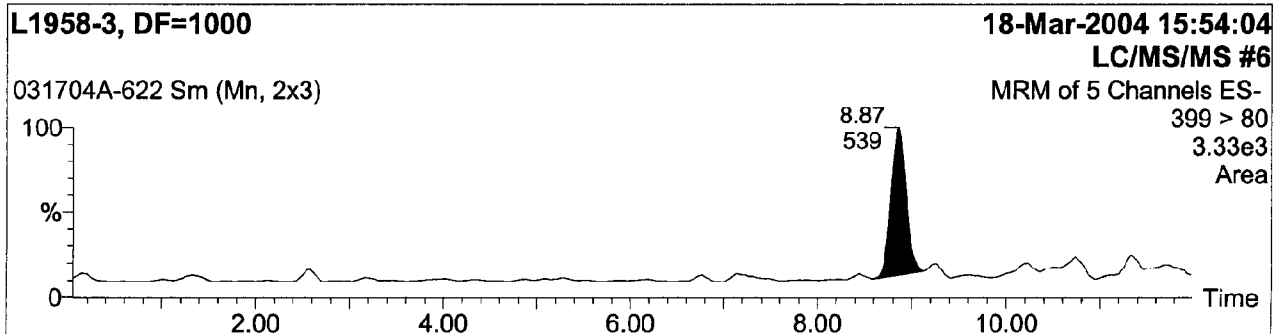
Study No.:L1958, Set No.:031704A, Ext.Date:03/17/04, Analyst:K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\031704A CG ACSFM
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Last modified: Thu Mar 18 09:51:08 2004
Job Code:

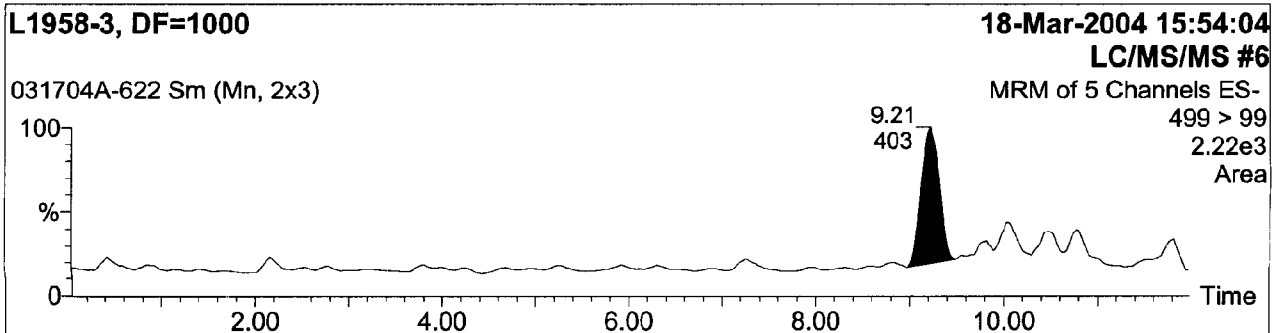
Printed: Fri Mar 19 12:24:08 2004

Name: 031704A-622
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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Quantify Sample Report

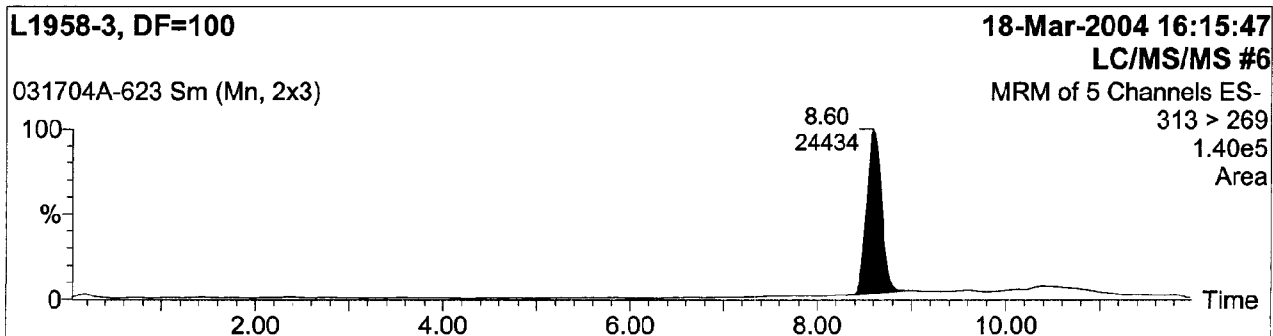
Study No.:L1958, Set No.:031704A, Ext.Date:03/17/04, Analyst:K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\031704A CG ACSFM
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Last modified: Thu Mar 18 09:51:08 2004
Job Code:

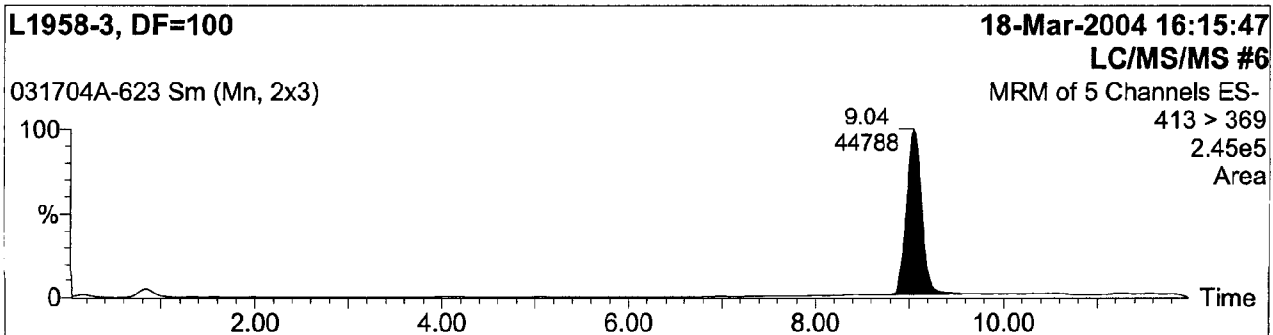
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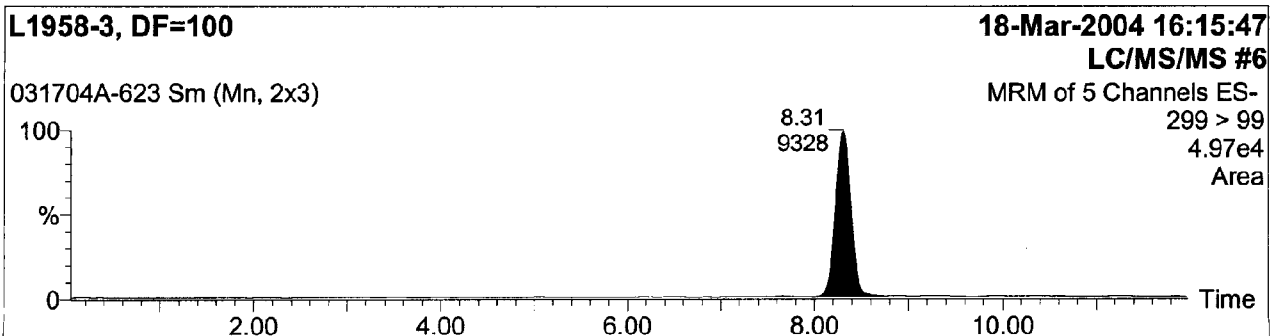
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

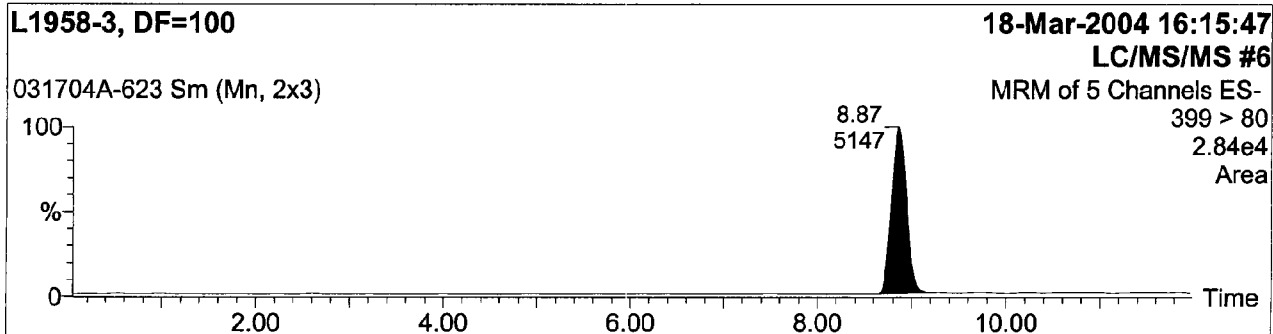
Study No.: L1958, Set No.: 031704A, Ext.Date: 03/17/04, Analyst: K.Risha

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Last modified: Fri Mar 19 11:30:32 2004
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Job Code:

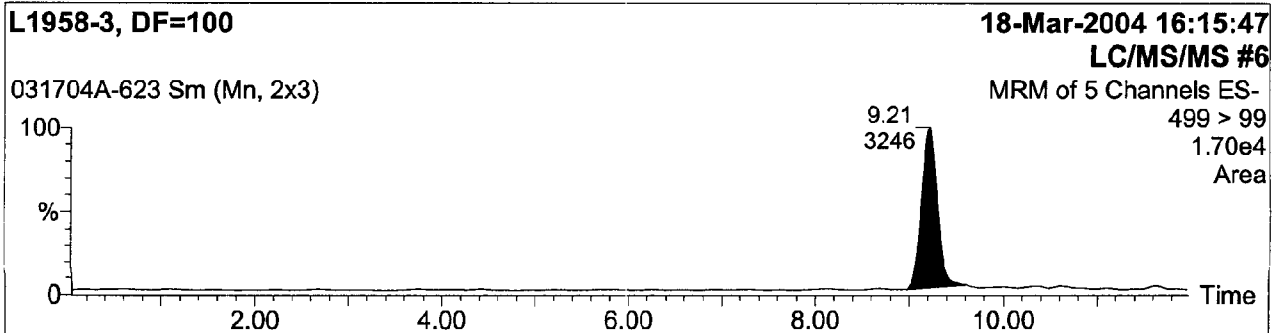
Printed: Fri Mar 19 12:24:08 2004

Name: 031704A-623
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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Quantify Sample Report

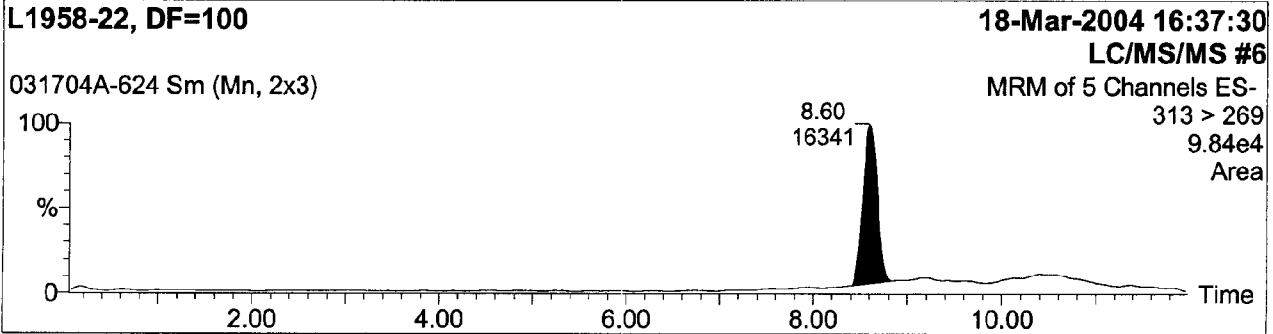
Study No.:L1958, Set No.:031704A, Ext.Date:03/17/04, Analyst:K.Risha

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Job Code:

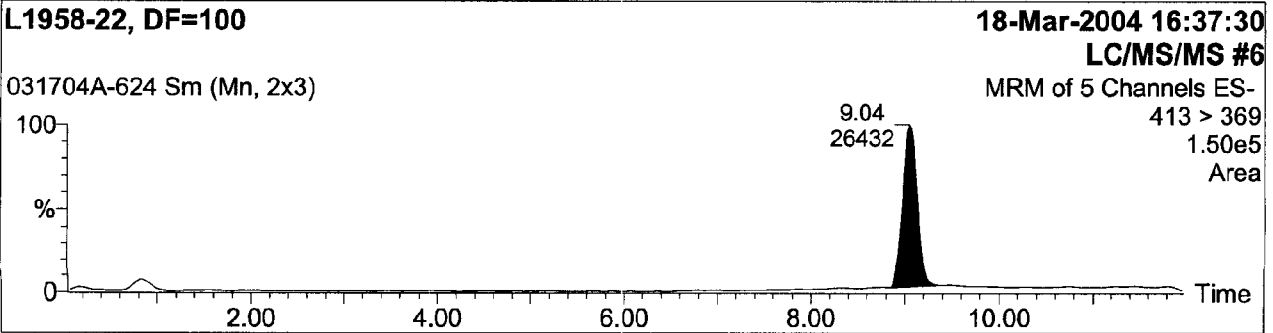
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Text:

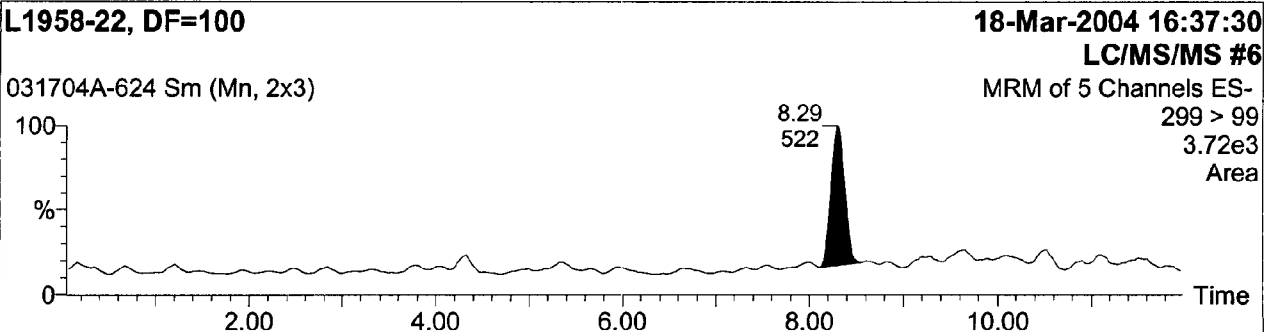
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



Oxygen Research, 3058 Research Drive, State College, PA 16801

Quantify Sample Report

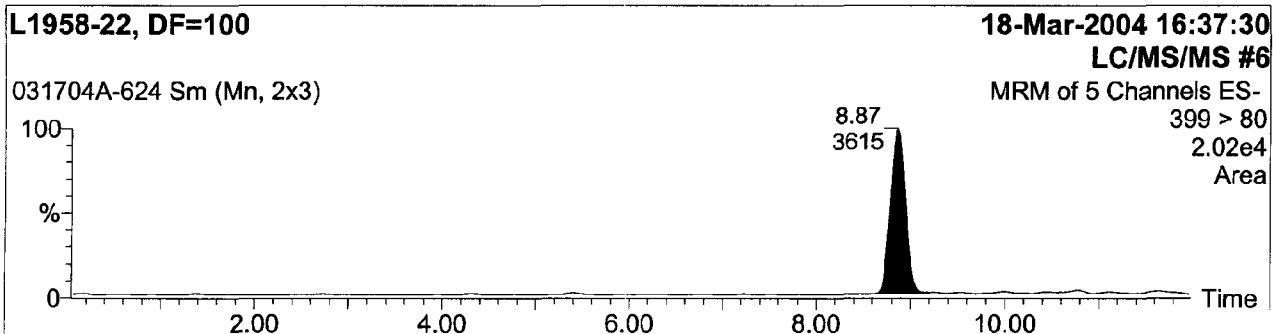
Study No.: L1958, Set No.: 031704A, Ext.Date: 03/17/04, Analyst: K.Risha

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Last modified: Thu Mar 18 09:51:08 2004
Job Code:

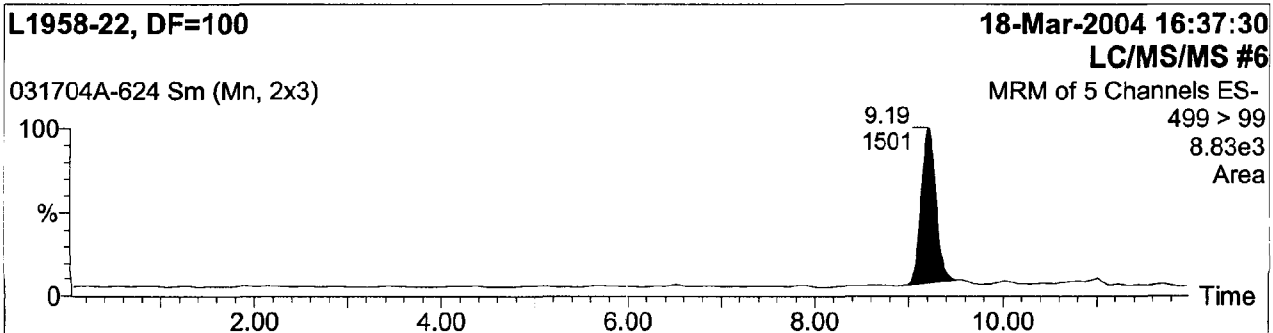
Printed: Fri Mar 19 12:24:08 2004

Name: 031704A-624
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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Quantify Sample Report

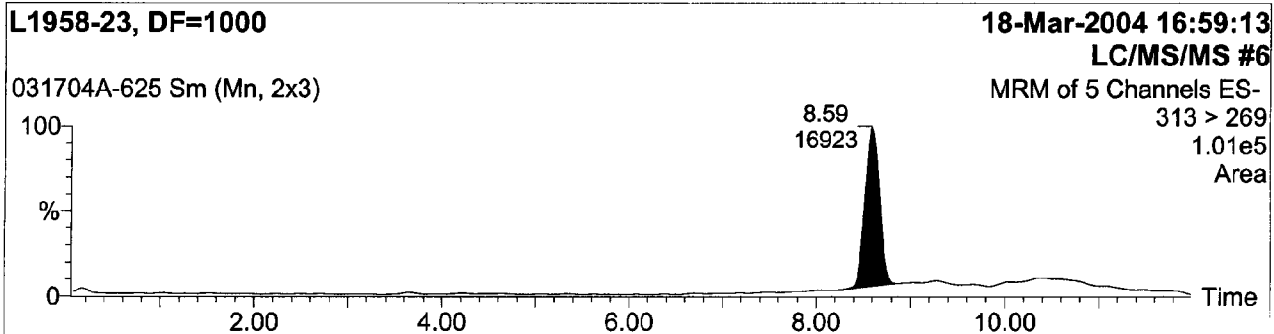
Study No.: L1958, Set No.: 031704A, Ext.Date: 03/17/04, Analyst: K.Risha

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Last modified: Thu Mar 18 09:51:08 2004
Job Code:

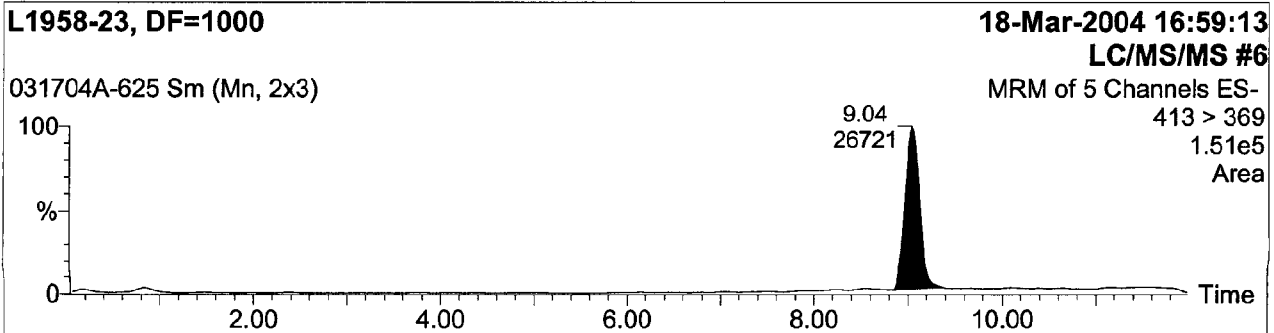
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Text:

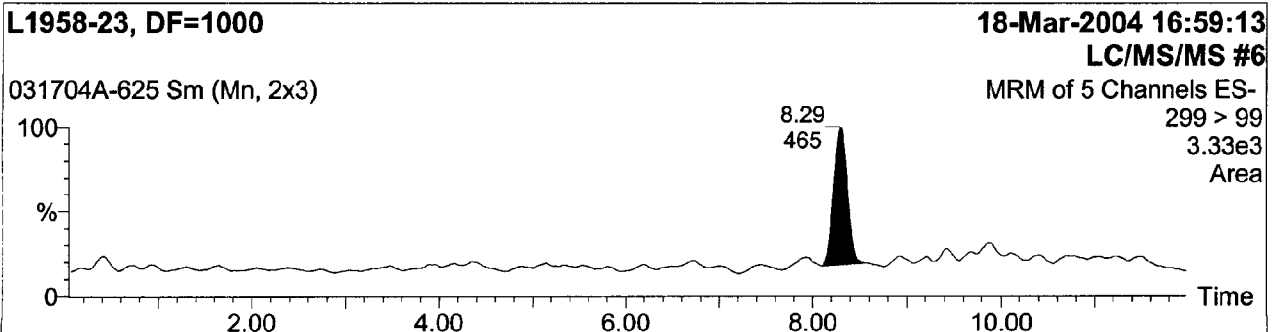
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

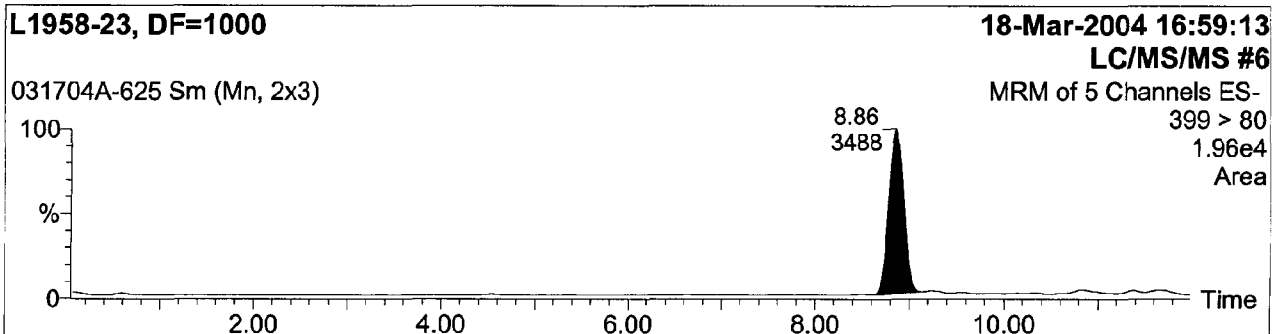
Study No.: L1958, Set No.: 031704A, Ext.Date: 03/17/04, Analyst: K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\031704A CG ACSFM
Last modified: Fri Mar 19 11:30:32 2004
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Last modified: Thu Mar 18 09:51:08 2004
Job Code:

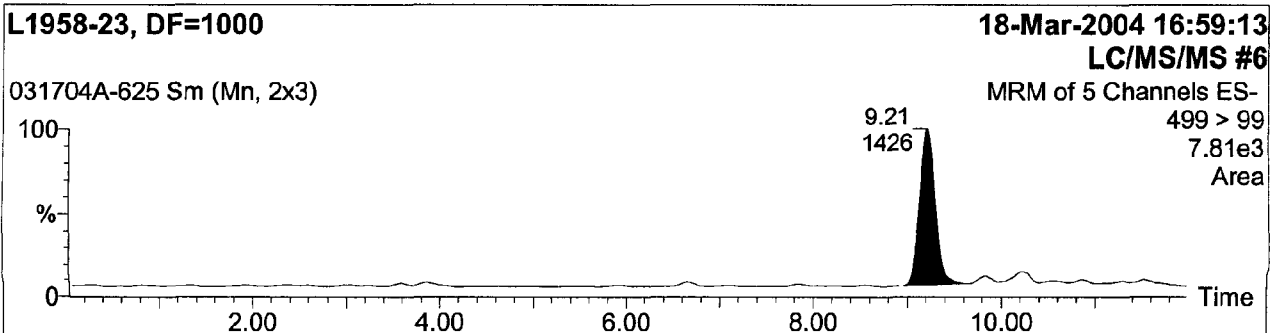
Printed: Fri Mar 19 12:24:08 2004

Name: 031704A-625
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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Quantify Sample Report

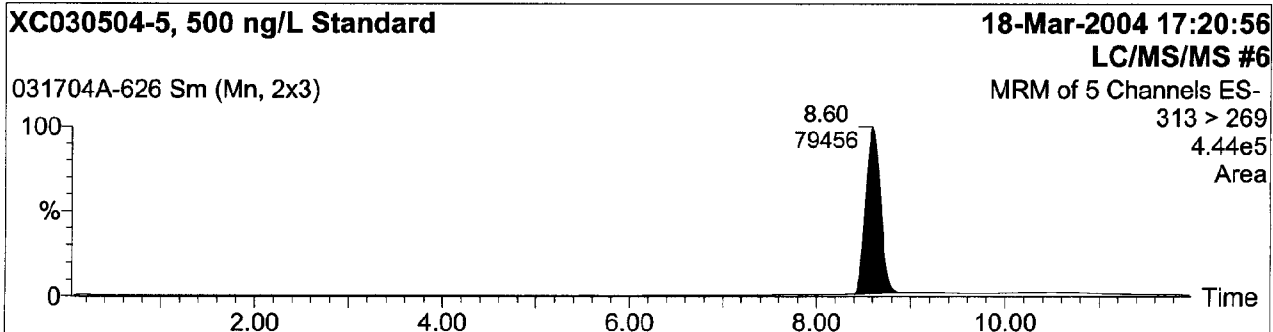
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Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\031704A CG ACSFM
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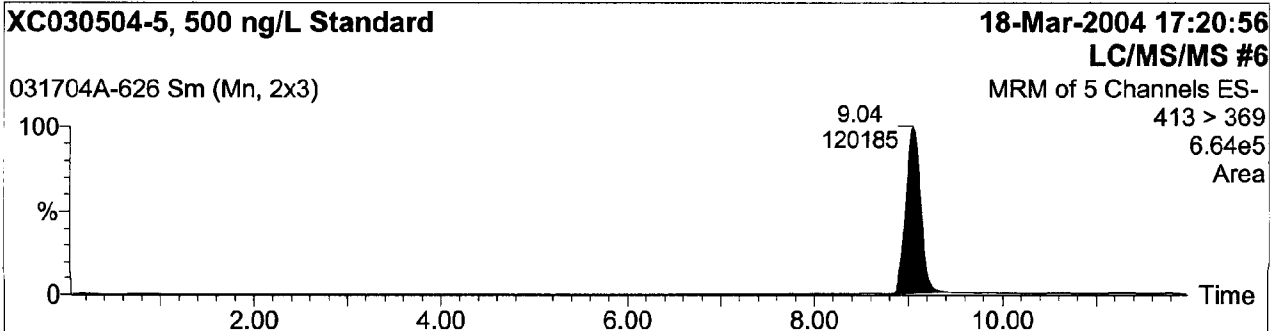
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Text:

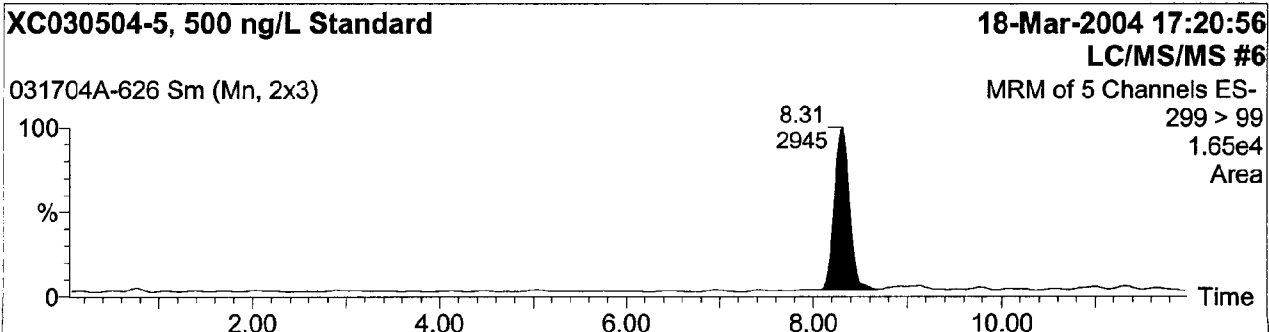
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

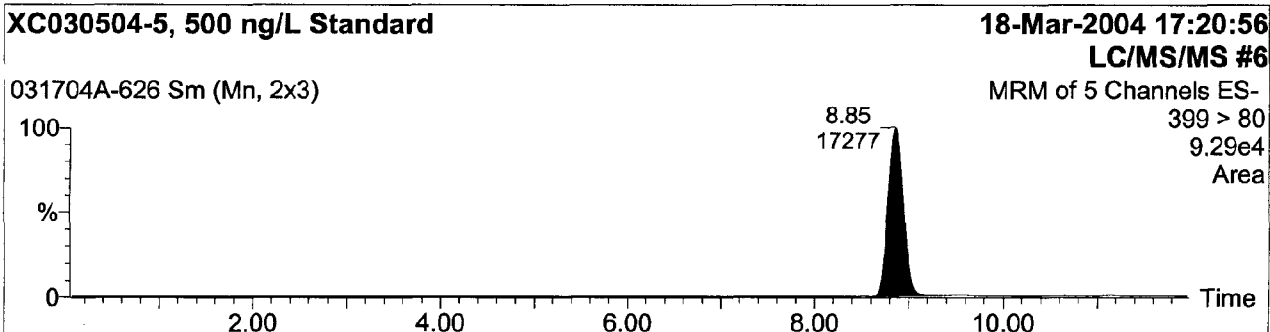
Study No.: L1958, Set No.: 031704A, Ext.Date: 03/17/04, Analyst: K.Risha

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Last modified: Fri Mar 19 11:30:32 2004
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Last modified: Thu Mar 18 09:51:08 2004
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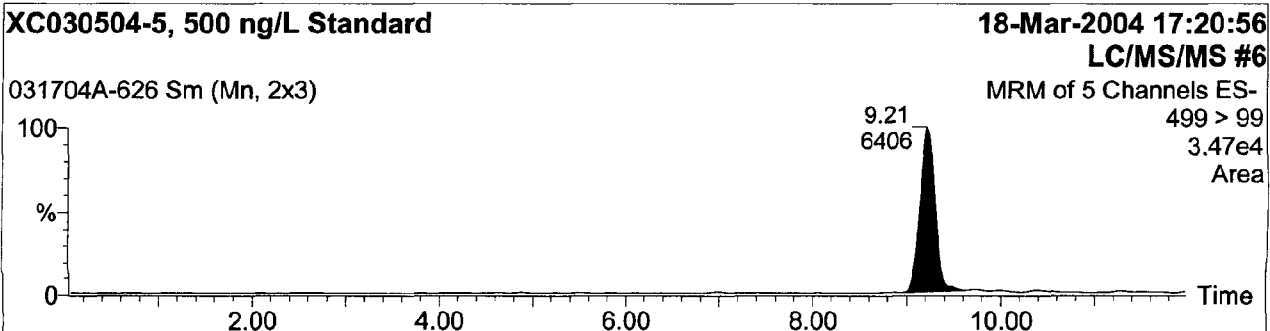
Printed: Fri Mar 19 12:24:08 2004

Name: 031704A-626
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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Quantify Sample Report

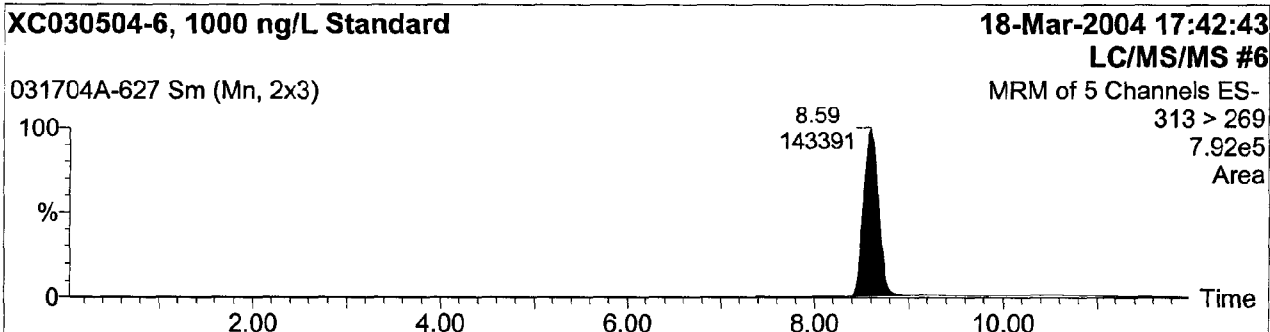
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Job Code:

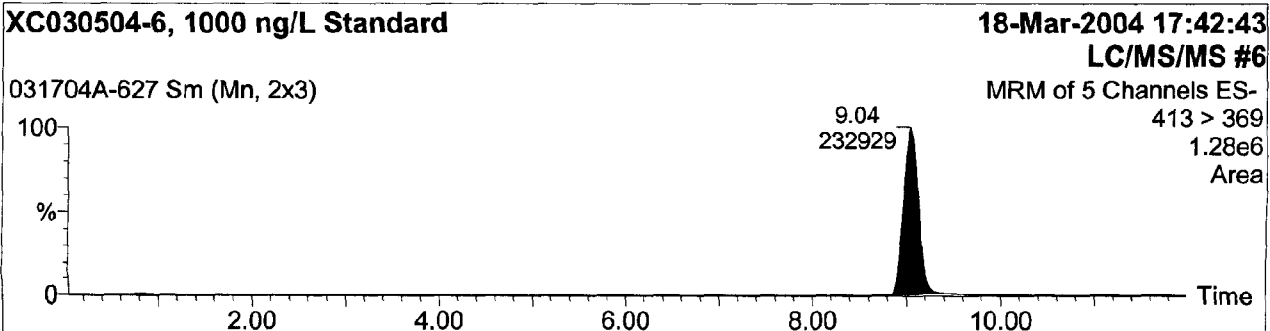
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Name: 031704A-627
Text:

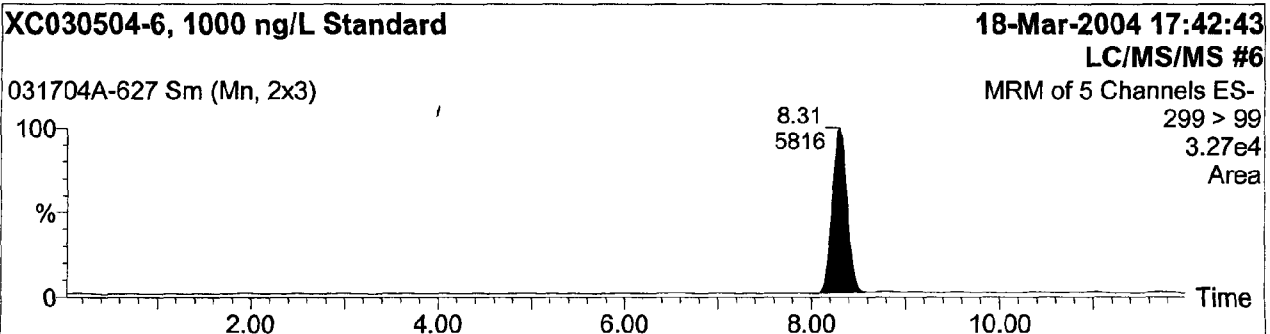
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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Quantify Sample Report

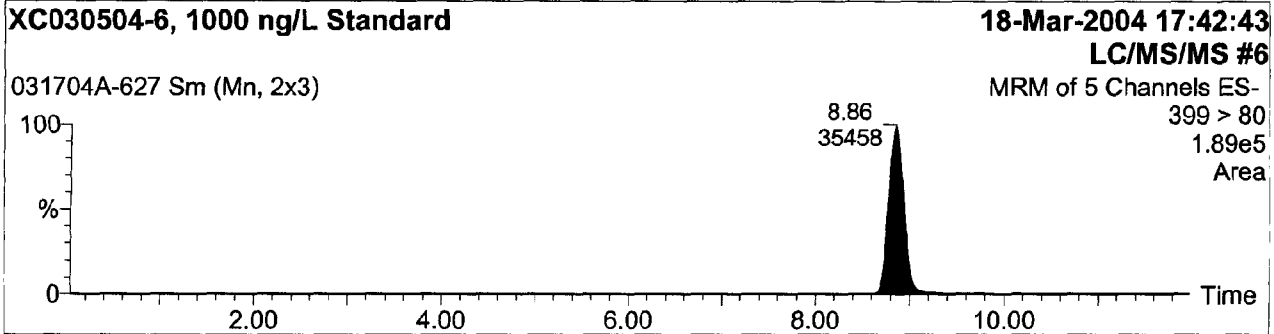
Study No.: L1958, Set No.: 031704A, Ext.Date: 03/17/04, Analyst: K.Risha

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Last modified: Fri Mar 19 11:30:32 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031604
Last modified: Thu Mar 18 09:51:08 2004
Job Code:

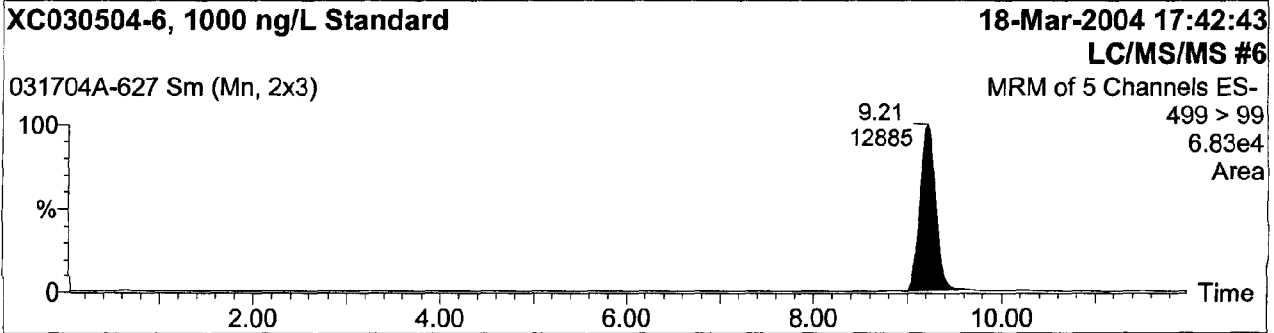
Printed: Fri Mar 19 12:24:08 2004

Name: 031704A-627
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



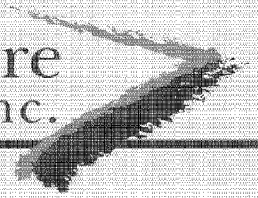
Oxygen Research, 3058 Research Drive, State College, PA 16801

Metals
FINAL REPORT
EVENT 2

E04-0126

February 25, 2004

North Shore Analytical, Inc.



MDH Lab # 027-137-389
WDNR Lab # 399017190

5612 Miller Trunk Highway, Suite #1
Duluth, MN 55811
Phone: (218) 729-4658
Fax: (218) 729-4659

Analytical Report

Date Reported: 3/4/04

Client:

3M Cottage Grove
Attn: Tom Baltutis
10746 Innovation Rd., Bldg. 145
Cottage Grove, MN 55016

Sample Information:

Chain of Custody: 3089
Sampled By: MAM
TMG

Phone: 651-458-2032
Fax: 651-458-2596

Method: EPA 1631

Sample ID	Laboratory ID #	Mercury (ng/L)	Sample Date	Analysis Date	MDL (ng/l.)
Field Blank	8094	< 0.5	2/25/2004	3/3/2004	0.1
Effluent	8095	1.0	2/25/2004	3/3/2004	0.1

Low level mercury results are reagent blank corrected.

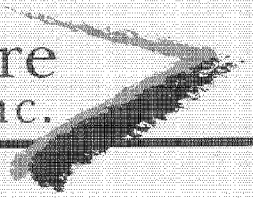
Reviewed By: _____

If you have any questions regarding this report, please call (218) 729-4658.

Sincerely,

Linda Christensen
Chemical Engineer

North Shore Analytical, Inc.



MDH Lab # 027-137-389
WDNR Lab # 399017190

5612 Miller Trunk Highway, Suite #1
Duluth, MN 55811
Phone: (218) 729-4658
Fax: (218) 729-4659

Analytical Report

Date Reported: 3/4/04

Client:

3M Cottage Grove
Attn: Tom Baltutis
10746 Innovation Rd., Bldg. 145
Cottage Grove, MN 55016

Sample Information:

Chain of Custody: 3089
Sampled By: MAM
TMG

Phone: 651-458-2032
Fax: 651-458-2596

Method: EPA 1631

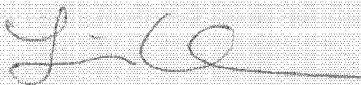
Sample ID	Laboratory ID #	Mercury (ng/L)	Sample Date	Analysis Date	MDL (ng/L)
Field Blank	8092	< 0.5	2/25/2004	3/3/2004	0.1
Phase 3 Effluent	8093	< 0.5	2/25/2004	3/3/2004	0.1

Low-level mercury results are reagent blank corrected.

Reviewed By: 

If you have any questions regarding this report, please call (218) 729-4658.

Sincerely,



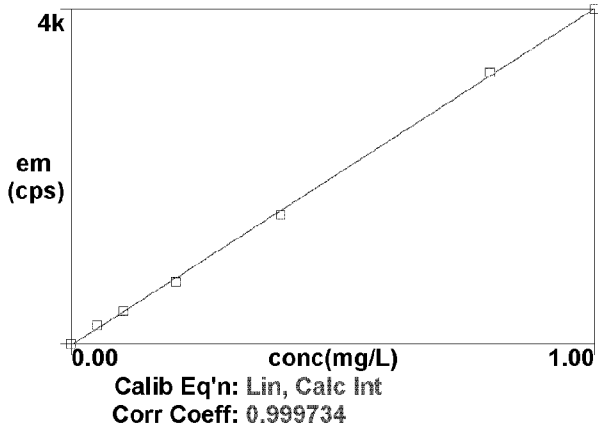
Linda Christensen
Chemical Engineer

Calib

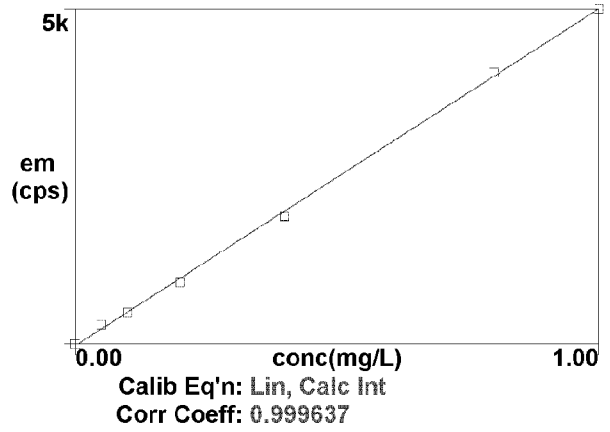
Method: WWTP Scan

Result: CG WWTP Carbon Study Event 2 E04-0126

Sb 206.836



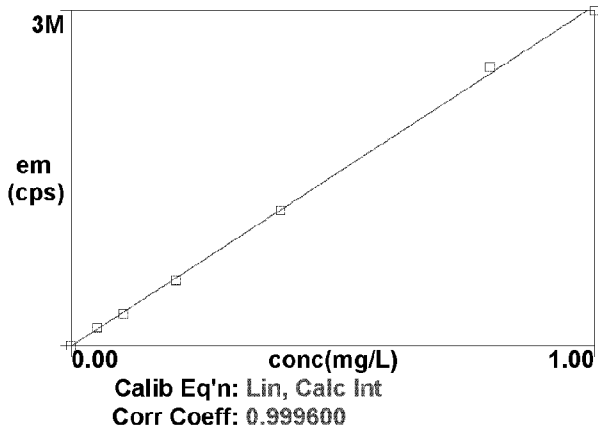
As 188.979



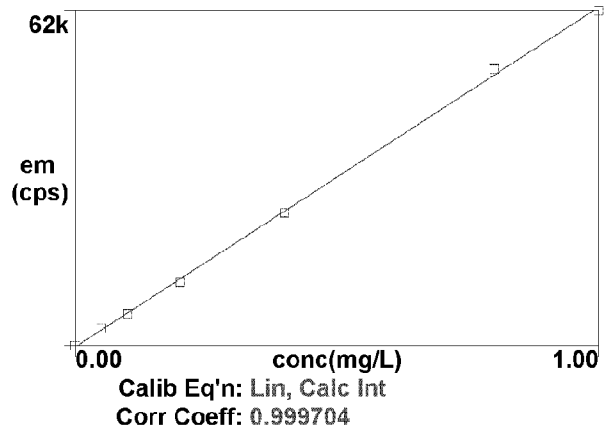
1

2

Be 313.107



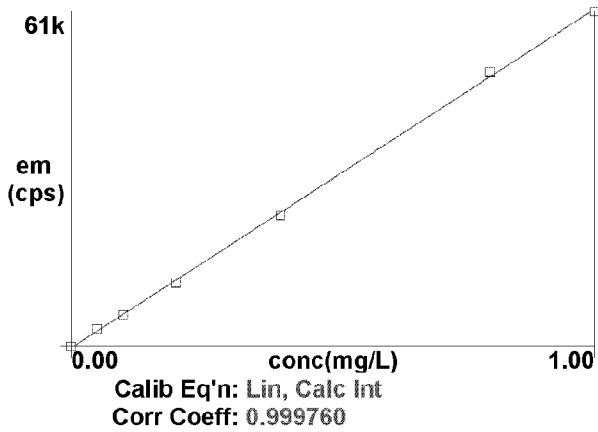
Co 228.616



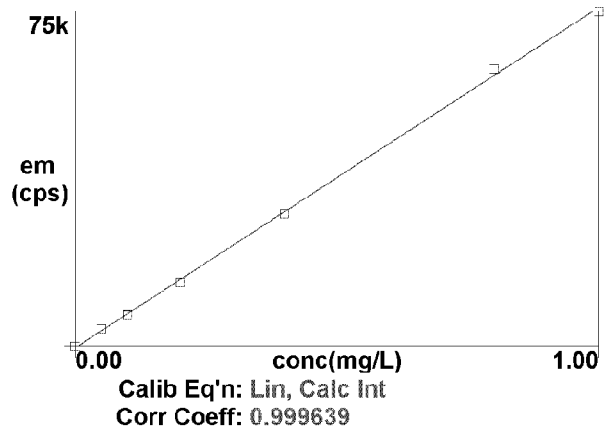
3

4

Cd 228.802



Cr 267.716



5

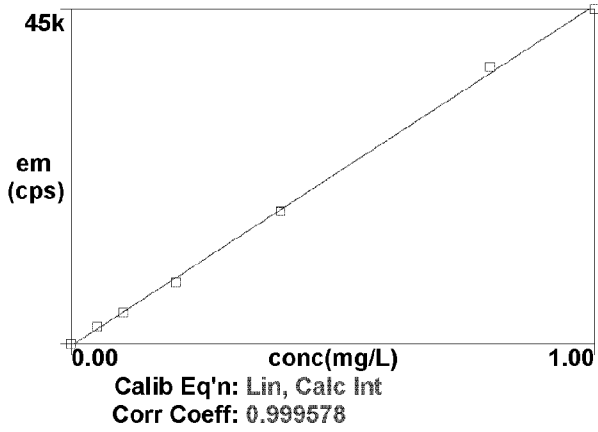
6

Calib

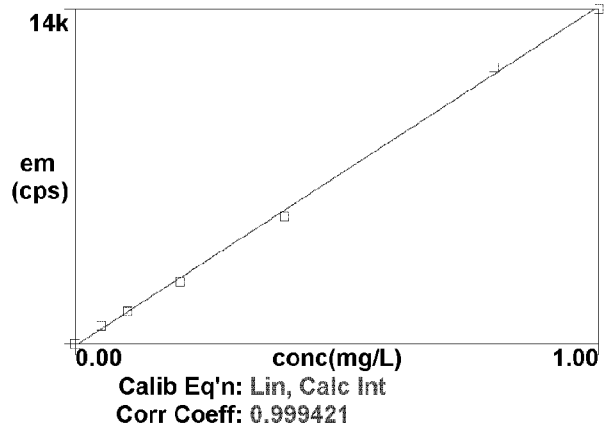
Method: WWTP Scan

Result: CG WWTP Carbon Study Event 2 E04-0126

Ni 231.604

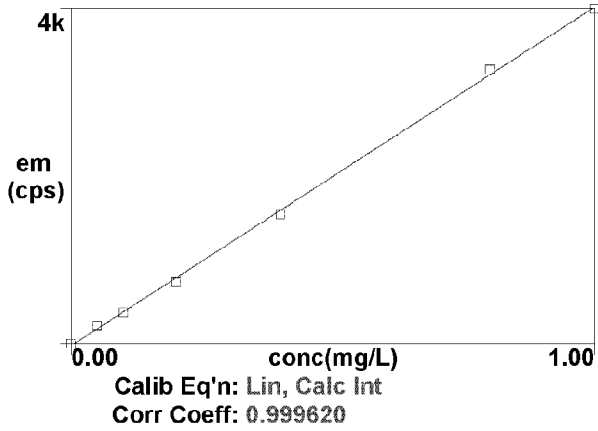


Pb 220.353



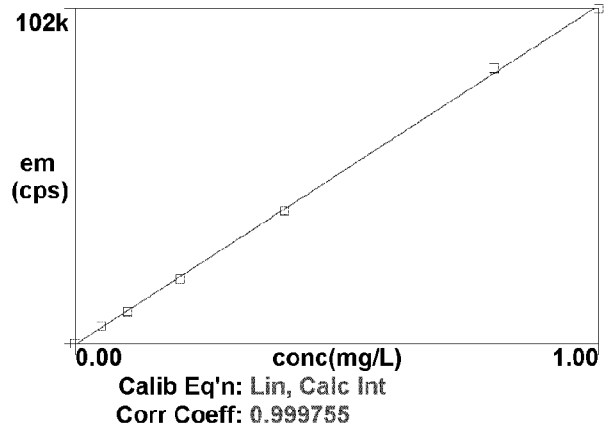
7

Se 196.026



8

Zn 213.857



9

10

Sample ID	Date	Time	Sample ID	Initial Sample Wt	MDL	Analyte Name	Reported Conc (Calib)	Calib Units	Reported Conc (Samp)	Samp Units	QC Recovery
0.8ppm	3/1/2004	12:40:44 PM				Sb 206.836	0.834 mg/L		0.834 mg/L		104.23
0.8ppm	3/1/2004	12:40:44 PM				As 188.979	0.834 mg/L		0.834 mg/L		104.28
0.8ppm	3/1/2004	12:40:44 PM				Ba 313.107	0.863 mg/L		0.863 mg/L		107.86
0.8ppm	3/1/2004	12:40:44 PM				Co 228.616	0.863 mg/L		0.863 mg/L		107.86
0.8ppm	3/1/2004	12:40:44 PM				Cd 228.802	0.859 mg/L		0.859 mg/L		107.35
0.8ppm	3/1/2004	12:40:44 PM				Cr 267.716	0.861 mg/L		0.861 mg/L		107.66
0.8ppm	3/1/2004	12:40:44 PM				Ni 231.604	0.862 mg/L		0.862 mg/L		107.76
0.8ppm	3/1/2004	12:40:44 PM				Pb 220.353	0.868 mg/L		0.868 mg/L		108.47
0.8ppm	3/1/2004	12:40:44 PM				Se 196.026	0.834 mg/L		0.834 mg/L		104.27
0.8ppm	3/1/2004	12:40:44 PM				Zn 213.857	0.86 mg/L		0.86 mg/L		107.51
MP-04-181	3/1/2004	12:45:11 PM	Field Blk	0.614	3.26	Sb 206.836	0.009 mg/L		ND	mg/kg	
	3/1/2004	12:45:11 PM				As 188.979	0.007 mg/L		ND	mg/kg	
	3/1/2004	12:45:11 PM				Ba 313.107	0.001 mg/L		ND	mg/kg	
	3/1/2004	12:45:11 PM				Co 228.616	0.003 mg/L		ND	mg/kg	
	3/1/2004	12:45:11 PM				Cd 228.802	0.004 mg/L		ND	mg/kg	
	3/1/2004	12:45:11 PM				Cr 267.716	0.005 mg/L		ND	mg/kg	
	3/1/2004	12:45:11 PM				Ni 231.604	0.006 mg/L		ND	mg/kg	
	3/1/2004	12:45:11 PM				Pb 220.353	0.007 mg/L		ND	mg/kg	
MP-04-183	3/1/2004	12:49:35 PM	Inf Phase 1/2	0.625	3.20	Sb 206.836	0.011 mg/L		ND	mg/kg	
	3/1/2004	12:49:35 PM				As 188.979	0.002 mg/L		ND	mg/kg	
	3/1/2004	12:49:35 PM				Ba 313.107	0.001 mg/L		ND	mg/kg	
	3/1/2004	12:49:35 PM				Co 228.616	0.003 mg/L		ND	mg/kg	
	3/1/2004	12:49:35 PM				Cd 228.802	0.004 mg/L		ND	mg/kg	
	3/1/2004	12:49:35 PM				Cr 267.716	0.006 mg/L		ND	mg/kg	
	3/1/2004	12:49:35 PM				Ni 231.604	0.006 mg/L		ND	mg/kg	
	3/1/2004	12:49:35 PM				Pb 220.353	0.005 mg/L		ND	mg/kg	
MP-04-184	3/1/2004	12:54:00 PM	Inf Phase 1/2 L	0.721	2.77	Sb 206.836	0.008 mg/L		ND	mg/kg	
	3/1/2004	12:54:00 PM				As 188.979	0.001 mg/L		ND	mg/kg	
	3/1/2004	12:54:00 PM				Ba 313.107	0.001 mg/L		ND	mg/kg	
	3/1/2004	12:54:00 PM				Co 228.616	0.004 mg/L		ND	mg/kg	
	3/1/2004	12:54:00 PM				Cd 228.802	0.004 mg/L		ND	mg/kg	
	3/1/2004	12:54:00 PM				Cr 267.716	0.005 mg/L		ND	mg/kg	
	3/1/2004	12:54:00 PM				Ni 231.604	0.006 mg/L		ND	mg/kg	
	3/1/2004	12:54:00 PM				Pb 220.353	0.005 mg/L		ND	mg/kg	
MP-04-185	3/1/2004	12:58:26 PM	Port A Unit 1	0.722	2.77	Sb 206.836	0.01 mg/L		ND	mg/kg	
	3/1/2004	12:58:26 PM				As 188.979	0.003 mg/L		ND	mg/kg	
	3/1/2004	12:58:26 PM				Ba 313.107	0.001 mg/L		ND	mg/kg	
	3/1/2004	12:58:26 PM				Co 228.616	0.004 mg/L		ND	mg/kg	
	3/1/2004	12:58:26 PM				Cd 228.802	0.004 mg/L		ND	mg/kg	
	3/1/2004	12:58:26 PM				Cr 267.716	0.005 mg/L		ND	mg/kg	
	3/1/2004	12:58:26 PM				Ni 231.604	0.006 mg/L		ND	mg/kg	
	3/1/2004	12:58:26 PM				Pb 220.353	0.005 mg/L		ND	mg/kg	
MP-04-185 MS	3/1/2004	12:58:26 PM	Port A Unit 1	2.77	2.77	Se 196.026	0.011 mg/L		ND	mg/kg	
	3/1/2004	12:58:26 PM				Zn 213.857	0.006 mg/L		ND	mg/kg	
	3/1/2004	1:02:51 PM				Sb 206.836	0.797 mg/L		55.2 mg/kg	80%	
	3/1/2004	1:02:51 PM				As 188.979	0.803 mg/L		55.61 mg/kg	80%	
	3/1/2004	1:02:51 PM				Ba 313.107	0.818 mg/L		56.64 mg/kg	82%	
	3/1/2004	1:02:51 PM				Co 228.616	0.801 mg/L		55.44 mg/kg	80%	
	3/1/2004	1:02:51 PM				Cd 228.802	0.77 mg/L		53.33 mg/kg	77%	
	3/1/2004	1:02:51 PM				Cr 267.716	0.821 mg/L		56.89 mg/kg	82%	
MP-04-185 MS	3/1/2004	1:02:51 PM	Port A Unit 1	2.77	2.77	Ni 231.604	0.85 mg/L		58.87 mg/kg	85%	
	3/1/2004	1:02:51 PM				Pb 220.353	0.846 mg/L		58.59 mg/kg	85%	
	3/1/2004	1:02:51 PM				Se 196.026	0.898 mg/L		62.19 mg/kg	90%	
	3/1/2004	1:02:51 PM				Zn 213.857	1.116 mg/L		77.3 mg/kg	112%	

Sample ID	Date	Time	Sample ID	Initial Sample Wt	MDL	Analyte Name	Reported Conc (Calib)	Calib Units	Reported Conc (Samp)	Samp Units	QC Recovery
MP-04-195	3/1/2004	1:07:24 PM	Lab Blk	0.723	2.77	Sb 206.836	0.005 mg/L	ND	mg/kg		
	3/1/2004	1:07:24 PM				As 188.979	0.002 mg/L	ND	mg/kg		
	3/1/2004	1:07:24 PM				Ba 313.107	0.001 mg/L	ND	mg/kg		
	3/1/2004	1:07:24 PM				Co 228.616	0.004 mg/L	ND	mg/kg		
	3/1/2004	1:07:24 PM				Cd 228.802	0.005 mg/L	ND	mg/kg		
	3/1/2004	1:07:24 PM				Cr 267.716	0.005 mg/L	ND	mg/kg		
	3/1/2004	1:07:24 PM				Ni 231.604	0.006 mg/L	ND	mg/kg		
	3/1/2004	1:07:24 PM				Pb 220.353	0.003 mg/L	ND	mg/kg		
	3/1/2004	1:07:24 PM				Se 196.026	0.011 mg/L	ND	mg/kg		
3/1/2004	1:07:24 PM	Zn 213.857	0.004 mg/L	ND	mg/kg						
MP-04-186	3/1/2004	1:11:51 PM	Port A Unit 1 D	0.647	3.09	Sb 206.836	0.009 mg/L	ND	mg/kg		
	3/1/2004	1:11:51 PM				As 188.979	0.005 mg/L	ND	mg/kg		
	3/1/2004	1:11:51 PM				Ba 313.107	0.001 mg/L	ND	mg/kg		
	3/1/2004	1:11:51 PM				Co 228.616	0.004 mg/L	ND	mg/kg		
	3/1/2004	1:11:51 PM				Cd 228.802	0.004 mg/L	ND	mg/kg		
	3/1/2004	1:11:51 PM				Cr 267.716	0.005 mg/L	ND	mg/kg		
	3/1/2004	1:11:51 PM				Ni 231.604	0.005 mg/L	ND	mg/kg		
	3/1/2004	1:11:51 PM				Pb 220.353	0.005 mg/L	ND	mg/kg		
	3/1/2004	1:11:51 PM				Se 196.026	0.004 mg/L	ND	mg/kg		
3/1/2004	1:11:51 PM	Zn 213.857	0.004 mg/L	ND	mg/kg						
MP-04-187	3/1/2004	1:16:18 PM	Port B Unit 1	0.65	3.08	Sb 206.836	0.006 mg/L	ND	mg/kg		
	3/1/2004	1:16:18 PM				As 188.979	0.005 mg/L	ND	mg/kg		
	3/1/2004	1:16:18 PM				Ba 313.107	0.001 mg/L	ND	mg/kg		
	3/1/2004	1:16:18 PM				Co 228.616	0.004 mg/L	ND	mg/kg		
	3/1/2004	1:16:18 PM				Cd 228.802	0.004 mg/L	ND	mg/kg		
	3/1/2004	1:16:18 PM				Cr 267.716	0.005 mg/L	ND	mg/kg		
	3/1/2004	1:16:18 PM				Ni 231.604	0.006 mg/L	ND	mg/kg		
	3/1/2004	1:16:18 PM				Pb 220.353	0.005 mg/L	ND	mg/kg		
	3/1/2004	1:16:18 PM				Se 196.026	0.004 mg/L	ND	mg/kg		
3/1/2004	1:16:18 PM	Zn 213.857	0.005 mg/L	ND	mg/kg						
MP-04-188	3/1/2004	1:20:45 PM	Port B Unit 1 D	0.787	2.54	Sb 206.836	0.012 mg/L	ND	mg/kg		
	3/1/2004	1:20:45 PM				As 188.979	0.004 mg/L	ND	mg/kg		
	3/1/2004	1:20:45 PM				Ba 313.107	0.001 mg/L	ND	mg/kg		
	3/1/2004	1:20:45 PM				Co 228.616	0.003 mg/L	ND	mg/kg		
	3/1/2004	1:20:45 PM				Cd 228.802	0.005 mg/L	ND	mg/kg		
	3/1/2004	1:20:45 PM				Cr 267.716	0.005 mg/L	ND	mg/kg		
	3/1/2004	1:20:45 PM				Ni 231.604	0.005 mg/L	ND	mg/kg		
	3/1/2004	1:20:45 PM				Pb 220.353	0.005 mg/L	ND	mg/kg		
	3/1/2004	1:20:45 PM				Se 196.026	0.011 mg/L	ND	mg/kg		
3/1/2004	1:20:45 PM	Zn 213.857	0.005 mg/L	ND	mg/kg						
0.8ppm	3/1/2004	1:25:13 PM				Sb 206.836	0.834 mg/L	0.834 mg/L	mg/L	104.20	
	3/1/2004	1:25:13 PM				As 188.979	0.833 mg/L	0.833 mg/L	mg/L	104.08	
	3/1/2004	1:25:13 PM				Ba 313.107	0.853 mg/L	0.853 mg/L	mg/L	106.59	
	3/1/2004	1:25:13 PM				Co 228.616	0.859 mg/L	0.859 mg/L	mg/L	107.42	
	3/1/2004	1:25:13 PM				Cd 228.802	0.857 mg/L	0.857 mg/L	mg/L	107.12	
	3/1/2004	1:25:13 PM				Cr 267.716	0.861 mg/L	0.861 mg/L	mg/L	107.58	
	3/1/2004	1:25:13 PM				Ni 231.604	0.859 mg/L	0.859 mg/L	mg/L	107.32	
	3/1/2004	1:25:13 PM				Pb 220.353	0.856 mg/L	0.856 mg/L	mg/L	107.04	
	3/1/2004	1:25:13 PM				Se 196.026	0.828 mg/L	0.828 mg/L	mg/L	103.45	
3/1/2004	1:25:13 PM				Zn 213.857	0.857 mg/L	0.857 mg/L	mg/L	107.17		
MP-04-189	3/1/2004	1:29:41 PM	Port A Unit 4	0.637	3.14	Sb 206.836	0.009 mg/L	ND	mg/kg		
	3/1/2004	1:29:41 PM				As 188.979	0.001 mg/L	ND	mg/kg		
	3/1/2004	1:29:41 PM				Ba 313.107	0.002 mg/L	ND	mg/kg		
	3/1/2004	1:29:41 PM				Co 228.616	0.004 mg/L	ND	mg/kg		
	3/1/2004	1:29:41 PM				Cd 228.802	0.004 mg/L	ND	mg/kg		
	3/1/2004	1:29:41 PM				Cr 267.716	0.005 mg/L	ND	mg/kg		
	3/1/2004	1:29:41 PM				Ni 231.604	0.005 mg/L	ND	mg/kg		
	3/1/2004	1:29:41 PM				Pb 220.353	0.005 mg/L	ND	mg/kg		
	3/1/2004	1:29:41 PM				Se 196.026	0.003 mg/L	ND	mg/kg		
3/1/2004	1:29:41 PM	Zn 213.857	0.004 mg/L	ND	mg/kg						

Sample ID	Date	Time	Sample ID	Initial Sample Wt	MDL	Analyte Name	Reported Conc (Calib)	Calib Units	Reported Conc (Samp)	Samp Units	QC Recovery
MP-04-190	3/1/2004	1:34:09 PM	Port A Unit 4 D	0.748	2.67	Sb 206.836	0.009 mg/L	ND	mg/kg		
	3/1/2004	1:34:09 PM				As 188.979	-0.001 mg/L	ND	mg/kg		
	3/1/2004	1:34:09 PM				Ba 313.107	0.002 mg/L	ND	mg/kg		
	3/1/2004	1:34:09 PM				Co 228.616	0.004 mg/L	ND	mg/kg		
	3/1/2004	1:34:09 PM				Cd 228.802	0.005 mg/L	ND	mg/kg		
	3/1/2004	1:34:09 PM				Cr 267.716	0.005 mg/L	ND	mg/kg		
	3/1/2004	1:34:09 PM				Ni 231.604	0.005 mg/L	ND	mg/kg		
	3/1/2004	1:34:09 PM				Pb 220.353	0.004 mg/L	ND	mg/kg		
	3/1/2004	1:34:09 PM				Se 196.026	0.008 mg/L	ND	mg/kg		
3/1/2004	1:34:09 PM	Zn 213.857	0.004 mg/L	ND	mg/kg						
MP-04-191	3/1/2004	1:38:39 PM	Port B Unit 4	0.788	2.54	Sb 206.836	0.008 mg/L	ND	mg/kg		
	3/1/2004	1:38:39 PM				As 188.979	0 mg/L	ND	mg/kg		
	3/1/2004	1:38:39 PM				Ba 313.107	0.001 mg/L	ND	mg/kg		
	3/1/2004	1:38:39 PM				Co 228.616	0.004 mg/L	ND	mg/kg		
	3/1/2004	1:38:39 PM				Cd 228.802	0.005 mg/L	ND	mg/kg		
	3/1/2004	1:38:39 PM				Cr 267.716	0.005 mg/L	ND	mg/kg		
	3/1/2004	1:38:39 PM				Ni 231.604	0.005 mg/L	ND	mg/kg		
	3/1/2004	1:38:39 PM				Pb 220.353	0.004 mg/L	ND	mg/kg		
	3/1/2004	1:38:39 PM				Se 196.026	0.013 mg/L	ND	mg/kg		
3/1/2004	1:38:39 PM	Zn 213.857	0.006 mg/L	ND	mg/kg						
MP-04-192	3/1/2004	1:43:08 PM	Port B Unit 4 D	0.623	3.21	Sb 206.836	0.009 mg/L	ND	mg/kg		
	3/1/2004	1:43:08 PM				As 188.979	0 mg/L	ND	mg/kg		
	3/1/2004	1:43:08 PM				Ba 313.107	0.001 mg/L	ND	mg/kg		
	3/1/2004	1:43:08 PM				Co 228.616	0.004 mg/L	ND	mg/kg		
	3/1/2004	1:43:08 PM				Cd 228.802	0.005 mg/L	ND	mg/kg		
	3/1/2004	1:43:08 PM				Cr 267.716	0.005 mg/L	ND	mg/kg		
	3/1/2004	1:43:08 PM				Ni 231.604	0.005 mg/L	ND	mg/kg		
	3/1/2004	1:43:08 PM				Pb 220.353	0.004 mg/L	ND	mg/kg		
	3/1/2004	1:43:08 PM				Se 196.026	0.014 mg/L	ND	mg/kg		
3/1/2004	1:43:08 PM	Zn 213.857	0.005 mg/L	ND	mg/kg						
MP-04-193	3/1/2004	1:47:37 PM	Combined Eff	0.615	3.25	Sb 206.836	0.005 mg/L	ND	mg/kg		
	3/1/2004	1:47:37 PM				As 188.979	-0.009 mg/L	ND	mg/kg		
	3/1/2004	1:47:37 PM				Ba 313.107	0.002 mg/L	ND	mg/kg		
	3/1/2004	1:47:37 PM				Co 228.616	0.003 mg/L	ND	mg/kg		
	3/1/2004	1:47:37 PM				Cd 228.802	0.005 mg/L	ND	mg/kg		
	3/1/2004	1:47:37 PM				Cr 267.716	0.004 mg/L	ND	mg/kg		
	3/1/2004	1:47:37 PM				Ni 231.604	0.004 mg/L	ND	mg/kg		
	3/1/2004	1:47:37 PM				Pb 220.353	-0.001 mg/L	ND	mg/kg		
	3/1/2004	1:47:37 PM				Se 196.026	0.011 mg/L	ND	mg/kg		
3/1/2004	1:47:37 PM	Zn 213.857	0.002 mg/L	ND	mg/kg						
MP-04-193 MS	3/1/2004	1:52:07 PM	Combined Eff	3.25	Sb 206.836	0.909 mg/L	73.88 mg/kg	91%			
	3/1/2004	1:52:07 PM			As 188.979	0.895 mg/L	72.73 mg/kg	90%			
	3/1/2004	1:52:07 PM			Ba 313.107	0.956 mg/L	77.74 mg/kg	96%			
	3/1/2004	1:52:07 PM			Co 228.616	0.942 mg/L	76.61 mg/kg	94%			
	3/1/2004	1:52:07 PM			Cd 228.802	0.924 mg/L	75.1 mg/kg	92%			
	3/1/2004	1:52:07 PM			Cr 267.716	0.966 mg/L	78.51 mg/kg	97%			
	3/1/2004	1:52:07 PM			Ni 231.604	1.002 mg/L	81.46 mg/kg	100%			
	3/1/2004	1:52:07 PM			Pb 220.353	1.014 mg/L	82.41 mg/kg	101%			
	3/1/2004	1:52:07 PM			Se 196.026	0.796 mg/L	64.73 mg/kg	80%			
3/1/2004	1:52:07 PM	Zn 213.857	1.326 mg/L	107.8 mg/kg	133%						
MP-04-182	3/1/2004	1:56:37 PM	Field Blk Dup	0.72	2.78	Sb 206.836	0.011 mg/L	ND	mg/kg		
	3/1/2004	1:56:37 PM				As 188.979	0.003 mg/L	ND	mg/kg		
	3/1/2004	1:56:37 PM				Ba 313.107	0.001 mg/L	ND	mg/kg		
	3/1/2004	1:56:37 PM				Co 228.616	0.004 mg/L	ND	mg/kg		
	3/1/2004	1:56:37 PM				Cd 228.802	0.004 mg/L	ND	mg/kg		
	3/1/2004	1:56:37 PM				Cr 267.716	0.005 mg/L	ND	mg/kg		
	3/1/2004	1:56:37 PM				Ni 231.604	0.006 mg/L	ND	mg/kg		
	3/1/2004	1:56:37 PM				Pb 220.353	0.007 mg/L	ND	mg/kg		
	3/1/2004	1:56:37 PM				Se 196.026	0.006 mg/L	ND	mg/kg		
3/1/2004	1:56:37 PM	Zn 213.857	0.005 mg/L	ND	mg/kg						

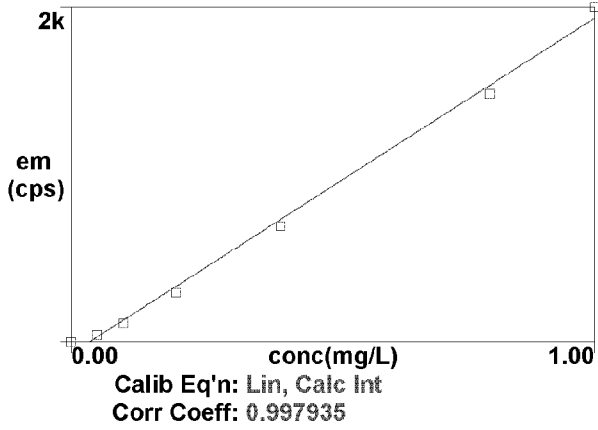
Sample ID	Date	Time	Sample ID	Initial Sample Wt	MDL	Analyte Name	Reported Conc (Calib)	Calib Units	Reported Conc (Samp)	Samp Units	QC Recovery
MP-04-197	3/1/2004	2:01:00 PM	100 ppm Stanc	0.706	2.83	Sb 206.836	1.254 mg/L		88.82 mg/kg		89%
	3/1/2004	2:01:00 PM				As 188.979	1.229 mg/L		87.05 mg/kg		87%
	3/1/2004	2:01:00 PM				Ba 313.107	1.254 mg/L		88.83 mg/kg		89%
	3/1/2004	2:01:00 PM				Co 228.616	1.274 mg/L		90.21 mg/kg		90%
	3/1/2004	2:01:00 PM				Cd 228.802	1.254 mg/L		88.83 mg/kg		89%
	3/1/2004	2:01:00 PM				Cr 267.716	1.286 mg/L		91.09 mg/kg		91%
	3/1/2004	2:01:00 PM				Ni 231.604	1.326 mg/L		93.91 mg/kg		94%
	3/1/2004	2:01:00 PM				Pb 220.353	1.301 mg/L		92.13 mg/kg		92%
	3/1/2004	2:01:00 PM				Se 196.026	1.219 mg/L		86.31 mg/kg		86%
3/1/2004	2:01:00 PM	Zn 213.857	1.429 mg/L		101.2 mg/kg		101%				
MP-04-194	3/1/2004	2:05:31 PM	Combined Eff I	0.801	2.50	Sb 206.836	0.012 mg/L		ND		
	3/1/2004	2:05:31 PM				As 188.979	0.007 mg/L		ND		
	3/1/2004	2:05:31 PM				Ba 313.107	0.002 mg/L		ND		
	3/1/2004	2:05:31 PM				Co 228.616	0.004 mg/L		ND		
	3/1/2004	2:05:31 PM				Cd 228.802	0.005 mg/L		ND		
	3/1/2004	2:05:31 PM				Cr 267.716	0.005 mg/L		ND		
	3/1/2004	2:05:31 PM				Ni 231.604	0.006 mg/L		ND		
	3/1/2004	2:05:31 PM				Pb 220.353	0.005 mg/L		ND		
	3/1/2004	2:05:31 PM				Se 196.026	0.01 mg/L		ND		
3/1/2004	2:05:31 PM	Zn 213.857	0.005 mg/L		ND						
0.8ppm	3/1/2004	2:09:56 PM				Sb 206.836	0.797 mg/L		ND		99.57
	3/1/2004	2:09:56 PM				As 188.979	0.797 mg/L		ND		99.58
	3/1/2004	2:09:56 PM				Ba 313.107	0.834 mg/L		ND		104.19
	3/1/2004	2:09:56 PM				Co 228.616	0.821 mg/L		ND		102.61
	3/1/2004	2:09:56 PM				Cd 228.802	0.82 mg/L		ND		102.45
	3/1/2004	2:09:56 PM				Cr 267.716	0.822 mg/L		ND		102.71
	3/1/2004	2:09:56 PM				Ni 231.604	0.819 mg/L		ND		102.41
	3/1/2004	2:09:56 PM				Pb 220.353	0.824 mg/L		ND		102.96
	3/1/2004	2:09:56 PM				Se 196.026	0.796 mg/L		ND		99.54
3/1/2004	2:09:56 PM	Zn 213.857	0.821 mg/L		ND		102.64				
MP-04-196	3/1/2004	2:14:23 PM	Lab Blk Dup	0.691	2.89	Sb 206.836	0.007 mg/L		ND		
	3/1/2004	2:14:23 PM				As 188.979	0 mg/L		ND		
	3/1/2004	2:14:23 PM				Ba 313.107	0.001 mg/L		ND		
	3/1/2004	2:14:23 PM				Co 228.616	0.004 mg/L		ND		
	3/1/2004	2:14:23 PM				Cd 228.802	0.004 mg/L		ND		
	3/1/2004	2:14:23 PM				Cr 267.716	0.005 mg/L		ND		
	3/1/2004	2:14:23 PM				Ni 231.604	0.006 mg/L		ND		
	3/1/2004	2:14:23 PM				Pb 220.353	0.003 mg/L		ND		
	3/1/2004	2:14:23 PM				Se 196.026	0.008 mg/L		ND		
3/1/2004	2:14:23 PM	Zn 213.857	0.005 mg/L		ND						
MP-04-198	3/1/2004	2:18:48 PM	100 ppm Stanc	0.641	3.12	Sb 206.836	1.163 mg/L		90.73 mg/kg		91%
	3/1/2004	2:18:48 PM				As 188.979	1.142 mg/L		89.05 mg/kg		89%
	3/1/2004	2:18:48 PM				Ba 313.107	1.176 mg/L		91.71 mg/kg		92%
	3/1/2004	2:18:48 PM				Co 228.616	1.185 mg/L		92.42 mg/kg		92%
	3/1/2004	2:18:48 PM				Cd 228.802	1.169 mg/L		91.17 mg/kg		91%
	3/1/2004	2:18:48 PM				Cr 267.716	1.199 mg/L		93.5 mg/kg		94%
	3/1/2004	2:18:48 PM				Ni 231.604	1.239 mg/L		96.61 mg/kg		97%
	3/1/2004	2:18:48 PM				Pb 220.353	1.206 mg/L		94.07 mg/kg		94%
	3/1/2004	2:18:48 PM				Se 196.026	1.133 mg/L		88.39 mg/kg		88%
3/1/2004	2:18:48 PM	Zn 213.857	1.331 mg/L		103.8 mg/kg		104%				
0.8ppm	3/1/2004	2:23:20 PM				Sb 206.836	0.791 mg/L		0.791 mg/L		98.89
	3/1/2004	2:23:20 PM				As 188.979	0.784 mg/L		0.784 mg/L		98.03
	3/1/2004	2:23:20 PM				Ba 313.107	0.817 mg/L		0.817 mg/L		102.17
	3/1/2004	2:23:20 PM				Co 228.616	0.808 mg/L		0.808 mg/L		101.04
	3/1/2004	2:23:20 PM				Cd 228.802	0.81 mg/L		0.81 mg/L		101.23
	3/1/2004	2:23:20 PM				Cr 267.716	0.812 mg/L		0.812 mg/L		101.49
	3/1/2004	2:23:20 PM				Ni 231.604	0.81 mg/L		0.81 mg/L		101.27
	3/1/2004	2:23:20 PM				Pb 220.353	0.809 mg/L		0.809 mg/L		101.07
	3/1/2004	2:23:20 PM				Se 196.026	0.782 mg/L		0.782 mg/L		97.75
3/1/2004	2:23:20 PM	Zn 213.857	0.81 mg/L		0.81 mg/L		101.22				

Calib

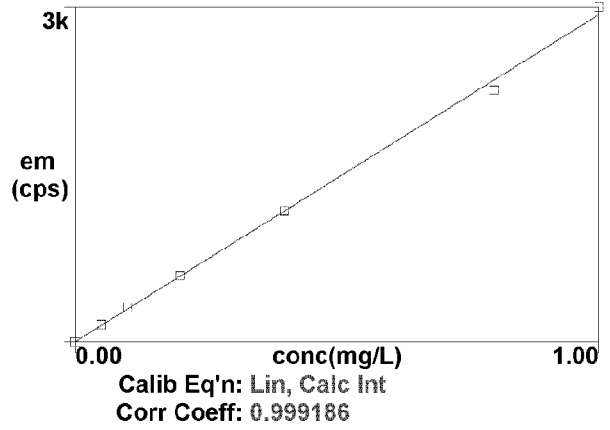
Method: WWTP Scan

Result: CG WWTP Carbon Study Event 2 E04-0126 Non-Digest

Sb 206.836

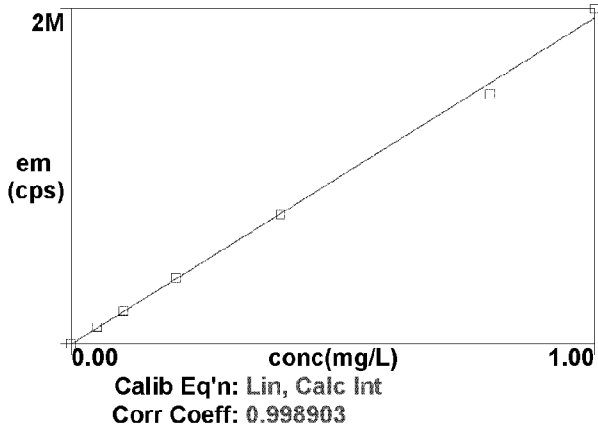


As 188.979



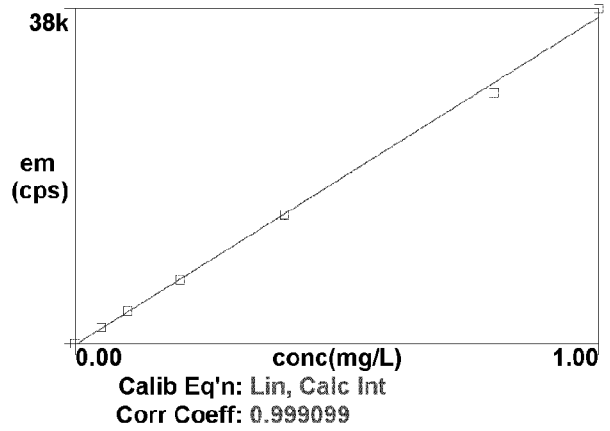
1

Be 313.107



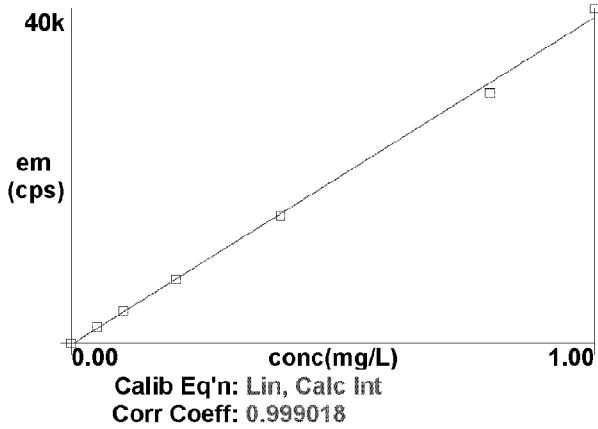
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Co 228.616



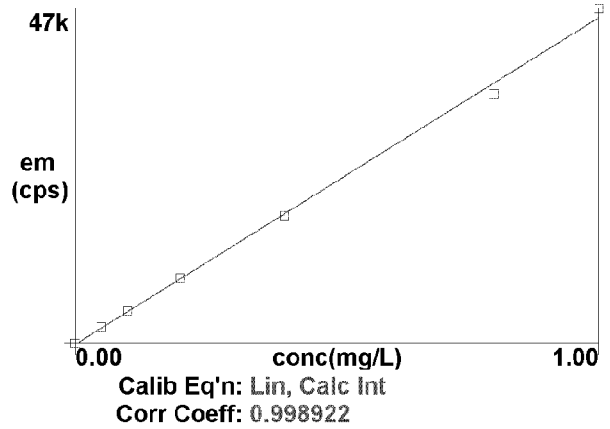
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Cd 228.802



4

Cr 267.716



5

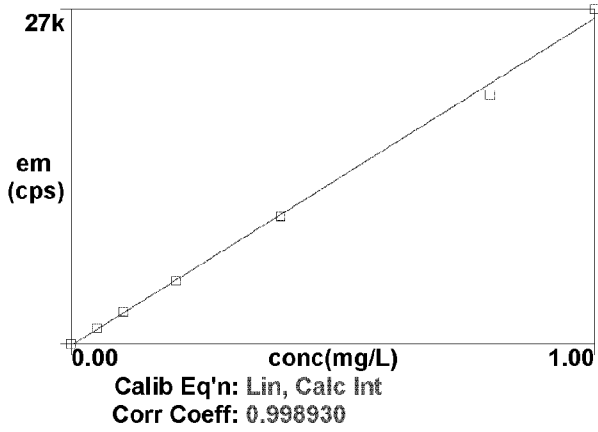
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Calib

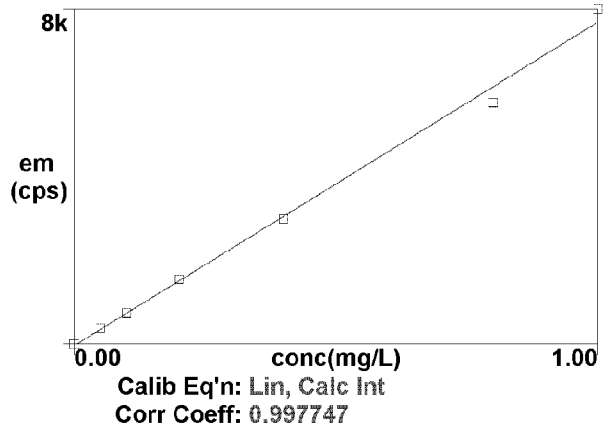
Method: WWTP Scan

Result: CG WWTP Carbon Study Event 2 E04-0126 Non-Digest

Ni 231.604



Pb 220.353

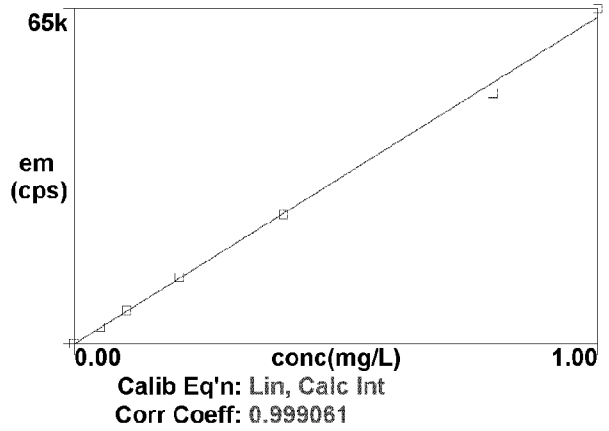
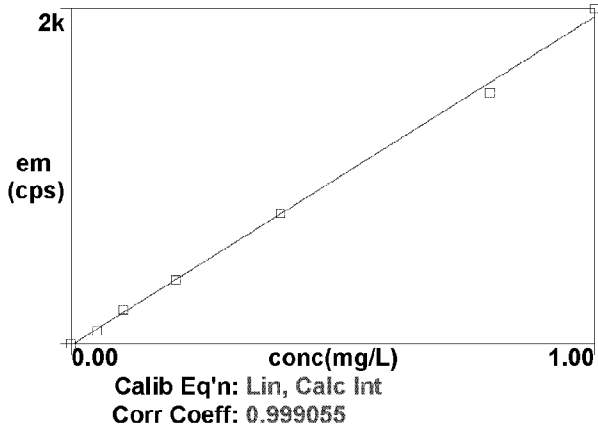


7

8

Se 196.026

Zn 213.857



9

10

Sample ID	Date	Time	Concentration	Analyte Name	Reported Conc (Calib)	Calib Units	QC Recovery
0.8ppm	3/1/2004	2:31:38 PM	100%	Sb 206.836	0.744	mg/L	93.04
	3/1/2004	2:31:38 PM		As 188.979	0.743	mg/L	92.87
	3/1/2004	2:31:38 PM		Be 313.107	0.779	mg/L	97.33
	3/1/2004	2:31:38 PM		Co 228.616	0.773	mg/L	96.64
	3/1/2004	2:31:38 PM		Cd 228.802	0.774	mg/L	96.69
	3/1/2004	2:31:38 PM		Cr 267.716	0.775	mg/L	96.82
	3/1/2004	2:31:38 PM		Ni 231.604	0.774	mg/L	96.73
	3/1/2004	2:31:38 PM		Pb 220.353	0.772	mg/L	96.48
	3/1/2004	2:31:38 PM		Se 196.026	0.742	mg/L	92.81
	3/1/2004	2:31:38 PM		Zn 213.857	0.775	mg/L	96.91
Field Blank	3/1/2004	2:36:08 PM	100%	Sb 206.836	ND	mg/L	
	3/1/2004	2:36:08 PM		As 188.979	ND	mg/L	
	3/1/2004	2:36:08 PM		Be 313.107	ND	mg/L	
	3/1/2004	2:36:08 PM		Co 228.616	ND	mg/L	
	3/1/2004	2:36:08 PM		Cd 228.802	ND	mg/L	
	3/1/2004	2:36:08 PM		Cr 267.716	ND	mg/L	
	3/1/2004	2:36:08 PM		Ni 231.604	ND	mg/L	
	3/1/2004	2:36:08 PM		Pb 220.353	ND	mg/L	
	3/1/2004	2:36:08 PM		Se 196.026	ND	mg/L	
	3/1/2004	2:36:08 PM		Zn 213.857	ND	mg/L	
Influent 1/2	3/1/2004	2:40:36 PM	100%	Sb 206.836	ND	mg/L	
	3/1/2004	2:40:36 PM		As 188.979	ND	mg/L	
	3/1/2004	2:40:36 PM		Be 313.107	ND	mg/L	
	3/1/2004	2:40:36 PM		Co 228.616	ND	mg/L	
	3/1/2004	2:40:36 PM		Cd 228.802	ND	mg/L	
	3/1/2004	2:40:36 PM		Cr 267.716	ND	mg/L	
	3/1/2004	2:40:36 PM		Ni 231.604	ND	mg/L	
	3/1/2004	2:40:36 PM		Pb 220.353	ND	mg/L	
	3/1/2004	2:40:36 PM		Se 196.026	ND	mg/L	
	3/1/2004	2:40:36 PM		Zn 213.857	ND	mg/L	
Port 1A	3/1/2004	2:45:01 PM	100%	Sb 206.836	ND	mg/L	
	3/1/2004	2:45:01 PM		As 188.979	ND	mg/L	
	3/1/2004	2:45:01 PM		Be 313.107	ND	mg/L	
	3/1/2004	2:45:01 PM		Co 228.616	ND	mg/L	
	3/1/2004	2:45:01 PM		Cd 228.802	ND	mg/L	
	3/1/2004	2:45:01 PM		Cr 267.716	ND	mg/L	
	3/1/2004	2:45:01 PM		Ni 231.604	ND	mg/L	
	3/1/2004	2:45:01 PM		Pb 220.353	ND	mg/L	
	3/1/2004	2:45:01 PM		Se 196.026	ND	mg/L	
	3/1/2004	2:45:01 PM		Zn 213.857	ND	mg/L	
Port 1B	3/1/2004	2:49:26 PM	100%	Sb 206.836	ND	mg/L	
	3/1/2004	2:49:26 PM		As 188.979	ND	mg/L	
	3/1/2004	2:49:26 PM		Be 313.107	ND	mg/L	
	3/1/2004	2:49:26 PM		Co 228.616	ND	mg/L	
	3/1/2004	2:49:26 PM		Cd 228.802	ND	mg/L	
	3/1/2004	2:49:26 PM		Cr 267.716	ND	mg/L	
	3/1/2004	2:49:26 PM		Ni 231.604	ND	mg/L	
	3/1/2004	2:49:26 PM		Pb 220.353	ND	mg/L	
	3/1/2004	2:49:26 PM		Se 196.026	ND	mg/L	
	3/1/2004	2:49:26 PM		Zn 213.857	ND	mg/L	

Sample ID	Date	Time	Concentration	Analyte Name	Reported Conc (Calib)	Calib Units	QC Recovery
Port 4A	3/1/2004	2:53:51 PM	100%	Sb 206.836	ND	mg/L	
	3/1/2004	2:53:51 PM		As 188.979	ND	mg/L	
	3/1/2004	2:53:51 PM		Be 313.107	ND	mg/L	
	3/1/2004	2:53:51 PM		Co 228.616	ND	mg/L	
	3/1/2004	2:53:51 PM		Cd 228.802	ND	mg/L	
	3/1/2004	2:53:51 PM		Cr 267.716	ND	mg/L	
	3/1/2004	2:53:51 PM		Ni 231.604	ND	mg/L	
	3/1/2004	2:53:51 PM		Pb 220.353	ND	mg/L	
	3/1/2004	2:53:51 PM		Se 196.026	ND	mg/L	
Port 4B	3/1/2004	2:58:17 PM	100%	Sb 206.836	ND	mg/L	
	3/1/2004	2:58:17 PM		As 188.979	ND	mg/L	
	3/1/2004	2:58:17 PM		Be 313.107	ND	mg/L	
	3/1/2004	2:58:17 PM		Co 228.616	ND	mg/L	
	3/1/2004	2:58:17 PM		Cd 228.802	ND	mg/L	
	3/1/2004	2:58:17 PM		Cr 267.716	ND	mg/L	
	3/1/2004	2:58:17 PM		Ni 231.604	ND	mg/L	
	3/1/2004	2:58:17 PM		Pb 220.353	ND	mg/L	
	3/1/2004	2:58:17 PM		Se 196.026	ND	mg/L	
Combined Eff 1/2	3/1/2004	3:02:44 PM	100%	Sb 206.836	ND	mg/L	
	3/1/2004	3:02:44 PM		As 188.979	ND	mg/L	
	3/1/2004	3:02:44 PM		Be 313.107	ND	mg/L	
	3/1/2004	3:02:44 PM		Co 228.616	ND	mg/L	
	3/1/2004	3:02:44 PM		Cd 228.802	ND	mg/L	
	3/1/2004	3:02:44 PM		Cr 267.716	ND	mg/L	
	3/1/2004	3:02:44 PM		Ni 231.604	ND	mg/L	
	3/1/2004	3:02:44 PM		Pb 220.353	ND	mg/L	
	3/1/2004	3:02:44 PM		Se 196.026	ND	mg/L	
	3/1/2004	3:02:44 PM		Zn 213.857	ND	mg/L	
	3/1/2004	3:07:11 PM		Sb 206.836	1.055	mg/L	106%
	3/1/2004	3:07:11 PM		As 188.979	1.131	mg/L	113%
	3/1/2004	3:07:11 PM		Be 313.107	1.133	mg/L	113%
	3/1/2004	3:07:11 PM		Co 228.616	1.008	mg/L	101%
	3/1/2004	3:07:11 PM		Cd 228.802	1.05	mg/L	105%
	3/1/2004	3:07:11 PM		Cr 267.716	1.036	mg/L	104%
	3/1/2004	3:07:11 PM		Ni 231.604	1.071	mg/L	107%
3/1/2004	3:07:11 PM	Pb 220.353	1.041	mg/L	104%		
3/1/2004	3:07:11 PM	Se 196.026	1.193	mg/L	119%		
3/1/2004	3:07:11 PM	Zn 213.857	1.542	mg/L	154%		
Lab Blank	3/1/2004	3:11:45 PM	100%	Sb 206.836	ND	mg/L	
	3/1/2004	3:11:45 PM		As 188.979	ND	mg/L	
	3/1/2004	3:11:45 PM		Be 313.107	ND	mg/L	
	3/1/2004	3:11:45 PM		Co 228.616	ND	mg/L	
	3/1/2004	3:11:45 PM		Cd 228.802	ND	mg/L	
	3/1/2004	3:11:45 PM		Cr 267.716	ND	mg/L	
	3/1/2004	3:11:45 PM		Ni 231.604	ND	mg/L	
	3/1/2004	3:11:45 PM		Pb 220.353	ND	mg/L	
	3/1/2004	3:11:45 PM		Se 196.026	ND	mg/L	
0.8ppm	3/1/2004	3:16:23 PM	100%	Sb 206.836	0.696	mg/L	87.04
	3/1/2004	3:16:23 PM		As 188.979	0.691	mg/L	86.38
	3/1/2004	3:16:23 PM		Be 313.107	0.715	mg/L	89.39
	3/1/2004	3:16:23 PM		Co 228.616	0.702	mg/L	87.80
	3/1/2004	3:16:23 PM		Cd 228.802	0.704	mg/L	87.97
	3/1/2004	3:16:23 PM		Cr 267.716	0.701	mg/L	87.60
	3/1/2004	3:16:23 PM		Ni 231.604	0.702	mg/L	87.74
	3/1/2004	3:16:23 PM		Pb 220.353	0.704	mg/L	87.98
	3/1/2004	3:16:23 PM		Se 196.026	0.694	mg/L	86.77
3/1/2004	3:16:23 PM	Zn 213.857	0.705	mg/L	88.14		