



# Inorganics Resubmission

## Case Narrative

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### Western Water and Land, Inc.

SG 44-23 BWQ

Work Order Number: 1311394

1. This report consists of 1 water sample. **Due to a client inquiry, sample 1311394-1 was reanalyzed for chloride and sulfate. The results confirm that the wrong sample was analyzed at a 50X dilution on 11/21/13. The raw data for the reanalyzed sample on 01/16/14 is included in the miscellaneous section of this report.**
2. The sample was received cool and intact by ALS on 11/21/13.
3. The sample had been correctly preserved for the total phosphorus analysis.
4. The sample was prepared for analysis based on Methods for the Chemical Analysis of Waters and Wastes (MCAWW), May 1994 procedures, Environmental Monitoring Systems Laboratory (EMSL) Rev 2.1 procedures, and Standard Methods for the Examination of Water and Wastewater, 20<sup>th</sup> Edition 1998 procedures.
5. The sample was analyzed following MCAWW, EMSL, and Standard Method procedures for the current revisions of the following SOPs and methods:

<u>Analyte</u>	<u>Method</u>	<u>SOP #</u>
Alkalinity	SM2320B	1106
Bicarbonate	SM2320B	1106
Carbonate	SM2320B	1106
pH	SM4500-H <sup>+</sup> B	1126
Total phosphorus	365.2	1119
Specific conductance	SM2510B	1128
TDS	SM2540C	1101
Bromide	300.0 Revision 2.1	1113
Chloride	300.0 Revision 2.1	1113
Fluoride	300.0 Revision 2.1	1113
Nitrate as N	300.0 Revision 2.1	1113
Nitrite as N	300.0 Revision 2.1	1113
Total Nitrates	300.0 Revision 2.1	1113
Sulfate	300.0 Revision 2.1	1113



6. All standards and solutions were used within their recommended shelf life.
7. The sample was prepared and analyzed within the established hold time for each analysis.

All in house quality control procedures were followed, as described below.

8. General quality control procedures.

- n A preparation (method) blank and laboratory control sample (LCS) were prepared and analyzed with the samples in each applicable preparation batch.
- n The method blank associated with each applicable batch was below the reporting limit for the requested analytes.
- n All laboratory control sample criteria were met.
- n All initial and continuing calibration blanks were below the reporting limit for the requested analytes.
- n All initial and continuing calibration verifications were within the acceptance criteria for the requested analytes.

9. Matrix specific quality control procedures.

Per method requirements, matrix QC was performed for each analysis. Since a sample from this order number was not the selected quality control (QC) sample, matrix specific QC results are not included in this report.

10. Electrical conductivity screening indicated that the concentration of dissolved salts was high in the sample. Therefore, it was necessary to dilute the sample prior to injection into the ion chromatograph in order to minimize the amount of salts loaded into the analytical column.

It was necessary to further dilute the sample in order to bring the chloride and sulfate concentrations into the analytical range of the ion chromatograph (IC).

Reduced aliquots were taken of the sample for the alkalinity, bicarbonate, and carbonate analysis. Reporting limits were elevated accordingly.

A reduced aliquot was taken of the sample for the TDS analysis. Reporting limits were elevated accordingly.

11. Manual integrations are performed when needed to provide consistent and defensible data following the guidelines in the current revision of SOP 939. Whenever manual integrations are performed, before and after chromatograms of the peak that were manually integrated are included in the report along with the reason why the re-integration was necessary.



12. Total nitrate/nitrite as N is the sum of nitrate as N and nitrite as N. If a sample is analyzed at multiple dilutions, the total will be obtained by adding the results from nitrate as N and nitrite as N at the dilution that brought each analyte within the calibration range of the instrument. Therefore, a dilution factor for total nitrate/nitrite as N is not reported.

The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, ALS certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed.

Megan Johnstone  
Megan Johnstone  
Inorganics Primary Data Reviewer

2/4/14  
Date

Ross E Miller  
Inorganics Final Data Reviewer

02/04/14  
Date



### **Inorganic Data Reporting Qualifiers**

The following qualifiers are used by the laboratory when reporting results of inorganic analyses.

- Concentration qualifier -- If the analyte was analyzed for but not detected a "U" is entered.
- QC qualifier -- Specified entries and their meanings are as follows:
  - N - Spiked sample recovery not within control limits.
  - \* - Duplicate analysis (relative percent difference) not within control limits.
  - Z - Calibration spike recovery not within control limits.



## **Chain of Custody**

# ALS Environmental -- FC

## Sample Number(s) Cross-Reference Table

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**OrderNum:** 1311394

**Client Name:** Western Water and Land, Inc.

**Client Project Name:** SG 44-23 BWQ

**Client Project Number:**

**Client PO Number:**

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Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
Palmer-276-703	1311394-1		WATER	20-Nov-13	15:56



# ALS Laboratory Group

225 Commerce Drive, Fort Collins, Colorado 80524  
Tel: (970) 443-1511 PH: (970) 490-1511 FX: (970) 490-1522

## Chain-of-Custody

Form 20268

PROJECT NAME SG 44-23 BWC		SAMPLER NWS		DATE 11-20-13		WORKORDER # 1311344	
FACILITY NAME SG 44-23		PROJECT NO.		TURNAROUND		PAGE 1 of 1	
FACILITY ID (API)		EDD FORMAT		DISPOSAL		Return to Client	
PURCHASE ORDER		BILL TO COMPANY Western Water & Land		DIS. Gases MET			
SEND REPORT TO Bruce Smith		INVOICE ATTN TO Bardon Dufforth		DRO			
ADDRESS 743 Horizon Ct. Suite 330		ADDRESS 1058 CR 215		BART			
CITY / STATE / ZIP Grand Junction, CO 81506		CITY / STATE / ZIP Durango, CO 81301		BTEX			
PHONE 970-242-0170		PHONE 970-263-2792		GRO			
FAX		FAX		Lab Filter			
E-MAIL bsmith@westernwaterandland.com		E-MAIL		Dis. Metals			
Matrix		Sample Date		Sample Time			
Field ID		Matrix		# Bottles			
Pres. QC		QC					
Lab ID		W		15			
Palmer-276-703		11-20-13		1550			
Lantz-268-230		11-20-13		15			

\*Time Zone (Circle): EST CST MST PST Matrix: O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analytes below.

Comments: Dis. Metals Lab Filtered	QC PACKAGE (check below)		
	LEVEL II (Standard QC)		
	LEVEL III (Std QC + forms)		
	LEVEL IV (Std QC + forms + raw data)	X	
Preservative Key: 1-HCl 2-HNO3 3-H2SO4 4-NaOH 5-NaHSO4 7-Other 8-4 degrees C 9-5035			



ALS Environmental - Fort Collins  
CONDITION OF SAMPLE UPON RECEIPT FORM

Client: Western Water

Workorder No: 1311394

Project Manager: ARL

Initials: JLR

Date: 11/21/13

1. Does this project require any special handling in addition to standard ALS procedures?		YES	<input checked="" type="radio"/> NO
2. Are custody seals on shipping containers intact?	NONE	<input checked="" type="radio"/> YES	NO
3. Are Custody seals on sample containers intact?	NONE	YES	NO
4. Is there a COC (Chain-of-Custody) present or other representative documents?		<input checked="" type="radio"/> YES	NO
5. Are the COC and bottle labels complete and legible?		<input checked="" type="radio"/> YES	NO
6. Is the COC in agreement with samples received? (IDs, dates, times, no. of samples, no. of containers, matrix, requested analyses, etc.)		<input checked="" type="radio"/> YES	NO
7. Were airbills / shipping documents present and/or removable?	DROP OFF	<input checked="" type="radio"/> YES	NO
8. Are all aqueous samples requiring preservation preserved correctly? (excluding volatiles)	N/A	<input checked="" type="radio"/> YES	NO
9. Are all aqueous non-preserved samples pH 4-9?	N/A	<input checked="" type="radio"/> YES	NO
10. Is there sufficient sample for the requested analyses?		<input checked="" type="radio"/> YES	NO
11. Were all samples placed in the proper containers for the requested analyses?		<input checked="" type="radio"/> YES	NO
12. Are all samples within holding times for the requested analyses?		<input checked="" type="radio"/> YES	NO
13. Were all sample containers received intact? (not broken or leaking, etc.)		<input checked="" type="radio"/> YES	NO
14. Are all samples requiring no headspace (VOC, GRO, RSK/MEE, Rx CN/S, radon) headspace free? Size of bubble: ____ < green pea ____ > green pea	N/A	<input checked="" type="radio"/> YES	NO
15. Do any water samples contain sediment? Amount Amount of sediment: ____ dusting ____ moderate ____ heavy	N/A	YES	<input checked="" type="radio"/> NO
16. Were the samples shipped on ice?		<input checked="" type="radio"/> YES	NO
17. Were cooler temperatures measured at 0.1-6.0°C? IR gun used*: <input checked="" type="radio"/> #2 #4 RAD ONLY		<input checked="" type="radio"/> YES	NO
Cooler #: <u>1</u>			
Temperature (°C): <u>1°</u>			
No. of custody seals on cooler: <u>2</u>			
External µR/hr reading: <u>11</u>			
Background µR/hr reading: <u>10</u>			
Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? <input checked="" type="radio"/> YES / NO / NA (If no, see Form 008.)			

**Additional Information:** PROVIDE DETAILS BELOW FOR A NO RESPONSE TO ANY QUESTION ABOVE, EXCEPT #1 AND #16.

If applicable, was the client contacted? YES / NO / NA Contact: [Signature]

Date/Time: 11/21/13

Project Manager Signature / Date: [Signature]

\*IR Gun #2: Oakton, SN 29922500201-0066

\*IR Gun #4: Oakton, SN 2372220101-0002



1311394

FROM: (970) 242-0170  
WESTERN WATER & LAND INC  
743 HORIZON CT STE 330  
GRAND JUNCTION CO 81506  
US

SHIP DATE: 20NOV13  
ACTWGT: 54.0 LB  
CAD: 9622/OFFC1424  
DIMMED: 23 X 15 X 14 IN  
BILL 3rd PARTY

TO amy wolf  
ALS ENVIRONMENTAL  
225 COMMERCE DR

FORT COLLINS CO 80524

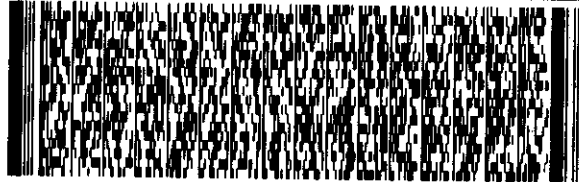
(US)

(999) 999-9999

REF:

INVT

DEPT:



FedEx  
Ground



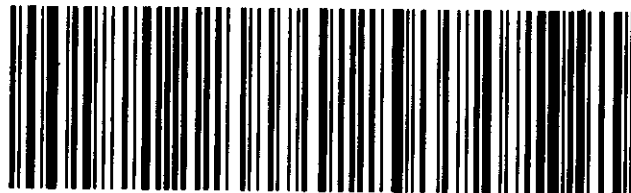
J13201306220126

TRK# 7972 1152 0560

11  
2

80524

9622 0417 3 (000 733 7852) 4 00 7972 1152 0560



Temp = 1°C



## Sample Results

# BICARBONATE AS CaCO<sub>3</sub>

Method SM2320B

## Sample Results

**Lab Name:** ALS Environmental -- FC  
**Client Name:** Western Water and Land, Inc.  
**Client Project ID:** SG 44-23 BWQ  
**Work Order Number:** 1311394  
**Reporting Basis:** As Received  
**Prep Method:** METHOD  
**Analyst:** Kerry M. Petrie  
**Final Volume:** 100 ml  
**Matrix:** WATER  
**Result Units:** MG/L

Client Sample ID	Lab ID	Date Collected	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	RptLimit/ LOQ	Flag	Sample Aliquot
Palmer-276-703	1311394-1	11/20/2013	11/25/2013	11/25/2013	N/A	1	510	20		25 ml

### Comments:

1. ND or U = Not Detected at or above the client requested detection limit.

**Data Package ID:** ak1311394-1

**Date Printed:** Tuesday, February 04, 2014

**ALS Environmental -- FC**

LIMS Version: 6.690

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# CARBONATE AS CaCO<sub>3</sub>

Method SM2320B

## Sample Results

**Lab Name:** ALS Environmental -- FC  
**Client Name:** Western Water and Land, Inc.  
**Client Project ID:** SG 44-23 BWQ  
**Work Order Number:** 1311394  
**Reporting Basis:** As Received  
**Prep Method:** METHOD  
**Analyst:** Kerry M. Petrie  
**Final Volume:** 100 ml  
**Matrix:** WATER  
**Result Units:** MG/L

Client Sample ID	Lab ID	Date Collected	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	RptLimit/ LOQ	Flag	Sample Aliquot
Palmer-276-703	1311394-1	11/20/2013	11/25/2013	11/25/2013	N/A	1	20	20	U	25 ml

### Comments:

1. ND or U = Not Detected at or above the client requested detection limit.

**Data Package ID:** ak1311394-1

# TOTAL ALKALINITY AS CaCO<sub>3</sub>

Method SM2320B

## Sample Results

**Lab Name:** ALS Environmental -- FC  
**Client Name:** Western Water and Land, Inc.  
**Client Project ID:** SG 44-23 BWQ  
**Work Order Number:** 1311394  
**Reporting Basis:** As Received  
**Prep Method:** METHOD  
**Analyst:** Kerry M. Petrie  
**Final Volume:** 100 ml  
**Matrix:** WATER  
**Result Units:** MG/L

Client Sample ID	Lab ID	Date Collected	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	RptLimit/ LOQ	Flag	Sample Aliquot
Palmer-276-703	1311394-1	11/20/2013	11/25/2013	11/25/2013	N/A	1	510	20		25 ml

### Comments:

1. ND or U = Not Detected at or above the client requested detection limit.

**Data Package ID:** ak1311394-1

**Date Printed:** Tuesday, February 04, 2014

**ALS Environmental -- FC**

LIMS Version: 6.690

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# pH

## Method SM4500-H

### Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1311394

Client Name: Western Water and Land, Inc.

ClientProject ID: SG 44-23 BWQ

Field ID:	Palmer-276-703	Sample Matrix:	WATER	Prep Batch:	pH131122-1	Analyst:	Kerry M. Petrie
Lab ID:	1311394-1	% Moisture:	N/A	QCBatchID:	pH131122-1-1	Sample Aliquot:	20 ML
		Date Collected:	20-Nov-13	Run ID:	pH131122-1A	Final Volume:	20 ML
		Date Extracted:	22-Nov-13	Cleanup:	NONE	Result Units:	pH
		Date Analyzed:	22-Nov-13	Basis:	As Received	Clean DF:	1
		Prep Method:	METHOD	File Name:			

CASNO	Target Analyte	Dilution Factor	Result	RptLimit/ LOQ	Result Qualifier	EPA Qualifier
10-29-7	PH AnalysisTime: 16:00	1	7.73	0.1		

Data Package ID: *ph1311394-1*

# Total Phosphorus as P

Method EPA365.2

## Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1311394

Client Name: Western Water and Land, Inc.

ClientProject ID: SG 44-23 BWQ

Field ID:	Palmer-276-703	Sample Matrix:	WATER	Prep Batch:	TP131124-1	Analyst:	Alex J. Devonald
Lab ID:	1311394-1	% Moisture:	N/A	QCBatchID:	TP131124-1-1	Sample Aliquot:	50 ML
		Date Collected:	20-Nov-13	Run ID:	TP131124-1A	Final Volume:	50 ML
		Date Extracted:	24-Nov-13	Cleanup:	NONE	Result Units:	MG/L
		Date Analyzed:	24-Nov-13	Basis:	As Received	Clean DF:	1
		Prep Method:	METHOD	File Name:	Manual Entry		

CASNO	Target Analyte	Dilution Factor	Result	RptLimit/ LOQ	Result Qualifier	EPA Qualifier
7723-14-0	TOTAL PHOSPHORUS	1	0.05	0.05	U	

Data Package ID: *po1311394-1*

# Total Dissolved Solids

Method SM2540C

## Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1311394

Client Name: Western Water and Land, Inc.

ClientProject ID: SG 44-23 BWQ

Field ID:	Palmer-276-703	Sample Matrix:	WATER	Prep Batch:	TD131122-1	Analyst:	Alex J. Devonald
Lab ID:	1311394-1	% Moisture:	N/A	QCBatchID:	TD131122-1-2	Sample Aliquot:	25 ML
		Date Collected:	20-Nov-13	Run ID:	TD131125-1A	Final Volume:	25 ML
		Date Extracted:	22-Nov-13	Cleanup:	NONE	Result Units:	MG/L
		Date Analyzed:	25-Nov-13	Basis:	As Received	Clean DF:	1
		Prep Method:	METHOD	File Name:	Manual Entry		

CASNO	Target Analyte	Dilution Factor	Result	RptLimit/ LOQ	Result Qualifier	EPA Qualifier
10-33-3	TOTAL DISSOLVED SOLIDS	1	3300	80		

Data Package ID: *td1311394-1*



# Specific Conductance in Water

Method SM2510B

## Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1311394

Client Name: Western Water and Land, Inc.

ClientProject ID: SG 44-23 BWQ

Field ID:	Palmer-276-703	Sample Matrix:	WATER	Prep Batch:	SC131122-1	Analyst:	Kerry M. Petrie
Lab ID:	1311394-1	% Moisture:	N/A	QCBatchID:	SC131122-1-1	Sample Aliquot:	45 ML
		Date Collected:	20-Nov-13	Run ID:	SC131122-1A	Final Volume:	45 ML
		Date Extracted:	22-Nov-13	Cleanup:	NONE	Result Units:	umhos/cm
		Date Analyzed:	22-Nov-13	Basis:	As Received	Clean DF:	1
		Prep Method:	METHOD	File Name:			

CASNO	Target Analyte	Dilution Factor	Result	RptLimit/ LOQ	Result Qualifier	EPA Qualifier
10-34-4	SPECIFIC CONDUCTIVITY AnalysisTime: 16:00	1	4290	1		

Data Package ID: sc1311394-1

# Ion Chromatography

Method EPA300.0 Revision 2.1

## Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1311394

Client Name: Western Water and Land, Inc.

ClientProject ID: SG 44-23 BWQ

Field ID:	Palmer-276-703	Sample Matrix:	WATER	Prep Batch:	IC131121-1	Analyst:	Alex J. Devonald
Lab ID:	1311394-1	% Moisture:	N/A	QCBatchID:	IC131121-1-2	Sample Aliquot:	1 ML
		Date Collected:	20-Nov-13	Run ID:	IC131121-1A1	Final Volume:	1 ML
		Date Extracted:	21-Nov-13	Cleanup:	NONE	Result Units:	MG/L
		Date Analyzed:	21-Nov-13	Basis:	As Received	Clean DF:	1
		Prep Method:	NONE	File Name:	31121_031.dxd		

CASNO	Target Analyte	Dilution Factor	Result	RptLimit/ LOQ	Result Qualifier	EPA Qualifier
1-005	NITRATE/NITRITE AS N AnalysisTime: 21:51	1	0.1	0.1	U	
16984-48-8	FLUORIDE AnalysisTime: 21:51	5	0.63	0.5		
16887-00-6	CHLORIDE AnalysisTime: 12:41	50	220	10		
14797-65-0	NITRITE AS N AnalysisTime: 21:51	5	0.5	0.5	U	
24959-67-9	BROMIDE AnalysisTime: 21:51	5	1	1	U	
14797-55-8	NITRATE AS N AnalysisTime: 21:51	5	1	1	U	
14808-79-8	SULFATE AnalysisTime: 12:41	50	1600	50		

Data Package ID: IC1311394-1



## **Summary Report Forms**

# BICARBONATE AS CaCO<sub>3</sub>

Method SM2320B

Method Blank

Lab Name: ALS Environmental -- FC

Work Order Number: 1311394

Client Name: Western Water and Land, Inc.

ClientProject ID: SG 44-23 BWQ

Lab ID: AK131125-2MB

Sample Matrix: WATER

% Moisture: N/A

Prep Batch: AK131125-2

QCBatchID: AK131125-2-1

Run ID: AK131125-1A

Cleanup: NONE

Basis: N/A

Sample Aliquot: 100 ml

Final Volume: 100 ml

Result Units: MG/L

Lab ID	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	RptLimit/ LOQ	Flag
AK131125-2MB	11/25/2013	11/25/2013	N/A	1	5	5	U

## Comments:

1. ND or U = Not Detected at or above the client requested detection limit.

Data Package ID: *ak1311394-1*

Date Printed: Tuesday, February 04, 2014

ALS Environmental -- FC

LIMS Version: 6.690

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# CARBONATE AS CaCO<sub>3</sub>

Method SM2320B

Method Blank

Lab Name: ALS Environmental -- FC

Work Order Number: 1311394

Client Name: Western Water and Land, Inc.

ClientProject ID: SG 44-23 BWQ

Lab ID: AK131125-2MB

Sample Matrix: WATER

% Moisture: N/A

Prep Batch: AK131125-2

QCBatchID: AK131125-2-1

Run ID: AK131125-1A

Cleanup: NONE

Basis: N/A

Sample Aliquot: 100 ml

Final Volume: 100 ml

Result Units: MG/L

Lab ID	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	RptLimit/ LOQ	Flag
AK131125-2MB	11/25/2013	11/25/2013	N/A	1	5	5	U

## Comments:

1. ND or U = Not Detected at or above the client requested detection limit.

Data Package ID: *ak1311394-1*

Date Printed: Tuesday, February 04, 2014

ALS Environmental -- FC

LIMS Version: 6.690

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# TOTAL ALKALINITY AS CaCO<sub>3</sub>

Method SM2320B

Method Blank

Lab Name: ALS Environmental -- FC

Work Order Number: 1311394

Client Name: Western Water and Land, Inc.

ClientProject ID: SG 44-23 BWQ

Lab ID: AK131125-2MB

Sample Matrix: WATER

% Moisture: N/A

Prep Batch: AK131125-2

QCBatchID: AK131125-2-1

Run ID: AK131125-1A

Cleanup: NONE

Basis: N/A

Sample Aliquot: 100 ml

Final Volume: 100 ml

Result Units: MG/L

Lab ID	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	RptLimit/ LOQ	Flag
AK131125-2MB	11/25/2013	11/25/2013	N/A	1	5	5	U

## Comments:

1. ND or U = Not Detected at or above the client requested detection limit.

Data Package ID: *ak1311394-1*

Date Printed: Tuesday, February 04, 2014

ALS Environmental -- FC

LIMS Version: 6.690

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# TOTAL ALKALINITY AS CaCO<sub>3</sub>

Method SM2320B

## Laboratory Control Sample

Lab Name: ALS Environmental -- FC

Work Order Number: 1311394

Client Name: Western Water and Land, Inc.

ClientProject ID: SG 44-23 BWQ

Lab ID: AK131125-2LCS

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 11/25/2013

Date Analyzed: 11/25/2013

Prep Batch: AK131125-2

QCBatchID: AK131125-2-1

Run ID: AK131125-1A

Cleanup: NONE

Basis: N/A

Sample Aliquot: 100 ml

Final Volume: 100 ml

Result Units: MG/L

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
	TOTAL ALKALINITY AS CaCO <sub>3</sub>	100	99.2	5		99	85 - 115

Data Package ID: ak1311394-1

Date Printed: Tuesday, February 04, 2014

ALS Environmental -- FC

LIMS Version: 6.690

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# Prep Batch ID: AK131125-2

Start Date: 11/25/13

End Date: 11/25/13

Concentration Method: NONE

Batch Created By: kmp

Start Time: 9:00

End Time: 13:45

Extract Method: METHOD

Date Created: 11/25/13

Prep Analyst: Kerry M. Petrie

Initial Volume Units: ml

Time Created: 8:47

Final Volume Units: ml

Validated By: mmj

Date Validated: 11/25/13

Time Validated: 15:43

Comments:

QC Batch ID: AK131125-2-1

Lab ID	QC Type	Field ID	Matrix	Date Collected	Initial Wt/Vol	Final Wt/Vol	Cleanup Method	Cleanup DF	Order Number
AK131125-2	MB	XXXXXX	WATER	XXXXXX	100	100	NONE	1	1311386
AK131125-2	LCS	XXXXXX	WATER	XXXXXX	100	100	NONE	1	1311386
1311287-10	DUP	XXXXXX	WATER	XXXXXX	25	100	NONE	1	1311287
1311386-1	DUP	XXXXXX	WATER	XXXXXX	25	100	NONE	1	1311386
1311287-10	SMP	XXXXXX	WATER	XXXXXX	25	100	NONE	1	1311287
1311376-1	SMP	XXXXXX	WATER	XXXXXX	25	100	NONE	1	1311376
1311378-1	SMP	XXXXXX	WATER	XXXXXX	25	100	NONE	1	1311378
1311386-1	SMP	XXXXXX	WATER	XXXXXX	25	100	NONE	1	1311386
1311386-2	SMP	XXXXXX	WATER	XXXXXX	25	100	NONE	1	1311386
1311386-3	SMP	XXXXXX	WATER	XXXXXX	25	100	NONE	1	1311386
1311386-4	SMP	XXXXXX	WATER	XXXXXX	25	100	NONE	1	1311386
1311386-5	SMP	XXXXXX	WATER	XXXXXX	25	100	NONE	1	1311386
1311394-1	SMP	Palmer-276-703	WATER	11/20/2013	25	100	NONE	1	1311394
1311399-1	SMP	XXXXXX	WATER	XXXXXX	25	100	NONE	1	1311399
1311401-1	SMP	XXXXXX	WATER	XXXXXX	25	100	NONE	1	1311401
1311448-1	SMP	XXXXXX	WATER	XXXXXX	25	100	NONE	1	1311448
1311449-10	SMP	XXXXXX	WATER	XXXXXX	25	100	NONE	1	1311449
1311449-11	SMP	XXXXXX	WATER	XXXXXX	25	100	NONE	1	1311449
1311449-6	SMP	XXXXXX	WATER	XXXXXX	25	100	NONE	1	1311449
1311449-7	SMP	XXXXXX	WATER	XXXXXX	25	100	NONE	1	1311449
1311449-8	SMP	XXXXXX	WATER	XXXXXX	25	100	NONE	1	1311449
1311449-9	SMP	XXXXXX	WATER	XXXXXX	25	100	NONE	1	1311449



## Prep Batch ID: pH131122-1

Start Date: 11/22/13

End Date: 11/22/13

Concentration Method: NONE

Batch Created By: kmp

Start Time: 11:00

End Time: 16:00

Extract Method: METHOD

Date Created: 11/22/13

Prep Analyst: Kerry M. Petrie

Initial Volume Units: ml

Time Created: 12:18

Final Volume Units: ml

Validated By: kmp

Date Validated: 11/22/13

Time Validated: 16:07

Comments:

QC Batch ID: pH131122-1-1

Lab ID	QC Type	Field ID	Matrix	Date Collected	Initial Wt/Vol	Final Wt/Vol	Cleanup Method	Cleanup DF	Order Number
1311399-1	DUP	XXXXXX	WATER	XXXXXX	20	20	NONE	1	1311399
1311394-1	SMP	Palmer-276-703	WATER	11/20/2013	20	20	NONE	1	1311394
1311399-1	SMP	XXXXXX	WATER	XXXXXX	20	20	NONE	1	1311399
1311401-1	SMP	XXXXXX	WATER	XXXXXX	20	20	NONE	1	1311401

QC Types

CAR	Carrier reference sample	DUP	Laboratory Duplicate
LCS	Laboratory Control Sample	LCSD	Laboratory Control Sample Duplicate
MB	Method Blank	MS	Laboratory Matrix Spike
MSD	Laboratory Matrix Spike Duplicate	REP	Sample replicate
RVS	Reporting Level Verification Standard	SMP	Field Sample
SYS	Sample Yield Spike		

**PH**  
**Method SM4500-H**  
**Calibration Verifications**

**Lab Name:** ALS Environmental -- FC

**Work Order Number:** 1311394

**Client Name:** Western Water and Land, Inc.

**ClientProject ID:** SG 44-23 BWQ

---

**Run ID:** pH131122-1A

**Result Units:** pH

---

Lab ID	Verification Type	Date Analyzed	Time Analyzed	Spike Added	Result	Reporting Limit	Result Qualifier	% Rec.	Control Limits
ICV	Initial Calibration	11/22/2013		7	7.00	0.1	N/A		6.95 - 7.05
CCV1	Continuing Calibration	11/22/2013		7	7.02	0.1	N/A		6.9 - 7.1

**Data Package ID:** *ph1311394-1*

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**Date Printed:** Tuesday, February 04, 2014

**ALS Environmental -- FC**

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# Prep Batch ID: SC131122-1

Start Date: 11/22/13

End Date: 11/22/13

Concentration Method: NONE

Batch Created By: kmp

Start Time: 11:00

End Time: 16:00

Extract Method: METHOD

Date Created: 11/22/13

Prep Analyst: Kerry M. Petrie

Initial Volume Units: ml

Time Created: 15:08

Final Volume Units: ml

Validated By: kmp

Date Validated: 11/22/13

Time Validated: 16:09

Comments:

QC Batch ID: SC131122-1-1

Lab ID	QC Type	Field ID	Matrix	Date Collected	Initial Wt/Vol	Final Wt/Vol	Cleanup Method	Cleanup DF	Order Number
1311399-1	DUP	XXXXXX	WATER	XXXXXX	45	45	NONE	1	1311399
1311394-1	SMP	Palmer-276-703	WATER	11/20/2013	45	45	NONE	1	1311394
1311399-1	SMP	XXXXXX	WATER	XXXXXX	45	45	NONE	1	1311399
1311401-1	SMP	XXXXXX	WATER	XXXXXX	45	45	NONE	1	1311401

QC Types

CAR	Carrier reference sample	DUP	Laboratory Duplicate
LCS	Laboratory Control Sample	LCSD	Laboratory Control Sample Duplicate
MB	Method Blank	MS	Laboratory Matrix Spike
MSD	Laboratory Matrix Spike Duplicate	REP	Sample replicate
RVS	Reporting Level Verification Standard	SMP	Field Sample
SYS	Sample Yield Spike		

# SPECIFIC CONDUCTIVITY

Method SM2510B

## Calibration Verifications

Lab Name: ALS Environmental -- FC

Work Order Number: 1311394

Client Name: Western Water and Land, Inc.

ClientProject ID: SG 44-23 BWQ

Run ID: SC131122-1A

Result Units: umhos/c

Lab ID	Verification Type	Date Analyzed	Time Analyzed	Spike Added	Result	Reporting Limit	Result Qualifier	% Rec.	Control Limits
ICV	Initial Calibration	11/22/2013		718	721	1	N/A	100	646.2 - 789.7
CCV1	Continuing Calibration	11/22/2013		1410	1410	1	N/A	100	1271.7 - 1554.3

Data Package ID: *sc1311394-1*

Date Printed: Tuesday, February 04, 2014

ALS Environmental -- FC

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# Total Phosphorus as P

Method EPA365.2

Method Blank

Lab Name: ALS Environmental -- FC

Work Order Number: 1311394

Client Name: Western Water and Land, Inc.

ClientProject ID: SG 44-23 BWQ

Lab ID: TP131124-1MB

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 24-Nov-13

Date Analyzed: 24-Nov-13

Prep Method: METHOD

Prep Batch: TP131124-1

QCBatchID: TP131124-1-1

Run ID: TP131124-1A

Cleanup: NONE

Basis: N/A

File Name: Manual Entry

Sample Aliquot: 50 ml

Final Volume: 50 ml

Result Units: MG/L

Clean DF: 1

CASNO	Target Analyte	DF	Result	RptLimit/ LOQ	Result Qualifier	EPA Qualifier
7723-14-0	TOTAL PHOSPHORUS	1	0.05	0.05	U	

Data Package ID: po1311394-1

Date Printed: Tuesday, February 04, 2014

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LIMS Version: 6.690

# Total Phosphorus as P

Method EPA365.2

## Laboratory Control Sample

Lab Name: ALS Environmental -- FC

Work Order Number: 1311394

Client Name: Western Water and Land, Inc.

ClientProject ID: SG 44-23 BWQ

Lab ID: TP131124-1LCS

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 11/24/2013

Date Analyzed: 11/24/2013

Prep Method: METHOD

Prep Batch: TP131124-1

QCBatchID: TP131124-1-1

Run ID: TP131124-1A

Cleanup: NONE

Basis: N/A

File Name: Manual Entry

Sample Aliquot: 50 ml

Final Volume: 50 ml

Result Units: MG/L

Clean DF: 1

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
7723-14-0	TOTAL PHOSPHORUS	0.5	0.478	0.05		96	80 - 120%

Data Package ID: *po1311394-1*

Date Printed: Tuesday, February 04, 2014

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# Prep Batch ID: TP131124-1

Start Date: 11/24/13

End Date: 11/24/13

Concentration Method: NONE

Batch Created By: AJD

Start Time: 8:15

End Time: 9:45

Extract Method: METHOD

Date Created: 11/24/13

Prep Analyst: Alex J. Devonald

Initial Volume Units: ml

Time Created: 8:12

Comments:

Final Volume Units: ml

Validated By: AJD

Date Validated: 11/24/13

Time Validated: 10:32

QC Batch ID: TP131124-1-1

Lab ID	QC Type	Field ID	Matrix	Date Collected	Initial Wt/Vol	Final Wt/Vol	Cleanup Method	Cleanup DF	Order Number
TP131124-1	RVS	XXXXXX	WATER	XXXXXX	50	50	NONE	1	1311376
TP131124-1	MB	XXXXXX	WATER	XXXXXX	50	50	NONE	1	1311376
TP131124-1	LCS	XXXXXX	WATER	XXXXXX	50	50	NONE	1	1311376
1311376-1	MS	XXXXXX	WATER	XXXXXX	50	50	NONE	1	1311376
1311376-1	MSD	XXXXXX	WATER	XXXXXX	50	50	NONE	1	1311376
1311376-1	SMP	XXXXXX	WATER	XXXXXX	50	50	NONE	1	1311376
1311378-1	SMP	XXXXXX	WATER	XXXXXX	50	50	NONE	1	1311378
1311394-1	SMP	Palmer-276-703	WATER	11/20/2013	50	50	NONE	1	1311394
1311399-1	SMP	XXXXXX	WATER	XXXXXX	50	50	NONE	1	1311399
1311401-1	SMP	XXXXXX	WATER	XXXXXX	50	50	NONE	1	1311401
1311448-1	SMP	XXXXXX	WATER	XXXXXX	50	50	NONE	1	1311448

QC Types

CAR	Carrier reference sample	DUP	Laboratory Duplicate
LCS	Laboratory Control Sample	LCSD	Laboratory Control Sample Duplicate
MB	Method Blank	MS	Laboratory Matrix Spike
MSD	Laboratory Matrix Spike Duplicate	REP	Sample replicate
RVS	Reporting Level Verification Standard	SMP	Field Sample
SYS	Sample Yield Spike		

# TOTAL PHOSPHORUS

Method EPA365.2

## Calibration Verifications

Lab Name: ALS Environmental -- FC

Work Order Number: 1311394

Client Name: Western Water and Land, Inc.

ClientProject ID: SG 44-23 BWQ

Run ID: TP131124-1A

Result Units: MG/L

Lab ID	Verification Type	Date Analyzed	Time Analyzed	Spike Added	Result	Reporting Limit	Result Qualifier	% Rec.	Control Limits
ICV	Initial Calibration	11/24/2013		0.5	0.517	0.05	N/A	103	90 - 110
CCV1	Continuing Calibration	11/24/2013		0.5	0.500	0.05	N/A	100	90 - 110

Data Package ID: *po1311394-1*

Date Printed: Tuesday, February 04, 2014

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# TOTAL PHOSPHORUS

Method EPA365.2

## Calibration Blanks

Lab Name: ALS Environmental -- FC

Work Order Number: 1311394

Client Name: Western Water and Land, Inc.

ClientProject ID: SG 44-23 BWQ

Run ID: TP131124-1A

Result Units: MG/L

Lab ID	Verification Type	Date Analyzed	Time Analyzed	Result	Reporting Limit	Flag
ICB	Initial Calibration	11/24/2013		0.05	0.05	U
CCB1	Continuing Calibration	11/24/2013		0.05	0.05	U

Data Package ID: *po1311394-1*

Date Printed: Tuesday, February 04, 2014

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# Total Dissolved Solids

Method SM2540C

Method Blank

Lab Name: ALS Environmental -- FC

Work Order Number: 1311394

Client Name: Western Water and Land, Inc.

ClientProject ID: SG 44-23 BWQ

Lab ID: TD131122-1MB

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 22-Nov-13

Date Analyzed: 25-Nov-13

Prep Method: METHOD

Prep Batch: TD131122-1

QCBatchID: TD131122-1-2

Run ID: TD131125-1A

Cleanup: NONE

Basis: N/A

File Name: Manual Entry

Sample Aliquot: 100 ml

Final Volume: 100 ml

Result Units: MG/L

Clean DF: 1

CASNO	Target Analyte	DF	Result	RptLimit/ LOQ	Result Qualifier	EPA Qualifier
10-33-3	TOTAL DISSOLVED SOLIDS	1	20	20	U	

Data Package ID: *td1311394-1*

Date Printed: Tuesday, February 04, 2014

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# Total Dissolved Solids

Method SM2540C

## Laboratory Control Sample

Lab Name: ALS Environmental -- FC

Work Order Number: 1311394

Client Name: Western Water and Land, Inc.

ClientProject ID: SG 44-23 BWQ

Lab ID: TD131122-1LCS

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 11/22/2013

Date Analyzed: 11/25/2013

Prep Method: METHOD

Prep Batch: TD131122-1

QCBatchID: TD131122-1-2

Run ID: TD131125-1A

Cleanup: NONE

Basis: N/A

File Name: Manual Entry

Sample Aliquot: 100 ml

Final Volume: 100 ml

Result Units: MG/L

Clean DF: 1

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
10-33-3	TOTAL DISSOLVED SOLIDS	400	429	20		107	85 - 115%

Data Package ID: *td1311394-1*

Date Printed: Tuesday, February 04, 2014

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# Prep Batch ID: TD131122-1

Start Date: 11/22/13

End Date: 11/22/13

Concentration Method: NONE

Batch Created By: ajd

Start Time: 10:30

End Time: 12:30

Extract Method: METHOD

Date Created: 11/22/13

Prep Analyst: Alex J. Devonald

Initial Volume Units: ml

Time Created: 9:44

Final Volume Units: ml

Validated By: ajd

Date Validated: 11/22/13

Time Validated: 12:38

## Comments:

QC Batch ID: TD131122-1-2

Lab ID	QC Type	Field ID	Matrix	Date Collected	Initial Wt/Vol	Final Wt/Vol	Cleanup Method	Cleanup DF	Order Number
TD131122-1	MB	XXXXXX	WATER	XXXXXX	100	100	NONE	1	1311401
TD131122-1	LCS	XXXXXX	WATER	XXXXXX	100	100	NONE	1	1311401
1311401-1	DUP	XXXXXX	WATER	XXXXXX	100	100	NONE	1	1311401
1311376-1	SMP	XXXXXX	WATER	XXXXXX	10	10	NONE	1	1311376
1311378-1	SMP	XXXXXX	WATER	XXXXXX	100	100	NONE	1	1311378
1311394-1	SMP	Palmer-276-703	WATER	11/20/2013	25	25	NONE	1	1311394
1311399-1	SMP	XXXXXX	WATER	XXXXXX	100	100	NONE	1	1311399
1311401-1	SMP	XXXXXX	WATER	XXXXXX	100	100	NONE	1	1311401

## QC Types

CAR	Carrier reference sample	DUP	Laboratory Duplicate
LCS	Laboratory Control Sample	LCSD	Laboratory Control Sample Duplicate
MB	Method Blank	MS	Laboratory Matrix Spike
MSD	Laboratory Matrix Spike Duplicate	REP	Sample replicate
RVS	Reporting Level Verification Standard	SMP	Field Sample
SYS	Sample Yield Spike		

# Ion Chromatography

Method EPA300.0 Revision 2.1

## Method Blank

Lab Name: ALS Environmental -- FC

Work Order Number: 1311394

Client Name: Western Water and Land, Inc.

ClientProject ID: SG 44-23 BWQ

Lab ID: IC131121-1MB

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 21-Nov-13

Date Analyzed: 21-Nov-13

Prep Method: NONE

Prep Batch: IC131121-1

QCBatchID: IC131121-1-2

Run ID: IC131121-1A1

Cleanup: NONE

Basis: N/A

File Name: 31121\_014.dxd

Sample Aliquot: 5 ml

Final Volume: 5 ml

Result Units: MG/L

Clean DF: 1

CASNO	Target Analyte	DF	Result	RptLimit/ LOQ	Result Qualifier	EPA Qualifier
16984-48-8	FLUORIDE	1	0.1	0.1	U	
16887-00-6	CHLORIDE	1	0.2	0.2	U	
14797-65-0	NITRITE AS N	1	0.1	0.1	U	
24959-67-9	BROMIDE	1	0.2	0.2	U	
14797-55-8	NITRATE AS N	1	0.2	0.2	U	
14808-79-8	SULFATE	1	1	1	U	

Data Package ID: IC1311394-1

Date Printed: Tuesday, February 04, 2014

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LIMS Version: 6.690

# Ion Chromatography

Method EPA300.0 Revision 2.1

## Laboratory Control Sample

Lab Name: ALS Environmental -- FC

Work Order Number: 1311394

Client Name: Western Water and Land, Inc.

ClientProject ID: SG 44-23 BWQ

Lab ID: IC131121-1LCS

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 11/21/2013

Date Analyzed: 11/21/2013

Prep Method: NONE

Prep Batch: IC131121-1

QCBatchID: IC131121-1-2

Run ID: IC131121-1A1

Cleanup: NONE

Basis: N/A

File Name: 31121\_013.dxd

Sample Aliquot: 5 ml

Final Volume: 5 ml

Result Units: MG/L

Clean DF: 1

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
16984-48-8	FLUORIDE	2	2	0.1		100	90 - 110%
16887-00-6	CHLORIDE	5	5.16	0.2		103	90 - 110%
14797-65-0	NITRITE AS N	2	1.99	0.1		100	90 - 110%
24959-67-9	BROMIDE	5	5.4	0.2		108	90 - 110%
14797-55-8	NITRATE AS N	5	5.2	0.2		104	90 - 110%
14808-79-8	SULFATE	20	20.3	1		102	90 - 110%

Data Package ID: IC1311394-1

Date Printed: Tuesday, February 04, 2014

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# Prep Batch ID: IC131121-1

Start Date: 11/21/13

End Date: 11/21/13

Concentration Method: NONE

Batch Created By: AJD

Start Time: 16:15

End Time: 17:00

Extract Method: NONE

Date Created: 11/21/13

Prep Analyst: Alex J. Devonald

Initial Volume Units: ml

Time Created: 16:15

Comments:

Final Volume Units: ml

Validated By: AJD

Date Validated: 11/21/13

Time Validated: 17:35

QC Batch ID: IC131121-1-2

Lab ID	QC Type	Field ID	Matrix	Date Collected	Initial Wt/Vol	Final Wt/Vol	Cleanup Method	Cleanup DF	Order Number
IC131121-1	RVS	XXXXXX	WATER	XXXXXX	5	5	NONE	1	1311386
IC131121-1	MB	XXXXXX	WATER	XXXXXX	5	5	NONE	1	1311386
IC131121-1	LCS	XXXXXX	WATER	XXXXXX	5	5	NONE	1	1311386
1311386-1	MS	XXXXXX	WATER	XXXXXX	5	5	NONE	1	1311386
1311386-1	MSD	XXXXXX	WATER	XXXXXX	5	5	NONE	1	1311386
1311386-1	SMP	XXXXXX	WATER	XXXXXX	5	5	NONE	1	1311386
1311394-1	SMP	Palmer-276-703	WATER	11/20/2013	5	5	NONE	1	1311394
1311399-1	SMP	XXXXXX	WATER	XXXXXX	5	5	NONE	1	1311399
1311401-1	SMP	XXXXXX	WATER	XXXXXX	5	5	NONE	1	1311401

QC Types

CAR	Carrier reference sample	DUP	Laboratory Duplicate
LCS	Laboratory Control Sample	LCSD	Laboratory Control Sample Duplicate
MB	Method Blank	MS	Laboratory Matrix Spike
MSD	Laboratory Matrix Spike Duplicate	REP	Sample replicate
RVS	Reporting Level Verification Standard	SMP	Field Sample
SYS	Sample Yield Spike		

# Ion Chromatography

## Method EPA300.0 Calibration Verifications

Lab Name: ALS Environmental -- FC

Work Order Number: 1311394

Client Name: Western Water and Land, Inc.

ClientProject ID: SG 44-23 BWQ

Lab ID: ICV

QC Type: Initial Calibration

File Name: 31111\_009.dxd

Run ID: IC131121-1A1

Date Analyzed: 11/11/2013

Time Analyzed: 15:51

Result Units: MG/L

CASNO	Target Analyte	Spike Added	Result	Reporting Limit	Result Qualifier	% Rec.	Control Limits
16984-48-8	FLUORIDE	2.5	2.46	0.1		99	90 - 110%
16887-00-6	CHLORIDE	5	4.81	0.2		96	90 - 110%
14797-65-0	NITRITE AS N	0.8	0.787	0.1		98	90 - 110%
24959-67-9	BROMIDE	5	4.83	0.2		97	90 - 110%
14797-55-8	NITRATE AS N	5	4.65	0.2		93	90 - 110%
14808-79-8	SULFATE	25	24.3	1		97	90 - 110%

Data Package ID: IC1311394-1

Date Printed: Tuesday, February 04, 2014

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# Ion Chromatography

## Method EPA300.0 Calibration Verifications

Lab Name: ALS Environmental -- FC

Work Order Number: 1311394

Client Name: Western Water and Land, Inc.

ClientProject ID: SG 44-23 BWQ

Lab ID: CCV1

QC Type: Continuing Calibration

File Name: 31121\_011.dxd

Run ID: IC131121-1A1

Date Analyzed: 11/21/2013

Time Analyzed: 17:09

Result Units: MG/L

CASNO	Target Analyte	Spike Added	Result	Reporting Limit	Result Qualifier	% Rec.	Control Limits
16984-48-8	FLUORIDE	5	5.08	0.1		102	90 - 110%
16887-00-6	CHLORIDE	10	10.2	0.2		102	90 - 110%
14797-65-0	NITRITE AS N	5	5.19	0.1		104	90 - 110%
24959-67-9	BROMIDE	10	10.2	0.2		102	90 - 110%
14797-55-8	NITRATE AS N	10	10.2	0.2		102	90 - 110%
14808-79-8	SULFATE	50	51.5	1		103	90 - 110%

Data Package ID: IC1311394-1

Date Printed: Tuesday, February 04, 2014

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# Ion Chromatography

Method EPA300.0

## Calibration Verifications

Lab Name: ALS Environmental -- FC

Work Order Number: 1311394

Client Name: Western Water and Land, Inc.

ClientProject ID: SG 44-23 BWQ

Lab ID: CCV2

QC Type: Continuing Calibration

File Name: 31121\_023.dxd

Run ID: IC131121-1A1

Date Analyzed: 11/21/2013

Time Analyzed: 19:58

Result Units: MG/L

CASNO	Target Analyte	Spike Added	Result	Reporting Limit	Result Qualifier	% Rec.	Control Limits
16984-48-8	FLUORIDE	5	5.31	0.1		106	90 - 110%
16887-00-6	CHLORIDE	10	10.2	0.2		102	90 - 110%
14797-65-0	NITRITE AS N	5	5.17	0.1		103	90 - 110%
24959-67-9	BROMIDE	10	10.2	0.2		102	90 - 110%
14797-55-8	NITRATE AS N	10	10.2	0.2		102	90 - 110%
14808-79-8	SULFATE	50	51.5	1		103	90 - 110%

Data Package ID: IC1311394-1

Date Printed: Tuesday, February 04, 2014

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# Ion Chromatography

Method EPA300.0

## Calibration Verifications

Lab Name: ALS Environmental -- FC

Work Order Number: 1311394

Client Name: Western Water and Land, Inc.

ClientProject ID: SG 44-23 BWQ

Lab ID: CCV3

QC Type: Continuing Calibration

File Name: 31121\_035.dxd

Run ID: IC131121-1A1

Date Analyzed: 11/21/2013

Time Analyzed: 22:47

Result Units: MG/L

CASNO	Target Analyte	Spike Added	Result	Reporting Limit	Result Qualifier	% Rec.	Control Limits
16984-48-8	FLUORIDE	5	5.38	0.1		108	90 - 110%
16887-00-6	CHLORIDE	10	10.2	0.2		102	90 - 110%
14797-65-0	NITRITE AS N	5	5.16	0.1		103	90 - 110%
24959-67-9	BROMIDE	10	10.2	0.2		102	90 - 110%
14797-55-8	NITRATE AS N	10	10.2	0.2		102	90 - 110%
14808-79-8	SULFATE	50	51.4	1		103	90 - 110%

Data Package ID: IC1311394-1

Date Printed: Tuesday, February 04, 2014

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# Ion Chromatography

Method EPA300.0

## Calibration Verifications

Lab Name: ALS Environmental -- FC

Work Order Number: 1311394

Client Name: Western Water and Land, Inc.

ClientProject ID: SG 44-23 BWQ

Lab ID: ICV

QC Type: Initial Calibration

File Name: 31216\_009.dxd

Run ID: IC140116-1A1

Date Analyzed: 12/16/2013

Time Analyzed: 17:50

Result Units: MG/L

CASNO	Target Analyte	Spike Added	Result	Reporting Limit	Result Qualifier	% Rec.	Control Limits
16887-00-6	CHLORIDE	5	4.78	0.2		96	90 - 110%
14808-79-8	SULFATE	25	24.1	1		97	90 - 110%

Data Package ID: IC1311394-1

Date Printed: Tuesday, February 04, 2014

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# Ion Chromatography

## Method EPA300.0 Calibration Verifications

Lab Name: ALS Environmental -- FC

Work Order Number: 1311394

Client Name: Western Water and Land, Inc.

ClientProject ID: SG 44-23 BWQ

Lab ID: CCV1

QC Type: Continuing Calibration

File Name: 40116\_011.dxd

Run ID: IC140116-1A1

Date Analyzed: 01/16/2014

Time Analyzed: 10:06

Result Units: MG/L

CASNO	Target Analyte	Spike Added	Result	Reporting Limit	Result Qualifier	% Rec.	Control Limits
16887-00-6	CHLORIDE	10	10.1	0.2		101	90 - 110%
14808-79-8	SULFATE	50	50.3	1		101	90 - 110%

Data Package ID: IC1311394-1

Date Printed: Tuesday, February 04, 2014

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# Ion Chromatography

Method EPA300.0

## Calibration Verifications

Lab Name: ALS Environmental -- FC

Work Order Number: 1311394

Client Name: Western Water and Land, Inc.

ClientProject ID: SG 44-23 BWQ

Lab ID: CCV2

QC Type: Continuing Calibration

File Name: 40116\_023.dxd

Run ID: IC140116-1A1

Date Analyzed: 01/16/2014

Time Analyzed: 12:55

Result Units: MG/L

CASNO	Target Analyte	Spike Added	Result	Reporting Limit	Result Qualifier	% Rec.	Control Limits
16887-00-6	CHLORIDE	10	9.99	0.2		100	90 - 110%
14808-79-8	SULFATE	50	50.1	1		100	90 - 110%

Data Package ID: IC1311394-1

Date Printed: Tuesday, February 04, 2014

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# Ion Chromatography

Method EPA300.0

Calibration Blanks

Lab Name: ALS Environmental -- FC

Work Order Number: 1311394

Client Name: Western Water and Land, Inc.

ClientProject ID: SG 44-23 BWQ

Lab ID: ICB

QC Type: Initial Calibration

Run ID: IC131121-1A1

Date Analyzed: 11/11/2013

Time Analyzed: 4:05:45 PM

Result Units: MG/L

CASNO	Target Analyte	Result	Reporting Limit	Result Qualifier
16984-48-8	FLUORIDE	0.1	0.1	U
16887-00-6	CHLORIDE	0.2	0.2	U
14797-65-0	NITRITE AS N	0.1	0.1	U
24959-67-9	BROMIDE	0.2	0.2	U
14797-55-8	NITRATE AS N	0.2	0.2	U
14808-79-8	SULFATE	1	1	U

Data Package ID: IC1311394-1

Date Printed: Tuesday, February 04, 2014

ALS Environmental -- FC

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LIMS Version: 6.690

# Ion Chromatography

Method EPA300.0

Calibration Blanks

Lab Name: ALS Environmental -- FC

Work Order Number: 1311394

Client Name: Western Water and Land, Inc.

ClientProject ID: SG 44-23 BWQ

Lab ID: CCB1

QC Type: Continuing Calibration

Run ID: IC131121-1A1

Date Analyzed: 11/21/2013

Time Analyzed: 5:23:47 PM

Result Units: MG/L

CASNO	Target Analyte	Result	Reporting Limit	Result Qualifier
16984-48-8	FLUORIDE	0.1	0.1	U
16887-00-6	CHLORIDE	0.2	0.2	U
14797-65-0	NITRITE AS N	0.1	0.1	U
24959-67-9	BROMIDE	0.2	0.2	U
14797-55-8	NITRATE AS N	0.2	0.2	U
14808-79-8	SULFATE	1	1	U

Data Package ID: IC1311394-1

Date Printed: Tuesday, February 04, 2014

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# Ion Chromatography

Method EPA300.0

Calibration Blanks

Lab Name: ALS Environmental -- FC

Work Order Number: 1311394

Client Name: Western Water and Land, Inc.

ClientProject ID: SG 44-23 BWQ

Lab ID: CCB2

QC Type: Continuing Calibration

Run ID: IC131121-1A1

Date Analyzed: 11/21/2013

Time Analyzed: 8:12:43 PM

Result Units: MG/L

CASNO	Target Analyte	Result	Reporting Limit	Result Qualifier
16984-48-8	FLUORIDE	0.1	0.1	U
16887-00-6	CHLORIDE	0.2	0.2	U
14797-65-0	NITRITE AS N	0.1	0.1	U
24959-67-9	BROMIDE	0.2	0.2	U
14797-55-8	NITRATE AS N	0.2	0.2	U
14808-79-8	SULFATE	1	1	U

Data Package ID: IC1311394-1

Date Printed: Tuesday, February 04, 2014

ALS Environmental -- FC

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LIMS Version: 6.690

# Ion Chromatography

Method EPA300.0

Calibration Blanks

Lab Name: ALS Environmental -- FC

Work Order Number: 1311394

Client Name: Western Water and Land, Inc.

ClientProject ID: SG 44-23 BWQ

Lab ID: CCB3

QC Type: Continuing Calibration

Run ID: IC131121-1A1

Date Analyzed: 11/21/2013

Time Analyzed: 11:01:37 PM

Result Units: MG/L

CASNO	Target Analyte	Result	Reporting Limit	Result Qualifier
16984-48-8	FLUORIDE	0.1	0.1	U
16887-00-6	CHLORIDE	0.2	0.2	U
14797-65-0	NITRITE AS N	0.1	0.1	U
24959-67-9	BROMIDE	0.2	0.2	U
14797-55-8	NITRATE AS N	0.2	0.2	U
14808-79-8	SULFATE	1	1	U

Data Package ID: IC1311394-1

Date Printed: Tuesday, February 04, 2014

ALS Environmental -- FC

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LIMS Version: 6.690

# Ion Chromatography

Method EPA300.0

Calibration Blanks

Lab Name: ALS Environmental -- FC

Work Order Number: 1311394

Client Name: Western Water and Land, Inc.

ClientProject ID: SG 44-23 BWQ

Lab ID: ICB

QC Type: Initial Calibration

Run ID: IC140116-1A1

Date Analyzed: 12/16/2013

Time Analyzed: 6:04:53 PM

Result Units: MG/L

CASNO	Target Analyte	Result	Reporting Limit	Result Qualifier
16887-00-6	CHLORIDE	0.2	0.2	U
14808-79-8	SULFATE	1	1	U

Data Package ID: IC1311394-1

Date Printed: Tuesday, February 04, 2014

ALS Environmental -- FC

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# Ion Chromatography

Method EPA300.0

Calibration Blanks

Lab Name: ALS Environmental -- FC

Work Order Number: 1311394

Client Name: Western Water and Land, Inc.

ClientProject ID: SG 44-23 BWQ

Lab ID: CCB1

QC Type: Continuing Calibration

Run ID: IC140116-1A1

Date Analyzed: 01/16/2014

Time Analyzed: 10:20:23 AM

Result Units: MG/L

CASNO	Target Analyte	Result	Reporting Limit	Result Qualifier
16887-00-6	CHLORIDE	0.2	0.2	U
14808-79-8	SULFATE	1	1	U

Data Package ID: IC1311394-1

Date Printed: Tuesday, February 04, 2014

ALS Environmental -- FC

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LIMS Version: 6.690

# Ion Chromatography

Method EPA300.0

Calibration Blanks

Lab Name: ALS Environmental -- FC

Work Order Number: 1311394

Client Name: Western Water and Land, Inc.

ClientProject ID: SG 44-23 BWQ

Lab ID: CCB2

QC Type: Continuing Calibration

Run ID: IC140116-1A1

Date Analyzed: 01/16/2014

Time Analyzed: 1:09:22 PM

Result Units: MG/L

CASNO	Target Analyte	Result	Reporting Limit	Result Qualifier
16887-00-6	CHLORIDE	0.2	0.2	U
14808-79-8	SULFATE	1	1	U

Data Package ID: IC1311394-1

Date Printed: Tuesday, February 04, 2014

ALS Environmental -- FC

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## Raw Data

# Alkalinity Raw Data Worksheet

Anal Run ID AK131125-1A

Anal Start Date 11/25/2013

Standardization Ref ID AlkalinityCAL131125-1

## Standardization Of Alkalinity

Rep Num	THAM Conc	Aliq Titrated (mL)	vol to pH 4.5(mL)	HCl Conc(N)	Conc Units	Avg HCl Conc
1	0.2	1	10.48	0.019084	N	0.01921309
2	0.2	1	10.43	0.0191755	N	
3	0.2	1	10.32	0.0193799	N	

Num	Don't Use	ReRun Num	Lab ID	QC Type	Anal Dil	Aliq Titrated (mL)	vol to pH 8.3(mL)	vol to pH 4.5(mL)	total vol(mL)	HCO <sub>3</sub> (mg/L as CaCO <sub>3</sub> )	CO <sub>3</sub> (mg/L as CaCO <sub>3</sub> )	OH (mg/L as CaCO <sub>3</sub> )	Total Alk (mg/L as CaCO <sub>3</sub> )	Expected	%Rec	vol to LL pH(mL)
1	<input type="checkbox"/>	0	AK131125-1	MB	1	100	0	0.4	0.4	3.842618	0	0	3.842618			NA
2	<input type="checkbox"/>	0	AK131125-1	LCS	1	100	5.33	5.22	10.55	0	100.2923	1.056726	101.349			NA
3	<input type="checkbox"/>	0	1311306-1	SMP	1	25	0	8.56	8.56	328.9281	0	0	328.9281			NA
4	<input type="checkbox"/>	0	1311306-2	SMP	1	25	0	8.61	8.61	330.8494	0	0	330.8494			NA
5	<input type="checkbox"/>	0	1311372-3	SMP	1	25	0	5.12	5.12	196.742	0	0	196.742			NA
6	<input type="checkbox"/>	0	1311372-3	DUP	1	25	0	4.92	4.92	189.0568	0	0	189.0568			NA
7	<input type="checkbox"/>	0	1311372-4	SMP	1	25	0	4.93	4.93	189.4411	0	0	189.4411			NA
8	<input type="checkbox"/>	0	1311410-1	SMP	1	25	0	6.71	6.71	257.8397	0	0	257.8397			NA
9	<input type="checkbox"/>	0	1311431-1	SMP	1	25	0	4.92	4.92	189.0568	0	0	189.0568			NA
10	<input type="checkbox"/>	0	1311431-2	SMP	1	25	0	9.05	9.05	347.7569	0	0	347.7569			NA
11	<input type="checkbox"/>	0	1311431-3	SMP	1	25	0	4.52	4.52	173.6863	0	0	173.6863			NA
12	<input type="checkbox"/>	0	1311432-1	SMP	1	25	0	6.01	6.01	230.9413	0	0	230.9413			NA
13	<input type="checkbox"/>	0	1311432-2	SMP	1	25	0	3.01	3.01	115.6628	0	0	115.6628			NA
14	<input type="checkbox"/>	0	1311432-3	SMP	1	25	0	3.82	3.82	146.788	0	0	146.788			NA
15	<input type="checkbox"/>	0	1311434-1	SMP	1	25	0	6.67	6.67	256.3026	0	0	256.3026			NA
16	<input type="checkbox"/>	0	1311434-2	SMP	1	25	0	7.98	7.98	306.6409	0	0	306.6409			NA
17	<input type="checkbox"/>	0	1311434-3	SMP	1	25	0	7.21	7.21	277.0528	0	0	277.0528			NA
18	<input type="checkbox"/>	0	1311435-1	SMP	1	25	0	1.88	1.88	72.24122	0	0	72.24122			NA
19	<input type="checkbox"/>	0	1311435-2	SMP	1	25	0	1.89	1.89	72.62548	0	0	72.62548			NA
20	<input type="checkbox"/>	0	1311436-1	SMP	1	25	0	4.78	4.78	183.6772	0	0	183.6772			NA
21	<input type="checkbox"/>	0	1311446-2	SMP	1	25	0	5.18	5.18	199.0476	0	0	199.0476			NA
22	<input type="checkbox"/>	0	1311458-1	SMP	1	25	0	8.04	8.04	308.9465	0	0	308.9465			NA
23	<input type="checkbox"/>	0	1311458-1	DUP	1	25	0	8.06	8.06	309.715	0	0	309.715			NA
24	<input type="checkbox"/>	0	1311458-2	SMP	1	25	0	7.32	7.32	281.2797	0	0	281.2797			NA
25	<input type="checkbox"/>	0	1311458-3	SMP	1	25	0	8.02	8.02	308.178	0	0	308.178			NA
26	<input type="checkbox"/>	0	AK131125-2	MB	1	100	0	0.34	0.34	3.266225	0	0	3.266225			NA
27	<input type="checkbox"/>	0	AK131125-2	LCS	1	100	5.2	5.13	10.33	0	98.56316	0.6724537	99.23561			NA
28	<input type="checkbox"/>	0	1311287-10	SMP	1	25	0	11.65	11.65	447.665	0	0	447.665			NA
29	<input type="checkbox"/>	0	1311287-10	DUP	1	25	0	11.79	11.79	453.0446	0	0	453.0446			NA
30	<input type="checkbox"/>	0	1311376-1	SMP	1	25	0	6.04	6.04	232.0941	0	0	232.0941			NA
31	<input type="checkbox"/>	0	1311378-1	SMP	1	25	0.34	9.16	9.5	338.9189	26.1298	0	365.0487			NA
32	<input type="checkbox"/>	0	1311386-1	SMP	1	25	0	71.87	71.87	2761.69	0	0	2761.69			NA
33	<input type="checkbox"/>	0	1311386-1	DUP	1	25	0	72.02	72.02	2767.453	0	0	2767.453			NA
34	<input type="checkbox"/>	0	1311386-2	SMP	1	25	0	61.68	61.68	2370.127	0	0	2370.127			NA
35	<input type="checkbox"/>	0	1311386-3	SMP	1	25	0	73.83	73.83	2837.005	0	0	2837.005			NA
36	<input type="checkbox"/>	0	1311386-4	SMP	1	25	0	72.79	72.79	2797.042	0	0	2797.042			NA
37	<input type="checkbox"/>	0	1311386-5	SMP	1	25	0	75.78	75.78	2911.936	0	0	2911.936			NA

Anal Run ID **AK131125-1A**Anal Start Date **11/25/2013**

Num	Don't Use	ReRun Num	Lab ID	QC Type	Anal Dil	Aliq Titrated (mL)	vol to pH 8.3(mL)	vol to pH 4.5(mL)	total vol(mL)	HCO <sub>3</sub> (mg/L as CaCO <sub>3</sub> )	CO <sub>3</sub> (mg/L as CaCO <sub>3</sub> )	OH (mg/L as CaCO <sub>3</sub> )	Total Alk (mg/L as CaCO <sub>3</sub> )	Expected	%Rec	vol to LL pH(mL)
38	<input type="checkbox"/>	0	1311394-1	SMP	1	25	0	13.39	13.39	514.5266	0	0	514.5266			NA
39	<input type="checkbox"/>	0	1311399-1	SMP	1	25	0	6.71	6.71	257.8397	0	0	257.8397			NA
40	<input type="checkbox"/>	0	1311401-1	SMP	1	25	0	11.22	11.22	431.1417	0	0	431.1417			NA
41	<input type="checkbox"/>	0	1311448-1	SMP	1	25	0	6.69	6.69	257.0711	0	0	257.0711			NA
42	<input type="checkbox"/>	0	1311449-6	SMP	1	25	0	43.1	43.1	1656.168	0	0	1656.168			NA
43	<input type="checkbox"/>	0	1311449-7	SMP	1	25	0	9.96	9.96	382.7248	0	0	382.7248			NA
44	<input type="checkbox"/>	0	1311449-8	SMP	1	25	0	58.67	58.67	2254.464	0	0	2254.464			NA
45	<input type="checkbox"/>	0	1311449-9	SMP	1	25	0	66.55	66.55	2557.262	0	0	2557.262			NA
46	<input type="checkbox"/>	0	1311449-10	SMP	1	25	0	22.92	22.92	880.728	0	0	880.728			NA
47	<input type="checkbox"/>	0	1311449-11	SMP	1	25	0	22.58	22.58	867.6631	0	0	867.6631			NA

**Comments:** Prepped and analyzed on 11/25/2013 from 0900-1345 by KMP.**Standards, Batch QC, and Matrix Spike Information**

ID	Parent ID	Parent Conc	Parent Vol.	Final Vol.
ICV	ST101202-3	10000	1	100
CCV	ST101202-3	10000	1	100

**Reagent List:**

0.020 N HCl Titrant **RG131115-2**  
 Phenolphthalein Indicator **RG130531-5**  
 Bromocresol Green Indicator **RG131014-5**  
 0.20 N Std. THAM **ST131001-1**  
 0.20 N NaCO<sub>3</sub> (ICV, LCS, CCV's - 1.0 mL) **ST121213-2**



## pH Calculations and Quality Control Results

Prep & Analysis Date: 11/22/2013

Prep & Analysis Time: 1100-1600

Analyst: KMP

### Reagent List:

4.01:	10.00:	2.00:
ST131011-3	ST131004-1	ST130725-1
7.00 (CCV):	7.00 (ICV):	12.45:
ST130523-1	ST130930-1	ST131108-1

ID	Temp. (°C)	Method	sample vol (g)	sample vol (mL)	pH Value	QC Acceptance Range (pH units)
pH 4.01	24.8	NA	NA	NA	4.01	+/- 0.05
pH 7.00	24.8	NA	NA	NA	7.00	
pH 10.00	24.8	NA	NA	NA	10.00	
pH 12.45	24.8	NA	NA	NA	12.45	
ICV - pH 7.00	24.8	NA	NA	NA	7.00	
1311399-1	24.8	4500H	NA	20	7.62	
1311399-1DUP	24.8	4500H	NA	20	7.64	+/- 0.10
1311394-1	24.8	4500H	NA	20	7.73	
1311401-1	24.8	4500H	NA	20	8.36	
1311406-1	24.8	EPA150.1	NA	20	11.17	
CCV- pH 7.00	24.8	NA	NA	NA	7.02	

### DUPLICATE SUMMARY (Aq)

ID	native pH Value	duplic pH Value	difference of native - dup	accept. limit
1311399-1	7.62	7.64	0.02	0.2 pH units

### pH INFORMATION:

SOP 1126 rev.17 / EPA Method 150.1, 9040C, 9045D, and SM4500-H+ B

Instrument : Fisher Scientific pH / mV meter model 50 (SN C0000643)

Electrode : Orion - Ross Sure-Flow Electrode Model 81-72BN

# PHOSPHATE AS P Raw Data Worksheet

Anal Run ID TP131124-1A

Anal Start Date 11/24/2013

Calib Ref ID PO4CAL131124-1

Standard	Response	Soln Conc	Units
0	0	-0.005354712	mg/L
0.05	0.056	0.06082781	mg/L
0.1	0.089	0.09982822	mg/L
0.25	0.211	0.2440115	mg/L
0.5	0.427	0.4992869	mg/L
0.75	0.64	0.7510169	mg/L
1	0.851	1.000383	mg/L

Slope	1.181831
Intercept	-0.005354712
RSQ	0.9997925

Num	Don't Use	ReRun Num	Lab ID	QC Type	Anal Dil	Abs (650nm)	Calc PO4 Conc	Expected	%Rec
1	<input type="checkbox"/>	0	ICV	ICV	1	0.442	0.5170144	0.5	103
2	<input type="checkbox"/>	0	ICB	ICB	1	0.003	-0.0018092		
3	<input type="checkbox"/>	0	TP131124-1	MB	1	0.001	-0.0041729		
4	<input type="checkbox"/>	0	TP131124-1	LCS	1	0.409	0.4780141		
5	<input type="checkbox"/>	0	TP131124-1	RVS	1	0.021	0.01946373		
6	<input type="checkbox"/>	0	I311376-1	SMP	1	0.022	0.02064556		
7	<input type="checkbox"/>	0	I311376-1	MS	1	0.257	0.2983758		
8	<input type="checkbox"/>	0	I311376-1	MSD	1	0.268	0.3113759		
9	<input type="checkbox"/>	0	I311378-1	SMP	1	0.058	0.06319147		
10	<input type="checkbox"/>	0	I311394-1	SMP	1	0.02	0.0182819		
11	<input type="checkbox"/>	0	I311399-1	SMP	1	0.013	0.01000909		
12	<input type="checkbox"/>	0	I311401-1	SMP	1	0.063	0.06910062		
13	<input type="checkbox"/>	0	CCV	CCV	1	0.428	0.5004688	0.5	100
14	<input type="checkbox"/>	0	CCB	CCB	1	0.001	-0.0041729		
15	<input type="checkbox"/>	0	I311448-1	SMP	1	0.026	0.02537289		
16	<input type="checkbox"/>	0	CCV	CCV	1	0.429	0.5016506	0.5	100
17	<input type="checkbox"/>	0	CCB	CCB	1	0.001	-0.0041729		

Comments: Analyzed on 11/24/2013 from 10:00 to 10:40. AJD

Standards, Batch QC, and Matrix Spike Information				
ID	Parent ID	Parent Conc	Parent Vol.	Final Vol.
1.00 mg/L PO4-P	*	100 mg/L PO4-P	0.200	20.0
0.75 mg/L PO4-P	*	100 mg/L PO4-P	0.150	20.0
0.50 mg/L PO4-P	*	100 mg/L PO4-P	0.100	20.0
0.25 mg/L PO4-P	*	100 mg/L PO4-P	0.050	20.0
0.10 mg/L PO4-P	*	100 mg/L PO4-P	0.020	20.0
0.05 mg/L PO4-P	*	100 mg/L PO4-P	0.010	20.0
ICV (0.50mg/L PO4-P)	**	100 mg/L PO4-P	0.100	20.0
CCV (0.50mg/L PO4-P)	*	100 mg/L PO4-P	0.100	20.0
TPHOS LCS	*	100 mg/L PO4-P	0.250	50.0
TPHOS MS/MSD	*	100 mg/L PO4-P	0.250	50.0

## Reagent List:

PO4-P Prnt Standard 1st Source (\*) ST130502-5

PO4-P 2nd Source (\*\*) ST131018-2

Color Reagent RG131124-1

# Specific Conductivity Calculations & Quality Control Results

Prep & Analysis Date: 11/22/13

Prep & Analysis Time: 1100-1600

Analyst: KMP

ID	sample vol (mL)	Temp. °C	Conductivity Reading (umhos/cm)	% Recovery	recovery limit
Calibration Standard ( * )	NA	24.8	1413	100	646.2 - 789.8
ICV-2nd Source ( ** )	NA	24.8	721		
1311399-1	45	24.8	1161		
1311399-1DUP	45	24.8	1154		
1311394-1	45	24.8	4290		
1311401-1	45	24.8	1089	100	1271.7 - 1554.3
CCV-1 ( * )	NA	24.8	1407		

## DUPLICATE SUMMARY

ID	native Spec. Cond. Value	duplic Spec. Cond. Value	RPD %	RPD accept. limit
1311399-1	1161	1154	1	0-10%

## Specific Conductivity - EPA Method 120.1/9050A/SM2510B - SOP 1128

Instrument : Fisher Scientific Conductivity/pH/mV meter model accumet 50 (SN C0000643)  
 Electrode : YSI Incorporated. Model 3440 (Cell K = 10/cm) OR  
 VWR Digital Conductivity Meter w/ electrode NIST (SN A22036)

Reagent List: 0.010 M KCl Solution [1413umhos/cm] ( \* ):  
**ST131004-3**

0.005 M KCl Solu+C21tion [718umhos/cm] ( \*\* ):  
**ST130903-1**

# TDS Raw Data Worksheet

Anal Run ID **TD131125-1A**

Anal Start Date **11/25/2013**

Num	Don't Use	ReRun Num	Lab ID	QC Type	Samp Vol (ml)	Empty Beaker (g)	A - Beaker + Residue gross (g)	A - Net mass (mg)	B - Beaker + Residue gross (g)	B - Net mass (mg)	Constant Wt (+/- 0.5mg)	Constant Wt (+/- 4%)	calculated conc (mg/L)	DL (mg/L)
1	<input type="checkbox"/>	0	TD131122-1	MB	100	77.6666	77.666	-0.6	77.6661	-0.5	0.1	NA	-5	20
2	<input type="checkbox"/>	0	TD131122-1	LCS	100	77.8856	77.9279	42.3	77.9285	42.9	0.6	1.41%	429	20
3	<input type="checkbox"/>	0	1311372-1	SMP	50	78.3418	78.4351	93.3	78.4336	91.8	1.5	1.62%	1836	40
4	<input type="checkbox"/>	0	1311372-1	DUP	50	77.948	78.0371	89.1	78.0374	89.4	0.3	0.34%	1788	40
5	<input type="checkbox"/>	0	1311372-2	SMP	25	78.0386	78.0842	45.6	78.0835	44.9	0.7	1.55%	1796	80
6	<input type="checkbox"/>	0	1311372-3	SMP	25	77.4659	77.5499	84	77.5487	82.8	1.2	1.44%	3312	80
7	<input type="checkbox"/>	0	1311372-4	SMP	25	78.2599	78.3443	84.4	78.343	83.1	1.3	1.55%	3324	80
8	<input type="checkbox"/>	0	1311373-1	SMP	5	80.66	80.7161	56.1	80.715	55	1.1	1.98%	11000	400
9	<input type="checkbox"/>	0	1311376-1	SMP	10	77.9428	77.9998	57	78.0002	57.4	0.4	0.70%	5740	200
10	<input type="checkbox"/>	0	1311378-1	SMP	100	78.1871	78.2362	49.1	78.237	49.9	0.8	1.62%	499	20
11	<input type="checkbox"/>	0	1311394-1	SMP	25	80.8283	80.9108	82.5	80.9117	83.4	0.9	1.08%	3336	80
12	<input type="checkbox"/>	0	1311399-1	SMP	100	80.729	80.8044	75.4	80.8035	74.5	0.9	1.20%	745	20
13	<input type="checkbox"/>	0	1311401-1	SMP	100	78.1984	78.2599	61.5	78.2604	62	0.5	0.81%	620	20
14	<input type="checkbox"/>	0	1311401-1	DUP	100	70.7993	70.8614	62.1	70.8631	63.8	1.7	2.70%	638	20
15	<input type="checkbox"/>	0	1311431-1	SMP	100	78.4629	78.4956	32.7	78.4961	33.2	0.5	1.52%	332	20
16	<input type="checkbox"/>	0	1311431-2	SMP	25	76.7752	76.8582	83	76.8591	83.9	0.9	1.08%	3356	80
17	<input type="checkbox"/>	0	1311431-3	SMP	100	65.3784	65.4119	33.5	65.4132	34.8	1.3	3.81%	348	20
18	<input type="checkbox"/>	0	1311432-1	SMP	10	71.819	71.8692	50.2	71.8695	50.5	0.3	0.60%	5050	200
19	<input type="checkbox"/>	0	1311432-2	SMP	5	71.3844	71.4754	91	71.4747	90.3	0.7	0.77%	18060	400
20	<input type="checkbox"/>	0	1311432-3	SMP	5	72.4777	72.5238	46.1	72.525	47.3	1.2	2.57%	9460	400

**Comments:** Analyzed on 11/25/2013 from 09:30 to 13:05. AJD

Standards, Batch QC, and Matrix Spike Information				
ID	Parent ID	Parent Conc	Parent Vol.	Final Vol.
LCS	ST130318-1	40000	1	100

## Reagent List:

TDS Spike Solution: 40.0 mg NaCl/mL **ST130318-1**

Shaded values used to determine the calculated concentration

Line	Sample	Sample Type	Method	Data File	Comment
1	5X STD	Calibration	131111ic1.met	c:\peaknet\data\131111ic1\131111_002.dxd	
2	10X STD	Calibration	131111ic1.met	c:\peaknet\data\131111ic1\131111_003.dxd	
3	25X STD	Calibration	131111ic1.met	c:\peaknet\data\131111ic1\131111_004.dxd	
4	100X STD	Calibration	131111ic1.met	c:\peaknet\data\131111ic1\131111_005.dxd	
5	500X STD	Calibration	131111ic1.met	c:\peaknet\data\131111ic1\131111_006.dxd	
6	1000X STD	Calibration	131111ic1.met	c:\peaknet\data\131111ic1\131111_007.dxd	
7	0 STD	Calibration	131111ic1.met	c:\peaknet\data\131111ic1\131111_008.dxd	
8	ICV	Sample	131111ic1.met	c:\peaknet\data\131111ic1\131111_009.dxd	
9	ICB	Sample	131111ic1.met	c:\peaknet\data\131111ic1\131111_010.dxd	
10	Blank	Sample	131111ic1a.met	c:\peaknet\data\131121ic1\131121_010.dxd	
11	CCV	Sample	131111ic1a.met	c:\peaknet\data\131121ic1\131121_011.dxd	CCV1 All Pass
12	CCB	Sample	131111ic1a.met	c:\peaknet\data\131121ic1\131121_012.dxd	CCB
13	IC131121-1LCS	Sample	131111ic1a.met	c:\peaknet\data\131121ic1\131121_013.dxd	Water All Pass
14	IC131121-1MB	Sample	131111ic1a.met	c:\peaknet\data\131121ic1\131121_014.dxd	Water
15	IC131121-1RVS	Sample	131111ic1a.met	c:\peaknet\data\131121ic1\131121_015.dxd	Water
16	1311386-1 5x	Sample	131111ic1a.met	c:\peaknet\data\131121ic1\131121_016.dxd	NO2NO3,SO4
17	1311386-1MS 5x	Sample	131111ic1a.met	c:\peaknet\data\131121ic1\131121_017.dxd	NO2NO3,SO4
18	1311386-1MSD 5x	Sample	131111ic1a.met	c:\peaknet\data\131121ic1\131121_018.dxd	NO2NO3,SO4
19	1311386-2 5x	Sample	131111ic1a.met	c:\peaknet\data\131121ic1\131121_019.dxd	NO2NO3,SO4
20	1311386-3 5x	Sample	131111ic1a.met	c:\peaknet\data\131121ic1\131121_020.dxd	NO2NO3,SO4
21	1311386-4 5x	Sample	131111ic1a.met	c:\peaknet\data\131121ic1\131121_021.dxd	NO2NO3,SO4
22	Blank	Sample	131111ic1a.met	c:\peaknet\data\131121ic1\131121_022.dxd	
23	CCV	Sample	131111ic1a.met	c:\peaknet\data\131121ic1\131121_023.dxd	CCV2 All Pass
24	CCB	Sample	131111ic1a.met	c:\peaknet\data\131121ic1\131121_024.dxd	CCB
25	1311386-5 5x	Sample	131111ic1a.met	c:\peaknet\data\131121ic1\131121_025.dxd	NO2NO3,SO4
26	1311386-1 50x	Sample	131111ic1a.met	c:\peaknet\data\131121ic1\131121_026.dxd	NO2NO3,SO4
27	1311386-2 50x	Sample	131111ic1a.met	c:\peaknet\data\131121ic1\131121_027.dxd	NO2NO3,SO4
28	1311386-3 50x	Sample	131111ic1a.met	c:\peaknet\data\131121ic1\131121_028.dxd	NO2NO3,SO4
29	1311386-4 50x	Sample	131111ic1a.met	c:\peaknet\data\131121ic1\131121_029.dxd	NO2NO3,SO4
30	1311386-5 50x	Sample	131111ic1a.met	c:\peaknet\data\131121ic1\131121_030.dxd	NO2NO3,SO4
31	1311394-1 5x	Sample	131111ic1a.met	c:\peaknet\data\131121ic1\131121_031.dxd	Br,Cl,F,NO2,NO3,SO4
32	1311394-1 50x	Sample	131111ic1a.met	c:\peaknet\data\131121ic1\131121_032.dxd	Br,Cl,F,NO2,NO3,SO4
33	1311399-1	Sample	131111ic1a.met	c:\peaknet\data\131121ic1\131121_033.dxd	Br,Cl,F,NO2,NO3,SO4
34	Blank	Sample	131111ic1a.met	c:\peaknet\data\131121ic1\131121_034.dxd	
35	CCV	Sample	131111ic1a.met	c:\peaknet\data\131121ic1\131121_035.dxd	CCV3 All Pass
36	CCB	Sample	131111ic1a.met	c:\peaknet\data\131121ic1\131121_036.dxd	CCB
37	1311399-1 10x	Sample	131111ic1a.met	c:\peaknet\data\131121ic1\131121_037.dxd	Br,Cl,F,NO2,NO3,SO4
38	1311401-1	Sample	131111ic1a.met	c:\peaknet\data\131121ic1\131121_038.dxd	Br,Cl,F,NO2,NO3,SO4
39	1311401-1 10x	Sample	131111ic1a.met	c:\peaknet\data\131121ic1\131121_039.dxd	Br,Cl,F,NO2,NO3,SO4
40	1311373-1 50x	Sample	131111ic1a.met	c:\peaknet\data\131121ic1\131121_040.dxd	Cl,SO4 (RR for SO4)
41	Blank	Sample	131111ic1a.met	c:\peaknet\data\131121ic1\131121_041.dxd	
42	CCV	Sample	131111ic1a.met	c:\peaknet\data\131121ic1\131121_042.dxd	CCV4 All Pass
43	CCB	Sample	131111ic1a.met	c:\peaknet\data\131121ic1\131121_043.dxd	CCB
44	stop	Sample	stop.met	c:\peaknet\data\131121ic1\131121_044.dxd	

Default Method Path: C:\PEAKNET\METHOD

Default Data Path: C:\PEAKNET\DATA\130701IC1

Comment:

BatchDx created schedule.

Analyst: ATD

Instrument #1: DIONEX DX-120. ID Serial Number: 99060762

Analytical Column: Dionex IonPac AS14 S/N 029999

Methods: EPA 300.0 and SW9056. ALS SOP 1113

Eluent: Made daily, 10mL of Eluent Concentrate ID: RG130924-1 to 1000mL of DI water.

Final\_ID\_Aliq

cal std level 7 (0x)

cal std level 6 (1000x) 5.00 ST131018-2, ST131111-3 0.01

cal std level 5 (500x) 5.00 " " 0.01

cal std level 4 (100x) 5.00 " " 0.05

cal std level 3 (25x) 5.00 " " 0.20

cal std level 2 (10x) 5.00 " " 0.50

cal std level 1 (5x) 5.00 " " 1.00

CCV 5.00 ST131018-2, ST131111-3 0.50

RVS 5.00 ST131018-2, ST131111-3 0.01

ICV 5.00 ST130502-5 0.25

ST131101-2 0.02

LCS &amp; MS/D 5.00 ST130208-9, ST131111-2 0.05

Dilutions Table: All to 5mL Final Volume

10X 0.5mL

20X 0.25mL

25X 0.2mL

50X 0.1mL

100X 0.05mL

200X 0.025mL

500X 0.01mL

# Method Report - 131111ic1.met

## Method Information : Select Module(s)

System Name : DX-120 IC-1  
System Number : 1  
Method Type : Ion Chromatography  
Column : AS14 4-MM  
Analyst : WETCHEM  
Comment : Flow rate = 1.2 mL/min,  
Eluent = 3.5mM Na<sub>2</sub>CO<sub>3</sub> / 1.0 mM NaHCO<sub>3</sub>

## DX-120 Timed Events

Module Name : DX-120 #1  
Module Serial Number : 99060762  
System Mode : Column  
Column : A  
Pump : On  
SRS / Cell : On  
Eluent Pressure : On  
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	Low	Low	Off	Begin
0.10		Inject	Low	Low	Off	
0.40		Load	Low	Low	Off	
11.80		Load	High	Low	Off	
11.90		Load	Low	Low	Off	

## DX-120 Detector Parameters

Detector Type : DX-120  
Data collection time (minutes) : 14.00  
Data Collection Rate : 5.00  
Real time plot scale maximum ( $\mu$ S) : 40.000  
Real time plot scale minimum ( $\mu$ S) : -3.000

## DX-120 Integration Parameters

Peak detection algorithm : Standard  
Starting peak width (seconds) : 8.00  
Peak threshold : 0.50  
Peak area reject (area counts) : 800.00  
Reference peak area reject (area counts) : 1000.00

## DX-120 Smoothing Parameters

Filter Type : No filter

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**DX-120 Report Data**

Report Format File : C:\PeakNet\method\IC Report\_std.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	Stop peak detection
0.05	Force baseline at start of all peaks
1.90	Start peak detection
2.20	Void volume treatment for this peak
3.00	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

Calibration standard volume : 1.00

Default sample volume : 1.00

Amount units :

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

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**DX-120 Component Identification Table**

Component	Retention	Tolerance	Reference
Fluoride	2.88 min	5.00 %	
Chloride	3.96 min	5.00 %	
Nitrite as N	4.61 min	4.90 %	
Bromide	5.69 min	7.30 %	
Nitrate as N	6.53 min	10.00 %	
Orthophosphate as P	9.12 min	4.10 %	
Sulfate	11.11 min	4.10 %	
Nitrate/Nitrite as N	20.00 min	5.00 %	

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**DX-120 Component Quantitation Table**

Component	Retention	Low Limit	High Limit
Fluoride	2.88 min	100	10000
Chloride	3.96 min	200	20000
Nitrite as N	4.61 min	100	10000
Bromide	5.69 min	200	20000
Nitrate as N	6.53 min	200	20000
Orthophosphate as P	9.12 min	300	20000
Sulfate	11.11 min	500	100000
Nitrate/Nitrite as N	20.00 min	1	10

---

**DX-120 Component Calibration Table**

Component	Retention Time	Curve Fit	Origin	Cal. by	Response Component	Relative Factor
Fluoride	2.88 min	Quadratic	Ignore	Area		0.00
Chloride	3.96 min	Quadratic	Ignore	Area		0.00
Nitrite as N	4.61 min	Quadratic	Ignore	Area		0.00
Bromide	5.69 min	Quadratic	Ignore	Area		0.00
Nitrate as N	6.53 min	Quadratic	Ignore	Area		0.00
Orthophosphate as P	9.12 min	Quadratic	Ignore	Area		0.00
Sulfate	11.11 min	Quadratic	Ignore	Area		0.00
Nitrate/Nitrite as N	20.00 min	Quadratic	Ignore	Area		0.00

---

**DX-120 Component = Fluoride Levels Table**

Retention Time : 2.88 min

Amount units :

Replicate unit type : Area

Number of levels : 7

Number of replicates : 1

Level	Amount	Replicate 1
1	10000.00	1.98716e+006
2	5000.00	924804
3	2000.00	343263
4	500.00	81730
5	100.00	15018
6	50.00	8218
7	0.00	0

---



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**DX-120 Component = Chloride Levels Table****Retention Time : 3.96 min****Amount units :****Replicate unit type : Area****Number of levels : 7****Number of replicates : 1**

Level	Amount	Replicate 1
1	20000.00	3.30617e+006
2	10000.00	1.50449e+006
3	4000.00	556434
4	1000.00	134784
5	200.00	28074
6	100.00	15701
7	0.00	1681

---

**DX-120 Component = Nitrite as N Levels Table****Retention Time : 4.61 min****Amount units :****Replicate unit type : Area****Number of levels : 7****Number of replicates : 1**

Level	Amount	Replicate 1
1	10000.00	3.26831e+006
2	5000.00	1.54459e+006
3	2000.00	583989
4	500.00	136080
5	100.00	22582
6	50.00	9689
7	0.00	0

---

**DX-120 Component = Bromide Levels Table****Retention Time : 5.69 min****Amount units :****Replicate unit type : Area****Number of levels : 7****Number of replicates : 1**

Level	Amount	Replicate 1
1	20000.00	1.1856e+006
2	10000.00	560434
3	4000.00	216136
4	1000.00	52804
5	200.00	10864
6	100.00	5483
7	0.00	0

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**DX-120 Component = Nitrate as N Levels Table**

Retention Time : 6.53 min

Amount units :

Replicate unit type : Area

Number of levels : 7

Number of replicates : 1

Level	Amount	Replicate 1
1	20000.00	8.73682e+006
2	10000.00	3.9045e+006
3	4000.00	1.39944e+006
4	1000.00	327975
5	200.00	66015
6	100.00	34719
7	0.00	0

---

**DX-120 Component = Orthophosphate as P Levels Table**

Retention Time : 9.12 min

Amount units :

Replicate unit type : Area

Number of levels : 7

Number of replicates : 1

Level	Amount	Replicate 1
1	20000.00	2.64127e+006
2	10000.00	1.24533e+006
3	4000.00	483234
4	1000.00	125579
5	200.00	28834
6	100.00	22750
7	0.00	3855

---

**DX-120 Component = Sulfate Levels Table**

Retention Time : 11.11 min

Amount units :

Replicate unit type : Area

Number of levels : 7

Number of replicates : 1

Level	Amount	Replicate 1
1	100000.00	1.28899e+007
2	50000.00	5.80606e+006
3	20000.00	2.10124e+006
4	5000.00	489614
5	1000.00	100489
6	500.00	52968
7	0.00	0

---

**DX-120 Component = Nitrate/Nitrite as N Levels Table**

**Retention Time : 20.00 min**

**Amount units :**

**Replicate unit type : Area**

**Number of levels : 0**

**Number of replicates : 1**

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**DX-120 XY Data Parameters**

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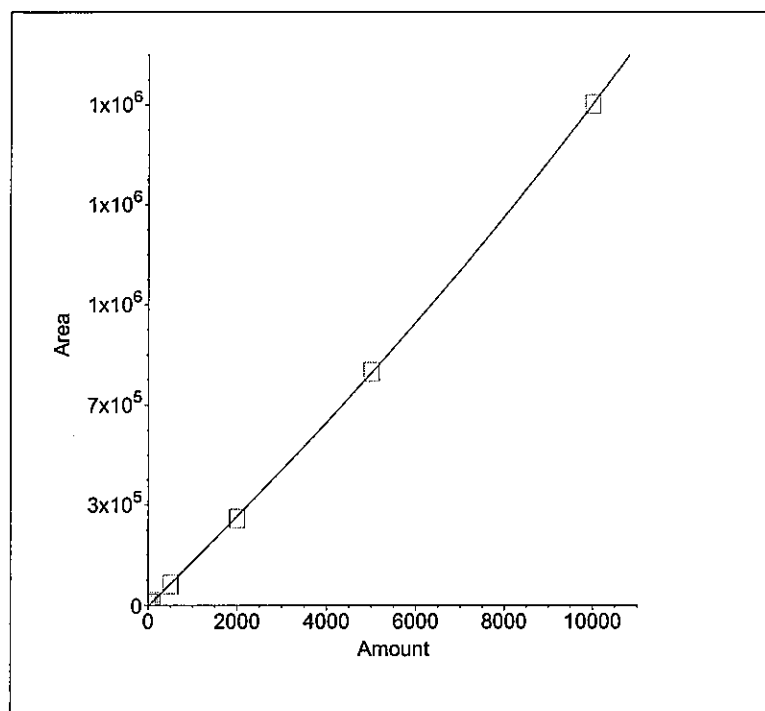
## 1. Component:Fluoride

Standard:External Fit Type:Quadratic

Origin:Ignore Calibration:Area

 $r^2=0.999956$ 

$$\text{Amt} = -3.685927\text{e-}010 * \text{Resp}^2 + 5.750427\text{e-}003 * \text{Resp} + 24.03$$



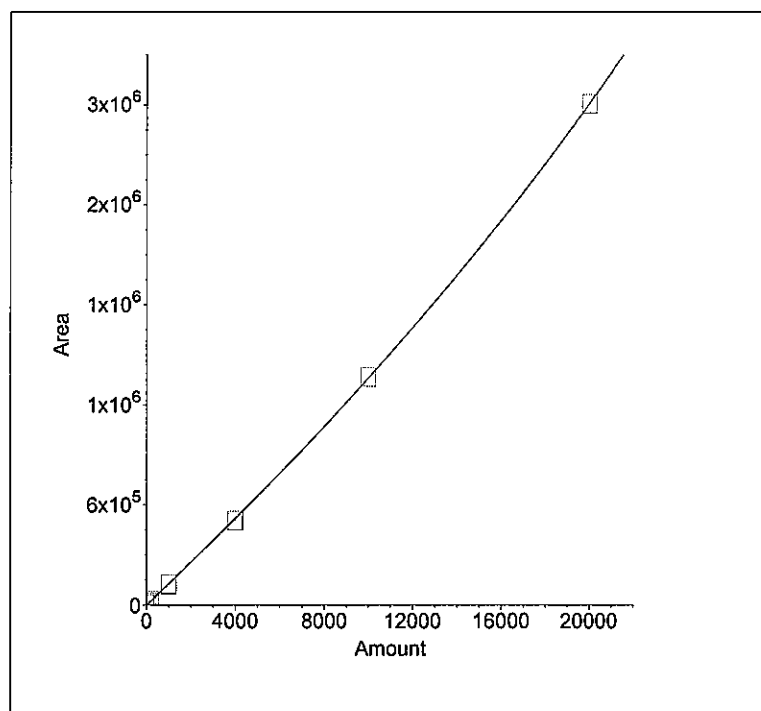
## 2. Component:Chloride

Standard:External Fit Type:Quadratic

Origin:Ignore Calibration:Area

 $r^2=0.999962$ 

$$\text{Amt} = -3.497739\text{e-}010 * \text{Resp}^2 + 7.199114\text{e-}003 * \text{Resp} + 13.45$$



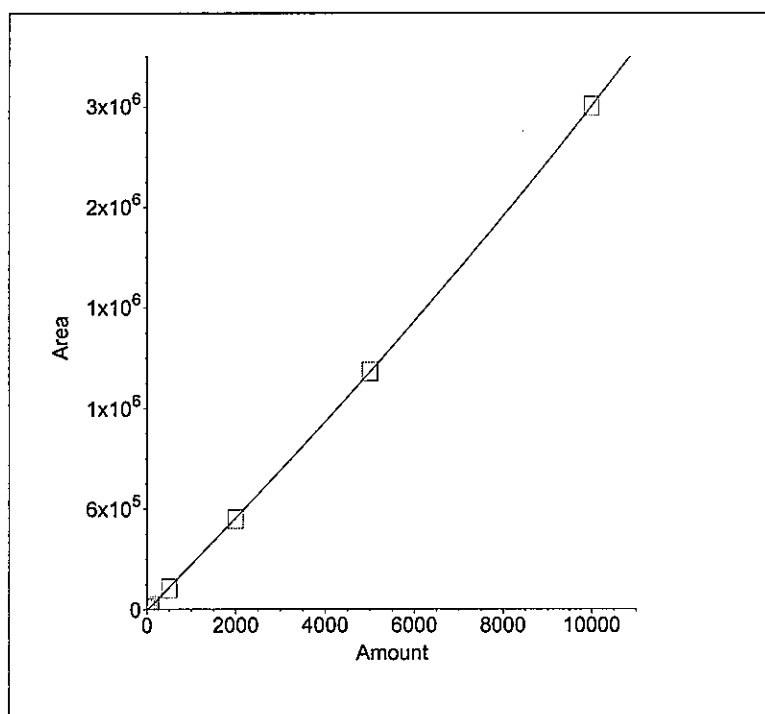
## 3. Component:Nitrite as N

Standard:External Fit Type:Quadratic

Origin:Ignore Calibration:Area

 $r^2=0.999983$ 

$$\text{Amt} = -1.033733\text{e-}010 * \text{Resp}^2 + 3.387090\text{e-}003 * \text{Resp} + 31.35$$



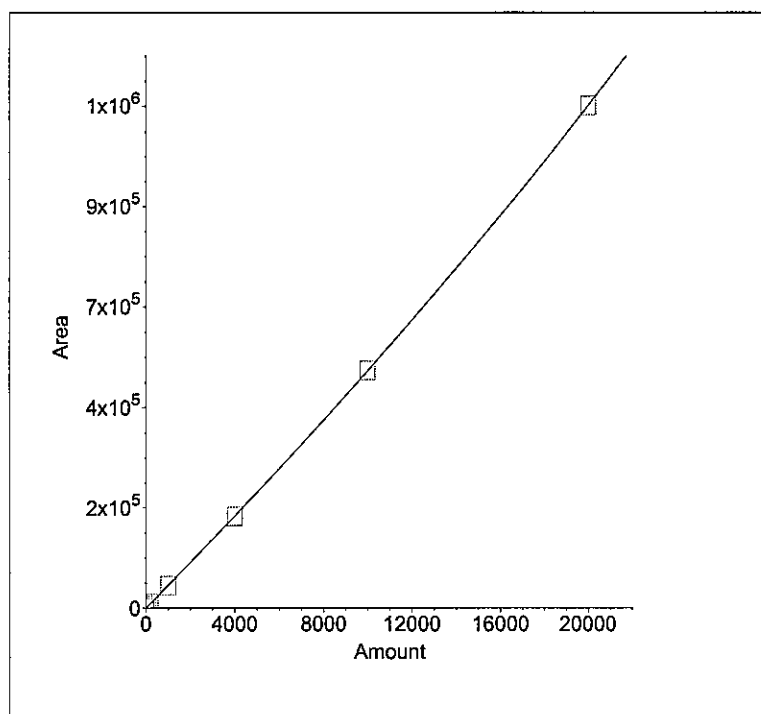
## 4. Component:Bromide

Standard:External Fit Type:Quadratic

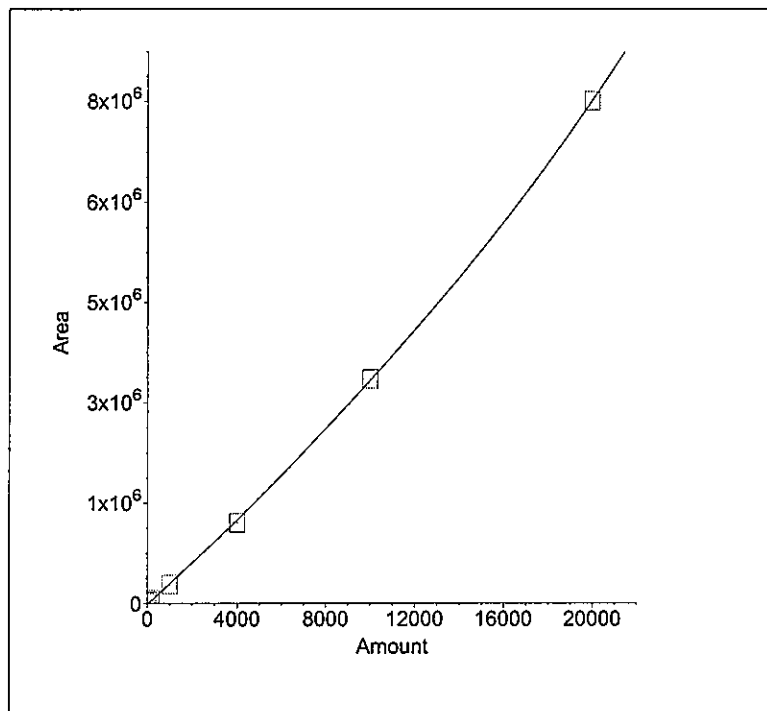
Origin:Ignore Calibration:Area

 $r^2=0.999998$ 

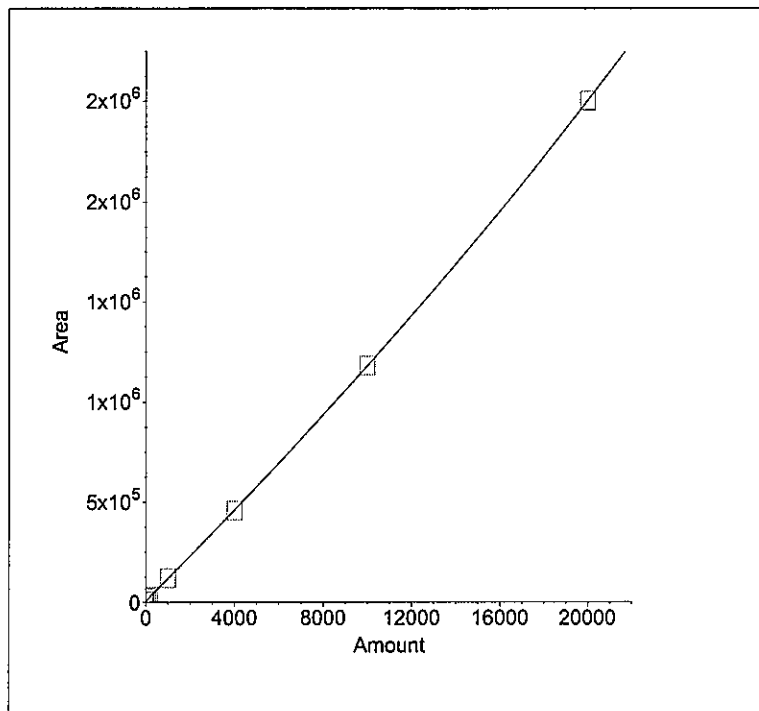
$$\text{Amt} = -1.585771\text{e-}009 * \text{Resp}^2 + 1.874290\text{e-}002 * \text{Resp} + 5.506$$



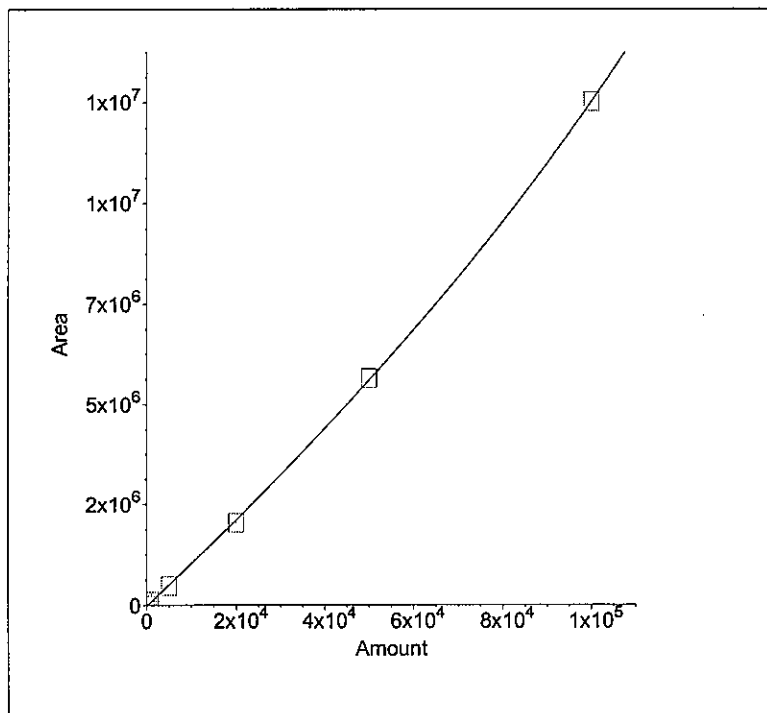
5. Component:Nitrate as N  
Standard:External Fit Type:Quadratic  
Origin:Ignore Calibration:Area  
 $r^2=0.999894$   
 $Amt=-5.896952e-011*Resp^2+$   
 $2.796009e-003*Resp+60.95$



6. Component:Orthophosphate as P  
Standard:External Fit Type:Quadratic  
Origin:Ignore Calibration:Area  
 $r^2=0.999992$   
 $Amt=-3.513453e-010*Resp^2+$   
 $8.520735e-003*Resp+-56.08$



7. Component:Sulfate  
Standard:External Fit Type:Quadratic  
Origin:Ignore Calibration:Area  
 $r^2=0.999914$   
 $Amt=-1.260247e-010*Resp^2+$   
 $9.356626e-003*Resp+277.9$



8. Component:Nitrate/Nitrite as N  
Standard:External Fit Type:Quadratic  
Origin:Ignore Calibration:Area

(No Levels Component)

## Calibration Update Report

Sample Name : 5X STD

Data File Name : C:\PEAKNET\DATA\131111IC1\131111\_002.DXD

Method File Name : C:\PeakNet\method\131111ic1.met	System Operator : AJD
Schedule File Name : c:\peaknet\schedule\131111ic1.sch	Datafile Updated : 11/12/13 8:07:58 AM
Date Time Acquired : 11/11/13 2:12:29 PM	Method Comment : Flow rate = 1.2 mL/min,
Calibration Date : 11/12/13 8:08:21 AM	Eluent =...

### Peak Information : All Components

Peak #	Analyte	Retention Time (min.)	Concentration	Peak Area
2	Fluoride	2.88	10000	1987164
3	Chloride	3.92	20000	3306168
4	Nitrite as N	4.59	10000	3268305
5	Bromide	5.65	20000	1185597
6	Nitrate as N	6.33	20000	8736816
7	Orthophosphate as P	8.99	20000	2641274
8	Sulfate	10.97	100000	12889868
	Nitrate/Nitrite as N			

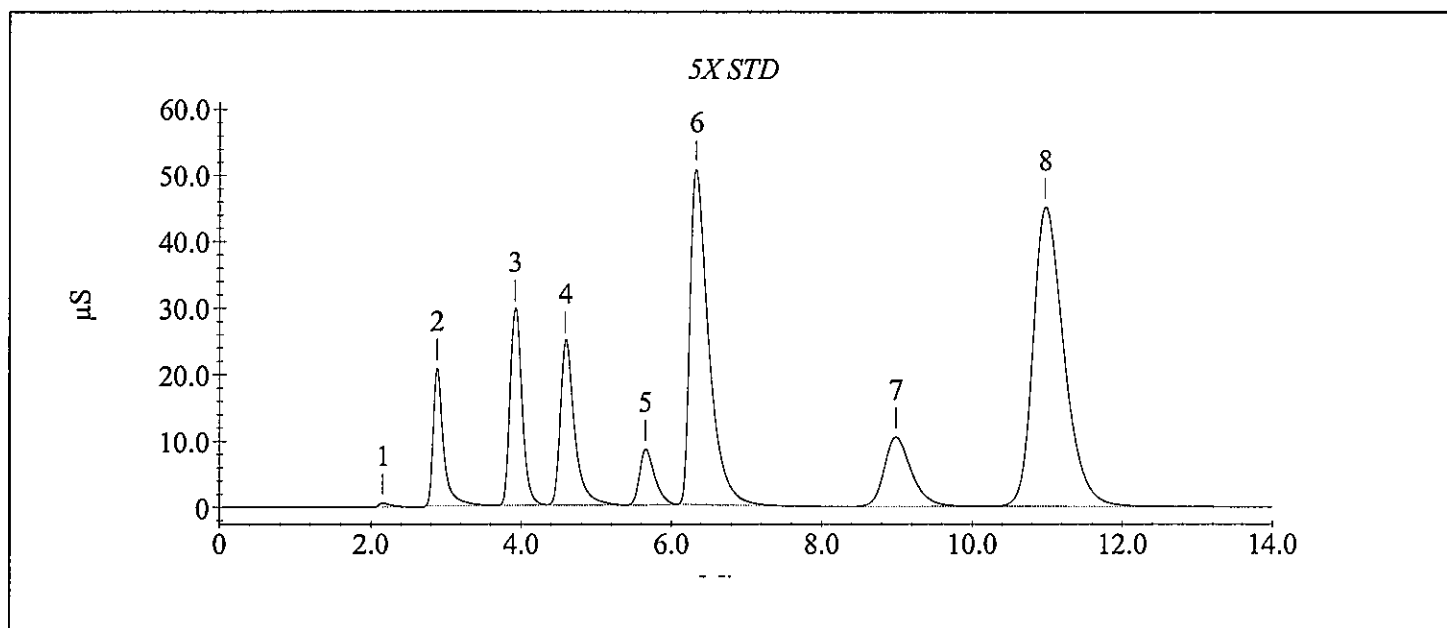
## Calibration Update Report

Sample Name : 5X STD

Data File Name : C:\PEAKNET\DATA\131111IC1\131111\_002.DXD

Method File Name : C:\PeakNet\method\131111ic1.met  
Schedule File Name : c:\peaknet\schedule\131111ic1.sch  
Date Time Acquired : 11/11/13 2:12:29 PM  
Calibration Date : 11/12/13 8:08:21 AM

System Operator : AJD  
Datafile Updated : 11/12/13 8:07:58 AM  
Method Comment : Flow rate = 1.2 mL/min,  
Eluent =...



## Calibration Update Report

Sample Name : 10X STD

Data File Name : C:\PEAKNET\DATA\131111IC1\131111\_003.DXD

Method File Name : C:\PeakNet\method\131111ic1.met	System Operator : AJD
Schedule File Name : c:\peaknet\schedule\131111ic1.sch	Datafile Updated : 11/11/13 4:18:59 PM
Date Time Acquired : 11/11/13 2:26:37 PM	Method Comment : Flow rate = 1.2 mL/min,
Calibration Date : 11/11/13 4:22:37 PM	Eluent =...

### Peak Information : All Components

Peak #	Analyte	Retention Time (min.)	Concentration	Peak Area
2	Fluoride	2.88	10000	924804
3	Chloride	3.92	20000	1504490
4	Nitrite as N	4.59	10000	1544592
5	Bromide	5.65	20000	560434
6	Nitrate as N	6.36	20000	3904501
7	Orthophosphate as P	9.01	20000	1245329
8	Sulfate	11.04	100000	5806059
	Nitrate/Nitrite as N			



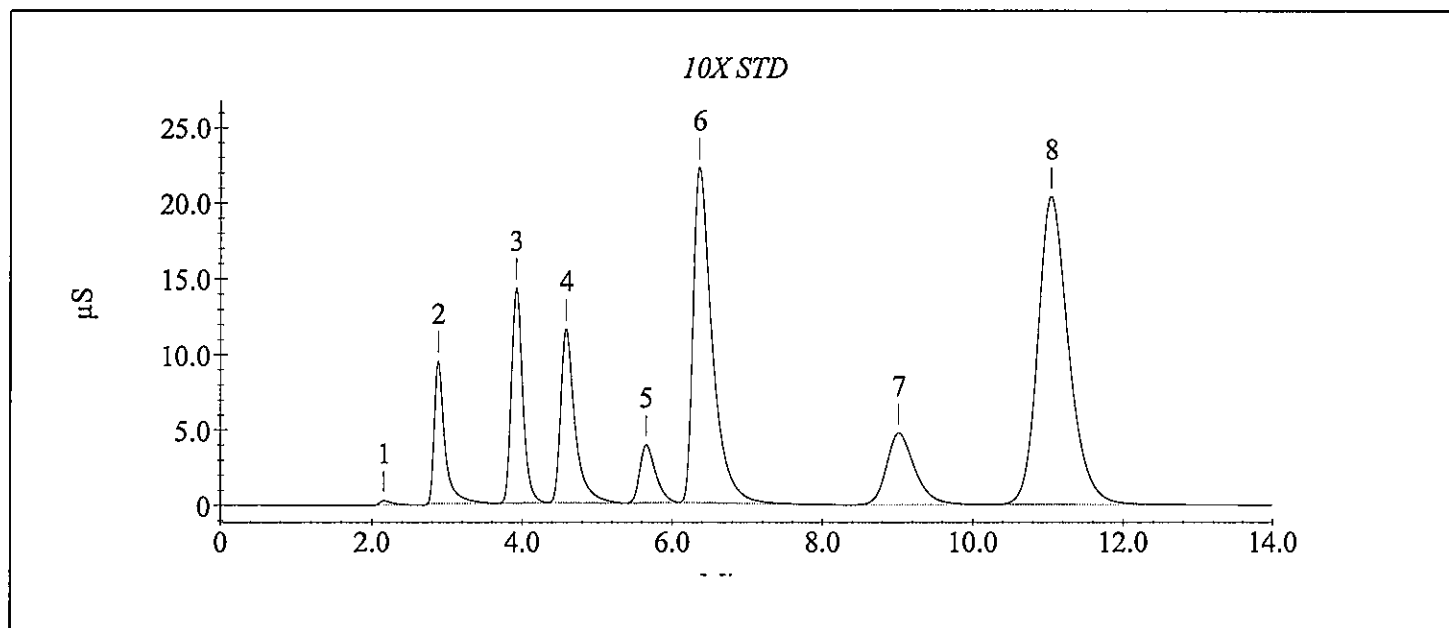
## Calibration Update Report

Sample Name : 10X STD

Data File Name : C:\PEAKNET\DATA\131111IC1\131111\_003.DXD

Method File Name : C:\PeakNet\method\131111ic1.met  
Schedule File Name : c:\peaknet\schedule\131111ic1.sch  
Date Time Acquired : 11/11/13 2:26:37 PM  
Calibration Date : 11/11/13 4:22:37 PM

System Operator : AJD  
Datafile Updated : 11/11/13 4:18:59 PM  
Method Comment : Flow rate = 1.2 mL/min,  
Eluent =...



## Calibration Update Report

Sample Name : 25X STD

Data File Name : C:\PEAKNET\DATA\131111IC1\131111\_004.DXD

Method File Name : C:\PeakNet\method\131111ic1.met  
Schedule File Name : c:\peaknet\schedule\131111ic1.sch  
Date Time Acquired : 11/11/13 2:40:46 PM  
Calibration Date : 11/12/13 8:30:00 AM

System Operator : AJD  
Datafile Updated : 11/11/13 4:19:25 PM  
Method Comment : Flow rate = 1.2 mL/min,  
Eluent =...

### Peak Information : All Components

Peak #	Analyte	Retention Time (min.)	Concentration	Peak Area
2	Fluoride	2.88	10000	343263
3	Chloride	3.92	20000	556434
4	Nitrite as N	4.59	10000	583989
5	Bromide	5.67	20000	216136
6	Nitrate as N	6.41	20000	1399435
7	Orthophosphate as P	9.04	20000	483234
8	Sulfate	11.08	100000	2101238
	Nitrate/Nitrite as N			

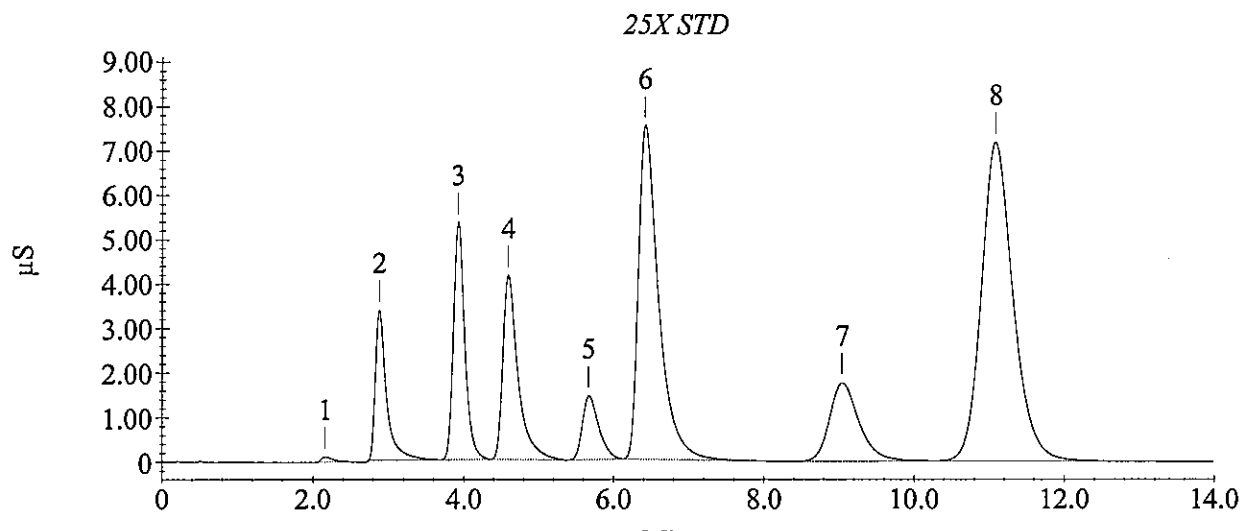
## Calibration Update Report

Sample Name : 25X STD

Data File Name : C:\PEAKNET\DATA\131111IC1\131111\_004.DXD

Method File Name : C:\PeakNet\method\131111ic1.met  
Schedule File Name : c:\peaknet\schedule\131111ic1.sch  
Date Time Acquired : 11/11/13 2:40:46 PM  
Calibration Date : 11/12/13 8:30:00 AM

System Operator : AJD  
Datafile Updated : 11/11/13 4:19:25 PM  
Method Comment : Flow rate = 1.2 mL/min,  
Eluent =...



## Calibration Update Report

Sample Name : 100X STD

Data File Name : C:\PEAKNET\DATA\131111IC1\131111\_005.DXD

Method File Name : C:\PeakNet\method\131111ic1.met	System Operator : AJD
Schedule File Name : c:\peaknet\schedule\131111ic1.sch	Datafile Updated : 11/11/13 4:20:02 PM
Date Time Acquired : 11/11/13 2:54:58 PM	Method Comment : Flow rate = 1.2 mL/min,
Calibration Date : 11/12/13 8:30:00 AM	Eluent =...

Peak Information : All Components				
Peak #	Analyte	Retention Time (min.)	Concentration	Peak Area
2	Fluoride	2.87	10000	81730
3	Chloride	3.92	20000	134784
4	Nitrite as N	4.59	10000	136080
5	Bromide	5.68	20000	52804
6	Nitrate as N	6.47	20000	327975
7	Orthophosphate as P	9.07	20000	125579
8	Sulfate	11.09	100000	489614
	Nitrate/Nitrite as N			

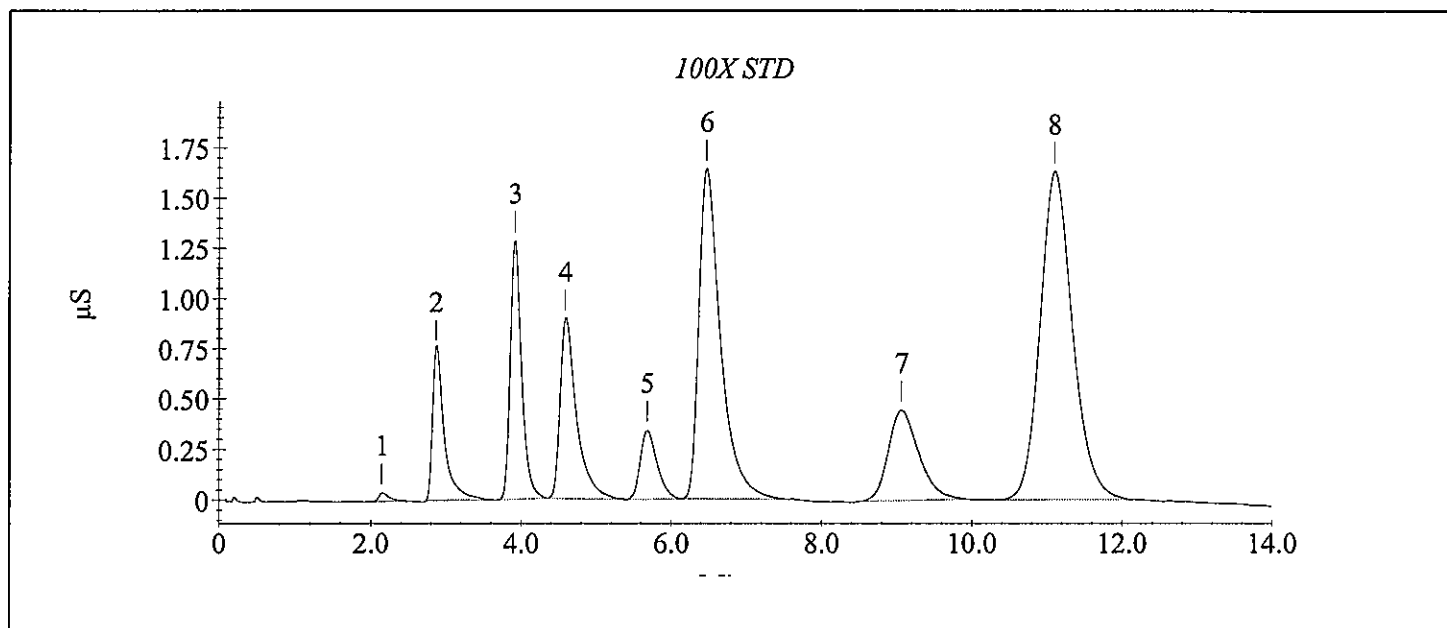
## Calibration Update Report

Sample Name : 100X STD

Data File Name : C:\PEAKNET\DATA\131111IC1\131111\_005.DXD

Method File Name : C:\PeakNet\method\131111ic1.met  
Schedule File Name : c:\peaknet\schedule\131111ic1.sch  
Date Time Acquired : 11/11/13 2:54:58 PM  
Calibration Date : 11/12/13 8:30:00 AM

System Operator : AJD  
Datafile Updated : 11/11/13 4:20:02 PM  
Method Comment : Flow rate = 1.2 mL/min,  
Eluent =...



## Calibration Update Report

Sample Name : 500X STD

Data File Name : C:\PEAKNET\DATA\131111IC1\131111\_006.DXD

Method File Name : C:\PeakNet\method\131111ic1.met	System Operator : AJD
Schedule File Name : c:\peaknet\schedule\131111ic1.sch	Datafile Updated : 11/12/13 8:31:30 AM
Date Time Acquired : 11/11/13 3:09:08 PM	Method Comment : Flow rate = 1.2 mL/min,
Calibration Date : 11/12/13 8:30:00 AM	Eluent =...

Peak Information : All Components				
Peak #	Analyte	Retention Time (min.)	Concentration	Peak Area
2	Fluoride	2.87	10000	15018
3	Chloride	3.92	20000	28074
4	Nitrite as N	4.61	10000	22582
5	Bromide	5.69	20000	10864
6	Nitrate as N	6.53	20000	66015
7	Orthophosphate as P	9.09	20000	28834
8	Sulfate	11.11	100000	100489
	Nitrate/Nitrite as N			

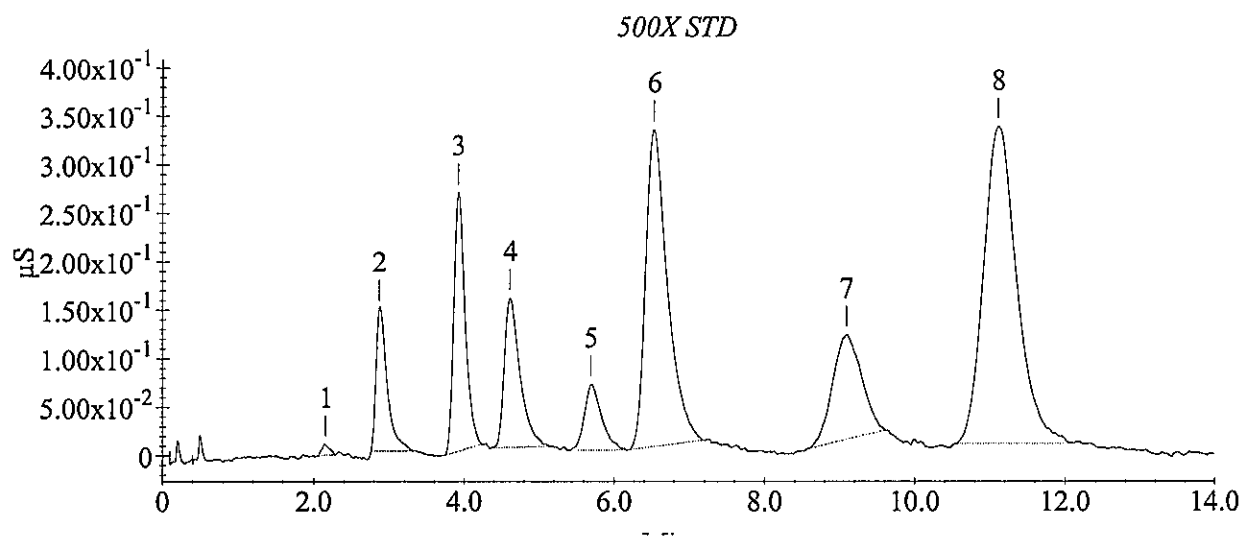
## Calibration Update Report

Sample Name : 500X STD

Data File Name : C:\PEAKNET\DATA\131111IC1\131111\_006.DXD

Method File Name : C:\PeakNet\method\131111ic1.met  
Schedule File Name : c:\peaknet\schedule\131111ic1.sch  
Date Time Acquired : 11/11/13 3:09:08 PM  
Calibration Date : 11/12/13 8:30:00 AM

System Operator : AJD  
Datafile Updated : 11/12/13 8:31:30 AM  
Method Comment : Flow rate = 1.2 mL/min,  
Eluent =...



## Calibration Update Report

Sample Name : 1000X STD

Data File Name : C:\PEAKNET\DATA\131111IC1\131111\_007.DXD

Method File Name : C:\PeakNet\method\131111ic1.met	System Operator : AJD
Schedule File Name : c:\peaknet\schedule\131111ic1.sch	Datafile Updated : 11/11/13 4:21:46 PM
Date Time Acquired : 11/11/13 3:23:19 PM	Method Comment : Flow rate = 1.2 mL/min,
Calibration Date : 11/12/13 8:30:00 AM	Eluent =...

Peak Information : All Components				
Peak #	Analyte	Retention Time (min.)	Concentration	Peak Area
2	Fluoride	2.88	50	8218
3	Chloride	3.92	100	15701
4	Nitrite as N	4.61	50	9689
5	Bromide	5.69	100	5483
6	Nitrate as N	6.53	100	34719
7	Orthophosphate as P	9.11	100	22750
8	Sulfate	11.11	500	52968
	Nitrate/Nitrite as N			



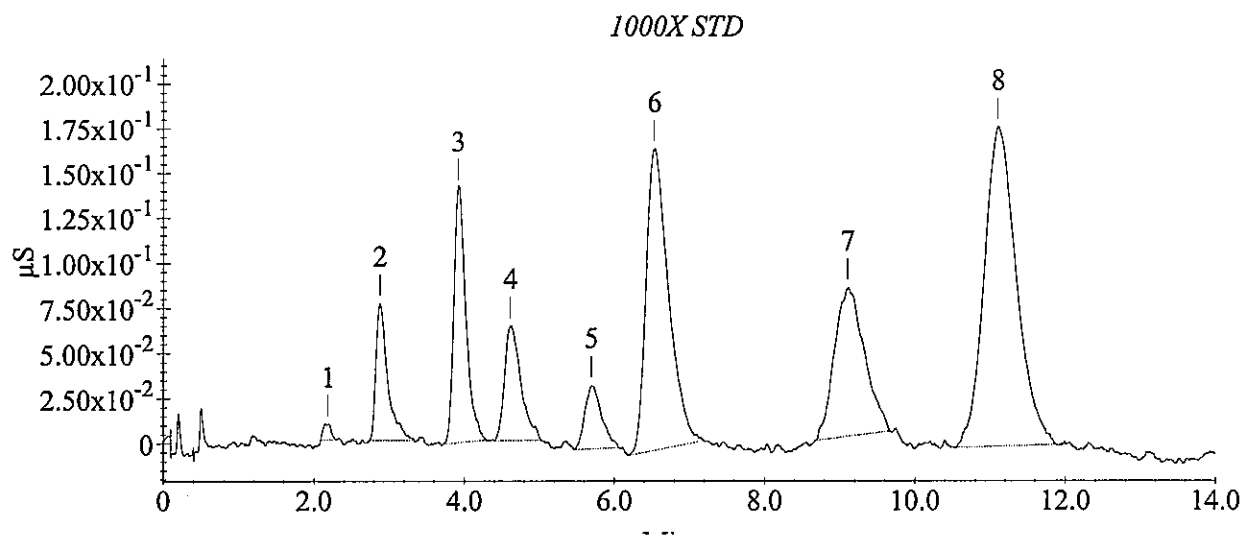
## Calibration Update Report

Sample Name : 1000X STD

Data File Name : C:\PEAKNET\DATA\131111IC1\131111\_007.DXD

Method File Name : C:\PeakNet\method\131111ic1.met  
Schedule File Name : c:\peaknet\schedule\131111ic1.sch  
Date Time Acquired : 11/11/13 3:23:19 PM  
Calibration Date : 11/12/13 8:30:00 AM

System Operator : AJD  
Datafile Updated : 11/11/13 4:21:46 PM  
Method Comment : Flow rate = 1.2 mL/min,  
Eluent =...



## Calibration Update Report

Sample Name : 0 STD

Data File Name : C:\PEAKNET\DATA\131111IC1\131111\_008.DXD

Method File Name : C:\PeakNet\method\131111ic1.met	System Operator : AJD
Schedule File Name : c:\peaknet\schedule\131111ic1.sch	Datafile Updated : 11/11/13 4:23:25 PM
Date Time Acquired : 11/11/13 3:37:30 PM	Method Comment : Flow rate = 1.2 mL/min,
Calibration Date : 11/12/13 8:30:00 AM	Eluent =...

Peak Information : All Components				
Peak #	Analyte	Retention Time (min.)	Concentration	Peak Area
1	Chloride	3.96	0	1681
1	Chloride	3.96	0	1681
	Nitrite as N			
	Bromide			
	Nitrate as N			
2	Orthophosphate as P	9.12	0	3855
	Sulfate			
	Nitrate/Nitrite as N			

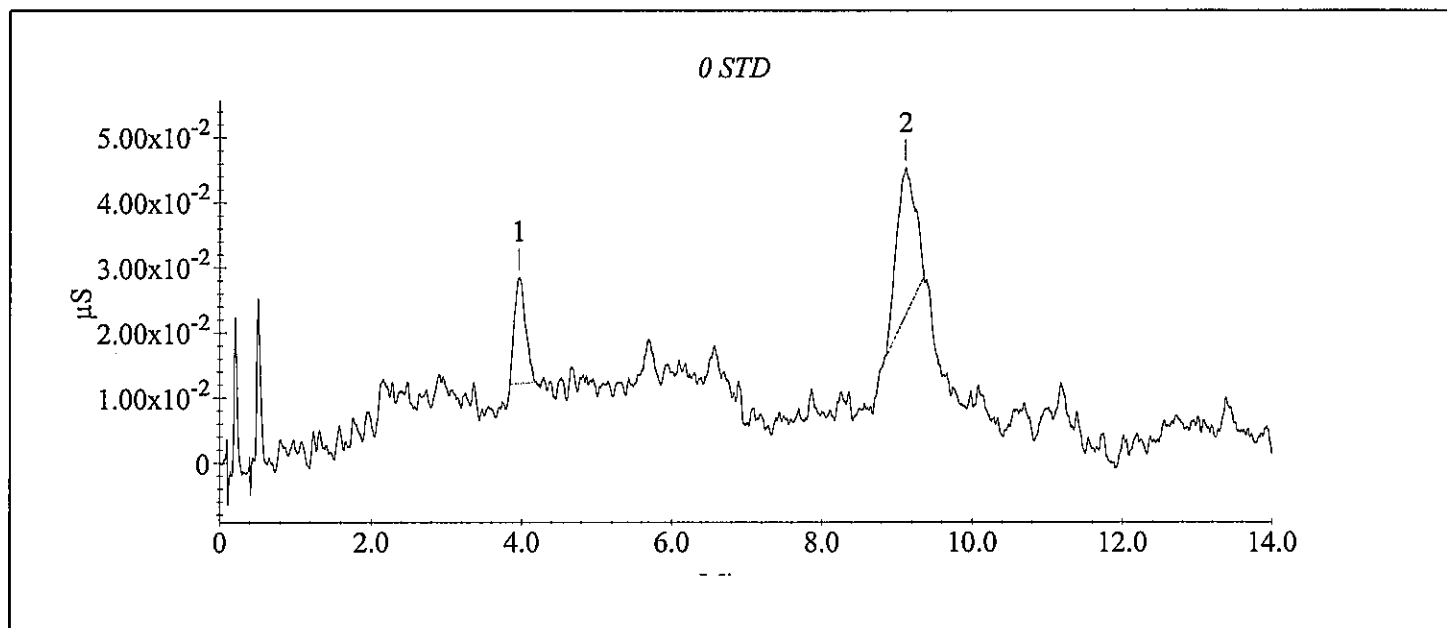
## Calibration Update Report

Sample Name : 0 STD

Data File Name : C:\PEAKNET\DATA\131111IC1\131111\_008.DXD

Method File Name : C:\PeakNet\method\131111ic1.met  
Schedule File Name : c:\peaknet\schedule\131111ic1.sch  
Date Time Acquired : 11/11/13 3:37:30 PM  
Calibration Date : 11/12/13 8:30:00 AM

System Operator : AJD  
Datafile Updated : 11/11/13 4:23:25 PM  
Method Comment : Flow rate = 1.2 mL/min,  
Eluent =...



DAILY VERIFICATION FOR ION CHROMATOGRAPH-1  
(Used internally for comparative check purposes)

Analysis Date: 11/11/2013  
Analyst Name: AJD  
Filename for ICV: 131111ic1/131111\_009.DXD  
Calibration Date: 11/11/2013  
Method ID: 131111ic1.met  
Updated Method date: NA

Calibration Equation Verification (ICV)

Analyte	calibration type:	1st		2nd regression coefficient	A		B
		regression coefficient	intercept		conc reported by PeakNet ug/L	conc calc by spread- sheet ug/L	A/B *100 agreement %
Ophos	quad. ignore 0.0	-2.617353E-10	-3.342	7.322904E-03	4810.6	4810.6	100.0

Retention Time (RT) Verification

Analyte	RT at calibration	RT in updated method (1st ICV or CCV)	deviation % (calibration vs. update) 10% tolerance	window width tolerance (NA)
F	2.88	2.88	0.0	5.00 %
Cl	3.92	3.92	0.0	5.00 %
NO2-N	4.60	4.60	0.0	4.90 %
Br	5.67	5.67	0.0	7.30 %
NO3-N	6.41	6.41	0.0	10.00%
PO4-P	9.04	9.04	0.0	4.10 %
SO4	11.08	11.08	0.0	4.10 %

## Sample Analysis Report

Sample Name : ICV

Data File Name : C:\PEAKNET\DATA\131111IC1\131111\_009.DXD

Method File Name : C:\PeakNet\method\131111ic1.met

Current Date : 11/11/13

Date, Time Analyzed : 11/11/13 3:51:35 PM

Current Time : 4:35:14 PM

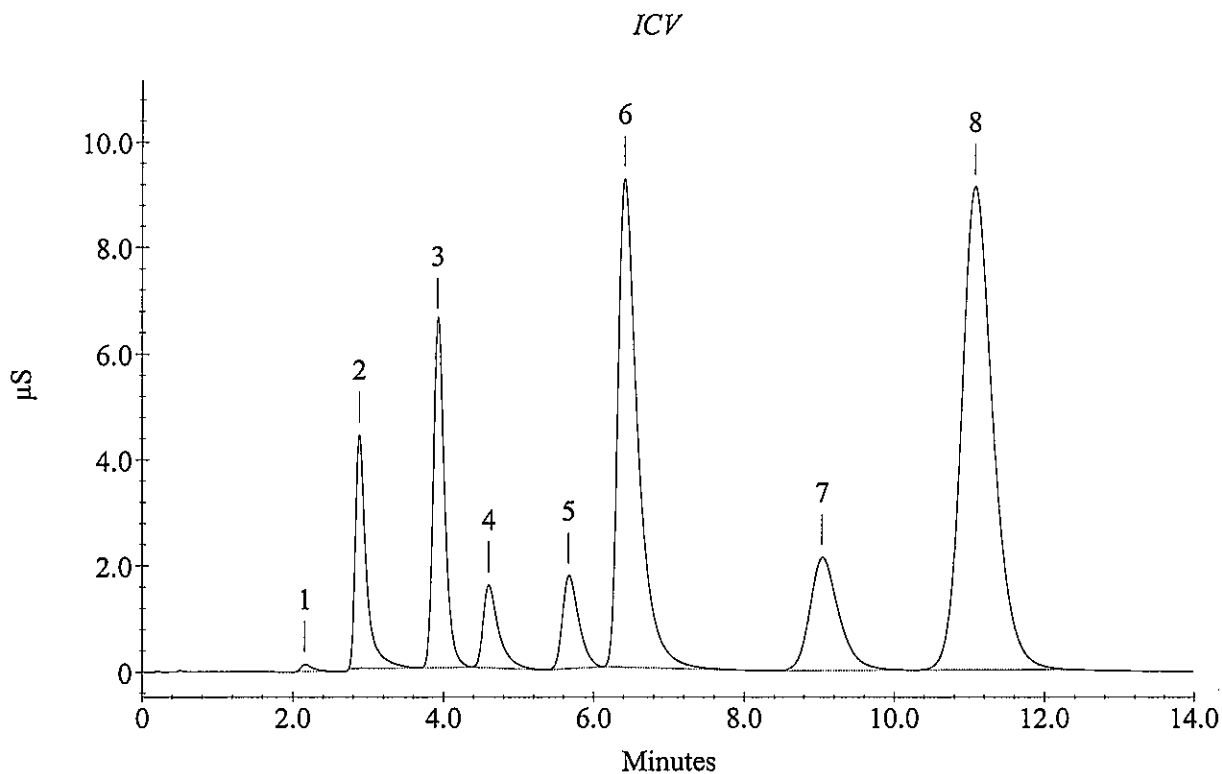
System Operator : AJD

Datafile Updated : 11/11/13 4:31:17 PM

Calibration Updated : 11/11/13 4:22:37 PM

### Peak Information : All Components

Peak Number	Analyte	Retention Time (min.)	Concentration (ug/L)	Limit Exceeded	Peak Area
2	Fluoride	2.88	2464.8		436667
3	Chloride	3.92	4809.0		689217
4	Nitrite as N	4.60	786.6		224512
5	Bromide	5.67	4831.4		263344
6	Nitrate as N	6.41	4647.3		1701358
7	Orthophosphate as P	9.04	4730.3		575385
8	Sulfate	11.08	24252.5		2657436
	Nitrate/Nitrite as N				



## Sample Analysis Report

Sample Name : ICB

Data File Name : C:\PEAKNET\DATA\131111IC1\131111\_010.DXD

Method File Name : C:\PeakNet\method\131111ic1.met

Current Date : 11/11/13

Date, Time Analyzed : 11/11/13 4:05:45 PM

Current Time : 4:36:06 PM

System Operator : AJD

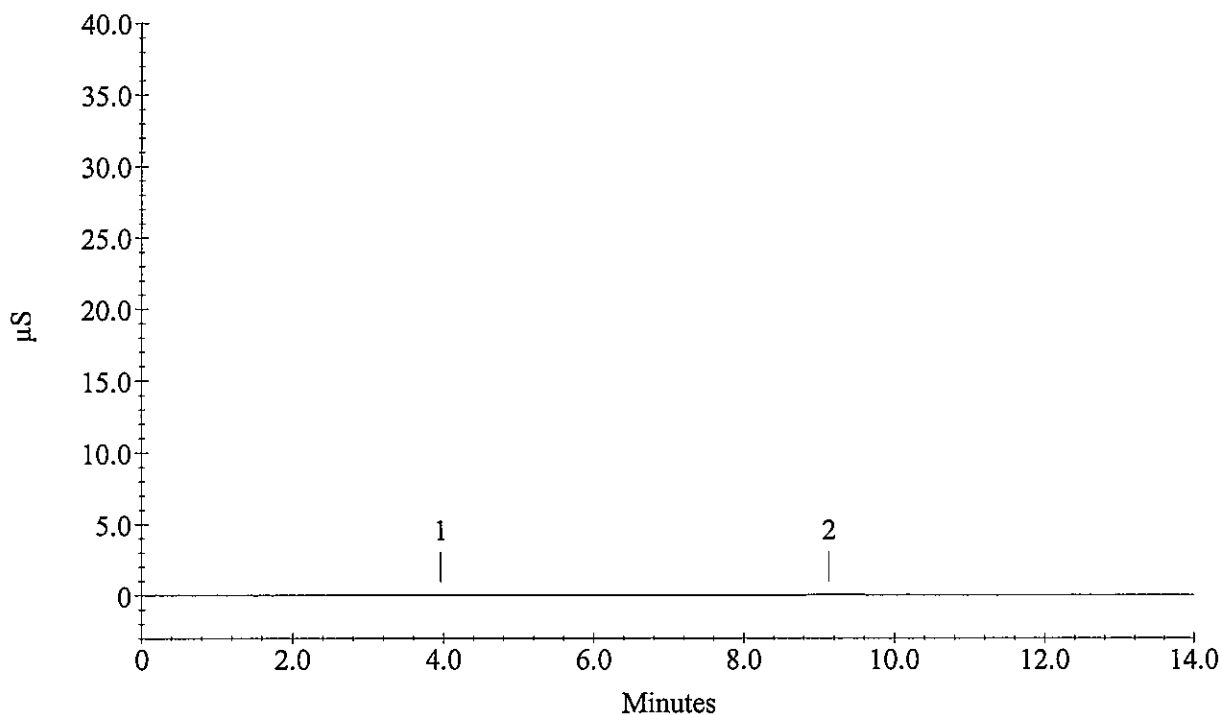
Datafile Updated : 11/11/13 4:19:45 PM

Calibration Updated : 11/11/13 4:22:37 PM

### Peak Information : All Components

Peak Number	Analyte	Retention Time (min.)	Concentration (ug/L)	Limit Exceeded	Peak Area
1	Chloride	3.96	28.8	-	2134
1	Chloride	3.96	28.8	-	2134
	Nitrite as N				
	Bromide				
	Nitrate as N				
2	Orthophosphate as P	9.13	29.8	-	10081
	Sulfate				
	Nitrate/Nitrite as N				

ICB



# **DAILY VERIFICATION FOR ION CHROMATOGRAPH-1** (Used internally for comparative check purposes)

Analysis Date: 11/21/2013

Analyst Name: AJD

Filename for CCV: 131121ic1/131121\_011.DXD

Calibration Date: 11/11/2013

Method ID: 131111ic1A.met

Updated Method date: NA

## **Calibration Equation Verification (ICV)**

Analyte	calibration type:	1st		2nd		A		B	
		regression coefficient	intercept	regression coefficient	intercept	conc reported by PeakNet ug/L	observed peak area	conc calc by spread-sheet ug/L	A/B *100 agreement %
Ophos	quad. ignore 0.0	-2.617353E-10	-3.342	7.322904E-03	-3.342	4810.6	673604	4810.6	100.0

## **Retention Time (RT) Verification**

Analyte	RT at		RT in		deviation % (calibration vs. update) 10% tolerance	window width tolerance (NA)
	calibration	updated method (1st ICV or CCV)	calibration	updated method (1st ICV or CCV)		
F	2.88	2.91	2.88	2.91	1.0	5.00 %
Cl	3.92	3.97	3.92	3.97	1.3	5.00 %
NO2-N	4.60	4.65	4.60	4.65	1.1	4.90 %
Br	5.67	5.76	5.67	5.76	1.6	7.30 %
NO3-N	6.41	6.49	6.41	6.49	1.2	10.00%
PO4-P	9.04	9.03	9.04	9.03	0.1	4.10 %
SO4	11.08	11.07	11.08	11.07	0.1	4.10 %

## Sample Analysis Report

Sample Name : CCV

Data File Name : c:\peaknet\data\131121ic1\131121\_011.DXD

Method File Name : c:\peaknet\method\131111ic1a.met

Current Date : 11/21/13

Date, Time Analyzed : 11/21/13 5:09:41 PM

Current Time : 5:23:44 PM

System Operator : AJD

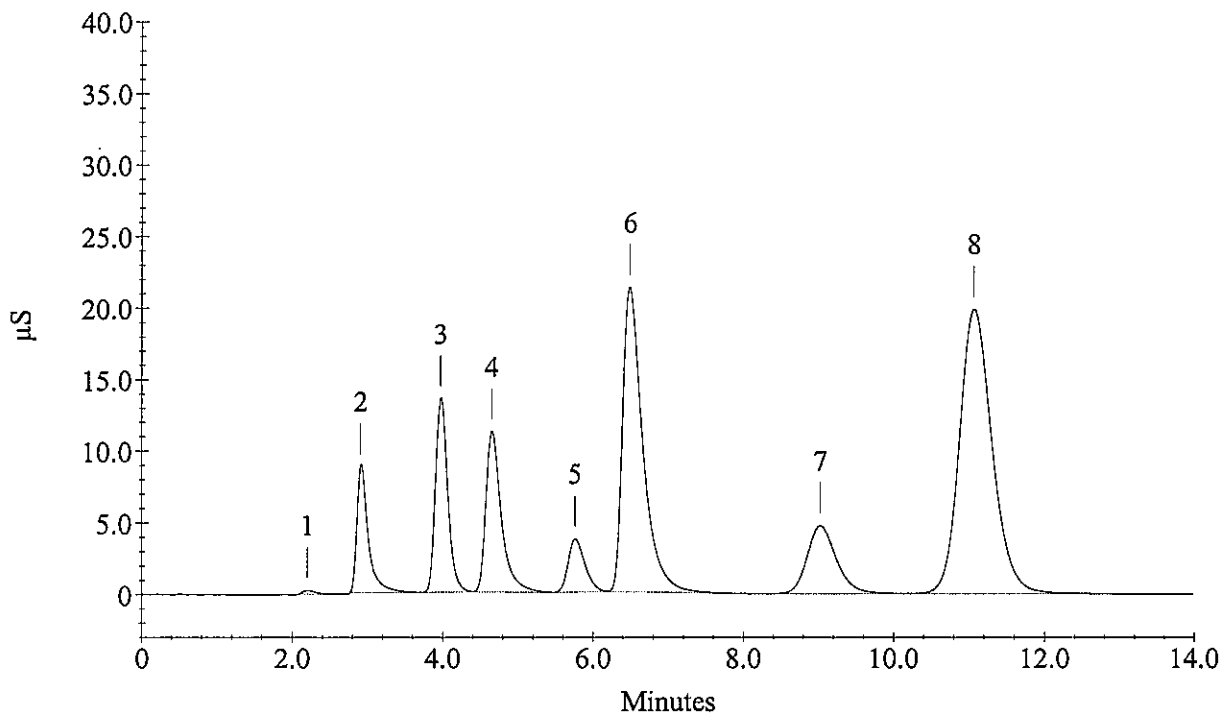
Datafile Updated : 11/21/13 5:23:43 PM

Calibration Updated : 11/21/13 8:26:48 AM

### Peak Information : All Components

Peak Number	Analyte	Retention Time (min.)	Concentration (ug/L)	Limit Exceeded	Peak Area
2	Fluoride	2.91	5084.4 ✓		936174
3	Chloride	3.97	10246.4 ✓		1536060
4	Nitrite as N	4.65	5191.6 ✓		1601814
5	Bromide	5.76	10215.0 ✓		572437
6	Nitrate as N	6.49	10220.2 ✓		3965078
7	Orthophosphate as P	9.03	10308.4 ✓		1284404
8	Sulfate	11.07	51485.1 ✓		5949612
	Nitrate/Nitrite as N				

CCV





## Sample Analysis Report

Sample Name : CCB

Data File Name : c:\peaknet\data\131121ic1\131121\_012.DXD

Method File Name : c:\peaknet\method\131111ic1a.met

Current Date : 11/21/13

Date, Time Analyzed : 11/21/13 5:23:47 PM

Current Time : 5:37:50 PM

System Operator : AJD

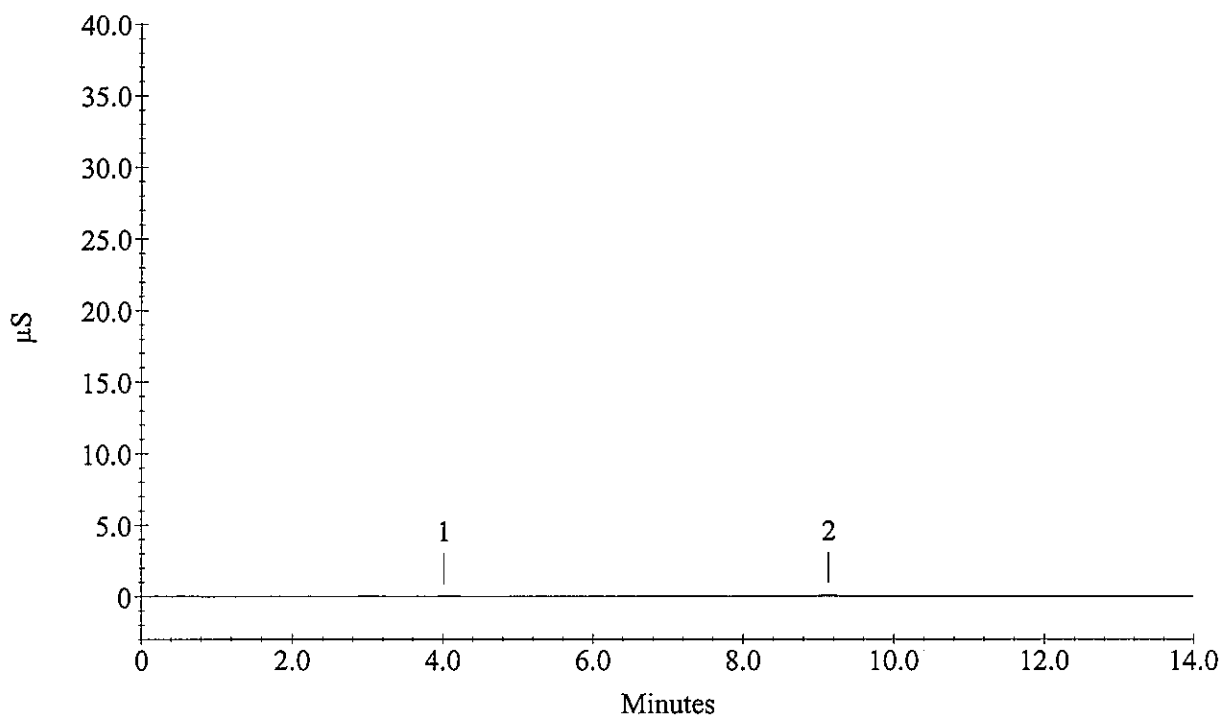
Datafile Updated : 11/21/13 5:37:48 PM

Calibration Updated : 11/21/13 8:26:48 AM

### Peak Information : All Components

Peak Number	Analyte	Retention Time (min.)	Concentration (ug/L)	Limit Exceeded	Peak Area
1	Chloride	4.01	22.4	-	1248
1	Chloride	4.01	22.4	-	1248
	Nitrite as N				
	Bromide				
	Nitrate as N				
2	Orthophosphate as P	9.13	171.5	-	26736
	Sulfate				
	Nitrate/Nitrite as N				

### CCB



## Sample Analysis Report

Sample Name : IC131121-1LCS

Data File Name : c:\peaknet\data\131121ic1\131121\_013.DXD

Method File Name : c:\peaknet\method\131111ic1a.met

Current Date : 11/21/13

Date, Time Analyzed : 11/21/13 5:37:52 PM

Current Time : 5:51:55 PM

System Operator : AJD

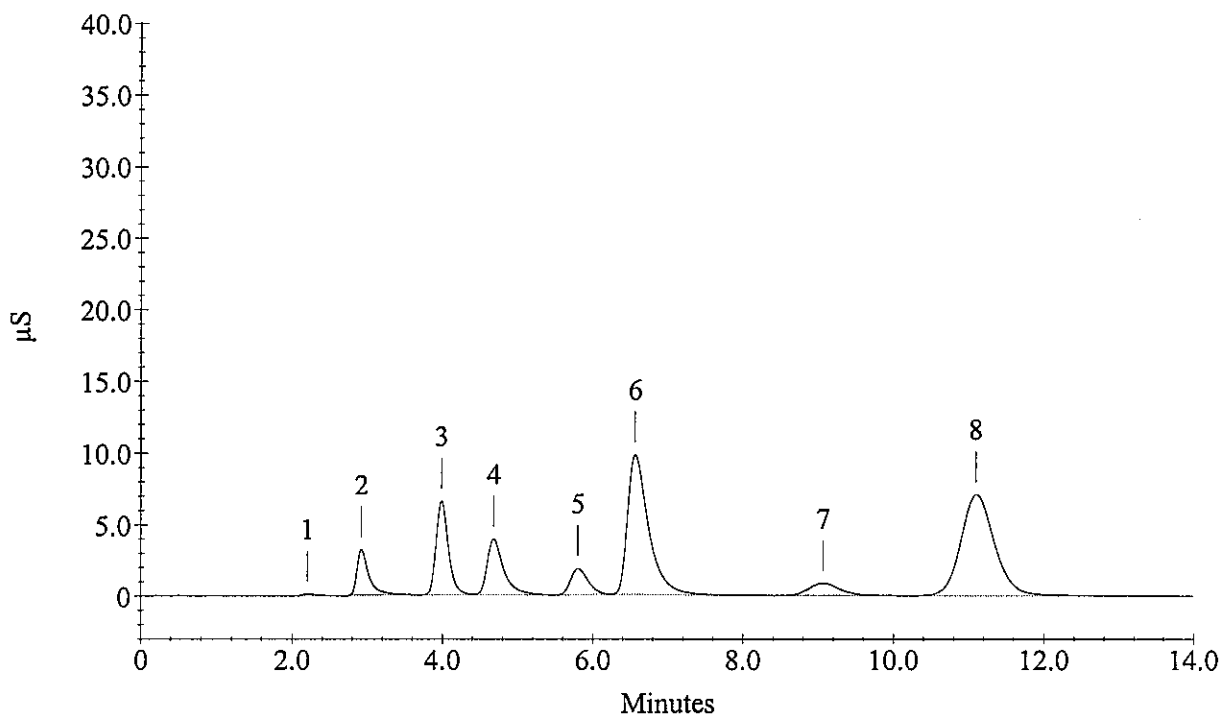
Datafile Updated : 11/21/13 5:51:54 PM

Calibration Updated : 11/21/13 5:26:27 PM

### Peak Information : All Components

Peak Number	Analyte	Retention Time (min.)	Concentration (ug/L)	Limit Exceeded	Peak Area
2	Fluoride	2.92	1996.7 ✓		350937
3	Chloride	3.99	5157.8 ✓		741277
4	Nitrite as N	4.68	1992.9 ✓		589730
5	Bromide	5.80	5398.9 ✓		295128
6	Nitrate as N	6.56	5204.4 ✓		1917071
7	Orthophosphate as P	9.07	2047.3 ✓		249423
8	Sulfate	11.09	20321.7 ✓		2207860
	Nitrate/Nitrite as N				

### IC131121-1LCS



## Sample Analysis Report

Sample Name : IC131121-1MB

Data File Name : c:\peaknet\data\131121ic1\131121\_014.DXD

Method File Name : c:\peaknet\method\131111ic1a.met

Current Date : 11/21/13

Date, Time Analyzed : 11/21/13 5:51:58 PM

Current Time : 6:05:59 PM

System Operator : AJD

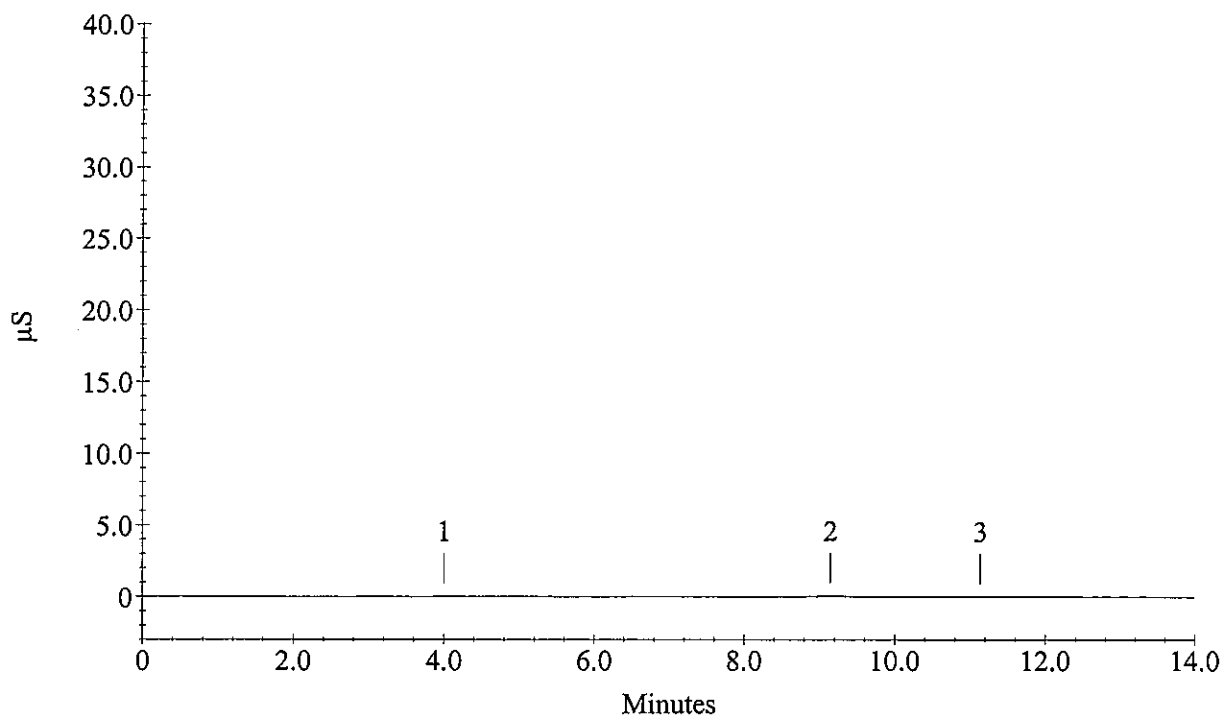
Datafile Updated : 11/21/13 6:05:59 PM

Calibration Updated : 11/21/13 5:26:27 PM

### Peak Information : All Components

Peak Number	Analyte	Retention Time (min.)	Concentration (ug/L)	Limit Exceeded	Peak Area
1	Chloride	4.00	27.0	-	1885
1	Chloride	4.00	27.0	-	1885
	Nitrite as N				
	Bromide				
	Nitrate as N				
2	Orthophosphate as P	9.15	87.4	-	16846
3	Sulfate	11.13	302.9	-	2673
	Nitrate/Nitrite as N				

### IC131121-1MB



## Sample Analysis Report

Sample Name : CCV

Data File Name : c:\peaknet\data\131121ic1\131121\_023.DXD

Method File Name : c:\peaknet\method\131111ic1a.met

Current Date : 11/21/13

Date, Time Analyzed : 11/21/13 7:58:37 PM

Current Time : 8:12:40 PM

System Operator : AJD

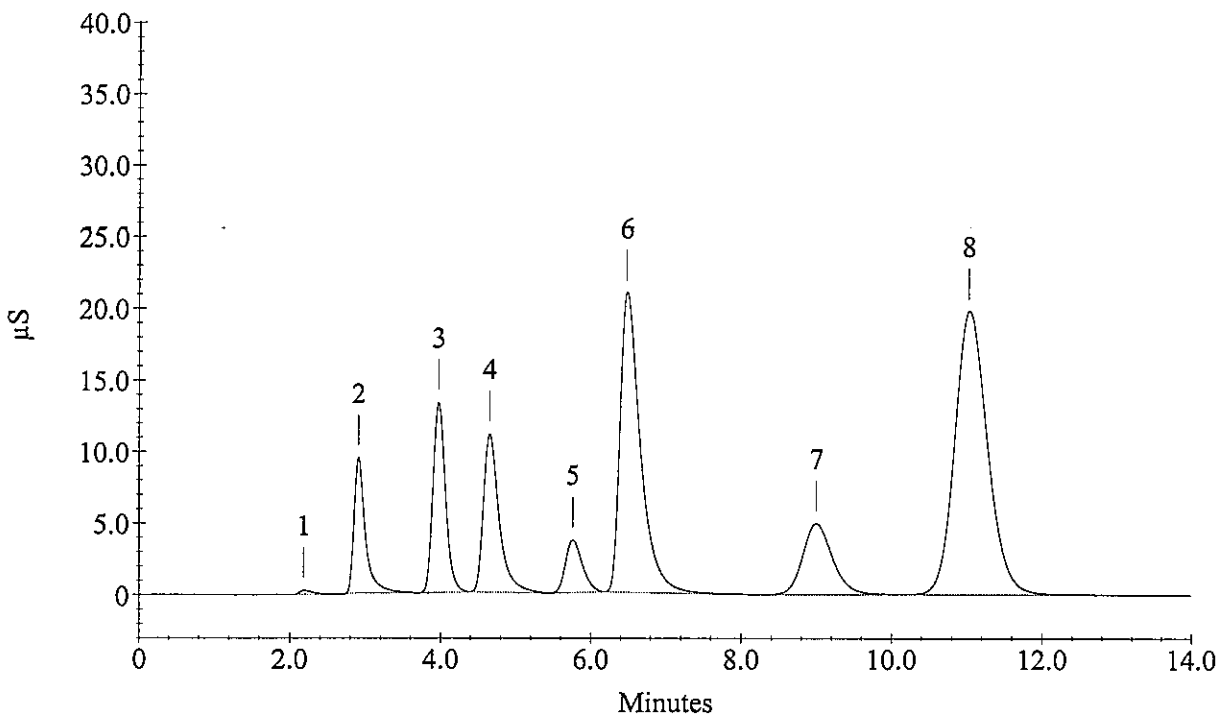
Datafile Updated : 11/21/13 8:12:39 PM

Calibration Updated : 11/21/13 5:26:27 PM

### Peak Information : All Components

Peak Number	Analyte	Retention Time (min.)	Concentration (ug/L)	Limit Exceeded	Peak Area
2	Fluoride	2.91	5308.3 ✓		980557
3	Chloride	3.97	10195.1 ✓		1527687
4	Nitrite as N	4.65	5172.0 ✓		1595393
5	Bromide	5.76	10201.0 ✓		571608
6	Nitrate as N	6.48	10209.2 ✓		3960348
7	Orthophosphate as P	9.00	10834.7 ✓		1353708
8	Sulfate	11.03	51550.0 ✓		5957864
	Nitrate/Nitrite as N				

CCV



## Sample Analysis Report

Sample Name : CCB

Data File Name : c:\peaknet\data\131121ic1\131121\_024.DXD

Method File Name : c:\peaknet\method\131111ic1a.met

Current Date : 11/21/13

Date, Time Analyzed : 11/21/13 8:12:43 PM

Current Time : 8:26:45 PM

System Operator : AJD

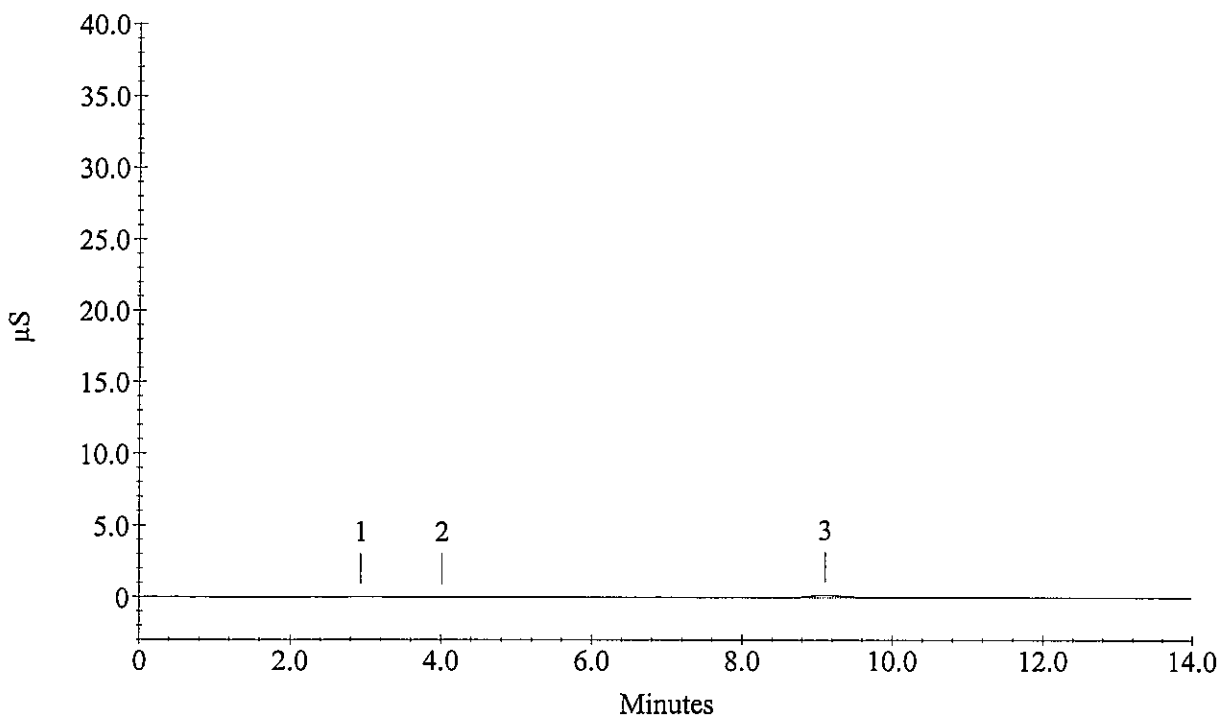
Datafile Updated : 11/21/13 8:26:44 PM

Calibration Updated : 11/21/13 5:26:27 PM

### Peak Information : All Components

Peak Number	Analyte	Retention Time (min.)	Concentration (ug/L)	Limit Exceeded	Peak Area
1		2.93	0.0		298
2	Chloride	4.01	31.6	-	2522
	Nitrite as N				
	Bromide				
	Nitrate as N				
3	Orthophosphate as P	9.11	356.9		48561
	Sulfate				
	Nitrate/Nitrite as N				

CCB



## Sample Analysis Report

Sample Name : 1311394-1 5x

Data File Name : c:\peaknet\data\131121ic1\131121\_031.DXD

Method File Name : c:\peaknet\method\131111ic1a.met

Current Date : 11/21/13

Date, Time Analyzed : 11/21/13 9:51:13 PM

Current Time : 10:05:16 PM

System Operator : AJD

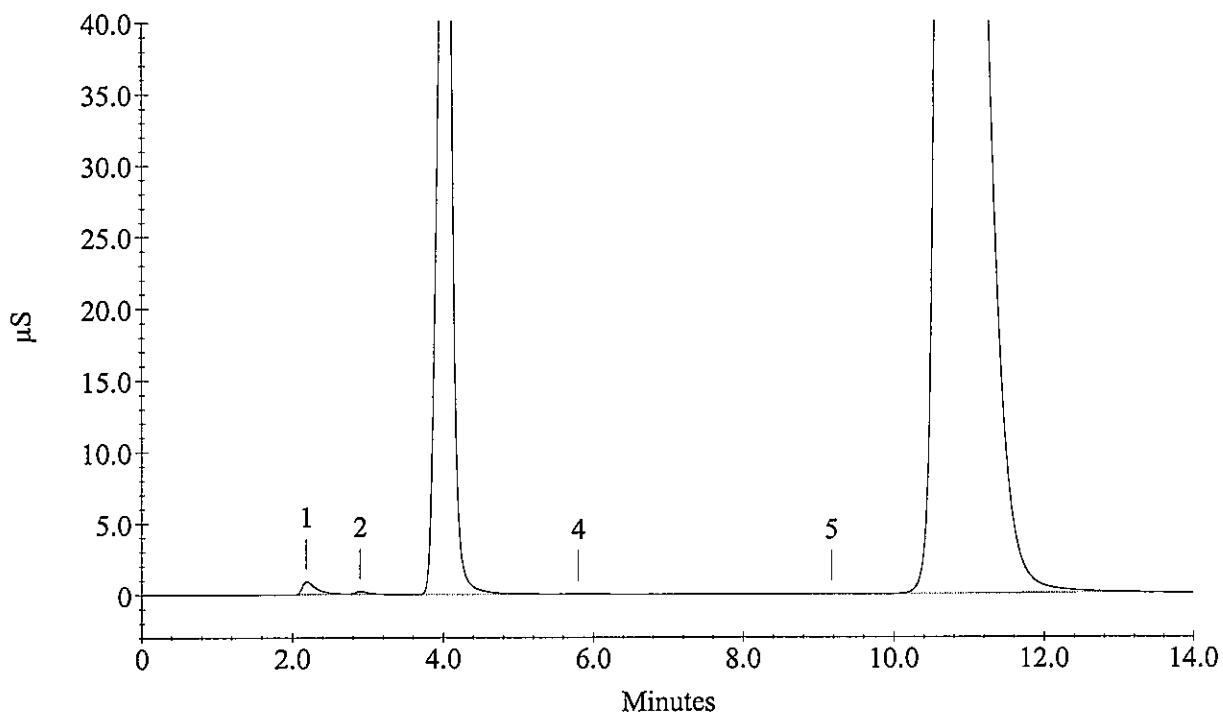
Datafile Updated : 11/21/13 10:05:15 PM

Calibration Updated : 11/21/13 5:26:27 PM

### Peak Information : All Components

Peak Number	Analyte	Retention Time (min.)	Concentration (ug/L)	Limit Exceeded	Peak Area
2	Fluoride	2.89	126.9		17902
3	Chloride	4.04	36174.0	+	8702347
	Nitrite as N				
4	Bromide	5.80	127.8	-	6527
	Nitrate as N				
5	Orthophosphate as P	9.17	3.9	-	7041
6	Sulfate	10.79	147964.4	+	51480875
	Nitrate/Nitrite as N				

1311394-1 5x



## Sample Analysis Report

Sample Name : 1311394-1 50x

Data File Name : c:\peaknet\data\131121ic1\131121\_032.DXD

Method File Name : c:\peaknet\method\131111ic1a.met

Current Date : 11/21/13

Date, Time Analyzed : 11/21/13 10:05:19 PM

Current Time : 10:19:21 PM

System Operator : AJD

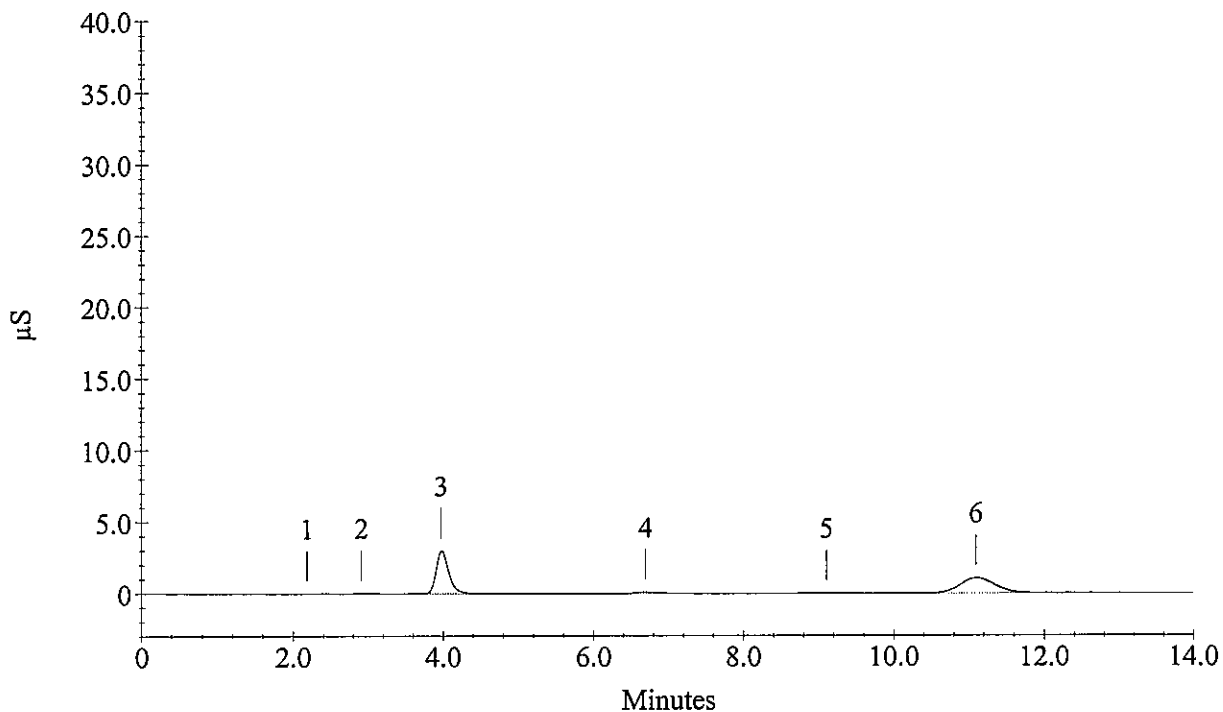
Datafile Updated : 11/21/13 10:19:20 PM

Calibration Updated : 11/21/13 5:26:27 PM

### Peak Information : All Components

Peak Number	Analyte	Retention Time (min.)	Concentration (ug/L)	Limit Exceeded	Peak Area
2	Fluoride	2.91	50.5	-	4604
3	Chloride	3.97	2499.3	-	351292
	Nitrite as N				
	Bromide				
4	Nitrate as N	6.69	119.1	-	20811
5	Orthophosphate as P	9.11	-26.7	-	3454
6	Sulfate	11.09	3447.4	-	340312
	Nitrate/Nitrite as N				

1311394-1 50x



## Sample Analysis Report

Sample Name : CCV

Data File Name : c:\peaknet\data\131121ic1\131121\_035.DXD

Method File Name : c:\peaknet\method\131111ic1a.met

Current Date : 11/21/13

Date, Time Analyzed : 11/21/13 10:47:32 PM

Current Time : 11:01:36 PM

System Operator : AJD

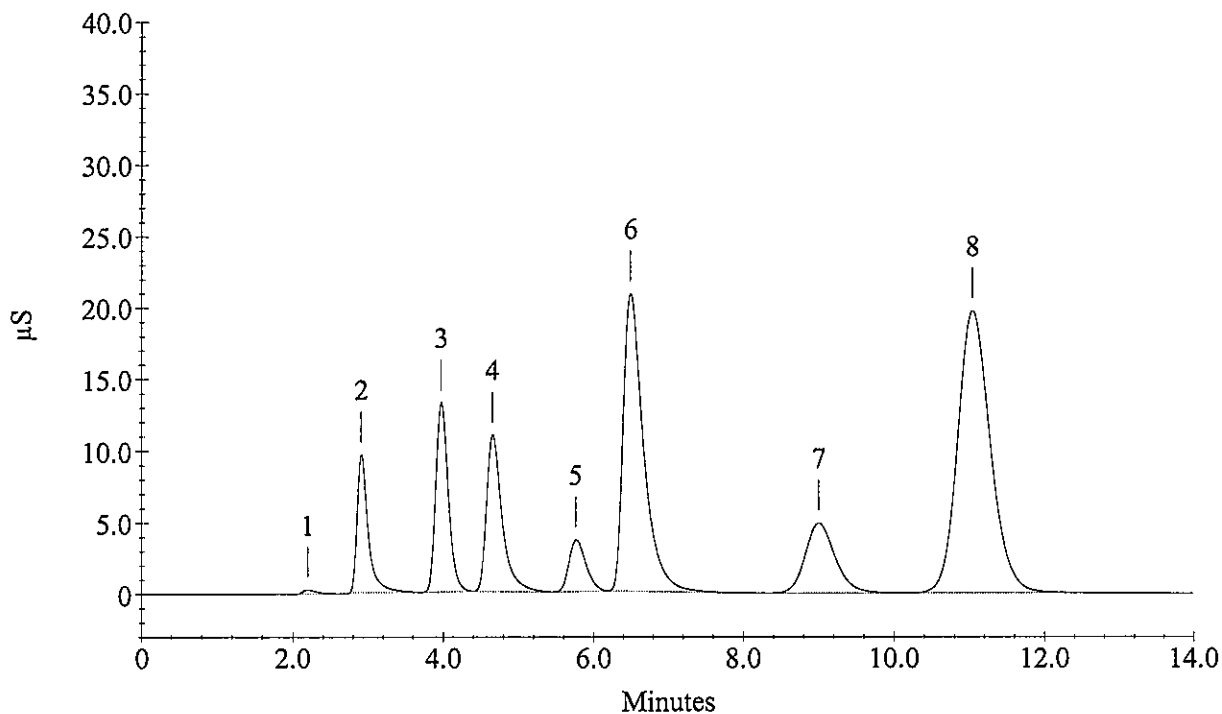
Datafile Updated : 11/21/13 11:01:35 PM

Calibration Updated : 11/21/13 5:26:27 PM

### Peak Information : All Components

Peak Number	Analyte	Retention Time (min.)	Concentration (ug/L)	Limit Exceeded	Peak Area
2	Fluoride	2.91	5381.5✓		995132
3	Chloride	3.97	10167.6✓		1523199
4	Nitrite as N	4.65	5157.8✓		1590755
5	Bromide	5.76	10183.8✓		570593
6	Nitrate as N	6.49	10176.3✓		3946238
7	Orthophosphate as P	9.00	10786.8✓		1347387
8	Sulfate	11.04	51423.1✓		5941710
	Nitrate/Nitrite as N				

CCV





## Sample Analysis Report

Sample Name : CCB

Data File Name : c:\peaknet\data\131121ic1\131121\_036.DXD

Method File Name : c:\peaknet\method\131111ic1a.met

Current Date : 11/21/13

Date, Time Analyzed : 11/21/13 11:01:37 PM

Current Time : 11:15:41 PM

System Operator : AJD

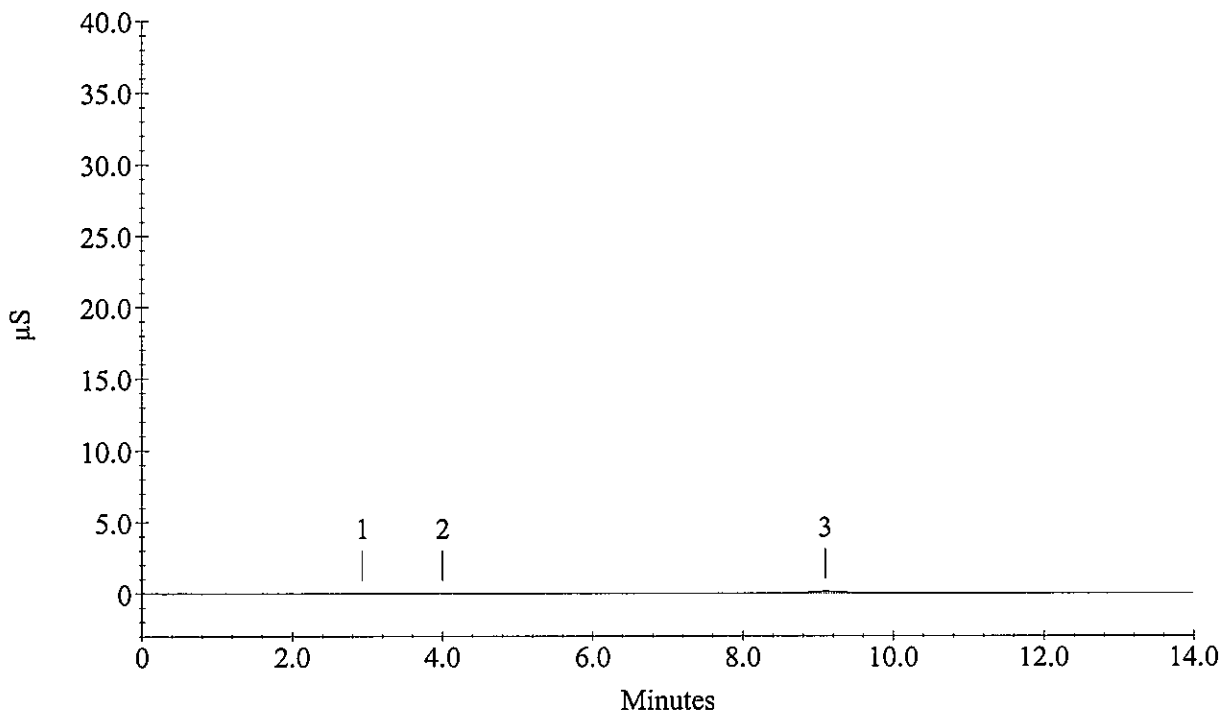
Datafile Updated : 11/21/13 11:15:40 PM

Calibration Updated : 11/21/13 5:26:27 PM

### Peak Information : All Components

Peak Number	Analyte	Retention Time (min.)	Concentration (ug/L)	Limit Exceeded	Peak Area
1		2.93	0.0		759
2	Chloride	4.00	27.7	-	1984
	Nitrite as N				
	Bromide				
	Nitrate as N				
3	Orthophosphate as P	9.09	257.8	-	36888
	Sulfate				
	Nitrate/Nitrite as N				

CCB





## Miscellaneous

## Sample Analysis Report

Sample Name : CCV

Data File Name : c:\peaknet\data\140116ic1\140116\_011.DXD

Method File Name : c:\peaknet\method\131216ic1a.met

Current Date : 1/16/14

Date, Time Analyzed : 1/16/14 10:06:16 AM

Current Time : 10:20:20 AM

System Operator : AJD

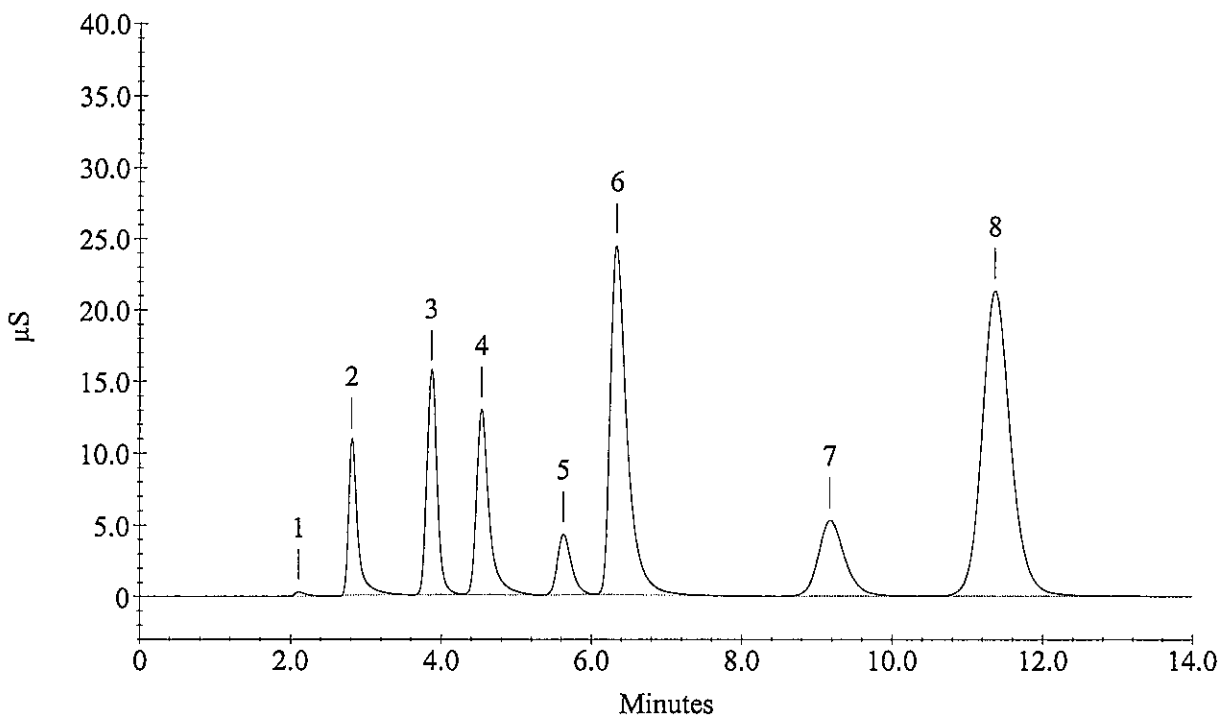
Datafile Updated : 1/16/14 10:20:19 AM

Calibration Updated : 1/14/14 4:57:03 PM

### Peak Information : All Components

Peak Number	Analyte	Retention Time (min.)	Concentration (ug/L)	Limit Exceeded	Peak Area
2	Fluoride	2.81	4709.1 ✓		918947
3	Chloride	3.87	10058.3 ✓		1464377
4	Nitrite as N	4.53	5030.5 ✓		1518458
5	Bromide	5.63	10094.3 ✓		550092
6	Nitrate as N	6.33	10171.0 ✓		3767775
7	Orthophosphate as P	9.17	9796.3 ✓		1302407
8	Sulfate	11.36	50296.1 ✓		5632914
	Nitrate/Nitrite as N				

CCV



## Sample Analysis Report

Sample Name : CCB

Data File Name : c:\peaknet\data\140116ic1\140116\_012.DXD

Method File Name : c:\peaknet\method\131216ic1a.met

Current Date : 1/16/14

Date, Time Analyzed : 1/16/14 10:20:23 AM

Current Time : 10:34:25 AM

System Operator : AJD

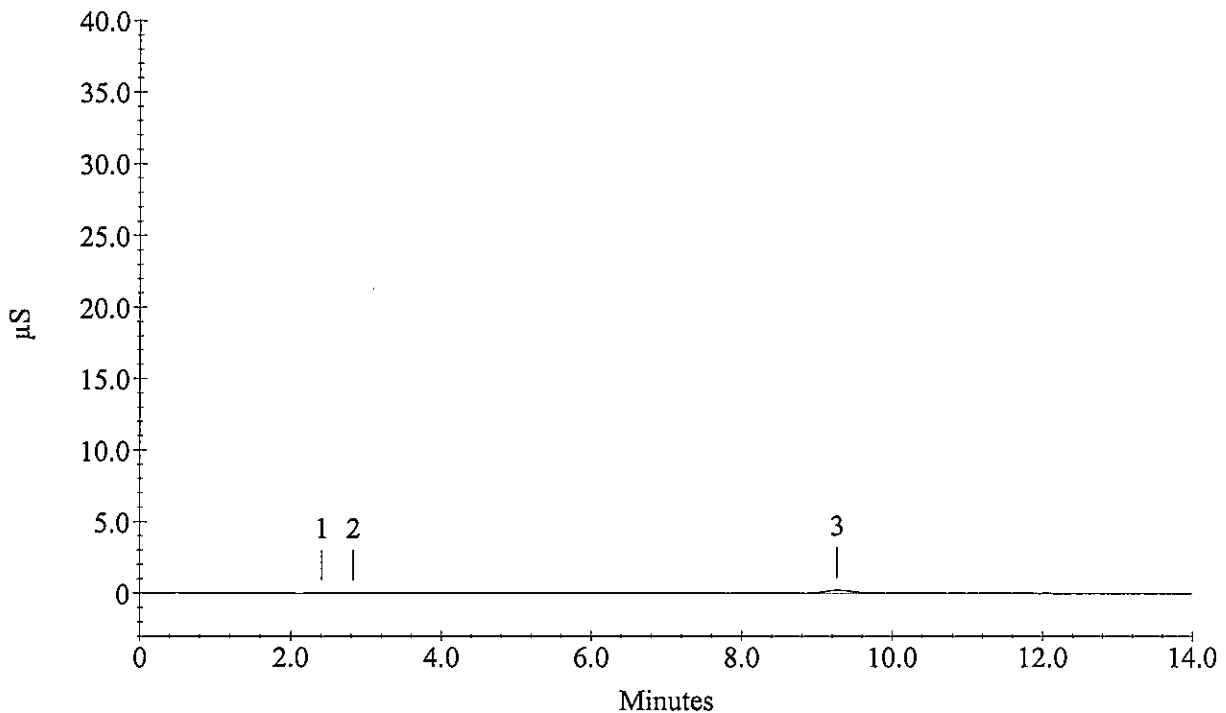
Datafile Updated : 1/16/14 10:34:24 AM

Calibration Updated : 1/14/14 4:57:03 PM

### Peak Information : All Components

Peak Number	Analyte	Retention Time (min.)	Concentration (ug/L)	Limit Exceeded	Peak Area
2	Fluoride Chloride Nitrite as N Bromide Nitrate as N	2.83	34.6	-	1199
3	Orthophosphate as P Sulfate Nitrate/Nitrite as N	9.27	292.7	-	56555

CCB



## Sample Analysis Report

Sample Name : 1311394-1 50x

Data File Name : c:\peaknet\data\140116ic1\140116\_022.DXD

Method File Name : c:\peaknet\method\131216ic1a.met

Current Date : 1/16/14

Date, Time Analyzed : 1/16/14 12:41:12 PM

Current Time : 12:55:14 PM

System Operator : AJD

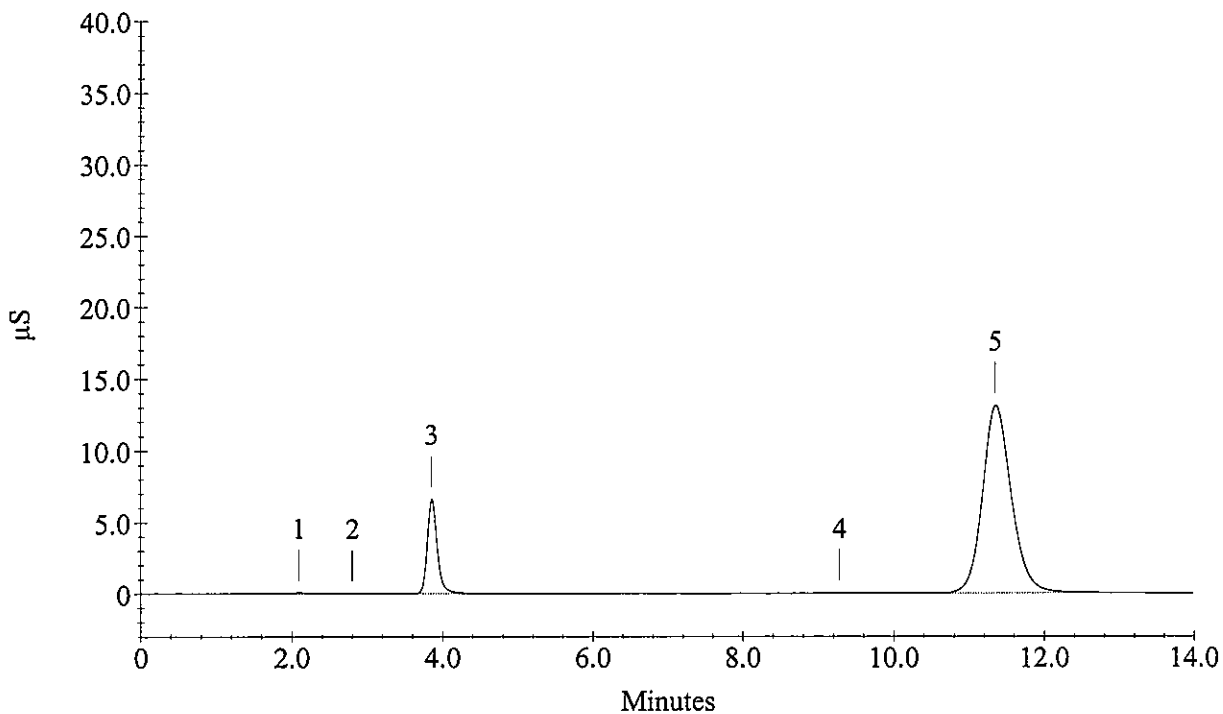
Datafile Updated : 1/16/14 12:55:13 PM

Calibration Updated : 1/14/14 4:57:03 PM

### Peak Information : All Components

Peak Number	Analyte	Retention Time (min.)	Concentration (ug/L)	Limit Exceeded	Peak Area
2	Fluoride	2.80	36.0	-	1462
3	Chloride	3.85	4338.5	-	600284
	Nitrite as N				
	Bromide				
	Nitrate as N				
4	Orthophosphate as P	9.28	-64.6	-	11745
5	Sulfate	11.35	32309.6	-	3490794
	Nitrate/Nitrite as N				

1311394-1 50x



## Sample Analysis Report

Sample Name : CCV

Data File Name : c:\peaknet\data\140116ic1\140116\_023.DXD

Method File Name : c:\peaknet\method\131216ic1a.met

Current Date : 1/16/14

Date, Time Analyzed : 1/16/14 12:55:17 PM

Current Time : 1:09:20 PM

System Operator : AJD

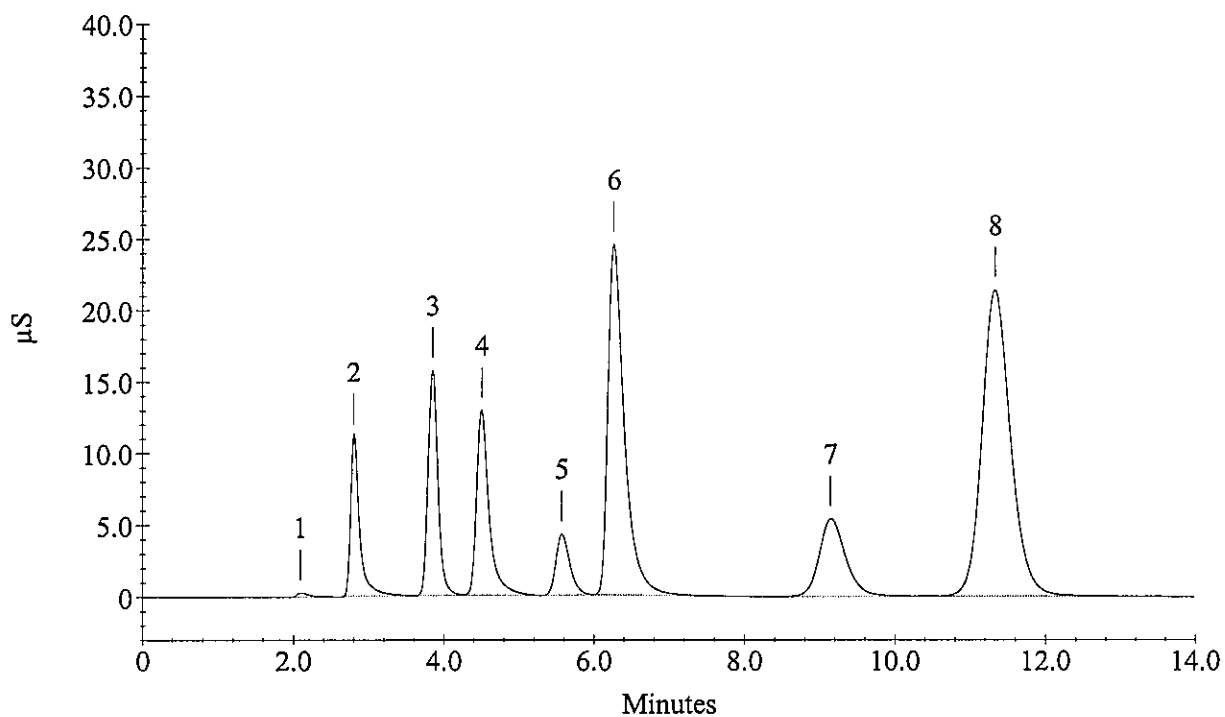
Datafile Updated : 1/16/14 1:09:19 PM

Calibration Updated : 1/14/14 4:57:03 PM

### Peak Information : All Components

Peak Number	Analyte	Retention Time (min.)	Concentration (ug/L)	Limit Exceeded	Peak Area
2	Fluoride	2.80	4796.2 ✓		937070
3	Chloride	3.85	9994.9 ✓		1454290
4	Nitrite as N	4.51	4984.3 ✓		1503714
5	Bromide	5.57	9994.6 ✓		544352
6	Nitrate as N	6.27	10091.6 ✓		3735101
7	Orthophosphate as P	9.15	9923.9 ✓		1319909
8	Sulfate	11.33	50065.3 ✓		5604428
	Nitrate/Nitrite as N				

CCV



## Sample Analysis Report

Sample Name : CCB

Data File Name : c:\peaknet\data\140116ic1\140116\_024.DXD

Method File Name : c:\peaknet\method\131216ic1a.met

Current Date : 1/16/14

Date, Time Analyzed : 1/16/14 1:09:22 PM

Current Time : 1:23:24 PM

System Operator : AJD

Datafile Updated : 1/16/14 1:23:23 PM

Calibration Updated : 1/14/14 4:57:03 PM

### Peak Information : All Components

Peak Number	Analyte	Retention Time (min.)	Concentration (ug/L)	Limit Exceeded	Peak Area
2	Fluoride Chloride Nitrite as N Bromide Nitrate as N	2.81	32.9	-	898
3	Orthophosphate as P Sulfate Nitrate/Nitrite as N	9.25	189.3	-	43578

CCB

