Columbia Analytical Services™ 1 Mustard Street, Suite 250, Rochester, NY 14609-6925 | 585.288.5380 | www.caslab.com

December 22, 2009

Mr. Frank Hagar
Northgate Environmental
1100 Quail Street
Suite 102
Newport Beach, CA 92660

Re: Tronox LLC Henderson #2027.001
Service Request #R0906477

Dear Mr. Hagar:

Enclosed is the analytical data report for the above referenced facility. A total of two samples were received by our laboratory on November 12, 2009.

Any problems encountered with this project are addressed in a case narrative section which is presented later in this report.

This report consists of two (2) packages: the sample data package and the sample data summary package. All data presented in this package has been reviewed prior to report submission. If you should have any questions or concerns, please contact me at (585) 288-5380.

Thank you for your continued use of our services.

Sincerely,
COLUMBIA ANALYTICAL SERVICES

Janice M. Jaeger
Project Chemist

enc.

cc: Ms. Cindy Arnold
Northgate Environmental
2501 Geigel Avenue
Orlando, FL 32806

This report contains a total of 36 pages.

CASE NARRATIVE

COMPANY: Northgate Environmental
Tronox LLC Henderson Project #2027.001
SERVICE REQUEST #: R0906477

Northgate samples were collected on 11/11/09 and received at CAS on 11/12/09 in good condition. Columbia Analytical Services' (CAS) reporting limit has been expressed as the Method Reporting Limit (MRL) rather than the Practical Quantitation Limit (PQL). At the client's request, all results have been reported to the Method Detection Limit (MDL) where an MDL is performed on that parameter. The MDL reported for the Alkalinity Carbonate, Alkalinity Carbonate and Alkalinity Hydroxide is the Alkalinity MDL. The software used for the 1030E calculations is Rockware AqQA. All data has been checked and verified.

INORGANICS

One water sample was analyzed for a site specific list of inorganics. Please see attached data pages for method numbers.

Site specific QC was not requested for these samples. All Blank spike recoveries were within limits except Nitrite on the 10/31/09 LCS was outside limits low. EB103009-GWA4 was reanalyzed outside the recommended holding time of 48 hours under a compliant LCS. Both sets of data have been reported. All outlying QC has been flagged with an "*".

The Laboratory blanks associated with these analyses were free of contamination except the 11/20/09 blank had a low level hit for Alkalinity and Bicarbonate alkalinity. All affected data has been flagged with a "B".

All samples were analyzed within holding time.

No other analytical or QC problems were encountered.

VOLATILE ORGANICS

Two water samples were analyzed for a site specific list of Volatiles by Methods 5030/8260B from SW-846.

All the initial and continuing calibration criteria were met for all analytes.

All internal standard areas were within QC limits.

All surrogate standard recoveries were within Tronox limits.

Site specific QC was not requested for these samples. All Reference spike recoveries were within Tronox limits.

The Laboratory blanks associated with these samples were free of contamination except for Hexachlorobutadiene on the 11/19/09 blank. No data was affected.

All samples were analyzed within required holding times.

No other analytical or QC problems were encountered.

SEMIVOLATILE ORGANICS

One water sample was analyzed for a site specific list of Semivolatiles by method 8270C low level from SW-846.

All the initial and continuing calibration criteria were met for all analytes.

All internal standard areas were within QC limits.

All surrogate standard recoveries were within Tronox limits.

Site specific QC was not requested for these samples. All Blank spike/Blank spike duplicate recoveries were within Tronox limits except Pyridine and 1,4-Dioxane were outside limits on the 11/17/09 LCS/LCSD. The outliers were within 10-150%. All RPD's were within limits.

The Laboratory Blanks associated with these analyses were free of contamination.

All samples were extracted and analyzed within holding times.

No other analytical or QC problems were encountered.

PESTICIDES

One water sample was analyzed for a site specific list of Pesticides by method 8081 from SW-846.

All the initial and continuing calibration criteria were met for all analytes.

All surrogate standard recoveries were within Tronox limits.

Site specific QC was not requested for these samples. All Blank spike/Blank spike duplicate recoveries were within limits except Endrin aldehyde and has been flagged with an "*". The outliers were not within 30-150%. All data is possibly biased low for Endrin aldhyde. All RPD's were within limits.

The Laboratory Blanks associated with these analyses were free of contamination.

All samples were extracted and analyzed within required holding times.

No other analytical or QC problems were encountered.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the details conditioned above. Release of the data contained in this hard copy data package have by authorized by the Laboratory Manager or his designee, as verified by the following signature.

CAS ASP/CLP Batching Form/Login Sheet

Client Proj #:	2027.001	Batch Complete:	Yes	Date Revised:	
Submission:	R0906477	Diskette Requested:	Yes	Date Due:	12/3/09
Client:	Northgate Environmental	Date:	11/12/09	Protocol:	SW846
Client Rep:	JJAEGER	Custody Seal: Present/Absent:		Shipping No.:	
Project:	Tronox LLC Henderson	Chain of Custody: Present/Absent:		SDG #:	M-122B

CAS Job #	Client/EPA ID	Matrix	Requested Parameters	Date Sampled	Date Received	pH (Solids)	% Solids	Remarks Sample Condition
R0906477-001	M-122B	Water	8260B, 120.1, SM 2320 B, 6020, 8081A, 7470A, 9056, 9040B, 353.2, 9012A, 314.0, 218.6, SM 2540 C, 8270C, SM 5540 C, 365.1, 350.1, 300.1, SM 2540 D, 9060, 6010B LL, SM 1030 E	11/11/09	11/12/09			
R0906477-002	M-122BDISS	Water	6010B, 6020, 7470A	11/11/09	11/12/09			
R0906477-003	TB111109-GW1	Water	8260B	11/11/09	11/12/09			

10004

Folder Comments:

Columbia Analytical Services™

REPORT QUALIFIERS

U	Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.
J	Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Arclors).
B	Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.
E	Inorganics- Concentration is estimated due to the serial dilution was outside control limits.
E	Organics- Concentration has exceeded the calibration range for that specific analysis.
D	Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.
*	Indicates that a quality control parameter has exceeded laboratory limits.
#	Spike was diluted out.
+	Correlation coefficient for MSA is <0.995.
N	Inorganics- Matrix spike recovery was outside laboratory limits.
N	Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.
S	Concentration has been determined using Method of Standard Additions (MSA).
W	Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.
P	Pesticide/Aroclors: Concentration >40% (25% for CLP) difference between the two GC columns.
C	Confirmed by GC/MS
Q	DoD reports: indicates a pesticide/Aroclor is not confirmed (≥100% Difference between two GC columns).
X	See Case Narrative for discussion.

ACCREDITED IN ACCORDANCE WITH nelac

CAS/Rochester Lab ID # for State Certifications[1]

NELAP Accredited
Delaware Accredited
Connecticut ID # PH0556
Florida ID # E87674
Illinois ID #200047
Maine ID #NY0032
Nebraska Accredited
Navy Facilities Engineering Service Center Approved
Nevada ID # NY-00032
New Jersey ID # NY004
New York ID # 10145
New Hampshire ID # 294100 A/B
Pennsylvania ID# 68-786
Rhode Island ID # 158
West Virginia ID # 292

[1] Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable, except as noted in the laboratory case narrative provided. For a specific list of accredited analytes, refer to the certifications section at www.caslab.com.

northgate
environmental management, Inc.

1100 Quail Street, Suite 102, Newport Beach, CA 92660
(949) 260-9293

CHAIN-OF-CUSTODY / Analytical Request Document

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COC No. 2027.001.01143
Page: 1 of 2
Cooler # ____ of ____

Collection Area: III

Required Ship to Lab:		Required Project Information:		Required Invoice Information:							
Lab Name:	COLUMBIA ANALYTICAL SERVICES, INC.	Site ID #:	TRONOX LLC. HENDERSON	Send Invoice to:	Susan Crowley Tronox LLC	TAT: Standard 30 day	X	Rush		Mark One	
Address:	1 Mustard Street, Suite 250	Project #	2027.001	Address:	PO Box 55	If Rush, Date due					
Rochester, NY 14609		Site Address	560 W. Lake Mead Drive	City/State	Henderson, NV 89009	Phone #:	(949)260-9293	QC level Required: Standard		Special	EPA Stage 4 / Mark one
Lab PM:	Janice Jaeger	City	Henderson / State: NV	Reimbursement project?	X	Non-reimbursement project?		Mark one	NJ Reduced Deliverable Package?		
Phone/Fax:	(585)288-5380	Site PM Name	Derrick Willis	Send EDD to	Frank Hagar Northgate Environmental Management, Inc frank.hagar@ngem.com	MA MCP Cert?		CT RCP Cert?		Mark One	
Lab PM email	jjaeger@caslab.com	Phone/Fax:	949-375-7004	CC Hardcopy report to	PDF Electronic Version Only						
Applicable Lab Quote #:		Site PM Email:	derrick.willis@ngem.com	CC Hardcopy report to	see additional comments below						

Lab Project ID (lab use)

Valid Matrix Codes: MATRIX — DRINKING WATER (WP), GROUND WATER (WG), WASTE WATER (LF), FREE PRODUCT (SO), SOIL (SW), OIL (AA), WIPE (AE), AMBIENT AIR (03), EVE AIR, SOIL GAS, WATER (W), SURFACE WATER (WS), WATER QC (WQ), SLUDGE (SL), RINSEATE (WH), OTHER (OT), ANIMAL TISSUE (TA)

ITEM #	SAMPLE ID — One Character per box. (A-Z, 0-9 / ,-) Samples IDs MUST BE UNIQUE	MATRIX CODE	SAMPLE TYPE G=GRAB C=COMP	SAMPLE DATE	SAMPLE TIME	#OF CONTAINERS	FIELD FILTERED? (Y/N)	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Requested Analyses: EPA 8260B VOC	EPA 9060 TOC	EPA 8270C SVOC	EPA 8081 OCP	EPA 6010B/6020	EPA 314.0 Perchlorate	EPA 9056 Chloride	EPA 218.6 Hex Chrom	Comments/Lab Sample I.D.
1	M-122B	WG	G	11/11/09	1335	3	N				X					X								3 x 40 ml VOAs
2	M-122B	WG	G	↓	↓	2	N		X								X							2 x 40 ml VOAs
3	M-122B	WG	G			2	N	X										X						2 x 1 L Amber Glass
4	M-122B	WG	G			2	N	X											X					2 x 1 L Amber Glass
5	M-122B	WG	G			1	N			X										X				500 ml Plastic
6	M-122BDISS	WG	G			1	Y			X										X				500 ml Plastic
7	M-122B	WG	G			1	N	X													X			250 ml Plastic
8	M-122B	WG	G			1	N								X							X		250 ml Amber Glass
9	M-122B	WG	G	↓	↓	1	Y								X								X	125 ml Plastic
10	TB111109-GW1	WG	G	11/11/09	1300	2	N				X					X								2x 40ml VOAs
11	JWO																							
12																								

Additional Comments/Special Instructions:
Omit As and Se from Metals 6010/6020
All PDF reports and EDDs will be uploaded to:
Northgate Environmental Management, Inc.
FTP site address provided to labs
Notifications provided to:
cindy.arnold@ngem.com
frank.hagar@ngem.com

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Josh W Otis GES	11/11	1500	GES	11/11	1500
GEL	11/11	1645	CAS	11/12	0845

Sample Receipt Conditions

	Y / N	Y / N	Y / N	
	Y / N	Y / N	Y / N	
	Y / N	Y / N	Y / N	
	Y / N	Y / N	Y / N	
	Temp in °C	Samples on Ice?	Sample Intact?	Trip Blank?

SHIPPING METHOD (mark as appropriate): UPS COURIER FEDEX / US MAIL

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Josh W Otis
SIGNATURE of SAMPLER:
DATE Signed: 11/11/09 Time: 1430

R0906477
Northgate Environmental
Tronox LLC Henderson

northgate
environmental management, Inc.
1100 Quail Street, Suite 102, Newport Beach, CA 92660
(949) 260-9293

CHAIN-OF-CUSTODY / Analytical Request Document

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COC No. 2027.001.01142
Page: 2 of 2
Cooler # ____ of ____

Collection Area: III

Required Ship to Lab:		Required Project Information:		Required Invoice Information:			
Lab Name:	COLUMBIA ANALYTICAL SERVICES, INC.	Site ID #:	TRONOX LLC. HENDERSON	Send Invoice to:	Susan Crowley Tronox LLC	TAT: Standard 30 day	X Rush ____ Mark One
Address:	1 Mustard Street, Suite 250	Project #	2027.001	Address:	PO Box 55	If Rush, Date due	
Rochester, NY 14609		Site Address	560 W. Lake Mead Drive	City/State	Henderson, NV 89009	Phone #: (949)260-9293	QC level Required: Standard ____ Special EPA Stage 4 Mark one
Lab PM:	Janice Jaeger	City	Henderson State NV	Reimbursement project?	X Non-reimbursement project? ____ Mark one	NJ Reduced Deliverable Package?	
Phone/Fax:	(585)288-5380	Site PM Name	Derrick Willis	Send EDD to	Frank Hagar Northgate Environmental Management, Inc frank.hagar@ngem.com	MA MCP Cert? ____ CT RCP Cert? ____ Mark One	
Lab PM email	jjaeger@caslab.com	Phone/Fax:	949-375-7004	CC Hardcopy report to	PDF Electronic Version Only	Lab Project ID (lab use)	
Applicable Lab Quote #:		Site PM Email:	derrick.willis@ngem.com	CC Hardcopy report to	see additional comments below		

Valid Matrix Codes: MATRIX — DRINKING WATER WP; GROUND WATER WG; WASTE WATER WW; FREE PRODUCT FP; SOIL SO; OIL OL; WIPE WI; AMBIENT AIR AA; SVE AIR AE; SOIL GAS GS; MATRIX — WATER W; SURFACE WATER WS; WATER QC WQ; SLUDGE SL; RINSEATE WA; OTHER OT; ANIMAL TISSUE TA

ITEM #	SAMPLE ID — One Character per box. (A-Z, 0-9 / ,-) Samples IDs MUST BE UNIQUE	MATRIX CODE	SAMPLE TYPE G=GRAB C=COMP	SAMPLE DATE	SAMPLE TIME	#OF CONTAINERS	FIELD FILTERED? (Y/N)	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Requested Analyses: EPA 9012 A Cyanide	EPA 350.1/365.1	EPA 9056/SM 4500C	SM 5540C	SM 2320B Alkalinity	EPA 9045C pH	SM 2540D TSS	Comments/Lab Sample I.D.
1	M-122B	WG	G	11/11/09	1335	1	N					X				X							250 ml Plastic
2	M-122B	WG	G			1	N		X								X						250 ml Plastic
3	M-122B	WG	G			1	N	X										X					250 ml Plastic
4	M-122B	WG	G			1	N	X											X				500 ml Plastic
5	M-122B	WG	G			1	N	X												X			250 ml Plastic
6	M-122B	WG	G			1	N	X													X		125 ml Plastic
7	M-122B	WG	G			1	N	X														X	1 L Plastic
8																							
9	JWO																						
10																							
11																							
12																							

Additional Comments/Special Instructions:
Omit As and Se from Metals 6010/6020
All PDF reports and EDDs will be uploaded to:
Northgate Environmental Management, Inc.
FTP site address provided to labs
Notifications provided to:
cindy.arnold@ngem.com
frank.hagar@ngem.com

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
[signature] GBS	11/11	1500	[signature] GBS	11/11	1500
[signature] GBS	11/11	1605	[signature] CAS	11/12/09	0845

Sample Receipt Conditions			
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N
Temp in OC	Samples on Ice?	Sample intact?	Trip Blank?

SHIPPING METHOD (mark as appropriate): UPS COURIER FEDEX US MAIL

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Josh W Otis
SIGNATURE of SAMPLER: [signature]
DATE Signed 11/11/09 Time: 1430

R0906477
Northgate Environmental
Tronox LLC Henderson

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Address:	1 Mustard Street, Suite 250
	Rochester, NY 14609
Lab PM:	Janice Jaeger
Phone/Fax:	(585)288-5380
Lab PM email	jjaeger@caslab.com
Applicable Lab Quote #:	

Required Project Information:

Site ID #:	TRONOX LLC. HENDERSON
Project #	2027.001
Site Address	560 W. Lake Mead Drive
City	Henderson
State	NV
Site PM Name	Derrick Willis
Phone/Fax:	949-375-7004
Site PM Email:	derrick.willis@ngem.com

Required Invoice Information:

Send invoice to:	Susan Crowley, Tronox LLC
Address:	PO Box 55
City/State	Henderson, NV 89009
Phone #:	(949)260-9293
Reimbursement project?	X
Non-reimbursement project?	Mark one
Send EDD to	Frank Hagar Northgate Environmental Management, Inc frank.hagar@ngem.com
CC Hardcopy report to	PDF Electronic Version Only
CC Hardcopy report to	see additional comments below

TAT: Standard 30 day	X	Rush		Mark One	
If Rush, Date due					
QC level Required: Standard		Special	EPA Stage 4	Mark one	
NJ Reduced Deliverable Package?					
MA MCP Cert?		CT RCP Cert?		Mark One	

Lab Project ID (lab use)

Valid Matrix Codes: MATRIX — DRINKING WATER DW; GROUND WATER GW; WASTE WATER WW; FREE PRODUCT FP; SOIL SO; OIL OL; WIPE WI; AMBIENT AIR AA; SOIL GAS SG; WATER WA; SURFACE WATER SW; WATER QC WQ; SLUDGE SL; RINSATE RN; OTHER OT; ANIMAL TISSUE TA

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / ,-) Samples IDs MUST BE UNIQUE)	MATRIX CODE	SAMPLE TYPE G=GRAB C=COMP	SAMPLE DATE	SAMPLE TIME	#OF CONTAINERS	FIELD FILTERED? (Y/N)	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Requested Analyses: EPA 8260B VOC	EPA 9060 TOC	EPA 8270C SVOC	EPA 8081 OCP	EPA 6010B/6020	EPA 314.0 Perchlorate	EPA 9056 Chlorate	EPA 218.6 Hex Chrom	Comments/Lab Sample I.D.
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3	M-122B	WG	G			2	N	X										X						2 x 1 L Amber Glass
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5	M-122B	WG	G			1	N			X										X				500 ml Plastic
6	M-122BDISS	WG	G			1	Y			X										X				500 ml Plastic
7	M-122B	WG	G			1	N	X													X			250 ml Plastic
8	M-122B	WG	G			1	N								X							X		250 ml Amber Glass
9	M-122B	WG	G			1	Y								X								X	125 ml Plastic
10	TB111109-GW1	WG	G	11/11/09	1300	2	N				X					X								2x 40ml VOAs
11	JWO																							
12																								

Additional Comments/Special Instructions:

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frank.hagar@ngem.com

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Josh W Otis	11/11	1500	[illegible] GBS	11/11	1500
[illegible] GFX	11/11	[illegible]	Mark K Peter	11/12	0950

Sample Receipt Conditions

Temp in °C	Samples on Ice?	Sample intact?	Trip Blank?
	Y / N	Y / N	Y / N
	Y / N	Y / N	Y / N
	Y / N	Y / N	Y / N
	Y / N	Y / N	Y / N

SHIPPING METHOD: (mark as appropriate) UPS COURIER FEDEX US MAIL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Josh W Otis

SIGNATURE of SAMPLER: [signature] DATE Signed 11/11/09 Time: 1430

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Rochester, NY 14609		Site Address	560 W. Lake Mead Drive	City/State	Henderson, NV 89009	Phone #: (949)260-9293	QC level Required: Standard ____ Special EPA Stage 4 Mark one
Lab PM:	Janice Jaeger	City	Henderson State NV	Reimbursement project?	X Non-reimbursement project? ____ Mark one	NJ Reduced Deliverable Package?	
Phone/Fax:	(585)288-5380	Site PM Name	Derrick Willis	Send EDD to	Frank Hagar Northgate Environmental Management, Inc frank.hagar@ngem.com	MA MCP Cert? ____ CT RCP Cert? ____ Mark One	
Lab PM email	jjaeger@caslab.com	Phone/Fax:	949-375-7004	CC Hardcopy report to	PDF Electronic Version Only	Lab Project ID (lab use)	
Applicable Lab Quote #:		Site PM Email:	derrick.willis@ngem.com	CC Hardcopy report to	see additional comments below		

Valid Matrix Codes
MATRIX: DRINKING WATER WP; GROUND WATER WG; WASTE WATER LF; FREE PRODUCT SO; SOIL SW; OIL AA; WIPE AE; AMBIENT AIR; SOIL GAS; WATER W; SURFACE WATER WB; WATER QC WQ; SLUDGE SL; RINSEATE WH; OTHER OT; ANIMAL TISSUE TA

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9 / ,-) Samples IDs MUST BE UNIQUE	MATRIX CODE	SAMPLE TYPE G=GRAB C=COMP	SAMPLE DATE	SAMPLE TIME	#OF CONTAINERS	FIELD FILTERED? (Y/N)	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Requested Analyses: EPA 9012 A Cyanide	EPA 350.1/365.1	EPA 9056/SM 4500C	SM 5540C	SM 2320B Alkalinity	EPA 9045C pH	SM 2540D TSS	Comments/Lab Sample I.D.
1	M-122B	WG	G	11/11/09	1535	1	N					X				X							250 ml Plastic
2	M-122B	WG	G			1	N		X								X						250 ml Plastic
3	M-122B	WG	G			1	N	X										X					250 ml Plastic
4	M-122B	WG	G			1	N	X											X				500 ml Plastic
5	M-122B	WG	G			1	N	X												X			250 ml Plastc
6	M-122B	WG	G			1	N	X													X		125 ml Plastic
7	M-122B	WG	G			1	N	X														X	1 L Plastic
8																							
9																							
10																							
11																							
12																							

JWO

Additional Comments/Special Instructions:
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cindy.arnold@ngem.com
frank.hagar@ngem.com

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Josh W Otis GES	11/11	1500	Rob Gies GES	11/11	1500
Josh W Otis GES	11/11	1645	Mark R. Peterson	11/12	0450

Sample Receipt Conditions

	Temp in OC	Samples on Ice?	Sample Intact?	Trip Blank?
	Y/N	Y/N	Y/N	
	Y/N	Y/N	Y/N	
	Y/N	Y/N	Y/N	
	Y/N	Y/N	Y/N	

SHIPPING METHOD: (mark as appropriate) UPS COURIER FEDEX US MAIL

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Josh W Otis
SIGNATURE of SAMPLER: Josh W Otis
DATE Signed 11/11/09 Time: 1430

Cooler Receipt And Preservation Check Form

Project/Client Northgate Submission Number R0906477

Cooler received on 11/12 by: BD **COURIER:** CAS UPS (FEDEX) VELOCITY CLIENT

1.	Were custody seals on outside of cooler?	(YES)	NO	
2.	Were custody papers properly filled out (ink, signed, etc.)?	(YES)	NO	
3.	Did all bottles arrive in good condition (unbroken)?	(YES)	NO	
4.	Did any VOA vials have significant* air bubbles?	YES	NO	(N/A)
5.	Were **Ice** or **Ice packs** present?	(YES)	NO	
6.	Where did the bottles originate?		CAS/ROC,	(CLIENT)
7.	Temperature of cooler(s) upon receipt:	4.0		
	Is the temperature within 0° - 6° C?:	(Yes)	Yes	Yes	Yes	Yes
	If No, Explain Below	No	No	No	No	No

Date/Time Temperatures Taken: 11/12 @ 0850

Thermometer ID: 161 / IR GUN#2 / (IR GUN#3) Reading From: (Temp Blank) / Sample Bottle

If out of Temperature, note packing/ice condition, Client Approval to Run Samples: _____

PC Secondary Review: JHW 11/12/09

Cooler Breakdown: Date: 11/12/09 by: MRP

1.	Were all bottle labels complete (*i.e.* analysis, preservation, etc.)?	(YES)	NO	
2.	Did all bottle labels and tags agree with custody papers?	(YES)	NO	
3.	Were correct containers used for the tests indicated?	(YES)	NO	
4.	Air Samples: Cassettes / Tubes Intact	Canisters Pressurized	Tedlar® Bags Inflated	(N/A)

Explain any discrepancies: _____

pH	Reagent	YES	NO	Lot Received	Exp	Sample ID	Vol. Added	Lot Added	Final pH
≥12	NaOH								
≤2	HNO_3								
≤2	H_2SO_4								
Residual Chlorine (-)	For TCN and Phenol			If present, contact PM to add ascorbic acid					
	$Na_2S_2O_3$	-	-						
	Zn Aceta	-	-						
	HCl	*	*						

*Not to be tested before analysis – pH tested and recorded by VOAs or GenChem on a separate worksheet

Yes = All samples OK

No = Samples were preserved at lab as listed

PM OK to Adjust: _____

Bottle lot numbers: _____

Other Comments:

PC Secondary Review: JHW 11/16/09 *significant air bubbles are greater than 5-6 mm

Cooler Receipt And Preservation Check Form

Project/Client Henderson Waters Submission Number R0906477.

Cooler received on 11/12/09 by: MRP COURIER: CAS UPS (FEDEX) VELOCITY CLIENT

1.	Were custody seals on outside of cooler?	(YES)	NO			
2.	Were custody papers properly filled out (ink, signed, etc.)?	(YES)	NO			
3.	Did all bottles arrive in good condition (unbroken)?	(YES)	NO			
4.	Did any VOA vials have significant* air bubbles?	YES	(NO)	N/A		
5.	Were ~~Ice~~ or **Ice packs** present?	(YES)	NO			
6.	Where did the bottles originate?	CAS/ROC, CLIENT				
7.	Temperature of cooler(s) upon receipt:	4.8	5.3°			
	Is the temperature within 0° - 6° C?:	(Yes)	(Yes)	Yes	Yes	Yes
	If No, Explain Below	No	No	No	No	No

Date/Time Temperatures Taken: 11/12/09 @ 10:00

Thermometer ID: 161 / IR GUN#2 / (IR GUN#3) Reading From: (Temp Blank) / Sample Bottle

If out of Temperature, note packing/ice condition, Client Approval to Run Samples: _____

PC Secondary Review: JMS 11/12/09

Cooler Breakdown: Date: 11/12/09 by: MRP

1.	Were all bottle labels complete (*i.e.* analysis, preservation, etc.)?	(YES)	NO
2.	Did all bottle labels and tags agree with custody papers?	(YES)	NO
3.	Were correct containers used for the tests indicated?	(YES)	NO
4.	Air Samples: Cassettes / Tubes Intact Canisters Pressurized Tedlar® Bags Inflated		(N/A)

Explain any discrepancies: _____

pH	Reagent	YES	NO	Lot Received	Exp	Sample ID	Vol. Added	Lot Added	Final pH
≥12	NaOH	✓		WC920351I	10/10				
≤2	HNO_3	✓		BD82698C	11/10				
≤2	H_2SO_4	✓		WC920648	10/10				
Residual Chlorine (-)	For TCN and Phenol			If present, contact PM to add ascorbic acid					
	$Na_2S_2O_3$	-	-						
	Zn Aceta	-	-						
	HCl	*	*						

*Not to be tested before analysis – pH tested and recorded by VOAs or GenChem on a separate worksheet

Yes = All samples OK

No = Samples were preserved at lab as listed

PM OK to Adjust: _____

Bottle lot numbers: 100509-2NN, 081009-1FF

Other Comments:

PC Secondary Review: JMS 11/16/09 *significant air bubbles are greater than 5-6 mm

Client:	Northgate Environmental	**Service Request:**	R0906477
Project:	Tronox LLC Henderson/2027.001	**Date Collected:**	11/11/09 1335
Sample Matrix:	Water	**Date Received:**	11/12/09
Sample Name:	M-122B	**Units:**	µg/L
Lab Code:	R0906477-001	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
1,1,1,2-Tetrachloroethane	0.18	U	1.0	0.18	1	NA	11/19/09 17:07		180234	
1,1,1-Trichloroethane (TCA)	0.32	U	1.0	0.32	1	NA	11/19/09 17:07		180234	
1,1,2,2-Tetrachloroethane	0.090	U	1.0	0.090	1	NA	11/19/09 17:07		180234	
1,1,2-Trichloroethane	0.20	U	1.0	0.20	1	NA	11/19/09 17:07		180234	
1,1-Dichloroethane (1,1-DCA)	0.14	U	1.0	0.14	1	NA	11/19/09 17:07		180234	
1,1-Dichloroethene (1,1-DCE)	0.37	U	1.0	0.37	1	NA	11/19/09 17:07		180234	
1,1-Dichloropropene	0.21	U	2.0	0.21	1	NA	11/19/09 17:07		180234	
1,2,3-Trichlorobenzene	0.25	U	2.0	0.25	1	NA	11/19/09 17:07		180234	
1,2,3-Trichloropropane	0.30	U	2.0	0.30	1	NA	11/19/09 17:07		180234	
1,2,4-Trichlorobenzene	0.19	U	2.0	0.19	1	NA	11/19/09 17:07		180234	
1,2,4-Trimethylbenzene	0.36	U	2.0	0.36	1	NA	11/19/09 17:07		180234	
1,2-Dibromo-3-chloropropane (DBCP)	0.43	U	5.0	0.43	1	NA	11/19/09 17:07		180234	
1,2-Dibromoethane	0.18	U	1.0	0.18	1	NA	11/19/09 17:07		180234	
1,2-Dichlorobenzene	0.40	U	2.0	0.40	1	NA	11/19/09 17:07		180234	
1,2-Dichloroethane	0.14	U	1.0	0.14	1	NA	11/19/09 17:07		180234	
1,2-Dichloropropane	0.15	U	1.0	0.15	1	NA	11/19/09 17:07		180234	
1,3,5-Trimethylbenzene	0.36	U	2.0	0.36	1	NA	11/19/09 17:07		180234	
1,3-Dichlorobenzene	0.36	U	2.0	0.36	1	NA	11/19/09 17:07		180234	
1,3-Dichloropropane	0.12	U	2.0	0.12	1	NA	11/19/09 17:07		180234	
1,4-Dichlorobenzene	0.34	U	2.0	0.34	1	NA	11/19/09 17:07		180234	
2,2-Dichloropropane	0.20	U	2.0	0.20	1	NA	11/19/09 17:07		180234	
2-Butanone (MEK)	1.0	U	10	1.0	1	NA	11/19/09 17:07		180234	
2-Chlorotoluene	0.38	U	5.0	0.38	1	NA	11/19/09 17:07		180234	
2-Hexanone	0.40	U	10	0.40	1	NA	11/19/09 17:07		180234	
2-Methyl-2-propanol	3.0	U	100	3.0	1	NA	11/19/09 17:07		180234	
4-Chlorotoluene	0.37	U	5.0	0.37	1	NA	11/19/09 17:07		180234	
4-Isopropyltoluene	0.22	U	2.0	0.22	1	NA	11/19/09 17:07		180234	
4-Methyl-2-pentanone	0.34	U	10	0.34	1	NA	11/19/09 17:07		180234	
Acetone	1.6	U	20	1.6	1	NA	11/19/09 17:07		180234	
Benzene	0.18	U	1.0	0.18	1	NA	11/19/09 17:07		180234	
Bromobenzene	0.33	U	2.0	0.33	1	NA	11/19/09 17:07		180234	
Bromochloromethane	0.18	U	2.0	0.18	1	NA	11/19/09 17:07		180234	
Bromodichloromethane	0.17	U	1.0	0.17	1	NA	11/19/09 17:07		180234	

Comments:

Client:	Northgate Environmental	**Service Request:**	R0906477
Project:	Tronox LLC Henderson/2027.001	**Date Collected:**	11/11/09 1335
Sample Matrix:	Water	**Date Received:**	11/12/09
Sample Name:	M-122B	**Units:**	µg/L
Lab Code:	R0906477-001	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Bromoform	0.20	U	1.0	0.20	1	NA	11/19/09 17:07		180234	
Bromomethane	0.40	U	2.0	0.40	1	NA	11/19/09 17:07		180234	
Carbon Tetrachloride	0.36	U	1.0	0.36	1	NA	11/19/09 17:07		180234	
Chlorobenzene	0.26	U	1.0	0.26	1	NA	11/19/09 17:07		180234	
Chloroethane	0.21	U	2.0	0.21	1	NA	11/19/09 17:07		180234	
Chloroform	**2.9**		1.0	0.16	1	NA	11/19/09 17:07		180234	
Chloromethane	0.18	U	2.0	0.18	1	NA	11/19/09 17:07		180234	
Dibromochloromethane	0.11	U	1.0	0.11	1	NA	11/19/09 17:07		180234	
Dibromomethane	0.18	U	1.0	0.18	1	NA	11/19/09 17:07		180234	
Dichlorodifluoromethane (CFC 12)	0.18	U	1.0	0.18	1	NA	11/19/09 17:07		180234	
Dichloromethane	0.13	U	2.0	0.13	1	NA	11/19/09 17:07		180234	
Diisopropyl Ether	0.090	U	1.0	0.090	1	NA	11/19/09 17:07		180234	
Ethyl tert-Butyl Ether	0.12	U	1.0	0.12	1	NA	11/19/09 17:07		180234	
Ethylbenzene	0.42	U	1.0	0.42	1	NA	11/19/09 17:07		180234	
Hexachlorobutadiene	0.27	U	5.0	0.27	1	NA	11/19/09 17:07		180234	
Isopropylbenzene (Cumene)	0.34	U	2.0	0.34	1	NA	11/19/09 17:07		180234	
Methyl tert-Butyl Ether	0.13	U	1.0	0.13	1	NA	11/19/09 17:07		180234	
Naphthalene	0.31	U	2.0	0.31	1	NA	11/19/09 17:07		180234	
Styrene	0.36	U	1.0	0.36	1	NA	11/19/09 17:07		180234	
Tetrachloroethene (PCE)	0.42	U	1.0	0.42	1	NA	11/19/09 17:07		180234	
Toluene	0.21	U	1.0	0.21	1	NA	11/19/09 17:07		180234	
Trichloroethene (TCE)	0.19	U	1.0	0.19	1	NA	11/19/09 17:07		180234	
Trichlorofluoromethane (CFC 11)	0.16	U	1.0	0.16	1	NA	11/19/09 17:07		180234	
Vinyl Chloride	0.22	U	1.0	0.22	1	NA	11/19/09 17:07		180234	
cis-1,2-Dichloroethene	0.14	U	1.0	0.14	1	NA	11/19/09 17:07		180234	
cis-1,3-Dichloropropene	0.14	U	1.0	0.14	1	NA	11/19/09 17:07		180234	
m,p-Xylenes	0.81	U	2.0	0.81	1	NA	11/19/09 17:07		180234	
n-Butylbenzene	0.20	U	5.0	0.20	1	NA	11/19/09 17:07		180234	
n-Propylbenzene	0.32	U	2.0	0.32	1	NA	11/19/09 17:07		180234	
o-Xylene	0.40	U	1.0	0.40	1	NA	11/19/09 17:07		180234	
sec-Butylbenzene	0.23	U	2.0	0.23	1	NA	11/19/09 17:07		180234	
tert-Amyl Methyl Ether	0.13	U	1.0	0.13	1	NA	11/19/09 17:07		180234	
tert-Butylbenzene	0.28	U	2.0	0.28	1	NA	11/19/09 17:07		180234	

Comments:

Client:	Northgate Environmental	**Service Request:**	R0906477
Project:	Tronox LLC Henderson/2027.001	**Date Collected:**	11/11/09 1335
Sample Matrix:	Water	**Date Received:**	11/12/09
Sample Name:	M-122B	**Units:**	µg/L
Lab Code:	R0906477-001	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
trans-1,2-Dichloroethene	0.16	U	1.0	0.16	1	NA	11/19/09 17:07		180234	
trans-1,3-Dichloropropene	0.17	U	1.0	0.17	1	NA	11/19/09 17:07		180234	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	97	70-130	11/19/09 17:07		
Dibromofluoromethane	98	70-130	11/19/09 17:07		
Toluene-d8	105	70-130	11/19/09 17:07		

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Northgate Environmental	**Service Request:**	R0906477
Project:	Tronox LLC Henderson/2027.001	**Date Collected:**	11/11/09 1300
Sample Matrix:	Water	**Date Received:**	11/12/09
Sample Name:	TB111109-GW1	**Units:**	µg/L
Lab Code:	R0906477-003	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
1,1,1,2-Tetrachloroethane	0.18	U	1.0	0.18	1	NA	11/19/09 17:37		180234	
1,1,1-Trichloroethane (TCA)	0.32	U	1.0	0.32	1	NA	11/19/09 17:37		180234	
1,1,2,2-Tetrachloroethane	0.090	U	1.0	0.090	1	NA	11/19/09 17:37		180234	
1,1,2-Trichloroethane	0.20	U	1.0	0.20	1	NA	11/19/09 17:37		180234	
1,1-Dichloroethane (1,1-DCA)	0.14	U	1.0	0.14	1	NA	11/19/09 17:37		180234	
1,1-Dichloroethene (1,1-DCE)	0.37	U	1.0	0.37	1	NA	11/19/09 17:37		180234	
1,1-Dichloropropene	0.21	U	2.0	0.21	1	NA	11/19/09 17:37		180234	
1,2,3-Trichlorobenzene	0.25	U	2.0	0.25	1	NA	11/19/09 17:37		180234	
1,2,3-Trichloropropane	0.30	U	2.0	0.30	1	NA	11/19/09 17:37		180234	
1,2,4-Trichlorobenzene	0.19	U	2.0	0.19	1	NA	11/19/09 17:37		180234	
1,2,4-Trimethylbenzene	0.36	U	2.0	0.36	1	NA	11/19/09 17:37		180234	
1,2-Dibromo-3-chloropropane (DBCP)	0.43	U	5.0	0.43	1	NA	11/19/09 17:37		180234	
1,2-Dibromoethane	0.18	U	1.0	0.18	1	NA	11/19/09 17:37		180234	
1,2-Dichlorobenzene	0.40	U	2.0	0.40	1	NA	11/19/09 17:37		180234	
1,2-Dichloroethane	0.14	U	1.0	0.14	1	NA	11/19/09 17:37		180234	
1,2-Dichloropropane	0.15	U	1.0	0.15	1	NA	11/19/09 17:37		180234	
1,3,5-Trimethylbenzene	0.36	U	2.0	0.36	1	NA	11/19/09 17:37		180234	
1,3-Dichlorobenzene	0.36	U	2.0	0.36	1	NA	11/19/09 17:37		180234	
1,3-Dichloropropane	0.12	U	2.0	0.12	1	NA	11/19/09 17:37		180234	
1,4-Dichlorobenzene	0.34	U	2.0	0.34	1	NA	11/19/09 17:37		180234	
2,2-Dichloropropane	0.20	U	2.0	0.20	1	NA	11/19/09 17:37		180234	
2-Butanone (MEK)	1.0	U	10	1.0	1	NA	11/19/09 17:37		180234	
2-Chlorotoluene	0.38	U	5.0	0.38	1	NA	11/19/09 17:37		180234	
2-Hexanone	0.40	U	10	0.40	1	NA	11/19/09 17:37		180234	
2-Methyl-2-propanol	3.0	U	100	3.0	1	NA	11/19/09 17:37		180234	
4-Chlorotoluene	0.37	U	5.0	0.37	1	NA	11/19/09 17:37		180234	
4-Isopropyltoluene	0.22	U	2.0	0.22	1	NA	11/19/09 17:37		180234	
4-Methyl-2-pentanone	0.34	U	10	0.34	1	NA	11/19/09 17:37		180234	
Acetone	1.6	U	20	1.6	1	NA	11/19/09 17:37		180234	
Benzene	0.18	U	1.0	0.18	1	NA	11/19/09 17:37		180234	
Bromobenzene	0.33	U	2.0	0.33	1	NA	11/19/09 17:37		180234	
Bromochloromethane	0.18	U	2.0	0.18	1	NA	11/19/09 17:37		180234	
Bromodichloromethane	0.17	U	1.0	0.17	1	NA	11/19/09 17:37		180234	

Comments:

Client:	Northgate Environmental	**Service Request:**	R0906477
Project:	Tronox LLC Henderson/2027.001	**Date Collected:**	11/11/09 1300
Sample Matrix:	Water	**Date Received:**	11/12/09
Sample Name:	TB111109-GW1	**Units:**	µg/L
Lab Code:	R0906477-003	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Bromoform	0.20	U	1.0	0.20	1	NA	11/19/09 17:37		180234	
Bromomethane	0.40	U	2.0	0.40	1	NA	11/19/09 17:37		180234	
Carbon Tetrachloride	0.36	U	1.0	0.36	1	NA	11/19/09 17:37		180234	
Chlorobenzene	0.26	U	1.0	0.26	1	NA	11/19/09 17:37		180234	
Chloroethane	0.21	U	2.0	0.21	1	NA	11/19/09 17:37		180234	
Chloroform	0.16	U	1.0	0.16	1	NA	11/19/09 17:37		180234	
Chloromethane	0.18	U	2.0	0.18	1	NA	11/19/09 17:37		180234	
Dibromochloromethane	0.11	U	1.0	0.11	1	NA	11/19/09 17:37		180234	
Dibromomethane	0.18	U	1.0	0.18	1	NA	11/19/09 17:37		180234	
Dichlorodifluoromethane (CFC 12)	0.18	U	1.0	0.18	1	NA	11/19/09 17:37		180234	
Dichloromethane	0.13	U	2.0	0.13	1	NA	11/19/09 17:37		180234	
Diisopropyl Ether	0.090	U	1.0	0.090	1	NA	11/19/09 17:37		180234	
Ethyl tert-Butyl Ether	0.12	U	1.0	0.12	1	NA	11/19/09 17:37		180234	
Ethylbenzene	0.42	U	1.0	0.42	1	NA	11/19/09 17:37		180234	
Hexachlorobutadiene	0.27	U	5.0	0.27	1	NA	11/19/09 17:37		180234	
Isopropylbenzene (Cumene)	0.34	U	2.0	0.34	1	NA	11/19/09 17:37		180234	
Methyl tert-Butyl Ether	0.13	U	1.0	0.13	1	NA	11/19/09 17:37		180234	
Naphthalene	0.31	U	2.0	0.31	1	NA	11/19/09 17:37		180234	
Styrene	0.36	U	1.0	0.36	1	NA	11/19/09 17:37		180234	
Tetrachloroethene (PCE)	0.42	U	1.0	0.42	1	NA	11/19/09 17:37		180234	
Toluene	0.21	U	1.0	0.21	1	NA	11/19/09 17:37		180234	
Trichloroethene (TCE)	0.19	U	1.0	0.19	1	NA	11/19/09 17:37		180234	
Trichlorofluoromethane (CFC 11)	0.16	U	1.0	0.16	1	NA	11/19/09 17:37		180234	
Vinyl Chloride	0.22	U	1.0	0.22	1	NA	11/19/09 17:37		180234	
cis-1,2-Dichloroethene	0.14	U	1.0	0.14	1	NA	11/19/09 17:37		180234	
cis-1,3-Dichloropropene	0.14	U	1.0	0.14	1	NA	11/19/09 17:37		180234	
m,p-Xylenes	0.81	U	2.0	0.81	1	NA	11/19/09 17:37		180234	
n-Butylbenzene	0.20	U	5.0	0.20	1	NA	11/19/09 17:37		180234	
n-Propylbenzene	0.32	U	2.0	0.32	1	NA	11/19/09 17:37		180234	
o-Xylene	0.40	U	1.0	0.40	1	NA	11/19/09 17:37		180234	
sec-Butylbenzene	0.23	U	2.0	0.23	1	NA	11/19/09 17:37		180234	
tert-Amyl Methyl Ether	0.13	U	1.0	0.13	1	NA	11/19/09 17:37		180234	
tert-Butylbenzene	0.28	U	2.0	0.28	1	NA	11/19/09 17:37		180234	

Comments:

Client:	Northgate Environmental	**Service Request:**	R0906477
Project:	Tronox LLC Henderson/2027.001	**Date Collected:**	11/11/09 1300
Sample Matrix:	Water	**Date Received:**	11/12/09
Sample Name:	TB111109-GW1	**Units:**	µg/L
Lab Code:	R0906477-003	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
trans-1,2-Dichloroethene	0.16	U	1.0	0.16	1	NA	11/19/09 17:37		180234	
trans-1,3-Dichloropropene	0.17	U	1.0	0.17	1	NA	11/19/09 17:37		180234	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	100	70-130	11/19/09 17:37		
Dibromofluoromethane	97	70-130	11/19/09 17:37		
Toluene-d8	105	70-130	11/19/09 17:37		

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Northgate Environmental	**Service Request:**	R0906477
Project:	Tronox LLC Henderson/2027.001	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ0912216-01	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
1,1,1,2-Tetrachloroethane	0.18	U	1.0	0.18	1	NA	11/19/09 16:38		180234	
1,1,1-Trichloroethane (TCA)	0.32	U	1.0	0.32	1	NA	11/19/09 16:38		180234	
1,1,2,2-Tetrachloroethane	0.090	U	1.0	0.090	1	NA	11/19/09 16:38		180234	
1,1,2-Trichloroethane	0.20	U	1.0	0.20	1	NA	11/19/09 16:38		180234	
1,1-Dichloroethane (1,1-DCA)	0.14	U	1.0	0.14	1	NA	11/19/09 16:38		180234	
1,1-Dichloroethene (1,1-DCE)	0.37	U	1.0	0.37	1	NA	11/19/09 16:38		180234	
1,1-Dichloropropene	0.21	U	2.0	0.21	1	NA	11/19/09 16:38		180234	
1,2,3-Trichlorobenzene	0.25	U	2.0	0.25	1	NA	11/19/09 16:38		180234	
1,2,3-Trichloropropane	0.30	U	2.0	0.30	1	NA	11/19/09 16:38		180234	
1,2,4-Trichlorobenzene	0.19	U	2.0	0.19	1	NA	11/19/09 16:38		180234	
1,2,4-Trimethylbenzene	0.36	U	2.0	0.36	1	NA	11/19/09 16:38		180234	
1,2-Dibromo-3-chloropropane (DBCP)	0.43	U	5.0	0.43	1	NA	11/19/09 16:38		180234	
1,2-Dibromoethane	0.18	U	1.0	0.18	1	NA	11/19/09 16:38		180234	
1,2-Dichlorobenzene	0.40	U	2.0	0.40	1	NA	11/19/09 16:38		180234	
1,2-Dichloroethane	0.14	U	1.0	0.14	1	NA	11/19/09 16:38		180234	
1,2-Dichloropropane	0.15	U	1.0	0.15	1	NA	11/19/09 16:38		180234	
1,3,5-Trimethylbenzene	0.36	U	2.0	0.36	1	NA	11/19/09 16:38		180234	
1,3-Dichlorobenzene	0.36	U	2.0	0.36	1	NA	11/19/09 16:38		180234	
1,3-Dichloropropane	0.12	U	2.0	0.12	1	NA	11/19/09 16:38		180234	
1,4-Dichlorobenzene	0.34	U	2.0	0.34	1	NA	11/19/09 16:38		180234	
2,2-Dichloropropane	0.20	U	2.0	0.20	1	NA	11/19/09 16:38		180234	
2-Butanone (MEK)	1.0	U	10	1.0	1	NA	11/19/09 16:38		180234	
2-Chlorotoluene	0.38	U	5.0	0.38	1	NA	11/19/09 16:38		180234	
2-Hexanone	0.40	U	10	0.40	1	NA	11/19/09 16:38		180234	
2-Methyl-2-propanol	3.0	U	100	3.0	1	NA	11/19/09 16:38		180234	
4-Chlorotoluene	0.37	U	5.0	0.37	1	NA	11/19/09 16:38		180234	
4-Isopropyltoluene	0.22	U	2.0	0.22	1	NA	11/19/09 16:38		180234	
4-Methyl-2-pentanone	0.34	U	10	0.34	1	NA	11/19/09 16:38		180234	
Acetone	1.6	U	20	1.6	1	NA	11/19/09 16:38		180234	
Benzene	0.18	U	1.0	0.18	1	NA	11/19/09 16:38		180234	
Bromobenzene	0.33	U	2.0	0.33	1	NA	11/19/09 16:38		180234	
Bromochloromethane	0.18	U	2.0	0.18	1	NA	11/19/09 16:38		180234	
Bromodichloromethane	0.17	U	1.0	0.17	1	NA	11/19/09 16:38		180234	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Northgate Environmental	**Service Request:**	R0906477
Project:	Tronox LLC Henderson/2027.001	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ0912216-01	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Bromoform	0.20	U	1.0	0.20	1	NA	11/19/09 16:38		180234	
Bromomethane	0.40	U	2.0	0.40	1	NA	11/19/09 16:38		180234	
Carbon Tetrachloride	0.36	U	1.0	0.36	1	NA	11/19/09 16:38		180234	
Chlorobenzene	0.26	U	1.0	0.26	1	NA	11/19/09 16:38		180234	
Chloroethane	0.21	U	2.0	0.21	1	NA	11/19/09 16:38		180234	
Chloroform	0.16	U	1.0	0.16	1	NA	11/19/09 16:38		180234	
Chloromethane	0.18	U	2.0	0.18	1	NA	11/19/09 16:38		180234	
Dibromochloromethane	0.11	U	1.0	0.11	1	NA	11/19/09 16:38		180234	
Dibromomethane	0.18	U	1.0	0.18	1	NA	11/19/09 16:38		180234	
Dichlorodifluoromethane (CFC 12)	0.18	U	1.0	0.18	1	NA	11/19/09 16:38		180234	
Dichloromethane	0.13	U	2.0	0.13	1	NA	11/19/09 16:38		180234	
Diisopropyl Ether	0.090	U	1.0	0.090	1	NA	11/19/09 16:38		180234	
Ethyl tert-Butyl Ether	0.12	U	1.0	0.12	1	NA	11/19/09 16:38		180234	
Ethylbenzene	0.42	U	1.0	0.42	1	NA	11/19/09 16:38		180234	
Hexachlorobutadiene	**0.33**	J	5.0	0.27	1	NA	11/19/09 16:38		180234	
Isopropylbenzene (Cumene)	0.34	U	2.0	0.34	1	NA	11/19/09 16:38		180234	
Methyl tert-Butyl Ether	0.13	U	1.0	0.13	1	NA	11/19/09 16:38		180234	
Naphthalene	0.31	U	2.0	0.31	1	NA	11/19/09 16:38		180234	
Styrene	0.36	U	1.0	0.36	1	NA	11/19/09 16:38		180234	
Tetrachloroethene (PCE)	0.42	U	1.0	0.42	1	NA	11/19/09 16:38		180234	
Toluene	0.21	U	1.0	0.21	1	NA	11/19/09 16:38		180234	
Trichloroethene (TCE)	0.19	U	1.0	0.19	1	NA	11/19/09 16:38		180234	
Trichlorofluoromethane (CFC 11)	0.16	U	1.0	0.16	1	NA	11/19/09 16:38		180234	
Vinyl Chloride	0.22	U	1.0	0.22	1	NA	11/19/09 16:38		180234	
cis-1,2-Dichloroethene	0.14	U	1.0	0.14	1	NA	11/19/09 16:38		180234	
cis-1,3-Dichloropropene	0.14	U	1.0	0.14	1	NA	11/19/09 16:38		180234	
m,p-Xylenes	0.81	U	2.0	0.81	1	NA	11/19/09 16:38		180234	
n-Butylbenzene	0.20	U	5.0	0.20	1	NA	11/19/09 16:38		180234	
n-Propylbenzene	0.32	U	2.0	0.32	1	NA	11/19/09 16:38		180234	
o-Xylene	0.40	U	1.0	0.40	1	NA	11/19/09 16:38		180234	
sec-Butylbenzene	0.23	U	2.0	0.23	1	NA	11/19/09 16:38		180234	
tert-Amyl Methyl Ether	0.13	U	1.0	0.13	1	NA	11/19/09 16:38		180234	
tert-Butylbenzene	0.28	U	2.0	0.28	1	NA	11/19/09 16:38		180234	

Comments:

Client:	Northgate Environmental	**Service Request:**	R0906477
Project:	Tronox LLC Henderson/2027.001	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ0912216-01	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
trans-1,2-Dichloroethene	0.16	U	1.0	0.16	1	NA	11/19/09 16:38		180234	
trans-1,3-Dichloropropene	0.17	U	1.0	0.17	1	NA	11/19/09 16:38		180234	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	99	70-130	11/19/09 16:38		
Dibromofluoromethane	98	70-130	11/19/09 16:38		
Toluene-d8	106	70-130	11/19/09 16:38		

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Water

Service Request: R0906477
Date Analyzed: 11/19/09

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Units: µg/L
Basis: NA

Analysis Lot: 180234

Analyte Name	Lab Control Sample RQ0912216-02 Result	Expected	% Rec	% Rec Limits
1,1,1,2-Tetrachloroethane	**20.7**	20.0	103	75 - 125
1,1,1-Trichloroethane (TCA)	**18.9**	20.0	94	75 - 125
1,1,2,2-Tetrachloroethane	**21.1**	20.0	106	75 - 125
1,1,2-Trichloroethane	**19.6**	20.0	98	75 - 125
1,1-Dichloroethane (1,1-DCA)	**17.9**	20.0	90	75 - 125
1,1-Dichloroethene (1,1-DCE)	**20.3**	20.0	101	75 - 125
1,1-Dichloropropene	**19.4**	20.0	97	75 - 125
1,2,3-Trichlorobenzene	**21.7**	20.0	108	75 - 125
1,2,3-Trichloropropane	**20.4**	20.0	102	75 - 125
1,2,4-Trichlorobenzene	**21.1**	20.0	105	75 - 125
1,2,4-Trimethylbenzene	**21.8**	20.0	109	75 - 125
1,2-Dibromo-3-chloropropane (DBCP)	**18.7**	20.0	93	75 - 125
1,2-Dibromoethane	**20.5**	20.0	102	75 - 125
1,2-Dichlorobenzene	**21.4**	20.0	107	75 - 125
1,2-Dichloroethane	**18.4**	20.0	92	75 - 125
1,2-Dichloropropane	**19.2**	20.0	96	75 - 125
1,3,5-Trimethylbenzene	**22.1**	20.0	110	75 - 125
1,3-Dichlorobenzene	**21.3**	20.0	106	75 - 125
1,3-Dichloropropane	**20.2**	20.0	101	75 - 125
1,4-Dichlorobenzene	**20.5**	20.0	102	75 - 125
2,2-Dichloropropane	**19.1**	20.0	96	75 - 125
2-Butanone (MEK)	**16.6**	20.0	83	75 - 125
2-Chlorotoluene	**21.0**	20.0	105	75 - 125
2-Hexanone	**16.9**	20.0	84	75 - 125
2-Methyl-2-propanol	**383**	400	96	75 - 125
4-Chlorotoluene	**21.9**	20.0	109	75 - 125
4-Isopropyltoluene	**21.6**	20.0	108	75 - 125
4-Methyl-2-pentanone	**15.8**	20.0	79	75 - 125
Acetone	**17.0**	20.0	85	75 - 125
Benzene	**18.7**	20.0	93	75 - 125
Bromobenzene	**21.2**	20.0	106	75 - 125
Bromochloromethane	**19.3**	20.0	97	75 - 125
Bromodichloromethane	**19.6**	20.0	98	75 - 125
Bromoform	**21.2**	20.0	106	75 - 125
Bromomethane	**14.9**	20.0	75	75 - 125
Carbon Tetrachloride	**19.5**	20.0	97	75 - 125

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Water

Service Request: R0906477
Date Analyzed: 11/19/09

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Units: µg/L
Basis: NA

Analysis Lot: 180234

Analyte Name	Lab Control Sample RQ0912216-02 Result	Expected	% Rec	% Rec Limits
Chlorobenzene	**20.3**	20.0	102	75 - 125
Chloroethane	**17.3**	20.0	87	75 - 125
Chloroform	**19.0**	20.0	95	75 - 125
Chloromethane	**15.1**	20.0	76	75 - 125
Dibromochloromethane	**21.2**	20.0	106	75 - 125
Dibromomethane	**19.0**	20.0	95	75 - 125
Dichlorodifluoromethane (CFC 12)	**19.6**	20.0	98	75 - 125
Dichloromethane	**17.1**	20.0	85	75 - 125
Diisopropyl Ether	**18.5**	20.0	92	75 - 125
Ethyl tert-Butyl Ether	**19.1**	20.0	95	75 - 125
Ethylbenzene	**21.3**	20.0	107	75 - 125
Hexachlorobutadiene	**20.8**	20.0	104	75 - 125
Isopropylbenzene (Cumene)	**22.7**	20.0	113	75 - 125
Methyl tert-Butyl Ether	**19.8**	20.0	99	75 - 125
Naphthalene	**19.7**	20.0	98	75 - 125
Styrene	**19.6**	20.0	98	75 - 125
Tetrachloroethene (PCE)	**21.1**	20.0	105	75 - 125
Toluene	**20.1**	20.0	100	75 - 125
Trichloroethene (TCE)	**19.5**	20.0	97	75 - 125
Trichlorofluoromethane (CFC 11)	**19.0**	20.0	95	75 - 125
Vinyl Chloride	**17.5**	20.0	87	75 - 125
cis-1,2-Dichloroethene	**19.3**	20.0	96	75 - 125
cis-1,3-Dichloropropene	**18.4**	20.0	92	75 - 125
m,p-Xylenes	**43.6**	40.0	109	75 - 125
n-Butylbenzene	**20.3**	20.0	101	75 - 125
n-Propylbenzene	**22.6**	20.0	113	75 - 125
o-Xylene	**20.1**	20.0	100	75 - 125
sec-Butylbenzene	**21.4**	20.0	107	75 - 125
tert-Amyl Methyl Ether	**18.6**	20.0	93	75 - 125
tert-Butylbenzene	**21.2**	20.0	106	75 - 125
trans-1,2-Dichloroethene	**19.3**	20.0	97	75 - 125
trans-1,3-Dichloropropene	**17.8**	20.0	89	75 - 125

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Northgate Environmental	**Service Request:**	R0906477
Project:	Tronox LLC Henderson/2027.001	**Date Collected:**	11/11/09 1335
Sample Matrix:	Water	**Date Received:**	11/12/09
Sample Name:	M-122B	**Units:**	µg/L
Lab Code:	R0906477-001	**Basis:**	NA

Low Level Semivolatile Organic Compounds by GC/MS

Analytical Method: 8270C
Prep Method: EPA 3510C

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
2-Methylnaphthalene	0.048	U	0.19	0.048	1	11/17/09	11/20/09 18:38	100898	180580	
Acenaphthene	0.053	U	0.19	0.053	1	11/17/09	11/20/09 18:38	100898	180580	
Acenaphthylene	0.076	U	0.19	0.076	1	11/17/09	11/20/09 18:38	100898	180580	
Anthracene	0.041	U	0.19	0.041	1	11/17/09	11/20/09 18:38	100898	180580	
Benz(a)anthracene	0.041	U	0.19	0.041	1	11/17/09	11/20/09 18:38	100898	180580	
Benzo(a)pyrene	0.042	U	0.19	0.042	1	11/17/09	11/20/09 18:38	100898	180580	
Benzo(b)fluoranthene	0.027	U	0.19	0.027	1	11/17/09	11/20/09 18:38	100898	180580	
Benzo(g,h,i)perylene	0.030	U	0.19	0.030	1	11/17/09	11/20/09 18:38	100898	180580	
Benzo(k)fluoranthene	0.029	U	0.19	0.029	1	11/17/09	11/20/09 18:38	100898	180580	
Bis(2-ethylhexyl) Phthalate	**0.69**	J	4.7	0.23	1	11/17/09	11/20/09 18:38	100898	180580	
Butyl Benzyl Phthalate	**0.12**	J	4.7	0.11	1	11/17/09	11/20/09 18:38	100898	180580	
Chrysene	0.029	U	0.19	0.029	1	11/17/09	11/20/09 18:38	100898	180580	
Di-n-butyl Phthalate	0.76	U	4.7	0.76	1	11/17/09	11/20/09 18:38	100898	180580	
Di-n-octyl Phthalate	0.041	U	4.7	0.041	1	11/17/09	11/20/09 18:38	100898	180580	
Dibenz(a,h)anthracene	0.046	U	0.19	0.046	1	11/17/09	11/20/09 18:38	100898	180580	
Diethyl Phthalate	0.20	U	4.7	0.20	1	11/17/09	11/20/09 18:38	100898	180580	
Dimethyl Phthalate	0.044	U	4.7	0.044	1	11/17/09	11/20/09 18:38	100898	180580	
Fluoranthene	0.040	U	0.19	0.040	1	11/17/09	11/20/09 18:38	100898	180580	
Fluorene	0.055	U	0.19	0.055	1	11/17/09	11/20/09 18:38	100898	180580	
Hexachlorobenzene	0.035	U	0.19	0.035	1	11/17/09	11/20/09 18:38	100898	180580	
Indeno(1,2,3-cd)pyrene	0.049	U	0.19	0.049	1	11/17/09	11/20/09 18:38	100898	180580	
Naphthalene	0.14	U	0.19	0.14	1	11/17/09	11/20/09 18:38	100898	180580	
Nitrobenzene	0.046	U	0.19	0.046	1	11/17/09	11/20/09 18:38	100898	180580	
Phenanthrene	0.062	U	0.19	0.062	1	11/17/09	11/20/09 18:38	100898	180580	
Pyrene	0.029	U	0.19	0.029	1	11/17/09	11/20/09 18:38	100898	180580	
Pyridine	0.89	U	1.9	0.89	1	11/17/09	11/20/09 18:38	100898	180580	
1,4-Dioxane	**2.4**		1.9	0.13	1	11/17/09	11/20/09 18:38	100898	180580	
Octachlorostyrene	0.13	U	0.19	0.13	1	11/17/09	11/20/09 18:38	100898	180580	

Comments:

Client:	Northgate Environmental	**Service Request:**	R0906477
Project:	Tronox LLC Henderson/2027.001	**Date Collected:**	11/11/09 1335
Sample Matrix:	Water	**Date Received:**	11/12/09
Sample Name:	M-122B	**Units:**	Percent
Lab Code:	R0906477-001	**Basis:**	NA

Low Level Semivolatile Organic Compounds by GC/MS

Analytical Method: 8270C
Prep Method: EPA 3510C

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
2-Fluorobiphenyl	81	45-135	11/20/09 18:38		
Nitrobenzene-d5	82	45-135	11/20/09 18:38		
Terphenyl-d14	88	45-135	11/20/09 18:38		

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Northgate Environmental	**Service Request:**	R0906477
Project:	Tronox LLC Henderson/2027.001	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ0911513-01	**Basis:**	NA

Low Level Semivolatile Organic Compounds by GC/MS

Analytical Method: 8270C
Prep Method: EPA 3510C

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
2-Methylnaphthalene	0.048	U	0.20	0.048	1	11/17/09	11/20/09 16:31	100898	180580	
Acenaphthene	0.053	U	0.20	0.053	1	11/17/09	11/20/09 16:31	100898	180580	
Acenaphthylene	0.076	U	0.20	0.076	1	11/17/09	11/20/09 16:31	100898	180580	
Anthracene	0.041	U	0.20	0.041	1	11/17/09	11/20/09 16:31	100898	180580	
Benz(a)anthracene	0.041	U	0.20	0.041	1	11/17/09	11/20/09 16:31	100898	180580	
Benzo(a)pyrene	0.042	U	0.20	0.042	1	11/17/09	11/20/09 16:31	100898	180580	
Benzo(b)fluoranthene	0.027	U	0.20	0.027	1	11/17/09	11/20/09 16:31	100898	180580	
Benzo(g,h,i)perylene	0.030	U	0.20	0.030	1	11/17/09	11/20/09 16:31	100898	180580	
Benzo(k)fluoranthene	0.029	U	0.20	0.029	1	11/17/09	11/20/09 16:31	100898	180580	
Bis(2-ethylhexyl) Phthalate	0.23	U	5.0	0.23	1	11/17/09	11/20/09 16:31	100898	180580	
Butyl Benzyl Phthalate	0.11	U	5.0	0.11	1	11/17/09	11/20/09 16:31	100898	180580	
Chrysene	0.029	U	0.20	0.029	1	11/17/09	11/20/09 16:31	100898	180580	
Di-n-butyl Phthalate	0.76	U	5.0	0.76	1	11/17/09	11/20/09 16:31	100898	180580	
Di-n-octyl Phthalate	0.041	U	5.0	0.041	1	11/17/09	11/20/09 16:31	100898	180580	
Dibenz(a,h)anthracene	0.046	U	0.20	0.046	1	11/17/09	11/20/09 16:31	100898	180580	
Diethyl Phthalate	0.20	U	5.0	0.20	1	11/17/09	11/20/09 16:31	100898	180580	
Dimethyl Phthalate	0.044	U	5.0	0.044	1	11/17/09	11/20/09 16:31	100898	180580	
Fluoranthene	0.040	U	0.20	0.040	1	11/17/09	11/20/09 16:31	100898	180580	
Fluorene	0.055	U	0.20	0.055	1	11/17/09	11/20/09 16:31	100898	180580	
Hexachlorobenzene	0.035	U	0.20	0.035	1	11/17/09	11/20/09 16:31	100898	180580	
Indeno(1,2,3-cd)pyrene	0.049	U	0.20	0.049	1	11/17/09	11/20/09 16:31	100898	180580	
Naphthalene	0.14	U	0.20	0.14	1	11/17/09	11/20/09 16:31	100898	180580	
Nitrobenzene	0.046	U	0.20	0.046	1	11/17/09	11/20/09 16:31	100898	180580	
Phenanthrene	0.062	U	0.20	0.062	1	11/17/09	11/20/09 16:31	100898	180580	
Pyrene	0.029	U	0.20	0.029	1	11/17/09	11/20/09 16:31	100898	180580	
Pyridine	0.89	U	2.0	0.89	1	11/17/09	11/20/09 16:31	100898	180580	
1,4-Dioxane	0.13	U	2.0	0.13	1	11/17/09	11/20/09 16:31	100898	180580	
Octachlorostyrene	0.13	U	0.20	0.13	1	11/17/09	11/20/09 16:31	100898	180580	

Comments:

Client:	Northgate Environmental	**Service Request:**	R0906477
Project:	Tronox LLC Henderson/2027.001	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	Percent
Lab Code:	RQ0911513-01	**Basis:**	NA

Low Level Semivolatile Organic Compounds by GC/MS

Analytical Method: 8270C
Prep Method: EPA 3510C

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
2-Fluorobiphenyl	88	45-135	11/20/09 16:31		
Nitrobenzene-d5	82	45-135	11/20/09 16:31		
Terphenyl-d14	112	45-135	11/20/09 16:31		

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Water

Service Request: R0906477
Date Analyzed: 11/20/09

Lab Control Sample Summary
Low Level Semivolatile Organic Compounds by GC/MS

Analytical Method: 8270C
Prep Method: EPA 3510C

Units: µg/L
Basis: NA

Extraction Lot: 100898

Analyte Name	Lab Control Sample RQ0911513-02 Result	Expected	% Rec		Duplicate Lab Control Sample RQ0911513-03 Result	Expected	% Rec		% Rec Limits	RPD	RPD Limit
2-Methylnaphthalene	**3.41**	4.00	85		**3.68**	4.00	92		50 - 120	8	30
Acenaphthene	**3.23**	4.00	81		**3.51**	4.00	88		50 - 120	8	30
Acenaphthylene	**3.30**	4.00	83		**3.62**	4.00	91		50 - 120	9	30
Anthracene	**3.43**	4.00	86		**3.98**	4.00	100		50 - 120	15	30
Benz(a)anthracene	**3.57**	4.00	89		**4.21**	4.00	105		50 - 120	16	30
Benzo(a)pyrene	**3.19**	4.00	80		**3.51**	4.00	88		50 - 120	10	30
Benzo(b)fluoranthene	**3.55**	4.00	89		**3.85**	4.00	96		50 - 120	8	30
Benzo(g,h,i)perylene	**3.84**	4.00	96		**4.04**	4.00	101		50 - 120	5	30
Benzo(k)fluoranthene	**3.75**	4.00	94		**3.74**	4.00	94		50 - 120	0	30
Bis(2-ethylhexyl) Phthalate	**3.55**	4.00	89		**4.20**	4.00	105		50 - 120	17	30
Butyl Benzyl Phthalate	**3.17**	4.00	79		**3.84**	4.00	96		50 - 120	19	30
Chrysene	**3.27**	4.00	82		**3.94**	4.00	99		50 - 120	19	30
Di-n-butyl Phthalate	**3.69**	4.00	92		**3.97**	4.00	99		50 - 120	7	30
Di-n-octyl Phthalate	**3.19**	4.00	80		**3.53**	4.00	88		50 - 120	10	30
Dibenz(a,h)anthracene	**3.91**	4.00	98		**4.02**	4.00	101		50 - 120	3	30
Diethyl Phthalate	**3.42**	4.00	86		**3.83**	4.00	96		50 - 120	11	30
Dimethyl Phthalate	**3.10**	4.00	78		**3.41**	4.00	85		50 - 120	10	30
Fluoranthene	**3.41**	4.00	85		**3.96**	4.00	99		50 - 120	15	30
Fluorene	**3.49**	4.00	87		**3.83**	4.00	96		50 - 120	9	30
Hexachlorobenzene	**3.37**	4.00	84		**4.18**	4.00	105		50 - 120	21	30
Indeno(1,2,3-cd)pyrene	**3.86**	4.00	97		**4.13**	4.00	103		50 - 120	7	30
Naphthalene	**2.99**	4.00	75		**3.31**	4.00	83		50 - 120	10	30
Nitrobenzene	**3.60**	4.00	90		**3.77**	4.00	94		50 - 120	5	30
Phenanthrene	**3.29**	4.00	82		**3.90**	4.00	98		50 - 120	17	30
Pyrene	**3.13**	4.00	78		**3.72**	4.00	93		50 - 120	17	30
Pyridine	**1.27**	4.00	32	*	**1.13**	4.00	28	*	50 - 120	12	30
1,4-Dioxane	**1.93**	5.00	39	*	**1.94**	5.00	39	*	50 - 120	1	30
Octachlorostyrene	**2.89**	4.00	72		**3.91**	4.00	98		50 - 120	30	30

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Northgate Environmental	**Service Request:**	R0906477
Project:	Tronox LLC Henderson/2027.001	**Date Collected:**	11/11/09 1335
Sample Matrix:	Water	**Date Received:**	11/12/09
Sample Name:	M-122B	**Units:**	µg/L
Lab Code:	R0906477-001	**Basis:**	NA

Organochlorine Pesticides by Gas Chromatography

Analytical Method: 8081A
Prep Method: EPA 3510C

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
4,4'-DDD	0.050	U	0.094	0.050	1	11/16/09	11/18/09 15:03	100766	180095	
4,4'-DDE	0.050	U	0.094	0.050	1	11/16/09	11/18/09 15:03	100766	180095	
4,4'-DDT	0.050	U	0.094	0.050	1	11/16/09	11/18/09 15:03	100766	180095	
Aldrin	0.025	U	0.047	0.025	1	11/16/09	11/18/09 15:03	100766	180095	
Chlordane	0.13	U	0.24	0.13	1	11/16/09	11/18/09 15:03	100766	180095	
Dieldrin	0.050	U	0.094	0.050	1	11/16/09	11/18/09 15:03	100766	180095	
Endosulfan I	0.025	U	0.047	0.025	1	11/16/09	11/18/09 15:03	100766	180095	
Endosulfan II	0.050	U	0.094	0.050	1	11/16/09	11/18/09 15:03	100766	180095	
Endosulfan Sulfate	0.050	U	0.094	0.050	1	11/16/09	11/18/09 15:03	100766	180095	
Endrin	0.050	U	0.094	0.050	1	11/16/09	11/18/09 15:03	100766	180095	
Endrin Aldehyde	0.050	U	0.094	0.050	1	11/16/09	11/18/09 15:03	100766	180095	
Endrin Ketone	0.050	U	0.094	0.050	1	11/16/09	11/18/09 15:03	100766	180095	
Heptachlor	0.025	U	0.047	0.025	1	11/16/09	11/18/09 15:03	100766	180095	
Heptachlor Epoxide	0.025	U	0.047	0.025	1	11/16/09	11/18/09 15:03	100766	180095	
Hexachlorobenzene	0.028	U	0.047	0.028	1	11/16/09	11/18/09 15:03	100766	180095	
Methoxychlor	0.25	U	0.47	0.25	1	11/16/09	11/18/09 15:03	100766	180095	
Toxaphene	0.50	U	0.94	0.50	1	11/16/09	11/18/09 15:03	100766	180095	
alpha-BHC	0.025	U	0.047	0.025	1	11/16/09	11/18/09 15:03	100766	180095	
alpha-Chlordane	0.025	U	0.047	0.025	1	11/16/09	11/18/09 15:03	100766	180095	
beta-BHC	0.025	U	0.047	0.025	1	11/16/09	11/18/09 15:03	100766	180095	
delta-BHC	0.025	U	0.047	0.025	1	11/16/09	11/18/09 15:03	100766	180095	
gamma-BHC (Lindane)	0.025	U	0.047	0.025	1	11/16/09	11/18/09 15:03	100766	180095	
gamma-Chlordane	0.025	U	0.047	0.025	1	11/16/09	11/18/09 15:03	100766	180095	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
Decachlorobiphenyl	63	40-140	11/18/09 15:03		
Tetrachloro-m-xylene	74	40-140	11/18/09 15:03		

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Northgate Environmental	**Service Request:**	R0906477
Project:	Tronox LLC Henderson/2027.001	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ0911458-01	**Basis:**	NA

Organochlorine Pesticides by Gas Chromatography

Analytical Method: 8081A
Prep Method: EPA 3510C

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
4,4'-DDD	0.050	U	0.10	0.050	1	11/16/09	11/18/09 11:30	100766	180095	
4,4'-DDE	0.050	U	0.10	0.050	1	11/16/09	11/18/09 11:30	100766	180095	
4,4'-DDT	0.050	U	0.10	0.050	1	11/16/09	11/18/09 11:30	100766	180095	
Aldrin	0.025	U	0.050	0.025	1	11/16/09	11/18/09 11:30	100766	180095	
Chlordane	0.13	U	0.25	0.13	1	11/16/09	11/18/09 11:30	100766	180095	
Dieldrin	0.050	U	0.10	0.050	1	11/16/09	11/18/09 11:30	100766	180095	
Endosulfan I	0.025	U	0.050	0.025	1	11/16/09	11/18/09 11:30	100766	180095	
Endosulfan II	0.050	U	0.10	0.050	1	11/16/09	11/18/09 11:30	100766	180095	
Endosulfan Sulfate	0.050	U	0.10	0.050	1	11/16/09	11/18/09 11:30	100766	180095	
Endrin	0.050	U	0.10	0.050	1	11/16/09	11/18/09 11:30	100766	180095	
Endrin Aldehyde	0.050	U	0.10	0.050	1	11/16/09	11/18/09 11:30	100766	180095	
Endrin Ketone	0.050	U	0.10	0.050	1	11/16/09	11/18/09 11:30	100766	180095	
Heptachlor	0.025	U	0.050	0.025	1	11/16/09	11/18/09 11:30	100766	180095	
Heptachlor Epoxide	0.025	U	0.050	0.025	1	11/16/09	11/18/09 11:30	100766	180095	
Hexachlorobenzene	0.028	U	0.050	0.028	1	11/16/09	11/18/09 11:30	100766	180095	
Methoxychlor	0.25	U	0.50	0.25	1	11/16/09	11/18/09 11:30	100766	180095	
Toxaphene	0.50	U	1.0	0.50	1	11/16/09	11/18/09 11:30	100766	180095	
alpha-BHC	0.025	U	0.050	0.025	1	11/16/09	11/18/09 11:30	100766	180095	
alpha-Chlordane	0.025	U	0.050	0.025	1	11/16/09	11/18/09 11:30	100766	180095	
beta-BHC	0.025	U	0.050	0.025	1	11/16/09	11/18/09 11:30	100766	180095	
delta-BHC	0.025	U	0.050	0.025	1	11/16/09	11/18/09 11:30	100766	180095	
gamma-BHC (Lindane)	0.025	U	0.050	0.025	1	11/16/09	11/18/09 11:30	100766	180095	
gamma-Chlordane	0.025	U	0.050	0.025	1	11/16/09	11/18/09 11:30	100766	180095	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
Decachlorobiphenyl	79	40-140	11/18/09 11:30		
Tetrachloro-m-xylene	70	40-140	11/18/09 11:30		

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Water

Service Request: R0906477
Date Analyzed: 11/18/09

Lab Control Sample Summary
Organochlorine Pesticides by Gas Chromatography

Analytical Method: 8081A
Prep Method: EPA 3510C

Units: µg/L
Basis: NA

Extraction Lot: 100766

Analyte Name	Lab Control Sample RQ0911458-02 Result	Expected	% Rec		Duplicate Lab Control Sample RQ0911458-03 Result	Expected	% Rec		% Rec Limits	RPD	RPD Limit
4,4'-DDD	**0.184**	0.200	92		**0.187**	0.200	93		50 - 130	1	30
4,4'-DDE	**0.170**	0.200	85		**0.172**	0.200	86		50 - 130	1	30
4,4'-DDT	**0.181**	0.200	90		**0.180**	0.200	90		50 - 130	0	30
Aldrin	**0.141**	0.200	71		**0.140**	0.200	70		50 - 130	1	30
Dieldrin	**0.180**	0.200	90		**0.184**	0.200	92		50 - 130	2	30
Endosulfan I	**0.186**	0.200	93		**0.185**	0.200	92		50 - 130	0	30
Endosulfan II	**0.185**	0.200	92		**0.186**	0.200	93		50 - 130	1	30
Endosulfan Sulfate	**0.187**	0.200	93		**0.189**	0.200	95		50 - 130	1	30
Endrin	**0.187**	0.200	94		**0.189**	0.200	95		50 - 130	1	30
Endrin Aldehyde	**0.0513**	0.200	26	*	**0.0485**	0.200	24	*	50 - 130	6	30
Endrin Ketone	**0.195**	0.200	97		**0.196**	0.200	98		50 - 130	1	30
Heptachlor	**0.163**	0.200	82		**0.163**	0.200	81		50 - 130	0	30
Heptachlor Epoxide	**0.166**	0.200	83		**0.169**	0.200	84		50 - 130	1	30
Hexachlorobenzene	**0.291**	0.500	58		**0.295**	0.500	59		50 - 130	1	30
Methoxychlor	**0.944**	1.00	94		**0.963**	1.00	96		50 - 130	2	30
alpha-BHC	**0.169**	0.200	84		**0.172**	0.200	86		50 - 130	2	30
alpha-Chlordane	**0.164**	0.200	82		**0.166**	0.200	83		50 - 130	1	30
beta-BHC	**0.165**	0.200	82		**0.169**	0.200	84		50 - 130	2	30
delta-BHC	**0.154**	0.200	77		**0.158**	0.200	79		50 - 130	2	30
gamma-BHC (Lindane)	**0.165**	0.200	83		**0.168**	0.200	84		50 - 130	2	30
gamma-Chlordane	**0.165**	0.200	83		**0.167**	0.200	84		50 - 130	1	30

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Northgate Environmental	**Service Request:**	R0906477
Project:	Tronox LLC Henderson/2027.001	**Date Collected:**	11/11/09 1335
Sample Matrix:	Water	**Date Received:**	11/12/09
Sample Name:	M-122B		
Lab Code:	R0906477-001	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed
Alkalinity as CaCO3, Total	SM 2320 B	**183**		mg/L	2.0	0.3	1	NA	11/20/09 08:42
Ammonia as Nitrogen	350.1	**0.061**		mg/L	0.050	0.007	1	NA	11/23/09 12:38
Anion-Cation Balance Difference	SM 1030 E	**0.505**		Percent			1	NA	12/22/09
Bicarbonate Alkalinity as CaCO3	SM 2320 B	**183**		mg/L	2.0	0.3	1	NA	11/20/09 08:42
Bromide	9056	**1.1**		mg/L	1.0	0.2	10	NA	11/12/09 14:12
Calculated TDS/EC Ratio	SM 1030 E	**0.796**		NONE			1	NA	12/22/09
Carbon, Total Organic (TOC)	9060	**2.6**		mg/L	1.0	0.1	1	NA	11/18/09 18:37
Carbon, Total Organic (TOC)	9060	**2.3**		mg/L	1.0	0.1	1	NA	11/18/09 18:45
Carbon, Total Organic (TOC)	9060	**2.2**		mg/L	1.0	0.1	1	NA	11/18/09 18:54
Carbon, Total Organic (TOC)	9060	**2.1**		mg/L	1.0	0.1	1	NA	11/18/09 18:29
Carbon, Total Organic (TOC), Average	9060	**2.3**		mg/L	1.0	0.1	1	NA	11/18/09 18:29
Carbonate Alkalinity as CaCO3	SM 2320 B	0.3	U	mg/L	2.0	0.3	1	NA	11/20/09 08:42
Chloride	9056	**406**		mg/L	20	5	100	NA	11/18/09 06:00
Chromium, Hexavalent, Dissolved	218.6	**0.044**		mg/L	0.010	0.004	1	NA	11/17/09 12:12
Conductivity	120.1	**4810**		µMHOS/cm	0.050		1	NA	11/12/09 14:35
Conductivity Ratio	SM 1030 E	**1.045**		NONE			1	NA	12/22/09
Cyanide, Total	9012A	0.005	U	mg/L	0.010	0.005	1	11/24/09	11/24/09 14:16
Hydroxide Alkalinity as CaCO3	SM 2320 B	0.3	U	mg/L	2.0	0.3	1	NA	11/20/09 08:42
Measured TDS/EC Ratio	SM 1030 E	**0.898**		NONE			1	NA	12/22/09
Nitrate as Nitrogen	9056	**18.1**		mg/L	0.50	0.04	10	NA	11/12/09 14:12
Nitrite as Nitrogen	353.2	**0.021**		mg/L	0.010	0.007	1	NA	11/12/09 16:06
pH	9040B	**7.27**		pH Units			1	NA	11/12/09 14:35
Phosphorus, Total	365.1	**0.060**		mg/L	0.050	0.005	1	11/18/09	11/19/09 10:11
Solids, Total Dissolved	SM 2540 C	**4320**		mg/L	31	17	1	NA	11/17/09 11:10
Solids, Total Suspended (TSS)	SM 2540 D	**122**		mg/L	1.7		1	NA	11/16/09 13:30
Sulfate	9056	**2090**		mg/L	80	18	400	NA	11/18/09 06:15
Surfactants	SM 5540 C	**0.006**	J	mg/L	0.020	0.005	1	NA	11/12/09 08:56
TDS Ratio	SM 1030 E	**1.128**		NONE			1	NA	12/22/09

Comments:

M-122B

Water Type	$Ca\text{-}SO_4$		
Dissolved Solids	4318.8 mg/kg	4320 mg/L	Measured
Density	1.0003 g/cm^3		Calculated
Conductivity	4810 µmho/cm		Measured
Hardness (as $CaCO_3$)			
Total	2237.8 mg/kg	2238.5 mg/L	Calculated
Carbonate	300.1	300.18	
Non-Carbonate	1937.7	1938.3	

Primary Tests

Anion-Cation Balance		
Anions	58.4	
Cations	59	
% Difference	0.505	OK
Measured TDS = Calculated TDS		
Measured	4318.790	
Calculated	3827.057	
Ratio	1.128	OK
Measured EC = Calculated EC		
Measured	4810.000	
Calculated	4601.246	
Ratio	1.045	OK

Secondary Tests

Measured EC and Ion Sums:		
Anions	1.213549	Not within preferred range (0.9-1.1)
Cations	1.225878	Not within preferred range (0.9-1.1)
Calculated TDS to EC ratio	0.796	Not within preferred range (0.55-0.7)
Measured TDS to EC ratio	0.898	Not within preferred range (0.55-0.7)

Organic Mass Balance

DOC ≥ Sum of Organics

DOC unavailable

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Northgate Environmental	**Service Request:**	R0906477
Project:	Tronox LLC Henderson/2027.001	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank		
Lab Code:	R0906477-MB	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed
Alkalinity as CaCO3, Total	SM 2320 B	**0.5**	J	mg/L	2.0	0.3	1	NA	11/20/09 08:42
Ammonia as Nitrogen	350.1	0.007	U	mg/L	0.050	0.007	1	NA	11/23/09 11:28
Bicarbonate Alkalinity as CaCO3	SM 2320 B	**0.5**	J	mg/L	2.0	0.3	1	NA	11/20/09 08:42
Bromide	9056	0.02	U	mg/L	0.10	0.02	1	NA	11/12/09 08:16
Carbon, Total Organic (TOC)	9060	0.1	U	mg/L	1.0	0.1	1	NA	11/18/09 14:28
Carbon, Total Organic (TOC)	9060	0.1	U	mg/L	1.0	0.1	1	NA	11/18/09 14:36
Carbon, Total Organic (TOC)	9060	0.1	U	mg/L	1.0	0.1	1	NA	11/18/09 14:44
Carbon, Total Organic (TOC)	9060	0.1	U	mg/L	1.0	0.1	1	NA	11/18/09 14:54
Carbonate Alkalinity as CaCO3	SM 2320 B	0.3	U	mg/L	2.0	0.3	1	NA	11/20/09 08:42
Chloride	9056	0.05	U	mg/L	0.20	0.05	1	NA	11/18/09 05:32
Chromium, Hexavalent, Dissolved	218.6	0.004	U	mg/L	0.010	0.004	1	NA	11/17/09 10:18
Cyanide, Total	9012A	0.005	U	mg/L	0.010	0.005	1	11/24/09	11/24/09 14:08
Hydroxide Alkalinity as CaCO3	SM 2320 B	0.3	U	mg/L	2.0	0.3	1	NA	11/20/09 08:42
Nitrate as Nitrogen	9056	0.004	U	mg/L	0.050	0.004	1	NA	11/12/09 08:16
Nitrite as Nitrogen	353.2	0.007	U	mg/L	0.010	0.007	1	NA	11/12/09 16:06
Phosphorus, Total	365.1	0.005	U	mg/L	0.050	0.005	1	11/18/09	11/19/09 09:47
Solids, Total Dissolved	SM 2540 C	6	U	mg/L	10	6	1	NA	11/17/09 11:10
Solids, Total Suspended (TSS)	SM 2540 D	1.0	U	mg/L	1.0		1	NA	11/16/09 13:30
Sulfate	9056	0.05	U	mg/L	0.20	0.05	1	NA	11/18/09 05:32
Surfactants	SM 5540 C	0.005	U	mg/L	0.020	0.005	1	NA	11/12/09 08:56

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Water

Service Request: R0906477
Date Analyzed: 11/12/09 - 11/24/09

Lab Control Sample Summary
General Chemistry Parameters

Units: mg/L
Basis: NA

Analyte Name	Method	Lab Control Sample R0906477-LCS1 Result	Expected	% Rec	% Rec Limits
Ammonia as Nitrogen	350.1	**0.495**	0.500	99	90 - 110
Bromide	9056	**0.991**	1.00	99	90 - 110
Carbon, Total Organic (TOC)	9060	**9.05**	10.0	91	86 - 117
Carbon, Total Organic (TOC)	9060	**9.64**	10.0	96	86 - 117
Carbon, Total Organic (TOC)	9060	**9.95**	10.0	100	86 - 117
Carbon, Total Organic (TOC)	9060	**9.96**	10.0	100	86 - 117
Chloride	9056	**1.89**	2.00	95	90 - 110
Chromium, Hexavalent, Dissolved	218.6	**0.193**	0.200	97	90 - 110
Cyanide, Total	9012A	**0.107**	0.100	107	85 - 115
Nitrite as Nitrogen	353.2	**0.250**	0.250	100	90 - 110
Phosphorus, Total	365.1	**0.818**	0.800	102	90 - 110
Solids, Total Dissolved	SM 2540 C	**895**	913	98	80 - 120
Solids, Total Suspended (TSS)	SM 2540 D	**210**	215	98	80 - 120
Sulfate	9056	**1.82**	2.00	91	90 - 110
Surfactants	SM 5540 C	**0.0208**	0.020	104	75 - 125
Alkalinity as CaCO3, Total	SM 2320 B	**18.1**	20.0	90	90 - 108
Carbon, Total Organic (TOC), Average	9060	**9.65**	10.0	97	86 - 117
Nitrate as Nitrogen	9056	**0.976**	1.00	98	90 - 110

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Northgate Environmental	**Service Request:**	R0906477
Project:	Tronox LLC Henderson/2027.001	**Date Analyzed:**	11/12/09 - 11/24/09
Sample Matrix:	Water		

Lab Control Sample Summary
General Chemistry Parameters

Units: mg/L
Basis: NA

Analyte Name	Method	Lab Control Sample R0906477-LCS2 Result	Expected	% Rec	% Rec Limits
Cyanide, Total	9012A	**0.410**	0.400	102	85 - 115
Surfactants	SM 5540 C	**0.340**	0.350	97	75 - 125

Comments:

Name	Unit	M-122B
Sample ID	text	M-122B
LIMs ID	text	R0906477-001
Calcium	µg/L	626000
Magnesium	µg/L	164000
Potassium	µg/L	8390
Sodium	µg/L	322000
Chlorate	µg/L	5040
Perchlorate	µg/L	5540
Bicarbonate	mg/L	183
Carbonate	mg/L	ND
Chloride	mg/L	406
Conductivity	µmho/cm	4810
Fluoride	mg/L	
Hydroxide	mg/L	ND
Nitrate	mg/L	18.1
Phosphorus	mg/L	0.06
Dissolved Solids	mg/L	4320
Sulfate	mg/L	2090

Columbia Analytical Services™ 1 Mustard Street, Suite 250, Rochester, NY 14609-6925 | 585.288.5380 | www.caslab.com

December 22, 2009

Mr. Frank Hagar
Northgate Environmental
1100 Quail Street
Suite 102
Newport Beach, CA 92660

Re: Tronox LLC Henderson #2027.001
Service Request #R0906477

Dear Mr. Hagar:

Enclosed is the analytical data report for the above referenced facility. A total of two samples were received by our laboratory on November 12, 2009.

Any problems encountered with this project are addressed in a case narrative section which is presented later in this report.

This report consists of two (2) packages: the sample data package and the sample data summary package. All data presented in this package has been reviewed prior to report submission. If you should have any questions or concerns, please contact me at (585) 288-5380.

Thank you for your continued use of our services.

Sincerely,
COLUMBIA ANALYTICAL SERVICES

Janice M. Jaeger
Project Chemist

enc.

cc: Ms. Cindy Arnold
Northgate Environmental
2501 Geigel Avenue
Orlando, FL 32806

This report contains a total of 896 pages.

SDG NARRATIVE

CASE NARRATIVE

COMPANY: Northgate Environmental
Tronox LLC Henderson Project #2027.001
SERVICE REQUEST #: R0906477

Northgate samples were collected on 11/11/09 and received at CAS on 11/12/09 in good condition. Columbia Analytical Services' (CAS) reporting limit has been expressed as the Method Reporting Limit (MRL) rather than the Practical Quantitation Limit (PQL). At the client's request, all results have been reported to the Method Detection Limit (MDL) where an MDL is performed on that parameter. The MDL reported for the Alkalinity Carbonate, Alkalinity Carbonate and Alkalinity Hydroxide is the Alkalinity MDL. The software used for the 1030E calculations is Rockware AqQA. All data has been checked and verified.

INORGANICS

One water sample was analyzed for a site specific list of inorganics. Please see attached data pages for method numbers.

Site specific QC was not requested for these samples. All Blank spike recoveries were within limits except Nitrite on the 10/31/09 LCS was outside limits low. EB103009-GWA4 was reanalyzed outside the recommended holding time of 48 hours under a compliant LCS. Both sets of data have been reported. All outlying QC has been flagged with an "*".

The Laboratory blanks associated with these analyses were free of contamination except the 11/20/09 blank had a low level hit for Alkalinity and Bicarbonate alkalinity. All affected data has been flagged with a "B".

All samples were analyzed within holding time.

No other analytical or QC problems were encountered.

VOLATILE ORGANICS

Two water samples were analyzed for a site specific list of Volatiles by Methods 5030/8260B from SW-846.

All the initial and continuing calibration criteria were met for all analytes.

All internal standard areas were within QC limits.

All surrogate standard recoveries were within Tronox limits.

Site specific QC was not requested for these samples. All Reference spike recoveries were within Tronox limits.

The Laboratory blanks associated with these samples were free of contamination except for Hexachlorobutadiene on the 11/19/09 blank. No data was affected.

All samples were analyzed within required holding times.

No other analytical or QC problems were encountered.

SEMIVOLATILE ORGANICS

One water sample was analyzed for a site specific list of Semivolatiles by method 8270C low level from SW-846.

All the initial and continuing calibration criteria were met for all analytes.

All internal standard areas were within QC limits.

All surrogate standard recoveries were within Tronox limits.

Site specific QC was not requested for these samples. All Blank spike/Blank spike duplicate recoveries were within Tronox limits except Pyridine and 1,4-Dioxane were outside limits on the 11/17/09 LCS/LCSD. The outliers were within 10-150%. All RPD's were within limits.

The Laboratory Blanks associated with these analyses were free of contamination.

All samples were extracted and analyzed within holding times.

No other analytical or QC problems were encountered.

PESTICIDES

One water sample was analyzed for a site specific list of Pesticides by method 8081 from SW-846.

All the initial and continuing calibration criteria were met for all analytes.

All surrogate standard recoveries were within Tronox limits.

Site specific QC was not requested for these samples. All Blank spike/Blank spike duplicate recoveries were within limits except Endrin aldehyde and has been flagged with an "*". The outliers were not within 30-150%. All data is possibly biased low for Endrin aldhyde. All RPD's were within limits.

The Laboratory Blanks associated with these analyses were free of contamination.

All samples were extracted and analyzed within required holding times.

No other analytical or QC problems were encountered.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the details conditioned above. Release of the data contained in this hard copy data package have by authorized by the Laboratory Manager or his designee, as verified by the following signature.

CAS ASP/CLP Batching Form/Login Sheet

Client Proj #: 2027.001	Batch Complete: Yes		Date Revised:
Submission: R0906477	Diskette Requested: Yes		Date Due: 12/3/09
Client: Northgate Environmental	Date: 11/12/09		Protocol: SW846
Client Rep: JJAEGER	Custody Seal: Present/Absent:		Shipping No.:
Project: Tronox LLC Henderson	Chain of Custody: Present/Absent:		SDG #: M-122B

CAS Job #	Client/EPA ID	Matrix	Requested Parameters	Date Sampled	Date Received	pH (Solids)	% Solids	Remarks Sample Condition
R0906477-001	M-122B	Water	8260B, 120.1, SM 2320 B, 6020, 8081A, 7470A, 9056, 9040B, 353.2, 9012A, 314.0, 218.6, SM 2540 C, 8270C, SM 5540 C, 365.1, 350.1, 300.1, SM 2540 D, 9060, 6010B LL, SM 1030 E	11/11/09	11/12/09			
R0906477-002	M-122BDISS	Water	6010B, 6020, 7470A	11/11/09	11/12/09			
R0906477-003	TB111109-GW1	Water	8260B	11/11/09	11/12/09			

Folder Comments:

Columbia Analytical Services™

REPORT QUALIFIERS

U	Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.
J	Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Arclors).
B	Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.
E	Inorganics- Concentration is estimated due to the serial dilution was outside control limits.
E	Organics- Concentration has exceeded the calibration range for that specific analysis.
D	Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.
*	Indicates that a quality control parameter has exceeded laboratory limits.
#	Spike was diluted out.
+	Correlation coefficient for MSA is <0.995.
N	Inorganics- Matrix spike recovery was outside laboratory limits.
N	Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.
S	Concentration has been determined using Method of Standard Additions (MSA).
W	Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.
P	Pesticide/Aroclors: Concentration >40% (25% for CLP) difference between the two GC columns.
C	Confirmed by GC/MS
Q	DoD reports: indicates a pesticide/Aroclor is not confirmed (≥100% Difference between two GC columns).
X	See Case Narrative for discussion.

ACCREDITED IN ACCORDANCE WITH nelac

CAS/Rochester Lab ID # for State Certifications[1]

NELAP Accredited
Delaware Accredited
Connecticut ID # PH0556
Florida ID # E87674
Illinois ID #200047
Maine ID #NY0032
Nebraska Accredited
Navy Facilities Engineering Service Center Approved
Nevada ID # NY-00032
New Jersey ID # NY004
New York ID # 10145
New Hampshire ID # 294100 A/B
Pennsylvania ID# 68-786
Rhode Island ID # 158
West Virginia ID # 292

[1] Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable, except as noted in the laboratory case narrative provided. For a specific list of accredited analytes, refer to the certifications section at www.caslab.com.

CHAINS OF CUSTODY

INTERNAL CHAINS

northgate
environmental management, inc.
1100 Quail Street, Suite 102, Newport Beach, CA 92660
(949) 260-9293

CHAIN-OF-CUSTODY / Analytical Request Document

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COC No. 2027.001.01143
Page: 1 of 2
Cooler # ____ of ____

Collection Area: III

Required Ship to Lab:		Required Project Information:		Required Invoice Information:				TAT: Standard 30 day	X	Rush		Mark One
Lab Name:	COLUMBIA ANALYTICAL SERVICES, INC.	Site ID #:	TRONOX LLC. HENDERSON	Send Invoice to:	Susan Crowley Tronox LLC			If Rush, Date due				
Address:	1 Mustard Street, Suite 250	Project #	2027.001	Address:	PO Box 55			QC level Required: Standard		Special	EPA Stage 4	Mark one
Rochester, NY 14609		Site Address	560 W. Lake Mead Drive	City/State	Henderson, NV 89009	Phone #:	(949)260-9293	NJ Reduced Deliverable Package?				
Lab PM:	Janice Jaeger	City	Henderson	State	NV	Reimbursement project?	X	Non-reimbursement project?		Mark one		
Phone/Fax:	(585)288-5380	Site PM Name	Derrick Willis	Send EDD to	Frank Hagar Northgate Environmental Management, Inc frank.hagar@ngem.com			MA MCP Cert?		CT RCP Cert?		Mark One
Lab PM email	jjaeger@caslab.com	Phone/Fax:	949-375-7004	CC Hardcopy report to	PDF Electronic Version Only			Lab Project ID (lab use)				
Applicable Lab Quote #:		Site PM Email:	derrick.willis@ngem.com	CC Hardcopy report to	see additional comments below							

Valid Matrix Codes
MATRIX: DRINKING WATER WP; GROUND WATER WG; WASTE WATER LF; FREE PRODUCT BO; SOIL SW; OIL AA; WIPE AE; AMBIENT AIR; SVE AIR; SOIL GAS
MATRIX: WATER W; WATER (SURFACE) WS; WATER (QC) WQ; SLUDGE OIL SL; RINSEATE WH; OTHER QT; ANIMAL TISSUE TA

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / ,-) Samples IDs MUST BE UNIQUE)	MATRIX CODE	SAMPLE TYPE G=GRAB C=COMP	SAMPLE DATE	SAMPLE TIME	#OF CONTAINERS	FIELD FILTERED? (Y/N)	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Requested Analyses: EPA 8260B VOC	EPA 9060 TOC	EPA 8270C SVOC	EPA 8081 OCP	EPA 6010B/6020	EPA 314.0 Perchlorate	EPA 9056 Chloride	EPA 218.6 Hex Chrom	Comments/Lab Sample I.D.
1	M-122B	WG	G	11/11/09	1335	3	N				X					X								3 x 40 ml VOAs
2	M-122B	WG	G			2	N		X								X							2 x 40 ml VOAs
3	M-122B	WG	G			2	N	X											X					2 x 1 L Amber Glass
4	M-122B	WG	G			2	N	X										X						2 x 1 L Amber Glass
5	M-122B	WG	G			1	N			X										X				500 ml Plastic
6	M-122BDISS	WG	G			1	Y			X										X				500 ml Plastic
7	M-122B	WG	G			1	N	X													X			250 ml Plastic
8	M-122B	WG	G			1	N								X							X		250 ml Amber Glass
9	M-122B	WG	G			1	Y								X								X	125 ml Plastic
10	TB111109-GW1	WG	G	11/11/09	1300	2	N				X					X								2x 40ml VOAs
11	JW0																							
12																								

Additional Comments/Special Instructions:
Omit As and Se from Metals 6010/6020
All PDF reports and EDDs will be uploaded to:
Northgate Environmental Management, Inc.
FTP site address provided to labs
Notifications provided to:
cindy.arnold@ngem.com
frank.hagar@ngem.com

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
[signature]	11/11	1500	[signature] GBS	11/11	1500
[signature] GBS	11/11	1645	[signature] CAS	11/12/09	0845

Sample Receipt Conditions			
	Y / N	Y / N	Y / N
	Y / N	Y / N	Y / N
	Y / N	Y / N	Y / N
	Y / N	Y / N	Y / N
Temp in C°	Samples on ice?	Sample intact?	Trip Blank?

SHIPPING METHOD: (mark as appropriate) UPS COURIER FEDEX US MAIL

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Josh W Otis
SIGNATURE of SAMPLER: [signature]
DATE Signed 11/11/09 Time: 1430

R0906477
Northgate Environmental
Tronox LLC Henderson

northgate
environmental management, inc.

1100 Quail Street, Suite 102, Newport Beach, CA 92660
(949) 260-9293

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COC No. 2027.001.01142
Page: 2 of 2
Cooler # ____ of ____

Collection Area: III

Required Ship to Lab:

Lab Name:	COLUMBIA ANALYTICAL SERVICES, INC.
Address:	1 Mustard Street, Suite 250
	Rochester, NY 14609
Lab PM:	Janice Jaeger
Phone/Fax:	(585)288-5380
Lab PM email	jjaeger@caslab.com
Applicable Lab Quote #:	

Required Project Information:

Site ID #:	TRONOX LLC. HENDERSON
Project #	2027.001
Site Address	560 W. Lake Mead Drive
City	Henderson
State	NV
Site PM Name	Derrick Willis
Phone/Fax:	949-375-7004
Site PM Email:	derrick.willis@ngem.com

Required Invoice Information:

Send Invoice to:	Susan Crowley Tronox LLC
Address:	PO Box 55
City/State	Henderson, NV 89009
Phone #:	(949)260-9293
Reimbursement project?	X
Non-reimbursement project?	Mark one
Send EDD to	Frank Hagar Northgate Environmental Management, Inc frank.hagar@ngem.com
CC Hardcopy report to	PDF Electronic Version Only
CC Hardcopy report to	see additional comments below

TAT: Standard 30 day	X	Rush		Mark One	
If Rush, Date due					
QC level Required: Standard		Special	EPA Stage 4	Mark one	
NJ Reduced Deliverable Package?					
MA MCP Cert?		CT RCP Cert?		Mark One	
Lab Project ID (lab use)					

Valid Matrix Codes: MATRIX — DRINKING WATER WP; GROUND WATER WG; WASTE WATER LF; FREE PRODUCT SO; SOIL SW; OIL AA; WIPE AE; AMBIENT AIR; SVE AIR; SOIL GAS; WATER W; WATER QC WQ; SLUDGE SL; RINSEATE WX; OTHER OT; ANIMAL TISSUE TA; OIL OIL; BIOTA BT

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / ,-) Samples IDs MUST BE UNIQUE)	MATRIX CODE	SAMPLE TYPE G=GRAB C=COMP	SAMPLE DATE	SAMPLE TIME	#OF CONTAINERS	FIELD FILTERED? (Y/N)	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Requested Analyses: EPA 9012 A Cyanide	EPA 350.1/365.1	EPA 9056/SM 4500C	SM 5540C	SM 2320B Alkalinity	EPA 9045C pH	SM 2540D TSS	Comments/Lab Sample I.D.
1	M-122B	WG	G	11/11/09	1335	1	N					X				X							250 ml Plastic
2	M-122B	WG	G			1	N		X								X						250 ml Plastic
3	M-122B	WG	G			1	N	X										X					250 ml Plastic
4	M-122B	WG	G			1	N	X											X				500 ml Plastic
5	M-122B	WG	G			1	N	X												X			250 ml Plastc
6	M-122B	WG	G			1	N	X													X		125 ml Plastic
7	M-122B	WG	G			1	N	X														X	1 L Plastic
8																							
9	JWO																						
10																							
11																							
12																							

Additional Comments/Special Instructions:

Omit As and Se from Metals 6010/6020
All PDF reports and EDDs will be uploaded to:
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FTP site address provided to labs
Notifications provided to:
cindy.arnold@ngem.com
frank.hagar@ngem.com

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
GBS	11/11	1500	GBS	11/11	1500
GBS	11/11	1645	CAS	11/12/09	0845

Sample Receipt Conditions

	Y / N	Y / N	Y / N
	Y / N	Y / N	Y / N
	Y / N	Y / N	Y / N
	Y / N	Y / N	Y / N
Temp in °C	Samples on Ice?	Sample intact?	Trip Blank?

SHIPPING METHOD (mark as appropriate): UPS COURIER FEDEX / US MAIL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Josh W Otis

SIGNATURE of SAMPLER: Josh W Otis DATE Signed 11/11/09 Time: 1430

R0906477
Northgate Environmental
Tronox LLC Henderson

northgate
environmental management, inc.

1100 Quail Street, Suite 102, Newport Beach, CA 92660
(949) 260-9293

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COC No. 2027.001.01143
Page: 1 of 2
Cooler # ____ of ____

Collection Area: III

Required Ship to Lab:		Required Project Information:		Required Invoice Information:			
Lab Name:	COLUMBIA ANALYTICAL SERVICES, INC.	Site ID #:	TRONOX LLC, HENDERSON	Send invoice to:	Susan Crowley Tronox LLC	TAT: Standard 30 day	X
Address:	1 Mustard Street, Suite 250	Project #	2027.001	Address:	PO Box 55	If Rush, Date due	
Rochester, NY 14609		Site Address	560 W. Lake Mead Drive	City/State	Henderson, NV 89009	Phone #:	(949)260-9293
Lab PM:	Janice Jaeger	City	Henderson	State	NV	Reimbursement project?	X
Phone/Fax:	(585)288-5380	Site PM Name	Derrick Willis	Send EDD to	Frank Hagar Northgate Environmental Management, Inc frank.hagar@ngem.com		
Lab PM email	jjaeger@caslab.com	Phone/Fax:	949-375-7004	CC Hardcopy report to	PDF Electronic Version Only		
Applicable Lab Quote #:		Site PM Email:	derrick.willis@ngem.com	CC Hardcopy report to	see additional comments below		

Rush		Mark One
QC level Required: Standard		Special
EPA Stage 4		Mark one
NJ Reduced Deliverable Package?		
MA MCP Cert?		CT RCP Cert?
Mark One		

Lab Project ID (lab use)

Valid Matrix Codes: DRINKING WATER (WP), GROUND WATER (WG), WASTE WATER (LF), FREE PRODUCT (SO), SOIL (SW), OIL (AA), WIPE (AE), AMBIENT AIR, SVE AIR, SOIL GAS, WATER (W), SURFACE WATER (WS), WATER QC (WQ), SLUDGE (SL), RINSEATE (WH), OTHER (OT), ANIMAL TISSUE (TA)

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / ,-) Samples IDs MUST BE UNIQUE)	MATRIX CODE	SAMPLE TYPE G=GRAB C=COMP	SAMPLE DATE	SAMPLE TIME	#OF CONTAINERS	FIELD FILTERED? (Y/N)	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Requested Analyses: EPA 8260B VOC	EPA 9060 TOC	EPA 8270C SVOC	EPA 8081 OCP	EPA 6010B/6020	EPA 314.0 Perchlorate	EPA 9056 Chlorate	EPA 218.6 Hex Chrom	Comments/Lab Sample I.D.
1	M-122B	WG	G	11/11/09	1335	3	N				X					X								3 x 40 ml VOAs
2	M-122B	WG	G			2	N		X								X							2 x 40 ml VOAs
3	M-122B	WG	G			2	N	X										X						2 x 1 L Amber Glass
4	M-122B	WG	G			2	N	X											X					2 x 1 L Amber Glass
5	M-122B	WG	G			1	N			X										X				500 ml Plastic
6	M-122BDISS	WG	G			1	Y			X										X				500 ml Plastic
7	M-122B	WG	G			1	N	X													X			250 ml Plastic
8	M-122B	WG	G			1	N								X							X		250 ml Amber Glass
9	M-122B	WG	G			1	Y								X								X	125 ml Plastic
10	TB111109-GW1	WG	G	11/11/09	1300	2	N				X					X								2x 40ml VOAs
11	JWO																							
12																								

Additional Comments/Special Instructions:

Omit As and Se from Metals 6010/6020
All PDF reports and EDDs will be uploaded to:
Northgate Environmental Management, Inc.
FTP site address provided to labs
Notifications provided to:
cindy.arnold@ngem.com
frank.hagar@ngem.com

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
[signature]	11/11	1500	[signature] GBS	11/11	1500
[signature] GBS	11/11	1645	[signature] Mark K Peters	11/12	0950

Sample Receipt Conditions

	Y / N	Y / N	Y / N
	Y / N	Y / N	Y / N
	Y / N	Y / N	Y / N
	Y / N	Y / N	Y / N
	Temp in °C	Samples on Ice?	Sample Intact?	Trip Blank?

SHIPPING METHOD: (mark as appropriate) UPS COURIER FEDEX US MAIL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Josh W Otis

SIGNATURE of SAMPLER: [signature]

DATE Signed 11/11/09 Time: 1430

northgate
environmental management, inc.
1100 Quail Street, Suite 102, Newport Beach, CA 92660
(949) 260-9293

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed and accurate.

COC No. 2027.001.01142
Page: 2 of 2
Cooler # ____ of ____
Collection Area: III

Required Ship to Lab:		Required Project Information:		Required Invoice Information:			
Lab Name:	COLUMBIA ANALYTICAL SERVICES, INC.	Site ID #:	TRONOX LLC. HENDERSON	Send Invoice to:	Susan Crowley Tronox LLC	TAT: Standard 30 day	X
Address:	1 Mustard Street, Suite 250	Project #	2027.001	Address:	PO Box 55	If Rush, Date due	
Rochester, NY 14609		Site Address	560 W. Lake Mead Drive	City/State	Henderson, NV 89009	Phone #:	(949)260-9293
Lab PM:	Janice Jaeger	City	Henderson	State	NV	Reimbursement project?	X
Phone/Fax:	(585)288-5380	Site PM Name	Derrick Willis	Send EDD to	Frank Hagar Northgate Environmental Management, Inc frank.hagar@ngem.com		
Lab PM email	jjaeger@caslab.com	Phone/Fax:	949-375-7004	CC Hardcopy report to	PDF Electronic Version Only		
Applicable Lab Quote #:		Site PM Email:	derrick.willis@ngem.com	CC Hardcopy report to	see additional comments below		

Rush | Mark One | If Rush, Date due | QC level Required: Standard | Special | EPA Stage 4 | Mark one | NJ Reduced Deliverable Package? | MA MCP Cert? | CT RCP Cert? | Mark One | Lab Project ID (lab use)

Valid Matrix Codes: MATRIX — DRINKING WATER (WP), GROUND WATER (WG), WASTE WATER (LF), FREE PRODUCT (GO), SOIL (SW), OIL (AA), WIPE (AE), AMBIENT AIR (SVE AIR), SOIL GAS (SOIL GAS); MATRIX — WATER (W), SURFACE WATER (WS), WATER QC (WQ), OIL, SLUDGE (SL), RINSEATE (WH), OTHER (OT), ANIMAL TISSUE (TA)

ITEM #	SAMPLE ID — One Character per box. (A-Z, 0-9 / ,-) Samples IDs MUST BE UNIQUE	MATRIX CODE	SAMPLE TYPE G=GRAB C=COMP	SAMPLE DATE	SAMPLE TIME	#OF CONTAINERS	FIELD FILTERED? (Y/N)	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Requested Analyses: EPA 9012 A Cyanide	EPA 350.1/365.1	EPA 9056/SM 4500C	SM 5540C	SM 2320B Alkalinity	EPA 9045C pH	SM 2540D TSS	Comments/Lab Sample I.D.
1	M-122B	WG	G	11/11/09	1335	1	N					X				X							250 ml Plastic
2	M-122B	WG	G			1	N		X								X						250 ml Plastic
3	M-122B	WG	G			1	N	X										X					250 ml Plastic
4	M-122B	WG	G			1	N	X											X				500 ml Plastic
5	M-122B	WG	G			1	N	X												X			250 ml Plastic
6	M-122B	WG	G			1	N	X													X		125 ml Plastic
7	M-122B	WG	G			1	N	X														X	1 L Plastic
8																							
9	JWO																						
10																							
11																							
12																							

Additional Comments/Special Instructions:
Omit As and Se from Metals 6010/6020
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Notifications provided to:
cindy.arnold@ngem.com
frank.hagar@ngem.com

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
[signature]	11/11	1500	[signature] GBS	11/11	1500
[signature] GBS	11/11	1605	[signature]	11/12	0950

Sample Receipt Conditions

	Temp in OC	Samples on Ice?	Sample intact?	Trip Blank?
	Y / N	Y / N	Y / N	
	Y / N	Y / N	Y / N	
	Y / N	Y / N	Y / N	
	Y / N	Y / N	Y / N	

SHIPPING METHOD (mark as appropriate): UPS COURIER FEDEX US MAIL

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Josh W Otis
SIGNATURE of SAMPLER: [signature]
DATE Signed: 11/11/09 Time: 1430

Cooler Receipt And Preservation Check Form

Project/Client Northgate Submission Number R0906477

Cooler received on 11/12 by: BD **COURIER:** CAS UPS (FEDEX) VELOCITY CLIENT

1.	Were custody seals on outside of cooler?	(YES)	NO	
2.	Were custody papers properly filled out (ink, signed, etc.)?	(YES)	NO	
3.	Did all bottles arrive in good condition (unbroken)?	(YES)	NO	
4.	Did any VOA vials have significant* air bubbles?	YES	NO	(N/A)
5.	Were **Ice** or **Ice packs** present?	(YES)	NO	
6.	Where did the bottles originate?		CAS/ROC	(CLIENT)
7.	Temperature of cooler(s) upon receipt:	4.0		
	Is the temperature within 0° - 6° C?:	(Yes)	Yes	Yes	Yes	Yes
	If No, Explain Below	No	No	No	No	No

Date/Time Temperatures Taken: 11/12 @ 0850

Thermometer ID: 161 / IR GUN#2 / (IR GUN#3) Reading From: (Temp Blank) / Sample Bottle

If out of Temperature, note packing/ice condition, Client Approval to Run Samples: _____

PC Secondary Review: JHW 11/12/09

Cooler Breakdown: Date: 11/12/09 by: MRP

1.	Were all bottle labels complete (*i.e.* analysis, preservation, etc.)?	(YES)	NO
2.	Did all bottle labels and tags agree with custody papers?	(YES)	NO
3.	Were correct containers used for the tests indicated?	(YES)	NO
4.	Air Samples: Cassettes / Tubes Intact Canisters Pressurized Tedlar® Bags Inflated		(N/A)

Explain any discrepancies: _____

pH	Reagent	YES	NO	Lot Received	Exp
≥12	NaOH				
≤2	HNO_3				
≤2	H_2SO_4				
Residual Chlorine (-)	For TCN and Phenol			If present, contact PM to add ascorbic acid	
	$Na_2S_2O_3$	-	-		
	Zn Aceta	-	-		
	HCl	*	*		

Sample ID	Vol. Added	Lot Added	Final pH

*Not to be tested before analysis – pH tested and recorded by VOAs or GenChem on a separate worksheet

Yes = All samples OK

No = Samples were preserved at lab as listed

PM OK to Adjust: _____

Bottle lot numbers: _____

Other Comments:

PC Secondary Review: JHW 11/16/09 *significant air bubbles are greater than 5-6 mm

Cooler Receipt And Preservation Check Form

Project/Client Henderson Waters Submission Number R0906477

Cooler received on 11/12/09 by: MRP **COURIER:** CAS UPS (FEDEX) VELOCITY CLIENT

1.	Were custody seals on outside of cooler?	(YES)	NO			
2.	Were custody papers properly filled out (ink, signed, etc.)?	(YES)	NO			
3.	Did all bottles arrive in good condition (unbroken)?	(YES)	NO			
4.	Did any VOA vials have significant* air bubbles?	YES	(NO)	N/A		
5.	Were ~~Ice~~ or **Ice packs** present?	(YES)	NO			
6.	Where did the bottles originate?	CAS/ROC, CLIENT				
7.	Temperature of cooler(s) upon receipt:	4.8	5.3°			
	Is the temperature within 0° - 6° C?:	(Yes)	(Yes)	Yes	Yes	Yes
	If No, Explain Below	No	No	No	No	No

Date/Time Temperatures Taken: 11/12/09 @ 10:00

Thermometer ID: 161 / IR GUN#2 / ~~IR GUN#3~~ Reading From: ~~Temp Blank~~ / Sample Bottle

If out of Temperature, note packing/ice condition, Client Approval to Run Samples: _____

PC Secondary Review: JMS 11/12/09

Cooler Breakdown: Date: 11/12/09 by: MRP

1.	Were all bottle labels complete (*i.e.* analysis, preservation, etc.)?	(YES)	NO
2.	Did all bottle labels and tags agree with custody papers?	(YES)	NO
3.	Were correct containers used for the tests indicated?	(YES)	NO
4.	Air Samples: Cassettes / Tubes Intact Canisters Pressurized Tedlar® Bags Inflated		(N/A)

Explain any discrepancies: _____

pH	Reagent	YES	NO	Lot Received	Exp	Sample ID	Vol. Added	Lot Added	Final pH
≥12	NaOH	✓		WC92035I	10/10				
≤2	HNO_3	✓		BD82698C	11/10				
≤2	H_2SO_4	✓		WC920648	10/10				
Residual Chlorine (-)	For TCN and Phenol			If present, contact PM to add ascorbic acid					
	$Na_2S_2O_3$	-	-						
	Zn Aceta	-	-						
	HCl	*	*						

*Not to be tested before analysis – pH tested and recorded by VOAs or GenChem on a separate worksheet

Yes = All samples OK

No = Samples were preserved at lab as listed

PM OK to Adjust: _____

Bottle lot numbers: 100509-2NN, 080009-1FF

Other Comments:

PC Secondary Review: JMS 11/16/09 *significant air bubbles are greater than 5-6 mm

H:\SMODOCS\Cooler Receipt 2.doc

Columbia Analytical Services, Inc.
Chain of Custody Report

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001

Service Request: R0906477

Bottle ID	Tests	Date	Time	Sample Location / User	Disposed On
R0906477-001.01					
	120.1, 9040B				
		11/12/09	0932	SMO / GLAFORCE	
R0906477-001.02					
	8260B				
		11/12/09	0932	SMO / GLAFORCE	
		11/12/09	1312	R-001 / MCARRERA	
		11/19/09	1725	In Lab / FNAEGLER	
		11/19/09	1729	R-001-S10 / FNAEGLER	
R0906477-001.03					
		11/12/09	0932	SMO / GLAFORCE	
		11/12/09	1312	R-001 / MCARRERA	
R0906477-001.04					
		11/12/09	0932	SMO / GLAFORCE	
		11/12/09	1312	R-001 / MCARRERA	
R0906477-001.05					
	8081A				
		11/12/09	0932	SMO / GLAFORCE	
		11/12/09	1313	R-003-EXT / MCARRERA	
		11/16/09	0808	In Lab / DMURPHY	
R0906477-001.06					
		11/12/09	0932	SMO / GLAFORCE	
		11/12/09	1313	R-003-EXT / MCARRERA	
R0906477-001.07					
		11/12/09	0932	SMO / GLAFORCE	
		11/12/09	1313	R-003-EXT / MCARRERA	
R0906477-001.08					
	8270C				
		11/12/09	0932	SMO / GLAFORCE	
		11/12/09	1313	R-003-EXT / MCARRERA	
		11/17/09	0743	In Lab / DMURPHY	
R0906477-001.09					
	300.1				
		11/12/09	0932	SMO / GLAFORCE	
		11/12/09	1312	R-002 / MCARRERA	
		11/12/09	1418	SUBBED / BDOYLE	
		11/13/09	1528	K-Delilah-51 / BTOBIN	
		11/19/09	1449	In Lab / ECROMWELL	
		11/19/09	1908	K-Cart-Delilah / MBLACK	

Columbia Analytical Services, Inc.
Chain of Custody Report

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001

Service Request: R0906477

Bottle ID	Tests	Date	Time	Sample Location / User	Disposed On
		11/20/09	0947	K-Delilah-51 / SDAVIS	
		11/23/09	1912	K-Cart-Delilah / MBLACK	
		11/24/09	0942	K-Delilah-51 / SDAVIS	
R0906477-001.10					
	SM 5540 C				
		11/12/09	0932	SMO / GLAFORCE	
R0906477-001.11					
	SM 2540 D				
		11/12/09	0932	SMO / GLAFORCE	
		11/12/09	1312	R-002 / MCARRERA	
		11/16/09	0932	In Lab / EWOLFE	
		11/16/09	1547	R-002 / EWOLFE	
R0906477-001.12					
	350.1, 365.1				
		11/12/09	0932	SMO / GLAFORCE	
		11/12/09	1312	R-002 / MCARRERA	
		11/18/09	1019	In Lab / SROBINSON	
		11/18/09	1720	R-002 / SROBINSON	
		11/23/09	0909	In Lab / NMEAD	
		11/23/09	1530	R-002 / NMEAD	
R0906477-001.13					
	9012A				
		11/12/09	0932	SMO / GLAFORCE	
		11/12/09	1312	R-002 / MCARRERA	
		11/23/09	0752	In Lab / GNITAJOUPPI	
		11/23/09	1616	R-002 / GNITAJOUPPI	
		11/24/09	0727	In Lab / GNITAJOUPPI	
		11/24/09	0951	R-002 / GNITAJOUPPI	
R0906477-001.14					
	353.2, 9056, SM 2540 C				
		11/12/09	0932	SMO / GLAFORCE	
		11/12/09	1610	R-002 / CSCHRADER	
		11/17/09	1012	In Lab / EWOLFE	
		11/17/09	1629	R-002 / RPAWL	
R0906477-001.16					
	314.0				
		11/12/09	0932	SMO / GLAFORCE	
		11/12/09	1312	R-002 / MCARRERA	
		11/12/09	1418	SUBBED / BDOYLE	
		11/13/09	1528	K-Delilah-51 / BTOBIN	
		11/25/09	0806	Custodian / KSMITH	
		11/25/09	0806	In Lab / ECROMWELL	

Columbia Analytical Services, Inc.
Chain of Custody Report

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001

Service Request: R0906477

Bottle ID	Tests	Date	Time	Sample Location / User	Disposed On
		11/25/09	1639	K-Delilah-51 / SDAVIS	
		12/2/09	1557	In Lab / ECROMWELL	
		12/3/09	0848	K-Delilah-51 / SDAVIS	
R0906477-001.17					
	SM 2320 B				
		11/12/09	0932	SMO / GLAFORCE	
		11/12/09	1312	R-002 / MCARRERA	
		11/20/09	0753	In Lab / KREYNOLDS	
		11/20/09	1411	R-002 / KREYNOLDS	
R0906477-001.19					
	6010B LL, 6020, 7470A				
		11/12/09	0932	SMO / GLAFORCE	
		11/12/09	1312	R-002 / MCARRERA	
		11/12/09	1418	SUBBED / BDOYLE	
		11/13/09	1528	K-Delilah-51 / BTOBIN	
		11/17/09	1419	Custodian / KSMITH	
		11/17/09	1419	In Lab / EJOHNSTONBAUGH	
		11/17/09	1815	K-Delilah-51 / KSMITH	
		11/19/09	0857	Custodian / KSMITH	
		11/19/09	0857	In Lab / MSMITH	
		11/19/09	1316	K-Delilah-51 / KSMITH	
R0906477-001.20					
	9060				
		11/12/09	0932	SMO / GLAFORCE	
		11/12/09	1312	R-002 / MCARRERA	
		11/14/09	0942	In Lab / CSCHRADER	
		11/19/09	1218	R-Dumpster / CSCHRADER	
R0906477-001.21					
		11/12/09	0932	SMO / GLAFORCE	
		11/18/09	1224	In Lab / CSCHRADER	
		11/19/09	1218	R-Dumpster / CSCHRADER	
R0906477-001.23					
	218.6				
		11/12/09	0932	SMO / GLAFORCE	
		11/12/09	1412	R-002 / BDOYLE	
		11/17/09	1123	In Lab / CWOODS	
		11/17/09	1552	R-002 / CWOODS	
R0906477-002.01					
	6010B, 6020, 7470A				
		11/12/09	0932	SMO / GLAFORCE	
		11/12/09	1312	R-002 / MCARRERA	
		11/12/09	1418	SUBBED / BDOYLE	

Columbia Analytical Services, Inc.
Chain of Custody Report

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001

Service Request: R0906477

Bottle ID	Tests	Date	Time	Sample Location / User	Disposed On
		11/13/09	1528	K-Delilah-51 / BTOBIN	
		11/17/09	1419	Custodian / KSMITH	
		11/17/09	1419	In Lab / EJOHNSTONBAUGH	
		11/17/09	1815	K-Delilah-51 / KSMITH	
		11/19/09	0857	Custodian / KSMITH	
		11/19/09	0857	In Lab / MSMITH	
		11/19/09	1316	K-Delilah-51 / KSMITH	
R0906477-003.01					
	8260B				
		11/12/09	1309	SMO / MCARRERA	
		11/12/09	1312	R-001 / MCARRERA	
		11/19/09	1725	In Lab / FNAEGLER	
		11/19/09	1729	R-001-S10 / FNAEGLER	
R0906477-003.02					
		11/12/09	1309	SMO / MCARRERA	
		11/12/09	1312	R-001 / MCARRERA	

VOLATILE ORGANICS

QC SUMMARY

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Water

Service Request: R0906477
Date Analyzed: 11/19/09

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Units: µg/L
Basis: NA

Analysis Lot: 180234

Analyte Name	Lab Control Sample RQ0912216-02 Result	Expected	% Rec	% Rec Limits
1,1,1,2-Tetrachloroethane	**20.7**	20.0	103	75 - 125
1,1,1-Trichloroethane (TCA)	**18.9**	20.0	94	75 - 125
1,1,2,2-Tetrachloroethane	**21.1**	20.0	106	75 - 125
1,1,2-Trichloroethane	**19.6**	20.0	98	75 - 125
1,1-Dichloroethane (1,1-DCA)	**17.9**	20.0	90	75 - 125
1,1-Dichloroethene (1,1-DCE)	**20.3**	20.0	101	75 - 125
1,1-Dichloropropene	**19.4**	20.0	97	75 - 125
1,2,3-Trichlorobenzene	**21.7**	20.0	108	75 - 125
1,2,3-Trichloropropane	**20.4**	20.0	102	75 - 125
1,2,4-Trichlorobenzene	**21.1**	20.0	105	75 - 125
1,2,4-Trimethylbenzene	**21.8**	20.0	109	75 - 125
1,2-Dibromo-3-chloropropane (DBCP)	**18.7**	20.0	93	75 - 125
1,2-Dibromoethane	**20.5**	20.0	102	75 - 125
1,2-Dichlorobenzene	**21.4**	20.0	107	75 - 125
1,2-Dichloroethane	**18.4**	20.0	92	75 - 125
1,2-Dichloropropane	**19.2**	20.0	96	75 - 125
1,3,5-Trimethylbenzene	**22.1**	20.0	110	75 - 125
1,3-Dichlorobenzene	**21.3**	20.0	106	75 - 125
1,3-Dichloropropane	**20.2**	20.0	101	75 - 125
1,4-Dichlorobenzene	**20.5**	20.0	102	75 - 125
2,2-Dichloropropane	**19.1**	20.0	96	75 - 125
2-Butanone (MEK)	**16.6**	20.0	83	75 - 125
2-Chlorotoluene	**21.0**	20.0	105	75 - 125
2-Hexanone	**16.9**	20.0	84	75 - 125
2-Methyl-2-propanol	**383**	400	96	75 - 125
4-Chlorotoluene	**21.9**	20.0	109	75 - 125
4-Isopropyltoluene	**21.6**	20.0	108	75 - 125
4-Methyl-2-pentanone	**15.8**	20.0	79	75 - 125
Acetone	**17.0**	20.0	85	75 - 125
Benzene	**18.7**	20.0	93	75 - 125
Bromobenzene	**21.2**	20.0	106	75 - 125
Bromochloromethane	**19.3**	20.0	97	75 - 125
Bromodichloromethane	**19.6**	20.0	98	75 - 125
Bromoform	**21.2**	20.0	106	75 - 125
Bromomethane	**14.9**	20.0	75	75 - 125
Carbon Tetrachloride	**19.5**	20.0	97	75 - 125

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Water

Service Request: R0906477
Date Analyzed: 11/19/09

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Units: µg/L
Basis: NA

Analysis Lot: 180234

Analyte Name	Lab Control Sample RQ0912216-02 Result	Expected	% Rec	% Rec Limits
Chlorobenzene	**20.3**	20.0	102	75 - 125
Chloroethane	**17.3**	20.0	87	75 - 125
Chloroform	**19.0**	20.0	95	75 - 125
Chloromethane	**15.1**	20.0	76	75 - 125
Dibromochloromethane	**21.2**	20.0	106	75 - 125
Dibromomethane	**19.0**	20.0	95	75 - 125
Dichlorodifluoromethane (CFC 12)	**19.6**	20.0	98	75 - 125
Dichloromethane	**17.1**	20.0	85	75 - 125
Diisopropyl Ether	**18.5**	20.0	92	75 - 125
Ethyl tert-Butyl Ether	**19.1**	20.0	95	75 - 125
Ethylbenzene	**21.3**	20.0	107	75 - 125
Hexachlorobutadiene	**20.8**	20.0	104	75 - 125
Isopropylbenzene (Cumene)	**22.7**	20.0	113	75 - 125
Methyl tert-Butyl Ether	**19.8**	20.0	99	75 - 125
Naphthalene	**19.7**	20.0	98	75 - 125
Styrene	**19.6**	20.0	98	75 - 125
Tetrachloroethene (PCE)	**21.1**	20.0	105	75 - 125
Toluene	**20.1**	20.0	100	75 - 125
Trichloroethene (TCE)	**19.5**	20.0	97	75 - 125
Trichlorofluoromethane (CFC 11)	**19.0**	20.0	95	75 - 125
Vinyl Chloride	**17.5**	20.0	87	75 - 125
cis-1,2-Dichloroethene	**19.3**	20.0	96	75 - 125
cis-1,3-Dichloropropene	**18.4**	20.0	92	75 - 125
m,p-Xylenes	**43.6**	40.0	109	75 - 125
n-Butylbenzene	**20.3**	20.0	101	75 - 125
n-Propylbenzene	**22.6**	20.0	113	75 - 125
o-Xylene	**20.1**	20.0	100	75 - 125
sec-Butylbenzene	**21.4**	20.0	107	75 - 125
tert-Amyl Methyl Ether	**18.6**	20.0	93	75 - 125
tert-Butylbenzene	**21.2**	20.0	106	75 - 125
trans-1,2-Dichloroethene	**19.3**	20.0	97	75 - 125
trans-1,3-Dichloropropene	**17.8**	20.0	89	75 - 125

Comments:

4A

VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

MBLK-1

Lab Name: CAS\ROCH Contract: Northgate

Lab Code: 10145 Case No.: R09-6477 SAS No.: SDG No.: M-122B

Lab File ID: C2476.D Lab Sample ID: RQ0912216-01

Date Analyzed: 11/19/09 Time Analyzed: 16:38

GC Column: DB-624 ID: 0.2 (mm) Heated Purge: (Y/N) N

Instrument ID: MS#10

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	LCS-1	RQ0912216-02	C2474.D	15:24
02	M-122B	R0906477-001|1.0	C2477.D	17:07
03	TB111109-GW1	R0906477-003|1.0	C2478.D	17:37

COMMENTS:

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: CAS\ROCH Contract: Northgate

Lab Code: 10145 Case No.: R09-6477 SAS No.: _____ SDG No.: M-122B

Lab File ID: C1901.D BFB Injection Date: 10/31/09

Instrument ID: MS#10 BFB Injection Time: 10:06

GC Column: DB-624 ID: 0.20 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	20.3
75	30.0 - 60.0% of mass 95	44.6
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.5
173	Less than 2.0% of mass 174	0.8 (1.0)1
174	50.0 - 120.0% of mass 95	80.9
175	5.0 - 9.0% of mass 174	5.9 (7.3)1
176	95.0 - 101.0% of mass 174	79.1 (97.8)1
177	5.0 - 9.0% of mass 176	5.6 (7.1)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

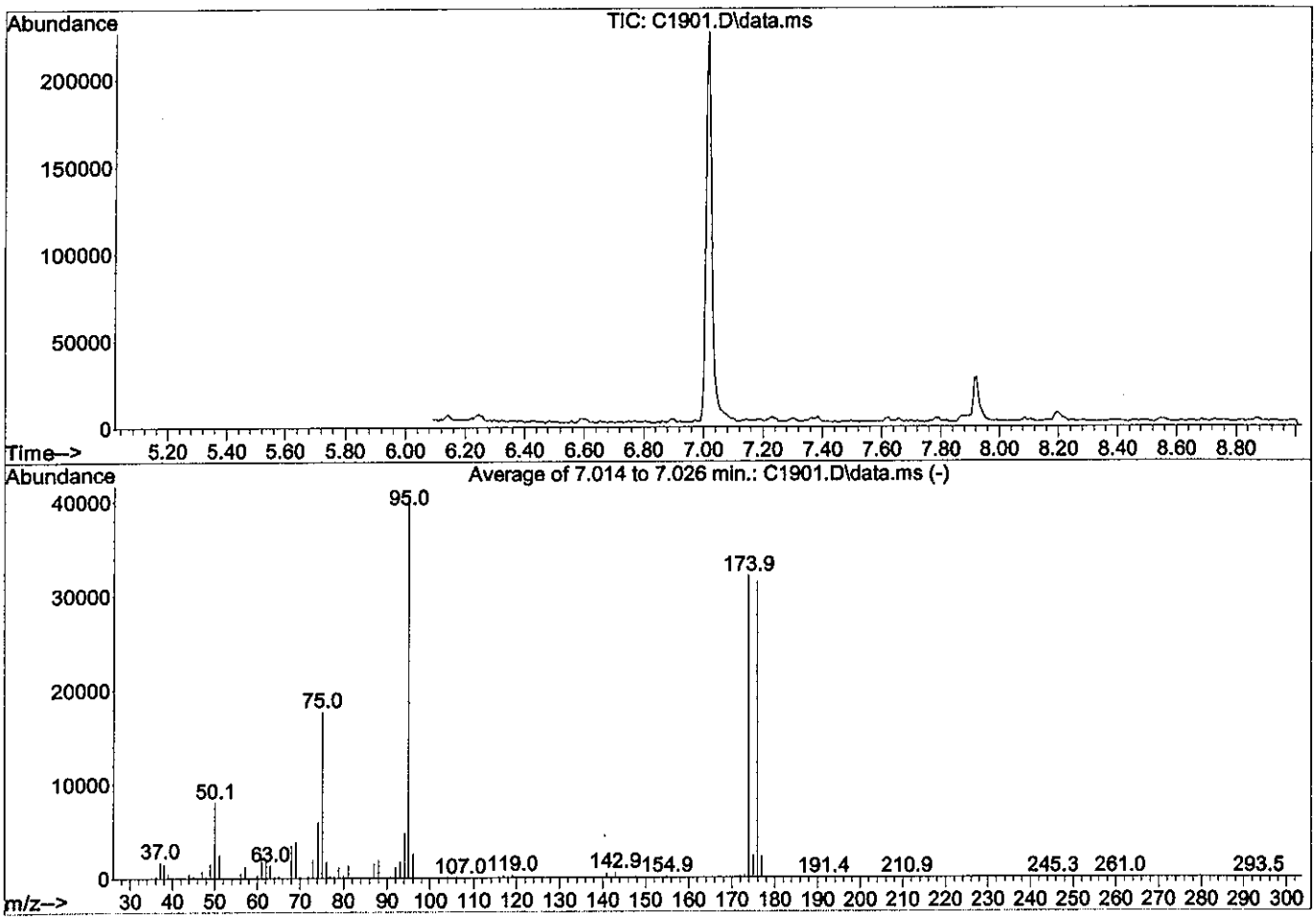
	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	0.5 STD	0.5 PPB STD	C1903.D	10/31/09	11:01
02	1.0 STD	1.0 PPB STD	C1904.D	10/31/09	11:31
03	2.0 STD	2.0 PPB STD	C1905.D	10/31/09	12:01
04	5.0 STD	5.0 PPB STD	C1906.D	10/31/09	12:31
05	10 STD	10.0 PPB STD	C1907.D	10/31/09	13:01
06	50 STD	50.0 PPB STD	C1908.D	10/31/09	13:31
07	100 STD	100.0 PPB STD	C1909.D	10/31/09	14:01
08	150 STD	150.0 PPB STD	C1910.D	10/31/09	14:31
09	200 STD	200.0 PPB STD	C1911.D	10/31/09	15:01

Data Path : J:\ACQUDATA\msvoa10\data\103109\
Data File : C1901.D
Acq On : 31 Oct 2009 10:06 am
Operator : F. Naegler
Sample : TUNE
Misc :
ALS Vial : 1 Sample Multiplier: 1

FW 11/2/09

Integration File: CPD4.P

Method : J:\ACQUDATA\MSVOA10\METHODS\T103009.M
Title : 8260B WATERS
Last Update : Wed Sep 27 14:33:13 2006



AutoFind: Scans 152, 153, 154; Background Corrected with Scan 147

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	20.3	8069	PASS
75	95	30	60	44.6	17693	PASS
95	95	100	100	100.0	39699	PASS
96	95	5	9	6.5	2581	PASS
173	174	0.00	2	1.0	328	PASS
174	95	50	120	80.9	32101	PASS
175	174	5	9	7.3	2335	PASS
176	174	95	101	97.8	31397	PASS
177	176	5	9	7.1	2222	PASS

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: CAS\ROCH Contract: Northgate

Lab Code: 10145 Case No.: R09-6477 SAS No.: SDG No.: M-122B

Lab File ID: C2471.D BFB Injection Date: 11/19/09

Instrument ID: MS#10 BFB Injection Time: 13:49

GC Column: DB-624 ID: 0.20 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	20.3
75	30.0 - 60.0% of mass 95	48.0
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.5
173	Less than 2.0% of mass 174	0.9 (1.1)1
174	50.0 - 120.0% of mass 95	89.9
175	5.0 - 9.0% of mass 174	5.9 (6.5)1
176	95.0 - 101.0% of mass 174	85.4 (95.1)1
177	5.0 - 9.0% of mass 176	4.9 (5.8)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

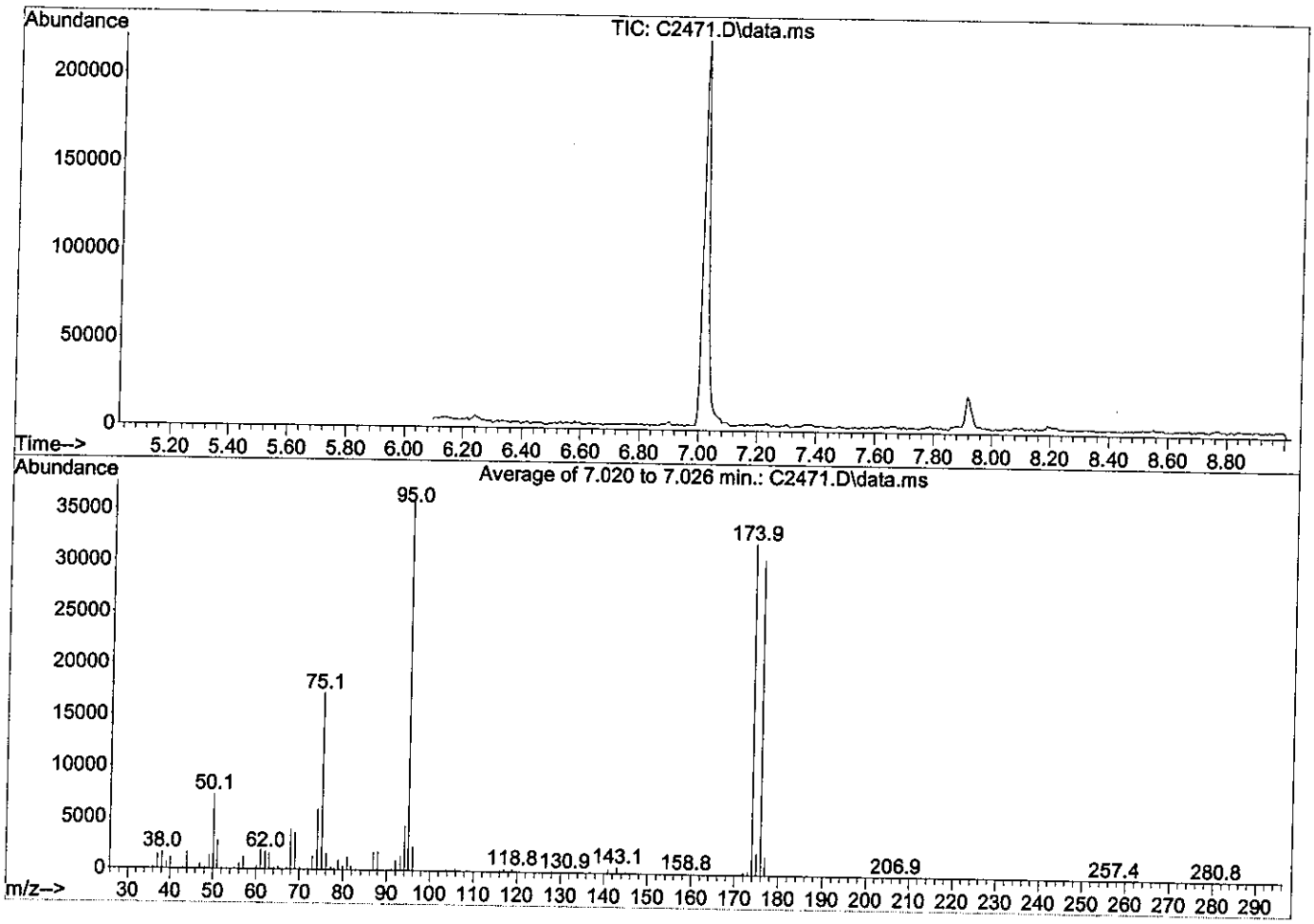
	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD-1	CCV	C2473.D	11/19/09	14:52
02	LCS-1	RQ0912216-02	C2474.D	11/19/09	15:24
03	MBLK-1	RQ0912216-01	C2476.D	11/19/09	16:38
04	M-122B	R0906477-001|1.0	C2477.D	11/19/09	17:07
05	TB111109-GW1	R0906477-003|1.0	C2478.D	11/19/09	17:37

Data Path : J:\ACQUDATA\msvoa10\data\111909\
Data File : C2471.D
Acq On : 19 Nov 2009 1:49 pm
Operator : F. Naegler
Sample : TUNE
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: CPD4.P

FL
12/8/09

Method : J:\ACQUDATA\MSVOA10\METHODS\T103109.M
Title : 8260B WATERS
Last Update : Wed Sep 27 14:33:13 2006



Spectrum Information: Average of 7.020 to 7.026 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	20.3	7270	PASS
75	95	30	60	48.0	17172	PASS
95	95	100	100	100.0	35812	PASS
96	95	5	9	6.5	2317	PASS
173	174	0.00	2	1.0	338	PASS
174	95	50	120	89.9	32180	PASS
175	174	5	9	6.5	2099	PASS
176	174	95	101	95.1	30596	PASS
177	176	5	9	5.8	1765	PASS

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CAS\ROCH Contract: Northgate

Lab Code: 10145 Case No.: R09-6477 SAS No.: SDG No.: M-122B

Lab File ID (Standard): C2473.D Date Analyzed: 11/19/09

Instrument ID: MS#10 Time Analyzed: 14:52

GC Column: DB-624 ID: 0.20 (mm) Heated Purge (Y/N): N

		IS1		IS2		IS3	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	887945	4.43	1395312	5.63	1226892	8.85
	UPPER LIMIT	1775890	3.93	2790624	5.13	2453784	8.35
	LOWER LIMIT	443973	4.93	697656	6.13	613446	9.35
	EPA SAMPLE NO.						
01	LCS-1	895025	4.43	1417570	5.64	1227043	8.85
02	MBLK-1	860078	4.43	1369229	5.64	1177991	8.85
03	M-122B	841899	4.43	1357500	5.64	1156430	8.85
04	TB111109-GW1	816600	4.43	1312725	5.64	1119769	8.85

IS1 = Pentafluorobenzene
IS2 = 1,4-Difluorobenzene
IS3 = d5-Chlorobenzene
IS4 = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column to be used to flag values outside QC limit with an asterisk.
* Values outside of contract required QC limits

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CAS\ROCH Contract: Northgate

Lab Code: 10145 Case No.: R09-6477 SAS No.: SDG No.: M-122B

Lab File ID (Standard): C2473.D Date Analyzed: 11/19/09

Instrument ID: MS#10 Time Analyzed: 14:52

GC Column: DB-624 ID: 0.20 (mm) Heated Purge (Y/N): N

		IS4 AREA	#	RT	#	AREA	#	RT	#	AREA	#	RT	#
	12 HOUR STD	613669		10.85									
	UPPER LIMIT	1227338		10.35									
	LOWER LIMIT	306835		11.35									
	EPA SAMPLE NO.												
01	LCS-1	607658		10.85									
02	MBLK-1	546840		10.85									
03	M-122B	513062		10.85									
04	TB111109-GW	512424		10.85									

IS1 = Pentafluorobenzene
IS2 = 1,4-Difluorobenzene
IS3 = d5-Chlorobenzene
IS4 = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column to be used to flag values outside QC limit with an asterisk.
* Values outside of contract required QC limits

VOLATILE ORGANICS

SAMPLE DATA

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Northgate Environmental	**Service Request:**	R0906477
Project:	Tronox LLC Henderson/2027.001	**Date Collected:**	11/11/09 1335
Sample Matrix:	Water	**Date Received:**	11/12/09
Sample Name:	M-122B	**Units:**	µg/L
Lab Code:	R0906477-001	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
1,1,1,2-Tetrachloroethane	0.18	U	1.0	0.18	1	NA	11/19/09 17:07		180234	
1,1,1-Trichloroethane (TCA)	0.32	U	1.0	0.32	1	NA	11/19/09 17:07		180234	
1,1,2,2-Tetrachloroethane	0.090	U	1.0	0.090	1	NA	11/19/09 17:07		180234	
1,1,2-Trichloroethane	0.20	U	1.0	0.20	1	NA	11/19/09 17:07		180234	
1,1-Dichloroethane (1,1-DCA)	0.14	U	1.0	0.14	1	NA	11/19/09 17:07		180234	
1,1-Dichloroethene (1,1-DCE)	0.37	U	1.0	0.37	1	NA	11/19/09 17:07		180234	
1,1-Dichloropropene	0.21	U	2.0	0.21	1	NA	11/19/09 17:07		180234	
1,2,3-Trichlorobenzene	0.25	U	2.0	0.25	1	NA	11/19/09 17:07		180234	
1,2,3-Trichloropropane	0.30	U	2.0	0.30	1	NA	11/19/09 17:07		180234	
1,2,4-Trichlorobenzene	0.19	U	2.0	0.19	1	NA	11/19/09 17:07		180234	
1,2,4-Trimethylbenzene	0.36	U	2.0	0.36	1	NA	11/19/09 17:07		180234	
1,2-Dibromo-3-chloropropane (DBCP)	0.43	U	5.0	0.43	1	NA	11/19/09 17:07		180234	
1,2-Dibromoethane	0.18	U	1.0	0.18	1	NA	11/19/09 17:07		180234	
1,2-Dichlorobenzene	0.40	U	2.0	0.40	1	NA	11/19/09 17:07		180234	
1,2-Dichloroethane	0.14	U	1.0	0.14	1	NA	11/19/09 17:07		180234	
1,2-Dichloropropane	0.15	U	1.0	0.15	1	NA	11/19/09 17:07		180234	
1,3,5-Trimethylbenzene	0.36	U	2.0	0.36	1	NA	11/19/09 17:07		180234	
1,3-Dichlorobenzene	0.36	U	2.0	0.36	1	NA	11/19/09 17:07		180234	
1,3-Dichloropropane	0.12	U	2.0	0.12	1	NA	11/19/09 17:07		180234	
1,4-Dichlorobenzene	0.34	U	2.0	0.34	1	NA	11/19/09 17:07		180234	
2,2-Dichloropropane	0.20	U	2.0	0.20	1	NA	11/19/09 17:07		180234	
2-Butanone (MEK)	1.0	U	10	1.0	1	NA	11/19/09 17:07		180234	
2-Chlorotoluene	0.38	U	5.0	0.38	1	NA	11/19/09 17:07		180234	
2-Hexanone	0.40	U	10	0.40	1	NA	11/19/09 17:07		180234	
2-Methyl-2-propanol	3.0	U	100	3.0	1	NA	11/19/09 17:07		180234	
4-Chlorotoluene	0.37	U	5.0	0.37	1	NA	11/19/09 17:07		180234	
4-Isopropyltoluene	0.22	U	2.0	0.22	1	NA	11/19/09 17:07		180234	
4-Methyl-2-pentanone	0.34	U	10	0.34	1	NA	11/19/09 17:07		180234	
Acetone	1.6	U	20	1.6	1	NA	11/19/09 17:07		180234	
Benzene	0.18	U	1.0	0.18	1	NA	11/19/09 17:07		180234	
Bromobenzene	0.33	U	2.0	0.33	1	NA	11/19/09 17:07		180234	
Bromochloromethane	0.18	U	2.0	0.18	1	NA	11/19/09 17:07		180234	
Bromodichloromethane	0.17	U	1.0	0.17	1	NA	11/19/09 17:07		180234	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Northgate Environmental	**Service Request:**	R0906477
Project:	Tronox LLC Henderson/2027.001	**Date Collected:**	11/11/09 1335
Sample Matrix:	Water	**Date Received:**	11/12/09
Sample Name:	M-122B	**Units:**	µg/L
Lab Code:	R0906477-001	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Bromoform	0.20	U	1.0	0.20	1	NA	11/19/09 17:07		180234	
Bromomethane	0.40	U	2.0	0.40	1	NA	11/19/09 17:07		180234	
Carbon Tetrachloride	0.36	U	1.0	0.36	1	NA	11/19/09 17:07		180234	
Chlorobenzene	0.26	U	1.0	0.26	1	NA	11/19/09 17:07		180234	
Chloroethane	0.21	U	2.0	0.21	1	NA	11/19/09 17:07		180234	
Chloroform	**2.9**		1.0	0.16	1	NA	11/19/09 17:07		180234	
Chloromethane	0.18	U	2.0	0.18	1	NA	11/19/09 17:07		180234	
Dibromochloromethane	0.11	U	1.0	0.11	1	NA	11/19/09 17:07		180234	
Dibromomethane	0.18	U	1.0	0.18	1	NA	11/19/09 17:07		180234	
Dichlorodifluoromethane (CFC 12)	0.18	U	1.0	0.18	1	NA	11/19/09 17:07		180234	
Dichloromethane	0.13	U	2.0	0.13	1	NA	11/19/09 17:07		180234	
Diisopropyl Ether	0.090	U	1.0	0.090	1	NA	11/19/09 17:07		180234	
Ethyl tert-Butyl Ether	0.12	U	1.0	0.12	1	NA	11/19/09 17:07		180234	
Ethylbenzene	0.42	U	1.0	0.42	1	NA	11/19/09 17:07		180234	
Hexachlorobutadiene	0.27	U	5.0	0.27	1	NA	11/19/09 17:07		180234	
Isopropylbenzene (Cumene)	0.34	U	2.0	0.34	1	NA	11/19/09 17:07		180234	
Methyl tert-Butyl Ether	0.13	U	1.0	0.13	1	NA	11/19/09 17:07		180234	
Naphthalene	0.31	U	2.0	0.31	1	NA	11/19/09 17:07		180234	
Styrene	0.36	U	1.0	0.36	1	NA	11/19/09 17:07		180234	
Tetrachloroethene (PCE)	0.42	U	1.0	0.42	1	NA	11/19/09 17:07		180234	
Toluene	0.21	U	1.0	0.21	1	NA	11/19/09 17:07		180234	
Trichloroethene (TCE)	0.19	U	1.0	0.19	1	NA	11/19/09 17:07		180234	
Trichlorofluoromethane (CFC 11)	0.16	U	1.0	0.16	1	NA	11/19/09 17:07		180234	
Vinyl Chloride	0.22	U	1.0	0.22	1	NA	11/19/09 17:07		180234	
cis-1,2-Dichloroethene	0.14	U	1.0	0.14	1	NA	11/19/09 17:07		180234	
cis-1,3-Dichloropropene	0.14	U	1.0	0.14	1	NA	11/19/09 17:07		180234	
m,p-Xylenes	0.81	U	2.0	0.81	1	NA	11/19/09 17:07		180234	
n-Butylbenzene	0.20	U	5.0	0.20	1	NA	11/19/09 17:07		180234	
n-Propylbenzene	0.32	U	2.0	0.32	1	NA	11/19/09 17:07		180234	
o-Xylene	0.40	U	1.0	0.40	1	NA	11/19/09 17:07		180234	
sec-Butylbenzene	0.23	U	2.0	0.23	1	NA	11/19/09 17:07		180234	
tert-Amyl Methyl Ether	0.13	U	1.0	0.13	1	NA	11/19/09 17:07		180234	
tert-Butylbenzene	0.28	U	2.0	0.28	1	NA	11/19/09 17:07		180234	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Northgate Environmental	**Service Request:**	R0906477
Project:	Tronox LLC Henderson/2027.001	**Date Collected:**	11/11/09 1335
Sample Matrix:	Water	**Date Received:**	11/12/09
Sample Name:	M-122B	**Units:**	µg/L
Lab Code:	R0906477-001	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
trans-1,2-Dichloroethene	0.16	U	1.0	0.16	1	NA	11/19/09 17:07		180234	
trans-1,3-Dichloropropene	0.17	U	1.0	0.17	1	NA	11/19/09 17:07		180234	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	97	70-130	11/19/09 17:07		
Dibromofluoromethane	98	70-130	11/19/09 17:07		
Toluene-d8	105	70-130	11/19/09 17:07		

Comments:

Quantitation Report (Not Reviewed)

Sample : R0906477-001|1.0
Data File : J:\ACQUDATA\MSVOA10\DATA\111909\C2477.D Vial: 6
Acq On : 19 Nov 2009 5:07 pm
Operator : F. Naegler
InstName : MSVOA10
Misc : NORTHGATE 4060 T4

Quant Time: Nov 19 17:23:32 2009
Quant Method : J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Mon Nov 02 10:48:31 2009
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	4.434	168	841899	50.00	ug/L	0.00
44) 1,4-Difluorobenzene	5.635	114	1357500	50.00	ug/L	0.00
71) d5-Chlorobenzene	8.854	117	1156430	50.00	ug/L	0.00
88) 1,4-Dichlorobenzene-d4	10.847	152	513062	50.00	ug/L	0.00
System Monitoring Compounds						
46) surr4,Dibrflmethane	4.348	113	466931	48.84	ug/L	0.00
Spiked Amount 50.000	Range 89 - 119		Recovery = 97.68%			
49) surr1,1,2-dichloroetha...	4.885	65	512568	51.13	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.26%			
65) SURR3,Toluene-d8	7.445	98	1443290	52.53	ug/L	0.00
Spiked Amount 50.000	Range 87 - 121		Recovery = 105.06%			
70) SURR2,BFB	9.890	95	567134	48.66	ug/L	0.00
Spiked Amount 50.000	Range 85 - 122		Recovery = 97.32%			
Target Compounds						Qvalue
16) Acetone	2.129	43	1354	0.91	ug/L	58
17) 2-Propanol	~~2.190~~	~~45~~	~~238~~	~~0.84~~	~~ug/L #~~	~~1~~
20) Acetonitrile	~~2.331~~	~~40~~	~~696~~	~~2.67~~	~~ug/L #~~	~~1~~
21) Allyl Chloride	~~2.276~~	~~76~~	~~1964~~	~~0.64~~	~~ug/L #~~	~~1~~
41) Chloroform	4.117	83	40438	2.91	ug/L	93
72) Tetrachloroethene	8.067	164	1138	0.20	ug/L #	38
86) Cyclohexanone	~~9.896~~	~~55~~	~~1754~~	~~2.49~~	~~ug/L #~~	~~23~~
109) Hexachlorobt	12.335	225	873	0.24	ug/L	92

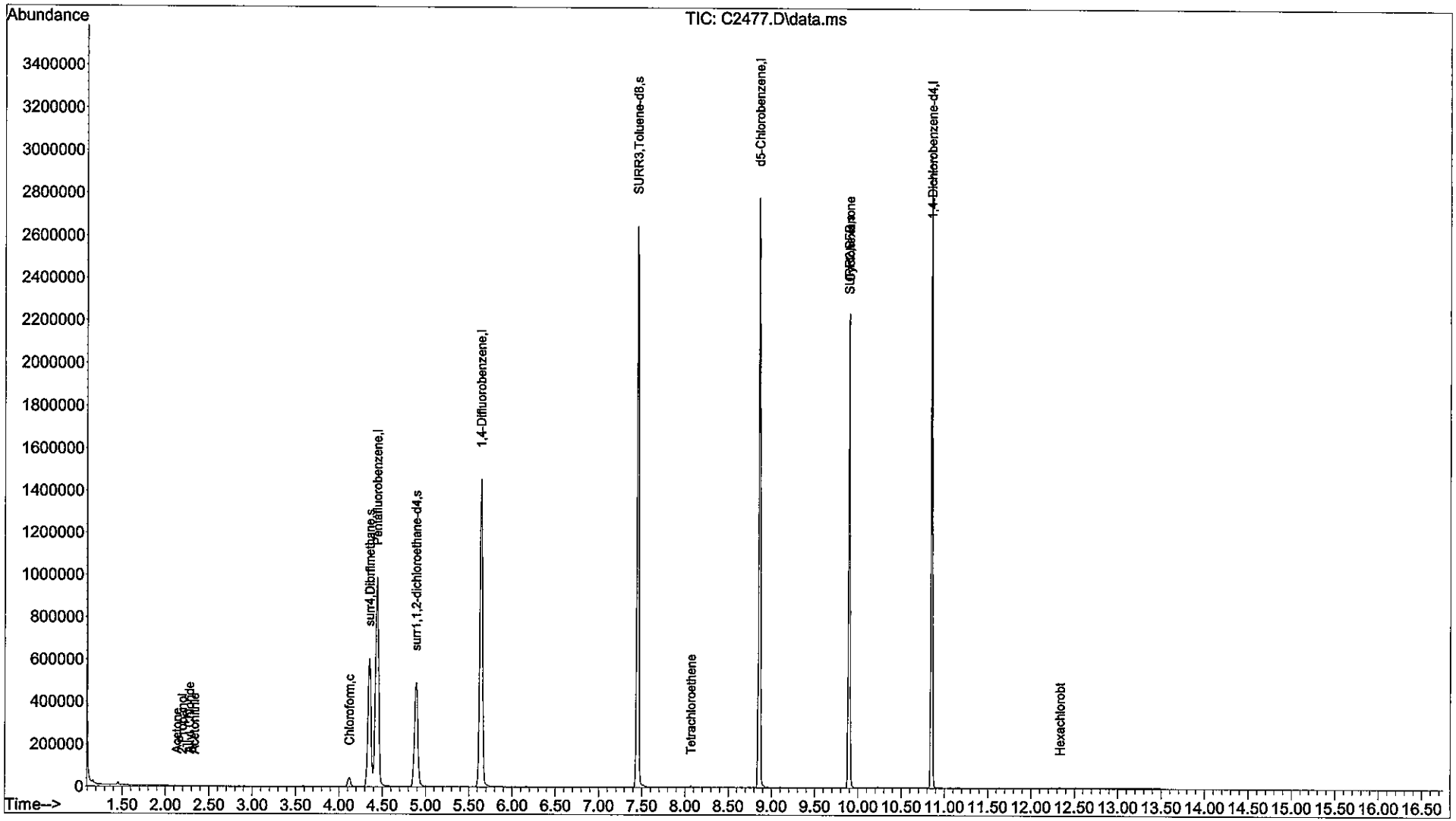
(#) = qualifier out of range (m) = manual integration (+) = signals summed

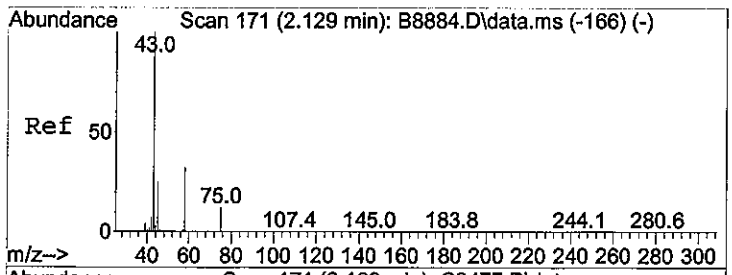
FN
12/8/09

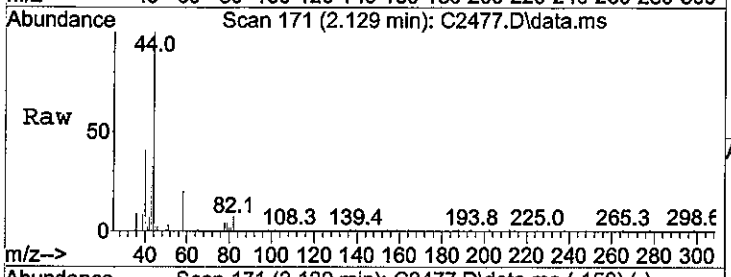
Quantitation Report (Not Reviewed)

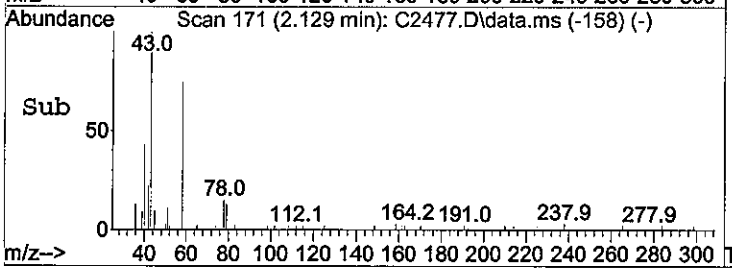
Sample : R0906477-001|1.0
Data File : J:\ACQUDATA\MSVOA10\DATA\111909\C2477.D Vial: 6
Acq On : 19 Nov 2009 5:07 pm
Operator : F. Naegler
InstName : MSVOA10
Misc : NORTHGATE 4060 T4

Quant Time: Nov 19 17:23:32 2009
Quant Method : J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Mon Nov 02 10:48:31 2009
Response via : Initial Calibration





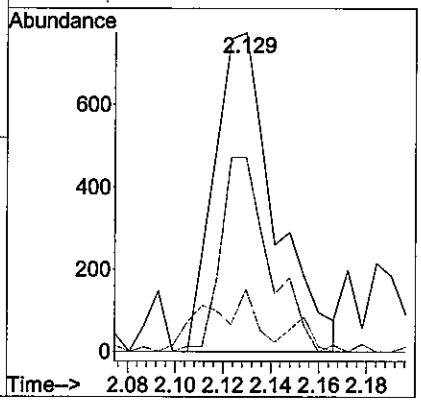


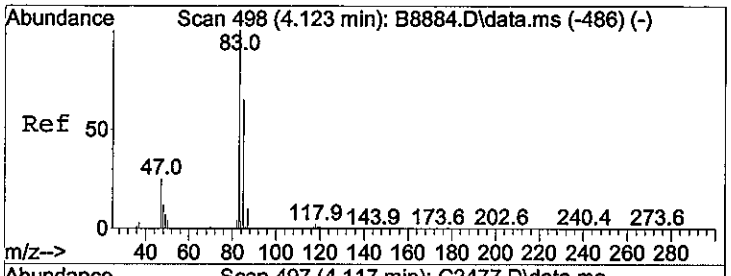


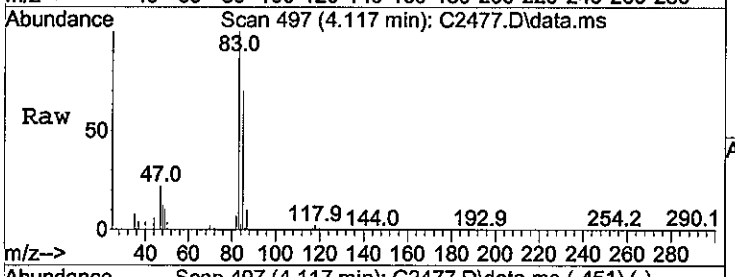
#16
Acetone
Concen: 0.91 ug/L
RT: 2.129 min Scan# 171
Delta R.T. 0.006 min
Lab File: C2477.D
Acq: 19 Nov 2009 5:07 pm

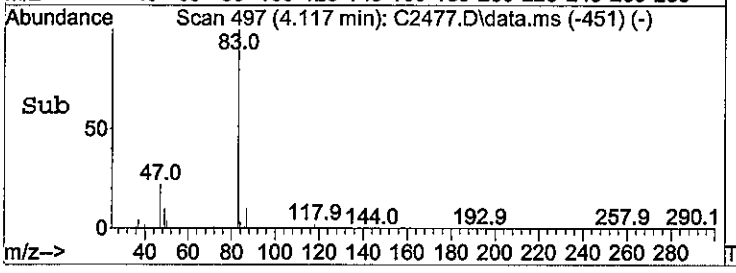
Tgt Ion: 43 Resp: 1354

Ion	Ratio	Lower	Upper
43	100		
58	60.9	4.9	64.9
42	19.5	0.0	38.3





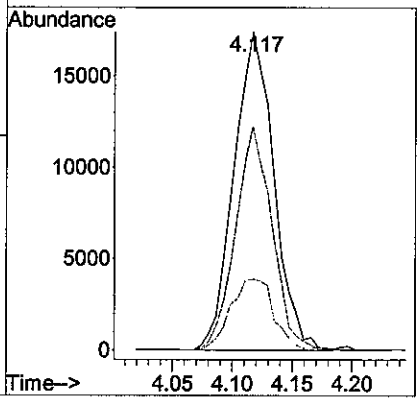


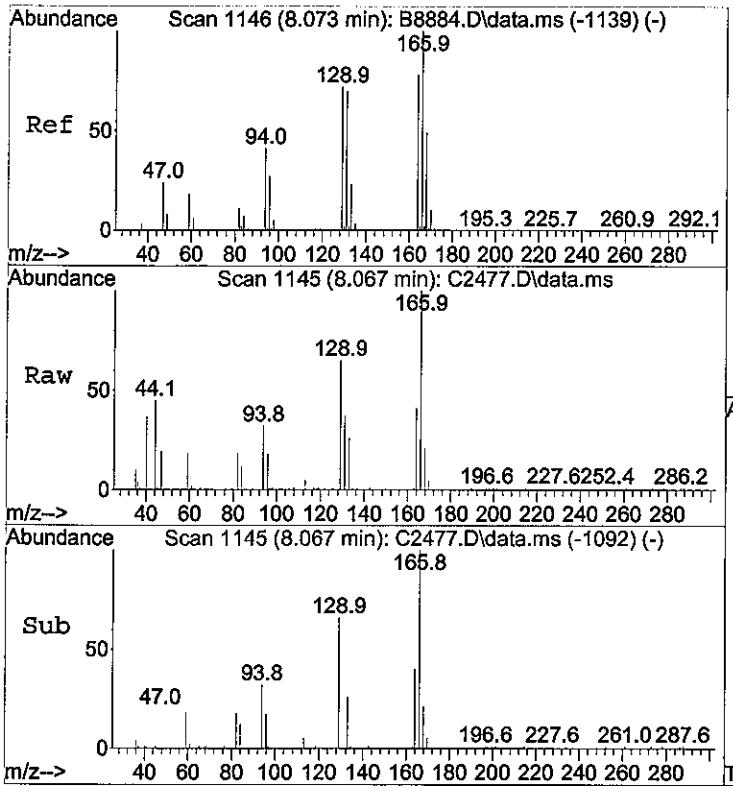


#41
Chloroform
Concen: 2.91 ug/L
RT: 4.117 min Scan# 497
Delta R.T. -0.006 min
Lab File: C2477.D
Acq: 19 Nov 2009 5:07 pm

Tgt Ion: 83 Resp: 40438

Ion	Ratio	Lower	Upper
83	100		
85	70.2	35.2	95.2
47	22.3	0.0	57.3

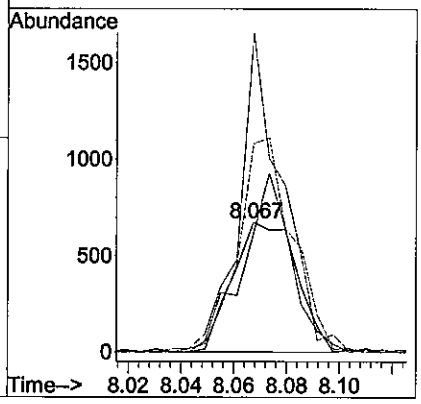


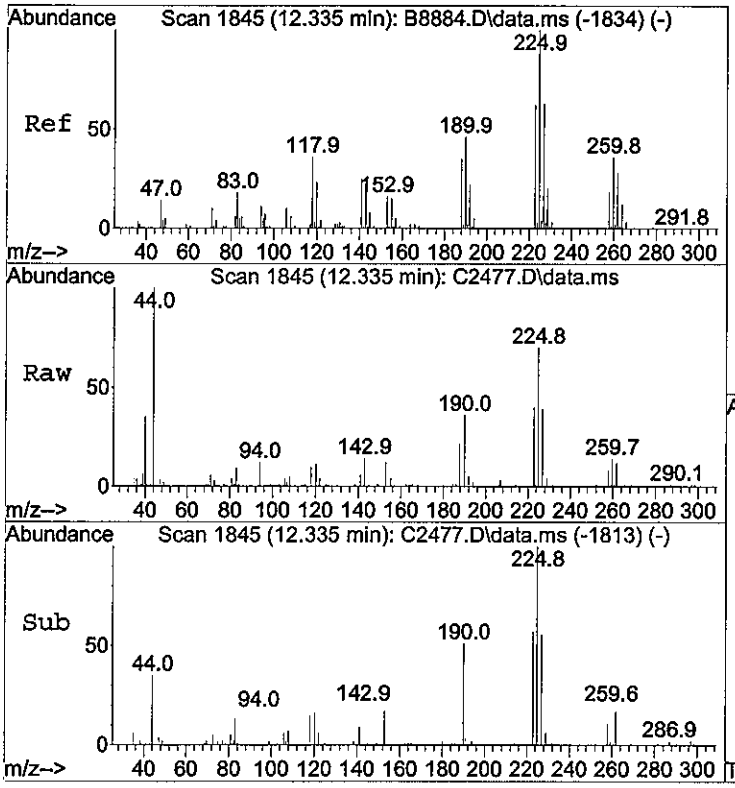


#72
Tetrachloroethene
Concen: 0.20 ug/L
RT: 8.067 min Scan# 1145
Delta R.T. -0.006 min
Lab File: C2477.D
Acq: 19 Nov 2009 5:07 pm

Tgt Ion:164 Resp: 1138

Ion	Ratio	Lower	Upper
164	100		
166	245.3	97.5	157.5#
129	160.6	67.5	127.5#
131	91.5	59.7	119.7

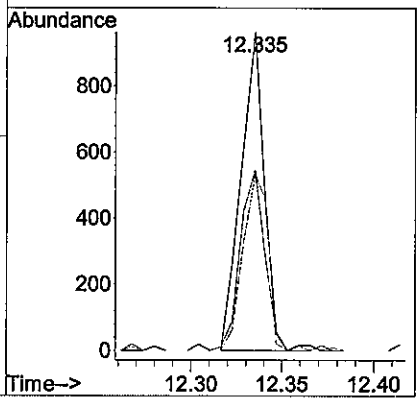




#109
Hexachlorobt
Concen: 0.24 ug/L
RT: 12.335 min Scan# 1845
Delta R.T. 0.000 min
Lab File: C2477.D
Acq: 19 Nov 2009 5:07 pm

Tgt Ion:225 Resp: 873

Ion	Ratio	Lower	Upper
225	100		
223	56.7	29.9	89.9
227	55.3	33.6	93.6



Client:	Northgate Environmental	**Service Request:**	R0906477
Project:	Tronox LLC Henderson/2027.001	**Date Collected:**	11/11/09 1300
Sample Matrix:	Water	**Date Received:**	11/12/09
Sample Name:	TB111109-GW1	**Units:**	µg/L
Lab Code:	R0906477-003	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
1,1,1,2-Tetrachloroethane	0.18	U	1.0	0.18	1	NA	11/19/09 17:37		180234	
1,1,1-Trichloroethane (TCA)	0.32	U	1.0	0.32	1	NA	11/19/09 17:37		180234	
1,1,2,2-Tetrachloroethane	0.090	U	1.0	0.090	1	NA	11/19/09 17:37		180234	
1,1,2-Trichloroethane	0.20	U	1.0	0.20	1	NA	11/19/09 17:37		180234	
1,1-Dichloroethane (1,1-DCA)	0.14	U	1.0	0.14	1	NA	11/19/09 17:37		180234	
1,1-Dichloroethene (1,1-DCE)	0.37	U	1.0	0.37	1	NA	11/19/09 17:37		180234	
1,1-Dichloropropene	0.21	U	2.0	0.21	1	NA	11/19/09 17:37		180234	
1,2,3-Trichlorobenzene	0.25	U	2.0	0.25	1	NA	11/19/09 17:37		180234	
1,2,3-Trichloropropane	0.30	U	2.0	0.30	1	NA	11/19/09 17:37		180234	
1,2,4-Trichlorobenzene	0.19	U	2.0	0.19	1	NA	11/19/09 17:37		180234	
1,2,4-Trimethylbenzene	0.36	U	2.0	0.36	1	NA	11/19/09 17:37		180234	
1,2-Dibromo-3-chloropropane (DBCP)	0.43	U	5.0	0.43	1	NA	11/19/09 17:37		180234	
1,2-Dibromoethane	0.18	U	1.0	0.18	1	NA	11/19/09 17:37		180234	
1,2-Dichlorobenzene	0.40	U	2.0	0.40	1	NA	11/19/09 17:37		180234	
1,2-Dichloroethane	0.14	U	1.0	0.14	1	NA	11/19/09 17:37		180234	
1,2-Dichloropropane	0.15	U	1.0	0.15	1	NA	11/19/09 17:37		180234	
1,3,5-Trimethylbenzene	0.36	U	2.0	0.36	1	NA	11/19/09 17:37		180234	
1,3-Dichlorobenzene	0.36	U	2.0	0.36	1	NA	11/19/09 17:37		180234	
1,3-Dichloropropane	0.12	U	2.0	0.12	1	NA	11/19/09 17:37		180234	
1,4-Dichlorobenzene	0.34	U	2.0	0.34	1	NA	11/19/09 17:37		180234	
2,2-Dichloropropane	0.20	U	2.0	0.20	1	NA	11/19/09 17:37		180234	
2-Butanone (MEK)	1.0	U	10	1.0	1	NA	11/19/09 17:37		180234	
2-Chlorotoluene	0.38	U	5.0	0.38	1	NA	11/19/09 17:37		180234	
2-Hexanone	0.40	U	10	0.40	1	NA	11/19/09 17:37		180234	
2-Methyl-2-propanol	3.0	U	100	3.0	1	NA	11/19/09 17:37		180234	
4-Chlorotoluene	0.37	U	5.0	0.37	1	NA	11/19/09 17:37		180234	
4-Isopropyltoluene	0.22	U	2.0	0.22	1	NA	11/19/09 17:37		180234	
4-Methyl-2-pentanone	0.34	U	10	0.34	1	NA	11/19/09 17:37		180234	
Acetone	1.6	U	20	1.6	1	NA	11/19/09 17:37		180234	
Benzene	0.18	U	1.0	0.18	1	NA	11/19/09 17:37		180234	
Bromobenzene	0.33	U	2.0	0.33	1	NA	11/19/09 17:37		180234	
Bromochloromethane	0.18	U	2.0	0.18	1	NA	11/19/09 17:37		180234	
Bromodichloromethane	0.17	U	1.0	0.17	1	NA	11/19/09 17:37		180234	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Northgate Environmental	**Service Request:**	R0906477
Project:	Tronox LLC Henderson/2027.001	**Date Collected:**	11/11/09 1300
Sample Matrix:	Water	**Date Received:**	11/12/09
Sample Name:	TB111109-GW1	**Units:**	µg/L
Lab Code:	R0906477-003	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Bromoform	0.20	U	1.0	0.20	1	NA	11/19/09 17:37		180234	
Bromomethane	0.40	U	2.0	0.40	1	NA	11/19/09 17:37		180234	
Carbon Tetrachloride	0.36	U	1.0	0.36	1	NA	11/19/09 17:37		180234	
Chlorobenzene	0.26	U	1.0	0.26	1	NA	11/19/09 17:37		180234	
Chloroethane	0.21	U	2.0	0.21	1	NA	11/19/09 17:37		180234	
Chloroform	0.16	U	1.0	0.16	1	NA	11/19/09 17:37		180234	
Chloromethane	0.18	U	2.0	0.18	1	NA	11/19/09 17:37		180234	
Dibromochloromethane	0.11	U	1.0	0.11	1	NA	11/19/09 17:37		180234	
Dibromomethane	0.18	U	1.0	0.18	1	NA	11/19/09 17:37		180234	
Dichlorodifluoromethane (CFC 12)	0.18	U	1.0	0.18	1	NA	11/19/09 17:37		180234	
Dichloromethane	0.13	U	2.0	0.13	1	NA	11/19/09 17:37		180234	
Diisopropyl Ether	0.090	U	1.0	0.090	1	NA	11/19/09 17:37		180234	
Ethyl tert-Butyl Ether	0.12	U	1.0	0.12	1	NA	11/19/09 17:37		180234	
Ethylbenzene	0.42	U	1.0	0.42	1	NA	11/19/09 17:37		180234	
Hexachlorobutadiene	0.27	U	5.0	0.27	1	NA	11/19/09 17:37		180234	
Isopropylbenzene (Cumene)	0.34	U	2.0	0.34	1	NA	11/19/09 17:37		180234	
Methyl tert-Butyl Ether	0.13	U	1.0	0.13	1	NA	11/19/09 17:37		180234	
Naphthalene	0.31	U	2.0	0.31	1	NA	11/19/09 17:37		180234	
Styrene	0.36	U	1.0	0.36	1	NA	11/19/09 17:37		180234	
Tetrachloroethene (PCE)	0.42	U	1.0	0.42	1	NA	11/19/09 17:37		180234	
Toluene	0.21	U	1.0	0.21	1	NA	11/19/09 17:37		180234	
Trichloroethene (TCE)	0.19	U	1.0	0.19	1	NA	11/19/09 17:37		180234	
Trichlorofluoromethane (CFC 11)	0.16	U	1.0	0.16	1	NA	11/19/09 17:37		180234	
Vinyl Chloride	0.22	U	1.0	0.22	1	NA	11/19/09 17:37		180234	
cis-1,2-Dichloroethene	0.14	U	1.0	0.14	1	NA	11/19/09 17:37		180234	
cis-1,3-Dichloropropene	0.14	U	1.0	0.14	1	NA	11/19/09 17:37		180234	
m,p-Xylenes	0.81	U	2.0	0.81	1	NA	11/19/09 17:37		180234	
n-Butylbenzene	0.20	U	5.0	0.20	1	NA	11/19/09 17:37		180234	
n-Propylbenzene	0.32	U	2.0	0.32	1	NA	11/19/09 17:37		180234	
o-Xylene	0.40	U	1.0	0.40	1	NA	11/19/09 17:37		180234	
sec-Butylbenzene	0.23	U	2.0	0.23	1	NA	11/19/09 17:37		180234	
tert-Amyl Methyl Ether	0.13	U	1.0	0.13	1	NA	11/19/09 17:37		180234	
tert-Butylbenzene	0.28	U	2.0	0.28	1	NA	11/19/09 17:37		180234	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Northgate Environmental	**Service Request:**	R0906477
Project:	Tronox LLC Henderson/2027.001	**Date Collected:**	11/11/09 1300
Sample Matrix:	Water	**Date Received:**	11/12/09
Sample Name:	TB111109-GW1	**Units:**	µg/L
Lab Code:	R0906477-003	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
trans-1,2-Dichloroethene	0.16	U	1.0	0.16	1	NA	11/19/09 17:37		180234	
trans-1,3-Dichloropropene	0.17	U	1.0	0.17	1	NA	11/19/09 17:37		180234	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	100	70-130	11/19/09 17:37		
Dibromofluoromethane	97	70-130	11/19/09 17:37		
Toluene-d8	105	70-130	11/19/09 17:37		

Comments:

Quantitation Report (Not Reviewed)

Sample : R0906477-003|1.0
Data File : J:\ACQUDATA\MSVOA10\DATA\111909\C2478.D Vial: 7
Acq On : 19 Nov 2009 5:37 pm
Operator : F. Naegler
InstName : MSVOA10
Misc : NORTHGATE 4060 T4

Quant Time: Nov 19 17:53:14 2009
Quant Method : J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Mon Nov 02 10:48:31 2009
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	4.434	168	816600	50.00	ug/L	0.00
44) 1,4-Difluorobenzene	5.635	114	1312725	50.00	ug/L	0.00
71) d5-Chlorobenzene	8.854	117	1119769	50.00	ug/L	0.00
88) 1,4-Dichlorobenzene-d4	10.847	152	512424	50.00	ug/L	0.00
System Monitoring Compounds						
46) surr4,Dibrflmethane	4.348	113	449010	48.47	ug/L	0.00
Spiked Amount 50.000	Range 89 - 119		Recovery = 96.94%			
49) surr1,1,2-dichloroetha...	4.885	65	496887	51.26	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.52%			
65) SURR3,Toluene-d8	7.445	98	1390053	52.32	ug/L	0.00
Spiked Amount 50.000	Range 87 - 121		Recovery = 104.64%			
70) SURR2,BFB	9.896	95	563062	49.96	ug/L	0.00
Spiked Amount 50.000	Range 85 - 122		Recovery = 99.92%			
Target Compounds						Qvalue
16) Acetone	2.123	43	1588	1.10	ug/L	83
17) 2-Propanol	~~2.190~~	~~45~~	~~484~~	~~1.77~~	~~ug/L~~	~~55~~
20) Acetonitrile	~~2.343~~	~~40~~	702	2.77	ug/L #	~~1~~
21) Allyl Chloride	~~2.282~~	~~76~~	~~1206~~	~~0.41~~	~~ug/L #~~	~~1~~
40) Tetrahydrofuran	4.086	42	565	0.45	ug/L	85
86) Cyclohexanone	~~9.890~~	~~55~~	~~1630~~	~~2.39~~	~~ug/L #~~	~~24~~

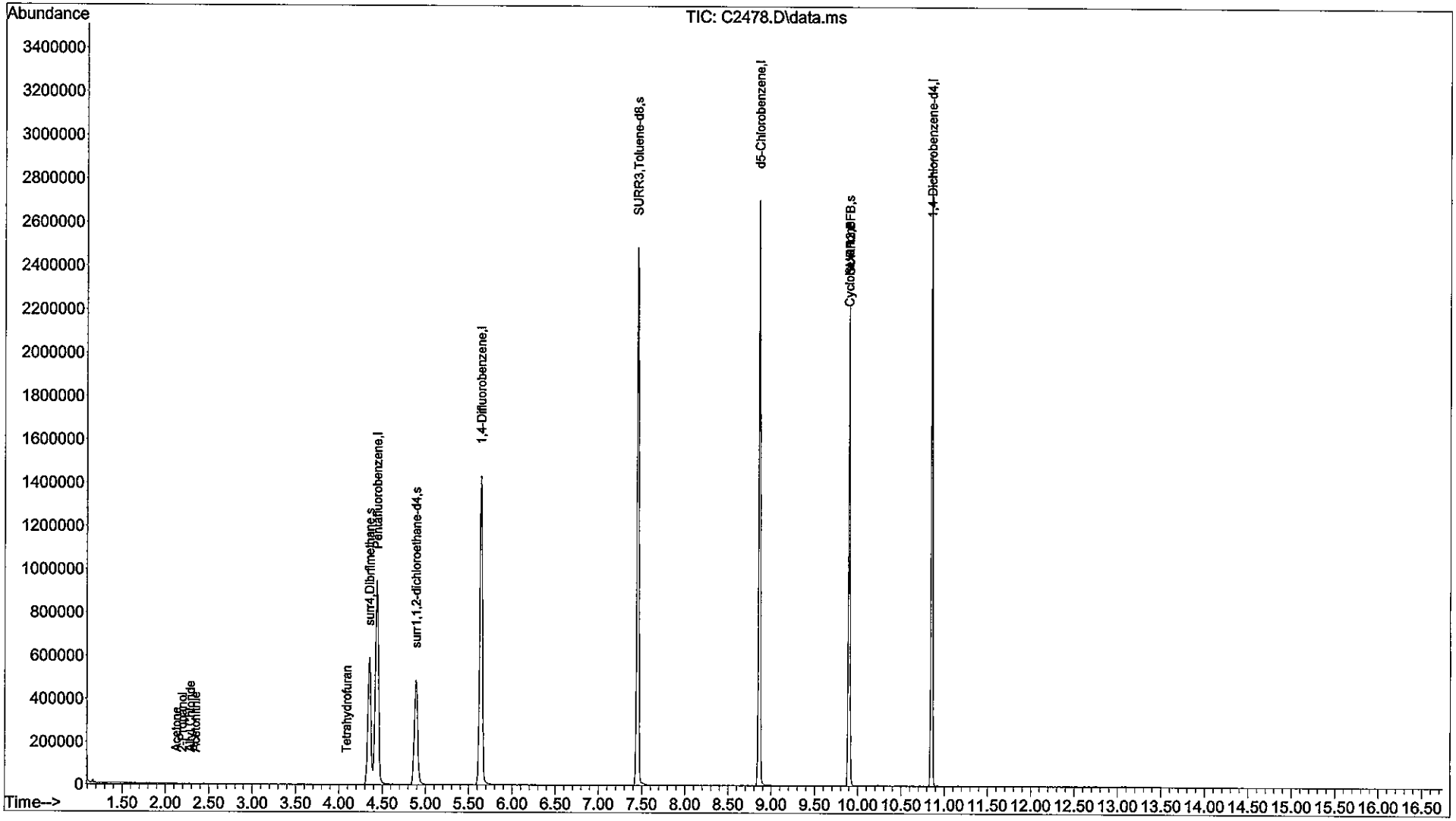
(#) = qualifier out of range (m) = manual integration (+) = signals summed

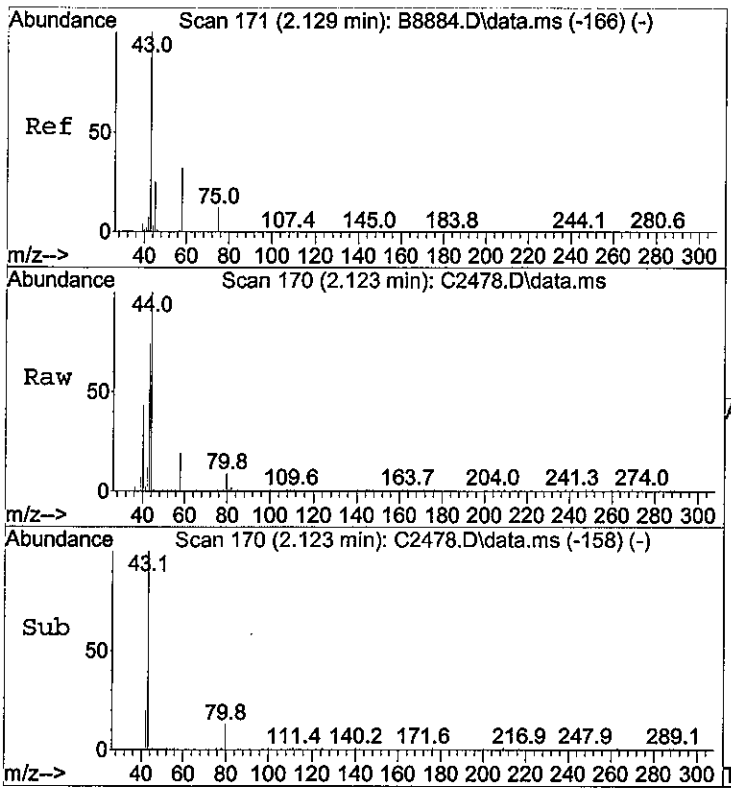
FV 12/8/09

Quantitation Report (Not Reviewed)

Sample : R0906477-003|1.0
Data File : J:\ACQUDATA\MSVOA10\DATA\111909\C2478.D Vial: 7
Acq On : 19 Nov 2009 5:37 pm
Operator : F. Naegler
InstName : MSVOA10
Misc : NORTHGATE 4060 T4

Quant Time: Nov 19 17:53:14 2009
Quant Method : J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Mon Nov 02 10:48:31 2009
Response via : Initial Calibration

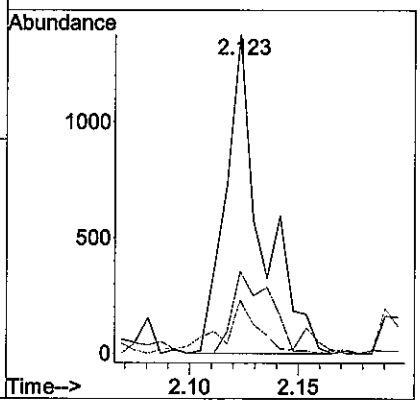


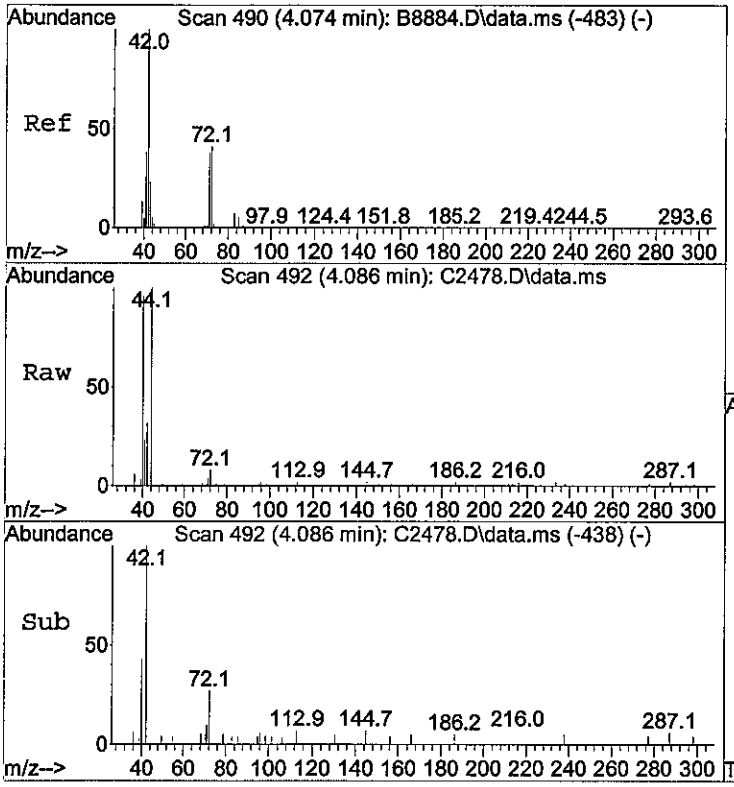


#16
Acetone
Concen: 1.10 ug/L
RT: 2.123 min Scan# 170
Delta R.T. 0.000 min
Lab File: C2478.D
Acq: 19 Nov 2009 5:37 pm

Tgt Ion: 43 Resp: 1588

Ion	Ratio	Lower	Upper
43	100		
58	25.7	4.9	64.9
42	16.8	0.0	38.3

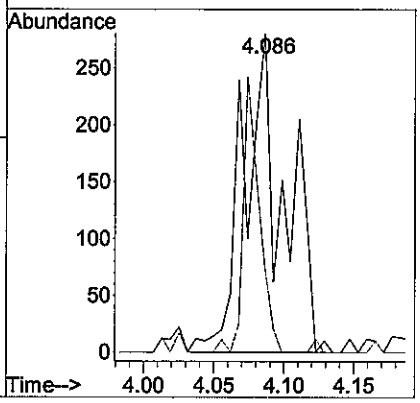




#40
Tetrahydrofuran
Concen: 0.45 ug/L
RT: 4.086 min Scan# 492
Delta R.T. 0.012 min
Lab File: C2478.D
Acq: 19 Nov 2009 5:37 pm

Tgt Ion: 42 Resp: 565

Ion	Ratio	Lower	Upper
42	100		
72	26.4	5.3	65.3



VOLATILE ORGANICS

STANDARDS DATA

Initial Calibration - Summary Report

Calibration ID:	CAL1023	10/31/09	**Instrument ID:**	MSVOA10	
Method ID:	MJ162		**Column Name:**	MS	

Parameter Name	Type	Curve Fit	Min RF	Mean RF	Max %RSD	%RSD	Min COD	COD	MRL Check	Conc ½ Low pt.
Dichlorodifluoromethane	TRG	AverageRF		0.520	15	7.4			OK	
Chloromethane	TRG	AverageRF	0.100	0.522	15	11.5			OK	
Vinyl Chloride	TRG	AverageRF		0.540	15	8.2			OK	
Bromomethane	TRG	AverageRF		0.321	15	10.9			OK	
Chloroethane	TRG	AverageRF		0.266	15	14.8			OK	
Dichlorofluoromethane (CFC 21)	TRG	AverageRF		0.856	15	9.3			OK	
Trichlorofluoromethane	TRG	AverageRF		0.811	15	10.9			OK	
Diethyl Ether	TRG	AverageRF		0.294	15	8.9			OK	
1,2-Dichloro-1,1,2-trifluoroethane (CF	TRG	AverageRF		0.513	15	9.6			OK	
2,2-Dichloro-1,1,1-trifluoroethane (CF	TRG	AverageRF		0.570	15	6.2			OK	
Acrolein	TRG	AverageRF		0.055	15	9.4			OK	
1,1-Dichloroethene	MS	AverageRF		0.370	15	6.0			OK	
Trichlorotrifluoroethane	TRG	AverageRF		0.386	15	6.2			OK	
Acetone	TRG	AverageRF		0.088	15	11.1			OK	
2-Propanol	TRG	AverageRF		0.017	15	7.4			OK	
Iodomethane (Methyl Iodide)	TRG	Linear		0.334			.99	0.9927	OK	3.87*
Carbon Disulfide	TRG	AverageRF		1.237	15	8.5			OK	
Acetonitrile	TRG	AverageRF		0.016	15	11.4			OK	
Allyl Chloride	TRG	AverageRF		0.182	15	7.1			OK	
Methyl Acetate	TRG	AverageRF		0.261	15	7.1			OK	
Methylene Chloride	TRG	AverageRF		0.499	15	14.5			OK	
tert-Butyl Alcohol	TRG	AverageRF		0.028	15	10.1			OK	
Acrylonitrile	TRG	AverageRF		0.128	15	7.3			OK	
Methyl tert-Butyl Ether	TRG	AverageRF		0.924	15	7.5			OK	
trans-1,2-Dichloroethene	TRG	AverageRF		0.437	15	4.1			OK	
1,1-Dichloroethane	TRG	AverageRF	0.100	0.964	15	5.8			OK	
Vinyl Acetate	TRG	AverageRF		0.039	15	13.8			OK	
Diisopropyl Ether	TRG	AverageRF		1.381	15	11.3			OK	
2-Chloro-1,3-butadiene	TRG	AverageRF		0.656	15	14.5			OK	
ETBE	TRG	AverageRF		1.347	15	11.7			OK	
2,2-Dichloropropane	TRG	AverageRF		0.611	15	8.1			OK	
cis-1,2-Dichloroethene	TRG	AverageRF		0.457	15	7.2			OK	
2-Butanone (MEK)	TRG	AverageRF		0.135	15	11.8			OK	
Propionitrile	TRG	AverageRF		0.045	15	10.8			OK	
Bromochloromethane	TRG	AverageRF		0.293	15	6.4			OK	
Methacrylonitrile	TRG	Linear		0.105			.99	0.9999	OK	0.62*
Tetrahydrofuran	TRG	AverageRF		0.076	15	5.7			OK	
Chloroform	TRG	AverageRF		0.827	15	4.0			OK	
1,1,1-Trichloroethane (TCA)	TRG	AverageRF		0.727	15	9.3			OK	
TAME	TRG	AverageRF		0.831	15	13.0			OK	
Cyclohexane	TRG	Linear		0.579			.99	0.9997	OK	-0.72*
Dibromofluoromethane	SURR	Linear		0.316			.99	0.9975	NA	15.28
Carbon Tetrachloride	TRG	AverageRF		0.133	15	10.6			OK	
1,1-Dichloropropene	TRG	AverageRF		0.346	15	7.3			OK	
1,2-Dichloroethane-d4	SURR	AverageRF		0.369	15	9.5			NA	
Benzene	MS	AverageRF		1.026	15	3.6			OK	
1,2-Dichloroethane (EDC)	TRG	AverageRF		0.436	15	3.7			OK	
Isobutyl Alcohol	TRG	AverageRF		0.006	15	10.8			OK	
n-Heptane	TRG	AverageRF		0.271	15	12.0			OK	
Trichloroethene (TCE)	MS	AverageRF		0.281	15	9.9			OK	
Methylcyclohexane	TRG	AverageRF		0.406	15	11.4			OK	
1,2-Dichloropropane	TRG	AverageRF		0.312	15	6.1			OK	

Initial Calibration - Summary Report

Calibration ID:	CAL1023	**Instrument ID:**	MSVOA10
Method ID:	MJ162	**Column Name:**	MS

Parameter Name	Type	Curve Fit	Min RF	Mean RF	Max %RSD	%RSD	Min COD	COD	MRL Check	Conc ½ Low pt.
Dibromomethane	TRG	AverageRF		0.157	15	1.8			OK	
1,4-Dioxane	TRG	Linear		0.002			.99	0.9997	OK	43.47*
Methyl Methacrylate	TRG	Linear		0.103			.99	0.9999	OK	1.28*
Bromodichloromethane	TRG	AverageRF		0.360	15	10.8			OK	
2-Chloroethyl Vinyl Ether	TRG	AverageRF		0.152	15	12.5			*	
cis-1,3-Dichloropropene	TRG	Linear		0.350			.99	0.9998	OK	0.64*
4-Methyl-2-pentanone (MIBK)	TRG	Linear		0.147			.99	0.9989	OK	0.44
Toluene-d8	SURR	AverageRF		1.012	15	8.5			NA	
Toluene	MS	AverageRF		1.050	15	7.4			OK	
trans-1,3-Dichloropropene	TRG	Linear		0.308			.99	0.9997	OK	0.69*
Ethyl Methacrylate	TRG	Linear		0.208			.99	0.9997	OK	1.22*
1,1,2-Trichloroethane	TRG	AverageRF		0.202	15	3.3			OK	
4-Bromofluorobenzene	SURR	AverageRF		0.429	15	6.9			NA	
Tetrachloroethene (PCE)	TRG	AverageRF		0.245	15	6.8			OK	
2-Hexanone	TRG	AverageRF		0.124	15	11.9			OK	
1,3-Dichloropropane	TRG	AverageRF		0.373	15	4.2			OK	
Dibromochloromethane	TRG	AverageRF		0.294	15	11.3			OK	
n-Butyl Acetate	TRG	AverageRF		0.310	15	12.7			OK	
1,2-Dibromoethane (EDB)	TRG	AverageRF		0.233	15	7.3			OK	
Chlorobenzene	MS	AverageRF	0.300	0.827	15	4.4			OK	
1,1,1,2-Tetrachloroethane	TRG	AverageRF		0.291	15	9.4			OK	
Ethylbenzene	TRG	AverageRF		0.405	15	14.3			OK	
m,p-Xylenes	TRG	AverageRF		0.493	15	12.0			OK	
o-Xylene	TRG	Linear		0.462			.99	0.9998	OK	0.16
Styrene	TRG	Linear		0.773			.99	0.9994	OK	-0.29*
Bromoform	TRG	AverageRF	0.100	0.156	15	14.7			OK	
Isopropylbenzene	TRG	AverageRF		1.187	15	14.2			OK	
Cyclohexanone	TRG	AverageRF		0.030	15	11.1			*	
trans-1,4-Dichloro-2-butene	TRG	AverageRF		0.074	15	11.7			OK	
1,1,2,2-Tetrachloroethane	TRG	AverageRF	0.300	0.515	15	2.2			OK	
Bromobenzene	TRG	AverageRF		0.664	15	4.7			OK	
1,2,3-Trichloropropane	TRG	AverageRF		0.158	15	4.3			OK	
n-Propylbenzene	TRG	AverageRF		2.866	15	13.1			OK	
2-Chlorotoluene	TRG	AverageRF		1.820	15	10.2			OK	
4-Chlorotoluene	TRG	AverageRF		2.145	15	11.5			OK	
1,3,5-Trimethylbenzene	TRG	AverageRF		2.079	15	13.2			OK	
tert-Butylbenzene	TRG	AverageRF		1.809	15	14.4			OK	
1,2,4-Trimethylbenzene	TRG	AverageRF		2.176	15	13.8			OK	
sec-Butylbenzene	TRG	AverageRF		2.620	15	12.2			OK	
4-Isopropyltoluene	TRG	AverageRF		2.241	15	13.5			OK	
1,3-Dichlorobenzene	TRG	AverageRF		1.265	15	9.0			OK	
1,4-Dichlorobenzene	TRG	AverageRF		1.339	15	3.0			OK	
n-Butylbenzene	TRG	AverageRF		2.047	15	9.4			OK	
1,2-Dichlorobenzene	TRG	AverageRF		1.176	15	6.8			OK	
1,2-Dibromo-3-chloropropane (DBCP)	TRG	Linear		0.085			.99	0.9996	OK	1.56*
1,2,4-Trichlorobenzene	TRG	AverageRF		0.773	15	11.8			OK	
Hexachlorobutadiene	TRG	AverageRF		0.359	15	8.1			OK	
Naphthalene	TRG	Linear		1.351			.99	0.9990	OK	0.26
1,2,3-Trichlorobenzene	TRG	AverageRF		0.677	15	10.5			OK	

Initial Calibration - Summary Report

Calibration ID:	CAL1023	**Instrument ID:**	MSVOA10
Method ID:	MJ162	**Column Name:**	MS

SPCC and CCC Evaluations

Parameter Name	Type	SPCC Criteria	SPCC Result	CCC Criteria	CCC Result
Chloromethane	SPCC	0.100	0.522		
Vinyl Chloride	CCC			30	8.2
1,1-Dichloroethene	CCC			30	6.0
1,1-Dichloroethane	SPCC	0.100	0.964		
Chloroform	CCC			30	4.0
1,2-Dichloropropane	CCC			30	6.1
Toluene	CCC			30	7.4
Chlorobenzene	SPCC	0.300	0.827		
Ethylbenzene	CCC			30	14.3
Bromoform	SPCC	0.100	0.156		
1,1,2,2-Tetrachloroethane	SPCC	0.300	0.515		

Initial Calibration - Detailed Report

Calibration ID:	CAL1023 10/31	**Instrument ID:**	MSVOA10
Method ID:	MJ162	**Column Name:**	MS
		Calibration Fit:	AverageRF

FileID	File Location	Acquisition Date	Quantitation Date	Last Updated
8224	J:\ACQUDATA\msvoa10\data\103109\C1903.D	10/31/2009 11:01	11/01/2009 08:08	11/02/2009 10:31
8225	J:\ACQUDATA\msvoa10\data\103109\C1904.D	10/31/2009 11:31	11/01/2009 08:09	11/02/2009 10:31
8226	J:\ACQUDATA\msvoa10\data\103109\C1905.D	10/31/2009 12:01	11/01/2009 08:00	11/02/2009 10:31
8227	J:\ACQUDATA\msvoa10\data\103109\C1906.D	10/31/2009 12:31	11/01/2009 08:01	11/02/2009 10:31
8228	J:\ACQUDATA\msvoa10\data\103109\C1907.D	10/31/2009 13:01	11/01/2009 08:02	11/02/2009 10:31
8229	J:\ACQUDATA\msvoa10\data\103109\C1908.D	10/31/2009 13:31	11/01/2009 08:04	11/02/2009 10:31
8230	J:\ACQUDATA\msvoa10\data\103109\C1909.D	10/31/2009 14:01	10/31/2009 13:17	11/02/2009 10:31
8231	J:\ACQUDATA\msvoa10\data\103109\C1910.D	10/31/2009 14:31	11/01/2009 08:06	11/02/2009 10:31
8232	J:\ACQUDATA\msvoa10\data\103109\C1911.D	10/31/2009 15:01	10/31/2009 14:17	11/02/2009 10:31

	FileID									
Parameter Name	**8224**	**8225**	**8226**	**8227**	**8228**	**8229**	**8230**	**8231**	**Mean RF**	**%RSD**
	8232									
Dichlorodifluoromethane	0.466	0.528	0.479	0.485	0.582	0.552	0.550	0.527		
	0.513								0.520	7.4
Chloromethane	0.508	0.566	0.498	0.566	0.617	0.547	0.519	0.454		
	0.422								0.522	11.5
Vinyl Chloride	0.478	0.565	0.560	0.570	0.608	0.546	0.544	0.512		
	0.473								0.540	8.2
Bromomethane	0.315	0.381	0.345	0.337	0.356	0.299	0.290	0.295		
	0.276								0.321	10.9
Chloroethane	0.187	0.318	0.273	0.287	0.309	0.269	0.261	0.250		
	0.236								0.266	14.8
Dichlorofluoromethane (CFC 21)	0.722	0.899	0.848	0.929	0.982	0.896	0.841	0.806		
	0.781								0.856	9.3
Trichlorofluoromethane	0.607	0.886	0.827	0.893	0.885	0.822	0.814	0.791		
	0.772								0.811	10.9
Diethyl Ether	0.286	0.334	0.301	0.305	0.322	0.297	0.282	0.263		
	0.252								0.294	8.9
1,2-Dichloro-1,1,2-trifluoroethane (	0.429	0.563	0.503	0.568	0.566	0.540	0.498	0.482		
	0.468								0.513	9.6
2,2-Dichloro-1,1,1-trifluoroethane (	0.499	0.587	0.544	0.611	0.615	0.582	0.572	0.560		
	0.559								0.570	6.2
Acrolein	0.063	0.062	0.053	0.047	0.054	0.056	0.053	0.052		
	0.051								0.055	9.4
1,1-Dichloroethene	0.326	0.367	0.351	0.403	0.391	0.366	0.374	0.374		
	0.374								0.370	6.0
Trichlorotrifluoroethane	0.359	0.434	0.393	0.401	0.402	0.369	0.371	0.368		
	0.376								0.386	6.2
Acetone			0.096	0.100	0.096	0.089	0.082	0.078		
	0.075								0.088	11.1
2-Propanol	0.015	0.015	0.016	0.015	0.017	0.018	0.018	0.018		
	0.018								0.017	7.4
Iodomethane (Methyl Iodide)	0.178	0.168	0.174	0.210	0.283	0.458	0.440	0.555		
	0.540								0.334	48.9#
Carbon Disulfide	1.058	1.342	1.230	1.262	1.282	1.277	1.062	1.330		
	1.288								1.237	8.5
Acetonitrile			0.016	0.019	0.016	0.013	0.015	0.015		
	0.015								0.016	11.4

Initial Calibration - Detailed Report

Calibration ID:	CAL1023	**Instrument ID:**	MSVOA10
Method ID:	MJ162	**Column Name:**	MS
		Calibration Fit:	AverageRF

	FileID									
Parameter Name	**8224 8232**	**8225**	**8226**	**8227**	**8228**	**8229**	**8230**	**8231**	**Mean RF**	**%RSD**
Allyl Chloride	0.155 0.193	0.174	0.174	0.179	0.188	0.190	0.192	0.194	0.182	7.1
Methyl Acetate	0.236 0.234	0.266	0.271	0.275	0.287	0.273	0.260	0.244	0.261	7.1
Methylene Chloride	0.631 0.441	0.595	0.523	0.492	0.490	0.439	0.438	0.439	0.499	14.5
tert-Butyl Alcohol	0.026 0.032	0.028	0.025	0.024	0.027	0.030	0.031	0.031	0.028	10.1
Acrylonitrile	0.116 0.121	0.117	0.128	0.133	0.143	0.137	0.134	0.125	0.128	7.3
Methyl tert-Butyl Ether	0.823 0.955	0.830	0.872	0.896	0.994	0.985	0.996	0.962	0.924	7.5
trans-1,2-Dichloroethene	0.403 0.442	0.432	0.421	0.458	0.464	0.437	0.441	0.439	0.437	4.1
1,1-Dichloroethane	0.860 0.941	1.050	0.978	0.971	1.033	0.941	0.950	0.948	0.964	5.8
Vinyl Acetate	0.045	0.035	0.031	0.034	0.036	0.041	0.043	0.045	0.039	13.8
Diisopropyl Ether	1.314	1.247	1.292	1.475	1.507	1.572	1.507	1.130	1.381	11.3
2-Chloro-1,3-butadiene	0.476 0.725	0.608	0.569	0.705	0.715	0.746	0.607	0.754	0.656	14.5
ETBE	1.462	1.167	1.203	1.278	1.393	1.536	1.547	1.189	1.347	11.7
2,2-Dichloropropane	0.489 0.637	0.637	0.578	0.619	0.634	0.625	0.638	0.643	0.611	8.1
cis-1,2-Dichloroethene	0.390 0.478	0.448	0.421	0.461	0.497	0.469	0.472	0.474	0.457	7.2
2-Butanone (MEK)	0.156 0.113	0.157	0.149	0.129	0.133	0.129	0.126	0.119	0.135	11.8
Propionitrile	0.034 0.047	0.041	0.044	0.044	0.048	0.049	0.049	0.047	0.045	10.8
Bromochloromethane	0.277 0.281	0.335	0.298	0.288	0.308	0.289	0.282	0.278	0.293	6.4
Methacrylonitrile	0.075 0.120	0.092	0.089	0.099	0.114	0.118	0.122	0.121	0.105	16.5#
Tetrahydrofuran	0.074		0.080	0.069	0.078	0.081	0.078	0.073	0.076	5.7
Chloroform	0.771 0.824	0.837	0.814	0.831	0.899	0.817	0.825	0.823	0.827	4.0
1,1,1-Trichloroethane (TCA)	0.570 0.777	0.729	0.673	0.755	0.781	0.742	0.754	0.765	0.727	9.3
TAME	0.968	0.711	0.734	0.764	0.820	0.928	0.972	0.756	0.831	13.0
Cyclohexane	0.569	0.436	0.454	0.754	0.657	0.601	0.583	0.575	0.579	17.7#
Dibromofluoromethane	0.291			0.339	0.328	0.342	0.306	0.288	0.316	7.6#
Carbon Tetrachloride	0.100 0.141	0.147	0.125	0.132	0.139	0.134	0.140	0.141	0.133	10.6

Initial Calibration - Detailed Report

Calibration ID:	CAL1023	**Instrument ID:**	MSVOA10
Method ID:	MJ162	**Column Name:**	MS
		Calibration Fit:	AverageRF

	FileID									
Parameter Name	**8224**	**8225**	**8226**	**8227**	**8228**	**8229**	**8230**	**8231**	**Mean RF**	**%RSD**
	8232									
1,1-Dichloropropene	0.294	0.335	0.323	0.346	0.353	0.352	0.366	0.372		
	0.369								0.346	7.3
1,2-Dichloroethane-d4				0.405	0.388	0.404	0.361	0.330		
	0.327								0.369	9.5
Benzene	0.958	1.071	0.992	1.022	1.076	1.007	1.036	1.035		
	1.032								1.026	3.6
1,2-Dichloroethane (EDC)	0.432	0.420	0.441	0.453	0.464	0.442	0.439	0.424		
	0.413								0.436	3.7
Isobutyl Alcohol			0.006	0.005	0.006	0.007	0.007	0.007		
	0.007								0.006	10.8
n-Heptane	0.228	0.239	0.225	0.268	0.279	0.307	0.300	0.298		
	0.293								0.271	12.0
Trichloroethene (TCE)	0.211	0.280	0.281	0.280	0.289	0.282	0.297	0.302		
	0.305								0.281	9.9
Methylcyclohexane	0.306	0.398	0.363	0.402	0.434	0.451	0.439	0.432		
	0.427								0.406	11.4
1,2-Dichloropropane	0.276	0.290	0.311	0.325	0.340	0.313	0.322	0.320		
	0.315								0.312	6.1
Dibromomethane	0.158	0.155	0.156	0.158	0.161	0.157	0.160	0.156		
	0.151								0.157	1.8
1,4-Dioxane			0.001	0.001	0.002	0.002	0.002	0.002		
	0.002								0.002	18.8#
Methyl Methacrylate	0.083	0.075	0.081	0.095	0.101	0.120	0.126	0.125		
	0.126								0.103	20.3#
Bromodichloromethane	0.293	0.317	0.325	0.355	0.391	0.384	0.395	0.392		
	0.388								0.360	10.8
2-Chloroethyl Vinyl Ether					0.118	0.157	0.161	0.162		
	0.162								0.152	12.5
cis-1,3-Dichloropropene	0.235	0.324	0.287	0.337	0.372	0.387	0.404	0.404		
	0.398								0.350	16.9#
4-Methyl-2-pentanone (MIBK)		0.119	0.114	0.125	0.142	0.170	0.174	0.171		
	0.164								0.147	17.1#
Toluene-d8				1.071	1.052	1.129	0.981	0.918		
	0.921								1.012	8.5
Toluene	0.862	1.052	1.022	1.096	1.126	1.084	1.097	1.077		
	1.034								1.050	7.4
trans-1,3-Dichloropropene	0.208	0.266	0.268	0.286	0.315	0.348	0.366	0.362		
	0.356								0.308	17.8#
Ethyl Methacrylate	0.153	0.152	0.162	0.165	0.200	0.250	0.266	0.261		
	0.260								0.208	24.5#
1,1,2-Trichloroethane	0.202	0.189	0.193	0.206	0.207	0.207	0.209	0.205		
	0.202								0.202	3.3
4-Bromofluorobenzene				0.442	0.442	0.474	0.424	0.395		
	0.400								0.429	6.9
Tetrachloroethene (PCE)	0.215	0.230	0.231	0.254	0.254	0.246	0.254	0.259		
	0.267								0.245	6.8
2-Hexanone			-	0.102	0.108	0.130	0.138	0.132		
	0.132								0.124	11.9
1,3-Dichloropropane	0.348	0.353	0.364	0.373	0.395	0.380	0.388	0.377		
	0.379								0.373	4.2

Initial Calibration - Detailed Report

Calibration ID:	CAL1023	**Instrument ID:**	MSVOA10
Method ID:	MJ162	**Column Name:**	MS
		Calibration Fit:	AverageRF

	FileID									
Parameter Name	**8224**	**8225**	**8226**	**8227**	**8228**	**8229**	**8230**	**8231**	**Mean RF**	**%RSD**
	8232									
Dibromochloromethane	0.233	0.266	0.276	0.277	0.302	0.316	0.327	0.323		
	0.329								0.294	11.3
n-Butyl Acetate				0.245	0.278	0.339	0.345	0.325		
	0.326								0.310	12.7
1,2-Dibromoethane (EDB)	0.210	0.209	0.218	0.231	0.249	0.245	0.248	0.241		
	0.249								0.233	7.3
Chlorobenzene	0.755	0.834	0.814	0.832	0.895	0.839	0.834	0.822		
	0.814								0.827	4.4
1,1,1,2-Tetrachloroethane	0.237	0.277	0.267	0.279	0.312	0.307	0.314	0.311		
	0.315								0.291	9.4
Ethylbenzene	0.297	0.365	0.339	0.410	0.442	0.446	0.447	0.452		
	0.450								0.405	14.3
m,p-Xylenes	0.378	0.441	0.448	0.521	0.565	0.539	0.531	0.516		
	0.494								0.493	12.0
o-Xylene	0.323	0.378	0.395	0.444	0.515	0.530	0.532	0.522		
	0.518								0.462	17.2#
Styrene	0.471	0.611	0.632	0.794	0.903	0.903	0.902	0.881		
	0.857								0.773	20.8#
Bromoform		0.128	0.135	0.134	0.147	0.166	0.177	0.178		
	0.186								0.156	14.7
Isopropylbenzene		0.912	0.958	1.125	1.270	1.337	1.327	1.307		
	1.256								1.187	14.2
Cyclohexanone				0.025	0.032	0.034	0.034	0.030		
	0.029								0.030	11.1
trans-1,4-Dichloro-2-butene	0.073	0.063	0.065	0.064	0.069	0.082	0.085	0.081		
	0.081								0.074	11.7
1,1,2,2-Tetrachloroethane	0.504	0.514	0.526	0.522	0.527	0.525	0.517	0.500		
	0.501								0.515	2.2
Bromobenzene	0.602	0.665	0.632	0.646	0.682	0.680	0.689	0.691		
	0.693								0.664	4.7
1,2,3-Trichloropropane	0.152	0.160	0.174	0.155	0.161	0.154	0.158	0.154		
	0.154								0.158	4.3
n-Propylbenzene	2.228	2.495	2.529	2.972	3.276	3.238	3.196	3.045		
	2.813								2.866	13.1
2-Chlorotoluene	1.485	1.716	1.584	1.821	2.005	1.971	1.969	1.951		
	1.874								1.820	10.2
4-Chlorotoluene	1.668	2.081	1.881	2.284	2.469	2.323	2.286	2.217		
	2.095								2.145	11.5
1,3,5-Trimethylbenzene		1.683	1.650	2.056	2.317	2.322	2.288	2.229		
	2.087								2.079	13.2
tert-Butylbenzene			1.315	1.602	1.815	1.970	1.984	2.016		
	1.962								1.809	14.4
1,2,4-Trimethylbenzene		1.691	1.726	2.165	2.397	2.409	2.405	2.363		
	2.255								2.176	13.8
sec-Butylbenzene			1.993	2.423	2.713	2.883	2.876	2.819		
	2.630								2.620	12.2
4-Isopropyltoluene			1.648	2.023	2.336	2.455	2.467	2.449		
	2.312								2.241	13.5
1,3-Dichlorobenzene	1.017	1.258	1.172	1.215	1.354	1.335	1.341	1.355		
	1.336								1.265	9.0

Initial Calibration - Detailed Report

Calibration ID:	CAL1023	**Instrument ID:**	MSVOA10
Method ID:	MJ162	**Column Name:**	MS
		Calibration Fit:	AverageRF

	FileID									
Parameter Name	**8224**	**8225**	**8226**	**8227**	**8228**	**8229**	**8230**	**8231**	**Mean RF**	**%RSD**
1,4-Dichlorobenzene	1.305	1.387	1.252	1.345	1.361	1.346	1.345	1.367		
	1.346								1.339	3.0
n-Butylbenzene				1.713	1.984	2.227	2.195	2.159		
	2.006								2.047	9.4
1,2-Dichlorobenzene	1.067	1.096	1.078	1.202	1.288	1.244	1.232	1.213		
	1.164								1.176	6.8
1,2-Dibromo-3-chloropropane (DBC	0.058	0.065	0.078	0.079	0.081	0.095	0.099	0.102		
	0.103								0.085	19.1#
1,2,4-Trichlorobenzene	0.731	0.696	0.633	0.682	0.775	0.839	0.861	0.872		
	0.868								0.773	11.8
Hexachlorobutadiene	0.363	0.362	0.304	0.327	0.356	0.360	0.368	0.385		
	0.403								0.359	8.1
Naphthalene	1.011	0.949	1.028	1.099	1.425	1.679	1.709	1.659		
	1.606								1.351	24.1#
1,2,3-Trichlorobenzene	0.621	0.612	0.577	0.617	0.686	0.729	0.742	0.756		
	0.755								0.677	10.5

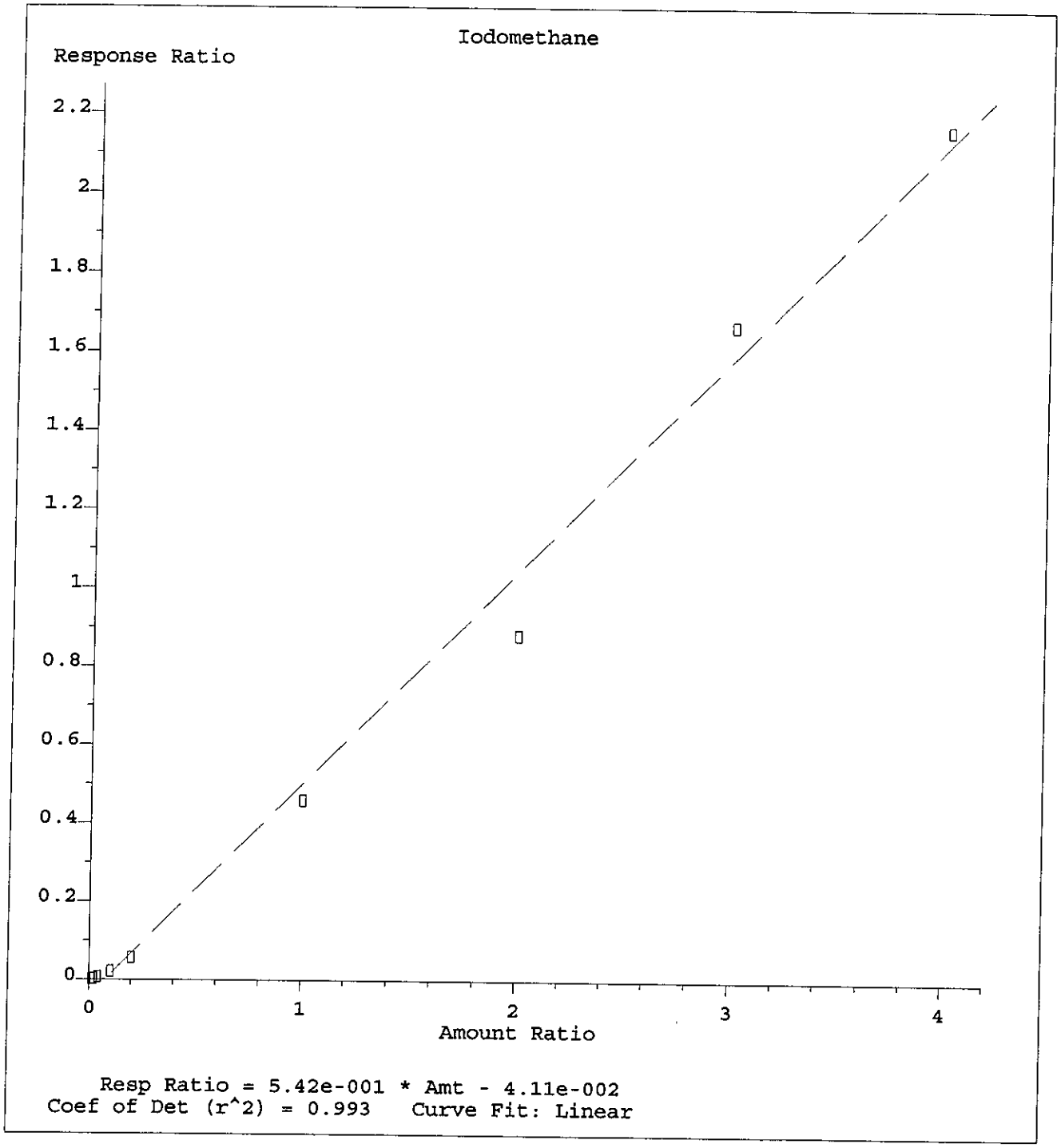
 # RSD Not Applicable. Compound being quantitated from curve. Included in Average RF summary for Average %RSD calculation.

Initial Calibration - Detailed Report

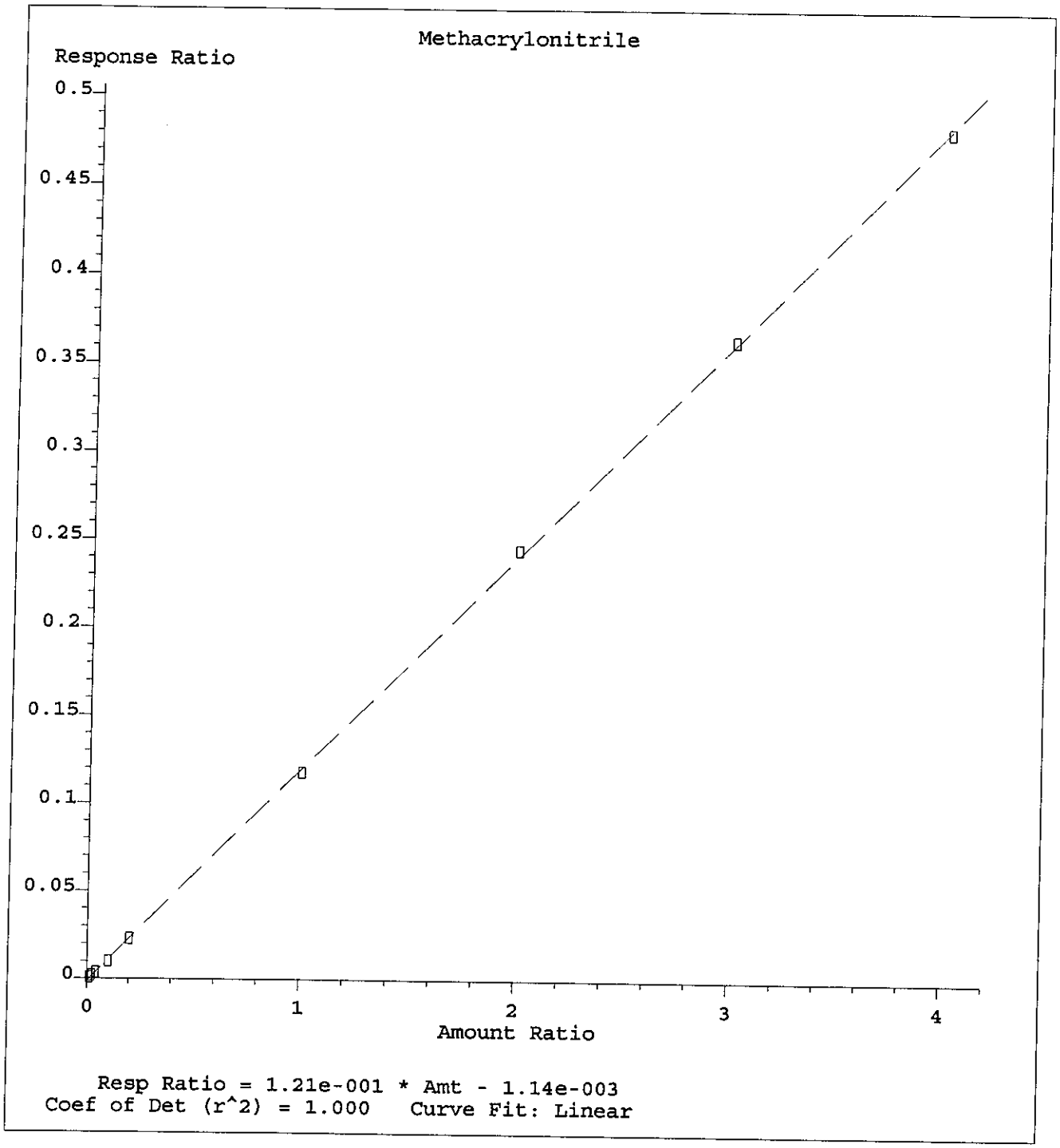
Calibration ID:	CAL1023	**Instrument ID:**	MSVOA10
Method ID:	MJ162	**Column Name:**	MS
		Calibration Fit:	Linear

FileID	File Location	Acquisition Date	Quantitation Date	Last Updated
8224	J:\ACQUDATA\msvoa10\data\103109\C1903.D	10/31/2009 11:01	11/01/2009 08:08	11/02/2009 10:31
8225	J:\ACQUDATA\msvoa10\data\103109\C1904.D	10/31/2009 11:31	11/01/2009 08:09	11/02/2009 10:31
8226	J:\ACQUDATA\msvoa10\data\103109\C1905.D	10/31/2009 12:01	11/01/2009 08:00	11/02/2009 10:31
8227	J:\ACQUDATA\msvoa10\data\103109\C1906.D	10/31/2009 12:31	11/01/2009 08:01	11/02/2009 10:31
8228	J:\ACQUDATA\msvoa10\data\103109\C1907.D	10/31/2009 13:01	11/01/2009 08:02	11/02/2009 10:31
8229	J:\ACQUDATA\msvoa10\data\103109\C1908.D	10/31/2009 13:31	11/01/2009 08:04	11/02/2009 10:31
8230	J:\ACQUDATA\msvoa10\data\103109\C1909.D	10/31/2009 14:01	10/31/2009 13:17	11/02/2009 10:31
8231	J:\ACQUDATA\msvoa10\data\103109\C1910.D	10/31/2009 14:31	11/01/2009 08:06	11/02/2009 10:31
8232	J:\ACQUDATA\msvoa10\data\103109\C1911.D	10/31/2009 15:01	10/31/2009 14:17	11/02/2009 10:31

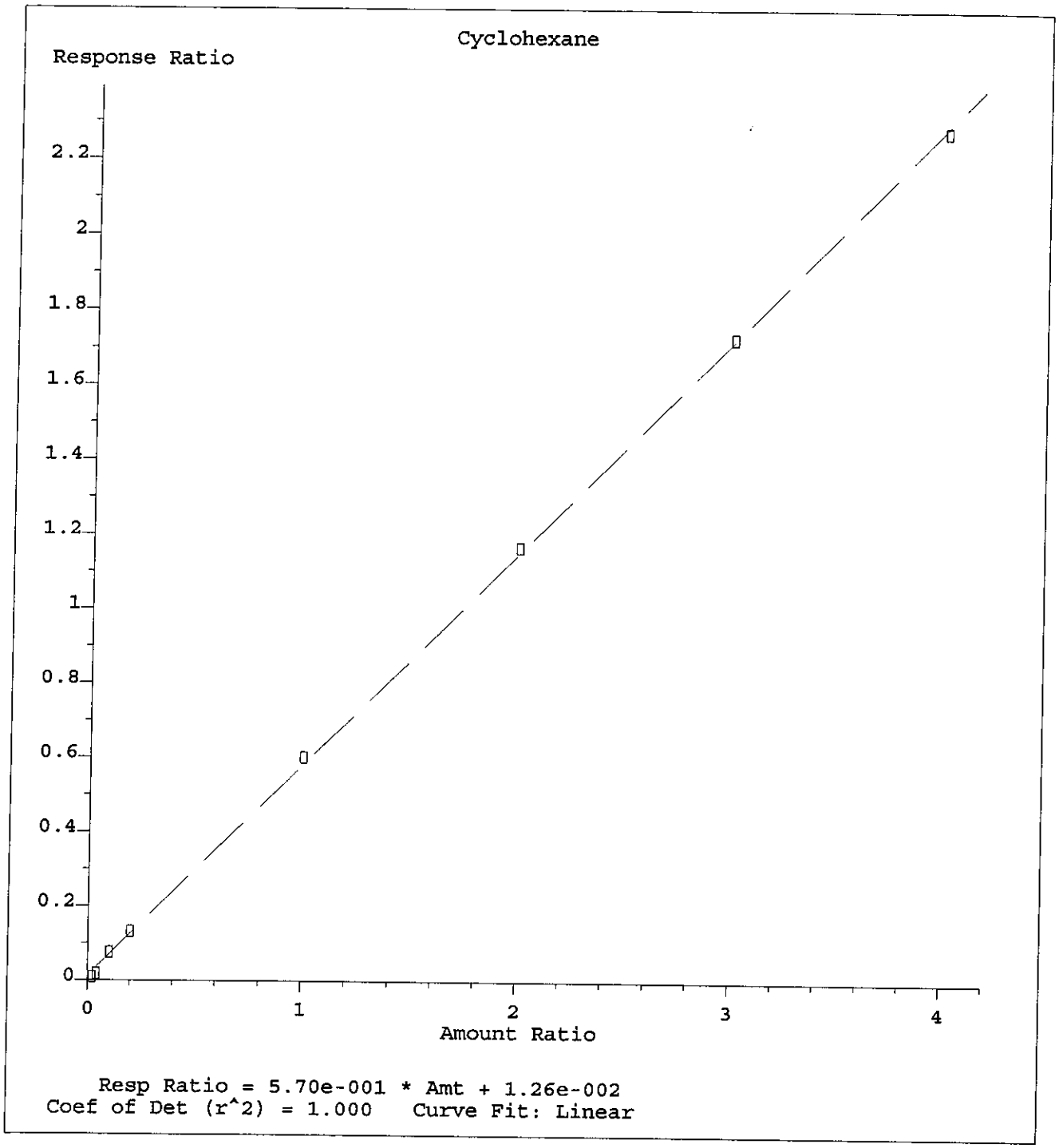
Parameter Name	CoefX2	CoefX	Y-intercept	COD	Mean RF
Iodomethane (Methyl Iodide)		0.542	-0.041	0.9927	0.334
Methacrylonitrile		0.121	-0.001	0.9999	0.105
Cyclohexane		0.570	0.013	0.9997	0.579
Dibromofluoromethane		0.258	0.092	0.9975	0.316
1,4-Dioxane		0.002	-0.001	0.9997	0.002
Methyl Methacrylate		0.126	-0.003	0.9999	0.103
cis-1,3-Dichloropropene		0.402	-0.004	0.9998	0.350
4-Methyl-2-pentanone (MIBK)		0.168	0.000	0.9989	0.147
trans-1,3-Dichloropropene		0.360	-0.004	0.9997	0.308
Ethyl Methacrylate		0.262	-0.006	0.9997	0.208
o-Xylene		0.521	0.000	0.9998	0.462
Styrene		0.869	0.007	0.9994	0.773
1,2-Dibromo-3-chloropropane (DBC		0.103	-0.003	0.9996	0.085
Naphthalene		1.638	-0.003	0.9990	1.351



Method Name: J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Calibration Table Last Updated: Sun Nov 01 08:49:12 2009



Method Name: J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Calibration Table Last Updated: Sun Nov 01 08:49:12 2009



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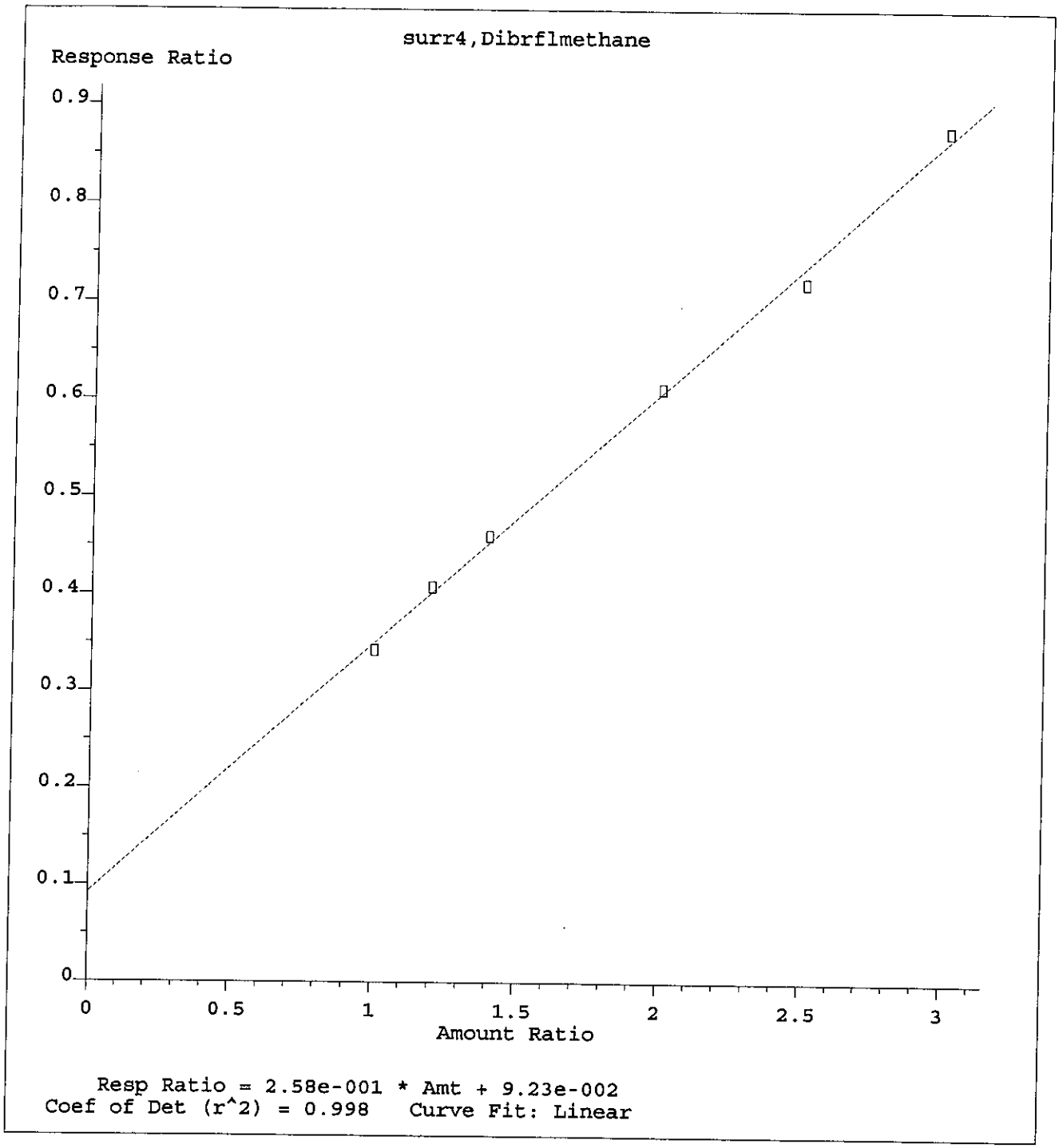
Calibration Table Last Updated: Sun Nov 01 08:49:12 2009



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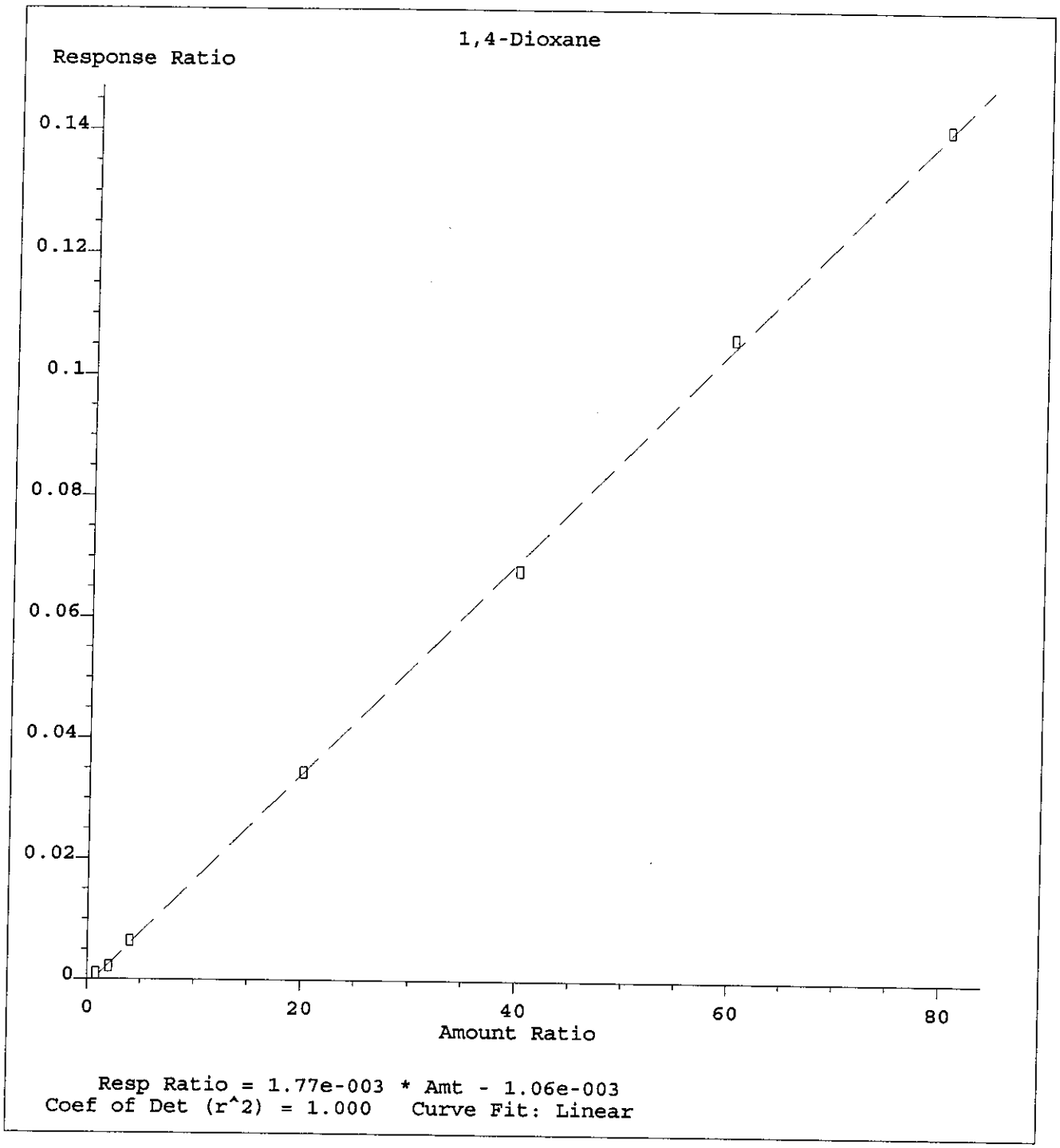

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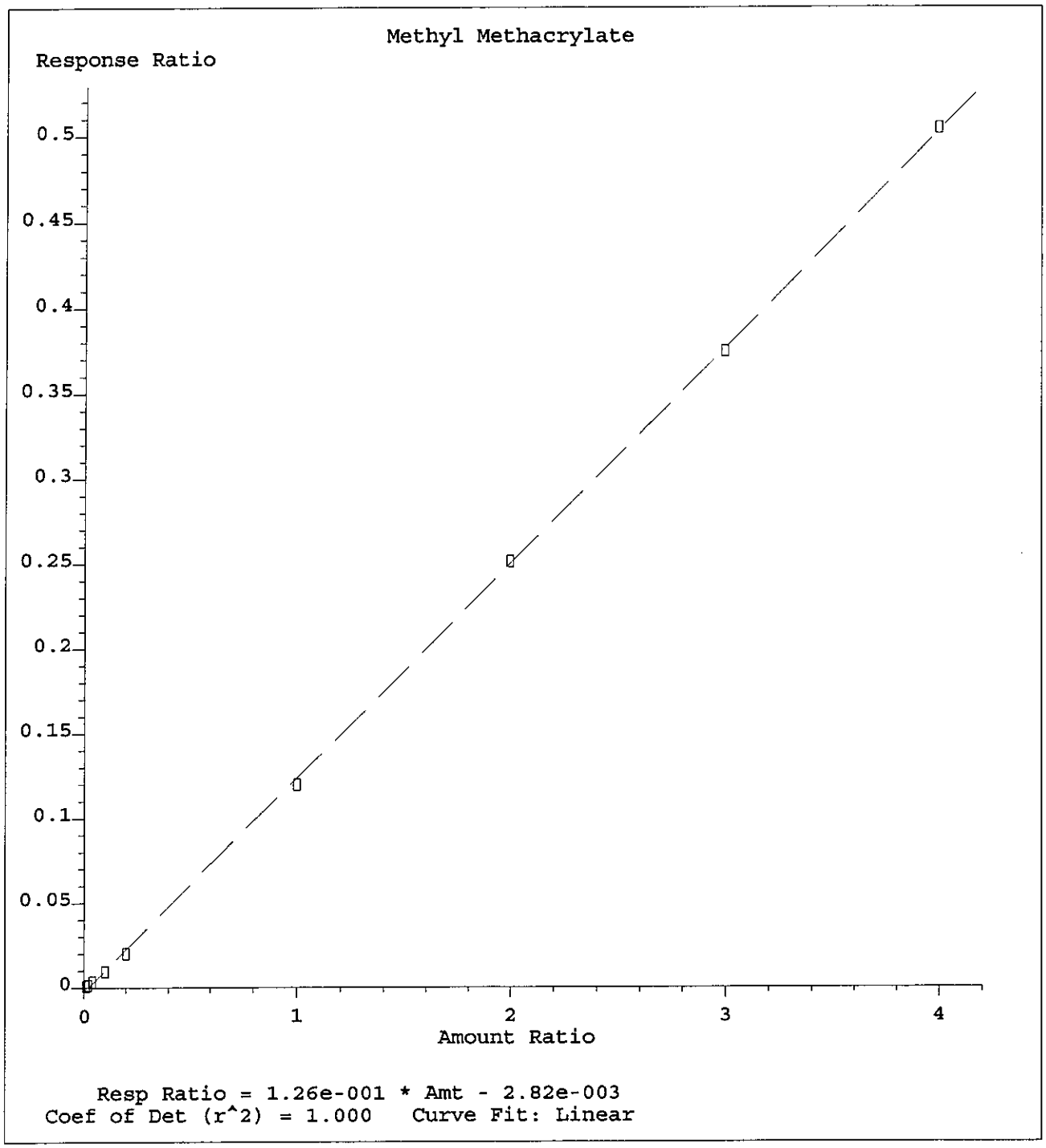
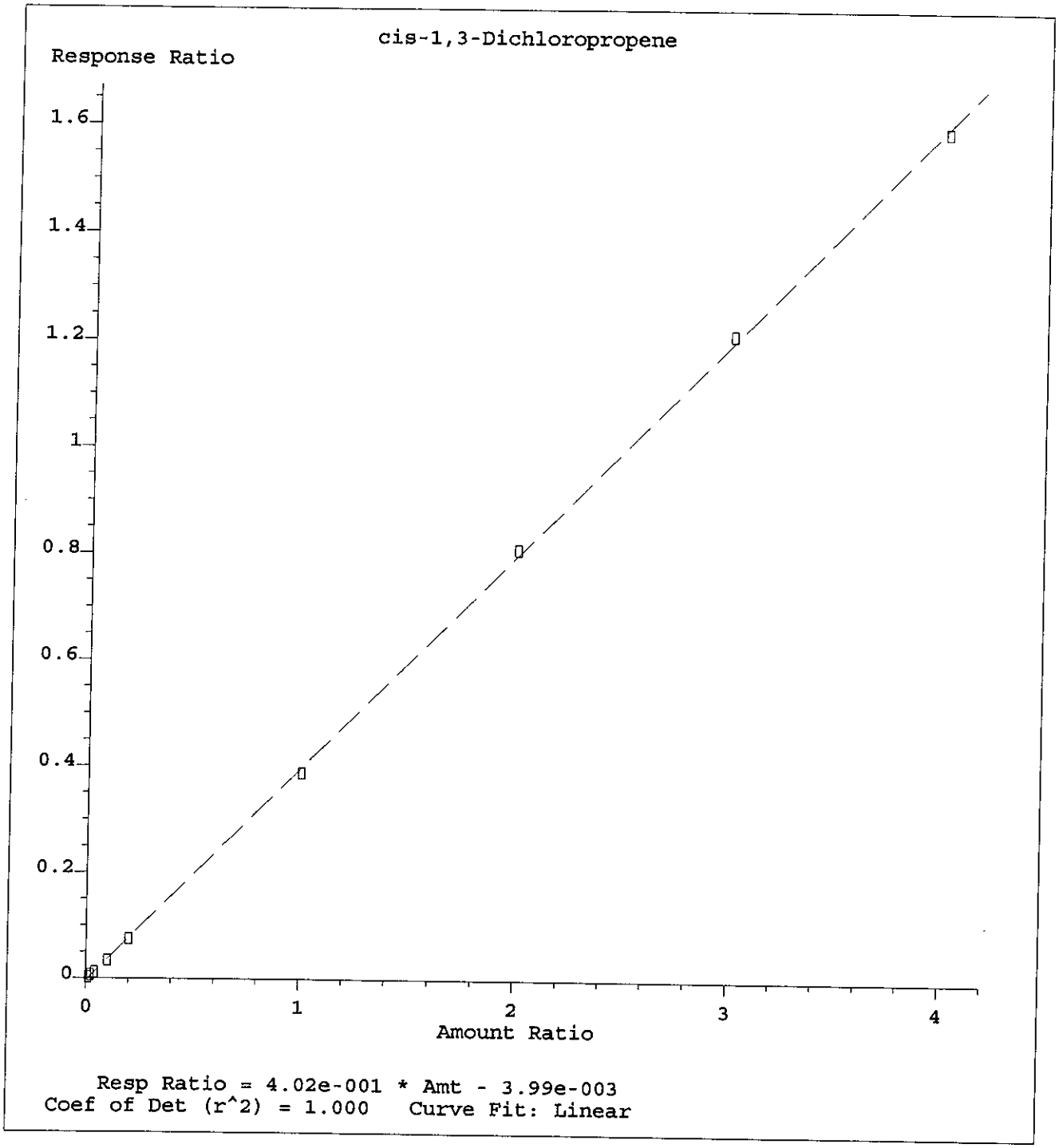
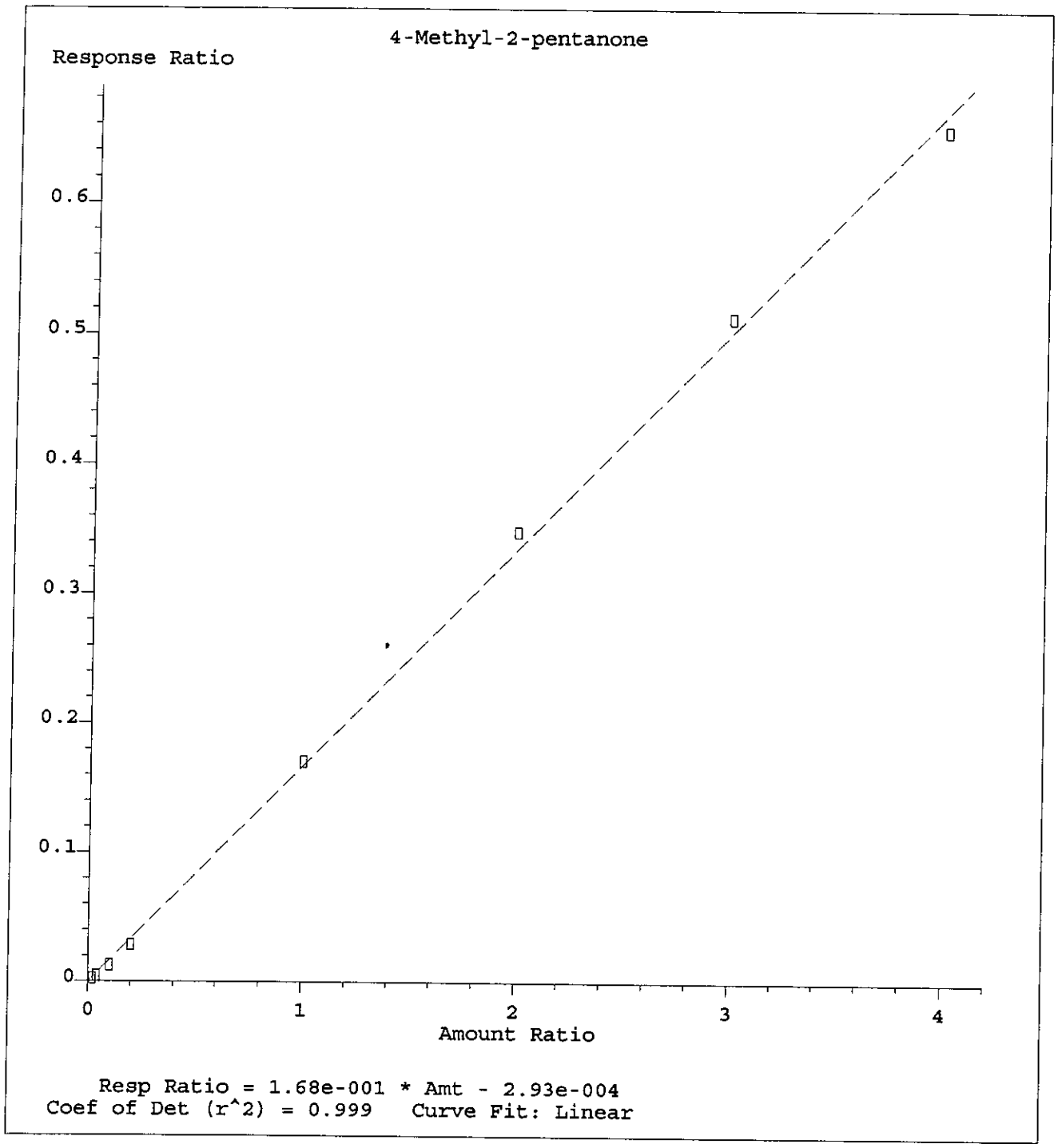


Method Name: J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Calibration Table Last Updated: Sun Nov 01 08:49:12 2009



Method Name: J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Calibration Table Last Updated: Sun Nov 01 08:49:12 2009



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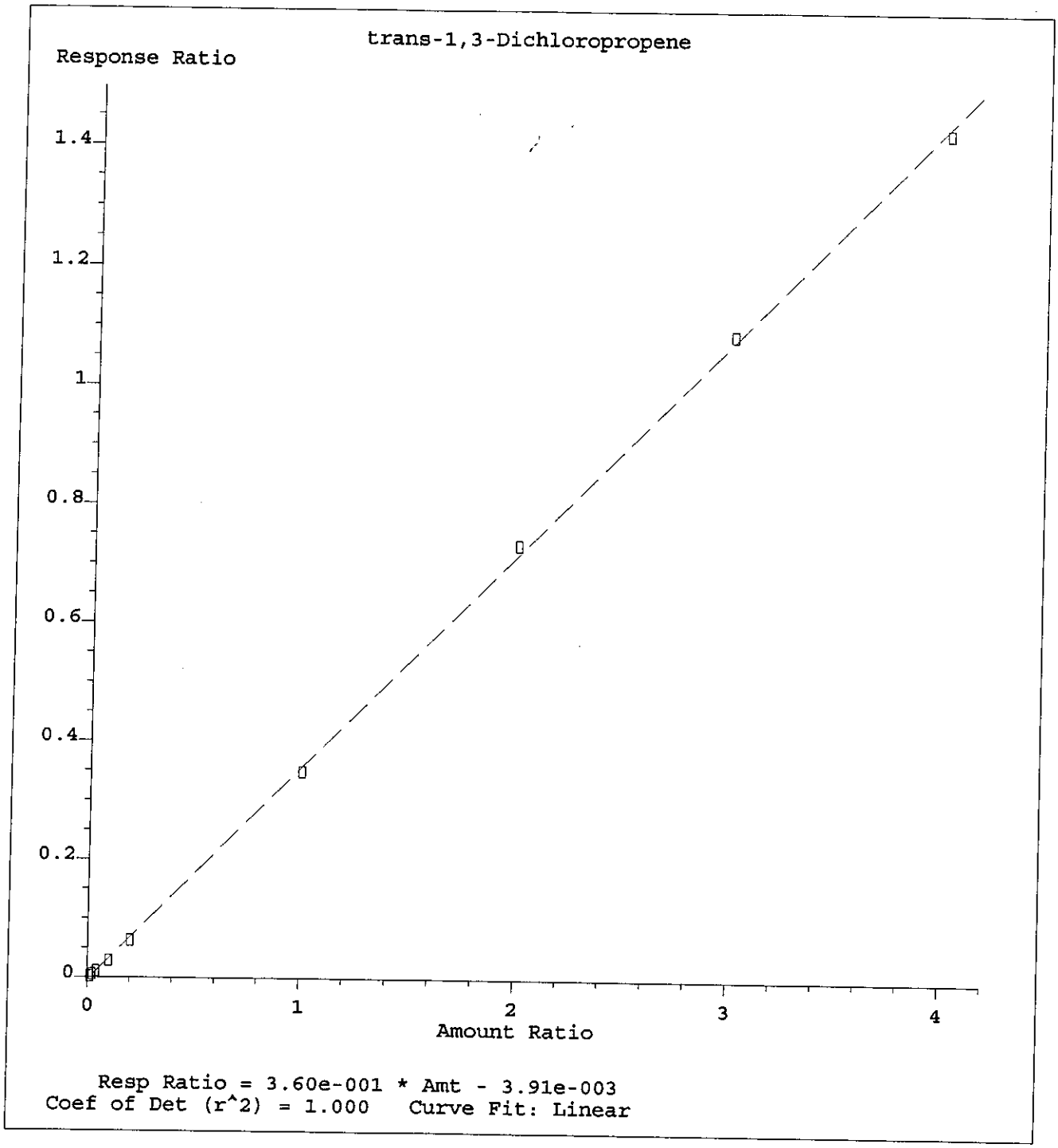
Calibration Table Last Updated: Sun Nov 01 08:49:12 2009



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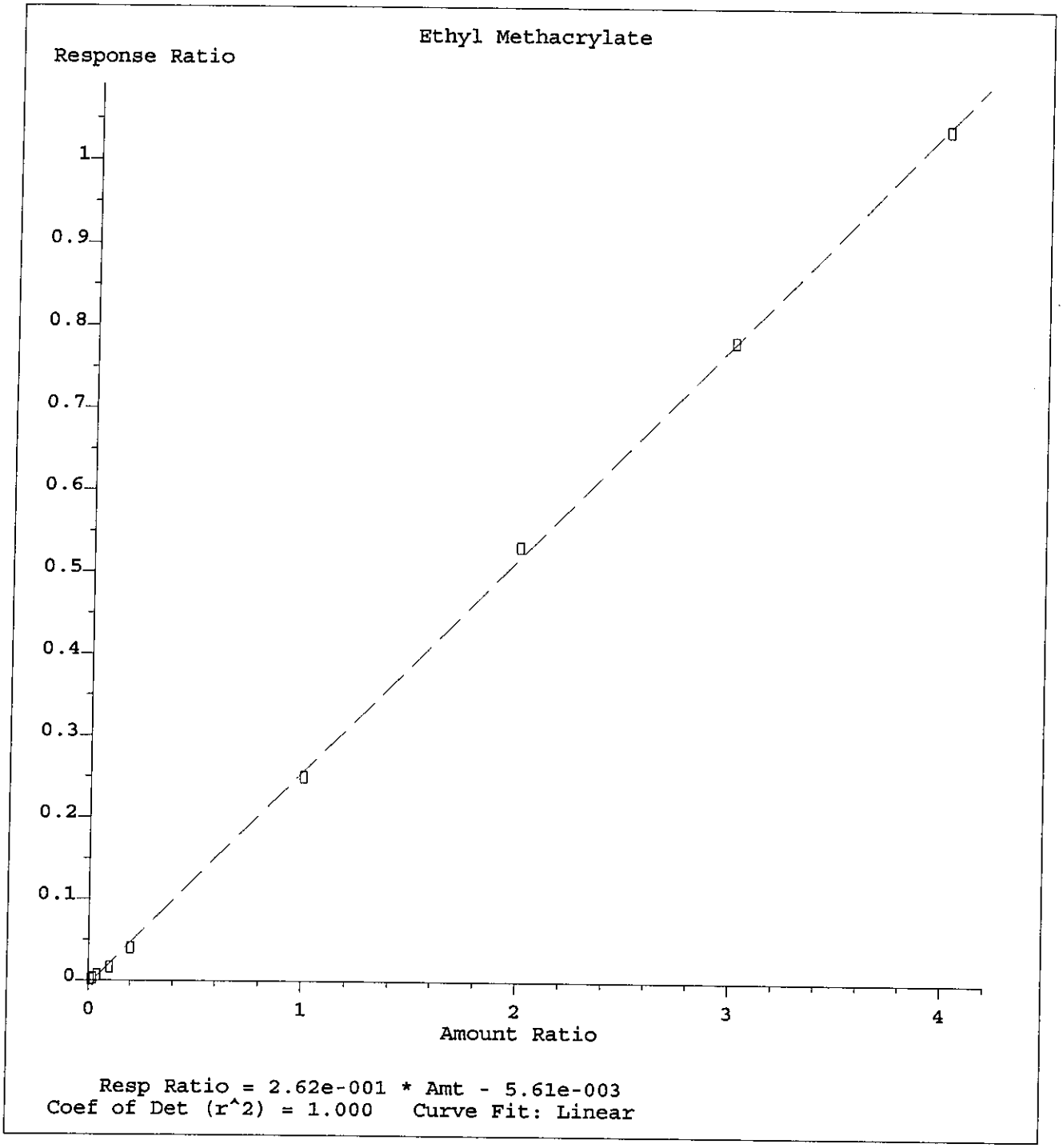
Calibration Table Last Updated: Sun Nov 01 08:49:12 2009



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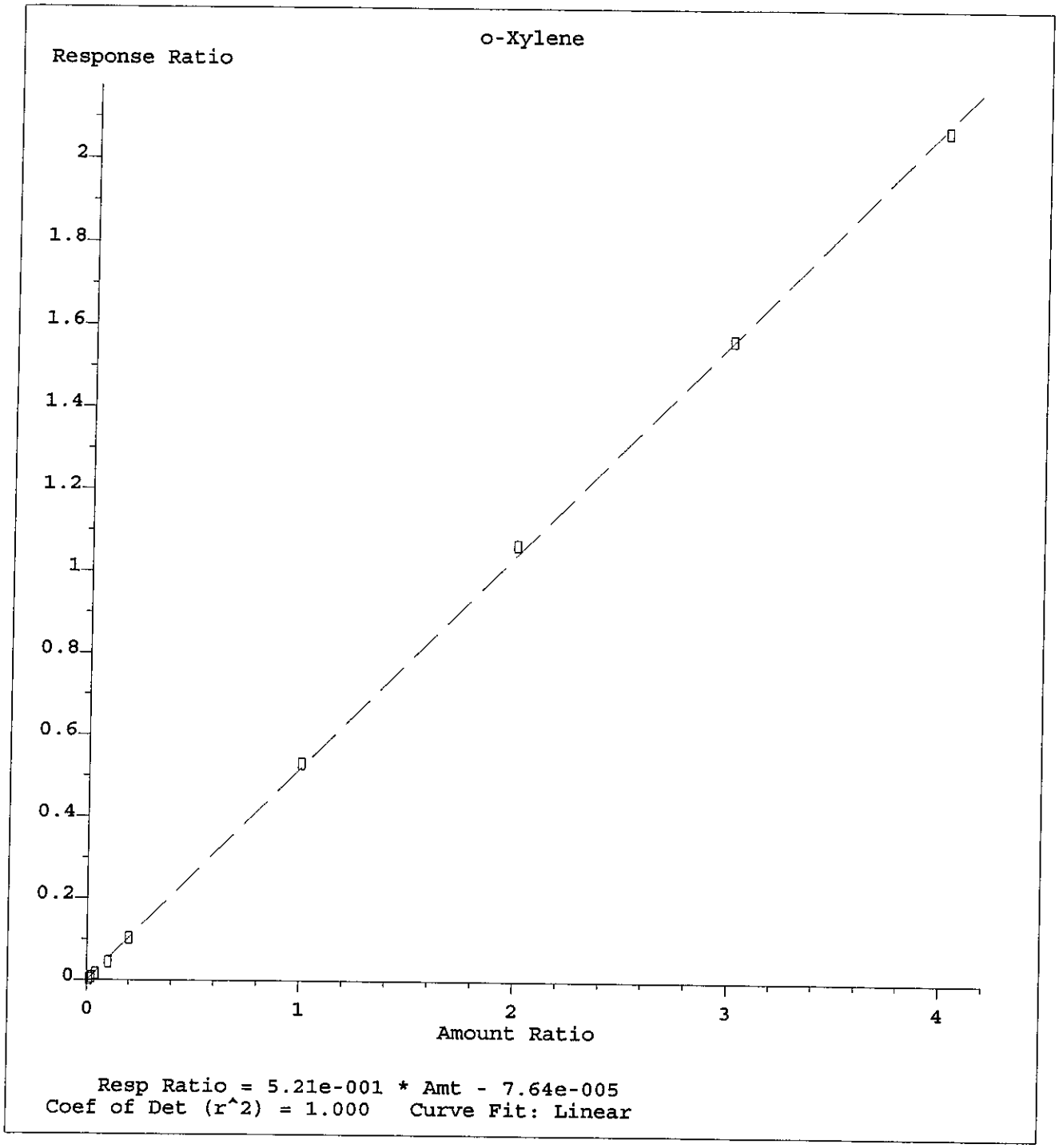

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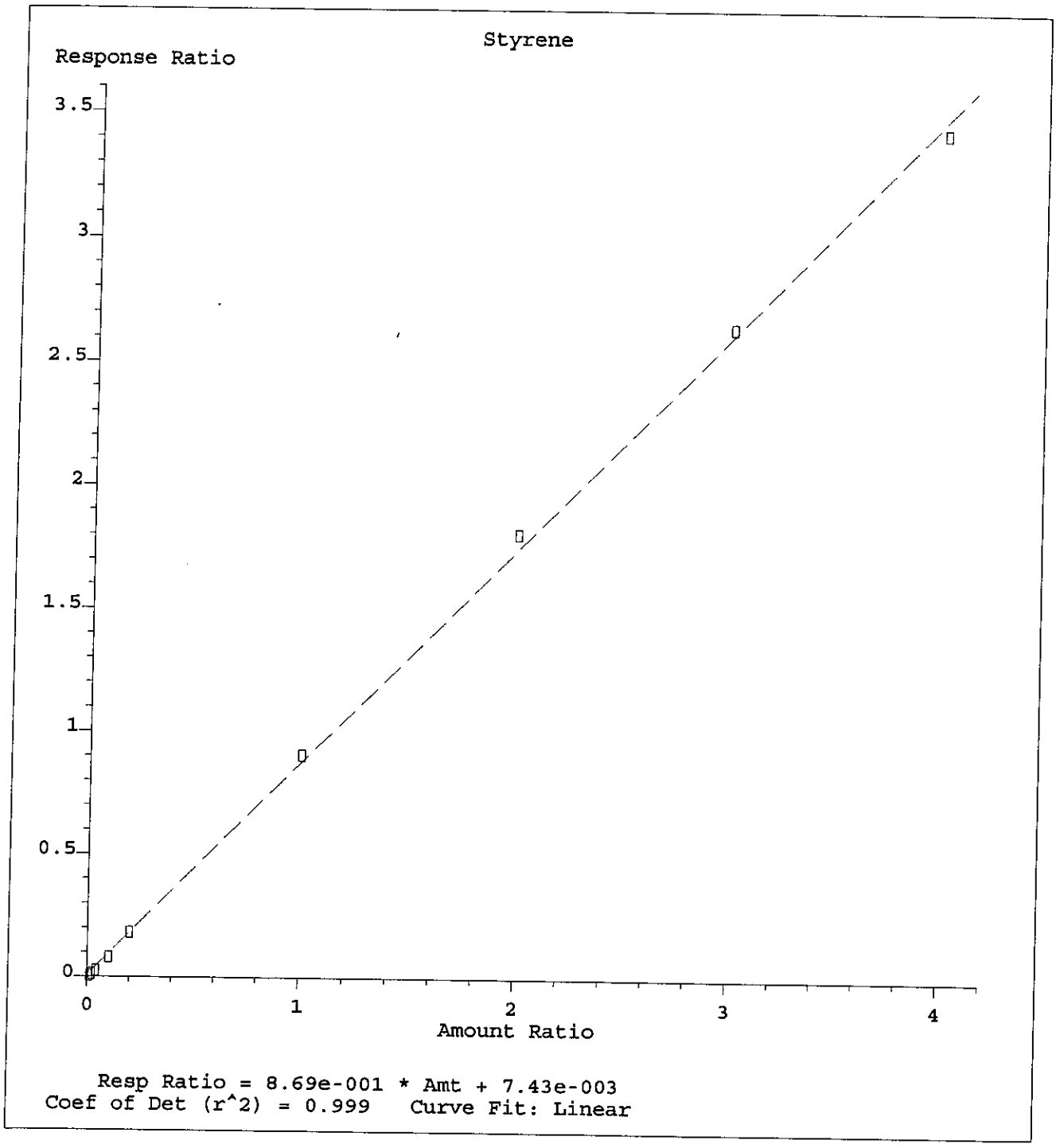
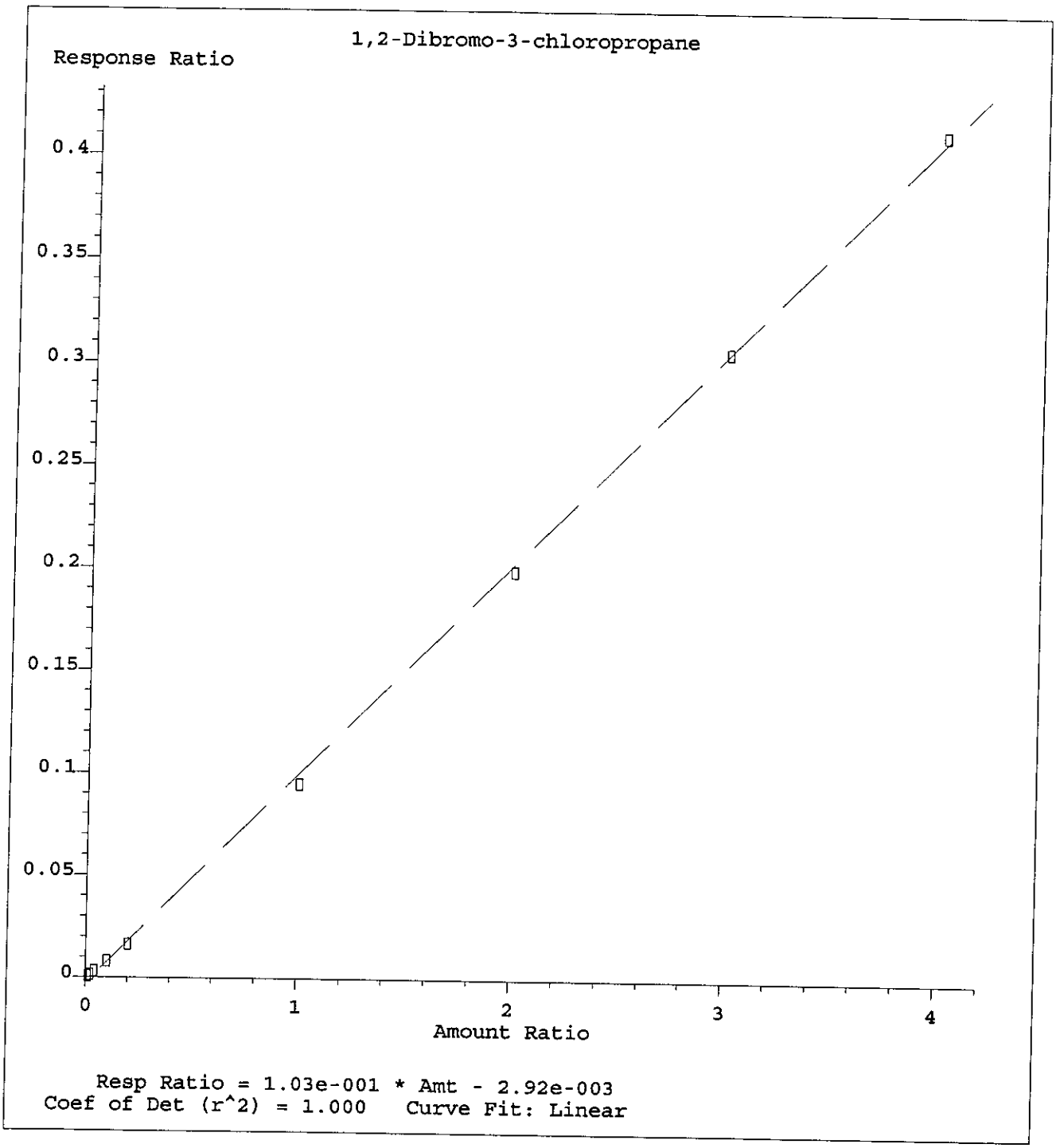
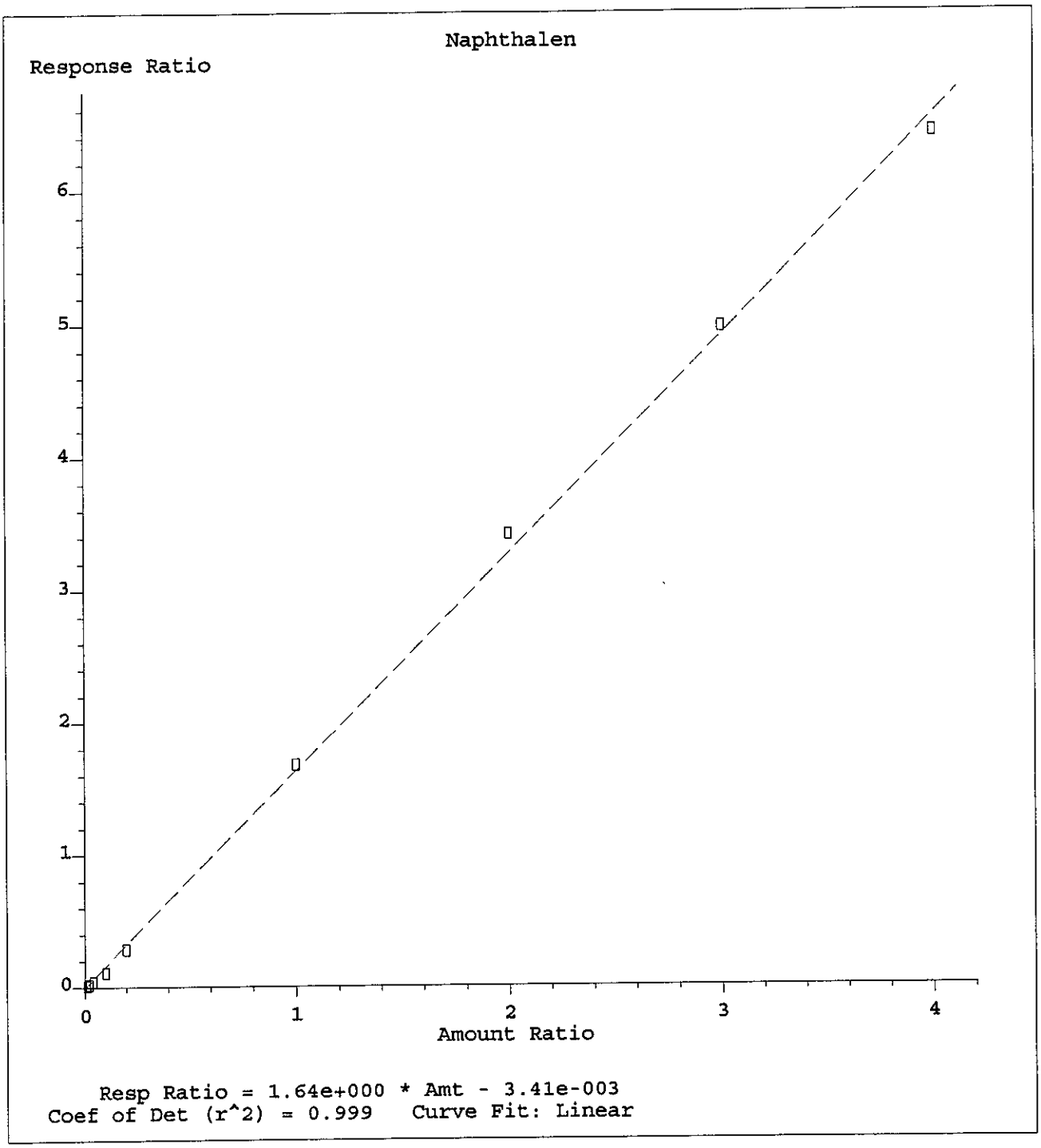
Calibration Table Last Updated: Sun Nov 01 08:49:12 2009



Method Name: J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Calibration Table Last Updated: Sun Nov 01 08:49:12 2009



Method Name: J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Calibration Table Last Updated: Sun Nov 01 08:49:12 2009



Method Name: J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Calibration Table Last Updated: Sun Nov 01 08:49:12 2009

Quantitation Report (QT Reviewed)

Sample : 0.5 PPB STD
Data File : J:\ACQUDATA\msvoa10\data\103109\C1903.D Vial: 3
Acq On : 31 Oct 2009 11:01 am
Operator : F. Naegler
InstName : MSVOA10
Misc :

FW 11/2/09

Quant Time: Nov 01 08:08:43 2009
Quant Method : J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Sat Oct 31 10:01:25 2009
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Pentafluorobenzene	4.440	168	769581	50.00 ug/L	0.00
44) 1,4-Difluorobenzene	5.641	114	1216541	50.00 ug/L	0.00
71) d5-Chlorobenzene	8.860	117	1066913	50.00 ug/L	0.00
88) 1,4-Dichlorobenzene-d4	10.847	152	511587	50.00 ug/L	0.00
System Monitoring Compounds					
46) surr4,Dibrflmethane	4.348	113	427012	54.02 ug/L	0.00
Spiked Amount 50.000	Range 89 - 119		Recovery = 108.04%		
49) surr1,1,2-dichloroetha...	4.891	65	500251	52.20 ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 104.40%		
65) SURR3,Toluene-d8	7.451	98	1352017	53.84 ug/L	0.00
Spiked Amount 50.000	Range 87 - 121		Recovery = 107.68%		
70) SURR2,BFB	9.896	95	545797	50.26 ug/L	0.00
Spiked Amount 50.000	Range 85 - 122		Recovery = 100.52%		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.184	85	3583	0.48 ug/L	97
4) Chloromethane	1.294	50	3909	0.52 ug/L	100
5) Vinyl Chloride	1.361	62	3682	0.47 ug/L	75
6) Bromomethane	1.556	94	2423	0.53 ug/L	83
7) Chloroethane	1.611	64	1441	0.35 ug/L	51
8) Freon 21	1.721	67	5560	0.42 ug/L	99
9) Trichlorofluoromethane	1.770	101	4668	0.37 ug/L	94
10) Diethyl Ether	1.940	59	2201	0.48 ug/L	80
11) Freon 123a	1.934	67	3301	0.42 ug/L	89
12) Freon 123	1.977	83	3841	0.45 ug/L	81
13) Acrolein	2.026	56	2438	2.85 ug/L	82
14) 1,1-Diclethene	2.105	96	2507	0.48 ug/L	92
15) Freon 113	2.099	101	2762	0.49 ug/L	89
16) Acetone	2.129	43	1129	0.72 ug/L	80
17) 2-Propanol	2.202	45	2325	9.35 ug/L	87
18) Iodomethane	2.215	142	1370	0.27 ug/L	83
19) Carbon Disulfide	2.276	76	8142	0.45 ug/L	97
20) Acetonitrile	2.324	40	983	4.10 ug/L #	11
21) Allyl Chloride	2.361	76	1191	0.46 ug/L #	73
22) Methyl Acetate	2.367	43	1816	0.44 ug/L	77
23) Methylene Chloride	2.446	84	4856	0.71 ug/L	90
24) TBA	2.507	59	3994	9.27 ug/L	72
25) Acrylonitrile	2.648	53	4460	2.33 ug/L	94
26) Methyl-t-Butyl Ether	2.666	73	6336	0.47 ug/L	99
27) trans-1,2-Dichloroethene	2.672	96	3104	0.49 ug/L	89
28) 1,1-Diclethane	3.068	63	6621	0.47 ug/L	96
29) Vinyl Acetate	3.123	86	151m	0.28 ug/L	
30) DIPE	3.117	45	8157	0.42 ug/L	99
31) 2-Chloro-1,3-Butadiene	3.154	53	3666	0.37 ug/L	96
32) ETBE	3.513	59	7977	0.40 ug/L	87
33) 2,2-Dichloropropane	3.702	77	3763	0.42 ug/L	90
34) cis-1,2-Dichloroethene	3.696	96	3000	0.45 ug/L #	53
35) 2-Butanone	3.727	43	1199	0.60 ug/L	58
37) Propionitrile	3.806	54	1295	1.83 ug/L	97
38) Bromochloromethane	4.001	130	2134	0.51 ug/L #	83

Quantitation Report (QT Reviewed)

Sample : 0.5 PPB STD
Data File : J:\ACQUDATA\msvoa10\data\103109\C1903.D Vial: 3
Acq On : 31 Oct 2009 11:01 am
Operator : F. Naegler
InstName : MSVOA10
Misc :

Quant Time: Nov 01 08:08:43 2009
Quant Method : J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Sat Oct 31 10:01:25 2009
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
39) Methacrylonitrile	4.007	67	575m	0.37 ug/L	
40) Tetrahydrofuran	4.086	42	797	0.70 ug/L #	48
41) Chloroform	4.129	83	5936	0.47 ug/L	84
42) 1,1,1-Trichloroethane	4.379	97	4383	0.39 ug/L #	56
43) TAME	5.214	73	4885	0.39 ug/L #	53
47) Carbontetrachloride	4.635	121	1211	0.37 ug/L	93
48) 1,1-Dichloropropene	4.647	75	3574	0.43 ug/L	98
50) Benzene	4.995	78	11657	0.49 ug/L	91
51) 1,2-Dichloroethane	5.025	62	5259	0.47 ug/L	77
52) Iso-Butyl Alcohol	4.879	43	1285m	8.96 ug/L	
53) n-Heptane	5.476	43	2769	0.46 ug/L	89
54) Trichloroethene	5.988	130	2568	0.38 ug/L	83
55) Methylcyclohexane	6.238	55	3721	0.40 ug/L	95
56) 1,2-Diclpropane	6.281	63	3356	0.46 ug/L	97
57) Dibromomethane	6.427	93	1920	0.51 ug/L	98
58) 1,4-Dioxane	6.488	88	128m	4.28 ug/L	
59) Methyl Methacrylate	6.494	69	1015m	0.41 ug/L	
60) Bromodichloromethane	6.641	83	3566	0.39 ug/L	93
62) 2-Chloroethylvinyl Ether	7.031	63	1124	0.37 ug/L	59
63) cis-1,3-Dichloropropene	7.165	75	2863	0.34 ug/L	87
64) 4-Methyl-2-pentanone	7.360	43	1245	0.36 ug/L	88
66) Toluene	7.519	91	10488	0.43 ug/L	99
67) trans-1,3-Dichloropropene	7.768	75	2536	0.33 ug/L	92
68) Ethyl Methacrylate	7.890	69	1860m	0.37 ug/L	
69) 1,1,2-Trichloroethane	7.945	97	2453	0.50 ug/L #	78
72) Tetrachloroethene	8.073	164	2295	0.45 ug/L #	70
73) 2-Hexanone	8.220	43	768	0.33 ug/L	88
74) 1,3-Dichloropropane	8.110	76	3709	0.47 ug/L	88
75) Dibromochloromethane	8.317	129	2484m	0.38 ug/L	
76) N-Butyl Acetate	8.360	43	1805	0.31 ug/L	91
77) 1,2-Dibromoethane	8.421	107	2237	0.44 ug/L #	68
78) Chlorobenzene	8.884	112	8054	0.46 ug/L	91
79) 1,1,1,2-Tetrachloroethane	8.963	131	2527	0.39 ug/L #	52
80) Ethylbenzene	8.994	106	3165	0.37 ug/L	89
81) (m+p)Xylene	9.104	106	8061	0.81 ug/L	97
82) o-Xylene	9.445	106	3443	0.36 ug/L	82
83) Styrene	9.463	104	5028	0.31 ug/L	90
84) Bromoform	9.622	173	1399	0.40 ug/L	98
85) Isopropylbenzene	9.768	105	8068	0.35 ug/L	88
86) Cyclohexanone	9.841	55	4802	7.55 ug/L	83
87) trans-1,4-Dichloro-2-B...	10.079	53	779	0.48 ug/L	70
89) 1,1,2,2-Tetrachloroethane	10.024	83	2577	0.51 ug/L	95
90) Bromobenzene	10.018	156	3081	0.48 ug/L	89
92) 1,2,3-Trichloropropane	10.055	110	780	0.50 ug/L #	66
93) n-Propylbenzene	10.122	91	11396	0.42 ug/L	95
94) 2-Chlorotoluene	10.183	91	7597	0.43 ug/L	99
95) 4-Chlorotoluene	10.274	91	8531	0.41 ug/L	97
96) 1,3,5-Trimethylbenzene	10.268	105	6815	0.35 ug/L	99
97) tert-Butylbenzene	10.530	119	6192	0.38 ug/L	88
98) 1,2,4-Trimethylbenzene	10.573	105	6160	0.30 ug/L	90
99) sec-Butylbenzene	10.707	105	8028	0.35 ug/L	97
100) p-Isopropyltoluene	10.829	119	7612	0.38 ug/L	97

Quantitation Report (QT Reviewed)

Sample : 0.5 PPB STD
Data File : J:\ACQUDATA\msvoa10\data\103109\C1903.D Vial: 3
Acq On : 31 Oct 2009 11:01 am
Operator : F. Naegler
InstName : MSVOA10
Misc :

Quant Time: Nov 01 08:08:43 2009
Quant Method : J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Sat Oct 31 10:01:25 2009
Response via : Initial Calibration

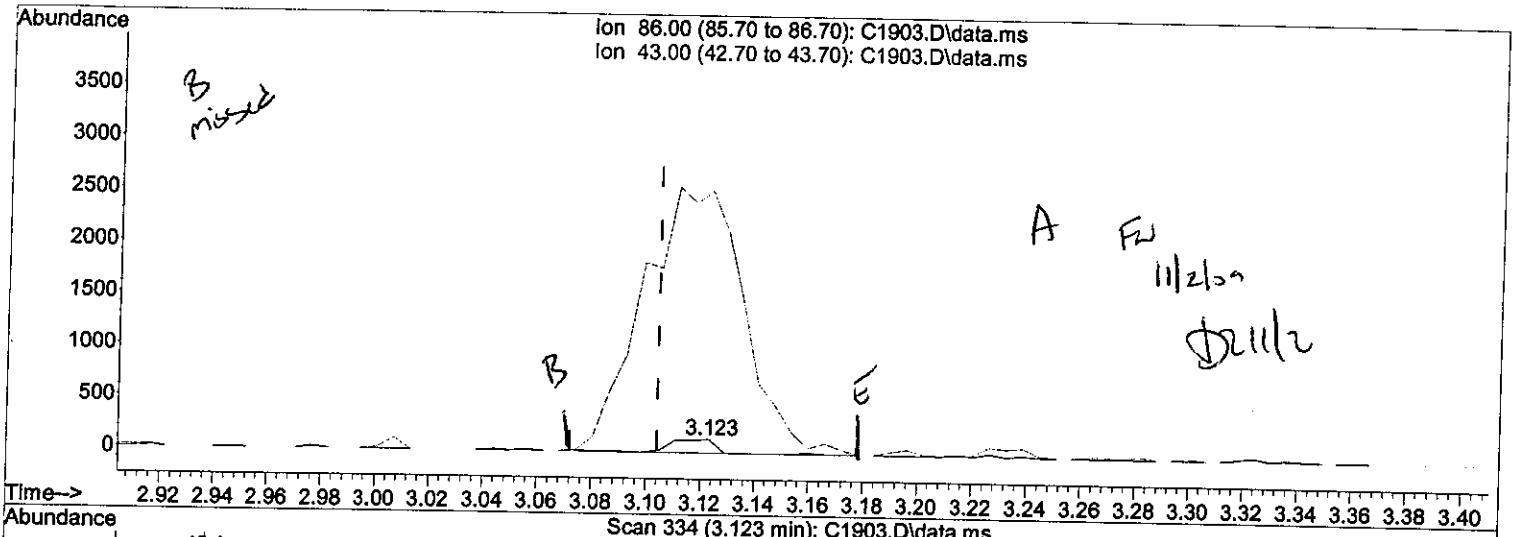
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
101) 1,3-Dclbenz	10.798	146	5205	0.42	ug/L		97
102) 1,4-Dclbenz	10.871	146	6676	0.50	ug/L		88
104) n-Butylbenzene	11.158	91	6760	0.39	ug/L		92
105) 1,2-Dclbenz	11.170	146	5458	0.47	ug/L		89
106) 1,2-Dibromo-3-chloropr...	11.725	157	299	0.33	ug/L	#	76
108) 1,2,4-Tcbenzene	12.237	180	3738	0.50	ug/L		87
109) Hexachlorobt	12.335	225	1855	0.53	ug/L	#	79
110) Naphthalen	12.383	128	5170	0.39	ug/L		96
111) 1,2,3-Tclbenzene	12.518	180	3176	0.48	ug/L		99

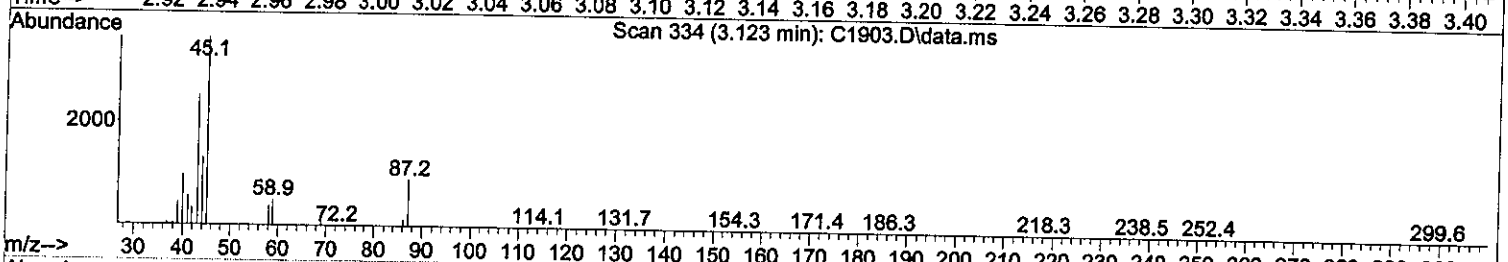
(#) = qualifier out of range (m) = manual integration (+) = signals summed

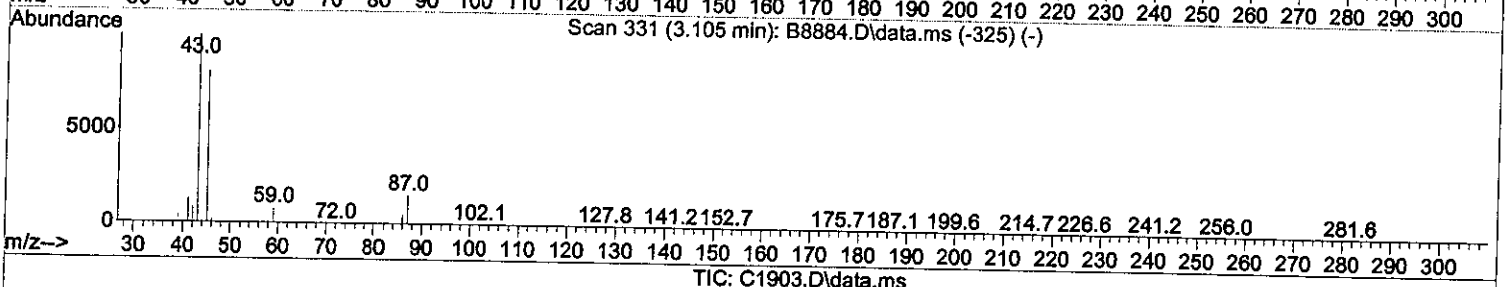
Quantitation Report (Qedit)

Sample : 0.5 PPB STD
Data File : J:\ACQUDATA\msvoa10\data\103109\C1903.D Vial: 3
Acq On : 31 Oct 2009 11:01 am
Operator : F. Naegler
InstName : MSVOA10
Misc :

Quant Time: Nov 01 08:08:43 2009
Quant Method : J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Sat Oct 31 10:01:25 2009
Response via : Initial Calibration







TIC: C1903.D\data.ms

(29) Vinyl Acetate

3.123min (+0.019) 0.28 ug/L m

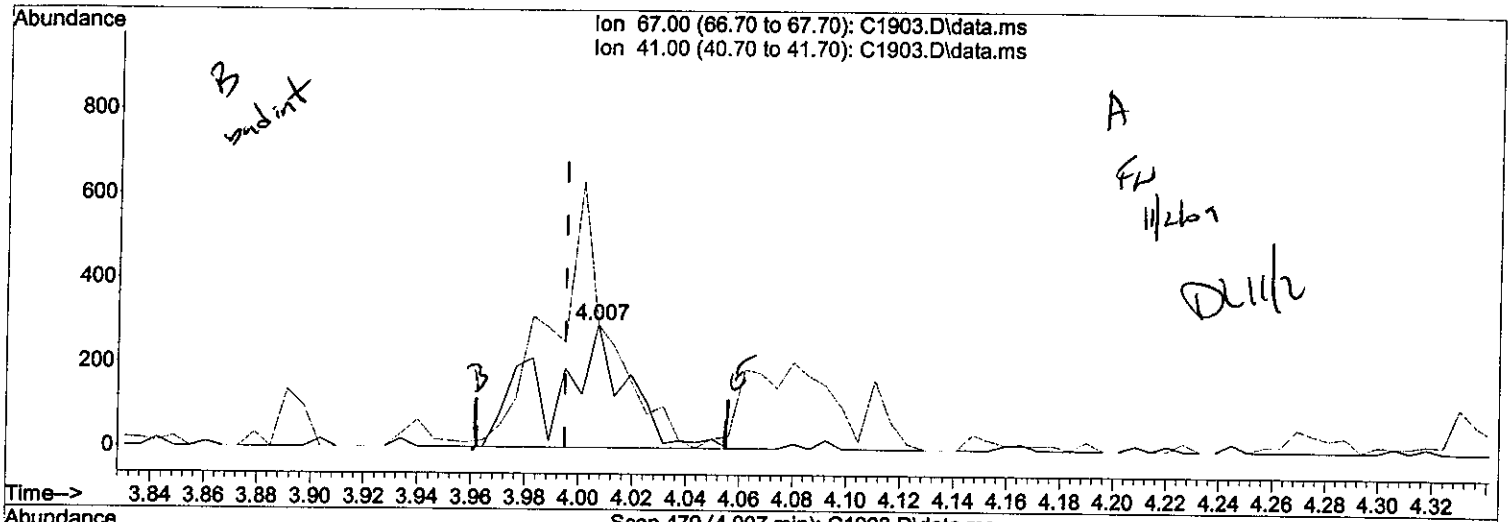
response 151

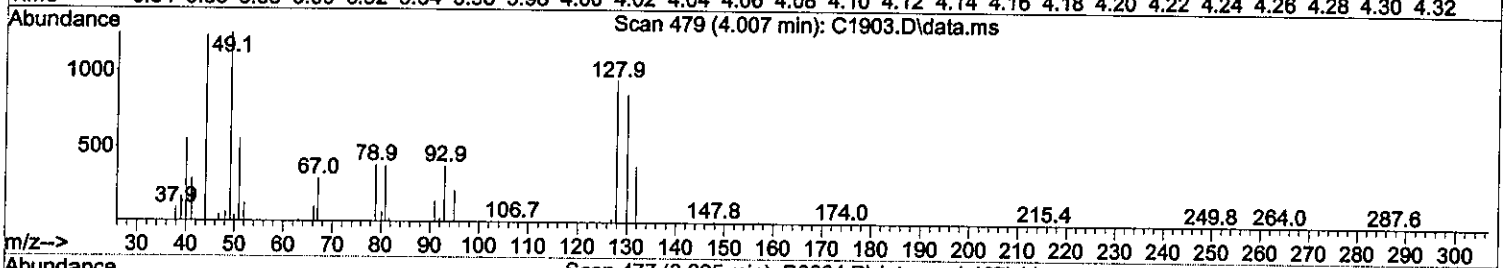
Ion	Exp%	Act%
86.00	100	100
43.00	1749.90	1925.95#
0.00	0.00	0.00
0.00	0.00	0.00

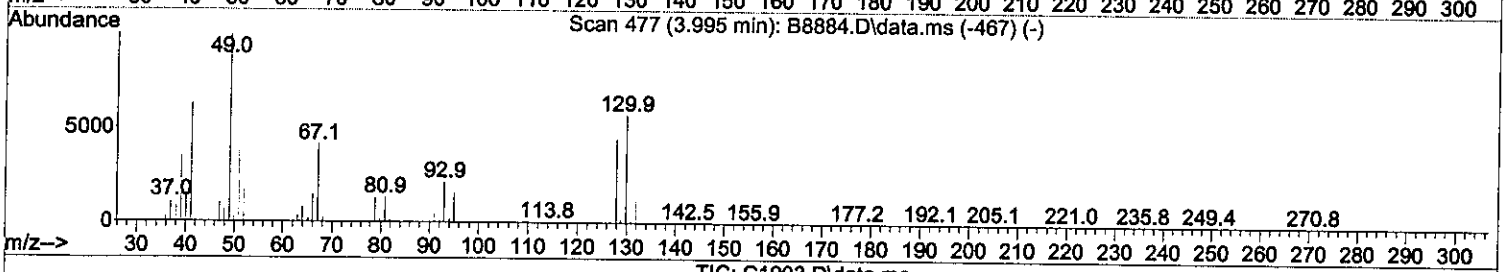
Quantitation Report (Qedit)

Sample : 0.5 PPB STD
Data File : J:\ACQUDATA\msvoa10\data\103109\C1903.D Vial: 3
Acq On : 31 Oct 2009 11:01 am
Operator : F. Naegler
InstName : MSVOA10
Misc :

Quant Time: Nov 01 08:08:43 2009
Quant Method : J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Sat Oct 31 10:01:25 2009
Response via : Initial Calibration







TIC: C1903.D\data.ms

(39) Methacrylonitrile

4.007min (+0.012) 0.37 ug/L m

response 575

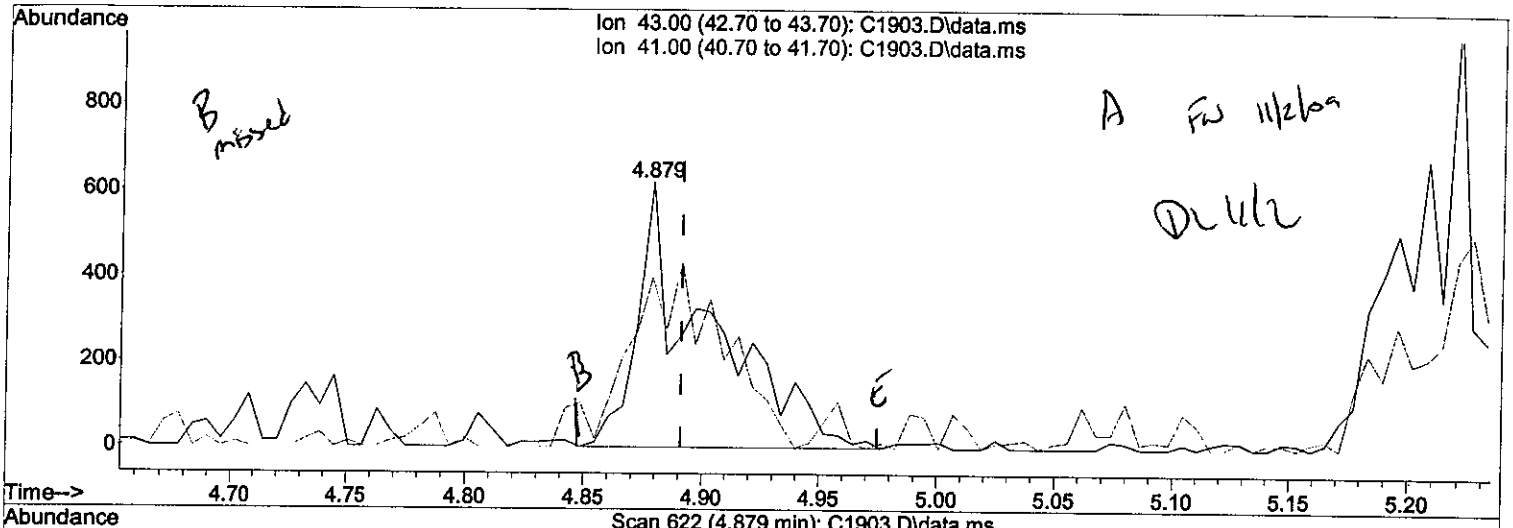
Ion	Exp%	Act%
67.00	100	100
41.00	156.90	99.66#
0.00	0.00	0.00
0.00	0.00	0.00

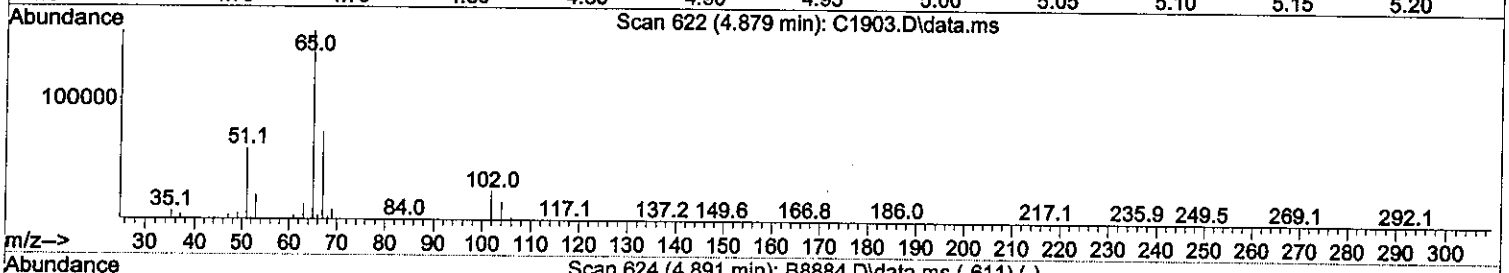
00070

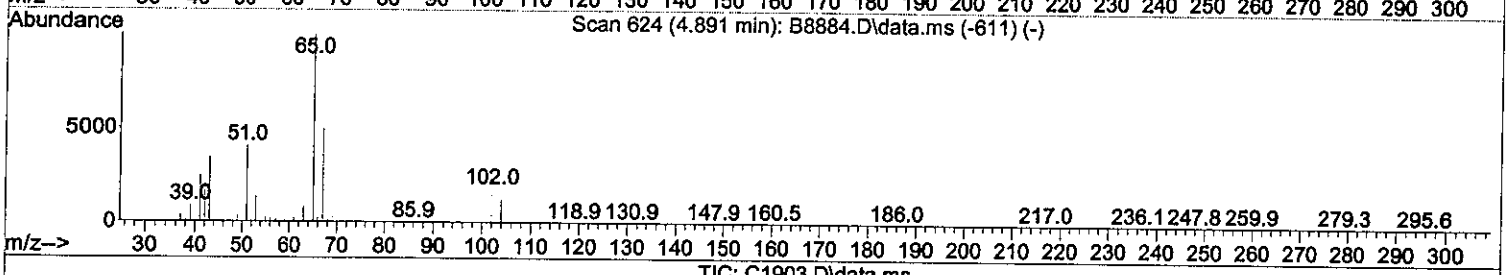
Quantitation Report (Qedit)

Sample : 0.5 PPB STD
Data File : J:\ACQUDATA\msvoa10\data\103109\C1903.D Vial: 3
Acq On : 31 Oct 2009 11:01 am
Operator : F. Naegler
InstName : MSVOA10
Misc :

Quant Time: Nov 01 08:08:43 2009
Quant Method : J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Sat Oct 31 10:01:25 2009
Response via : Initial Calibration







TIC: C1903.D\data.ms

(52) Iso-Butyl Alcohol

4.879min (-0.012) 8.96 ug/L m

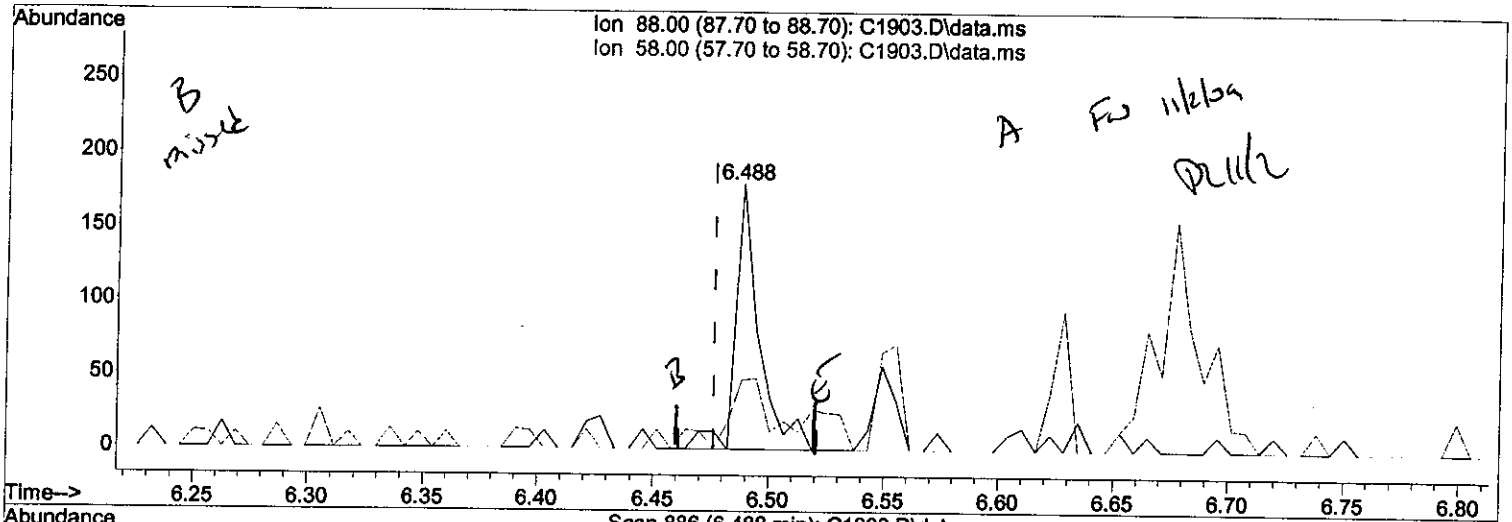
response 1285

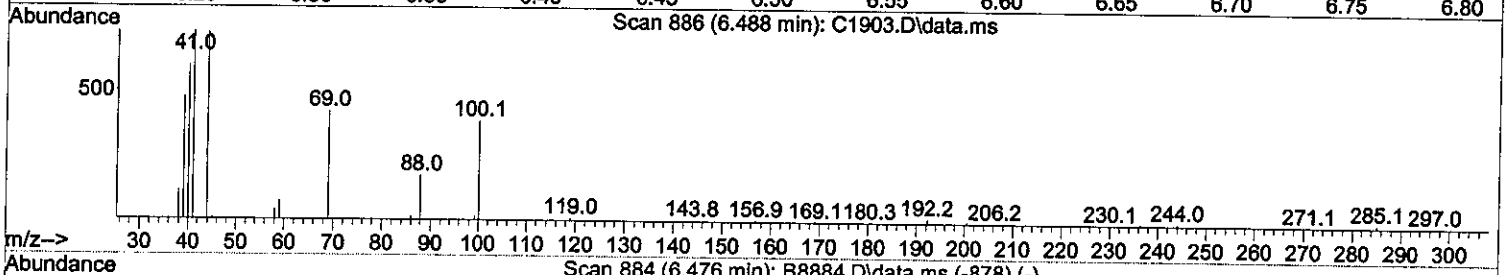
Ion	Exp%	Act%
43.00	100	100
41.00	75.50	64.09
0.00	0.00	0.00
0.00	0.00	0.00

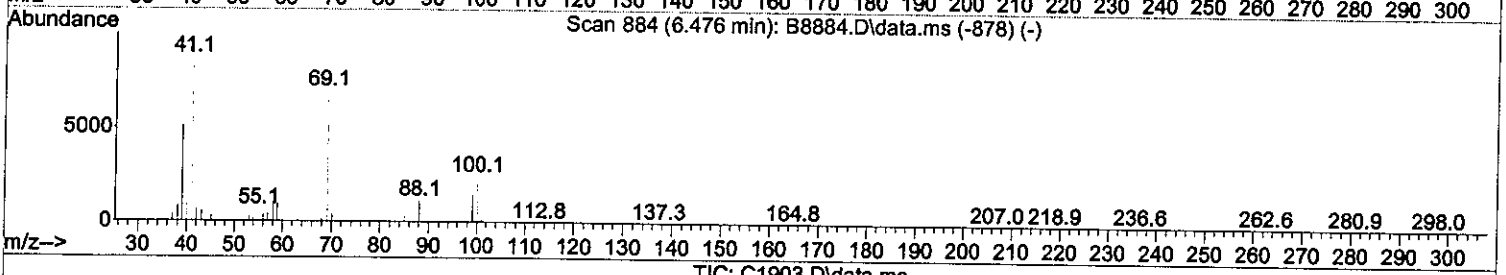
Quantitation Report (Qedit)

Sample : 0.5 PPB STD
Data File : J:\ACQUDATA\msvoa10\data\103109\C1903.D Vial: 3
Acq On : 31 Oct 2009 11:01 am
Operator : F. Naegler
InstName : MSVOA10
Misc :

Quant Time: Nov 01 08:08:43 2009
Quant Method : J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Sat Oct 31 10:01:25 2009
Response via : Initial Calibration







(58) 1,4-Dioxane

6.488min (+0.012) 4.28 ug/L m

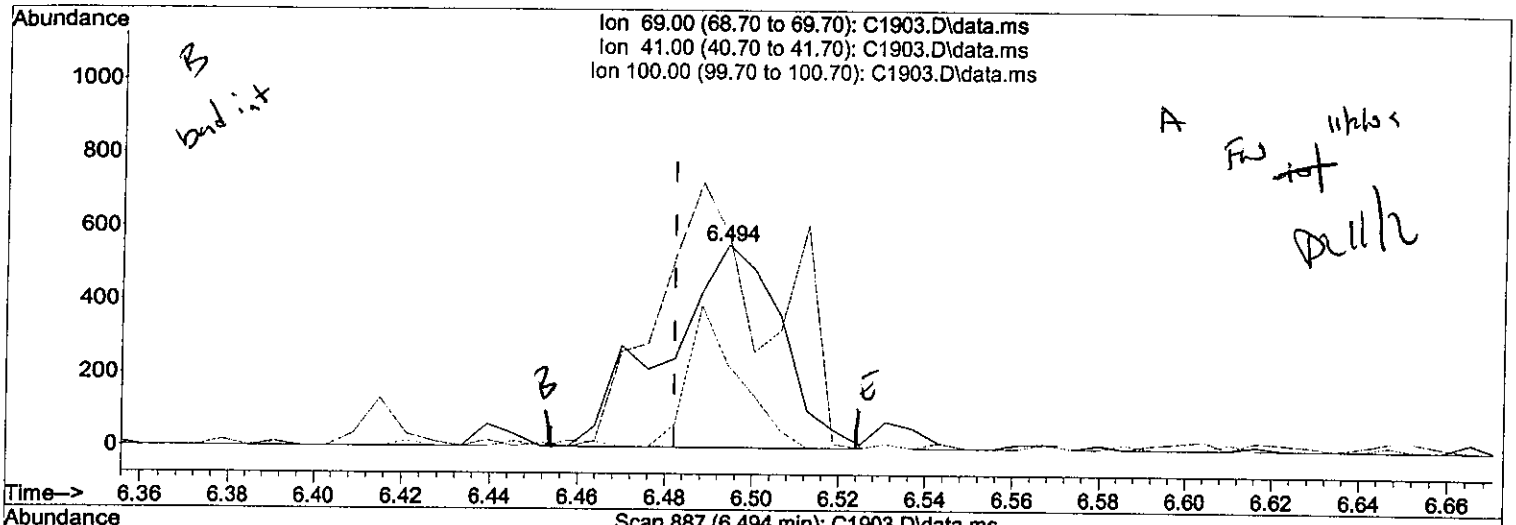
response 128

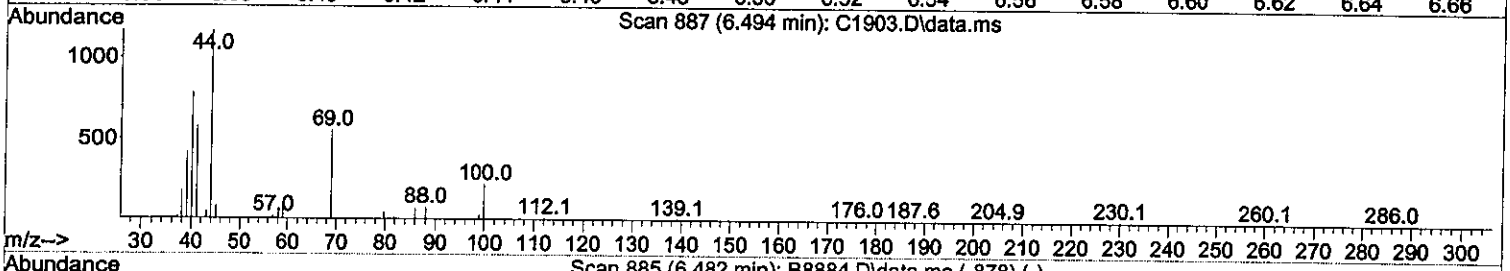
Ion	Exp%	Act%
88.00	100	100
58.00	95.80	26.11#
0.00	0.00	0.00
0.00	0.00	0.00

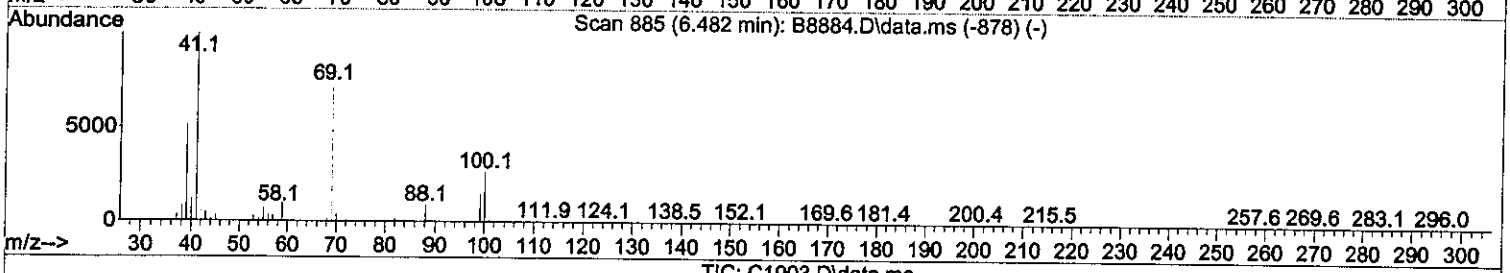
Quantitation Report (Qedit)

Sample : 0.5 PPB STD
Data File : J:\ACQUDATA\msvoa10\data\103109\C1903.D Vial: 3
Acq On : 31 Oct 2009 11:01 am
Operator : F. Naegler
InstName : MSVOA10
Misc :

Quant Time: Nov 01 08:08:43 2009
Quant Method : J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Sat Oct 31 10:01:25 2009
Response via : Initial Calibration







TIC: C1903.D\data.ms

(59) Methyl Methacrylate

6.494min (+0.012) 0.41 ug/L m

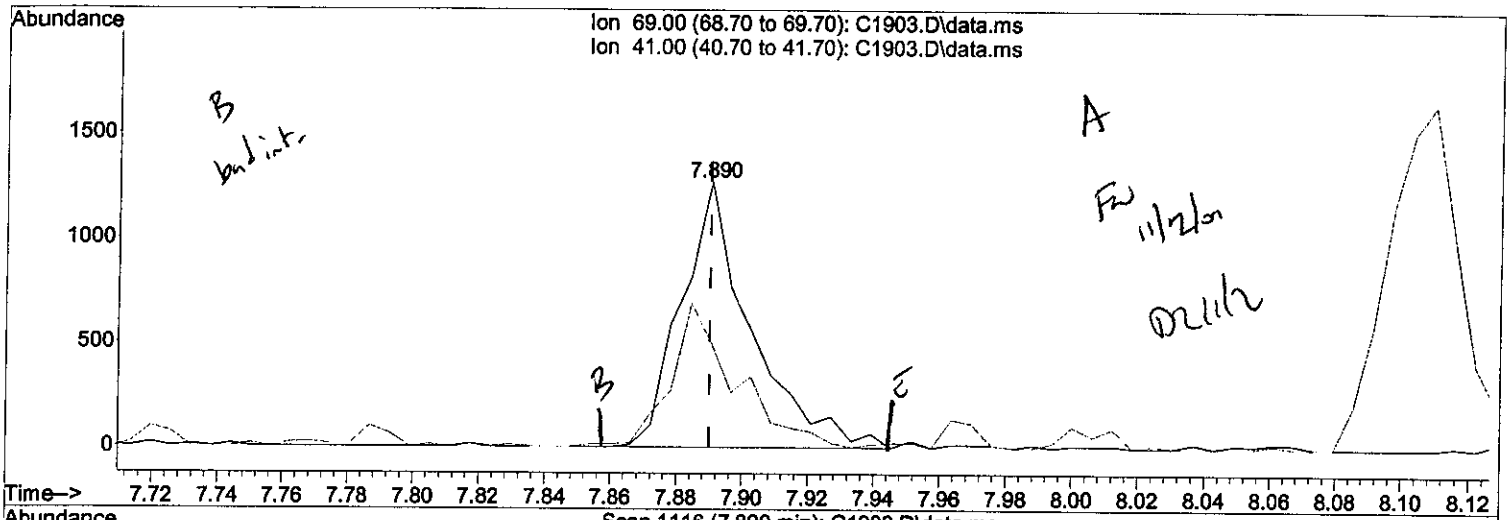
response 1015

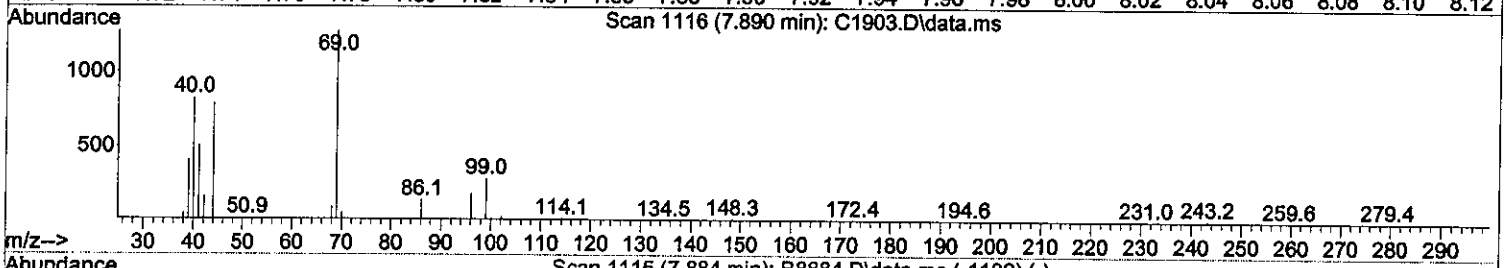
Ion	Exp%	Act%
69.00	100	100
41.00	142.40	105.05#
100.00	37.80	40.61
0.00	0.00	0.00

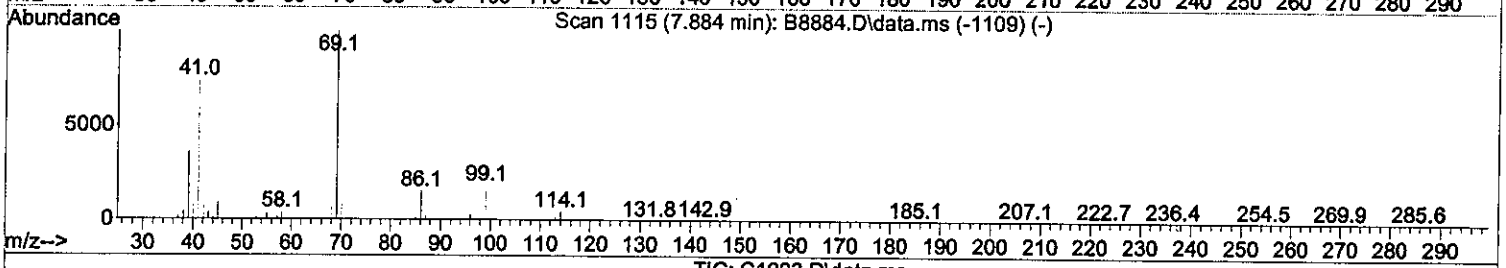
Quantitation Report (Qedit)

Sample : 0.5 PPB STD
Data File : J:\ACQUDATA\msvoa10\data\103109\C1903.D Vial: 3
Acq On : 31 Oct 2009 11:01 am
Operator : F. Naegler
InstName : MSVOA10
Misc :

Quant Time: Nov 01 08:08:43 2009
Quant Method : J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Sat Oct 31 10:01:25 2009
Response via : Initial Calibration







TIC: C1903.D\data.ms

(68) Ethyl Methacrylate

7.890min (+0.000) 0.37 ug/L m

response 1860

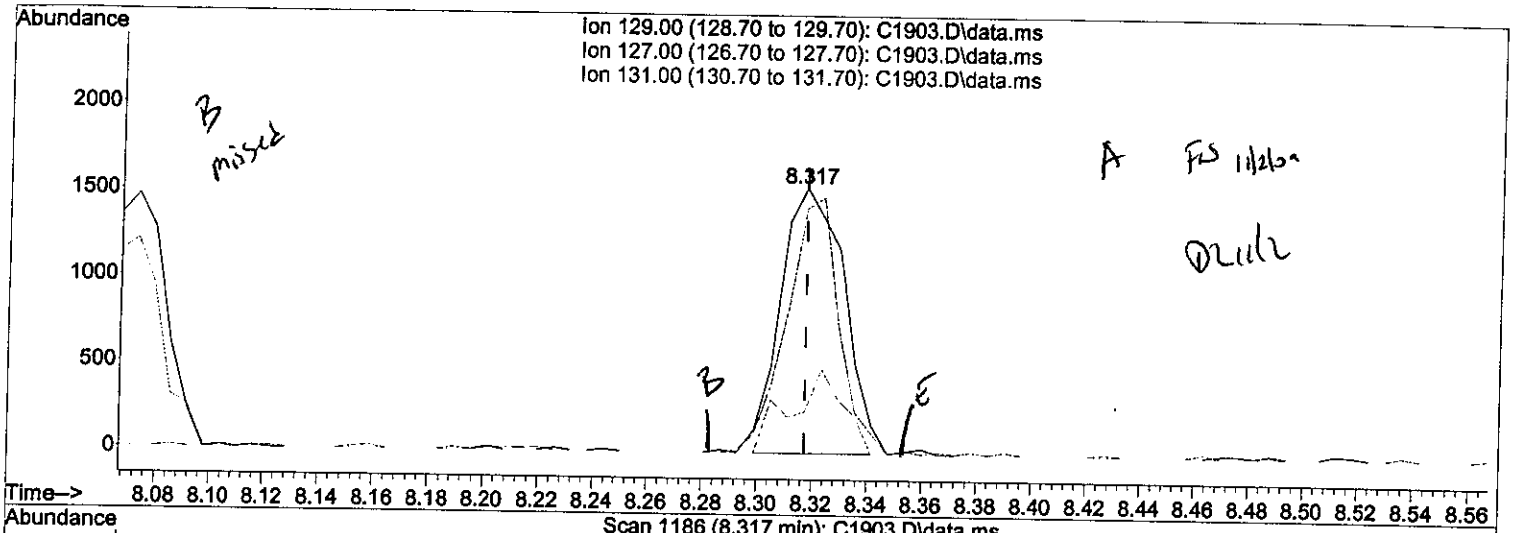
Ion	Exp%	Act%
69.00	100	100
41.00	79.90	39.62#
0.00	0.00	0.00
0.00	0.00	0.00

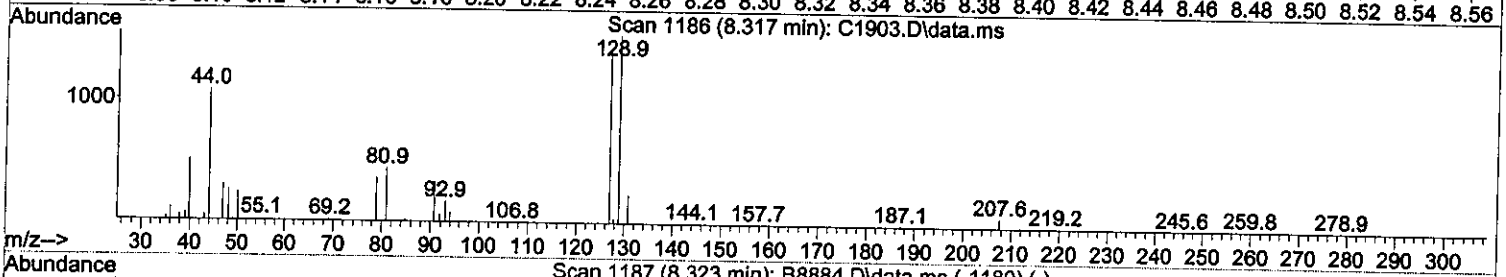
00074

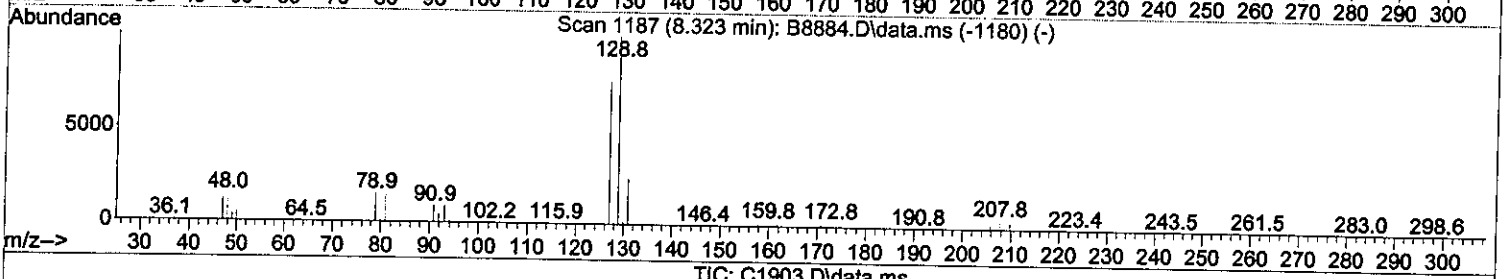
Quantitation Report (Qedit)

Sample : 0.5 PPB STD
Data File : J:\ACQUDATA\msvoa10\data\103109\C1903.D Vial: 3
Acq On : 31 Oct 2009 11:01 am
Operator : F. Naegler
InstName : MSVOA10
Misc :

Quant Time: Nov 01 08:08:43 2009
Quant Method : J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Sat Oct 31 10:01:25 2009
Response via : Initial Calibration







TIC: C1903.D\data.ms

(75) Dibromochloromethane

8.317min (-0.000) 0.38 ug/L m

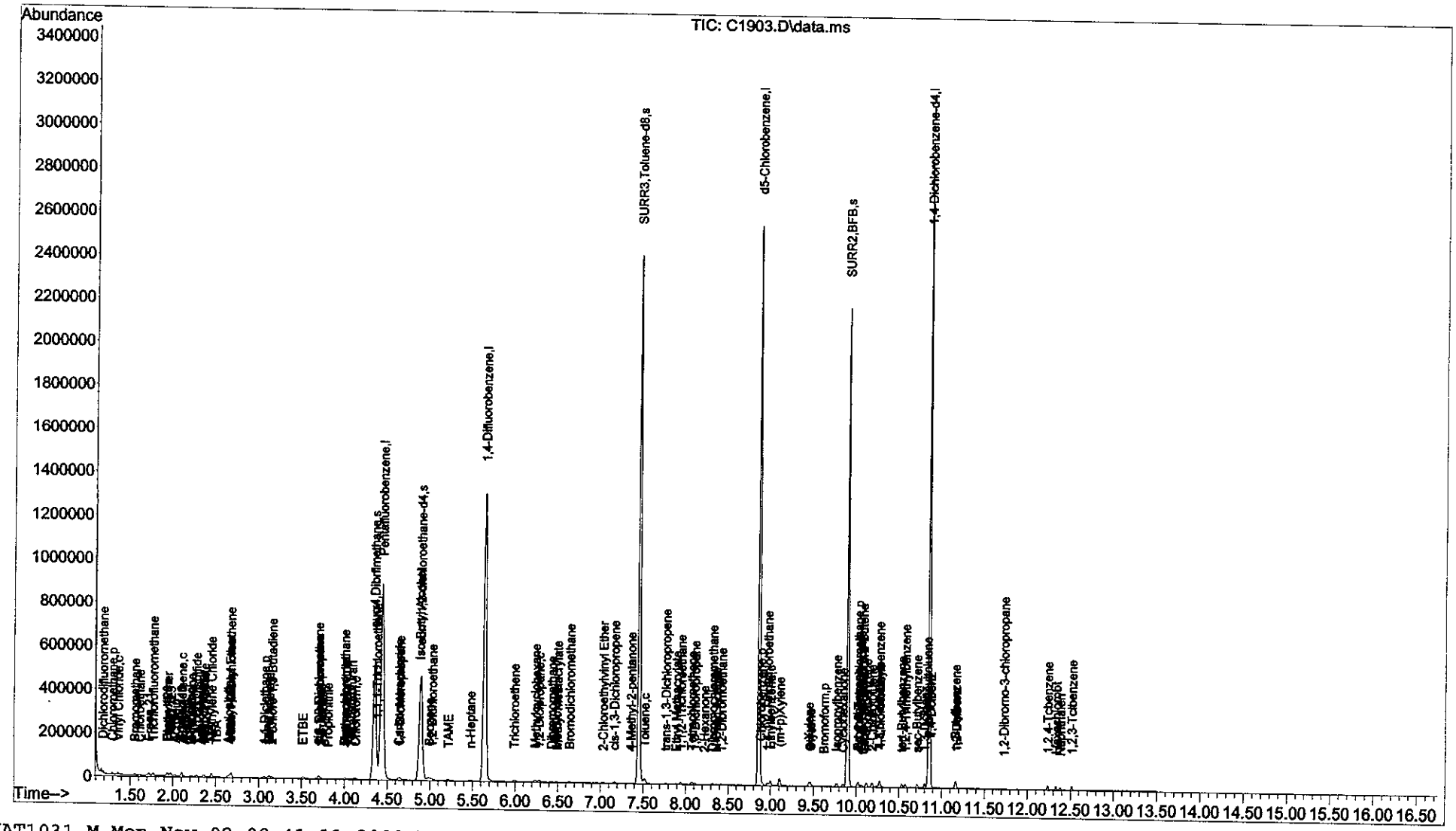
response 2484

Ion	Exp%	Act%
129.00	100	100
127.00	76.40	92.15
131.00	23.70	15.50
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Sample : 0.5 PPB STD
Data File : J:\ACQUDATA\msvoa10\data\103109\C1903.D Vial: 3
Acq On : 31 Oct 2009 11:01 am
Operator : F. Naegler
InstName : MSVOA10
Misc :

Quant Time: Nov 01 08:08:43 2009
Quant Method : J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Sat Oct 31 10:01:25 2009
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Sample : 1.0 PPB STD
Data File : J:\ACQUDATA\msvoa10\data\103109\C1904.D Vial: 4
Acq On : 31 Oct 2009 11:31 am
Operator : F. Naegler
InstName : MSVOA10
Misc :

FN 11/2/09

Quant Time: Nov 01 08:09:17 2009
Quant Method : J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Sat Oct 31 10:01:25 2009
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	4.440	168	735170	50.00	ug/L	0.00
44) 1,4-Difluorobenzene	5.641	114	1168448	50.00	ug/L	0.00
71) d5-Chlorobenzene	8.860	117	1025183	50.00	ug/L	0.00
88) 1,4-Dichlorobenzene-d4	10.847	152	508626	50.00	ug/L	0.00
System Monitoring Compounds						
46) surr4,Dibrflmethane	4.348	113	406458	53.53	ug/L	0.00
Spiked Amount 50.000	Range 89 - 119		Recovery = 107.06%			
49) surr1,1,2-dichloroetha...	4.891	65	484946	52.68	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 105.36%			
65) SURR3,Toluene-d8	7.445	98	1295503	53.71	ug/L	0.00
Spiked Amount 50.000	Range 87 - 121		Recovery = 107.42%			
70) SURR2,BFB	9.896	95	534552	51.25	ug/L	0.00
Spiked Amount 50.000	Range 85 - 122		Recovery = 102.50%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.184	85	7769	1.08	ug/L	92
4) Chloromethane	1.288	50	8326	1.15	ug/L	85
5) Vinyl Chloride	1.355	62	8307	1.12	ug/L	95
6) Bromomethane	1.556	94	5596	1.29	ug/L	97
7) Chloroethane	1.611	64	4669	1.20	ug/L	96
8) Freon 21	1.721	67	13225	1.05	ug/L	92
9) Trichlorofluoromethane	1.770	101	13025	1.08	ug/L	96
10) Diethyl Ether	1.934	59	4912	1.12	ug/L	86
11) Freon 123a	1.934	67	8280	1.09	ug/L	86
12) Freon 123	1.971	83	8637	1.06	ug/L	94
13) Acrolein	2.026	56	4529	5.54	ug/L	91
14) 1,1-Diclethene	2.105	96	5392	1.09	ug/L	92
15) Freon 113	2.099	101	6384	1.18	ug/L	87
16) Acetone	2.129	43	2042	1.36	ug/L	87
17) 2-Propanol	2.202	45	4555	19.18	ug/L	75
18) Iodomethane	2.221	142	2472	0.51	ug/L	87
19) Carbon Disulfide	2.276	76	19726	1.14	ug/L	96
20) Acetonitrile	2.337	40	1817	7.94	ug/L #	27
21) Allyl Chloride	2.361	76	2552	1.03	ug/L #	82
22) Methyl Acetate	2.361	43	3912	0.99	ug/L	96
23) Methylene Chloride	2.452	84	8745	1.34	ug/L	88
24) TBA	2.507	59	8238	20.01	ug/L	86
25) Acrylonitrile	2.648	53	8630	4.71	ug/L	92
26) Methyl-t-Butyl Ether	2.672	73	12203	0.95	ug/L	97
27) trans-1,2-Dichloroethene	2.678	96	6357	1.05	ug/L	91
28) 1,1-Diclethane	3.062	63	15440	1.15	ug/L	94
29) Vinyl Acetate	3.099	86	515m FN	0.99	ug/L	
30) DIPE	3.117	45	18335	0.98	ug/L	99
31) 2-Chloro-1,3-Butadiene	3.154	53	8946	0.95	ug/L	96
32) ETBE	3.519	59	17161	0.91	ug/L	97
33) 2,2-Dichloropropane	3.696	77	9364	1.08	ug/L	89
34) cis-1,2-Dichloroethene	3.702	96	6594	1.03	ug/L	94
35) 2-Butanone	3.720	43	2313	1.22	ug/L	90
37) Propionitrile	3.800	54	3041	4.49	ug/L	92
38) Bromochloromethane	4.001	130	4930	1.24	ug/L #	58

Quantitation Report (QT Reviewed)

Sample : 1.0 PPB STD
Data File : J:\ACQUDATA\msvoa10\data\103109\C1904.D Vial: 4
Acq On : 31 Oct 2009 11:31 am
Operator : F. Naegler
InstName : MSVOA10
Misc :

Quant Time: Nov 01 08:09:17 2009
Quant Method : J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Sat Oct 31 10:01:25 2009
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
39) Methacrylonitrile	3.989	67	1347	0.90 ug/L	91
40) Tetrahydrofuran	4.074	42	1489	1.37 ug/L	90
41) Chloroform	4.123	83	12306	1.02 ug/L	89
42) 1,1,1-Trichloroethane	4.385	97	10715	0.99 ug/L #	54
43) TAME	5.214	73	10447	0.88 ug/L	96
45) Cyclohexane	4.464	56	10183m	0.50 ug/L	
47) Carbontetrachloride	4.653	121	3434	1.08 ug/L	76
48) 1,1-Dichloropropene	4.653	75	7821	0.98 ug/L	98
50) Benzene	4.989	78	25025	1.10 ug/L	93
51) 1,2-Dichloroethane	5.025	62	9804	0.91 ug/L	92
52) Iso-Butyl Alcohol	4.891	43	2214	16.06 ug/L	72
53) n-Heptane	5.482	43	5580	0.96 ug/L	92
54) Trichloroethene	5.988	130	6541	1.02 ug/L	80
55) Methylcyclohexane	6.232	55	9297	1.05 ug/L #	74
56) 1,2-Diclpropane	6.287	63	6786	0.98 ug/L	98
57) Dibromomethane	6.427	93	3624	1.01 ug/L	77
58) 1,4-Dioxane	6.494	88	498m	17.34 ug/L	
59) Methyl Methacrylate	6.488	69	1748	0.74 ug/L	87
60) Bromodichloromethane	6.641	83	7410	0.84 ug/L	94
62) 2-Chloroethylvinyl Ether	7.025	63	2307	0.78 ug/L	92
63) cis-1,3-Dichloropropene	7.165	75	7576	0.93 ug/L	87
64) 4-Methyl-2-pentanone	7.354	43	2777	0.83 ug/L	86
66) Toluene	7.519	91	24595	1.04 ug/L	94
67) trans-1,3-Dichloropropene	7.768	75	6225	0.85 ug/L	95
68) Ethyl Methacrylate	7.884	69	3555	0.74 ug/L	78
69) 1,1,2-Trichloroethane	7.945	97	4428	0.94 ug/L	97
72) Tetrachloroethene	8.073	164	4723	0.97 ug/L	87
73) 2-Hexanone	8.220	43	1538	0.69 ug/L	98
74) 1,3-Dichloropropane	8.104	76	7246	0.96 ug/L	88
75) Dibromochloromethane	8.317	129	5445	0.87 ug/L	96
76) N-Butyl Acetate	8.354	43	4052	0.73 ug/L	93
77) 1,2-Dibromoethane	8.421	107	4283	0.88 ug/L	93
78) Chlorobenzene	8.884	112	17107	1.02 ug/L	89
79) 1,1,1,2-Tetrachloroethane	8.963	131	5674	0.92 ug/L	88
80) Ethylbenzene	8.994	106	7477	0.92 ug/L	95
81) (m+p)Xylene	9.097	106	18082	1.88 ug/L	97
82) o-Xylene	9.451	106	7749	0.84 ug/L	99
83) Styrene	9.463	104	12520	0.81 ug/L	97
84) Bromoform	9.616	173	2622	0.79 ug/L	58
85) Isopropylbenzene	9.768	105	18706	0.84 ug/L	91
86) Cyclohexanone	9.841	55	8948	14.64 ug/L	95
87) trans-1,4-Dichloro-2-B...	10.079	53	1296	0.82 ug/L	83
89) 1,1,2,2-Tetrachloroethane	10.024	83	5229	1.03 ug/L	98
90) Bromobenzene	10.018	156	6760	1.06 ug/L	95
92) 1,2,3-Trichloropropane	10.055	110	1630	1.04 ug/L #	68
93) n-Propylbenzene	10.122	91	25383	0.93 ug/L	91
94) 2-Chlorotoluene	10.183	91	17459	0.99 ug/L	92
95) 4-Chlorotoluene	10.274	91	21166	1.03 ug/L	95
96) 1,3,5-Trimethylbenzene	10.268	105	17119	0.89 ug/L	98
97) tert-Butylbenzene	10.530	119	13648	0.85 ug/L	94
98) 1,2,4-Trimethylbenzene	10.573	105	17199	0.85 ug/L	99
99) sec-Butylbenzene	10.713	105	19352	0.85 ug/L	97

Quantitation Report (QT Reviewed)

Sample : 1.0 PPB STD
Data File : J:\ACQUDATA\msvoa10\data\103109\C1904.D Vial: 4
Acq On : 31 Oct 2009 11:31 am
Operator : F. Naegler
InstName : MSVOA10
Misc :

Quant Time: Nov 01 08:09:17 2009
Quant Method : J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Sat Oct 31 10:01:25 2009
Response via : Initial Calibration

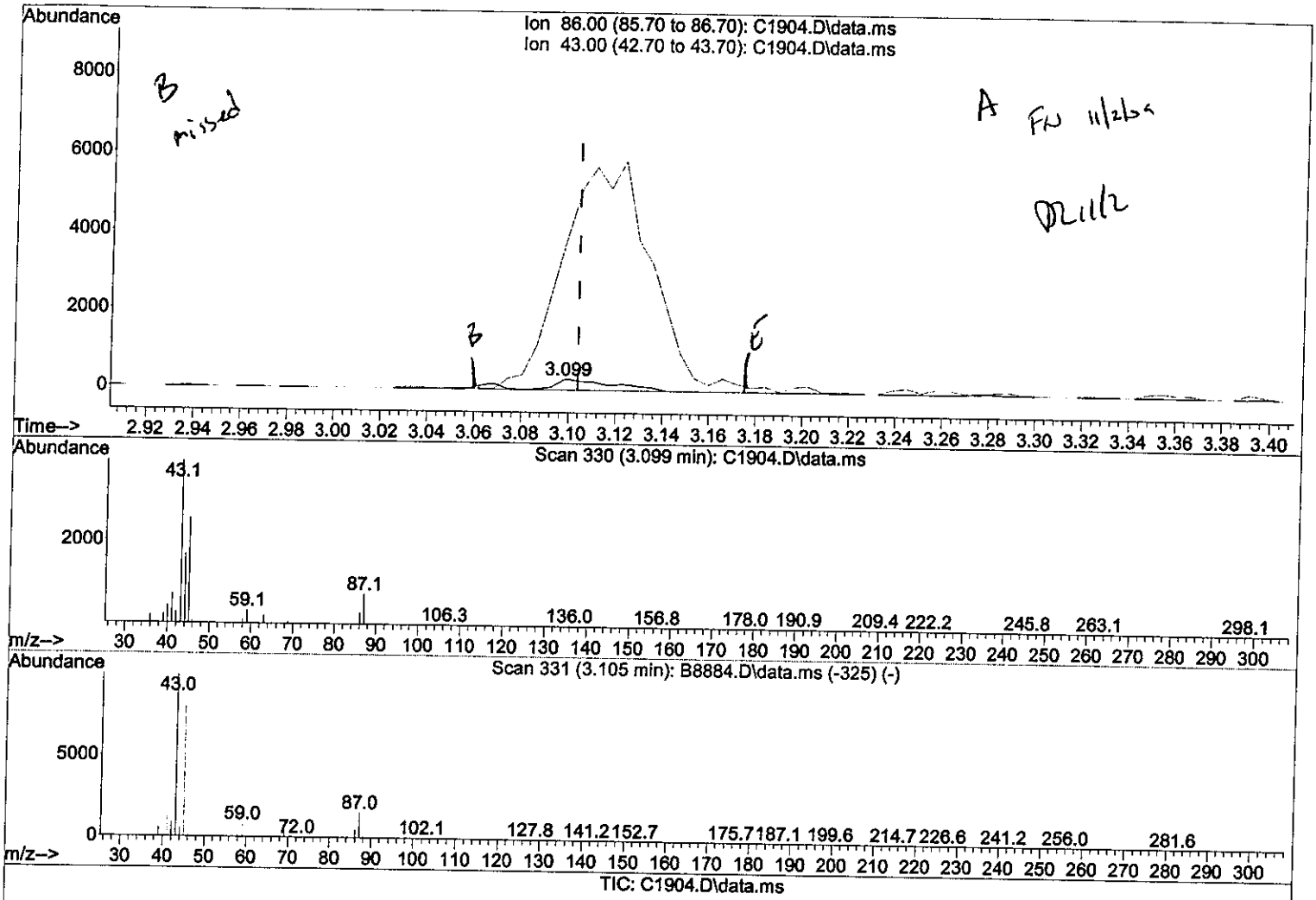
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
100) p-Isopropyltoluene	10.829	119	17275	0.87 ug/L	91
101) 1,3-Dclbenz	10.798	146	12800	1.04 ug/L	90
102) 1,4-Dclbenz	10.865	146	14106	1.06 ug/L	90
104) n-Butylbenzene	11.158	91	14509	0.84 ug/L	94
105) 1,2-Dclbenz	11.164	146	11144	0.96 ug/L	98
106) 1,2-Dibromo-3-chloropr...	11.725	157	666	0.73 ug/L	84
108) 1,2,4-Tcbenzene	12.237	180	7077	0.95 ug/L	94
109) Hexachlorobt	12.335	225	3685	1.07 ug/L	93
110) Naphthalen	12.383	128	9651	0.74 ug/L	94
111) 1,2,3-Tclbenzene	12.518	180	6227	0.94 ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Qedit)

Sample : 1.0 PPB STD
Data File : J:\ACQUDATA\msvoa10\data\103109\C1904.D Vial: 4
Acq On : 31 Oct 2009 11:31 am
Operator : F. Naegler
InstName : MSVOA10
Misc :

Quant Time: Nov 01 08:09:17 2009
Quant Method : J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Sat Oct 31 10:01:25 2009
Response via : Initial Calibration



TIC: C1904.D\data.ms

(29) Vinyl Acetate

3.099min (-0.005) 0.99 ug/L m

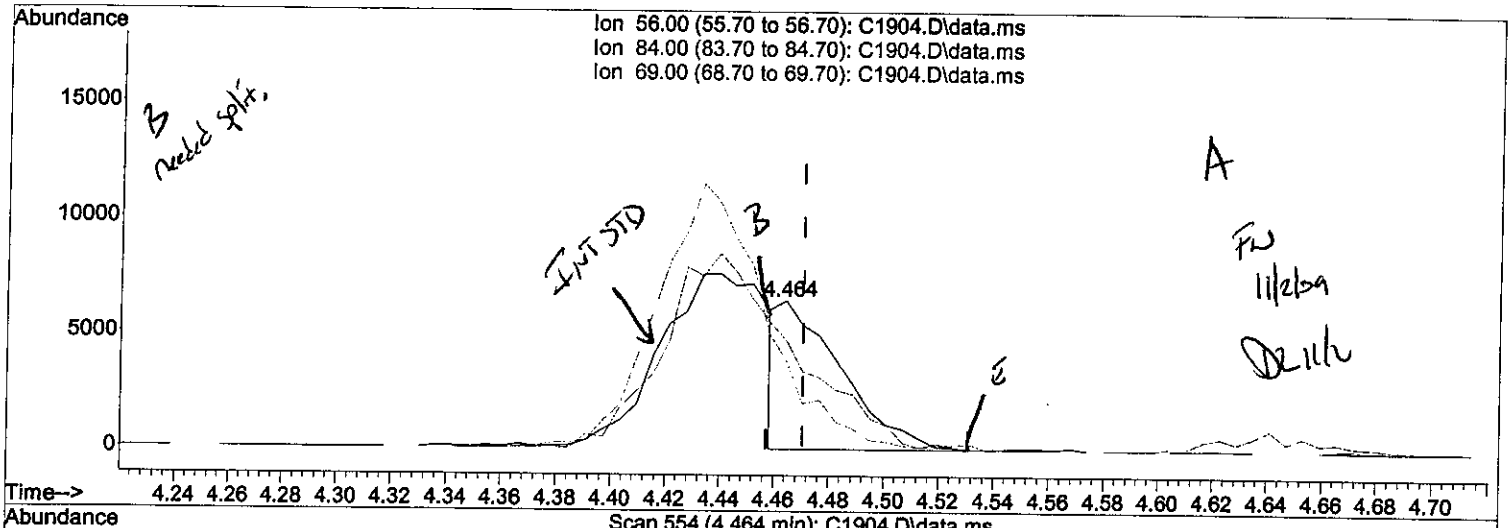
response 515

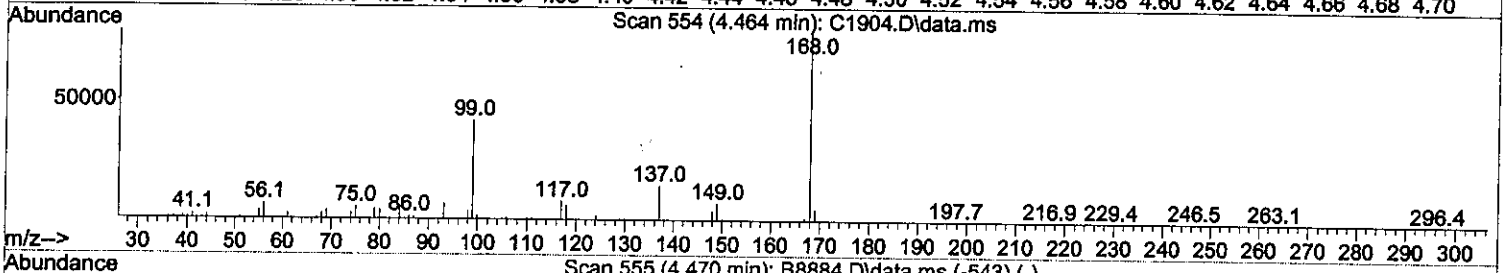
Ion	Exp%	Act%
86.00	100	100
43.00	1749.90	1402.88#
0.00	0.00	0.00
0.00	0.00	0.00

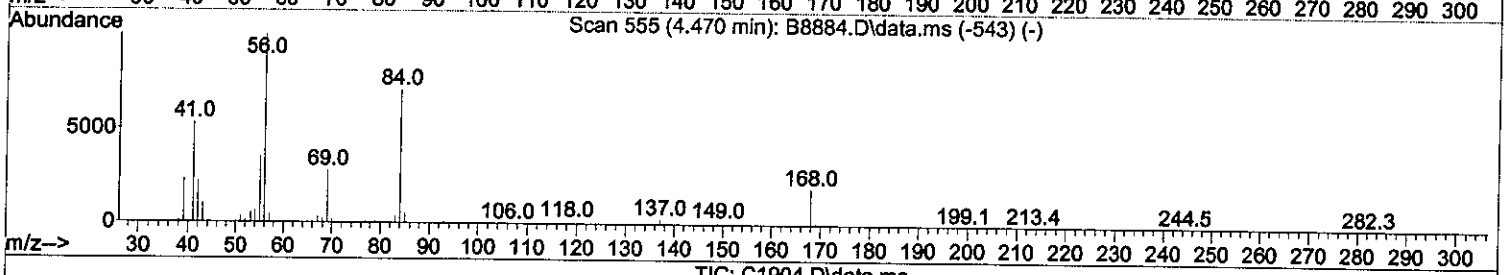
Quantitation Report (Qedit)

Sample : 1.0 PPB STD
Data File : J:\ACQUDATA\msvoa10\data\103109\C1904.D Vial: 4
Acq On : 31 Oct 2009 11:31 am
Operator : F. Naegler
InstName : MSVOA10
Misc :

Quant Time: Nov 01 08:09:17 2009
Quant Method : J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Sat Oct 31 10:01:25 2009
Response via : Initial Calibration







TIC: C1904.D\data.ms

(45) Cyclohexane

4.464min (-0.006) 0.50 ug/L m

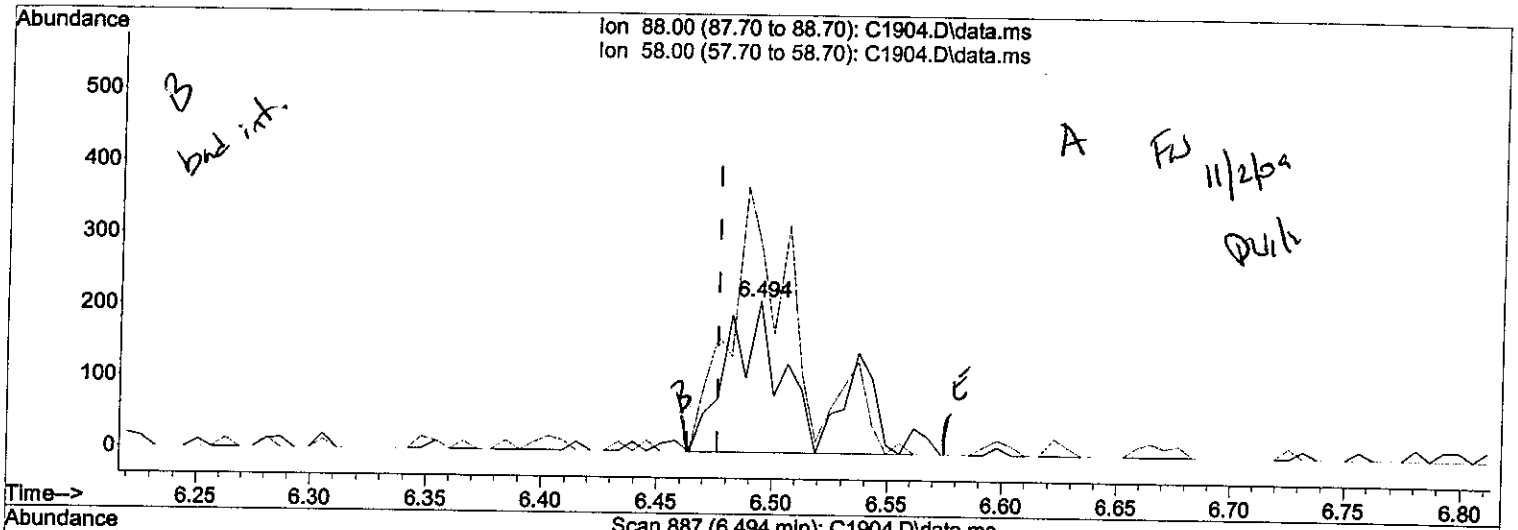
response 10183

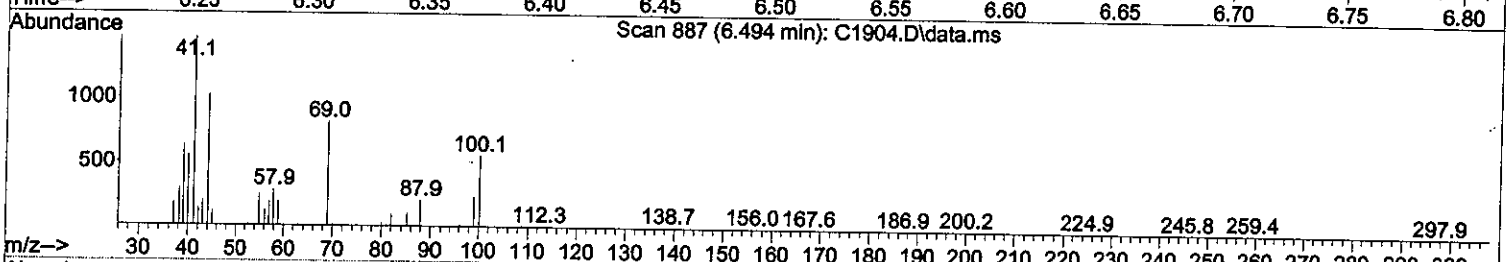
Ion	Exp%	Act%
56.00	100	100
84.00	44.20	73.77
69.00	0.00	60.52#
0.00	0.00	0.00

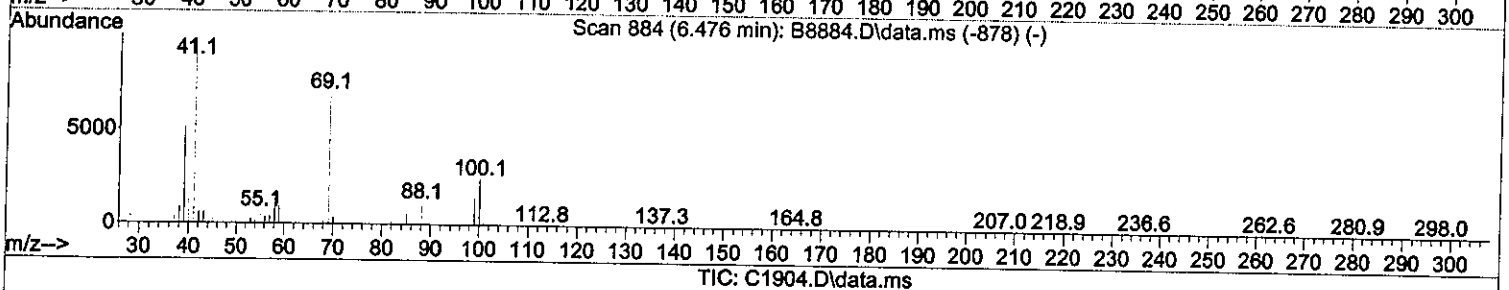
Quantitation Report (Qedit)

Sample : 1.0 PPB STD
Data File : J:\ACQUDATA\msvoa10\data\103109\C1904.D Vial: 4
Acq On : 31 Oct 2009 11:31 am
Operator : F. Naegler
InstName : MSVOA10
Misc :

Quant Time: Nov 01 08:09:17 2009
Quant Method : J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Sat Oct 31 10:01:25 2009
Response via : Initial Calibration







TIC: C1904.D\data.ms

(58) 1,4-Dioxane

6.494min (+0.018) 17.34 ug/L m

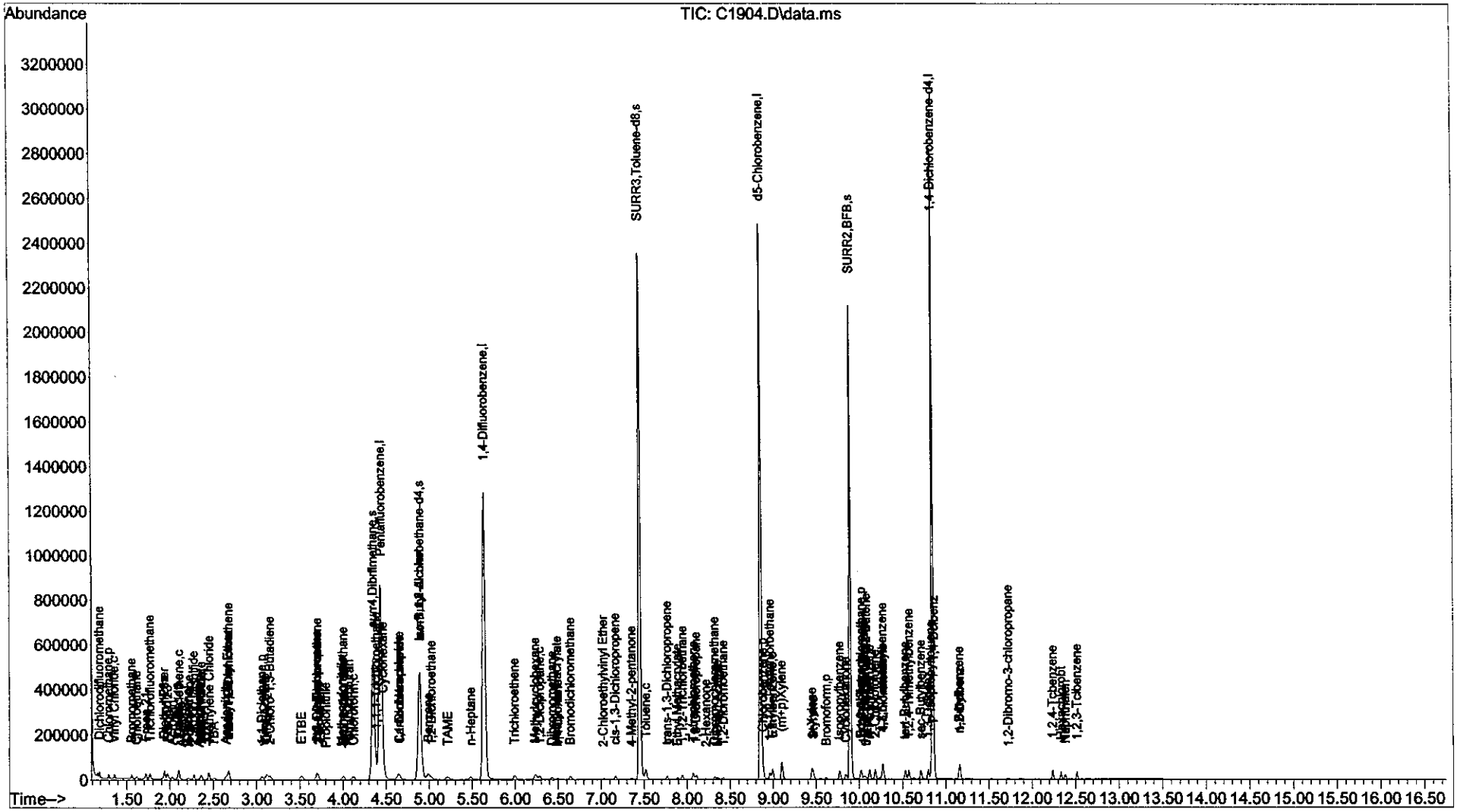
response 498

Ion	Exp%	Act%
88.00	100	100
58.00	95.80	135.38#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Sample : 1.0 PPB STD
Data File : J:\ACQUDATA\msvoa10\data\103109\C1904.D Vial: 4
Acq On : 31 Oct 2009 11:31 am
Operator : F. Naegler
InstName : MSVOA10
Misc :

Quant Time: Nov 01 08:09:17 2009
Quant Method : J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Sat Oct 31 10:01:25 2009
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Sample : 2.0 PPB STD
Data File : J:\ACQUDATA\msvoa10\data\103109\C1905.D Vial: 5
Acq On : 31 Oct 2009 12:01 pm
Operator : F. Naegler
InstName : MSVOA10
Misc :

Quant Time: Nov 01 08:00:25 2009
Quant Method : J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Sat Oct 31 10:01:25 2009
Response via : Initial Calibration

FW 11/2/09

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	4.434	168	729946	50.00	ug/L	0.00
44) 1,4-Difluorobenzene	5.641	114	1155551	50.00	ug/L	0.00
71) d5-Chlorobenzene	8.854	117	1020995	50.00	ug/L	0.00
88) 1,4-Dichlorobenzene-d4	10.847	152	515059	50.00	ug/L	0.00
System Monitoring Compounds						
46) surr4,Dibrflmethane	4.348	113	404089	53.82	ug/L	0.00
Spiked Amount 50.000	Range 89 - 119		Recovery = 107.64%			
49) surr1,1,2-dichloroetha...	4.891	65	487048	53.50	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 107.00%			
65) SURR3,Toluene-d8	7.451	98	1288575	54.02	ug/L	0.00
Spiked Amount 50.000	Range 87 - 121		Recovery = 108.04%			
70) SURR2,BFB	9.896	95	531443	51.52	ug/L	0.00
Spiked Amount 50.000	Range 85 - 122		Recovery = 103.04%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.184	85	13983	1.97	ug/L	94
4) Chloromethane	1.288	50	14540	2.03	ug/L	89
5) Vinyl Chloride	1.355	62	16340	2.21	ug/L	94
6) Bromomethane	1.556	94	10066	2.33	ug/L	88
7) Chloroethane	1.611	64	7981	2.07	ug/L	97
8) Freon 21	1.721	67	24752	1.97	ug/L	92
9) Trichlorofluoromethane	1.770	101	24139	2.01	ug/L	98
10) Diethyl Ether	1.940	59	8801	2.03	ug/L	93
11) Freon 123a	1.934	67	14680	1.95	ug/L	96
12) Freon 123	1.971	83	15891	1.97	ug/L	93
13) Acrolein	2.026	56	7770	9.57	ug/L	97
14) 1,1-Diclethene	2.105	96	10258	2.08	ug/L #	80
15) Freon 113	2.093	101	11478	2.13	ug/L	98
16) Acetone	2.129	43	2817	1.89	ug/L	86
17) 2-Propanol	2.202	45	9574	40.60	ug/L	71
18) Iodomethane	2.227	142	5072	1.04	ug/L	85
19) Carbon Disulfide	2.276	76	35918	2.10	ug/L	95
20) Acetonitrile	2.324	40	2281	10.04	ug/L #	46
21) Allyl Chloride	2.361	76	5073	2.07	ug/L #	77
22) Methyl Acetate	2.361	43	7923	2.03	ug/L	96
23) Methylene Chloride	2.446	84	15265	2.36	ug/L	86
24) TBA	2.513	59	14500	35.47	ug/L	90
25) Acrylonitrile	2.641	53	18748	10.31	ug/L	91
26) Methyl-t-Butyl Ether	2.672	73	25452	1.99	ug/L	97
27) trans-1,2-Dichloroethene	2.678	96	12292	2.05	ug/L	88
28) 1,1-Diclethane	3.062	63	28550	2.14	ug/L	97
29) Vinyl Acetate	3.105	86	894	1.73	ug/L #	77
30) DIPE	3.117	45	37728	2.04	ug/L	99
31) 2-Chloro-1,3-Butadiene	3.154	53	16616	1.77	ug/L	97
32) ETBE	3.525	59	35121	1.87	ug/L	97
33) 2,2-Dichloropropane	3.696	77	16879	1.97	ug/L	91
34) cis-1,2-Dichloroethene	3.702	96	12292	1.94	ug/L	93
35) 2-Butanone	3.720	43	4344	2.31	ug/L	84
37) Propionitrile	3.788	54	6397	9.52	ug/L	91
38) Bromochloromethane	4.007	130	8692	2.20	ug/L #	82

Quantitation Report (QT Reviewed)

Sample : 2.0 PPB STD
Data File : J:\ACQUDATA\msvoa10\data\103109\C1905.D Vial: 5
Acq On : 31 Oct 2009 12:01 pm
Operator : F. Naegler
InstName : MSVOA10
Misc :

Quant Time: Nov 01 08:00:25 2009
Quant Method : J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Sat Oct 31 10:01:25 2009
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
39) Methacrylonitrile	4.001	67	2604	1.75 ug/L #	74
40) Tetrahydrofuran	4.080	42	2343	2.16 ug/L	69
41) Chloroform	4.117	83	23757	1.98 ug/L	95
42) 1,1,1-Trichloroethane	4.379	97	19646	1.83 ug/L	97
43) TAME	5.214	73	21418	1.82 ug/L	78
45) Cyclohexane	4.458	56	21007	1.04 ug/L #	61
47) Carbontetrachloride	4.641	121	5775	1.84 ug/L	96
48) 1,1-Dichloropropene	4.647	75	14951	1.89 ug/L	89
50) Benzene	4.982	78	45855	2.04 ug/L	98
51) 1,2-Dichloroethane	5.019	62	20374	1.91 ug/L	93
52) Iso-Butyl Alcohol	4.891	43	5263m FW	38.61 ug/L	
53) n-Heptane	5.488	43	10387	1.81 ug/L	83
54) Trichloroethene	5.988	130	13002	2.05 ug/L	98
55) Methylcyclohexane	6.238	55	16789	1.91 ug/L	91
56) 1,2-Diclpropane	6.287	63	14369	2.09 ug/L	86
57) Dibromomethane	6.427	93	7206 FW	2.02 ug/L	96
58) 1,4-Dioxane	6.488	88	1096m FW	38.58 ug/L	
59) Methyl Methacrylate	6.494	69	3733	1.60 ug/L #	77
60) Bromodichloromethane	6.641	83	15022	1.72 ug/L	96
62) 2-Chloroethylvinyl Ether	7.025	63	4802	1.65 ug/L	86
63) cis-1,3-Dichloropropene	7.165	75	13269	1.64 ug/L	95
64) 4-Methyl-2-pentanone	7.354	43	5275	1.59 ug/L	90
66) Toluene	7.519	91	47220	2.02 ug/L	97
67) trans-1,3-Dichloropropene	7.768	75	12367	1.71 ug/L	92
68) Ethyl Methacrylate	7.890	69	7478	1.58 ug/L	97
69) 1,1,2-Trichloroethane	7.945	97	8932	1.92 ug/L	96
72) Tetrachloroethene	8.073	164	9421	1.95 ug/L	90
73) 2-Hexanone	8.213	43	3137	1.41 ug/L	93
74) 1,3-Dichloropropane	8.104	76	14882	1.98 ug/L	96
75) Dibromochloromethane	8.323	129	11274	1.81 ug/L	89
76) N-Butyl Acetate	8.360	43	9307	1.69 ug/L	94
77) 1,2-Dibromoethane	8.415	107	8902	1.84 ug/L	79
78) Chlorobenzene	8.884	112	33262	1.98 ug/L	96
79) 1,1,1,2-Tetrachloroethane	8.963	131	10914	1.78 ug/L	97
80) Ethylbenzene	8.994	106	13841	1.70 ug/L	94
81) (m+p)Xylene	9.104	106	36567	3.82 ug/L	99
82) o-Xylene	9.445	106	16118	1.75 ug/L	92
83) Styrene	9.463	104	25824	1.68 ug/L	94
84) Bromoform	9.616	173	5520	1.66 ug/L	97
85) Isopropylbenzene	9.768	105	39141	1.77 ug/L	99
86) Cyclohexanone	9.841	55	17669	29.03 ug/L	96
87) trans-1,4-Dichloro-2-B...	10.079	53	2662	1.70 ug/L	79
89) 1,1,2,2-Tetrachloroethane	10.024	83	10843	2.12 ug/L	94
90) Bromobenzene	10.018	156	13016	2.02 ug/L	97
92) 1,2,3-Trichloropropane	10.055	110	3592	2.27 ug/L #	74
93) n-Propylbenzene	10.116	91	52096	1.89 ug/L	98
94) 2-Chlorotoluene	10.183	91	32631	1.83 ug/L	95
95) 4-Chlorotoluene	10.274	91	38750	1.86 ug/L	97
96) 1,3,5-Trimethylbenzene	10.268	105	33995	1.74 ug/L	99
97) tert-Butylbenzene	10.536	119	27093	1.66 ug/L	98
98) 1,2,4-Trimethylbenzene	10.573	105	35555	1.73 ug/L	96
99) sec-Butylbenzene	10.713	105	41059	1.77 ug/L	94

Sample : 2.0 PPB STD
Data File : J:\ACQUDATA\msvoa10\data\103109\C1905.D Vial: 5
Acq On : 31 Oct 2009 12:01 pm
Operator : F. Naegler
InstName : MSVOA10
Misc :

Quant Time: Nov 01 08:00:25 2009
Quant Method : J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Sat Oct 31 10:01:25 2009
Response via : Initial Calibration

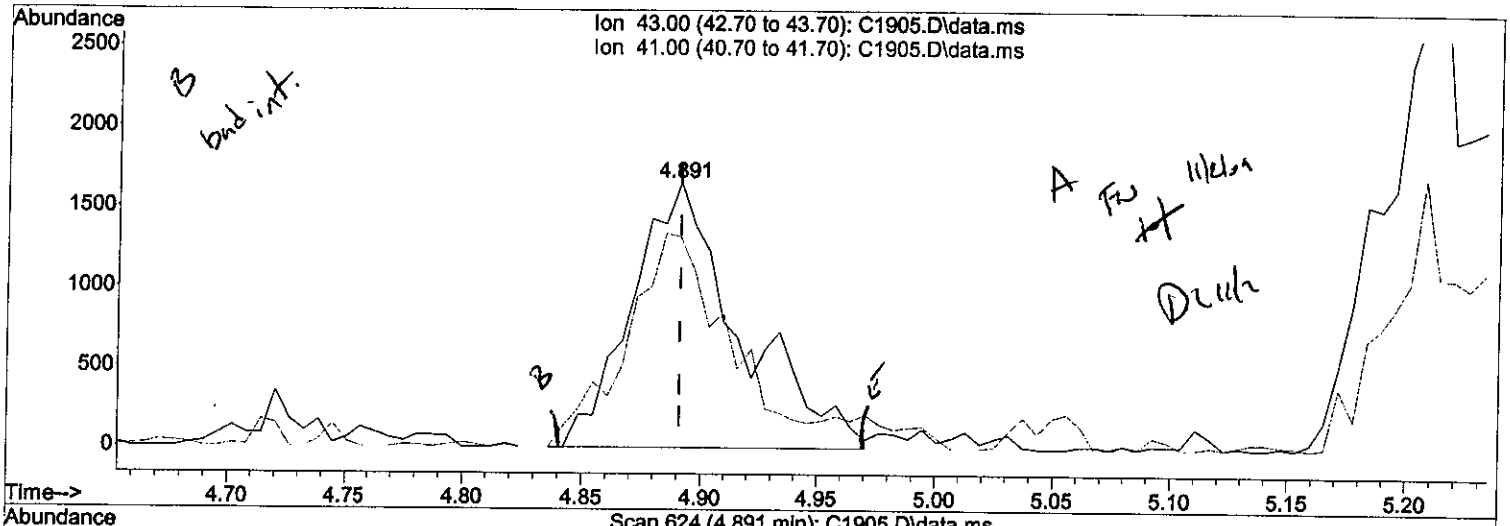
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
100) p-Isopropyltoluene	10.829	119	33962	1.69 ug/L	97
101) 1,3-Dclbenz	10.798	146	24141	1.93 ug/L	93
102) 1,4-Dclbenz	10.872	146	25784	1.92 ug/L	97
104) n-Butylbenzene	11.158	91	28986	1.65 ug/L	94
105) 1,2-Dclbenz	11.164	146	22217	1.88 ug/L	94
106) 1,2-Dibromo-3-chloropr...	11.719	157	1613	1.74 ug/L #	67
108) 1,2,4-Tcbenzene	12.237	180	13035	1.73 ug/L	98
109) Hexachlorobt	12.335	225	6262	1.79 ug/L	96
110) Naphthalen	12.377	128	21178	1.60 ug/L	99
111) 1,2,3-Tclbenzene	12.518	180	11890	1.78 ug/L	93

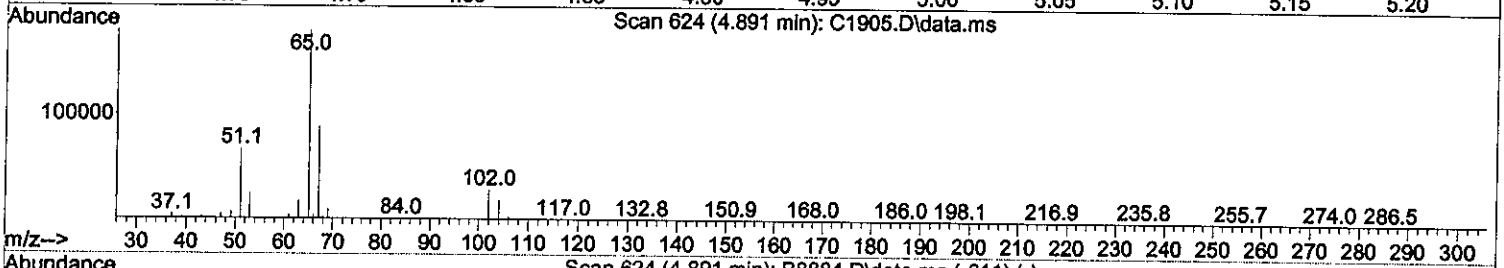
(#) = qualifier out of range (m) = manual integration (+) = signals summed

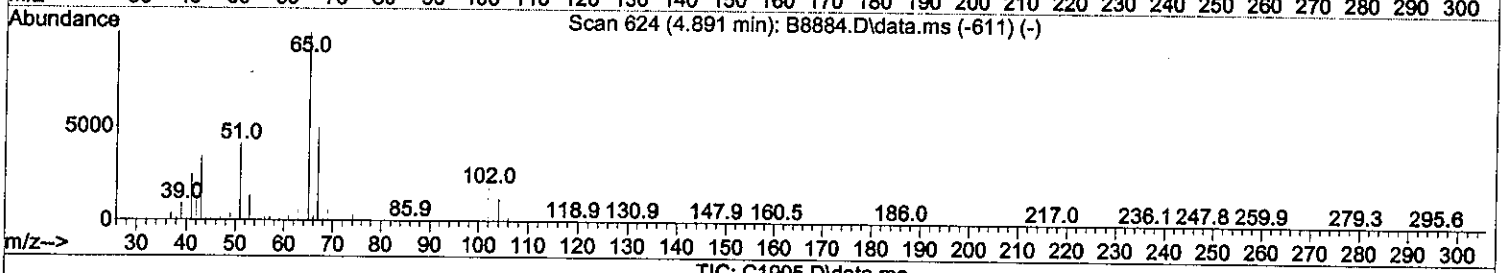
Quantitation Report (Qedit)

Sample : 2.0 PPB STD
Data File : J:\ACQUDATA\msvoa10\data\103109\C1905.D Vial: 5
Acq On : 31 Oct 2009 12:01 pm
Operator : F. Naegler
InstName : MSVOA10
Misc :

Quant Time: Nov 01 08:00:25 2009
Quant Method : J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Sat Oct 31 10:01:25 2009
Response via : Initial Calibration







TIC: C1905.D\data.ms

(52) Iso-Butyl Alcohol

4.891min (-0.000) 38.61 ug/L m

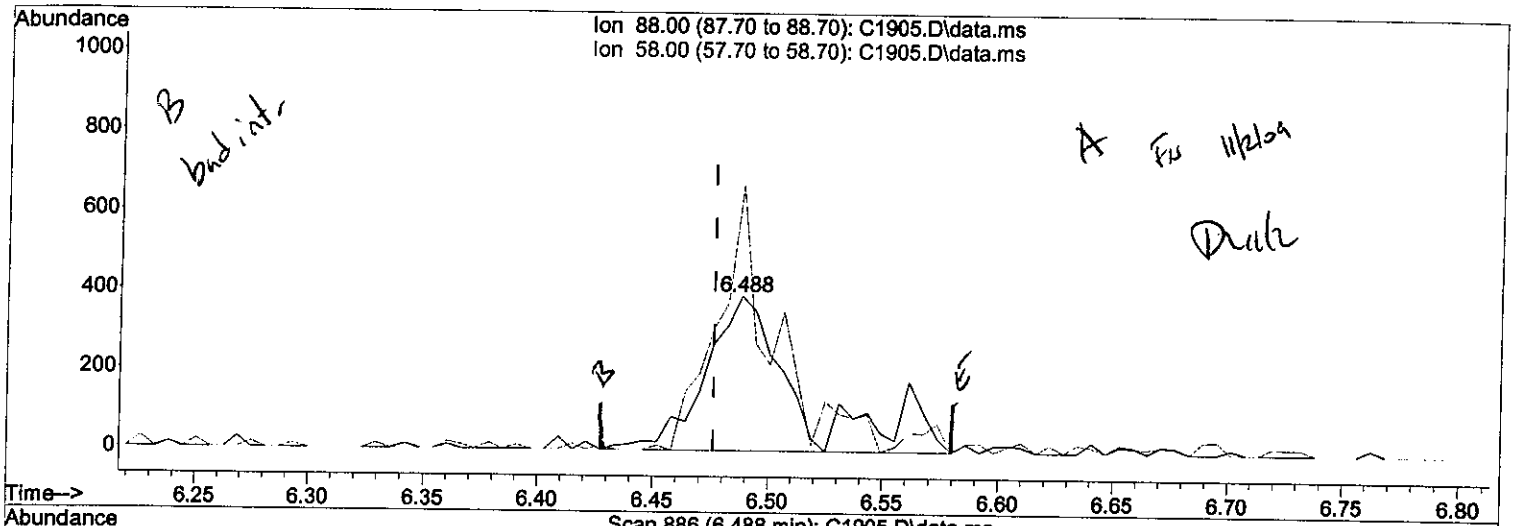
response 5263

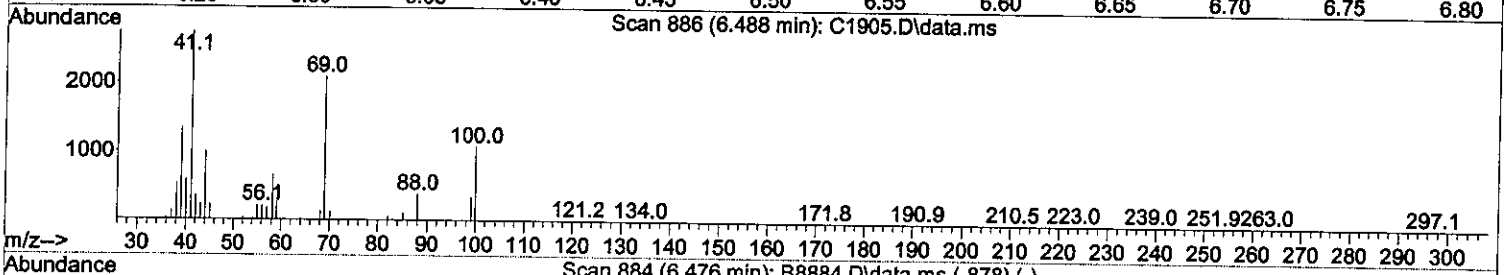
Ion	Exp%	Act%
43.00	100	100
41.00	75.50	79.37
0.00	0.00	0.00
0.00	0.00	0.00

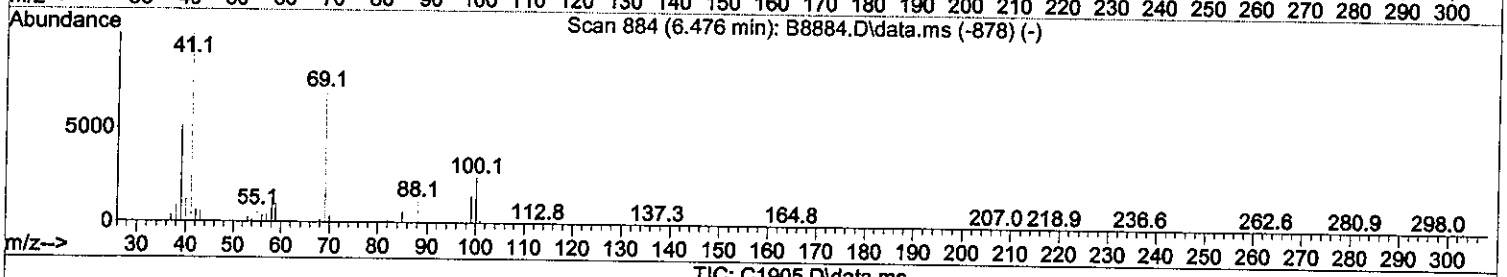
Quantitation Report (Qedit)

Sample : 2.0 PPB STD
Data File : J:\ACQUDATA\msvoa10\data\103109\C1905.D Vial: 5
Acq On : 31 Oct 2009 12:01 pm
Operator : F. Naegler
InstName : MSVOA10
Misc :

Quant Time: Nov 01 08:00:25 2009
Quant Method : J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Sat Oct 31 10:01:25 2009
Response via : Initial Calibration







(58) 1,4-Dioxane

6.488min (+0.012) 38.58 ug/L m

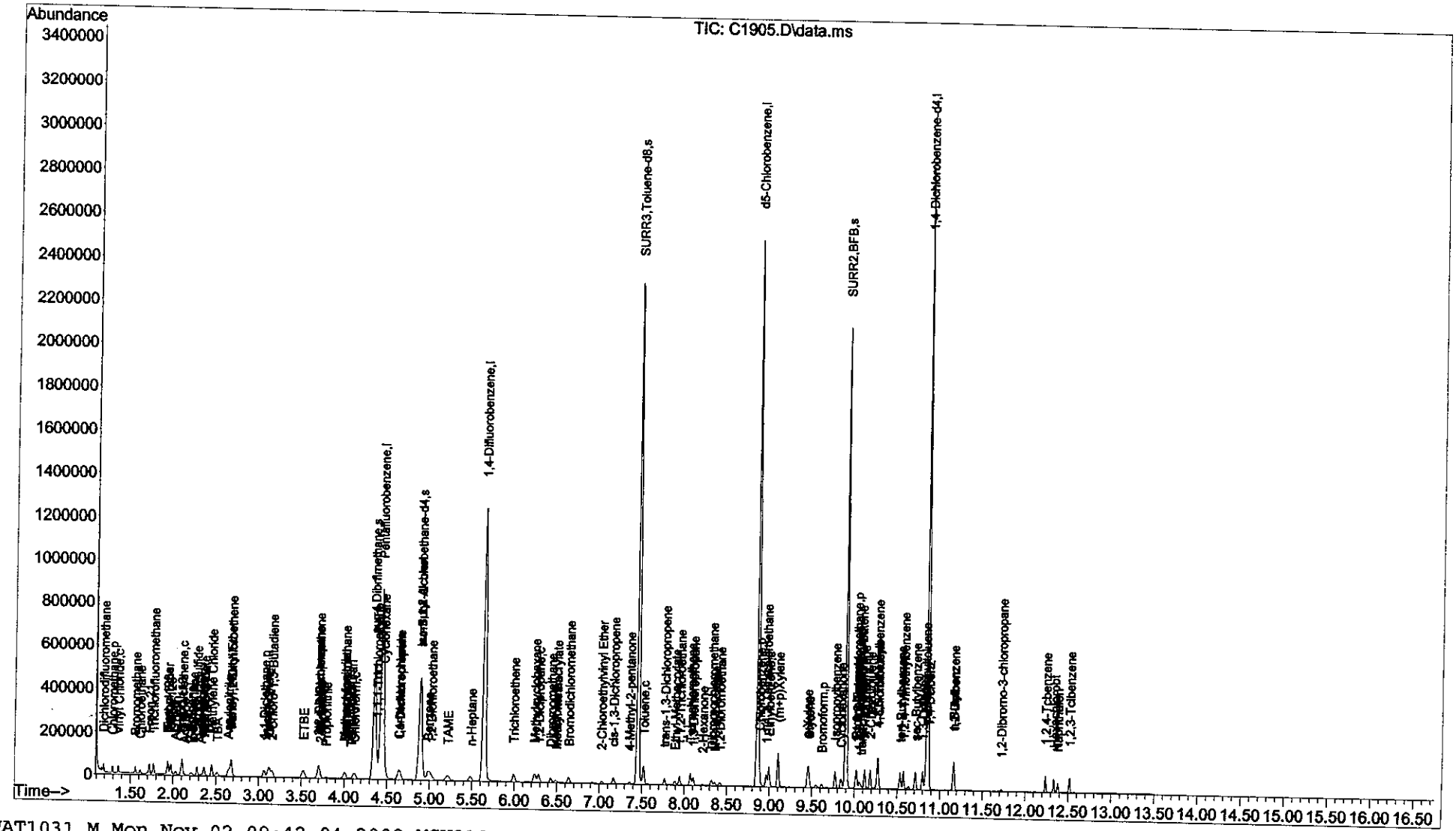
response 1096

Ion	Exp%	Act%
88.00	100	100
58.00	95.80	171.54#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Sample : 2.0 PPB STD
Data File : J:\ACQUDATA\msvoa10\data\103109\C1905.D Vial: 5
Acq On : 31 Oct 2009 12:01 pm
Operator : F. Naegler
InstName : MSVOA10
Misc :

Quant Time: Nov 01 08:00:25 2009
Quant Method : J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Sat Oct 31 10:01:25 2009
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Sample : 5.0 PPB STD
Data File : J:\ACQUDATA\msvoa10\data\103109\C1906.D Vial: 6
Acq On : 31 Oct 2009 12:31 pm
Operator : F. Naegler
InstName : MSVOA10
Misc :

Quant Time: Nov 01 08:01:38 2009
Quant Method : J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Sat Oct 31 10:01:25 2009
Response via : Initial Calibration

FW 11/2/09

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	4.440	168	728492	50.00	ug/L	0.00
44) 1,4-Difluorobenzene	5.641	114	1155830	50.00	ug/L	0.00
71) d5-Chlorobenzene	8.854	117	1018994	50.00	ug/L	0.00
88) 1,4-Dichlorobenzene-d4	10.847	152	519614	50.00	ug/L	0.00
System Monitoring Compounds						
46) surr4,Dibrflmethane	4.348	113	470351	62.63	ug/L	0.00
Spiked Amount 50.000	Range 89 - 119		Recovery = 125.26%#			
49) surr1,1,2-dichloroetha...	4.891	65	561093	61.62	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 123.24%#			
65) SURR3,Toluene-d8	7.445	98	1484849	62.23	ug/L	0.00
Spiked Amount 50.000	Range 87 - 121		Recovery = 124.46%#			
70) SURR2,BFB	9.896	95	612443	59.36	ug/L	0.00
Spiked Amount 50.000	Range 85 - 122		Recovery = 118.72%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.184	85	35368	4.98	ug/L	98
4) Chloromethane	1.288	50	41200	5.75	ug/L	99
5) Vinyl Chloride	1.355	62	41528	5.63	ug/L	99
6) Bromomethane	1.556	94	24517	5.69	ug/L	94
7) Chloroethane	1.611	64	20939	5.45	ug/L	95
8) Freon 21	1.721	67	67655	5.40	ug/L	99
9) Trichlorofluoromethane	1.770	101	65044	5.43	ug/L	95
10) Diethyl Ether	1.934	59	22209	5.13	ug/L	97
11) Freon 123a	1.934	67	41399	5.52	ug/L	91
12) Freon 123	1.971	83	44505	5.52	ug/L	93
13) Acrolein	2.026	56	17013	21.00	ug/L	87
14) 1,1-Diclethene	2.105	96	29384	5.97	ug/L	93
15) Freon 113	2.093	101	29188	5.42	ug/L	96
16) Acetone	2.123	43	7283	4.91	ug/L	96
17) 2-Propanol	2.203	45	22070	93.77	ug/L	80
18) Iodomethane	2.221	142	15314	3.16	ug/L	98
19) Carbon Disulfide	2.276	76	91968	5.38	ug/L	99
20) Acetonitrile	2.324	40	6879	30.33	ug/L #	67
21) Allyl Chloride	2.355	76	13010	5.32	ug/L	90
22) Methyl Acetate	2.361	43	20037	5.14	ug/L	94
23) Methylene Chloride	2.446	84	35822	5.56	ug/L	95
24) TBA	2.507	59	35282	86.49	ug/L	90
25) Acrylonitrile	2.641	53	48593	26.76	ug/L	97
26) Methyl-t-Butyl Ether	2.672	73	65261	5.11	ug/L	94
27) trans-1,2-Dichloroethene	2.678	96	33355	5.57	ug/L	90
28) 1,1-Diclethane	3.062	63	70767	5.30	ug/L	95
29) Vinyl Acetate	3.105	86	2498	4.86	ug/L #	65
30) DIPE	3.123	45	107437	5.82	ug/L	94
31) 2-Chloro-1,3-Butadiene	3.154	53	51339	5.49	ug/L	92
32) ETBE	3.519	59	93102	4.97	ug/L	99
33) 2,2-Dichloropropane	3.702	77	45101	5.27	ug/L	99
34) cis-1,2-Dichloroethene	3.696	96	33586	5.30	ug/L	96
35) 2-Butanone	3.721	43	9391	5.00	ug/L	81
37) Propionitrile	3.788	54	15932	23.75	ug/L	93
38) Bromochloromethane	4.007	130	20961	5.32	ug/L	94

Sample : 5.0 PPB STD
Data File : J:\ACQUDATA\msvoa10\data\103109\C1906.D Vial: 6
Acq On : 31 Oct 2009 12:31 pm
Operator : F. Naegler
InstName : MSVOA10
Misc :

Quant Time: Nov 01 08:01:38 2009
Quant Method : J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Sat Oct 31 10:01:25 2009
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
39) Methacrylonitrile	3.995	67	7188	4.85 ug/L	96
40) Tetrahydrofuran	4.074	42	5018	4.64 ug/L	76
41) Chloroform	4.123	83	60545	5.05 ug/L	98
42) 1,1,1-Trichloroethane	4.385	97	54974	5.13 ug/L	88
43) TAME	5.214	73	55659	4.75 ug/L	97
45) Cyclohexane	4.470	56	87197	4.31 ug/L	81
47) Carbontetrachloride	4.647	121	15220	4.86 ug/L	99
48) 1,1-Dichloropropene	4.641	75	40037	5.07 ug/L	96
50) Benzene	4.989	78	118155	5.27 ug/L	94
51) 1,2-Dichloroethane	5.025	62	52357	4.90 ug/L	99
52) Iso-Butyl Alcohol	4.891	43	12024	88.20 ug/L	81
53) n-Heptane	5.482	43	30920	5.38 ug/L	97
54) Trichloroethene	5.994	130	32401	5.10 ug/L	94
55) Methylcyclohexane	6.238	55	46442	5.29 ug/L	93
56) 1,2-Diclpropane	6.281	63	37522	5.47 ug/L	98
57) Dibromomethane	6.427	93	18297	5.14 ug/L	94
58) 1,4-Dioxane	6.482	88	2475m	87.11 ug/L	
59) Methyl Methacrylate	6.488	69	10968	4.70 ug/L	89
60) Bromodichloromethane	6.641	83	41050	4.71 ug/L	97
62) 2-Chloroethylvinyl Ether	7.025	63	13100	4.49 ug/L	90
63) cis-1,3-Dichloropropene	7.165	75	38896	4.81 ug/L	96
64) 4-Methyl-2-pentanone	7.354	43	14494	4.38 ug/L	86
66) Toluene	7.519	91	126723	5.43 ug/L	99
67) trans-1,3-Dichloropropene	7.769	75	33078	4.58 ug/L	98
68) Ethyl Methacrylate	7.890	69	19115	4.03 ug/L	91
69) 1,1,2-Trichloroethane	7.945	97	23846	5.11 ug/L	89
72) Tetrachloroethene	8.073	164	25882	5.37 ug/L	97
73) 2-Hexanone	8.214	43	10444	4.70 ug/L	87
74) 1,3-Dichloropropane	8.104	76	37997	5.06 ug/L	97
75) Dibromochloromethane	8.317	129	28227	4.55 ug/L	96
76) N-Butyl Acetate	8.354	43	24967	4.54 ug/L	90
77) 1,2-Dibromoethane	8.415	107	23546	4.89 ug/L	95
78) Chlorobenzene	8.884	112	84732	5.06 ug/L	99
79) 1,1,1,2-Tetrachloroethane	8.963	131	28454	4.64 ug/L	97
80) Ethylbenzene	8.994	106	41762	5.14 ug/L	96
81) (m+p)Xylene	9.104	106	106126	11.10 ug/L	98
82) o-Xylene	9.451	106	45196	4.92 ug/L	99
83) Styrene	9.463	104	80887	5.27 ug/L	94
84) Bromoform	9.616	173	13625	4.11 ug/L	85
85) Isopropylbenzene	9.768	105	114627	5.20 ug/L	97
86) Cyclohexanone	9.841	55	50415	82.99 ug/L	97
87) trans-1,4-Dichloro-2-B...	10.073	53	6555	4.20 ug/L	89
89) 1,1,2,2-Tetrachloroethane	10.024	83	27125	5.25 ug/L	98
90) Bromobenzene	10.018	156	33574	5.16 ug/L	94
92) 1,2,3-Trichloropropane	10.055	110	8051	5.03 ug/L	92
93) n-Propylbenzene	10.116	91	154435	5.55 ug/L	98
94) 2-Chlorotoluene	10.183	91	94635	5.26 ug/L	97
95) 4-Chlorotoluene	10.274	91	118655	5.63 ug/L	99
96) 1,3,5-Trimethylbenzene	10.268	105	106815	5.41 ug/L	99
97) tert-Butylbenzene	10.530	119	83246	5.06 ug/L	97
98) 1,2,4-Trimethylbenzene	10.573	105	112490	5.44 ug/L	98
99) sec-Butylbenzene	10.713	105	125887	5.39 ug/L	97

Quantitation Report (QT Reviewed)

Sample : 5.0 PPB STD
Data File : J:\ACQUDATA\msvoa10\data\103109\C1906.D Vial: 6
Acq On : 31 Oct 2009 12:31 pm
Operator : F. Naegler
InstName : MSVOA10
Misc :

Quant Time: Nov 01 08:01:38 2009
Quant Method : J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Sat Oct 31 10:01:25 2009
Response via : Initial Calibration

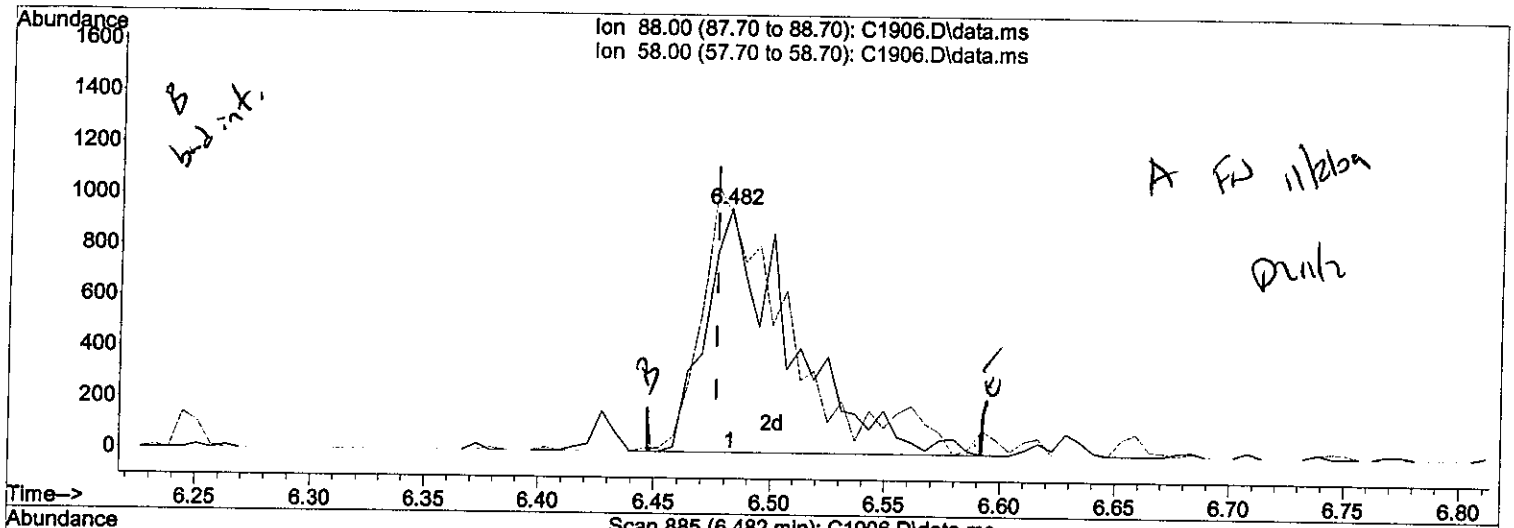
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
100) p-Isopropyltoluene	10.829	119	105112	5.18 ug/L	97
101) 1,3-Dclbenz	10.798	146	63145	5.00 ug/L	98
102) 1,4-Dclbenz	10.865	146	69911	5.15 ug/L	95
104) n-Butylbenzene	11.158	91	88992	5.02 ug/L	92
105) 1,2-Dclbenz	11.164	146	62483	5.25 ug/L	95
106) 1,2-Dibromo-3-chloropr...	11.719	157	4123	4.42 ug/L	87
108) 1,2,4-Tcbenzene	12.237	180	35452	4.66 ug/L	99
109) Hexachlorobt	12.335	225	16976	4.82 ug/L	98
110) Naphthalen	12.377	128	57084	4.27 ug/L	98
111) 1,2,3-Tclbenzene	12.518	180	32044	4.74 ug/L	98

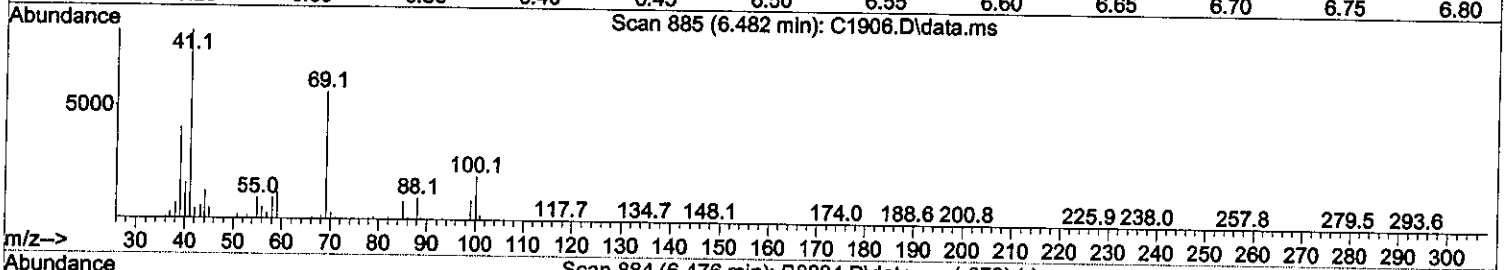
(#) = qualifier out of range (m) = manual integration (+) = signals summed

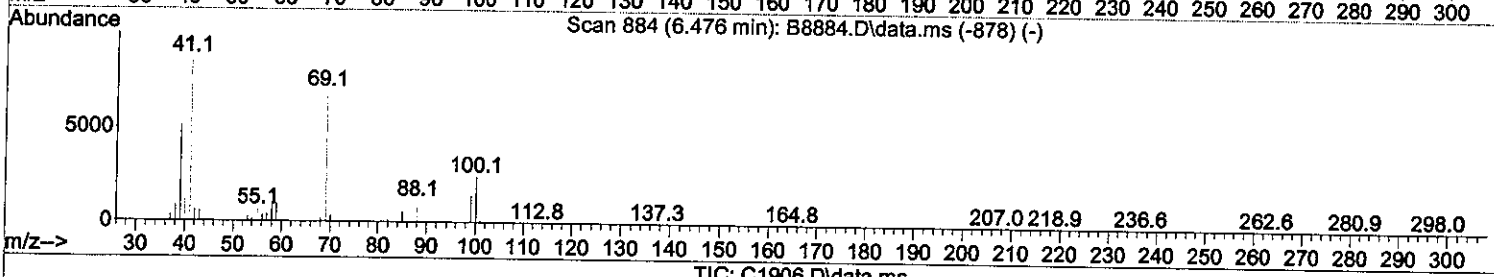
Quantitation Report (Qedit)

Sample : 5.0 PPB STD
Data File : J:\ACQUDATA\msvoa10\data\103109\C1906.D Vial: 6
Acq On : 31 Oct 2009 12:31 pm
Operator : F. Naegler
InstName : MSVOA10
Misc :

Quant Time: Nov 01 08:01:38 2009
Quant Method : J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Sat Oct 31 10:01:25 2009
Response via : Initial Calibration







(58) 1,4-Dioxane

6.482min (+0.006) 87.11 ug/L m

response 2475

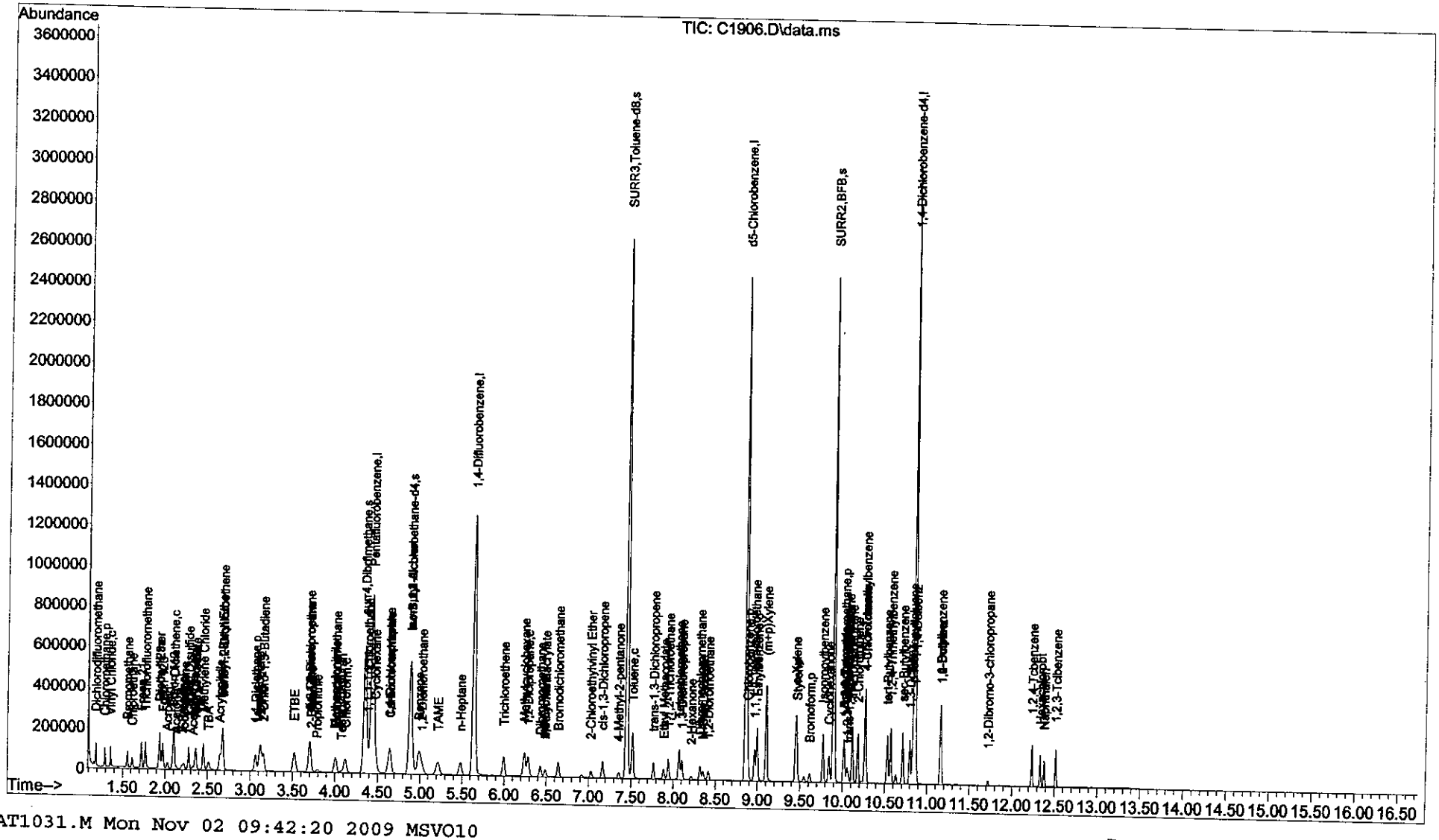
Ion	Exp%	Act%
88.00	100	100
58.00	95.80	97.70
0.00	0.00	0.00
0.00	0.00	0.00

00093

Quantitation Report (QT Reviewed)

Sample : 5.0 PPB STD
Data File : J:\ACQUDATA\msvoa10\data\103109\C1906.D Vial: 6
Acq On : 31 Oct 2009 12:31 pm
Operator : F. Naegler
InstName : MSVOA10
Misc :

Quant Time: Nov 01 08:01:38 2009
Quant Method : J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Sat Oct 31 10:01:25 2009
Response via : Initial Calibration



WAT1031.M Mon Nov 02 09:42:20 2009 MSVO10

Quantitation Report (QT Reviewed)

Sample : 10.0 PPB STD
Data File : J:\ACQUDATA\msvoa10\data\103109\C1907.D Vial: 7
Acq On : 31 Oct 2009 1:01 pm
Operator : F. Naegler
InstName : MSVOA10
Misc :

Quant Time: Nov 01 08:02:38 2009
Quant Method : J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Sat Oct 31 10:01:25 2009
Response via : Initial Calibration

FD 11/2/09

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	4.434	168	737028	50.00	ug/L	0.00
44) 1,4-Difluorobenzene	5.641	114	1182419	50.00	ug/L	0.00
71) d5-Chlorobenzene	8.860	117	1042324	50.00	ug/L	0.00
88) 1,4-Dichlorobenzene-d4	10.847	152	531717	50.00	ug/L	0.00
System Monitoring Compounds						
46) surr4,Dibrflmethane	4.348	113	543255	70.71	ug/L	0.00
Spiked Amount 50.000	Range 89 - 119		Recovery = 141.42%#			
49) surr1,1,2-dichloroetha...	4.891	65	642565	68.98	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 137.96%#			
65) SURR3,Toluene-d8	7.445	98	1741855	71.36	ug/L	0.00
Spiked Amount 50.000	Range 87 - 121		Recovery = 142.72%#			
70) SURR2,BFB	9.896	95	730981	69.26	ug/L	0.00
Spiked Amount 50.000	Range 85 - 122		Recovery = 138.52%#			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.184	85	85803	11.95	ug/L	99
4) Chloromethane	1.294	50	90899	12.55	ug/L	99
5) Vinyl Chloride	1.355	62	89685	12.02	ug/L	98
6) Bromomethane	1.556	94	52503	12.05	ug/L	95
7) Chloroethane	1.611	64	45511	11.70	ug/L	98
8) Freon 21	1.721	67	144803	11.42	ug/L	97
9) Trichlorofluoromethane	1.770	101	130441	10.77	ug/L	99
10) Diethyl Ether	1.940	59	47465	10.84	ug/L	95
11) Freon 123a	1.934	67	83463	11.00	ug/L	81
12) Freon 123	1.971	83	90666	11.11	ug/L	95
13) Acrolein	2.026	56	40004	48.81	ug/L	97
14) 1,1-Diclethene	2.105	96	57670	11.58	ug/L	98
15) Freon 113	2.099	101	59260	10.89	ug/L	97
16) Acetone	2.129	43	14107	9.40	ug/L	98
17) 2-Propanol	2.202	45	51249	215.22	ug/L	93
18) Iodomethane	2.221	142	41758	8.52	ug/L	94
19) Carbon Disulfide	2.276	76	189007	10.93	ug/L	99
20) Acetonitrile	2.330	40	12021	52.39	ug/L #	79
21) Allyl Chloride	2.361	76	27737	11.21	ug/L	97
22) Methyl Acetate	2.361	43	42265	10.71	ug/L	98
23) Methylene Chloride	2.452	84	72196	11.07	ug/L	93
24) TBA	2.507	59	80858	195.91	ug/L	93
25) Acrylonitrile	2.641	53	105637	57.51	ug/L	96
26) Methyl-t-Butyl Ether	2.672	73	146513	11.34	ug/L	99
27) trans-1,2-Dichloroethene	2.678	96	68458	11.30	ug/L	93
28) 1,1-Diclethane	3.062	63	152287	11.28	ug/L	99
29) Vinyl Acetate	3.105	86	5319	10.22	ug/L #	59
30) DIPE	3.123	45	222170	11.90	ug/L	98
31) 2-Chloro-1,3-Butadiene	3.160	53	105430	11.14	ug/L	99
32) ETBE	3.519	59	205400	10.84	ug/L	99
33) 2,2-Dichloropropane	3.702	77	93496	10.79	ug/L	99
34) cis-1,2-Dichloroethene	3.702	96	73296	11.44	ug/L	100
35) 2-Butanone	3.714	43	19636	10.33	ug/L	93
37) Propionitrile	3.794	54	35309	52.04	ug/L	92
38) Bromochloromethane	4.001	130	45347	11.37	ug/L	90

Sample : 10.0 PPB STD
Data File : J:\ACQUDATA\msvoa10\data\103109\C1907.D Vial: 7
Acq On : 31 Oct 2009 1:01 pm
Operator : F. Naegler
InstName : MSVOA10
Misc :

Quant Time: Nov 01 08:02:38 2009
Quant Method : J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Sat Oct 31 10:01:25 2009
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
39) Methacrylonitrile	3.989	67	16779	11.19 ug/L	82
40) Tetrahydrofuran	4.080	42	11455	10.48 ug/L	99
41) Chloroform	4.117	83	132454	10.92 ug/L	97
42) 1,1,1-Trichloroethane	4.385	97	115122	10.61 ug/L	99
43) TAME	5.214	73	120801	10.18 ug/L	96
45) Cyclohexane	4.470	56	155414	7.51 ug/L	72
47) Carbontetrachloride	4.641	121	32977	10.29 ug/L	97
48) 1,1-Dichloropropene	4.647	75	83485	10.33 ug/L	97
50) Benzene	4.988	78	254401	11.08 ug/L	99
51) 1,2-Dichloroethane	5.025	62	109819	10.06 ug/L	98
52) Iso-Butyl Alcohol	4.885	43	27368	196.23 ug/L	81
53) n-Heptane	5.482	43	66067	11.23 ug/L	98
54) Trichloroethene	5.988	130	68458	10.52 ug/L	96
55) Methylcyclohexane	6.238	55	102564	11.42 ug/L	92
56) 1,2-Diclpropane	6.287	63	80453	11.46 ug/L	93
57) Dibromomethane	6.427	93	37980 (a)	10.42 ug/L	95
58) 1,4-Dioxane	6.482	88	7529m	259.02 ug/L	
59) Methyl Methacrylate	6.488	69	23841	9.98 ug/L	99
60) Bromodichloromethane	6.641	83	92427	10.37 ug/L	97
62) 2-Chloroethylvinyl Ether	7.025	63	27935	9.36 ug/L	97
63) cis-1,3-Dichloropropene	7.165	75	87876	10.63 ug/L	100
64) 4-Methyl-2-pentanone	7.354	43	33570	9.91 ug/L	98
66) Toluene	7.518	91	266307	11.15 ug/L	99
67) trans-1,3-Dichloropropene	7.768	75	74472	10.09 ug/L	97
68) Ethyl Methacrylate	7.884	69	47330	9.75 ug/L	94
69) 1,1,2-Trichloroethane	7.945	97	49017	10.28 ug/L	99
72) Tetrachloroethene	8.073	164	52849	10.71 ug/L	95
73) 2-Hexanone	8.213	43	22460	9.89 ug/L	90
74) 1,3-Dichloropropane	8.104	76	82359	10.71 ug/L	98
75) Dibromochloromethane	8.317	129	62858	9.91 ug/L	96
76) N-Butyl Acetate	8.354	43	57933	10.31 ug/L	94
77) 1,2-Dibromoethane	8.415	107	51973	10.54 ug/L	97
78) Chlorobenzene	8.884	112	186658	10.89 ug/L	99
79) 1,1,1,2-Tetrachloroethane	8.963	131	65002	10.36 ug/L	95
80) Ethylbenzene	8.994	106	92149	11.10 ug/L	97
81) (m+p)Xylene	9.104	106	235412	24.07 ug/L	96
82) o-Xylene	9.445	106	107406	11.43 ug/L	97
83) Styrene	9.463	104	188209	12.00 ug/L	99
84) Bromoform	9.616	173	30728	9.06 ug/L	90
85) Isopropylbenzene	9.768	105	264790	11.75 ug/L	99
86) Cyclohexanone	9.841	55	133783	215.30 ug/L	99
87) trans-1,4-Dichloro-2-B...	10.073	53	14379	9.00 ug/L	85
89) 1,1,2,2-Tetrachloroethane	10.024	83	56024	10.60 ug/L	98
90) Bromobenzene	10.018	156	72521	10.90 ug/L	98
92) 1,2,3-Trichloropropane	10.055	110	17126	10.47 ug/L	92
93) n-Propylbenzene	10.116	91	348355	12.23 ug/L	99
94) 2-Chlorotoluene	10.183	91	213212	11.58 ug/L	98
95) 4-Chlorotoluene	10.274	91	262519	12.18 ug/L	100
96) 1,3,5-Trimethylbenzene	10.262	105	246381	12.19 ug/L	96
97) tert-Butylbenzene	10.530	119	193035	11.46 ug/L	99
98) 1,2,4-Trimethylbenzene	10.573	105	254913	12.04 ug/L	99
99) sec-Butylbenzene	10.713	105	288547	12.08 ug/L	99

Quantitation Report (QT Reviewed)

Sample : 10.0 PPB STD
Data File : J:\ACQUDATA\msvoa10\data\103109\C1907.D Vial: 7
Acq On : 31 Oct 2009 1:01 pm
Operator : F. Naegler
InstName : MSVOA10
Misc :

Quant Time: Nov 01 08:02:38 2009
Quant Method : J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Sat Oct 31 10:01:25 2009
Response via : Initial Calibration

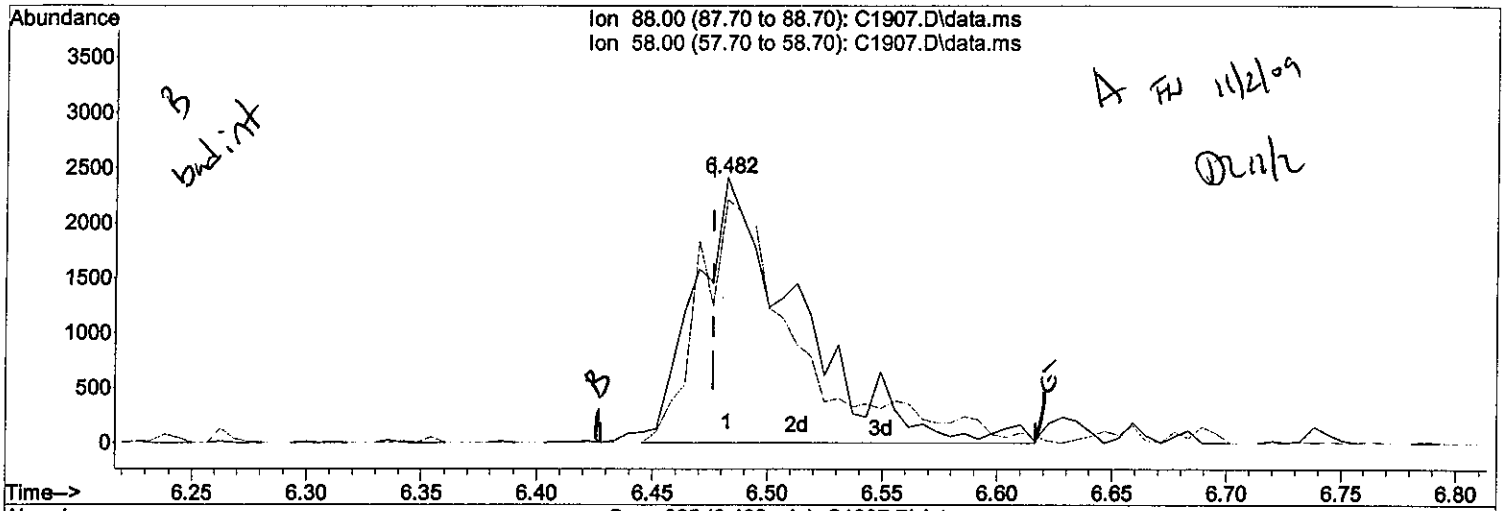
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
100) p-Isopropyltoluene	10.829	119	248457	11.97 ug/L	98
101) 1,3-Dclbenz	10.798	146	144001	11.14 ug/L	99
102) 1,4-Dclbenz	10.865	146	144690	10.42 ug/L	96
104) n-Butylbenzene	11.158	91	210943	11.63 ug/L	99
105) 1,2-Dclbenz	11.164	146	137022	11.26 ug/L	98
106) 1,2-Dibromo-3-chloropr...	11.719	157	8605	9.01 ug/L	95
108) 1,2,4-Tcbenzene	12.237	180	82449	10.58 ug/L	99
109) Hexachlorobt	12.335	225	37857	10.50 ug/L	99
110) Naphthalen	12.377	128	151505	11.07 ug/L	99
111) 1,2,3-Tclbenzene	12.518	180	72903	10.54 ug/L	98

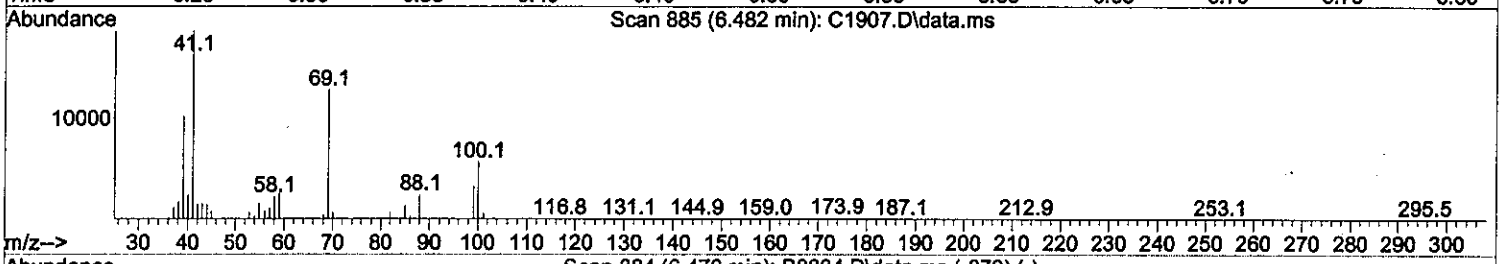
(#) = qualifier out of range (m) = manual integration (+) = signals summed

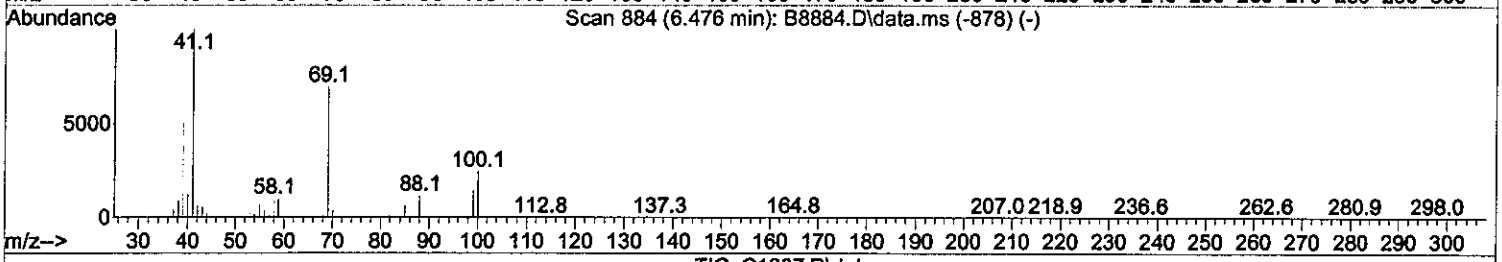
Quantitation Report (Qedit)

Sample : 10.0 PPB STD
Data File : J:\ACQUDATA\msvoa10\data\103109\C1907.D Vial: 7
Acq On : 31 Oct 2009 1:01 pm
Operator : F. Naegler
InstName : MSVOA10
Misc :

Quant Time: Nov 01 08:02:38 2009
Quant Method : J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Sat Oct 31 10:01:25 2009
Response via : Initial Calibration







TIC: C1907.D\data.ms

(58) 1,4-Dioxane

6.482min (+0.006) 259.02 ug/L m

response 7529

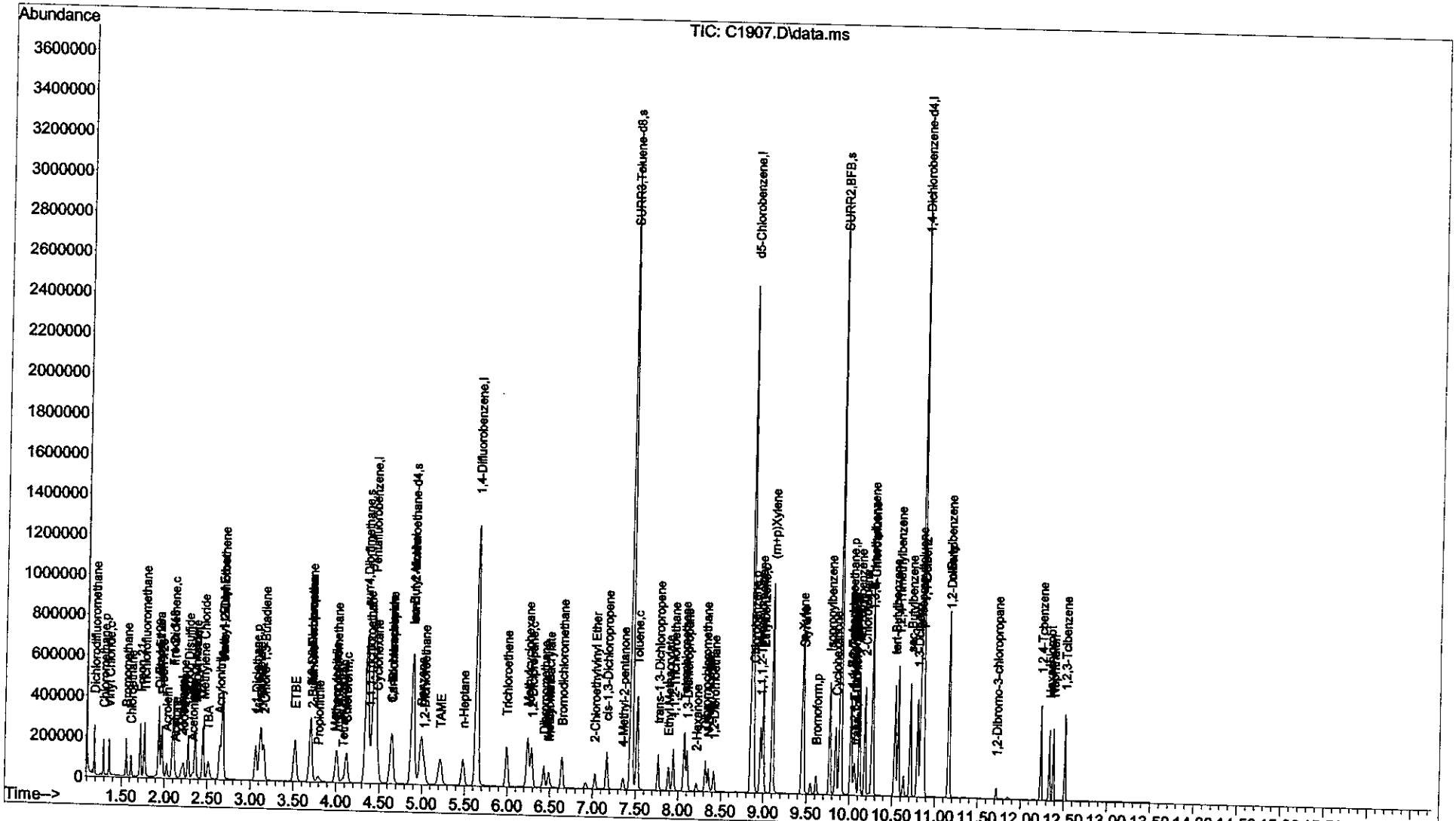
Ion	Exp%	Act%
88.00	100	100
58.00	95.80	91.92
0.00	0.00	0.00
0.00	0.00	0.00

00098

Quantitation Report (QT Reviewed)

Sample : 10.0 PPB STD
Data File : J:\ACQUDATA\msvoa10\data\103109\C1907.D Vial: 7
Acq On : 31 Oct 2009 1:01 pm
Operator : F. Naegler
InstName : MSVOA10
Misc :

Quant Time: Nov 01 08:02:38 2009
Quant Method : J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Sat Oct 31 10:01:25 2009
Response via : Initial Calibration



WAT1031.M Mon Nov 02 09:42:51 2009 MSVO10

Quantitation Report (QT Reviewed)

Sample : 50.0 PPB STD
Data File : J:\ACQUDATA\msvoa10\data\103109\C1908.D Vial: 8
Acq On : 31 Oct 2009 1:31 pm
Operator : F. Naegler
InstName : MSVOA10
Misc :

FJ 11/2/09

Quant Time: Nov 01 08:04:14 2009
Quant Method : J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Sat Oct 31 10:01:25 2009
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	4.434	168	761311	50.00	ug/L	0.00
44) 1,4-Difluorobenzene	5.641	114	1213166	50.00	ug/L	0.00
71) d5-Chlorobenzene	8.860	117	1080035	50.00	ug/L	0.00
88) 1,4-Dichlorobenzene-d4	10.847	152	564154	50.00	ug/L	0.00
System Monitoring Compounds						
46) surr4,Dibrflmethane	4.348	113	415009	52.65	ug/L	0.00
Spiked Amount 50.000	Range 89 - 119		Recovery = 105.30%			
49) surr1,1,2-dichloroetha...	4.891	65	490132	51.28	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.56%			
65) SURR3,Toluene-d8	7.445	98	1369743	54.69	ug/L	0.00
Spiked Amount 50.000	Range 87 - 121		Recovery = 109.38%			
70) SURR2,BFB	9.896	95	575082	53.11	ug/L	0.00
Spiked Amount 50.000	Range 85 - 122		Recovery = 106.22%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.184	85	420321	56.68	ug/L	99
4) Chloromethane	1.288	50	416352	55.64	ug/L	100
5) Vinyl Chloride	1.355	62	415930	53.95	ug/L	98
6) Bromomethane	1.556	94	227348	50.51	ug/L	100
7) Chloroethane	1.611	64	205103	51.07	ug/L	100
8) Freon 21	1.721	67	682318	52.11	ug/L	100
9) Trichlorofluoromethane	1.770	101	626088	50.03	ug/L	99
10) Diethyl Ether	1.934	59	225830	49.93	ug/L	95
11) Freon 123a	1.934	67	410753	52.41	ug/L	92
12) Freon 123	1.971	83	443399	52.59	ug/L	97
13) Acrolein	2.026	56	213288	251.94	ug/L	97
14) 1,1-Diclethene	2.105	96	278911	54.22	ug/L	93
15) Freon 113	2.093	101	280582	49.90	ug/L	97
16) Acetone	2.123	43	68105	43.91	ug/L	98
17) 2-Propanol	2.203	45	273833	1113.29	ug/L	94
18) Iodomethane	2.221	142	348656	68.86	ug/L	91
19) Carbon Disulfide	2.276	76	971883	54.43	ug/L	99
20) Acetonitrile	2.325	40	50226	211.91	ug/L	99
21) Allyl Chloride	2.361	76	144478	56.51	ug/L	93
22) Methyl Acetate	2.361	43	207725	50.98	ug/L	97
23) Methylene Chloride	2.446	84	334419	49.63	ug/L	98
24) TBA	2.507	59	459096	1076.86	ug/L	98
25) Acrylonitrile	2.642	53	522079	275.14	ug/L	100
26) Methyl-t-Butyl Ether	2.672	73	750007	56.20	ug/L	98
27) trans-1,2-Dichloroethene	2.678	96	332846	53.19	ug/L	96
28) 1,1-Diclethane	3.062	63	716759	51.40	ug/L	99
29) Vinyl Acetate	3.099	86	30944	57.57	ug/L #	69
30) DIPE	3.117	45	1197026	62.09	ug/L	97
31) 2-Chloro-1,3-Butadiene	3.154	53	567697	58.06	ug/L	98
32) ETBE	3.519	59	1169408	59.73	ug/L	99
33) 2,2-Dichloropropane	3.702	77	475616	53.16	ug/L	97
34) cis-1,2-Dichloroethene	3.702	96	357123	53.97	ug/L	94
35) 2-Butanone	3.714	43	98563	50.20	ug/L	96
37) Propionitrile	3.788	54	184662	263.46	ug/L	100
38) Bromochloromethane	4.007	130	220125	53.42	ug/L	88

Quantitation Report (QT Reviewed)

Sample : 50.0 PPB STD
Data File : J:\ACQUDATA\msvoa10\data\103109\C1908.D Vial: 8
Acq On : 31 Oct 2009 1:31 pm
Operator : F. Naegler
InstName : MSVOA10
Misc :

Quant Time: Nov 01 08:04:14 2009
Quant Method : J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Sat Oct 31 10:01:25 2009
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
39) Methacrylonitrile	3.989	67	89617	57.84 ug/L	95
40) Tetrahydrofuran	4.074	42	61788	54.71 ug/L	98
41) Chloroform	4.117	83	621692	49.61 ug/L	98
42) 1,1,1-Trichloroethane	4.385	97	565143	50.43 ug/L	98
43) TAME	5.214	73	706385	57.66 ug/L	96
45) Cyclohexane	4.470	56	729160	34.35 ug/L	76
47) Carbontetrachloride	4.641	121	162588	49.42 ug/L	99
48) 1,1-Dichloropropene	4.647	75	426954	51.48 ug/L	97
50) Benzene	4.989	78	1222040	51.89 ug/L	97
51) 1,2-Dichloroethane	5.025	62	536024	47.84 ug/L	98
52) Iso-Butyl Alcohol	4.885	43	162564	1136.07 ug/L	99
53) n-Heptane	5.476	43	372045	61.65 ug/L	96
54) Trichloroethene	5.995	130	342718	51.35 ug/L	99
55) Methylcyclohexane	6.238	55	547417	59.42 ug/L	97
56) 1,2-Diclpropane	6.281	63	379988	52.76 ug/L	98
57) Dibromomethane	6.427	93	190406	50.93 ug/L	95
58) 1,4-Dioxane	6.476	88	41674m	1397.39 ug/L	
59) Methyl Methacrylate	6.482	69	145189	59.22 ug/L	98
60) Bromodichloromethane	6.641	83	465415	50.88 ug/L	99
62) 2-Chloroethylvinyl Ether	7.025	63	190133	62.08 ug/L	99
63) cis-1,3-Dichloropropene	7.165	75	469979	55.39 ug/L	98
64) 4-Methyl-2-pentanone	7.354	43	206269	59.34 ug/L	92
66) Toluene	7.519	91	1315133	53.65 ug/L	100
67) trans-1,3-Dichloropropene	7.762	75	422257	55.76 ug/L	98
68) Ethyl Methacrylate	7.884	69	302858	60.80 ug/L	96
69) 1,1,2-Trichloroethane	7.945	97	250653	51.22 ug/L	98
72) Tetrachloroethene	8.073	164	265918	52.01 ug/L	96
73) 2-Hexanone	8.214	43	140761	59.81 ug/L	98
74) 1,3-Dichloropropane	8.104	76	410569	51.55 ug/L	95
75) Dibromochloromethane	8.317	129	340800	51.85 ug/L	99
76) N-Butyl Acetate	8.354	43	366171	62.86 ug/L	95
77) 1,2-Dibromoethane	8.415	107	264842	51.84 ug/L	96
78) Chlorobenzene	8.884	112	906406	51.05 ug/L	99
79) 1,1,1,2-Tetrachloroethane	8.963	131	332001	51.07 ug/L	96
80) Ethylbenzene	8.994	106	482054	56.02 ug/L	99
81) (m+p)Xylene	9.104	106	1164435	114.91 ug/L	98
82) o-Xylene	9.445	106	572686	58.82 ug/L	99
83) Styrene	9.463	104	975175	59.99 ug/L	98
84) Bromoform	9.616	173	179386	51.03 ug/L	94
85) Isopropylbenzene	9.768	105	1444231	61.83 ug/L	98
86) Cyclohexanone	9.841	55	724963	1125.95 ug/L	97
87) trans-1,4-Dichloro-2-B...	10.073	53	88157	53.26 ug/L	96
89) 1,1,2,2-Tetrachloroethane	10.024	83	296245	52.84 ug/L	99
90) Bromobenzene	10.018	156	383550	54.34 ug/L	96
92) 1,2,3-Trichloropropane	10.055	110	86819	50.00 ug/L	94
93) n-Propylbenzene	10.116	91	1826972	60.47 ug/L	100
94) 2-Chlorotoluene	10.183	91	1111772	56.93 ug/L	98
95) 4-Chlorotoluene	10.274	91	1310396	57.30 ug/L	98
96) 1,3,5-Trimethylbenzene	10.268	105	1309846	61.09 ug/L	97
97) tert-Butylbenzene	10.530	119	1111541	62.17 ug/L	100
98) 1,2,4-Trimethylbenzene	10.573	105	1359048	60.48 ug/L	100
99) sec-Butylbenzene	10.713	105	1626451	64.16 ug/L	99

Quantitation Report (QT Reviewed)

Sample : 50.0 PPB STD
Data File : J:\ACQUDATA\msvoa10\data\103109\C1908.D Vial: 8
Acq On : 31 Oct 2009 1:31 pm
Operator : F. Naegler
InstName : MSVOA10
Misc :

Quant Time: Nov 01 08:04:14 2009
Quant Method : J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Sat Oct 31 10:01:25 2009
Response via : Initial Calibration

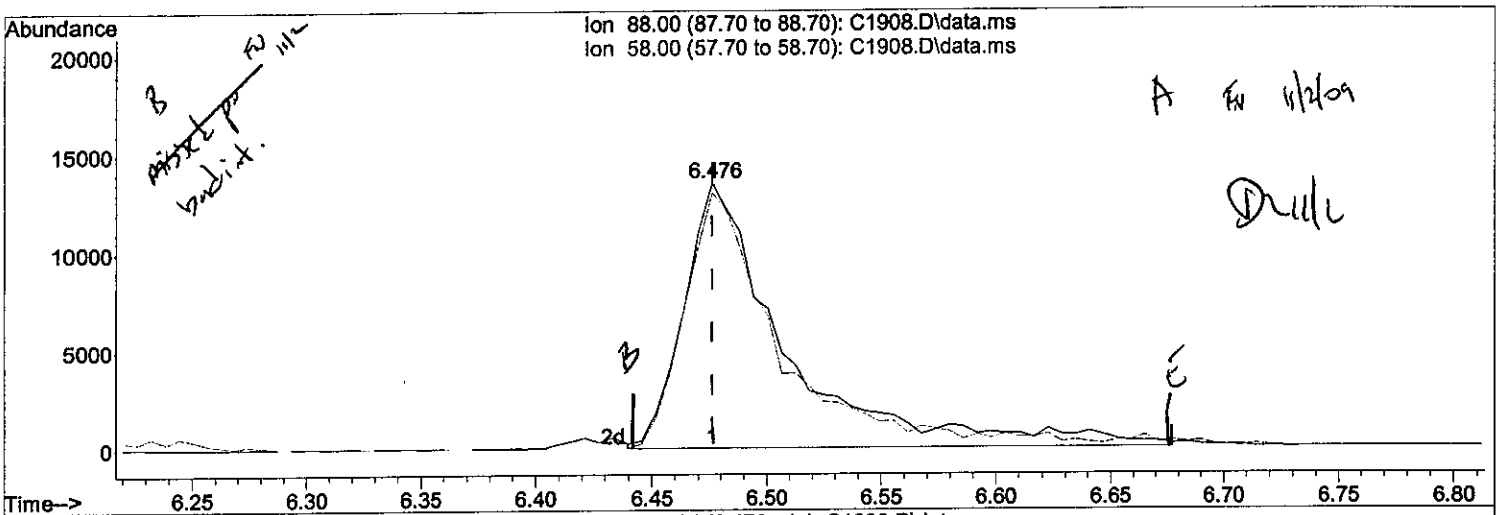
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
100) p-Isopropyltoluene	10.829	119	1385010	62.90	ug/L	99
101) 1,3-Dclbenz	10.798	146	752891	54.91	ug/L	100
102) 1,4-Dclbenz	10.872	146	759576	51.56	ug/L	99
104) n-Butylbenzene	11.152	91	1256380	65.27	ug/L	98
105) 1,2-Dclbenz	11.164	146	701614	54.34	ug/L	99
106) 1,2-Dibromo-3-chloropr...	11.719	157	53437	52.71	ug/L	97
108) 1,2,4-Tcbenzene	12.237	180	473328	57.27	ug/L	98
109) Hexachlorobt	12.335	225	203034	53.06	ug/L	96
110) Naphthalen	12.377	128	947039	65.20	ug/L	99
111) 1,2,3-Tclbenzene	12.518	180	411082	56.04	ug/L	99

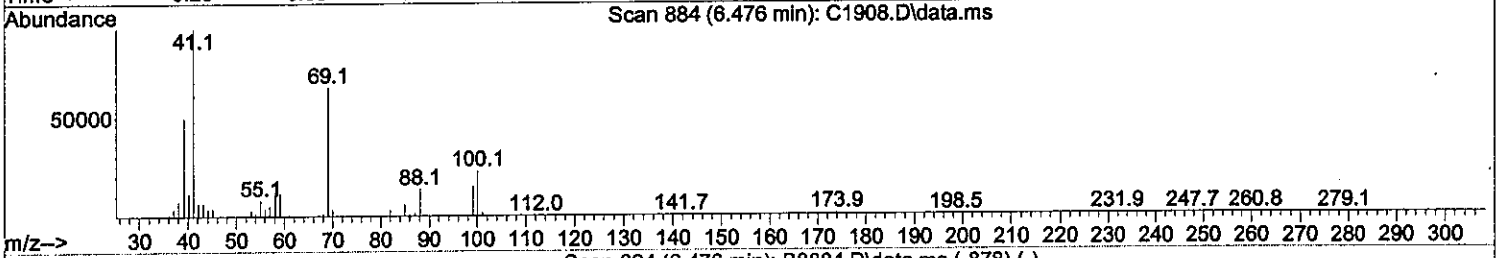
(#) = qualifier out of range (m) = manual integration (+) = signals summed

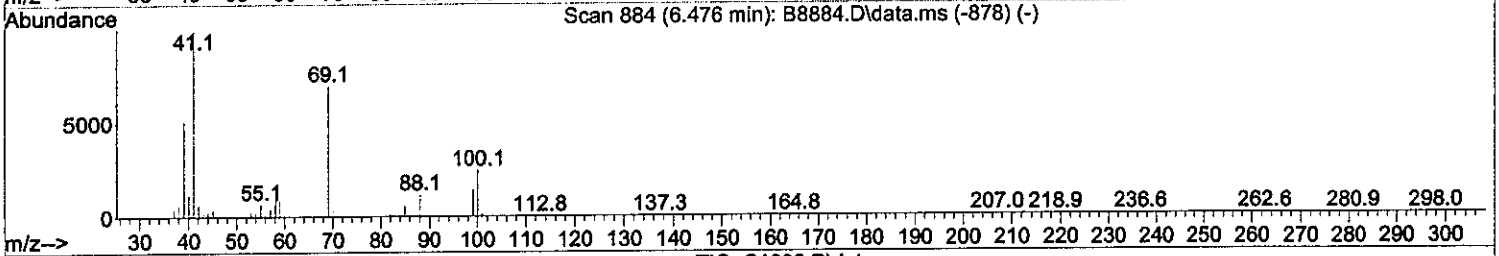
Quantitation Report (Qedit)

Sample : 50.0 PPB STD
Data File : J:\ACQUDATA\msvoa10\data\103109\C1908.D Vial: 8
Acq On : 31 Oct 2009 1:31 pm
Operator : F. Naegler
InstName : MSVOA10
Misc :

Quant Time: Nov 01 08:04:14 2009
Quant Method : J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Sat Oct 31 10:01:25 2009
Response via : Initial Calibration







TIC: C1908.D\data.ms

(58) 1,4-Dioxane

6.476min (+0.000) 1397.39 ug/L m

response 41674

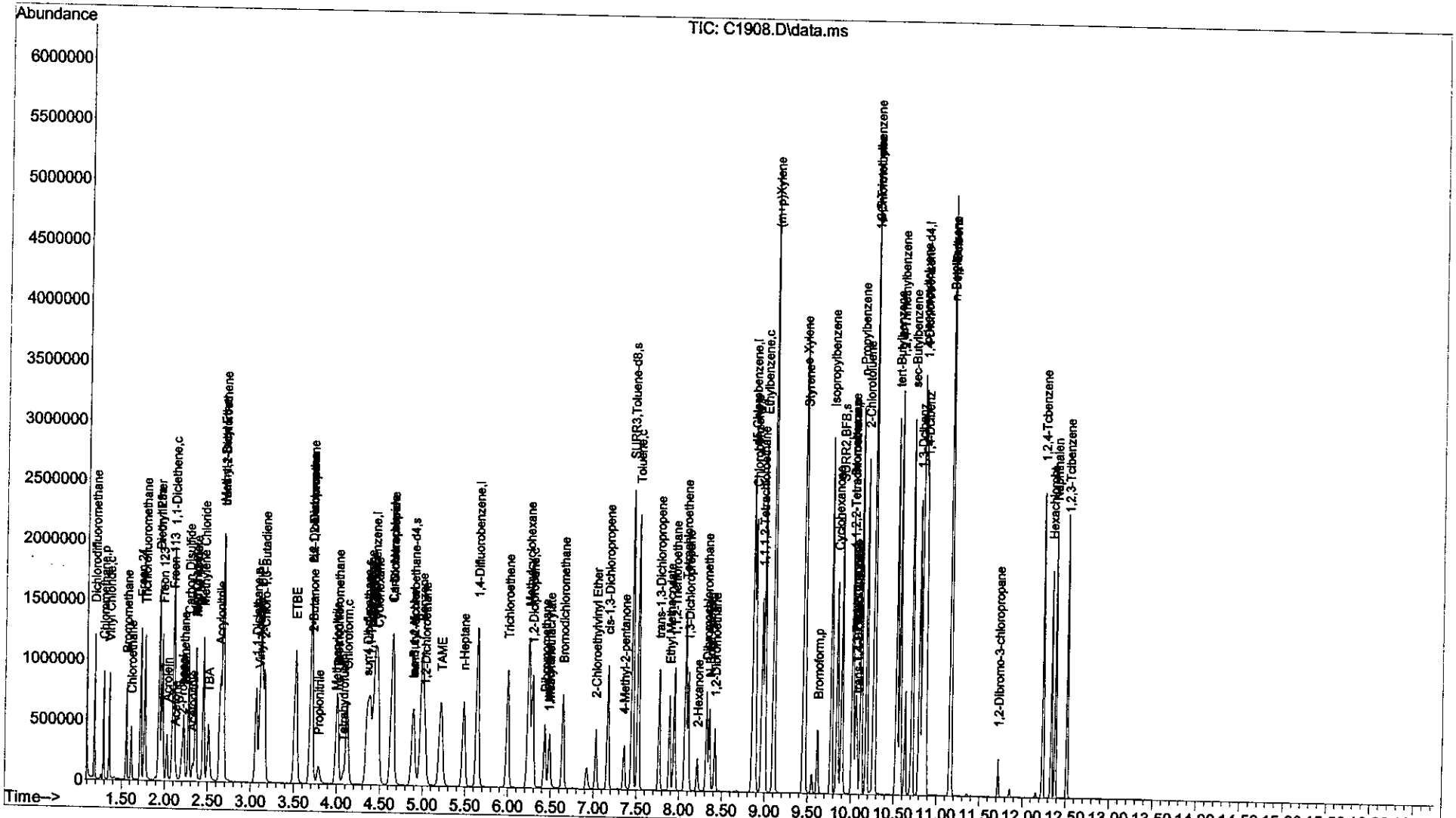
Ion	Exp%	Act%
88.00	100	100
58.00	95.80	96.23
0.00	0.00	0.00
0.00	0.00	0.00

00103

Quantitation Report (QT Reviewed)

Sample : 50.0 PPB STD
Data File : J:\ACQUDATA\msvoa10\data\103109\C1908.D Vial: 8
Acq On : 31 Oct 2009 1:31 pm
Operator : F. Naegler
InstName : MSVOA10
Misc :

Quant Time: Nov 01 08:04:14 2009
Quant Method : J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Sat Oct 31 10:01:25 2009
Response via : Initial Calibration



WAT1031.M Mon Nov 02 09:43:33 2009 MSVO10

Quantitation Report (QT Reviewed)

Sample : 100.0 PPB STD
Data File : J:\ACQUDATA\msvoa10\data\103109\C1909.D Vial: 9
Acq On : 31 Oct 2009 2:01 pm
Operator : F. Naegler
InstName : MSVOA10
Misc :

FW 11/2/09

Quant Time: Oct 31 13:17:01 2009
Quant Method : J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Sat Oct 31 10:01:25 2009
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	4.434	168	819415	50.00	ug/L	0.00
44) 1,4-Difluorobenzene	5.641	114	1294793	50.00	ug/L	0.00
71) d5-Chlorobenzene	8.860	117	1160870	50.00	ug/L	0.00
88) 1,4-Dichlorobenzene-d4	10.853	152	606285	50.00	ug/L	0.00
System Monitoring Compounds						
46) surr4,Dibrflmethane	4.348	113	791482	94.07	ug/L	0.00
Spiked Amount 50.000	Range 89 - 119		Recovery = 188.14%#			
49) surr1,1,2-dichloroetha...	4.891	65	935940	91.76	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 183.52%#			
65) SURR3,Toluene-d8	7.451	98	2539698	95.02	ug/L	0.00
Spiked Amount 50.000	Range 87 - 121		Recovery = 190.04%#			
70) SURR2,BFB	9.896	95	1096990	94.92	ug/L	0.00
Spiked Amount 50.000	Range 85 - 122		Recovery = 189.84%#			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.184	85	901640	112.97	ug/L	99
4) Chloromethane	1.288	50	850520	105.61	ug/L	98
5) Vinyl Chloride	1.355	62	891203	107.40	ug/L	100
6) Bromomethane	1.556	94	475080	98.07	ug/L	97
7) Chloroethane	1.611	64	427167	98.81	ug/L	99
8) Freon 21	1.721	67	1378826	97.84	ug/L	99
9) Trichlorofluoromethane	1.770	101	1334690	99.08	ug/L	97
10) Diethyl Ether	1.934	59	462863	95.08	ug/L	93
11) Freon 123a	1.934	67	816769	96.82	ug/L	88
12) Freon 123	1.971	83	936873	103.24	ug/L	98
13) Acrolein	2.026	56	433761	476.04	ug/L	96
14) 1,1-Diclethene	2.105	96	612237	110.58	ug/L	98
15) Freon 113	2.093	101	607644	100.40	ug/L	98
16) Acetone	2.123	43	133720	80.10	ug/L	95
17) 2-Propanol	2.202	45	594624	2246.08	ug/L	96
18) Iodomethane	2.221	142	721655	132.43	ug/L	92
19) Carbon Disulfide	2.276	76	1739703	90.53	ug/L	100
20) Acetonitrile	2.324	40	123293	483.31	ug/L	92
21) Allyl Chloride	2.361	76	314403	114.26	ug/L #	90
22) Methyl Acetate	2.361	43	426134	97.16	ug/L	98
23) Methylene Chloride	2.446	84	717947	99.00	ug/L	94
24) TBA	2.507	59	1031483	2247.90	ug/L	94
25) Acrylonitrile	2.641	53	1095514	536.41	ug/L	98
26) Methyl-t-Butyl Ether	2.672	73	1631999	113.61	ug/L	98
27) trans-1,2-Dichloroethene	2.678	96	721909	107.18	ug/L	98
28) 1,1-Diclethane	3.062	63	1557142	103.76	ug/L	99
29) Vinyl Acetate	3.105	86	69689	120.46	ug/L #	88
30) DIPE	3.123	45	2469272	119.00	ug/L	96
31) 2-Chloro-1,3-Butadiene	3.160	53	995575	94.59	ug/L	97
32) ETBE	3.519	59	2535058	120.30	ug/L	98
33) 2,2-Dichloropropane	3.702	77	1045441	108.57	ug/L	98
34) cis-1,2-Dichloroethene	3.702	96	773606	108.62	ug/L	99
35) 2-Butanone	3.714	43	205826	97.40	ug/L	98
37) Propionitrile	3.787	54	402802	533.93	ug/L	98
38) Bromochloromethane	4.007	130	462270	104.22	ug/L	85

Quantitation Report (QT Reviewed)

Sample : 100.0 PPB STD
Data File : J:\ACQUDATA\msvoa10\data\103109\C1909.D Vial: 9
Acq On : 31 Oct 2009 2:01 pm
Operator : F. Naegler
InstName : MSVOA10
Misc :

Quant Time: Oct 31 13:17:01 2009
Quant Method : J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Sat Oct 31 10:01:25 2009
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
39) Methacrylonitrile	3.989	67	200277	120.10 ug/L	90
40) Tetrahydrofuran	4.074	42	128131	105.40 ug/L	88
41) Chloroform	4.117	83	1352258	100.26 ug/L	99
42) 1,1,1-Trichloroethane	4.385	97	1235921	102.47 ug/L	99
43) TAME	5.214	73	1593139	120.82 ug/L	95
45) Cyclohexane	4.470	56	1508705	66.60 ug/L	74
47) Carbontetrachloride	4.641	121	362774	103.33 ug/L	99
48) 1,1-Dichloropropene	4.647	75	946785	106.96 ug/L	96
50) Benzene	4.988	78	2683074	106.74 ug/L	99
51) 1,2-Dichloroethane	5.025	62	1137775	95.15 ug/L	96
52) Iso-Butyl Alcohol	4.885	43	354244	2319.54 ug/L	95
53) n-Heptane	5.482	43	777281	120.68 ug/L	90
54) Trichloroethene	5.994	130	767877	107.79 ug/L	98
55) Methylcyclohexane	6.238	55	1137066	115.65 ug/L	97
56) 1,2-Diclpropane	6.287	63	832923	108.35 ug/L	99
57) Dibromomethane	6.427	93	414289	103.82 ug/L	93
58) 1,4-Dioxane	6.476	88	87811	2758.80 ug/L	89
59) Methyl Methacrylate	6.482	69	325293	124.32 ug/L	94
60) Bromodichloromethane	6.641	83	1022977	104.77 ug/L	98
62) 2-Chloroethylvinyl Ether	7.025	63	416825	127.53 ug/L	100
63) cis-1,3-Dichloropropene	7.165	75	1047153	115.63 ug/L	99
64) 4-Methyl-2-pentanone	7.354	43	450028	121.30 ug/L	89
66) Toluene	7.518	91	2839555	108.53 ug/L	100
67) trans-1,3-Dichloropropene	7.768	75	947675	117.25 ug/L	98
68) Ethyl Methacrylate	7.884	69	687658	129.34 ug/L	92
69) 1,1,2-Trichloroethane	7.945	97	539990	103.39 ug/L	99
72) Tetrachloroethene	8.073	164	590043	107.37 ug/L	98
73) 2-Hexanone	8.207	43	320169	126.57 ug/L	97
74) 1,3-Dichloropropane	8.104	76	901840	105.35 ug/L	91
75) Dibromochloromethane	8.317	129	758700	107.40 ug/L	99
76) N-Butyl Acetate	8.354	43	800674	127.89 ug/L	93
77) 1,2-Dibromoethane	8.415	107	575041	104.72 ug/L	97
78) Chlorobenzene	8.884	112	1935736	101.43 ug/L	100
79) 1,1,1,2-Tetrachloroethane	8.963	131	727975	104.18 ug/L	97
80) Ethylbenzene	8.994	106	1038283	112.25 ug/L	96
81) (m+p)Xylene	9.103	106	2467790	226.57 ug/L	97
82) o-Xylene	9.445	106	1235694	118.08 ug/L	100
83) Styrene	9.463	104	2095349	119.92 ug/L	97
84) Bromoform	9.616	173	409833	108.47 ug/L	93
85) Isopropylbenzene	9.768	105	3080993	122.73 ug/L	99
86) Cyclohexanone	9.841	55	1559967	2254.11 ug/L	97
87) trans-1,4-Dichloro-2-B...	10.073	53	197834	111.21 ug/L	99
89) 1,1,2,2-Tetrachloroethane	10.024	83	626914	104.05 ug/L	100
90) Bromobenzene	10.018	156	835739	110.18 ug/L	97
92) 1,2,3-Trichloropropane	10.054	110	191270	102.51 ug/L	93
93) n-Propylbenzene	10.115	91	3875412	119.36 ug/L	98
94) 2-Chlorotoluene	10.183	91	2387894	113.79 ug/L	99
95) 4-Chlorotoluene	10.274	91	2772074	112.78 ug/L	98
96) 1,3,5-Trimethylbenzene	10.268	105	2774394	120.41 ug/L	98
97) tert-Butylbenzene	10.530	119	2405655	125.20 ug/L	99
98) 1,2,4-Trimethylbenzene	10.573	105	2916635	120.78 ug/L	98
99) sec-Butylbenzene	10.713	105	3487651	128.02 ug/L	98

Sample : 100.0 PPB STD
Data File : J:\ACQUDATA\msvoa10\data\103109\C1909.D Vial: 9
Acq On : 31 Oct 2009 2:01 pm
Operator : F. Naegler
InstName : MSVOA10
Misc :

Quant Time: Oct 31 13:17:01 2009
Quant Method : J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Sat Oct 31 10:01:25 2009
Response via : Initial Calibration

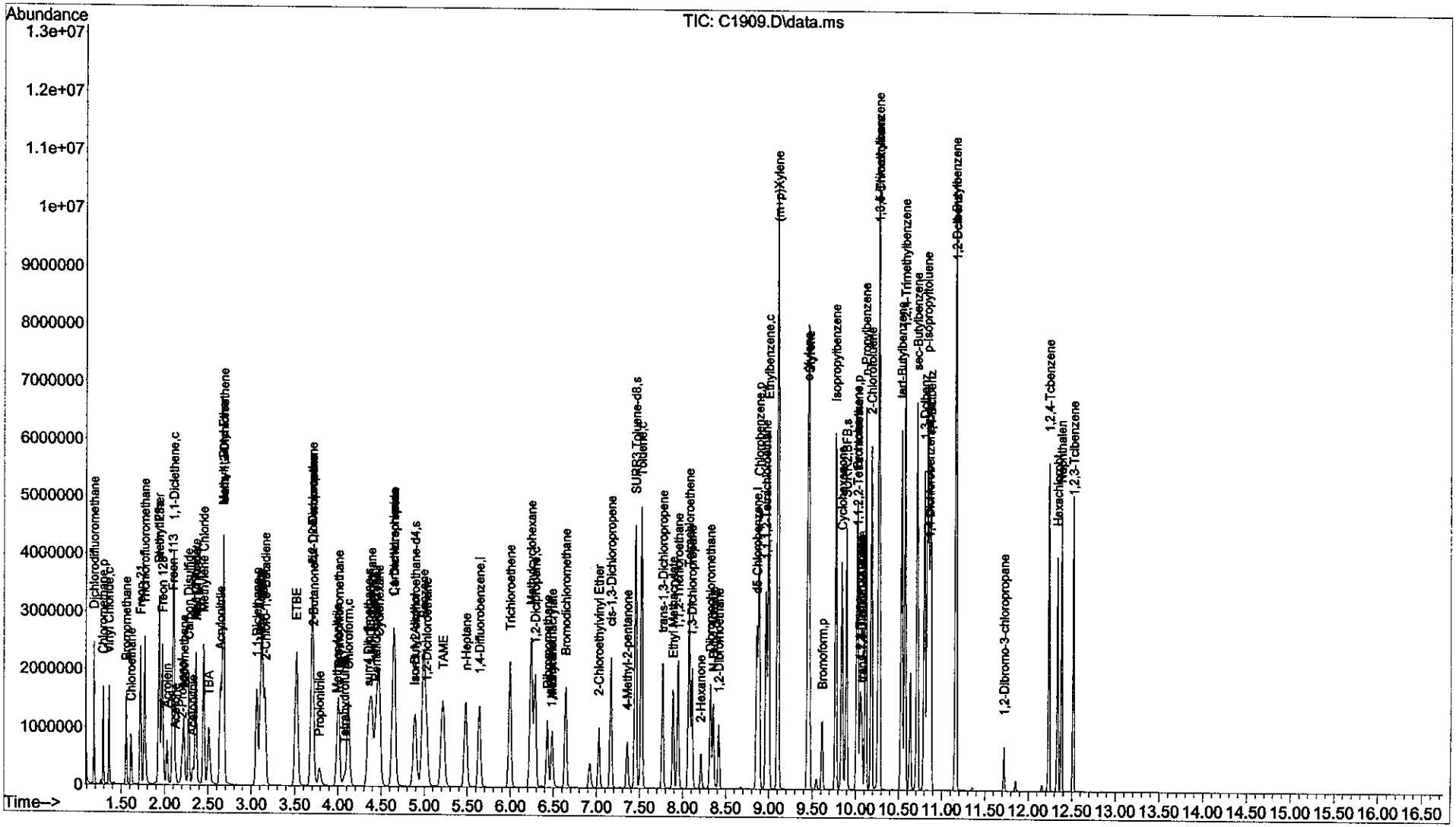
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
100) p-Isopropyltoluene	10.829	119	2990999	126.39	ug/L	98
101) 1,3-Dclbenz	10.798	146	1625523	110.32	ug/L	99
102) 1,4-Dclbenz	10.871	146	1630754	103.01	ug/L	97
104) n-Butylbenzene	11.158	91	2661267	128.65	ug/L	99
105) 1,2-Dclbenz	11.164	146	1493403	107.62	ug/L	98
106) 1,2-Dibromo-3-chloropr...	11.719	157	120595	110.70	ug/L	96
108) 1,2,4-Tcbenzene	12.237	180	1043574	117.50	ug/L	97
109) Hexachlorobt	12.335	225	446102	108.48	ug/L	98
110) Naphthalen	12.377	128	2071692	132.72	ug/L	98
111) 1,2,3-Tclbenzene	12.517	180	899812	114.13	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Sample : 100.0 PPB STD
Data File : J:\ACQUDATA\msvoa10\data\103109\C1909.D Vial: 9
Acq On : 31 Oct 2009 2:01 pm
Operator : F. Naegler
InstName : MSVOA10
Misc :

Quant Time: Oct 31 13:17:01 2009
Quant Method : J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Sat Oct 31 10:01:25 2009
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Sample : 150.0 PPB STD
Data File : J:\ACQUDATA\msvoa10\data\103109\C1910.D Vial: 10
Acq On : 31 Oct 2009 2:31 pm
Operator : F. Naegler
InstName : MSVOA10
Misc :

Quant Time: Nov 01 08:06:03 2009
Quant Method : J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Sat Oct 31 10:01:25 2009
Response via : Initial Calibration

FJ 11/2/09

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	4.440	168	891933	50.00	ug/L	0.00
44) 1,4-Difluorobenzene	5.641	114	1412979	50.00	ug/L	0.00
71) d5-Chlorobenzene	8.860	117	1272501	50.00	ug/L	0.00
88) 1,4-Dichlorobenzene-d4	10.853	152	657315	50.00	ug/L	0.00
System Monitoring Compounds						
46) surr4,Dibrflmethane	4.348	113	1016384	110.70	ug/L	0.00
Spiked Amount 50.000	Range 89 - 119		Recovery = 221.40%#			
49) surr1,1,2-dichloroetha...	4.891	65	1164868	104.65	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 209.30%#			
65) SURR3,Toluene-d8	7.452	98	3242455	111.16	ug/L	0.00
Spiked Amount 50.000	Range 87 - 121		Recovery = 222.32%#			
70) SURR2,BFB	9.896	95	1395403	110.64	ug/L	0.00
Spiked Amount 50.000	Range 85 - 122		Recovery = 221.28%#			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.184	85	1411215	162.44	ug/L	98
4) Chloromethane	1.288	50	1214034	138.48	ug/L	98
5) Vinyl Chloride	1.355	62	1369438	151.62	ug/L	98
6) Bromomethane	1.556	94	789697	149.77	ug/L	99
7) Chloroethane	1.611	64	670065	142.40	ug/L	99
8) Freon 21	1.721	67	2157979	140.67	ug/L	97
9) Trichlorofluoromethane	1.770	101	2115307	144.27	ug/L	98
10) Diethyl Ether	1.934	59	703908	132.83	ug/L	89
11) Freon 123a	1.934	67	1290590	140.55	ug/L	85
12) Freon 123	1.971	83	1497733	151.63	ug/L	96
13) Acrolein	2.026	56	700852	706.62	ug/L	100
14) 1,1-Diclethene	2.105	96	999867	165.91	ug/L	98
15) Freon 113	2.093	101	985832	149.64	ug/L	94
16) Acetone	2.123	43	209364	115.22	ug/L	95
17) 2-Propanol	2.203	45	946257	3283.70	ug/L	99
18) Iodomethane	2.221	142	1486087	250.54	ug/L	93
19) Carbon Disulfide	2.276	76	3558051	170.09	ug/L	99
20) Acetonitrile	2.325	40	198562	715.08	ug/L	91
21) Allyl Chloride	2.361	76	518298	173.05	ug/L #	82
22) Methyl Acetate	2.361	43	652589	136.70	ug/L	96
23) Methylene Chloride	2.446	84	1174146	148.74	ug/L	90
24) TBA	2.507	59	1647449	3298.36	ug/L	92
25) Acrylonitrile	2.642	53	1670546	751.47	ug/L	99
26) Methyl-t-Butyl Ether	2.672	73	2573935	164.62	ug/L	96
27) trans-1,2-Dichloroethene	2.678	96	1174338	160.18	ug/L	98
28) 1,1-Diclethane	3.062	63	2537105	155.31	ug/L	100
29) Vinyl Acetate	3.105	86	120350	191.11	ug/L #	82
30) DIPE	3.123	45	3024788	133.92	ug/L	90
31) 2-Chloro-1,3-Butadiene	3.154	53	2016832	176.05	ug/L	97
32) ETBE	3.519	59	3180952	138.68	ug/L	98
33) 2,2-Dichloropropane	3.702	77	1719709	164.07	ug/L	97
34) cis-1,2-Dichloroethene	3.702	96	1268368	163.61	ug/L	98
35) 2-Butanone	3.714	43	317922	138.21	ug/L	95
37) Propionitrile	3.788	54	623016	758.68	ug/L	100
38) Bromochloromethane	4.007	130	744033	154.11	ug/L #	81

Sample : 150.0 PPB STD
Data File : J:\ACQUDATA\msvoa10\data\103109\C1910.D Vial: 10
Acq On : 31 Oct 2009 2:31 pm
Operator : F. Naegler
InstName : MSVOA10
Misc :

Quant Time: Nov 01 08:06:03 2009
Quant Method : J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Sat Oct 31 10:01:25 2009
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
39) Methacrylonitrile	3.995	67	324207	178.61 ug/L	79
40) Tetrahydrofuran	4.074	42	196141	148.23 ug/L	90
41) Chloroform	4.117	83	2202215	150.01 ug/L	99
42) 1,1,1-Trichloroethane	4.385	97	2047766	155.97 ug/L	96
43) TAME	5.214	73	2021600	140.84 ug/L	94
45) Cyclohexane	4.470	56	2438616	98.64 ug/L	68
47) Carbontetrachloride	4.641	121	599300	156.42 ug/L	99
48) 1,1-Dichloropropene	4.647	75	1577328	163.28 ug/L	98
50) Benzene	4.989	78	4385572	159.87 ug/L	99
51) 1,2-Dichloroethane	5.025	62	1798473	137.82 ug/L	96
52) Iso-Butyl Alcohol	4.885	43	578889	3473.43 ug/L	97
53) n-Heptane	5.482	43	1261113	179.42 ug/L	89
54) Trichloroethene	5.995	130	1281664	164.87 ug/L	98
55) Methylcyclohexane	6.238	55	1832598	170.80 ug/L	93
56) 1,2-Diclpropane	6.287	63	1355806	161.62 ug/L	98
57) Dibromomethane	6.427	93	660006	151.57 ug/L	93
58) 1,4-Dioxane	6.476	88	150050m	4319.89 ug/L	
59) Methyl Methacrylate	6.482	69	529465	185.43 ug/L	91
60) Bromodichloromethane	6.641	83	1659770	155.78 ug/L	98
62) 2-Chloroethylvinyl Ether	7.025	63	687969	192.87 ug/L	98
63) cis-1,3-Dichloropropene	7.165	75	1712679	173.30 ug/L	99
64) 4-Methyl-2-pentanone	7.354	43	724090	178.85 ug/L	89
66) Toluene	7.519	91	4563394	159.82 ug/L	98
67) trans-1,3-Dichloropropene	7.762	75	1535416	174.08 ug/L	98
68) Ethyl Methacrylate	7.884	69	1105140	190.47 ug/L	88
69) 1,1,2-Trichloroethane	7.945	97	867987	152.30 ug/L	98
72) Tetrachloroethene	8.073	164	987097	163.86 ug/L	98
73) 2-Hexanone	8.214	43	503824	181.69 ug/L	92
74) 1,3-Dichloropropane	8.104	76	1437679	153.21 ug/L	91
75) Dibromochloromethane	8.317	129	1232625	159.18 ug/L	98
76) N-Butyl Acetate	8.354	43	1239432	180.60 ug/L	92
77) 1,2-Dibromoethane	8.415	107	921858	153.15 ug/L	97
78) Chlorobenzene	8.884	112	3138760	150.04 ug/L	98
79) 1,1,1,2-Tetrachloroethane	8.963	131	1186391	154.88 ug/L	97
80) Ethylbenzene	8.994	106	1726218	170.26 ug/L	87
81) (m+p)Xylene	9.104	106	3939148	329.93 ug/L	87
82) o-Xylene	9.451	106	1991179	173.58 ug/L	94
83) Styrene	9.463	104	3361517	175.51 ug/L	95
84) Bromoform	9.616	173	678332	163.79 ug/L	97
85) Isopropylbenzene	9.774	105	4988165	181.27 ug/L	96
86) Cyclohexanone	9.841	55	2264718	2985.37 ug/L	97
87) trans-1,4-Dichloro-2-B...	10.073	53	309951	158.95 ug/L	94
89) 1,1,2,2-Tetrachloroethane	10.024	83	985403	150.85 ug/L	99
90) Bromobenzene	10.018	156	1361833	165.60 ug/L	97
92) 1,2,3-Trichloropropane	10.055	110	302857	149.71 ug/L	98
93) n-Propylbenzene	10.122	91	6005557	170.60 ug/L	91
94) 2-Chlorotoluene	10.183	91	3846415	169.06 ug/L	97
95) 4-Chlorotoluene	10.274	91	4372210	164.08 ug/L	98
96) 1,3,5-Trimethylbenzene	10.268	105	4395796	175.97 ug/L	98
97) tert-Butylbenzene	10.536	119	3974488	190.80 ug/L	97
98) 1,2,4-Trimethylbenzene	10.573	105	4658765	177.95 ug/L	96
99) sec-Butylbenzene	10.713	105	5559433	188.23 ug/L	95

Quantitation Report (QT Reviewed)

Sample : 150.0 PPB STD
Data File : J:\ACQUDATA\msvoa10\data\103109\C1910.D Vial: 10
Acq On : 31 Oct 2009 2:31 pm
Operator : F. Naegler
InstName : MSVOA10
Misc :

Quant Time: Nov 01 08:06:03 2009
Quant Method : J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Sat Oct 31 10:01:25 2009
Response via : Initial Calibration

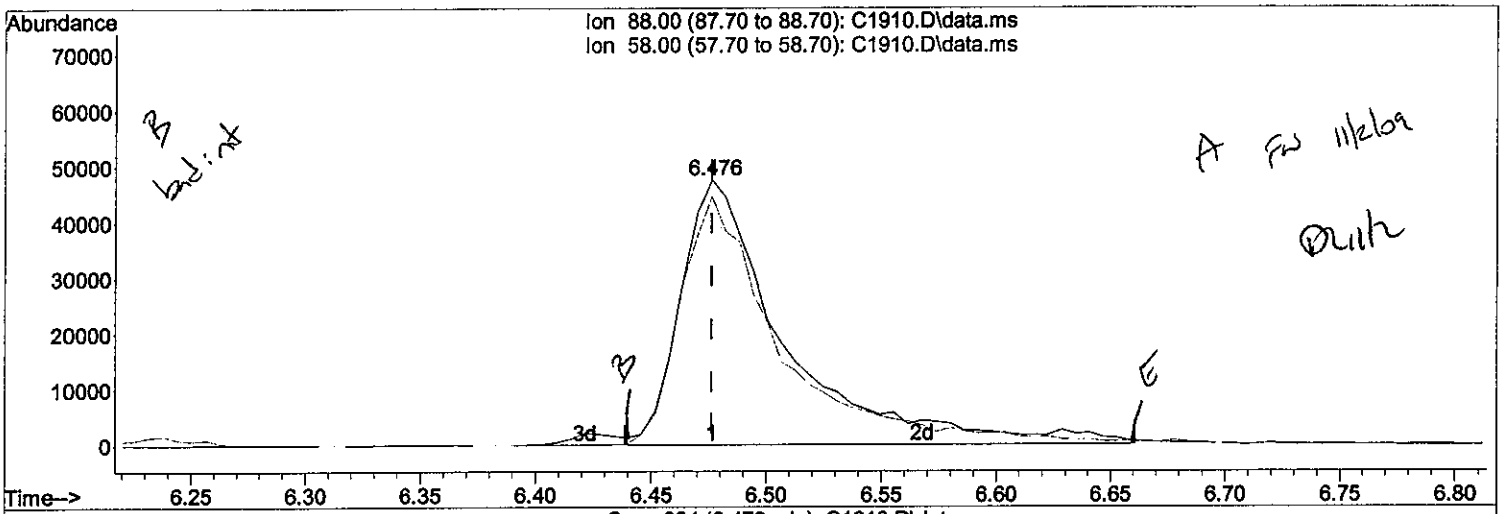
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
100) p-Isopropyltoluene	10.829	119	4829210	188.23	ug/L	95
101) 1,3-Dclbenz	10.798	146	2672835	167.32	ug/L	99
102) 1,4-Dclbenz	10.872	146	2696262	157.09	ug/L	98
104) n-Butylbenzene	11.158	91	4258108	189.86	ug/L	95
105) 1,2-Dclbenz	11.164	146	2392376	159.02	ug/L	97
106) 1,2-Dibromo-3-chloropr...	11.719	157	200905	170.10	ug/L	98
108) 1,2,4-Tcbenzene	12.237	180	1719928	178.62	ug/L	97
109) Hexachlorobt	12.335	225	760102	170.49	ug/L	96
110) Naphthalen	12.377	128	3271267	193.30	ug/L	97
111) 1,2,3-Tclbenzene	12.518	180	1491157	174.46	ug/L	99

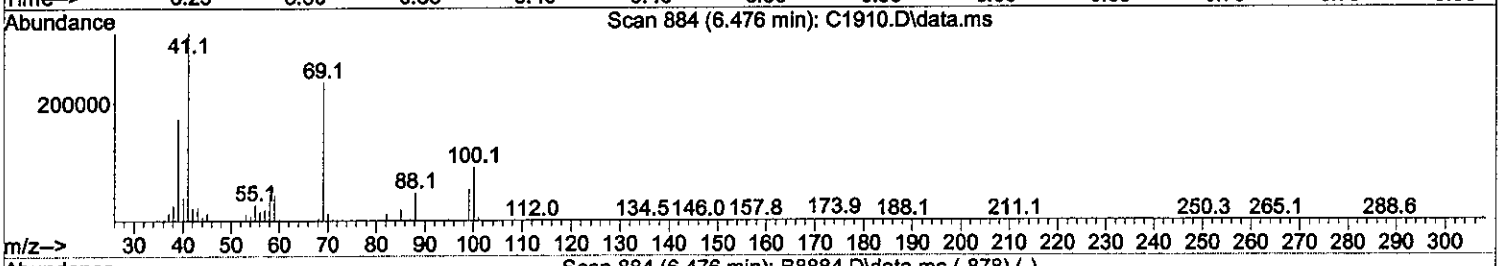
(#) = qualifier out of range (m) = manual integration (+) = signals summed

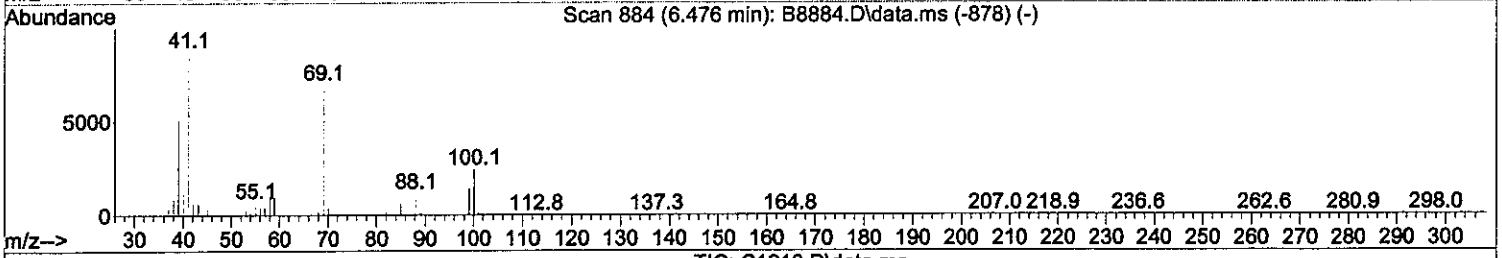
Quantitation Report (Qedit)

Sample : 150.0 PPB STD
Data File : J:\ACQUDATA\msvoa10\data\103109\C1910.D Vial: 10
Acq On : 31 Oct 2009 2:31 pm
Operator : F. Naegler
InstName : MSVOA10
Misc :

Quant Time: Nov 01 08:06:03 2009
Quant Method : J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Sat Oct 31 10:01:25 2009
Response via : Initial Calibration







TIC: C1910.D\data.ms

(58) 1,4-Dioxane

6.476min (+0.000) 4319.89 ug/L m

response 150050

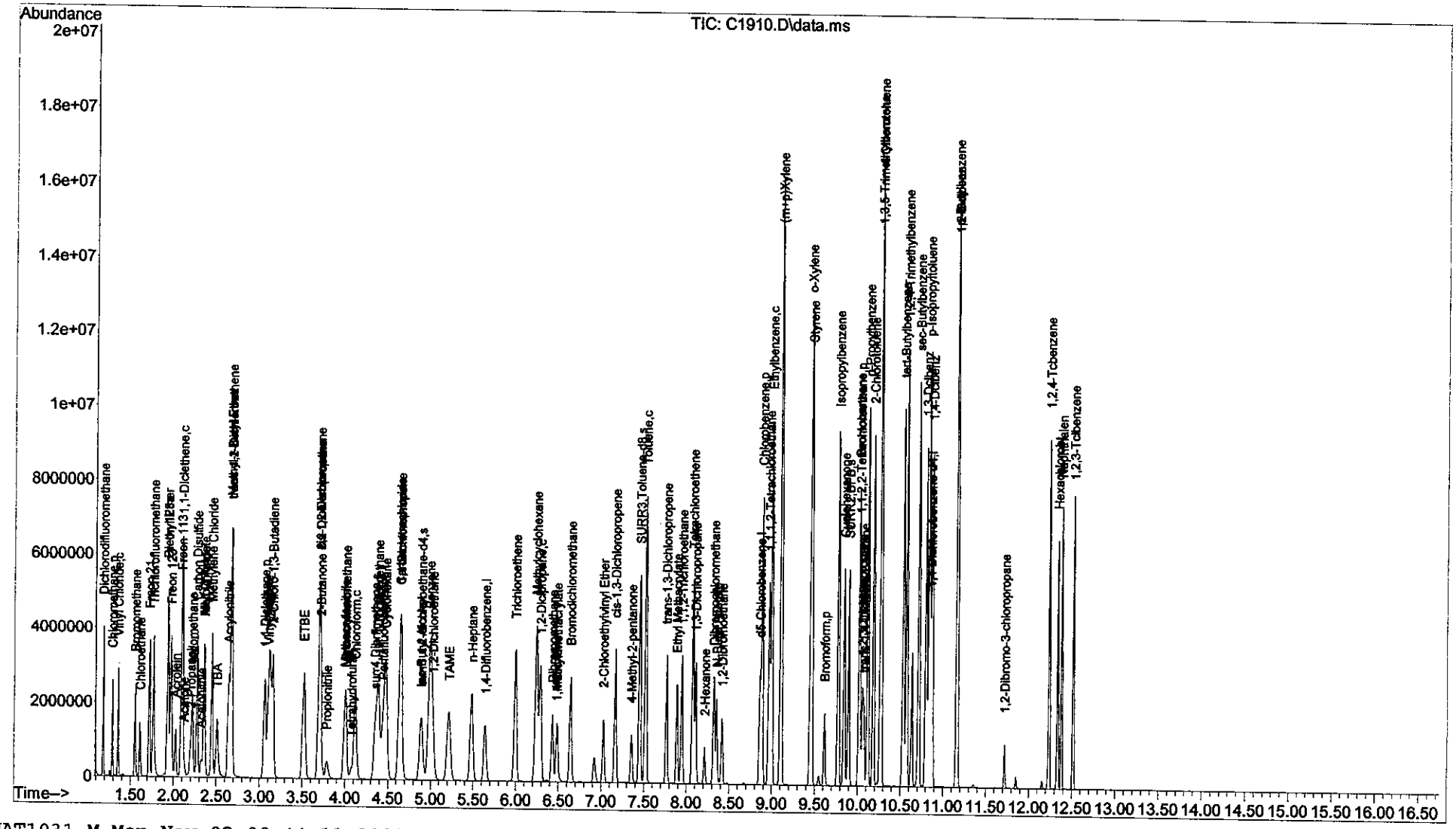
Ion	Exp%	Act%
88.00	100	100
58.00	95.80	93.81
0.00	0.00	0.00
0.00	0.00	0.00

00112

Quantitation Report (QT Reviewed)

Sample : 150.0 PPB STD
Data File : J:\ACQUDATA\msvoa10\data\103109\C1910.D Vial: 10
Acq On : 31 Oct 2009 2:31 pm
Operator : F. Naegler
InstName : MSVOA10
Misc :

Quant Time: Nov 01 08:06:03 2009
Quant Method : J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Sat Oct 31 10:01:25 2009
Response via : Initial Calibration



C1103

Quantitation Report (QT Reviewed)

Sample : 200.0 PPB STD
Data File : J:\ACQUDATA\msvoa10\data\103109\C1911.D Vial: 11
Acq On : 31 Oct 2009 3:01 pm
Operator : F. Naegler
InstName : MSVOA10
Misc :

FN 11/2/09

Quant Time: Oct 31 14:17:01 2009
Quant Method : J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Sat Oct 31 10:01:25 2009
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	4.440	168	950654	50.00	ug/L	0.00
44) 1,4-Difluorobenzene	5.641	114	1521441	50.00	ug/L	0.00
71) d5-Chlorobenzene	8.860	117	1342747	50.00	ug/L	0.00
88) 1,4-Dichlorobenzene-d4	10.853	152	698953	50.00	ug/L	0.00
System Monitoring Compounds						
46) surr4,Dibrflmethane	4.348	113	1329745	134.51	ug/L	0.00
Spiked Amount 50.000	Range 89 - 119		Recovery = 269.02%#			
49) surr1,1,2-dichloroetha...	4.891	65	1494609	124.70	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 249.40%#			
65) SURR3,Toluene-d8	7.452	98	4204057	133.85	ug/L	0.00
Spiked Amount 50.000	Range 87 - 121		Recovery = 267.70%#			
70) SURR2,BFB	9.896	95	1825093	134.39	ug/L	0.00
Spiked Amount 50.000	Range 85 - 122		Recovery = 268.78%#			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.184	85	1949225	210.51	ug/L	96
4) Chloromethane	1.288	50	1604202	171.69	ug/L	96
5) Vinyl Chloride	1.355	62	1797793	186.75	ug/L	96
6) Bromomethane	1.556	94	1048118	186.50	ug/L	99
7) Chloroethane	1.611	64	896953	178.84	ug/L	98
8) Freon 21	1.721	67	2969231	181.60	ug/L	97
9) Trichlorofluoromethane	1.770	101	2934564	187.78	ug/L	98
10) Diethyl Ether	1.934	59	957808	169.58	ug/L	89
11) Freon 123a	1.934	67	1777955	181.67	ug/L	84
12) Freon 123	1.971	83	2127199	202.05	ug/L	96
13) Acrolein	2.026	56	976099	923.35	ug/L	99
14) 1,1-Diclethene	2.105	96	1423618	221.64	ug/L	95
15) Freon 113	2.093	101	1429678	203.61	ug/L	95
16) Acetone	2.123	43	286452	147.91	ug/L	93
17) 2-Propanol	2.203	45	1337407	4354.39	ug/L	98
18) Iodomethane	2.221	142	2054679	325.00	ug/L	94
19) Carbon Disulfide	2.276	76	4898979	219.73	ug/L	98
20) Acetonitrile	2.324	40	277787	938.60	ug/L	95
21) Allyl Chloride	2.355	76	734667	230.14	ug/L #	83
22) Methyl Acetate	2.361	43	890960	175.10	ug/L	92
23) Methylene Chloride	2.446	84	1676810	199.30	ug/L	85
24) TBA	2.507	59	2398506	4505.44	ug/L	90
25) Acrylonitrile	2.641	53	2296996	969.45	ug/L	99
26) Methyl-t-Butyl Ether	2.672	73	3631395	217.90	ug/L	94
27) trans-1,2-Dichloroethene	2.678	96	1679203	214.90	ug/L	94
28) 1,1-Diclethane	3.062	63	3579531	205.59	ug/L	98
29) Vinyl Acetate	3.105	86	169486	252.51	ug/L #	81
30) DIPE	3.123	45	4998235	207.62	ug/L	97
31) 2-Chloro-1,3-Butadiene	3.160	53	2755150	225.64	ug/L	92
32) ETBE	3.519	59	5558129	227.36	ug/L	97
33) 2,2-Dichloropropane	3.702	77	2421103	216.71	ug/L	98
34) cis-1,2-Dichloroethene	3.702	96	1816486	219.84	ug/L	92
35) 2-Butanone	3.714	43	430411	175.56	ug/L	95
37) Propionitrile	3.788	54	888595	1015.26	ug/L	99
38) Bromochloromethane	4.007	130	1069762	207.89	ug/L #	79

Sample : 200.0 PPB STD
Data File : J:\ACQUDATA\msvoa10\data\103109\C1911.D Vial: 11
Acq On : 31 Oct 2009 3:01 pm
Operator : F. Naegler
InstName : MSVOA10
Misc :

Quant Time: Oct 31 14:17:01 2009
Quant Method : J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Sat Oct 31 10:01:25 2009
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
39) Methacrylonitrile	3.995	67	457520	236.48	ug/L		83
40) Tetrahydrofuran	4.074	42	282815	200.52	ug/L		88
41) Chloroform	4.123	83	3132180	200.17	ug/L		96
42) 1,1,1-Trichloroethane	4.385	97	2953442	211.06	ug/L		96
43) TAME	5.214	73	3680147	240.56	ug/L		93
45) Cyclohexane	4.470	56	3463570	130.11	ug/L		64
47) Carbontetrachloride	4.641	121	856843	207.69	ug/L		100
48) 1,1-Dichloropropene	4.647	75	2246569	215.98	ug/L		98
50) Benzene	4.989	78	6282785	212.70	ug/L		98
51) 1,2-Dichloroethane	5.025	62	2511389	178.73	ug/L		96
52) Iso-Butyl Alcohol	4.885	43	820550	4572.45	ug/L		94
53) n-Heptane	5.482	43	1782013	235.46	ug/L		87
54) Trichloroethene	5.994	130	1856202	221.75	ug/L		97
55) Methylcyclohexane	6.238	55	2598280	224.90	ug/L		89
56) 1,2-Diclpropane	6.287	63	1916724	212.19	ug/L		100
57) Dibromomethane	6.427	93	921267	196.48	ug/L		90
58) 1,4-Dioxane	6.476	88	213686	5713.38	ug/L		100
59) Methyl Methacrylate	6.482	69	767288	249.56	ug/L		89
60) Bromodichloromethane	6.641	83	2360771	205.77	ug/L		98
62) 2-Chloroethylvinyl Ether	7.025	63	983213	256.00	ug/L		96
63) cis-1,3-Dichloropropene	7.165	75	2420903	227.50	ug/L		98
64) 4-Methyl-2-pentanone	7.354	43	997767	228.88	ug/L		87
66) Toluene	7.519	91	6291887	204.65	ug/L		95
67) trans-1,3-Dichloropropene	7.769	75	2168098	228.28	ug/L		97
68) Ethyl Methacrylate	7.890	69	1580825	253.04	ug/L		83
69) 1,1,2-Trichloroethane	7.945	97	1226752	199.90	ug/L		99
72) Tetrachloroethene	8.073	164	1431374	225.18	ug/L		97
73) 2-Hexanone	8.214	43	707300	241.73	ug/L		88
74) 1,3-Dichloropropane	8.104	76	2033194	205.34	ug/L		89
75) Dibromochloromethane	8.317	129	1766961	216.25	ug/L		99
76) N-Butyl Acetate	8.354	43	1751871	241.92	ug/L		92
77) 1,2-Dibromoethane	8.415	107	1337033	210.51	ug/L		96
78) Chlorobenzene	8.884	112	4372811	198.09	ug/L		96
79) 1,1,1,2-Tetrachloroethane	8.963	131	1692571	209.40	ug/L		97
80) Ethylbenzene	8.994	106	2418699	226.08	ug/L	#	78
81) (m+p)Xylene	9.104	106	5311574	421.61	ug/L	#	77
82) o-Xylene	9.451	106	2780666	229.72	ug/L		88
83) Styrene	9.463	104	4603978	227.81	ug/L		90
84) Bromoform	9.616	173	998215	228.41	ug/L		95
85) Isopropylbenzene	9.774	105	6744634	232.27	ug/L		92
86) Cyclohexanone	9.841	55	3127273	3906.74	ug/L		98
87) trans-1,4-Dichloro-2-B...	10.073	53	433794	210.82	ug/L		89
89) 1,1,2,2-Tetrachloroethane	10.030	83	1400471	201.61	ug/L		98
90) Bromobenzene	10.018	156	1937842	221.61	ug/L		95
92) 1,2,3-Trichloropropane	10.061	110	429941	199.87	ug/L		90
93) n-Propylbenzene	10.122	91	7863323	210.07	ug/L		85
94) 2-Chlorotoluene	10.183	91	5240371	216.60	ug/L		93
95) 4-Chlorotoluene	10.274	91	5856915	206.70	ug/L		97
96) 1,3,5-Trimethylbenzene	10.268	105	5835369	219.68	ug/L		95
97) tert-Butylbenzene	10.536	119	5484475	247.60	ug/L		96
98) 1,2,4-Trimethylbenzene	10.573	105	6305827	226.52	ug/L		92
99) sec-Butylbenzene	10.713	105	7353884	234.16	ug/L		90

Quantitation Report (QT Reviewed)

Sample : 200.0 PPB STD
Data File : J:\ACQUDATA\msvoa10\data\103109\C1911.D Vial: 11
Acq On : 31 Oct 2009 3:01 pm
Operator : F. Naegler
InstName : MSVOA10
Misc :

Quant Time: Oct 31 14:17:01 2009
Quant Method : J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Sat Oct 31 10:01:25 2009
Response via : Initial Calibration

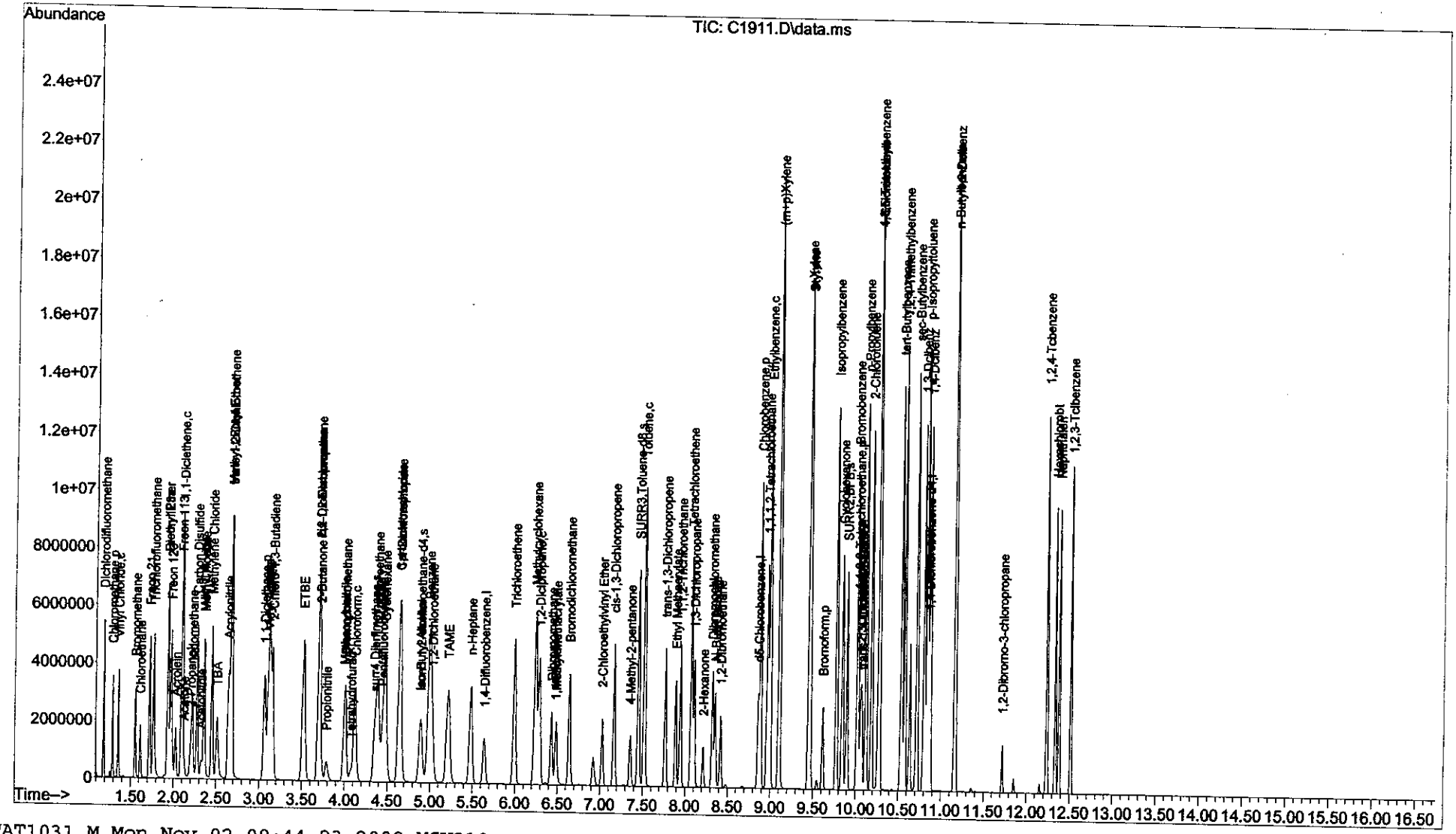
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
100) p-Isopropyltoluene	10.835	119	6463376	236.91 ug/L	90
101) 1,3-Dclbenz	10.798	146	3734118	219.83 ug/L	96
102) 1,4-Dclbenz	10.872	146	3763945	206.24 ug/L	96
104) n-Butylbenzene	11.158	91	5607544	235.13 ug/L	92
105) 1,2-Dclbenz	11.164	146	3253696	203.38 ug/L	96
106) 1,2-Dibromo-3-chloropr...	11.719	157	287589	228.99 ug/L	97
108) 1,2,4-Tcbenzene	12.237	180	2425985	236.93 ug/L	97
109) Hexachlorobt	12.335	225	1126606	237.64 ug/L	97
110) Naphthalen	12.377	128	4489112	249.46 ug/L	94
111) 1,2,3-Tclbenzene	12.518	180	2111741	232.34 ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Sample : 200.0 PPB STD
Data File : J:\ACQUDATA\msvoa10\data\103109\C1911.D Vial: 11
Acq On : 31 Oct 2009 3:01 pm
Operator : F. Naegler
InstName : MSVOA10
Misc :

Quant Time: Oct 31 14:17:01 2009
Quant Method : J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Sat Oct 31 10:01:25 2009
Response via : Initial Calibration



C1911

Evaluate Continuing Calibration Report

Sample : CCV
Data File : J:\ACQUDATA\msvoa10\data\111909\C2473.D Vial: 2
Acq On : 19 Nov 2009 2:52 pm
Operator : F. Naegler
InstName : MSVOA10
Misc :

Quant Time: Nov 19 15:44:50 2009
Quant Method : J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Mon Nov 02 10:48:31 2009
Response via : Initial Calibration

FJ 12/8/09

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene	1.000	1.000	0.0	117	0.00
2		Dichlorodifluoromethane	0.520	0.580	-11.5	123	0.00
3		Freon 114	0.000	0.000	0.0	123	0.00
4	p	Chloromethane	0.522	0.412	21.1#	88	0.00
5	c	Vinyl Chloride	0.540	0.476	11.9	102	0.00
6		Bromomethane	0.321	0.254	20.9#	99	0.00
7		Chloroethane	0.266	0.236	11.3	102	0.00
8		Freon 21	0.856	0.699	18.3	91	0.00
9		Trichlorofluoromethane	0.811	0.789	2.7	112	0.00
10		Diethyl Ether	0.294	0.244	17.0	96	0.00
11		Freon 123a	0.513	0.431	16.0	93	0.00
12		Freon 123	0.570	0.481	15.6	96	0.00
13		Acrolein	0.055	0.038	30.9#	78	0.00 ✓
14	c	1,1-Diclethene	0.370	0.386	-4.3	123	0.00
15		Freon 113	0.386	0.397	-2.8	126	0.00
16		Acetone	0.088	0.064	27.3#	84	0.00 * 1
17		2-Propanol	0.017	0.013	23.5#	85	0.00
18		Iodomethane	0.334	0.464	6.9 ~~38.9#~~	118	0.00
19		Carbon Disulfide	1.237	1.227	0.8	112	0.00
20		Acetonitrile	0.016	0.011	31.3#	95	0.00 ✓
21		Allyl Chloride	0.182	0.192	-5.5	118	0.00
22		Methyl Acetate	0.261	0.227	13.0	97	0.00
23		Methylene Chloride	0.499	0.434	13.0	115	0.00
24		TBA	0.028	0.024	14.3	94	0.00
25		Acrylonitrile	0.128	0.113	11.7	96	0.00
26		Methyl-t-Butyl Ether	0.924	0.894	3.2	106	0.00
27		trans-1,2-Dichloroethene	0.437	0.452	-3.4	121	0.00
28	p	1,1-Diclethane	0.964	0.922	4.4	114	0.00
29		Vinyl Acetate	0.039	0.037	5.1	106	0.00
30		DIPE	1.381	1.235	10.6	92	0.00
31		2-Chloro-1,3-Butadiene	0.656	0.667	-1.7	104	0.00
32		ETBE	1.347	1.235	8.3	94	0.00
33		2,2-Dichloropropane	0.611	0.648	-6.1	121	0.00
34		cis-1,2-Dichloroethene	0.457	0.471	-3.1	117	0.00
35		2-Butanone	0.135	0.102	24.4#	92	0.00
36		Ethyl Acetate	0.000	0.000	0.0	92	0.00
37		Propionitrile	0.045	0.040	11.1	96	0.00
38		Bromochloromethane	0.293	0.277	5.5	112	0.00
39		Methacrylonitrile	0.105	0.105	12.5 ~~0.0~~	104	0.00
40		Tetrahydrofuran	0.076	0.064	15.8	92	0.00
41	c	Chloroform	0.827	0.814	1.6	116	0.00
42		1,1,1-Trichloroethane	0.727	0.751	-3.3	118	0.00
43		TAME	0.831	0.766	7.8	96	0.00
44	I	1,4-Difluorobenzene	1.000	1.000	0.0	115	0.00
45		Cyclohexane	0.579	0.484	17.3 ~~16.4~~	93	0.00
46	s	surr4,Dibrflmethane	0.316	0.337	5.0 ~~6.6~~	113	0.00
47		Carbontetrachloride	0.133	0.138	-3.8	119	0.00

Evaluate Continuing Calibration Report

Sample : CCV
Data File : J:\ACQUDATA\msvoa10\data\111909\C2473.D Vial: 2
Acq On : 19 Nov 2009 2:52 pm
Operator : F. Naegler
InstName : MSVOA10
Misc :

Quant Time: Nov 19 15:44:50 2009
Quant Method : J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Mon Nov 02 10:48:31 2009
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Drift	%Dev	Area%	Dev(min)
48		1,1-Dichloropropene	0.346	0.363		-4.9	119	0.00
49	s	surr1,1,2-dichloroethane-d4	0.369	0.366		0.8	104	0.00
50		Benzene	1.026	1.028		-0.2	117	0.00
51		1,2-Dichloroethane	0.436	0.407		6.7	106	0.00
52		Iso-Butyl Alcohol	0.006	0.005		16.7	89	0.00
53		n-Heptane	0.271	0.302		-11.4	113	0.00
54		Trichloroethene	0.281	0.297		-5.7	121	0.00
55		Methylcyclohexane	0.406	0.367		9.6	94	0.00
56	c	1,2-Diclpropane	0.312	0.309		1.0	113	0.00
57		Dibromomethane	0.157	0.150		4.5	110	0.00
58		1,4-Dioxane	0.002	0.002	6.4	~~0.0~~	107	0.00
59		Methyl Methacrylate	0.103	0.110	10.5	~~6.8~~	106	0.00
60		Bromodichloromethane	0.360	0.384		-6.7	115	0.00
61		2-Nitropropane	0.000	0.000		0.0	100	0.00
62		2-Chloroethylvinyl Ether	0.152	0.130		14.5	96	0.00
63		cis-1,3-Dichloropropene	0.350	0.384	3.3	~~9.7~~	114	0.00
64		4-Methyl-2-pentanone	0.147	0.137	18.2	~~6.8~~	93	0.00
65	s	SURR3,Toluene-d8	1.012	1.091		-7.8	111	0.00
66	c	Toluene	1.050	1.108		-5.5	118	0.00
67		trans-1,3-Dichloropropene	0.308	0.337	5.4	~~9.4~~	111	0.00
68		Ethyl Methacrylate	0.208	0.234	8.8	~~12.5~~	108	0.00
69		1,1,2-Trichloroethane	0.202	0.196		3.0	109	0.00
70	s	SURR2,BFB	0.429	0.443		-3.3	108	0.00
71	I	d5-Chlorobenzene	1.000	1.000		0.0	114	0.00
72		Tetrachloroethene	0.245	0.266		-8.6	123	0.00
73		2-Hexanone	0.124	0.107		13.7	93	0.00
74		1,3-Dichloropropane	0.373	0.369		1.1	110	0.00
75		Dibromochloromethane	0.294	0.316		-7.5	114	0.00
76		N-Butyl Acetate	0.310	0.269		13.2	90	0.00
77		1,2-Dibromoethane	0.233	0.236		-1.3	109	0.00
78	p	Chlorobenzene	0.827	0.865		-4.6	117	0.00
79		1,1,1,2-Tetrachloroethane	0.291	0.314		-7.9	116	0.00
80	c	Ethylbenzene	0.405	0.457		-12.8	116	0.00
81		(m+p)Xylene	0.493	0.556		-12.8	117	0.00
82		o-Xylene	0.462	0.543	-4.3	~~17.5~~	116	0.00
83		Styrene	0.773	0.913	-4.2	~~18.1~~	115	0.00
84	p	Bromoform	0.156	0.162		-3.8	111	0.00
85		Isopropylbenzene	1.187	1.369		-15.3	116	0.00
86		Cyclohexanone	0.030	0.018		40.0#	61	0.00 ✓
87		trans-1,4-Dichloro-2-Butene	0.074	0.070		5.4	97	0.00
88	I	1,4-Dichlorobenzene-d4	1.000	1.000		0.0	109	0.00
89	p	1,1,2,2-Tetrachloroethane	0.515	0.504		2.1	104	0.00
90		Bromobenzene	0.664	0.713		-7.4	114	0.00
91		4-Ethyltoulene	0.000	0.000		0.0	120	0.00
92		1,2,3-Trichloropropane	0.158	0.151		4.4	106	0.00
93		n-Propylbenzene	2.866	3.452		-20.4#	116	0.00

Evaluate Continuing Calibration Report

Sample : CCV
Data File : J:\ACQUDATA\msvoa10\data\111909\C2473.D Vial: 2
Acq On : 19 Nov 2009 2:52 pm
Operator : F. Naegler
InstName : MSVOA10
Misc :

Quant Time: Nov 19 15:44:50 2009
Quant Method : J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Mon Nov 02 10:48:31 2009
Response via : Initial Calibration

FN 12/8/09

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Drift	%Dev	Area%	Dev(min)
94	2-Chlorotoluene	1.820	2.036		-11.9	112	0.00
95	4-Chlorotoluene	2.145	2.422		-12.9	113	0.00
96	1,3,5-Trimethylbenzene	2.079	2.447		-17.7	115	0.00
97	tert-Butylbenzene	1.809	2.083		-15.1	115	0.00
98	1,2,4-Trimethylbenzene	2.176	2.523		-15.9	114	0.00
99	sec-Butylbenzene	2.620	3.045		-16.2	115	0.00
100	p-Isopropyltoluene	2.241	2.632		-17.4	117	0.00
101	1,3-Dclbenz	1.265	1.384		-9.4	113	0.00
102	1,4-Dclbenz	1.339	1.403		-4.8	113	0.00
103	Benzyl Chloride	0.000	0.000		0.0	100	0.00
104	n-Butylbenzene	2.047	2.344		-14.5	114	0.00
105	1,2-Dclbenz	1.176	1.278		-8.7	112	0.00
106	1,2-Dibromo-3-chloropropane	0.085	0.087	13.2	~~-2.4~~	99	0.00
107	Nitrobenzene	0.000	0.000		0.0	69	0.00
108	1,2,4-Tcbenzene	0.773	0.870		-12.5	113	0.00
109	Hexachlorobt	0.359	0.417		-16.2	126	0.00
110	Naphthalen	1.351	1.584	3.1	~~-17.2~~	103	0.00
111	1,2,3-Tclbenzene	0.677	0.740		-9.3	110	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (Not Reviewed)

Sample : CCV
Data File : J:\ACQUDATA\MSVOA10\DATA\111909\C2473.D Vial: 2
Acq On : 19 Nov 2009 2:52 pm
Operator : F. Naegler
InstName : MSVOA10
Misc :

FJ 12/8/09

Quant Time: Nov 19 15:08:10 2009
Quant Method : J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Mon Nov 02 10:48:31 2009
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	4.434	168	887945	50.00	ug/L	0.00
44) 1,4-Difluorobenzene	5.635	114	1395312	50.00	ug/L	0.00
71) d5-Chlorobenzene	8.854	117	1226892	50.00	ug/L	0.00
88) 1,4-Dichlorobenzene-d4	10.847	152	613669	50.00	ug/L	0.00
System Monitoring Compounds						
46) surr4,Dibrflmethane	4.342	113	470435	47.52	ug/L	0.00
Spiked Amount 50.000	Range 89 - 119		Recovery = 95.04%			
49) surr1,1,2-dichloroetha...	4.885	65	511371	49.63	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.26%			
65) SURR3,Toluene-d8	7.445	98	1522487	53.91	ug/L	0.00
Spiked Amount 50.000	Range 87 - 121		Recovery = 107.82%			
70) SURR2,BFB	9.890	95	618479	51.63	ug/L	0.00
Spiked Amount 50.000	Range 85 - 122		Recovery = 103.26%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.184	85	515244	55.76	ug/L	98
4) Chloromethane	1.288	50	366213	39.52	ug/L	99
5) Vinyl Chloride	1.355	62	422385	44.08	ug/L	99
6) Bromomethane	1.556	94	225393	39.49	ug/L	99
7) Chloroethane	1.611	64	209588	44.43	ug/L	97
8) Freon 21	1.721	67	620461	40.81	ug/L	97
9) Trichlorofluoromethane	1.770	101	700660	48.67	ug/L	98
10) Diethyl Ether	1.934	59	216343	41.49	ug/L	91
11) Freon 123a	1.928	67	382857	42.02	ug/L	94
12) Freon 123	1.971	83	426965	42.18	ug/L	96
13) Acrolein	2.026	56	166770	171.83	ug/L	99
14) 1,1-Diclethene	2.105	96	342798	52.23	ug/L	98
15) Freon 113	2.093	101	352571	51.45	ug/L	93
16) Acetone	2.123	43	57097	36.49	ug/L	94
17) 2-Propanol	2.196	45	231680	778.01	ug/L	92
18) Iodomethane	2.221	142	411928	46.54	ug/L	97
19) Carbon Disulfide	2.276	76	1089209	49.59	ug/L	100
20) Acetonitrile	2.318	40	47669	173.16	ug/L	88
21) Allyl Chloride	2.355	76	170413	52.75	ug/L	92
22) Methyl Acetate	2.355	43	201794	43.59	ug/L	98
23) Methylene Chloride	2.446	84	385555	43.55	ug/L	88
24) TBA	2.507	59	432504	861.65	ug/L	95
25) Acrylonitrile	2.635	53	499894	219.35	ug/L	99
26) Methyl-t-Butyl Ether	2.666	73	793888	48.40	ug/L	97
27) trans-1,2-Dichloroethene	2.672	96	401644	51.70	ug/L	99
28) 1,1-Diclethane	3.062	63	819111	47.86	ug/L	99
29) Vinyl Acetate	3.099	86	32713	47.73	ug/L #	85
30) DIPE	3.117	45	1096276	44.71	ug/L	95
31) 2-Chloro-1,3-Butadiene	3.153	53	592273	50.83	ug/L	98
32) ETBE	3.513	59	1096556	45.85	ug/L	97
33) 2,2-Dichloropropane	3.702	77	575120	53.00	ug/L	97
34) cis-1,2-Dichloroethene	3.696	96	417884	51.52	ug/L	97
35) 2-Butanone	3.708	43	90647	37.93	ug/L	97
37) Propionitrile	3.781	54	176451	222.75	ug/L	100
38) Bromochloromethane	4.001	130	246323	47.35	ug/L #	84

Sample : CCV
Data File : J:\ACQUDATA\MSVOA10\DATA\111909\C2473.D Vial: 2
Acq On : 19 Nov 2009 2:52 pm
Operator : F. Naegler
InstName : MSVOA10
Misc :

Quant Time: Nov 19 15:08:10 2009
Quant Method : J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Mon Nov 02 10:48:31 2009
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
39) Methacrylonitrile	3.989	67	93034	43.73	ug/L	85
40) Tetrahydrofuran	4.068	42	56803	41.94	ug/L	98
41) Chloroform	4.117	83	722961	49.25	ug/L	97
42) 1,1,1-Trichloroethane	4.385	97	667046	51.65	ug/L	97
43) TAME	5.208	73	680517	46.09	ug/L	94
45) Cyclohexane	4.470	56	675029	41.36	ug/L	70
47) Carbontetrachloride	4.641	121	192909	51.90	ug/L	98
48) 1,1-Dichloropropene	4.641	75	506071	52.48	ug/L	98
50) Benzene	4.982	78	1434379	50.12	ug/L	97
51) 1,2-Dichloroethane	5.019	62	567893	46.63	ug/L	97
52) Iso-Butyl Alcohol	4.879	43	144914	830.09	ug/L	94
53) n-Heptane	5.476	43	420955	55.75	ug/L	88
54) Trichloroethene	5.988	130	415083	52.94	ug/L	97
55) Methylcyclohexane	6.232	55	512047	45.22	ug/L	91
56) 1,2-Diclpropane	6.281	63	430504	49.38	ug/L	97
57) Dibromomethane	6.421	93	209194	47.79	ug/L	93
58) 1,4-Dioxane	6.476	88	~~39793~~ 44711	~~836.39~~ 936.35	ug/L	92
59) Methyl Methacrylate	6.482	69	153930	44.76	ug/L	89
60) Bromodichloromethane	6.634	83	535640	53.33	ug/L	99
62) 2-Chloroethylvinyl Ether	7.025	63	181924	42.91	ug/L	93
63) cis-1,3-Dichloropropene	7.165	75	536360	48.37	ug/L	98
64) 4-Methyl-2-pentanone	7.354	43	190854	40.90	ug/L	89
66) Toluene	7.518	91	1545833	52.76	ug/L	100
67) trans-1,3-Dichloropropene	7.762	75	469987	47.28	ug/L	99
68) Ethyl Methacrylate	7.884	69	325931	45.60	ug/L	85
69) 1,1,2-Trichloroethane	7.939	97	273877	48.55	ug/L	97
72) Tetrachloroethene	8.073	164	326773	54.26	ug/L	99
73) 2-Hexanone	8.207	43	131009	43.17	ug/L	96
74) 1,3-Dichloropropane	8.104	76	453085	49.50	ug/L	87
75) Dibromochloromethane	8.317	129	387725	53.72	ug/L	99
76) N-Butyl Acetate	8.348	43	330175	43.46	ug/L	95
77) 1,2-Dibromoethane	8.415	107	289130	50.49	ug/L	98
78) Chlorobenzene	8.884	112	1061236	52.32	ug/L	97
79) 1,1,1,2-Tetrachloroethane	8.963	131	385746	54.03	ug/L	96
80) Ethylbenzene	8.994	106	560998	56.40	ug/L	98
81) (m+p)Xylene	9.097	106	1365144	112.96	ug/L	98
82) o-Xylene	9.445	106	666602	52.13	ug/L	100
83) Styrene	9.457	104	1119812	52.08	ug/L	95
84) Bromoform	9.609	173	198928	51.87	ug/L	97
85) Isopropylbenzene	9.768	105	1679085	57.67	ug/L	99
86) Cyclohexanone	9.835	55	439320	587.79	ug/L	99
87) trans-1,4-Dichloro-2-B...	10.073	53	85528	47.28	ug/L	94
89) 1,1,2,2-Tetrachloroethane	10.024	83	309483	48.96	ug/L	99
90) Bromobenzene	10.018	156	437789	53.69	ug/L	94
92) 1,2,3-Trichloropropane	10.055	110	92458	47.68	ug/L	89
93) n-Propylbenzene	10.115	91	2118533	60.23	ug/L	99
94) 2-Chlorotoluene	10.183	91	1249514	55.95	ug/L	98
95) 4-Chlorotoluene	10.274	91	1486428	56.47	ug/L	100
96) 1,3,5-Trimethylbenzene	10.262	105	1501666	58.85	ug/L	96
97) tert-Butylbenzene	10.530	119	1277975	57.56	ug/L	99
98) 1,2,4-Trimethylbenzene	10.573	105	1548442	57.97	ug/L	99
99) sec-Butylbenzene	10.713	105	1868658	58.12	ug/L	99

FJ 12/8/09

Sample : CCV
Data File : J:\ACQUDATA\MSVOA10\DATA\111909\C2473.D Vial: 2
Acq On : 19 Nov 2009 2:52 pm
Operator : F. Naegler
InstName : MSVOA10
Misc :

Quant Time: Nov 19 15:08:10 2009
Quant Method : J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Mon Nov 02 10:48:31 2009
Response via : Initial Calibration

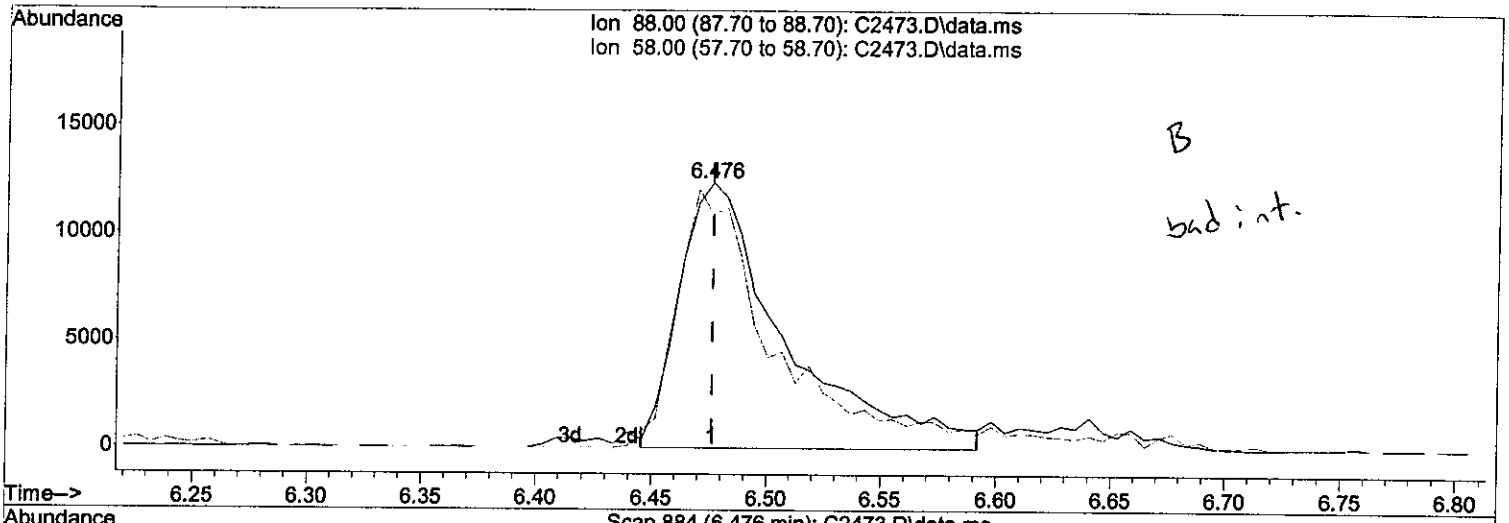
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
100) p-Isopropyltoluene	10.829	119	1615332	58.72	ug/L	99
101) 1,3-Dclbenz	10.798	146	849584	54.73	ug/L	99
102) 1,4-Dclbenz	10.865	146	861283	52.40	ug/L	98
104) n-Butylbenzene	11.152	91	1438536	57.25	ug/L	98
105) 1,2-Dclbenz	11.164	146	784341	54.34	ug/L	99
106) 1,2-Dibromo-3-chloropr...	11.719	157	53097	43.50	ug/L	94
108) 1,2,4-Tcbenzene	12.237	180	533914	56.28	ug/L	99
109) Hexachlorobt	12.335	225	255980	58.16	ug/L	97
110) Naphthalen	12.377	128	971813	48.43	ug/L	99
111) 1,2,3-Tclbenzene	12.511	180	453863	54.61	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Qedit)

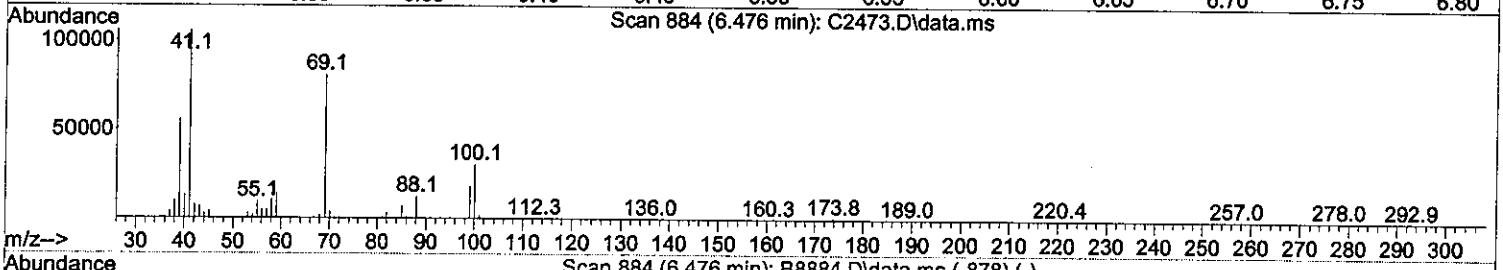
Sample : CCV
Data File : J:\ACQUDATA\msvoa10\data\111909\C2473.D Vial: 2
Acq On : 19 Nov 2009 2:52 pm
Operator : F. Naegler
InstName : MSVOA10
Misc :

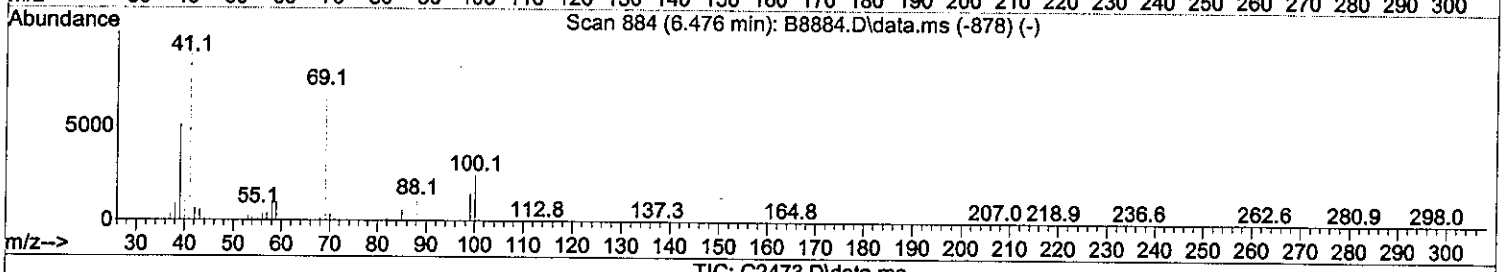
Quant Time: Nov 19 15:08:10 2009
Quant Method : J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Mon Nov 02 10:48:31 2009
Response via : Initial Calibration



B

bad int.





TIC: C2473.D\data.ms

(58) 1,4-Dioxane

6.476min (-0.000) 836.39 ug/L

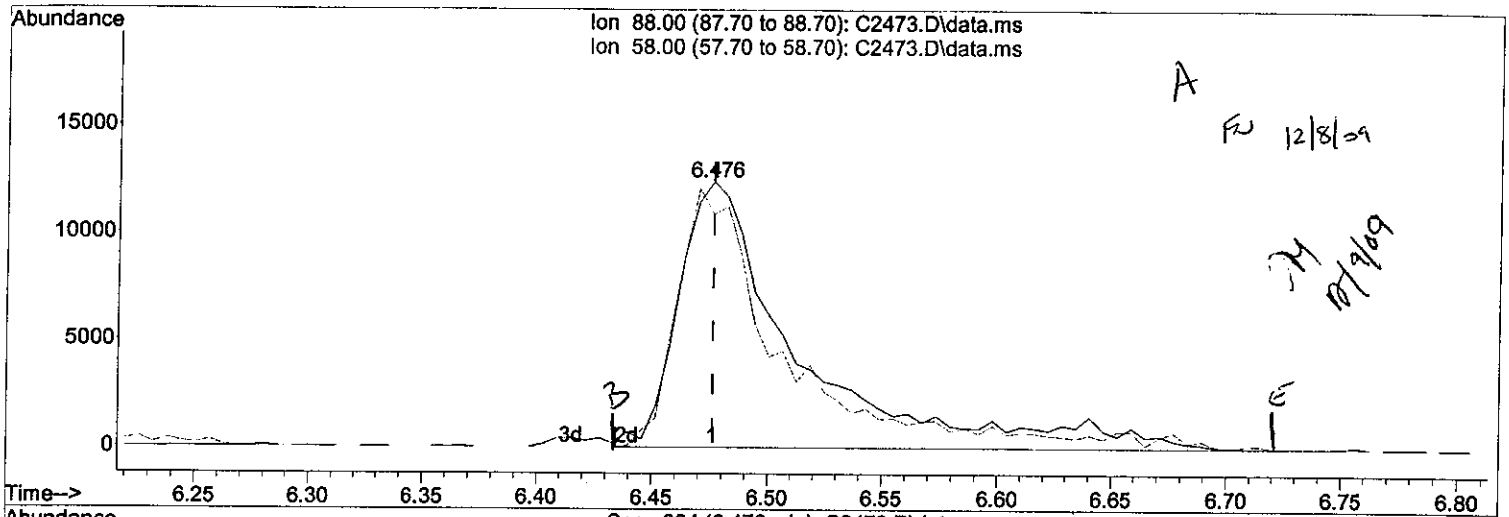
response 39793

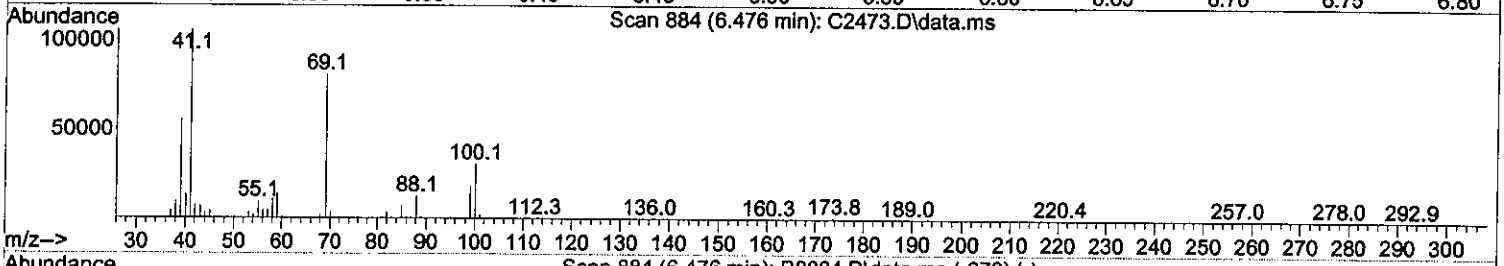
Ion	Exp%	Act%
88.00	100	100
58.00	95.80	87.88
0.00	0.00	0.00
0.00	0.00	0.00

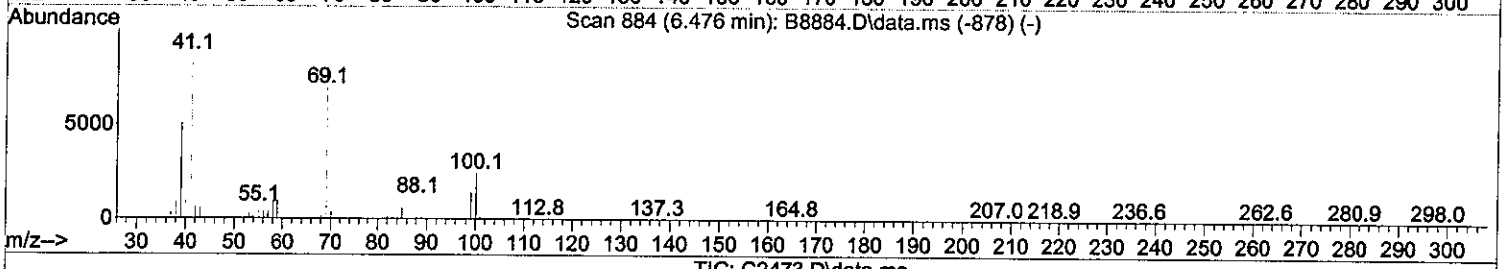
Quantitation Report (Qedit)

Sample : CCV
Data File : J:\ACQUDATA\msvoa10\data\111909\C2473.D Vial: 2
Acq On : 19 Nov 2009 2:52 pm
Operator : F. Naegler
InstName : MSVOA10
Misc :

Quant Time: Nov 19 15:08:10 2009
Quant Method : J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Mon Nov 02 10:48:31 2009
Response via : Initial Calibration







TIC: C2473.D\data.ms

(58) 1,4-Dioxane

6.476min (-0.000) 936.05 ug/L m

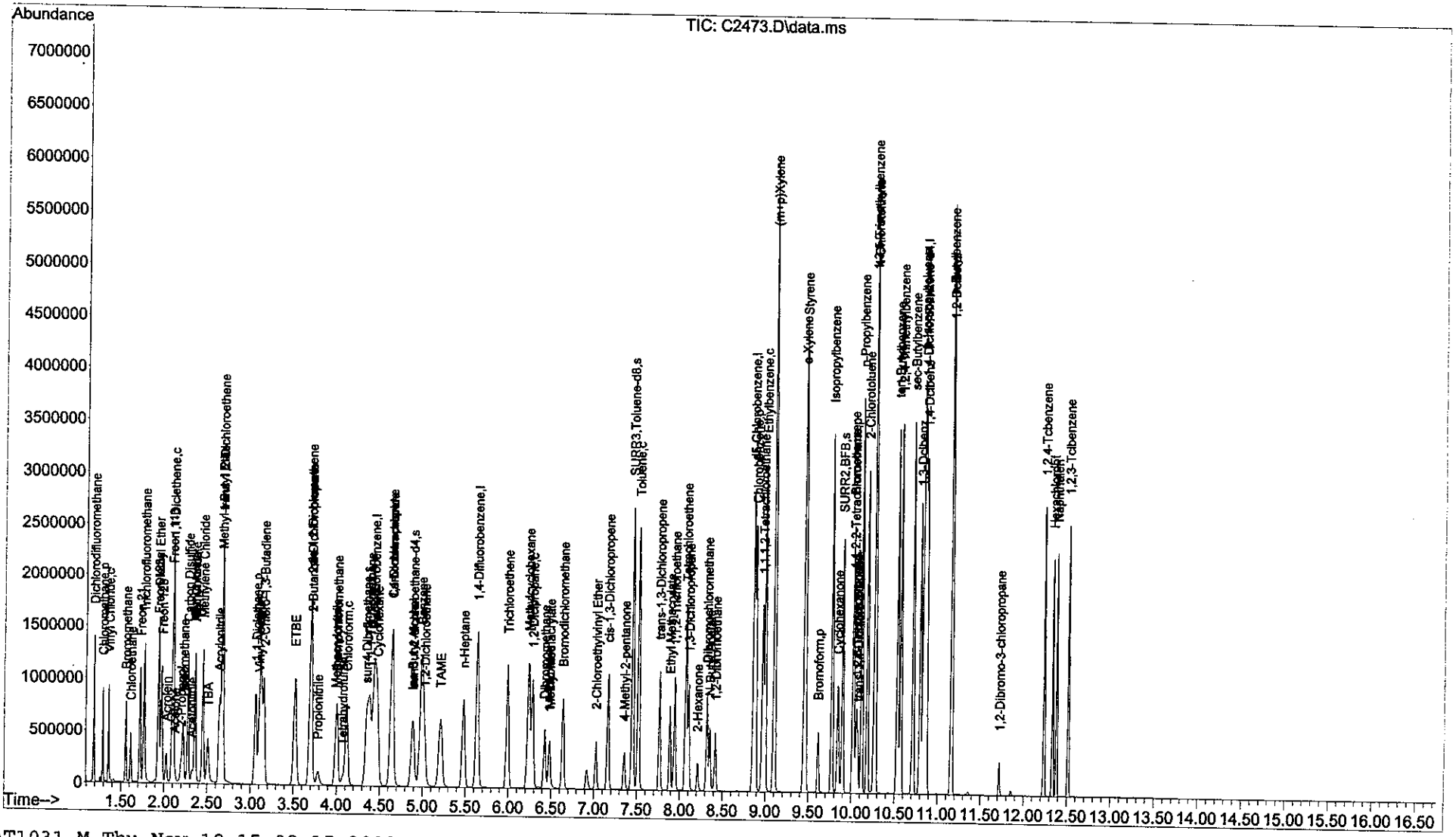
response 44711

Ion	Exp%	Act%
88.00	100	100
58.00	95.80	87.88
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Sample : CCV
Data File : J:\ACQUDATA\MSVOA10\DATA\111909\C2473.D Vial: 2
Acq On : 19 Nov 2009 2:52 pm
Operator : F. Naegler
InstName : MSVOA10
Misc :

Quant Time: Nov 19 15:08:10 2009
Quant Method : J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Mon Nov 02 10:48:31 2009
Response via : Initial Calibration



VOLATILE ORGANICS

RAW QC DATA

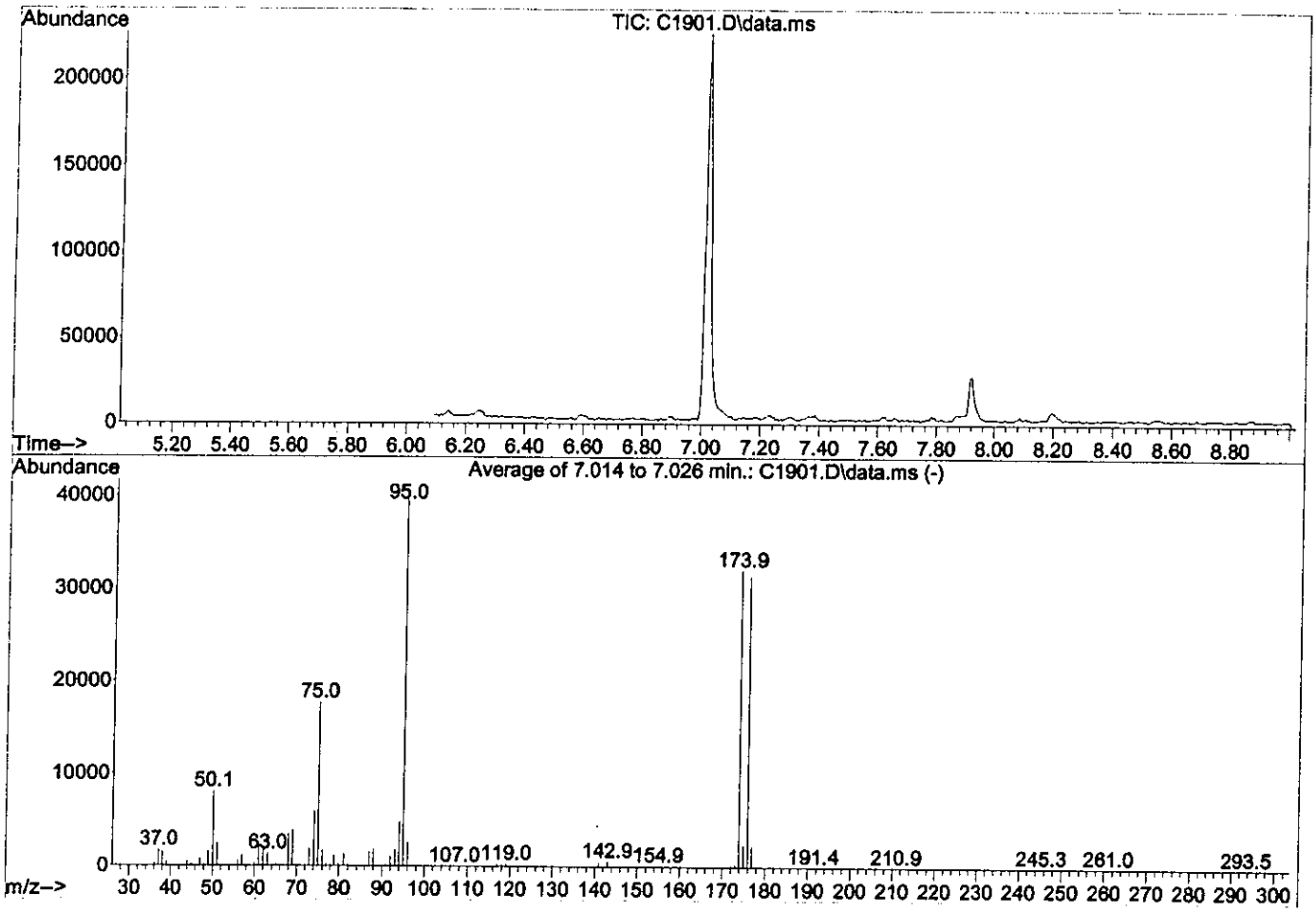
BFB

Data Path : J:\ACQUDATA\msvoa10\data\103109\
Data File : C1901.D
Acq On : 31 Oct 2009 10:06 am
Operator : F. Naegler
Sample : TUNE
Misc :
ALS Vial : 1 Sample Multiplier: 1

FW 11/2/09

Integration File: CPD4.P

Method : J:\ACQUDATA\MSVOA10\METHODS\T103009.M
Title : 8260B WATERS
Last Update : Wed Sep 27 14:33:13 2006



AutoFind: Scans 152, 153, 154; Background Corrected with Scan 147

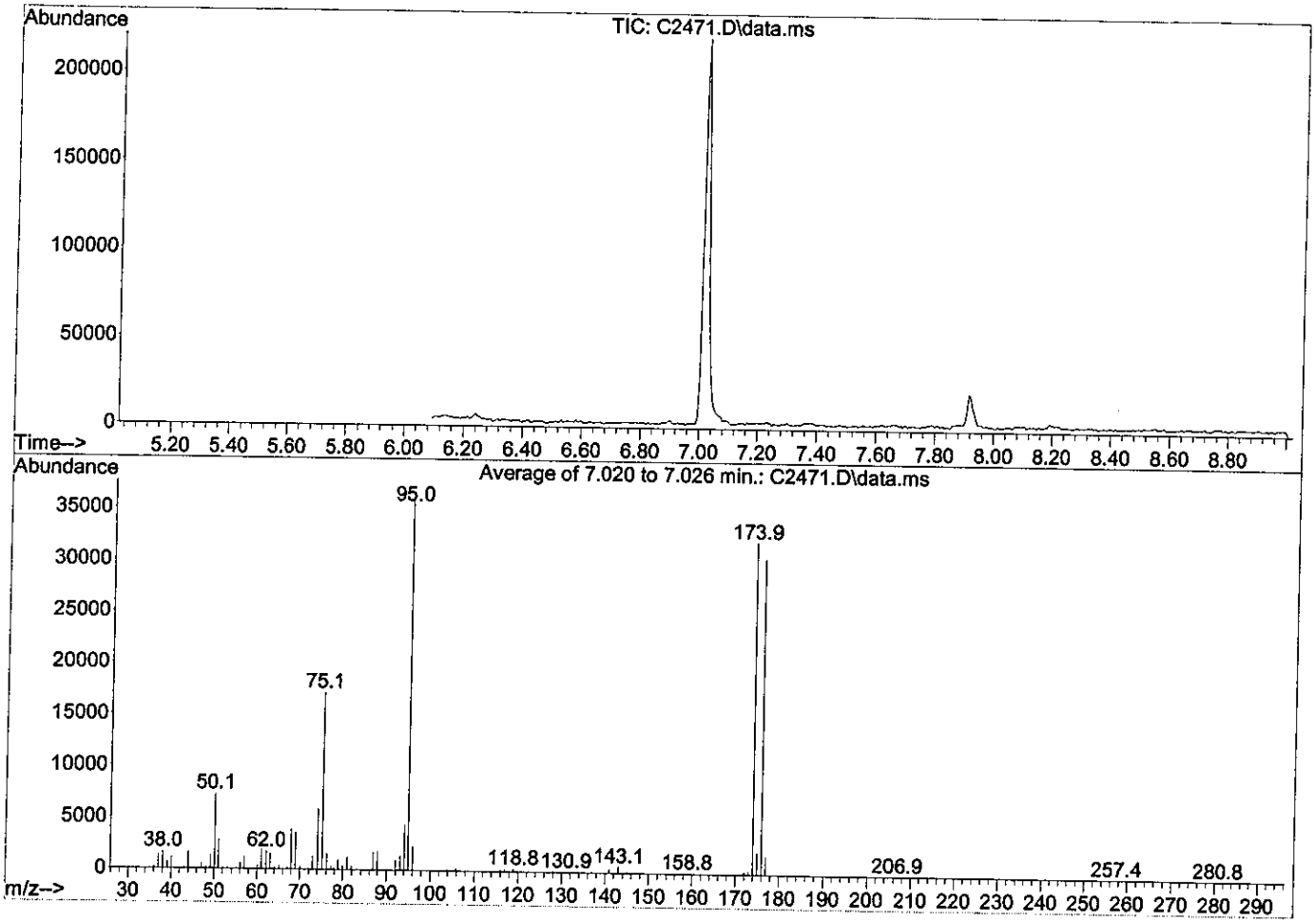
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	20.3	8069	PASS
75	95	30	60	44.6	17693	PASS
95	95	100	100	100.0	39699	PASS
96	95	5	9	6.5	2581	PASS
173	174	0.00	2	1.0	328	PASS
174	95	50	120	80.9	32101	PASS
175	174	5	9	7.3	2335	PASS
176	174	95	101	97.8	31397	PASS
177	176	5	9	7.1	2222	PASS

Data Path : J:\ACQUDATA\msvoa10\data\111909\
Data File : C2471.D
Acq On : 19 Nov 2009 1:49 pm
Operator : F. Naegler
Sample : TUNE
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: CPD4.P

FL 12/8/09

Method : J:\ACQUDATA\MSVOA10\METHODS\T103109.M
Title : 8260B WATERS
Last Update : Wed Sep 27 14:33:13 2006



Spectrum Information: Average of 7.020 to 7.026 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	20.3	7270	PASS
75	95	30	60	48.0	17172	PASS
95	95	100	100	100.0	35812	PASS
96	95	5	9	6.5	2317	PASS
173	174	0.00	2	1.0	338	PASS
174	95	50	120	89.9	32180	PASS
175	174	5	9	6.5	2099	PASS
176	174	95	101	95.1	30596	PASS
177	176	5	9	5.8	1765	PASS

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Northgate Environmental	**Service Request:**	R0906477
Project:	Tronox LLC Henderson/2027.001	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ0912216-01	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
1,1,1,2-Tetrachloroethane	0.18	U	1.0	0.18	1	NA	11/19/09 16:38		180234	
1,1,1-Trichloroethane (TCA)	0.32	U	1.0	0.32	1	NA	11/19/09 16:38		180234	
1,1,2,2-Tetrachloroethane	0.090	U	1.0	0.090	1	NA	11/19/09 16:38		180234	
1,1,2-Trichloroethane	0.20	U	1.0	0.20	1	NA	11/19/09 16:38		180234	
1,1-Dichloroethane (1,1-DCA)	0.14	U	1.0	0.14	1	NA	11/19/09 16:38		180234	
1,1-Dichloroethene (1,1-DCE)	0.37	U	1.0	0.37	1	NA	11/19/09 16:38		180234	
1,1-Dichloropropene	0.21	U	2.0	0.21	1	NA	11/19/09 16:38		180234	
1,2,3-Trichlorobenzene	0.25	U	2.0	0.25	1	NA	11/19/09 16:38		180234	
1,2,3-Trichloropropane	0.30	U	2.0	0.30	1	NA	11/19/09 16:38		180234	
1,2,4-Trichlorobenzene	0.19	U	2.0	0.19	1	NA	11/19/09 16:38		180234	
1,2,4-Trimethylbenzene	0.36	U	2.0	0.36	1	NA	11/19/09 16:38		180234	
1,2-Dibromo-3-chloropropane (DBCP)	0.43	U	5.0	0.43	1	NA	11/19/09 16:38		180234	
1,2-Dibromoethane	0.18	U	1.0	0.18	1	NA	11/19/09 16:38		180234	
1,2-Dichlorobenzene	0.40	U	2.0	0.40	1	NA	11/19/09 16:38		180234	
1,2-Dichloroethane	0.14	U	1.0	0.14	1	NA	11/19/09 16:38		180234	
1,2-Dichloropropane	0.15	U	1.0	0.15	1	NA	11/19/09 16:38		180234	
1,3,5-Trimethylbenzene	0.36	U	2.0	0.36	1	NA	11/19/09 16:38		180234	
1,3-Dichlorobenzene	0.36	U	2.0	0.36	1	NA	11/19/09 16:38		180234	
1,3-Dichloropropane	0.12	U	2.0	0.12	1	NA	11/19/09 16:38		180234	
1,4-Dichlorobenzene	0.34	U	2.0	0.34	1	NA	11/19/09 16:38		180234	
2,2-Dichloropropane	0.20	U	2.0	0.20	1	NA	11/19/09 16:38		180234	
2-Butanone (MEK)	1.0	U	10	1.0	1	NA	11/19/09 16:38		180234	
2-Chlorotoluene	0.38	U	5.0	0.38	1	NA	11/19/09 16:38		180234	
2-Hexanone	0.40	U	10	0.40	1	NA	11/19/09 16:38		180234	
2-Methyl-2-propanol	3.0	U	100	3.0	1	NA	11/19/09 16:38		180234	
4-Chlorotoluene	0.37	U	5.0	0.37	1	NA	11/19/09 16:38		180234	
4-Isopropyltoluene	0.22	U	2.0	0.22	1	NA	11/19/09 16:38		180234	
4-Methyl-2-pentanone	0.34	U	10	0.34	1	NA	11/19/09 16:38		180234	
Acetone	1.6	U	20	1.6	1	NA	11/19/09 16:38		180234	
Benzene	0.18	U	1.0	0.18	1	NA	11/19/09 16:38		180234	
Bromobenzene	0.33	U	2.0	0.33	1	NA	11/19/09 16:38		180234	
Bromochloromethane	0.18	U	2.0	0.18	1	NA	11/19/09 16:38		180234	
Bromodichloromethane	0.17	U	1.0	0.17	1	NA	11/19/09 16:38		180234	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Northgate Environmental	**Service Request:**	R0906477
Project:	Tronox LLC Henderson/2027.001	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ0912216-01	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Bromoform	0.20	U	1.0	0.20	1	NA	11/19/09 16:38		180234	
Bromomethane	0.40	U	2.0	0.40	1	NA	11/19/09 16:38		180234	
Carbon Tetrachloride	0.36	U	1.0	0.36	1	NA	11/19/09 16:38		180234	
Chlorobenzene	0.26	U	1.0	0.26	1	NA	11/19/09 16:38		180234	
Chloroethane	0.21	U	2.0	0.21	1	NA	11/19/09 16:38		180234	
Chloroform	0.16	U	1.0	0.16	1	NA	11/19/09 16:38		180234	
Chloromethane	0.18	U	2.0	0.18	1	NA	11/19/09 16:38		180234	
Dibromochloromethane	0.11	U	1.0	0.11	1	NA	11/19/09 16:38		180234	
Dibromomethane	0.18	U	1.0	0.18	1	NA	11/19/09 16:38		180234	
Dichlorodifluoromethane (CFC 12)	0.18	U	1.0	0.18	1	NA	11/19/09 16:38		180234	
Dichloromethane	0.13	U	2.0	0.13	1	NA	11/19/09 16:38		180234	
Diisopropyl Ether	0.090	U	1.0	0.090	1	NA	11/19/09 16:38		180234	
Ethyl tert-Butyl Ether	0.12	U	1.0	0.12	1	NA	11/19/09 16:38		180234	
Ethylbenzene	0.42	U	1.0	0.42	1	NA	11/19/09 16:38		180234	
Hexachlorobutadiene	**0.33**	J	5.0	0.27	1	NA	11/19/09 16:38		180234	
Isopropylbenzene (Cumene)	0.34	U	2.0	0.34	1	NA	11/19/09 16:38		180234	
Methyl tert-Butyl Ether	0.13	U	1.0	0.13	1	NA	11/19/09 16:38		180234	
Naphthalene	0.31	U	2.0	0.31	1	NA	11/19/09 16:38		180234	
Styrene	0.36	U	1.0	0.36	1	NA	11/19/09 16:38		180234	
Tetrachloroethene (PCE)	0.42	U	1.0	0.42	1	NA	11/19/09 16:38		180234	
Toluene	0.21	U	1.0	0.21	1	NA	11/19/09 16:38		180234	
Trichloroethene (TCE)	0.19	U	1.0	0.19	1	NA	11/19/09 16:38		180234	
Trichlorofluoromethane (CFC 11)	0.16	U	1.0	0.16	1	NA	11/19/09 16:38		180234	
Vinyl Chloride	0.22	U	1.0	0.22	1	NA	11/19/09 16:38		180234	
cis-1,2-Dichloroethene	0.14	U	1.0	0.14	1	NA	11/19/09 16:38		180234	
cis-1,3-Dichloropropene	0.14	U	1.0	0.14	1	NA	11/19/09 16:38		180234	
m,p-Xylenes	0.81	U	2.0	0.81	1	NA	11/19/09 16:38		180234	
n-Butylbenzene	0.20	U	5.0	0.20	1	NA	11/19/09 16:38		180234	
n-Propylbenzene	0.32	U	2.0	0.32	1	NA	11/19/09 16:38		180234	
o-Xylene	0.40	U	1.0	0.40	1	NA	11/19/09 16:38		180234	
sec-Butylbenzene	0.23	U	2.0	0.23	1	NA	11/19/09 16:38		180234	
tert-Amyl Methyl Ether	0.13	U	1.0	0.13	1	NA	11/19/09 16:38		180234	
tert-Butylbenzene	0.28	U	2.0	0.28	1	NA	11/19/09 16:38		180234	

Comments:

Client:	Northgate Environmental	**Service Request:**	R0906477
Project:	Tronox LLC Henderson/2027.001	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ0912216-01	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
trans-1,2-Dichloroethene	0.16	U	1.0	0.16	1	NA	11/19/09 16:38		180234	
trans-1,3-Dichloropropene	0.17	U	1.0	0.17	1	NA	11/19/09 16:38		180234	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	99	70-130	11/19/09 16:38		
Dibromofluoromethane	98	70-130	11/19/09 16:38		
Toluene-d8	106	70-130	11/19/09 16:38		

Comments:

Quantitation Report (Not Reviewed)

Sample : MBLK
Data File : J:\ACQUDATA\MSVOA10\DATA\111909\C2476.D Vial: 5
Acq On : 19 Nov 2009 4:38 pm
Operator : F. Naegler
InstName : MSVOA10
Misc : RQ0912216-01

Quant Time: Nov 19 16:53:50 2009
Quant Method : J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Mon Nov 02 10:48:31 2009
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Pentafluorobenzene	4.434	168	860078	50.00 ug/L	0.00
44) 1,4-Difluorobenzene	5.635	114	1369229	50.00 ug/L	0.00
71) d5-Chlorobenzene	8.854	117	1177991	50.00 ug/L	0.00
88) 1,4-Dichlorobenzene-d4	10.847	152	546840	50.00 ug/L	0.00
System Monitoring Compounds					
46) surr4,Dibrflmethane	4.348	113	472651	49.08 ug/L	0.00
Spiked Amount 50.000	Range 89 - 119		Recovery = 98.16%		
49) surr1,1,2-dichloroetha...	4.885	65	517466	51.18 ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.36%		
65) SURR3,Toluene-d8	7.445	98	1465841	52.90 ug/L	0.00
Spiked Amount 50.000	Range 87 - 121		Recovery = 105.80%		
70) SURR2,BFB	9.896	95	579833	49.32 ug/L	0.00
Spiked Amount 50.000	Range 85 - 122		Recovery = 98.64%		
Target Compounds					Qvalue
16) Acetone	2.123	43	608	0.40 ug/L	57
21) Allyl Chloride	~~2.276~~	~~76~~	~~1229~~	~~0.39 ug/L #~~	~~1~~
86) Cyclohexanone	9.853	55	414	0.58 ug/L	62
109) Hexachlorobt	12.335	225	1298	0.33 ug/L	90
110) Naphthalen	12.383	128	1949	0.21 ug/L	89

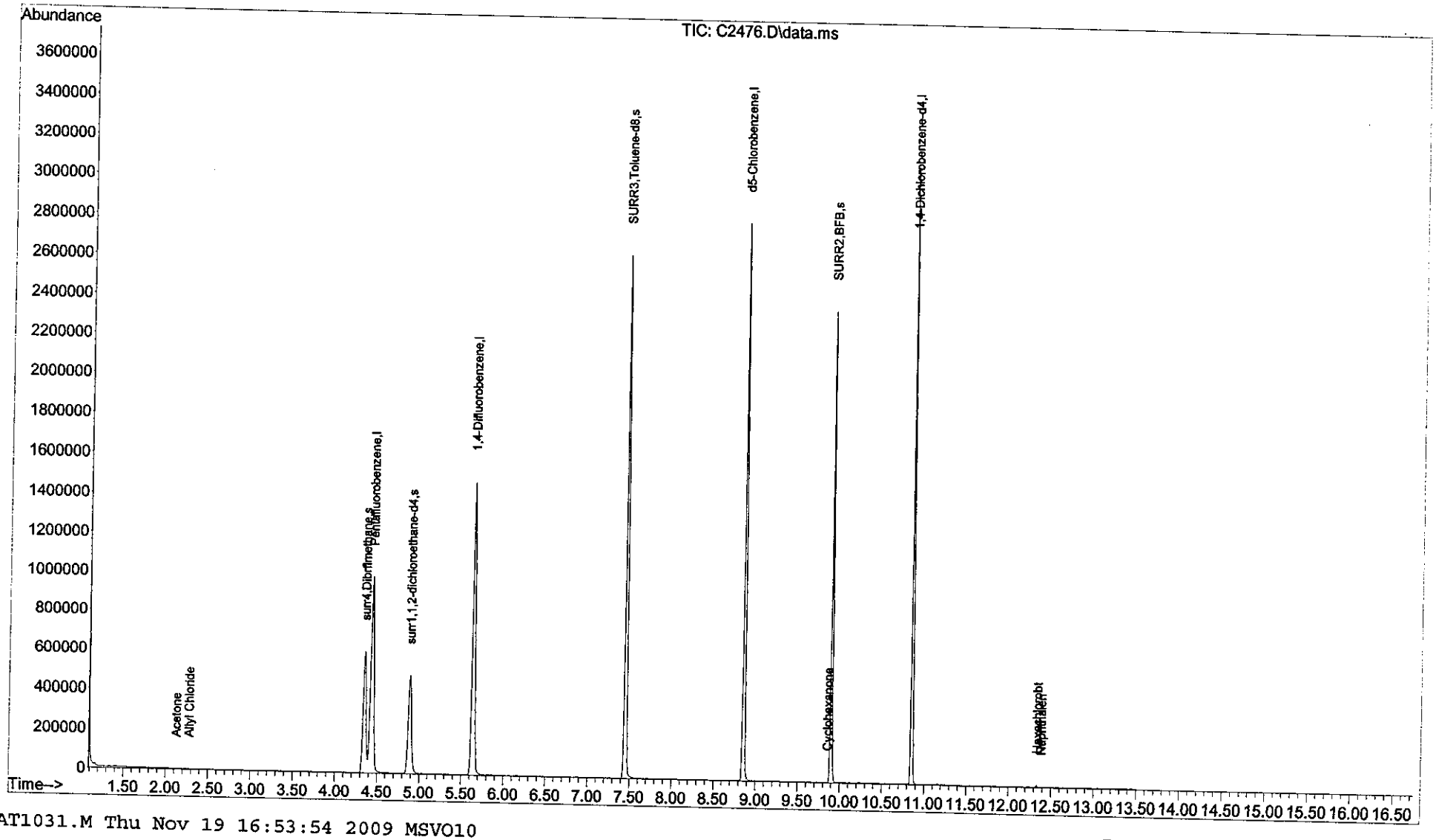
(#) = qualifier out of range (m) = manual integration (+) = signals summed

FN
12/8/09

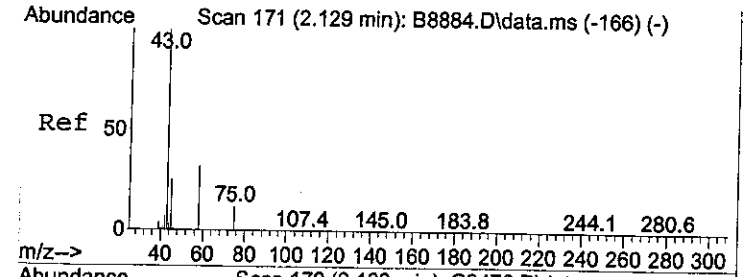
Quantitation Report (Not Reviewed)

Sample : MBLK
Data File : J:\ACQUDATA\MSVOA10\DATA\111909\C2476.D Vial: 5
Acq On : 19 Nov 2009 4:38 pm
Operator : F. Naegler
InstName : MSVOA10
Misc :

Quant Time: Nov 19 16:53:50 2009
Quant Method : J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Mon Nov 02 10:48:31 2009
Response via : Initial Calibration



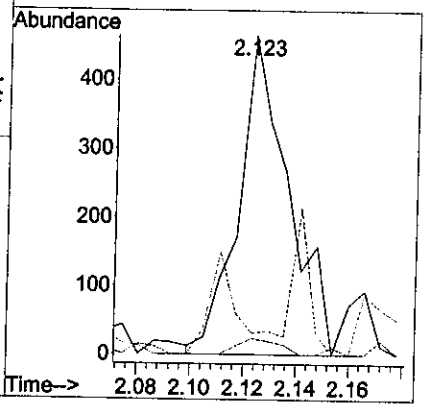
WAT1031.M Thu Nov 19 16:53:54 2009 MSVO10

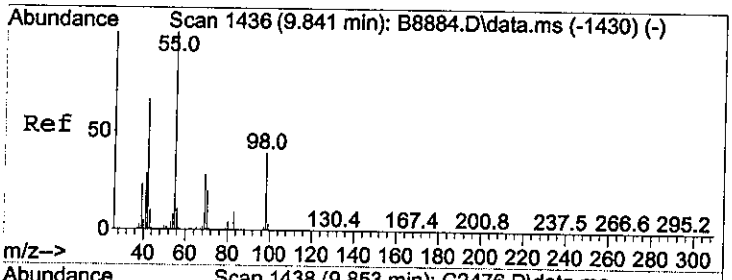


#16
Acetone
Concen: 0.40 ug/L
RT: 2.123 min Scan# 170
Delta R.T. 0.000 min
Lab File: C2476.D
Acq: 19 Nov 2009 4:38 pm

Tgt Ion: 43 Resp: 608

Ion	Ratio	Lower	Upper
43	100		
58	5.0	4.9	64.9
42	6.7	0.0	38.3

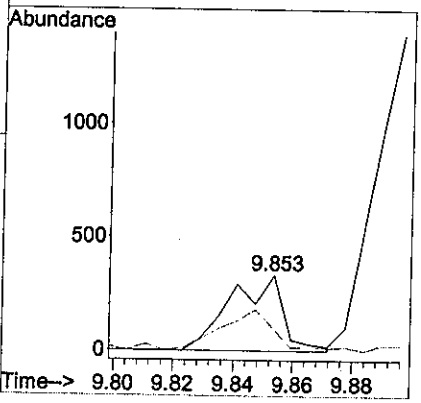


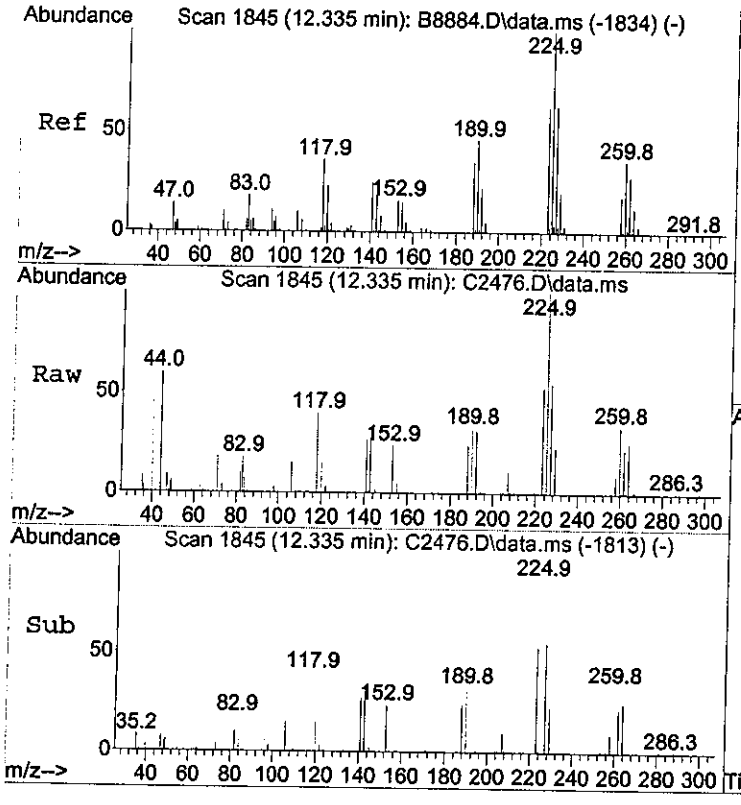


#86
Cyclohexanone
Concen: 0.58 ug/L
RT: 9.853 min Scan# 1438
Delta R.T. 0.012 min
Lab File: C2476.D
Acq: 19 Nov 2009 4:38 pm

Tgt Ion: 55 Resp: 414

Ion	Ratio	Lower	Upper
55	100		
42	29.0	27.1	87.1

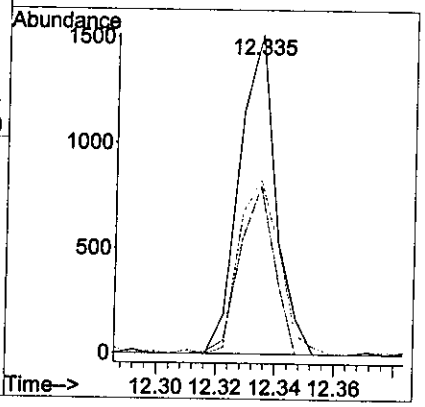


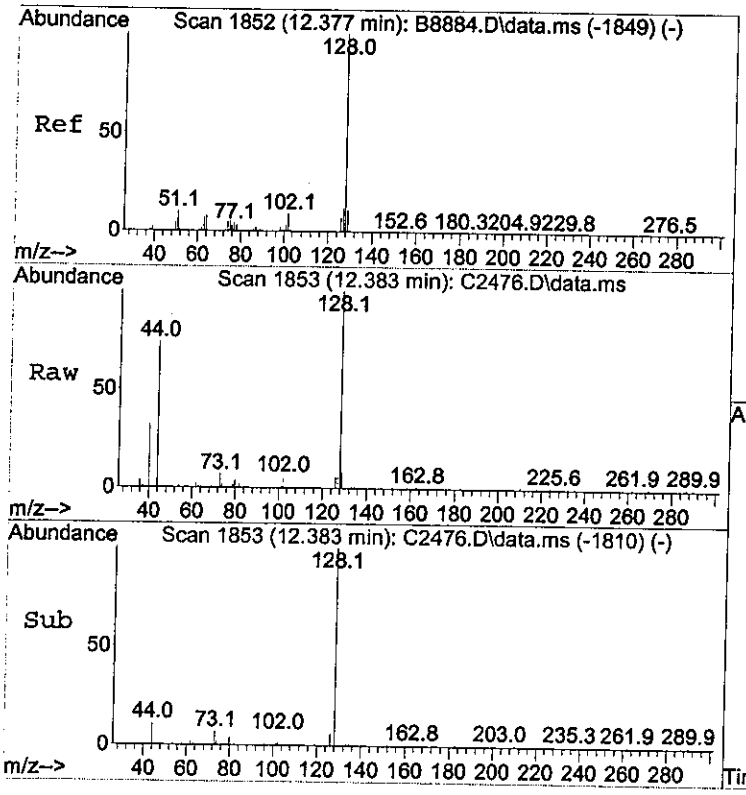


#109
Hexachlorobt
Concen: 0.33 ug/L
RT: 12.335 min Scan# 1845
Delta R.T. -0.000 min
Lab File: C2476.D
Acq: 19 Nov 2009 4:38 pm

Tgt Ion:225 Resp: 1298

Ion	Ratio	Lower	Upper
225	100		
223	52.7	29.9	89.9
227	54.8	33.6	93.6

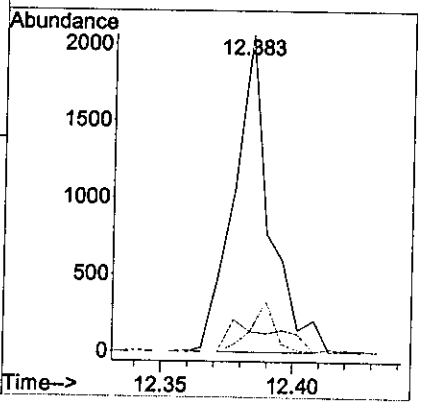




#110
Naphthalen
Concen: 0.21 ug/L
RT: 12.383 min Scan# 1853
Delta R.T. 0.006 min
Lab File: C2476.D
Acq: 19 Nov 2009 4:38 pm

Tgt Ion:128 Resp: 1949

Ion	Ratio	Lower	Upper
128	100		
127	6.4	0.0	42.3
102	6.3	0.0	38.6



COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Northgate Environmental	**Service Request:**	R0906477
Project:	Tronox LLC Henderson/2027.001	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	RQ0912216-02	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
1,1,1,2-Tetrachloroethane	**20.7**		1.0	0.18	1	NA	11/19/09 15:24		180234	
1,1,1-Trichloroethane (TCA)	**18.9**		1.0	0.32	1	NA	11/19/09 15:24		180234	
1,1,2,2-Tetrachloroethane	**21.1**		1.0	0.090	1	NA	11/19/09 15:24		180234	
1,1,2-Trichloroethane	**19.6**		1.0	0.20	1	NA	11/19/09 15:24		180234	
1,1-Dichloroethane (1,1-DCA)	**17.9**		1.0	0.14	1	NA	11/19/09 15:24		180234	
1,1-Dichloroethene (1,1-DCE)	**20.3**		1.0	0.37	1	NA	11/19/09 15:24		180234	
1,1-Dichloropropene	**19.4**		2.0	0.21	1	NA	11/19/09 15:24		180234	
1,2,3-Trichlorobenzene	**21.7**		2.0	0.25	1	NA	11/19/09 15:24		180234	
1,2,3-Trichloropropane	**20.4**		2.0	0.30	1	NA	11/19/09 15:24		180234	
1,2,4-Trichlorobenzene	**21.1**		2.0	0.19	1	NA	11/19/09 15:24		180234	
1,2,4-Trimethylbenzene	**21.8**		2.0	0.36	1	NA	11/19/09 15:24		180234	
1,2-Dibromo-3-chloropropane (DBCP)	**18.7**		5.0	0.43	1	NA	11/19/09 15:24		180234	
1,2-Dibromoethane	**20.5**		1.0	0.18	1	NA	11/19/09 15:24		180234	
1,2-Dichlorobenzene	**21.4**		2.0	0.40	1	NA	11/19/09 15:24		180234	
1,2-Dichloroethane	**18.4**		1.0	0.14	1	NA	11/19/09 15:24		180234	
1,2-Dichloropropane	**19.2**		1.0	0.15	1	NA	11/19/09 15:24		180234	
1,3,5-Trimethylbenzene	**22.1**		2.0	0.36	1	NA	11/19/09 15:24		180234	
1,3-Dichlorobenzene	**21.3**		2.0	0.36	1	NA	11/19/09 15:24		180234	
1,3-Dichloropropane	**20.2**		2.0	0.12	1	NA	11/19/09 15:24		180234	
1,4-Dichlorobenzene	**20.5**		2.0	0.34	1	NA	11/19/09 15:24		180234	
2,2-Dichloropropane	**19.1**		2.0	0.20	1	NA	11/19/09 15:24		180234	
2-Butanone (MEK)	**16.6**		10	1.0	1	NA	11/19/09 15:24		180234	
2-Chlorotoluene	**21.0**		5.0	0.38	1	NA	11/19/09 15:24		180234	
2-Hexanone	**16.9**		10	0.40	1	NA	11/19/09 15:24		180234	
2-Methyl-2-propanol	**383**		100	3.0	1	NA	11/19/09 15:24		180234	
4-Chlorotoluene	**21.9**		5.0	0.37	1	NA	11/19/09 15:24		180234	
4-Isopropyltoluene	**21.6**		2.0	0.22	1	NA	11/19/09 15:24		180234	
4-Methyl-2-pentanone	**15.8**		10	0.34	1	NA	11/19/09 15:24		180234	
Acetone	**17.0**	J	20	1.6	1	NA	11/19/09 15:24		180234	
Benzene	**18.7**		1.0	0.18	1	NA	11/19/09 15:24		180234	
Bromobenzene	**21.2**		2.0	0.33	1	NA	11/19/09 15:24		180234	
Bromochloromethane	**19.3**		2.0	0.18	1	NA	11/19/09 15:24		180234	
Bromodichloromethane	**19.6**		1.0	0.17	1	NA	11/19/09 15:24		180234	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Northgate Environmental	**Service Request:**	R0906477
Project:	Tronox LLC Henderson/2027.001	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	RQ0912216-02	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Bromoform	**21.2**		1.0	0.20	1	NA	11/19/09 15:24		180234	
Bromomethane	**14.9**		2.0	0.40	1	NA	11/19/09 15:24		180234	
Carbon Tetrachloride	**19.5**		1.0	0.36	1	NA	11/19/09 15:24		180234	
Chlorobenzene	**20.3**		1.0	0.26	1	NA	11/19/09 15:24		180234	
Chloroethane	**17.3**		2.0	0.21	1	NA	11/19/09 15:24		180234	
Chloroform	**19.0**		1.0	0.16	1	NA	11/19/09 15:24		180234	
Chloromethane	**15.1**		2.0	0.18	1	NA	11/19/09 15:24		180234	
Dibromochloromethane	**21.2**		1.0	0.11	1	NA	11/19/09 15:24		180234	
Dibromomethane	**19.0**		1.0	0.18	1	NA	11/19/09 15:24		180234	
Dichlorodifluoromethane (CFC 12)	**19.6**		1.0	0.18	1	NA	11/19/09 15:24		180234	
Dichloromethane	**17.1**		2.0	0.13	1	NA	11/19/09 15:24		180234	
Diisopropyl Ether	**18.5**		1.0	0.090	1	NA	11/19/09 15:24		180234	
Ethyl tert-Butyl Ether	**19.1**		1.0	0.12	1	NA	11/19/09 15:24		180234	
Ethylbenzene	**21.3**		1.0	0.42	1	NA	11/19/09 15:24		180234	
Hexachlorobutadiene	**20.8**		5.0	0.27	1	NA	11/19/09 15:24		180234	
Isopropylbenzene (Cumene)	**22.7**		2.0	0.34	1	NA	11/19/09 15:24		180234	
Methyl tert-Butyl Ether	**19.8**		1.0	0.13	1	NA	11/19/09 15:24		180234	
Naphthalene	**19.7**		2.0	0.31	1	NA	11/19/09 15:24		180234	
Styrene	**19.6**		1.0	0.36	1	NA	11/19/09 15:24		180234	
Tetrachloroethene (PCE)	**21.1**		1.0	0.42	1	NA	11/19/09 15:24		180234	
Toluene	**20.1**		1.0	0.21	1	NA	11/19/09 15:24		180234	
Trichloroethene (TCE)	**19.5**		1.0	0.19	1	NA	11/19/09 15:24		180234	
Trichlorofluoromethane (CFC 11)	**19.0**		1.0	0.16	1	NA	11/19/09 15:24		180234	
Vinyl Chloride	**17.5**		1.0	0.22	1	NA	11/19/09 15:24		180234	
cis-1,2-Dichloroethene	**19.3**		1.0	0.14	1	NA	11/19/09 15:24		180234	
cis-1,3-Dichloropropene	**18.4**		1.0	0.14	1	NA	11/19/09 15:24		180234	
m,p-Xylenes	**43.6**		2.0	0.81	1	NA	11/19/09 15:24		180234	
n-Butylbenzene	**20.3**		5.0	0.20	1	NA	11/19/09 15:24		180234	
n-Propylbenzene	**22.6**		2.0	0.32	1	NA	11/19/09 15:24		180234	
o-Xylene	**20.1**		1.0	0.40	1	NA	11/19/09 15:24		180234	
sec-Butylbenzene	**21.4**		2.0	0.23	1	NA	11/19/09 15:24		180234	
tert-Amyl Methyl Ether	**18.6**		1.0	0.13	1	NA	11/19/09 15:24		180234	
tert-Butylbenzene	**21.2**		2.0	0.28	1	NA	11/19/09 15:24		180234	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Northgate Environmental	**Service Request:**	R0906477
Project:	Tronox LLC Henderson/2027.001	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	RQ0912216-02	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
trans-1,2-Dichloroethene	**19.3**		1.0	0.16	1	NA	11/19/09 15:24		180234	
trans-1,3-Dichloropropene	**17.8**		1.0	0.17	1	NA	11/19/09 15:24		180234	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	104	70-130	11/19/09 15:24		
Dibromofluoromethane	94	70-130	11/19/09 15:24		
Toluene-d8	107	70-130	11/19/09 15:24		

Comments:

Quantitation Report (Not Reviewed)

Sample : LCS
Data File : J:\ACQUDATA\MSVOA10\DATA\111909\C2474.D Vial: 3
Acq On : 19 Nov 2009 3:24 pm
Operator : F. Naegler
InstName : MSVOA10 RQ0912216-02
Misc :

FW 12/8/09

Quant Time: Nov 19 15:39:56 2009
Quant Method : J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Mon Nov 02 10:48:31 2009
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	4.434	168	895025	50.00	ug/L	0.00
44) 1,4-Difluorobenzene	5.635	114	1417570	50.00	ug/L	0.00
71) d5-Chlorobenzene	8.854	117	1227043	50.00	ug/L	0.00
88) 1,4-Dichlorobenzene-d4	10.847	152	607658	50.00	ug/L	0.00
System Monitoring Compounds						
46) surr4,Dibrflmethane	4.348	113	474809	47.09	ug/L	0.00
Spiked Amount 50.000	Range 89 - 119		Recovery = 94.18%			
49) surr1,1,2-dichloroetha...	4.885	65	524973	50.15	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.30%			
65) SURR3,Toluene-d8	7.445	98	1533158	53.44	ug/L	0.00
Spiked Amount 50.000	Range 87 - 121		Recovery = 106.88%			
70) SURR2,BFB	9.896	95	630697	51.82	ug/L	0.00
Spiked Amount 50.000	Range 85 - 122		Recovery = 103.64%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.184	85	182118	19.55	ug/L	98
4) Chloromethane	1.288	50	141057	15.10	ug/L	98
5) Vinyl Chloride	1.355	62	168865	17.48	ug/L	100
6) Bromomethane	1.556	94	85726	14.90	ug/L	98
7) Chloroethane	1.611	64	82418	17.33	ug/L	98
8) Freon 21	1.721	67	270248	17.63	ug/L	100
9) Trichlorofluoromethane	1.770	101	275298	18.97	ug/L	99
10) Diethyl Ether	1.934	59	92161	17.54	ug/L	92
11) Freon 123a	1.934	67	153240	16.69	ug/L	85
12) Freon 123	1.971	83	174136	17.07	ug/L	98
13) Acrolein	2.026	56	49984	51.09	ug/L	94 (50-150)
14) 1,1-Diclethene	2.105	96	134095	20.27	ug/L	97
15) Freon 113	2.093	101	143935	20.84	ug/L	92
16) Acetone	2.123	43	26779	16.98	ug/L	94
17) 2-Propanol	2.196	45	95678	318.76	ug/L	97
18) Iodomethane	2.221	142	129141	17.08	ug/L	96
19) Carbon Disulfide	2.276	76	407096	18.39	ug/L	99
20) Acetonitrile	2.324	40	19427	70.01	ug/L	92
21) Allyl Chloride	2.355	76	65631	20.15	ug/L	94
22) Methyl Acetate	2.361	43	90027	19.29	ug/L	93
23) Methylene Chloride	2.446	84	152451	17.08	ug/L	91
24) TBA	2.507	59	193669	382.78	ug/L	100
25) Acrylonitrile	2.641	53	207137	90.17	ug/L	99
26) Methyl-t-Butyl Ether	2.666	73	326469	19.75	ug/L	95
27) trans-1,2-Dichloroethene	2.672	96	151401	19.33	ug/L	96
28) 1,1-Diclethane	3.056	63	309158	17.92	ug/L	99
29) Vinyl Acetate	3.105	86	9380	13.58	ug/L #	21 (50-150)
30) DIPE	3.117	45	457012	18.49	ug/L	89
31) 2-Chloro-1,3-Butadiene	3.154	53	261491	22.26	ug/L	95
32) ETBE	3.519	59	459295	19.05	ug/L	97
33) 2,2-Dichloropropane	3.696	77	209219	19.13	ug/L	99
34) cis-1,2-Dichloroethene	3.696	96	157417	19.26	ug/L	95
35) 2-Butanone	3.714	43	39930	16.58	ug/L	96
37) Propionitrile	3.781	54	76078	95.28	ug/L	92
38) Bromochloromethane	4.001	130	101192	19.30	ug/L #	84

Quantitation Report (Not Reviewed)

Sample : LCS
Data File : J:\ACQUDATA\MSVOA10\DATA\111909\C2474.D Vial: 3
Acq On : 19 Nov 2009 3:24 pm
Operator : F. Naegler
InstName : MSVOA10
Misc :

Quant Time: Nov 19 15:39:56 2009
Quant Method : J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Mon Nov 02 10:48:31 2009
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
39) Methacrylonitrile	3.989	67	38761	18.35	ug/L	91
40) Tetrahydrofuran	4.074	42	23172	16.97	ug/L	79
41) Chloroform	4.117	83	281125	19.00	ug/L	96
42) 1,1,1-Trichloroethane	4.379	97	245870	18.89	ug/L	98
43) TAME	5.208	73	277079	18.62	ug/L	93
45) Cyclohexane	4.470	56	321668	18.81	ug/L	67
47) Carbontetrachloride	4.635	121	73531	19.47	ug/L	98
48) 1,1-Dichloropropene	4.641	75	190447	19.44	ug/L	97
50) Benzene	4.982	78	542513	18.66	ug/L	98
51) 1,2-Dichloroethane	5.019	62	227031	18.35	ug/L	97
52) Iso-Butyl Alcohol	4.885	43	58137	327.79	ug/L	93
53) n-Heptane	5.476	43	158781	20.70	ug/L	88
54) Trichloroethene	5.988	130	155025	19.46	ug/L	96
55) Methylcyclohexane	6.232	55	233875	20.33	ug/L	93
56) 1,2-Diclpropane	6.281	63	170139	19.21	ug/L	93
57) Dibromomethane	6.421	93	84611	19.03	ug/L	96
58) 1,4-Dioxane	6.476	88	~~18454~~ 23257	~~398.13~~ 447.72	ug/L #	66
59) Methyl Methacrylate	6.482	69	58805	17.53	ug/L	88
60) Bromodichloromethane	6.635	83	200180	19.62	ug/L	98
62) 2-Chloroethylvinyl Ether	7.025	63	67022	15.56	ug/L	90
63) cis-1,3-Dichloropropene	7.165	75	203180	18.35	ug/L	99
64) 4-Methyl-2-pentanone	7.354	43	74465	15.76	ug/L	87
66) Toluene	7.519	91	597909	20.09	ug/L	99
67) trans-1,3-Dichloropropene	7.762	75	176126	17.78	ug/L	98
68) Ethyl Methacrylate	7.884	69	121002	17.34	ug/L	86
69) 1,1,2-Trichloroethane	7.939	97	112559	19.64	ug/L	98
72) Tetrachloroethene	8.067	164	126835	21.06	ug/L	98
73) 2-Hexanone	8.214	43	51251	16.88	ug/L	92
74) 1,3-Dichloropropane	8.104	76	184417	20.15	ug/L	86
75) Dibromochloromethane	8.317	129	153177	21.22	ug/L	98
76) N-Butyl Acetate	8.354	43	129709	17.07	ug/L	93
77) 1,2-Dibromoethane	8.415	107	117120	20.45	ug/L	95
78) Chlorobenzene	8.884	112	412621	20.34	ug/L	97
79) 1,1,1,2-Tetrachloroethane	8.963	131	147773	20.69	ug/L	95
80) Ethylbenzene	8.994	106	212076	21.32	ug/L	98
81) (m+p)Xylene	9.098	106	527497	43.64	ug/L	97
82) o-Xylene	9.445	106	256722	20.08	ug/L	94
83) Styrene	9.457	104	427149	19.60	ug/L	94
84) Bromoform	9.610	173	81357	21.21	ug/L	97
85) Isopropylbenzene	9.768	105	659798	22.66	ug/L	100
86) Cyclohexanone	9.841	55	277076	370.67	ug/L	96
87) trans-1,4-Dichloro-2-B...	10.073	53	33229	18.37	ug/L	98
89) 1,1,2,2-Tetrachloroethane	10.024	83	132279	21.13	ug/L	97
90) Bromobenzene	10.012	156	171469	21.24	ug/L	93
92) 1,2,3-Trichloropropane	10.055	110	39162	20.39	ug/L	90
93) n-Propylbenzene	10.116	91	785501	22.55	ug/L	99
94) 2-Chlorotoluene	10.183	91	464449	21.00	ug/L	97
95) 4-Chlorotoluene	10.274	91	570340	21.88	ug/L	98
96) 1,3,5-Trimethylbenzene	10.262	105	557654	22.07	ug/L	96
97) tert-Butylbenzene	10.530	119	465223	21.16	ug/L	99
98) 1,2,4-Trimethylbenzene	10.573	105	576293	21.79	ug/L	98
99) sec-Butylbenzene	10.713	105	680325	21.37	ug/L	98

Sample : LCS
Data File : J:\ACQUDATA\MSVOA10\DATA\111909\C2474.D Vial: 3
Acq On : 19 Nov 2009 3:24 pm
Operator : F. Naegler
InstName : MSVOA10
Misc :

Quant Time: Nov 19 15:39:56 2009
Quant Method : J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Mon Nov 02 10:48:31 2009
Response via : Initial Calibration

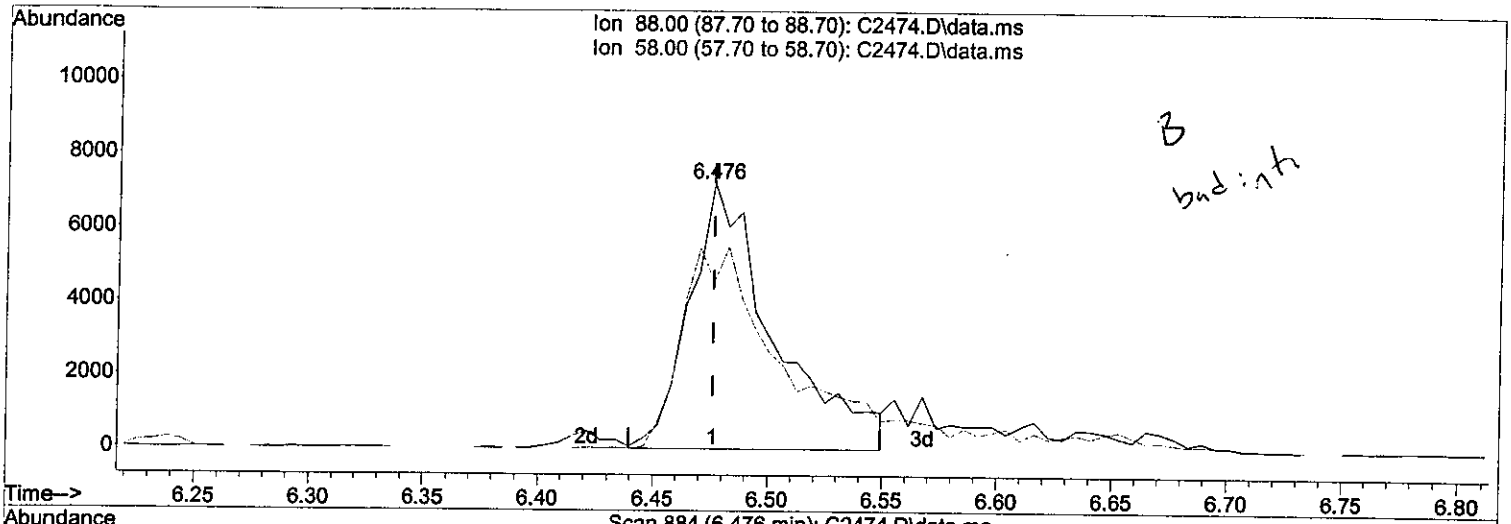
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
100) p-Isopropyltoluene	10.829	119	587200	21.56	ug/L	98
101) 1,3-Dclbenz	10.798	146	326969	21.27	ug/L	99
102) 1,4-Dclbenz	10.865	146	332910	20.45	ug/L	97
104) n-Butylbenzene	11.158	91	504818	20.29	ug/L	99
105) 1,2-Dclbenz	11.164	146	306490	21.44	ug/L	99
106) 1,2-Dibromo-3-chloropr...	11.719	157	21521	18.65	ug/L	91
108) 1,2,4-Tcbenzene	12.237	180	197784	21.06	ug/L	94
109) Hexachlorobt	12.335	225	90732	20.82	ug/L	96
110) Naphthalen	12.377	128	389824	19.68	ug/L	100
111) 1,2,3-Tclbenzene	12.511	180	178318	21.67	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

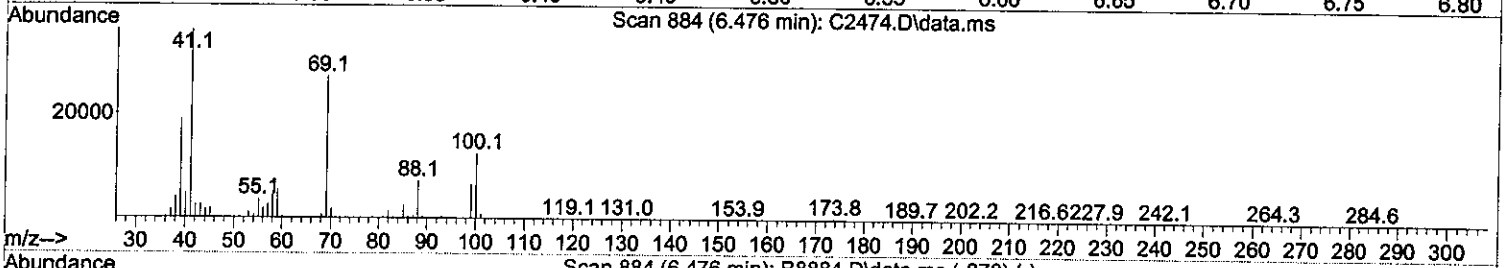
Quantitation Report (Qedit)

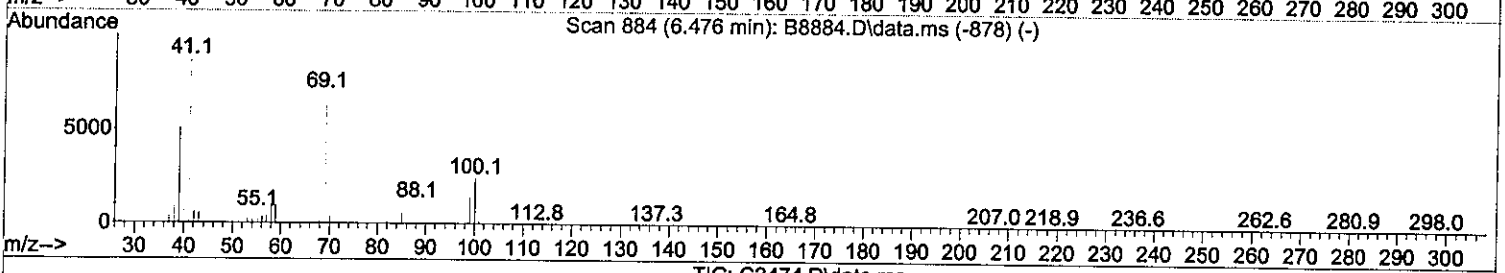
Sample : LCS
Data File : J:\ACQUDATA\msvoa10\data\111909\C2474.D Vial: 3
Acq On : 19 Nov 2009 3:24 pm
Operator : F. Naegler
InstName : MSVOA10
Misc :

Quant Time: Nov 19 15:39:56 2009
Quant Method : J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Mon Nov 02 10:48:31 2009
Response via : Initial Calibration



B
bad : th





TIC: C2474.D\data.ms

(58) 1,4-Dioxane

6.476min (+0.000) 398.13 ug/L

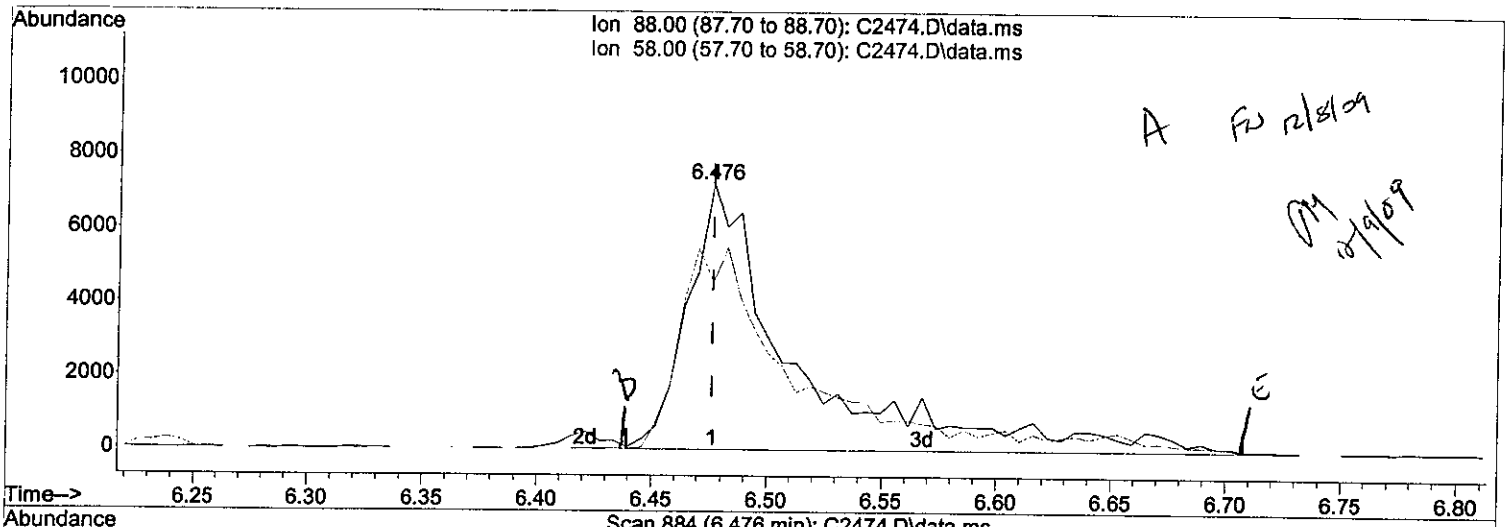
response 18454

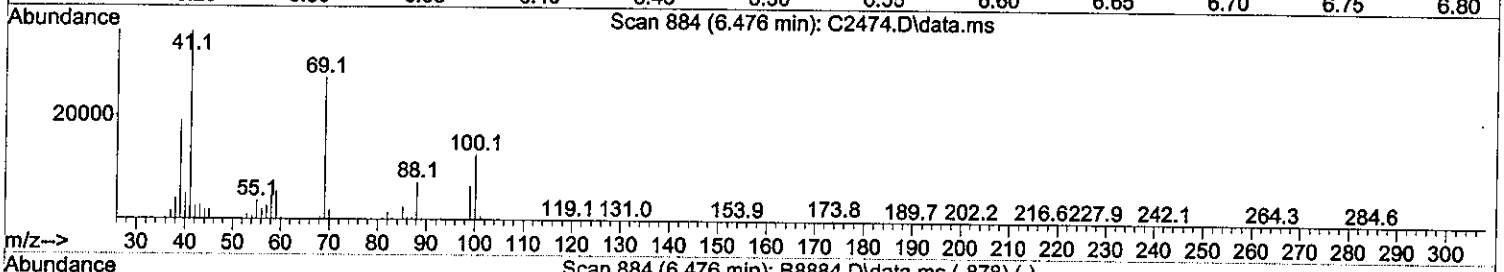
Ion	Exp%	Act%
88.00	100	100
58.00	95.80	63.00#
0.00	0.00	0.00
0.00	0.00	0.00

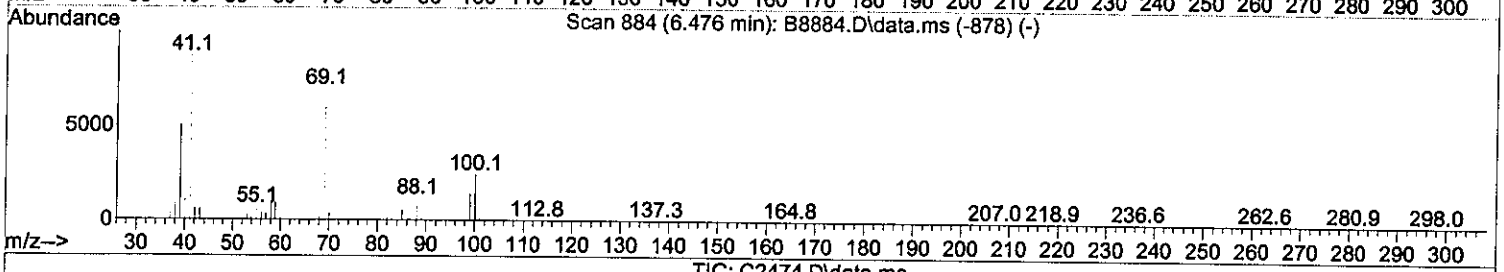
Quantitation Report (Qedit)

Sample : LCS
Data File : J:\ACQUDATA\msvoa10\data\111909\C2474.D Vial: 3
Acq On : 19 Nov 2009 3:24 pm
Operator : F. Naegler
InstName : MSVOA10
Misc :

Quant Time: Nov 19 15:39:56 2009
Quant Method : J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Mon Nov 02 10:48:31 2009
Response via : Initial Calibration







TIC: C2474.D\data.ms

(58) 1,4-Dioxane

6.476min (+0.000) 494.72 ug/L m

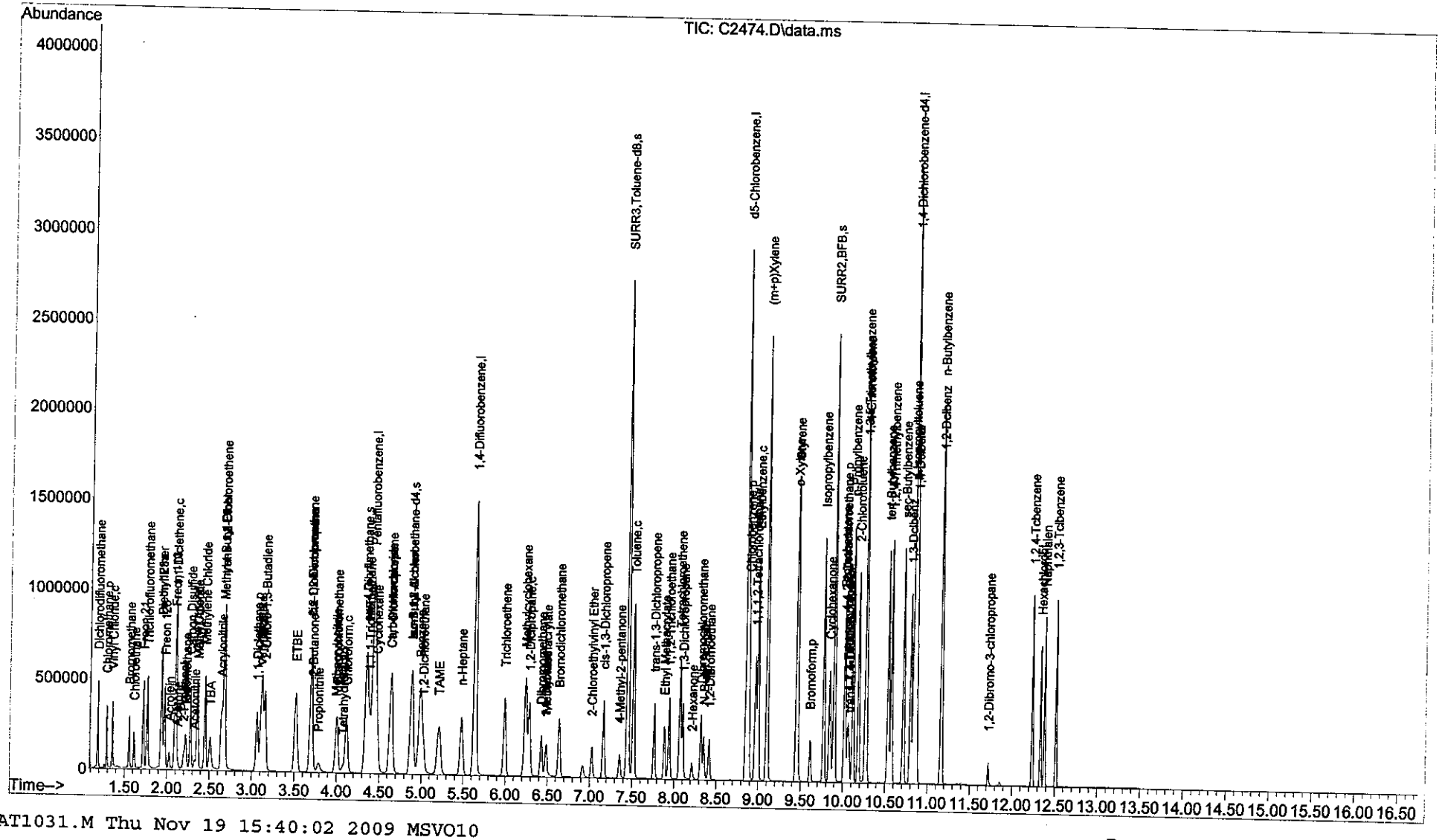
response 23297

Ion	Exp%	Act%
88.00	100	100
58.00	95.80	63.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Sample : LCS
Data File : J:\ACQUDATA\MSVOA10\DATA\111909\C2474.D Vial: 3
Acq On : 19 Nov 2009 3:24 pm
Operator : F. Naegler
InstName : MSVOA10
Misc :

Quant Time: Nov 19 15:39:56 2009
Quant Method : J:\ACQUDATA\MSVOA10\METHODS\WAT1031.M
Quant Title : MS#10 - 8260B WATERS 10mL Purge
QLast Update : Mon Nov 02 10:48:31 2009
Response via : Initial Calibration



Analysis: 8260B | Analyst: F. Naegler | Tune Method: T103109.M

Date: 10/31/09 | Data Path: j:\acqudata\msvoa 10 \ 103109 | Run Method: WAT1031.M

Instr. MS #10 | LIMS Run#: ——

Pos.	Sample	Diln.	Diln. Prep.	Client	RL	Tier	Vial	pH	File#	OK?	Comments
1	BLK								C1899	Y	
1	BLK								C1900	Y	
1	Tune		1mL/100mL						C1901	Y	
2	ICAL BLK								C1902	Y	
3	0.5 PPB STD								C1903	Y	
4	1.0								C1904	Y	
5	2.0								C1905	Y	
6	5.0								C1906	Y	
7	10.0								C1907	Y	
8	50.0								C1908	Y	
9	100.0								C1909	Y	
10	150.0								C1910	Y	
11	200.0								C1911	Y	
12	BLK								C1912	Y	
13	50ppb ICV								C1913	Y	
14	BLK								C1914	Y	
									~~C1915~~		
									F n/i		

WATER ICAL TABLE

CONC (PPB)	0.5	1.0	2.0	5.0	10	50	100	150	200
1° T/B (500) 12735	10mL/1mL 5mL/50mL	1mL/50mL	2mL/50mL	5mL/50mL	2mL/100mL	5mL/50mL	10mL/50mL	15mL/50mL	20mL/50mL
1° HBL (500) 13002	↓	↓	↓	↓	↓	↓	↓	↓	↓
1° Fr (500) 12876	↓	↓	↓	↓	↓	↓	↓	↓	↓
1° Oxy (500) 12600	↓	↓	↓	↓	↓	↓	↓	↓	↓
SURR (500) 12869	–	–	–	1mL/50mL	4mL/100mL	–	5mL/50mL	7.5mL/50mL	10mL/50mL

All samples = 10 mL + 1 uL Combined IS/Surr 10 mL purged

Primary : SEE ICAL TABLE

Primary :

Primary :

Primary :

T/B Secondary 500 : 12761 – 5uL

HBL Secondary 500 : 12788 – 5uL

Fr Secondary 200 : 12647 – 12.5uL

Oxy Secondary 500 : 12682 – 5uL

50mL (ICV)

Comb. IS/Surr. 500 : 13040

Surrogate 500 : 12869

Internal Std. :

0001

9/1/09

Analysis: 8260B
Analyst: F. Naegler
Tune Method: T103109.M
Date: 11/19/09
Data Path: j:\acqudata\msvoa 10 \111909.M
Run Method: WAT1031.M
Instr. MS #10
LIMS Run#: 180234

Pos.	Sample	Diln.	Diln. Prep.	Client	RL	Tier	Vial	pH	File#	OK?	Comments
1	Blk								C2470	Y	
1	Tune		1mL/100mL						C2471	Y_T	
2	CCV								C2472	(N)	
2	CCV								C2473	Y_C	
3	LCS								C2474	Y_Q	RQ0912216-02
4	MBLK								C2475	(N)	
5	MBLK								C2476	Y_{MB}	RQ0912216-01
6	RQ0906477-001	1.0		[redacted]	4060	4	1	<2	C2477	Y	
7	↓ -003	1.0		↓	↓	↓	1	<2	C2478	Y	
8	RQ0906479-001	1.0		[redacted]	4187	2	1	<2	C2479	Y	
			Inst stopped								

FJ 11/20/09

All samples = 10 mL + 1 uL Combined IS/Surr 10 mL purged

T/G Primary 500 : 13220 - 5mL
HSL Primary 500 : 13221 - 5mL
Fr Primary 500 : 13227 - 5mL
OXY Primary 500 : 13228 - 5mL
50mL (CCV)

T/G Secondary 500 : 13265 - 2mL
HSL Secondary 500 : 13057 - 2mL
Fr Secondary 200 : 13224 - 5mL
OXY Secondary 500 : 13376 - 2mL
50mL (LCS)

Comb. IS/Surr. 500 : 13449
Surrogate 500 : 12869
Internal Std. :

0029

SEMIVOLATILE ORGANICS

QC SUMMARY

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Water

Service Request: R0906477
Date Analyzed: 11/20/09

Lab Control Sample Summary
Low Level Semivolatile Organic Compounds by GC/MS

Analytical Method: 8270C
Prep Method: EPA 3510C

Units: µg/L
Basis: NA

Extraction Lot: 100898

Analyte Name	Lab Control Sample RQ0911513-02 Result	Expected	% Rec		Duplicate Lab Control Sample RQ0911513-03 Result	Expected	% Rec		% Rec Limits	RPD	RPD Limit
2-Methylnaphthalene	**3.41**	4.00	85		**3.68**	4.00	92		50 - 120	8	30
Acenaphthene	**3.23**	4.00	81		**3.51**	4.00	88		50 - 120	8	30
Acenaphthylene	**3.30**	4.00	83		**3.62**	4.00	91		50 - 120	9	30
Anthracene	**3.43**	4.00	86		**3.98**	4.00	100		50 - 120	15	30
Benz(a)anthracene	**3.57**	4.00	89		**4.21**	4.00	105		50 - 120	16	30
Benzo(a)pyrene	**3.19**	4.00	80		**3.51**	4.00	88		50 - 120	10	30
Benzo(b)fluoranthene	**3.55**	4.00	89		**3.85**	4.00	96		50 - 120	8	30
Benzo(g,h,i)perylene	**3.84**	4.00	96		**4.04**	4.00	101		50 - 120	5	30
Benzo(k)fluoranthene	**3.75**	4.00	94		**3.74**	4.00	94		50 - 120	0	30
Bis(2-ethylhexyl) Phthalate	**3.55**	4.00	89		**4.20**	4.00	105		50 - 120	17	30
Butyl Benzyl Phthalate	**3.17**	4.00	79		**3.84**	4.00	96		50 - 120	19	30
Chrysene	**3.27**	4.00	82		**3.94**	4.00	99		50 - 120	19	30
Di-n-butyl Phthalate	**3.69**	4.00	92		**3.97**	4.00	99		50 - 120	7	30
Di-n-octyl Phthalate	**3.19**	4.00	80		**3.53**	4.00	88		50 - 120	10	30
Dibenz(a,h)anthracene	**3.91**	4.00	98		**4.02**	4.00	101		50 - 120	3	30
Diethyl Phthalate	**3.42**	4.00	86		**3.83**	4.00	96		50 - 120	11	30
Dimethyl Phthalate	**3.10**	4.00	78		**3.41**	4.00	85		50 - 120	10	30
Fluoranthene	**3.41**	4.00	85		**3.96**	4.00	99		50 - 120	15	30
Fluorene	**3.49**	4.00	87		**3.83**	4.00	96		50 - 120	9	30
Hexachlorobenzene	**3.37**	4.00	84		**4.18**	4.00	105		50 - 120	21	30
Indeno(1,2,3-cd)pyrene	**3.86**	4.00	97		**4.13**	4.00	103		50 - 120	7	30
Naphthalene	**2.99**	4.00	75		**3.31**	4.00	83		50 - 120	10	30
Nitrobenzene	**3.60**	4.00	90		**3.77**	4.00	94		50 - 120	5	30
Phenanthrene	**3.29**	4.00	82		**3.90**	4.00	98		50 - 120	17	30
Pyrene	**3.13**	4.00	78		**3.72**	4.00	93		50 - 120	17	30
Pyridine	**1.27**	4.00	32	*	**1.13**	4.00	28	*	50 - 120	12	30
1,4-Dioxane	**1.93**	5.00	39	*	**1.94**	5.00	39	*	50 - 120	1	30
Octachlorostyrene	**2.89**	4.00	72		**3.91**	4.00	98		50 - 120	30	30

Comments:

4B

EPA SAMPLE NO.

SEMIVOLATILE METHOD BLANK SUMMARY

SBLK01

Lab Name: CAS-ROCH Contract: northgate

Lab Code: 10145 Case No.: R906477 SAS No.: _____ SDG No.: M-122B

Lab File ID: DC444.D Lab Sample ID: RQ0911513-01|1.0

Instrument ID: 5973B Date Extracted: 11/17/09

Matrix: (soil/water) WATER Date Analyzed: 11/20/09

Level: (low/med) LOW Time Analyzed: 16:31

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	SBLK01MS	RQ0911513-02|1.0	DC445.D	11/20/09
02	SBLK01MSD	RQ0911513-03|1.0	DC446.D	11/20/09
03	M-122B	R0906477-001|1.0	DC447.D	11/20/09

COMMENTS:

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CAS-ROCH Contract: NORTHGA

Lab Code: 10145 Case No.: R906477 SAS No.: _____ SDG No.: M-122B

Lab File ID: DC080.D DFTPP Injection Date: 10/16/09

Instrument ID: 5973-B DFTPP Injection Time: 9:29

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	37.5
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 Relative abundance	43.3
70	Less than 2.0% of mass 69	0.2 (0.4)1
127	40.0 - 60.0% of mass 198	47.7
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.9
275	10.0 - 30.0% of mass 198	28.3
365	Greater than 1.0% of mass 198	4.4
441	Present, but less than mass 443	14.7
442	40.0 - 100.0% of mass 198	89.2
443	17.0 - 23.0% of mass 442	18.4 (20.7)2

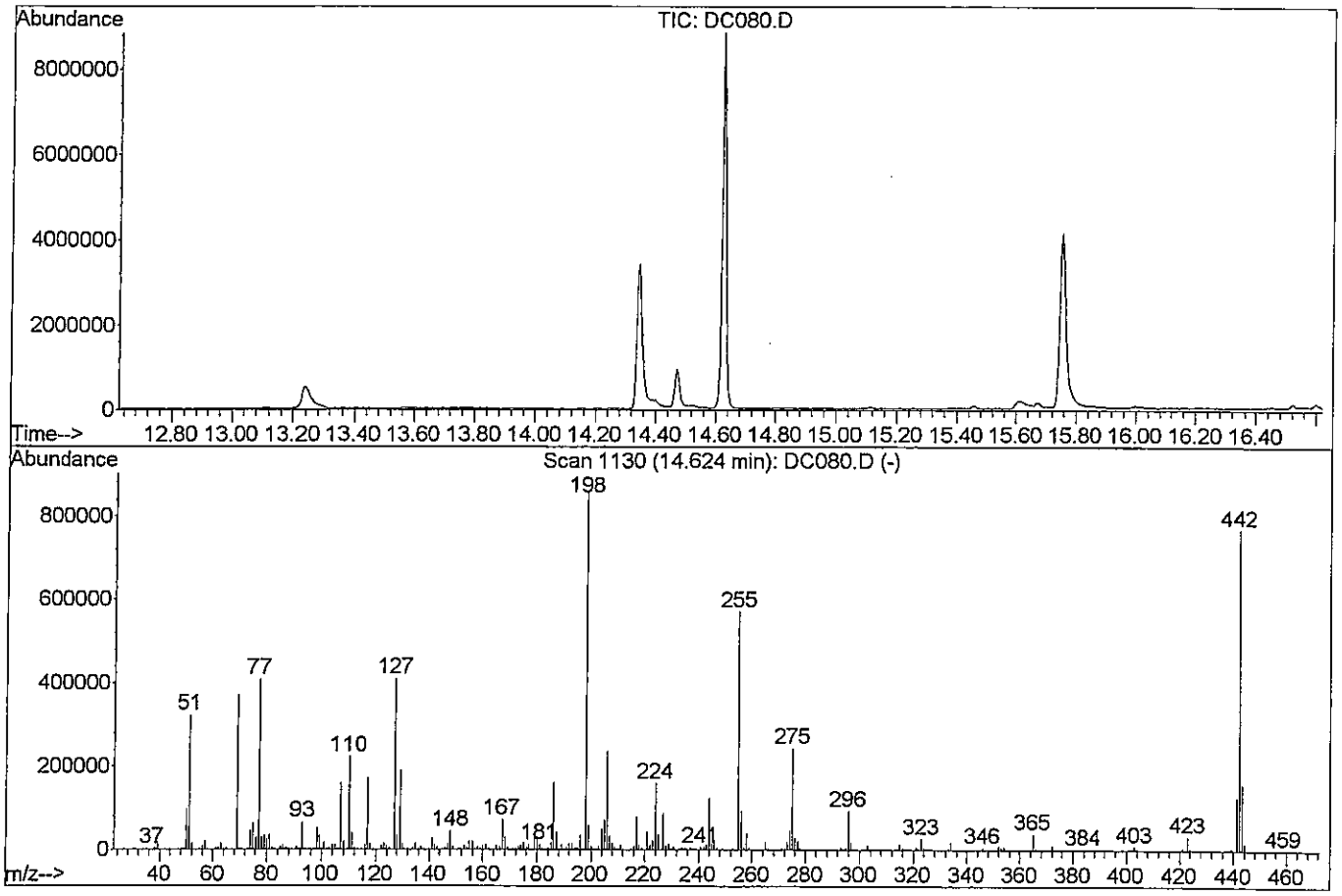
1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD001	SSTD001	DC082.D	10/16/09	10:47
02	SSTD002	SSTD002	DC083.D	10/16/09	11:30
03	SSTD005	SSTD005	DC084.D	10/16/09	12:11
04	SSTD010	SSTD010	DC085.D	10/16/09	12:52
05	SSTD020	SSTD020	DC086.D	10/16/09	13:41
06	SSTD030	SSTD030	DC087.D	10/16/09	14:29
07	SSTD040	SSTD040	DC088.D	10/16/09	15:31
08	SSTD050	SSTD050	DC089.D	10/16/09	16:32
09	SSTD100	SSTD100	DC090.D	10/16/09	17:27

DFTPP

Data File : J:\ACQUDATA\5973B\DATA\101609\DC080.D Vial: 1
Acq On : 16 Oct 2009 9:29 am Operator: J.Wu
Sample : TUNE CHECK Inst : 5973-B
Misc : 10 ng DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : J:\ACQUDATA\5973B\METHODS\DFTPPLVI.M (RTE Integrator)
Title : 8270 BNA ANALYSIS



Spectrum Information: Scan 1130

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	37.5	322435	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	43.3	372544	PASS
70	69	0.00	2	0.4	1596	PASS
127	198	40	60	47.7	410048	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	860160	PASS
199	198	5	9	6.9	59416	PASS
275	198	10	30	28.3	243136	PASS
365	198	1	100	4.4	37952	PASS
441	443	0.01	100	79.7	126384	PASS
442	198	40	100	89.2	767104	PASS
443	442	17	23	20.7	158656	PASS

DC080.D DFTPPLVI.M Mon Oct 19 09:16:05 2009

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CAS-ROCH Contract: northgate

Lab Code: 10145 Case No.: R906477 SAS No.: SDG No.: M-122B

Lab File ID: DC434.D DFTPP Injection Date: 11/20/09

Instrument ID: 5973B DFTPP Injection Time: 9:07

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	50.3
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 Relative abundance	53.7
70	Less than 2.0% of mass 69	0.4 (0.8)1
127	40.0 - 60.0% of mass 198	56.0
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	8.9
275	10.0 - 30.0% of mass 198	27.2
365	Greater than 1.0% of mass 198	4.5
441	Present, but less than mass 443	8.8
442	40.0 - 100.0% of mass 198	63.6
443	17.0 - 23.0% of mass 442	11.9 (18.7)2

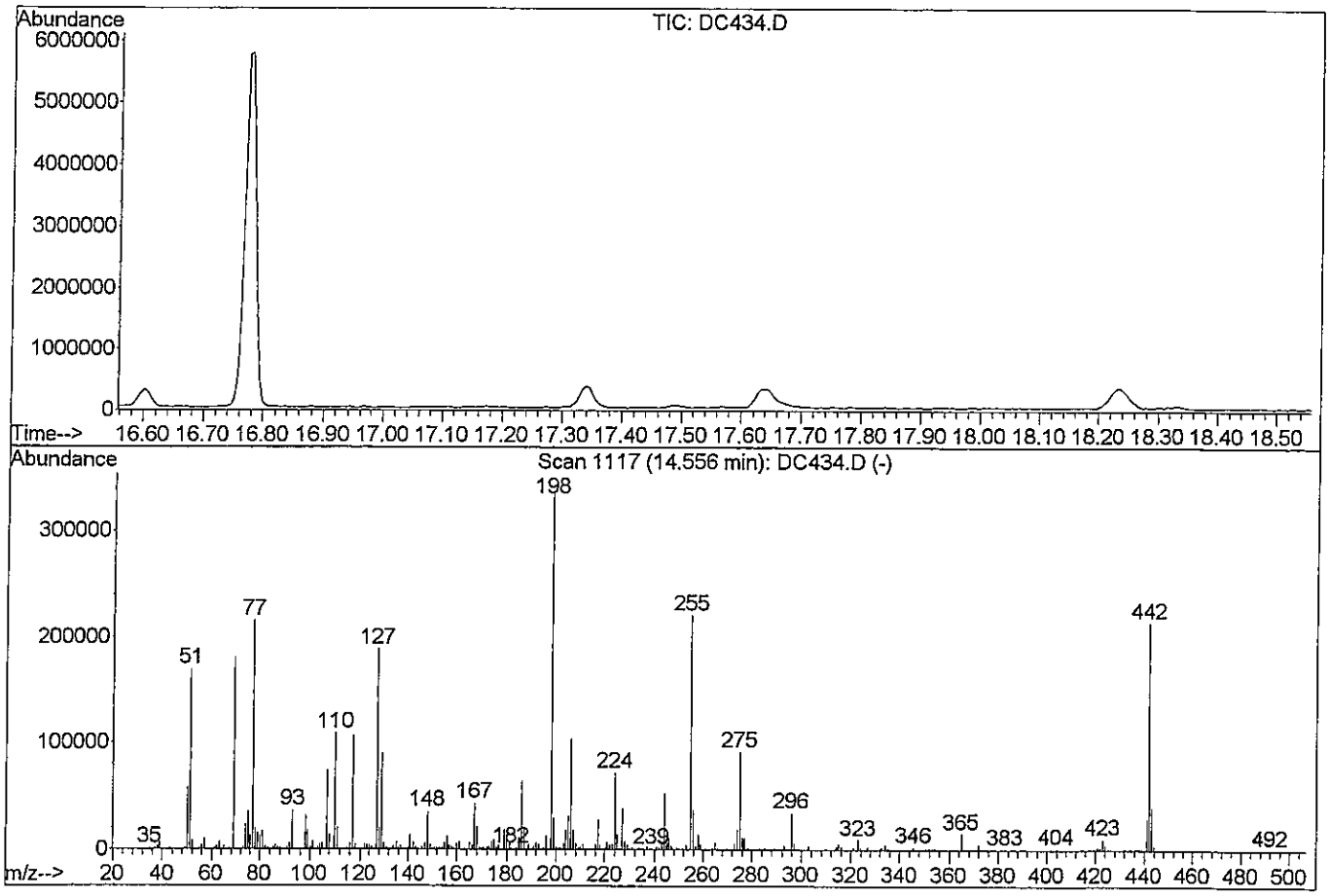
1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD01	CALIBRATION CHECK	DC435.D	11/20/09	9:45
02	SBLK01	RQ0911513-01|1.0	DC444.D	11/20/09	16:31
03	SBLK01MS	RQ0911513-02|1.0	DC445.D	11/20/09	17:14
04	SBLK01MSD	RQ0911513-03|1.0	DC446.D	11/20/09	17:56
05	M-122B	R0906477-001|1.0	DC447.D	11/20/09	18:38

DFTPP

Data File : J:\ACQUDATA\5973B\DATA\112009\DC434.D Vial: 1
Acq On : 20 Nov 2009 9:07 am Operator: M.PEDRO
Sample : TUNE CHECK Inst : 5973-B
Misc : 10 NG DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : J:\ACQUDATA\5973B\METHODS\DFTPPLVI.M (RTE Integrator)
Title : 8270 BNA ANALYSIS



Peak Apex is scan: 2827

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	50.3	169280	PASS
68	69	0	2	0.0	0	PASS
69	198	0	100	53.7	180928	PASS
70	69	0	2	0.8	1493	PASS
127	198	40	60	56.0	188608	PASS
197	198	0	1	0.0	0	PASS
198	198	100	100	100.0	336832	PASS
199	198	5	9	8.9	29872	PASS
275	198	10	30	27.2	91504	PASS
365	198	1	100	4.5	15295	PASS
441	443	0	100	74.1	29624	PASS
442	198	40	100	63.6	214080	PASS
443	442	17	23	18.7	39952	PASS

DC434.D DFTPPLVI.M Mon Nov 23 10:04:54 2009

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CAS-ROCH Contract: northgate

Lab Code: 10145 Case No.: R906477 SAS No.: SDG No.: M-122B

Lab File ID (Standard): DC435.D Date Analyzed: 11/20/09

Instrument ID: 5973B Time Analyzed: 9:45

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	12 HOUR STD	46428	10.61	186145	11.88	118764	13.46
	UPPER LIMIT	92856	11.11	372290	12.38	237528	13.96
	LOWER LIMIT	23214	10.11	93073	11.38	59382	12.96
	EPA SAMPLE NO.						
01	SBLK01	54868	10.61	189256	11.88	125088	13.47
02	SBLK01MS	51467	10.60	220342	11.88	146708	13.46
03	SBLK01MSD	55108	10.60	207953	11.88	137911	13.46
04	M-122B	55895	10.61	187764	11.88	124418	13.47

IS1 (DCB) = d4-1,4-Dichlorobenzene
IS2 (NPT) = d8-Naphthalene
IS3 (ANT) = d10-Acenaphthene
IS4 (PHN) = d10-Phenanthrene
IS5 (CRY) = d12-Chrysene
IS6 (PRY) = d12-Perylene

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column to be used to flag values outside QC limit with an asterisk.
* Values outside of contract required QC limits

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CAS-ROCH Contract: northgate

Lab Code: 10145 Case No.: R906477 SAS No.: SDG No.: M-122B

Lab File ID (Standard): DC435.D Date Analyzed: 11/20/09

Instrument ID: 5973B Time Analyzed: 09:45

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
	12 HOUR STD	203298	14.67	236853	17.91	185463	21.58
	UPPER LIMIT	406596	14.17	473706	17.41	370926	21.08
	LOWER LIMIT	101649	15.17	118427	18.41	92732	22.08
	EPA SAMPLE NO.						
01	SBLK01	210251	14.67	218809	17.92	178166	21.59
02	SBLK01MS	252967	14.67	278575	17.92	218540	21.59
03	SBLK01MSD	222624	14.67	237818	17.92	213035	21.58
04	M-122B	204308	14.67	225484	17.92	180258	21.59

IS1 (DCB) = d4-1,4-Dichlorobenzene
IS2 (NPT) = d8-Naphthalene
IS3 (ANT) = d10-Acenaphthene
IS4 (PHN) = d10-Phenanthrene
IS5 (CRY) = d12-Chrysene
IS6 (PRY) = d12-Perylene

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column to be used to flag values outside QC limit with an asterisk.
* Values outside of contract required QC limits

SEMIVOLATILE ORGANICS

SAMPLE DATA

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Northgate Environmental	**Service Request:**	R0906477
Project:	Tronox LLC Henderson/2027.001	**Date Collected:**	11/11/09 1335
Sample Matrix:	Water	**Date Received:**	11/12/09
Sample Name:	M-122B	**Units:**	µg/L
Lab Code:	R0906477-001	**Basis:**	NA

Low Level Semivolatile Organic Compounds by GC/MS

Analytical Method: 8270C
Prep Method: EPA 3510C

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
2-Methylnaphthalene	0.048	U	0.19	0.048	1	11/17/09	11/20/09 18:38	100898	180580	
Acenaphthene	0.053	U	0.19	0.053	1	11/17/09	11/20/09 18:38	100898	180580	
Acenaphthylene	0.076	U	0.19	0.076	1	11/17/09	11/20/09 18:38	100898	180580	
Anthracene	0.041	U	0.19	0.041	1	11/17/09	11/20/09 18:38	100898	180580	
Benz(a)anthracene	0.041	U	0.19	0.041	1	11/17/09	11/20/09 18:38	100898	180580	
Benzo(a)pyrene	0.042	U	0.19	0.042	1	11/17/09	11/20/09 18:38	100898	180580	
Benzo(b)fluoranthene	0.027	U	0.19	0.027	1	11/17/09	11/20/09 18:38	100898	180580	
Benzo(g,h,i)perylene	0.030	U	0.19	0.030	1	11/17/09	11/20/09 18:38	100898	180580	
Benzo(k)fluoranthene	0.029	U	0.19	0.029	1	11/17/09	11/20/09 18:38	100898	180580	
Bis(2-ethylhexyl) Phthalate	**0.69**	J	4.7	0.23	1	11/17/09	11/20/09 18:38	100898	180580	
Butyl Benzyl Phthalate	**0.12**	J	4.7	0.11	1	11/17/09	11/20/09 18:38	100898	180580	
Chrysene	0.029	U	0.19	0.029	1	11/17/09	11/20/09 18:38	100898	180580	
Di-n-butyl Phthalate	0.76	U	4.7	0.76	1	11/17/09	11/20/09 18:38	100898	180580	
Di-n-octyl Phthalate	0.041	U	4.7	0.041	1	11/17/09	11/20/09 18:38	100898	180580	
Dibenz(a,h)anthracene	0.046	U	0.19	0.046	1	11/17/09	11/20/09 18:38	100898	180580	
Diethyl Phthalate	0.20	U	4.7	0.20	1	11/17/09	11/20/09 18:38	100898	180580	
Dimethyl Phthalate	0.044	U	4.7	0.044	1	11/17/09	11/20/09 18:38	100898	180580	
Fluoranthene	0.040	U	0.19	0.040	1	11/17/09	11/20/09 18:38	100898	180580	
Fluorene	0.055	U	0.19	0.055	1	11/17/09	11/20/09 18:38	100898	180580	
Hexachlorobenzene	0.035	U	0.19	0.035	1	11/17/09	11/20/09 18:38	100898	180580	
Indeno(1,2,3-cd)pyrene	0.049	U	0.19	0.049	1	11/17/09	11/20/09 18:38	100898	180580	
Naphthalene	0.14	U	0.19	0.14	1	11/17/09	11/20/09 18:38	100898	180580	
Nitrobenzene	0.046	U	0.19	0.046	1	11/17/09	11/20/09 18:38	100898	180580	
Phenanthrene	0.062	U	0.19	0.062	1	11/17/09	11/20/09 18:38	100898	180580	
Pyrene	0.029	U	0.19	0.029	1	11/17/09	11/20/09 18:38	100898	180580	
Pyridine	0.89	U	1.9	0.89	1	11/17/09	11/20/09 18:38	100898	180580	
1,4-Dioxane	**2.4**		1.9	0.13	1	11/17/09	11/20/09 18:38	100898	180580	
Octachlorostyrene	0.13	U	0.19	0.13	1	11/17/09	11/20/09 18:38	100898	180580	

Comments:

Client:	Northgate Environmental	**Service Request:**	R0906477
Project:	Tronox LLC Henderson/2027.001	**Date Collected:**	11/11/09 1335
Sample Matrix:	Water	**Date Received:**	11/12/09
Sample Name:	M-122B	**Units:**	Percent
Lab Code:	R0906477-001	**Basis:**	NA

Low Level Semivolatile Organic Compounds by GC/MS

Analytical Method: 8270C
Prep Method: EPA 3510C

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
2-Fluorobiphenyl	81	45-135	11/20/09 18:38		
Nitrobenzene-d5	82	45-135	11/20/09 18:38		
Terphenyl-d14	88	45-135	11/20/09 18:38		

Comments:

Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\5973B\DATA\112009\DC447.D Vial: 13
Acq On : 20 Nov 2009 6:38 pm Operator: M.PEDRO
Sample : R0906477-001|1.0 Inst : 5973-B
Misc : 11/11/09 1.0 8270LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 23 10:47 2009 Quant Results File: LVI1016.RES

Quant Method : J:\ACQUDATA\5...\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Nov 12 12:29:20 2009
Response via : Initial Calibration
DataAcq Meth : LVI1016

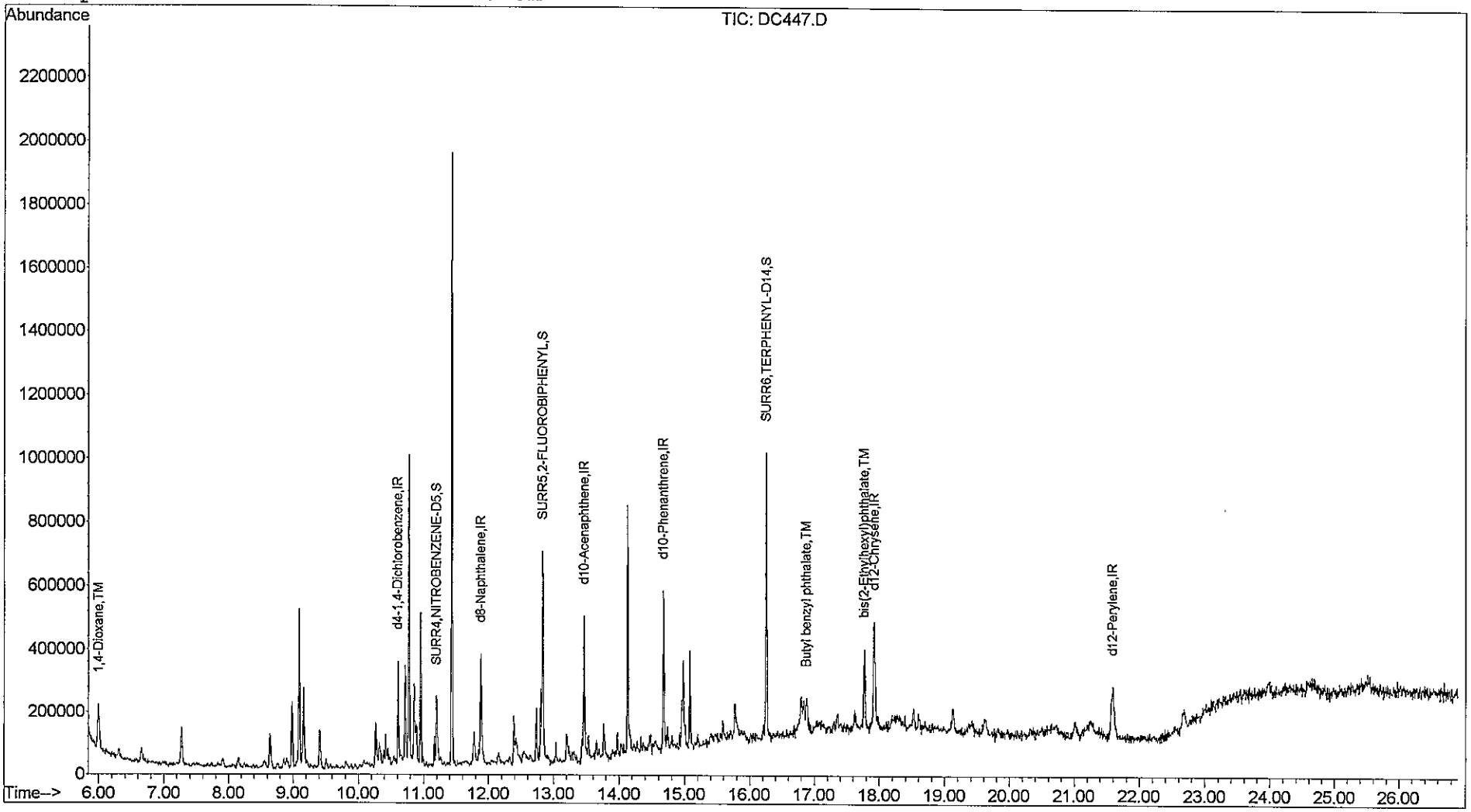
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) d4-1,4-Dichlorobenzene	10.61	152	55895	1.00	ppm	0.00
4) d8-Naphthalene	11.88	136	187764	1.00	ppm	-0.01
10) d10-Acenaphthene	13.47	164	124418	1.00	ppm	-0.02
18) d10-Phenanthrene	14.67	188	204308	1.00	ppm	-0.02
26) d12-Chrysene	17.92	240	225484	1.00	ppm	-0.07
33) d12-Perylene	21.59	264	180258	1.00	ppm	-0.19
System Monitoring Compounds						
5) SURR4,NITROBENZENE-D5	11.20	82	108281	1.63	ppm	0.00
Spiked Amount 2.000	Range 22 - 124		Recovery = 81.50%			
11) SURR5,2-FLUOROBIPHENYL	12.83	172	257176	1.62	ppm	-0.02
Spiked Amount 2.000	Range 27 - 114		Recovery = 81.00%			
28) SURR6,TERPHENYL-D14	16.26	244	328075	1.76	ppm	-0.05
Spiked Amount 2.000	Range 23 - 139		Recovery = 88.00%			
Target Compounds						Qvalue
2) 1,4-Dioxane	6.00	88	110556	2.57	ppm	95
29) Butyl benzyl phthalate	16.87	149	17215	0.13	ppm	94
30) bis(2-Ethylhexyl)phthalate	17.77	149	130381	0.73	ppm	97

(#) = qualifier out of range (m) = manual integration

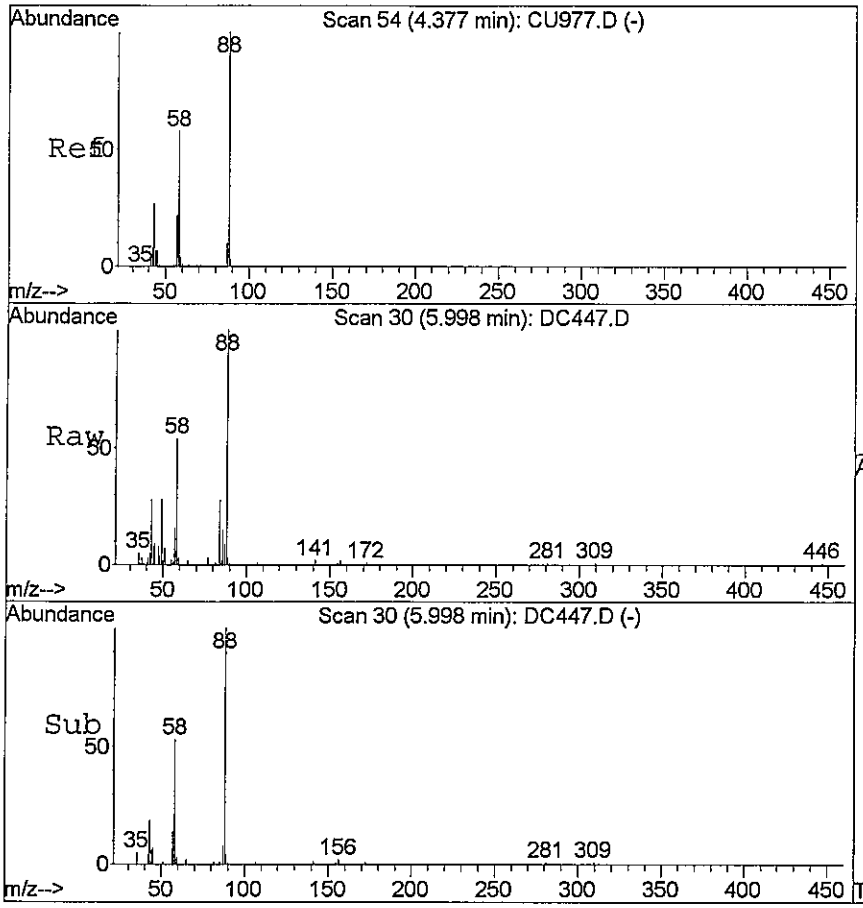
Quantitation Report

Data File : J:\ACQUDATA\5973B\DATA\112009\DC447.D Vial: 13
Acq On : 20 Nov 2009 6:38 pm Operator: M.PEDRO
Sample : R0906477-001|1.0 Inst : 5973-B
Misc : 11/11/09 1.0 8270LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 23 10:47 2009 Quant Results File: LVI1016.RES

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Nov 12 12:29:20 2009
Response via : Initial Calibration



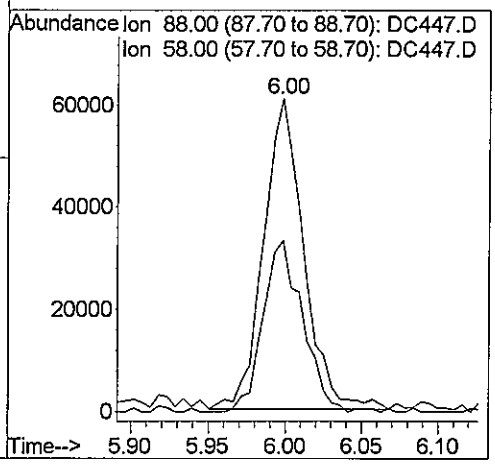
19105

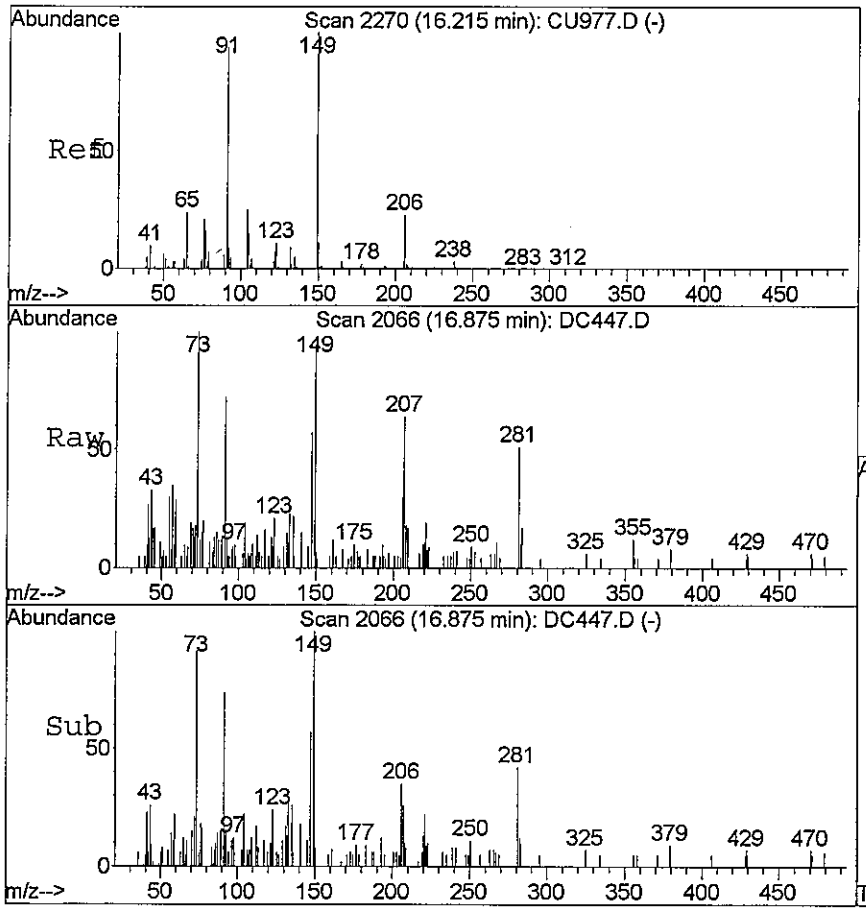


#2
1,4-Dioxane
Concen: 2.57 ppm
RT: 6.00 min Scan# 30
Delta R.T. -0.04 min
Lab File: DC447.D
Acq: 20 Nov 2009 6:38 pm

Tgt Ion: 88 Resp: 110556

Ion	Ratio	Lower	Upper
88	100		
58	54.5	28.0	88.0

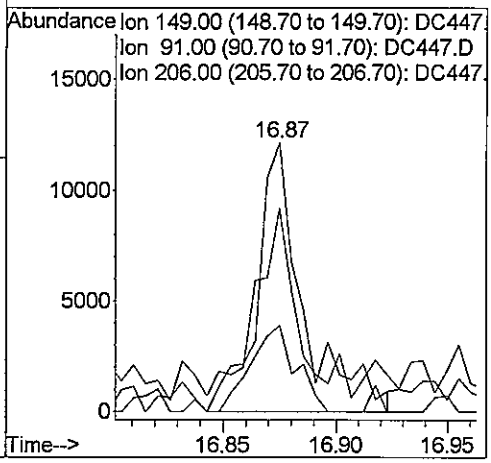


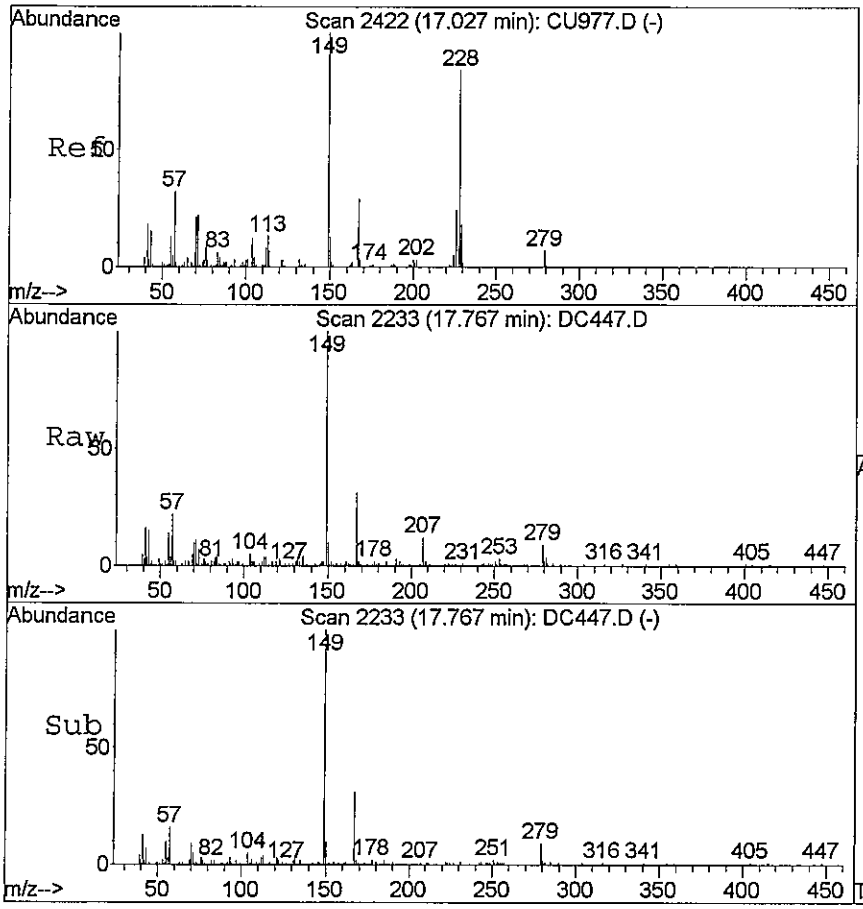


#29
Butyl benzyl phthalate
Concen: 0.13 ppm
RT: 16.87 min Scan# 2066
Delta R.T. -0.05 min
Lab File: DC447.D
Acq: 20 Nov 2009 6:38 pm

Tgt Ion:149 Resp: 17215

Ion	Ratio	Lower	Upper
149	100		
91	68.4	44.9	83.3
206	20.9	16.9	31.5

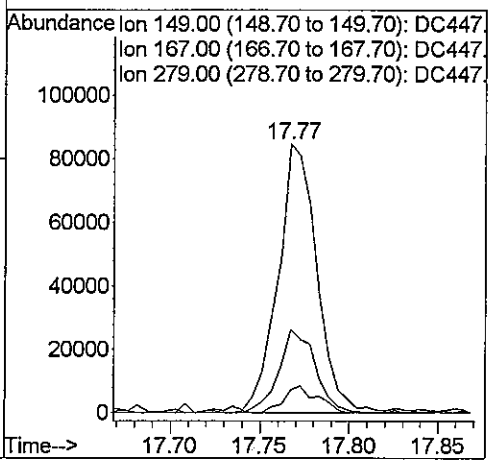




#30
bis(2-Ethylhexyl)phthalate
Concen: 0.73 ppm
RT: 17.77 min Scan# 2233
Delta R.T. -0.08 min
Lab File: DC447.D
Acq: 20 Nov 2009 6:38 pm

Tgt Ion:149 Resp: 130381

Ion	Ratio	Lower	Upper
149	100		
167	31.0	12.8	52.8
279	8.6	0.0	29.2



00163

SEMIVOLATILE ORGANICS

STANDARDS DATA

Response Factor Report 5973-B

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Mon Oct 19 08:41:26 2009
Response via : Initial Calibration

Calibration Files
0.1 =DC082.D 0.2 =DC083.D 0.5 =DC084.D
1.0 =DC085.D 2.0 =DC086.D 3.0 =DC087.D 4.0=DC088, 5.0=DC089
10.0=DC090

		Compound	0.1	0.2	0.5	1.0	2.0	3.0	Avg	%RSD
1)	IR	d4-1,4-Dichlorobenzen	----------			ISTD	----------			
2)	TM	1,4-Dioxane	1.101	0.606	0.806	0.715	0.820	0.772	0.790	16.75 LR
3)	TM	Pyridine				0.818	1.255	1.215	1.151	14.60
4)	IR	d8-Naphthalene	----------			ISTD	----------			
5)	S	SURR4,NITROBENZENE-	0.194	0.266	0.320	0.314	0.360	0.357	0.325	18.80 LR
6)	TM	Nitrobenzene		0.237	0.323	0.282	0.347	0.336	0.322	13.09
7)	TM	Naphthalene	1.055	1.029	1.086	0.978	1.092	1.032	1.044	3.38
8)	TM	2-Methylnaphthalene	0.475	0.684	0.748	0.651	0.742	0.686	0.682	12.31
9)	TM	1-Methylnaphthalene	0.606	0.710	0.660	0.585	0.687	0.657	0.661	6.39
10)	IR	d10-Acenaphthene	----------			ISTD	----------			
11)	S	SURR5,2-FLUOROBIPHE	1.212	1.168	1.282	1.248	1.338	1.332	1.279	4.85
12)	TM	Acenaphthylene	1.716	1.676	1.925	1.704	1.893	1.819	1.783	4.93
13)	TM	Dimethyl phthalate		1.441	1.510	1.412	1.557	1.552	1.497	3.50
14)	TM	Acenaphthene	1.372	1.120	1.161	1.054	1.170	1.149	1.159	7.63
15)	TM	Dibenzofuran	1.572	1.525	1.735	1.554	1.727	1.685	1.629	4.94
16)	TM	Fluorene	1.159	1.293	1.350	1.201	1.341	1.340	1.286	5.32
17)	TM	Diethylphthalate	1.339	1.422	1.544	1.392	1.525	1.489	1.459	4.82
18)	IR	d10-Phenanthrene	----------			ISTD	----------			
19)	TM	Hexachlorobenzene	0.246	0.265	0.250	0.246	0.268	0.277	0.265	5.62
20)	TM	Phenanthrene	1.128	1.204	1.050	1.052	1.113	1.151	1.105	4.67
21)	TM	Anthracene	1.057	0.992	1.118	0.943	1.110	1.118	1.079	6.63
22)	TM	Carbazole	0.647	0.801	0.849	0.774	0.852	0.825	0.780	8.82
23)	TM	Octachlorostyrene		0.060	0.062	0.056	0.059	0.074	0.068	14.49
24)	TM	Di-n-butylphthalate		1.546	1.353	1.259	1.433	1.453	1.394	7.30
25)	TM	Fluoranthene	1.282	1.236	1.245	1.216	1.286	1.305	1.265	2.51
26)	IR	d12-Chrysene	----------			ISTD	----------			
27)	TM	Pyrene	1.432	1.240	1.285	1.202	1.284	1.231	1.254	6.90
28)	S	SURR6,TERPHENYL-D14	0.754	0.799	0.825	0.792	0.873	0.846	0.824	4.87
29)	TM	Butyl benzyl phthal		0.553	0.621	0.533	0.624	0.619	0.610	7.23
30)	TM	bis(2-Ethylhexyl)ph		0.706	0.757	0.712	0.814	0.823	0.787	8.49
31)	TM	Benzo(a)anthracene	1.019	1.052	1.089	1.043	1.116	1.127	1.089	4.07
32)	TM	Chrysene	1.158	1.100	1.173	1.040	1.149	1.099	1.114	4.03
33)	IR	d12-Perylene	----------			ISTD	----------			
34)	TM	Di-n-octyl phthalat			1.543	1.396	1.698	1.700	1.670	9.04
35)	TM	Benzo(b)Fluoranthen		1.324	1.343	1.296	1.478	1.462	1.419	6.28
36)	TM	Benzo(k)fluoranthen		1.374	1.367	1.341	1.433	1.348	1.371	2.43
37)	TM	Benzo(a)pyrene		1.074	1.213	1.150	1.304	1.285	1.243	7.28
38)	TM	Indeno(1,2,3-cd)Pyr		1.363	1.470	1.457	1.599	1.513	1.505	4.98

(#) = Out of Range ### Number of calibration levels exceeded format ###

JW

00165

Response Factor Report 5973-B

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Mon Oct 19 08:41:26 2009
Response via : Initial Calibration

Calibration Files
0.1 =DC082.D 0.2 =DC083.D 0.5 =DC084.D
1.0 =DC085.D 2.0 =DC086.D 3.0 =DC087.D

		Compound	0.1	0.2	0.5	1.0	2.0	3.0	Avg	%RSD
39)	TM	Dibenz(a,h)anthrace	1.131	1.281	1.199	1.338	1.296	1.281		6.02
40)	TM	Benzo(g,h,i)perylen	1.230	1.315	1.263	1.359	1.290	1.254		5.85

(#) = Out of Range ### Number of calibration levels exceeded format ###

Evaluate Continuing Calibration Report

Data File : J:\ACQUDATA\5973B\DATA\101609\DC086.D Vial: 6
Acq On : 16 Oct 2009 1:41 pm Operator: J.Wu
Sample : SSTD020 Inst : 5973-B
Misc : 2.0/4.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Mon Oct 19 08:41:26 2009
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	IR	d4-1,4-Dichlorobenzene	1.000	1.000	0.0	100	0.00
2	TM	1,4-Dioxane	0.790	0.820	-3.8	100	0.00
3	TM	Pyridine	1.151	1.255	-9.0	100	0.00
4	IR	d8-Naphthalene	1.000	1.000	0.0	100	0.00
5	S	SURR4,NITROBENZENE-D5	0.325	0.360	-10.8	100	0.00
6	TM	Nitrobenzene	0.322	0.347	-7.8	100	0.00
7	TM	Naphthalene	1.044	1.092	-4.6	100	0.00
8	TM	2-Methylnaphthalene	0.682	0.742	-8.8	100	0.00
9	TM	1-Methylnaphthalene	0.661	0.687	-3.9	100	0.00
10	IR	d10-Acenaphthene	1.000	1.000	0.0	100	0.00
11	S	SURR5,2-FLUOROBIPHENYL	1.279	1.338	-4.6	100	0.00
12	TM	Acenaphthylene	1.783	1.893	-6.2	100	0.00
13	TM	Dimethyl phthalate	1.497	1.557	-4.0	100	0.00
14	TM	Acenaphthene	1.159	1.170	-0.9	100	0.00
15	TM	Dibenzofuran	1.629	1.727	-6.0	100	0.00
16	TM	Fluorene	1.286	1.341	-4.3	100	0.00
17	TM	Diethylphthalate	1.459	1.525	-4.5	100	0.00
18	IR	d10-Phenanthrene	1.000	1.000	0.0	100	0.00
19	TM	Hexachlorobenzene	0.265	0.268	-1.1	100	0.00
20	TM	Phenanthrene	1.105	1.113	-0.7	100	0.00
21	TM	Anthracene	1.079	1.110	-2.9	100	0.00
22	TM	Carbazole	0.780	0.852	-9.2	100	0.00
23	TM	Octachlorostyrene	0.068	0.059	13.2	100	0.00
24	TM	Di-n-butylphthalate	1.394	1.433	-2.8	100	0.00
25	TM	Fluoranthene	1.265	1.286	-1.7	100	0.00
26	IR	d12-Chrysene	1.000	1.000	0.0	100	0.00
27	TM	Pyrene	1.254	1.284	-2.4	100	0.00
28	S	SURR6,TERPHENYL-D14	0.824	0.873	-5.9	100	0.00
29	TM	Butyl benzyl phthalate	0.610	0.624	-2.3	100	0.00
30	TM	bis(2-Ethylhexyl)phthalate	0.787	0.814	-3.4	100	0.00
31	TM	Benzo(a)anthracene	1.089	1.116	-2.5	100	0.00
32	TM	Chrysene	1.114	1.149	-3.1	100	0.00
33	IR	d12-Perylene	1.000	1.000	0.0	100	0.00
34	TM	Di-n-octyl phthalate	1.670	1.698	-1.7	100	0.00
35	TM	Benzo(b)Fluoranthene	1.419	1.478	-4.2	100	0.00
36	TM	Benzo(k)fluoranthene	1.371	1.433	-4.5	100	0.00

(#) = Out of Range

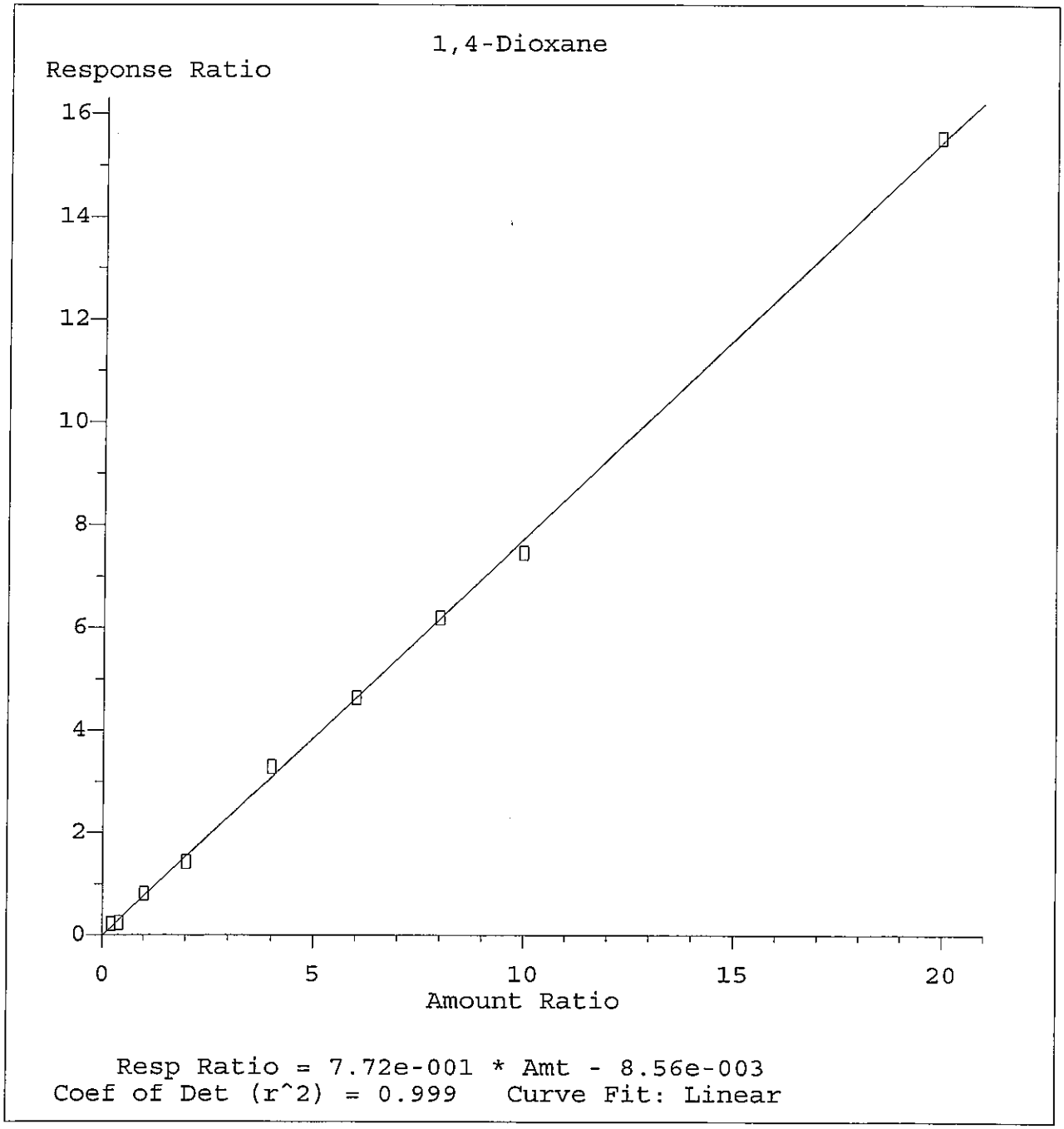
Evaluate Continuing Calibration Report

Data File : J:\ACQUDATA\5973B\DATA\101609\DC086.D Vial: 6
Acq On : 16 Oct 2009 1:41 pm Operator: J.Wu
Sample : SSTD020 Inst : 5973-B
Misc : 2.0/4.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P

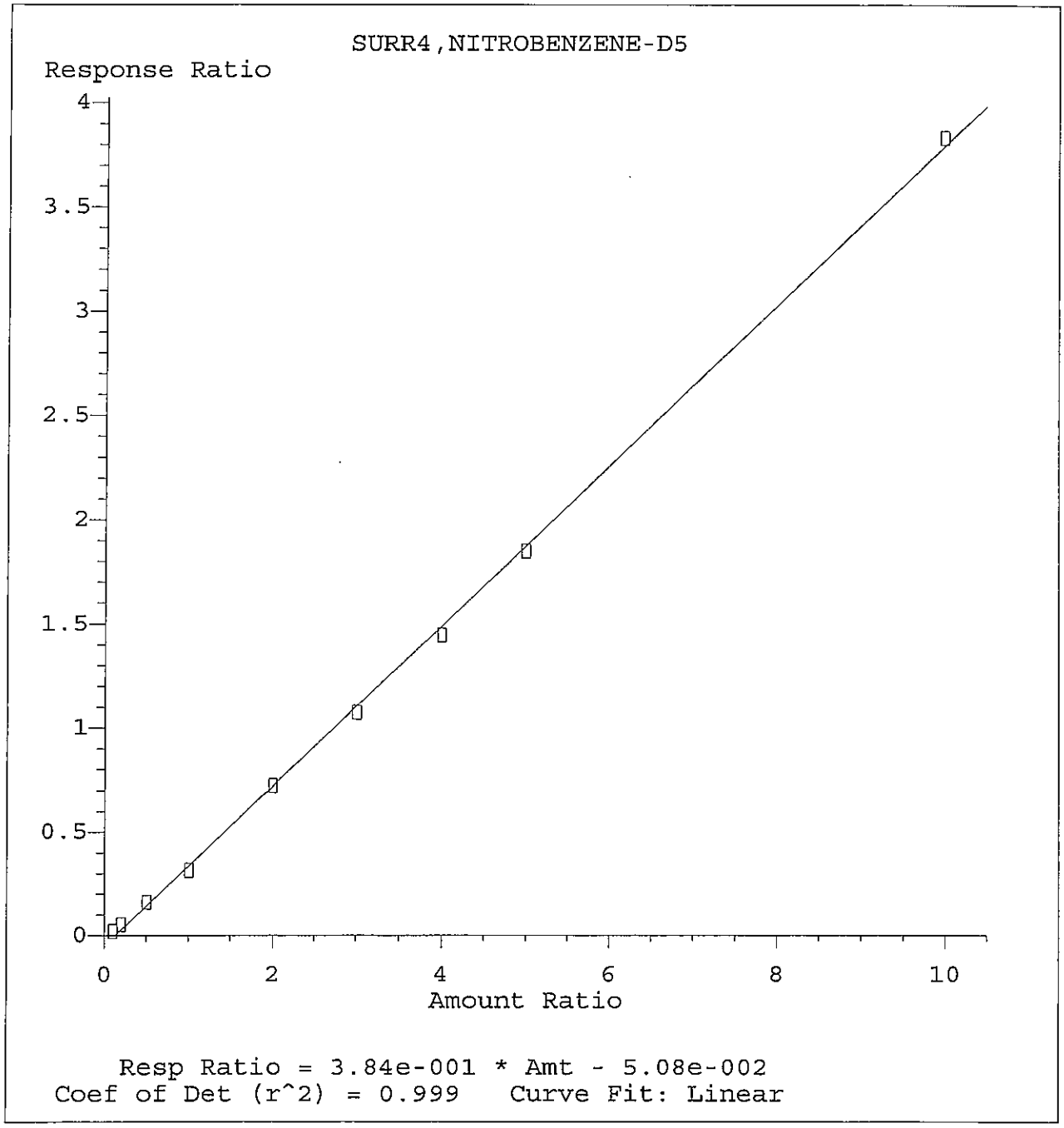
Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Mon Oct 19 08:41:26 2009
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
37	TM	Benzo(a)pyrene	1.243	1.304	-4.9	100	0.00
38	TM	Indeno(1,2,3-cd)Pyrene	1.505	1.599	-6.2	100	0.00
39	TM	Dibenz(a,h)anthracene	1.281	1.338	-4.4	100	0.00
40	TM	Benzo(g,h,i)perylene	1.254	1.359	-8.4	100	0.00



Method Name: J:\ACQUDATA\5973B\METHODS\LVI1016.M
Calibration Table Last Updated: Fri Oct 16 18:01:02 2009



Method Name: J:\ACQUDATA\5973B\METHODS\LVI1016.M
Calibration Table Last Updated: Fri Oct 16 18:01:56 2009

Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\5973B\DATA\101609\DC082.D Vial: 2
Acq On : 16 Oct 2009 10:47 am Operator: J.Wu
Sample : SSTD001 Inst : 5973-B
Misc : 0.1/0.2 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 16 15:31 2009 Quant Results File: LVI1016.RES

Quant Method : J:\ACQUDATA\5...\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Fri Oct 16 15:27:09 2009
Response via : Initial Calibration
DataAcq Meth : LVI1016

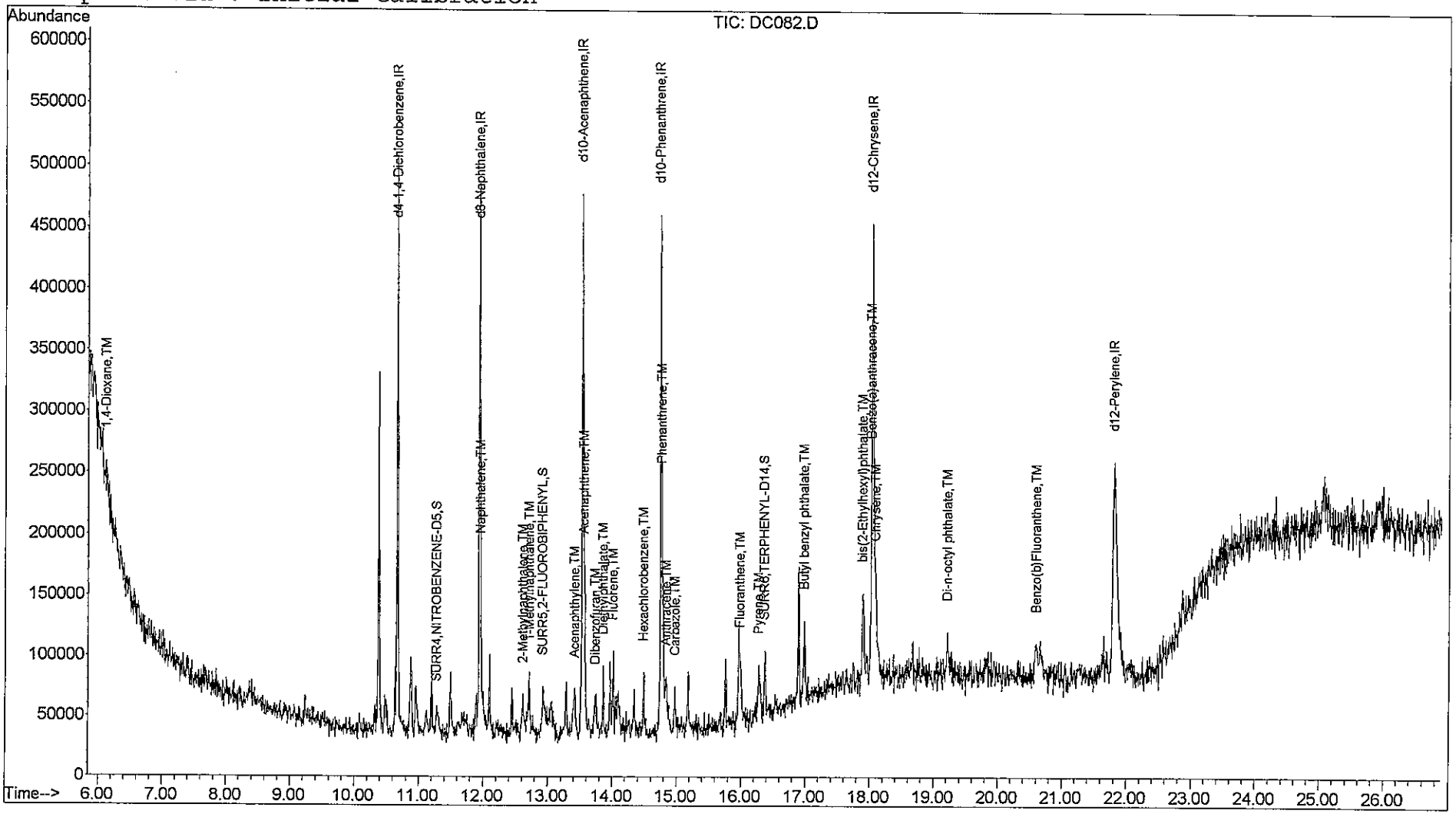
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) d4-1,4-Dichlorobenzene	10.66	152	82785	1.00	ppm	0.00
4) d8-Naphthalene	11.94	136	317002	1.00	ppm	0.00
10) d10-Acenaphthene	13.54	164	201017	1.00	ppm	0.01
18) d10-Phenanthrene	14.75	188	316658	1.00	ppm	0.01
26) d12-Chrysene	18.05	240	309946	1.00	ppm	0.02
33) d12-Perylene	21.81	264	253465m	1.00	ppm	0.00
System Monitoring Compounds						
5) SURR4,NITROBENZENE-D5	11.27	82	6139	0.06	ppm	0.02
Spiked Amount 2.000	Range 22 - 124		Recovery = 3.00%#			
11) SURR5,2-FLUOROBIPHENYL	12.92	172	24369m	0.09	ppm	0.03
Spiked Amount 2.000	Range 27 - 114		Recovery = 4.50%#			
28) SURR6,TERPHENYL-D14	16.37	244	23360	0.09	ppm	0.02
Spiked Amount 2.000	Range 23 - 139		Recovery = 4.50%#			
Target Compounds						Qvalue
2) 1,4-Dioxane	6.13	88	18225	0.23	ppm	81
7) Naphthalene	11.96	128	33444	0.10	ppm	94
8) 2-Methylnaphthalene	12.61	142	15045	0.07	ppm	86
9) 1-Methylnaphthalene	12.70	142	19222	0.10	ppm	89
12) Acenaphthylene	13.42	152	34492	0.09	ppm	79
14) Acenaphthene	13.56	153	27587	0.12	ppm	76
15) Dibenzofuran	13.73	168	31607	0.10	ppm	81
16) Fluorene	14.01	166	23292m	0.10	ppm	
17) Diethylphthalate	13.86	149	26920	0.09	ppm	92
19) Hexachlorobenzene	14.49	284	7781	0.10	ppm	91
20) Phenanthrene	14.77	178	35728	0.10	ppm	77
21) Anthracene	14.83	178	33473	0.10	ppm	85
22) Carbazole	14.97	167	20497	0.09	ppm	72
25) Fluoranthene	15.99	202	40594	0.10	ppm	89
27) Pyrene	16.27	202	44382	0.11	ppm	86
29) Butyl benzyl phthalate	16.98	149	23856	0.12	ppm	84
30) bis(2-Ethylhexyl)phthalate	17.89	149	48402	0.19	ppm	86
31) Benzo(a)anthracene	18.02	228	31570m	0.09	ppm	
32) Chrysene	18.10	228	35902	0.11	ppm	75
34) Di-n-octyl phthalate	19.22	149	31491	0.07	ppm	99
35) Benzo(b)Fluoranthene	20.60	252	34888	0.10	ppm	86

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : J:\ACQUDATA\5973B\DATA\101609\DC082.D Vial: 2
Acq On : 16 Oct 2009 10:47 am Operator: J.Wu
Sample : SSTD001 Inst : 5973-B
Misc : 0.1/0.2 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 16 15:31 2009 Quant Results File: LVI1016.RES

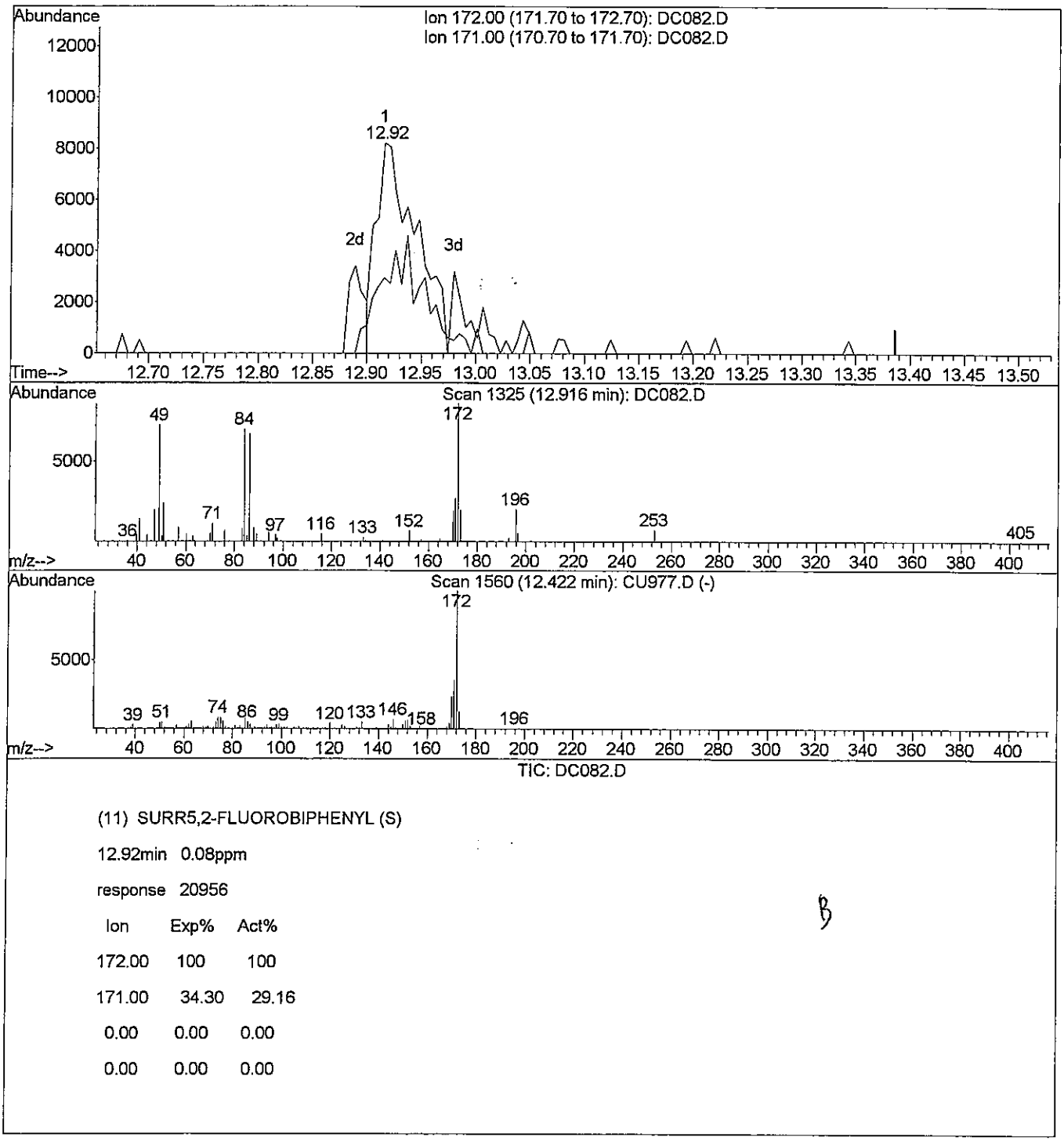
Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Mon Oct 19 08:41:26 2009
Response via : Initial Calibration



Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\101609\DC082.D Vial: 2
Acq On : 16 Oct 2009 10:47 am Operator: J.Wu
Sample : SSTD001 Inst : 5973-B
Misc : 0.1/0.2 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 16 15:27 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Fri Oct 16 15:27:09 2009
Response via : Multiple Level Calibration



(11) SURR5,2-FLUOROBIPHENYL (S)

12.92min 0.08ppm

response 20956

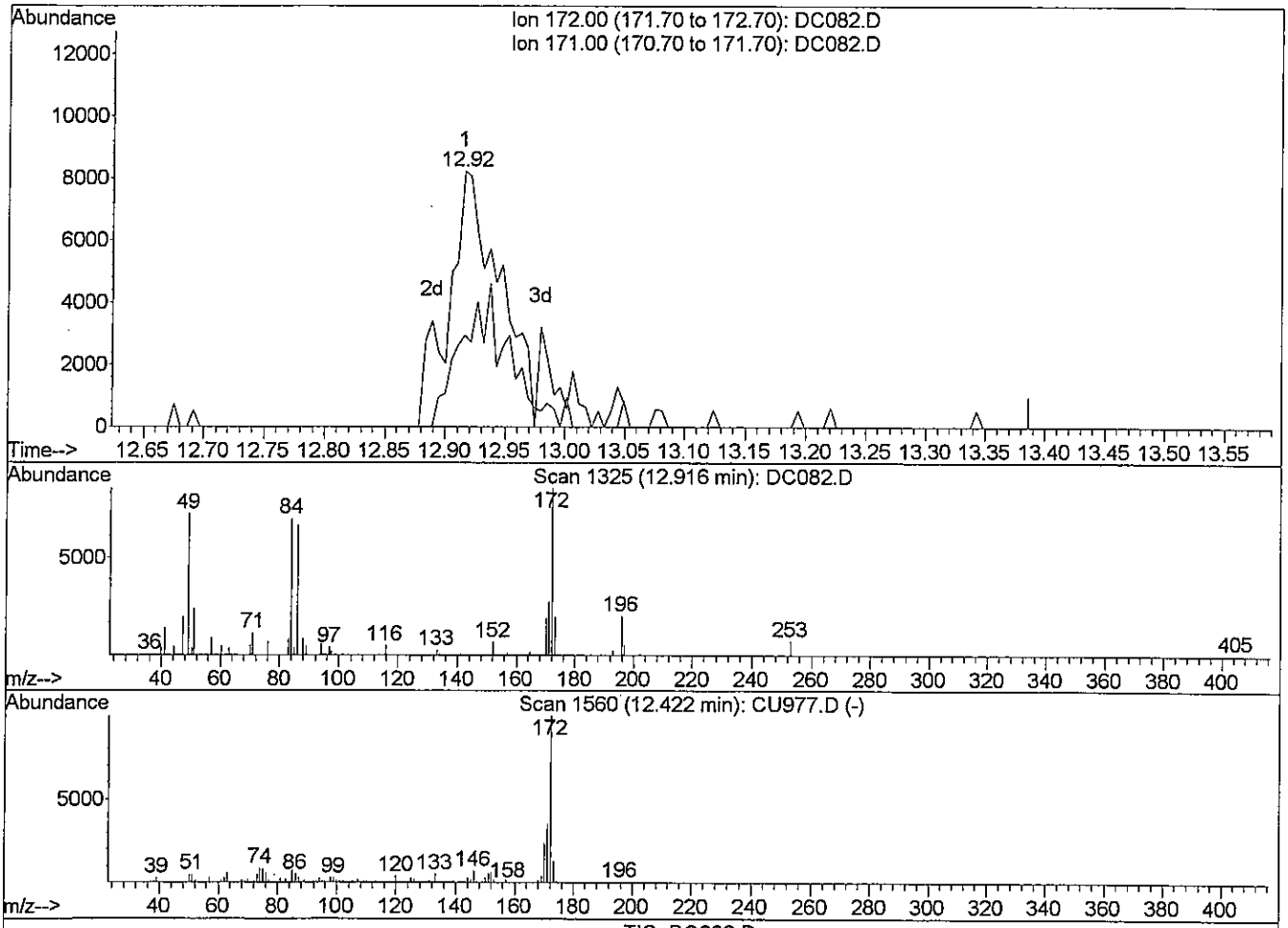
Ion	Exp%	Act%
172.00	100	100
171.00	34.30	29.16
0.00	0.00	0.00
0.00	0.00	0.00

B

Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\101609\DC082.D Vial: 2
Acq On : 16 Oct 2009 10:47 am Operator: J.Wu
Sample : SSTD001 Inst : 5973-B
Misc : 0.1/0.2 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 16 15:31 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Mon Oct 19 08:41:26 2009
Response via : Multiple Level Calibration



TIC: DC082.D

(11) SURR5,2-FLUOROBIPHENYL (S)

12.92min 0.09ppm m

response 24369

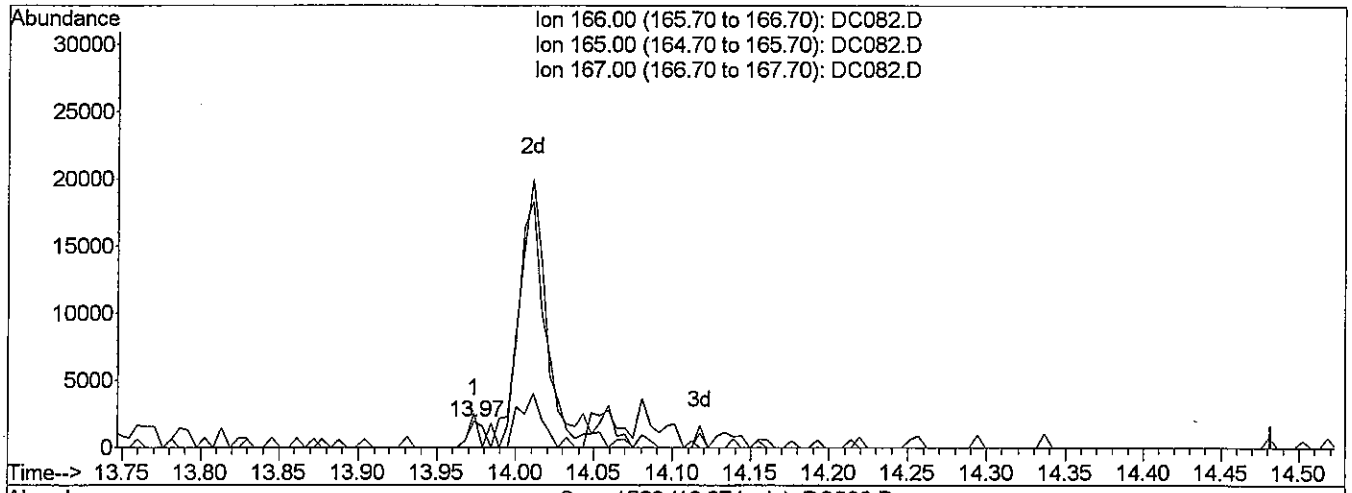
Ion	Exp%	Act%
172.00	100	100
171.00	34.30	35.76
0.00	0.00	0.00
0.00	0.00	0.00

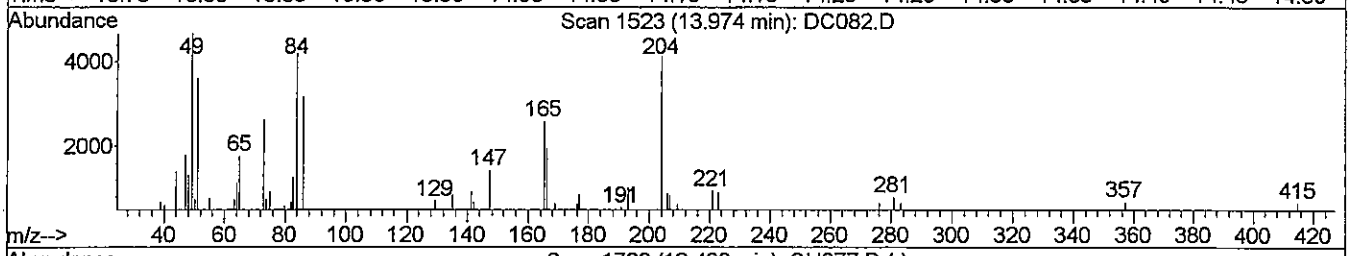
10/19/09

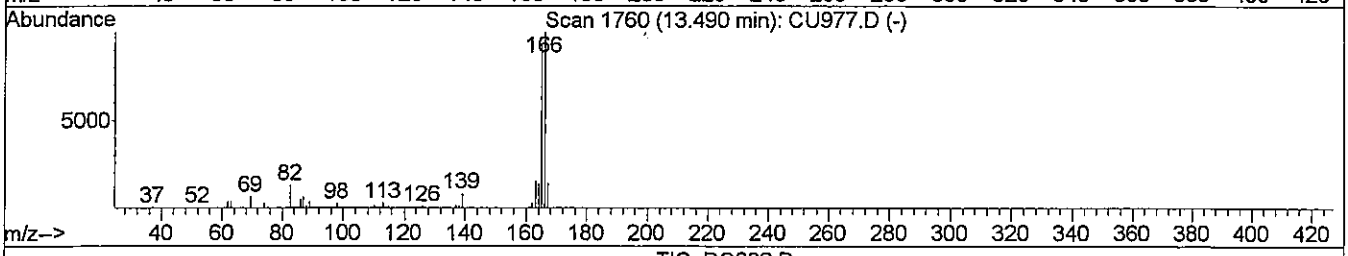
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\101609\DC082.D Vial: 2
Acq On : 16 Oct 2009 10:47 am Operator: J.Wu
Sample : SSTD001 Inst : 5973-B
Misc : 0.1/0.2 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 16 15:28 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Fri Oct 16 15:27:09 2009
Response via : Multiple Level Calibration







TIC: DC082.D

(16) Fluorene (TM)

13.97min 0.01ppm

response 1306

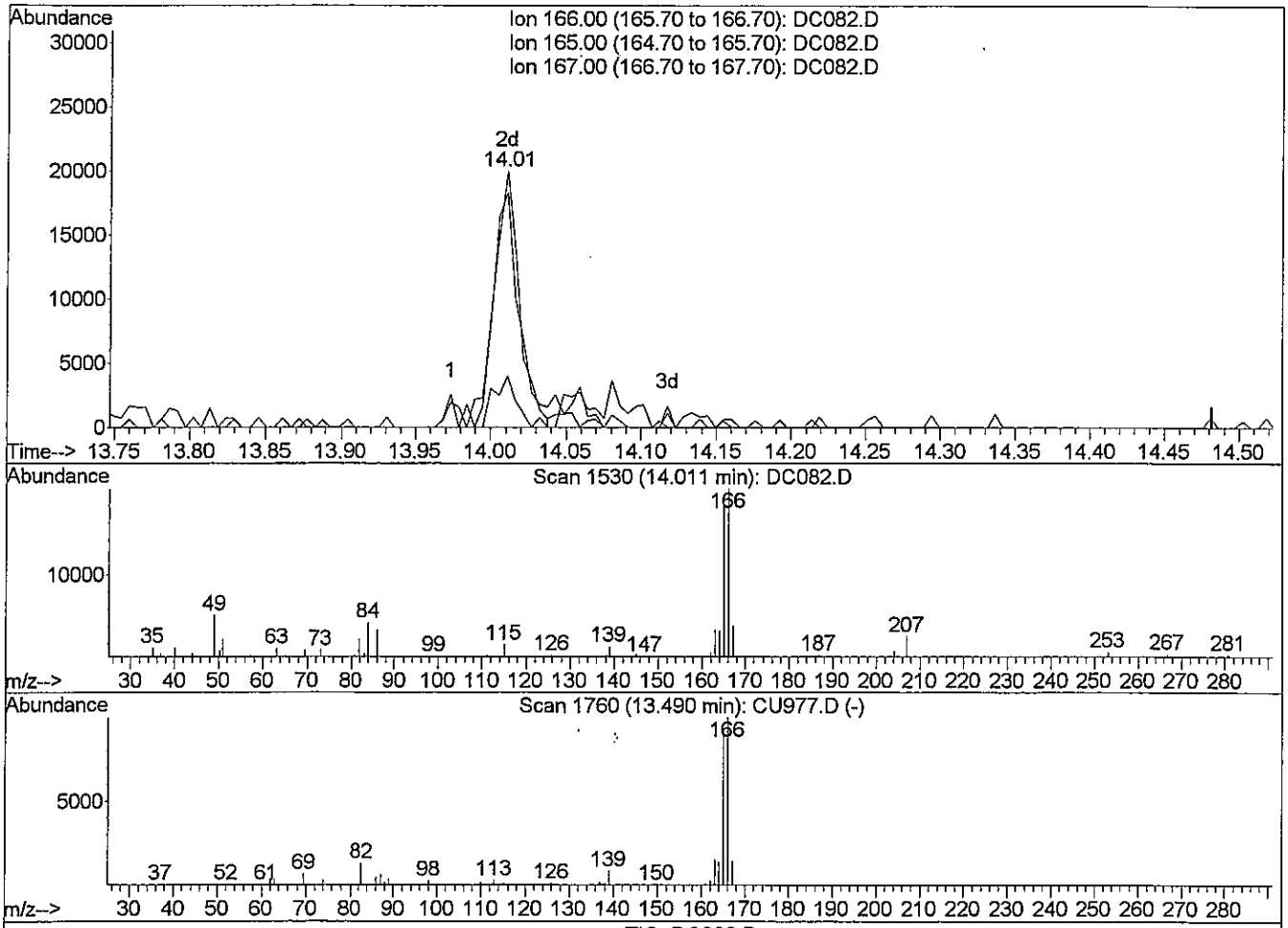
Ion	Exp%	Act%
166.00	100	100
165.00	91.90	86.72
167.00	13.10	0.00
0.00	0.00	0.00

B

Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\101609\DC082.D Vial: 2
Acq On : 16 Oct 2009 10:47 am Operator: J.Wu
Sample : SSTD001 Inst : 5973-B
Misc : 0.1/0.2 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 16 15:28 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Fri Oct 16 15:27:09 2009
Response via : Multiple Level Calibration



TIC: DC082.D

(16) Fluorene (TM)

14.01min 0.10ppm m

response 23292

Ion	Exp%	Act%
166.00	100	100
165.00	91.90	91.91
167.00	13.10	20.11
0.00	0.00	0.00

A JW 10/19/09

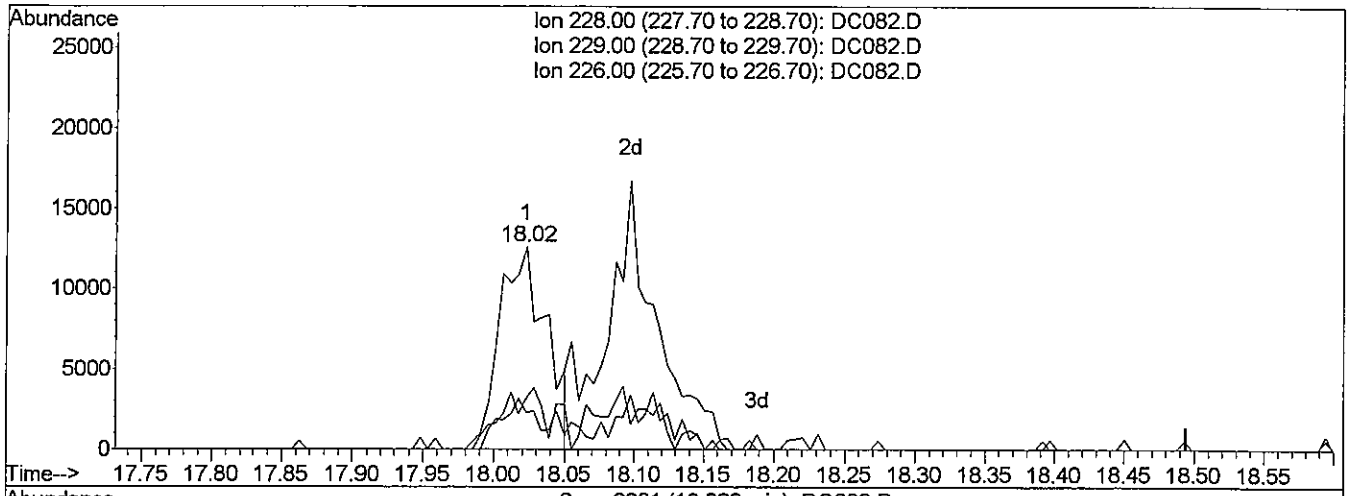
JW 10/19

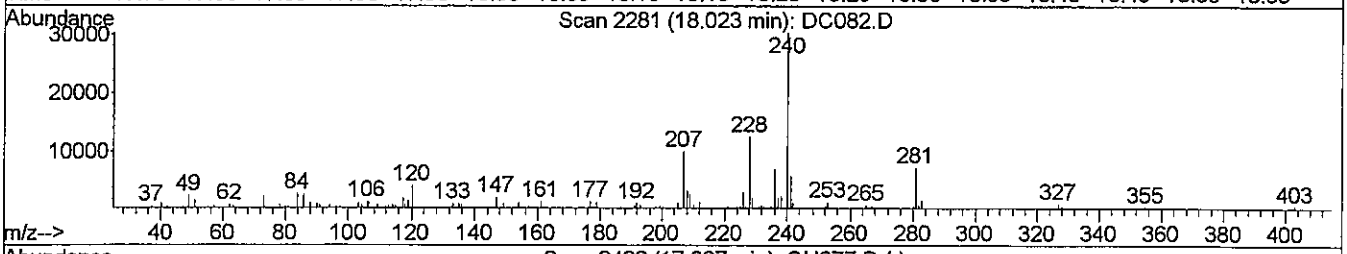
DC082.D LVI1016.M Fri Oct 16 15:28:49 2009

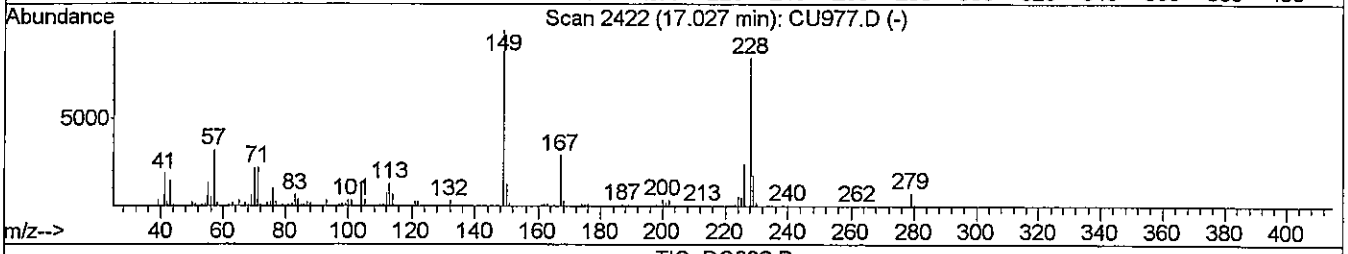
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\101609\DC082.D Vial: 2
Acq On : 16 Oct 2009 10:47 am Operator: J.Wu
Sample : SSTD001 Inst : 5973-B
Misc : 0.1/0.2 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 16 15:28 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Fri Oct 16 15:27:09 2009
Response via : Multiple Level Calibration







TIC: DC082.D

(31) Benzo(a)anthracene (TM)

18.02min 0.09ppm

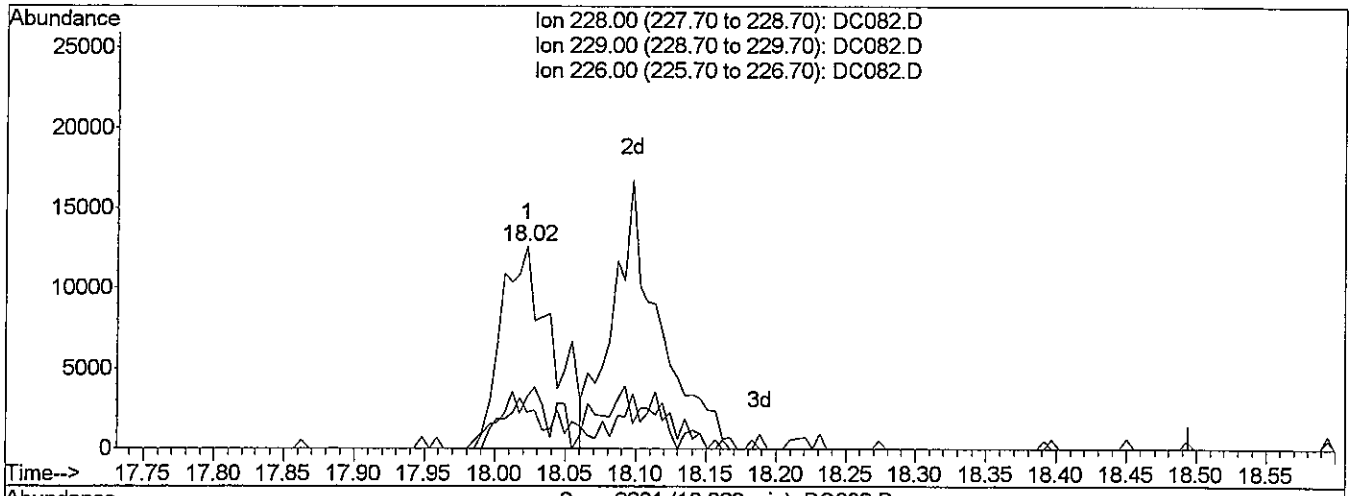
response 28441

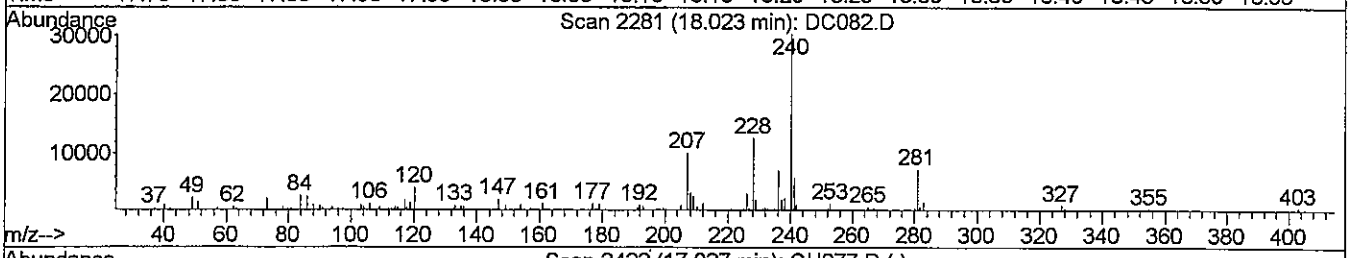
Ion	Exp%	Act%
228.00	100	100
229.00	20.60	17.86
226.00	27.40	18.17
0.00	0.00	0.00

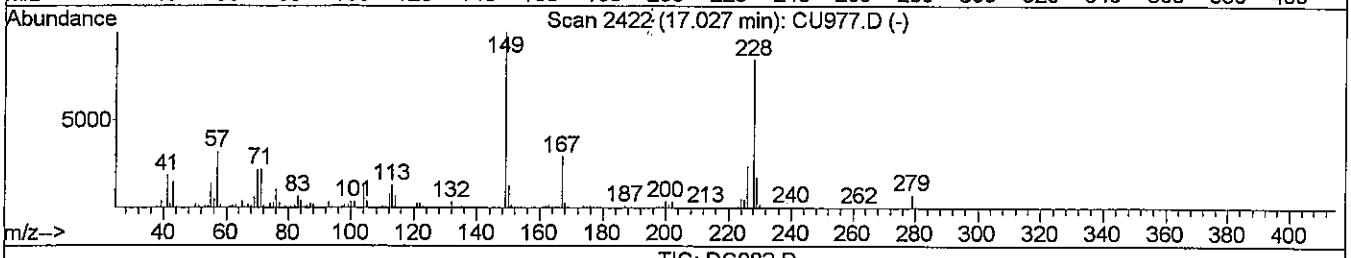
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\101609\DC082.D Vial: 2
Acq On : 16 Oct 2009 10:47 am Operator: J.Wu
Sample : SSTD001 Inst : 5973-B
Misc : 0.1/0.2 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 16 15:30 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Fri Oct 16 15:27:09 2009
Response via : Multiple Level Calibration







TIC: DC082.D

(31) Benzo(a)anthracene (TM)

18.02min 0.09ppm m

response 31570

Ion	Exp%	Act%
228.00	100	100
229.00	20.60	18.09
226.00	27.40	25.73
0.00	0.00	0.00

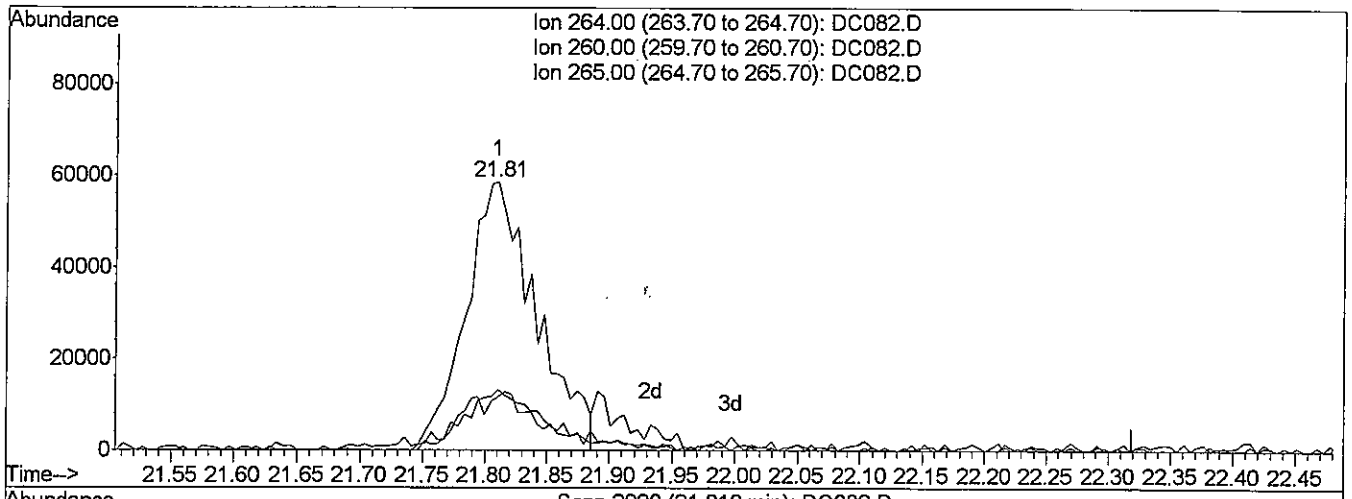
JWW 10/19/09 A JW 10/19/09

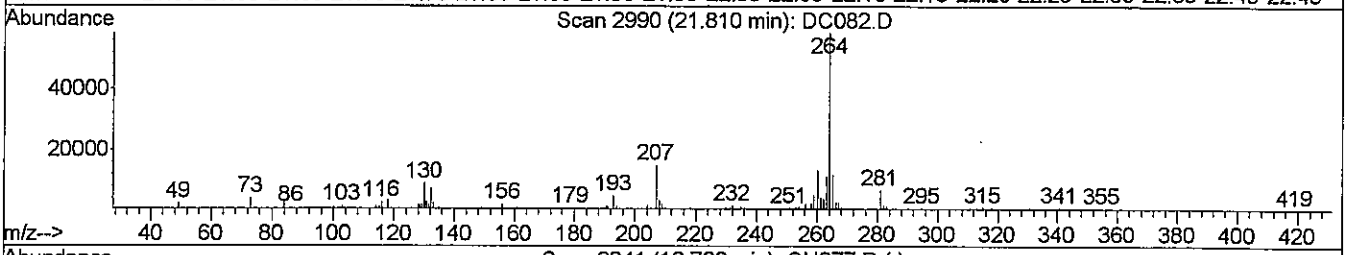
DC082.D LVI1016.M Fri Oct 16 15:30:49 2009

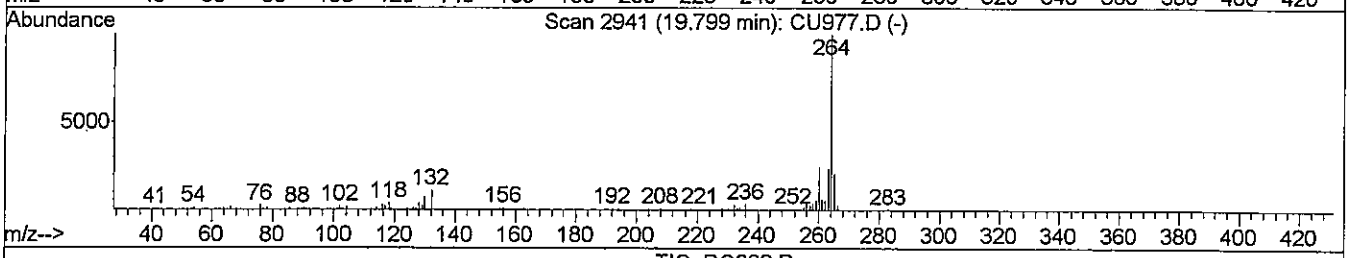
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\101609\DC082.D Vial: 2
Acq On : 16 Oct 2009 10:47 am Operator: J.Wu
Sample : SSTD001 Inst : 5973-B
Misc : 0.1/0.2 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 16 15:30 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Fri Oct 16 15:27:09 2009
Response via : Multiple Level Calibration







TIC: DC082.D

(33) d12-Perylene (IR)

21.81min 1.00ppm

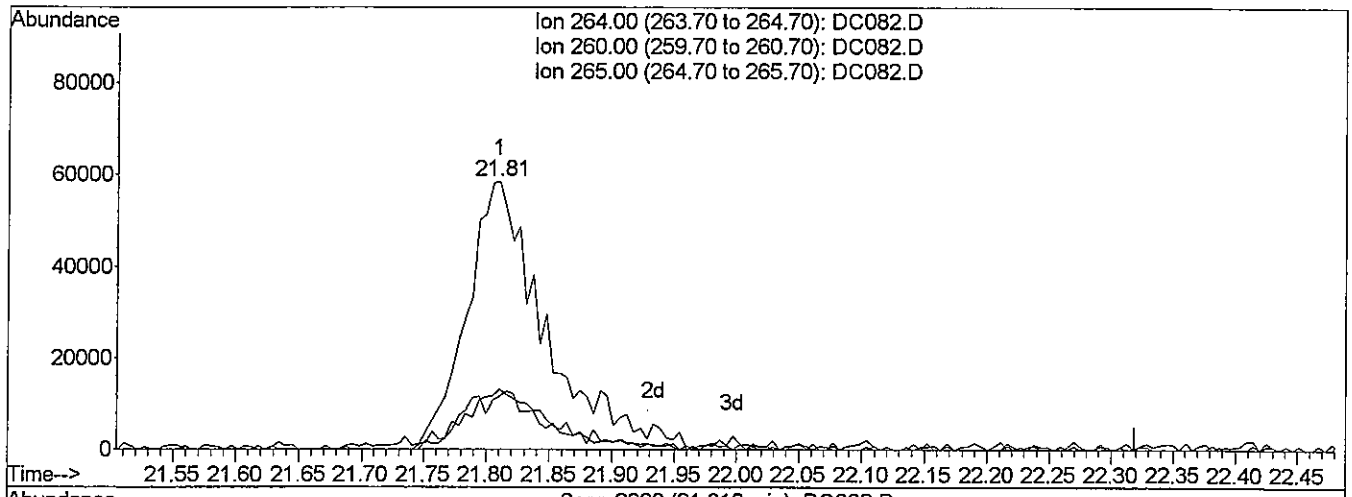
response 229411

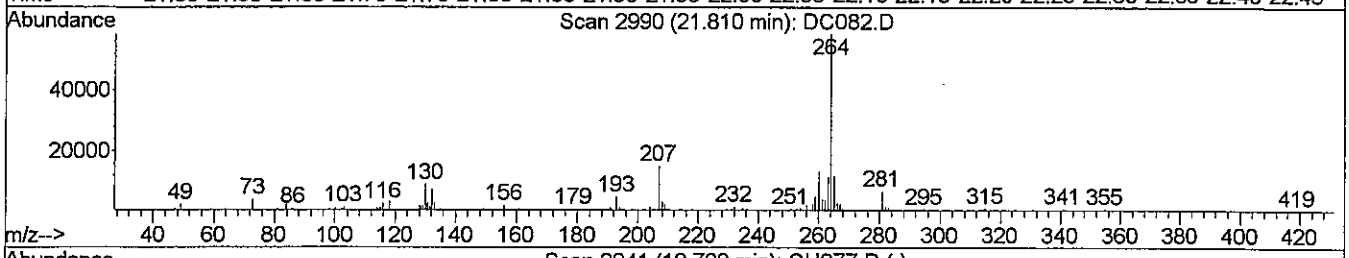
Ion	Exp%	Act%
264.00	100	100
260.00	17.80	22.56
265.00	18.30	14.86
0.00	0.00	0.00

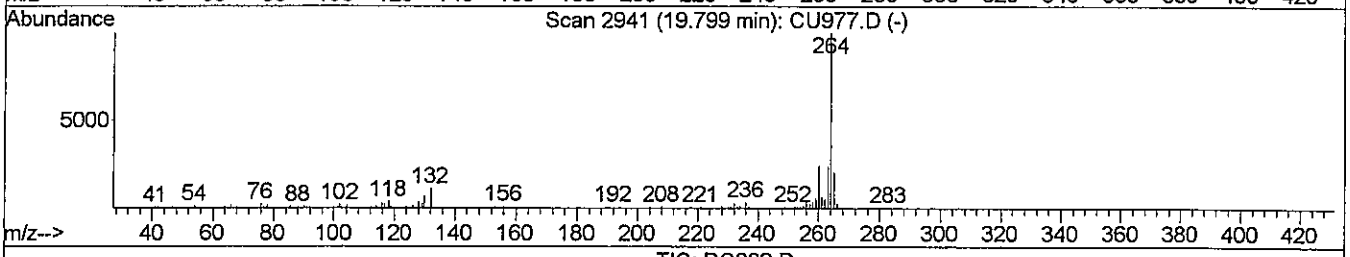
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\101609\DC082.D Vial: 2
Acq On : 16 Oct 2009 10:47 am Operator: J.Wu
Sample : SSTD001 Inst : 5973-B
Misc : 0.1/0.2 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 16 15:31 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Fri Oct 16 15:27:09 2009
Response via : Multiple Level Calibration







TIC: DC082.D

(33) d12-Perylene (IR)

21.81min 1.00ppm m

response 253465

Ion	Exp%	Act%
264.00	100	100
260.00	17.80	22.41
265.00	18.30	19.92
0.00	0.00	0.00

MW MH

AJW 10/19/09

Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\5973B\DATA\101609\DC083.D Vial: 3
Acq On : 16 Oct 2009 11:30 am Operator: J.Wu
Sample : SSTD002 Inst : 5973-B
Misc : 0.2/0.4 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 16 15:37 2009 Quant Results File: LVI1016.RES

Quant Method : J:\ACQUDATA\5...\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Fri Oct 16 15:33:05 2009
Response via : Initial Calibration
DataAcq Meth : LVI1016

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) d4-1,4-Dichlorobenzene	10.66	152	94430	1.00	ppm	0.00
4) d8-Naphthalene	11.93	136	357680	1.00	ppm	0.00
10) d10-Acenaphthene	13.53	164	226632	1.00	ppm	0.00
18) d10-Phenanthrene	14.74	188	335536	1.00	ppm	0.00
26) d12-Chrysene	18.04	240	353236	1.00	ppm	0.00
33) d12-Perylene	21.82	264	287788	1.00	ppm	0.00
System Monitoring Compounds						
5) SURR4,NITROBENZENE-D5	11.27	82	19021	0.17	ppm	0.02
Spiked Amount 2.000	Range 22 - 124		Recovery = 8.50%#			
11) SURR5,2-FLUOROBIPHENYL	12.91	172	52920	0.18	ppm	0.02
Spiked Amount 2.000	Range 27 - 114		Recovery = 9.00%#			
28) SURR6,TERPHENYL-D14	16.37	244	56470	0.20	ppm	0.02
Spiked Amount 2.000	Range 23 - 139		Recovery = 10.00%#			
Target Compounds						Qvalue
2) 1,4-Dioxane	6.14	88	22873	0.26	ppm	80
3) Pyridine	6.97	79	12703	0.10	ppm	80
6) Nitrobenzene	11.29	77	16947	0.13	ppm	95
7) Naphthalene	11.96	128	73621	0.20	ppm	90
8) 2-Methylnaphthalene	12.60	142	48911m JW	0.21	ppm	
9) 1-Methylnaphthalene	12.70	142	50777	0.23	ppm	97
12) Acenaphthylene	13.41	152	75950	0.18	ppm	96
13) Dimethyl phthalate	13.27	163	65297	0.19	ppm	99
14) Acenaphthene	13.56	153	50769	0.19	ppm	81
15) Dibenzofuran	13.72	168	69126	0.19	ppm	98
16) Fluorene	14.00	166	58591	0.21	ppm	71
17) Diethylphthalate	13.85	149	64447	0.19	ppm	98
19) Hexachlorobenzene	14.48	284	17802	0.22	ppm	94
20) Phenanthrene	14.77	178	80782	0.21	ppm	94
21) Anthracene	14.82	178	66581	0.18	ppm	93
22) Carbazole	14.95	167	53761	0.23	ppm	95
23) Octachlorostyrene	15.76	378	4002m JW	0.18	ppm	
24) Di-n-butylphthalate	15.17	149	103768m JW	0.21	ppm	
25) Fluoranthene	15.98	202	82960	0.19	ppm	96
27) Pyrene	16.27	202	87596	0.19	ppm	96
29) Butyl benzyl phthalate	16.97	149	39084	0.17	ppm	94
30) bis(2-Ethylhexyl)phthalate	17.89	149	99685	0.34	ppm	90
31) Benzo(a)anthracene	18.01	228	74327	0.19	ppm	94
32) Chrysene	18.09	228	77701	0.20	ppm	95
34) Di-n-octyl phthalate	19.22	149	73723	0.14	ppm	100
35) Benzo(b)Fluoranthene	20.59	252	76223	0.18	ppm	85

(#) = qualifier out of range (m) = manual integration
DC083.D LVI1016.M Mon Oct 19 09:03:51 2009 JW

00181

Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\5973B\DATA\101609\DC083.D Vial: 3
Acq On : 16 Oct 2009 11:30 am Operator: J.Wu
Sample : SSTD002 Inst : 5973-B
Misc : 0.2/0.4 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 16 15:37 2009 Quant Results File: LVI1016.RES

Quant Method : J:\ACQUDATA\5...\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Fri Oct 16 15:33:05 2009
Response via : Initial Calibration
DataAcq Meth : LVI1016

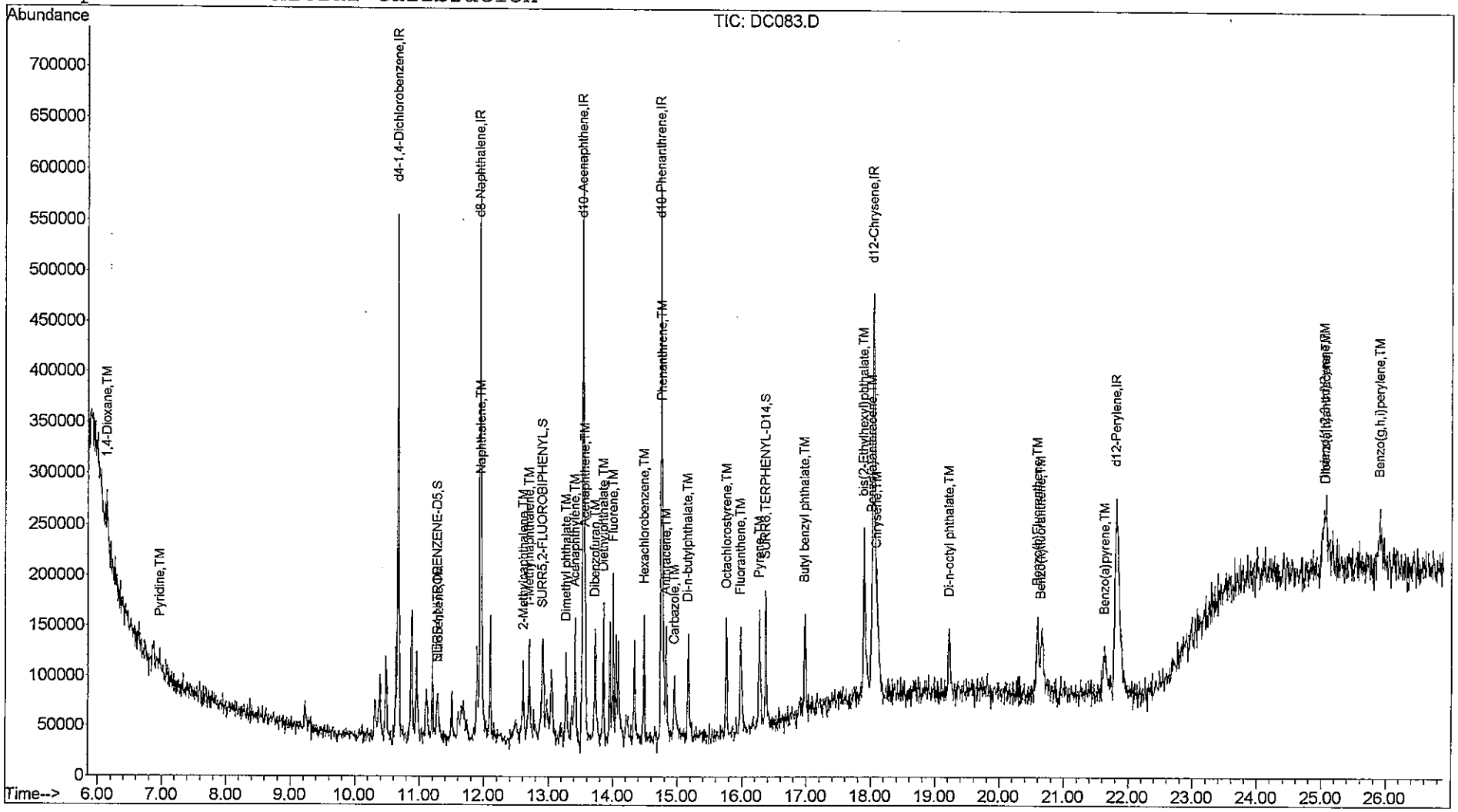
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
36)	Benzo(k)fluoranthene	20.64	252	79087m	0.19	ppm	
37)	Benzo(a)pyrene	21.63	252	61790m	0.17	ppm	
38)	Indeno(1,2,3-cd)Pyrene	25.04	276	78475m	0.18	ppm	
39)	Dibenz(a,h)anthracene	25.06	278	65097m	0.18	ppm	
40)	Benzo(g,h,i)perylene	25.90	276	70780	0.19	ppm	85

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : J:\ACQUDATA\5973B\DATA\101609\DC083.D Vial: 3
Acq On : 16 Oct 2009 11:30 am Operator: J.Wu
Sample : SSTD002 Inst : 5973-B
Misc : 0.2/0.4 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 16 15:37 2009 Quant Results File: LVI1016.RES

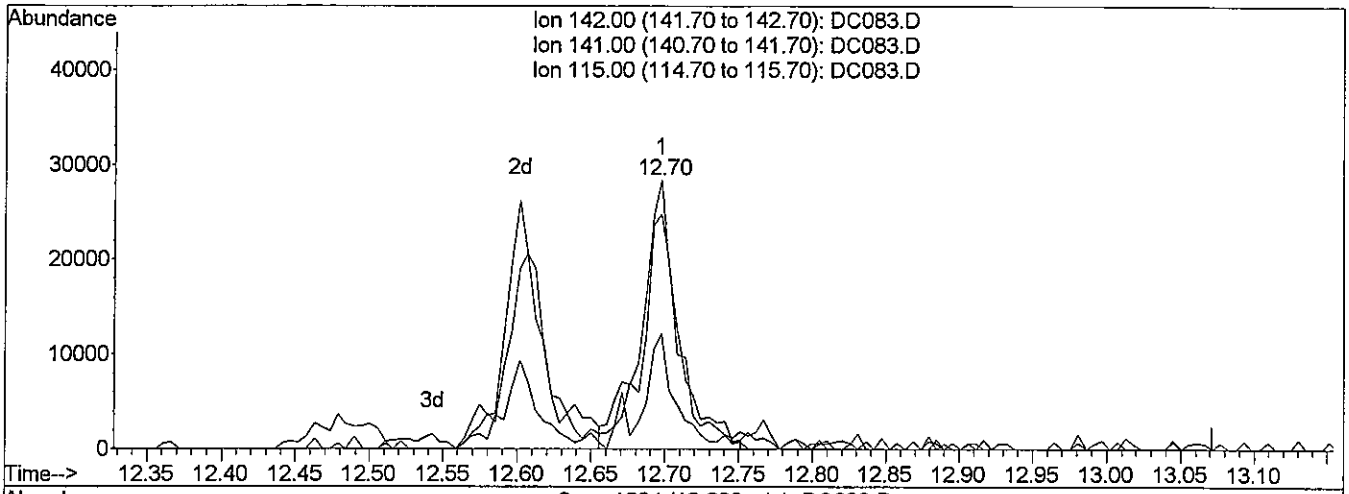
Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Mon Oct 19 08:41:26 2009
Response via : Initial Calibration

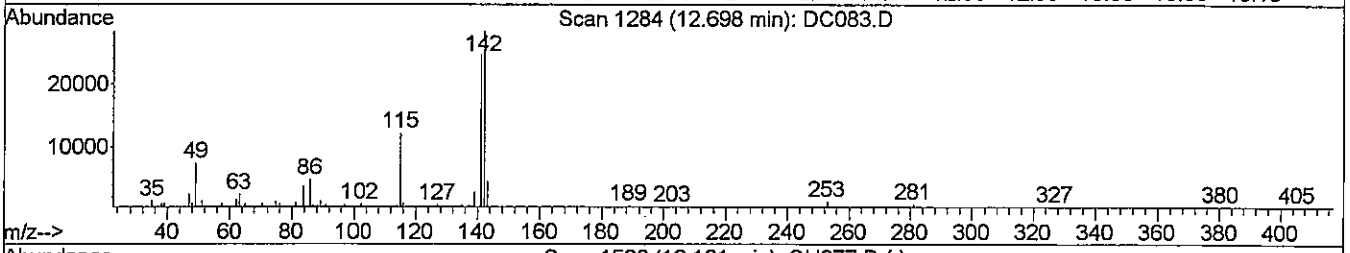


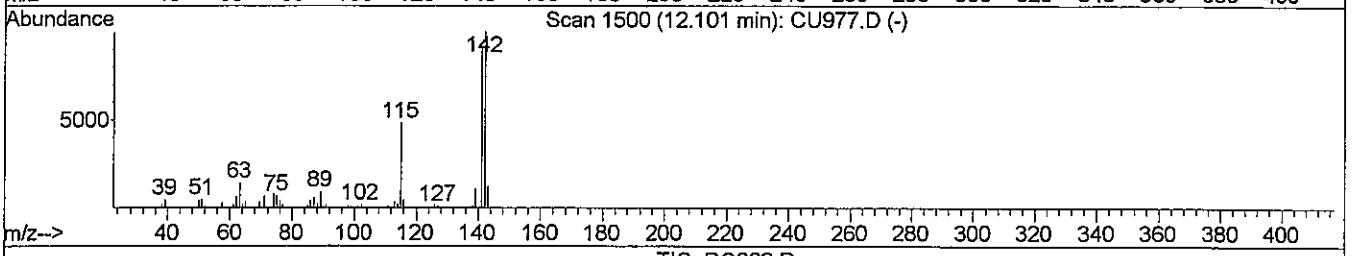
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\101609\DC083.D Vial: 3
Acq On : 16 Oct 2009 11:30 am Operator: J.Wu
Sample : SSTD002 Inst : 5973-B
Misc : 0.2/0.4 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 16 15:33 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Fri Oct 16 15:33:05 2009
Response via : Multiple Level Calibration







TIC: DC083.D

(8) 2-Methylnaphthalene (TM)

12.70min 0.22ppm

response 50777

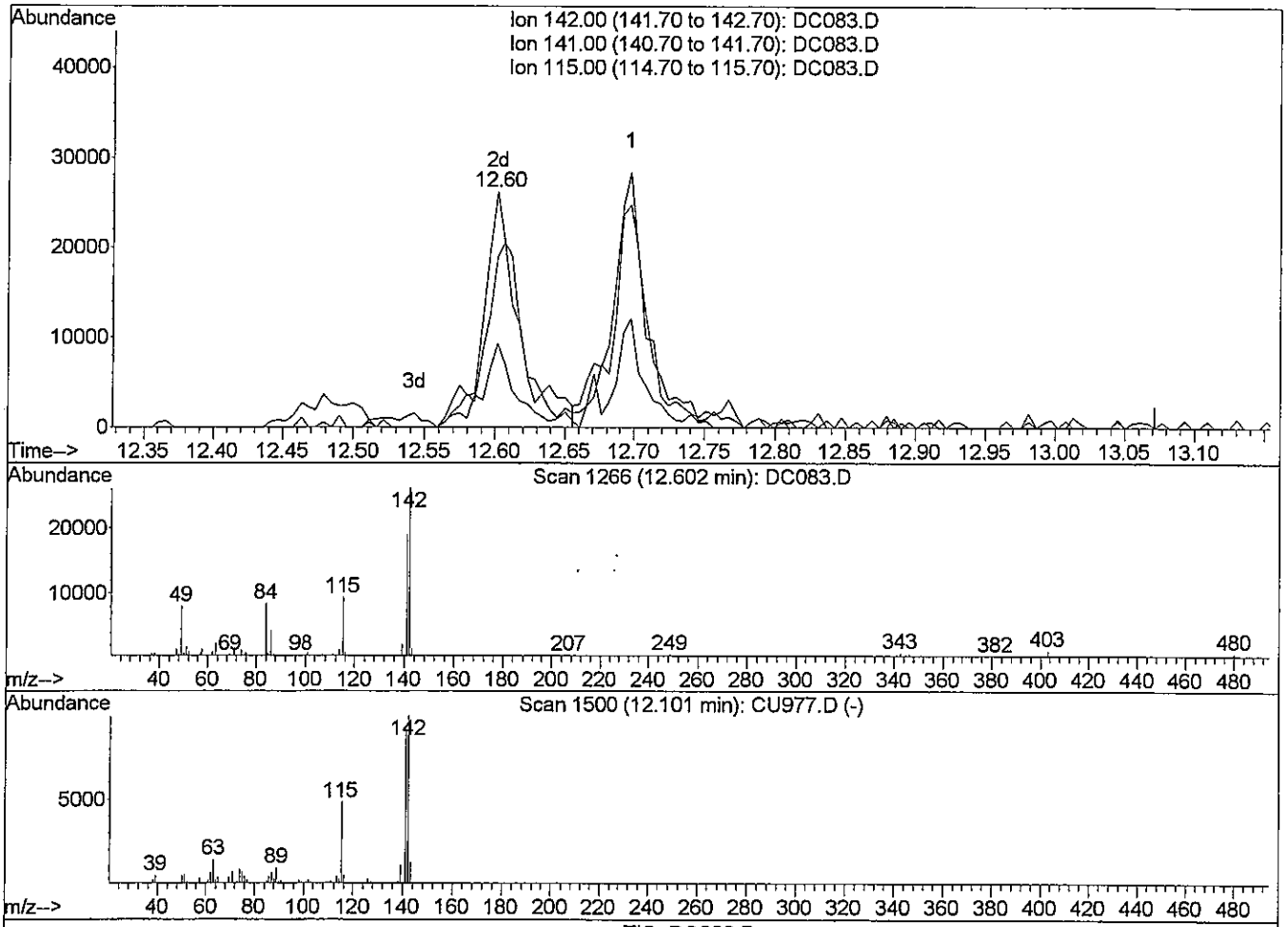
Ion	Exp%	Act%
142.00	100	100
141.00	93.70	86.13
115.00	41.60	42.88
0.00	0.00	0.00

DC083.D LVI1016.M Fri Oct 16 15:34:03 2009

Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\101609\DC083.D Vial: 3
Acq On : 16 Oct 2009 11:30 am Operator: J.Wu
Sample : SSTD002 Inst : 5973-B
Misc : 0.2/0.4 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 16 15:34 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Fri Oct 16 15:33:05 2009
Response via : Multiple Level Calibration



TIC: DC083.D

(8) 2-Methylnaphthalene (TM)

12.60min 0.21ppm m

response 48911

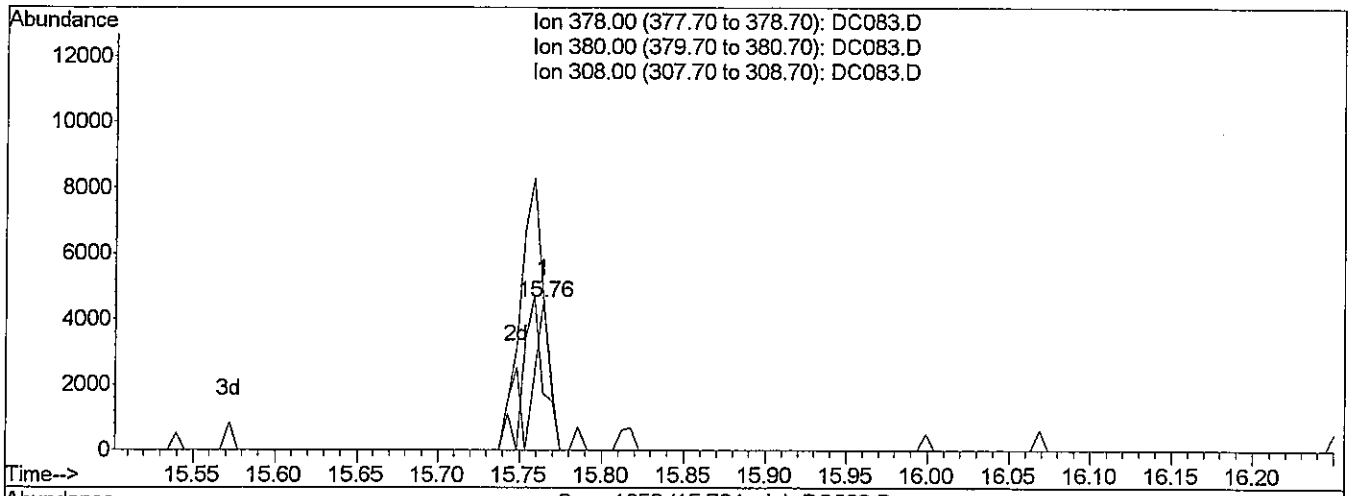
Ion	Exp%	Act%
142.00	100	100
141.00	93.70	72.58#
115.00	41.60	35.68
0.00	0.00	0.00

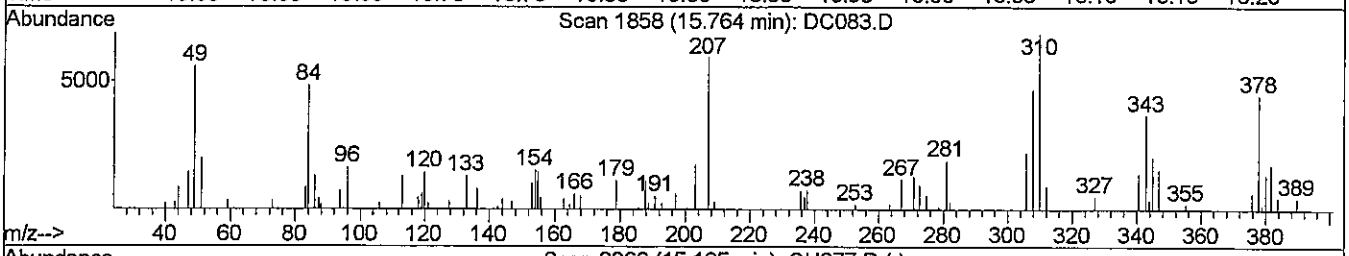
VMW 10/19/09 AW 10/19/09

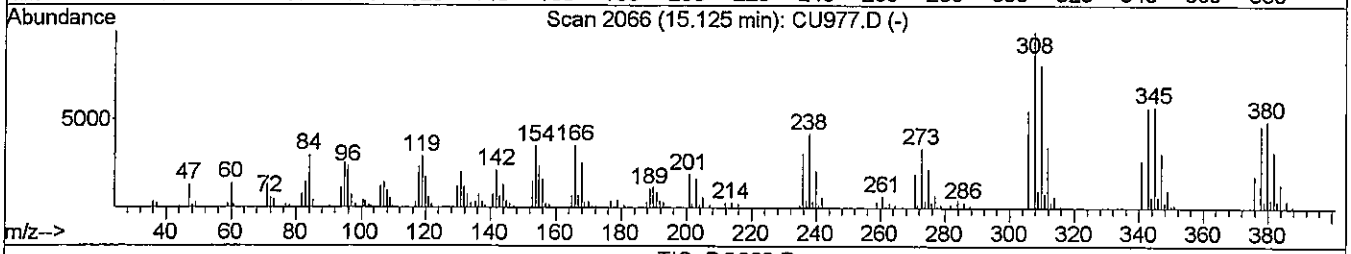
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\101609\DC083.D Vial: 3
Acq On : 16 Oct 2009 11:30 am Operator: J.Wu
Sample : SSTD002 Inst : 5973-B
Misc : 0.2/0.4 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 16 15:34 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Fri Oct 16 15:33:05 2009
Response via : Multiple Level Calibration







TIC: DC083.D

(23) Octachlorostyrene (TM)

15.76min 0.12ppm

response 2711

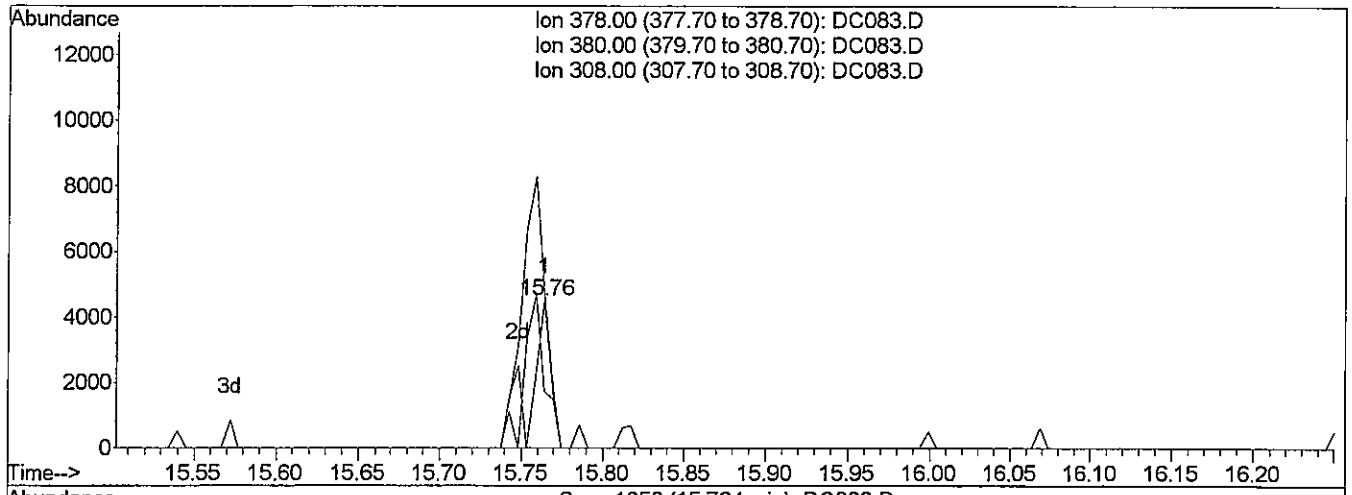
Ion	Exp%	Act%
378.00	100	100
380.00	104.20	1.53#
308.00	154.00	26.99#
0.00	0.00	0.00

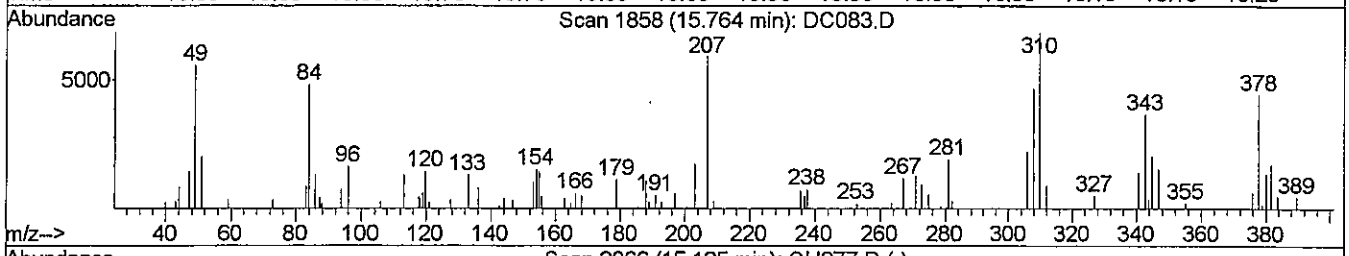
B

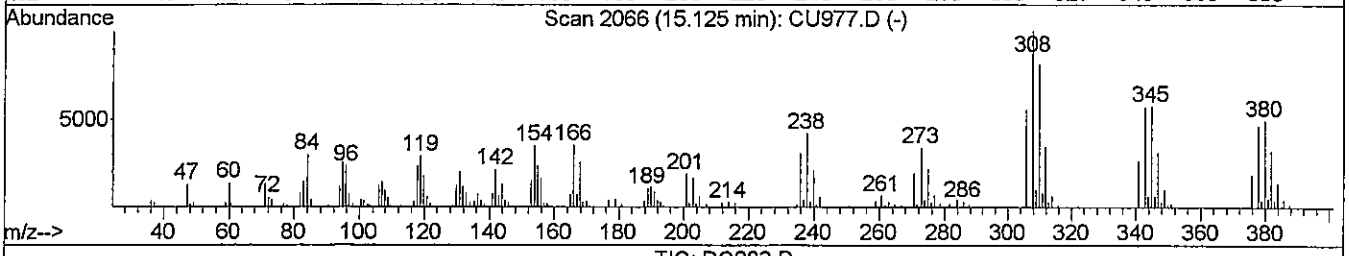
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\101609\DC083.D Vial: 3
Acq On : 16 Oct 2009 11:30 am Operator: J.Wu
Sample : SSTD002 Inst : 5973-B
Misc : 0.2/0.4 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 16 15:35 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Fri Oct 16 15:33:05 2009
Response via : Multiple Level Calibration







TIC: DC083.D

(23) Octachlorostyrene (TM)

15.76min 0.18ppm m

response 4002

Ion	Exp%	Act%
378.00	100	100
380.00	104.20	38.43#
308.00	154.00	104.59#
0.00	0.00	0.00

10/19/09

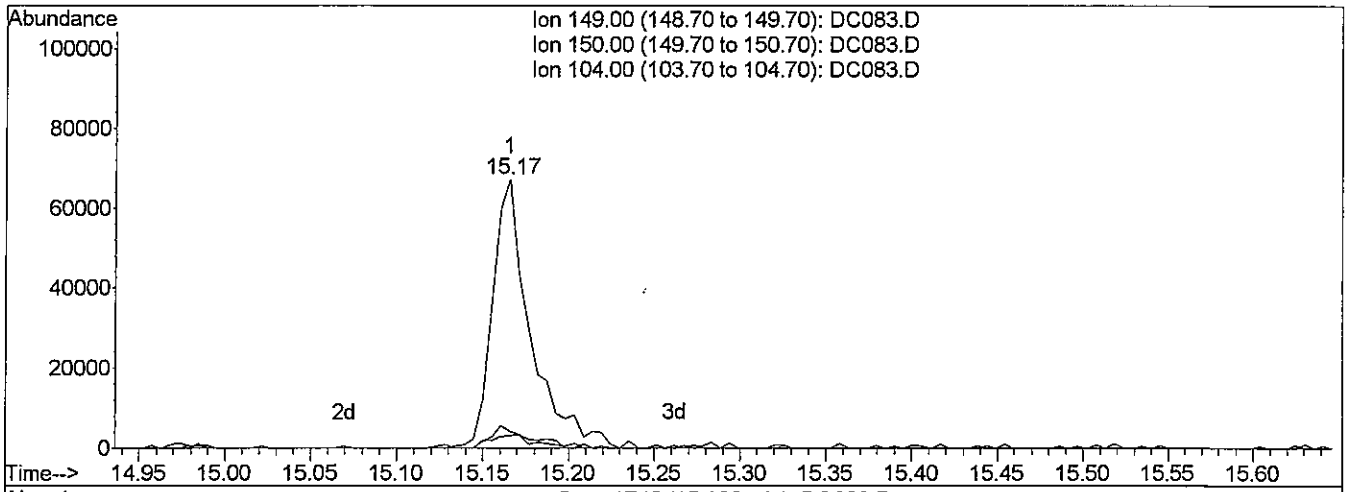
DC083.D LVI1016.M Fri Oct 16 15:35:16 2009

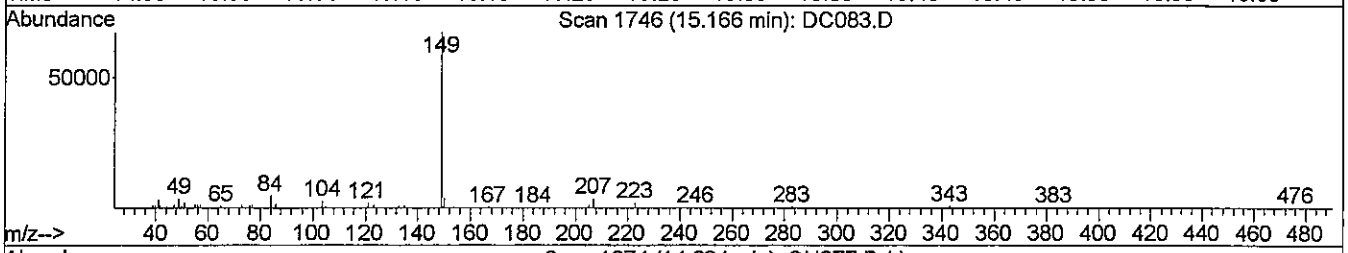
00187

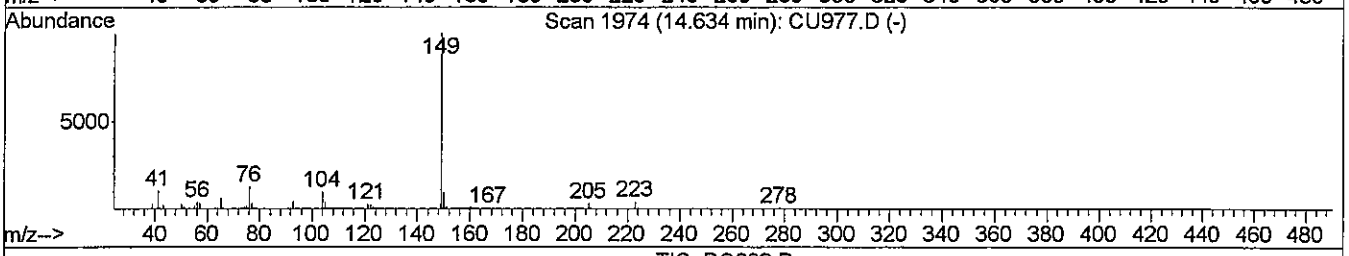
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\101609\DC083.D Vial: 3
Acq On : 16 Oct 2009 11:30 am Operator: J.Wu
Sample : SSTD002 Inst : 5973-B
Misc : 0.2/0.4 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 16 15:35 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Fri Oct 16 15:33:05 2009
Response via : Multiple Level Calibration







TIC: DC083.D

(24) Di-n-butylphthalate (TM)

15.17min 0.21ppm

response 103768

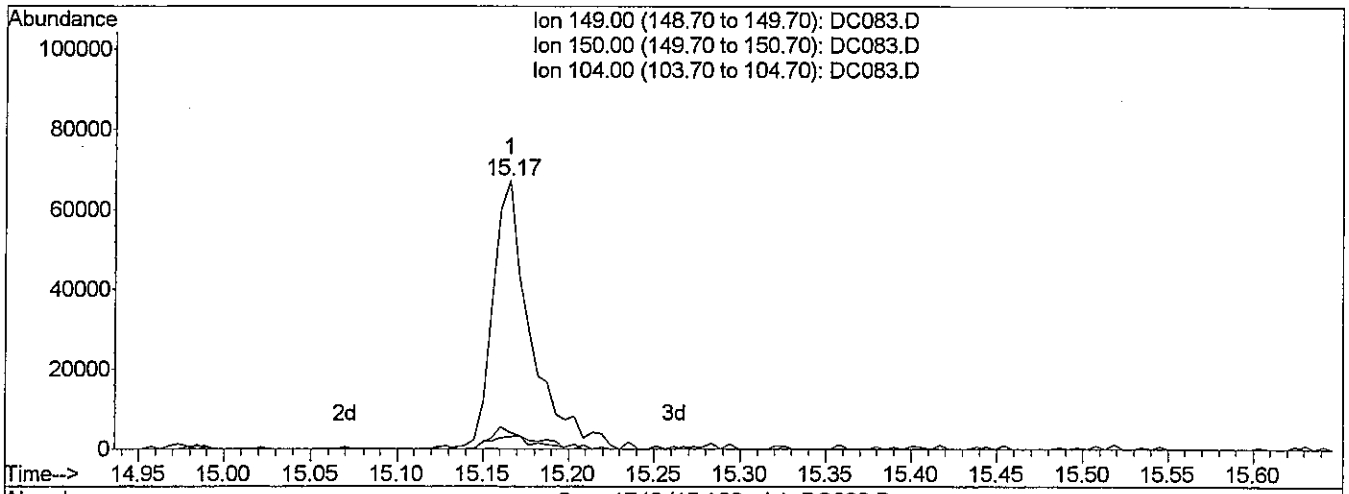
Ion	Exp%	Act%
149.00	100	100
150.00	9.30	5.83#
104.00	5.00	4.51
0.00	0.00	0.00

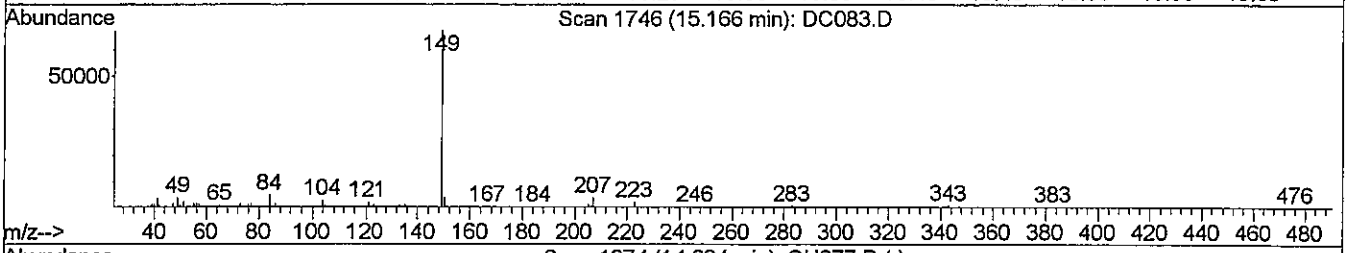
DC083.D LVI1016.M Fri Oct 16 15:35:27 2009

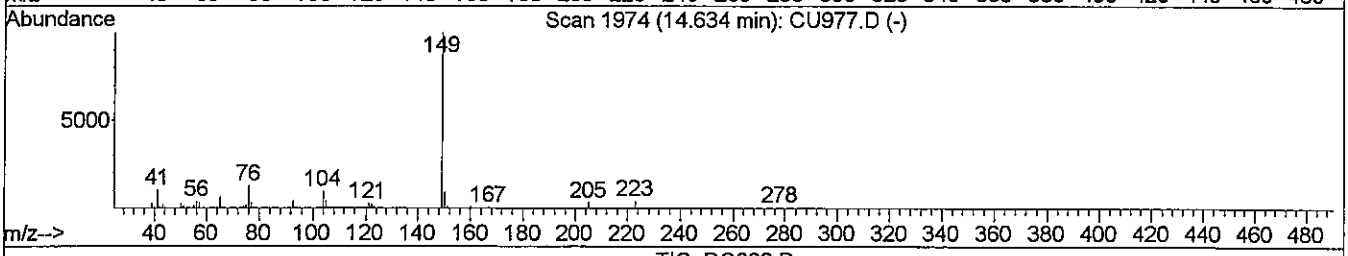
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\101609\DC083.D Vial: 3
Acq On : 16 Oct 2009 11:30 am Operator: J.Wu
Sample : SSTD002 Inst : 5973-B
Misc : 0.2/0.4 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 16 15:35 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Fri Oct 16 15:33:05 2009
Response via : Multiple Level Calibration







TIC: DC083.D

(24) Di-n-butylphthalate (TM)

15.17min 0.21ppm m

response 103768

Ion	Exp%	Act%
149.00	100	100
150.00	9.30	6.20#
104.00	5.00	4.51
0.00	0.00	0.00

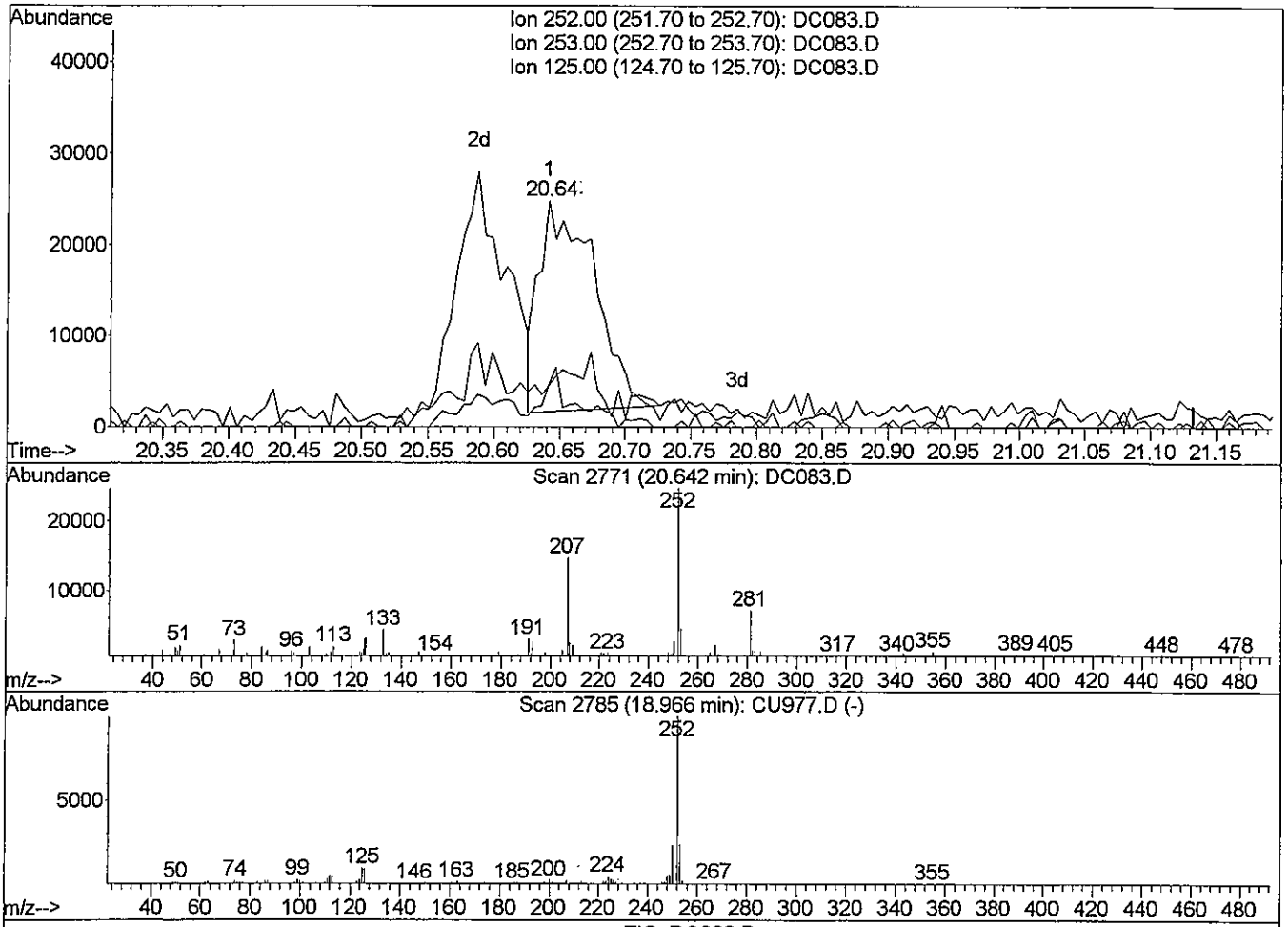
MW 10/19/09

DC083.D LVI1016.M Fri Oct 16 15:35:34 2009

Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\101609\DC083.D Vial: 3
Acq On : 16 Oct 2009 11:30 am Operator: J.Wu
Sample : SSTD002 Inst : 5973-B
Misc : 0.2/0.4 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 16 15:35 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Fri Oct 16 15:33:05 2009
Response via : Multiple Level Calibration



TIC: DC083.D

(36) Benzo(k)fluoranthene (TM)

20.64min 0.16ppm

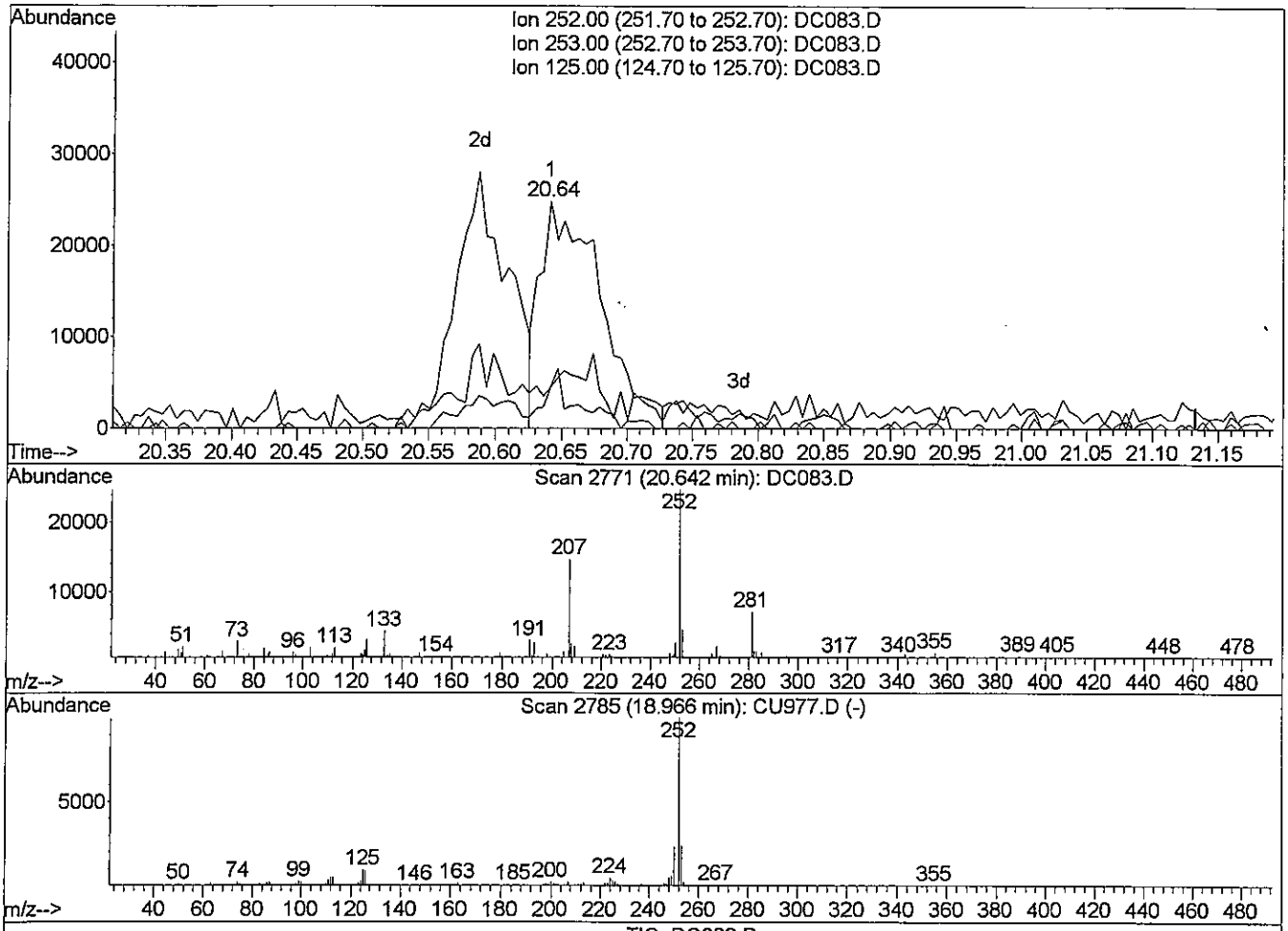
response 67251

Ion	Exp%	Act%
252.00	100	100
253.00	25.10	11.79
125.00	9.70	21.46
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\101609\DC083.D Vial: 3
Acq On : 16 Oct 2009 11:30 am Operator: J.Wu
Sample : SSTD002 Inst : 5973-B
Misc : 0.2/0.4 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 16 15:36 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Fri Oct 16 15:33:05 2009
Response via : Multiple Level Calibration



TIC: DC083.D

(36) Benzo(k)fluoranthene (TM)

20.64min 0.19ppm m

response 79087

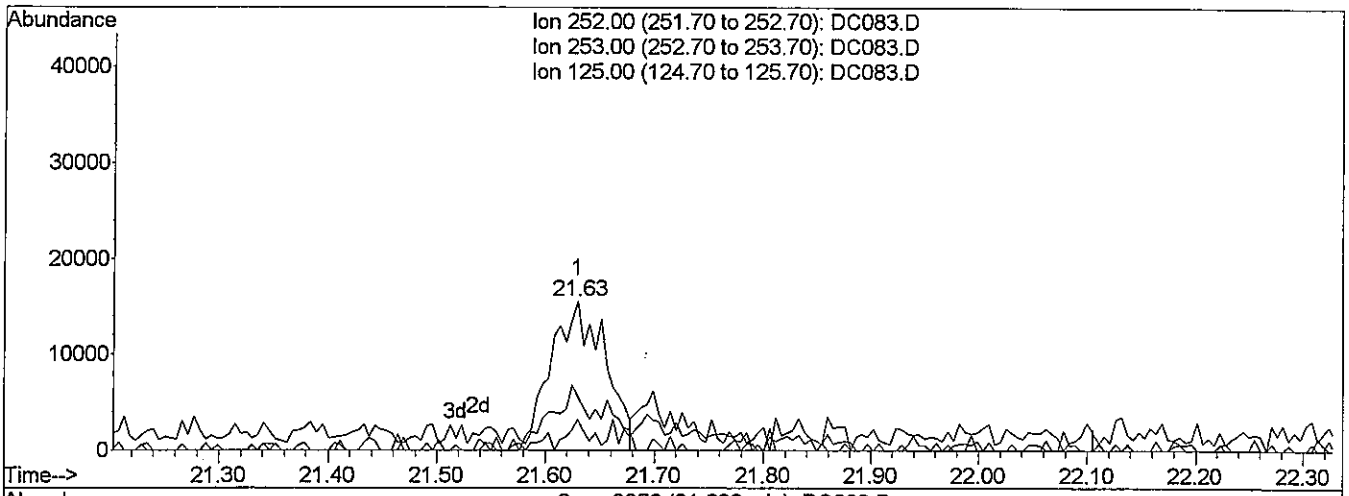
Ion	Exp%	Act%
252.00	100	100
253.00	25.10	17.97
125.00	9.70	12.00
0.00	0.00	0.00

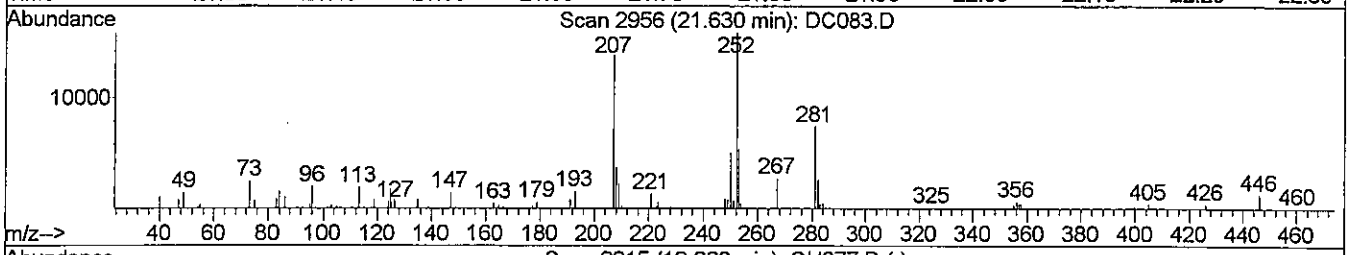
10/19/09

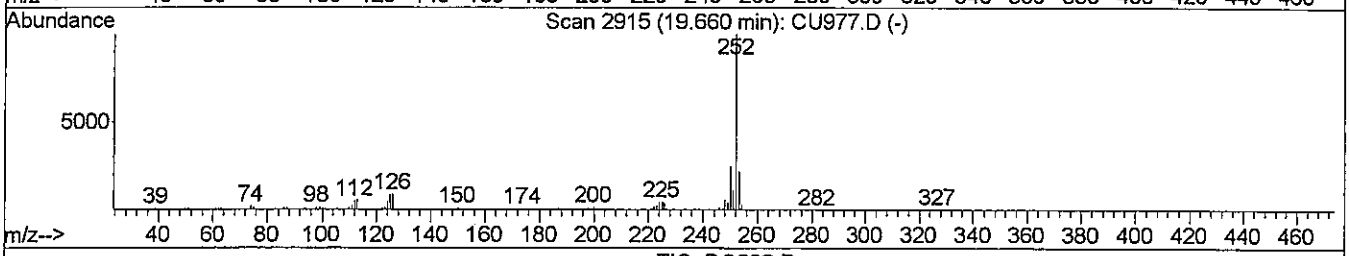
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\101609\DC083.D Vial: 3
Acq On : 16 Oct 2009 11:30 am Operator: J.Wu
Sample : SSTD002 Inst : 5973-B
Misc : 0.2/0.4 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 16 15:36 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Fri Oct 16 15:33:05 2009
Response via : Multiple Level Calibration







TIC: DC083.D

(37) Benzo(a)pyrene (TM)

21.63min 0.15ppm

response 53589

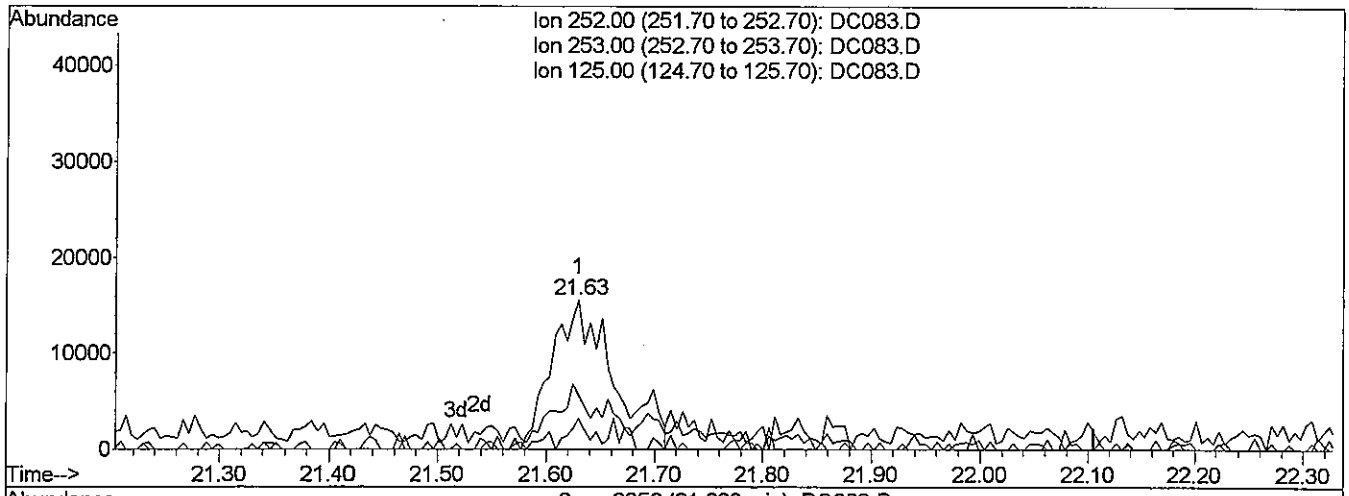
Ion	Exp%	Act%
252.00	100	100
253.00	24.50	33.99
125.00	10.20	15.33
0.00	0.00	0.00

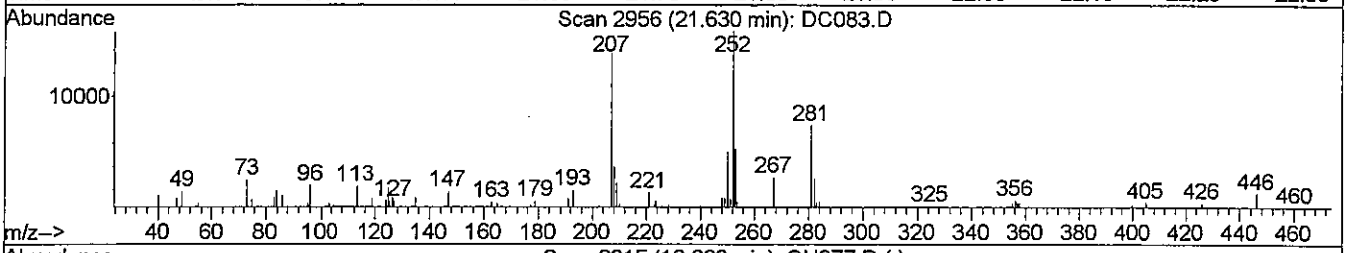
DC083.D LVI1016.M Fri Oct 16 15:36:40 2009

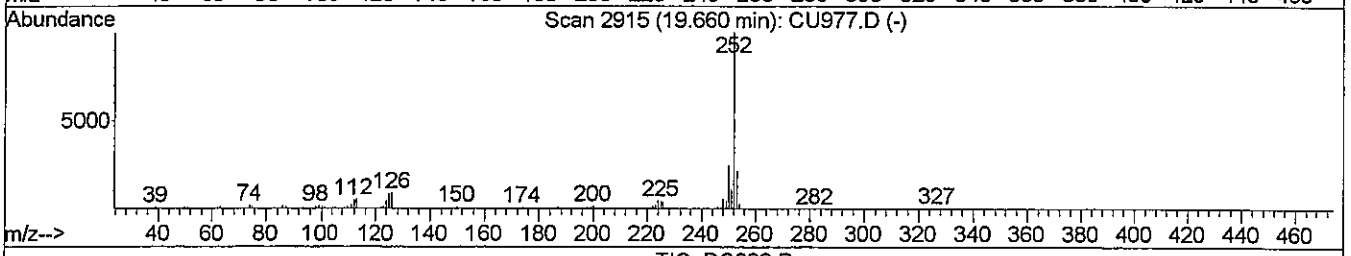
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\101609\DC083.D Vial: 3
Acq On : 16 Oct 2009 11:30 am Operator: J.Wu
Sample : SSTD002 Inst : 5973-B
Misc : 0.2/0.4 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 16 15:36 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Fri Oct 16 15:33:05 2009
Response via : Multiple Level Calibration







TIC: DC083.D

(37) Benzo(a)pyrene (TM)

21.63min 0.17ppm m

response 61790

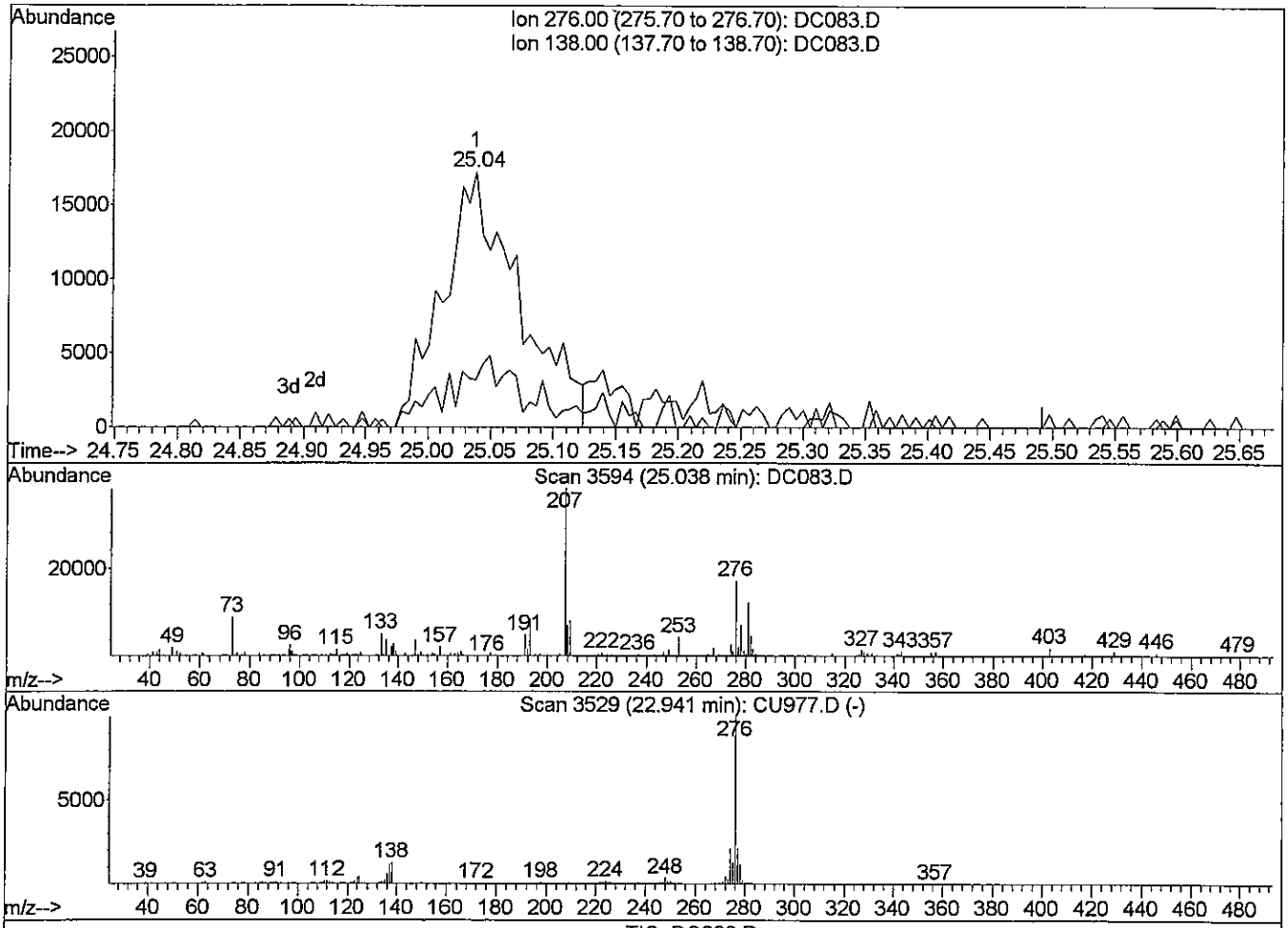
Ion	Exp%	Act%
252.00	100	100
253.00	24.50	35.64
125.00	10.20	13.85
0.00	0.00	0.00

DC083.D LVI1016.M Fri Oct 16 15:36:54 2009

Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\101609\DC083.D Vial: 3
Acq On : 16 Oct 2009 11:30 am Operator: J.Wu
Sample : SSTD002 Inst : 5973-B
Misc : 0.2/0.4 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 16 15:36 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Fri Oct 16 15:33:05 2009
Response via : Multiple Level Calibration



TIC: DC083.D

(38) Indeno(1,2,3-cd)Pyrene (TM)

25.04min 0.17ppm

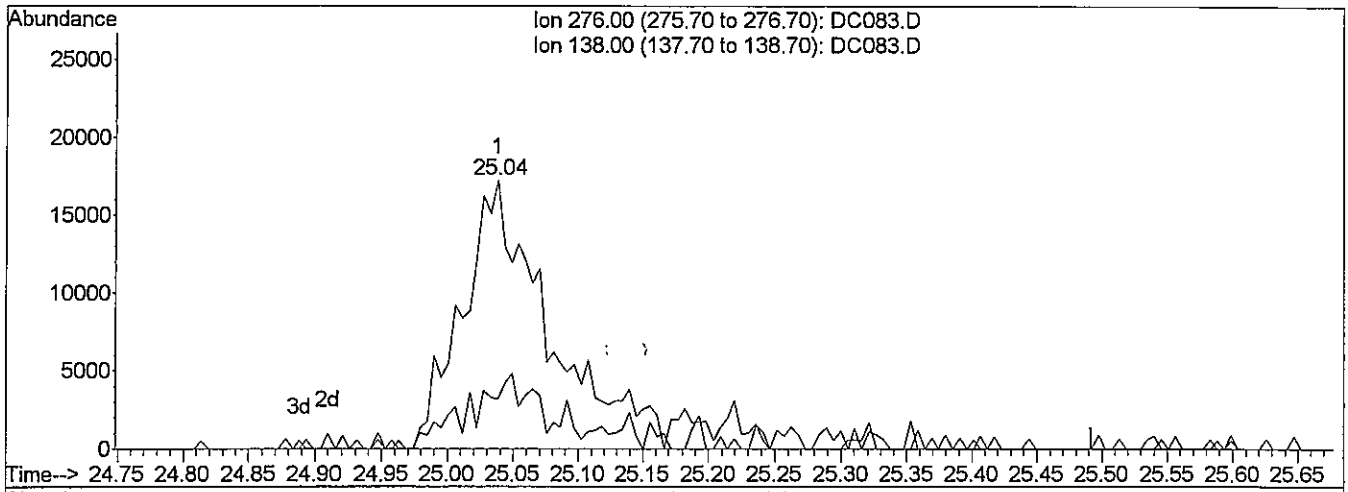
response 72227

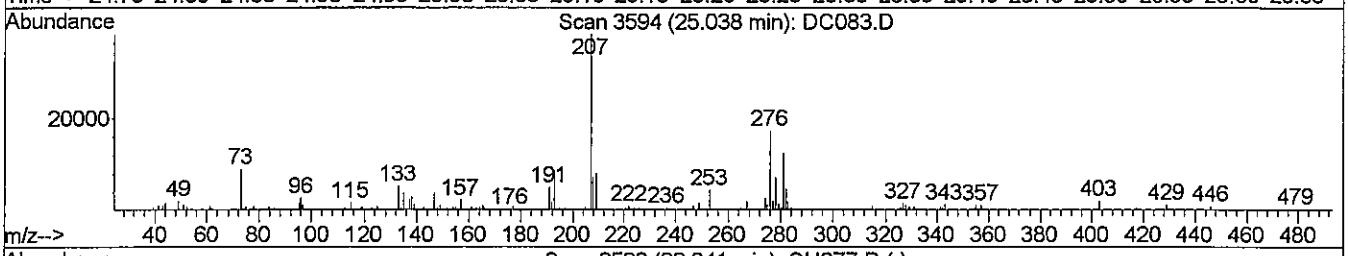
Ion	Exp%	Act%
276.00	100	100
138.00	19.60	16.94
0.00	0.00	0.00
0.00	0.00	0.00

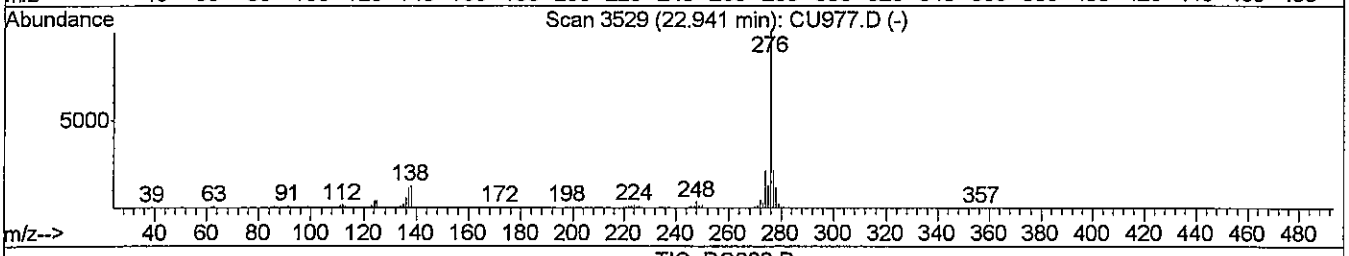
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\101609\DC083.D Vial: 3
Acq On : 16 Oct 2009 11:30 am Operator: J.Wu
Sample : SSTD002 Inst : 5973-B
Misc : 0.2/0.4 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 16 15:37 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Fri Oct 16 15:33:05 2009
Response via : Multiple Level Calibration







TIC: DC083.D

(38) Indeno(1,2,3-cd)Pyrene (TM)

25.04min 0.18ppm m

response 78475

Ion	Exp%	Act%
276.00	100	100
138.00	19.60	18.34
0.00	0.00	0.00
0.00	0.00	0.00

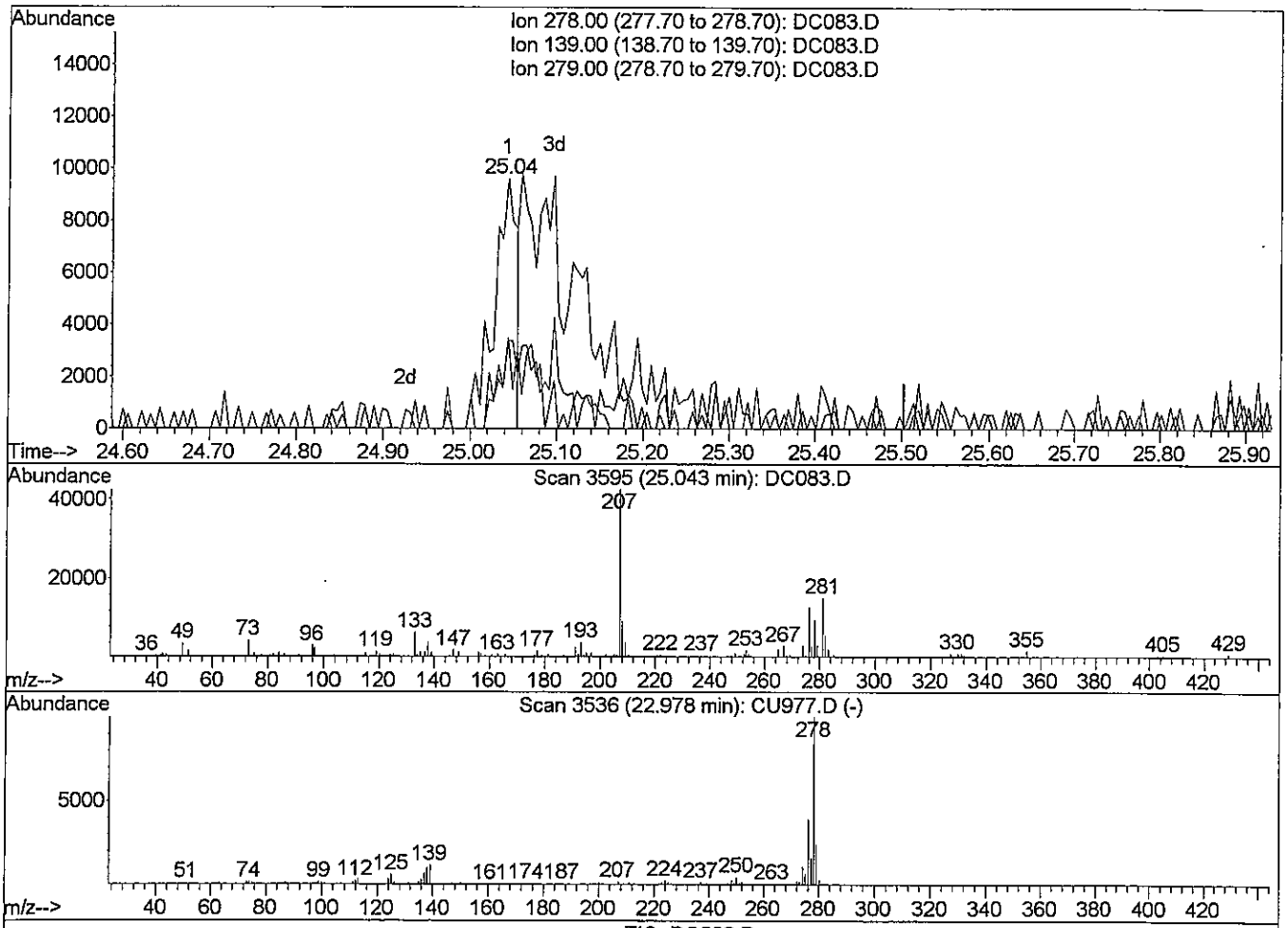
MW 1/1

Acw 10/19/09

Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\101609\DC083.D Vial: 3
Acq On : 16 Oct 2009 11:30 am Operator: J.Wu
Sample : SSTD002 Inst : 5973-B
Misc : 0.2/0.4 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 16 15:37 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Fri Oct 16 15:33:05 2009
Response via : Multiple Level Calibration



TIC: DC083.D

(39) Dibenz(a,h)anthracene (TM)

25.04min 0.05ppm

response 17503

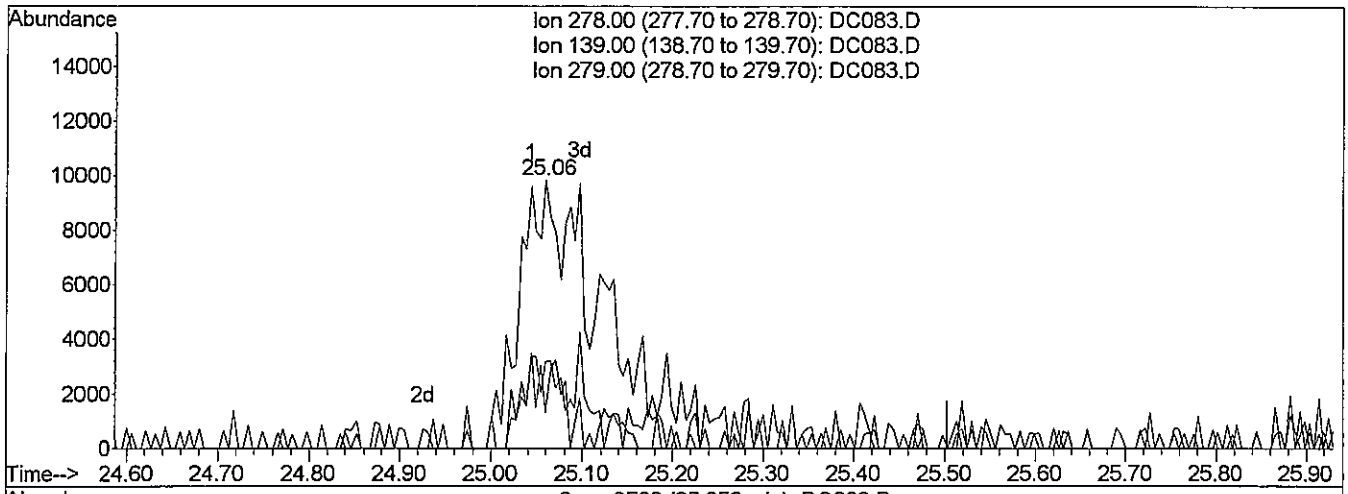
Ion	Exp%	Act%
278.00	100	100
139.00	12.50	34.19
279.00	23.70	40.42
0.00	0.00	0.00

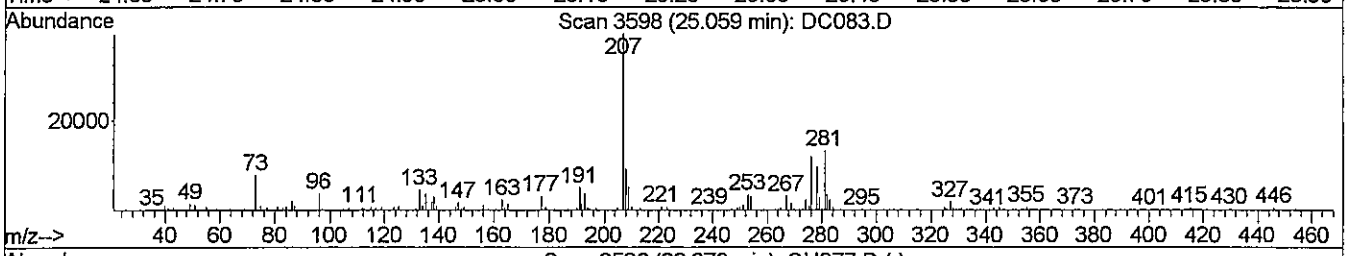
B

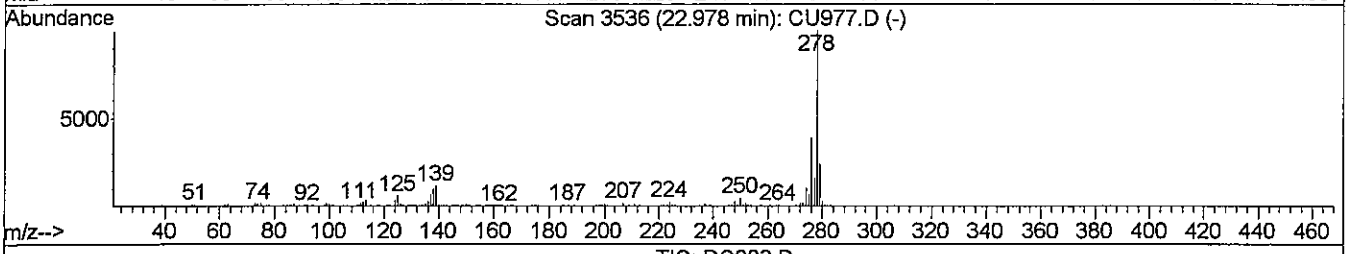
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\101609\DC083.D Vial: 3
Acq On : 16 Oct 2009 11:30 am Operator: J.Wu
Sample : SSTD002 Inst : 5973-B
Misc : 0.2/0.4 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 16 15:37 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Fri Oct 16 15:33:05 2009
Response via : Multiple Level Calibration







TIC: DC083.D

(39) Dibenz(a,h)anthracene (TM)

25.06min 0.18ppm m

response 65097

Ion	Exp%	Act%
278.00	100	100
139.00	12.50	13.43
279.00	23.70	32.29
0.00	0.00	0.00

MW 10/19/09

ATW 10/19/09

Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\5973B\DATA\101609\DC084.D Vial: 4
Acq On : 16 Oct 2009 12:11 pm Operator: J.Wu
Sample : SSTD005 Inst : 5973-B
Misc : 0.5/1.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 16 15:42 2009 Quant Results File: LVI1016.RES

Quant Method : J:\ACQUDATA\5...\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Fri Oct 16 15:39:18 2009
Response via : Initial Calibration
DataAcq Meth : LVI1016

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) d4-1,4-Dichlorobenzene	10.66	152	93596	1.00	ppm	0.00
4) d8-Naphthalene	11.93	136	341951	1.00	ppm	0.00
10) d10-Acenaphthene	13.53	164	214381	1.00	ppm	0.00
18) d10-Phenanthrene	14.74	188	350214	1.00	ppm	0.00
26) d12-Chrysene	18.04	240	352890	1.00	ppm	0.00
33) d12-Perylene	21.81	264	284594	1.00	ppm	-0.01
System Monitoring Compounds						
5) SURR4,NITROBENZENE-D5	11.26	82	54656	0.50	ppm	0.01
Spiked Amount 2.000	Range 22 - 124		Recovery = 25.00%			
11) SURR5,2-FLUOROBIPHENYL	12.90	172	137436	0.49	ppm	0.01
Spiked Amount 2.000	Range 27 - 114		Recovery = 24.50%#			
28) SURR6,TERPHENYL-D14	16.36	244	145491	0.52	ppm	0.01
Spiked Amount 2.000	Range 23 - 139		Recovery = 26.00%			
Target Compounds						Qvalue
2) 1,4-Dioxane	6.11	88	75395	0.93	ppm	97
3) Pyridine	6.90	79	40693	0.33	ppm	84
6) Nitrobenzene	11.28	77	55271	0.47	ppm	95
7) Naphthalene	11.95	128	185743	0.52	ppm	92
8) 2-Methylnaphthalene	12.58	142	127956	0.57	ppm	87
9) 1-Methylnaphthalene	12.69	142	112840	0.52	ppm	95
12) Acenaphthylene	13.40	152	206298	0.52	ppm	99
13) Dimethyl phthalate	13.26	163	161846m	0.50	ppm	
14) Acenaphthene	13.56	153	124472	0.50	ppm	89
15) Dibenzofuran	13.71	168	185925	0.54	ppm	98
16) Fluorene	13.99	166	144727	0.54	ppm	87
17) Diethylphthalate	13.84	149	165516	0.50	ppm	96
19) Hexachlorobenzene	14.48	284	43800	0.51	ppm	89
20) Phenanthrene	14.76	178	183856	0.46	ppm	96
21) Anthracene	14.81	178	195720	0.52	ppm	98
22) Carbazole	14.94	167	148635	0.62	ppm	98
23) Octachlorostyrene	15.75	378	10874	0.47	ppm	88
24) Di-n-butylphthalate	15.15	149	236895m	0.45	ppm	
25) Fluoranthene	15.97	202	218044	0.49	ppm	97
27) Pyrene	16.25	202	226788	0.51	ppm	93
29) Butyl benzyl phthalate	16.97	149	109530	0.47	ppm	95
30) bis(2-Ethylhexyl)phthalate	17.89	149	266996	0.93	ppm	93
31) Benzo(a)anthracene	18.01	228	192126	0.50	ppm	87
32) Chrysene	18.09	228	206966	0.53	ppm	87
34) Di-n-octyl phthalate	19.21	149	219615m	0.42	ppm	
35) Benzo(b)Fluoranthene	20.58	252	191134	0.47	ppm	87

(#) = qualifier out of range (m) = manual integration

00198

Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\5973B\DATA\101609\DC084.D Vial: 4
Acq On : 16 Oct 2009 12:11 pm Operator: J.Wu
Sample : SSTD005 Inst : 5973-B
Misc : 0.5/1.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 16 15:42 2009 Quant Results File: LVI1016.RES

Quant Method : J:\ACQUDATA\5...\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Fri Oct 16 15:39:18 2009
Response via : Initial Calibration
DataAcq Meth : LVI1016

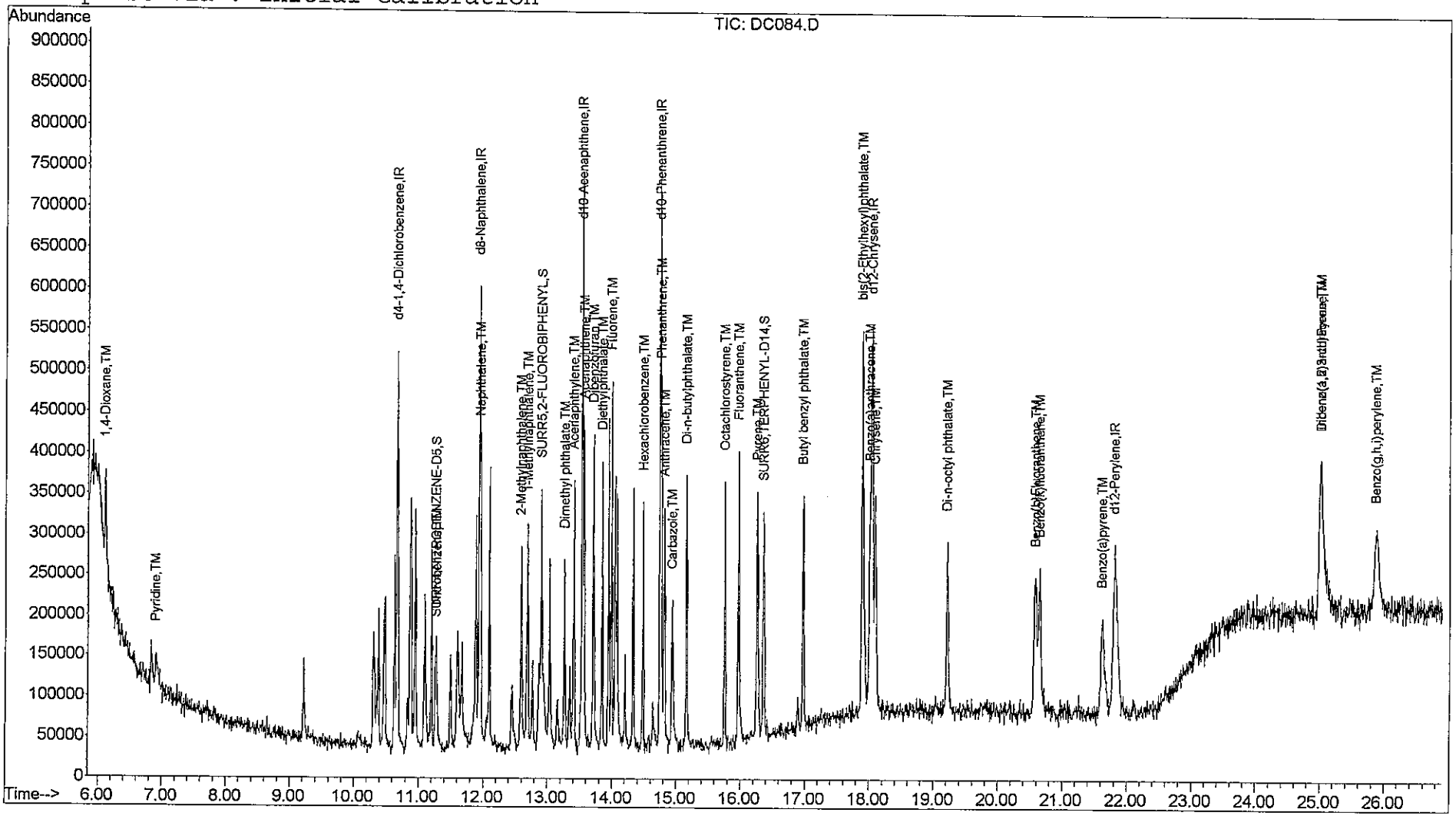
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
36)	Benzo(k)fluoranthene	20.65	252	194582m	0.48	ppm	
37)	Benzo(a)pyrene	21.61	252	172560m	0.48	ppm	
38)	Indeno(1,2,3-cd)Pyrene	25.02	276	209169m	0.49	ppm	
39)	Dibenz(a,h)anthracene	25.03	278	182335m	0.51	ppm	
40)	Benzo(g,h,i)perylene	25.88	276	187094	0.52	ppm	88

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : J:\ACQUDATA\5973B\DATA\101609\DC084.D Vial: 4
Acq On : 16 Oct 2009 12:11 pm Operator: J.Wu
Sample : SSTD005 Inst : 5973-B
Misc : 0.5/1.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 16 15:42 2009 Quant Results File: LVI1016.RES

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Mon Oct 19 08:41:26 2009
Response via : Initial Calibration

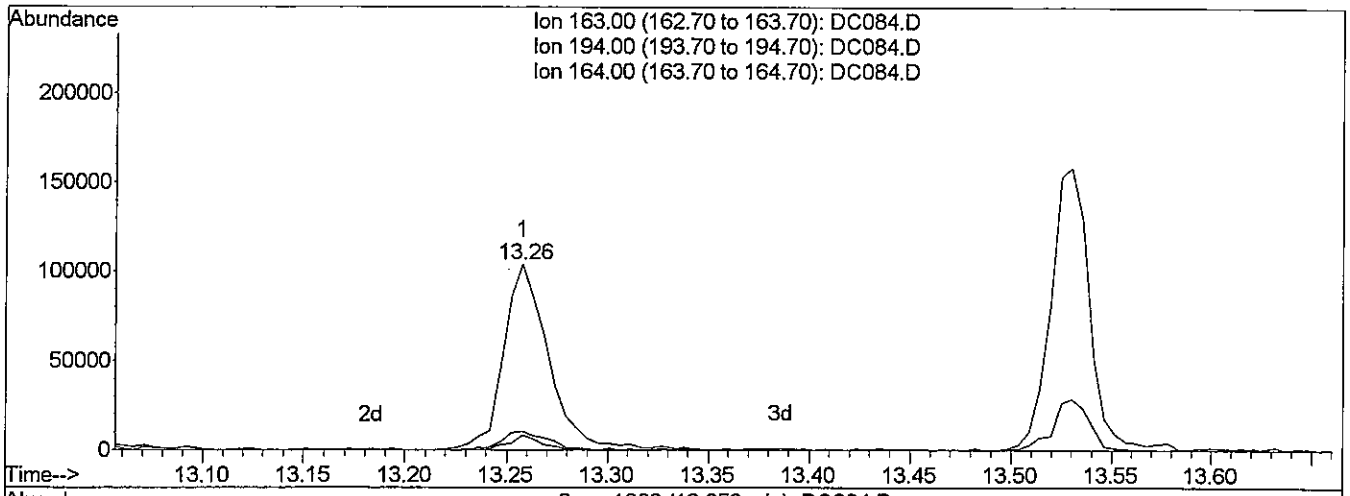


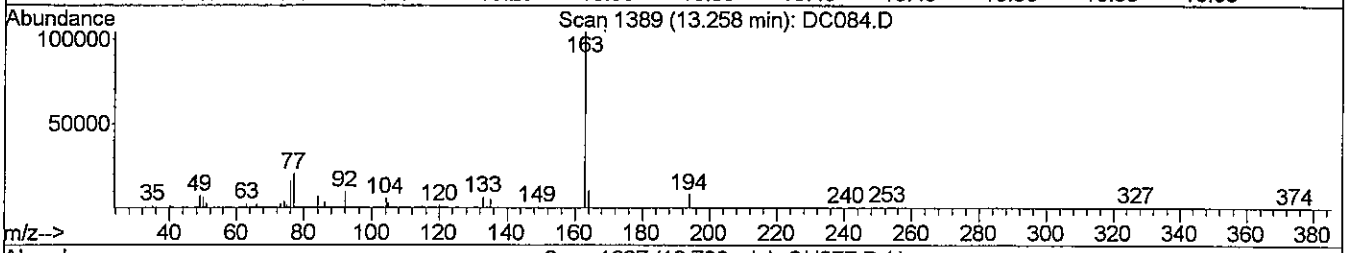
00700

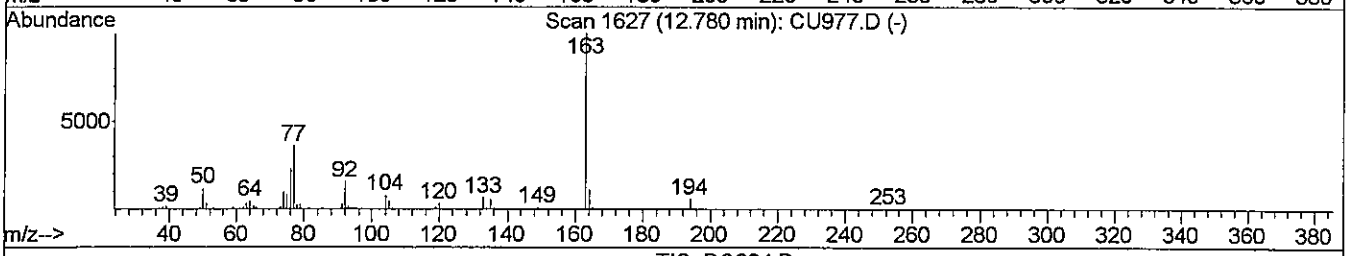
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\101609\DC084.D Vial: 4
Acq On : 16 Oct 2009 12:11 pm Operator: J.Wu
Sample : SSTD005 Inst : 5973-B
Misc : 0.5/1.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 16 15:39 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Fri Oct 16 15:39:18 2009
Response via : Multiple Level Calibration







TIC: DC084.D

(13) Dimethyl phthalate (TM)

13.26min 0.50ppm

response 160697

Ion	Exp%	Act%
163.00	100	100
194.00	5.80	8.14#
164.00	10.80	10.01
0.00	0.00	0.00

B

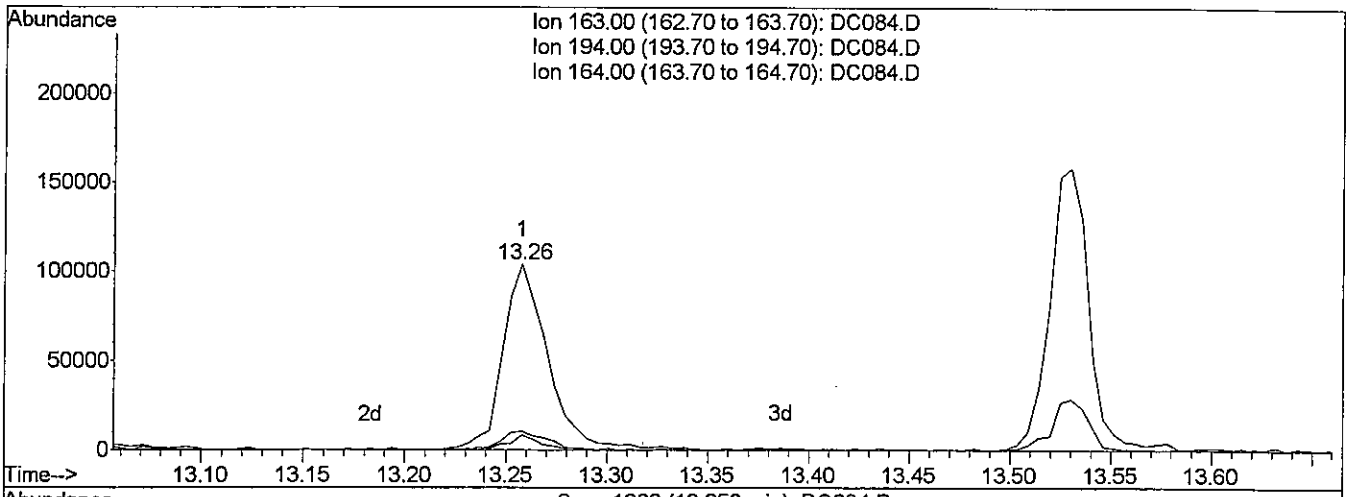
DC084.D LVI1016.M Fri Oct 16 15:39:57 2009

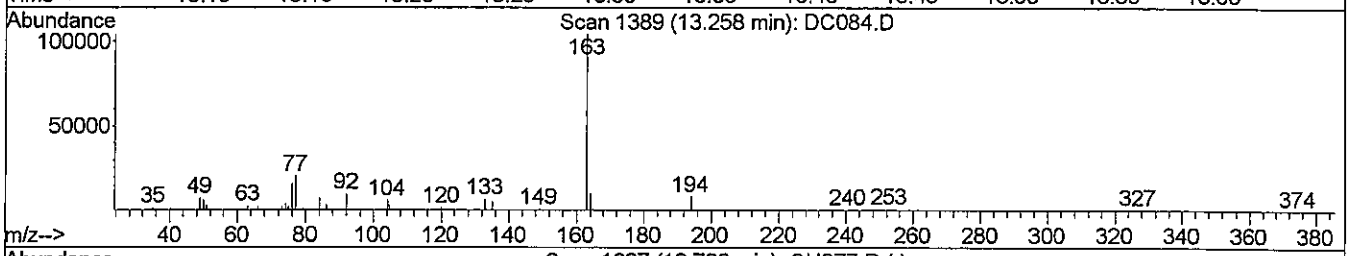
00201

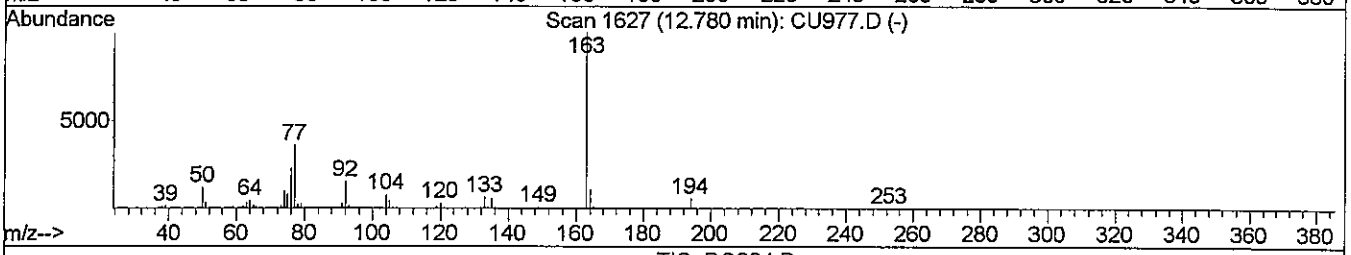
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\101609\DC084.D Vial: 4
Acq On : 16 Oct 2009 12:11 pm Operator: J.Wu
Sample : SSTD005 Inst : 5973-B
Misc : 0.5/1.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 16 15:40 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Fri Oct 16 15:39:18 2009
Response via : Multiple Level Calibration







TIC: DC084.D

(13) Dimethyl phthalate (TM)

13.26min 0.50ppm m

response 161846

Ion	Exp%	Act%
163.00	100	100
194.00	5.80	8.08#
164.00	10.80	9.94
0.00	0.00	0.00

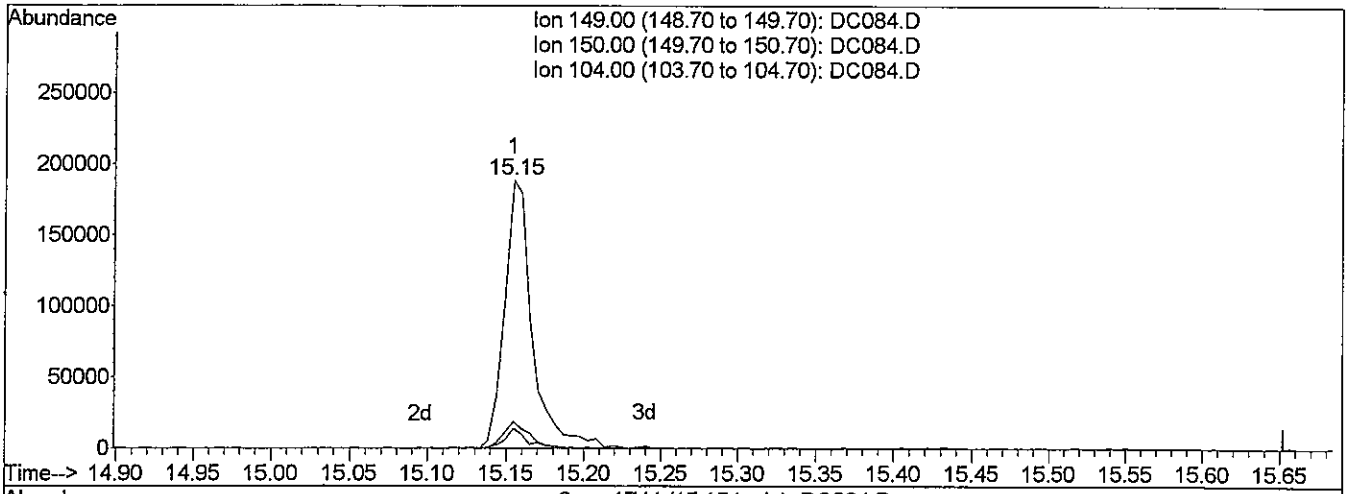
MW 10/19/09

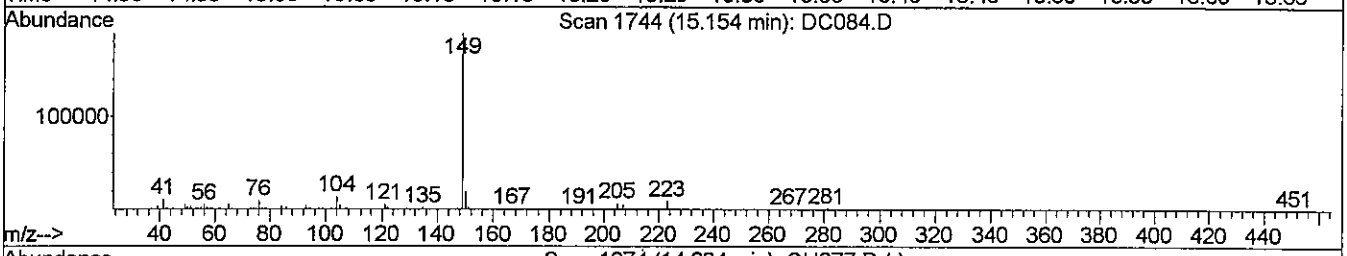
DC084.D LVI1016.M Fri Oct 16 15:40:03 2009

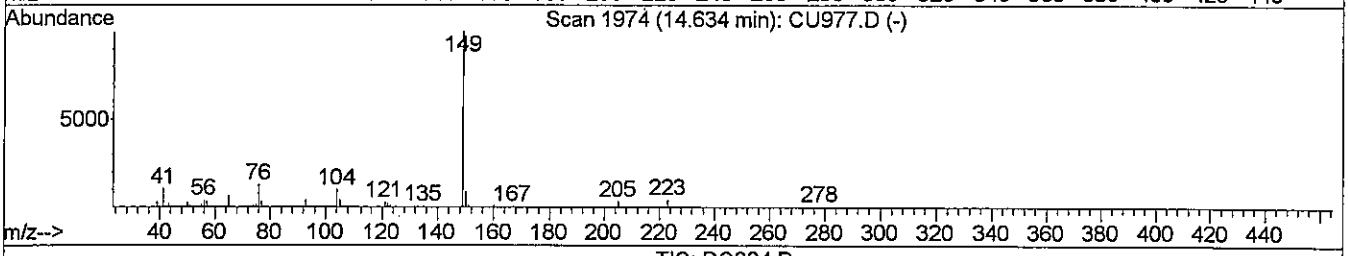
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\101609\DC084.D Vial: 4
Acq On : 16 Oct 2009 12:11 pm Operator: J.Wu
Sample : SSTD005 Inst : 5973-B
Misc : 0.5/1.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 16 15:40 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Fri Oct 16 15:39:18 2009
Response via : Multiple Level Calibration







TIC: DC084.D

(24) Di-n-butylphthalate (TM)

15.15min 0.45ppm

response 235535

Ion	Exp%	Act%
149.00	100	100
150.00	9.30	9.91
104.00	5.00	7.51#
0.00	0.00	0.00

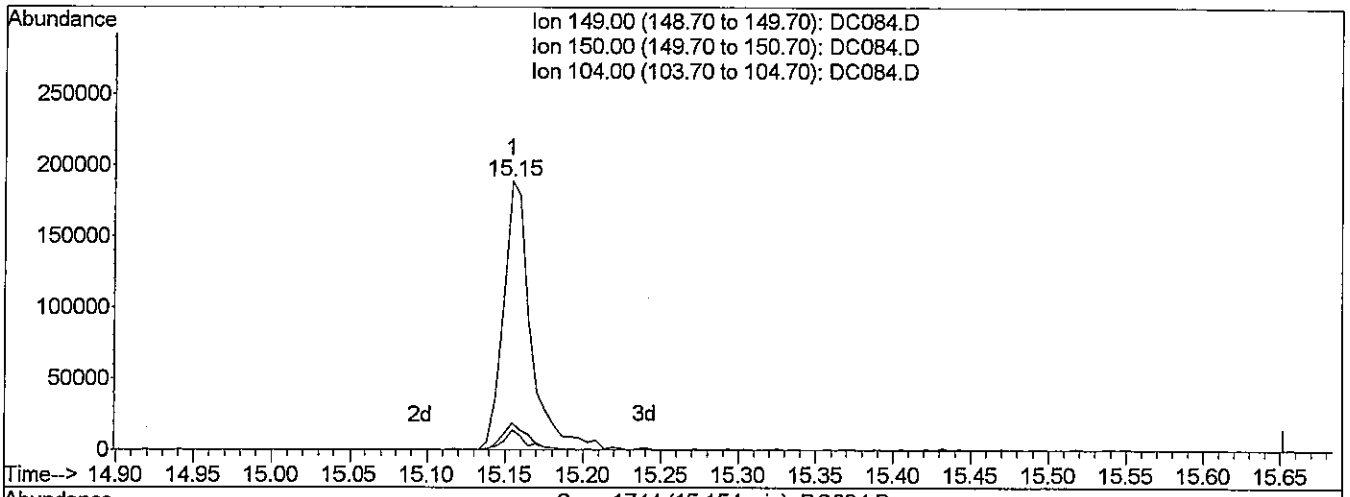
B

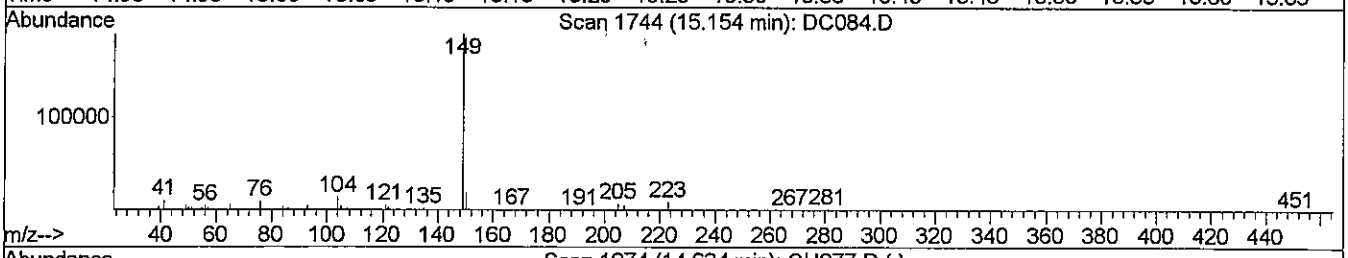
DC084.D LVI1016.M Fri Oct 16 15:40:25 2009

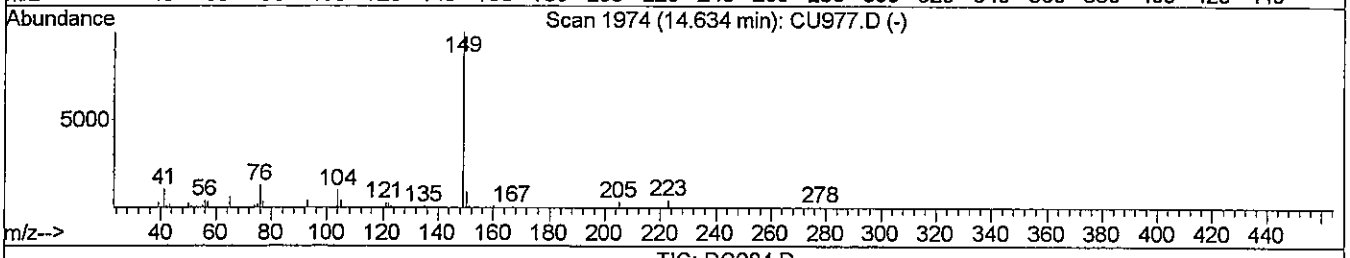
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\101609\DC084.D Vial: 4
Acq On : 16 Oct 2009 12:11 pm Operator: J.Wu
Sample : SSTD005 Inst : 5973-B
Misc : 0.5/1.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 16 15:40 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Fri Oct 16 15:39:18 2009
Response via : Multiple Level Calibration







TIC: DC084.D

(24) Di-n-butylphthalate (TM)

15.15min 0.45ppm m

response 236895

Ion	Exp%	Act%
149.00	100	100
150.00	9.30	10.12
104.00	5.00	7.51#
0.00	0.00	0.00

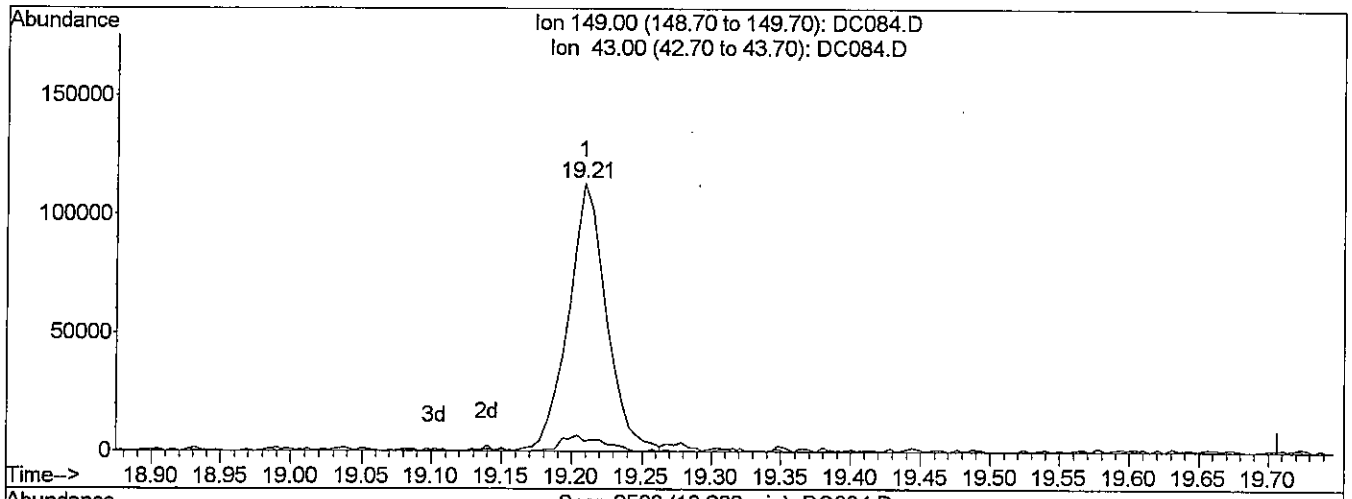
AJW 10/19/09

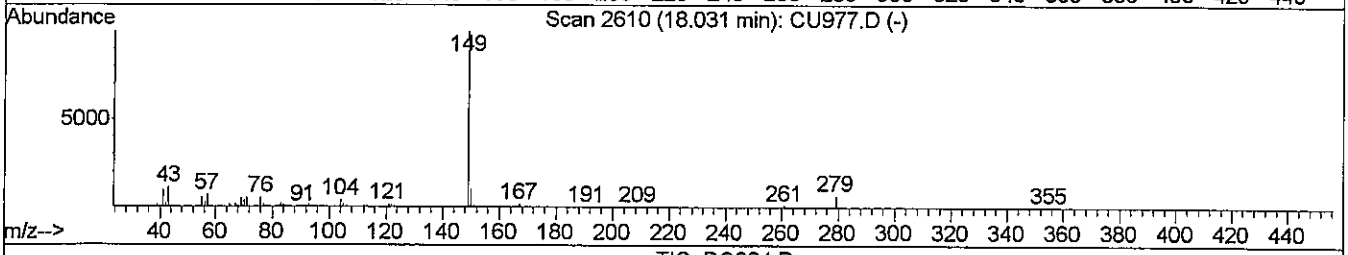
DC084.D LVI1016.M Fri Oct 16 15:40:29 2009

Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\101609\DC084.D Vial: 4
Acq On : 16 Oct 2009 12:11 pm Operator: J.Wu
Sample : SSTD005 Inst : 5973-B
Misc : 0.5/1.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 16 15:40 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Fri Oct 16 15:39:18 2009
Response via : Single Level Calibration





TIC: DC084.D

(34) Di-n-octyl phthalate (TM)

19.21min 0.41ppm

response 215420

Ion	Exp%	Act%
149.00	100	100
43.00	7.10	3.66#
0.00	0.00	0.00
0.00	0.00	0.00

B

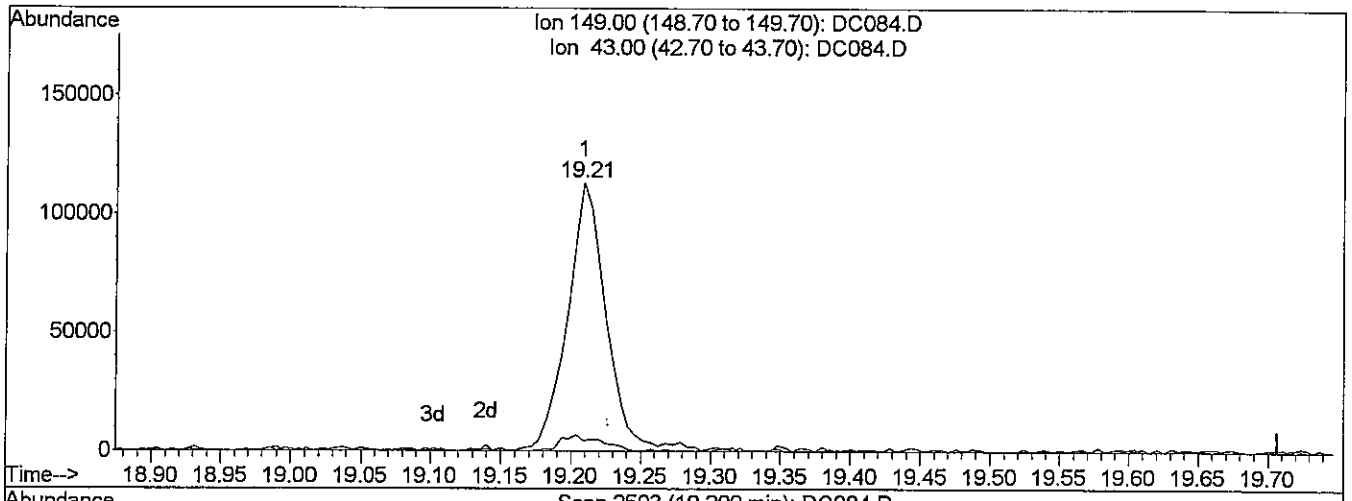
DC084.D LVI1016.M Fri Oct 16 15:41:02 2009

00205

Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\101609\DC084.D Vial: 4
Acq On : 16 Oct 2009 12:11 pm Operator: J.Wu
Sample : SSTD005 Inst : 5973-B
Misc : 0.5/1.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 16 15:41 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Fri Oct 16 15:39:18 2009
Response via : Single Level Calibration



TIC: DC084.D

(34) Di-n-octyl phthalate (TM)

19.21min 0.42ppm m

response 219615

Ion	Exp%	Act%
149.00	100	100
43.00	7.10	3.85#
0.00	0.00	0.00
0.00	0.00	0.00

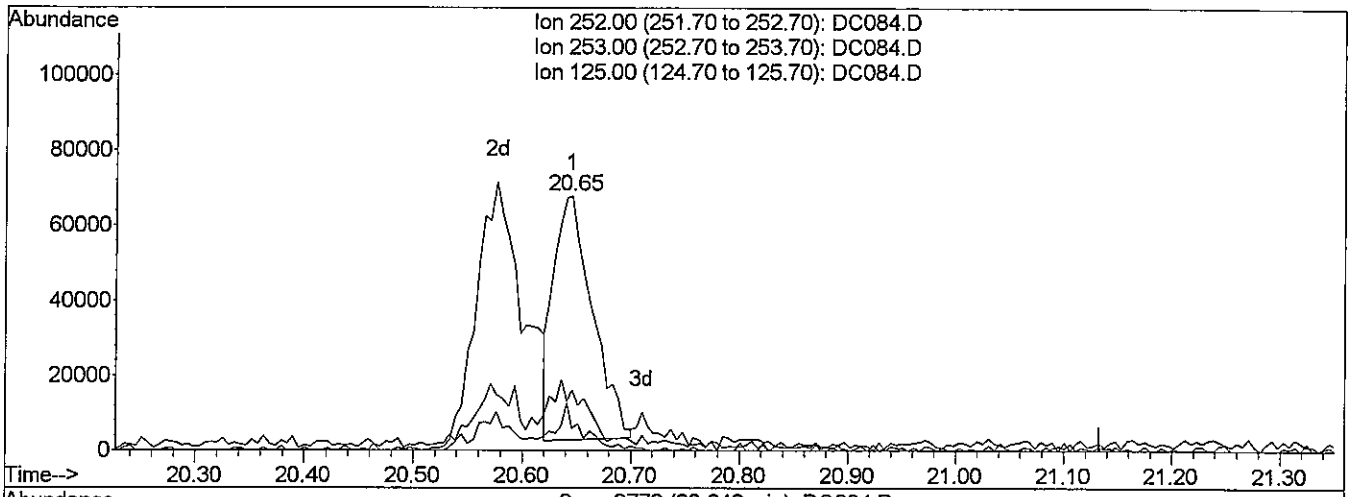
JWW 10/16

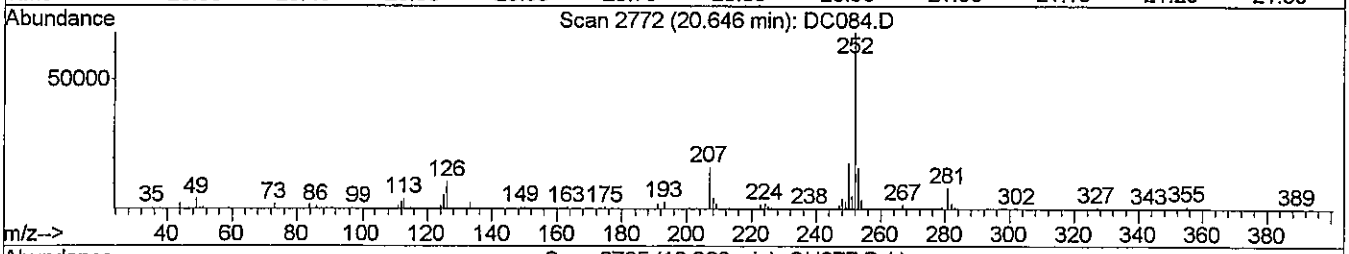
A JW 10/19/09

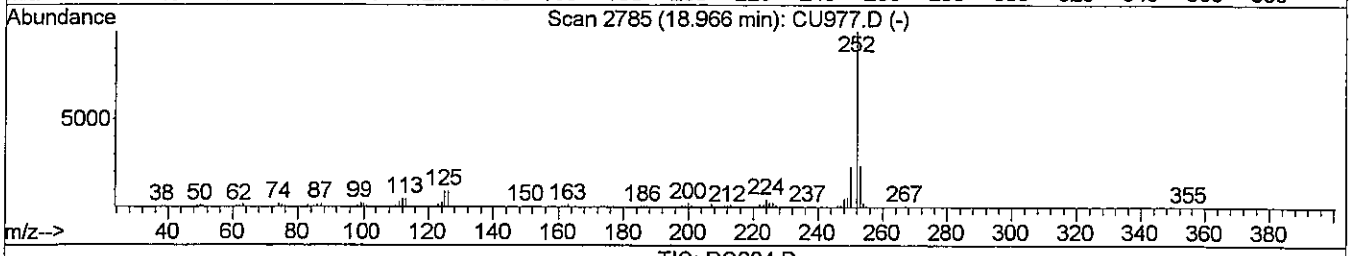
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\101609\DC084.D Vial: 4
Acq On : 16 Oct 2009 12:11 pm Operator: J.Wu
Sample : SSTD005 Inst : 5973-B
Misc : 0.5/1.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 16 15:41 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Fri Oct 16 15:39:18 2009
Response via : Multiple Level Calibration







TIC: DC084.D

(36) Benzo(k)fluoranthene (TM)

20.65min 0.40ppm

response 163419

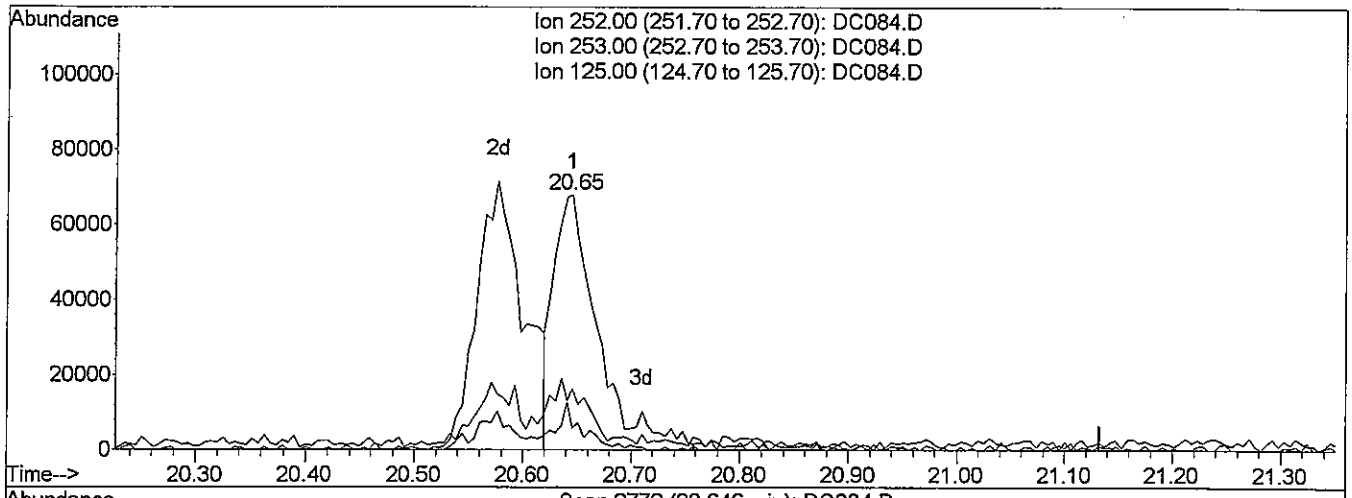
Ion	Exp%	Act%
252.00	100	100
253.00	25.10	20.41
125.00	9.70	6.71
0.00	0.00	0.00

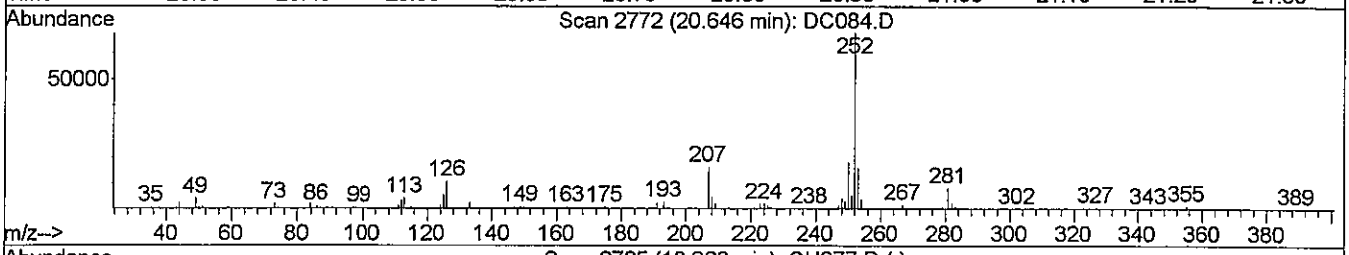
B

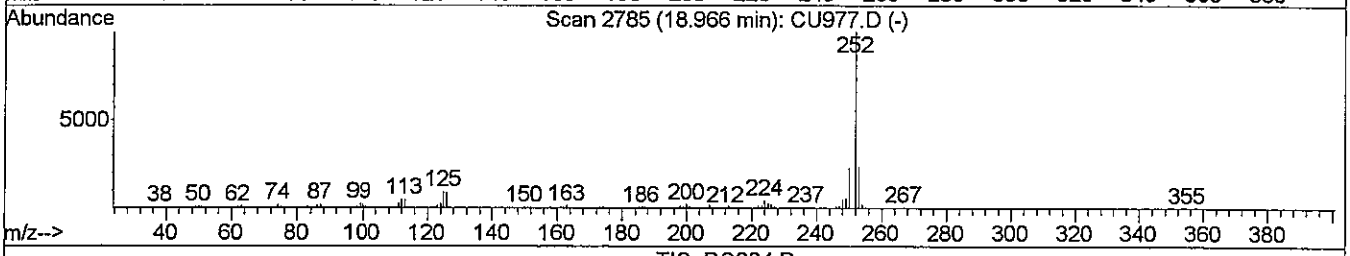
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\101609\DC084.D Vial: 4
Acq On : 16 Oct 2009 12:11 pm Operator: J.Wu
Sample : SSTD005 Inst : 5973-B
Misc : 0.5/1.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 16 15:41 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Fri Oct 16 15:39:18 2009
Response via : Multiple Level Calibration







TIC: DC084.D

(36) Benzo(k)fluoranthene (TM)

20.65min 0.48ppm m

response 194582

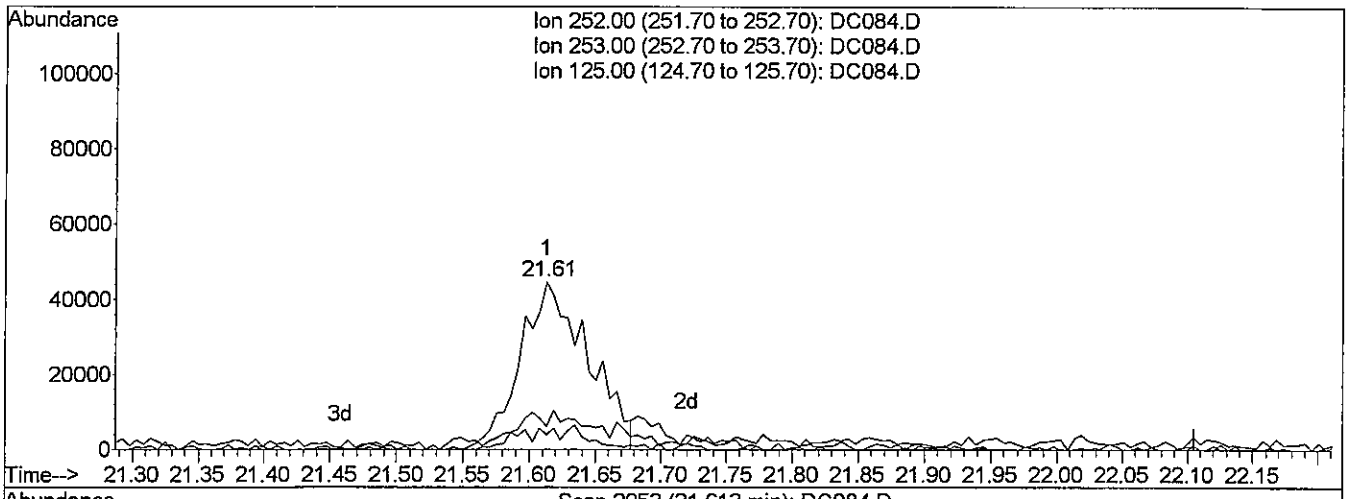
Ion	Exp%	Act%
252.00	100	100
253.00	25.10	23.79
125.00	9.70	8.55
0.00	0.00	0.00

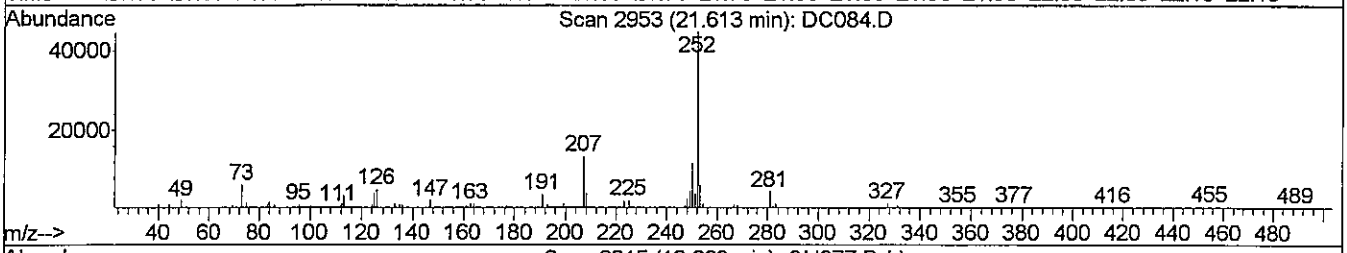
DC084.D LVI1016.M Fri Oct 16 15:41:31 2009

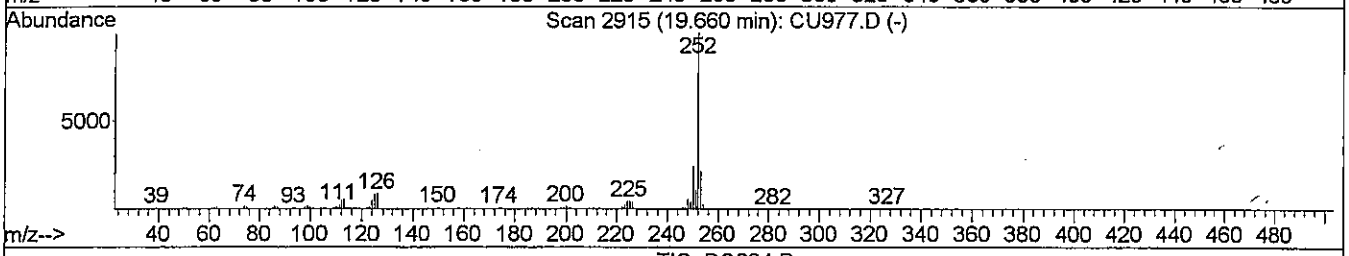
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\101609\DC084.D Vial: 4
Acq On : 16 Oct 2009 12:11 pm Operator: J.Wu
Sample : SSTD005 Inst : 5973-B
Misc : 0.5/1.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 16 15:41 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Fri Oct 16 15:39:18 2009
Response via : Multiple Level Calibration







TIC: DC084.D

(37) Benzo(a)pyrene (TM)

21.61min 0.44ppm

response 158967

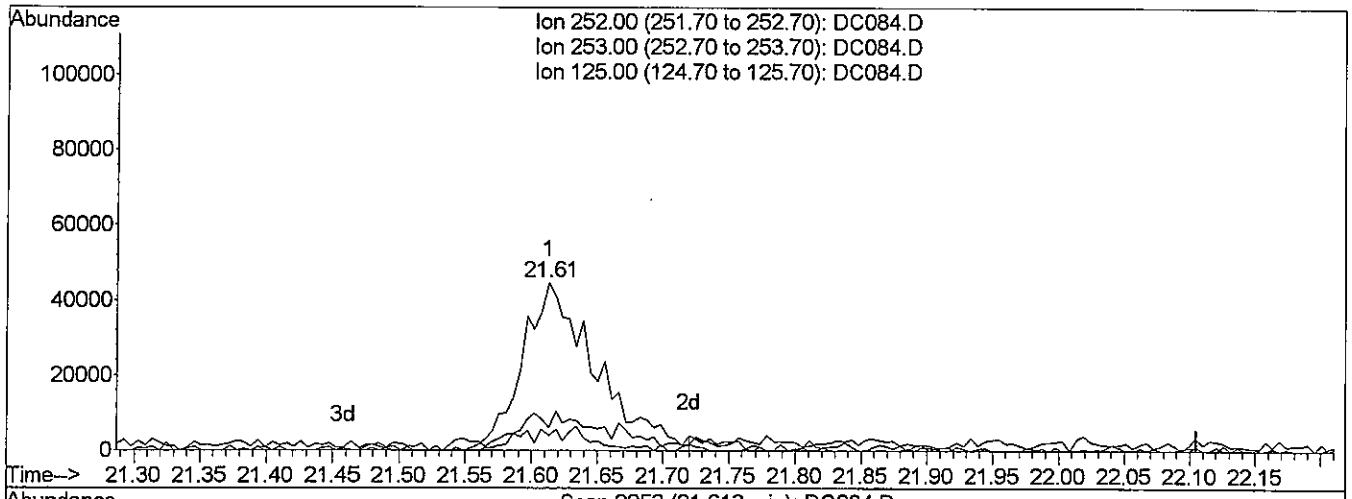
Ion	Exp%	Act%
252.00	100	100
253.00	24.50	7.49
125.00	10.20	7.39
0.00	0.00	0.00

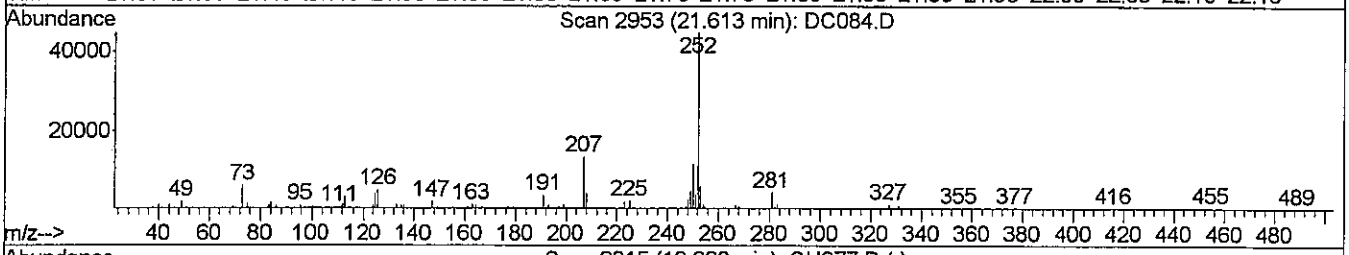
B

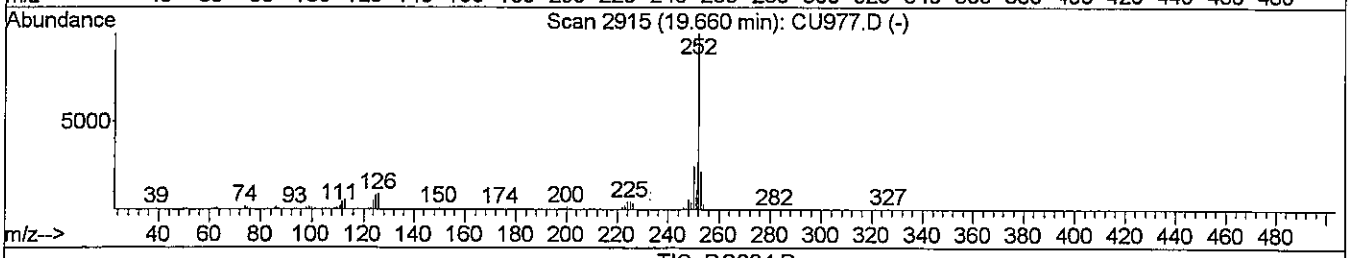
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\101609\DC084.D Vial: 4
Acq On : 16 Oct 2009 12:11 pm Operator: J.Wu
Sample : SSTD005 Inst : 5973-B
Misc : 0.5/1.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 16 15:41 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Fri Oct 16 15:39:18 2009
Response via : Multiple Level Calibration







TIC: DC084.D

(37) Benzo(a)pyrene (TM)

21.61min 0.48ppm m

response 172560

Ion	Exp%	Act%
252.00	100	100
253.00	24.50	13.89
125.00	10.20	8.87
0.00	0.00	0.00

10/19/09

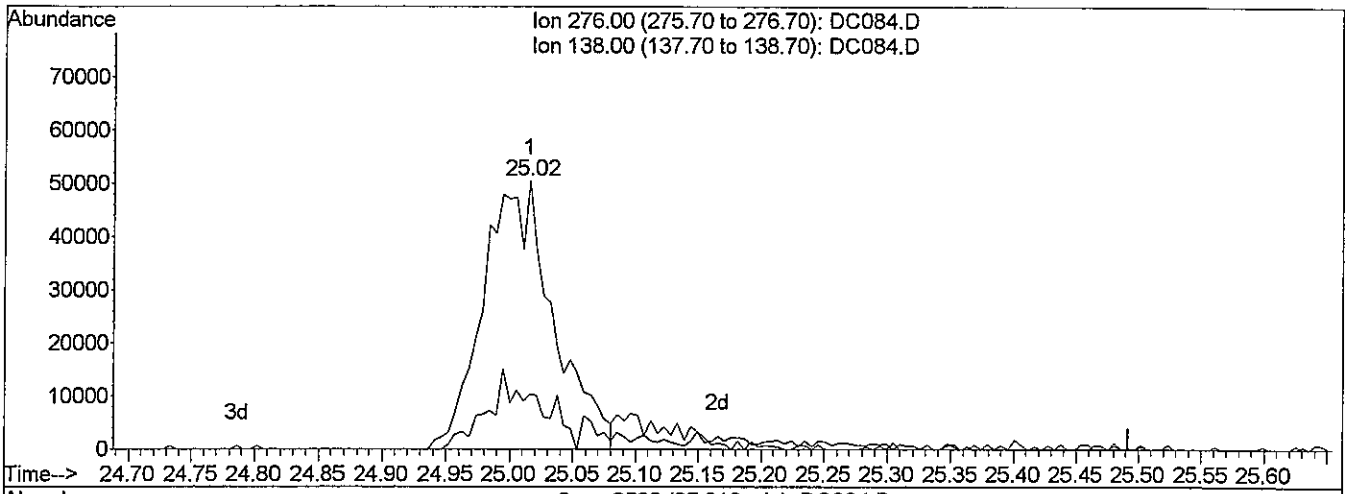
DC084.D LVI1016.M Fri Oct 16 15:41:50 2009

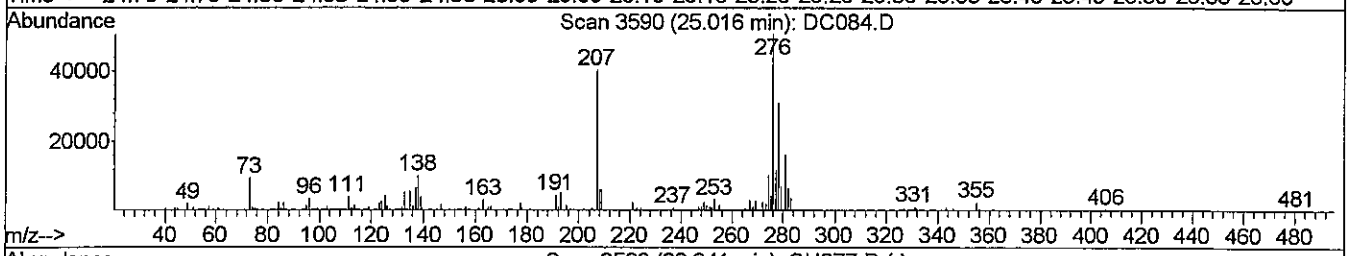
00210

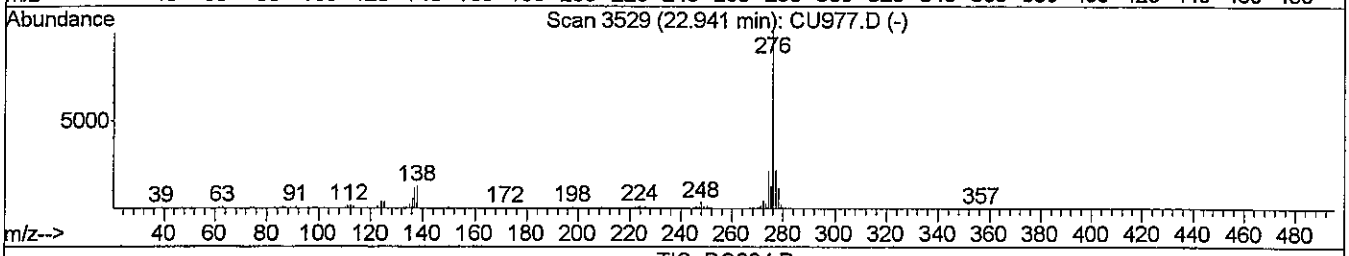
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\101609\DC084.D Vial: 4
Acq On : 16 Oct 2009 12:11 pm Operator: J.Wu
Sample : SSTD005 Inst : 5973-B
Misc : 0.5/1.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 16 15:42 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Fri Oct 16 15:39:18 2009
Response via : Multiple Level Calibration







TIC: DC084.D

(38) Indeno(1,2,3-cd)Pyrene (TM)

25.02min 0.45ppm

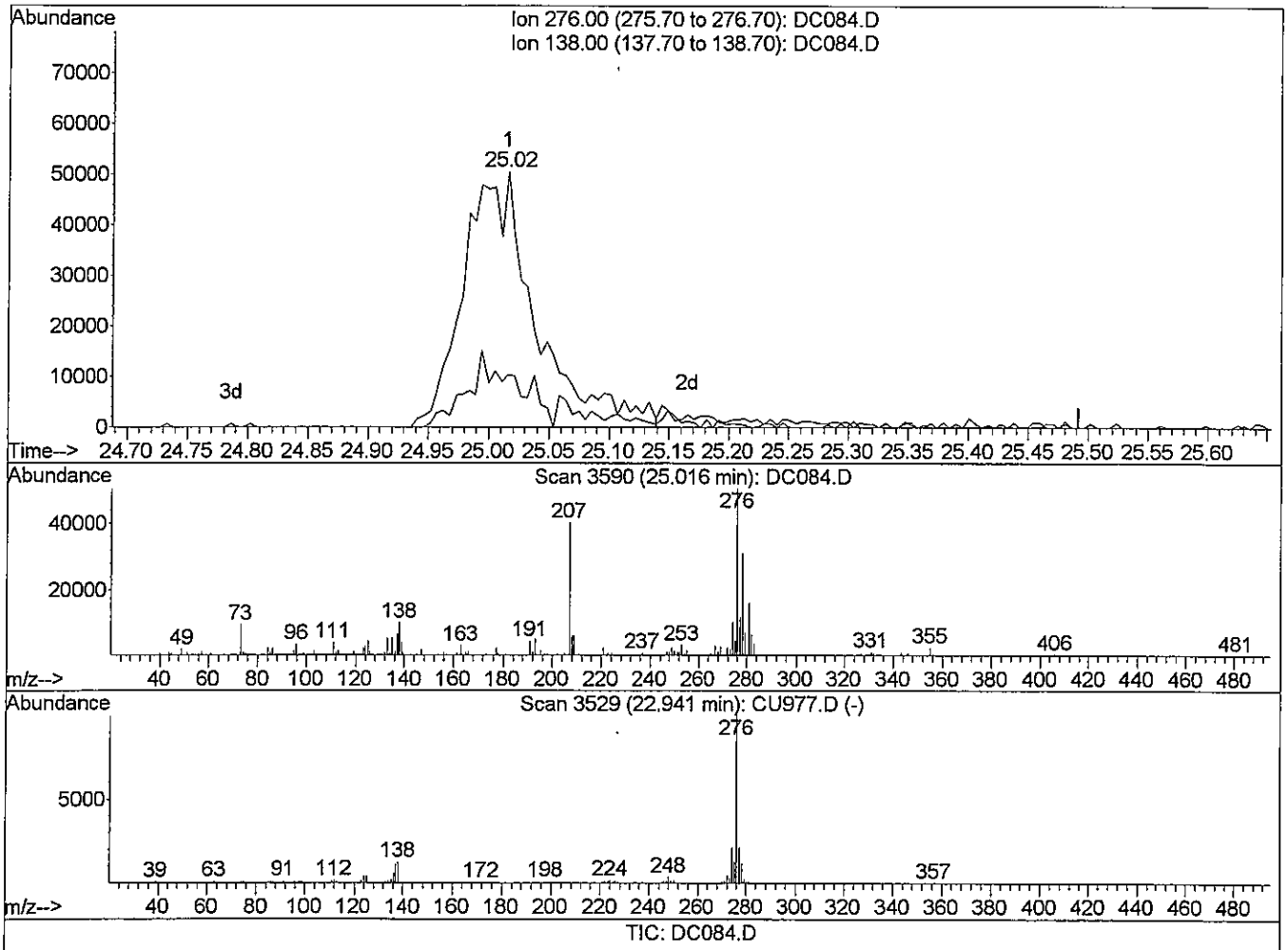
response 193196

Ion	Exp%	Act%
276.00	100	100
138.00	19.60	19.75
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\101609\DC084.D Vial: 4
Acq On : 16 Oct 2009 12:11 pm Operator: J.Wu
Sample : SSTD005 Inst : 5973-B
Misc : 0.5/1.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 16 15:42 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Fri Oct 16 15:39:18 2009
Response via : Multiple Level Calibration



TIC: DC084.D

(38) Indeno(1,2,3-cd)Pyrene (TM)

25.02min 0.49ppm m

response 209169

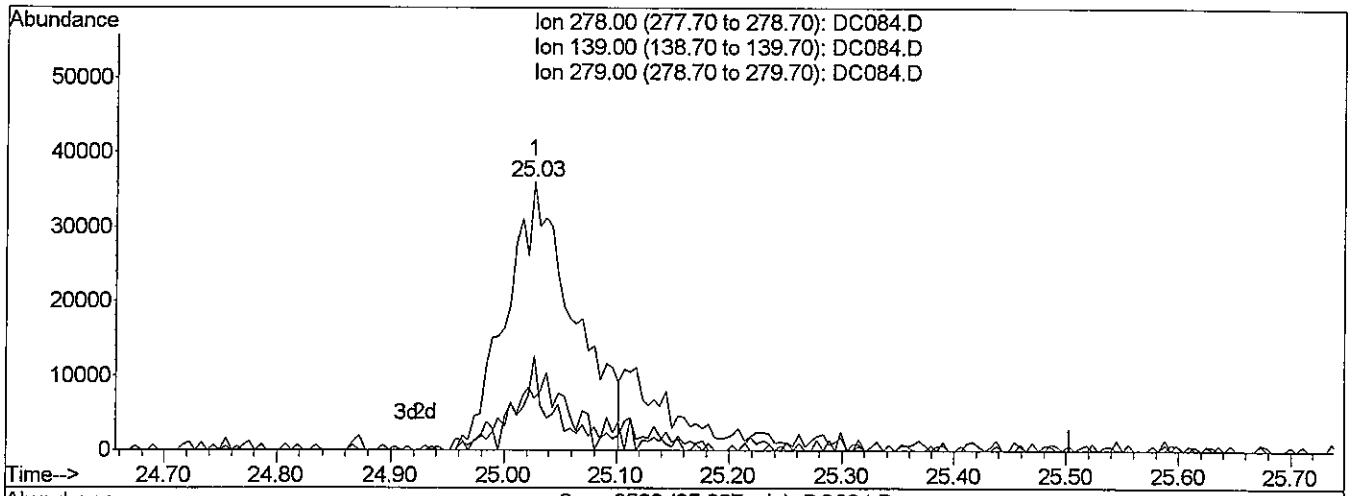
Ion	Exp%	Act%
276.00	100	100
138.00	19.60	20.41
0.00	0.00	0.00
0.00	0.00	0.00

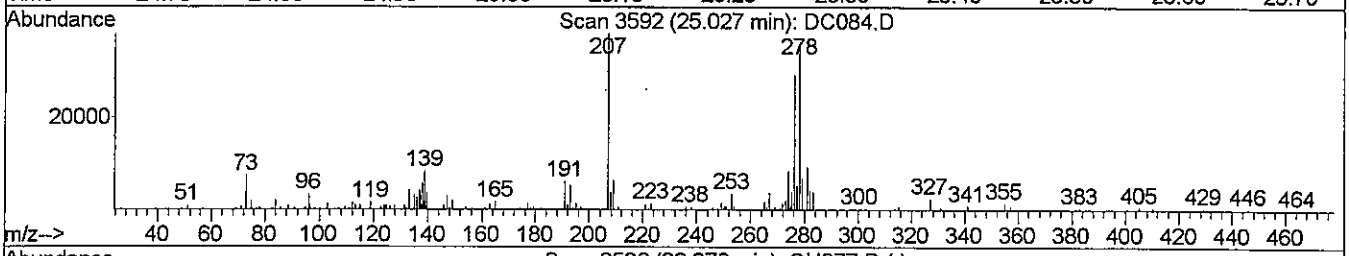
DC084.D LVI1016.M Fri Oct 16 15:42:32 2009

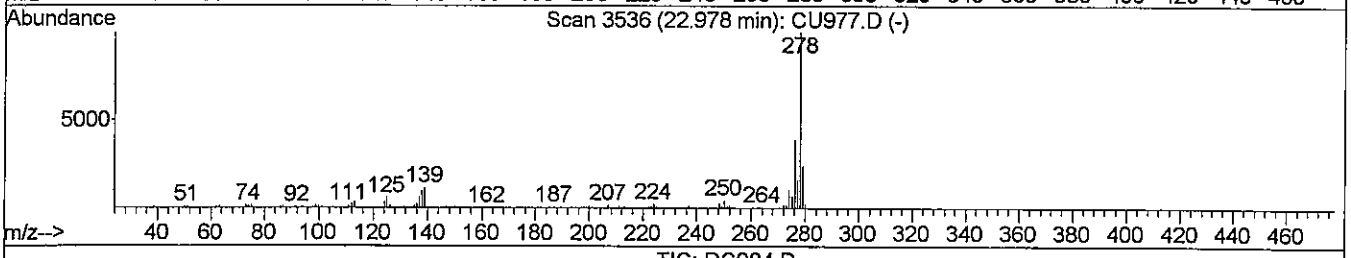
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\101609\DC084.D Vial: 4
Acq On : 16 Oct 2009 12:11 pm Operator: J.Wu
Sample : SSTD005 Inst : 5973-B
Misc : 0.5/1.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 16 15:41 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Fri Oct 16 15:39:18 2009
Response via : Multiple Level Calibration







TIC: DC084.D

(39) Dibenz(a,h)anthracene (TM)

25.03min 0.42ppm

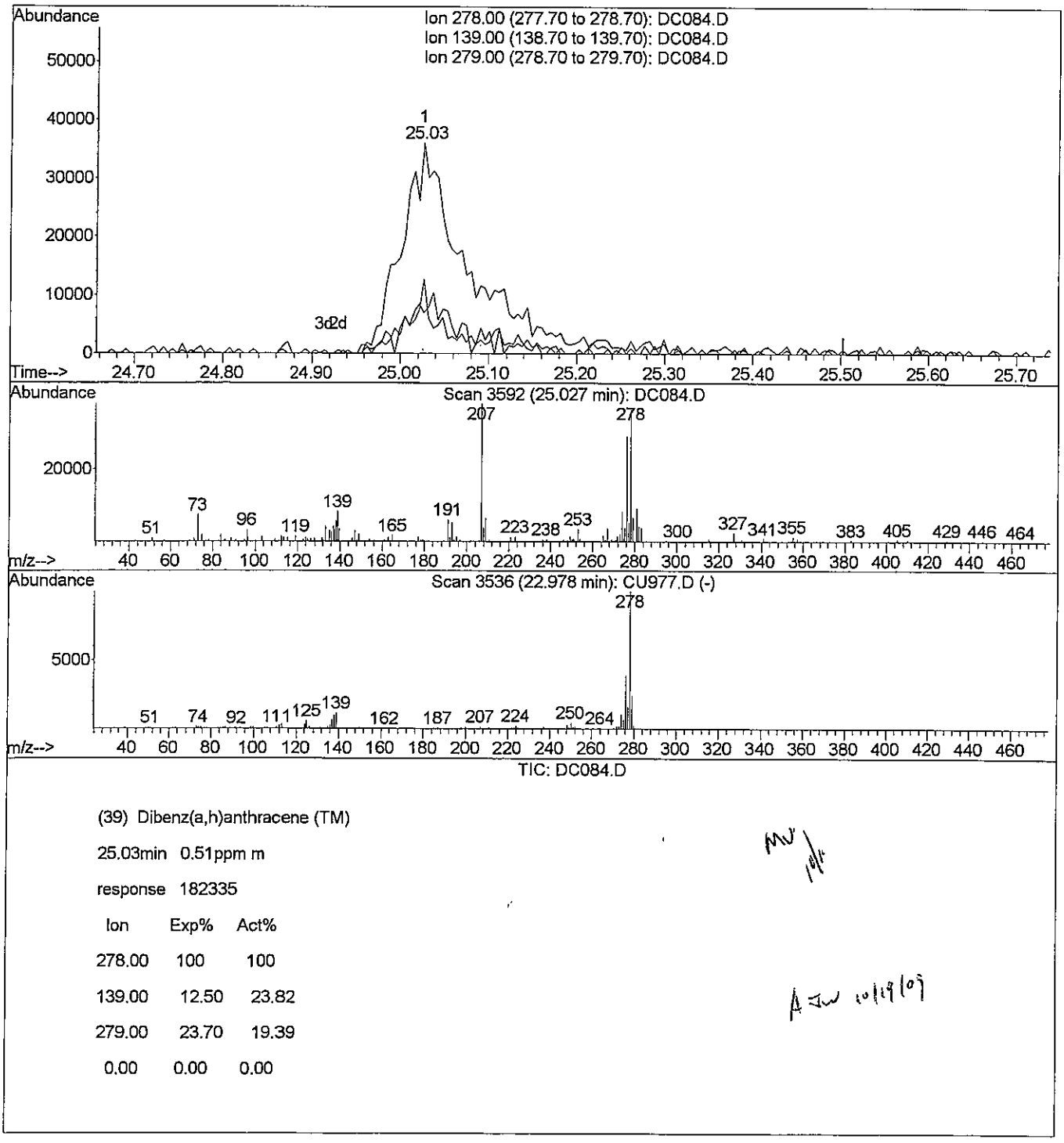
response 149495

Ion	Exp%	Act%
278.00	100	100
139.00	12.50	34.31
279.00	23.70	19.10
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\101609\DC084.D Vial: 4
Acq On : 16 Oct 2009 12:11 pm Operator: J.Wu
Sample : SSTD005 Inst : 5973-B
Misc : 0.5/1.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 16 15:42 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Fri Oct 16 15:39:18 2009
Response via : Multiple Level Calibration



TIC: DC084.D

(39) Dibenz(a,h)anthracene (TM)

25.03min 0.51ppm m

response 182335

Ion	Exp%	Act%
278.00	100	100
139.00	12.50	23.82
279.00	23.70	19.39
0.00	0.00	0.00

DC084.D LVI1016.M Fri Oct 16 15:42:14 2009

Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\5973B\DATA\101609\DC085.D Vial: 5
Acq On : 16 Oct 2009 12:52 pm Operator: J.Wu
Sample : SSTD010 Inst : 5973-B
Misc : 1.0/2.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 16 15:44 2009 Quant Results File: LVI1016.RES

Quant Method : J:\ACQUDATA\5...\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Fri Oct 16 15:42:56 2009
Response via : Initial Calibration
DataAcq Meth : LVI1016

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) d4-1,4-Dichlorobenzene	10.66	152	103601	1.00	ppm	0.00
4) d8-Naphthalene	11.93	136	366299	1.00	ppm	0.00
10) d10-Acenaphthene	13.53	164	231611	1.00	ppm	0.00
18) d10-Phenanthrene	14.74	188	378797	1.00	ppm	0.00
26) d12-Chrysene	18.03	240	392732	1.00	ppm	0.00
33) d12-Perylene	21.81	264	303994	1.00	ppm	0.00
System Monitoring Compounds						
5) SURR4,NITROBENZENE-D5	11.25	82	114908	0.99	ppm	0.00
Spiked Amount 2.000	Range 22 - 124		Recovery = 49.50%			
11) SURR5,2-FLUOROBIPHENYL	12.89	172	288938	0.96	ppm	0.00
Spiked Amount 2.000	Range 27 - 114		Recovery = 48.00%			
28) SURR6,TERPHENYL-D14	16.35	244	311191	0.99	ppm	0.00
Spiked Amount 2.000	Range 23 - 139		Recovery = 49.50%			
Target Compounds						Qvalue
2) 1,4-Dioxane	6.14	88	148187	1.67	ppm	93
3) Pyridine	6.91	79	84740	0.62	ppm	90
6) Nitrobenzene	11.27	77	103120	0.82	ppm	83
7) Naphthalene	11.95	128	358113	0.93	ppm	94
8) 2-Methylnaphthalene	12.58	142	238412	0.98	ppm	84
9) 1-Methylnaphthalene	12.68	142	214390	0.92	ppm	86
12) Acenaphthylene	13.40	152	394692	0.92	ppm	98
13) Dimethyl phthalate	13.25	163	326930	0.93	ppm	98
14) Acenaphthene	13.56	153	244044	0.90	ppm	97
15) Dibenzofuran	13.70	168	360030	0.95	ppm	97
16) Fluorene	13.98	166	278231	0.94	ppm	93
17) Diethylphthalate	13.84	149	322351	0.91	ppm	98
19) Hexachlorobenzene	14.48	284	93310	1.01	ppm	92
20) Phenanthrene	14.76	178	398340	0.94	ppm	96
21) Anthracene	14.81	178	357295	0.88	ppm	98
22) Carbazole	14.93	167	293177	1.14	ppm	97
23) Octachlorostyrene	15.75	378	21046	0.85	ppm	86
24) Di-n-butylphthalate	15.15	149	477029	0.86	ppm	97
25) Fluoranthene	15.96	202	460731	0.96	ppm	98
27) Pyrene	16.25	202	471879	0.96	ppm	98
29) Butyl benzyl phthalate	16.97	149	209306	0.81	ppm	92
30) bis(2-Ethylhexyl)phthalate	17.89	149	559151	1.76	ppm	95
31) Benzo(a)anthracene	18.00	228	409794	0.95	ppm	97
32) Chrysene	18.09	228	408310	0.93	ppm	97
34) Di-n-octyl phthalate	19.21	149	424472m	0.75	ppm	
35) Benzo(b)Fluoranthene	20.57	252	393842	0.91	ppm	91

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\5973B\DATA\101609\DC085.D Vial: 5
Acq On : 16 Oct 2009 12:52 pm Operator: J.Wu
Sample : SSTD010 Inst : 5973-B
Misc : 1.0/2.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 16 15:44 2009 Quant Results File: LVI1016.RES

Quant Method : J:\ACQUDATA\5...\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Fri Oct 16 15:42:56 2009
Response via : Initial Calibration
DataAcq Meth : LVI1016

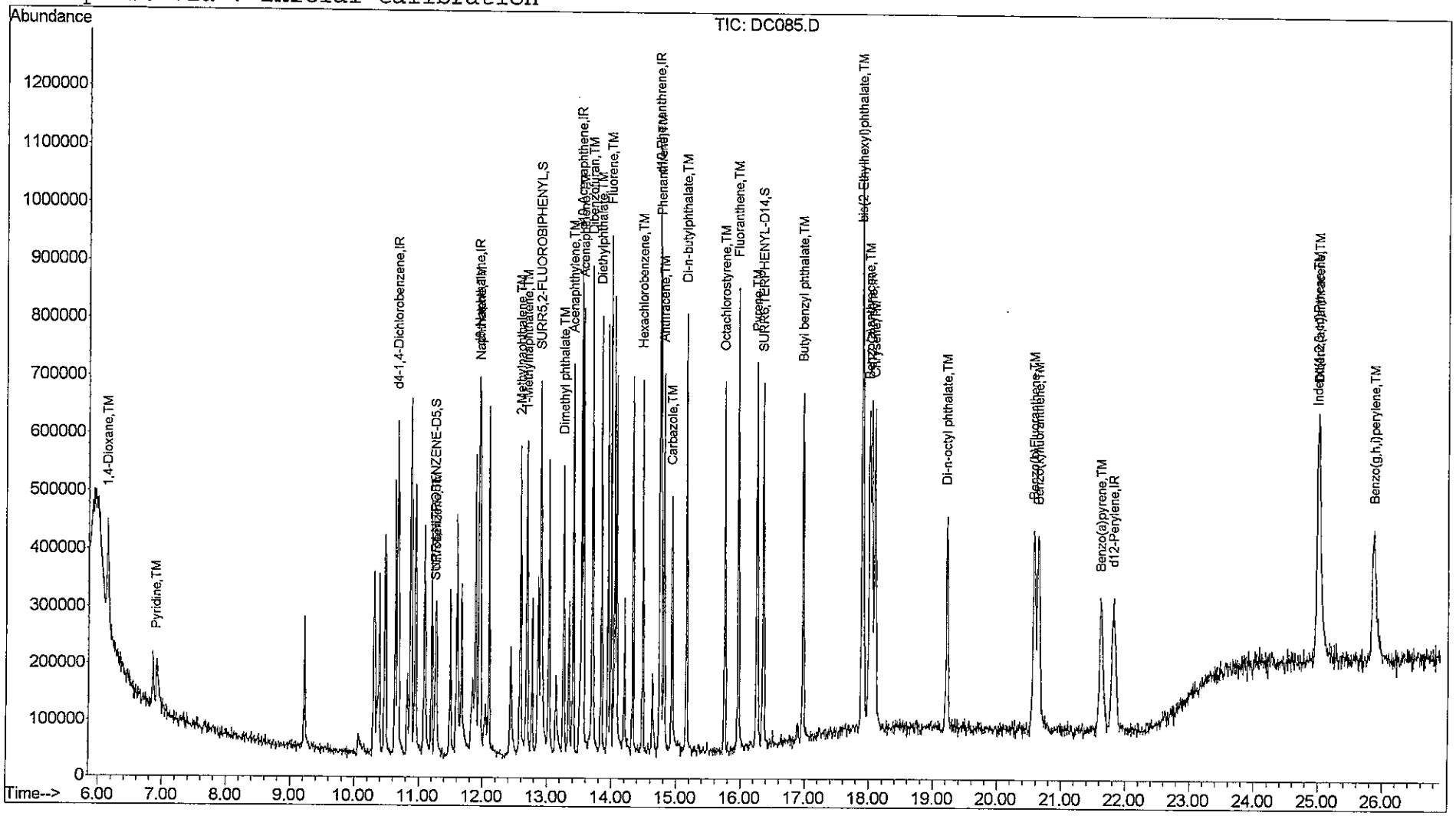
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
36)	Benzo(k)fluoranthene	20.64	252	407782	0.94	ppm	88
37)	Benzo(a)pyrene	21.62	252	349741	0.90	ppm	91
38)	Indeno(1,2,3-cd)Pyrene	24.98	276	442907	0.96	ppm	84
39)	Dibenz(a,h)anthracene	25.01	278	364347	0.93	ppm	87
40)	Benzo(g,h,i)perylene	25.87	276	384031	0.98	ppm	91

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : J:\ACQUDATA\5973B\DATA\101609\DC085.D Vial: 5
Acq On : 16 Oct 2009 12:52 pm Operator: J.Wu
Sample : SSTD010 Inst : 5973-B
Misc : 1.0/2.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 16 15:44 2009 Quant Results File: LVI1016.RES

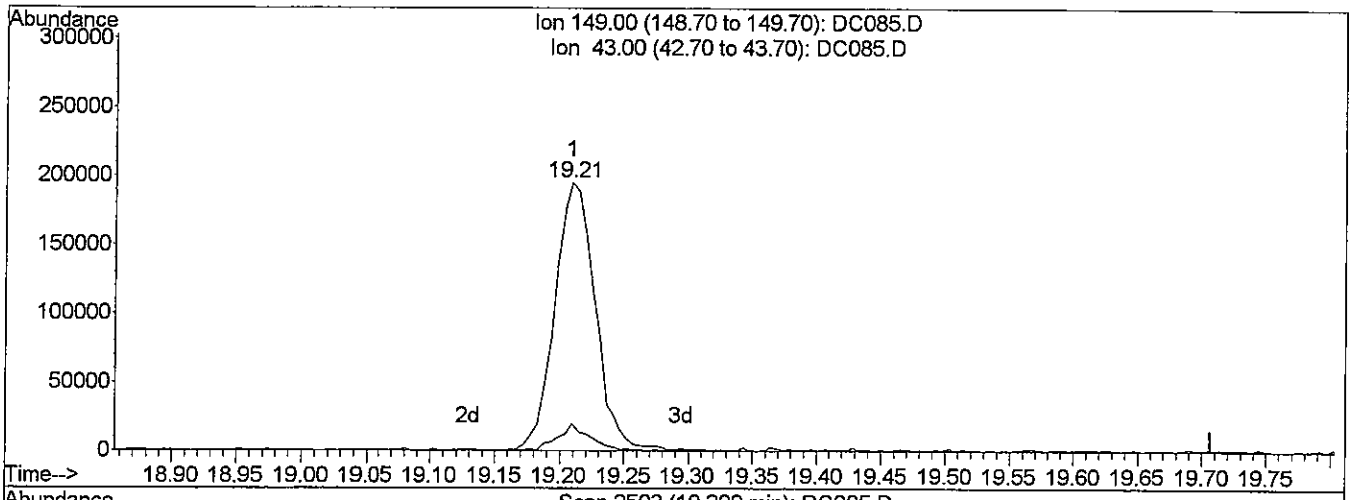
Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Mon Oct 19 08:41:26 2009
Response via : Initial Calibration

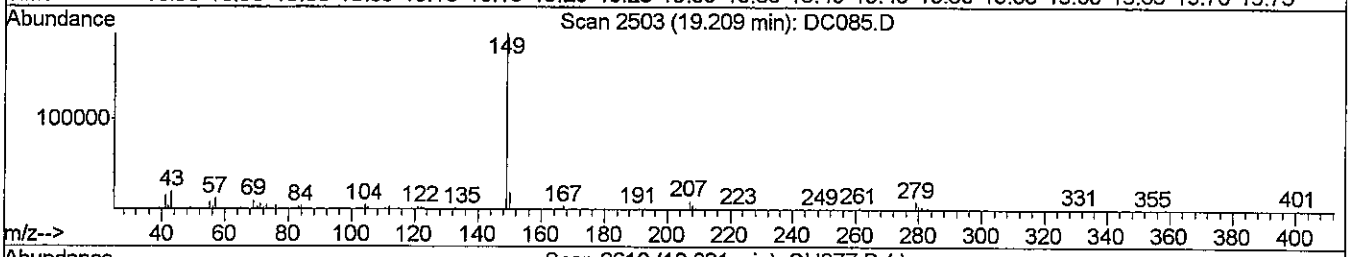


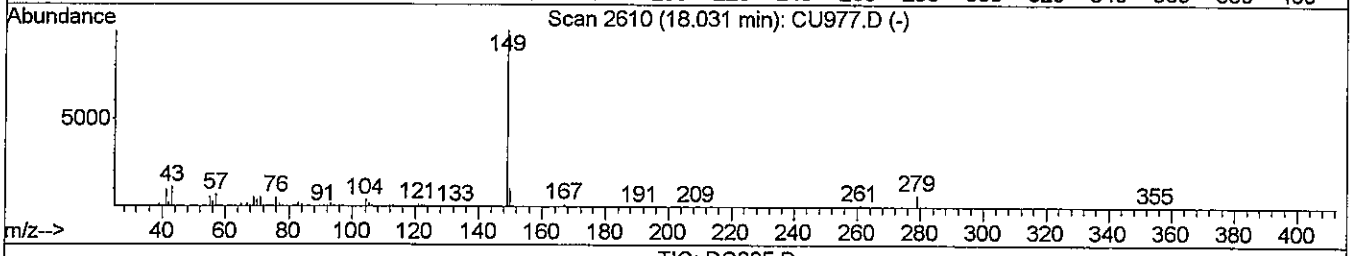
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\101609\DC085.D Vial: 5
Acq On : 16 Oct 2009 12:52 pm Operator: J.Wu
Sample : SSTD010 Inst : 5973-B
Misc : 1.0/2.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 16 15:42 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Fri Oct 16 15:42:56 2009
Response via : Single Level Calibration







TIC: DC085.D

(34) Di-n-octyl phthalate (TM)

19.21min 0.75ppm

response 425124

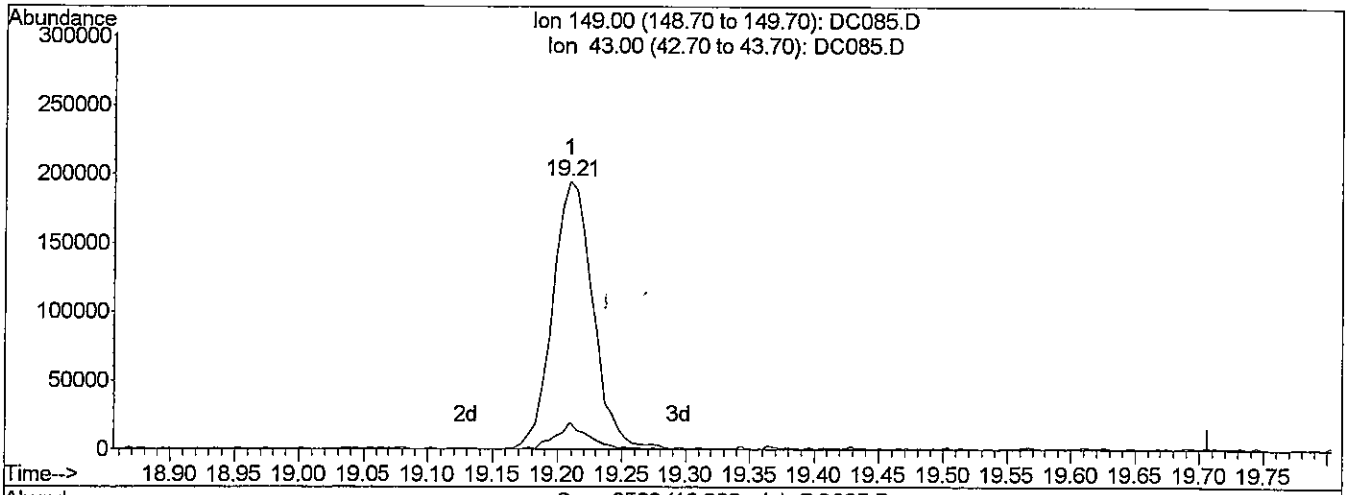
Ion	Exp%	Act%
149.00	100	100
43.00	7.10	10.11#
0.00	0.00	0.00
0.00	0.00	0.00

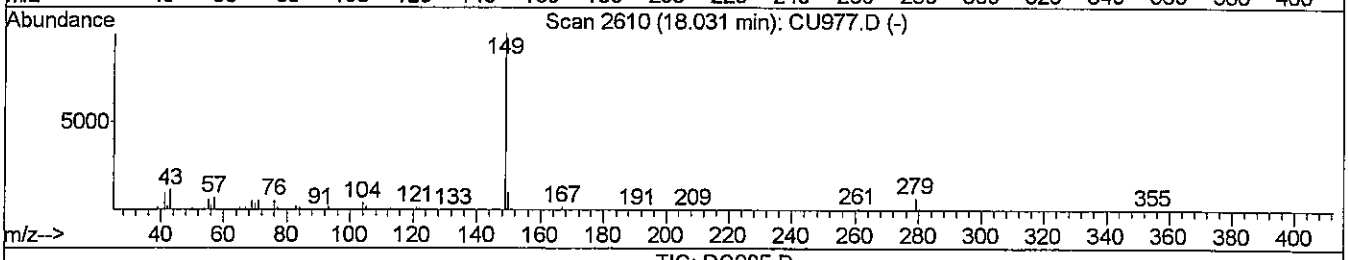
DC085.D LVI1016.M Fri Oct 16 15:44:08 2009

Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\101609\DC085.D Vial: 5
Acq On : 16 Oct 2009 12:52 pm Operator: J.Wu
Sample : SSTD010 Inst : 5973-B
Misc : 1.0/2.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 16 15:44 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Fri Oct 16 15:42:56 2009
Response via : Single Level Calibration





TIC: DC085.D

(34) Di-n-octyl phthalate (TM)

19.21min 0.75ppm m

response 424472

Ion	Exp%	Act%
149.00	100	100
43.00	7.10	10.09#
0.00	0.00	0.00
0.00	0.00	0.00

MW 10/19/09

AJW 10/19/09

Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\5973B\DATA\101609\DC086.D Vial: 6
Acq On : 16 Oct 2009 1:41 pm Operator: J.Wu
Sample : SSTD020 Inst : 5973-B
Misc : 2.0/4.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 16 15:25 2009 Quant Results File: LVI1016.RES

Quant Method : J:\ACQUDATA\5...\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Fri Oct 16 15:25:43 2009
Response via : Initial Calibration
DataAcq Meth : LVI1016

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) d4-1,4-Dichlorobenzene	10.65	152	87265	1.00	ppm	0.00
4) d8-Naphthalene	11.93	136	332086	1.00	ppm	0.00
10) d10-Acenaphthene	13.52	164	211569	1.00	ppm	0.00
18) d10-Phenanthrene	14.74	188	351504	1.00	ppm	0.00
26) d12-Chrysene	18.03	240	365317	1.00	ppm	0.00
33) d12-Perylene	21.82	264	282309	1.00	ppm	0.00
System Monitoring Compounds						
5) SURR4,NITROBENZENE-D5	11.25	82	239198	2.16	ppm	0.00
Spiked Amount 2.000	Range 22 - 124		Recovery = 108.00%			
11) SURR5,2-FLUOROBIPHENYL	12.89	172	566093	1.99	ppm	0.00
Spiked Amount 2.000	Range 27 - 114		Recovery = 99.50%			
28) SURR6,TERPHENYL-D14	16.34	244	637762	2.19	ppm	0.00
Spiked Amount 2.000	Range 23 - 139		Recovery = 109.50%			
Target Compounds						Qvalue
2) 1,4-Dioxane	6.08	88	286073	3.36	ppm	100
3) Pyridine	6.85	79	219021	1.89	ppm	100
6) Nitrobenzene	11.26	77	230528	2.08	ppm	100
7) Naphthalene	11.95	128	725465	2.08	ppm	100
8) 2-Methylnaphthalene	12.57	142	492721	2.17	ppm	100
9) 1-Methylnaphthalene	12.67	142	456255	2.17	ppm	100
12) Acenaphthylene	13.40	152	800878	2.03	ppm	100
13) Dimethyl phthalate	13.24	163	659035	2.10	ppm	100
14) Acenaphthene	13.55	153	495146	2.02	ppm	100
15) Dibenzofuran	13.69	168	730567	2.21	ppm	100
16) Fluorene	13.98	166	567384	2.23	ppm	100
17) Diethylphthalate	13.83	149	645239	1.99	ppm	100
19) Hexachlorobenzene	14.47	284	188697	2.23	ppm	100
20) Phenanthrene	14.76	178	782237	1.93	ppm	100
21) Anthracene	14.80	178	780456	2.06	ppm	100
22) Carbazole	14.92	167	598651	2.33	ppm	100
23) Octachlorostyrene	15.76	378	41252	1.76	ppm	100
24) Di-n-butylphthalate	15.15	149	1007379	1.91	ppm	100
25) Fluoranthene	15.96	202	904072	1.99	ppm	100
27) Pyrene	16.25	202	938308	2.04	ppm	100
29) Butyl benzyl phthalate	16.97	149	455718	1.88	ppm	100
30) bis(2-Ethylhexyl)phthalate	17.89	149	1189156	3.94	ppm	100
31) Benzo(a)anthracene	17.99	228	815272	2.07	ppm	100
32) Chrysene	18.08	228	839775	2.10	ppm	100
34) Di-n-octyl phthalate	19.21	149	958568	1.86	ppm	100
35) Benzo(b)Fluoranthene	20.56	252	834259	2.05	ppm	98

(#) = qualifier out of range (m) = manual integration
DC086.D LVI1016.M Mon Oct 19 09:04:19 2009 JW

00220

Data File : J:\ACQUDATA\5973B\DATA\101609\DC086.D Vial: 6
Acq On : 16 Oct 2009 1:41 pm Operator: J.Wu
Sample : SSTD020 Inst : 5973-B
Misc : 2.0/4.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 16 15:25 2009 Quant Results File: LVI1016.RES

Quant Method : J:\ACQUDATA\5...\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Fri Oct 16 15:25:43 2009
Response via : Initial Calibration
DataAcq Meth : LVI1016

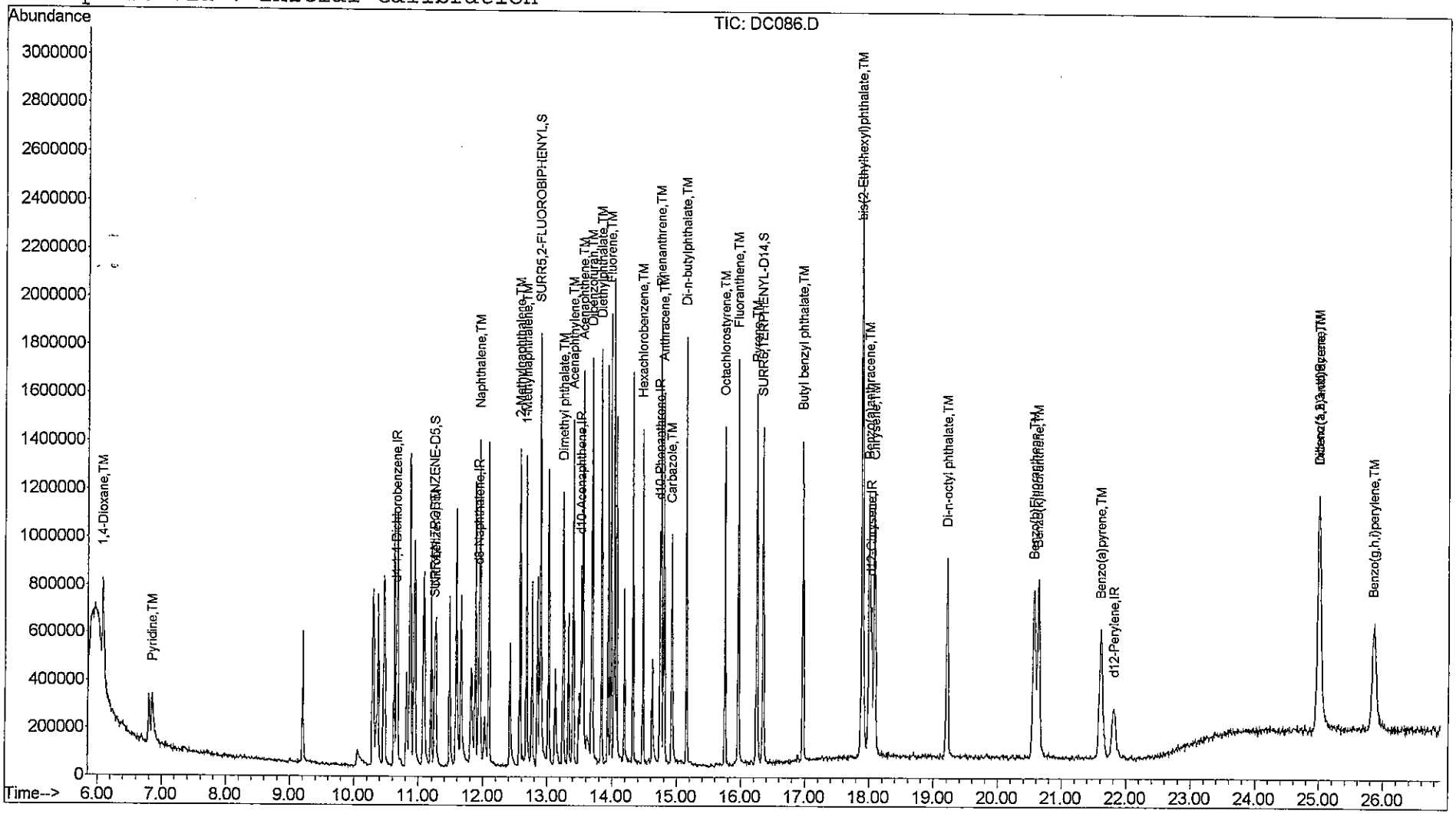
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
36)	Benzo(k)fluoranthene	20.63	252	809108	2.01	ppm	100
37)	Benzo(a)pyrene	21.61	252	736123	2.06	ppm	100
38)	Indeno(1,2,3-cd)Pyrene	24.99	276	902940	2.12	ppm	100
39)	Dibenz(a,h)anthracene	25.00	278	755294	2.13	ppm	100
40)	Benzo(g,h,i)perylene	25.85	276	767035	2.13	ppm	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : J:\ACQUDATA\5973B\DATA\101609\DC086.D Vial: 6
Acq On : 16 Oct 2009 1:41 pm Operator: J.Wu
Sample : SSTD020 Inst : 5973-B
Misc : 2.0/4.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 16 15:25 2009 Quant Results File: LVI1016.RES

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Mon Oct 19 08:41:26 2009
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\5973B\DATA\101609\DC087.D Vial: 7
Acq On : 16 Oct 2009 2:29 pm Operator: J.Wu
Sample : SSTD030 Inst : 5973-B
Misc : 3.0/6.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 16 15:44 2009 Quant Results File: LVI1016.RES

Quant Method : J:\ACQUDATA\5...\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Fri Oct 16 15:44:33 2009
Response via : Initial Calibration
DataAcq Meth : LVI1016

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) d4-1,4-Dichlorobenzene	10.66	152	89723	1.00	ppm	0.00
4) d8-Naphthalene	11.93	136	351732	1.00	ppm	0.00
10) d10-Acenaphthene	13.52	164	221022	1.00	ppm	0.00
18) d10-Phenanthrene	14.74	188	350171	1.00	ppm	0.00
26) d12-Chrysene	18.03	240	382769	1.00	ppm	0.00
33) d12-Perylene	21.81	264	306035	1.00	ppm	0.00
System Monitoring Compounds						
5) SURR4,NITROBENZENE-D5	11.24	82	377146	3.38	ppm	0.00
Spiked Amount 2.000	Range 22 - 124		Recovery = 169.00%#			
11) SURR5,2-FLUOROBIPHENYL	12.89	172	883301	3.09	ppm	0.00
Spiked Amount 2.000	Range 27 - 114		Recovery = 154.50%#			
28) SURR6,TERPHENYL-D14	16.35	244	971157	3.15	ppm	0.00
Spiked Amount 2.000	Range 23 - 139		Recovery = 157.50%#			
Target Compounds						Qvalue
2) 1,4-Dioxane	6.07	88	415592	5.52	ppm	94
3) Pyridine	6.84	79	327171	2.86	ppm	92
6) Nitrobenzene	11.26	77	354400	3.00	ppm	92
7) Naphthalene	11.95	128	1088906	2.97	ppm	97
8) 2-Methylnaphthalene	12.57	142	723644	3.11	ppm	94
9) 1-Methylnaphthalene	12.68	142	693683	3.10	ppm	97
12) Acenaphthylene	13.40	152	1206313	2.99	ppm	99
13) Dimethyl phthalate	13.24	163	1029105	3.09	ppm	98
14) Acenaphthene	13.55	153	762175	2.97	ppm	95
15) Dibenzofuran	13.70	168	1117343	3.09	ppm	99
16) Fluorene	13.98	166	888831	3.13	ppm	94
17) Diethylphthalate	13.83	149	987033	2.95	ppm	99
19) Hexachlorobenzene	14.48	284	291188	3.41	ppm	93
20) Phenanthrene	14.76	178	1209082	3.11	ppm	98
21) Anthracene	14.80	178	1174391	3.16	ppm	98
22) Carbazole	14.92	167	866430	3.65	ppm	98
23) Octachlorostyrene	15.76	378	77766	3.48	ppm	94
24) Di-n-butylphthalate	15.15	149	1526808	3.06	ppm	99
25) Fluoranthene	15.96	202	1371411	3.11	ppm	99
27) Pyrene	16.25	202	1413697	2.94	ppm	95
29) Butyl benzyl phthalate	16.97	149	710370	2.90	ppm	98
30) bis(2-Ethylhexyl)phthalate	17.89	149	1890380	6.25	ppm	94
31) Benzo(a)anthracene	18.00	228	1294017	3.10	ppm	97
32) Chrysene	18.08	228	1261801	2.98	ppm	92
34) Di-n-octyl phthalate	19.21	149	1560533	2.79	ppm	99
35) Benzo(b)Fluoranthene	20.57	252	1342020	3.07	ppm	95

(#) = qualifier out of range (m) = manual integration
DC087.D LVI1016.M Mon Oct 19 09:04:33 2009

00223

Data File : J:\ACQUDATA\5973B\DATA\101609\DC087.D Vial: 7
Acq On : 16 Oct 2009 2:29 pm Operator: J.Wu
Sample : SSTD030 Inst : 5973-B
Misc : 3.0/6.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 16 15:44 2009 Quant Results File: LVI1016.RES

Quant Method : J:\ACQUDATA\5...\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Fri Oct 16 15:44:33 2009
Response via : Initial Calibration
DataAcq Meth : LVI1016

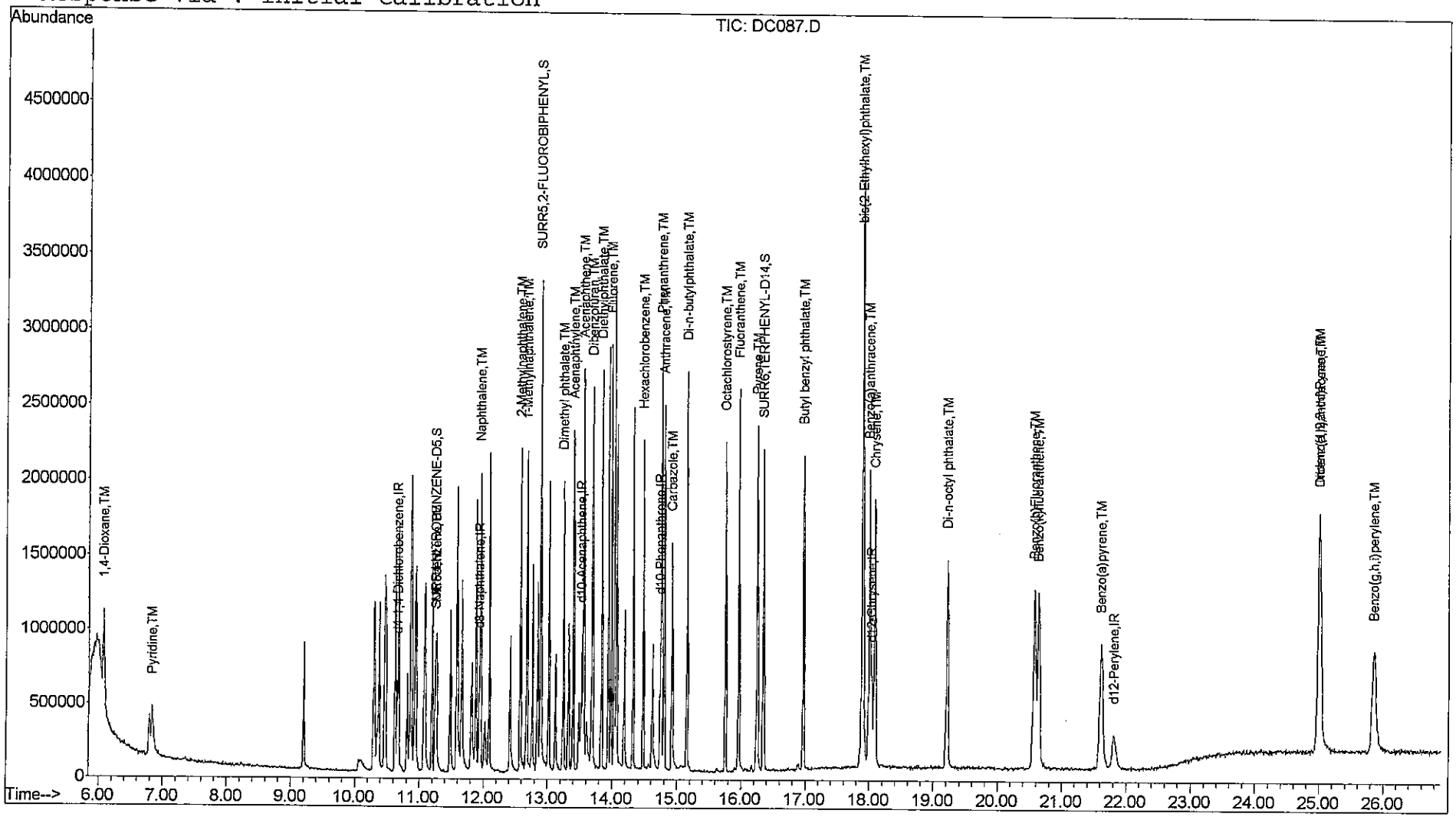
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
36) Benzo(k)fluoranthene	20.63	252	1237942	2.84	ppm	95
37) Benzo(a)pyrene	21.61	252	1179311	3.02	ppm	94
38) Indeno(1,2,3-cd)Pyrene	24.99	276	1389152	2.99	ppm	91
39) Dibenz(a,h)anthracene	25.00	278	1189435	3.02	ppm	98
40) Benzo(g,h,i)perylene	25.85	276	1183933	3.02	ppm	95

(#) = qualifier out of range (m) = manual integration
DC087.D LVI1016.M Mon Oct 19 09:04:33 2009 Page 2

Quantitation Report

Data File : J:\ACQUDATA\5973B\DATA\101609\DC087.D Vial: 7
Acq On : 16 Oct 2009 2:29 pm Operator: J.Wu
Sample : SSTD030 Inst : 5973-B
Misc : 3.0/6.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 16 15:44 2009 Quant Results File: LVI1016.RES

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Mon Oct 19 08:41:26 2009
Response via : Initial Calibration



S2200

Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\5973B\DATA\101609\DC088.D Vial: 8
Acq On : 16 Oct 2009 3:31 pm Operator: J.Wu
Sample : SSTD040 Inst : 5973-B
Misc : 4.0/8.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 16 16:16 2009 Quant Results File: LVI1016.RES

Quant Method : J:\ACQUDATA\5...\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Fri Oct 16 15:48:01 2009
Response via : Initial Calibration
DataAcq Meth : LVI1016

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) d4-1,4-Dichlorobenzene	10.65	152	99813	1.00	ppm	0.00
4) d8-Naphthalene	11.93	136	358515	1.00	ppm	0.00
10) d10-Acenaphthene	13.52	164	229694	1.00	ppm	0.00
18) d10-Phenanthrene	14.74	188	356634	1.00	ppm	0.00
26) d12-Chrysene	18.03	240	385150	1.00	ppm	0.00
33) d12-Perylene	21.82	264	311671	1.00	ppm	0.00
System Monitoring Compounds						
5) SURR4,NITROBENZENE-D5	11.24	82	517585	4.53	ppm	0.00
Spiked Amount 2.000	Range 22 - 124		Recovery = 226.50%#			
11) SURR5,2-FLUOROBIPHENYL	12.89	172	1164560	3.95	ppm	0.00
Spiked Amount 2.000	Range 27 - 114		Recovery = 197.50%#			
28) SURR6,TERPHENYL-D14	16.34	244	1289432	4.13	ppm	0.00
Spiked Amount 2.000	Range 23 - 139		Recovery = 206.50%#			
Target Compounds						Qvalue
2) 1,4-Dioxane	6.02	88	616626	7.53	ppm	98
3) Pyridine	6.79	79	456090	3.69	ppm	95
6) Nitrobenzene	11.26	77	480577	4.24	ppm	90
7) Naphthalene	11.95	128	1465293	3.96	ppm	98
8) 2-Methylnaphthalene	12.57	142	1002258	4.23	ppm	90
9) 1-Methylnaphthalene	12.67	142	933981	4.08	ppm	97
12) Acenaphthylene	13.40	152	1620319	3.89	ppm	99
13) Dimethyl phthalate	13.24	163	1360181	3.93	ppm	99
14) Acenaphthene	13.55	153	1005562	3.77	ppm	94
15) Dibenzofuran	13.70	168	1444363	3.84	ppm	98
16) Fluorene	13.98	166	1154420	3.90	ppm	98
17) Diethylphthalate	13.83	149	1335140	3.89	ppm	96
19) Hexachlorobenzene	14.48	284	386832	4.36	ppm	94
20) Phenanthrene	14.76	178	1577348	4.00	ppm	96
21) Anthracene	14.80	178	1650187	4.36	ppm	97
22) Carbazole	14.92	167	1092483	4.35	ppm	99
23) Octachlorostyrene	15.76	378	114805	5.03	ppm	96
24) Di-n-butylphthalate	15.15	149	2051524	4.11	ppm	99
25) Fluoranthene	15.96	202	1864506	4.16	ppm	98
27) Pyrene	16.24	202	1928039	4.01	ppm	98
29) Butyl benzyl phthalate	16.96	149	988328	4.10	ppm	98
30) bis(2-Ethylhexyl)phthalate	17.89	149	2555325	8.52	ppm	96
31) Benzo(a)anthracene	18.00	228	1706262	4.08	ppm	98
32) Chrysene	18.08	228	1724959	4.05	ppm	95
34) Di-n-octyl phthalate	19.21	149	2155811	3.87	ppm	99
35) Benzo(b)Fluoranthene	20.57	252	1788516	4.02	ppm	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\5973B\DATA\101609\DC088.D Vial: 8
Acq On : 16 Oct 2009 3:31 pm Operator: J.Wu
Sample : SSTD040 Inst : 5973-B
Misc : 4.0/8.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 16 16:16 2009 Quant Results File: LVI1016.RES

Quant Method : J:\ACQUDATA\5...\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Fri Oct 16 15:48:01 2009
Response via : Initial Calibration
DataAcq Meth : LVI1016

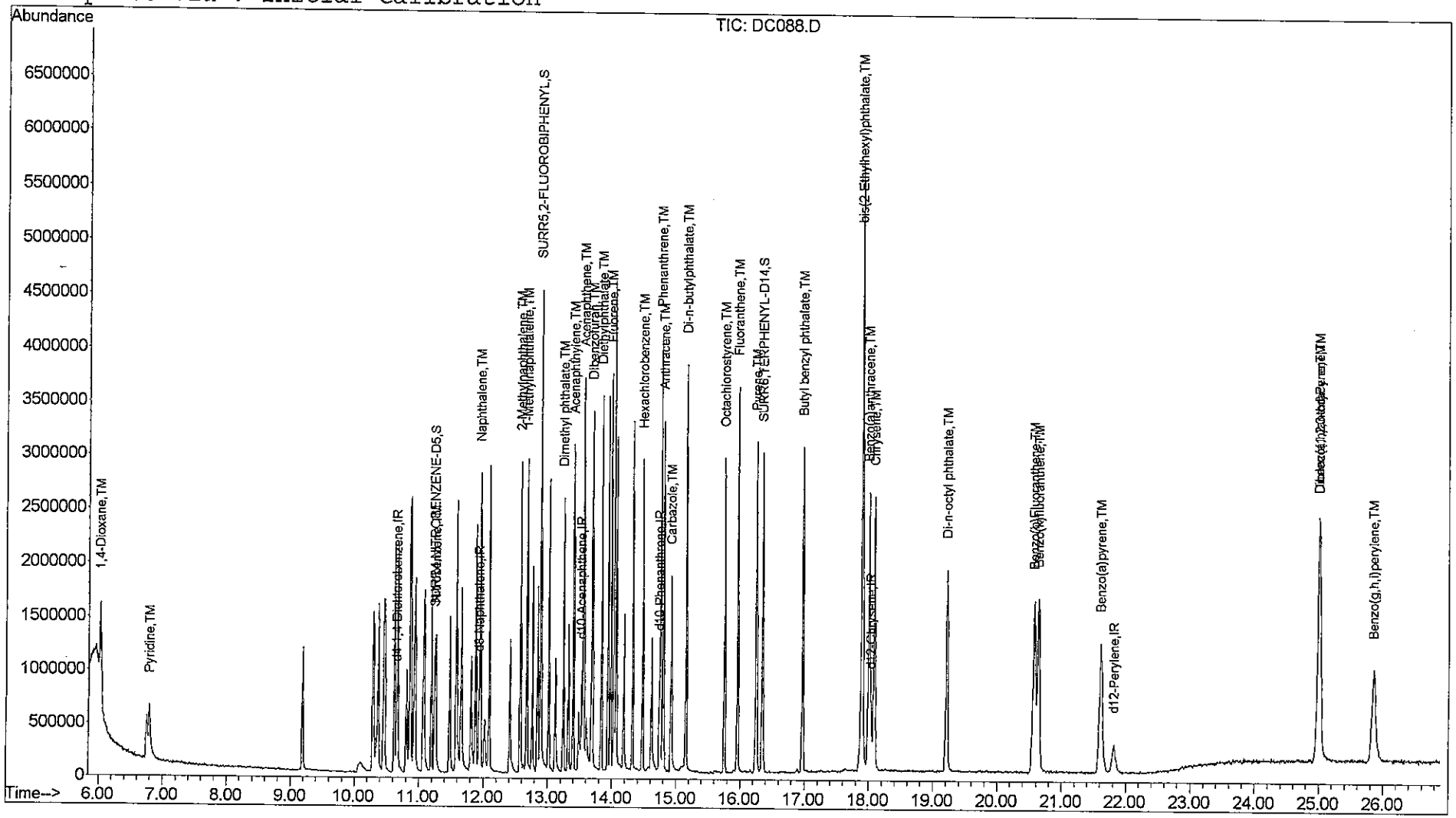
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
36)	Benzo(k)fluoranthene	20.64	252	1737385	3.95	ppm	97
37)	Benzo(a)pyrene	21.61	252	1607997	4.07	ppm	94
38)	Indeno(1,2,3-cd)Pyrene	24.99	276	1923380	4.09	ppm	93
39)	Dibenz(a,h)anthracene	25.01	278	1647958	4.12	ppm	96
40)	Benzo(g,h,i)perylene	25.85	276	1408674	3.55	ppm	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : J:\ACQUDATA\5973B\DATA\101609\DC088.D Vial: 8
Acq On : 16 Oct 2009 3:31 pm Operator: J.Wu
Sample : SSTD040 Inst : 5973-B
Misc : 4.0/8.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 16 16:16 2009 Quant Results File: LVI1016.RES

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Mon Oct 19 08:41:26 2009
Response via : Initial Calibration



82260

Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\5973B\DATA\101609\DC089.D Vial: 9
Acq On : 16 Oct 2009 4:32 pm Operator: J.Wu
Sample : SSTD050 Inst : 5973-B
Misc : 5.0/10.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 16 17:07 2009 Quant Results File: LVI1016.RES

Quant Method : J:\ACQUDATA\5...\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Fri Oct 16 16:17:50 2009
Response via : Initial Calibration
DataAcq Meth : LVI1016

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) d4-1,4-Dichlorobenzene	10.66	152	93968	1.00	ppm	0.00
4) d8-Naphthalene	11.93	136	331049	1.00	ppm	0.00
10) d10-Acenaphthene	13.53	164	210541	1.00	ppm	0.00
18) d10-Phenanthrene	14.74	188	346087	1.00	ppm	0.00
26) d12-Chrysene	18.03	240	360909	1.00	ppm	0.00
33) d12-Perylene	21.80	264	304096	1.00	ppm	-0.02
System Monitoring Compounds						
5) SURR4,NITROBENZENE-D5	11.24	82	611999	5.74	ppm	0.00
Spiked Amount 2.000	Range 22 - 124		Recovery = 287.00%#			
11) SURR5,2-FLUOROBIPHENYL	12.88	172	1421756	5.32	ppm	0.00
Spiked Amount 2.000	Range 27 - 114		Recovery = 266.00%#			
28) SURR6,TERPHENYL-D14	16.34	244	1589028	5.41	ppm	0.00
Spiked Amount 2.000	Range 23 - 139		Recovery = 270.50%#			
Target Compounds						Qvalue
2) 1,4-Dioxane	6.09	88	699916	9.21	ppm	94
3) Pyridine	6.85	79	577484	5.09	ppm	96
6) Nitrobenzene	11.26	77	581744	5.53	ppm	91
7) Naphthalene	11.95	128	1759567	5.17	ppm	96
8) 2-Methylnaphthalene	12.57	142	1191060	5.41	ppm	96
9) 1-Methylnaphthalene	12.67	142	1140824	5.38	ppm	95
12) Acenaphthylene	13.40	152	1926622	5.12	ppm	98
13) Dimethyl phthalate	13.24	163	1617436	5.17	ppm	99
14) Acenaphthene	13.55	153	1210021	4.98	ppm	96
15) Dibenzofuran	13.69	168	1783759	5.24	ppm	95
16) Fluorene	13.98	166	1410593	5.25	ppm	98
17) Diethylphthalate	13.84	149	1618337	5.25	ppm	97
19) Hexachlorobenzene	14.48	284	470506	5.39	ppm	100
20) Phenanthrene	14.75	178	1893622	4.99	ppm	95
21) Anthracene	14.80	178	1981727	5.40	ppm	97
22) Carbazole	14.91	167	1255944	4.92	ppm	98
23) Octachlorostyrene	15.75	378	130210	5.74	ppm	88
24) Di-n-butylphthalate	15.15	149	2455674	5.16	ppm	97
25) Fluoranthene	15.96	202	2177906	5.04	ppm	97
27) Pyrene	16.24	202	2272436	5.04	ppm	98
29) Butyl benzyl phthalate	16.97	149	1198033	5.35	ppm	94
30) bis(2-Ethylhexyl)phthalate	17.89	149	3252122	11.63	ppm	95
31) Benzo(a)anthracene	18.00	228	2090630	5.34	ppm	98
32) Chrysene	18.08	228	2035322	5.09	ppm	96
34) Di-n-octyl phthalate	19.21	149	2764548	5.22	ppm	99
35) Benzo(b)Fluoranthene	20.57	252	2222586	5.14	ppm	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\5973B\DATA\101609\DC089.D Vial: 9
Acq On : 16 Oct 2009 4:32 pm Operator: J.Wu
Sample : SSTD050 Inst : 5973-B
Misc : 5.0/10.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 16 17:07 2009 Quant Results File: LVI1016.RES

Quant Method : J:\ACQUDATA\5...\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Fri Oct 16 16:17:50 2009
Response via : Initial Calibration
DataAcq Meth : LVI1016

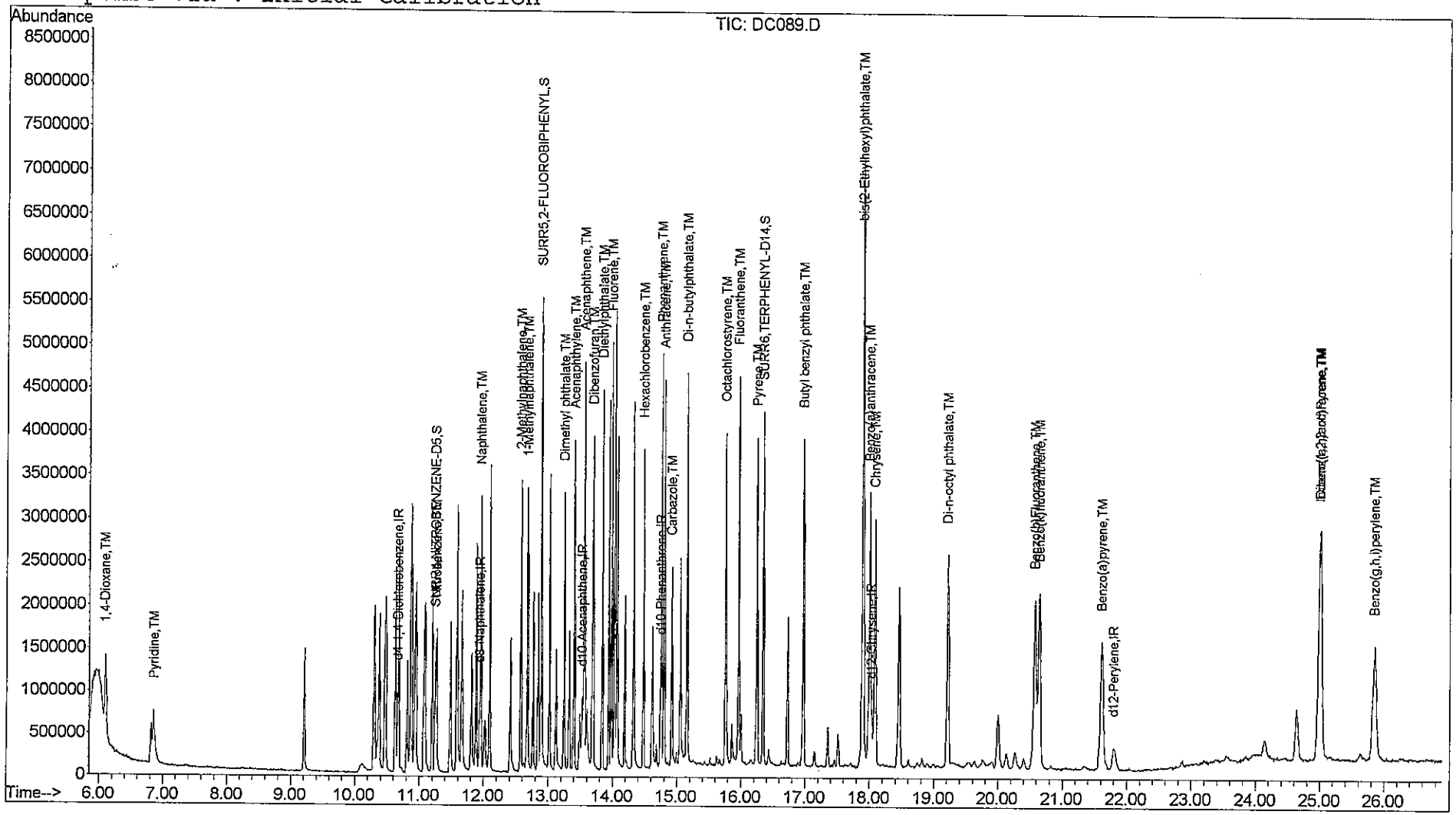
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
36)	Benzo(k)fluoranthene	20.64	252	2018179	4.73	ppm	96
37)	Benzo(a)pyrene	21.60	252	1961381	5.11	ppm	98
38)	Indeno(1,2,3-cd)Pyrene	25.00	276	2398162	5.25	ppm	94
39)	Dibenz(a,h)anthracene	25.01	278	2046704	5.25	ppm	95
40)	Benzo(g,h,i)perylene	25.85	276	1923430	5.07	ppm	96

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : J:\ACQUDATA\5973B\DATA\101609\DC089.D Vial: 9
Acq On : 16 Oct 2009 4:32 pm Operator: J.Wu
Sample : SSTD050 Inst : 5973-B
Misc : 5.0/10.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 16 17:07 2009 Quant Results File: LVI1016.RES

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Mon Oct 19 08:41:26 2009
Response via : Initial Calibration



TC200

Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\5973B\DATA\101609\DC090.D Vial: 10
Acq On : 16 Oct 2009 5:27 pm Operator: J.Wu
Sample : SSTD100 Inst : 5973-B
Misc : 10.0/20.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 16 18:00 2009 Quant Results File: LVI1016.RES

Quant Method : J:\ACQUDATA\5...\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Fri Oct 16 17:08:18 2009
Response via : Initial Calibration
DataAcq Meth : LVI1016

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) d4-1,4-Dichlorobenzene	10.66	152	91500	1.00	ppm	0.00
4) d8-Naphthalene	11.93	136	331229	1.00	ppm	0.00
10) d10-Acenaphthene	13.53	164	214281	1.00	ppm	0.00
18) d10-Phenanthrene	14.74	188	345056	1.00	ppm	0.00
26) d12-Chrysene	18.03	240	404767	1.00	ppm	0.00
33) d12-Perylene	21.80	264	307806	1.00	ppm	-0.02
System Monitoring Compounds						
5) SURR4,NITROBENZENE-D5	11.24	82	1269272	11.84	ppm	0.00
Spiked Amount 2.000	Range 22 - 124		Recovery = 592.00%#			
11) SURR5,2-FLUOROBIPHENYL	12.88	172	2821850	10.40	ppm	0.00
Spiked Amount 2.000	Range 27 - 114		Recovery = 520.00%#			
28) SURR6,TERPHENYL-D14	16.34	244	3292259	9.94	ppm	0.00
Spiked Amount 2.000	Range 23 - 139		Recovery = 497.00%#			
Target Compounds						Qvalue
2) 1,4-Dioxane	6.07	88	1420817	19.56	ppm	95
3) Pyridine	6.82	79	1140233	10.61	ppm	93
6) Nitrobenzene	11.27	77	1202247	11.34	ppm	95
7) Naphthalene	11.95	128	3432902	10.03	ppm	92
8) 2-Methylnaphthalene	12.57	142	2431980	10.92	ppm	94
9) 1-Methylnaphthalene	12.67	142	2321546	10.78	ppm	98
12) Acenaphthylene	13.40	152	3690546	9.72	ppm	88
13) Dimethyl phthalate	13.24	163	3186488	10.05	ppm	96
14) Acenaphthene	13.55	153	2494824	10.14	ppm	99
15) Dibenzofuran	13.69	168	3424544	9.91	ppm	86
16) Fluorene	13.98	166	2779602	10.18	ppm	99
17) Diethylphthalate	13.84	149	3072408m	9.87	ppm	
19) Hexachlorobenzene	14.48	284	998162	11.22	ppm	94
20) Phenanthrene	14.76	178	3628057	9.62	ppm	88
21) Anthracene	14.80	178	3692403	10.06	ppm	87
22) Carbazole	14.91	167	1923141	7.15	ppm	99
23) Octachlorostyrene	15.75	378	266718	11.60	ppm	87
24) Di-n-butylphthalate	15.15	149	4301585m	9.10	ppm	
25) Fluoranthene	15.96	202	4303520	10.00	ppm	92
27) Pyrene	16.24	202	4462882	8.84	ppm	91
29) Butyl benzyl phthalate	16.97	149	2524521	10.15	ppm	93
30) bis(2-Ethylhexyl)phthalate	17.89	149	6095272	19.33	ppm	94
31) Benzo(a)anthracene	18.00	228	4402960	10.03	ppm	99
32) Chrysene	18.08	228	4277420	9.51	ppm	94
34) Di-n-octyl phthalate	19.22	149	5560023	10.65	ppm	99
35) Benzo(b)Fluoranthene	20.58	252	4783970	10.99	ppm	98

(#) = qualifier out of range (m) = manual integration

00232

Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\5973B\DATA\101609\DC090.D Vial: 10
Acq On : 16 Oct 2009 5:27 pm Operator: J.Wu
Sample : SSTD100 Inst : 5973-B
Misc : 10.0/20.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 16 18:00 2009 Quant Results File: LVI1016.RES

Quant Method : J:\ACQUDATA\5...\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Fri Oct 16 17:08:18 2009
Response via : Initial Calibration
DataAcq Meth : LVI1016

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
36)	Benzo(k)fluoranthene	20.65	252	4246620m	10.03	ppm	
37)	Benzo(a)pyrene	21.61	252	4124260	10.73	ppm	99
38)	Indeno(1,2,3-cd)Pyrene	25.01	276	4663469	10.10	ppm	88
39)	Dibenz(a,h)anthracene	25.02	278	4111504	10.45	ppm	96
40)	Benzo(g,h,i)perylene	25.86	276	3628732	9.43	ppm	96

(#) = qualifier out of range (m) = manual integration

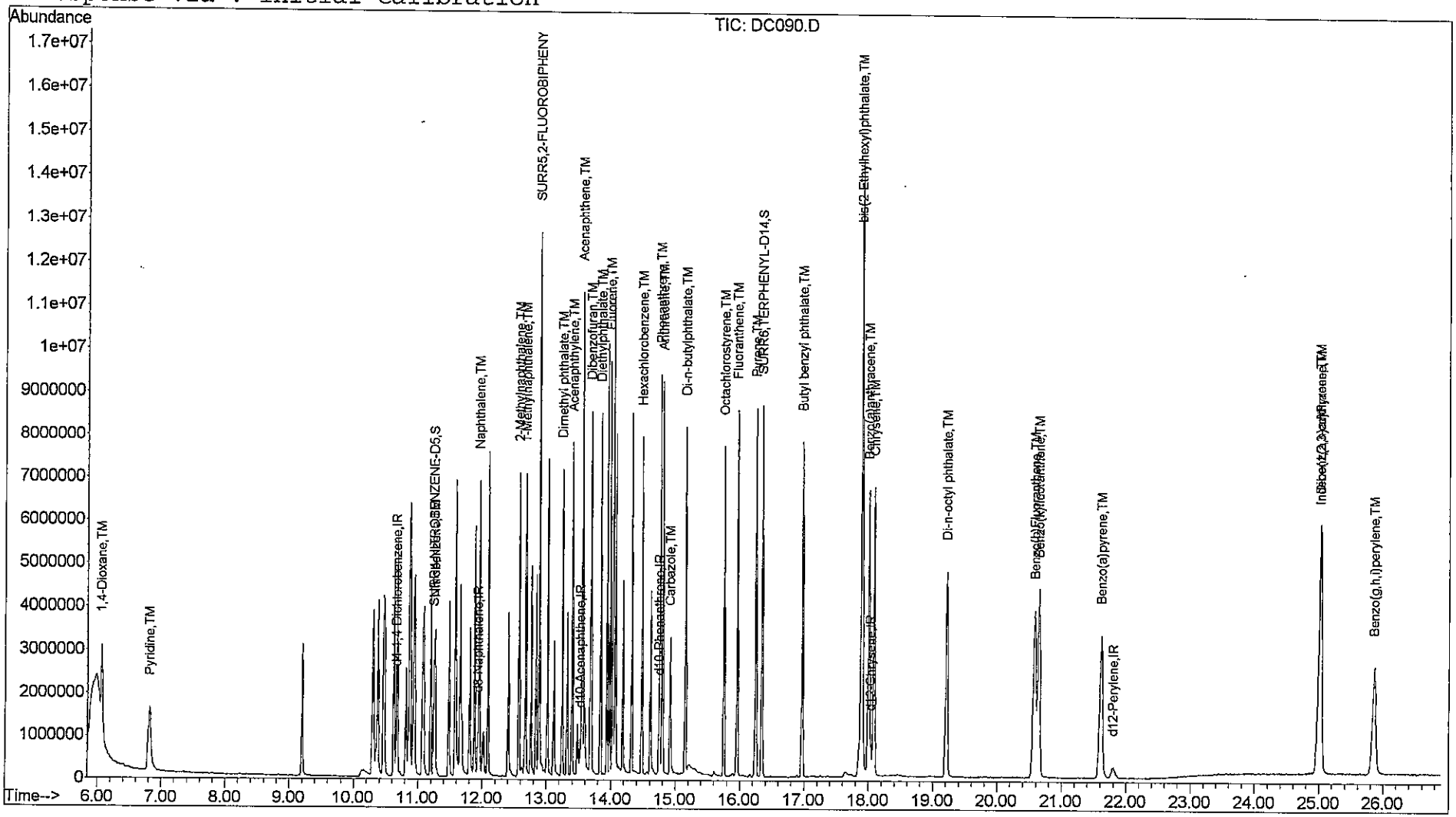
Quantitation Report

Data File : J:\ACQUDATA\5973B\DATA\101609\DC090.D
Acq On : 16 Oct 2009 5:27 pm
Sample : SSTD100
Misc : 10.0/20.0 PPM STD 8270.LL
MS Integration Params: RTEINT.P
Quant Time: Oct 16 18:00 2009

Vial: 10
Operator: J.Wu
Inst : 5973-B
Multiplr: 1.00

Quant Results File: LVI1016.RES

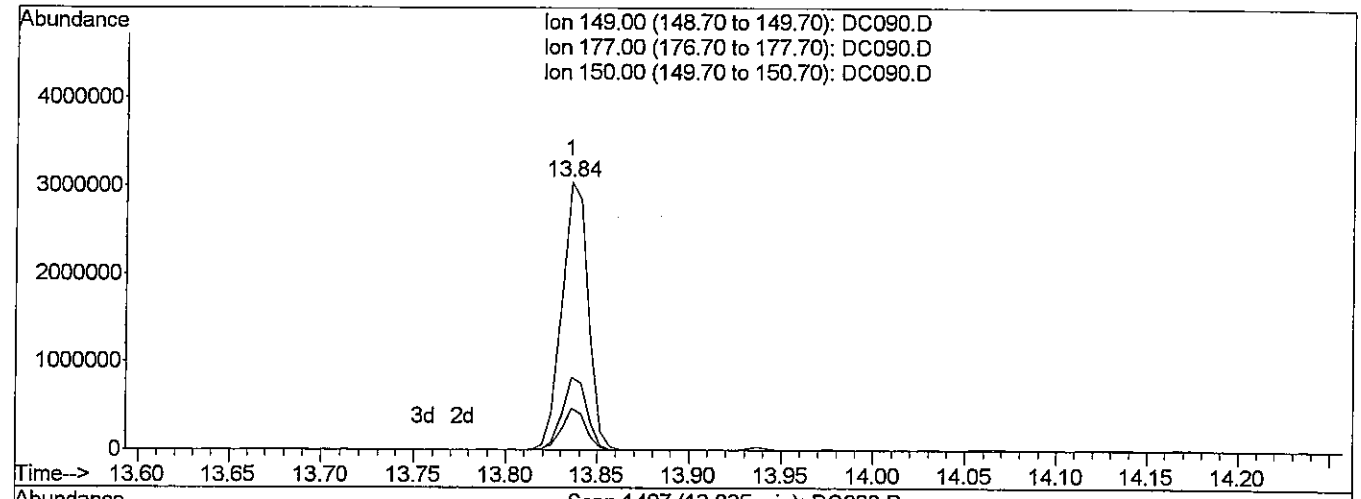
Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Fri Oct 16 18:01:02 2009
Response via : Initial Calibration

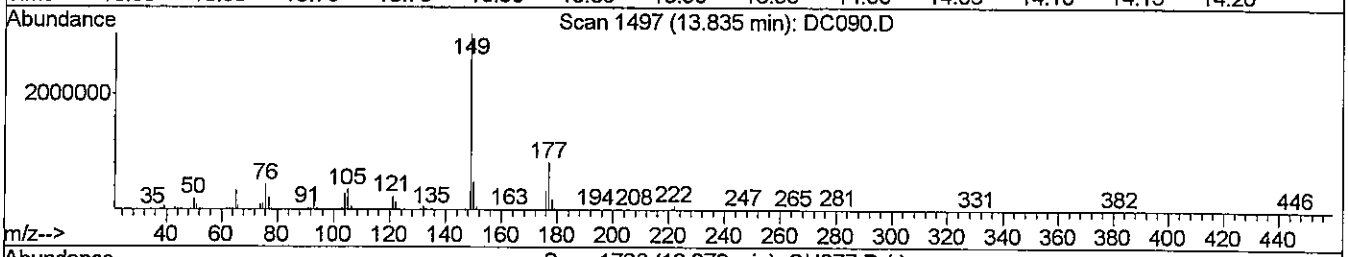


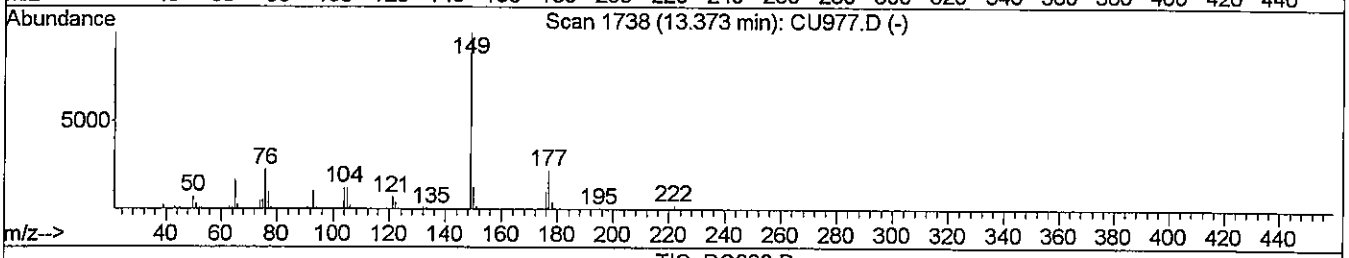
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\101609\DC090.D Vial: 10
Acq On : 16 Oct 2009 5:27 pm Operator: J.Wu
Sample : SSTD100 Inst : 5973-B
Misc : 10.0/20.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 16 17:59 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Fri Oct 16 17:08:18 2009
Response via : Multiple Level Calibration







TIC: DC090.D

(17) Diethylphthalate (TM)

13.84min 9.89ppm

response 3078361

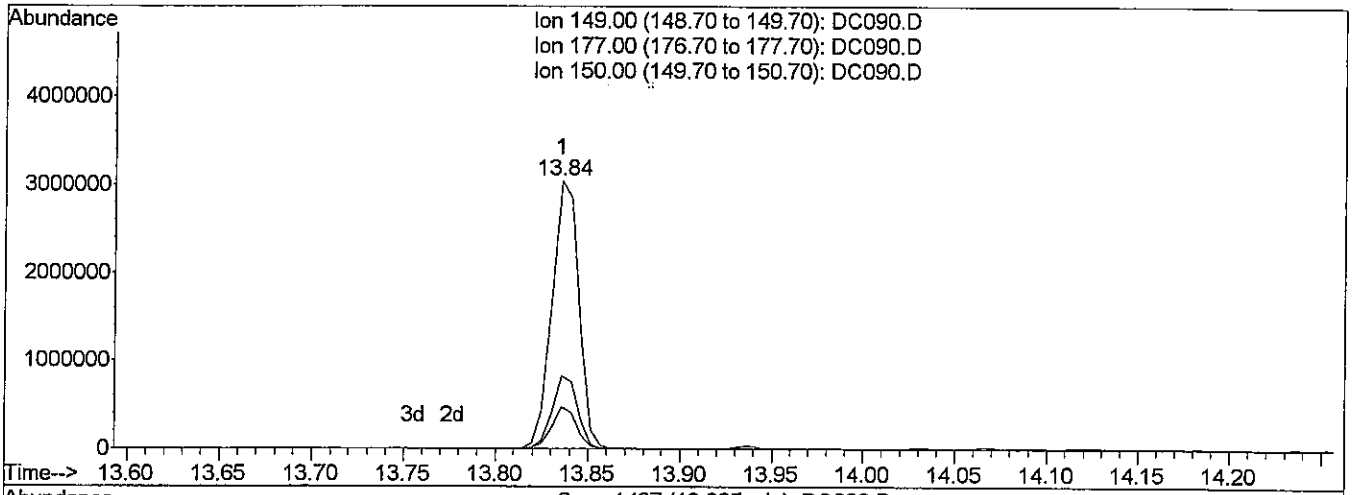
Ion	Exp%	Act%
149.00	100	100
177.00	23.40	26.87
150.00	11.00	15.32#
0.00	0.00	0.00

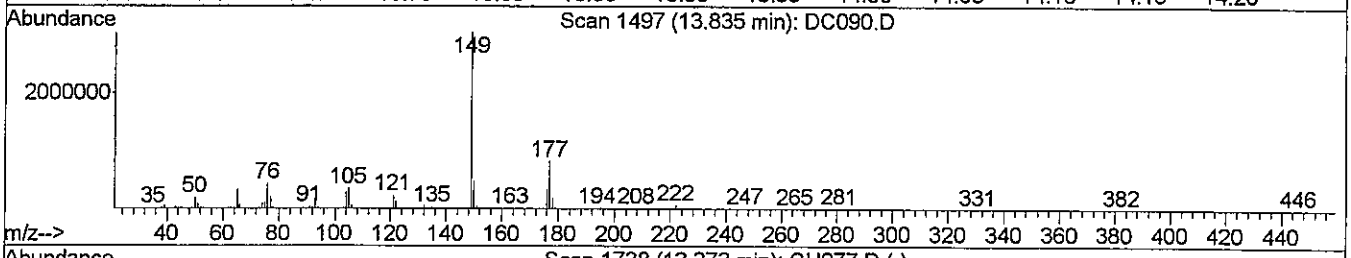
DC090.D LVI1016.M Fri Oct 16 18:00:04 2009

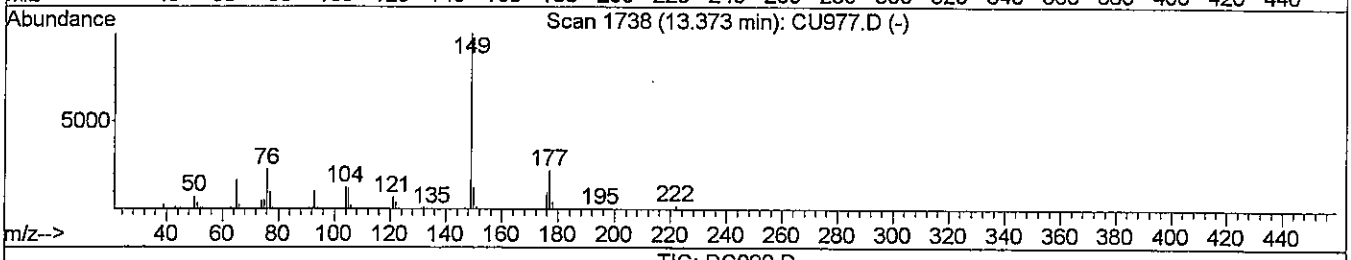
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\101609\DC090.D Vial: 10
Acq On : 16 Oct 2009 5:27 pm Operator: J.Wu
Sample : SSTD100 Inst : 5973-B
Misc : 10.0/20.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 16 18:00 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Fri Oct 16 17:08:18 2009
Response via : Multiple Level Calibration







TIC: DC090.D

(17) Diethylphthalate (TM)

13.84min 9.87ppm m

response 3072408

Ion	Exp%	Act%
149.00	100	100
177.00	23.40	26.89
150.00	11.00	15.49#
0.00	0.00	0.00

A IW 10/19/09

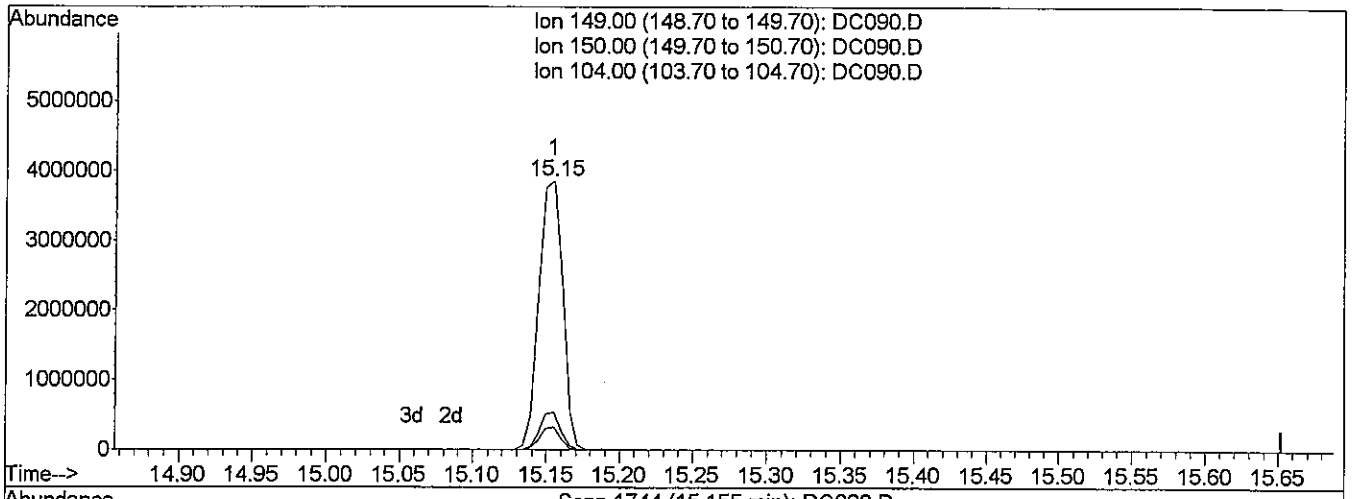
DC090.D LVI1016.M Fri Oct 16 18:00:09 2009

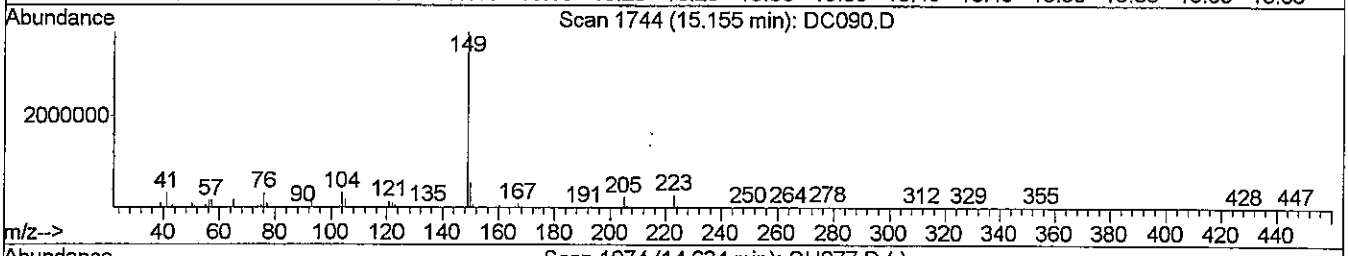
00236

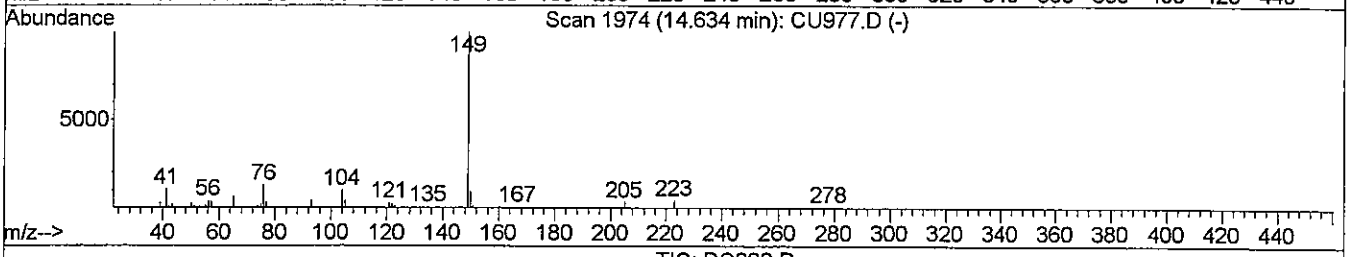
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\101609\DC090.D Vial: 10
Acq On : 16 Oct 2009 5:27 pm Operator: J.Wu
Sample : SSTD100 Inst : 5973-B
Misc : 10.0/20.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 16 18:00 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Fri Oct 16 17:08:18 2009
Response via : Multiple Level Calibration







TIC: DC090.D

(24) Di-n-butylphthalate (TM)

15.15min 9.09ppm

response 4297850

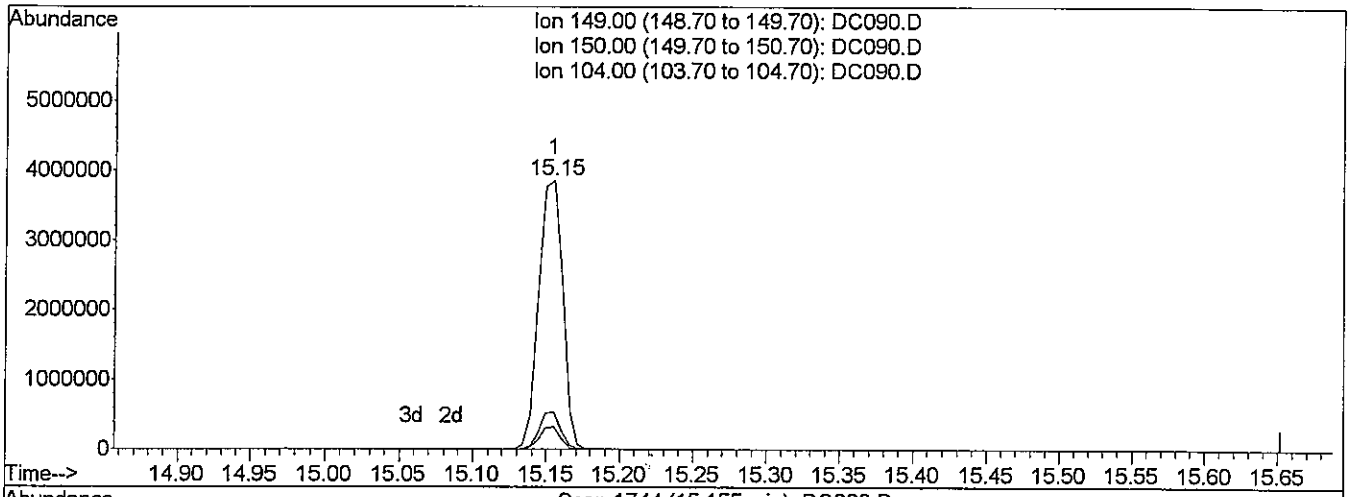
Ion	Exp%	Act%
149.00	100	100
150.00	9.30	13.83#
104.00	5.00	8.29#
0.00	0.00	0.00

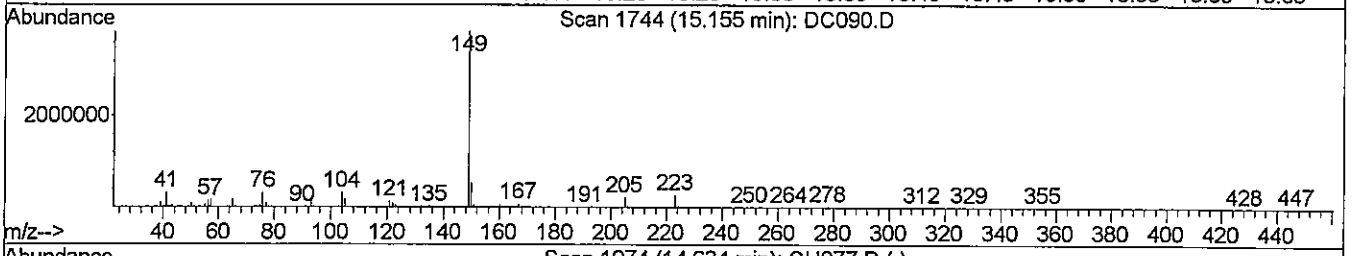
B

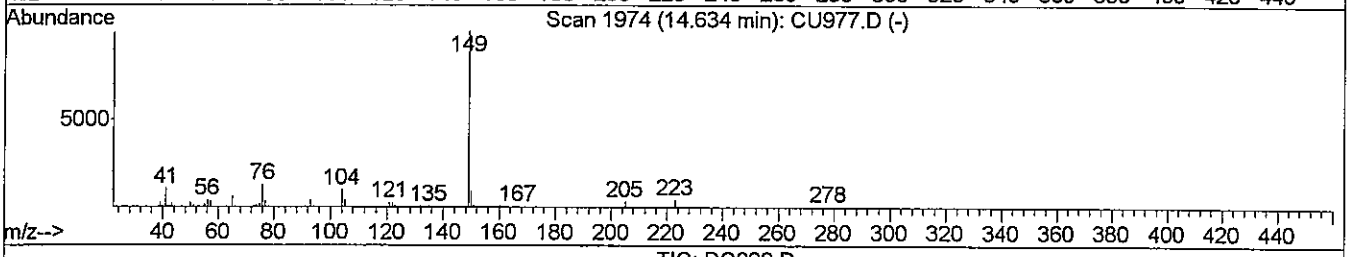
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\101609\DC090.D Vial: 10
Acq On : 16 Oct 2009 5:27 pm Operator: J.Wu
Sample : SSTD100 Inst : 5973-B
Misc : 10.0/20.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 16 18:00 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Fri Oct 16 17:08:18 2009
Response via : Multiple Level Calibration







TIC: DC090.D

(24) Di-n-butylphthalate (TM)

15.15min 9.10ppm m

response 4301585

Ion	Exp%	Act%
149.00	100	100
150.00	9.30	13.87#
104.00	5.00	8.29#
0.00	0.00	0.00

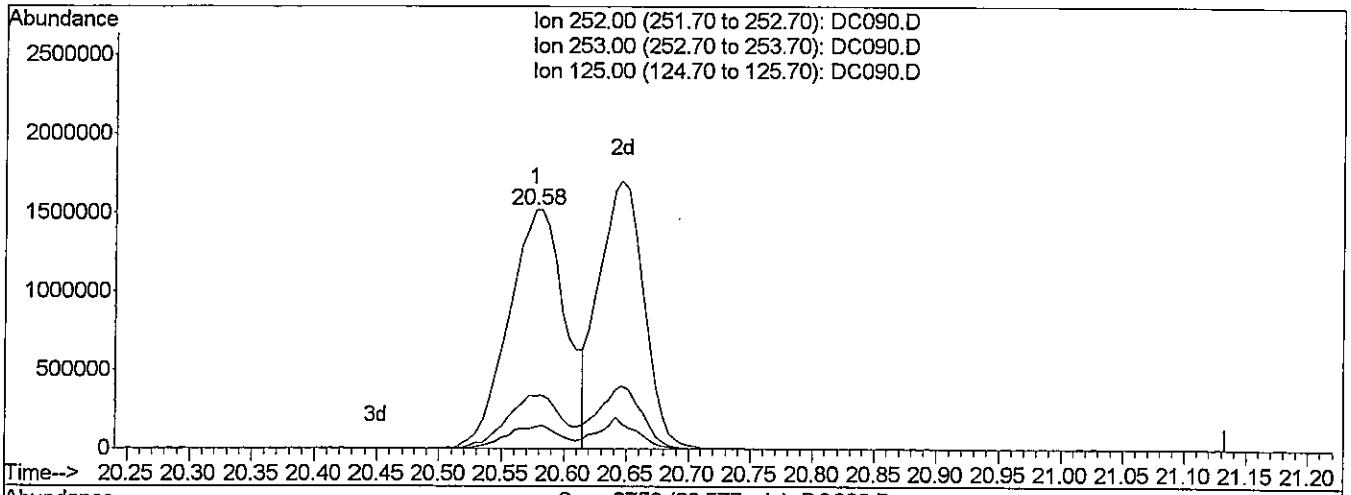
VMW 10/19/09

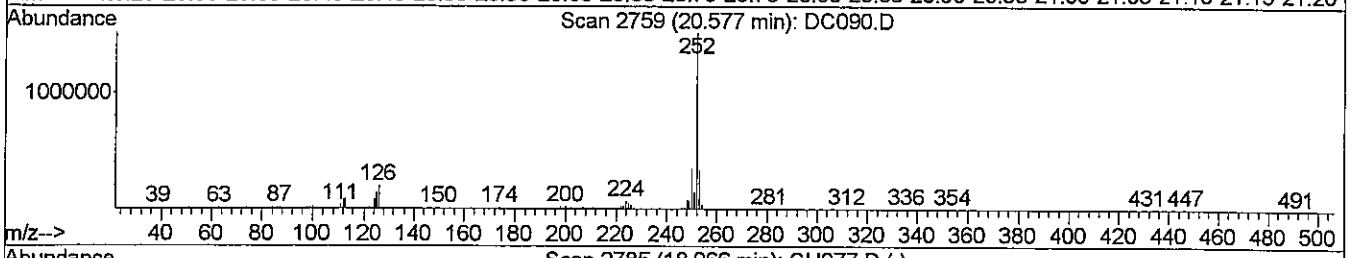
DC090.D LVI1016.M Fri Oct 16 18:00:25 2009

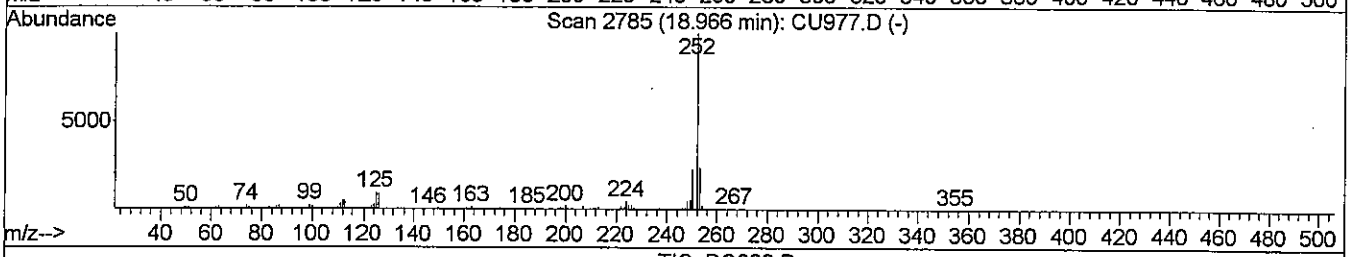
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\101609\DC090.D Vial: 10
Acq On : 16 Oct 2009 5:27 pm Operator: J.Wu
Sample : SSTD100 Inst : 5973-B
Misc : 10.0/20.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 16 18:00 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Fri Oct 16 17:08:18 2009
Response via : Multiple Level Calibration







TIC: DC090.D

(36) Benzo(k)fluoranthene (TM)

20.58min 11.30ppm

response 4783970

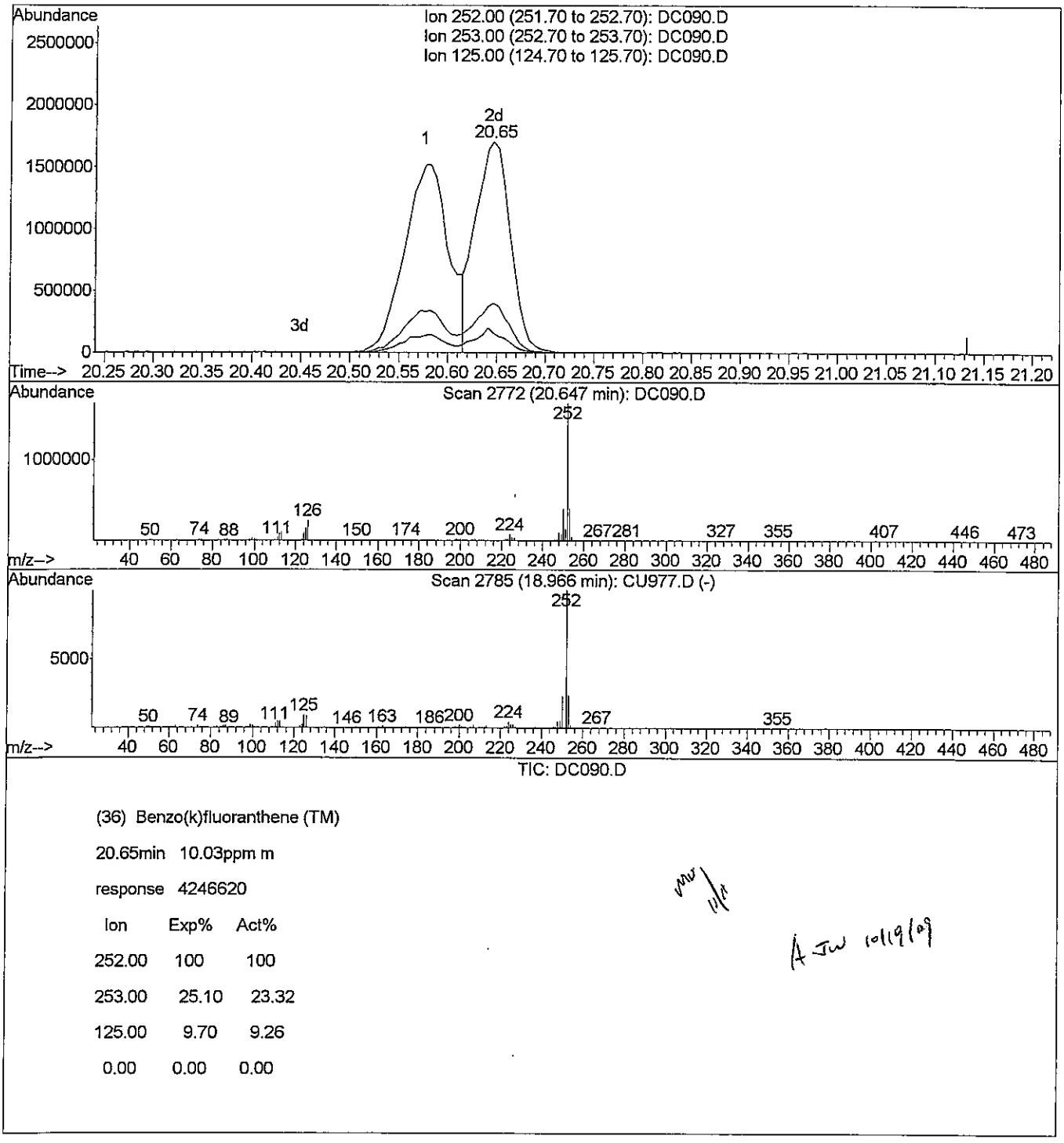
Ion	Exp%	Act%
252.00	100	100
253.00	25.10	21.27
125.00	9.70	9.08
0.00	0.00	0.00

DC090.D LVI1016.M Fri Oct 16 18:00:42 2009

Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\101609\DC090.D Vial: 10
Acq On : 16 Oct 2009 5:27 pm Operator: J.Wu
Sample : SSTD100 Inst : 5973-B
Misc : 10.0/20.0 PPM STD 8270.LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 16 18:00 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Fri Oct 16 17:08:18 2009
Response via : Multiple Level Calibration



(36) Benzo(k)fluoranthene (TM)

20.65min 10.03ppm m

response 4246620

Ion	Exp%	Act%
252.00	100	100
253.00	25.10	23.32
125.00	9.70	9.26
0.00	0.00	0.00

A JW 10/19/09

Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\5973B\DATA\101609\DC081.D Vial: 1
Acq On : 16 Oct 2009 10:07 am Operator: J.Wu
Sample : BLK Inst : 5973-B
Misc : 10/16/2009 1.0 CAS 8270.LL BLK Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 19 9:02 2009 Quant Results File: LVI1016.RES

Quant Method : J:\ACQUDATA\5...\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Mon Oct 19 08:41:26 2009
Response via : Initial Calibration
DataAcq Meth : LVI1016

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) d4-1,4-Dichlorobenzene	10.66	152	109673	1.00	ppm	0.01
4) d8-Naphthalene	11.94	136	369285	1.00	ppm	0.00
10) d10-Acenaphthene	13.54	164	260435	1.00	ppm	0.02
18) d10-Phenanthrene	14.75	188	391332	1.00	ppm	0.02
26) d12-Chrysene	18.04	240	405121	1.00	ppm	0.01
33) d12-Perylene	21.81	264	293938	1.00	ppm	0.00
System Monitoring Compounds						
5) SURR4,NITROBENZENE-D5	11.24	82	259	0.13	ppm	0.00
Spiked Amount 2.000	Range 22 - 124		Recovery = 6.50%#			
11) SURR5,2-FLUOROBIPHENYL	12.99	172	201	0.00	ppm	0.10
Spiked Amount 2.000	Range 27 - 114		Recovery = 0.00%#			
28) SURR6,TERPHENYL-D14	16.41	244	416	0.00	ppm	0.07
Spiked Amount 2.000	Range 23 - 139		Recovery = 0.00%#			

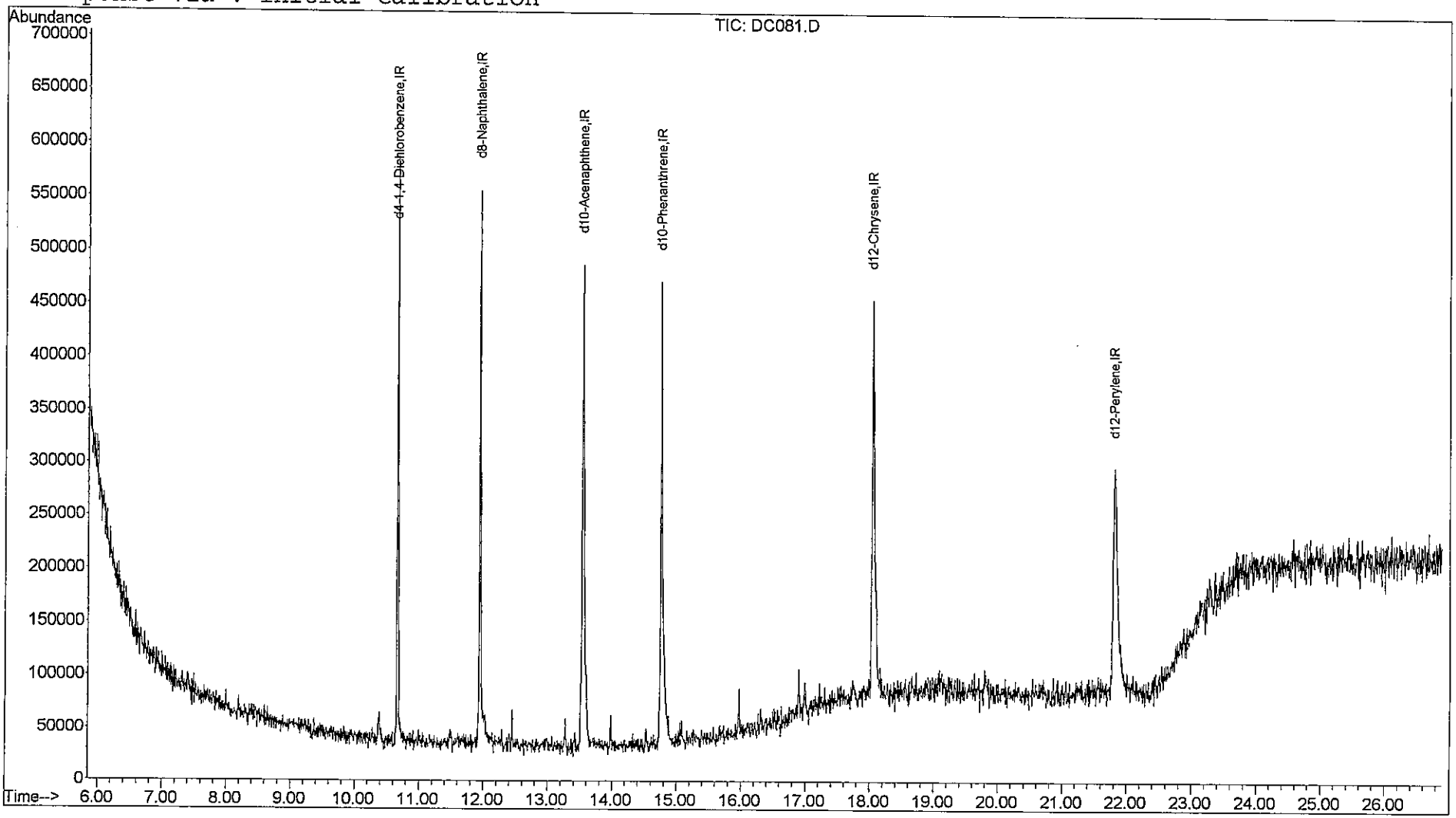
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : J:\ACQUDATA\5973B\DATA\101609\DC081.D Vial: 1
Acq On : 16 Oct 2009 10:07 am Operator: J.Wu
Sample : BLK Inst : 5973-B
Misc : 10/16/2009 1.0 CAS 8270.LL BLK Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 19 9:02 2009 Quant Results File: LVI1016.RES

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Mon Oct 19 08:41:26 2009
Response via : Initial Calibration



DC081.D LVI1016.M Mon Oct 19 09:03:42 2009

Evaluate Continuing Calibration Report

Data File : J:\ACQUDATA\5973B\DATA\101609\DC091.D Vial: 11
Acq On : 16 Oct 2009 6:16 pm Operator: J.Wu
Sample : ICV 1 Inst : 5973-B
Misc : 2.0 PPM STD 8270.LL ICV 1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Mon Oct 19 08:41:26 2009
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	IR	d4-1,4-Dichlorobenzene	1.000	1.000	0.0	104	0.00
2	TM	1,4-Dioxane	0.790	0.000#	100.0#	0#	-6.08#
3	TM	Pyridine	1.151	1.213	-5.4	101	0.00
4	IR	d8-Naphthalene	1.000	1.000	0.0	108	0.00
5	S	SURR4,NITROBENZENE-D5	0.325	0.000#	100.0#	0#	-11.25#
6	TM	Nitrobenzene	0.322	0.325	-0.9	101	0.00
7	TM	Naphthalene	1.044	1.024	1.9	101	0.00
8	TM	2-Methylnaphthalene	0.682	0.697	-2.2	102	0.00
9	TM	1-Methylnaphthalene	0.661	0.662	-0.2	104	0.00
10	IR	d10-Acenaphthene	1.000	1.000	0.0	105	0.00
11	S	SURR5,2-FLUOROBIPHENYL	1.279	0.000#	100.0#	0#	-12.89#
12	TM	Acenaphthylene	1.783	1.850	-3.8	103	0.00
13	TM	Dimethyl phthalate	1.497	1.316	12.1	89	0.00
14	TM	Acenaphthene	1.159	1.199	-3.5	108	0.00
15	TM	Dibenzofuran	1.629	1.688	-3.6	103	0.00
16	TM	Fluorene	1.286	1.325	-3.0	104	0.00
17	TM	Diethylphthalate	1.459	1.293	11.4	89	0.00
18	IR	d10-Phenanthrene	1.000	1.000	0.0	103	0.00
19	TM	Hexachlorobenzene	0.265	0.269	-1.5	103	0.00
20	TM	Phenanthrene	1.105	1.059	4.2	98	0.00
21	TM	Anthracene	1.079	1.073	0.6	100	0.00
22	TM	Carbazole	0.780	0.889	-14.0	108	0.00
23	TM	Octachlorostyrene	0.068	0.055	19.1	96	0.00
24	TM	Di-n-butylphthalate	1.394	1.225	12.1	88	0.00
25	TM	Fluoranthene	1.265	1.253	0.9	101	0.00
26	IR	d12-Chrysene	1.000	1.000	0.0	105	0.00
27	TM	Pyrene	1.254	1.192	4.9	98	0.00
28	S	SURR6,TERPHENYL-D14	0.824	0.000#	100.0#	0#	-16.34#
29	TM	Butyl benzyl phthalate	0.610	0.504	17.4	85	0.00
30	TM	bis(2-Ethylhexyl)phthalate	0.787	0.353	55.1#	46#	0.00
31	TM	Benzo(a)anthracene	1.089	1.070	1.7	101	0.00
32	TM	Chrysene	1.114	1.057	5.1	97	0.00
33	IR	d12-Perylene	1.000	1.000	0.0	109	-0.01
34	TM	Di-n-octyl phthalate	1.670	1.357	18.7	87	0.00
35	TM	Benzo(b)Fluoranthene	1.419	1.377	3.0	102	0.00
36	TM	Benzo(k)fluoranthene	1.371	1.382	-0.8	106	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : J:\ACQUDATA\5973B\DATA\101609\DC091.D Vial: 11
Acq On : 16 Oct 2009 6:16 pm Operator: J.Wu
Sample : ICV 1 Inst : 5973-B
Misc : 2.0 PPM STD 8270.LL ICV 1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Mon Oct 19 08:41:26 2009
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
37	TM	Benzo(a)pyrene	1.243	1.136	8.6	95	0.00
38	TM	Indeno(1,2,3-cd)Pyrene	1.505	1.473	2.1	101	0.00
39	TM	Dibenz(a,h)anthracene	1.281	1.234	3.7	101	0.00
40	TM	Benzo(g,h,i)perylene	1.254	1.236	1.4	100	0.00

Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\5973B\DATA\101609\DC091.D Vial: 11
Acq On : 16 Oct 2009 6:16 pm Operator: J.Wu
Sample : ICV 1 Inst : 5973-B
Misc : 2.0 PPM STD 8270.LL ICV 1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 19 8:56 2009 Quant Results File: LVI1016.RES

Quant Method : J:\ACQUDATA\5...\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Mon Oct 19 08:41:26 2009
Response via : Initial Calibration
DataAcq Meth : LVI1016

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) d4-1,4-Dichlorobenzene	10.66	152	91151	1.00	ppm	0.00
4) d8-Naphthalene	11.93	136	359564	1.00	ppm	0.00
10) d10-Acenaphthene	13.53	164	222654	1.00	ppm	0.00
18) d10-Phenanthrene	14.74	188	362953	1.00	ppm	0.00
26) d12-Chrysene	18.03	240	384824	1.00	ppm	0.00
33) d12-Perylene	21.81	264	308962	1.00	ppm	-0.01
System Monitoring Compounds						
5) SURR4,NITROBENZENE-D5	0.00	82	0d	0.00	ppm	
Spiked Amount 2.000	Range 22 - 124		Recovery =	0.00%#		
11) SURR5,2-FLUOROBIPHENYL	0.00	172	0d	0.00	ppm	
Spiked Amount 2.000	Range 27 - 114		Recovery =	0.00%#		
28) SURR6,TERPHENYL-D14	0.00	244	0d	0.00	ppm	
Spiked Amount 2.000	Range 23 - 139		Recovery =	0.00%#		
Target Compounds						Qvalue
3) Pyridine	6.84	79	221223	2.11	ppm	88
6) Nitrobenzene	11.27	77	233859	2.02	ppm	90
7) Naphthalene	11.95	128	736121	1.96	ppm	94
8) 2-Methylnaphthalene	12.57	142	501195	2.04	ppm	93
9) 1-Methylnaphthalene	12.68	142	475880	2.00	ppm	90
12) Acenaphthylene	13.40	152	823627	2.07	ppm	99
13) Dimethyl phthalate	13.24	163	586003	1.76	ppm	98
14) Acenaphthene	13.55	153	534003	2.07	ppm	91
15) Dibenzofuran	13.69	168	751541	2.07	ppm	100
16) Fluorene	13.98	166	589824	2.06	ppm	99
17) Diethylphthalate	13.84	149	575755	1.77	ppm	98
19) Hexachlorobenzene	14.48	284	195136	2.03	ppm	95
20) Phenanthrene	14.75	178	768855	1.92	ppm	97
21) Anthracene	14.80	178	778943	1.99	ppm	96
22) Carbazole	14.92	167	645020	2.28	ppm	95
23) Octachlorostyrene	15.75	378	39562m	1.61	ppm	
24) Di-n-butylphthalate	15.15	149	889475	1.76	ppm	97
25) Fluoranthene	15.96	202	909758	1.98	ppm	98
27) Pyrene	16.24	202	917496	1.90	ppm	97
29) Butyl benzyl phthalate	16.97	149	388195	1.65	ppm	97
30) bis(2-Ethylhexyl)phthalate	17.88	149	543304	1.79	ppm	92
31) Benzo(a)anthracene	18.00	228	823500	1.97	ppm	97
32) Chrysene	18.08	228	813517	1.90	ppm	94
34) Di-n-octyl phthalate	19.21	149	838278	1.62	ppm	98
35) Benzo(b)Fluoranthene	20.57	252	850803	1.94	ppm	97
36) Benzo(k)fluoranthene	20.64	252	853675	2.02	ppm	95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\5973B\DATA\101609\DC091.D Vial: 11
Acq On : 16 Oct 2009 6:16 pm Operator: J.Wu
Sample : ICV 1 Inst : 5973-B
Misc : 2.0 PPM STD 8270.LL ICV 1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 19 8:56 2009 Quant Results File: LVI1016.RES

Quant Method : J:\ACQUDATA\5...\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Mon Oct 19 08:41:26 2009
Response via : Initial Calibration
DataAcq Meth : LVI1016

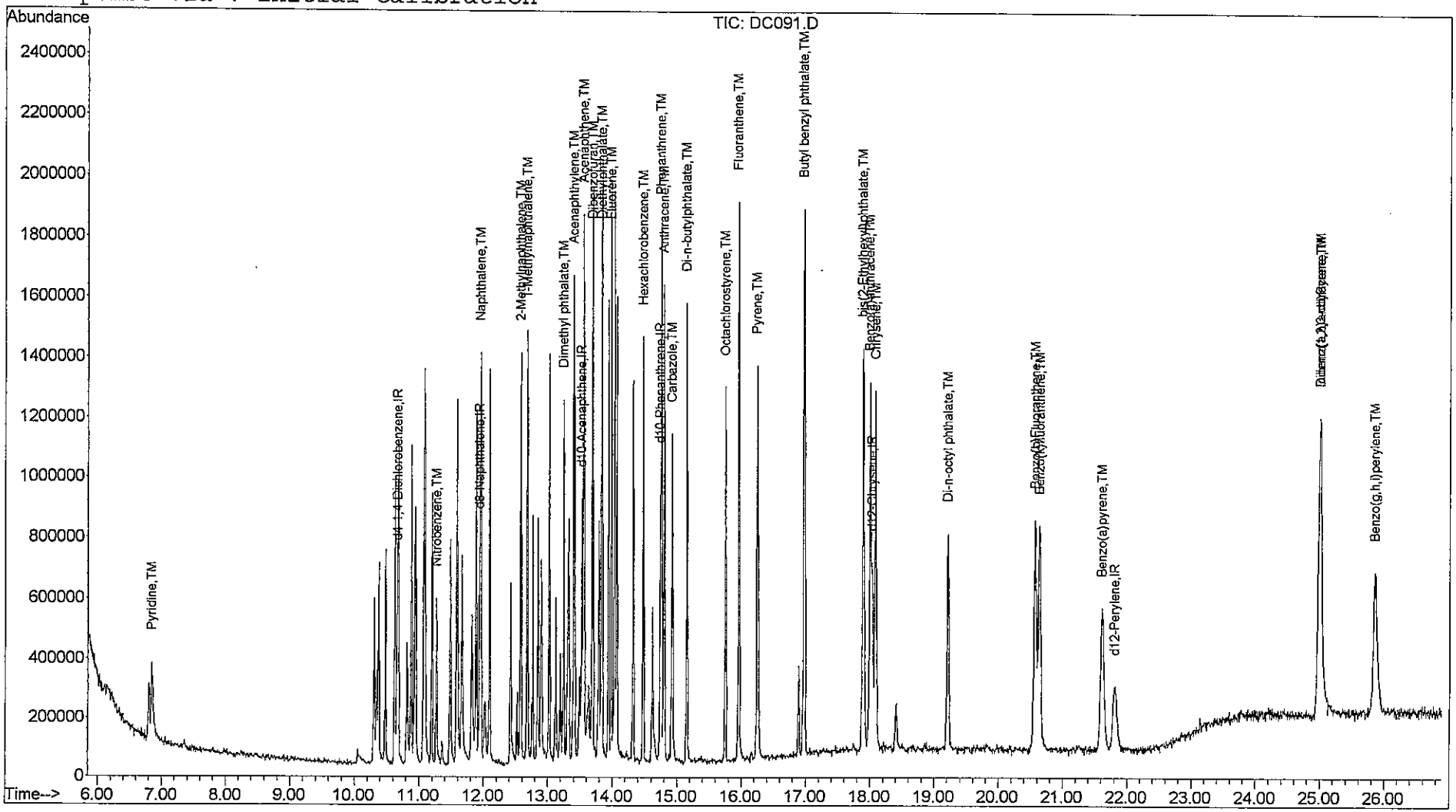
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
37)	Benzo(a)pyrene	21.61	252	701855	1.83	ppm	95
38)	Indeno(1,2,3-cd)Pyrene	25.00	276	910100	1.96	ppm	94
39)	Dibenz(a,h)anthracene	25.01	278	762778	1.93	ppm	96
40)	Benzo(g,h,i)perylene	25.86	276	763465	1.97	ppm	94

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : J:\ACQUDATA\5973B\DATA\101609\DC091.D Vial: 11
Acq On : 16 Oct 2009 6:16 pm Operator: J.Wu
Sample : ICV 1 Inst : 5973-B
Misc : 2.0 PPM STD 8270.LL ICV 1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 19 8:56 2009 Quant Results File: LVI1016.RES

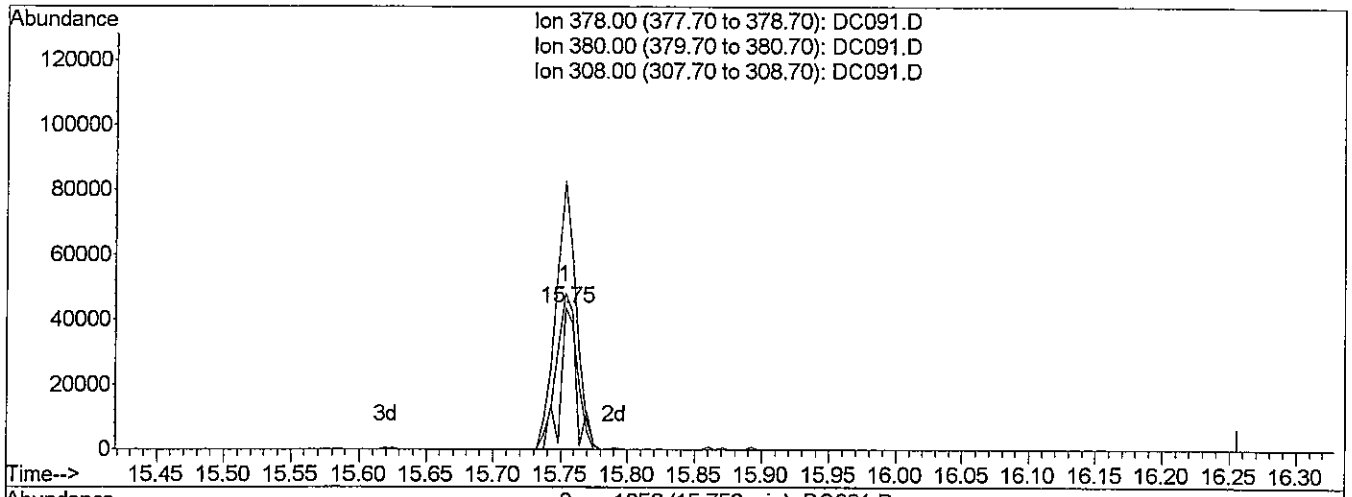
Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Mon Oct 19 08:41:26 2009
Response via : Initial Calibration

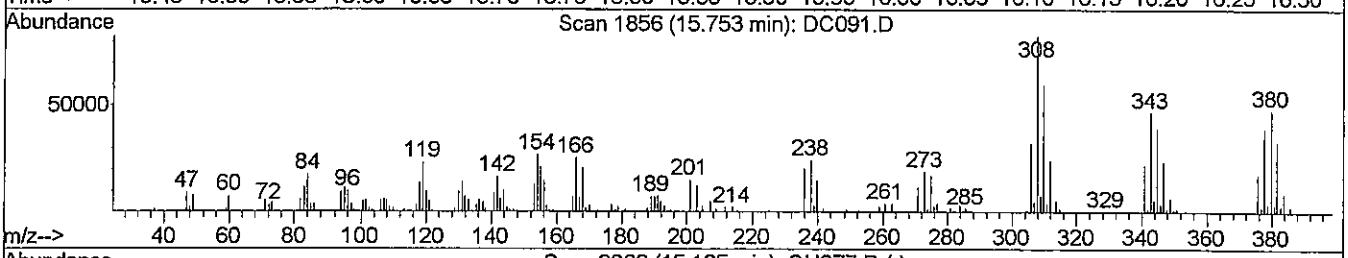


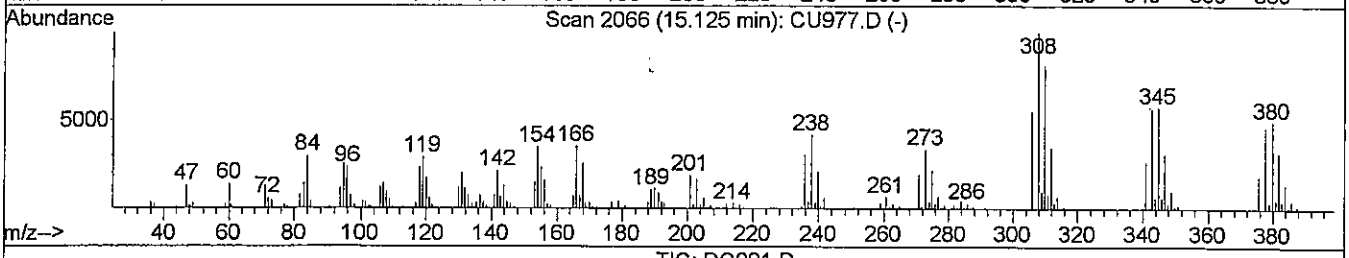
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\101609\DC091.D Vial: 11
Acq On : 16 Oct 2009 6:16 pm Operator: J.Wu
Sample : ICV 1 Inst : 5973-B
Misc : 2.0 PPM STD 8270.LL ICV 1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 19 8:56 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Mon Oct 19 08:41:26 2009
Response via : Multiple Level Calibration







TIC: DC091.D

(23) Octachlorostyrene (TM)

15.75min 1.60ppm

response 39399

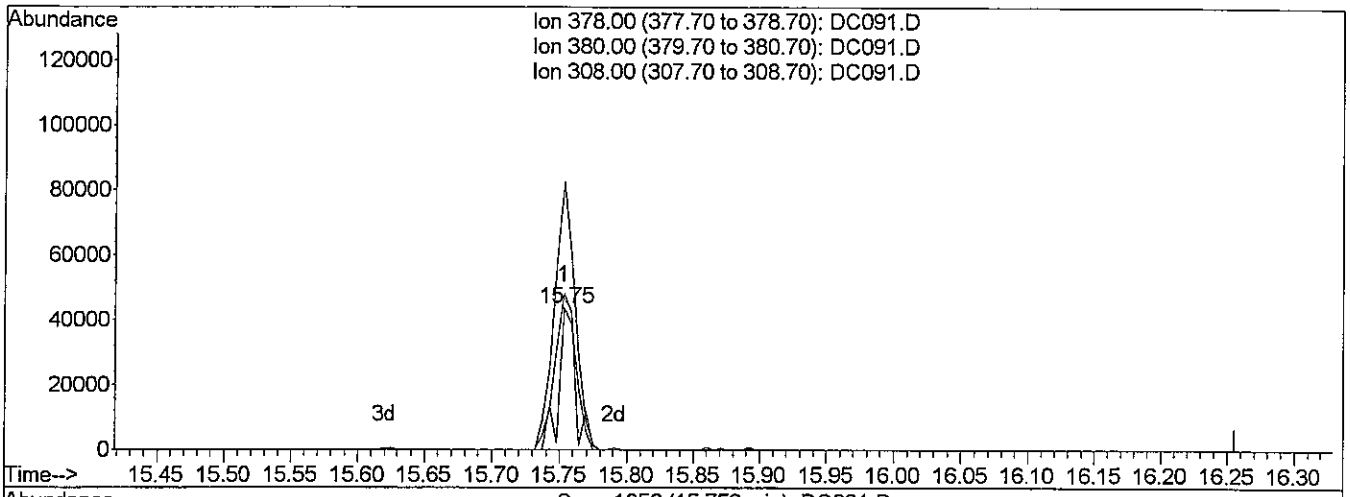
Ion	Exp%	Act%
378.00	100	100
380.00	104.20	118.19
308.00	154.00	207.47#
0.00	0.00	0.00

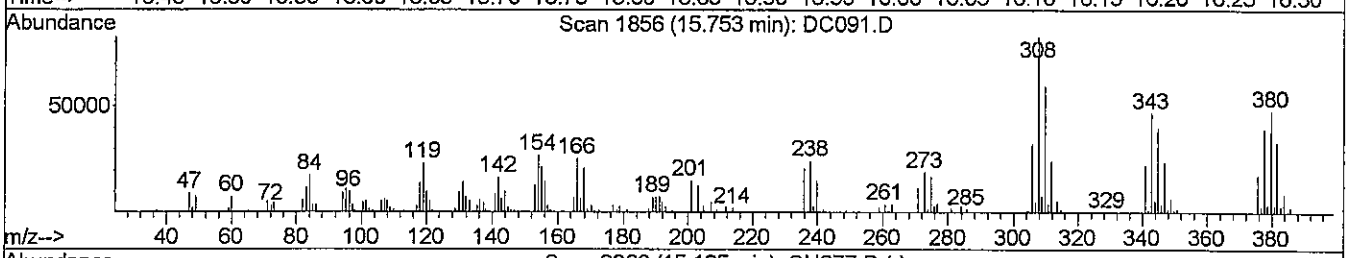
DC091.D LVI1016.M Mon Oct 19 08:56:36 2009

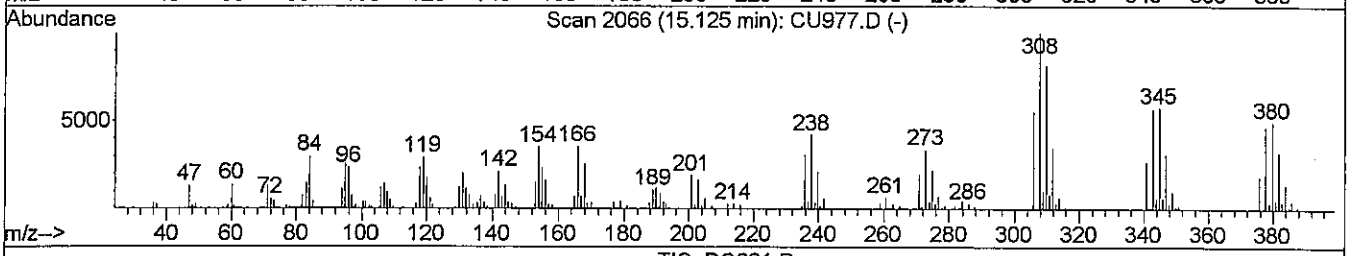
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\101609\DC091.D Vial: 11
Acq On : 16 Oct 2009 6:16 pm Operator: J.Wu
Sample : ICV 1 Inst : 5973-B
Misc : 2.0 PPM STD 8270.LL ICV 1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 19 8:56 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Mon Oct 19 08:41:26 2009
Response via : Multiple Level Calibration







TIC: DC091.D

(23) Octachlorostyrene (TM)

15.75min 1.61ppm m

response 39562

Ion	Exp%	Act%
378.00	100	100
380.00	104.20	120.87
308.00	154.00	208.05#
0.00	0.00	0.00

A JW 10/19/09

DC091.D LVI1016.M Mon Oct 19 08:56:42 2009

Evaluate Continuing Calibration Report

Data File : J:\ACQUDATA\5973B\DATA\101609\DC092.D Vial: 12
Acq On : 16 Oct 2009 7:15 pm Operator: J.Wu
Sample : ICV 2 Inst : 5973-B
Misc : 2.0 PPM STD 8270.LL ICV 2 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Mon Oct 19 08:41:26 2009
Response via : Multiple Level Calibration

for sample# 11, 28.
#2 L.R.
#1 L.R.

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	IR	d4-1,4-Dichlorobenzene	1.000	1.000	0.0	112	0.00
2	TM	1,4-Dioxane	0.790	0.446	43.5#	61	-0.02
3	TM	Pyridine	1.151	0.000#	100.0#	0#	-6.85#
4	IR	d8-Naphthalene	1.000	1.000	0.0	106	0.00
5	S	SURR4,NITROBENZENE-D5	0.325	0.375	-15.4	110	0.00
6	TM	Nitrobenzene	0.322	0.000#	100.0#	0#	-11.26#
7	TM	Naphthalene	1.044	0.000#	100.0#	0#	-11.95#
8	TM	2-Methylnaphthalene	0.682	0.000#	100.0#	0#	-12.57#
9	TM	1-Methylnaphthalene	0.661	0.000#	100.0#	0#	-12.67#
10	IR	d10-Acenaphthene	1.000	1.000	0.0	110	0.00
11	S	SURR5,2-FLUOROBIPHENYL	1.279	1.397	-9.2	114	0.00
12	TM	Acenaphthylene	1.783	0.000#	100.0#	0#	-13.40#
13	TM	Dimethyl phthalate	1.497	0.000#	100.0#	0#	-13.24#
14	TM	Acenaphthene	1.159	0.000#	100.0#	0#	-13.55#
15	TM	Dibenzofuran	1.629	0.000#	100.0#	0#	-13.69#
16	TM	Fluorene	1.286	0.000#	100.0#	0#	-13.98#
17	TM	Diethylphthalate	1.459	0.000#	100.0#	0#	-13.83#
18	IR	d10-Phenanthrene	1.000	1.000	0.0	94	0.01
19	TM	Hexachlorobenzene	0.265	0.000#	100.0#	0#	-14.47#
20	TM	Phenanthrene	1.105	0.000#	100.0#	0#	-14.76#
21	TM	Anthracene	1.079	0.000#	100.0#	0#	-14.80#
22	TM	Carbazole	0.780	0.000#	100.0#	0#	-14.92#
23	TM	Octachlorostyrene	0.068	0.000#	100.0#	0#	-15.76#
24	TM	Di-n-butylphthalate	1.394	0.000#	100.0#	0#	-15.15#
25	TM	Fluoranthene	1.265	0.000#	100.0#	0#	-15.96#
26	IR	d12-Chrysene	1.000	1.000	0.0	98	0.00
27	TM	Pyrene	1.254	0.000#	100.0#	0#	-16.25#
28	S	SURR6,TERPHENYL-D14	0.824	0.945	-14.7	106	0.00
29	TM	Butyl benzyl phthalate	0.610	0.000#	100.0#	0#	-16.97#
30	TM	bis(2-Ethylhexyl)phthalate	0.787	0.387	50.8#	47#	0.00
31	TM	Benzo(a)anthracene	1.089	0.000#	100.0#	0#	-17.99#
32	TM	Chrysene	1.114	0.000#	100.0#	0#	-18.08#
33	IR	d12-Perylene	1.000	1.000	0.0	94	-0.01
34	TM	Di-n-octyl phthalate	1.670	0.000#	100.0#	0#	-19.21#
35	TM	Benzo(b)Fluoranthene	1.419	0.000#	100.0#	0#	-20.56#
36	TM	Benzo(k)fluoranthene	1.371	0.000#	100.0#	0#	-20.63#

(#) = Out of Range

00250

Evaluate Continuing Calibration Report

Data File : J:\ACQUDATA\5973B\DATA\101609\DC092.D Vial: 12
Acq On : 16 Oct 2009 7:15 pm Operator: J.Wu
Sample : ICV 2 Inst : 5973-B
Misc : 2.0 PPM STD 8270.LL ICV 2 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Mon Oct 19 08:41:26 2009
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
37	TM	Benzo(a)pyrene	1.243	0.000#	100.0#	0#	-21.61#
38	TM	Indeno(1,2,3-cd)Pyrene	1.505	0.000#	100.0#	0#	-24.99#
39	TM	Dibenz(a,h)anthracene	1.281	0.000#	100.0#	0#	-25.00#
40	TM	Benzo(g,h,i)perylene	1.254	0.000#	100.0#	0#	-25.85#

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report

Data File : J:\ACQUDATA\5973B\DATA\101609\DC092.D Vial: 12
Acq On : 16 Oct 2009 7:15 pm Operator: J.Wu
Sample : ICV 2 Inst : 5973-B
Misc : 2.0 PPM STD 8270.LL ICV 2 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Mon Oct 19 08:41:26 2009
Response via : Multiple Level Calibration for # 5 L.R only.

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	IR	d4-1,4-Dichlorobenzene	1.000	1.000	0.0	112	0.00
2	TM	1,4-Dioxane	4.000	2.321	42.0#	61	-0.02
3	TM	Pyridine	2.000	0.000	100.0#	0	-6.85#
4	IR	d8-Naphthalene	1.000	1.000	0.0	106	0.00
5	S	SURR4,NITROBENZENE-D5	2.000	2.082	-4.1	110	0.00
6	TM	Nitrobenzene	2.000	0.000	100.0#	0	-11.26#
7	TM	Naphthalene	2.000	0.000	100.0#	0	-11.95#
8	TM	2-Methylnaphthalene	2.000	0.000	100.0#	0	-12.57#
9	TM	1-Methylnaphthalene	2.000	0.000	100.0#	0	-12.67#
10	IR	d10-Acenaphthene	1.000	1.000	0.0	110	0.00
11	S	SURR5,2-FLUOROBIPHENYL	2.000	2.184	-9.2	114	0.00
12	TM	Acenaphthylene	2.000	0.000	100.0#	0	-13.40#
13	TM	Dimethyl phthalate	2.000	0.000	100.0#	0	-13.24#
14	TM	Acenaphthene	2.000	0.000	100.0#	0	-13.55#
15	TM	Dibenzofuran	2.000	0.000	100.0#	0	-13.69#
16	TM	Fluorene	2.000	0.000	100.0#	0	-13.98#
17	TM	Diethylphthalate	2.000	0.000	100.0#	0	-13.83#
18	IR	d10-Phenanthrene	1.000	1.000	0.0	94	0.01
19	TM	Hexachlorobenzene	2.000	0.000	100.0#	0	-14.47#
20	TM	Phenanthrene	2.000	0.000	100.0#	0	-14.76#
21	TM	Anthracene	2.000	0.000	100.0#	0	-14.80#
22	TM	Carbazole	2.000	0.000	100.0#	0	-14.92#
23	TM	Octachlorostyrene	2.000	0.000	100.0#	0	-15.76#
24	TM	Di-n-butylphthalate	2.000	0.000	100.0#	0	-15.15#
25	TM	Fluoranthene	2.000	0.000	100.0#	0	-15.96#
26	IR	d12-Chrysene	1.000	1.000	0.0	98	0.00
27	TM	Pyrene	2.000	0.000	100.0#	0	-16.25#
28	S	SURR6,TERPHENYL-D14	2.000	2.293	-14.7	106	0.00
29	TM	Butyl benzyl phthalate	2.000	0.000	100.0#	0	-16.97#
30	TM	bis(2-Ethylhexyl)phthalate	4.000	1.969	50.8#	47	0.00
31	TM	Benzo(a)anthracene	2.000	0.000	100.0#	0	-17.99#
32	TM	Chrysene	2.000	0.000	100.0#	0	-18.08#
33	IR	d12-Perylene	1.000	1.000	0.0	94	-0.01
34	TM	Di-n-octyl phthalate	2.000	0.000	100.0#	0	-19.21#
35	TM	Benzo(b)Fluoranthene	2.000	0.000	100.0#	0	-20.56#
36	TM	Benzo(k)fluoranthene	2.000	0.000	100.0#	0	-20.63#

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : J:\ACQUDATA\5973B\DATA\101609\DC092.D Vial: 12
Acq On : 16 Oct 2009 7:15 pm Operator: J.Wu
Sample : ICV 2 Inst : 5973-B
Misc : 2.0 PPM STD 8270.LL ICV 2 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Mon Oct 19 08:41:26 2009
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
37	TM	Benzo(a)pyrene	2.000	0.000	100.0#	0	-21.61#
38	TM	Indeno(1,2,3-cd)Pyrene	2.000	0.000	100.0#	0	-24.99#
39	TM	Dibenz(a,h)anthracene	2.000	0.000	100.0#	0	-25.00#
40	TM	Benzo(g,h,i)perylene	2.000	0.000	100.0#	0	-25.85#

Evaluate Continuing Calibration Report

Data File : J:\ACQUDATA\5973B\DATA\101609\DC092.D Vial: 12
Acq On : 16 Oct 2009 7:15 pm Operator: J.Wu
Sample : ICV 2 Inst : 5973-B
Misc : 2.0 PPM STD 8270.LL ICV 2 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Mon Oct 19 08:41:26 2009
Response via : Multiple Level Calibration for #2 L-R only

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	IR	d4-1,4-Dichlorobenzene	1.000	1.000	0.0	94	0.00
2	TM	1,4-Dioxane	2.000	2.321	-16.1	117	-0.02
3	TM	Pyridine	1.000	0.000	-100.0#	0	-6.85#
4	IR	d8-Naphthalene	1.000	1.000	0.0	96	0.00
5	S	SURR4,NITROBENZENE-D5	1.000	2.082	-108.2#	229	0.00
6	TM	Nitrobenzene	1.000	0.000	100.0#	0	-11.26#
7	TM	Naphthalene	1.000	0.000	100.0#	0	-11.95#
8	TM	2-Methylnaphthalene	1.000	0.000	100.0#	0	-12.57#
9	TM	1-Methylnaphthalene	1.000	0.000	100.0#	0	-12.67#
10	IR	d10-Acenaphthene	1.000	1.000	0.0	100	0.00
11	S	SURR5,2-FLUOROBIPHENYL	1.000	2.184	-118.4#	224	0.00
12	TM	Acenaphthylene	1.000	0.000	100.0#	0	-13.40#
13	TM	Dimethyl phthalate	1.000	0.000	100.0#	0	-13.24#
14	TM	Acenaphthene	1.000	0.000	100.0#	0	-13.55#
15	TM	Dibenzofuran	1.000	0.000	100.0#	0	-13.69#
16	TM	Fluorene	1.000	0.000	100.0#	0	-13.98#
17	TM	Diethylphthalate	1.000	0.000	100.0#	0	-13.83#
18	IR	d10-Phenanthrene	1.000	1.000	0.0	87	0.01
19	TM	Hexachlorobenzene	1.000	0.000	100.0#	0	-14.47#
20	TM	Phenanthrene	1.000	0.000	100.0#	0	-14.76#
21	TM	Anthracene	1.000	0.000	100.0#	0	-14.80#
22	TM	Carbazole	1.000	0.000	100.0#	0	-14.92#
23	TM	Octachlorostyrene	1.000	0.000	100.0#	0	-15.76#
24	TM	Di-n-butylphthalate	1.000	0.000	100.0#	0	-15.15#
25	TM	Fluoranthene	1.000	0.000	100.0#	0	-15.96#
26	IR	d12-Chrysene	1.000	1.000	0.0	91	0.00
27	TM	Pyrene	1.000	0.000	100.0#	0	-16.25#
28	S	SURR6,TERPHENYL-D14	1.000	2.293	-129.3#	218	0.00
29	TM	Butyl benzyl phthalate	1.000	0.000	100.0#	0	-16.97#
30	TM	bis(2-Ethylhexyl)phthalate	2.000	1.969	1.5	99	0.00
31	TM	Benzo(a)anthracene	1.000	0.000	100.0#	0	-17.99#
32	TM	Chrysene	1.000	0.000	100.0#	0	-18.08#
33	IR	d12-Perylene	1.000	1.000	0.0	87	-0.01
34	TM	Di-n-octyl phthalate	1.000	0.000	100.0#	0	-19.21#
35	TM	Benzo(b)Fluoranthene	1.000	0.000	100.0#	0	-20.56#
36	TM	Benzo(k)fluoranthene	1.000	0.000	100.0#	0	-20.63#

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : J:\ACQUDATA\5973B\DATA\101609\DC092.D Vial: 12
Acq On : 16 Oct 2009 7:15 pm Operator: J.Wu
Sample : ICV 2 Inst : 5973-B
Misc : 2.0 PPM STD 8270.LL ICV 2 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Mon Oct 19 08:41:26 2009
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
37	TM	Benzo(a)pyrene	1.000	0.000	100.0#	0	-21.61#
38	TM	Indeno(1,2,3-cd)Pyrene	1.000	0.000	100.0#	0	-24.99#
39	TM	Dibenz(a,h)anthracene	1.000	0.000	100.0#	0	-25.00#
40	TM	Benzo(g,h,i)perylene	1.000	0.000	100.0#	0	-25.85#

Evaluate Continuing Calibration Report

Data File : J:\ACQUDATA\5973B\DATA\101609\DC092.D Vial: 12
Acq On : 16 Oct 2009 7:15 pm Operator: J.Wu
Sample : ICV 2 Inst : 5973-B
Misc : 2.0 PPM STD 8270.LL ICV 2 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Mon Oct 19 08:41:26 2009
Response via : Multiple Level Calibration for #30 only

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	IR	d4-1,4-Dichlorobenzene	1.000	1.000	0.0	94	0.00
2	TM	1,4-Dioxane	0.790	0.892	-12.9	117	-0.02
3	TM	Pyridine	1.151	0.000#	100.0#	0#	-6.85#
4	IR	d8-Naphthalene	1.000	1.000	0.0	96	0.00
5	S	SURR4,NITROBENZENE-D5	0.325	0.750	-130.8#	229#	0.00
6	TM	Nitrobenzene	0.322	0.000#	100.0#	0#	-11.26#
7	TM	Naphthalene	1.044	0.000#	100.0#	0#	-11.95#
8	TM	2-Methylnaphthalene	0.682	0.000#	100.0#	0#	-12.57#
9	TM	1-Methylnaphthalene	0.661	0.000#	100.0#	0#	-12.67#
10	IR	d10-Acenaphthene	1.000	1.000	0.0	100	0.00
11	S	SURR5,2-FLUOROBIPHENYL	1.279	2.794	-118.5#	224#	0.00
12	TM	Acenaphthylene	1.783	0.000#	100.0#	0#	-13.40#
13	TM	Dimethyl phthalate	1.497	0.000#	100.0#	0#	-13.24#
14	TM	Acenaphthene	1.159	0.000#	100.0#	0#	-13.55#
15	TM	Dibenzofuran	1.629	0.000#	100.0#	0#	-13.69#
16	TM	Fluorene	1.286	0.000#	100.0#	0#	-13.98#
17	TM	Diethylphthalate	1.459	0.000#	100.0#	0#	-13.83#
18	IR	d10-Phenanthrene	1.000	1.000	0.0	87	0.01
19	TM	Hexachlorobenzene	0.265	0.000#	100.0#	0#	-14.47#
20	TM	Phenanthrene	1.105	0.000#	100.0#	0#	-14.76#
21	TM	Anthracene	1.079	0.000#	100.0#	0#	-14.80#
22	TM	Carbazole	0.780	0.000#	100.0#	0#	-14.92#
23	TM	Octachlorostyrene	0.068	0.000#	100.0#	0#	-15.76#
24	TM	Di-n-butylphthalate	1.394	0.000#	100.0#	0#	-15.15#
25	TM	Fluoranthene	1.265	0.000#	100.0#	0#	-15.96#
26	IR	d12-Chrysene	1.000	1.000	0.0	91	0.00
27	TM	Pyrene	1.254	0.000#	100.0#	0#	-16.25#
28	S	SURR6,TERPHENYL-D14	0.824	1.891	-129.5#	218#	0.00
29	TM	Butyl benzyl phthalate	0.610	0.000#	100.0#	0#	-16.97#
30	TM	bis(2-Ethylhexyl)phthalate	0.787	0.774	1.7	99	0.00
31	TM	Benzo(a)anthracene	1.089	0.000#	100.0#	0#	-17.99#
32	TM	Chrysene	1.114	0.000#	100.0#	0#	-18.08#
33	IR	d12-Perylene	1.000	1.000	0.0	87	-0.01
34	TM	Di-n-octyl phthalate	1.670	0.000#	100.0#	0#	-19.21#
35	TM	Benzo(b)Fluoranthene	1.419	0.000#	100.0#	0#	-20.56#
36	TM	Benzo(k)fluoranthene	1.371	0.000#	100.0#	0#	-20.63#

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : J:\ACQUDATA\5973B\DATA\101609\DC092.D Vial: 12
Acq On : 16 Oct 2009 7:15 pm Operator: J.Wu
Sample : ICV 2 Inst : 5973-B
Misc : 2.0 PPM STD 8270.LL ICV 2 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Mon Oct 19 08:41:26 2009
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
37	TM	Benzo(a)pyrene	1.243	0.000#	100.0#	0#	-21.61#
38	TM	Indeno(1,2,3-cd)Pyrene	1.505	0.000#	100.0#	0#	-24.99#
39	TM	Dibenz(a,h)anthracene	1.281	0.000#	100.0#	0#	-25.00#
40	TM	Benzo(g,h,i)perylene	1.254	0.000#	100.0#	0#	-25.85#

Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\5973B\DATA\101609\DC092.D Vial: 12
Acq On : 16 Oct 2009 7:15 pm Operator: J.Wu
Sample : ICV 2 Inst : 5973-B
Misc : 2.0 PPM STD 8270.LL ICV 2 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 19 9:00 2009 Quant Results File: LVI1016.RES

Quant Method : J:\ACQUDATA\5...\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Mon Oct 19 08:41:26 2009
Response via : Initial Calibration
DataAcq Meth : LVI1016

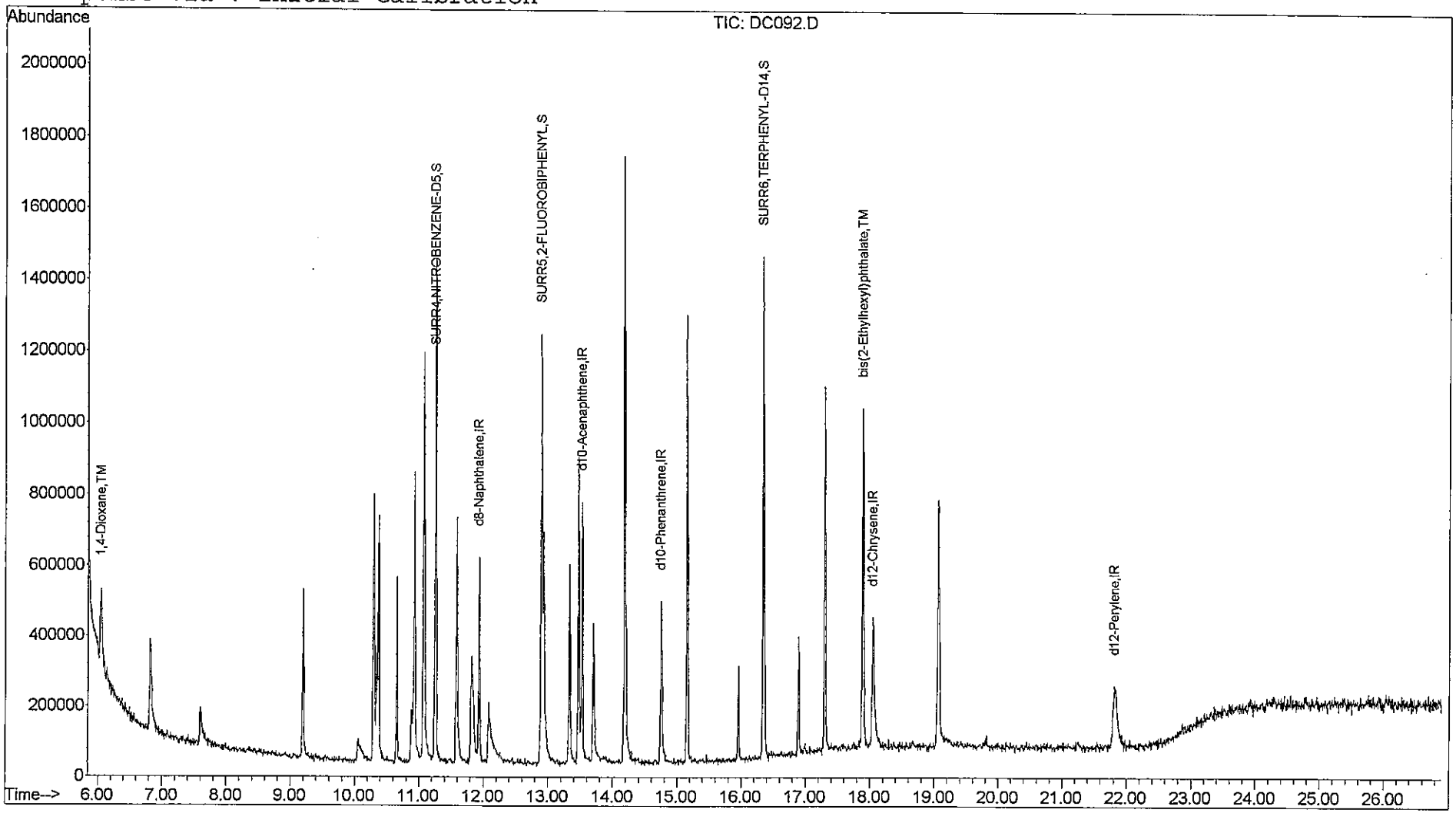
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) d4-1,4-Dichlorobenzene	10.65	152	97525	1.00	ppm	0.00
4) d8-Naphthalene	11.93	136	351138	1.00	ppm	0.00
10) d10-Acenaphthene	13.53	164	231706	1.00	ppm	0.00
18) d10-Phenanthrene	14.75	188	330956	1.00	ppm	0.01
26) d12-Chrysene	18.04	240	358620	1.00	ppm	0.00
33) d12-Perylene	21.81	264	265381m	1.00	ppm	-0.01
System Monitoring Compounds						
5) SURR4,NITROBENZENE-D5	11.24	82	263320	2.08	ppm	0.00
Spiked Amount 2.000	Range 22 - 124		Recovery = 104.00%			
11) SURR5,2-FLUOROBIPHENYL	12.89	172	647288	2.18	ppm	0.00
Spiked Amount 2.000	Range 27 - 114		Recovery = 109.00%			
28) SURR6,TERPHENYL-D14	16.34	244	678000	2.29	ppm	0.00
Spiked Amount 2.000	Range 23 - 139		Recovery = 114.50%			
Target Compounds						Qvalue
2) 1,4-Dioxane	6.05	88	173932	2.32	ppm	84
30) bis(2-Ethylhexyl)phthalate	17.89	149	555429	1.97	ppm	94

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : J:\ACQUDATA\5973B\DATA\101609\DC092.D Vial: 12
Acq On : 16 Oct 2009 7:15 pm Operator: J.Wu
Sample : ICV 2 Inst : 5973-B
Misc : 2.0 PPM STD 8270.LL ICV 2 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 19 9:00 2009 Quant Results File: LVI1016.RES

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Mon Oct 19 08:41:26 2009
Response via : Initial Calibration

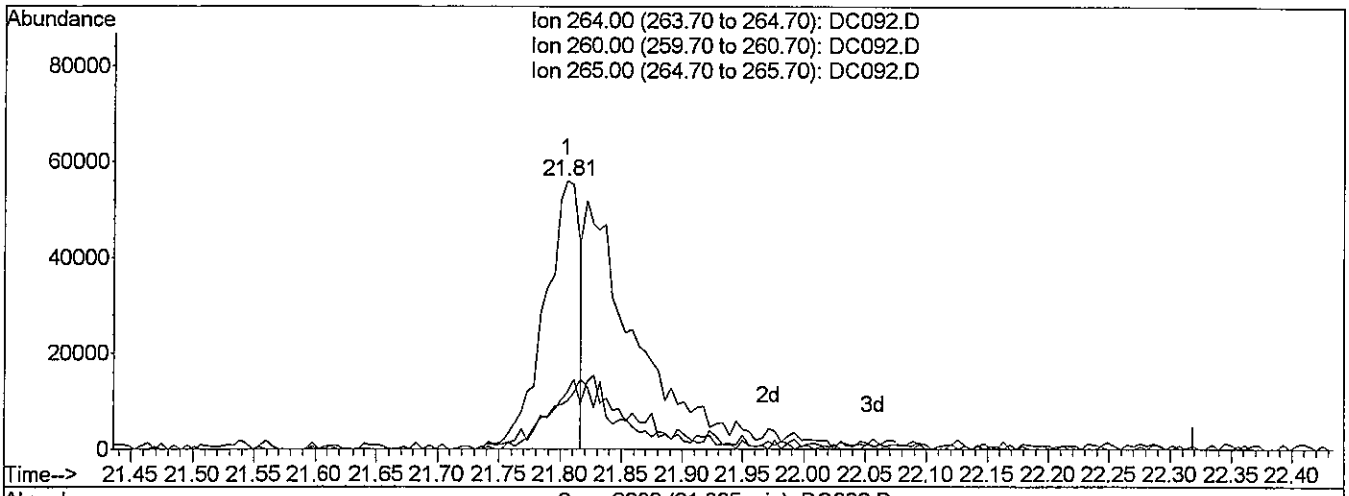


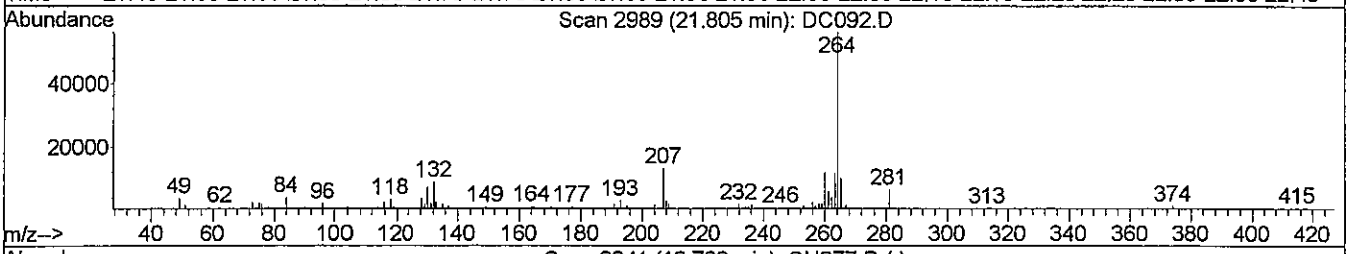
65209

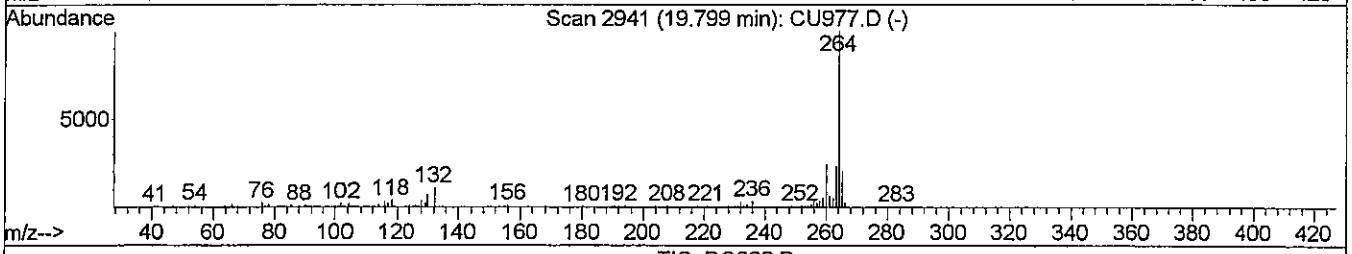
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\101609\DC092.D Vial: 12
Acq On : 16 Oct 2009 7:15 pm Operator: J.Wu
Sample : ICV 2 Inst : 5973-B
Misc : 2.0 PPM STD 8270.LL ICV 2 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 19 9:00 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Mon Oct 19 08:41:26 2009
Response via : Multiple Level Calibration







TIC: DC092.D

(33) d12-Perylene (IR)

21.81min 1.00ppm

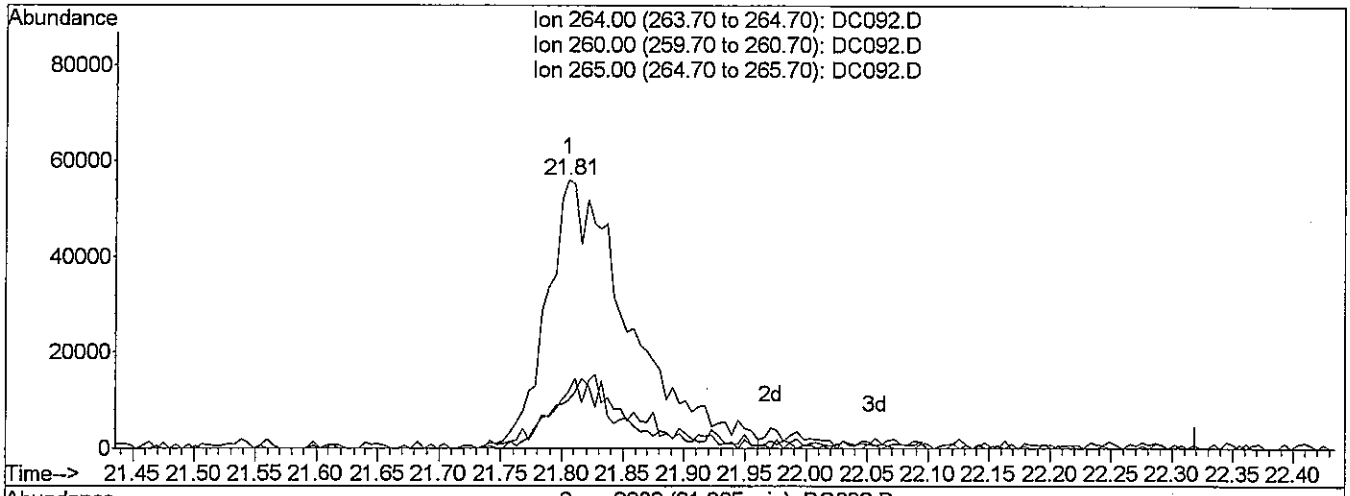
response 112203

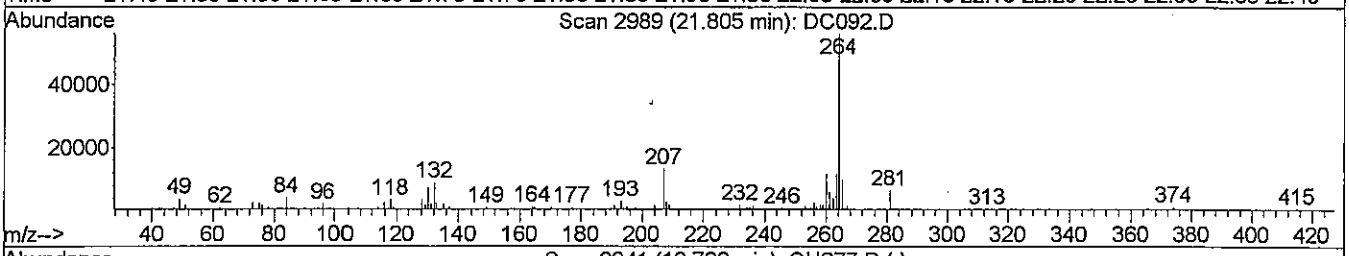
Ion	Exp%	Act%
264.00	100	100
260.00	17.80	20.23
265.00	18.30	7.31
0.00	0.00	0.00

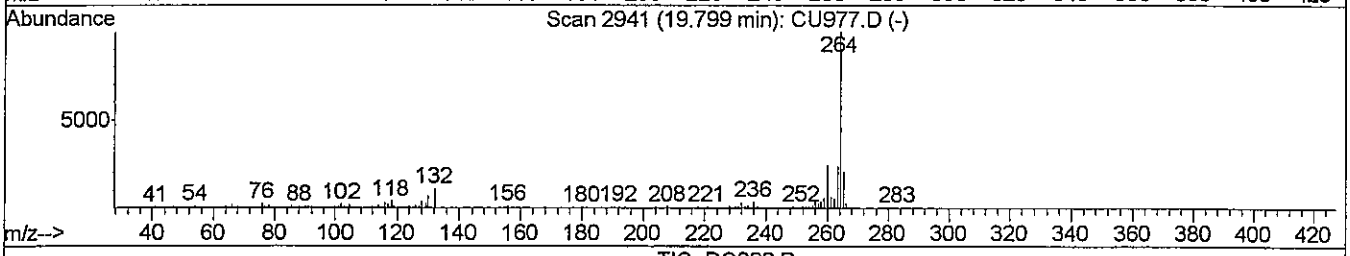
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\101609\DC092.D Vial: 12
Acq On : 16 Oct 2009 7:15 pm Operator: J.Wu
Sample : ICV 2 Inst : 5973-B
Misc : 2.0 PPM STD 8270.LL ICV 2 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 19 9:00 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Mon Oct 19 08:41:26 2009
Response via : Multiple Level Calibration







TIC: DC092.D

(33) d12-Perylene (IR)

21.81min 1.00ppm m

response 265381

Ion	Exp%	Act%
264.00	100	100
260.00	17.80	20.98
265.00	18.30	17.94
0.00	0.00	0.00

A JW 10/19/09

DC092.D LVI1016.M Mon Oct 19 09:00:27 2009

00261

Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\5973B\DATA\101609\DC080.D Vial: 1
Acq On : 16 Oct 2009 9:29 am Operator: J.Wu
Sample : TUNE CHECK Inst : 5973-B
Misc : 10 ng DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 19 9:14 2009 Quant Results File: DFTPPLVI.RES

Quant Method : J:\ACQUDATA\5...\DFTPPLVI.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Mon Oct 19 09:14:27 2009
Response via : Initial Calibration
DataAcq Meth : DFTPPLVI

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) d4-1,4-Dichlorobenzene	10.36	152	116302	1.00	ppb	0.00
2) d8-Naphthalene	11.64	136	391511	1.00	ppb	0.00
3) d10-Acenaphthene	13.24	164	278727	1.00	ppb	0.00
4) d10-Phenanthrene	14.47	188	398634	1.00	ppb	0.00
10) d12-Chrysene	17.75	240	461654	1.00	ppb	0.00
12) d12-Perylene	21.53	264	330574	1.00	ppb	0.00
Target Compounds						Qvalue
5) Pentachlorophenol	14.35	266	621554	10.00	ppb	100
6) DFTPP	14.62	198	761881	10.00	ppb	100
9) 4,4'-DDT	16.87	235	2121443	10.00	ppb	100
11) Benzidine	15.76	184	2620890	10.00	ppb	100

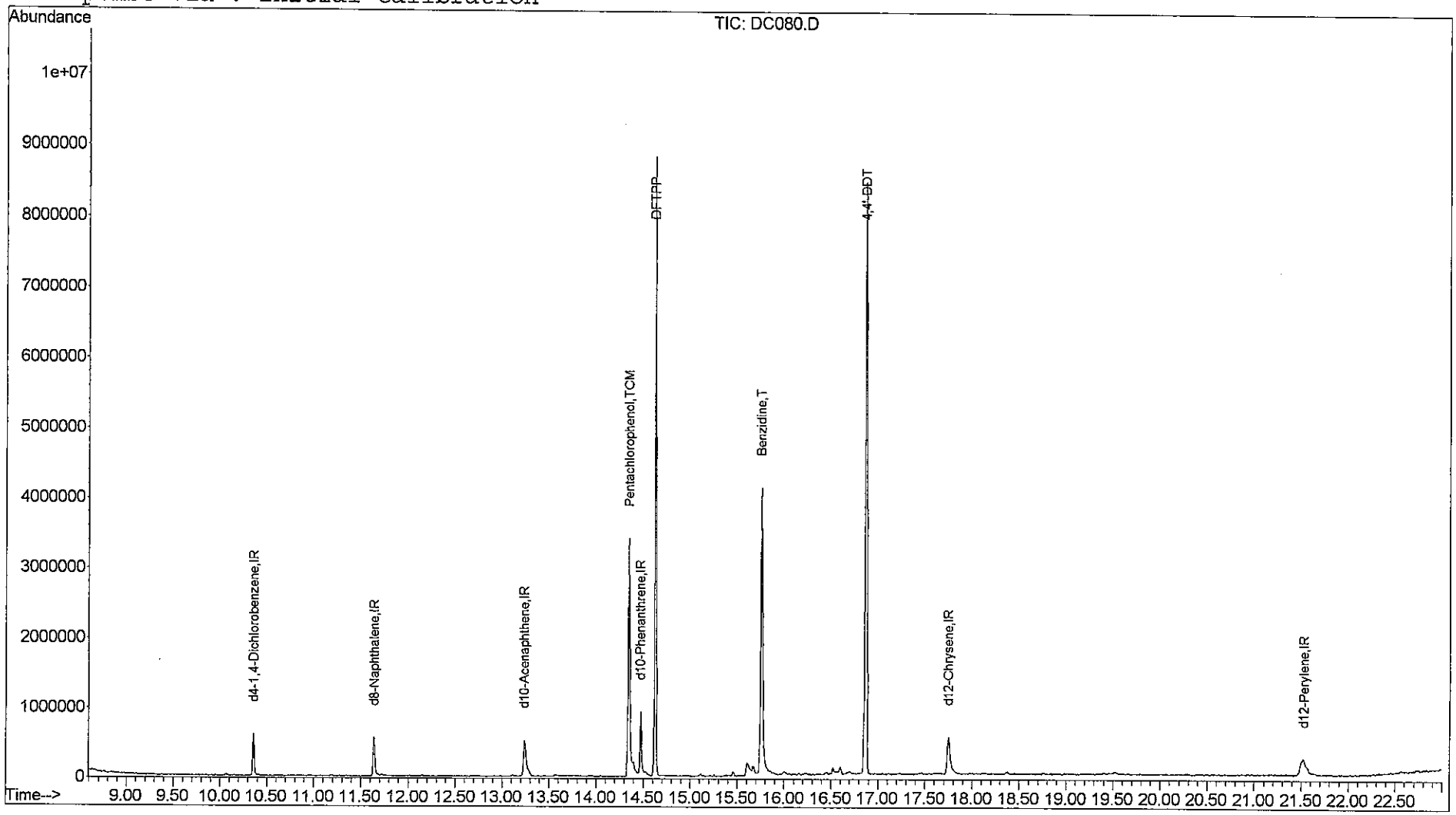
(#) = qualifier out of range (m) = manual integration
DC080.D DFTPPLVI.M Mon Oct 19 09:15:20 2009 Page 1

00262

Quantitation Report

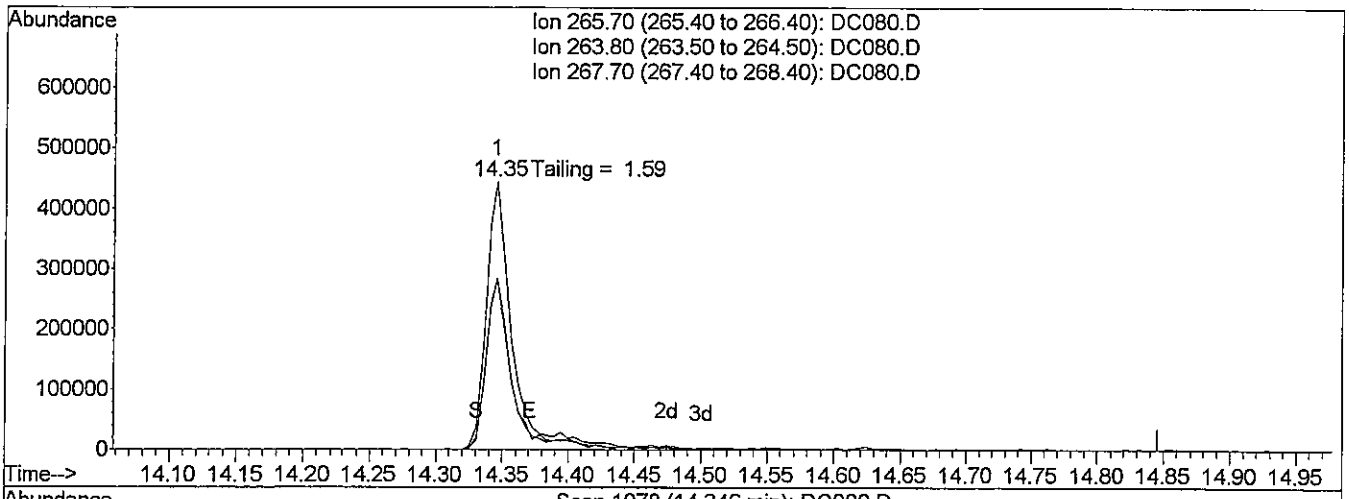
Data File : J:\ACQUDATA\5973B\DATA\101609\DC080.D Vial: 1
Acq On : 16 Oct 2009 9:29 am Operator: J.Wu
Sample : TUNE CHECK Inst : 5973-B
Misc : 10 ng DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 19 9:14 2009 Quant Results File: DFTPPLVI.RES

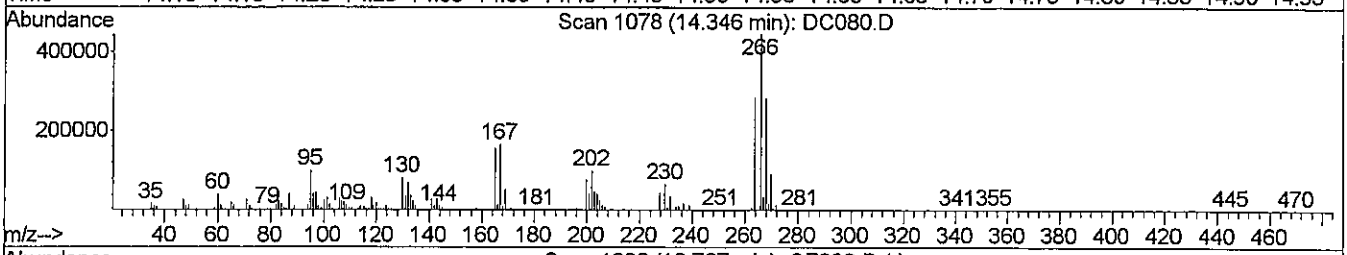
Method : J:\ACQUDATA\5973B\METHODS\DFTPPLVI.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Mon Oct 19 09:14:27 2009
Response via : Initial Calibration

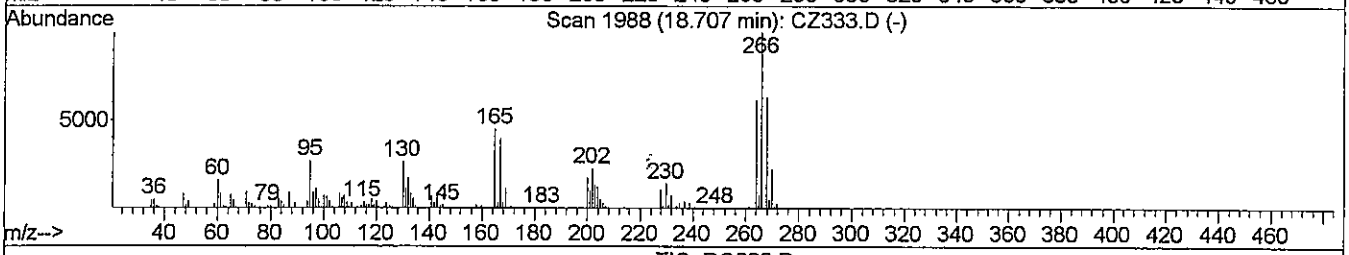


Data File : J:\ACQUDATA\5973B\DATA\101609\DC080.D Vial: 1
Acq On : 16 Oct 2009 9:29 am Operator: J.Wu
Sample : TUNE CHECK Inst : 5973-B
Misc : 10 ng DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 19 9:14 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\DFTPPLVI.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Mon Oct 19 09:14:27 2009
Response via : Single Level Calibration







TIC: DC080.D

(5) Pentachlorophenol (TCM)

14.35min 10.00ppb

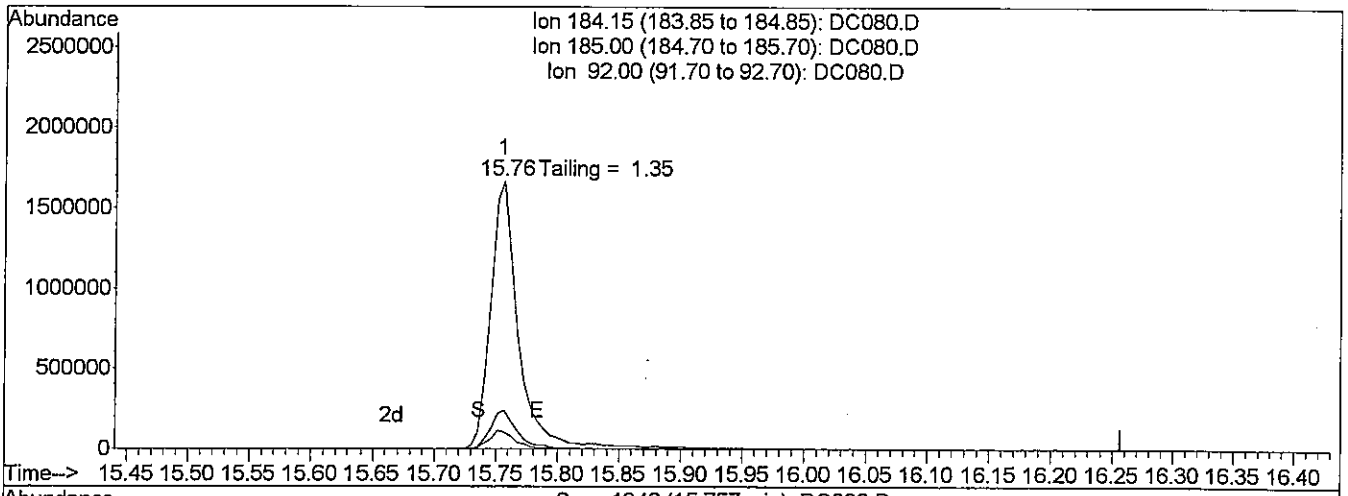
response 621554

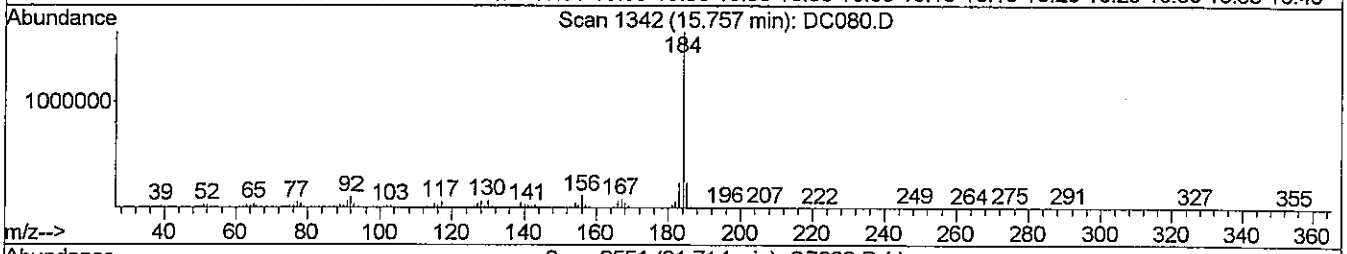
Ion	Exp%	Act%
265.70	100	100
263.80	63.60	63.56
267.70	63.60	63.58
0.00	0.00	0.00

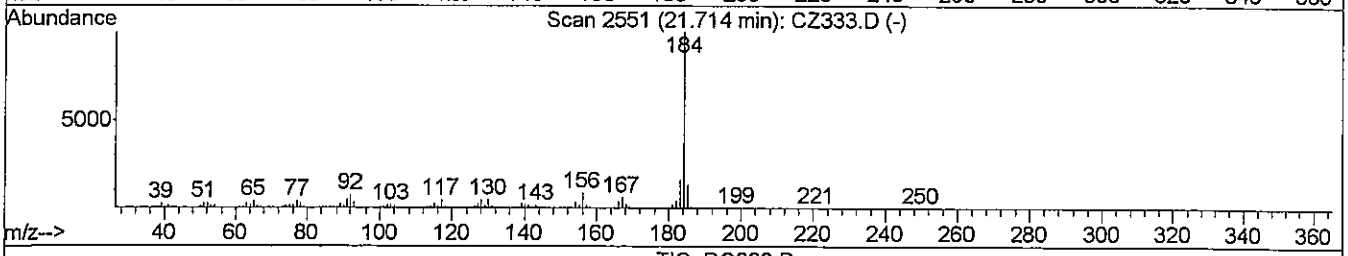
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\101609\DC080.D Vial: 1
Acq On : 16 Oct 2009 9:29 am Operator: J.Wu
Sample : TUNE CHECK Inst : 5973-B
Misc : 10 ng DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 19 9:14 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\DFTPPLVI.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Mon Oct 19 09:14:27 2009
Response via : Single Level Calibration







TIC: DC080.D

(11) Benzidine (T)

15.76min 10.00ppb

response 2620890

Ion	Exp%	Act%
184.15	100	100
185.00	14.20	14.23
92.00	6.20	6.17
0.00	0.00	0.00

DC080.D DFTPPLVI.M Mon Oct 19 09:15:11 2009

Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\5973B\DATA\112009\DC434.D Vial: 1
Acq On : 20 Nov 2009 9:07 am Operator: M.PEDRO
Sample : TUNE CHECK Inst : 5973-B
Misc : 10 NG DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 9:44 2009 Quant Results File: DFTPPLVI.RES

Quant Method : J:\ACQUDATA\5...\DFTPPLVI.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Fri Nov 13 15:35:55 2009
Response via : Initial Calibration
DataAcq Meth : DFTPPLVI

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) d4-1,4-Dichlorobenzene	10.30	152	60656	1.00	ppb	-0.01
2) d8-Naphthalene	11.59	136	191769	1.00	ppb	-0.01
3) d10-Acenaphthene	13.18	164	132107	1.00	ppb	-0.02
4) d10-Phenanthrene	14.41	188	234345	1.00	ppb	0.00
10) d12-Chrysene	17.64	240	268494	1.00	ppb	-0.02
12) d12-Perylene	21.32	264	208462	1.00	ppb	-0.04
Target Compounds						Qvalue
5) Pentachlorophenol	14.29	266	426105	11.66	ppb	98
6) DFTPP	14.56	198	439761	9.82	ppb	89
9) 4,4'-DDT	16.78	235	1249679	10.02	ppb	95
11) Benzidine	15.68	184	1239523	8.13	ppb	97

NP 11/23

(#) = qualifier out of range (m) = manual integration
DC434.D DFTPPLVI.M Fri Nov 20 10:35:42 2009 Page 1

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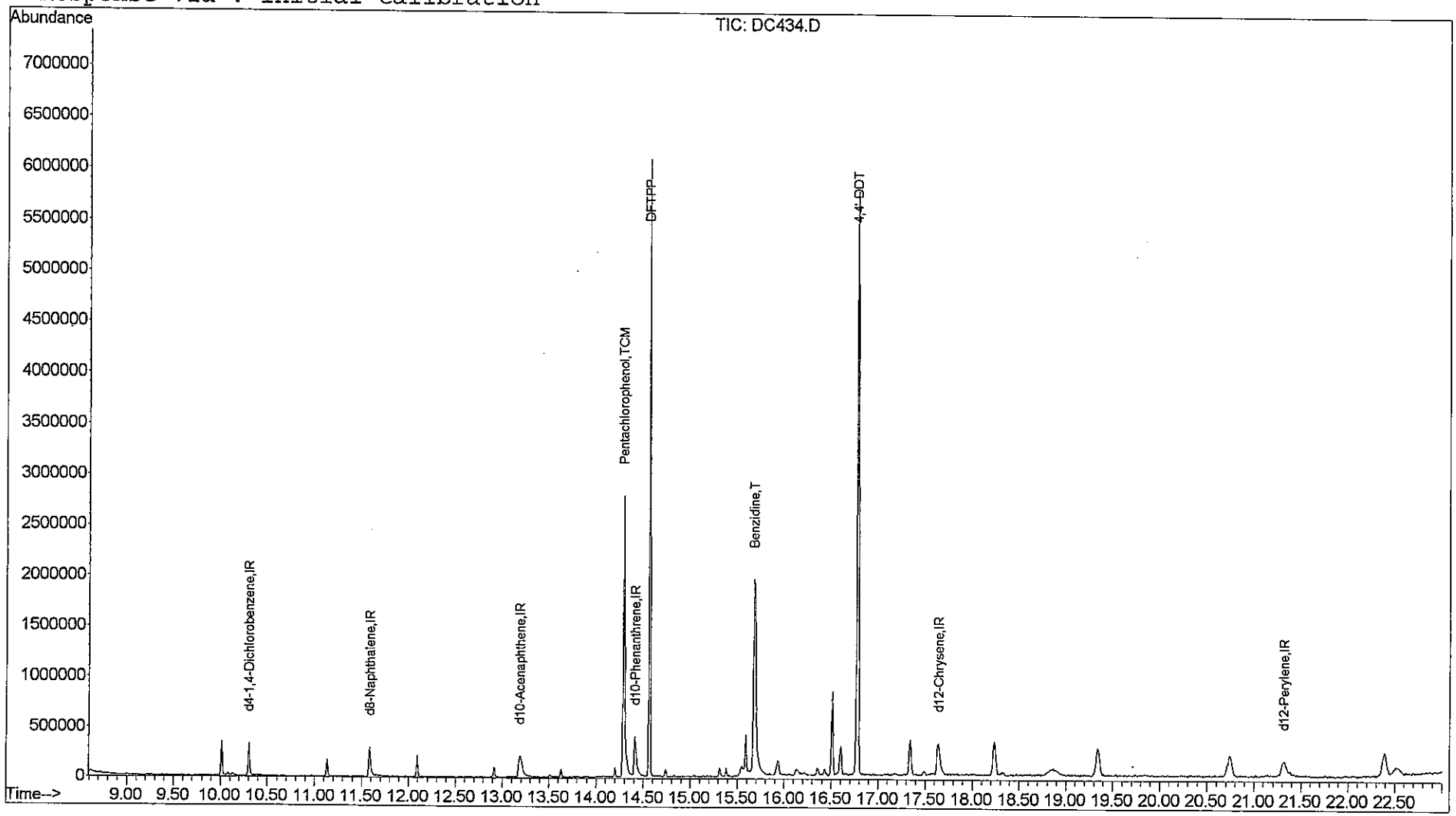
Quantitation Report

Data File : J:\ACQUDATA\5973B\DATA\112009\DC434.D Vial: 1
Acq On : 20 Nov 2009 9:07 am Operator: M.PEDRO
Sample : TUNE CHECK Inst : 5973-B
Misc : 10 NG DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 9:44 2009 Quant Results File: DFTPPLVI.RES

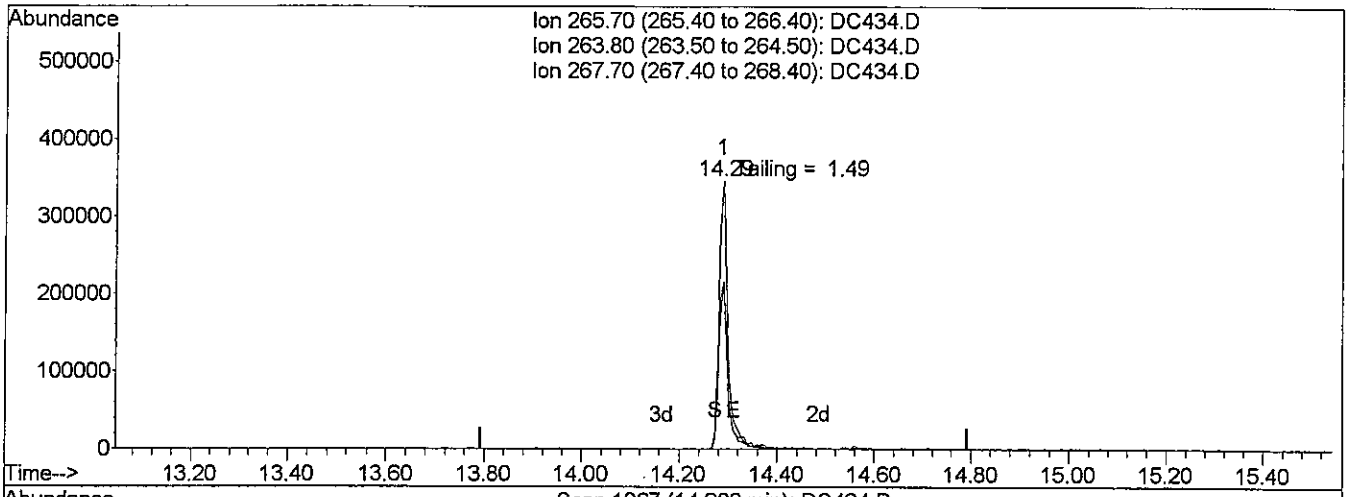
Method : J:\ACQUDATA\5973B\METHODS\DFTPPLVI.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Fri Nov 13 15:35:55 2009
Response via : Initial Calibration

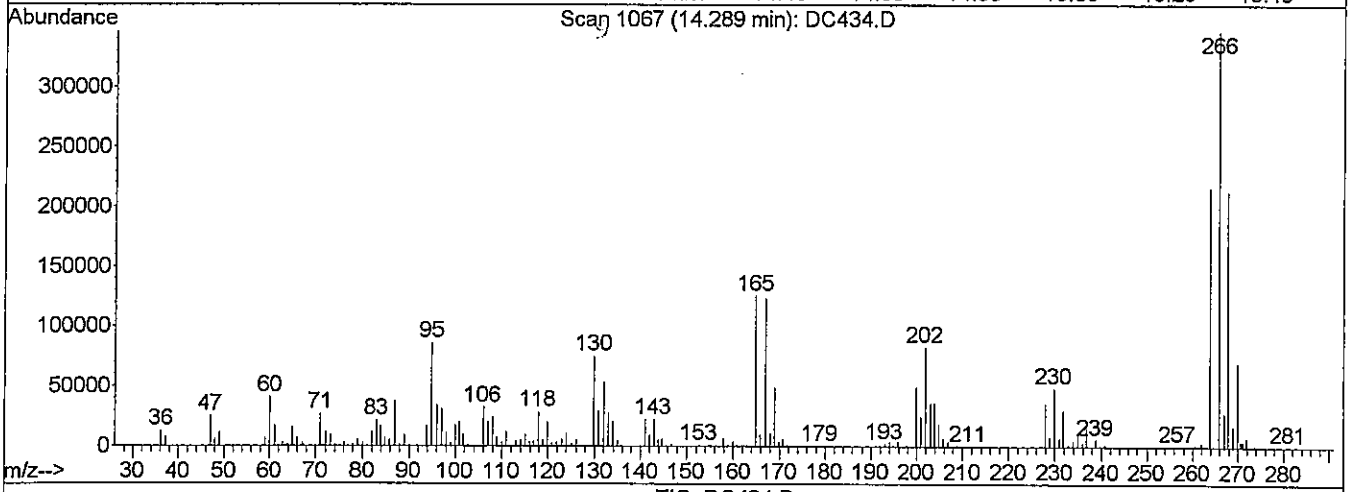


Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\112009\DC434.D Vial: 1
Acq On : 20 Nov 2009 9:07 am Operator: M.PEDRO
Sample : TUNE CHECK Inst : 5973-B
Misc : 10 NG DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 9:30 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\DFTPPLVI.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Fri Nov 13 15:35:55 2009
Response via : Single Level Calibration





TIC: DC434.D

(5) Pentachlorophenol (TCM)

14.29min 11.66ppb

response 426105

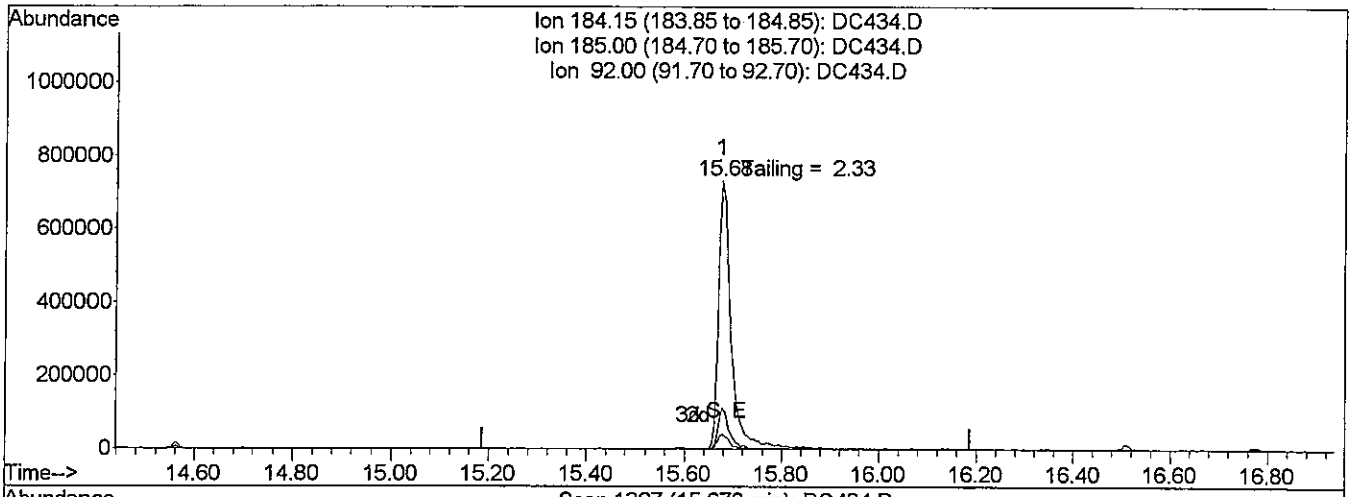
Ion	Exp%	Act%
265.70	100	100
263.80	63.60	62.18
267.70	63.60	61.40
0.00	0.00	0.00

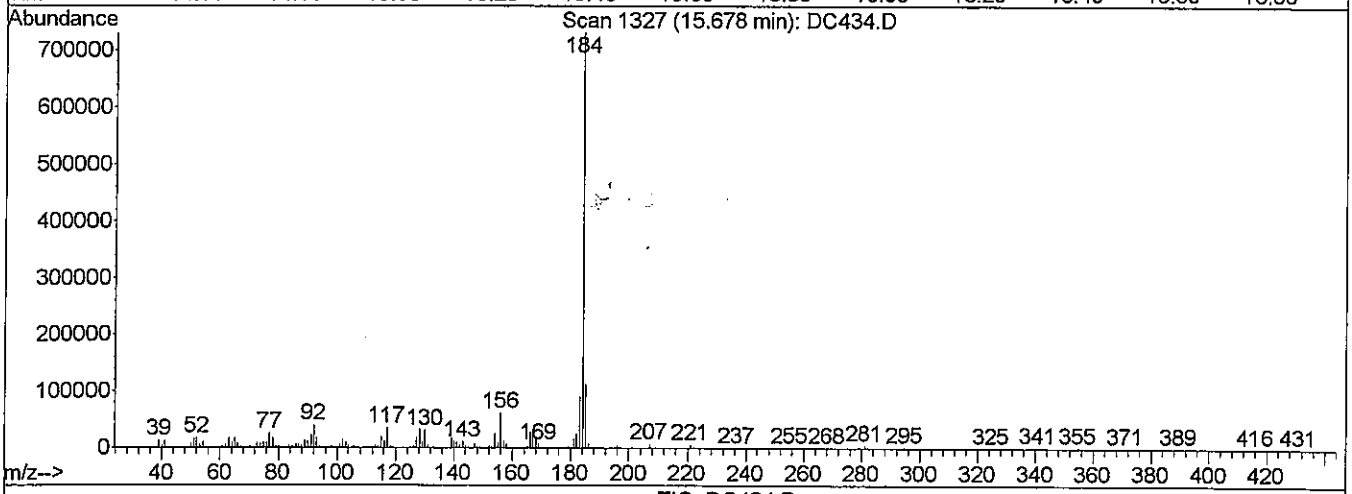
DC434.D DFTPPLVI.M Fri Nov 20 09:40:25 2009

Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\112009\DC434.D Vial: 1
Acq On : 20 Nov 2009 9:07 am Operator: M.PEDRO
Sample : TUNE CHECK Inst : 5973-B
Misc : 10 NG DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 9:30 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\DFTPPLVI.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Fri Nov 13 15:35:55 2009
Response via : Single Level Calibration





TIC: DC434.D

(11) Benzidine (T)

15.68min 8.13ppb

response 1239523

Ion	Exp%	Act%
184.15	100	100
185.00	14.20	15.34
92.00	6.20	5.43
0.00	0.00	0.00

Evaluate Continuing Calibration Report

Data File : J:\ACQUDATA\5973B\DATA\112009\DC435.D Vial: 1
Acq On : 20 Nov 2009 9:45 am Operator: M.PEDRO
Sample : CALIBRATION CHECK Inst : 5973-B
Misc : 2.0/4.0 PPM 8270LL Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Nov 12 12:29:20 2009
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	IR	d4-1,4-Dichlorobenzene	1.000	1.000	0.0	53	0.00
2	TM	1,4-Dioxane	4.000	4.759	-19.0	59	-0.05
3	TM	Pyridine	2.000	2.191	-9.5	53	-0.06
4	IR	d8-Naphthalene	1.000	1.000	0.0	56	-0.01
5	S	SURR4,NITROBENZENE-D5	2.000	2.007	-0.4	56	-0.01
6	TM	Nitrobenzene	2.000	2.211	-10.5	57	-0.01
7	TM	Naphthalene	2.000	2.016	-0.8	54	-0.01
8	TM	2-Methylnaphthalene	2.000	2.181	-9.1	56	-0.01
9	TM	1-Methylnaphthalene	2.000	2.076	-3.8	56	-0.01
10	IR	d10-Acenaphthene	1.000	1.000	0.0	56	-0.02
11	S	SURR5,2-FLUOROBIPHENYL	2.000	2.138	-6.9	57	-0.01
12	TM	Acenaphthylene	2.000	2.024	-1.2	54	-0.02
13	TM	Dimethyl phthalate	2.000	2.119	-6.0	57	-0.02
14	TM	Acenaphthene	2.000	1.997	0.1	56	-0.02
15	TM	Dibenzofuran	2.000	2.120	-6.0	56	-0.02
16	TM	Fluorene	2.000	2.138	-6.9	58	-0.02
17	TM	Diethylphthalate	2.000	2.207	-10.3	59	-0.02
18	IR	d10-Phenanthrene	1.000	1.000	0.0	58	-0.02
19	TM	Hexachlorobenzene	2.000	2.159	-7.9	62	-0.02
20	TM	Phenanthrene	2.000	2.083	-4.2	60	-0.02
21	TM	Anthracene	2.000	2.194	-9.7	62	-0.02
22	TM	Carbazole	2.000	2.185	-9.3	58	-0.02
23	TM	Octachlorostyrene	2.000	2.422	-21.1#	81	-0.05
24	TM	Di-n-butylphthalate	2.000	2.184	-9.2	61	-0.03
25	TM	Fluoranthene	2.000	2.130	-6.5	61	-0.04
26	IR	d12-Chrysene	1.000	1.000	0.0	65	-0.08
27	TM	Pyrene	2.000	1.971	1.4	62	-0.05
28	S	SURR6,TERPHENYL-D14	2.000	2.112	-5.6	65	-0.05
29	TM	Butyl benzyl phthalate	2.000	1.993	0.3	63	-0.05
30	TM	bis(2-Ethylhexyl)phthalate	4.000	4.140	-3.5	65	-0.08
31	TM	Benzo(a)anthracene	2.000	2.075	-3.8	66	-0.07
32	TM	Chrysene	2.000	2.016	-0.8	63	-0.08
33	IR	d12-Perylene	1.000	1.000	0.0	66	-0.20
34	TM	Di-n-octyl phthalate	2.000	2.060	-3.0	67	-0.11
35	TM	Benzo(b)Fluoranthene	2.000	2.013	-0.6	64	-0.14
36	TM	Benzo(k)fluoranthene	2.000	2.139	-6.9	67	-0.14

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : J:\ACQUDATA\5973B\DATA\112009\DC435.D Vial: 1
Acq On : 20 Nov 2009 9:45 am Operator: M.PEDRO
Sample : CALIBRATION CHECK Inst : 5973-B
Misc : 2.0/4.0 PPM 8270LL Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Nov 12 12:29:20 2009
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
37	TM	Benzo(a)pyrene	2.000	2.066	-3.3	65	-0.17
38	TM	Indeno(1,2,3-cd)Pyrene	2.000	2.148	-7.4	66	-0.18
39	TM	Dibenz(a,h)anthracene	2.000	2.128	-6.4	67	-0.18
40	TM	Benzo(g,h,i)perylene	2.000	2.268	-13.4	69	-0.21

Evaluate Continuing Calibration Report

Data File : J:\ACQUDATA\5973B\DATA\112009\DC435.D Vial: 1
Acq On : 20 Nov 2009 9:45 am Operator: M.PEDRO
Sample : CALIBRATION CHECK Inst : 5973-B
Misc : 2.0/4.0 PPM 8270LL Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Nov 12 12:29:20 2009
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	IR	d4-1,4-Dichlorobenzene	1.000	1.000	0.0	53	0.00
2	TM	1,4-Dioxane	0.790	0.917	-16.1	59	-0.05
3	TM	Pyridine	1.151	1.261	-9.6	53	-0.06
4	IR	d8-Naphthalene	1.000	1.000	0.0	56	-0.01
5	S	SURR4,NITROBENZENE-D5	0.325	0.360	-10.8	56	-0.01
6	TM	Nitrobenzene	0.322	0.356	-10.6	57	-0.01
7	TM	Naphthalene	1.044	1.052	-0.8	54	-0.01
8	TM	2-Methylnaphthalene	0.682	0.744	-9.1	56	-0.01
9	TM	1-Methylnaphthalene	0.661	0.686	-3.8	56	-0.01
10	IR	d10-Acenaphthene	1.000	1.000	0.0	56	-0.02
11	S	SURR5,2-FLUOROBIPHENYL	1.279	1.368	-7.0	57	-0.01
12	TM	Acenaphthylene	1.783	1.804	-1.2	54	-0.02
13	TM	Dimethyl phthalate	1.497	1.586	-5.9	57	-0.02
14	TM	Acenaphthene	1.159	1.158	0.1	56	-0.02
15	TM	Dibenzofuran	1.629	1.727	-6.0	56	-0.02
16	TM	Fluorene	1.286	1.375	-6.9	58	-0.02
17	TM	Diethylphthalate	1.459	1.611	-10.4	59	-0.02
18	IR	d10-Phenanthrene	1.000	1.000	0.0	58	-0.02
19	TM	Hexachlorobenzene	0.265	0.286	-7.9	62	-0.02
20	TM	Phenanthrene	1.105	1.151	-4.2	60	-0.02
21	TM	Anthracene	1.079	1.184	-9.7	62	-0.02
22	TM	Carbazole	0.780	0.852	-9.2	58	-0.02
23	TM	Octachlorostyrene	0.068	0.082	-20.6#	81	-0.05
24	TM	Di-n-butylphthalate	1.394	1.522	-9.2	61	-0.03
25	TM	Fluoranthene	1.265	1.347	-6.5	61	-0.04
26	IR	d12-Chrysene	1.000	1.000	0.0	65	-0.08
27	TM	Pyrene	1.254	1.236	1.4	62	-0.05
28	S	SURR6,TERPHENYL-D14	0.824	0.870	-5.6	65	-0.05
29	TM	Butyl benzyl phthalate	0.610	0.608	0.3	63	-0.05
30	TM	bis(2-Ethylhexyl)phthalate	0.787	0.814	-3.4	65	-0.08
31	TM	Benzo(a)anthracene	1.089	1.130	-3.8	66	-0.07
32	TM	Chrysene	1.114	1.123	-0.8	63	-0.08
33	IR	d12-Perylene	1.000	1.000	0.0	66	-0.20
34	TM	Di-n-octyl phthalate	1.670	1.721	-3.1	67	-0.11
35	TM	Benzo(b)Fluoranthene	1.419	1.429	-0.7	64	-0.14
36	TM	Benzo(k)fluoranthene	1.371	1.466	-6.9	67	-0.14

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : J:\ACQUDATA\5973B\DATA\112009\DC435.D Vial: 1
Acq On : 20 Nov 2009 9:45 am Operator: M.PEDRO
Sample : CALIBRATION CHECK Inst : 5973-B
Misc : 2.0/4.0 PPM 8270LL Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Nov 12 12:29:20 2009
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
37	TM	Benzo(a)pyrene	1.243	1.284	-3.3	65	-0.17
38	TM	Indeno(1,2,3-cd)Pyrene	1.505	1.616	-7.4	66	-0.18
39	TM	Dibenz(a,h)anthracene	1.281	1.363	-6.4	67	-0.18
40	TM	Benzo(g,h,i)perylene	1.254	1.422	-13.4	69	-0.21

Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\5973B\DATA\112009\DC435.D Vial: 1
Acq On : 20 Nov 2009 9:45 am Operator: M.PEDRO
Sample : CALIBRATION CHECK Inst : 5973-B
Misc : 2.0/4.0 PPM 8270LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 10:32 2009 Quant Results File: LVI1016.RES

Quant Method : J:\ACQUDATA\5...\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Nov 12 12:29:20 2009
Response via : Initial Calibration
DataAcq Meth : LVI1016

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) d4-1,4-Dichlorobenzene	10.61	152	46428	1.00	ppm	0.00
4) d8-Naphthalene	11.88	136	186145	1.00	ppm	-0.01
10) d10-Acenaphthene	13.46	164	118764	1.00	ppm	-0.02
18) d10-Phenanthrene	14.67	188	203298	1.00	ppm	-0.02
26) d12-Chrysene	17.91	240	236853	1.00	ppm	-0.08
33) d12-Perylene	21.58	264	185463	1.00	ppm	-0.20
System Monitoring Compounds						
5) SURR4,NITROBENZENE-D5	11.19	82	134188	2.01	ppm	-0.01
Spiked Amount 2.000	Range 22 - 124		Recovery = 100.50%			
11) SURR5,2-FLUOROBIPHENYL	12.83	172	324915	2.14	ppm	-0.01
Spiked Amount 2.000	Range 27 - 114		Recovery = 107.00%			
28) SURR6,TERPHENYL-D14	16.26	244	412303	2.11	ppm	-0.05
Spiked Amount 2.000	Range 23 - 139		Recovery = 105.50%			
Target Compounds						Qvalue
2) 1,4-Dioxane	5.98	88	170206	4.76	ppm	96
3) Pyridine	6.75	79	117081	2.19	ppm	90
6) Nitrobenzene	11.21	77	132444	2.21	ppm	89
7) Naphthalene	11.89	128	391666	2.02	ppm	96
8) 2-Methylnaphthalene	12.52	142	276921	2.18	ppm	95
9) 1-Methylnaphthalene	12.62	142	255401	2.08	ppm	100
12) Acenaphthylene	13.34	152	428522	2.02	ppm	97
13) Dimethyl phthalate	13.19	163	376634	2.12	ppm	98
14) Acenaphthene	13.49	153	275040	2.00	ppm	92
15) Dibenzofuran	13.63	168	410151	2.12	ppm	86
16) Fluorene	13.92	166	326667	2.14	ppm	99
17) Diethylphthalate	13.77	149	382562	2.21	ppm	97
19) Hexachlorobenzene	14.41	284	116315	2.16	ppm	97
20) Phenanthrene	14.69	178	468077	2.08	ppm	96
21) Anthracene	14.74	178	481242	2.19	ppm	98
22) Carbazole	14.86	167	346493	2.19	ppm	97
23) Octachlorostyrene	15.67	378	33425	2.42	ppm	90
24) Di-n-butylphthalate	15.08	149	618759m	2.18	ppm	
25) Fluoranthene	15.88	202	547770	2.13	ppm	97
27) Pyrene	16.16	202	585486	1.97	ppm	97
29) Butyl benzyl phthalate	16.88	149	287836	1.99	ppm	92
30) bis(2-Ethylhexyl)phthalate	17.77	149	771531	4.14	ppm	94
31) Benzo(a)anthracene	17.88	228	535198	2.08	ppm	95
32) Chrysene	17.96	228	531853	2.02	ppm	94
34) Di-n-octyl phthalate	19.06	149	638226	2.06	ppm	98
35) Benzo(b)Fluoranthene	20.38	252	529936	2.01	ppm	98

(#) = qualifier out of range (m) = manual integration

mwp 11/13

00274

Data File : J:\ACQUDATA\5973B\DATA\112009\DC435.D Vial: 1
Acq On : 20 Nov 2009 9:45 am Operator: M.PEDRO
Sample : CALIBRATION CHECK Inst : 5973-B
Misc : 2.0/4.0 PPM 8270LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 10:32 2009 Quant Results File: LVI1016.RES

Quant Method : J:\ACQUDATA\5...\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Nov 12 12:29:20 2009
Response via : Initial Calibration
DataAcq Meth : LVI1016

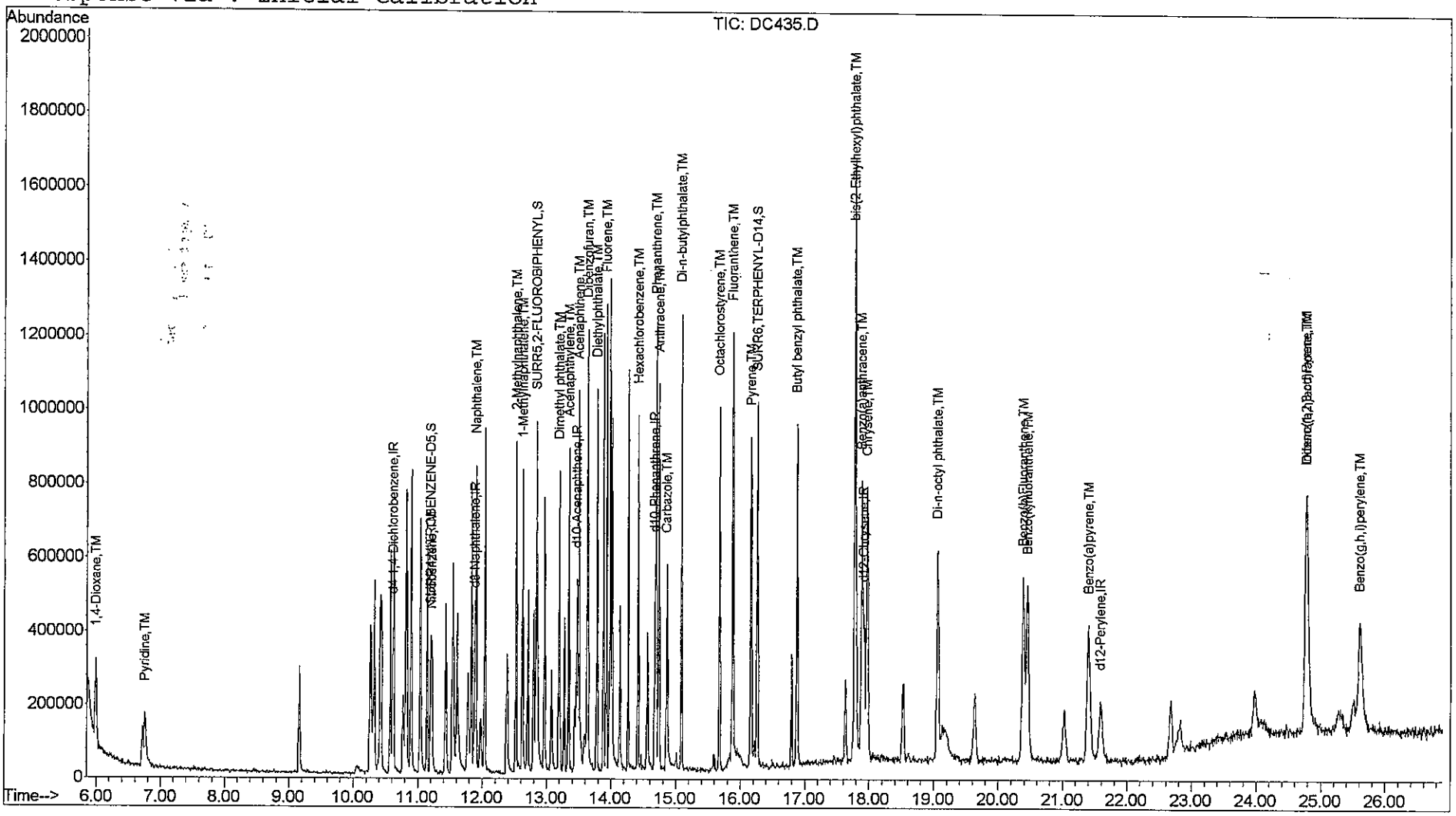
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
36)	Benzo(k)fluoranthene	20.46	252	543807m	2.14	ppm	
37)	Benzo(a)pyrene	21.40	252	476349	2.07	ppm	92
38)	Indeno(1,2,3-cd)Pyrene	24.77	276	599504	2.15	ppm	89
39)	Dibenz(a,h)anthracene	24.78	278	505604	2.13	ppm	97
40)	Benzo(g,h,i)perylene	25.60	276	527315	2.27	ppm	90

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : J:\ACQUDATA\5973B\DATA\112009\DC435.D Vial: 1
Acq On : 20 Nov 2009 9:45 am Operator: M.PEDRO
Sample : CALIBRATION CHECK Inst : 5973-B
Misc : 2.0/4.0 PPM 8270LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 10:32 2009 Quant Results File: LVI1016.RES

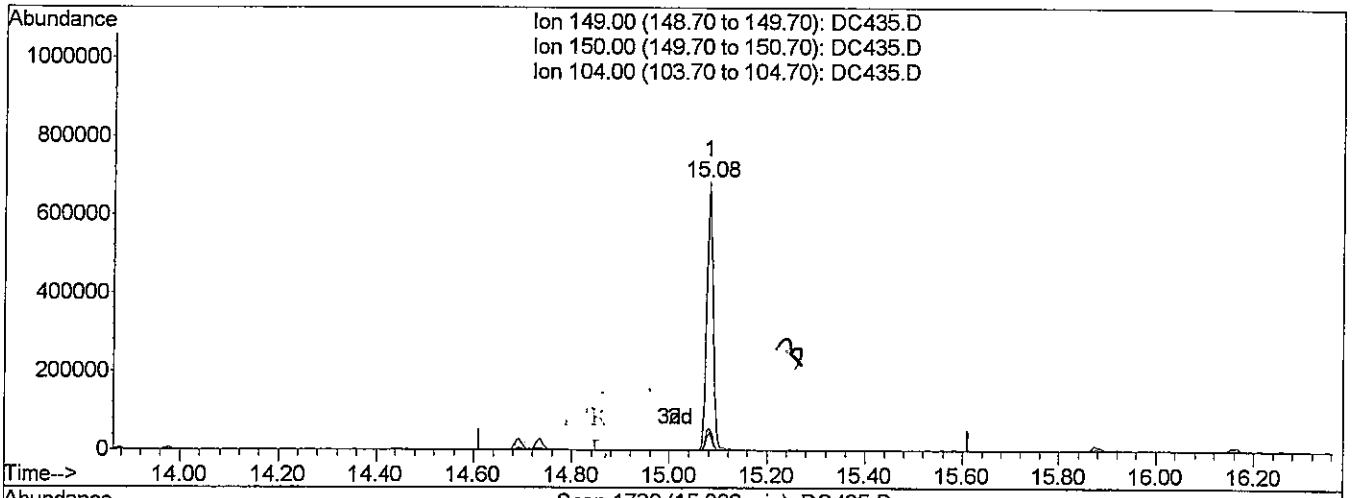
Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Nov 12 12:29:20 2009
Response via : Initial Calibration



Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\112009\DC435.D Vial: 1
Acq On : 20 Nov 2009 9:45 am Operator: M.PEDRO
Sample : CALIBRATION CHECK Inst : 5973-B
Misc : 2.0/4.0 PPM 8270LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 10:12 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Nov 12 12:29:20 2009
Response via : Multiple Level Calibration



TIC: DC435.D

(24) Di-n-butylphthalate (TM)

15.08min 2.19ppm

response 619637

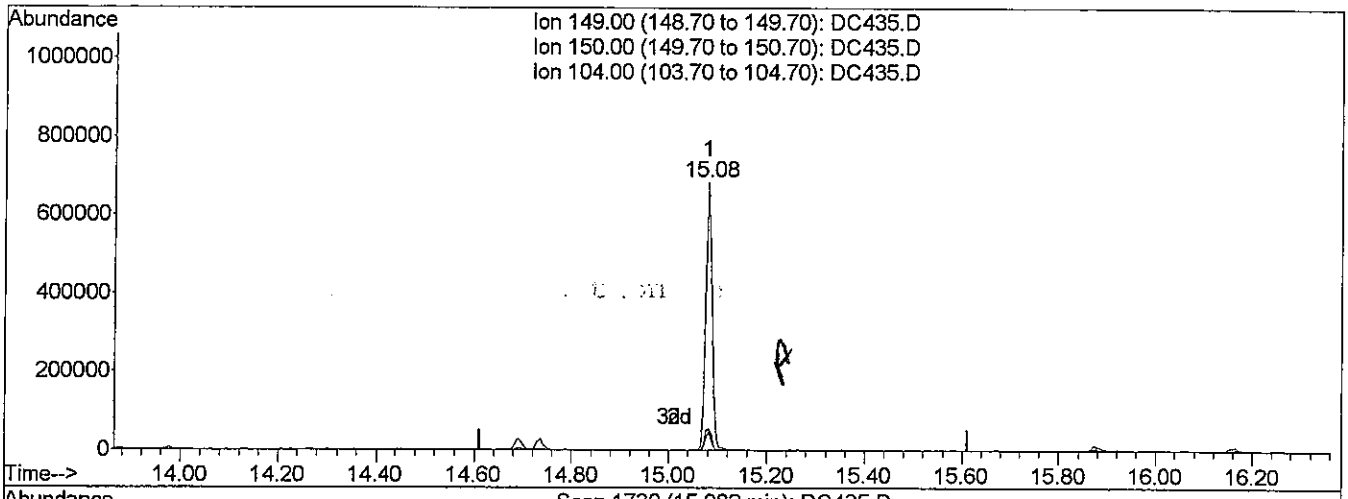
Ion	Exp%	Act%
149.00	100	100
150.00	9.30	8.05
104.00	5.00	6.94#
0.00	0.00	0.00

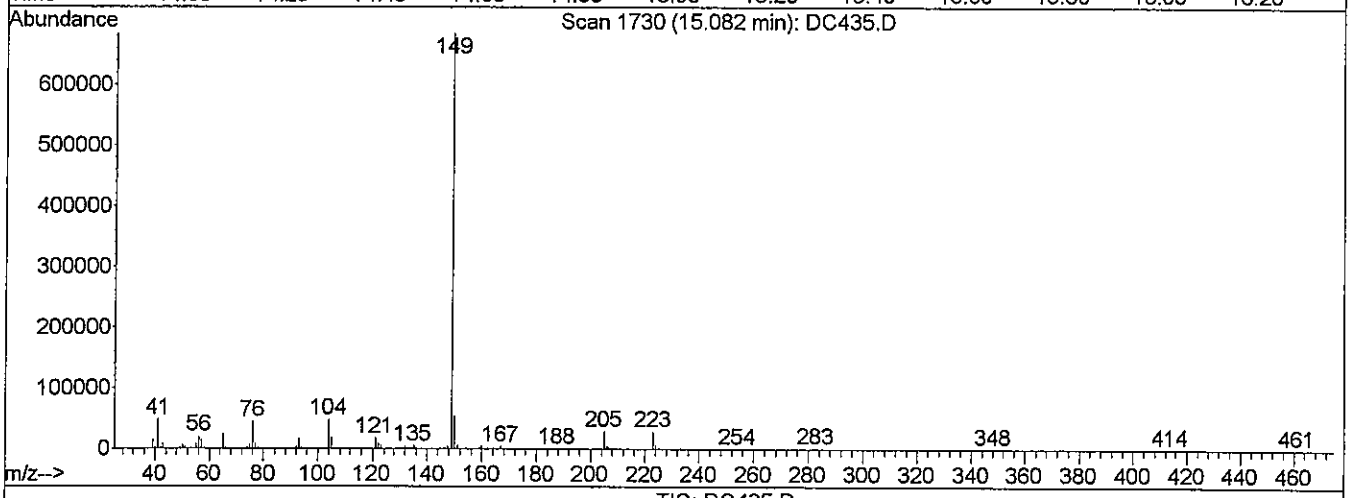
DC435.D LVI1016.M Fri Nov 20 10:31:25 2009

Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\112009\DC435.D Vial: 1
Acq On : 20 Nov 2009 9:45 am Operator: M.PEDRO
Sample : CALIBRATION CHECK Inst : 5973-B
Misc : 2.0/4.0 PPM 8270LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 10:31 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Nov 12 12:29:20 2009
Response via : Multiple Level Calibration





TIC: DC435.D

(24) Di-n-butylphthalate (TM)

15.08min 2.18ppm m

response 618759

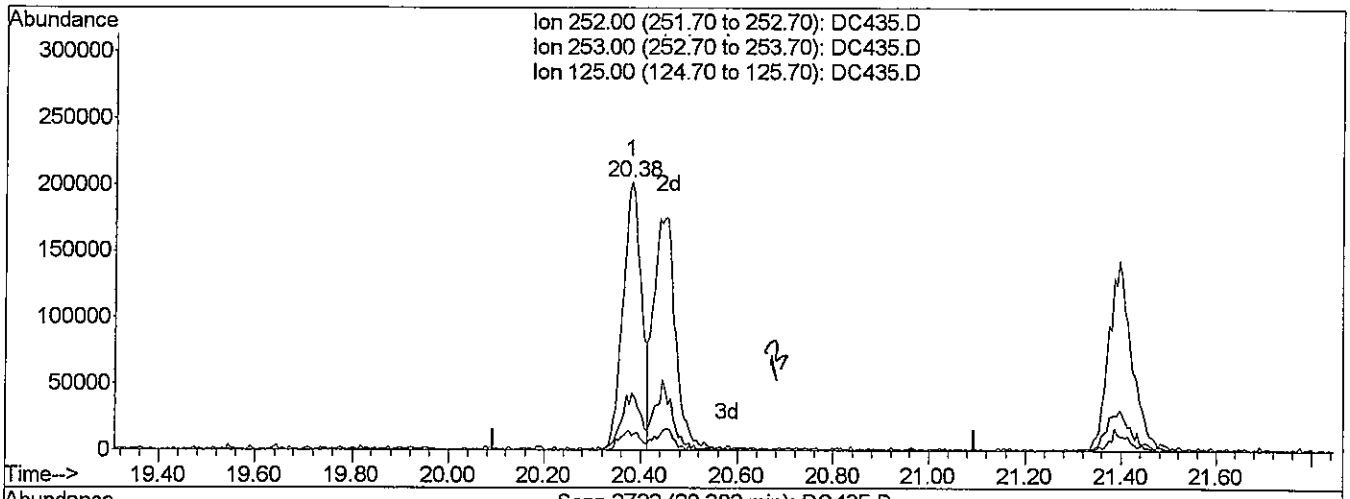
Ion	Exp%	Act%
149.00	100	100
150.00	9.30	8.05
104.00	5.00	6.94#
0.00	0.00	0.00

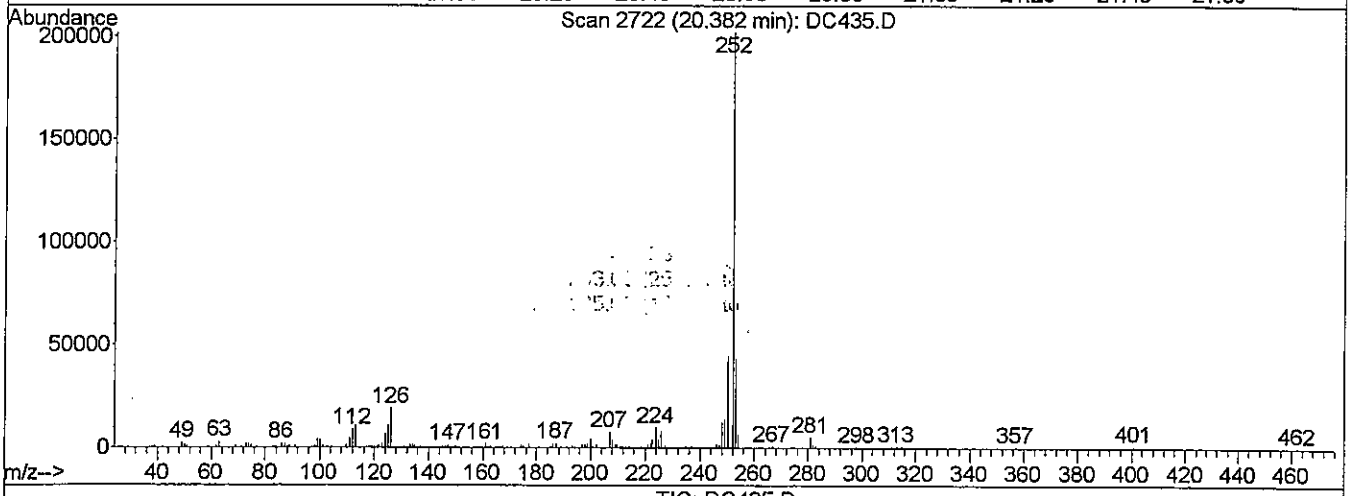
DC435.D LVI1016.M Fri Nov 20 10:31:31 2009

Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\112009\DC435.D Vial: 1
Acq On : 20 Nov 2009 9:45 am Operator: M.PEDRO
Sample : CALIBRATION CHECK Inst : 5973-B
Misc : 2.0/4.0 PPM 8270LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 10:31 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Nov 12 12:29:20 2009
Response via : Multiple Level Calibration





TIC: DC435.D

(36) Benzo(k)fluoranthene (TM)

20.38min 2.08ppm

response 529936

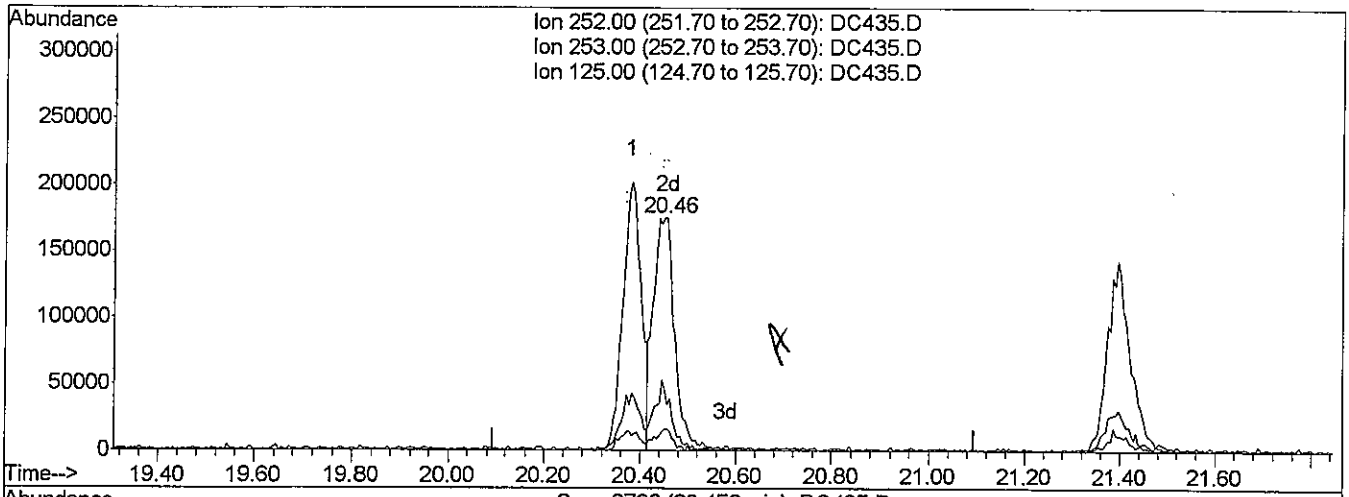
Ion	Exp%	Act%
252.00	100	100
253.00	25.10	22.04
125.00	9.70	5.49
0.00	0.00	0.00

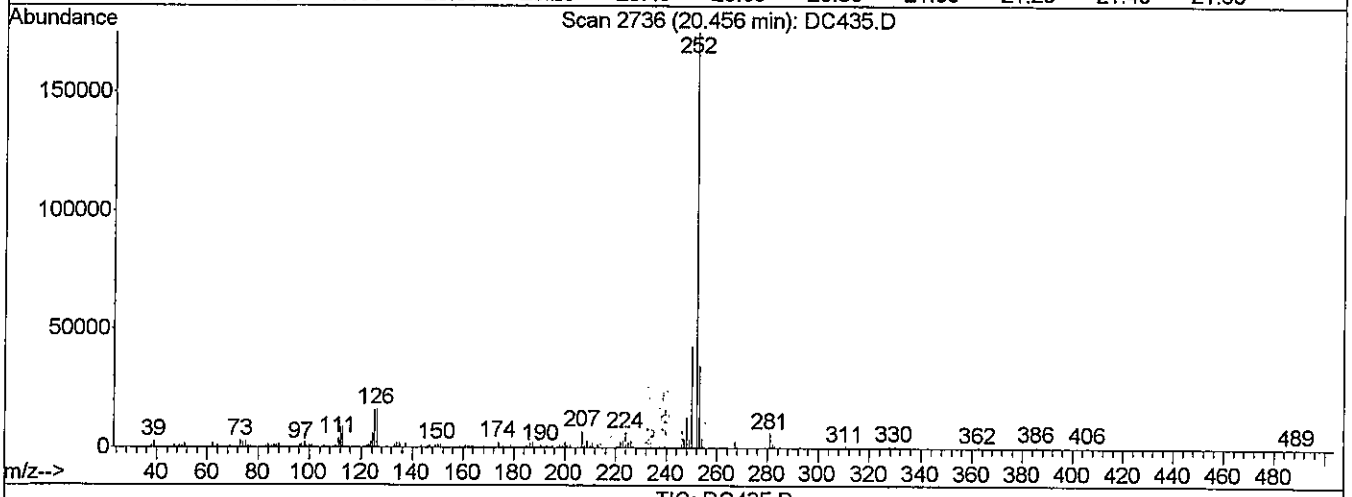
DC435.D LVI1016.M Fri Nov 20 10:32:02 2009

Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\112009\DC435.D Vial: 1
Acq On : 20 Nov 2009 9:45 am Operator: M.PEDRO
Sample : CALIBRATION CHECK Inst : 5973-B
Misc : 2.0/4.0 PPM 8270LL Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 20 10:32 2009 Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Nov 12 12:29:20 2009
Response via : Multiple Level Calibration





TIC: DC435.D

(36) Benzo(k)fluoranthene (TM)

20.46min 2.14ppm m

response 543807

Ion	Exp%	Act%
252.00	100	100
253.00	25.10	19.67
125.00	9.70	8.95
0.00	0.00	0.00

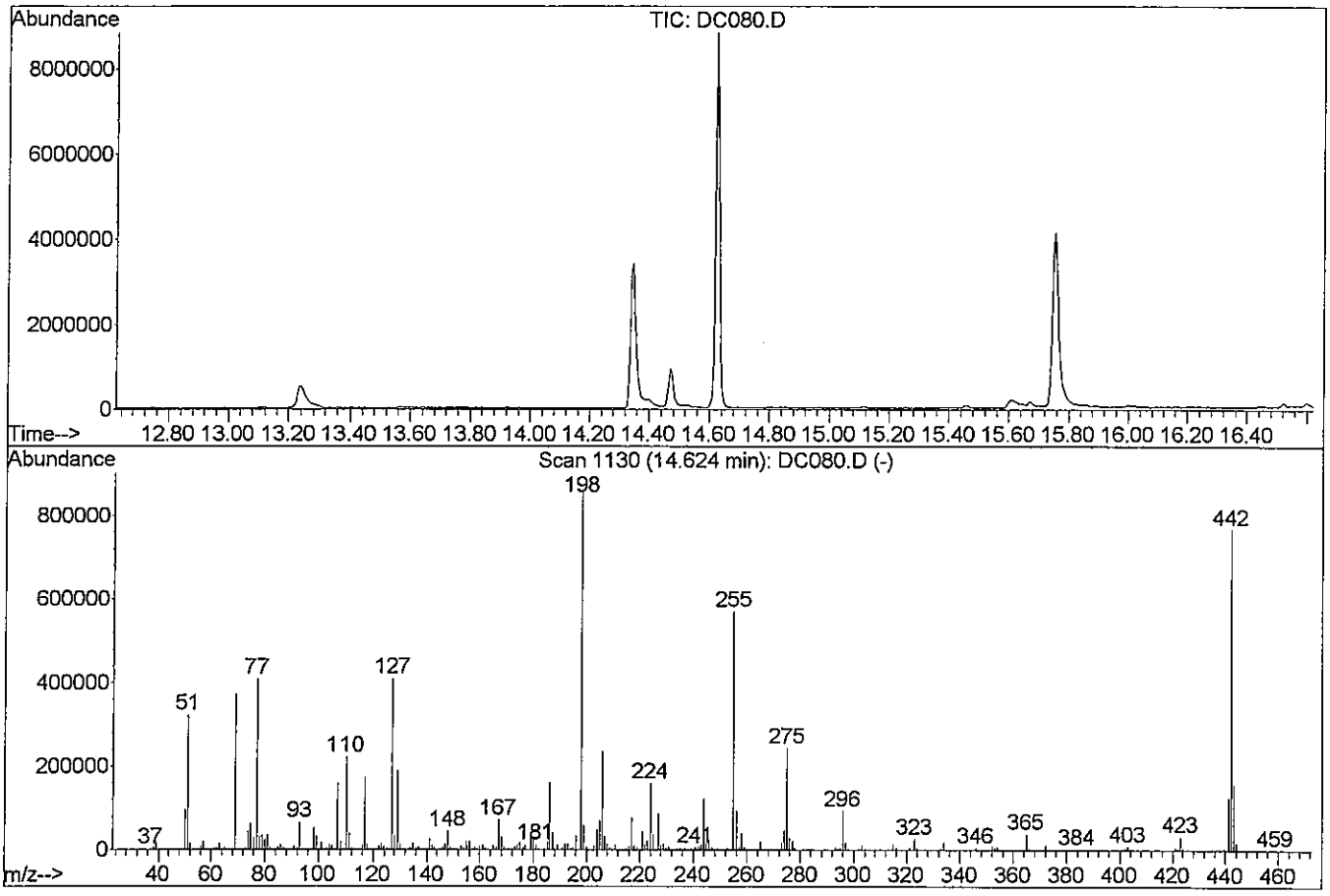
DC435.D LVI1016.M Fri Nov 20 10:32:16 2009

SEMIVOLATILE ORGANICS

RAW QC DATA

DFTPP

Data File : J:\ACQUDATA\5973B\DATA\101609\DC080.D Vial: 1
Acq On : 16 Oct 2009 9:29 am Operator: J.Wu
Sample : TUNE CHECK Inst : 5973-B
Misc : 10 ng DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : J:\ACQUDATA\5973B\METHODS\DFTPPLVI.M (RTE Integrator)
Title : 8270 BNA ANALYSIS



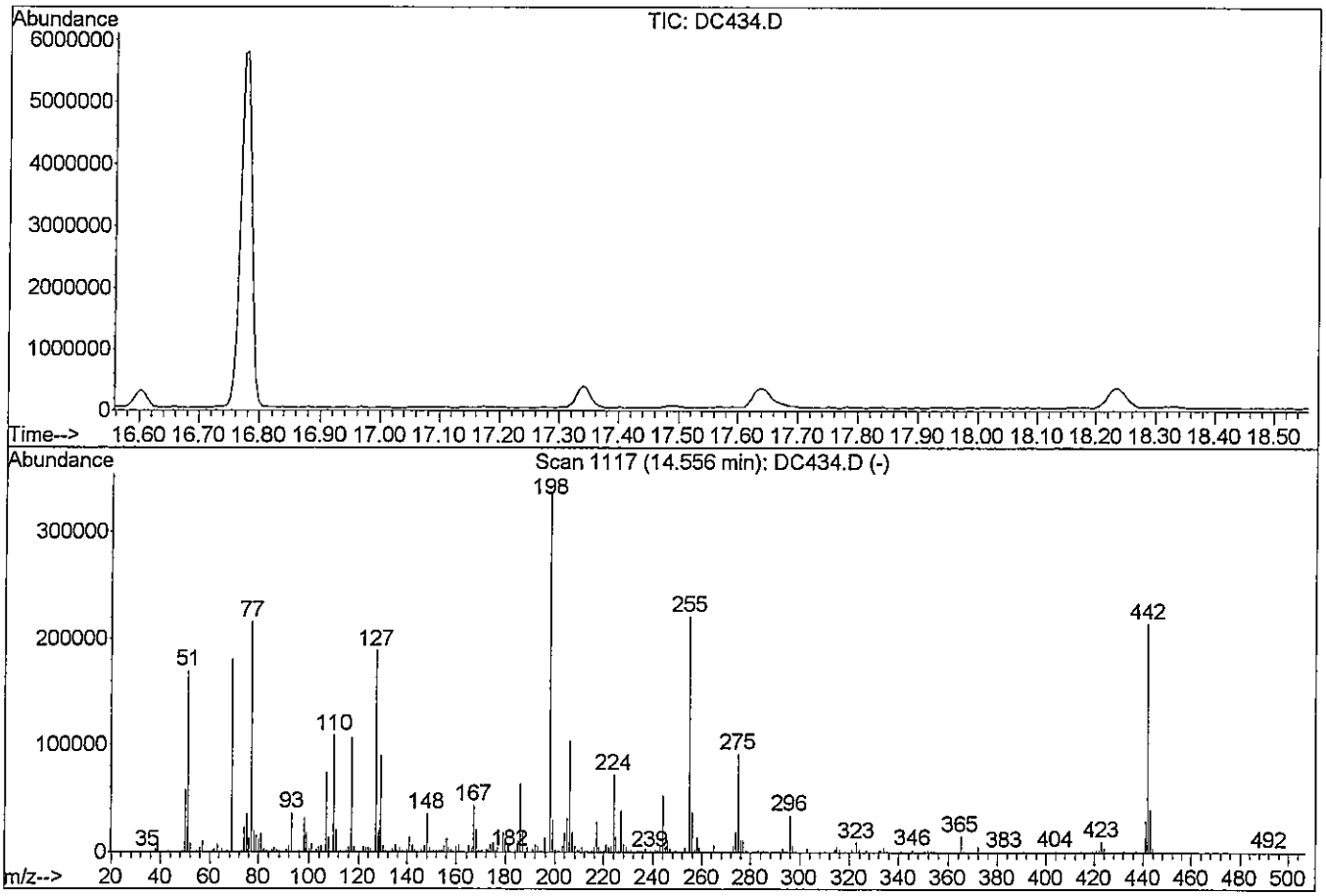
Spectrum Information: Scan 1130

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	37.5	322435	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	43.3	372544	PASS
70	69	0.00	2	0.4	1596	PASS
127	198	40	60	47.7	410048	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	860160	PASS
199	198	5	9	6.9	59416	PASS
275	198	10	30	28.3	243136	PASS
365	198	1	100	4.4	37952	PASS
441	443	0.01	100	79.7	126384	PASS
442	198	40	100	89.2	767104	PASS
443	442	17	23	20.7	158656	PASS

DC080.D DFTPPLVI.M Mon Oct 19 09:16:05 2009

DFTPP

Data File : J:\ACQUDATA\5973B\DATA\112009\DC434.D Vial: 1
Acq On : 20 Nov 2009 9:07 am Operator: M.PEDRO
Sample : TUNE CHECK Inst : 5973-B
Misc : 10 NG DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : J:\ACQUDATA\5973B\METHODS\DFTPPLVI.M (RTE Integrator)
Title : 8270 BNA ANALYSIS



Peak Apex is scan: 2827

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	50.3	169280	PASS
68	69	0	2	0.0	0	PASS
69	198	0	100	53.7	180928	PASS
70	69	0	2	0.8	1493	PASS
127	198	40	60	56.0	188608	PASS
197	198	0	1	0.0	0	PASS
198	198	100	100	100.0	336832	PASS
199	198	5	9	8.9	29872	PASS
275	198	10	30	27.2	91504	PASS
365	198	1	100	4.5	15295	PASS
441	443	0	100	74.1	29624	PASS
442	198	40	100	63.6	214080	PASS
443	442	17	23	18.7	39952	PASS

DC434.D DFTPPLVI.M Mon Nov 23 10:04:54 2009

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Northgate Environmental	**Service Request:**	R0906477
Project:	Tronox LLC Henderson/2027.001	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ0911513-01	**Basis:**	NA

Low Level Semivolatile Organic Compounds by GC/MS

Analytical Method: 8270C
Prep Method: EPA 3510C

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
2-Methylnaphthalene	0.048	U	0.20	0.048	1	11/17/09	11/20/09 16:31	100898	180580	
Acenaphthene	0.053	U	0.20	0.053	1	11/17/09	11/20/09 16:31	100898	180580	
Acenaphthylene	0.076	U	0.20	0.076	1	11/17/09	11/20/09 16:31	100898	180580	
Anthracene	0.041	U	0.20	0.041	1	11/17/09	11/20/09 16:31	100898	180580	
Benz(a)anthracene	0.041	U	0.20	0.041	1	11/17/09	11/20/09 16:31	100898	180580	
Benzo(a)pyrene	0.042	U	0.20	0.042	1	11/17/09	11/20/09 16:31	100898	180580	
Benzo(b)fluoranthene	0.027	U	0.20	0.027	1	11/17/09	11/20/09 16:31	100898	180580	
Benzo(g,h,i)perylene	0.030	U	0.20	0.030	1	11/17/09	11/20/09 16:31	100898	180580	
Benzo(k)fluoranthene	0.029	U	0.20	0.029	1	11/17/09	11/20/09 16:31	100898	180580	
Bis(2-ethylhexyl) Phthalate	0.23	U	5.0	0.23	1	11/17/09	11/20/09 16:31	100898	180580	
Butyl Benzyl Phthalate	0.11	U	5.0	0.11	1	11/17/09	11/20/09 16:31	100898	180580	
Chrysene	0.029	U	0.20	0.029	1	11/17/09	11/20/09 16:31	100898	180580	
Di-n-butyl Phthalate	0.76	U	5.0	0.76	1	11/17/09	11/20/09 16:31	100898	180580	
Di-n-octyl Phthalate	0.041	U	5.0	0.041	1	11/17/09	11/20/09 16:31	100898	180580	
Dibenz(a,h)anthracene	0.046	U	0.20	0.046	1	11/17/09	11/20/09 16:31	100898	180580	
Diethyl Phthalate	0.20	U	5.0	0.20	1	11/17/09	11/20/09 16:31	100898	180580	
Dimethyl Phthalate	0.044	U	5.0	0.044	1	11/17/09	11/20/09 16:31	100898	180580	
Fluoranthene	0.040	U	0.20	0.040	1	11/17/09	11/20/09 16:31	100898	180580	
Fluorene	0.055	U	0.20	0.055	1	11/17/09	11/20/09 16:31	100898	180580	
Hexachlorobenzene	0.035	U	0.20	0.035	1	11/17/09	11/20/09 16:31	100898	180580	
Indeno(1,2,3-cd)pyrene	0.049	U	0.20	0.049	1	11/17/09	11/20/09 16:31	100898	180580	
Naphthalene	0.14	U	0.20	0.14	1	11/17/09	11/20/09 16:31	100898	180580	
Nitrobenzene	0.046	U	0.20	0.046	1	11/17/09	11/20/09 16:31	100898	180580	
Phenanthrene	0.062	U	0.20	0.062	1	11/17/09	11/20/09 16:31	100898	180580	
Pyrene	0.029	U	0.20	0.029	1	11/17/09	11/20/09 16:31	100898	180580	
Pyridine	0.89	U	2.0	0.89	1	11/17/09	11/20/09 16:31	100898	180580	
1,4-Dioxane	0.13	U	2.0	0.13	1	11/17/09	11/20/09 16:31	100898	180580	
Octachlorostyrene	0.13	U	0.20	0.13	1	11/17/09	11/20/09 16:31	100898	180580	

Comments:

Client:	Northgate Environmental	**Service Request:**	R0906477
Project:	Tronox LLC Henderson/2027.001	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	Percent
Lab Code:	RQ0911513-01	**Basis:**	NA

Low Level Semivolatile Organic Compounds by GC/MS

Analytical Method: 8270C
Prep Method: EPA 3510C

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
2-Fluorobiphenyl	88	45-135	11/20/09 16:31		
Nitrobenzene-d5	82	45-135	11/20/09 16:31		
Terphenyl-d14	112	45-135	11/20/09 16:31		

Comments:

Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\5973B\DATA\112009\DC444.D
Acq On : 20 Nov 2009 4:31 pm
Sample : RQ0911513-01|1.0
Misc : 11/11/09 1.0 8270LL BLK
MS Integration Params: RTEINT.P
Quant Time: Nov 23 10:36 2009

Vial: 10
Operator: M.PEDRO
Inst : 5973-B
Multiplr: 1.00

Quant Results File: LVI1016.RES

Quant Method : J:\ACQUDATA\5...\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Nov 12 12:29:20 2009
Response via : Initial Calibration
DataAcq Meth : LVI1016

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) d4-1,4-Dichlorobenzene	10.61	152	54868	1.00	ppm	0.00
4) d8-Naphthalene	11.88	136	189256	1.00	ppm	-0.01
10) d10-Acenaphthene	13.47	164	125088	1.00	ppm	-0.02
18) d10-Phenanthrene	14.67	188	210251	1.00	ppm	-0.02
26) d12-Chrysene	17.92	240	218809	1.00	ppm	-0.07
33) d12-Perylene	21.59	264	178166	1.00	ppm	-0.19
System Monitoring Compounds						
5) SURR4,NITROBENZENE-D5	11.20	82	109537	1.64	ppm	0.00
Spiked Amount 2.000	Range 22 - 124		Recovery = 82.00%			
11) SURR5,2-FLUOROBIPHENYL	12.83	172	280269	1.75	ppm	-0.02
Spiked Amount 2.000	Range 27 - 114		Recovery = 87.50%			
28) SURR6,TERPHENYL-D14	16.26	244	403130	2.23	ppm	-0.05
Spiked Amount 2.000	Range 23 - 139		Recovery = 111.50%			

Target Compounds Qvalue

MF 11/23

(#) = qualifier out of range (m) = manual integration

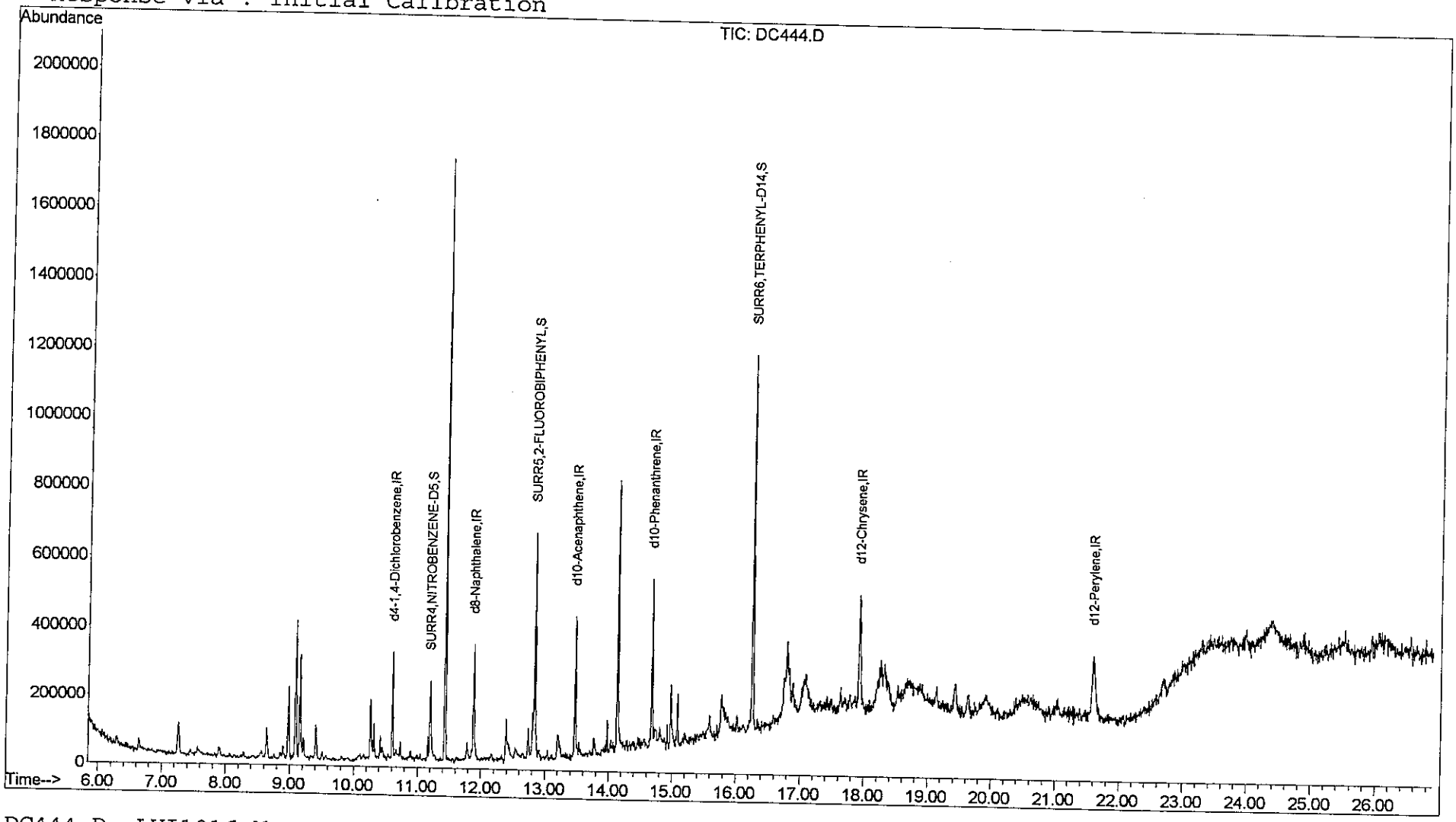
Quantitation Report

Data File : J:\ACQUDATA\5973B\DATA\112009\DC444.D
Acq On : 20 Nov 2009 4:31 pm
Sample : RQ0911513-01|1.0
Misc : 11/11/09 1.0 8270LL BLK
MS Integration Params: RTEINT.P
Quant Time: Nov 23 10:36 2009

Vial: 10
Operator: M.PEDRO
Inst : 5973-B
Multiplr: 1.00

Quant Results File: LVI1016.RES

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Nov 12 12:29:20 2009
Response via : Initial Calibration



00287

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Northgate Environmental	**Service Request:**	R0906477
Project:	Tronox LLC Henderson/2027.001	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	RQ0911513-02	**Basis:**	NA

Low Level Semivolatile Organic Compounds by GC/MS

Analytical Method: 8270C
Prep Method: EPA 3510C

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
2-Methylnaphthalene	**3.41**		0.20	0.048	1	11/17/09	11/20/09 17:14	100898	180580	
Acenaphthene	**3.23**		0.20	0.053	1	11/17/09	11/20/09 17:14	100898	180580	
Acenaphthylene	**3.30**		0.20	0.076	1	11/17/09	11/20/09 17:14	100898	180580	
Anthracene	**3.43**		0.20	0.041	1	11/17/09	11/20/09 17:14	100898	180580	
Benz(a)anthracene	**3.57**		0.20	0.041	1	11/17/09	11/20/09 17:14	100898	180580	
Benzo(a)pyrene	**3.19**		0.20	0.042	1	11/17/09	11/20/09 17:14	100898	180580	
Benzo(b)fluoranthene	**3.55**		0.20	0.027	1	11/17/09	11/20/09 17:14	100898	180580	
Benzo(g,h,i)perylene	**3.84**		0.20	0.030	1	11/17/09	11/20/09 17:14	100898	180580	
Benzo(k)fluoranthene	**3.75**		0.20	0.029	1	11/17/09	11/20/09 17:14	100898	180580	
Bis(2-ethylhexyl) Phthalate	**3.55**	J	5.0	0.23	1	11/17/09	11/20/09 17:14	100898	180580	
Butyl Benzyl Phthalate	**3.17**	J	5.0	0.11	1	11/17/09	11/20/09 17:14	100898	180580	
Chrysene	**3.27**		0.20	0.029	1	11/17/09	11/20/09 17:14	100898	180580	
Di-n-butyl Phthalate	**3.69**	J	5.0	0.76	1	11/17/09	11/20/09 17:14	100898	180580	
Di-n-octyl Phthalate	**3.19**	J	5.0	0.041	1	11/17/09	11/20/09 17:14	100898	180580	
Dibenz(a,h)anthracene	**3.91**		0.20	0.046	1	11/17/09	11/20/09 17:14	100898	180580	
Diethyl Phthalate	**3.42**	J	5.0	0.20	1	11/17/09	11/20/09 17:14	100898	180580	
Dimethyl Phthalate	**3.10**	J	5.0	0.044	1	11/17/09	11/20/09 17:14	100898	180580	
Fluoranthene	**3.41**		0.20	0.040	1	11/17/09	11/20/09 17:14	100898	180580	
Fluorene	**3.49**		0.20	0.055	1	11/17/09	11/20/09 17:14	100898	180580	
Hexachlorobenzene	**3.37**		0.20	0.035	1	11/17/09	11/20/09 17:14	100898	180580	
Indeno(1,2,3-cd)pyrene	**3.86**		0.20	0.049	1	11/17/09	11/20/09 17:14	100898	180580	
Naphthalene	**2.99**		0.20	0.14	1	11/17/09	11/20/09 17:14	100898	180580	
Nitrobenzene	**3.60**		0.20	0.046	1	11/17/09	11/20/09 17:14	100898	180580	
Phenanthrene	**3.29**		0.20	0.062	1	11/17/09	11/20/09 17:14	100898	180580	
Pyrene	**3.13**		0.20	0.029	1	11/17/09	11/20/09 17:14	100898	180580	
Pyridine	**1.27**	J	2.0	0.89	1	11/17/09	11/20/09 17:14	100898	180580	
1,4-Dioxane	**1.93**	J	2.0	0.13	1	11/17/09	11/20/09 17:14	100898	180580	
Octachlorostyrene	**2.89**		0.20	0.13	1	11/17/09	11/20/09 17:14	100898	180580	

Comments:

Client:	Northgate Environmental	**Service Request:**	R0906477
Project:	Tronox LLC Henderson/2027.001	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	Percent
Lab Code:	RQ0911513-02	**Basis:**	NA

Low Level Semivolatile Organic Compounds by GC/MS

Analytical Method: 8270C
Prep Method: EPA 3510C

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
2-Fluorobiphenyl	81	45-135	11/20/09 17:14		
Nitrobenzene-d5	79	45-135	11/20/09 17:14		
Terphenyl-d14	84	45-135	11/20/09 17:14		

Comments:

Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\5973B\DATA\112009\DC445.D
Acq On : 20 Nov 2009 5:14 pm
Sample : RQ0911513-02|1.0
Misc : 11/11/09 1.0 8270LL LCS
MS Integration Params: RTEINT.P
Quant Time: Nov 23 10:39 2009

Vial: 11
Operator: M.PEDRO
Inst : 5973-B
Multiplr: 1.00

Quant Results File: LVI1016.RES

Quant Method : J:\ACQUDATA\5...\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Nov 12 12:29:20 2009
Response via : Initial Calibration
DataAcq Meth : LVI1016

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) d4-1,4-Dichlorobenzene	10.60	152	51467	1.00	ppm	-0.01
4) d8-Naphthalene	11.88	136	220342	1.00	ppm	-0.01
10) d10-Acenaphthene	13.46	164	146708	1.00	ppm	-0.02
18) d10-Phenanthrene	14.67	188	252967	1.00	ppm	-0.02
26) d12-Chrysene	17.92	240	278575m	1.00	ppm	-0.07
33) d12-Perylene	21.59	264	218540	1.00	ppm	-0.19
System Monitoring Compounds						
5) SURR4,NITROBENZENE-D5	11.19	82	122726	1.58	ppm	-0.01
Spiked Amount 2.000	Range 22 - 124		Recovery = 79.00%			
11) SURR5,2-FLUOROBIPHENYL	12.83	172	303150	1.62	ppm	-0.02
Spiked Amount 2.000	Range 27 - 114		Recovery = 81.00%			
28) SURR6,TERPHENYL-D14	16.26	244	385559m	1.68	ppm	-0.05
Spiked Amount 2.000	Range 23 - 139		Recovery = 84.00%			
Target Compounds						Qvalue
2) 1,4-Dioxane	5.99	88	76112	1.93	ppm	97
3) Pyridine	6.76	79	74948	1.27	ppm	87
6) Nitrobenzene	11.21	77	255106	3.60	ppm	95
7) Naphthalene	11.90	128	687362	2.99	ppm	96
8) 2-Methylnaphthalene	12.52	142	512276	3.41	ppm	90
9) 1-Methylnaphthalene	12.62	142	496330	3.41	ppm	96
12) Acenaphthylene	13.34	152	864568	3.30	ppm	98
13) Dimethyl phthalate	13.19	163	680348	3.10	ppm	97
14) Acenaphthene	13.49	153	549930	3.23	ppm	93
15) Dibenzofuran	13.63	168	831220	3.48	ppm	97
16) Fluorene	13.93	166	659203	3.49	ppm	98
17) Diethylphthalate	13.78	149	733059	3.42	ppm	98
19) Hexachlorobenzene	14.42	284	226168	3.37	ppm	100
20) Phenanthrene	14.70	178	921143	3.29	ppm	96
21) Anthracene	14.73	178	937247	3.43	ppm	99
22) Carbazole	14.86	167	536543	2.72	ppm	99
23) Octachlorostyrene	15.67	378	49644	2.89	ppm	79
24) Di-n-butylphthalate	15.09	149	1301031m	3.69	ppm	
25) Fluoranthene	15.88	202	1091069	3.41	ppm	98
27) Pyrene	16.16	202	1092124	3.13	ppm	99
29) Butyl benzyl phthalate	16.88	149	537768	3.17	ppm	93
30) bis(2-Ethylhexyl)phthalate	17.78	149	777711	3.55	ppm	95
31) Benzo(a)anthracene	17.88	228	1083514m	3.57	ppm	
32) Chrysene	17.97	228	1015495m	3.27	ppm	
34) Di-n-octyl phthalate	19.06	149	1163468	3.19	ppm	96
35) Benzo(b)Fluoranthene	20.39	252	1100190	3.55	ppm	93

(#) = qualifier out of range (m) = manual integration

11/23

00290

Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\5973B\DATA\112009\DC445.D
Acq On : 20 Nov 2009 5:14 pm
Sample : RQ0911513-02|1.0
Misc : 11/11/09 1.0 8270LL LCS
MS Integration Params: RTEINT.P
Quant Time: Nov 23 10:39 2009

Vial: 11
Operator: M.PEDRO
Inst : 5973-B
Multiplr: 1.00

Quant Results File: LVI1016.RES

Quant Method : J:\ACQUDATA\5...\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Nov 12 12:29:20 2009
Response via : Initial Calibration
DataAcq Meth : LVI1016

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
36) Benzo(k)fluoranthene	20.45	252	1124548m	3.75	ppm	
37) Benzo(a)pyrene	21.41	252	866264	3.19	ppm	93
38) Indeno(1,2,3-cd)Pyrene	24.78	276	1268619	3.86	ppm	99
39) Dibenz(a,h)anthracene	24.80	278	1095417	3.91	ppm	97
40) Benzo(g,h,i)perylene	25.61	276	1051580	3.84	ppm	91

(#) = qualifier out of range (m) = manual integration

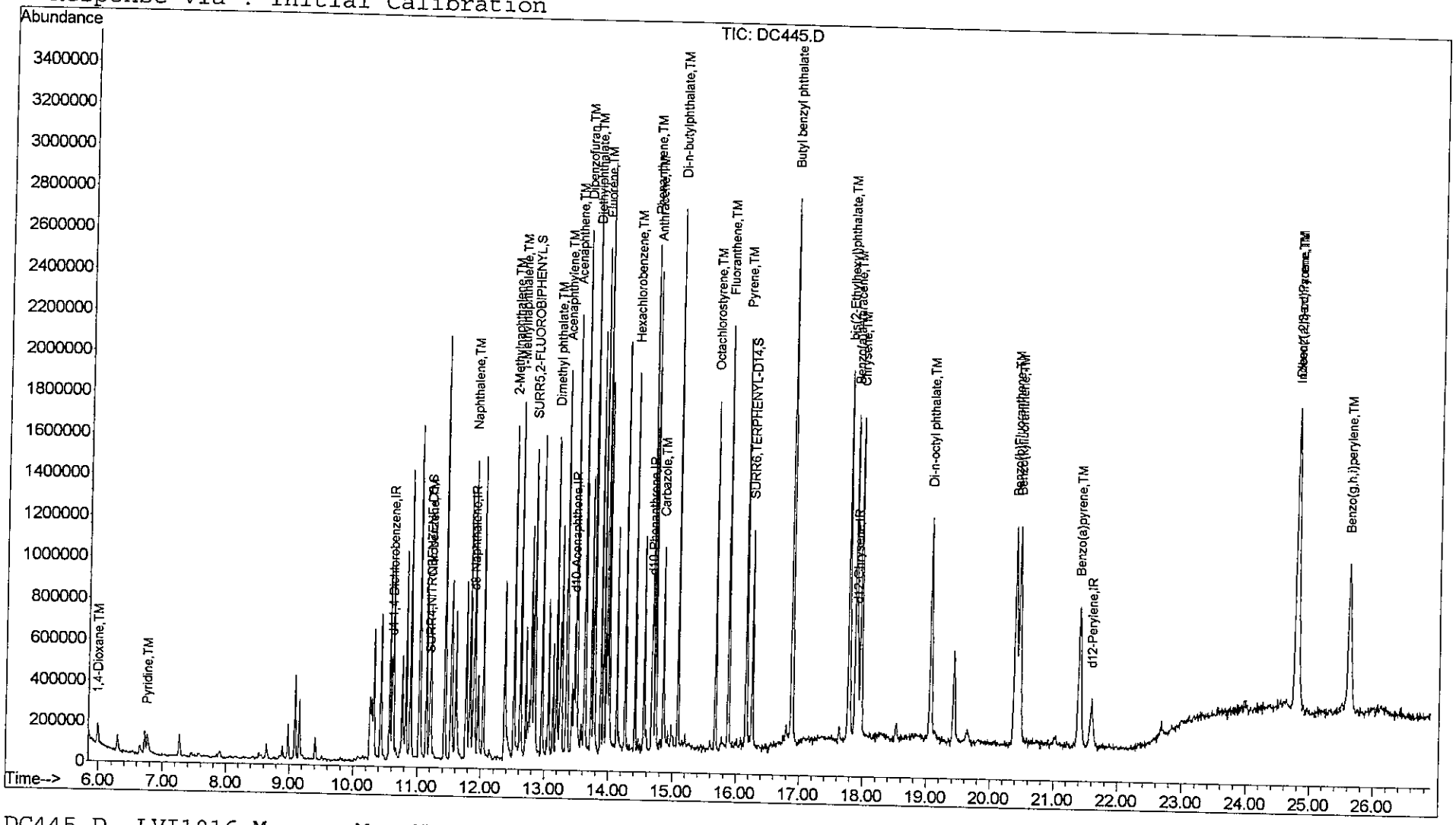
Quantitation Report

Data File : J:\ACQUDATA\5973B\DATA\112009\DC445.D
Acq On : 20 Nov 2009 5:14 pm
Sample : RQ0911513-02|1.0
Misc : 11/11/09 1.0 8270LL LCS
MS Integration Params: RTEINT.P
Quant Time: Nov 23 10:39 2009

Vial: 11
Operator: M.PEDRO
Inst : 5973-B
Multiplr: 1.00

Quant Results File: LVI1016.RES

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Nov 12 12:29:20 2009
Response via : Initial Calibration



25289

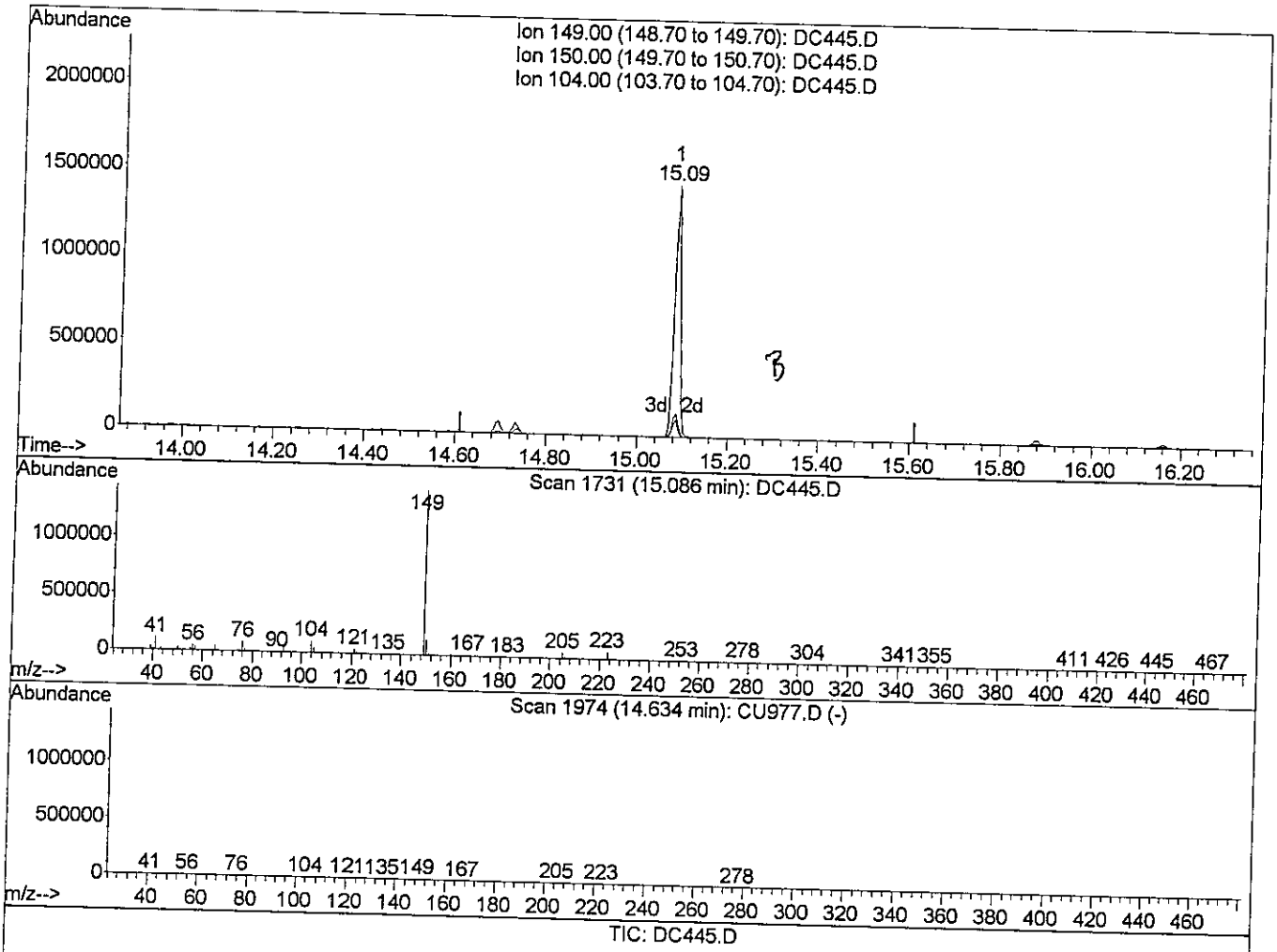
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\112009\DC445.D
Acq On : 20 Nov 2009 5:14 pm
Sample : RQ0911513-02|1.0
Misc : 11/11/09 1.0 8270LL LCS
MS Integration Params: RTEINT.P
Quant Time: Nov 20 17:41 2009

Vial: 11
Operator: M.PEDRO
Inst : 5973-B
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Nov 12 12:29:20 2009
Response via : Multiple Level Calibration



TIC: DC445.D

(24) Di-n-butylphthalate (TM)

15.09min 3.69ppm

response 1299625

Ion	Exp%	Act%
149.00	100	100
150.00	9.30	9.27
104.00	5.00	7.02#
0.00	0.00	0.00

Bad int.

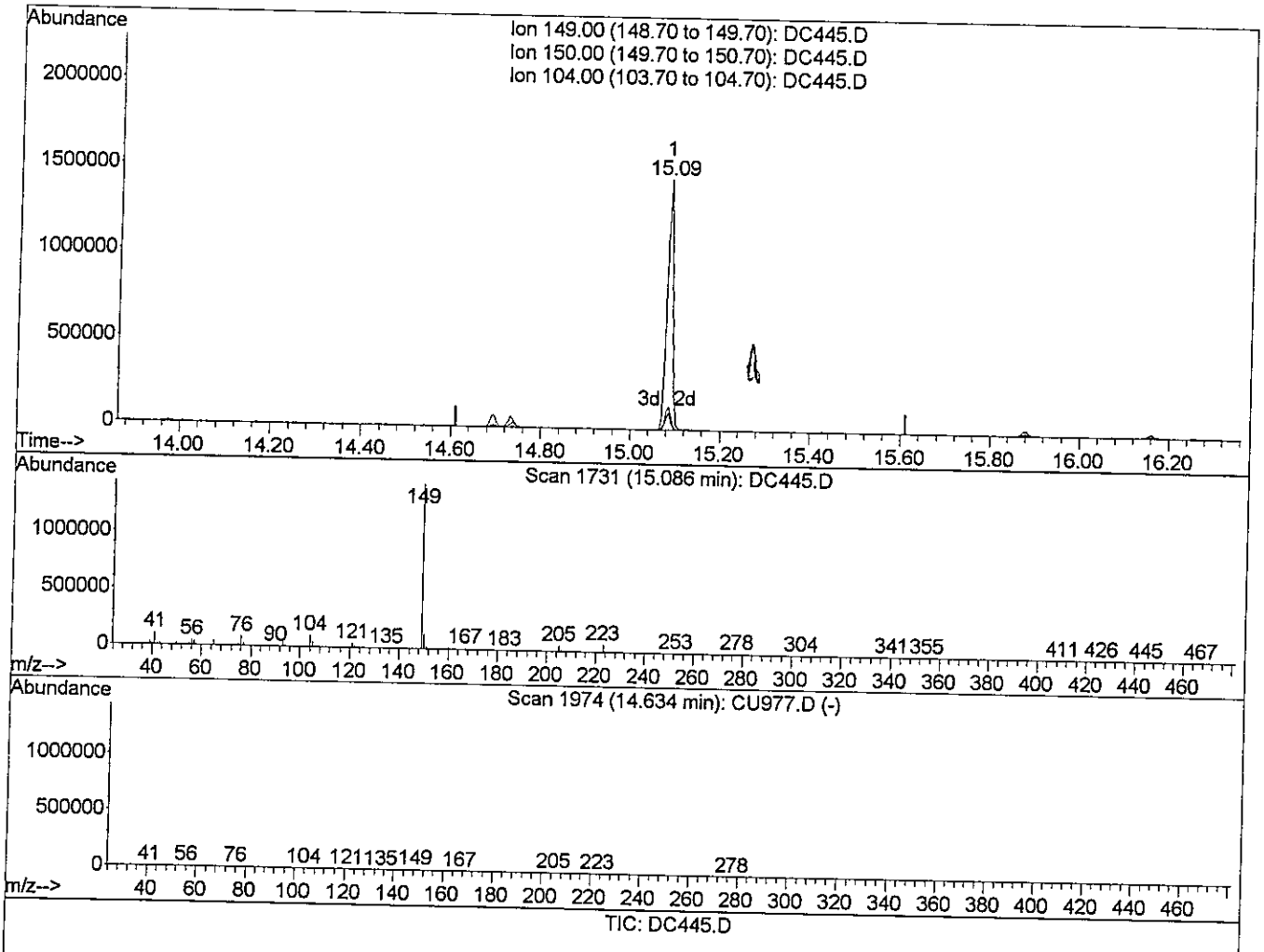
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\112009\DC445.D
Acq On : 20 Nov 2009 5:14 pm
Sample : RQ0911513-02|1.0
Misc : 11/11/09 1.0 8270LL LCS
MS Integration Params: RTEINT.P
Quant Time: Nov 23 10:38 2009

Vial: 11
Operator: M.PEDRO
Inst : 5973-B
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Nov 12 12:29:20 2009
Response via : Multiple Level Calibration



TIC: DC445.D

(24) Di-n-butylphthalate (TM)

15.09min 3.69ppm m

response 1301031

Ion	Exp%	Act%
149.00	100	100
150.00	9.30	9.29
104.00	5.00	7.02#
0.00	0.00	0.00

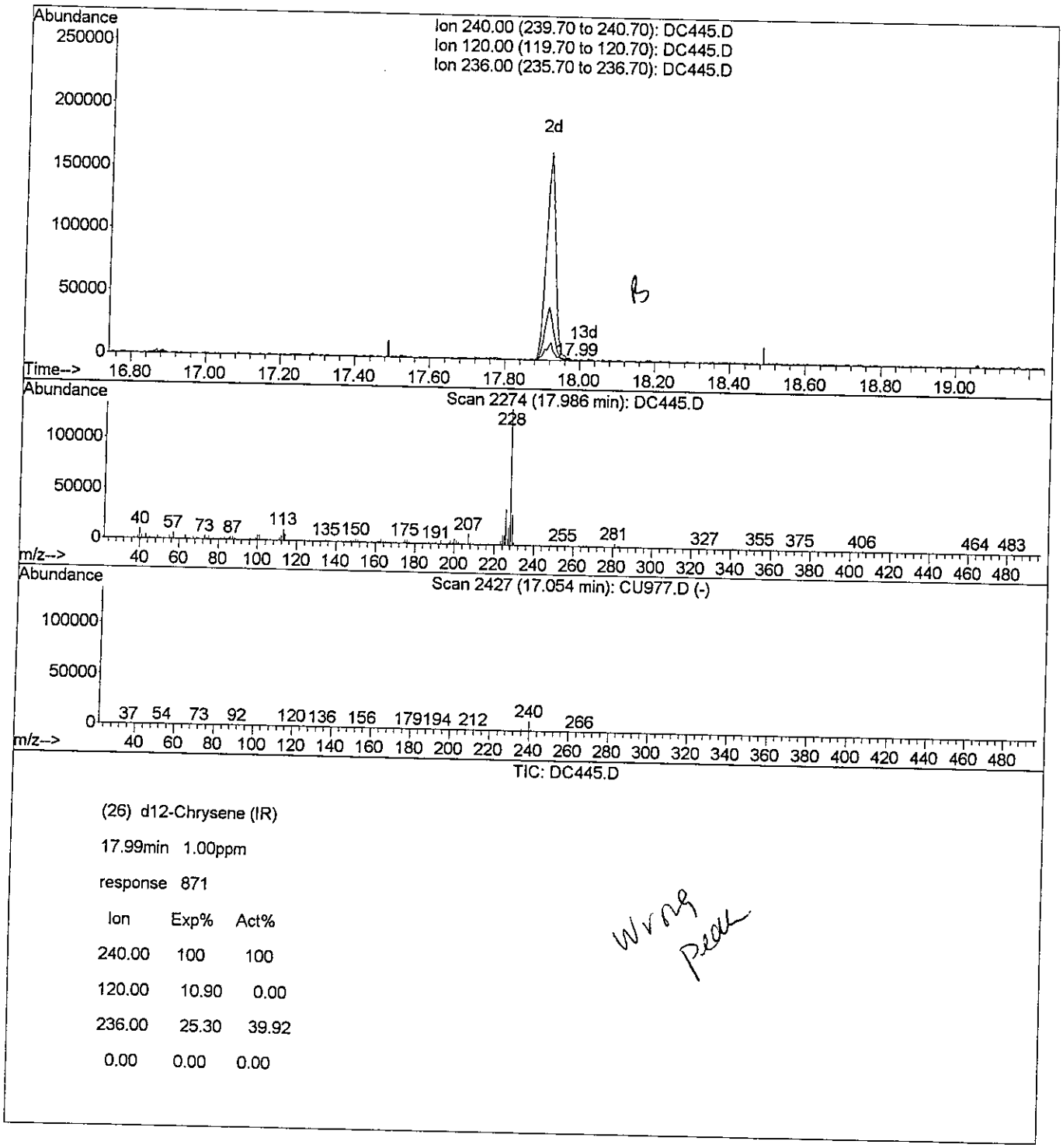
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\112009\DC445.D
Acq On : 20 Nov 2009 5:14 pm
Sample : RQ0911513-02|1.0
Misc : 11/11/09 1.0 8270LL LCS
MS Integration Params: RTEINT.P
Quant Time: Nov 23 10:38 2009

Vial: 11
Operator: M.PEDRO
Inst : 5973-B
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Nov 12 12:29:20 2009
Response via : Multiple Level Calibration



(26) d12-Chrysene (IR)

17.99min 1.00ppm

response 871

Ion	Exp%	Act%
240.00	100	100
120.00	10.90	0.00
236.00	25.30	39.92
0.00	0.00	0.00

Wrong Peak

DC445.D LVI1016.M Mon Nov 23 10:38:14 2009

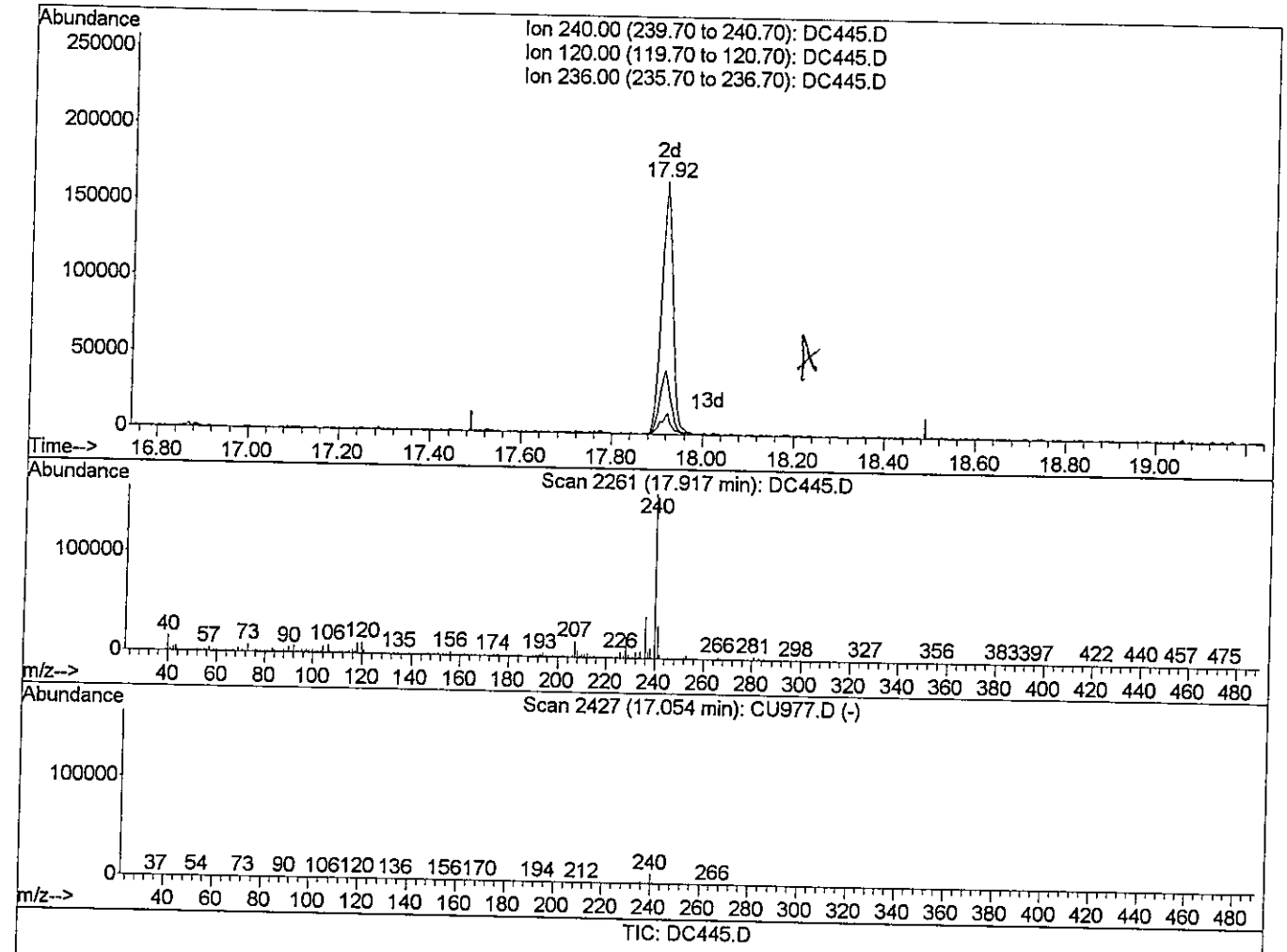
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\112009\DC445.D
Acq On : 20 Nov 2009 5:14 pm
Sample : RQ0911513-02|1.0
Misc : 11/11/09 1.0 8270LL LCS
MS Integration Params: RTEINT.P
Quant Time: Nov 23 10:38 2009

Vial: 11
Operator: M.PEDRO
Inst : 5973-B
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Nov 12 12:29:20 2009
Response via : Multiple Level Calibration



TIC: DC445.D

(26) d12-Chrysene (IR)

17.92min 1.00ppm m

response 278575

Ion	Exp%	Act%
240.00	100	100
120.00	10.90	6.75
236.00	25.30	25.34
0.00	0.00	0.00

mvp 11/23

mvp 11/11

DC445.D LVI1016.M Mon Nov 23 10:38:18 2009

00296

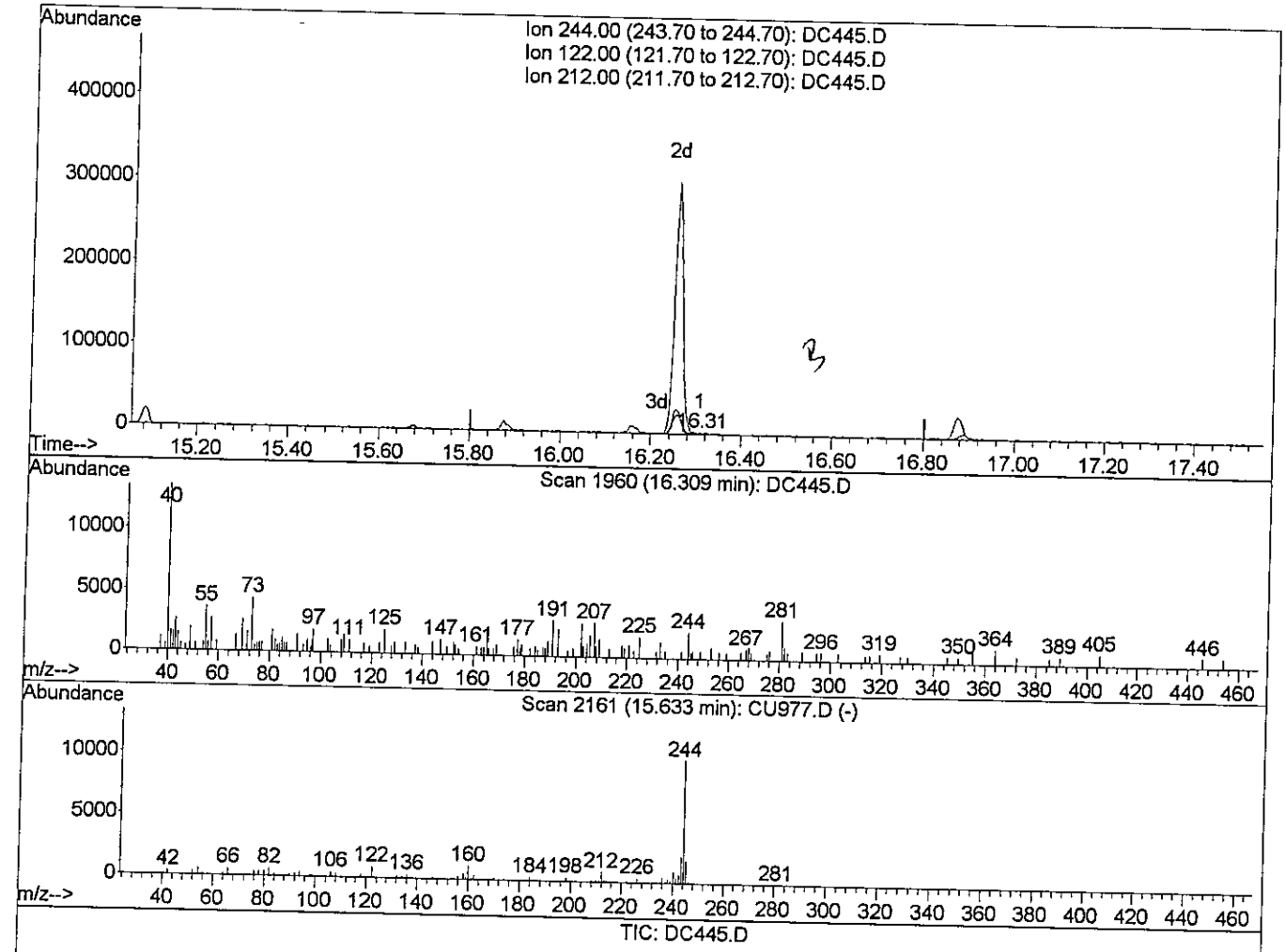
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\112009\DC445.D
Acq On : 20 Nov 2009 5:14 pm
Sample : RQ0911513-02|1.0
Misc : 11/11/09 1.0 8270LL LCS
MS Integration Params: RTEINT.P
Quant Time: Nov 23 10:38 2009

Vial: 11
Operator: M.PEDRO
Inst : 5973-B
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Nov 12 12:29:20 2009
Response via : Multiple Level Calibration



(28) SURR6,TERPHENYL-D14 (S)

16.31min 0.00ppm

response 477

Ion	Exp%	Act%
244.00	100	100
122.00	8.10	0.00
212.00	7.60	0.00
0.00	0.00	0.00

Wrong peak

DC445.D LVI1016.M Mon Nov 23 10:38:25 2009

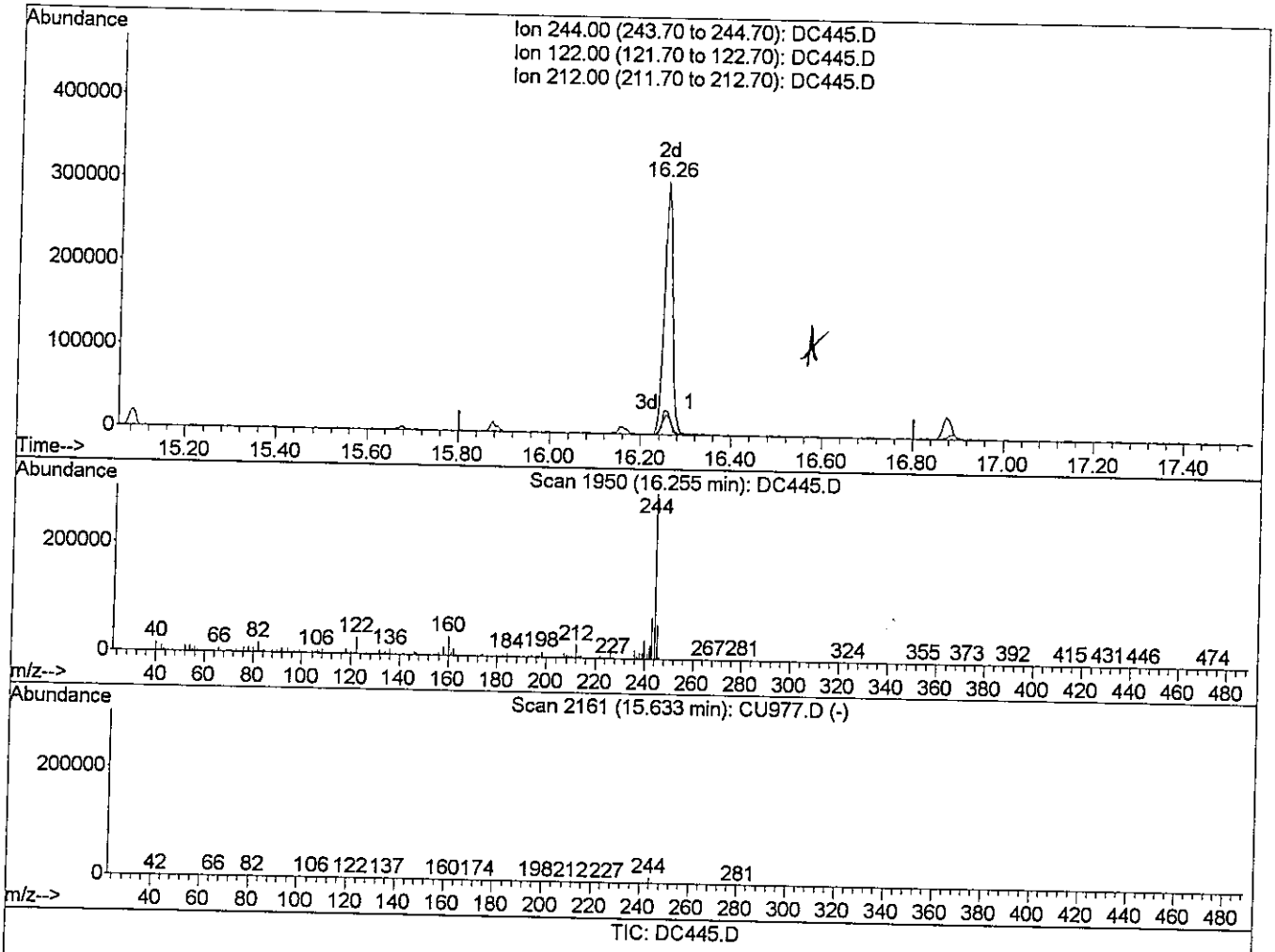
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\112009\DC445.D
Acq On : 20 Nov 2009 5:14 pm
Sample : RQ0911513-02|1.0
Misc : 11/11/09 1.0 8270LL LCS
MS Integration Params: RTEINT.P
Quant Time: Nov 23 10:38 2009

Vial: 11
Operator: M.PEDRO
Inst : 5973-B
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Nov 12 12:29:20 2009
Response via : Multiple Level Calibration



TIC: DC445.D

(28) SURR6,TERPHENYL-D14 (S)

16.26min 1.68ppm m

response 385559

Ion	Exp%	Act%
244.00	100	100
122.00	8.10	9.84
212.00	7.60	7.89
0.00	0.00	0.00

11/23

11/24

DC445.D LVI1016.M Mon Nov 23 10:38:29 2009

00298

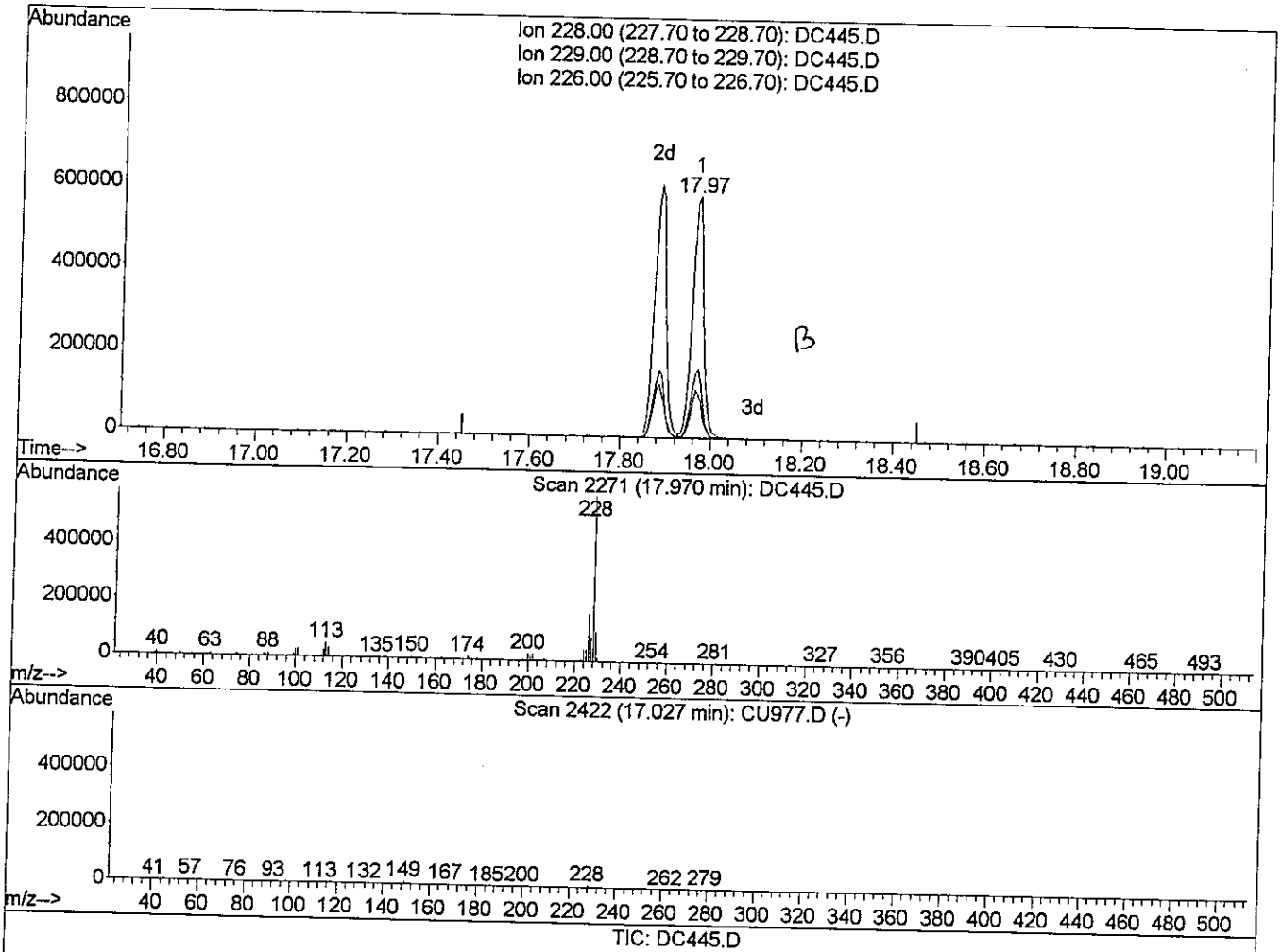
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\112009\DC445.D
Acq On : 20 Nov 2009 5:14 pm
Sample : RQ0911513-02|1.0
Misc : 11/11/09 1.0 8270LL LCS
MS Integration Params: RTEINT.P
Quant Time: Nov 23 10:38 2009

Vial: 11
Operator: M.PEDRO
Inst : 5973-B
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Nov 12 12:29:20 2009
Response via : Multiple Level Calibration



TIC: DC445.D

(31) Benzo(a)anthracene (TM)

17.97min 3.32ppm

response 1006678

Ion	Exp%	Act%
228.00	100	100
229.00	20.60	17.94
226.00	27.40	28.39
0.00	0.00	0.00

Wrong peak

DC445.D LVI1016.M Mon Nov 23 10:38:41 2009

00299

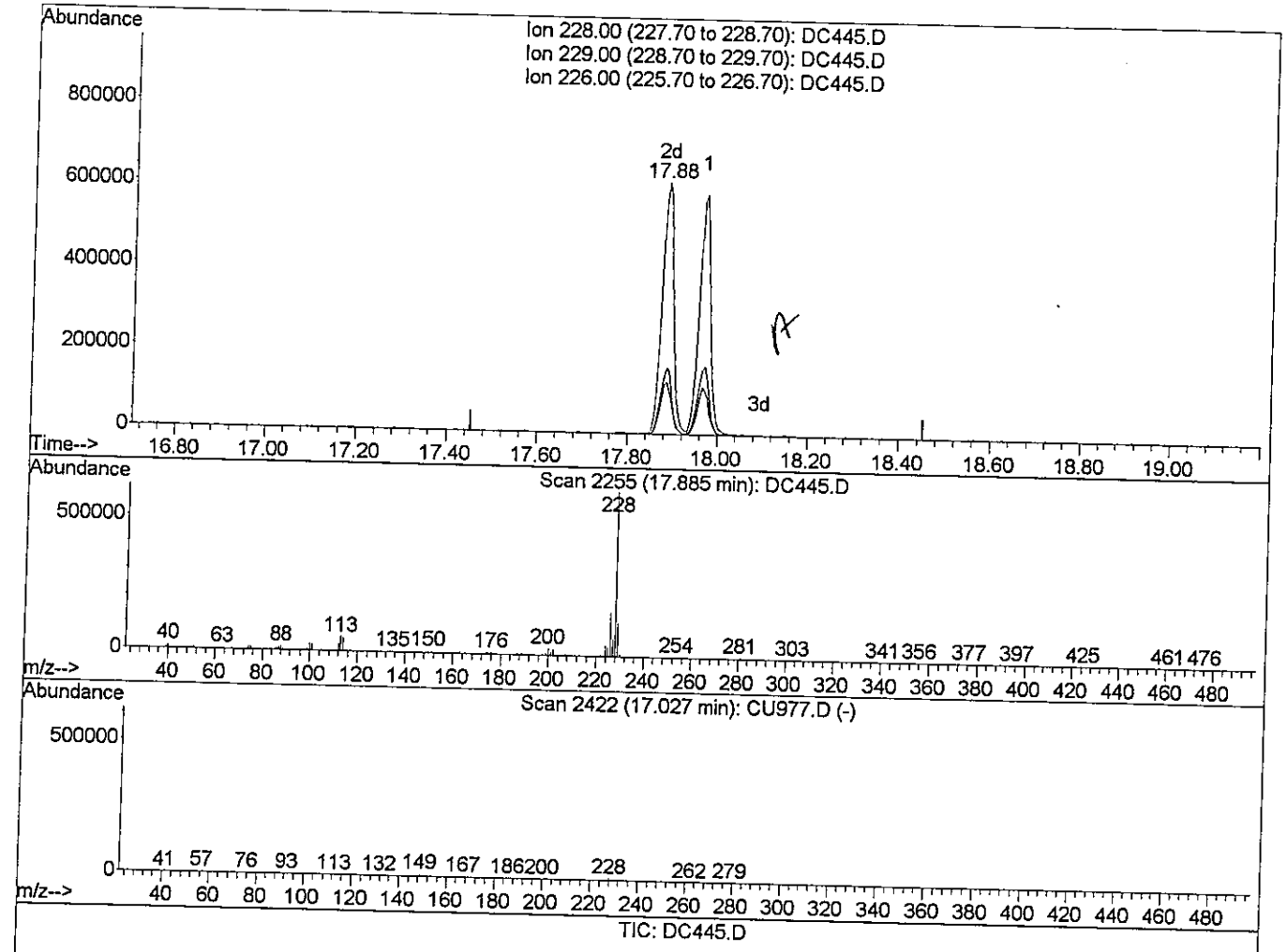
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\112009\DC445.D
Acq On : 20 Nov 2009 5:14 pm
Sample : RQ0911513-02|1.0
Misc : 11/11/09 1.0 8270LL LCS
MS Integration Params: RTEINT.P
Quant Time: Nov 23 10:38 2009

Vial: 11
Operator: M.PEDRO
Inst : 5973-B
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Nov 12 12:29:20 2009
Response via : Multiple Level Calibration



(31) Benzo(a)anthracene (TM)

17.88min 3.57ppm m

response 1083514

Ion	Exp%	Act%
228.00	100	100
229.00	20.60	20.68
226.00	27.40	26.53
0.00	0.00	0.00

mf 11/23

mw 11/24

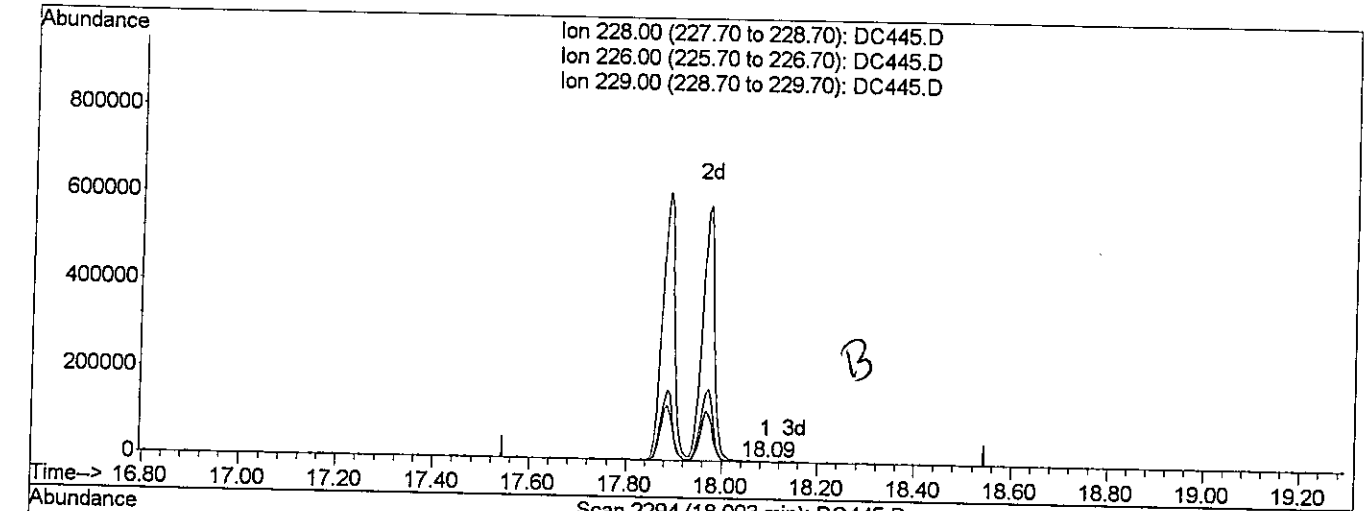
Quantitation Report (Qedit)

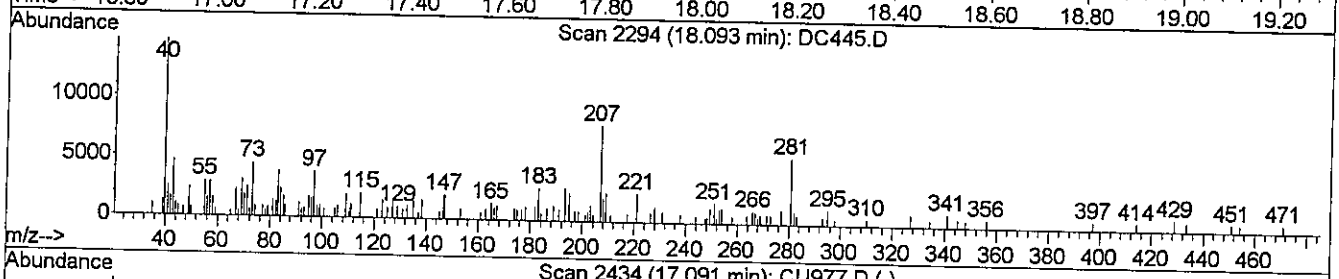
Data File : J:\ACQUDATA\5973B\DATA\112009\DC445.D
Acq On : 20 Nov 2009 5:14 pm
Sample : RQ0911513-02|1.0
Misc : 11/11/09 1.0 8270LL LCS
MS Integration Params: RTEINT.P
Quant Time: Nov 23 10:38 2009

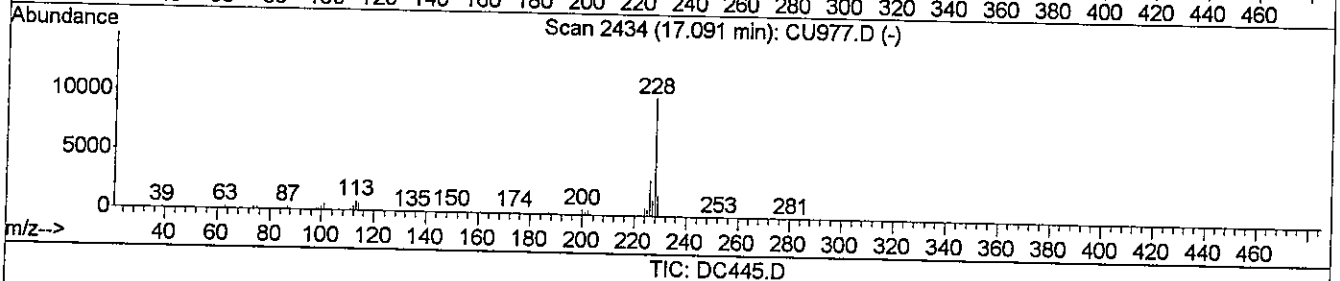
Vial: 11
Operator: M.PEDRO
Inst : 5973-B
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Nov 12 12:29:20 2009
Response via : Multiple Level Calibration







TIC: DC445.D

(32) Chrysene (TM)

18.09min 0.00ppm

response 1018

Ion	Exp%	Act%
228.00	100	100
226.00	25.80	0.00
229.00	20.80	0.00
0.00	0.00	0.00

Wrong Peak

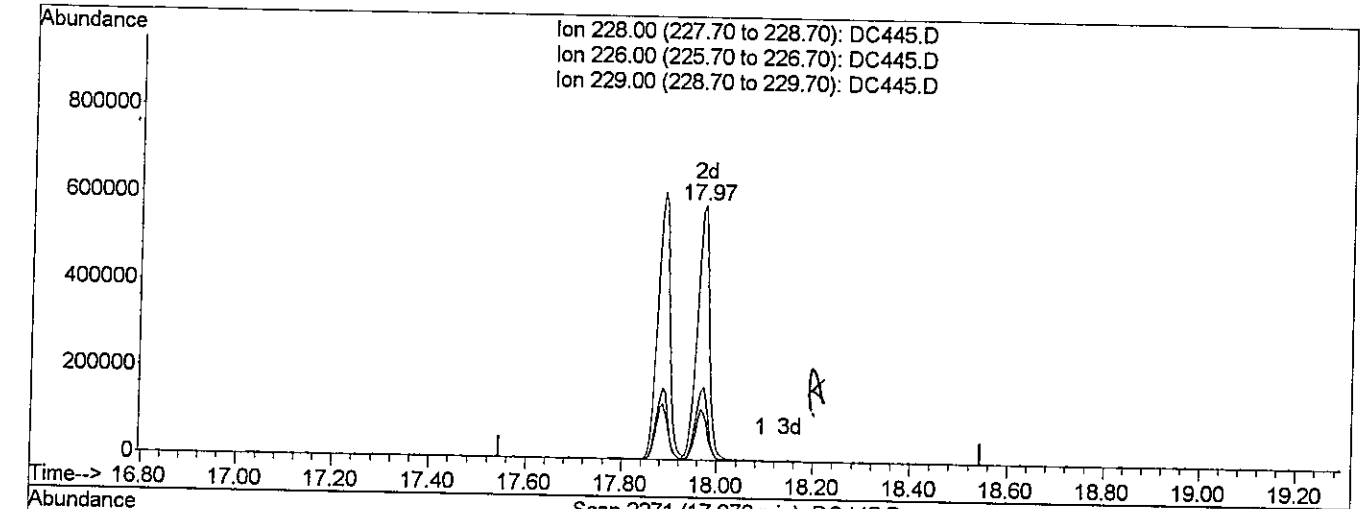
Quantitation Report (Qedit)

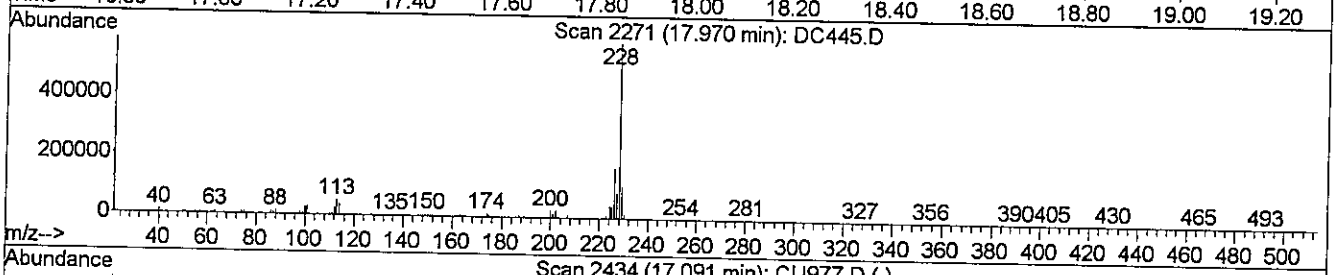
Data File : J:\ACQUDATA\5973B\DATA\112009\DC445.D
Acq On : 20 Nov 2009 5:14 pm
Sample : RQ0911513-02|1.0
Misc : 11/11/09 1.0 8270LL LCS
MS Integration Params: RTEINT.P
Quant Time: Nov 23 10:38 2009

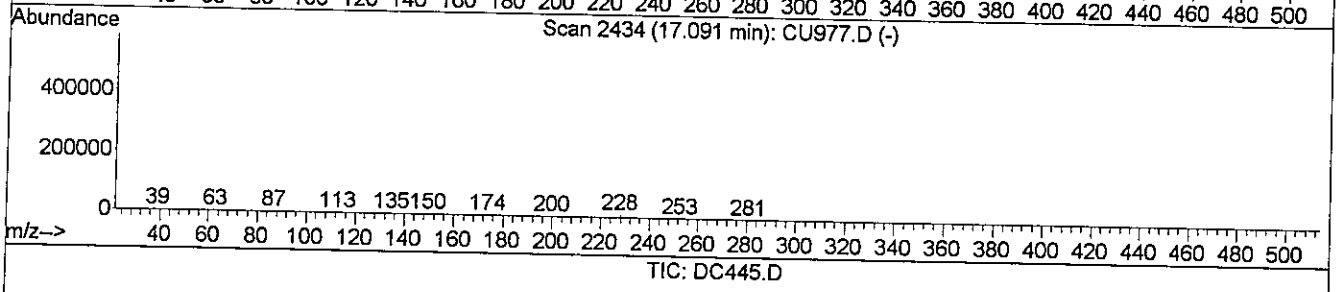
Vial: 11
Operator: M.PEDRO
Inst : 5973-B
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Nov 12 12:29:20 2009
Response via : Multiple Level Calibration







TIC: DC445.D

(32) Chrysene (TM)

17.97min 3.27ppm m

response 1015495

Ion	Exp%	Act%
228.00	100	100
226.00	25.80	28.39
229.00	20.80	18.11
0.00	0.00	0.00

11/23

11/11

DC445.D LVI1016.M Mon Nov 23 10:38:58 2009

00302

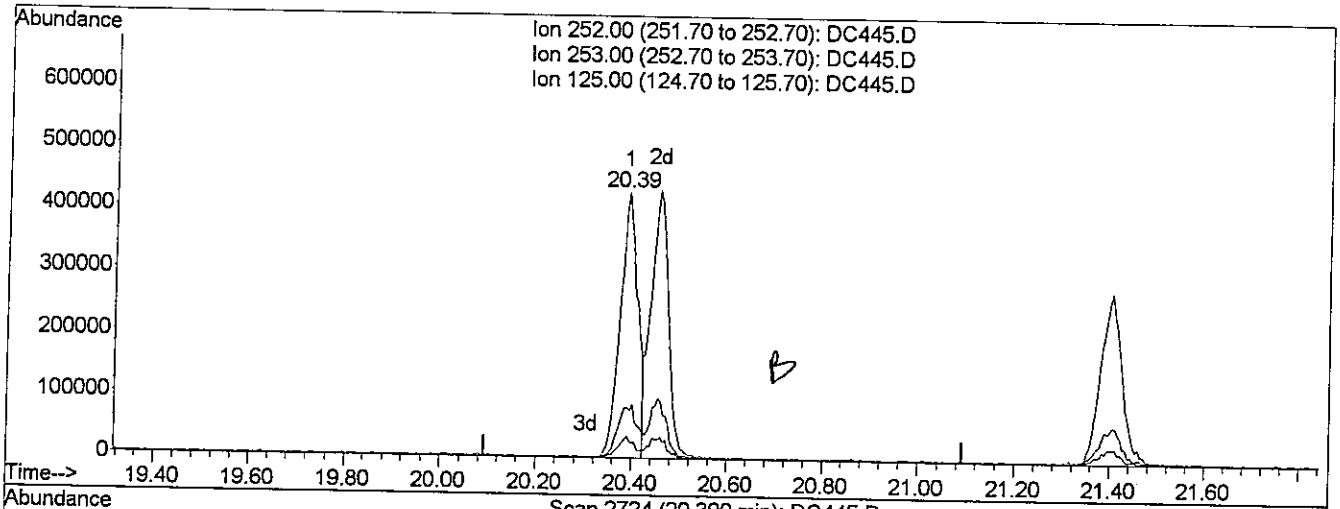
Quantitation Report (Qedit)

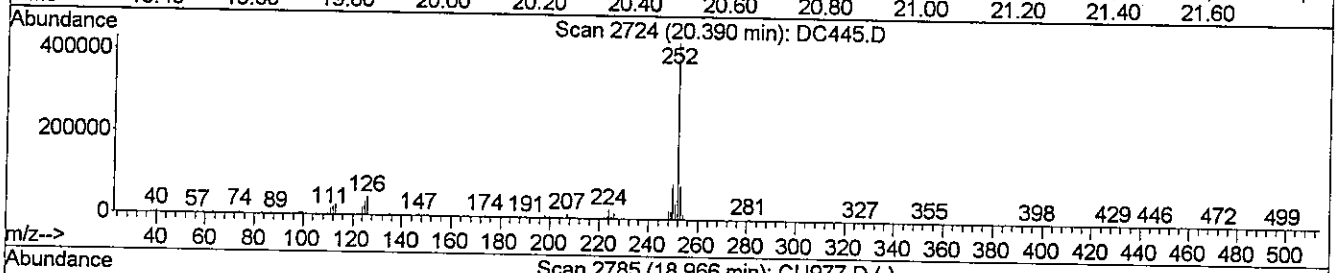
Data File : J:\ACQUDATA\5973B\DATA\112009\DC445.D
Acq On : 20 Nov 2009 5:14 pm
Sample : RQ0911513-02|1.0
Misc : 11/11/09 1.0 8270LL LCS
MS Integration Params: RTEINT.P
Quant Time: Nov 23 10:38 2009

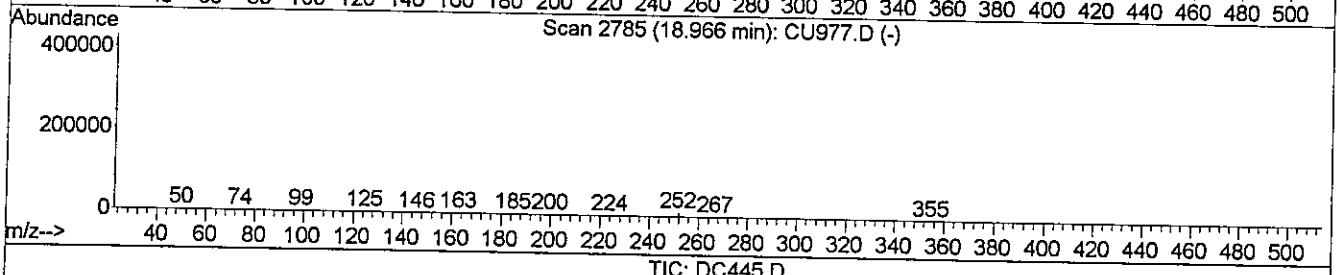
Vial: 11
Operator: M.PEDRO
Inst : 5973-B
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Nov 12 12:29:20 2009
Response via : Multiple Level Calibration







TIC: DC445.D

(36) Benzo(k)fluoranthene (TM)

20.39min 3.67ppm

response 1100190

Ion	Exp%	Act%
252.00	100	100
253.00	25.10	17.28
125.00	9.70	8.07
0.00	0.00	0.00

wrong peak

DC445.D LVI1016.M Mon Nov 23 10:39:06 2009

00303

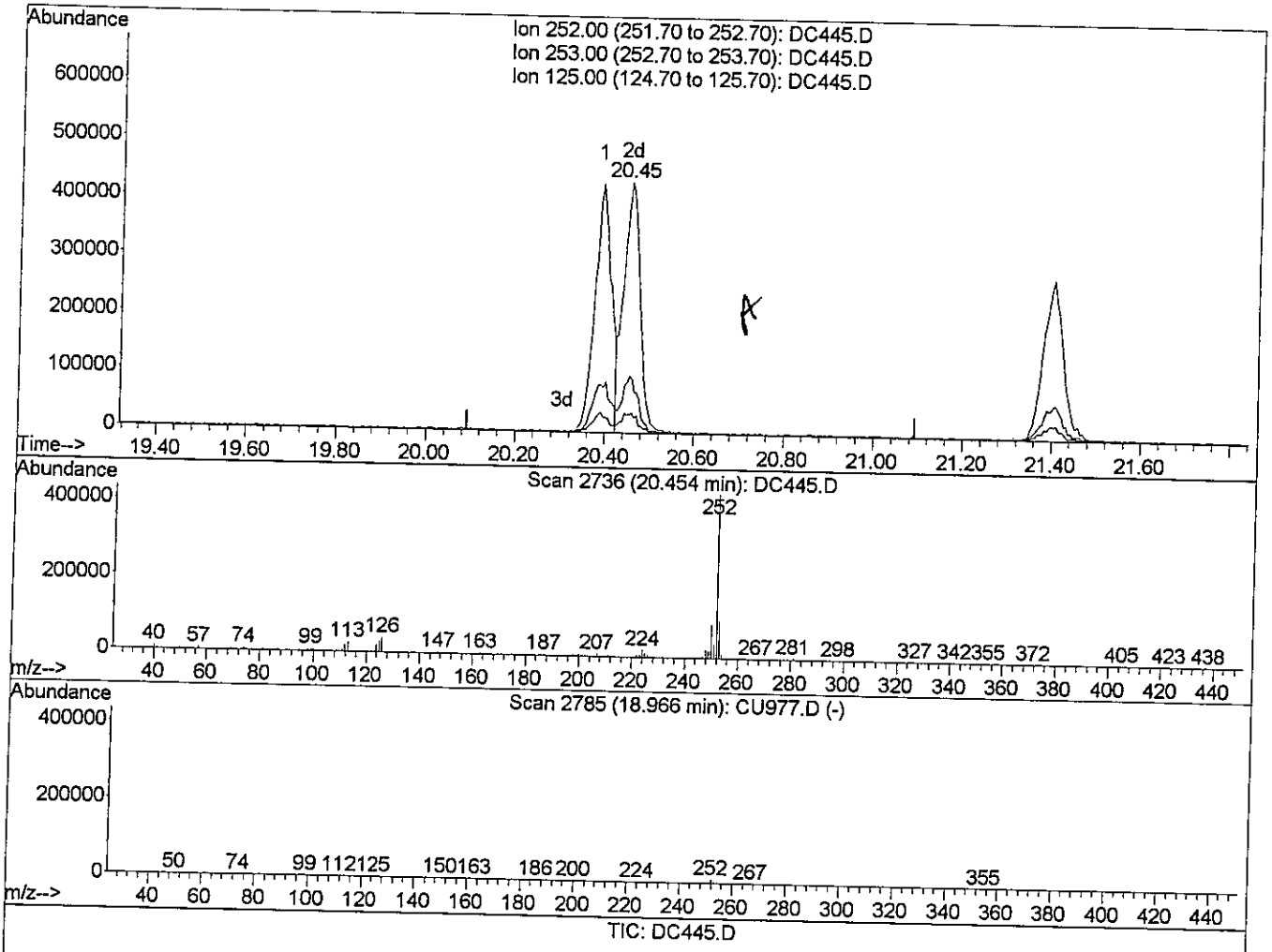
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\112009\DC445.D
Acq On : 20 Nov 2009 5:14 pm
Sample : RQ0911513-02|1.0
Misc : 11/11/09 1.0 8270LL LCS
MS Integration Params: RTEINT.P
Quant Time: Nov 23 10:39 2009

Vial: 11
Operator: M.PEDRO
Inst : 5973-B
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Nov 12 12:29:20 2009
Response via : Multiple Level Calibration



(36) Benzo(k)fluoranthene (TM)

20.45min 3.75ppm m

response 1124548

Ion	Exp%	Act%
252.00	100	100
253.00	25.10	22.58
125.00	9.70	7.16
0.00	0.00	0.00

DC445.D LVI1016.M Mon Nov 23 10:39:12 2009

00304

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Northgate Environmental	**Service Request:**	R0906477
Project:	Tronox LLC Henderson/2027.001	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Lab Control Sample Dup	**Units:**	µg/L
Lab Code:	RQ0911513-03	**Basis:**	NA

Low Level Semivolatile Organic Compounds by GC/MS

Analytical Method: 8270C
Prep Method: EPA 3510C

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
2-Methylnaphthalene	**3.68**		0.20	0.048	1	11/17/09	11/20/09 17:56	100898	180580	
Acenaphthene	**3.51**		0.20	0.053	1	11/17/09	11/20/09 17:56	100898	180580	
Acenaphthylene	**3.62**		0.20	0.076	1	11/17/09	11/20/09 17:56	100898	180580	
Anthracene	**3.98**		0.20	0.041	1	11/17/09	11/20/09 17:56	100898	180580	
Benz(a)anthracene	**4.21**		0.20	0.041	1	11/17/09	11/20/09 17:56	100898	180580	
Benzo(a)pyrene	**3.51**		0.20	0.042	1	11/17/09	11/20/09 17:56	100898	180580	
Benzo(b)fluoranthene	**3.85**		0.20	0.027	1	11/17/09	11/20/09 17:56	100898	180580	
Benzo(g,h,i)perylene	**4.04**		0.20	0.030	1	11/17/09	11/20/09 17:56	100898	180580	
Benzo(k)fluoranthene	**3.74**		0.20	0.029	1	11/17/09	11/20/09 17:56	100898	180580	
Bis(2-ethylhexyl) Phthalate	**4.20**	J	5.0	0.23	1	11/17/09	11/20/09 17:56	100898	180580	
Butyl Benzyl Phthalate	**3.84**	J	5.0	0.11	1	11/17/09	11/20/09 17:56	100898	180580	
Chrysene	**3.94**		0.20	0.029	1	11/17/09	11/20/09 17:56	100898	180580	
Di-n-butyl Phthalate	**3.97**	J	5.0	0.76	1	11/17/09	11/20/09 17:56	100898	180580	
Di-n-octyl Phthalate	**3.53**	J	5.0	0.041	1	11/17/09	11/20/09 17:56	100898	180580	
Dibenz(a,h)anthracene	**4.02**		0.20	0.046	1	11/17/09	11/20/09 17:56	100898	180580	
Diethyl Phthalate	**3.83**	J	5.0	0.20	1	11/17/09	11/20/09 17:56	100898	180580	
Dimethyl Phthalate	**3.41**	J	5.0	0.044	1	11/17/09	11/20/09 17:56	100898	180580	
Fluoranthene	**3.96**		0.20	0.040	1	11/17/09	11/20/09 17:56	100898	180580	
Fluorene	**3.83**		0.20	0.055	1	11/17/09	11/20/09 17:56	100898	180580	
Hexachlorobenzene	**4.18**		0.20	0.035	1	11/17/09	11/20/09 17:56	100898	180580	
Indeno(1,2,3-cd)pyrene	**4.13**		0.20	0.049	1	11/17/09	11/20/09 17:56	100898	180580	
Naphthalene	**3.31**		0.20	0.14	1	11/17/09	11/20/09 17:56	100898	180580	
Nitrobenzene	**3.77**		0.20	0.046	1	11/17/09	11/20/09 17:56	100898	180580	
Phenanthrene	**3.90**		0.20	0.062	1	11/17/09	11/20/09 17:56	100898	180580	
Pyrene	**3.72**		0.20	0.029	1	11/17/09	11/20/09 17:56	100898	180580	
Pyridine	**1.13**	J	2.0	0.89	1	11/17/09	11/20/09 17:56	100898	180580	
1,4-Dioxane	**1.94**	J	2.0	0.13	1	11/17/09	11/20/09 17:56	100898	180580	
Octachlorostyrene	**3.91**		0.20	0.13	1	11/17/09	11/20/09 17:56	100898	180580	

Comments:

Client:	Northgate Environmental	**Service Request:**	R0906477
Project:	Tronox LLC Henderson/2027.001	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Lab Control Sample Dup	**Units:**	Percent
Lab Code:	RQ0911513-03	**Basis:**	NA

Low Level Semivolatile Organic Compounds by GC/MS

Analytical Method: 8270C
Prep Method: EPA 3510C

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
2-Fluorobiphenyl	90	45-135	11/20/09 17:56		
Nitrobenzene-d5	90	45-135	11/20/09 17:56		
Terphenyl-d14	106	45-135	11/20/09 17:56		

Comments:

Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\5973B\DATA\112009\DC446.D
Acq On : 20 Nov 2009 5:56 pm
Sample : RQ0911513-03|1.0
Misc : 11/11/09 1.0 8270LL LCSD
MS Integration Params: RTEINT.P
Quant Time: Nov 23 10:42 2009

Vial: 12
Operator: M.PEDRO
Inst : 5973-B
Multiplr: 1.00

Quant Results File: LVI1016.RES

Quant Method : J:\ACQUDATA\5...\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Nov 12 12:29:20 2009
Response via : Initial Calibration
DataAcq Meth : LVI1016

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) d4-1,4-Dichlorobenzene	10.60	152	55108	1.00	ppm	-0.01
4) d8-Naphthalene	11.88	136	207953	1.00	ppm	-0.02
10) d10-Acenaphthene	13.46	164	137911	1.00	ppm	-0.02
18) d10-Phenanthrene	14.67	188	222624	1.00	ppm	-0.02
26) d12-Chrysene	17.92	240	237818	1.00	ppm	-0.07
33) d12-Perylene	21.58	264	213035	1.00	ppm	-0.20
System Monitoring Compounds						
5) SURR4,NITROBENZENE-D5	11.19	82	133450	1.80	ppm	-0.01
Spiked Amount 2.000	Range 22 - 124		Recovery = 90.00%			
11) SURR5,2-FLUOROBIPHENYL	12.83	172	316915	1.80	ppm	-0.02
Spiked Amount 2.000	Range 27 - 114		Recovery = 90.00%			
28) SURR6,TERPHENYL-D14	16.26	244	415843	2.12	ppm	-0.05
Spiked Amount 2.000	Range 23 - 139		Recovery = 106.00%			
Target Compounds						Qvalue
2) 1,4-Dioxane	6.00	88	82062	1.94	ppm	92
3) Pyridine	6.78	79	71602	1.13	ppm	94
6) Nitrobenzene	11.21	77	252546	3.77	ppm	89
7) Naphthalene	11.90	128	719338	3.31	ppm	95
8) 2-Methylnaphthalene	12.52	142	521495	3.68	ppm	92
9) 1-Methylnaphthalene	12.62	142	526599	3.83	ppm	97
12) Acenaphthylene	13.34	152	891205	3.62	ppm	96
13) Dimethyl phthalate	13.18	163	704001m	3.41	ppm	
14) Acenaphthene	13.49	153	561012	3.51	ppm	95
15) Dibenzofuran	13.63	168	873301	3.89	ppm	94
16) Fluorene	13.92	166	678828	3.83	ppm	98
17) Diethylphthalate	13.78	149	771184	3.83	ppm	97
19) Hexachlorobenzene	14.41	284	246910	4.18	ppm	97
20) Phenanthrene	14.69	178	959598	3.90	ppm	97
21) Anthracene	14.73	178	957108	3.98	ppm	97
22) Carbazole	14.85	167	659866	3.80	ppm	99
23) Octachlorostyrene	15.67	378	59077	3.91	ppm	83
24) Di-n-butylphthalate	15.08	149	1231076m	3.97	ppm	
25) Fluoranthene	15.88	202	1114552	3.96	ppm	97
27) Pyrene	16.16	202	1109407	3.72	ppm	98
29) Butyl benzyl phthalate	16.88	149	557476	3.84	ppm	98
30) bis(2-Ethylhexyl)phthalate	17.77	149	785481	4.20	ppm	91
31) Benzo(a)anthracene	17.88	228	1090281	4.21	ppm	98
32) Chrysene	17.97	228	1043889	3.94	ppm	95
34) Di-n-octyl phthalate	19.06	149	1254283	3.53	ppm	98
35) Benzo(b)Fluoranthene	20.39	252	1165172	3.85	ppm	89

MP 11/23

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\ACQUDATA\5973B\DATA\112009\DC446.D
Acq On : 20 Nov 2009 5:56 pm
Sample : RQ0911513-03|1.0
Misc : 11/11/09 1.0 8270LL LCSD
MS Integration Params: RTEINT.P
Quant Time: Nov 23 10:42 2009

Vial: 12
Operator: M.PEDRO
Inst : 5973-B
Multiplr: 1.00

Quant Results File: LVI1016.RES

Quant Method : J:\ACQUDATA\5...\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Nov 12 12:29:20 2009
Response via : Initial Calibration
DataAcq Meth : LVI1016

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
36) Benzo(k)fluoranthene	20.45	252	1092785m	3.74	ppm	
37) Benzo(a)pyrene	21.41	252	929644	3.51	ppm	97
38) Indeno(1,2,3-cd)Pyrene	24.79	276	1324313	4.13	ppm	99
39) Dibenz(a,h)anthracene	24.79	278	1097819	4.02	ppm	96
40) Benzo(g,h,i)perylene	25.61	276	1079812	4.04	ppm	91

(#) = qualifier out of range (m) = manual integration

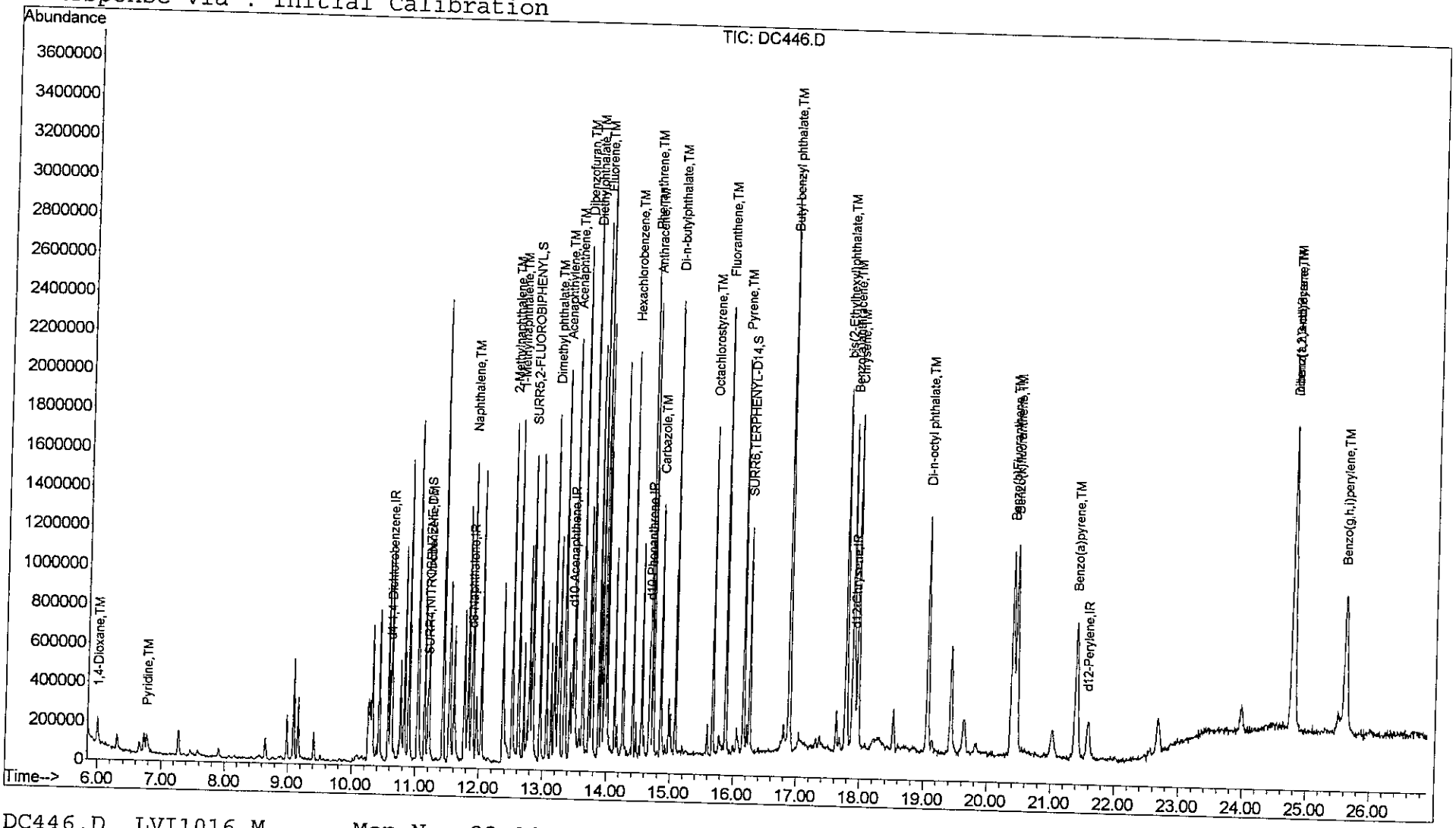
Quantitation Report

Data File : J:\ACQUDATA\5973B\DATA\112009\DC446.D
Acq On : 20 Nov 2009 5:56 pm
Sample : RQ0911513-03|1.0
Misc : 11/11/09 1.0 8270LL LCSD
MS Integration Params: RTEINT.P
Quant Time: Nov 23 10:42 2009

Vial: 12
Operator: M.PEDRO
Inst : 5973-B
Multiplr: 1.00

Quant Results File: LVI1016.RES

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Nov 12 12:29:20 2009
Response via : Initial Calibration



DC446.D LVI1016.M Mon Nov 23 10:42:43 2009

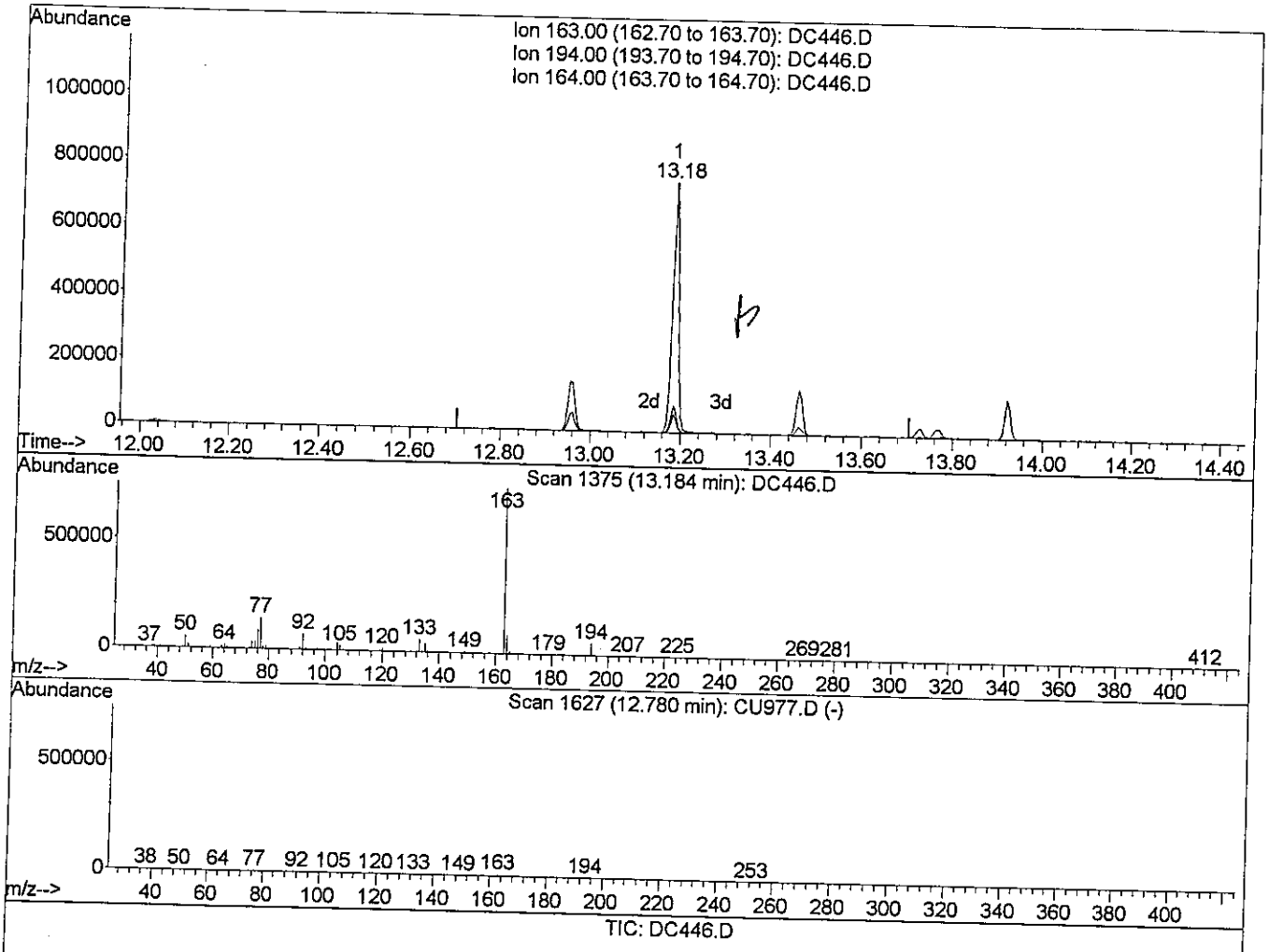
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\112009\DC446.D
Acq On : 20 Nov 2009 5:56 pm
Sample : RQ0911513-03|1.0
Misc : 11/11/09 1.0 8270LL LCSD
MS Integration Params: RTEINT.P
Quant Time: Nov 20 18:24 2009

Vial: 12
Operator: M.PEDRO
Inst : 5973-B
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Nov 12 12:29:20 2009
Response via : Multiple Level Calibration



TIC: DC446.D

(13) Dimethyl phthalate (TM)

13.18min 3.43ppm

response 707386

Ion	Exp%	Act%
163.00	100	100
194.00	5.80	7.58#
164.00	10.80	10.88
0.00	0.00	0.00

Bad int.

DC446.D LVI1016.M Mon Nov 23 10:40:15 2009

00310

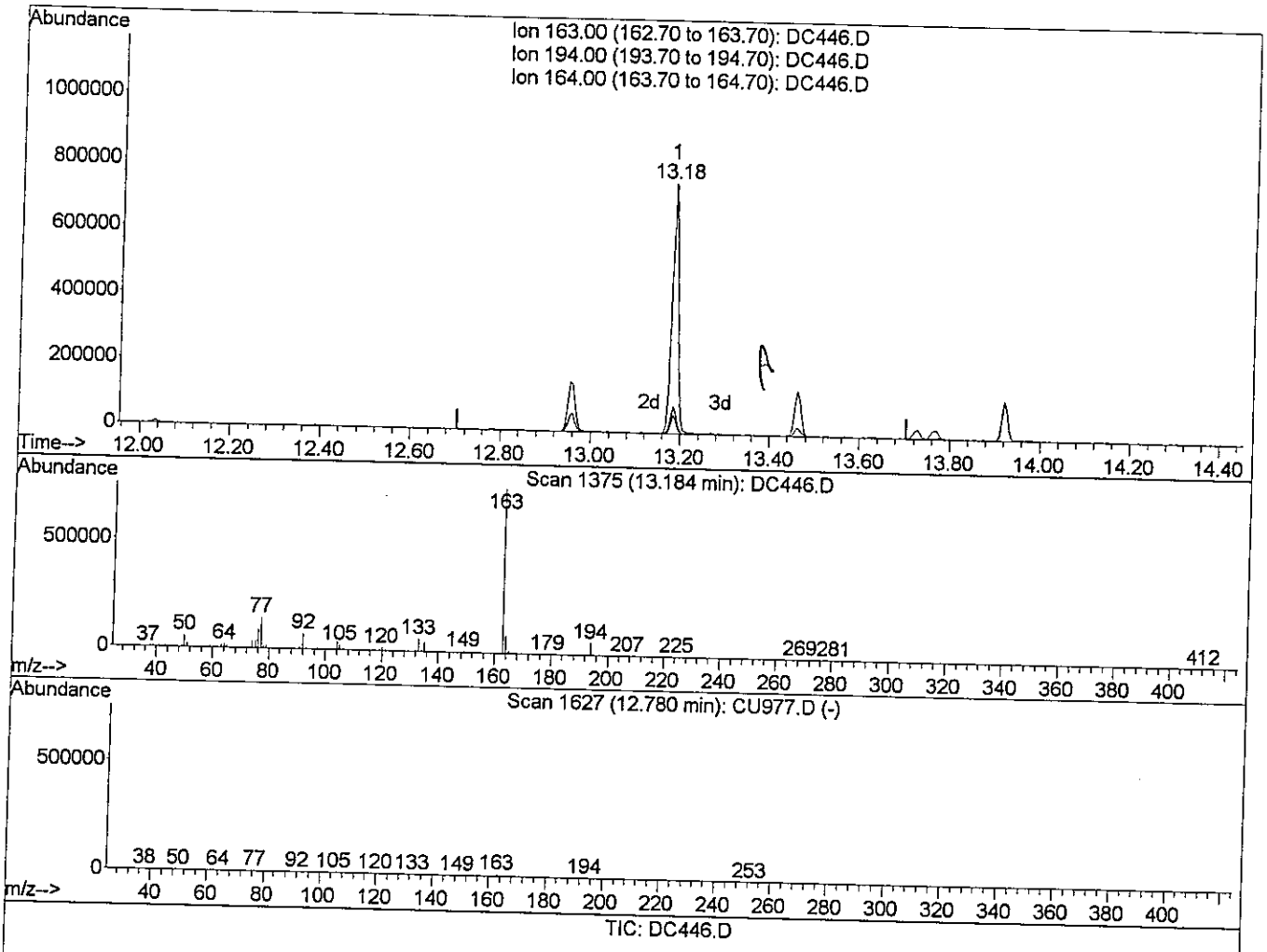
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\112009\DC446.D
Acq On : 20 Nov 2009 5:56 pm
Sample : RQ0911513-03|1.0
Misc : 11/11/09 1.0 8270LL LCSD
MS Integration Params: RTEINT.P
Quant Time: Nov 23 10:40 2009

Vial: 12
Operator: M.PEDRO
Inst : 5973-B
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Nov 12 12:29:20 2009
Response via : Multiple Level Calibration



(13) Dimethyl phthalate (TM)

13.18min 3.41ppm m

response 704001

Ion	Exp%	Act%
163.00	100	100
194.00	5.80	7.62#
164.00	10.80	10.92
0.00	0.00	0.00

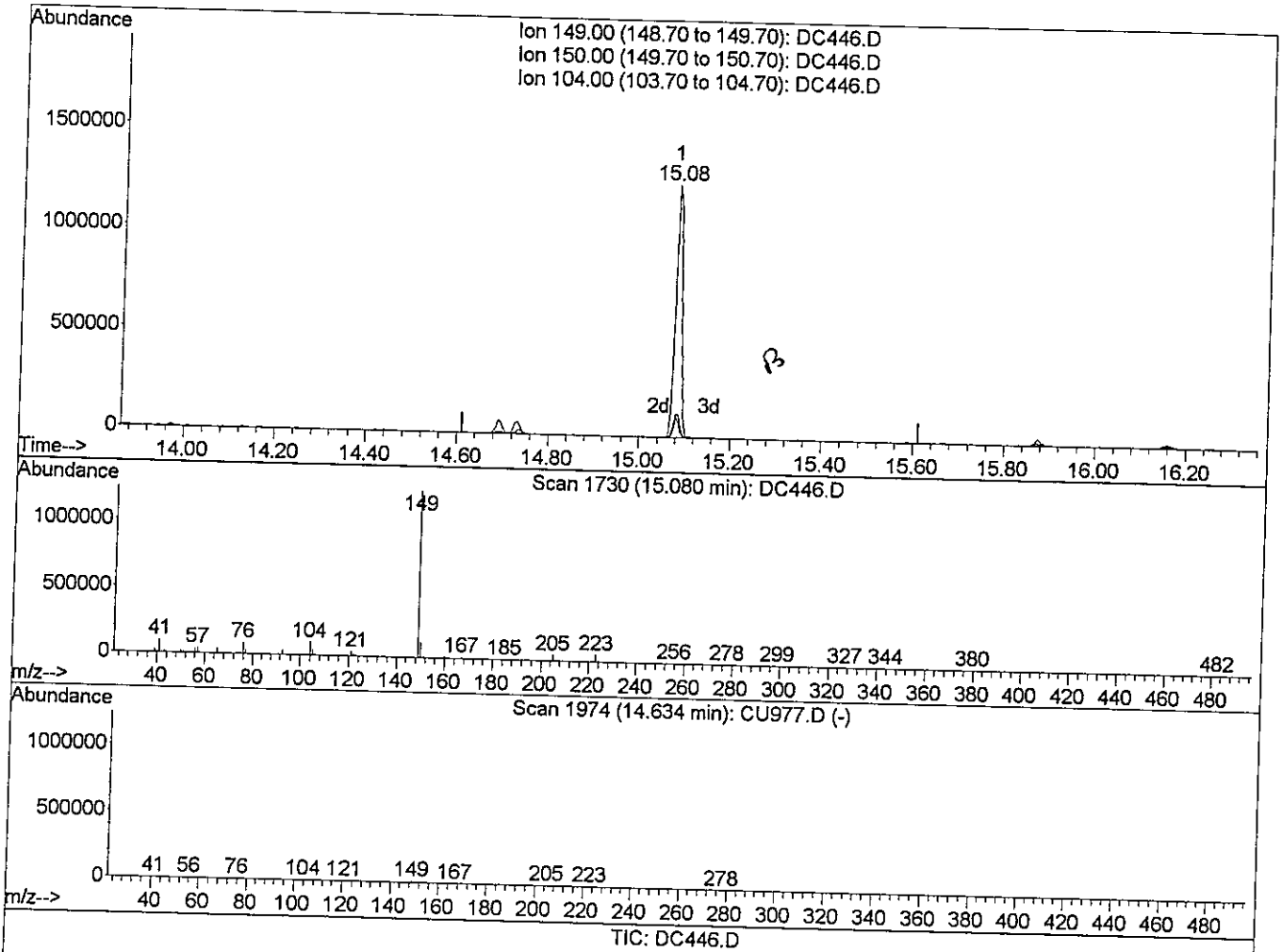
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\112009\DC446.D
Acq On : 20 Nov 2009 5:56 pm
Sample : RQ0911513-03|1.0
Misc : 11/11/09 1.0 8270LL LCSD
MS Integration Params: RTEINT.P
Quant Time: Nov 23 10:40 2009

Vial: 12
Operator: M.PEDRO
Inst : 5973-B
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Nov 12 12:29:20 2009
Response via : Multiple Level Calibration



(24) Di-n-butylphthalate (TM)

15.08min 3.97ppm

response 1231180

Ion	Exp%	Act%
149.00	100	100
150.00	9.30	9.15
104.00	5.00	7.98#
0.00	0.00	0.00

Bad int.

DC446.D LVI1016.M Mon Nov 23 10:41:56 2009

00312

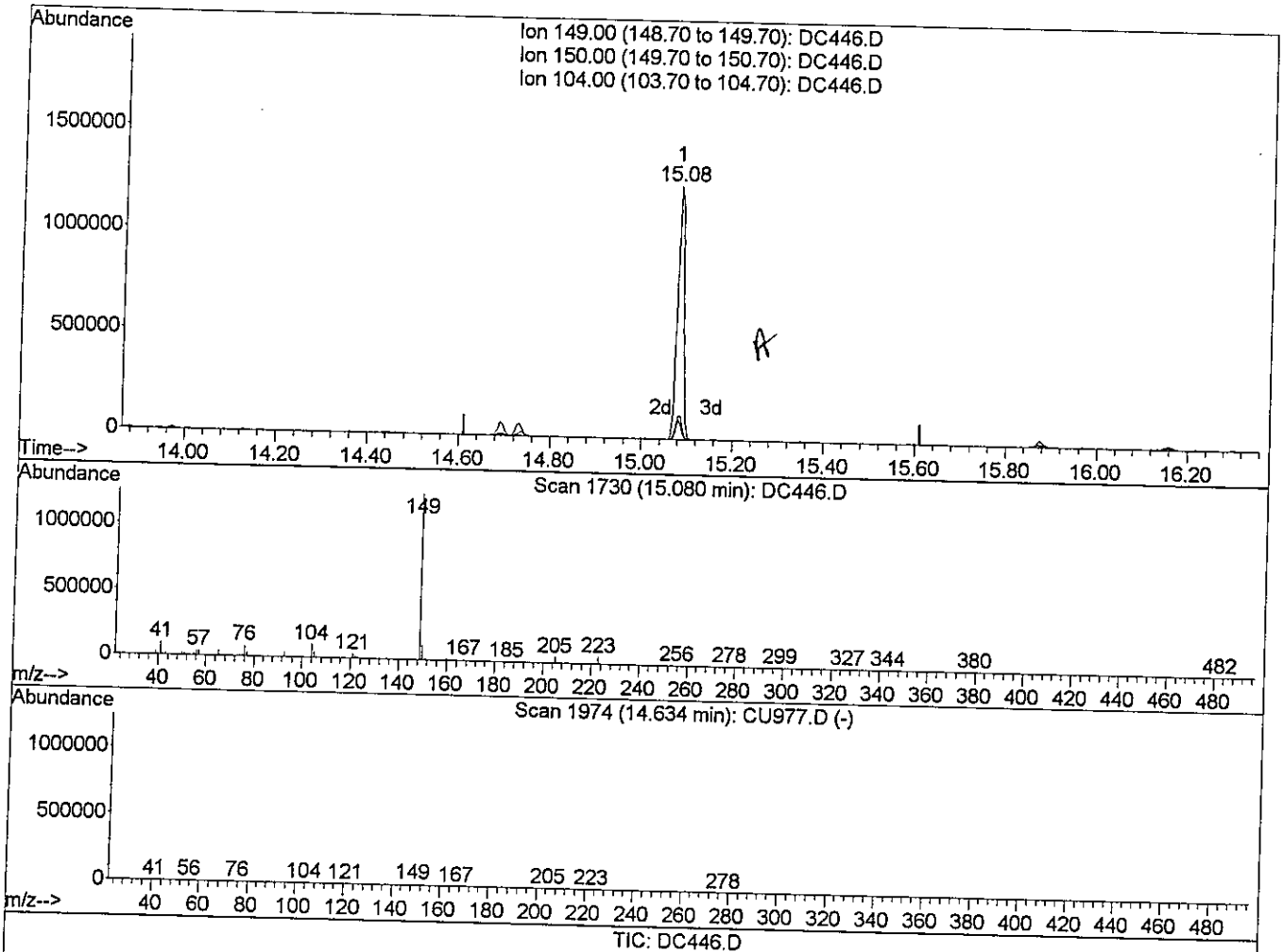
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\112009\DC446.D
Acq On : 20 Nov 2009 5:56 pm
Sample : RQ0911513-03|1.0
Misc : 11/11/09 1.0 8270LL LCSD
MS Integration Params: RTEINT.P
Quant Time: Nov 23 10:41 2009

Vial: 12
Operator: M.PEDRO
Inst : 5973-B
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Nov 12 12:29:20 2009
Response via : Multiple Level Calibration



(24) Di-n-butylphthalate (TM)

15.08min 3.97ppm m

response 1231076

Ion	Exp%	Act%
149.00	100	100
150.00	9.30	9.21
104.00	5.00	7.98#
0.00	0.00	0.00

11/23

DC446.D LVI1016.M Mon Nov 23 10:42:01 2009

00313

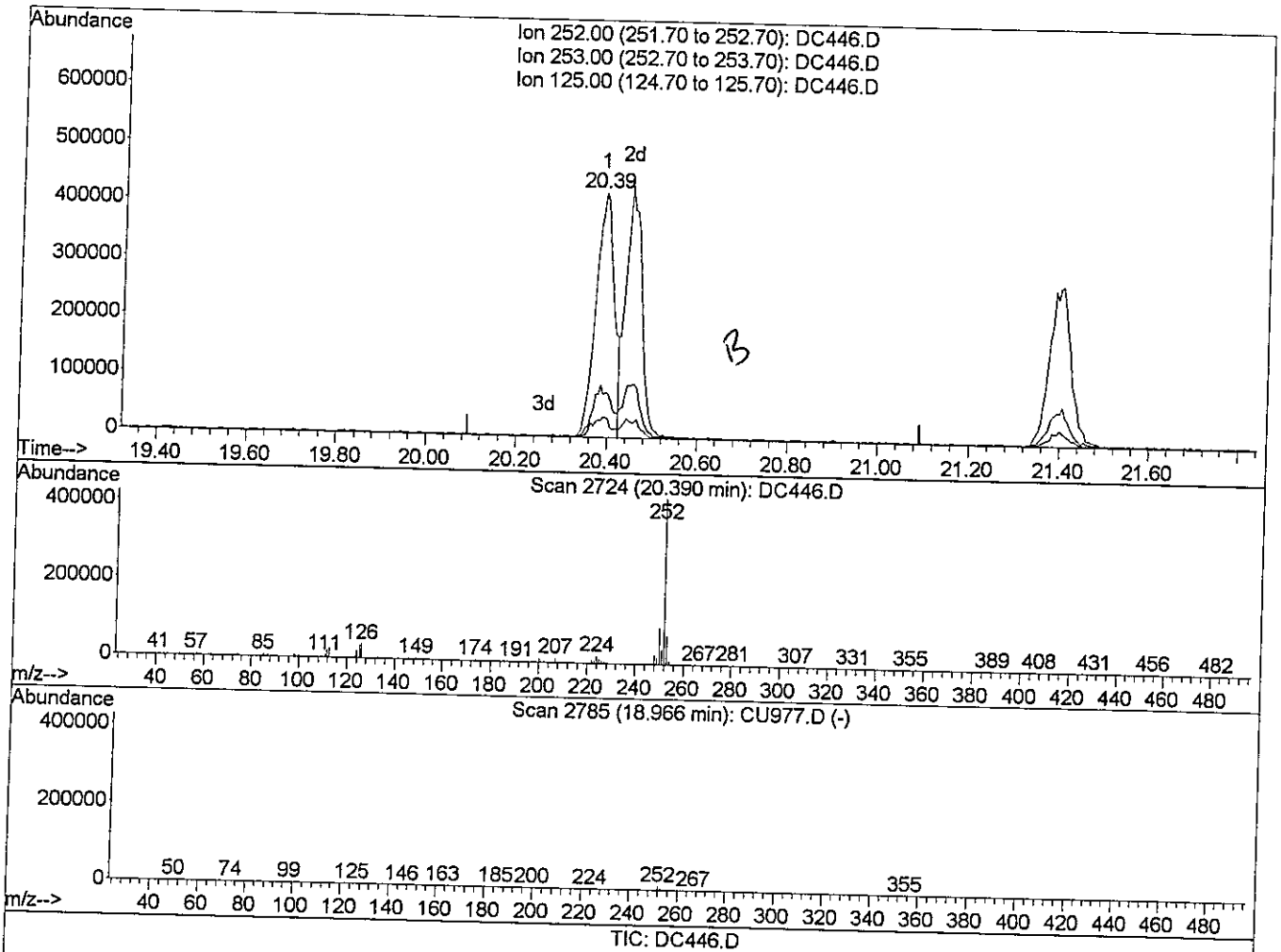
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\112009\DC446.D
Acq On : 20 Nov 2009 5:56 pm
Sample : RQ0911513-03|1.0
Misc : 11/11/09 1.0 8270LL LCSD
MS Integration Params: RTEINT.P
Quant Time: Nov 23 10:41 2009

Vial: 12
Operator: M.PEDRO
Inst : 5973-B
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Nov 12 12:29:20 2009
Response via : Multiple Level Calibration



(36) Benzo(k)fluoranthene (TM)

20.39min 3.99ppm

response 1165172

Ion	Exp%	Act%
252.00	100	100
253.00	25.10	15.18
125.00	9.70	8.07
0.00	0.00	0.00

Wrong Peak

DC446.D LVI1016.M Mon Nov 23 10:42:25 2009

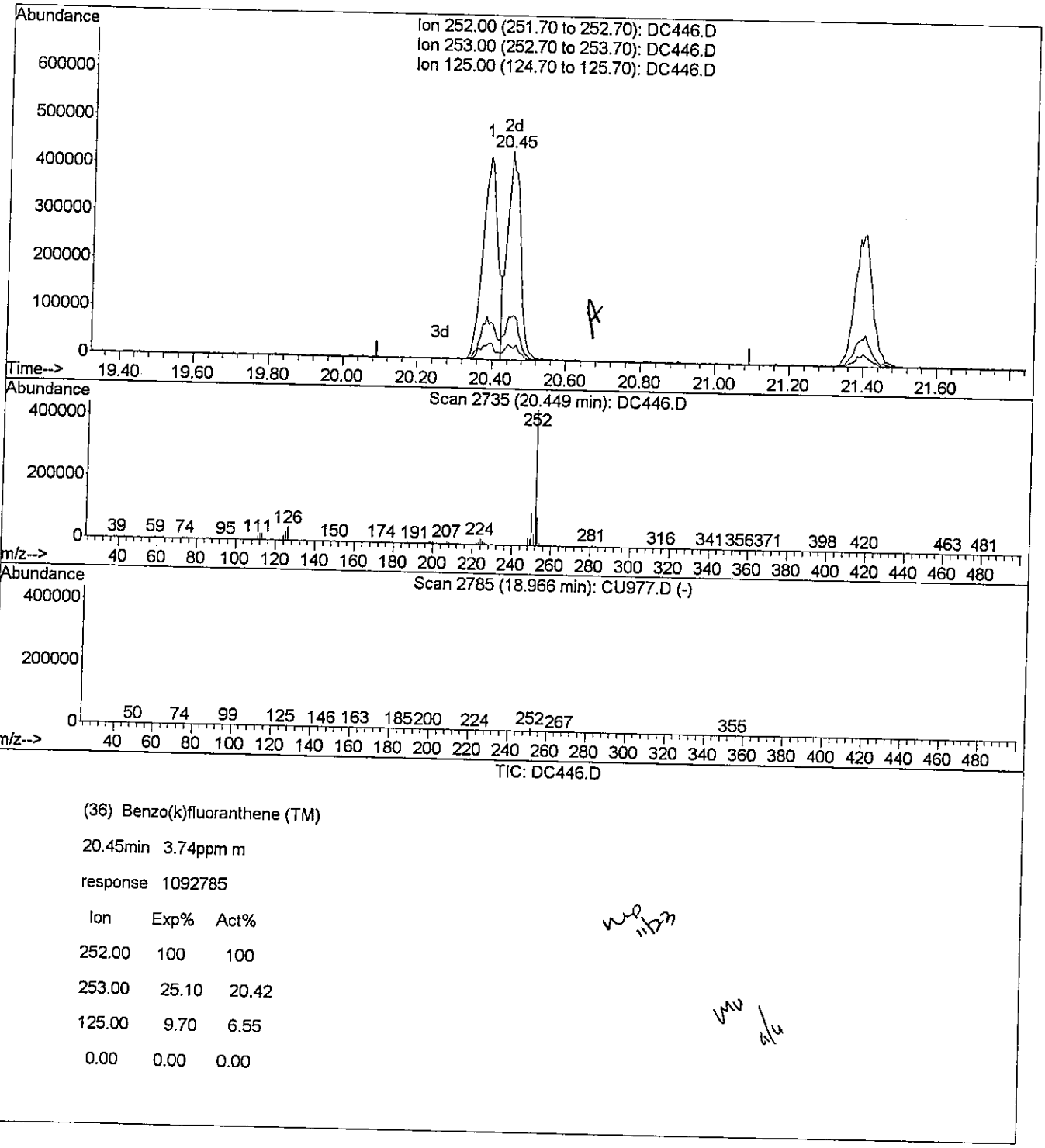
Quantitation Report (Qedit)

Data File : J:\ACQUDATA\5973B\DATA\112009\DC446.D
Acq On : 20 Nov 2009 5:56 pm
Sample : RQ0911513-03|1.0
Misc : 11/11/09 1.0 8270LL LCSD
MS Integration Params: RTEINT.P
Quant Time: Nov 23 10:42 2009

Vial: 12
Operator: M.PEDRO
Inst : 5973-B
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\ACQUDATA\5973B\METHODS\LVI1016.M (RTE Integrator)
Title : 8270 BNA ANALYSIS
Last Update : Thu Nov 12 12:29:20 2009
Response via : Multiple Level Calibration



TIC: DC446.D

(36) Benzo(k)fluoranthene (TM)

20.45min 3.74ppm m

response 1092785

Ion	Exp%	Act%
252.00	100	100
253.00	25.10	20.42
125.00	9.70	6.55
0.00	0.00	0.00

DC446.D LVI1016.M Mon Nov 23 10:42:30 2009

00315

Preparation Information Benchsheet

Prep Run#: 100898
Team: Semivoa GCMS/DMURPHY

Prep WorkFlow: OrgExtLLAq(7)
Prep Method: EPA 3510C

Status: Prepped
Prep Date/Time: 11/17/09 07:41 AM

#	Lab Code	Client ID	B#	Amt. Ext.	Method /Test	pH	AE	BN	Final Vol	Sample Desc. (Initial/Final)	SpikeAmt./Inv. ID	Comments
1	RQ0911513-01	MB		1000mL	8270C/SVO_LL	6	x	x	1.00mL	clear-colorless	1.0000 mL/13095	
2	RQ0911513-02	LCS		1000mL	8270C/SVO_LL	6	x	x	1.00mL	clear-colorless	1.0000 mL/12890; 1.0000 mL/12891; 1.0000 mL/13095	
3	RQ0911513-03	DLCS		1000mL	8270C/SVO_LL	6	x	x	1.00mL	clear-colorless	1.0000 mL/12890; 1.0000 mL/12891; 1.0000 mL/13095	
4	R0906477-001	M122B	.08	1060mL	8270C/SVO_LL	7	x	x	1.00mL	yellow-cloudy	1.0000 mL/13095	
5	R0906514-001	P0911101336X WW-5-912	.02	1060mL	8270C/SVO_LL	7	x	x	1.00mL	clear-colorless	1.0000 mL/13095	
6	R0906514-002	P0911120805Y ST-6-575	.02	1060mL	8270C/SVO_LL	7	x	x	1.00mL	clear-colorless	1.0000 mL/13095	

Spiking Solutions

Name: 8270 LVI 1,4-Dioxane LCS Spike 5ppm — Inventory ID 12890 — Logbook Ref: — Expires On: 12/28/2009

Name: 8270 LVI LCS Spike 4ppm — Inventory ID 12891 — Logbook Ref: — Expires On: 04/24/2010

Name: 8270 LVI Surrogate 2/4 ug/mL — Inventory ID 13095 — Logbook Ref: — Expires On: 05/03/2010

Preparation Materials

Eppendorf Pipette Repeater — EXT #3 (12431)
Dichloromethane (Methylene Chloride) 99.9% MeCl2 — (13312)
2mL Graduated Vials — (13019)
Sodium Hydroxide 50% NaOH — (12914)
Sulfuric Acid, 50% H2SO4 — (13286)
Prepared Sodium Sulfate Na2SO4 — (13006)

Preparation Steps

Step: Extraction
Started: 11/17/09 07:41
Finished: 11/17/09 14:30
By: DMURPHY

Step: Concentration
Started: 11/18/09 13:00
Finished: 11/18/09 15:00
By: DCURRAN

Step: Final Volume
Started: 11/18/09 15:33
Finished: 11/18/09 15:33
By: DCURRAN

Comments:

Reviewed By: [signature] Date: 11/19/09

Spike Witness: DCURRAN [signature] Date: 11/19/09

Chain of Custody

Relinquished By: _____ Date: _____

Received By: _____ Date: _____

Extracts Examined
Yes No

Printed 11/18/09 15:33

59738

11/21/09 Run 1800-500

10 ul of 100 ppm ESTD 0448-1500 to 1.0ml

Tune		DC435 N
Tune		434 YT 1.0
Calibration Check		435 YCC
	RQ0911262-02 LCS	436 Y
	03 LCSD	437 Y
[redacted]	R0906403-002 10.0	438 N Rpt 1/5
	003	439 Y
	RQ0911262-04 MS	440 YQ
	05 MSD	441 YQ
	R0906403-004	442 Y
	RQ0911262-01 Bln	443 YMB
	RQ0911513-01 Bln	444 YMB
	↓ 02 LCS	445 YQ
	03 LCSD	446 YQ
[redacted]	R0906477-001	447 Y
[redacted]	R0906514-001	448 Y
	002	449 Y
	R0906403-002 5.0	450 Y 8:00pm

MD 11/23

	DC435
10.61	46428
11.88	186145
13.46	118764
14.67	203298
17.91	236853
21.58	185463

PESTICIDES

QC SUMMARY

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Water

Service Request: R0906477
Date Analyzed: 11/18/09

Lab Control Sample Summary
Organochlorine Pesticides by Gas Chromatography

Analytical Method: 8081A
Prep Method: EPA 3510C

Units: µg/L
Basis: NA

Extraction Lot: 100766

Analyte Name	Lab Control Sample RQ0911458-02 Result	Expected	% Rec		Duplicate Lab Control Sample RQ0911458-03 Result	Expected	% Rec		% Rec Limits	RPD	RPD Limit
4,4'-DDD	**0.184**	0.200	92		**0.187**	0.200	93		50 - 130	1	30
4,4'-DDE	**0.170**	0.200	85		**0.172**	0.200	86		50 - 130	1	30
4,4'-DDT	**0.181**	0.200	90		**0.180**	0.200	90		50 - 130	0	30
Aldrin	**0.141**	0.200	71		**0.140**	0.200	70		50 - 130	1	30
Dieldrin	**0.180**	0.200	90		**0.184**	0.200	92		50 - 130	2	30
Endosulfan I	**0.186**	0.200	93		**0.185**	0.200	92		50 - 130	0	30
Endosulfan II	**0.185**	0.200	92		**0.186**	0.200	93		50 - 130	1	30
Endosulfan Sulfate	**0.187**	0.200	93		**0.189**	0.200	95		50 - 130	1	30
Endrin	**0.187**	0.200	94		**0.189**	0.200	95		50 - 130	1	30
Endrin Aldehyde	**0.0513**	0.200	26	*	**0.0485**	0.200	24	*	50 - 130	6	30
Endrin Ketone	**0.195**	0.200	97		**0.196**	0.200	98		50 - 130	1	30
Heptachlor	**0.163**	0.200	82		**0.163**	0.200	81		50 - 130	0	30
Heptachlor Epoxide	**0.166**	0.200	83		**0.169**	0.200	84		50 - 130	1	30
Hexachlorobenzene	**0.291**	0.500	58		**0.295**	0.500	59		50 - 130	1	30
Methoxychlor	**0.944**	1.00	94		**0.963**	1.00	96		50 - 130	2	30
alpha-BHC	**0.169**	0.200	84		**0.172**	0.200	86		50 - 130	2	30
alpha-Chlordane	**0.164**	0.200	82		**0.166**	0.200	83		50 - 130	1	30
beta-BHC	**0.165**	0.200	82		**0.169**	0.200	84		50 - 130	2	30
delta-BHC	**0.154**	0.200	77		**0.158**	0.200	79		50 - 130	2	30
gamma-BHC (Lindane)	**0.165**	0.200	83		**0.168**	0.200	84		50 - 130	2	30
gamma-Chlordane	**0.165**	0.200	83		**0.167**	0.200	84		50 - 130	1	30

Comments:

Method Blank Summary

Lab Name: Columbia Analytical Services *Contract:* NORTHGATE

Lab Code: 10145 *Case.No.:* R0906477 *SAS No.:* _____ *SDG No.:* M-122B

Lab Sample ID RQ0911458-01|1. *Lab File ID:* FD542.D

Matrix: WATER *Level: (low/med)*

Date extracted: 11/16/09 *Extraction: (Sepf/Cont/Sonc)* Sepf

Date analyzed: (1) 11/18/2009 *Date analyzed:* (2) 11/18/2009

Time analyzed: (1) 11:30 *Time analyzed:* (2) 11:30

Instrument ID: (1) 6890D *Instrument ID:* (2) 6890D

GC Column(1) (1) STx-CLP *GC Column(2)* (2) STx-CLPII

This Method Blank Applies to the Following Sample, MS, and MSD:

EPA Sample No.	*Lab Sample No.*	*Date Analyzed 1*	*Date Analyzed 2*
PBLK1MS	RQ0911458-02|1.0	11/18/2009	11/18/2009
PBLK1MSD	RQ0911458-03|1.0	11/18/2009	11/18/2009
M-122B	R0906477-001|1.0	11/18/2009	11/18/2009

PESTICIDES

SAMPLE DATA

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Northgate Environmental	**Service Request:**	R0906477
Project:	Tronox LLC Henderson/2027.001	**Date Collected:**	11/11/09 1335
Sample Matrix:	Water	**Date Received:**	11/12/09
Sample Name:	M-122B	**Units:**	µg/L
Lab Code:	R0906477-001	**Basis:**	NA

Organochlorine Pesticides by Gas Chromatography

Analytical Method: 8081A
Prep Method: EPA 3510C

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
4,4'-DDD	0.050	U	0.094	0.050	1	11/16/09	11/18/09 15:03	100766	180095	
4,4'-DDE	0.050	U	0.094	0.050	1	11/16/09	11/18/09 15:03	100766	180095	
4,4'-DDT	0.050	U	0.094	0.050	1	11/16/09	11/18/09 15:03	100766	180095	
Aldrin	0.025	U	0.047	0.025	1	11/16/09	11/18/09 15:03	100766	180095	
Chlordane	0.13	U	0.24	0.13	1	11/16/09	11/18/09 15:03	100766	180095	
Dieldrin	0.050	U	0.094	0.050	1	11/16/09	11/18/09 15:03	100766	180095	
Endosulfan I	0.025	U	0.047	0.025	1	11/16/09	11/18/09 15:03	100766	180095	
Endosulfan II	0.050	U	0.094	0.050	1	11/16/09	11/18/09 15:03	100766	180095	
Endosulfan Sulfate	0.050	U	0.094	0.050	1	11/16/09	11/18/09 15:03	100766	180095	
Endrin	0.050	U	0.094	0.050	1	11/16/09	11/18/09 15:03	100766	180095	
Endrin Aldehyde	0.050	U	0.094	0.050	1	11/16/09	11/18/09 15:03	100766	180095	
Endrin Ketone	0.050	U	0.094	0.050	1	11/16/09	11/18/09 15:03	100766	180095	
Heptachlor	0.025	U	0.047	0.025	1	11/16/09	11/18/09 15:03	100766	180095	
Heptachlor Epoxide	0.025	U	0.047	0.025	1	11/16/09	11/18/09 15:03	100766	180095	
Hexachlorobenzene	0.028	U	0.047	0.028	1	11/16/09	11/18/09 15:03	100766	180095	
Methoxychlor	0.25	U	0.47	0.25	1	11/16/09	11/18/09 15:03	100766	180095	
Toxaphene	0.50	U	0.94	0.50	1	11/16/09	11/18/09 15:03	100766	180095	
alpha-BHC	0.025	U	0.047	0.025	1	11/16/09	11/18/09 15:03	100766	180095	
alpha-Chlordane	0.025	U	0.047	0.025	1	11/16/09	11/18/09 15:03	100766	180095	
beta-BHC	0.025	U	0.047	0.025	1	11/16/09	11/18/09 15:03	100766	180095	
delta-BHC	0.025	U	0.047	0.025	1	11/16/09	11/18/09 15:03	100766	180095	
gamma-BHC (Lindane)	0.025	U	0.047	0.025	1	11/16/09	11/18/09 15:03	100766	180095	
gamma-Chlordane	0.025	U	0.047	0.025	1	11/16/09	11/18/09 15:03	100766	180095	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
Decachlorobiphenyl	63	40-140	11/18/09 15:03		
Tetrachloro-m-xylene	74	40-140	11/18/09 15:03		

Comments:

Quantitation Report (Not Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111809\
Data File : FD548.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 18 Nov 2009 3:03 pm
Operator : M.PEDRO
Sample : R0906477-001|1.0
Misc : 11/16/09 106 8081
ALS Vial : 10 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 19 07:40:30 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 09:14:11 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/l	ug/l	
	System Monitoring Compounds							
1)	S SURR1,Tetrac	9.20	9.37	1934.7E6	5256.0E6	73.527	68.656	
	Spiked Amount 100.000	Range 30 - 150		Recovery =		73.53%	68.66%	
25)	S SURR2,Decachloro	17.33	17.93	1552.7E6	3456.1E6	63.420	63.376	
	Spiked Amount 100.000	Range 30 - 150		Recovery =		63.42%	63.38%	
	Target Compounds							
2)	TC HEXACHLOROBENZEN	9.89	10.19	10936162	25910029	0.291	0.254	
3)	tc alpha-BHC	0.00	10.45	0	5983775	N.D.	0.053	#
5)	tcm Heptachlor	11.48	11.70	7777635	8173921	0.212	0.082	#
7)	tc beta-BHC	0.00	11.16	0	7904206	N.D.	0.183	#
8)	tc delta-BHC	0.00	11.62	0	6470962	N.D.	0.064	#
9)	tc Heptachlor E	12.83	13.01	5074389	31237702	0.161	0.365	#
11)	tc gamma-Chlord	0.00	13.27	0	35511649	N.D.	0.403	#
13)	tc 4,4'-DDE	0.00	13.73	0	7698369	N.D.	0.098	#
14)	tcm Dieldrin	0.00	13.98	0	18867730	N.D.	0.228	#
15)	tcm Endrin	0.00	14.41	0	8179086	N.D.	0.119	#
17)	tc beta-Endosul	0.00	14.73	0	23432620	N.D.	0.336	#
18)	tc 4,4'-DDD	14.19	14.57	2596731	4883448	0.106	0.078	#
19)	tcm 4,4'-DDT	0.00	15.03	0	37050926	N.D.	0.552	#
20)	tc Endrin Aldeh	15.06	15.25	2462980	15530183	0.116	0.286	#
21)	tc Endosulfan S	15.71	0.00	1739416	0	0.071	N.D.	#
22)	tc Methoxychlor	0.00	16.02	0	1175599	N.D.	0.042	#
23)	tc FAMPHUR	0.00	15.74	0	533677	N.D.	0.013	#
24)	tc Endrin Keton	16.09	0.00	4078864	0	0.145	N.D.	#
26)	L8C Toxaphene	14.53	14.87	16285736	1257231	13.600	0.345	#
28)	L8C Toxaphene{3}	0.00	15.25	0	15530183	N.D.	3.822	#
30)	L8C Toxaphene{5}	16.27	16.51	11261223	1384768	19.250	0.967	#
	Sum Toxaphene			27546959	18172183	32.850	5.134	
Average	Toxaphene					16.425	1.711	
31)	L9C Chlordane	0.00	11.47	0	3404888	N.D.	5.327	#
32)	L9C Chlordane{2}	11.48	11.70	7777635	8173921	16.009	5.795	#

00323

Quantitation Report (Not Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111809\
Data File : FD548.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 18 Nov 2009 3:03 pm
Operator : M.PEDRO
Sample : R0906477-001|1.0
Misc : 11/16/09 106 8081
ALS Vial : 10 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 19 07:40:30 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 09:14:11 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/l	ug/l
33) L9C Chlordane{3}	0.00	12.42	0	10569181	N.D.	5.611 #
34) L9C Chlordane{4}	0.00	13.27	0	35511649	N.D.	3.831 #
35) L9C Chlordane{5}	14.30	0.00	4911392	0	3.363	N.D. #
Sum Chlordane			12689027	57659639	19.372	20.564
Average Chlordane					9.686	5.141

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111809\
Data File : FD548.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 18 Nov 2009 3:03 pm
Operator : M.PEDRO
Sample : R0906477-001|1.0
Misc : 11/16/09 106 8081
ALS Vial : 10 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 19 07:40:30 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 09:14:11 2009
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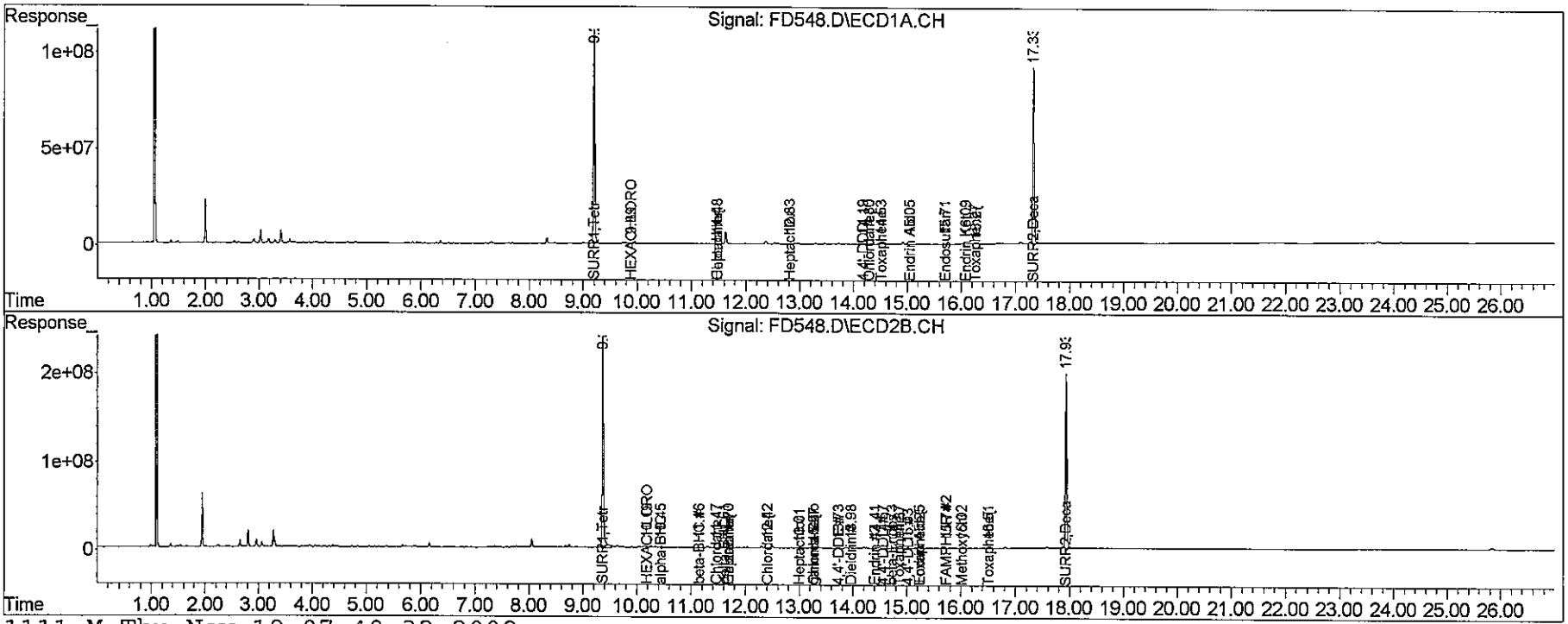
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m



G2260

PESTICIDES

STANDARDS DATA

Calibration Level Concentrations
Columbia Analytical Services

Analyte	Calib Mix	Level 1 ppb	Level 2 ppb	Level 3 ppb	Level 4 ppb	Level 5 ppb
alpha-BHC	Ind A	80	40	20	10	5
gamma-BHC	Ind A	80	40	20	10	5
DDD	Ind A	160	80	40	20	10
DDT	Ind A	160	80	40	20	10
Dieldrin	Ind A	160	80	40	20	10
alpha-Endosulfan	Ind A	80	40	20	10	5
Endrin	Ind A	160	80	40	20	10
Heptachlor	Ind A	80	40	20	10	5
Methoxychlor	Ind A	800	400	200	100	50
Surr.-DCB	Ind A	160	80	40	20	10
Surr.-TCMX	Ind A	80	40	20	10	5
Aldrin	Ind B	80	40	20	10	5
beta-BHC	Ind B	80	40	20	10	5
delta-BHC	Ind B	80	40	20	10	5
DDE	Ind B	160	80	40	20	10
alpha-Chlordane	Ind B	80	40	20	10	5
gamma-Chlordane	Ind B	80	40	20	10	5
beta-Endosulfan	Ind B	160	80	40	20	10
Endosulfan Sulfate	Ind B	160	80	40	20	10
Endrin Aldehyde	Ind B	160	80	40	20	10
Endrin Ketone	Ind B	160	80	40	20	10
Heptachlor Epoxide	Ind B	80	40	20	10	5
Surr.-DCB	Ind B	160	80	40	20	10
Surr.-TCMX	Ind B	80	40	20	10	5
PCB 1016	1016/1260	1000	750	500	750	100
PCB 1221	1221	1000		500		100
PCB 1232	1232	1000		500		100
PCB 1242	1242	1000		500		100
PCB 1248	1248	1000		500		100
PCB 1254	1254	1000		500		100
PCB 1260	1016/1260	1000	750	500	750	100
Chlordane	Chlor	500	250	100	50	25
Toxaphene	Tox	1000	750	500	250	100
Hexachlorobenzene	K/F/HCB	100	80	50	20	5
Kepone	K/F/HCB	2500	2000	1500	1000	500
Famphur	K/F/HCB	500	400	300	200	100

6F

Pesticide Initial Calibration of Multicomponent Analytes

Lab Name: Columbia Analytical Services *Client:* NORTHGATE

Lab Code: 10145 *Case.No.:* R0906477 *SAS No.:* _____ *SDG No.:* M-122B

Instrument ID: 6890D *Date Anlyzed:* 11/11/2009

GC Column(1) STx-CLP *(ID):* 0.32mm 30				*GC Column(2)* STx-CLPII *(ID):* 0.32mm 30			
		RT Window			*RT Window*		
Compound	*RT*	*From*	*To*	*RT*	*From*	*To*	
SURR1,Tetrac	9.21	9.16	9.26	9.38	9.33	9.43	
HEXACHLOROBEN	9.90	9.83	9.97	10.20	10.13	10.27	
alpha-BHC	10.21	10.16	10.26	10.46	10.41	10.51	
gamma-BHC (L	10.73	10.68	10.78	11.03	10.98	11.08	
Heptachlor	11.48	11.43	11.53	11.70	11.65	11.75	
Aldrin	11.93	11.88	11.98	12.18	12.13	12.23	
beta-BHC	10.89	10.84	10.94	11.18	11.13	11.23	
delta-BHC	11.16	11.11	11.21	11.62	11.57	11.67	
Heptachlor E	12.83	12.76	12.90	13.02	12.95	13.09	
alpha-Endosu	13.40	13.33	13.47	13.59	13.52	13.66	
gamma-Chlord	13.02	12.95	13.09	13.30	13.23	13.37	
alpha-Chlord	13.21	13.14	13.28	13.50	13.43	13.57	
4,4'-DDE	13.32	13.25	13.39	13.75	13.68	13.82	
Dieldrin	13.75	13.68	13.82	13.98	13.91	14.05	
Endrin	14.09	14.02	14.16	14.43	14.36	14.50	
KEPONE	14.15	14.08	14.22	14.60	14.53	14.67	
beta-Endosul	14.42	14.35	14.49	14.74	14.67	14.81	
4,4'-DDD	14.18	14.11	14.25	14.57	14.50	14.64	
4,4'-DDT	14.58	14.51	14.65	15.03	14.96	15.10	
Endrin Aldeh	15.04	14.97	15.11	15.24	15.17	15.31	
Endosulfan S	15.69	15.62	15.76	15.64	15.57	15.71	
Methoxychlor	15.28	15.21	15.35	16.00	15.93	16.07	
FAMPHUR	15.99	15.92	16.06	15.73	15.66	15.80	
Endrin Keton	16.09	16.02	16.16	16.40	16.33	16.47	
SURR2,Decachlorobip	17.34	17.24	17.44	17.95	17.85	18.05	
Toxaphene	14.50	14.43	14.57	14.86	14.79	14.93	
Toxaphene	14.59	14.52	14.66	14.97	14.90	15.04	
Toxaphene	15.19	15.12	15.26	15.25	15.18	15.32	

6F

Pesticide Initial Calibration of Multicomponent Analytes

Lab Name: **Columbia Analytical Services** *Client:* NORTHGATE

Lab Code: **10145** *Case.No.:* R0906477 *SAS No.:* _____ *SDG No.:* M-122B

Instrument ID: 6890D *Date Anlyzed:* 11/11/2009

GC Column(1) STx-CLP *(ID):* 0.32mm 30 | *GC Column(2)* STx-CLPII *(ID):* 0.32mm 30

		RT Window			*RT Window*	
Compound	*RT*	*From*	*To*	*RT*	*From*	*To*
Toxaphene	16.06	15.99	16.13	15.63	15.56	15.70
Toxaphene	16.26	16.19	16.33	16.53	16.46	16.60
Chlordane	11.35	11.28	11.42	11.48	11.41	11.55
Chlordane	11.48	11.41	11.55	11.70	11.63	11.77
Chlordane	12.15	12.08	12.22	12.41	12.34	12.48
Chlordane	13.02	12.95	13.09	13.29	13.22	13.36
Chlordane	14.32	14.25	14.39	14.81	14.74	14.88

Response Factor Report 6890D

Method Path : J:\ACQUDATA\6890D\METHODS\
Method File : 80811111.M
Title : 608/8081A PESTICIDES
Last Update : Thu Nov 12 09:14:11 2009
Response Via : Initial Calibration

Calibration Files
1 =FD369.D 2 =FD368.D 3 =FD367.D
4 =FD366.D 5 =FD365.D

		Compound	1	2	3	4	5	Avg		%RSD
1)	S	SURR1,Tetrac	2.747	2.692	2.624	2.576	2.518	2.631	E7	3.45
2)	TC	HEXACHLOROBENZENE	3.817	3.804	3.756	3.720	3.704	3.760	E7	1.32
3)	tc	alpha-BHC	4.456	4.370	4.225	3.952	3.669	4.134	E7	7.81
4)	tcm	gamma-BHC (L	3.978	3.888	3.746	3.565	3.365	3.709	E7	6.67
5)	tcm	Heptachlor	3.764	3.784	3.728	3.611	3.483	3.674	E7	3.43
6)	tcm	Aldrin	3.558	3.575	3.502	3.355	3.174	3.433	E7	4.92
7)	tc	beta-BHC	1.590	1.563	1.554	1.532	1.524	1.553	E7	1.68
8)	TC	delta-BHC	3.984	3.910	3.794	3.546	3.299	3.707	E7	7.60
9)	tc	Heptachlor E	3.191	3.224	3.191	3.112	3.037	3.151	E7	2.41
10)	tc	alpha-Endosu	2.891	2.888	2.825	2.727	2.620	2.790	E7	4.17
11)	tc	gamma-Chlord	3.313	3.285	3.181	3.054	2.932	3.153	E7	5.08
12)	tc	alpha-Chlord	3.043	3.015	2.957	2.880	2.709	2.921	E7	4.58
13)	tc	4,4'-DDE	3.095	3.156	3.090	2.969	2.807	3.023	E7	4.59
14)	tcm	Dieldrin	3.147	3.239	3.209	3.111	2.939	3.129	E7	3.76
15)	tcm	Endrin	2.942	2.993	2.961	2.857	2.743	2.899	E7	3.48
16)	tc	KEPONE	1.114	1.114	1.178	1.281	1.216	1.181	E7	6.02
17)	tc	beta-Endosul	2.658	2.685	2.655	2.622	2.475	2.619	E7	3.19
18)	tc	4,4'-DDD	2.551	2.549	2.501	2.375	2.304	2.456	E7	4.52
19)	tcm	4,4'-DDT	2.706	2.791	2.712	2.580	2.396	2.637	E7	5.86
20)	tc	Endrin Aldeh	2.169	2.167	2.160	2.063	2.037	2.119	E7	3.02
21)	tc	Endosulfan S	2.511	2.528	2.508	2.415	2.363	2.465	E7	2.92
22)	tc	Methoxychlor	1.191	1.232	1.244	1.237	1.230	1.227	E7	1.68
23)	tc	FAMPHUR	1.865	1.855	1.886	1.994	1.816	1.883	E7	3.56
24)	tc	Endrin Keton	2.842	2.875	2.855	2.782	2.705	2.812	E7	2.45
25)	S	SURR2,Decachlorobiphe	2.440	2.452	2.416	2.511	2.423	2.448	E7	1.53
26)	L8C	Toxaphene	1.259	1.245	1.187	1.109	1.187	1.197	E6	4.95
27)	L8C	Toxaphene{2}	8.772	8.434	8.239	7.723	8.301	8.294	E5	4.58
28)	L8C	Toxaphene{3}	7.551	7.422	6.939	6.379	6.554	6.969	E5	7.40
29)	L8C	Toxaphene{4}	8.158	8.010	7.514	6.922	7.179	7.557	E5	6.98
30)	L8C	Toxaphene{5}	6.368	6.123	5.822	5.371	5.565	5.850	E5	6.92
31)	L9C	Chlordane	2.247	2.066	2.026	2.017	1.860	2.043	E5	6.78
32)	L9C	Chlordane{2}	5.458	4.918	4.742	4.711	4.464	4.858	E5	7.66
33)	L9C	Chlordane{3}	7.546	7.105	7.157	7.333	7.125	7.253	E5	2.58
34)	L9C	Chlordane{4}	4.306	3.934	3.699	3.552	3.244	3.747	E6	10.68
35)	L9C	Chlordane{5}	1.692	1.512	1.458	1.414	1.225	1.460	E6	11.54

Signal #2 Calibration Files
1 =FD369.D 2 =FD368.D 3 =FD367.D
4 =FD366.D 5 =FD365.D

		Compound	1	2	3	4	5	Avg		%RSD
1)	S	SURR1,Tetrac	7.620	7.763	7.716	7.499	7.680	7.656	E7	1.33
2)	TC	HEXACHLOROBENZENE	1.008	1.014	1.011	1.016	1.043	1.019	E8	1.38
3)	tc	alpha-BHC	1.160	1.150	1.119	1.106	1.066	1.120	E8	3.33
4)	tcm	gamma-BHC (L	1.049	1.043	1.036	1.030	1.042	1.040	E8	0.68

Method Path : J:\ACQUDATA\6890D\METHODS\
Method File : 80811111.M
Title : 608/8081A PESTICIDES
Last Update : Thu Nov 12 09:14:11 2009
Response Via : Initial Calibration

Calibration Files
1 =FD369.D 2 =FD368.D 3 =FD367.D
4 =FD366.D 5 =FD365.D

	Compound	1	2	3	4	5	Avg		%RSD
5)	tcm Heptachlor	0.949	0.988	1.007	1.009	1.024	0.995	E8	2.89
6)	tcm Aldrin	9.094	9.531	9.538	9.754	9.189	9.421	E7	2.89
7)	tc beta-BHC	4.291	4.338	4.332	4.360	4.260	4.316	E7	0.93
8)	tc delta-BHC	1.029	1.036	1.020	1.002	0.952	1.008	E8	3.36
9)	tc Heptachlor E	7.907	8.354	8.634	8.711	9.150	8.551	E7	5.37
10)	tc alpha-Endosu	5.996	7.027	7.036	7.440	6.779	6.856	E7	7.81
11)	tc gamma-Chlord	8.529	8.808	8.789	8.701	9.184	8.802	E7	2.73
12)	tc alpha-Chlord	8.209	8.446	8.582	8.518	8.148	8.381	E7	2.29
13)	tc 4,4'-DDE	7.551	8.061	8.098	8.035	7.595	7.868	E7	3.44
14)	tcm Dieldrin	7.689	8.116	8.394	8.507	8.622	8.266	E7	4.51
15)	tcm Endrin	6.408	7.011	7.156	7.187	6.556	6.864	E7	5.22
16)	tc KEPONE	2.452	2.578	2.887	3.145	3.016	2.816	E7	10.40
17)	tc beta-Endosul	6.425	6.798	7.085	7.138	7.441	6.977	E7	5.50
18)	tc 4,4'-DDD	6.298	6.129	6.500	6.465	5.985	6.275	E7	3.50
19)	tcm 4,4'-DDT	6.641	6.762	6.811	6.623	6.728	6.713	E7	1.19
20)	tc Endrin Aldeh	5.076	5.328	5.475	5.495	5.820	5.439	E7	4.98
21)	tc Endosulfan S	5.920	6.202	6.386	6.427	6.241	6.235	E7	3.21
22)	tc Methoxychlor	2.527	2.695	2.810	2.870	3.032	2.787	E7	6.79
23)	tc FAMPHUR	3.877	3.898	4.035	4.328	4.209	4.069	E7	4.81
24)	tc Endrin Keton	6.347	6.644	6.804	6.831	6.919	6.709	E7	3.36
25)	S SURR2,Decachlorobiphe	5.361	5.387	5.486	5.539	5.494	5.453	E7	1.39
26)	L8C Toxaphene	3.649	3.663	3.564	3.460	3.877	3.643	E6	4.23
27)	L8C Toxaphene{2}	1.874	2.035	1.832	1.785	2.183	1.942	E6	8.47
28)	L8C Toxaphene{3}	4.085	4.069	3.992	3.877	4.296	4.064	E6	3.78
29)	L8C Toxaphene{4}	1.752	1.809	1.702	1.631	1.820	1.743	E6	4.50
30)	L8C Toxaphene{5}	1.455	1.438	1.401	1.361	1.507	1.432	E6	3.85
31)	L9C Chlordane	7.140	6.522	6.031	5.865	6.399	6.391	E5	7.76
32)	L9C Chlordane{2}	1.532	1.410	1.381	1.381	1.349	1.411	E6	5.07
33)	L9C Chlordane{3}	1.899	1.805	1.857	1.875	1.981	1.884	E6	3.43
34)	L9C Chlordane{4}	1.009	0.951	0.930	0.907	0.838	0.927	E7	6.72
35)	L9C Chlordane{5}	4.373	3.999	3.879	3.900	3.370	3.904	E6	9.19

(#) = Out of Range

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD365.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 9:02 am
Operator : M.PEDRO
Sample : INDAL
Misc : INITIAL CAL
ALS Vial : 3 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 08:51:35 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Wed Oct 28 08:32:24 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/l	ug/l
	System Monitoring Compounds						
1)	S SURR1,Tetrac	9.21	9.38	125.9E6	384.0E6	5.301	5.500
	Spiked Amount 100.000	Range 30 - 150		Recovery =		5.30%#	5.50%#
25)	S SURR2,Decachloro	17.34	17.95	242.3E6	549.4E6	12.024m	12.717m
	Spiked Amount 100.000	Range 30 - 150		Recovery =		12.02%#	12.72%#
	Target Compounds						
2)	TC HEXACHLOROBENZEN	9.90	10.20	185.2E6	521.6E6	5.840	5.590
3)	tc alpha-BHC	10.21	10.46	183.5E6	532.9E6	5.014	5.171m
4)	tcm gamma-BHC (L	10.73	11.03	168.3E6	521.0E6	5.120	5.652
5)	tcm Heptachlor	11.48	11.70	174.1E6	511.9E6	5.324	5.840
10)	tc alpha-Endosu	13.40	13.59	131.0E6	339.0E6	5.367	5.665
14)	tcm Dieldrin	13.75	13.98	293.9E6	862.2E6	10.748	13.033
15)	tcm Endrin	14.09	14.43	274.3E6	655.6E6	11.243	11.484m
18)	tc 4,4'-DDD	14.18	14.57	230.4E6	598.5E6	10.942	11.647m
19)	tcm 4,4'-DDT	14.58	15.03	239.6E6	672.8E6	10.244	12.308
22)	tc Methoxychlor	15.28	16.00	615.0E6	1515.8E6	56.504	65.131
	Sum Toxaphene			0	0	N.D.	N.D.
	Average Toxaphene					0.000	0.000
	Sum Chlordane			0	0	N.D.	N.D.
	Average Chlordane					0.000	0.000

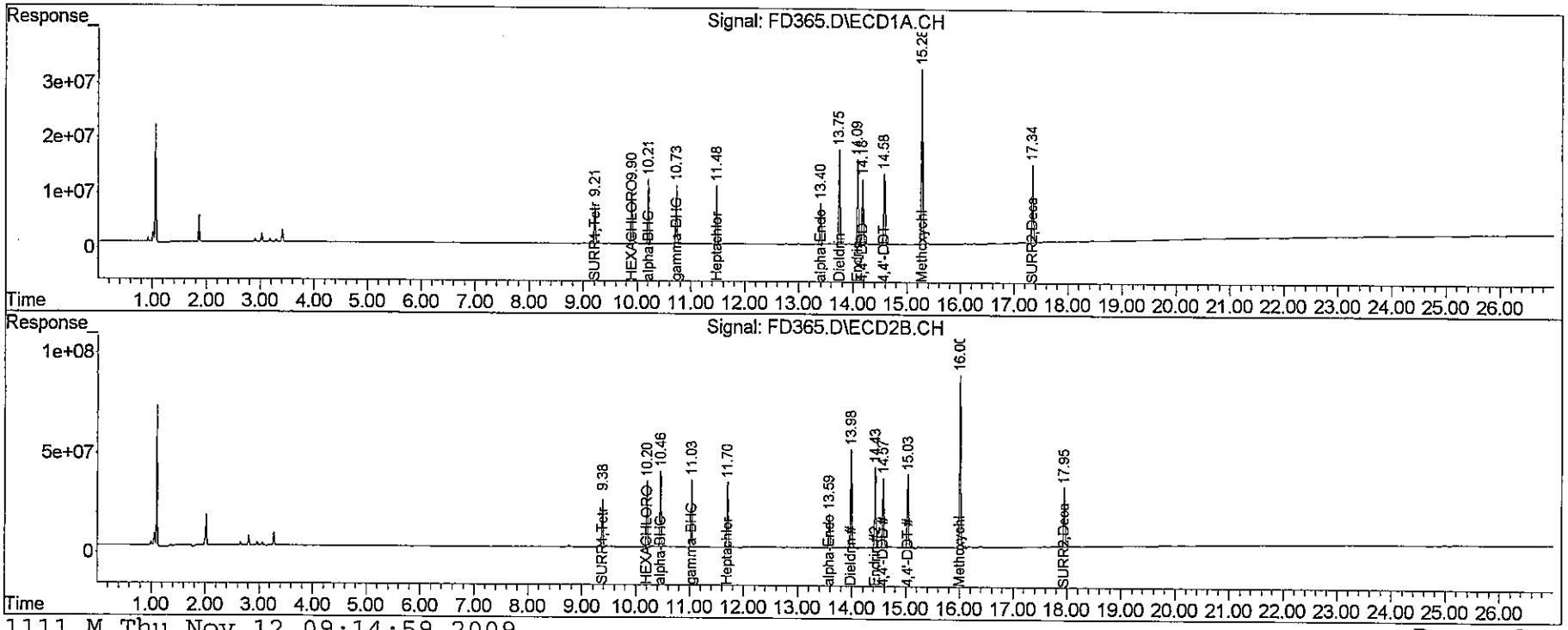
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD365.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 9:02 am
Operator : M.PEDRO
Sample : INDAL
Misc : INITIAL CAL
ALS Vial : 3 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 08:51:35 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Wed Oct 28 08:32:24 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m



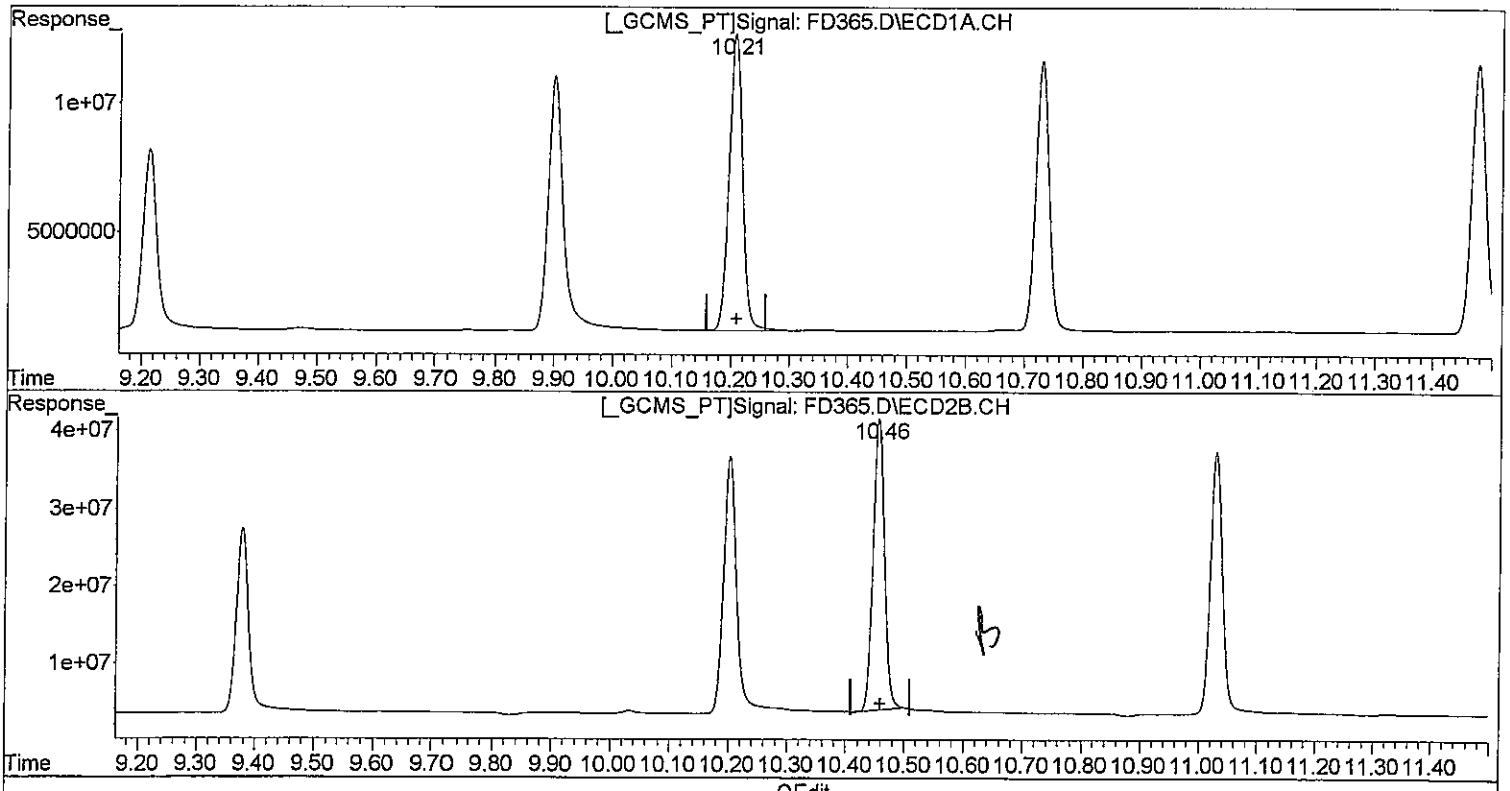
ECD2B

Quantitation Report (Qedit)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD365.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 9:02 am
Operator : M.PEDRO
Sample : INDAL
Misc : INITIAL CAL
ALS Vial : 3 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 08:40:47 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Wed Oct 28 08:32:24 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m



(3) alpha-BHC (tc)
10.21min 5.014ug/l
response 183467721

(3) alpha-BHC #2 (tc)
10.46min 4.994ug/l
response 514712537

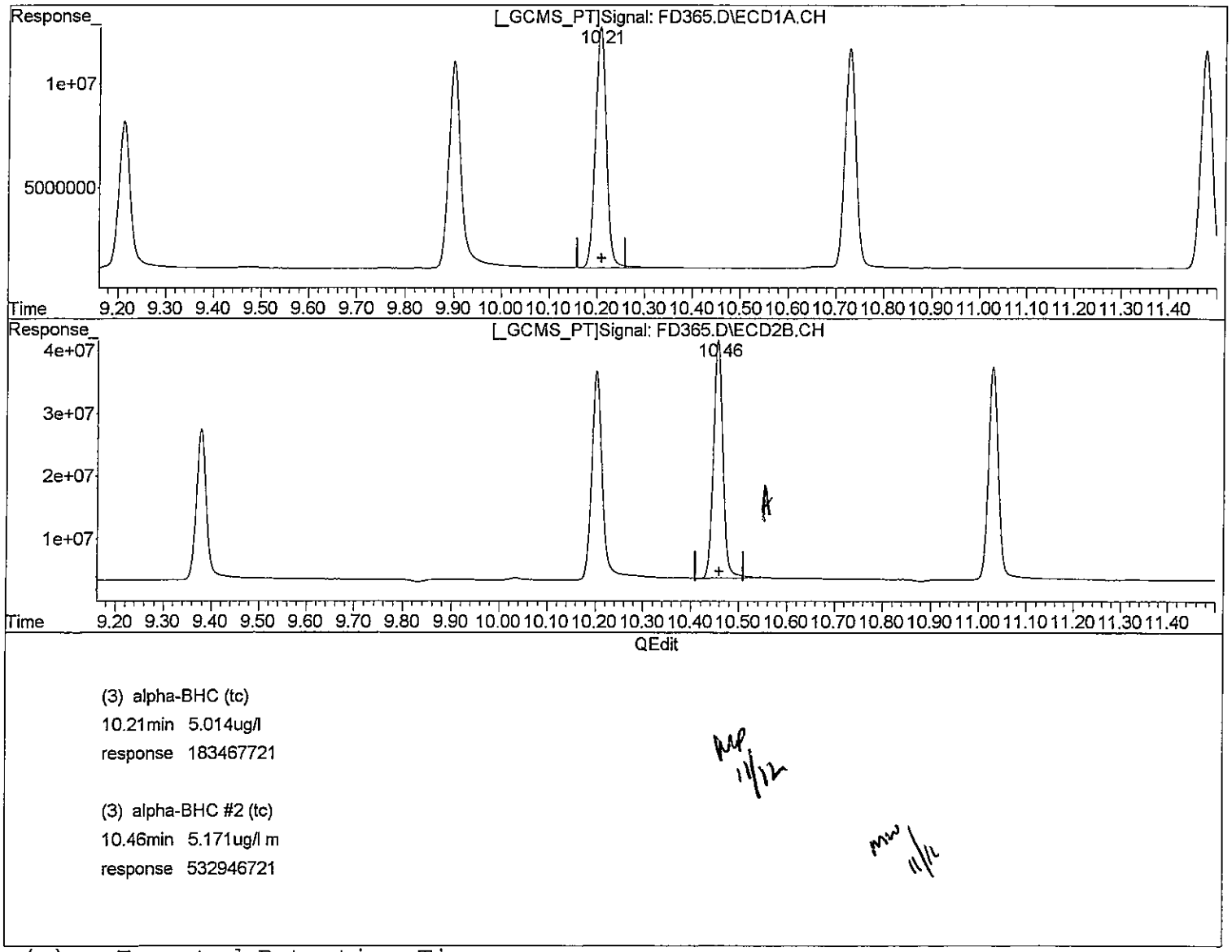
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD365.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 9:02 am
Operator : M.PEDRO
Sample : INDAL
Misc : INITIAL CAL
ALS Vial : 3 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 08:40:47 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Wed Oct 28 08:32:24 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m



(3) alpha-BHC (tc)
10.21min 5.014ug/l
response 183467721

(3) alpha-BHC #2 (tc)
10.46min 5.171ug/l m
response 532946721

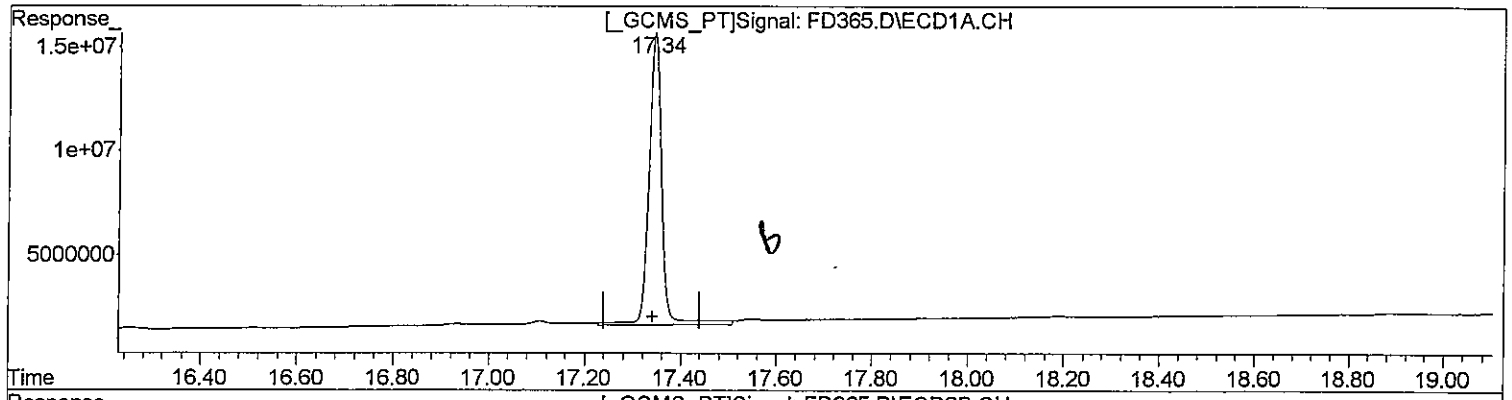
(+) = Expected Retention Time

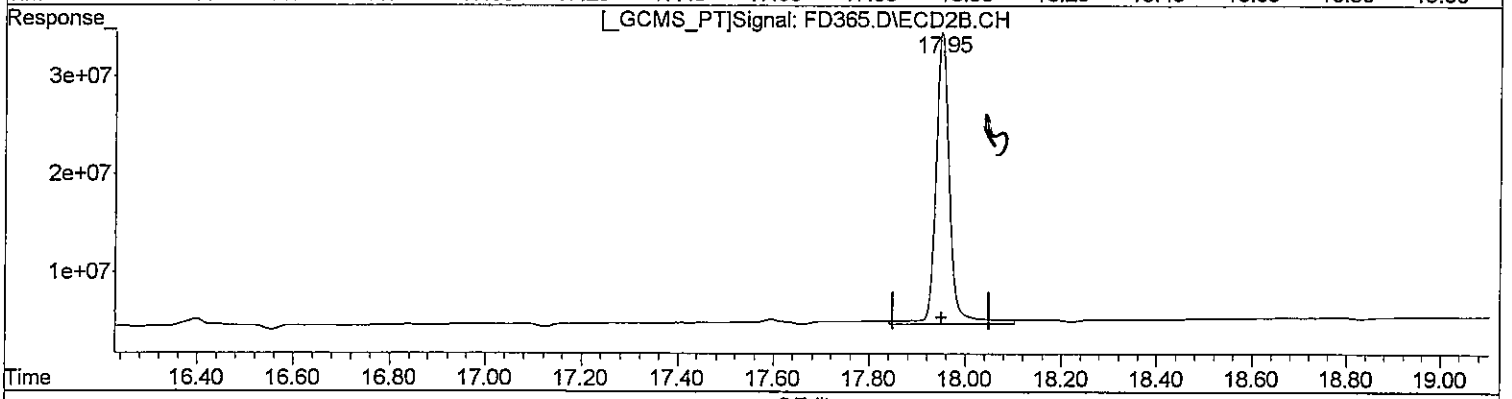
Quantitation Report (Qedit)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD365.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 9:02 am
Operator : M.PEDRO
Sample : INDAL
Misc : INITIAL CAL
ALS Vial : 3 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 08:18:33 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Wed Oct 28 08:32:24 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m





QEdit

(25) SURR2,Decachlorobiphenyl (S)
17.34min 13.133ug/l
response 264683984

(25) SURR2,Decachlorobiphenyl #2 (S)
17.95min 13.859ug/l
response 598701749

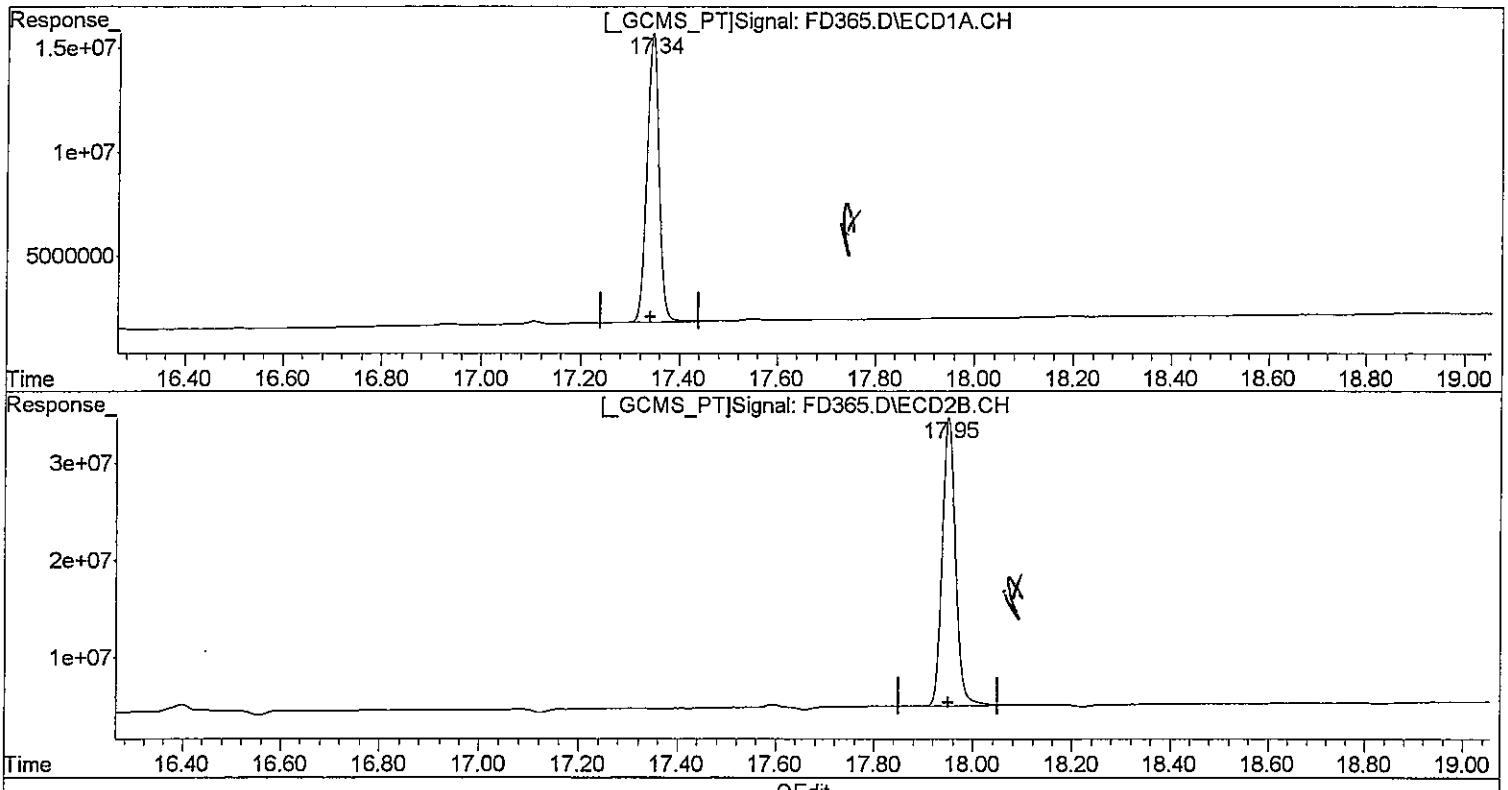
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD365.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 9:02 am
Operator : M.PEDRO
Sample : INDAL
Misc : INITIAL CAL
ALS Vial : 3 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 08:18:33 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Wed Oct 28 08:32:24 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m



QEdit

(25) SURR2,Decachlorobiphenyl (S)
17.34min 12.024ug/l m
response 242330939

(25) SURR2,Decachlorobiphenyl #2 (S)
17.95min 12.717ug/l m
response 549372578

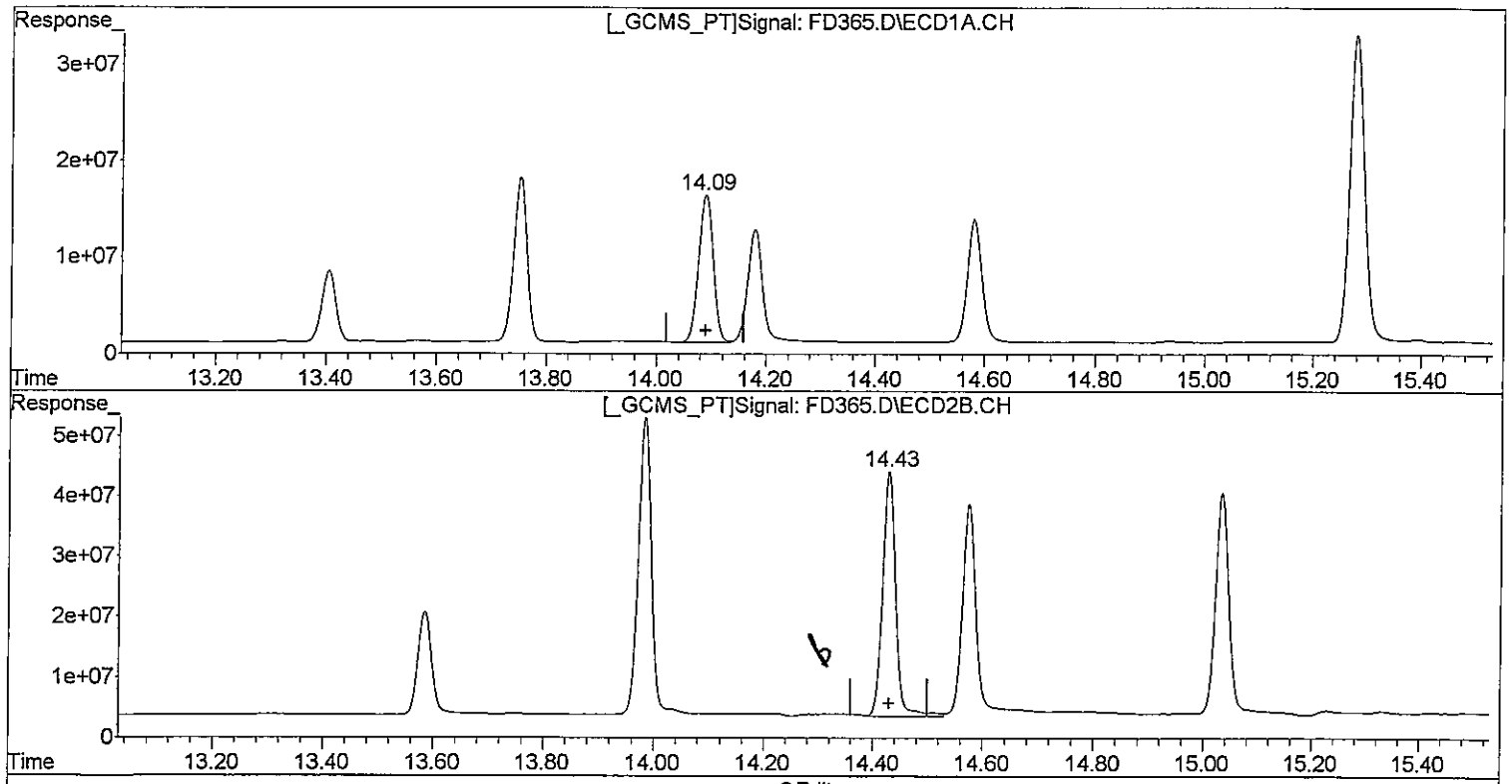
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD365.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 9:02 am
Operator : M.PEDRO
Sample : INDAL
Misc : INITIAL CAL
ALS Vial : 3 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 08:18:33 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Wed Oct 28 08:32:24 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m



QEdit

(15) Endrin (tcm)
14.09min 11.243ug/l
response 274328662

(15) Endrin #2 (tcm)
14.43min 11.773ug/l
response 672138181

(+) = Expected Retention Time

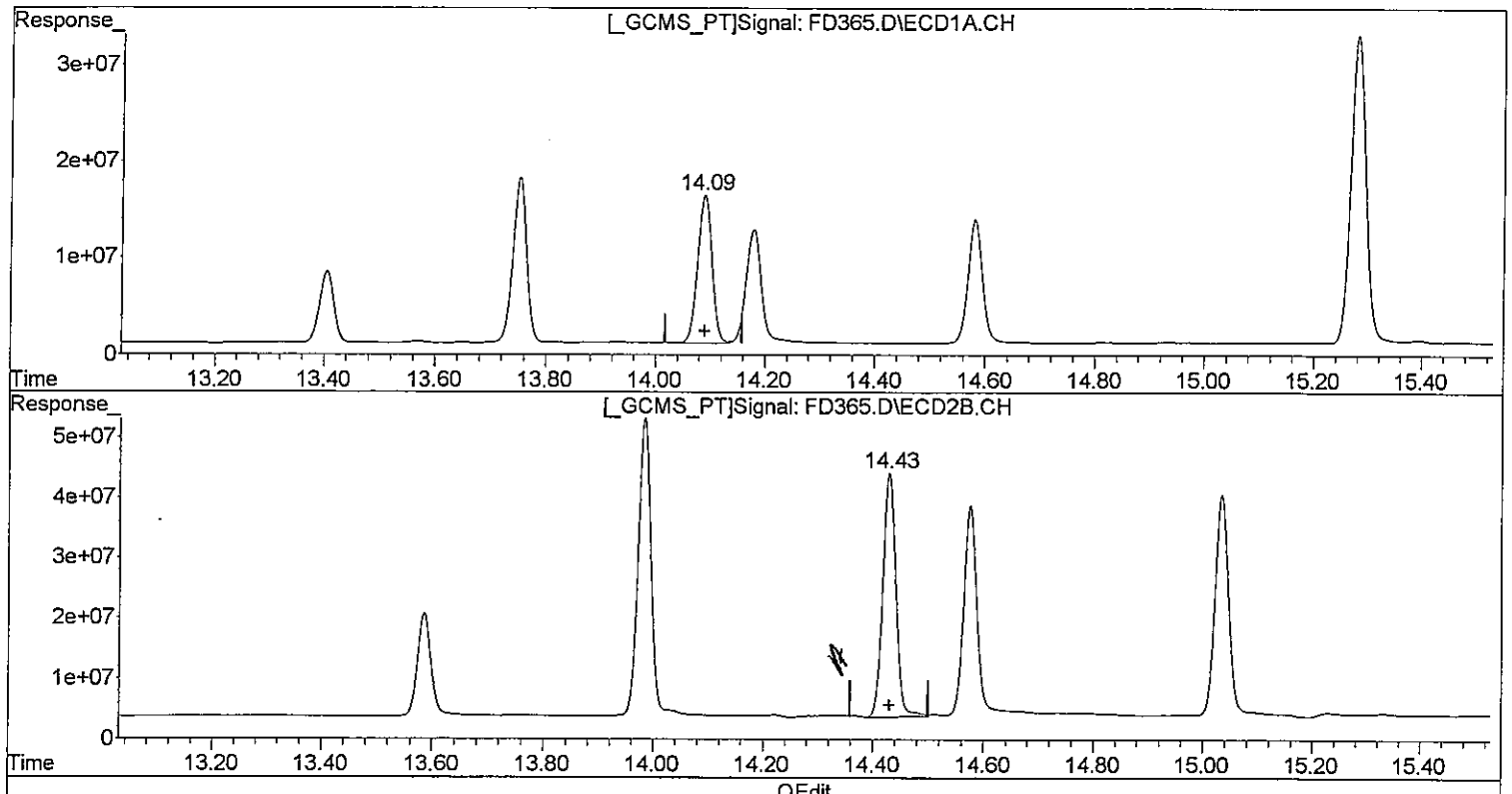
00338

Quantitation Report (Qedit)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD365.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 9:02 am
Operator : M.PEDRO
Sample : INDAL
Misc : INITIAL CAL
ALS Vial : 3 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 08:18:33 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Wed Oct 28 08:32:24 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m



QEdit

(15) Endrin (tcm)
14.09min 11.243ug/l
response 274328662

(15) Endrin #2 (tcm)
14.43min 11.484ug/l m
response 655640487

(+) = Expected Retention Time

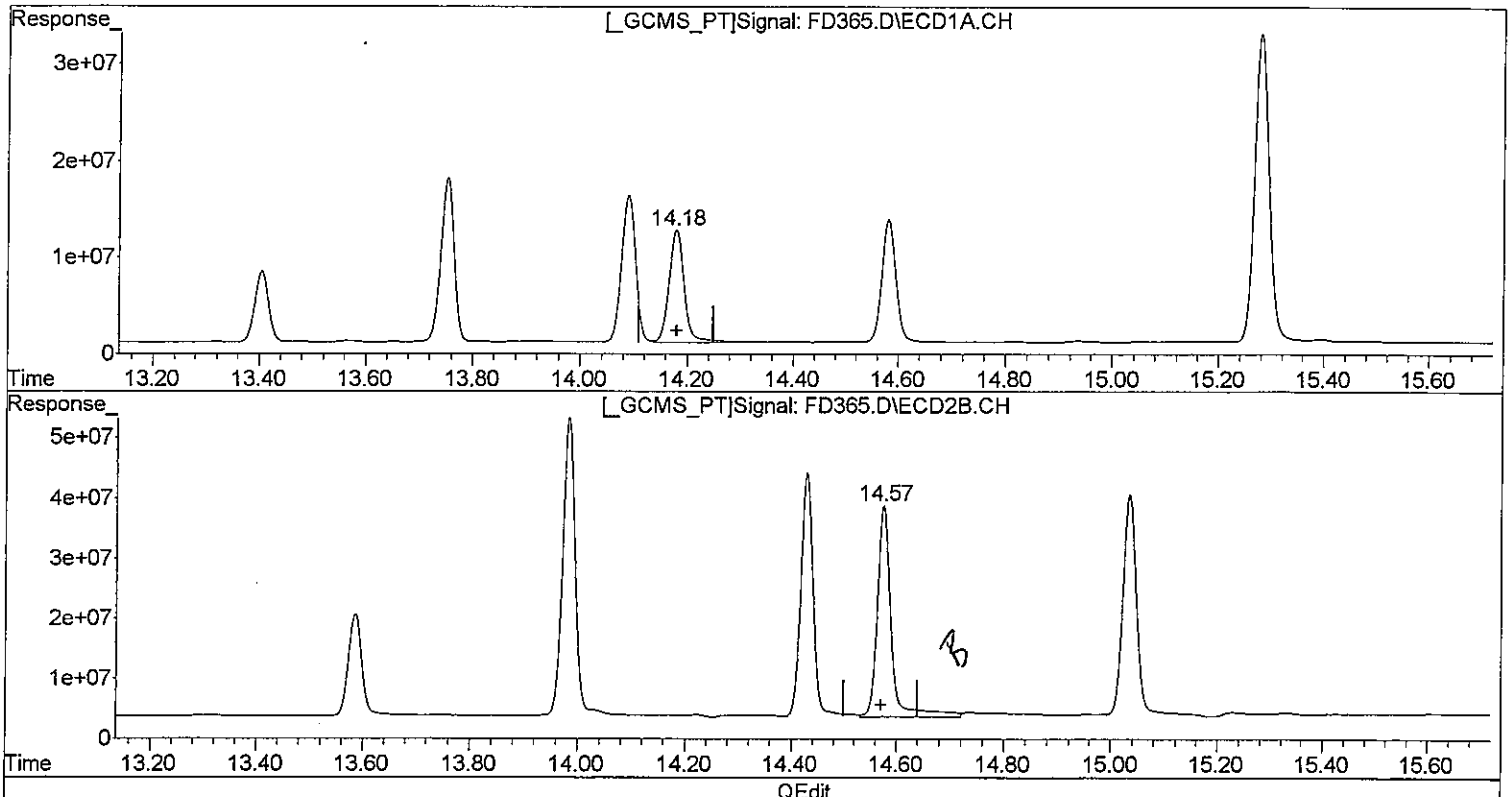
00339

Quantitation Report (Qedit)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD365.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 9:02 am
Operator : M.PEDRO
Sample : INDAL
Misc : INITIAL CAL
ALS Vial : 3 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 08:18:33 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Wed Oct 28 08:32:24 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m



(18) 4,4'-DDD (tc)
14.18min 10.942ug/l
response 230361008

(18) 4,4'-DDD #2 (tc)
14.58min 12.659ug/l
response 650471667

(+) = Expected Retention Time

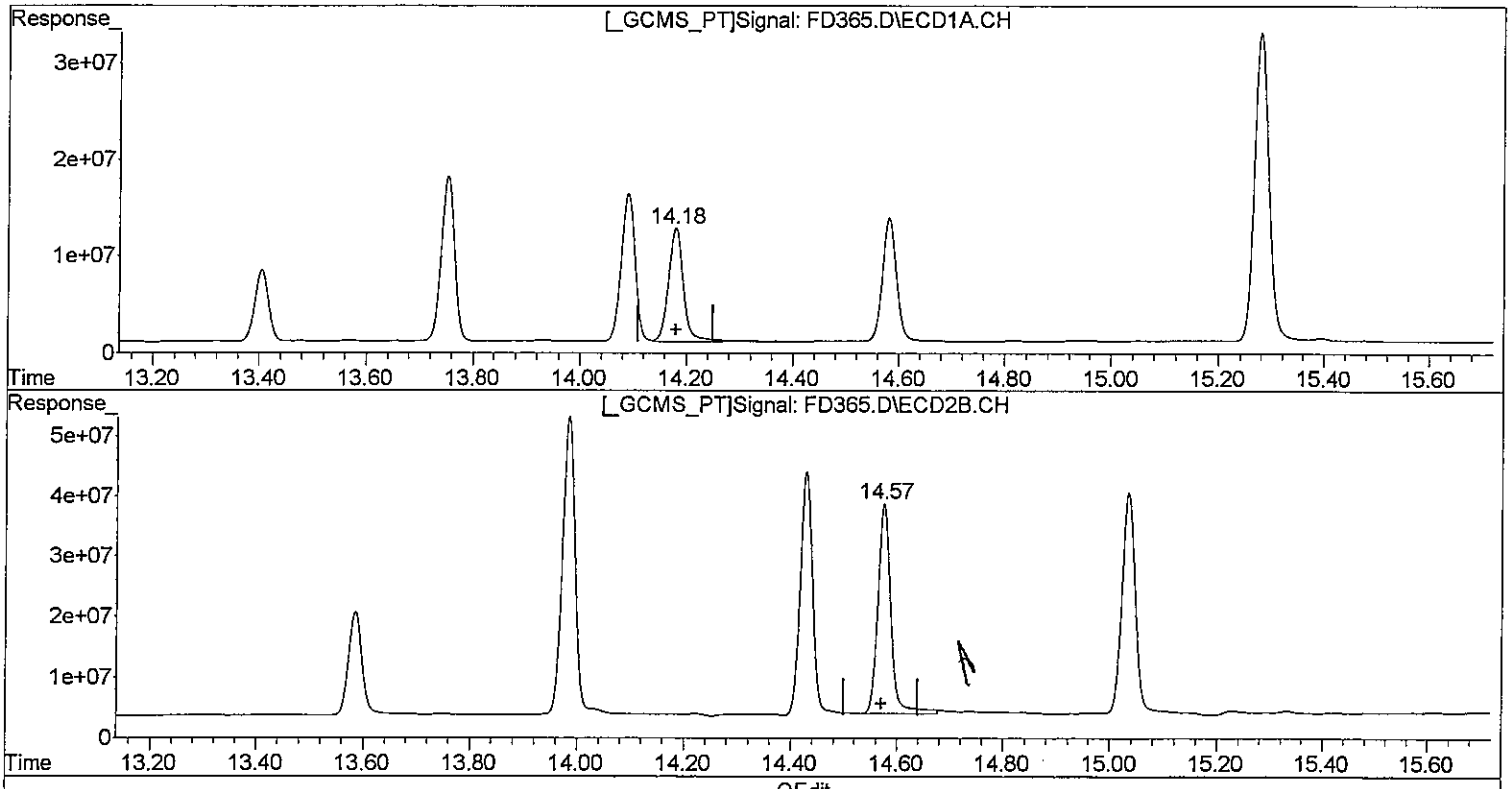
00340

Quantitation Report (Qedit)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD365.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 9:02 am
Operator : M.PEDRO
Sample : INDAL
Misc : INITIAL CAL
ALS Vial : 3 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 08:18:33 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Wed Oct 28 08:32:24 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m



QEdit

(18) 4,4'-DDD (tc)
14.18min 10.942ug/l
response 230361008

(18) 4,4'-DDD #2 (tc)
14.57min 11.647ug/l m
response 598452459

(+) = Expected Retention Time

00341

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD366.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 9:38 am
Operator : M.PEDRO
Sample : INDAML
Misc : INITIAL CAL
ALS Vial : 4 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 08:51:54 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/l	ug/l
	System Monitoring Compounds						
1)	S SURR1,Tetrac	9.21	9.38	257.6E6	749.9E6	10.845	10.740m
	Spiked Amount 100.000	Range 30 - 150		Recovery =		10.85%#	10.74%#
25)	S SURR2,Decachloro	17.34	17.95	502.1E6	1107.8E6	24.913	25.644
	Spiked Amount 100.000	Range 30 - 150		Recovery =		24.91%#	25.64%#
	Target Compounds						
2)	TC HEXACHLOROBENZEN	9.90	10.20	372.0E6	1015.9E6	11.728	10.885
3)	tc alpha-BHC	10.21	10.46	395.2E6	1105.9E6	10.799	10.730m
4)	tcm gamma-BHC (L	10.73	11.03	356.5E6	1030.0E6	10.848	11.175
5)	tcm Heptachlor	11.48	11.70	361.1E6	1009.4E6	11.040	11.516
10)	tc alpha-Endosu	13.40	13.59	272.7E6	744.0E6	11.173	12.435
14)	tcm Dieldrin	13.75	13.98	622.2E6	1701.5E6	22.754	25.719
15)	tcm Endrin	14.09	14.43	571.3E6	1437.4E6	23.415	25.178
18)	tc 4,4'-DDD	14.18	14.57	475.0E6	1293.0E6	22.563	25.165
19)	tcm 4,4'-DDT	14.58	15.03	516.1E6	1324.6E6	22.067	24.233
22)	tc Methoxychlor	15.28	16.00	1237.4E6	2869.9E6	113.699	123.316
	Sum Toxaphene			0	0	N.D.	N.D.
	Average Toxaphene					0.000	0.000
	Sum Chlordane			0	0	N.D.	N.D.
	Average Chlordane					0.000	0.000

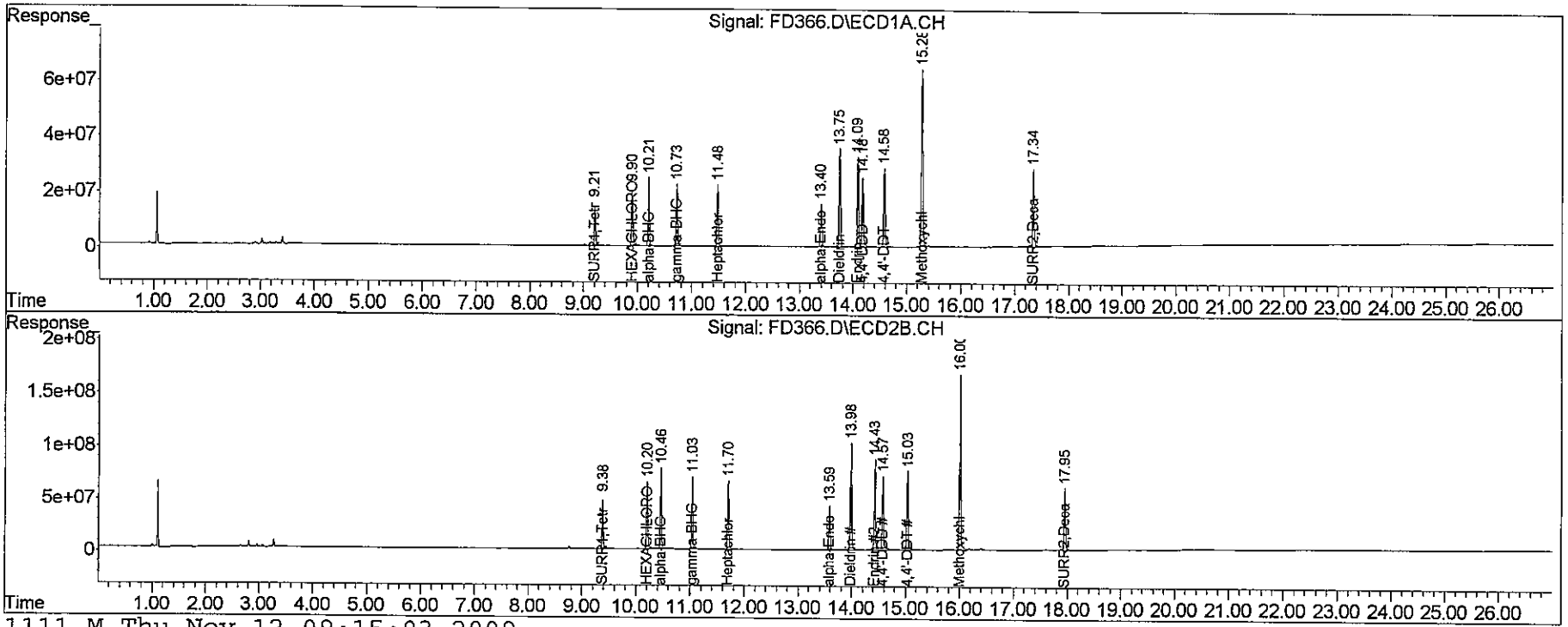
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD366.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 9:38 am
Operator : M.PEDRO
Sample : INDAML
Misc : INITIAL CAL
ALS Vial : 4 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 08:51:54 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m



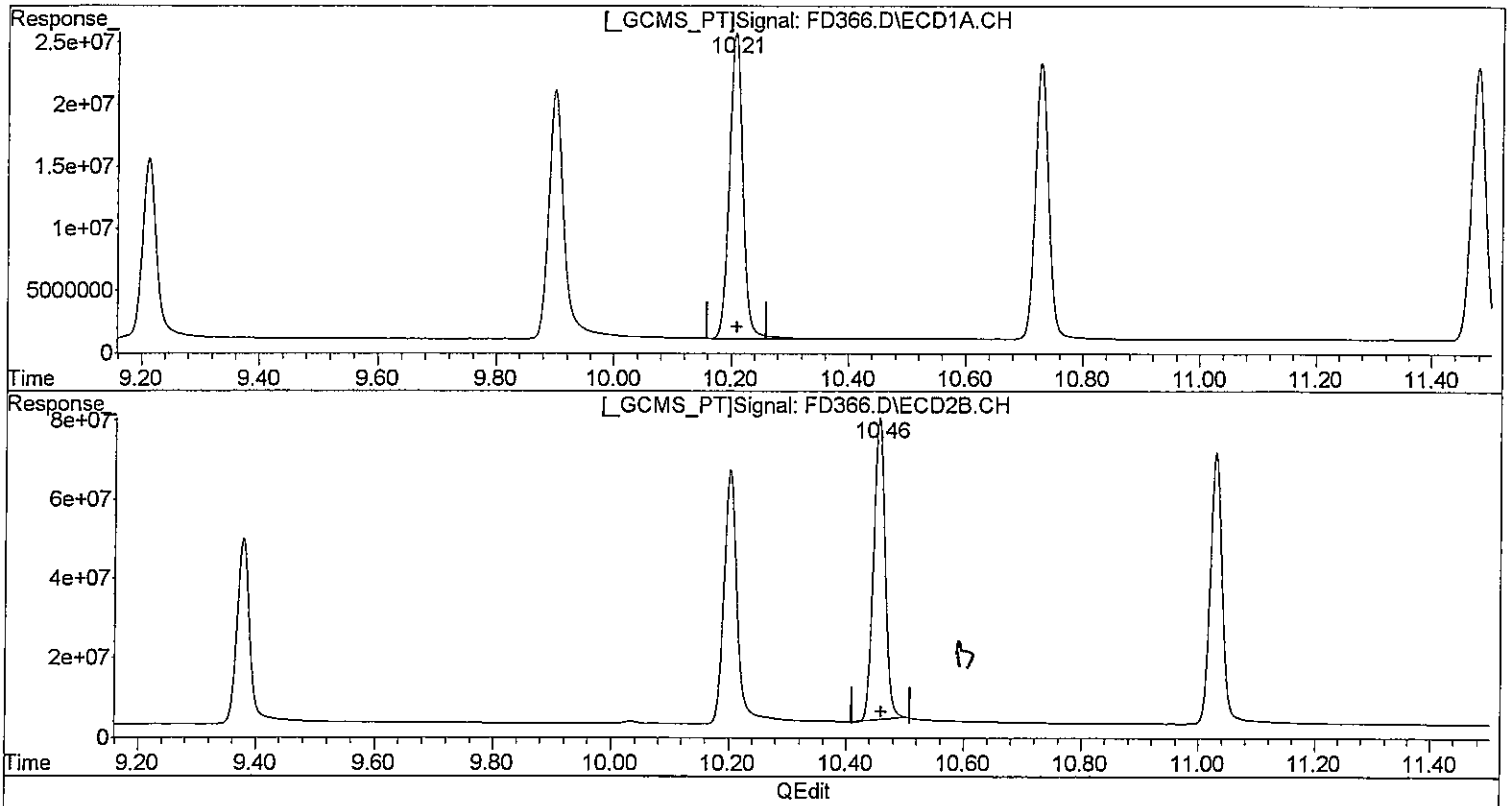
EPA608

Quantitation Report (Qedit)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD366.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 9:38 am
Operator : M.PEDRO
Sample : INDAML
Misc : INITIAL CAL
ALS Vial : 4 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 08:41:41 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m



(3) alpha-BHC (tc)
10.21min 10.799ug/l
response 395189145

(3) alpha-BHC #2 (tc)
10.46min 10.172ug/l
response 1048416151

(+) = Expected Retention Time

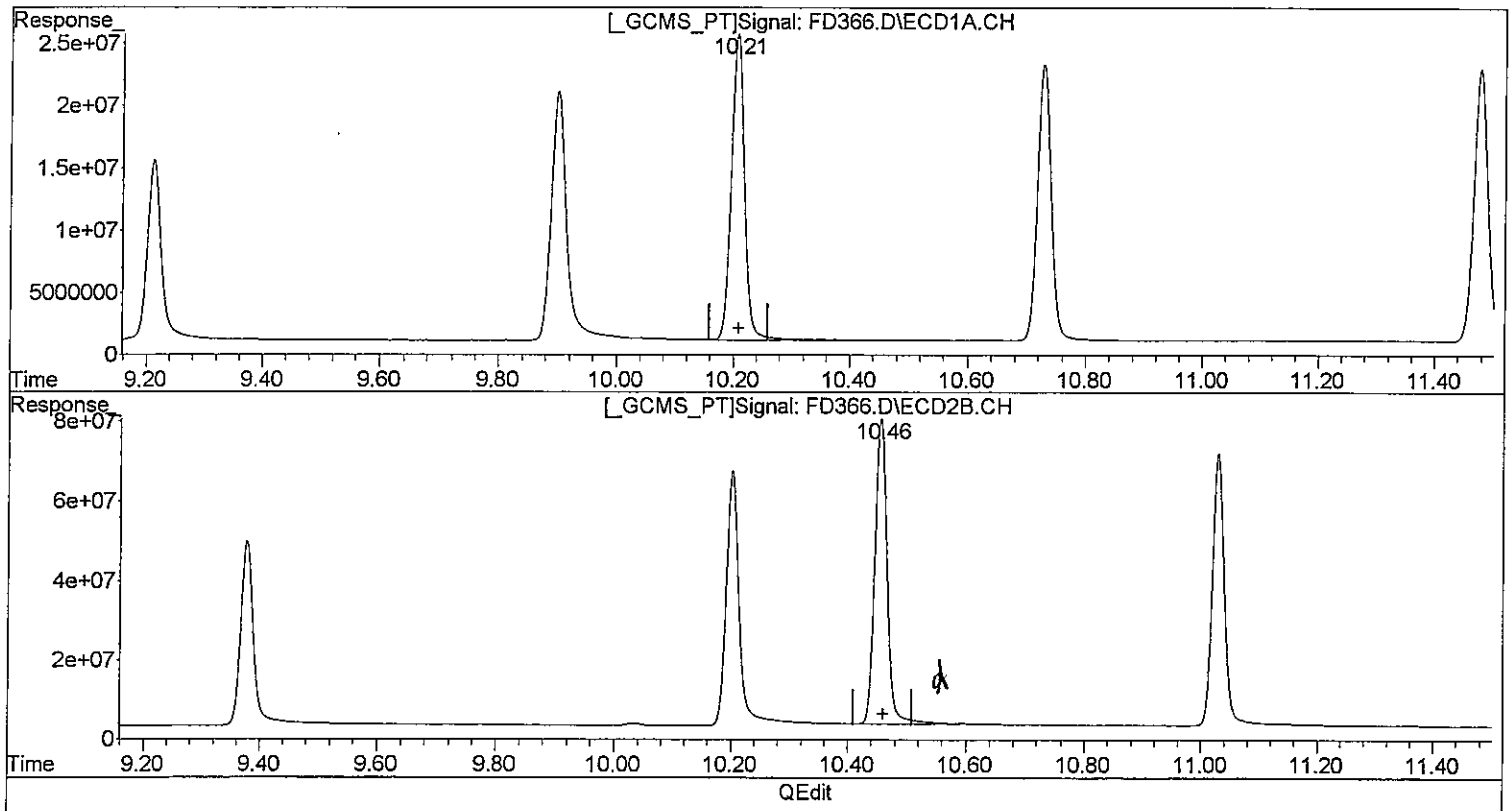
00344

Quantitation Report (Qedit)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD366.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 9:38 am
Operator : M.PEDRO
Sample : INDAML
Misc : INITIAL CAL
ALS Vial : 4 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 08:41:41 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m



(3) alpha-BHC (tc)
10.21min 10.799ug/l
response 395189145

(3) alpha-BHC #2 (tc)
10.46min 10.730ug/l m
response 1105900594

MP 11/12

MW 11/12

(+) = Expected Retention Time

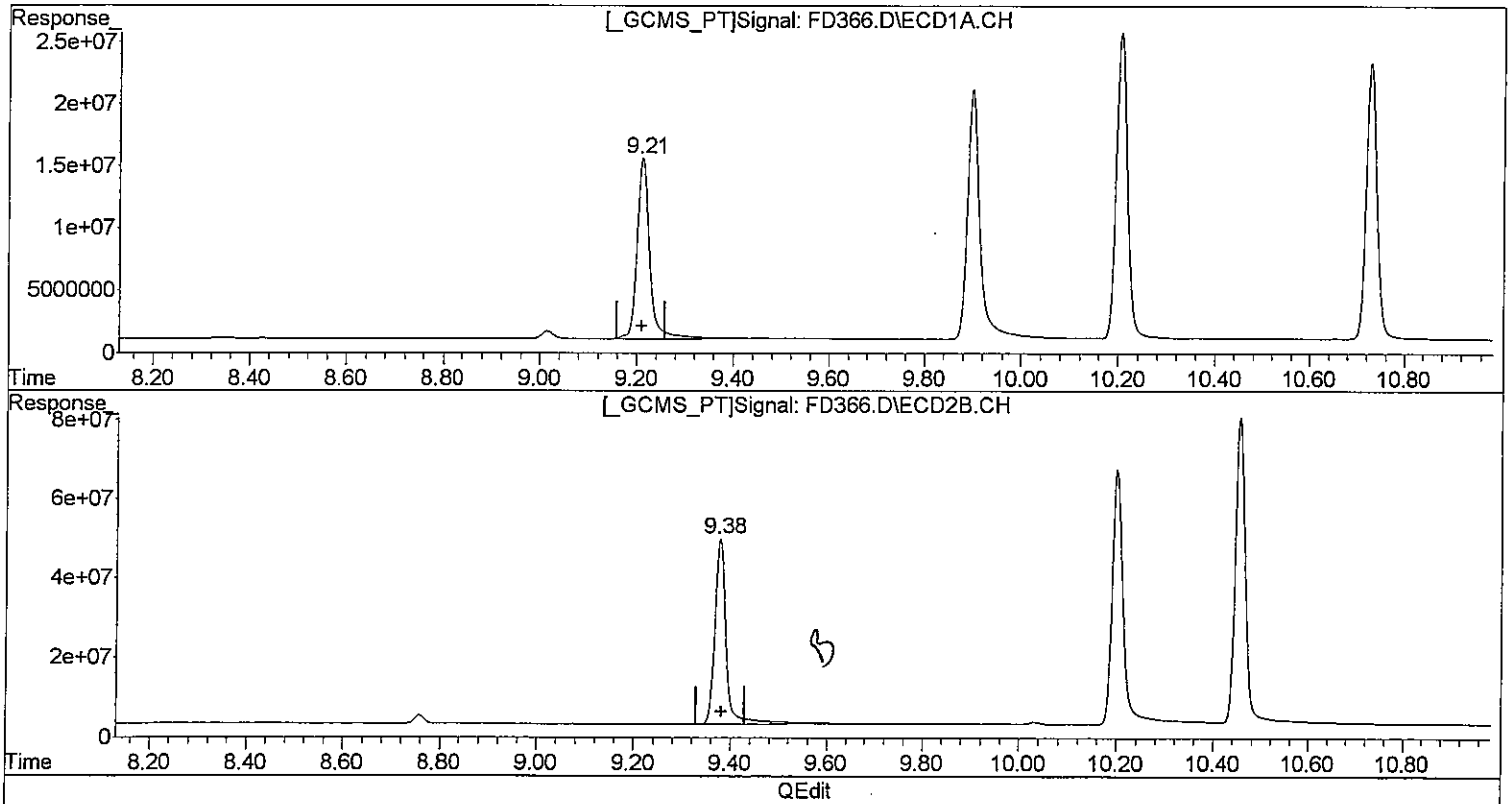
00345

Quantitation Report (Qedit)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD366.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 9:38 am
Operator : M.PEDRO
Sample : INDAML
Misc : INITIAL CAL
ALS Vial : 4 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 08:18:38 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m



(1) SURR1,Tetrac (S)
9.21min 10.845ug/l
response 257574059

(1) SURR1,Tetrac #2 (S)
9.38min 11.267ug/l
response 786622017

(+) = Expected Retention Time

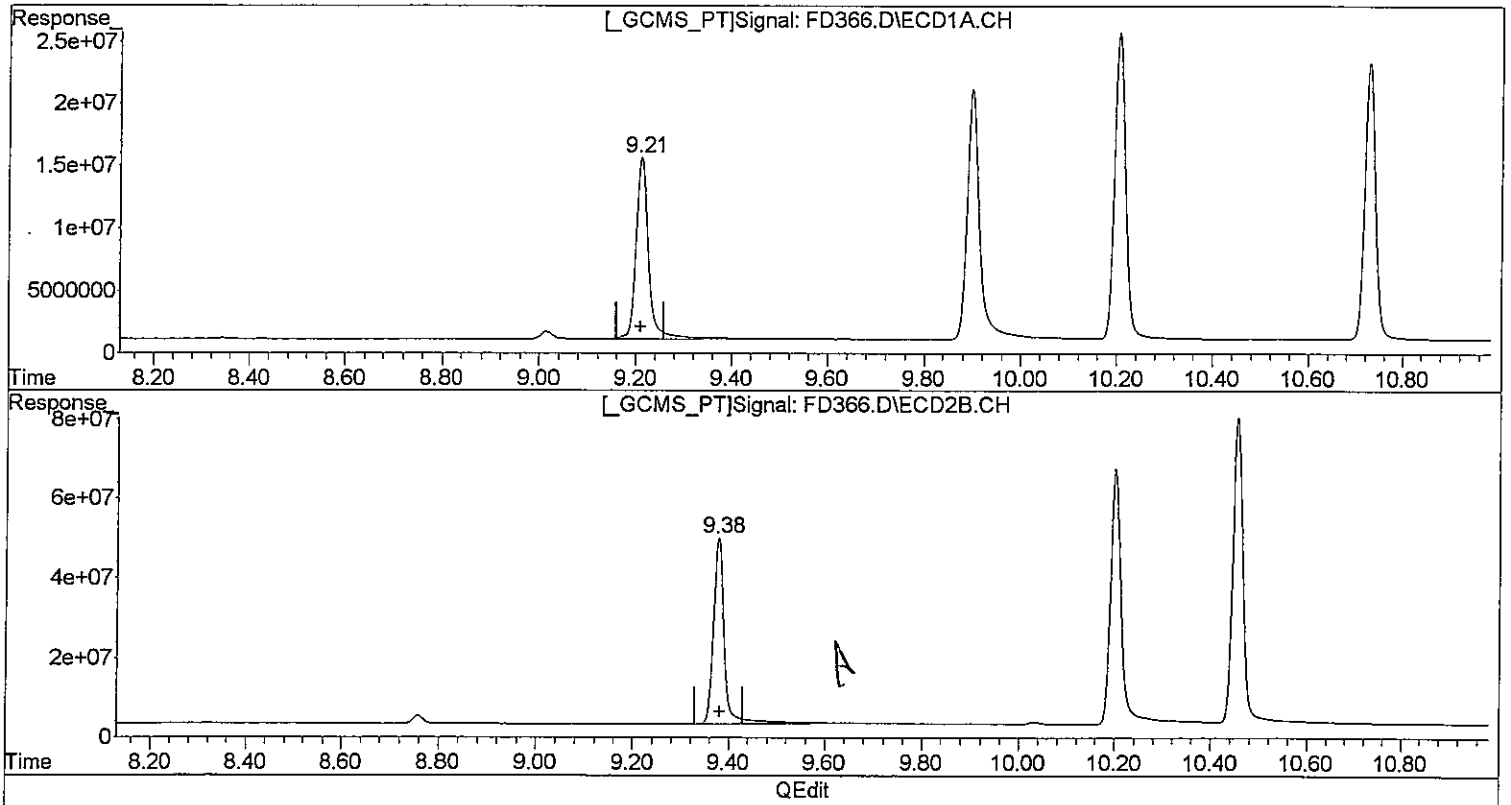
00346

Quantitation Report (Qedit)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD366.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 9:38 am
Operator : M.PEDRO
Sample : INDAML
Misc : INITIAL CAL
ALS Vial : 4 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 08:18:38 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m



(1) SURR1,Tetrac (S)
9.21min 10.845ug/l
response 257574059

(1) SURR1,Tetrac #2 (S)
9.38min 10.740ug/l m
response 749868023

(+) = Expected Retention Time

00347

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD367.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 10:14 am
Operator : M.PEDRO
Sample : INDAM
Misc : INITIAL CAL
ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 08:43:21 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/l	ug/l
	System Monitoring Compounds						
1)	S SURR1,Tetrac	9.21	9.38	524.7E6	1543.2E6	22.092	22.103
	Spiked Amount 100.000	Range 30 - 150		Recovery =		22.09%#	22.10%#
25)	S SURR2,Decachloro	17.34	17.95	966.4E6	2194.4E6	47.949	50.795
	Spiked Amount 100.000	Range 30 - 150		Recovery =		47.95%	50.80%
	Target Compounds						
2)	TC HEXACHLOROBENZEN	9.90	10.20	751.3E6	2022.9E6	23.690	21.676
3)	tc alpha-BHC	10.21	10.46	845.1E6	2237.2E6	23.093	21.706m
4)	tcm gamma-BHC (L	10.73	11.03	749.3E6	2072.4E6	22.801	22.483
5)	tcm Heptachlor	11.48	11.70	745.6E6	2013.3E6	22.796	22.969
10)	tc alpha-Endosu	13.40	13.58	565.0E6	1407.3E6	23.151	23.518
14)	tcm Dieldrin	13.75	13.98	1283.7E6	3357.7E6	46.947	50.754
15)	tcm Endrin	14.09	14.43	1184.5E6	2862.6E6	48.547	50.142
18)	tc 4,4'-DDD	14.18	14.57	1000.3E6	2599.9E6	47.517	50.597
19)	tcm 4,4'-DDT	14.58	15.03	1085.0E6	2724.6E6	46.394	49.844
22)	tc Methoxychlor	15.28	16.00	2487.7E6	5620.9E6	228.579	241.522
	Sum Toxaphene			0	0	N.D.	N.D.
	Average Toxaphene					0.000	0.000
	Sum Chlordane			0	0	N.D.	N.D.
	Average Chlordane					0.000	0.000

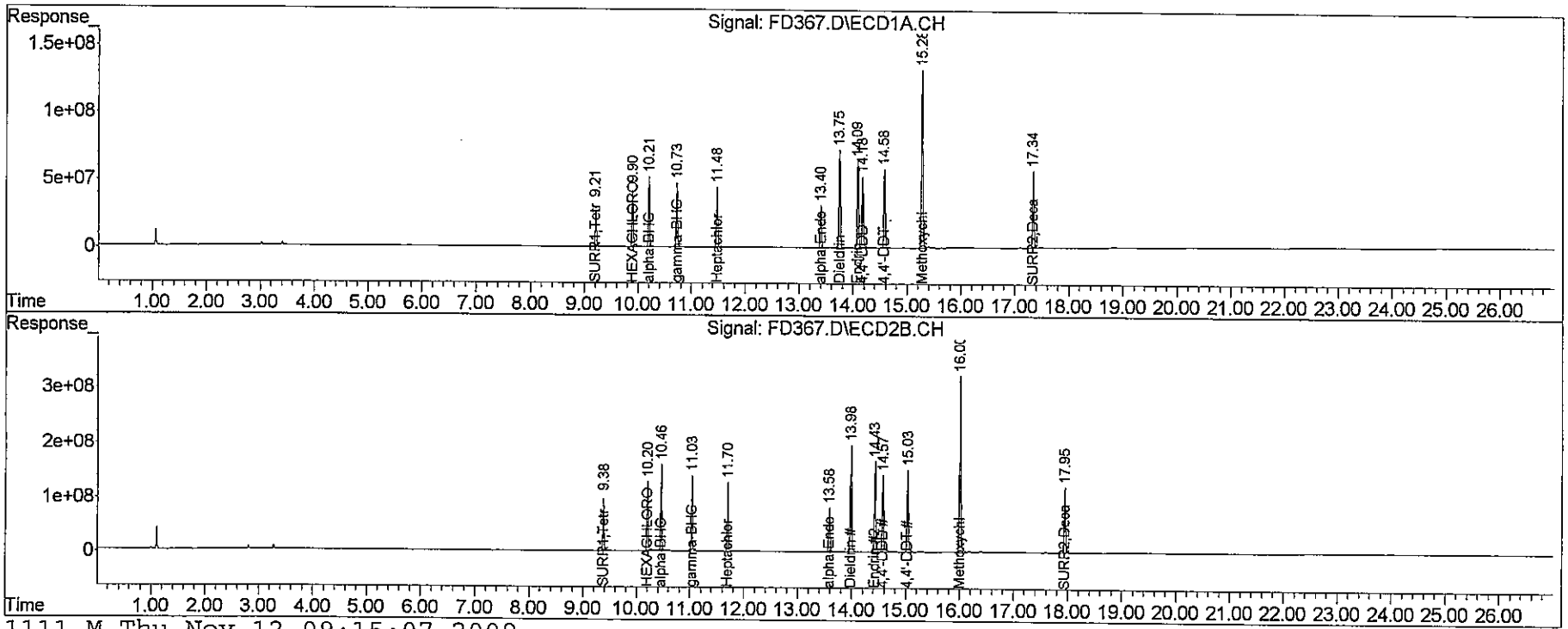
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD367.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 10:14 am
Operator : M.PEDRO
Sample : INDAM
Misc : INITIAL CAL
ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 08:43:21 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m



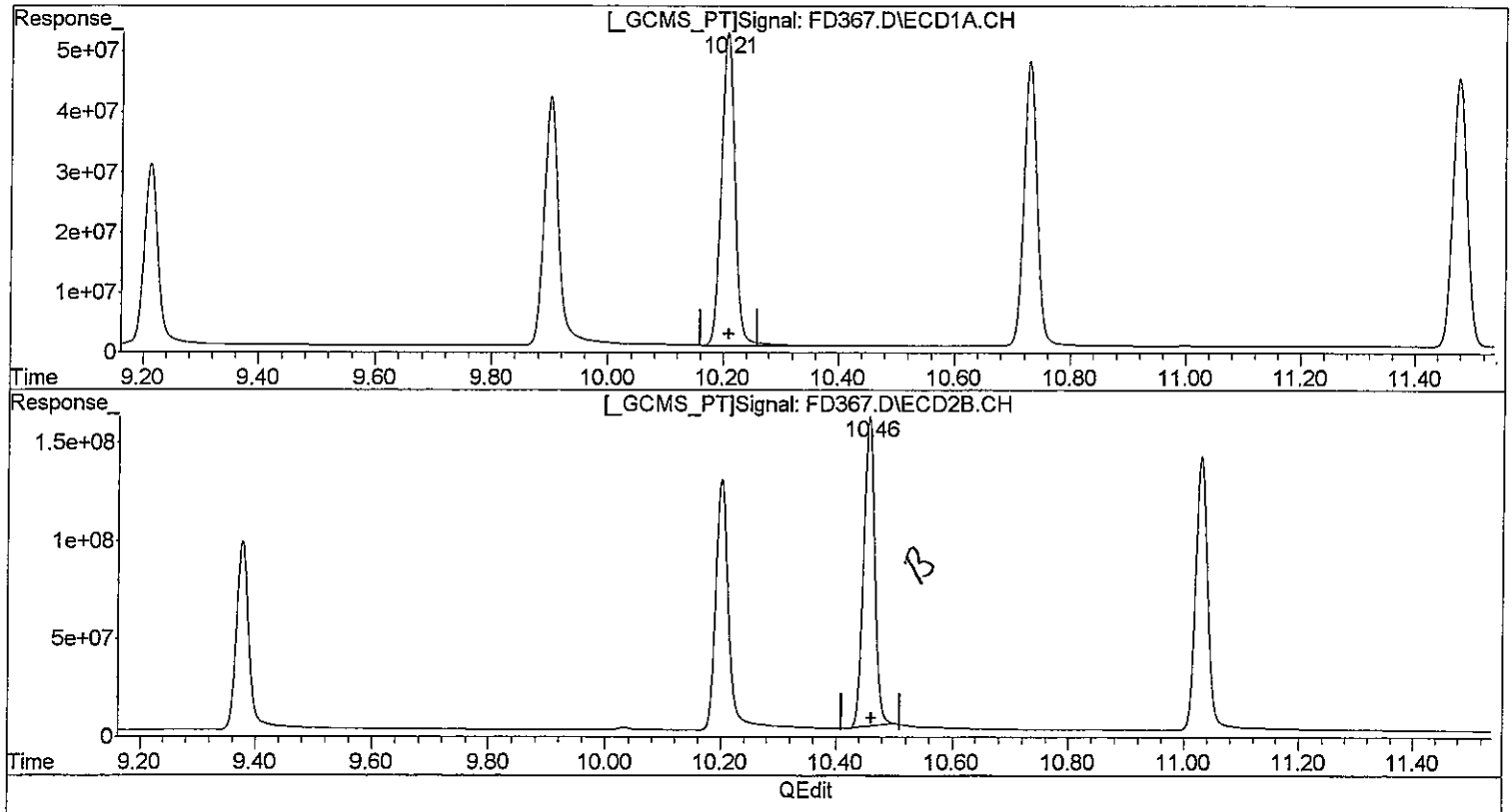
6tc09

Quantitation Report (Qedit)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD367.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 10:14 am
Operator : M.PEDRO
Sample : INDAM
Misc : INITIAL CAL
ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 08:18:42 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m



(3) alpha-BHC (tc)
10.21min 23.093ug/l
response 845071043

(3) alpha-BHC #2 (tc)
10.46min 20.919ug/l
response 2156018382

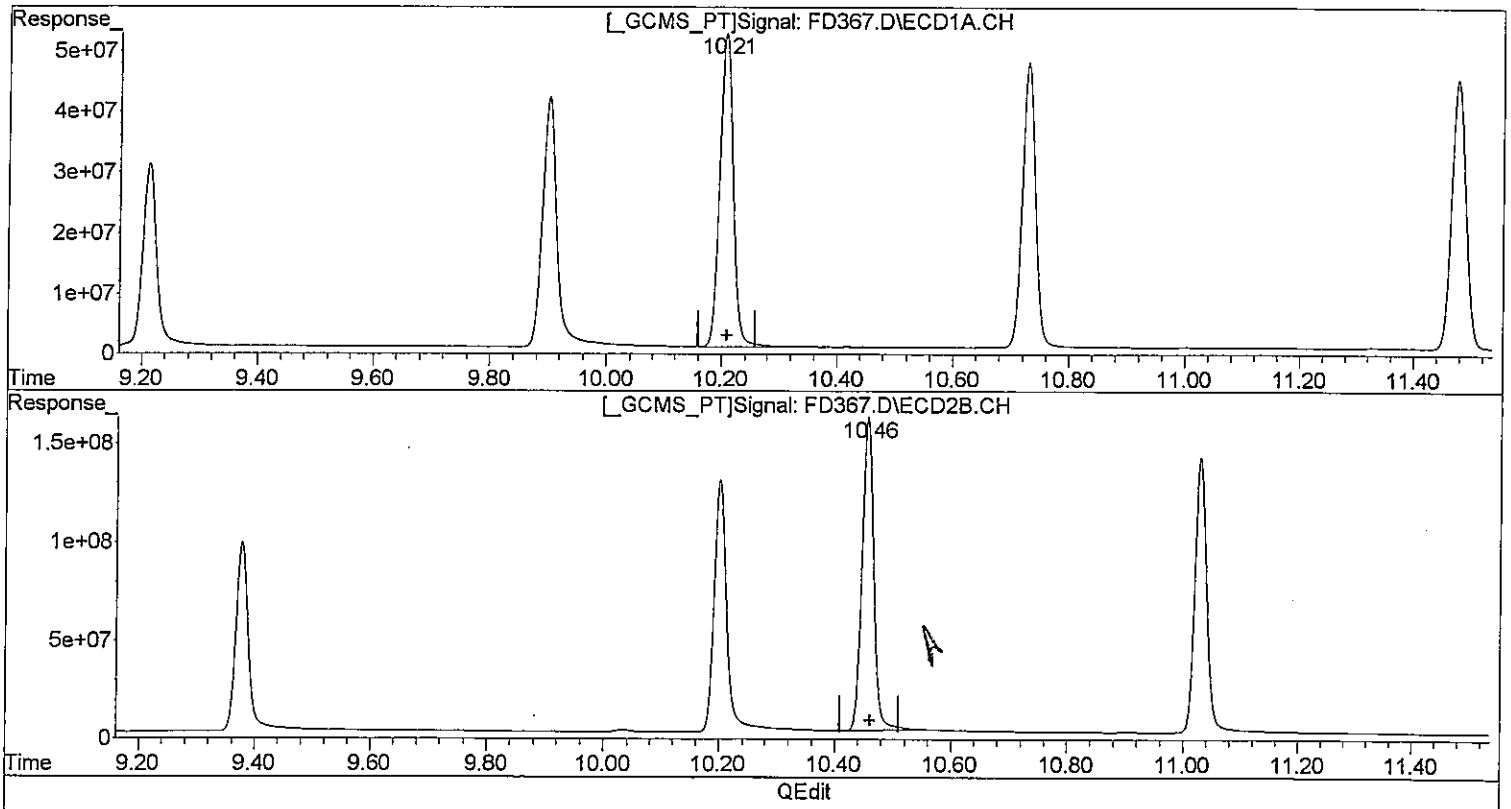
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD367.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 10:14 am
Operator : M.PEDRO
Sample : INDAM
Misc : INITIAL CAL
ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 08:18:42 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m



QEdit

(3) alpha-BHC (tc)
10.21min 23.093ug/l
response 845071043

(3) alpha-BHC #2 (tc)
10.46min 21.706ug/l m
response 2237175802

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD368.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 10:49 am
Operator : M.PEDRO
Sample : INDAMH
Misc : INITIAL CAL
ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 08:45:11 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/l	ug/l
	System Monitoring Compounds						
1)	S SURR1,Tetrac	9.21	9.38	1076.6E6	3105.2E6	45.329	44.476
	Spiked Amount 100.000	Range 30 - 150		Recovery =		45.33%	44.48%
25)	S SURR2,Decachloro	17.34	17.95	1961.4E6	4309.7E6	97.315	99.759
	Spiked Amount 100.000	Range 30 - 150		Recovery =		97.31%	99.76%
	Target Compounds						
2)	TC HEXACHLOROBENZEN	9.90	10.20	1521.5E6	4057.5E6	47.975	43.478
3)	tc alpha-BHC	10.21	10.46	1747.9E6	4598.4E6	47.764	44.616
4)	tcm gamma-BHC (L	10.73	11.03	1555.3E6	4170.5E6	47.327	45.246
5)	tcm Heptachlor	11.48	11.70	1513.6E6	3952.8E6	46.275	45.095
10)	tc alpha-Endosu	13.40	13.59	1155.3E6	2810.8E6	47.342	46.975
14)	tcm Dieldrin	13.75	13.98	2591.5E6	6493.0E6	94.776	98.146
15)	tcm Endrin	14.09	14.43	2394.5E6	5608.5E6	98.140	98.239
18)	tc 4,4'-DDD	14.18	14.57	2038.8E6	4903.4E6	96.847	95.428
19)	tcm 4,4'-DDT	14.58	15.03	2232.6E6	5409.9E6	95.466	98.969
22)	tc Methoxychlor	15.28	16.00	4929.4E6	10780.4E6	452.936	463.222
	Sum Toxaphene			0	0	N.D.	N.D.
	Average Toxaphene					0.000	0.000
	Sum Chlordane			0	0	N.D.	N.D.
	Average Chlordane					0.000	0.000

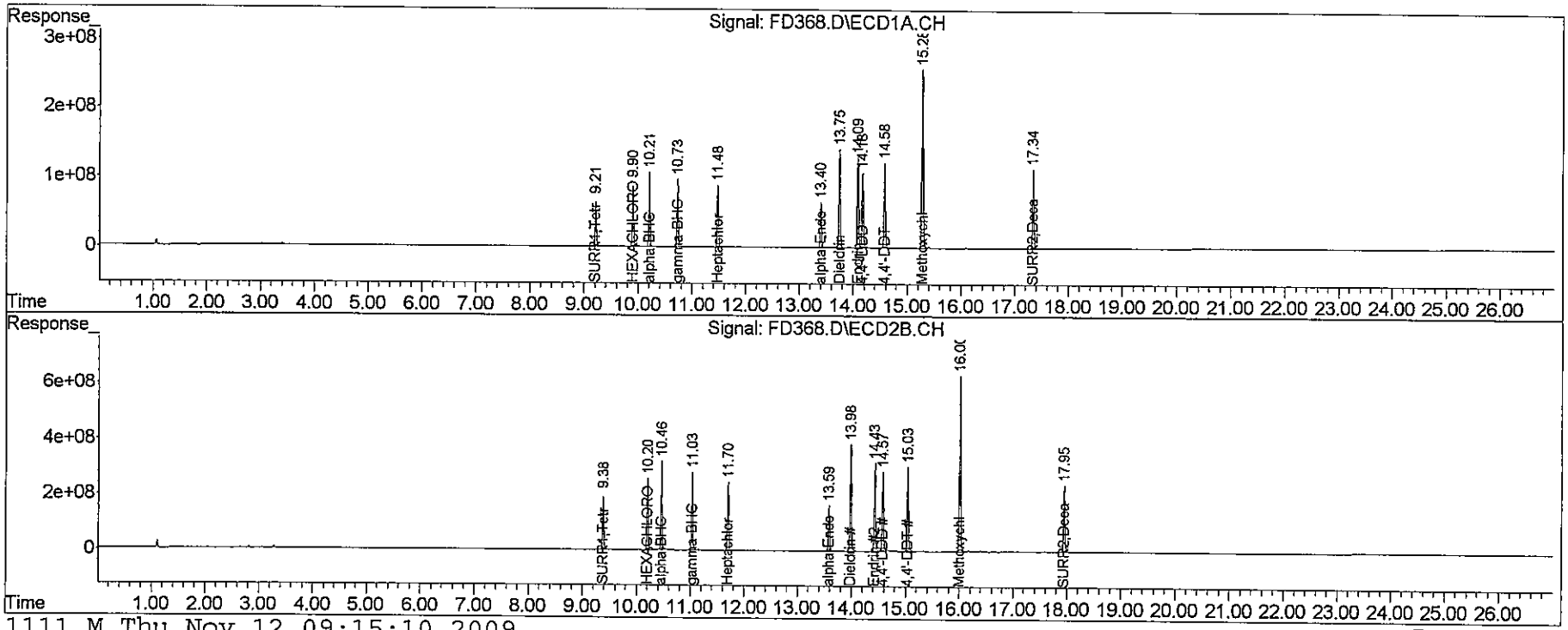
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD368.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 10:49 am
Operator : M.PEDRO
Sample : INDAMH
Misc : INITIAL CAL
ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 08:45:11 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m



Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD369.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 11:25 am
Operator : M.PEDRO
Sample : INDAH
Misc : INITIAL CAL
ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 08:50:53 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/l	ug/l
	System Monitoring Compounds						
1)	S SURR1,Tetrac	9.21	9.38	2197.8E6	6096.1E6	92.534	87.314
	Spiked Amount 100.000	Range 30 - 150		Recovery =		92.53%	87.31%
25)	S SURR2,Decachloro	17.34	17.95	3903.9E6	8576.8E6	193.696	198.533
	Spiked Amount 100.000	Range 30 - 150		Recovery =		193.70%#	198.53%#
	Target Compounds						
2)	TC HEXACHLOROBENZEN	9.90	10.20	3053.6E6	8067.2E6	96.287	86.443
3)	tc alpha-BHC	10.21	10.46	3564.9E6	9277.1E6	97.417	90.011
4)	tcm gamma-BHC (L	10.73	11.03	3182.5E6	8390.1E6	96.843	91.024
5)	tcm Heptachlor	11.48	11.70	3011.1E6	7595.0E6	92.060	86.647
10)	tc alpha-Endosu	13.40	13.59	2312.7E6	4797.2E6	94.770	80.171
14)	tcm Dieldrin	13.75	13.98	5035.8E6	12302.5E6	184.169	185.960
15)	tcm Endrin	14.09	14.43	4707.0E6	10252.2E6	192.919	179.580
18)	tc 4,4'-DDD	14.18	14.57	4081.2E6	10076.4E6	193.862	196.101
19)	tcm 4,4'-DDT	14.58	15.03	4329.5E6	10625.1E6	185.131	194.377
22)	tc Methoxychlor	15.28	16.00	9529.8E6	20218.6E6	875.638	868.768
	Sum Toxaphene			0	0	N.D.	N.D.
	Average Toxaphene					0.000	0.000
	Sum Chlordane			0	0	N.D.	N.D.
	Average Chlordane					0.000	0.000

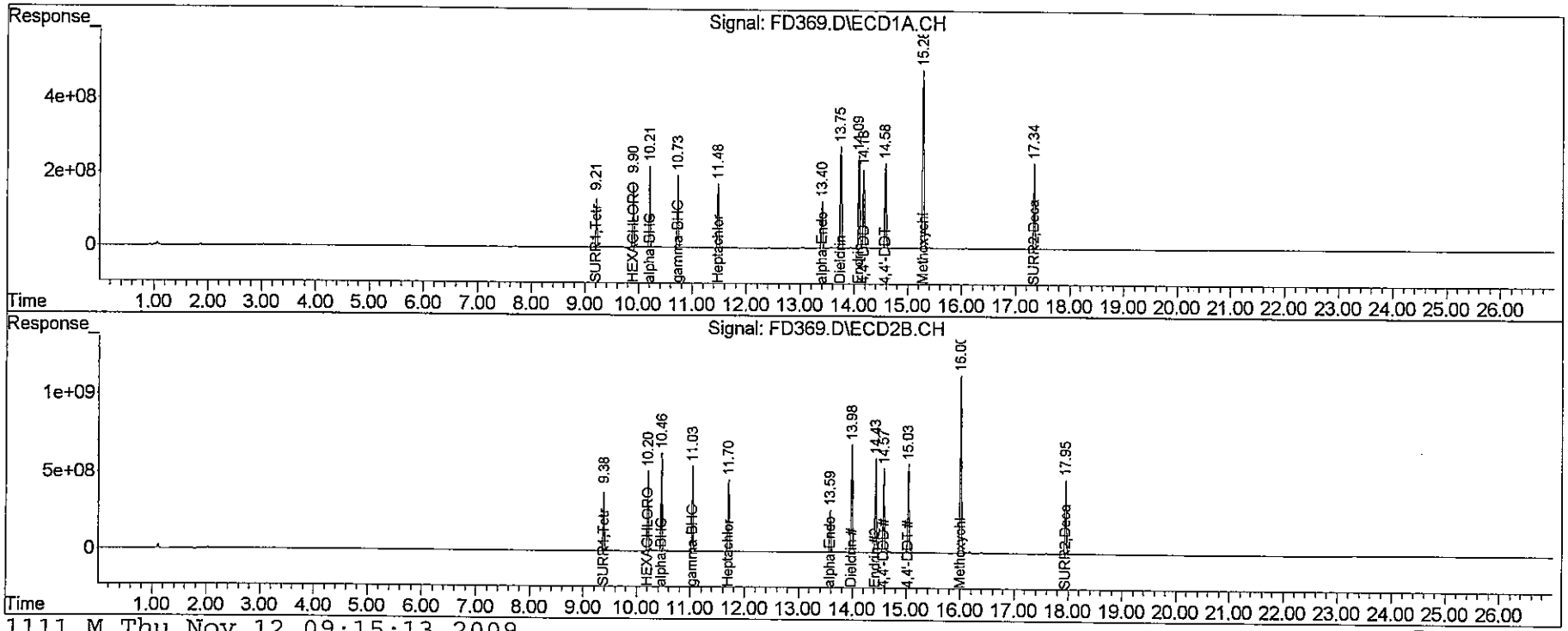
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD369.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 11:25 am
Operator : M.PEDRO
Sample : INDAH
Misc : INITIAL CAL
ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 08:50:53 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m



Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD370.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 12:01 pm
Operator : M.PEDRO
Sample : INDBL
Misc : INITIAL CAL
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 08:53:54 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/l	ug/l
	System Monitoring Compounds						
1)	S SURR1,Tetrac	9.21	9.38	127.9E6	437.5E6	5.386	6.267
	Spiked Amount 100.000	Range 30 - 150		Recovery =		5.39%#	6.27%#
25)	S SURR2,Decachloro	17.34	17.95	261.8E6	614.8E6	12.989	14.230
	Spiked Amount 100.000	Range 30 - 150		Recovery =		12.99%#	14.23%#
	Target Compounds						
6)	tcm Aldrin	11.93	12.18	158.7E6	459.5E6	5.207	5.631m
7)	tc beta-BHC	10.89	11.18	76203585	213.0E6	5.562	5.256m
8)	tc delta-BHC	11.16	11.63	165.0E6	475.9E6	5.007	5.207m
9)	tc Heptachlor E	12.83	13.02	151.8E6	457.5E6	5.505	6.419
11)	tc gamma-Chlord	13.02	13.30	146.6E6	459.2E6	5.331	6.411
12)	tc alpha-Chlord	13.21	13.50	135.4E6	407.4E6	5.263	5.932m
13)	tc 4,4'-DDE	13.32	13.75	280.7E6	759.5E6	10.610	11.420m
17)	tc beta-Endosul	14.42	14.74	247.5E6	744.1E6	10.725	13.347
20)	tc Endrin Aldeh	15.04	15.24	203.7E6	582.0E6	11.168	13.354
21)	tc Endosulfan S	15.69	15.64	236.3E6	624.1E6	11.129	12.428m
24)	tc Endrin Keton	16.09	16.40	270.5E6	691.9E6	11.391	13.114
	Sum Toxaphene			0	0	N.D.	N.D.
	Average Toxaphene					0.000	0.000
	Sum Chlordane			0	0	N.D.	N.D.
	Average Chlordane					0.000	0.000

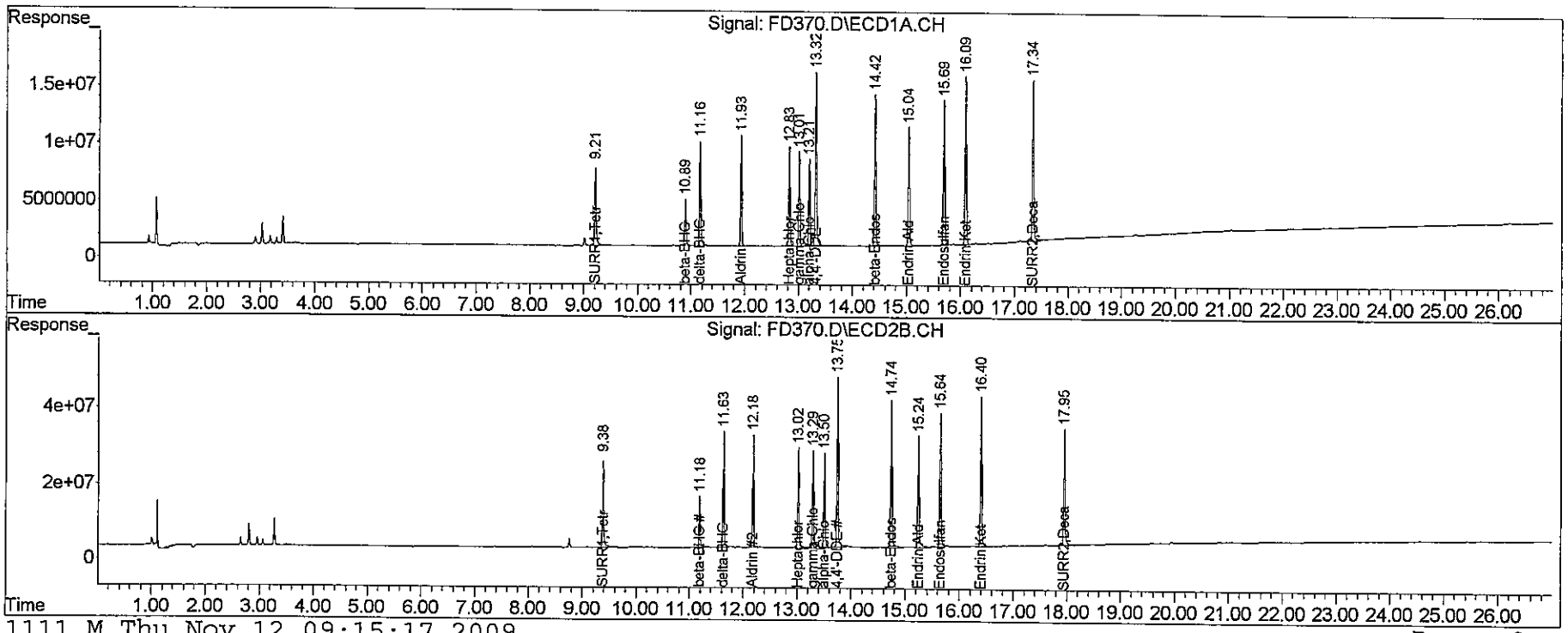
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD370.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 12:01 pm
Operator : M.PEDRO
Sample : INDBL
Misc : INITIAL CAL
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 08:53:54 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m



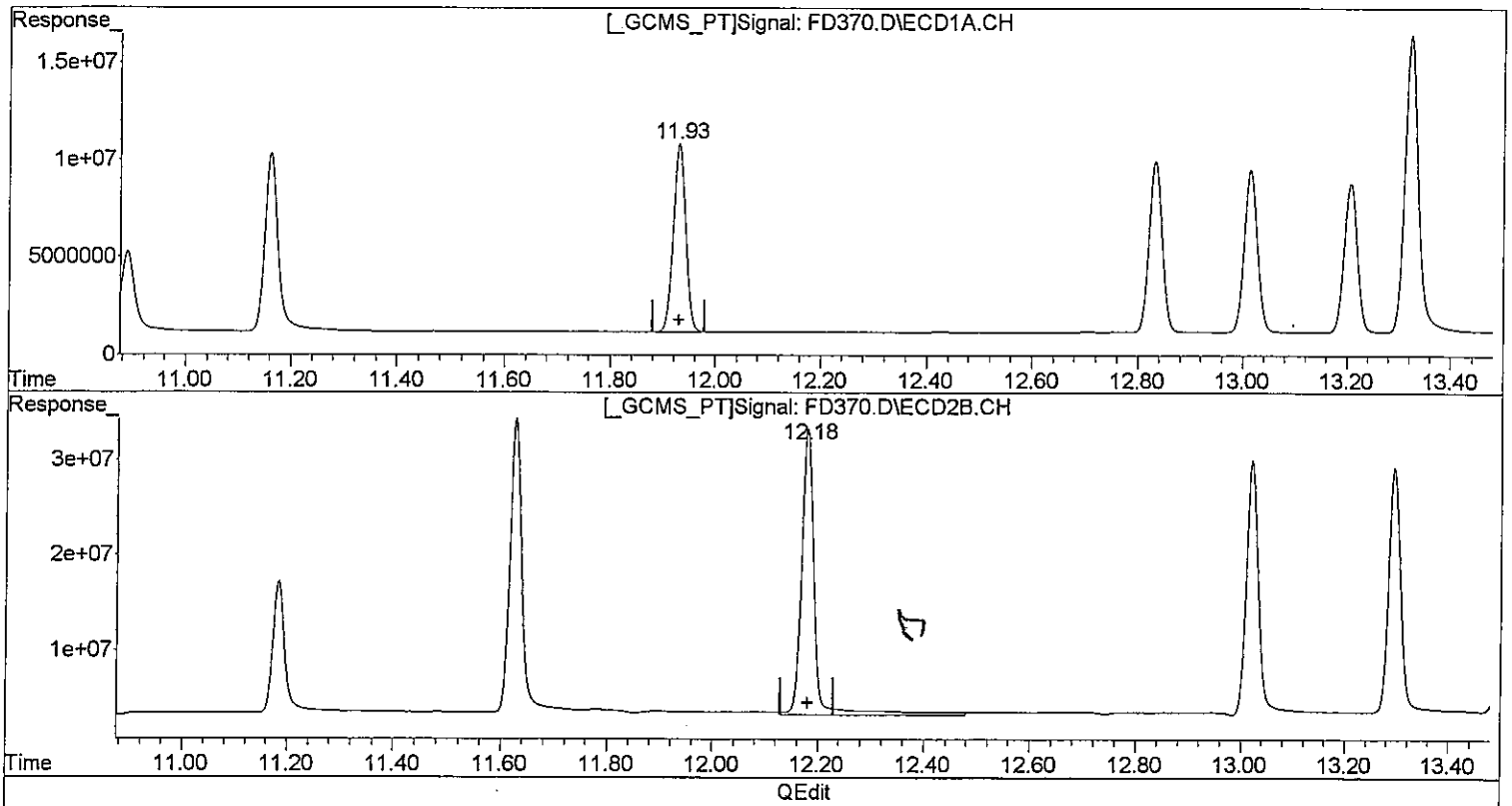
LCS08

Quantitation Report (Qedit)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD370.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 12:01 pm
Operator : M.PEDRO
Sample : INDBL
Misc : INITIAL CAL
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 08:18:56 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m



QEdit

(6) Aldrin (tcm)
11.93min 5.207ug/l
response 158689748

(6) Aldrin #2 (tcm)
12.18min 6.317ug/l
response 515385216

(+) = Expected Retention Time

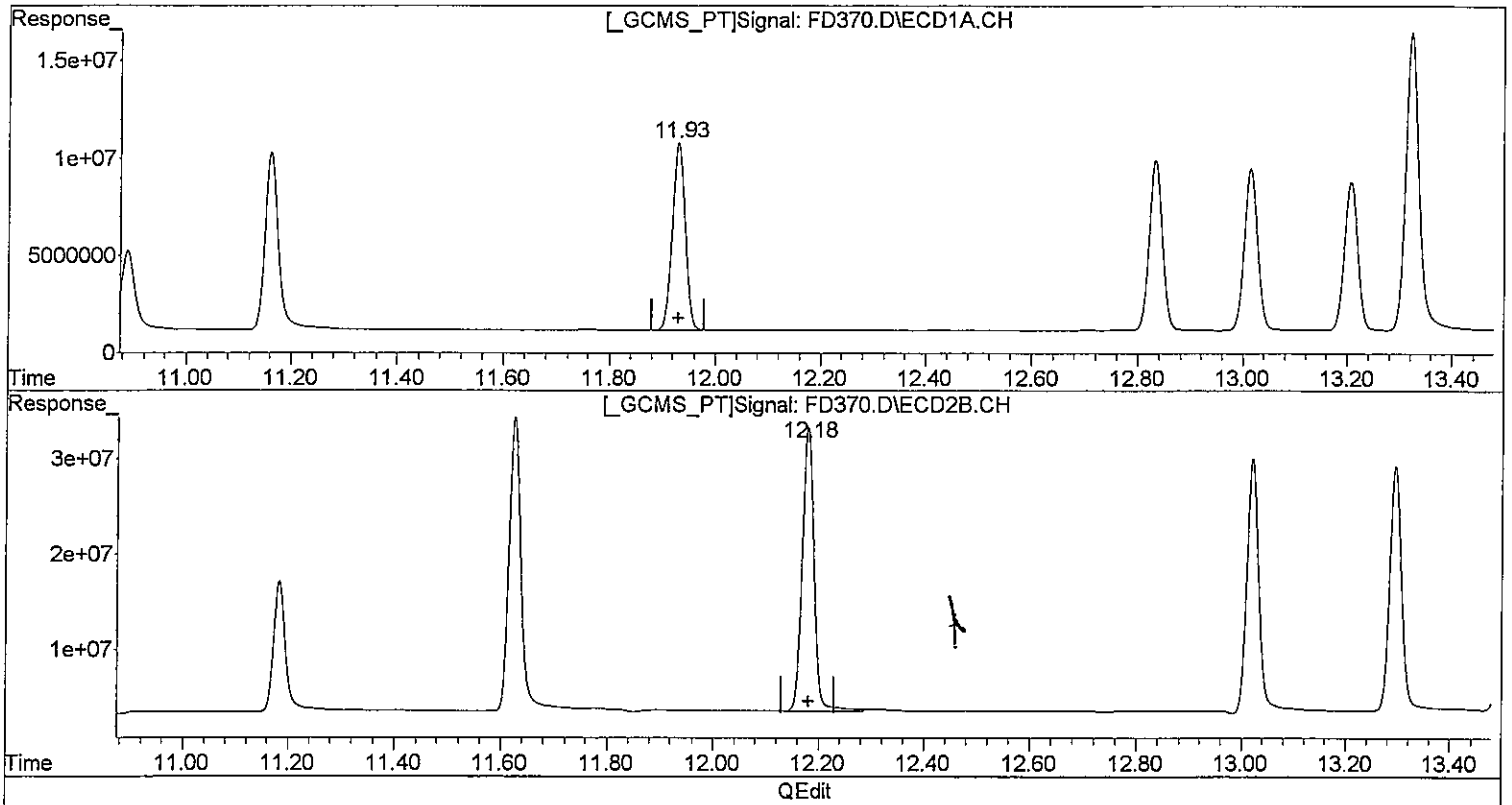
00358

Quantitation Report (Qedit)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD370.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 12:01 pm
Operator : M.PEDRO
Sample : INDBL
Misc : INITIAL CAL
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 08:18:56 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m



(6) Aldrin (tcm)
11.93min 5.207ug/l
response 158689748

(6) Aldrin #2 (tcm)
12.18min 5.631ug/l m
response 459466210

(+) = Expected Retention Time

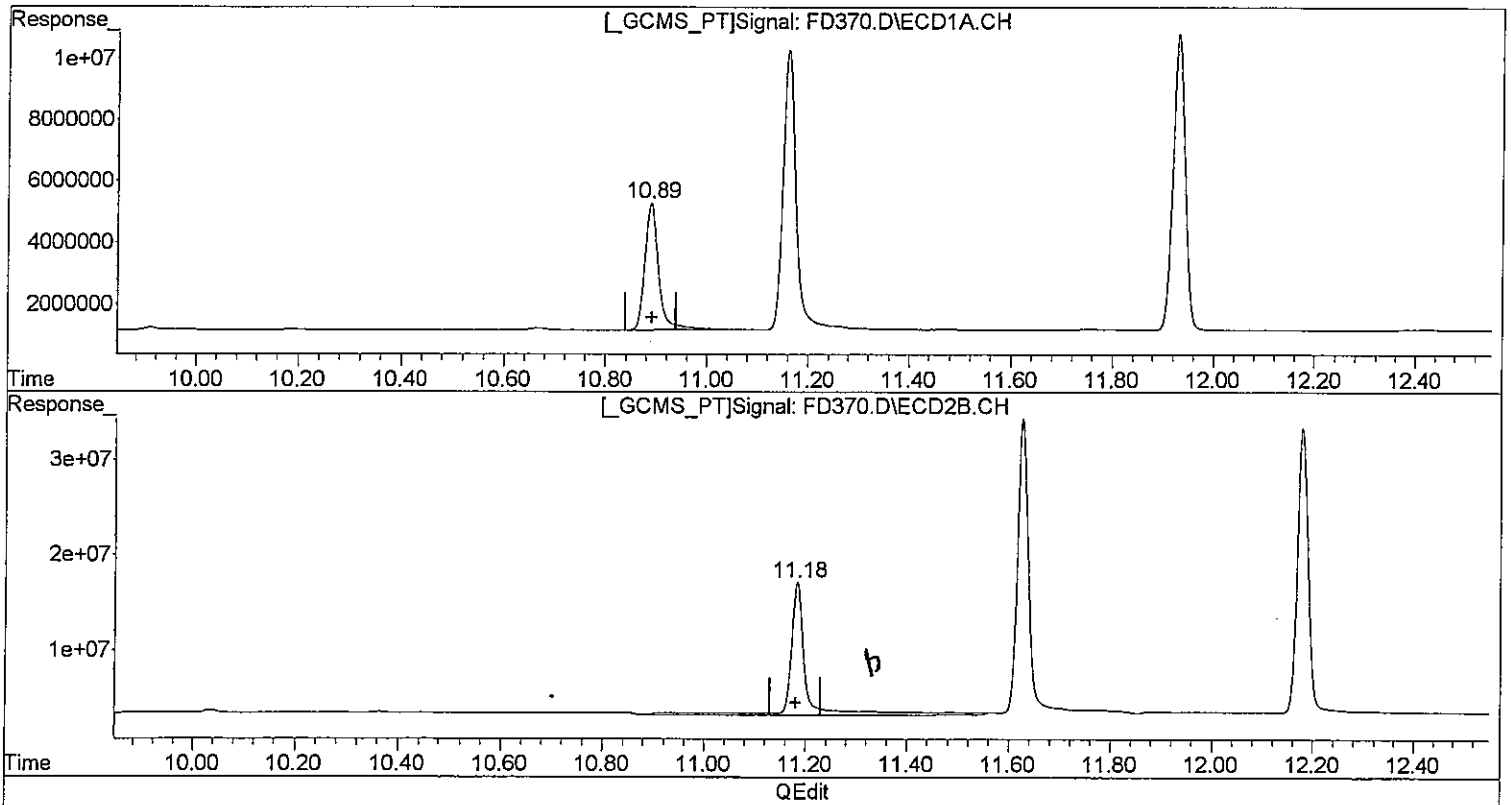
00359

Quantitation Report (Qedit)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD370.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 12:01 pm
Operator : M.PEDRO
Sample : INDBL
Misc : INITIAL CAL
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 08:18:56 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m



(7) beta-BHC (tc)
10.89min 5.562ug/l
response 76203585

(7) beta-BHC #2 (tc)
11.18min 7.588ug/l
response 307474608

(+) = Expected Retention Time

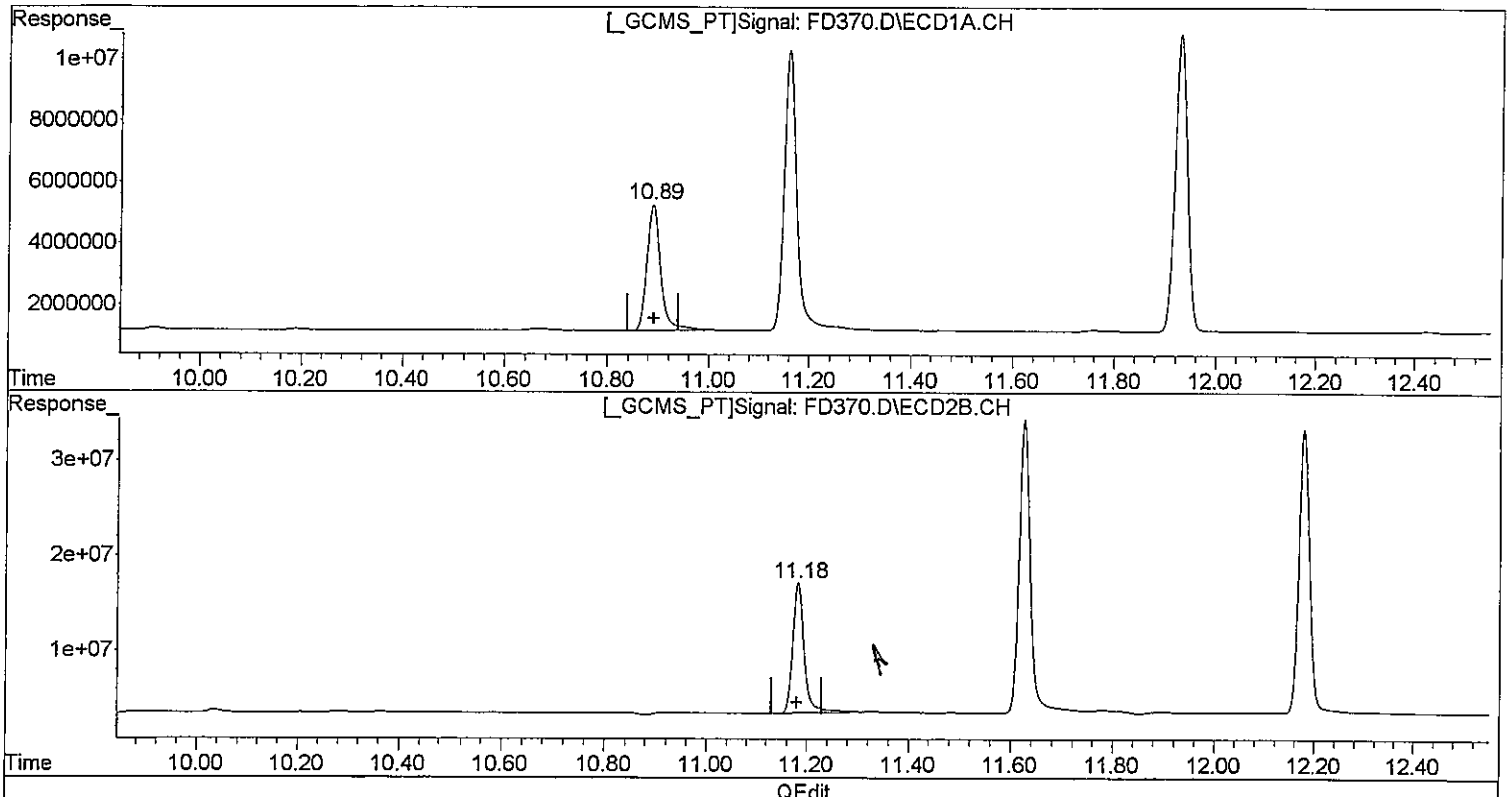
00360

Quantitation Report (Qedit)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD370.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 12:01 pm
Operator : M.PEDRO
Sample : INDBL
Misc : INITIAL CAL
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 08:18:56 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m



(7) beta-BHC (tc)
10.89min 5.562ug/l
response 76203585

(7) beta-BHC #2 (tc)
11.18min 5.256ug/l m
response 213009717

(+) = Expected Retention Time

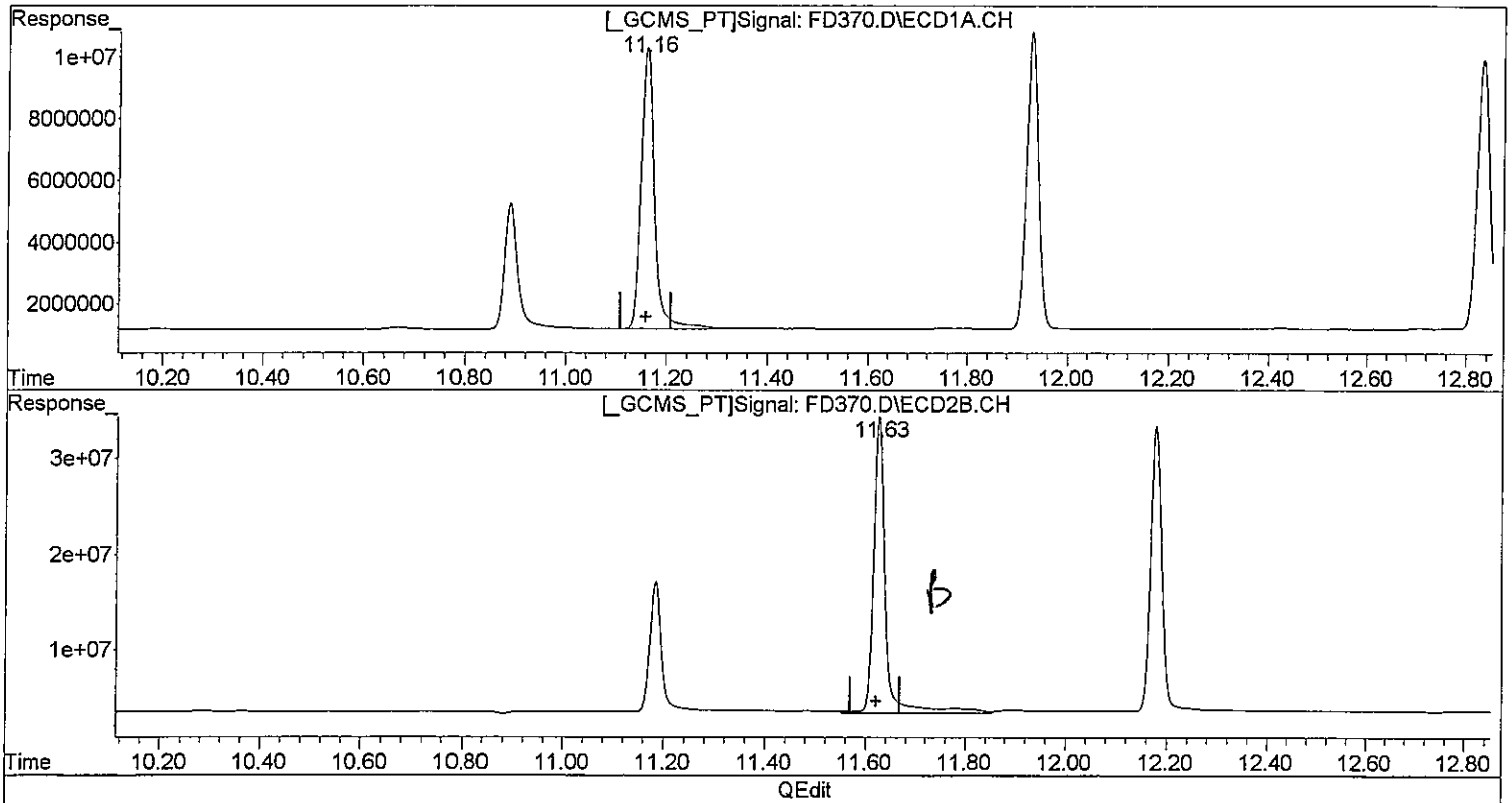
00361

Quantitation Report (Qedit)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD370.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 12:01 pm
Operator : M.PEDRO
Sample : INDBL
Misc : INITIAL CAL
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 08:18:56 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m



(8) delta-BHC (tc)
11.16min 5.007ug/l
response 164973096

(8) delta-BHC #2 (tc)
11.63min 5.803ug/l
response 530363052

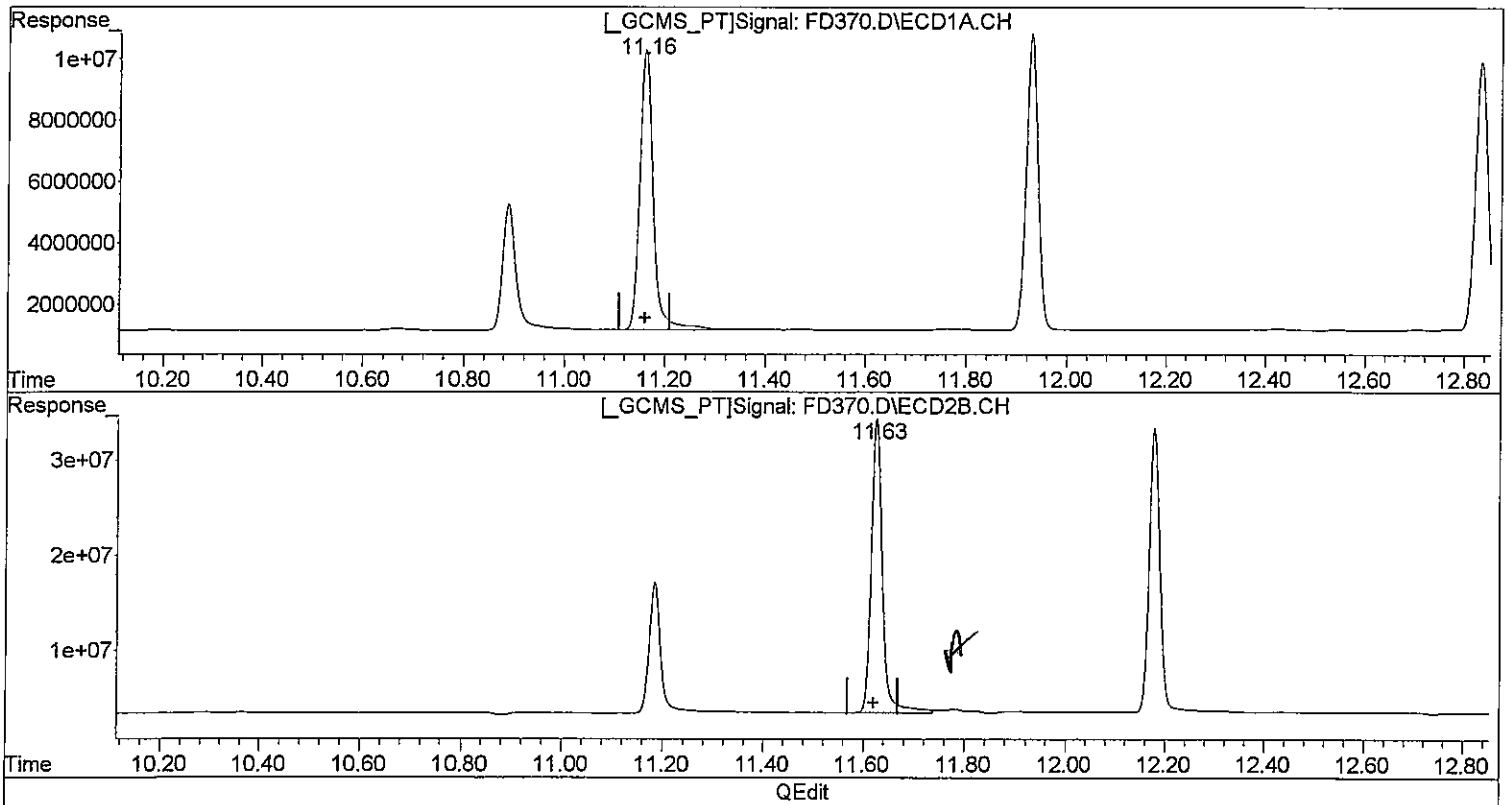
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD370.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 12:01 pm
Operator : M.PEDRO
Sample : INDBL
Misc : INITIAL CAL
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 08:18:56 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m



QEdit

(8) delta-BHC (tc)
11.16min 5.007ug/l
response 164973096

(8) delta-BHC #2 (tc)
11.63min 5.207ug/l m
response 475919698

MP 11/12

MW 11/11

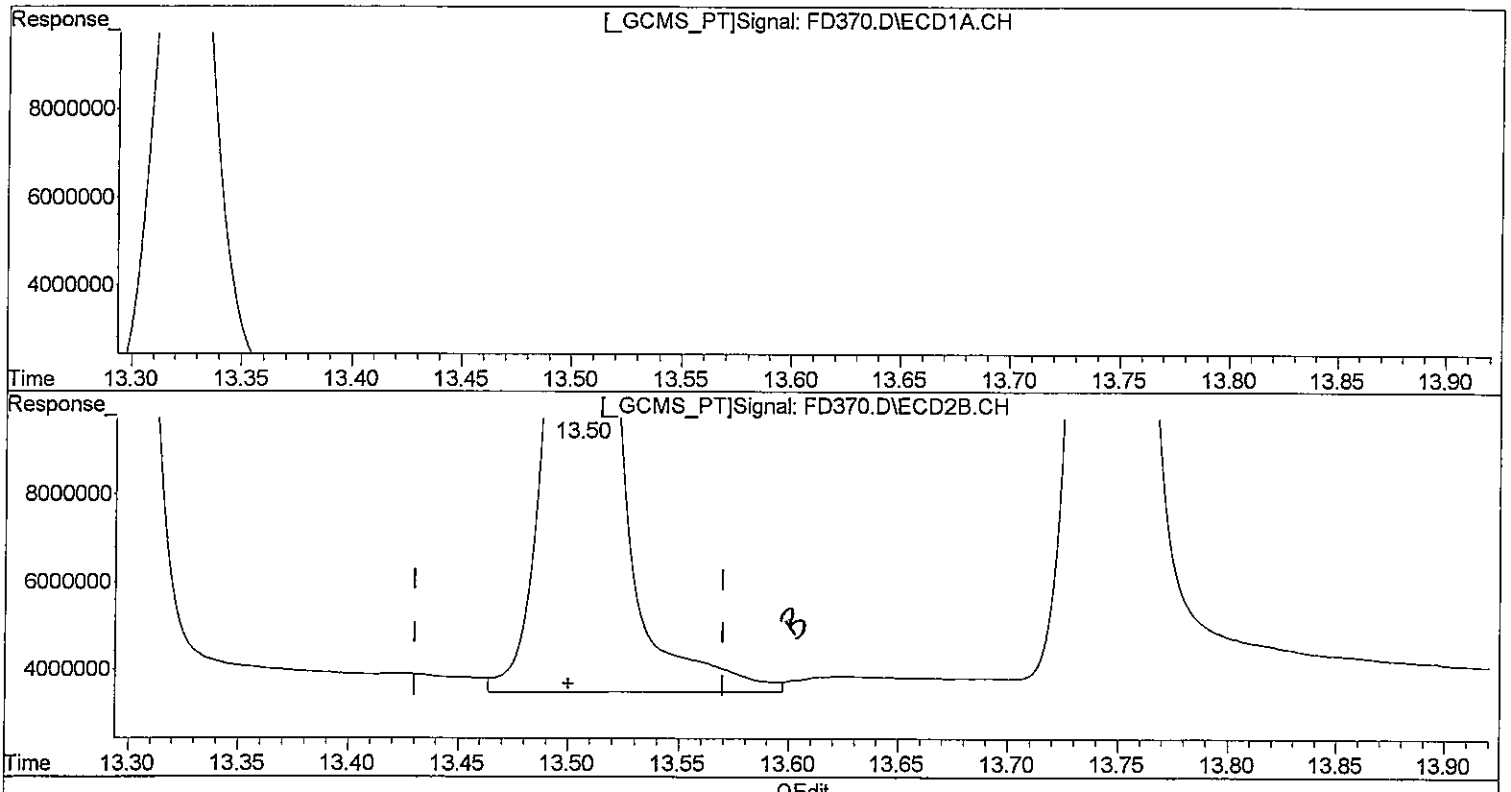
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD370.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 12:01 pm
Operator : M.PEDRO
Sample : INDBL
Misc : INITIAL CAL
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 08:18:56 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m



(12) alpha-Chlord (tc)
13.21min 5.263ug/l
response 135443525

(12) alpha-Chlord #2 (tc)
13.51min 6.180ug/l
response 424463721

Baer

(+) = Expected Retention Time

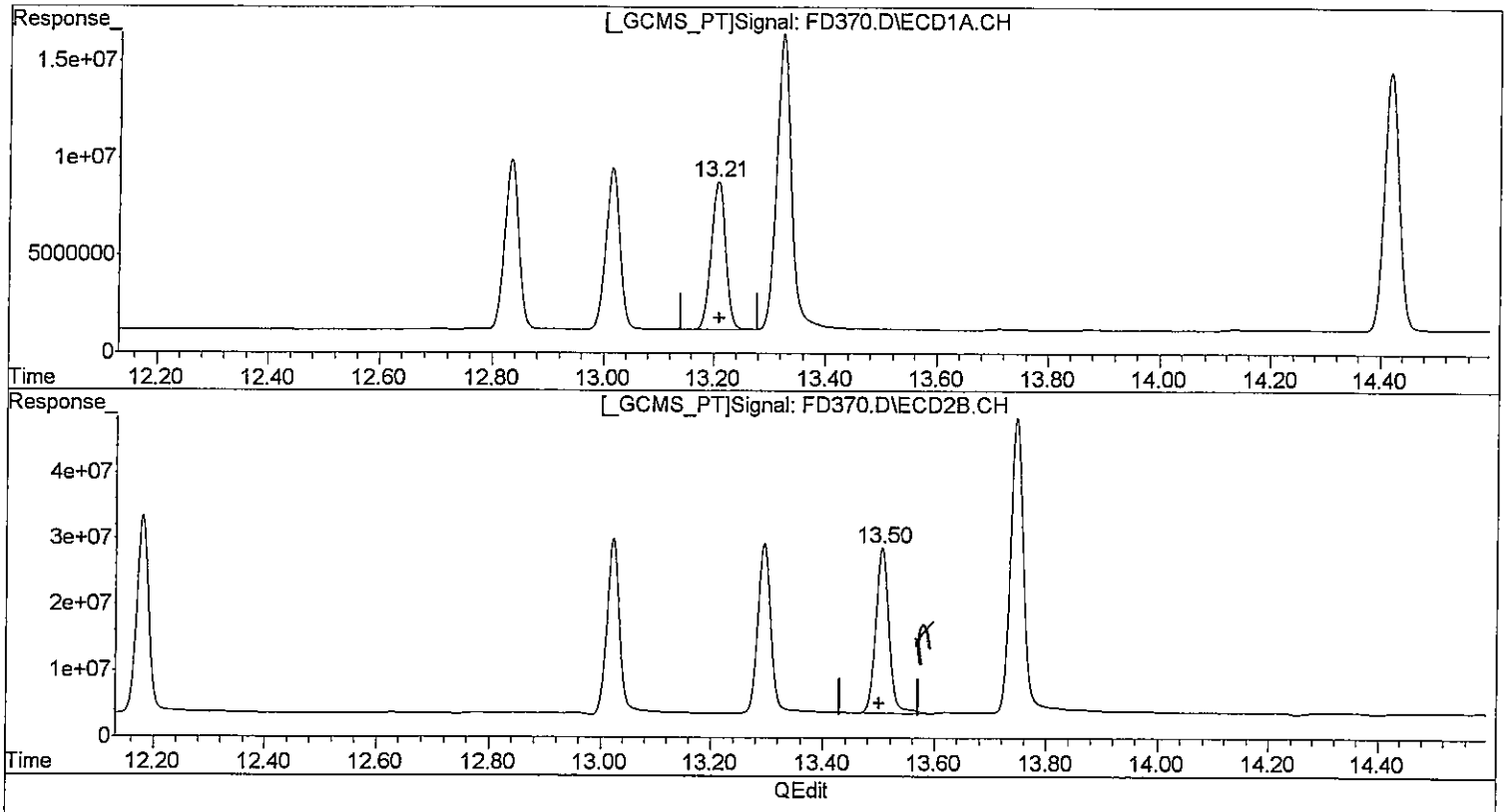
00364

Quantitation Report (Qedit)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD370.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 12:01 pm
Operator : M.PEDRO
Sample : INDBL
Misc : INITIAL CAL
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 08:18:56 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m



QEdit

(12) alpha-Chlord (tc)
13.21min 5.263ug/l
response 135443525

(12) alpha-Chlord #2 (tc)
13.50min 5.932ug/l m
response 407423262

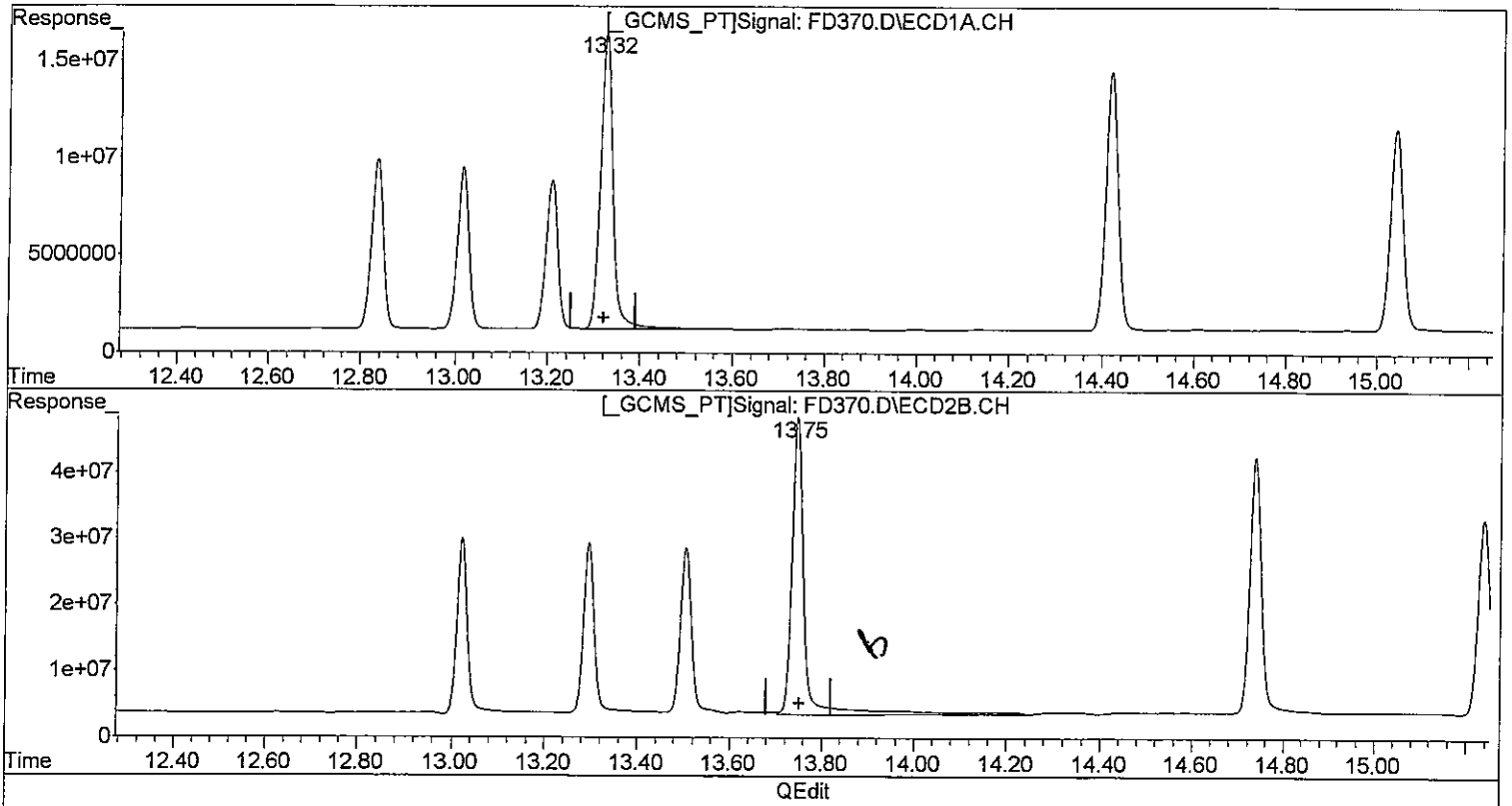
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD370.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 12:01 pm
Operator : M.PEDRO
Sample : INDBL
Misc : INITIAL CAL
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 08:18:56 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m



(13) 4,4'-DDE (tc)
13.32min 10.610ug/l
response 280668498

(13) 4,4'-DDE #2 (tc)
13.75min 13.147ug/l
response 874336850

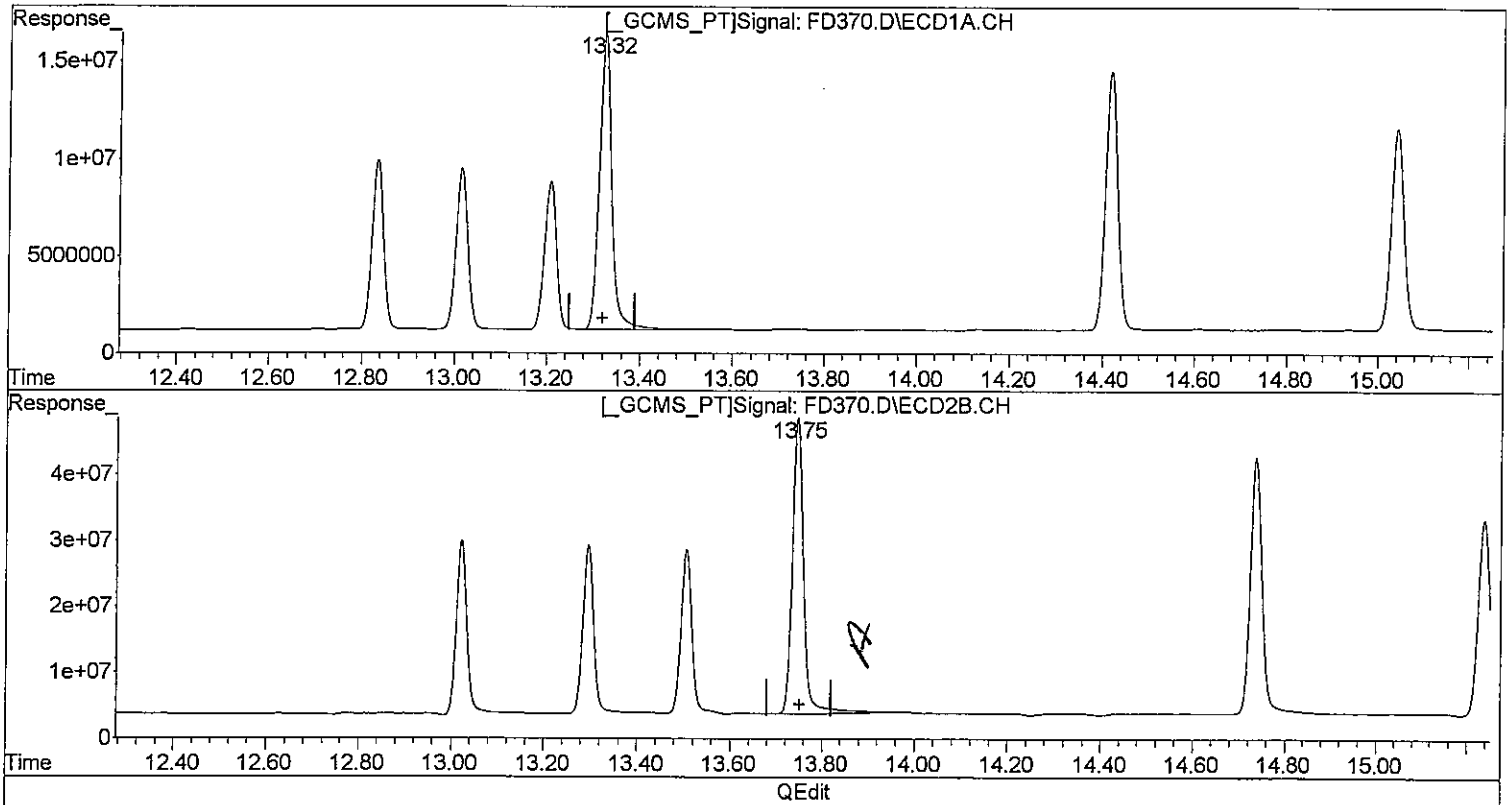
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD370.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 12:01 pm
Operator : M.PEDRO
Sample : INDBL
Misc : INITIAL CAL
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 08:18:56 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m



QEdit

(13) 4,4'-DDE (tc)
13.32min 10.610ug/l
response 280668498

(13) 4,4'-DDE #2 (tc)
13.75min 11.420ug/l m
response 759464112

(+) = Expected Retention Time

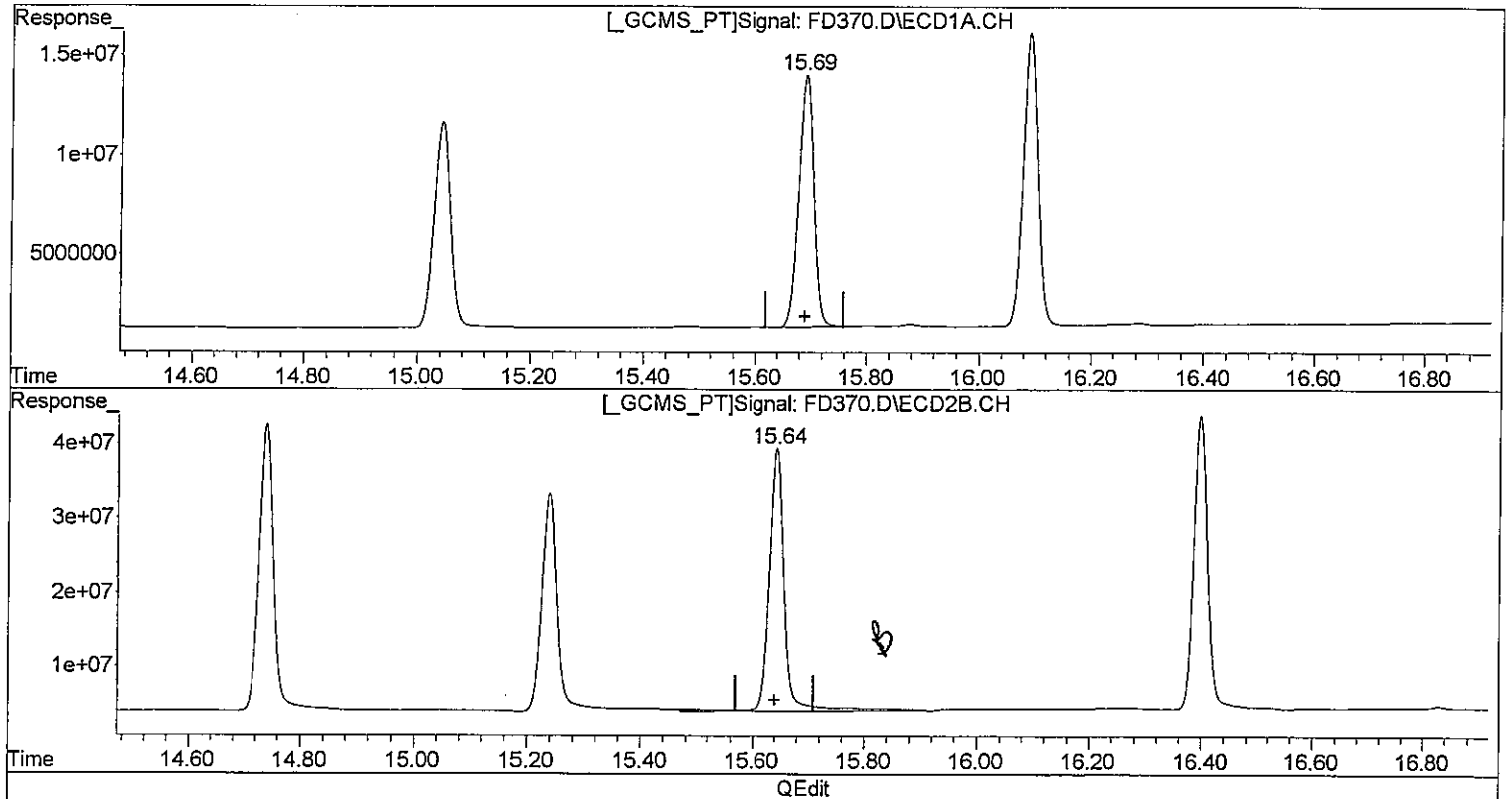
00367

Quantitation Report (Qedit)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD370.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 12:01 pm
Operator : M.PEDRO
Sample : INDBL
Misc : INITIAL CAL
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 08:18:56 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m



(21) Endosulfan S (tc)
15.69min 11.129ug/l
response 236302067

(21) Endosulfan S #2 (tc)
15.64min 13.597ug/l
response 682834146

(+) = Expected Retention Time

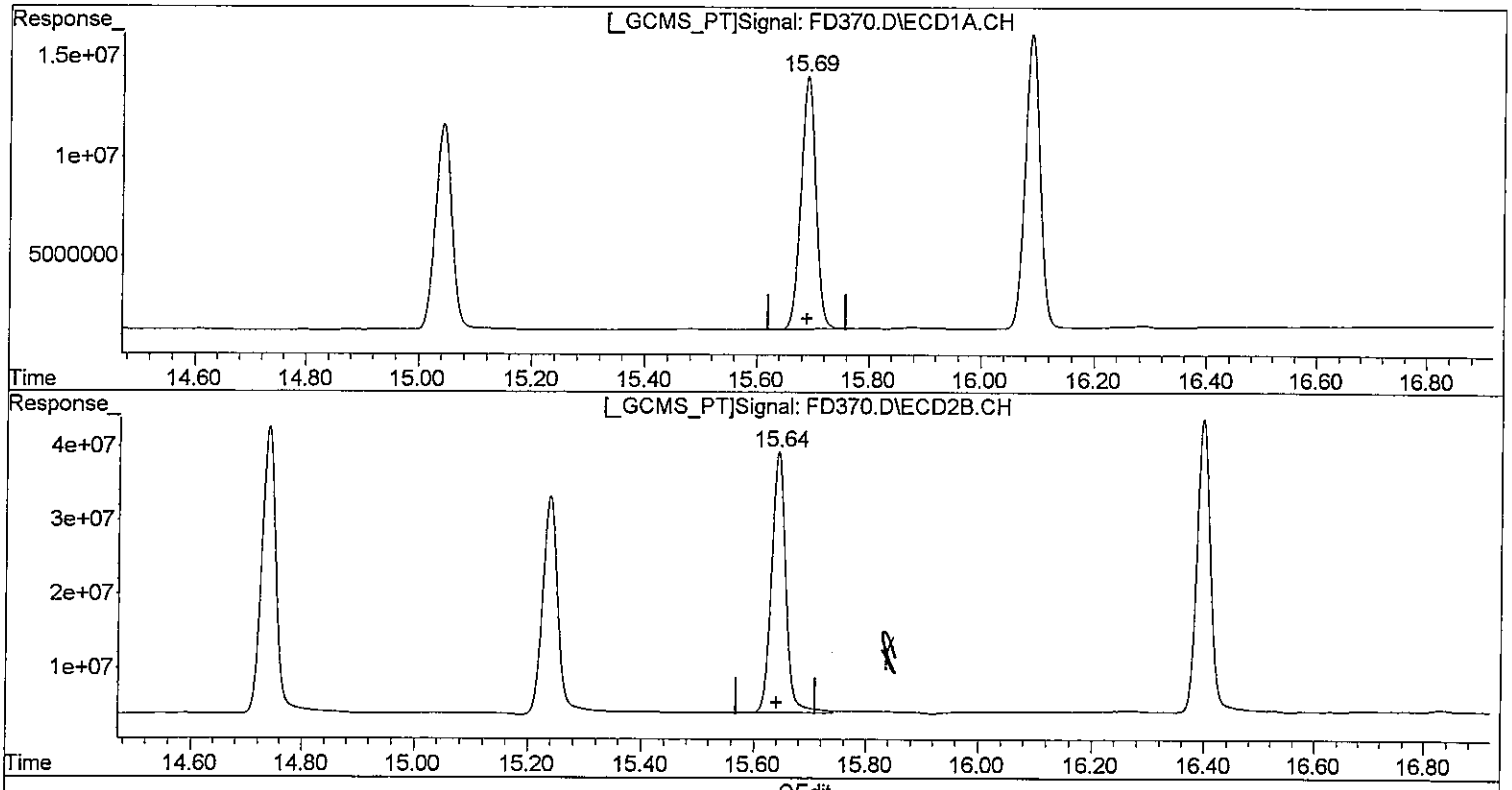
00368

Quantitation Report (Qedit)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD370.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 12:01 pm
Operator : M.PEDRO
Sample : INDBL
Misc : INITIAL CAL
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 08:18:56 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m



QEdit

(21) Endosulfan S (tc)
15.69min 11.129ug/l
response 236302067

(21) Endosulfan S #2 (tc)
15.64min 12.428ug/l m
response 624085576

(+) = Expected Retention Time

00369

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD371.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 12:37 pm
Operator : M.PEDRO
Sample : INDBML
Misc : INITIAL CAL
ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 08:54:35 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/l	ug/l
	System Monitoring Compounds						
1)	S SURR1,Tetrac	9.21	9.38	263.3E6	827.6E6	11.084	11.853
	Spiked Amount 100.000	Range 30 - 150		Recovery =		11.08%#	11.85%#
25)	S SURR2,Decachloro	17.34	17.95	504.3E6	1151.1E6	25.022	26.646
	Spiked Amount 100.000	Range 30 - 150		Recovery =		25.02%#	26.65%#
	Target Compounds						
6)	tcm Aldrin	11.93	12.18	335.5E6	975.4E6	11.009	11.955
7)	tc beta-BHC	10.89	11.18	153.2E6	436.0E6	11.185	10.759
8)	tc delta-BHC	11.16	11.63	354.6E6	1002.2E6	10.762	10.966
9)	tc Heptachlor E	12.83	13.02	311.2E6	871.1E6	11.281	12.222
11)	tc gamma-Chlord	13.02	13.30	305.4E6	870.1E6	11.108	12.147
12)	tc alpha-Chlord	13.21	13.50	288.0E6	851.8E6	11.192	12.402
13)	tc 4,4'-DDE	13.32	13.75	593.9E6	1606.9E6	22.451	24.162
17)	tc beta-Endosul	14.42	14.74	524.3E6	1427.6E6	22.724	25.606
20)	tc Endrin Aldeh	15.04	15.24	412.5E6	1099.1E6	22.620	25.219
21)	tc Endosulfan S	15.69	15.64	483.1E6	1285.4E6	22.751	25.596
24)	tc Endrin Keton	16.09	16.40	556.4E6	1366.1E6	23.431	25.891
	Sum Toxaphene			0	0	N.D.	N.D.
	Average Toxaphene					0.000	0.000
	Sum Chlordane			0	0	N.D.	N.D.
	Average Chlordane					0.000	0.000

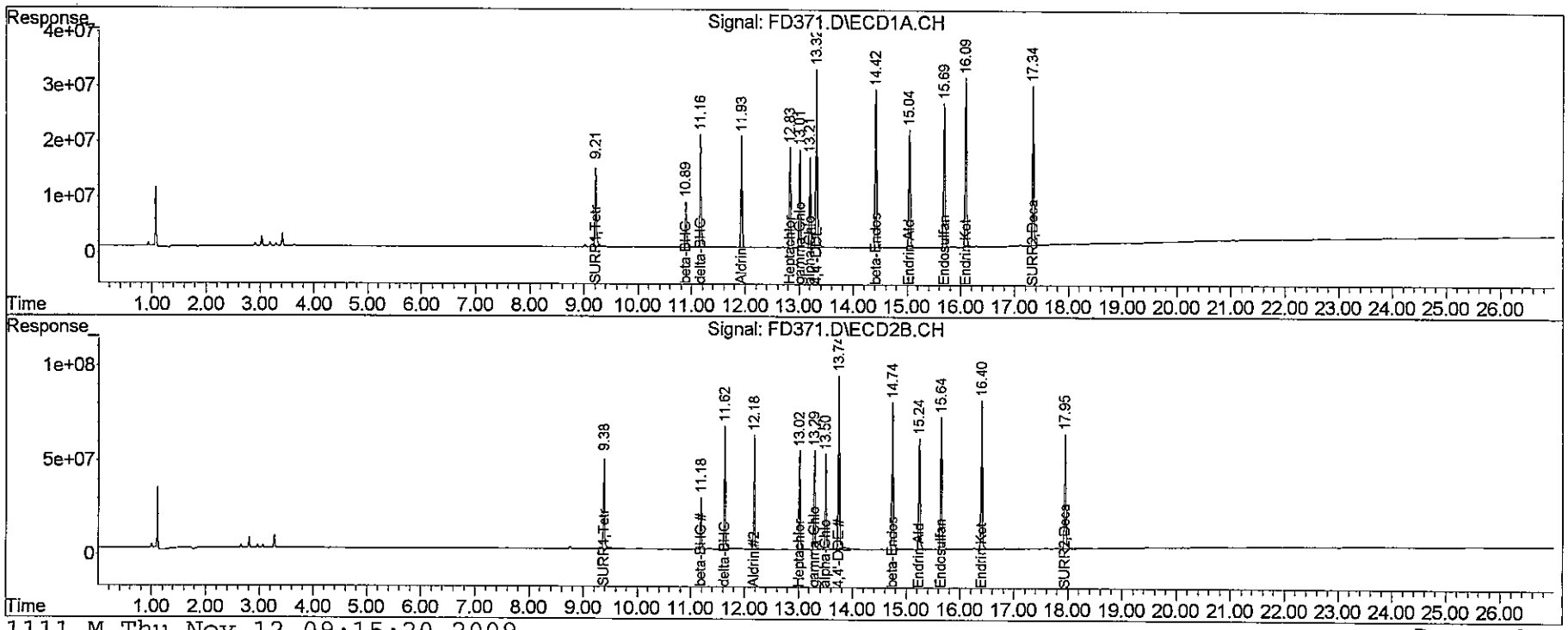
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD371.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 12:37 pm
Operator : M.PEDRO
Sample : INDBML
Misc : INITIAL CAL
ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 08:54:35 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m



TL2006

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD372.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 1:12 pm
Operator : M.PEDRO
Sample : INDBM
Misc : INITIAL CAL
ALS Vial : 10 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 08:56:15 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/l	ug/l
	System Monitoring Compounds						
1)	S SURR1,Tetrac	9.21	9.38	539.4E6	1600.4E6	22.710	22.923
	Spiked Amount 100.000	Range 30 - 150		Recovery =		22.71%#	22.92%#
25)	S SURR2,Decachloro	17.34	17.95	1001.0E6	2243.1E6	49.665	51.923
	Spiked Amount 100.000	Range 30 - 150		Recovery =		49.66%	51.92%
	Target Compounds						
6)	tcm Aldrin	11.93	12.18	700.5E6	1907.6E6	22.986	23.380
7)	tc beta-BHC	10.89	11.18	310.9E6	866.4E6	22.692	21.381
8)	tc delta-BHC	11.16	11.62	758.9E6	2040.8E6	23.031	22.330
9)	tc Heptachlor E	12.83	13.02	638.3E6	1726.8E6	23.141	24.230
11)	tc gamma-Chlord	13.02	13.29	636.3E6	1757.8E6	23.141	24.539
12)	tc alpha-Chlord	13.21	13.50	591.4E6	1716.4E6	22.983	24.991
13)	tc 4,4'-DDE	13.32	13.75	1235.9E6	3239.1E6	46.720	48.703
17)	tc beta-Endosul	14.42	14.74	1062.0E6	2833.8E6	46.024	50.829
20)	tc Endrin Aldeh	15.04	15.24	864.1E6	2190.0E6	47.381	50.252
21)	tc Endosulfan S	15.69	15.64	1003.0E6	2554.4E6	47.238	50.865
24)	tc Endrin Keton	16.09	16.40	1141.9E6	2721.5E6	48.087	51.578
	Sum Toxaphene			0	0	N.D.	N.D.
	Average Toxaphene					0.000	0.000
	Sum Chlordane			0	0	N.D.	N.D.
	Average Chlordane					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

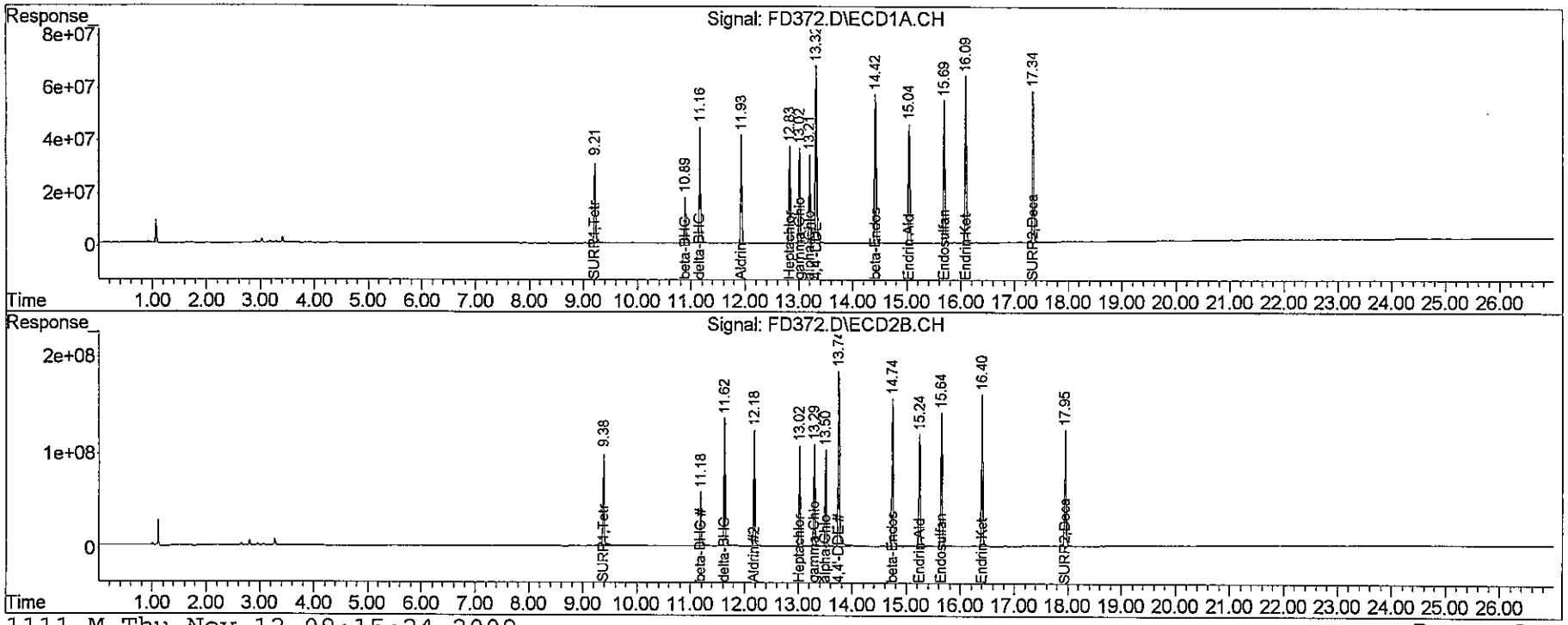
00372

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD372.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 1:12 pm
Operator : M.PEDRO
Sample : INDBM
Misc : INITIAL CAL
ALS Vial : 10 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 08:56:15 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m



CL608

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD373.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 1:48 pm
Operator : M.PEDRO
Sample : INDBMH
Misc : INITIAL CAL
ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 08:58:00 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/l	ug/l
	System Monitoring Compounds						
1)	S SURR1,Tetrac	9.21	9.38	1103.5E6	3191.5E6	46.458	45.712
	Spiked Amount 100.000	Range 30 - 150		Recovery =		46.46%	45.71%
25)	S SURR2,Decachloro	17.34	17.95	1997.9E6	4434.6E6	99.128	102.650
	Spiked Amount 100.000	Range 30 - 150		Recovery =		99.13%	102.65%
	Target Compounds						
6)	tcm Aldrin	11.93	12.18	1430.0E6	3812.5E6	46.926	46.728
7)	tc beta-BHC	10.89	11.18	625.1E6	1735.2E6	45.630	42.820
8)	tc delta-BHC	11.16	11.63	1563.9E6	4144.7E6	47.465	45.351
9)	tc Heptachlor E	12.83	13.02	1289.4E6	3341.5E6	46.746	46.885
11)	tc gamma-Chlord	13.02	13.30	1314.1E6	3523.1E6	47.792	49.184
12)	tc alpha-Chlord	13.21	13.50	1206.0E6	3378.6E6	46.865	49.193
13)	tc 4,4'-DDE	13.32	13.75	2524.9E6	6449.0E6	95.447	96.969
17)	tc beta-Endosul	14.42	14.74	2147.7E6	5438.5E6	93.076	97.547
20)	tc Endrin Aldeh	15.04	15.24	1733.2E6	4262.5E6	95.037	97.807
21)	tc Endosulfan S	15.69	15.64	2022.0E6	4961.9E6	95.226	98.807
24)	tc Endrin Keton	16.09	16.40	2300.1E6	5315.5E6	96.861	100.740
	Sum Toxaphene			0	0	N.D.	N.D.
	Average Toxaphene					0.000	0.000
	Sum Chlordane			0	0	N.D.	N.D.
	Average Chlordane					0.000	0.000

11/12

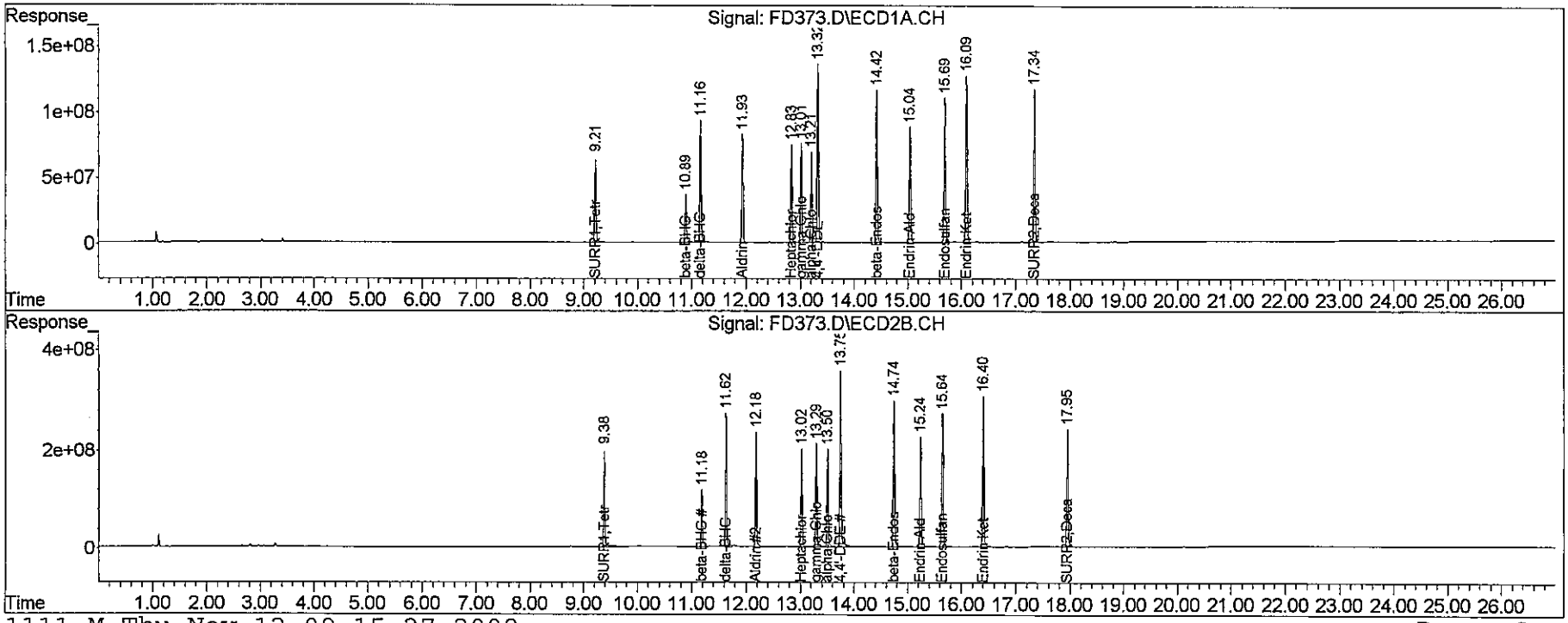
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD373.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 1:48 pm
Operator : M.PEDRO
Sample : INDBMH
Misc : INITIAL CAL
ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 08:58:00 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m



FD373

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD374.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 2:24 pm
Operator : M.PEDRO
Sample : INDBH
Misc : INITIAL CAL
ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 08:59:05 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/l	ug/l
System Monitoring Compounds						
1) S SURR1,Tetrac	9.21	9.38	2200.2E6	5711.0E6	92.635	81.799
Spiked Amount 100.000	Range 30 - 150		Recovery =		92.64%	81.80%
25) S SURR2,Decachloro	17.34	17.95	3974.7E6	8667.4E6	197.208	200.631
Spiked Amount 100.000	Range 30 - 150		Recovery =		197.21%#	200.63%#
Target Compounds						
6) tcm Aldrin	11.93	12.18	2846.6E6	7275.3E6	93.410	89.170
7) tc beta-BHC	10.89	11.18	1271.7E6	3432.5E6	92.828	84.705
8) tc delta-BHC	11.16	11.62	3187.0E6	8235.9E6	96.724	90.116
9) tc Heptachlor E	12.83	13.02	2552.5E6	6325.9E6	92.538	88.760
11) tc gamma-Chlord	13.01	13.29	2650.5E6	6823.5E6	96.392	95.259
12) tc alpha-Chlord	13.21	13.51	2434.5E6	6567.0E6	94.603	95.618
13) tc 4,4'-DDE	13.32	13.75	4952.4E6	12082.2E6	187.215	181.672
17) tc beta-Endosul	14.42	14.74	4252.7E6	10280.0E6	184.301	184.388
20) tc Endrin Aldeh	15.04	15.24	3470.3E6	8120.9E6	190.287	186.342
21) tc Endosulfan S	15.69	15.64	4018.0E6	9471.4E6	189.225	188.607
24) tc Endrin Keton	16.09	16.40	4546.8E6	10155.5E6	191.473	192.469
Sum Toxaphene			0	0	N.D.	N.D.
Average Toxaphene					0.000	0.000
Sum Chlordane			0	0	N.D.	N.D.
Average Chlordane					0.000	0.000

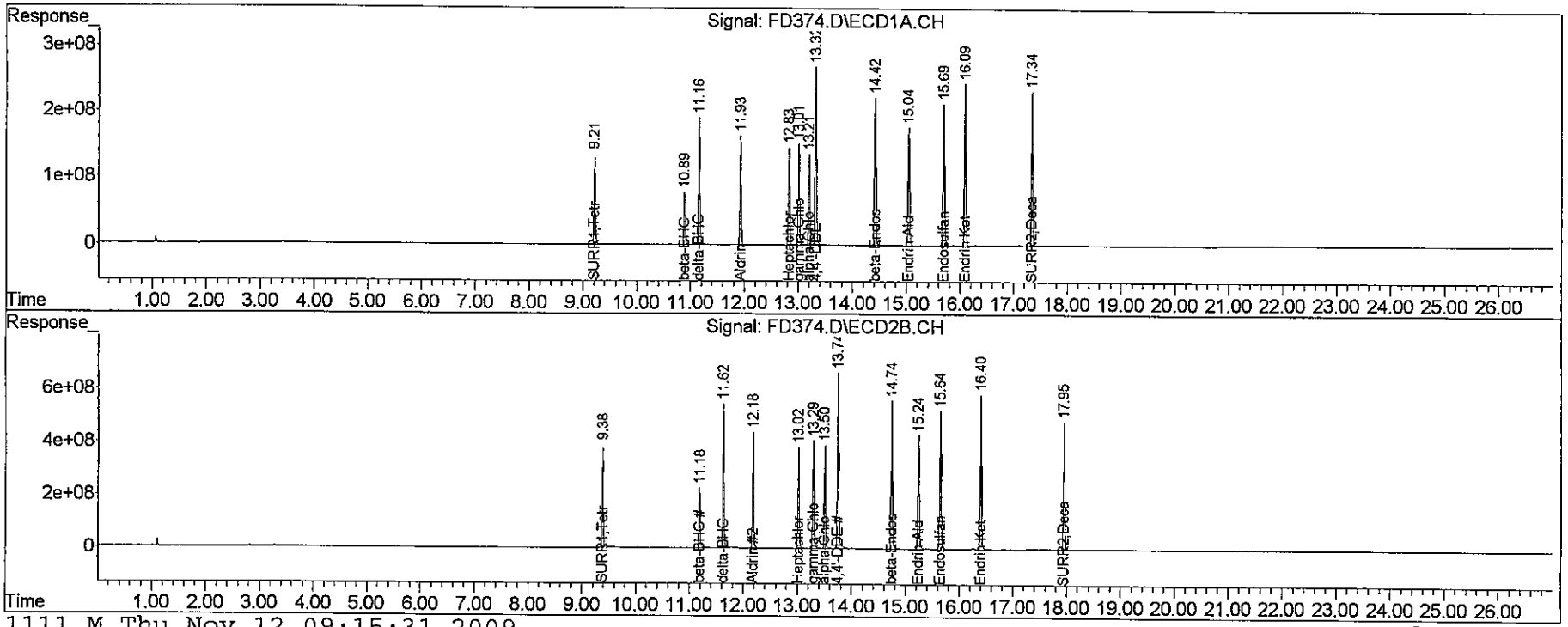
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD374.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 2:24 pm
Operator : M.PEDRO
Sample : INDBH
Misc : INITIAL CAL
ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 08:59:05 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m



FD374

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD375.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 2:59 pm
Operator : M.PEDRO
Sample : KEP/FAM L
Misc : INITIAL CAL
ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 09:00:01 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/l	ug/l
	System Monitoring Compounds						
	Target Compounds						
16)	tc KEPONE	14.15	14.60	6077.8E6	15079.7E6	626.191	654.882
23)	tc FAMPHUR	15.99	15.73	1815.8E6	4208.8E6	110.220	117.172m
	Sum Toxaphene			0	0	N.D.	N.D.
	Average Toxaphene					0.000	0.000
	Sum Chlordane			0	0	N.D.	N.D.
	Average Chlordane					0.000	0.000

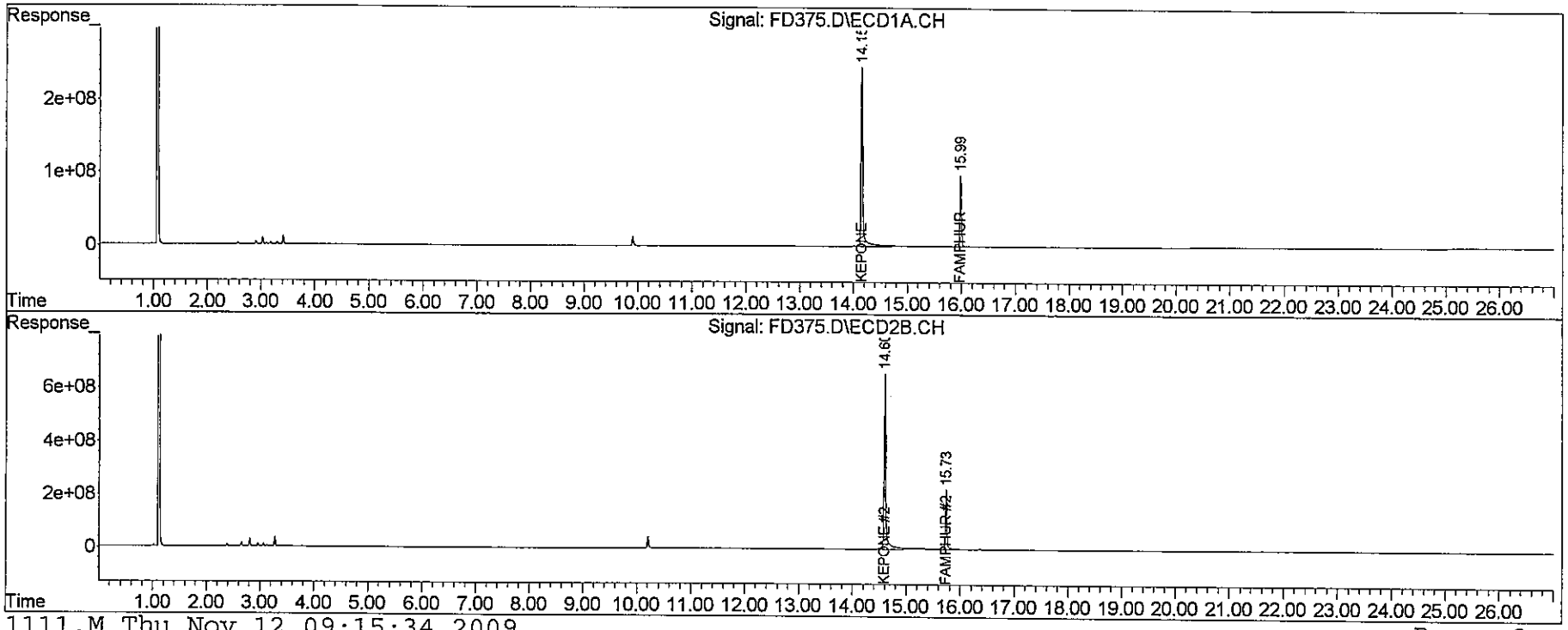
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD375.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 2:59 pm
Operator : M.PEDRO
Sample : KEP/FAM L
Misc : INITIAL CAL
ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 09:00:01 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m

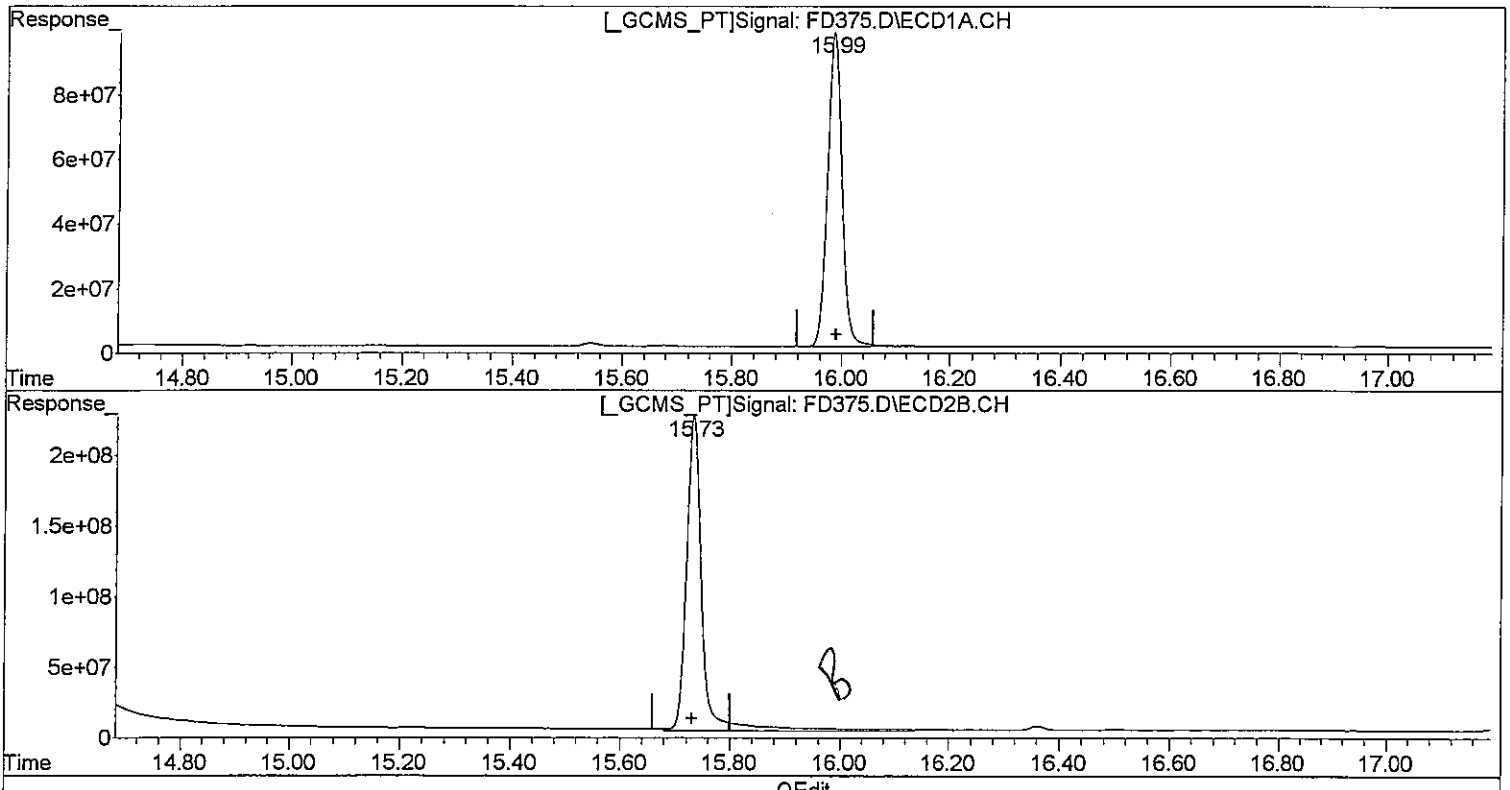


Quantitation Report (Qedit)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD375.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 2:59 pm
Operator : M.PEDRO
Sample : KEP/FAM L
Misc : INITIAL CAL
ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 08:19:19 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m



(23) FAMPHUR (tc)
15.99min 110.220ug/l
response 1815772576

(23) FAMPHUR #2 (tc)
15.73min 126.843ug/l
response 4556226822

(+) = Expected Retention Time

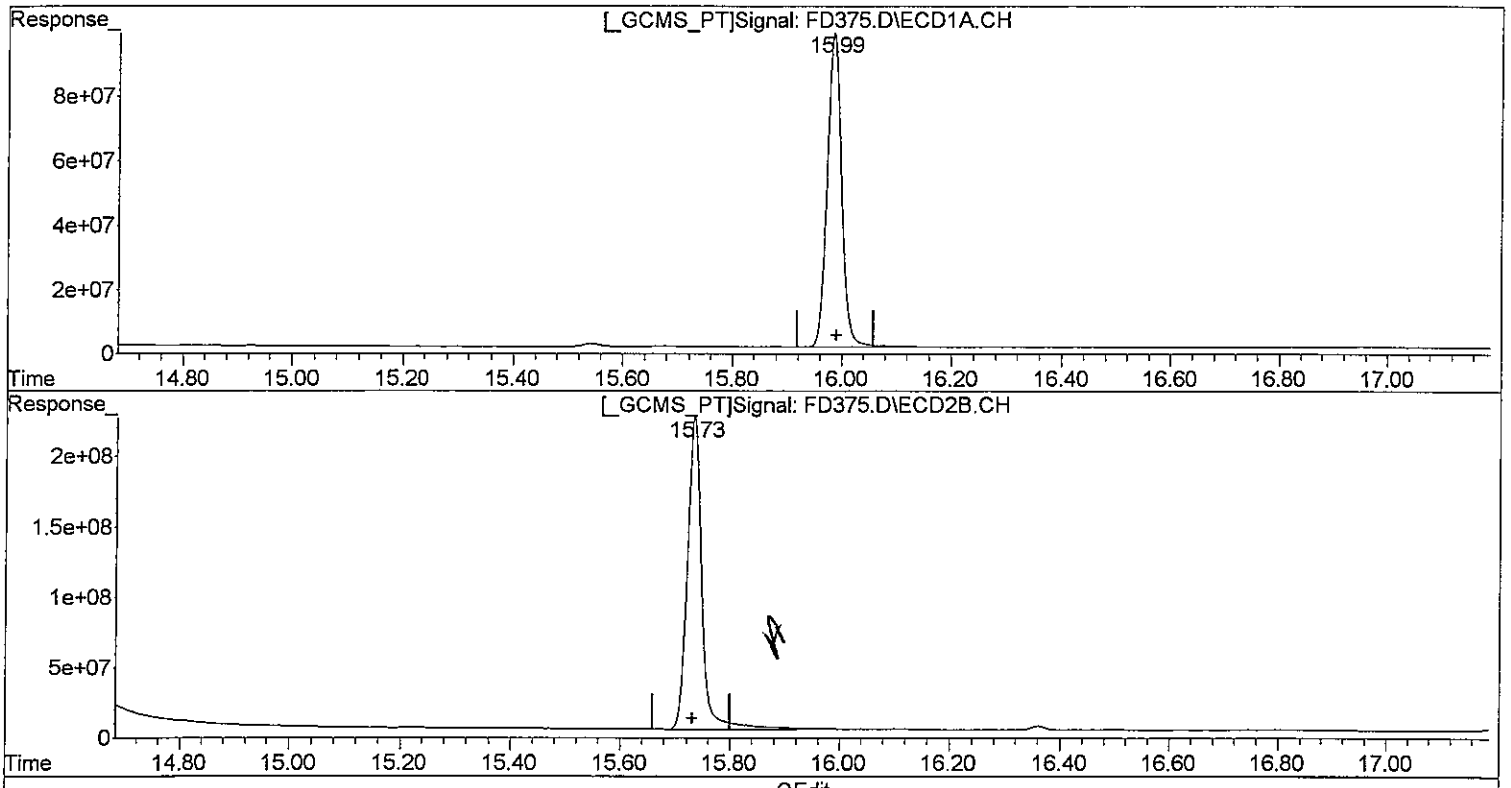
00380

Quantitation Report (Qedit)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD375.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 2:59 pm
Operator : M.PEDRO
Sample : KEP/FAM L
Misc : INITIAL CAL
ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 08:19:19 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m



QEdit

(23) FAMPHUR (tc)
15.99min 110.220ug/l
response 1815772576

(23) FAMPHUR #2 (tc)
15.73min 117.172ug/l m
response 4208844113

(+) = Expected Retention Time

00381

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD376.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 3:35 pm
Operator : M.PEDRO
Sample : KEP/FAM ML
Misc : INITIAL CAL
ALS Vial : 14 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 09:01:02 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/l	ug/l
System Monitoring Compounds						
Target Compounds						
16) tc KEPONE	14.15	14.60	12810.4E6	31453.1E6	1319.859	1365.947
23) tc FAMPHUR	15.99	15.73	3988.1E6	8655.3E6	242.083	240.959m
Sum Toxaphene			0	0	N.D.	N.D.
Average Toxaphene					0.000	0.000
Sum Chlordane			0	0	N.D.	N.D.
Average Chlordane					0.000	0.000

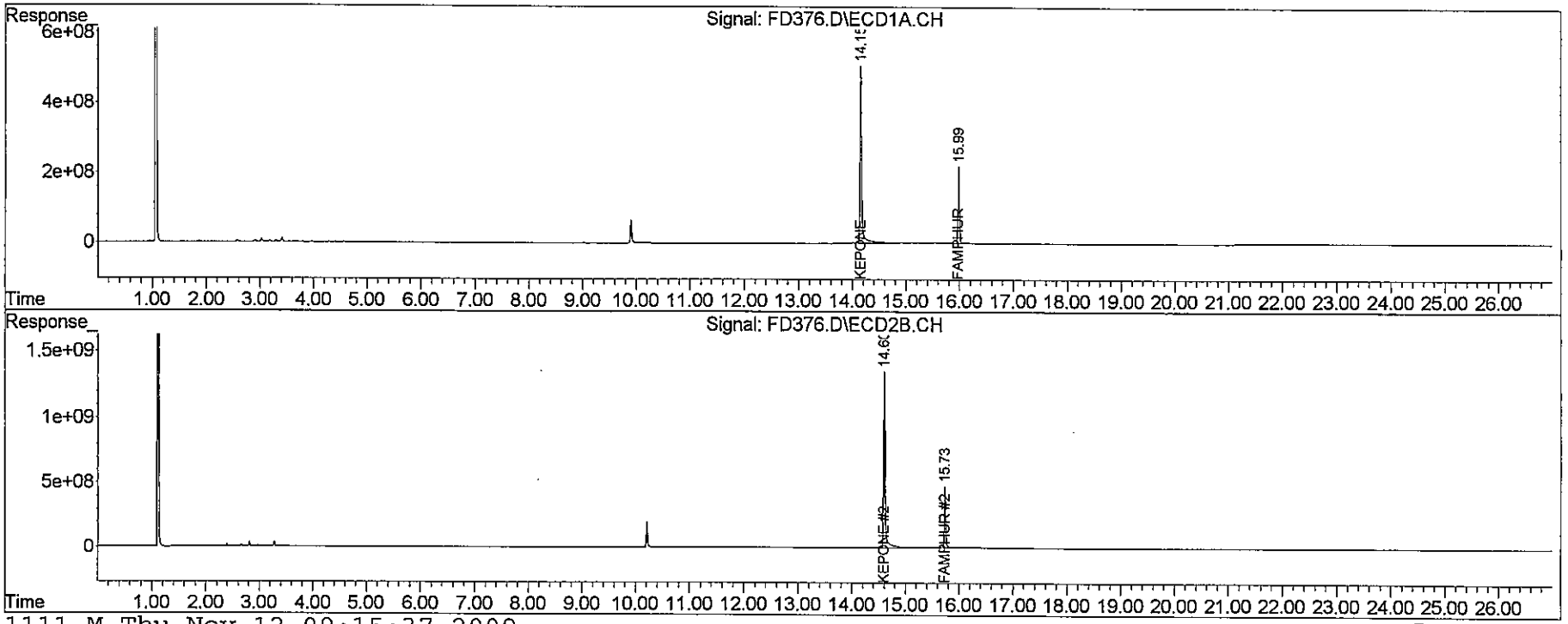
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD376.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 3:35 pm
Operator : M.PEDRO
Sample : KEP/FAM ML
Misc : INITIAL CAL
ALS Vial : 14 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 09:01:02 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m

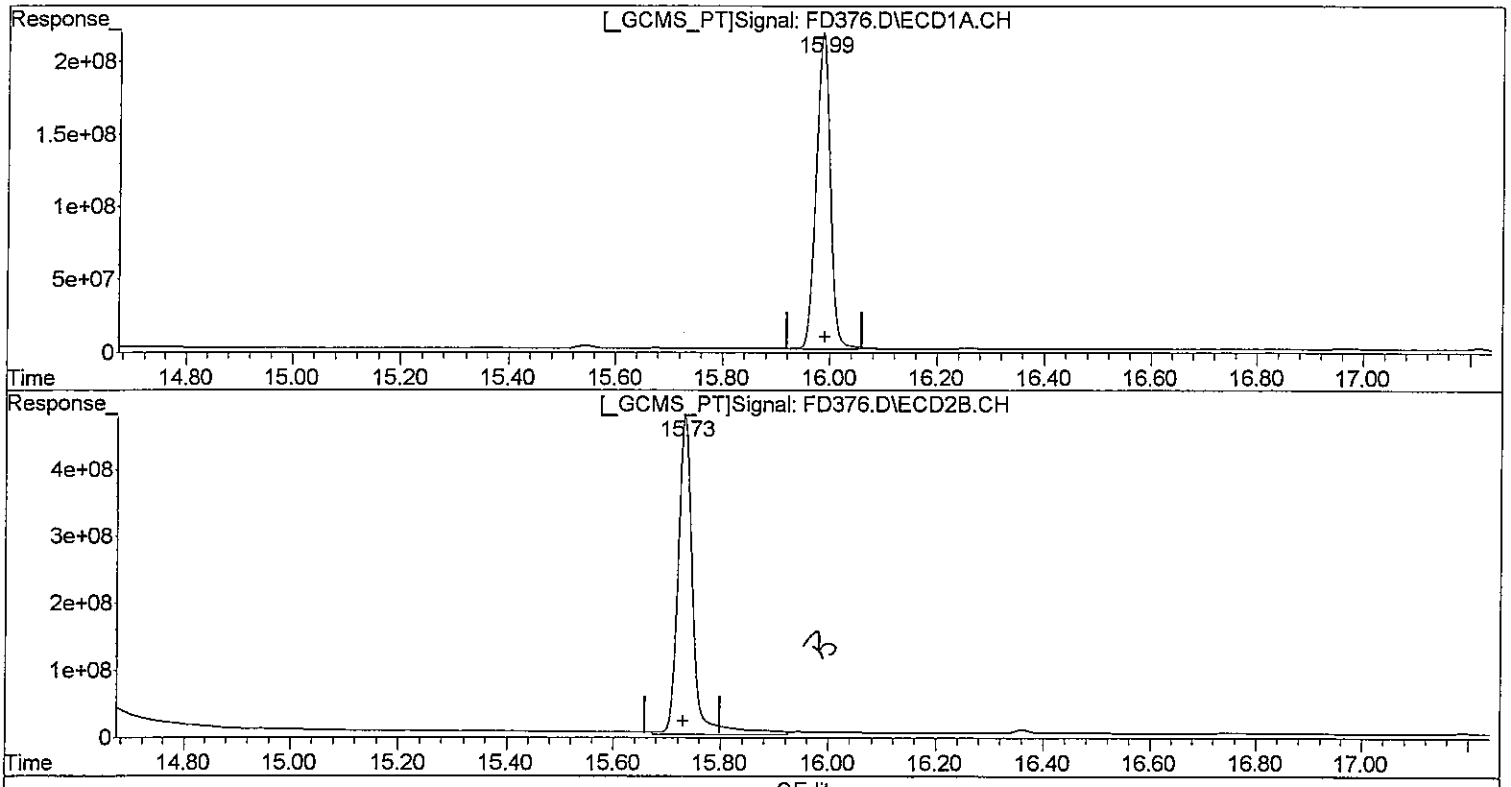


Quantitation Report (Qedit)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD376.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 3:35 pm
Operator : M.PEDRO
Sample : KEP/FAM ML
Misc : INITIAL CAL
ALS Vial : 14 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 08:19:23 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m



QEdit

(23) FAMPHUR (tc)
15.99min 242.083ug/l
response 3988068081

(23) FAMPHUR #2 (tc)
15.73min 254.692ug/l
response 9148558590

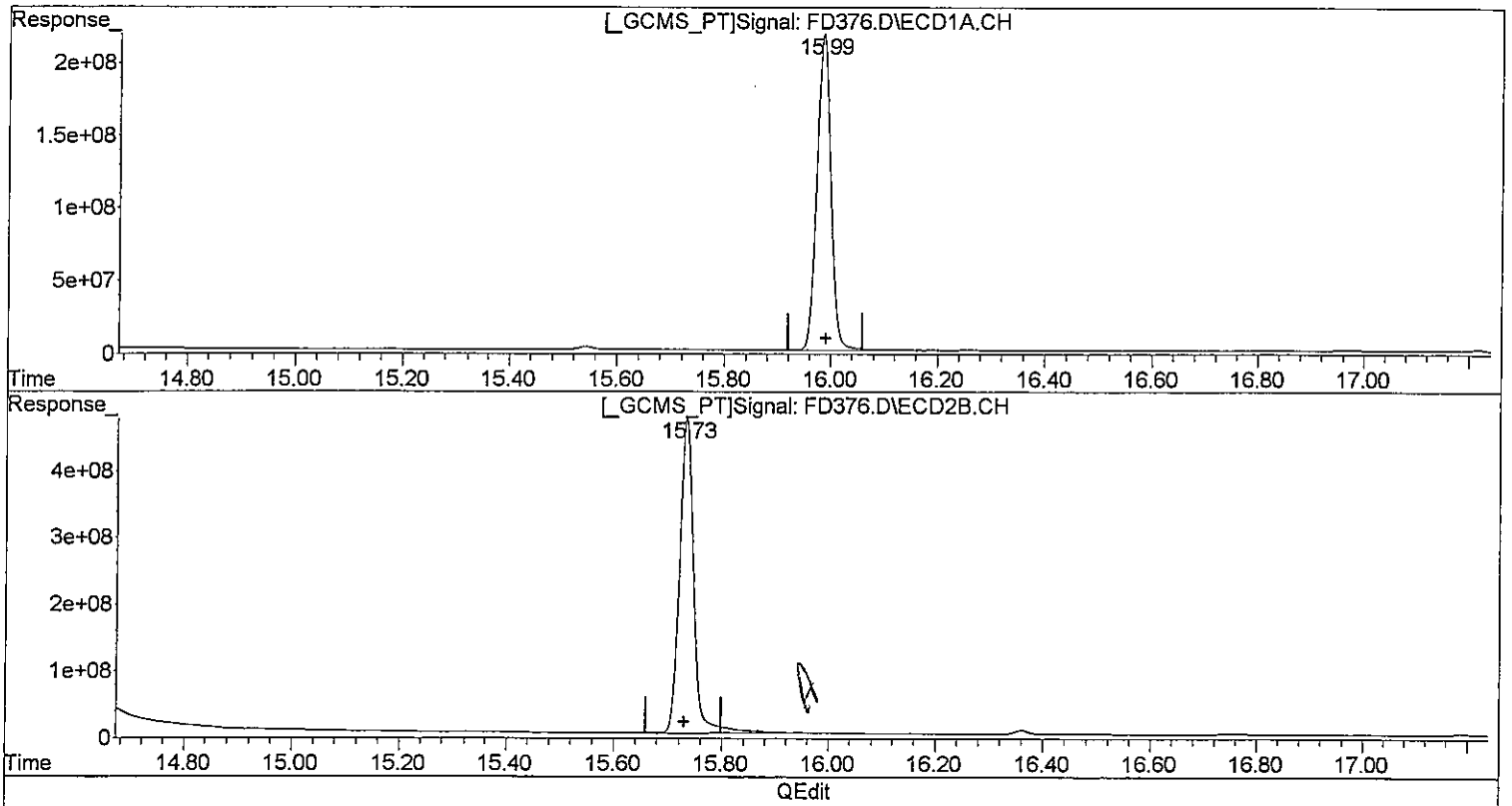
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD376.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 3:35 pm
Operator : M.PEDRO
Sample : KEP/FAM ML
Misc : INITIAL CAL
ALS Vial : 14 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 08:19:23 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m



QEdit

(23) FAMPHUR (tc)
15.99min 242.083ug/l
response 3988068081

(23) FAMPHUR #2 (tc)
15.73min 240.959ug/l m
response 8655265096

(+) = Expected Retention Time

00385

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD377.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 4:11 pm
Operator : M.PEDRO
Sample : KEP/FAM M
Misc : INITIAL CAL
ALS Vial : 15 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 09:01:47 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/l	ug/l
System Monitoring Compounds						
Target Compounds						
16) tc KEPONE	14.15	14.60	17669.3E6	43308.1E6	1820.472	1880.785
23) tc FAMPHUR	15.99	15.73	5657.5E6	12106.4E6	343.420	337.036m
Sum Toxaphene			0	0	N.D.	N.D.
Average Toxaphene					0.000	0.000
Sum Chlordane			0	0	N.D.	N.D.
Average Chlordane					0.000	0.000

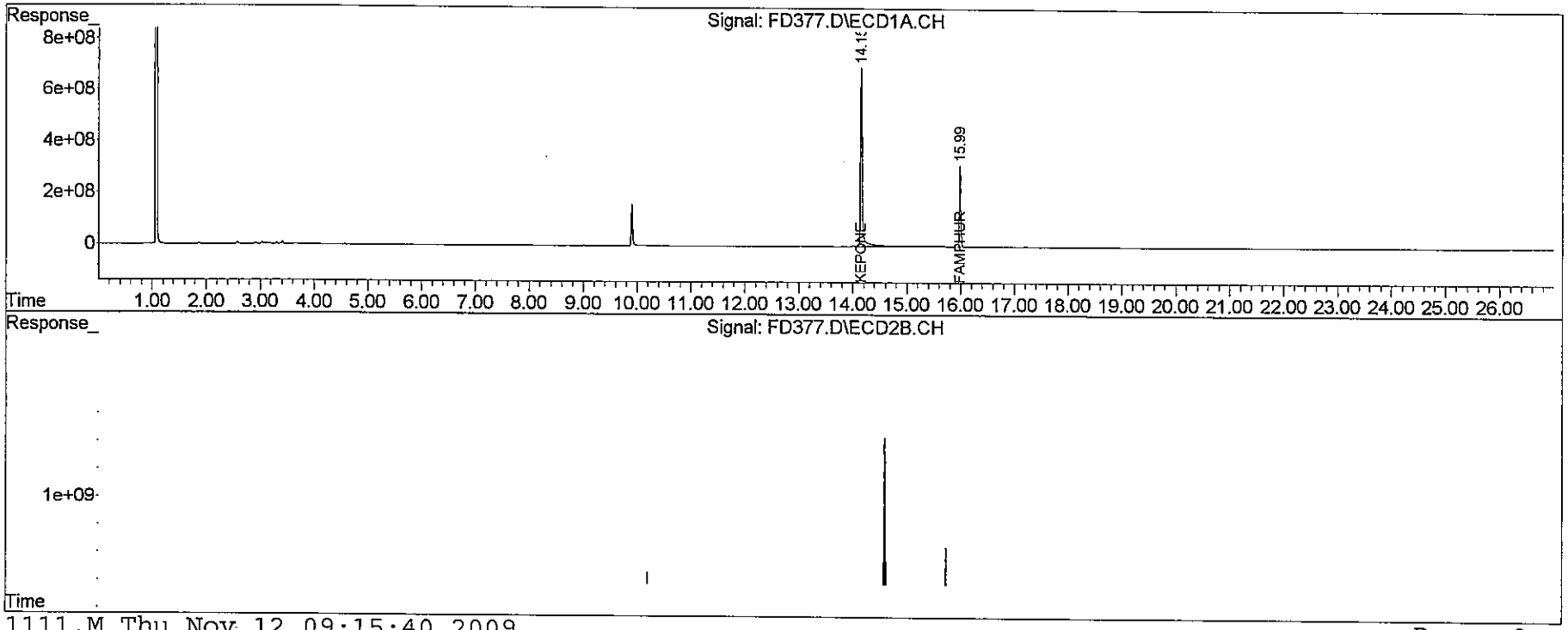
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD377.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 4:11 pm
Operator : M.PEDRO
Sample : KEP/FAM M
Misc : INITIAL CAL
ALS Vial : 15 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 09:01:47 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m

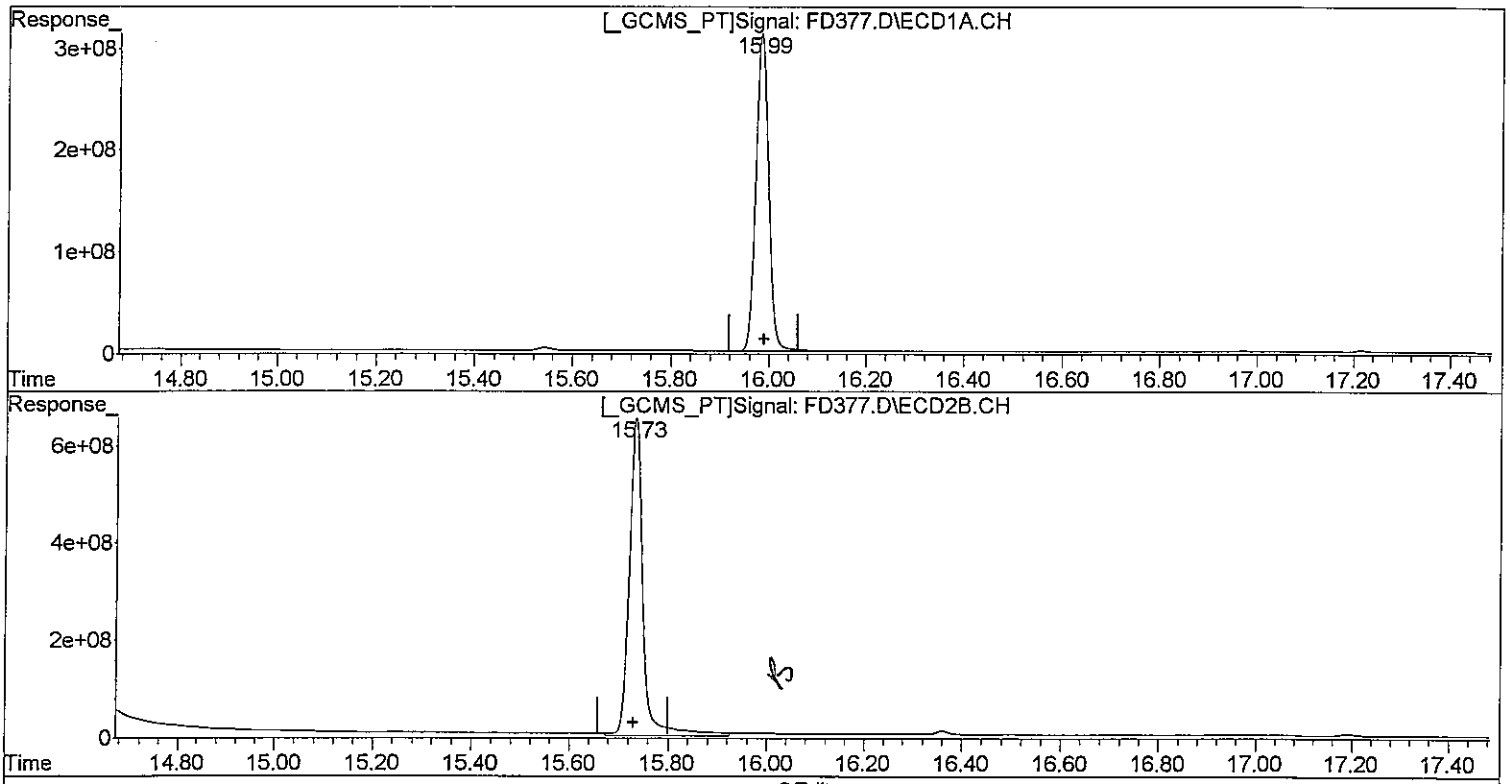


Quantitation Report (Qedit)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD377.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 4:11 pm
Operator : M.PEDRO
Sample : KEP/FAM M
Misc : INITIAL CAL
ALS Vial : 15 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 08:19:27 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m



QEdit

(23) FAMPHUR (tc)
15.99min 343.420ug/l
response 5657494294

(23) FAMPHUR #2 (tc)
15.73min 354.599ug/l
response 12737246990

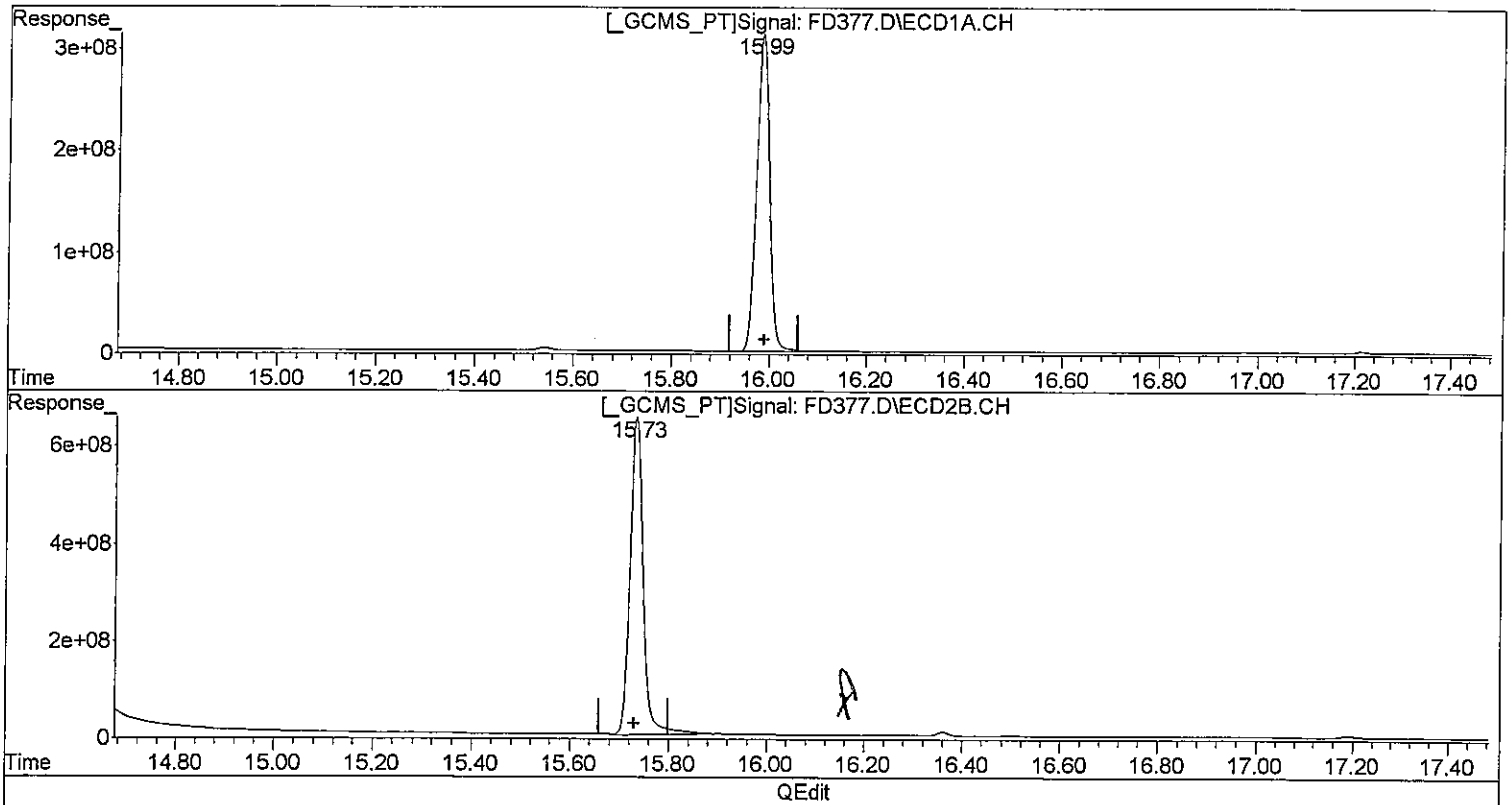
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD377.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 4:11 pm
Operator : M.PEDRO
Sample : KEP/FAM M
Misc : INITIAL CAL
ALS Vial : 15 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 08:19:27 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m



(23) FAMPHUR (tc)
15.99min 343.420ug/l
response 5657494294

(23) FAMPHUR #2 (tc)
15.73min 337.036ug/l m
response 12106394795

(+) = Expected Retention Time

00389

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD378.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 4:46 pm
Operator : M.PEDRO
Sample : KEP/FAM MH
Misc : INITIAL CAL
ALS Vial : 16 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 09:10:39 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/l	ug/l
	System Monitoring Compounds						
	Target Compounds						
16)	tc KEPONE	14.15	14.60	22287.5E6	51552.4E6	2296.282	2238.819
23)	tc FAMPHUR	15.99	15.73	7420.7E6	15591.7E6	450.447	434.066m
	Sum Toxaphene			0	0	N.D.	N.D.
	Average Toxaphene					0.000	0.000
	Sum Chlordane			0	0	N.D.	N.D.
	Average Chlordane					0.000	0.000

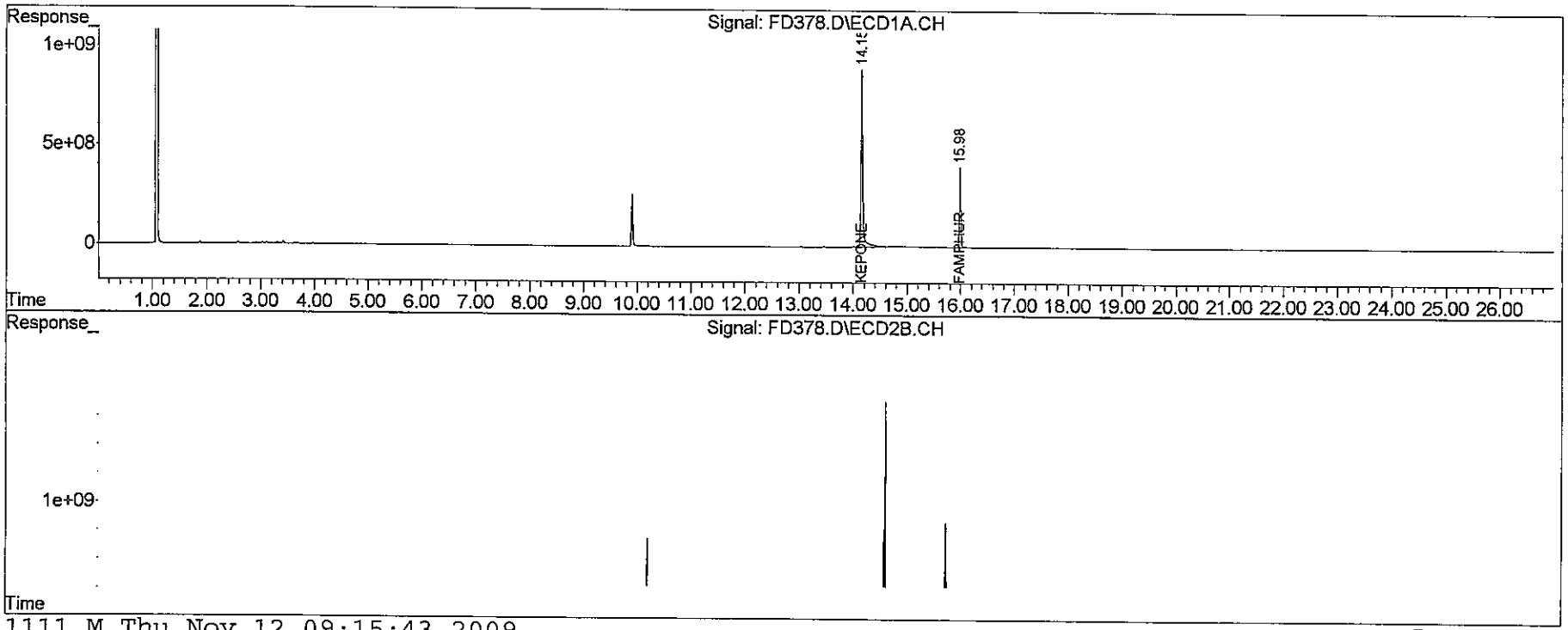
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD378.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 4:46 pm
Operator : M.PEDRO
Sample : KEP/FAM MH
Misc : INITIAL CAL
ALS Vial : 16 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 09:10:39 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m



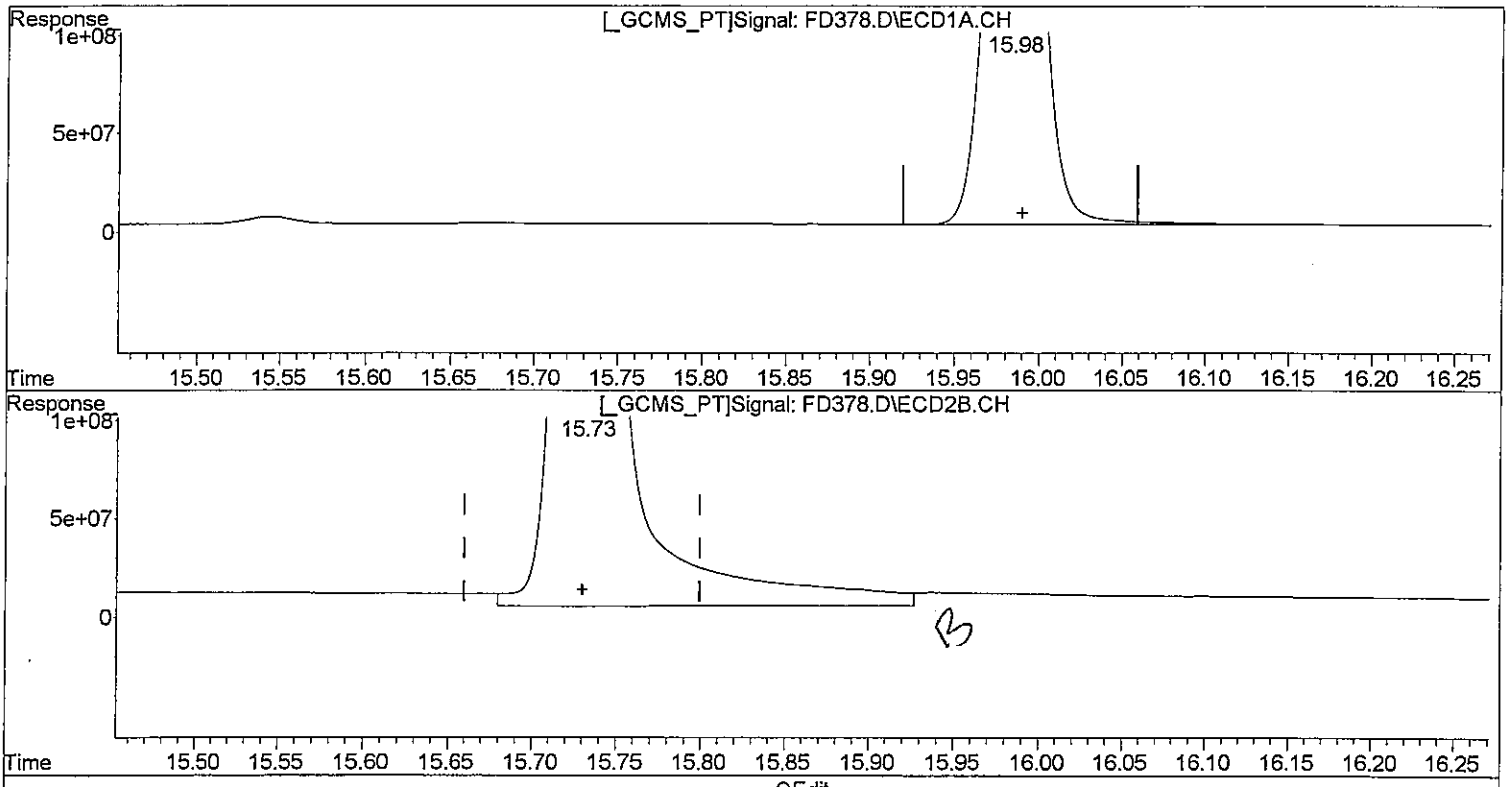
TG208

Quantitation Report (Qedit)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD378.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 4:46 pm
Operator : M.PEDRO
Sample : KEP/FAM MH
Misc : INITIAL CAL
ALS Vial : 16 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 08:19:31 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m



QEdit

(23) FAMPHUR (tc)
15.99min 450.447ug/l
response 7420666152

(23) FAMPHUR #2 (tc)
15.73min 458.767ug/l
response 16478970883

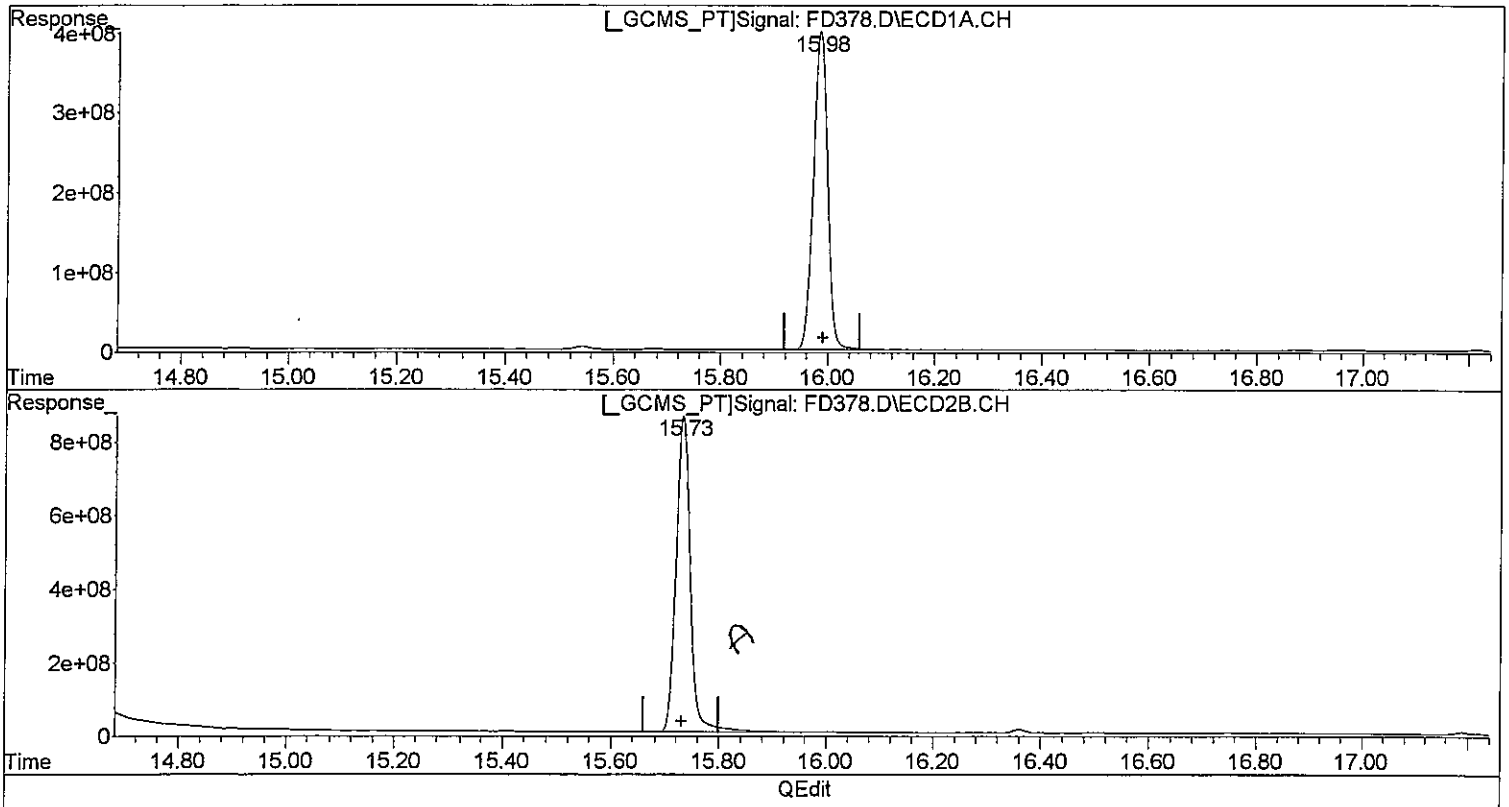
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD378.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 4:46 pm
Operator : M.PEDRO
Sample : KEP/FAM MH
Misc : INITIAL CAL
ALS Vial : 16 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 09:10:39 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m



QEdit

(23) FAMPHUR (tc)
15.99min 450.447ug/l
response 7420666152

(23) FAMPHUR #2 (tc)
15.73min 434.066ug/l m
response 15591710557

(+) = Expected Retention Time

00393

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD379.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 5:22 pm
Operator : M.PEDRO
Sample : KEP/FAM H
Misc : INITIAL CAL
ALS Vial : 17 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 09:03:27 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/l	ug/l
	System Monitoring Compounds						
	Target Compounds						
16)	tc KEPONE	14.15	14.60	27843.7E6	61305.1E6	2868.733	2662.361
23)	tc FAMPHUR	15.99	15.73	9324.4E6	19387.1E6	566.008	539.728m
	Sum Toxaphene			0	0	N.D.	N.D.
Average	Toxaphene					0.000	0.000
	Sum Chlordane			0	0	N.D.	N.D.
Average	Chlordane					0.000	0.000

mcp 11/12

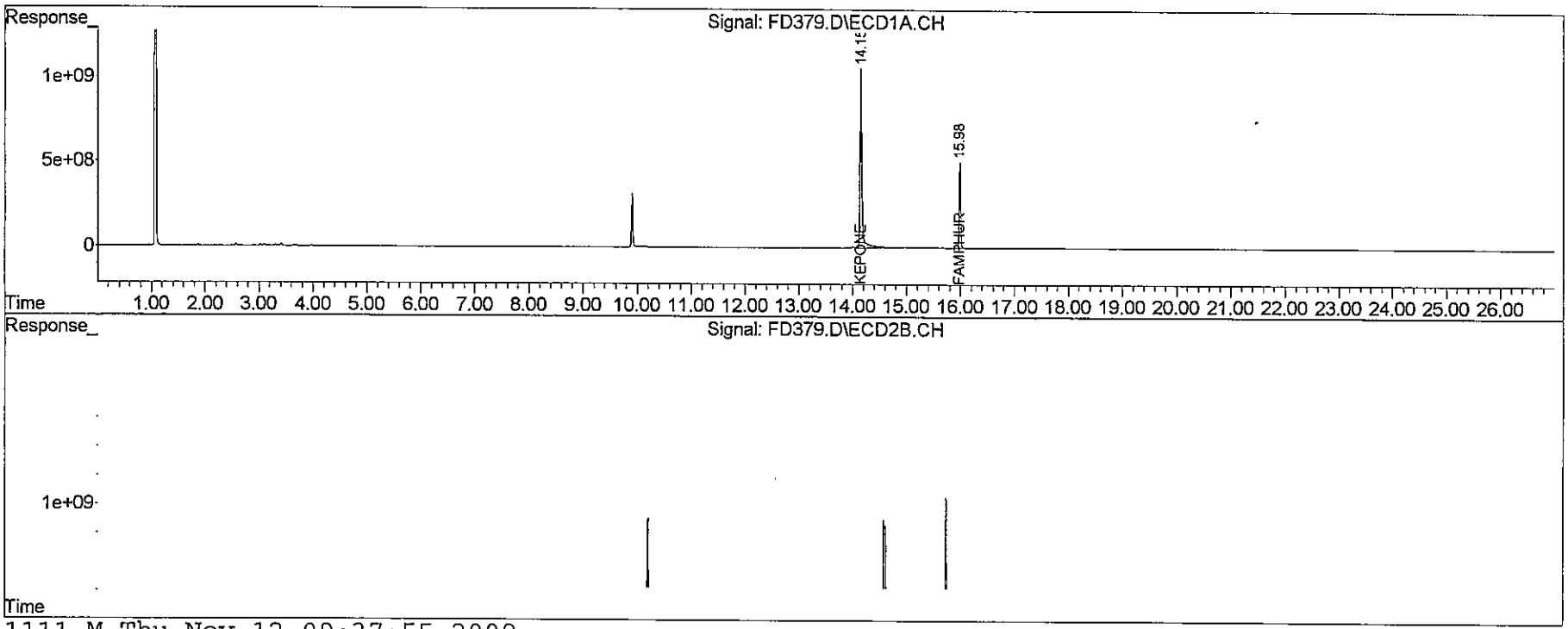
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD379.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 5:22 pm
Operator : M.PEDRO
Sample : KEP/FAM H
Misc : INITIAL CAL
ALS Vial : 17 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 09:03:27 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m

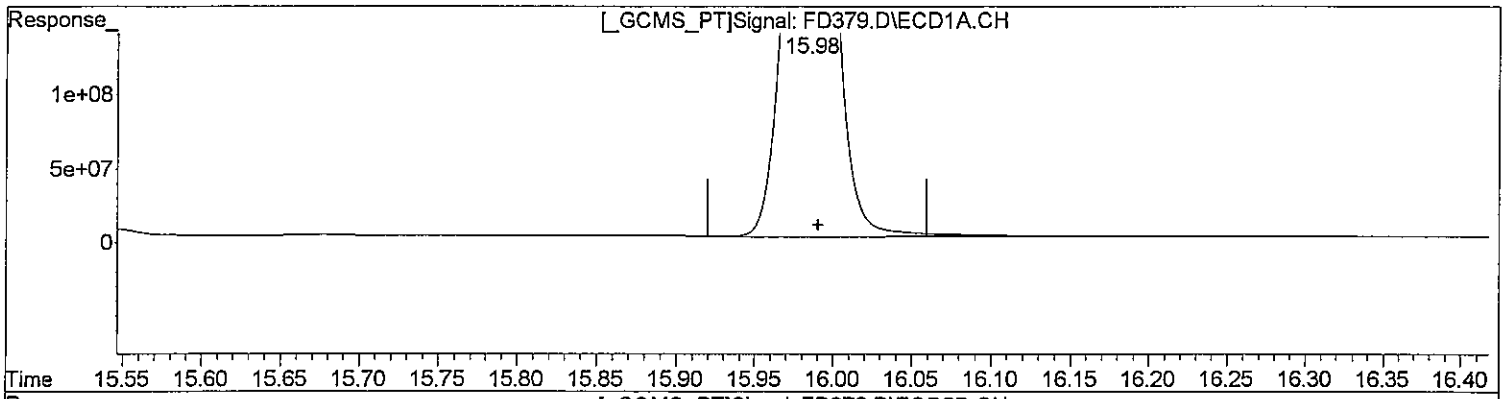


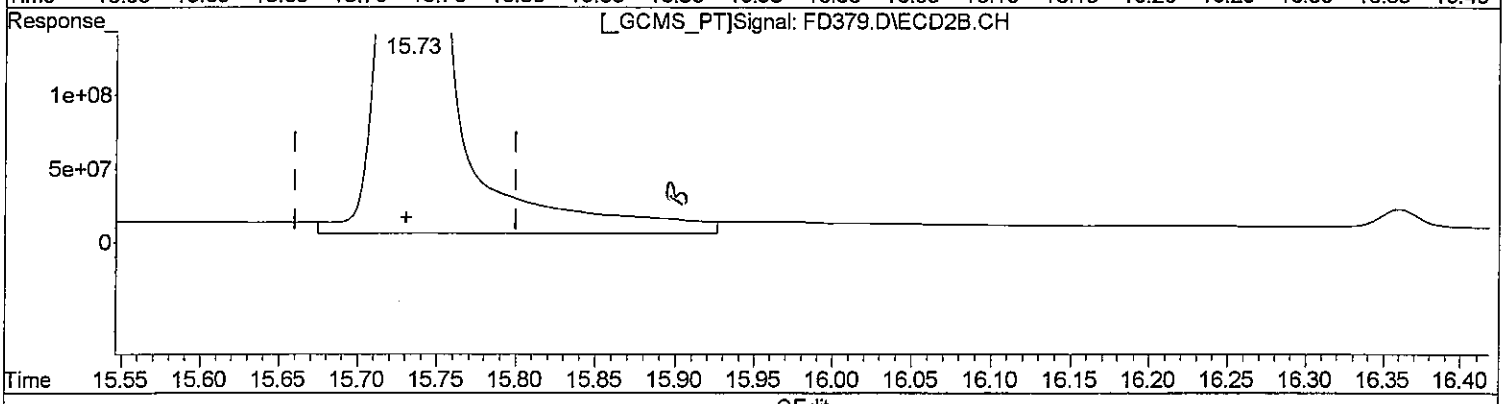
Quantitation Report (Qedit)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD379.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 5:22 pm
Operator : M.PEDRO
Sample : KEP/FAM H
Misc : INITIAL CAL
ALS Vial : 17 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 08:19:35 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m





QEdit

(23) FAMPHUR (tc)
15.99min 566.008ug/l
response 9324409376

(23) FAMPHUR #2 (tc)
15.73min 567.541ug/l
response 20386142300

(+) = Expected Retention Time

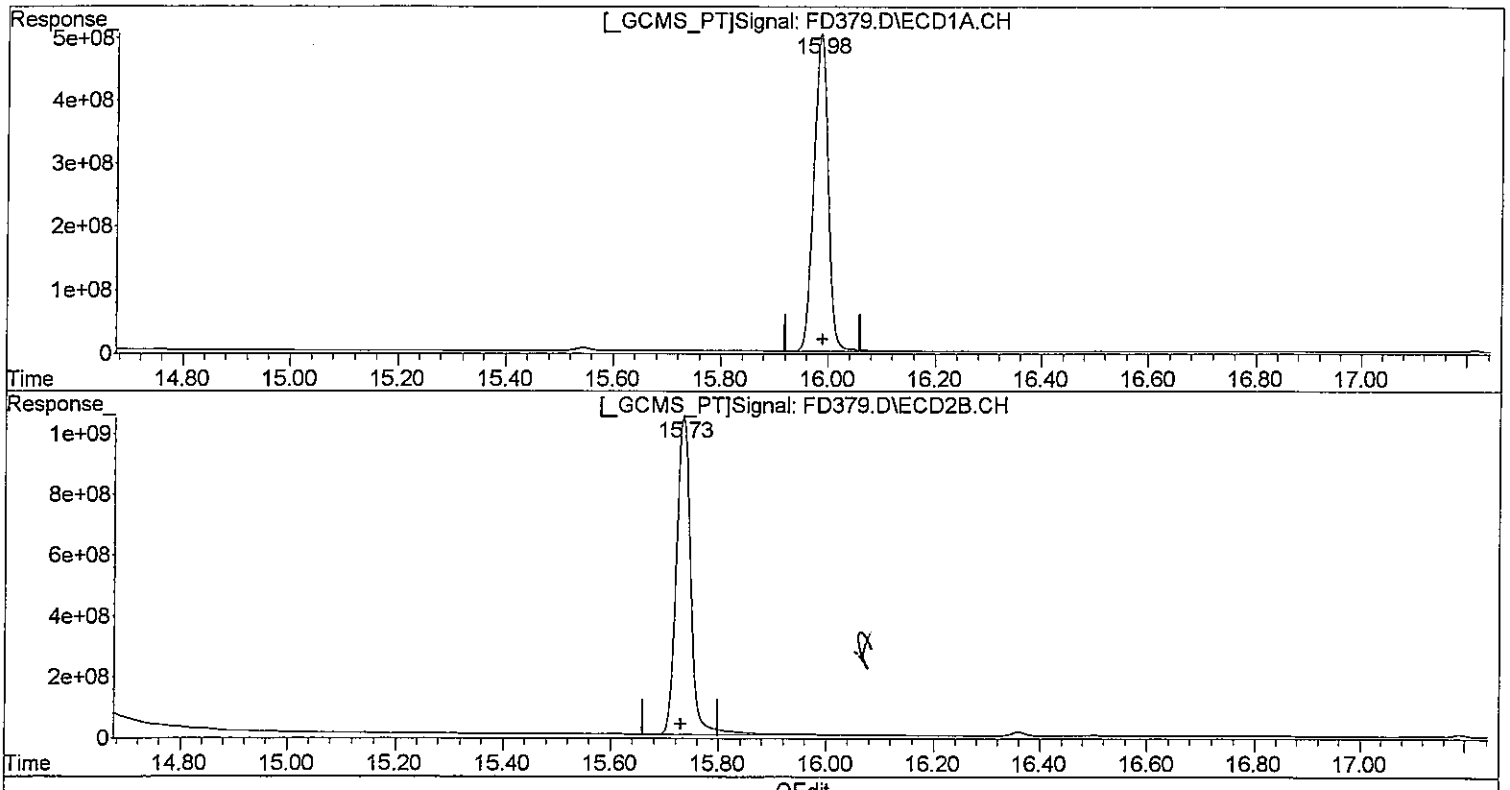
00396

Quantitation Report (Qedit)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD379.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 5:22 pm
Operator : M.PEDRO
Sample : KEP/FAM H
Misc : INITIAL CAL
ALS Vial : 17 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 08:19:35 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m



QEdit

(23) FAMPHUR (tc)
15.99min 566.008ug/l
response 9324409376

(23) FAMPHUR #2 (tc)
15.73min 539.728ug/l m
response 19387097325

(+) = Expected Retention Time

00397

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD380.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 5:58 pm
Operator : M.PEDRO
Sample : TOX L
Misc : INITIAL CAL
ALS Vial : 18 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 09:04:01 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/l	ug/l
	System Monitoring Compounds						
1)	S SURR1,Tetrac	9.21	9.38	587.8E6	1754.3E6	24.746	25.127
	Spiked Amount 100.000	Range 30 - 150		Recovery =		24.75%#	25.13%#
25)	S SURR2,Decachloro	17.34	17.95	548.6E6	1257.3E6	27.219	29.103
	Spiked Amount 100.000	Range 30 - 150		Recovery =		27.22%#	29.10%#
	Target Compounds						
26)	L8C Toxaphene	14.50	14.86	118.7E6	387.7E6	119.164	141.668
27)	L8C Toxaphene{2}	14.59	14.97	83008717	218.3E6	121.401	154.469 #
28)	L8C Toxaphene{3}	15.19	15.25	65539965	429.6E6	114.203	135.926
29)	L8C Toxaphene{4}	16.06	15.63	71794637	182.0E6	112.716	134.044
30)	L8C Toxaphene{5}	16.26	16.53	55646837	150.7E6	104.166	128.867
	Sum Toxaphene			394.7E6	1368.3E6	571.650	694.974
Average	Toxaphene					114.330	138.995
	Sum Chlordane			0	0	N.D.	N.D.
Average	Chlordane					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

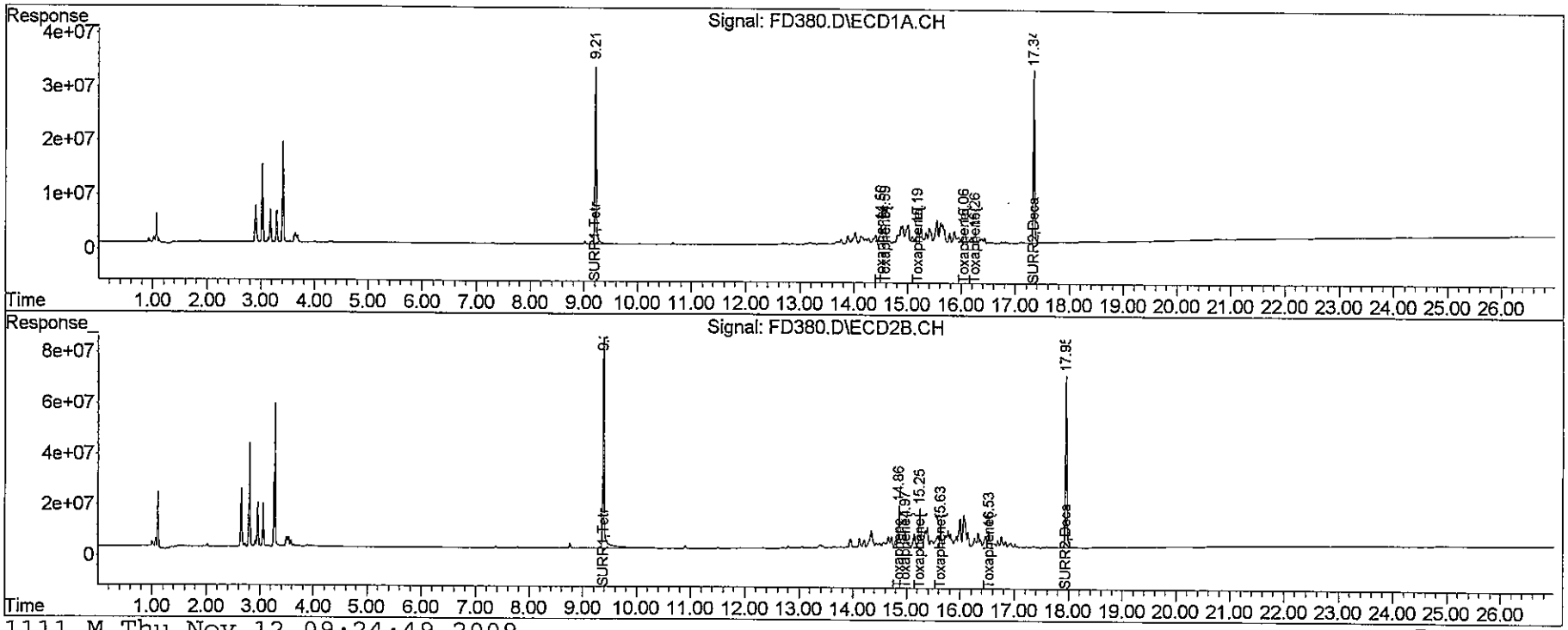
00398

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD380.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 5:58 pm
Operator : M.PEDRO
Sample : TOX L
Misc : INITIAL CAL
ALS Vial : 18 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 09:04:01 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m



Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD381.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 6:33 pm
Operator : M.PEDRO
Sample : TOX ML
Misc : INITIAL CAL
ALS Vial : 19 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 09:04:24 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/l	ug/l
System Monitoring Compounds						
1) S SURR1,Tetrac	9.21	9.38	1031.5E6	2989.4E6	43.428	42.817
Spiked Amount 100.000	Range 30 - 150		Recovery =		43.43%	42.82%
25) S SURR2,Decachloro	17.34	17.95	961.1E6	2171.4E6	47.688	50.264
Spiked Amount 100.000	Range 30 - 150		Recovery =		47.69%	50.26%
Target Compounds						
26) L8C Toxaphene	14.50	14.86	277.3E6	864.9E6	278.294	316.058
27) L8C Toxaphene{2}	14.59	14.97	193.1E6	446.2E6	282.382	315.679
28) L8C Toxaphene{3}	15.19	15.24	159.5E6	969.3E6	277.886	306.683
29) L8C Toxaphene{4}	16.06	15.63	173.0E6	407.6E6	271.682	300.221
30) L8C Toxaphene{5}	16.26	16.53	134.3E6	340.3E6	251.367	291.057
Sum Toxaphene			937.2E6	3028.4E6	1361.610	1529.698
Average Toxaphene					272.322	305.940
Sum Chlordane			0	0	N.D.	N.D.
Average Chlordane					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

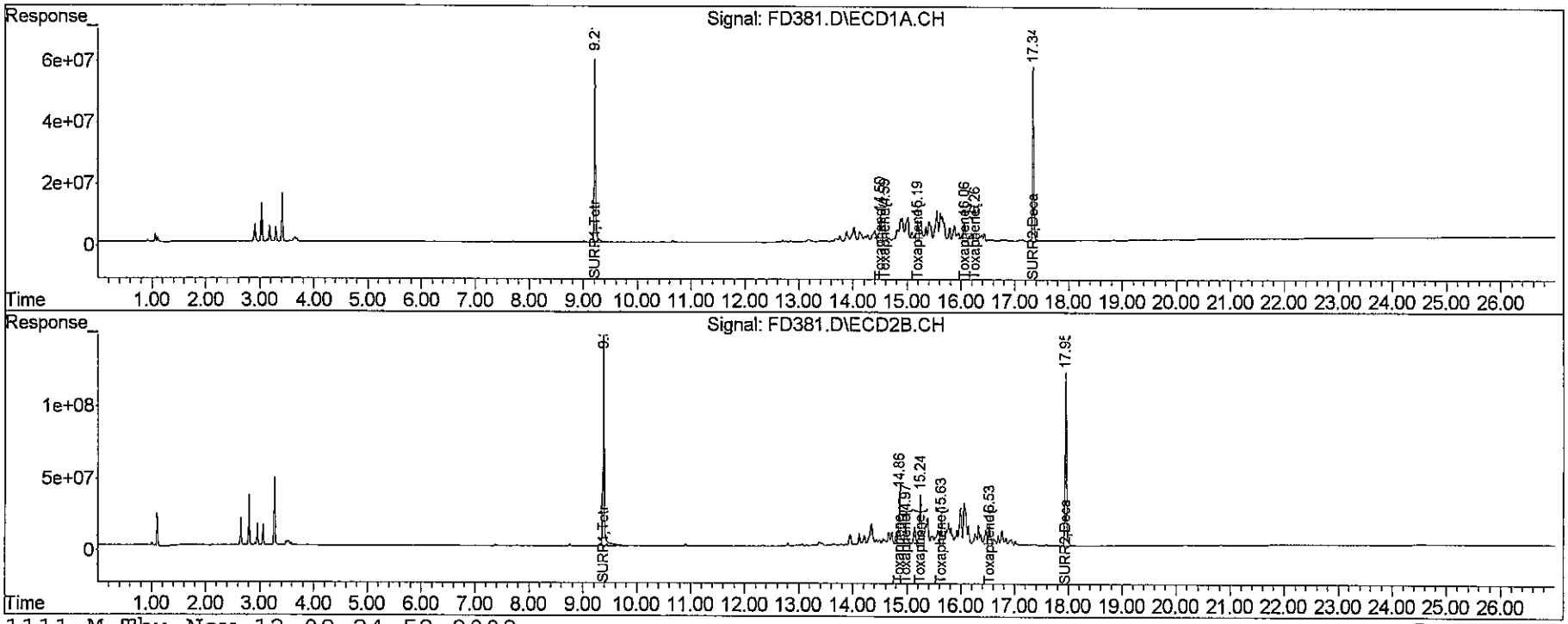
00400

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD381.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 6:33 pm
Operator : M.PEDRO
Sample : TOX ML
Misc : INITIAL CAL
ALS Vial : 19 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 09:04:24 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m



Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD382.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 7:09 pm
Operator : M.PEDRO
Sample : TOX M
Misc : INITIAL CAL
ALS Vial : 20 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 09:04:59 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/l	ug/l
System Monitoring Compounds						
1) S SURR1,Tetrac	9.21	9.38	1566.3E6	4465.2E6	65.944	63.955
Spiked Amount 100.000	Range 30 - 150		Recovery =		65.94%	63.95%
25) S SURR2,Decachloro	17.34	17.95	1450.5E6	3252.8E6	71.968	75.295
Spiked Amount 100.000	Range 30 - 150		Recovery =		71.97%	75.30%
Target Compounds						
26) L8C Toxaphene	14.50	14.86	593.5E6	1781.8E6	595.627	651.101
27) L8C Toxaphene{2}	14.59	14.97	412.0E6	916.0E6	602.515	648.112
28) L8C Toxaphene{3}	15.19	15.25	346.9E6	1996.1E6	604.531	631.532
29) L8C Toxaphene{4}	16.06	15.63	375.7E6	851.1E6	589.867	626.841
30) L8C Toxaphene{5}	16.26	16.53	291.1E6	700.3E6	544.911	598.869
Sum Toxaphene			2019.2E6	6245.3E6	2937.452	3156.456
Average Toxaphene					587.490	631.291
Sum Chlordane			0	0	N.D.	N.D.
Average Chlordane					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

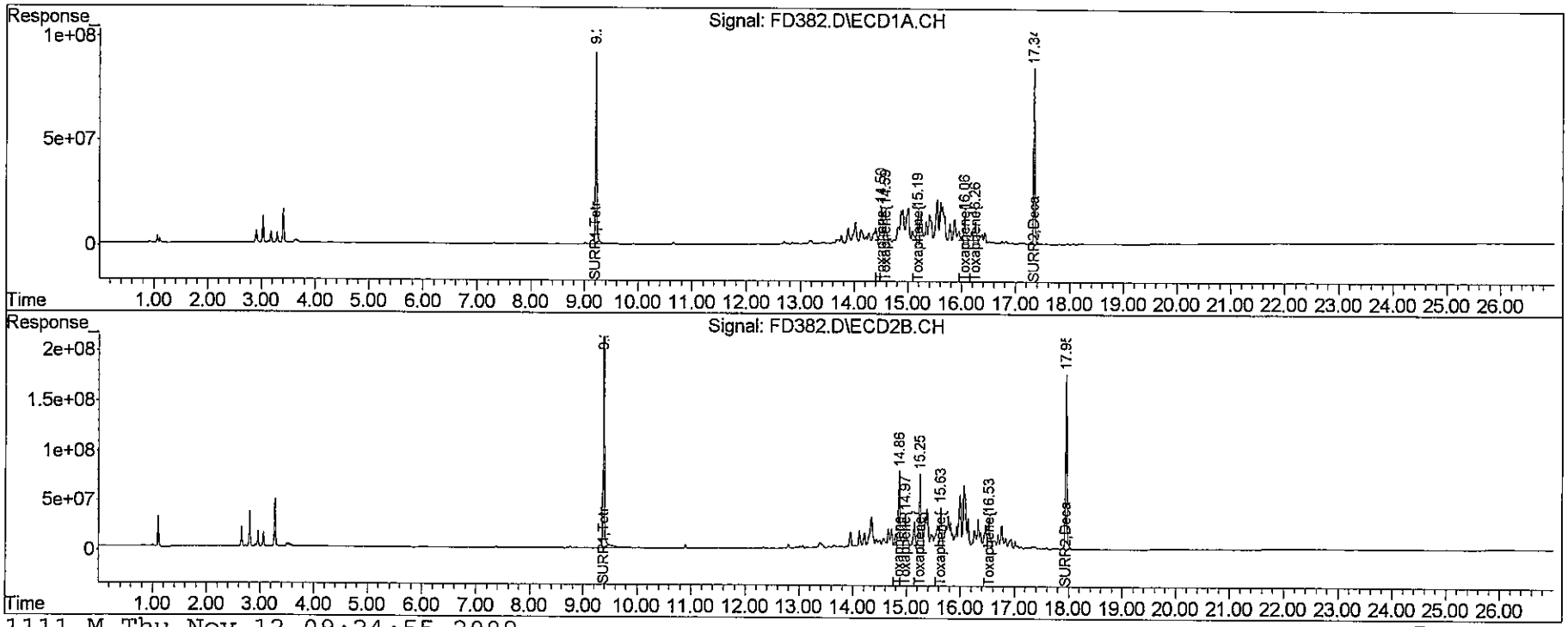
00402

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD382.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 7:09 pm
Operator : M.PEDRO
Sample : TOX M
Misc : INITIAL CAL
ALS Vial : 20 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 09:04:59 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m



80811111.M Thu Nov 12 09:24:55 2009 Page: 2

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD383.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 7:45 pm
Operator : M.PEDRO
Sample : TOX MH
Misc : INITIAL CAL
ALS Vial : 21 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 09:05:37 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/l	ug/l
System Monitoring Compounds						
1) S SURR1,Tetrac	9.21	9.38	2139.3E6	6047.6E6	90.071	86.619
Spiked Amount 100.000	Range 30 - 150		Recovery =		90.07%	86.62%
25) S SURR2,Decachloro	17.34	17.95	1992.2E6	4412.4E6	98.844	102.137
Spiked Amount 100.000	Range 30 - 150		Recovery =		98.84%	102.14%
Target Compounds						
26) L8C Toxaphene	14.50	14.86	934.0E6	2747.6E6	937.371	1003.998
27) L8C Toxaphene{2}	14.59	14.97	632.5E6	1526.2E6	925.059	1079.847
28) L8C Toxaphene{3}	15.19	15.25	556.6E6	3051.5E6	969.910	965.473
29) L8C Toxaphene{4}	16.06	15.63	600.8E6	1356.5E6	943.165	999.051
30) L8C Toxaphene{5}	16.26	16.53	459.2E6	1078.4E6	859.645	922.227
Sum Toxaphene			3183.1E6	9760.2E6	4635.149	4970.597
Average Toxaphene					927.030	994.119
Sum Chlordane			0	0	N.D.	N.D.
Average Chlordane					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

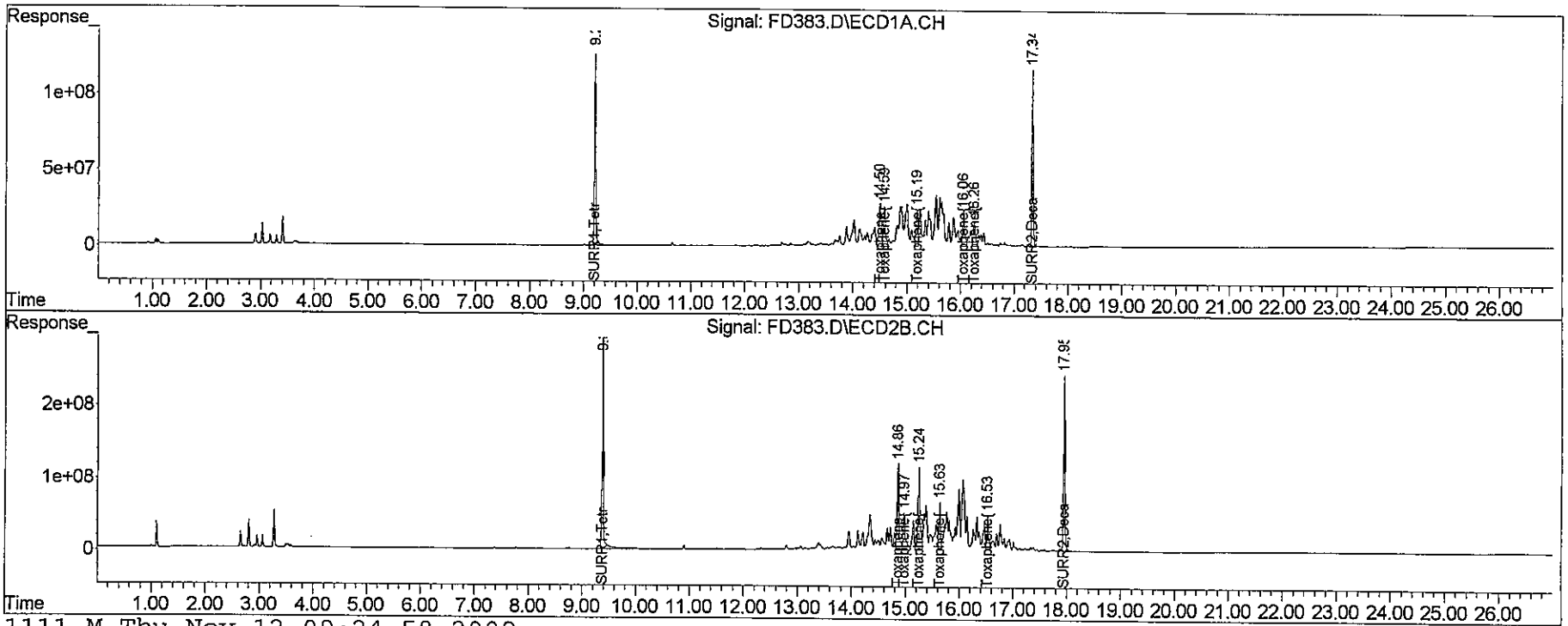
00404

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD383.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 7:45 pm
Operator : M.PEDRO
Sample : TOX MH
Misc : INITIAL CAL
ALS Vial : 21 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 09:05:37 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m



Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD384.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 8:20 pm
Operator : M.PEDRO
Sample : TOX H
Misc : INITIAL CAL
ALS Vial : 22 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 09:06:08 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/l	ug/l
System Monitoring Compounds						
1) S SURR1,Tetrac	9.21	9.38	2646.9E6	7349.9E6	111.441	105.273
Spiked Amount 100.000	Range 30 - 150		Recovery =		111.44%	105.27%
25) S SURR2,Decachloro	17.34	17.95	2471.9E6	5459.4E6	122.647	126.372
Spiked Amount 100.000	Range 30 - 150		Recovery =		122.65%	126.37%
Target Compounds						
26) L8C Toxaphene	14.50	14.86	1258.6E6	3649.0E6	1263.091	1333.361
27) L8C Toxaphene{2}	14.59	14.97	877.2E6	1873.9E6	1282.886	1325.884
28) L8C Toxaphene{3}	15.19	15.25	755.1E6	4084.9E6	1315.784	1292.404
29) L8C Toxaphene{4}	16.06	15.64	815.8E6	1752.3E6	1280.768	1290.552
30) L8C Toxaphene{5}	16.26	16.53	636.8E6	1454.8E6	1192.098	1244.190
Sum Toxaphene			4343.5E6	12814.9E6	6334.627	6486.391
Average Toxaphene					1266.925	1297.278
Sum Chlordane			0	0	N.D.	N.D.
Average Chlordane					0.000	0.000

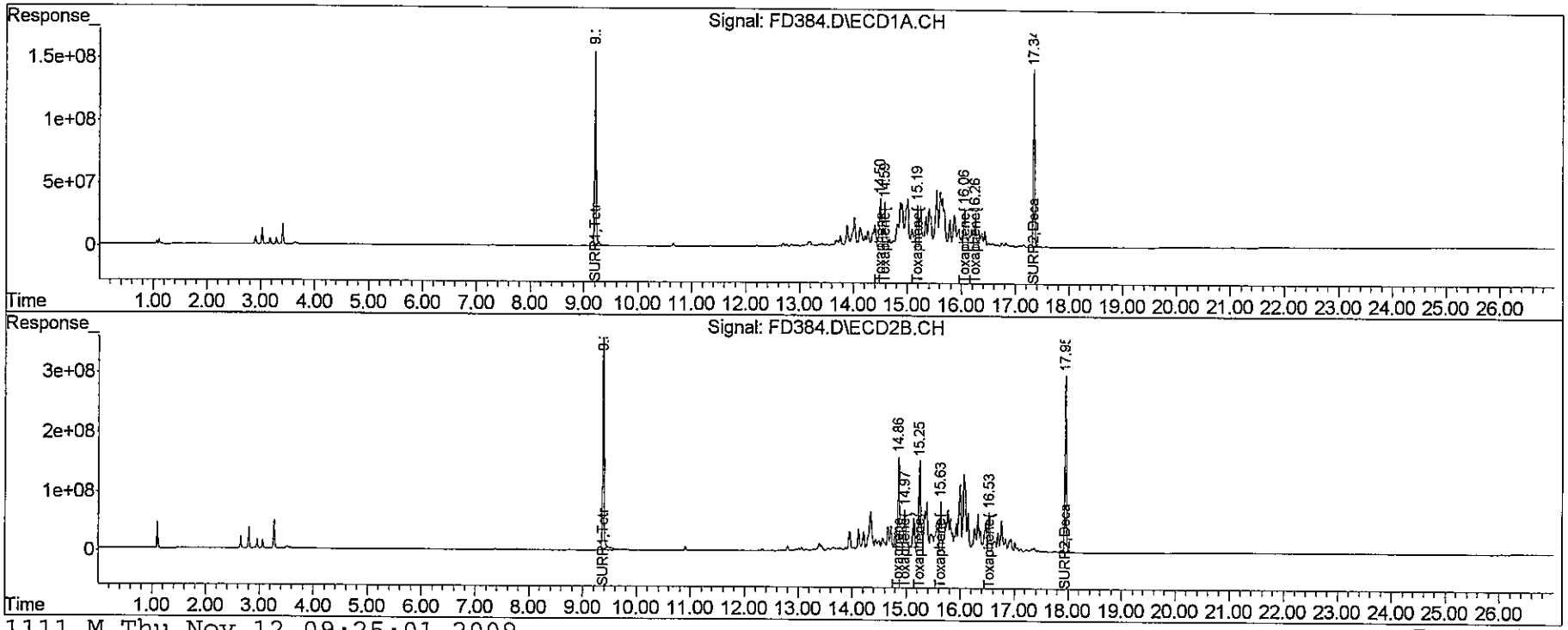
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD384.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 8:20 pm
Operator : M.PEDRO
Sample : TOX H
Misc : INITIAL CAL
ALS Vial : 22 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 09:06:08 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m



J01109

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD385.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 8:56 pm
Operator : M.PEDRO
Sample : CHLOR L
Misc : INITIAL CAL
ALS Vial : 23 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 09:07:00 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/l	ug/l
System Monitoring Compounds						
1) S SURR1,Tetrac	9.21	9.38	504.1E6	1514.6E6	21.223	21.693
Spiked Amount 100.000	Range 30 - 150		Recovery =		21.22%#	21.69%#
25) S SURR2,Decachloro	17.34	17.95	482.5E6	1121.7E6	23.940	25.964
Spiked Amount 100.000	Range 30 - 150		Recovery =		23.94%#	25.96%#
Target Compounds						
Sum Toxaphene			0	0	N.D.	N.D.
Average Toxaphene					0.000	0.000
31) L9C Chlordane	11.35	11.48	4650094	15997857	25.901	28.270
32) L9C Chlordane{2}	11.48	11.70	11159156	33712846	25.914	26.309
33) L9C Chlordane{3}	12.15	12.41	17812902	49531566	28.357	30.913
34) L9C Chlordane{4}	13.02	13.29	81112496	209.6E6	25.269	26.692m
35) L9C Chlordane{5}	14.32	14.81	30629536	84239696	25.348	26.421m
Sum Chlordane			145.4E6	393.1E6	130.790	138.605
Average Chlordane					26.158	27.721

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

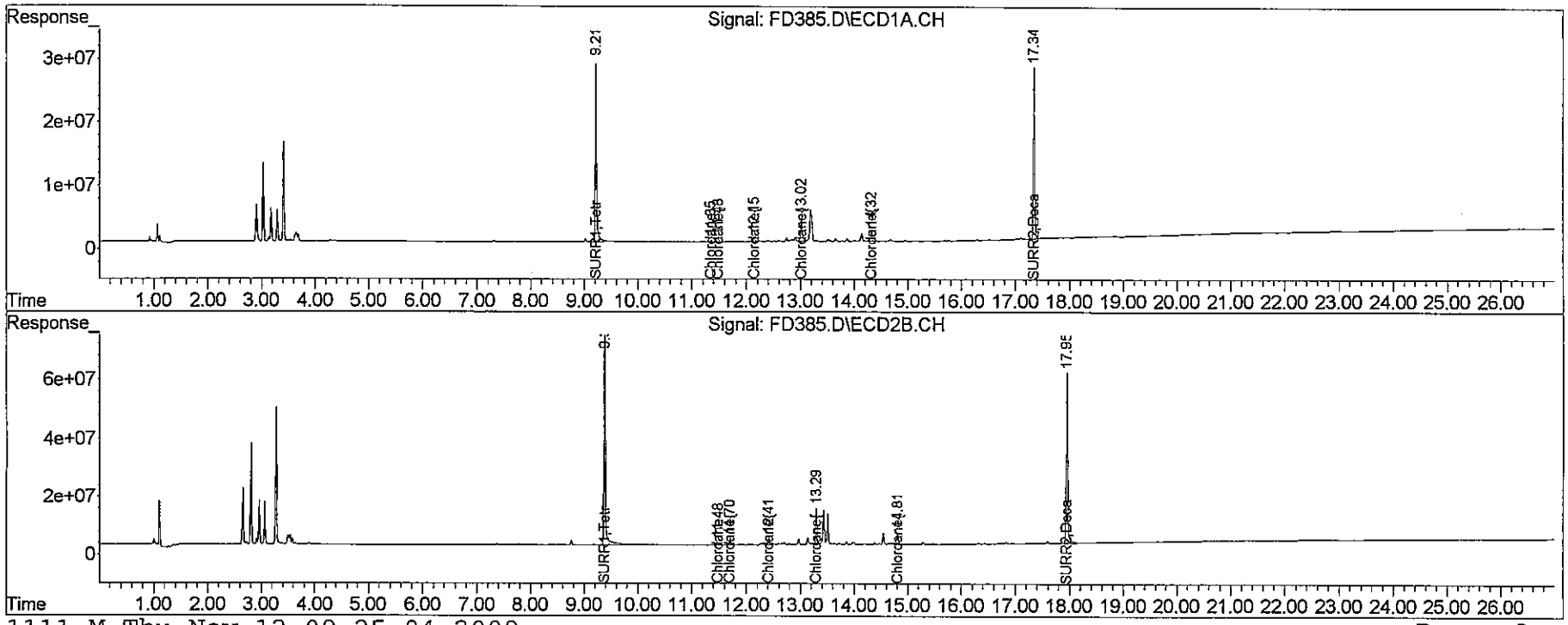
00408

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD385.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 8:56 pm
Operator : M.PEDRO
Sample : CHLOR L
Misc : INITIAL CAL
ALS Vial : 23 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 09:07:00 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m

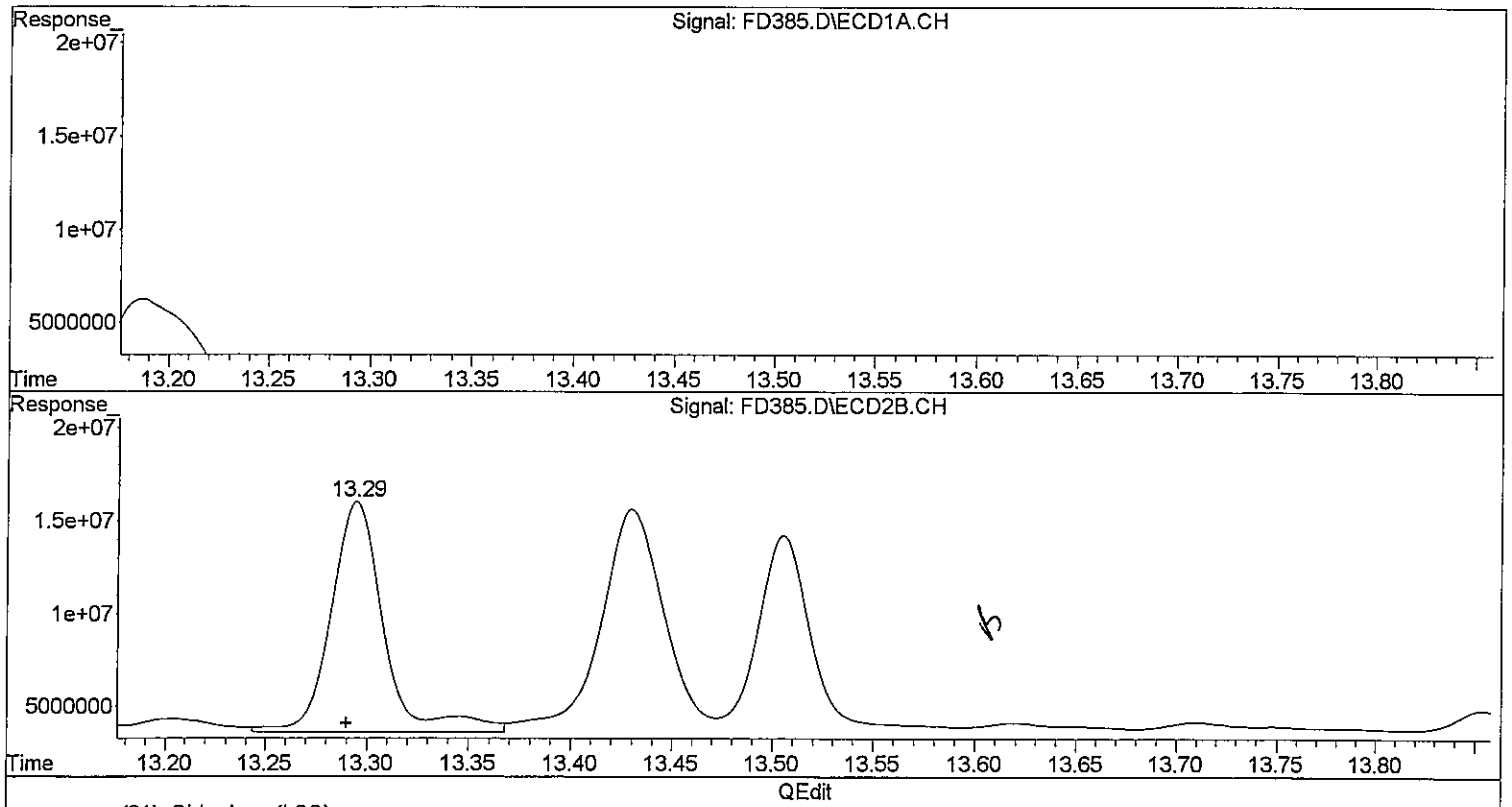


Quantitation Report (Qedit)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD385.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 8:56 pm
Operator : M.PEDRO
Sample : CHLOR L
Misc : INITIAL CAL
ALS Vial : 23 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 08:19:59 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m



QEdit

(31) Chlordane (L9C)

R.T.	Response	Conc
11.35	4650094	25.90
11.48	11159156	25.91
12.15	17812902	28.36
13.02	81112496	25.27
14.32	30629536	25.35

(31) Chlordane #2 (L9C)

R.T.	Response	Conc
11.48	15997857	28.27
11.70	33712846	26.31
12.41	49531566	30.91
13.29	225166400	28.68
14.81	90716795	28.45

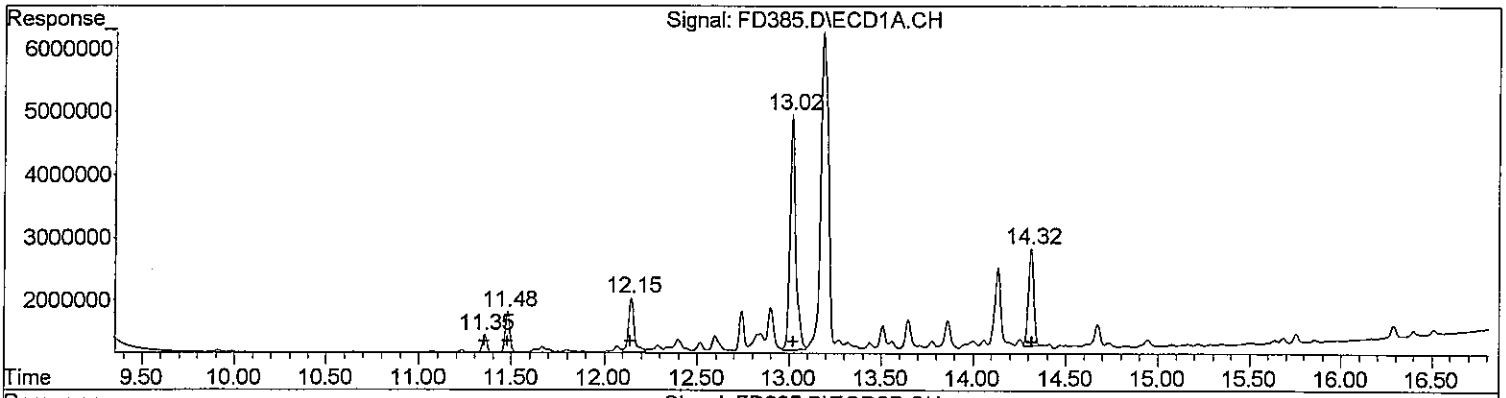
(+) = Expected Retention Time

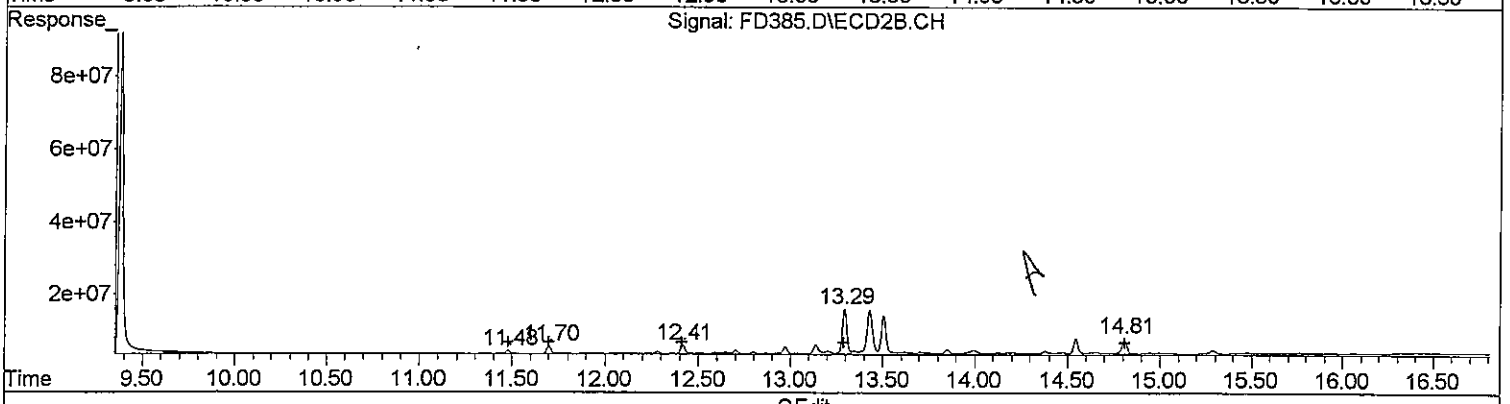
Quantitation Report (Qedit)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD385.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 8:56 pm
Operator : M.PEDRO
Sample : CHLOR L
Misc : INITIAL CAL
ALS Vial : 23 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 08:19:59 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m





QEdit

(31) Chlordane #2 (L9C)

R.T.	Response	Conc
11.35	4650094	25.90
11.48	11159156	25.91
12.15	17812902	28.36
13.02	81112496	25.27
14.32	30629536	25.35

(31) Chlordane #2 (L9C)

R.T.	Response	Conc
11.48	15997857	28.27
11.70	33712846	26.31
12.41	49531566	30.91
13.29	209577043	26.69
14.81	84239696	26.42

(+) = Expected Retention Time

00411

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD386.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 9:31 pm
Operator : M.PEDRO
Sample : CHLOR ML
Misc : INITIAL CAL
ALS Vial : 24 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 09:07:33 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/l	ug/l
System Monitoring Compounds						
1) S SURR1,Tetrac	9.21	9.38	1023.5E6	2955.5E6	43.093	42.332
Spiked Amount 100.000	Range 30 - 150		Recovery =		43.09%	42.33%
25) S SURR2,Decachloro	17.34	17.95	945.1E6	2170.8E6	46.891	50.248
Spiked Amount 100.000	Range 30 - 150		Recovery =		46.89%	50.25%
Target Compounds						
Sum Toxaphene			0	0	N.D.	N.D.
Average Toxaphene					0.000	0.000
31) L9C Chlordane	11.35	11.48	10085734	29324943	56.178	51.820
32) L9C Chlordane{2}	11.48	11.70	23556000	69056071	54.703	53.890
33) L9C Chlordane{3}	12.14	12.41	36663267	93765118	58.366	58.519
34) L9C Chlordane{4}	13.02	13.29	177.6E6	453.5E6	55.331	57.763
35) L9C Chlordane{5}	14.32	14.81	70717490	195.0E6	58.525	61.156
Sum Chlordane			318.6E6	840.7E6	283.102	283.148
Average Chlordane					56.620	56.630

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

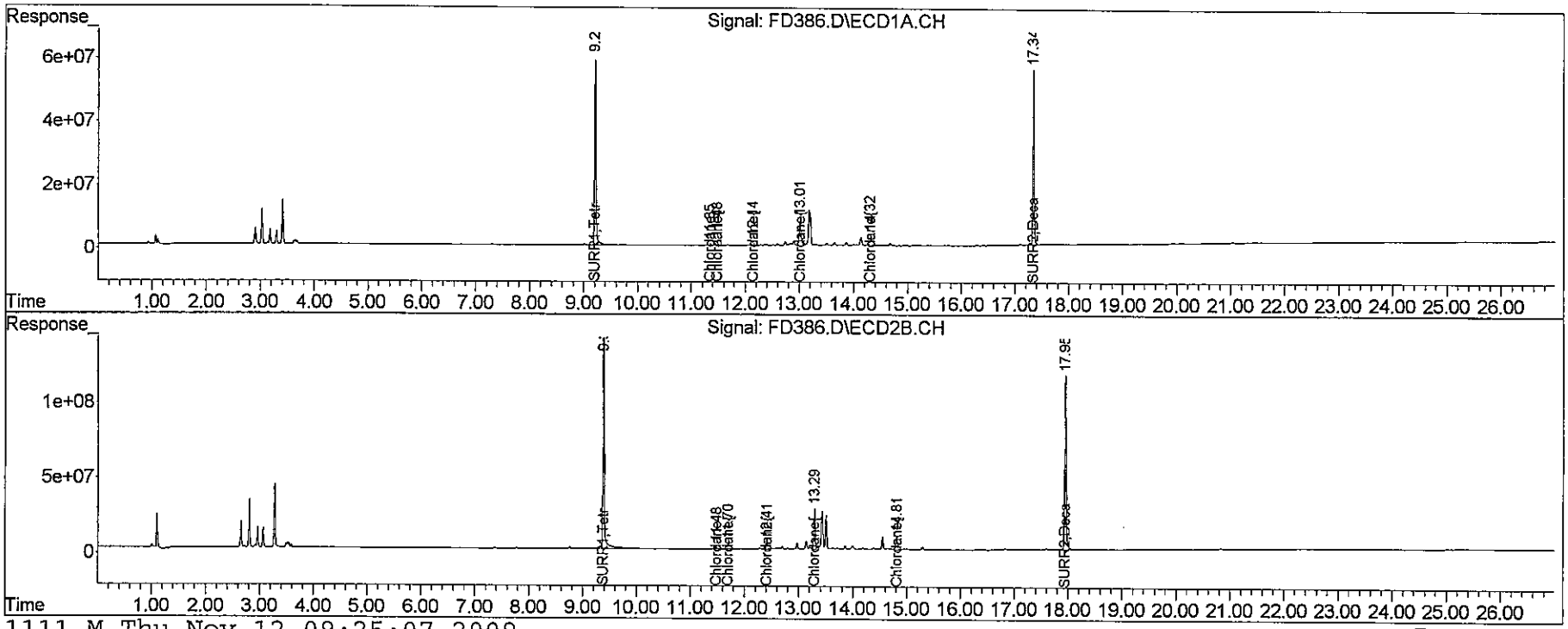
00412

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD386.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 9:31 pm
Operator : M.PEDRO
Sample : CHLOR ML
Misc : INITIAL CAL
ALS Vial : 24 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 09:07:33 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m



Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD387.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 10:07 pm
Operator : M.PEDRO
Sample : CHLOR M
Misc : INITIAL CAL
ALS Vial : 25 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 09:07:59 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/l	ug/l
System Monitoring Compounds						
1) S SURR1,Tetrac	9.21	9.38	1549.1E6	4405.6E6	65.222	63.102
Spiked Amount 100.000	Range 30 - 150		Recovery =		65.22%	63.10%
25) S SURR2,Decachloro	17.34	17.95	1425.4E6	3222.3E6	70.722	74.590
Spiked Amount 100.000	Range 30 - 150		Recovery =		70.72%	74.59%
Target Compounds						
Sum Toxaphene			0	0	N.D.	N.D.
Average Toxaphene					0.000	0.000
31) L9C Chlordane	11.35	11.48	20259464	60311821	112.846	106.576
32) L9C Chlordane{2}	11.48	11.70	47416000	138.1E6	110.111	107.760
33) L9C Chlordane{3}	12.14	12.41	71568187	185.7E6	113.933	115.920
34) L9C Chlordane{4}	13.02	13.29	369.9E6	929.9E6	115.239	118.433
35) L9C Chlordane{5}	14.32	14.81	145.8E6	387.9E6	120.684	121.669
Sum Chlordane			655.0E6	1701.9E6	572.814	570.358
Average Chlordane					114.563	114.072

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

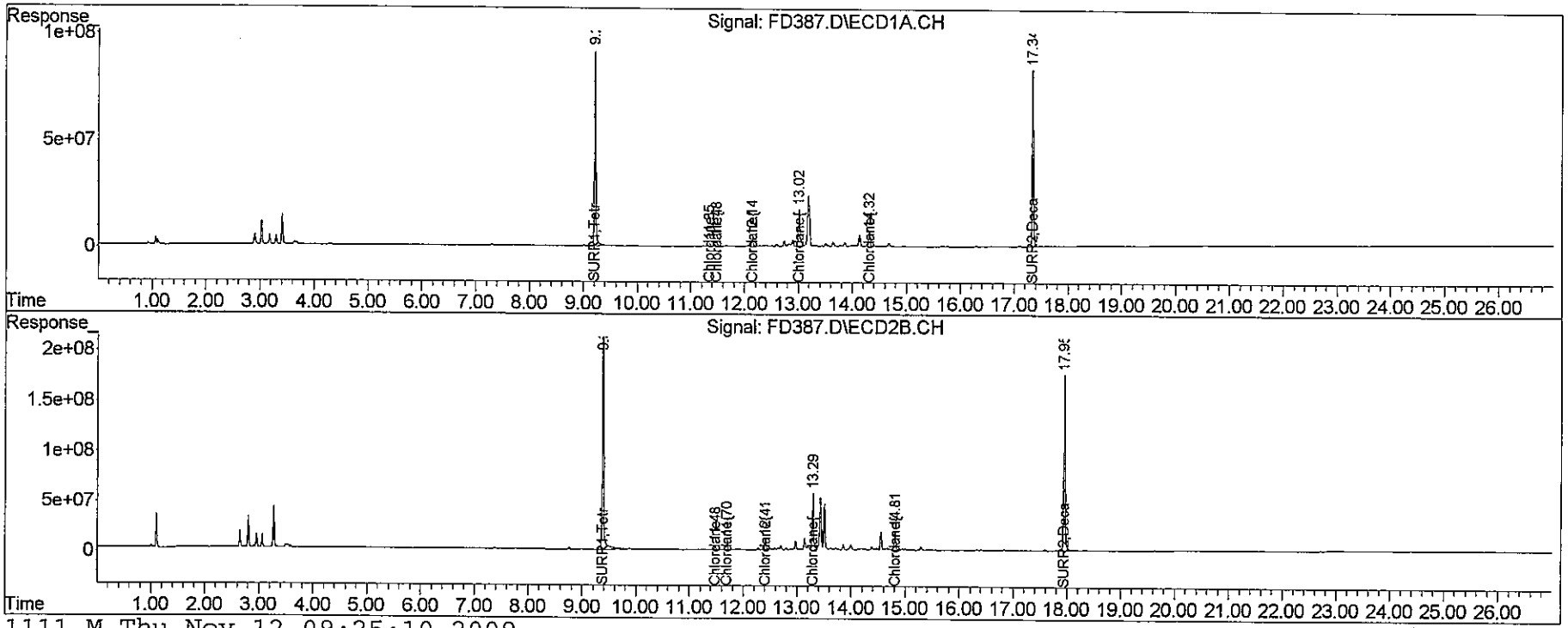
00414

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD387.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 10:07 pm
Operator : M.PEDRO
Sample : CHLOR M
Misc : INITIAL CAL
ALS Vial : 25 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 09:07:59 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m



Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD388.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 10:43 pm
Operator : M.PEDRO
Sample : CHLOR MH
Misc : INITIAL CAL
ALS Vial : 26 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 09:08:32 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/l	ug/l
System Monitoring Compounds						
1) S SURR1,Tetrac	9.21	9.38	2096.3E6	5835.7E6	88.260	83.585
Spiked Amount 100.000	Range 30 - 150		Recovery =		88.26%	83.58%
25) S SURR2,Decachloro	17.34	17.95	1930.2E6	4331.2E6	95.768	100.257
Spiked Amount 100.000	Range 30 - 150		Recovery =		95.77%	100.26%
Target Compounds						
Sum Toxaphene			0	0	N.D.	N.D.
Average Toxaphene					0.000	0.000
31) L9C Chlordane	11.35	11.48	51662260	163.0E6	287.762	288.103
32) L9C Chlordane{2}	11.48	11.70	122.9E6	352.4E6	285.516	275.011
33) L9C Chlordane{3}	12.14	12.41	177.6E6	451.3E6	282.762	281.656
34) L9C Chlordane{4}	13.02	13.29	983.4E6	2377.6E6	306.365	302.819
35) L9C Chlordane{5}	14.32	14.81	378.1E6	999.8E6	312.922	313.580
Sum Chlordane			1713.8E6	4344.2E6	1475.328	1461.169
Average Chlordane					295.066	292.234

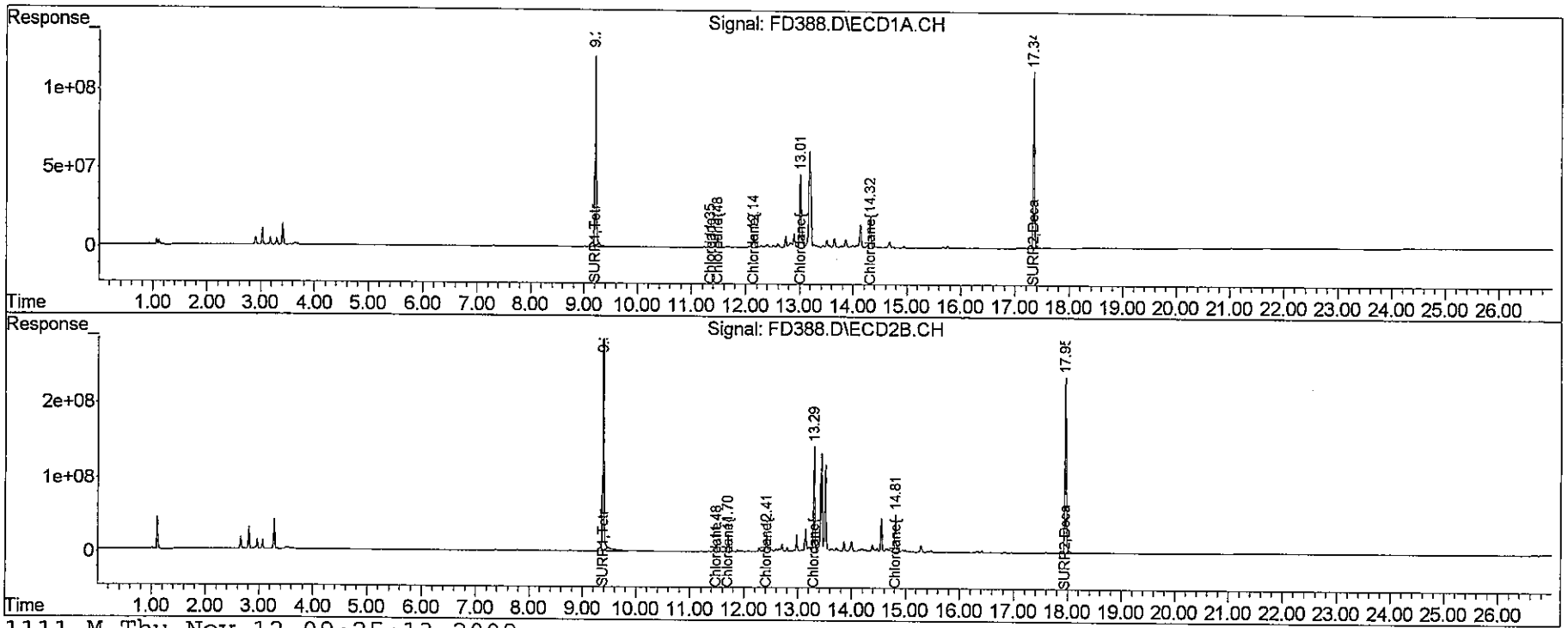
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD388.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 10:43 pm
Operator : M.PEDRO
Sample : CHLOR MH
Misc : INITIAL CAL
ALS Vial : 26 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 09:08:32 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m



Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD389.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 11:18 pm
Operator : M.PEDRO
Sample : CHLOR H
Misc : INITIAL CAL
ALS Vial : 27 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 09:09:04 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/l	ug/l
System Monitoring Compounds						
1) S SURR1,Tetrac	9.21	9.38	2750.9E6	7579.1E6	115.822	108.555
Spiked Amount 100.000	Range 30 - 150		Recovery =		115.82%	108.56%
25) S SURR2,Decachloro	17.34	17.95	2548.9E6	5661.8E6	126.468	131.057
Spiked Amount 100.000	Range 30 - 150		Recovery =		126.47%	131.06%
Target Compounds						
Sum Toxaphene			0	0	N.D.	N.D.
Average Toxaphene					0.000	0.000
31) L9C Chlordane	11.35	11.48	112.4E6	357.0E6	625.868	630.859
32) L9C Chlordane{2}	11.48	11.70	272.9E6	766.2E6	633.717	597.943
33) L9C Chlordane{3}	12.14	12.41	377.3E6	949.5E6	600.635	592.573
34) L9C Chlordane{4}	13.01	13.29	2153.0E6	5043.9E6	670.711	642.411
35) L9C Chlordane{5}	14.32	14.81	845.8E6	2186.6E6	699.976	685.804
Sum Chlordane			3761.3E6	9303.2E6	3230.906	3149.589
Average Chlordane					646.181	629.918

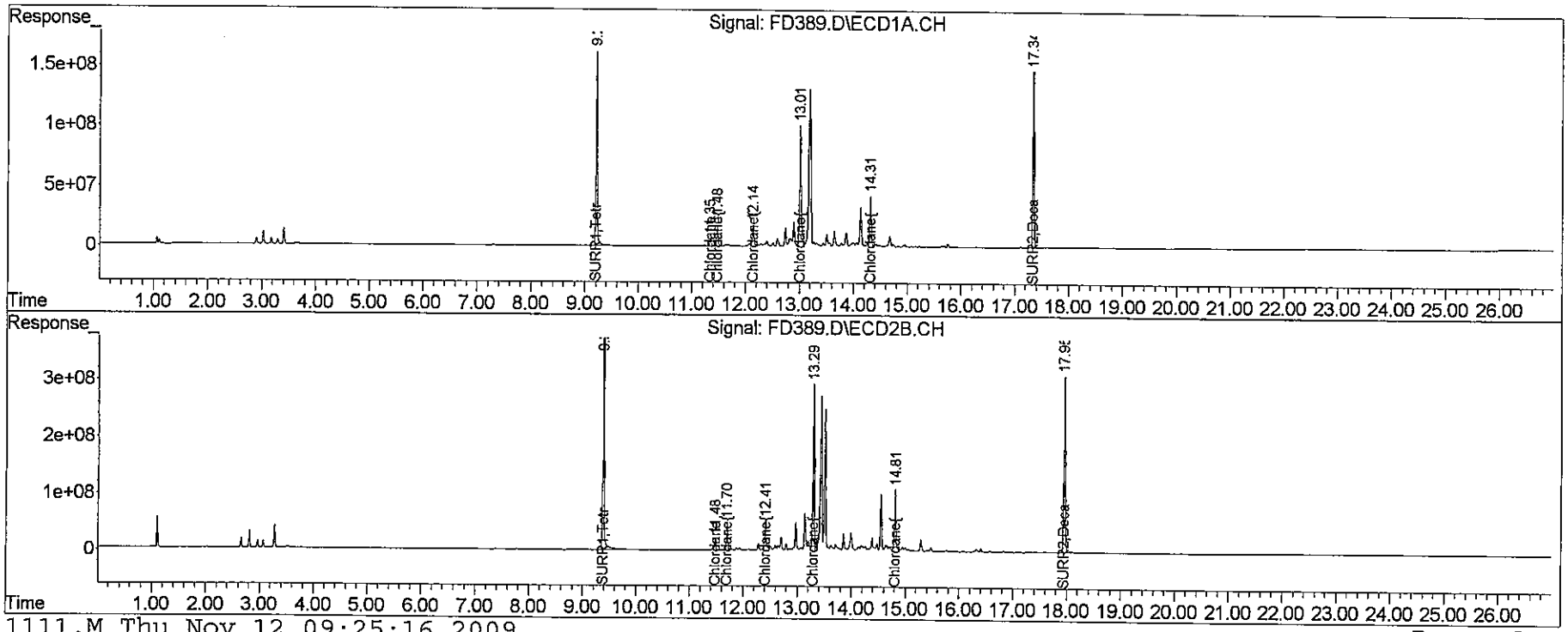
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD389.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 11:18 pm
Operator : M.PEDRO
Sample : CHLOR H
Misc : INITIAL CAL
ALS Vial : 27 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 09:09:04 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 08:17:19 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m



GT1109

Evaluate Continuing Calibration Report

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD390.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 11:54 pm
Operator : M.PEDRO
Sample : PEST ICV
Misc : INITIAL CAL
ALS Vial : 28 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 09:17:12 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 09:14:11 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
3	tc alpha-BHC	41.345	41.526 E6	-0.4	98	0.00
4	tcm gamma-BHC (L	37.086	38.212 E6	-3.0	102	0.00
5	tcm Heptachlor	36.739	37.629 E6	-2.4	101	0.00
6	tcm Aldrin	34.328	34.162 E6	0.5	98	0.00
7	tc beta-BHC	15.526	15.205 E6	2.1	98	0.00
8	TC delta-BHC	37.067	35.999 E6	2.9	95	0.00
9	tc Heptachlor E	31.508	31.073 E6	1.4	97	0.00
10	tc alpha-Endosu	27.900	30.048 E6	-7.7	106	0.00
11	tc gamma-Chlord	31.532	31.569 E6	-0.1	99	0.00
12	tc alpha-Chlord	29.209	27.649 E6	5.3	93	0.00
13	tc 4,4'-DDE	30.234	29.328 E6	3.0	95	0.00
14	tcm Dieldrin	31.291	31.617 E6	-1.0	99	0.00
15	tcm Endrin	28.992	28.998 E6	-0.0	98	0.00
17	tc beta-Endosul	26.188	21.383 E6	18.3#	81	0.00
18	tc 4,4'-DDD	24.557	25.014 E6	-1.9	100	0.00
19	tcm 4,4'-DDT	26.370	28.681 E6	-8.8	106	0.00
20	tc Endrin Aldeh	21.190	20.852 E6	1.6	97	0.00
21	tc Endosulfan S	24.650	24.350 E6	1.2	97	0.00
22	tc Methoxychlor	12.270	12.652 E6	-3.1	102	0.00
24	tc Endrin Keton	28.118	28.228 E6	-0.4	99	0.00
Signal #2						
3	tc alpha-BHC	111.992	112.135 E6	-0.1	100	0.00
4	tcm gamma-BHC (L	103.992	104.953 E6	-0.9	101	0.00
5	tcm Heptachlor	99.550	104.039 E6	-4.5	103	0.00
6	tcm Aldrin	94.213	93.117 E6	1.2	98	0.00
7	tc beta-BHC	43.162	45.347 E6	-5.1	105	0.00
8	tc delta-BHC	100.802	96.625 E6	4.1	95	0.00
9	tc Heptachlor E	85.511	85.627 E6	-0.1	99	0.00

Evaluate Continuing Calibration Report

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD390.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 11:54 pm
Operator : M.PEDRO
Sample : PEST ICV
Misc : INITIAL CAL
ALS Vial : 28 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 09:17:12 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 09:14:11 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
10	tc	alpha-Endosu	68.559	76.777 E6	-12.0	109	0.00
11	tc	gamma-Chlord	88.023	88.658 E6	-0.7	101	0.00
12	tc	alpha-Chlord	83.807	80.073 E6	4.5	93	0.00
13	tc	4,4'-DDE	78.679	78.268 E6	0.5	97	0.00
14	tcm	Dieldrin	82.658	84.201 E6	-1.9	100	0.00
15	tcm	Endrin	68.637	70.439 E6	-2.6	98	0.00
17	tc	beta-Endosul	69.774	61.789 E6	11.4	87	0.00
18	tc	4,4'-DDD	62.753	61.834 E6	1.5	95	0.00
19	tcm	4,4'-DDT	67.131	73.583 E6	-9.6	108	0.00
20	tc	Endrin Aldeh	54.388	53.939 E6	0.8	99	0.00
21	tc	Endosulfan S	62.351	62.554 E6	-0.3	98	0.00
22	tc	Methoxychlor	27.869	28.566 E6	-2.5	102	0.00
24	tc	Endrin Keton	67.091	68.050 E6	-1.4	100	0.00

Evaluate Continuing Calibration Report - Not Founds

1	S	SURR1,Tetrac	26.313	0.000 E6	100.0#	0#	-9.21#
2	TC	HEXACHLOROBENZENE	37.602	0.000 E6	100.0#	0#	-9.90#
16	tc	KEPONE	11.805	0.000 E6	100.0#	0#	-14.15#
23	tc	FAMPHUR	18.831	0.000 E6	100.0#	0#	-15.99#
25	S	SURR2,Decachlorobiphenyl	24.483	0.000 E6	100.0#	0#	-17.34#
26	L8C	Toxaphene	1.197	0.000 E6	100.0#	0#	-14.50#
27	L8C	Toxaphene{2}	829.376	0.000 E3	100.0#	0#	-14.59#
28	L8C	Toxaphene{3}	696.890	0.000 E3	100.0#	0#	-15.19#
29	L8C	Toxaphene{4}	755.672	0.000 E3	100.0#	0#	-16.06#
30	L8C	Toxaphene{5}	584.988	0.000 E3	100.0#	0#	-16.26#
31	L9C	Chlordane	204.338	0.000 E3	100.0#	0#	-11.35#
32	L9C	Chlordane{2}	485.844	0.000 E3	100.0#	0#	-11.48#
33	L9C	Chlordane{3}	725.306	0.000 E3	100.0#	0#	-12.15#
34	L9C	Chlordane{4}	3.747	0.000 E6	100.0#	0#	-13.02#

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD390.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 11:54 pm
Operator : M.PEDRO
Sample : PEST ICV
Misc : INITIAL CAL
ALS Vial : 28 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 09:17:12 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 09:14:11 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/l	ug/l
	System Monitoring Compounds						
	Target Compounds						
3)	tc alpha-BHC	10.21	10.46	830.5E6	2242.7E6	20.088	20.026
4)	tcm gamma-BHC (L	10.73	11.03	764.2E6	2099.1E6	20.608	20.185
5)	tcm Heptachlor	11.48	11.70	752.6E6	2080.8E6	20.484	20.902
6)	tcm Aldrin	11.93	12.18	683.2E6	1862.3E6	19.903	19.767
7)	tc beta-BHC	10.89	11.18	304.1E6	906.9E6	19.586	21.012
8)	tc delta-BHC	11.16	11.63	720.0E6	1932.5E6	19.424	19.171
9)	tc Heptachlor E	12.83	13.02	621.5E6	1712.5E6	19.724	20.027
10)	tc alpha-Endosu	13.40	13.59	601.0E6	1535.5E6	21.540	22.397
11)	tc gamma-Chlord	13.02	13.30	631.4E6	1773.2E6	20.024	20.144
12)	tc alpha-Chlord	13.21	13.51	553.0E6	1601.5E6	18.932	19.109
13)	tc 4,4'-DDE	13.32	13.75	1173.1E6	3130.7E6	38.801	39.791
14)	tcm Dieldrin	13.75	13.98	1264.7E6	3368.1E6	40.416	40.747
15)	tcm Endrin	14.09	14.43	1159.9E6	2817.5E6	40.008	41.050
17)	tc beta-Endosul	14.42	14.74	855.3E6	2471.6E6	32.661	35.423
18)	tc 4,4'-DDD	14.18	14.57	1000.5E6	2473.4E6	40.743	39.415
19)	tcm 4,4'-DDT	14.58	15.03	1147.3E6	2943.3E6	43.506	43.844
20)	tc Endrin Aldeh	15.04	15.24	834.1E6	2157.6E6	39.361	39.670
21)	tc Endosulfan S	15.69	15.64	974.0E6	2502.2E6	39.514	40.130
22)	tc Methoxychlor	15.28	16.00	2530.5E6	5713.2E6	206.242	205.003
24)	tc Endrin Keton	16.09	16.40	1129.1E6	2722.0E6	40.158	40.572
	Sum Toxaphene			0	0	N.D.	N.D.
	Average Toxaphene					0.000	0.000
	Sum Chlordane			0	0	N.D.	N.D.
	Average Chlordane					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

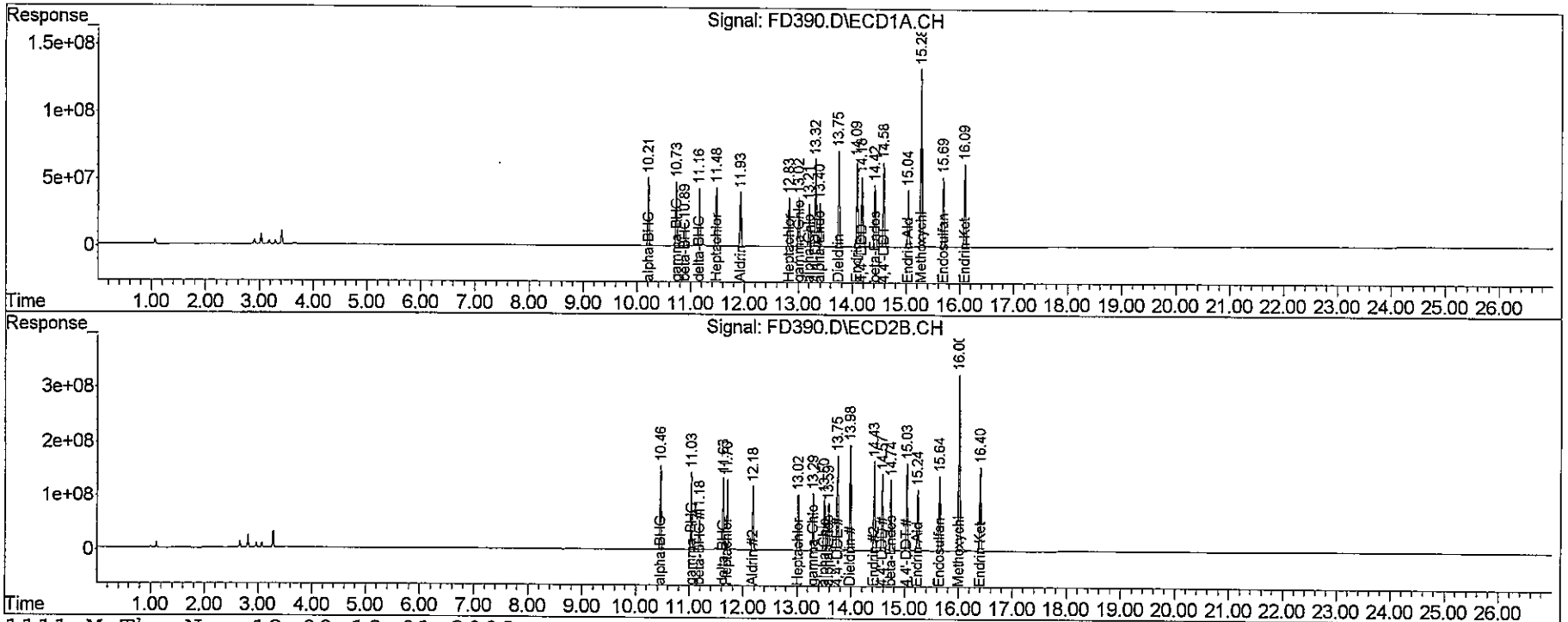
00422

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD390.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 11 Nov 2009 11:54 pm
Operator : M.PEDRO
Sample : PEST ICV
Misc : INITIAL CAL
ALS Vial : 28 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 09:17:12 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 09:14:11 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m



Evaluate Continuing Calibration Report

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD391.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Nov 2009 12:30 am
Operator : M.PEDRO
Sample : TOX ICV
Misc : INITIAL CAL
ALS Vial : 29 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 09:18:35 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 09:14:11 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
26	L8C Toxaphene	1.197	1.206 E6	-0.8	102	0.00
27	L8C Toxaphene{2}	829.376	816.332 E3	1.6	99	0.00
28	L8C Toxaphene{3}	696.890	703.034 E3	-0.9	101	0.00
29	L8C Toxaphene{4}	755.672	764.646 E3	-1.2	102	0.00
30	L8C Toxaphene{5}	584.988	558.302 E3	4.6	96	0.00

Signal #2

26	L8C Toxaphene	3.643	3.627 E6	0.4	102	0.00
27	L8C Toxaphene{2}	1.942	1.851 E6	4.7	101	0.00
28	L8C Toxaphene{3}	4.064	4.021 E6	1.1	101	0.00
29	L8C Toxaphene{4}	1.743	1.680 E6	3.6	99	0.00
30	L8C Toxaphene{5}	1.432	1.399 E6	2.3	100	0.00

Evaluate Continuing Calibration Report - Not Founds

1	S SURR1,Tetrac	26.313	0.000 E6	100.0#	0#	-9.21#
2	TC HEXACHLOROBENZENE	37.602	0.000 E6	100.0#	0#	-9.90#
3	tc alpha-BHC	41.345	0.000 E6	100.0#	0#	-10.21#
4	tcm gamma-BHC (L	37.086	0.000 E6	100.0#	0#	-10.73#
5	tcm Heptachlor	36.739	0.000 E6	100.0#	0#	-11.48#
6	tcm Aldrin	34.328	0.000 E6	100.0#	0#	-11.93#
7	tc beta-BHC	15.526	0.000 E6	100.0#	0#	-10.89#
8	TC delta-BHC	37.067	0.000 E6	100.0#	0#	-11.16#
9	tc Heptachlor E	31.508	0.000 E6	100.0#	0#	-12.83#
10	tc alpha-Endosu	27.900	0.000 E6	100.0#	0#	-13.40#
11	tc gamma-Chlord	31.532	0.000 E6	100.0#	0#	-13.02#
12	tc alpha-Chlord	29.209	0.000 E6	100.0#	0#	-13.21#
13	tc 4,4'-DDE	30.234	0.000 E6	100.0#	0#	-13.32#
14	tcm Dieldrin	31.291	0.000 E6	100.0#	0#	-13.75#

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD391.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Nov 2009 12:30 am
Operator : M.PEDRO
Sample : TOX ICV
Misc : INITIAL CAL
ALS Vial : 29 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 09:18:35 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 09:14:11 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/l	ug/l
System Monitoring Compounds						
Target Compounds						
26) L8C Toxaphene	14.50	14.86	603.1E6	1813.7E6	503.670	497.919
27) L8C Toxaphene{2}	14.58	14.97	408.2E6	925.5E6	492.137	476.638
28) L8C Toxaphene{3}	15.19	15.25	351.5E6	2010.3E6	504.408	494.682
29) L8C Toxaphene{4}	16.06	15.63	382.3E6	840.2E6	505.937	482.113
30) L8C Toxaphene{5}	16.26	16.53	279.2E6	699.3E6	477.191	488.229
Sum Toxaphene			2024.3E6	6289.0E6	2483.342	2439.581
Average Toxaphene					496.668	487.916
Sum Chlordane			0	0	N.D.	N.D.
Average Chlordane					0.000	0.000

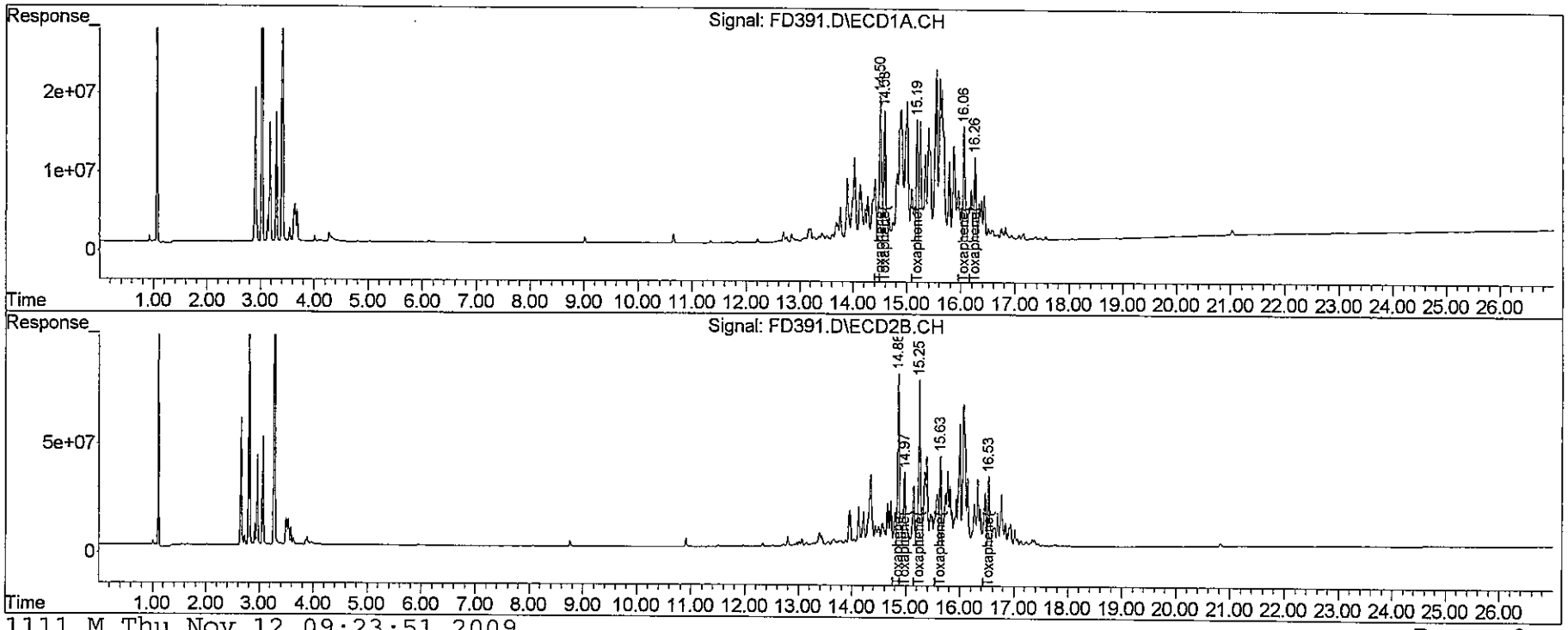
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD391.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Nov 2009 12:30 am
Operator : M.PEDRO
Sample : TOX ICV
Misc : INITIAL CAL
ALS Vial : 29 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 09:18:35 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 09:14:11 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m



Evaluate Continuing Calibration Report

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD392.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Nov 2009 1:05 am
Operator : M.PEDRO
Sample : CHLOR ICV
Misc : INITIAL CAL
ALS Vial : 30 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 09:20:10 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 09:14:11 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
31	L9C Chlordane	204.338	219.964 E3	-7.6	109	0.00
32	L9C Chlordane{2}	485.844	510.213 E3	-5.0	108	0.00
33	L9C Chlordane{3}	725.306	766.292 E3	-5.7	107	0.00
34	L9C Chlordane{4}	3.747	3.975 E6	-6.1	107	0.00
35	L9C Chlordane{5}	1.460	1.518 E6	-4.0	104	0.00
	Signal #2					
31	L9C Chlordane	639.140	681.945 E3	-6.7	113	0.00
32	L9C Chlordane{2}	1.411	1.486 E6	-5.3	108	0.00
33	L9C Chlordane{3}	1.884	1.964 E6	-4.2	106	0.00
34	L9C Chlordane{4}	9.270	9.932 E6	-7.1	107	0.00
35	L9C Chlordane{5}	3.904	4.159 E6	-6.5	107	0.00

Evaluate Continuing Calibration Report - Not Founds

1	S	SURR1,Tetrac	26.313	0.000 E6	100.0#	0#	-9.21#
2	TC	HEXACHLOROBENZENE	37.602	0.000 E6	100.0#	0#	-9.90#
3	tc	alpha-BHC	41.345	0.000 E6	100.0#	0#	-10.21#
4	tcm	gamma-BHC (L	37.086	0.000 E6	100.0#	0#	-10.73#
5	tcm	Heptachlor	36.739	0.000 E6	100.0#	0#	-11.48#
6	tcm	Aldrin	34.328	0.000 E6	100.0#	0#	-11.93#
7	tc	beta-BHC	15.526	0.000 E6	100.0#	0#	-10.89#
8	TC	delta-BHC	37.067	0.000 E6	100.0#	0#	-11.16#
9	tc	Heptachlor E	31.508	0.000 E6	100.0#	0#	-12.83#
10	tc	alpha-Endosu	27.900	0.000 E6	100.0#	0#	-13.40#
11	tc	gamma-Chlord	31.532	0.000 E6	100.0#	0#	-13.02#
12	tc	alpha-Chlord	29.209	0.000 E6	100.0#	0#	-13.21#
13	tc	4,4'-DDE	30.234	0.000 E6	100.0#	0#	-13.32#
14	tcm	Dieldrin	31.291	0.000 E6	100.0#	0#	-13.75#

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD392.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Nov 2009 1:05 am
Operator : M.PEDRO
Sample : CHLOR ICV
Misc : INITIAL CAL
ALS Vial : 30 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 09:20:10 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 09:14:11 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/l	ug/l
System Monitoring Compounds						
Target Compounds						
Sum Toxaphene			0	0	N.D.	N.D.
Average Toxaphene					0.000	0.000
31) L9C Chlordane	11.35	11.48	21996375	68194541	107.647	106.697
32) L9C Chlordane{2}	11.48	11.70	51021288	148.6E6	105.016	105.330
33) L9C Chlordane{3}	12.14	12.41	76629212	196.4E6	105.651	104.289
34) L9C Chlordane{4}	13.01	13.29	397.5E6	993.2E6	106.070	107.140
35) L9C Chlordane{5}	14.32	14.81	151.8E6	415.9E6	103.968	106.516
Sum Chlordane			698.9E6	1822.3E6	528.352	529.972
Average Chlordane					105.670	105.994

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

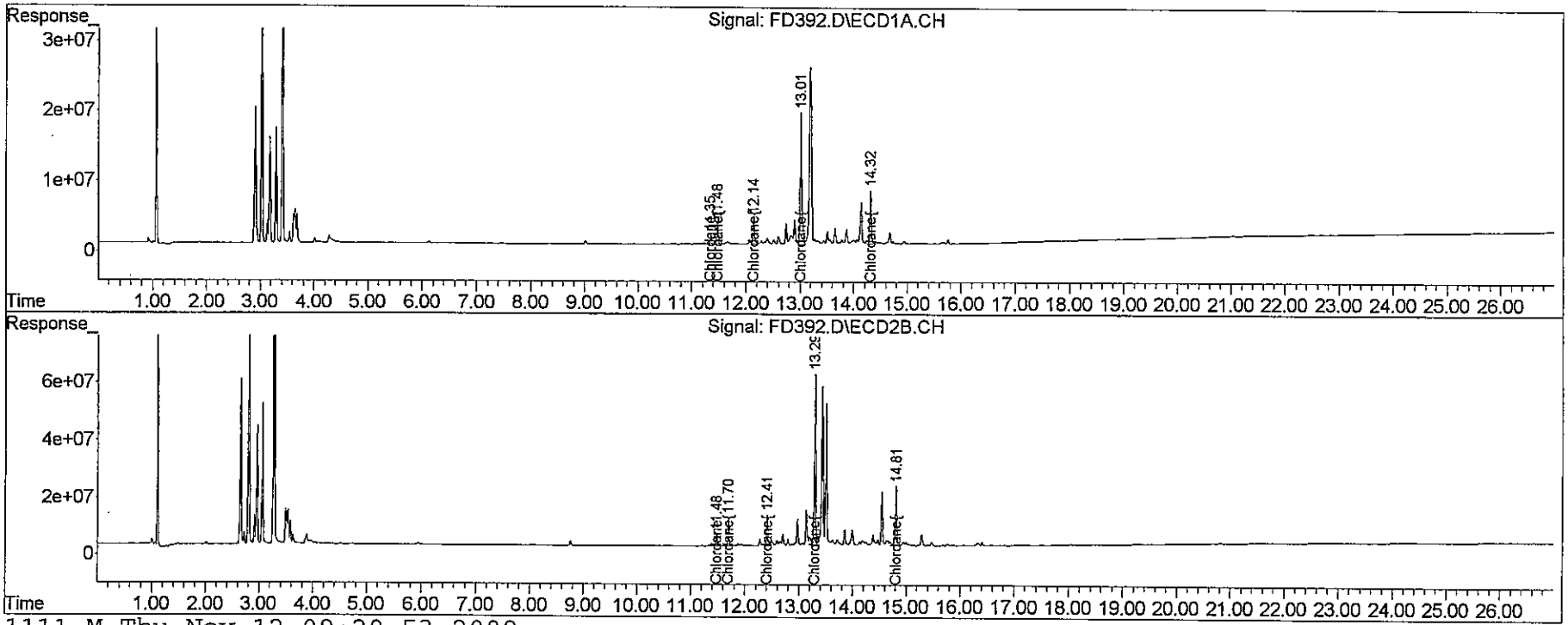
00428

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111109\
Data File : FD392.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Nov 2009 1:05 am
Operator : M.PEDRO
Sample : CHLOR ICV
Misc : INITIAL CAL
ALS Vial : 30 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 12 09:20:10 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 09:14:11 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m



7D
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name:	Columbia Analytical Services		Contract:		
Lab Code:	10145	Case No.:	SAS No.:	SDG No.:	
GC Column (1):	STX-CLP	ID: 0.32 (mm)		Initial Calibration Date(s):	11/11/2009
EPA Sample No. (PEM):	PEM			Date Analyzed:	11/18/2009
LAB Sample ID. (PEM):	PEM			Time Analyzed:	9:43
4,4'-DDT % Breakdown (1):	0.8%			Endrin % Breakdown (1):	1.9%
Combined % Breakdown (1):	2.7%				

QC LIMITS:

%D of amounts in PEM must be less than or equal to 25.0%
4,4'-DDT breakdown must be less than or equal to 15.0%
Endrin breakdown must be less than or equal to 15.0%
Combined breakdown must be less than or equal to 30.0%

FORM VII PEST-1

7D

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name:	Columbia Analytical Services		Contract:		
Lab Code:	10145	Case No.:	SAS No.:	SDG No.:	
GC Column (2):	STX-CLPII	ID: 0.32 (mm)		Initial Calibration Date(s):	11/11/2009
EPA Sample No. (PEM):	PEM			Date Analyzed:	11/18/2009
LAB Sample ID. (PEM):	PEM			Time Analyzed:	9:43
4,4'-DDT % Breakdown (1):	0.8%			Endrin % Breakdown (1):	3.1%
Combined % Breakdown (1):	3.9%				

QC LIMITS:

%D of amounts in PEM must be less than or equal to 25.0%
4,4'-DDT breakdown must be less than or equal to 15.0%
Endrin breakdown must be less than or equal to 15.0%
Combined breakdown must be less than or equal to 30.0%

FORM VII PEST-1

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111809\
Data File : FD539.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 18 Nov 2009 9:43 am
Operator : M.PEDRO
Sample : PEM
Misc : PEST PERFORM CHECK
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 19 08:10:30 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 09:14:11 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/l	ug/l
	System Monitoring Compounds						
1)	S SURR1,Tetrac	9.22	9.37	522.4E6	1609.0E6	19.854	21.017
	Spiked Amount 100.000	Range 30 - 150		Recovery =		19.85%#	21.02%#
25)	S SURR2,Decachloro	17.34	17.94	465.5E6	1041.3E6	19.013	19.095
	Spiked Amount 100.000	Range 30 - 150		Recovery =		19.01%#	19.09%#
	Target Compounds						
3)	tc alpha-BHC	10.21	10.45	388.6E6	1150.9E6	9.399	10.277
4)	tcm gamma-BHC (L	10.73	11.02	351.0E6	1050.8E6	9.464	10.104
7)	tc beta-BHC	10.89	11.17	144.8E6	458.9E6	9.326	10.633
13)	tc 4,4'-DDE	13.32	13.74	8380896	24003229	0.277	0.305
15)	tcm Endrin	14.09	14.42	1391.1E6	3478.0E6	47.983	50.673
18)	tc 4,4'-DDD	14.18	14.57	12167880	28234379	0.495	0.450m
19)	tcm 4,4'-DDT	14.58	15.02	2656.7E6	6398.3E6	100.747	95.311
20)	tc Endrin Aldeh	15.04	15.23	6552272	46924210	0.309	0.863 #
22)	tc Methoxychlor	15.28	15.99	2962.3E6	6563.1E6	241.434	235.502
24)	tc Endrin Keton	16.09	16.39	20522281	65638806	0.730	0.978 #
	Sum Toxaphene			0	0	N.D.	N.D.
	Average Toxaphene					0.000	0.000
	Sum Chlordane			0	0	N.D.	N.D.
	Average Chlordane					0.000	0.000

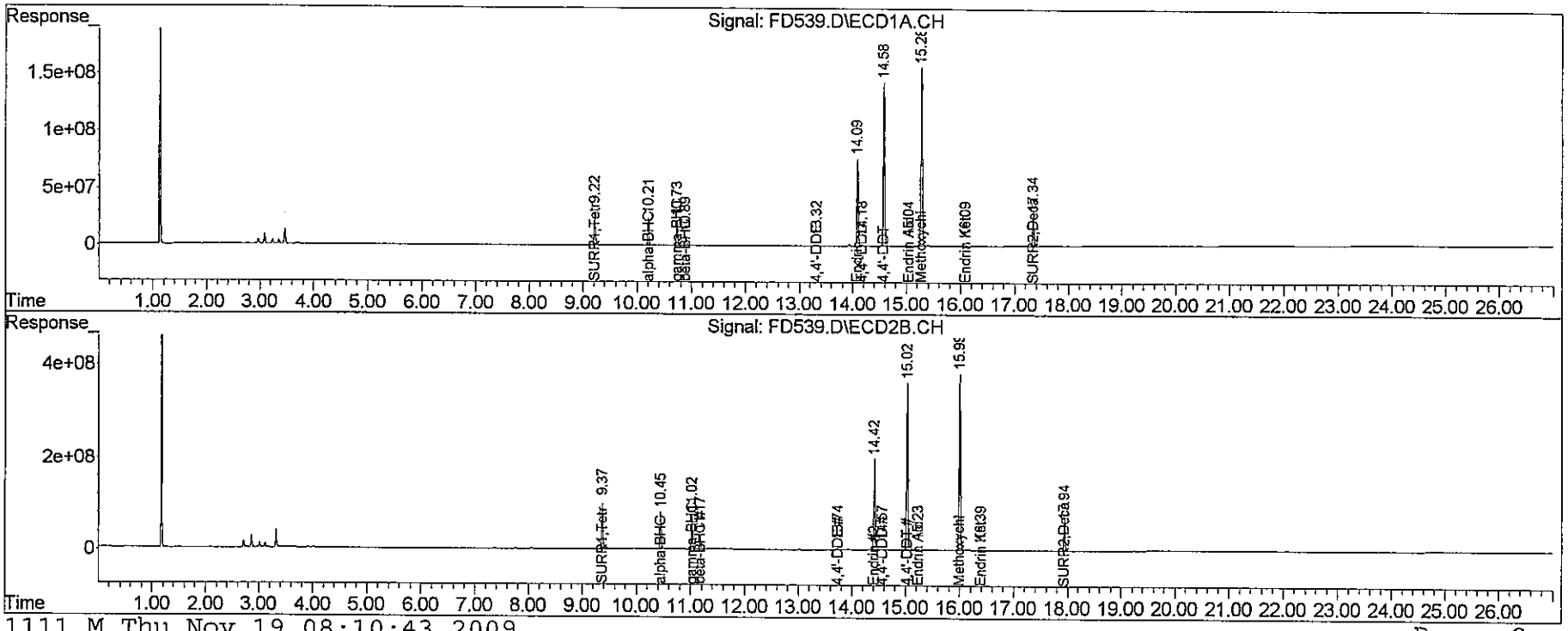
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111809\
Data File : FD539.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 18 Nov 2009 9:43 am
Operator : M.PEDRO
Sample : PEM
Misc : PEST PERFORM CHECK
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 19 08:10:30 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 09:14:11 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m



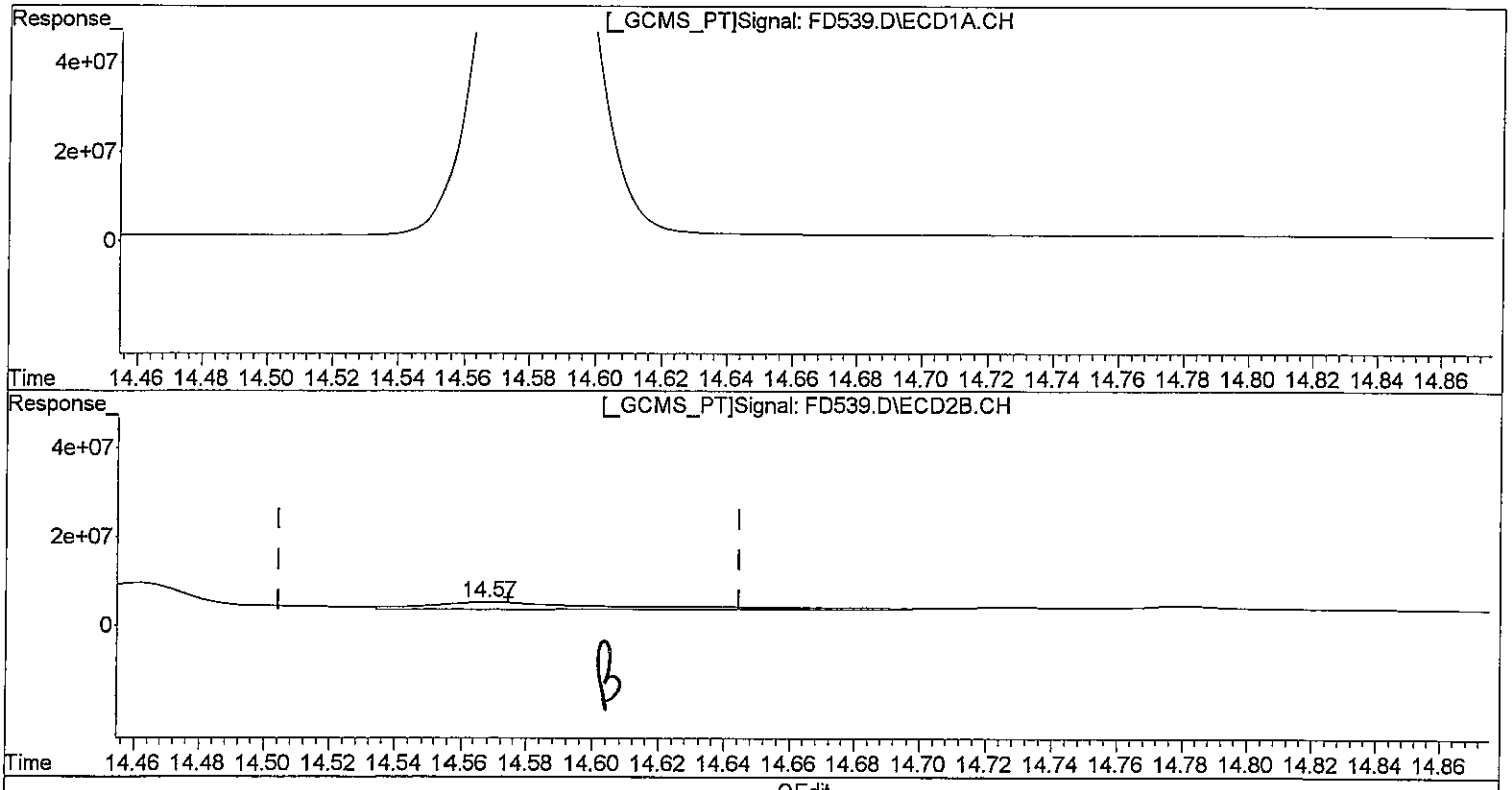
sc1b0

Quantitation Report (Qedit)

Data Path : J:\ACQUDATA\6890D\DATA\111809\
Data File : FD539.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 18 Nov 2009 9:43 am
Operator : M.PEDRO
Sample : PEM
Misc : PEST PERFORM CHECK
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 19 07:39:43 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 09:14:11 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m



QEdit

(18) 4,4'-DDD (tc)
14.18min 0.495ug/l
response 12167880

(18) 4,4'-DDD #2 (tc)
14.57min 1.157ug/l
response 72609523

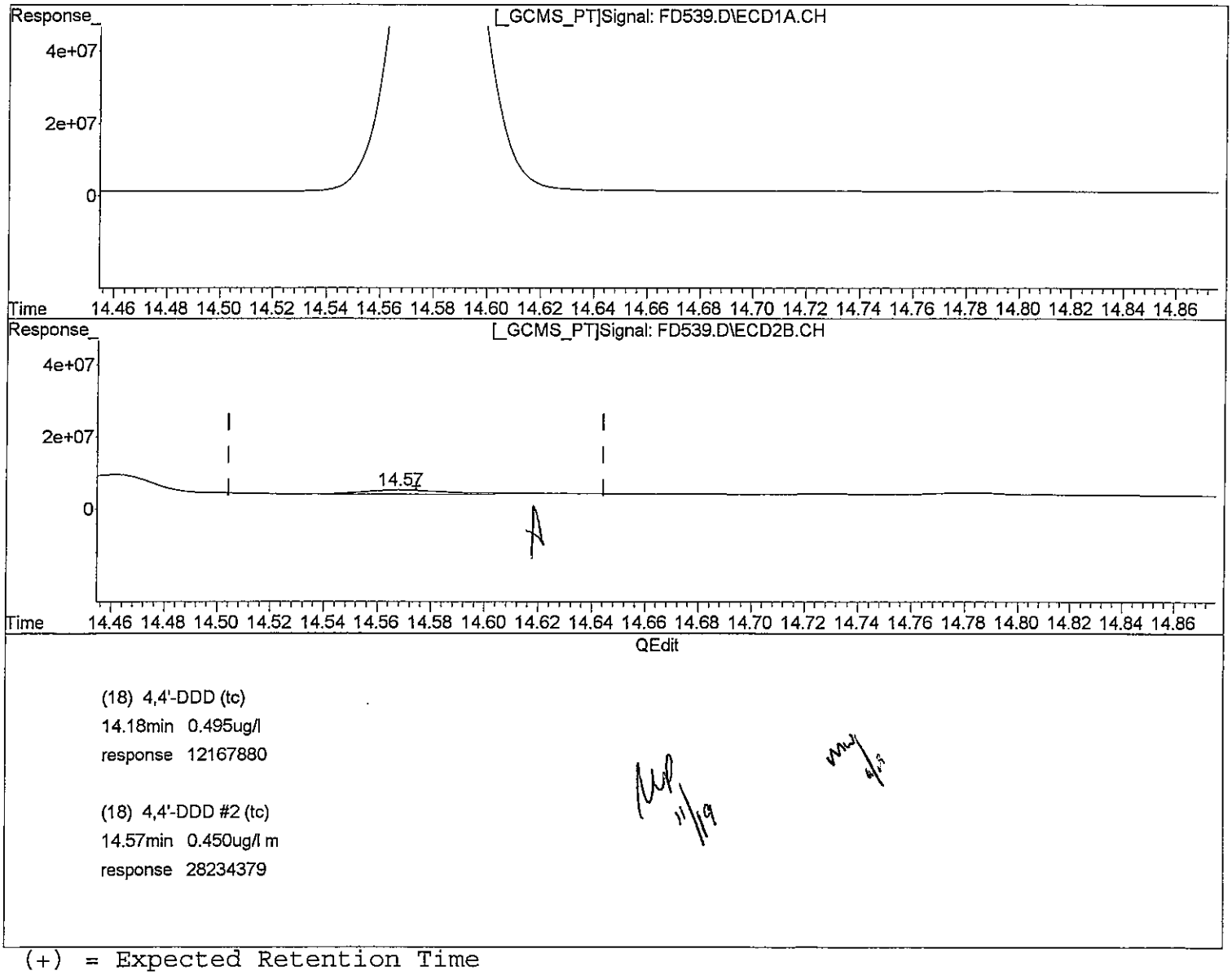
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : J:\ACQUDATA\6890D\DATA\111809\
Data File : FD539.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 18 Nov 2009 9:43 am
Operator : M.PEDRO
Sample : PEM
Misc : PEST PERFORM CHECK
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 19 07:39:43 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 09:14:11 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m



(18) 4,4'-DDD (tc)
14.18min 0.495ug/l
response 12167880

(18) 4,4'-DDD #2 (tc)
14.57min 0.450ug/l m
response 28234379

(+) = Expected Retention Time

8D

Pesticide Analytical Sequence

Lab Name: **Columbia Analytical Services** *Client:* NORTHGATE

Lab Code: 10145 *Case.No.:* R0906477 *SAS No.:* _____ *SDG No.:* M-122B

GC Column(1) STx-CLP *(ID):* 0.32mm 30

Instrument ID: 6890D

The analytical sequence of Performance Evaluation Mixtures, Blanks, Samples, and Standards is given below:

Mean Surrogate RT from Initial Calibration

TCX 9.21 DCB 17.34

EPA Sample No.	*Lab Sample ID*	*Date Anlyzed*	*Time Anlyzed*	*TCX rt_time*	*DCB rt_time*
INDAL	INDAL	11/11/2009	9:02	9.21	17.34
INDAML	INDAML	11/11/2009	9:38	9.21	17.34
INDAM	INDAM	11/11/2009	10:14	9.21	17.34
INDAMH	INDAMH	11/11/2009	10:49	9.21	17.34
INDAH	INDAH	11/11/2009	11:25	9.21	17.34
INDBL	INDBL	11/11/2009	12:01	9.21	17.34
INDBML	INDBML	11/11/2009	12:37	9.21	17.34
INDBM	INDBM	11/11/2009	13:12	9.21	17.34
INDBMH	INDBMH	11/11/2009	13:48	9.21	17.34
INDBH	INDBH	11/11/2009	14:24	9.21	17.34
KEP/FAM L	KEP/FAM L	11/11/2009	14:59	0.00	0.00
KEP/FAM ML	KEP/FAM ML	11/11/2009	15:35	0.00	0.00
KEP/FAM M	KEP/FAM M	11/11/2009	16:11	0.00	0.00
KEP/FAM MH	KEP/FAM MH	11/11/2009	16:46	0.00	0.00
KEP/FAM H	KEP/FAM H	11/11/2009	17:22	0.00	0.00
TOX L	TOX L	11/11/2009	17:58	9.21	17.34
TOX ML	TOX ML	11/11/2009	18:33	9.21	17.34
TOX M	TOX M	11/11/2009	19:09	9.21	17.34
TOX MH	TOX MH	11/11/2009	19:45	9.21	17.34
TOX H	TOX H	11/11/2009	20:20	9.21	17.34
CHLOR L	CHLOR L	11/11/2009	20:56	9.21	17.34

QC Limit

TCX = Tetrachloro-m-xylene (+/- 0.05 Minutes)

DCB = Decachlorobiphenyl (+/- 0.10 Minutes)

Column used to flag retention time values with an aste

* Values outside of QC limits

8D

Pesticide Analytical Sequence

Lab Name: Columbia Analytical Services *Client:* NORTHGATE

Lab Code: 10145 *Case.No.:* R0906477 *SAS No.:* _____ *SDG No.:* M-122B

GC Column(1) STx-CLP *(ID):* 0.32mm 30

Instrument ID: 6890D

The analytical sequence of Performance Evaluation Mixtures, Blanks, Samples, and Standards is given below:

Mean Surrogate RT from Initial Calibration

TCX 9.21 DCB 17.34

EPA Sample No.	*Lab Sample ID*	*Date Anlyzed*	*Time Anlyzed*	*TCX rt_time*	*DCB rt_time*
CHLOR ML	CHLOR ML	11/11/2009	21:31	9.21	17.34
CHLOR M	CHLOR M	11/11/2009	22:07	9.21	17.34
CHLOR MH	CHLOR MH	11/11/2009	22:43	9.21	17.34
CHLOR H	CHLOR H	11/11/2009	23:18	9.21	17.34
PEST ICV	PEST ICV	11/11/2009	23:54	0.00	0.00
TOX ICV	TOX ICV	11/12/2009	0:30	0.00	0.00
CHLOR ICV	CHLOR ICV	11/12/2009	1:05	0.00	0.00
PEM	PEM	11/18/2009	9:43	9.22	17.34
CCV16A	CCV16A	11/18/2009	10:18	9.21	17.33
CCV16B	CCV16B	11/18/2009	10:54	9.21	17.33
PBLK1	RQ0911458-01|1.0	11/18/2009	11:30	9.20	17.33
PBLK1MS	RQ0911458-02|1.0	11/18/2009	12:05	9.20	17.33
PBLK1MSD	RQ0911458-03|1.0	11/18/2009	12:41	9.20	17.33
ZZZZZ	ZZZZZ	11/18/2009	13:16	9.20	17.33
ZZZZZ	ZZZZZ	11/18/2009	13:52	9.20	17.33
ZZZZZ	ZZZZZ	11/18/2009	14:28	9.20	17.33
M-122B	R0906477-001|1.0	11/18/2009	15:03	9.20	17.33
ZZZZZ	ZZZZZ	11/18/2009	15:39	9.20	17.33
ZZZZZ	ZZZZZ	11/18/2009	16:15	9.20	17.33
ZZZZZ	ZZZZZ	11/18/2009	16:50	9.20	17.33
CCV17A	CCV17A	11/18/2009	17:26	9.20	17.33

QC Limit

TCX = Tetrachloro-m-xylene (+/- 0.05 Minutes)

DCB = Decachlorobiphenyl (+/- 0.10 Minutes)

Column used to flag retention time values with an aste

* Values outside of QC limits

8D

Pesticide Analytical Sequence

Lab Name: Columbia Analytical Services *Client:* NORTHGATE

Lab Code: 10145 *Case.No.:* R0906477 *SAS No.:* _____ *SDG No.:* M-122B

GC Column(1) STx-CLP *(ID):* 0.32mm 30

Instrument ID: 6890D

The analytical sequence of Performance Evaluation Mixtures, Blanks, Samples, and Standards is given below:

Mean Surrogate RT from Initial Calibration

TCX 9.21 DCB 17.34

EPA Sample No.	*Lab Sample ID*	*Date Anlyzed*	*Time Anlyzed*	*TCX rt_time*	*DCB rt_time*
CCV17B	CCV17B	11/18/2009	18:02	9.21	17.33

QC Limit

TCX = Tetrachloro-m-xylene (+/- 0.05 Minutes)

DCB = Decachlorobiphenyl (+/- 0.10 Minutes)

Column used to flag retention time values with an aste

* Values outside of QC limits

8D

Pesticide Analytical Sequence

Lab Name: Columbia Analytical Services *Contract:* NORTHGATE

Lab Code: 10145 *Case.No.:* R0906477 *SAS No.:* _____ *SDG No.:* M-122B

GC Column(1) STx-CLPII *(ID):* 0.32mm 30

Instrument ID: 6890D

The analytical sequence of Performance Evaluation Mixtures, Blanks, Samples, and Standards is given below:

Mean Surrogate RT from Initial Calibration

TCX 9.38 DCB 17.95

EPA Sample No.	*Lab Sample ID*	*Date Anlyzed*	*Time Anlyzed*	*TCX rt_time*	*DCB rt_time*
INDAL	INDAL	11/11/2009	9:02	9.38	17.95
INDAML	INDAML	11/11/2009	9:38	9.38	17.95
INDAM	INDAM	11/11/2009	10:14	9.38	17.95
INDAMH	INDAMH	11/11/2009	10:49	9.38	17.95
INDAH	INDAH	11/11/2009	11:25	9.38	17.95
INDBL	INDBL	11/11/2009	12:01	9.38	17.95
INDBML	INDBML	11/11/2009	12:37	9.38	17.95
INDBM	INDBM	11/11/2009	13:12	9.38	17.95
INDBMH	INDBMH	11/11/2009	13:48	9.38	17.95
INDBH	INDBH	11/11/2009	14:24	9.38	17.95
KEP/FAM L	KEP/FAM L	11/11/2009	14:59	0.00	0.00
KEP/FAM ML	KEP/FAM ML	11/11/2009	15:35	0.00	0.00
KEP/FAM M	KEP/FAM M	11/11/2009	16:11	0.00	0.00
KEP/FAM MH	KEP/FAM MH	11/11/2009	16:46	0.00	0.00
KEP/FAM H	KEP/FAM H	11/11/2009	17:22	0.00	0.00
TOX L	TOX L	11/11/2009	17:58	9.38	17.95
TOX ML	TOX ML	11/11/2009	18:33	9.38	17.95
TOX M	TOX M	11/11/2009	19:09	9.38	17.95
TOX MH	TOX MH	11/11/2009	19:45	9.38	17.95
TOX H	TOX H	11/11/2009	20:20	9.38	17.95
CHLOR L	CHLOR L	11/11/2009	20:56	9.38	17.95

QC Limit

TCX = Tetrachloro-m-xylene (+/- 0.05 Minutes)

DCB = Decachlorobiphenyl (+/- 0.10 Minutes)

Column used to flag retention time values with an aste

* Values outside of QC limits

8D

Pesticide Analytical Sequence

Lab Name: Columbia Analytical Services *Contract:* NORTHGATE

Lab Code: 10145 *Case.No.:* R0906477 *SAS No.:* _____ *SDG No.:* M-122B

GC Column(1) STx-CLPII *(ID):* 0.32mm 30

Instrument ID: 6890D

The analytical sequence of Performance Evaluation Mixtures, Blanks, Samples, and Standards is given below:

Mean Surrogate RT from Initial Calibration

TCX 9.38 DCB 17.95

EPA Sample No.	*Lab Sample ID*	*Date Anlyzed*	*Time Anlyzed*	*TCX rt_time*	*DCB rt_time*
CHLOR ML	CHLOR ML	11/11/2009	21:31	9.38	17.95
CHLOR M	CHLOR M	11/11/2009	22:07	9.38	17.95
CHLOR MH	CHLOR MH	11/11/2009	22:43	9.38	17.95
CHLOR H	CHLOR H	11/11/2009	23:18	9.38	17.95
PEST ICV	PEST ICV	11/11/2009	23:54	0.00	0.00
TOX ICV	TOX ICV	11/12/2009	0:30	0.00	0.00
CHLOR ICV	CHLOR ICV	11/12/2009	1:05	0.00	0.00
PEM	PEM	11/18/2009	9:43	9.37	17.94
CCV16A	CCV16A	11/18/2009	10:18	9.37	17.94
CCV16B	CCV16B	11/18/2009	10:54	9.37	17.94
PBLK1	RQ0911458-01|1.0	11/18/2009	11:30	9.37	17.93
PBLK1MS	RQ0911458-02|1.0	11/18/2009	12:05	9.37	17.93
PBLK1MSD	RQ0911458-03|1.0	11/18/2009	12:41	9.37	17.93
ZZZZZ	ZZZZZ	11/18/2009	13:16	9.37	17.93
ZZZZZ	ZZZZZ	11/18/2009	13:52	9.37	17.94
ZZZZZ	ZZZZZ	11/18/2009	14:28	9.37	17.93
M-122B	R0906477-001|1.0	11/18/2009	15:03	9.37	17.93
ZZZZZ	ZZZZZ	11/18/2009	15:39	9.37	17.93
ZZZZZ	ZZZZZ	11/18/2009	16:15	9.37	17.93
ZZZZZ	ZZZZZ	11/18/2009	16:50	9.37	17.93
CCV17A	CCV17A	11/18/2009	17:26	9.37	17.93

QC Limit

TCX = Tetrachloro-m-xylene (+/- 0.05 Minutes)

DCB = Decachlorobiphenyl (+/- 0.10 Minutes)

Column used to flag retention time values with an aste

* Values outside of QC limits

Form VIII Pest

8D

Pesticide Analytical Sequence

Lab Name: Columbia Analytical Services *Contract:* NORTHGATE

Lab Code: 10145 *Case.No.:* R0906477 *SAS No.:* _____ *SDG No.:* M-122B

GC Column(1) STx-CLPII *(ID):* 0.32mm 30

Instrument ID: 6890D

The analytical sequence of Performance Evaluation Mixtures, Blanks, Samples, and Standards is given below:

Mean Surrogate RT from Initial Calibration

TCX 9.38 DCB 17.95

EPA Sample No.	*Lab Sample ID*	*Date Anlyzed*	*Time Anlyzed*	*TCX rt_time*	*DCB rt_time*
CCV17B	CCV17B	11/18/2009	18:02	9.37	17.93

QC Limit

TCX = Tetrachloro-m-xylene (+/- 0.05 Minutes)

DCB = Decachlorobiphenyl (+/- 0.10 Minutes)

Column used to flag retention time values with an aste

* Values outside of QC limits

Form VIII Pest

Evaluate Continuing Calibration Report

Data Path : J:\ACQUDATA\6890D\DATA\111809\
Data File : FD540.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 18 Nov 2009 10:18 am
Operator : M.PEDRO
Sample : CCV16A
Misc : INDAMH
ALS Vial : 2 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 19 08:19:43 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 09:14:11 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1	S	SURR1,Tetrac	26.313	26.434 E6	-0.5	98	0.00
2	TC	HEXACHLOROBENZENE	37.602	37.311 E6	0.8	98	0.00
3	tc	alpha-BHC	41.345	42.586 E6	-3.0	97	0.00
4	tcm	gamma-BHC (L	37.086	37.914 E6	-2.2	98	0.00
5	tcm	Heptachlor	36.739	36.871 E6	-0.4	97	0.00
10	tc	alpha-Endosu	27.900	27.997 E6	-0.3	97	-0.01
14	tcm	Dieldrin	31.291	31.416 E6	-0.4	97	-0.01
15	tcm	Endrin	28.992	28.759 E6	0.8	96	-0.01
18	tc	4,4'-DDD	24.557	24.923 E6	-1.5	98	-0.01
19	tcm	4,4'-DDT	26.370	27.433 E6	-4.0	98	-0.01
22	tc	Methoxychlor	12.270	12.032 E6	1.9	98	-0.01
25	S	SURR2,Decachlorobiphenyl	24.483	23.376 E6	4.5	95	0.00
Signal #2							
1	S	SURR1,Tetrac	76.555	75.220 E6	1.7	97	0.00
2	TC	HEXACHLOROBENZENE	101.868	101.914 E6	-0.0	100	0.00
3	tc	alpha-BHC	111.992	115.363 E6	-3.0	100	0.00
4	tcm	gamma-BHC (L	103.992	103.311 E6	0.7	99	-0.01
5	tcm	Heptachlor	99.550	97.605 E6	2.0	99	-0.01
10	tc	alpha-Endosu	68.559	69.926 E6	-2.0	100	-0.01
14	tcm	Dieldrin	82.658	77.570 E6	6.2	96	-0.01
15	tcm	Endrin	68.637	68.533 E6	0.2	98	-0.01
18	tc	4,4'-DDD	62.753	62.097 E6	1.0	101	-0.01
19	tcm	4,4'-DDT	67.131	65.544 E6	2.4	97	-0.01
22	tc	Methoxychlor	27.869	26.209 E6	6.0	97	-0.01
25	S	SURR2,Decachlorobiphenyl	54.533	51.853 E6	4.9	96	-0.01

MP 11/19

Evaluate Continuing Calibration Report - Not Founds

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111809\
Data File : FD540.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 18 Nov 2009 10:18 am
Operator : M.PEDRO
Sample : CCV16A
Misc : INDAMH
ALS Vial : 2 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 19 08:19:43 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 09:14:11 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/l	ug/l
	System Monitoring Compounds						
1)	S SURR1,Tetrac	9.21	9.37	1057.3E6	3008.8E6	40.183	39.302
	Spiked Amount 100.000	Range 30 - 150		Recovery =		40.18%	39.30%
25)	S SURR2,Decachloro	17.33	17.94	1870.1E6	4148.3E6	76.382	76.069
	Spiked Amount 100.000	Range 30 - 150		Recovery =		76.38%	76.07%
	Target Compounds						
2)	TC HEXACHLOROBENZEN	9.89	10.19	1492.4E6	4076.6E6	39.691	40.018
3)	tc alpha-BHC	10.20	10.45	1703.4E6	4614.5E6	41.201	41.204
4)	tcm gamma-BHC (L	10.72	11.02	1516.6E6	4132.4E6	40.893	39.738
5)	tcm Heptachlor	11.47	11.69	1474.8E6	3904.2E6	40.143	39.219
10)	tc alpha-Endosu	13.39	13.57	1119.9E6	2797.0E6	40.139	40.798
14)	tcm Dieldrin	13.74	13.97	2513.2E6	6205.6E6	80.317	75.076
15)	tcm Endrin	14.08	14.41	2300.7E6	5482.7E6	79.356	79.880
18)	tc 4,4'-DDD	14.17	14.56	1993.9E6	4967.8E6	81.192	79.165
19)	tcm 4,4'-DDT	14.57	15.02	2194.6E6	5243.5E6	83.224	78.109
22)	tc Methoxychlor	15.27	15.99	4812.7E6	10483.7E6	392.248	376.182
	Sum Toxaphene			0	0	N.D.	N.D.
	Average Toxaphene					0.000	0.000
	Sum Chlordane			0	0	N.D.	N.D.
	Average Chlordane					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

11/19

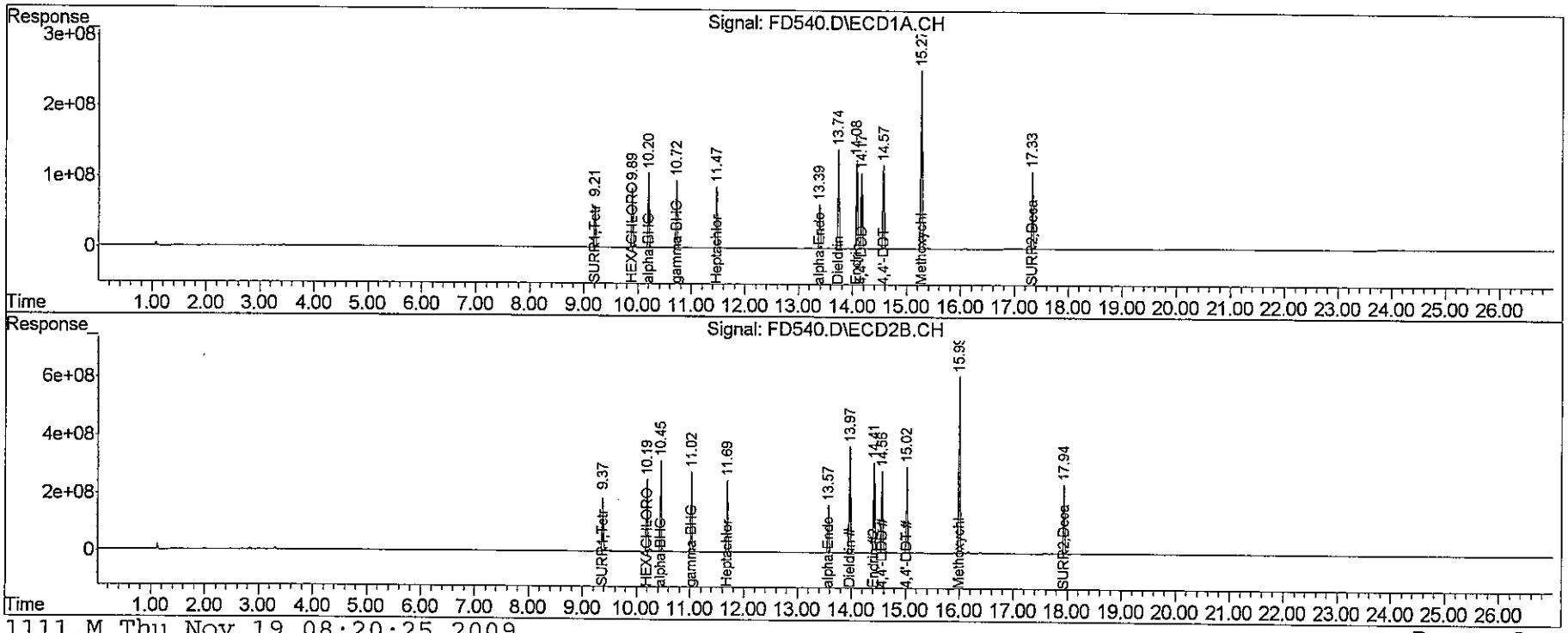
00443

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111809\
Data File : FD540.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 18 Nov 2009 10:18 am
Operator : M.PEDRO
Sample : CCV16A
Misc : INDAMH
ALS Vial : 2 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 19 08:19:43 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 09:14:11 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m



Evaluate Continuing Calibration Report

Data Path : J:\ACQUDATA\6890D\DATA\111809\
Data File : FD541.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 18 Nov 2009 10:54 am
Operator : M.PEDRO
Sample : CCV16B
Misc : INDBMH
ALS Vial : 3 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 19 08:21:00 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 09:14:11 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1	S	SURR1,Tetrac	26.313	27.076 E6	-2.9	101	0.00
6	tcm	Aldrin	34.328	35.017 E6	-2.0	98	-0.01
7	tc	beta-BHC	15.526	15.435 E6	0.6	99	0.00
8	TC	delta-BHC	37.067	38.724 E6	-4.5	99	0.00
9	tc	Heptachlor E	31.508	31.584 E6	-0.2	98	-0.01
11	tc	gamma-Chlord	31.532	32.179 E6	-2.1	98	-0.01
12	tc	alpha-Chlord	29.209	30.971 E6	-6.0	103	-0.01
13	tc	4,4'-DDE	30.234	31.100 E6	-2.9	99	-0.01
17	tc	beta-Endosul	26.188	26.950 E6	-2.9	100	-0.01
20	tc	Endrin Aldeh	21.190	20.943 E6	1.2	97	-0.01
21	tc	Endosulfan S	24.650	24.754 E6	-0.4	98	-0.01
24	tc	Endrin Keton	28.118	28.014 E6	0.4	97	-0.01
25	S	SURR2,Decachlorobiphenyl	24.483	24.389 E6	0.4	99	-0.01

Signal #2

1	S	SURR1,Tetrac	76.555	78.497 E6	-2.5	101	0.00
6	tcm	Aldrin	94.213	92.973 E6	1.3	98	-0.01
7	tc	beta-BHC	43.162	43.346 E6	-0.4	100	0.00
8	tc	delta-BHC	100.802	103.487 E6	-2.7	100	-0.01
9	tc	Heptachlor E	85.511	81.773 E6	4.4	98	-0.01
11	tc	gamma-Chlord	88.023	85.342 E6	3.0	97	-0.01
12	tc	alpha-Chlord	83.807	81.620 E6	2.6	97	-0.01
13	tc	4,4'-DDE	78.679	77.390 E6	1.6	96	-0.01
17	tc	beta-Endosul	69.774	66.108 E6	5.3	97	-0.01
20	tc	Endrin Aldeh	54.388	51.349 E6	5.6	96	-0.01
21	tc	Endosulfan S	62.351	60.192 E6	3.5	97	-0.01
24	tc	Endrin Keton	67.091	63.903 E6	4.8	96	-0.01
25	S	SURR2,Decachlorobiphenyl	54.533	53.785 E6	1.4	100	-0.01

11/19

00445

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111809\
Data File : FD541.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 18 Nov 2009 10:54 am
Operator : M.PEDRO
Sample : CCV16B
Misc : INDBMH
ALS Vial : 3 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 19 08:21:00 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 09:14:11 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/l	ug/l
	System Monitoring Compounds						
1)	S SURR1,Tetrac	9.21	9.37	1083.0E6	3139.9E6	41.160	41.014
	Spiked Amount 100.000	Range 30 - 150		Recovery =		41.16%	41.01%
25)	S SURR2,Decachloro	17.33	17.94	1951.1E6	4302.8E6	79.693	78.903
	Spiked Amount 100.000	Range 30 - 150		Recovery =		79.69%	78.90%
	Target Compounds						
6)	tcm Aldrin	11.92	12.17	1400.7E6	3718.9E6	40.802	39.473
7)	tc beta-BHC	10.88	11.17	617.4E6	1733.9E6	39.764	40.171
8)	tc delta-BHC	11.15	11.61	1548.9E6	4139.5E6	41.788	41.065
9)	tc Heptachlor E	12.82	13.01	1263.4E6	3270.9E6	40.097	38.251
11)	tc gamma-Chlord	13.00	13.28	1287.1E6	3413.7E6	40.820	38.782
12)	tc alpha-Chlord	13.19	13.49	1238.8E6	3264.8E6	42.413	38.956
13)	tc 4,4'-DDE	13.31	13.73	2488.0E6	6191.2E6	82.291	78.689
17)	tc beta-Endosul	14.41	14.72	2156.0E6	5288.6E6	82.327	75.797
20)	tc Endrin Aldeh	15.03	15.22	1675.4E6	4107.9E6	79.067	75.530
21)	tc Endosulfan S	15.68	15.63	1980.3E6	4815.3E6	80.340	77.229
24)	tc Endrin Keton	16.08	16.38	2241.1E6	5112.3E6	79.705	76.199
	Sum Toxaphene			0	0	N.D.	N.D.
	Average Toxaphene					0.000	0.000
	Sum Chlordane			0	0	N.D.	N.D.
	Average Chlordane					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

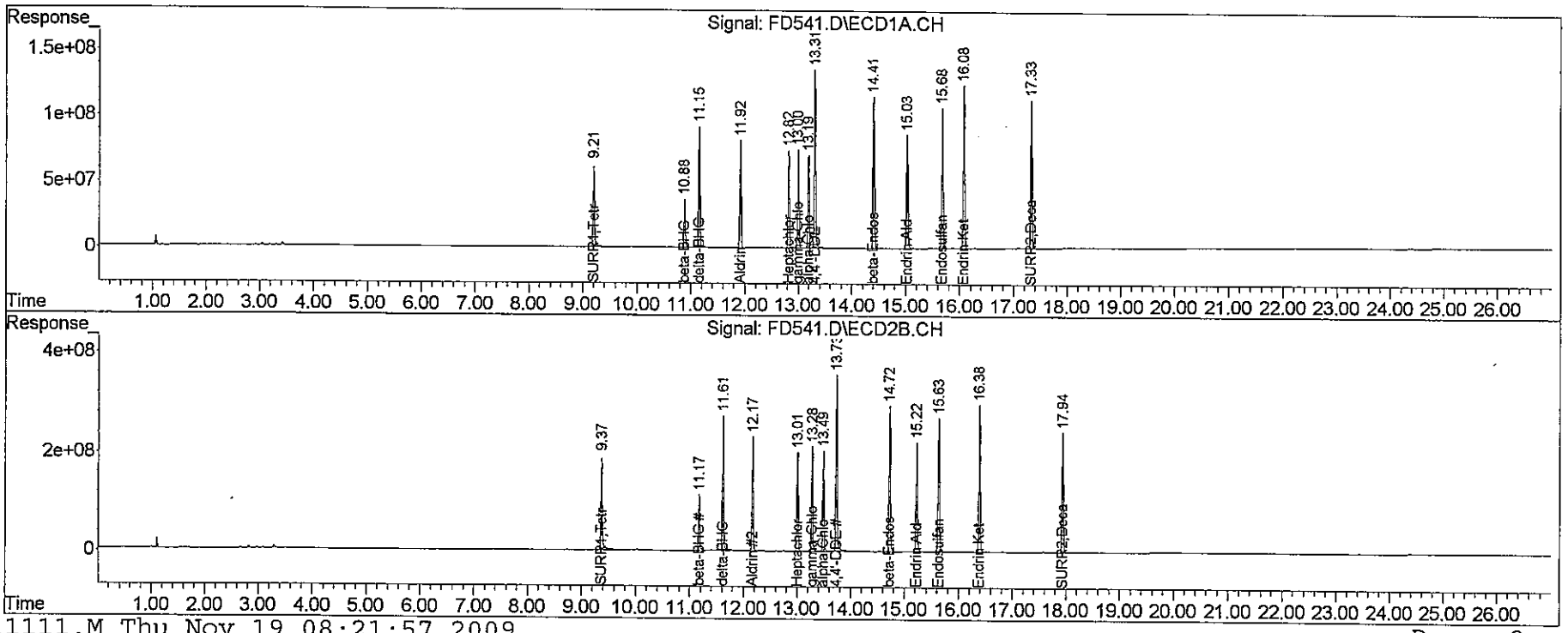
00446

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111809\
Data File : FD541.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 18 Nov 2009 10:54 am
Operator : M.PEDRO
Sample : CCV16B
Misc : INDBMH
ALS Vial : 3 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 19 08:21:00 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 09:14:11 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m



Evaluate Continuing Calibration Report

Data Path : J:\ACQUDATA\6890D\DATA\111809\
Data File : FD552.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 18 Nov 2009 5:26 pm
Operator : M.PEDRO
Sample : CCV17A
Misc : INDAMH
ALS Vial : 14 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 19 08:36:31 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 09:14:11 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1	S	SURR1,Tetrac	26.313	26.664 E6	-1.3	99	0.00
2	TC	HEXACHLOROBENZENE	37.602	37.560 E6	0.1	99	0.00
3	tc	alpha-BHC	41.345	42.822 E6	-3.6	98	0.00
4	tcm	gamma-BHC (L	37.086	38.126 E6	-2.8	98	-0.01
5	tcm	Heptachlor	36.739	37.001 E6	-0.7	98	-0.01
10	tc	alpha-Endosu	27.900	28.061 E6	-0.6	97	-0.01
14	tcm	Dieldrin	31.291	31.282 E6	0.0	97	-0.01
15	tcm	Endrin	28.992	28.480 E6	1.8	95	-0.01
18	tc	4,4'-DDD	24.557	25.062 E6	-2.1	98	-0.01
19	tcm	4,4'-DDT	26.370	26.392 E6	-0.1	95	-0.01
22	tc	Methoxychlor	12.270	12.075 E6	1.6	98	-0.01
25	S	SURR2,Decachlorobiphenyl	24.483	23.775 E6	2.9	97	-0.01

Signal #2

1	S	SURR1,Tetrac	76.555	76.276 E6	0.4	98	0.00
2	TC	HEXACHLOROBENZENE	101.868	102.524 E6	-0.6	101	0.00
3	tc	alpha-BHC	111.992	115.821 E6	-3.4	101	-0.01
4	tcm	gamma-BHC (L	103.992	104.453 E6	-0.4	100	-0.01
5	tcm	Heptachlor	99.550	97.706 E6	1.9	99	-0.01
10	tc	alpha-Endosu	68.559	62.556 E6	8.8	89	-0.01
14	tcm	Dieldrin	82.658	78.844 E6	4.6	97	-0.01
15	tcm	Endrin	68.637	65.734 E6	4.2	94	-0.01
18	tc	4,4'-DDD	62.753	62.705 E6	0.1	102	-0.01
19	tcm	4,4'-DDT	67.131	65.480 E6	2.5	97	-0.01
22	tc	Methoxychlor	27.869	26.376 E6	5.4	98	-0.01
25	S	SURR2,Decachlorobiphenyl	54.533	51.716 E6	5.2	96	-0.02

Evaluate Continuing Calibration Report - Not Founds

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111809\
Data File : FD552.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 18 Nov 2009 5:26 pm
Operator : M.PEDRO
Sample : CCV17A
Misc : INDAMH
ALS Vial : 14 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 19 08:36:31 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 09:14:11 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/l	ug/l
	System Monitoring Compounds						
1)	S SURR1,Tetrac	9.20	9.37	1066.6E6	3051.0E6	40.534	39.854
	Spiked Amount 100.000	Range 30 - 150		Recovery =		40.53%	39.85%
25)	S SURR2,Decachloro	17.33	17.93	1902.0E6	4137.3E6	77.687	75.868
	Spiked Amount 100.000	Range 30 - 150		Recovery =		77.69%	75.87%
	Target Compounds						
2)	TC HEXACHLOROBENZEN	9.89	10.19	1502.4E6	4101.0E6	39.955	40.258
3)	tc alpha-BHC	10.20	10.45	1712.9E6	4632.8E6	41.429	41.367
4)	tcm gamma-BHC (L	10.72	11.02	1525.0E6	4178.1E6	41.122	40.177
5)	tcm Heptachlor	11.47	11.69	1480.0E6	3908.2E6	40.285	39.259
10)	tc alpha-Endosu	13.39	13.57	1122.4E6	2502.3E6	40.230	36.498
14)	tcm Dieldrin	13.74	13.97	2502.5E6	6307.5E6	79.975	76.308
15)	tcm Endrin	14.08	14.41	2278.4E6	5258.7E6	78.588	76.617
18)	tc 4,4'-DDD	14.17	14.56	2005.0E6	5016.4E6	81.644	79.939
19)	tcm 4,4'-DDT	14.57	15.02	2111.4E6	5238.4E6	80.067	78.032
22)	tc Methoxychlor	15.27	15.99	4829.9E6	10550.2E6	393.647	378.570
	Sum Toxaphene			0	0	N.D.	N.D.
	Average Toxaphene					0.000	0.000
	Sum Chlordane			0	0	N.D.	N.D.
	Average Chlordane					0.000	0.000

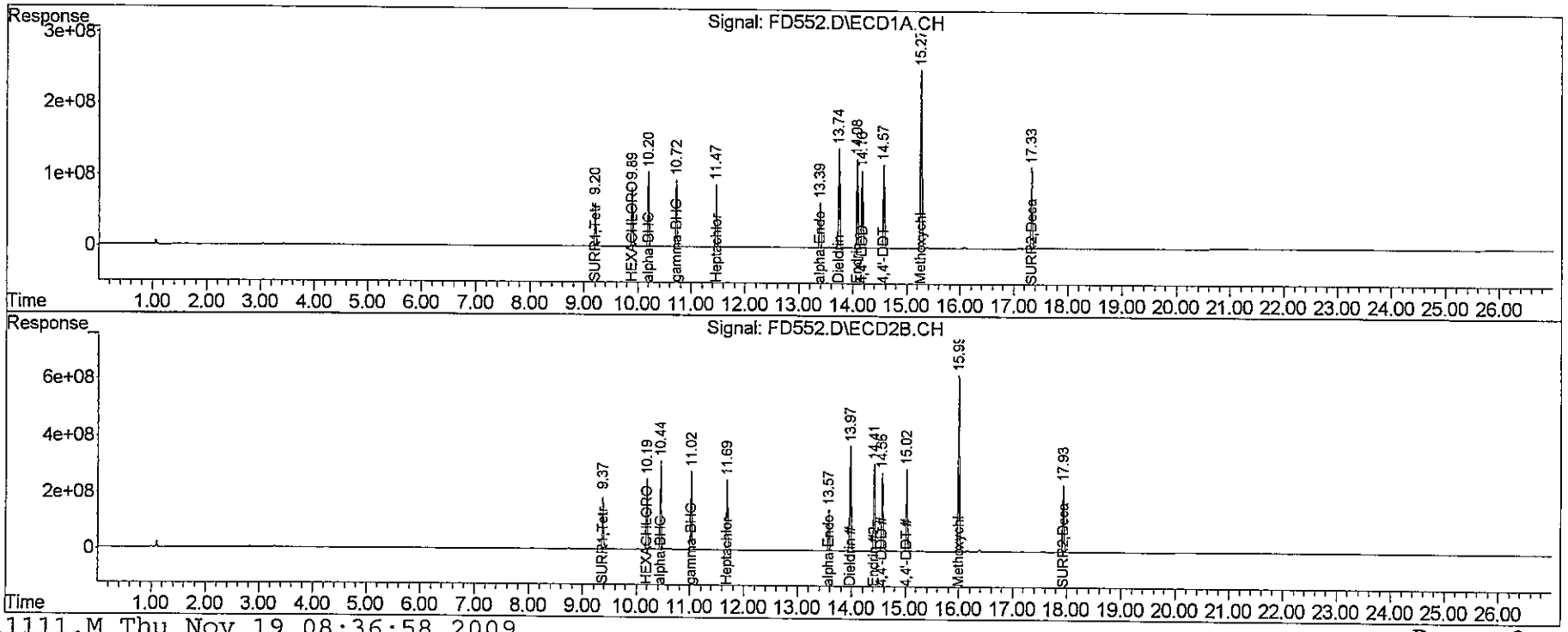
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111809\
Data File : FD552.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 18 Nov 2009 5:26 pm
Operator : M.PEDRO
Sample : CCV17A
Misc : INDAMH
ALS Vial : 14 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 19 08:36:31 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 09:14:11 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m



Evaluate Continuing Calibration Report

Data Path : J:\ACQUDATA\6890D\DATA\111809\
Data File : FD553.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 18 Nov 2009 6:02 pm
Operator : M.PEDRO
Sample : CCV17B
Misc : INDBMH
ALS Vial : 15 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 19 08:37:56 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 09:14:11 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1	S	SURR1,Tetrac	26.313	27.235 E6	-3.5	101	0.00
6	tcm	Aldrin	34.328	35.143 E6	-2.4	98	-0.01
7	tc	beta-BHC	15.526	15.505 E6	0.1	99	0.00
8	TC	delta-BHC	37.067	38.533 E6	-4.0	99	0.00
9	tc	Heptachlor E	31.508	31.509 E6	-0.0	98	-0.01
11	tc	gamma-Chlord	31.532	32.108 E6	-1.8	98	-0.01
12	tc	alpha-Chlord	29.209	30.339 E6	-3.9	101	-0.01
13	tc	4,4'-DDE	30.234	31.018 E6	-2.6	98	-0.01
17	tc	beta-Endosul	26.188	26.561 E6	-1.4	99	-0.01
20	tc	Endrin Aldeh	21.190	20.777 E6	1.9	96	-0.01
21	tc	Endosulfan S	24.650	24.657 E6	-0.0	98	-0.02
24	tc	Endrin Keton	28.118	27.949 E6	0.6	97	-0.01
25	S	SURR2,Decachlorobiphenyl	24.483	24.462 E6	0.1	100	-0.01

Signal #2

1	S	SURR1,Tetrac	76.555	79.272 E6	-3.5	102	0.00
6	tcm	Aldrin	94.213	93.721 E6	0.5	98	-0.01
7	tc	beta-BHC	43.162	43.577 E6	-1.0	100	0.00
8	tc	delta-BHC	100.802	103.703 E6	-2.9	100	-0.01
9	tc	Heptachlor E	85.511	81.598 E6	4.6	98	-0.01
11	tc	gamma-Chlord	88.023	85.365 E6	3.0	97	-0.01
12	tc	alpha-Chlord	83.807	81.962 E6	2.2	97	-0.01
13	tc	4,4'-DDE	78.679	78.744 E6	-0.1	98	-0.01
17	tc	beta-Endosul	69.774	65.911 E6	5.5	97	-0.01
20	tc	Endrin Aldeh	54.388	51.690 E6	5.0	97	-0.01
21	tc	Endosulfan S	62.351	60.106 E6	3.6	97	-0.01
24	tc	Endrin Keton	67.091	63.981 E6	4.6	96	-0.01
25	S	SURR2,Decachlorobiphenyl	54.533	53.287 E6	2.3	99	-0.01

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111809\
Data File : FD553.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 18 Nov 2009 6:02 pm
Operator : M.PEDRO
Sample : CCV17B
Misc : INDBMH
ALS Vial : 15 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 19 08:37:56 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 09:14:11 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/l	ug/l
	System Monitoring Compounds						
1)	S SURR1,Tetrac	9.21	9.37	1089.4E6	3170.9E6	41.402	41.420
	Spiked Amount 100.000	Range 30 - 150		Recovery =		41.40%	41.42%
25)	S SURR2,Decachloro	17.33	17.93	1956.9E6	4263.0E6	79.930	78.172
	Spiked Amount 100.000	Range 30 - 150		Recovery =		79.93%	78.17%
	Target Compounds						
6)	tcm Aldrin	11.92	12.17	1405.7E6	3748.8E6	40.949	39.791
7)	tc beta-BHC	10.88	11.17	620.2E6	1743.1E6	39.945	40.385
8)	tc delta-BHC	11.15	11.61	1541.3E6	4148.1E6	41.582	41.151
9)	tc Heptachlor E	12.82	13.01	1260.4E6	3263.9E6	40.001	38.169
11)	tc gamma-Chlord	13.00	13.28	1284.3E6	3414.6E6	40.730	38.792
12)	tc alpha-Chlord	13.19	13.49	1213.6E6	3278.5E6	41.548	39.120
13)	tc 4,4'-DDE	13.31	13.73	2481.4E6	6299.5E6	82.073	80.066
17)	tc beta-Endosul	14.41	14.72	2124.9E6	5272.9E6	81.139	75.571
20)	tc Endrin Aldeh	15.03	15.22	1662.1E6	4135.2E6	78.439	76.032
21)	tc Endosulfan S	15.68	15.63	1972.6E6	4808.5E6	80.024	77.119
24)	tc Endrin Keton	16.08	16.38	2235.9E6	5118.5E6	79.521	76.291
	Sum Toxaphene			0	0	N.D.	N.D.
	Average Toxaphene					0.000	0.000
	Sum Chlordane			0	0	N.D.	N.D.
	Average Chlordane					0.000	0.000

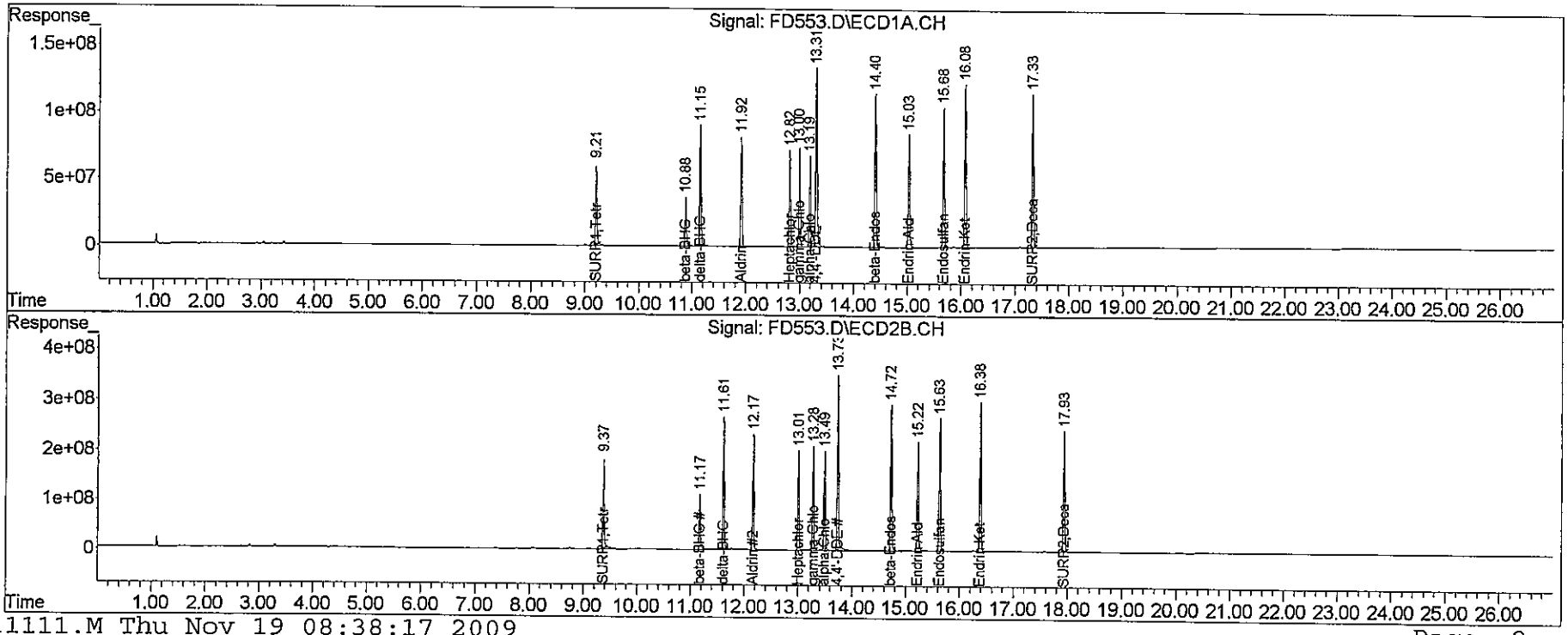
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111809\
Data File : FD553.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 18 Nov 2009 6:02 pm
Operator : M.PEDRO
Sample : CCV17B
Misc : INDBMH
ALS Vial : 15 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 19 08:37:56 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 09:14:11 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m



ESTD

10A

Pesticide Identification Summary
For Single Component Analytes

NYSDEC Sample No.
PBLK1MS

Lab Name: Columbia Analytical Services *Contract:* NORTHGATE

Lab Code: 10145 *Case.No.:* R0906477 *SAS No.:* _____ *SDG No.:* M-122B

Lab Sample ID RQ0911458-02|1.0 *Date anlyzed:* 11/18/2009

Instrument ID: 6890D *Instrument ID:* 6890D

GC Column(1) STx-CLP *(ID)* 0.32mm 30m *GC Column(2)* STx-CLPII *(ID)* 0.32mm 30m

Analyte	*Column*	*RT*	*RT Window From*	*RT Window To*	*Concentration*	*%RPD*
4,4'-DDD	*1*	14.16	14.11	14.25	0.17	
	2	14.56	14.50	14.64	0.18	10.63
4,4'-DDE	*1*	13.31	13.25	13.39	0.16	
	2	13.73	13.68	13.82	0.17	5.98
4,4'-DDT	*1*	14.57	14.51	14.65	0.17	
	2	15.02	14.96	15.10	0.18	6.34
Aldrin	*1*	11.92	11.88	11.98	0.14	
	2	12.17	12.13	12.23	0.14	1.35
alpha-BHC	*1*	10.20	10.16	10.26	0.16	
	2	10.44	10.41	10.51	0.17	4.37
alpha-Chlord	*1*	13.19	13.14	13.28	0.16	
	2	13.49	13.43	13.57	0.16	2.53
alpha-Endosu	*1*	13.39	13.33	13.47	0.17	
	2	13.57	13.52	13.66	0.19	8.07
beta-BHC	*1*	10.88	10.84	10.94	0.16	
	2	11.17	11.13	11.23	0.16	2.59
beta-Endosul	*1*	14.40	14.35	14.49	0.16	
	2	14.72	14.67	14.81	0.18	12.31
delta-BHC	*1*	11.15	11.11	11.21	0.15	
	2	11.61	11.57	11.67	0.15	0.98
Dieldrin	*1*	13.74	13.68	13.82	0.17	
	2	13.97	13.91	14.05	0.18	4.60

10A

Pesticide Identification Summary
For Single Component Analytes

NYSDEC Sample No.
PBLK1MS

Lab Name: Columbia Analytical Services *Contract:* NORTHGATE

Lab Code: 10145 *Case.No.:* R0906477 *SAS No.:* _____ *SDG No.:* M-122B

Lab Sample ID RQ0911458-02|1.0 *Date anlyzed:* 11/18/2009

Instrument ID: 6890D *Instrument ID:* 6890D

GC Column(1) STx-CLP *(ID)* 0.32mm 30m *GC Column(2)* STx-CLPII *(ID)* 0.32mm 30m

Analyte	Column	RT	RT Window From	RT Window To	Concentration	%RPD
Endosulfan S	1	15.68	15.62	15.76	0.17	
	2	15.63	15.57	15.71	0.19	11.13
Endrin	1	14.08	14.02	14.16	0.17	
	2	14.41	14.36	14.50	0.19	10.57
Endrin Aldeh	1	15.03	14.97	15.11	0.03	
	2	15.22	15.17	15.31	0.05	47.23
Endrin Keton	1	16.08	16.02	16.16	0.18	
	2	16.38	16.33	16.47	0.19	10.16
gamma-BHC (L	1	10.72	10.68	10.78	0.16	
	2	11.02	10.98	11.08	0.17	0.67
gamma-Chlord	1	13.00	12.95	13.09	0.17	
	2	13.28	13.23	13.37	0.16	1.83
Heptachlor	1	11.47	11.43	11.53	0.15	
	2	11.69	11.65	11.75	0.16	5.54
Heptachlor E	1	12.82	12.76	12.90	0.16	
	2	13.01	12.95	13.09	0.17	2.44
HEXACHLOROBE	1	9.89	9.83	9.97	0.29	
	2	10.19	10.13	10.27	0.29	1.31
Methoxychlor	1	15.27	15.21	15.35	0.90	
	2	15.99	15.93	16.07	0.94	4.76

10A

Pesticide Identification Summary
For Single Component Analytes

NYSDEC Sample No.
PBLK1MSD

Lab Name: Columbia Analytical Services *Contract:* NORTHGATE

Lab Code: 10145 *Case.No.:* R0906477 *SAS No.:* _____ *SDG No.:* M-122B

Lab Sample ID RQ0911458-03|1.0 *Date anlyzed:* 11/18/2009

Instrument ID: 6890D *Instrument ID:* 6890D

GC Column(1) STx-CLP *(ID)* 0.32mm 30m *GC Column(2)* STx-CLPII *(ID)* 0.32mm 30m

Analyte	*Column*	*RT*	*RT Window From*	*RT Window To*	*Concentration*	*%RPD*
4,4'-DDD	*1*	14.16	14.11	14.25	0.17	
	2	14.56	14.50	14.64	0.19	9.60
4,4'-DDE	*1*	13.31	13.25	13.39	0.16	
	2	13.73	13.68	13.82	0.17	5.74
4,4'-DDT	*1*	14.57	14.51	14.65	0.17	
	2	15.02	14.96	15.10	0.18	5.82
Aldrin	*1*	11.92	11.88	11.98	0.14	
	2	12.17	12.13	12.23	0.14	1.01
alpha-BHC	*1*	10.20	10.16	10.26	0.16	
	2	10.44	10.41	10.51	0.17	4.28
alpha-Chlord	*1*	13.19	13.14	13.28	0.17	
	2	13.49	13.43	13.57	0.16	1.77
alpha-Endosu	*1*	13.39	13.33	13.47	0.18	
	2	13.57	13.52	13.66	0.18	4.99
beta-BHC	*1*	10.88	10.84	10.94	0.16	
	2	11.17	11.13	11.23	0.17	3.01
beta-Endosul	*1*	14.40	14.35	14.49	0.16	
	2	14.72	14.67	14.81	0.19	12.00
delta-BHC	*1*	11.15	11.11	11.21	0.16	
	2	11.61	11.57	11.67	0.16	1.46
Dieldrin	*1*	13.74	13.68	13.82	0.17	
	2	13.97	13.91	14.05	0.18	5.63

10A

Pesticide Identification Summary
For Single Component Analytes

NYSDEC Sample No.
PBLK1MSD

Lab Name: Columbia Analytical Services *Contract:* NORTHGATE

Lab Code: 10145 *Case.No.:* R0906477 *SAS No.:* _____ *SDG No.:* M-122B

Lab Sample ID RQ0911458-03|1.0 *Date anlyzed:* 11/18/2009

Instrument ID: 6890D *Instrument ID:* 6890D

GC Column(1) STx-CLP *(ID)* 0.32mm 30m *GC Column(2)* STx-CLPII *(ID)* 0.32mm 30m

Analyte	*Column*	*RT*	*RT Window From*	*RT Window To*	*Concentration*	*%RPD*
Endosulfan S	*1*	15.68	15.62	15.76	0.17	
	2	15.63	15.57	15.71	0.19	11.53
Endrin	*1*	14.08	14.02	14.16	0.17	
	2	14.41	14.36	14.50	0.19	9.76
Endrin Aldeh	*1*	15.03	14.97	15.11	0.03	
	2	15.22	15.17	15.31	0.05	47.13
Endrin Keton	*1*	16.08	16.02	16.16	0.18	
	2	16.38	16.33	16.47	0.20	8.86
gamma-BHC (L	*1*	10.72	10.68	10.78	0.17	
	2	11.02	10.98	11.08	0.17	0.12
gamma-Chlord	*1*	13.00	12.95	13.09	0.17	
	2	13.28	13.23	13.37	0.17	0.72
Heptachlor	*1*	11.47	11.43	11.53	0.15	
	2	11.69	11.65	11.75	0.16	5.31
Heptachlor E	*1*	12.82	12.76	12.90	0.17	
	2	13.01	12.95	13.09	0.17	1.56
HEXACHLOROBE	*1*	9.89	9.83	9.97	0.29	
	2	10.19	10.13	10.27	0.30	1.71
Methoxychlor	*1*	15.27	15.21	15.35	0.91	
	2	15.99	15.93	16.07	0.96	5.10

PESTICIDES

RAW QC DATA

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Northgate Environmental	**Service Request:**	R0906477
Project:	Tronox LLC Henderson/2027.001	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ0911458-01	**Basis:**	NA

Organochlorine Pesticides by Gas Chromatography

Analytical Method: 8081A
Prep Method: EPA 3510C

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
4,4'-DDD	0.050	U	0.10	0.050	1	11/16/09	11/18/09 11:30	100766	180095	
4,4'-DDE	0.050	U	0.10	0.050	1	11/16/09	11/18/09 11:30	100766	180095	
4,4'-DDT	0.050	U	0.10	0.050	1	11/16/09	11/18/09 11:30	100766	180095	
Aldrin	0.025	U	0.050	0.025	1	11/16/09	11/18/09 11:30	100766	180095	
Chlordane	0.13	U	0.25	0.13	1	11/16/09	11/18/09 11:30	100766	180095	
Dieldrin	0.050	U	0.10	0.050	1	11/16/09	11/18/09 11:30	100766	180095	
Endosulfan I	0.025	U	0.050	0.025	1	11/16/09	11/18/09 11:30	100766	180095	
Endosulfan II	0.050	U	0.10	0.050	1	11/16/09	11/18/09 11:30	100766	180095	
Endosulfan Sulfate	0.050	U	0.10	0.050	1	11/16/09	11/18/09 11:30	100766	180095	
Endrin	0.050	U	0.10	0.050	1	11/16/09	11/18/09 11:30	100766	180095	
Endrin Aldehyde	0.050	U	0.10	0.050	1	11/16/09	11/18/09 11:30	100766	180095	
Endrin Ketone	0.050	U	0.10	0.050	1	11/16/09	11/18/09 11:30	100766	180095	
Heptachlor	0.025	U	0.050	0.025	1	11/16/09	11/18/09 11:30	100766	180095	
Heptachlor Epoxide	0.025	U	0.050	0.025	1	11/16/09	11/18/09 11:30	100766	180095	
Hexachlorobenzene	0.028	U	0.050	0.028	1	11/16/09	11/18/09 11:30	100766	180095	
Methoxychlor	0.25	U	0.50	0.25	1	11/16/09	11/18/09 11:30	100766	180095	
Toxaphene	0.50	U	1.0	0.50	1	11/16/09	11/18/09 11:30	100766	180095	
alpha-BHC	0.025	U	0.050	0.025	1	11/16/09	11/18/09 11:30	100766	180095	
alpha-Chlordane	0.025	U	0.050	0.025	1	11/16/09	11/18/09 11:30	100766	180095	
beta-BHC	0.025	U	0.050	0.025	1	11/16/09	11/18/09 11:30	100766	180095	
delta-BHC	0.025	U	0.050	0.025	1	11/16/09	11/18/09 11:30	100766	180095	
gamma-BHC (Lindane)	0.025	U	0.050	0.025	1	11/16/09	11/18/09 11:30	100766	180095	
gamma-Chlordane	0.025	U	0.050	0.025	1	11/16/09	11/18/09 11:30	100766	180095	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
Decachlorobiphenyl	79	40-140	11/18/09 11:30		
Tetrachloro-m-xylene	70	40-140	11/18/09 11:30		

Comments:

Quantitation Report (Not Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111809\
Data File : FD542.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 18 Nov 2009 11:30 am
Operator : M.PEDRO
Sample : RQ0911458-01|1.0
Misc : 11/16/09 100 8081/608 BLK
ALS Vial : 4 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 19 07:40:00 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 09:14:11 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/l	ug/l	
	System Monitoring Compounds							
1)	S SURR1,Tetrac	9.20	9.37	1832.4E6	5018.2E6	69.639	65.550	
	Spiked Amount 100.000	Range 30 - 150		Recovery =		69.64%	65.55%	
25)	S SURR2,Decachloro	17.33	17.93	1928.6E6	4238.2E6	78.772	77.718	
	Spiked Amount 100.000	Range 30 - 150		Recovery =		78.77%	77.72%	
	Target Compounds							
2)	TC HEXACHLOROBENZEN	9.90	10.19	4533766	13536556	0.121	0.133	
4)	tcm gamma-BHC (L	0.00	11.02	0	3221637	N.D.	0.031	#
5)	tcm Heptachlor	11.49	0.00	8766725	0	0.239	N.D.	#
7)	tc beta-BHC	0.00	11.20	0	4705230	N.D.	0.109	#
8)	tc delta-BHC	11.16	11.62	7185973	12067864	0.194	0.120	#
9)	tc Heptachlor E	12.83	13.01	5296134	81491312	0.168	0.953	#
10)	tc alpha-Endosu	0.00	13.59	0	12610755	N.D.	0.184	#
11)	tc gamma-Chlord	0.00	13.27	0	92400118	N.D.	1.050	#
13)	tc 4,4'-DDE	0.00	13.73	0	28136585	N.D.	0.358	#
14)	tcm Dieldrin	0.00	13.98	0	67190902	N.D.	0.813	#
15)	tcm Endrin	0.00	14.41	0	41823702	N.D.	0.609	#
17)	tc beta-Endosul	0.00	14.73	0	88006823	N.D.	1.261	#
18)	tc 4,4'-DDD	14.19	14.56	7402855	19994565	0.301	0.319	
19)	tcm 4,4'-DDT	0.00	15.03	0	160.1E6	N.D.	2.385	#
20)	tc Endrin Aldeh	15.06	0.00	12710857	0	0.600	N.D.	#
22)	tc Methoxychlor	0.00	15.98	0	25876644	N.D.	0.929	#
23)	tc FAMPHUR	0.00	15.74	0	15178397	N.D.	0.373	#
26)	L8C Toxaphene	14.53	0.00	46000335	0	38.414	N.D.	#
28)	L8C Toxaphene{3}	15.19	0.00	4704310	0	6.750	N.D.	#
30)	L8C Toxaphene{5}	16.27	16.51	35700976	32332677	61.029	22.575	#
	Sum Toxaphene			86405621	32332677	106.193	22.575	
Average	Toxaphene					35.398	22.575	
32)	L9C Chlordane{2}	11.49	0.00	8766725	0	18.044	N.D.	#
33)	L9C Chlordane{3}	0.00	12.42	0	28106851	N.D.	14.922	#
34)	L9C Chlordane{4}	0.00	13.27	0	92400118	N.D.	9.967	#

MR 11/19

00460

Quantitation Report (Not Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111809\
Data File : FD542.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 18 Nov 2009 11:30 am
Operator : M.PEDRO
Sample : RQ0911458-01|1.0
Misc : 11/16/09 100 8081/608 BLK
ALS Vial : 4 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 19 07:40:00 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 09:14:11 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/l	ug/l
35) L9C Chlordane{5}	14.30	0.00	15763454	0	10.794	N.D. #
Sum Chlordane			24530179	120.5E6	28.838	24.889
Average Chlordane					14.419	12.445

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

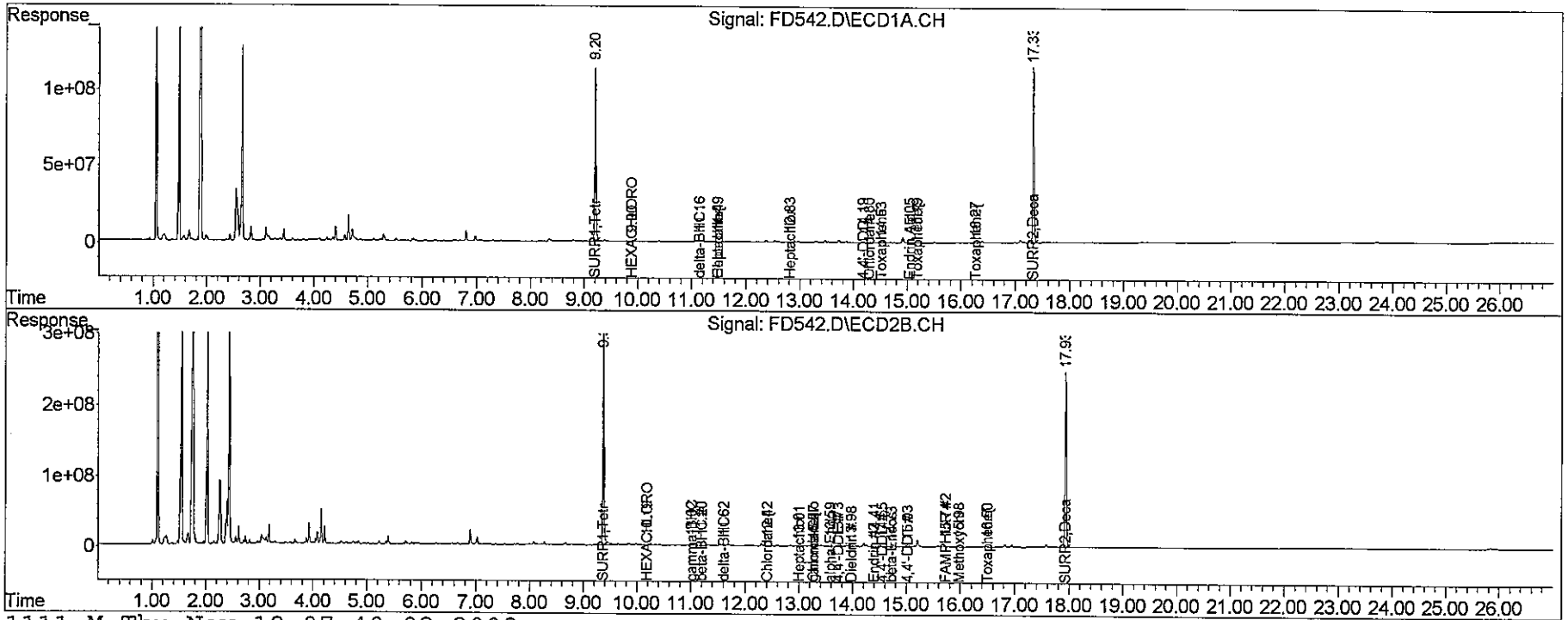
00461

Quantitation Report (Not Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111809\
Data File : FD542.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 18 Nov 2009 11:30 am
Operator : M.PEDRO
Sample : RQ0911458-01|1.0
Misc : 11/16/09 100 8081/608 BLK
ALS Vial : 4 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 19 07:40:00 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 09:14:11 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m



COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Northgate Environmental	**Service Request:**	R0906477
Project:	Tronox LLC Henderson/2027.001	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	RQ0911458-02	**Basis:**	NA

Organochlorine Pesticides by Gas Chromatography

Analytical Method: 8081A
Prep Method: EPA 3510C

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
4,4'-DDD	**0.184**		0.10	0.050	1	11/16/09	11/18/09 12:05	100766	180095	
4,4'-DDE	**0.170**		0.10	0.050	1	11/16/09	11/18/09 12:05	100766	180095	
4,4'-DDT	**0.181**		0.10	0.050	1	11/16/09	11/18/09 12:05	100766	180095	
Aldrin	**0.141**		0.050	0.025	1	11/16/09	11/18/09 12:05	100766	180095	
Chlordane	0.13	U	0.25	0.13	1	11/16/09	11/18/09 12:05	100766	180095	
Dieldrin	**0.180**		0.10	0.050	1	11/16/09	11/18/09 12:05	100766	180095	
Endosulfan I	**0.186**		0.050	0.025	1	11/16/09	11/18/09 12:05	100766	180095	
Endosulfan II	**0.185**		0.10	0.050	1	11/16/09	11/18/09 12:05	100766	180095	
Endosulfan Sulfate	**0.187**		0.10	0.050	1	11/16/09	11/18/09 12:05	100766	180095	
Endrin	**0.187**		0.10	0.050	1	11/16/09	11/18/09 12:05	100766	180095	
Endrin Aldehyde	**0.0513**	J	0.10	0.050	1	11/16/09	11/18/09 12:05	100766	180095	
Endrin Ketone	**0.195**		0.10	0.050	1	11/16/09	11/18/09 12:05	100766	180095	
Heptachlor	**0.163**		0.050	0.025	1	11/16/09	11/18/09 12:05	100766	180095	
Heptachlor Epoxide	**0.166**		0.050	0.025	1	11/16/09	11/18/09 12:05	100766	180095	
Hexachlorobenzene	**0.291**		0.050	0.028	1	11/16/09	11/18/09 12:05	100766	180095	
Methoxychlor	**0.944**		0.50	0.25	1	11/16/09	11/18/09 12:05	100766	180095	
Toxaphene	0.50	U	1.0	0.50	1	11/16/09	11/18/09 12:05	100766	180095	
alpha-BHC	**0.169**		0.050	0.025	1	11/16/09	11/18/09 12:05	100766	180095	
alpha-Chlordane	**0.164**		0.050	0.025	1	11/16/09	11/18/09 12:05	100766	180095	
beta-BHC	**0.165**		0.050	0.025	1	11/16/09	11/18/09 12:05	100766	180095	
delta-BHC	**0.154**		0.050	0.025	1	11/16/09	11/18/09 12:05	100766	180095	
gamma-BHC (Lindane)	**0.165**		0.050	0.025	1	11/16/09	11/18/09 12:05	100766	180095	
gamma-Chlordane	**0.165**		0.050	0.025	1	11/16/09	11/18/09 12:05	100766	180095	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
Decachlorobiphenyl	85	40-140	11/18/09 12:05		
Tetrachloro-m-xylene	67	40-140	11/18/09 12:05		

Comments:

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111809\
Data File : FD543.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 18 Nov 2009 12:05 pm
Operator : M.PEDRO
Sample : RQ0911458-02|1.0
Misc : 11/16/09 100 8081/608 LCS
ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 19 08:25:08 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 09:14:11 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/l	ug/l	
	System Monitoring Compounds							
1)	S SURR1,Tetrac	9.20	9.37	1768.7E6	4860.0E6	67.216	63.484	
	Spiked Amount 100.000	Range 30 - 150		Recovery =		67.22%	63.48%	
25)	S SURR2,Decachloro	17.33	17.93	2077.0E6	4586.5E6	84.834	84.105	
	Spiked Amount 100.000	Range 30 - 150		Recovery =		84.83%	84.11%	
	Target Compounds							
2)	TC HEXACHLOROBENZEN	9.89	10.19	1080.7E6	2966.1E6	28.740	29.117	
3)	tc alpha-BHC	10.20	10.44	666.9E6	1886.6E6	16.131	16.846	
4)	tcm gamma-BHC (L	10.72	11.02	609.1E6	1720.0E6	16.425	16.539	
5)	tcm Heptachlor	11.47	11.69	567.1E6	1625.0E6	15.436	16.324	
6)	tcm Aldrin	11.92	12.17	478.4E6	1331.0E6	13.937	14.128	
7)	tc beta-BHC	10.88	11.17	248.9E6	710.1E6	16.032	16.452	
8)	tc delta-BHC	11.15	11.61	572.4E6	1541.3E6	15.442	15.291	
9)	tc Heptachlor E	12.82	13.01	510.7E6	1420.5E6	16.210	16.612	
10)	tc alpha-Endosu	13.39	13.57	477.8E6	1272.7E6	17.124	18.563	
11)	tc gamma-Chlord	13.00	13.28	521.6E6	1429.6E6	16.541	16.241	
12)	tc alpha-Chlord	13.19	13.49	479.1E6	1339.8E6	16.403	15.987	
13)	tc 4,4'-DDE	13.31	13.73	485.3E6	1340.4E6	16.051	17.037	
14)	tcm Dieldrin	13.74	13.97	538.0E6	1487.7E6	17.195	17.998	
15)	tcm Endrin	14.08	14.41	488.6E6	1285.9E6	16.854	18.735	
17)	tc beta-Endosul	14.40	14.72	427.0E6	1287.0E6	16.306	18.446	
18)	tc 4,4'-DDD	14.16	14.56	406.6E6	1155.7E6	16.557	18.416	
19)	tcm 4,4'-DDT	14.57	15.02	446.6E6	1211.8E6	16.937	18.051	
20)	tc Endrin Aldeh	15.03	15.22	67228348	278.8E6	3.173	5.126	#
21)	tc Endosulfan S	15.68	15.63	412.0E6	1165.0E6	16.714	18.684	
22)	tc Methoxychlor	15.27	15.99	1104.7E6	2631.6E6	90.040	94.429	
24)	tc Endrin Keton	16.08	16.38	494.0E6	1304.8E6	17.569	19.449	
	Sum Toxaphene			0	0	N.D.	N.D.	
	Average Toxaphene					0.000	0.000	
	Sum Chlordane			0	0	N.D.	N.D.	
	Average Chlordane					0.000	0.000	

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111809\
Data File : FD543.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 18 Nov 2009 12:05 pm
Operator : M.PEDRO
Sample : RQ0911458-02|1.0
Misc : 11/16/09 100 8081/608 LCS
ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 19 08:25:08 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 09:14:11 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/l	ug/l

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

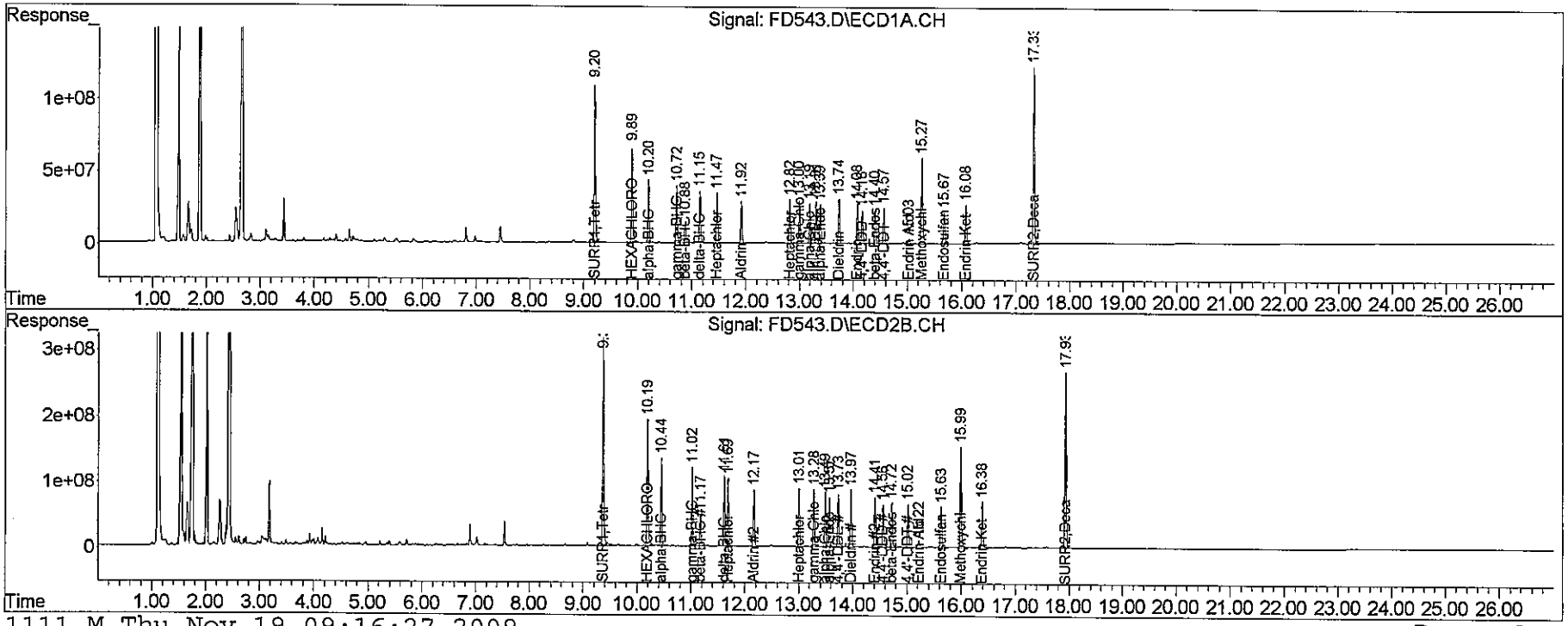
00465

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111809\
Data File : FD543.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 18 Nov 2009 12:05 pm
Operator : M.PEDRO
Sample : RQ0911458-02|1.0
Misc : 11/16/09 100 8081/608 LCS
ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 19 08:25:08 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 09:14:11 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m



99h00

Quantitation Report (Not Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111809\
Data File : FD543.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 18 Nov 2009 12:05 pm
Operator : M.PEDRO
Sample : RQ0911458-02|1.0
Misc : 11/16/09 100 8081/608 LCS
ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 19 07:40:05 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 09:14:11 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/l	ug/l	
	System Monitoring Compounds							
1)	S SURR1,Tetrac	9.20	9.37	1768.7E6	4860.0E6	67.216	63.484	
	Spiked Amount 100.000	Range 30 - 150		Recovery =		67.22%	63.48%	
25)	S SURR2,Decachloro	17.33	17.93	2077.0E6	4586.5E6	84.834	84.105	
	Spiked Amount 100.000	Range 30 - 150		Recovery =		84.83%	84.11%	
	Target Compounds							
2)	TC HEXACHLOROBENZEN	9.89	10.19	1080.7E6	2966.1E6	28.740	29.117	
3)	tc alpha-BHC	10.20	10.44	666.9E6	1886.6E6	16.131	16.846	
4)	tcm gamma-BHC (L	10.72	11.02	609.1E6	1720.0E6	16.425	16.539	
5)	tcm Heptachlor	11.47	11.69	567.1E6	1625.0E6	15.436	16.324	
6)	tcm Aldrin	11.92	12.17	478.4E6	1331.0E6	13.937	14.128	
7)	tc beta-BHC	10.88	11.17	248.9E6	710.1E6	16.032	16.452	
8)	tc delta-BHC	11.15	11.61	572.4E6	1541.3E6	15.442	15.291	
9)	tc Heptachlor E	12.82	13.01	510.7E6	1420.5E6	16.210	16.612	
10)	tc alpha-Endosu	13.39	13.57	477.8E6	1272.7E6	17.124	18.563	
11)	tc gamma-Chlord	13.00	13.28	521.6E6	1429.6E6	16.541	16.241	
12)	tc alpha-Chlord	13.19	13.49	479.1E6	1339.8E6	16.403	15.987	
13)	tc 4,4'-DDE	13.31	13.73	485.3E6	1340.4E6	16.051	17.037	
14)	tcm Dieldrin	13.74	13.97	538.0E6	1487.7E6	17.195	17.998	
15)	tcm Endrin	14.08	14.41	488.6E6	1285.9E6	16.854	18.735	
16)	tc KEPONE	14.16	0.00	406.6E6	0	34.443	N.D.	#
17)	tc beta-Endosul	14.40	14.72	427.0E6	1287.0E6	16.306	18.446	
18)	tc 4,4'-DDD	14.16	14.56	406.6E6	1155.7E6	16.557	18.416	
19)	tcm 4,4'-DDT	14.57	15.02	446.6E6	1211.8E6	16.937	18.051	
20)	tc Endrin Aldeh	15.03	15.22	67228348	278.8E6	3.173	5.126	#
21)	tc Endosulfan S	15.68	15.63	412.0E6	1165.0E6	16.714	18.684	
22)	tc Methoxychlor	15.27	15.99	1104.7E6	2631.6E6	90.040	94.429	
24)	tc Endrin Keton	16.08	16.38	494.0E6	1304.8E6	17.569	19.449	
27)	L8C Toxaphene{2}	14.57	0.00	446.6E6	0	538.531	N.D.	#
29)	L8C Toxaphene{4}	16.08	15.63	494.0E6	1165.0E6	653.728	668.443	
30)	L8C Toxaphene{5}	16.27	16.50	28155316	33210076	48.130	23.187	#
	Sum Toxaphene			968.8E6	1198.2E6	1240.388	691.630	

00467

Data Path : J:\ACQUDATA\6890D\DATA\111809\
Data File : FD543.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 18 Nov 2009 12:05 pm
Operator : M.PEDRO
Sample : RQ0911458-02|1.0
Misc : 11/16/09 100 8081/608 LCS
ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 19 07:40:05 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 09:14:11 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/l	ug/l	
Average Toxaphene					413.463	345.815	
32) L9C Chlordane{2}	11.47	11.69	567.1E6	1625.0E6	1167.251	1152.072	
33) L9C Chlordane{3}	0.00	12.42	0	13784351	N.D.	7.318	#
34) L9C Chlordane{4}	13.00	13.28	521.6E6	1429.6E6	139.196	154.215	
35) L9C Chlordane{5}	14.30	0.00	7535609	0	5.160	N.D.	#
Sum Chlordane			1096.2E6	3068.4E6	1311.607	1313.605	
Average Chlordane					437.202	437.868	

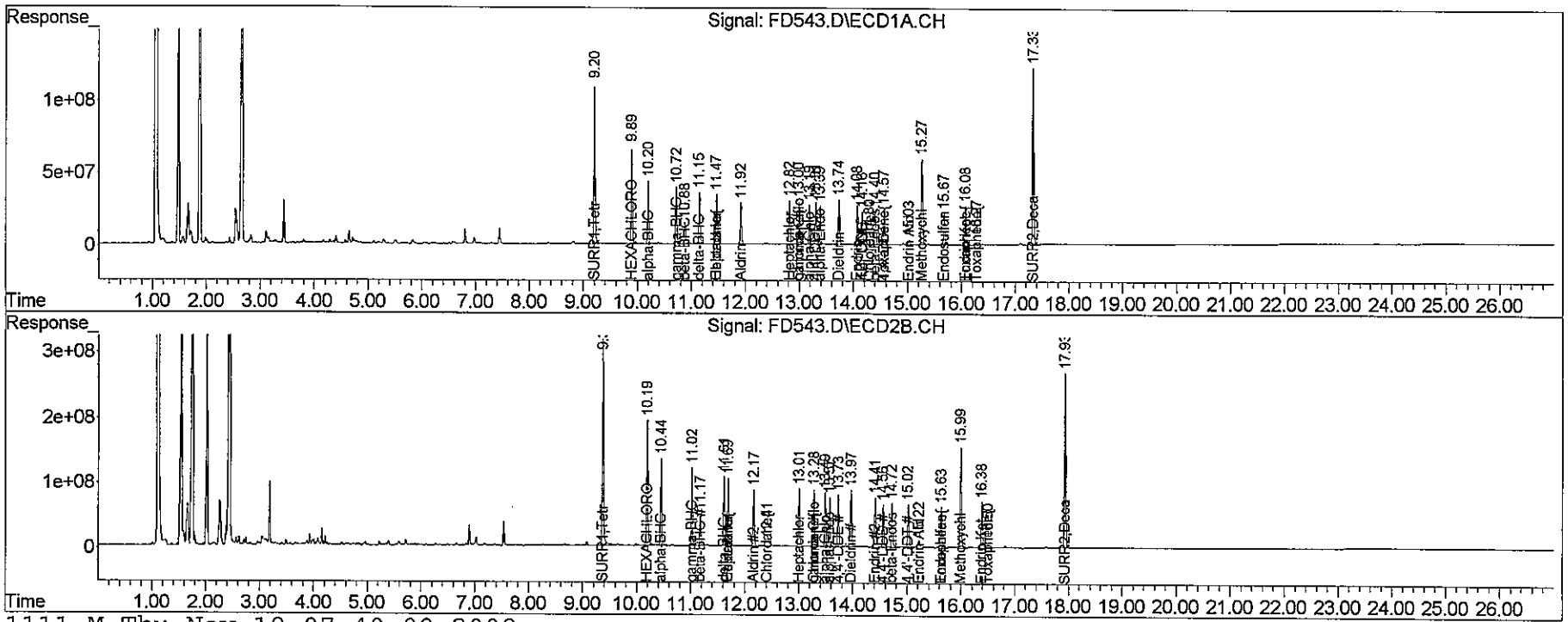
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111809\
Data File : FD543.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 18 Nov 2009 12:05 pm
Operator : M.PEDRO
Sample : RQ0911458-02|1.0
Misc : 11/16/09 100 8081/608 LCS
ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 19 07:40:05 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 09:14:11 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m



COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Northgate Environmental	**Service Request:**	R0906477
Project:	Tronox LLC Henderson/2027.001	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Lab Control Sample Dup	**Units:**	µg/L
Lab Code:	RQ0911458-03	**Basis:**	NA

Organochlorine Pesticides by Gas Chromatography

Analytical Method: 8081A
Prep Method: EPA 3510C

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
4,4'-DDD	**0.187**		0.10	0.050	1	11/16/09	11/18/09 12:41	100766	180095	
4,4'-DDE	**0.172**		0.10	0.050	1	11/16/09	11/18/09 12:41	100766	180095	
4,4'-DDT	**0.180**		0.10	0.050	1	11/16/09	11/18/09 12:41	100766	180095	
Aldrin	**0.140**		0.050	0.025	1	11/16/09	11/18/09 12:41	100766	180095	
Chlordane	0.13	U	0.25	0.13	1	11/16/09	11/18/09 12:41	100766	180095	
Dieldrin	**0.184**		0.10	0.050	1	11/16/09	11/18/09 12:41	100766	180095	
Endosulfan I	**0.185**		0.050	0.025	1	11/16/09	11/18/09 12:41	100766	180095	
Endosulfan II	**0.186**		0.10	0.050	1	11/16/09	11/18/09 12:41	100766	180095	
Endosulfan Sulfate	**0.189**		0.10	0.050	1	11/16/09	11/18/09 12:41	100766	180095	
Endrin	**0.189**		0.10	0.050	1	11/16/09	11/18/09 12:41	100766	180095	
Endrin Aldehyde	**0.0485**		0.10	0.050	1	11/16/09	11/18/09 12:41	100766	180095	
Endrin Ketone	**0.196**		0.10	0.050	1	11/16/09	11/18/09 12:41	100766	180095	
Heptachlor	**0.163**		0.050	0.025	1	11/16/09	11/18/09 12:41	100766	180095	
Heptachlor Epoxide	**0.169**		0.050	0.025	1	11/16/09	11/18/09 12:41	100766	180095	
Hexachlorobenzene	**0.295**		0.050	0.028	1	11/16/09	11/18/09 12:41	100766	180095	
Methoxychlor	**0.963**		0.50	0.25	1	11/16/09	11/18/09 12:41	100766	180095	
Toxaphene	0.50	U	1.0	0.50	1	11/16/09	11/18/09 12:41	100766	180095	
alpha-BHC	**0.172**		0.050	0.025	1	11/16/09	11/18/09 12:41	100766	180095	
alpha-Chlordane	**0.166**		0.050	0.025	1	11/16/09	11/18/09 12:41	100766	180095	
beta-BHC	**0.169**		0.050	0.025	1	11/16/09	11/18/09 12:41	100766	180095	
delta-BHC	**0.158**		0.050	0.025	1	11/16/09	11/18/09 12:41	100766	180095	
gamma-BHC (Lindane)	**0.168**		0.050	0.025	1	11/16/09	11/18/09 12:41	100766	180095	
gamma-Chlordane	**0.167**		0.050	0.025	1	11/16/09	11/18/09 12:41	100766	180095	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
Decachlorobiphenyl	78	40-140	11/18/09 12:41		
Tetrachloro-m-xylene	66	40-140	11/18/09 12:41		

Comments:

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111809\
Data File : FD544.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 18 Nov 2009 12:41 pm
Operator : M.PEDRO
Sample : RQ0911458-03|1.0
Misc : 11/16/09 100 8081/608 LCSD
ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 19 08:28:38 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 09:14:11 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/l	ug/l	
	System Monitoring Compounds							
1)	S SURR1,Tetrac	9.20	9.37	1743.5E6	4799.8E6	66.261	62.698	
	Spiked Amount 100.000	Range 30 - 150		Recovery =		66.26%	62.70%	
25)	S SURR2,Decachloro	17.33	17.93	1918.0E6	4265.7E6	78.340	78.221	
	Spiked Amount 100.000	Range 30 - 150		Recovery =		78.34%	78.22%	
	Target Compounds							
2)	TC HEXACHLOROBENZEN	9.89	10.19	1090.3E6	3005.1E6	28.996	29.500	
3)	tc alpha-BHC	10.20	10.44	680.5E6	1924.0E6	16.459	17.180	
4)	tcm gamma-BHC (L	10.72	11.02	624.0E6	1748.0E6	16.826	16.809	
5)	tcm Heptachlor	11.47	11.69	566.3E6	1617.6E6	15.413	16.249	
6)	tcm Aldrin	11.92	12.17	475.9E6	1319.2E6	13.863	14.002	
7)	tc beta-BHC	10.88	11.17	254.1E6	727.8E6	16.362	16.861	
8)	tc delta-BHC	11.15	11.61	586.7E6	1572.6E6	15.830	15.601	
9)	tc Heptachlor E	12.82	13.01	522.6E6	1440.6E6	16.587	16.847	
10)	tc alpha-Endosu	13.39	13.57	490.3E6	1266.1E6	17.573	18.468	
11)	tc gamma-Chlord	13.00	13.28	527.6E6	1461.7E6	16.731	16.606	
12)	tc alpha-Chlord	13.19	13.49	483.9E6	1364.0E6	16.566	16.276	
13)	tc 4,4'-DDE	13.31	13.73	491.0E6	1352.9E6	16.239	17.195	
14)	tcm Dieldrin	13.74	13.97	545.1E6	1523.4E6	17.419	18.431	
15)	tcm Endrin	14.08	14.41	497.5E6	1298.4E6	17.160	18.918	
17)	tc beta-Endosul	14.40	14.72	430.7E6	1294.1E6	16.447	18.547	
18)	tc 4,4'-DDD	14.16	14.56	416.2E6	1170.9E6	16.949	18.659	
19)	tcm 4,4'-DDT	14.57	15.02	448.8E6	1210.8E6	17.020	18.036	
20)	tc Endrin Aldeh	15.03	15.22	63661510	263.6E6	3.004	4.846	#
21)	tc Endosulfan S	15.68	15.63	415.2E6	1178.2E6	16.845	18.895	
22)	tc Methoxychlor	15.27	15.99	1122.4E6	2683.0E6	91.478	96.274	
24)	tc Endrin Keton	16.08	16.38	503.3E6	1312.5E6	17.898	19.563	
	Sum Toxaphene			0	0	N.D.	N.D.	
Average	Toxaphene					0.000	0.000	
	Sum Chlordane			0	0	N.D.	N.D.	
Average	Chlordane					0.000	0.000	

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111809\
Data File : FD544.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 18 Nov 2009 12:41 pm
Operator : M.PEDRO
Sample : RQ0911458-03|1.0
Misc : 11/16/09 100 8081/608 LCSD
ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 19 08:28:38 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 09:14:11 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/l	ug/l

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

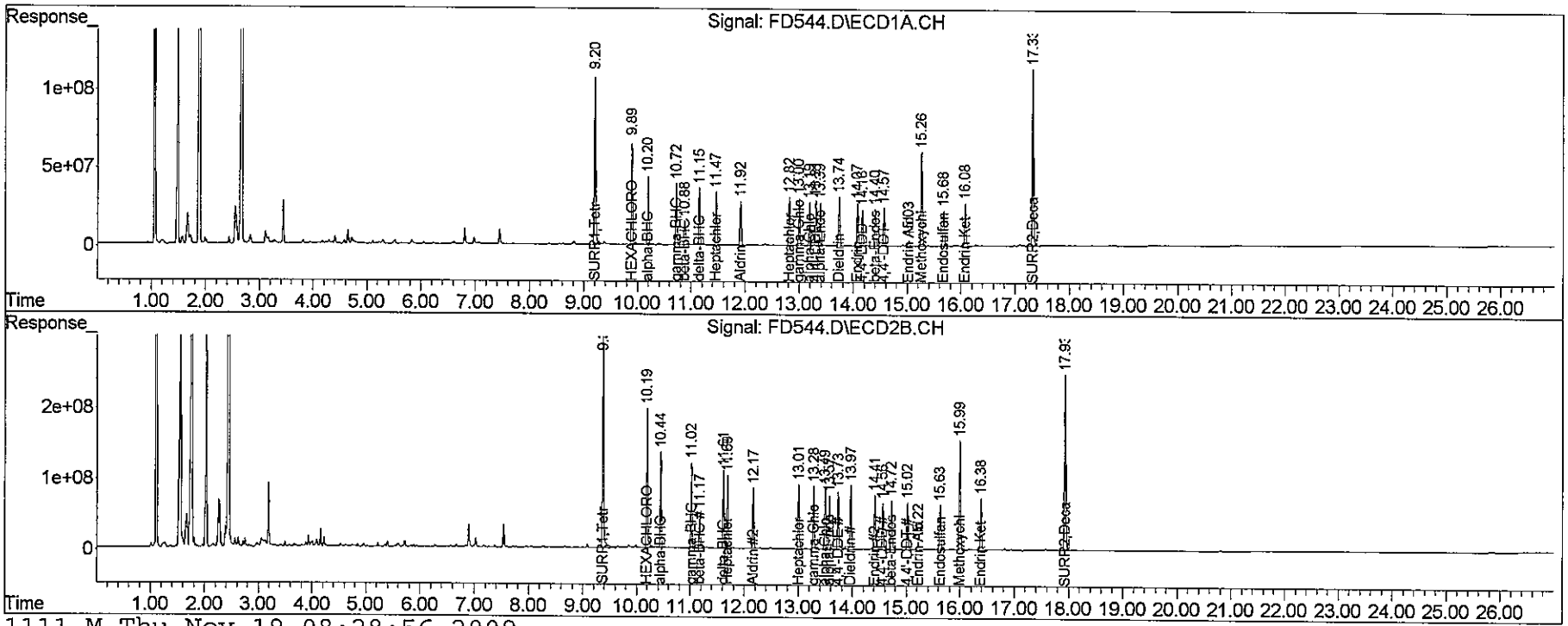
00472

Quantitation Report (QT Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111809\
Data File : FD544.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 18 Nov 2009 12:41 pm
Operator : M.PEDRO
Sample : RQ0911458-03|1.0
Misc : 11/16/09 100 8081/608 LCSD
ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 19 08:28:38 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 09:14:11 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m



Quantitation Report (Not Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111809\
Data File : FD544.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 18 Nov 2009 12:41 pm
Operator : M.PEDRO
Sample : RQ0911458-03|1.0
Misc : 11/16/09 100 8081/608 LCSD
ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 19 07:40:10 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 09:14:11 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/l	ug/l	
	System Monitoring Compounds							
1)	S SURR1,Tetrac	9.20	9.37	1743.5E6	4799.8E6	66.261	62.698	
	Spiked Amount 100.000	Range 30 - 150		Recovery =		66.26%	62.70%	
25)	S SURR2,Decachloro	17.33	17.93	1918.0E6	4265.7E6	78.340	78.221	
	Spiked Amount 100.000	Range 30 - 150		Recovery =		78.34%	78.22%	
	Target Compounds							
2)	TC HEXACHLOROBENZEN	9.89	10.19	1090.3E6	3005.1E6	28.996	29.500	
3)	tc alpha-BHC	10.20	10.44	680.5E6	1924.0E6	16.459	17.180	
4)	tcm gamma-BHC (L	10.72	11.02	624.0E6	1748.0E6	16.826	16.809	
5)	tcm Heptachlor	11.47	11.69	566.3E6	1617.6E6	15.413	16.249	
6)	tcm Aldrin	11.92	12.17	475.9E6	1319.2E6	13.863	14.002	
7)	tc beta-BHC	10.88	11.17	254.1E6	727.8E6	16.362	16.861	
8)	tc delta-BHC	11.15	11.61	586.7E6	1572.6E6	15.830	15.601	
9)	tc Heptachlor E	12.82	13.01	522.6E6	1440.6E6	16.587	16.847	
10)	tc alpha-Endosu	13.39	13.57	490.3E6	1266.1E6	17.573	18.468	
11)	tc gamma-Chlord	13.00	13.28	527.6E6	1461.7E6	16.731	16.606	
12)	tc alpha-Chlord	13.19	13.49	483.9E6	1364.0E6	16.566	16.276	
13)	tc 4,4'-DDE	13.31	13.73	491.0E6	1352.9E6	16.239	17.195	
14)	tcm Dieldrin	13.74	13.97	545.1E6	1523.4E6	17.419	18.431	
15)	tcm Endrin	14.08	14.41	497.5E6	1298.4E6	17.160	18.918	
16)	tc KEPONE	14.16	0.00	416.2E6	0	35.258	N.D.	#
17)	tc beta-Endosul	14.40	14.72	430.7E6	1294.1E6	16.447	18.547	
18)	tc 4,4'-DDD	14.16	14.56	416.2E6	1170.9E6	16.949	18.659	
19)	tcm 4,4'-DDT	14.57	15.02	448.8E6	1210.8E6	17.020	18.036	
20)	tc Endrin Aldeh	15.03	15.22	63661510	263.6E6	3.004	4.846	#
21)	tc Endosulfan S	15.68	15.63	415.2E6	1178.2E6	16.845	18.895	
22)	tc Methoxychlor	15.27	15.99	1122.4E6	2683.0E6	91.478	96.274	
24)	tc Endrin Keton	16.08	16.38	503.3E6	1312.5E6	17.898	19.563	
27)	L8C Toxaphene{2}	14.57	0.00	448.8E6	0	541.140	N.D.	#
29)	L8C Toxaphene{4}	16.08	15.63	503.3E6	1178.2E6	665.964	676.011	
30)	L8C Toxaphene{5}	16.27	16.51	27878668	26049670	47.657	18.188	#
	Sum Toxaphene			979.9E6	1204.2E6	1254.761	694.199	

00474

Data Path : J:\ACQUDATA\6890D\DATA\111809\
Data File : FD544.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 18 Nov 2009 12:41 pm
Operator : M.PEDRO
Sample : RQ0911458-03|1.0
Misc : 11/16/09 100 8081/608 LCSD
ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 19 07:40:10 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 09:14:11 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/l	ug/l	
Average Toxaphene					418.254	347.099	
32) L9C Chlordane{2}	11.47	11.69	566.3E6	1617.6E6	1165.541	1146.787	
33) L9C Chlordane{3}	0.00	12.42	0	8585563	N.D.	4.558	#
34) L9C Chlordane{4}	13.00	13.28	527.6E6	1461.7E6	140.790	157.675	
Sum Chlordane			1093.8E6	3087.8E6	1306.331	1309.021	
Average Chlordane					653.166	436.340	

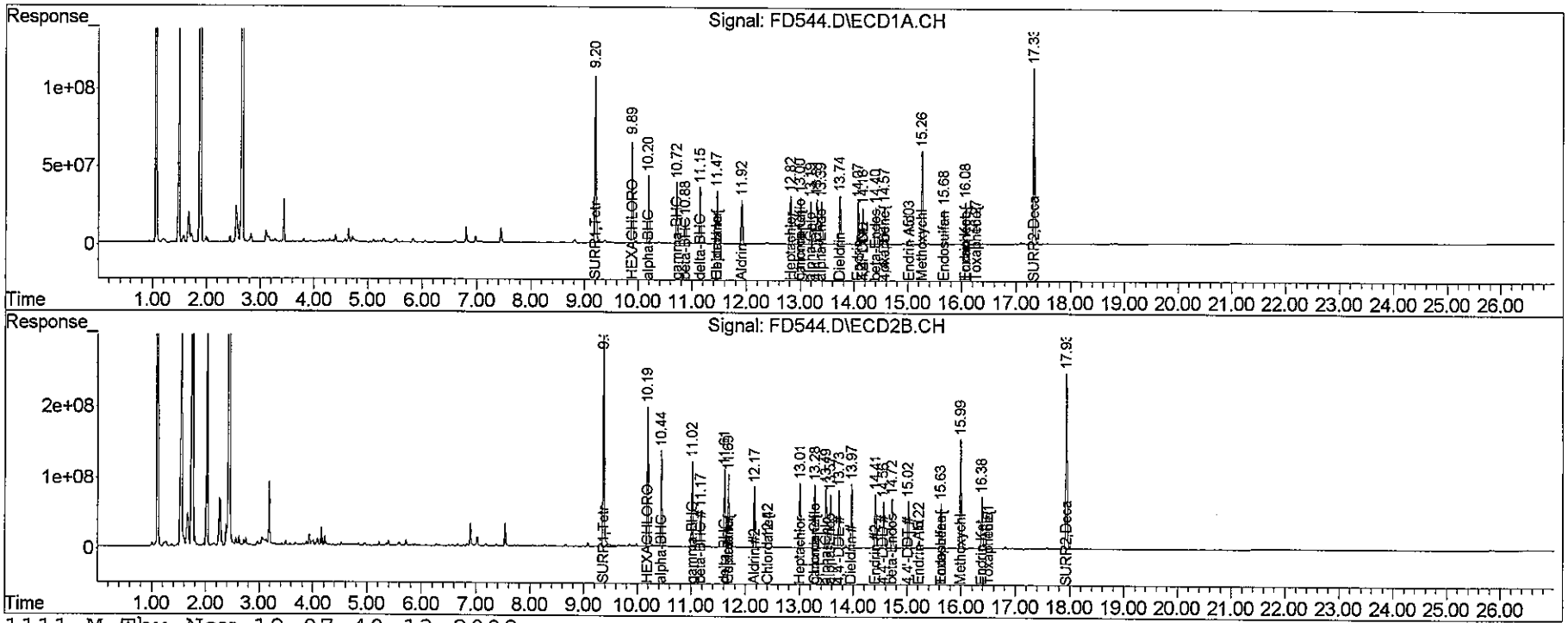
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data Path : J:\ACQUDATA\6890D\DATA\111809\
Data File : FD544.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 18 Nov 2009 12:41 pm
Operator : M.PEDRO
Sample : RQ0911458-03|1.0
Misc : 11/16/09 100 8081/608 LCSD
ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Nov 19 07:40:10 2009
Quant Method : J:\ACQUDATA\6890D\METHODS\80811111.M
Quant Title : 608/8081A PESTICIDES
QLast Update : Thu Nov 12 09:14:11 2009
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : STx-CLP Signal #2 Phase: STx-CLPII
Signal #1 Info : 0.32mm 30m Signal #2 Info : 0.32mm 30m



Preparation Information Benchsheet

Prep Run#: 100766 **Prep WorkFlow:** OrgExtAq(7) **Status:** Prepped
Team: Semivoa GC/DMURPHY **Prep Method:** EPA 3510C **Prep Date/Time:** 11/16/09 07:54 AM

#	Lab Code	Client ID	B#	Amt. Ext.	Method /Test	pH	AE	BN	Final Vol	Sample Desc. (Initial/Final)	SpikeAmt./Inv. ID	Comments
1	RQ0911458-01	MB		1000mL	608 Modified/PCB				10.00mL	clear-colorless	1.0000 mL/12937	
2	RQ0911458-01	MB		1000mL	608 Modified/PEST_OC				10.00mL	clear-colorless	1.0000 mL/12937	
3	RQ0911458-01	MB		1000mL	8081A/PEST_OC	6			10.00mL	clear-colorless	1.0000 mL/12937	
4	RQ0911458-01	MB		1000mL	8082/PCB	6			10.00mL	clear-colorless	1.0000 mL/12937	
5	RQ0911458-02	LCS		1000mL	608 Modified/PCB	6			10.00mL	clear-colorless	1.0000 mL/12552; 1.0000 mL/12937	
6	RQ0911458-02	LCS		1000mL	608 Modified/PEST_OC	6			10.00mL	clear-colorless	1.0000 mL/12937; 1.0000 mL/13033	
7	RQ0911458-02	LCS		1000mL	8081A/PEST_OC	6			10.00mL	clear-colorless	1.0000 mL/12010; 1.0000 mL/12937; 1.0000 mL/13033	
8	RQ0911458-02	LCS		1000mL	8082/PCB	6			10.00mL	clear-colorless	1.0000 mL/12552; 1.0000 mL/12937	
9	RQ0911458-03	DLCS		1000mL	608 Modified/PCB	6			10.00mL	clear-colorless	1.0000 mL/12552; 1.0000 mL/12937	
10	RQ0911458-03	DLCS		1000mL	608 Modified/PEST_OC	6			10.00mL	clear-colorless	1.0000 mL/12937; 1.0000 mL/13033	
11	RQ0911458-03	DLCS		1000mL	8081A/PEST_OC	6			10.00mL	clear-colorless	1.0000 mL/12010; 1.0000 mL/12937; 1.0000 mL/13033	
12	RQ0911458-03	DLCS		1000mL	8082/PCB	6			10.00mL	clear-colorless	1.0000 mL/12552; 1.0000 mL/12937	
13	R0906420-040	Section IV Area 1A2 PW Expanded	.06	1060mL	8081A/PEST_OC	7			10.00mL	clear-colorless	1.0000 mL/12937	
14	R0906420-040	Section IV Area 1A2 PW Expanded	.06	1060mL	8082/PCB	7			10.00mL	clear-colorless	1.0000 mL/12937	
15	R0906453-001	SMIPS001	.04	930mL	608 Modified/PCB	8			10.00mL	black-opaque	1.0000 mL/12937	sample volume 930 ml
16	R0906453-001	SMIPS001	.04	930mL	608 Modified/PEST_OC	8			10.00mL	black-opaque	1.0000 mL/12937	sample volume 1050 ml
17	R0906477-001	M-122B	.05	1060mL	8081A/PEST_OC	7			10.00mL	yellow-cloudy	1.0000 mL/12937	

Spiking Solutions

Name:	Kepone/Famphur Spike STD GCEXT	Inventory ID	12010	Logbook Ref:		Expires On:	03/02/2010
Name:	8082 Spike 5ug/ml AR 1242	Inventory ID	12552	Logbook Ref:		Expires On:	04/05/2010
Name:	8081/8082 Surrogate Spike STD 1 ug/ml	Inventory ID	12937	Logbook Ref:		Expires On:	04/25/2010
Name:	608 LCS Spike STD	Inventory ID	13033	Logbook Ref:		Expires On:	04/30/2010

Preparation Materials

Eppendorf Pipette Repeater	EXT #3 (12431)	2mL Graduated Vials	(13019)	Water Deionized H2O	DI System (2262)
Sulfuric Acid Reagent Grade H2SO4	(12512)	Mercury Reagent Grade Hg	(12913)	Isopropanol (2-Propanol) Reagent Grade	0-344-42-C (9670)
Dichloromethane (Methylene Chloride) 99.9% MeCl2	(12660)	Hexane (n-Hexane) 99.8% Minimum	(13311)	Prepared Sodium Sulfate Na2SO4	(13313)
Prepared Tetrabutylammonium hydrogen sulfate (TBA)	(11950)				

Preparation Information Benchsheet

Prep Run#: 100766
Team: Semivoa GC/DMURPHY

Prep WorkFlow: OrgExtAq(7)
Prep Method: EPA 3510C

Status: Prepped
Prep Date/Time: 11/16/09 07:54 AM

Preparation Steps

Step:	Extraction	Step:	Concentration	Step:	Acid Clean	Step:	Sulfur Clean	Step:	Final Volume
Started:	11/16/09 07:54	Started:	11/17/09 11:00	Started:	11/17/09 13:30	Started:	11/17/09 14:00	Started:	11/17/09 15:17
Finished:	11/16/09 14:00	Finished:	11/17/09 13:00	Finished:	11/17/09 13:50	Finished:	11/17/09 15:17	Finished:	11/17/09 15:17
By:	DMURPHY	By:	DCURRAN	By:	DCURRAN	By:	DCURRAN	By:	DCURRAN

Comments: Meghan Peden 11/18

Reviewed By: _____ Date: _____ Spike Witness: DCURRAN Daniel P. Curran Date: 11/18/09

Chain of Custody

Relinquished By: _____ Date: _____ Extracts Examined

Received By: _____ Date: _____ Yes No

Analysis: 8081/1608	Analyst: Meghan Kelly	Run Method:	8081A-M
Date: 11/11/09	Instr. 6890D	Quant Method:	↓
		LIMS Run#:	17915

Pos.	Sample	Diln.	Diln. Prep.	Client	File#	OK?	Comments
	Rem		12176		FD363	Y	
	PIB/ML				364	Y	
	INDAL		13114		365	Y	
	ML		13113		366	Y	
	M		13112		367	Y	
	MH		13111		368	Y	
	H		13110		369	Y	
	INDBL		13119		370	Y	
	ML		13118		371	Y	
	M		13117		372	Y	
	MH		13116		373	Y	
	H		13115		374	Y	
	Kepfam L		0748-10Sd		375	Y	
	ML		E		376	Y	
	M		F		377	Y	
	MH		G		378	Y	
	H		H		379	Y	
	TOX L		11978		380	Y	
	ML		11977		381	Y	
	M		11979		382	Y	
	MH		11880		383	Y	
	H		118881		384	Y	
	Chlo L		11888		385	Y	
	ML		11889		386	Y	
	M		11890		387	Y	
	MH		11891		388	Y	
	H		11892		389	Y	
	8081 ICV		10258		390	Y ICV	
	TOX ICV		12236		391	Y ICV	
	CHLO ICV		12237		392	Y ICV	
	Rem		12176		393	Y PB	
	INDA CCV1A		13112		394	Y CC	
	CCV1B		13117		395	Y CC	
	R0905744-01C	1.0			396	Y	
	R0906070-005	1.0			397	Y	
	R0906209-001	4.0			398	Y	
	R0905976-005	5.0			399	Y	
	R0910792-01 BMS	1.0			400	Y MS	
	02	1.0			401	Y D	Prd Mtd ↓

All samples = _____mL + _____uL Combined IS/Surr.;

Primary :_____ exp: Secondary :_____ exp:

Primary:_____ exp: Secondary :_____ exp:

[redacted]

Analysis: 8081/608 Analyst: Meghan Reaves Run Method: 8081111.M

Date: 11/19/09 Instr. 6890D Quant Method: ↓

LIMS Run#: 180095

Pos.	Sample	Diln.	Diln. Prep.	Client	File#	OK?	Comments
	Perm		12176		FD59	YPE	
	CCV16A		13111		540	Y	
	CCV16B		13116		541	Y	
	RQ0911458-01	1.0			542	MS	
	02 MS				543	YQ	End. Std ↓
	03 MSD				544	YQ	↓
	R0906420-010				545	Y	
	R0906453-001				546	Y	
	001				547	Not Needed	
	R0910477-001				548	Y	
	RQ0910444-01				549	YMB	
	02				550	YQ	
	03				551	YQ	
	CCV17A		13111		552	Y	
	CCV17B		13116		553	Y	
	R0906024-006	10.0			554	N	Rpt hits
	007	1.0			555	Y	
	008				556	Y	
	009				557	Y	
	010				558	Y	
	015				559	N	Rpt hits str +1/2D
	016				560	Y	
	R0906051-007	10.0			561	Rpt	
	RQ0910444-06 MS				562		
	↓ 07 MSD				563		
	CCV18A		13111		564	YCC	F.Con B.C.↓
	CCV18B		13116		565	Y	F.Con B.C.↓
	RQ0911458-02				566	Y	
	03				567	Y Y	
	Rep/Surr Meth		06181085D		568	Y	
					569		
					509		
					MB 11/20/09		

All samples = _____mL + _____uL Combined IS/Surr.;

Primary :_____ exp: Secondary :_____ exp:

Primary:_____ exp: Secondary :_____ exp:

00105

GENERAL CHEMISTRY DATA

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Water

Service Request: R0906477
Date Collected: 11/11/09 1335
Date Received: 11/12/09

Sample Name: M-122B
Lab Code: R0906477-001

Basis: NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed
Alkalinity as CaCO3, Total	SM 2320 B	**183**		mg/L	2.0	0.3	1	NA	11/20/09 08:42
Ammonia as Nitrogen	350.1	**0.061**		mg/L	0.050	0.007	1	NA	11/23/09 12:38
Anion-Cation Balance Difference	SM 1030 E	**0.505**		Percent			1	NA	12/22/09
Bicarbonate Alkalinity as CaCO3	SM 2320 B	**183**		mg/L	2.0	0.3	1	NA	11/20/09 08:42
Bromide	9056	**1.1**		mg/L	1.0	0.2	10	NA	11/12/09 14:12
Calculated TDS/EC Ratio	SM 1030 E	**0.796**		NONE			1	NA	12/22/09
Carbon, Total Organic (TOC)	9060	**2.6**		mg/L	1.0	0.1	1	NA	11/18/09 18:37
Carbon, Total Organic (TOC)	9060	**2.3**		mg/L	1.0	0.1	1	NA	11/18/09 18:45
Carbon, Total Organic (TOC)	9060	**2.2**		mg/L	1.0	0.1	1	NA	11/18/09 18:54
Carbon, Total Organic (TOC)	9060	**2.1**		mg/L	1.0	0.1	1	NA	11/18/09 18:29
Carbon, Total Organic (TOC), Average	9060	**2.3**		mg/L	1.0	0.1	1	NA	11/18/09 18:29
Carbonate Alkalinity as CaCO3	SM 2320 B	0.3	U	mg/L	2.0	0.3	1	NA	11/20/09 08:42
Chloride	9056	**406**		mg/L	20	5	100	NA	11/18/09 06:00
Chromium, Hexavalent, Dissolved	218.6	**0.044**		mg/L	0.010	0.004	1	NA	11/17/09 12:12
Conductivity	120.1	**4810**		µMHOS/cm	0.050		1	NA	11/12/09 14:35
Conductivity Ratio	SM 1030 E	**1.045**		NONE			1	NA	12/22/09
Cyanide, Total	9012A	0.005	U	mg/L	0.010	0.005	1	11/24/09	11/24/09 14:16
Hydroxide Alkalinity as CaCO3	SM 2320 B	0.3	U	mg/L	2.0	0.3	1	NA	11/20/09 08:42
Measured TDS/EC Ratio	SM 1030 E	**0.898**		NONE			1	NA	12/22/09
Nitrate as Nitrogen	9056	**18.1**		mg/L	0.50	0.04	10	NA	11/12/09 14:12
Nitrite as Nitrogen	353.2	**0.021**		mg/L	0.010	0.007	1	NA	11/12/09 16:06
pH	9040B	**7.27**		pH Units			1	NA	11/12/09 14:35
Phosphorus, Total	365.1	**0.060**		mg/L	0.050	0.005	1	11/18/09	11/19/09 10:11
Solids, Total Dissolved	SM 2540 C	**4320**		mg/L	31	17	1	NA	11/17/09 11:10
Solids, Total Suspended (TSS)	SM 2540 D	**122**		mg/L	1.7		1	NA	11/16/09 13:30
Sulfate	9056	**2090**		mg/L	80	18	400	NA	11/18/09 06:15
Surfactants	SM 5540 C	**0.006**	J	mg/L	0.020	0.005	1	NA	11/12/09 08:56
TDS Ratio	SM 1030 E	**1.128**		NONE			1	NA	12/22/09

Comments:

M-122B

Water Type	$Ca\text{-}SO_4$		
Dissolved Solids	4318.8 mg/kg	4320 mg/L	Measured
Density	1.0003 g/cm^3		Calculated
Conductivity	4810 µmho/cm		Measured
Hardness (as $CaCO_3$)			
Total	2237.8 mg/kg	2238.5 mg/L	Calculated
Carbonate	300.1	300.18	
Non-Carbonate	1937.7	1938.3	

Primary Tests

Anion-Cation Balance		
Anions	58.4	
Cations	59	
% Difference	0.505	OK
Measured TDS = Calculated TDS		
Measured	4318.790	
Calculated	3827.057	
Ratio	1.128	OK
Measured EC = Calculated EC		
Measured	4810.000	
Calculated	4601.246	
Ratio	1.045	OK

Secondary Tests

Measured EC and Ion Sums:		
Anions	1.213549	Not within preferred range (0.9-1.1)
Cations	1.225878	Not within preferred range (0.9-1.1)
Calculated TDS to EC ratio	0.796	Not within preferred range (0.55-0.7)
Measured TDS to EC ratio	0.898	Not within preferred range (0.55-0.7)

Organic Mass Balance

DOC ≥ Sum of Organics

DOC unavailable

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Northgate Environmental	**Service Request:**	R0906477
Project:	Tronox LLC Henderson/2027.001	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank		
Lab Code:	R0906477-MB	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed
Alkalinity as CaCO3, Total	SM 2320 B	**0.5**	J	mg/L	2.0	0.3	1	NA	11/20/09 08:42
Ammonia as Nitrogen	350.1	0.007	U	mg/L	0.050	0.007	1	NA	11/23/09 11:28
Bicarbonate Alkalinity as CaCO3	SM 2320 B	**0.5**	J	mg/L	2.0	0.3	1	NA	11/20/09 08:42
Bromide	9056	0.02	U	mg/L	0.10	0.02	1	NA	11/12/09 08:16
Carbon, Total Organic (TOC)	9060	0.1	U	mg/L	1.0	0.1	1	NA	11/18/09 14:28
Carbon, Total Organic (TOC)	9060	0.1	U	mg/L	1.0	0.1	1	NA	11/18/09 14:36
Carbon, Total Organic (TOC)	9060	0.1	U	mg/L	1.0	0.1	1	NA	11/18/09 14:44
Carbon, Total Organic (TOC)	9060	0.1	U	mg/L	1.0	0.1	1	NA	11/18/09 14:54
Carbonate Alkalinity as CaCO3	SM 2320 B	0.3	U	mg/L	2.0	0.3	1	NA	11/20/09 08:42
Chloride	9056	0.05	U	mg/L	0.20	0.05	1	NA	11/18/09 05:32
Chromium, Hexavalent, Dissolved	218.6	0.004	U	mg/L	0.010	0.004	1	NA	11/17/09 10:18
Cyanide, Total	9012A	0.005	U	mg/L	0.010	0.005	1	11/24/09	11/24/09 14:08
Hydroxide Alkalinity as CaCO3	SM 2320 B	0.3	U	mg/L	2.0	0.3	1	NA	11/20/09 08:42
Nitrate as Nitrogen	9056	0.004	U	mg/L	0.050	0.004	1	NA	11/12/09 08:16
Nitrite as Nitrogen	353.2	0.007	U	mg/L	0.010	0.007	1	NA	11/12/09 16:06
Phosphorus, Total	365.1	0.005	U	mg/L	0.050	0.005	1	11/18/09	11/19/09 09:47
Solids, Total Dissolved	SM 2540 C	6	U	mg/L	10	6	1	NA	11/17/09 11:10
Solids, Total Suspended (TSS)	SM 2540 D	1.0	U	mg/L	1.0		1	NA	11/16/09 13:30
Sulfate	9056	0.05	U	mg/L	0.20	0.05	1	NA	11/18/09 05:32
Surfactants	SM 5540 C	0.005	U	mg/L	0.020	0.005	1	NA	11/12/09 08:56

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Water

Service Request: R0906477
Date Analyzed: 11/12/09 - 11/24/09

Lab Control Sample Summary
General Chemistry Parameters

Units: mg/L
Basis: NA

Analyte Name	Method	Lab Control Sample R0906477-LCS1 Result	Expected	% Rec	% Rec Limits
Ammonia as Nitrogen	350.1	**0.495**	0.500	99	90 - 110
Bromide	9056	**0.991**	1.00	99	90 - 110
Carbon, Total Organic (TOC)	9060	**9.05**	10.0	91	86 - 117
Carbon, Total Organic (TOC)	9060	**9.64**	10.0	96	86 - 117
Carbon, Total Organic (TOC)	9060	**9.95**	10.0	100	86 - 117
Carbon, Total Organic (TOC)	9060	**9.96**	10.0	100	86 - 117
Chloride	9056	**1.89**	2.00	95	90 - 110
Chromium, Hexavalent, Dissolved	218.6	**0.193**	0.200	97	90 - 110
Cyanide, Total	9012A	**0.107**	0.100	107	85 - 115
Nitrite as Nitrogen	353.2	**0.250**	0.250	100	90 - 110
Phosphorus, Total	365.1	**0.818**	0.800	102	90 - 110
Solids, Total Dissolved	SM 2540 C	**895**	913	98	80 - 120
Solids, Total Suspended (TSS)	SM 2540 D	**210**	215	98	80 - 120
Sulfate	9056	**1.82**	2.00	91	90 - 110
Surfactants	SM 5540 C	**0.0208**	0.020	104	75 - 125
Alkalinity as CaCO3, Total	SM 2320 B	**18.1**	20.0	90	90 - 108
Carbon, Total Organic (TOC), Average	9060	**9.65**	10.0	97	86 - 117
Nitrate as Nitrogen	9056	**0.976**	1.00	98	90 - 110

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Northgate Environmental
Project: Tronox LLC Henderson/2027.001
Sample Matrix: Water

Service Request: R0906477
Date Analyzed: 11/12/09 - 11/24/09

Lab Control Sample Summary
General Chemistry Parameters

Units: mg/L
Basis: NA

Analyte Name	Method	Lab Control Sample R0906477-LCS2 Result	Expected	% Rec	% Rec Limits
Cyanide, Total	9012A	**0.410**	0.400	102	85 - 115
Surfactants	SM 5540 C	**0.340**	0.350	97	75 - 125

Comments:

Name	Unit	M-122B
Sample ID	text	M-122B
LIMs ID	text	R0906477-001
Calcium	µg/L	626000
Magnesium	µg/L	164000
Potassium	µg/L	8390
Sodium	µg/L	322000
Chlorate	µg/L	5040
Perchlorate	µg/L	5540
Bicarbonate	mg/L	183
Carbonate	mg/L	ND
Chloride	mg/L	406
Conductivity	µmho/cm	4810
Fluoride	mg/L	
Hydroxide	mg/L	ND
Nitrate	mg/L	18.1
Phosphorus	mg/L	0.06
Dissolved Solids	mg/L	4320
Sulfate	mg/L	2090

Analytical Results Summary

4runs

Instrument Name: R-Buret-01 **Analyst:** KREYNOLDS **Analysis Lot:** 180390 **Method/Testcode:** SM 2320 B/Alkalinity Titr

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt	Final Result	Dil	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
RQ0911699-01	Alkalinity as CaCO3, Total	MB		Water	0.50 mg/L	100 mL	0.5 mg/L J	1	2.0			11/20/09 08:42	N	IV
RQ0911699-01	Bicarbonate Alkalinity as CaCO3	MB		Water	0.50 mg/L	100 mL	0.5 mg/L J	1	2.0			11/20/09 08:42	N	IV
RQ0911699-01	Carbonate Alkalinity as CaCO3	MB		Water	0.00 mg/L	100 mL	2.0 mg/L U	1	2.0			11/20/09 08:42	N	IV
RQ0911699-01	Hydroxide Alkalinity as CaCO3	MB		Water	0.00 mg/L	100 mL	2.0 mg/L U	1	2.0			11/20/09 08:42	N	IV
RQ0911699-02	Alkalinity as CaCO3, Total	LCS		Water	18.10 mg/L	100 mL	18.1 mg/L	1	2.0	90		11/20/09 08:42	N	IV
R0906436-019	Alkalinity as CaCO3, Total	N/A		Water	470.00 mg/L	10 mL	470 mg/L	1	2.0			11/20/09 08:42	N	IV
RQ0911699-03	Alkalinity as CaCO3, Total	DUP	R0906436-019	Water	471.00 mg/L	10 mL	471 mg/L	1	2.0		<1	11/20/09 08:42	N	IV
RQ0911699-04	Alkalinity as CaCO3, Total	MS	R0906436-019	Water	640.00 mg/L	10 mL	640 mg/L	1	2.0	85		11/20/09 08:42	N	IV
R0906436-020	Alkalinity as CaCO3, Total	N/A		Water	210.00 mg/L	10 mL	210 mg/L	1	2.0			11/20/09 08:42	N	IV
R0906464-005	Alkalinity as CaCO3, Total	N/A		Water	460.00 mg/L	5 mL	460 mg/L	1	2.0			11/20/09 08:42	N	II
R0906464-006	Alkalinity as CaCO3, Total	N/A		Water	166.00 mg/L	15 mL	166 mg/L	1	2.0			11/20/09 08:42	N	II
R0906464-007	Alkalinity as CaCO3, Total	N/A		Water	88.80 mg/L	25 mL	88.8 mg/L	1	2.0			11/20/09 08:42	N	II
R0906464-008	Alkalinity as CaCO3, Total	N/A		Water	524.00 mg/L	5 mL	524 mg/L	1	2.0			11/20/09 08:42	N	II
R0906464-009	Alkalinity as CaCO3, Total	N/A		Water	280.00 mg/L	10 mL	280 mg/L	1	2.0			11/20/09 08:42	N	II
R0906555-001	Alkalinity as CaCO3, Total	N/A		Water	98.00 mg/L	25 mL	98.0 mg/L	1	2.0			11/20/09 08:42	N	IV
RQ0911699-05	Alkalinity as CaCO3, Total	DUP	R0906555-001	Water	98.00 mg/L	25 mL	98.0 mg/L	1	2.0		<1	11/20/09 08:42	N	IV
RQ0911699-06	Alkalinity as CaCO3, Total	MS	R0906555-001	Water	132.40 mg/L	25 mL	132 mg/L	1	2.0	86		11/20/09 08:42	N	IV
R0906555-002	Alkalinity as CaCO3, Total	N/A		Water	256.00 mg/L	25 mL	256 mg/L	1	2.0			11/20/09 08:42	N	IV
R0906555-003	Alkalinity as CaCO3, Total	N/A		Water	416.67 mg/L	15 mL	417 mg/L	1	2.0			11/20/09 08:42	N	IV
R0906477-001	Alkalinity as CaCO3, Total	N/A		Water	183.33 mg/L	15 mL	183 mg/L	1	2.0			11/20/09 08:42	N	IV
R0906477-001	Bicarbonate Alkalinity as CaCO3	N/A		Water	183.33 mg/L	15 mL	183 mg/L	1	2.0			11/20/09 08:42	N	IV
R0906477-001	Hydroxide Alkalinity as CaCO3	N/A		Water	0.00 mg/L	15 mL	2.0 mg/L U	1	2.0			11/20/09 08:42	N	IV
R0906477-001	Carbonate Alkalinity as CaCO3	N/A		Water	0.00 mg/L	15 mL	2.0 mg/L U	1	2.0			11/20/09 08:42	N	IV
R0906489-001	Alkalinity as CaCO3, Total	N/A		Water	201.00 mg/L	10 mL	201 mg/L	1	2.0			11/20/09 08:42	N	II
R0906492-004	Alkalinity as CaCO3, Total	N/A		Water	225.00 mg/L	10 mL	225 mg/L	1	2.0			11/20/09 08:42	N	IV
R0906492-005	Alkalinity as CaCO3, Total	N/A		Water	261.00 mg/L	10 mL	261 mg/L	1	2.0			11/20/09 08:42	N	IV
R0906492-006	Alkalinity as CaCO3, Total	N/A		Water	260.00 mg/L	10 mL	260 mg/L	1	2.0			11/20/09 08:42	N	IV

R0436
R0555
R0477
R0492
R0578
5 copies

Reviewed & Approved
By: CK
Date: 11/24/09

3498

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

COLUMBIA ANALYTICAL SERVICES, INC.
Rochester, NY

Analyte: Alkalinity | **Regular Level** X | Analyst: KLR | Date: 11/20/09
Method: SM20 2320 B | **High Level** | Pipette: HANS | Time: 8:42

Table 403.1 Alkalinaty Relationships

Result of titration	Hydroxide Alkalinaty as CaCO3	Carbonate Alkalinaty as CaCO3	Bicarbonate oncentration as CaCO3
P = 0	0.0	0.0	T
P < 1/2T	0.0	2P	T - 2P
P = 1/2T	0.0	2P	0
P > 1/2T	2P - T	2(T- P)	0
P = T	T	0.0	0

P = Phenolphthalein Alkalinity T = Total Alkalinaty

Phenolphthalein alkalinity = the quantity measured by titration to pH 8.3

Alkalinity, mg CaCO3 /L = $(A_{(mL\ acid\ used)} \times N_{(H2SO4)} \times 50{,}000)$ /mL sample

pH meter cal:		Buffer Lot #:
4.0	4	WC92081A
7.0	7.03	WC92081B
10.0	10	WC92081C
pH Meter ID	ROCKY	Balance ID (for soils): N/A

Reagents:	Concentration		Log #	Date
H2SO4:	0.020	N	WC92085G	9/22/09
Reg Level Reference:	50	mg/L	WC92109I	
High Level Reference:	5000	mg/L	WC92104I	
LCS/MS Solution:	1000	mg/L	WC92104H	

* Soils - 1g of sample diluted to 100mLs in DI
**HND Soil - 25 g of sample diluted to 250mLs in DI

	Misc.	Order #	Sample Vol (mL)	pH Initial	Titrant Volume Initial (mL)	Vol to pH 4.5	Vol to pH 8.3	Phen. Alk.	OH- Alk.	Carb Alk.	Bicarb Alk.	Total Alk.	Vol. Spk 1000 ppm (mL)	*Soil (X)	**HND Soil (X)
1		ICV	25.0	8.51	0.00	1.28						51.2			
2		ICB	100.0	5.24	0.00	0.05	0.00	0.0	0.0	0.0	0.5	0.5			
3		LCS	100.0	9.52	0.00	1.81						18.1	2.0		
4	6436	R0906436-019	10.0	6.89	0.00	4.70						470.0			
5	DUP	R0906436-019	10.0	7.05	0.00	4.71						471.0			
6	SPK TV=200	R0906436-019	10.0	7.39	0.00	6.40						640.0	2.0		
7		R0906436-020	10.0	7.30	0.00	2.10						210.0			
8	6464	R0906464-005	5.0	6.71	0.00	2.30						460.0			
9		R0906464-006	15.0	7.17	0.00	2.49						166.0			
10		R0906464-007	25.0	7.29	0.00	2.22						88.8			
11		R0906464-008	5.0	6.76	0.00	2.62						524.0			
12		R0906464-009	10.0	7.25	0.00	2.80						280.0			
13		CCV	25.0	8.10	0.00	1.30						52.0			
14		CCB	100.0	5.27	0.00	0.01						0.1			
15	6555	R0906555-001	25.0	7.30	0.00	2.45						98.0			
16	DUP	R0906555-001	25.0	7.42	0.00	2.45						98.0			
17	SPK TV=40	R0906555-001	25.0	8.80	0.00	3.31						132.4	1.0		
18		R0906555-002	25.0	7.79	0.00	6.40						256.0			
19		R0906555-003	15.0	7.52	0.00	6.25						416.7			
20	6477	R0906477-001	15.0	7.61	0.00	2.75	0.00	0.0	0.0	0.0	183.3	183.3			
21	6489	R0906489-001	10.0	5.29	0.00	2.01						201.0			
22	6492	R0906492-004	10.0	7.65	0.00	2.25						225.0			
23		R0906492-005	10.0	8.07	0.00	2.61						261.0			
24		R0906492-006	10.0	7.71	0.00	2.60						260.0			
25		CCV	25.0	8.28	0.00	1.29						51.6			
26		CCB	100.0	5.35	0.00	0.05						0.5			
27		LCS	100.0	9.61	0.00	1.89						18.9	2.0		
28	6492	R0906492-007	10.0	7.64	0.00	2.41						241.0			
29		R0906492-009	15.0	7.57	0.00	2.19						146.0			
30		R0906492-011	20.0	7.60	0.00	2.35						117.5			
31	DUP	R0906492-011	20.0	7.77	0.00	2.35						117.5			
32	SPK TV = 50	R0906492-011	20.0	9.01	0.00	3.29						164.5	1.0		
33		R0906492-012	20.0	7.91	0.00	2.71						135.5			
34		R0906492-013	20.0	7.87	0.00	3.00						150.0			
35		R0906492-014	20.0	7.87	0.00	2.99						149.5			
36		R0906492-022	60.0	6.52	0.00	2.00						33.3			
37		CCV	25.0	8.76	0.00	1.28						51.2			
38		CCB	100.0	5.27	0.00	0.02						0.2			

Analyte: Alkalinity
Method: SM20 2320 B

Regular Level X
High Level

Analyst: KLR
Pipette: HANS

Date: 11/20/09
Time: 8:42

Table 403.1 Alkalinaty Relationships

Result of titration	Hydroxide Alkalinaty as CaCO3	Carbonate Alkalinaty as CaCO3	Bicarbonate concentration as CaCO3
P = 0	0.0	0.0	T
P < 1/2T	0.0	2P	T - 2P
P = 1/2T	0.0	2P	0
P > 1/2T	2P - T	2(T- P)	0
P = T	T	0.0	0

P = Phenolphthalein Alkalinity T = Total Alkalinaty

pH meter cal:

		Buffer Lot #:
4.0	4	WC92081A
7.0	7.03	WC92081B
10.0	10	WC92081C

pH Meter ID: ROCKY Balance ID (for soils): N/A

Reagents:	Concentration		Log #	Date
H2SO4:	0.020	N	WC92085G	9/22/09
Reg Level Reference:	50	mg/L	WC92109I	
High Level Reference:	5000	mg/L	WC92104I	
LCS/MS Solution:	1000	mg/L	WC92104H	

Phenolphthalein alkalinity = the quantity measured by titration to pH 8.3

Alkalinity, mg CaCO3 /L = $(A_{(mL\ acid\ used)} \times N_{(H2SO4)} \times 50{,}000)$ /mL sample

* Soils - 1g of sample diluted to 100mLs in DI
**HND Soil - 25 g of sample diluted to 250mLs in DI

	Misc.	Order #	Sample Vol (mL)	pH Initial	Titrant Volume Initial (mL)	Vol to pH 4.5	Vol to pH 8.3	Phen. Alk.	OH- Alk.	Carb Alk.	Bicarb Alk.	Total Alk.	Vol. Spk 1000 ppm (mL)	*Soil (X)	**HND Soil (X)
39	6504	R0906504-001	10.0	7.56	0.00	2.59						259.0			
40		R0906504-002	15.0	7.64	0.00	2.51						167.3			
41		R0906504-003	15.0	7.63	0.00	2.50						166.7			
42	6530	R0906530-001	10.0	8.15	0.00	2.80						280.0			
43		R0906530-002	10.0	7.75	0.00	4.19						419.0			
44		R0906530-003	10.0	7.65	0.00	2.80						280.0			
45	DUP	R0906530-003	10.0	7.61	0.00	2.81						281.0			
46	SPK TV=100	R0906530-003	10.0	8.33	0.00	3.61						361.0	1.0		
47		R0906530-004	5.0	7.33	0.00	2.12						424.0			
48		R0906530-005	10.0	7.44	0.00	3.59						359.0			
49		CCV	25.0	8.75	0.00	1.30						52.0			
50		CCB	100.0	5.41	0.00	0.02						0.2			
51		LCS	100.0	9.62	0.00	1.89						18.9	2.0		
52	6530	R0906530-006	10.0	7.25	0.00	3.60						360.0			
53		R0906530-007	10.0	8.26	0.00	2.79						279.0			
54		R0906530-008	10.0	8.25	0.00	2.81						281.0			
55		R0906530-009	100.0	6.35	0.00	0.21						2.1	See LL		
56	6578	R0906578-001	10.0	7.68	0.00	3.09						309.0			
57		R0906578-002	10.0	7.77	0.00	2.89						289.0			
58		R0906578-003	10.0	7.61	0.00	2.65						265.0			
59		R0906578-004	10.0	7.32	0.00	2.42						242.0			
60		R0906578-005	15.0	7.67	0.00	2.01						134.0			
61		CCV	25.0	8.39	0.00	1.25						50.0			
62		CCB	100.0	5.06	0.00	0.02						0.2			
63	6578	R0906578-006	10.0	7.76	0.00	2.50						250.0			
64	DUP	R0906578-006	10.0	7.76	0.00	2.50						250.0			
65	SPK TV=100	R0906578-006	10.0	8.93	0.00	3.40						340.0	1.0		
66		R0906578-007	15.0	8.30	0.00	2.80						186.7			
67		R0906578-008	15.0	7.49	0.00	2.81						187.3			
68		R0906578-009	15.0	7.45	0.00	2.82						188.0			
69		R0906578-010	15.0	8.01	0.00	7.51						500.7			
70	6592	R0906592-001	25.0	7.25	0.00	2.19						87.6			
71	6595	R0906595-001	25.0	8.32	0.00	3.61						144.4			
72		CCV	25.0	8.30	0.00	1.29						51.6			
73		CCB	100.0	5.14	0.00	0.02						0.2			
74															
75		KLR 11/20/09													
76															

COLUMBIA ANALYTICAL SERVICES, INC.
Rochester, NY

Analyte: Alkalinity Low Level
Method: SM20 2320 B

Analyst: KLR
Pipette: HANS
Date: 11/20/09
Time: 8:42

pH meter cal:

		Buffer Lot #:
4.0	4	WC92081A
7.0	7.03	WC92081B
10.0	10	WC92081C

pH meter ID: ROCKY
Balance ID (soils): N/A

Reagent:

	Concentration	Log #	Date
H2SO4:	0.02 N	WC92085G	9/22/09

Alkalinity, mg CaCO3 /L = $\frac{(2B-C) \times N \times 50,000}{mL\ sample}$

where: B = mL standard acid used
C = total ml titrant to reach 0.3 pH units lower

*Soil - 1g of sample diluted to 100mls in DI
**HND Soil - 25 g of sample diluted to 250mLs in DI

	Misc.	Order #	Sample Vol (mL)	pH Initial	Titrant Volume Initial (mL)	Vol.@pH 4.5		Vol.@pH -0.3		Total Alkalinity (mg/L)	*Soil (X)	**HND Soil (X)
						Vol.(B)	pH	Vol.(C)	pH			
1		R0906530-009	100.0	6.35	0.00	0.21	4.46	0.41	4.15	0.10		
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KLR
11/20/09

COLUMBIA ANALYTICAL SERVICES, INC.
Rochester, NY

Analyte: Alkalinity | **Regular Level** | Analyst: KLR | Date: 11/20/09
Method: SM20 2320 B | **High Level** X | Pipette: HANS | Time: 8:15

Table 403.1 Alkalinaty Relationships

Result of titration	Hydroxide Alkalinaty as CaCO3	Carbonate Alkalinaty as CaCO3	Bicarbonate oncentration as CaCO3
P = 0	0.0	0.0	T
P < 1/2T	0.0	2P	T - 2P
P = 1/2T	0.0	2P	0
P > 1/2T	2P - T	2(T- P)	0
P = T	T	0.0	0

P = Phenolphthalein Alkalinity T = Total Alkalinaty

pH meter cal:

		Buffer Lot #:
4.0	4	WC92081A
7.0	7.03	WC92081B
10.0	10	WC92081C

pH Meter ID ROCKY Balance ID (soils): N/A

Reagents:	Concentration		Log #	Date
H2SO4:	0.100	N	WC85245D	12/10/08
Reg Level Reference:	50	mg/L	WC92109I	
High Level Reference:	5000	mg/L	WC92104I	
LCS/MS Solution:	1000	mg/L	WC92104H	

Phenolphthalein alkalinity = the quantity measured by titration to pH 8.3

Alkalinity, mg CaCO3 /L = $(A_{(mL\ acid\ used)} \times N_{(H2SO4)} \times 50{,}000)$ /mL sample

* Soils - 1g of sample diluted to 100mLs in DI
**HND Soil - 25 g of sample diluted to 250mLs in DI

	Misc.	Order #	Sample Vol (mL)	pH Initial	Titrant Volume Initial (mL)	Vol to pH 4.5	Vol to pH 8.3	Phen. Alk.	OH- Alk.	Carb Alk.	Bicarb Alk.	Total Alk.	Vol. Spk 5000 ppm (mL)	*Soil (X)	**HND Soil (X)
1	TV = 5000	ICV	2.0	10.70	0.00	1.91						4775.0			
2		ICB	100.0	5.04	0.00	0.01						0.5			
3	TV = 1000	LCS	25.0	10.81	0.00	4.80						960.0	5.0		
4	6579	R0906579-001	5.0	7.41	0.00	5.10						5100.0			
5	DUP	R0906579-001	5.0	7.33	0.00	5.10						5100.0			
6	PK TV=200	R0906579-001	5.0	8.40	0.00	7.02						7020.0	2.0		
7		CCV	2.0	10.66	0.00	1.91						4775.0			
8		CCB	100.0	5.30	0.00	0.01						0.5			
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KLR 11/20/09

Columbia Analytical Services
1 Mustard Street, Rochester, NY 14609

General Chemistry Analytical Run Cover Sheet

Analyst: KLR Date: 11/20/09

Analysis: ___Alkalinity, Regular/Low Level_____ Instrument: __Titration_____

Quality Control:

	Log Book #	Log Book Date	Stock Sol (mLs)	Stock Sol (mg/L)	Final Vol (mLs)	True Value (mg/L)
a) Titrant:	WC92085G	9/22/2009				
b) I/CCV Preparation:	WC92109I	10/29/2009				50
c) LCS Preparation:	WC92104H	10/29/2009	2	1000	100	20
d) Matrix Spike Prep.:	WC92104H	10/29/2009	See Data Sheet			

Instrument log filled in? (Y) (N)

Packages:

Copy and attach Standards Preparation.

Comments:

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TITLE PROJECT

Continued from page

9/21/09 (A) TDS Reference
EW 0.9126 ~~1.1926~~g NaCl (WC85215H) diluted volumetrically to 9/21/09 EW 1 Liter ~~9/21/09~~ EW DI. Store in plastic bottle @ 4°C.
TV = 913 mg/L Exp: 9/21/10 (12306)

9/21/09 (3) TKN Digest Reagent
SBR To a 2L vol. flask, add 268g K_2SO_4 (WC920816) and 14.6 g $CuSO_4$ (WC85271E). Fill ~½ way with UPDI. Slowly add 268 mL omnitrace H_2SO_4 (WC920648). Allow to dissolve and cool. Bring to vol. with UPDI. Store in amber glass @ RT for 1 month. Exp 10/21/09

9/21/09 (C) Color Reagent - TPO4
GN - same as WC92075G. Exp 1 year: 9/21/09 or when discolored

9/21/09 (D) Ascorbic Acid - TPO4
GN - same as WC92070C. Exp 1 week: 9/28/09

9/22/09 (E) Hypochlorite - TKN
NM - same as WC92082B. Prepare fresh each run.

9/22/09 Received from VWR:

(F) EDTA 1x500g CAT# EX0539-1 EMD Lot# 49077930 CAS# 6381-92-6
Store at room temp Exp 9/22/14 12329

(G) 1x1L 0.0200N Sulfuric Acid Solution CAT# BDH3229-4 BDH Lot# 9089 CAS# 7664-93-9
Store at room temp Exp 3/31/10 12330

(H) 1x500g Sodium Formate Crystal CAT# 3720-01 JT Baker Lot# B40601 CAS# 141-53-7
Store at room temp Exp 9/22/14

(I) 1x125ml Bromide Standard 1000 ppm CAT# ICC-001 Ultra Scientific Lot# J00147
Store at 4°C in Standards fridge Exp 3/31/11 12327

(J) 1x500ml Phenol Solution CAT# EX0511-1 EMD Lot# 48112 CAS# 108-95-2
Store in flammable cabinet Exp 9/22/14 12328

9/22/09 (K) TS/TVS Reference
EW 0.3001 g KHP (WC85062C) diluted volumetrically to 1 Liter w/ DI. Store in plastic bottle @ 4°C. TV_{TS} = 300 mg/L TV_{TVS} = 200 mg/L Exp: 9/22/10 (12332)

Continued to page

SIGNATURE DATE

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TITLE PROJECT

Continued from page

11/6/09 (A) TKN Digest Reagent
DW Same as WC12053B Exp 11/6/10

11/6/09 (B) Color Reagent NH3
NDV - Same as WC92083E. Exp. 1 year, 11/6/10

(C) Buffer-NH3
- Same as WC92071E. Exp. 1 year, 11/6/10.

11/2/09 (D) Ascorbic Acid - kendeb
Dup In a 100 ml vol flask dissolve 1.0 g Ascorbic Acid (WC12011E) and 0.2 ml Acetone (WC15203I) in DI. Bring to volume w/ DI. Store at 4C Exp 11/2/10

11/6/09 (E) DPD Indicator
Dup In a 500 ml vol flask dissolve 0.50 g DPD (WC16075F), 0.10 g EDTA (WC12015F) and 4.0 ml 1+3 H_2SO_4 (WC12015C) in DI. Store @ RT in amber. Exp 12/9/09 or when discolored.

(F) FAS Titrant
In a 500 ml vol flask dissolve 0.553 g Ferrous Ammonium Sulfate Hexahydrate (WC12003D) and 0.5 ml 1+3 H_2SO_4 (WC12015C) in DI. Store @ RT in amber exp 12/9/09

(G) Stock Chlorine - Cl Residual
In a 500 ml vol flask dilute appx ml Sodium hypochlorite (WC92014F) to volume with DI. Make fresh and Standardized per run

(H) 0.025 N $Na_2S_2O_3$
In a 500 ml vol flask dilute 2.5 ml 0.1 N $Na_2S_2O_3$ (WC12012E) to volume with DI. Make fresh per run

11/9/09 (I) Alkalinity Reference Stock 5.0 mg/L
Volumetrically add 10.0 mL of the 500 mg/L Alkalinity Reference Stock (WC92104I) and dilute to 1L w/ DI. Store in a plastic bottle @ 4°C exp 11/29/10

SIGNATURE DATE

Continued to page

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10/28/09 (A) MBAS Wash Solution
To a tared 2L vol. flask add: 100g Sodium Phosphate Monobasic, Monohydrate (WC 920920) add 13.7 mL conc. H_2SO_4 (M1780049K) Store @ RT. Bring to vol w/DI
exp 10/28/10

10/28/09 SBR (B) 100 ppm Organic Phosphorous Standard - TPO_4
In a 1 liter vol. flask, dissolve 0.9885g β-Glycerophosphoric Acid, Disodium Salt, 5-Hydrate (WC761430) in DI. Bring to volume w/ DI. Store in amber glass at 4°C. Exp 1yr. 10/28/10.

10/28/09 NM (C) Ascorbic Acid - TPO_4
-same as WC920860. Exp. 1week, 11/4/09

10/28/09 QN (D) Sulfamic Acid - CN
-same as WC92089E. Exp 1year: 10/28/10

10/29/09 DPW (E) 1.0ppm Working reference Stock
Dilute 10mL of 1000 ppm MBAS/LAS Standard (WC92092F) to 1L Volumetrically w/ DI. Store @ RT, exp: 10/29/09.

10/29/09 NM (F) NH_3 Carrier/Diluent
-same as WC92067C. Prepared solution x3

(G) Buffer - NH_3
-same as WC92091G. ~~Exp: 10/24/04~~ Exp. 10/29/10.

10/29/09 KLE (H) Alkalinity LCS/MS Solution 1000mg/L
Dissolve 1.0590g Na_2CO_3 (WC76232D) in ~800mL of DI. Bring up to 1L volumetrically with DI. Store in a plastic bottle @ 4°C exp: 4/29/10

(I) Alkalinity Reference Stock: 5000mg/L
Dissolve 5.300g Na_2CO_3 (WC76294G) in ~800mL DI. Bring up to 1L volumetrically with DI. Store in a plastic bottle @ 4°C. exp: 4/29/10

Continued to page

SIGNATURE DATE

DISCLOSED TO AND UNDERSTOOD BY DATE

PROPRIETARY INFORMATION

Columbia Analytical Services
1 Mustard Street, Rochester, NY 14609

General Chemistry Analytical Run Cover Sheet

Analyst: VLP Date: 11/20/09

Analysis: ___Alkalinity, High Level_____ Instrument: __Titration_____

Quality Control:

	Log Book #	Log Book Date	Stock Sol (m/Ls)	Stock Sol (mg/L)	Final Vol (mLs)	True Value (mg/L)
a) Titrant:	WC85245D	12/10/2008				
b) I/CCV Preparation:	WC92104I	10/29/2009				5000
c) LCS Preparation:	WC92104I	10/29/2009	5	5000	25	1000
d) Matrix Spike Prep.:	WC92104I	10/29/2009	See Data Sheet			

Instrument log filled in? (Y) (N)

Packages:

Copy and attach Standards Preparation.

Comments:

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12/10/08 NM

(A) ANSA Reducing Agent - Silica

To a tared 500 mL dark plastic bottle add:
- 2.0 g sodium sulfite (WC69172D)
- 396.0 g UPDI
- 0.25 g ANSH (WC76127G)
- 15.0 g Sodium Bisulfite (WC76161H)
- 5.2 g Glycerol (WC76105H)

Mix thoroughly. Store @ 40C. Exp. 1 year, 12/10/09

~~(B) Oxalic Acid - Silica~~

~~To a tared 500 mL plastic bottle add:~~ NM 12/10/08
- ~~456 g~~ UPDI
- ~~20.0 g~~ Ammonium Molybdate (WC~~85204K~~) NM 12/10/08
- 14.8 g Instra NM 12/10/08

(B) Oxalic Acid - Silica

To a tared 500mL plastic bottle add:
- 50.0 g Oxalic Acid (WC85204K)
- 490 g UPDI.

Stir until dissolved. Store @ RT. Exp. 1 year, 12/10/09.

12/10/08 BB

Received from Thermo Fisher

(C) (3) x Pk of 5 vials 13.8% Sodium Dihydrogen Phosphate Buffer, Cat # K981335.21, Lot # 1012294. Store @ 4°C Expires 7/1/09

Received from VWR

(D) (1) x 1 L 0.100 N Sulfuric Acid, Cat # VW3230-1, VWR Lot # 8196, CAS # 7664-93-9. Store @ R.T. Expires 1/31/10

Received from HACH

Analytical Results Summary

Instrument Name: R-FIA-01 **Analyst:** NMEAD **Analysis Lot:** 180572 **Method/Testcode:** 350.1/Ammonia T

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt	Final Result	Dil	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
RQ0911746-01	Ammonia as Nitrogen	MB		Water	0.01 mg/L	10 mL	0.050 mg/L U	1	0.050			11/23/09 11:28:18	N	IV
RQ0911746-02	Ammonia as Nitrogen	LCS		Water	0.50 mg/L	10 mL	0.495 mg/L	1	0.050	99		11/23/09 12:08:45	N	IV
R0906555-001	Ammonia as Nitrogen	N/A		Water	0.00 mg/L	10 mL	0.050 mg/L U	1	0.050			11/23/09 12:15:35	N	IV
RQ0911746-04	Ammonia as Nitrogen	DUP	R0906555-001	Water	0.00 mg/L	10 mL	0.050 mg/L U	1	0.050		NC	11/23/09 12:16:33	N	IV
RQ0911746-03	Ammonia as Nitrogen	MS	R0906555-001	Water	0.47 mg/L	10 mL	0.469 mg/L	1	0.050	94		11/23/09 12:17:32	N	IV
R0906555-002	Ammonia as Nitrogen	N/A		Water	0.00 mg/L	10 mL	0.050 mg/L U	1	0.050			11/23/09 12:20:26	N	IV
R0906555-003	Ammonia as Nitrogen	N/A		Water	0.00 mg/L	10 mL	0.050 mg/L U	1	0.050			11/23/09 12:21:23	N	IV
R0906600-001	Ammonia as Nitrogen	N/A		Water	0.93 mg/L	10 mL	1850 mg/L	2000	100			11/23/09 12:22:21	N	II
R0906625-001	Ammonia as Nitrogen	N/A		Water	0.00 mg/L	10 mL	0.050 mg/L U	1	0.050			11/23/09 12:23:18	N	II
R0906401-001	Ammonia as Nitrogen	N/A		Water	0.00 mg/L	10 mL	0.050 mg/L U	1	0.050			11/23/09 12:24:15	N	I
R0906401-002	Ammonia as Nitrogen	N/A		Water	0.00 mg/L	10 mL	0.10 mg/L U	2	0.10			11/23/09 13:56:20	N	I
R0906401-003	Ammonia as Nitrogen	N/A		Water	0.01 mg/L	10 mL	0.050 mg/L U	1	0.050			11/23/09 12:26:13	N	I
R0906401-004	Ammonia as Nitrogen	N/A		Water	0.02 mg/L	10 mL	0.050 mg/L U	1	0.050			11/23/09 12:27:13	N	I
R0906402-001	Ammonia as Nitrogen	N/A		Water	0.03 mg/L	10 mL	5.0 mg/L U	100	5.0			11/23/09 13:59:17	N	I
R0906405-001	Ammonia as Nitrogen	N/A		Water	0.03 mg/L	10 mL	0.050 mg/L U	1	0.050			11/23/09 12:29:10	N	II
R0906405-002	Ammonia as Nitrogen	N/A		Water	0.01 mg/L	10 mL	0.050 mg/L U	1	0.050			11/23/09 12:33:02	N	II
R0906405-003	Ammonia as Nitrogen	N/A		Water	0.01 mg/L	10 mL	0.050 mg/L U	1	0.050			11/23/09 12:34:01	N	II
R0906405-004	Ammonia as Nitrogen	N/A		Water	0.12 mg/L	10 mL	0.117 mg/L	1	0.050			11/23/09 12:34:59	N	II
R0906270-001	Ammonia as Nitrogen	N/A		Water	0.02 mg/L	10 mL	0.022 mg/L J	1	0.050			11/23/09 12:35:57	N	IV
R0906270-002	Ammonia as Nitrogen	N/A		Water	0.03 mg/L	10 mL	0.031 mg/L J	1	0.050			11/23/09 12:36:54	N	IV
R0906270-003	Ammonia as Nitrogen	N/A		Water	0.21 mg/L	10 mL	0.206 mg/L	1	0.050			11/23/09 12:37:51	N	IV
R0906477-001	Ammonia as Nitrogen	N/A		Water	0.06 mg/L	10 mL	0.061 mg/L	1	0.050			11/23/09 12:38:48	N	IV
R0906328-001	Ammonia as Nitrogen	N/A		Water	0.02 mg/L	10 mL	0.050 mg/L U	1	0.050			11/23/09 12:39:48	Y	IV
RQ0911746-06	Ammonia as Nitrogen	DUP	R0906328-001	Water	0.01 mg/L	10 mL	0.012 mg/L J	1	0.050		NC	11/23/09 12:40:47	N	IV
RQ0911746-05	Ammonia as Nitrogen	MS	R0906328-001	Water	0.43 mg/L	10 mL	0.430 mg/L	1	0.050	86*		11/23/09 12:43:44	N	IV
R0906328-002	Ammonia as Nitrogen	N/A		Water	1.17 mg/L	10 mL	5.86 mg/L	5	0.25			11/23/09 14:00:16	N	IV

99h99

* indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Creator: NMEAD
Creation Date: Nov 23, 2009 9:59:39
Last Modified: Nov 23, 2009 10:04:30
Description: QC 8000 350.1 Ammonia - RUN LOG - 0911230A

Cup #	Sample ID	Manual Dilution	Sample Type	
1	Standard A - 2.000	1.0000	CalStd	
2	Standard B - 1.000	1.0000	CalStd	
3	Standard C - 0.500	1.0000	CalStd	
4	Standard D - 0.200	1.0000	CalStd	
5	Standard E - 0.100	1.0000	CalStd	
6	Standard F - 0.050	1.0000	CalStd	
7	Standard G - 0.020	1.0000	CalStd	
8	Standard H - 0.010	1.0000	CalStd	
9	Standard I - 0.000	1.0000	CalStd	
1	ICV TV= 0.90	1.0000	Unknown	
2	ICB	1.0000	Unknown	
3	LCS TV= 0.500	1.0000	Unknown	
4	CRDL 0.050	1.0000	Unknown	
5	CRDL 0.010	1.0000	Unknown	
6	CCV	1.0000	Unknown	
7	CCB	1.0000	Unknown	
8	R0906300-001	1.0000	Unknown	
9	R0906300-002	1.0000	Unknown	
10	R0906300-003	1.0000	Unknown	
11	R0906300-004	1.0000	Unknown	
12	R0906300-005	1.0000	Unknown	
13	6300-005 DUP	1.0000	Unknown	
14	6300-005 SPK TV= 0.500	1.0000	Unknown	
15	R0906300-008	1.0000	Unknown	⊛
16	R0906300-009	1.0000	Unknown	⊛
17	R0906300-010	1.0000	Unknown	
18	CCV	1.0000	Unknown	
19	CCB	1.0000	Unknown	
20	LCS	1.0000	Unknown	
21	R0906300-012	1.0000	Unknown	
22	R0906300-016	1.0000	Unknown	
23	R0906300-019	1.0000	Unknown	
24	R0906300-020	1.0000	Unknown	
25	R0906300-021	1.0000	Unknown	
26	R0906399-003	1.0000	Unknown	
27	6399-003 DUP	1.0000	Unknown	
28	6399-003 SPK TV= 0.500	1.0000	Unknown	
29	R0906399-007	1.0000	Unknown	
30	CCV	1.0000	Unknown	
31	CCB	1.0000	Unknown	

⊛ - neg. peak. < LOQ

Cup #	Sample ID	Manual Dilution	Sample Type	
32	R0906399-011	1.0000	Unknown	- Bad integration? rpt'd #15
33	FILTER BLANK	1.0000	Unknown	
34	FILTERED LCS TV = 0.500	1.0000	Unknown	
35	PB SOIL	1.0000	Unknown	1.0g → 100g
36	LCS SOIL TV = 50.0	1.0000	Unknown	
37	R0906420-032	1.0000	Unknown	
38	6420-032 DUP	1.0000	Unknown	
39	6420-032 SPK TV = 50.0	1.0000	Unknown	
40	R0906420-033	1.0000	Unknown	
41	R0906420-034	1.0000	Unknown	- sm. air spike - rpt'd #15
42	CCV	1.0000	Unknown	
43	CCB	1.0000	Unknown	
44	LCS	1.0000	Unknown	
45	R0906420-035	1.0000	Unknown	1.0g → 100g
46	R0906420-036	1.0000	Unknown	
47	R0906420-037	1.0000	Unknown	
48	R0906504-004	1.0000	Unknown	
49	R0906504-005	1.0000	Unknown	
50	R0906504-006	1.0000	Unknown	
51	R0906555-001	1.0000	Unknown	⊛
52	6555-001 DUP	1.0000	Unknown	⊛
53	6555-001 SPK TV = 0.500	1.0000	Unknown	
54	CCV	1.0000	Unknown	
55	CCB	1.0000	Unknown	
56	R0906555-002	1.0000	Unknown	
57	R0906555-003	1.0000	Unknown	
58	R0906600-001	2,000.0000	Unknown	
59	R0906625-001	1.0000	Unknown	⊛
60	R0906401-001	1.0000	Unknown	⊛
61	R0906401-002	1.0000	Unknown	- strange neg peak - rpt'd #154 -
62	R0906401-003	1.0000	Unknown	- sm. sine peak - < LOQ
63	R0906401-004	1.0000	Unknown	- sm. sine peak - < LOQ
64	R0906402-001	10.0000	Unknown	- neg. peak - rpt'd #155 - 1/2
65	R0906405-001	1.0000	Unknown	#156 - 1/
66	CCV	1.0000	Unknown	#157 - 1/
67	CCB	1.0000	Unknown	
68	LCS	1.0000	Unknown	
69	R0906405-002	1.0000	Unknown	
70	R0906405-003	1.0000	Unknown	
71	R0906405-004	1.0000	Unknown	
72	R0906270-001	1.0000	Unknown	
73	R0906270-002	1.0000	Unknown	
74	R0906270-003	1.0000	Unknown	
75	R0906477-001	1.0000	Unknown	
76	R0906328-001	1.0000	Unknown	

⊛ - neg. peak - < LOQ

Cup #	Sample ID	Manual Dilution	Sample Type	
77	6328-001 DUP	1.0000	Unknown	
78	CCV	1.0000	Unknown	
79	CCB	1.0000	Unknown	
80	6328-001 SPK TV= 0.500	1.0000	Unknown	-100 - (86.1%)
81	R0906328-002	1.0000	Unknown	-rpt@#158-1/5
82	R0906328-003	1.0000	Unknown	-rpt@#159-1/5
83	R0906328-004	1.0000	Unknown	
84	R0906328-005	1.0000	Unknown	
85	R0906328-006	1.0000	Unknown	
86	R0906328-015	1.0000	Unknown	
87	R0906328-016	1.0000	Unknown	
88	R0906420-001	1.0000	Unknown	
89	6420-001 DUP	1.0000	Unknown	
90	CCV	1.0000	Unknown	
91	CCB	1.0000	Unknown	
92	LCS	1.0000	Unknown	
93	6420-001 SPK TV= 0.500	1.0000	Unknown	
94	R0906420-002	1.0000	Unknown	
95	R0906420-003	1.0000	Unknown	
96	R0906420-004	1.0000	Unknown	(*)
97	R0906420-005	1.0000	Unknown	
98	R0906420-006	1.0000	Unknown	
99	R0906420-007	1.0000	Unknown	(*)
100	R0906420-008	1.0000	Unknown	(*)
101	R0906420-009	1.0000	Unknown	(*)
102	CCV	1.0000	Unknown	
103	CCB	1.0000	Unknown	
104	R0906420-010	1.0000	Unknown	rpt@#160,161, 165-1/2
105	6420-010 DUP	1.0000	Unknown	
106	6420-010 SPK TV= 0.500	1.0000	Unknown	
107	R0906420-011	1.0000	Unknown	
108	R0906420-012	1.0000	Unknown	-rpt@#166-1/2
109	R0906420-013	1.0000	Unknown	
110	R0906420-014	1.0000	Unknown	
111	R0906420-015	1.0000	Unknown	
112	R0906420-016	1.0000	Unknown	
113	R0906420-017	1.0000	Unknown	
114	CCV	1.0000	Unknown	
115	CCB	1.0000	Unknown	
116	LCS	1.0000	Unknown	
117	R0906420-018	1.0000	Unknown	
118	R0906420-019	1.0000	Unknown	
119	R0906420-020	1.0000	Unknown	
120	6420-020 DUP	1.0000	Unknown	
121	6420-020 SPK TV= 0.500	1.0000	Unknown	

(*) - Neg. peak - <LOQ

Cup #	Sample ID	Manual Dilution	Sample Type	
122	R0906420-021	1.0000	Unknown	
123	R0906420-022	1.0000	Unknown	
124	R0906420-023	1.0000	Unknown	
125	R0906434-001	20.0000	Unknown	
126	CCV	1.0000	Unknown	
127	CCB	1.0000	Unknown	
128	R0906434-002	20.0000	Unknown	
129	R0906434-003	20.0000	Unknown	
130	R0906434-004	20.0000	Unknown	
131	R0906434-005	20.0000	Unknown	
132	R0906434-006	20.0000	Unknown	
133	R0906442-001	10.0000	Unknown	
134	R0906442-002	1.0000	Unknown	
135	R0906442-005	1.0000	Unknown	
136	6442-005 DUP	1.0000	Unknown	
137	6442-005 SPK TV= 0.500	1.0000	Unknown	-low - (85.7%)
138	CCV	1.0000	Unknown	
139	CCB	1.0000	Unknown	
140	LCS	1.0000	Unknown	
141	R0906442-006	1.0000	Unknown	
142	R0906442-007	1.0000	Unknown	
143	R0906444-003	10.0000	Unknown	-rpt @ #167-1/20
144	R0906445-001	1.0000	Unknown	
145	R0906445-002	1.0000	Unknown	
146	6445-002 DUP	1.0000	Unknown	
147	6445-002 SPK TV= 0.500	1.0000	Unknown	
148	R0906445-003	1.0000	Unknown	-Bump after peak - rpt @ #
149	R0906300-007	1.0000	Unknown	
150	CCV	1.0000	Unknown	
151	CCB	1.0000	Unknown	
152	R0906399-011 RPT	1.0000	Unknown	
153	R0906420-034 RPT	1.0000	Unknown	1.0g → 100g
154	R0906401-002 RPT 1/2	2.0000	Unknown	(*)
155	R0906402-001 RPT 1/20	20.0000	Unknown	- neg peak
156	R0906402-001 RPT 1/50	50.0000	Unknown	- sm. double peak
157	R0906402-001 RPT 1/100	100.0000	Unknown	- report this result
158	R0906328-002 RPT 1/5	5.0000	Unknown	
159	R0906328-003 RPT 1/5	5.0000	Unknown	
160	R0906420-010 RPT 1/2	2.0000	Unknown	
161	6420-010 DUP RPT 1/2	2.0000	Unknown	
162	CCV	1.0000	Unknown	
163	CCB	1.0000	Unknown	
164	LCS	1.0000	Unknown	
165	6420-010SPKRPT1/2TV=0.5	2.0000	Unknown	
166	R0906420-012 RPT 1/2	2.0000	Unknown	

(*) - neg. peak - < LOQ

Cup #	Sample ID	Manual Dilution	Sample Type	
167	R0906444-003 RPT 1/20	20.0000	Unknown	
168	R0906445-003 RPT	1.0000	Unknown	
169	CCV	1.0000	Unknown	
170	CCB	1.0000	Unknown	

OPERATOR: NMEAD
ACQ. TIME: Nov 23, 2009 11:27:16
DATA FILENAME: C:\OMNION\DATA\091123A1.FDT
TRAY FILENAME: C:\OMNION\TRAYS\0911230A.TRA

Multi-Channel Table
Type: Unknowns
Channel Range: 1 to 8 -- Cup Range: 1 to 25

Cup	Sample ID	Sampling Date	Sampling Time	Rep #	QC 8000 350.1 Ammonia (mg/L)	Man Dil Factor	Auto Dil Factor
1	ICV TV= 0.90	23 Nov 2009	11:27:19	1	0.8596	1.0	1.00
2	ICB	23 Nov 2009	11:28:18	1	0.0055	1.0	1.00
3	LCS TV= 0.500	23 Nov 2009	11:29:16	1	0.4991	1.0	1.00
4	CRDL 0.050	23 Nov 2009	11:30:14	1	0.0569	1.0	1.00
5	CRDL 0.010	23 Nov 2009	11:31:12	1	0.0184	1.0	1.00
6	CCV	23 Nov 2009	11:32:10	1	0.8558	1.0	1.00
7	CCB	23 Nov 2009	11:33:09	1	-0.0000	1.0	1.00
8	R0906300-001	23 Nov 2009	11:34:07	1	0.2968	1.0	1.00
9	R0906300-002	23 Nov 2009	11:35:04	1	0.4184	1.0	1.00
10	R0906300-003	23 Nov 2009	11:36:01	1	0.3042	1.0	1.00
11	R0906300-004	23 Nov 2009	11:36:58	1	-0.0000	1.0	1.00
12	R0906300-005	23 Nov 2009	11:37:55	1	0.0445	1.0	1.00
13	6300-005 DUP	23 Nov 2009	11:38:52	1	0.0436	1.0	1.00
14	6300-005 SPK TV= 0.500	23 Nov 2009	11:39:49	1	0.5342	1.0	1.00
15	R0906300-008	23 Nov 2009	11:40:47	1	-0.0000	1.0	1.00 (*)
16	R0906300-009	23 Nov 2009	11:41:45	1	0.0069	1.0	1.00 (*)
17	R0906300-010	23 Nov 2009	11:42:43	1	0.2027	1.0	1.00
18	CCV	23 Nov 2009	11:43:41	1	0.8579	1.0	1.00
19	CCB	23 Nov 2009	11:44:39	1	-0.0000	1.0	1.00
20	LCS	23 Nov 2009	11:45:37	1	0.4964	1.0	1.00
21	R0906300-012	23 Nov 2009	11:46:36	1	0.2519	1.0	1.00
22	R0906300-016	23 Nov 2009	11:47:34	1	0.2317	1.0	1.00
23	R0906300-019	23 Nov 2009	11:48:32	1	0.4147	1.0	1.00
24	R0906300-020	23 Nov 2009	11:49:30	1	0.0064	1.0	1.00
25	R0906300-021	23 Nov 2009	11:50:27	1	0.0089	1.0	1.00

(*) - No peak < LOQ

OPERATOR: NMEAD
ACQ. TIME: Nov 23, 2009 11:27:16
DATA FILENAME: C:\OMNION\DATA\091123A1.FDT
TRAY FILENAME: C:\OMNION\TRAYS\0911230A.TRA

Multi-Channel Table
Type: Unknowns
Channel Range: 1 to 8 -- Cup Range: 26 to 50

Cup	Sample ID	Sampling Date	Sampling Time	Rep #	QC 8000 350.1 Ammonia (mg/L)	Man Dil Factor	Auto Dil Factor	
26	R0906399-003	23 Nov 2009	11:51:24	1	0.0920	1.0	1.00	
27	6399-003 DUP	23 Nov 2009	11:52:21	1	0.0893	1.0	1.00	
28	6399-003 SPK TV= 0.500	23 Nov 2009	11:53:19	1	0.5687	1.0	1.00	
29	R0906399-007	23 Nov 2009	11:54:16	1	0.0708	1.0	1.00	
30	CCV	23 Nov 2009	11:55:13	1	0.8548	1.0	1.00	
31	CCB	23 Nov 2009	11:56:12	1	0.0066	1.0	1.00	
32	R0906399-011	23 Nov 2009	11:57:11	1	0.0714	1.0	1.00	-Bad integration?-rpt c#152
33	FILTER BLANK	23 Nov 2009	11:58:10	1	0.0021	1.0	1.00	
34	FILTERED LCS TV= 0.500	23 Nov 2009	11:59:08	1	0.4938	1.0	1.00	
35	PB SOIL	23 Nov 2009	12:00:06	1	0.0065	1.0	1.00	= 0.65
36	LCS SOIL TV= 50.0	23 Nov 2009	12:01:04	1	0.4976	1.0	1.00	= 49.76
37	R0906420-032	23 Nov 2009	12:02:02	1	0.0342	1.0	1.00	= 3.42
38	6420-032 DUP	23 Nov 2009	12:03:00	1	0.0336	1.0	1.00	= 3.36
39	6420-032 SPK TV= 50.0	23 Nov 2009	12:03:58	1	0.4927	1.0	1.00	= 49.27
40	R0906420-033	23 Nov 2009	12:04:57	1	0.0342	1.0	1.00	= 3.42
41	R0906420-034	23 Nov 2009	12:05:54	1	0.0209	1.0	1.00	-sm. air spike-rpt c#153
42	CCV	23 Nov 2009	12:06:51	1	0.8575	1.0	1.00	
43	CCB	23 Nov 2009	12:07:48	1	0.0038	1.0	1.00	
44	LCS	23 Nov 2009	12:08:45	1	0.4951	1.0	1.00	
45	R0906420-035	23 Nov 2009	12:09:42	1	0.0602	1.0	1.00	= 6.02
46	R0906420-036	23 Nov 2009	12:10:42	1	0.1640	1.0	1.00	= 16.40
47	R0906420-037	23 Nov 2009	12:11:41	1	0.0537	1.0	1.00	= 5.37
48	R0906504-004	23 Nov 2009	12:12:40	1	0.0680	1.0	1.00	= 6.80
49	R0906504-005	23 Nov 2009	12:13:39	1	0.2568	1.0	1.00	= 25.68
50	R0906504-006	23 Nov 2009	12:14:37	1	0.0934	1.0	1.00	= 9.34

OPERATOR: NMEAD
ACQ. TIME: Nov 23, 2009 11:27:16
DATA FILENAME: C:\OMNION\DATA\091123A1.FDT
TRAY FILENAME: C:\OMNION\TRAYS\0911230A.TRA

Multi-Channel Table
Type: Unknowns
Channel Range: 1 to 8 -- Cup Range: 51 to 75

Cup	Sample ID	Sampling Date	Sampling Time	Rep #	QC 8000 350.1 Ammonia (mg/L)	Man Dil Factor	Auto Dil Factor	
51	R0906555-001	23 Nov 2009	12:15:35	1	-0.0000	1.0	1.00	(*)
52	6555-001 DUP	23 Nov 2009	12:16:33	1	-0.0000	1.0	1.00	(*)
53	6555-001 SPK TV= 0.500	23 Nov 2009	12:17:32	1	0.4693	1.0	1.00	
54	CCV	23 Nov 2009	12:18:30	1	0.8600	1.0	1.00	
55	CCB	23 Nov 2009	12:19:28	1	0.0075	1.0	1.00	
56	R0906555-002	23 Nov 2009	12:20:26	1	0.0018	1.0	1.00	
57	R0906555-003	23 Nov 2009	12:21:23	1	0.0041	1.0	1.00	
58	R0906600-001	23 Nov 2009	12:22:21	1	1852.6040	2000.0	1.00	
59	R0906625-001	23 Nov 2009	12:23:18	1	-0.0000	1.0	1.00	(*)
60	R0906401-001	23 Nov 2009	12:24:15	1	0.0153	1.0	1.00	(*)
61	R0906401-002	23 Nov 2009	12:25:14	1	-0.0000	1.0	1.00	- strange peak - rpt@#154-1/2
62	R0906401-003	23 Nov 2009	12:26:13	1	0.0137	1.0	1.00	- sm. sine peak - <LOQ
63	R0906401-004	23 Nov 2009	12:27:13	1	0.0200	1.0	1.00	- sm. sine peak - <LOQ
64	R0906402-001	23 Nov 2009	12:28:12	1	1.2322	10.0	1.00	- neg. peak - rpt@#155-1/20
65	R0906405-001	23 Nov 2009	12:29:10	1	0.0250	1.0	1.00	#156-1/50
66	CCV	23 Nov 2009	12:30:08	1	0.8647	1.0	1.00	#157-1/100
67	CCB	23 Nov 2009	12:31:06	1	0.0048	1.0	1.00	
68	LCS	23 Nov 2009	12:32:04	1	0.4968	1.0	1.00	
69	R0906405-002	23 Nov 2009	12:33:02	1	0.0053	1.0	1.00	
70	R0906405-003	23 Nov 2009	12:34:01	1	0.0091	1.0	1.00	
71	R0906405-004	23 Nov 2009	12:34:59	1	0.1168	1.0	1.00	
72	R0906270-001	23 Nov 2009	12:35:57	1	0.0221	1.0	1.00	
73	R0906270-002	23 Nov 2009	12:36:54	1	0.0315	1.0	1.00	
74	R0906270-003	23 Nov 2009	12:37:51	1	0.2058	1.0	1.00	
75	R0906477-001	23 Nov 2009	12:38:48	1	0.0609	1.0	1.00	

(*) - neg. peak - < LOQ

OPERATOR: NMEAD
ACQ. TIME: Nov 23, 2009 11:27:16
DATA FILENAME: C:\OMNION\DATA\091123A1.FDT
TRAY FILENAME: C:\OMNION\TRAYS\0911230A.TRA

Multi-Channel Table
Type: Unknowns
Channel Range: 1 to 8 -- Cup Range: 76 to 100

Cup	Sample ID	Sampling Date	Sampling Time	Rep #	QC 8000 350.1 Ammonia (mg/L)	Man Dil Factor	Auto Dil Factor	
76	R0906328-001	23 Nov 2009	12:39:48	1	0.0178	1.0	1.00	
77	6328-001 DUP	23 Nov 2009	12:40:47	1	0.0123	1.0	1.00	
78	CCV	23 Nov 2009	12:41:46	1	0.8582	1.0	1.00	
79	CCB	23 Nov 2009	12:42:45	1	-0.0000	1.0	1.00	
80	6328-001 SPK TV= 0.500	23 Nov 2009	12:43:44	1	0.4303	1.0	1.00	- low - (86.1%)
81	R0906328-002	23 Nov 2009	12:44:43	1	5.0750	1.0	1.00	- rpt c#158-1/5
82	R0906328-003	23 Nov 2009	12:45:42	1	4.9897	1.0	1.00	- rpt c#159-1/5
83	R0906328-004	23 Nov 2009	12:46:40	1	0.8554	1.0	1.00	
84	R0906328-005	23 Nov 2009	12:47:38	1	0.2055	1.0	1.00	
85	R0906328-006	23 Nov 2009	12:48:36	1	0.6986	1.0	1.00	
86	R0906328-015	23 Nov 2009	12:49:34	1	0.3717	1.0	1.00	
87	R0906328-016	23 Nov 2009	12:50:32	1	1.9448	1.0	1.00	
88	R0906420-001	23 Nov 2009	12:51:31	1	0.5664	1.0	1.00	
89	6420-001 DUP	23 Nov 2009	12:52:29	1	0.5724	1.0	1.00	
90	CCV	23 Nov 2009	12:53:26	1	0.8610	1.0	1.00	
91	CCB	23 Nov 2009	12:54:25	1	-0.0000	1.0	1.00	
92	LCS	23 Nov 2009	12:55:24	1	0.4983	1.0	1.00	
93	6420-001 SPK TV= 0.500	23 Nov 2009	12:56:24	1	1.0550	1.0	1.00	
94	R0906420-002	23 Nov 2009	12:57:23	1	1.1036	1.0	1.00	
95	R0906420-003	23 Nov 2009	12:58:22	1	0.5772	1.0	1.00	
96	R0906420-004	23 Nov 2009	12:59:21	1	0.0161	1.0	1.00	(*)
97	R0906420-005	23 Nov 2009	13:00:20	1	0.3046	1.0	1.00	
98	R0906420-006	23 Nov 2009	13:01:19	1	1.0865	1.0	1.00	
99	R0906420-007	23 Nov 2009	13:02:17	1	-0.0000	1.0	1.00	(*)
100	R0906420-008	23 Nov 2009	13:03:15	1	0.0099	1.0	1.00	(*)

(*) - neg. peak - < LOQ

OPERATOR: NMEAD
ACQ. TIME: Nov 23, 2009 11:27:16
DATA FILENAME: C:\OMNION\DATA\091123A1.FDT
TRAY FILENAME: C:\OMNION\TRAYS\0911230A.TRA

Multi-Channel Table
Type: Unknowns
Channel Range: 1 to 8 -- Cup Range: 101 to 125

Cup	Sample ID	Sampling Date	Sampling Time	Rep #	QC 8000 350.1 Ammonia (mg/L)	Man Dil Factor	Auto Dil Factor	
101	R0906420-009	23 Nov 2009	13:04:13	1	-0.0000	1.0	1.00	(*)
102	CCV	23 Nov 2009	13:05:11	1	0.8562	1.0	1.00	
103	CCB	23 Nov 2009	13:06:09	1	0.0027	1.0	1.00	
104	R0906420-010	23 Nov 2009	13:07:07	1	2.3662	1.0	1.00	rpt @ #160, 161, 165 - 1/2
105	6420-010 DUP	23 Nov 2009	13:08:05	1	2.3762	1.0	1.00	
106	6420-010 SPK TV= 0.500	23 Nov 2009	13:09:05	1	2.8397	1.0	1.00	
107	R0906420-011	23 Nov 2009	13:10:05	1	0.2322	1.0	1.00	
108	R0906420-012	23 Nov 2009	13:11:04	1	2.3885	1.0	1.00	rpt @ #166 - 1/2
109	R0906420-013	23 Nov 2009	13:12:03	1	0.3795	1.0	1.00	
110	R0906420-014	23 Nov 2009	13:13:02	1	0.3919	1.0	1.00	
111	R0906420-015	23 Nov 2009	13:14:02	1	0.0387	1.0	1.00	
112	R0906420-016	23 Nov 2009	13:15:01	1	0.2146	1.0	1.00	
113	R0906420-017	23 Nov 2009	13:16:00	1	0.3255	1.0	1.00	
114	CCV	23 Nov 2009	13:16:59	1	0.8555	1.0	1.00	
115	CCB	23 Nov 2009	13:17:57	1	0.0079	1.0	1.00	
116	LCS	23 Nov 2009	13:18:56	1	0.4990	1.0	1.00	
117	R0906420-018	23 Nov 2009	13:19:54	1	0.7239	1.0	1.00	
118	R0906420-019	23 Nov 2009	13:20:52	1	0.7728	1.0	1.00	
119	R0906420-020	23 Nov 2009	13:21:50	1	0.2626	1.0	1.00	
120	6420-020 DUP	23 Nov 2009	13:22:48	1	0.2712	1.0	1.00	
121	6420-020 SPK TV= 0.500	23 Nov 2009	13:23:48	1	0.7171	1.0	1.00	
122	R0906420-021	23 Nov 2009	13:24:49	1	0.8826	1.0	1.00	
123	R0906420-022	23 Nov 2009	13:25:48	1	0.6493	1.0	1.00	
124	R0906420-023	23 Nov 2009	13:26:47	1	1.3877	1.0	1.00	
125	R0906434-001	23 Nov 2009	13:27:46	1	10.7647	20.0	1.00	

(*) - neg peak - < LOQ

OPERATOR: NMEAD
ACQ. TIME: Nov 23, 2009 11:27:16
DATA FILENAME: C:\OMNION\DATA\091123A1.FDT
TRAY FILENAME: C:\OMNION\TRAYS\0911230A.TRA

Multi-Channel Table
Type: Unknowns
Channel Range: 1 to 8 -- Cup Range: 126 to 150

Cup	Sample ID	Sampling Date	Sampling Time	Rep #	QC 8000 350.1 Ammonia (mg/L)	Man Dil Factor	Auto Dil Factor	
126	CCV	23 Nov 2009	13:28:45	1	0.8591	1.0	1.00	
127	CCB	23 Nov 2009	13:29:45	1	0.0025	1.0	1.00	
128	R0906434-002	23 Nov 2009	13:30:44	1	14.7371	20.0	1.00	
129	R0906434-003	23 Nov 2009	13:31:43	1	11.2021	20.0	1.00	
130	R0906434-004	23 Nov 2009	13:32:42	1	15.6035	20.0	1.00	
131	R0906434-005	23 Nov 2009	13:33:40	1	10.4343	20.0	1.00	
132	R0906434-006	23 Nov 2009	13:34:38	1	15.6495	20.0	1.00	
133	R0906442-001	23 Nov 2009	13:35:37	1	8.9976	10.0	1.00	
134	R0906442-002	23 Nov 2009	13:36:35	1	0.4052	1.0	1.00	
135	R0906442-005	23 Nov 2009	13:37:33	1	0.7371	1.0	1.00	
136	6442-005 DUP	23 Nov 2009	13:38:33	1	0.7404	1.0	1.00	
137	6442-005 SPK TV= 0.500	23 Nov 2009	13:39:33	1	1.1658	1.0	1.00	-low (85.7%)
138	CCV	23 Nov 2009	13:40:33	1	0.8636	1.0	1.00	
139	CCB	23 Nov 2009	13:41:33	1	0.0017	1.0	1.00	
140	LCS	23 Nov 2009	13:42:32	1	0.4986	1.0	1.00	
141	R0906442-006	23 Nov 2009	13:43:31	1	0.1564	1.0	1.00	
142	R0906442-007	23 Nov 2009	13:44:30	1	0.0267	1.0	1.00	
143	R0906444-003	23 Nov 2009	13:45:29	1	26.8216	10.0	1.00	- rpt @#167-1/20
144	R0906445-001	23 Nov 2009	13:46:29	1	0.0036	1.0	1.00	
145	R0906445-002	23 Nov 2009	13:47:28	1	0.0843	1.0	1.00	
146	6445-002 DUP	23 Nov 2009	13:48:27	1	0.0852	1.0	1.00	
147	6445-002 SPK TV= 0.500	23 Nov 2009	13:49:25	1	0.5547	1.0	1.00	
148	R0906445-003	23 Nov 2009	13:50:23	1	0.0172	1.0	1.00	- Bump after spk - rpt @#168
149	R0906300-007	23 Nov 2009	13:51:21	1	0.2349	1.0	1.00	
150	CCV	23 Nov 2009	13:52:19	1	0.8616	1.0	1.00	

OPERATOR: NMEAD
ACQ. TIME: Nov 23, 2009 11:27:16
DATA FILENAME: C:\OMNION\DATA\091123A1.FDT
TRAY FILENAME: C:\OMNION\TRAYS\0911230A.TRA

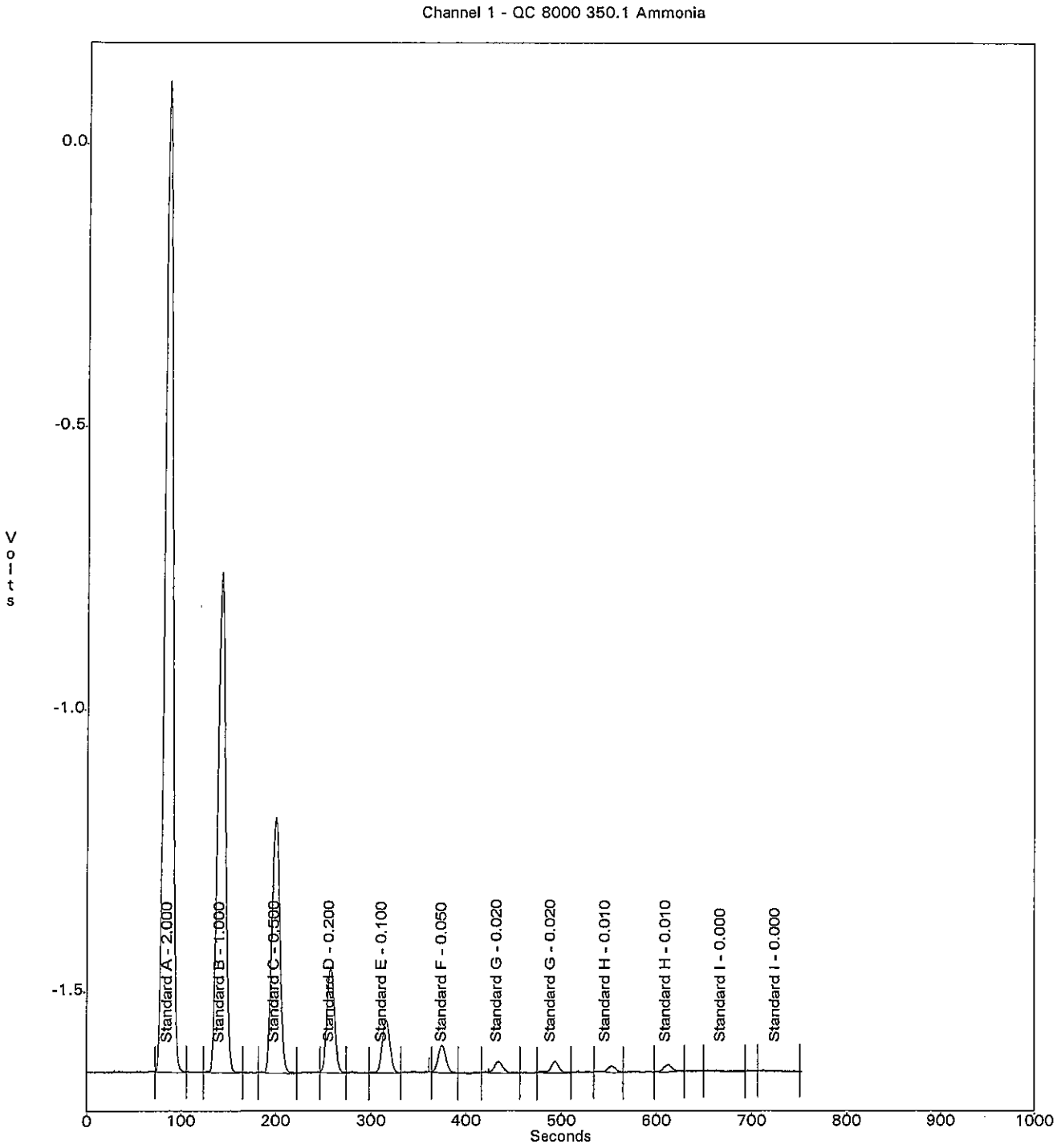
Multi-Channel Table
Type: Unknowns
Channel Range: 1 to 8 -- Cup Range: 151 to 175

Cup	Sample ID	Sampling Date	Sampling Time	Rep #	QC 8000 350.1 Ammonia (mg/L)	Man Dil Factor	Auto Dil Factor
151	CCB	23 Nov 2009	13:53:20	1	-0.0000	1.0	1.00
152	R0906399-011 RPT	23 Nov 2009	13:54:20	1	0.0738	1.0	1.00
153	R0906420-034 RPT	23 Nov 2009	13:55:20	1	0.0232	1.0	1.00 = 2.32
154	R0906401-002 RPT 1/2	23 Nov 2009	13:56:20	1	0.0258	2.0	1.00 (*)
155	R0906402-001 RPT 1/20	23 Nov 2009	13:57:19	1	1.7589	20.0	1.00 – neg. peak
156	R0906402-001 RPT 1/50	23 Nov 2009	13:58:18	1	0.6671	50.0	1.00 – sm. double peak
157	R0906402-001 RPT 1/100	23 Nov 2009	13:59:17	1	2.6465	100.0	1.00 – report this result
158	R0906328-002 RPT 1/5	23 Nov 2009	14:00:16	1	5.8575	5.0	1.00
159	R0906328-003 RPT 1/5	23 Nov 2009	14:01:16	1	5.8475	5.0	1.00
160	R0906420-010 RPT 1/2	23 Nov 2009	14:02:15	1	2.5171	2.0	1.00
161	6420-010 DUP RPT 1/2	23 Nov 2009	14:03:14	1	2.5199	2.0	1.00
162	CCV	23 Nov 2009	14:04:13	1	0.8616	1.0	1.00
163	CCB	23 Nov 2009	14:05:11	1	0.0014	1.0	1.00
164	LCS	23 Nov 2009	14:06:09	1	0.5074	1.0	1.00
165	6420-010SPKRPT1/2TV=0.5	23 Nov 2009	14:07:07	1	3.4629	2.0	1.00
166	R0906420-012 RPT 1/2	23 Nov 2009	14:08:08	1	2.5428	2.0	1.00
167	R0906444-003 RPT 1/20	23 Nov 2009	14:09:08	1	27.5008	20.0	1.00
168	R0906445-003 RPT	23 Nov 2009	14:10:08	1	0.0237	1.0	1.00
169	CCV	23 Nov 2009	14:11:09	1	0.8639	1.0	1.00
170	CCB	23 Nov 2009	14:12:09	1	0.0035	1.0	1.00

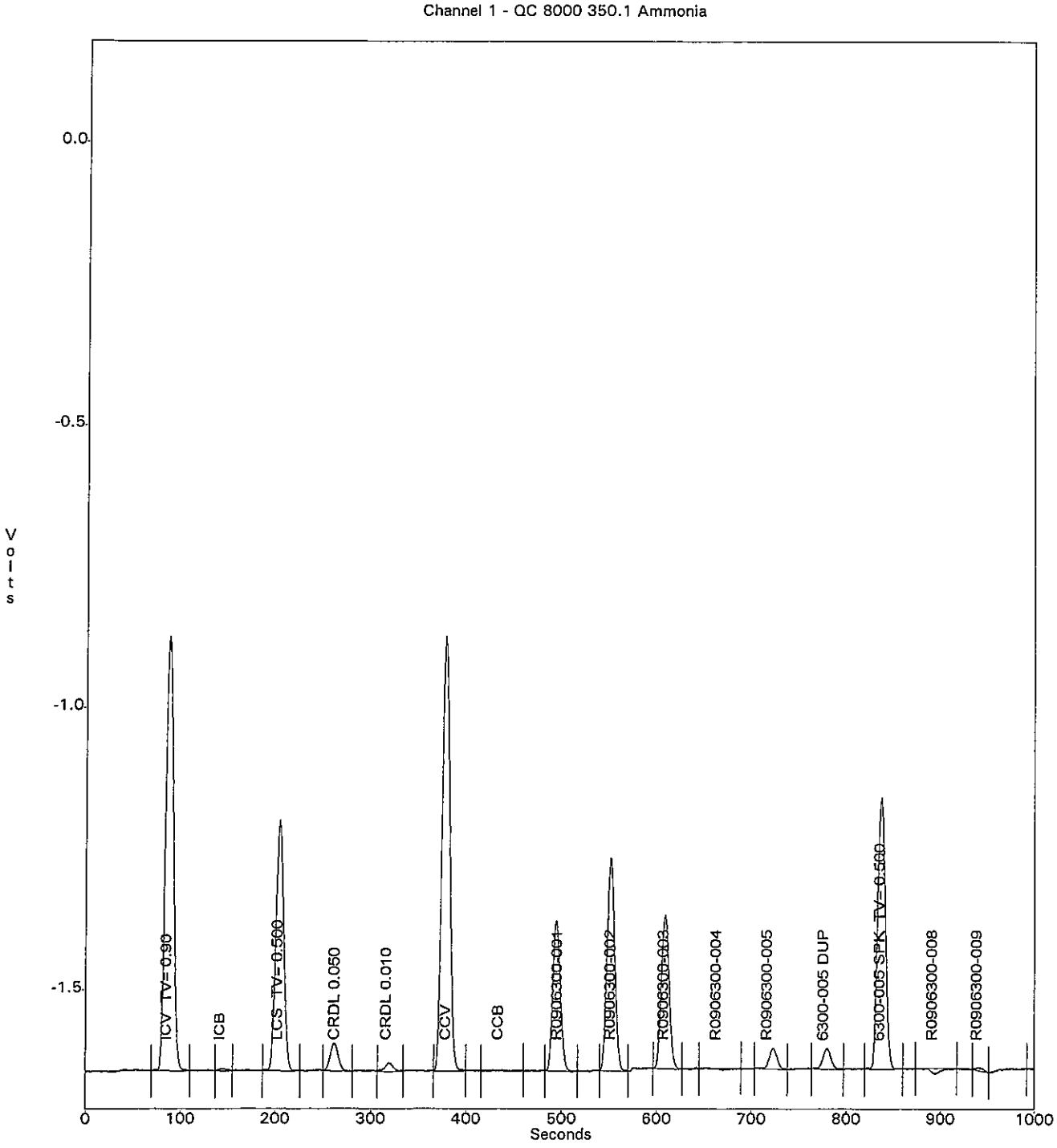
0g → 1000

(*) - neg. peak - < LOQ

OPERATOR: NMEAD
ACQ. TIME: Nov 23, 2009 11:00:19
DATA FILENAME: C:\OMNION\DATA\0911230A.FDT
TRAY FILENAME: C:\OMNION\TRAYS\0911230A.TRA



OPERATOR: NMEAD
ACQ. TIME: Nov 23, 2009 11:27:16
DATA FILENAME: C:\OMNION\DATA\091123A1.FDT
TRAY FILENAME: C:\OMNION\TRAYS\0911230A.TRA



OPERATOR: NMEAD
ACQ. TIME: Nov 23, 2009 11:27:16
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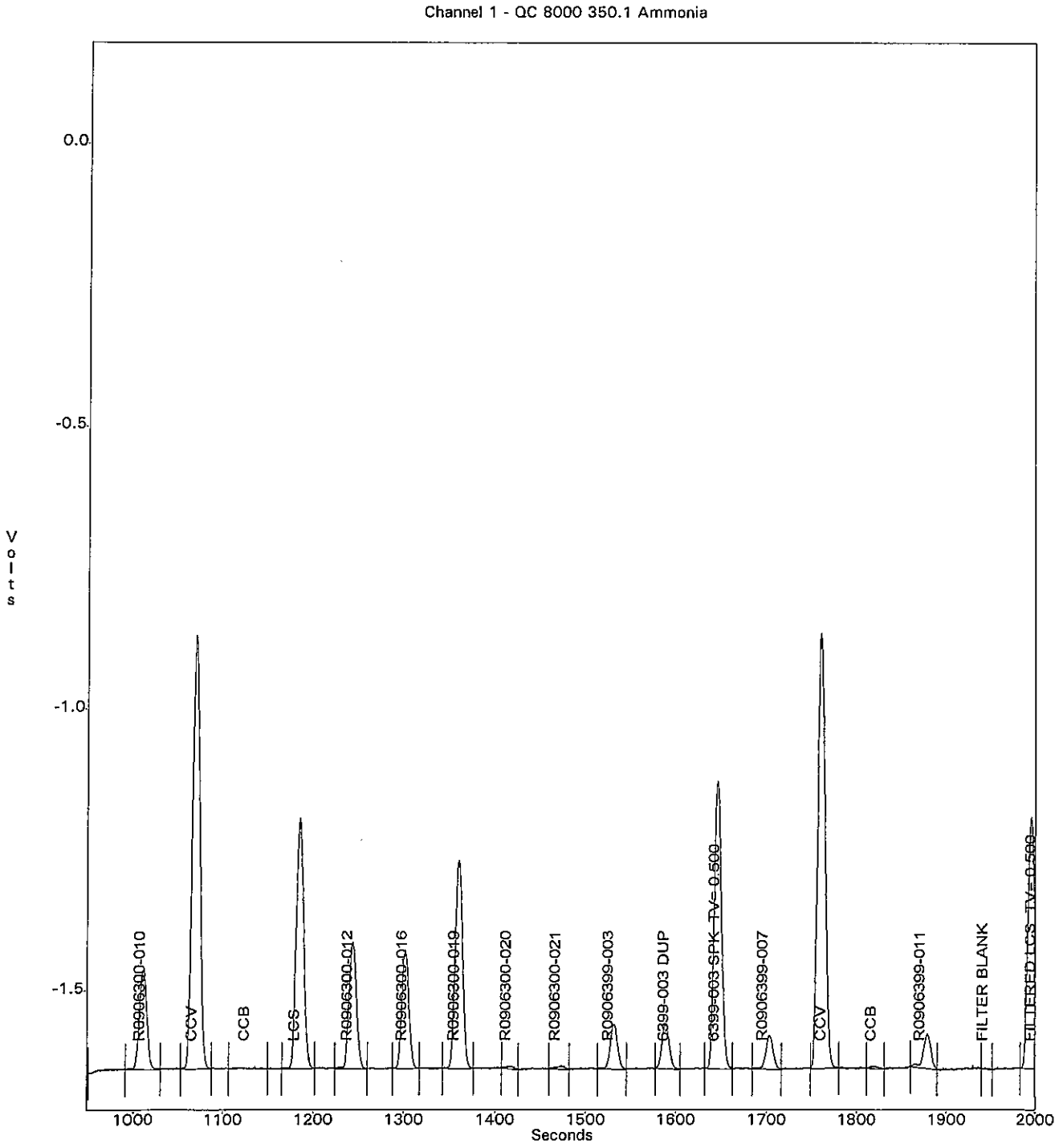
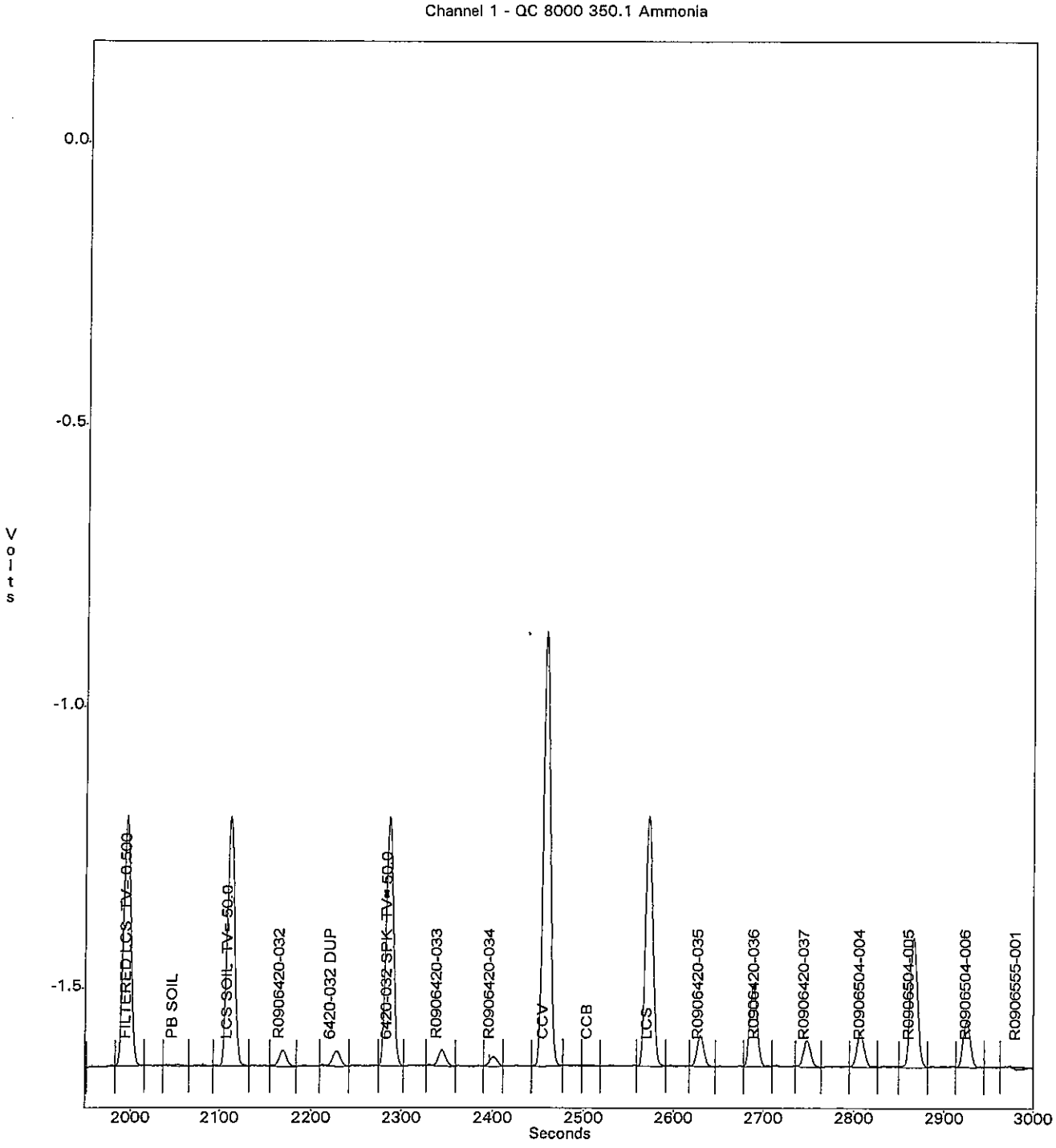
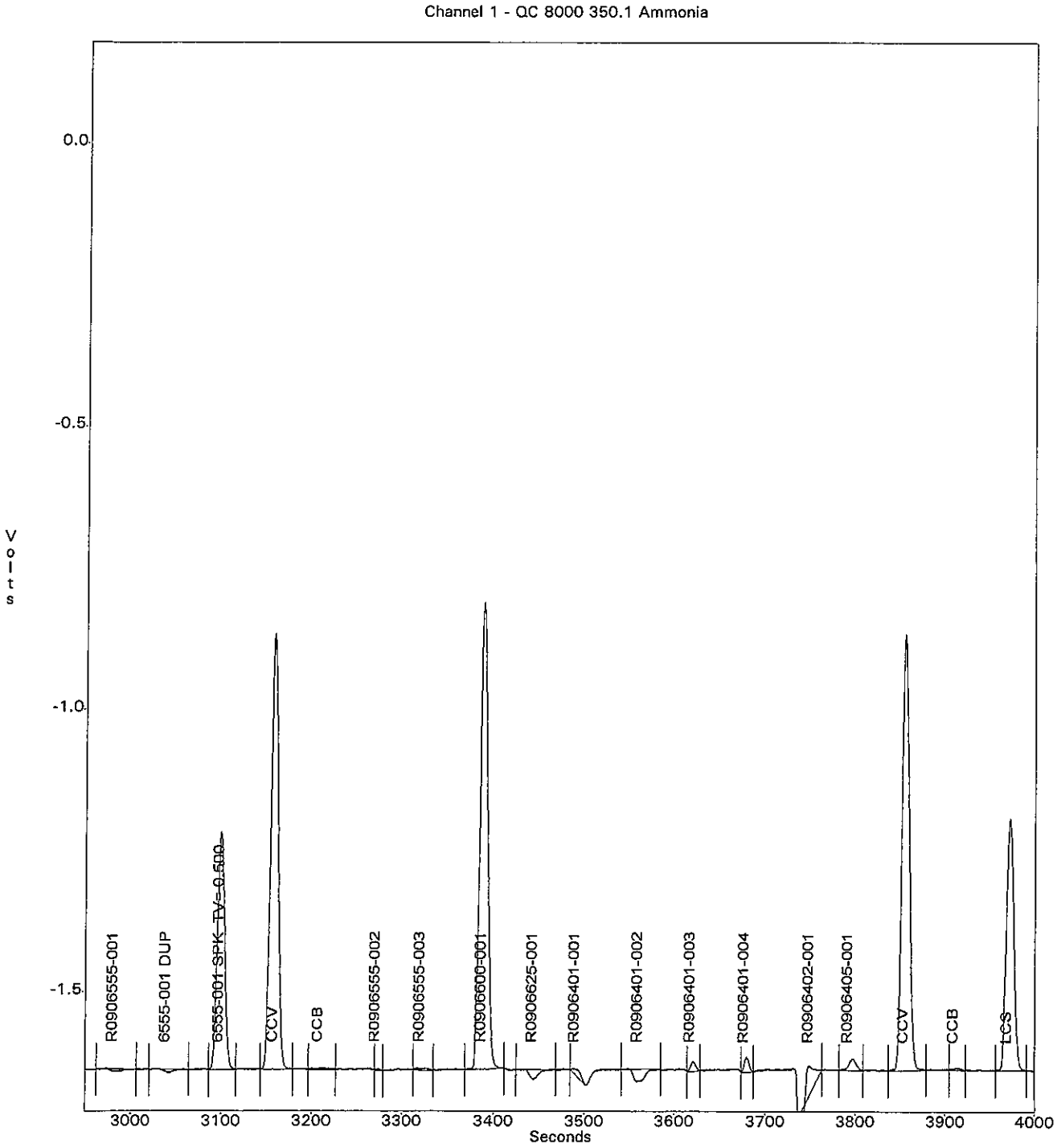
TRAY FILENAME: C:\OMNION\TRAYS\0911230A.TRA



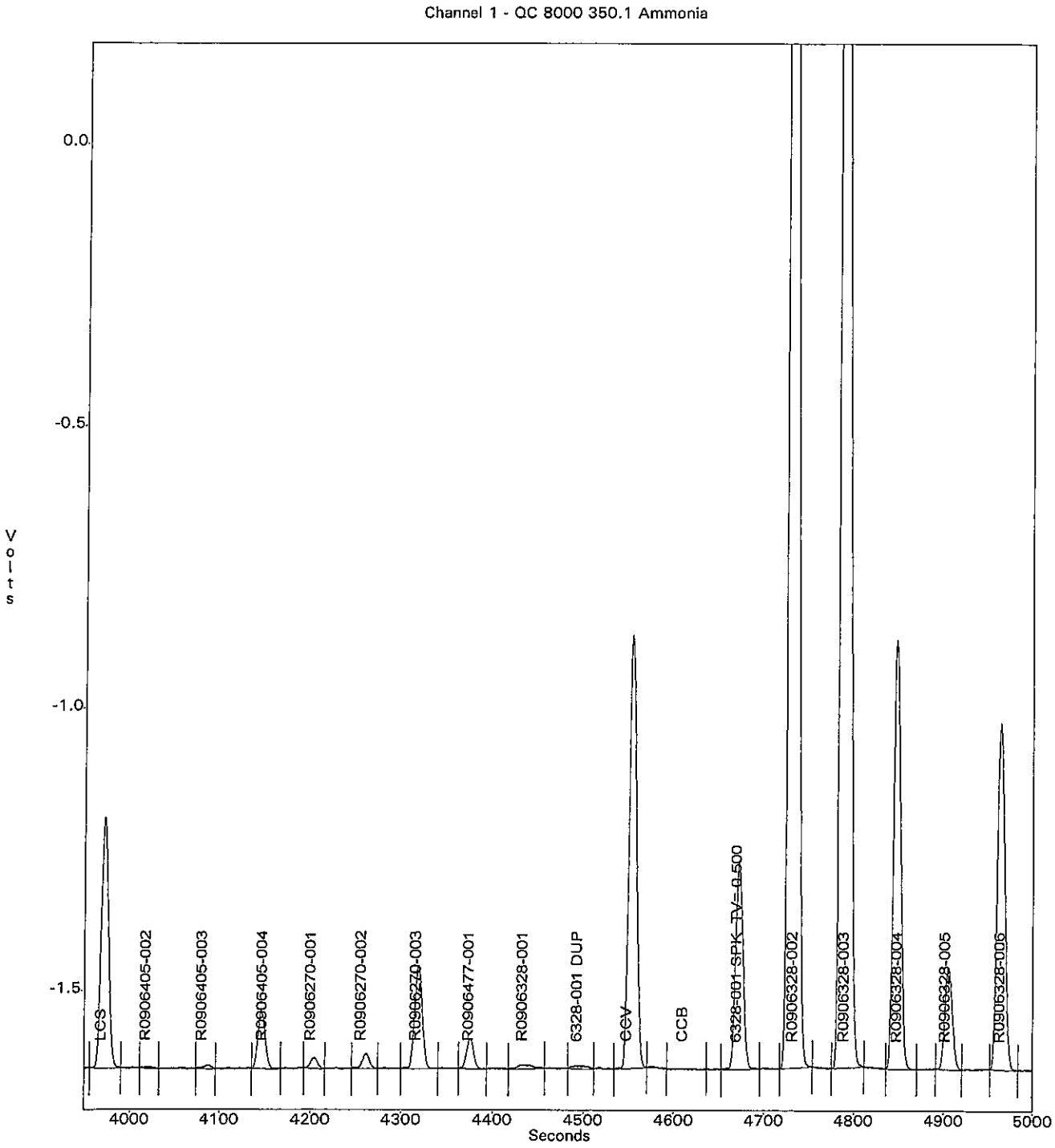
OPERATOR: NMEAD
ACQ. TIME: Nov 23, 2009 11:27:16
DATA FILENAME: C:\OMNION\DATA\091123A1.FDT
TRAY FILENAME: C:\OMNION\TRAYS\0911230A.TRA



OPERATOR: NMEAD
ACQ. TIME: Nov 23, 2009 11:27:16
DATA FILENAME: C:\OMNION\DATA\091123A1.FDT
TRAY FILENAME: C:\OMNION\TRAYS\0911230A.TRA

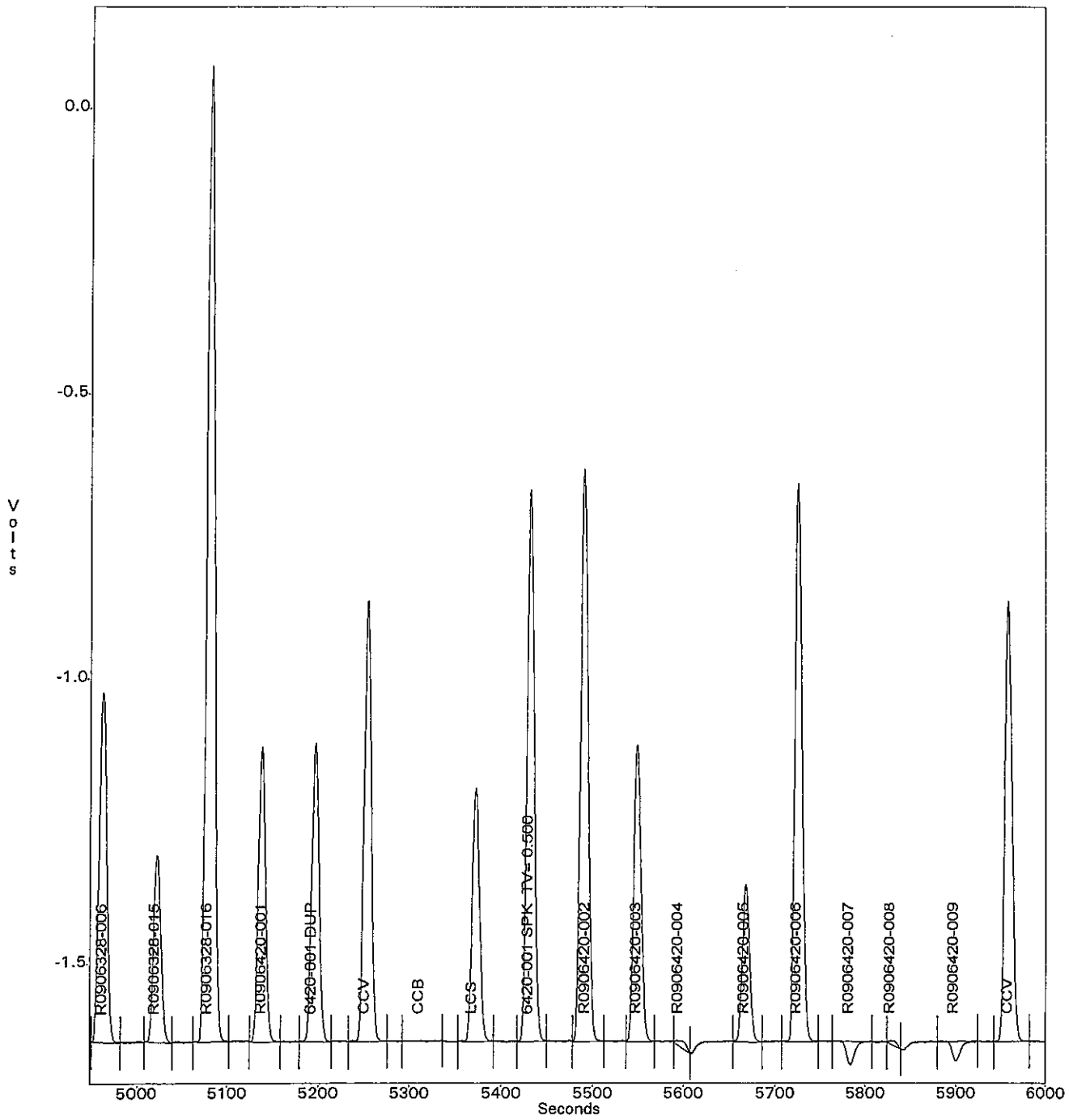


OPERATOR: NMEAD
ACQ. TIME: Nov 23, 2009 11:27:16
DATA FILENAME: C:\OMNION\DATA\091123A1.FDT
TRAY FILENAME: C:\OMNION\TRAYS\0911230A.TRA

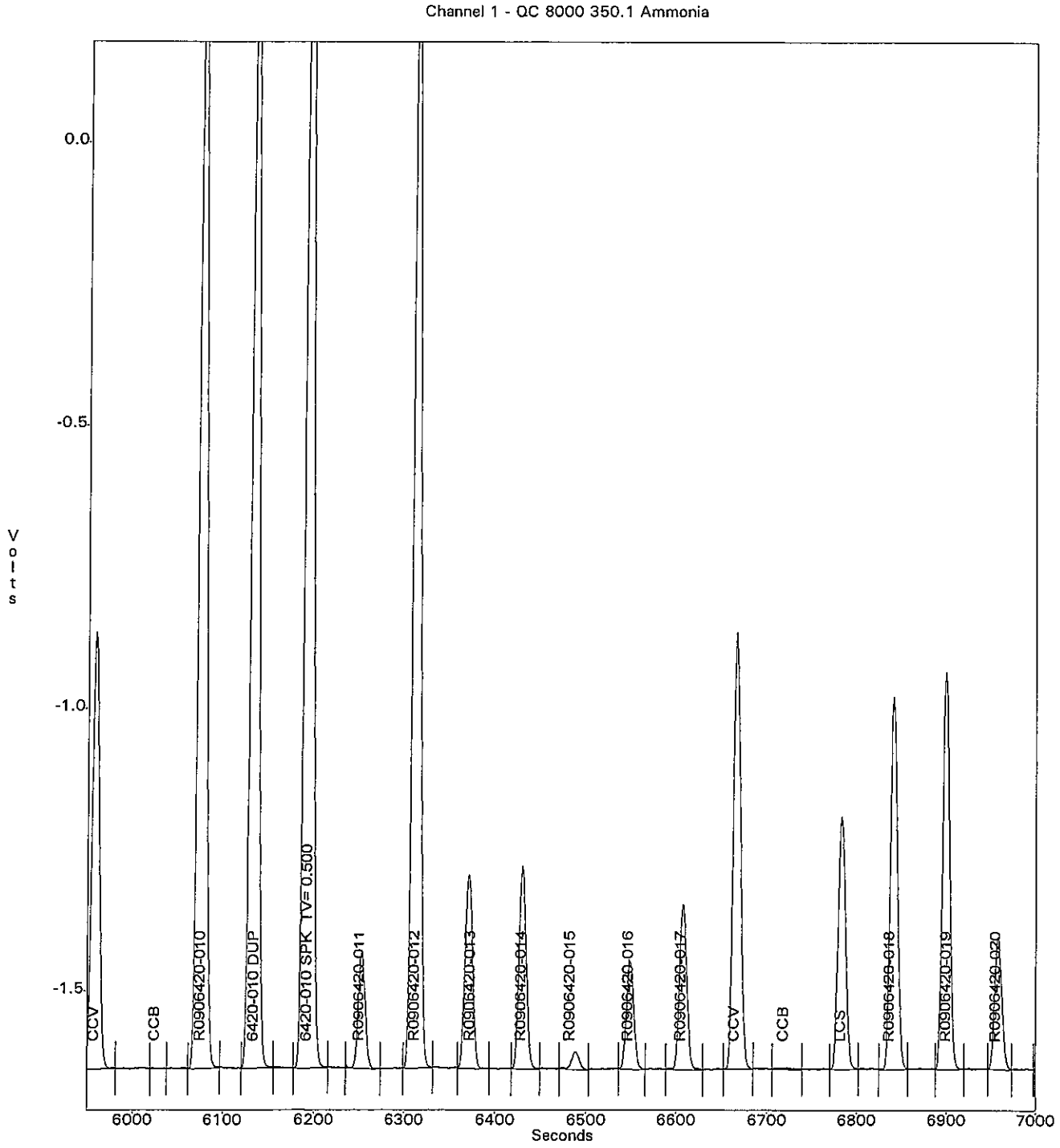


OPERATOR: NMEAD
ACQ. TIME: Nov 23, 2009 11:27:16
DATA FILENAME: C:\OMNION\DATA\091123A1.FDT
TRAY FILENAME: C:\OMNION\TRAYS\0911230A.TRA

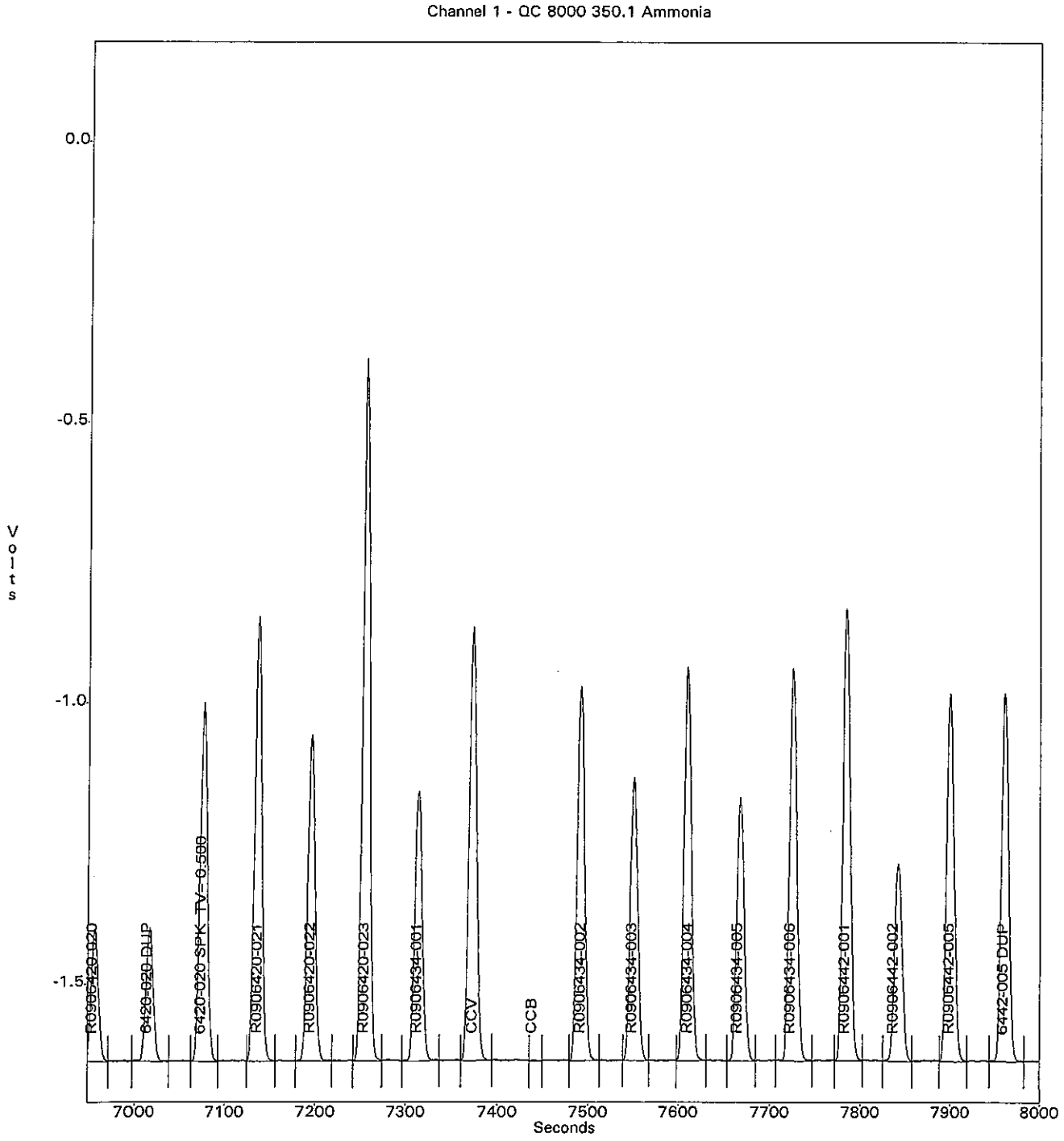
Channel 1 - QC 8000 350.1 Ammonia



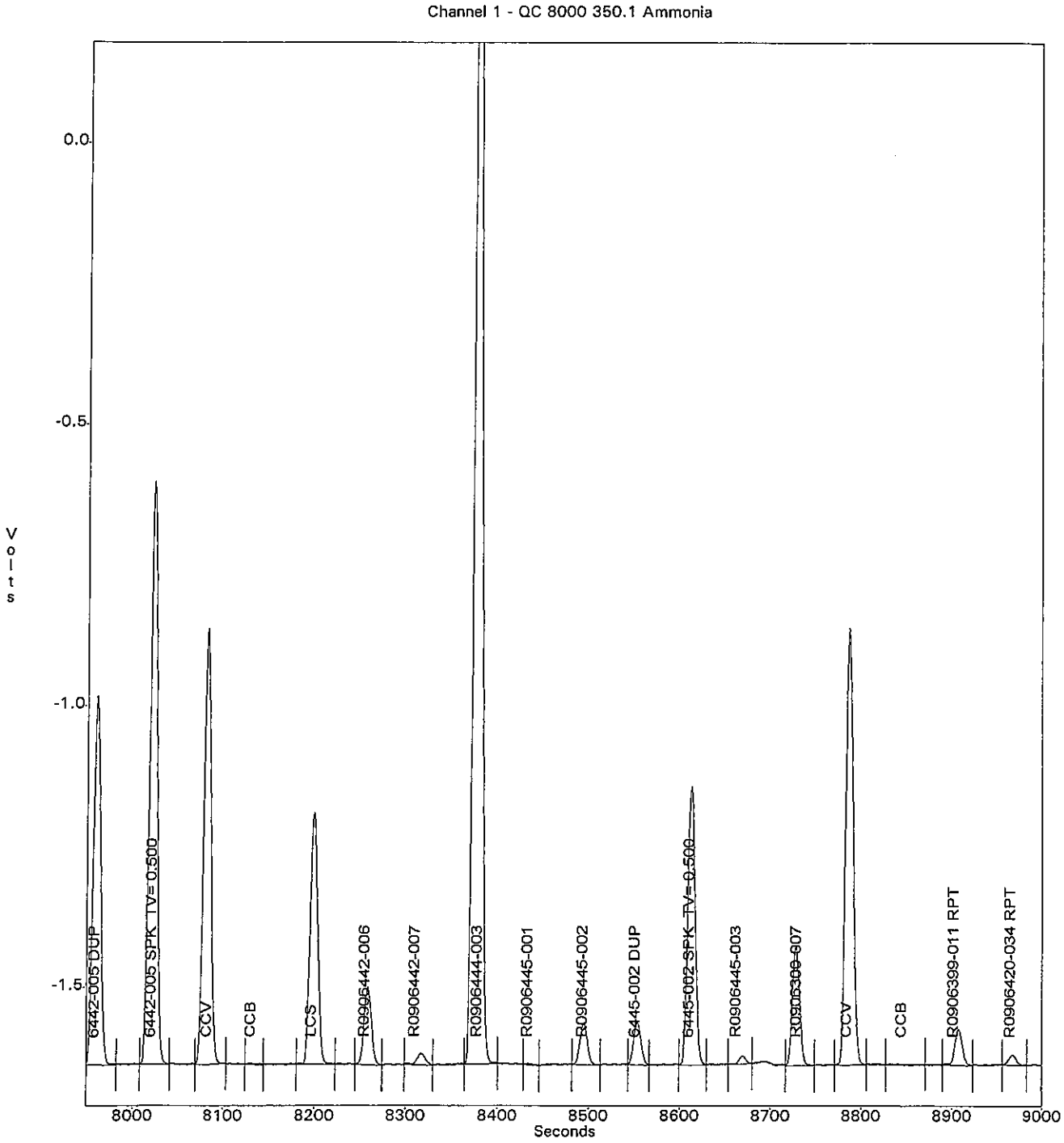
OPERATOR: NMEAD
ACQ. TIME: Nov 23, 2009 11:27:16
DATA FILENAME: C:\OMNION\DATA\091123A1.FDT
TRAY FILENAME: C:\OMNION\TRAYS\0911230A.TRA



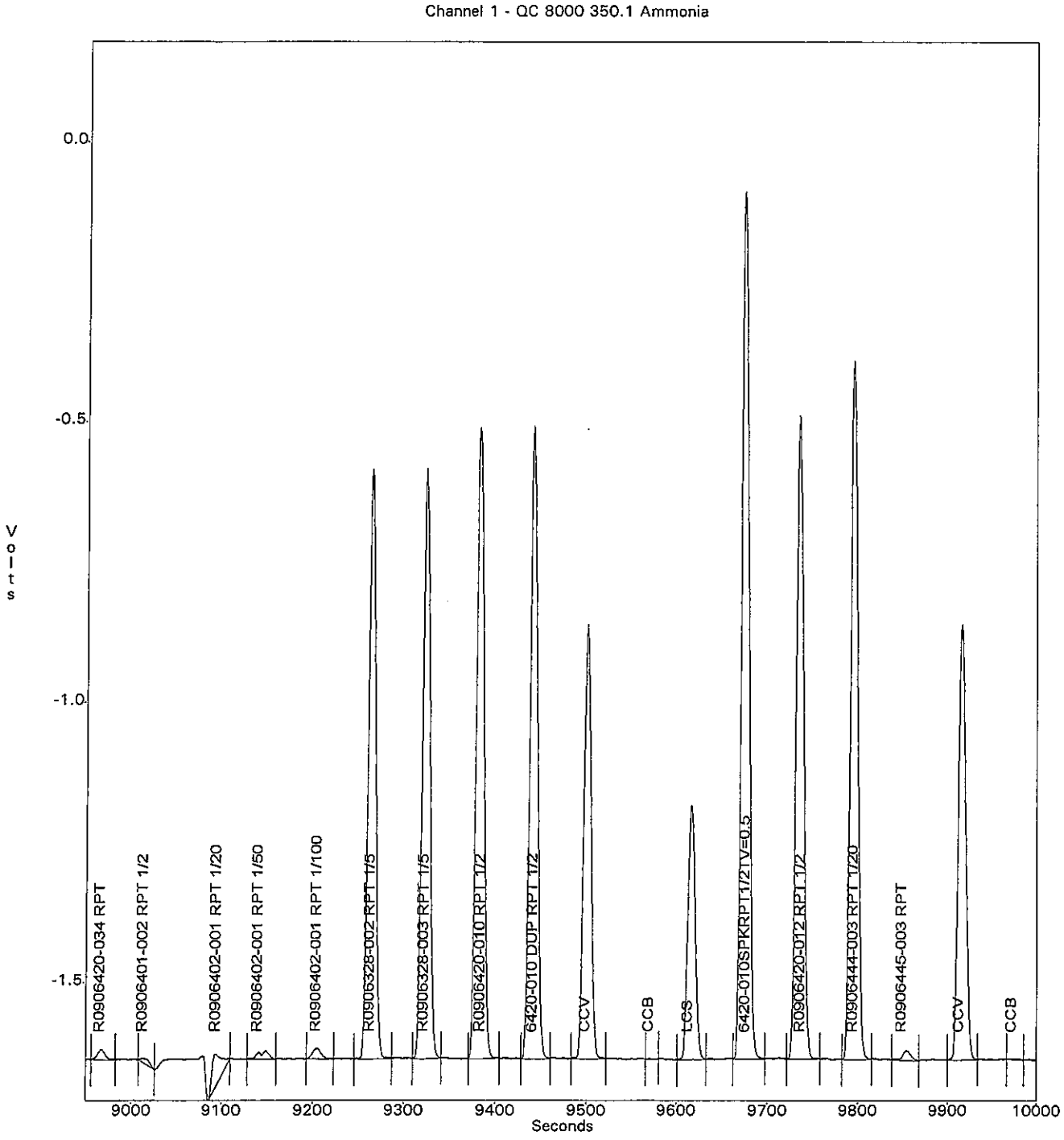
OPERATOR: NMEAD
ACQ. TIME: Nov 23, 2009 11:27:16
DATA FILENAME: C:\OMNION\DATA\091123A1.FDT
TRAY FILENAME: C:\OMNION\TRAYS\0911230A.TRA



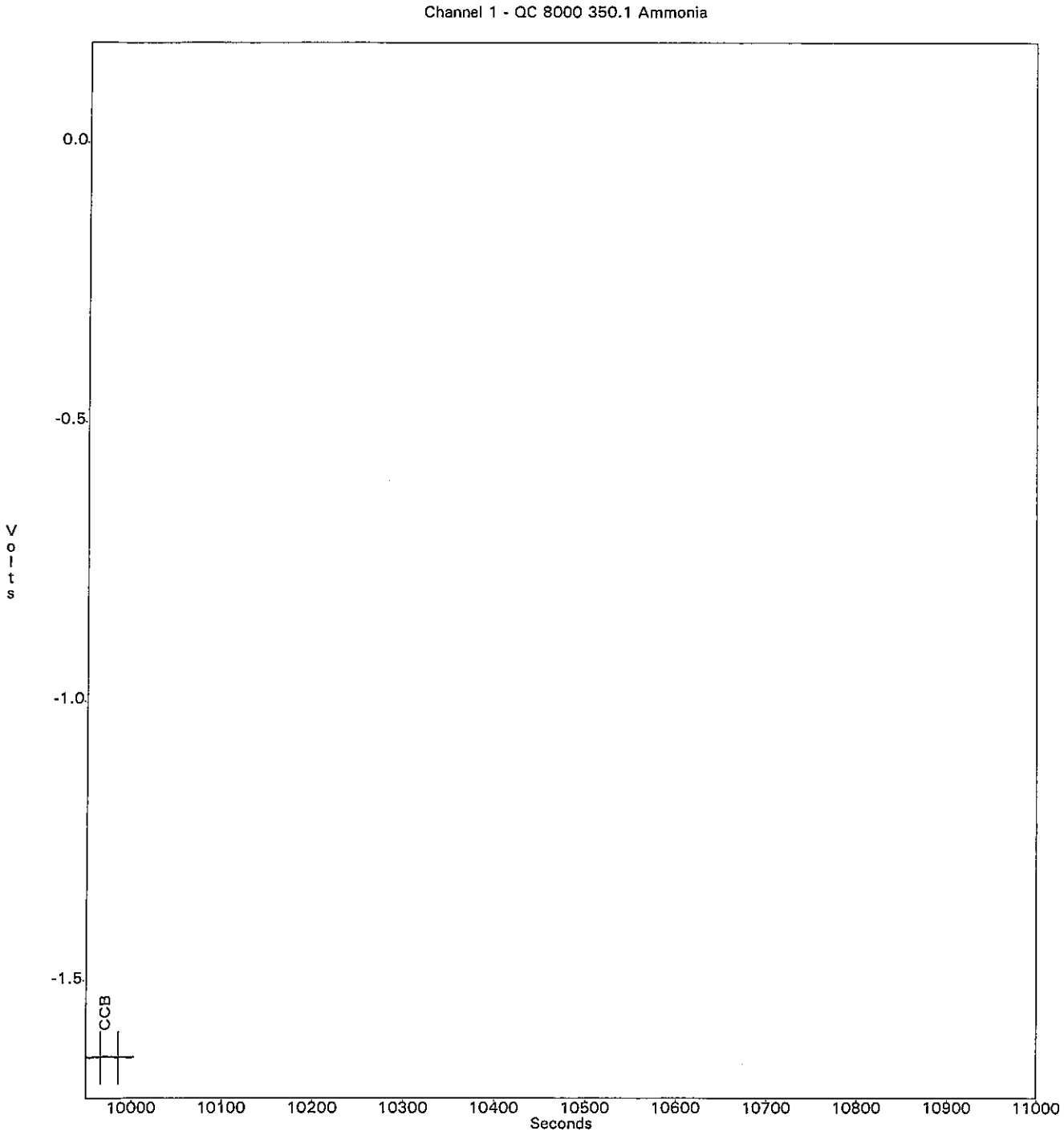
OPERATOR: NMEAD
ACQ. TIME: Nov 23, 2009 11:27:16
DATA FILENAME: C:\OMNION\DATA\091123A1.FDT
TRAY FILENAME: C:\OMNION\TRAYS\0911230A.TRA



OPERATOR: NMEAD
ACQ. TIME: Nov 23, 2009 11:27:16
DATA FILENAME: C:\OMNION\DATA\091123A1.FDT
TRAY FILENAME: C:\OMNION\TRAYS\0911230A.TRA



OPERATOR:	NMEAD
ACQ. TIME:	Nov 23, 2009 11:27:16
DATA FILENAME:	C:\OMNION\DATA\091123A1.FDT
TRAY FILENAME:	C:\OMNION\TRAYS\0911230A.TRA



OPERATOR: NMEAD
ACQ. TIME: Nov 23, 2009 11:00:19
DATA FILENAME: C:\OMNION\DATA\0911230A.FDT
METHOD FILENAME:
TRAY FILENAME: C:\OMNION\TRAYS\0911230A.TRA

TRAY DESCRIPTION:
Created: Nov 23, 2009 9:59:39
Modified: Nov 23, 2009 10:04:30
QC 8000 350.1 Ammonia - RUN LOG - 0911230A
DATA DESCRIPTION:
Created: Nov 23, 2009 11:00:19
Modified: Nov 23, 2009 11:00:19

Method - Ch. 1 (QC 8000 350.1 Ammonia)

METHOD DESCRIPTION:
Created: Jun 8, 2007 13:44:01
Modified: Nov 17, 2009 14:38:09
Ammonia

ANALYTE DATA:
Analyte Name: QC 8000 350.1 Ammonia
Concentration Units: mg/L
Chemistry: Direct
Inject to Peak Start (s): 28.5
Peak Base Width (s): 22.000
% Width Tolerance: 50.000
Threshold: 2877.000
Autodilution Trigger: Off
QuikChem Method:

CALIBRATION DATA:
Levels:
1 : 2.000 2 : 1.000 3 : 0.500 4 : 0.200
5 : 0.100 6 : 0.050 7 : 0.020 8 : 0.010
9 : 0.000
Calibration Rep Handling: Average
Calibration Fit Type: 1st Order Poly
Force Though Zero: No
Weighting Method: 1/X
Concentration Scaling: None

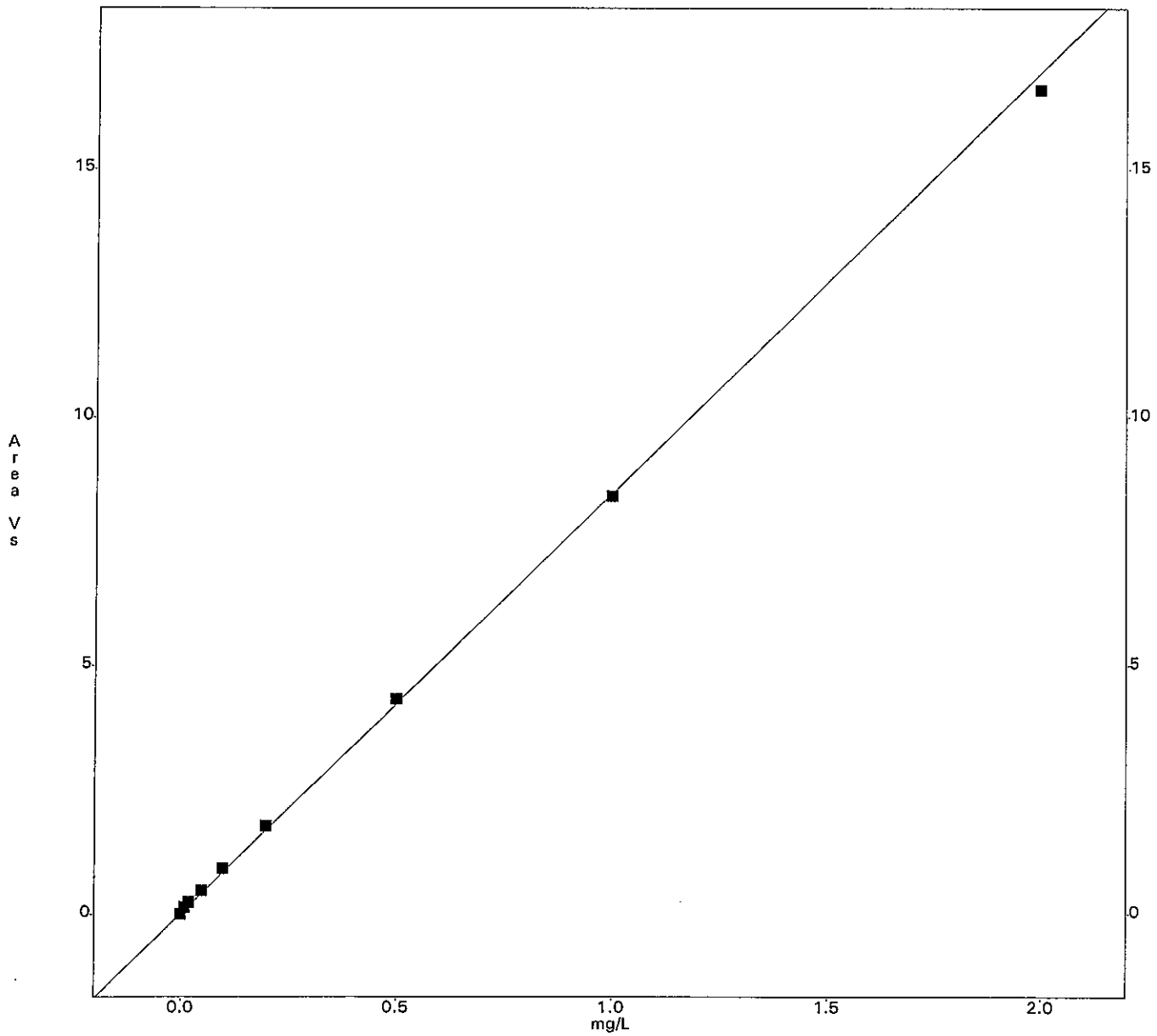
QC 8000 350.1 Ammonia

Lvl	Area	mg/L	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Replic STD	Replic % RSD	Residual 1st Poly
1	16591591	2.00	16591591					0.0	0.0	2.1
2	8414215	1.00	8414215					0.0	0.0	0.7
3	4324864	0.50	4324864					0.0	0.0	-2.0
4	1776931	0.20	1776931					0.0	0.0	-4.8
5	920192	0.10	920192					0.0	0.0	-8.6
6	476579	0.05	476579					0.0	0.0	-12.4
7	244877	0.02	239168	250586				8073.7	3.3	-44.4
8	140149	0.01	145293	135005				7274.7	5.2	-65.3
9	0	0.00	0	0				0.0	0.0	

1st Order Poly
Conc = 1.180e-007 Area - 1.096e-007
r = 0.9997

pipette ID's: E2
ALT

Scaling: None - Weighting: 1/X



Printed: Monday, November 23, 2009 - 11:13 AM

Columbia Analytical Services
1 Mustard St., Rochester NY 14609

General Chemistry Analytical Run Cover Sheet

Analyst: N. Mead Date: 11/23/09

Analysis: Ammonia Instrument: Lachat

Quality Control:

	Same as Log#, Date,	Stocks Prep. Log#, Date,	Stock Sol (mLs)	Stock Sol (mg/L)	Final Vol (mLs)	True Value (mg/L)
a) Standards Prep.:	WC65166A, 4/7/03	WC85257E, 1/19/09				
b) ICV Preparation:	WC92071F, 8/26/09	WC85257G, 1/19/09	0.5	18	10	0.90
c) LCS Preparation:	WC65166D, 4/7/03	WC85257E, 1/19/09	0.05	100	10	0.50
d) Matrix Spike Prep.:	WC65166D, 4/7/03	WC85257E, 1/19/09	0.05	100	10	0.50

Instrument log filled in? (Y) (N)

Packages: Copy and attach Standards Preparation

Comments:

p:\greg\forms\cover.nh3

4/7/03 DMG

Ammonia (NH_3) [Lachat: pql = 0.050 Reg Level, 0.010 - Low Level]

(A) STANDARDS

STD.	CONC (mg/L)	mls 10ppm (WC651166C)	mls Carrier-Diluent (WC
A	2.000	2.00	8.00
B	1.000	1.00	9.00
C	0.500	0.50	9.50
D	0.200	0.20	9.80
E	0.100	1/10 Dil'N of STD B.) 1.000	
F	0.050	1/10 Dil'N of STD C.) 0.500	
G	0.020	1/10 Dil'N of STD D.) 0.200	
H	0.010	1/10 Dil'N of STD E.) 0.100	
I	0.000	10 mls of Carrier-Diluent	

(B) ICV/CCV: (TV = 1.80 mg/L)

Do two (2) 1/10 serial dilutions of the 180 ppm Reference Stock (WC651561B). Prepare using Carrier-Diluent (WC651165F)

(C) 10.0 ppm Working Stock

Do two (2) 1/10 serial dilutions of the 1000 ppm Standard Stock (WC651561A). Prepare using Carrier-Diluent (WC651165F)

(D) LCS/Matrix Spike: (TV = 0.500 mg/L)

Add 0.050 mls 100 ppm working Stock (WC651166C, 1st 1/10 serial dilution) to 10 mls Carrier-Diluent (WC651165F) or sample.

1 run.

1/15/09 NH1 (A1) Buffer - NH_3
- same as WC85247I. Exp. 1 year, 1/15/10.

(B) Buffer - TKN
- same as WC85246C. Exp. 1 month, 2/15/09.

1 run. (C) NO_2 Cocr Reagent - Kunslab
In 100 ml vol flask, dissolve 1.00g sulfanimide (WC85167F) and 0.10g NED (WC76226H) in 10ml H_3PO_4 (WC76251H) Bring to volume with DI. Store at 4°C Exp 2/15/09

to 1000g w/DI. (7357)

1/19/09 SBR (D) Rhodamine Indicator Solution
Dissolve 0.020g 5-(4-DMAB) Rhodanine (WC76015E) in 100mL Acetone (WC69232E). Store in glass & R.T. Expires 1/19/10

Diphenylcarbazide in ng to volume. Store at

1/19/09 SBR (E) NH_3/TKN 1000 ppm Standard Stock
3.819g granular NH_4Cl (WC85085F), previously dried for 2 hrs @ 140°C. dissolve in ~800 mL DI in a 1 L volumetric flask. Bring to volume with DI. Store @ 4°C in amber glass. Expires 1/19/10

7 X 3.

each run,

(F) 500 ppm Organic TKN Standard
In a 1 Liter vol. flask, dissolve 5.252g L-glutamic acid (WC85029D) in ~800 mL DI. Bring to volume with DI. Store @ 4°C in amber glass Expires 1/19/10.
TV = 500 mg/L nitrogen

1/07.

Eriochrome Black T shake well to mix.

(G) NH_3 180 ppm Reference Stock
0.687g granular NH_4Cl (WC85085G), previously dried for 2 hrs @ 104°C : dissolve in ~800mL DI in a 1 L vol flask. Bring to volume with DI Store @ 4°C in amber glass. Expires 1/19/10.

DI Fresh per run

(H) TKN 400 ppm Reference Stock
1.5276g granular NH_4Cl (WC85085G), previously dried for 2 hrs @ 104°C : dissolve in ~800 mL DI in a 1 L vol. flask. Bring to volume with DI. Store @ 4°C in amber glass Expires 1/19/10

) with DI. Fresh per run.

1/19/09 EW (I) TSS Reference
0.2122g Kaolin (WC69285G) brought to 1000g with DI. (7483)
Store in plastic bottle @ 4°C.
TV = 212 mg/L Exp: 1/19/10

and 0.10g EDTA (WC85210C) amber glass.

TITLE PROJECT

Continued from page

8/25/09 (A) MBAS Wash Solution
DPW To a tared 2L Vol. Flask add: 100g Sodium Phosphate mono basic monohydrate (WC920354) and 13.7mL conc. H_2SO_4 (WC920460B). Bring to volume w/DI. Store@RT, exp: 8/25/2010.

ejs 8/25/09 (B) 1:1 H_2SO_4 - Cn Distillation
Same as WC920270E Exp 8/25/10

8/26/09 (C) Hypochlorite - NH_3
NM -400 mLs Sodium Hypochlorite (WC920460F)
-400 mLs UP DI
Prepare fresh each run.

8/26/09 (D) 1.0ppm Working Reference Stock
DPW Dilute 1.0mL of 1000ppm LAS Reference Stock (WC920460L) to 1L volumetrically w/DI, Store@4°C, Exp: ~~8/26/10~~ 8/26/2010

8/26/09 (E) Iodide-Iodate Titrant - Sulfite
DPW In a 1L vol flask dilute 0.4428g KIO_3 (WC852398), 4.25g KI (WC852455) and 0.310g $NaHCO_3$ (WC852210) to volume with DI. Store at 4°C Exp 8/26/10

8/26/09 (F) Ammonia (NH_3) [Lachat: LOQ = 0.050 Reg. level, 0.010 - Low level]
NM
ICV/CCV: (TV = 0.90 mg/L)
Do ~~this~~ 1mg/L 8/26/09 one (1) 1/10 serial dilution of the 180ppm Reference Stock (WC852576). Add 0.5mL of this 18.0ppm stock to 9.5mL NH_3 Carrier/Diluent.

Continued to page

SIGNATURE ✓ Signed 8/26/09 DATE
DISCLOSED TO AND UNDERSTOOD BY DATE
PROPRIETARY INFORMATION

Analytical Results Summary

Instrument Name: R-TOC-01 **Analyst:** CSCHRADER **Analysis Lot:** 179988 **Method/Testcode:** 9060/TOC 4X T

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
RQ0911613-01	Carbon, Total Organic (TOC)	MB		Water	-0.13 ppm	42 mL	1.0 mg/L U	1	1.0			11/18/09 14:28	N	IV
RQ0911613-01	Carbon, Total Organic (TOC)	MB		Water	-0.16 ppm	42 mL	1.0 mg/L U	1	1.0			11/18/09 14:36	N	IV
RQ0911613-01	Carbon, Total Organic (TOC)	MB		Water	-0.21 ppm	42 mL	1.0 mg/L U	1	1.0			11/18/09 14:44	N	IV
RQ0911613-01	Carbon, Total Organic (TOC)	MB		Water	-0.14 ppm	42 mL	1.0 mg/L U	1	1.0			11/18/09 14:54	N	IV
RQ0911613-02	Carbon, Total Organic (TOC)	LCS		Water	9.05 ppm	42 mL	9.05 mg/L	1	1.0	91		11/18/09 15:02	N	IV
RQ0911613-02	Carbon, Total Organic (TOC)	LCS		Water	9.64 ppm	42 mL	9.64 mg/L	1	1.0	96		11/18/09 15:10	N	IV
RQ0911613-02	Carbon, Total Organic (TOC)	LCS		Water	9.96 ppm	42 mL	9.96 mg/L	1	1.0	100		11/18/09 15:19	N	IV
RQ0911613-02	Carbon, Total Organic (TOC)	LCS		Water	9.95 ppm	42 mL	9.95 mg/L	1	1.0	100		11/18/09 15:28	N	IV
R0906095-013	Carbon, Total Organic (TOC)	N/A		Water	1.33 ppm	42 mL	1.3 mg/L	1	1.0			11/18/09 16:11	N	IV
R0906095-013	Carbon, Total Organic (TOC)	N/A		Water	2.20 ppm	42 mL	2.2 mg/L	1	1.0			11/18/09 16:19	N	IV
R0906095-013	Carbon, Total Organic (TOC)	N/A		Water	1.49 ppm	42 mL	1.5 mg/L	1	1.0			11/18/09 16:27	N	IV
R0906095-013	Carbon, Total Organic (TOC)	N/A		Water	1.32 ppm	42 mL	1.3 mg/L	1	1.0			11/18/09 16:37	N	IV
R0906095-013	Carbon, Total Organic (TOC), Average	N/A		Water	1.59 mg/L	42 mL	1.6 mg/L	1	1.0			11/18/09 16:37	N	IV
R0906095-016	Carbon, Total Organic (TOC)	N/A		Water	1.85 ppm	42 mL	1.8 mg/L	1	1.0			11/18/09 16:46	N	IV
R0906095-016	Carbon, Total Organic (TOC)	N/A		Water	1.76 ppm	42 mL	1.8 mg/L	1	1.0			11/18/09 16:54	N	IV
R0906095-016	Carbon, Total Organic (TOC)	N/A		Water	1.57 ppm	42 mL	1.6 mg/L	1	1.0			11/18/09 17:02	N	IV
R0906095-016	Carbon, Total Organic (TOC)	N/A		Water	1.48 ppm	42 mL	1.5 mg/L	1	1.0			11/18/09 17:11	N	IV
R0906095-016	Carbon, Total Organic (TOC), Average	N/A		Water	1.66 mg/L	42 mL	1.7 mg/L	1	1.0			11/18/09 17:11	N	IV
R0906095-017	Carbon, Total Organic (TOC)	N/A		Water	0.90 ppm	42 mL	0.9 mg/L J	1	1.0			11/18/09 17:20	N	IV
R0906095-017	Carbon, Total Organic (TOC), Average	N/A		Water	1.14 mg/L	42 mL	1.1 mg/L	1	1.0			11/18/09 ~~17:20~~ 17:46	N	IV
R0906095-017	Carbon, Total Organic (TOC)	N/A		Water	1.61 ppm	42 mL	1.6 mg/L	1	1.0			11/18/09 17:28	N	IV
R0906095-017	Carbon, Total Organic (TOC)	N/A		Water	1.11 ppm	42 mL	1.1 mg/L	1	1.0			11/18/09 17:36	N	IV
R0906095-017	Carbon, Total Organic (TOC)	N/A		Water	0.94 ppm	42 mL	0.9 mg/L J	1	1.0			11/18/09 17:46	N	IV
R0906095-020	Carbon, Total Organic (TOC)	N/A		Water	0.51 ppm	42 mL	0.5 mg/L J	1	1.0			11/18/09 17:54	N	IV
R0906095-020	Carbon, Total Organic (TOC)	N/A		Water	0.13 ppm	42 mL	0.1 mg/L J	1	1.0			11/18/09 18:03	N	IV

CK 11/23/09

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! indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Printed 11/19/09 10:43

Results Summary

R60095 R64477 R65555 R66102 R66181 R66221 b copied

Reviewed & Approved
By: CK
Date: 11/24/09

Analytical Results Summary

Instrument Name: R-TOC-01 **Analyst:** CSCHRADER **Analysis Lot:** 179988 **Method/Testcode:** 9060/TOC 4X T

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
R0906095-020	Carbon, Total Organic (TOC)	N/A		Water	0.14 ppm	42 mL	0.1 mg/L J	1	1.0			11/18/09 18:11	N	IV
R0906095-020	Carbon, Total Organic (TOC)	N/A		Water	0.11 ppm	42 mL	0.1 mg/L J	1	1.0			11/18/09 18:20	N	IV
R0906095-020	Carbon, Total Organic (TOC), Average	N/A		Water	0.22 mg/L	42 mL	0.2 mg/L J	1	1.0			11/18/09 18:20	N	IV
R0906477-001	Carbon, Total Organic (TOC)	N/A		Water	2.09 ppm	42 mL	2.1 mg/L	1	1.0			11/18/09 18:29	N	IV
R0906477-001	Carbon, Total Organic (TOC), Average	N/A		Water	2.29 mg/L	42 mL	2.3 mg/L	1	1.0			11/18/09 ~~18:29~~ 18:54	N	IV
R0906477-001	Carbon, Total Organic (TOC)	N/A		Water	2.57 ppm	42 mL	2.6 mg/L	1	1.0			11/18/09 18:37	N	IV
R0906477-001	Carbon, Total Organic (TOC)	N/A		Water	2.29 ppm	42 mL	2.3 mg/L	1	1.0			11/18/09 18:45	N	IV
R0906477-001	Carbon, Total Organic (TOC)	N/A		Water	2.21 ppm	42 mL	2.2 mg/L	1	1.0			11/18/09 18:54	N	IV
R0906555-001	Carbon, Total Organic (TOC)	N/A		Water	5.88 ppm	42 mL	5.9 mg/L	1	1.0			11/18/09 19:03	N	IV
R0906555-001	Carbon, Total Organic (TOC)	N/A		Water	6.34 ppm	42 mL	6.3 mg/L	1	1.0			11/18/09 19:11	N	IV
R0906555-001	Carbon, Total Organic (TOC)	N/A		Water	6.56 ppm	42 mL	6.6 mg/L	1	1.0			11/18/09 19:20	N	IV
R0906555-001	Carbon, Total Organic (TOC)	N/A		Water	6.57 ppm	42 mL	6.6 mg/L	1	1.0			11/18/09 19:29	N	IV
RQ0911613-04	Carbon, Total Organic (TOC)	DUP	R0906555-001	Water	5.94 ppm	42 mL	5.9 mg/L	1	1.0		1	11/18/09 19:38	N	IV
RQ0911613-04	Carbon, Total Organic (TOC)	DUP	R0906555-001	Water	6.37 ppm	42 mL	6.4 mg/L	1	1.0		<1	11/18/09 19:46	N	IV
RQ0911613-04	Carbon, Total Organic (TOC)	DUP	R0906555-001	Water	6.45 ppm	42 mL	6.4 mg/L	1	1.0		2	11/18/09 19:54	N	IV
RQ0911613-04	Carbon, Total Organic (TOC)	DUP	R0906555-001	Water	6.54 ppm	42 mL	6.5 mg/L	1	1.0		<1	11/18/09 20:03	N	IV
RQ0911613-03	Carbon, Total Organic (TOC)	MS	R0906555-001	Water	15.41 ppm	42 mL	15.4 mg/L	1	1.0	95		11/18/09 20:12	N	IV
RQ0911613-03	Carbon, Total Organic (TOC)	MS	R0906555-001	Water	16.76 ppm	42 mL	16.8 mg/L	1	1.0	104		11/18/09 20:20	N	IV
RQ0911613-03	Carbon, Total Organic (TOC)	MS	R0906555-001	Water	16.40 ppm	42 mL	16.4 mg/L	1	1.0	98		11/18/09 20:28	N	IV
RQ0911613-03	Carbon, Total Organic (TOC)	MS	R0906555-001	Water	17.06 ppm	42 mL	17.1 mg/L	1	1.0	105		11/18/09 20:38	N	IV
R0906555-002	Carbon, Total Organic (TOC)	N/A		Water	9.63 ppm	42 mL	9.6 mg/L	1	1.0			11/18/09 21:55	N	IV
R0906555-002	Carbon, Total Organic (TOC)	N/A		Water	11.04 ppm	42 mL	11.0 mg/L	1	1.0			11/18/09 22:03	N	IV
R0906555-002	Carbon, Total Organic (TOC)	N/A		Water	10.77 ppm	42 mL	10.8 mg/L	1	1.0			11/18/09 22:12	N	IV
R0906555-002	Carbon, Total Organic (TOC)	N/A		Water	11.16 ppm	42 mL	11.2 mg/L	1	1.0			11/18/09 22:21	N	IV

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****
** SEQUENCE **
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111809 Wed Nov 18 12:16:11 2009

Pos/ Vial	Sample Name	Method	Run Type	# Rep	Vol (mL)	# Blk	Dil Fact	Ovr Rng	Remarks
1	CCV	toc1	Chk. 5	4	1.000	0	1.00	No	
2	CCB	toc1	Chk. 5	4	1.000	0	1.00	No	
3	LCS	toc1	Chk. 5	4	1.000	0	1.00	No	
4	R0906095-011	toc1	Sample	4	1.000	0	1.00	No	
5	R0906095-013	toc1	Sample	4	1.000	0	1.00	No	
6	R0906095-016	toc1	Sample	4	1.000	0	1.00	No	
7	R0906095-017	toc1	Sample	4	1.000	0	1.00	No	
8	R0906095-020	toc1	Sample	4	1.000	0	1.00	No	
9	R0906477-001	toc1	Sample	4	1.000	0	1.00	No	
10	R0906555-001	toc1	Sample	4	1.000	0	1.00	No	
11	R0906555-001DUP	toc1	Sample	4	1.000	0	1.00	No	
12	R0906555-001SPK	toc1	Sample	4	1.000	0	1.00	No	
13	CCV	toc1	Chk. 5	4	1.000	0	1.00	No	
14	CCB	toc1	Chk. 5	4	1.000	0	1.00	No	
15	R0906555-002	toc1	Sample	4	1.000	0	1.00	No	
16	R0906555-003	toc1	Sample	4	1.000	0	1.00	No	
17	R0906102-022	toc1	Sample	2	1.000	0	1.00	No	
18	R0906102-022DUP	toc1	Sample	2	1.000	0	1.00	No	
19	R0906102-022SPK	toc1	Sample	2	1.000	0	1.00	No	
20	R0906102-023	toc1	Sample	2	1.000	0	1.00	No	
21	R0906102-024	toc1	Sample	2	1.000	0	1.00	No	
22	R0906102-025	toc1	Sample	2	1.000	0	1.00	No	
23	R0906102-026	toc1	Sample	2	1.000	0	1.00	No	
24	R0906102-027	toc1	Sample	2	1.000	0	1.00	No	
25	CCV	toc1	Chk. 5	4	1.000	0	1.00	No	
26	CCB	toc1	Chk. 5	4	1.000	0	1.00	No	
27	LCS	toc1	Chk. 5	2	1.000	0	1.00	No	
28	R0906102-028	toc1	Sample	2	1.000	0	1.00	No	
29	R0906181-003	toc1	Sample	2	1.000	0	1.00	No	2
30	R0906221-002	toc1	Sample	2	1.000	0	1.00	No	
31	R0906221-003	toc1	Sample	2	1.000	0	1.00	No	
32	R0906221-012	toc1	Sample	2	1.000	0	1.00	No	
33	R0906221-014	toc1	Sample	2	1.000	0	1.00	No	
34	R0906221-015	toc1	Sample	2	1.000	0	1.00	No	
35	R0906221-016	toc1	Sample	2	1.000	0	1.00	No	
36	R0906221-022	toc1	Sample	2	1.000	0	1.00	No	
37	CCV	toc1	Chk. 5	2	1.000	0	1.00	No	
38	CCB	toc1	Chk. 5	2	1.000	0	1.00	No	
39	R0906221-021	toc1	Sample	2	1.000	0	1.00	No	
40	R0906221-021DUP	toc1	Sample	2	1.000	0	1.00	No	
41	R0906221-021SPK	toc1	Sample	2	1.000	0	1.00	No	
42	R0906221-023	toc1	Sample	2	1.000	0	1.00	No	
43	R0906221-024	toc1	Sample	2	1.000	0	1.00	No	
44	R0906221-025	toc1	Sample	2	1.000	0	1.00	No	

Analyst: C. Schrader
Pipets: TOC/TOX
WAYNE

****
** SEQUENCE **
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111809 Wed Nov 18 12:16:11 2009

Pos/ Vial	Sample Name	Method	Run Type	# Rep	Vol (mL)	# Blk	Dil Fact	Ovr Rng	Remarks
45	R0906221-026	toc1	Sample	2	1.000	0	1.00	No	
46	R0906248-001	toc1	Sample	2	1.000	0	1.00	No	
47	CCV	toc1	Chk. 5	2	1.000	0	1.00	No	
48	CCB	toc1	Chk. 5	2	1.000	0	1.00	No	

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OI Analytical Model 1010

TOC by EPA 415.1 / 9060 / SM20 5310 C

Sample Information:

Sample #:	1
Sample Name:	CCV
Run Type:	CHK STD 5
Analysis Mode:	TOC
Total Reps:	4
Date:	18Nov2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	1118001.rlt

Method Name:	toc1
Sequence Name:	111809
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	13:54	12291	14.561	14.206
2	14:02	12790	15.167	14.797
3	14:10	13066	15.502	15.124
4	14:19	13332	15.825	15.439
	Avg.	12870	15.264	14.892
	Std. Dev	444.78		
	RSD (%)	3.46		

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11/19/09

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TOC by EPA 415.1 / 9060
OI Analytical Model 1010

Sample Information:

Sample #:	2
Sample Name:	CCB
Run Type:	CHK STD 5
Analysis Mode:	TOC
Total Reps:	4
Date:	18Nov2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	1118002.rlt

Method Name:	toc1
Sequence Name:	111809
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	14:28	193	-0.132	-0.129
2	14:36	168	-0.163	-0.159
3	14:44	126	-0.214	-0.209
4	14:54	182	-0.146	-0.142
	Avg.	167	-0.164	-0.160
	Std. Dev	29.34		
	RSD (%)	17.54		

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TOC by EPA 415.1 / 9060
OI Analytical Model 1010

Sample Information:

Sample #:	3
Sample Name:	LCS
Run Type:	CHK STD 5
Analysis Mode:	TOC
Total Reps:	4
Date:	18Nov2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	1118003.rlt

Method Name:	toc1
Sequence Name:	111809
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	15:02	7940	9.277	9.050
2	15:10	8438	9.881	9.640
3	15:19	8704	10.204	9.956
4	15:28	8703	10.203	9.954
	Avg.	8446	9.891	9.650
	Std. Dev	359.96		
	RSD (%)	4.26		

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TOC by EPA 415.1 / 9060
OI Analytical Model 1010

Sample Information:

Sample #:	4
Sample Name:	R0906095-011
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	4
Date:	18Nov2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	1118004.rlt

Method Name:	toc1
Sequence Name:	111809
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	15:37	1031	0.981	0.957
2	15:45	2034	2.200	2.146
3	15:53	1459	1.501	1.465
4	16:02	1267	1.268	1.237
	Avg.	1448	1.487	1.451
	Std. Dev	428.24		
	RSD (%)	29.58		

RSD>20%, RPT
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TOC by EPA 415.1 / 9060
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Sample Information:

Sample #:	5
Sample Name:	R0906095-013
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	4
Date:	18Nov2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	1118005.rlt

Method Name:	toc1
Sequence Name:	111809
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	16:11	1347	1.365	1.332
2	16:19	2082	2.258	2.203
3	16:27	1483	1.530	1.493
4	16:37	1336	1.352	1.319
	Avg.	1562	1.626	1.587
	Std. Dev	353.05		
	RSD (%)	22.60		

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TOC by EPA 415.1 / 9060
OI Analytical Model 1010

Sample Information:

Sample #:	6
Sample Name:	R0906095-016
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	4
Date:	18Nov2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	1118006.rlt

Method Name:	toc1
Sequence Name:	111809
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	16:46	1781	1.892	1.846
2	16:54	1708	1.804	1.760
3	17:02	1544	1.604	1.565
4	17:11	1470	1.515	1.478
	Avg.	1626	1.704	1.662
	Std. Dev	143.54		
	RSD (%)	8.83		

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TOC by EPA 415.1 / 9060
OI Analytical Model 1010

Sample Information:

Sample #:	7
Sample Name:	R0906095-017
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	4
Date:	18Nov2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	1118007.rlt

Method Name:	toc1
Sequence Name:	111809
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	17:20	979	0.918	0.896
2	17:28	1584	1.653	1.613
3	17:36	1160	1.138	1.110
4	17:46	1019	0.967	0.943
	Avg.	1186	1.169	1.140
	Std. Dev	276.78		
	RSD (%)	23.35		

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TOC by EPA 415.1 / 9060
OI Analytical Model 1010

Sample Information:

Sample #:	8
Sample Name:	R0906095-020
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	4
Date:	18Nov2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	1118008.rlt

Method Name:	toc1
Sequence Name:	111809
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	17:54	656	0.526	0.513
2	18:03	336	0.137	0.134
3	18:11	344	0.147	0.143
4	18:20	312	0.108	0.105
	Avg.	412	0.230	0.224
	Std. Dev	163.23		
	RSD (%)	39.62		

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TOC by EPA 415.1 / 9060
OI Analytical Model 1010

Sample Information:

Sample #:	9
Sample Name:	R0906477-001
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	4
Date:	18Nov2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	1118009.rlt

Method Name:	toc1
Sequence Name:	111809
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	18:29	1990	2.146	2.094
2	18:37	2393	2.636	2.571
3	18:45	2159	2.351	2.294
4	18:54	2088	2.265	2.210
	Avg.	2158	2.350	2.292
	Std. Dev	171.61		
	RSD (%)	7.95		

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1 Mustard Street
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TOC by EPA 415.1 / 9060
OI Analytical Model 1010

Sample Information:

Sample #:	10
Sample Name:	R0906555-001
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	4
Date:	18Nov2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	1118010.rlt

Method Name:	toc1
Sequence Name:	111809
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	19:03	5185	6.026	5.880
2	19:11	5576	6.501	6.343
3	19:20	5763	6.728	6.564
4	19:29	5768	6.735	6.570
	Avg.	5573	6.498	6.339
	Std. Dev	273.67		
	RSD (%)	4.91		

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Sample Information:

Sample #:	11
Sample Name:	R0906555-001DUP
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	4
Date:	18Nov2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	1118011.rlt

Method Name:	toc1
Sequence Name:	111809
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	19:38	5233	6.085	5.936
2	19:46	5600	6.531	6.371
3	19:54	5663	6.607	6.446
4	20:03	5743	6.704	6.541
	Avg.	5560	6.482	6.324
	Std. Dev	225.56		
	RSD (%)	4.06		

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Sample Information:

Sample #:	12
Sample Name:	R0906555-001SPK
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	4
Date:	18Nov2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	1118012.rlt

Method Name:	toc1
Sequence Name:	111809
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	20:12	13227	15.794	15.409
2	20:20	14365	17.176	16.757
3	20:28	14066	16.813	16.403
4	20:38	14621	17.487	17.060
	Avg.	14070	16.817	16.407
	Std. Dev	605.89		
	RSD (%)	4.31		

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Sample Information:

Sample #:	13
Sample Name:	CCV
Run Type:	CHK STD 5
Analysis Mode:	TOC
Total Reps:	4
Date:	18Nov2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	1118013.rlt

Method Name:	toc1
Sequence Name:	111809
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	20:46	12729	15.093	14.725
2	20:55	12675	15.027	14.661
3	21:03	13112	15.558	15.179
4	21:12	13378	15.881	15.494
	Avg.	12974	15.390	15.015
	Std. Dev	332.51		
	RSD (%)	2.56		

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9515

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Sample Information:

Sample #:	14
Sample Name:	CCB
Run Type:	CHK STD 5
Analysis Mode:	TOC
Total Reps:	4
Date:	18Nov2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	1118014.rlt

Method Name:	toc1
Sequence Name:	111809
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	21:21	217	-0.103	-0.101
2	21:29	175	-0.154	-0.150
3	21:37	160	-0.172	-0.168
4	21:47	198	-0.126	-0.123
	Avg.	188	-0.139	-0.136
	Std. Dev	25.12		
	RSD (%)	13.40		

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Sample Information:

Sample #:	15
Sample Name:	R0906555-002
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	4
Date:	18Nov2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	1118015.rlt

Method Name:	toc1
Sequence Name:	111809
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	21:55	8350	9.870	9.630
2	22:03	9536	11.311	11.035
3	22:12	9313	11.040	10.771
4	22:21	9640	11.437	11.158
	Avg.	9210	10.915	10.648
	Std. Dev	589.18		
	RSD (%)	6.40		

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Sample Information:

Sample #:	16
Sample Name:	R0906555-003
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	4
Date:	18Nov2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	1118016.rlt

Method Name:	toc1
Sequence Name:	111809
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	22:30	182061	220.848	215.461
2	22:38	191842	232.727	227.051
3	22:46	194036	235.392	229.650
4	22:55	196424	238.292	232.480
	Avg.	191091	231.815	226.161
	Std. Dev	6303.94		
	RSD (%)	3.30		

RPT @ 1/20

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TOC by EPA 415.1 / 9060
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Sample Information:

Sample #:	17
Sample Name:	R0906102-022
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	2
Date:	18Nov2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	1118017.rlt

Method Name:	toc1
Sequence Name:	111809
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	23:04	10154	12.061	11.767
2	23:13	10320	12.263	11.964
	Avg.	10237	12.162	11.866
	Std. Dev	117.38		
	RSD (%)	1.15		

RPT, carry-over
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Sample Information:

Sample #:	18
Sample Name:	R0906102-022DUP
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	2
Date:	18Nov2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	1118018.rlt

Method Name:	toc1
Sequence Name:	111809
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	23:22	7983	9.425	9.195
2	23:31	7704	9.086	8.864
	Avg.	7844	9.255	9.030
	Std. Dev	197.28		
	RSD (%)	2.52		

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9851

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TOC by EPA 415.1 / 9060
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Sample Information:

Sample #:	19
Sample Name:	R0906102-022SPK
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	2
Date:	18Nov2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	1118019.rlt

Method Name:	toc1
Sequence Name:	111809
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	23:40	15305	18.318	17.871
2	23:50	15982	19.140	18.673
	Avg.	15644	18.729	18.272
	Std. Dev	478.71		
	RSD (%)	3.06		

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0552

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Sample Information:

Sample #:	20
Sample Name:	R0906102-023
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	2
Date:	18Nov2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	1118020.rlt

Method Name:	toc1
Sequence Name:	111809
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	23:58	4906	5.688	5.549
2	00:08	5393	6.279	6.126
	Avg.	5150	5.983	5.837
	Std. Dev	344.36		
	RSD (%)	6.69		

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Sample Information:

Sample #:	21
Sample Name:	R0906102-024
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	2
Date:	19Nov2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	1118021.rlt

Method Name:	toc1
Sequence Name:	111809
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	00:17	3207	3.624	3.536
2	00:26	3621	4.127	4.026
	Avg.	3414	3.876	3.781
	Std. Dev	292.74		
	RSD (%)	8.57		

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1550

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Sample Information:

Sample #:	22
Sample Name:	R0906102-025
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	2
Date:	19Nov2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	1118022.rlt

Method Name:	toc1
Sequence Name:	111809
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	00:35	2870	3.215	3.136
2	00:44	3357	3.806	3.714
	Avg.	3114	3.511	3.425
	Std. Dev	344.36		
	RSD (%)	11.06		

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Sample Information:

Sample #:	23
Sample Name:	R0906102-026
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	2
Date:	19Nov2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	1118023.rlt

Method Name:	toc1
Sequence Name:	111809
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	00:53	4626	5.348	5.217
2	01:02	5127	5.956	5.811
	Avg.	4877	5.652	5.514
	Std. Dev	354.26		
	RSD (%)	7.26		

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Sample Information:

Sample #:	24
Sample Name:	R0906102-027
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	2
Date:	19Nov2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	1118024.rlt

Method Name:	toc1
Sequence Name:	111809
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	01:11	4838	5.605	5.468
2	01:20	5428	6.322	6.167
	Avg.	5133	5.963	5.818
	Std. Dev	417.19		
	RSD (%)	8.13		

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Sample Information:

Sample #:	25
Sample Name:	CCV
Run Type:	CHK STD 5
Analysis Mode:	TOC
Total Reps:	4
Date:	19Nov2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	1118025.rlt

Method Name:	toc1
Sequence Name:	111809
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	01:29	12973	15.389	15.014
2	01:37	13347	15.844	15.457
3	01:45	13397	15.904	15.516
4	01:55	13224	15.694	15.311
	Avg.	13235	15.708	15.325
	Std. Dev	189.34		
	RSD (%)	1.43		

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Sample Information:

Sample #:	26
Sample Name:	CCB
Run Type:	CHK STD 5
Analysis Mode:	TOC
Total Reps:	4
Date:	19Nov2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	1118026.rlt

Method Name:	toc1
Sequence Name:	111809
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	02:03	195	-0.130	-0.127
2	02:11	216	-0.104	-0.102
3	02:20	185	-0.142	-0.139
4	02:29	222	-0.097	-0.095
	Avg.	205	-0.118	-0.116
	Std. Dev	17.41		
	RSD (%)	8.51		

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Sample Information:

Sample #:	27
Sample Name:	LCS
Run Type:	CHK STD 5
Analysis Mode:	TOC
Total Reps:	2
Date:	19Nov2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	1118027.rlt

Method Name:	toc1
Sequence Name:	111809
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	02:38	8245	9.647	9.412
2	02:47	8647	10.135	9.888
	Avg.	8446	9.891	9.650
	Std. Dev	284.26		
	RSD (%)	3.37		

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9559

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TOC by EPA 415.1 / 9060
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Sample Information:

Sample #:	28
Sample Name:	R0906102-028
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	2
Date:	19Nov2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	1118028.rlt

Method Name:	toc1
Sequence Name:	111809
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	02:56	4234	4.871	4.753
2	03:05	4630	5.352	5.222
	Avg.	4432	5.112	4.987
	Std. Dev	280.01		
	RSD (%)	6.32		

OK
CS
11/19/09

9959

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TOC by EPA 415.1 / 9060
OI Analytical Model 1010

Sample Information:

Sample #:	29
Sample Name:	R0906181-003
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	2
Date:	19Nov2009
Dilution Factor:	1.00
Comments:	2

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	1118029.rlt

Method Name:	toc1
Sequence Name:	111809
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	03:14	1348	1.366	1.333
2	03:23	1759	1.866	1.820
	Avg.	1554	1.616	1.577
	Std. Dev	290.62		
	RSD (%)	18.71		

2X ↓

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9552

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Sample Information:

Sample #:	30
Sample Name:	R0906221-002
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	2
Date:	19Nov2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	1118030.rlt

Method Name:	toc1
Sequence Name:	111809
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	03:32	825	0.731	0.713
2	03:41	1309	1.319	1.287
	Avg.	1067	1.025	1.000
	Std. Dev	342.24		
	RSD (%)	32.07		

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Sample Information:

Sample #:	31
Sample Name:	R0906221-003
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	2
Date:	19Nov2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	1118031.rlt

Method Name:	toc1
Sequence Name:	111809
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	03:50	1849	1.975	1.927
2	03:59	2912	3.266	3.186
	Avg.	2381	2.620	2.556
	Std. Dev	751.65		
	RSD (%)	31.58		

↑ RSD, RPT @ 1/2
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9051

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Sample Information:

Sample #:	32
Sample Name:	R0906221-012
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	2
Date:	19Nov2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	1118032.rlt

Method Name:	toc1
Sequence Name:	111809
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	04:08	12460	14.862	14.500
2	04:17	13430	16.040	15.649
	Avg.	12945	15.451	15.074
	Std. Dev	685.89		
	RSD (%)	5.30		

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Sample Information:

Sample #:	33
Sample Name:	R0906221-014
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	2
Date:	19Nov2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	1118033.rlt

Method Name:	toc1
Sequence Name:	111809
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	04:26	1230	1.223	1.193
2	04:36	2033	2.198	2.145
	Avg.	1632	1.711	1.669
	Std. Dev	567.81		
	RSD (%)	34.80		

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Sample Information:

Sample #:	34
Sample Name:	R0906221-015
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	2
Date:	19Nov2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	1118034.rlt

Method Name:	toc1
Sequence Name:	111809
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	04:44	3265	3.695	3.604
2	04:54	4782	5.537	5.402
	Avg.	4024	4.616	4.503
	Std. Dev	1072.68		
	RSD (%)	26.66		

↑RSD, RPT @ 1/2
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Sample Information:

Sample #:	35
Sample Name:	R0906221-016
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	2
Date:	19Nov2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	1118035.rlt

Method Name:	toc1
Sequence Name:	111809
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	05:02	1217	1.207	1.178
2	05:12	1808	1.925	1.878
	Avg.	1513	1.566	1.528
	Std. Dev	417.90		
	RSD (%)	27.63		

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Sample Information:

Sample #:	36
Sample Name:	R0906221-022
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	2
Date:	19Nov2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	1118036.rlt

Method Name:	toc1
Sequence Name:	111809
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	05:21	2305	2.529	2.467
2	05:30	3403	3.862	3.768
	Avg.	2854	3.195	3.117
	Std. Dev	776.40		
	RSD (%)	27.20		

↑ RSD, RPT @ 1/2
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Sample Information:

Sample #:	37
Sample Name:	CCV
Run Type:	CHK STD 5
Analysis Mode:	TOC
Total Reps:	2
Date:	19Nov2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	1118037.rlt

Method Name:	toc1
Sequence Name:	111809
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	05:39	13375	15.878	15.490
2	05:48	12806	15.186	14.816
	Avg.	13091	15.532	15.153
	Std. Dev	402.34		
	RSD (%)	3.07		

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Sample Information:

Sample #:	38
Sample Name:	CCB
Run Type:	CHK STD 5
Analysis Mode:	TOC
Total Reps:	2
Date:	19Nov2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	1118038.rlt

Method Name:	toc1
Sequence Name:	111809
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	05:57	177	-0.152	-0.148
2	06:06	304	0.002	0.002
	Avg.	241	-0.075	-0.073
	Std. Dev	89.80		
	RSD (%)	37.34		

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T1559

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TOC by EPA 415.1 / 9060
OI Analytical Model 1010

Sample Information:

Sample #:	39
Sample Name:	R0906221-021
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	2
Date:	19Nov2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	1118039.rlt

Method Name:	toc1
Sequence Name:	111809
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	06:15	2047	2.215	2.161
2	06:24	3051	3.435	3.351
	Avg.	2549	2.825	2.756
	Std. Dev	709.94		
	RSD (%)	27.85		

↑RSD, RPT @ 1/2

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Sample Information:

Sample #:	40
Sample Name:	R0906221-021DUP
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	2
Date:	19Nov2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	1118040.rlt

Method Name:	toc1
Sequence Name:	111809
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	06:33	2116	2.299	2.243
2	06:42	3263	3.692	3.602
	Avg.	2690	2.996	2.923
	Std. Dev	811.05		
	RSD (%)	30.16		

1RSD, RPT @ 1/2

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Sample Information:

Sample #:	41
Sample Name:	R0906221-021SPK
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	2
Date:	19Nov2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	1118041.rlt

Method Name:	toc1
Sequence Name:	111809
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	06:51	9595	11.383	11.105
2	07:00	11019	13.112	12.792
	Avg.	10307	12.247	11.949
	Std. Dev	1006.92		
	RSD (%)	9.77		

SAMPLE LOOP FAILED

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Sample Information:

Sample #:	42
Sample Name:	R0906221-023
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	2
Date:	19Nov2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	1118042.rlt

Method Name:	toc1
Sequence Name:	111809
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	07:09	1730	1.830	1.786
2	07:19	2683	2.988	2.915
	Avg.	2207	2.409	2.350
	Std. Dev	673.87		
	RSD (%)	30.54		

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Sample Information:

Sample #:	43
Sample Name:	R0906221-024
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	2
Date:	19Nov2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	1118043.rlt

Method Name:	toc1
Sequence Name:	111809
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	07:27	2283	2.502	2.441
2	07:37	3811	4.358	4.251
	Avg.	3047	3.430	3.346
	Std. Dev	1080.46		
	RSD (%)	35.46		

↑RSD, RPT @ 1/2

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Sample Information:

Sample #:	44
Sample Name:	R0906221-025
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	2
Date:	19Nov2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	1118044.rlt

Method Name:	toc1
Sequence Name:	111809
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	07:46	1370	1.393	1.359
2	07:55	2174	2.370	2.312
	Avg.	1772	1.881	1.835
	Std. Dev	568.51		
	RSD (%)	32.08		

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Sample Information:

Sample #:	45
Sample Name:	R0906221-026
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	2
Date:	19Nov2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	1118045.rlt

Method Name:	toc1
Sequence Name:	111809
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	08:04	1257	1.256	1.225
2	08:13	2248	2.459	2.399
	Avg.	1753	1.858	1.812
	Std. Dev	700.74		
	RSD (%)	39.99		

↑ RSD, RPT @ 1/2
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0959

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Sample Information:

Sample #:	46
Sample Name:	R0906248-001
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	2
Date:	19Nov2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	1118046.rlt

Method Name:	toc1
Sequence Name:	111809
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	08:22	1263	1.263	1.232
2	08:31	2220	2.425	2.366
	Avg.	1742	1.844	1.799
	Std. Dev	676.70		
	RSD (%)	38.86		

↑RSD, RPT @ 1/2

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Sample Information:

Sample #:	47
Sample Name:	CCV
Run Type:	CHK STD 5
Analysis Mode:	TOC
Total Reps:	2
Date:	19Nov2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	1118047.rlt

Method Name:	toc1
Sequence Name:	111809
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	08:40	12941	15.350	14.976
2	08:49	12603	14.940	14.576
	Avg.	12772	15.145	14.776
	Std. Dev	239.00		
	RSD (%)	1.87		

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Sample Information:

Sample #:	48
Sample Name:	CCB
Run Type:	CHK STD 5
Analysis Mode:	TOC
Total Reps:	2
Date:	19Nov2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	1118048.rlt

Method Name:	toc1
Sequence Name:	111809
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	08:58	152	-0.182	-0.178
2	09:07	284	-0.022	-0.021
	Avg.	218	-0.102	-0.100
	Std. Dev	93.34		
	RSD (%)	42.82		

Columbia Analytical Services
1 Mustard St., Rochester NY 14609

General Chemistry Analytical Run Cover Sheet

Analyst: C. Schrader Date: 11/18/09

Analysis: Total Organic Carbon, 415.1/9060
High Level: 1.0 to 30.0 ppm

Instrument: OI Analytical Model1010 TOC Analyzer

Quality Control:

	Log#, Date,	Stocks Prep. Log#, Date,	Stock Sol (mLs)	Stock Sol (mg/L)	Final Vol (mLs)	True Value (mg/L)
a) Standards Prep.:	WC86012B, 08/18/09	WC86010B, 05/05/09				
b) I/CCV Preparation:	WC86012E, 08/18/09	WC86010A, 05/05/09	3.0	1000	200	15.00
c) LCS Preparation:	WC86012C, 08/18/09	WC86010B, 05/05/09	1.0	1000	100	10.00
d) Matrix Spike Prep.:	WC86012D, 08/18/09	WC86010B, 05/05/09	0.42	1000	42	10.00

Instrument log filled in? (Y) (N)

Comments:

Curve Date = 08/18/09

Note: Dilutions greater than 1/1 are placed in the "comments" section of the Model 1010 Analyzer report. The "Dilution Factor" on the Model 1010 will always read "1.00" TOC results on the Model 1010 Analyzer reports do not include the dilution factor. Final results on the Starlims run and final report include the dilution factor.

p:\L\1\G\forms\coversht\cover.toc

****
** SEQUENCE **
****

081809RL Tue Aug 18 17:43:10 2009

Pos/ Vial	Sample Name	Method	Run Type	# Rep	Vol (mL)	# Blk	Dil Fact	Ovr Rng	Remarks
1	BLANK	blk	Sample	4	1.000	15	1.00	No	
2	BLANK	blk	Sample	4	1.000	8	1.00	No	
3	BLANK	toc1	Sample	4	1.000	0	1.00	No	
4	0.00 STD	toc1	Std. 1	4	1.000	0	1.00	No	
5	1.00 STD	toc1	Std. 2	4	1.000	0	1.00	No	
6	5.00 STD	toc1	Std. 3	4	1.000	0	1.00	No	
7	10.00 STD	toc1	Std. 4	4	1.000	0	1.00	No	
8	30.00 STD	toc1	Std. 5	4	1.000	0	1.00	No	
9	ICV	toc1	Chk. 5	4	1.000	0	1.00	No	
10	ICB	toc1	Chk. 5	4	1.000	0	1.00	No	
11	LCS	toc1	Chk. 5	4	1.000	0	1.00	No	
12	MDL 1 TV= 0.500	toc1	Sample	4	1.000	0	1.00	No	
13	MDL 2 TV= 0.500	toc1	Sample	4	1.000	0	1.00	No	
14	MDL 3 TV= 0.500	toc1	Sample	4	1.000	0	1.00	No	
15	MDL 4 TV= 0.500	toc1	Sample	4	1.000	0	1.00	No	
16	MDL 5 TV= 0.500	toc1	Sample	4	1.000	0	1.00	No	
17	MDL 6 TV= 0.500	toc1	Sample	4	1.000	0	1.00	No	
18	MDL 7 TV= 0.500	toc1 CS 8/19/09	Sample	4	1.000	0	1.00	No	
19	LOD TV= 0.500	toc1	Sample	4	1.000	0	1.00	No	
20	LOD TV= ~~0.500~~ 0.200	toc1	Sample	4	1.000	0	1.00	No	
21	CCV CS 8/19/09	toc1	Chk. 5	4	1.000	0	1.00	No	
22	CCB	toc1	Chk. 5	4	1.000	0	1.00	No	

Analyst: C. Schrader

Pipets: Spiderman
Wonder Woman

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585-288-5380

OI Analytical Model 1010

TOC by EPA 415.1 / 9060 / SM20 5310 C

Sample Information:

Sample #:	1
Sample Name:	BLANK
Run Type:	BLANK
Analysis Mode:	TICTOC
Total Reps:	15
Date:	18Aug2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	0818001.rlt

Method Name:	blk
Sequence Name:	081809rl
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time		TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	17:50	*	377	0.518	0.505
2	17:55	*	255	0.351	0.342
3	18:01	*	219	0.302	0.294
4	18:06	*	266	0.366	0.357
5	18:12	*	329	0.452	0.441
6	18:18	*	310	0.426	0.416
7	18:23	*	326	0.448	0.437
8	18:29	*	218	0.300	0.293
9	18:35	*	248	0.341	0.333
10	18:40	*	222	0.306	0.298
11	18:46	*	215	0.296	0.289
12	18:51	*	225	0.310	0.302
13	18:57	*	230	0.317	0.309
14	19:03	*	235	0.323	0.316
15	19:10	*	231	0.318	0.310
	Avg.		260	0.358	0.350
	Std. Dev		50.72		
	RSD (%)		19.48		

Reagent blanks
OK
CS
8/19/09

Report generrated by OI Analytical's TOC Reporter V5.0, using WinToc 1010 V5.0 and 1010 Firmware V5.0

'*' = modified '-' = unused

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TOC by EPA 415.1 / 9060
OI Analytical Model 1010

Sample Information:

Sample #:	2
Sample Name:	BLANK
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	4
Date:	18Aug2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	0818002.rtt

Method Name:	blk
Sequence Name:	081809rl
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	19:17	333	0.138	0.135
2	19:22	209	-0.032	-0.031
3	19:28	196	-0.049	-0.048
4	19:36	209	-0.032	-0.031
	Avg.	237	0.007	0.006
	Std. Dev	64.46		
	RSD (%)	27.23		

Water blank
OK
CS
8/19/09

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TOC by EPA 415.1 / 9060
OI Analytical Model 1010

Sample Information:

Sample #:	3
Sample Name:	BLANK
Run Type:	BLANK
Analysis Mode:	TICTOC
Total Reps:	8
Date:	18Aug2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	0818003.rlt

Method Name:	blk
Sequence Name:	081809rl
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time		TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	19:42	*	259	0.356	0.348
2	19:48	*	250	0.344	0.336
3	19:53	*	233	0.321	0.313
4	19:59	*	262	0.360	0.352
5	20:04	*	248	0.341	0.333
6	20:10	*	255	0.351	0.342
7	20:16	*	214	0.295	0.288
8	20:23	*	200	0.276	0.269
	Avg.		240	0.331	0.322
	Std. Dev		22.55		
	RSD (%)		9.39		

Reagent blanks
OK
CS
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TOC by EPA 415.1 / 9060
OI Analytical Model 1010

Sample Information:

Sample #:	4
Sample Name:	BLANK
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	4
Date:	18Aug2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	0818004.rlt

Method Name:	blk
Sequence Name:	081809rl
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	20:30	278	0.075	0.074
2	20:35	177	-0.063	-0.062
3	20:41	237	0.019	0.019
4	20:49	160	-0.086	-0.084
	Avg.	213	-0.014	-0.013
	Std. Dev	54.49		
	RSD (%)	25.58		

Water blank
OK
CS
8/19/09

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TOC by EPA 415.1 / 9060
OI Analytical Model 1010

Sample Information:

Sample #:	5
Sample Name:	BLANK
Run Type:	SAMPLE
Analysis Mode:	TICTOC
Total Reps:	4
Date:	18Aug2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	0818005.rlt

Method Name:	toc1
Sequence Name:	081809rl
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	20:58	296	0.100	0.098
2	21:06	296	0.100	0.098
3	21:14	286	0.086	0.084
4	21:23	267	0.060	0.059
	Avg.	286	0.087	0.085
	Std. Dev	13.67		
	RSD (%)	4.78		

Water blank
OK
CS
8/19/09

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TOC by EPA 415.1 / 9060
OI Analytical Model 1010

Sample Information:

Sample #:	6
Sample Name:	0.00 STD
Run Type:	STD 1
Analysis Mode:	TOC
Total Reps:	4
Date:	18Aug2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	0818006.rlt

Method Name:	toc1
Sequence Name:	081809rl
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	21:32	238	0.000	0.000
2	21:40	295	0.000	0.000
3	21:49	295	0.000	0.000
4	21:58	260	0.000	0.000
	Avg.	272	0.000	0.000
	Std. Dev	28.04		
	RSD (%)	10.31		

OK
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TOC by EPA 415.1 / 9060
OI Analytical Model 1010

Sample Information:

Sample #:	7
Sample Name:	1.00 STD
Run Type:	STD 2
Analysis Mode:	TOC
Total Reps:	4
Date:	18Aug2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	0818007.rlt

Method Name:	toc1
Sequence Name:	081809rl
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	22:07	1094	1.025	1.000
2	22:15	1030	1.025	1.000
3	22:23	1079	1.025	1.000
4	22:32	1132	1.025	1.000
	Avg.	1084	1.025	1.000
	Std. Dev	42.21		
	RSD (%)	3.89		

OK
CS
8/19/09

65500

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TOC by EPA 415.1 / 9060
OI Analytical Model 1010

Sample Information:

Sample #:	8
Sample Name:	5.00 STD
Run Type:	STD 3
Analysis Mode:	TOC
Total Reps:	4
Date:	18Aug2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	0818008.rlt

Method Name:	toc1
Sequence Name:	081809rl
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	22:41	4391	5.125	5.000
2	22:49	4589	5.125	5.000
3	22:57	4771	5.125	5.000
4	23:07	4693	5.125	5.000
	Avg.	4611	5.125	5.000
	Std. Dev	164.53		
	RSD (%)	3.57		

OK
CS
8/19/09

16596

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TOC by EPA 415.1 / 9060
OI Analytical Model 1010

Sample Information:

Sample #:	9
Sample Name:	10.00 STD
Run Type:	STD 4
Analysis Mode:	TOC
Total Reps:	4
Date:	18Aug2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	0818009.rit

Method Name:	toc1
Sequence Name:	081809rl
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	23:16	8591	10.250	10.000
2	23:24	8882	10.250	10.000
3	23:32	8965	10.250	10.000
4	23:41	8927	10.250	10.000
	Avg.	8841	10.250	10.000
	Std. Dev	170.25		
	RSD (%)	1.93		

OK
CS
8/19/09

25509

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TOC by EPA 415.1 / 9060
OI Analytical Model 1010

Sample Information:

Sample #:	10
Sample Name:	30.00 STD
Run Type:	STD 5
Analysis Mode:	TOC
Total Reps:	4
Date:	18Aug2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	0818010.rlt

Method Name:	toc1
Sequence Name:	081809rl
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	23:50	23659	30.750	30.000
2	23:58	25783	30.750	30.000
3	00:06	26255	30.750	30.000
4	00:16	26397	30.750	30.000
	Avg.	25524	30.750	30.000
	Std. Dev	1270.41		
	RSD (%)	4.98		

OK
CS
8/19/09

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TOC by EPA 415.1 / 9060
OI Analytical Model 1010

Sample Information:

Sample #:	11
Sample Name:	ICV
Run Type:	CHK STD 5
Analysis Mode:	TOC
Total Reps:	4
Date:	19Aug2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	0818011.rlt

Method Name:	toc1
Sequence Name:	081809rl
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	00:24	13002	15.425	15.048
2	00:32	13583	16.130	15.737
3	00:41	13434	15.949	15.560
4	00:50	13494	16.022	15.631
	Avg.	13378	15.882	15.494
	Std. Dev	258.19		
	RSD (%)	1.93		

OK
CS
8/19/09

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TOC by EPA 415.1 / 9060
OI Analytical Model 1010

Sample Information:

Sample #:	12
Sample Name:	ICB
Run Type:	CHK STD 5
Analysis Mode:	TOC
Total Reps:	4
Date:	19Aug2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	0818012.rlt

Method Name:	toc1
Sequence Name:	081809rl
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	00:59	230	-0.087	-0.085
2	01:07	190	-0.136	-0.133
3	01:15	239	-0.077	-0.075
4	01:24	196	-0.129	-0.126
	Avg.	214	-0.107	-0.105
	Std. Dev	24.36		
	RSD (%)	11.40		

OK
CS
8/19/09

Report generrated by OI Analytical's TOC Reporter V5.0, using WinToc 1010 V5.0 and 1010 Firmware V5.0

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Columbia Analytical Srvcs.
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585-288-5380

TOC by EPA 415.1 / 9060
OI Analytical Model 1010

Sample Information:

Sample #:	13
Sample Name:	LCS
Run Type:	CHK STD 5
Analysis Mode:	TOC
Total Reps:	4
Date:	19Aug2009
Dilution Factor:	1.00
Comments:	

Operator Name:	Unknown
Sample Volume (ml):	1.025
Loop Volume (ml):	1.025
Loop Size (ml):	1.000
Sample Intro:	AUTOSAMPLER
Remote Start:	OFF
File Name:	0818013.rlt

Method Name:	toc1
Sequence Name:	081809rl
Calibration Name:	081809rl
PAM Mode:	OFF
PAM Volume (ul):	0
PAM Purge (min:sec):	0:30

Sample Results:

Rep #	Time	TOC Area (cnts)	TOC Mass (ugC)	TOC Conc (ppm)
1	01:33	8506	9.964	9.721
2	01:41	8454	9.901	9.659
3	01:49	8741	10.249	9.999
4	01:59	9089	10.672	10.412
	Avg.	8698	10.197	9.948
	Std. Dev	289.33		
	RSD (%)	3.33		

OK
CS
8/19/09

Report generrated by OI Analytical's TOC Reporter V5.0, using WinToc 1010 V5.0 and 1010 Firmware V5.0

'*' = modified '-' = unused

5/5/09 CS

(A) TOC Reference Stock (1000 ppm)
2.128 g KHP (WC5/5/09 WC86062C), previously dried @ 104 °C for 2 hours, → 1000 mL w/ UPDI. Store @ RT (CS 5/5/09) in amber glass.
Exp. 1 yr., ~~5/5/09~~ 5/5/10

(B) TOC Standard Stock (1000 ppm)
2.128 g KHP (~~WC5500~~ CS 5/5/09) (WC5/5/09 WC86076G), previously dried @ 104 °C for 2 hours, → 1000 mL w/ UPDI. Store @ RT in amber glass.
Exp. 1 yr. 5/5/10.

(C) TOC High Level Calibration for OI Model 1010
Standards - fresh per calibration

Conc. (mg/L)	mLs 1000 ppm (WC86010B) (~~WC5500~~ CS 5/5/09)	Final vol. w/ UP
0.00	0.00	100
1.00	0.10	100
5.00	0.50	100
10.00	1.00	100
30.00	3.00	100

(D) TOC High Level LCS TV = 10.0 mg/L fresh per run
1.0 mL 1000 ppm Std stock (WC86010B) diluted volumetrically to 100 mL w/ UPDI.

Continued on Page

Read and Understood By

Signed Date Signed Date

7/2/09 (E)(A) Matrix Spike - Add 20 mL of 10000 ppm CS 7/2/09 standard stock (WC86008B) to sample and analyze. TV = (20 mL)(10000 ppm) / (X g sample)

8/18/09 (B) TOC High Level Calibration for OI Model 1010

CS Standards - fresh per calibration

Conc. (mg/L)	mLs 1000 ppm (WC86010B)	Final vol w/ UPDI (mL)
0.00	0.000	100
1.00	0.100	100
5.00	0.500	100
10.00	1.000	100
30.00	3.000	100

(C) TOC High Level LCS. TV = 10.0 mg/L fresh per run. 1.0 mL 1000 ppm Std stock (WC86010B). Diluted volumetrically to 100 mL w/ UPDI

(D) TOC High level MS. TV = 10.0 mg/L. Add 0.420 mL 1000 ppm std. stock (WC86010B) to 42 mL in sample volume.

(E) TOC High Level ICV/CCV TV = 15.0 mg/L, fresh per run 3.0 mL 1000 ppm Ref. Stock (WC86010A) diluted to 200 mL volumetrically w/ UPDI.

Continued on Page

Read and Understood By

SD 8/18/09

Signed | Date | Signed | Date

****
** CALIBRATION **
****

081809RL Wed Aug 19 00:16:03 2009

Std. #	Used	Conc. (ppm)	Volume (mL)
1	Yes	0.000	1.000
2	Yes	1.000	1.000
3	Yes	5.000	1.000
4	Yes	10.000	1.000
5	Yes	30.000	1.000

RF (ugC/k-cts):	1.215
R-Squared:	0.9970
Offset (cts):	301
Offset (ugC):	-0.367
Calibration Mode:	TOC
Allow Editing:	No

Rep	Std. 1	Std. 2	Std. 3	Std. 4	Std. 5
1	238	1094	4391	8591	23659
2	295	1030	4589	8882	25783
3	295	1079	4771	8965	26255
4	260	1132	4693	8927	26397
5	-	-	-	-	-
6	-	-	-	-	-
7	-	-	-	-	-
8	-	-	-	-	-
9	-	-	-	-	-
10	-	-	-	-	-

(* = unused)

Analytical Results Summary

Instrument Name: R-IC-01 **Analyst:** CWOODS **Analysis Lot:** 179794 **Method/Testcode:** 218.6/Cr6 D

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt	Final Result	Dil	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
RQ0911555-01	Chromium, Hexavalent, Dissolved	MB		Water	0.00 mg/L	10 mL	0.010 mg/L U	1 ✓	0.010			11/17/09 10:18:13	N	IV
RQ0911555-02	Chromium, Hexavalent, Dissolved	LCS		Water	0.19 mg/L	10 mL	0.193 mg/L	1 ✓	0.010	97		11/17/09 10:39:01	N	IV
R0906477-001	Chromium, Hexavalent, Dissolved	N/A		Water	0.04 mg/L	10 mL	0.044 mg/L	1 ✓	0.010			11/17/09 12:12:41	N	IV
RQ0911555-03	Chromium, Hexavalent, Dissolved	DUP	R0906477-001	Water	0.04 mg/L	10 mL	0.044 mg/L	1 ✓	0.010		1	11/17/09 12:23:05	N	IV
RQ0911555-04	Chromium, Hexavalent, Dissolved	MS	R0906477-001	Water	0.25 mg/L	10 mL	0.254 mg/L	1 ✓	0.010	105		11/17/09 12:33:29	N	IV

t indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Schedule File: J:\ACQUDATA\IC\SCHEDULE\IC#1\As-7\As7-111709.sch 11-11-09 IC# 1

Line	Sample	Sample Type	Level	Method	Data File	Dilution	Comment
1	CCV	Sample		1-1022.met	n17_001.dxd	1	7199/218.6
2	CCB	Sample		1-1022.met	n17_002.dxd	1	7199/218.6
3	LCS	Sample		1-1022.met	n17_003.dxd	1	7199/218.6
4	LCS	Sample		1-1022.met	n17_004.dxd	1	7199/218.6
5	091116 0904	Sample		1-1022.met	n17_005.dxd	1	7199
6	091116 0904	Sample		1-1022.met	n17_006.dxd	1	7199
7	091116 0904 DUP @ IC	Sample		1-1022.met	n17_007.dxd	1	7199
8	091116 0904 DUP @ IC	Sample		1-1022.met	n17_008.dxd	1	7199
9	091116 0904 SPK @ IC	Sample		1-1022.met	n17_009.dxd	1	7199
10	091116 0904 SPK @ IC	Sample		1-1022.met	n17_010.dxd	1	7199
11	CCV	Sample		1-1022.met	n17_011.dxd	1	7199/218.6
12	CCB	Sample		1-1022.met	n17_012.dxd	1	7199/218.6
13	R0906477-001	Sample		1-1022.met	n17_013.dxd	1	218.6
14	R0906477-001 DUP @ IC	Sample		1-1022.met	n17_014.dxd	1	218.6
15	R0906477-001 SPK @ IC	Sample		1-1022.met	n17_015.dxd	1	218.6
16	CCV	Sample		1-1022.met	n17_016.dxd	1	7199/218.6
17	CCB	Sample		1-1022.met	n17_017.dxd	1	7199/218.6

Default Method Path: J:\ACQUDATA\IC\METHOD.ACI\IC#1\CR6
Default Data Path: J:\ACQUDATA\IC\DATA\IC#1\CR6\111709
Comment:

Analyst: CWoods
Pipets: 01 Blue
Lucy

1 copy

R-6477

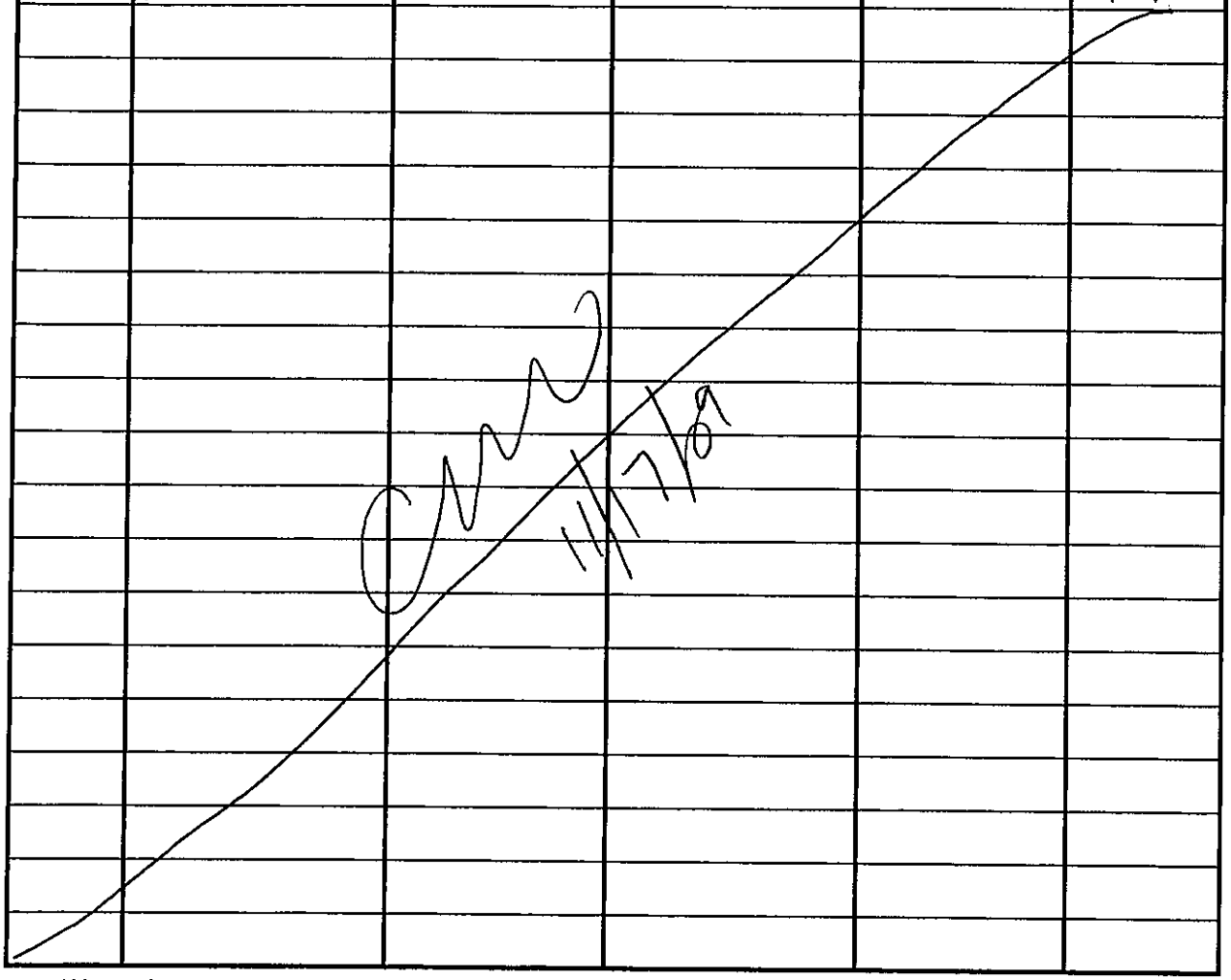
Reviewed & Approved
By: B Bowe
Date: 11/18/09

Columbia Analytical Services
1 Mustard St., Suite 250
Rochester, NY 14609-0859

Analyst: C. Woods
Date: 11/17/09
pH Meter ID: Bullwinkle
Adjustment Solutions: NaOH

Hexavalent Chromium: (Method 218.6*) (Method 7199**)

Folder Number	Sample ID	Sample pH at arrival	Date and Time pH check at arrival	Sample pH at analysis	Analysis Date
6477	R0906477-001	9.495	11/12/09 845	9.48	11/17/09
6543	R0906543-006	5.95→9.18	11/17/09 1024	9.18	11/17/09



*Note: Sample pH must be between 9.3 and 9.7 for 218.6

**Note: Sample pH must be between 9.0 and 9.5 for 7199

Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : CCV
Data File Name : ...\N17_001.DXD
Method File Name : ...\1-1022.met
Date Time Collected : 11/17/09 10:07:48

Detector Name : UV/Vis
Column ID : AS7 (012190) NG-1 (020261)
Method Comment : Cal.: IC#1, 10/22/09 50uL Loop

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment : 7199/218.6

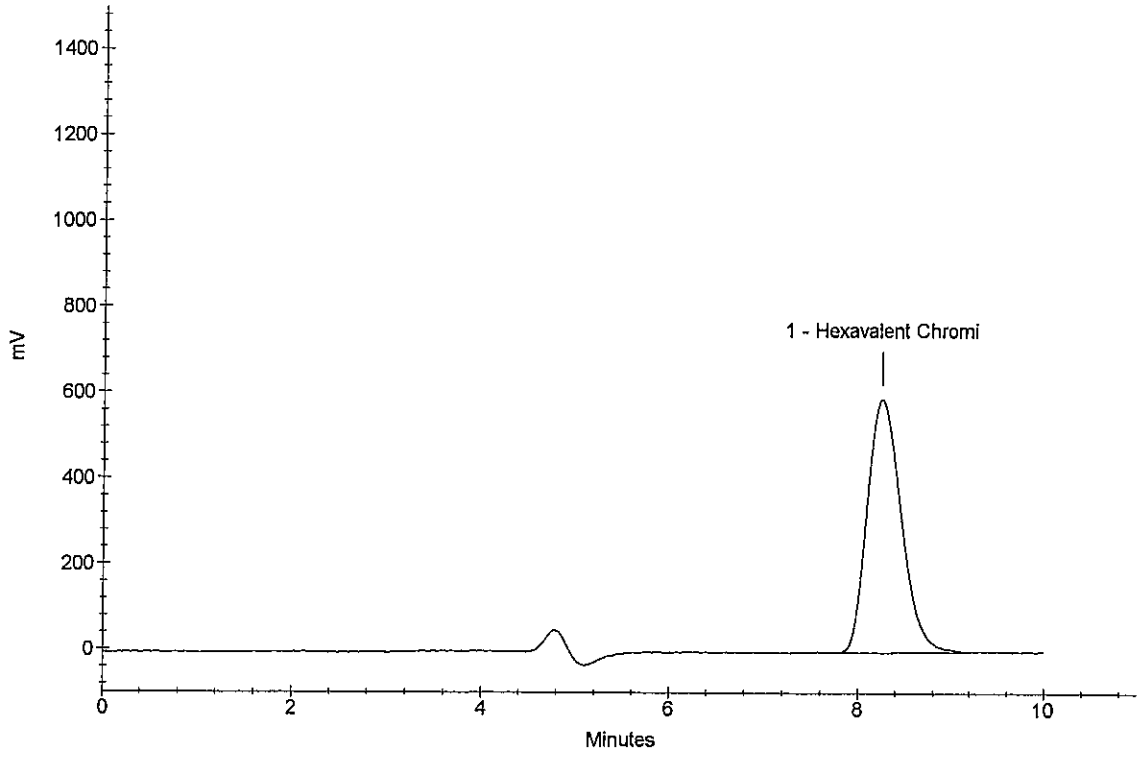
Data Collection Rate : 20.00 Hz
Data Collection Period : 600.00 seconds
Component Amount Units : PPM

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount (PPM)	Peak Area
1	8.25	Hexavalent Chromi	0.4721	15031303

ok 11/17/09

CCV



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : CCB
Data File Name : ...\N17_002.DXD
Method File Name : ...\1-1022.met
Date Time Collected : 11/17/09 10:18:13

Detector Name : UV/Vis
Column ID : AS7 (012190) NG-1 (020261)
Method Comment : Cal.: IC#1, 10/22/09 50uL Loop

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment : 7199/218.6

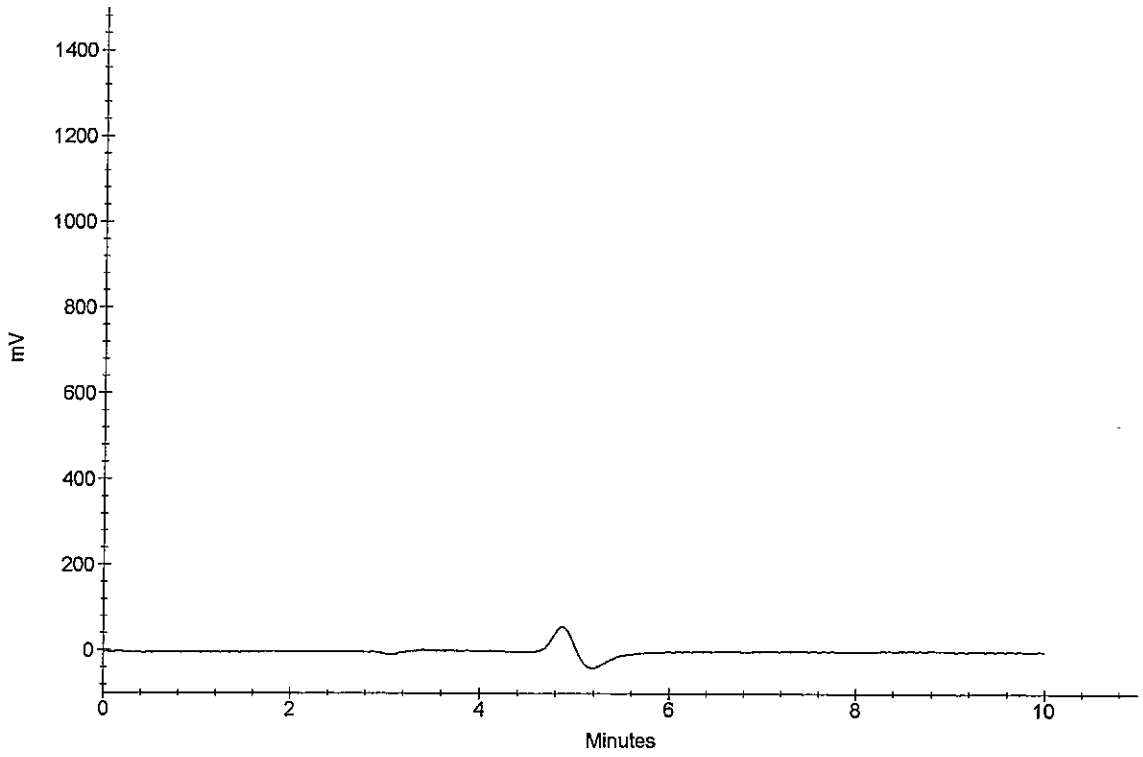
Data Collection Rate : 20.00 Hz
Data Collection Period : 600.00 seconds
Component Amount Units : PPM

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount (PPM)	Peak Area
0	0.00	(null)	0.0000	0

OK
11/17/09

CCB



00604

Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : LCS
Data File Name : ...\N17_003.DXD
Method File Name : ...\1-1022.met
Date Time Collected : 11/17/09 10:28:37

Detector Name : UV/Vis
Column ID : AS7 (012190) NG-1 (020261)
Method Comment : Cal.: IC#1, 10/22/09 50uL Loop

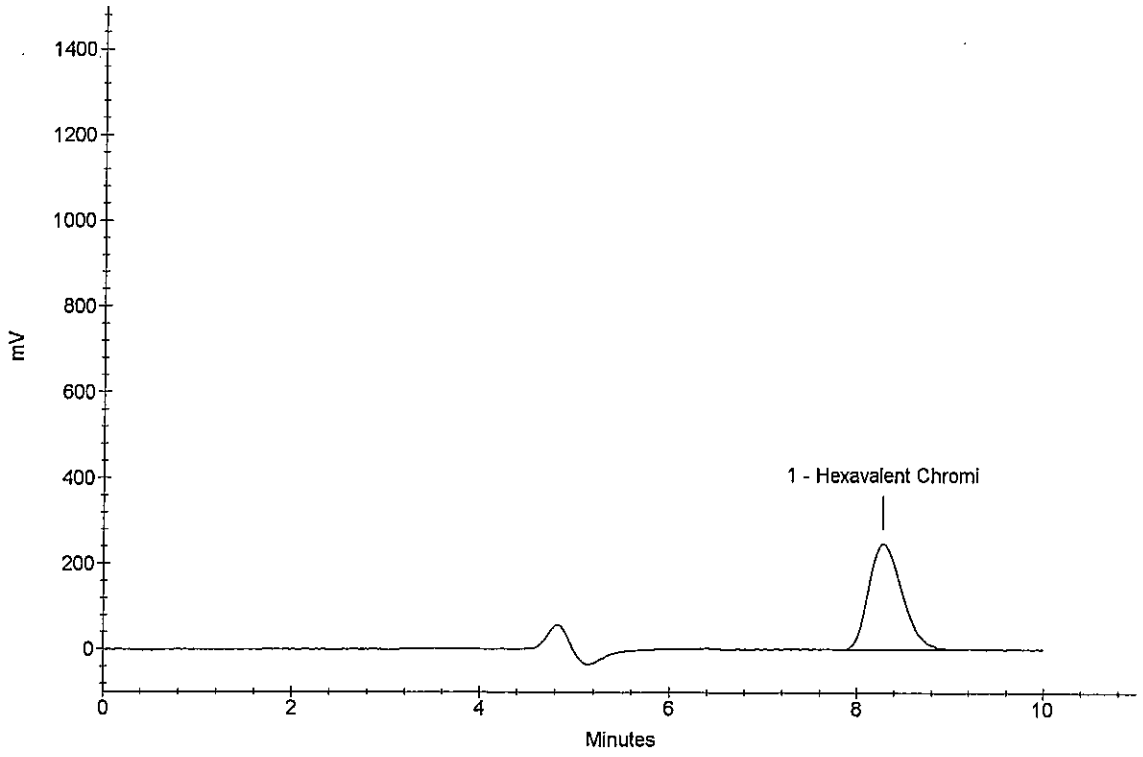
Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment : 7199/218.6

Data Collection Rate : 20.00 Hz
Data Collection Period : 600.00 seconds
Component Amount Units : PPM

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount (PPM)	Peak Area
1	8.28	Hexavalent Chromi	0.1935	6198016

OK
11/17/09
LCS



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : LCS
Data File Name : ...\N17_004.DXD
Method File Name : ...\1-1022.met
Date Time Collected : 11/17/09 10:39:01

Detector Name : UV/Vis
Column ID : AS7 (012190) NG-1 (020261)
Method Comment : Cal.: IC#1, 10/22/09 50uL Loop

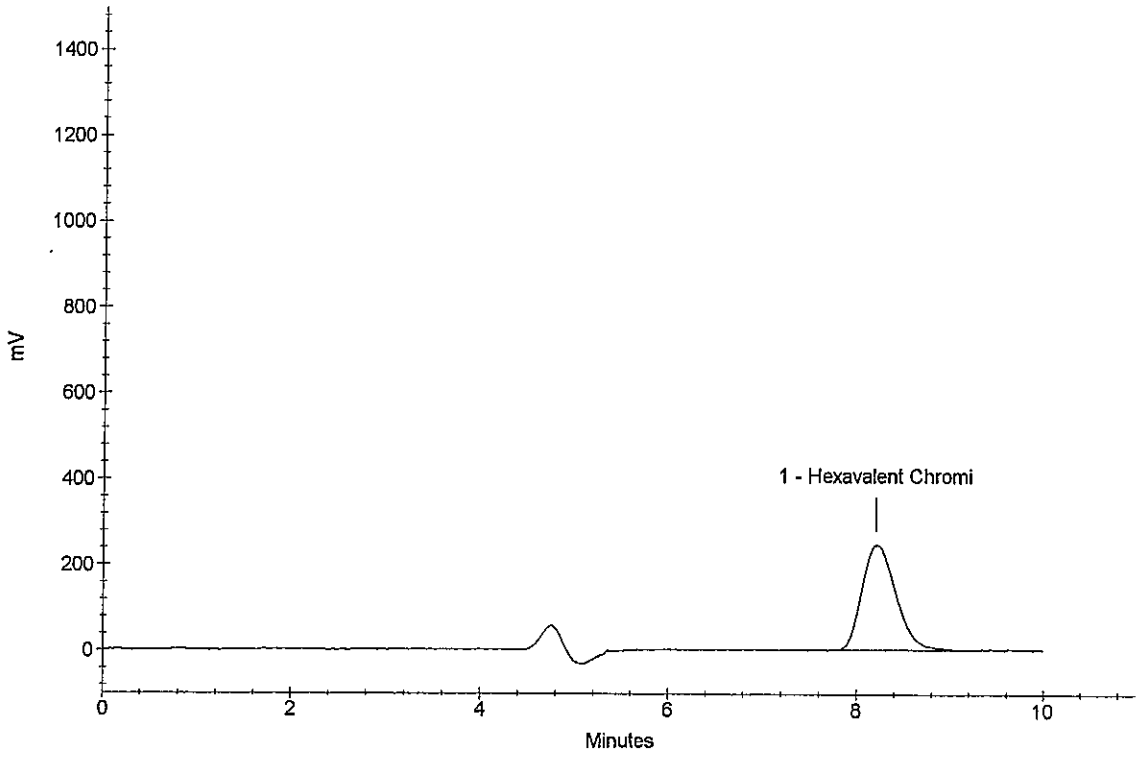
Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment : 7199/218.6

Data Collection Rate : 20.00 Hz
Data Collection Period : 600.00 seconds
Component Amount Units : PPM

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount (PPM)	Peak Area
1	8.20	Hexavalent Chromi	0.1930	6184686

LCS 11/17/09



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : 091116 0904
Data File Name : ...\N17_005.DXD
Method File Name : ...\1-1022.met
Date Time Collected : 11/17/09 10:49:26

Detector Name : UV/Vis
Column ID : AS7 (012190) NG-1 (020261)
Method Comment : Cal.: IC#1, 10/22/09 50uL Loop

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment : 7199

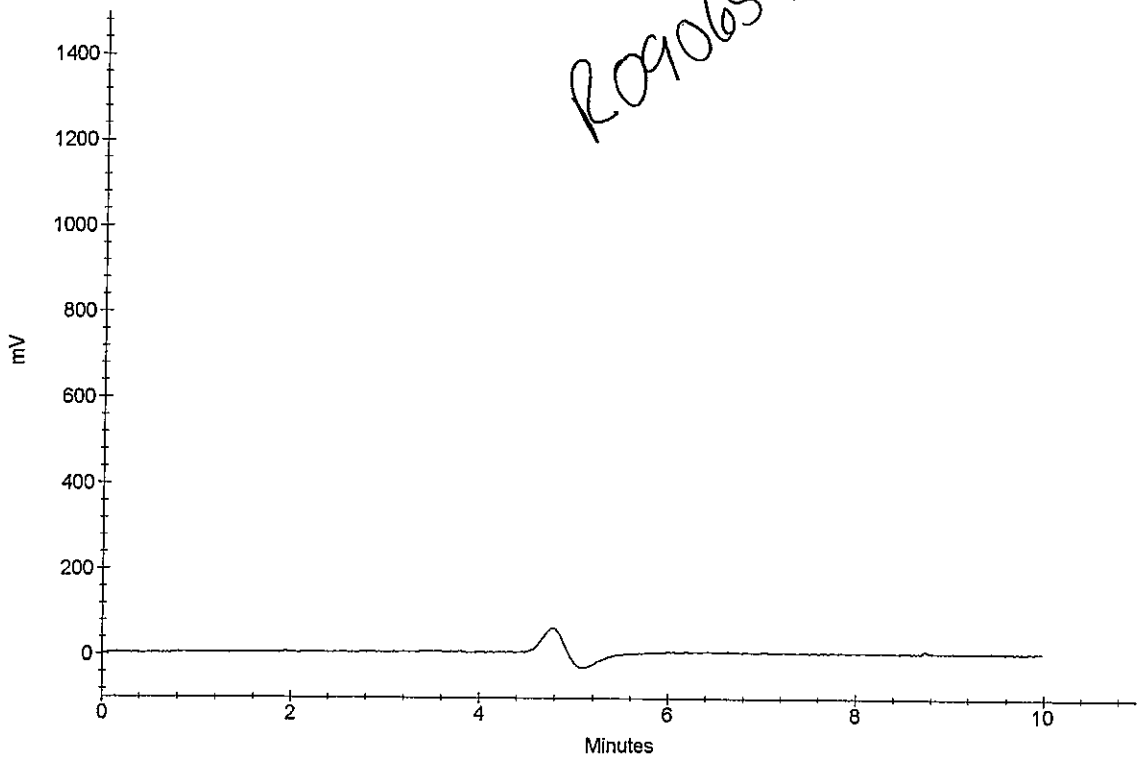
Data Collection Rate : 20.00 Hz
Data Collection Period : 600.00 seconds
Component Amount Units : PPM

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name		Component Amount (PPM)	Peak Area
0	0.00	(null)	OK 11/17/09	0.0000	0

091116 0904

R0906543-006



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : 091116 0904
Data File Name : ...\N17_006.DXD
Method File Name : ...\1-1022.met
Date Time Collected : 11/17/09 10:59:50

Detector Name : UV/Vis
Column ID : AS7 (012190) NG-1 (020261)
Method Comment : Cal.: IC#1, 10/22/09 50uL Loop

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment : 7199

Data Collection Rate : 20.00 Hz
Data Collection Period : 600.00 seconds
Component Amount Units : PPM

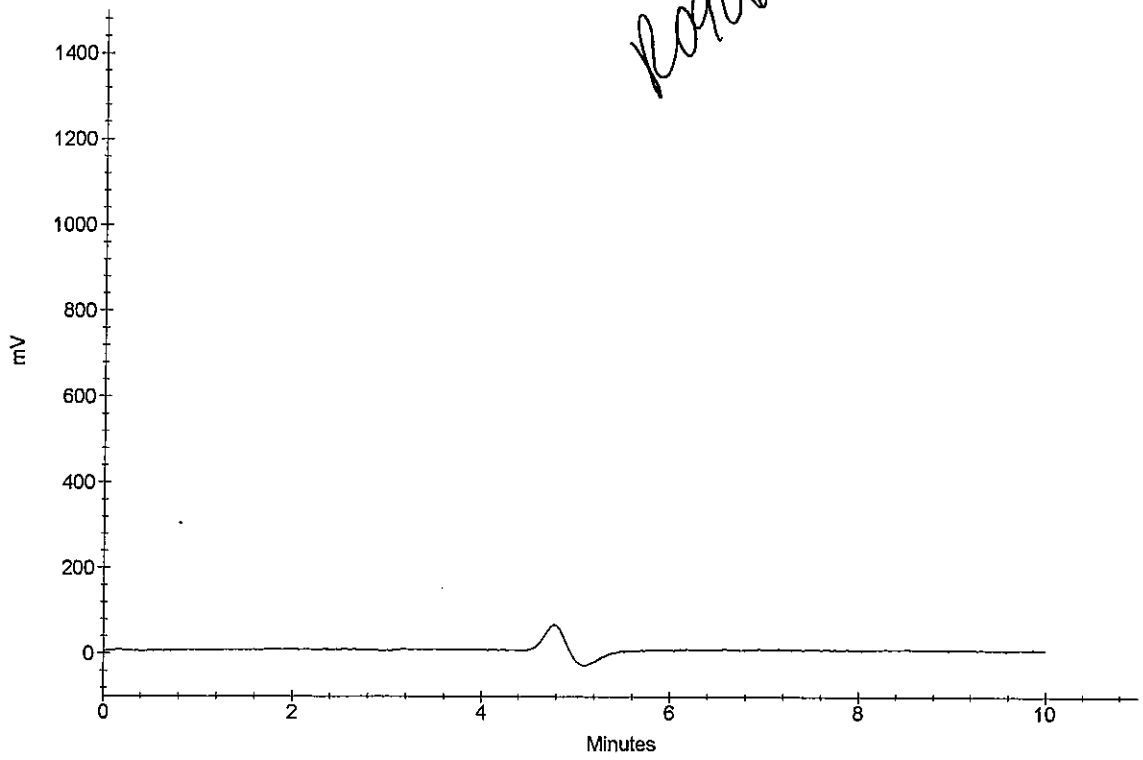
Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount (PPM)	Peak Area
0	0.00	(null)	0.0000	0

OK
CT 11/17/09

091116 0904

R0906543-006



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : 091116 0904 DUP @ IC
Data File Name : ...\N17_007.DXD
Method File Name : ...\1-1022.met
Date Time Collected : 11/17/09 11:10:14

Detector Name : UV/Vis
Column ID : AS7 (012190) NG-1 (020261)
Method Comment : Cal.: IC#1, 10/22/09 50uL Loop

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment : 7199

Data Collection Rate : 20.00 Hz
Data Collection Period : 600.00 seconds
Component Amount Units : PPM

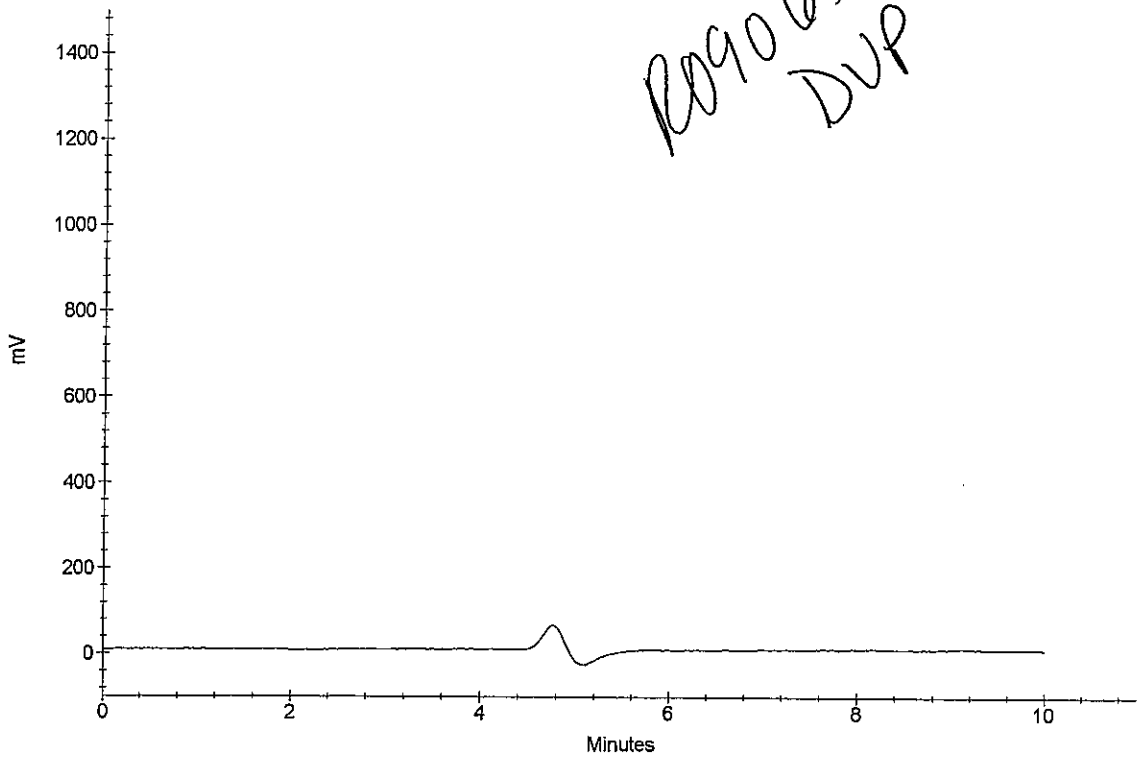
Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount (PPM)	Peak Area
0	0.00	(null)	0.0000	0

OK
CVT 11/17/09

091116 0904 DUP @ IC

R0906543-006
DUP



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : 091116 0904 DUP @ IC
Data File Name : ...\N17_008.DXD
Method File Name : ...\1-1022.met
Date Time Collected : 11/17/09 11:20:39

Detector Name : UV/Vis
Column ID : AS7 (012190) NG-1 (020261)
Method Comment : Cal.: IC#1, 10/22/09 50uL Loop

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment : 7199

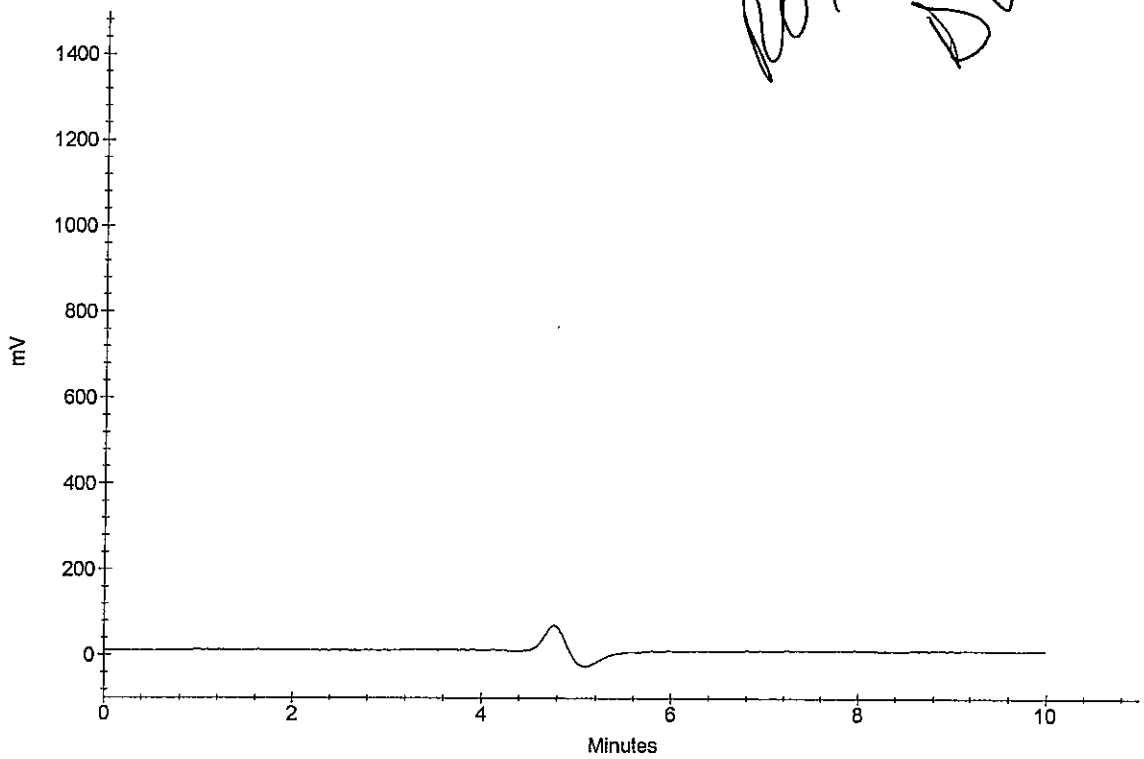
Data Collection Rate : 20.00 Hz
Data Collection Period : 600.00 seconds
Component Amount Units : PPM

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount (PPM)	Peak Area
0	0.00	(null)	0.0000	0

OK
CW 11/17/09

R0906543-006
DUP



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : 091116 0904 SPK @ IC
Data File Name : ...\N17_009.DXD
Method File Name : ...\1-1022.met
Date Time Collected : 11/17/09 11:31:03

Detector Name : UV/Vis
Column ID : AS7 (012190) NG-1 (020261)
Method Comment : Cal.: IC#1, 10/22/09 50uL Loop

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment : 7199

Data Collection Rate : 20.00 Hz
Data Collection Period : 600.00 seconds
Component Amount Units : PPM

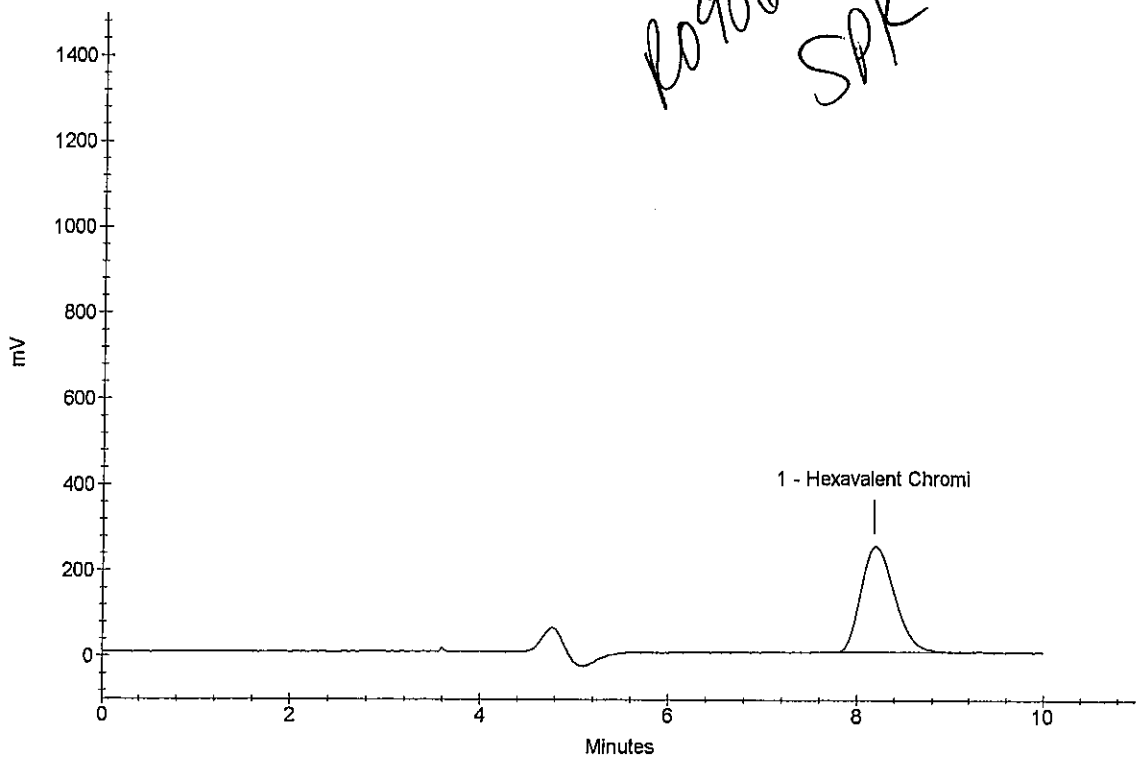
Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount (PPM)	Peak Area
1	8.18	Hexavalent Chromi	0.1916	6137892

11/17/09

091116 0904 SPK @ IC

R0906543-006 SPK



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : 091116 0904 SPK @ IC
Data File Name : ...\N17_010.DXD
Method File Name : ...\1-1022.met
Date Time Collected : 11/17/09 11:41:28

Detector Name : UV/Vis
Column ID : AS7 (012190) NG-1 (020261)
Method Comment : Cal.: IC#1, 10/22/09 50uL Loop

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment : 7199

Data Collection Rate : 20.00 Hz
Data Collection Period : 600.00 seconds
Component Amount Units : PPM

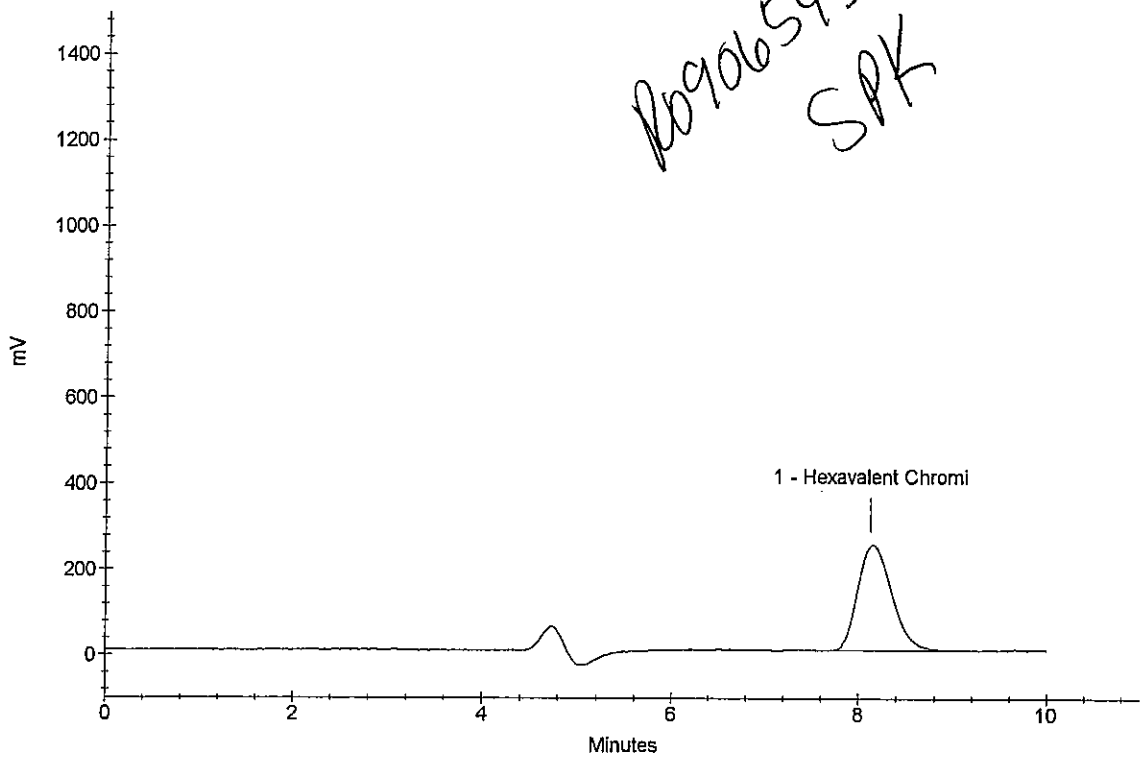
Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount (PPM)	Peak Area
1	8.13	Hexavalent Chromi	0.1939	6210248

OK
11/17/09

091116 0904 SPK @ IC

R0906543-006
SPK



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : CCV
Data File Name : ...\N17_011.DXD
Method File Name : ...\1-1022.met
Date Time Collected : 11/17/09 11:51:52

Detector Name : UV/Vis
Column ID : AS7 (012190) NG-1 (020261)
Method Comment : Cal.: IC#1, 10/22/09 50uL Loop

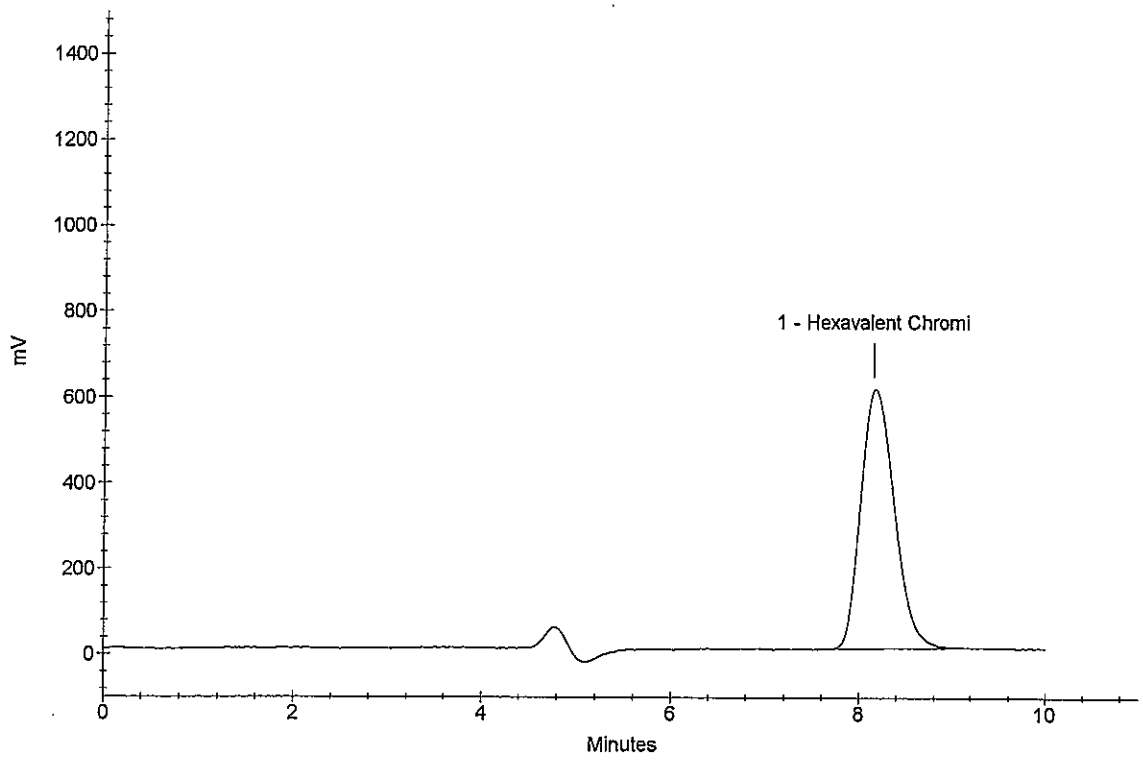
Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment : 7199/218.6

Data Collection Rate : 20.00 Hz
Data Collection Period : 600.00 seconds
Component Amount Units : PPM

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount (PPM)	Peak Area
1	8.15	Hexavalent Chromi	0.4744	15101483

OK
CCV 11/17/09



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : CCB
Data File Name : ...\N17_012.DXD
Method File Name : ...\1-1022.met
Date Time Collected : 11/17/09 12:02:16

Detector Name : UV/Vis
Column ID : AS7 (012190) NG-1 (020261)
Method Comment : Cal.: IC#1, 10/22/09 50uL Loop

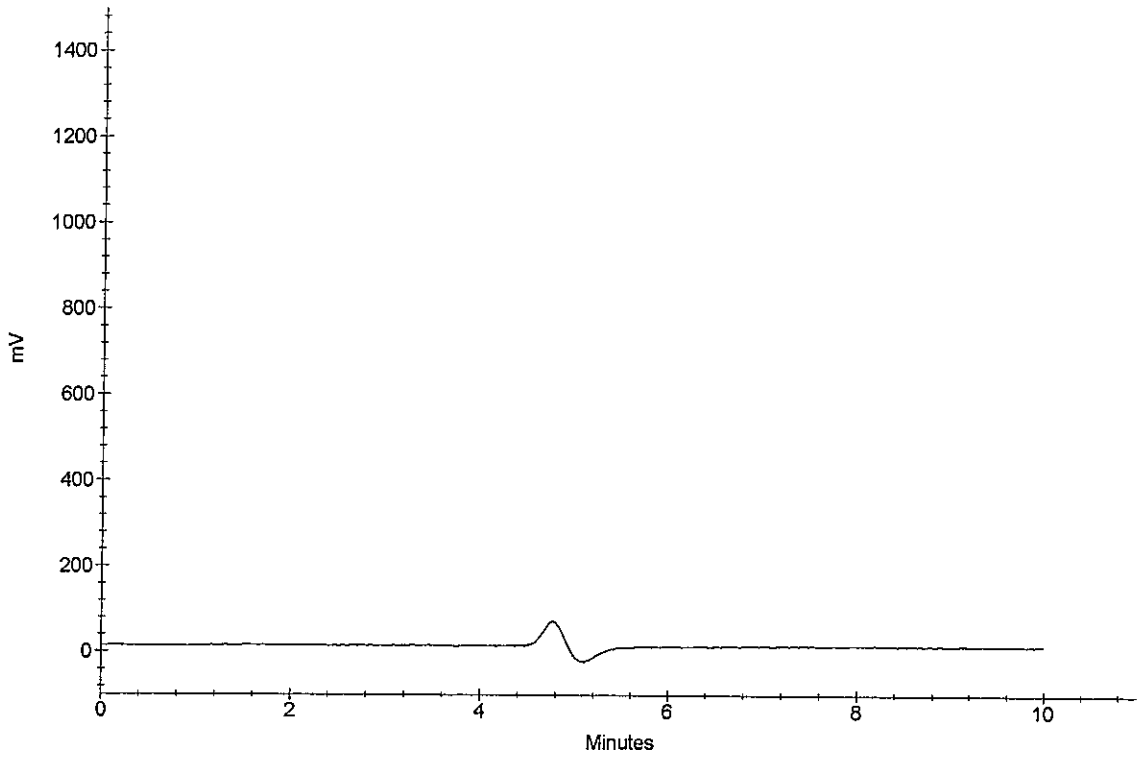
Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment : 7199/218.6

Data Collection Rate : 20.00 Hz
Data Collection Period : 600.00 seconds
Component Amount Units : PPM

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount (PPM)	Peak Area
0	0.00	(null)	0.0000	0

ok
11/17/09
CCB



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : R0906477-001
Data File Name : ...\N17_013.DXD
Method File Name : ...\1-1022.met
Date Time Collected : 11/17/09 12:12:41

Detector Name : UV/Vis
Column ID : AS7 (012190) NG-1 (020261)
Method Comment : Cal.: IC#1, 10/22/09 50uL Loop

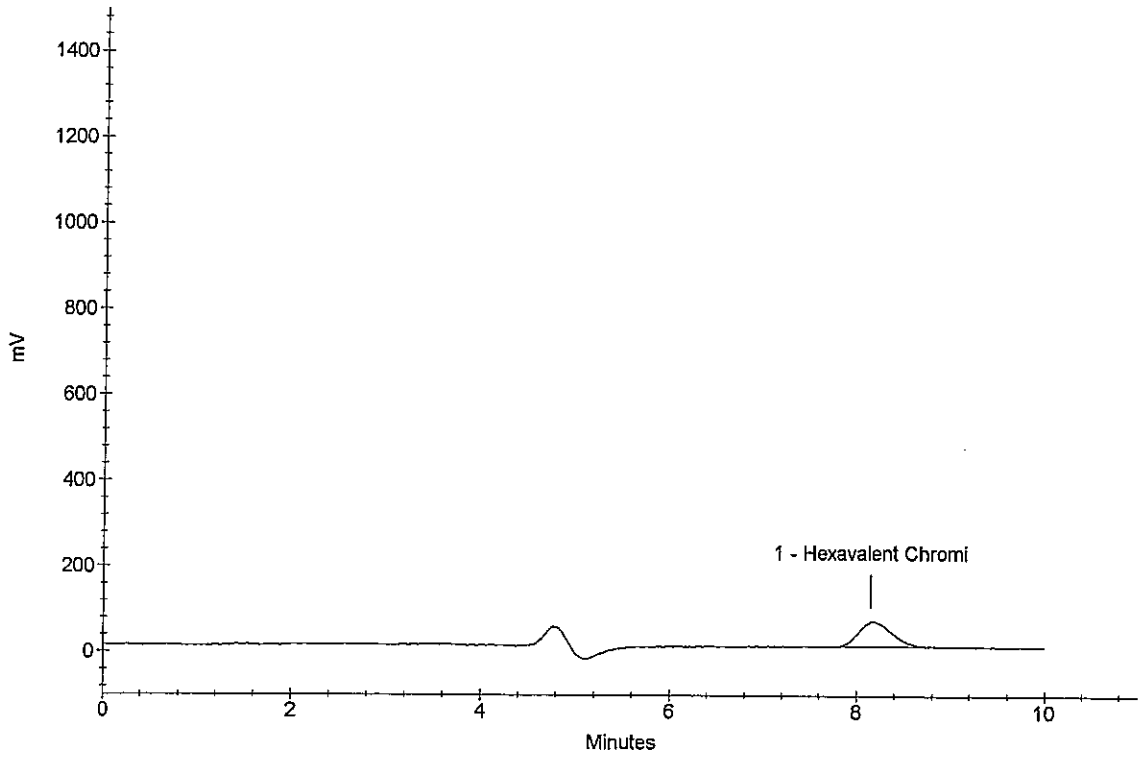
Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment : 218.6

Data Collection Rate : 20.00 Hz
Data Collection Period : 600.00 seconds
Component Amount Units : PPM

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount (PPM)	Peak Area
1	8.15	Hexavalent Chromi	0.0437	1449795

R0906477-001



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : R0906477-001 DUP @ IC
Data File Name : ...\N17_014.DXD
Method File Name : ...\1-1022.met
Date Time Collected : 11/17/09 12:23:05

Detector Name : UV/Vis
Column ID : AS7 (012190) NG-1 (020261)
Method Comment : Cal.: IC#1, 10/22/09 50uL Loop

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment : 218.6

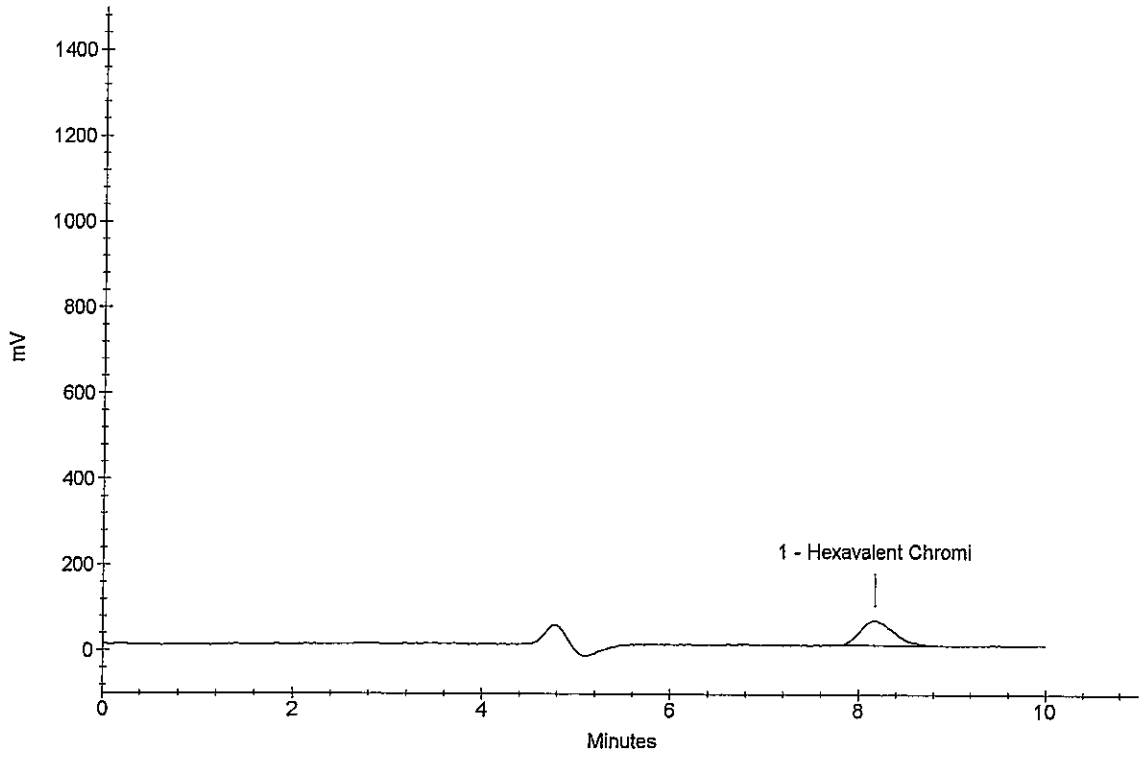
Data Collection Rate : 20.00 Hz
Data Collection Period : 600.00 seconds
Component Amount Units : PPM

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount (PPM)	Peak Area
1	8.18	Hexavalent Chromi	0.0441	1462415

11/17/09

R0906477-001 DUP @ IC



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : R0906477-001 SPK @ IC
Data File Name : ...\N17_015.DXD
Method File Name : ...\1-1022.met
Date Time Collected : 11/17/09 12:33:29

Detector Name : UV/Vis
Column ID : AS7 (012190) NG-1 (020261)
Method Comment : Cal.: IC#1, 10/22/09 50uL Loop

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment : 218.6

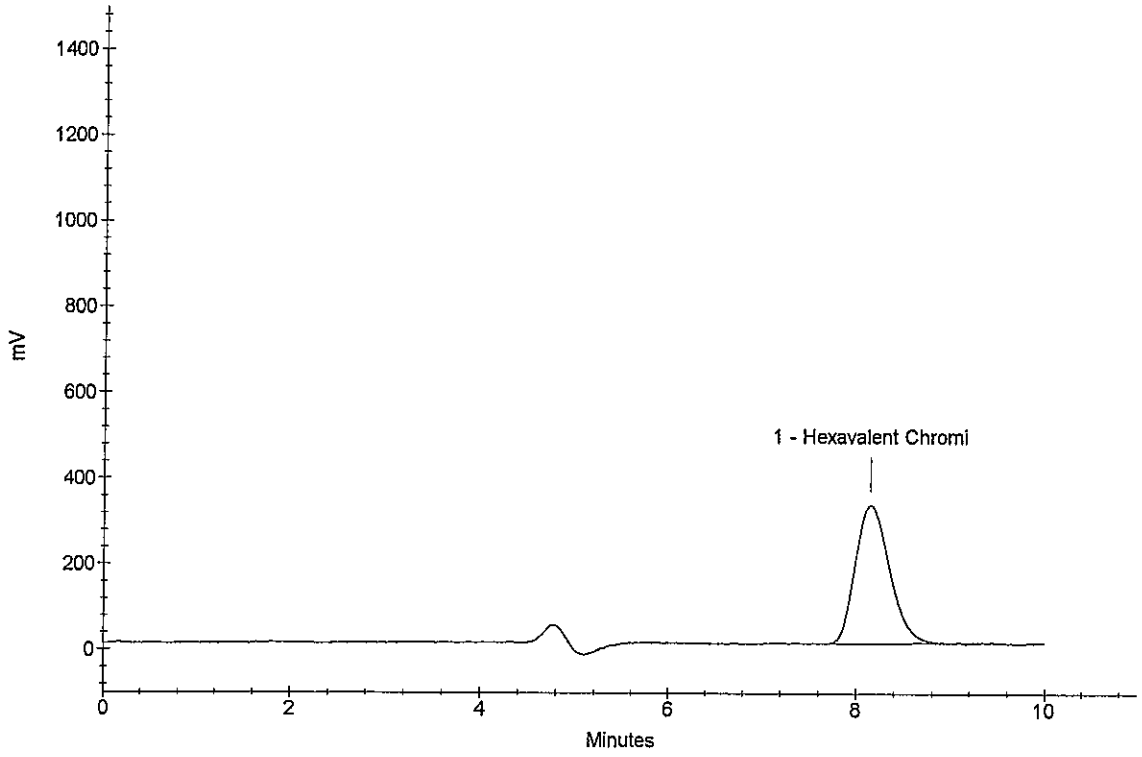
Data Collection Rate : 20.00 Hz
Data Collection Period : 600.00 seconds
Component Amount Units : PPM

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount (PPM)	Peak Area
1	8.15	Hexavalent Chromi	0.2539	8114410

ok
11/17/09

R0906477-001 SPK @ IC



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : CCV
Data File Name : ...\N17_016.DXD
Method File Name : ...\1-1022.met
Date Time Collected : 11/17/09 12:43:53

Detector Name : UV/Vis
Column ID : AS7 (012190) NG-1 (020261)
Method Comment : Cal.: IC#1, 10/22/09 50uL Loop

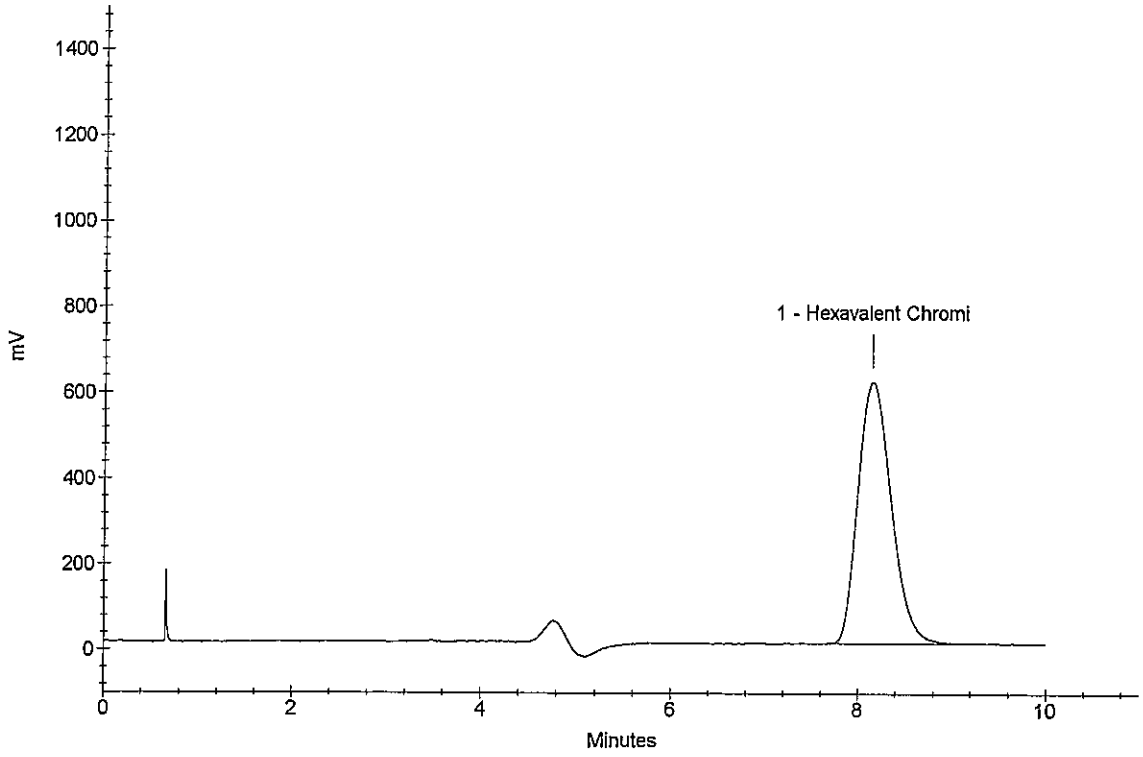
Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment : 7199/218.6

Data Collection Rate : 20.00 Hz
Data Collection Period : 600.00 seconds
Component Amount Units : PPM

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount (PPM)	Peak Area
1	8.15	Hexavalent Chromi	0.4746	15109136

CCV 11/17/09



00618

Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : CCB
Data File Name : ...\N17_017.DXD
Method File Name : ...\1-1022.met
Date Time Collected : 11/17/09 12:54:18

Detector Name : UV/Vis
Column ID : AS7 (012190) NG-1 (020261)
Method Comment : Cal.: IC#1, 10/22/09 50uL Loop

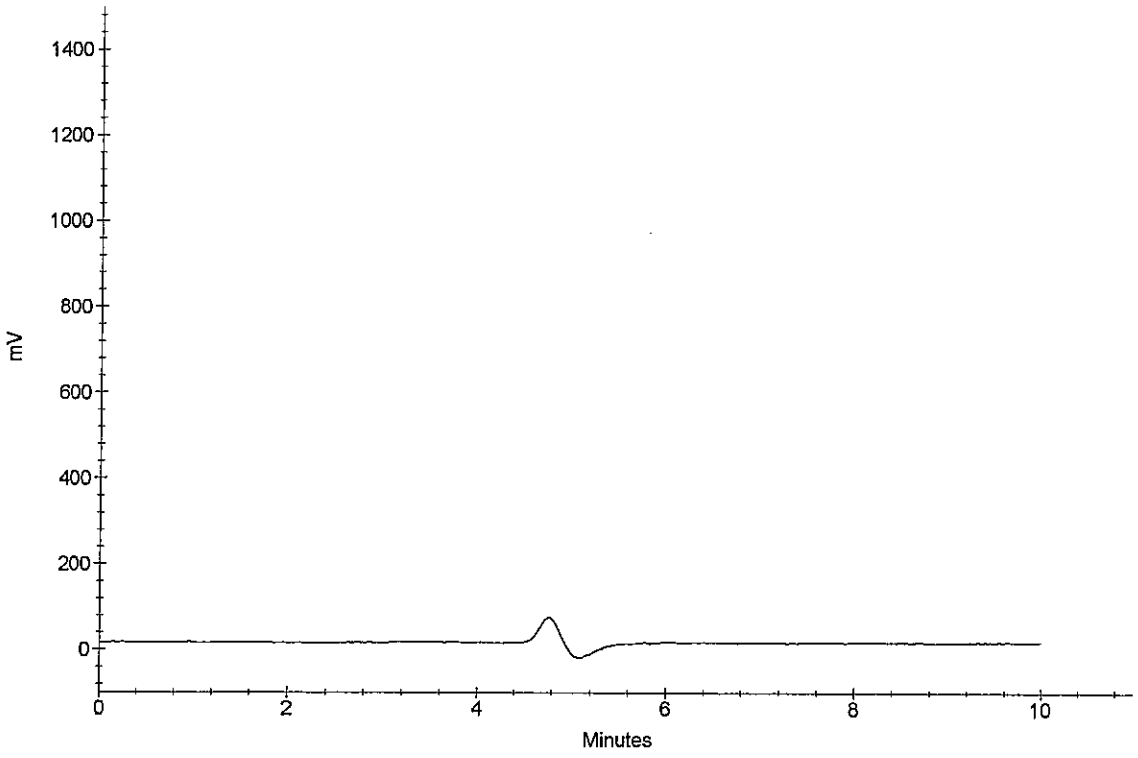
Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment : 7199/218.6

Data Collection Rate : 20.00 Hz
Data Collection Period : 600.00 seconds
Component Amount Units : PPM

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount (PPM)	Peak Area
0	0.00	(null)	0.0000	0

CCB 11/17/09



00619

Columbia Analytical Services – Rochester, New York

Ion Chromatography Cover Sheet

Instrument: Dionex 1000I, IC #1

Column: AS7 Analytical Column, NG-1 Guard Column, 4mm, 06/02/08

Curve Date: 10/22/09 **Loop size:** 100 uL Loop

Analyst: C. Woods **Analysis Date:** 11/17/09

Standards Prep Dates & Log ID's:

Std Type	*Date Rec'd*	*Log ID*		*Std Type*	*Prep Date*	*Log ID*
Calibration Standard Stock	02/05/09	WC85265C		Calibration Stds	10/22/09	SAME AS WC85303E
LCS / MS Soluble Stock	02/05/09	WC85265C		Soluble MS	Daily	SAME AS WC85304B
I/CCV Standard Stock	02/05/09	WC85265D		I/CCV	Daily	SAME AS WC85303F
LCS / MS Insoluble Stock	01/11/08 Soils Only	WC85095H Soils Only		Insoluble LCS/MS	Daily	SAME AS WC85304C
LCS for Waters	Daily	SAME AS WC85304A		MS for Waters	Daily	SAME AS WC85304B

Comments:

Ion Chromatography Calibration Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : STANDARD 1
Sample Type : Calibration Update
Data File Name : ...\O22_001.DXD
Method File Name : ...\1-1022.met

Date Time Collected : 10/22/09 10:03:56
Detector Name : UV/Vis
Column ID : AS7 (012190) NG-1 (020261)
Method Analyst : CMW

Dilution Factor : 1.00
Sample Comment : 7199/218.6
Data Collection Rate : 20.00 Hz

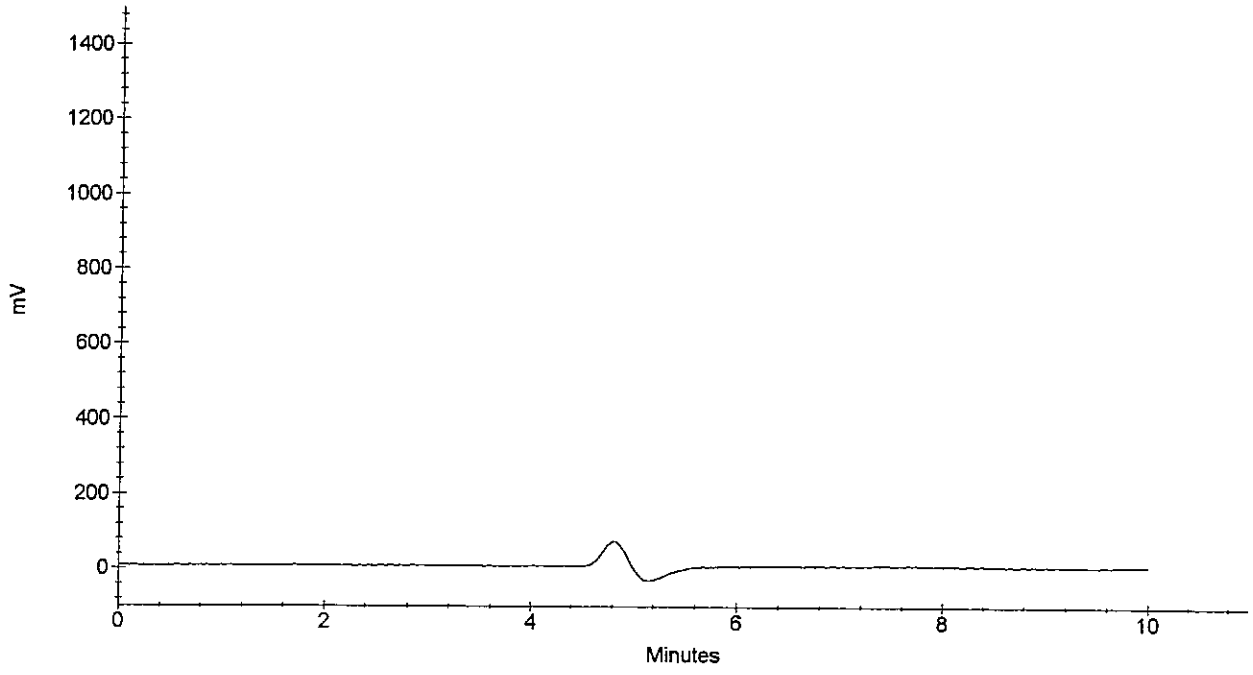
Calibration Type : EXTERNAL
Calibration Level : 1

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name		Component Amount (PPM)	Peak Area
0	0.00	(null)	OK	0.000	0

10/23/09

STANDARD 1



Ion Chromatography Calibration Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : STANDARD 2
Sample Type : Calibration Update
Data File Name : ...\O22_002.DXD
Method File Name : ...\1-1022.met

Date Time Collected : 10/22/09 10:14:21
Detector Name : UV/Vis
Column ID : AS7 (012190) NG-1 (020261)
Method Analyst : CMW

Dilution Factor : 1.00
Sample Comment : 7199/218.6
Data Collection Rate : 20.00 Hz

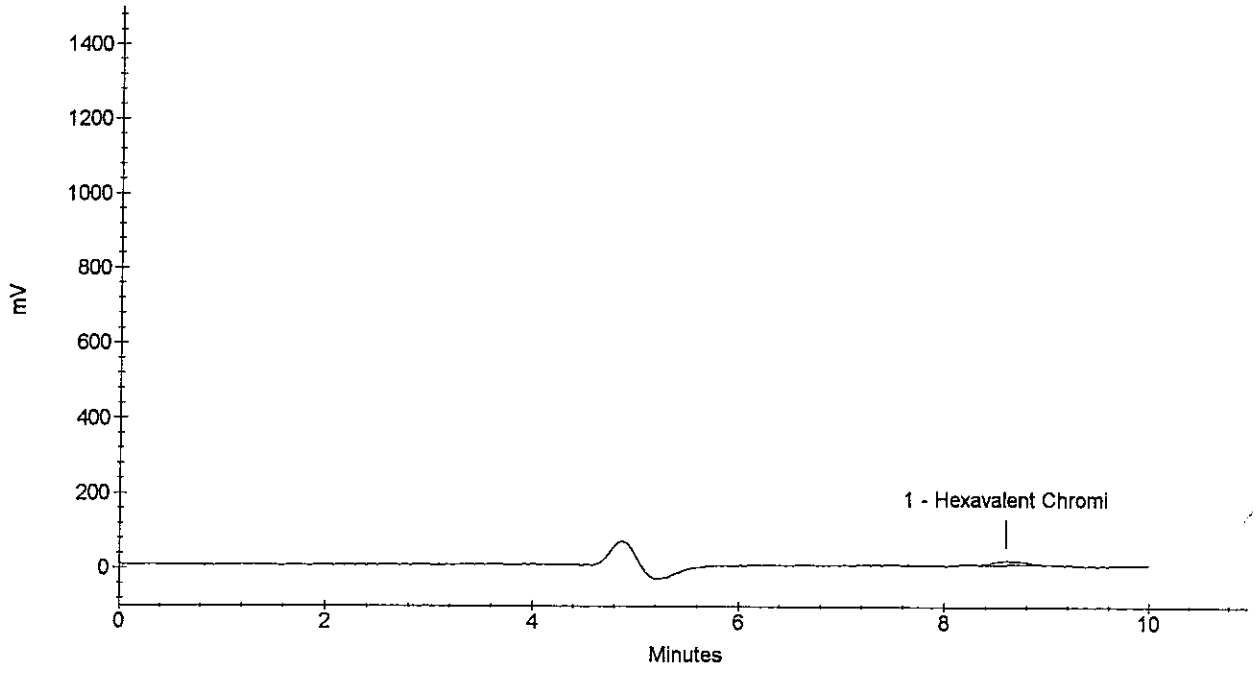
Calibration Type : EXTERNAL
Calibration Level : 2

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount (PPM)	Peak Area
1	8.60	Hexavalent Chromi	0.010	224648

10/23/09

STANDARD 2



00622

Ion Chromatography Calibration Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : STANDARD 3
Sample Type : Calibration Update
Data File Name : ...\O22_003.DXD
Method File Name : ...\1-1022.met

Date Time Collected : 10/22/09 10:24:45
Detector Name : UV/Vis
Column ID : AS7 (012190) NG-1 (020261)
Method Analyst : CMW

Dilution Factor : 1.00
Sample Comment : 7199/218.6
Data Collection Rate : 20.00 Hz

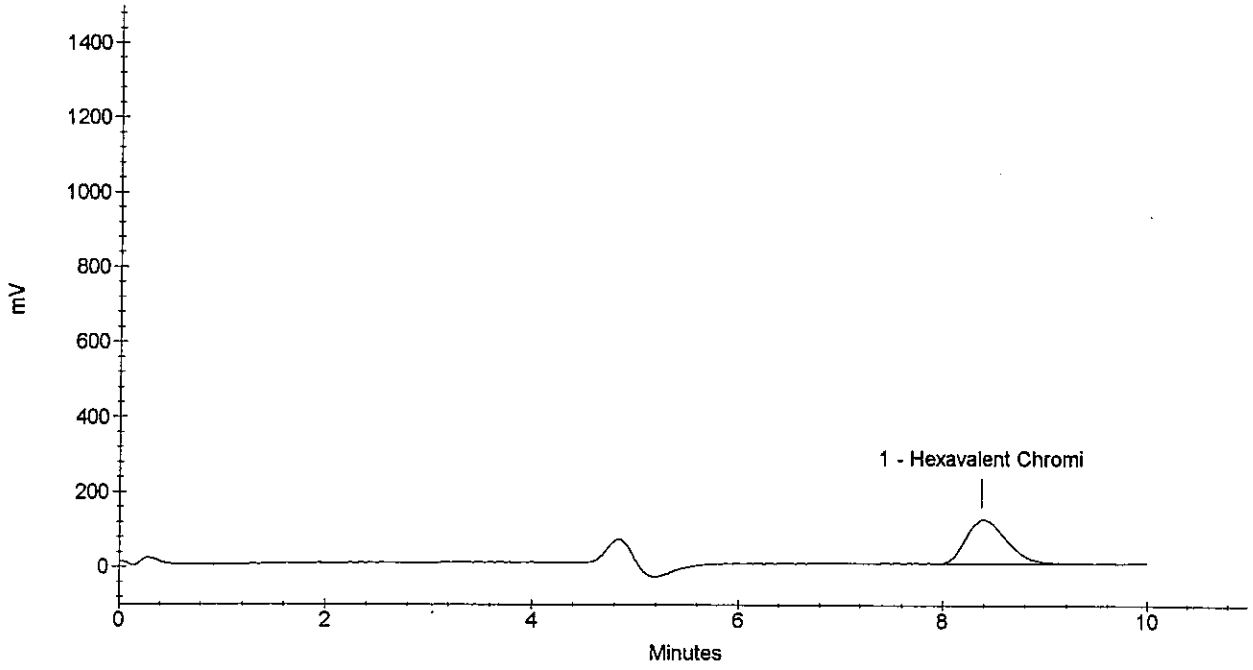
Calibration Type : EXTERNAL
Calibration Level : 3

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount (PPM)	Peak Area
1	8.38	Hexavalent Chromi	0.100	3238235

10/23/09

STANDARD 3



Ion Chromatography Calibration Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : STANDARD 4
Sample Type : Calibration Update
Data File Name : ...\O22_004.DXD
Method File Name : ...\1-1022.met

Date Time Collected : 10/22/09 10:35:09
Detector Name : UV/Vis
Column ID : AS7 (012190) NG-1 (020261)
Method Analyst : CMW

Dilution Factor : 1.00
Sample Comment : 7199/218.6
Data Collection Rate : 20.00 Hz

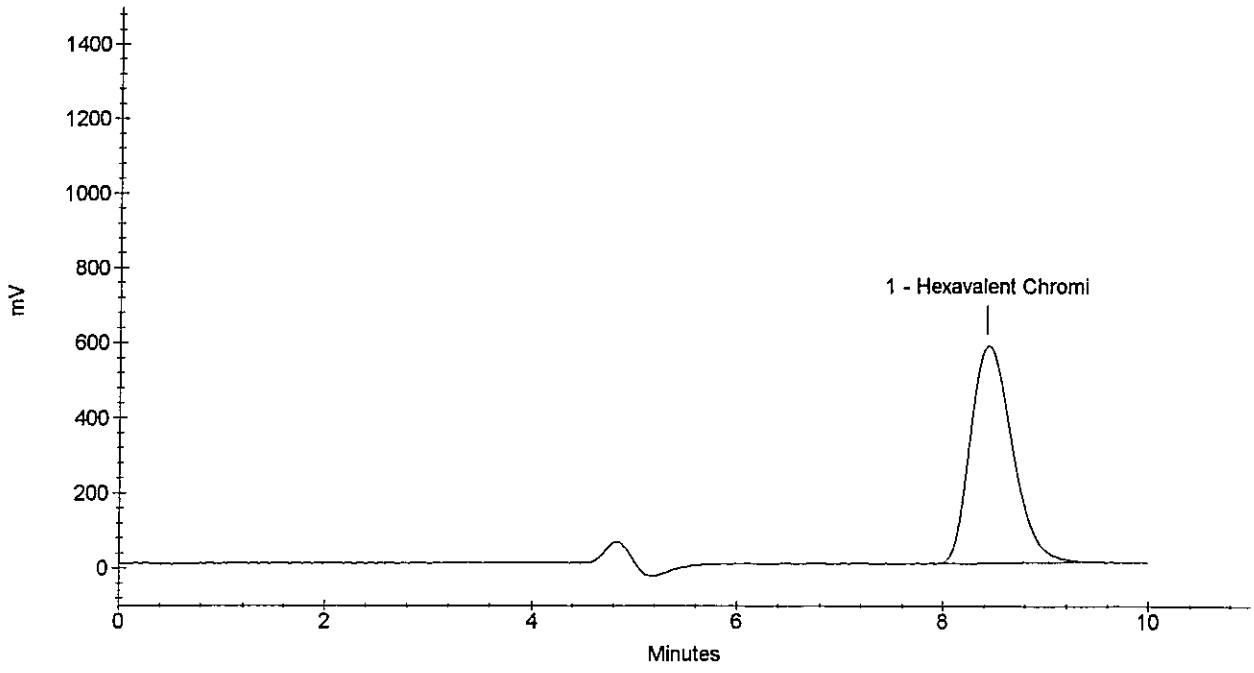
Calibration Type : EXTERNAL
Calibration Level : 4

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount (PPM)	Peak Area
1	8.43	Hexavalent Chromi	0.500	16376437

OK
10/29/09

STANDARD 4



00624

Ion Chromatography Calibration Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : STANDARD 5
Sample Type : Calibration Update
Data File Name : ...\O22_005.DXD
Method File Name : ...\1-1022.met

Date Time Collected : 10/22/09 10:45:33
Detector Name : UV/Vis
Column ID : AS7 (012190) NG-1 (020261)
Method Analyst : CMW

Dilution Factor : 1.00
Sample Comment : 7199/218.6
Data Collection Rate : 20.00 Hz

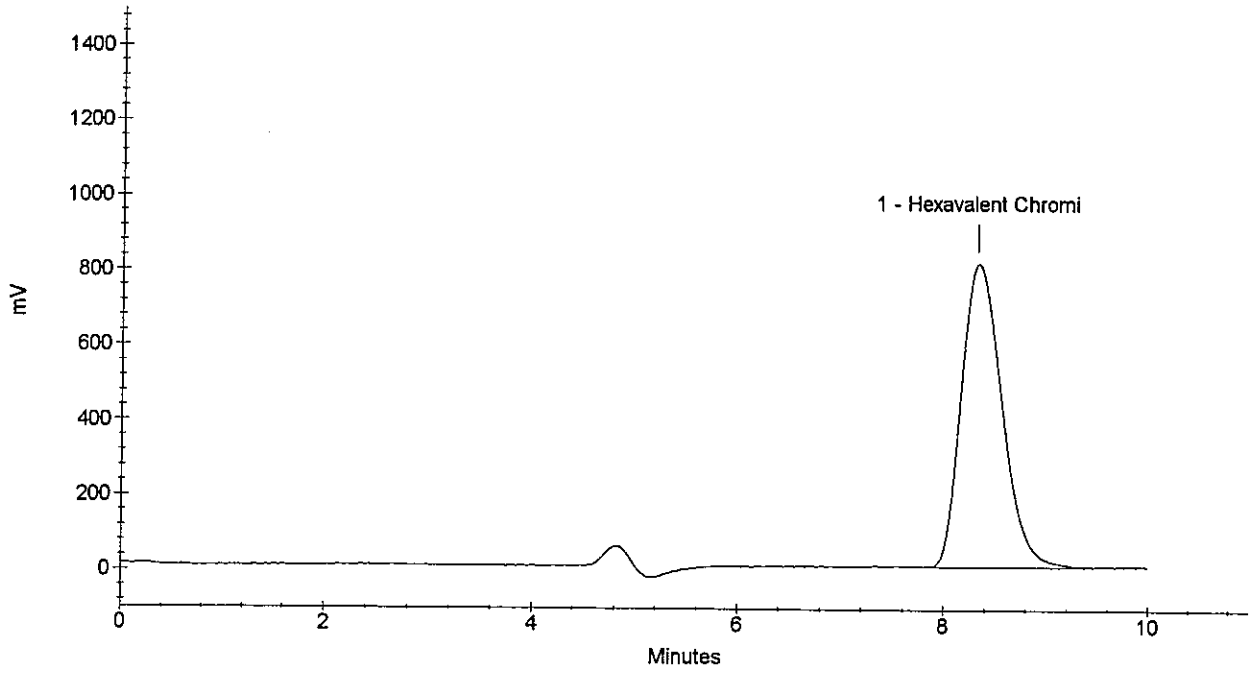
Calibration Type : EXTERNAL
Calibration Level : 5

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount (PPM)	Peak Area
1	8.32	Hexavalent Chromi	0.700	22244818

10/23/09

STANDARD 5



Ion Chromatography Calibration Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : STANDARD 6
Sample Type : Calibration Update
Data File Name : ...\O22_006.DXD
Method File Name : ...\1-1022.met

Date Time Collected : 10/22/09 10:55:56
Detector Name : UV/Vis
Column ID : AS7 (012190) NG-1 (020261)
Method Analyst : CMW

Dilution Factor : 1.00
Sample Comment : 7199/218.6
Data Collection Rate : 20.00 Hz

Calibration Type : EXTERNAL
Calibration Level : 6

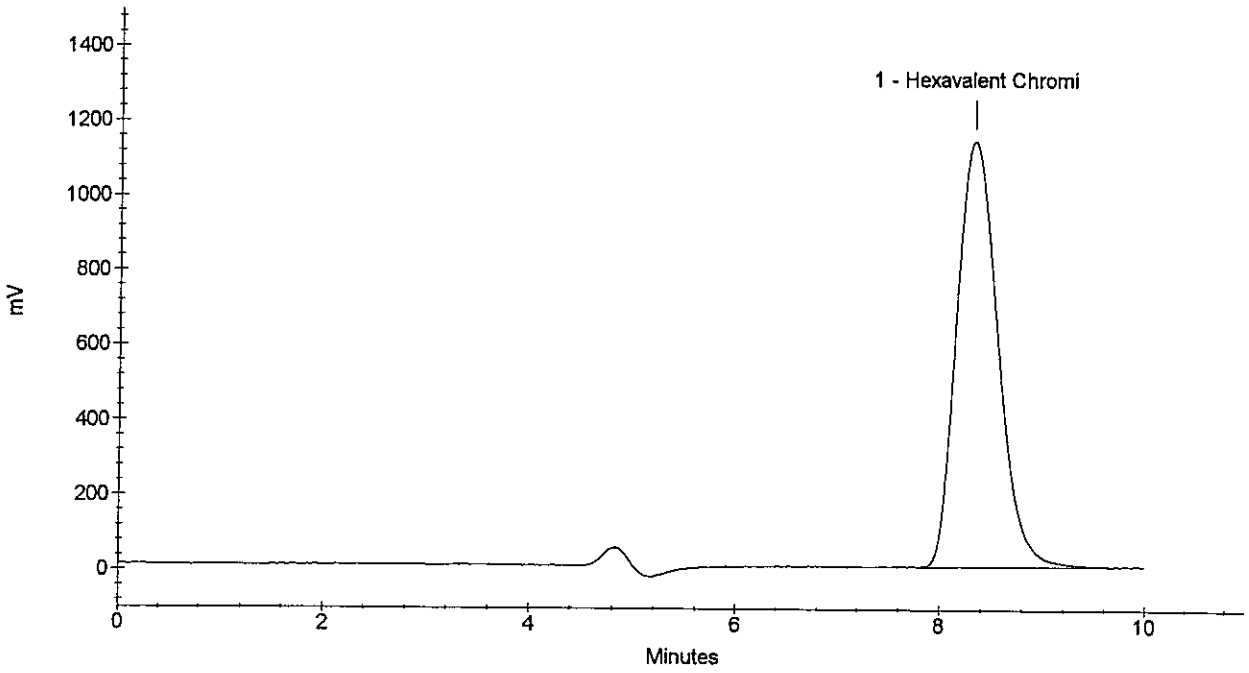
Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount (PPM)	Peak Area
1	8.32	Hexavalent Chromi	1.000	31530713

OK

10/23/09

STANDARD 6



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : ICV
Data File Name : ...\O22_007.DXD
Method File Name : ...\1-1022.met
Date Time Collected : 10/22/09 11:06:20

Detector Name : UV/Vis
Column ID : AS7 (012190) NG-1 (020261)
Method Comment : Cal.: IC#1, 10/22/09 50uL Loop

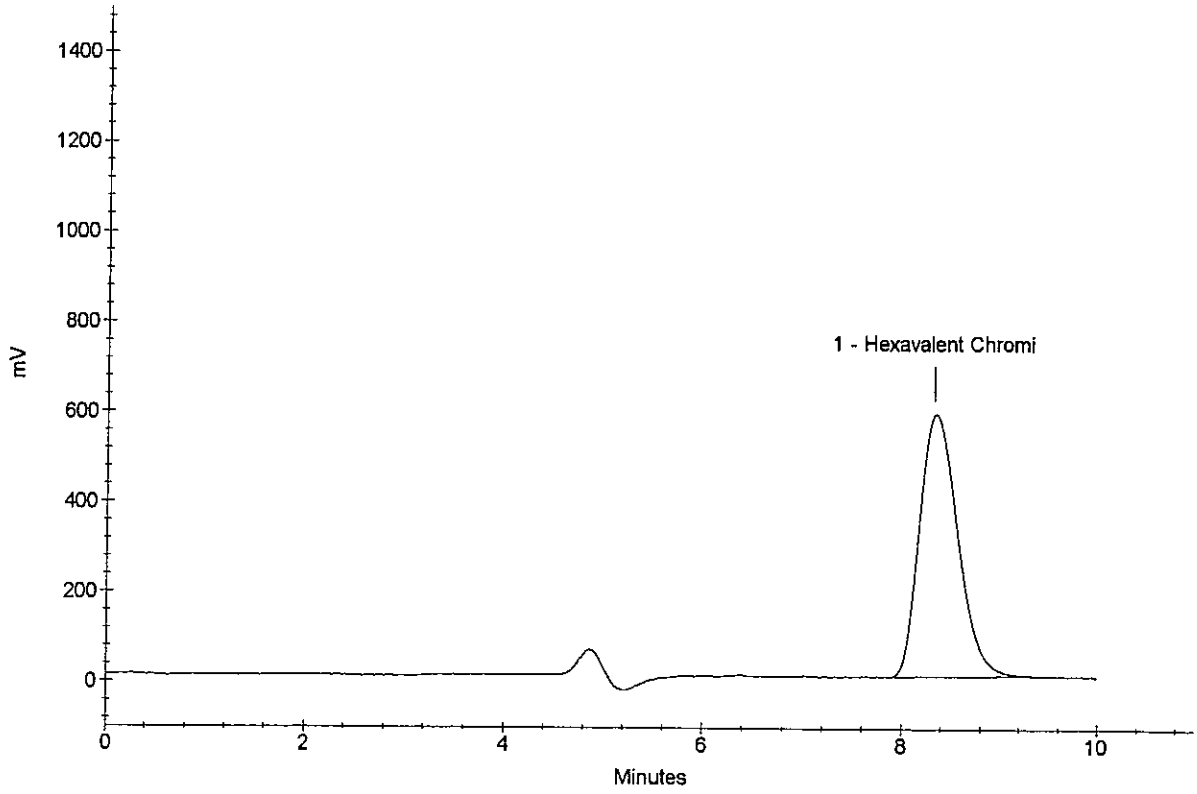
Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment : 7199/218.6

Data Collection Rate : 20.00 Hz
Data Collection Period : 600.00 seconds
Component Amount Units : PPM

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount (PPM)	Peak Area
1	8.32	Hexavalent Chromi	0.4980	15850591

ICV



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : ICB
Data File Name : ...\O22_008.DXD
Method File Name : ...\1-1022.met
Date Time Collected : 10/22/09 11:16:44

Detector Name : UV/Vis
Column ID : AS7 (012190) NG-1 (020261)
Method Comment : Cal.: IC#1, 10/22/09 50uL Loop

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment : 7199/218.6

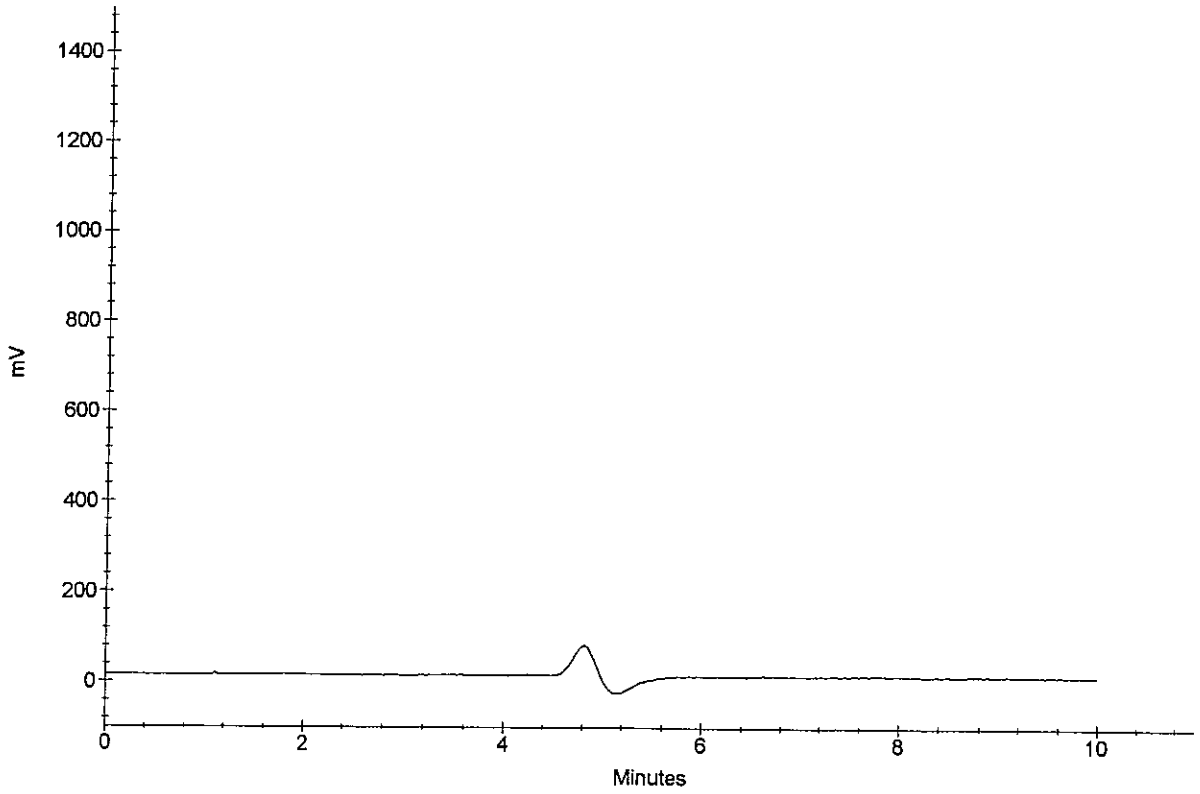
Data Collection Rate : 20.00 Hz
Data Collection Period : 600.00 seconds
Component Amount Units : PPM

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount (PPM)	Peak Area
0	0.00	(null)	0.0000	0

OK
10/28/09

ICB



00628

Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : LCS
Data File Name : ...\O22_009.DXD
Method File Name : ...\1-1022.met
Date Time Collected : 10/22/09 11:27:08

Detector Name : UV/Vis
Column ID : AS7 (012190) NG-1 (020261)
Method Comment : Cal.: IC#1, 10/22/09 50uL Loop

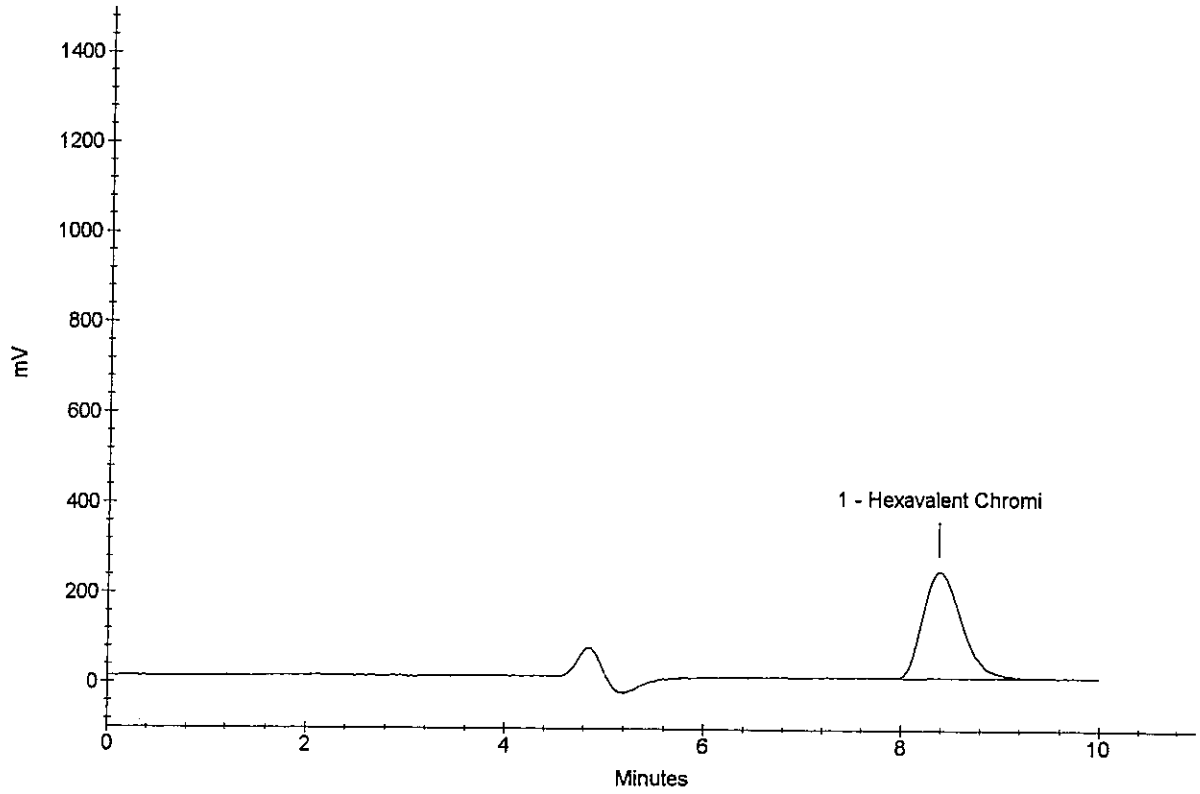
Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment : 7199/218.6

Data Collection Rate : 20.00 Hz
Data Collection Period : 600.00 seconds
Component Amount Units : PPM

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount (PPM)	Peak Area
1	8.38	Hexavalent Chromi	0.2018	6461626

LCS



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : LCS
Data File Name : ...\O22_010.DXD
Method File Name : ...\1-1022.met
Date Time Collected : 10/22/09 11:37:32

Detector Name : UV/Vis
Column ID : AS7 (012190) NG-1 (020261)
Method Comment : Cal.: IC#1, 10/22/09 50uL Loop

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment : 7199/218.6

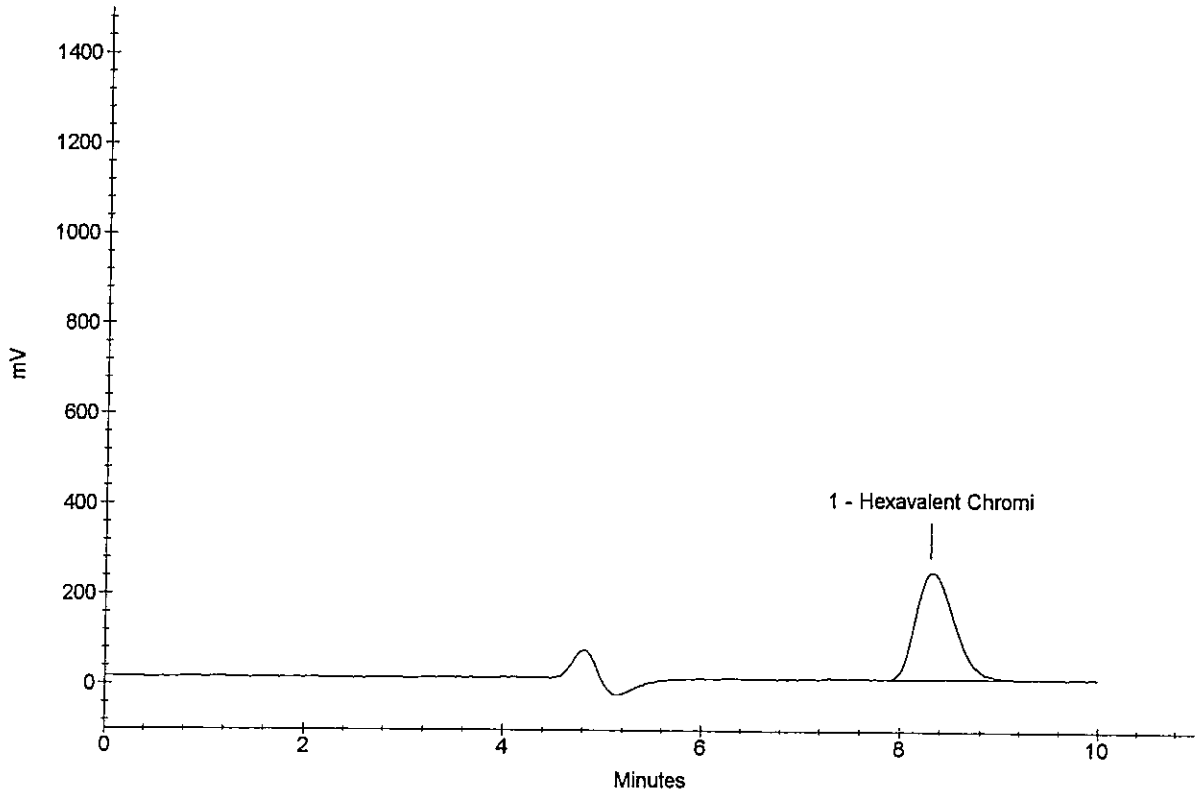
Data Collection Rate : 20.00 Hz
Data Collection Period : 600.00 seconds
Component Amount Units : PPM

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount (PPM)	Peak Area
1	8.30	Hexavalent Chromi	0.1991	6377765

10/25/09

LCS



DIONEX ACI METHOD PARAMETERS - 1-1022.met

Method Information : All Modules

System Name : Dionex 4000i
System Number : 101
Method Type : Ion Chromatography
Column : AS7 (012190) NG-1 (020261)
Analyst : CMW
Comment : Cal.: IC#1, 10/22/09 50uL Loop

AI450 Detector Parameters

Detector Type : UV/Vis
Data collection time (minutes) : 10.00
Data Collection Rate : 20.00
Real time plot scale maximum (mV) : 1500.000
Real time plot scale minimum (mV) : -100.000

AI450 Integration Parameters

Peak detection algorithm : Standard
Starting peak width (seconds) : 15.00
Peak threshold : 5.00
Peak area reject (area counts) : 1000.00
Reference peak area reject (area counts) : 1000.00

AI450 Smoothing Parameters

Filter Type : No filter

AI450 Report Data

Report Format File : J:\ACQUDATA\IC\METHOD.ACI\IC#2\As7-cr6.rpt
Print Sample Analysis : Yes
Print Calibration Update : Yes
Print Check Standard : No
System Suitability Tests :
No system suitability tests selected.

AI450 Integration Data Events

Time	Description
0.00	Stop peak detection
4.40	Force baseline at start of all peaks
5.00	Double peak threshold
6.00	Start peak detection

AI450 Calibration Parameters

External or internal calibration : EXTERNAL
Number of replicates for calibration : 1
Rejection : Manual
Level Weighting : Equal
Calibration standard volume : 1.00
Default sample volume : 1.00
Amount units : PPM
Replace retention time : Yes
Update response : Yes
Default dilution factor : 1.00
Default response factor for unknown peaks : 0.00
Calculate unknowns by area or height : Area

AI450 Component Identification Table

Component	Retention	Tolerance	Reference
Hexavalent Chromi	8.32 min	1.00 min	

AI450 Component Quantitation Table

Component	Retention	Low Limit	High Limit
Hexavalent Chromi	8.32 min	0	0

AI450 Component Calibration Table

Component	Retention Time	Curve Fit	Origin	Cal. by	Response Component	Relative Factor
Hexavalent Chromi	8.32 min	Linear	Include	Area		0.00

AI450 Component = Hexavalent Chromi Levels Table

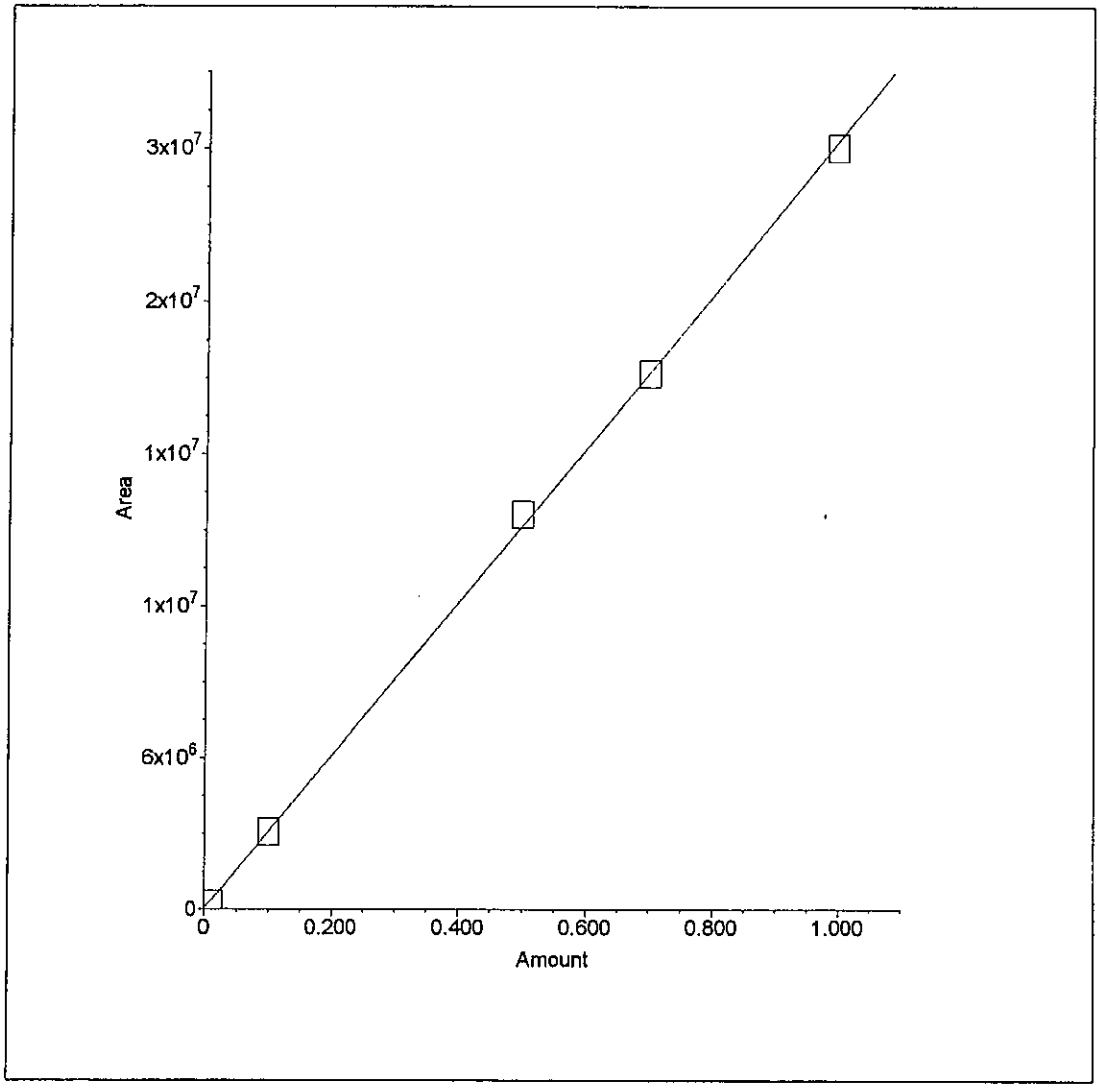
Retention Time : 8.32 min
Amount units : PPM
Replicate unit type : Area
Number of levels : 6
Number of replicates : 1

Level	Amount	Replicate 1
1	0.00	~~16802.4~~ No PEAK
2	0.01	224648
3	0.10	3.23823e+006
4	0.50	1.63764e+007
5	0.70	2.22448e+007
6	1.00	3.15307e+007

CW 10/22/09

AI450 XY Data Parameters

1. Component:Hexavalent Chromi
Standard:External Fit Type:Linear
Origin:Include Calibration:Area
r^2=0.999657
Amt=3.155e-008*Resp+-0.002064



Columbia Analytical Services – Rochester, New York

Ion Chromatography Cover Sheet

Instrument: Dionex 1000I, IC #1

Column: AS7 Analytical Column, NG-1 Guard Column, 4mm, 06/02/08

Curve Date: 10/22/09 **Loop size:** 100 uL Loop

Analyst: C. Woods **Analysis Date:** 10/22/09

Standards Prep Dates & Log ID's:

Std Type	*Date Rec'd*	*Log ID*		*Std Type*	*Prep Date*	*Log ID*
Calibration Standard Stock	02/05/09	WC85265C		Calibration Stds	10/22/09	SAME AS WC85303E
LCS / MS Soluble Stock	02/05/09	WC85265C		Soluble MS	Daily	SAME AS WC85304B
I/CCV Standard Stock	02/05/09	WC85265D		I/CCV	Daily	SAME AS WC85303F
LCS / MS Insoluble Stock	01/11/08 Soils Only	WC85095H Soils Only		Insoluble LCS/MS	Daily	SAME AS WC85304C
LCS for Waters	Daily	SAME AS WC85304A		MS for Waters	Daily	SAME AS WC85304B

Comments:

3h each run.

) NH_2CO_3 (WC852100)

1X2.

d 0.2 ml acetone (WC852003)

c Stock (WC852156)
exp 2/2010

tock (WC85018 J)
exp 2/2009

510 g $MgCl_2 \cdot 6H_2O$
Store at

1 run.

Digest
Vial 1-L
p. ly 2010, 2/5/10

2/5/09 Received from HACH

(A) (3) x 25 BOD Nutrient Buffer Pillows, Cat. 14863-98, HACH Lot # A8339, CAS#s Same as WC850017H. Store @ RT. Expires 12/31/2013

(B) (2) x 150 COD Digestion Solution Vials, 0-1500ppm, Cat# 21259-15, HACH Lot # A9017, CAS #s Same as WC850008D Store in cool, dark place. Expires 1/31/2014

Received from Thermo-Fisher

(C) (1) x 500mL Chromium Reference Std Soln, 1000 mg/L. Cat# SC192-500, Fisher Lot # 076763, CAS# 7778-50-9 Store @ R.T. Expires 1/31/2010 [7980]

Received from Environmental Express

(D) (1) x 250 mL Chromium Std Soln, 1000 mg/L. Cat # HP100012-7, EE Lot # 0804608, CAS# 7778-50-9 Store @ R.T. Expires 7/30/2010 [7981]

Received from VWR

(E) (1) x 500mL Phenol, liquified, Cat# PX0511-1, EMD Lot # 48112, CAS# 108-95-2. Store in flammable cabinet. Expires 2/5/2014 [7983]

(F) (1) x 6 Membrane cap assemblies for BOD, Probe. Cat# YSI5906, YSI Lot # ~~590~~ C8M100071. Store @ RT. Exp: not listed.

2/5/09 (G) 0.00564N $Na_2S_2O_3$

Same as WC852561. Fresh per run.

(H) Stock Chlorine - Cl. Residual

Same as WC852560J Fresh per run

(I) DPD Indicator

Same as WC8525GK Store at 4°C. Exp 2/5/10 or when discolored

~~2/6/09 (J) 0.00564 N Sodium Thiosulfate - Chlorine Demand~~
~~NM - Same as WC85 2/6/09 Exp. 2 weeks, 2/20/09 2/20/09.~~

~~(K) Std. KIO_3 Titrant - Chlorine Demand~~
nm 2/6/09

1/10/08 (A) DPD Indicator TC 1/10/08

TC ~~clm~~ a 500 mL vol flask, dissolve 0.50g DPD (WC76015F) and 0.100g EDTAC and 4mL 1 + 3 H_2SO_4 (WC85027B) in uPDI, Bring to vol. Store @ RT in amber glass. Exp 1 yr. or when discolored, 1/10/09.

1/10/08 NM (B) Sodium Phenolate - NH3

- same as WC85088F. Exp. 1 year, 1/10/09.

1/11/08 NM (C) Erwchrome Black-T Indicator (Hardness)

- same as WC85075H. Exp. 5/31/08.

1/11/08 KB (D) ISS Reference

0.2152g Kaolin (WC69285G) brought to 1000g w/ DI. Store at 4°C in a plastic bottle.

TV = 215 mg/L exp: 01/11/09

~~1/11/08~~ 1/11/08 (E) Crist Soils Buffer

In a 500 mL vol. flask dissolve

- 43.545g K_2HPO_4 (WC76227G)
- 34.02g KH_2PO_4 (WC85054G)

in ~400 mL DI. Bring to vol. w/ DI. Store @ 4°C. Exp. 1 yr. 1/11/09.

(F) Crist Soils Digest Solution

20.0g NaOH pellets (WC85072G) and 30.0g Na_2CO_3 (WC76232D) dissolved in DI Bring to 1 liter volumetrically w/ DI

Exp. 1 month, 2/11/08.

1/11/08 (G) 0.0250 $Na_2S_2O_3$ - Sulfides

TC Dilute 50 mLs 1.0N $Na_2S_2O_3$ (WC85067D) → 200 mLs volumetrically w/ DI. Store for 2 weeks @ 4°C. Exp. 1/25/08.

1/11/08 KB Received from Life Assoc

(H) (1) x 100g Lead II Chromate, Cat # 1425, AA Lot # J03Q003, CAS # 7758-97-6. Store @ R.T. Expires 1/11/13

BB 10/14/09 criteria change

00537

3

CMW 5/15/09

Ⓐ LCS for Cr^{6+} Waters (TV=0.2ppm)

To 10mL of DI water, add 0.2mL of 10ppm Std. ~~Stock~~ CMW 5/15/09 (WC85303C). Mix thoroughly. Prepare as needed.

Ⓑ Matrix Spike for Cr^{6+} Waters (TV=0.2ppm)

To 10mL of sample, add 0.2mL of 10ppm Std. (WC85303C). Mix thoroughly + analyze.

Ⓒ LCS for Cr^{6+} Soils

To digestate add approximately 10mg of Lead(II) Chromate (WC85095H) + digest as normal.

$$TV = \frac{(mg\ PbCrO_4)}{(kg\ sample)} \times 0.161$$

Ⓓ Matrix Spike for Cr^{6+} Soils

To digestate add approximately 10mg of Lead(II) Chromate (WC85095H) + digest as normal.

$$TV = \frac{(mg\ PbCrO_4)}{(kg\ sample)} \times 0.161$$

Ⓔ Post-Verification Spike (PVS) for Cr^{6+} Soils

A- If a sample has no value, take a 45mL aliquot of digestate and add 0.45mLs of 100ppm Std. (WC85304F). Analyze as usual. TV= 1.00ppm (Needs to be run @ dilution on IC)

B- If a sample has a value, use the following to determine the amount of spike.

$$\left(\begin{matrix}\text{Amount of}\\ \text{spike, mL}\end{matrix}\right) = \frac{(45mLs)(2)(\text{Sample Value, mg/L})}{(100\ ppm)}$$

Spike a 45mL aliquot w/ the calculated amount of 100ppm Standard (WC85304F). Spike with whichever amount is greater, A or B.

Ⓕ 100ppm Standard Working Stock

Do a 1/10 serial dilution of 1000ppm Standard Stock (WC85265C). Prepare fresh as needed

Revie

00638

CMW 5/15/09

Ⓐ Cr^{6+} 7199 Elvent

Dissolve 33g of Ammonium Sulfate (WC85040B) in 500mL of DI and add 6.5mL of Ammonium hydroxide (WC85188I). Dilute to 1L volumetrically w/ DI. Degas prior to use. Store @RT. Expires 6/15/09.

Ⓑ Cr^{6+} 7199 Post-Column Color Reagent

Dissolve 0.5g of 1,5-diphenylcarbohydrazide (WC85190E) in 100mL HPLC grade methanol (WC85284G) in a 1L volumetric flask. In a separate container add about 500mL DI then add 28mL of conc. H_2SO_4 (WC85276C), mix + degas before adding to diphenylcarbohydrazide solution. Dilute to volume w/ DI water. Store @4°C. Degas prior to use. Expires ~~6~~ CMW 5/15/09 6/15/09.

Cr^{6+} 7199/218.6 Calibration on IC #5

Ⓒ 10ppm Standard Working Stock

Do two(2) 1/10 serial dilutions of 1000ppm Std. Stock (WC85265C). Prepare as needed.

Ⓓ 10ppm Reference Working Stock

Do two (2) 1/10 serial dilutions of 1000ppm Ref. Stock (WC85265D). Prepare as needed.

Ⓔ Calibration Standards

Std #	mLs 10ppm Std. (WC85303C)	mLs DI	concentration (ppm)
6	1.0	9.0	1.00
5	0.70	9.3	0.70
4	~~0.10~~ 0.50 CMW 5/15/09	~~9.9~~ 9.5	~~0.10~~ 0.50
3	0.10	9.9	0.10
2	1/10 dilution of Std. #3		0.010
1	0.0	10	0.00

Ⓕ ICV/CCV (TV=0.50ppm) [Waters + Soils]

To 9.5mLs of DI add 0.5mLs of 10ppm Reference Stock (WC85303D). Mix + analyze. Prepare as needed.

Limits for DI Water if pH < 5.5; or > 7.5 Notify QA!

Limits for Spec. Cond. >= 1 - Notify QA! (Limit is 2 umohs/cm) **Date:** 11/12/09

Conductivity holding time is 48 hrs from sample date

pH holding time is 15 minutes from collection

Sub. #	Order #	pH 150.1/4500H+B 9040B	Corrsivity 9045C	CONDUCTVITY 120 raw data	units	mhos/cr	TEMP °C	Analyst	Time	HT** (y/n	Meter J/VWR
DIcheck	CCB	6.963		0.827	µs	0827		MRP	0845	yes	J
	218.6 Cr6+	9.495						MRP	↓	↓	↓
CCV	7.00	7.039						↓	↓	↓	↓
R0906477	001	7.267		4.81	ms	4860		MRP	1435	yes	J
↓	001dup	7.291		4.85	ms	4850		↓	↓	↓	↓
R0906490	001	7.498 MRP 11/12/09									
~~R0906496~~	~~014~~										
CCV	7.00/2767	7.047		2.71	ms	2710					
CCB	DI H2O			0.698	µs	0.698		↓	↓	↓	↓
R0906506	001	7.261						MRP	1610	yes	J
↓	001dup	7.265						↓	↓	↓	↓
CCV	7.00	6.952						↓	↓	↓	↓

MRP 11/12/09

*Meters used will be designated by "J" for Jenway or "VWR" for the VWR meter, **HT = holding time

pH Meter Calibration 4.010 10.010 7.029

STANDARDS ~~4.00~~ ✓ ~~10.00~~ ✓ ICV check 7.00 TEMP. 19.2°

LOT #: BDB2694H BDB2695A BDB2694I

Conductivity Meter Calibration (calibrate to 1412 and test 2767 & 146.9 standard)

N KCL: 1412 Calibrated (Yes / NO) LOT #: BDB2695F

Cell Constant: 1.130

N KCL: 2767 LOT #: BDB2695D Reading 2.71 ms

10% Limits: 2490.3 to 3043.7

N KCL: 146.9 LOT #: BDB2694B Reading 151.2 uS

10% Limits: 132.2 TO 161.6

uS = 1 umhos/cm mS = 1,000 umhos/cm S = 1,000,000 umhos/cm

Analyst: MRP DATE: 11/12/09 TIME: 1435

Analytical Results Summary

Instrument Name: R-Discrete-01 **Analyst:** HLOVEJOY **Analysis Lot:** 180890 **Method/Testcode:** 335.4/CN T 4 RUNS

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt	Final Result	Dil	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
R0911804-01	Cyanide, Total	MB		Water	0.00 mg/L	50 mL	0.010 mg/L U	1	0.010			11/24/09 14:08:50	N	IV
R0911804-01	Cyanide, Total	MB		Water	0.00 mg/L	50 mL	0.010 mg/L U	1	0.010			11/24/09 14:08:50	N	IV
R0911804-02	Cyanide, Total	LCS		Water	0.11 mg/L	50 mL	0.107 mg/L	1	0.010	107		11/24/09 14:08:51	N	IV
R0911804-02	Cyanide, Total	LCS		Water	0.11 mg/L	50 mL	0.107 mg/L	1	0.010	107		11/24/09 14:08:51	N	IV
R0911804-03	Cyanide, Total	LCS		Water	0.41 mg/L	50 mL	0.410 mg/L	1	0.010	102		11/24/09 14:08:52	N	IV
R0911804-03	Cyanide, Total	LCS		Water	0.41 mg/L	50 mL	0.410 mg/L	1	0.010	102		11/24/09 14:08:52	N	IV
R0906436-017	Cyanide, Total	N/A		Water	0.00 mg/L	50 mL	0.010 mg/L U	1	0.010			11/24/09 14:08:53	Y	IV
R0911804-05	Cyanide, Total	DUP	R0906436-017	Water	0.00 mg/L	50 mL	0.010 mg/L U	1	0.010		NC	11/24/09 14:08:54	N	IV
R0911804-04	Cyanide, Total	MS	R0906436-017	Water	0.10 mg/L	50 mL	0.102 mg/L	1	0.010	102		11/24/09 14:08:55	N	IV
R0906625-001	Cyanide, Total	N/A		Water	0.00 mg/L	50 mL	0.010 mg/L U	1	0.010			11/24/09 14:08:56	N	II
R0906555-001	Cyanide, Total	N/A		Water	0.00 mg/L	50 mL	0.010 mg/L U	1	0.010			11/24/09 14:08:57	N	IV
R0906555-002	Cyanide, Total	N/A		Water	0.00 mg/L	50 mL	0.010 mg/L U	1	0.010			11/24/09 14:08:58	N	IV
R0906555-003	Cyanide, Total	N/A		Water	0.00 mg/L	50 mL	0.010 mg/L U	1	0.010			11/24/09 14:16:16	N	IV
R0906477-001	Cyanide, Total	N/A		Water	0.00 mg/L	50 mL	0.010 mg/L U	1	0.010			11/24/09 14:16:19	N	IV
R0906436-016	Cyanide, Total	N/A		Water	0.00 mg/L	50 mL	0.010 mg/L U	1	0.010			11/24/09 14:16:20	N	IV
R0906436-019	Cyanide, Total	N/A		Water	0.00 mg/L	50 mL	0.010 mg/L U	1	0.010			11/24/09 14:16:21	N	IV
R0906436-020	Cyanide, Total	N/A		Water	0.00 mg/L	50 mL	0.010 mg/L U	1	0.010			11/24/09 14:16:22	N	IV
R0906578-001	Cyanide, Total	N/A		Water	0.00 mg/L	50 mL	0.010 mg/L U	1	0.010			11/24/09 14:16:23	N	IV
R0906578-002	Cyanide, Total	N/A		Water	0.00 mg/L	50 mL	0.010 mg/L U	1	0.010			11/24/09 14:51:00	N	IV
R0906578-003	Cyanide, Total	N/A		Water	0.00 mg/L	50 mL	0.010 mg/L U	1	0.010			11/24/09 14:16:25	N	IV
R0906578-006	Cyanide, Total	N/A		Water	0.00 mg/L	50 mL	0.010 mg/L U	1	0.010			11/24/09 14:16:26	Y	IV
R0911804-07	Cyanide, Total	DUP	R0906578-006	Water	0.00 mg/L	50 mL	0.010 mg/L U	1	0.010		NC	11/24/09 14:23:46	N	IV
R0911804-06	Cyanide, Total	MS	R0906578-006	Water	0.10 mg/L	50 mL	0.0981 mg/L	1	0.010	98		11/24/09 14:23:47	N	IV
R0906578-004	Cyanide, Total	N/A		Water	0.00 mg/L	50 mL	0.010 mg/L U	1	0.010			11/24/09 14:23:50	N	IV
R0906578-005	Cyanide, Total	N/A		Water	0.00 mg/L	50 mL	0.010 mg/L U	1	0.010			11/24/09 14:23:51	N	IV
R0911802-01	Cyanide, Total, ASTM	MB		Solid	0.00 mg/L	50 mL	0.010 mg/L U	1	0.010			11/24/09 14:23:52	N	II
R0906551-001	Cyanide, Total, ASTM	N/A		Solid	0.00 mg/L	50 mL	0.010 mg/L U	1	0.010			11/24/09 14:23:53	N	II

Reviewed & Approved
By: Sletto
Date: 11/25/09

R0436 R6670
R6555
R6477
R6578

! indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Preparation Information Benchsheet

Prep Run#: 101566
Team: GenChem/GNITAJOUPPI

Prep WorkFlow: Gen Dist CN
Prep Method: Method

Status: Prepped
Prep Date/Time: 11/24/09 08:30 AM

#	Lab Code	Client ID	B#	Amt. Ext.	Method /Test	pH	AE	BN	Final Vol	Sample Desc. (Initial/Final)	SpikeAmt./Inv. ID	Comments
1	RQ0911804-01	MB		50mL	335.4/CN T				50.00mL			
2	RQ0911804-01	MB		50mL	9012A/CN Tot				50.00mL			
3	RQ0911804-02	LCS		50mL	335.4/CN T				50.00mL		0.0500 mL/11016	
4	RQ0911804-02	LCS		50mL	9012A/CN Tot				50.00mL		0.0500 mL/11016	
5	RQ0911804-03	LCS		50mL	335.4/CN T				50.00mL		2.0000 mL/11016	
6	RQ0911804-03	LCS		50mL	9012A/CN Tot				50.00mL		2.0000 mL/11016	
7	R0906436-017	MW-310	.08	50mL	9012A/CN Tot				50.00mL			
8	RQ0911804-05	R0906436-017 DUP	.08	50mL	9012A/CN Tot				50.00mL			
9	RQ0911804-04	R0906436-017 MS	.08	50mL	9012A/CN Tot				50.00mL		0.0500 mL/11016	
10	R0906625-001	B325 Final Eff 24Hr Comp	.05	50mL	335.4/CN T				50.00mL			
11	R0906555-001	UPSTREAM	.08	50mL	9012A/CN Tot				50.00mL			
12	R0906555-002	DOWNSTREAM	.08	50mL	9012A/CN Tot				50.00mL			
13	R0906555-003	SPRING	.08	50mL	9012A/CN Tot				50.00mL			
14	R0906477-001	M-122B	.13	50mL	9012A/CN Tot				50.00mL			
15	R0906436-016	MW-229	.08	50mL	9012A/CN Tot				50.00mL			
16	R0906436-019	MW-202	.08	50mL	9012A/CN Tot				50.00mL			
17	R0906436-020	MW-312	.08	50mL	9012A/CN Tot				50.00mL			
18	R0906578-001	MW-7AR	.08	50mL	9012A/CN Tot				50.00mL			
19	R0906578-002	MW-7B	.08	50mL	9012A/CN Tot				50.00mL			
20	R0906578-003	MW-17A	.08	50mL	9012A/CN Tot				50.00mL			
21	R0906578-006	MW-25B	.08	50mL	9012A/CN Tot				50.00mL			
22	RQ0911804-07	R0906578-006 DUP	.08	50mL	9012A/CN Tot				50.00mL			
23	RQ0911804-06	R0906578-006 MS	.08	50mL	9012A/CN Tot				50.00mL		0.0500 mL/11016	
24	R0906578-004	MW-17B	.08	50mL	9012A/CN Tot				50.00mL			
25	R0906578-005	MW-25A	.08	50mL	9012A/CN Tot				50.00mL			
26	RQ0911802-01	MB	.01	50mL	9012A/CN Tot ASTM				50.00mL			
27	R0906551-001	B386 HAZ FL SLUDGE (PRESS #3)	.02	50mL	9012A/CN Tot ASTM				50.00mL			

Spiking Solutions

Name: Cyanide 10 ppm as CN Inventory ID 11016 Logbook Ref: FRESH PER RUN Expires On: 07/10/2010

Preparation Steps

Step: Distillation
Started: 11/24/09 08:30
Finished: 11/24/09 13:00
By: GNITAJOUPPI

Preparation Information Benchsheet

Prep Run#: 101566
Team: GenChem/GNITAJOUPPI

Prep WorkFlow: Gen Dist CN
Prep Method: Method

Status: Prepped
Prep Date/Time: 11/24/09 08:30 AM

Comments: _____

Reviewed By: _____ Date: _____ Spike Witness: KREYNOLDS Date: _____

Chain of Custody

Relinquished By: _____ Date: _____

Received By: _____ Date: _____

Extracts Examined
Yes No

Midi-Cyanide Distillation Sheet

Stock ppm: 1016.371

Analyst: GNITA

Date Std'n: 7/10/09

Date: 11/24/09

10 ppm Spike Solution:

Chiller Temp: 9°C

Date made: 11/23/09

Midi Block #1 Temp: 140°C

mL used: 0.9839

Midi Block #2 Temp: 135°C

Pipette ID: E2

Balance ID: NA

Spk witness: KLR

Still #	QC type	Order #	Dist. Vol.	Final Vol.	Method	pH	H2S +/-	Comments
1	Prep Blk		50	50	335.4/9012	N/A	N/A	
2	LCS-LL		50	50	335.4/9012	N/A	N/A	+ 0.5 ml 10 ppm
3	LCS-HL		50	50	335.4/9012	N/A	N/A	+ 2.0 ml 10 ppm
4		R0906436-017	50	50	9012	≥12	–	
5		6436-017 DUP	50	50	9012	≥12	–	
6		6436-017 SPK	50	50	9012	≥12	–	+ 0.5 ml 10 ppm
7		R0906625-001	50	50	335.4	≥12	–	
8		R0906555-001	50	50	9012	≥12	–	
9		R0906555-002	50	50	9012	≥12	–	
10		R0906555-003	50	50	9012	≥12	–	
11		R0906477-001	50	50	9012	≥12	–	
12		R0906436-016	50	50	9012	≥12	–	
13		R0906436-019	50	50	9012	≥12	–	
14		R0906436-020	50	50	9012	≥12	–	
15		R0906578-001	50	50	9012	≥12	–	
16		R0906578-002	50	50	9012	≥12	–	
17		R0906578-003	50	50	9012	≥12	–	
18		R0906578-006	50	50	9012	≥12	–	
19		6578-006 DUP	50	50	9012	≥12	–	
20		6578-006 SPK	50	50	9012	≥12	–	+ 0.5 ml 10 ppm

Midi-Cyanide Distillation Sheet

Analyst: GN ITA

Date: 11/24/09

Chiller Temp: 10°C
Midi Block #1 Temp: 140°
Midi Block #2 Temp: 135°C
Balance ID: R-Balance-01

Stock ppm: _____

Date Std'n: _____

10 ppm Spike Solution:

Date made: _____
mL used: _____
Pipette ID: _____

Still #	QC type	Order #	Dist. Vol.	Final Vol.	Method	pH	H2S +/-	Comments
1		R0906578-004	50	50	9012	>12	—	
2		R0906578-005	50	50	9012	>12	—	
3		MB	50	50	9012	>12	—	ASTM
4		R0906551-001	50	50	9012	>12	—	ASTM
5		MB	50	50	Resid	>12	—	ASTM
6		LCS	50	50	Resid	>12	—	ASTM 10.5mL of 10 ppm
7		R0906551-001	50	50	Resid	>12	—	ASTM
8	Prep Blk		1.0	50	335.4/9012	N/A	N/A	
9	LCS-LL		1.0	50	335.4/9012	N/A	N/A	+ 0.5 ml 10 ppm
10	LCS-HL		1.0	50	335.4/9012	N/A	N/A	+ 2.0 ml 10 ppm
11		R0906551-002	1.01	50	9012	N/A	—	
12		6551-002DUP	1.03	50	9012	N/A	—	
13		6551-002SPK	1.20	50	9012	N/A	—	
14		R0906670-002	1.04	50	9012	N/A	—	
15		MB	1.00	50	Resid	N/A	—	
16		LCS	1.00	50	Resid	N/A	—	10.5mL of 10 ppm
17		R0906551-002	1.20	50	Resid	N/A	—	-
18				50	9012			
19		GN 11/24/09		50	9012			
20				50	9012			

Columbia Analytical Services
Rochester, NY 14609
Analyst: H. Lovejoy
Pipette: orblue

Date : 2009-11-24
Time : 17.46

Test CN
Unit mg/L

Sample ID:	Resp.	Result	Note	Dilut	Date and Time
4 CCB-TCN	0.008	-0.00031			2009-11-24 14.51
R0906578-002	0.008	-0.00045	does not confirm. repeated		2009-11-24 14.51
6551-001 RESID	0.019	0.01082	confirmation only		2009-11-24 14.51
6551-002 RESID	0.035	0.02653			2009-11-24 14.51
3 CCV-TCN	0.527	0.52706			2009-11-24 14.54
4 CCB-TCN	0.008	-0.00028			2009-11-24 14.54
3 CCV-TCN	0.529	0.52923			2009-11-24 15.17
4 CCB-TCN	0.009	0.00062			2009-11-24 15.17
R0906578-002	0.008	-0.00027	confirms repeat		2009-11-24 15.17
3 CCV-TCN	0.538	0.53797			2009-11-24 15.20
4 CCB-TCN	0.009	0.00051			2009-11-24 15.20

Calibration results AquaKem 6.5 Page: 1

Columbia Analytical Services
Rochester, NY 14609
Analyst: H.Lovegan
Pipette: 01 Blue

24.11.2009 13:23

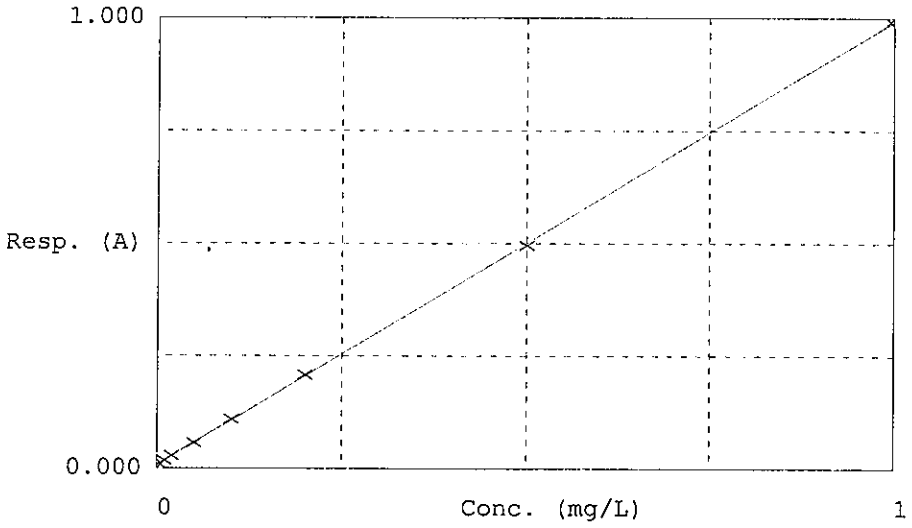
Test CN

Accepted 24.11.2009 13:23

Factor 1.01629
Bias 0.00849

Coeff. of det. 0.999946

Errors



	Calibrator	Response	Calc. con.	Conc.	Errors
1	CN-0.00	0.00847	-0.00001	0.00000	
2	CN-0.01	0.01800	0.00967	0.01000	
3	CN-0.02	0.02782	0.01965	0.02000	
4	CN-0.05	0.05696	0.04926	0.05000	
5	CN-0.10	0.10914	0.10229	0.10000	
6	CN-0.20	0.20779	0.20255	0.20000	
7	CN-0.50	0.49513	0.49457	0.50000	
8	CN-1.00	0.99445	1.00203	1.00000	
9	1 ICV-TCN(contr	0.49357	0.49298	0.50000	
10	2 ICB-TCN(contr	0.00915	0.00067	0.00000	

Columbia Analytical Services
1 Mustard St., Rochester NY

General Chemistry Analytical Run Cover Sheet

Analyst: GNHA Distillation Date: 11/24/09

Analysis: Total Cyanide Instrument: AquaKem 200 Analyzer Date: 11/24/09

Quality Control:

	Same as Log #, Date	Stock Sol (mLs)	Stock Sol (mg/L)	Final Vol mLs	True Value (mg/L)
a) Stds. Prep. :	WC85134D, 4/3/08				
10 ppm Working Stock:	WC85134B, 4/3/08	0.9839	1016.371	100	10.0
b) I/CCV (Ref.) Prep.:	WC92067D, 8/20/09	0.5	10	10	0.500
10 ppm Working Stock:	WC85134C, 4/3/08	0.98	1020.365	100	10.0
c) LCS (water) Prep:	WC69160D , 8/02/04	2.0	10	50	0.4
LCS (water) Prep:	WC69160C , 8/02/04	0.5	10	50	0.1
LCS (soil) Prep. :	WC69160D , 8/02/04	2.0	10	~1 g.	~ 20 (see bench sheet)
LCS (soil) Prep:	WC69160C , 8/02/04	0.5	10	~1 g.	~ 5 (see bench sheet)
d) Mtx Spk (water) Prep:	WC69160E , 8/02/04	0.5	10	50	0.1
Mtx Spk (soil) Prep:	WC69160E , 8/02/04	0.5	10	~1 g.	~5 (see bench sheet)

Method Reference: 335.2 EPA 600; 9010A,9012 EPA SW-846; 335.2 CLP-M NYSASP

Instrument log filled in? (Y) (N)

Stock Prep:
1000 mg/L TCN Std. Stock prepared 7/10/09, WC92037C, standardized 7/10/09, WC91033A
1000 mg/L TCN Ref. Stock prepared 7/10/09, WC92037D, standardized 7/10/09, WC91033B

10 mg/L Std. And Ref. working stocks are prepared weekly using the above stock solutions, diluting to volume with 0.25N NaOH

0.25N NaOH, fresh daily: 26.14 mL 50% w/w NaOH WCC85271B diluted to 2L with DI

Reagents, Distillation:	**Log Book #**	**Comments**
Sulfamic Acid	WC92104D	
Sulfuric Acid, 1:1	WC92117C	
Magnesium Chloride	WC92114C	
Calcium Hypochlorite	WC92062I	
Ascorbic Acid	WC92081E	
Acetate Buffer	N/A	
Zinc Acetate	N/A	
Acetic Acid	N/A	
Cadmium Carbonate	N/A	
Anti-foam	N/A	

Reagents, Autoanalyzer:		
Buffer		
Pyridine Barbituric Acid		

Chloramine-T, fresh daily: 2.00 g Chloramine-T WC76197G diluted to 200 mL with DI

Comments:

4/3/08 (A) 0.25 N NaOH

26.14 mls conc. NaOH (WC85011C) → Liter w/ DI.
Fresh per run.

(B) 10ppm TCN Std. Stock

1.022 mls of the 978.432 ppm TCN Std. Stock (WC85007E)
→ 100 mls w/ 0.25N NaOH (WC85134A)

(C) 10ppm TCN Ref. Stock

1.002 mls of the 998.4 ppm TCN Ref. Stock (WC85009F)
→ 100 mls w/ 0.25N NaOH (WC85134A)

(D) TCN Calibration Stds. Fresh per run

Conc.	mls 10ppm TCN Std. Stock (WC85134B)	mls 0.25N NaOH
1.00	1.0	9.0
0.50	0.50	9.50
0.20	0.20	9.80
0.10	1/10 dilution of 1.00 ppm Std	
0.05	1/10 dilution of 0.50 ppm Std	
0.02	1/10 dilution of 0.20 ppm Std	
0.01	1/10 dilution of 0.10 ppm Std	
0.00	0.00	10.0

(E) ICV/CCV TV=0.70 Fresh per run

0.70 mls 10ppm TCN Ref. Stock (WC85134C) + 9.30 mls 0.25N NaOH (WC85134A)

/3/08 Nm (F) NH3 Carrier/Diluent

-same as WC85073F. Prepared solution X 3.

(G) Hypochlorite - NH3

-same as WC85109F. Prepare fresh each run.

1/3/08 (F) Iodide - Iodide Titrant - Sulfite

c 4.458g KIO3 (WC85007E) + 4.25g KI (WC76272E) + 0.310g NaHCO3 (WC76115E)
dissolved in DI in 1L volumetric flask and brought to volume. Store at 4°C exp 4/3/09

(G) Ascorbic Acid - Kone lab

Same as WC85113C Store at 4°C exp 2 weeks 4/17/08

4/3/08 AB Received for
(A) (3) x 2
CPE
(B) (4) x 2
CPE L

Received for
(C) (1) x
Erlen
431-
Eppen

4/4/08 Nm (D) Post-Di
To a 2-L
(WC85133C
Pour off 10
w/ UPDI.

(E) Hypochlor
-same as

4/4/08 Nm (F) Color Re
To a t
-75.0g S
-0.50g S
-454g Ur
Stir until

(G) Buffer - T
-same as U

4/8/08 Nm (H) Post-Dig
-same as S

(I) Hypochlo
-same as

8/2/04 CMW

TCN Distillation

(A) 0.25N NaOH

·40.0mLs NaOH (WC690747F, EM Lot # 3321) → 2 Liters w/ DI. Make fresh each run.

(B) TCN 10ppm working Stock (for LCS/MS/STANDARDS)

· 1.020 mL TCN Std. Stock #1 (WC691154D), Standardization WC71016A → 100mL w/ 0.25 NaOH (WC691160A). Prepare fresh weekly. Store in amber glass @ 4°C.

(C) TCN Low Level LCS:

Add 0.50mL 10ppm working Standard Stock (WC691160B) to 50mL DI. TV = 0.100ppm. For soils, add 1.0g Ottawa sand to 50.0mL DI and 0.50mL 10ppm Standard working stock (WC691160B). TV = 5.0ppm.

(D) TCN High Level LCS:

Add 2.0mL 10 ppm Standard working stock (WC691160B) to 50mL DI. TV = 0.400ppm. For soils, add 1.0g Ottawa sand to 50mL DI and 2.0mL 10ppm Standard working stock (WC691160B). TV = 20.0ppm.

(E) TCN Matrix Spike

Add 0.50mLs 10ppm Standard Working Stock (WC691160B) to 50.0mL sample. TV = 0.100ppm. For soils, 1.0g sample to 50.0mL DI and 0.50mL 10ppm Standard working stock (WC691160B). TV = 5.0ppm

(F) TCN 10ppm Reference Working Stock

Add 1.002mL TCN Ref. Stock #2 (WC691154E) Standardization WC71016B → 100mls w/ 0.25N NaOH (WC691160A). Prep fresh weekly. Store in Amber glass @ 4°C.

CMW 8/2/04

8/2/04 CMW

(A) TCN AA

Conc. (mg/L)
0.500
0.400
0.300
0.200
0.100
0.050
0.020
0.010
0.000

(B) CCV/IC

· Add 0.3m to 9.7mLs 10 samples

8/3/04 CB

(C) TDS Refere

0.9120g Na DI H_2O [Vol bottle @ 4

8/3/04 GN

(D) Post - M

Same a

8/3/04 CMW

(E) 10% Ph

Same a

8/3/04 CMW

(F) Phenols

· Same a

8/3/04 JJT

(G) Rec'd Ecl

- Sam

8/4/04 DK

(H) Total S.

400.00 DI F glass

Continued from page

7/9/09 (A) ~.02500 N Iodine
CKp in a 1L vol flask dissolve 20.25g KI (WCES2855) in ~500ml DI. Add 3.2g Iodine (WCES2626) and bring to volume with DI. Stir until dissolved. Store in amber glass at 4°C. Exp 7/9/10. Standardized with each run

7/10/09 (B) Ascorbic Acid - TPC
GN - same as WC92004A. Exp IWK 7/17/09

7/10/09 (C) 1000ppm TCN Stock #1: Standard Stock
BB To a tared 500mL volumetric flask, add:
1.26g KCN (WC76005C)
1.00g KOH (WC76005D)
~400mL DI
Dissolve and bring to volume w/DI. Standardize and store @ 4°C in amber glass Expires 7/10/10

(D) 1000ppm TCN Stock #2: Reference Stock
To a tared 500mL volumetric flask, add
1.26g KCN (WC76007B)
1.00g KOH (WC76005D)
~400mL DI
Dissolve and bring to volume w/DI. Standardize and store @ 4°C in amber glass Expires 7/10/10

(E) 0.0192N $AgNO_3$
To a 500mL volumetric flask, add ~400mL DI and 1.6324g $AgNO_3$ (WC85285D) which has been dried @ 104°C for 1 hour and stored in a desiccator. Mix to dissolve, then bring to volume w/DI. Use to standardize TCN Stocks. Prepare fresh each use.

7/10/09 (F) TSS Reference
0.2150g Kaolin (WC69285G) brought to 1000g w/ DI.
Store in Plastic bottle @ 4°C.
TV = 215 mg/L Exp: 6/2/10 (10877)

SIGNATURE DATE Continued to page

DISCLOSED TO AND UNDERSTOOD BY DATE PROPRIETARY INFORMATION

7/10/09 TCN Stock Standardization

BD (A) Std'n of 1000ppm Stock #1 (WC920370)

Trial #	mLs Stock #1	mLs (WC920372E) 0.0192N $AgNO_3$	-BLK
BLK	0.0	0.03	-
1	5.0	5.13	5.10
2	5.0	5.11	5.08
3	5.0	5.12	5.09

$\bar{x}$ = 5.09 mLs

$mg/L\ CN^- = \frac{(5.09mL)(0.0192N)(52)(1000)}{5.0\ mL\ Stock\ \#1} = 1016.3712$

Dil'n Factor: $1000/1016.3712 = 0.9839\ mL \rightarrow 100\ mL$ for 10 ppm

(B) Std'n of 1000ppm Stock #2 (WC920370)

Trial #	mLs Stock #2	mLs (WC920372E) 0.0192N $AgNO_3$	-BLK
BLK	0.0	0.03	-
1	5.0	5.14	5.11
2	5.0	5.14	5.11
3	5.0	5.14	5.11

$\bar{x}$ = 5.11 mLs

$mg/L\ CN^- = \frac{(5.11mL)(0.0192N)(52)(1000)}{5.0\ mL\ Stock\ \#2} = 1020.3648$

Dil'n Factor: $1000/1020.3648 = 0.9800\ mL \rightarrow 100\ mL$ for 10 ppm

TITLE PROJECT

Continued from page

8/20/09 EW (A) TDS Reference
0.9153g NaCl (WC85215H) diluted volumetrically to 1 liter w/ DI. Store in plastic bottle @ 4°C
TV = 915 mg/L Exp 8/20/10 (11634)

8/20/09 NM (B) Color Reagent - TKN
- Same as WC92059G. Exp. 1 month, 9/20/09.

(C) NH3 Carrier/Diluent
To a 2 liter plastic bottle add:
- 998g UPDI
- 3.68g conc. insta-analyzed H_2SO_4 (WC92064B)
Prepared solution x4.

8/20/09 As of 8/18/09 for Kunelab.

(D) ICV/CCV TCN TV = 0.50
0.50 mls 10ppm TCN Ref Stock (WC85134C) + 9.50 mls 0.25N NaOH (WC85134H) 8/20/09

(E) ICV/CCV CrO_4^{-2} TV = 0.45 8/20/09
0.25 mls 1.8ppm CrO_4 Ref Stock (WC85136G) + 9.75 mls UPDI.

(F) ICV/CCV CrO_4 TV = 0.36 8/20/09
0.25ml 18.0ppm CrO_4 Ref Stock (WC85136F) + 9.75 mls UPDI.
0.20ml 9.80

(G) ICV/CCV NO_2 TV = 0.45
0.25ml 18.0ppm NO_2 Ref Stock (1/10 dil of WC85135B) + 9.75mls UPDI WC92CC 7/9 8/24/09

(H) ICV/CCV Cr^{+6} TV = 0.25
0.25mls 10ppm Cr^{+6} Ref Stock (WC85129G) + 9.75 mls UPDI

(I) ICV/CCV NH_3 TV = 0.10
0.50mls 18.0ppm NH_3 Reference Stock (1/10 dil of WC85129G) + 9.50mls diluent (WC92045D)

8/20/09 NMead (J) ICV/CCV TKN's (TV=4.00)
9.9mls PDMM + 0.1 mls 400ppm Reference working stock (WC92420C)

Continued to page

SIGNATURE DATE

DISCLOSED TO AND UNDERSTOOD BY DATE

PROPRIETARY INFORMATION

Result Report AquaKem 6.5 Page: 1

Columbia Analytical Services
Rochester, NY 14609
Analyst: Hlavacek
Pipette: orBlue

Date : 2009-11-24
Time : 17.46

Test CN
Unit mg/L

Sample ID:	Resp.	Result	Note	Dilut	Date and Time
1 ICV-TCN	0.494	0.49298			2009-11-24 12.30
2 ICB-TCN	0.009	0.00067			2009-11-24 12.30
3 CCV-TCN	0.507	0.50628			2009-11-24 14.08
4 CCB-TCN	0.008	-0.00005			2009-11-24 14.08
PB	0.008	-0.00017			2009-11-24 14.08
LCS-LL	0.114	0.10745			2009-11-24 14.08
LCS-HL	0.412	0.40959			2009-11-24 14.08
R0906436-017	0.009	0.00002			2009-11-24 14.08
6436-017 DUP	0.008	-0.00032			2009-11-24 14.08
6436-017 SPK	0.109	0.10169			2009-11-24 14.08
R0906625-001	0.009	0.00044			2009-11-24 14.08
R0906555-001	0.008	-0.00045			2009-11-24 14.08
R0906555-002	0.008	-0.00066			2009-11-24 14.08
R0906555-003	0.009	0.00047			2009-11-24 14.16
3 CCV-TCN	0.508	0.50746			2009-11-24 14.16
4 CCB-TCN	0.009	0.00014			2009-11-24 14.16
R0906477-001	0.008	-0.00052			2009-11-24 14.16
R0906436-016	0.008	-0.00029			2009-11-24 14.16
R0906436-019	0.008	-0.00036			2009-11-24 14.16
R0906436-020	0.008	-0.00008			2009-11-24 14.16
R0906578-001	0.008	-0.00042			2009-11-24 14.16
R0906578-002	0.024	0.01598	not confirmed by repeat		2009-11-24 14.16
R0906578-003	0.008	-0.00047			2009-11-24 14.16
R0906578-006	0.008	-0.00052			2009-11-24 14.16
6578-006 DUP	0.008	-0.00016			2009-11-24 14.23
6578-006 SPK	0.105	0.09812			2009-11-24 14.23
3 CCV-TCN	0.506	0.50579			2009-11-24 14.23
4 CCB-TCN	0.009	0.00023			2009-11-24 14.23
R0906578-004	0.008	-0.00035			2009-11-24 14.23
R0906578-005	0.008	-0.00061			2009-11-24 14.23
MB ASTM	0.008	-0.00060			2009-11-24 14.23
R0906551-001	0.012	0.00351			2009-11-24 14.23
MB ASTM RESID	0.009	0.00036			2009-11-24 14.23
LCS ASTM RESID	0.009	0.00017			2009-11-24 14.23
6551-001 RESID	0.019	0.01055			2009-11-24 14.23
PB SOIL	0.008	-0.00018			2009-11-24 14.31
LCS-LL SOIL	0.097	0.09022			2009-11-24 14.31
LCS-HL SOIL	0.381	0.37885			2009-11-24 14.31
3 CCV-TCN	0.509	0.50863			2009-11-24 14.31
4 CCB-TCN	0.009	0.00010			2009-11-24 14.31
R0906551-002	0.009	0.00009			2009-11-24 14.31
6551-002 DUP	0.008	-0.00015			2009-11-24 14.31
6551-002 SPK	0.011	0.00224			2009-11-24 14.31
R0906670-002	0.008	-0.00082			2009-11-24 14.31
MB SOIL RESIDUAL	0.010	0.00195			2009-11-24 14.31
LCS SOIL RESID	0.009	0.00033			2009-11-24 14.31
6551-002 RESID	0.035	0.02713			2009-11-24 14.34
3 CCV-TCN	0.515	0.51474			2009-11-24 14.36
4 CCB-TCN	0.008	-0.00024			2009-11-24 14.36
3 CCV-TCN	0.516	0.51620			2009-11-24 14.51

Analytical Results Summary

Instrument Name: R-Discrete-01 **Analyst:** HLOVEJOY **Analysis Lot:** 179459 **Method/Testcode:** 353.2/NO2

ab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
Q0911447-01	Nitrite as Nitrogen	MB		Water	0.00 mg/L	10 mL	0.010 mg/L U	1	0.010			11/12/09 16:06:00	N	IV
Q0911447-02	Nitrite as Nitrogen	LCS		Water	0.25 mg/L	10 mL	0.250 mg/L	1	0.010	100		11/12/09 16:06:00	N	IV
0906477-001	Nitrite as Nitrogen	N/A		Water	0.02 mg/L	10 mL	0.021 mg/L	1	0.010			11/12/09 16:06:00	N	IV
Q0911447-03	Nitrite as Nitrogen	DUP	R0906477-001	Water	0.02 mg/L	10 mL	0.022 mg/L	1	0.010		7	11/12/09 16:06:00	N	IV
Q0911447-04	Nitrite as Nitrogen	MS	R0906477-001	Water	0.27 mg/L	10 mL	0.270 mg/L	1	0.010	100		11/12/09 16:06:00	N	IV

R64477
R64123
R64191
R64403
4 copies

Reviewed & Approved
By: CK
Date: 11/18/09

99955

indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Calibration results AquaKem 6.5 Page: 1

Columbia Analytical Services
Rochester, NY 14607
Analyst: M. Lovejoy
Pipette: ~~CT-6~~ 11/12/09 Superman

12.11.2009 14:15

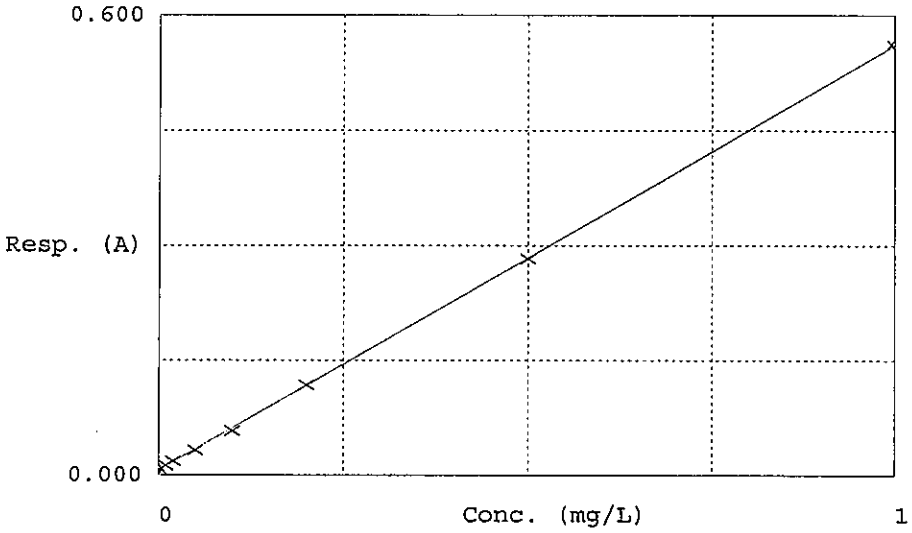
Test NO2

Accepted 12.11.2009 14:15

Factor 1.80044
Bias 0.00599

Coeff. of det. 0.999912

Errors



	Calibrator	Response	Calc. con.	Conc.	Errors
1	NO2-0.00	0.00785	0.00335	0.00000	
2	NO2-0.01	0.01276	0.01220	0.01000	
3	NO2-0.02	0.01835	0.02226	0.02000	
4	NO2-0.05	0.03259	0.04790	0.05000	
5	NO2-0.10	0.05785	0.09337	0.10000	
6	NO2-0.20	0.11780	0.20132	0.20000	
7	NO2-0.50	0.28277	0.49834	0.50000	
8	NO2-1.00	0.56211	1.00127	1.00000	
9	1 ICV-NO2(contr	0.25092	0.44099	0.45000	
10	2 ICB-NO2(contr	0.00788	0.00340	0.00000	

Columbia Analytical Services
Rochester, NY 14607
Analyst: H.Lavery
Pipette: Superman

Date : 2009-11-12
Time : 17.25

Test : NO2
Unit : mg/L

Sample	Result	Date and Time	Note	Dilut
1 ICV-NO2	0.4410	2009-11-12 14.05		
2 ICB-NO2	0.0034	2009-11-12 14.05		
3 CCV-NO2	0.4284	2009-11-12 16.06		
4 CCB-NO2	0.0041	2009-11-12 16.06		
LCS NO2	0.2500	2009-11-12 16.06		
R0906477-001	0.0206	2009-11-12 16.06		
6477-001 DUP	0.0220	2009-11-12 16.06		
6477-001 SPK	0.2698	2009-11-12 16.06		
LCS NO2 2	0.2532	2009-11-12 16.06		
LCS NO2 3	0.2561	2009-11-12 16.06		
11250-01 MB	0.0040	2009-11-12 16.06		
R0906123-019	0.0013	2009-11-12 16.06		
R0906123-020	0.0071	2009-11-12 16.06		
R0906123-022	0.0045	2009-11-12 16.06		
3 CCV-NO2	0.4706	2009-11-12 16.13		
4 CCB-NO2	0.0039	2009-11-12 16.13		
R0906123-023	0.0033	2009-11-12 16.13		
R0906123-024	0.0052	2009-11-12 16.13		
6123-024 DUP	0.0043	2009-11-12 16.13		
6123-024 SPK	0.2545	2009-11-12 16.13		
11317-01 MB	0.0044	2009-11-12 16.13		
R0906191-002	0.0036	2009-11-12 16.13		
R0906191-003	0.0034	2009-11-12 16.13		
R0906191-004	0.0003	2009-11-12 16.13		
R0906191-005	0.0041	2009-11-12 16.13		
6191-005 DUP	0.0028	2009-11-12 16.13		
3 CCV-NO2	0.4723	2009-11-12 16.17		
4 CCB-NO2	0.0037	2009-11-12 16.17		
6191-005 SPK	0.2278	2009-11-12 16.17		
R0906403-002	0.0025	2009-11-12 16.17		
R0906403-003	0.0002	2009-11-12 16.17		
R0906403-004	-0.0025	2009-11-12 16.17		
3 CCV-NO2	0.4562	2009-11-12 16.19		
4 CCB-NO2	0.0047	2009-11-12 16.19		

Columbia Analytical Services
1 Mustard St., Rochester NY 14609

General Chemistry Analytical Run Cover Sheet

Analyst: A.Joseph Date: 11/12/09

Analysis: Nitrite Instrument: Aquakem

Quality Control:

	Same as Log#, Date,	Stocks Prep. Log#, Date,	Stock Sol (mLs)	Stock Sol (mg/L)	Final Vol (mLs)	True Value (mg/L)
a) Standards Prep.:	WC65144E, 3/5/03	WC72002F, 1/26/09				
b) ICV Preparation:	WC92067G, 8/20/09	WC72007G, 1/26/09	0.25	18	10	0.45
c) LCS Preparation:	WC65144G, 3/5/03	WC72002F, 1/26/09	0.25	10	10	0.25
d) Matrix Spike Prep.:	WC65144G, 3/5/03	WC72002F, 1/26/09	0.25	10	10	0.25

Instrument log filled in? (Y) (N)

Packages: Copy and attach Standards Preparation

Comments:

Production:

	Start Time	End Time	Total (minutes)
Preparation Time :			
Analytical Time:			
Finish Time:			

# of Samples (including Mtx QC): _____
Repeats due to Sample: _____
Repeats due to Error: _____

p:\greg\forms\cover.no2

REFERENCE (ICV / CCV) STOCK PREP

(Fluoride and Bromide are purchased 1000ppm standards)

Reviewed & Approved
By: CK SJ / CK SB
Date: 10/1/06 5/1/07 / 9/10/07 11/1/08 SJ 12/1/08

Chloride 650ppm Stock: 1.070g NaCl crystals dried for 2 hrs at 104 . Dissolve in approx. 800mls DI in 1 Liter volumetric flask. Bring to volume with DI water. Store in amber jar @ room temp. for 1 year.

ID Letter	NaCl Source	Analyst	Date Prepared	Date Expires	Final Cl Reference Stock ID
A					
B					
C					
D					
E					

Nitrite 180ppm Stock: 1.09g KNO2 previously dried for 2 hrs at 104 . Dissolve in approx. 800mls DI in 1 Liter volumetric flask. Bring to volume with DI water. Store in amber jar @ 4 for 1 year.

ID Letter	KNO2 Source	Analyst	Date Prepared	Date Expires	Final NO2 Reference Stock ID
F	WC760970	NM	1/31/08	1/31/09	WC72007F (3902)
G	WC#50990	[illegible]	1/26/09	1/26/10	WC72007G (7740)
H					
I					
J					

Nitrate 180ppm Stock: 1.30g KNO3 crystals dried for 2 hrs at 104 . Dissolve in approx. 800mls DI in 1 Liter volumetric flask. Bring to volume with DI water. Transfer to amber jar and add 1.0ml Chloroform. Store in amber jar @ room temp. for 6 months.

CK 10/5/06

ID Letter	~~KNO2~~ Source KND3	Chloroform Source ID	Analyst	Date Prepared	Date Expires	Final NO3 Reference Stock ID
K	WC76115G	WC76176J	FN	10/5/06	4/5/07	WC72007K
L	WC76115G	WC76234A	FN	3/26/07	9/26/07	WC72007L
M	WC76115G	WC76234A	NM	9/21/07	3/21/08	WC72007M
N	WC76115G	WC76234A	CMW	3/25/08	9/25/08	WC72007N
O						

OPO4 180ppm Stock: 0.7909g granular KH2PO4 dried for 2 hrs at 104 . Dissolve in approx. 800mls DI in 1 Liter volumetric flask. Bring to volume with DI water. Store in amber jar @ 4 for 1 year.

ID Letter	KH2PO4 Source	Analyst	Date Prepared	Date Expires	Final OPO4/TPO4 Reference Stock ID
P	WC 65 196E	JC	2/23/07	11/3/07	WC72007P
Q	WC850546	AB	11/30/07	11/30/08	WC72007Q
R	WC850856	RP	2/14/08	2/14/09	WC72007R
S	WC#50549	[illegible]	1/26/09	1/26/10	WC72007S (7738)
T					

Sulfate 3200ppm Stock: 5.80g K2SO4 dried for 2 hrs at 104 . Dissolve in approx. 800mls DI in 1 Liter volumetric flask. Bring to volume with DI water. Store in amber jar @ 4 for 1 year.

ID Letter	K2SO4 Source	Analyst	Date Prepared	Date Expires	Final SO4 Reference Stock ID
U					
V					
W					
X					
Y					

STANDARD STOCK PREP

(Fluoride and Bromide are purchased 1000ppm standards)

Reviewed & Approved
By: CK SD / CK SD 1/7/08
Date: 10/16/06 5/1/07 / 9/10/07 5/24/2008

Chloride 1000ppm Stock: 1.648g NaCl crystals dried for 2 hrs at 104 . Dissolve in approx. 800mls DI in 1 Liter volumetric flask. Bring to volume with DI water. Store in amber jar @ room temp. for 1 year.

ID Letter	NaCl Source	Analyst	Date Prepared	Date Expires	Final Cl 1000ppm Stock ID
A	WC76259E	CMW	1/26/09	1/26/10	~~WC72002A~~ CMW 1/26/09
B					
C					
D					
E					

Nitrite 1000ppm Stock: 6.07g KNO2 previously dried for 2 hrs at 104 . Dissolve in approx. 800mls DI in 1 Liter volumetric flask. Bring to volume with DI water. Store in amber jar @ 4 for 1 year.

ID Letter	KNO2 Source	Analyst	Date Prepared	Date Expires	Final NO2 1000ppm Stock ID
F	WC76097D	CMW	1/26/09	1/26/10	WC72002F (7741)
G					
H					
I					
J					

Nitrate 1000ppm Stock: 7.22g KNO3 crystals dried for 2 hrs at 104 . Dissolve in approx. 800mls DI in 1 Liter volumetric flask. Bring to volume with DI water. Transfer to amber jar and add 1.0ml Chloroform. Store in amber jar @ room temp. for 6 months.

CK 10/5/06

ID Letter	~~KNO2~~ Source KNO3	Chloroform Source ID	Analyst	Date Prepared	Date Expires	Final NO3 1000ppm Stock ID
K	WC76114C	WC76170J	FN	10/5/06	4/5/07	WC72002K
L	WC76114C	WC76234A	FN	3/26/07	9/26/07	WC72002L
M	WC76114C	WC76234A	NM	9/21/07	3/2/08	WC72002M
N	WC76114C	WC76234A	CMW	3/25/08	9/25/08	WC72002N
O						

OPO4 / TPO4 1000ppm Stock: 4.394g KH2PO4 dried for 2 hrs at 104 . Dissolve in approx. 800mls DI in 1 Liter volumetric flask. Bring to volume with DI water. Store in amber jar @ 4 for 1 year.

ID Letter	KH2PO4 Source	Analyst	Date Prepared	Date Expires	Final OPO4/TPO4 1000ppm Stock ID
P	WC650856	CMW	1/26/09	1/26/10	WC72002P (7742)
Q					
R					
S					
T					

Sulfate 1000ppm Stock: 1.479g Na2SO4 dried overnight at 104 . Dissolve in approx. 800mls DI in 1 Liter volumetric flask. Bring to volume with DI water. Store in amber jar @ 4 for 1 year.

ID Letter	Na2SO4 Source	Analyst	Date Prepared	Date Expires	Final SO4 1000ppm Stock ID
U					
V					
W					
X					
Y					

3/5/03 NM (A) 4-AAP - Phenols
-same as WC65126H. Prepare fresh each run.

3/5/03 DMG (B) NH_4OH Buffer (TOTN + NO_2)
To a tared 1L amber jar add:
- 778.5g DI
- 113.4g HCl (WC65093I, EIN Lot # 42167)
- 76.5g NH_4Cl (WX5530908, EIN Lot # K28141705, 033)
- 0.90g EDTA (WC65079D, EIN Lot # 42081224)

Stir until dissolved. Cool. Adjust pH to 8.5 w/conc. HCl or NaOH. Store @ RT. Exp. 1 year, 3/5/04.

(C) Sulfanilamide Color Reagent (TOTN) + (NO_2)
To a tared 1L amber jar add:
- 758g DI
- 153g H_3PO_4 (WC65027F, EIN Lot # 40341226)
- 0.90g NED (WC55231B, Baker Lot # TC3600)
- 36g Sulfanilamide (WC6497C, Baker Lot # V09H38)

Stir until dissolved. Store @ RT. Exp. 1 month, 4/5/03

3/5/03 DMG Nitrite (NO_2) (Lachat: PQL = 0.010 mg/L):
(D) 10 ppm Working Stock: do (2) two 1/10 serial dilutions of 1000 ppm STD Stock (WC65135A)

(E) Standards

STD.	Conc (mg/L)	mls 10 ppm (WC65144D)	mls DI
A	1.000	1.00	9.00
B	0.5000	0.50	9.50
C	0.200	0.20	9.80
D	0.100	1/10 dil'n of STD A) 1.000	
E	0.050	1/10 dil'n of STD B) 0.500	
F	0.020	1/10 dil'n of STD C) 0.200	
G	0.010	1/10 dil'n of STD D.) 0.100	
H	0.000	10 mls DI	

Reviewed & Approved
By: G
Date: 6/3/03

(F) ICV/CCV. (TV: 0.900 mg/L)
Add 0.50 mls 18.0 ppm Reference Stock (1) one 1/10 dilution of 180 ppm Reference Stock (WC65135B) to 9.5 mls DI.

(G) LCS/Matrix Spike: (TV = 0.250 mg/L)
Add 0.25 mls 10 ppm working stock (WC65144D) to 10 mls DI or Sample.

3/5/03 DMG (M) Nitrate/
(A) 10 ppm S
dilutions of
make fresh

(B) Standard

Std	Conc
H	2.00
B	1.00
C	0.50
D	0.200
E	0.100
F	0.050
G	0.020
H	0.010
I	0.000

(C) Referenc
make two
NO_3 Refer

(D) LCS/Mat
Add 0.05
dilution of
to 10 mls

(E) Column
1.00 ppm
100 ppm

Revi
By:
Date

TITLE PROJECT

Continued from page

8/20/09 (A) TDS Reference
EW 0.9153g NaCl (WC85215H) diluted volumetrically to 1 liter DI. Store in plastic bottle @ 4°C
TV = 915 mg/L Exp 8/20/10 (11634)

8/20/09 (B) Color Reagent - TKN
NM - same as WC92059G. Exp 1 month, 9/20/09.

(C) NH3 Carrier/Diluent
To a 2 liter plastic bottle add:
- 998g UPDI
- 3.68g conc. insta-analyzed H_2SO_4 (WC92064B)
- Prepared solution x4.

8/20/09 As of 8/18/09 for Kenelab.

(D) ICV/CCV TCN TV = 0.50
0.50 mls 10ppm TCN Ref Stock (WC85134C) + 9.50 mls 0.25N NaOH (WC85134H) 9.50 <ron 8/24/09

(E) ICV/CCV CrO_4^{-2} TV = ~~0.45~~ 0.45 <ron 8/24/09
0.25 mls 1.80ppm CrO_4 Ref Stock (WC85130G) + 9.75 mls UPDI

(F) ICV/CCV CrO_4 TV = ~~0.45~~ 0.36 <ron 8/24/09
~~0.25 ml~~ 0.20ml 18.0ppm CrO_4 Ref Stock (WC85130F) + ~~9.75~~ 9.80 mls UPDI

(G) ICV/CCV NO_2 TV = 0.45
0.25ml 18.0ppm NO_2 Ref Stock (1/10 dil of ~~WC85135B~~ WC72CC 7G <ron 8/24/09) + 9.75mls UPDI

(H) ICV/CCV Cr^{+6} TV = 0.25
0.25mls 10ppm Cr^{+6} Ref Stock (WC85120G) + 9.75 mls UPDI

(I) ICV/CCV NH_3 TV = 0.00
0.20mls 18ppm NH_3 Reference stock (1/10 dil of WC85257G) + 9.80mls diluent (WC92045D)

8/20/09 (J) ICV/CCV TKN's (TV=4.00)
NMead 9.9mls PDMM + 0.1 mls 400ppm Reference working stock (WC94420C)

Continued to page

SIGNATURE DATE

DISCLOSED TO AND UNDERSTOOD BY DATE

PROPRIETARY INFORMATION

Analytical Results Summary

Instrument Name: R-FIA-01 **Analyst:** NMEAD **Analysis Lot:** 180101 **Method/Testcode:** 365.1/Tot Phos T

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt	Final Result	Dil	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
?Q0911623-01	Phosphorus, Total	MB		Water	0.00 mg/L	25.0000 mL	0.050 mg/L U	1	0.050			11/19/09 09:47:49	N	I
?Q0911623-02	Phosphorus, Total	LCS		Water	0.82 mg/L	25.0000 mL	0.818 mg/L	1	0.050	102		11/19/09 09:48:31	N	I
?0906388-001	Phosphorus, Total	N/A		Water	0.62 mg/L	25.0000 mL	2.48 mg/L	4	0.20			11/19/09 10:07:46	N	I
?0906388-004	Phosphorus, Total	N/A		Water	0.60 mg/L	25.0000 mL	2.40 mg/L	4	0.20			11/19/09 10:08:30	N	I
?0906388-007	Phosphorus, Total	N/A		Water	1.93 mg/L	25.0000 mL	1.93 mg/L	1	0.050			11/19/09 10:48:47	N	I
?0906477-001	Phosphorus, Total	N/A		Water	0.06 mg/L	25.0000 mL	0.060 mg/L	1	0.050			11/19/09 10:11:22	N	IV
?0906328-001	Phosphorus, Total	N/A		Water	0.11 mg/L	25.0000 mL	0.108 mg/L	1	0.050			11/19/09 10:12:04	Y	IV
?Q0911623-03	Phosphorus, Total	DUP	R0906328-001	Water	0.11 mg/L	25.0000 mL	0.106 mg/L	1	0.050		2	11/19/09 10:12:47	N	IV
?Q0911623-04	Phosphorus, Total	MS	R0906328-001	Water	0.87 mg/L	25.0000 mL	0.871 mg/L	1	0.050	95		11/19/09 10:13:29	N	IV
?0906328-002	Phosphorus, Total	N/A		Water	0.13 mg/L	25.0000 mL	0.127 mg/L	1	0.050			11/19/09 10:49:32	N	IV
?0906328-003	Phosphorus, Total	N/A		Water	0.13 mg/L	25.0000 mL	0.126 mg/L	1	0.050			11/19/09 10:14:54	N	IV
?0906328-004	Phosphorus, Total	N/A		Water	0.01 mg/L	25.0000 mL	0.050 mg/L U	1	0.050			11/19/09 10:15:35	N	IV
?0906328-005	Phosphorus, Total	N/A		Water	0.07 mg/L	25.0000 mL	0.072 mg/L	1	0.050			11/19/09 10:50:17	N	IV
?0906328-006	Phosphorus, Total	N/A		Water	0.36 mg/L	25.0000 mL	0.357 mg/L	1	0.050			11/19/09 10:17:03	N	IV
?0906328-015	Phosphorus, Total	N/A		Water	0.03 mg/L	25.0000 mL	0.050 mg/L U	1	0.050			11/19/09 10:19:13	N	IV
?0906328-016	Phosphorus, Total	N/A		Water	0.09 mg/L	25.0000 mL	0.090 mg/L	1	0.050			11/19/09 10:19:57	N	IV
?0906434-001	Phosphorus, Total	N/A		Water	0.96 mg/L	25.0000 mL	1.93 mg/L	2	0.10			11/19/09 10:51:01	N	I
?0906434-002	Phosphorus, Total	N/A		Water	0.58 mg/L	25.0000 mL	2.34 mg/L	4	0.20			11/19/09 10:21:23	N	I
?0906434-003	Phosphorus, Total	N/A		Water	1.97 mg/L	25.0000 mL	1.97 mg/L	1	0.050			11/19/09 10:51:46	N	I
?0906434-004	Phosphorus, Total	N/A		Water	0.59 mg/L	25.0000 mL	2.37 mg/L	4	0.20			11/19/09 10:22:50	N	I
?0906434-005	Phosphorus, Total	N/A		Water	0.55 mg/L	25.0000 mL	2.21 mg/L	4	0.20			11/19/09 10:23:32	N	I
?0906434-006	Phosphorus, Total	N/A		Water	0.58 mg/L	25.0000 mL	2.32 mg/L	4	0.20			11/19/09 10:24:15	N	I
?0906491-002	Phosphorus, Total	N/A		Water	0.62 mg/L	25.0000 mL	2.48 mg/L	4	0.20			11/19/09 10:24:57	N	II
?0906502-001	Phosphorus, Total	N/A		Water	0.89 mg/L	25.0000 mL	3.56 mg/L	4	0.20			11/19/09 10:53:57	N	II
?Q0911623-05	Phosphorus, Total	DUP	R0906502-001	Water	0.87 mg/L	25.0000 mL	3.47 mg/L	4	0.20		3	11/19/09 10:54:40	N	II
?Q0911623-06	Phosphorus, Total	MS	R0906502-001	Water	1.02 mg/L	25.0000 mL	4.10 mg/L	4	0.20	67*		11/19/09 10:55:24	N	II

' indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Regular Level water MB #1 run# 18010/

Preparation Information Benchsheet

Prep Run#: 101122
Team: GenChem/SROBINSON

Prep WorkFlow: Gen Dig Phos
Prep Method: Method

Status: Prepped
Prep Date/Time: 11/18/09 04:56 PM

#	Lab Code	Client ID	B#	Amt. Ext.	Method /Test	pH	AE	BN	Final Vol	Sample Desc. (Initial/Final)	SpikeAmt./Inv. ID	Comments
1	RQ0911623-01	MB		25mL	365.1/Tot Phos T				25.00mL			
2	RQ0911623-02	LCS		25mL	365.1/Tot Phos T				25.00mL		0.2000 mL/11400	
3	R0906388-001	Goodman St. S. Composite	.03	25mL	365.1/Tot Phos T				25.00mL			
4	R0906388-004	Goodman St. N. Composite	.03	25mL	365.1/Tot Phos T				25.00mL			
5	R0906388-007	Norhtland Composite	.03	25mL	365.1/Tot Phos T				25.00mL			
6	R0906477-001	M-122B	.12	25mL	365.1/Tot Phos T				25.00mL			
7	R0906328-001	WS-1	.10	25mL	365.1/Tot Phos T				25.00mL			
8	RQ0911623-03	R0906328-001 DUP	.10	25mL	365.1/Tot Phos T				25.00mL			
9	RQ0911623-04	R0906328-001 MS	.10	25mL	365.1/Tot Phos T				25.00mL		0.2000 mL/11400	
10	R0906328-002	IN-6S	.10	25mL	365.1/Tot Phos T				25.00mL			
11	R0906328-003	IN-6S (DUP)	.10	25mL	365.1/Tot Phos T				25.00mL			
12	R0906328-004	WEX-0212-IB	.10	25mL	365.1/Tot Phos T				25.00mL			
13	R0906328-005	SE-0100-DBR	.10	25mL	365.1/Tot Phos T				25.00mL			
14	R0906328-006	IN-5S	.10	25mL	365.1/Tot Phos T				25.00mL			
15	R0906328-015	SE-0100-SBR	.10	25mL	365.1/Tot Phos T				25.00mL			
16	R0906328-016	OFFICE WELL	.10	25mL	365.1/Tot Phos T				25.00mL			
17	R0906434-001	MFC1 INFLUENT	.01	25mL	365.1/Tot Phos T				25.00mL			
18	R0906434-002	MFC1 EFFLUENT	.01	25mL	365.1/Tot Phos T				25.00mL			
19	R0906434-003	MFC3 INFLUENT	.01	25mL	365.1/Tot Phos T				25.00mL			
20	R0906434-004	MFC3 EFFLUENT	.01	25mL	365.1/Tot Phos T				25.00mL			
21	R0906434-005	MFC4 INFLUENT	.01	25mL	365.1/Tot Phos T				25.00mL			
22	R0906434-006	MFC4 EFFLUENT	.01	25mL	365.1/Tot Phos T				25.00mL			
23	R0906491-002	EFFLUENT	.01	25mL	365.1/Tot Phos T				25.00mL			
24	R0906502-001	LB-002	.03	25mL	365.1/Tot Phos T				25.00mL			
25	RQ0911623-05	R0906502-001 DUP	.03	25mL	365.1/Tot Phos T				25.00mL			
26	RQ0911623-06	R0906502-001 MS	.03	25mL	365.1/Tot Phos T				25.00mL		0.2000 mL/11400	

Spiking Solutions

Name: Phosphorous (Total) 100 ppm Inventory ID 11400 Logbook Ref: Fresh Daily Expires On: 01/26/2010

Preparation Materials

Water Deionized H2O — Millipore System (2263) — 29.45mL
Sulfuric Acid, 5.6M — WC92108C (13166) — 38 mL
Ammonium Persulfate RG (NH4)2S2O8 — WC92090C (12462) — 15.2g

Preparation Steps

Step: Digestion
Started: 11/18/09 16:56
Finished: 11/18/09 ~~17:21~~ 17:40
By: SROBINSON SBR 11/18/09

Preparation Information Benchsheet

Prep Run#: 101122
Team: GenChem/SROBINSON

Prep WorkFlow: Gen Dig Phos
Prep Method: Method

Status: Prepped
Prep Date/Time: 11/18/09 04:56 PM

Comments: _____

Reviewed By: _____ Date: _____ Spike Witness: HLOVEJOY Date: _____

Chain of Custody

Relinquished By: _____ Date: _____

Received By: _____ Date: _____

Extracts Examined
Yes No

Columbia Analytical Services
1 Mustard Street
Rochester, NY 14609

Analyte: TPO4 Digest
Analyst: SBR
Pipet ID: Aguaman, Lucy
Balance ID: R-Balance-01

Low Level / Regular Level
Date: 11/18/09
Spk Witness: JM

#	Misc.	Order #	Sample Amt	Dilution	Spk Amount	Comments
1		PB SOIL	0.25→25			
2		LCS INORG SOIL	0.25		0.20 mL	100 ppm
3		LCS ORG SOIL	0.25		0.20 mL	100 ppm
4		R0906123-014	0.25			
5		R0906123-015	0.26			
6		R0906123-017	0.29			
7		6123-017 DUP	0.26			
8		6123-017 SPK	0.27		0.20 mL	100 ppm
9		R0906123-018	0.29			
10		R0906123-019	0.27			
11		R0906123-020	0.27			
12		R0906123-022	0.27			
13		R0906123-023	0.29			
14		R0906123-024	0.25			
15		6123-024 DUP	0.25			
16		6123-024 SPK	0.26		0.20 mL	100 ppm
17		R0906403-002	0.29			
18		R0906403-003	0.28			
19		R0906403-004	0.26			
20		PB 1 RL WATER	25	1		
21		LCS 1 INORG RL	25	1	0.20 mL	100 ppm
22		LCS 1 ORG RL	25	1	0.20 mL	100 ppm
23		R0906388-001	25	1		
24		R0906388-004	25	1		
25		R0906388-007	25	1		
26		R0906477-001	25	1		
27		R0906328-001	25	1		
28		6328-001 DUP	25	1		
29		6328-001 SPK	25	1	0.20 mL	100 ppm
30		R0906328-002	25	1		
31		R0906328-003	25	1		
32		R0906328-004	25	1		
33		R0906328-005	25	1		
34		R0906328-006	25	1		
35		R0906328-015	25	1		
36		R0906328-016	25	1		
37		R0906434-001	25	1		
38		R0906434-002	25	1		
39		R0906434-003	25	1		
40		R0906434-004	25	1		
41		R0906434-005	25	1		
42		R0906434-006	25	1		
43		R0906491-002	25	1		
44		R0906502-001	25	1		
45		6502-001 DUP	25	1		
46		6502-001 SPK	25	1	0.20 mL	100 ppm
47		PB 2 RL WATER	25	1		
48		LCS 2 INORG RL	25	1	0.20 mL	100 ppm
49		LCS 2 ORG RL	25	1	0.20 mL	100 ppm
50	SPLP MB	RQ0910788-01	25	1		

Columbia Analytical Services
1 Mustard Street
Rochester, NY 14609

Analyte: TPO4 Digest Low Level / Regular Level
Analyst: SBR Date: 11/18/09
Pipet ID: Aquaman, Lucy Spk Witness: DM
Balance ID:

#	Misc.	Order #	Sample Amt	Dilution	Spk Amount	Comments
1		R0906056-001	25	1		
2		R0906056-003	25	1		
3		R0906056-005	25	1		
4		6056-005 DUP	25	1		
5		6056-005 SPK	25	1	0.20 mL	100 ppm
6		R0906056-007	25	1		
7	SPLP MB	RQ0910579-01	25	1		
8		R0906056-002	25	1		
9		R0906056-004	25	1		
10		R0906056-006	25	1		
11		R0906056-008	25	1		
12	SPLP MB	RQ0910958-01	25	1		
13		R0906056-009	25	1		
14		R0906056-011	25	1		
15		6056-011 DUP	25	1		
16		6056-011 SPK	25	1	0.20 mL	100 ppm
17	SPLP MB	RQ0910891-01	25	1		
18		R0906056-010	25	1		
19		R0906056-012	25	1		
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SBR 11/18/09

Creator: NMEAD
Creation Date: Nov 18, 2009 14:58:42
Last Modified: Nov 19, 2009 9:21:33
Description: QC 8000 365.1 TPO4 - RUN LOG - TPO4B 0911190A

Cup #	Sample ID	Manual Dilution	Sample Type	
1	Standard A - 2.00	1.0000	CalStd	
2	Standard B - 1.00	1.0000	CalStd	
3	Standard C - 0.50	1.0000	CalStd	
4	Standard D - 0.20	1.0000	CalStd	
5	Standard E - 0.10	1.0000	CalStd	
6	Standard F - 0.05	1.0000	CalStd	
7	Standard G - 0.02	1.0000	CalStd	
8	Standard H - 0.00	1.0000	CalStd	
1	ICV TV= 0.8	1.0000	Unknown	
2	ICB	1.0000	Unknown	
3	PB-SOIL	1.0000	Unknown	0.25g → 25mL
4	LCS-SOIL INORG. TV= 80	1.0000	Unknown	↓ ↓
5	LCS-SOIL ORG. TV= 80	1.0000	Unknown	
6	PB-1 RL	1.0000	Unknown	
7	LCS-1 RL INORG. TV= 0.8	1.0000	Unknown	
8	LCS-1 RL ORG. TV= 0.8	1.0000	Unknown	
9	PB-2 RL	1.0000	Unknown	
10	LCS-2 RL INORG	1.0000	Unknown	
11	LCS-2 RL ORG	1.0000	Unknown	
12	CCV	1.0000	Unknown	
13	CCB	1.0000	Unknown	
14	CRDL - 0.100	1.0000	Unknown	
15	CRDL - 0.050	1.0000	Unknown	
16	R0906123-014	10.0000	Unknown	0.25g → 25mL
17	R0906123-015	10.0000	Unknown	0.26g →
18	R0906123-017	10.0000	Unknown	0.27g →
19	6123-017 DUP	10.0000	Unknown	0.26g →
20	6123-017 SPK TV= 74.1	10.0000	Unknown	0.27g →
21	R0906123-018	10.0000	Unknown	0.29g →
22	R0906123-019	10.0000	Unknown	0.27g →
23	R0906123-020	10.0000	Unknown	0.27g → ↓
24	CCV	1.0000	Unknown	
25	CCB	1.0000	Unknown	
26	R0906123-022	10.0000	Unknown	0.27g → 25mL
27	R0906123-023	10.0000	Unknown	0.29g → ↓
28	R0906123-024	10.0000	Unknown	rpt ~~Cr# 88~~ → 90-1/2
29	6123-024 DUP	10.0000	Unknown	
30	6123-024 SPK TV= 76.9	10.0000	Unknown	
31	R0906403-002	10.0000	Unknown	0.29g → 25mL
32	R0906403-003	10.0000	Unknown	0.28g → ↓

Cup #	Sample ID	Manual Dilution	Sample Type	
33	R0906403-004	10.0000	Unknown	0.26g → 25mL
34	R0906388-001	4.0000	Unknown	
35	R0906388-004	4.0000	Unknown	
36	CCV	1.0000	Unknown	
37	CCB	1.0000	Unknown	
38	R0906388-007	4.0000	Unknown	- rpt c#91 - str.
39	R0906477-001	1.0000	Unknown	
40	R0906328-001	1.0000	Unknown	
41	6328-001 DUP	1.0000	Unknown	
42	6328-001 SPK TV = 0.8	1.0000	Unknown	
43	R0906328-002	1.0000	Unknown	- air spike - rpt c#92
44	R0906328-003	1.0000	Unknown	
45	R0906328-004	1.0000	Unknown	
46	R0906328-005	4.0000	Unknown	- rpt c#93 - str.
47	R0906328-006	1.0000	Unknown	
48	CCV	1.0000	Unknown	
49	CCB	1.0000	Unknown	
50	R0906328-015	1.0000	Unknown	
51	R0906328-016	1.0000	Unknown	
52	R0906434-001	4.0000	Unknown	- rpt c#94 - 1/2
53	R0906434-002	4.0000	Unknown	
54	R0906434-003	4.0000	Unknown	- rpt c# 95 - 1/2 amu/pl/09 str
55	R0906434-004	4.0000	Unknown	
56	R0906434-005	4.0000	Unknown	
57	R0906434-006	4.0000	Unknown	
58	R0906491-002	4.0000	Unknown	
59	R0906502-001	1.0000	Unknown	- rpt c# 98 - 1/4
60	CCV	1.0000	Unknown	
61	CCB	1.0000	Unknown	
62	6502-001 DUP	1.0000	Unknown	} rpt c# 99, 100 - 1/4
63	6502-001 SPK TV = 0.8	1.0000	Unknown	
64	RQ0910788-01 MB	1.0000	Unknown	
65	R0906056-001	1.0000	Unknown	
66	R0906056-003	1.0000	Unknown	
67	R0906056-005	1.0000	Unknown	
68	6056-005 DUP	1.0000	Unknown	
69	6056-005 SPK TV = 0.8	1.0000	Unknown	
70	R0906056-007	1.0000	Unknown	
71	RQ0910579-01 MB	1.0000	Unknown	
72	CCV	1.0000	Unknown	
73	CCB	1.0000	Unknown	
74	R0906056-002	1.0000	Unknown	
75	R0906056-004	1.0000	Unknown	
76	R0906056-006	1.0000	Unknown	
77	R0906056-008	1.0000	Unknown	

Cup #	Sample ID	Manual Dilution	Sample Type	
78	RQ0910958-01 MB	1.0000	Unknown	
79	R0906056-009	1.0000	Unknown	
80	R0906056-011	1.0000	Unknown	
81	6056-011 DUP	1.0000	Unknown	
82	6056-011 SPK TV= 0.8	1.0000	Unknown	
83	RQ0910891-01 MB	1.0000	Unknown	
84	CCV	1.0000	Unknown	
85	CCB	1.0000	Unknown	
86	R0906056-010	1.0000	Unknown	
87	R0906056-012	1.0000	Unknown	
88	R0906123-024 RPT 1/2	2.0000	Unknown	0.25g → 25mL
89	6123-024 DUP RPT 1/2	2.0000	Unknown	0.25g → ↓
90	6123-024SPKRPT1/2TV=76.9	2.0000	Unknown	0.26g → ↓
91	R0906388-007 RPT STR	1.0000	Unknown	
92	R0906328-002 RPT	1.0000	Unknown	
93	R0906328-005 RPT STR	1.0000	Unknown	
94	R0906434-001 RPT 1/2	2.0000	Unknown	
95	R0906434-003 RPT STR	1.0000	Unknown	
96	CCV	1.0000	Unknown	
97	CCB	1.0000	Unknown	
98	R0906502-001 RPT 1/4	4.0000	Unknown	
99	6502-001 DUP RPT 1/4	4.0000	Unknown	
100	6502-001SPKRPT1/4TV=0.8	4.0000	Unknown	
101	CCV	1.0000	Unknown	
102	CCB	1.0000	Unknown	

OPERATOR: NMEAD
ACQ. TIME: Nov 19, 2009 9:44:09
DATA FILENAME: C:\OMNION\DATA\091119A1.FDT
TRAY FILENAME: C:\OMNION\TRAYS\0911190A.TRA

Multi-Channel Table
Type: Unknowns
Channel Range: 1 to 8 -- Cup Range: 1 to 25

Cup	Sample ID	Sampling Date	Sampling Time	Rep #	QC 8000 365.1 Total Phosphorus (mg/L)	Man Dil Factor	Auto Dil Factor	
1	ICV TV= 0.8	19 Nov 2009	09:44:12	1	0.7898	1.0	1.00	
2	ICB	19 Nov 2009	09:44:56	1	0.0011	1.0	1.00	
3	PB-SOIL	19 Nov 2009	09:45:39	1	0.0105	1.0	1.00	= 1.05
4	LCS-SOIL INORG. TV= 80	19 Nov 2009	09:46:23	1	0.8168	1.0	1.00	= 81.68
5	LCS-SOIL ORG. TV= 80	19 Nov 2009	09:47:06	1	0.8553	1.0	1.00	= 85.53
6	PB-1 RL	19 Nov 2009	09:47:49	1	0.0011	1.0	1.00	
7	LCS-1 RL INORG. TV= 0.8	19 Nov 2009	09:48:31	1	0.8182	1.0	1.00	
8	LCS-1 RL ORG. TV= 0.8	19 Nov 2009	09:49:14	1	0.8495	1.0	1.00	
9	PB-2 RL	19 Nov 2009	09:49:57	1	0.0011	1.0	1.00	
10	LCS-2 RL INORG	19 Nov 2009	09:50:39	1	0.8217	1.0	1.00	
11	LCS-2 RL ORG	19 Nov 2009	09:51:22	1	0.8487	1.0	1.00	
12	CCV	19 Nov 2009	09:52:04	1	0.7916	1.0	1.00	
13	CCB	19 Nov 2009	09:52:46	1	0.0011	1.0	1.00	
14	CRDL - 0.100	19 Nov 2009	09:53:27	1	0.0999	1.0	1.00	
15	CRDL - 0.050	19 Nov 2009	09:54:09	1	0.0490	1.0	1.00	
16	R0906123-014	19 Nov 2009	09:54:52	1	8.3705	10.0	1.00	= 837.05
17	R0906123-015	19 Nov 2009	09:55:36	1	6.5707	10.0	1.00	= 631.80
18	R0906123-017	19 Nov 2009	09:56:19	1	7.7721	10.0	1.00	= 719.64
19	6123-017 DUP	19 Nov 2009	09:57:03	1	8.1720	10.0	1.00	= 785.77
20	6123-017 SPK TV= 74.1	19 Nov 2009	09:57:47	1	8.9878	10.0	1.00	= 832.20
21	R0906123-018	19 Nov 2009	09:58:30	1	7.1702	10.0	1.00	= 618.12
22	R0906123-019	19 Nov 2009	09:59:13	1	8.7483	10.0	1.00	= 810.03
23	R0906123-020	19 Nov 2009	09:59:55	1	4.5377	10.0	1.00	= 420.16
24	CCV	19 Nov 2009	10:00:38	1	0.7895	1.0	1.00	
25	CCB	19 Nov 2009	10:01:20	1	0.0011	1.0	1.00	

OPERATOR: NMEAD
ACQ. TIME: Nov 19, 2009 9:44:09
DATA FILENAME: C:\OMNION\DATA\091119A1.FDT
TRAY FILENAME: C:\OMNION\TRAYS\0911190A.TRA

Multi-Channel Table
Type: Unknowns
Channel Range: 1 to 8 -- Cup Range: 26 to 50

Cup	Sample ID	Sampling Date	Sampling Time	Rep #	QC 8000 365.1 Total Phosphorus (mg/L)	Man Dil Factor	Auto Dil Factor	
26	R0906123-022	19 Nov 2009	10:02:03	1	10.0321	10.0	1.00	= 928.898
27	R0906123-023	19 Nov 2009	10:02:45	1	7.2475	10.0	1.00	= 624.78
28	R0906123-024	19 Nov 2009	10:03:28	1	1.6174	10.0	1.00	rpt c# 88 → 90-1/2
29	6123-024 DUP	19 Nov 2009	10:04:10	1	1.5421	10.0	1.00	
30	6123-024 SPK TV= 76.9	19 Nov 2009	10:04:52	1	2.8982	10.0	1.00	
31	R0906403-002	19 Nov 2009	10:05:36	1	9.3708	10.0	1.00	= 807.83
32	R0906403-003	19 Nov 2009	10:06:19	1	9.4721	10.0	1.00	= 845.72
33	R0906403-004	19 Nov 2009	10:07:03	1	8.1108	10.0	1.00	= 779.88
34	R0906388-001	19 Nov 2009	10:07:46	1	2.4802	4.0	1.00	
35	R0906388-004	19 Nov 2009	10:08:30	1	2.3967	4.0	1.00	
36	CCV	19 Nov 2009	10:09:13	1	0.7856	1.0	1.00	
37	CCB	19 Nov 2009	10:09:57	1	0.0011	1.0	1.00	
38	R0906388-007	19 Nov 2009	10:10:39	1	1.8783	4.0	1.00	– rpt c# 91-str.
39	R0906477-001	19 Nov 2009	10:11:22	1	0.0602	1.0	1.00	
40	R0906328-001	19 Nov 2009	10:12:04	1	0.1081	1.0	1.00	
41	6328-001 DUP	19 Nov 2009	10:12:47	1	0.1058	1.0	1.00	
42	6328-001 SPK TV= 0.8	19 Nov 2009	10:13:29	1	0.8708	1.0	1.00	
43	R0906328-002	19 Nov 2009	10:14:12	1	0.1326	1.0	1.00	– air spike - rpt c# 92
44	R0906328-003	19 Nov 2009	10:14:54	1	0.1260	1.0	1.00	
45	R0906328-004	19 Nov 2009	10:15:35	1	0.0079	1.0	1.00	
46	R0906328-005	19 Nov 2009	10:16:19	1	0.0808	4.0	1.00	– rpt c# 93-str.
47	R0906328-006	19 Nov 2009	10:17:03	1	0.3565	1.0	1.00	
48	CCV	19 Nov 2009	10:17:46	1	0.7906	1.0	1.00	
49	CCB	19 Nov 2009	10:18:30	1	0.0011	1.0	1.00	
50	R0906328-015	19 Nov 2009	10:19:13	1	0.0327	1.0	1.00	

OPERATOR: NMEAD
ACQ. TIME: Nov 19, 2009 9:44:09
DATA FILENAME: C:\OMNION\DATA\091119A1.FDT
TRAY FILENAME: C:\OMNION\TRAYS\0911190A.TRA

Multi-Channel Table
Type: Unknowns
Channel Range: 1 to 8 -- Cup Range: 51 to 75

Cup	Sample ID	Sampling Date	Sampling Time	Rep #	QC 8000 365.1 Total Phosphorus (mg/L)	Man Dil Factor	Auto Dil Factor	
51	R0906328-016	19 Nov 2009	10:19:57	1	0.0902	1.0	1.00	
52	R0906434-001	19 Nov 2009	10:20:41	1	1.9578	4.0	1.00	– rpt c# 94-1/2
53	R0906434-002	19 Nov 2009	10:21:23	1	2.3387	4.0	1.00	
54	R0906434-003	19 Nov 2009	10:22:07	1	1.8827	4.0	1.00	= rpt c# 95- str.
55	R0906434-004	19 Nov 2009	10:22:50	1	2.3654	4.0	1.00	
56	R0906434-005	19 Nov 2009	10:23:32	1	2.2145	4.0	1.00	
57	R0906434-006	19 Nov 2009	10:24:15	1	2.3207	4.0	1.00	
58	R0906491-002	19 Nov 2009	10:24:57	1	2.4845	4.0	1.00	
59	R0906502-001	19 Nov 2009	10:25:40	1	3.3744	1.0	1.00	– rpt c# 98-1/4
60	CCV	19 Nov 2009	10:26:22	1	0.7858	1.0	1.00	
61	CCB	19 Nov 2009	10:27:06	1	0.0011	1.0	1.00	
62	6502-001 DUP	19 Nov 2009	10:27:51	1	3.4130	1.0	1.00	} rpt c# 99, 100 - 1/4
63	6502-001 SPK TV= 0.8	19 Nov 2009	10:28:34	1	4.1902	1.0	1.00	
64	RQ0910788-01 MB	19 Nov 2009	10:29:18	1	0.0058	1.0	1.00	
65	R0906056-001	19 Nov 2009	10:30:01	1	0.0352	1.0	1.00	
66	R0906056-003	19 Nov 2009	10:30:45	1	0.0050	1.0	1.00	
67	R0906056-005	19 Nov 2009	10:31:28	1	0.0040	1.0	1.00	
68	6056-005 DUP	19 Nov 2009	10:32:12	1	0.0048	1.0	1.00	
69	6056-005 SPK TV= 0.8	19 Nov 2009	10:32:56	1	0.8209	1.0	1.00	
70	R0906056-007	19 Nov 2009	10:33:39	1	0.0085	1.0	1.00	
71	RQ0910579-01 MB	19 Nov 2009	10:34:22	1	0.0079	1.0	1.00	
72	CCV	19 Nov 2009	10:35:04	1	0.7906	1.0	1.00	
73	CCB	19 Nov 2009	10:35:47	1	0.0011	1.0	1.00	
74	R0906056-002	19 Nov 2009	10:36:29	1	0.0221	1.0	1.00	
75	R0906056-004	19 Nov 2009	10:37:12	1	0.0096	1.0	1.00	

OPERATOR: NMEAD
ACQ. TIME: Nov 19, 2009 9:44:09
DATA FILENAME: C:\OMNION\DATA\091119A1.FDT
TRAY FILENAME: C:\OMNION\TRAYS\0911190A.TRA

Multi-Channel Table
Type: Unknowns
Channel Range: 1 to 8 -- Cup Range: 76 to 100

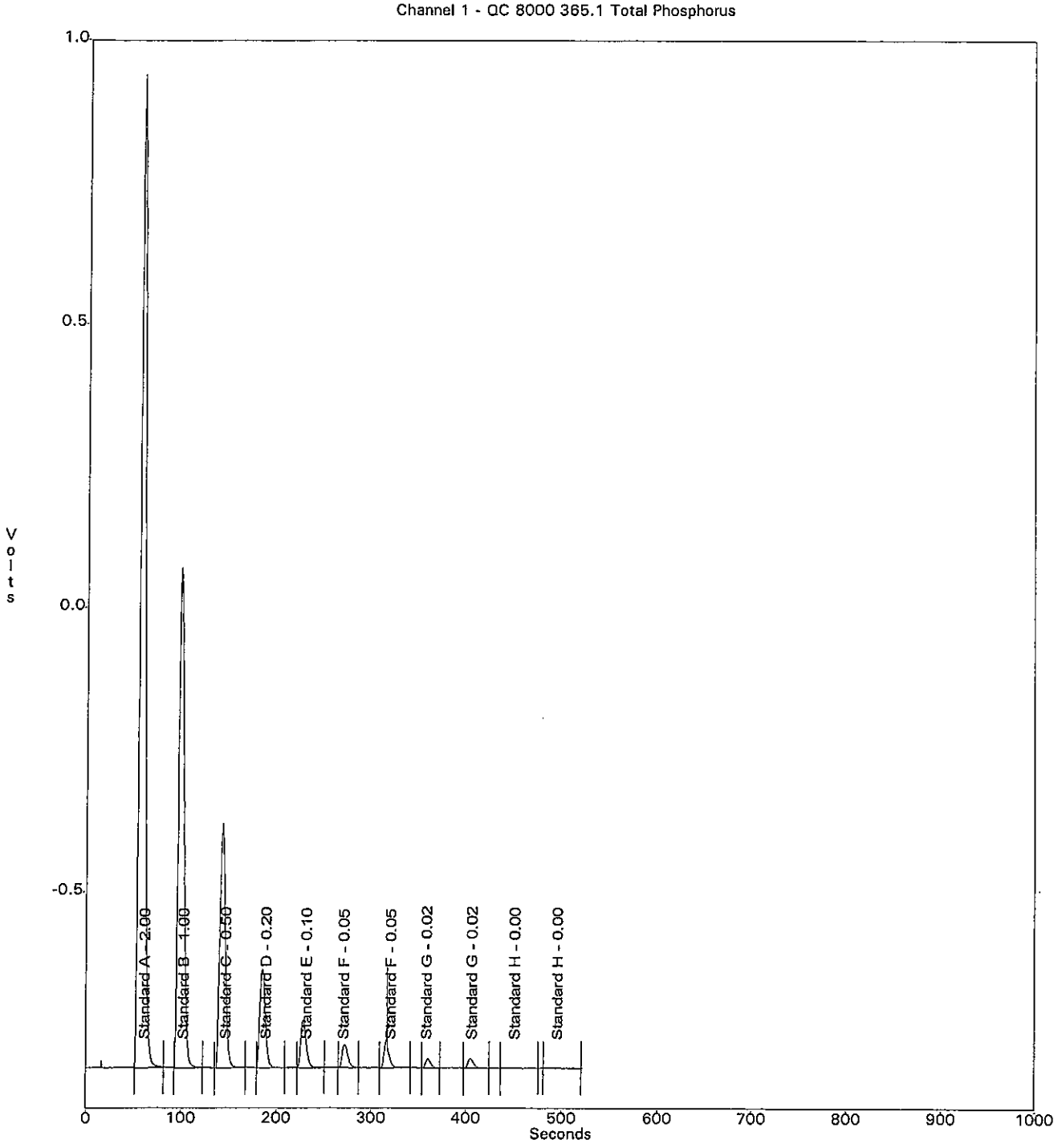
Cup	Sample ID	Sampling Date	Sampling Time	Rep #	QC 8000 365.1 Total Phosphorus (mg/L)	Man Dil Factor	Auto Dil Factor	
76	R0906056-006	19 Nov 2009	10:37:56	1	0.0069	1.0	1.00	
77	R0906056-008	19 Nov 2009	10:38:41	1	0.0088	1.0	1.00	
78	RQ0910958-01 MB	19 Nov 2009	10:39:26	1	0.0061	1.0	1.00	
79	R0906056-009	19 Nov 2009	10:40:09	1	0.0156	1.0	1.00	
80	R0906056-011	19 Nov 2009	10:40:53	1	0.0065	1.0	1.00	
81	6056-011 DUP	19 Nov 2009	10:41:37	1	0.0083	1.0	1.00	
82	6056-011 SPK TV= 0.8	19 Nov 2009	10:42:20	1	0.8193	1.0	1.00	
83	RQ0910891-01 MB	19 Nov 2009	10:43:04	1	0.0068	1.0	1.00	
84	CCV	19 Nov 2009	10:43:47	1	0.7917	1.0	1.00	
85	CCB	19 Nov 2009	10:44:30	1	0.0011	1.0	1.00	
86	R0906056-010	19 Nov 2009	10:45:13	1	0.0048	1.0	1.00	
87	R0906056-012	19 Nov 2009	10:45:55	1	0.0064	1.0	1.00	
88	R0906123-024 RPT 1/2	19 Nov 2009	10:46:37	1	1.7486	2.0	1.00	= 17486
89	6123-024 DUP RPT 1/2	19 Nov 2009	10:47:20	1	1.6427	2.0	1.00	= 164.27
90	6123-024SPKRPT1/2TV=76.9	19 Nov 2009	10:48:03	1	2.9747	2.0	1.00	= 286.03
91	R0906388-007 RPT STR	19 Nov 2009	10:48:47	1	1.9295	1.0	1.00	
92	R0906328-002 RPT	19 Nov 2009	10:49:32	1	0.1273	1.0	1.00	
93	R0906328-005 RPT STR	19 Nov 2009	10:50:17	1	0.0722	1.0	1.00	
94	R0906434-001 RPT 1/2	19 Nov 2009	10:51:01	1	1.9273	2.0	1.00	
95	R0906434-003 RPT STR	19 Nov 2009	10:51:46	1	1.9707	1.0	1.00	
96	CCV	19 Nov 2009	10:52:29	1	0.7895	1.0	1.00	
97	CCB	19 Nov 2009	10:53:13	1	0.0011	1.0	1.00	
98	R0906502-001 RPT 1/4	19 Nov 2009	10:53:57	1	3.5600	4.0	1.00	
99	6502-001 DUP RPT 1/4	19 Nov 2009	10:54:40	1	3.4656	4.0	1.00	
100	6502-001SPKRPT1/4TV=0.8	19 Nov 2009	10:55:24	1	4.0960	4.0	1.00	

OPERATOR: NMEAD
ACQ. TIME: Nov 19, 2009 9:44:09
DATA FILENAME: C:\OMNION\DATA\091119A1.FDT
TRAY FILENAME: C:\OMNION\TRAYS\0911190A.TRA

Multi-Channel Table
Type: Unknowns
Channel Range: 1 to 8 -- Cup Range: 101 to 125

Cup	Sample ID	Sampling Date	Sampling Time	Rep #	QC 8000 365.1 Total Phosphorus (mg/L)	Man Dil Factor	Auto Dil Factor
101	CCV	19 Nov 2009	10:56:07	1	0.7885	1.0	1.00
102	CCB	19 Nov 2009	10:56:51	1	0.0011	1.0	1.00

OPERATOR:	NMEAD
ACQ. TIME:	Nov 19, 2009 9:32:24
DATA FILENAME:	C:\OMNION\DATA\0911190A.FDT
TRAY FILENAME:	C:\OMNION\TRAYS\0911190A.TRA



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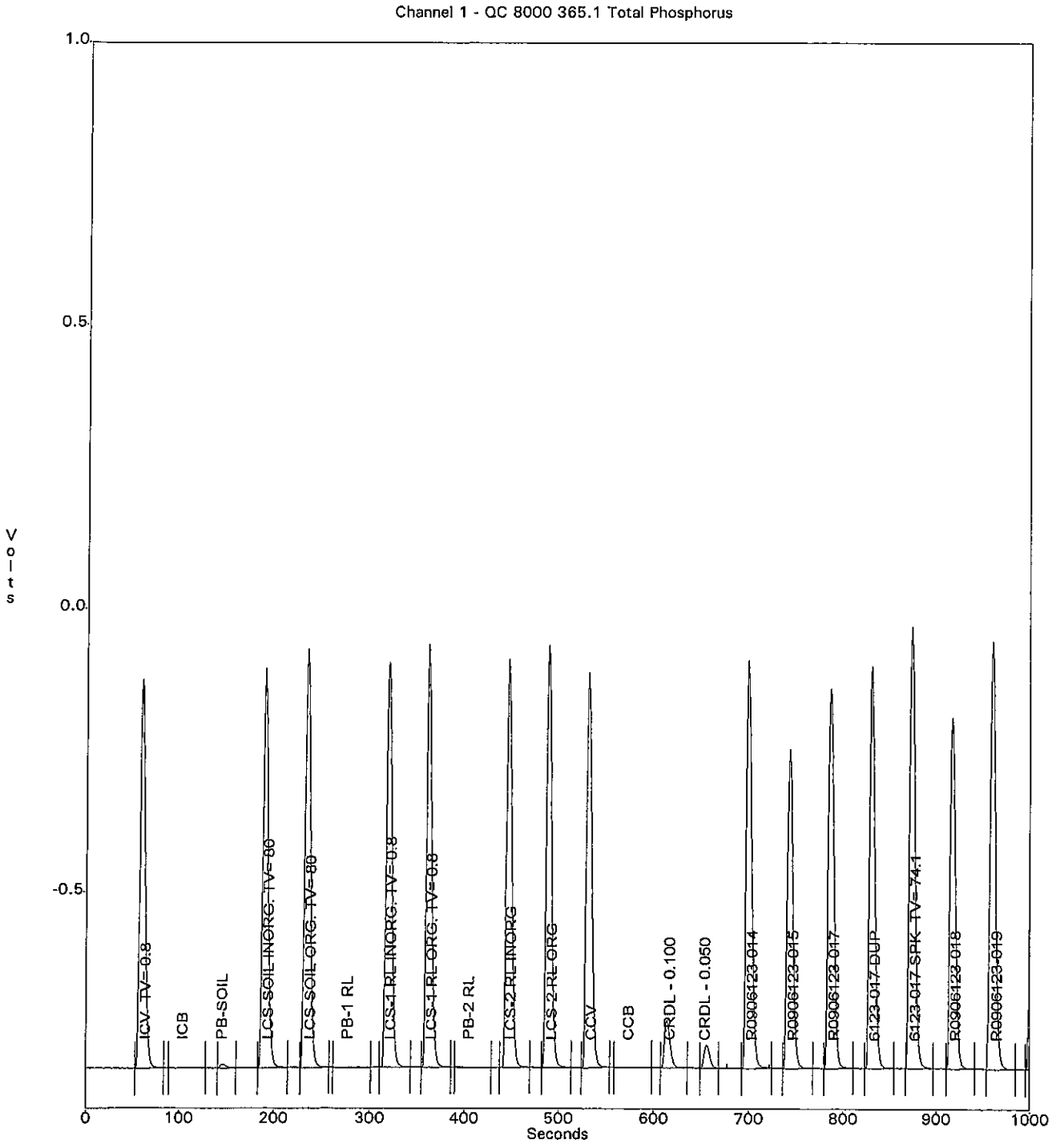
TRAY FILENAME: C:\OMNION\TRAYS\0911190A.TRA



OPERATOR: NMEAD
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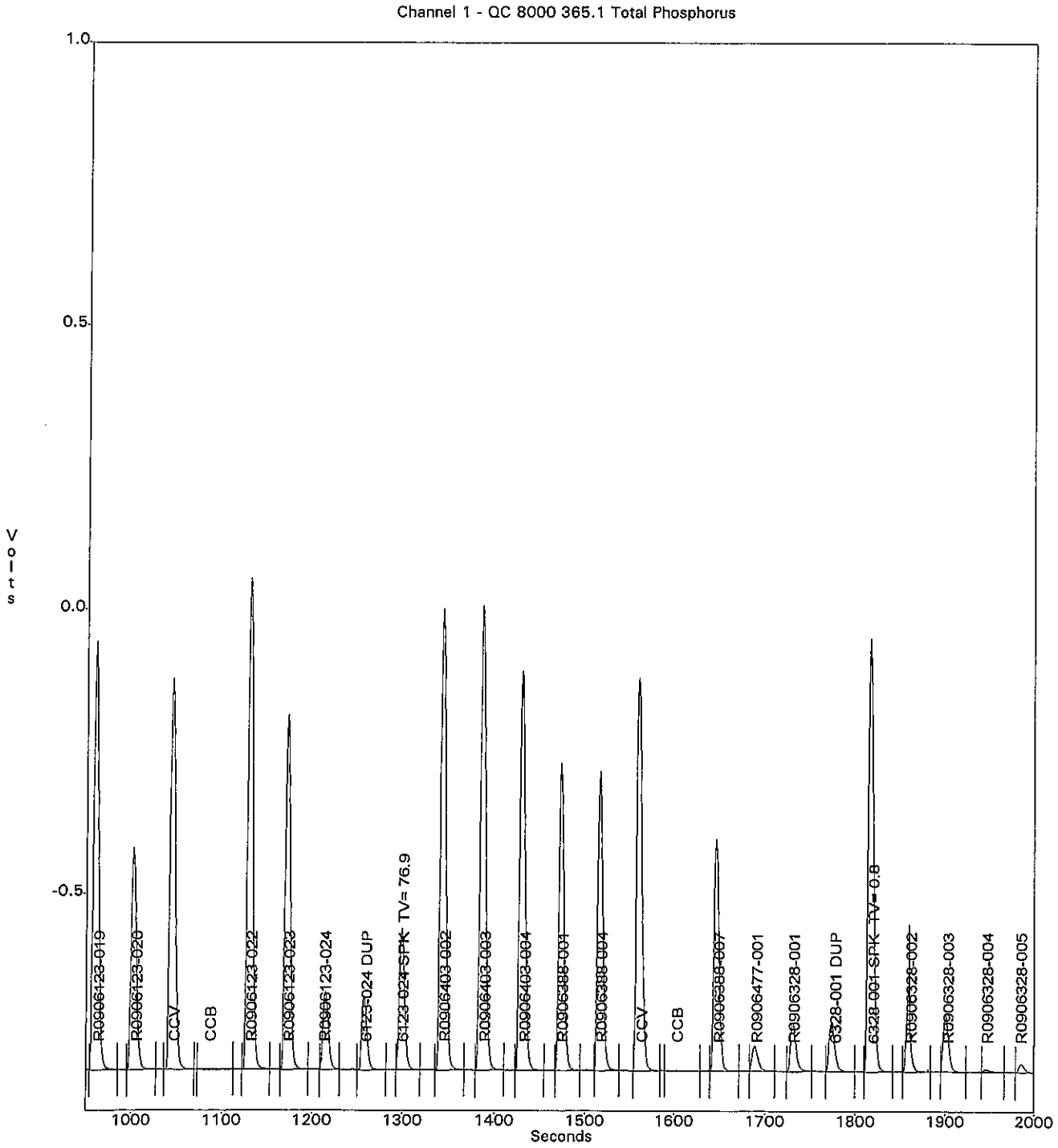
TRAY FILENAME: C:\OMNION\TRAYS\0911190A.TRA



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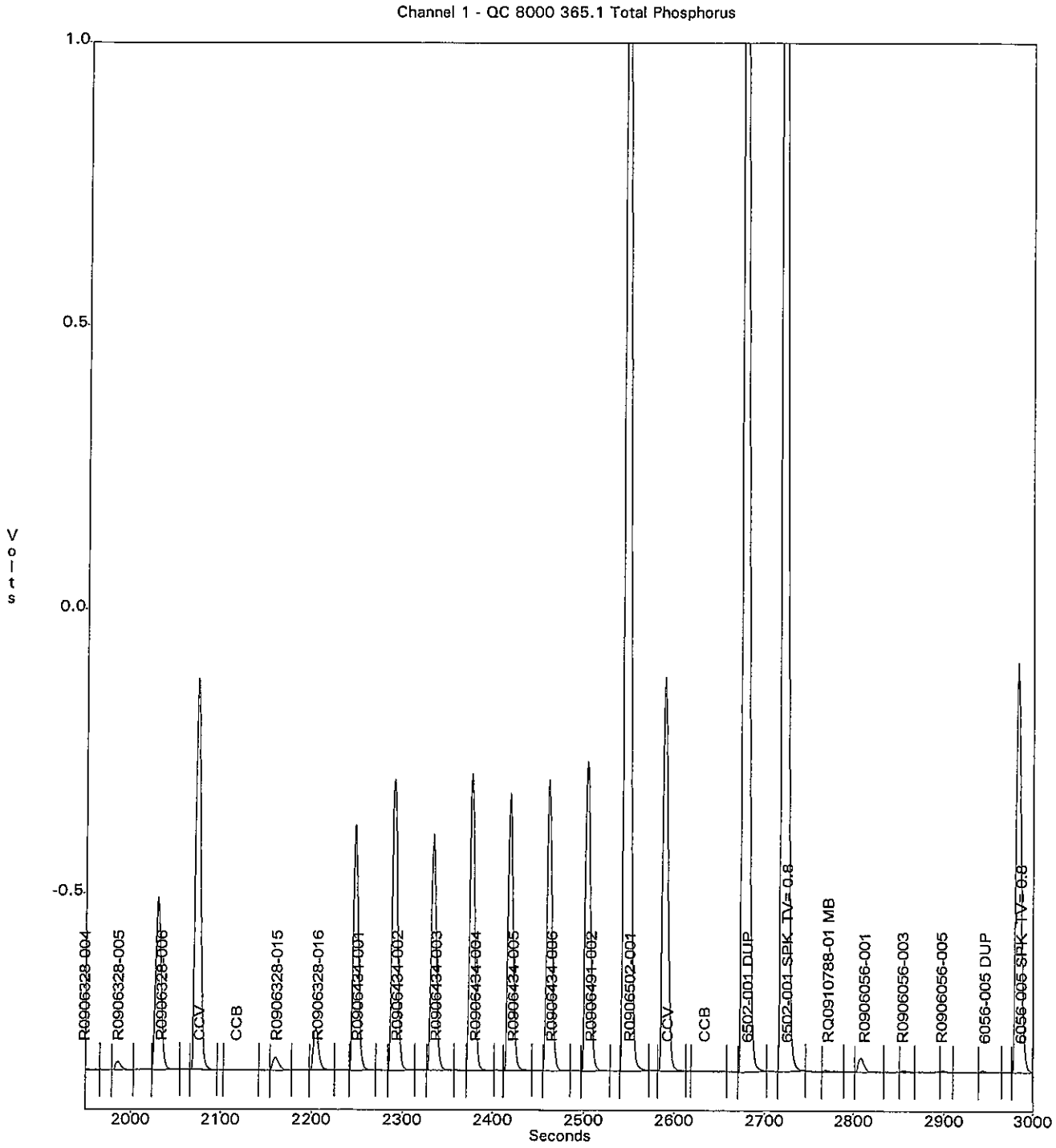
DATA FILENAME: C:\OMNION\DATA\091119A1.FDT
TRAY FILENAME: C:\OMNION\TRAYS\0911190A.TRA



OPERATOR: NMEAD
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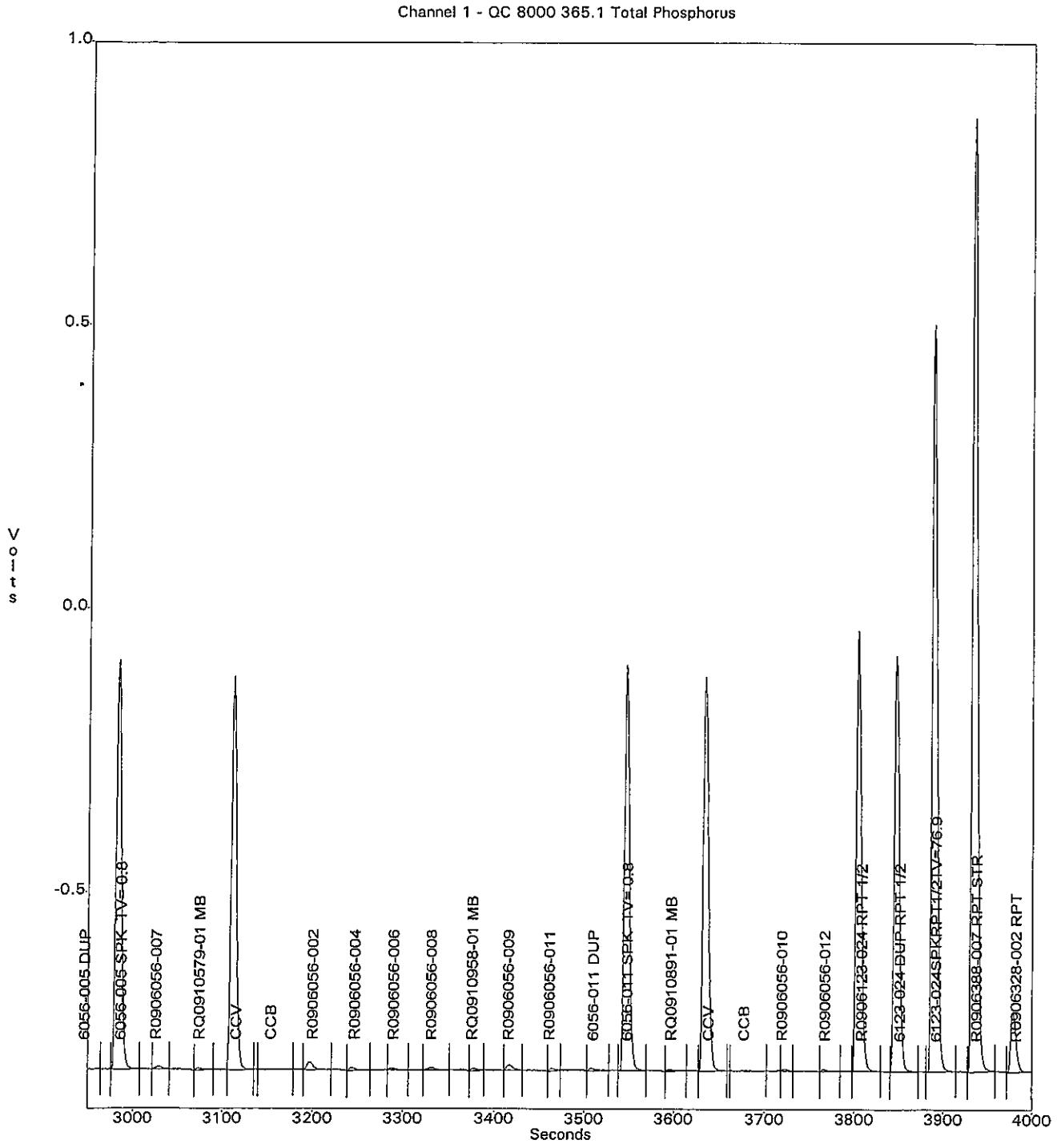
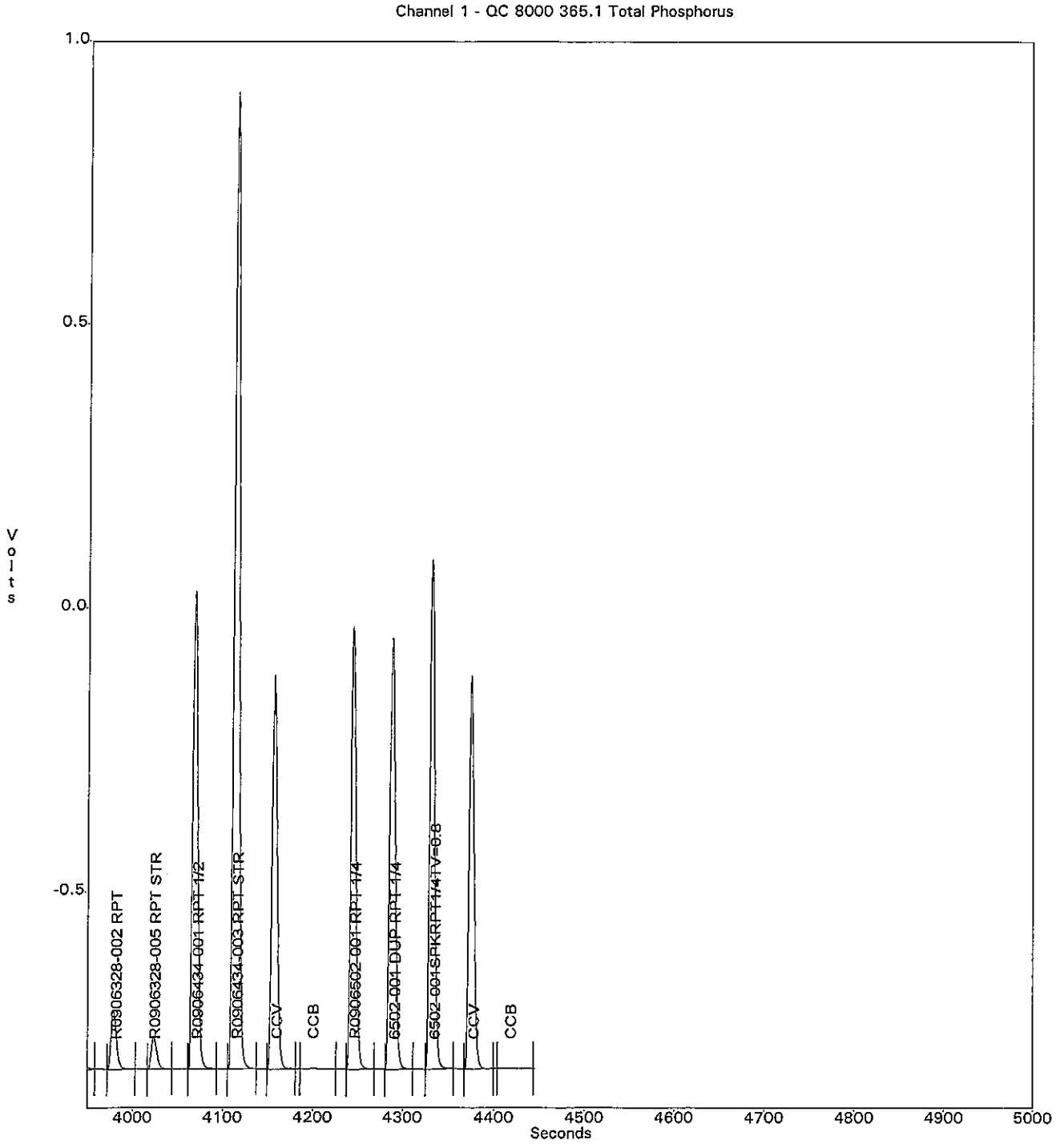
DATA FILENAME: C:\OMNION\DATA\091119A1.FDT
TRAY FILENAME: C:\OMNION\TRAYS\0911190A.TRA



OPERATOR: NMEAD
ACQ. TIME: Nov 19, 2009 9:44:09
DATA FILENAME: C:\OMNION\DATA\091119A1.FDT
TRAY FILENAME: C:\OMNION\TRAYS\0911190A.TRA



OPERATOR:	NMEAD
ACQ. TIME:	Nov 19, 2009 9:32:24
DATA FILENAME:	C:\OMNION\DATA\0911190A.FDT
METHOD FILENAME:	C:\OMNION\METHODS\TPO4B.MET
TRAY FILENAME:	C:\OMNION\TRAYS\0911190A.TRA

TRAY DESCRIPTION:

Created:	Nov 18, 2009 14:58:42
Modified:	Nov 19, 2009 9:21:33

QC 8000 365.1 TPO4 - RUN LOG - TPO4B 0911190A

DATA DESCRIPTION:

Created:	Nov 19, 2009 9:32:24
Modified:	Nov 19, 2009 9:32:24

Method - Ch. 1 (QC 8000 365.1 Total Phosphorus)

METHOD DESCRIPTION:

Created:	Feb 25, 2008 14:38:43
Modified:	Nov 10, 2009 10:49:44

Total Phosphorus - 2.00 -- 0.05

ANALYTE DATA:

Analyte Name:	QC 8000 365.1 Total Phosphorus
Concentration Units:	mg/L
Chemistry:	Direct
Inject to Peak Start (s):	11.0
Peak Base Width (s):	18.000
% Width Tolerance:	60.000
Threshold:	6416.000
Autodilution Trigger:	Off
QuikChem Method:	10-115-01-1-E

CALIBRATION DATA:

Levels:

1 : 2.000	2 : 1.000	3 : 0.500	4 : 0.200
5 : 0.100	6 : 0.050	7 : 0.020	8 : 0.000

Calibration Rep Handling:	Average
Calibration Fit Type:	1st Order Poly
Force Though Zero:	No
Weighting Method:	None
Concentration Scaling:	None

QC 8000 365.1 Total Phosphorus

Lvl	Area	mg/L	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Replic STD	Replic % RSD	Residual 1st Poly
1	11701771	2.00	11701771					0.0	0.0	0.0
2	5864140	1.00	5864140					0.0	0.0	-0.3
3	2908823	0.50	2908823					0.0	0.0	0.4
4	1164013	0.20	1164013					0.0	0.0	0.1
5	571813	0.10	571813					0.0	0.0	1.2
6	279917	0.05	*303992*	279917				0.0	0.0	2.2
7	119819	0.02	122176	117462				3333.3	2.8	-7.9
8	0	0.00	0	0				0.0	0.0	

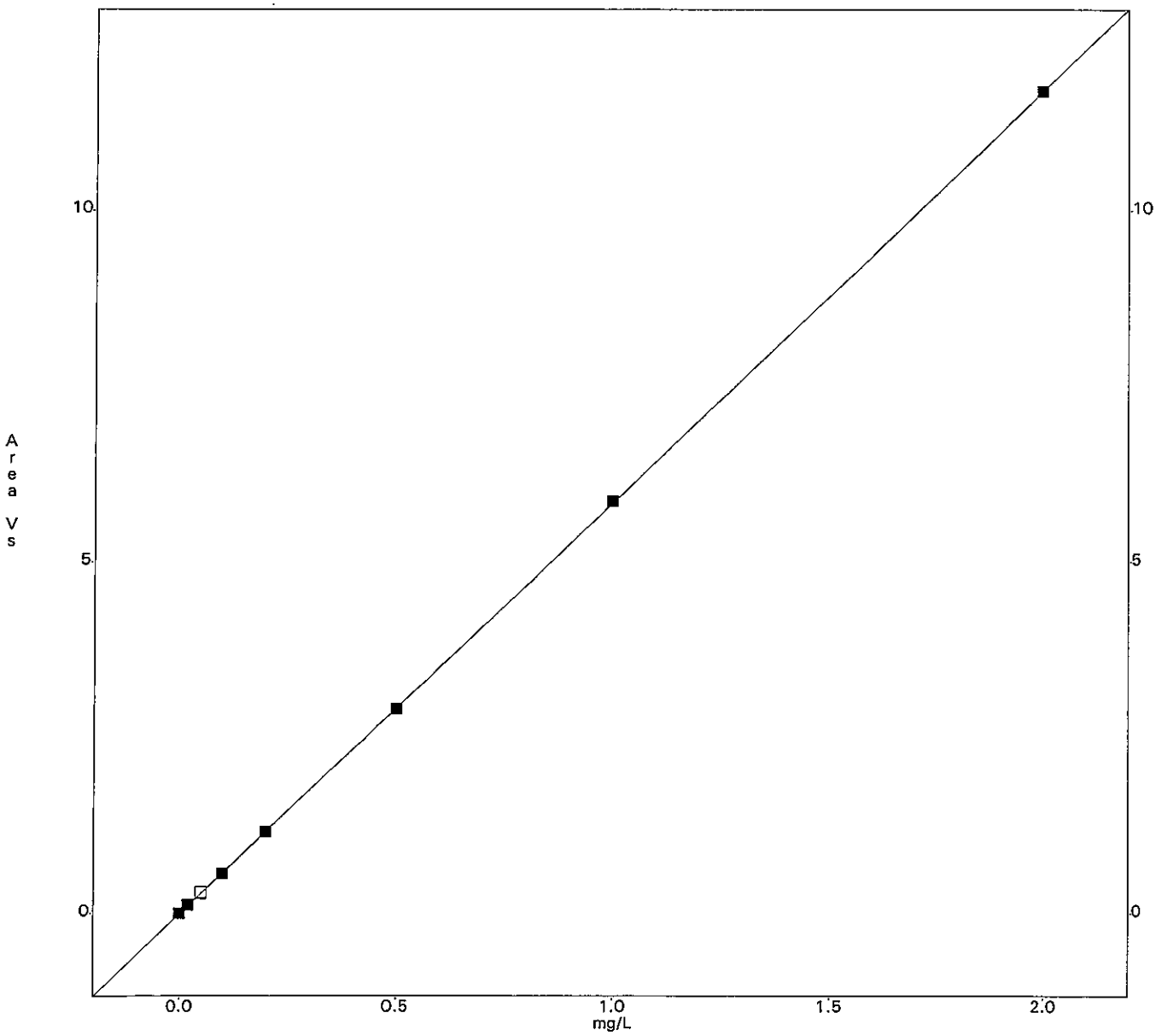
deleted - air spike

Underlined Italic numbers and hollow graph points reflect the unused Replicate Points

1st Order Poly
Conc = 1.708e-007 Area + 1.123e-003
r = 1.0000

pipette ID: E-2

Scaling: None - Weighting: None



Printed: Thursday, November 19, 2009 - 10:59 AM

Columbia Analytical Services

1 Mustard St., Rochester NY 14609

General Chemistry Analytical Run Cover Sheet

Analyst: N. Mead Date: 11/19/09

Analysis: Total Phosphorus, 0.05 - 2.0 mg/L Instrument: Lachat

Quality Control:

	Same as Log#, Date,	Stocks Prep. Log#, Date,	Stock Sol (mLs)	Stock Sol (mg/L)	Final Vol (mLs)	True Value (mg/L)
a) Standards Prep.:	WC85114C, 02/25/08	WC72002P, 1/26/09				
b) I/CCV Preparation:	WC92069F, 08/24/09	WC92111A, 11/11/09	0.8	10	10	0.80
c) Inorganic LCS Prep:	WC85114F, 2/25/08	WC72002P, 1/26/09	0.2	100	25	0.80
d) Organic LCS Prep:	WC85052A, 10/10/07	WC92104B, 10/28/09	0.2	100	25	0.80
e) Matrix Spike Prep.:	WC85114F, 2/25/08	WC72002P, 1/26/09	0.2	100	25	0.80

Instrument log filled in? (Y) (N)

Packages:

Copy and attach Standards Preparation.

Comments:

p:\greg\forms\covert.po4

TITLE

PROJECT

Continued from page

8/24/09 SBR Ⓐ TKN Digest Reagent

To a 2L vol. flask, add 268g K_2SO_4 (WC92055E) and 14.6g $CuSO_4$ (WC85271E) Fill ~ 1/2 way with UPDI. Slowly add 268mL omni trace H_2SO_4 (WC92064B). Allow to dissolve and cool. Bring to vol. with UPDI. Store @ RT in amber glass. Exp 9/24/09

8/24/09 DPW Recieved from EMD

Ⓑ 4x4L chloroform. Cat#: CX1054-1, lot#: 48171. Store@ RT, exp: 8/24/2012, Cas#: 67-66-3.

Ⓒ MBAS Wash Solution

To a tared 2L vol. flask add: 100g sodium phosphate monobasic monohydrate (WC92035H) and 13.7mL conc. H_2SO_4 (WC92040B). Bring to vol. w/ DI, store@RT. ~~Prep'd~~ DPW 8/24/09 Prep'd: 8/21/09, exp: 8/21/2010

Ⓓ MBAS Color Reagent

To a tared 2L vol. flask add: 100g sodium phosphate monobasic monohydrate (WC92035H), 13.7mL conc. H_2SO_4 (WC92040B) and 60mL of methylene blue stock (WC92017E). Bring to Volume w/ DI, Store@RT. Prep'd: 8/21/09 exp: 8/21/2010.

Ⓔ 1.0ppm LAS Working Standard Stock

Dilute 1.0mL of 1000ppm LAS Standard Stock (WC85268F) to 1L volumetrically w/ DI. Store@ 4°C, exp: 8/24/2010.

8/24/09 GN Ⓕ TPO_4 - RL - ICV/CCV, TV = 0.80 ppm

Add 0.8mls of 10ppm Reference Stock (Two 1/10 serial dilution of 1000ppm Reference stock (WC 85232H)) to 9.2mls carrier / Diluent. Make fresh each run

Continued to page

SIGNATURE | DATE

DISCLOSED TO AND UNDERSTOOD BY | DATE | PROPRIETARY INFORMATION

2/26/08 RP (A) 0.0250N $Na_2S_2O_3$ - Sulfides

Dilute 50mls 0.1N $Na_2S_2O_3$ (WC850670) to 200mls volumetrically w/ DI. Store for 2 weeks at 4°C. Exp. 3/11/08

2/25/08 TC (B) TPO4 Reg. Level Calibration for UC8000 π 2/26/08

Make a 10ppm Standard Working Stock by preparing two serial dilutions of the 1000ppm TPO4 Standard Stock (WC720001T)

(C) Cal. Standards - flush per run

Std	Std Conc. (mg/L)	mls of 10ppm working Stock (WC850670D)	mls Carrier/Diluent π 2/26/08
A	2.00	2.0	8.0
B	1.00	1.0	9.0
C	~~0.05~~ 0.50	0.50	9.5
D	0.20	1/10 dilution of Std A	
E	0.10	1/10 dilution of Std B	
F	0.050	1/10 dilution of Std C	
G	0.020	1/10 dilution of Std D.	
H	0.000	use Carrier/Diluent only	

~~(D) CCV/ICV TV=1.50~~ π 2/25/08 Added

(D) Make a 10ppm Reference Working Stock by preparing two serial dilutions of the 1000ppm TPO4 Reference Stock (WC850711F)

(E) ICV/CCV TV=1.50

Add 1.50mls of the 10ppm Reference Working Stock (WC850114D) to 8.5mls Carrier/Diluent. Fresh per run.

(F) Inorganic/Organic TPO4 RL LCS/MS TV=0.80ppm

To 25mls sample or LIPOI add 0.20mls of 100ppm Standard Stock (prepared by making a 1/10 dilution of the 1000ppm Standard Stock (WC720001T)

Organic LCS is prepared from 100ppm Inorganic Standard (WC850711H)

10/10/07 Ⓐ TPO4-RL Organic LCS N=1.40

To 25 mL UPW in vial add 0.35mL 100ppm Organic Standard (WC85059H)

Ⓑ Organic TPO4 Working Standard 10ppm

Make a 1/10 dilution of 100 ppm Organic Phosphorous Standard (WC85051H).

Ⓒ TPO4-LL Organic LCS N=0.025

To 20 mL UPW in vial add 0.05mL 10ppm Organic TPO4 Working Standard (WC85052B)

TITLE

PROJECT

Continued from page

11/11/09 (A) TPO4 1000 ppm Reference Stock
NVN 4.394g KH_2PO_4 (WC8505456) previously dried for 2 hours @ 104°C. Dissolve in ~800mLs DI in a 1 liter vol. flask. Bring to volume w/DI. Store in amber glass @ 4°C. for 1 year. Expires 11/11/10.

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DATE

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DATE

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10/28/09 (A) MBAS Wash Solution
To a tared 2L vol Flask add: 100g Sodium Phosphate Monobasic, Monohydrate (WC 920920) add 13.7 ml conc H_2SO_4 (M1780897K) Store @ RT. Bring to vol w/DI
exp 10/28/10

10/28/09 (B) 100 ppm Organic Phosphorous Standard - TPO4
SBR In a 1 liter vol. flask, dissolve 0.9885g β-Glycerophosphoric Acid, Disodium Salt, 5-Hydrate (WC761431) in DI. Bring to volume w/ DI Store in amber glass at 4°C Exp 1yr 10/28/10.

10/28/09 (C) Ascorbic Acid - TPO4
NM -same as WC92086D. Exp. 1 week, 11/4/09

10/28/09 (D) Sulfamic Acid - CN
BN -same as WC92089E. Exp 1 year: 10/28/10

Continued to page

SIGNATURE DATE

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PROPRIETARY INFORMATION

STANDARD STOCK PREP

(Fluoride and Bromide are purchased 1000ppm standards)

Reviewed & Approved

By: CK SD | CK SD 1/7/05

Date: 10/16/06 5/1/07 | 9/10/07

Chloride 1000ppm Stock: 1.648g NaCl crystals dried for 2 hrs at 104 . Dissolve in approx. 800mls DI in 1 Liter volumetric flask. Bring to volume with DI water. Store in amber jar @ room temp. for 1 year.

ID Letter	NaCl Source	Analyst	Date Prepared	Date Expires	Final Cl 1000ppm Stock ID
A	WC76259E	CMM	1/26/09	1/26/10	~~WC72002A~~ CMM 1/26/09
B					
C					
D					
E					

Nitrite 1000ppm Stock: 6.07g KNO2 previously dried for 2 hrs at 104 . Dissolve in approx. 800mls DI in 1 Liter volumetric flask. Bring to volume with DI water. Store in amber jar @ 4 for 1 year.

ID Letter	KNO2 Source	Analyst	Date Prepared	Date Expires	Final NO2 1000ppm Stock ID
F	WC760970	CMM	1/26/09	1/26/10	WC72002F (7741)
G					
H					
I					
J					

Nitrate 1000ppm Stock: 7.22g KNO3 crystals dried for 2 hrs at 104 . Dissolve in approx. 800mls DI in 1 Liter volumetric flask. Bring to volume with DI water. Transfer to amber jar and add 1.0ml Chloroform. Store in amber jar @ room temp. for 6 months.

CK 10/5/06

ID Letter	~~KNO2~~ KNO3 Source	Chloroform Source ID	Analyst	Date Prepared	Date Expires	Final NO3 1000ppm Stock ID
K	WC76114C	WC76170J	FN	10/5/06	4/5/07	WC72002K
L	WC76114C	WC76234A	FN	3/26/07	9/26/07	WC72002L
M	WC76114C	WC76234A	NM	9/21/07	3/21/08	WC72002M
N	WC76114C	WC76234A	CMM	3/25/08	9/25/08	WC72002N
O						

OPO4 / TPO4 1000ppm Stock: 4.394g KH2PO4 dried for 2 hrs at 104 . Dissolve in approx. 800mls DI in 1 Liter volumetric flask. Bring to volume with DI water. Store in amber jar @ 4 for 1 year.

ID Letter	KH2PO4 Source	Analyst	Date Prepared	Date Expires	Final OPO4/TPO4 1000ppm Stock ID
P	WC650855	CMM	1/26/09	1/26/10	WC72002P (7742)
Q					
R					
S					
T					

Sulfate 1000ppm Stock: 1.479g Na2SO4 dried overnight at 104 . Dissolve in approx. 800mls DI in 1 Liter volumetric flask. Bring to volume with DI water. Store in amber jar @ 4 for 1 year.

ID Letter	Na2SO4 Source	Analyst	Date Prepared	Date Expires	Final SO4 1000ppm Stock ID
U	WC760153E	CMM	1/27/09	1/27/10	WC72002U (7752)
V					
W					
X					
Y					

Analytical Results Summary

A

Instrument Name: R-Balance-02 **Analyst:** EWOLFE **Analysis Lot:** 179797 **Method/Testcode:** SM 2540 C/TDS

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
RQ0911563-01	Solids, Total Dissolved	MB		Water	0.00 mg/L ✓	100 mL	10 mg/L U	1	10			11/17/09 11:10	N	II
RQ0911563-02	Solids, Total Dissolved	LCS		Water	894.74 mg/L ✓	57 mL	895 mg/L	1	18	98		11/17/09 11:10	N	II
R0906420-031	Solids, Total Dissolved	N/A		Water	1514.71 mg/L ✓	68 mL	1510 mg/L	1	15			11/17/09 11:10	N	II
R0906420-038	Solids, Total Dissolved	N/A		Water	3906.52 mg/L ✓	46 mL	3910 mg/L	1	22			11/17/09 11:10	N	II
R0906420-039	Solids, Total Dissolved	N/A		Water	5020.00 mg/L ✓	25 mL	5020 mg/L	1	40			11/17/09 11:10	N	II
R0906420-040	Solids, Total Dissolved	N/A		Water	3477.78 mg/L ✓	36 mL	3480 mg/L	1	28			11/17/09 11:10	N	II
R0906420-043	Solids, Total Dissolved	N/A		Water	709.00 mg/L ✓	100 mL	709 mg/L	1	10			11/17/09 11:10	N	II
R0906477-001	Solids, Total Dissolved	N/A		Water	4321.88 mg/L ✓	32 mL	4320 mg/L	1	31			11/17/09 11:10	N	IV
R0906489-001	Solids, Total Dissolved	N/A		Water	173.00 mg/L ✓	100 mL	173 mg/L	1	10			11/17/09 11:10	N	II
R0906491-002	Solids, Total Dissolved	N/A		Water	28515.15 mg/L ✓	3.3 mL	28500 mg/L	1	300			11/17/09 11:10	N	II
RQ0911563-03	Solids, Total Dissolved	DUP	R0906491-002	Water	28060.61 mg/L ✓	3.3 mL	28100 mg/L	1	300		2	11/17/09 11:10	N	II
R0906498-001	Solids, Total Dissolved	N/A		Water	763.00 mg/L ✓	100 mL	763 mg/L	1	10			11/17/09 11:10	N	I
R0906498-002	Solids, Total Dissolved	N/A		Water	1401.56 mg/L ✓	64 mL	1400 mg/L	1	16			11/17/09 11:10	N	I
R0906498-004	Solids, Total Dissolved	N/A		Water	483.00 mg/L ✓	100 mL	483 mg/L	1	10			11/17/09 11:10	N	I
R0906498-006	Solids, Total Dissolved	N/A		Water	282.00 mg/L ✓	100 mL	282 mg/L	1	10			11/17/09 11:10	N	I
R0906504-001	Solids, Total Dissolved	N/A		Water	621.00 mg/L ✓	100 mL	621 mg/L	1	10			11/17/09 11:10	N	II
R0906504-002	Solids, Total Dissolved	N/A		Water	565.00 mg/L ✓	100 mL	565 mg/L	1	10			11/17/09 11:10	N	II
R0906504-003	Solids, Total Dissolved	N/A		Water	568.00 mg/L ✓	100 mL	568 mg/L	1	10			11/17/09 11:10	N	II
R0906507-001	Solids, Total Dissolved	N/A		Water	544.00 mg/L ✓	100 mL	544 mg/L	1	10			11/17/09 11:10	N	II
R0906508-001	Solids, Total Dissolved	N/A		Water	572.00 mg/L ✓	100 mL	572 mg/L	1	10			11/17/09 11:10	N	II
R0906530-001	Solids, Total Dissolved	N/A		Water	1564.71 mg/L ✓	85 mL	1560 mg/L	1	12			11/17/09 11:10	N	II
R0906530-002	Solids, Total Dissolved	N/A		Water	1123.08 mg/L ✓	91 mL	1120 mg/L	1	11			11/17/09 11:10	N	II
R0906530-003	Solids, Total Dissolved	N/A		Water	686.00 mg/L ✓	100 mL	686 mg/L	1	10			11/17/09 11:10	Y	II
RQ0911563-04	Solids, Total Dissolved	DUP	R0906530-003	Water	675.00 mg/L ✓	100 mL	675 mg/L	1	10		2	11/17/09 11:10	N	II

69631

f indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

COLUMBIA ANALYTICAL SERVICES, INC.
Rochester, NY

Analyte: Total Suspended Solids (TSS) Analyst: E. WOLFE Date: 11/17/09
Method: SM20 2540D Pipet: DISPOSABLE Time: 11:10
Analyte: Total Dissolved Solids (TDS)
Method: SM20 2540C **TS** ____ **TDS** X **TSS** ____
Analyte: Total Solids (TS)
Method SM20 2540B LCS Lot: WC92097C TV: **913** Balance ID: **AE240**
Filter Lot: **WC92107A** Oven ID: 1 *Lower tare weight used unless marked: ____

	Misc.	Order #	Dish ID	Sample Vol. (mLs)	Used all	Raw Data				Total Solids (mg/L)
1		MB	LA	100		Gross (A) 1:	88.1972	Gross (A) 3:		1.00
						Gross (A) 2:	88.1975			
						B)	88.1971	A-B=	0.0001	
2		LCS	TH	50		Gross (A) 1:	66.8087	Gross (A) 3:		912.00
						Gross (A) 2:	66.8090			
						B)	66.7631	A-B=	0.0456	
3		R0906436-014	HL	100		Gross (A) 1:	71.5179	Gross (A) 3:		824.00
						Gross (A) 2:	71.5179			
						B)	71.4355	A-B=	0.0824	
4		R0906420-011	53	24		Gross (A) 1:	87.5744	Gross (A) 3:		4545.83
						Gross (A) 2:	87.5743			
						B)	87.4652	A-B=	0.1091	
5		R0906420-011 DUP	75	23		Gross (A) 1:	86.3846	Gross (A) 3:		4556.52
						Gross (A) 2:	86.3846			
						B)	86.2798	A-B=	0.1048	
6		R0906420-012	NY	29		Gross (A) 1:	77.2993	Gross (A) 3:		4551.72
						Gross (A) 2:	77.2991			
						B)	77.1671	A-B=	0.1320	
7		R0906420-013	C5	25		Gross (A) 1:	74.1710	Gross (A) 3:		4840.00
						Gross (A) 2:	74.1711			
						B)	74.0500	A-B=	0.1210	
8		R0906420-014	GA	59		Gross (A) 1:	80.3664	Gross (A) 3:		1525.42
						Gross (A) 2:	80.3661			
						B)	80.2761	A-B=	0.0900	
9		R0906420-015	54	69		Gross (A) 1:	87.8232	Gross (A) 3:		1752.17
						Gross (A) 2:	87.8235			
						B)	87.7023	A-B=	0.1209	
10		R0906420-016	SD	60		Gross (A) 1:	82.7990	Gross (A) 3:		2038.33
						Gross (A) 2:	82.7994			
						B)	82.6767	A-B=	0.1223	
11		R0906420-017	T5	53		Gross (A) 1:	82.5292	Gross (A) 3:		1526.42
						Gross (A) 2:	82.5294			
						B)	82.4483	A-B=	0.0809	
12		R0906420-018	58	63		Gross (A) 1:	87.2020	Gross (A) 3:		1563.49
						Gross (A) 2:	87.2023			
						B)	87.1035	A-B=	0.0985	
13		R0906420-019	E1	71		Gross (A) 1:	82.1123	Gross (A) 3:		1453.52
						Gross (A) 2:	82.1123			
						B)	82.0091	A-B=	0.1032	

TS, TDS, TSS mg/L = (A-B)*1,000,000 Sample Vol. (mls)
Where: A = wgt (g) of dried residue + dish
B = wgt (g) of tared dish

COLUMBIA ANALYTICAL SERVICES, INC.
Rochester, NY

Analyte: Total Suspended Solids (TSS) Analyst: E. WOLFE Date: 11/17/09
Method: SM20 2540D Pipet: DISPOSABLE Time: 11:10
Analyte: Total Dissolved Solids (TDS)
Method: SM20 2540C **TS** ____ **TDS** X **TSS** ____
Analyte: Total Solids (TS)
Method SM20 2540B LCS Lot: WC92097C TV: **913** Balance ID: **AE240**
Filter Lot: **WC92107A** Oven ID: 1 *Lower tare weight used unless marked: ____

	Misc.	Order #	Dish ID	Sample Vol. (mLs)	Used all	Raw Data				Total Solids (mg/L)
14		R0906420-020	62	32		Gross (A) 1:	90.1561	Gross (A) 3:		3159.37
						Gross (A) 2:	90.1561			
						B)	90.0550	A-B=	0.1011	
15		R0906420-020 DUP	QW	31		Gross (A) 1:	84.1813	Gross (A) 3:		3067.74
						Gross (A) 2:	84.1810			
						B)	84.0859	A-B=	0.0951	
16		R0906420-021	FE	47		Gross (A) 1:	86.4832	Gross (A) 3:		2565.96
						Gross (A) 2:	86.4832			
						B)	86.3626	A-B=	0.1206	
17		R0906420-022	43	27		Gross (A) 1:	83.3305	Gross (A) 3:		4111.11
						Gross (A) 2:	83.3302			
						B)	83.2192	A-B=	0.1110	
18		R0906420-023	TX	22		Gross (A) 1:	68.9470	Gross (A) 3:		4318.18
						Gross (A) 2:	68.9470			
						B)	68.8520	A-B=	0.0950	
19		R0906420-024	VV	22		Gross (A) 1:	93.4521	Gross (A) 3:		3804.55
						Gross (A) 2:	93.4515			
						B)	93.3678	A-B=	0.0837	
20		R0906420-025	GY	44		Gross (A) 1:	85.7931	Gross (A) 3:		2445.45
						Gross (A) 2:	85.7931			
						B)	85.6855	A-B=	0.1076	
21		R0906420-026	DF	66		Gross (A) 1:	78.3533	Gross (A) 3:		1604.55
						Gross (A) 2:	78.3534			
						B)	78.2474	A-B=	0.1059	
22		R0906420-027	EW	100		Gross (A) 1:	74.5017	Gross (A) 3:		454.00
						Gross (A) 2:	74.5023			
						B)	74.4563	A-B=	0.0454	
23		R0906420-028	TC	95		Gross (A) 1:	72.1978	Gross (A) 3:		995.79
						Gross (A) 2:	72.1964	240		
						B)	72.1018	A-B=	0.0946	
24		R0906420-029	40	100		Gross (A) 1:	83.1250	Gross (A) 3:		659.00
						Gross (A) 2:	83.1250			
						B)	83.0591	A-B=	0.0659	
25		MB	63	100		Gross (A) 1:	87.1511	Gross (A) 3:		0.00
						Gross (A) 2:	87.1515			
						B)	87.1511	A-B=	0.0000	
26		LCS	AC	57		Gross (A) 1:	84.4987	Gross (A) 3:		894.74
						Gross (A) 2:	84.4988			
						B)	84.4477	A-B=	0.0510	

TS, TDS, TSS mg/L = (A-B)*1,000,000 Sample Vol. (mls)
Where: A = wgt (g) of dried residue + dish
B = wgt (g) of tared dish

COLUMBIA ANALYTICAL SERVICES, INC.
Rochester, NY

Analyte: Total Suspended Solids (TSS) Analyst: E. WOLFE Date: 11/17/09
Method: SM20 2540D Pipet: DISPOSABLE Time: 11:10
Analyte: Total Dissolved Solids (TDS)
Method: SM20 2540C **TS** ____ **TDS** X **TSS** ____
Analyte: Total Solids (TS)
Method SM20 2540B LCS Lot: WC92097C TV: **913** Balance ID: **AE240**
Filter Lot: **WC92107A** Oven ID: 1 *Lower tare weight used unless marked: ____

	Misc.	Order #	Dish ID	Sample Vol. (mLs)	Used all	Raw Data				Total Solids (mg/L)
27		R0906420-031	MM	68		Gross (A) 1:	75.2092	Gross (A) 3:		1514.71
						Gross (A) 2:	75.2087			
						B)	75.1057	A-B=	0.1030	
28		R0906420-038	X5	46		Gross (A) 1:	88.0377	Gross (A) 3:		3906.52
						Gross (A) 2:	88.0374			
						B)	87.8577	A-B=	0.1797	
29		R0906420-039	30	25		Gross (A) 1:	86.9295	Gross (A) 3:		5020.00
						Gross (A) 2:	86.9291			
						B)	86.8036	A-B=	0.1255	
30		R0906420-040	ND	36		Gross (A) 1:	78.3869	Gross (A) 3:		3477.78
						Gross (A) 2:	78.3873			
						B)	78.2617	A-B=	0.1252	
31		R0906420-043	PM	100		Gross (A) 1:	84.9898	Gross (A) 3:		709.00
						Gross (A) 2:	84.9910			
						B)	84.9189	A-B=	0.0709	
32		R0906477-001	FF	32		Gross (A) 1:	81.7422	Gross (A) 3:		4321.88
						Gross (A) 2:	81.7426			
						B)	81.6039	A-B=	0.1383	
33		R0906489-001	JP	100		Gross (A) 1:	75.8929	Gross (A) 3:		173.00
						Gross (A) 2:	75.8927			
						B)	75.8754	A-B=	0.0173	
34		R0906491-002	VS	3.3		Gross (A) 1:	80.5664	Gross (A) 3:		28515.15
						Gross (A) 2:	80.5666			
						B)	80.4723	A-B=	0.0941	
35		R0906491-002 DUP	AM	3.3		Gross (A) 1:	81.7305	Gross (A) 3:		28060.61
						Gross (A) 2:	81.7306			
						B)	81.6379	A-B=	0.0926	
36		R0906498-001	T4	100		Gross (A) 1:	83.3300	Gross (A) 3:		763.00
						Gross (A) 2:	83.3303			
						B)	83.2537	A-B=	0.0763	
37		R0906498-002	XX	64		Gross (A) 1:	88.7268	Gross (A) 3:		1401.56
						Gross (A) 2:	88.7270			
						B)	88.6371	A-B=	0.0897	
38		R0906498-004	RN	100		Gross (A) 1:	77.1534	Gross (A) 3:		483.00
						Gross (A) 2:	77.1537			
						B)	77.1051	A-B=	0.0483	
39		R0906498-006	KR	100		Gross (A) 1:	73.1208	Gross (A) 3:		282.00
						Gross (A) 2:	73.1210			
						B)	73.0926	A-B=	0.0282	

TS, TDS, TSS mg/L = (A-B)*1,000,000 Sample Vol. (mls)
Where: A = wgt (g) of dried residue + dish
B = wgt (g) of tared dish

COLUMBIA ANALYTICAL SERVICES, INC.
Rochester, NY

Analyte: Total Suspended Solids (TSS) Analyst: E. WOLFE Date: 11/17/09
Method: SM20 2540D Pipet: DISPOSABLE Time: 11:10
Analyte: Total Dissolved Solids (TDS)
Method: SM20 2540C **TS** ____ **TDS** X **TSS** ____
Analyte: Total Solids (TS)
Method SM20 2540B LCS Lot: WC92097C TV: **913** Balance ID: **AE240**
Filter Lot: **WC92107A** Oven ID: 1 *Lower tare weight used unless marked: ____

	Misc.	Order #	Dish ID	Sample Vol. (mLs)	Used all	Raw Data				Total Solids (mg/L)
40		R0906504-001	FN	100		Gross (A) 1:	82.2090	Gross (A) 3:		621.00
						Gross (A) 2:	82.2094			
						B)	82.1469	A-B=	0.0621	
41		R0906504-002	18	100		Gross (A) 1:	86.7543	Gross (A) 3:		565.00
						Gross (A) 2:	86.7551			
						B)	86.6978	A-B=	0.0565	
42		R0906504-003	TM	100		Gross (A) 1:	76.0941	Gross (A) 3:		568.00
						Gross (A) 2:	76.0944			
						B)	76.0373	A-B=	0.0568	
43		R0906507-001	BP	100		Gross (A) 1:	72.2691	Gross (A) 3:		544.00
						Gross (A) 2:	72.2693			
						B)	72.2147	A-B=	0.0544	
44		R0906508-001	A	100		Gross (A) 1:	85.2005	Gross (A) 3:		572.00
						Gross (A) 2:	85.2005			
						B)	85.1433	A-B=	0.0572	
45		R0906530-001	ZX	85		Gross (A) 1:	81.9743	Gross (A) 3:		1564.71
						Gross (A) 2:	81.9746			
						B)	81.8413	A-B=	0.1330	
46		R0906530-002	OS	91		Gross (A) 1:	77.0386	Gross (A) 3:		1123.08
						Gross (A) 2:	77.0389			
						B)	76.9364	A-B=	0.1022	
47		R0906530-003	PD	100		Gross (A) 1:	85.1567	Gross (A) 3:		686.00
						Gross (A) 2:	85.1606			
						B)	85.0881	A-B=	0.0686	
48		R0906530-003 DUP	A10	100		Gross (A) 1:	85.1062	Gross (A) 3:		675.00
						Gross (A) 2:	85.1066			
						B)	85.0387	A-B=	0.0675	

TS, TDS, TSS mg/L = (A-B)*1,000,000 Sample Vol. (mls)
Where: A = wgt (g) of dried residue + dish
B = wgt (g) of tared dish

COLUMBIA ANALYTICAL SERVICES, INC

Tare Weights:

Instrument: X Mettler AE240 Analytical Balance
____ Mettler AG204 Analytical Balance

Analyst: E. WOLFE
Date: 11/17/09

Drying Tins: ____ Dish 104°C: ____
Crucible 550°C: ____ Dish 550°C: ____
Dish 180°C: X G/O Dishes: ____

	Weight	Actual
s Weights (s):	100 g	100 g
	____ g	____ g

ID Number	Weight	
LA	88.1974	88.1971
75	86.2798	86.2800
T5	82.4483	82.4483
QW	84.0859	84.0860
58	87.1035	87.1037
GA	80.2766	80.2761
FE	86.3626	86.3628
53	87.4656	87.4652
VV	93.3679	93.3678
TX	68.8523	68.8520
MM	75.1061	75.1057
X5	87.8579	87.8577
63	87.1513	87.1511
AC	84.4479	84.4477
ND	78.2619	78.2617
43	83.2192	83.2194
AM	81.6381	81.6379
A10	85.0387	85.0387
T4	83.2539	83.2537
A	85.1435	85.1433
FN	82.1469	82.1469
18	86.6980	86.6978
XX	88.6371	88.6371
ZX	81.8414	81.8413

ID Number	Weight	
54	87.7025	87.7023
E1	82.0091	82.0092
62	90.0550	90.0550
SD	82.6767	82.6770
C5	74.0501	74.0500
TH	66.7633	66.7631
HL	71.4355	71.4355
NY	77.1674	77.1671
TC	72.1019	72.1018
EW	74.4563	74.4563
PM	84.9190	84.9189
FF	81.6040	81.6039
GY	85.6857	85.6855
40	83.0591	83.0592
DF	78.2474	78.2475
30	86.8037	86.8036
KR	73.0926	73.0926
BP	72.2147	72.2148
PD	85.0881	85.0881
OS	76.9367	76.9364
TM	76.0377	76.0373
VS	80.4726	80.4723
RN	77.1051	77.1052
JP	75.8755	75.8754

Columbia Analytical Services
1 Mustard St., Rochester, NY 14609-0859

General Chemistry Analytical Run Cover Sheet

Analyst: EW Date: 11/17/09

Analysis: Total Dissolved Solids Instrument: ✓ Mettler AE 240 Analytical Balance
_____ Mettler AG 204 Analytical Balance

Quality Control:

	Log Book #	Log Book Date	Stock Sol (m/Ls)	Stock Sol (mg/L)	Final Vol (mLs)	True Value (mg/L)
a) Standards Prep.:						
b) I/CCV Preparation:						
c) LCS Preparation:	WC92097C	10/15/2009				913
d) Matrix Spike Prep.:						

Instrument log filled in? (Y) (N)

Packages: Copy and attach LCS Preparation

Comments:

The weight loss between successive gross dry weights should not exceed 4% or 1.0 mg, whichever is less.

For calculations, used: ✓ lower ____ higher tare weight

As a rule, the lower of the successive dry weights is used to calculate the result.

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TITLE PROJECT

Continued from page

10/15/09 (A) Hypochlorite - NH3
NM
- 400 mLs sodium Hypochlorite (WC92094F)
- 400 mLs UPDI
Prepare fresh each run.

10/15/09 (B) 1:1 H_2SO_4 - Cn Distillation
GN Same as WC92071B exp 10/15/10

10/15/09 (C) TDS Reference
EW 0.9131 g NaCl (WC85215H) diluted volumetrically to 1 liter w/ DI. Store in plastic bottle @ 4°C.
TV = 913 mg/L Exp: 10/15/10 (12686)

10/15/09 Recieved from VWR
EW (D) (1) x100 Nylon Membrane Filters, 0.45µm, Whatman Cat # 7404-009, Lot # 0907BE. Store in drawer at solids bench. Exp: NA
(E) (1) x100 Nuclepore Track-Etch Membrane, 8.0µm, VWR Cat # 28158-840, Lot # 8217010 Store in drawer @ solids bench. Exp: NA.

10/15/09 (F) Color Reagent - TPO4
NM To a tared 1-L plastic bottle add:
- 347.0g UPDI
- 19.2g conc. omnitrace H_2SO_4 (WC92064B)
- 36.0g Stock APT (WC92027G)
- 106.5g stock Ammonium Molybdate (WC92093A)
Mix well. Degas prior to use. Exp. 1 year, 10/15/10 or when discolored

10/15/09 (G) 10% Phosphoric Acid
CB Same as WC92036D Expires 10/15/10

Continued to page

SIGNATURE DATE

DISCLOSED TO AND UNDERSTOOD BY DATE PROPRIETARY INFORMATION

Analytical Results Summary

2 runs

Instrument Name: R-Balance-02 **Analyst:** EWOLFE **Analysis Lot:** 179605 **Method/Testcode:** SM 2540 D/TSS

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt	Final Result	Dil	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
RQ0911501-01	Solids, Total Suspended (TSS)	MB		Water	0.00 mg/L	1000 mL	1.0 mg/L U	1	1.0			11/16/09 13:30	N	IV
RQ0911501-02	Solids, Total Suspended (TSS)	LCS		Water	210.00 mg/L	100 mL	210 mg/L	1	10	98		11/16/09 13:30	N	IV
R0906300-010	Solids, Total Suspended (TSS)	N/A		Water	4.80 mg/L	1000 mL	4.8 mg/L	1	1.0			11/16/09 13:30	N	IV
R0906300-011	Solids, Total Suspended (TSS)	N/A		Water	3.50 mg/L	1000 mL	3.5 mg/L	1	1.0			11/16/09 13:30	N	IV
R0906300-012	Solids, Total Suspended (TSS)	N/A		Water	4.10 mg/L	1000 mL	4.1 mg/L	1	1.0			11/16/09 13:30	N	IV
R0906454-001	Solids, Total Suspended (TSS)	N/A		Water	2.24 mg/L	980 mL	2.2 mg/L	1	1.0			11/16/09 13:30	N	II
RQ0911501-03	Solids, Total Suspended (TSS)	DUP	R0906454-001	Water	2.16 mg/L	970 mL	2.2 mg/L	1	1.0		4	11/16/09 13:30	N	II
R0906473-001	Solids, Total Suspended (TSS)	N/A		Water	23.20 mg/L	1000 mL	23.2 mg/L	1	1.0			11/16/09 13:30	N	I
R0906473-002	Solids, Total Suspended (TSS)	N/A		Water	3.10 mg/L	1000 mL	3.1 mg/L	1	1.0			11/16/09 13:30	N	I
R0906473-003	Solids, Total Suspended (TSS)	N/A		Water	18.20 mg/L	1000 mL	18.2 mg/L	1	1.0			11/16/09 13:30	N	I
R0906473-004	Solids, Total Suspended (TSS)	N/A		Water	0.90 mg/L	1000 mL	1.0 mg/L U	1	1.0			11/16/09 13:30	N	I
R0906473-005	Solids, Total Suspended (TSS)	N/A		Water	0.20 mg/L	1000 mL	1.0 mg/L U	1	1.0			11/16/09 13:30	N	I
R0906473-006	Solids, Total Suspended (TSS)	N/A		Water	6.50 mg/L	1000 mL	6.5 mg/L	1	1.0			11/16/09 13:30	N	I
R0906474-001	Solids, Total Suspended (TSS)	N/A		Water	3.67 mg/L	545 mL	3.7 mg/L	1	1.8			11/16/09 13:30	N	II
R0906477-001	Solids, Total Suspended (TSS)	N/A		Water	122.03 mg/L	590 mL	122 mg/L	1	1.7			11/16/09 13:30	N	IV
R0906482-001	Solids, Total Suspended (TSS)	N/A		Water	7.63 mg/L	590 mL	7.6 mg/L	1	1.7			11/16/09 13:30	N	II
R0906486-001	Solids, Total Suspended (TSS)	N/A		Water	2.21 mg/L	995 mL	2.2 mg/L	1	1.0			11/16/09 13:30	N	II
RQ0911501-04	Solids, Total Suspended (TSS)	DUP	R0906486-001	Water	2.10 mg/L	1000 mL	2.1 mg/L	1	1.0		5	11/16/09 13:30	N	II
R0906486-005	Solids, Total Suspended (TSS)	N/A		Water	3.93 mg/L	610 mL	3.9 mg/L	1	1.6			11/16/09 13:30	N	II
R0906486-009	Solids, Total Suspended (TSS)	N/A		Water	2.30 mg/L	1000 mL	2.3 mg/L	1	1.0			11/16/09 13:30	N	II
R0906486-013	Solids, Total Suspended (TSS)	N/A		Water	2.10 mg/L	1000 mL	2.1 mg/L	1	1.0			11/16/09 13:30	N	II
R0906491-001	Solids, Total Suspended (TSS)	N/A		Water	1.10 mg/L	1000 mL	1.1 mg/L	1	1.0			11/16/09 13:30	N	II
R0906498-001	Solids, Total Suspended (TSS)	N/A		Water	1.70 mg/L	1000 mL	1.7 mg/L	1	1.0			11/16/09 13:30	N	I
R0906498-002	Solids, Total Suspended (TSS)	N/A		Water	11.24 mg/L	445 mL	11.2 mg/L	1	2.2			11/16/09 13:30	N	I

66999

I indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Printed 11/18/09 10:54

Results Summary

R0477 1 copy

Reviewed & Approved
By: CK
Date: 11/18/09

COLUMBIA ANALYTICAL SERVICES, INC.
Rochester, NY

Analyte: Total Suspended Solids (TSS) Analyst: E. WOLFE Date: 11/16/09
Method: SM20 2540D Pipet: NA Time: 13:30
Analyte: Total Dissolved Solids (TDS)
Method: SM20 2540C **TS** ____ **TDS** ____ **TSS** X
Analyte: Total Solids (TS)
Method SM20 2540B LCS Lot: WC92106B TV: **215** Balance ID: **AE240**
Filter Lot: **WC92107A** Oven ID: 2 *Lower tare weight used unless marked: ____

	Misc.	Order #	Dish ID	Sample Vol. (mLs)	Used all	Raw Data				Total Solids (mg/L)
1		MB	23	1000		Gross (A) 1:	1.4140	Gross (A) 3:		0.00
						Gross (A) 2:	1.4140			
						B)	1.4140	A-B=	0.0000	
2		LCS	24	100		Gross (A) 1:	1.4403	Gross (A) 3:		210.00
						Gross (A) 2:	1.4403			
						B)	1.4193	A-B=	0.0210	
3		R0906300-010	25	1000		Gross (A) 1:	1.4200	Gross (A) 3:		4.80
						Gross (A) 2:	1.4200			
						B)	1.4152	A-B=	0.0048	
4		R0906300-011	26	1000		Gross (A) 1:	1.4128	Gross (A) 3:		3.50
						Gross (A) 2:	1.4128			
						B)	1.4093	A-B=	0.0035	
5		R0906300-012	27	1000		Gross (A) 1:	1.4169	Gross (A) 3:		4.10
						Gross (A) 2:	1.4168			
						B)	1.4127	A-B=	0.0041	
6		R0906454-001	28	980	X	Gross (A) 1:	1.4154	Gross (A) 3:		2.24
						Gross (A) 2:	1.4154			
						B)	1.4132	A-B=	0.0022	
7		R0906454-001 DUP	29	970	X	Gross (A) 1:	1.4182	Gross (A) 3:		2.16
						Gross (A) 2:	1.4183			
						B)	1.4161	A-B=	0.0021	
8		R0906473-001	30	1000		Gross (A) 1:	1.4355	Gross (A) 3:		23.20
						Gross (A) 2:	1.4355			
						B)	1.4123	A-B=	0.0232	
9		R0906473-002	31	1000		Gross (A) 1:	1.4280	Gross (A) 3:		3.10
						Gross (A) 2:	1.4279			
						B)	1.4248	A-B=	0.0031	
10		R0906473-003	32	1000		Gross (A) 1:	1.4411	Gross (A) 3:		18.20
						Gross (A) 2:	1.4410			
						B)	1.4228	A-B=	0.0182	
11		R0906473-004	33	1000		Gross (A) 1:	1.4160	Gross (A) 3:		0.90
						Gross (A) 2:	1.4159			
						B)	1.4150	A-B=	0.0009	
12		R0906473-005	34	1000		Gross (A) 1:	1.4217	Gross (A) 3:		0.20
						Gross (A) 2:	1.4217			
						B)	1.4215	A-B=	0.0002	
13		R0906473-006	35	1000		Gross (A) 1:	1.4284	Gross (A) 3:		6.50
						Gross (A) 2:	1.4284			
						B)	1.4219	A-B=	0.0065	

TS, TDS, TSS mg/L = (A-B)*1,000,000 Sample Vol. (mls)
Where: A = wgt (g) of dried residue + dish
B = wgt (g) of tared dish

COLUMBIA ANALYTICAL SERVICES, INC.
Rochester, NY

Analyte: Total Suspended Solids (TSS) Analyst: E. WOLFE Date: 11/16/09
Method: SM20 2540D Pipet: NA Time: 13:30
Analyte: Total Dissolved Solids (TDS)
Method: SM20 2540C **TS** ____ **TDS** ____ **TSS** X
Analyte: Total Solids (TS)
Method SM20 2540B LCS Lot: WC92106B TV: **215** Balance ID: **AE240**
Filter Lot: **WC92107A** Oven ID: 2 *Lower tare weight used unless marked: ____

	Misc.	Order #	Dish ID	Sample Vol. (mLs)	Used all	Raw Data				Total Solids (mg/L)
14		R0906474-001	36	545		Gross (A) 1:	1.4172	Gross (A) 3:		3.67
						Gross (A) 2:	1.4171			
						B)	1.4151	A-B=	0.0020	
15		R0906477-001	37	590		Gross (A) 1:	1.4907	Gross (A) 3:		122.03
						Gross (A) 2:	1.4903			
						B)	1.4183	A-B=	0.0720	
16		R0906482-001	38	590		Gross (A) 1:	1.4232	Gross (A) 3:		7.63
						Gross (A) 2:	1.4232			
						B)	1.4187	A-B=	0.0045	
17		R0906486-001	39	995	X	Gross (A) 1:	1.4207	Gross (A) 3:		2.21
						Gross (A) 2:	1.4208			
						B)	1.4185	A-B=	0.0022	
18		R0906486-001 DUP	40	1000		Gross (A) 1:	1.4164	Gross (A) 3:		2.10
						Gross (A) 2:	1.4164			
						B)	1.4143	A-B=	0.0021	
19		R0906486-005	41	610		Gross (A) 1:	1.4262	Gross (A) 3:		3.93
						Gross (A) 2:	1.4262			
						B)	1.4238	A-B=	0.0024	
20		R0906486-009	42	1000		Gross (A) 1:	1.4242	Gross (A) 3:		2.30
						Gross (A) 2:	1.4242			
						B)	1.4219	A-B=	0.0023	
21		R0906486-013	43	1000		Gross (A) 1:	1.4241	Gross (A) 3:		2.10
						Gross (A) 2:	1.4239			
						B)	1.4218	A-B=	0.0021	
22		R0906491-001	44	1000		Gross (A) 1:	1.4237	Gross (A) 3:		1.10
						Gross (A) 2:	1.4235			
						B)	1.4224	A-B=	0.0011	
23		R0906498-001	45	1000		Gross (A) 1:	1.4247	Gross (A) 3:		1.70
						Gross (A) 2:	1.4247			
						B)	1.4230	A-B=	0.0017	
24		R0906498-002	46	445		Gross (A) 1:	1.4325	Gross (A) 3:		11.24
						Gross (A) 2:	1.4325			
						B)	1.4275	A-B=	0.0050	
25		MB	47	1000		Gross (A) 1:	1.4323	Gross (A) 3:		0.00
						Gross (A) 2:	1.4323			
						B)	1.4323	A-B=	0.0000	
26		LCS	48	93		Gross (A) 1:	1.4437	Gross (A) 3:		211.83
						Gross (A) 2:	1.4437			
						B)	1.4240	A-B=	0.0197	

TS, TDS, TSS mg/L = (A-B)*1,000,000 Sample Vol. (mls)
Where: A = wgt (g) of dried residue + dish
B = wgt (g) of tared dish

COLUMBIA ANALYTICAL SERVICES, INC.
Rochester, NY

Analyte: Total Suspended Solids (TSS) Analyst: E. WOLFE Date: 11/16/09
Method: SM20 2540D Pipet: NA Time: 13:30
Analyte: Total Dissolved Solids (TDS)
Method: SM20 2540C **TS** _____ **TDS** _____ **TSS** X
Analyte: Total Solids (TS)
Method SM20 2540B LCS Lot: WC92106B TV: **215** Balance ID: **AE240**
Filter Lot: **WC92107A** Oven ID: 2 *Lower tare weight used unless marked: _____

	Misc.	Order #	Dish ID	Sample Vol. (mLs)	Used all	Raw Data				Total Solids (mg/L)
27		R0906498-004	49	1000		Gross (A) 1:	1.4170	Gross (A) 3:		1.20
						Gross (A) 2:	1.4170			
						B)	1.4158	A-B=	0.0012	
28		R0906498-006	50	1000		Gross (A) 1:	1.4193	Gross (A) 3:		1.10
						Gross (A) 2:	1.4193			
						B)	1.4182	A-B=	0.0011	
29		R0906502-001	51	1000		Gross (A) 1:	1.4209	Gross (A) 3:		2.00
						Gross (A) 2:	1.4207			
						B)	1.4187	A-B=	0.0020	
30		R0906490-001	52	217		Gross (A) 1:	1.4253	Gross (A) 3:		23.96
						Gross (A) 2:	1.4252			
						B)	1.4200	A-B=	0.0052	
31		R0906501-001	53	100		Gross (A) 1:	1.4268	Gross (A) 3:		81.00
						Gross (A) 2:	1.4268			
						B)	1.4187	A-B=	0.0081	
32		R0906501-001 DUP	54	100		Gross (A) 1:	1.4326	Gross (A) 3:		80.00
						Gross (A) 2:	1.4324			
						B)	1.4244	A-B=	0.0080	
33		R0906501-003	55	38		Gross (A) 1:	1.4311	Gross (A) 3:		247.37
						Gross (A) 2:	1.4311			
						B)	1.4217	A-B=	0.0094	
34		R0906501-003 DUP	56	40		Gross (A) 1:	1.4233	Gross (A) 3:		235.00
						Gross (A) 2:	1.4233			
						B)	1.4139	A-B=	0.0094	
35		R0906501-004	57	748		Gross (A) 1:	1.4376	Gross (A) 3:		15.91
						Gross (A) 2:	1.4375			
						B)	1.4256	A-B=	0.0119	
36		R0906501-006	58	1000		Gross (A) 1:	1.4230	Gross (A) 3:		3.30
						Gross (A) 2:	1.4231			
						B)	1.4197	A-B=	0.0033	
37		R0906504-001	59	1000		Gross (A) 1:	1.4280	Gross (A) 3:		1.60
						Gross (A) 2:	1.4282			
						B)	1.4264	A-B=	0.0016	
38		R0906504-002	60	1000		Gross (A) 1:	1.4265	Gross (A) 3:		1.70
						Gross (A) 2:	1.4266			
						B)	1.4248	A-B=	0.0017	
39		R0906504-003	61	1000		Gross (A) 1:	1.4307	Gross (A) 3:		2.10
						Gross (A) 2:	1.4308			
						B)	1.4286	A-B=	0.0021	

TS, TDS, TSS mg/L = (A-B)*1,000,000 Sample Vol. (mls)
Where: A = wgt (g) of dried residue + dish
B = wgt (g) of tared dish

COLUMBIA ANALYTICAL SERVICES, INC.
Rochester, NY

Analyte: Total Suspended Solids (TSS) Analyst: E. WOLFE Date: 11/16/09
Method: SM20 2540D Pipet: NA Time: 13:30
Analyte: Total Dissolved Solids (TDS)
Method: SM20 2540C **TS** ____ **TDS** ____ **TSS** X
Analyte: Total Solids (TS)
Method SM20 2540B LCS Lot: WC92106B TV: **215** Balance ID: **AE240**
Filter Lot: **WC92107A** Oven ID: 2 *Lower tare weight used unless marked: ____

	Misc.	Order #	Dish ID	Sample Vol. (mLs)	Used all	Raw Data				Total Solids (mg/L)
40		R0906505-001	62	1000		Gross (A) 1:	1.4213	Gross (A) 3:		1.80
						Gross (A) 2:	1.4214			
						B)	1.4195	A-B=	0.0018	
41		R0906505-002	63	1000		Gross (A) 1:	1.4192	Gross (A) 3:		2.30
						Gross (A) 2:	1.4192			
						B)	1.4169	A-B=	0.0023	
42		R0906518-001	64	985	X	Gross (A) 1:	1.4234	Gross (A) 3:		5.18
						Gross (A) 2:	1.4234			
						B)	1.4183	A-B=	0.0051	
43		R0906526-001	65	840		Gross (A) 1:	1.4140	Gross (A) 3:		5.24
						Gross (A) 2:	1.4141			
						B)	1.4096	A-B=	0.0044	
44		R0906526-002	66	800		Gross (A) 1:	1.4296	Gross (A) 3:		5.62
						Gross (A) 2:	1.4296			
						B)	1.4251	A-B=	0.0045	
45		R0906526-003	67	1000		Gross (A) 1:	1.4255	Gross (A) 3:		7.80
						Gross (A) 2:	1.4255			
						B)	1.4177	A-B=	0.0078	
46		R0906526-004	68	1000		Gross (A) 1:	1.4298	Gross (A) 3:		2.70
						Gross (A) 2:	1.4299			
						B)	1.4271	A-B=	0.0027	
47		R0906524-001	69	675		Gross (A) 1:	1.4365	Gross (A) 3:		22.96
						Gross (A) 2:	1.4365			
						B)	1.4210	A-B=	0.0155	

TS, TDS, TSS mg/L = (A-B)*1,000,000 Sample Vol. (mls)
Where: A = wgt (g) of dried residue + dish
B = wgt (g) of tared dish

COLUMBIA ANALYTICAL SERVICES, INC

Tare Weights:

Instrument: X Mettler AE240 Analytical Balance
____ Mettler AG204 Analytical Balance

Analyst: E. WOLFE
Date: 11/16/09

Drying Tins: X
Crucible 550°C: ____
Dish 180°C: ____
Dish 104°C: ____
Dish 550°C: ____
G/O Dishes: ____

	Weight	**Actual**
s Weights (s):	0.9999 g	1 g
	____ g	____ g

ID Number	Weight	
23	1.4140	1.4140
24	1.4193	1.4193
25	1.4152	1.4152
26	1.4093	1.4093
27	1.4127	1.4127
28	1.4132	1.4132
29	1.4161	1.4162
30	1.4124	1.4123
31	1.4248	1.4248
32	1.4229	1.4228
33	1.4151	1.4150
34	1.4215	1.4215
35	1.4220	1.4219
36	1.4151	1.4151
37	1.4183	1.4184
38	1.4187	1.4188
39	1.4185	1.4185
40	1.4143	1.4143
41	1.4238	1.4239
42	1.4219	1.4219
43	1.4218	1.4218
44	1.4225	1.4224
45	1.4230	1.4230
46	1.4276	1.4275

ID Number	Weight	
47	1.4324	1.4323
48	1.4240	1.4240
49	1.4158	1.4158
50	1.4183	1.4182
51	1.4188	1.4187
52	1.4201	1.4200
53	1.4187	1.4187
54	1.4245	1.4244
55	1.4219	1.4217
56	1.4140	1.4139
57	1.4256	1.4256
58	1.4197	1.4197
59	1.4265	1.4264
60	1.4248	1.4249
61	1.4287	1.4286
62	1.4196	1.4195
63	1.4170	1.4169
64	1.4183	1.4183
65	1.4097	1.4096
66	1.4251	1.4251
67	1.4177	1.4177
68	1.4272	1.4271
69	1.4211	1.4210

EW 11/18/09

J:\ACQUDATA\WetChem\Solids\Solids\TSS\TSS111609

00704

Columbia Analytical Services
1 Mustard St., Rochester, NY 14609-0859

General Chemistry Analytical Run Cover Sheet

Analyst: EW Date: 11/16/09

Analysis: Total Suspended Solids Instrument: ✓ Mettler AE 240 Analytical Balance
_____ Mettler AG 204 Analytical Balance

Quality Control:

	Log Book #	Log Book Date	Stock Sol (m/Ls)	Stock Sol (mg/L)	Final Vol (mLs)	True Value (mg/L)
a) Standards Prep.:						
b) I/CCV Preparation:						
c) LCS Preparation:	WC92106B	11/2/2009				215
d) Matrix Spike Prep.:						

Instrument log filled in? (Y) (N)

Packages: Copy and attach LCS Preparation

Comments:

The difference between successive gross dry weights should be less than 4% of the previous weight or 0.5 mg, whichever is less.

As a rule, both the lower tare weight and the lower of the successive dry weights are used for calculation.

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TITLE PROJECT

Continued from page

11/2/09 (A) TKN Digest Reagent
SBR same as WC9208SB. Exp 12/2/09

11/2/09 (B) TSS Reference
EW 0.2146 g Kaolin (WC09285G) brought to ~~liter~~ 1000g w/ DI. exp 11/2/09
Store in plastic bottle @ 4°C.
TV = 215 mg/L Exp: 6/2/10 (13074)

11/2/09 Received from RICCA (VWR)
KB (C) · (1) x 500mL Calcium Chloride Standard, 1.00mL = 1.00mg $CaCO_3$, Cat. # 1780-16, RICCA Lot # 2904100, CAS #s 471-34-1, 7647-01-0, 7732-18-5. Store @ 4°C. Expires 9/30/10. 13084
(D) · (1) x 500mL 0.1% Phenanthroline, Cat # 5520-16, RICCA Lot # 2910596, CAS #s 5144-89-8, 7647-01-0, 7732-18-5. Store @ 4°C. Expires 10/31/11.
(E) · (1) x 1L Chloride Color Reagent, Cat # 1940-32, RICCA Lot # 2910359, CAS #s 592-85-8, 7782-61-8, 7697-37-2, 67-56-1, 9002-92-0, 7732-18-5. Store @ R.T. Expires 10/31/10. 13099

Received from Alfa Aesar (VWR)
(F) (1) x 1 Kg Sodium Persulfate, Cat # 54100 a 215748, AA Lot # E27U015, CAS # 7775-27-1. Store @ R.T. Expires 11/2/14

Received from VWR
(G) · (4) x 500g Sodium Carbonate Anhydrous, Cat # SX0395-1, EMD Lot # 49203934, CAS # 497-19-8. Store @ R.T. Expires 11/2/14 13094
(H) · (1) x 500g Sodium Salicylate powder, Cat # 2094-12, Mallinckrodt Lot # H30581, CAS # 54-21-7. Store @ R.T. Expires 11/2/14 13097
(I) · (1) x 500g Zinc Acetate Dihydrate, Cat # 8740-04, Mallinckrodt Lot # G29H06, CAS # 5970-45-6. Store @ R.T. Expires 11/2/14 13098

Continued to page

SIGNATURE DATE

DISCLOSED TO AND UNDERSTOOD BY DATE PROPRIETARY INFORMATION

Analytical Results Summary

Instrument Name: R-IC-06 **Analyst:** CWOODS **Analysis Lot:** 179282 **Method/Testcode:** 300.0/Br

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
2Q0911399-03	Bromide	MB		Water	0.00 mg/L	10 mL	0.10 mg/L U	1	0.10			11/12/09 08:16:52	N	IV
2Q0911399-03	Bromide	MB		Water	0.00 mg/L	10 mL	0.10 mg/L U	1	0.10			11/12/09 08:16:52	N	IV
2Q0911399-03	Chloride	MB		Water	0.00 mg/L	10 mL	0.20 mg/L U	1	0.20			11/12/09 08:16:52	N	IV
2Q0911399-03	Chloride	MB		Water	0.00 mg/L	10 mL	0.20 mg/L U	1	0.20			11/12/09 08:16:52	N	IV
2Q0911399-03	Nitrate as Nitrogen	MB		Water	0.00 mg/L	10 mL	0.050 mg/L U	1	0.050			11/12/09 08:16:52	N	IV
2Q0911399-03	Nitrate as Nitrogen	MB		Water	0.00 mg/L	10 mL	0.050 mg/L U	1	0.050			11/12/09 08:16:52	N	IV
2Q0911399-03	Sulfate	MB		Water	0.00 mg/L	10 mL	0.20 mg/L U	1	0.20			11/12/09 08:16:52	N	IV
2Q0911399-03	Sulfate	MB		Water	0.00 mg/L	10 mL	0.20 mg/L U	1	0.20			11/12/09 08:16:52	N	IV
2Q0911399-04	Bromide	LCS		Water	0.99 mg/L	10 mL	0.991 mg/L	1	0.10	99		11/12/09 08:32:37	N	IV
2Q0911399-04	Bromide	LCS		Water	0.99 mg/L	10 mL	0.991 mg/L	1	0.10	99		11/12/09 08:32:37	N	IV
2Q0911399-04	Chloride	LCS		Water	1.90 mg/L	10 mL	1.90 mg/L	1	0.20	95		11/12/09 08:32:37	N	IV
2Q0911399-04	Chloride	LCS		Water	1.90 mg/L	10 mL	1.90 mg/L	1	0.20	95		11/12/09 08:32:37	N	IV
2Q0911399-04	Nitrate as Nitrogen	LCS		Water	0.98 mg/L	10 mL	0.976 mg/L	1	0.050	98		11/12/09 08:32:37	N	IV
2Q0911399-04	Nitrate as Nitrogen	LCS		Water	0.98 mg/L	10 mL	0.976 mg/L	1	0.050	98		11/12/09 08:32:37	N	IV
2Q0911399-04	Sulfate	LCS		Water	1.97 mg/L	10 mL	1.97 mg/L	1	0.20	98		11/12/09 08:32:37	N	IV
2Q0911399-04	Sulfate	LCS		Water	1.97 mg/L	10 mL	1.97 mg/L	1	0.20	98		11/12/09 08:32:37	N	IV
2Q0906492-004	Chloride	N/A		Water	11.60 mg/L	10 mL	11.6 mg/L	10	2.0			11/12/09 12:06:49	N	IV
2Q0906492-004	Nitrate as Nitrogen	N/A		Water	0.78 mg/L	10 mL	0.78 mg/L	10	0.50			11/12/09 12:06:49	N	IV
2Q0906492-004	Sulfate	N/A		Water	12.89 mg/L	10 mL	12.9 mg/L	10	2.0			11/12/09 12:06:49	N	IV
2Q0911399-01	Chloride	DUP	R0906492-004	Water	11.52 mg/L	10 mL	11.5 mg/L	10	2.0		1	11/12/09 12:22:34	N	IV
2Q0911399-01	Nitrate as Nitrogen	DUP	R0906492-004	Water	0.77 mg/L	10 mL	0.77 mg/L	10	0.50		1	11/12/09 12:22:34	N	IV
2Q0911399-01	Sulfate	DUP	R0906492-004	Water	12.20 mg/L	10 mL	12.2 mg/L	10	2.0		6	11/12/09 12:22:34	N	IV
2Q0911399-02	Chloride	MS	R0906492-004	Water	29.68 mg/L	10 mL	29.7 mg/L	10	2.0	90		11/12/09 12:38:20	N	IV
2Q0911399-02	Nitrate as Nitrogen	MS	R0906492-004	Water	9.62 mg/L	10 mL	9.62 mg/L	10	0.50	88*		11/12/09 12:38:20	N	IV
2Q0911399-02	Sulfate	MS	R0906492-004	Water	31.41 mg/L	10 mL	31.4 mg/L	10	2.0	93		11/12/09 12:38:20	N	IV
2Q0906492-005	Chloride	N/A		Water	2.31 mg/L	10 mL	2.3 mg/L	10	2.0			11/12/09 12:54:06	N	IV
2Q0906492-005	Nitrate as Nitrogen	N/A		Water	0.85 mg/L	10 mL	0.85 mg/L	10	0.50			11/12/09 12:54:06	N	IV
2Q0906492-005	Sulfate	N/A		Water	17.71 mg/L	10 mL	17.7 mg/L	10	2.0			11/12/09 12:54:06	N	IV
2Q0906492-006	Chloride	N/A		Water	2.27 mg/L	10 mL	2.3 mg/L	10	2.0			11/12/09 13:09:53	N	IV
2Q0906492-006	Nitrate as Nitrogen	N/A		Water	1.26 mg/L	10 mL	1.26 mg/L	10	0.50			11/12/09 13:09:53	N	IV
2Q0906492-006	Sulfate	N/A		Water	12.08 mg/L	10 mL	12.1 mg/L	10	2.0			11/12/09 13:09:53	N	IV
2Q0906492-007	Chloride	N/A		Water	2.59 mg/L	10 mL	2.6 mg/L	10	2.0			11/12/09 13:25:39	N	IV
2Q0906492-007	Nitrate as Nitrogen	N/A		Water	1.23 mg/L	10 mL	1.23 mg/L	10	0.50			11/12/09 13:25:39	N	IV
2Q0906492-007	Sulfate	N/A		Water	12.62 mg/L	10 mL	12.6 mg/L	10	2.0			11/12/09 13:25:39	N	IV
2Q0906492-009	Chloride	N/A		Water	2.11 mg/L	10 mL	2.1 mg/L	10	2.0			11/12/09 13:41:24	N	IV
2Q0906492-009	Nitrate as Nitrogen	N/A		Water	0.80 mg/L	10 mL	0.80 mg/L	10	0.50			11/12/09 13:41:24	N	IV
2Q0906492-009	Sulfate	N/A		Water	10.81 mg/L	10 mL	10.8 mg/L	10	2.0			11/12/09 13:41:24	N	IV
2Q0906436-014	Bromide	N/A		Water	0.00 mg/L	10 mL	1.0 mg/L U	10	1.0			11/12/09 13:57:11	N	IV
2Q0906436-014	Chloride	N/A		Water	3.57 mg/L	10 mL	3.6 mg/L	10	2.0			11/12/09 13:57:11	N	IV

Reviewed & Approved
By: CK
Date: 11/18/09

* indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: R-IC-06 **Analyst:** CWOODS **Analysis Lot:** 179282 **Method/Testcode:** 300.0/NO3

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
R0906436-014	Nitrate as Nitrogen	N/A		Water	1.33 mg/L	10 mL	1.33 mg/L	10	0.50			11/12/09 13:57:11	N	IV
R0906477-001	Bromide	N/A		Water	1.06 mg/L	10 mL	1.1 mg/L	10	1.0			11/12/09 14:12:57	N	IV
R0906477-001	Nitrate as Nitrogen	N/A		Water	18.09 mg/L	10 mL	18.1 mg/L	10	0.50			11/12/09 14:12:57	N	IV
R0906489-001	Bromide	N/A		Water	16.15 mg/L	10 mL	16.1 mg/L	10	1.0			11/12/09 15:00:17	N	II
R0906489-001	Chloride	N/A		Water	5.81 mg/L	10 mL	5.8 mg/L	10	2.0			11/12/09 15:00:17	N	II
R0906489-001	Nitrate as Nitrogen	N/A		Water	0.00 mg/L	10 mL	0.50 mg/L U	10	0.50			11/12/09 15:00:17	N	II
R0906489-001	Sulfate	N/A		Water	0.00 mg/L	10 mL	2.0 mg/L U	10	2.0			11/12/09 15:00:17	N	II
R0906504-001	Bromide	N/A		Water	0.00 mg/L	10 mL	1.0 mg/L U	10	1.0			11/12/09 18:56:55	N	II
R0906504-001	Chloride	N/A		Water	76.21 mg/L	10 mL	76.2 mg/L	10	2.0			11/12/09 18:56:55	N	II
R0906504-001	Nitrate as Nitrogen	N/A		Water	0.00 mg/L	10 mL	0.50 mg/L U	10	0.50			11/12/09 18:56:55	N	II
R0906504-002	Bromide	N/A		Water	0.00 mg/L	10 mL	1.0 mg/L U	10	1.0			11/12/09 19:12:42	N	II
R0906504-002	Chloride	N/A		Water	45.64 mg/L	10 mL	45.6 mg/L	10	2.0			11/12/09 19:12:42	N	II
R0906504-002	Nitrate as Nitrogen	N/A		Water	0.00 mg/L	10 mL	0.50 mg/L U	10	0.50			11/12/09 19:12:42	N	II
R0906504-003	Bromide	N/A		Water	0.00 mg/L	10 mL	1.0 mg/L U	10	1.0			11/12/09 19:28:29	N	II
R0906504-003	Chloride	N/A		Water	44.94 mg/L	10 mL	44.9 mg/L	10	2.0			11/12/09 19:28:29	N	II
R0906504-003	Nitrate as Nitrogen	N/A		Water	0.00 mg/L	10 mL	0.50 mg/L U	10	0.50			11/12/09 19:28:29	N	II
RQ0911399-05	Bromide	DUP	R0906504-003	Water	0.00 mg/L	10 mL	1.0 mg/L U	10	1.0		NC	11/12/09 19:44:15	N	II
RQ0911399-05	Chloride	DUP	R0906504-003	Water	44.85 mg/L	10 mL	44.8 mg/L	10	2.0		<1	11/12/09 19:44:15	N	II
RQ0911399-05	Nitrate as Nitrogen	DUP	R0906504-003	Water	0.00 mg/L	10 mL	0.50 mg/L U	10	0.50		NC	11/12/09 19:44:15	N	II
RQ0911399-06	Bromide	MS	R0906504-003	Water	10.16 mg/L	10 mL	10.2 mg/L	10	1.0	102		11/12/09 20:00:00	N	II
RQ0911399-06	Chloride	MS	R0906504-003	Water	64.17 mg/L	10 mL	64.2 mg/L	10	2.0	96		11/12/09 20:00:00	N	II
RQ0911399-06	Nitrate as Nitrogen	MS	R0906504-003	Water	9.88 mg/L	10 mL	9.88 mg/L	10	0.50	99		11/12/09 20:00:00	N	II

09/09/09

I indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

11-12-09 IC#6

Line	Sample	Sample Type	Level	Method	Data File	Dilution	Comment
1	CCV	Sample		6-102609.met	1112_001.dxd	1	9056/300.0
2	CCB	Sample		6-102609.met	1112_002.dxd	1	9056/300.0
3	LCS	Sample		6-102609.met	1112_003.dxd	1	9056/300.0
4	M-29D	Sample		6-102609.met	1112_004.dxd	10	CNS (300.0)
5	M-29D DUP	Sample		6-102609.met	1112_005.dxd	10	CNS (300.0)
6	M-29D SPK	Sample		6-102609.met	1112_006.dxd	10	CNS (300.0)
7	M-29S	Sample		6-102609.met	1112_007.dxd	10	CNS (300.0)
8	M-25D	Sample		6-102609.met	1112_008.dxd	10	CNS (300.0)
9	M-25S	Sample		6-102609.met	1112_009.dxd	10	CNS (300.0)
10	M-27D	Sample		6-102609.met	1112_010.dxd	10	CNS (300.0)
11	SDS-4	Sample		6-102609.met	1112_011.dxd	10	CBNS (300.0)
12	M-122B	Sample		6-102609.met	1112_012.dxd	10	CBNS (9056)
13	CCV	Sample		6-102609.met	1112_013.dxd	1	9056/300.0
14	CCB	Sample		6-102609.met	1112_014.dxd	1	9056/300.0
15	GAS CONDENSATE	Sample		6-102609.met	1112_015.dxd	10	CBNS (300.0)
16	MB 11317-01	Sample		6-102609.met	1112_016.dxd	1	CBNS (9056 EXT)
17	LCS EXTRACTION	Sample		6-102609.met	1112_017.dxd	1	CBNS (9056 EXT)
18	R0906191-002	Sample		6-102609.met	1112_018.dxd	1	CBNS (9056 EXT)
19	R0906191-003	Sample		6-102609.met	1112_019.dxd	1	CBNS (9056 EXT)
20	R0906191-004	Sample		6-102609.met	1112_020.dxd	1	CBNS (9056 EXT)
21	R0906191-005	Sample		6-102609.met	1112_021.dxd	1	CBNS (9056 EXT)
22	R0906191-005 DUP	Sample		6-102609.met	1112_022.dxd	1	CBNS (9056 EXT)
23	R0906191-005 SPK	Sample		6-102609.met	1112_023.dxd	1	CBNS (9056 EXT)
24	R0906403-002	Sample		6-102609.met	1112_024.dxd	1	CBNS (9056 EXT)
25	CCV	Sample		6-102609.met	1112_025.dxd	1	9056/300.0
26	CCB	Sample		6-102609.met	1112_026.dxd	1	9056/300.0
27	LCS	Sample		6-102609.met	1112_027.dxd	1	9056/300.0
28	R0906403-003	Sample		6-102609.met	1112_028.dxd	1	CBNS (9056 EXT)
29	R0906403-004	Sample		6-102609.met	1112_029.dxd	1	CBNS (9056 EXT)
30	SW-001	Sample		6-102609.met	1112_030.dxd	1	CBNS (300.0)
31	SW-003	Sample		6-102609.met	1112_031.dxd	1	CBNS (300.0)
32	SW-011	Sample		6-102609.met	1112_032.dxd	1	CBNS (300.0)
33	SW-011 DUP	Sample		6-102609.met	1112_033.dxd	1	CBNS (300.0)
34	SW-011 SPK	Sample		6-102609.met	1112_034.dxd	1	CBNS (300.0)
35	CCV	Sample		6-102609.met	1112_035.dxd	1	9056/300.0
36	CCB	Sample		6-102609.met	1112_036.dxd	1	9056/300.0
37	END	Sample		j:\acqudata\ic\method.aci\ic#6\shutdown.met	1112	1	9056/300.0

Default Method Path: J:\ACQUDATA\IC\METHOD.ACI\IC#6\DI METHODS
Default Data Path: J:\ACQUDATA\IC\DATA\IC#6\111209
Comment:

Analyst: R Paul
Pipets: Mine
Lucy

R6492
R6436
R6477
R6191
R6403
Scopio

Reviewed & Approved
By: CK
Date: 11/19/09

Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : CCV
Data File Name : ...\1112_001.DXD
Method File Name : ...\6-102609.met
Date Time Collected : 11/12/09 8:01:05 AM

Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

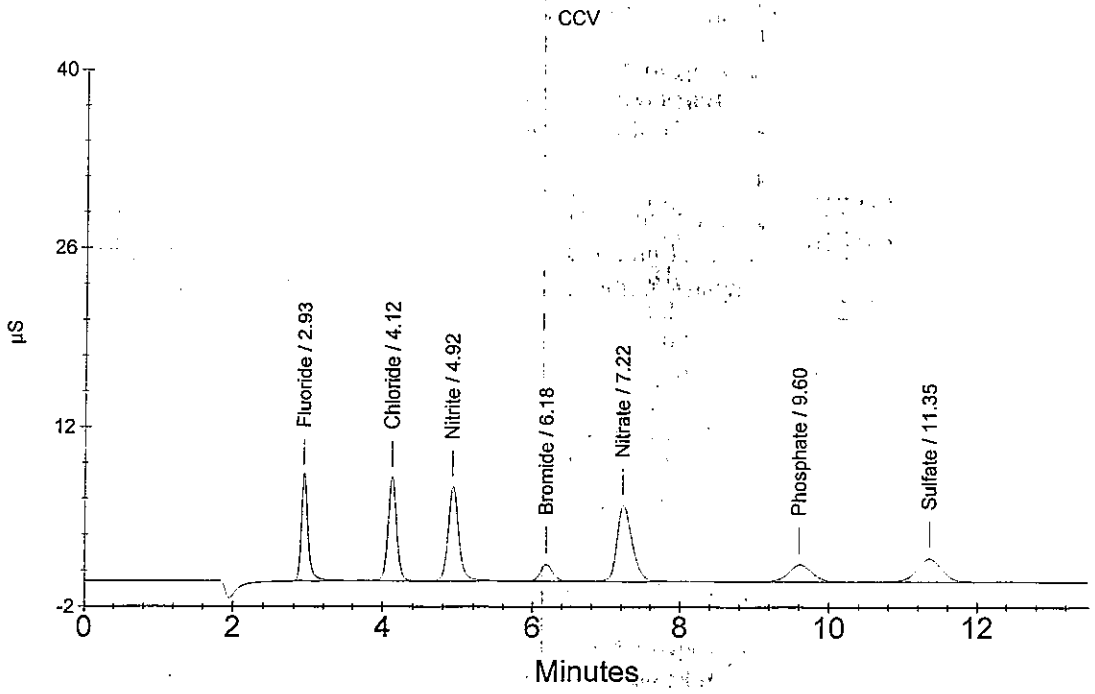
Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment : 9056/300.0

Data Collection Rate : 5.00 Hz
Data Collection Period : 810.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount	Peak Area
1	2.93	Fluoride	1.962	557282
2	4.12	Chloride	3.009	615545
3	4.92	Nitrite	1.811	732377
4	6.18	Bromide	2.021	152334
5	7.22	Nitrate	1.797	851197
6	9.60	Phosphate	1.819	287609
7	11.35	Sulfate	3.159	422319

RP 11/13/09



00710

Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : CCB
Data File Name : ...\1112_002.DXD
Method File Name : ...\6-102609.met
Date Time Collected : 11/12/09 8:16:52 AM

Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

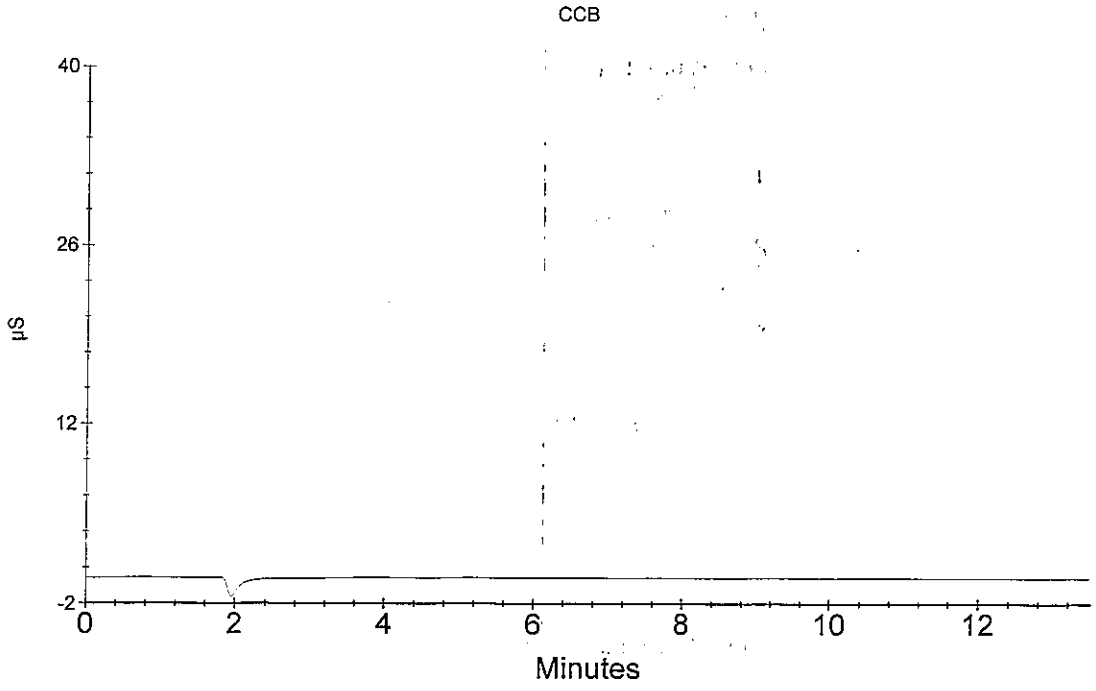
Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment : 9056/300.0

Data Collection Rate : 5.00 Hz
Data Collection Period : 810.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount	Peak Area

OK RP 11/13/09



00711

Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : LCS
Data File Name : ...\1112_003.DXD
Method File Name : ...\6-102609.met
Date Time Collected : 11/12/09 8:32:37 AM

Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment : 9056/300.0

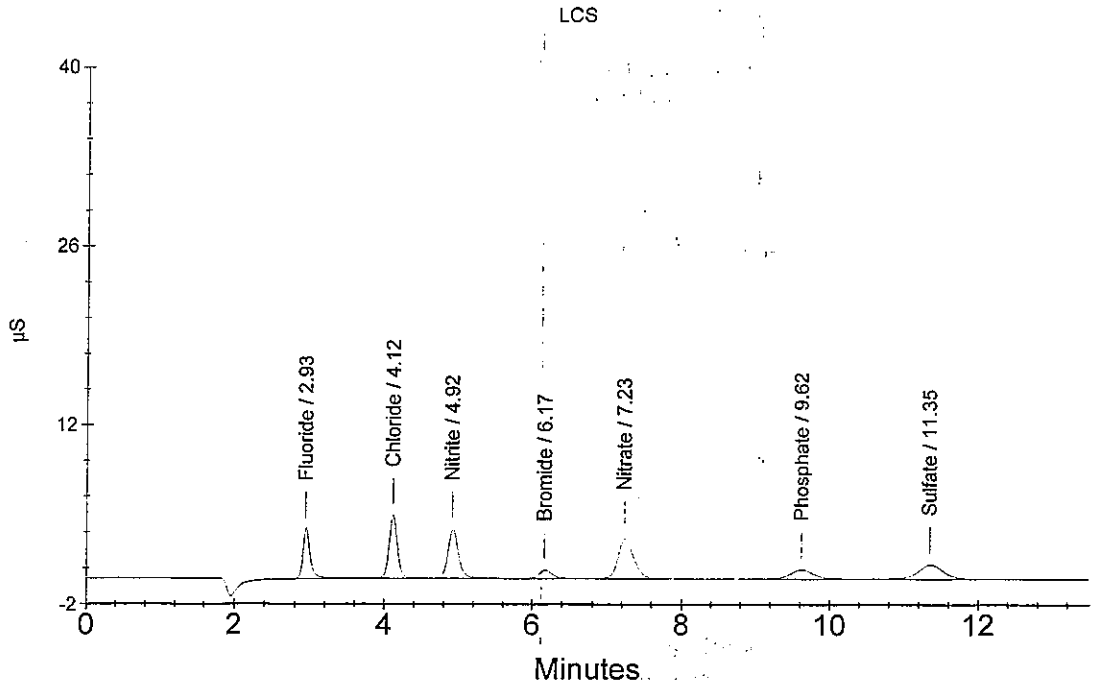
Data Collection Rate : 5.00 Hz
Data Collection Period : 810.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount	Peak Area
1	2.93	Fluoride	0.990	270028
2	4.12	Chloride	1.901	381378
3	4.92	Nitrite	0.971	381745
4	6.17	Bromide	0.991	74108
5	7.23	Nitrate	0.976	447034
6	9.62	Phosphate	1.016	157136
7	11.35	Sulfate	1.968	261361

OK

RL 11/13/09



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : M-29D R0906492-004
Data File Name : ...\1112_004.DXD
Method File Name : ...\6-102609.met
Date Time Collected : 11/12/09 12:06:49 PM

Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

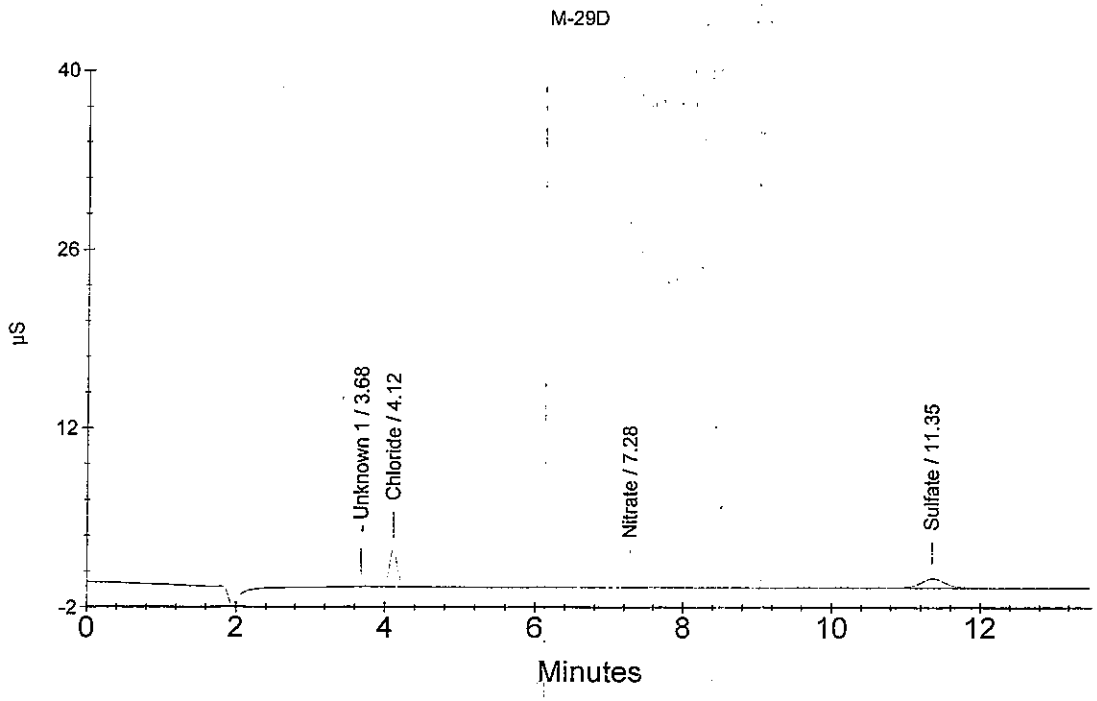
Dilution Factor : 10.00
Sample Type : Sample Analysis
Sample Comment : CNS (~~300.0~~ 9056) GS 11/13/09

Data Collection Rate : 5.00 Hz
Data Collection Period : 810.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount	Peak Area
2	4.12	Chloride	OK 11.601	224713
3	7.28	Nitrate	OK 0.783	5163
4	11.35	Sulfate	OK 12.891	169512

RP 11/13/09



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : M-29D DUP R0906492-004 DUP
Data File Name : ...\1112_005.DXD
Method File Name : ...\6-102609.met
Date Time Collected : 11/12/09 12:22:34 PM

Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

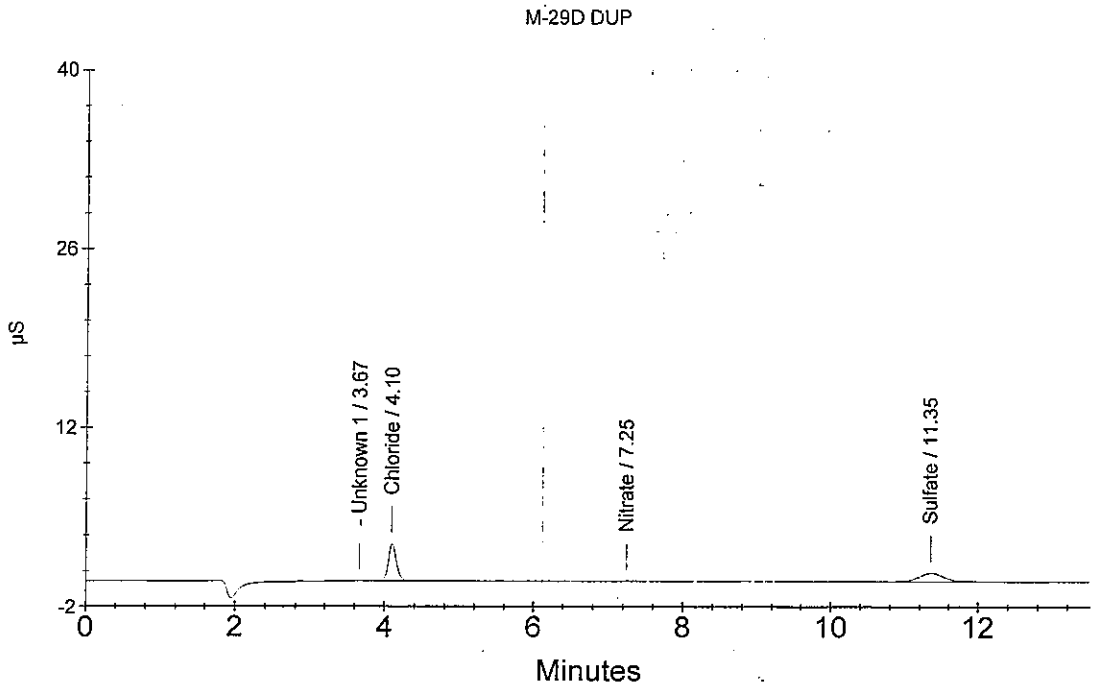
Dilution Factor : 10.00
Sample Type : Sample Analysis
Sample Comment : CNS (~~300.0~~) 9056 CS 11/13/09

Data Collection Rate : 5.00 Hz
Data Collection Period : 810.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name		Component Amount	Peak Area
2	4.10	Chloride	OK	11.517	222945
3	7.25	Nitrate	OK	0.773	4658
4	11.35	Sulfate	OK	12.200	160166

RP 11/13/09



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : M-29D SPK R0906492-004 SPK
Data File Name : ...\1112_006.DXD
Method File Name : ...\6-102609.met
Date Time Collected : 11/12/09 12:38:20 PM

Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

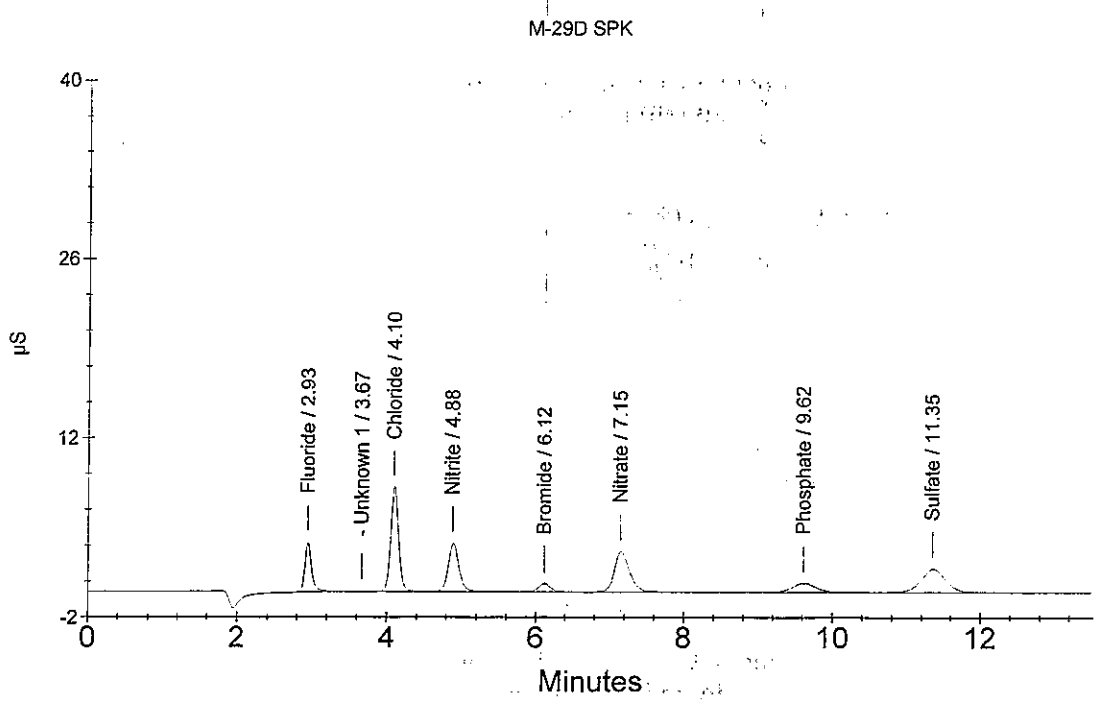
Dilution Factor : 10.00
Sample Type : Sample Analysis
Sample Comment : CNS ~~(300.0)~~ 9056 OS 11/13/09

Data Collection Rate : 5.00 Hz
Data Collection Period : 810.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name		Component Amount	Peak Area
1	2.93	Fluoride		9.504	258459
3	4.10	Chloride	OK	29.680	606951
4	4.88	Nitrite		9.413	369514
5	6.12	Bromide		9.614	71842
6	7.15	Nitrate	OK	9.617	440056
7	9.62	Phosphate		9.842	152005
8	11.35	Sulfate	OK	31.413	419949

RP 11/13/09



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : M-29S R0906492-005
Data File Name : ...\1112_007.DXD
Method File Name : ...\6-102609.met
Date Time Collected : 11/12/09 12:54:06 PM

Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

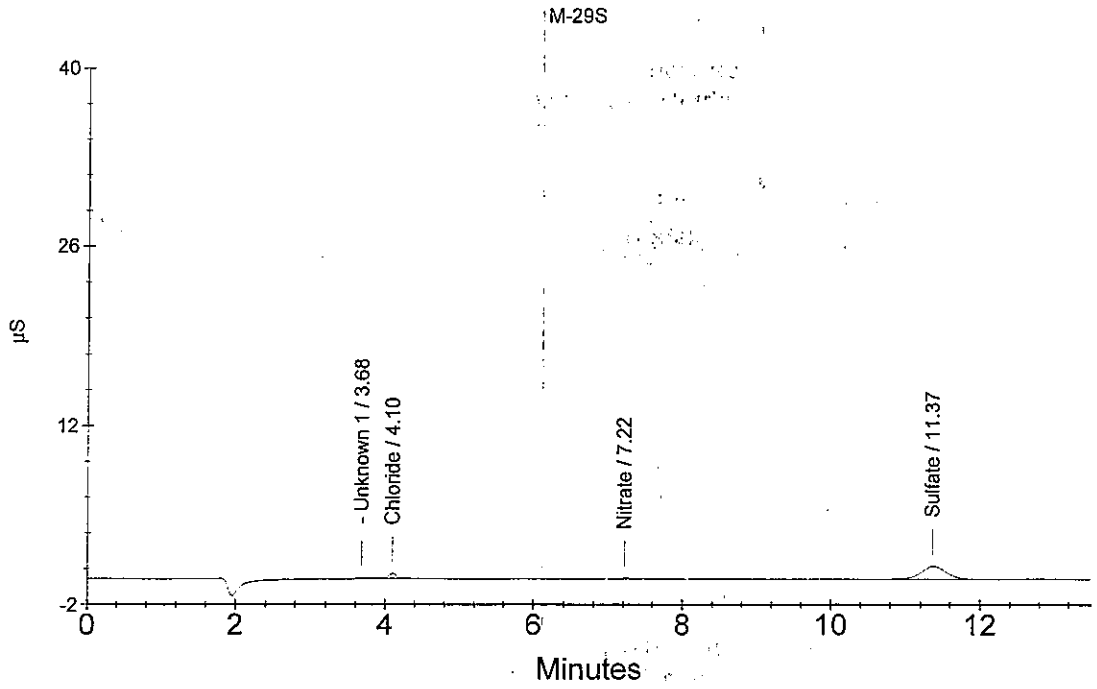
Dilution Factor : 10.00
Sample Type : Sample Analysis
Sample Comment : CNS ~~(300.0)~~ 9056 CS 11/13/09

Data Collection Rate : 5.00 Hz
Data Collection Period : 810.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name		Component Amount	Peak Area
2	4.10	Chloride	OK	2.305	28175
3	7.22	Nitrate	OK	0.850	8475
4	11.37	Sulfate	OK	17.712	234692

RP 11/13/09



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : M-25D R0906492-006
Data File Name : ...\1112_008.DXD
Method File Name : ...\6-102609.met
Date Time Collected : 11/12/09 1:09:53 PM

Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

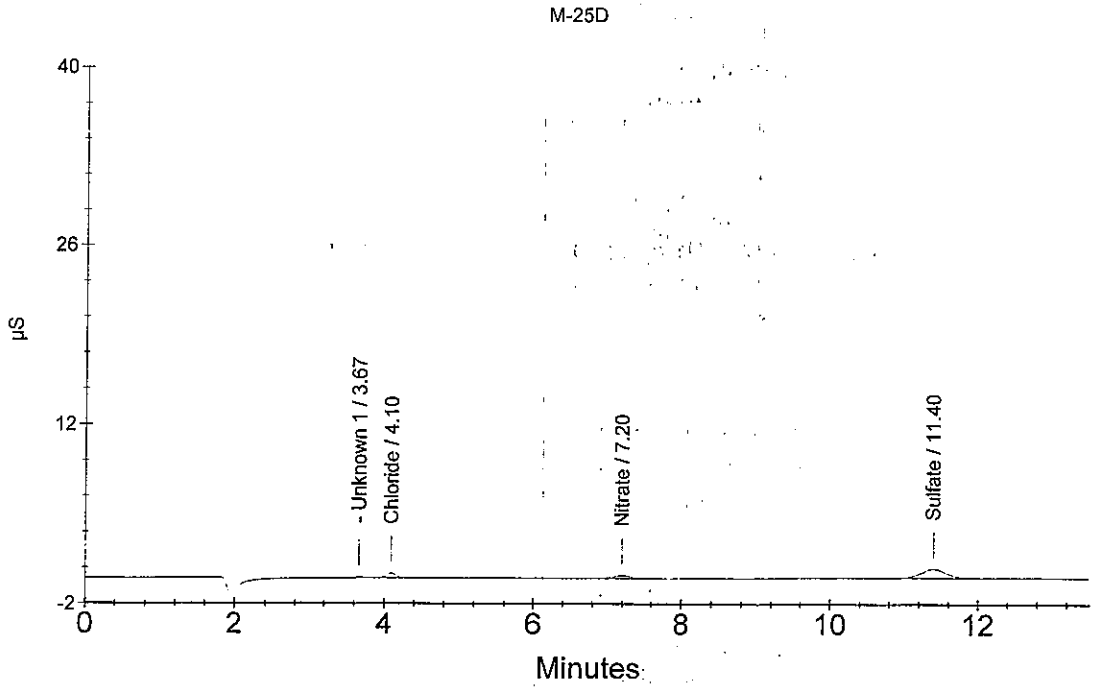
Dilution Factor : 10.00
Sample Type : Sample Analysis
Sample Comment : CNS ~~(300.0)~~ 9056 CS 11/13/09

Data Collection Rate : 5.00 Hz
Data Collection Period : 810.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount	Peak Area
2	4.10	Chloride	CK 2.269	27405
3	7.20	Nitrate	CK 1.262	28758
4	11.40	Sulfate	CK 12.084	158601

RT 11/13/09



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : M-25S R0906492-007
Data File Name : ...\1112_009.DXD
Method File Name : ...\6-102609.met
Date Time Collected : 11/12/09 1:25:39 PM

Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

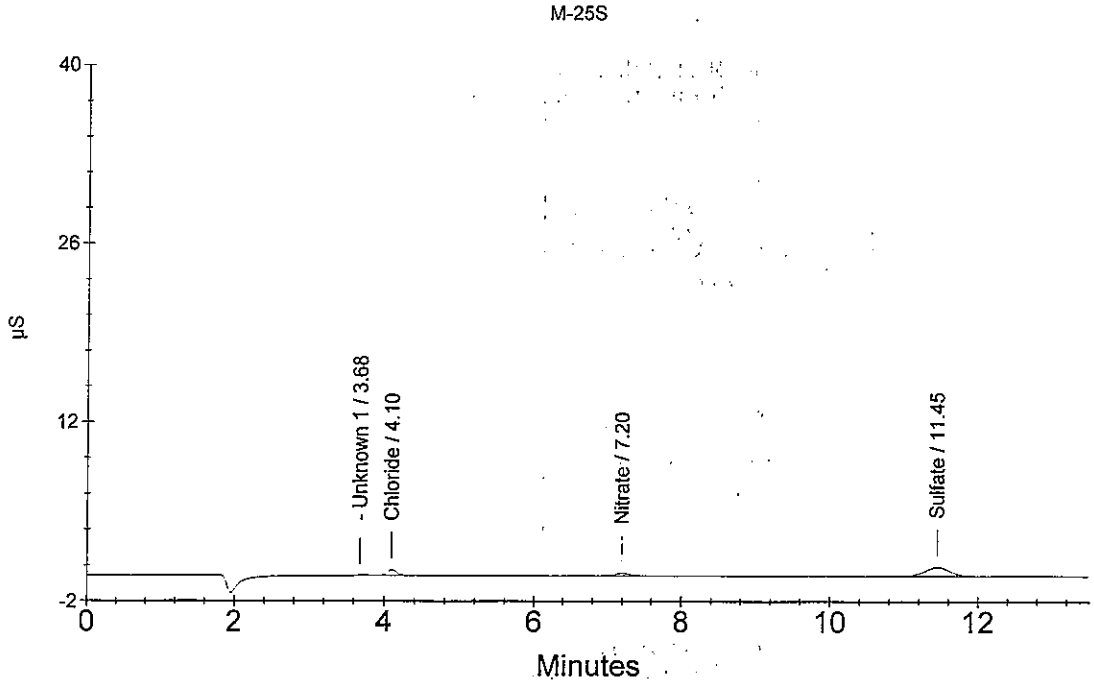
Dilution Factor : 10.00
Sample Type : Sample Analysis
Sample Comment : CNS (300.0) 9056 11/13/09

Data Collection Rate : 5.00 Hz
Data Collection Period : 810.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount	Peak Area
2	4.10	Chloride	OK 2.593	34265
3	7.20	Nitrate	OK 1.232	27288
4	11.45	Sulfate	OK 12.621	165865

RP 11/13/09



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : M-27D R0906492-009
Data File Name : ...\1112_010.DXD
Method File Name : ...\6-102609.met
Date Time Collected : 11/12/09 1:41:24 PM

Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

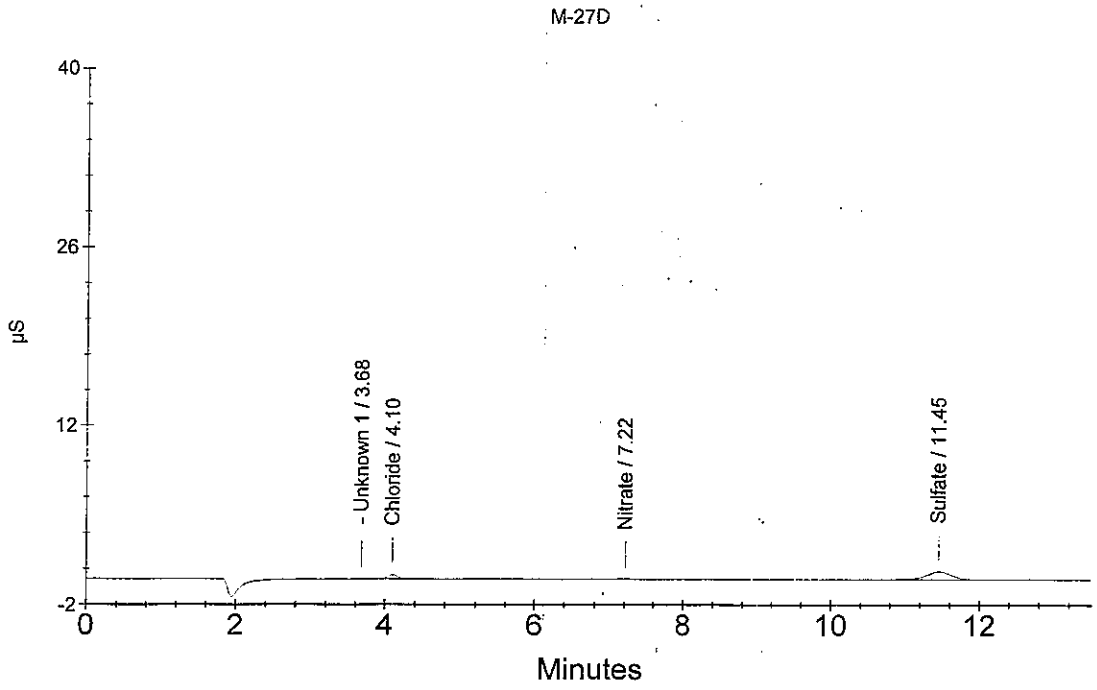
Dilution Factor : 10.00
Sample Type : Sample Analysis
Sample Comment : CNS (~~300.0~~) 9056 CS 11/13/09

Data Collection Rate : 5.00 Hz
Data Collection Period : 810.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount	Peak Area
2	4.10	Chloride	OK 2.112	24078
3	7.22	Nitrate	OK 0.797	5840
4	11.45	Sulfate	OK 10.805	141309

RP 11/13/09



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : SDS-4 R0906436-014
Data File Name : ...\1112_011.DXD
Method File Name : ...\6-102609.met
Date Time Collected : 11/12/09 1:57:11 PM

Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

Dilution Factor : 10.00
Sample Type : Sample Analysis
Sample Comment : CBNS (300.0)

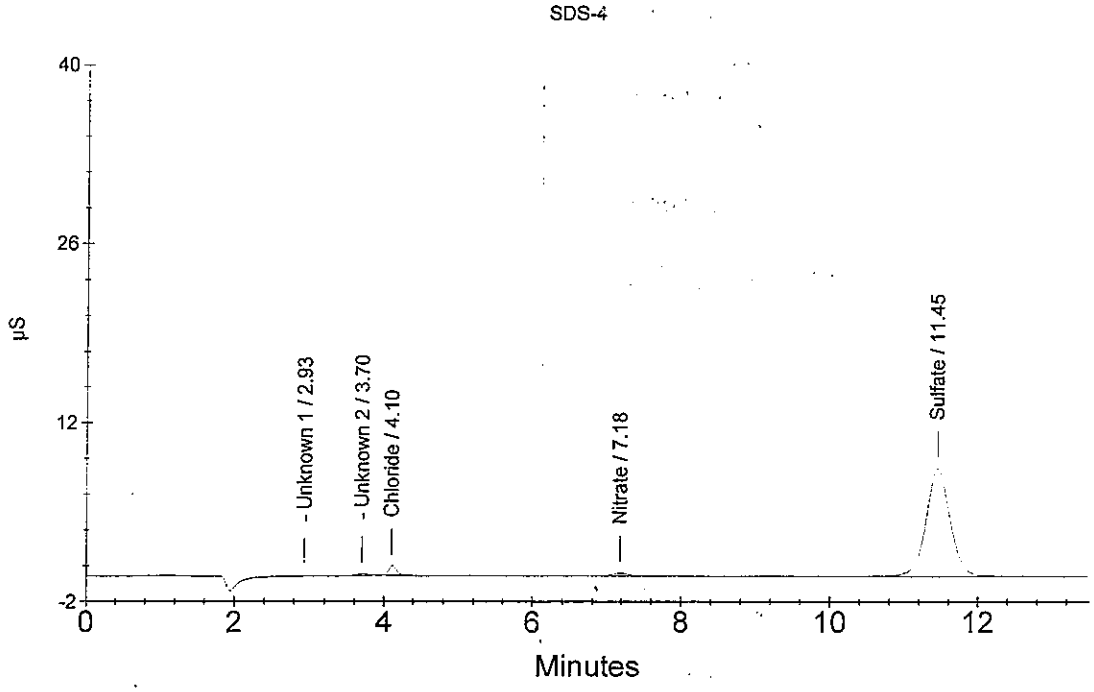
Data Collection Rate : 5.00 Hz
Data Collection Period : 810.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount	Peak Area
3	4.10	Chloride	OK 3.565	54806
4	7.18	Nitrate	OK 1.327	31932
5	11.45	Sulfate	1/20 142.838	1926582

Br OK

RP 11/13/09



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : M-122B R0906477-001
Data File Name : ...\1112_012.DXD
Method File Name : ...\6-102609.met
Date Time Collected : 11/12/09 2:12:57 PM

Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

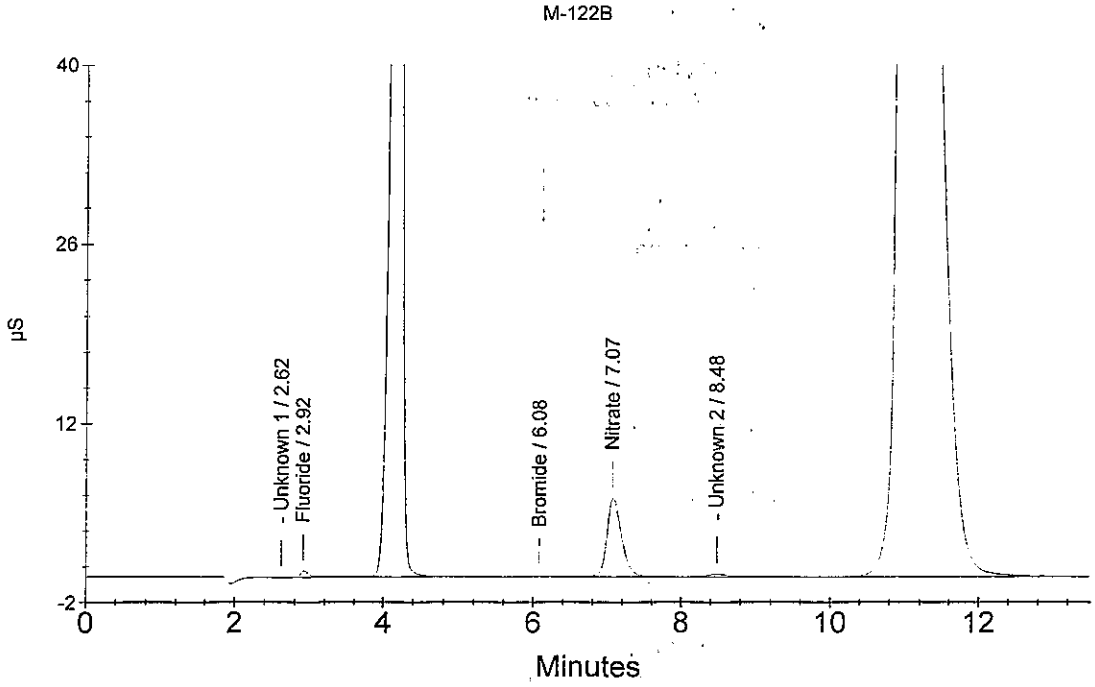
Dilution Factor : 10.00
Sample Type : Sample Analysis
Sample Comment : CBNS (9056)

Data Collection Rate : 5.00 Hz
Data Collection Period : 810.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name		Component Amount	Peak Area
2	2.92	Fluoride		2.085	39257
3	4.18	Chloride	1/100	537.385	11341321
4	6.08	Bromide	OK	1.059	6871
5	7.07	Nitrate	OK	18.085	856952
7	11.02	Sulfate	1/400	3326.605	44975841

RP 11/13/09



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : CCV
Data File Name : ...\1112_013.DXD
Method File Name : ...\6-102609.met
Date Time Collected : 11/12/09 2:28:44 PM

Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

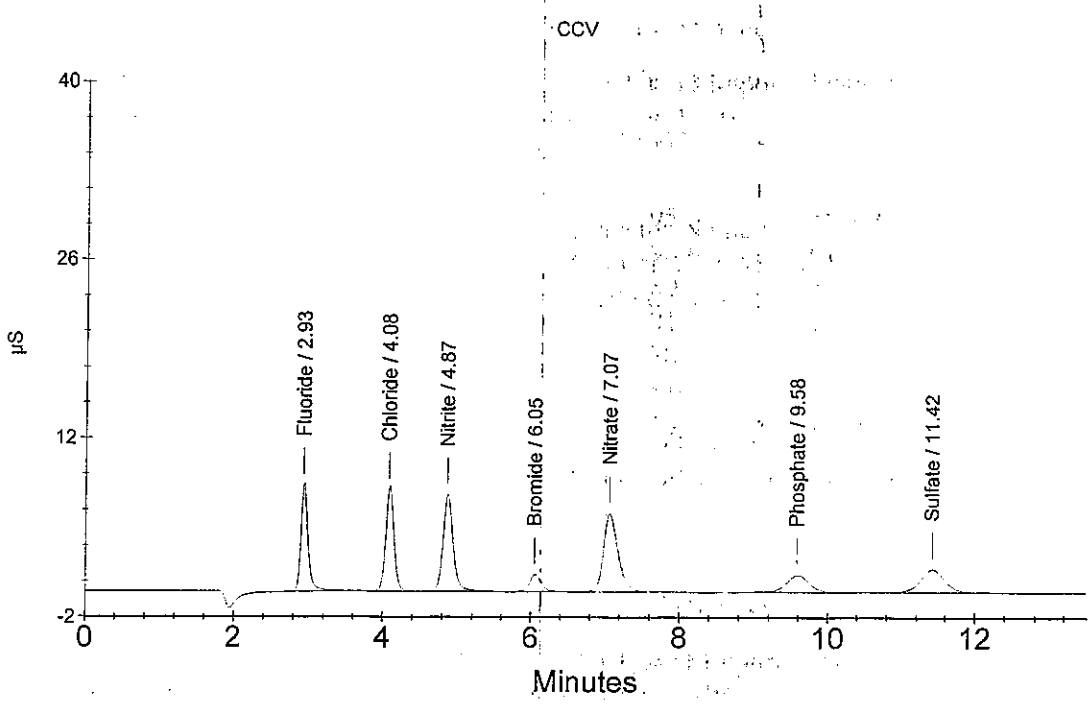
Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment : 9056/300.0

Data Collection Rate : 5.00 Hz
Data Collection Period : 810.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount	Peak Area
1	2.93	Fluoride	1.951	554099
2	4.08	Chloride	2.989	611414
3	4.87	Nitrite	1.804	729598
4	6.05	Bromide	2.015	151866
5	7.07	Nitrate	1.783	844463
6	9.58	Phosphate	1.816	286996
7	11.42	Sulfate	3.151	421290

RP 11/13/09



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : CCB
Data File Name : ...\1112_014.DXD
Method File Name : ...\6-102609.met
Date Time Collected : 11/12/09 2:44:31 PM

Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

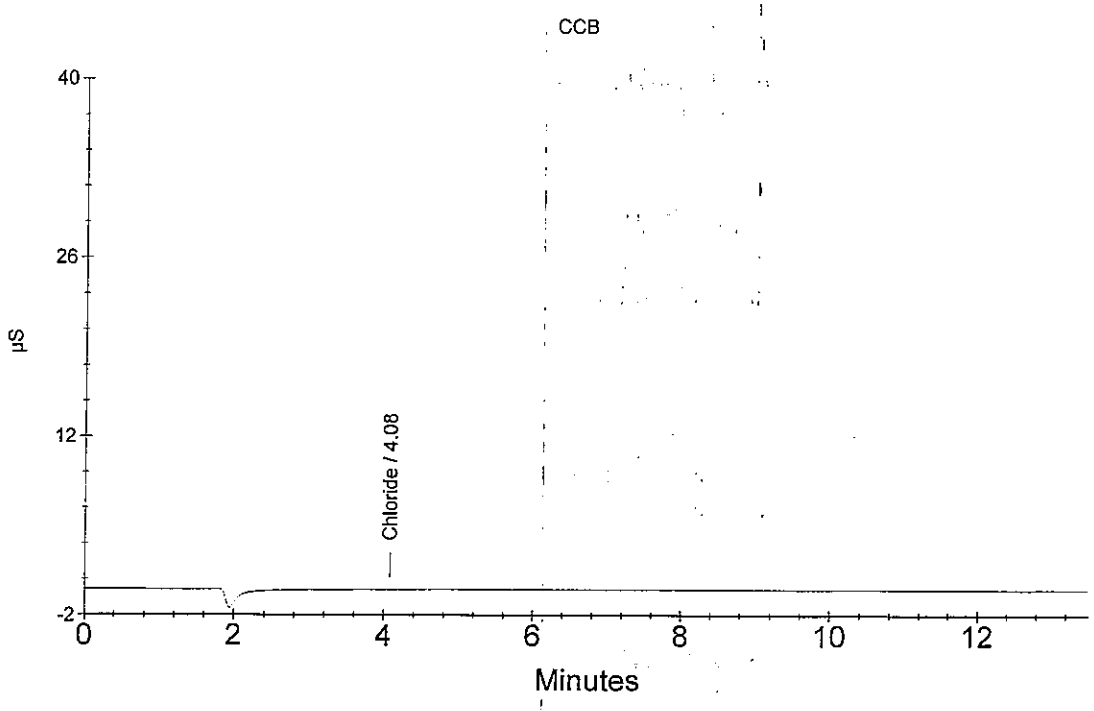
Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment : 9056/300.0

Data Collection Rate : 5.00 Hz
Data Collection Period : 810.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount	Peak Area
1	4.08	Chloride	OK 0.103	1238

RR 11/13/09



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : GAS CONDENSATE R0906489-001
Data File Name : ...\1112_015.DXD
Method File Name : ...\6-102609.met
Date Time Collected : 11/12/09 3:00:17 PM

Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

Dilution Factor : 10.00
Sample Type : Sample Analysis
Sample Comment : CBNS (300.0)

Data Collection Rate : 5.00 Hz
Data Collection Period : 810.00 seconds
Component Amount Units :

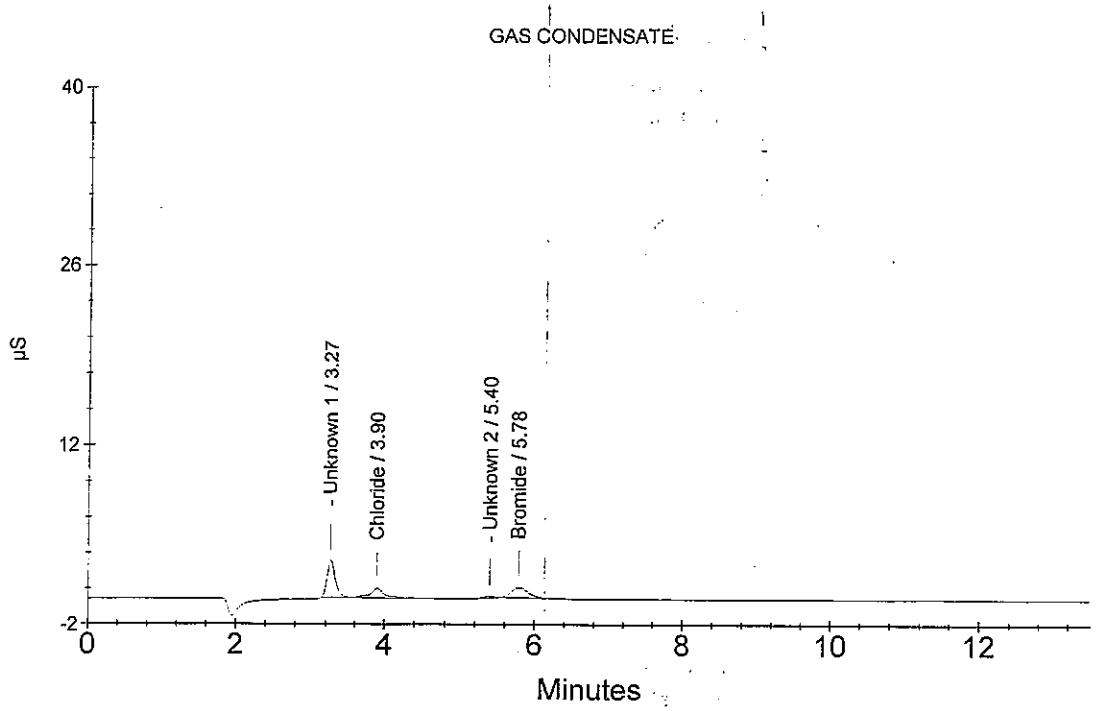
Peak Information : All Components

Peak Number	Peak Retention Time	Component Name		Component Amount	Peak Area
2	3.90	Chloride	OK	5.805	102177
4	5.78	Bromide	OK	16.145	121444

NO_3 OK

SO_4 OK

RP 11/13/09



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : MB 11317-01
Data File Name : ...\1112_016.DXD
Method File Name : ...\6-102609.met
Date Time Collected : 11/12/09 3:16:02 PM

Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

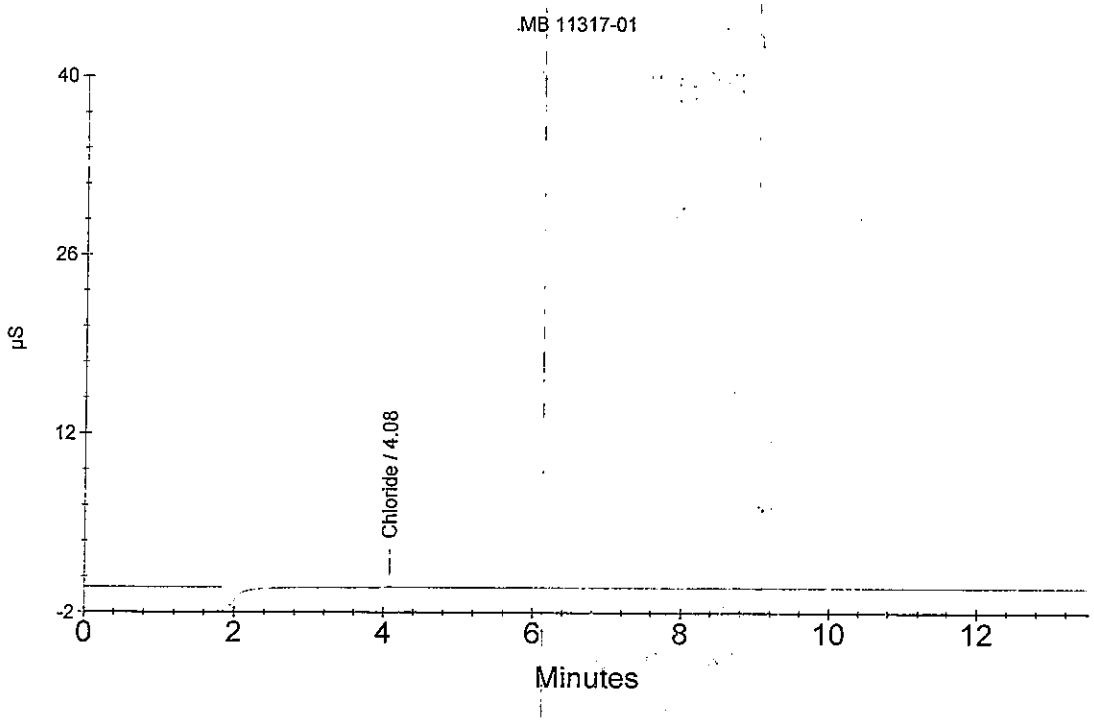
Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment : CBNS (9056 EXT)

Data Collection Rate : 5.00 Hz
Data Collection Period : 810.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name		Component Amount	Peak Area
1	4.08	Chloride	X	0.105	1731

RP 11/13/09



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : LCS EXTRACTION
Data File Name : ...\1112_017.DXD
Method File Name : ...\6-102609.met
Date Time Collected : 11/12/09 3:31:48 PM

Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment : CBNS (9056 EXT)

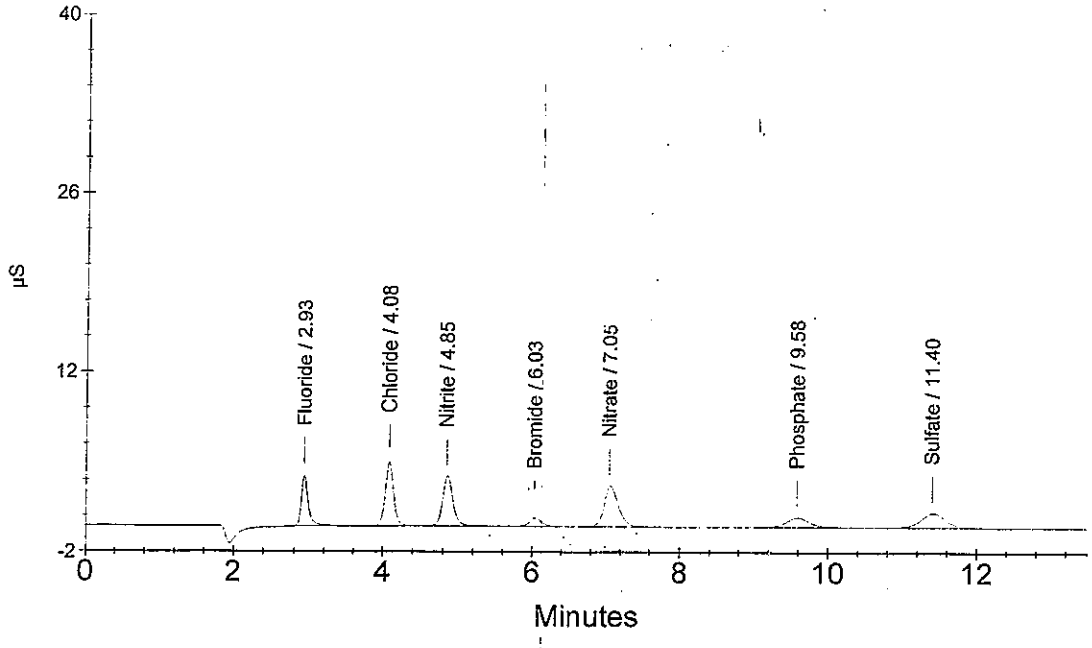
Data Collection Rate : 5.00 Hz
Data Collection Period : 810.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount	Peak Area
1	2.93	Fluoride	OK 0.986	269032
2	4.08	Chloride	1.893	.379602
3	4.85	Nitrite	0.965	379415
4	6.03	Bromide	0.991	74112
5	7.05	Nitrate	0.973	445631
6	9.58	Phosphate	1.051	162824
7	11.40	Sulfate	1.976	262406

RP 11/13/09

LCS EXTRACTION



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : R0906191-002
Data File Name : ...\1112_018.DXD
Method File Name : ...\6-102609.met
Date Time Collected : 11/12/09 3:47:34 PM

Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment : CBNS (9056 EXT)

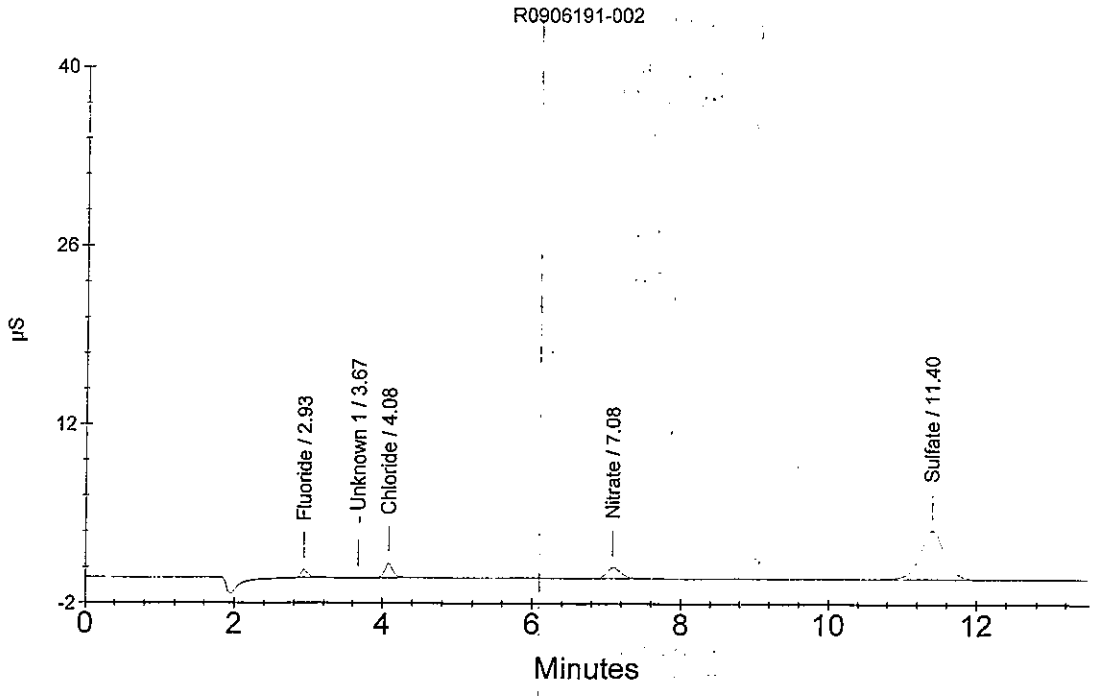
Data Collection Rate : 5.00 Hz
Data Collection Period : 810.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name		Component Amount	Peak Area
1	2.93	Fluoride		0.215	41237
3	4.08	Chloride	OK	0.490	83004
4	7.08	Nitrate	OK	0.309	118615
5	11.40	Sulfate	OK	6.475	870680

Br OK

RP 11/13/09



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : R0906191-003
Data File Name : ...\1112_019.DXD
Method File Name : ...\6-102609.met
Date Time Collected : 11/12/09 4:03:20 PM

Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment : CBNS (9056 EXT)

Data Collection Rate : 5.00 Hz
Data Collection Period : 810.00 seconds
Component Amount Units :

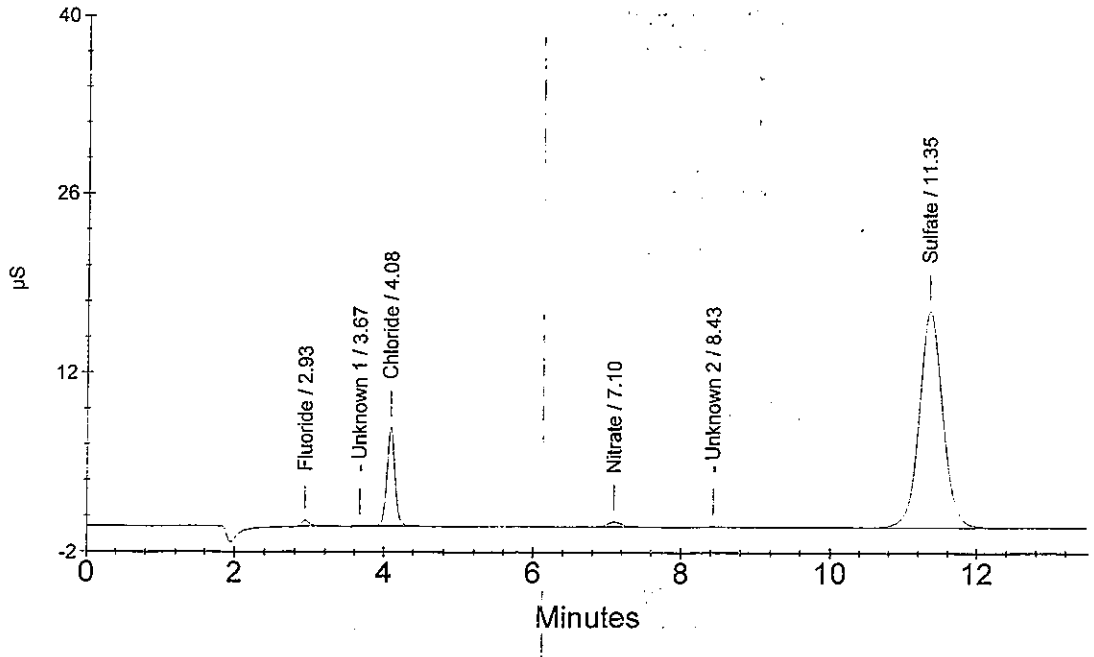
Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount	Peak Area
1	2.93	Fluoride	0.179	30432
3	4.08	Chloride	2.790	569296
4	7.10	Nitrate	0.170	50386
6	11.35	Sulfate	27.841	3759741

OK
OK
1/4
Br OK

RP 11/13/09

R0906191-003



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : R0906191-004
Data File Name : ...\1112_020.DXD
Method File Name : ...\6-102609.met
Date Time Collected : 11/12/09 4:19:06 PM

Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

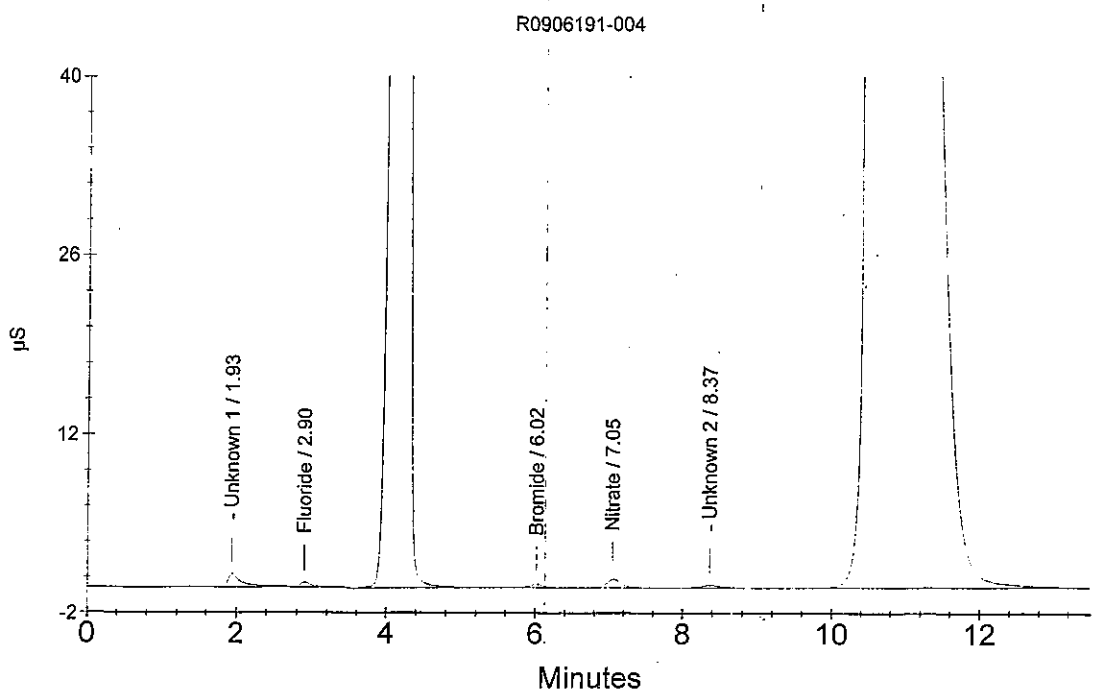
Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment : CBNS (9056 EXT)

Data Collection Rate : 5.00 Hz
Data Collection Period : 810.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name		Component Amount	Peak Area
2	2.90	Fluoride		0.203	37686
3	4.23	Chloride	1/20	147.386	31141141
4	6.02	Bromide	OK	0.425	31138
5	7.05	Nitrate	OK	0.251	90110
7	10.57	Sulfate	1/200	925.677	125160463

RP 11/13/09



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : R0906191-005
Data File Name : ...\1112_021.DXD
Method File Name : ...\6-102609.met
Date Time Collected : 11/12/09 4:34:53 PM

Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

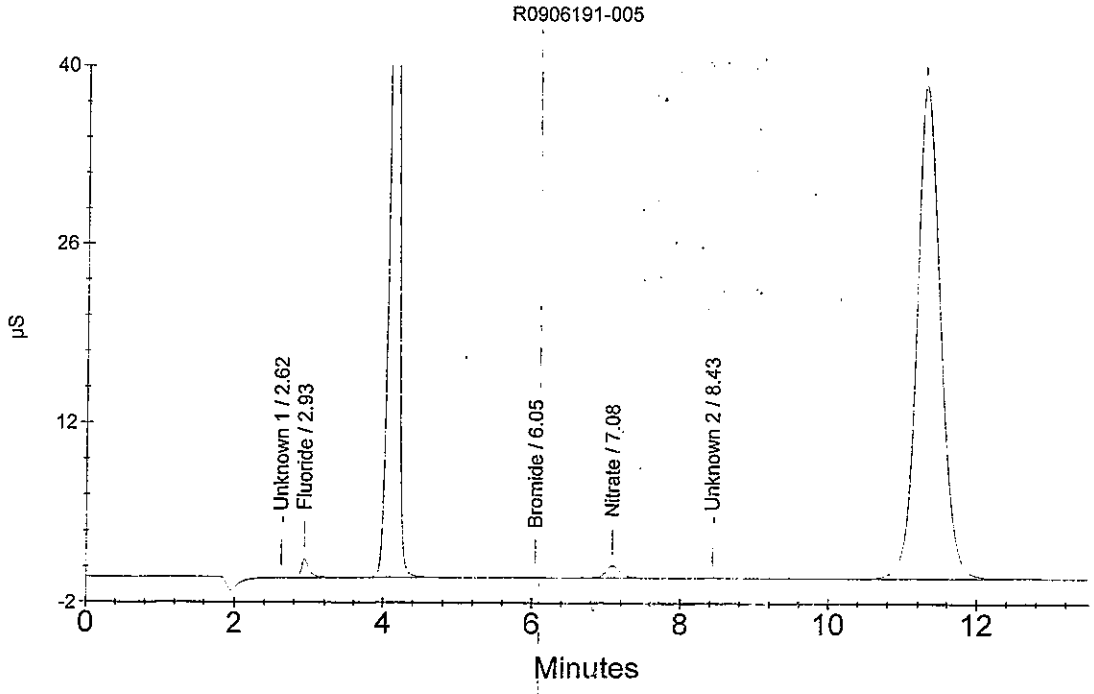
Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment : CBNS (9056 EXT)

Data Collection Rate : 5.00 Hz
Data Collection Period : 810.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name		Component Amount	Peak Area
2	2.93	Fluoride		0.474	117745
3	4.13	Chloride	1/4	28.863	6081835
4	6.05	Bromide	OK	0.087	5462
5	7.08	Nitrate	OK	0.330	128928
7	11.30	Sulfate	1/10	63.554	8588594

RP 11/13/09



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : R0906191-005 DUP
Data File Name : ...\1112_022.DXD
Method File Name : ...\6-102609.met
Date Time Collected : 11/12/09 4:50:41 PM

Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment : CBNS (9056 EXT)

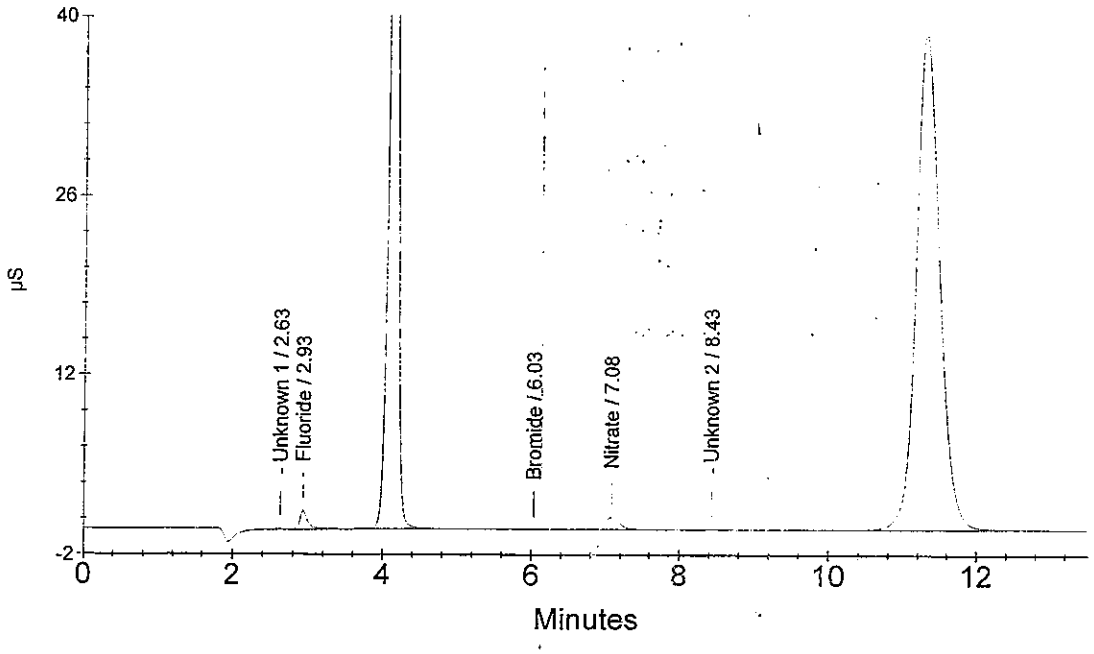
Data Collection Rate : 5.00 Hz
Data Collection Period : 810.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name		Component Amount	Peak Area
2	2.93	Fluoride		0.470	116462
3	4.13	Chloride	1/4	28.983	6107380
4	6.03	Bromide	OK	0.091	5705
5	7.08	Nitrate	OK	0.331	129445
		Phosphate			
7	11.30	Sulfate	1/100	63.936	8640290

RP
11/13/09

R0906191-005 DUP



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : R0906191-005 SPK
Data File Name : ...\1112_023.DXD
Method File Name : ...\6-102609.met
Date Time Collected : 11/12/09 5:06:29 PM

Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment : CBNS (9056 EXT)

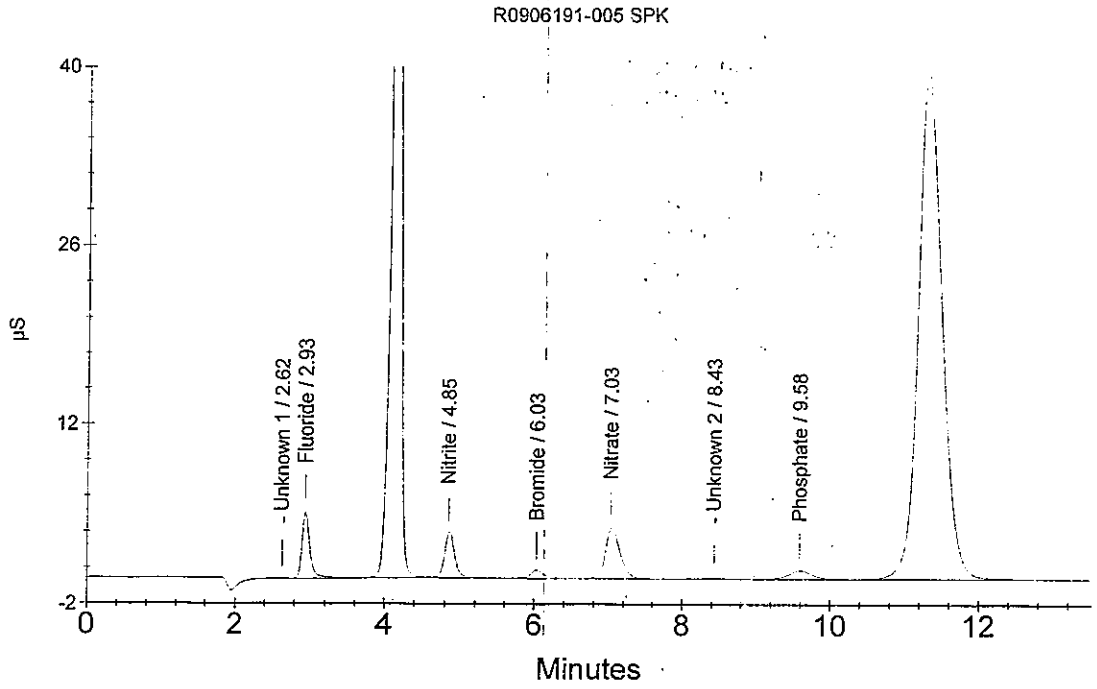
Data Collection Rate : 5.00 Hz
Data Collection Period : 810.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount	Peak Area
2	2.93	Fluoride	1.301	361962
3	4.13	Chloride	31.024	6538775
4	4.85	Nitrite	0.859	335038
5	6.03	Bromide	0.979	73185
6	7.03	Nitrate	1.166	540804
8	9.58	Phosphate	0.915	140761
9	11.30	Sulfate	65.304	8825300

4/4 OK OK 4/10

RP 11/13/09



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : R0906403-002
Data File Name : ...\1112_024.DXD
Method File Name : ...\6-102609.met
Date Time Collected : 11/12/09 5:22:15 PM

Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment : CBNS (9056 EXT)

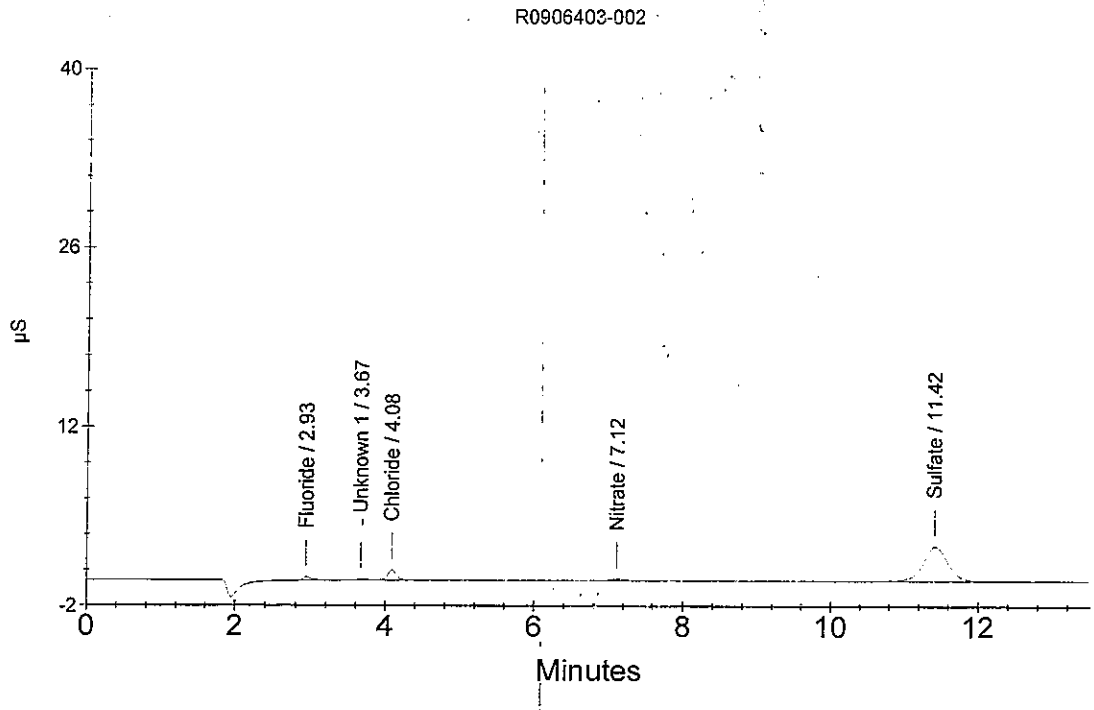
Data Collection Rate : 5.00 Hz
Data Collection Period : 810.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name		Component Amount	Peak Area
1	2.93	Fluoride		0.128	15512
3	4.08	Chloride	OK	0.383	60516
4	7.12	Nitrate Phosphate	OK	0.104	17878
5	11.42	Sulfate	OK	4.687	628907

BrOK

RP 11/13/09



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : CCV
Data File Name : ...\1112_025.DXD
Method File Name : ...\6-102609.met
Date Time Collected : 11/12/09 5:38:02 PM

Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment : 9056/300.0

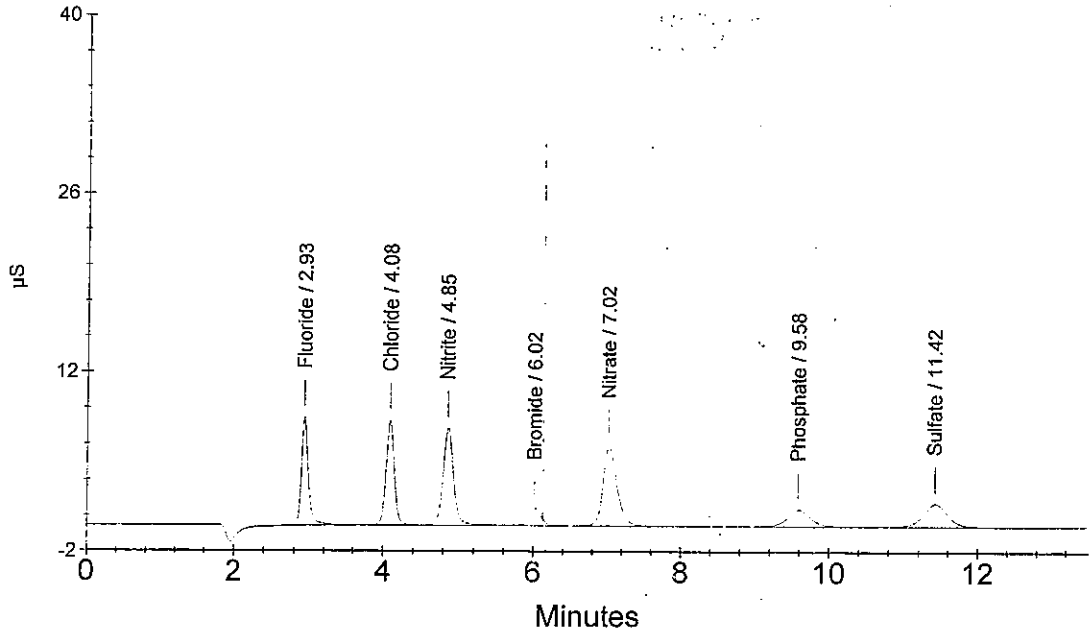
Data Collection Rate : 5.00 Hz
Data Collection Period : 810.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount	Peak Area
1	2.93	Fluoride	1.944	552122
2	4.08	Chloride	2.980	609566
3	4.85	Nitrite	1.802	728856
4	6.02	Bromide	2.001	150823
5	7.02	Nitrate	1.782	843815
6	9.58	Phosphate	1.819	287483
7	11.42	Sulfate	3.140	419811

RP 11/13/09

CCV



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : CCB
Data File Name : ...\1112_026.DXD
Method File Name : ...\6-102609.met
Date Time Collected : 11/12/09 5:53:49 PM

Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

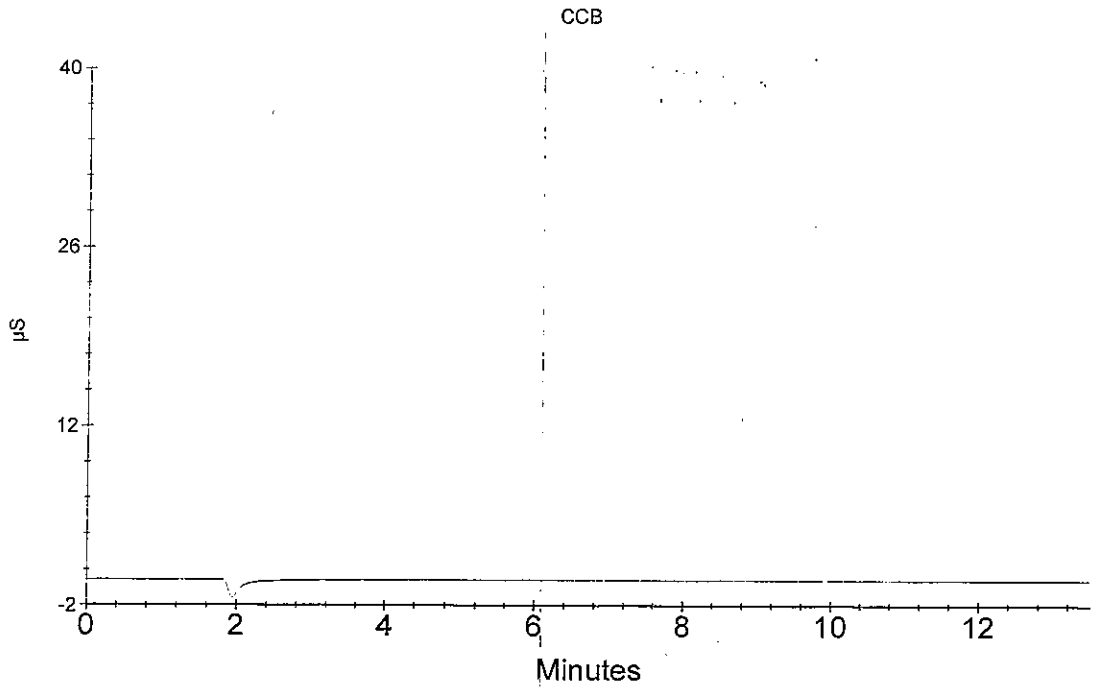
Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment : 9056/300.0

Data Collection Rate : 5.00 Hz
Data Collection Period : 810.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount	Peak Area
		Phosphate		
		Sulfate		

OK RP 11/13/09



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : LCS
Data File Name : ...\1112_027.DXD
Method File Name : ...\6-102609.met
Date Time Collected : 11/12/09 6:09:35 PM

Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

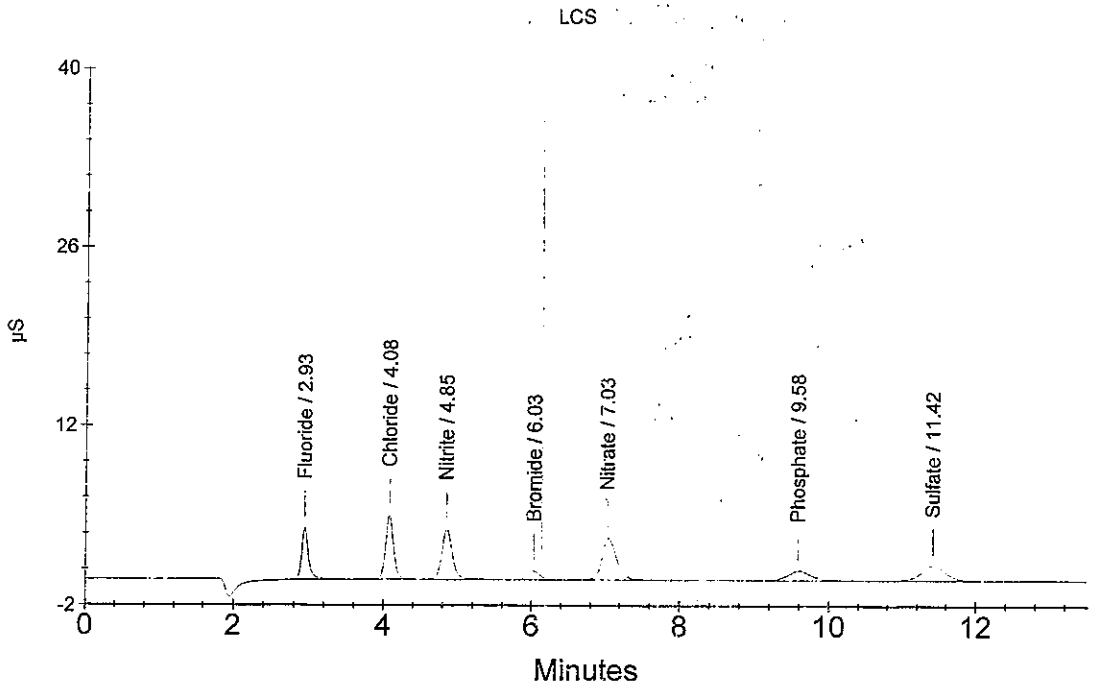
Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment : 9056/300.0

Data Collection Rate : 5.00 Hz
Data Collection Period : 810.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount	Peak Area
1	2.93	Fluoride	OK 0.984	268309
2	4.08	Chloride	1.887	378494
3	4.85	Nitrite	0.964	378988
4	6.03	Bromide	0.998	74641
5	7.03	Nitrate	0.969	443526
6	9.58	Phosphate	1.024	158521
7	11.42	Sulfate	1.997	265249

RL 11/13/09



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : R0906403-003
Data File Name : ...\1112_028.DXD
Method File Name : ...\6-102609.met
Date Time Collected : 11/12/09 6:25:23 PM

Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

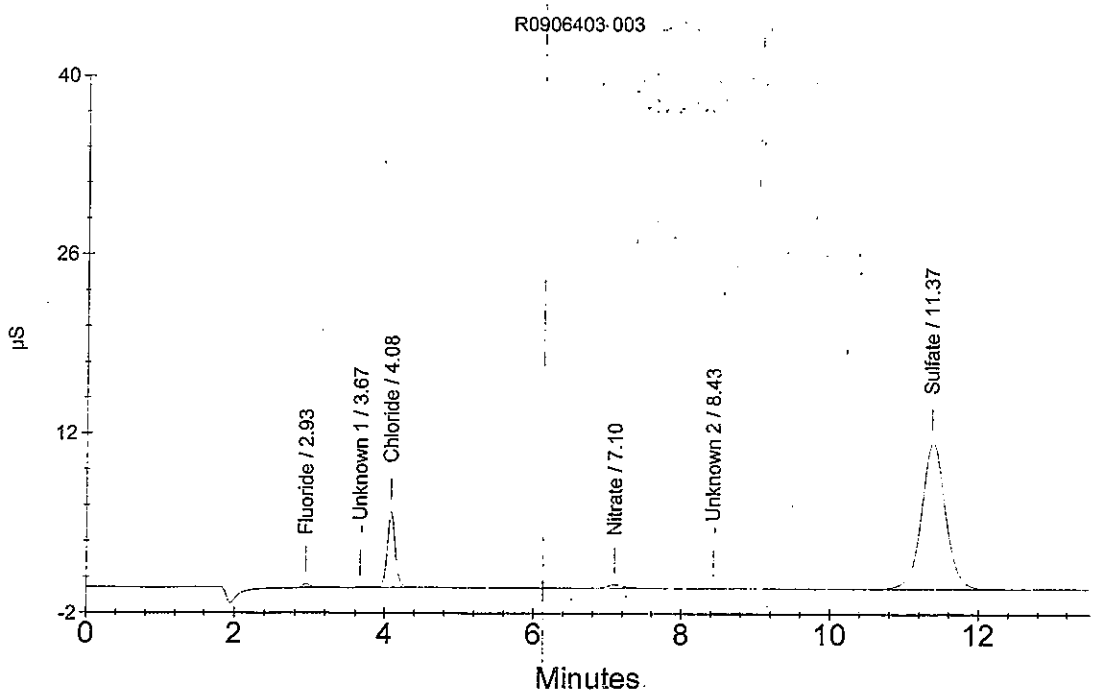
Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment : CBNS (9056 EXT)

Data Collection Rate : 5.00 Hz
Data Collection Period : 810.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount	Peak Area
1	2.93	Fluoride	0.135	17611
3	4.08	Chloride	OK 2.172	438752
4	7.10	Nitrate Phosphate	OK 0.143	36812
6	11.37	Sulfate	1/4 19.069	2573585

Br OK
RP 11/13/09



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : R0906403-004
Data File Name : ...\1112_029.DXD
Method File Name : ...\6-102609.met
Date Time Collected : 11/12/09 6:41:09 PM

Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

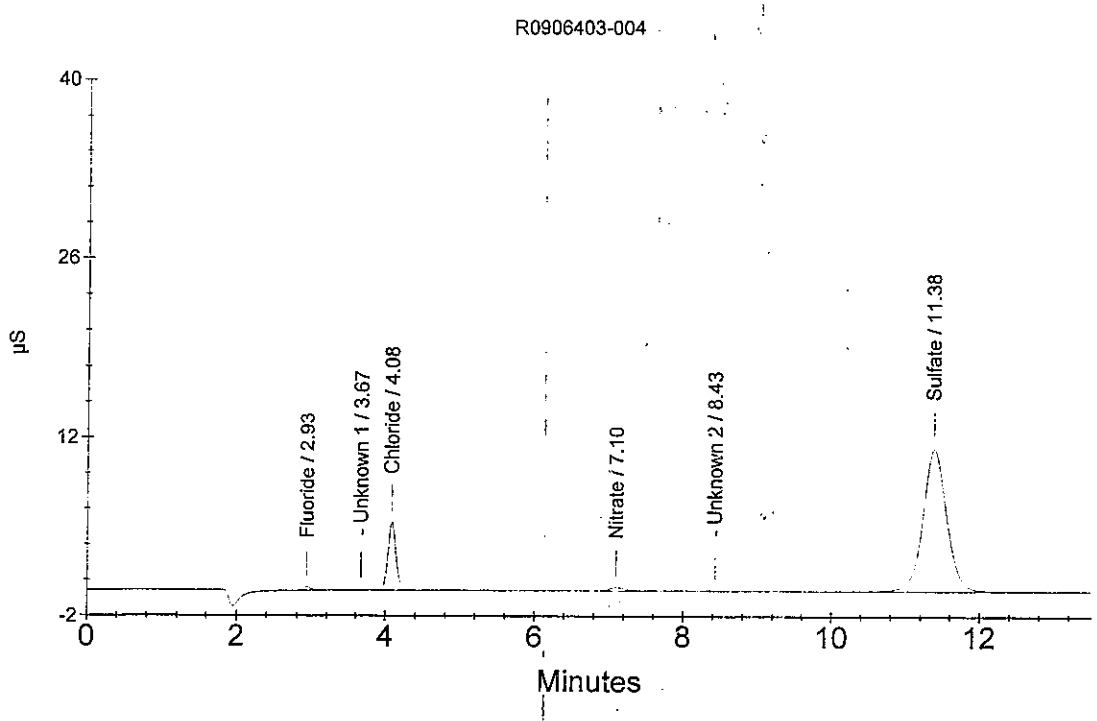
Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment : CBNS (9056 EXT)

Data Collection Rate : 5.00 Hz
Data Collection Period : 810.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name		Component Amount	Peak Area
1	2.93	Fluoride		0.134	17216
3	4.08	Chloride	OK	1.975	396944
4	7.10	Nitrate Phosphate	OK	0.141	36112
6	11.38	Sulfate	4/4	18.629	2514112

Br OK
RP 11/13/09



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : SW-001 R0906504-001
Data File Name : ...\1112_030.DXD
Method File Name : ...\6-102609.met
Date Time Collected : 11/12/09 6:56:55 PM

Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

Dilution Factor : 10.00
Sample Type : Sample Analysis
Sample Comment : CBNS (300.0)

Data Collection Rate : 5.00 Hz
Data Collection Period : 810.00 seconds
Component Amount Units :

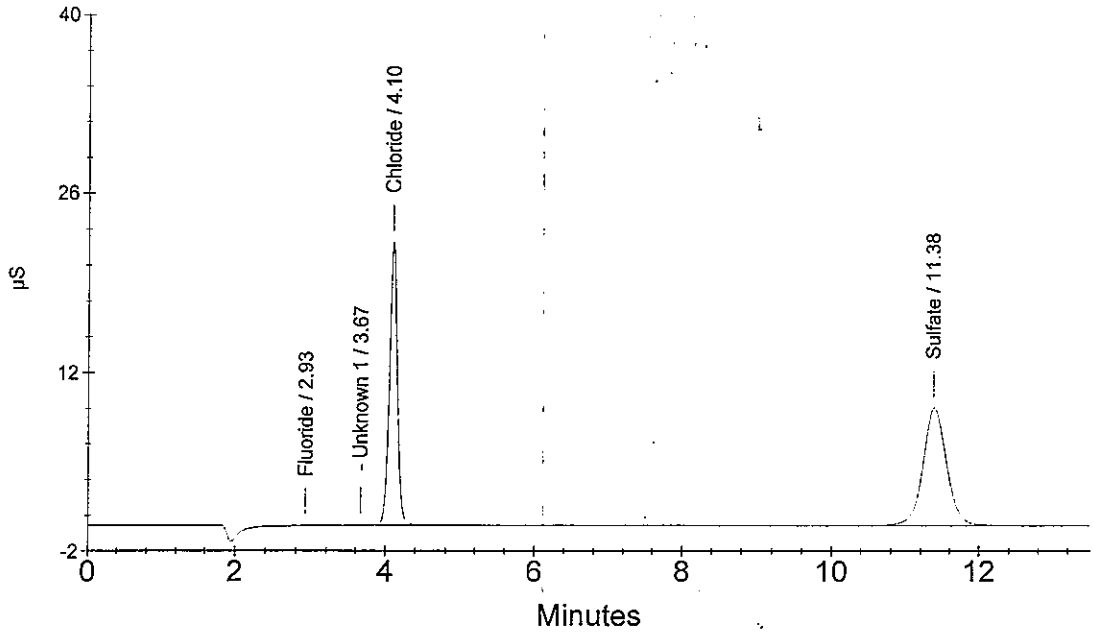
Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount	Peak Area
1	2.93	Fluoride	0.838	2416
3	4.10	Chloride	76.211	1590763
4	11.38	Sulfate	154.605	2085697

OK 1/40

Br & NO3 OK 11/13/09

SW-001



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : SW-003 R0906504-002
Data File Name : ...\1112_031.DXD
Method File Name : ...\6-102609.met
Date Time Collected : 11/12/09 7:12:42 PM

Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

Dilution Factor : 10.00
Sample Type : Sample Analysis
Sample Comment : CBNS (300.0)

Data Collection Rate : 5.00 Hz
Data Collection Period : 810.00 seconds
Component Amount Units :

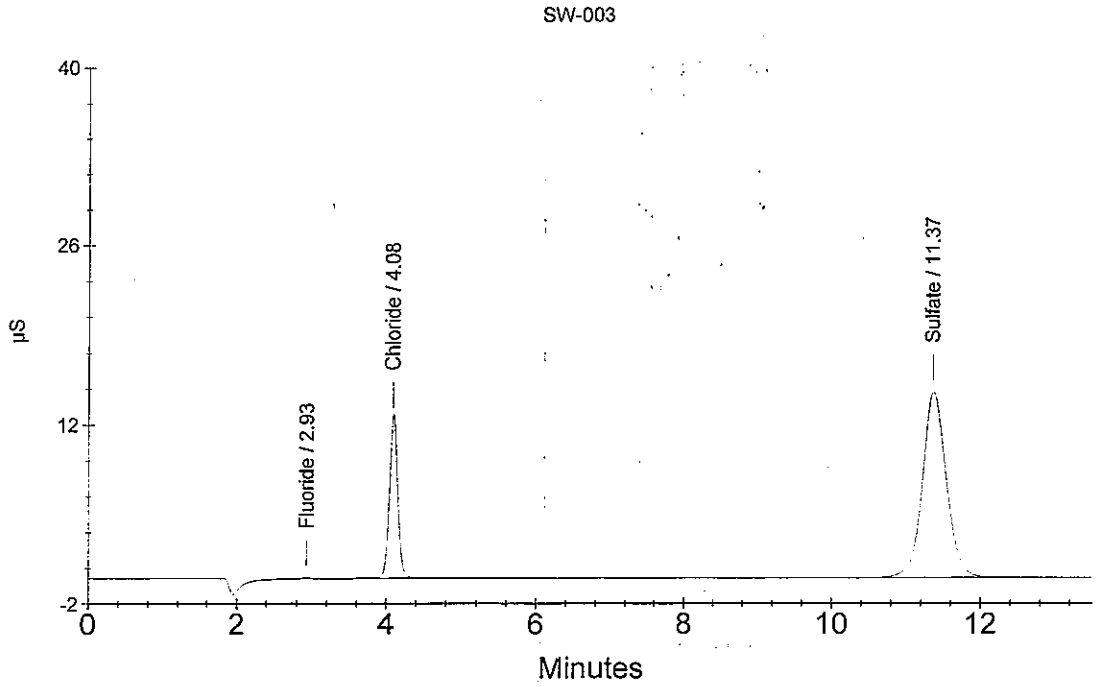
Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount	Peak Area
1	2.93	Fluoride	0.923	4915
2	4.08	Chloride	45.642	944430
3	11.37	Sulfate	240.308	3244529

ok 1/40

NO_3+Br ok

11/13/09



00740

Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : SW-011 R0906504-003
Data File Name : ...\1112_032.DXD
Method File Name : ...\6-102609.met
Date Time Collected : 11/12/09 7:28:29 PM

Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

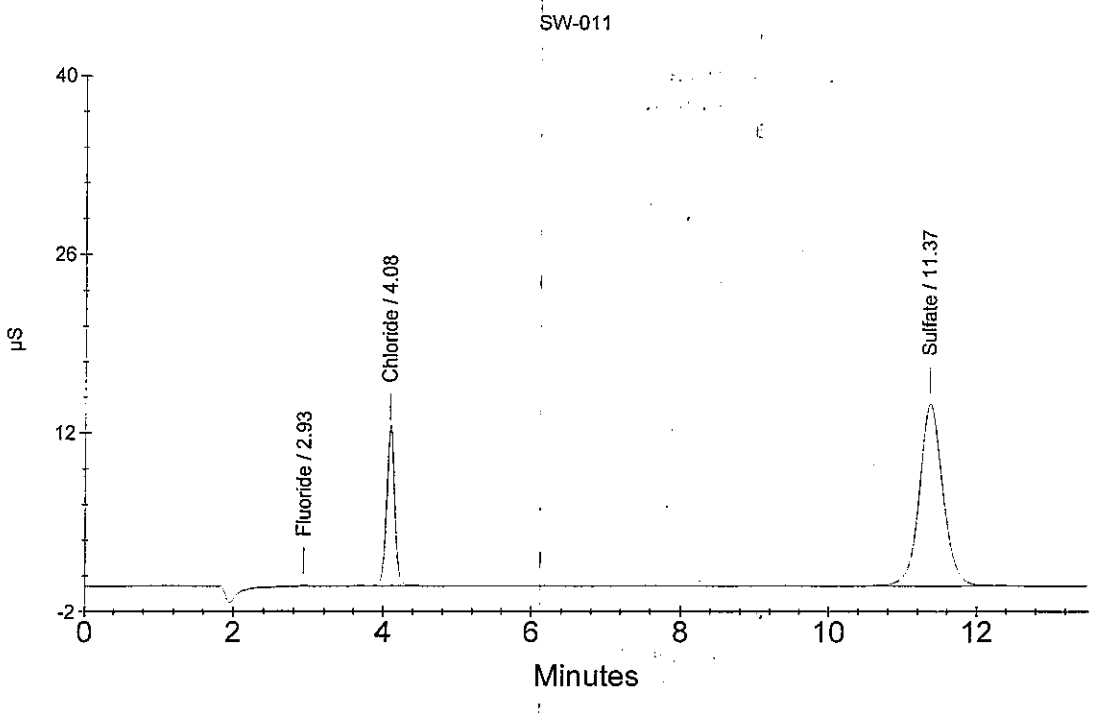
Dilution Factor : 10.00
Sample Type : Sample Analysis
Sample Comment : CBNS (300.0)

Data Collection Rate : 5.00 Hz
Data Collection Period : 810.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount	Peak Area
1	2.93	Fluoride	0.920	4842
2	4.08	Chloride	44.935	929480
3	11.37	Sulfate	235.899	3184914

OK 11/13
Br + NO_3 OK 11/13/09



00741

Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : SW-011 DUP R0906504-003
Data File Name : ...\1112_033.DXD DUP
Method File Name : ...\6-102609.met
Date Time Collected : 11/12/09 7:44:15 PM

Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

Dilution Factor : 10.00
Sample Type : Sample Analysis
Sample Comment : CBNS (300.0)

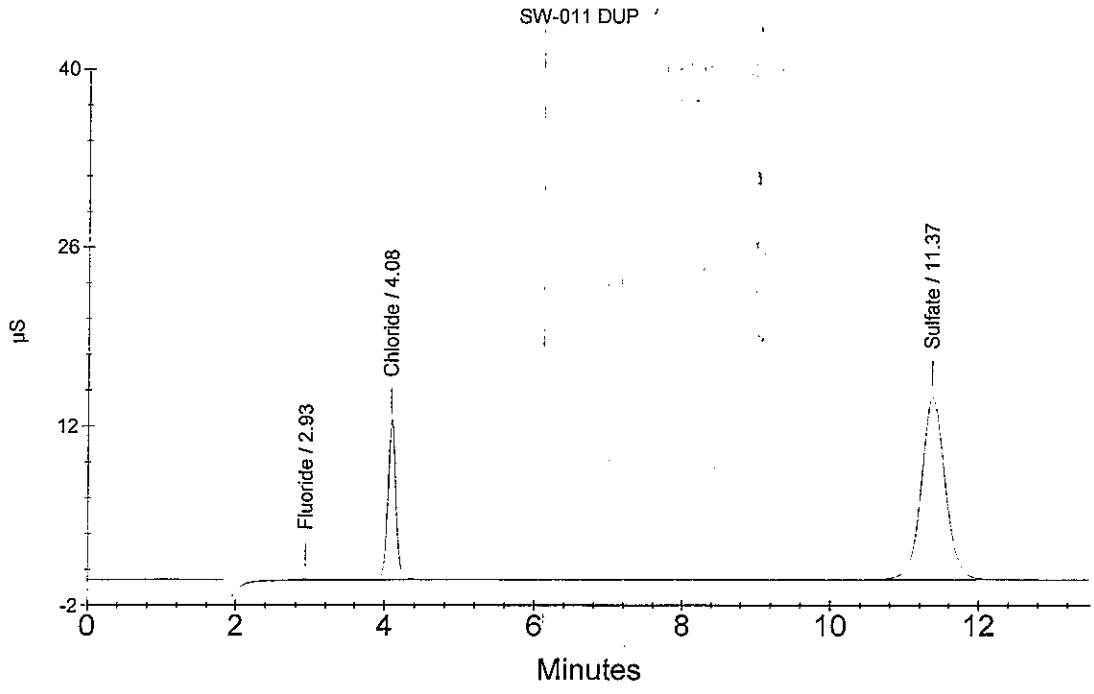
Data Collection Rate : 5.00 Hz
Data Collection Period : 810.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount	Peak Area
1	2.93	Fluoride	0.925	4970
2	4.08	Chloride	44.845	927583
3	11.37	Sulfate	235.729	3182604

ok 1/40

Br + NO3 OK 11/13/09



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : SW-011 SPK R0906504-003
Data File Name : ...\1112_034.DXD SPK
Method File Name : ...\6-102609.met
Date Time Collected : 11/12/09 8:00:00 PM

Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

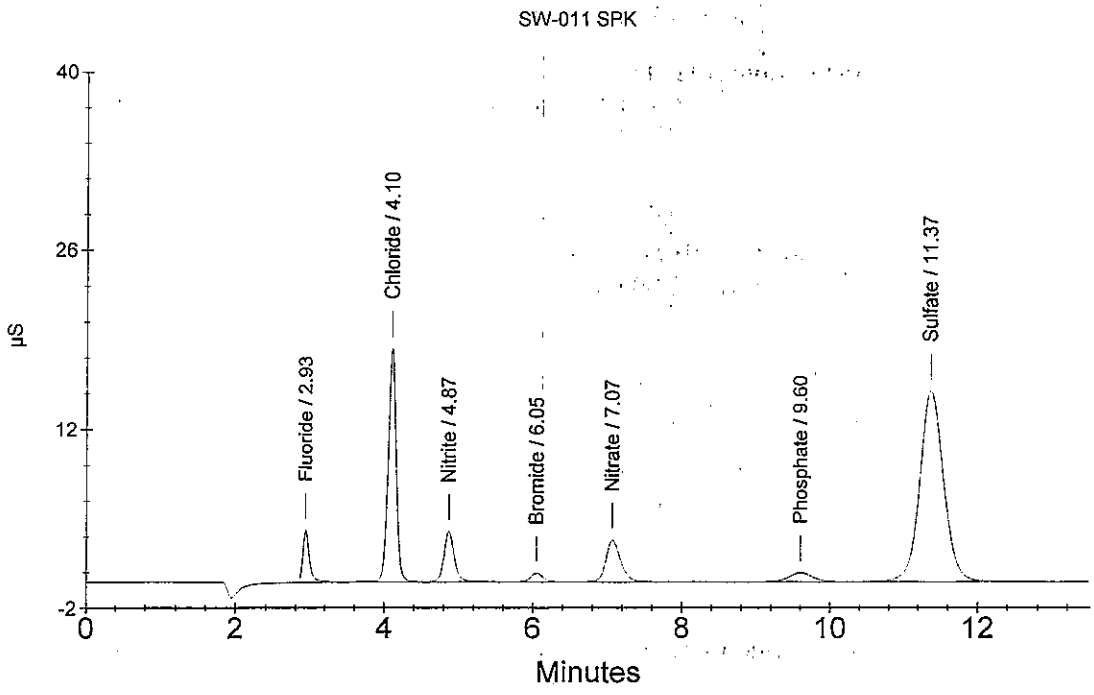
Dilution Factor : 10.00
Sample Type : Sample Analysis
Sample Comment : CBNS (300.0)

Data Collection Rate : 5.00 Hz
Data Collection Period : 810.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name		Component Amount	Peak Area
1	2.93	Fluoride		10.187	278667
2	4.10	Chloride	ok	64.173	1336235
3	4.87	Nitrite		9.690	381085
4	6.05	Bromide	ok	10.159	75987
5	7.07	Nitrate	ok	9.875	452755
6	9.60	Phosphate		10.150	157004
7	11.37	Sulfate	—	247.587	3342955

CMT 11/13/09



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : CCV
Data File Name : ...\1112_035.DXD
Method File Name : ...\6-102609.met
Date Time Collected : 11/12/09 8:15:46 PM

Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

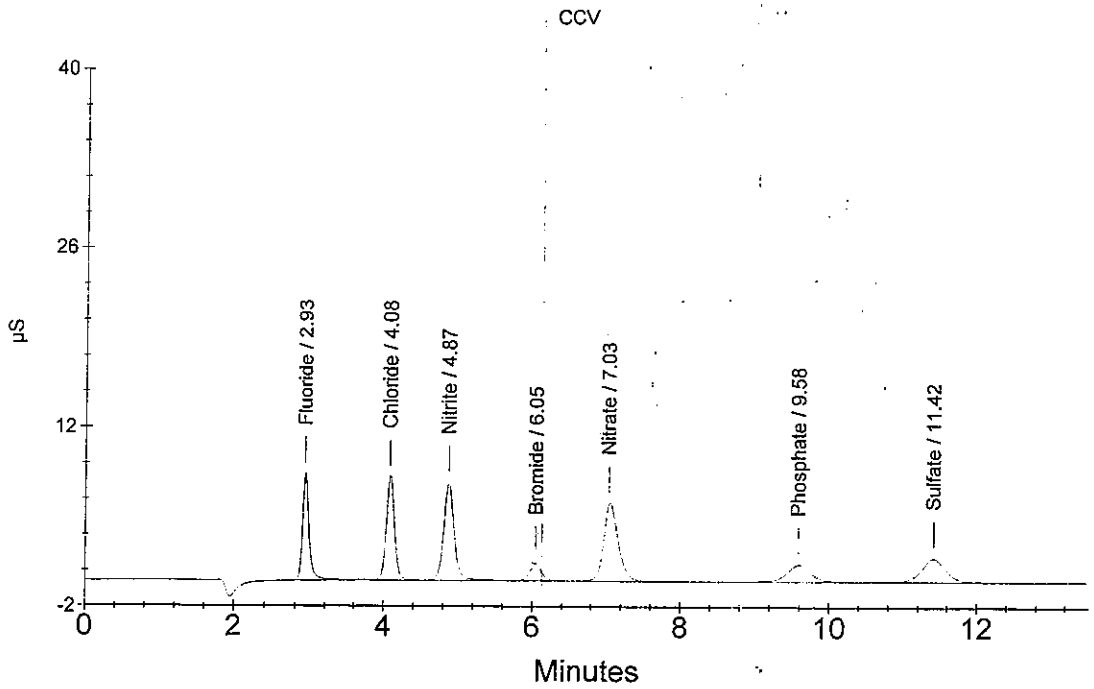
Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment : 9056/300.0

Data Collection Rate : 5.00 Hz
Data Collection Period : 810.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount	Peak Area
1	2.93	Fluoride	1.943	551717
2	4.08	Chloride	2.981	609639
3	4.87	Nitrite	1.806	730199
4	6.05	Bromide	1.997	150499
5	7.03	Nitrate	1.778	842017
6	9.58	Phosphate	1.819	287583
7	11.42	Sulfate	3.184	425677

RP 11/13/09



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : CCB
Data File Name : ...\1112_036.DXD
Method File Name : ...\6-102609.met
Date Time Collected : 11/12/09 8:31:33 PM

Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

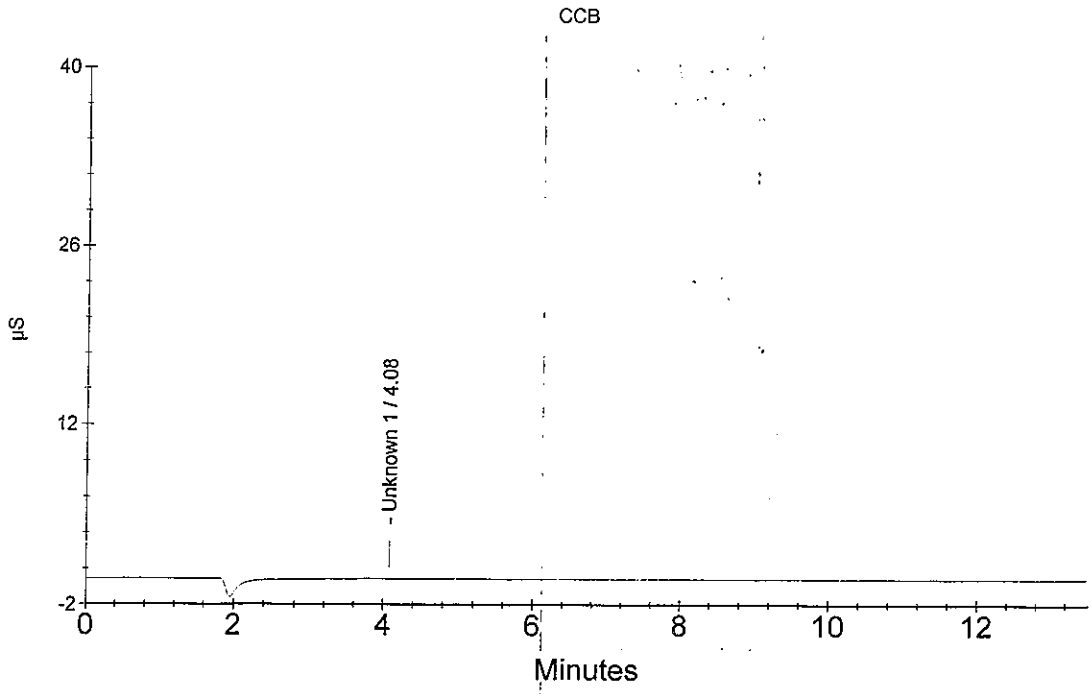
Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment : 9056/300.0

Data Collection Rate : 5.00 Hz
Data Collection Period : 810.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount	Peak Area

OK
RP 11/13/09



Columbia Analytical Services – Rochester, New York

Ion Chromatography Cover Sheet

Instrument: Dionex DX-120 Ion Chromatogram – IC # 6

Column: Dionex AS-14/AG-14, 10/09/09

Curve Date: 10/26/09 **Loop size:** 50 uL

Analyst: R. Paul **Analysis Date:** 11/12/09

Are copy of LCS and CCV attached to run? (YES) / NO

Standards Prep Dates & Log ID's:

Std Type	*Prep Date*	*Log ID*		*Std Type*	*Prep Date*	*Log ID*
Calibration Intermediate	10/06/09	WC940011B		Working Calibration Stds	10/22/09	WC940021C
LCS / MS Intermediate	10/06/09	WC940011B		Working LCS/MS Standard	11/12/09	WC940053M
ICV Intermediate	10/09/09	WC940012H		Working ICV Standard	10/26/09	WC940027L
CCV Intermediate	10/9/09	WC940012H		Working CCV Standard	11/11/09	WC940028M

Original Retention Times for this method are based on the ICV and are as follows:

Fluoride: 2.90	Bromide: 6.02
Chloride: 4.05	Nitrate: 7.03
Nitrite: 4.83	Phosphate: 9.55
Sulfate: 11.43	

Additional Comments: _____

ICV / CCV PREP

(A 1:2 dilution of the Reference Intermediate Stock is done daily)

Analyte	ICV / CCV Intermediate Stock ID	Conc. mg/L	mLs Stock	Final Vol. mL	Final Conc. mg/L	Analyst/ Date Prepped	Lot ID	Exp. Date	Matrix H2SO4 / NaOH / DI	H2SO4 / NaOH Lot #
F	WC9400124	4.00	5.0	10	2.00	11/2/09	A	11/3/09	DI	
Cl		6.50			3.25	11/2/09	B	11/3/09	NaOH	WC850306
NO2		3.60			1.80	11/3/09	C	11/4/09	DI	
Br		4.00			2.00	11/3/09	D	11/4/09	NaOH	WC850306
NO3		3.60			1.80	10/30/09	E	10/31/09	H_2SO_4	WC85294I
OPO4		3.60			1.80	11/4/09	F	11/5/09	DI	
SO4		6.40			3.20	11/4/09	G	11/5/09	H_2SO_4	WC85294I
						11/5/09	H	11/6/09	DI	
						11/6/09	I	11/7/09	DI	
						11/9/09	J	11/10/09	DI	
						11/10/09	K	11/11/09	DI	
						11/11/09	L	11/12/09	DI	
						11/12/09	M	11/13/09	DI	
							N			
							O			
							P			
							Q			

CS PREP

tocks delivered using Volumetric glassware and brought to volume with DI. LCS expires after 7 days; if NO2 is needed, LCS must be prepared daily.)

MS prepared fresh daily using same volume of intermediate stock added to 100mls sample. MS not prepared volumetrically.)

Analyte	Calibration Intermediate Stock ID	Intermediate Stock Conc (mg/L)	mLs Intermediate Stock	Final Vol. mLs	Final Conc. (mg/L)	Analyst/ Date Prepped	Lot ID	Exp. Date	Matrix H2SO4 / NaOH / DI	H2SO4 / NaOH Lot #
F	WC940012A	50	2.0	100	1.0	RP 10/28/09	A	11/4/09	DI	
Cl		100			2.0	RP 10/29/09	B	11/5/09	DI	
NO2		50			1.0	RP ~~11/2/09~~	C	11/9/09	DI	
Br		50			1.0	RP 11/2/09	D	11/9/09	NaOH	WC850506
NO3		50			1.0	RP 11/3/09	E	11/10/09	DI	
OPO4		50			1.0	RP 10/30/09	F	11/6/09	H_2SO_4	WC8294I
SO4		100			2.0	RP 11/4/09	G	11/11/09	DI	
						RP 11/4/09	H	11/11/09	H_2SO_4	WC85294I
						RP 11/5/09	I	11/12/09	DI	
						RP 11/9/09	J	11/16/09	DI	
						RP 11/10/09	K	11/17/09	DI	
						RP 11/11/09	L	11/18/09	DI	
						RP 11/12/09	M	11/19/09	DI	
							N			
							O			
							P			
							Q			
							R			

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Ion Chromatography Calibration Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : STANDARD 1
Sample Type : Calibration Update
Data File Name : ...\1026_001.DXD
Method File Name : ...\6-102609.met

Date Time Collected : 10/26/09 12:38:04 PM
Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

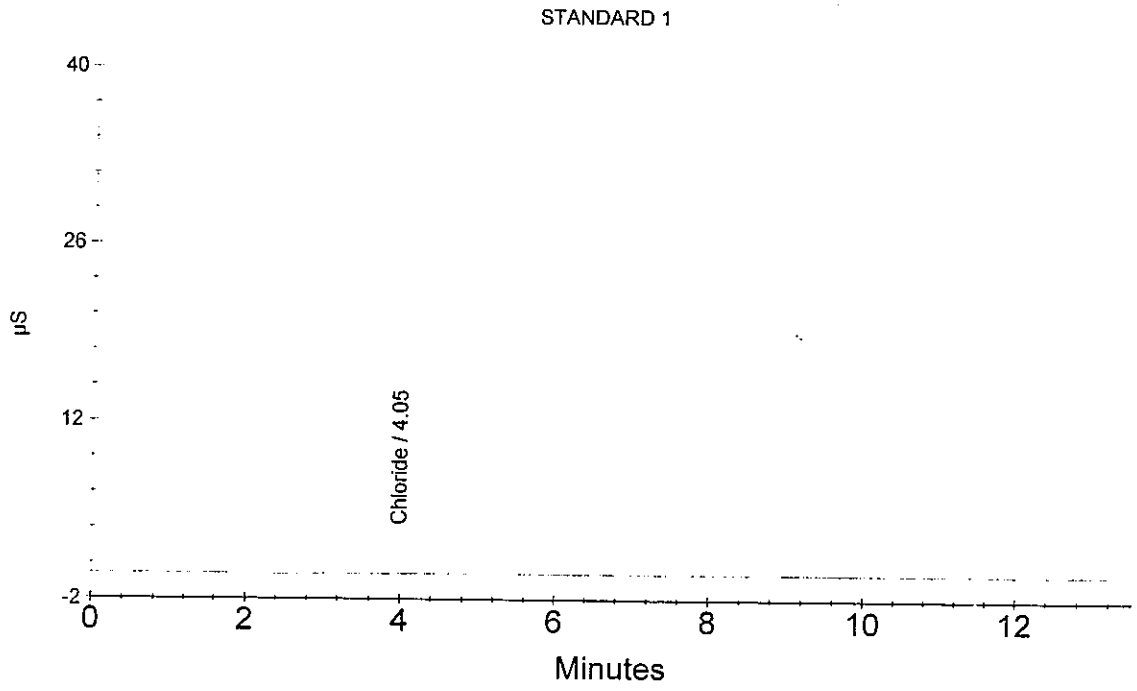
Dilution Factor : 1.00
Sample Comment :
Data Collection Rate : 5.00 Hz

Calibration Type : EXTERNAL
Calibration Level : 1

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name		Component Amount	Peak Area	Cal Response Previous
1	4.05	Chloride	(X	0.00	2068	2068.40

RP 10/27/09



00749

Ion Chromatography Calibration Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : STANDARD 2
Sample Type : Calibration Update
Data File Name : ...\1026_002.DXD
Method File Name : ...\6-102609.met

Date Time Collected : 10/26/09 12:53:48 PM
Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

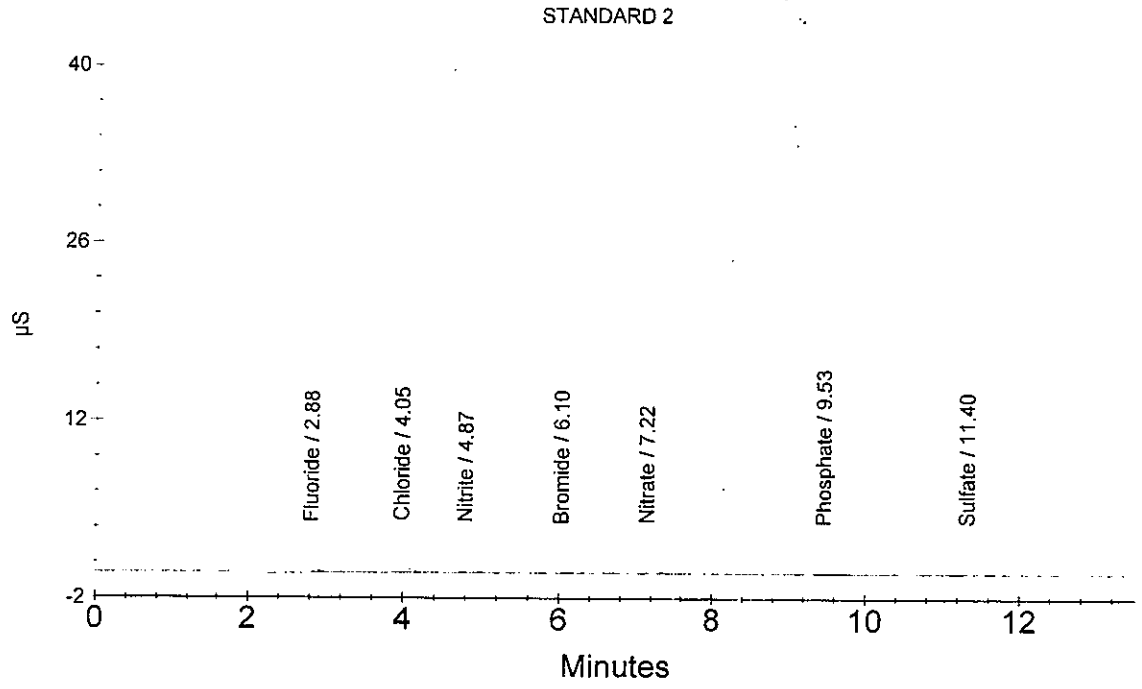
Dilution Factor : 1.00
Sample Comment :
Data Collection Rate : 5.00 Hz

Calibration Type : EXTERNAL
Calibration Level : 2

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name		Component Amount	Peak Area	Cal Response Previous
1	2.88	Fluoride	OK	0.05	8987	8986.60
2	4.05	Chloride		0.10	22579	22578.70
3	4.87	Nitrite		0.05	15988	15988.00
4	6.10	Bromide		0.05	2682	2681.80
5	7.22	Nitrate		0.05	18058	18058.40
6	9.53	Phosphate		0.05	4705	4656.20
7	11.40	Sulfate		0.10	11637	4705.20

RP 10/27/09



Ion Chromatography Calibration Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : STANDARD 3
Sample Type : Calibration Update
Data File Name : ...\1026_003.DXD
Method File Name : ...\6-102609.met

Date Time Collected : 10/26/09 1:09:37 PM
Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

Dilution Factor : 1.00
Sample Comment :
Data Collection Rate : 5.00 Hz

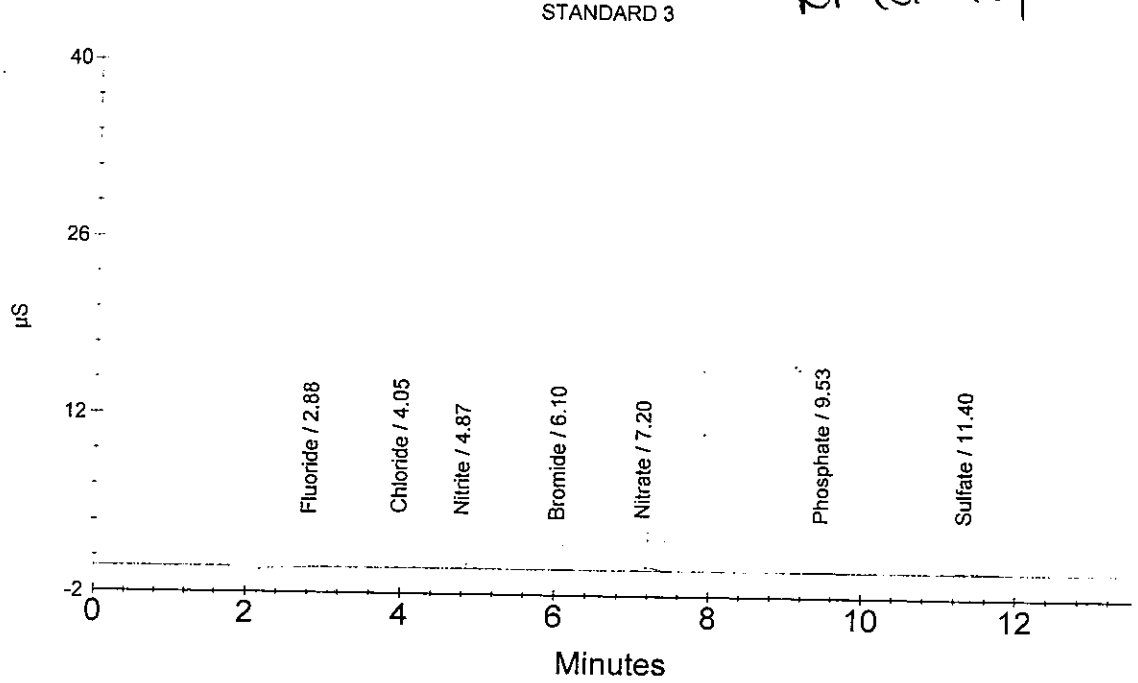
Calibration Type : EXTERNAL
Calibration Level : 3

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount	Peak Area	Cal Response Previous
1	2.88	Fluoride	0.10	21129	21129.40
2	4.05	Chloride	0.20	38723	38723.00
3	4.87	Nitrite	0.10	34146	34145.60
4	6.10	Bromide	0.10	8014	8013.60
5	7.20	Nitrate	0.10	39938	39938.30
6	9.53	Phosphate	0.10	11678	12052.30
7	11.40	Sulfate	0.20	26529	11678.20

OK

RP 10/27/09



00751

Ion Chromatography Calibration Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : STANDARD 4
Sample Type : Calibration Update
Data File Name : ...\1026_004.DXD
Method File Name : ...\6-102609.met

Date Time Collected : 10/26/09 1:25:24 PM
Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

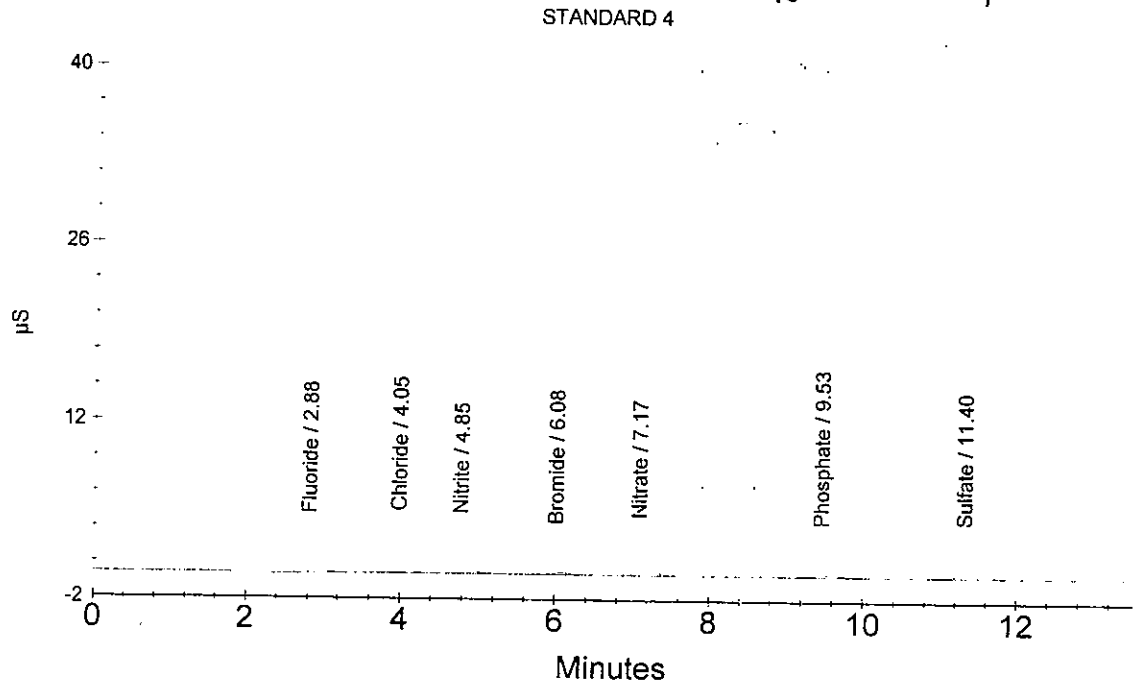
Dilution Factor : 1.00
Sample Comment :
Data Collection Rate : 5.00 Hz

Calibration Type : EXTERNAL
Calibration Level : 4

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount	Peak Area	Cal Response Previous
1	2.88	Fluoride	0.25	57667	57666.60
2	4.05	Chloride	0.50	86462	86462.00
3	4.85	Nitrite	0.25	87551	87551.20
4	6.08	Bromide	0.25	18954	18954.50
5	7.17	Nitrate	0.25	103219	103219.00
6	9.53	Phosphate	0.25	33531	35711.60
7	11.40	Sulfate	0.50	65634	33530.70

RP 10/27/09



00752

Ion Chromatography Calibration Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : STANDARD 5
Sample Type : Calibration Update
Data File Name : ...\1026_005.DXD
Method File Name : ...\6-102609.met

Date Time Collected : 10/26/09 1:41:12 PM
Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

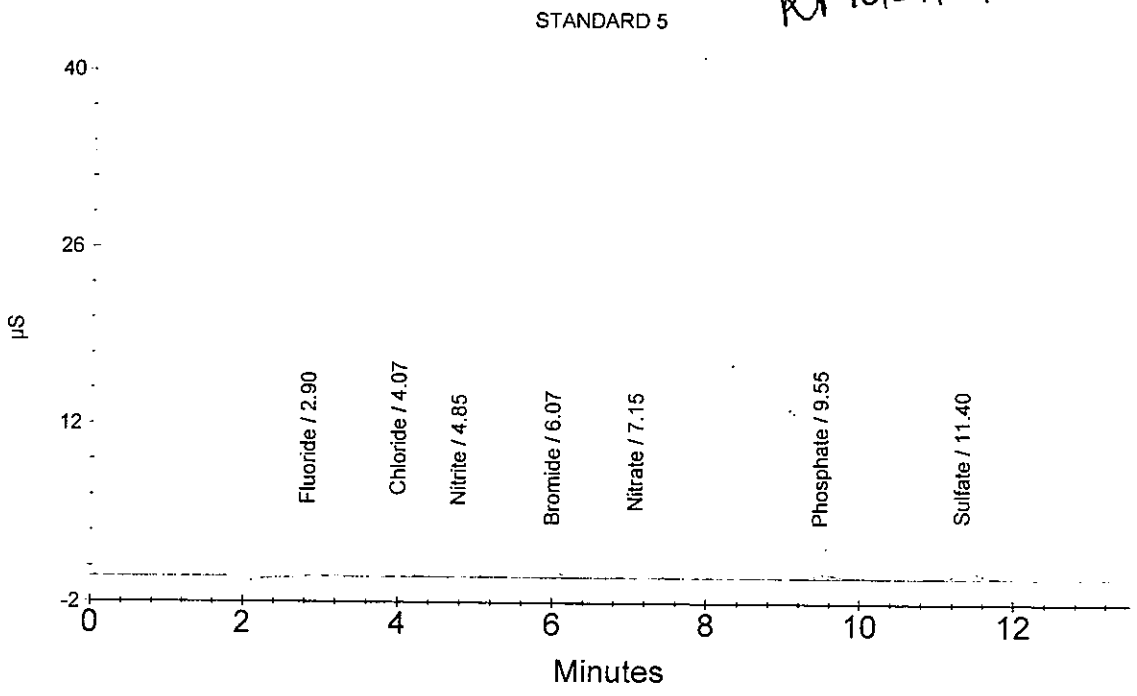
Dilution Factor : 1.00
Sample Comment :
Data Collection Rate : 5.00 Hz

Calibration Type : EXTERNAL
Calibration Level : 5

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount	Peak Area	Cal Response Previous
1	2.90	Fluoride	0.50	111063	111062.50
2	4.07	Chloride	1.00	198049	198049.30
3	4.85	Nitrite	0.50	178463	178463.40
4	6.07	Bromide	0.50	36386	36385.60
5	7.15	Nitrate	0.50	208490	208490.10
6	9.55	Phosphate	0.50	72532	76005.00
7	11.40	Sulfate	1.00	128729	72531.80

OK RR 10/27/09



Ion Chromatography Calibration Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : STANDARD 6
Sample Type : Calibration Update
Data File Name : ...\1026_006.DXD
Method File Name : ...\6-102609.met

Date Time Collected : 10/26/09 1:57:00 PM
Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

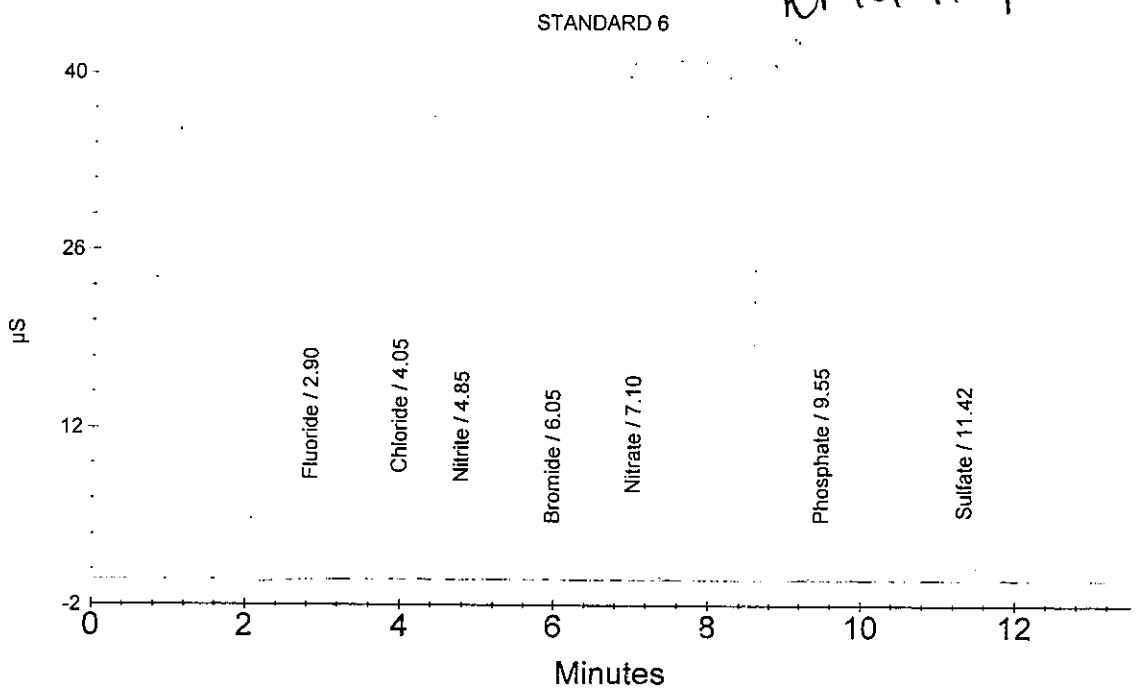
Dilution Factor : 1.00
Sample Comment :
Data Collection Rate : 5.00 Hz

Calibration Type : EXTERNAL
Calibration Level : 6

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount	Peak Area	Cal Response Previous
1	2.90	Fluoride	OK 1.00	261486	261486.20
2	4.05	Chloride	2.00	362961	362960.80
3	4.85	Nitrite	1.00	375530	375529.80
4	6.05	Bromide	1.00	74185	74185.40
5	7.10	Nitrate	1.00	431933	431933.30
6	9.55	Phosphate	1.00	150277	156496.00
7	11.42	Sulfate	2.00	265742	150276.80

RP 10/27/09



Ion Chromatography Calibration Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : STANDARD 7
Sample Type : Calibration Update
Data File Name : ...\1026_007.DXD
Method File Name : ...\6-102609.met

Date Time Collected : 10/26/09 2:12:47 PM
Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

Dilution Factor : 1.00
Sample Comment :
Data Collection Rate : 5.00 Hz

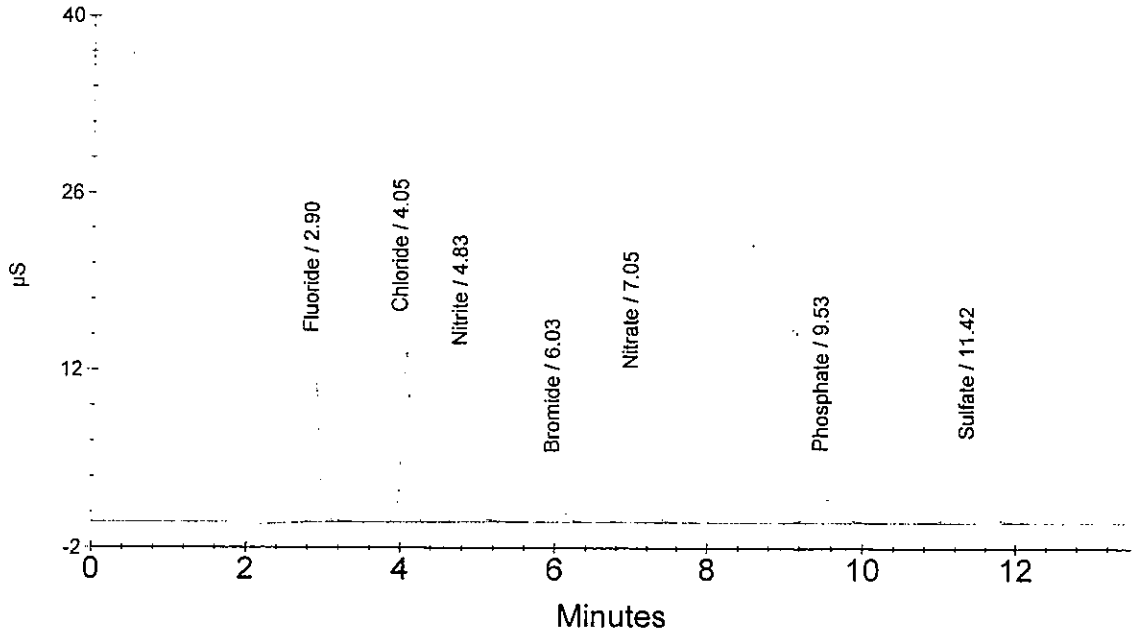
Calibration Type : EXTERNAL
Calibration Level : 7

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount	Peak Area	Cal Response Previous
1	2.90	Fluoride	OK 2.50	692867	692866.80
2	4.05	Chloride	5.00	975428	975427.80
3	4.83	Nitrite	2.50	987818	987817.60
4	6.03	Bromide	2.50	185483	185482.90
5	7.05	Nitrate	2.50	1136396	1136396.10
6	9.53	Phosphate	2.50	390856	403540.40
7	11.42	Sulfate	5.00	657511	390856.20

RP 10/27/09

STANDARD 7



Ion Chromatography Calibration Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : STANDARD 8
Sample Type : Calibration Update
Data File Name : ...\1026_008.DXD
Method File Name : ...\6-102609.met

Date Time Collected : 10/26/09 2:28:37 PM
Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

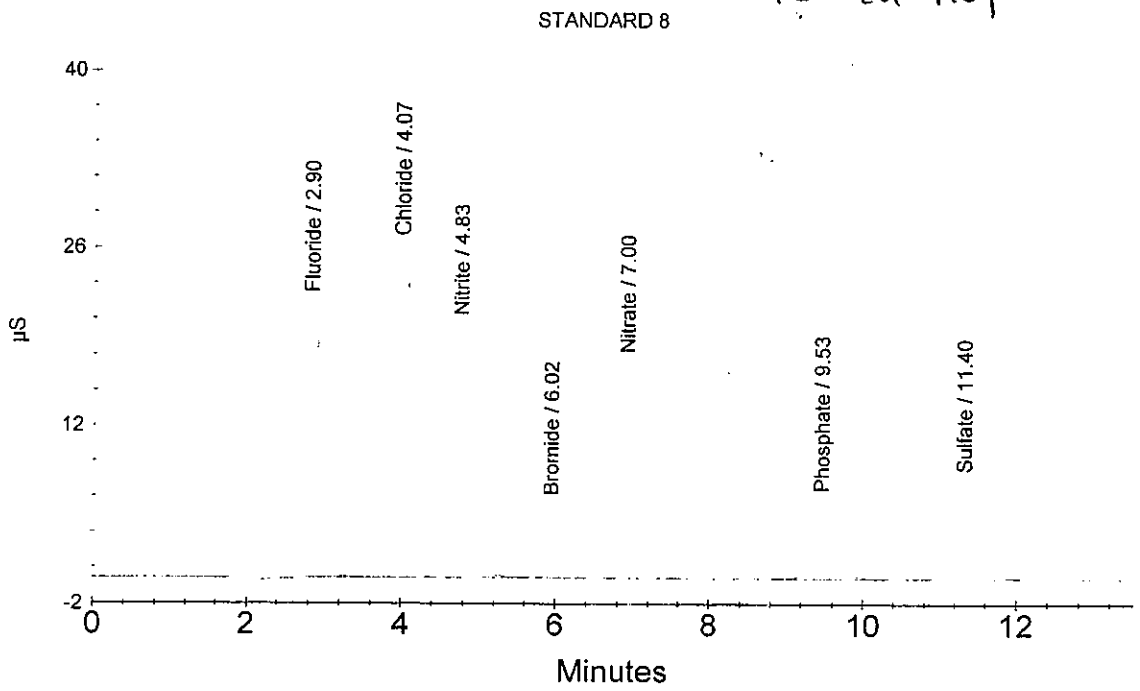
Dilution Factor : 1.00
Sample Comment :
Data Collection Rate : 5.00 Hz

Calibration Type : EXTERNAL
Calibration Level : 8

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount	Peak Area	Cal Response Previous
1	2.90	Fluoride	DK 4.00	1155579	1155579.40
2	4.07	Chloride	8.00	1657657	1657657.50
3	4.83	Nitrite	4.00	1639153	1639152.70
4	6.02	Bromide	4.00	301715	301714.60
5	7.00	Nitrate	4.00	1917680	1917679.70
6	9.53	Phosphate	4.00	640556	662562.60
7	11.40	Sulfate	8.00	1071153	640556.20

RP 10/27/09



00756

Ion Chromatography Calibration Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : STANDARD 9
Sample Type : Calibration Update
Data File Name : ...\1026_009.DXD
Method File Name : ...\6-102609.met

Date Time Collected : 10/26/09 2:44:24 PM
Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

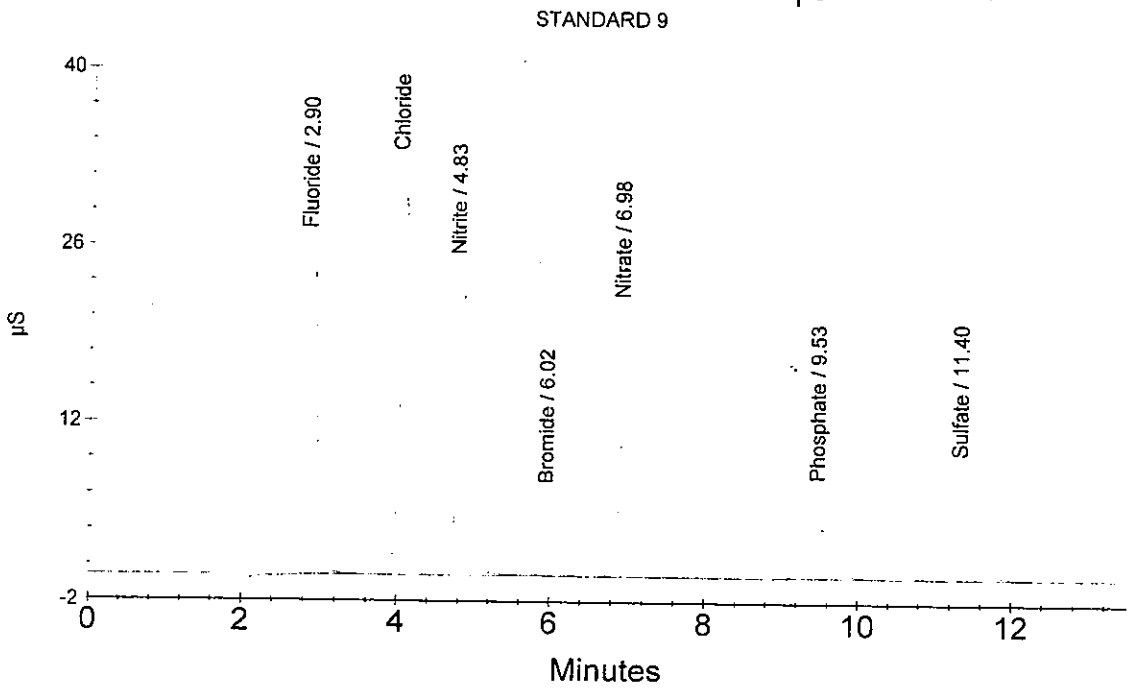
Dilution Factor : 1.00
Sample Comment :
Data Collection Rate : 5.00 Hz

Calibration Type : EXTERNAL
Calibration Level : 9

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount	Peak Area	Cal Response Previous
1	2.90	Fluoride	OK 5.00	1471849	1471849.10
2	4.07	Chloride	10.00	2137279	2137278.70
3	4.83	Nitrite	5.00	2086787	2086787.00
4	6.02	Bromide	5.00	380908	380908.20
5	6.98	Nitrate	5.00	2474229	2474228.90
6	9.53	Phosphate	5.00	809064	844196.20
7	11.40	Sulfate	10.00	1358462	809063.80

RP 10/27/09



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : ICV
Data File Name : ...\1026_010.DXD
Method File Name : ...\6-102609.met
Date Time Collected : 10/26/09 3:00:11 PM

Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

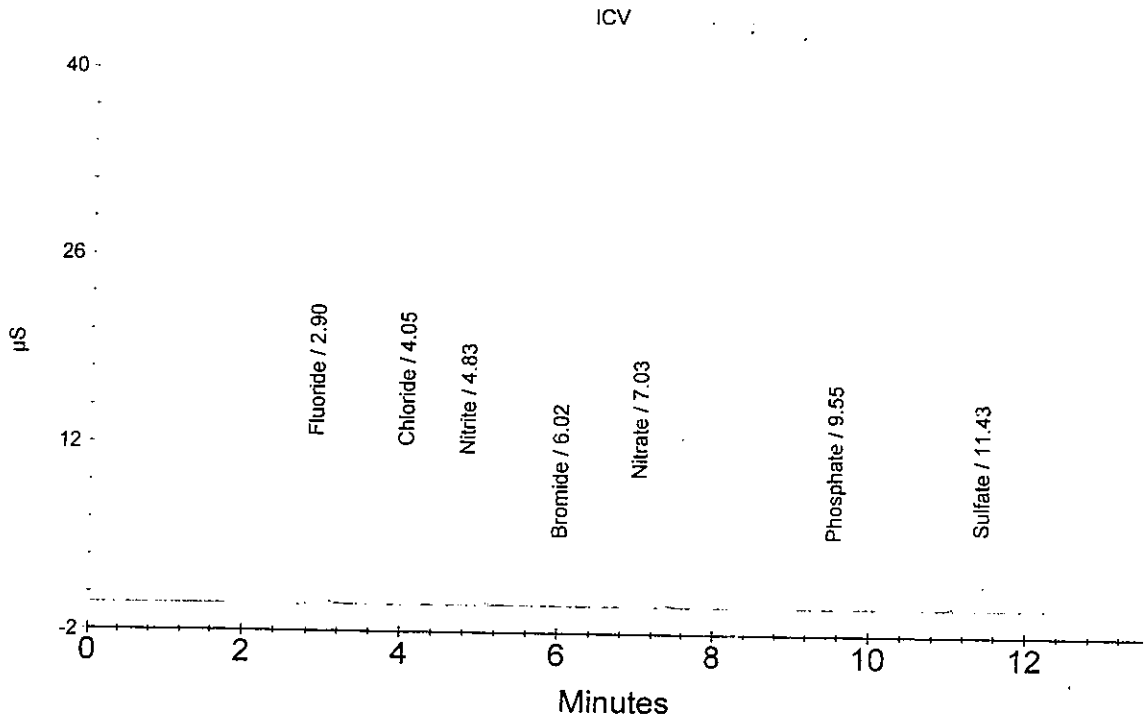
Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment :

Data Collection Rate : 5.00 Hz
Data Collection Period : 810.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name		Component Amount	Peak Area
1	2.90	Fluoride	OK	1.915	543576
2	4.05	Chloride		2.955	604155
3	4.83	Nitrite		1.762	712163
4	6.02	Bromide		1.954	147192
5	7.03	Nitrate		1.715	810932
6	9.55	Phosphate		1.773	280012
7	11.43	Sulfate		3.086	412450

RP 10/27/09



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : ICB
Data File Name : ...\1026_011.DXD
Method File Name : ...\6-102609.met
Date Time Collected : 10/26/09 3:15:59 PM

Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

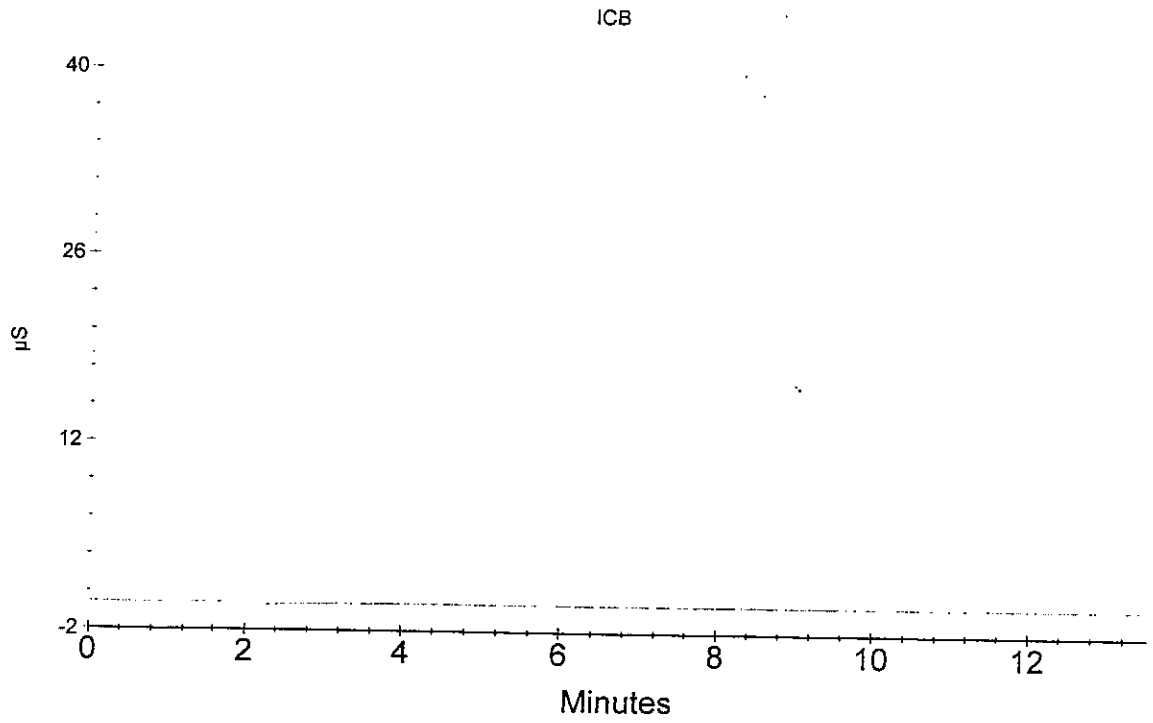
Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment :

Data Collection Rate : 5.00 Hz
Data Collection Period : 810.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount	Peak Area

OK
RP
10/27/09



Ion Chromatography Analytical Report
Columbia Analytical Services
Rochester, NY 14607

Sample Name : LCS
Data File Name : ...\1026_012.DXD
Method File Name : ...\6-102609.met
Date Time Collected : 10/26/09 3:31:46 PM

Detector Name :
Column ID : AS-14 / AG-14
Method Analyst :

Dilution Factor : 1.00
Sample Type : Sample Analysis
Sample Comment :

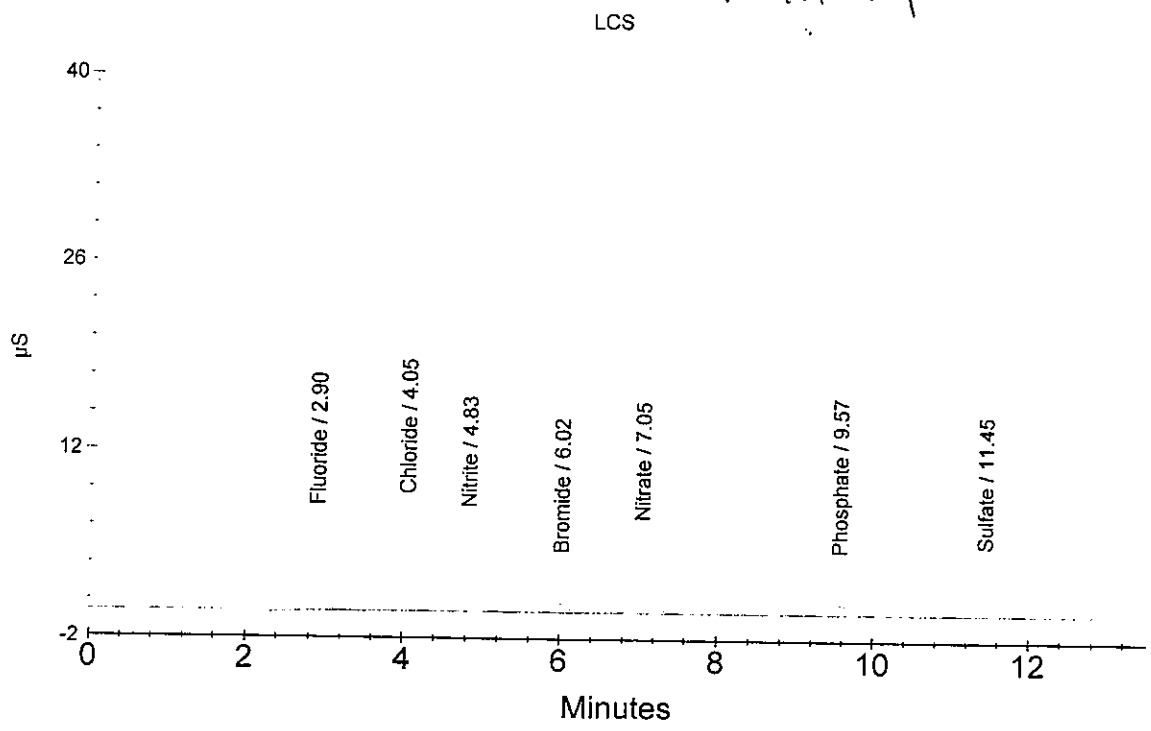
Data Collection Rate : 5.00 Hz
Data Collection Period : 810.00 seconds
Component Amount Units :

Peak Information : All Components

Peak Number	Peak Retention Time	Component Name	Component Amount	Peak Area
1	2.90	Fluoride	0.960	261323
2	4.05	Chloride	1.836	367572
3	4.83	Nitrite	0.964	378884
4	6.02	Bromide	0.984	73573
5	7.05	Nitrate	0.948	433552
6	9.57	Phosphate	0.971	149912
7	11.45	Sulfate	1.993	264662

OK

RP 10/27/09



00760

Method Report - 6-102609

Method Information : All Modules

System Name : DX120
System Number : 1
Method Type : Ion Chromatography
Column : AS-14 / AG-14
Analyst :
Comment : Dionex DX-120 (IC #6)
Calibration 10.09.09

DX-120 Timed Events

Module Name :
Module Serial Number :
System Mode : Column
Column : A
Pump : On
SRS / Cell : On
Eluent Pressure : Off
Pressure Unit : psi
TTL 1 Label : TTL 1
TTL 2 Label : TTL 2
Comment :

Time	Offset	Valve	TTL1	TTL2	AC	Collect
Init		Load	Low	Low	Off	
0.00	*	Load	High	Low	Off	
2.20	*	Inject	Low	Low	Off	Begin
15.00		Load	Low	Low	Off	

DX-120 Detector Parameters

Detector Type : DX-120
Data collection time (minutes) : 13.50
Data Collection Rate (Hz.) : 5.00
Real time plot scale maximum (μS) : 20.000
Real time plot scale minimum (μS) : -5.000

DX-120 Integration Parameters

Peak detection algorithm : Standard
Starting peak width (seconds) : 10.00
Peak threshold : 1.000000
Peak area reject (area counts) : 1000.00
Reference peak area reject (area counts) : 1000.00

DX-120 Smoothing Parameters

Filter Type : No filter

DX-120 Report Data

Report Format File : J:\ACQUDATA\IC\METHOD.ACI\Ic#4\DX120ANION.rpt
Print Sample Analysis : Yes
Print Calibration Update : Yes
Print Check Standard : Yes
System Suitability Tests :
No system suitability tests selected.

DX-120 Integration Data Events

Time	Description
0.00	Force baseline at start of all peaks
2.10	Void volume treatment for this peak

DX-120 Calibration Parameters

External or internal calibration : EXTERNAL
Number of replicates for calibration : 1
Rejection : Manual
Level Weighting : Equal
Sample Weight : 1.000000
Calibration standard volume : 1.000000
Default sample volume : 1.000000
Amount units :
Replace retention time : Yes
Update response : Yes
Default dilution factor : 1.000000
Default response factor for unknown peaks : 0.000000
Calculate unknowns by area or height : Area

DX-120 Component Identification Table

Component	Retention	Tolerance	Reference
Fluoride	2.90 min	10.00 %	
Chloride	4.07 min	10.00 %	
Nitrite	4.83 min	10.00 %	
Bromide	6.02 min	10.00 %	
Nitrate	6.98 min	10.00 %	
Phosphate	9.53 min	10.00 %	
Sulfate	11.40 min	10.00 %	

DX-120 Component Quantitation Table

Component	Retention	Low Limit	High Limit
Fluoride	2.90 min	0.05	5
Chloride	4.07 min	0.1	10
Nitrite	4.83 min	0.05	5
Bromide	6.02 min	0.05	5
Nitrate	6.98 min	0.05	5
Phosphate	9.53 min	0.05	5
Sulfate	11.40 min	0.1	10

DX-120 Component Calibration Table

Component	Retention Time	Curve Fit	Origin	Cal. by	Response Component	Relative Factor
Fluoride	2.90 min	Linear	Ignore	Area		0.00
Chloride	4.07 min	Linear	Ignore	Area		0.00
Nitrite	4.83 min	Linear	Ignore	Area		0.00
Bromide	6.02 min	Linear	Ignore	Area		0.00
Nitrate	6.98 min	Linear	Ignore	Area		0.00
Phosphate	9.53 min	Linear	Ignore	Area		0.00
Sulfate	11.40 min	Linear	Ignore	Area		0.00

DX-120 Component = Fluoride Levels Table

Retention Time : 2.90 min
Amount units :
Replicate unit type : Area
Number of levels : 9
Number of replicates : 1

Level	Amount	Replicate 1
1	0.00	0
2	0.05	8986.6
3	0.10	21129.4
4	0.25	57666.6
5	0.50	111063
6	1.00	261486
7	2.50	692867
8	4.00	1.15558e+006
9	5.00	1.47185e+006

DX-120 Component = Chloride Levels Table

Retention Time : 4.07 min
Amount units :
Replicate unit type : Area
Number of levels : 9
Number of replicates : 1

Level	Amount	Replicate 1
1	0.00	2068.4
2	0.10	22578.7
3	0.20	38723
4	0.50	86462
5	1.00	198049
6	2.00	362961
7	5.00	975428
8	8.00	1.65766e+006
9	10.00	2.13728e+006

DX-120 Component = Nitrite Levels Table

Retention Time : 4.83 min
Amount units :
Replicate unit type : Area
Number of levels : 9
Number of replicates : 1

Level	Amount	Replicate 1
1	0.00	0
2	0.05	15988
3	0.10	34145.6
4	0.25	87551.2
5	0.50	178463
6	1.00	375530
7	2.50	987818
8	4.00	1.63915e+006
9	5.00	2.08679e+006

DX-120 Component = Bromide Levels Table

Retention Time : 6.02 min
Amount units :
Replicate unit type : Area
Number of levels : 9
Number of replicates : 1

Level	Amount	Replicate 1
1	0.00	~~1200.5~~ NO PEAK RP 10/27/09
2	0.05	2681.8
3	0.10	8013.6
4	0.25	18954.5
5	0.50	36385.6
6	1.00	74185.4
7	2.50	185483
8	4.00	301715
9	5.00	380908

DX-120 Component = Nitrate Levels Table

Retention Time : 6.98 min
Amount units :
Replicate unit type : Area
Number of levels : 9
Number of replicates : 1

Level	Amount	Replicate 1
1	0.00	~~9156.4~~ NO PEAK RP 10/27/09
2	0.05	18058.4
3	0.10	39938.3
4	0.25	103219
5	0.50	208490
6	1.00	431933
7	2.50	1.1364e+006
8	4.00	1.91768e+006
9	5.00	2.47423e+006

DX-120 Component = Phosphate Levels Table

Retention Time : 9.53 min
Amount units :
Replicate unit type : Area
Number of levels : 9
Number of replicates : 1

Level	Amount	Replicate 1
1	0.00	~~7622.6~~ NO PEAK RP 10/27/09
2	0.05	4705.2
3	0.10	11678.2
4	0.25	33530.7
5	0.50	72531.8
6	1.00	150277
7	2.50	390856
8	4.00	640556
9	5.00	809064

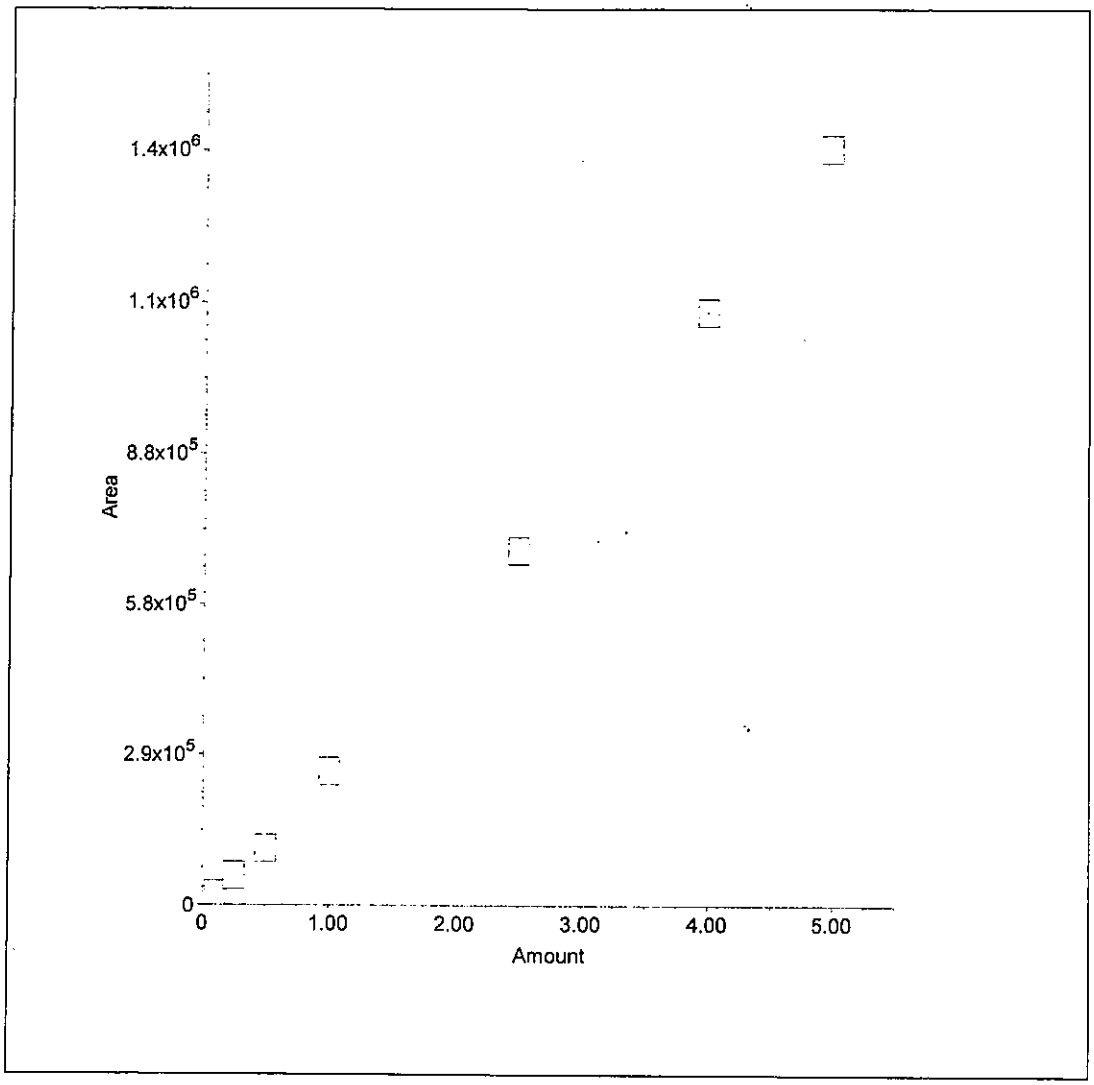
DX-120 Component = Sulfate Levels Table

Retention Time : 11.40 min
Amount units :
Replicate unit type : Area
Number of levels : 9
Number of replicates : 1

Level	Amount	Replicate 1
1	0.00	~~1078.1~~ NO PEAK RP 10/27/09
2	0.10	11637.4
3	0.20	26529.2
4	0.50	65633.8
5	1.00	128729
6	2.00	265742
7	5.00	657511
8	8.00	1.07115e+006
9	10.00	1.35846e+006

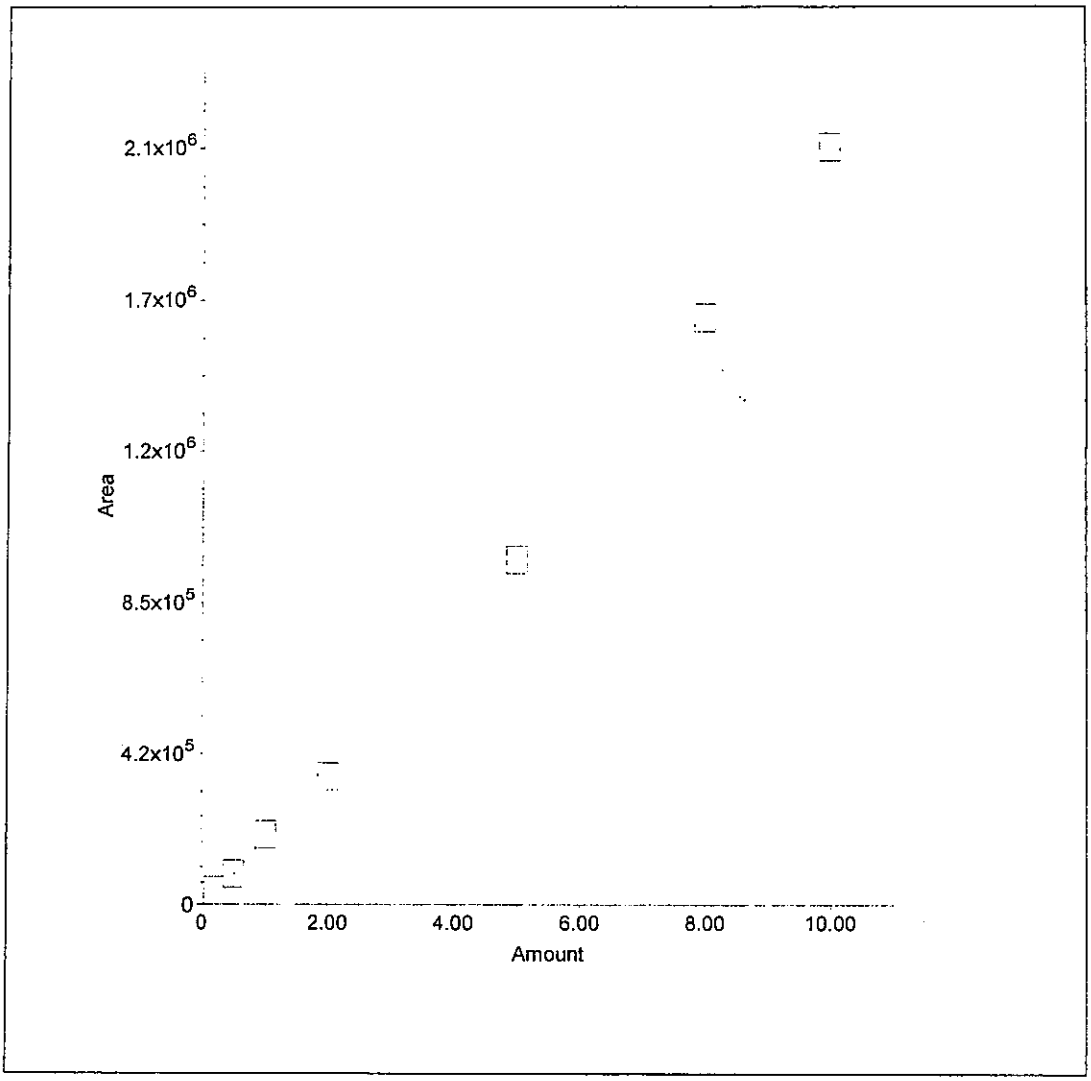
DX-120 XY Data Parameters

1. Component:Fluoride
Standard:External Fit Type:Linear
Origin:Ignore Calibration:Area
r^2=0.999256
Amt=3.384e-006*Resp+0.07565



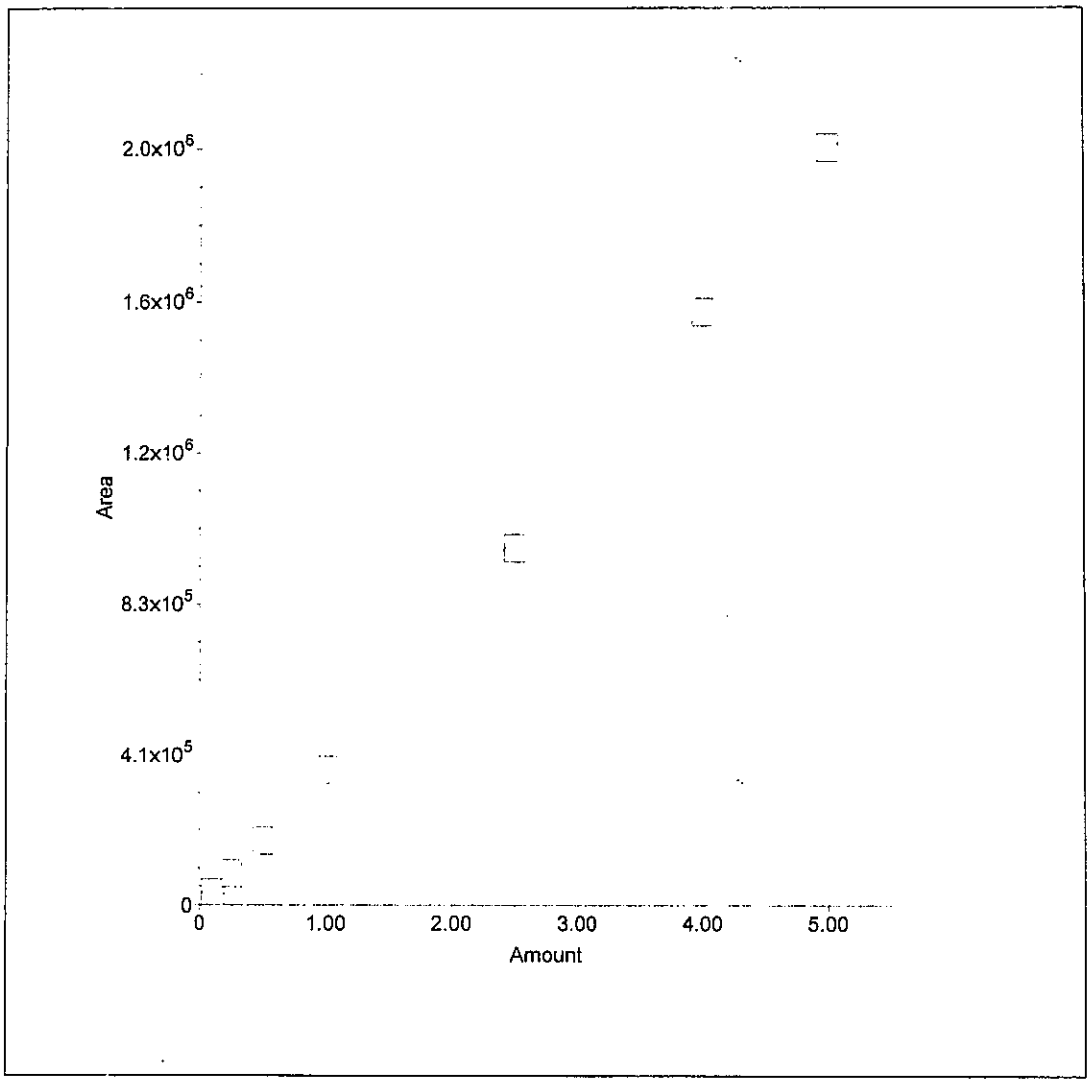
RP 102709

2. Component:Chloride
Standard:External Fit Type:Linear
Origin:Ignore Calibration:Area
r^2=0.998301
Amt=4.73e-006*Resp+0.09727



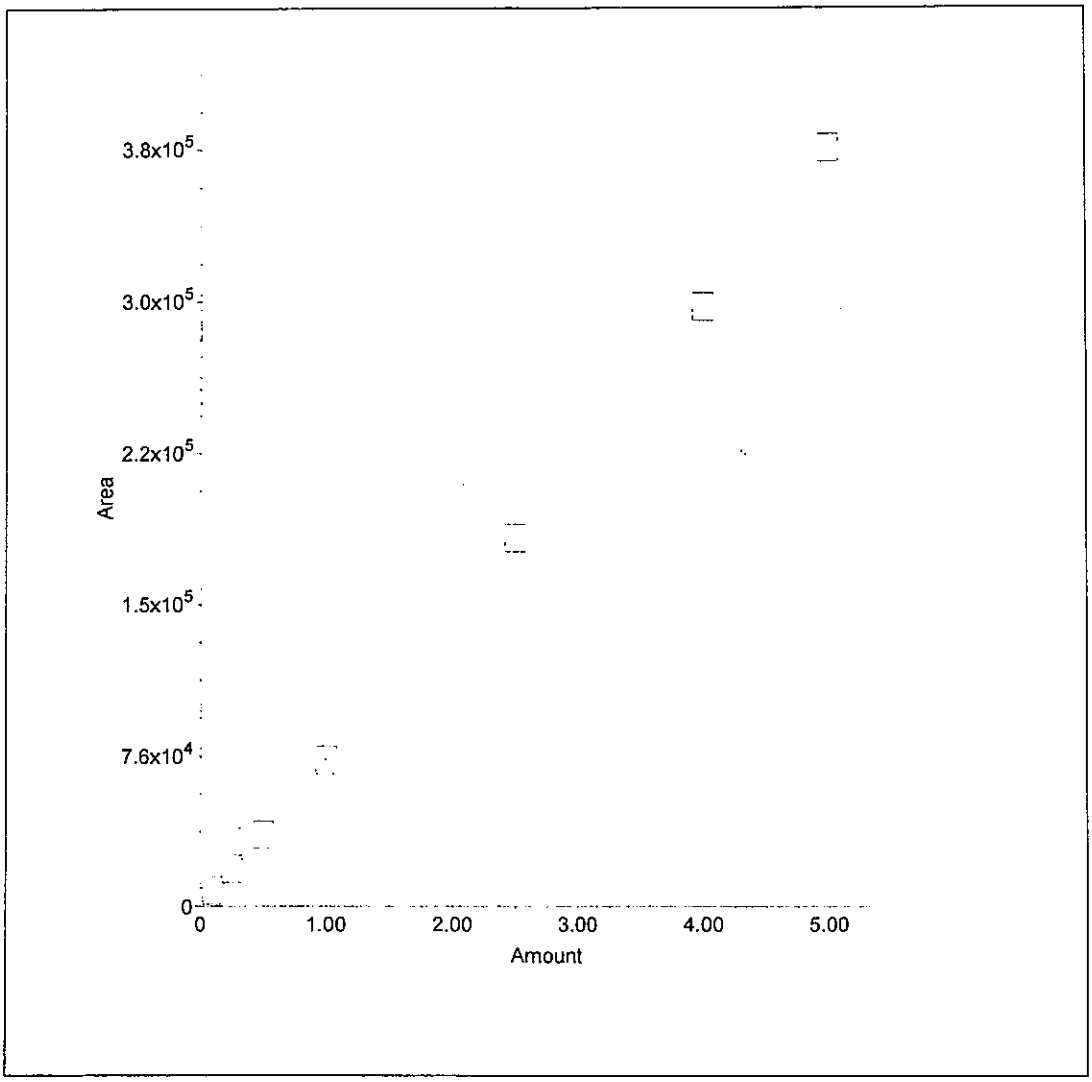
RR 10127109

3. Component:Nitrite
Standard:External Fit Type:Linear
Origin:Ignore Calibration:Area
r^2=0.999417
Amt=2.397e-006*Resp+0.0557



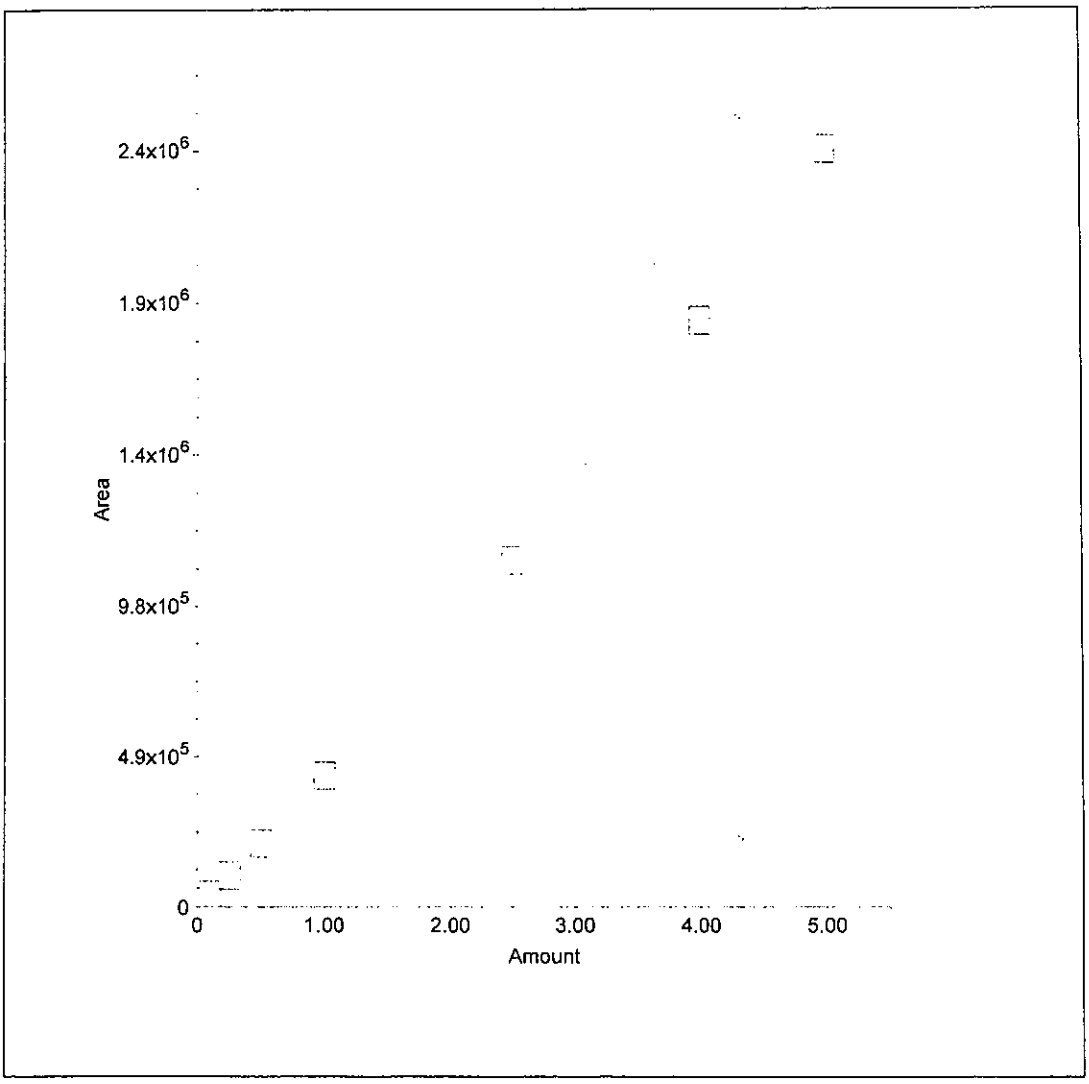
RP 10/27/09

4. Component:Bromide
Standard:External Fit Type:Linear
Origin:Ignore Calibration:Area
r^2=0.999861
Amt=1.317e-005*Resp+0.0154



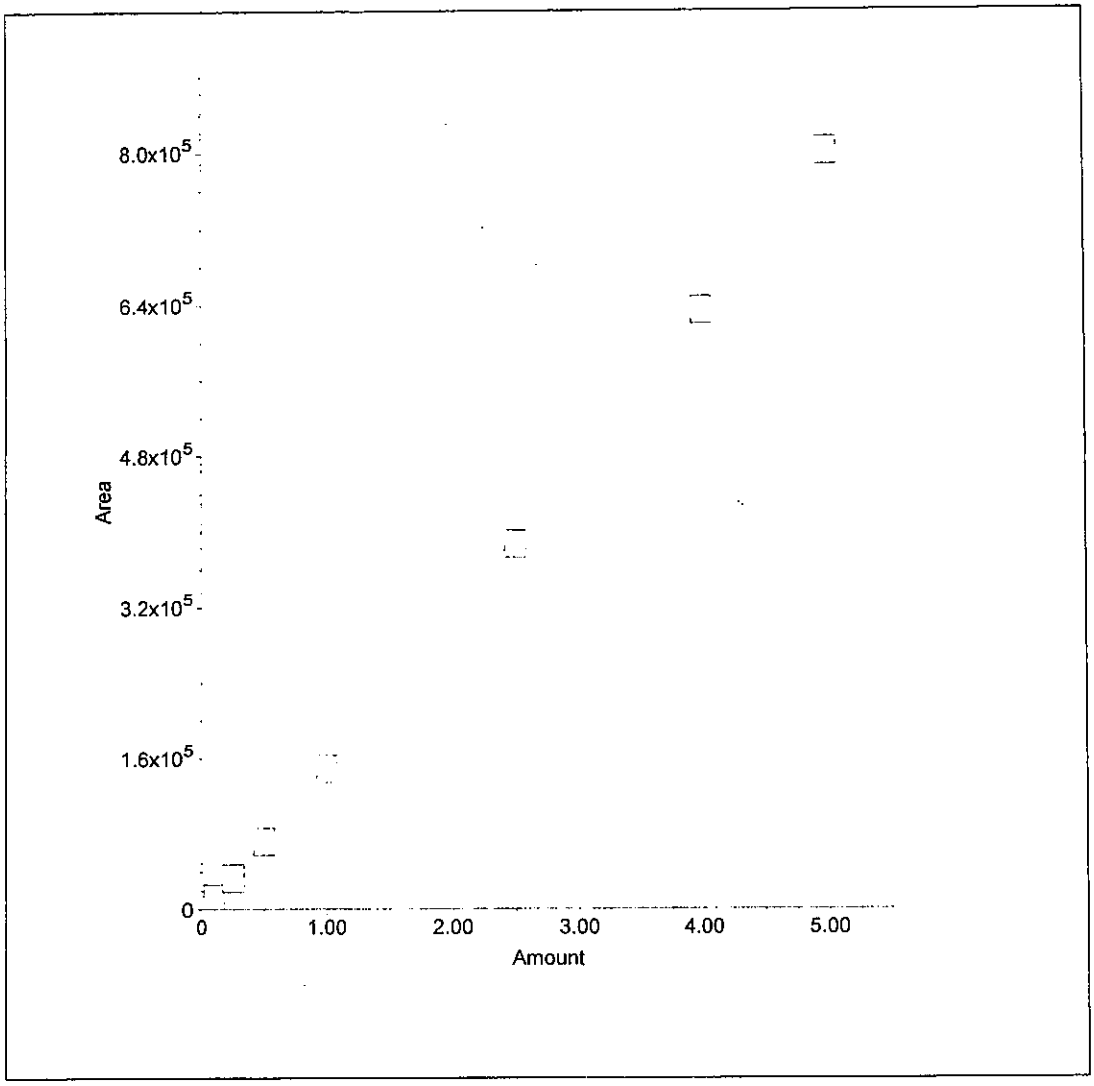
RP 10/27/09

5. Component:Nitrate
Standard:External Fit Type:Linear
Origin:Ignore Calibration:Area
r^2=0.998673
Amt=2.031e-006*Resp+0.06781



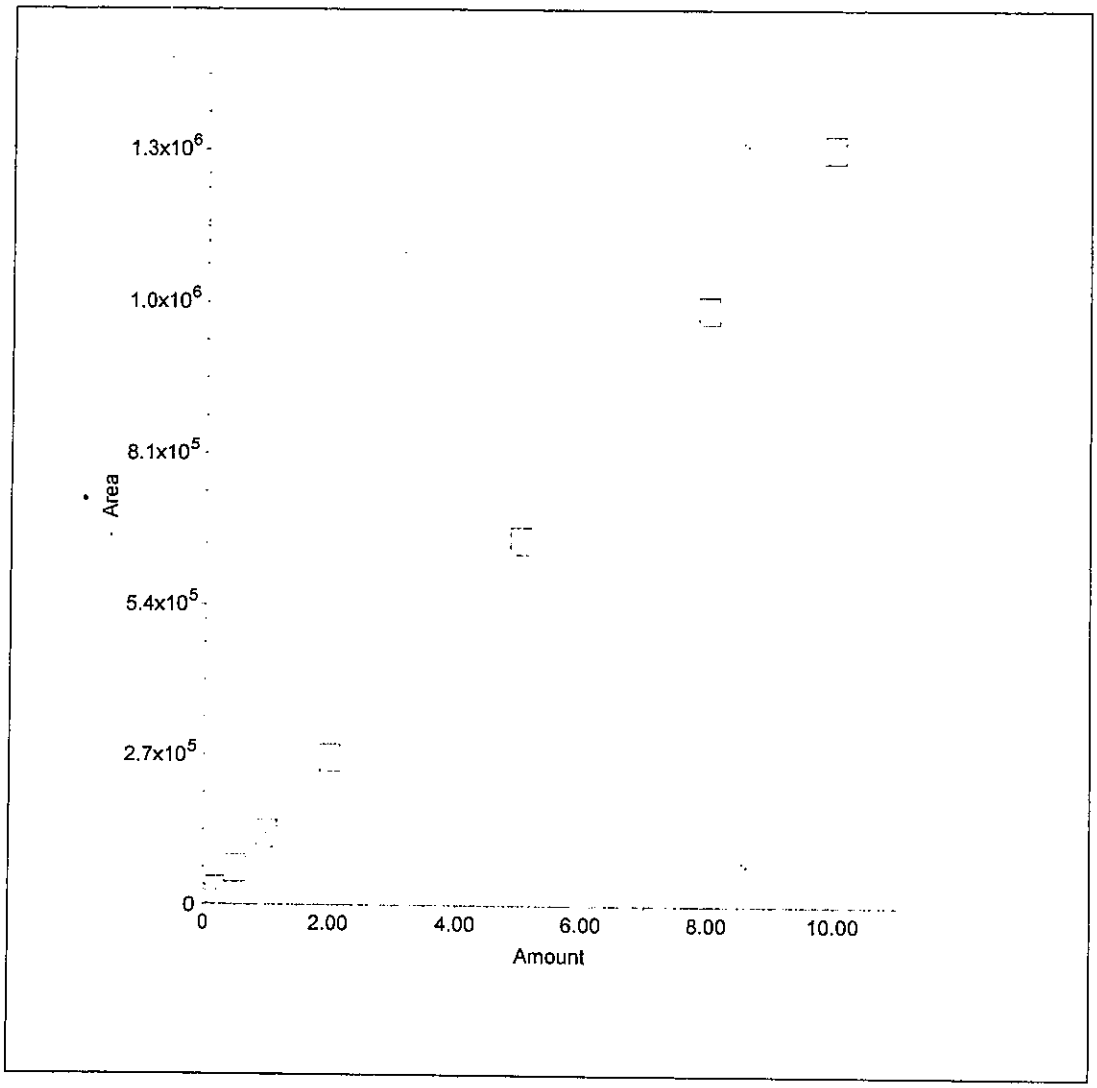
RP 10/27/09

6. Component:Phosphate
Standard:External Fit Type:Linear
Origin:Ignore Calibration:Area
r^2=0.999813
Amt=6.16e-006*Resp+0.04796



RP 10/27/09

7. Component:Sulfate
Standard:External Fit Type:Linear
Origin:Ignore Calibration:Area
r^2=0.999799
Amt=7.396e-006*Resp+0.03546



RP 10/27/09

Columbia Analytical Services – Rochester, New York

Ion Chromatography Cover Sheet

Instrument: Dionex DX-120 Ion Chromatogram – IC # 6

Column: Dionex AS-14/AG-14, 10/09/09

Curve Date: 10/26/09 **Loop size:** 50 uL

Analyst: RP **Analysis Date:** 10/26/09

Is copy of LCS attached to run? (YES) NO

Standards Prep Dates & Log ID's:

Std Type	*Prep Date*	*Log ID*		*Std Type*	*Prep Date*	*Log ID*
Calibration Intermediate	10/06/09	WC940011B		Working Calibration Stds	10/22/09	WC940021C
LCS / MS Intermediate	10/06/09	WC940011B		Working LCS/MS Standard	10/26/09	WC940052P
ICV Intermediate	10/09/09	WC940012H		Working ICV Standard	10/26/09	WC940027L
CCV Intermediate	10/9/09	WC940012H		Working CCV Standard	10/26/09	WC940027L

Comments:

Original retention times based on ICV:
Fluoride 2.90 Bromide 6.02
Chloride 4.05 Nitrate 7.03 Sulfate 11.43
Nitrite 4.83 Phosphate 9.55

CALIBRATION INTERMEDIATE STOCK PREP
(used for Calibration and LCS / MS)

Analyte	1000ppm Stock ID	Conc. mg/L	mLs Stock	Final Vol. mL	Final Conc. mg/L	Analyst	Date Prepped	Lot ID	Exp. Date
F	WC920636	1000	10	200	50	RP	9/10/09	A	1/24/10
Cl	WC72001E	1000	20		100	RP	10/6/09	B	1/24/10
NO2	WC72002F	1000	10		50			C	
Br	WC920634	1000	10		50			D	
NO3	WC90001I	1000	10		50		RP 10/22/09	E	
OPO4	WC72002?	1000	10		50			F	
SO4	WC72002U	1000	20		100			G	

ICV/CCV INTERMEDIATE STOCK PREP

Analyte	ICV/CCV Stock ID	Conc. mg/L	mLs Stock	Final Vol. mL	Final Conc. mg/L	Analyst	Date Prepped	Lot ID	Exp. Date
F	WC85284I	1000	4.0	1000	4.00	RP	9/22/09	H	1/24/10
Cl	WC72006E	650	10		6.50	CS	10/9/09	I	1/26/10
NO2	WC72007G	180	20		3.60			J	
Br	WC85037D	1000	4.0		4.00			K	
NO3	WC900066	180	20		3.60	CS	10/13/09	L	
OPO4	WC72007S	180	20		3.60			M	
SO4	WC72007U	3200	2.0		6.40			N	

CALIBRATION INTERMEDIATE STOCK PREP
(used for Calibration and LCS / MS)

Analyte	1000ppm Stock ID	Conc. mg/L	mLs Stock	Final Vol. mL	Final Conc. mg/L	Analyst	Date Prepped	Lot ID	Exp. Date
F	WC92063G	1000	10	200	50	RP	10/28/09	A	1/26/10
Cl	WC72001E	1000	20		100			B	
NO2	WC72002F	1000	10		50			C	
Br	WC92063H	1000	10		50			D	
NO3	WC90001F	1000	10		50			E	
OPO4	WC72002P	1000	10		50			F	
SO4	WC72002U	1000	20		100			G	

ICV/CCV INTERMEDIATE STOCK PREP

Analyte	ICV/CCV Stock ID	Conc. mg/L	mLs Stock	Final Vol. mL	Final Conc. mg/L	Analyst	Date Prepped	Lot ID	Exp. Date
F	WC85284I	1000	4.0	1000	4.00	CS	10/9/09	H	11/26/10
Cl	WC72006E	650	10		6.50			I	
NO2	WC72007G	180	20		3.60			J	
Br	WC92085I	1000	4.0		4.00			K	
NO3	WC90006G	180	20		3.60			L	
OPO4	WC72007S	180	20		3.60			M	
SO4	WC72007U	3200	2.0		6.40			N	

CALIBRATION STANDARDS PREP

(Stocks delivered using Volumetric glassware and brought to volume with DI. Expire after 7 days.)

Std #	mLs Intermediate Stock	Final Vol. mLs	Final Std Conc. (mg/L) F	Cl	NO2	Br	NO3	OPO4	SO4	Calibration Intermediate Stock ID	Analyst/ Date Prepped	Lot ID	Exp. Date	Matrix H2SO4 / NaOH / DI	H2SO4 / NaOH Lot #
9	10.0	100	5.0	10.0	5.0	5.0	5.0	5.0	10.0	WC94091A	RP / 10/1/09	A	10/8/09	H_2SO_4	WC85294I
8	8.0	100	4.0	8.0	4.0	4.0	4.0	4.0	8.0	WC94011B	RP / 10/09/09	B	10/17/09	DI	
7	5.0	100	2.5	5.0	2.5	2.5	2.5	2.5	5.0	WC940011B	RP 10/22/09	C	10/29/09	DI	
6	2.0	100	1.0	2.0	1.0	1.0	1.0	1.0	2.0			D			
5	1.0	100	0.5	1.0	0.50	0.50	0.50	0.50	1.0			D			
4	0.5	100	0.25	0.50	0.25	0.25	0.25	0.25	0.50			F			
3	0.2	100	0.10	0.20	0.10	0.10	0.10	0.10	0.20			G			
2	0.1	100	0.05	0.10	0.05	0.05	0.05	0.05	0.10			H			
1	0.0	100	0.0	0.0	0.0	0.0	0.0	0.0	0.0			I			
												J			
												K			
												L			
												M			
												N			
												O			
												P			
												Q			

ICV / CCV PREP

(A 1:2 dilution of the Reference Intermediate Stock is done daily)

Analyte	ICV / CCV Intermediate Stock ID	Conc. mg/L	mLs Stock	Final Vol. mL	Final Conc. mg/L	Analyst/ Date Prepped	Lot ID	Exp. Date CS 10/16/09	Matrix H2SO4 / NaOH / DI	H2SO4 / NaOH Lot #
F	WC9401ZH	4.00	5.0	10	2.00	RP 10/10/09	A	10/17/09	DI	
Cl		6.50			3.25	RP 10/12/09	B	10/19/09	DI	
NO2		3.60			1.80	RP 10/15/09	C	10/22/09	DI	
Br		4.00			2.00	CS 10/16/09	D	10/21/09	DI	
NO3		3.60			1.80	CS 10/15/09	E	10/22/09	DI	
OPO4		3.60			1.80	CS 10/16/09	F	10/23/09	DI	
SO4		6.40			3.20	CS 10/19/09	G	10/26/09	DI	
						RP 10/20/09	H	10/20/09	DI	
						RP 10/21/09	I	10/21/09	DI	
						RP 10/22/09	J	10/22/09	DI	
						RP 10/23/09	K	10/23/09	DI	
						RP 10/20/09	L	10/20/09	DI	
						RP 10/27/09	M	10/27/09	DI	
							N			
							O			
							P			
							Q			

LCS PREP

(Stocks delivered using Volumetric glassware and brought to volume with DI. LCS expires after 7 days; if NO2 is needed, LCS must be prepared daily.)

(MS prepared fresh daily using same volume of intermediate stock added to 100mls sample. MS not prepared volumetrically.)

Analyte	Calibration Intermediate Stock ID	Intermediate Stock Conc (mg/L)	mLs Intermediate Stock	Final Vol. mLs	Final Conc. (mg/L)	Analyst/ Date Prepped	Lot ID	Exp. Date	Matrix H2SO4 / NaOH / DI	H2SO4 / NaOH Lot #
F	WC9408	50	2.0	100	1.0	RP 10/6/09	A	10/13/09	DI	
Cl	011B	100			2.0	RP 10/7/09	B	10/14/09	DI	
NO2		50			1.0	RP 10/8/09	C	10/15/09	DI	
Br		50			1.0	RP 10/9/09	D	10/16/09	DI	
NO3		50			1.0	RP 10/10/09	E	10/17/09	DI	
OPO4		50			1.0	RP 10/12/09	F	10/19/09	DI	
SO4		100			2.0	RP 10/13/09	G	10/20/09	DI	
						CS 10/14/09	H	10/21/09	DI	
						CS 10/15/09	I	10/22/09	DI	
						CS 10/16/09	J	10/23/09	DI	
						CS 10/19/09	K	10/26/09	DI	
						RP 10/20/09	L	10/27/09	DI	
						RP 10/21/09	M	10/28/09	DI	
						RP 10/22/09	N	10/29/09	DI	
						RP 10/23/09	O	10/30/09	DI	
						RP 10/26/09	P	11/2/09	DI	
						RP 10/27/09	Q	11/3/09	DI	
							R			

Analytical Results Summary

Instrument Name: R-IC-03 **Analyst:** RPAWL **Analysis Lot:** 179914 **Method/Testcode:** 9056/Chloride

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt	Final Result	Dil	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
RQ0911594-01	Chloride	MB		Water	0.00 mg/L	10 mL	0.20 mg/L U	1	0.20			11/18/09 05:32:30	N	IV
RQ0911594-01	Sulfate	MB		Water	0.00 mg/L	10 mL	0.20 mg/L U	1	0.20			11/18/09 05:32:30	N	IV
RQ0911594-02	Chloride	LCS		Water	1.89 mg/L	10 mL	1.89 mg/L	1	0.20	95		11/18/09 05:46:35	N	IV
RQ0911594-02	Sulfate	LCS		Water	1.82 mg/L	10 mL	1.82 mg/L	1	0.20	91		11/18/09 05:46:35	N	IV
R0906477-001	Chloride	N/A		Water	406.15 mg/L	10 mL	406 mg/L	100	20			11/18/09 06:00:40	N	IV
R0906477-001	Sulfate	N/A		Water	2085.51 mg/L	10 mL	2090 mg/L	400	80			11/18/09 06:15:19	N	IV

I indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

11-17-09 #3

System	Ident	Vial	Volume	Dilution	Amount	Internal Standard Amount	Level	Injections	Done	Sample Info 1	Sample Info 2
metrohm.smt	CCV	146	1.0	1.0	1.0	100.0	0	1	1	9056/300.0	
metrohm.smt	CCB	147	1.0	1.0	1.0	100.0	0	1	1	9056/300.0	
metrohm.smt	LCS	148	1.0	1.0	1.0	100.0	0	1	1	9056/300.0	
metrohm.smt	R0906426-006	4	1.0	40.0	1.0	100.0	0	1	1	C (300.0)	
metrohm.smt	R0906426-010	5	1.0	40.0	1.0	100.0	0	1	1	C (300.0)	
metrohm.smt	R0906426-011	6	1.0	40.0	1.0	100.0	0	1	1	C (300.0)	
metrohm.smt	R0906426-012	7	1.0	40.0	1.0	100.0	0	1	1	C (300.0)	
metrohm.smt	R0906426-013	8	1.0	20.0	1.0	100.0	0	1	1	C (300.0)	
metrohm.smt	R0906426-015	9	1.0	20.0	1.0	100.0	0	1	1	C (300.0)	
metrohm.smt	R0906426-016	10	1.0	20.0	1.0	100.0	0	1	1	C (300.0)	
metrohm.smt	R0906426-017	11	1.0	40.0	1.0	100.0	0	1	1	C (300.0)	
metrohm.smt	R0906426-018	12	1.0	20.0	1.0	100.0	0	1	1	C (300.0)	
metrohm.smt	CCV	13	1.0	1.0	1.0	100.0	0	1	1	9056/300.0	
metrohm.smt	CCB	14	1.0	1.0	1.0	100.0	0	1	1	9056/300.0	
metrohm.smt	R0906420-019	15	1.0	20.0	1.0	100.0	0	1	1	C (300.0)	
metrohm.smt	R0906420-020	16	1.0	40.0	1.0	100.0	0	1	1	C (300.0)	
metrohm.smt	R0906420-020 DUP	17	1.0	40.0	1.0	100.0	0	1	1	C (300.0)	
metrohm.smt	R0906420-020 SPK	18	1.0	40.0	1.0	100.0	0	1	1	C (300.0)	
metrohm.smt	R0906420-021	19	1.0	20.0	1.0	100.0	0	1	1	C (300.0)	
metrohm.smt	R0906420-022	20	1.0	40.0	1.0	100.0	0	1	1	C (300.0)	
metrohm.smt	R0906420-023	21	1.0	20.0	1.0	100.0	0	1	1	C (300.0)	
metrohm.smt	R0906420-024	22	1.0	20.0	1.0	100.0	0	1	1	C (300.0)	
metrohm.smt	R0906420-025	23	1.0	40.0	1.0	100.0	0	1	1	C (300.0)	
metrohm.smt	R0906420-026	24	1.0	40.0	1.0	100.0	0	1	1	C (300.0)	
metrohm.smt	CCV	25	1.0	1.0	1.0	100.0	0	1	1	9056/300.0	
metrohm.smt	CCB	26	1.0	1.0	1.0	100.0	0	1	1	9056/300.0	
metrohm.smt	LCS	27	1.0	1.0	1.0	100.0	0	1	1	9056/300.0	
metrohm.smt	R0906420-028	28	1.0	40.0	1.0	100.0	0	1	1	C (300.0)	
metrohm.smt	R0906420-031	29	1.0	20.0	1.0	100.0	0	1	1	C (300.0)	
metrohm.smt	R0906420-038	30	1.0	20.0	1.0	100.0	0	1	1	C (300.0)	
metrohm.smt	R0906420-039	31	1.0	40.0	1.0	100.0	0	1	1	C (300.0)	
metrohm.smt	R0906420-040	32	1.0	100.0	1.0	100.0	0	1	1	C (300.0)	
metrohm.smt	R0906328-002	33	1.0	40.0	1.0	100.0	0	1	1	C (300.0)	
metrohm.smt	R0906328-002 DUP	34	1.0	40.0	1.0	100.0	0	1	1	C (300.0)	
metrohm.smt	R0906328-002 SPK	35	1.0	40.0	1.0	100.0	0	1	1	C (300.0)	
metrohm.smt	R0906328-002	36	1.0	100.0	1.0	100.0	0	1	1	S (300.0)	
metrohm.smt	CCV	37	1.0	1.0	1.0	100.0	0	1	1	9056/300.0	
metrohm.smt	CCB	38	1.0	1.0	1.0	100.0	0	1	1	9056/300.0	
metrohm.smt	R0906328-003	39	1.0	100.0	1.0	100.0	0	1	1	CS (300.0)	
metrohm.smt	R0906328-004	40	1.0	100.0	1.0	100.0	0	1	1	C (300.0)	
metrohm.smt	R0906328-004	41	1.0	40.0	1.0	100.0	0	1	1	S (300.0)	
metrohm.smt	R0906328-005	42	1.0	20.0	1.0	100.0	0	1	1	CS (300.0)	
metrohm.smt	R0906328-006	43	1.0	100.0	1.0	100.0	0	1	1	C (300.0)	
metrohm.smt	R0906328-015	44	1.0	40.0	1.0	100.0	0	1	1	C (300.0)	
metrohm.smt	R0906328-015	45	1.0	20.0	1.0	100.0	0	1	1	S (300.0)	
metrohm.smt	R0906328-016	46	1.0	200.0	1.0	100.0	0	1	1	C (300.0)	
metrohm.smt	R0906328-016	47	1.0	40.0	1.0	100.0	0	1	1	S (300.0)	
metrohm.smt	R0906328-016 DUP	48	1.0	40.0	1.0	100.0	0	1	1	S (300.0)	
metrohm.smt	CCV	49	1.0	1.0	1.0	100.0	0	1	1	9056/300.0	
metrohm.smt	CCB	50	1.0	1.0	1.0	100.0	0	1	1	9056/300.0	
metrohm.smt	LCS	51	1.0	1.0	1.0	100.0	0	1	1	9056/300.0	

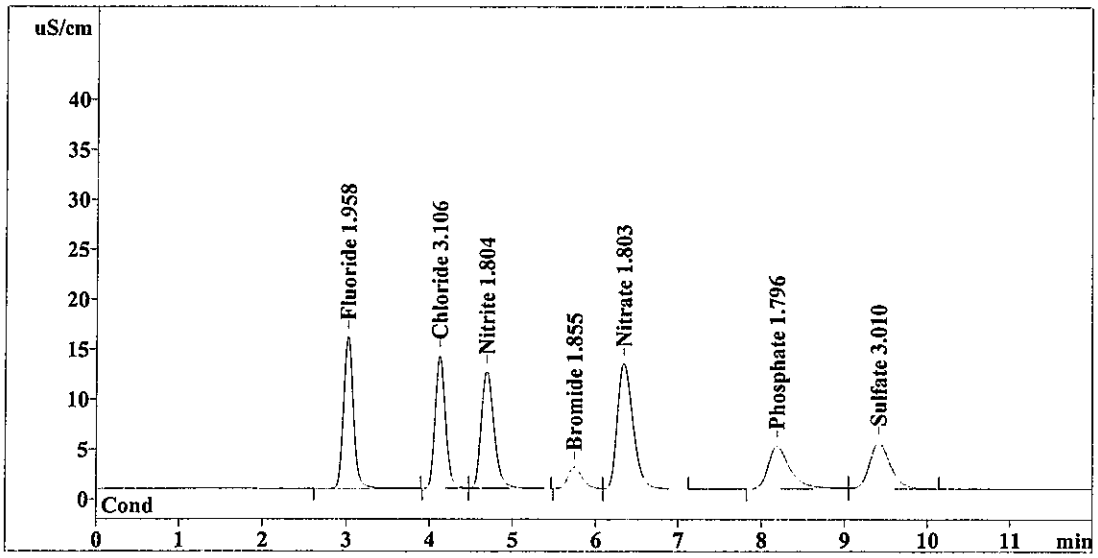
Analyst: R. Pawl
Pipets: Mine
Lucy

3-Copies
~~R6420~~ AM 11/23/09
R6328
R6436
R6477

Reviewed & Approved
By:
Date: 11/23/09

System	Ident	Vial	Volume	Dilution	Amount	Internal Standard Amount	Level	Injections	Done	Sample Info 1	Sample Info 2
metrohm.smt	R0906328-016 SPK	52	1.0	40.0	1.0	100.0	0	1	1	S (300.0)	
metrohm.smt	R0906477-001	53	1.0	40.0	1.0	100.0	0	1	1	CS (300.0)	
metrohm.smt	R0906477-001 DUP	54	1.0	40.0	1.0	100.0	0	1	1	CS (300.0)	
metrohm.smt	R0906477-001 SPK	55	1.0	40.0	1.0	100.0	0	1	1	CS (300.0)	
metrohm.smt	R0906477-002	56	1.0	40.0	1.0	100.0	0	1	1	S (300.0)	
metrohm.smt	R0906174-003	57	1.0	40.0	1.0	100.0	0	1	1	S (300.0)	
metrohm.smt	R0906174-003 DUP	58	1.0	40.0	1.0	100.0	0	1	1	S (300.0)	
metrohm.smt	R0906174-003 SPK	59	1.0	40.0	1.0	100.0	0	1	1	S (300.0)	
metrohm.smt	R0906436-008	60	1.0	40.0	1.0	100.0	0	1	1	S (300.0)	
metrohm.smt	CCV	61	1.0	1.0	1.0	100.0	0	1	1	9056/300.0	
metrohm.smt	CCB	62	1.0	1.0	1.0	100.0	0	1	1	9056/300.0	
metrohm.smt	R0906436-011	63	1.0	20.0	1.0	100.0	0	1	1	S (300.0)	
metrohm.smt	R0906436-014	64	1.0	20.0	1.0	100.0	0	1	1	S (300.0)	
metrohm.smt	R0906474-001	65	1.0	10.0	1.0	100.0	0	1	1	S (300.0)	
metrohm.smt	R0906474-001 DUP	66	1.0	10.0	1.0	100.0	0	1	1	S (300.0)	
metrohm.smt	R0906474-001 SPK	67	1.0	10.0	1.0	100.0	0	1	1	S (300.0)	
metrohm.smt	R0906504-001	68	1.0	10.0	1.0	100.0	0	1	1	S (300.0)	
metrohm.smt	R0906504-002	69	1.0	10.0	1.0	100.0	0	1	1	S (300.0)	
metrohm.smt	R0906504-003	70	1.0	10.0	1.0	100.0	0	1	1	S (300.0)	
metrohm.smt	R0906504-003 DUP	71	1.0	10.0	1.0	100.0	0	1	1	S (300.0)	
metrohm.smt	R0906504-003 SPK	72	1.0	10.0	1.0	100.0	0	1	1	S (300.0)	
metrohm.smt	CCV	73	1.0	1.0	1.0	100.0	0	1	1	9056/300.0	
metrohm.smt	CCB	74	1.0	1.0	1.0	100.0	0	1	1	9056/300.0	
metrohm.smt	LCS	75	1.0	1.0	1.0	100.0	0	1	1	9056/300.0	
metrohm.smt	R0906477-001	76	1.0	100.0	1.0	100.0	0	1	1	S (9056)	
metrohm.smt	R0906477-001	77	1.0	400.0	1.0	100.0	0	1	1	C (9056)	
metrohm.smt	CCV	78	1.0	1.0	1.0	100.0	0	1	1	9056/300.0	
metrohm.smt	CCB	79	1.0	1.0	1.0	100.0	0	1	1	9056/300.0	

Report date:	11/17/2009 12:00:22 PM
Printed by:	User
Ident:	CCV
Analysis from:	11/17/2009 11:48:24 AM
File:	TB171148.CHW Last save: 11/17/2009 12:00:22 P
Method:	3-111609.mtw Last save: 11/17/2009 11:45:31 A
Run operator:	User
Analysis number:	10926
SAMPLE:	9056/300.0
:	
Vial number:	146
Volume:	1.0 µL
Dilution:	1.00
Amount:	1.0000
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)
Size:	4.0 x 100 mm
Number:	7503293
Part.size:	5.0 µm



Quantitation method: Custom

No	Retention min	Area uS/cm*sec		Conc. mg/L	Name
1	3.02	128.499	OK	1.958	Fluoride
2	4.12	116.498		3.106	Chloride
3	4.69	128.104		1.804	Nitrite
4	5.74	25.763		1.855	Bromide
5	6.34	166.683		1.803	Nitrate
6	8.19	78.299		1.796	Phosphate
7	9.41	79.717		3.010	Sulfate
7	12.00	723.564		15.332	

RR 11/18/09

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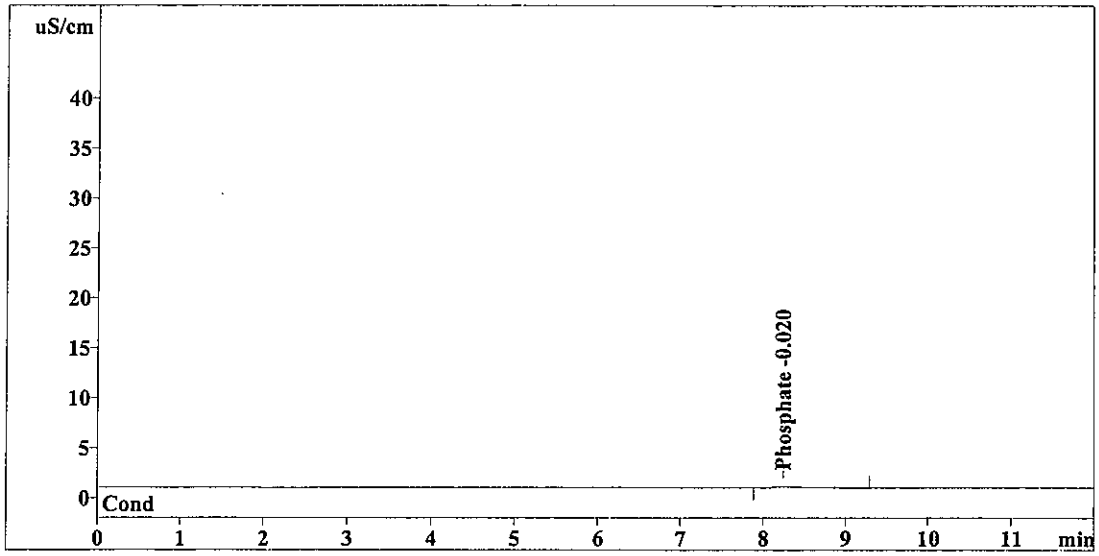
Report date:	11/17/2009 12:14:27 PM		
Printed by:	User		
Ident:	CCB		
Analysis from:	11/17/2009 12:02:29 PM		
File:	TB171202.CHW	Last save:	11/17/2009 12:14:27 P
Method:	3-111609.mtw	Last save:	11/17/2009 11:45:31 A
Run operator:	User		
Analysis number:	10927		
SAMPLE:	9056/300.0		
:			
Vial number:	147		
Volume:	1.0 µL		
Dilution:	1.00		
Amount:	1.0000		
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)		
Size:	4.0 x 100 mm		
Number:	7503293		
Part.size:	5.0 µm		



Quantitation method: Custom

No	Retention min	Area uS/cm*sec	Conc. mg/L	Name
1	0.00	0.000	0.000	Fluoride
2	0.00	0.000	0.000	Chloride
3	0.00	0.000	0.000	Nitrite
4	0.00	0.000	0.000	Bromide
5	0.00	0.000	0.000	Nitrate
6	8.25	2.433	-0.020	Phosphate
7	0.00	0.000	0.000	Sulfate
7	12.00	2.433	0.020	

RP 11/18/09

This report has been created by IC Net
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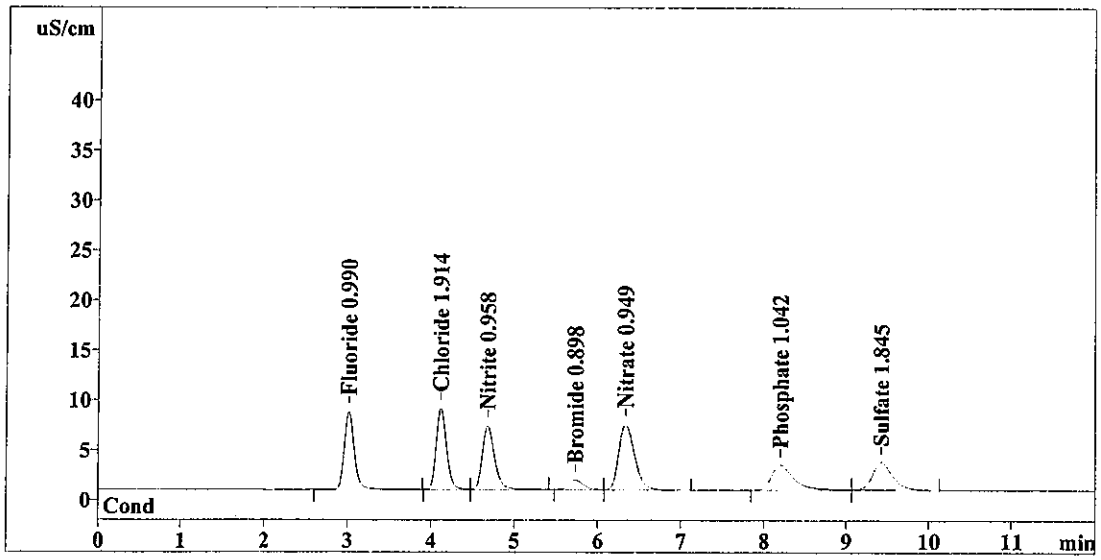
Report date:	11/17/2009 12:28:32 PM		
Printed by:	User		
Ident:	LCS		
Analysis from:	11/17/2009 12:16:34 PM		
File:	TB171216.CHW	Last save:	11/17/2009 12:28:33 P
Method:	3-111609.mtw	Last save:	11/17/2009 11:45:31 A
Run operator:	User		
Analysis number:	10928		
SAMPLE:	9056/300.0		
:			
Vial number:	148		
Volume:	1.0 µL		
Dilution:	1.00		
Amount:	1.0000		
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)		
Size:	4.0 x 100 mm		
Number:	7503293		
Part.size:	5.0 µm		



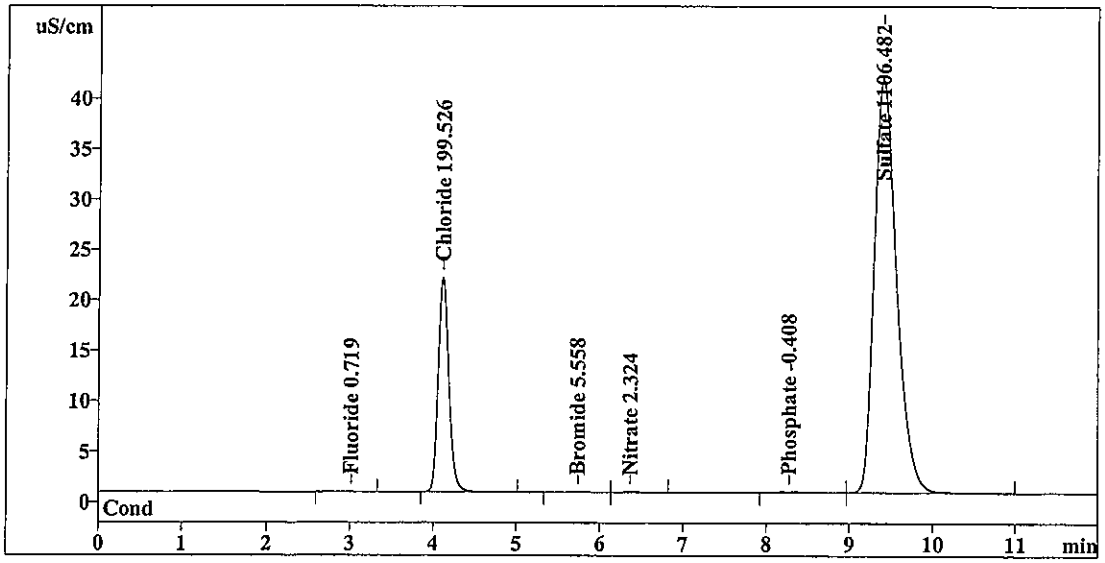
Quantitation method: Custom

No	Retention min	Area uS/cm*sec	Conc. mg/L	Name
1	3.01	64.520	0.990	Fluoride
2	4.12	70.512	1.914	Chloride
3	4.68	65.712	0.958	Nitrite
4	5.74	11.709	0.898	Bromide
5	6.34	85.240	0.949	Nitrate
6	8.20	46.780	1.042	Phosphate
7	9.42	47.350	1.845	Sulfate
7	12.00	391.823	8.595	

RP 11/18/09

This report has been created by IC Net
METROHM LTD

Report date:	11/18/2009 8:17:56 AM		
Printed by:	User		
Ident:	R0906426-006		
Analysis from:	11/17/2009 12:57:06 PM		
File:	tb171257.CHW	Last save:	11/18/2009 8:17:56 AM
Method:	3-111609.mtw	Last save:	11/17/2009 11:45:31 A
Run operator:	User		
Analysis number:	10929		
SAMPLE:	C (300.0)		
:			
Vial number:	4		
Volume:	1.0 µL		
Dilution:	40.00		
Amount:	1.0000		
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)		
Size:	4.0 x 100 mm		
Number:	7503293		
Part.size:	5.0 µm		



Quantitation method: Custom

No	Retention min	Area uS/cm*sec	Conc. mg/L	Name
1	3.02	0.320	0.719	Fluoride
2	4.12	189.115	199.526	Chloride
3	0.00	0.000	0.000	Nitrite
4	5.74	0.579	5.558	Bromide
5	6.37	0.328	2.324	Nitrate
6	8.27	2.838	-0.408	Phosphate
7	9.41	764.968	1106.482	Sulfate
7	12.00	958.147	1315.018	

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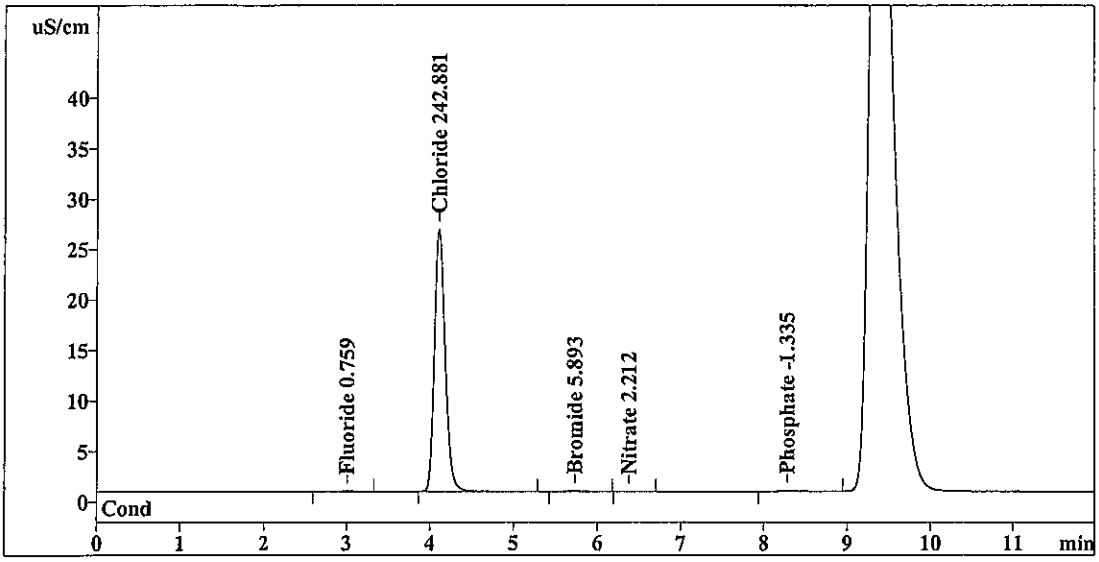
RR 11/18/09

Report date:	11/18/2009 8:17:57 AM		
Printed by:	User		
Ident:	R0906426-010		
Analysis from:	11/17/2009 1:11:11 PM		
File:	tb171311.CHW	Last save:	11/18/2009 8:17:57 AM
Method:	3-111609.mtw	Last save:	11/17/2009 11:45:31 A
Run operator:	User		
Analysis number:	10930		
SAMPLE:	C (300.0)		
:			
Vial number:	5		
Volume:	1.0 µL		
Dilution:	40.00		
Amount:	1.0000		
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)		
Size:	4.0 x 100 mm		
Number:	7503293		
Part.size:	5.0 µm		



Quantitation method: Custom

No	Retention min	Area uS/cm*sec	Conc. mg/L	Name
1	3.01	0.385	0.759	Fluoride
2	4.12	230.929	242.881	Chloride
3	0.00	0.000	0.000	Nitrite
4	5.73	0.702	5.893	Bromide
5	6.38	0.061	2.212	Nitrate
6	8.29	1.870	-1.335	Phosphate
7	0.00	0.000	0.000	Sulfate
7	12.00	233.947	253.080	

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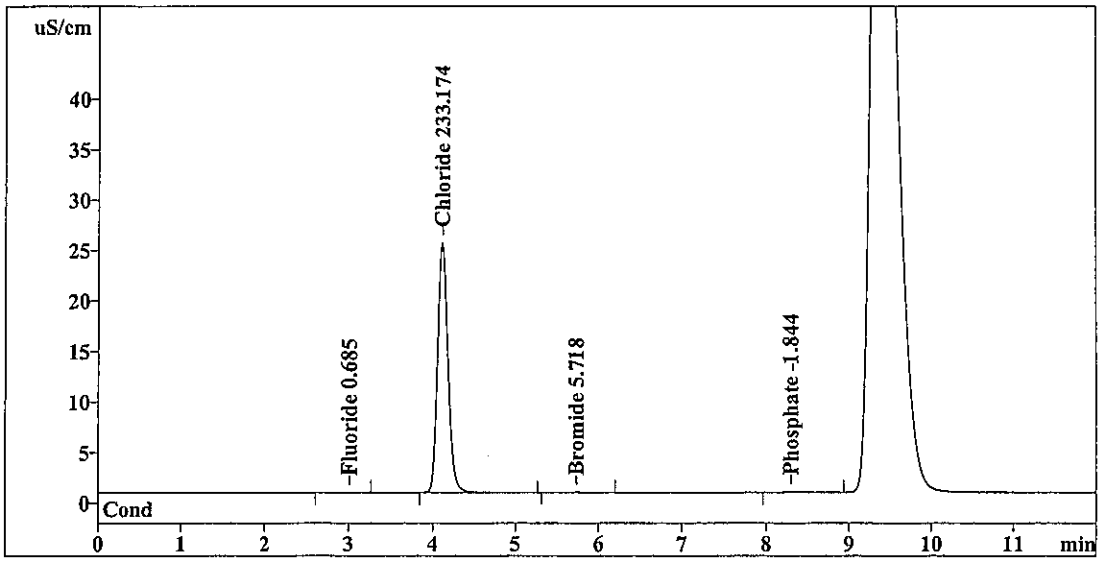
METROHM LTD

Report date:	11/18/2009 8:17:57 AM
Printed by:	User
Ident:	R0906426-011
Analysis from:	11/17/2009 1:25:16 PM
File:	tb171325.CHW Last save: 11/18/2009 8:17:58 AM
Method:	3-111609.mtw Last save: 11/17/2009 11:45:31 A
Run operator:	User
Analysis number:	10931
SAMPLE:	C (300.0)
:	
Vial number:	6
Volume:	1.0 µL
Dilution:	40.00
Amount:	1.0000
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)
Size:	4.0 x 100 mm
Number:	7503293
Part.size:	5.0 µm

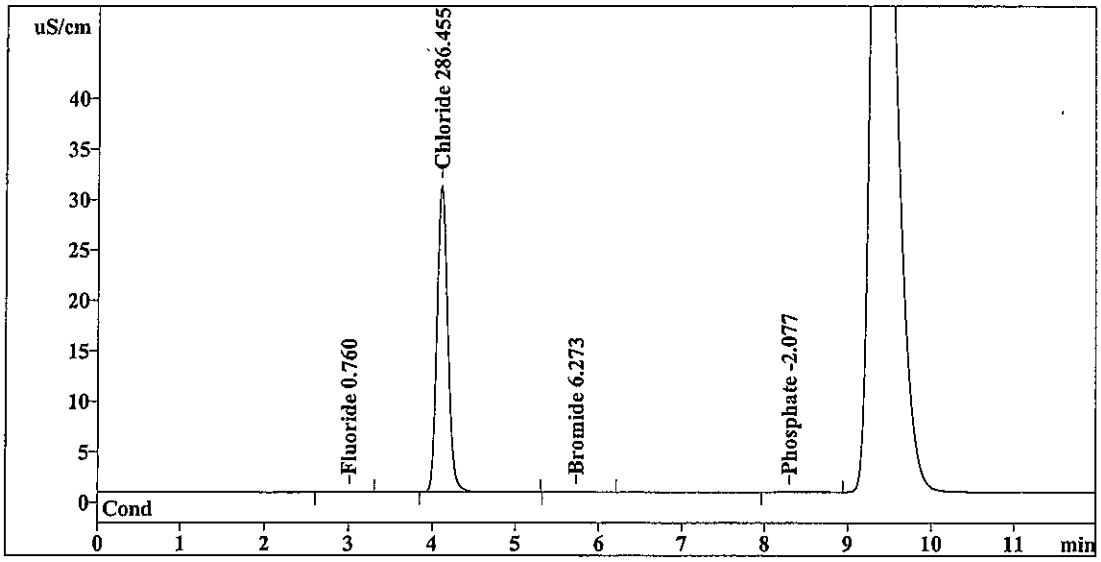


Quantitation method: Custom

No	Retention min	Area uS/cm*sec	Conc. mg/L	Name
1	3.01	0.263	0.685	Fluoride
2	4.12	221.567	233.174	Chloride
3	0.00	0.000	0.000	Nitrite
4	5.74	0.637	5.718	Bromide
5	0.00	0.000	0.000	Nitrate
6	8.31	1.338	-1.844	Phosphate
7	0.00	0.000	0.000	Sulfate
7	12.00	223.807	241.422	

This report has been created by IC Net
METROHM LTD

Report date:	11/18/2009 8:17:58 AM
Printed by:	User
Ident:	R0906420-012
Analysis from:	11/17/2009 1:39:21 PM
File:	tb171339.CHW Last save: 11/18/2009 8:17:58 AM
Method:	3-111609.mtw Last save: 11/17/2009 11:45:31 A
Run operator:	User
Analysis number:	10932
SAMPLE:	C (300.0)
Vial number:	7
Volume:	1.0 µL
Dilution:	40.00
Amount:	1.0000
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)
Size:	4.0 x 100 mm
Number:	7503293
Part.size:	5.0 µm



Quantitation method: Custom

No	Retention min	Area uS/cm*sec	Conc. mg/L	Name
1	3.01	0.387	0.760	Fluoride
2	4.12	272.956	286.455	Chloride
3	0.00	0.000	0.000	Nitrite
4	5.73	0.841	6.273	Bromide
5	0.00	0.000	0.000	Nitrate
6	8.30	1.095	-2.077	Phosphate
7	0.00	0.000	0.000	Sulfate
7	12.00	275.279	295.565	

This report has been created by IC Net
METROHM LTD

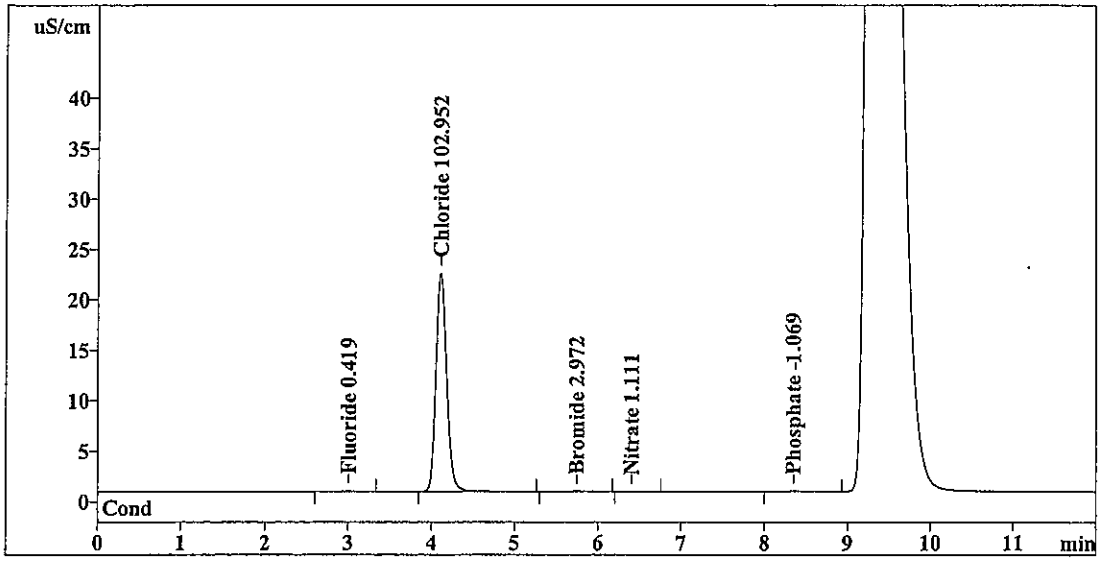
Report date: 11/18/2009 8:17:58 AM
Printed by: User

Ident: R090642 013 11/18/09
Analysis from: 11/17/2009 1:53:27 PM
File: tb171353.CHW Last save: 11/18/2009 8:17:59 AM

Method: 3-111609.mtw Last save: 11/17/2009 11:45:31 A
Run operator: User
Analysis number: 10933

SAMPLE: C (300.0)
:
Vial number: 8
Volume: 1.0 µL
Dilution: 20.00
Amount: 1.0000

COLUMN: METROSEP A SUPP 5 - 100 (6.1006.510)
Size: 4.0 x 100 mm
Number: 7503293
Part.size: 5.0 µm



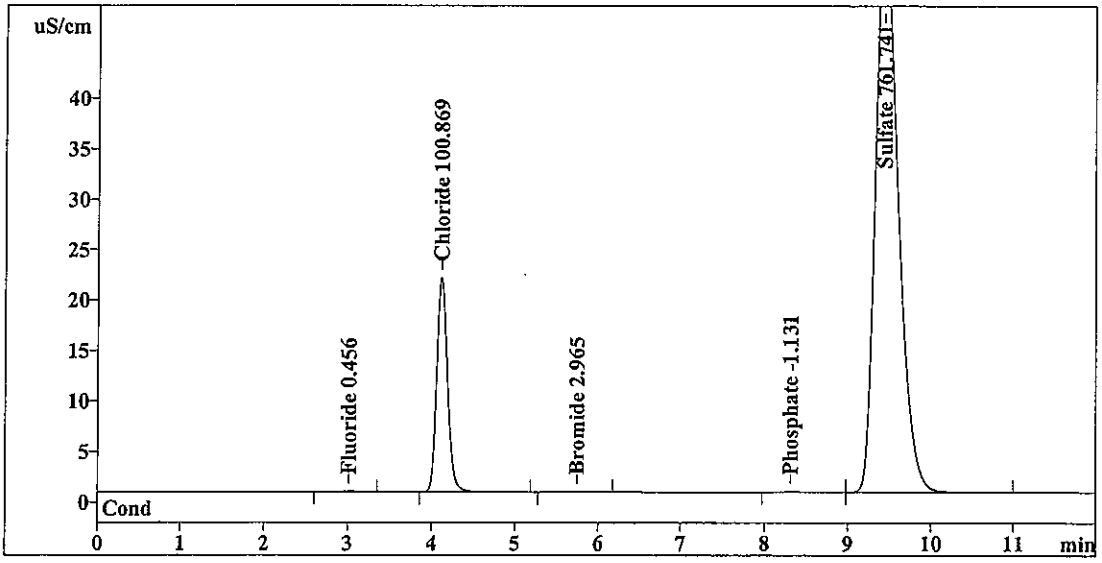
Quantitation method: Custom

No	Retention min	Area uS/cm*sec		Conc. mg/L	Name
1	3.01	0.516		0.419	Fluoride
2	4.11	195.267	OK	102.952	Chloride
3	0.00	0.000		0.000	Nitrite
4	5.75	0.721		2.972	Bromide
5	6.41	0.083		1.111	Nitrate
6	8.36	1.032		-1.069	Phosphate
7	0.00	0.000		0.000	Sulfate
7	12.00	197.618		108.524	

This report has been created by IC Net
METROHM LTD

RP 11/18/09

Report date:	11/18/2009 8:17:59 AM		
Printed by:	User		
Ident:	R0906428-015		
Analysis from:	11/17/2009 2:07:59 PM		
File:	tb171407.CHW	Last save:	11/18/2009 8:17:59 AM
Method:	3-111609.mtw	Last save:	11/17/2009 11:45:31 A
Run operator:	User		
Analysis number:	10934		
SAMPLE:	C (300.0)		
Vial number:	9		
Volume:	1.0 µL		
Dilution:	20.00		
Amount:	1.0000		
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)		
Size:	4.0 x 100 mm		
Number:	7503293		
Part.size:	5.0 µm		



Quantitation method: Custom

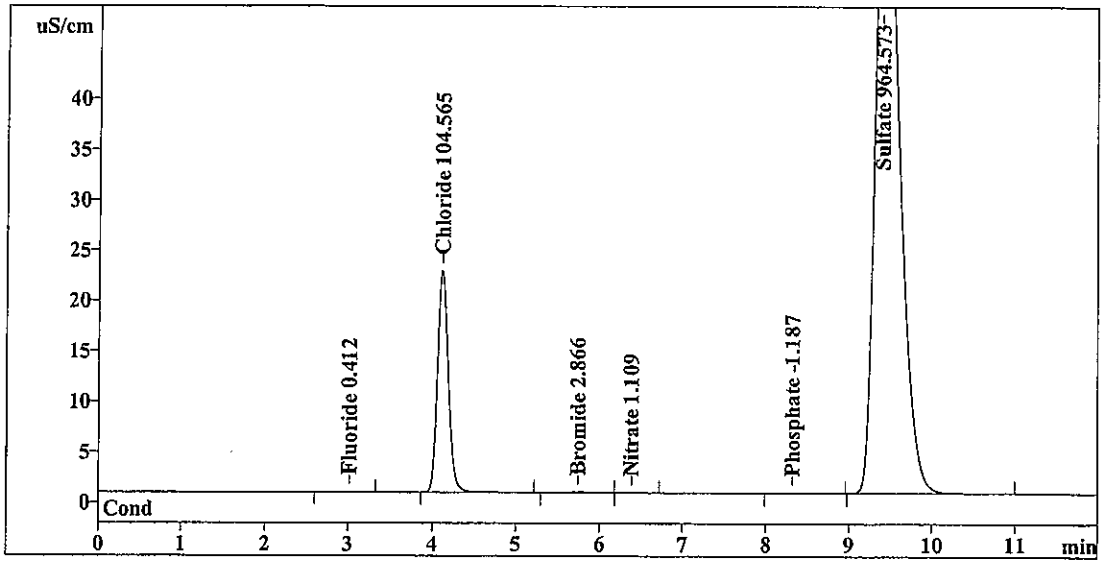
No	Retention min	Area uS/cm*sec	Conc. mg/L	Name
1	3.01	0.638	0.456	Fluoride
2	4.12	191.248	100.869	Chloride
3	0.00	0.000	0.000	Nitrite
4	5.75	0.715	2.965	Bromide
5	0.00	0.000	0.000	Nitrate
6	8.32	0.901	-1.131	Phosphate
7	9.44	1054.747	761.741	Sulfate
7	12.00	1248.249	867.162	

OK

RP 11/18/09

This report has been created by IC Net
METROHM LTD

Report date:	11/17/2009 2:34:02 PM		
Printed by:	User		
Ident:	R0906428-016 RP 11/18/09		
Analysis from:	11/17/2009 2:22:04 PM		
File:	TB171422.CHW	Last save:	11/17/2009 2:34:03 PM
Method:	3-111609.mtw	Last save:	11/17/2009 11:45:31 A
Run operator:	User		
Analysis number:	10935		
SAMPLE:	C (300.0)		
Vial number:	10		
Volume:	1.0 µL		
Dilution:	20.00		
Amount:	1.0000		
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)		
Size:	4.0 x 100 mm		
Number:	7503293		
Part.size:	5.0 µm		



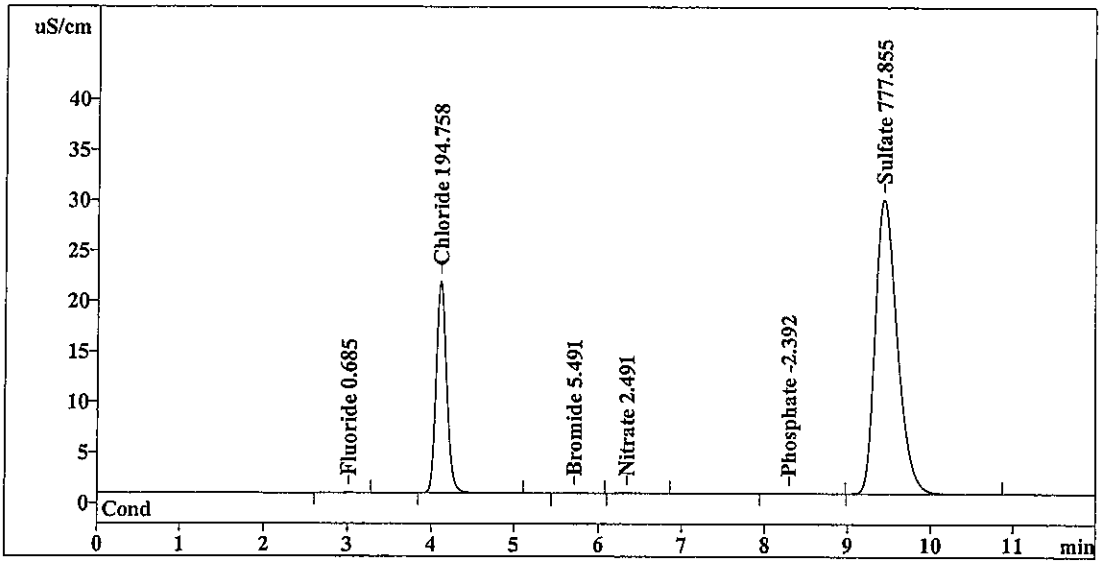
Quantitation method: Custom

No	Retention min	Area uS/cm*sec		Conc. mg/L	Name
1	3.01	0.493		0.412	Fluoride
2	4.12	198.378	OK	104.565	Chloride
3	0.00	0.000		0.000	Nitrite
4	5.75	0.642		2.866	Bromide
5	6.38	0.072		1.109	Nitrate
6	8.33	0.786		-1.187	Phosphate
7	9.42	1336.648		964.573	Sulfate
7	12.00	1537.019		1074.712	

RP 11/18/09

This report has been created by IC Net
METROHM LTD

Report date:	11/17/2009 2:48:14 PM
Printed by:	User
Ident:	R0906426-017
Analysis from:	11/17/2009 2:36:09 PM
File:	TB171436.CHW Last save: 11/17/2009 2:48:15 PM
Method:	3-111609.mtw Last save: 11/17/2009 11:45:31 A
Run operator:	User
Analysis number:	10936
SAMPLE:	C (300.0)
:	
Vial number:	11
Volume:	1.0 µL
Dilution:	40.00
Amount:	1.0000
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)
Size:	4.0 x 100 mm
Number:	7503293
Part.size:	5.0 µm

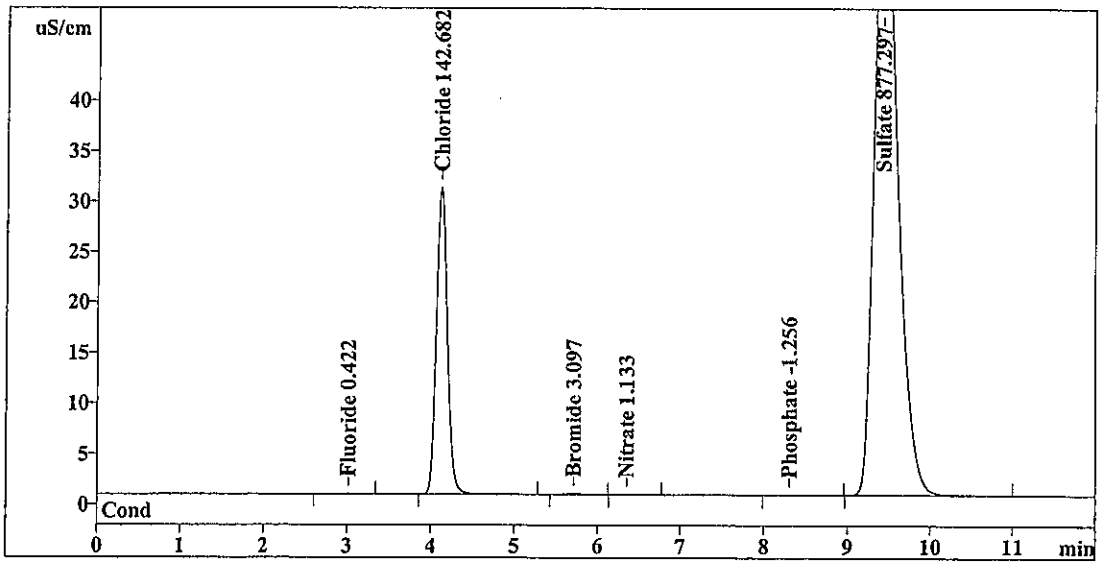


Quantitation method: Custom

No	Retention min	Area uS/cm*sec	Conc. mg/L	Name
1	3.01	0.262	0.685	Fluoride
2	4.12	184.515	194.758	Chloride
3	0.00	0.000	0.000	Nitrite
4	5.72	0.554	5.491	Bromide
5	6.34	0.726	2.491	Nitrate
6	8.30	0.766	-2.392	Phosphate
7	9.45	536.601	777.855	Sulfate
7	12.00	723.424	983.673	

This report has been created by IC Net
METROHM LTD

Report date:	11/17/2009 3:02:20 PM		
Printed by:	User		
Ident:	R0906420-018		
Analysis from:	11/17/2009 2:50:21 PM		
File:	TB171450.CHW	Last save:	11/17/2009 3:02:20 PM
Method:	3-111609.mtw	Last save:	11/17/2009 11:45:31 A
Run operator:	User		
Analysis number:	10937		
SAMPLE:	C (300.0)		
:			
Vial number:	12		
Volume:	1.0 µL		
Dilution:	20.00		
Amount:	1.0000		
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)		
Size:	4.0 x 100 mm		
Number:	7503293		
Part.size:	5.0 µm		



Quantitation method: Custom

No	Retention min	Area uS/cm*sec	Conc. mg/L	Name
1	3.01	0.524	0.422	Fluoride
2	4.12	271.904	142.682	Chloride
3	0.00	0.000	0.000	Nitrite
4	5.72	0.812	3.097	Bromide
5	6.35	0.190	1.133	Nitrate
6	8.31	0.642	-1.256	Phosphate
7	9.43	1215.350	877.297	Sulfate
7	12.00	1489.421	1025.887	

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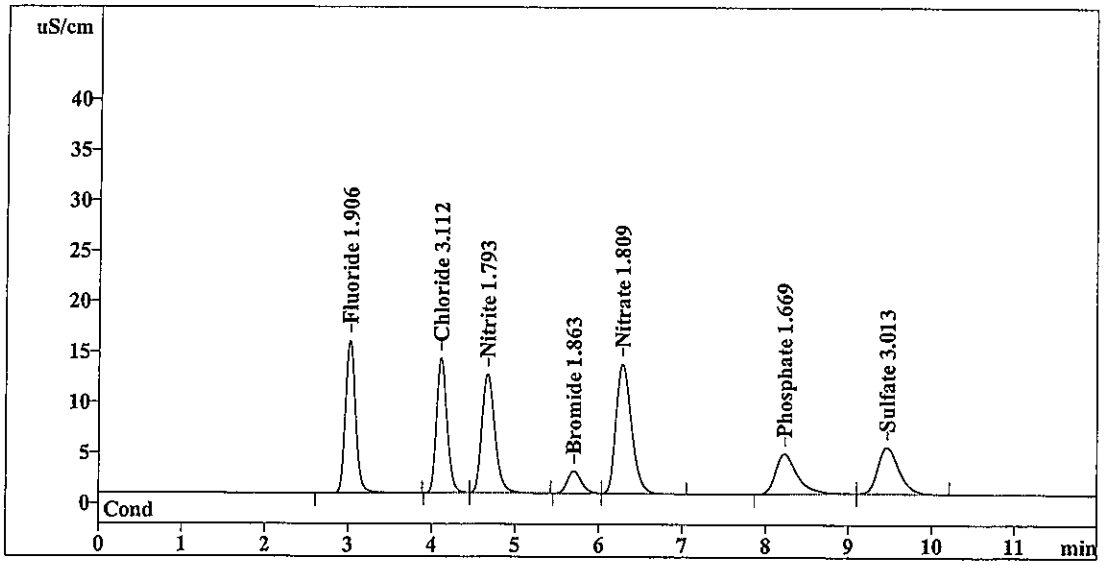
RP 11/18/09

This report has been created by IC Net
METROHM LTD

Report date:	11/17/2009 3:16:25 PM		
Printed by:	User		
Ident:	CCV		
Analysis from:	11/17/2009 3:04:27 PM		
File:	TB171504.CHW	Last save:	11/17/2009 3:16:25 PM
Method:	3-111609.mtw	Last save:	11/17/2009 11:45:31 A
Run operator:	User		
Analysis number:	10938		
SAMPLE:	9056/300.0		
:			
Vial number:	13		
Volume:	1.0 µL		
Dilution:	1.00		
Amount:	1.0000		
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)		
Size:	4.0 x 100 mm		
Number:	7503293		
Part.size:	5.0 µm		



Quantitation method: Custom

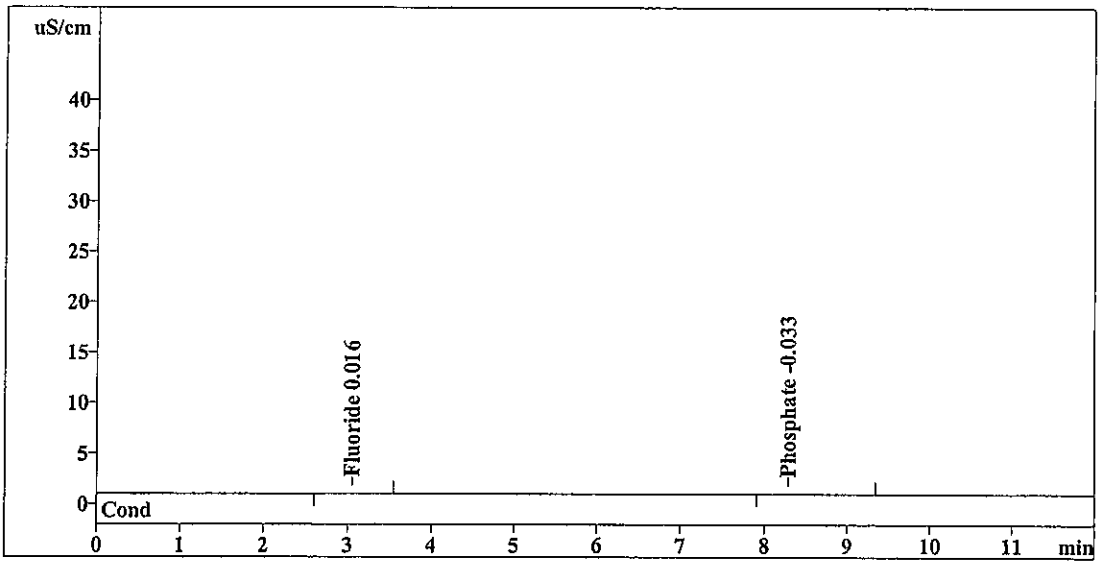
No	Retention min	Area uS/cm*sec	Conc. mg/L	Name
1	3.02	125.094	1.906	Fluoride
2	4.12	116.730	3.112	Chloride
3	4.67	127.315	1.793	Nitrite
4	5.70	25.870	1.863	Bromide
5	6.29	167.206	1.809	Nitrate
6	8.23	72.972	1.669	Phosphate
7	9.47	79.822	3.013	Sulfate
7	12.00	715.010	15.165	

OK ↓ ↓ ↓

RP 11/18/09

This report has been created by IC Net
METROHM LTD

Report date:	11/17/2009 3:30:29 PM	
Printed by:	User	
Ident:	CCB	
Analysis from:	11/17/2009 3:18:31 PM	
File:	TB171518.CHW	Last save: 11/17/2009 3:30:29 PM
Method:	3-111609.mtw	Last save: 11/17/2009 11:45:31 A
Run operator:	User	
Analysis number:	10939	
SAMPLE:	9056/300.0	
:		
Vial number:	14	
Volume:	1.0 µL	
Dilution:	1.00	
Amount:	1.0000	
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)	
Size:	4.0 x 100 mm	
Number:	7503293	
Part.size:	5.0 µm	



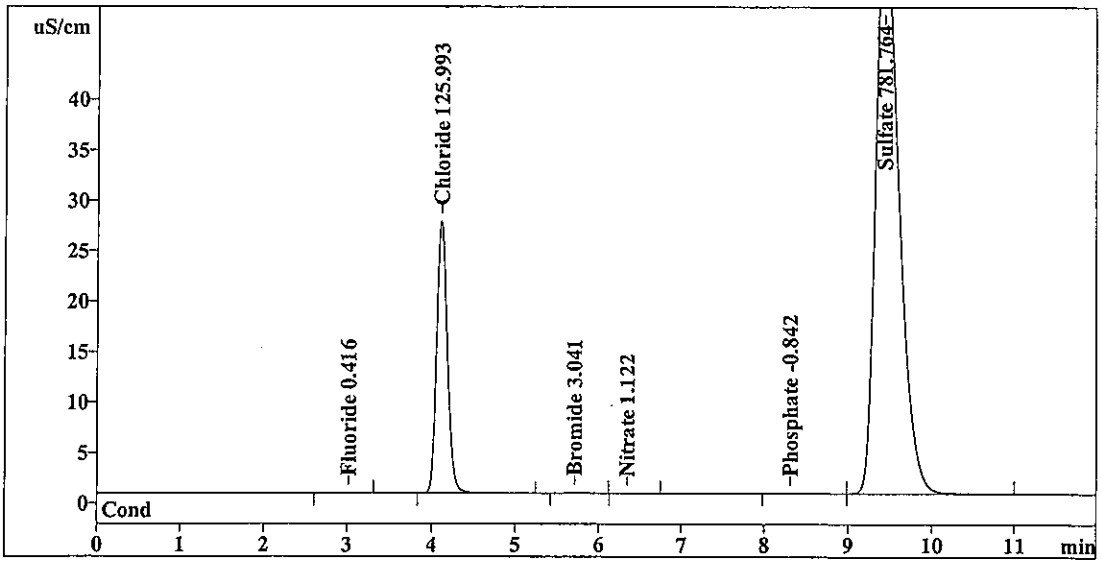
Quantitation method: Custom

No	Retention min	Area uS/cm*sec	Conc. mg/L	Name
1	3.05	0.181	0.016	Fluoride
2	0.00	0.000	0.000	Chloride
3	0.00	0.000	0.000	Nitrite
4	0.00	0.000	0.000	Bromide
5	0.00	0.000	0.000	Nitrate
6	8.29	1.878	0.033	Phosphate
7	0.00	0.000	0.000	Sulfate
7	12.00	2.059	0.049	

RP 11/18/09

This report has been created by IC Net
METROHM LTD

Report date:	11/17/2009 3:44:35 PM		
Printed by:	User		
Ident:	R0906420-019		
Analysis from:	11/17/2009 3:32:37 PM		
File:	TB171532.CHW	Last save:	11/17/2009 3:44:35 PM
Method:	3-111609.mtw	Last save:	11/17/2009 11:45:31 A
Run operator:	User		
Analysis number:	10940		
SAMPLE:	C (300.0)		
:			
Vial number:	15		
Volume:	1.0 µL		
Dilution:	20.00		
Amount:	1.0000		
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)		
Size:	4.0 x 100 mm		
Number:	7503293		
Part.size:	5.0 µm		



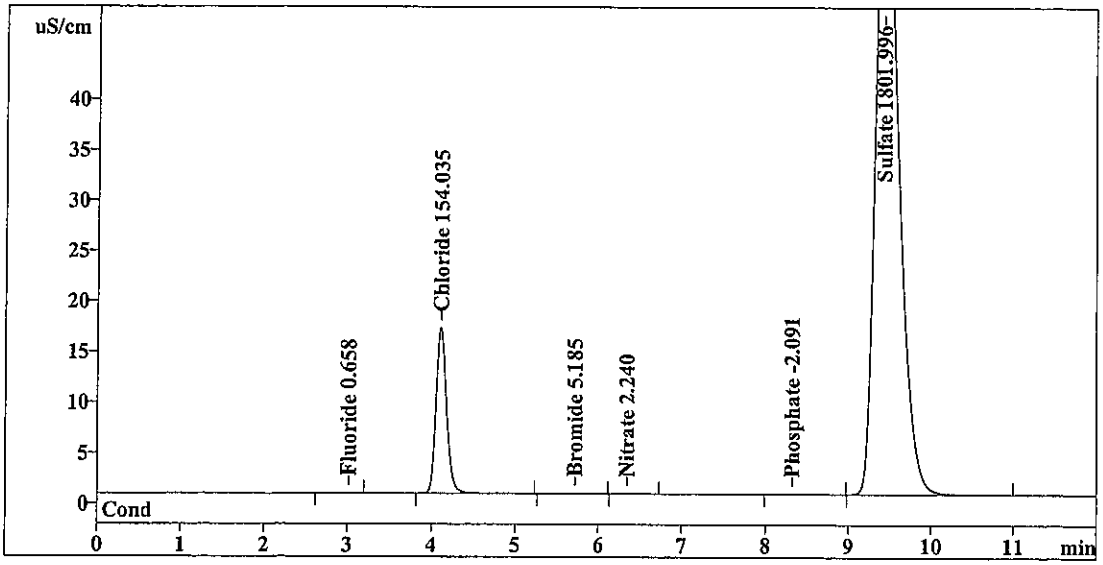
Quantitation method: Custom

No	Retention min	Area uS/cm*sec		Conc. mg/L	Name
1	3.02	0.504		0.416	Fluoride
2	4.12	239.710	OK	125.993	Chloride
3	0.00	0.000		0.000	Nitrite
4	5.71	0.771		3.041	Bromide
5	6.34	0.136		1.122	Nitrate
6	8.31	1.505		-0.842	Phosphate
7	9.44	1082.575		781.764	Sulfate
7	12.00	1325.200		913.177	

RP 11/18/09

This report has been created by IC Net
METROHM LTD

Report date:	11/17/2009 3:58:39 PM		
Printed by:	User		
Ident:	R0906420-020		
Analysis from:	11/17/2009 3:46:41 PM		
File:	TB171546.CHW	Last save:	11/17/2009 3:58:39 PM
Method:	3-111609.mtw	Last save:	11/17/2009 11:45:31 A
Run operator:	User		
Analysis number:	10941		
SAMPLE:	C (300.0)		
:			
Vial number:	16		
Volume:	1.0 µL		
Dilution:	40.00		
Amount:	1.0000		
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)		
Size:	4.0 x 100 mm		
Number:	7503293		
Part.size:	5.0 µm		



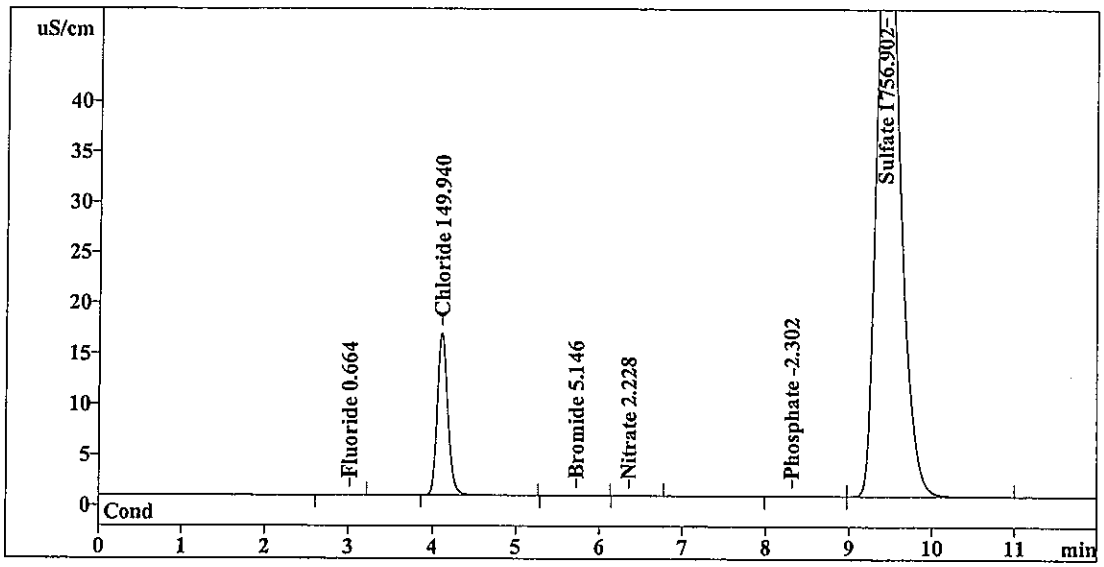
Quantitation method: Custom

No	Retention min	Area uS/cm*sec	Conc. mg/L	Name
1	3.01	0.218	0.658	Fluoride
2	4.11	145.240	OK 154.035	Chloride
3	0.00	0.000	0.000	Nitrite
4	5.72	0.442	5.185	Bromide
5	6.35	0.127	2.240	Nitrate
6	8.32	1.080	-2.091	Phosphate
7	9.44	1248.290	1801.996	Sulfate
7	12.00	1395.397	1966.207	

RP 11/18/09

This report has been created by IC Net
METROHM LTD

Report date:	11/17/2009 4:12:44 PM		
Printed by:	User		
Ident:	R0906420-020 DUP		
Analysis from:	11/17/2009 4:00:46 PM		
File:	TB171600.CHW	Last save:	11/17/2009 4:12:45 PM
Method:	3-111609.mtw	Last save:	11/17/2009 11:45:31 A
Run operator:	User		
Analysis number:	10942		
SAMPLE:	C (300.0)		
:			
Vial number:	17		
Volume:	1.0 µL		
Dilution:	40.00		
Amount:	1.0000		
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)		
Size:	4.0 x 100 mm		
Number:	7503293		
Part.size:	5.0 µm		



Quantitation method: Custom

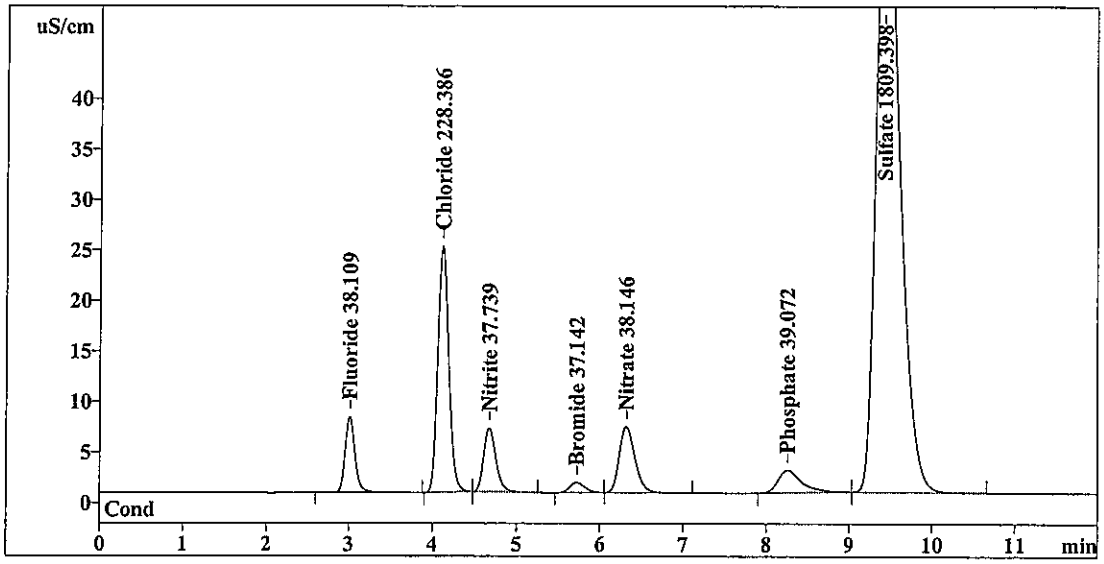
No	Retention min	Area uS/cm*sec	Conc. mg/L	Name
1	3.01	0.227	0.664	Fluoride
2	4.11	141.289	149.940	Chloride
3	0.00	0.000	0.000	Nitrite
4	5.72	0.428	5.146	Bromide
5	6.36	0.098	2.228	Nitrate
6	8.32	0.860	-2.302	Phosphate
7	9.44	1216.954	1756.902	Sulfate
7	12.00	1359.856	1917.182	

OK

RP 11/18/09

This report has been created by IC Net
METROHM LTD

Report date:	11/17/2009 4:32:58 PM
Printed by:	User
Ident:	R0906420-020 SPK
Analysis from:	11/17/2009 4:21:00 PM
File:	TB171621.CHW Last save: 11/17/2009 4:32:59 PM
Method:	3-111609.mtw Last save: 11/17/2009 11:45:31 A
Run operator:	User
Analysis number:	10943
SAMPLE:	C (300.0)
:	
Vial number:	18
Volume:	1.0 µL
Dilution:	40.00
Amount:	1.0000
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)
Size:	4.0 x 100 mm
Number:	7503293
Part.size:	5.0 µm



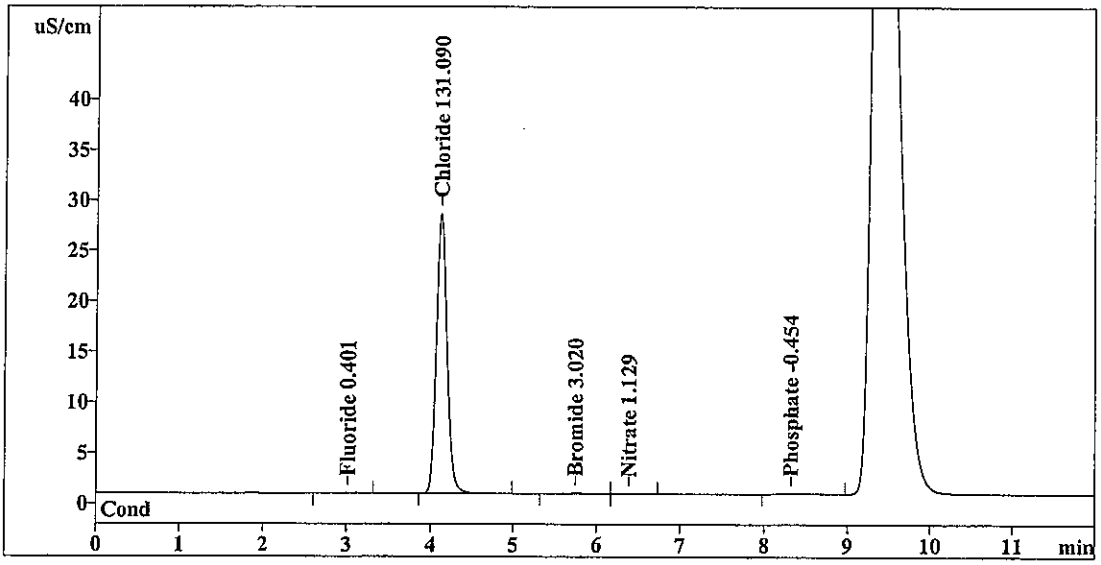
Quantitation method: Custom

No	Retention min	Area uS/cm*sec	Conc. mg/L	Name
1	3.01	62.085	38.109	Fluoride
2	4.12	216.949	228.386	Chloride
3	4.67	64.614	37.739	Nitrite
4	5.72	12.164	37.142	Bromide
5	6.32	85.699	38.146	Nitrate
6	8.26	44.063	39.072	Phosphate
7	9.43	1253.433	1809.398	Sulfate
7	12.00	1739.007	2227.992	

RP 11/18/09

This report has been created by IC Net
METROHM LTD

Report date:	11/17/2009 4:47:03 PM		
Printed by:	User		
Ident:	R0906420-021		
Analysis from:	11/17/2009 4:35:05 PM		
File:	TB171635.CHW	Last save:	11/17/2009 4:47:03 PM
Method:	3-111609.mtw	Last save:	11/17/2009 11:45:31 A
Run operator:	User		
Analysis number:	10944		
SAMPLE:	C (300.0)		
:			
Vial number:	19		
Volume:	1.0 µL		
Dilution:	20.00		
Amount:	1.0000		
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)		
Size:	4.0 x 100 mm		
Number:	7503293		
Part.size:	5.0 µm		



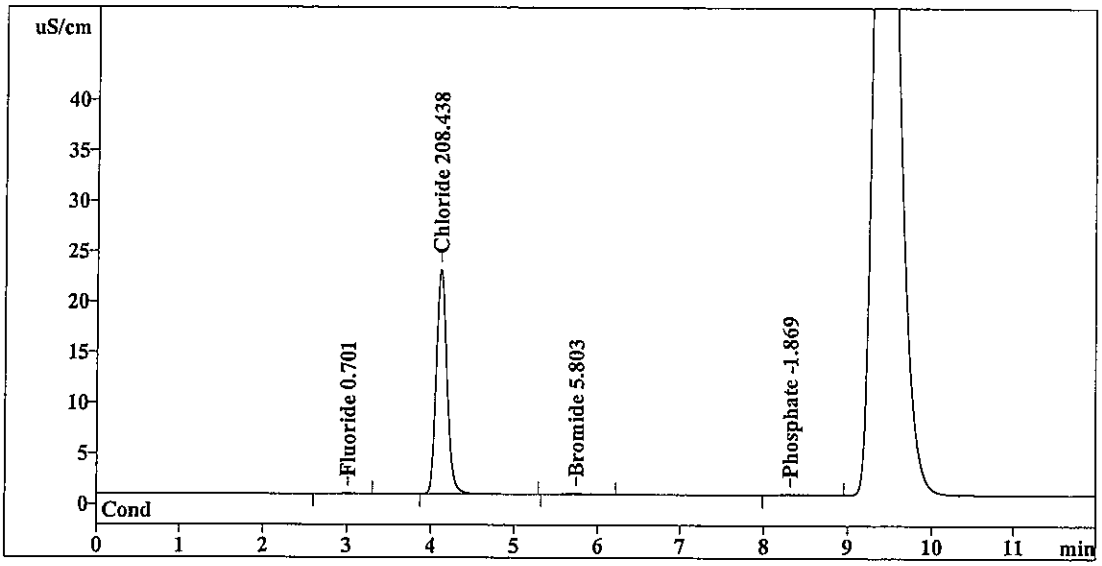
Quantitation method: Custom

No	Retention min	Area uS/cm*sec	Conc. mg/L	Name
1	3.01	0.454	0.401	Fluoride
2	4.12	249.542	OK 131.090	Chloride
3	0.00	0.000	0.000	Nitrite
4	5.75	0.756	3.020	Bromide
5	6.39	0.171	1.129	Nitrate
6	8.32	2.316	-0.454	Phosphate
7	0.00	0.000	0.000	Sulfate
7	12.00	253.239	136.094	

RP 11/18/09

This report has been created by IC Net
METROHM LTD

Report date:	11/17/2009 5:01:08 PM		
Printed by:	User		
Ident:	R0906420-022		
Analysis from:	11/17/2009 4:49:10 PM		
File:	TB171649.CHW	Last save:	11/17/2009 5:01:09 PM
Method:	3-111609.mtw	Last save:	11/17/2009 11:45:31 A
Run operator:	User		
Analysis number:	10945		
SAMPLE:	C (300.0)		
Vial number:	20		
Volume:	1.0 µL		
Dilution:	40.00		
Amount:	1.0000		
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)		
Size:	4.0 x 100 mm		
Number:	7503293		
Part.size:	5.0 µm		



Quantitation method: Custom

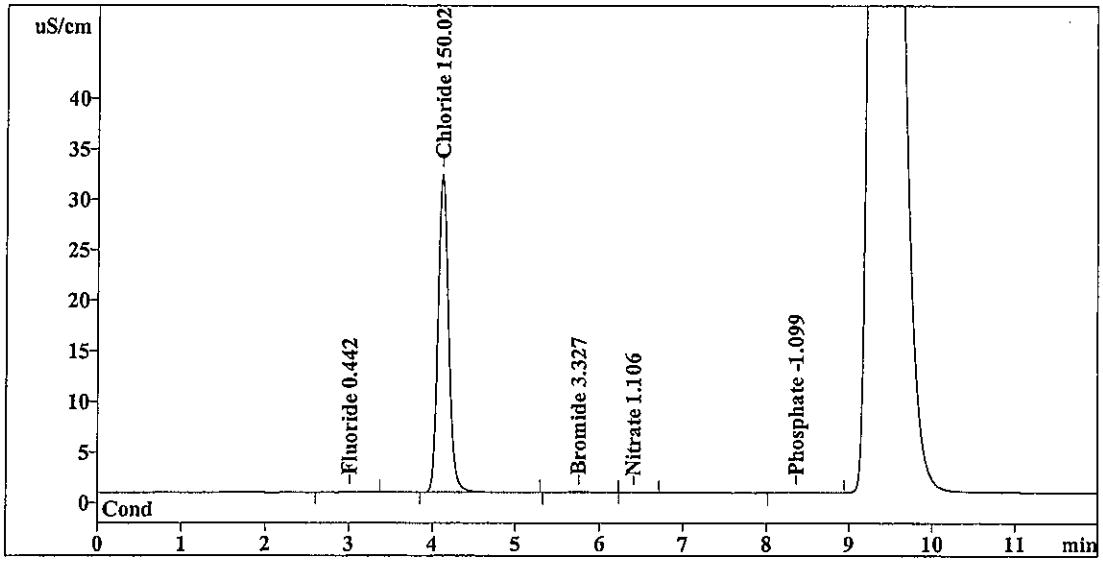
No	Retention min	Area uS/cm*sec	Conc. mg/L	Name
1	3.01	0.289	0.701	Fluoride
2	4.12	197.709	208.438	Chloride
3	0.00	0.000	0.000	Nitrite
4	5.74	0.669	5.803	Bromide
5	0.00	0.000	0.000	Nitrate
6	8.32	1.312	-1.869	Phosphate
7	0.00	0.000	0.000	Sulfate
7	12.00	199.979	216.811	

OK

RP 11/18/09

This report has been created by IC Net
METROHM LTD

Report date:	11/17/2009 5:15:25 PM		
Printed by:	User		
Ident:	R0906420-023		
Analysis from:	11/17/2009 5:03:15 PM		
File:	TB171703.CHW	Last save:	11/17/2009 5:15:25 PM
Method:	3-111609.mtw	Last save:	11/17/2009 11:45:31 A
Run operator:	User		
Analysis number:	10946		
SAMPLE:	C (300.0)		
:			
Vial number:	21		
Volume:	1.0 µL		
Dilution:	20.00		
Amount:	1.0000		
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)		
Size:	4.0 x 100 mm		
Number:	7503293		
Part.size:	5.0 µm		



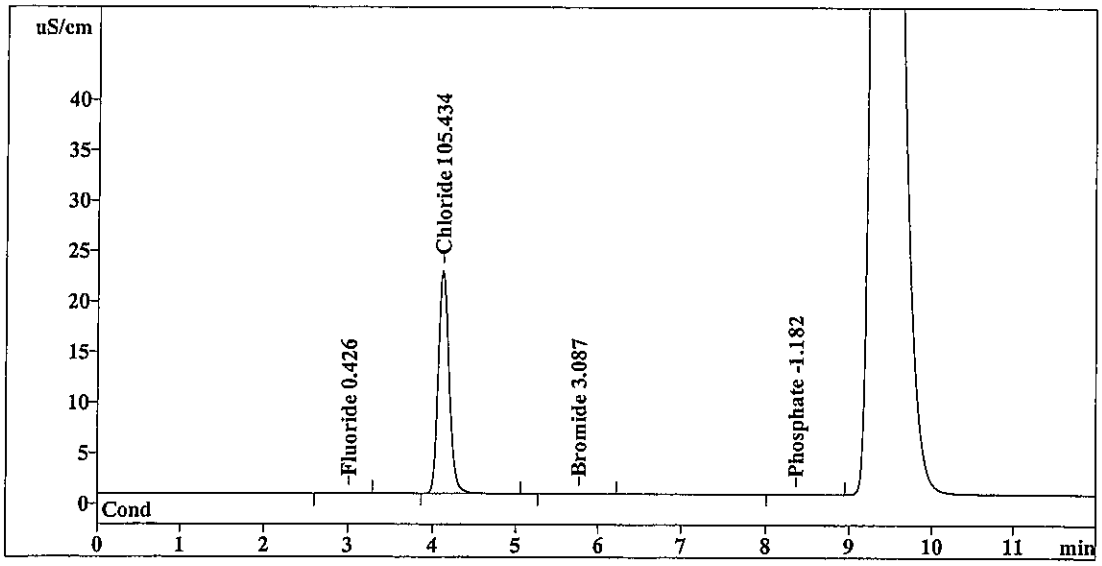
Quantitation method: Custom

No	Retention min	Area uS/cm*sec	Conc. mg/L	Name
1	3.01	0.593	0.442	Fluoride
2	4.12	286.072	150.027	Chloride
3	0.00	0.000	0.000	Nitrite
4	5.76	0.981	3.327	Bromide
5	6.42	0.062	1.106	Nitrate
6	8.37	0.969	-1.099	Phosphate
7	0.00	0.000	0.000	Sulfate
7	12.00	288.676	156.002	

RR 11/18/09

This report has been created by IC Net
METROHM LTD

Report date:	11/17/2009 5:29:51 PM		
Printed by:	User		
Ident:	R0906420-024		
Analysis from:	11/17/2009 5:17:53 PM		
File:	TB171717.CHW	Last save:	11/17/2009 5:29:51 PM
Method:	3-111609.mtw	Last save:	11/17/2009 11:45:31 A
Run operator:	User		
Analysis number:	10947		
SAMPLE:	C (300.0)		
:			
Vial number:	22		
Volume:	1.0 µL		
Dilution:	20.00		
Amount:	1.0000		
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)		
Size:	4.0 x 100 mm		
Number:	7503293		
Part.size:	5.0 µm		



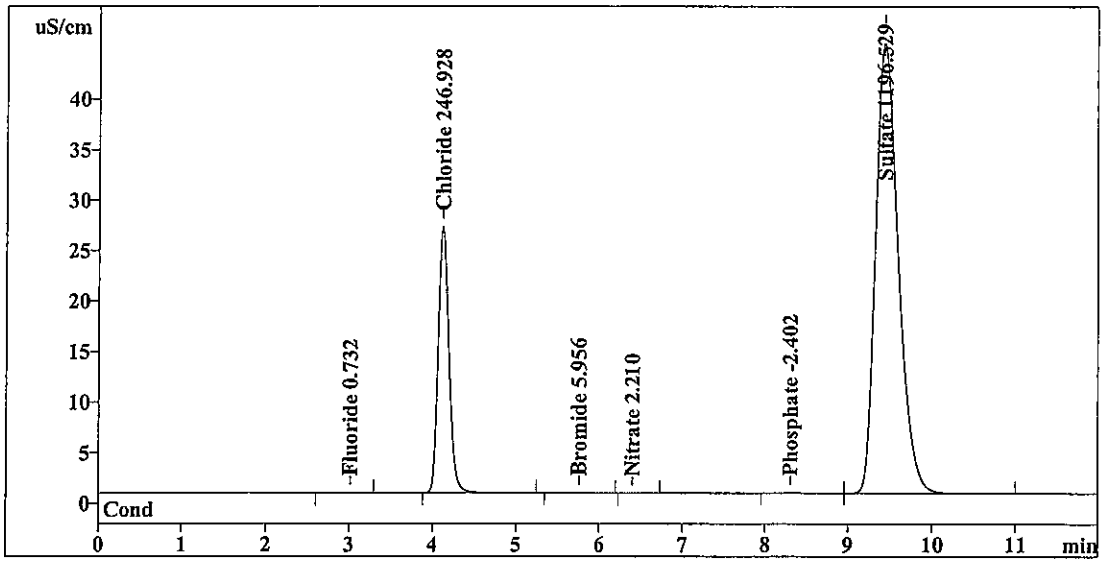
Quantitation method: Custom

No	Retention min	Area uS/cm*sec	Conc. mg/L	Name
1	3.01	0.538	0.426	Fluoride
2	4.12	200.052	BK 105.434	Chloride
3	0.00	0.000	0.000	Nitrite
4	5.77	0.805	3.087	Bromide
5	0.00	0.000	0.000	Nitrate
6	8.37	0.796	-1.182	Phosphate
7	0.00	0.000	0.000	Sulfate
7	12.00	202.191	110.128	

RP 11/18/09

This report has been created by IC Net
METROHM LTD

Report date:	11/17/2009 5:43:56 PM		
Printed by:	User		
Ident:	R0906420-025		
Analysis from:	11/17/2009 5:31:58 PM		
File:	TB171731.CHW	Last save:	11/17/2009 5:43:56 PM
Method:	3-111609.mtw	Last save:	11/17/2009 11:45:31 A
Run operator:	User		
Analysis number:	10948		
SAMPLE:	C (300.0)		
:			
Vial number:	23		
Volume:	1.0 µL		
Dilution:	40.00		
Amount:	1.0000		
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)		
Size:	4.0 x 100 mm		
Number:	7503293		
Part.size:	5.0 µm		



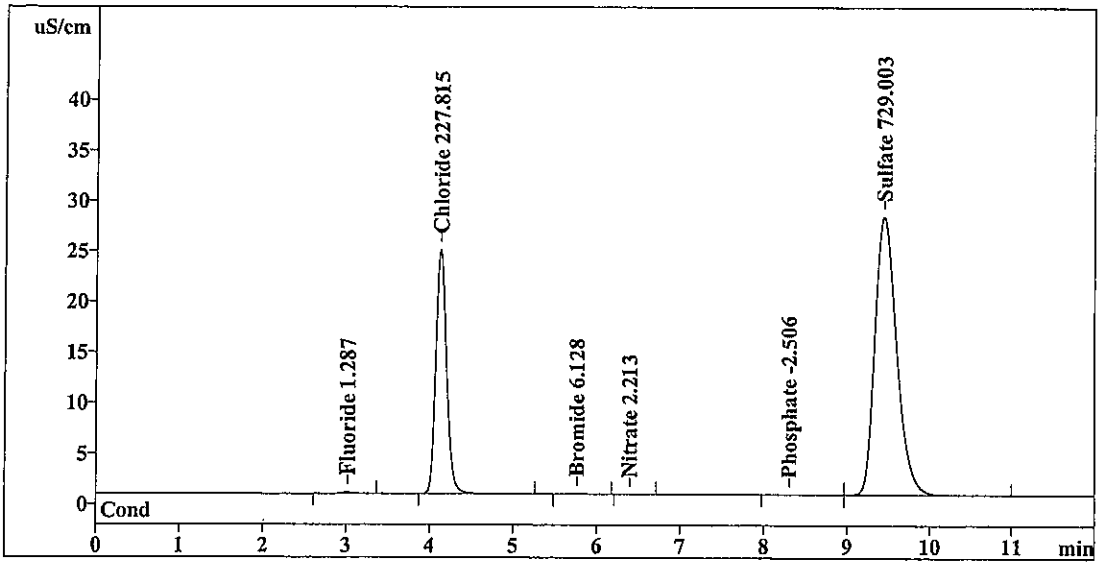
Quantitation method: Custom

No	Retention min	Area uS/cm*sec	Conc. mg/L	Name
1	3.01	0.340	0.732	Fluoride
2	4.13	234.832	OK 246.928	Chloride
3	0.00	0.000	0.000	Nitrite
4	5.76	0.725	5.956	Bromide
5	6.41	0.056	2.210	Nitrate
6	8.31	0.755	-2.402	Phosphate
7	9.44	827.543	1196.529	Sulfate
7	12.00	1064.251	1454.758	

RP 11/18/09

This report has been created by IC Net
METROHM LTD

Report date:	11/17/2009 5:58:02 PM		
Printed by:	User		
Ident:	R0906420-026		
Analysis from:	11/17/2009 5:46:03 PM		
File:	TB171746.CHW	Last save:	11/17/2009 5:58:02 PM
Method:	3-111609.mtw	Last save:	11/17/2009 11:45:31 A
Run operator:	User		
Analysis number:	10949		
SAMPLE:	C (300.0)		
Vial number:	24		
Volume:	1.0 µL		
Dilution:	40.00		
Amount:	1.0000		
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)		
Size:	4.0 x 100 mm		
Number:	7503293		
Part.size:	5.0 µm		



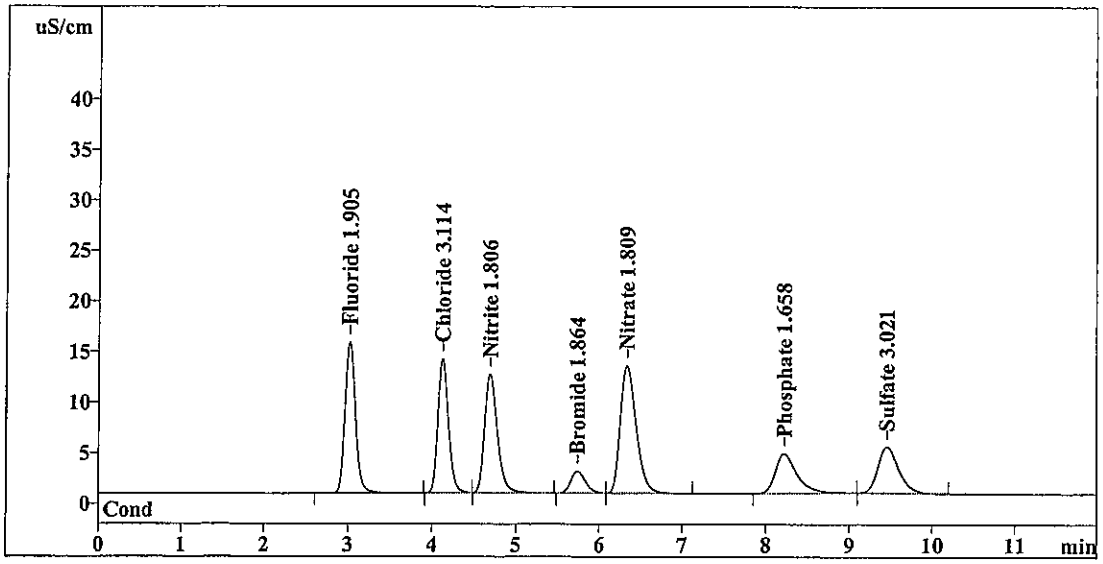
Quantitation method: Custom

No	Retention min	Area uS/cm*sec	Conc. mg/L	Name
1	3.02	1.257	1.287	Fluoride
2	4.13	216.398	OK 227.815	Chloride
3	0.00	0.000	0.000	Nitrite
4	5.76	0.788	6.128	Bromide
5	6.41	0.063	2.213	Nitrate
6	8.31	0.647	-2.506	Phosphate
7	9.45	502.653	729.003	Sulfate
7	12.00	721.806	968.953	

RR 11/18/09

This report has been created by IC Net
METROHM LTD

Report date:	11/17/2009 6:12:07 PM		
Printed by:	User		
Ident:	CCV		
Analysis from:	11/17/2009 6:00:09 PM		
File:	TB171800.CHW	Last save:	11/17/2009 6:12:07 PM
Method:	3-111609.mtw	Last save:	11/17/2009 11:45:31 A
Run operator:	User		
Analysis number:	10950		
SAMPLE:	9056/300.0		
:			
Vial number:	25		
Volume:	1.0 µL		
Dilution:	1.00		
Amount:	1.0000		
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)		
Size:	4.0 x 100 mm		
Number:	7503293		
Part.size:	5.0 µm		



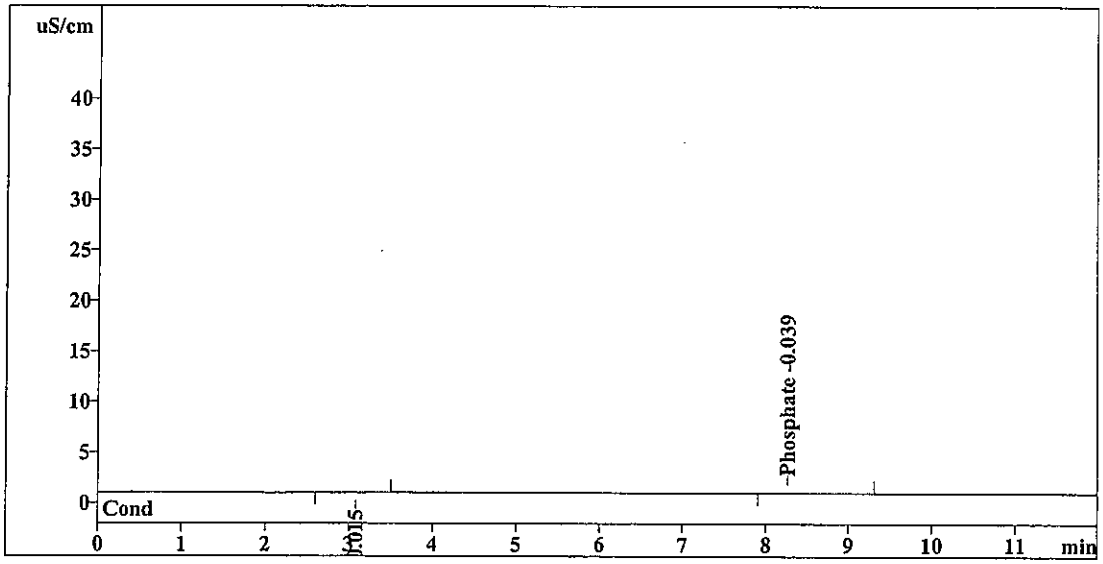
Quantitation method: Custom

No	Retention min	Area uS/cm*sec	Conc. mg/L	Name
1	3.02	124.988	1.905	Fluoride
2	4.13	116.815	3.114	Chloride
3	4.69	128.248	1.806	Nitrite
4	5.74	25.894	1.864	Bromide
5	6.34	167.222	1.809	Nitrate
6	8.23	72.529	1.658	Phosphate
7	9.46	80.024	3.021	Sulfate
7	12.00	715.720	15.177	

RP 11/18/09

This report has been created by IC Net
METROHM LTD

Report date:	11/17/2009 6:26:11 PM		
Printed by:	User		
Ident:	CCB		
Analysis from:	11/17/2009 6:14:13 PM		
File:	TB171814.CHW	Last save:	11/17/2009 6:26:11 PM
Method:	3-111609.mtw	Last save:	11/17/2009 11:45:31 A
Run operator:	User		
Analysis number:	10951		
SAMPLE:	9056/300.0		
:			
Vial number:	26		
Volume:	1.0 µL		
Dilution:	1.00		
Amount:	1.0000		
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)		
Size:	4.0 x 100 mm		
Number:	7503293		
Part.size:	5.0 µm		



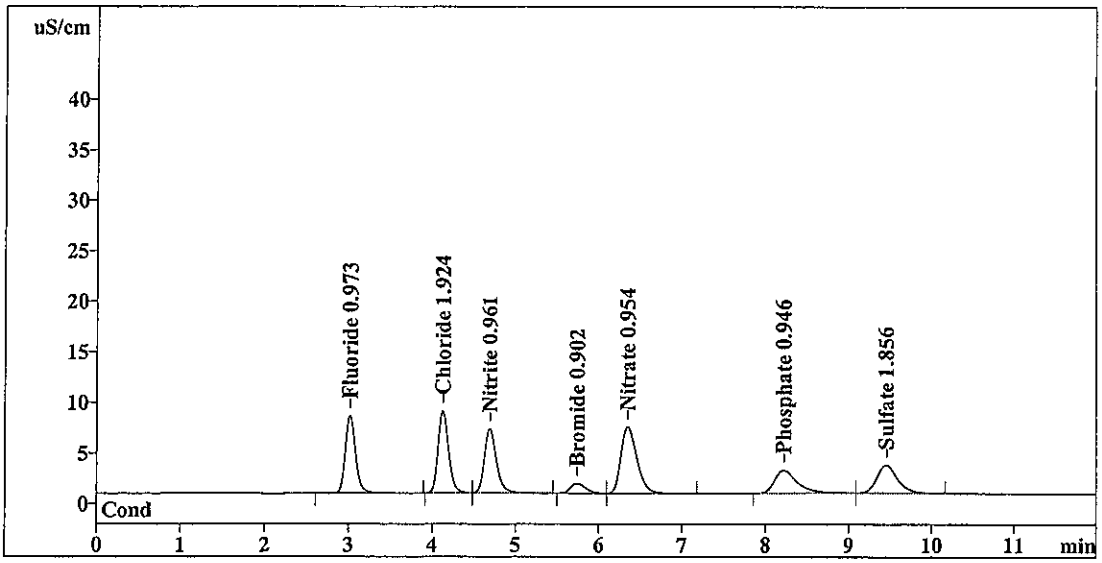
Quantitation method: Custom

No	Retention min	Area uS/cm*sec	Conc. mg/L	Name
1	3.09	0.151	0.015	Fluoride
2	0.00	0.000	0.000	Chloride
3	0.00	0.000	0.000	Nitrite
4	0.00	0.000	0.000	Bromide
5	0.00	0.000	0.000	Nitrate
6	8.27	1.655	-0.039	Phosphate
7	0.00	0.000	0.000	Sulfate
7	12.00	1.806	0.054	

RR 11/18/09

This report has been created by IC Net
METROHM LTD

Report date:	11/17/2009 6:40:16 PM		
Printed by:	User		
Ident:	LCS		
Analysis from:	11/17/2009 6:28:18 PM		
File:	TB171828.CHW	Last save:	11/17/2009 6:40:17 PM
Method:	3-111609.mtw	Last save:	11/17/2009 11:45:31 A
Run operator:	User		
Analysis number:	10952		
SAMPLE:	9056/300.0		
:			
Vial number:	27		
Volume:	1.0 µL		
Dilution:	1.00		
Amount:	1.0000		
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)		
Size:	4.0 x 100 mm		
Number:	7503293		
Part.size:	5.0 µm		



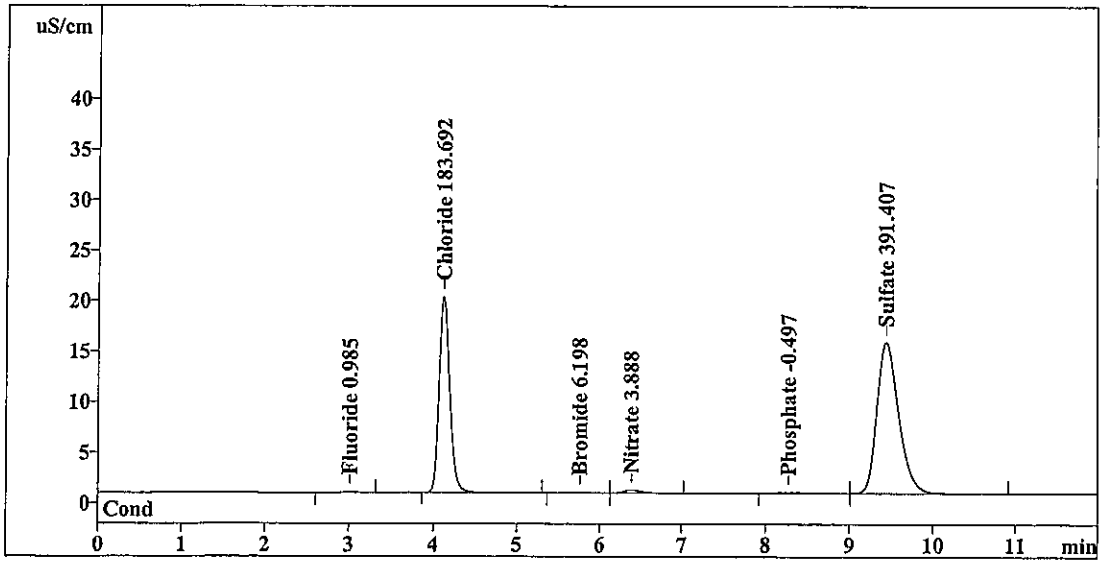
Quantitation method: Custom

No	Retention min	Area uS/cm*sec	Conc. mg/L	Name
1	3.02	63.447	0.973	Fluoride
2	4.13	70.889	1.924	Chloride
3	4.69	65.943	0.961	Nitrite
4	5.75	11.779	0.902	Bromide
5	6.36	85.704	0.954	Nitrate
6	8.23	42.784	0.946	Phosphate
7	9.46	47.646	1.856	Sulfate
7	12.00	388.192	8.517	

RP 11/18/09

This report has been created by IC Net
METROHM LTD

Report date:	11/17/2009 6:54:22 PM		
Printed by:	User		
Ident:	R0906420-028		
Analysis from:	11/17/2009 6:42:23 PM		
File:	TB171842.CHW	Last save:	11/17/2009 6:54:22 PM
Method:	3-111609.mtw	Last save:	11/17/2009 11:45:31 A
Run operator:	User		
Analysis number:	10953		
SAMPLE:	C (300.0)		
:			
Vial number:	28		
Volume:	1.0 µL		
Dilution:	40.00		
Amount:	1.0000		
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)		
Size:	4.0 x 100 mm		
Number:	7503293		
Part.size:	5.0 µm		



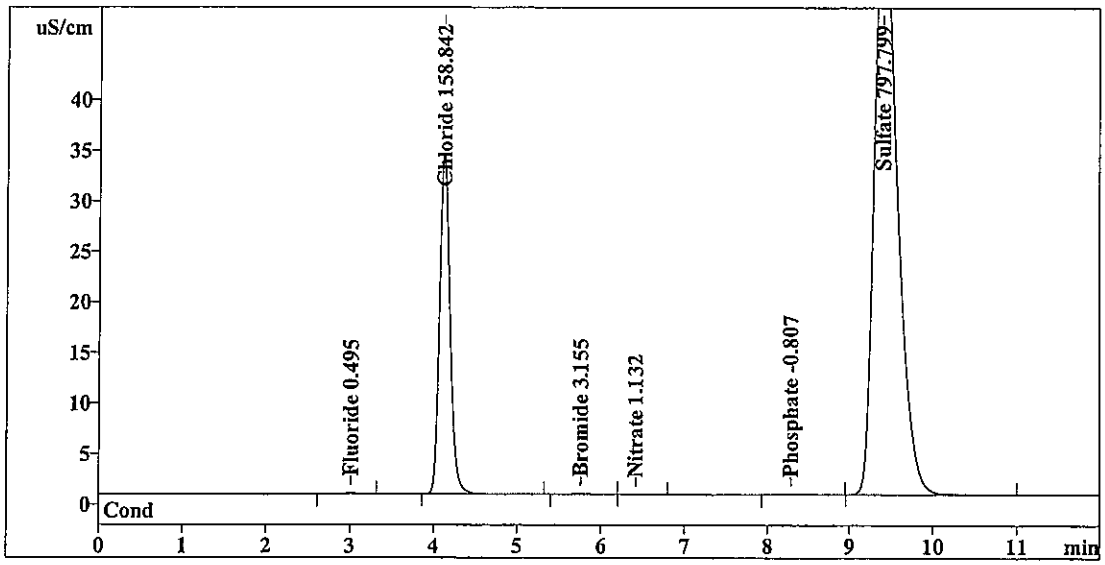
Quantitation method: Custom

No	Retention min	Area uS/cm*sec		Conc. mg/L	Name
1	3.01	0.759		0.985	Fluoride
2	4.13	173.843	OK	183.692	Chloride
3	0.00	0.000		0.000	Nitrite
4	5.76	0.813		6.198	Bromide
5	6.39	4.055		3.888	Nitrate
6	8.28	2.745		-0.497	Phosphate
7	9.44	268.053		391.407	Sulfate
7	12.00	450.268		586.668	

RP 11/18/09

This report has been created by IC Net
METROHM LTD

Report date:	11/17/2009 7:08:26 PM		
Printed by:	User		
Ident:	R0906420-031		
Analysis from:	11/17/2009 6:56:28 PM		
File:	TB171856.CHW	Last save:	11/17/2009 7:08:27 PM
Method:	3-111609.mtw	Last save:	11/17/2009 11:45:31 A
Run operator:	User		
Analysis number:	10954		
SAMPLE:	C (300.0)		
:			
Vial number:	29		
Volume:	1.0 µL		
Dilution:	20.00		
Amount:	1.0000		
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)		
Size:	4.0 x 100 mm		
Number:	7503293		
Part.size:	5.0 µm		



Quantitation method: Custom

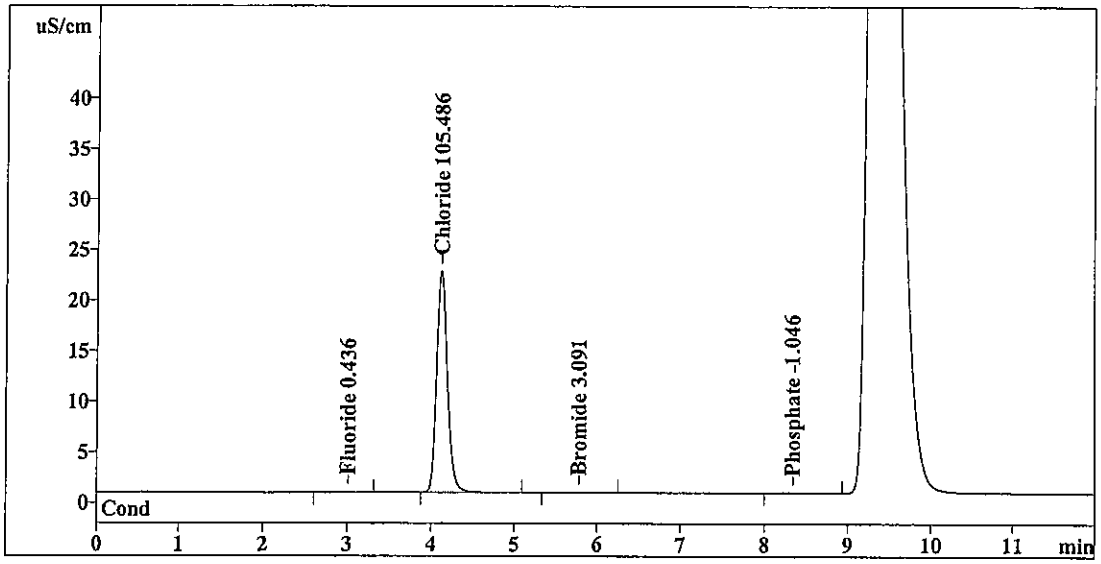
No	Retention min	Area uS/cm*sec	Conc. mg/L	Name
1	3.01	0.767	0.495	Fluoride
2	4.13	303.075	158.842	Chloride
3	0.00	0.000	0.000	Nitrite
4	5.76	0.854	3.155	Bromide
5	6.41	0.184	1.132	Nitrate
6	8.29	1.578	-0.807	Phosphate
7	9.41	1104.861	797.799	Sulfate
7	12.00	1411.320	962.230	

OK

RP 11/18/09

This report has been created by IC Net
METROHM LTD

Report date:	11/17/2009 7:22:31 PM		
Printed by:	User		
Ident:	R0906420-038		
Analysis from:	11/17/2009 7:10:33 PM		
File:	TB171910.CHW	Last save:	11/17/2009 7:22:31 PM
Method:	3-111609.mtw	Last save:	11/17/2009 11:45:31 A
Run operator:	User		
Analysis number:	10955		
SAMPLE:	C (300.0)		
:			
Vial number:	30		
Volume:	1.0 µL		
Dilution:	20.00		
Amount:	1.0000		
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)		
Size:	4.0 x 100 mm		
Number:	7503293		
Part.size:	5.0 µm		



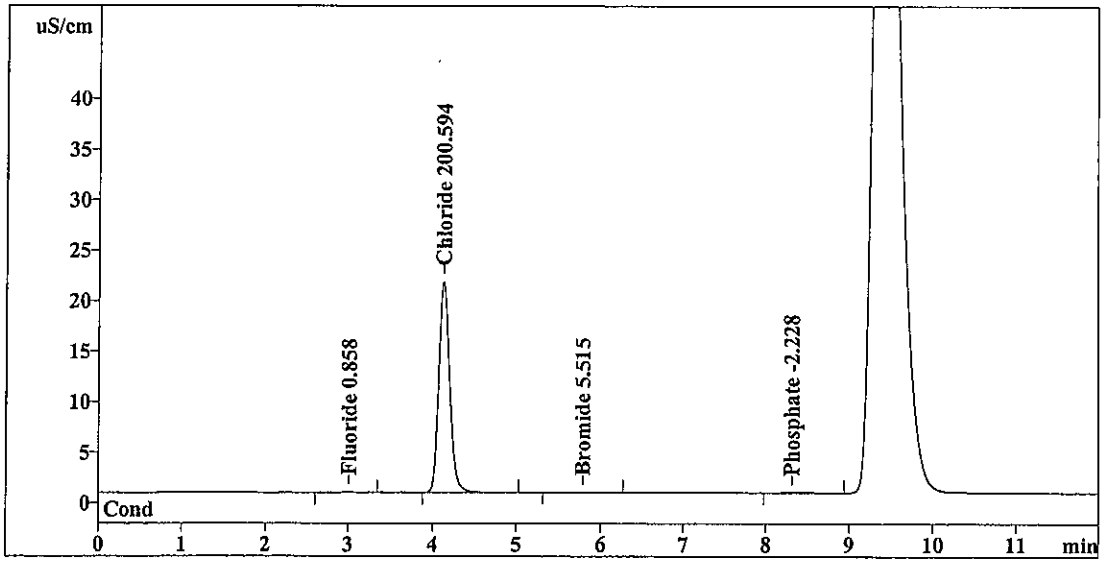
Quantitation method: Custom

No	Retention min	Area uS/cm*sec	Conc. mg/L	Name
1	3.01	0.570	0.436	Fluoride
2	4.13	200.153	105.486	Chloride
3	0.00	0.000	0.000	Nitrite
4	5.78	0.808	3.091	Bromide
5	0.00	0.000	0.000	Nitrate
6	8.34	1.080	-1.046	Phosphate
7	0.00	0.000	0.000	Sulfate
7	12.00	202.611	110.058	

RP 11/18/09

This report has been created by IC Net
METROHM LTD

Report date:	11/17/2009 7:36:35 PM		
Printed by:	User		
Ident:	R0906420-039		
Analysis from:	11/17/2009 7:24:38 PM		
File:	TB171924.CHW	Last save:	11/17/2009 7:36:36 PM
Method:	3-111609.mtw	Last save:	11/17/2009 11:45:31 A
Run operator:	User		
Analysis number:	10956		
SAMPLE:	C (300.0)		
:			
Vial number:	31		
Volume:	1.0 µL		
Dilution:	40.00		
Amount:	1.0000		
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)		
Size:	4.0 x 100 mm		
Number:	7503293		
Part.size:	5.0 µm		



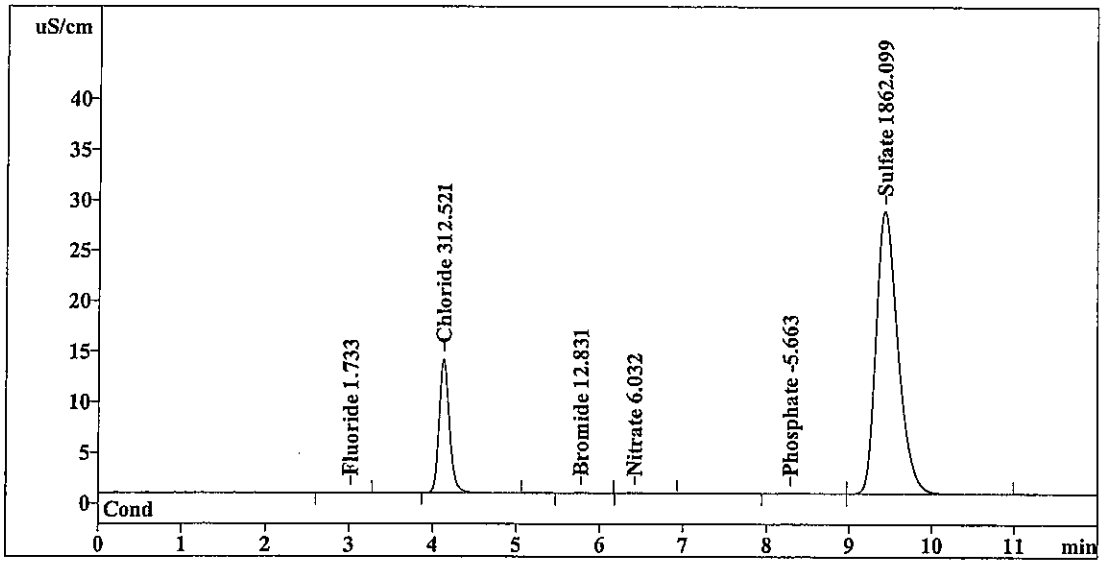
Quantitation method: Custom

No	Retention min	Area uS/cm*sec	Conc. mg/L	Name
1	3.01	0.548	0.858	Fluoride
2	4.13	190.145	OK 200.594	Chloride
3	0.00	0.000	0.000	Nitrite
4	5.80	0.563	5.515	Bromide
5	0.00	0.000	0.000	Nitrate
6	8.32	0.938	-2.228	Phosphate
7	0.00	0.000	0.000	Sulfate
7	12.00	192.193	209.195	

RP 11/18/09

This report has been created by IC Net
METROHM LTD

Report date:	11/17/2009 7:50:41 PM		
Printed by:	User		
Ident:	R0906420-040		
Analysis from:	11/17/2009 7:38:43 PM		
File:	TB171938.CHW	Last save:	11/17/2009 7:50:41 PM
Method:	3-111609.mtw	Last save:	11/17/2009 11:45:31 A
Run operator:	User		
Analysis number:	10957		
SAMPLE:	C (300.0)		
:			
Vial number:	32		
Volume:	1.0 µL		
Dilution:	100.00		
Amount:	1.0000		
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)		
Size:	4.0 x 100 mm		
Number:	7503293		
Part.size:	5.0 µm		



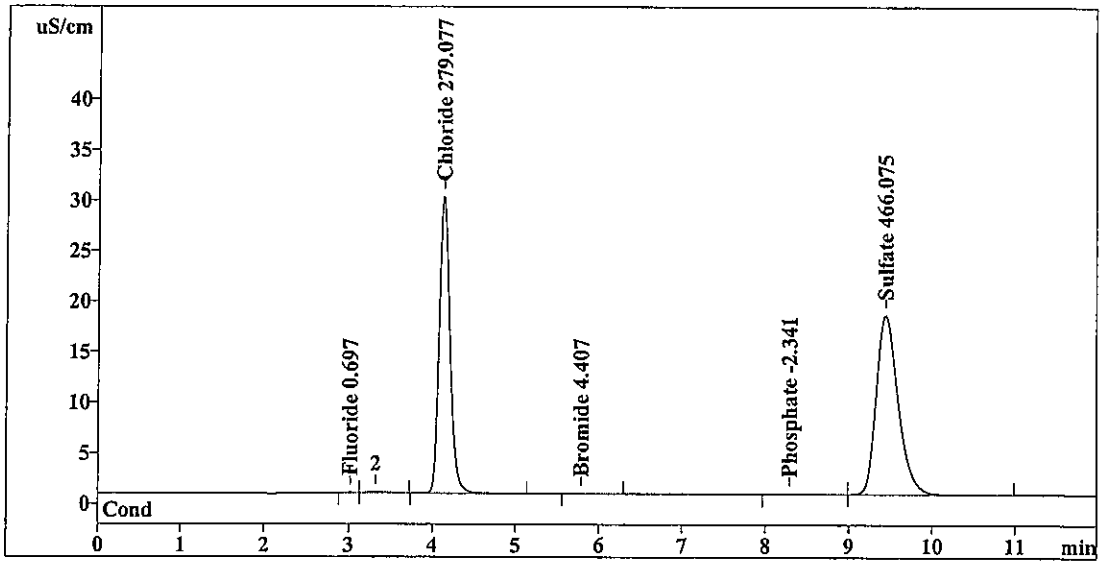
Quantitation method: Custom

No	Retention min	Area uS/cm*sec	Conc. mg/L	Name
1	3.02	0.276	1.733	Fluoride
2	4.13	117.244	OK 312.521	Chloride
3	0.00	0.000	0.000	Nitrite
4	5.78	0.422	12.831	Bromide
5	6.43	0.538	6.032	Nitrate
6	8.29	0.899	-5.663	Phosphate
7	9.44	513.658	1862.099	Sulfate
7	12.00	633.037	2200.877	

RP 11/18/09

This report has been created by IC Net
METROHM LTD

Report date:	11/17/2009 8:04:45 PM		
Printed by:	User		
Ident:	R0906328-002		
Analysis from:	11/17/2009 7:52:47 PM		
File:	TB171952.CHW	Last save:	11/17/2009 8:04:46 PM
Method:	3-111609.mtw	Last save:	11/17/2009 11:45:31 A
Run operator:	User		
Analysis number:	10958		
SAMPLE:	C (300.0)		
:			
Vial number:	33		
Volume:	1.0 µL		
Dilution:	40.00		
Amount:	1.0000		
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)		
Size:	4.0 x 100 mm		
Number:	7503293		
Part.size:	5.0 µm		



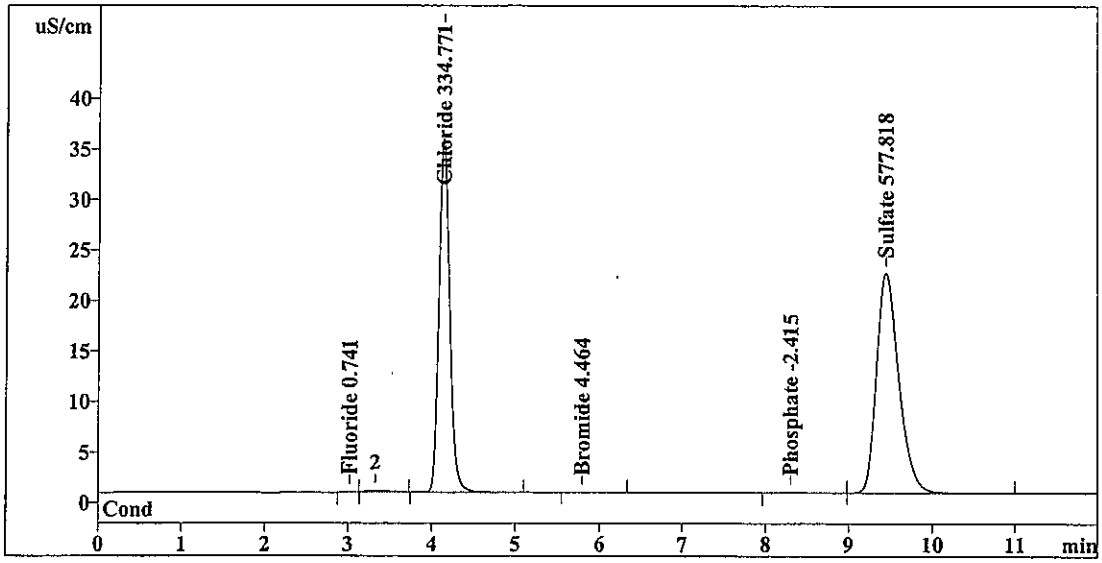
Quantitation method: Custom

No	Retention min	Area uS/cm*sec	Conc. mg/L	Name
1	3.01	0.282	0.697	Fluoride
2	4.14	265.839	OL 279.077	Chloride
3	0.00	0.000	0.000	Nitrite
4	5.80	0.157	4.407	Bromide
5	0.00	0.000	0.000	Nitrate
6	8.30	0.819	-2.341	Phosphate
7	9.45	319.941	466.075	Sulfate
7	12.00	587.038	752.597	

This report has been created by IC Net
METROHM LTD

RP 11/18/09

Report date:	11/17/2009 8:18:51 PM		
Printed by:	User		
Ident:	R0906328-002 DUP		
Analysis from:	11/17/2009 8:06:52 PM		
File:	TB172006.CHW	Last save:	11/17/2009 8:18:51 PM
Method:	3-111609.mtw	Last save:	11/17/2009 11:45:31 A
Run operator:	User		
Analysis number:	10959		
SAMPLE:	C (300.0)		
:			
Vial number:	34		
Volume:	1.0 µL		
Dilution:	40.00		
Amount:	1.0000		
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)		
Size:	4.0 x 100 mm		
Number:	7503293		
Part.size:	5.0 µm		



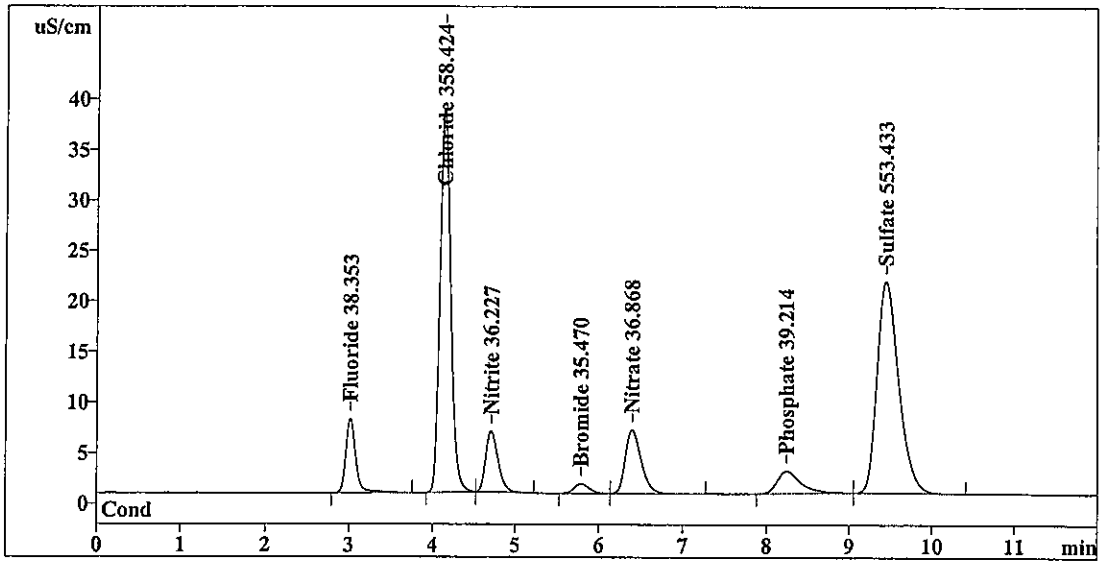
Quantitation method: Custom

No	Retention min	Area uS/cm*sec	Conc. mg/L	Name
1	3.01	0.355	0.741	Fluoride
2	4.14	319.555	334.771	Chloride
3	0.00	0.000	0.000	Nitrite
4	5.80	0.177	4.464	Bromide
5	0.00	0.000	0.000	Nitrate
6	8.30	0.742	-2.415	Phosphate
7	9.45	397.592	577.818	Sulfate
7	12.00	718.421	920.208	

This report has been created by IC Net
METROHM LTD

RP 11/18/09

Report date:	11/17/2009 8:32:55 PM		
Printed by:	User		
Ident:	R0906328-002 SPK		
Analysis from:	11/17/2009 8:20:57 PM		
File:	TB172020.CHW	Last save:	11/17/2009 8:32:55 PM
Method:	3-111609.mtw	Last save:	11/17/2009 11:45:31 A
Run operator:	User		
Analysis number:	10960		
SAMPLE:	C (300.0)		
:			
Vial number:	35		
Volume:	1.0 µL		
Dilution:	40.00		
Amount:	1.0000		
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)		
Size:	4.0 x 100 mm		
Number:	7503293		
Part.size:	5.0 µm		



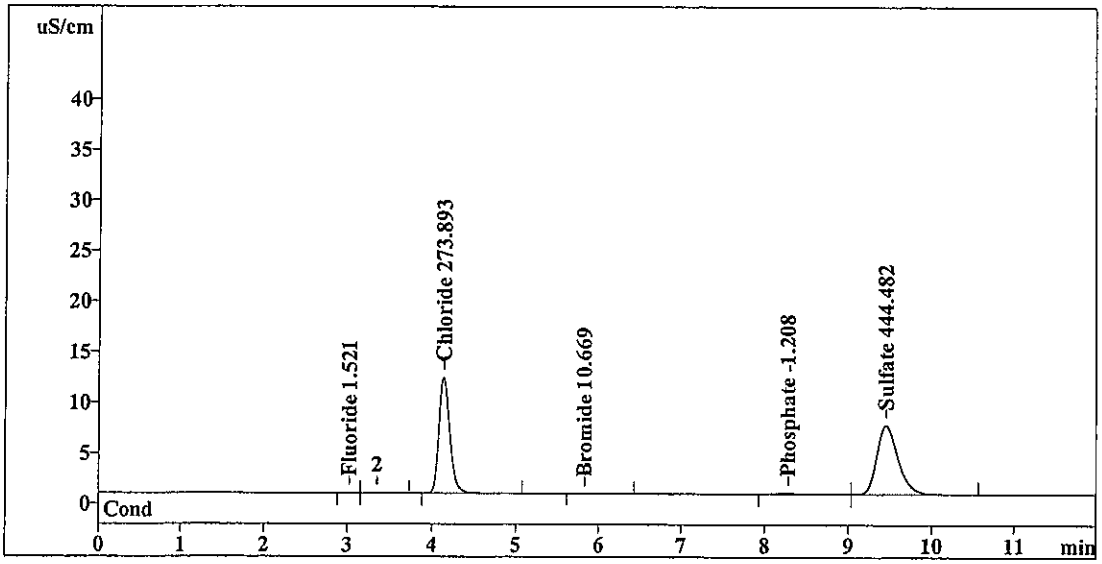
Quantitation method: Custom

No	Retention min	Area uS/cm*sec	Conc. mg/L	Name
1	3.02	62.488	38.353	Fluoride
2	4.14	342.368	OR 358.424	Chloride
3	4.71	61.825	36.227	Nitrite
4	5.79	11.550	35.470	Bromide
5	6.40	82.654	36.868	Nitrate
6	8.24	44.212	39.214	Phosphate
7	9.45	380.647	553.433	Sulfate
7	12.00	985.744	1097.990	

This report has been created by IC Net
METROHM LTD

BR 11/18/09

Report date:	11/17/2009 8:47:00 PM		
Printed by:	User		
Ident:	R0906328-002		
Analysis from:	11/17/2009 8:35:02 PM		
File:	TB172035.CHW	Last save:	11/17/2009 8:47:01 PM
Method:	3-111609.mtw	Last save:	11/17/2009 11:45:31 A
Run operator:	User		
Analysis number:	10961		
SAMPLE:	S (300.0)		
:			
Vial number:	36		
Volume:	1.0 µL		
Dilution:	100.00		
Amount:	1.0000		
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)		
Size:	4.0 x 100 mm		
Number:	7503293		
Part.size:	5.0 µm		



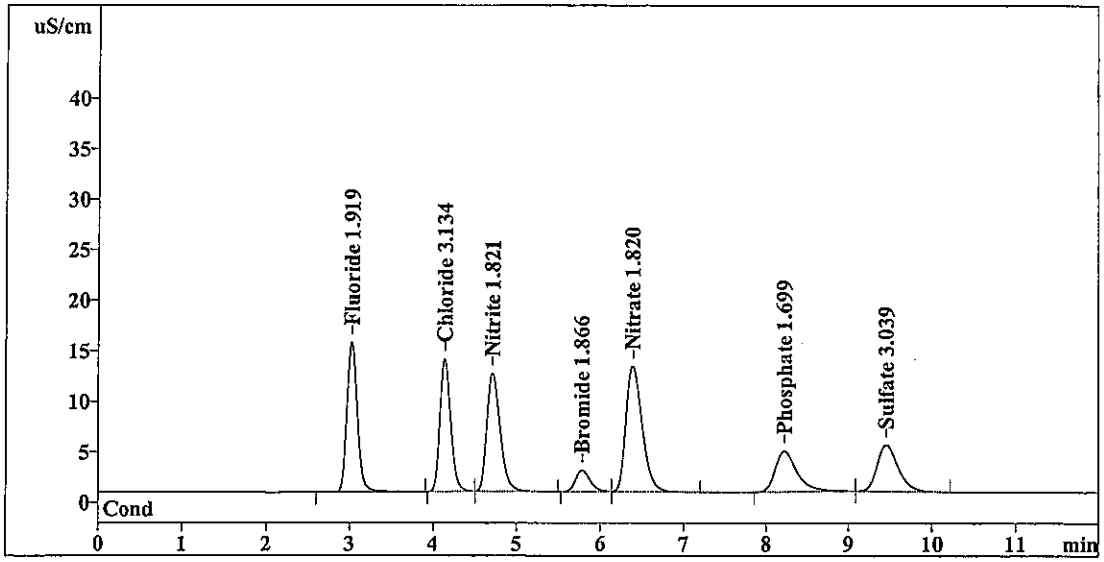
Quantitation method: Custom

No	Retention min	Area uS/cm*sec	Conc. mg/L	Name
1	3.02	0.136	1.521	Fluoride
2	4.14	102.341	273.893	Chloride
3	0.00	0.000	0.000	Nitrite
4	5.83	0.105	10.669	Bromide
5	0.00	0.000	0.000	Nitrate
6	8.28	2.759	-1.208	Phosphate
7	9.46	119.610	OK 444.482	Sulfate
7	12.00	224.951	731.773	

This report has been created by IC Net
METROHM LTD

RP 11/18/09

Report date:	11/17/2009 9:01:05 PM		
Printed by:	User		
Ident:	CCV		
Analysis from:	11/17/2009 8:49:07 PM		
File:	TB172049.CHW	Last save:	11/17/2009 9:01:06 PM
Method:	3-111609.mtw	Last save:	11/17/2009 11:45:31 A
Run operator:	User		
Analysis number:	10962		
SAMPLE:	9056/300.0		
:			
Vial number:	37		
Volume:	1.0 µL		
Dilution:	1.00		
Amount:	1.0000		
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)		
Size:	4.0 x 100 mm		
Number:	7503293		
Part.size:	5.0 µm		



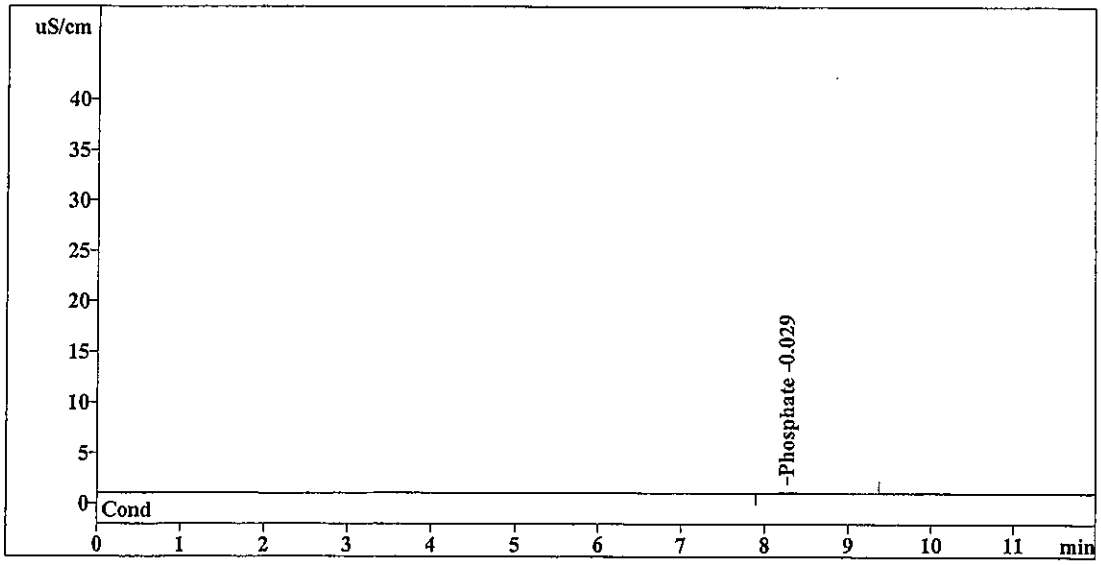
Quantitation method: Custom

No	Retention min	Area uS/cm*sec		Conc. mg/L	Name
1	3.03	125.946	OK	1.919	Fluoride
2	4.14	117.584	↓	3.134	Chloride
3	4.72	129.381	↓	1.821	Nitrite
4	5.78	25.912	—	1.866	Bromide
5	6.39	168.333	OK	1.820	Nitrate
6	8.22	74.239	↓	1.699	Phosphate
7	9.46	80.541	↓	3.039	Sulfate
7	12.00	721.937		15.299	

RP 11/18/09

This report has been created by IC Net
METROHM LTD

Report date:	11/17/2009 9:15:10 PM		
Printed by:	User		
Ident:	CCB		
Analysis from:	11/17/2009 9:03:12 PM		
File:	TB172103.CHW	Last save:	11/17/2009 9:15:10 PM
Method:	3-111609.mtw	Last save:	11/17/2009 11:45:31 A
Run operator:	User		
Analysis number:	10963		
SAMPLE:	9056/300.0		
:			
Vial number:	38		
Volume:	1.0 µL		
Dilution:	1.00		
Amount:	1.0000		
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)		
Size:	4.0 x 100 mm		
Number:	7503293		
Part.size:	5.0 µm		



Quantitation method: Custom

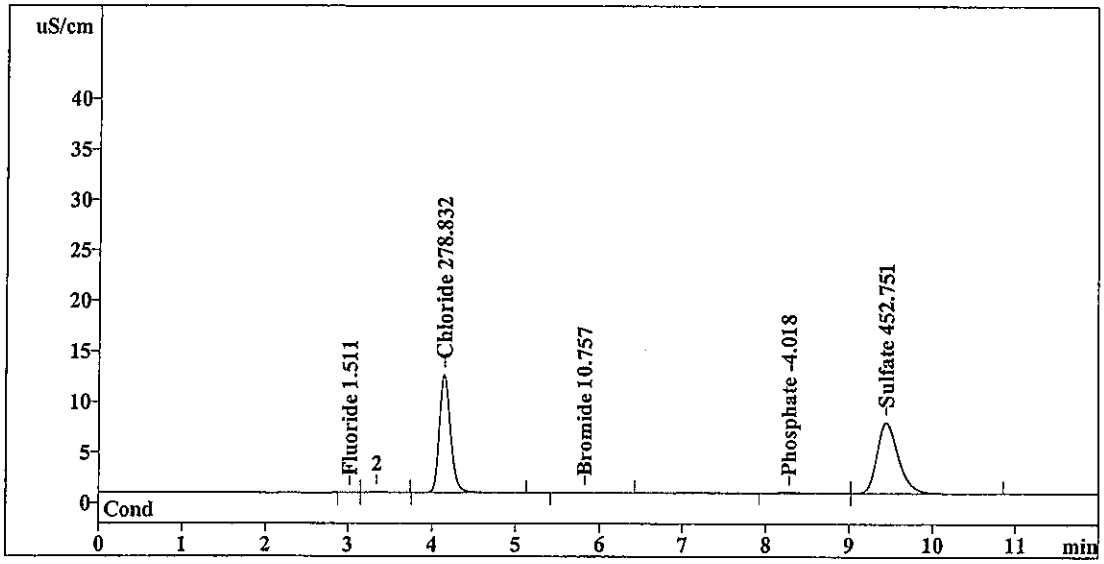
No	Retention min	Area uS/cm*sec	Conc. mg/L	Name
1	0.00	0.000	0.000	Fluoride
2	0.00	0.000	0.000	Chloride
3	0.00	0.000	0.000	Nitrite
4	0.00	0.000	0.000	Bromide
5	0.00	0.000	0.000	Nitrate
6	8.27	2.058	-0.029	Phosphate
7	0.00	0.000	0.000	Sulfate
7	12.00	2.058	0.029	

OK

RP 11/18/09

This report has been created by IC Net
METROHM LTD

Report date:	11/17/2009 9:29:14 PM		
Printed by:	User		
Ident:	R0906328-003		
Analysis from:	11/17/2009 9:17:16 PM		
File:	TB172117.CHW	Last save:	11/17/2009 9:29:15 PM
Method:	3-111609.mtw	Last save:	11/17/2009 11:45:31 A
Run operator:	User		
Analysis number:	10964		
SAMPLE:	CS (300.0)		
:			
Vial number:	39		
Volume:	1.0 µL		
Dilution:	100.00		
Amount:	1.0000		
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)		
Size:	4.0 x 100 mm		
Number:	7503293		
Part.size:	5.0 µm		



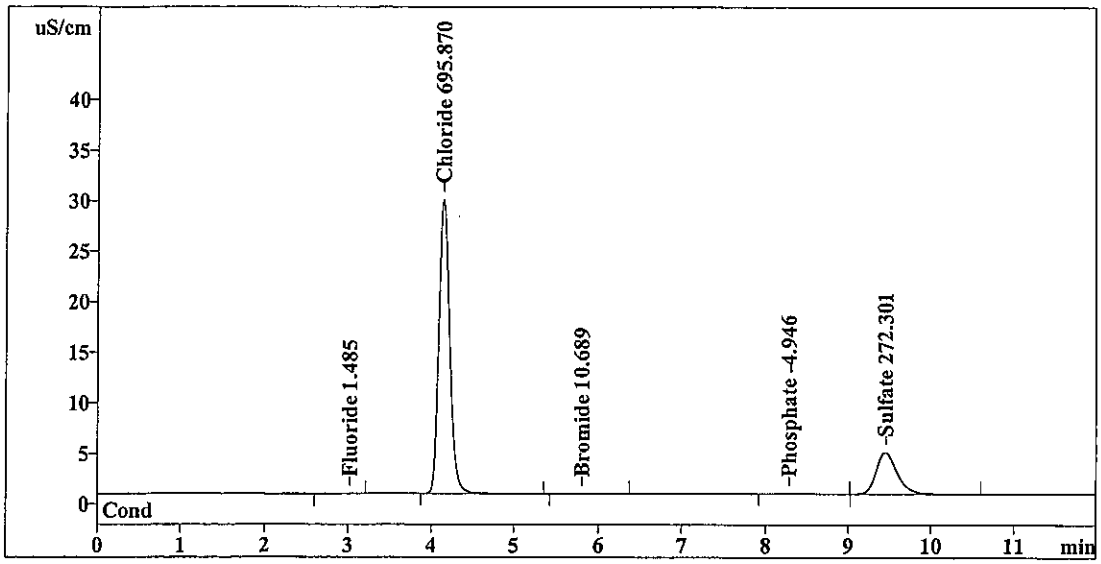
Quantitation method: Custom

No	Retention min	Area uS/cm*sec		Conc. mg/L	Name
1	3.02	0.130		1.511	Fluoride
2	4.15	104.247	OK	278.832	Chloride
3	0.00	0.000		0.000	Nitrite
4	5.81	0.118		10.757	Bromide
5	0.00	0.000		0.000	Nitrate
6	8.28	1.586		-4.018	Phosphate
7	9.45	121.908	OK	452.751	Sulfate
7	12.00	227.989		747.870	

RR 11/18/09

This report has been created by IC Net
METROHM LTD

Report date:	11/17/2009 9:43:20 PM		
Printed by:	User		
Ident:	R0906328-004		
Analysis from:	11/17/2009 9:31:22 PM		
File:	TB172131.CHW	Last save:	11/17/2009 9:43:20 PM
Method:	3-111609.mtw	Last save:	11/17/2009 11:45:31 A
Run operator:	User		
Analysis number:	10965		
SAMPLE:	C (300.0)		
:			
Vial number:	40		
Volume:	1.0 µL		
Dilution:	100.00		
Amount:	1.0000		
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)		
Size:	4.0 x 100 mm		
Number:	7503293		
Part.size:	5.0 µm		



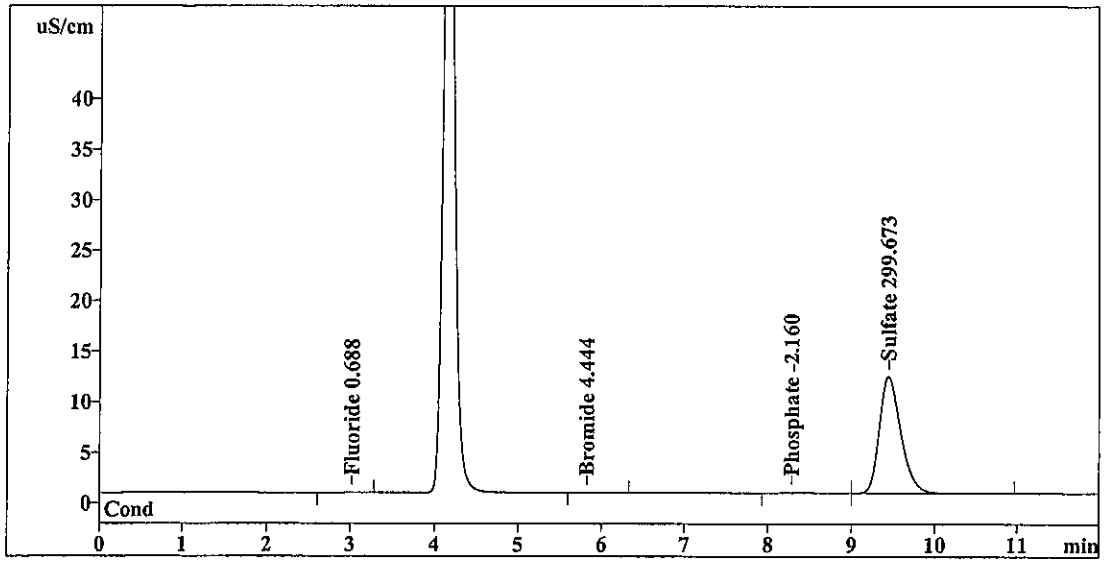
Quantitation method: Custom

No	Retention min	Area uS/cm*sec	Conc. mg/L	Name
1	3.02	0.112	1.485	Fluoride
2	4.15	265.136	OK 695.870	Chloride
3	0.00	0.000	0.000	Nitrite
4	5.81	0.108	10.689	Bromide
5	0.00	0.000	0.000	Nitrate
6	8.28	1.198	-4.946	Phosphate
7	9.45	71.749	272.301	Sulfate
7	12.00	338.304	985.292	

This report has been created by IC Net
METROHM LTD

RP 11/18/09

Report date:	11/17/2009 9:57:24 PM		
Printed by:	User		
Ident:	R0906328-004		
Analysis from:	11/17/2009 9:45:26 PM		
File:	TB172145.CHW	Last save:	11/17/2009 9:57:25 PM
Method:	3-111609.mtw	Last save:	11/17/2009 11:45:31 A
Run operator:	User		
Analysis number:	10966		
SAMPLE:	S (300.0)		
:			
Vial number:	41		
Volume:	1.0 µL		
Dilution:	40.00		
Amount:	1.0000		
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)		
Size:	4.0 x 100 mm		
Number:	7503293		
Part.size:	5.0 µm		



Quantitation method: Custom

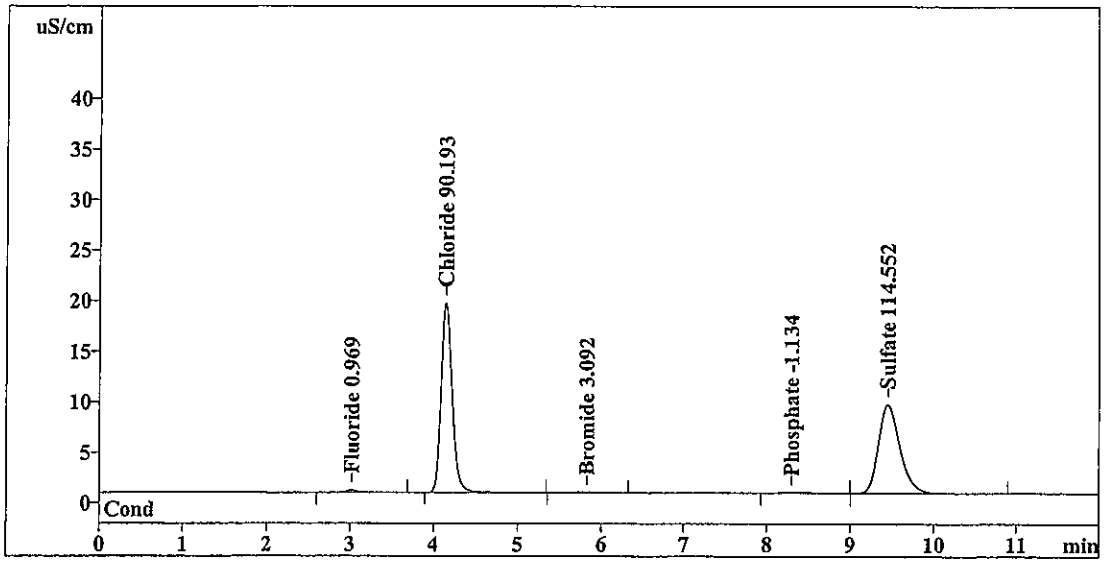
No	Retention min	Area uS/cm*sec	Conc. mg/L	Name
1	3.02	0.267	0.688	Fluoride
2	0.00	0.000	0.000	Chloride
3	0.00	0.000	0.000	Nitrite
4	5.83	0.170	4.444	Bromide
5	0.00	0.000	0.000	Nitrate
6	8.29	1.009	-2.160	Phosphate
7	9.45	204.306	299.673	Sulfate
7	12.00	205.752	306.965	

OK

RR 11/18/09

This report has been created by IC Net
METROHM LTD

Report date:	11/17/2009 10:11:37 PM		
Printed by:	User		
Ident:	R0906328-005		
Analysis from:	11/17/2009 9:59:31 PM		
File:	TB172159.CHW	Last save:	11/17/2009 10:11:37 P
Method:	3-111609.mtw	Last save:	11/17/2009 11:45:31 A
Run operator:	User		
Analysis number:	10967		
SAMPLE:	CS (300.0)		
:			
Vial number:	42		
Volume:	1.0 µL		
Dilution:	20.00		
Amount:	1.0000		
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)		
Size:	4.0 x 100 mm		
Number:	7503293		
Part.size:	5.0 µm		



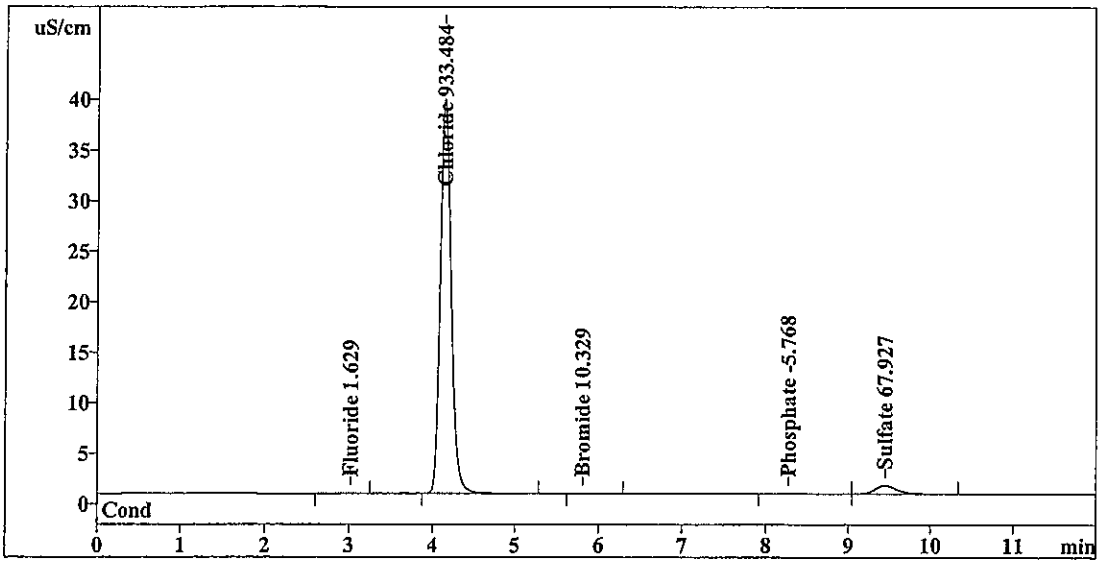
Quantitation method: Custom

No	Retention min	Area uS/cm*sec	Conc. mg/L	Name
1	3.02	2.331	0.969	Fluoride
2	4.15	170.654	OK 90.193	Chloride
3	0.00	0.000	0.000	Nitrite
4	5.83	0.808	3.092	Bromide
5	0.00	0.000	0.000	Nitrate
6	8.29	0.895	-1.134	Phosphate
7	9.45	155.267	OK 114.552	Sulfate
7	12.00	329.955	209.940	

RP 11/18/09

This report has been created by IC Net
METROHM LTD

Report date:	11/17/2009 10:26:00 PM		
Printed by:	User		
Ident:	R0906328-006		
Analysis from:	11/17/2009 10:14:02 PM		
File:	TB172214.CHW	Last save:	11/17/2009 10:26:01 P
Method:	3-111609.mtw	Last save:	11/17/2009 11:45:31 A
Run operator:	User		
Analysis number:	10968		
SAMPLE:	C (300.0)		
:			
Vial number:	43		
Volume:	1.0 µL		
Dilution:	100.00		
Amount:	1.0000		
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)		
Size:	4.0 x 100 mm		
Number:	7503293		
Part.size:	5.0 µm		



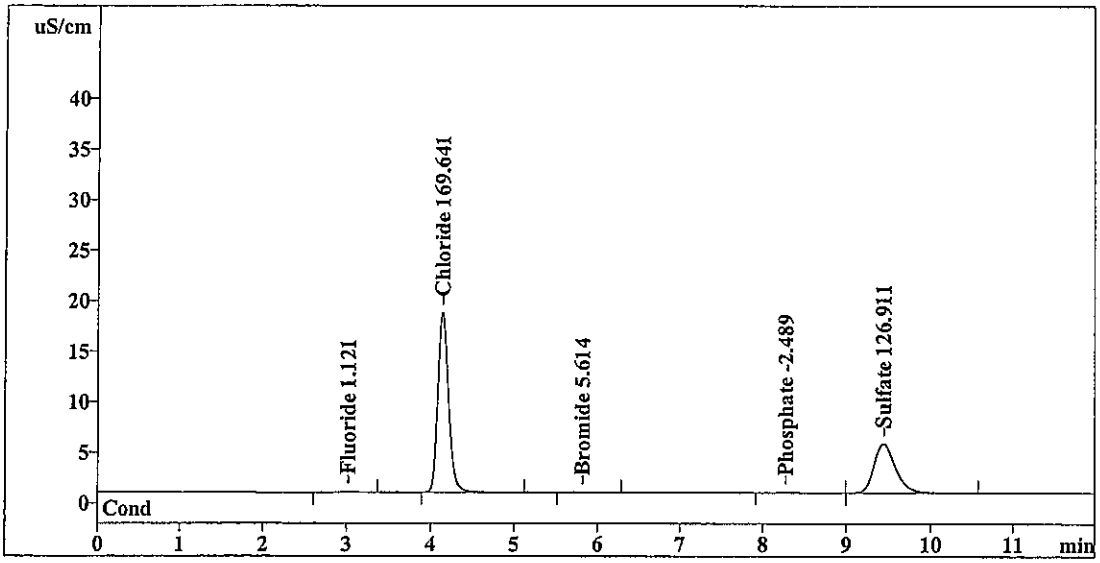
Quantitation method: Custom

No	Retention min	Area uS/cm*sec	Conc. mg/L	Name
1	3.02	0.208	1.629	Fluoride
2	4.15	356.806	OK 933.484	Chloride
3	0.00	0.000	0.000	Nitrite
4	5.83	0.055	10.329	Bromide
5	0.00	0.000	0.000	Nitrate
6	8.28	0.855	-5.768	Phosphate
7	9.45	14.940	67.927	Sulfate
7	12.00	372.864	1019.137	

RP 11/18/09

This report has been created by IC Net
METROHM LTD

Report date:	11/17/2009 10:40:05 PM		
Printed by:	User		
Ident:	R0906328-015		
Analysis from:	11/17/2009 10:28:07 PM		
File:	TB172228.CHW	Last save:	11/17/2009 10:40:06 P
Method:	3-111609.mtw	Last save:	11/17/2009 11:45:31 A
Run operator:	User		
Analysis number:	10969		
SAMPLE:	C (300.0)		
:			
Vial number:	44		
Volume:	1.0 µL		
Dilution:	40.00		
Amount:	1.0000		
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)		
Size:	4.0 x 100 mm		
Number:	7503293		
Part.size:	5.0 µm		



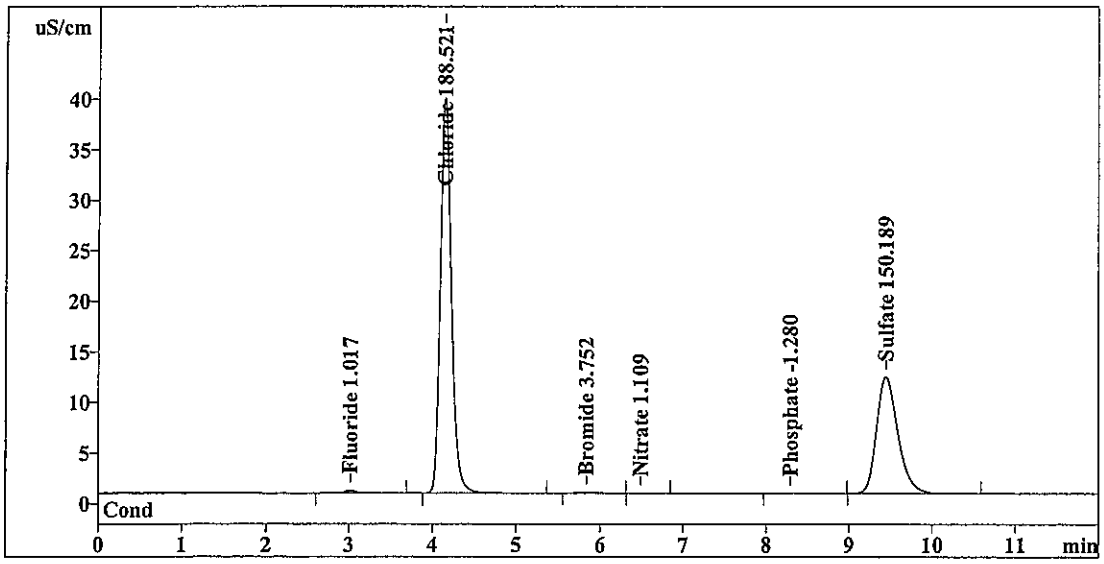
Quantitation method: Custom

No	Retention min	Area uS/cm*sec		Conc. mg/L	Name
1	3.02	0.983		1.121	Fluoride
2	4.14	160.290	OK	169.641	Chloride
3	0.00	0.000		0.000	Nitrite
4	5.82	0.599		5.614	Bromide
5	0.00	0.000		0.000	Nitrate
6	8.28	0.665		-2.489	Phosphate
7	9.44	84.251		126.911	Sulfate
7	12.00	246.789		305.776	

RP 11/18/09

This report has been created by IC Net
METROHM LTD

Report date:	11/17/2009 10:54:10 PM		
Printed by:	User		
Ident:	R0906328-015		
Analysis from:	11/17/2009 10:42:12 PM		
File:	TB172242.CHW	Last save:	11/17/2009 10:54:10 P
Method:	3-111609.mtw	Last save:	11/17/2009 11:45:31 A
Run operator:	User		
Analysis number:	10970		
SAMPLE:	S (300.0)		
:			
Vial number:	45		
Volume:	1.0 µL		
Dilution:	20.00		
Amount:	1.0000		
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)		
Size:	4.0 x 100 mm		
Number:	7503293		
Part.size:	5.0 µm		



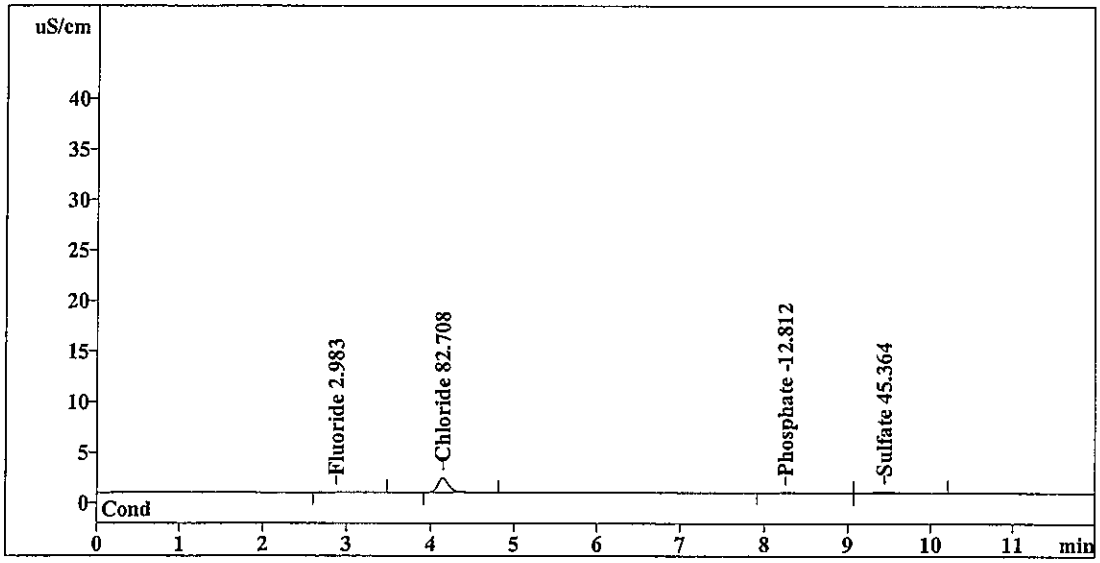
Quantitation method: Custom

No	Retention min	Area uS/cm*sec	Conc. mg/L	Name
1	3.02	2.493	1.017	Fluoride
2	4.15	360.324	188.521	Chloride
3	0.00	0.000	0.000	Nitrite
4	5.84	1.292	3.752	Bromide
5	6.50	0.076	1.109	Nitrate
6	8.30	0.590	-1.280	Phosphate
7	9.45	204.795	150.189	Sulfate
7	12.00	569.570	345.868	

RP 11/18/09

This report has been created by IC Net
METROHM LTD

Report date:	11/17/2009 11:08:15 PM
Printed by:	User
Ident:	R0906328-016
Analysis from:	11/17/2009 10:56:16 PM
File:	TB172256.CHW Last save: 11/17/2009 11:08:15 P
Method:	3-111609.mtw Last save: 11/17/2009 11:45:31 A
Run operator:	User
Analysis number:	10971
SAMPLE:	C (300.0)
:	
Vial number:	46
Volume:	1.0 µL
Dilution:	200.00
Amount:	1.0000
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)
Size:	4.0 x 100 mm
Number:	7503293
Part.size:	5.0 µm



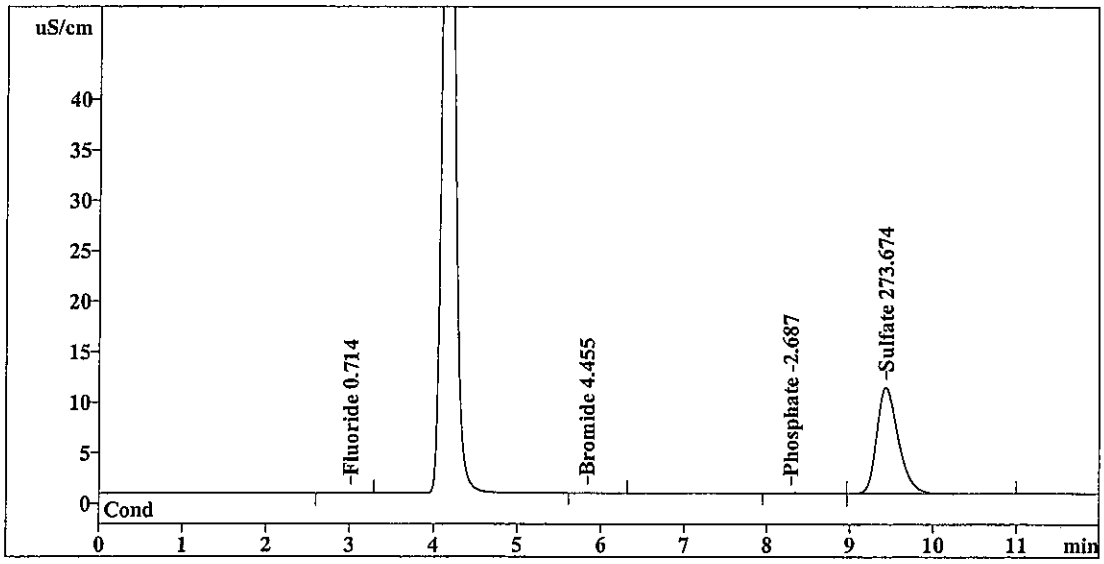
Quantitation method: Custom

No	Retention min	Area uS/cm*sec		Conc. mg/L	Name
1	2.89	0.117		2.983	Fluoride
2	4.15	12.630	1/200 + 1/20	82.708	Chloride
3	0.00	0.000		0.000	Nitrite
4	0.00	0.000		0.000	Bromide
5	0.00	0.000		0.000	Nitrate
6	8.27	0.588		-12.812	Phosphate
7	9.45	2.364		45.364	Sulfate
7	12.00	15.699		143.867	

RP 11/18/09

This report has been created by IC Net
METROHM LTD

Report date:	11/17/2009 11:22:19 PM		
Printed by:	User		
Ident:	R0906328-016		
Analysis from:	11/17/2009 11:10:21 PM		
File:	TB172310.CHW	Last save:	11/17/2009 11:22:20 P
Method:	3-111609.mtw	Last save:	11/17/2009 11:45:31 A
Run operator:	User		
Analysis number:	10972		
SAMPLE:	S (300.0)		
:			
Vial number:	47		
Volume:	1.0 µL		
Dilution:	40.00		
Amount:	1.0000		
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)		
Size:	4.0 x 100 mm		
Number:	7503293		
Part.size:	5.0 µm		



Quantitation method: Custom

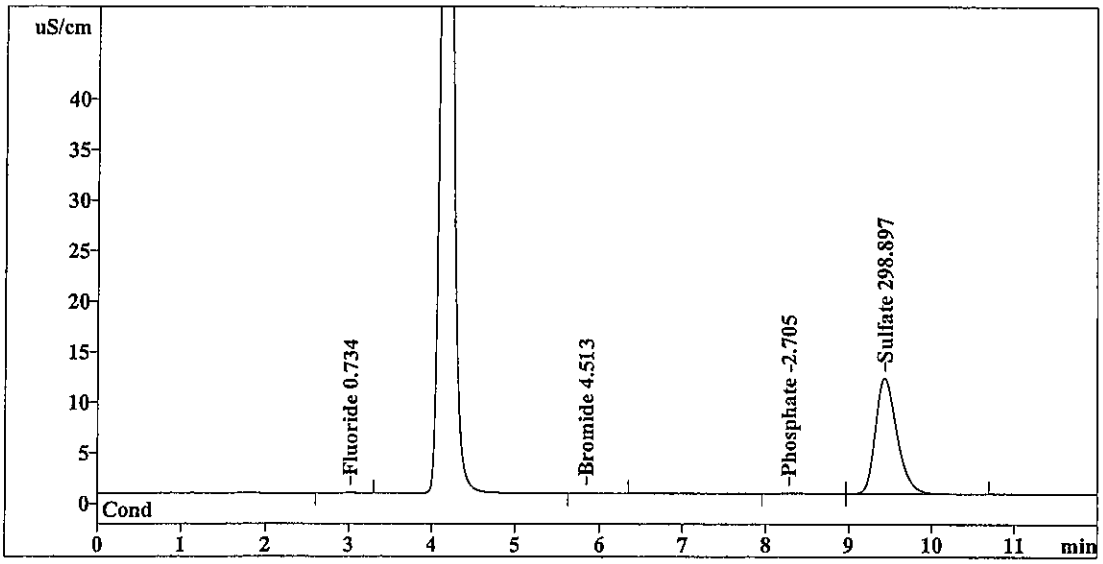
No	Retention min	Area uS/cm*sec	Conc. mg/L	Name
1	3.02	0.311	0.714	Fluoride
2	0.00	0.000	0.000	Chloride
3	0.00	0.000	0.000	Nitrite
4	5.84	0.174	4.455	Bromide
5	0.00	0.000	0.000	Nitrate
6	8.29	0.458	-2.687	Phosphate
7	9.44	186.239	273.674	Sulfate
7	12.00	187.182	281.530	

OK

RP 11/18/09

This report has been created by IC Net
METROHM LTD

Report date:	11/17/2009 11:36:24 PM
Printed by:	User
Ident:	R0906328-016 DUP
Analysis from:	11/17/2009 11:24:26 PM
File:	TB172324.CHW Last save: 11/17/2009 11:36:25 P
Method:	3-111609.mtw Last save: 11/17/2009 11:45:31 A
Run operator:	User
Analysis number:	10973
SAMPLE:	S (300.0)
:	
Vial number:	48
Volume:	1.0 µL
Dilution:	40.00
Amount:	1.0000
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)
Size:	4.0 x 100 mm
Number:	7503293
Part.size:	5.0 µm



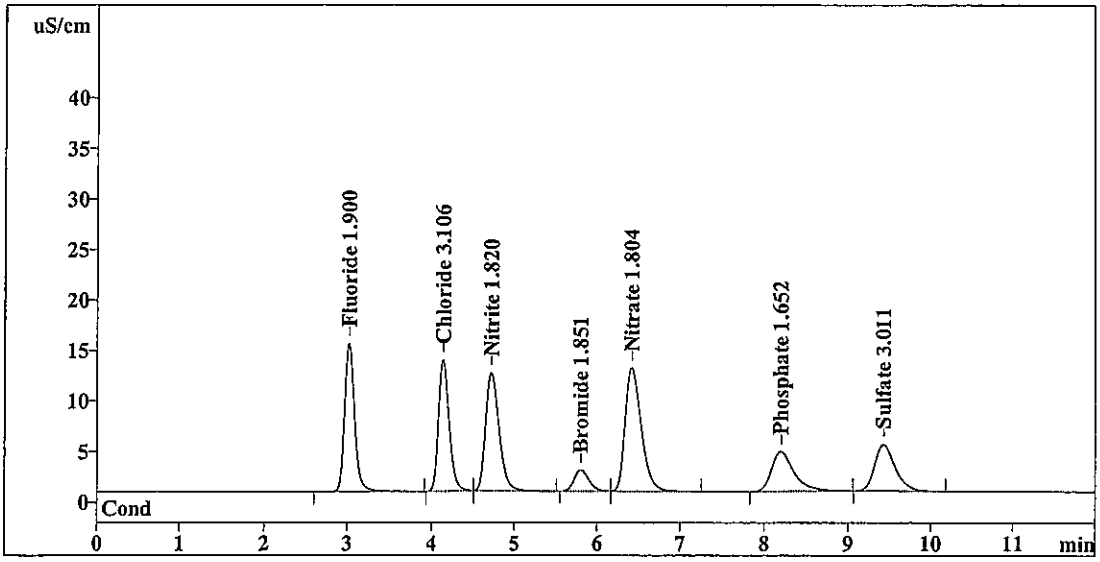
Quantitation method: Custom

No	Retention min	Area uS/cm*sec		Conc. mg/L	Name
1	3.02	0.343		0.734	Fluoride
2	0.00	0.000		0.000	Chloride
3	0.00	0.000		0.000	Nitrite
4	5.84	0.195		4.513	Bromide
5	0.00	0.000		0.000	Nitrate
6	8.29	0.439		-2.705	Phosphate
7	9.44	203.767	OK	298.897	Sulfate
7	12.00	204.745		306.849	

This report has been created by IC Net
METROHM LTD

RR 11/18/09

Report date:	11/17/2009 11:50:29 PM		
Printed by:	User		
Ident:	CCV		
Analysis from:	11/17/2009 11:38:31 PM		
File:	TB172338.CHW	Last save:	11/17/2009 11:50:29 P
Method:	3-111609.mtw	Last save:	11/17/2009 11:45:31 A
Run operator:	User		
Analysis number:	10974		
SAMPLE:	9056/300.0		
:			
Vial number:	49		
Volume:	1.0 µL		
Dilution:	1.00		
Amount:	1.0000		
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)		
Size:	4.0 x 100 mm		
Number:	7503293		
Part.size:	5.0 µm		



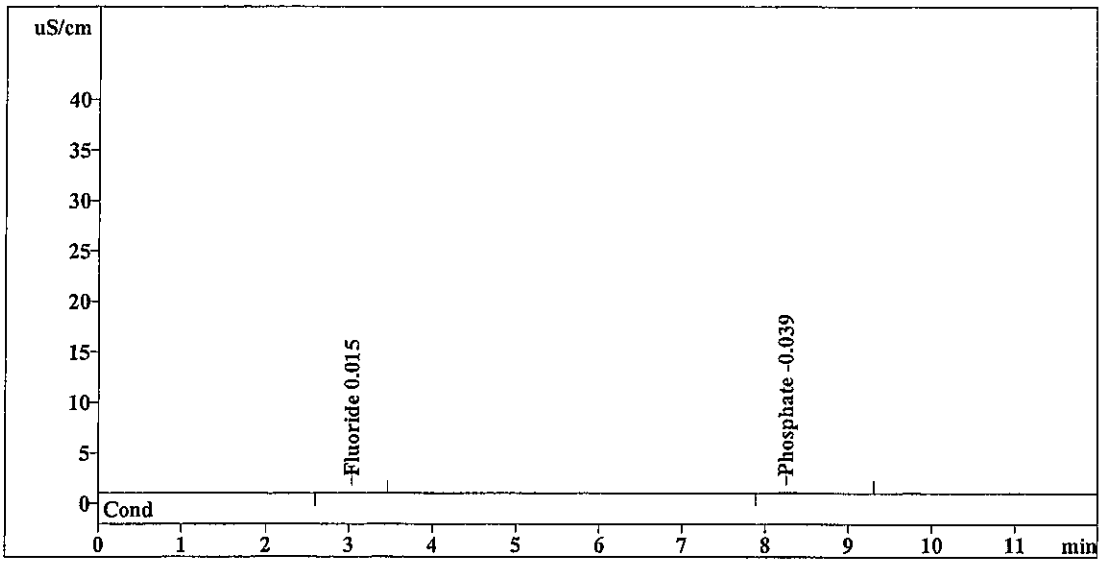
Quantitation method: Custom

No	Retention min	Area uS/cm*sec	Conc. mg/L	Name
1	3.02	124.679	1.900	Fluoride
2	4.15	116.520	3.106	Chloride
3	4.72	129.311	1.820	Nitrite
4	5.80	25.691	1.851	Bromide
5	6.42	166.796	1.804	Nitrate
6	8.20	72.250	1.652	Phosphate
7	9.43	79.761	3.011	Sulfate
7	12.00	715.009	15.145	

RP 11/18/09

This report has been created by IC Net
METROHM LTD

Report date:	11/18/2009 12:04:34 AM		
Printed by:	User		
Ident:	CCB		
Analysis from:	11/17/2009 11:52:35 PM		
File:	TB172352.CHW	Last save:	11/18/2009 12:04:34 A
Method:	3-111609.mtw	Last save:	11/17/2009 11:45:31 A
Run operator:	User		
Analysis number:	10975		
SAMPLE:	9056/300.0		
:			
Vial number:	50		
Volume:	1.0 µL		
Dilution:	1.00		
Amount:	1.0000		
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)		
Size:	4.0 x 100 mm		
Number:	7503293		
Part.size:	5.0 µm		



Quantitation method: Custom

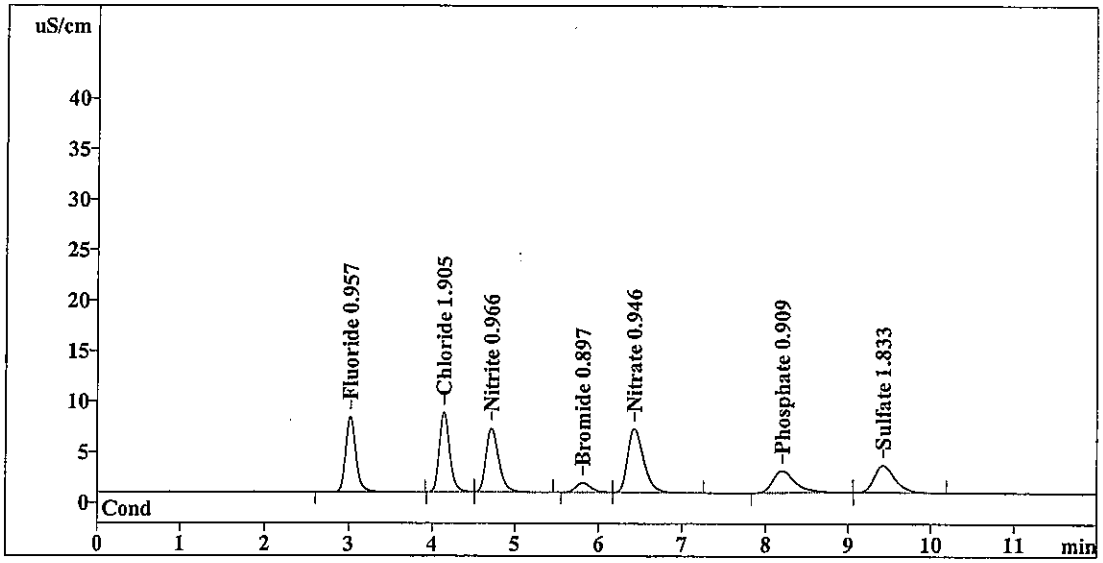
No	Retention min	Area uS/cm*sec	Conc. mg/L	Name
1	3.05	0.131	0.015	Fluoride
2	0.00	0.000	0.000	Chloride
3	0.00	0.000	0.000	Nitrite
4	0.00	0.000	0.000	Bromide
5	0.00	0.000	0.000	Nitrate
6	8.25	1.653	0.039	Phosphate
7	0.00	0.000	0.000	Sulfate
7	12.00	1.784	0.054	

OK

RP 11/18/09

This report has been created by IC Net
METROHM LTD

Report date:	11/18/2009 12:19:01 AM	
Printed by:	User	
Ident:	LCS	
Analysis from:	11/18/2009 12:06:41 AM	
File:	TB180006.CHW	Last save: 11/18/2009 12:19:00 A
Method:	3-111609.mtw	Last save: 11/17/2009 11:45:31 A
Run operator:	User	
Analysis number:	10976	
SAMPLE:	9056/300.0	
:		
Vial number:	51	
Volume:	1.0 µL	
Dilution:	1.00	
Amount:	1.0000	
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)	
Size:	4.0 x 100 mm	
Number:	7503293	
Part.size:	5.0 µm	



Quantitation method: Custom

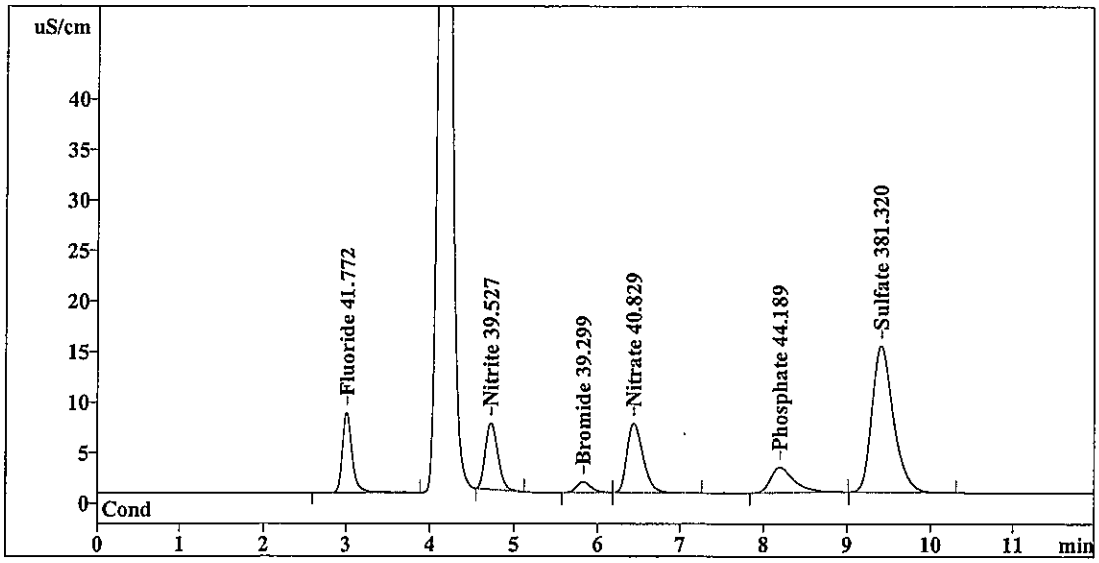
No	Retention min	Area uS/cm*sec	Conc. mg/L	Name
1	3.02	62.388	0.957	Fluoride
2	4.15	70.188	1.905	Chloride
3	4.72	66.250	0.966	Nitrite
4	5.81	11.694	0.897	Bromide
5	6.43	85.010	0.946	Nitrate
6	8.20	41.216	0.909	Phosphate
7	9.42	46.997	1.833	Sulfate
7	12.00	383.743	8.413	

OK OK

RP 11/18/09

This report has been created by IC Net
METROHM LTD

Report date:	11/18/2009 12:34:29 AM		
Printed by:	User		
Ident:	R0906328-016 SPK		
Analysis from:	11/18/2009 12:22:31 AM		
File:	TB180022.CHW	Last save:	11/18/2009 12:34:29 A
Method:	3-111609.mtw	Last save:	11/17/2009 11:45:31 A
Run operator:	User		
Analysis number:	10977		
SAMPLE:	S (300.0)		
:			
Vial number:	52		
Volume:	1.0 µL		
Dilution:	40.00		
Amount:	1.0000		
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)		
Size:	4.0 x 100 mm		
Number:	7503293		
Part.size:	5.0 µm		



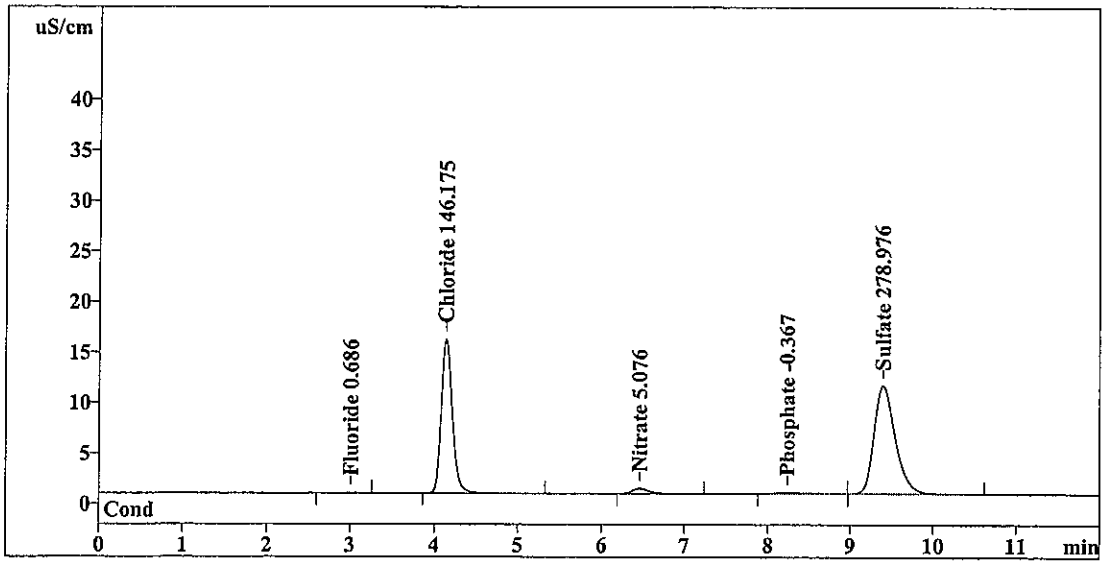
Quantitation method: Custom

No	Retention min	Area uS/cm*sec	Conc. mg/L	Name
1	3.01	68.135	41.772	Fluoride
2	0.00	0.000	0.000	Chloride
3	4.72	67.913	39.527	Nitrite
4	5.83	12.955	39.299	Bromide
5	6.44	92.093	40.829	Nitrate
6	8.20	49.406	44.189	Phosphate
7	9.41	261.044	OK 381.320	Sulfate
7	12.00	551.545	586.936	

RP 11/18/09

This report has been created by IC Net
METROHM LTD

Report date:	11/18/2009 12:48:44 AM	
Printed by:	User	
	6447	
Ident:	R090~~6477~~.001 RP 11/18/09	
Analysis from:	11/18/2009 12:36:46 AM	
File:	TB180036.CHW	Last save: 11/18/2009 12:48:44 A
Method:	3-111609.mtw	Last save: 11/17/2009 11:45:31 A
Run operator:	User	
Analysis number:	10978	
SAMPLE:	CS (300.0)	
:		
Vial number:	53	
Volume:	1.0 µL	
Dilution:	40.00	
Amount:	1.0000	
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)	
Size:	4.0 x 100 mm	
Number:	7503293	
Part.size:	5.0 µm	



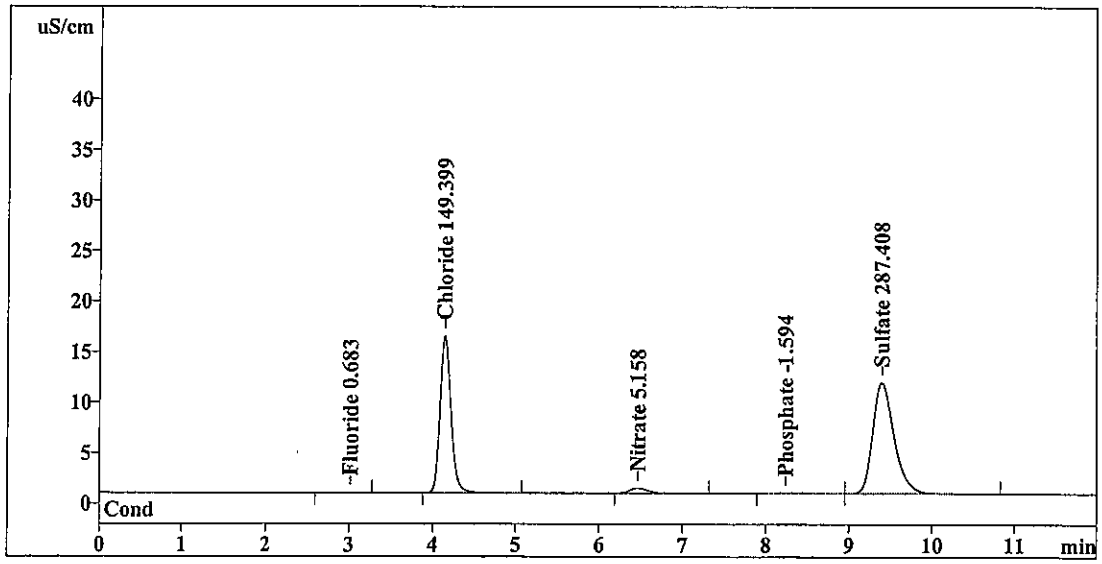
Quantitation method: Custom

No	Retention min	Area uS/cm*sec	Conc. mg/L	Name
1	3.01	0.264	0.686	Fluoride
2	4.14	137.658	OK 146.175	Chloride
3	0.00	0.000	0.000	Nitrite
4	0.00	0.000	0.000	Bromide
5	6.46	6.887	5.076	Nitrate
6	8.24	2.880	-0.367	Phosphate
7	9.40	189.923	OK 278.976	Sulfate
7	12.00	337.613	431.280	

RP 11/18/09

This report has been created by IC Net
METROHM LTD

Report date:	11/18/2009 1:02:50 AM		
Printed by:	User		
Ident:	R090447-001 DUP		
Analysis from:	11/18/2009 12:50:52 AM		
File:	TB180050.CHW	Last save:	11/18/2009 1:02:50 AM
Method:	3-111609.mtw	Last save:	11/17/2009 11:45:31 A
Run operator:	User		
Analysis number:	10979		
SAMPLE:	CS (300.0)		
:			
Vial number:	54		
Volume:	1.0 µL		
Dilution:	40.00		
Amount:	1.0000		
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)		
Size:	4.0 x 100 mm		
Number:	7503293		
Part.size:	5.0 µm		

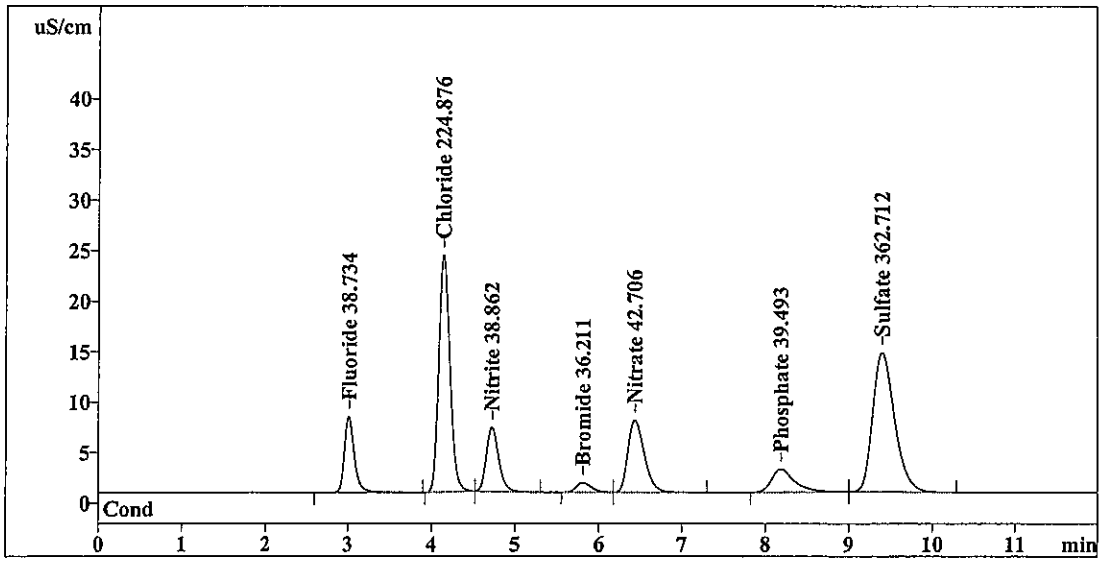


Quantitation method: Custom

No	Retention min	Area uS/cm*sec	Conc. mg/L	Name
1	3.01	0.259	0.683	Fluoride
2	4.14	140.768	149.399	Chloride
3	0.00	0.000	0.000	Nitrite
4	0.00	0.000	0.000	Bromide
5	6.46	7.081	5.158	Nitrate
6	8.24	1.599	-1.594	Phosphate
7	9.40	195.783	287.408	Sulfate
7	12.00	345.490	444.242	

This report has been created by IC Net
METROHM LTD

Report date:	11/18/2009 1:16:55 AM		
Printed by:	User		
	6447		
Ident:	R090647 7-001 SPK		
Analysis from:	11/18/2009 1:04:57 AM		
File:	TB180104.CHW	Last save:	11/18/2009 1:16:55 AM
Method:	3-111609.mtw	Last save:	11/17/2009 11:45:31 A
Run operator:	User		
Analysis number:	10980		
SAMPLE:	CS (300.0)		
:			
Vial number:	55		
Volume:	1.0 µL		
Dilution:	40.00		
Amount:	1.0000		
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)		
Size:	4.0 x 100 mm		
Number:	7503293		
Part.size:	5.0 µm		



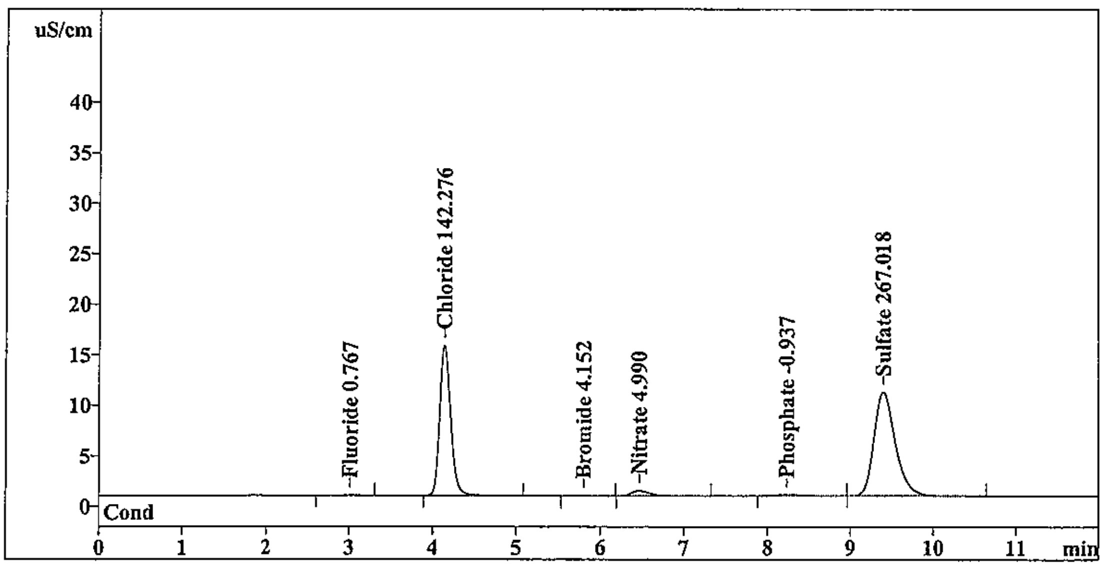
Quantitation method: Custom

No	Retention min	Area uS/cm*sec	Conc. mg/L	Name
1	3.01	63.116	38.734	Fluoride
2	4.14	213.564	224.876	Chloride
3	4.72	66.685	38.862	Nitrite
4	5.81	11.822	36.211	Bromide
5	6.43	96.566	42.706	Nitrate
6	8.19	44.503	39.493	Phosphate
7	9.40	248.112	362.712	Sulfate
7	12.00	744.369	783.593	

RP 11/18/09

This report has been created by IC Net
METROHM LTD

Report date:	11/18/2009 1:31:00 AM		
Printed by:	User		
Ident:	R0906477-002 (6447 RP11/18/09)		
Analysis from:	11/18/2009 1:19:02 AM		
File:	TB180119.CHW	Last save:	11/18/2009 1:31:00 AM
Method:	3-111609.mtw	Last save:	11/17/2009 11:45:31 A
Run operator:	User		
Analysis number:	10981		
SAMPLE:	S (300.0)		
:			
Vial number:	56		
Volume:	1.0 µL		
Dilution:	40.00		
Amount:	1.0000		
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)		
Size:	4.0 x 100 mm		
Number:	7503293		
Part.size:	5.0 µm		



Quantitation method: Custom

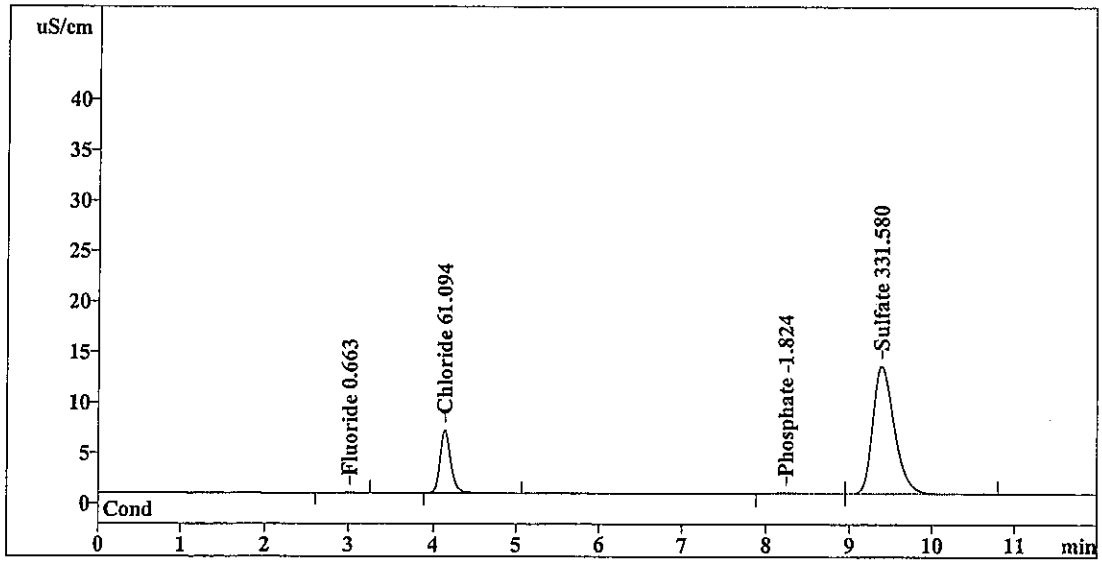
No	Retention min	Area uS/cm*sec	Conc. mg/L	Name
1	3.01	0.398	0.767	Fluoride
2	4.14	133.898	142.276	Chloride
3	0.00	0.000	0.000	Nitrite
4	5.82	0.063	4.152	Bromide
5	6.47	6.681	4.990	Nitrate
6	8.24	2.286	-0.937	Phosphate
7	9.40	181.613	OK 267.018	Sulfate
7	12.00	324.938	420.139	

RP 11/18/09

This report has been created by IC Net
METROHM LTD

00838

Report date:	11/18/2009 1:45:05 AM		
Printed by:	User		
Ident:	R0906174-003		
Analysis from:	11/18/2009 1:33:07 AM		
File:	TB180133.CHW	Last save:	11/18/2009 1:45:05 AM
Method:	3-111609.mtw	Last save:	11/17/2009 11:45:31 A
Run operator:	User		
Analysis number:	10982		
SAMPLE:	S (300.0)		
:			
Vial number:	57		
Volume:	1.0 µL		
Dilution:	40.00		
Amount:	1.0000		
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)		
Size:	4.0 x 100 mm		
Number:	7503293		
Part.size:	5.0 µm		



Quantitation method: Custom

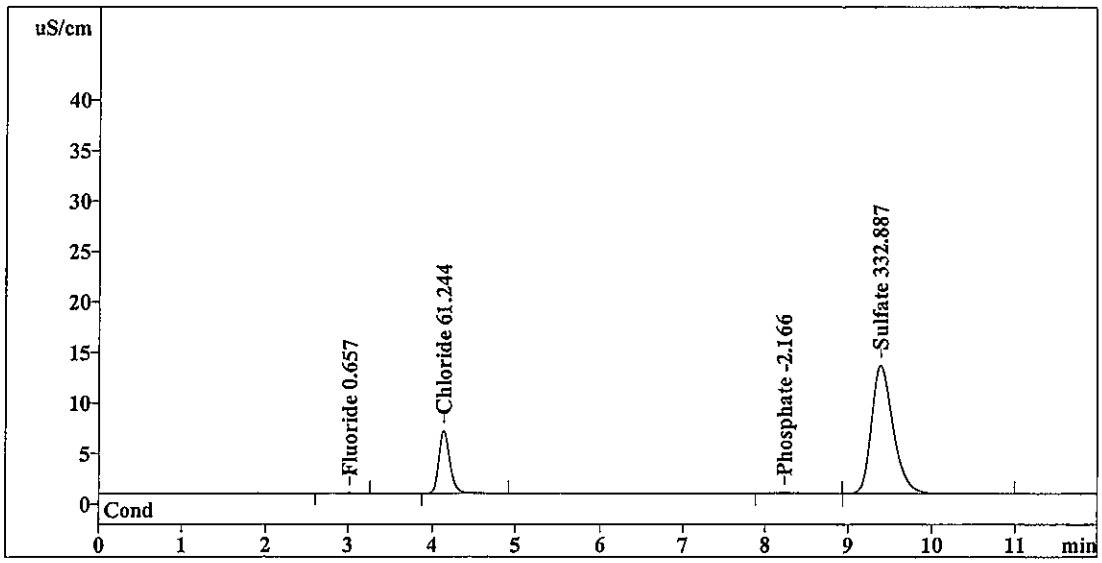
No	Retention min	Area uS/cm*sec	Conc. mg/L	Name
1	3.01	0.226	0.663	Fluoride
2	4.14	55.599	61.094	Chloride
3	0.00	0.000	0.000	Nitrite
4	0.00	0.000	0.000	Bromide
5	0.00	0.000	0.000	Nitrate
6	8.24	1.359	-1.824	Phosphate
7	9.40	226.479	331.580	Sulfate
7	12.00	283.662	395.161	

OK

This report has been created by IC Net
METROHM LTD

RP 11/18/09

Report date:	11/18/2009 1:59:11 AM		
Printed by:	User		
Ident:	R0906174-003 DUP		
Analysis from:	11/18/2009 1:47:13 AM		
File:	TB180147.CHW	Last save:	11/18/2009 1:59:11 AM
Method:	3-111609.mtw	Last save:	11/17/2009 11:45:31 A
Run operator:	User		
Analysis number:	10983		
SAMPLE:	S (300.0)		
:			
Vial number:	58		
Volume:	1.0 µL		
Dilution:	40.00		
Amount:	1.0000		
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)		
Size:	4.0 x 100 mm		
Number:	7503293		
Part.size:	5.0 µm		



Quantitation method: Custom

No	Retention min	Area uS/cm*sec	Conc. mg/L	Name
1	3.01	0.217	0.657	Fluoride
2	4.14	55.744	61.244	Chloride
3	0.00	0.000	0.000	Nitrite
4	0.00	0.000	0.000	Bromide
5	0.00	0.000	0.000	Nitrate
6	8.24	1.003	-2.166	Phosphate
7	9.39	227.386	332.887	Sulfate
7	12.00	284.350	396.953	

OK

This report has been created by IC Net
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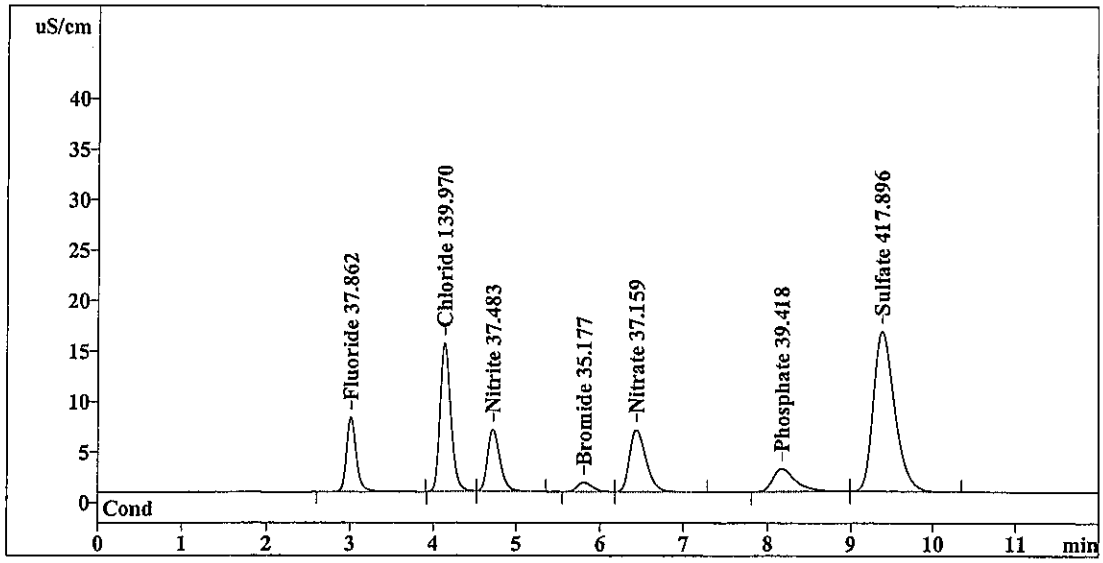
RP 11/18/09

Report date:	11/18/2009 2:13:16 AM
Printed by:	User
Ident:	R0906174-003 SPK
Analysis from:	11/18/2009 2:01:18 AM
File:	TB180201.CHW Last save: 11/18/2009 2:13:16 AM
Method:	3-111609.mtw Last save: 11/17/2009 11:45:31 A
Run operator:	User
Analysis number:	10984
SAMPLE:	S (300.0)
:	
Vial number:	59
Volume:	1.0 µL
Dilution:	40.00
Amount:	1.0000
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)
Size:	4.0 x 100 mm
Number:	7503293
Part.size:	5.0 µm



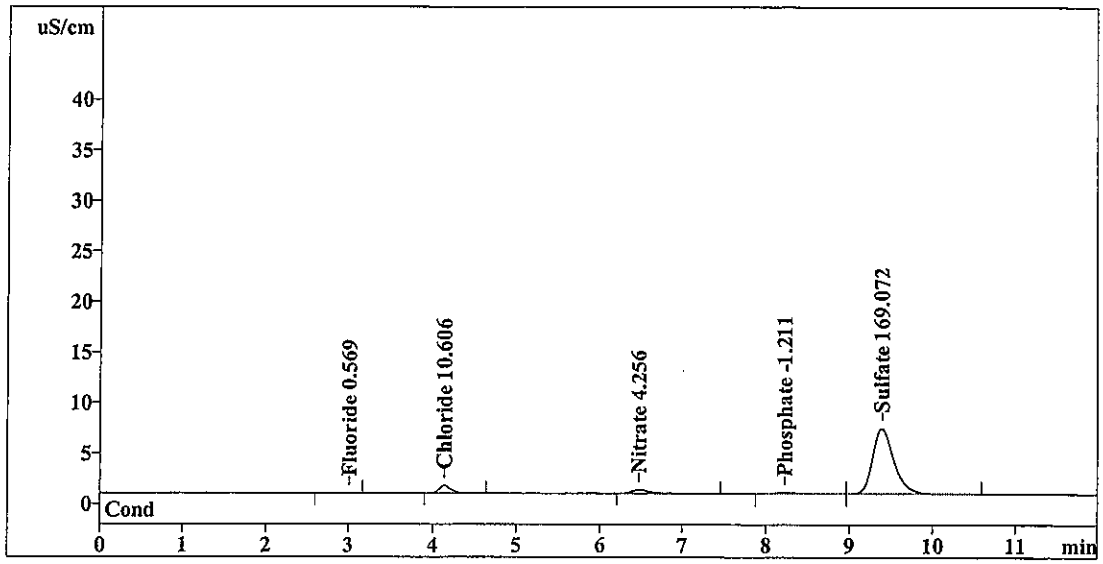
Quantitation method: Custom

No	Retention min	Area uS/cm*sec	Conc. mg/L	Name
1	3.01	61.677	37.862	Fluoride
2	4.14	131.673	139.970	Chloride
3	4.72	64.142	37.483	Nitrite
4	5.81	11.443	35.177	Bromide
5	6.44	83.347	37.159	Nitrate
6	8.18	44.424	39.418	Phosphate
7	9.39	286.461	417.896	Sulfate
7	12.00	683.167	744.965	

This report has been created by IC Net
METROHM LTD

RP 11/18/09

Report date:	11/18/2009 2:27:21 AM		
Printed by:	User		
Ident:	R0906436-008		
Analysis from:	11/18/2009 2:15:22 AM		
File:	TB180215.CHW	Last save:	11/18/2009 2:27:21 AM
Method:	3-111609.mtw	Last save:	11/17/2009 11:45:31 A
Run operator:	User		
Analysis number:	10985		
SAMPLE:	S (300.0)		
:			
Vial number:	60		
Volume:	1.0 µL		
Dilution:	40.00		
Amount:	1.0000		
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)		
Size:	4.0 x 100 mm		
Number:	7503293		
Part.size:	5.0 µm		



Quantitation method: Custom

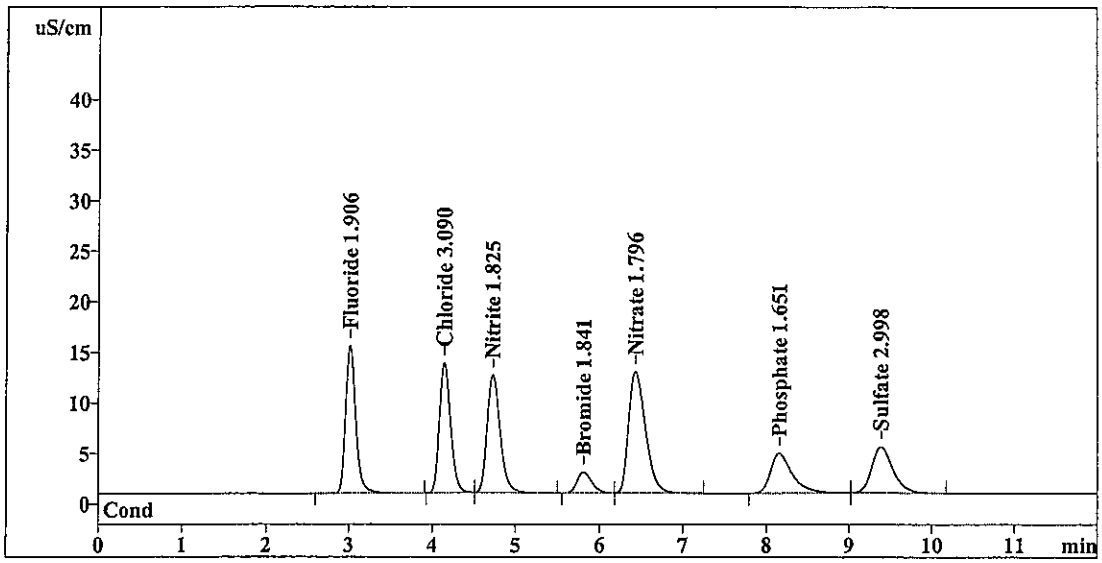
No	Retention min	Area uS/cm*sec	Conc. mg/L	Name
1	3.01	0.071	0.569	Fluoride
2	4.14	6.905	10.606	Chloride
3	0.00	0.000	0.000	Nitrite
4	0.00	0.000	0.000	Bromide
5	6.48	4.932	4.256	Nitrate
6	8.23	1.999	-1.211	Phosphate
7	9.39	113.549	169.072	Sulfate
7	12.00	127.456	185.714	

OK

RP 11/18/09

This report has been created by IC Net
METROHM LTD

Report date:	11/18/2009 2:41:25 AM		
Printed by:	User		
Ident:	CCV		
Analysis from:	11/18/2009 2:29:27 AM		
File:	TB180229.CHW	Last save:	11/18/2009 2:41:25 AM
Method:	3-111609.mtw	Last save:	11/17/2009 11:45:31 A
Run operator:	User		
Analysis number:	10986		
SAMPLE:	9056/300.0		
:			
Vial number:	61		
Volume:	1.0 µL		
Dilution:	1.00		
Amount:	1.0000		
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)		
Size:	4.0 x 100 mm		
Number:	7503293		
Part.size:	5.0 µm		



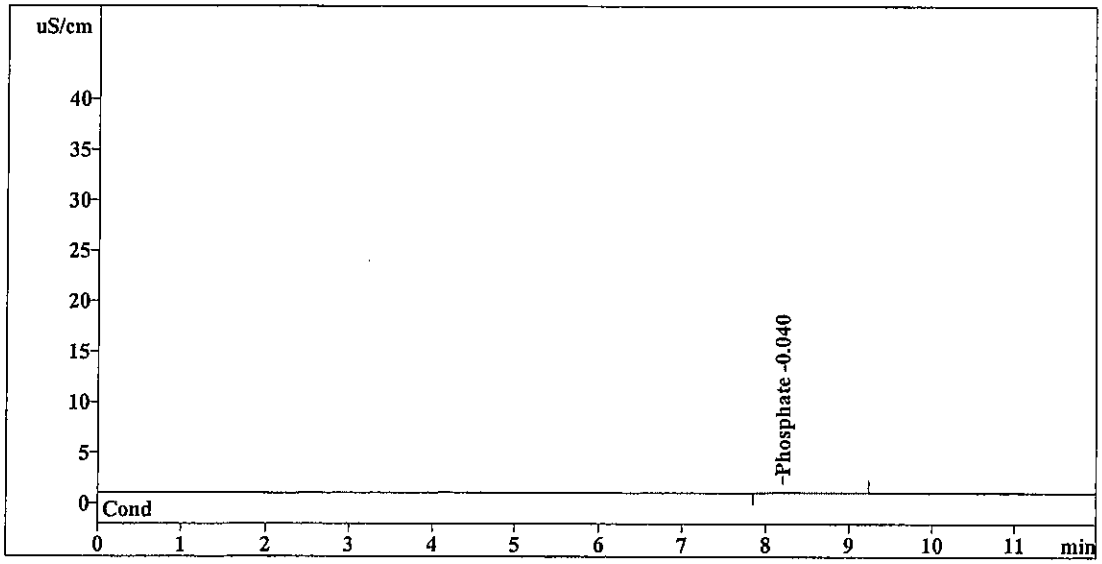
Quantitation method: Custom

No	Retention min	Area uS/cm*sec	Conc. mg/L	Name
1	3.02	125.067	1.906	Fluoride
2	4.14	115.885	3.090	Chloride
3	4.72	129.665	1.825	Nitrite
4	5.81	25.546	1.841	Bromide
5	6.43	166.006	1.796	Nitrate
6	8.17	72.230	1.651	Phosphate
7	9.39	79.390	2.998	Sulfate
7	12.00	713.789	15.107	

RP 11/18/09

This report has been created by IC Net
METROHM LTD

Report date:	11/18/2009 2:55:30 AM	
Printed by:	User	
Ident:	CCB	
Analysis from:	11/18/2009 2:43:32 AM	
File:	TB180243.CHW	Last save: 11/18/2009 2:55:30 AM
Method:	3-111609.mtw	Last save: 11/17/2009 11:45:31 A
Run operator:	User	
Analysis number:	10987	
SAMPLE:	9056/300.0	
:		
Vial number:	62	
Volume:	1.0 µL	
Dilution:	1.00	
Amount:	1.0000	
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)	
Size:	4.0 x 100 mm	
Number:	7503293	
Part.size:	5.0 µm	



Quantitation method: Custom

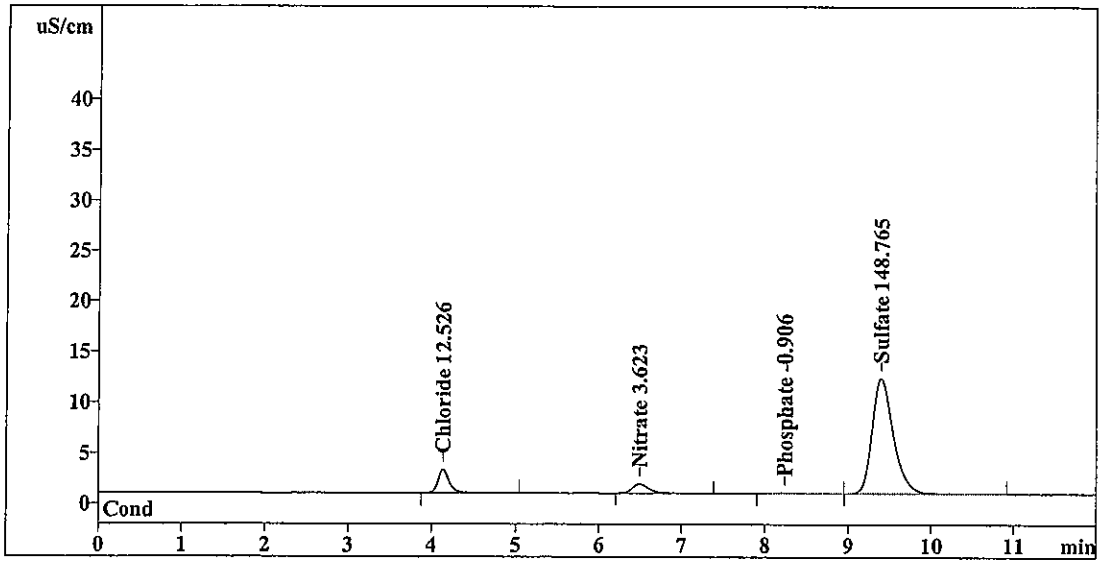
No	Retention min	Area uS/cm*sec	Conc. mg/L	Name
1	0.00	0.000	0.000	Fluoride
2	0.00	0.000	0.000	Chloride
3	0.00	0.000	0.000	Nitrite
4	0.00	0.000	0.000	Bromide
5	0.00	0.000	0.000	Nitrate
6	8.22	1.595	0.040	Phosphate
7	0.00	0.000	0.000	Sulfate
7	12.00	1.595	0.040	

OK

AP 11/18/09

This report has been created by IC Net
METROHM LTD

Report date:	11/18/2009 3:09:35 AM		
Printed by:	User		
Ident:	R0906436-011		
Analysis from:	11/18/2009 2:57:36 AM		
File:	TB180257.CHW	Last save:	11/18/2009 3:09:35 AM
Method:	3-111609.mtw	Last save:	11/17/2009 11:45:31 A
Run operator:	User		
Analysis number:	10988		
SAMPLE:	S (300.0)		
:			
Vial number:	63		
Volume:	1.0 µL		
Dilution:	20.00		
Amount:	1.0000		
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)		
Size:	4.0 x 100 mm		
Number:	7503293		
Part.size:	5.0 µm		



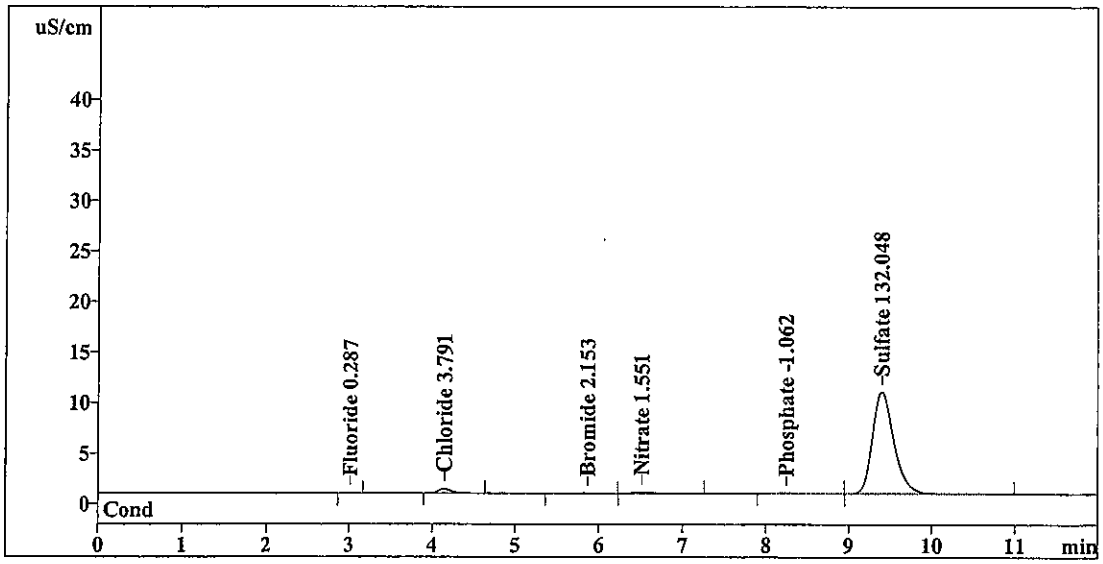
Quantitation method: Custom

No	Retention min	Area uS/cm*sec	Conc. mg/L	Name
1	0.00	0.000	0.000	Fluoride
2	4.14	20.837	12.526	Chloride
3	0.00	0.000	0.000	Nitrite
4	0.00	0.000	0.000	Bromide
5	6.49	12.057	3.623	Nitrate
6	8.24	1.372	-0.906	Phosphate
7	9.40	202.816	OK 148.765	Sulfate
7	12.00	237.083	165.819	

This report has been created by IC Net
METROHM LTD

RP 11/18/09

Report date:	11/18/2009 3:23:39 AM		
Printed by:	User		
Ident:	R0906436-014		
Analysis from:	11/18/2009 3:11:41 AM		
File:	TB180311.CHW	Last save:	11/18/2009 3:23:39 AM
Method:	3-111609.mtw	Last save:	11/17/2009 11:45:31 A
Run operator:	User		
Analysis number:	10989		
SAMPLE:	S (300.0)		
:			
Vial number:	64		
Volume:	1.0 µL		
Dilution:	20.00		
Amount:	1.0000		
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)		
Size:	4.0 x 100 mm		
Number:	7503293		
Part.size:	5.0 µm		



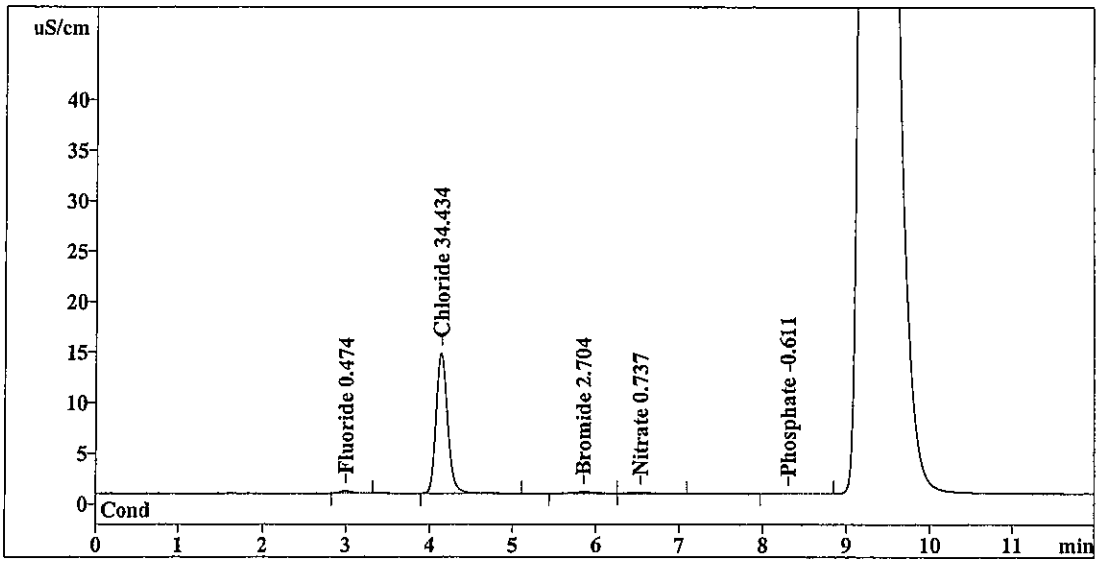
Quantitation method: Custom

No	Retention min	Area uS/cm*sec	Conc. mg/L	Name
1	3.01	0.081	0.287	Fluoride
2	4.14	3.988	3.791	Chloride
3	0.00	0.000	0.000	Nitrite
4	5.87	0.119	2.153	Bromide
5	6.51	2.180	1.551	Nitrate
6	8.25	1.045	-1.062	Phosphate
7	9.40	179.584	132.048	Sulfate
7	12.00	186.996	140.892	

RP 11/18/09

This report has been created by IC Net
METROHM LTD

Report date:	11/18/2009 3:37:44 AM		
Printed by:	User		
Ident:	R0906474-001		
Analysis from:	11/18/2009 3:25:46 AM		
File:	TB180325.CHW	Last save:	11/18/2009 3:37:44 AM
Method:	3-111609.mtw	Last save:	11/17/2009 11:45:31 A
Run operator:	User		
Analysis number:	10990		
SAMPLE:	S (300.0)		
:			
Vial number:	65		
Volume:	1.0 µL		
Dilution:	10.00		
Amount:	1.0000		
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)		
Size:	4.0 x 100 mm		
Number:	7503293		
Part.size:	5.0 µm		



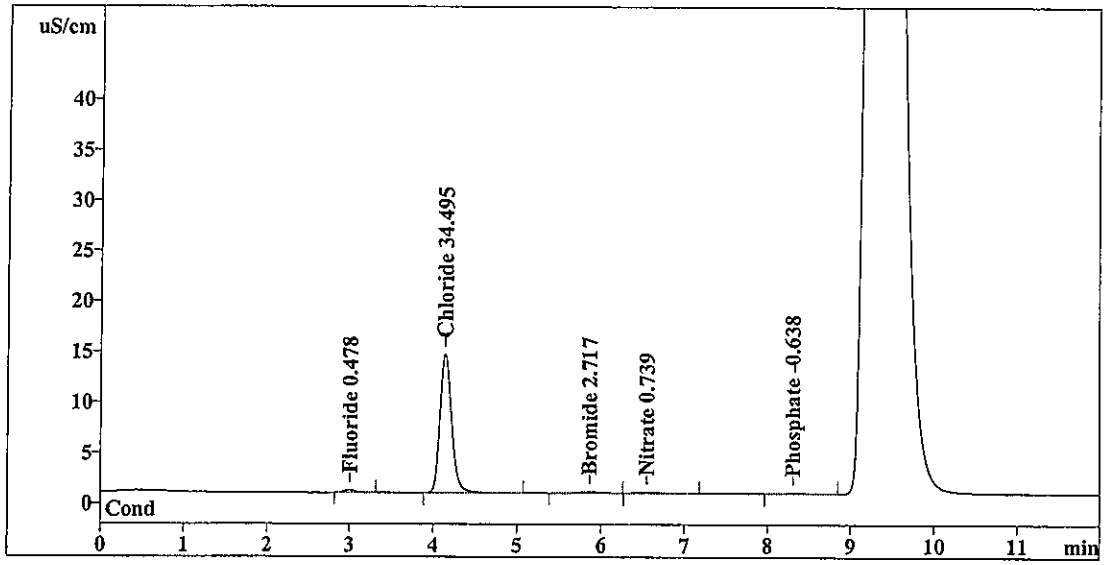
Quantitation method: Custom

No	Retention min	Area uS/cm*sec	Conc. mg/L	Name
1	3.00	2.261	0.474	Fluoride
2	4.13	129.518	~~OK~~ 34.434	Chloride
3	0.00	0.000	0.000	Nitrite
4	5.85	2.508	2.704	Bromide
5	6.54	1.810	0.737	Nitrate
6	8.30	0.713	-0.611	Phosphate
7	0.00	0.000	1/400 0.000	Sulfate
7	12.00	136.810	38.959	

This report has been created by IC Net
METROHM LTD

RP 11/18/09

Report date:	11/18/2009 3:51:49 AM		
Printed by:	User		
Ident:	R0906474-001 DUP		
Analysis from:	11/18/2009 3:39:51 AM		
File:	TB180339.CHW	Last save:	11/18/2009 3:51:49 AM
Method:	3-111609.mtw	Last save:	11/17/2009 11:45:31 A
Run operator:	User		
Analysis number:	10991		
SAMPLE:	S (300.0)		
:			
Vial number:	66		
Volume:	1.0 µL		
Dilution:	10.00		
Amount:	1.0000		
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)		
Size:	4.0 x 100 mm		
Number:	7503293		
Part.size:	5.0 µm		



Quantitation method: Custom

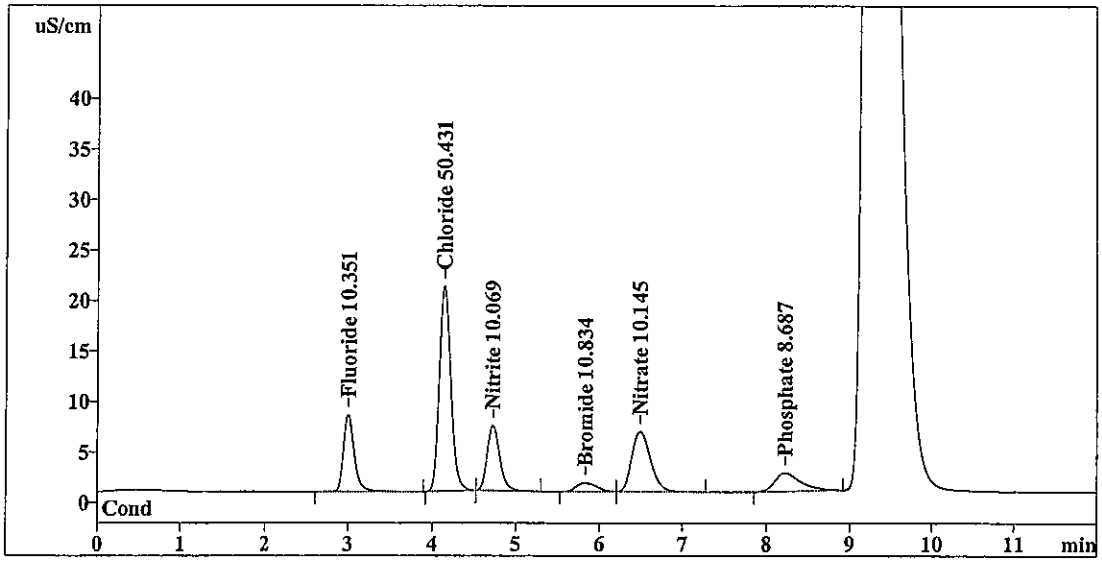
No	Retention min	Area uS/cm*sec	Conc. mg/L	Name
1	3.00	2.290	0.478	Fluoride
2	4.14	129.754	34.495	Chloride
3	0.00	0.000	0.000	Nitrite
4	5.86	2.527	2.717	Bromide
5	6.55	1.836	0.739	Nitrate
6	8.32	0.598	-0.638	Phosphate
7	0.00	0.000	0.000	Sulfate
7	12.00	137.005	39.068	

1/400

This report has been created by IC Net
METROHM LTD

RP 11/18/09

Report date:	11/18/2009 4:05:54 AM		
Printed by:	User		
Ident:	R0906474-001 SPK		
Analysis from:	11/18/2009 3:53:55 AM		
File:	TB180353.CHW	Last save:	11/18/2009 4:05:54 AM
Method:	3-111609.mtw	Last save:	11/17/2009 11:45:31 A
Run operator:	User		
Analysis number:	10992		
SAMPLE:	S (300.0)		
:			
Vial number:	67		
Volume:	1.0 µL		
Dilution:	10.00		
Amount:	1.0000		
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)		
Size:	4.0 x 100 mm		
Number:	7503293		
Part.size:	5.0 µm		



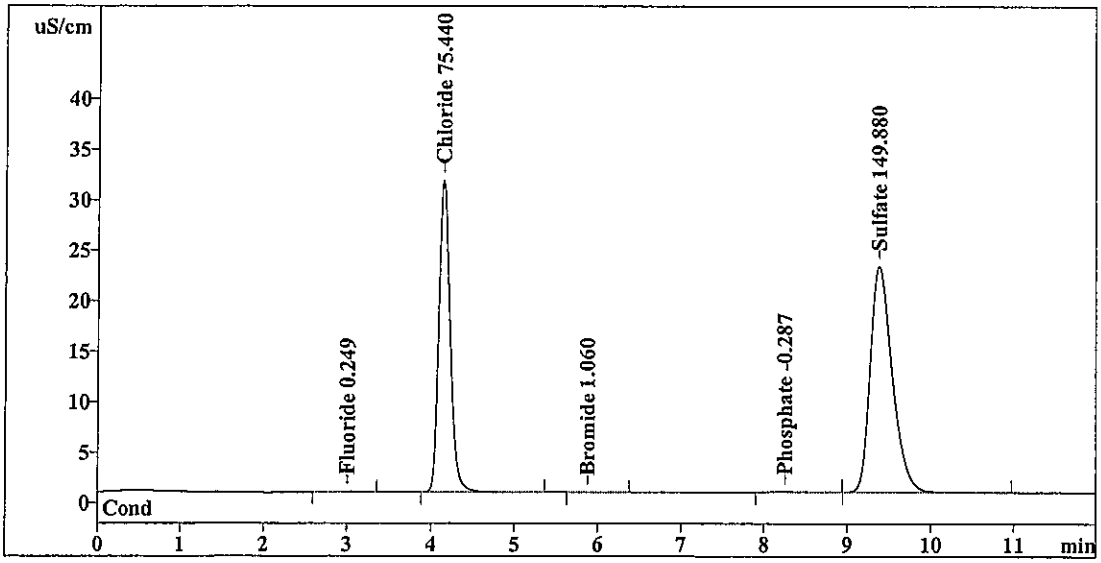
Quantitation method: Custom

No	Retention min	Area uS/cm*sec	Conc. mg/L	Name
1	3.00	67.531	10.351	Fluoride
2	4.14	191.232	50.431	Chloride
3	4.72	69.296	10.069	Nitrite
4	5.84	14.436	10.834	Bromide
5	6.50	91.496	10.145	Nitrate
6	8.23	39.550	8.687	Phosphate
7	0.00	0.000	4/00 0.000	Sulfate
7	12.00	473.541	100.517	

RP 11/18/09

This report has been created by IC Net
METROHM LTD

Report date:	11/18/2009 4:19:58 AM		
Printed by:	User		
Ident:	R0906504-001		
Analysis from:	11/18/2009 4:08:00 AM		
File:	TB180408.CHW	Last save:	11/18/2009 4:19:58 AM
Method:	3-111609.mtw	Last save:	11/17/2009 11:45:31 A
Run operator:	User		
Analysis number:	10993		
SAMPLE:	S (300.0)		
:			
Vial number:	68		
Volume:	1.0 µL		
Dilution:	10.00		
Amount:	1.0000		
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)		
Size:	4.0 x 100 mm		
Number:	7503293		
Part.size:	5.0 µm		



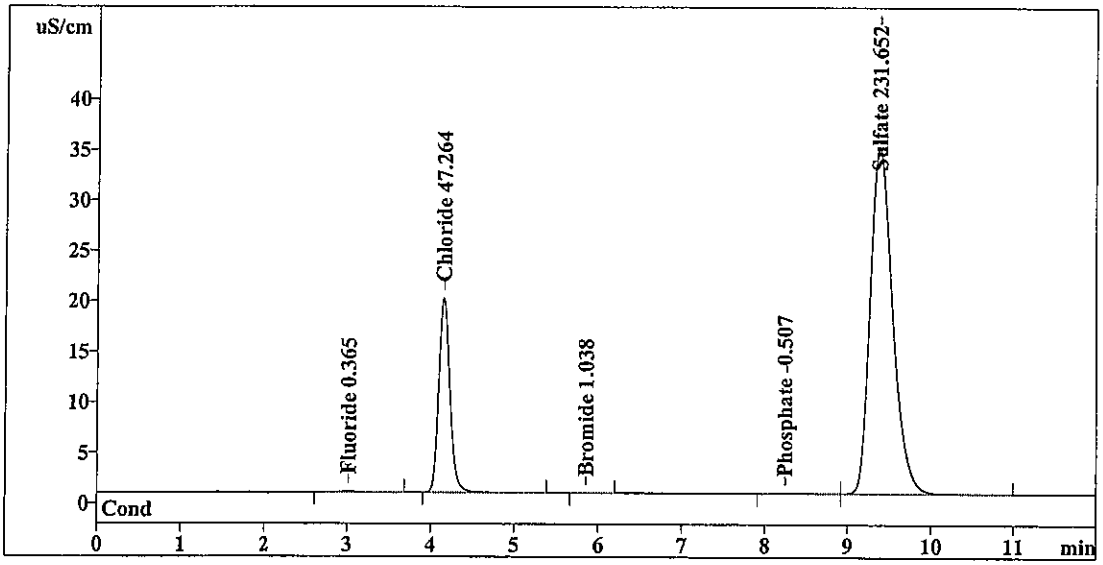
Quantitation method: Custom

No	Retention min	Area uS/cm*sec		Conc. mg/L	Name
1	3.01	0.776		0.249	Fluoride
2	4.15	287.716		75.440	Chloride
3	0.00	0.000		0.000	Nitrite
4	5.88	0.096		1.060	Bromide
5	0.00	0.000		0.000	Nitrate
6	8.25	2.064		-0.287	Phosphate
7	9.39	412.673	1/20	149.880	Sulfate
7	12.00	703.325		226.916	

This report has been created by IC Net
METROHM LTD

RR 11/18/09

Report date:	11/18/2009 4:34:03 AM		
Printed by:	User		
Ident:	R0906504-002		
Analysis from:	11/18/2009 4:22:05 AM		
File:	TB180422.CHW	Last save:	11/18/2009 4:34:03 AM
Method:	3-111609.mtw	Last save:	11/17/2009 11:45:31 A
Run operator:	User		
Analysis number:	10994		
SAMPLE:	S (300.0)		
:			
Vial number:	69		
Volume:	1.0 µL		
Dilution:	10.00		
Amount:	1.0000		
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)		
Size:	4.0 x 100 mm		
Number:	7503293		
Part.size:	5.0 µm		



Quantitation method: Custom

No	Retention min	Area uS/cm*sec	Conc. mg/L	Name
1	3.01	1.543	0.365	Fluoride
2	4.15	179.016	47.264	Chloride
3	0.00	0.000	0.000	Nitrite
4	5.86	0.062	1.038	Bromide
5	0.00	0.000	0.000	Nitrate
6	8.25	1.147	-0.507	Phosphate
7	9.38	639.972	1/40 231.652	Sulfate
7	12.00	821.740	280.826	

RP 11/18/09

This report has been created by IC Net
METROHM LTD

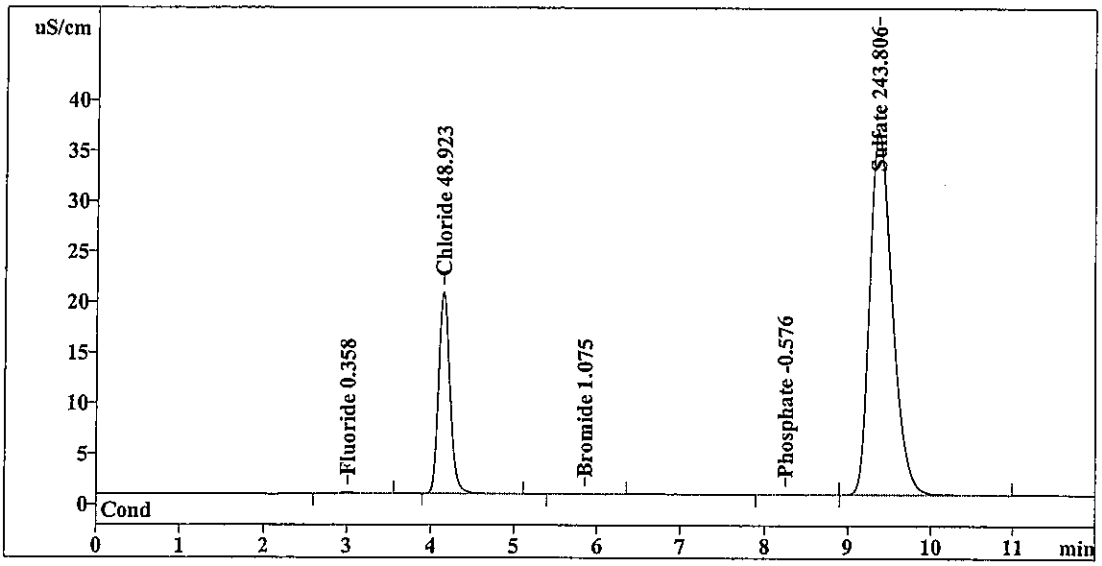
Report date: 11/18/2009 4:48:08 AM
Printed by: User

Ident: R0906504-003
Analysis from: 11/18/2009 4:36:10 AM
File: TB180436.CHW Last save: 11/18/2009 4:48:08 AM

Method: 3-111609.mtw Last save: 11/17/2009 11:45:31 A
Run operator: User
Analysis number: 10995

SAMPLE: S (300.0)
:
Vial number: 70
Volume: 1.0 µL
Dilution: 10.00
Amount: 1.0000

COLUMN: METROSEP A SUPP 5 - 100 (6.1006.510)
Size: 4.0 x 100 mm
Number: 7503293
Part.size: 5.0 µm



Quantitation method: Custom

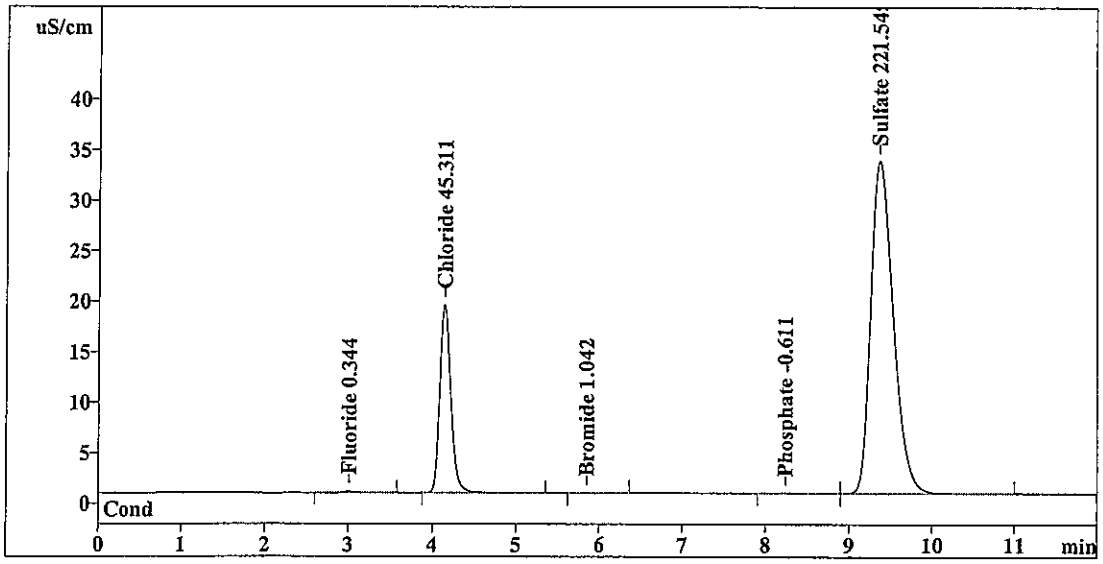
No	Retention min	Area uS/cm*sec	Conc. mg/L	Name
1	3.01	1.500	0.358	Fluoride
2	4.15	185.416	48.923	Chloride
3	0.00	0.000	0.000	Nitrite
4	5.86	0.117	1.075	Bromide
5	0.00	0.000	0.000	Nitrate
6	8.25	0.860	-0.576	Phosphate
7	9.38	673.754	243.806	Sulfate
7	12.00	861.647	294.737	

1/40

RP 11/18/09

This report has been created by IC Net
METROHM LTD

Report date:	11/18/2009 5:02:12 AM	
Printed by:	User	
Ident:	R0906504-003 DUP	
Analysis from:	11/18/2009 4:50:14 AM	
File:	TB180450.CHW	Last save: 11/18/2009 5:02:13 AM
Method:	3-111609.mtw	Last save: 11/17/2009 11:45:31 A
Run operator:	User	
Analysis number:	10996	
SAMPLE:	S (300.0)	
:		
Vial number:	71	
Volume:	1.0 µL	
Dilution:	10.00	
Amount:	1.0000	
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)	
Size:	4.0 x 100 mm	
Number:	7503293	
Part.size:	5.0 µm	



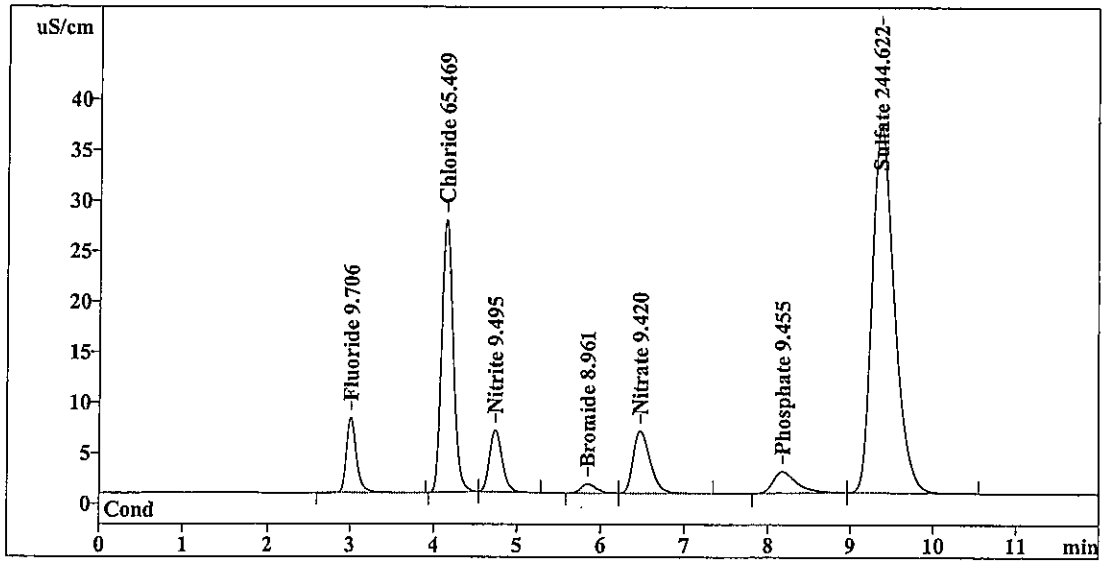
Quantitation method: Custom

No	Retention min	Area uS/cm*sec	Conc. mg/L	Name
1	3.01	1.403	0.344	Fluoride
2	4.15	171.483	45.311	Chloride
3	0.00	0.000	0.000	Nitrite
4	5.86	0.068	1.042	Bromide
5	0.00	0.000	0.000	Nitrate
6	8.24	0.710	-0.611	Phosphate
7	9.37	611.879	1/40 221.545	Sulfate
7	12.00	785.543	268.854	

This report has been created by IC Net
METROHM LTD

RP 11/18/09

Report date:	11/18/2009 5:16:17 AM		
Printed by:	User		
Ident:	R0906504-003 SPK		
Analysis from:	11/18/2009 5:04:19 AM		
File:	TB180504.CHW	Last save:	11/18/2009 5:16:17 AM
Method:	3-111609.mtw	Last save:	11/17/2009 11:45:31 A
Run operator:	User		
Analysis number:	10997		
SAMPLE:	S (300.0)		
:			
Vial number:	72		
Volume:	1.0 µL		
Dilution:	10.00		
Amount:	1.0000		
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)		
Size:	4.0 x 100 mm		
Number:	7503293		
Part.size:	5.0 µm		



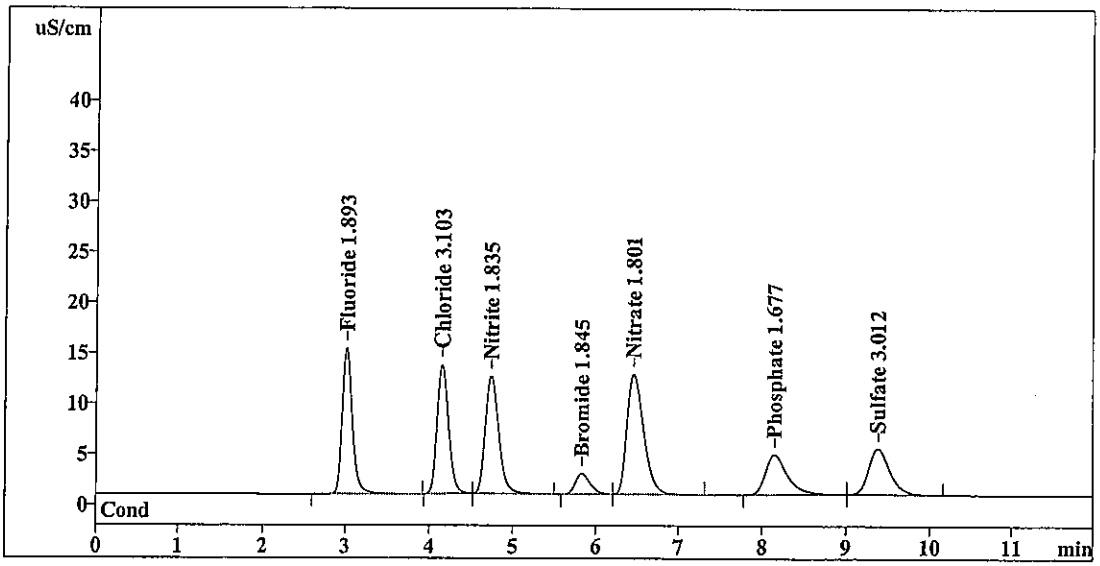
Quantitation method: Custom

No	Retention min	Area uS/cm*sec	Conc. mg/L	Name
1	3.01	63.267	9.706	Fluoride
2	4.15	249.248	65.469	Chloride
3	4.73	65.062	9.495	Nitrite
4	5.85	11.688	8.961	Bromide
5	6.48	84.589	9.420	Nitrate
6	8.18	42.754	9.455	Phosphate
7	9.37	676.023	140 244.622	Sulfate
7	12.00	1192.631	357.128	

This report has been created by IC Net
METROHM LTD

RP 11/18/09

Report date:	11/18/2009 5:30:22 AM		
Printed by:	User		
Ident:	CCV		
Analysis from:	11/18/2009 5:18:24 AM		
File:	TB180518.CHW	Last save:	11/18/2009 5:30:22 AM
Method:	3-111609.mtw	Last save:	11/17/2009 11:45:31 A
Run operator:	User		
Analysis number:	10998		
SAMPLE:	9056/300.0		
:			
Vial number:	73		
Volume:	1.0 µL		
Dilution:	1.00		
Amount:	1.0000		
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)		
Size:	4.0 x 100 mm		
Number:	7503293		
Part.size:	5.0 µm		



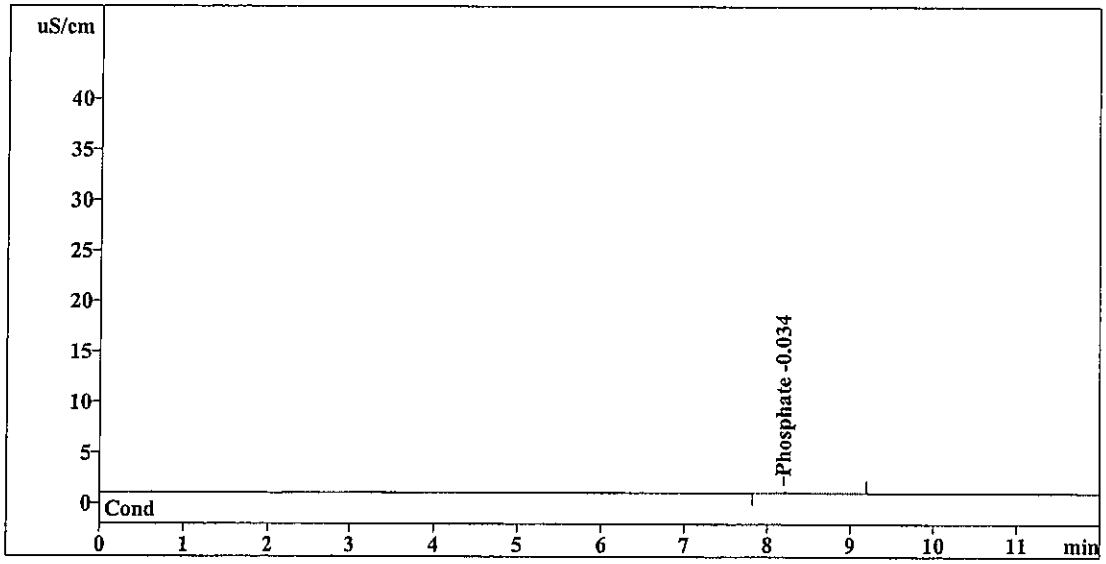
Quantitation method: Custom

No	Retention min	Area uS/cm*sec	Conc. mg/L	Name
1	3.02	124.243	1.893	Fluoride
2	4.15	116.395	3.103	Chloride
3	4.73	130.425	1.835	Nitrite
4	5.83	25.608	1.845	Bromide
5	6.46	166.467	1.801	Nitrate
6	8.15	73.316	1.677	Phosphate
7	9.38	79.776	3.012	Sulfate
7	12.00	716.230	15.167	

RP 11/18/09

This report has been created by IC Net
METROHM LTD

Report date:	11/18/2009 5:44:28 AM		
Printed by:	User		
Ident:	CCB		
Analysis from:	11/18/2009 5:32:30 AM		
File:	TB180532.CHW	Last save:	11/18/2009 5:44:29 AM
Method:	3-111609.mtw	Last save:	11/17/2009 11:45:31 A
Run operator:	User		
Analysis number:	10999		
SAMPLE:	9056/300.0		
:			
Vial number:	74		
Volume:	1.0 µL		
Dilution:	1.00		
Amount:	1.0000		
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)		
Size:	4.0 x 100 mm		
Number:	7503293		
Part.size:	5.0 µm		



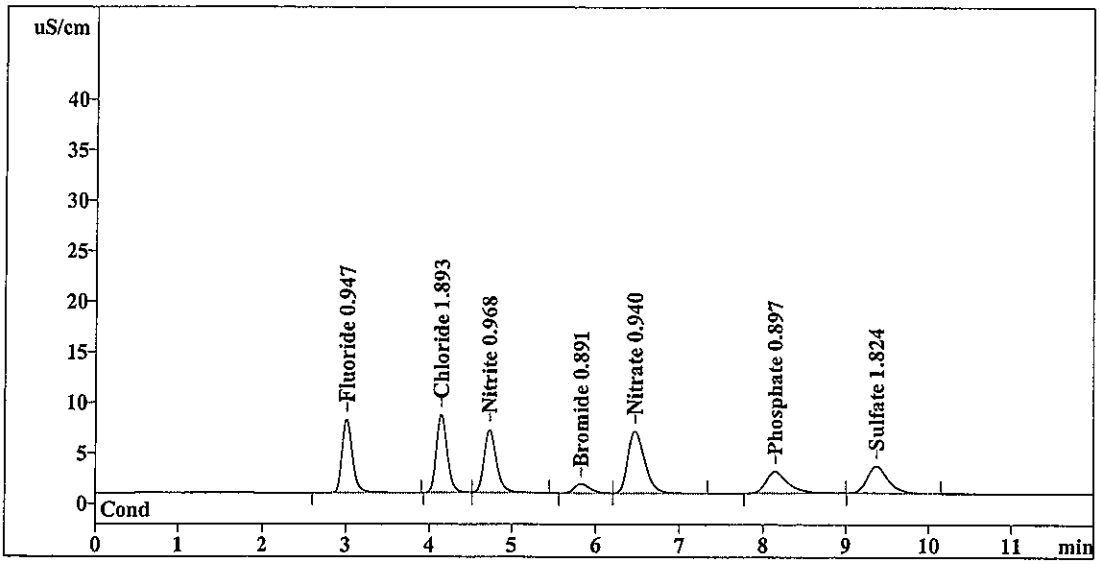
Quantitation method: Custom

No	Retention min	Area uS/cm*sec	Conc. mg/L	Name
1	0.00	0.000	0.000	Fluoride
2	0.00	0.000	0.000	Chloride
3	0.00	0.000	0.000	Nitrite
4	0.00	0.000	0.000	Bromide
5	0.00	0.000	0.000	Nitrate
6	8.20	1.844	0.034	Phosphate
7	0.00	0.000	0.000	Sulfate
7	12.00	1.844	0.034	

RP 11/18/09

This report has been created by IC Net
METROHM LTD

Report date:	11/18/2009 5:58:33 AM
Printed by:	User
Ident:	LCS
Analysis from:	11/18/2009 5:46:35 AM
File:	TB180546.CHW Last save: 11/18/2009 5:58:34 AM
Method:	3-111609.mtw Last save: 11/17/2009 11:45:31 A
Run operator:	User
Analysis number:	11000
SAMPLE:	9056/300.0
:	
Vial number:	75
Volume:	1.0 µL
Dilution:	1.00
Amount:	1.0000
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)
Size:	4.0 x 100 mm
Number:	7503293
Part.size:	5.0 µm



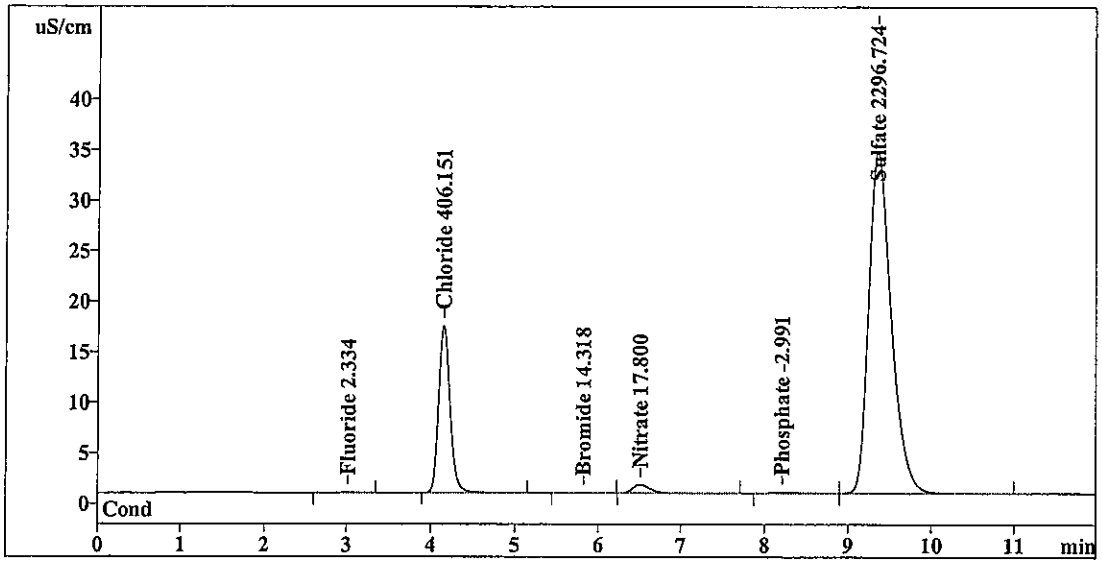
Quantitation method: Custom

No	Retention min	Area uS/cm*sec	Conc. mg/L	Name
1	3.01	61.710	0.947	Fluoride
2	4.14	69.718	1.893	Chloride
3	4.73	66.427	0.968	Nitrite
4	5.84	11.610	0.891	Bromide
5	6.47	84.390	0.940	Nitrate
6	8.15	40.727	0.897	Phosphate
7	9.37	46.752	1.824	Sulfate
7	12.00	381.333	8.360	

RP 111809

This report has been created by IC Net
METROHM LTD

Report date:	11/18/2009 6:12:46 AM		
Printed by:	User		
Ident:	R0906477-001		
Analysis from:	11/18/2009 6:00:40 AM		
File:	TB180600.CHW	Last save:	11/18/2009 6:12:46 AM
Method:	3-111609.mtw	Last save:	11/17/2009 11:45:31 A
Run operator:	User		
Analysis number:	11001		
SAMPLE:	C & (9056)		
:	#4 11/18/09		
Vial number:	76		
Volume:	1.0 µL		
Dilution:	100.00		
Amount:	1.0000		
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)		
Size:	4.0 x 100 mm		
Number:	7503293		
Part.size:	5.0 µm		



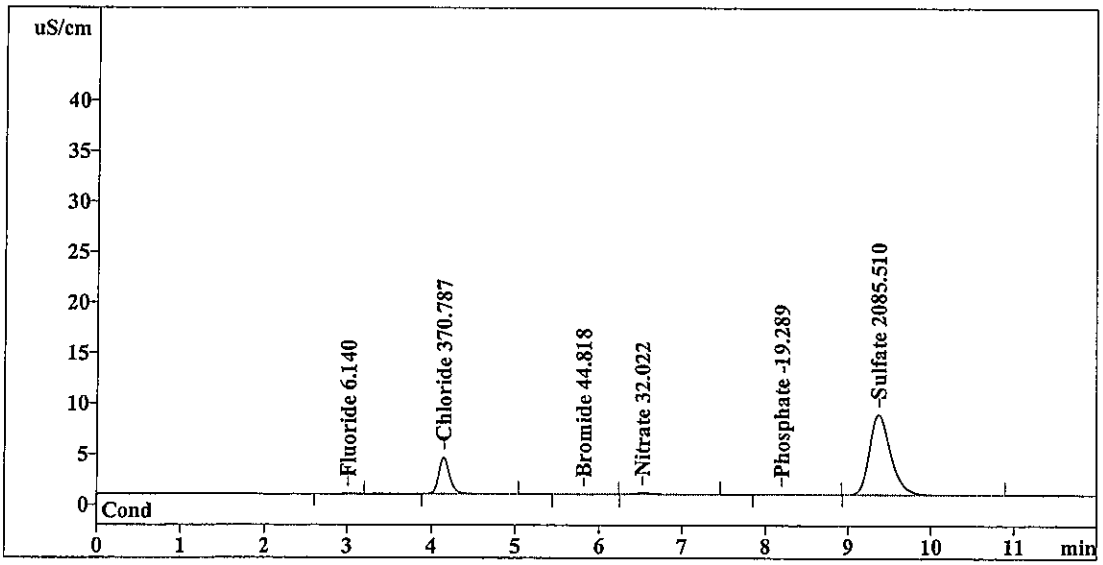
Quantitation method: Custom

No	Retention min	Area uS/cm*sec	Conc. mg/L	Name
1	3.01	0.673	2.334	Fluoride
2	4.15	153.365	OK 406.151	Chloride
3	0.00	0.000	0.000	Nitrite
4	5.82	0.641	14.318	Bromide
5	6.51	11.757	17.800	Nitrate
6	8.22	2.015	-2.991	Phosphate
7	9.36	634.469	2296.724	Sulfate
7	12.00	802.919	2740.317	

This report has been created by IC Net
METROHM LTD

RP 11/18/09

Report date:	11/18/2009 6:27:17 AM		
Printed by:	User		
Ident:	R0906477-001		
Analysis from:	11/18/2009 6:15:19 AM		
File:	TB180615.CHW	Last save:	11/18/2009 6:27:17 AM
Method:	3-111609.mtw	Last save:	11/17/2009 11:45:31 A
Run operator:	User		
Analysis number:	11002		
SAMPLE:	S/C (9056) RP 11/18/09		
:			
Vial number:	77		
Volume:	1.0 µL		
Dilution:	400.00		
Amount:	1.0000		
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)		
Size:	4.0 x 100 mm		
Number:	7503293		
Part.size:	5.0 µm		



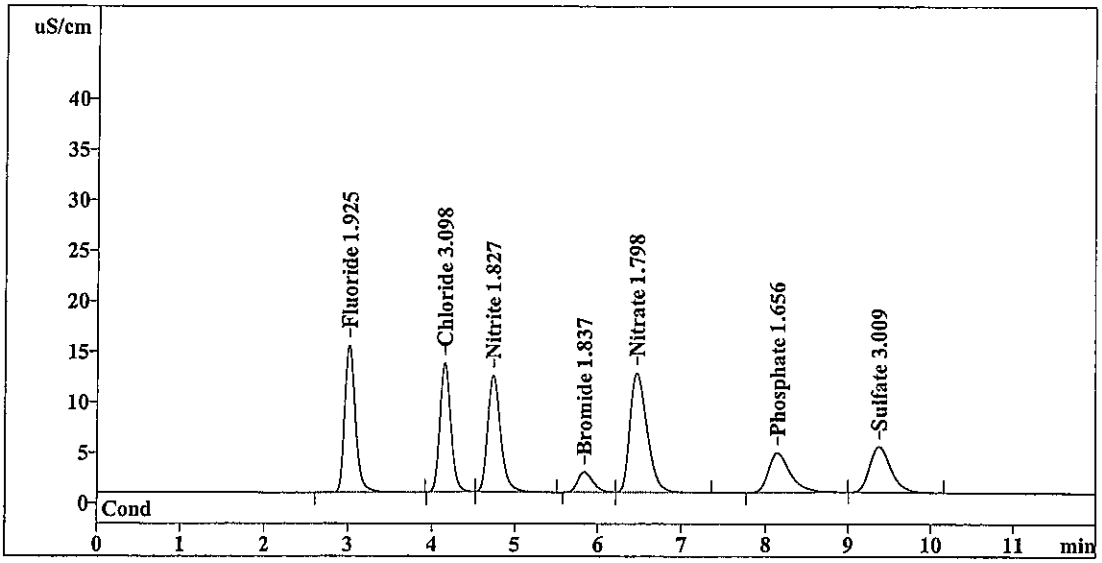
Quantitation method: Custom

No	Retention min	Area uS/cm*sec	Conc. mg/L	Name
1	3.01	0.145	6.140	Fluoride
2	4.15	32.437	370.787	Chloride
3	0.00	0.000	0.000	Nitrite
4	5.82	0.184	44.818	Bromide
5	6.52	2.420	32.022	Nitrate
6	8.20	1.250	-19.289	Phosphate
7	9.37	140.984	OK 2085.510	Sulfate
7	12.00	177.420	2558.566	

This report has been created by IC Net
METROHM LTD

RP 11/18/09

Report date:	11/18/2009 6:41:22 AM		
Printed by:	User		
Ident:	CCV		
Analysis from:	11/18/2009 6:29:24 AM		
File:	TB180629.CHW	Last save:	11/18/2009 6:41:23 AM
Method:	3-111609.mtw	Last save:	11/17/2009 11:45:31 A
Run operator:	User		
Analysis number:	11003		
SAMPLE:	9056/300.0		
:			
Vial number:	78		
Volume:	1.0 µL		
Dilution:	1.00		
Amount:	1.0000		
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)		
Size:	4.0 x 100 mm		
Number:	7503293		
Part.size:	5.0 µm		



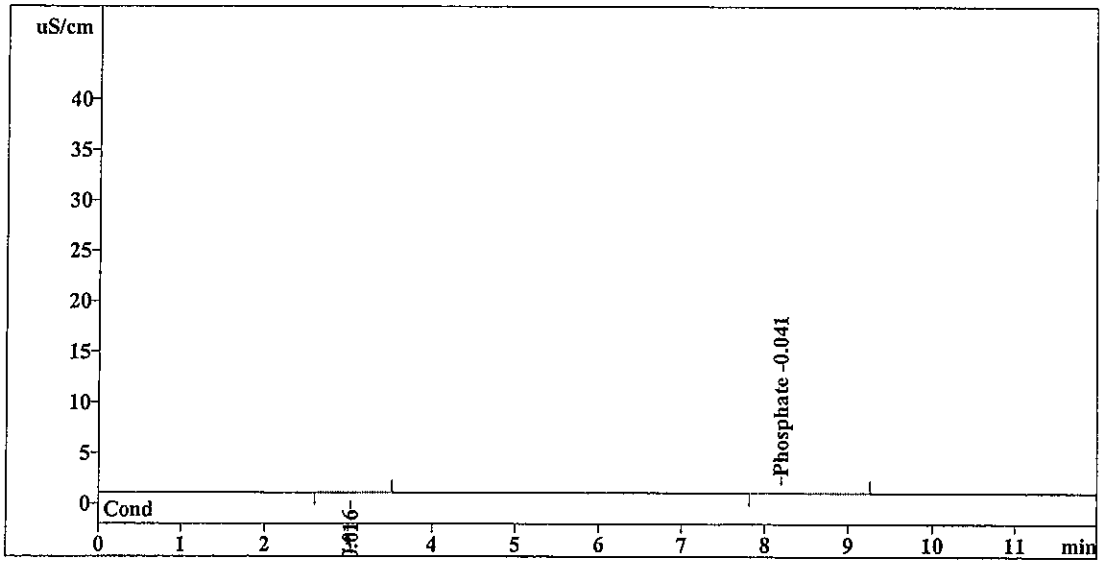
Quantitation method: Custom

No	Retention min	Area uS/cm*sec	Conc. mg/L	Name
1	3.02	126.307	1.925	Fluoride
2	4.15	116.211	3.098	Chloride
3	4.74	129.788	1.827	Nitrite
4	5.84	25.488	1.837	Bromide
5	6.47	166.211	1.798	Nitrate
6	8.15	72.413	1.656	Phosphate
7	9.37	79.695	3.009	Sulfate
7	12.00	716.112	15.149	

RP 11/18/09

This report has been created by IC Net
METROHM LTD

Report date:	11/18/2009 6:55:27 AM		
Printed by:	User		
Ident:	CCB		
Analysis from:	11/18/2009 6:43:29 AM		
File:	TB180643.CHW	Last save:	11/18/2009 6:55:27 AM
Method:	3-111609.mtw	Last save:	11/17/2009 11:45:31 A
Run operator:	User		
Analysis number:	11004		
SAMPLE:	9056/300.0		
:			
Vial number:	79		
Volume:	1.0 µL		
Dilution:	1.00		
Amount:	1.0000		
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)		
Size:	4.0 x 100 mm		
Number:	7503293		
Part.size:	5.0 µm		



Quantitation method: Custom

No	Retention min	Area uS/cm*sec	Conc. mg/L	Name
1	3.04	0.158	0.016	Fluoride
2	0.00	0.000	0.000	Chloride
3	0.00	0.000	0.000	Nitrite
4	0.00	0.000	0.000	Bromide
5	0.00	0.000	0.000	Nitrate
6	8.20	1.556	-0.041	Phosphate
7	0.00	0.000	0.000	Sulfate
7	12.00	1.713	0.056	

OK

RP 11/18/09

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Columbia Analytical Services – Rochester, New York

Ion Chromatography Cover Sheet

Instrument: Metrohm IC 861

Column: Metrosep A Supp 5 - 100, 4mm, 05/05/09

Curve Date: 11/16/09 **Loop size: 25 uL Loop**_____

Analyst: RP **Analysis Date:** 11/17/09

Is copy of LCS attached to run? (YES) / NO

Standards Prep Dates & Log ID's:

Std Type	*Prep Date*	*Log ID*		*Std Type*	*Prep Date*	*Log ID*
Calibration Intermediate	11/13/09	WC94012B		Working Calibration Stds	11/16/09	WC94021F
LCS / MS Intermediate	11/13/09	WC94012B		Working LCS/MS Standard	11/17/09	WC94054C
ICV Intermediate	10/09/09	WC94012H		Working ICV Standard	11/16/09	WC94028O
CCV Intermediate	10/09/09	WC94012H		Working CCV Standard	11/17/09	WC94029A

Original Retention Times for this method are based on ICV and are as follows:

Fluoride: 3.02
Chloride: 4.12
Nitrite: 4.68
Bromide: 5.72
Nitrate: 6.31
Phosphate: 8.18
Sulfate: 9.44

Additional Comments: **Curve not valid for Bromide**

LCS PREP

(Stocks delivered using Volumetric glassware and brought to volume with DI. LCS expires after 7 days; if NO2 is needed, LCS must be prepared daily.)

(MS prepared fresh daily using same volume of intermediate stock added to 100mls sample. MS not prepared volumetrically.)

Analyte	Calibration Intermediate Stock ID	Intermediate Stock Conc (mg/L)	mLs Intermediate Stock	Final Vol. mLs	Final Conc. (mg/L)	Analyst/ Date Prepped	Lot ID	Exp. Date	Matrix H2SO4 / NaOH / DI	H2SO4 / NaOH Lot #
F	WC940128	50	2.0	100	1.0	RP 11/13/09	A	11/20/09	DI	
Cl		100			2.0	CMW 11/16/09	B	11/23/09	DI	
NO2		50			1.0	RP 11/17/09	C	11/24/09	DI	
Br		50			1.0	RP 11/17/09	D	11/24/09	NaOH	WC850306
NO3		50			1.0	RP 11/17/09	E	11/24/09	H_2SO_4	WC852941
OPO4		50			1.0	RP 11/18/09	F	11/25/09	DI	
SO4		100			2.0		G			
							H			
							I			
							J			
							K			
							L			
							M			
							N			
							O			RP 11/18/09
							P			
							Q			
							R			

ICV / CCV PREP

(A 1:2 dilution of the Reference Intermediate Stock is done daily)

Analyte	ICV / CCV Intermediate Stock ID	Conc. mg/L	mLs Stock	Final Vol. mL	Final Conc. mg/L	Analyst/ Date Prepped	Lot ID	Exp. Date	Matrix H2SO4 / NaOH / DI	H2SO4 / NaOH Lot #
F	~~WC9400124~~ RP 11/18/09	4.00	5.0	10	2.00	11/17/09	A	11/18/09	DI	
Cl	WC9400124	6.50			3.25	11/18/09	B	11/19/09	DI	
NO2		3.60			1.80		C			
Br		4.00			2.00		D			
NO3		3.60			1.80		E			
OPO4		3.60			1.80		F			
SO4		6.40			3.20		G			
							H			
							I			
							J			
							K			
							L			
							M			
							N			RP 11/18/09 ~~11/18/09~~
							O			
							P			
							Q			

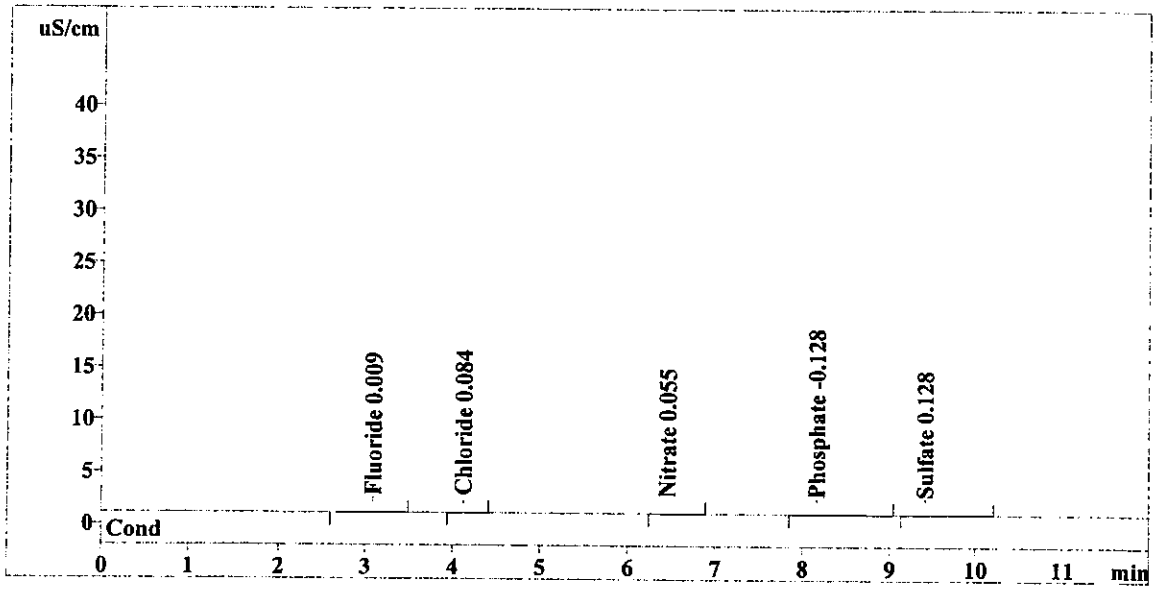
Report date: 11/16/2009 12:33:39 PM
Printed by: User

Ident: STANDARD 1
Analysis from: 11/16/2009 9:11:32 AM
File: tb160911.chw Last save: 11/16/2009 9:23:31 AM

Method: 3-111609.mtw Last save: 11/16/2009 9:07:41 AM
Run operator: User
Analysis number: 10826

SAMPLE:
:
Vial number: 137
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000

COLUMN: METROSEP A SUPP 5 - 100 (6.1006.510)
Size: 4.0 x 100 mm
Number: 7503293
Part.size: 5.0 µm



Quantitation method: Custom

No	Retention min	Area uS/cm*sec		Conc. mg/L	Name
1	3.11	0.129		0.009	Fluoride
2	4.12	0.139		0.084	Chloride
3	0.00	0.000		0.000	Nitrite
4	0.00	0.000		0.000	Bromide
5	6.45	0.112		0.055	Nitrate
6	8.18	0.317		-0.128	Phosphate
7	9.42	0.058		0.128	Sulfate
7	12.00	0.754		0.404	

11/16/09

This report has been created by IC Net
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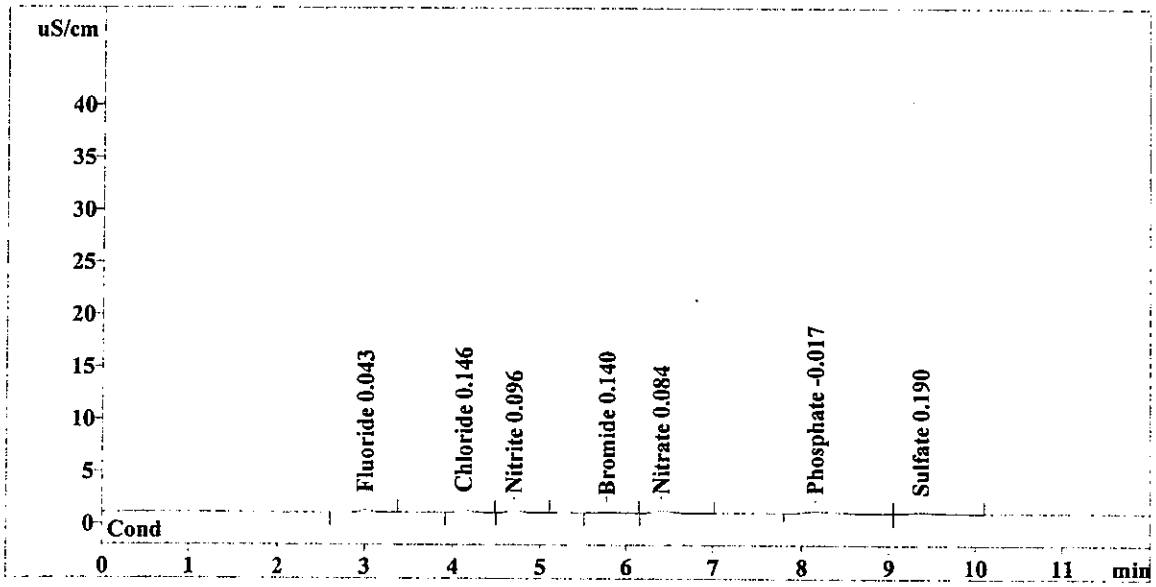
Report date: 11/16/2009 12:33:42 PM
Printed by: User

Ident: STANDARD 2
Analysis from: 11/16/2009 9:25:42 AM
File: tb160925.chw Last save: 11/16/2009 9:37:41 AM

Method: 3-111609.mtw Last save: 11/16/2009 9:23:31 AM
Run operator: User
Analysis number: 10827

SAMPLE:
:
Vial number: 138
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000

COLUMN: METROSEP A SUPP 5 - 100 (6.1006.510)
Size: 4.0 x 100 mm
Number: 7503293
Part.size: 5.0 µm



Quantitation method: Custom

No	Retention min	Area uS/cm*sec		Conc. mg/L	Name
1	3.01	2.196		0.043	Fluoride
2	4.12	2.460		0.146	Chloride
3	4.70	2.096		0.096	Nitrite
4	5.77	0.511		0.140	Bromide
5	6.41	2.891		0.084	Nitrate
6	8.16	4.211		-0.017	Phosphate
7	9.37	1.771		0.190	Sulfate
7	12.00	16.136		0.716	

11/16/09

This report has been created by IC Net
METROHM LTD

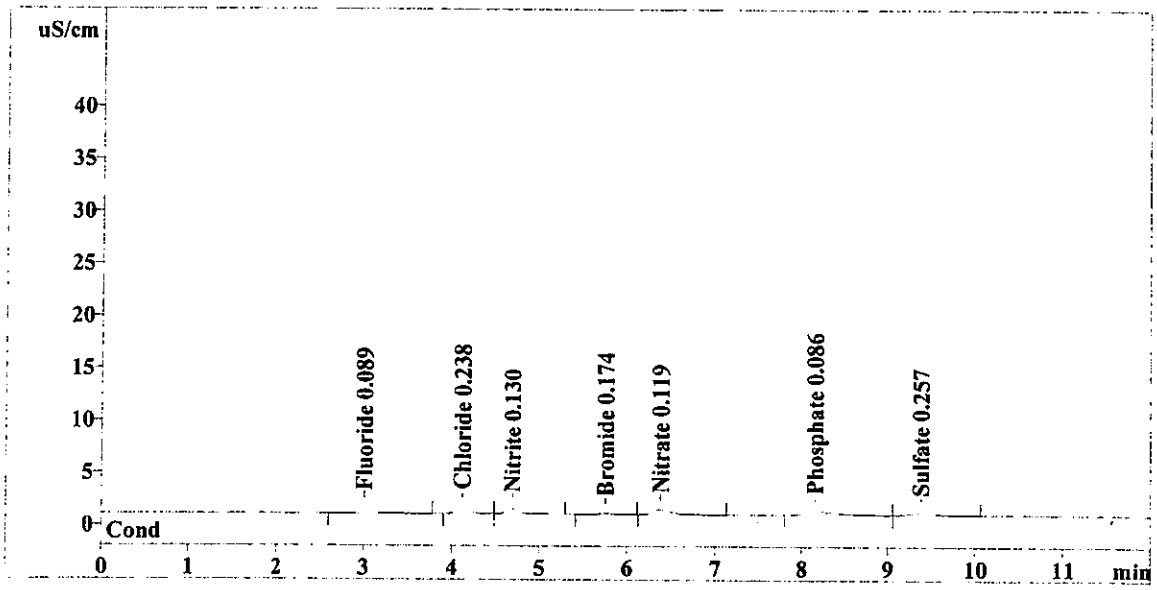
Report date: 11/16/2009 12:33:44 PM
Printed by: User

Ident: STANDARD 3
Analysis from: 11/16/2009 9:39:48 AM
File: tb160939.chw Last save: 11/16/2009 9:51:47 AM

Method: 3-111609.mtw Last save: 11/16/2009 9:37:41 AM
Run operator: User
Analysis number: 10828

SAMPLE:
:
Vial number: 139
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000

COLUMN: METROSEP A SUPP 5 - 100 (6.1006.510)
Size: 4.0 x 100 mm
Number: 7503293
Part.size: 5.0 µm



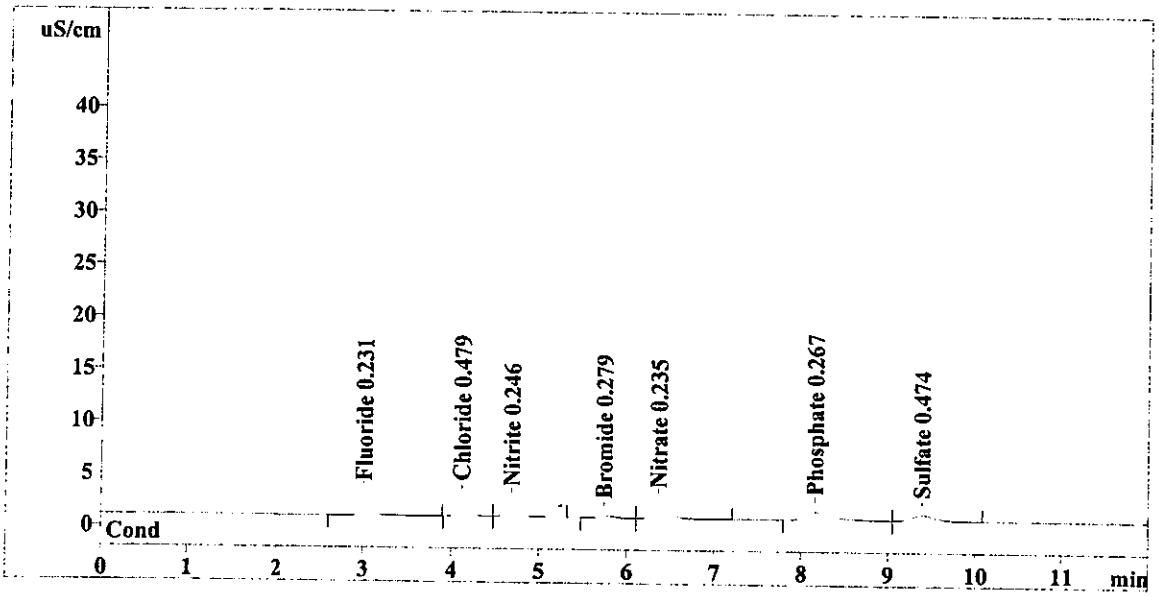
Quantitation method: Custom

No	Retention min	Area uS/cm*sec		Conc. mg/L	Name
1	3.01	5.253	ok	0.089	Fluoride
2	4.12	6.088	↓	0.238	Chloride
3	4.69	4.567	↓	0.130	Nitrite
4	5.76	1.031	ok	0.174	Bromide
5	6.39	6.198		0.119	Nitrate
6	8.16	7.981		0.086	Phosphate
7	9.38	3.618	↓	0.257	Sulfate
7	12.00	34.735		1.094	

11/16/09

This report has been created by IC Net
METROHM LTD

Report date:	11/16/2009 12:33:47 PM
Printed by:	User
Ident:	STANDARD 4
Analysis from:	11/16/2009 9:53:53 AM
File:	tb160953.chw Last save: 11/16/2009 10:05:51 A
Method:	3-111609.mtw Last save: 11/16/2009 9:51:47 AM
Run operator:	User
Analysis number:	10829
SAMPLE:	
:	
Vial number:	140
Volume:	1.0 µL
Dilution:	1.00
Amount:	1.0000
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)
Size:	4.0 x 100 mm
Number:	7503293
Part.size:	5.0 µm



Quantitation method: Custom

No	Retention min	Area uS/cm*sec		Conc. mg/L	Name
1	3.01	14.306		0.231	Fluoride
2	4.12	15.444		0.479	Chloride
3	4.68	12.877		0.246	Nitrite
4	5.75	2.590		0.279	Bromide
5	6.37	17.209		0.235	Nitrate
6	8.16	15.011		0.267	Phosphate
7	9.39	9.611		0.474	Sulfate
7	12.00	87.048		2.211	

11/16/09

This report has been created by IC Net
METROHM LTD

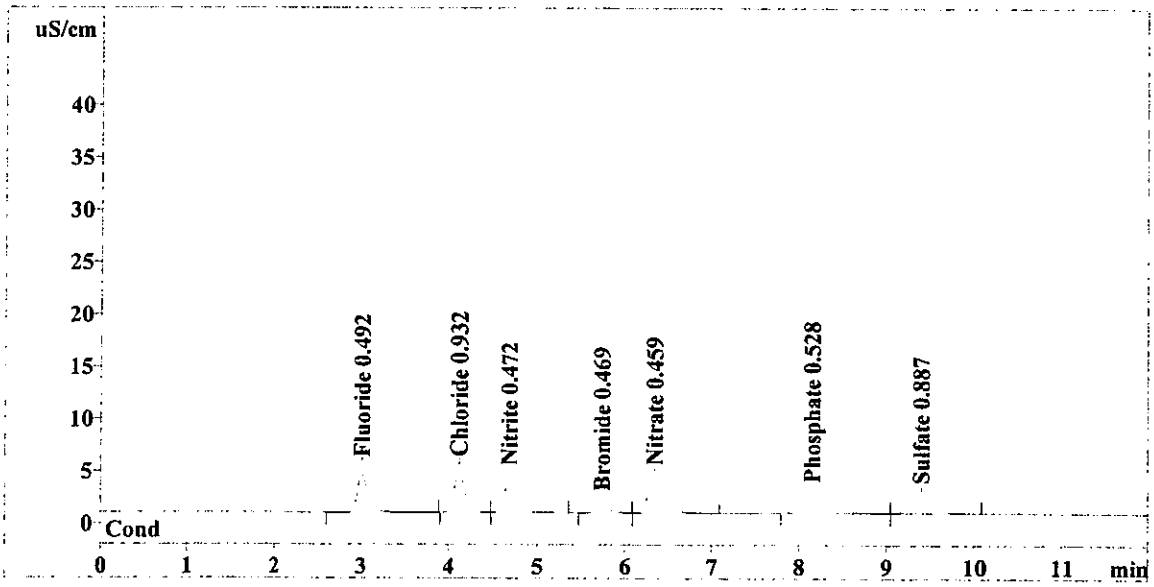
Report date: 11/16/2009 10:19:56 AM
Printed by: User

Ident: STANDARD 5
Analysis from: 11/16/2009 10:07:58 AM
File: TB161007.CHW Last save: 11/16/2009 10:19:56 A

Method: 3-111609.mtw Last save: 11/16/2009 10:05:51 A
Run operator: User
Analysis number: 10830

SAMPLE:
:
Vial number: 141
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000

COLUMN: METROSEP A SUPP 5 - 100 (6.1006.510)
Size: 4.0 x 100 mm
Number: 7503293
Part.size: 5.0 µm



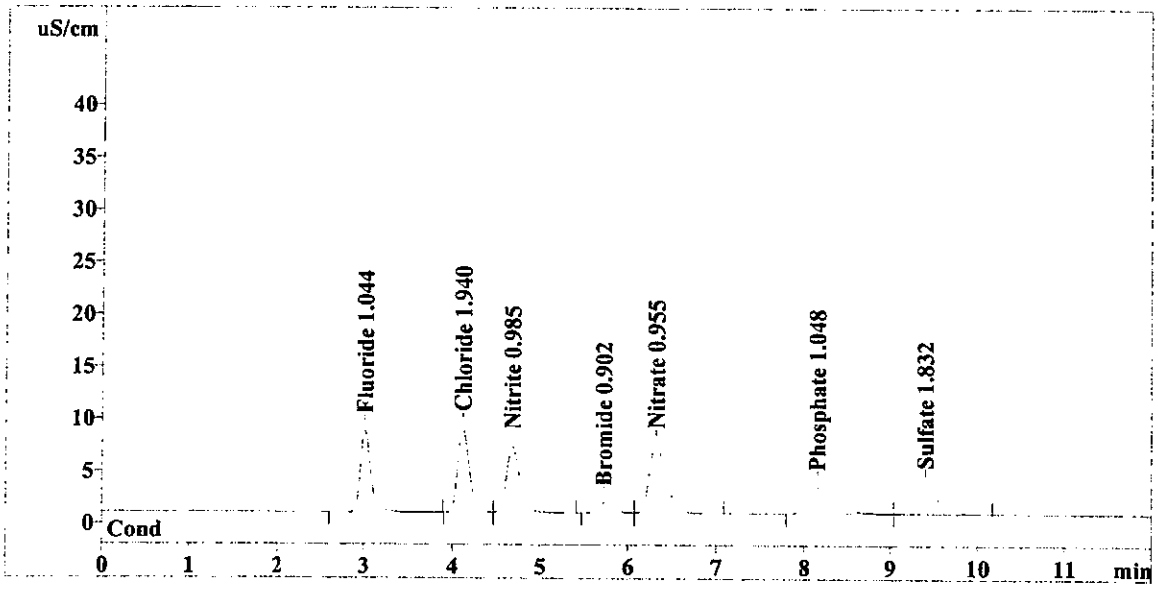
Quantitation method: Custom

No	Retention min	Area uS/cm*sec		Conc. mg/L	Name
1	3.01	30.795		0.492	Fluoride
2	4.11	32.330		0.932	Chloride
3	4.68	29.254		0.472	Nitrite
4	5.74	5.424		0.469	Bromide
5	6.35	38.467		0.459	Nitrate
6	8.16	25.344		0.528	Phosphate
7	9.40	21.012		0.887	Sulfate
7	12.00	182.625		4.238	

11/16/09

This report has been created by IC Net
METROHM LTD

Report date:	11/16/2009 10:34:01 AM	
Printed by:	User	
Ident:	STANDARD 6	
Analysis from:	11/16/2009 10:22:03 AM	
File:	TB161022.CHW	Last save: 11/16/2009 10:34:02 A
Method:	3-111609.mtw	Last save: 11/16/2009 10:19:56 A
Run operator:	User	
Analysis number:	10831	
SAMPLE:		
:		
Vial number:	142	
Volume:	1.0 µL	
Dilution:	1.00	
Amount:	1.0000	
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)	
Size:	4.0 x 100 mm	
Number:	7503293	
Part.size:	5.0 µm	



Quantitation method: Custom

No	Retention min	Area uS/cm*sec		Conc. mg/L	Name
1	3.01	66.008		1.044	Fluoride
2	4.11	70.865		1.940	Chloride
3	4.68	66.423		0.985	Nitrite
4	5.73	11.842		0.902	Bromide
5	6.33	85.736		0.955	Nitrate
6	8.16	46.334		1.048	Phosphate
7	9.41	47.212		1.832	Sulfate
7	12.00	394.420		8.706	

11/16/09

This report has been created by IC Net
METROHM LTD

Report date: 11/16/2009 10:48:07 AM
Printed by: User

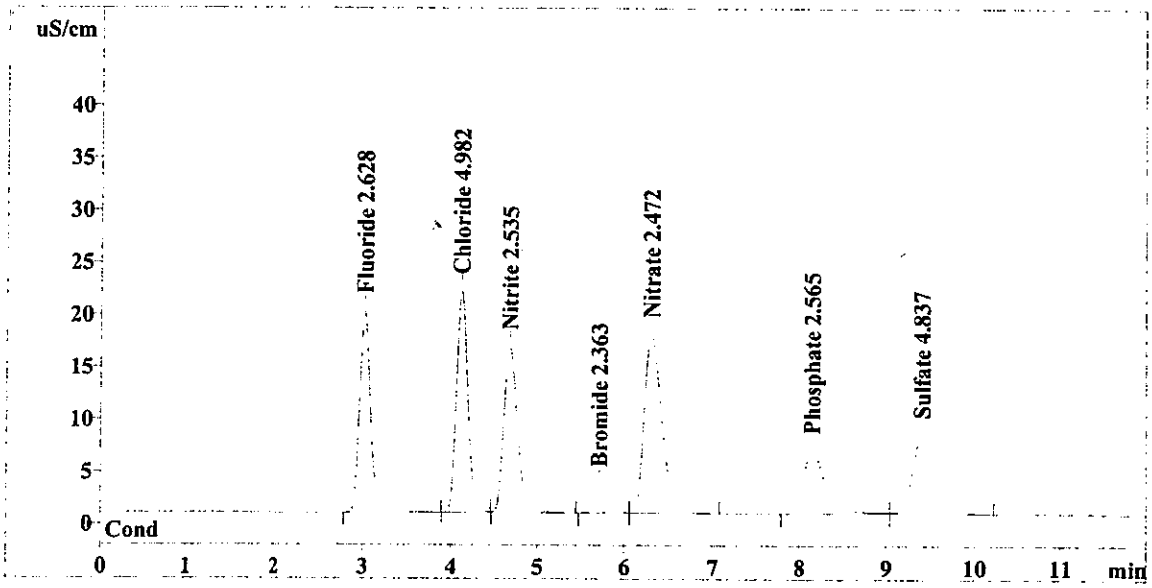
Ident: STANDARD 7
Analysis from: 11/16/2009 10:36:09 AM
File: TB161036.CHW Last save: 11/16/2009 10:48:07 A

Method: 3-111609.mtw Last save: 11/16/2009 10:34:02 A
Run operator: User
Analysis number: 10832

SAMPLE:

Vial number: 143
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000

COLUMN: METROSEP A SUPP 5 - 100 (6.1006.510)
Size: 4.0 x 100 mm
Number: 7503293
Part.size: 5.0 µm



Quantitation method: Custom

No	Retention min	Area uS/cm*sec		Conc. mg/L	Name
1	3.02	167.114		2.628	Fluoride
2	4.11	186.897		4.982	Chloride
3	4.67	178.174		2.535	Nitrite
4	5.72	33.449		2.363	Bromide
5	6.31	229.714		2.472	Nitrate
6	8.15	108.250		2.565	Phosphate
7	9.41	130.911		4.837	Sulfate
7	12.00	1034.509		22.382	

ok
ok
11/16/09

This report has been created by IC Net
METROHM LTD

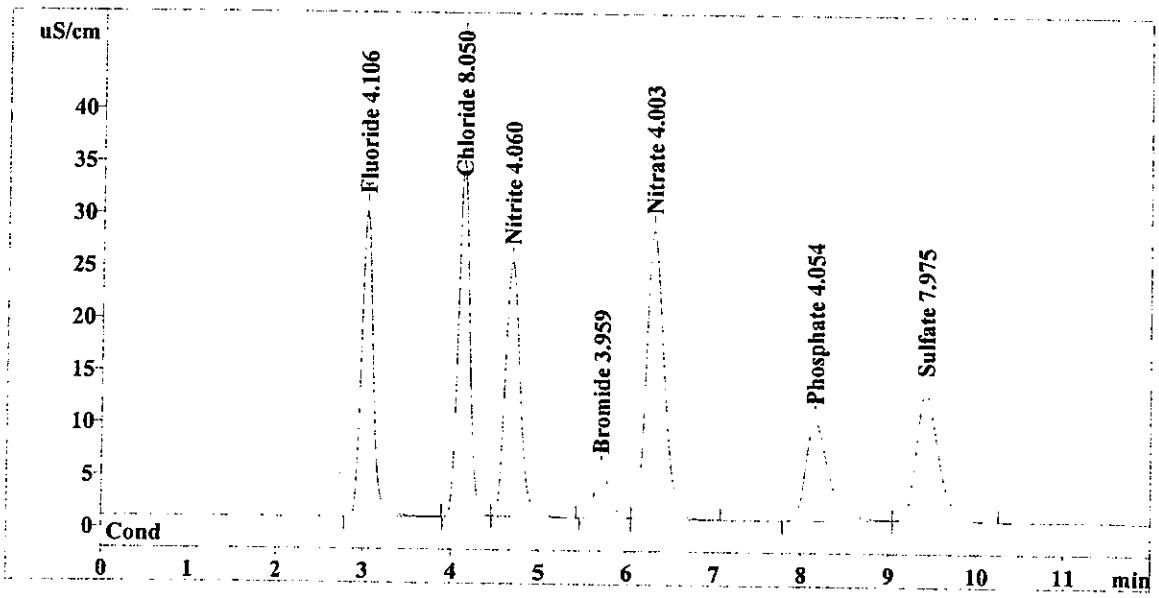
00671

Report date:	11/16/2009 11:02:12 AM	
Printed by:	User	
Ident:	STANDARD 8	
Analysis from:	11/16/2009 10:50:14 AM	
File:	TB161050.CHW	Last save: 11/16/2009 11:02:12 A
Method:	3-111609.mtw	Last save: 11/16/2009 10:48:07 A
Run operator:	User	
Analysis number:	10833	

SAMPLE:
:

Vial number:	144
Volume:	1.0 µL
Dilution:	1.00
Amount:	1.0000

COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)
Size:	4.0 x 100 mm
Number:	7503293
Part.size:	5.0 µm

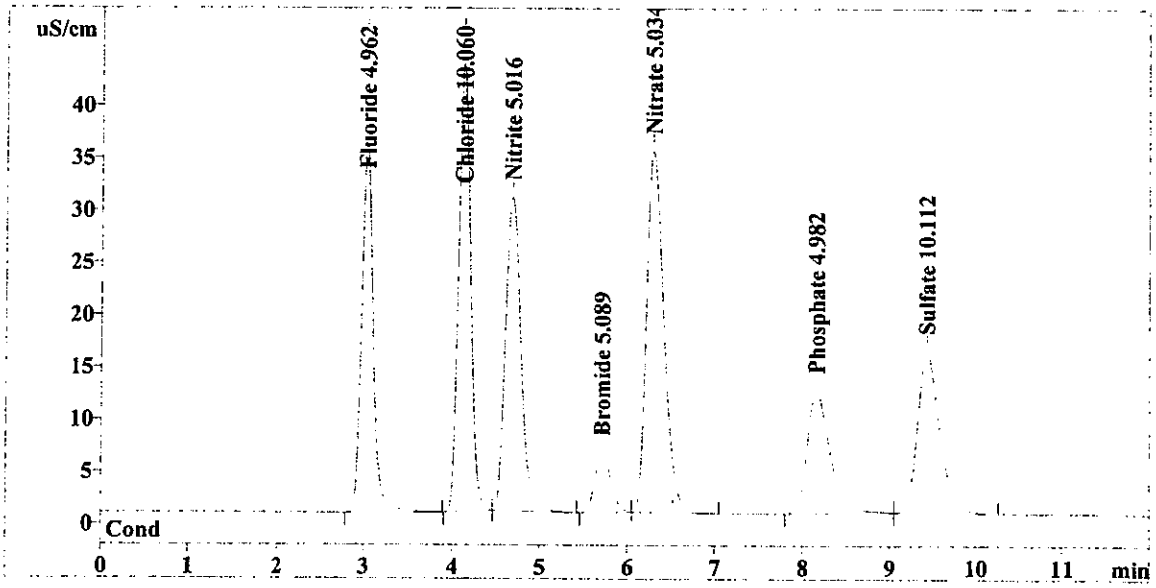


Quantitation method: Custom

No	Retention min	Area uS/cm*sec		Conc. mg/L	Name
1	3.03	264.736		4.106	Fluoride
2	4.12	304.982		8.050	Chloride
3	4.67	290.210		4.060	Nitrite
4	5.71	56.875		3.959	Bromide
5	6.30	375.537		4.003	Nitrate
6	8.16	170.257		4.054	Phosphate
7	9.42	218.151		7.975	Sulfate
7	12.00	1680.747		36.207	

This report has been created by IC Net
METROHM LTD

Report date:	11/16/2009 11:16:16 AM
Printed by:	User
Ident:	STANDARD 9
Analysis from:	11/16/2009 11:04:18 AM
File:	TB161104.CHW Last save: 11/16/2009 11:16:17 A
Method:	3-111609.mtw Last save: 11/16/2009 11:02:12 A
Run operator:	User
Analysis number:	10834
SAMPLE:	
:	
Vial number:	145
Volume:	1.0 µL
Dilution:	1.00
Amount:	1.0000
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)
Size:	4.0 x 100 mm
Number:	7503293
Part.size:	5.0 µm



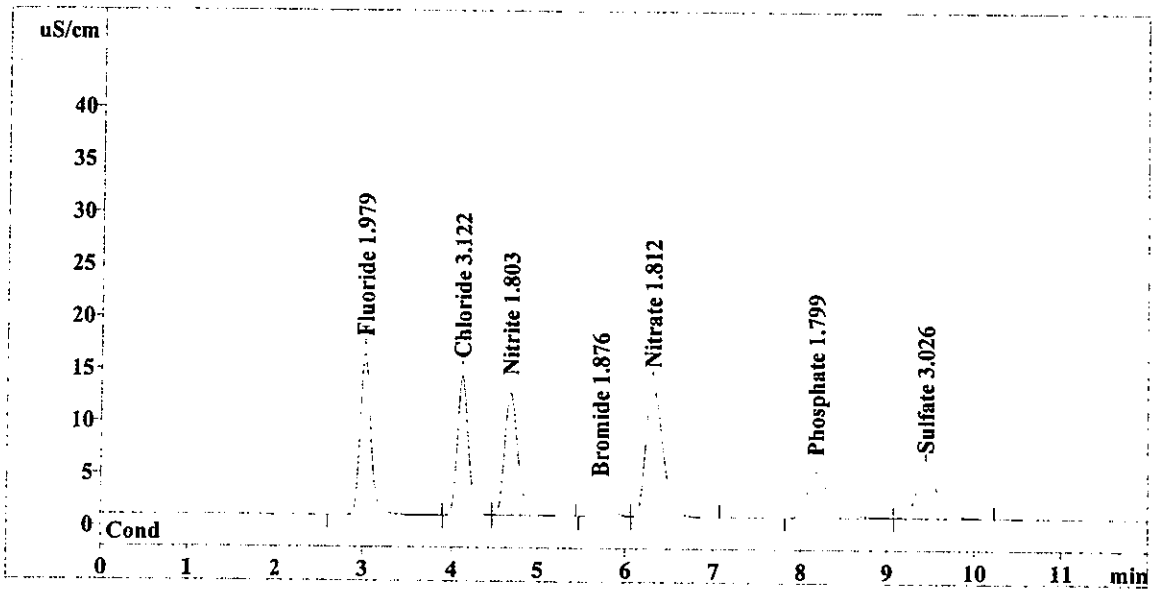
Quantitation method: Custom

No	Retention min	Area uS/cm*sec		Conc. mg/L	Name
1	3.03	327.081		4.962	Fluoride
2	4.12	384.798		10.060	Chloride
3	4.67	365.147		5.016	Nitrite
4	5.71	73.201		5.089	Bromide
5	6.30	474.653		5.034	Nitrate
6	8.16	211.364		4.982	Phosphate
7	9.43	277.134		10.112	Sulfate
7	12.00	2113.378		45.255	

11/16/09

This report has been created by IC Net
METROHM LTD

Report date:	11/16/2009 11:30:21 AM
Printed by:	User
Ident:	ICV
Analysis from:	11/16/2009 11:18:23 AM
File:	TB161118.CHW Last save: 11/16/2009 11:30:22 A
Method:	3-111609.mtw Last save: 11/16/2009 11:16:17 A
Run operator:	User
Analysis number:	10835
SAMPLE:	
:	
Vial number:	146
Volume:	1.0 µL
Dilution:	1.00
Amount:	1.0000
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)
Size:	4.0 x 100 mm
Number:	7503293
Part.size:	5.0 µm



Quantitation method: Custom

No	Retention min	Area uS/cm*sec		Conc. mg/L	Name
1	3.02	129.790		1.979	Fluoride
2	4.12	117.122		3.122	Chloride
3	4.68	128.036		1.803	Nitrite
4	5.72	26.059		1.876	Bromide
5	6.31	167.506		1.812	Nitrate
6	8.18	78.417		1.799	Phosphate
7	9.44	80.174		3.026	Sulfate
7	12.00	727.104		15.417	

11/16/09

This report has been created by IC Net
METROHM LTD

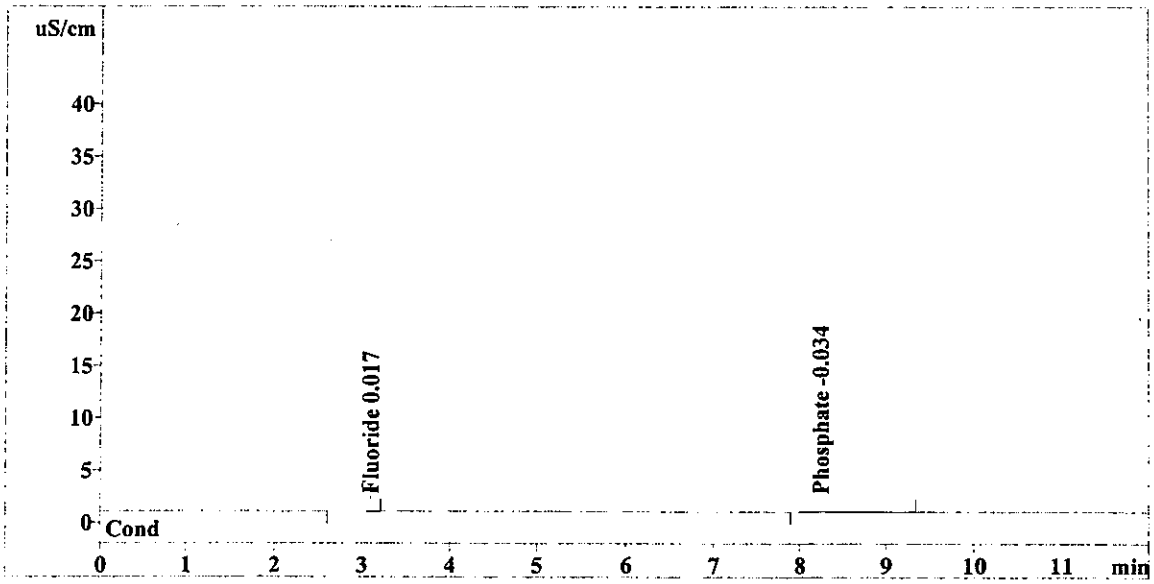
Report date: 11/16/2009 11:44:26 AM
Printed by: User

Ident: ICB
Analysis from: 11/16/2009 11:32:28 AM
File: TB161132.CHW Last save: 11/16/2009 11:44:27 A

Method: 3-111609.mtw Last save: 11/16/2009 11:16:17 A
Run operator: User
Analysis number: 10836

SAMPLE:
:
Vial number: 147
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000

COLUMN: METROSEP A SUPP 5 - 100 (6.1006.510)
Size: 4.0 x 100 mm
Number: 7503293
Part.size: 5.0 µm



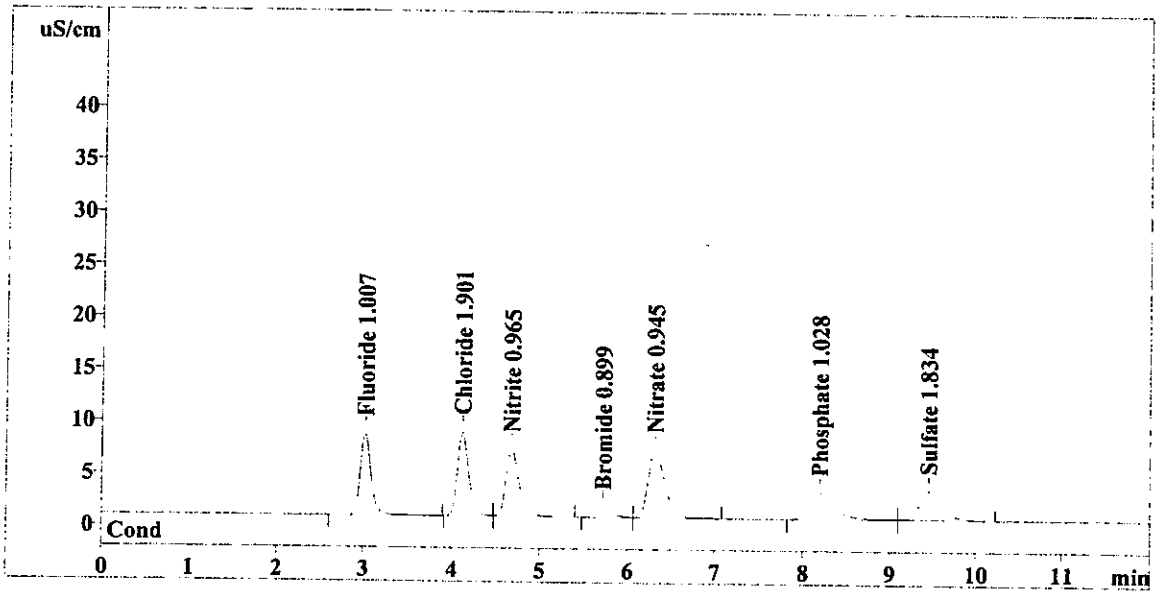
Quantitation method: Custom

No	Retention min	Area uS/cm*sec		Conc. mg/L	Name
1	3.10	0.057		0.017	Fluoride
2	0.00	0.000		0.000	Chloride
3	0.00	0.000		0.000	Nitrite
4	0.00	0.000		0.000	Bromide
5	0.00	0.000		0.000	Nitrate
6	8.25	1.838		-0.034	Phosphate
7	0.00	0.000		0.000	Sulfate
7	12.00	1.895		0.052	

11/16/09

This report has been created by IC Net
METROHM LTD

Report date:	11/16/2009 11:58:31 AM	
Printed by:	User	
Ident:	LCS	
Analysis from:	11/16/2009 11:46:33 AM	
File:	TB161146.CHW	Last save: 11/16/2009 11:58:32 A
Method:	3-111609.mtw	Last save: 11/16/2009 11:16:17 A
Run operator:	User	
Analysis number:	10837	
SAMPLE:		
:		
Vial number:	148	
Volume:	1.0 µL	
Dilution:	1.00	
Amount:	1.0000	
COLUMN:	METROSEP A SUPP 5 - 100 (6.1006.510)	
Size:	4.0 x 100 mm	
Number:	7503293	
Part.size:	5.0 µm	



Quantitation method: Custom

No	Retention min	Area uS/cm*sec		Conc. mg/L	Name
1	3.02	65.501	ak	1.007	Fluoride
2	4.12	69.997	↓	1.901	Chloride
3	4.68	66.227	↓	0.965	Nitrite
4	5.72	11.733		0.899	Bromide
5	6.32	84.877	ak	0.945	Nitrate
6	8.20	46.200	↓	1.028	Phosphate
7	9.46	47.025	↓	1.834	Sulfate
7	12.00	391.561		8.579	

11/16/09

This report has been created by IC Net
METROHM LTD

ACQUISITION PARAMETERS

Channels:	1
Method duration:	12.00min
Run duration:	0.00min
Measurements (method):	13800
Measurements (run):	0
Freq.divisor:	1
Sampling:	10.00 pts/sec
Start delay:	sec
Device:	732 IC Detector
Program before:	
Program after:	
Spikes filter:	No
Median filter:	No
slit:	0
Gauss filter:	No
slit:	0

INTEGRATION DEFAULTS

Channel:	Cond
Delay:	2.60 min
Width:	2.00 sec
Broadening:	2.00
Slope:	1.00
Asymmetry:	1.00
MinArea:	0.05
MinHeight:	0.00
Rider ratio:	0.00

No. min
1 0.00 Enable valley-to-valley
2 11.00 Disable detection

CALIBRATION

Channel:	Cond
Method:	External standard
Response:	Area
Standard:	No

IDENTIFICATION

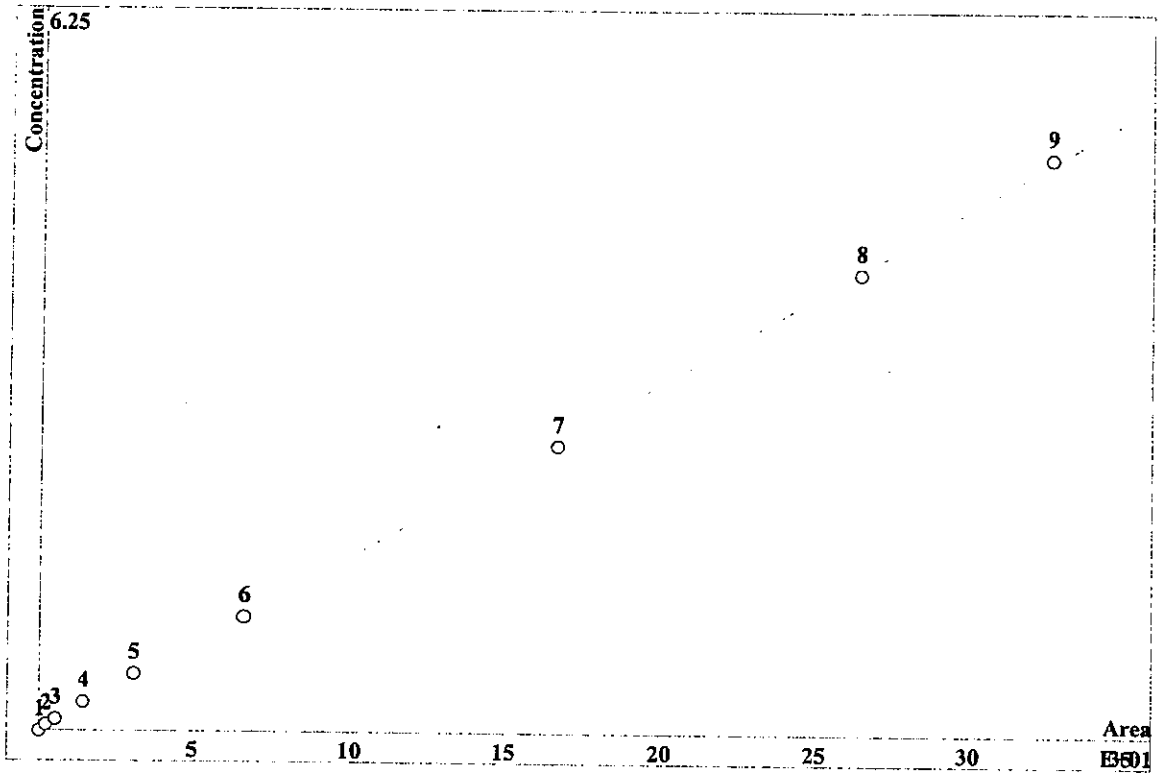
Reference peaks:	Time
Other peaks:	Time
Retention units:	min

No	Retention	Window%	RF	Conc.	Index	Type	Group	Name
1	3.05	10.0	1.513e-02	0.00	0.000		0	Fluoride
2	4.22	10.0	2.592e-02	0.00	0.000		0	Chloride
3	4.82	10.0	1.355e-02	0.00	0.000		0	Nitrite
4	5.94	10.0	6.816e-02	0.00	0.000		0	Bromide
5	6.59	10.0	1.049e-02	0.00	0.000		0	Nitrate
6	8.45	10.0	2.394e-02	0.00	0.000		0	Phosphate
7	9.74	10.0	3.598e-02	0.00	0.000		0	Sulfate

This report has been created by IC Net
METROHM LTD

CALIBRATION OF COMPONENT Fluoride

Method: 3-111609.mtw
Equation: Q = 0.0151338·A + 0.0131481
RSD: 1.762 %
Correlation coefficient: 0.999916



K3 = 0 K2 = 0 K1 = 0.0151338 K0 = 0.0131481

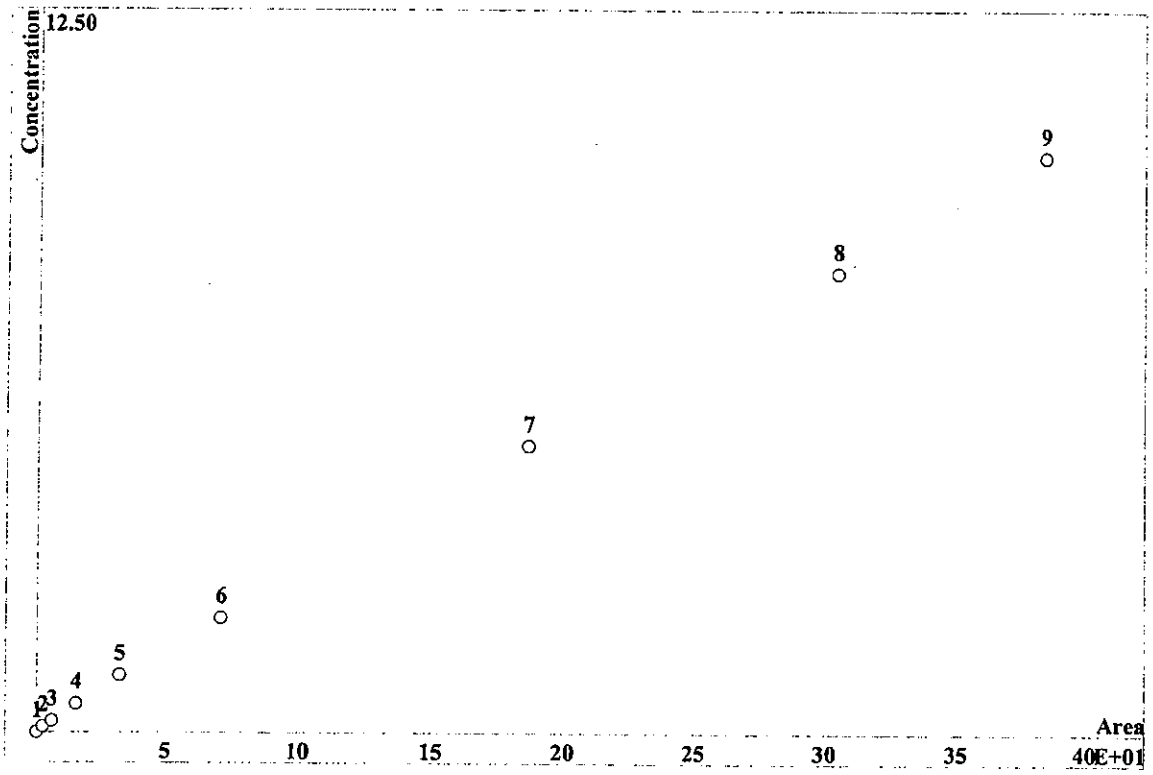
OK
BB 11/18/09

Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0.00362	0.1289	0	1	3.05	Yes	TB160911.CHW
2	0.2388	2.196	0.05	1	3.05	Yes	TB160925.CHW
3	0.5576	5.253	0.1	1	3.05	Yes	TB160939.CHW
4	1.654	14.31	0.25	1	3.05	Yes	TB160953.CHW
5	3.643	30.79	0.5	1	3.05	Yes	TB161007.CHW
6	7.807	66.01	1	1	3.05	Yes	TB161022.CHW
7	19.31	167.1	2.5	1	3.05	Yes	TB161036.CHW
8	29.2	264.7	4	1	3.05	Yes	TB161050.CHW
9	35.36	327.1	5	1	3.05	Yes	TB161104.CHW

CALIBRATION OF COMPONENT Chloride

Method: 3-111609.mtw
Equation: Q = 0.0259208·A + 0.0861673
RSD: 2.301 %
Correlation coefficient: 0.999856



K3 = 0 K2 = 0 K1 = 0.0259208 K0 = 0.0861673

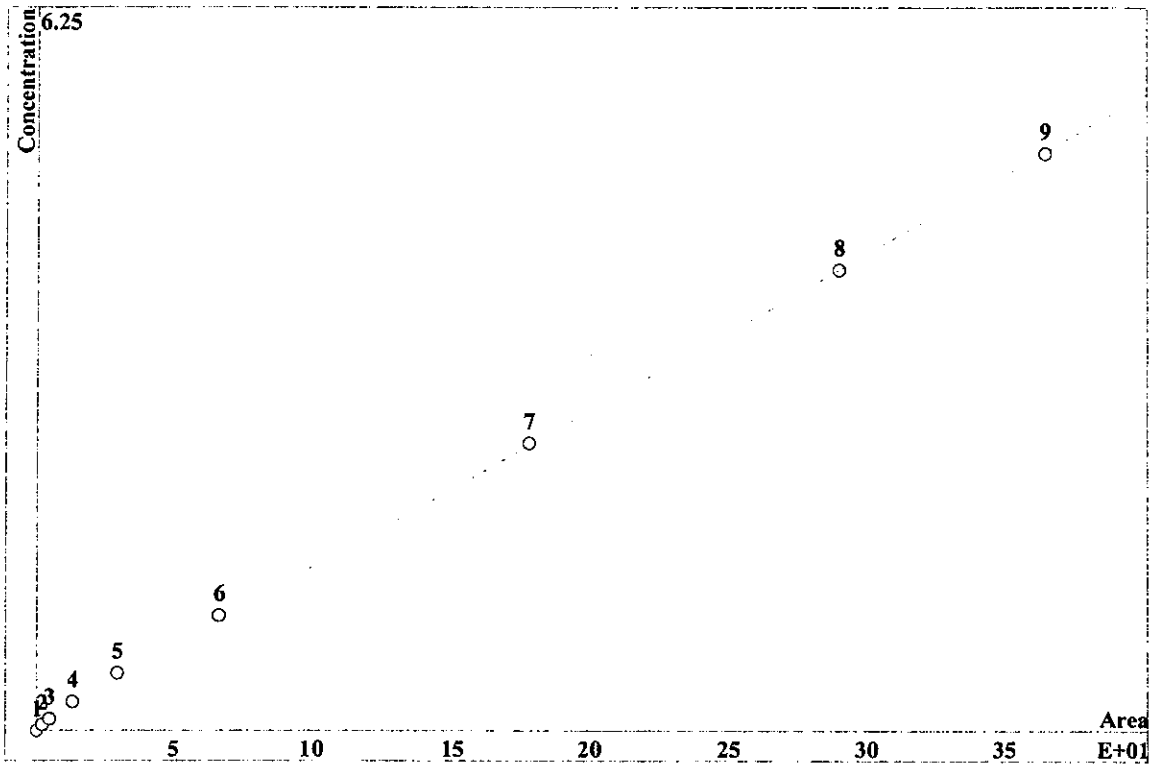
OK
BD 11/18/09

Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0.01493	0.1387	1e-05	1	4.22	Yes	TB160911.CHW
2	0.2625	2.46	0.1	1	4.22	Yes	TB160925.CHW
3	0.6636	6.088	0.2	1	4.22	Yes	TB160939.CHW
4	1.752	15.44	0.5	1	4.22	Yes	TB160953.CHW
5	3.686	32.33	1	1	4.22	Yes	TB161007.CHW
6	8.025	70.86	2	1	4.22	Yes	TB161022.CHW
7	21.11	186.9	5	1	4.22	Yes	TB161036.CHW
8	34.02	305	8	1	4.22	Yes	TB161050.CHW
9	42.77	384.8	10	1	4.22	Yes	TB161104.CHW

CALIBRATION OF COMPONENT Nitrite

Method: 3-111609.mtw
Equation: Q = 0.013552·A + 0.0678212
RSD: 1.881 %
Correlation coefficient: 0.999886



K3 = 0 K2 = 0 K1 = 0.013552 K0 = 0.0678212

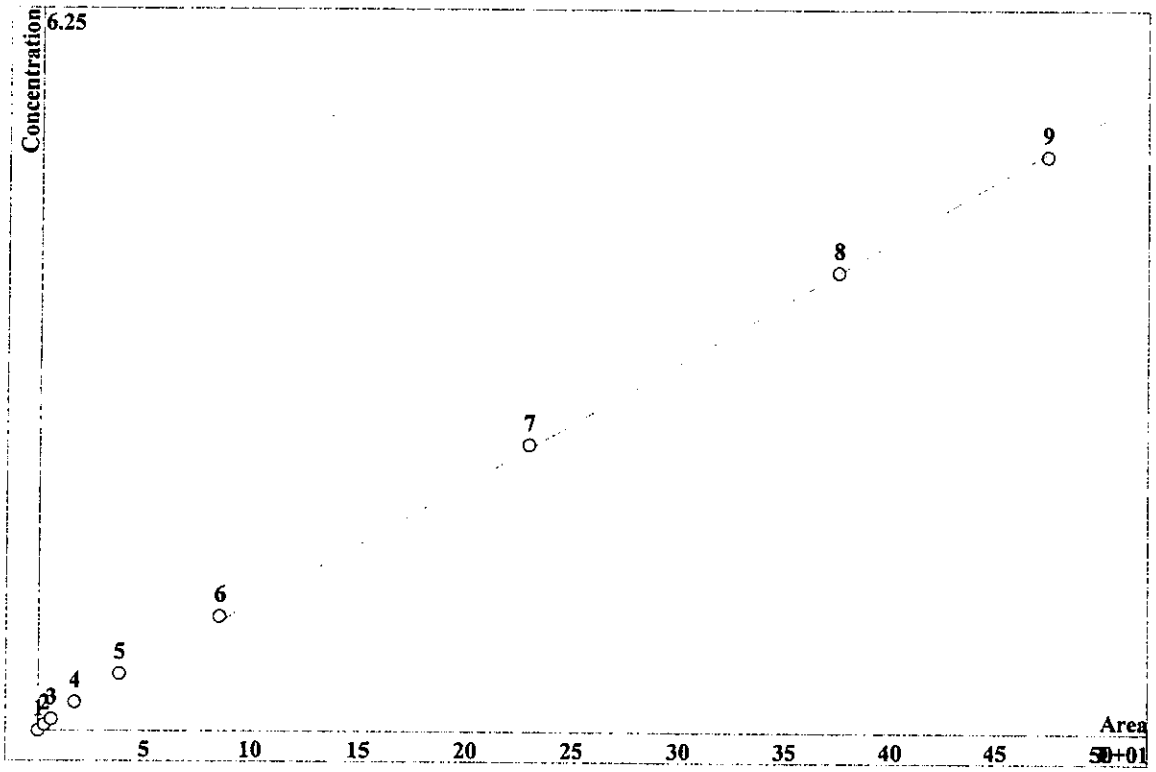
OK 11/18/04

Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0	0	1e-05	0	0	No	TB160911.CHW
2	0.2011	2.096	0.05	1	4.82	Yes	TB160925.CHW
3	0.4395	4.567	0.1	1	4.82	Yes	TB160939.CHW
4	1.281	12.88	0.25	1	4.82	Yes	TB160953.CHW
5	2.893	29.25	0.5	1	4.82	Yes	TB161007.CHW
6	6.351	66.42	1	1	4.82	Yes	TB161022.CHW
7	15.82	178.2	2.5	1	4.82	Yes	TB161036.CHW
8	24.35	290.2	4	1	4.82	Yes	TB161050.CHW
9	29.99	365.1	5	1	4.82	Yes	TB161104.CHW

CALIBRATION OF COMPONENT Nitrate

Method: 3-111609.mtw
Equation: Q = 0.0104899·A + 0.0546671
RSD: 2.693 %
Correlation coefficient: 0.999803



K3 = 0 K2 = 0 K1 = 0.0104899 K0 = 0.0546671

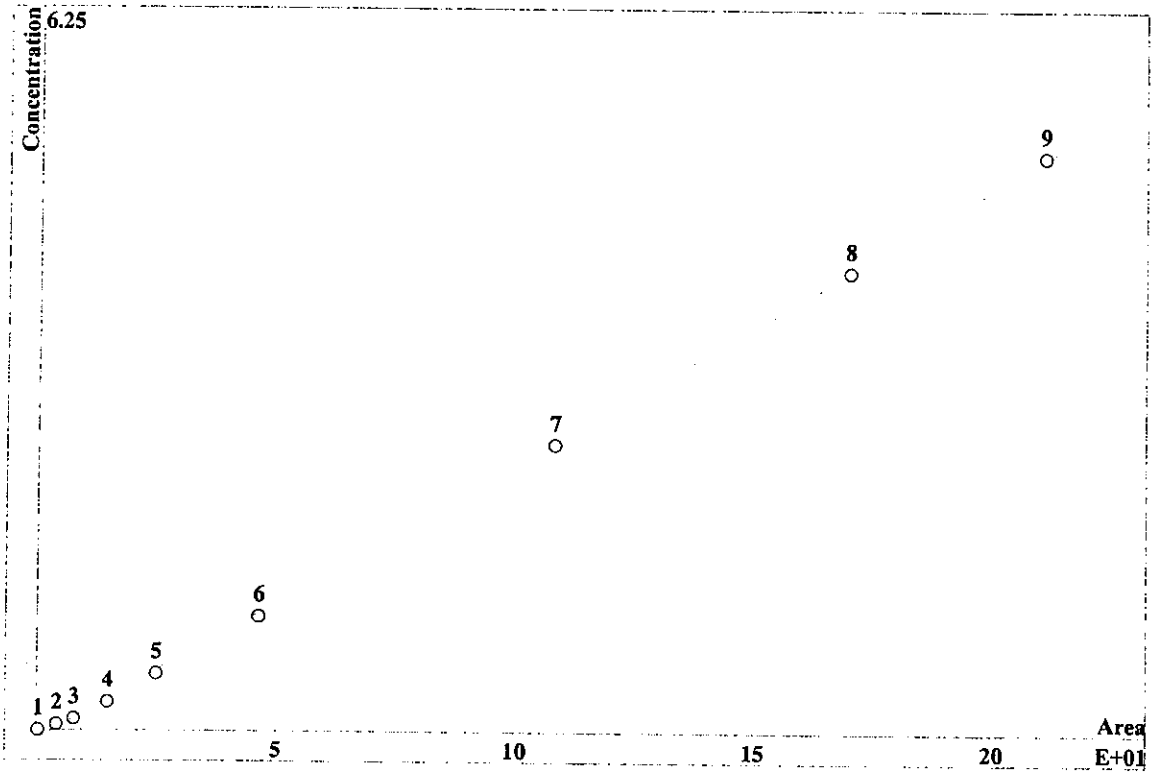
OK HB 11/18/09

Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0.007702	0.1118	1e-05	1	6.59	Yes	TB160911.CHW
2	0.2073	2.891	0.05	1	6.59	Yes	TB160925.CHW
3	0.453	6.198	0.1	1	6.59	Yes	TB160939.CHW
4	1.308	17.21	0.25	1	6.59	Yes	TB160953.CHW
5	2.948	38.47	0.5	1	6.59	Yes	TB161007.CHW
6	6.503	85.74	1	1	6.59	Yes	TB161022.CHW
7	17.07	229.7	2.5	1	6.59	Yes	TB161036.CHW
8	27.53	375.5	4	1	6.59	Yes	TB161050.CHW
9	34.56	474.7	5	1	6.59	Yes	TB161104.CHW

CALIBRATION OF COMPONENT Phosphate

Method: 3-111609.mtw
Equation: Q = 0.0239417·A - 0.0781431
RSD: 2.430 %
Correlation coefficient: 0.999840



K3 = 0 K2 = 0 K1 = 0.0239417 K0 = -0.0781431

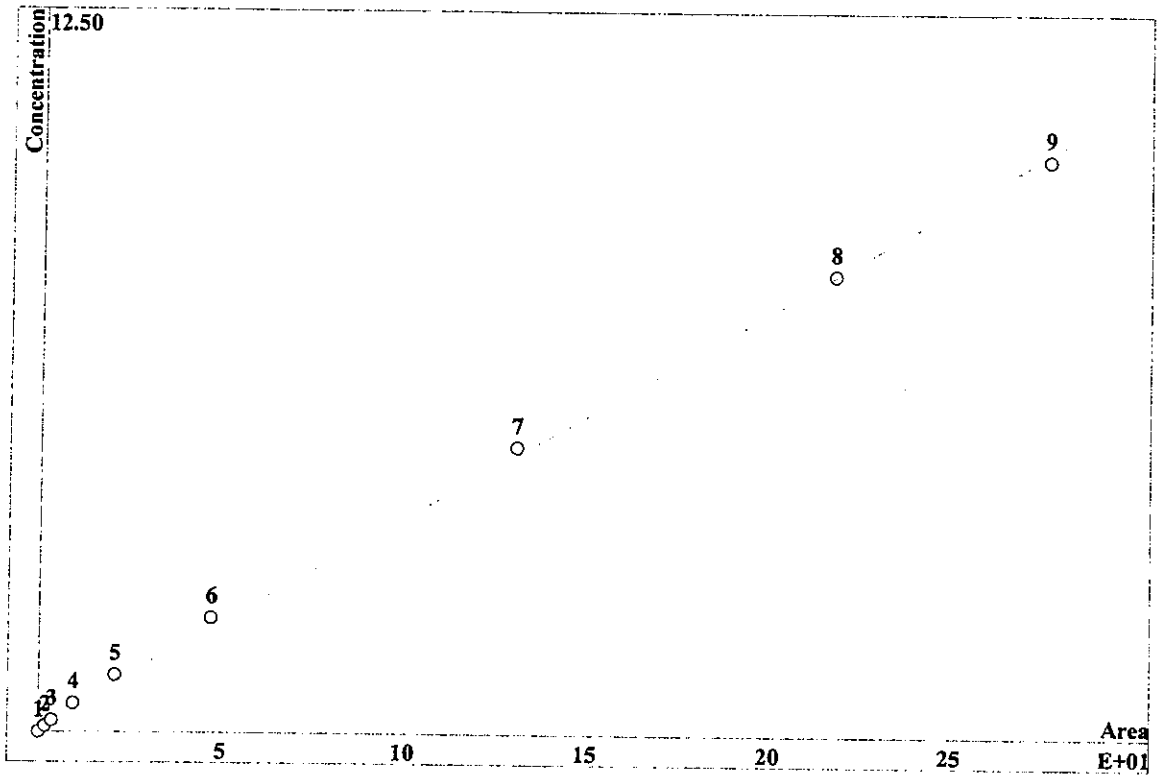
OK
BS 11/18/09

Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0.01211	0.3173	1e-05	1	8.45	Yes	TB160911.CHW
2	0.1836	4.211	0.05	1	8.45	Yes	TB160925.CHW
3	0.3641	7.981	0.1	1	8.45	Yes	TB160939.CHW
4	0.7334	15.01	0.25	1	8.45	Yes	TB160953.CHW
5	1.304	25.34	0.5	1	8.45	Yes	TB161007.CHW
6	2.49	46.33	1	1	8.45	Yes	TB161022.CHW
7	6.018	108.3	2.5	1	8.45	Yes	TB161036.CHW
8	9.5	170.3	4	1	8.45	Yes	TB161050.CHW
9	11.8	211.4	5	1	8.45	Yes	TB161104.CHW

CALIBRATION OF COMPONENT Sulfate

Method: 3-111609.mtw
Equation: Q = 0.0359757·A + 0.141779
RSD: 4.168 %
Correlation coefficient: 0.999529



K3 = 0 K2 = 0 K1 = 0.0359757 K0 = 0.141779

OK
11/18/09

Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0.002553	0.05765	1e-05	1	9.74	Yes	TB160911.CHW
2	0.09612	1.771	0.1	1	9.74	Yes	TB160925.CHW
3	0.1982	3.618	0.2	1	9.74	Yes	TB160939.CHW
4	0.54	9.611	0.5	1	9.74	Yes	TB160953.CHW
5	1.202	21.01	1	1	9.74	Yes	TB161007.CHW
6	2.722	47.21	2	1	9.74	Yes	TB161022.CHW
7	7.473	130.9	5	1	9.74	Yes	TB161036.CHW
8	12.28	218.2	8	1	9.74	Yes	TB161050.CHW
9	15.48	277.1	10	1	9.74	Yes	TB161104.CHW

Columbia Analytical Services – Rochester, New York

Ion Chromatography Cover Sheet

Instrument: Metrohm IC 861

Column: Metrosep A Supp 5 - 100, 4mm, 05/05/09

Curve Date: 11/16/09 **Loop size: 25 uL Loop**

Analyst: R.Paul C.Woods **Analysis Date:** 11/16/09

Is copy of LCS attached to run? (YES) / NO

Standards Prep Dates & Log ID's:

Std Type	*Prep Date*	*Log ID*		*Std Type*	*Prep Date*	*Log ID*
Calibration Intermediate	11/13/09	WC94012B		Working Calibration Stds	11/16/09	WC94021F
LCS / MS Intermediate	11/13/09	WC94012B		Working LCS/MS Standard	11/16/09	WC94054B
ICV Intermediate	10/09/09	WC94012H		Working ICV Standard	11/16/09	WC94028O
CCV Intermediate	10/09/09	WC94012H		Working CCV Standard	11/16/09	WC94028O

Original Retention Times for this method are based on ICV and are as follows:

Fluoride: 3.02
Chloride: 4.12
Nitrite: 4.68
Bromide: 5.72
Nitrate: 6.31
Phosphate: 8.18
Sulfate: 9.44

Additional Comments: **Curve not valid for Bromide**

CALIBRATION INTERMEDIATE STOCK PREP
(used for Calibration and LCS / MS)

Analyte	1000ppm Stock ID	Conc. mg/L	mLs Stock	Final Vol. mL	Final Conc. mg/L	Analyst	Date Prepped	Lot ID	Exp. Date
F	WC92063G	1000	10	200	50	RP	10/28/09	A	1/26/10
Cl	WC72001E	1000	20		100	RP	11/13/09	B	1/26/10
NO2	WC72008F	1000	10		50			C	
Br	WC92063H	1000	10		50			D	
NO3	WC90001F	1000	10		50			E	
OPO4	WC72002P	1000	10		50			F	
SO4	WC72002U	1000	20		100			G	

ICV/CCV INTERMEDIATE STOCK PREP

Analyte	ICV/CCV Stock ID	Conc. mg/L	mLs Stock	Final Vol. mL	Final Conc. mg/L	Analyst	Date Prepped	Lot ID	Exp. Date
F	WC85284I	1000	4.0	1000	4.00	CS	10/9/09	H	1/26/10
Cl	WC72006E	650	10		6.50			I	
NO2	WC72007G	180	20		3.60			J	
Br	WC92085I	1000	4.0		4.00			K	
NO3	WC90006G	180	20		3.60			L	
OPO4	WC72005S	180	20		3.60			M	
SO4	WC72007U	3200	2.0		6.40			N	

CALIBRATION STANDARDS PREP

(Stocks delivered using Volumetric glassware and brought to volume with DI. Expire after 7 days.)

Std #	mLs Intermediate Stock	Final Vol. mLs	Final Std Conc. (mg/L) F	Cl	NO2	Br	NO3	OPO4	SO4	Calibration Intermediate Stock ID	Analyst/ Date Prepped	Lot ID	Exp. Date	Matrix H2SO4 / NaOH / DI	H2SO4 / NaOH Lot #
9	10.0	100	5.0	10.0	5.0	5.0	5.0	5.0	10.0	WC94011A	RP / 10/1/09 ~~9/10/09~~	A	10/8/09	H_2SO_4	WC85294I
8	8.0	100	4.0	8.0	4.0	4.0	4.0	4.0	8.0	WC94011B	RP/10/09/09	B	10/~~17~~ 11/09 ~~11/10/09~~	DI	
7	5.0	100	2.5	5.0	2.5	2.5	2.5	2.5	5.0	WC94001IB	RP 10/22/09	C	10/29/09	DI	
6	2.0	100	1.0	2.0	1.0	1.0	1.0	1.0	2.0	WC94001ZA	RP 11/2/09	D	11/9/09	NaOH	WC85030G
5	1.0	100	0.5	1.0	0.50	0.50	0.50	0.50	1.0	WC94001ZA	RP 10/30/09	~~E~~	11/6/09	H_2SO_4	WC85294I
4	0.5	100	0.25	0.50	0.25	0.25	0.25	0.25	0.50	WC94001ZB	RP 11/4/09	F	11/23/09	DI	
3	0.2	100	0.10	0.20	0.10	0.10	0.10	0.10	0.20			G			
2	0.1	100	0.05	0.10	0.05	0.05	0.05	0.05	0.10			H			
1	0.0	100	0.0	0.0	0.0	0.0	0.0	0.0	0.0			I			
												J			
												K			
												L			
												M			
												N			
												O			
												P			
												Q			

LCS PREP

(Stocks delivered using Volumetric glassware and brought to volume with DI. LCS expires after 7 days; if NO2 is needed, LCS must be prepared daily.)

(MS prepared fresh daily using same volume of intermediate stock added to 100mls sample. MS not prepared volumetrically.)

Analyte	Calibration Intermediate Stock ID	Intermediate Stock Conc (mg/L)	mLs Intermediate Stock	Final Vol. mLs	Final Conc. (mg/L)	Analyst/ Date Prepped	Lot ID	Exp. Date	Matrix H2SO4 / NaOH / DI	H2SO4 / NaOH Lot #
F	WC940128	50	2.0	100	1.0	RLP 11/13/09	A	11/20/09	DI	
Cl		100			2.0	CMW 11/16/09	B	11/23/09	DI	
NO2		50			1.0		C			
Br		50			1.0		D			
NO3		50			1.0		E			
OPO4		50			1.0		F			
SO4		100			2.0		G			
							H			
							I			
							J			
							K			
							L			
							M			
							N			
							O			
							P			
							Q			
							R			

ICV / CCV PREP

(A 1:2 dilution of the Reference Intermediate Stock is done daily)

Analyte	ICV / CCV Intermediate Stock ID	Conc. mg/L	mLs Stock	Final Vol. mL	Final Conc. mg/L	Analyst/ Date Prepped	Lot ID	Exp. Date	Matrix H2SO4 / NaOH / DI	H2SO4 / NaOH Lot #
F	WC9M0012H	4.00	5.0	10	2.00	11/2/09	A	11/3/09	DI	
Cl		6.50			3.25	11/2/09	B	11/3/09	NaOH	WC850306
NO2		3.60			1.80	11/3/09	C	11/4/09	DI	
Br		4.00			2.00	11/3/09	D	11/4/09	NaOH	WC850306
NO3		3.60			1.80	10/30/09	E	10/31/09	H_2SO_4	WC85294I
OPO4		3.60			1.80	11/4/09	F	11/5/09	DI	
SO4		6.40			3.20	11/4/09	G	11/5/09	H_2SO_4	WC85294I
						11/5/09	H	11/6/09	DI	
						11/6/09	I	11/7/09	DI	
						11/9/09	J	11/10/09	DI	
						11/10/09	K	11/11/09	DI	
						11/11/09	L	11/12/09	DI	
						11/12/09	M	11/13/09	DI	
						11/13/09	N	11/14/09	DI	
						11/16/09 CMW	O	11/17/09	DI	
							P			
							Q			

Analytical Results Summary

Instrument Name: R-UV-VIS-01 **Analyst:** DWARD **Analysis Lot:** 179148 **Method/Testcode:** SM 5540 C/MBAS Hendext

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt	Final Result	Dil	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
2Q0911250-01	Surfactants	MB		Soil	0.32 mg/L	25 g	2.0 mg/Kg U	10	2.0			11/12/09 08:56	N	IV
2Q0911354-01	Surfactants	LCS		Soil	0.21 mg/L	25 g	0.208 mg/Kg	1	0.20	104		11/12/09 08:56	N	IV
2Q0911354-02	Surfactants	LCS		Soil	3.40 mg/L	25 g	3.40 mg/Kg	1	0.20	97		11/12/09 08:56	N	IV
20906123-019	Surfactants	N/A		Soil	0.42 mg/L	25 g	2.1 mg/Kg U	10	2.1			11/12/09 08:56	N	IV
20906123-020	Surfactants	N/A		Soil	0.42 mg/L	25 g	3.1 mg/Kg U	10	3.1			11/12/09 08:56	N	IV
20906123-022	Surfactants	N/A		Soil	0.71 mg/L	25 g	0.8 mg/Kg J	10	2.2			11/12/09 08:56	N	IV
20906123-023	Surfactants	N/A		Soil	0.52 mg/L	25 g	2.2 mg/Kg U	10	2.2			11/12/09 08:56	N	IV
20906123-024	Surfactants	N/A		Soil	0.52 mg/L	25 g	2.5 mg/Kg U	10	2.5			11/12/09 08:56	Y	IV
2Q0911250-02	Surfactants	DUP	R0906123-024	Soil	0.52 mg/L	25 g	2.5 mg/Kg U	10	2.5		NC	11/12/09 08:56	N	IV
2Q0911250-03	Surfactants	MS	R0906123-024	Soil	33.37 mg/L	25 g	41.1 mg/Kg	10	2.5	95		11/12/09 08:56	N	IV
2Q0911354-03	Surfactants	MB		Water	0.00 mg/L	500 mL	0.020 mg/L U	1	0.020			11/12/09 08:56	N	IV
2Q0911354-04	Surfactants	LCS		Water	0.02 mg/L	500 mL	0.0208 mg/L	1	0.020	104		11/12/09 08:56	N	IV
2Q0911354-05	Surfactants	LCS		Water	0.34 mg/L	500 mL	0.340 mg/L	1	0.020	97		11/12/09 08:56	N	IV
20906477-001	Surfactants	N/A		Water	0.01 mg/L	500 mL	0.006 mg/L J	1	0.020			11/12/09 08:56	N	IV

R6123
R6477
2 copies

Reviewed & Approved
By: _____
Date: 11/19/09

58889

I indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

COLUMBIA ANALYTICAL SERVICES, INC.
Rochester, NY

Analyte: Surfactants (MBAs) Analyst: DWARD Date: 11/12/09
Method: SM20 5540C Pipette: Volumetrics Time: 8:56
Spectrophotometer: MR21 (R-UV-VIS-01)

Calibration:

Std	Conc.	Absorb.	Result	% Rec
1	0.00	0.000	0.00323	
2	0.02	0.019	0.02175	108.7%
3	0.04	0.039	0.04124	103.1%
4	0.06	0.059	0.06074	101.2%
5	0.08	0.075	0.07633	95.4%
6	0.10	0.101	0.10168	101.7%
7	0.15	0.154	0.15334	102.2%
8	0.20	0.190	0.18843	94.2%
9	0.25	0.240	0.23717	94.9%
10	0.30	0.319	0.31418	104.7%
11	0.40	0.409	0.40191	100.5%

Curve Date: 5/28/09
C.C = 0.998342
y-int. = -0.003311
Slope: 1.025888

Working Std Stock Log I WC92108D
Working Standard Stock Prep Date: 11/5/2009
Working Ref Stock Log WC92108E
Working Reference Stock Prep Date: 11/5/2009

* Soil - 25 g diluted to 250 mLs

	Misc.	Order #	Sample Vol. (mLs)	Absorbance @ 652 nm	MBAs mg/L	Bench Dilution	Final Dilution	Final Result	*Soil
	TV= 0.300	ICV	500.000	0.320	0.3152	1.0	1.00	105.1%	
		ICB/PB	500.000	0.000	0.0032	1.0	1.00	0.0032	
1	TV= 0.300	CCV	500.000	0.330	0.3249	1.0	1.00	0.3249	
2		CCB/PB	500.000	0.000	0.0032	1.0	1.00	0.0032	
3	TV= 0.020	LCS-LL	500.000	0.018	0.0208	1.0	1.00	0.0208	
4	TV= 0.350	LCS-HL	500.000	0.345	0.3395	1.0	1.00	0.3395	
5	MB	RQ0911250-01	50.000	0.000	0.0032	1.0	10.00	0.3227	*
6		R0906123-019	50.000	0.001	0.0042	1.0	10.00	0.4202	*
7		R0906123-020	50.000	0.001	0.0042	1.0	10.00	0.4202	*
8		R0906123-022	50.000	0.004	0.0071	1.0	10.00	0.7127	*
9		R0906123-023	50.000	0.002	0.0052	1.0	10.00	0.5177	*
10		R0906123-024	50.000	0.002	0.0052	1.0	10.00	0.5177	*
11	DUP	RQ0911250-02	50.000	0.002	0.0052	1.0	10.00	0.5177	*
12	MS	RQ0911250-03	50.000	0.339	0.3337	1.0	10.00	33.3673	*
13		CCV	500.000	0.330	0.3249	1.0	1.00	0.3249	
14		CCB/PB	500.000	0.000	0.0032	1.0	1.00	0.0032	
15		R0906477-001	500.000	0.003	0.0062	1.0	1.00	0.0062	
16		CCV	500.000	0.330	0.3249	1.0	1.00	0.3249	
17		CCB/PB	500.000	0.000	0.0032	1.0	1.00	0.0032	
18									
19									
20									
21									
22									
23									
24									
25									
26									

11/12/09
DPW

MBAs, mg/L = $\frac{\text{Conc. (mg/L)} \times \text{Dil'n} \times 500\ \text{mL}}{\text{Sample Volume}}$

Columbia Analytical Services
1 Mustard Street, Rochester, NY 14609

General Chemistry Analytical Run Cover Sheet

Analyst: DWard Date: 11/12/09

Analysis: MBAS (Surfactants) ✓ Instrument: Milton Roy Spec 21 ✓

Quality Control: Curve Date: 05/28/09

	Same as Log Book #	Same as Log Book Date	Working Stocks Prep. Log#, Date,	Stock Sol (mls)	Stock Sol (mg/L)	Final Vol (mls)	True Value (mg/L)
a) Standards Prep:	WC92008D	5/28/2009	WC92008B, 5/28/09				
b) ICV Prep:	WC92008E	5/28/2009	WC92008C, 5/28/09				
b) CCV Prep:	WC92008E	5/28/2009	see bench sheet	150	1	500	0.3
c) LCS-LL Prep:	WC92009A	5/28/2009	see bench sheet	10	1	500	0.02
c) LCS-HL Prep:	WC92009B	5/28/2009	see bench sheet	175	1	500	0.35
d) Matrix Spike	WC92009C	5/28/2009	WC85268F, 2/12/09	0.175	1000	500	0.35

Instrument log filled in? (Y)(N)

Packages:

Copy and attach Standards Preparation.

Comments: 1000 ppm Standard Stock: WC85268F

1000 ppm Reference Stock: WC92092F

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BOOK PAGE

TITLE **PROJECT**

Continued from page

11/4/09 NM (A) Color Reagent - TPO_4
- same as WC92097E. Exp. 1 year, 11/4/10, or when discolored

11/4/09 BB (B) 10% Phosphoric Acid
Same as WC92036D. Expires 11/4/10 BB 11/4/09

11/4/09 SBR (C) 5.6M H_2SO_4 - TPO_4
same as WC92077E. Exp 11/4/10

11/5/09 DPW (D) 1.0 ppm LAS Working Standard Stock
Dilute 1.0mL of 1000ppm LAS Standard (WC85268F) to 1L volumetrically w/ DI.
Store @ 4°C, Exp: 11/30/2009.

(E) 1.0 ppm LAS Working Reference Stock
Dilute 1.0mL of 1000 ppm AS/R MBAS standard (WC92092F) to 1L volumetrically w/DI. 11/5/09 DPW
Store @ 4°C, exp: 11/5/2010.

Recieved from EMD
(F) 4X500g Sodium phosphate monobasic monohydrate, cat#: SX0710-1, Lot#: 49050936, Store @ RT. Exp: 11/5/2014, cas#: 10049-21-5.

(G) 4X4L Chloroform, cat#: CX1059-1, Lot#: 48171, Store @ RT. Exp: 11/5/2012, Cas#: 67-66-3

11/6/09 NM (G) NH_3 Carrier/Diluent
- same as WC92067C. Prepared solution X3.

(H) Hypochlorite - NH_3
- same as WC92097A. Prepare fresh each run.

11/6/09 GN (I) 0.02500N $Na_2S_2O_3$
Dilute 50.0 mls $Na_2S_2O_3$ 0.1N (WC 92020E) volumetrically w/DI to 200mls. Store at 4°C in amber jar.
Exp: 2 weeks : 11/20/09

Continued to page

SIGNATURE DATE

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5/28/09 (A) Buffer - TOTN
NM -same as WC92003E. Exp. 1 year, 5/28/10

5/28/09 Calibration for Surfactants (MBAS)
cm w (B) 1.0ppm Working Standard Stock
Dilute 1mL of 1000ppm Standard (WC85268F) to 1L w/ DI water volumetrically. Store in amber glass @ 4°C. Expires 1 year, 5/28/2010.

(C) 1.0ppm Working Reference Stock
Dilute 1mL of 1000ppm Reference (WC85215G) to 1L w/ DI water volumetrically. Store in amber glass @ 4°C. Expires 1 year, 5/28/2010.

(D) Calibration Standard

Cal Std	mLs DI	mLs Standard (WC92008B)	Conc.
1	500	0	0.00
2	490	10	0.02
3	480	20	0.04
4	470	30	0.06
5	460	40	0.08
6	450	50	0.10
7	425	75	0.15
8	400	100	0.20
9	375	125	0.25
10	350	150	0.30
11	300	200	0.40

(E) ICV/CCV
To a ~~5/28/09~~ 1L separatory funnel add 350mL of DI water and 150mL of working reference stock (WC92008C). Analyze as a normal sample. True Value = 0.30mg/L.

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TITLE PROJECT

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5/28/09 (A) LCS-Low Level
To a 1L separatory funnel add 490mL of DI water and 10mL of working standard stock (WC92008B). Analyze as normal sample. True Value = 0.02mg/L.

(B) LCS-High Level
To a 1L separatory funnel add 325mL of DI water and 175mL of working standard stock (WC92008B). Analyze as normal sample. True Value = 0.35mg/L.

(C) Matrix Spike
To a 1L separatory funnel add ~~325mL of~~ 500mL ~~sample an~~ of sample and add ~~0.325mL~~ 0.175mL of 1000ppm Standard Stock (WC85268F). Analyze as normal. True Value = 0.35mg/L.

5/28/09 5/28/09
5/28/09 (D) TKN Digest Reagent
JHp same as WC91001D Stored at RT in amber glass Exp 6/28/09

5/28/09 (E) 10% Phosphoric Acid
BB Same as WC92002H. Expires 5/28/10.

5/28/09 (E) Ascorbic Acid - Konelab
JHp Same as WC91002A. Exp 6/12/09

5/28/09 (G) Received from CPI
BB 4 (12) x 20 Oz Mesa Filter SPE discs, Cat# 4350-13, CPI Lot# 050809. Store at 0/G hexid Exp: NA

Received from VWR.
(H.U.) x 2.5 Kg Ammonium Sulfate, Cat# AX1385-3, EMD Lot# 48164910, CAS# 7783 20-2 Store @ R.T. Expires 5/28/14 10181

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2/12/09 BB

Ethylene Glycol

(A) ICV/CCV Prep (final vol = 1mL)

0.60 mL DI + 0.40mL 10ppm Ref. Stock (WC85268D)

TV = 4.00 ppm

(B) LCS/MS prep

To 1.0 mL DI or sample, add 0.30mL 10ppm Std. Working Stock (WC85268C).

TV = 3.00 ppm

(C) Glycol Std. Working Stock, 10ppm

In a volumetric flask, dilute 0.10 mL Ethylene Glycol 10,000 ppm Std (WC85241A) to 100 mLs.

Make fresh per run.

(D) Glycol Ref. Working Stock, 10ppm

In a volumetric flask, dilute 0.10mL Ethylene Glycol 10,000 ppm Ref (WC85241B) to 100mLs. Store each run.

(E) Standards for Glycol (final vol. = 1.0mL)

Conc (ppm)	mL 10ppm Std working stock (WC85268C)	Vol DI (mL)
1.0	0.10 mL	0.90
2.0	0.20 mL	0.80
4.0	0.40 mL	0.60
8.0	0.80 mL	0.20
10.0	1.00 mL	0.0

2/12/09 BB

Receives from VWR

(F) (1) x 120mL LAS Standard, 1000 mL = 1.00mg LAS

Cat # 4350-4, RICCA Lot # 2811283, CAS no. 7664-93-9, 68411-30-3. Store @ 4°C. Expires 11/30/09 [2187]

2/13/09

(G) Phosphate buffer for UV254

Same as WC85254G. Expires 2/20/09

(H) KHP Std. 500 mg/L Exp 12/09

Same as WC85254H, except phosphate buffer is WC85268G + KHP is WC85062C.

2/18/09 SBR

(I) Cr^{+6} Color Reagent

In a 50mL vol. flask dissolve 0.25g 1,5-Diphenylcarbohydrazide (WC85190E) in acetone (WC85203J) and bring to volume. Store @ 4°C. Exp 3/18/09

2/18/09 EW

(A) ISS Ref

0.2148g

DI. =

TV = 21

2/18/09 EW

(B) Erichr

Add 50

(WC6928

Store

2/18/09 SBR

(C) NC_2 (color

In a 100

0.10g NED

volume

(D) Ascorbic Ac

- same c

2/18/09 SBR

(E) 10% Phosp

- same a

(F) Phenol

- same a

2/19/09 AW

(G) Cr^{+6} Digest

San

2/19/09 NM

(H) NH_3 C

- Same

(I) Hyperc

- same a

2/20/09 AB

(J) 0.5m

0.2M

phosp.

Expire

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10/5/09 KLR (H) Received from CPI
15ML x 20/pk Oil+Grease fiber SPE disks, 47mm, Cat #: 4350-13
CPI lot #: 080409 No expiration Date

10/5/09 EW Received from VWR
(B) 10 x 100/pk Glass microfibre filter, 691, 4.7cm, CAT# 6333-129.
VWR LOT # 61823159. No expiration Date.

SBR 10/05/09 (C) TKN Digest Reagent
same as WC92085B Exp 11/05/09

10/5/09 DPW Received from ~~EMB~~ EMD DPW 10.15.09
(D) 4x500g Sodium phosphate monobasic monohydrate. Cat#: SX0710-1, lot#: 46317436.
Store@RT, exp: 10/5/2014. Cas#: 10049-21-5.

(E) 4x4L chloroform. Cat#: CX1054-1, lot#: 48171. Store@RT, exp: 10/5/2012.
Cas#: 67-66-3

Received from ERA
(F) 1x10mL vial MBAS/LAS Standard, 1000mg/L. ERA lot#: 170865, Cat#: 975.
Store@4°C, exp: ~~5/30/2011~~ DPW 10.15.09 5/31/2011.

10/6/09 NM (G) Post-Digestion matrix Match-TKN
To a 2-L vol. flask add 300mL TKN Digest Reagent (WC92092C) and bring to volume w/ UPDI. mix thoroughly. Pour off 100 mL and discard. Bring back to volume w/ UPDI. mix thoroughly. Store @ RT in amber glass. Exp. 11/5/09.

(H) Hypochlorite - TKN
- same as WC92082B. Prepare fresh each run.

10/6/09 NM (I) Color Reagent - TP04
- same as WC92086C. Exp. 1 year, 10/6/10, or when discolored.

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