facility 439136
project 10243

Inorganics

Case Narrative

COGCC

PW NORM 2017 -- 10048

Work Order Number: 1705202

1. This report consists of 1 water sample.

2. The sample was received cool and intact by ALS on 05/09/17.

3. The sample was prepared for analysis based on SW-846, 3rd Edition procedures and Standard Methods for the Examination of Water and Wastewater, 20th Edition 1998 procedures.

4. The sample was analyzed following SW-846 and Standard Method procedures for the current revisions of the following SOPs and methods:

Analyte	Method	SOP #
Alkalinity	SM2320B	1106
Bicarbonate	SM2320B	1106
Carbonate	SM2320B	1106
pH	9040C	1126
Specific conductance	SM2510B	1128
TDS	SM2540C	1101
TSS	SM2540D	1100
Bromide	9056	1113
Chloride	9056	1113
Fluoride	9056	1113
Sulfate	9056	1113

5. All standards and solutions were used within their recommended shelf life.

6. 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.

7. General quality control procedures.

- A preparation (method) blank, laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) were prepared and analyzed with the samples in each applicable preparation batch.
- The method blank associated with each applicable batch was below the reporting limit for the requested analytes.
- All laboratory control sample criteria were met with the exception of the RPD for TDS. Since the recoveries for TDS in the laboratory control sample and laboratory control sample duplicate were within control limits, no further action was taken.
- All initial and continuing calibration blanks were below the reporting limit for the requested analytes.
- All initial and continuing calibration verifications were within the acceptance criteria for the requested analytes.

8. 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.

9. 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 concentration into the analytical range of the ion chromatograph (IC).

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

10. 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.

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
Inorganics Primary Data Reviewer

5/25/17
Date

Steve Workman
Inorganics Final Data Reviewer

5/26/17
Date

Inorganic Data Reporting Qualifiers

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

- Concentration qualifier -- A "J" is entered if the reported value was obtained from a reading that was less than the Reporting Limit but greater than or equal to ALS's Method Detection Limit. 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 -- Fort Collins

Sample Number(s) Cross-Reference Table

OrderNum: 1705202
Client Name: COGCC
Client Project Name: PW NORM 2017
Client Project Number: 10048
Client PO Number: CT 2017-3066

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
439136	1705202-1		WATER	09-May-17	12:50
439136	1705202-2		WATER	09-May-17	12:50

ALS Environmental

225 Commerce Drive, Fort Collins, Colorado 80524
TF: (800) 443-1511 PH: (970) 490-1511 FX: (970) 490-1522

Chain-of-Custody

Turnaround time for samples received after 2 p.m. will be calculated beginning from the next business day.
Turnaround time for samples received Saturday will be calculated beginning from the next business day.

ALS WORKORDER # 1705202

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DISPOSAL BY LAB or RETURN

PROJECT NAME	PW NORM 2017	TURNAROUND TIME	45 days
PROJECT No.	10048	SITE ID	
		EDD FORMAT	COGCC
COMPANY NAME	COGCC	PURCHASE ORDER	CT 2017-3066
SEND REPORT TO	Peter Cintantas	BILL TO COMPANY	
ADDRESS	1120 Lincoln St., Suite 801	INVOICE ATTN TO	
CITY / STATE / ZIP	Denver, CO 80203	ADDRESS	
PHONE	719-679-1326	CITY / STATE / ZIP	
FAX		PHONE	
E-MAIL		FAX	
		E-MAIL	

SAMPLER: Robert Young

PARAMETER/METHOD REQUEST FOR ANALYSIS

A	total metals SW6010/6020
B	dissolved metals SW6010
C	SW9040A pH
D	SM2510B specific conductance
E	SM2320C total, bicarb & carb alkalinity
F	SM2540C dissolved solids
G	SM2540D suspended solids
H	SW9056 ~~SO4~~ (Br, Cl, F, SO4)
I	SAR calc.
J	

LAB ID	FIELD ID	MATRIX	SAMPLE DATE	SAMPLE TIME	# OF BOTTLES	PRESERVATIVE	QC	A	B	C	D	E	F	G	H	I	J	SEE NOTES SECTION
1	439136	W	5/9/17	1250	1	2	X	X										
↓	439136	W	↓	↓	2	7	X		X	X	X	X	X	X	X	X		

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

NOTES

REPORT LEVEL / QC REQUIRED

	Summary (Standard QC)
	LEVEL II (Standard QC)
	LEVEL III (Std QC + forms)
	LEVEL IV (Std QC + forms + raw)

PRESERVATION KEY: 1-HCl 2-HNO3 3-H2SO4 4-NaOH 5-NaOH/ZnAcetate 6-NaHSO4 7-4°C 8-Other

Form 202r9

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY		Robert Young	5/9/17	1642
RECEIVED BY		~~Joshua Griffith~~	5/9/17	1642
RELINQUISHED BY				
RECEIVED BY				
RELINQUISHED BY				
RECEIVED BY				

ALS Environmental

225 Commerce Drive, Fort Collins, Colorado 80524
TF: (800) 443-1511 PH: (970) 490-1511 FX: (970) 490-1522

Chain-of-Custody

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Turnaround time for samples received Saturday will be calculated beginning from the next business day.

ALS WORKORDER # 1705202

PAGE of

DISPOSAL BY LAB or RETURN

PROJECT NAME	PW NORM 2017	TURNAROUND TIME	45 day
PROJECT No.	10048	SITE ID	
		EDD FORMAT	COGCC
COMPANY NAME	COGCC	PURCHASE ORDER	CT2017-3066
SEND REPORT TO	Peter Gintautas	BILL TO COMPANY	
ADDRESS		INVOICE ATTN TO	
CITY / STATE / ZIP		ADDRESS	
PHONE	719 6791326	CITY / STATE / ZIP	
FAX		PHONE	
E-MAIL		FAX	
		E-MAIL	
		SAMPLER	Robert Young

PARAMETER/METHOD REQUEST FOR ANALYSIS

A	gross alpha/gross beta
B	210 Pb
C	210 Po
D	222 Rn
E	224 Ra + 226 Ra
F	228 Ra
G	gamma emitters
H	* isotopic U
I	* isotopic Th
J	

LAB ID	FIELD ID	MATRIX	SAMPLE DATE	SAMPLE TIME	# OF BOTTLES	PRESERVATIVE	QC	A	B	C	D	E	F	G	H	I	J	SEE NOTES SECTION
	439136	W	5/9/17	1250	3	2		X	X	X		X	X	X	*	*		
	439136	W	"	"	3	7					X							

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

NOTES	REPORT LEVEL / QC REQUIRED
*iso U only if 6020 "total" U > 3 ug/L	Summary (Standard QC)
" Th " " " " Th > 3 ug/L	LEVEL II (Standard QC)
	LEVEL III (Std QC + forms)
	LEVEL IV (Std QC + forms + raw)

PRESERVATION KEY: 1-HCl 2-HNO3 3-H2SO4 4-NaOH 5-NaOH/ZnAcetate 6-NaHSO4 7-4°C 8-Other

Form 202r9

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY	Robert T. Young	Robert Young	5/8/17	1642
RECEIVED BY		JOSHUA VS	5/9/17	1642
RELINQUISHED BY				
RECEIVED BY				
RELINQUISHED BY				
RECEIVED BY				

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ALS Environmental - Fort Collins
CONDITION OF SAMPLE UPON RECEIPT FORM

Client: COGCC Workorder No: 1705202

Project Manager: SS Initials: CAT Date: 5-10-17

1. Does this project require any special handling in addition to standard ALS procedures?		YES	(NO)
2. Are custody seals on shipping containers intact?	(NONE)	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?		(YES)	NO
5. Are the COC and bottle labels complete and legible?		(YES)	NO
6. Is the COC in agreement with samples received? (IDs, dates, times, no. of samples, no. of containers, matrix, requested analyses, etc.)		(YES)	NO
7. Were airbills / shipping documents present and/or removable?	(DROP OFF)	YES	NO
8. Are all aqueous samples requiring preservation preserved correctly? (excluding volatiles)	N/A	YES	(NO)
9. Are all aqueous non-preserved samples pH 4-9?	N/A	(YES)	NO
10. Is there sufficient sample for the requested analyses?		(YES)	NO
11. Were all samples placed in the proper containers for the requested analyses?		(YES)	NO
12. Are all samples within holding times for the requested analyses?		(YES)	NO
13. Were all sample containers received intact? (not broken or leaking, etc.)		(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	(YES)	NO
15. Do any water samples contain sediment? Amount Amount of sediment: ____ dusting ____ moderate ____ heavy	N/A	YES	(NO)
16. Were the samples shipped on ice?		(YES)	(NO)
17. Were cooler temperatures measured at 0.1-6.0°C? IR gun used*: (#2) #4	RAD ONLY	(YES)	(NO)

Cooler #:	1	2							
Temperature (°C):	6.0	Amb							
No. of custody seals on cooler:	0	0							
DOT Survey/ Acceptance Information: External µR/hr reading:	NA	NA							
Background µR/hr reading:	NA								

Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? 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.

All RAD Samples in the Amb Cooler.

Added 3.5 ml HNO_3 to EA. RAD and Total metals bottle. Final pH < 2. HNO_3 lot no. 152495.

If applicable, was the client contacted? YES / NO / NA Contact: _____ Date/Time: _____

Project Manager Signature / Date: Shiloh Lunn

*IR Gun #2: Oakton, SN 29922500201-0066
*IR Gun #4: Oakton, SN 2372220101-0002

Sample Results

BICARBONATE AS CaCO3

Method SM2320B

Sample Results

Lab Name: ALS -- Fort Collins
Client Name: COGCC
Client Project ID: PW NORM 2017 10048
Work Order Number: 1705202
Reporting Basis: As Received
Prep Method: NONE
Analyst: Alyssa M. Gruziano

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/LOD	Flag	Sample Aliquot
439136	1705202-1	05/09/2017	05/23/2017	05/23/2017	N/A	1	920	100		5 ml

Comments:

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

Data Package ID: *AK1705202-1*

CARBONATE AS CaCO3

Method SM2320B

Sample Results

Lab Name: ALS -- Fort Collins
Client Name: COGCC
Client Project ID: PW NORM 2017 10048
Work Order Number: 1705202
Reporting Basis: As Received
Prep Method: NONE
Analyst: Alyssa M. Gruziano

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/LOD	Flag	Sample Aliquot
439136	1705202-1	05/09/2017	05/23/2017	05/23/2017	N/A	1	100	100	U	5 ml

Comments:

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

Data Package ID: *AK1705202-1*

TOTAL ALKALINITY AS CaCO3

Method SM2320B

Sample Results

Lab Name: ALS -- Fort Collins
Client Name: COGCC
Client Project ID: PW NORM 2017 10048
Work Order Number: 1705202
Reporting Basis: As Received
Prep Method: NONE
Analyst: Alyssa M. Gruziano

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/LOD	Flag	Sample Aliquot
439136	1705202-1	05/09/2017	05/23/2017	05/23/2017	N/A	1	920	100		5 ml

Comments:

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

Data Package ID: *AK1705202-1*

pH

Method SW9040

Sample Results

Lab Name: ALS -- Fort Collins
Work Order Number: 1705202
Client Name: COGCC
ClientProject ID: PW NORM 2017 10048

Field ID: 439136
Lab ID: 1705202-1

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 09-May-17
Date Extracted: 11-May-17
Date Analyzed: 11-May-17
Prep Method: NONE

Prep Batch: PH170511-1
QCBatchID: PH170511-1-1
Run ID: PH170511-1A1
Cleanup: NONE
Basis: As Received
File Name:

Analyst: Hannah M. Alt
Sample Aliquot: 20 ML
Final Volume: 20 ML
Result Units: pH
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Result Qualifier	Reporting Limit	DL
10-29-7	PH AnalysisTime: 12:00	1	7.75		0.1	

Data Package ID: *pH1705202-1*

Specific Conductance in Water

Method SM2510B

Sample Results

Lab Name: ALS -- Fort Collins
Work Order Number: 1705202
Client Name: COGCC
ClientProject ID: PW NORM 2017 10048

Field ID: 439136
Lab ID: 1705202-1

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 09-May-17
Date Extracted: 11-May-17
Date Analyzed: 11-May-17
Prep Method: NONE

Prep Batch: SC170511-1
QCBatchID: SC170511-1-1
Run ID: SC170511-1A1
Cleanup: NONE
Basis: As Received
File Name:

Analyst: Hannah M. Alt
Sample Aliquot: 20 ML
Final Volume: 20 ML
Result Units: umhos/cm
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Result Qualifier	Reporting Limit	DL
10-34-4	SPECIFIC CONDUCTIVITY AnalysisTime: 10:45	1	25100		1	

Data Package ID: *SC1705202-1*

Total Dissolved Solids

Method SM2540C

Sample Results

Lab Name: ALS -- Fort Collins
Work Order Number: 1705202
Client Name: COGCC
ClientProject ID: PW NORM 2017 10048

Field ID: 439136
Lab ID: 1705202-1

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 09-May-17
Date Extracted: 15-May-17
Date Analyzed: 16-May-17
Prep Method: METHOD

Prep Batch: TD170515-1
QCBatchID: TD170515-1-1
Run ID: TD170516-1A1
Cleanup: NONE
Basis: As Received
File Name: Manual Entry

Analyst: Hannah M. Alt
Sample Aliquot: 5 ML
Final Volume: 5 ML
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Result Qualifier	Reporting Limit	DL
10-33-3	TOTAL DISSOLVED SOLIDS	1	16000		400	

Data Package ID: *TD1705202-1*

Total Suspended Solids

Method SM2540D

Sample Results

Lab Name: ALS -- Fort Collins
Work Order Number: 1705202
Client Name: COGCC
ClientProject ID: PW NORM 2017 10048

Field ID: 439136
Lab ID: 1705202-1

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 09-May-17
Date Extracted: 15-May-17
Date Analyzed: 16-May-17
Prep Method: METHOD

Prep Batch: TS170515-1
QCBatchID: TS170515-1-1
Run ID: TS170516-1A1
Cleanup: NONE
Basis: As Received
File Name: Manual Entry

Analyst: Hannah M. Alt
Sample Aliquot: 100 ML
Final Volume: 100 ML
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Result Qualifier	Reporting Limit	DL
10-32-2	TOTAL SUSPENDED SOLIDS	1	620		20	

Data Package ID: *TS1705202-1*

Ion Chromatography

Method SW9056

Sample Results

Lab Name: ALS -- Fort Collins
Work Order Number: 1705202
Client Name: COGCC
ClientProject ID: PW NORM 2017 10048

Field ID: 439136
Lab ID: 1705202-1

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 09-May-17
Date Extracted: 16-May-17
Date Analyzed: 16-May-17
Prep Method: NONE

Prep Batch: IC170516-1
QCBatchID: IC170516-1-2
Run ID: IC170516-1a2
Cleanup: NONE
Basis: As Received
File Name: 70516_055.DXD

Analyst: Alyssa M. Gruziano
Sample Aliquot: 5 ml
Final Volume: 5 ml
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Result Qualifier	Reporting Limit	MDL
16984-48-8	FLUORIDE AnalysisTime: 22:34	25	1.7	J	2.5	0.75
16887-00-6	CHLORIDE AnalysisTime: 14:01	1000	9700		200	60
24959-67-9	BROMIDE AnalysisTime: 22:34	25	60		5	1.5
14808-79-8	SULFATE AnalysisTime: 22:34	25	7.1	J	25	3.8

Data Package ID: *IC1705202-1*

Summary Report Forms

BICARBONATE AS CaCO3

Method SM2320B

Method Blank

Lab Name: ALS -- Fort Collins
Work Order Number: 1705202
Client Name: COGCC
ClientProject ID: PW NORM 2017 10048

Lab ID: AK170523-1MB

Sample Matrix: WATER
% Moisture: N/A

Prep Batch: AK170523-1
QCBatchID: AK170523-1-3
Run ID: AK170523-1a1
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
AK170523-1MB	5/23/2017	05/23/2017	N/A	1	5	5	U

Comments:

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

Data Package ID: *AK1705202-1*

CARBONATE AS CaCO3

Method SM2320B

Method Blank

Lab Name: ALS -- Fort Collins
Work Order Number: 1705202
Client Name: COGCC
ClientProject ID: PW NORM 2017 10048

Lab ID: AK170523-1MB

Sample Matrix: WATER
% Moisture: N/A

Prep Batch: AK170523-1
QCBatchID: AK170523-1-3
Run ID: AK170523-1a1
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
AK170523-1MB	5/23/2017	05/23/2017	N/A	1	5	5	U

Comments:

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

Data Package ID: *AK1705202-1*

TOTAL ALKALINITY AS CaCO3

Method SM2320B

Method Blank

Lab Name: ALS -- Fort Collins
Work Order Number: 1705202
Client Name: COGCC
ClientProject ID: PW NORM 2017 10048

Lab ID: AK170523-1MB

Sample Matrix: WATER
% Moisture: N/A

Prep Batch: AK170523-1
QCBatchID: AK170523-1-3
Run ID: AK170523-1a1
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
AK170523-1MB	5/23/2017	05/23/2017	N/A	1	5	5	U

Comments:

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

Data Package ID: *AK1705202-1*

TOTAL ALKALINITY AS CaCO3

Method SM2320B

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS -- Fort Collins
Work Order Number: 1705202
Client Name: COGCC
ClientProject ID: PW NORM 2017 10048

Lab ID: AK170523-1LCS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 23-May-17
Date Analyzed: 23-May-17
Prep Method: NONE

Prep Batch: AK170523-1
QCBatchID: AK170523-1-3
Run ID: AK170523-1a1
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 CaCO3	100	101	5		101	85 - 115

Lab ID: AK170523-1LCSD

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 23-May-17
Date Analyzed: 23-May-17
Prep Method: NONE

Prep Batch: AK170523-1
QCBatchID: AK170523-1-3
Run ID: AK170523-1a1
Cleanup: NONE
Basis: N/A

Sample Aliquot: 100 ml
Final Volume: 100 ml
Result Units: MG/L

CASNO	Target Analyte	Spike Added	LCSD Result	Reporting Limit	Result Qualifier	LCSD % Rec.	RPD Limit	RPD
	TOTAL ALKALINITY AS CaCO3	100	102	5		102	15	1

Data Package ID: *AK1705202-1*

Prep Batch ID: AK170523-1

Start Date: 05/23/17
Start Time: 11:00
Prep Analyst: Alyssa M. Gruziano

End Date: 05/23/17
End Time: 11:30

Concentration Method: NONE
Extract Method: NONE
Initial Volume Units: ml
Final Volume Units: ml

Batch Created By: amg
Date Created: 05/23/17
Time Created: 12:13
Validated By: mmj
Date Validated: 05/23/17
Time Validated: 16:57

Comments:

QC Batch ID: AK170523-1-3

Lab ID	QC Type	Field ID	Matrix	Date Collected	Initial Wt/Vol	Final Wt/Vol	Cleanup Method	Cleanup DF	Order Number
AK170523-1	MB	XXXXXX	WATER	XXXXXX	100	100	NONE	1	1705158
AK170523-1	LCS	XXXXXX	WATER	XXXXXX	100	100	NONE	1	1705158
AK170523-1	LCSD	XXXXXX	WATER	XXXXXX	100	100	NONE	1	1705158
1705158-1	DUP	XXXXXX	WATER	XXXXXX	5	100	NONE	1	1705158
1705256-24	DUP	XXXXXX	WATER	XXXXXX	25	100	NONE	1	1705256
1705158-1	SMP	XXXXXX	WATER	XXXXXX	5	100	NONE	1	1705158
1705202-1	SMP	439136	WATER	5/9/2017	5	100	NONE	1	1705202
1705203-1	SMP	XXXXXX	WATER	XXXXXX	5	100	NONE	1	1705203
1705240-1	SMP	XXXXXX	WATER	XXXXXX	10	100	NONE	1	1705240
1705242-1	SMP	XXXXXX	WATER	XXXXXX	25	100	NONE	1	1705242
1705243-1	SMP	XXXXXX	WATER	XXXXXX	25	100	NONE	1	1705243
1705256-24	SMP	XXXXXX	WATER	XXXXXX	25	100	NONE	1	1705256
1705331-1	SMP	XXXXXX	WATER	XXXXXX	25	100	NONE	1	1705331

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			

Prep Batch ID: PH170511-1

Start Date: 05/11/17
Start Time: 10:20
Prep Analyst: Hannah M. Alt

End Date: 05/11/17
End Time: 10:25

Concentration Method: NONE
Extract Method: NONE
Initial Volume Units: ml
Final Volume Units: ml

Batch Created By: hma
Date Created: 05/11/17
Time Created: 11:32
Validated By: hma
Date Validated: 05/12/17
Time Validated: 8:26

Comments:

QC Batch ID: PH170511-1-1

Lab ID	QC Type	Field ID	Matrix	Date Collected	Initial Wt/Vol	Final Wt/Vol	Cleanup Method	Cleanup DF	Order Number
CCV	CCV	XXXXXX	WATER	XXXXXX	20	20	NONE	1	1705212
ICV	ICV	XXXXXX	WATER	XXXXXX	20	20	NONE	1	1705212
1705212-1	DUP	XXXXXX	WATER	XXXXXX	20	20	NONE	1	1705212
1705158-1	SMP	XXXXXX	WATER	XXXXXX	20	20	NONE	1	1705158
1705177-1	SMP	XXXXXX	WATER	XXXXXX	20	20	NONE	1	1705177
1705177-2	SMP	XXXXXX	WATER	XXXXXX	20	20	NONE	1	1705177
1705177-3	SMP	XXXXXX	WATER	XXXXXX	20	20	NONE	1	1705177
1705202-1	SMP	439136	WATER	5/9/2017	20	20	NONE	1	1705202
1705203-1	SMP	XXXXXX	WATER	XXXXXX	20	20	NONE	1	1705203
1705212-1	SMP	XXXXXX	WATER	XXXXXX	20	20	NONE	1	1705212

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 SW9040

Calibration Verifications

Lab Name: **ALS -- Fort Collins**
Work Order Number: 1705202
Client Name: COGCC
ClientProject ID: PW NORM 2017 10048

Run ID: PH170511-1A1
Result Units: pH

Lab ID	Verification Type	Date Analyzed	Time Analyzed	Spike Added	Result	Reporting Limit	Result Qualifier	% Rec.	Control Limits
ICV	Initial Calibration	5/11/2017		7	7.03	0.1	N/A		6.95 - 7.05
CCV	Continuing Calibration	5/11/2017		7	7.01	0.1	N/A		6.9 - 7.1

Data Package ID: *pH1705202-1*

Prep Batch ID: SC170511-1

Start Date: 05/11/17
Start Time: 10:20
Prep Analyst: Hannah M. Alt

End Date: 05/11/17
End Time: 10:25

Concentration Method: NONE
Extract Method: NONE
Initial Volume Units: ml
Final Volume Units: ml

Batch Created By: hma
Date Created: 05/11/17
Time Created: 11:20
Validated By: hma
Date Validated: 05/12/17
Time Validated: 8:33

Comments:

QC Batch ID: SC170511-1-1

Lab ID	QC Type	Field ID	Matrix	Date Collected	Initial Wt/Vol	Final Wt/Vol	Cleanup Method	Cleanup DF	Order Number
CCV	CCV	XXXXXX	WATER	XXXXXX	20	20	NONE	1	1705158
ICV	ICV	XXXXXX	WATER	XXXXXX	20	20	NONE	1	1705158
1705158-1	DUP	XXXXXX	WATER	XXXXXX	20	20	NONE	1	1705158
1705158-1	SMP	XXXXXX	WATER	XXXXXX	20	20	NONE	1	1705158
1705177-1	SMP	XXXXXX	WATER	XXXXXX	20	20	NONE	1	1705177
1705177-2	SMP	XXXXXX	WATER	XXXXXX	20	20	NONE	1	1705177
1705177-3	SMP	XXXXXX	WATER	XXXXXX	20	20	NONE	1	1705177
1705202-1	SMP	439136	WATER	5/9/2017	20	20	NONE	1	1705202
1705203-1	SMP	XXXXXX	WATER	XXXXXX	20	20	NONE	1	1705203

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 -- Fort Collins
Work Order Number: 1705202
Client Name: COGCC
ClientProject ID: PW NORM 2017 10048

Run ID: SC170511-1A1
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	5/11/2017		718	744	1	N/A	104	646.2 - 789.7
CCV	Continuing Calibration	5/11/2017		1410	1500	1	N/A	106	1271.7 - 1554.3

Data Package ID: *SC1705202-1*

Total Dissolved Solids

Method SM2540C

Method Blank

Lab Name: ALS -- Fort Collins
Work Order Number: 1705202
Client Name: COGCC
ClientProject ID: PW NORM 2017 10048

Lab ID: TD170515-1MB

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 15-May-17
Date Analyzed: 16-May-17
Prep Method: METHOD

Prep Batch: TD170515-1
QCBatchID: TD170515-1-1
Run ID: TD170516-1A1
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	Result Qualifier	Reporting Limit	MDL
10-33-3	TOTAL DISSOLVED SOLIDS	1	20	U	20	

Data Package ID: *TD1705202-1*

Total Dissolved Solids

Method SM2540C

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS -- Fort Collins
Work Order Number: 1705202
Client Name: COGCC
ClientProject ID: PW NORM 2017 10048

Lab ID: TD170515-1LCS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 05/15/2017
Date Analyzed: 05/16/2017
Prep Method: METHOD

Prep Batch: TD170515-1
QCBatchID: TD170515-1-1
Run ID: TD170516-1A1
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	411	20		103	85 - 115%

Lab ID: TD170515-1LCSD

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 05/15/2017
Date Analyzed: 05/16/2017
Prep Method: METHOD

Prep Batch: TD170515-1
QCBatchID: TD170515-1-1
Run ID: TD170516-1A1
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	LCSD Result	Reporting Limit	Result Qualifier	LCSD % Rec.	RPD Limit	RPD
10-33-3	TOTAL DISSOLVED SOLIDS	400	452	20	*	113	5	10

Data Package ID: *TD1705202-1*

Prep Batch ID: TD170515-1

Start Date: 05/15/17
Start Time: 12:00
Prep Analyst: Hannah M. Alt

End Date: 05/15/17
End Time: 13:00

Concentration Method: NONE
Extract Method: METHOD
Initial Volume Units: ml
Final Volume Units: ml

Batch Created By: hma
Date Created: 05/15/17
Time Created: 11:52
Validated By: hma
Date Validated: 05/16/17
Time Validated: 13:35

Comments:

QC Batch ID: TD170515-1-1

Lab ID	QC Type	Field ID	Matrix	Date Collected	Initial Wt/Vol	Final Wt/Vol	Cleanup Method	Cleanup DF	Order Number
TD170515-1	MB	XXXXXX	WATER	XXXXXX	100	100	NONE	1	1705271
TD170515-1	LCS	XXXXXX	WATER	XXXXXX	100	100	NONE	1	1705271
TD170515-1	LCSD	XXXXXX	WATER	XXXXXX	100	100	NONE	1	1705271
1705271-17	DUP	XXXXXX	WATER	XXXXXX	100	100	NONE	1	1705271
1705275-2	DUP	XXXXXX	WATER	XXXXXX	100	100	NONE	1	1705275
1705177-3	SMP	XXXXXX	WATER	XXXXXX	5	5	NONE	1	1705177
1705202-1	SMP	439136	WATER	5/9/2017	5	5	NONE	1	1705202
1705203-1	SMP	XXXXXX	WATER	XXXXXX	5	5	NONE	1	1705203
1705228-1	SMP	XXXXXX	WATER	XXXXXX	100	100	NONE	1	1705228
1705234-1	SMP	XXXXXX	WATER	XXXXXX	50	50	NONE	1	1705234
1705240-1	SMP	XXXXXX	WATER	XXXXXX	100	100	NONE	1	1705240
1705242-1	SMP	XXXXXX	WATER	XXXXXX	100	100	NONE	1	1705242
1705243-1	SMP	XXXXXX	WATER	XXXXXX	50	50	NONE	1	1705243
1705271-17	SMP	XXXXXX	WATER	XXXXXX	100	100	NONE	1	1705271
1705275-10	SMP	XXXXXX	WATER	XXXXXX	100	100	NONE	1	1705275
1705275-11	SMP	XXXXXX	WATER	XXXXXX	100	100	NONE	1	1705275
1705275-13	SMP	XXXXXX	WATER	XXXXXX	100	100	NONE	1	1705275
1705275-15	SMP	XXXXXX	WATER	XXXXXX	100	100	NONE	1	1705275
1705275-2	SMP	XXXXXX	WATER	XXXXXX	100	100	NONE	1	1705275
1705275-4	SMP	XXXXXX	WATER	XXXXXX	100	100	NONE	1	1705275
1705275-5	SMP	XXXXXX	WATER	XXXXXX	100	100	NONE	1	1705275
1705275-7	SMP	XXXXXX	WATER	XXXXXX	100	100	NONE	1	1705275

Prep Batch ID: TD170515-1

Start Date: 05/15/17
Start Time: 12:00
Prep Analyst: Hannah M. Alt

End Date: 05/15/17
End Time: 13:00

Concentration Method: NONE
Extract Method: METHOD
Initial Volume Units: ml
Final Volume Units: ml

Batch Created By: hma
Date Created: 05/15/17
Time Created: 11:52
Validated By: hma
Date Validated: 05/16/17
Time Validated: 13:35

Comments:

Oven Number: 18

	Date	Time	Temp	Units
In Oven:	5/16/2017	8:15	180	CELSIUS
Out of Oven:	5/16/2017	9:15	180	CELSIUS

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 Suspended Solids

Method SM2540D

Method Blank

Lab Name: ALS -- Fort Collins
Work Order Number: 1705202
Client Name: COGCC
ClientProject ID: PW NORM 2017 10048

Lab ID: TS170515-1MB

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 15-May-17
Date Analyzed: 16-May-17
Prep Method: METHOD

Prep Batch: TS170515-1
QCBatchID: TS170515-1-1
Run ID: TS170516-1A1
Cleanup: NONE
Basis: N/A
File Name: Manual Entry

Sample Aliquot: 500 ml
Final Volume: 500 ml
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	DF	Result	Result Qualifier	Reporting Limit	MDL
10-32-2	TOTAL SUSPENDED SOLIDS	1	4	U	4	

Data Package ID: *TS1705202-1*

Total Suspended Solids

Method SM2540D

Laboratory Control Sample

Lab Name: ALS -- Fort Collins
Work Order Number: 1705202
Client Name: COGCC
ClientProject ID: PW NORM 2017 10048

Lab ID: TS170515-1LCS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 05/15/2017
Date Analyzed: 05/16/2017
Prep Method: METHOD

Prep Batch: TS170515-1
QCBatchID: TS170515-1-1
Run ID: TS170516-1A1
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
10-32-2	TOTAL SUSPENDED SOLIDS	802	762	20		95	85 - 115%

Data Package ID: *TS1705202-1*

Prep Batch ID: TS170515-1

Start Date: 05/15/17
Start Time: 10:00
Prep Analyst: Hannah M. Alt

End Date: 05/15/17
End Time: 11:35

Concentration Method: NONE
Extract Method: METHOD
Initial Volume Units: ml
Final Volume Units: ml

Batch Created By: hma
Date Created: 05/15/17
Time Created: 11:35
Validated By: hma
Date Validated: 05/16/17
Time Validated: 12:08

Comments:

QC Batch ID: TS170515-1-1

Lab ID	QC Type	Field ID	Matrix	Date Collected	Initial Wt/Vol	Final Wt/Vol	Cleanup Method	Cleanup DF	Order Number
TS170515-1	MB	XXXXXX	WATER	XXXXXX	500	500	NONE	1	1705212
TS170515-1	LCS	XXXXXX	WATER	XXXXXX	100	100	NONE	1	1705212
1705212-1	DUP	XXXXXX	WATER	XXXXXX	100	100	NONE	1	1705212
1705158-1	SMP	XXXXXX	WATER	XXXXXX	100	100	NONE	1	1705158
1705177-1	SMP	XXXXXX	WATER	XXXXXX	100	100	NONE	1	1705177
1705177-2	SMP	XXXXXX	WATER	XXXXXX	100	100	NONE	1	1705177
1705177-3	SMP	XXXXXX	WATER	XXXXXX	100	100	NONE	1	1705177
1705202-1	SMP	439136	WATER	5/9/2017	100	100	NONE	1	1705202
1705203-1	SMP	XXXXXX	WATER	XXXXXX	100	100	NONE	1	1705203
1705212-1	SMP	XXXXXX	WATER	XXXXXX	100	100	NONE	1	1705212
1705240-1	SMP	XXXXXX	WATER	XXXXXX	100	100	NONE	1	1705240
1705242-1	SMP	XXXXXX	WATER	XXXXXX	100	100	NONE	1	1705242
1705243-1	SMP	XXXXXX	WATER	XXXXXX	100	100	NONE	1	1705243

Oven Number: 12

	Date	Time	Temp	Units
In Oven:	5/15/2017	11:35	85	CELSIUS
Out of Oven:	5/16/2017	8:15	85	CELSIUS

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 SW9056

Method Blank

Lab Name: ALS -- Fort Collins
Work Order Number: 1705202
Client Name: COGCC
ClientProject ID: PW NORM 2017 10048

Lab ID: IC170516-1MB

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 16-May-17
Date Analyzed: 16-May-17

Prep Batch: IC170516-1
QCBatchID: IC170516-1-2
Run ID: IC170516-1a2
Cleanup: NONE
Basis: N/A
File Name: 70516_011.dxd

Sample Aliquot: 5 ml
Final Volume: 5 ml
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	DF	Result	Result Qualifier	Reporting Limit	MDL
16984-48-8	FLUORIDE	1	0.03	U	0.1	0.03
16887-00-6	CHLORIDE	1	0.069	J	0.2	0.06
24959-67-9	BROMIDE	1	0.06	U	0.2	0.06
14808-79-8	SULFATE	1	0.15	U	1	0.15

Data Package ID: *IC1705202-1*

Ion Chromatography

Method SW9056

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS -- Fort Collins
Work Order Number: 1705202
Client Name: COGCC
ClientProject ID: PW NORM 2017 10048

Lab ID: IC170516-1LCS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 05/16/2017
Date Analyzed: 05/16/2017
Prep Method: NONE

Prep Batch: IC170516-1
QCBatchID: IC170516-1-2
Run ID: IC170516-1a2
Cleanup: NONE
Basis: N/A
File Name: 70516_012.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	2.01	0.1		100	90 - 110%
16887-00-6	CHLORIDE	5	5.03	0.2		101	90 - 110%
24959-67-9	BROMIDE	5	5.05	0.2		101	90 - 110%
14808-79-8	SULFATE	20	19.5	1		97	90 - 110%

Lab ID: IC170516-1LCSD

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 05/16/2017
Date Analyzed: 05/16/2017
Prep Method: NONE

Prep Batch: IC170516-1
QCBatchID: IC170516-1-2
Run ID: IC170516-1a2
Cleanup: NONE
Basis: N/A
File Name: 70516_013.dxd

Sample Aliquot: 5 ml
Final Volume: 5 ml
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	Spike Added	LCSD Result	Reporting Limit	Result Qualifier	LCSD % Rec.	RPD Limit	RPD
16984-48-8	FLUORIDE	2	1.98	0.1		99	15	1
16887-00-6	CHLORIDE	5	4.93	0.2		99	15	2
24959-67-9	BROMIDE	5	4.96	0.2		99	15	2
14808-79-8	SULFATE	20	19.3	1		97	15	1

Data Package ID: *IC1705202-1*

Prep Batch ID: IC170516-1

Start Date: 05/16/17
Start Time: 9:00
Prep Analyst: Alyssa M. Gruziano

End Date: 05/16/17
End Time: 9:30

Concentration Method: NONE
Extract Method: NONE
Initial Volume Units: ml
Final Volume Units: ml

Batch Created By: amg
Date Created: 05/16/17
Time Created: 11:33
Validated By: amg
Date Validated: 05/17/17
Time Validated: 8:49

Comments:

QC Batch ID: IC170516-1-2

Lab ID	QC Type	Field ID	Matrix	Date Collected	Initial Wt/Vol	Final Wt/Vol	Cleanup Method	Cleanup DF	Order Number
IC170516-1	MB	XXXXXX	WATER	XXXXXX	5	5	NONE	1	1705320
IC170516-1	LCS	XXXXXX	WATER	XXXXXX	5	5	NONE	1	1705320
IC170516-1	LCSD	XXXXXX	WATER	XXXXXX	5	5	NONE	1	1705320
1705320-5	MS	XXXXXX	WATER	XXXXXX	5	5	NONE	1	1705320
1705320-5	MSD	XXXXXX	WATER	XXXXXX	5	5	NONE	1	1705320
1705177-1	SMP	XXXXXX	WATER	XXXXXX	5	5	NONE	1	1705177
1705177-2	SMP	XXXXXX	WATER	XXXXXX	5	5	NONE	1	1705177
1705177-3	SMP	XXXXXX	WATER	XXXXXX	5	5	NONE	1	1705177
1705202-1	SMP	439136	WATER	5/9/2017	5	5	NONE	1	1705202
1705203-1	SMP	XXXXXX	WATER	XXXXXX	5	5	NONE	1	1705203
1705240-1	SMP	XXXXXX	WATER	XXXXXX	5	5	NONE	1	1705240
1705242-1	SMP	XXXXXX	WATER	XXXXXX	5	5	NONE	1	1705242
1705243-1	SMP	XXXXXX	WATER	XXXXXX	5	5	NONE	1	1705243
1705320-5	SMP	XXXXXX	WATER	XXXXXX	5	5	NONE	1	1705320

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 SW9056

Calibration Verifications

Lab Name: ALS -- Fort Collins
Work Order Number: 1705202
Client Name: COGCC
ClientProject ID: PW NORM 2017 10048

Lab ID: ICV
QC Type: Initial Calibration
File Name: 70516_009.dxd

Run ID: IC170516-1a2
Date Analyzed: 05/16/2017
Time Analyzed: 10:58
Result Units: MG/L

CASNO	Target Analyte	Spike Added	Result	Reporting Limit	Result Qualifier	% Rec.	Control Limits
16984-48-8	FLUORIDE	2.5	2.47	0.1		99	90 - 110%
16887-00-6	CHLORIDE	5	4.68	0.2		94	90 - 110%
24959-67-9	BROMIDE	5	4.71	0.2		94	90 - 110%
14808-79-8	SULFATE	25	24.0	1		96	90 - 110%

Data Package ID: *IC1705202-1*

Ion Chromatography

Method SW9056

Calibration Verifications

Lab Name: ALS -- Fort Collins
Work Order Number: 1705202
Client Name: COGCC
ClientProject ID: PW NORM 2017 10048

Lab ID: CCV1
QC Type: Continuing Calibration
File Name: 70516_021.dxd

Run ID: IC170516-1a2
Date Analyzed: 05/16/2017
Time Analyzed: 14:00
Result Units: MG/L

CASNO	Target Analyte	Spike Added	Result	Reporting Limit	Result Qualifier	% Rec.	Control Limits
16984-48-8	FLUORIDE	5	5.13	0.1		103	90 - 110%
16887-00-6	CHLORIDE	10	10.0	0.2		100	90 - 110%
24959-67-9	BROMIDE	10	9.99	0.2		100	90 - 110%
14808-79-8	SULFATE	50	50.2	1		100	90 - 110%

Data Package ID: *IC1705202-1*

Ion Chromatography

Method SW9056

Calibration Verifications

Lab Name: ALS -- Fort Collins
Work Order Number: 1705202
Client Name: COGCC
ClientProject ID: PW NORM 2017 10048

Lab ID: CCV2
QC Type: Continuing Calibration
File Name: 70516_033.DXD

Run ID: IC170516-1a2
Date Analyzed: 05/16/2017
Time Analyzed: 17:01
Result Units: MG/L

CASNO	Target Analyte	Spike Added	Result	Reporting Limit	Result Qualifier	% Rec.	Control Limits
16984-48-8	FLUORIDE	5	5.24	0.1		105	90 - 110%
16887-00-6	CHLORIDE	10	10.0	0.2		100	90 - 110%
24959-67-9	BROMIDE	10	10.0	0.2		100	90 - 110%
14808-79-8	SULFATE	50	50.5	1		101	90 - 110%

Data Package ID: *IC1705202-1*

Ion Chromatography

Method SW9056

Calibration Verifications

Lab Name: ALS -- Fort Collins
Work Order Number: 1705202
Client Name: COGCC
ClientProject ID: PW NORM 2017 10048

Lab ID: CCV3
QC Type: Continuing Calibration
File Name: 70516_045.DXD

Run ID: IC170516-1a2
Date Analyzed: 05/16/2017
Time Analyzed: 20:03
Result Units: MG/L

CASNO	Target Analyte	Spike Added	Result	Reporting Limit	Result Qualifier	% Rec.	Control Limits
16984-48-8	FLUORIDE	5	5.33	0.1		107	90 - 110%
16887-00-6	CHLORIDE	10	10.1	0.2		101	90 - 110%
24959-67-9	BROMIDE	10	10.1	0.2		101	90 - 110%
14808-79-8	SULFATE	50	50.8	1		102	90 - 110%

Data Package ID: *IC1705202-1*

Ion Chromatography

Method SW9056

Calibration Verifications

Lab Name: ALS -- Fort Collins
Work Order Number: 1705202
Client Name: COGCC
ClientProject ID: PW NORM 2017 10048

Lab ID: CCV4
QC Type: Continuing Calibration
File Name: 70516_057.DXD

Run ID: IC170516-1a2
Date Analyzed: 05/16/2017
Time Analyzed: 23:04
Result Units: MG/L

CASNO	Target Analyte	Spike Added	Result	Reporting Limit	Result Qualifier	% Rec.	Control Limits
16984-48-8	FLUORIDE	5	5.32	0.1		106	90 - 110%
16887-00-6	CHLORIDE	10	10.2	0.2		102	90 - 110%
24959-67-9	BROMIDE	10	10.1	0.2		101	90 - 110%
14808-79-8	SULFATE	50	50.9	1		102	90 - 110%

Data Package ID: *IC1705202-1*

Ion Chromatography

Method SW9056

Calibration Verifications

Lab Name: ALS -- Fort Collins
Work Order Number: 1705202
Client Name: COGCC
ClientProject ID: PW NORM 2017 10048

Lab ID: ICV
QC Type: Initial Calibration
File Name: 70516_009.dxd

Run ID: IC170524-1a3
Date Analyzed: 05/16/2017
Time Analyzed: 10:58
Result Units: MG/L

CASNO	Target Analyte	Spike Added	Result	Reporting Limit	Result Qualifier	% Rec.	Control Limits
16887-00-6	CHLORIDE	5	4.68	0.2		94	90 - 110%

Data Package ID: *IC1705202-1*

Ion Chromatography

Method SW9056

Calibration Verifications

Lab Name: ALS -- Fort Collins
Work Order Number: 1705202
Client Name: COGCC
ClientProject ID: PW NORM 2017 10048

Lab ID: CCV1
QC Type: Continuing Calibration
File Name: 70524_012.dxd

Run ID: IC170524-1a3
Date Analyzed: 05/24/2017
Time Analyzed: 9:14
Result Units: MG/L

CASNO	Target Analyte	Spike Added	Result	Reporting Limit	Result Qualifier	% Rec.	Control Limits
16887-00-6	CHLORIDE	10	10.0	0.2		100	90 - 110%

Data Package ID: *IC1705202-1*

Ion Chromatography

Method SW9056

Calibration Verifications

Lab Name: ALS -- Fort Collins
Work Order Number: 1705202
Client Name: COGCC
ClientProject ID: PW NORM 2017 10048

Lab ID: CCV2
QC Type: Continuing Calibration
File Name: 70524_024.dxd

Run ID: IC170524-1a3
Date Analyzed: 05/24/2017
Time Analyzed: 12:15
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%

Data Package ID: *IC1705202-1*

Ion Chromatography

Method SW9056

Calibration Verifications

Lab Name: ALS -- Fort Collins
Work Order Number: 1705202
Client Name: COGCC
ClientProject ID: PW NORM 2017 10048

Lab ID: CCV3
QC Type: Continuing Calibration
File Name: 70524_036.dxd

Run ID: IC170524-1a3
Date Analyzed: 05/24/2017
Time Analyzed: 15:17
Result Units: MG/L

CASNO	Target Analyte	Spike Added	Result	Reporting Limit	Result Qualifier	% Rec.	Control Limits
16887-00-6	CHLORIDE	10	9.87	0.2		99	90 - 110%

Data Package ID: *IC1705202-1*

Ion Chromatography

Method SW9056

Calibration Blanks

Lab Name: **ALS -- Fort Collins**
Work Order Number: 1705202
Client Name: COGCC
ClientProject ID: PW NORM 2017 10048

Lab ID: ICB
QC Type: Initial Calibration

Run ID: IC170516-1a2
Date Analyzed: 05/16/2017
Time Analyzed: 11:13:57 AM
Result Units: MG/L

CASNO	Target Analyte	Result	Reporting Limit	Result Qualifier
16984-48-8	FLUORIDE	0.03	0.1	U
16887-00-6	CHLORIDE	0.087	0.2	J
24959-67-9	BROMIDE	0.06	0.2	U
14808-79-8	SULFATE	0.15	1	U

Data Package ID: *IC1705202-1*

Ion Chromatography

Method SW9056

Calibration Blanks

Lab Name: **ALS -- Fort Collins**
Work Order Number: 1705202
Client Name: COGCC
ClientProject ID: PW NORM 2017 10048

Lab ID: CCB1
QC Type: Continuing Calibration

Run ID: IC170516-1a2
Date Analyzed: 05/16/2017
Time Analyzed: 2:15:19 PM
Result Units: MG/L

CASNO	Target Analyte	Result	Reporting Limit	Result Qualifier
16984-48-8	FLUORIDE	0.03	0.1	U
16887-00-6	CHLORIDE	0.06	0.2	U
24959-67-9	BROMIDE	0.06	0.2	U
14808-79-8	SULFATE	0.15	1	U

Data Package ID: *IC1705202-1*

Ion Chromatography

Method SW9056

Calibration Blanks

Lab Name: **ALS -- Fort Collins**
Work Order Number: 1705202
Client Name: COGCC
ClientProject ID: PW NORM 2017 10048

Lab ID: CCB2
QC Type: Continuing Calibration

Run ID: IC170516-1a2
Date Analyzed: 05/16/2017
Time Analyzed: 5:16:43 PM
Result Units: MG/L

CASNO	Target Analyte	Result	Reporting Limit	Result Qualifier
16984-48-8	FLUORIDE	0.03	0.1	U
16887-00-6	CHLORIDE	0.06	0.2	U
24959-67-9	BROMIDE	0.06	0.2	U
14808-79-8	SULFATE	0.15	1	U

Data Package ID: *IC1705202-1*

Ion Chromatography

Method SW9056

Calibration Blanks

Lab Name: **ALS -- Fort Collins**
Work Order Number: 1705202
Client Name: COGCC
ClientProject ID: PW NORM 2017 10048

Lab ID: CCB3
QC Type: Continuing Calibration

Run ID: IC170516-1a2
Date Analyzed: 05/16/2017
Time Analyzed: 8:18:09 PM
Result Units: MG/L

CASNO	Target Analyte	Result	Reporting Limit	Result Qualifier
16984-48-8	FLUORIDE	0.03	0.1	U
16887-00-6	CHLORIDE	0.06	0.2	U
24959-67-9	BROMIDE	0.06	0.2	U
14808-79-8	SULFATE	0.285	1	J

Data Package ID: *IC1705202-1*

Ion Chromatography

Method SW9056

Calibration Blanks

Lab Name: **ALS -- Fort Collins**
Work Order Number: 1705202
Client Name: COGCC
ClientProject ID: PW NORM 2017 10048

Lab ID: CCB4
QC Type: Continuing Calibration

Run ID: IC170516-1a2
Date Analyzed: 05/16/2017
Time Analyzed: 11:19:35 PM
Result Units: MG/L

CASNO	Target Analyte	Result	Reporting Limit	Result Qualifier
16984-48-8	FLUORIDE	0.03	0.1	U
16887-00-6	CHLORIDE	0.06	0.2	U
24959-67-9	BROMIDE	0.06	0.2	U
14808-79-8	SULFATE	0.15	1	U

Data Package ID: *IC1705202-1*

Ion Chromatography

Method SW9056

Calibration Blanks

Lab Name: ALS -- Fort Collins
Work Order Number: 1705202
Client Name: COGCC
ClientProject ID: PW NORM 2017 10048

Lab ID: ICB
QC Type: Initial Calibration

Run ID: IC170524-1a3
Date Analyzed: 05/16/2017
Time Analyzed: 11:13:57 AM
Result Units: MG/L

CASNO	Target Analyte	Result	Reporting Limit	Result Qualifier
16887-00-6	CHLORIDE	0.087	0.2	J

Data Package ID: *IC1705202-1*

Ion Chromatography

Method SW9056

Calibration Blanks

Lab Name: **ALS -- Fort Collins**
Work Order Number: 1705202
Client Name: COGCC
ClientProject ID: PW NORM 2017 10048

Lab ID: CCB1
QC Type: Continuing Calibration

Run ID: IC170524-1a3
Date Analyzed: 05/24/2017
Time Analyzed: 9:29:37 AM
Result Units: MG/L

CASNO	Target Analyte	Result	Reporting Limit	Result Qualifier
16887-00-6	CHLORIDE	0.06	0.2	U

Data Package ID: *IC1705202-1*

Ion Chromatography

Method SW9056

Calibration Blanks

Lab Name: ALS -- Fort Collins
Work Order Number: 1705202
Client Name: COGCC
ClientProject ID: PW NORM 2017 10048

Lab ID: CCB2
QC Type: Continuing Calibration

Run ID: IC170524-1a3
Date Analyzed: 05/24/2017
Time Analyzed: 12:30:53 PM
Result Units: MG/L

CASNO	Target Analyte	Result	Reporting Limit	Result Qualifier
16887-00-6	CHLORIDE	0.06	0.2	U

Data Package ID: *IC1705202-1*

Ion Chromatography

Method SW9056

Calibration Blanks

Lab Name: **ALS -- Fort Collins**
Work Order Number: 1705202
Client Name: COGCC
ClientProject ID: PW NORM 2017 10048

Lab ID: CCB3
QC Type: Continuing Calibration

Run ID: IC170524-1a3
Date Analyzed: 05/24/2017
Time Analyzed: 3:32:16 PM
Result Units: MG/L

CASNO	Target Analyte	Result	Reporting Limit	Result Qualifier
16887-00-6	CHLORIDE	0.06	0.2	U

Data Package ID: *IC1705202-1*

Raw Data

Alkalinity Raw Data Worksheet

Anal Run ID **AK170523-1a1**

Anal Start Date **5/23/2017**

Standardization Ref ID **AlkalinityCAL170523-1**

Standardization Of Alkalinity

Rep Num	THAM Conc	Aliq Titrated (mL)	vol to pH 4.5(mL)	HCl Conc(N)	Conc Units
1	0.2	1	10.55	0.0189574	N
2	0.2	1	10.51	0.0190295	N
3	0.2	1	10.62	0.0188324	N

Avg HCl Conc
0.01893975

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)	HCO3 (mg/L as CaCO3)	CO3 (mg/L as CaCO3)	OH (mg/L as CaCO3)	Total Alk (mg/L as CaCO3)	Expected	%Rec	vol to LL pH(mL)
1	☐	0	AK170523-1	MB	1	100	0	0.23	0.23	2.178071	0	0	2.178071			NA
2	☐	0	AK170523-1	LCS	1	100	5.01	5.68	10.69	6.344816	94.88814	0	101.233			NA
3	☐	0	AK170523-1	LCSD	1	100	5.03	5.77	10.8	7.007704	95.26693	0	102.2746			NA
4	☐	0	1705158-1	SMP	1	5	0	7.1	7.1	1344.722	0	0	1344.722			NA
5	☐	0	1705158-1	DUP	1	5	0	7.3	7.3	1382.602	0	0	1382.602			NA
6	☐	0	1705202-1	SMP	1	5	0	4.84	4.84	916.6838	0	0	916.6838			NA
7	☐	0	1705203-1	SMP	1	5	0	5.95	5.95	1126.915	0	0	1126.915			NA
8	☐	0	1705240-1	SMP	1	10	0	5.68	5.68	537.8888	0	0	537.8888			NA
9	☐	0	1705242-1	SMP	1	25	0	14.01	14.01	530.6917	0	0	530.6917			NA
10	☐	0	1705243-1	SMP	1	25	0	8.05	8.05	304.9299	0	0	304.9299			NA
11	☐	0	1705211-1	SMP	1	25	0	5.25	5.25	198.8673	0	0	198.8673			NA
12	☐	0	1705248-1	SMP	1	25	0	5.22	5.22	197.7309	0	0	197.7309			NA
13	☐	0	1705250-1	SMP	1	25	0	2.89	2.89	109.4717	0	0	109.4717			NA
14	☐	0	1705256-6	SMP	1	25	0	1.55	1.55	58.71321	0	0	58.71321			NA
15	☐	0	1705256-12	SMP	1	25	0	5.65	5.65	214.0191	0	0	214.0191			NA
16	☐	0	1705256-18	SMP	1	25	0	3.19	3.19	120.8356	0	0	120.8356			NA
17	☐	0	1705256-24	SMP	1	25	0	1.3	1.3	49.24334	0	0	49.24334			NA
18	☐	0	1705256-24	DUP	1	25	0	1.29	1.29	48.86454	0	0	48.86454			NA
19	☐	0	1705460-1	SMP	1	1.044	0	1.63	1.63	1478.534	0	0	1478.534			NA
20	☐	0	1705460-2	SMP	1	1.061	0	0.29	0.29	258.8372	0	0	258.8372			NA
21	☐	0	1705331-1	SMP	1	25	0	6.32	6.32	239.3984	0	0	239.3984			NA

Comments:

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	**RG161102-1**
Phenolphthalein Indicator	**RG141105-2**
Bromocresol Green Indicator	**RG160628-1**
0.20 N Std. THAM	**ST161228-1**
0.20 N NaCO3 (ICV, LCS, CCV's - 1.0 mL)	**ST161028-2**

pH Calculations and Quality Control Results

Prep & Analysis Date: 5/11/2017
Prep & Analysis Time: 1030
Analyst: HMA

Reagent List:

4.01: ST160428-1	10.01: ST160428-3
7.00 (CCV): ST170317-4	7.00 (ICV): ST160428-5

ID	Temp. (°C)	Method	sample vol (g)	sample vol (mL)	pH Value	QC Accdeptance Range (pH units)
pH 4.01	24.7	NA	NA	NA	4.01	
pH 7.00	24.7	NA	NA	NA	7.00	
pH 10.01	24.7	NA	NA	NA	10.01	
ICV - pH 7.00	24.7	NA	NA	NA	7.03	+/- 0.05
1705212-1	24.7	EPA150.1	NA	20.0	6.83	
1705212-1DUP	24.7	EPA150.1	NA	20.0	6.79	
1705212-2	24.7	EPA150.1	NA	20.0	6.78	
1705212-3	24.7	EPA150.1	NA	20.0	6.97	
1705158-1	24.7	SW9040	NA	20.0	8.45	
1705177-1	24.7	SW9040	NA	20.0	7.55	
1705177-2	24.7	SW9040	NA	20.0	7.58	
1705177-3	24.7	SW9040	NA	20.0	7.10	
1705202-1	24.7	SW9040	NA	20.0	7.75	
1705203-1	24.7	SW9040	NA	20.0	7.75	
CCV- pH 7.00	24.7	NA	NA	NA	7.01	+/- 0.10

DUPLICATE SUMMARY (Aq)

ID	native pH Value	duplic pH Value	difference of native - dup	accept. limit
1705212-1	6.83	6.79	0.04	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

Specific Conductivity Calculations & Quality Control Results

Prep & Analysis Date: 5/11/2017
Prep & Analysis Time: 10:20
Analyst: HMA

ID	Prep Dilution Factor	Initial Sample Volume (mL)	Final Sample Volume (mL)	Temp. °C	Conductivity Instrument Reading	Instrument Units	Calclated Conductivity (umhos/cm)	% Recovery	Recovery Limit
Calibration Standard (*)		30	30		1413	umhos/cm	1413		
ICV-2nd Source (**)		30	30		744	umhos/cm	744	104	646.2 - 789.8
1705158-1	1	30	30		3410	umhos/cm	3410		
1705158-1DUP	1	30	30		3500	umhos/cm	3500		
1705177-1	1	30	30		50200	umhos/cm	50200		
1705177-2	1	30	30		50300	umhos/cm	50300		
1705177-3	1	30	30		27300	umhos/cm	27300		
1705202-1	1	30	30		25100	umhos/cm	25100		
1705203-1	1	30	30		20790	umhos/cm	20790		
CCV-1 (*)		30	30		1497	umhos/cm	1497	106	1271.7 - 1554.3

DUPLICATE SUMMARY

ID	native Spec. Cond. Value	duplic Spec. Cond. Value	RPD %	RPD accept. limit
1705158-1	3410	3500	3	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] (*): ST170201-4

0.005 M KCl Solu+C21tion [718umhos/cm] (**): ST170201-1

TDS Raw Data Worksheet

Anal Run ID **TD170516-1A1**

Anal Start Date **5/16/2017**

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	☐	0	TD170515-1	MB	100	3.3992	3.4001	0.9	3.4001	0.9	0	NA	9	20
2	☐	0	TD170515-1	LCS	100	3.4307	3.4711	40.4	3.4718	41.1	0.7	1.72%	411	20
3	☐	0	TD170515-1	LCSD	100	3.4087	3.453	44.3	3.4539	45.2	0.9	2.01%	452	20
4	☐	0	1705211-1	SMP	100	3.3851	3.47	84.9	3.4696	84.5	0.4	0.47%	845	20
5	☐	0	1705248-1	SMP	100	3.4067	3.4922	85.5	3.4922	85.5	0	0.00%	855	20
6	☐	0	1705250-1	SMP	100	3.3758	3.4141	38.3	3.4136	37.8	0.5	1.31%	378	20
7	☐	0	1705177-3	SMP	5	3.364	3.4553	91.3	3.4548	90.8	0.5	0.55%	18160	400
8	☐	0	1705202-1	SMP	5	3.3852	3.4633	78.1	3.4632	78	0.1	0.13%	15600	400
9	☐	0	1705203-1	SMP	5	3.4081	3.4716	63.5	3.4714	63.3	0.2	0.32%	12660	400
10	☐	0	1705228-1	SMP	100	3.4278	3.4678	40	3.4677	39.9	0.1	0.25%	399	20
11	☐	0	1705234-1	SMP	50	3.4015	3.4704	68.9	3.4698	68.3	0.6	0.87%	1366	40
12	☐	0	1705240-1	SMP	100	3.36	3.4248	64.8	3.424	64	0.8	1.24%	640	20
13	☐	0	1705242-1	SMP	100	3.4272	3.4928	65.6	3.4931	65.9	0.3	0.46%	659	20
14	☐	0	1705243-1	SMP	50	3.4383	3.53	91.7	3.5298	91.5	0.2	0.22%	1830	40
15	☐	0	1705271-17	SMP	100	3.4261	3.4589	32.8	3.4589	32.8	0	0.00%	328	20
16	☐	0	1705271-17	DUP	100	3.4334	3.4671	33.7	3.4667	33.3	0.4	1.19%	333	20
17	☐	0	1705275-2	SMP	100	3.4061	3.4326	26.5	3.4324	26.3	0.2	0.76%	263	20
18	☐	0	1705275-2	DUP	100	3.4174	3.4443	26.9	3.4434	26	0.9	3.40%	260	20
19	☐	0	1705275-4	SMP	100	3.4272	3.4574	30.2	3.4571	29.9	0.3	1.00%	299	20
20	☐	0	1705275-5	SMP	100	3.4256	3.4576	32	3.4566	31	1	3.17%	310	20
21	☐	0	1705275-7	SMP	100	3.3734	3.4042	30.8	3.4035	30.1	0.7	2.30%	301	20
22	☐	0	1705275-10	SMP	100	3.4325	3.4542	21.7	3.4539	21.4	0.3	1.39%	214	20
23	☐	0	1705275-11	SMP	100	3.4276	3.4535	25.9	3.4531	25.5	0.4	1.56%	255	20
24	☐	0	1705275-13	SMP	100	3.4206	3.446	25.4	3.4456	25	0.4	1.59%	250	20
25	☐	0	1705275-15	SMP	100	3.4294	3.4681	38.7	3.4676	38.2	0.5	1.30%	382	20

Comments:

Standards, Batch QC, and Matrix Spike Information

ID	Parent ID	Parent Conc	Parent Vol.	Final Vol.
LCS	ST161028-3	40000	1	100

Reagent List:

TDS Spike Solution: 40.0 mg NaCl/mL **ST161028-3**

Shaded values used to to determine the calculated concentration

TSS Raw Data Worksheet

Anal Run ID **TS170516-1A1**

Anal Start Date **5/16/2017**

Num	Don't Use	ReRun Num	Lab ID	QC Type	Samp Vol (ml)	Filter + Boat (g)	A - Filer + Boat gross (g)	A - Net mass (mg)	B - Filer + Boat gross (g)	B - Net mass (mg)	Constant Wt (+/- 0.5mg)	Constant Wt (+/- 4%)	calculated conc (mg/L)	DL (mg/L)
1	☐	0	TS170515-1	MB	500	1.3695	1.3697	0.2	1.3697	0.2	0	NA	0.4	4
2	☐	0	TS170515-2	MB	500	1.3809	1.3804	-0.5	1.3808	-0.1	0.4	NA	-0.2	4
3	☐	0	TS170515-1	LCS	100	1.3581	1.4341	76	1.4343	76.2	0.2	0.26%	762	20
4	☐	0	TS170515-2	LCS	100	1.3532	1.4121	58.9	1.4123	59.1	0.2	0.34%	591	20
5	☐	0	TS170515-2	LCSD	100	1.3612	1.4199	58.7	1.4196	58.4	0.3	0.51%	584	20
6	☐	0	1705212-1	SMP	100	1.3524	1.3552	2.8	1.3555	3.1	0.3	10.17%	31	20
7	☐	0	1705212-1	DUP	100	1.3696	1.3727	3.1	1.3726	3	0.1	3.28%	30	20
8	☐	0	1705212-2	SMP	100	1.3486	1.3518	3.2	1.352	3.4	0.2	6.06%	34	20
9	☐	0	1705212-3	SMP	100	1.384	1.3862	2.2	1.3867	2.7	0.5	20.41%	27	20
10	☐	0	1705252-1	SMP	100	1.3807	1.3842	3.5	1.3842	3.5	0	0.00%	35	20
11	☐	0	1705252-1	DUP	100	1.3721	1.3754	3.3	1.3755	3.4	0.1	2.99%	34	20
12	☐	0	1705158-1	SMP	100	1.375	1.3753	0.3	1.3752	0.2	0.1	NA	2	20
13	☐	0	1705177-1	SMP	100	1.3889	1.3991	10.2	1.399	10.1	0.1	0.99%	101	20
14	☐	0	1705177-2	SMP	100	1.3625	1.3809	18.4	1.3808	18.3	0.1	0.54%	183	20
15	☐	0	1705177-3	SMP	100	1.3816	1.3822	0.6	1.3822	0.6	0	NA	6	20
16	☐	0	1705202-1	SMP	100	1.3645	1.4268	62.3	1.4264	61.9	0.4	0.64%	619	20
17	☐	0	1705203-1	SMP	100	1.3854	1.3886	3.2	1.3886	3.2	0	0.00%	32	20
18	☐	0	1705240-1	SMP	100	1.3868	1.3867	-0.1	1.3867	-0.1	0	NA	-1	20
19	☐	0	1705242-1	SMP	100	1.3699	1.3706	0.7	1.3707	0.8	0.1	NA	8	20
20	☐	0	1705243-1	SMP	100	1.3843	1.3852	0.9	1.3853	1	0.1	NA	10	20
21	☐	0	1705228-1	SMP	500	1.3739	1.3791	5.2	1.3787	4.8	0.4	8.00%	9.6	4
22	☐	0	1705271-17	SMP	500	1.372	1.3727	0.7	1.3726	0.6	0.1	NA	1.2	4
23	☐	0	1705275-2	SMP	500	1.3813	1.3922	10.9	1.3918	10.5	0.4	3.74%	21	4
24	☐	0	1705275-4	SMP	500	1.3743	1.3801	5.8	1.3797	5.4	0.4	7.14%	10.8	4
25	☐	0	1705275-5	SMP	500	1.3808	1.3811	0.3	1.3809	0.1	0.2	NA	0.2	4
26	☐	0	1705275-7	SMP	500	1.3643	1.3777	13.4	1.3773	13	0.4	3.03%	26	4
27	☐	0	1705275-10	SMP	500	1.3614	1.3662	4.8	1.3658	4.4	0.4	8.70%	8.8	4
28	☐	0	1705275-11	SMP	500	1.3765	1.3986	22.1	1.3984	21.9	0.2	0.91%	43.8	4
29	☐	0	1705275-13	SMP	500	1.3807	1.3817	1	1.3812	0.5	0.5	NA	1	4
30	☐	0	1705275-15	SMP	500	1.3674	1.3842	16.8	1.384	16.6	0.2	1.20%	33.2	4
31	☐	0	1705276-2	SMP	500	1.3702	1.3718	1.6	1.3716	1.4	0.2	NA	2.8	4
32	☐	0	1705276-2	DUP	500	1.3715	1.373	1.5	1.3726	1.1	0.4	NA	2.2	4

Comments:

Standards, Batch QC, and Matrix Spike Information

ID	Parent ID	Parent Conc	Parent Vol.	Final Vol.

Reagent List:

TSS Spike Material: pottery clay **ST170509-4**

Shaded values used to to determine the calculated concentration

Schedule File: C:\PeakNet2\schedule02\170516ic2.SCH

Line	Sample	Sample Type	Level	Method	Data File	Comment
1	Blank	Sample		170516ic2.met	c:\peaknet2\data02\170516ic2\170516_001.dxd	Water
2	0 STD	Calibration	7	170516ic2.met	c:\peaknet2\data02\170516ic2\170516_002.dxd	
3	1000X STD	Calibration	6	170516ic2.met	c:\peaknet2\data02\170516ic2\170516_003.dxd	
4	500X STD	Calibration	5	170516ic2.met	c:\peaknet2\data02\170516ic2\170516_004.dxd	
5	100X STD	Calibration	4	170516ic2.met	c:\peaknet2\data02\170516ic2\170516_005.dxd	
6	25X STD	Calibration	3	170516ic2.met	c:\peaknet2\data02\170516ic2\170516_006.dxd	
7	10X STD	Calibration	2	170516ic2.met	c:\peaknet2\data02\170516ic2\170516_007.dxd	
8	5X STD	Calibration	1	170516ic2.met	c:\peaknet2\data02\170516ic2\170516_008.dxd	
9	ICV	Sample		170516ic2.met	c:\peaknet2\data02\170516ic2\170516_009.dxd	ICV
10	ICB	Sample		170516ic2.met	c:\peaknet2\data02\170516ic2\170516_010.dxd	ICB
11	IC170516-1MB	Sample		170516ic2.met	c:\peaknet2\data02\170516ic2\170516_011.dxd	MB
12	IC170516-1LCS	Sample		170516ic2.met	c:\peaknet2\data02\170516ic2\170516_012.dxd	LCS
13	IC170516-1LCSD	Sample		170516ic2.met	c:\peaknet2\data02\170516ic2\170516_013.dxd	LCSD
14	1704598-1 1x	Sample		170516ic2.met	c:\peaknet2\data02\170516ic2\170516_014.dxd	RRing F
15	1704598-2 1x	Sample		170516ic2.met	c:\peaknet2\data02\170516ic2\170516_015.dxd	RRing F
16	1704598-3 2x	Sample		170516ic2.met	c:\peaknet2\data02\170516ic2\170516_016.dxd	RRing F
17	1704598-4 1x	Sample		170516ic2.met	c:\peaknet2\data02\170516ic2\170516_017.dxd	RRing F
18	1704598-5 1x	Sample		170516ic2.met	c:\peaknet2\data02\170516ic2\170516_018.dxd	RRing F
19	1705265-2 1000x	Sample		170516ic2.met	c:\peaknet2\data02\170516ic2\170516_019.dxd	RRing Cl
20	1704412-1 200x	Sample		170516ic2.met	c:\peaknet2\data02\170516ic2\170516_020.dxd	RRing F, ~~Cl~~
21	CCV	Sample		170516ic2.met	c:\peaknet2\data02\170516ic2\170516_021.dxd	CCV
22	CCB	Sample		170516ic2.met	c:\peaknet2\data02\170516ic2\170516_022.dxd	CCB
23	1704412-1 500x	Sample		170516ic2.met	c:\peaknet2\data02\170516ic2\170516_023.dxd	RRing ~~F~~, Cl
24	1704412-3 200x	Sample		170516ic2.met	c:\peaknet2\data02\170516ic2\170516_024.dxd	RRing F, ~~Cl~~
25	1704412-3 500x	Sample		170516ic2.met	c:\peaknet2\data02\170516ic2\170516_025.dxd	RRing ~~F~~, Cl
26	1704412-6 250x	Sample		170516ic2.met	c:\peaknet2\data02\170516ic2\170516_026.dxd	RRing F, ~~Cl~~
27	1704412-6 500x	Sample		170516ic2.met	c:\peaknet2\data02\170516ic2\170516_027.dxd	RRing ~~F~~, Cl
28	~~1705265-1 500x~~	Sample		170516ic2.met	c:\peaknet2\data02\170516ic2\170516_028.dxd	~~RRing Cl~~
29	~~1705265-1MS 500x~~	Sample		170516ic2.met	c:\peaknet2\data02\170516ic2\170516_029.dxd	~~RRing Cl~~
30	~~1705265-1MSD 500x~~	Sample		170516ic2.met	c:\peaknet2\data02\170516ic2\170516_030.dxd	~~RRing Cl~~
31	~~1705133-1 1x~~	Sample		170516ic2.met	c:\peaknet2\data02\170516ic2\170516_031.dxd	~~SO4~~
32	~~1705133-2 5x~~	Sample		170516ic2.met	c:\peaknet2\data02\170516ic2\170516_032.dxd	~~SO4~~
33	CCV	Sample		170516ic2.met	c:\peaknet2\data02\170516ic2\170516_033.dxd	CCV
34	CCB	Sample		170516ic2.met	c:\peaknet2\data02\170516ic2\170516_034.dxd	CCB
35	~~1705133-3 1x~~	Sample		170516ic2.met	c:\peaknet2\data02\170516ic2\170516_035.dxd	~~SO4~~
36	1705133-4 1x	Sample		170516ic2.met	c:\peaknet2\data02\170516ic2\170516_036.dxd	SO4
37	~~1705133-5 5x~~	Sample		170516ic2.met	c:\peaknet2\data02\170516ic2\170516_037.dxd	~~SO4~~
38	~~1705133-6 5x~~	Sample		170516ic2.met	c:\peaknet2\data02\170516ic2\170516_038.dxd	~~SO4~~
39	1705320-1 1x	Sample		170516ic2.met	c:\peaknet2\data02\170516ic2\170516_039.dxd	F, NO3
40	1705320-2 2x	Sample		170516ic2.met	c:\peaknet2\data02\170516ic2\170516_040.dxd	F, NO3
41	1705320-3 1x	Sample		170516ic2.met	c:\peaknet2\data02\170516ic2\170516_041.dxd	F, NO3
42	1705320-4 1x	Sample		170516ic2.met	c:\peaknet2\data02\170516ic2\170516_042.dxd	F, NO3
43	1705320-5 1x	Sample		170516ic2.met	c:\peaknet2\data02\170516ic2\170516_043.dxd	F, NO3
44	1705320-5MS 1x	Sample		170516ic2.met	c:\peaknet2\data02\170516ic2\170516_044.dxd	F, NO3
45	CCV	Sample		170516ic2.met	c:\peaknet2\data02\170516ic2\170516_045.dxd	CCV
46	CCB	Sample		170516ic2.met	c:\peaknet2\data02\170516ic2\170516_046.dxd	CCB
47	1705320-5MSD 1x	Sample		170516ic2.met	c:\peaknet2\data02\170516ic2\170516_047.dxd	F, NO3
48	1705320-6 1x	Sample		170516ic2.met	c:\peaknet2\data02\170516ic2\170516_048.dxd	F, NO3
49	1705177-1 50x	Sample		170516ic2.met	c:\peaknet2\data02\170516ic2\170516_049.dxd	Br, ~~Cl~~, F, SO4
50	~~1705177-1 500x~~	Sample		170516ic2.met	c:\peaknet2\data02\170516ic2\170516_050.dxd	~~Br, Cl, F, SO4~~
51	1705177-2 50x	Sample		170516ic2.met	c:\peaknet2\data02\170516ic2\170516_051.dxd	Br, ~~Cl~~, F, SO4
52	~~1705177-2 500x~~	Sample		170516ic2.met	c:\peaknet2\data02\170516ic2\170516_052.dxd	~~Br, Cl, F, SO4~~
53	1705177-3 25x	Sample		170516ic2.met	c:\peaknet2\data02\170516ic2\170516_053.dxd	Br, ~~Cl~~, F, SO4
54	~~1705177-3 250x~~	Sample		170516ic2.met	c:\peaknet2\data02\170516ic2\170516_054.dxd	~~Br, Cl, F, SO4~~
55	1705202-1 25x	Sample		170516ic2.met	c:\peaknet2\data02\170516ic2\170516_055.dxd	Br, ~~Cl~~, F, SO4
56	~~1705202-1 250x~~	Sample		170516ic2.met	c:\peaknet2\data02\170516ic2\170516_056.dxd	~~Br, Cl, F, SO4~~
57	CCV	Sample		170516ic2.met	c:\peaknet2\data02\170516ic2\170516_057.dxd	CCV
58	CCB	Sample		170516ic2.met	c:\peaknet2\data02\170516ic2\170516_058.dxd	CCB
59	1705203-1 25x	Sample		170516ic2.met	c:\peaknet2\data02\170516ic2\170516_059.dxd	Br, ~~Cl~~, F, SO4
60	~~1705203-1 250x~~	Sample		170516ic2.met	c:\peaknet2\data02\170516ic2\170516_060.dxd	~~Br, Cl, F, SO4~~
61	~~1705240-1 1x~~	Sample		170516ic2.met	c:\peaknet2\data02\170516ic2\170516_061.dxd	~~Br, Cl, F, SO4~~
62	~~1705240-1 10x~~	Sample		170516ic2.met	c:\peaknet2\data02\170516ic2\170516_062.dxd	~~Br, Cl, F, SO4~~
63	~~1705242-1 1x~~	Sample		170516ic2.met	c:\peaknet2\data02\170516ic2\170516_063.dxd	~~Br, Cl, F, SO4~~
64	~~1705242-1 10x~~	Sample		170516ic2.met	c:\peaknet2\data02\170516ic2\170516_064.dxd	~~Br, Cl, F, SO4~~
65	1705243-1 2x	Sample		170516ic2.met	c:\peaknet2\data02\170516ic2\170516_065.dxd	Br, ~~Cl~~, F, SO4
66	1705243-1 20x	Sample		170516ic2.met	c:\peaknet2\data02\170516ic2\170516_066.dxd	Br, Cl, ~~F, SO4~~
67	CCV	Sample		170516ic2.met	c:\peaknet2\data02\170516ic2\170516_067.dxd	CCV
68	CCB	Sample		170516ic2.met	c:\peaknet2\data02\170516ic2\170516_068.dxd	CCB
69	STOP	Sample		stop.met	c:\peaknet2\data02\170516ic2\170516_069.dxd	STOP

Default Method Path: C:\PEAKNET2\METHOD02
Default Data Path: C:\PEAKNET2\DATA02\170214IC2
Comment:

BatchDx created schedule. Analyst: ANG
Instrument #2: DIONEX DX-120. ID Serial Number: 99060762
Analytical Column: Dionex IonPac AS14

Schedule File: C:\PeakNet2\schedule02\170516ic2.SCH

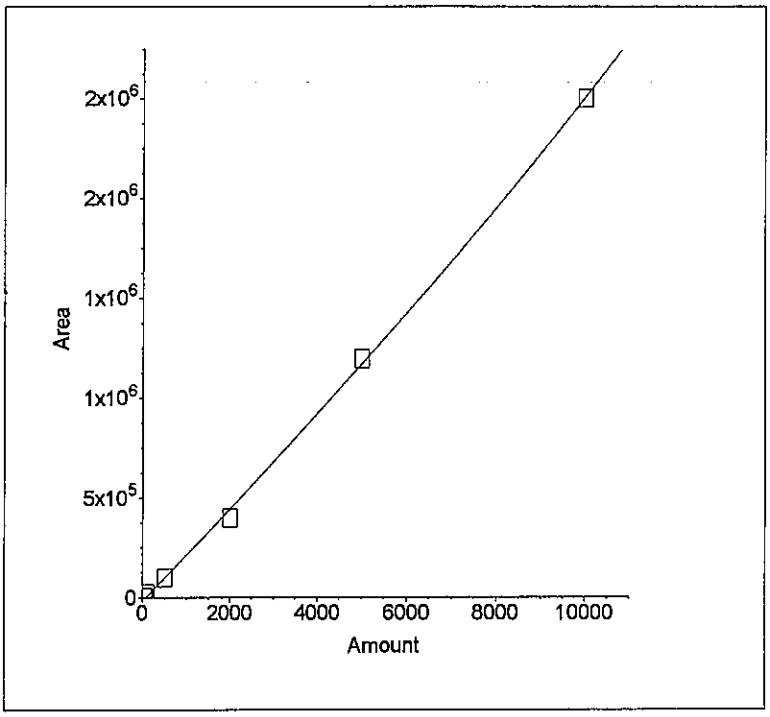
Methods: EPA 300.0 and SW9056. ALS SOP 1113

Final_	ID_	Aliq
ICAL std level 7 (0x)		
ICAL std level 6 (1000x)	50.00	ST170207-8, ST170515-3 0.05
ICAL std level 5 (500x)	5.00	" " 0.01
ICAL std level 4 (100x)	5.00	" " 0.05
ICAL std level 3 (25x)	5.00	" " 0.20
ICAL std level 2 (10x)	5.00	" " 0.50
ICAL std level 1 (5x)	5.00	" " 1.00
CCV	5.00	ST170207-8, ST170317-2 0.50
RVS	5.00	ST160920-1, ST170116-9 0.01
ICV	5.00	ST160707-6 0.25
		ST170314-1 0.08
LCS & MS/D	5.00	ST160809-2 0.05
		ST170116-8 0.05

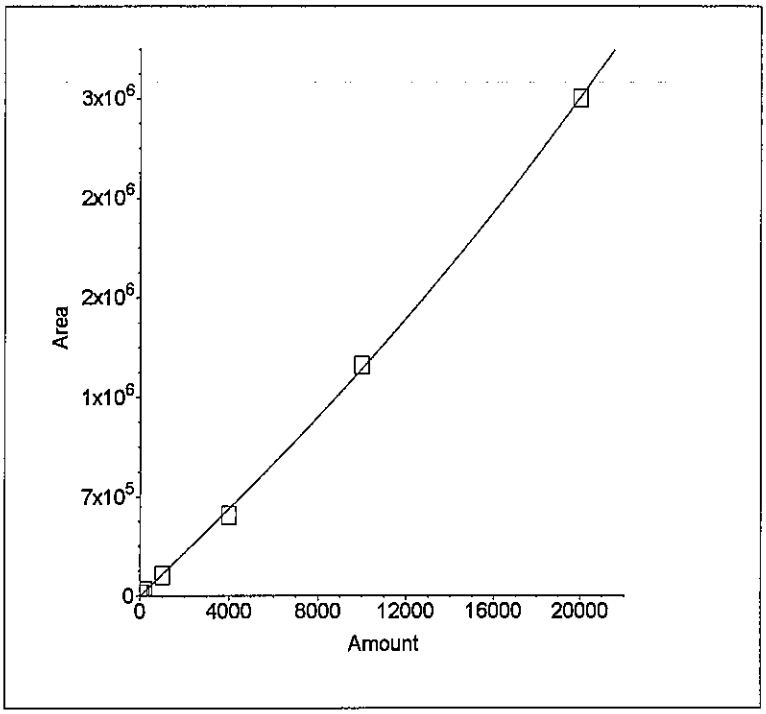
Dilutions Table: All to 5mL Final Volume (FV) unless specified otherwise:

2x (2.5mL)	4x (1.25mL)	5x (1mL)	8x (0.625mL)
10x (0.5mL)	12.5x (0.4mL)	20x (0.25mL)	25x (0.2mL)
40x (0.125mL)	50x (0.1mL)	62.5x (0.08mL)	100x (0.05mL)
125x (0.04mL)	200x (0.025mL)	250x (0.02mL)	500x (0.01mL)
1000x (100uL to 100mL FV)		2000x (50uL to 100mL FV)	
2500x (40uL to 100mL FV)		4000x (25uL to 100mL FV)	
5000x (50uL to 250mL FV)		10000x (25uL to 250mL FV)	

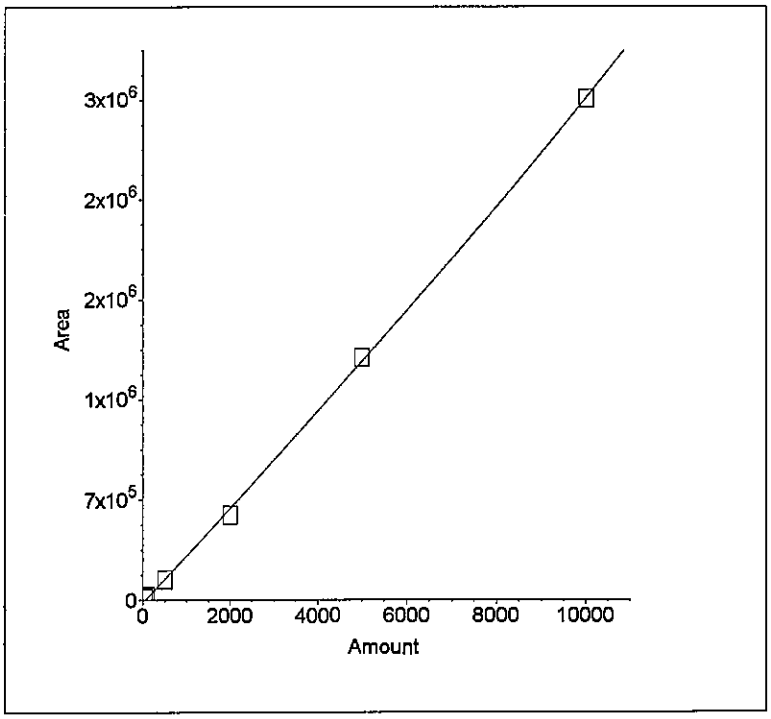
1. Component:Fluoride
Standard:External Fit Type:Quadratic
Origin:Ignore Calibration:Area
r^2=0.999293
Amt=-1.833807e-010*Resp^2+
4.405363e-003*Resp+71.44



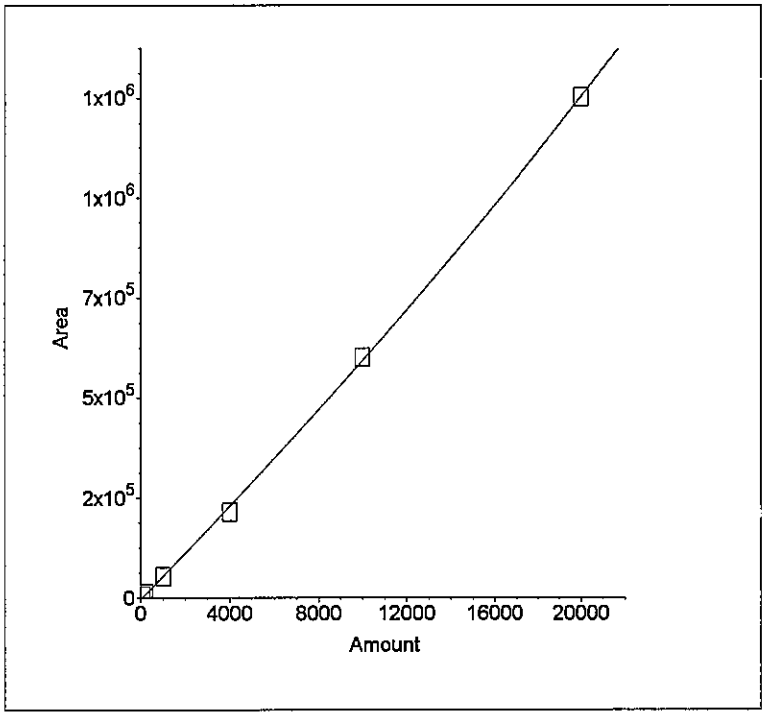
2. Component:Chloride
Standard:External Fit Type:Quadratic
Origin:Ignore Calibration:Area
r^2=0.999684
Amt=-2.748118e-010*Resp^2+
6.602077e-003*Resp+16



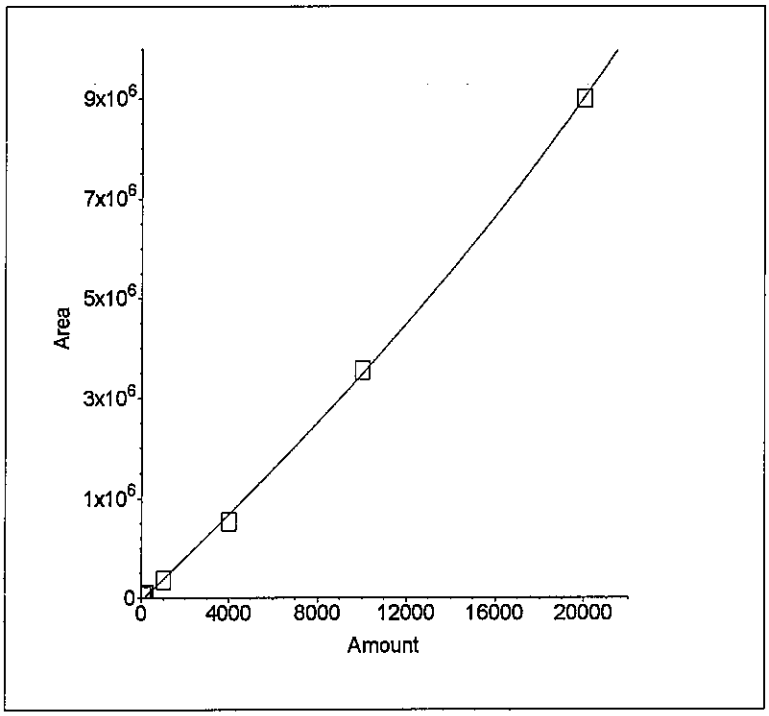
3. Component:Nitrite as N
Standard:External Fit Type:Quadratic
Origin:Ignore Calibration:Area
r^2=0.999626
Amt=-7.002681e-011*Resp^2+
3.010826e-003*Resp+54



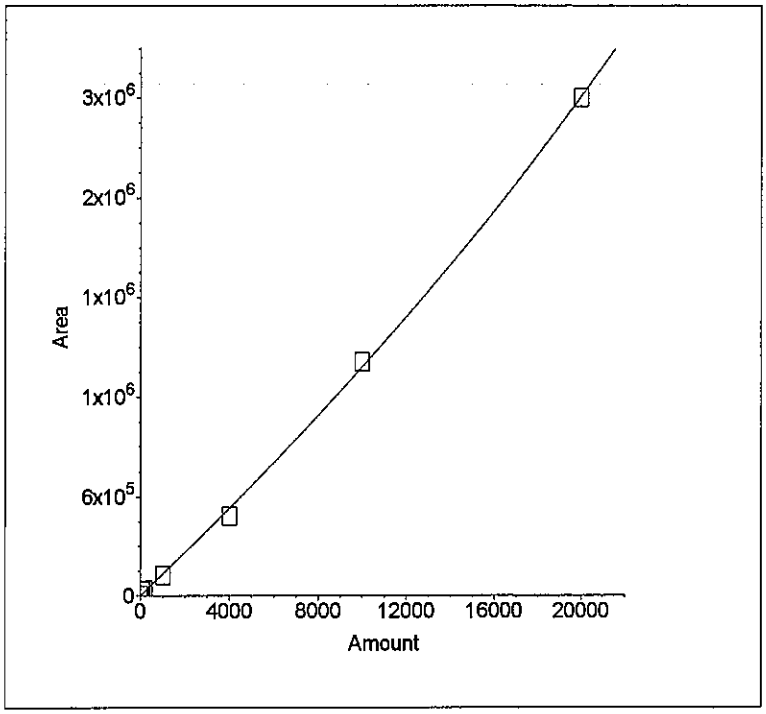
4. Component:Bromide
Standard:External Fit Type:Quadratic
Origin:Ignore Calibration:Area
r^2=0.999767
Amt=-1.126898e-009*Resp^2+
1.649409e-002*Resp+71.09



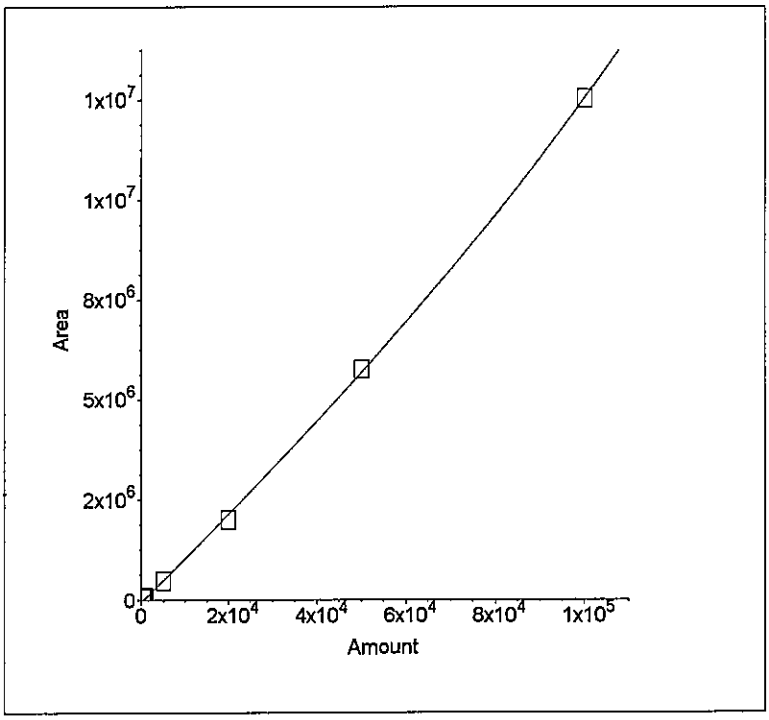
5. Component:Nitrate as N
Standard:External Fit Type:Quadratic
Origin:Ignore Calibration:Area
r^2=0.999535
Amt=-4.713629e-011*Resp^2+
2.592663e-003*Resp+117.5



6. Component:Orthophosphate as P
Standard:External Fit Type:Quadratic
Origin:Ignore Calibration:Area
r^2=0.999459
Amt=-3.163691e-010*Resp^2+
7.218814e-003*Resp+-4.352



7. Component:Sulfate
Standard:External Fit Type:Quadratic
Origin:Ignore Calibration:Area
r^2=0.999699
Amt=-9.412835e-011*Resp^2+
8.473892e-003*Resp+444.4



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

(No Levels Component)

Calibration Update Report

Sample Name : 0 STD
Data File Name : c:\peaknet2\data02\170516ic2\170516_002.DXD

Method File Name : c:\peaknet2\method02\170516ic2.met
Schedule File Name : c:\peaknet2\schedule02\170516ic2.sch
Date Time Acquired : 5/16/17 9:13:01 AM
Calibration Date : 5/16/17 9:28:04 AM

System Operator : amg
Datafile Updated : 5/16/17 9:28:04 AM
Method Comment : Flow rate = 1.2 mL/min, Eluent = ...

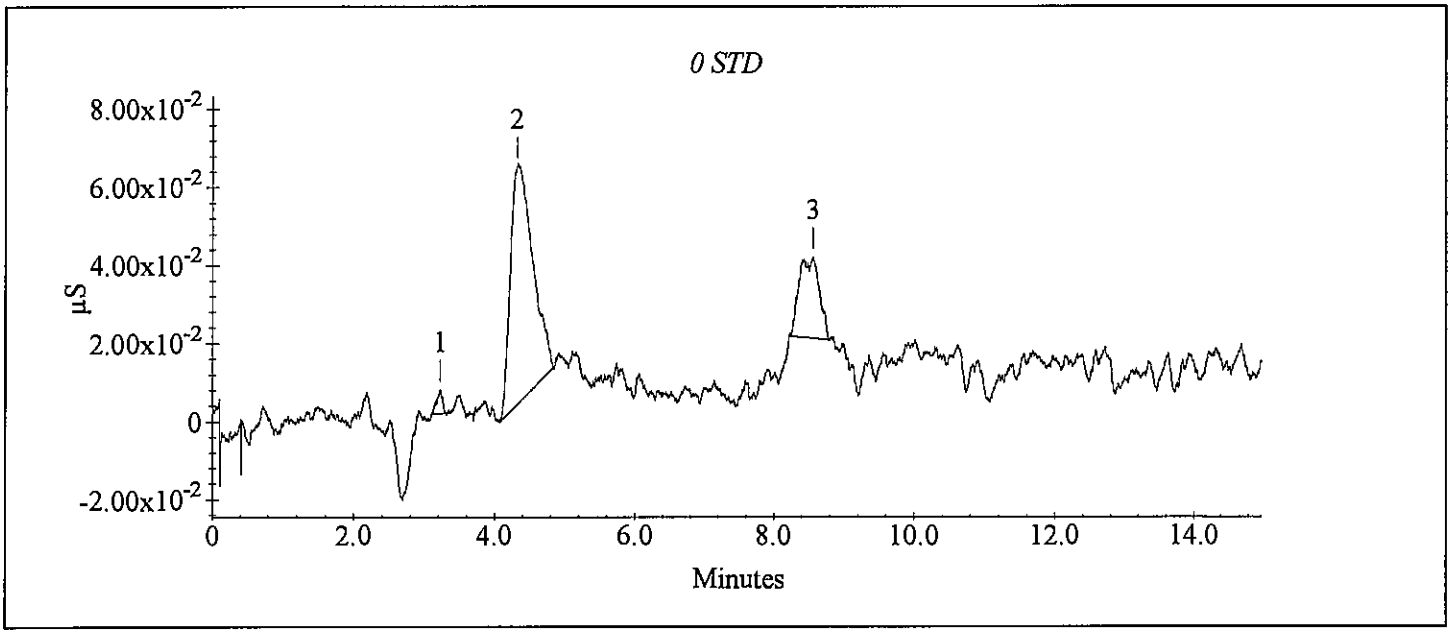
Peak Information : All Components

Peak #	Analyte	Retention Time (min.)	Concentration	Peak Area
1		3.23	0	
2	Chloride	4.32	0	13490
	Nitrite as N			
	Bromide			
	Nitrate as N			
3	Orthophosphate as P	8.56	0	4123
	Sulfate			
	Nitrate/Nitrite as N			

Calibration Update Report

Sample Name : 0 STD
Data File Name : c:\peaknet2\data02\170516ic2\170516_002.DXD

Method File Name : c:\peaknet2\method02\170516ic2.met	System Operator : amg
Schedule File Name : c:\peaknet2\schedule02\170516ic2.sch	Datafile Updated : 5/16/17 9:28:04 AM
Date Time Acquired : 5/16/17 9:13:01 AM	Method Comment : Flow rate = 1.2 mL/min,
Calibration Date : 5/16/17 9:28:04 AM	Eluent = ...



Calibration Update Report

Sample Name : 1000X STD
Data File Name : c:\peaknet2\data02\170516ic2\170516_003.DXD

Method File Name : c:\peaknet2\method02\170516ic2.met
Schedule File Name : c:\peaknet2\schedule02\170516ic2.sch
Date Time Acquired : 5/16/17 9:28:07 AM
Calibration Date : 5/16/17 9:43:13 AM
System Operator : amg
Datafile Updated : 5/16/17 9:43:13 AM
Method Comment : Flow rate = 1.2 mL/min, Eluent = ...

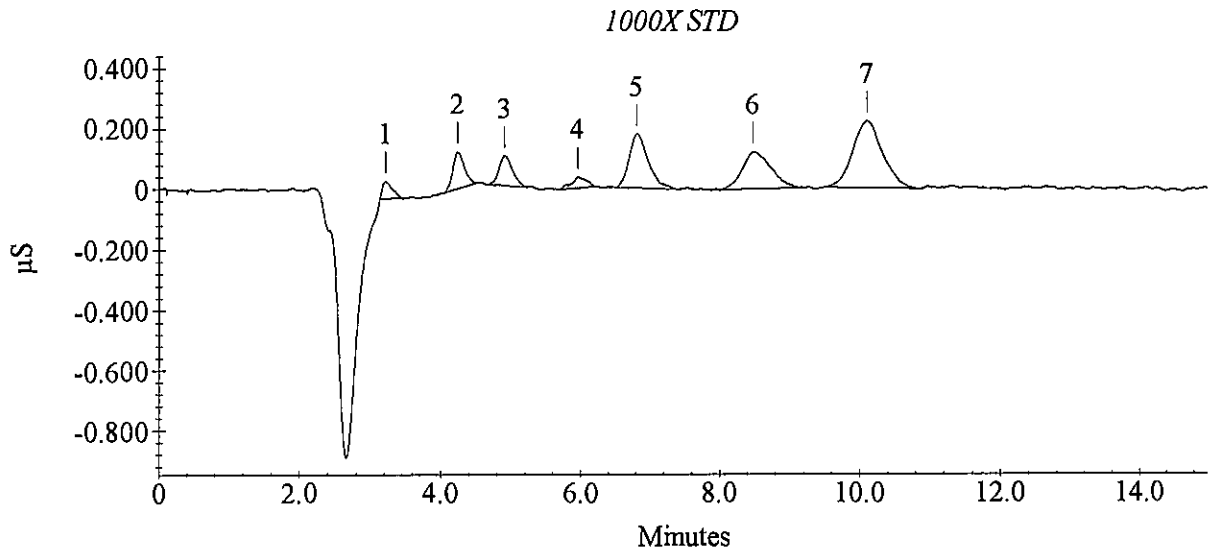
Peak Information : All Components

Peak #	Analyte	Retention Time (min.)	Concentration	Peak Area
1	Fluoride	3.21	50	5393
2	Chloride	4.24	100	13816
3	Nitrite as N	4.91	50	13057
4	Bromide	5.96	100	5303
5	Nitrate as N	6.81	100	33982
6	Orthophosphate as P	8.48	100	34405
7	Sulfate	10.11	500	64785
	Nitrate/Nitrite as N			

Calibration Update Report

Sample Name : 1000X STD
Data File Name : c:\peaknet2\data02\170516ic2\170516_003.DXD

Method File Name : c:\peaknet2\method02\170516ic2.met	System Operator : amg
Schedule File Name : c:\peaknet2\schedule02\170516ic2.sch	Datafile Updated : 5/16/17 9:43:13 AM
Date Time Acquired : 5/16/17 9:28:07 AM	Method Comment : Flow rate = 1.2 mL/min,
Calibration Date : 5/16/17 9:43:13 AM	Eluent = ...



Calibration Update Report

Sample Name : 500X STD
Data File Name : c:\peaknet2\data02\170516ic2\170516_004.DXD

Method File Name : c:\peaknet2\method02\170516ic2.met
Schedule File Name : c:\peaknet2\schedule02\170516ic2.sch
Date Time Acquired : 5/16/17 9:43:15 AM
Calibration Date : 5/16/17 9:58:19 AM
System Operator : amg
Datafile Updated : 5/16/17 9:58:19 AM
Method Comment : Flow rate = 1.2 mL/min, Eluent = ...

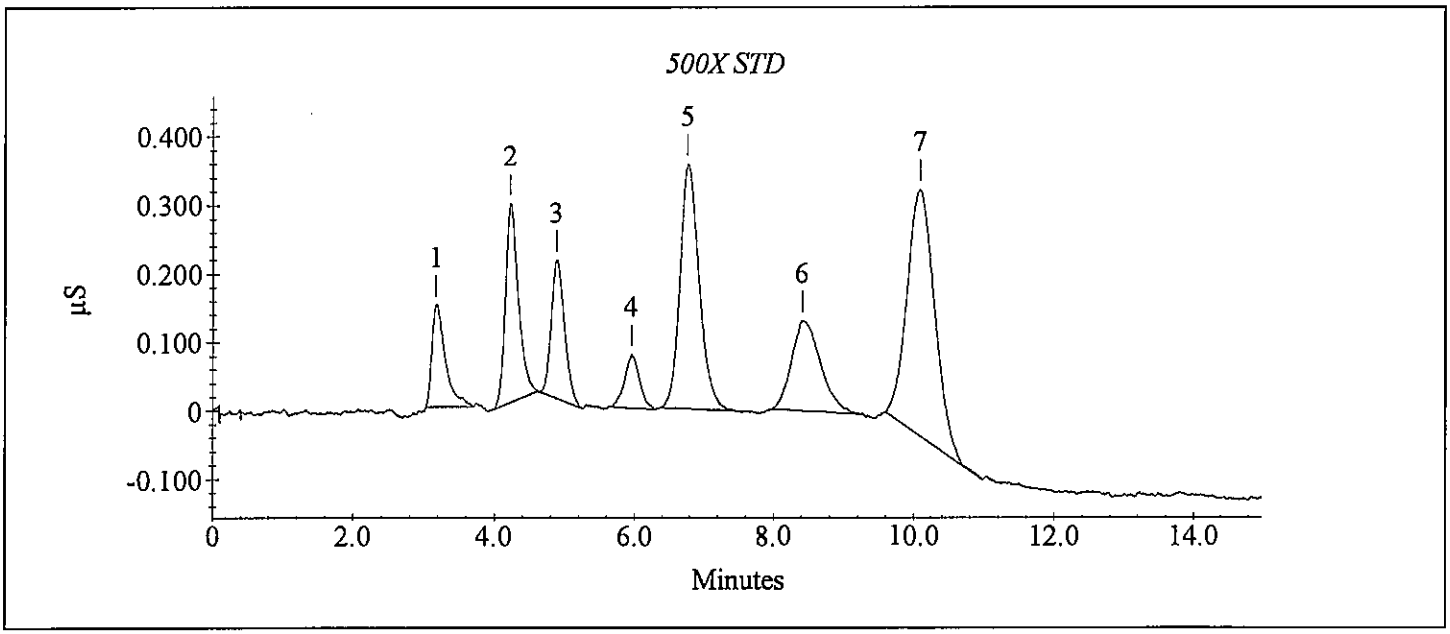
Peak Information : All Components

Peak #	Analyte	Retention Time (min.)	Concentration	Peak Area
1	Fluoride	3.17	100	19812
2	Chloride	4.23	200	36869
3	Nitrite as N	4.88	100	26887
4	Bromide	5.96	200	11731
5	Nitrate as N	6.77	200	68770
6	Orthophosphate as P	8.41	200	37790
7	Sulfate	10.09	1000	99003
	Nitrate/Nitrite as N			

Calibration Update Report

Sample Name : 500X STD
Data File Name : c:\peaknet2\data02\170516ic2\170516_004.DXD

Method File Name : c:\peaknet2\method02\170516ic2.met	System Operator : amg
Schedule File Name : c:\peaknet2\schedule02\170516ic2.sch	Datafile Updated : 5/16/17 9:58:19 AM
Date Time Acquired : 5/16/17 9:43:15 AM	Method Comment : Flow rate = 1.2 mL/min,
Calibration Date : 5/16/17 9:58:19 AM	Eluent = ...



Calibration Update Report

Sample Name : 100X STD
Data File Name : c:\peaknet2\data02\170516ic2\170516_005.DXD

Method File Name : c:\peaknet2\method02\170516ic2.met
Schedule File Name : c:\peaknet2\schedule02\170516ic2.sch
Date Time Acquired : 5/16/17 9:58:23 AM
Calibration Date : 5/16/17 10:13:27 AM

System Operator : amg
Datafile Updated : 5/16/17 10:13:27 AM
Method Comment : Flow rate = 1.2 mL/min, Eluent = ...

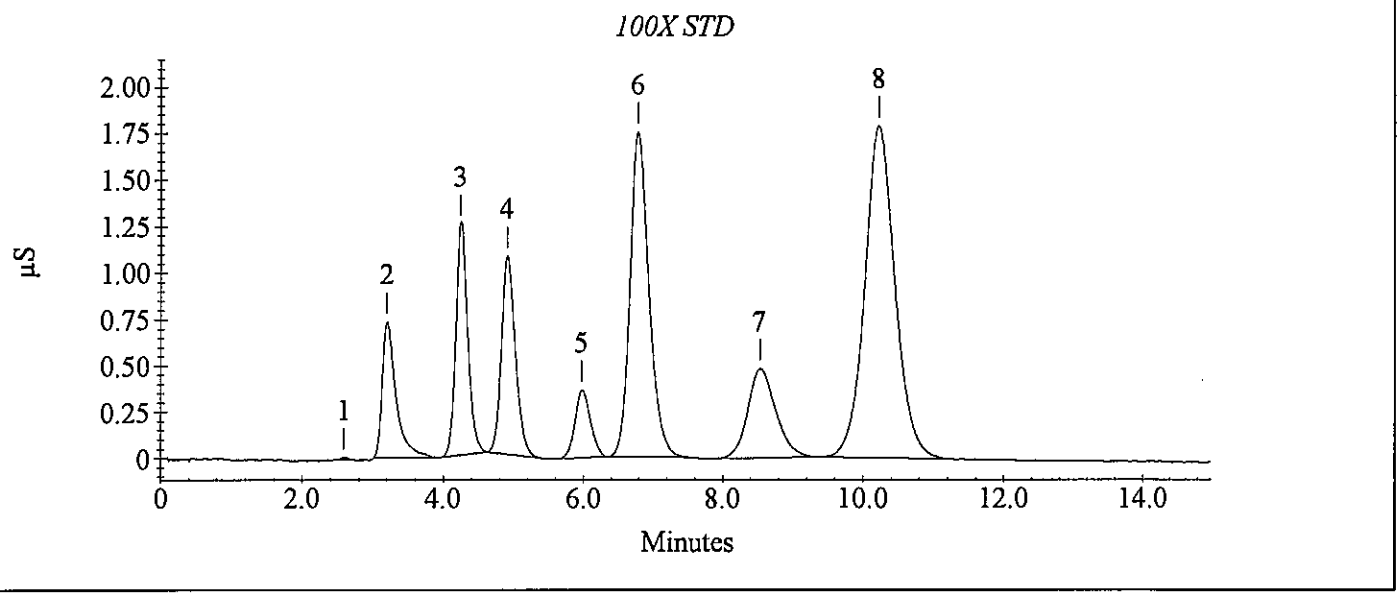
Peak Information : All Components

Peak #	Analyte	Retention Time (min.)	Concentration	Peak Area
2	Fluoride	3.20	500	99745
3	Chloride	4.24	1000	145792
4	Nitrite as N	4.91	500	148195
5	Bromide	5.97	1000	56315
6	Nitrate as N	6.79	1000	332020
7	Orthophosphate as P	8.53	1000	133798
8	Sulfate	10.23	5000	529777
	Nitrate/Nitrite as N			

Calibration Update Report

Sample Name : 100X STD
Data File Name : c:\peaknet2\data02\170516ic2\170516_005.DXD

Method File Name : c:\peaknet2\method02\170516ic2.met	System Operator : amg
Schedule File Name : c:\peaknet2\schedule02\170516ic2.sch	Datafile Updated : 5/16/17 10:13:27 AM
Date Time Acquired : 5/16/17 9:58:23 AM	Method Comment : Flow rate = 1.2 mL/min,
Calibration Date : 5/16/17 10:13:27 AM	Eluent = ...



Calibration Update Report

Sample Name : 25X STD
Data File Name : c:\peaknet2\data02\170516ic2\170516_006.DXD

Method File Name : c:\peaknet2\method02\170516ic2.met
Schedule File Name : c:\peaknet2\schedule02\170516ic2.sch
Date Time Acquired : 5/16/17 10:13:31 AM
Calibration Date : 5/16/17 10:28:34 AM
System Operator : amg
Datafile Updated : 5/16/17 10:28:34 AM
Method Comment : Flow rate = 1.2 mL/min, Eluent = ...

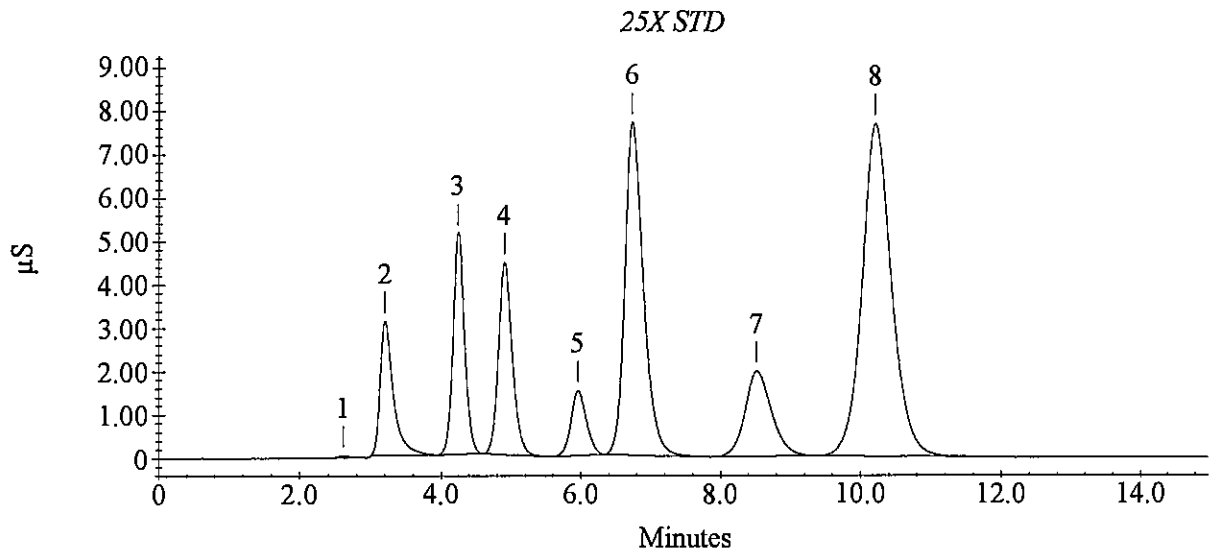
Peak Information : All Components

Peak #	Analyte	Retention Time (min.)	Concentration	Peak Area
2	Fluoride	3.20	2000	399901
3	Chloride	4.24	4000	577192
4	Nitrite as N	4.91	2000	608367
5	Bromide	5.96	4000	228373
6	Nitrate as N	6.73	4000	1414335
7	Orthophosphate as P	8.52	4000	518467
8	Sulfate	10.21	20000	2215950
	Nitrate/Nitrite as N			

Calibration Update Report

Sample Name : 25X STD
Data File Name : c:\peaknet2\data02\170516ic2\170516_006.DXD

Method File Name : c:\peaknet2\method02\170516ic2.met	System Operator : amg
Schedule File Name : c:\peaknet2\schedule02\170516ic2.sch	Datafile Updated : 5/16/17 10:28:34 AM
Date Time Acquired : 5/16/17 10:13:31 AM	Method Comment : Flow rate = 1.2 mL/min,
Calibration Date : 5/16/17 10:28:34 AM	Eluent = ...



Calibration Update Report

Sample Name : 10X STD
Data File Name : c:\peaknet2\data02\170516ic2\170516_007.DXD

Method File Name : c:\peaknet2\method02\170516ic2.met
Schedule File Name : c:\peaknet2\schedule02\170516ic2.sch
Date Time Acquired : 5/16/17 10:28:38 AM
Calibration Date : 5/16/17 10:43:42 AM

System Operator : amg
Datafile Updated : 5/16/17 10:43:42 AM
Method Comment : Flow rate = 1.2 mL/min, Eluent = ...

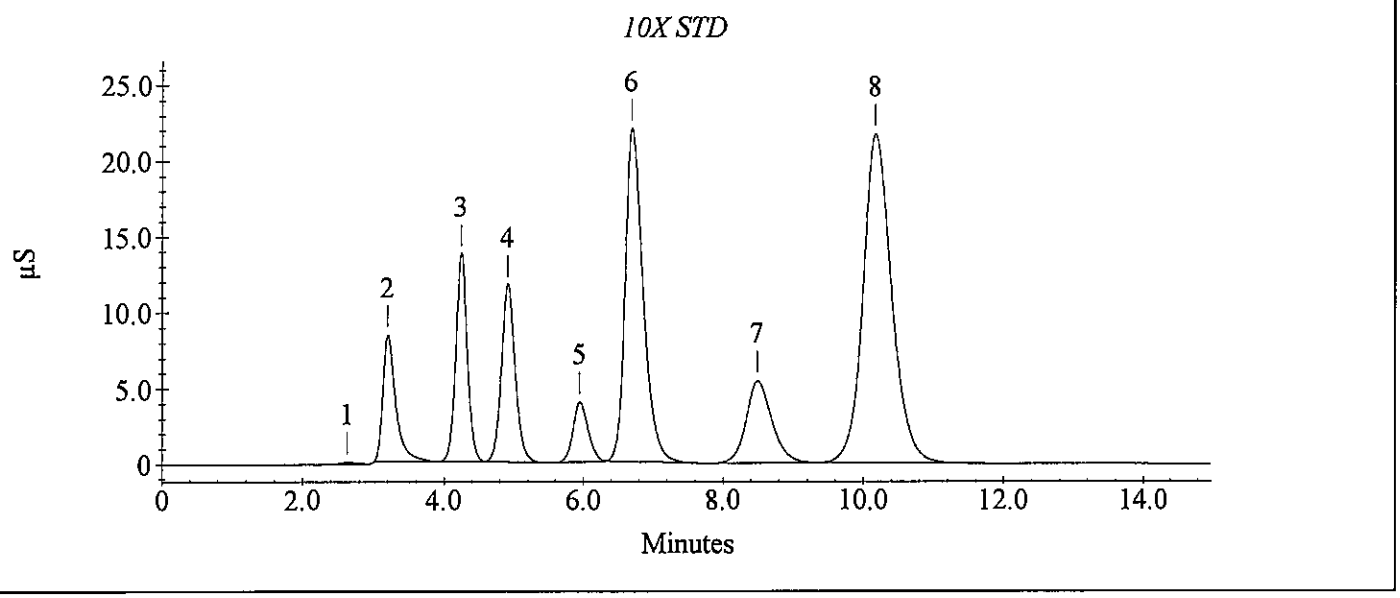
Peak Information : All Components

Peak #	Analyte	Retention Time (min.)	Concentration	Peak Area
2	Fluoride	3.20	5000	1069377
3	Chloride	4.24	10000	1564327
4	Nitrite as N	4.91	5000	1614531
5	Bromide	5.95	10000	592981
6	Nitrate as N	6.69	10000	3956320
7	Orthophosphate as P	8.49	10000	1377208
8	Sulfate	10.17	50000	6144636
	Nitrate/Nitrite as N			

Calibration Update Report

Sample Name : 10X STD
Data File Name : c:\peaknet2\data02\170516ic2\170516_007.DXD

Method File Name : c:\peaknet2\method02\170516ic2.met	System Operator : amg
Schedule File Name : c:\peaknet2\schedule02\170516ic2.sch	Datafile Updated : 5/16/17 10:43:42 AM
Date Time Acquired : 5/16/17 10:28:38 AM	Method Comment : Flow rate = 1.2 mL/min,
Calibration Date : 5/16/17 10:43:42 AM	Eluent = ...



Calibration Update Report

Sample Name : 5X STD
Data File Name : c:\peaknet2\data02\170516ic2\170516_008.DXD

Method File Name : c:\peaknet2\method02\170516ic2.met	System Operator : amg
Schedule File Name : c:\peaknet2\schedule02\170516ic2.sch	Datafile Updated : 5/16/17 10:58:49 AM
Date Time Acquired : 5/16/17 10:43:45 AM	Method Comment : Flow rate = 1.2 mL/min,
Calibration Date : 5/16/17 10:58:49 AM	Eluent = ...

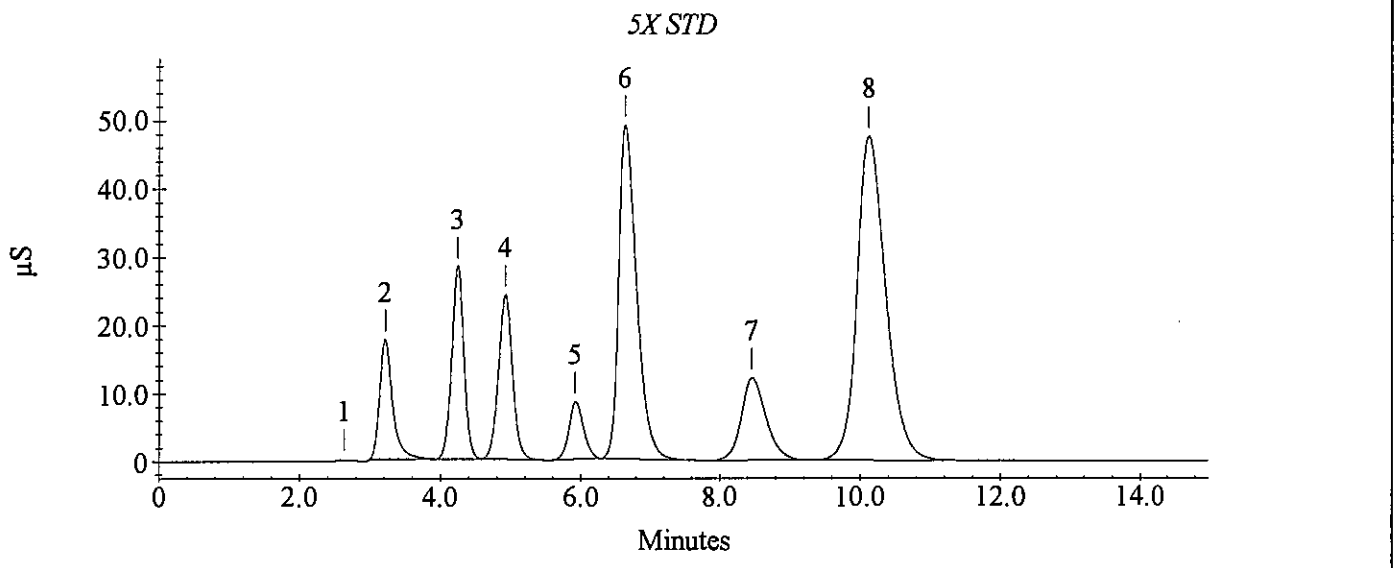
Peak Information : All Components

Peak #	Analyte	Retention Time (min.)	Concentration	Peak Area
2	Fluoride	3.21	10000	2272493
3	Chloride	4.24	20000	3382494
4	Nitrite as N	4.92	10000	3405290
5	Bromide	5.92	20000	1233589
6	Nitrate as N	6.64	20000	8766053
7	Orthophosphate as P	8.47	20000	2977409
8	Sulfate	10.12	100000	13502144
	Nitrate/Nitrite as N			

Calibration Update Report

Sample Name : 5X STD
Data File Name : c:\peaknet2\data02\170516ic2\170516_008.DXD

Method File Name : c:\peaknet2\method02\170516ic2.met	System Operator : amg
Schedule File Name : c:\peaknet2\schedule02\170516ic2.sch	Datafile Updated : 5/16/17 10:58:49 AM
Date Time Acquired : 5/16/17 10:43:45 AM	Method Comment : Flow rate = 1.2 mL/min,
Calibration Date : 5/16/17 10:58:49 AM	Eluent = ...



Sample Analysis Report

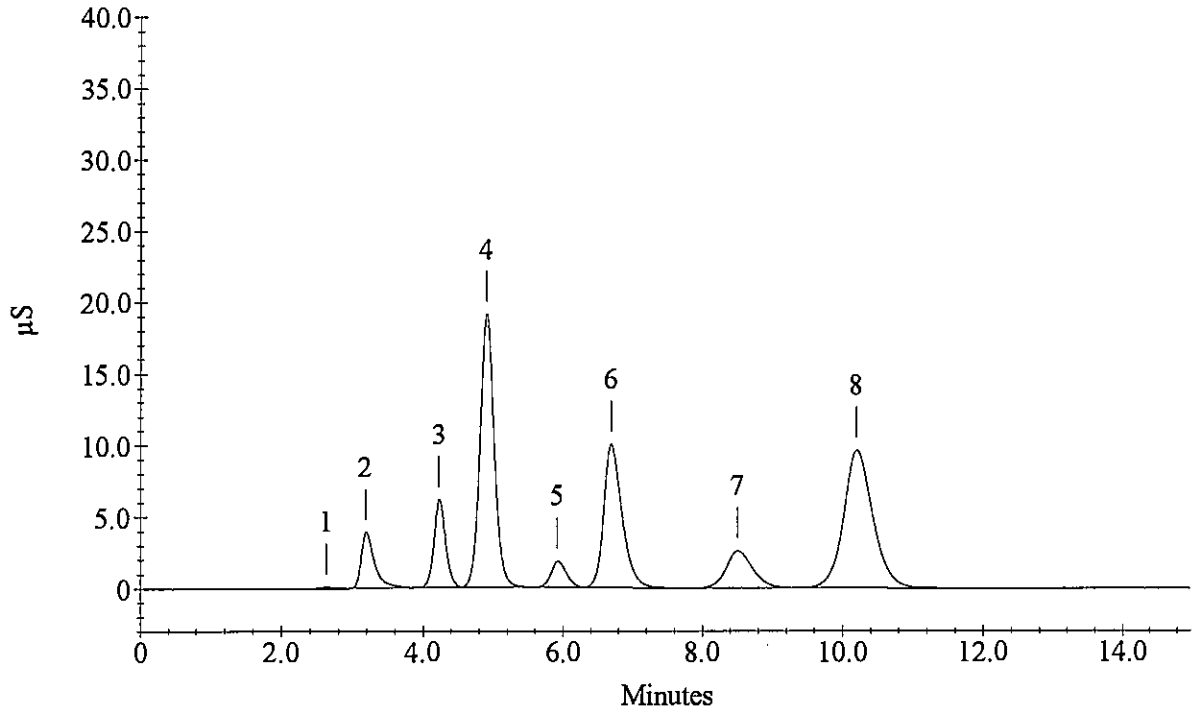
Sample Name : ICV
Data File Name : c:\peaknet2\data02\170516ic2\170516_009.DXD

Method File Name : c:\peaknet2\method02\170516ic2.met
Date, Time Analyzed : 5/16/17 10:58:51 AM
System Operator : amg
Calibration Updated : 5/16/17 10:58:49 AM

Current Date : 5/16/17
Current Time : 11:13:56 AM
Datafile Updated : 5/16/17 11:13:56 AM

Peak Information : All Components

Peak Number	Analyte	Retention Time (min.)	Concentration (ug/L)	Limit Exceeded	Peak Area
2	Fluoride	3.19	2467.1		508336
3	Chloride	4.23	4682.0		701032
4	Nitrite as N	4.91	8034.8		2672957
5	Bromide	5.92	4709.8		272632
6	Nitrate as N	6.69	4926.3		1835666
7	Orthophosphate as P	8.51	5170.9		688640
8	Sulfate	10.20	23958.3		2781988
	Nitrate/Nitrite as N				



Sample Analysis Report

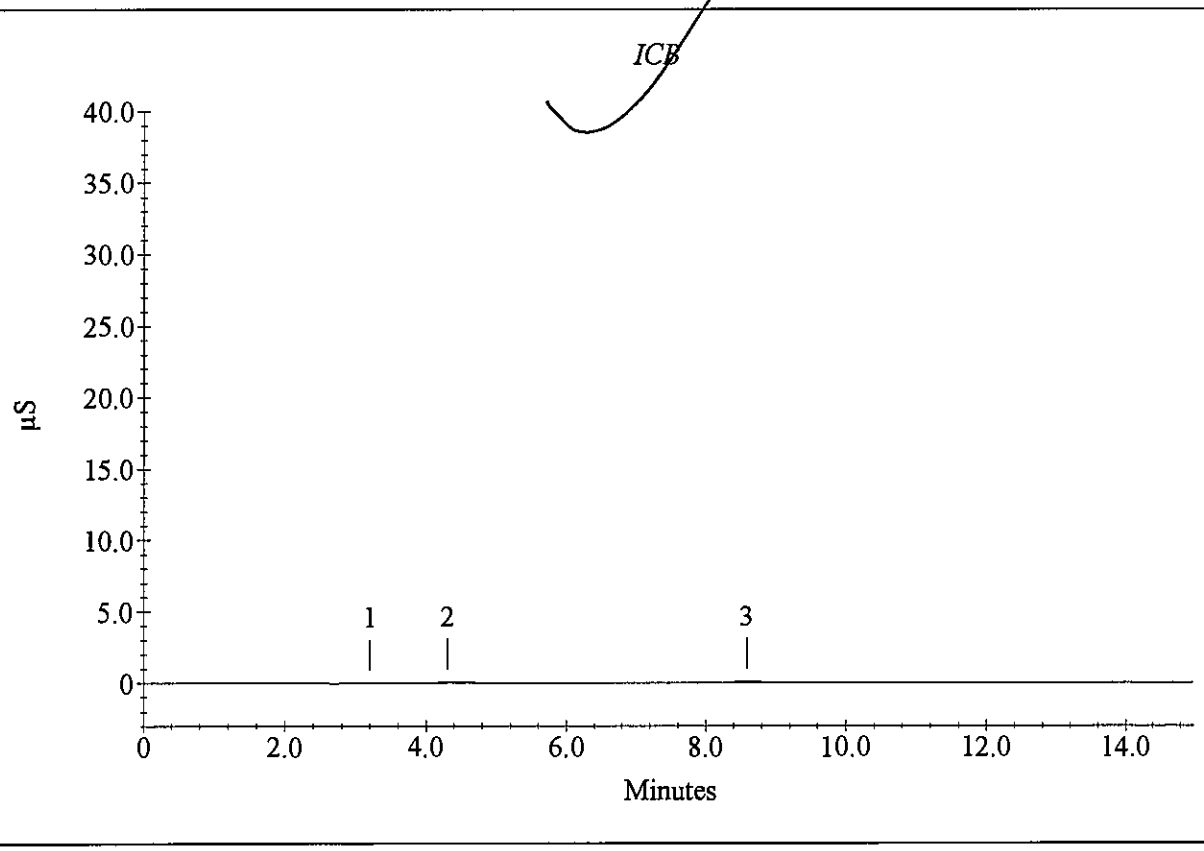
Sample Name : ICB
Data File Name : c:\peaknet2\data02\170516ic2\170516_010.DXD

Method File Name : c:\peaknet2\method02\170516ic2.met
Date, Time Analyzed : 5/16/17 11:13:57 AM
System Operator : amg
Calibration Updated : 5/16/17 10:58:49 AM

Current Date : 5/16/17
Current Time : 11:29:02 AM
Datafile Updated : 5/16/17 11:29:02 AM

Peak Information : All Components

Peak Number	Analyte	Retention Time (min.)	Concentration (ug/L)	Limit Exceeded	Peak Area
1	Fluoride	3.20	26.2	-	1220
2	Chloride Nitrite as N Bromide Nitrate as N	4.31	87.0	-	15442
3	Orthophosphate as P Sulfate Nitrate/Nitrite as N	8.59	160.4	-	29934



Sample Analysis Report

Sample Name : IC170516-1MB
Data File Name : c:\peaknet2\data02\170516ic2\170516_011.DXD

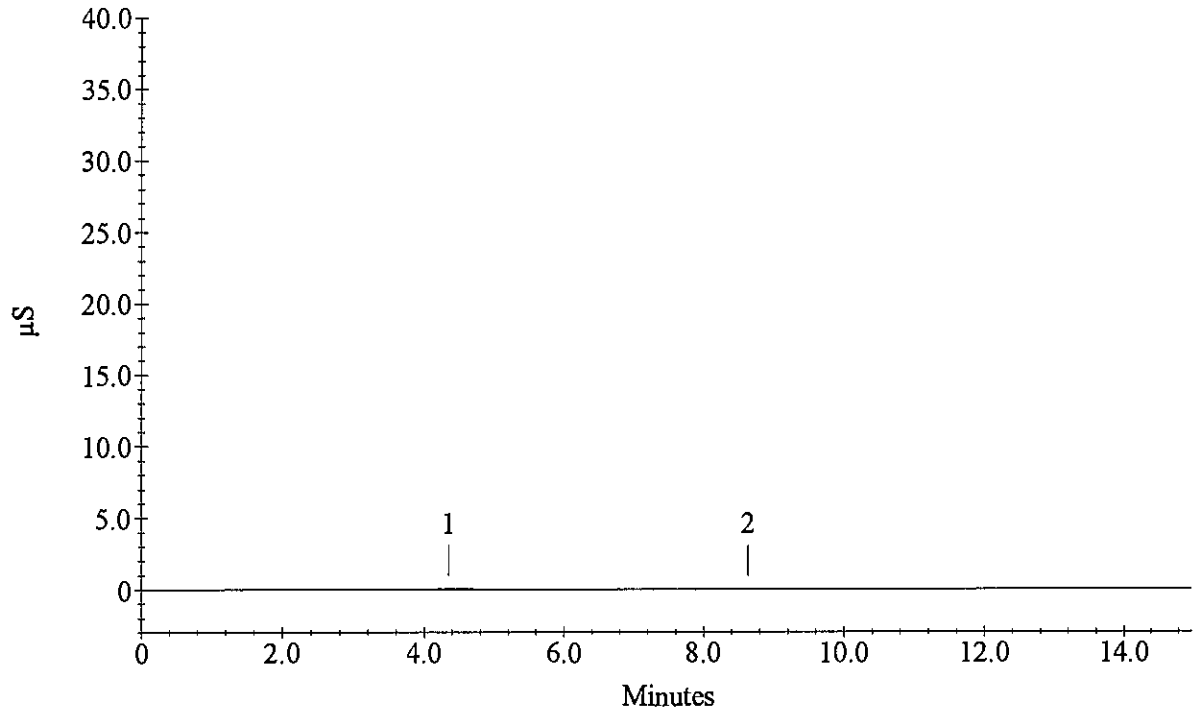
Method File Name : c:\peaknet2\method02\170516ic2.met
Date, Time Analyzed : 5/16/17 11:29:04 AM
System Operator : amg
Calibration Updated : 5/16/17 10:58:49 AM

Current Date : 5/16/17
Current Time : 11:44:09 AM
Datafile Updated : 5/16/17 11:44:08 AM

Peak Information : All Components

Peak Number	Analyte	Retention Time (min.)	Concentration (ug/L)	Limit Exceeded	Peak Area
1	Chloride	4.35	69.5	-	12906
1	Chloride Nitrite as N Bromide Nitrate as N	4.35	69.5	-	12906
2	Orthophosphate as P Sulfate Nitrate/Nitrite as N	8.64	19.6	-	12032

IC170516-1MB



Sample Analysis Report

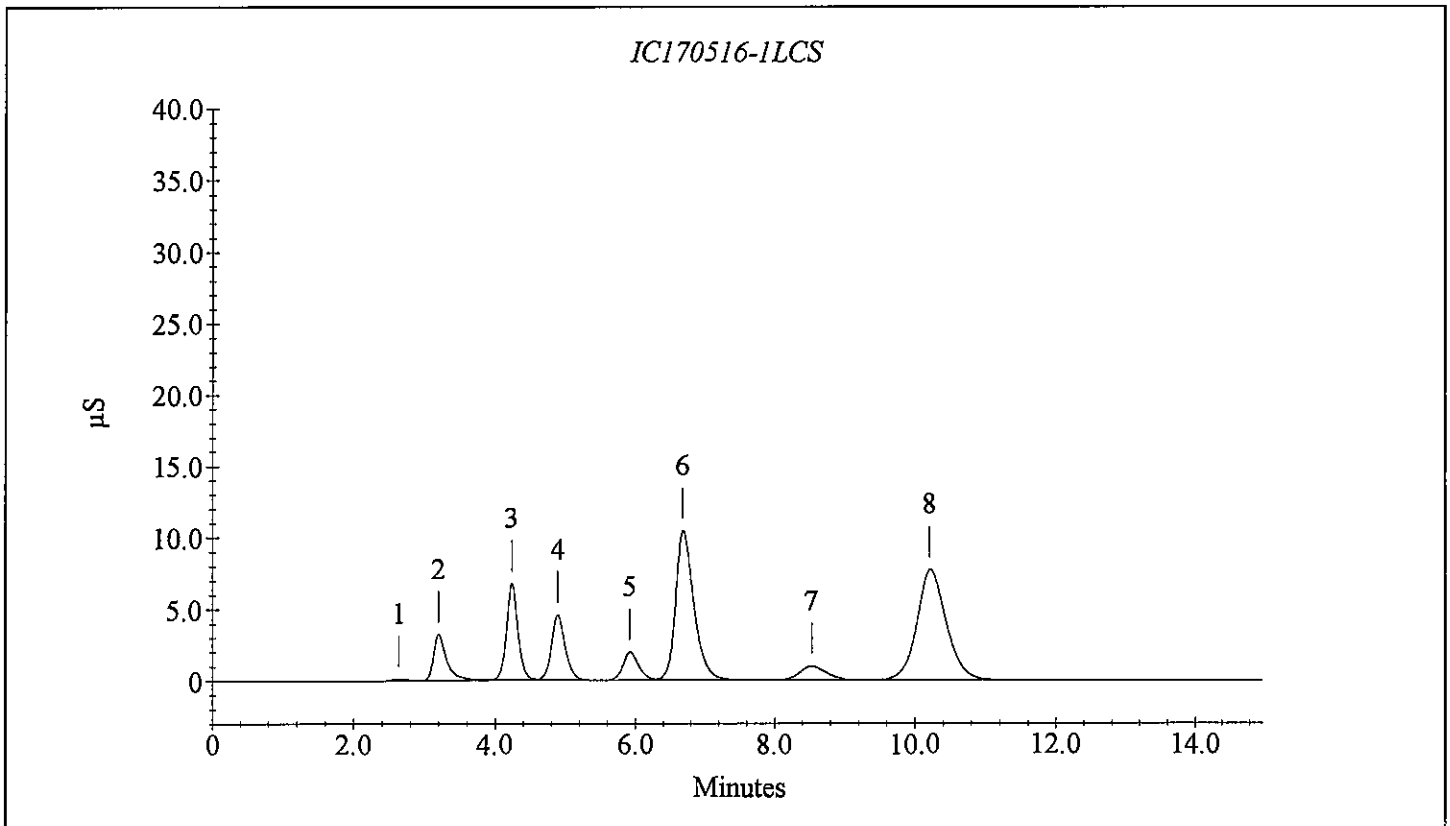
Sample Name : IC170516-1LCS
Data File Name : c:\peaknet2\data02\170516ic2\170516_012.DXD

Method File Name : c:\peaknet2\method02\170516ic2.met
Date, Time Analyzed : 5/16/17 11:44:11 AM
System Operator : amg
Calibration Updated : 5/16/17 10:58:49 AM

Current Date : 5/16/17
Current Time : 11:59:16 AM
Datafile Updated : 5/16/17 11:59:15 AM

Peak Information : All Components

Peak Number	Analyte	Retention Time (min.)	Concentration (ug/L)	Limit Exceeded	Peak Area
2	Fluoride	3.20	2006.2		410593
3	Chloride	4.24	5028.4		754451
4	Nitrite as N	4.89	1984.1		615308
5	Bromide	5.92	5051.1		292810
6	Nitrate as N	6.68	5064.7		1890027
7	Orthophosphate as P	8.53	1985.8		264881
8	Sulfate	10.21	19464.5		2239147
	Nitrate/Nitrite as N				



Sample Analysis Report

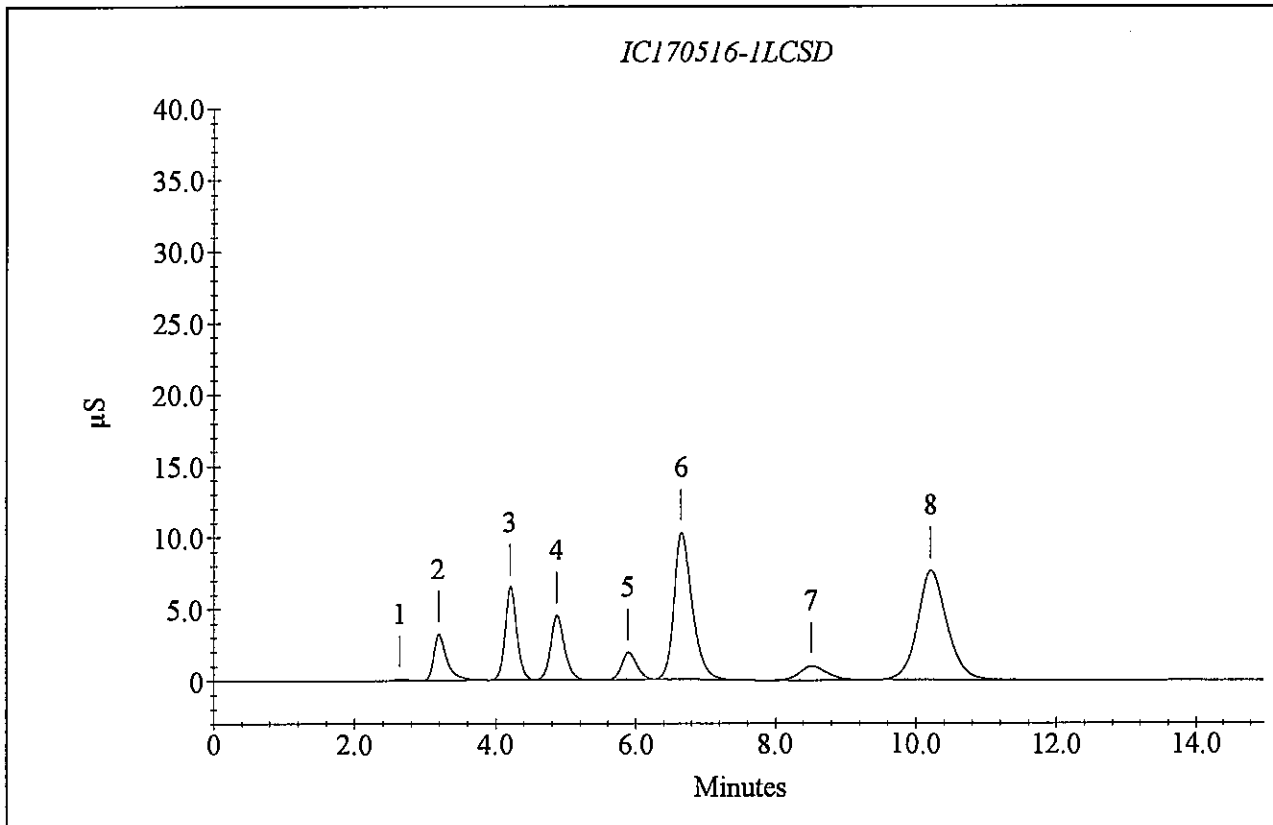
Sample Name : IC170516-1LCSD
Data File Name : c:\peaknet2\data02\170516ic2\170516_013.DXD

Method File Name : c:\peaknet2\method02\170516ic2.met
Date, Time Analyzed : 5/16/17 11:59:18 AM
System Operator : amg
Calibration Updated : 5/16/17 10:58:49 AM

Current Date : 5/16/17
Current Time : 12:14:21 PM
Datafile Updated : 5/16/17 12:14:21 PM

Peak Information : All Components

Peak Number	Analyte	Retention Time (min.)	Concentration (ug/L)	Limit Exceeded	Peak Area
2	Fluoride	3.19	1977.5		404530
3	Chloride	4.20	4934.5		739949
4	Nitrite as N	4.87	2003.6		621532
5	Bromide	5.89	4965.0		287715
6	Nitrate as N	6.65	5007.1		1867398
7	Orthophosphate as P	8.52	1982.9		264511
8	Sulfate	10.21	19319.5		2221755
	Nitrate/Nitrite as N				



Sample Analysis Report

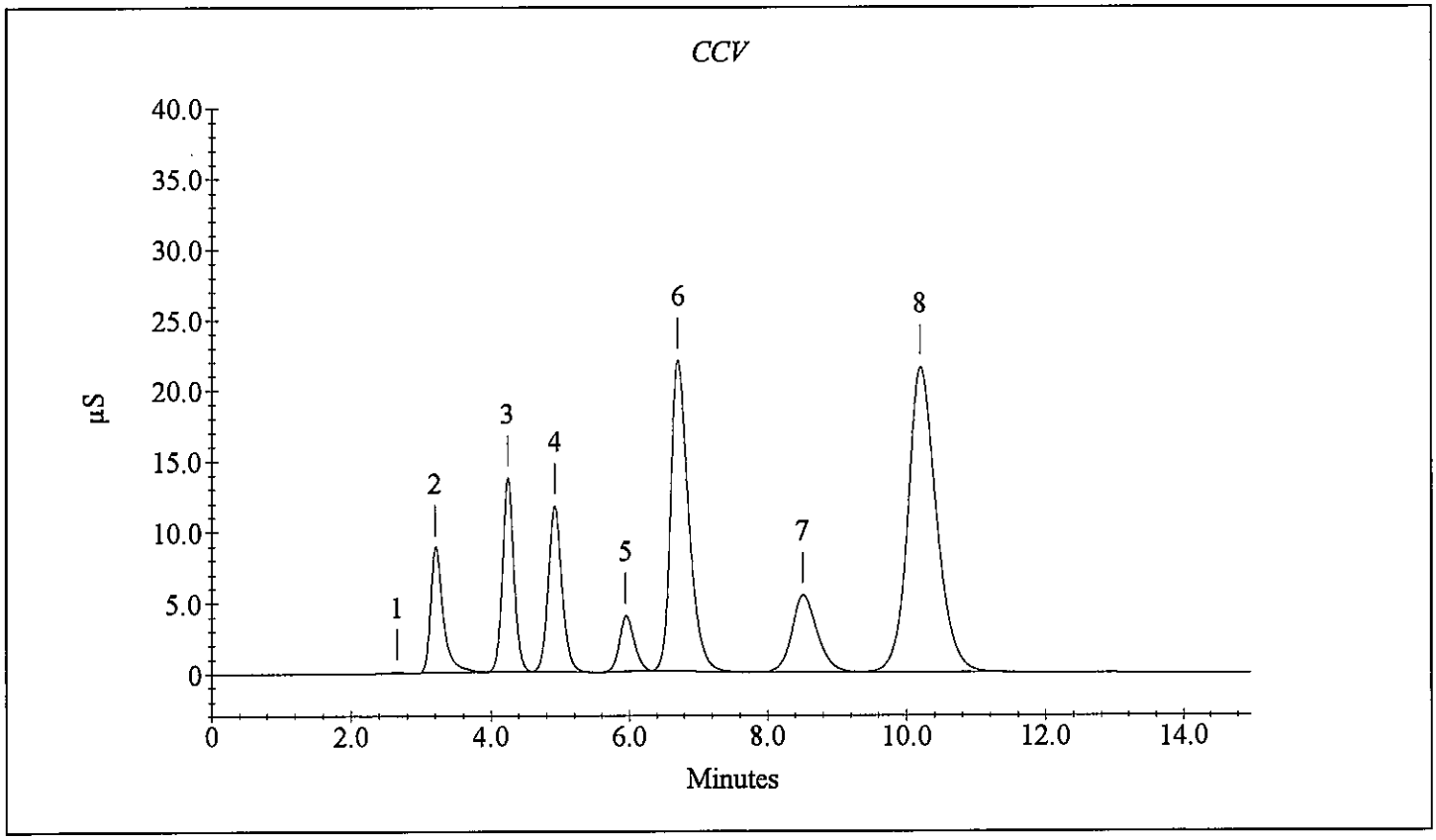
Sample Name : CCV
Data File Name : c:\peaknet2\data02\170516ic2\170516_021.DXD

Method File Name : c:\peaknet2\method02\170516ic2.met
Date, Time Analyzed : 5/16/17 2:00:13 PM
System Operator : amg
Calibration Updated : 5/16/17 10:58:49 AM

Current Date : 5/16/17
Current Time : 2:15:17 PM
Datafile Updated : 5/16/17 2:15:17 PM

Peak Information : All Components

Peak Number	Analyte	Retention Time (min.)	Concentration (ug/L)	Limit Exceeded	Peak Area
2	Fluoride	3.20	5128.3		1093075
3	Chloride	4.24	10030.1		1557122
4	Nitrite as N	4.92	5044.8		1622321
5	Bromide	5.95	9988.6		590737
6	Nitrate as N	6.71	10063.8		3946099
7	Orthophosphate as P	8.51	10169.2		1394320
8	Sulfate	10.20	50181.6		6114671
	Nitrate/Nitrite as N				



Sample Analysis Report

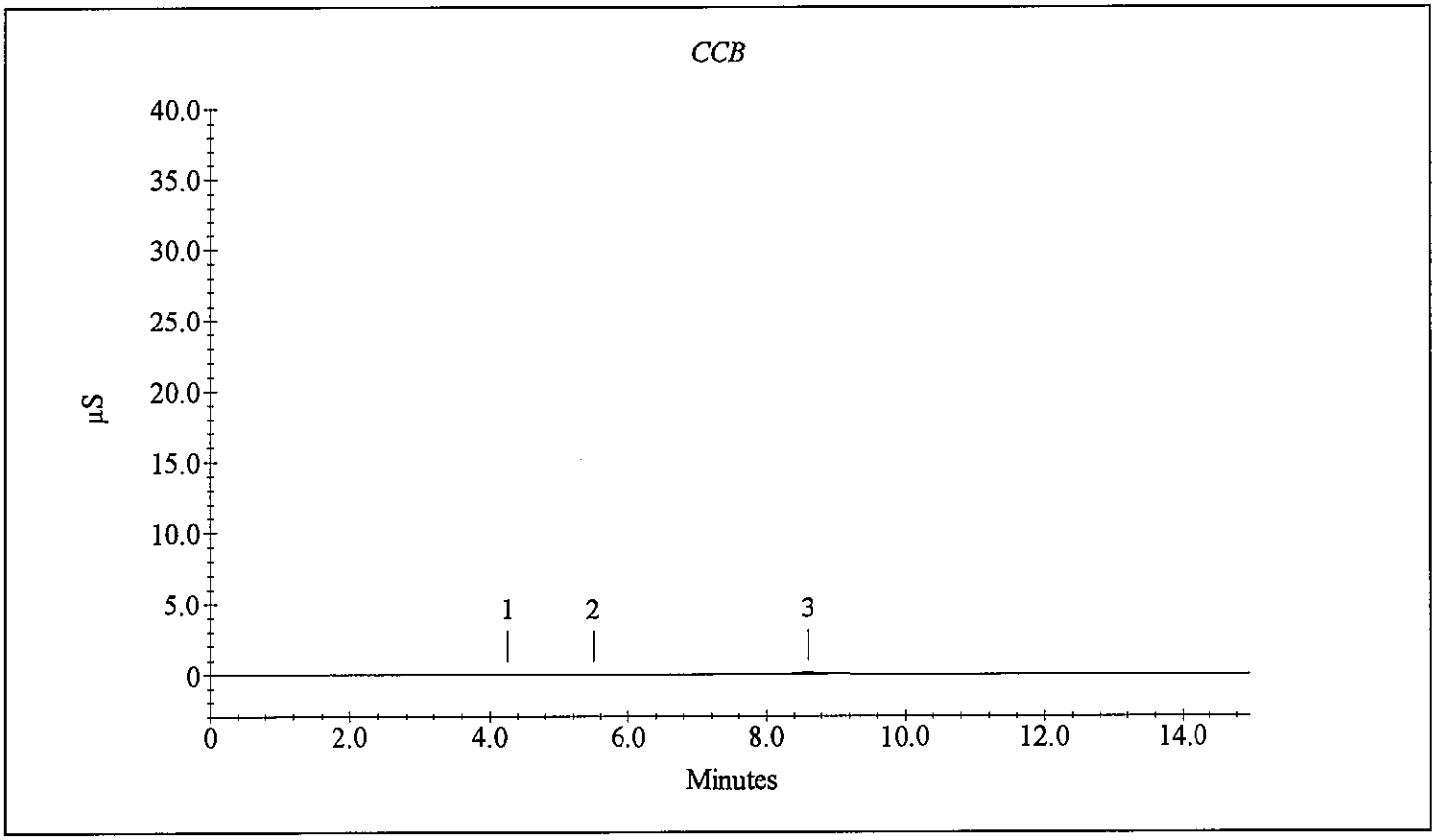
Sample Name : CCB
Data File Name : c:\peaknet2\data02\170516ic2\170516_022.DXD

Method File Name : c:\peaknet2\method02\170516ic2.met
Date, Time Analyzed : 5/16/17 2:15:19 PM
System Operator : amg
Calibration Updated : 5/16/17 10:58:49 AM

Current Date : 5/16/17
Current Time : 2:30:24 PM
Datafile Updated : 5/16/17 2:30:24 PM

Peak Information : All Components

Peak Number	Analyte	Retention Time (min.)	Concentration (ug/L)	Limit Exceeded	Peak Area
1	Chloride	4.25	-7.0	-	1830
1	Chloride Nitrite as N Bromide Nitrate as N	4.25	-7.0	-	1830
3	Orthophosphate as P Sulfate Nitrate/Nitrite as N	8.60	169.8	-	31126



Sample Analysis Report

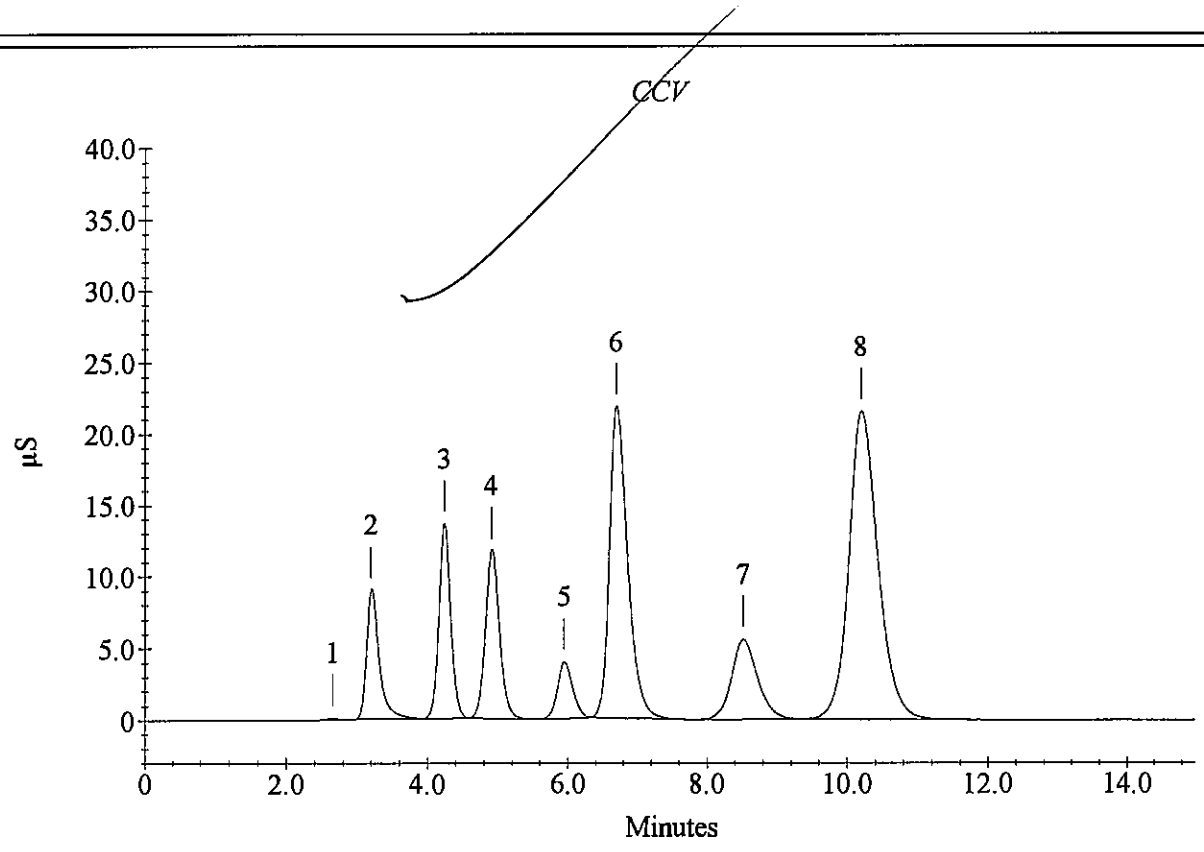
Sample Name : CCV
Data File Name : c:\peaknet2\data02\170516ic2\170516_033.DXD

Method File Name : c:\peaknet2\method02\170516ic2.met
Date, Time Analyzed : 5/16/17 5:01:37 PM
System Operator : amg
Calibration Updated : 5/16/17 10:58:49 AM

Current Date : 5/16/17
Current Time : 5:16:41 PM
Datafile Updated : 5/16/17 5:16:41 PM

Peak Information : All Components

Peak Number	Analyte	Retention Time (min.)	Concentration (ug/L)	Limit Exceeded	Peak Area
2	Fluoride	3.20	5238.8		1118181
3	Chloride	4.24	10046.3		1559837
4	Nitrite as N	4.91	5109.0		1644154
5	Bromide	5.95	10009.4		592016
6	Nitrate as N	6.69	10076.9		3951765
7	Orthophosphate as P	8.52	10454.6		1436322
8	Sulfate	10.20	50492.4		6156044
	Nitrate/Nitrite as N				



Sample Analysis Report

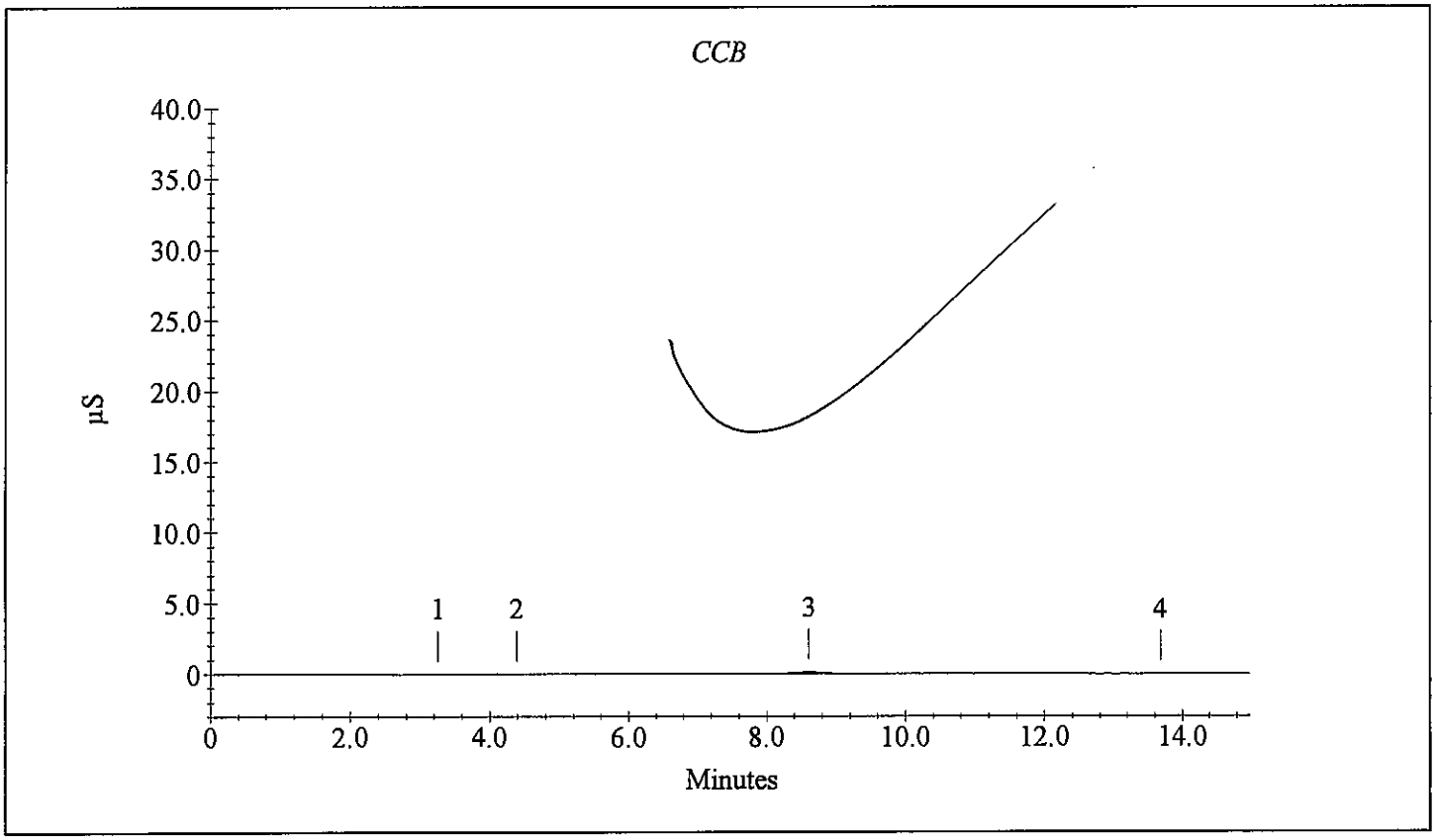
Sample Name : CCB
Data File Name : c:\peaknet2\data02\170516ic2\170516_034.DXD

Method File Name : c:\peaknet2\method02\170516ic2.met
Date, Time Analyzed : 5/16/17 5:16:43 PM
System Operator : amg
Calibration Updated : 5/16/17 10:58:49 AM

Current Date : 5/16/17
Current Time : 5:31:49 PM
Datafile Updated : 5/16/17 5:31:48 PM

Peak Information : All Components

Peak Number	Analyte	Retention Time (min.)	Concentration (ug/L)	Limit Exceeded	Peak Area
1	Fluoride	3.25	27.7	-	1528
2	Chloride Nitrite as N Bromide Nitrate as N	4.39	1.5	-	3066
3	Orthophosphate as P Sulfate Nitrate/Nitrite as N	8.61	230.8	-	38892



Sample Analysis Report

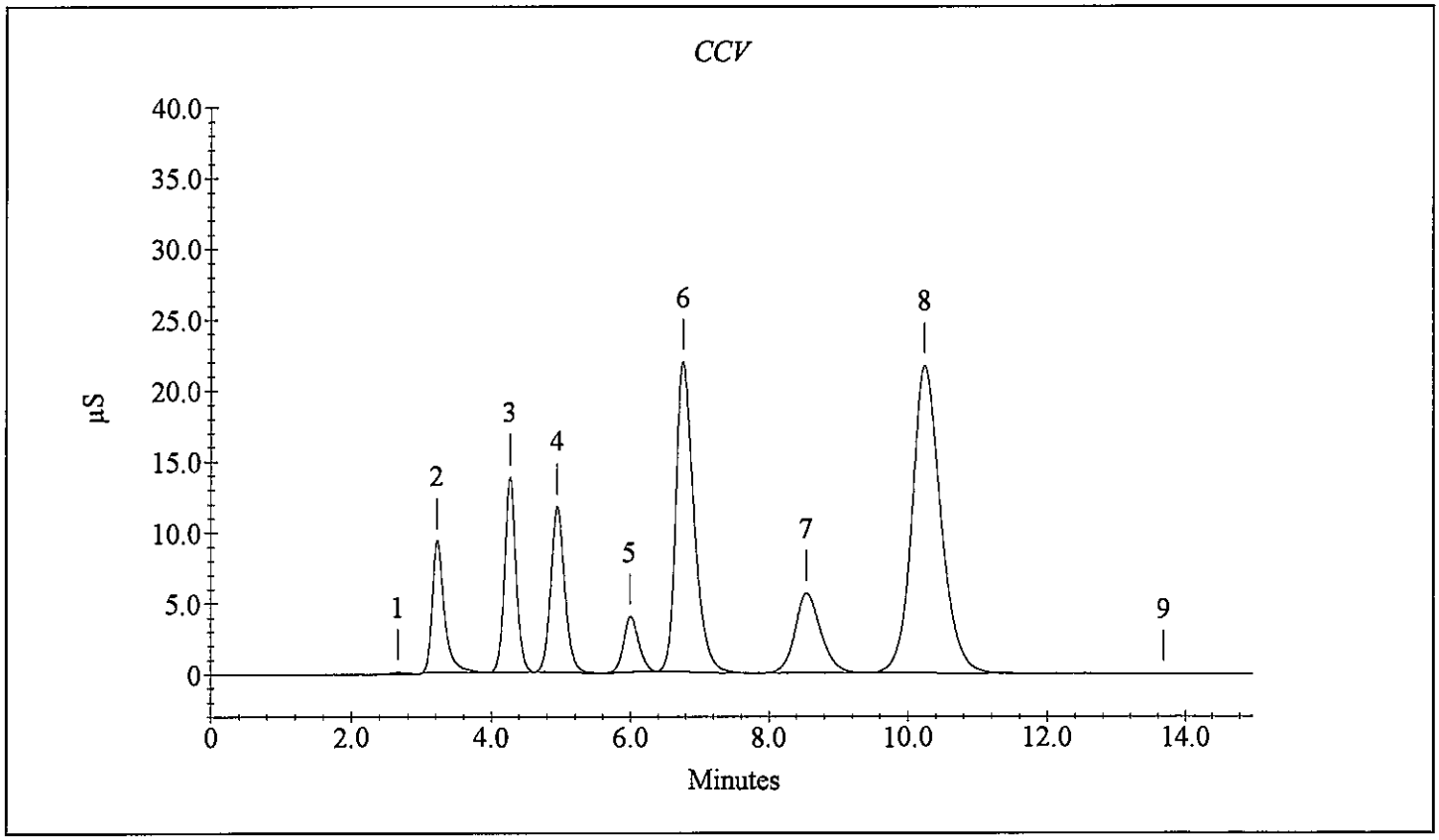
Sample Name : CCV
Data File Name : c:\peaknet2\data02\170516ic2\170516_045.DXD

Method File Name : c:\peaknet2\method02\170516ic2.met
Date, Time Analyzed : 5/16/17 8:03:03 PM
System Operator : amg
Calibration Updated : 5/16/17 10:58:49 AM

Current Date : 5/16/17
Current Time : 8:18:07 PM
Datafile Updated : 5/16/17 8:18:07 PM

Peak Information : All Components

Peak Number	Analyte	Retention Time (min.)	Concentration (ug/L)	Limit Exceeded	Peak Area
2	Fluoride	3.21	5334.6		1139985
3	Chloride	4.27	10144.6		1576252
4	Nitrite as N	4.95	5098.6		1640624
5	Bromide	5.99	10054.2		594771
6	Nitrate as N	6.76	10155.1		3985507
7	Orthophosphate as P	8.55	10648.5		1464966
8	Sulfate	10.24	50842.0		6202635
	Nitrate/Nitrite as N				



Sample Analysis Report

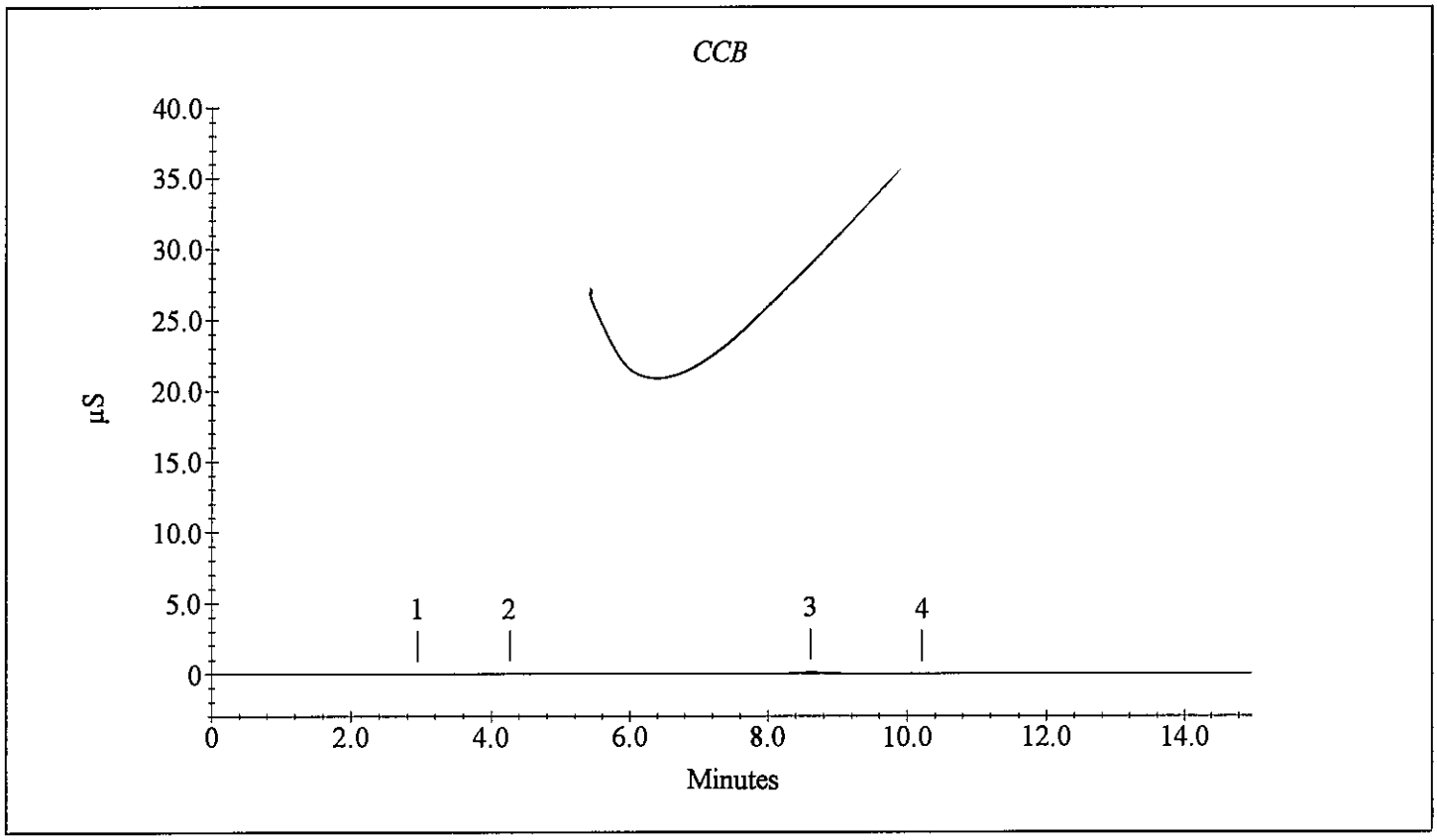
Sample Name : CCB
Data File Name : c:\peaknet2\data02\170516ic2\170516_046.DXD

Method File Name : c:\peaknet2\method02\170516ic2.met
Date, Time Analyzed : 5/16/17 8:18:09 PM
System Operator : amg
Calibration Updated : 5/16/17 10:58:49 AM

Current Date : 5/16/17
Current Time : 8:33:15 PM
Datafile Updated : 5/16/17 8:33:14 PM

Peak Information : All Components

Peak Number	Analyte	Retention Time (min.)	Concentration (ug/L)	Limit Exceeded	Peak Area
1		2.95	0.0		266
2	Chloride Nitrite as N Bromide Nitrate as N	4.27	5.1	-	3580
3	Orthophosphate as P	8.61	218.8	-	37365
4	Sulfate Nitrate/Nitrite as N	10.21	284.6	-	1735



Sample Analysis Report

Sample Name : 1705202-1 25x
Data File Name : c:\peaknet2\data02\170516ic2\170516_055.DXD

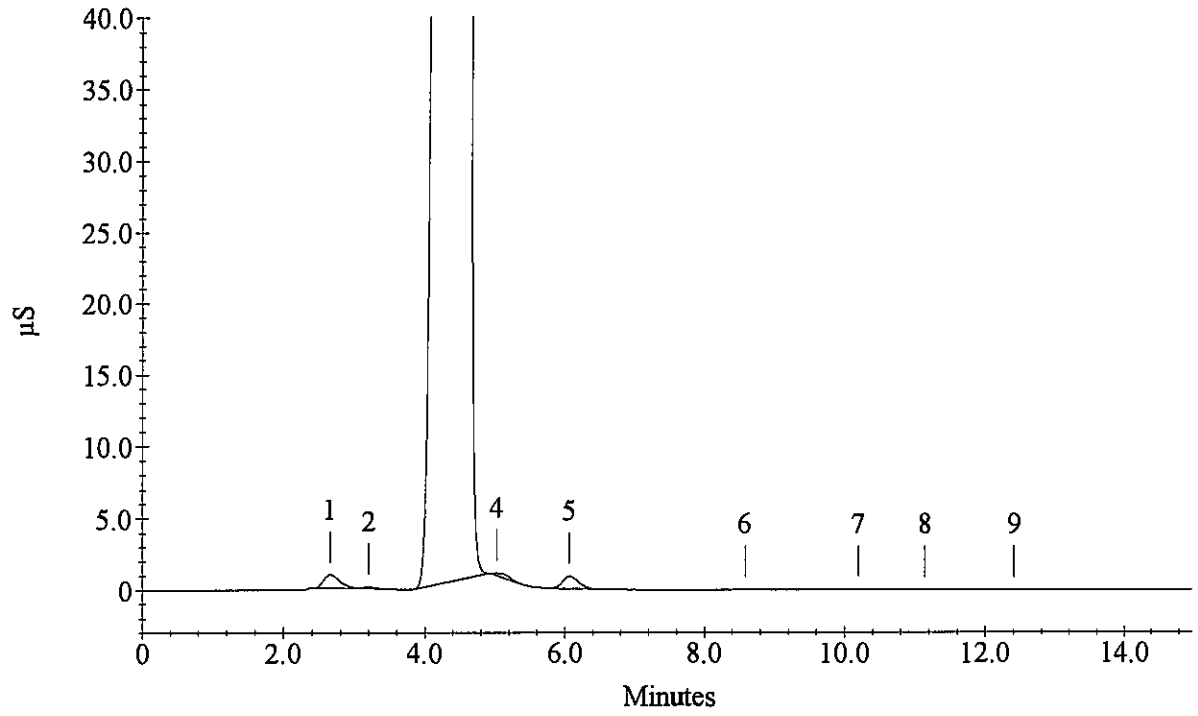
Method File Name : c:\peaknet2\method02\170516ic2.met
Date, Time Analyzed : 5/16/17 10:34:14 PM
System Operator : amg
Calibration Updated : 5/16/17 10:58:49 AM

Current Date : 5/16/17
Current Time : 10:49:18 PM
Datafile Updated : 5/16/17 10:49:18 PM

Peak Information : All Components

Peak Number	Analyte	Retention Time (min.)	Concentration (ug/L)	Limit Exceeded	Peak Area
2	Fluoride	3.20	68.9	-	9871
	Chloride				
4	Nitrite as N	5.03	143.1		37878
5	Bromide	6.07	2393.6		137027
	Nitrate as N				
6	Orthophosphate as P	8.59	-49.1	-	3312
7	Sulfate	10.20	285.9	-	1885
	Nitrate/Nitrite as N				

1705202-1 25x



Sample Analysis Report

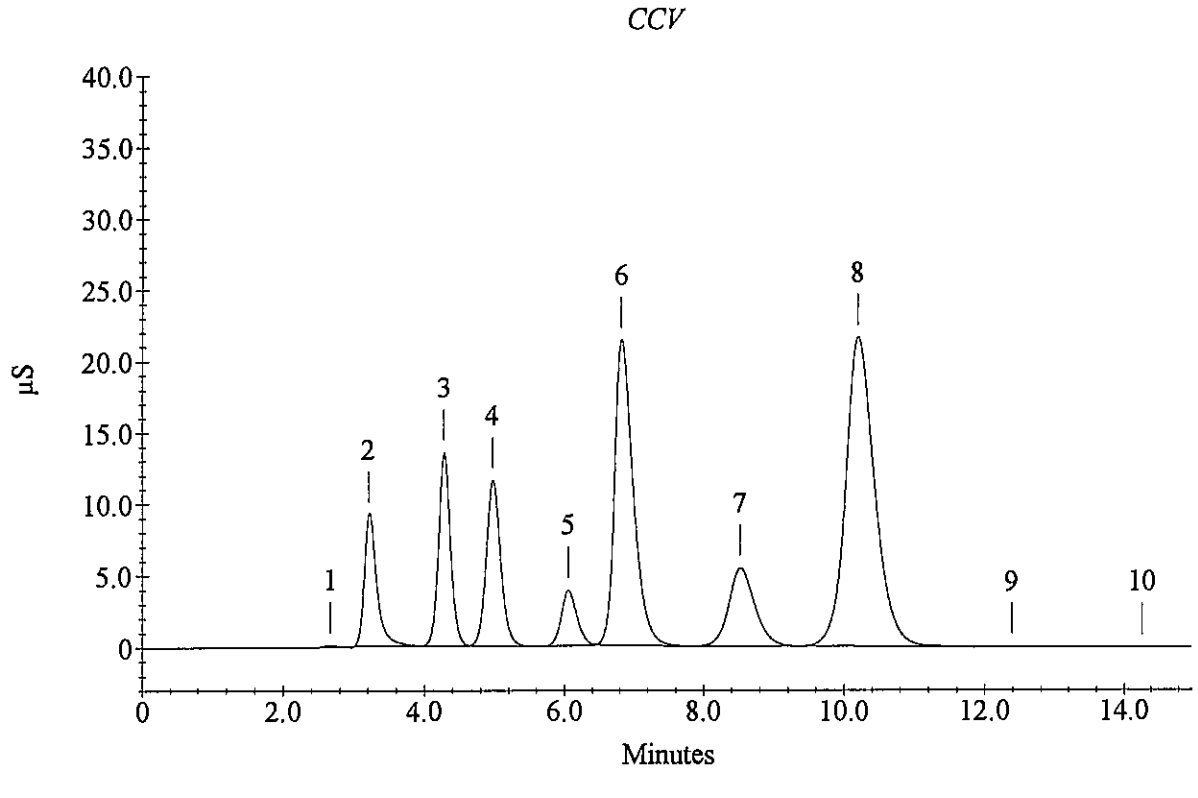
Sample Name : CCV
Data File Name : c:\peaknet2\data02\170516ic2\170516_057.DXD

Method File Name : c:\peaknet2\method02\170516ic2.met
Date, Time Analyzed : 5/16/17 11:04:27 PM
System Operator : amg
Calibration Updated : 5/16/17 10:58:49 AM

Current Date : 5/16/17
Current Time : 11:19:33 PM
Datafile Updated : 5/16/17 11:19:33 PM

Peak Information : All Components

Peak Number	Analyte	Retention Time (min.)	Concentration (ug/L)	Limit Exceeded	Peak Area
2	Fluoride	3.21	5317.8		1136148
3	Chloride	4.28	10171.0		1580651
4	Nitrite as N	4.97	5132.0		1651963
5	Bromide	6.05	10104.1		597846
6	Nitrate as N	6.83	10143.6		3980516
7	Orthophosphate as P	8.52	10260.2		1407688
8	Sulfate	10.20	50924.8		6213684
	Nitrate/Nitrite as N				



Sample Analysis Report

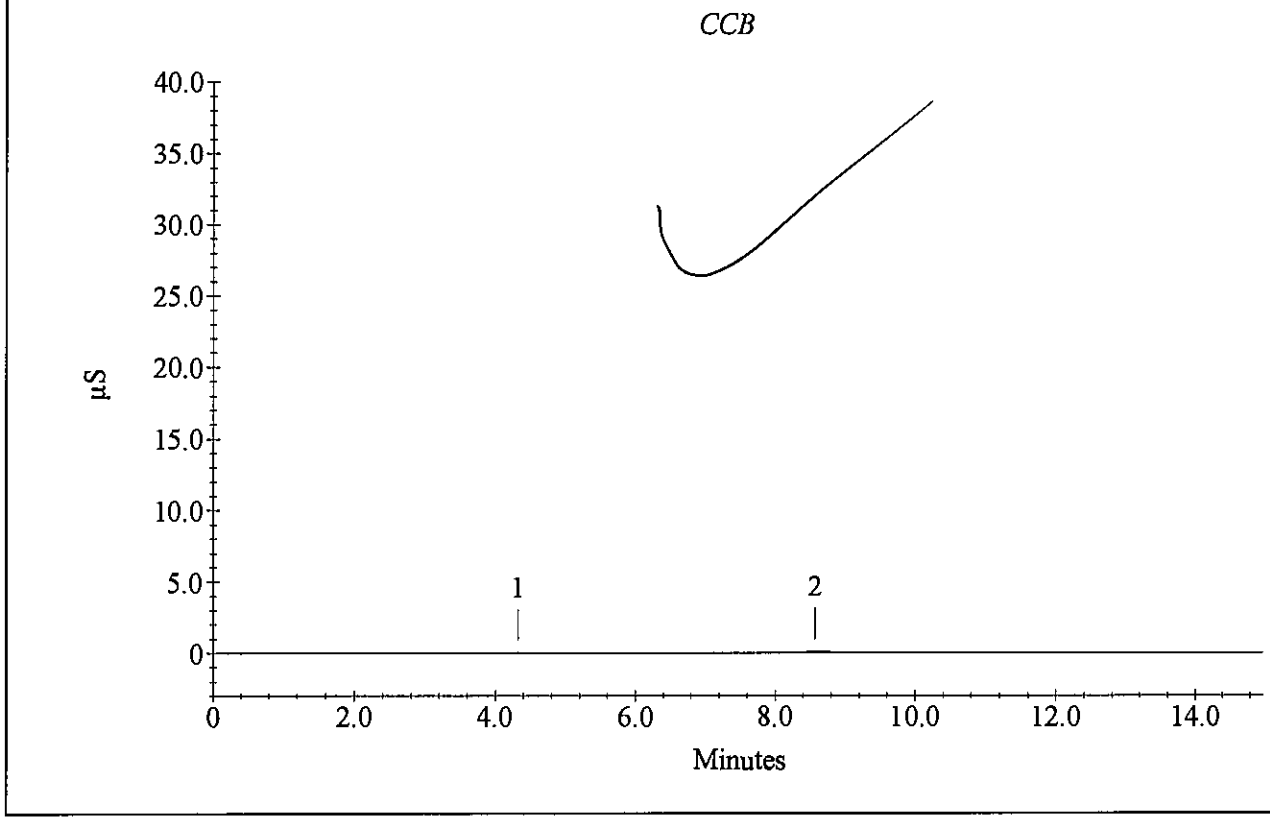
Sample Name : CCB
Data File Name : c:\peaknet2\data02\170516ic2\170516_058.DXD

Method File Name : c:\peaknet2\method02\170516ic2.met
Date, Time Analyzed : 5/16/17 11:19:35 PM
System Operator : amg
Calibration Updated : 5/16/17 10:58:49 AM

Current Date : 5/16/17
Current Time : 11:34:40 PM
Datafile Updated : 5/16/17 11:34:40 PM

Peak Information : All Components

Peak Number	Analyte	Retention Time (min.)	Concentration (ug/L)	Limit Exceeded	Peak Area
1	Chloride Nitrite as N Bromide Nitrate as N	4.32	0.0		686
2	Orthophosphate as P Sulfate Nitrate/Nitrite as N	8.57	145.4	-	28026



Schedule File: C:\PeakNet2\schedule02\170524ic2.SCH

Line	Sample	Sample Type	Level	Method	Data File	Comment
1	Blank	Sample		170516ic2.met	c:\peaknet2\data02\170516ic2\170516_001.dxd	Water
2	0 STD	Calibration	7	170516ic2.met	c:\peaknet2\data02\170516ic2\170516_002.dxd	
3	1000X STD	Calibration	6	170516ic2.met	c:\peaknet2\data02\170516ic2\170516_003.dxd	
4	500X STD	Calibration	5	170516ic2.met	c:\peaknet2\data02\170516ic2\170516_004.dxd	
5	100X STD	Calibration	4	170516ic2.met	c:\peaknet2\data02\170516ic2\170516_005.dxd	
6	25X STD	Calibration	3	170516ic2.met	c:\peaknet2\data02\170516ic2\170516_006.dxd	
7	10X STD	Calibration	2	170516ic2.met	c:\peaknet2\data02\170516ic2\170516_007.dxd	
8	5X STD	Calibration	1	170516ic2.met	c:\peaknet2\data02\170516ic2\170516_008.dxd	
9	ICV	Sample		170516ic2.met	c:\peaknet2\data02\170516ic2\170516_009.dxd	ICV
10	ICB	Sample		170516ic2.met	c:\peaknet2\data02\170516ic2\170516_010.dxd	ICB
11	Blank	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_011.dxd	Blank*
12	CCV	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_012.dxd	CCV*
13	CCB	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_013.dxd	CCB *
14	IC170524-1MB	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_014.dxd	MB*
15	IC170524-1LCS	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_015.dxd	LCS*
16	IC170524-1LCSD	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_016.dxd	LCSD*
17	1705265-1 1000x	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_017.dxd	RRing for Cl*
18	1705265-1MS 1000x	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_018.dxd	RRing for Cl*
19	1705265-1MSD 1000x	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_019.dxd	RRing for Cl*
20	1705177-1 1000x	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_020.dxd	RRing for Cl*
21	1705177-2 1000x	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_021.dxd	RRing for Cl*
22	1705177-3 1000x	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_022.dxd	RRing for Cl*
23	1705338-2 1x	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_023.dxd	RRing for F*
24	CCV	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_024.dxd	CCV*
25	CCB	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_025.dxd	CCB *
26	1705338-3 1x	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_026.dxd	RRing for F*
27	1705329-1 1x	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_027.dxd	RRing F, ~~xClx,~~ Br, SO4
28	1705329-2 1x	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_028.dxd	RRing F, ~~xClx~~, Br, SO4
29	1705329-3 1x	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_029.dxd	RRing F, ~~xClx,~~ Br, SO4
30	1705484-1 5x	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_030.dxd	RRing Cl, SO4*
31	1705202-1 1000x	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_031.dxd	RRing Cl*
32	1705338-1 50x	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_032.dxd	RRing Cl*
33	1705175-1 10x	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_033.dxd	SO4*
34	1705175-2 10x	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_034.dxd	SO4*
35	~~1705175-2 250x~~	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_035.dxd	~~xxxCl, SO4xxx~~
36	CCV	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_036.dxd	CCV*
37	CCB	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_037.dxd	CCB
38	1705175-3 10x	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_038.dxd	SO4*
39	1705175-3 250x	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_039.dxd	Cl*
40	1705175-4 10x	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_040.dxd	SO4*
41	1705175-4 250x	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_041.dxd	Cl*
42	1705175-5 10x	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_042.dxd	SO4*
43	1705175-5 250x	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_043.dxd	Cl*
44	1705310-1 10x	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_044.dxd	SO4
45	1705310-1MS 10x	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_045.dxd	SO4
46	1705310-1MSD 10x	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_046.dxd	SO4
47	1705310-2 10x	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_047.dxd	SO4
48	CCV	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_048.dxd	CCV
49	CCB	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_049.dxd	CCB
50	1705310-3 10x	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_050.dxd	SO4
51	1705310-4 10x	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_051.dxd	SO4
52	1705310-5 10x	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_052.dxd	SO4
53	1705310-6 10x	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_053.dxd	SO4
54	1705310-7 10x	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_054.dxd	SO4
55	1705310-8 10x	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_055.dxd	~~Cl,~~ SO4
56	1705310-8 250x	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_056.dxd	Cl, ~~SO4~~
57	1705310-9 10x	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_057.dxd	~~Cl,~~ SO4
58	1705310-9 250x	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_058.dxd	Cl, ~~SO4~~
59	1705310-10 10x	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_059.dxd	~~Cl~~, SO4
60	CCV	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_060.dxd	CCV
61	CCB	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_061.dxd	CCB
62	1705310-10 250x	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_062.dxd	Cl, ~~SO4~~
63	1705310-11 10x	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_063.dxd	~~Cl~~, SO4
64	1705310-11 250x	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_064.dxd	Cl, ~~SO4~~
65	1705311-1 10x	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_065.dxd	SO4
66	1705311-2 10x	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_066.dxd	~~Cl~~, SO4
67	1705311-2 250x	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_067.dxd	Cl, ~~SO4~~
68	1705311-3 10x	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_068.dxd	~~Cl~~, SO4
69	1705311-3 250x	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_069.dxd	Cl, ~~SO4~~
70	IC170524-2MB	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_070.dxd	MB
71	IC170524-2LCS	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_071.dxd	LCS
72	CCV	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_072.dxd	CCV
73	CCB	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_073.dxd	CCB
74	IC170524-2LCSD	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_074.dxd	LCSD
75	1705311-4 10x	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_075.dxd	~~Cl~~, SO4
76	1705311-4 250x	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_076.dxd	Cl, ~~SO4~~
77	1705460-1 10x	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_077.dxd	~~Cl~~, SO4

Schedule File: C:\PeakNet2\schedule02\170524ic2.SCH

Line	Sample	Sample Type	Level	Method	Data File	Comment
78	1705460-1 250x	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_078.dxd	Cl, ~~SO4~~
79	1705461-1 10x	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_079.dxd	~~Cl,~~ SO4
80	1705461-1 250x	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_080.dxd	Cl, ~~SO4~~
81	1705461-2 10x	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_081.dxd	~~Cl,~~ SO4
82	1705461-2 250x	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_082.dxd	Cl, ~~SO4~~
83	1705462-1 10x	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_083.dxd	SO4
84	CCV	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_084.dxd	CCV
85	CCB	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_085.dxd	CCB
86	1705462-2 10x	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_086.dxd	SO4
87	1705462-3 10x	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_087.dxd	SO4
88	1705462-4 10x	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_088.dxd	SO4
89	1705462-5 10x	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_089.dxd	SO4
90	1705462-6 10x	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_090.dxd	SO4
91	1705462-7 10x	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_091.dxd	SO4
92	1705462-8 10x	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_092.dxd	SO4
93	~~1705462-9 10x~~	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_093.dxd	~~SO4~~
94	~~1705462-9MS 10x~~	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_094.dxd	~~SO4~~
95	~~1705462-9MSD 10x~~	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_095.dxd	~~SO4~~
96	CCV	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_096.dxd	CCV
97	CCB	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_097.dxd	CCB
98	1705462-10 10x	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_098.dxd	~~Cl,~~ SO4
99	1705462-10 250x	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_099.dxd	Cl, ~~SO4~~
100	1705329-1 5x	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_100.dxd	RRing Cl only
101	1705329-2 5x	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_101.dxd	RRing Cl only
102	1705329-3 5x	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_102.dxd	RRing Cl only
103	1705175-2 500x	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_103.dxd	RRing Cl only
104	1705462-9 10x	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_104.dxd	RRing SO4 only
105	1705462-9MS 10x	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_105.dxd	RRing SO4 only
106	1705462-9MSD 10x	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_106.dxd	RRing SO4 only
107	CCV	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_107.dxd	CCV
108	CCB	Sample		170516bic2.met	c:\peaknet2\data02\170524ic2\170524_108.dxd	CCB

Default Method Path: C:\PEAKNET2\METHOD02
Default Data Path: C:\PEAKNET2\DATA02\170214IC2
Comment:

BatchDx created schedule. Analyst: AMG

Instrument #2: DIONEX DX-120. ID Serial Number: 99060762
Analytical Column: Dionex IonPac AS14
Methods: EPA 300.0 and SW9056. ALS SOP 1113

Final_ ID_ Aliq

ICAL std level 7 (0x)			
ICAL std level 6 (1000x)	50.00	ST170207-8, ST170515-3	0.05
ICAL std level 5 (500x)	5.00	"	0.01
ICAL std level 4 (100x)	5.00	"	0.05
ICAL std level 3 (25x)	5.00	"	0.20
ICAL std level 2 (10x)	5.00	"	0.50
ICAL std level 1 (5x)	5.00	"	1.00
CCV	5.00	ST170207-8, ST170317-2	0.50
RVS	5.00	ST160920-1, ST170116-9	0.01
ICV	5.00	ST160707-6	0.25
		ST170427-1	0.08
LCS & MS/D	5.00	ST160809-2	0.05
		ST170116-8	0.05

Dilutions Table: All to 5mL Final Volume (FV) unless specified otherwise:

2x (2.5mL)	4x (1.25mL)	5x (1mL)	8x (0.625mL)
10x (0.5mL)	12.5x (0.4mL)	20x (0.25mL)	25x (0.2mL)
40x (0.125mL)	50x (0.1mL)	62.5x (0.08mL)	100x (0.05mL)
125x (0.04mL)	200x (0.025mL)	250x (0.02mL)	500x (0.01mL)
1000x (100uL to 100mL FV)		2000x (50uL to 100mL FV)	
2500x (40uL to 100mL FV)		4000x (25uL to 100mL FV)	
5000x (50uL to 250mL FV)		10000x (25uL to 250mL FV)	

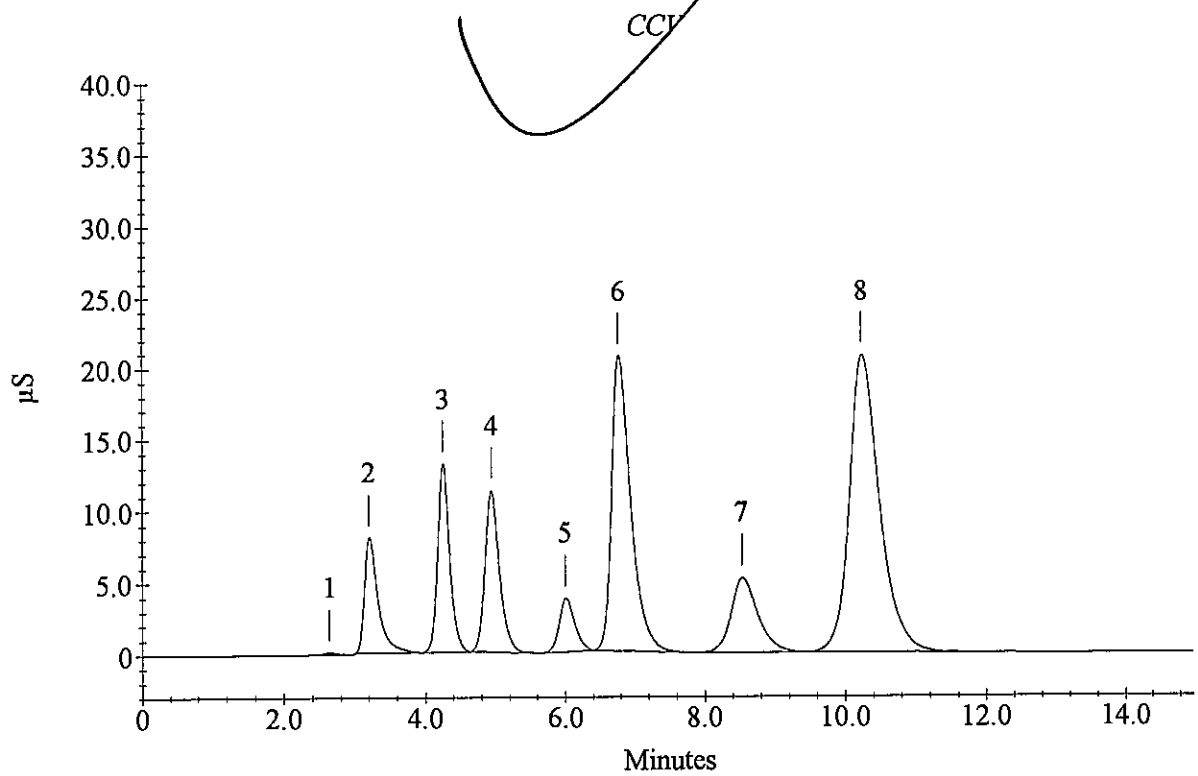
Sample Analysis Report

Sample Name : CCV
Data File Name : C:\PEAKNET2\DATA02\170524IC2\170524_012.DXD

Method File Name : C:\peaknet2\method02\170516bic2.met Current Date : 5/24/17
Date, Time Analyzed : 5/24/17 9:14:30 AM Current Time : 9:31:47 AM
System Operator : amg Datafile Updated : 5/24/17 9:31:45 AM
Calibration Updated : 5/24/17 9:31:22 AM

Peak Information : All Components

Peak Number	Analyte	Retention Time (min.)	Concentration (ug/L)	Limit Exceeded	Peak Area
2	Fluoride	3.20	5029.4		1070682
3	Chloride	4.25	10015.5		1554686
4	Nitrite as N	4.95	5030.5		1617491
5	Bromide	6.00	9776.6		577704
6	Nitrate as N	6.77	10000.3		3918736
7	Orthophosphate as P	8.53	10021.3		1372637
8	Sulfate	10.24	50341.0		6135880
	Nitrate/Nitrite as N				



Sample Analysis Report

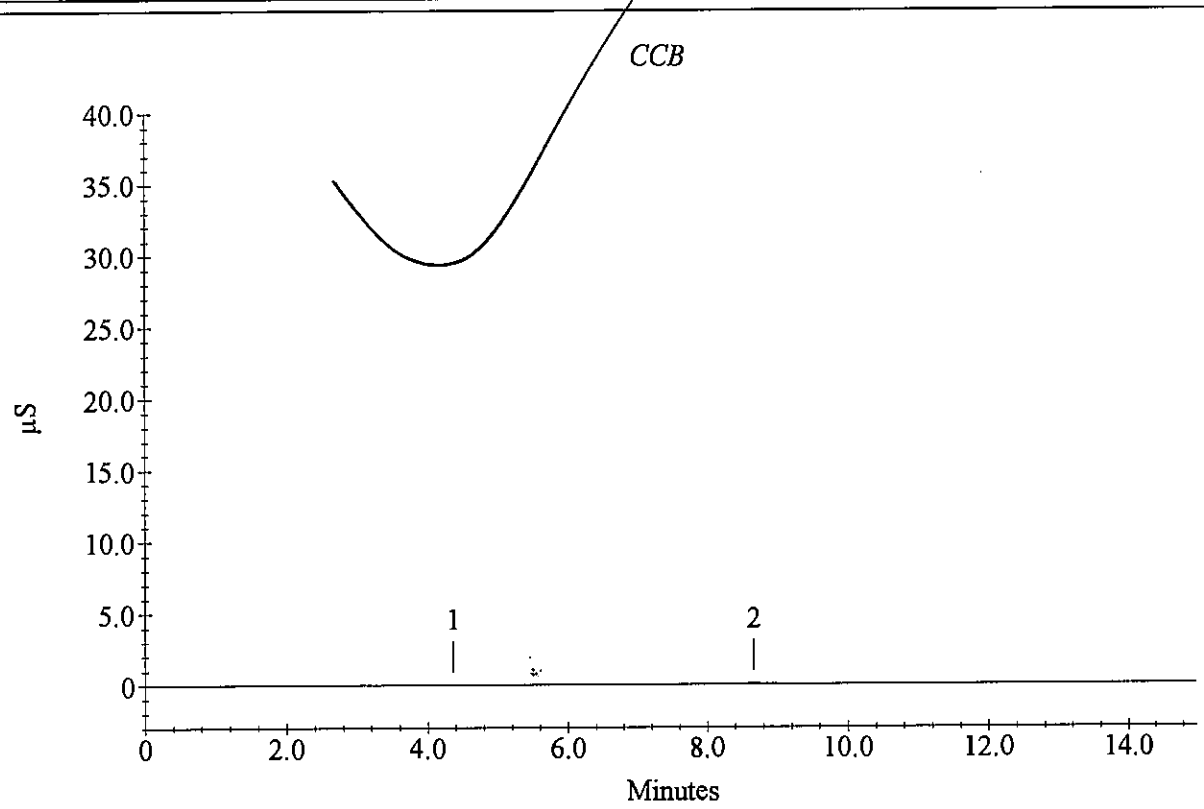
Sample Name : CCB
Data File Name : c:\peaknet2\data02\170524ic2\170524_013.DXD

Method File Name : c:\peaknet2\method02\170516aic2.met
Date, Time Analyzed : 5/24/17 9:29:37 AM
System Operator : amg
Calibration Updated : 5/23/17 9:16:50 AM

Current Date : 5/24/17
Current Time : 9:44:41 AM
Datafile Updated : 5/24/17 9:44:41 AM

Peak Information : All Components

Peak Number	Analyte	Retention Time (min.)	Concentration (ug/L)	Limit Exceeded	Peak Area
1	Chloride	4.36	-2.3	-	2516
1	Chloride Nitrite as N Bromide Nitrate as N	4.36	-2.3	-	2516
2	Orthophosphate as P Sulfate Nitrate/Nitrite as N	8.67	70.3	-	18480



Sample Analysis Report

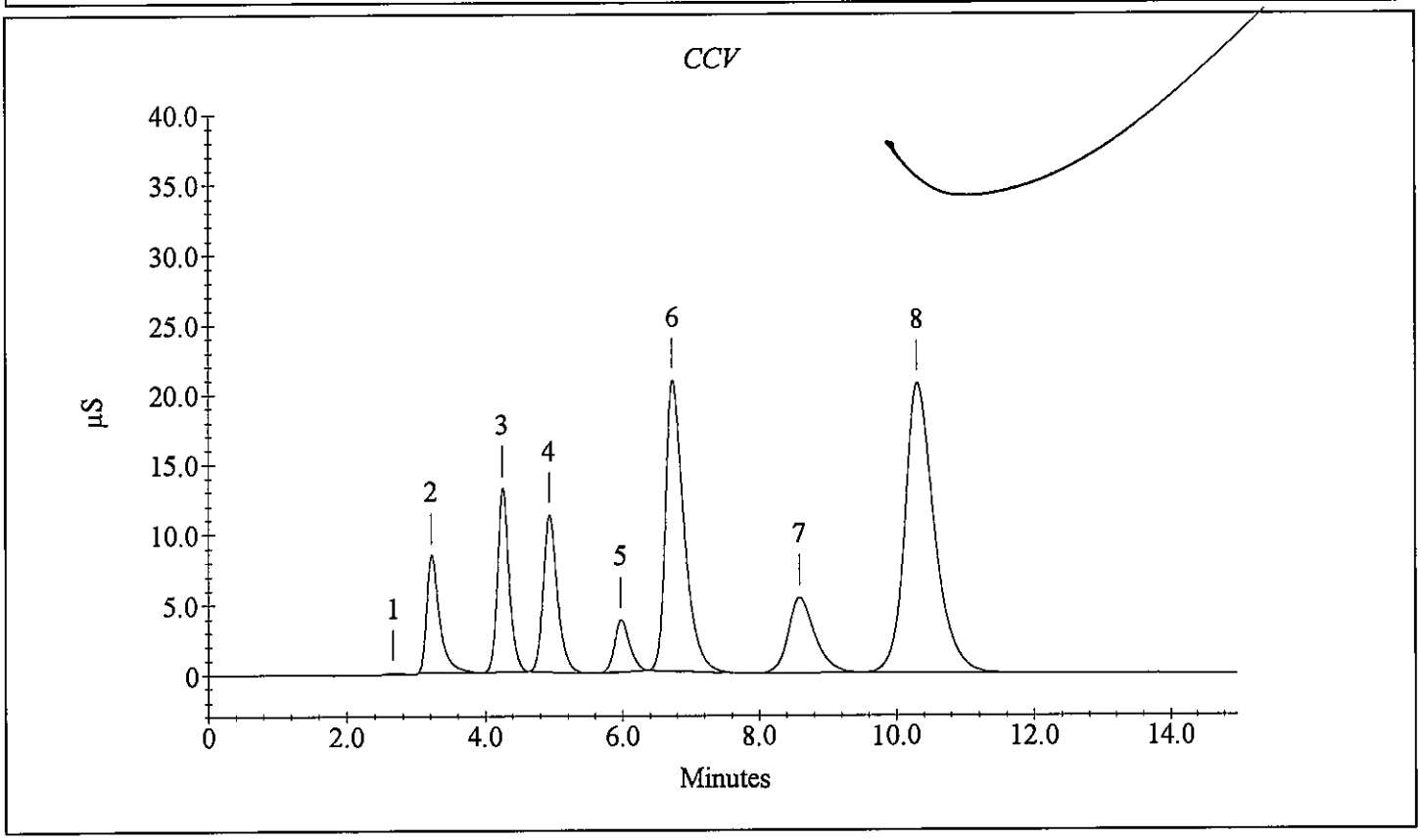
Sample Name : CCV
Data File Name : c:\peaknet2\data02\170524ic2\170524_024.DXD

Method File Name : c:\peaknet2\method02\170516bic2.met
Date, Time Analyzed : 5/24/17 12:15:46 PM
System Operator : amg
Calibration Updated : 5/24/17 9:31:22 AM

Current Date : 5/24/17
Current Time : 12:30:51 PM
Datafile Updated : 5/24/17 12:30:50 PM

Peak Information : All Components

Peak Number	Analyte	Retention Time (min.)	Concentration (ug/L)	Limit Exceeded	Peak Area
2	Fluoride	3.21	5164.9		1101393
3	Chloride	4.25	9993.1		1550952
4	Nitrite as N	4.93	5002.4		1607958
5	Bromide	5.97	9695.3		572711
6	Nitrate as N	6.73	9993.0		3915602
7	Orthophosphate as P	8.59	10547.5		1450029
8	Sulfate	10.31	50389.8		6142376
	Nitrate/Nitrite as N				



Sample Analysis Report

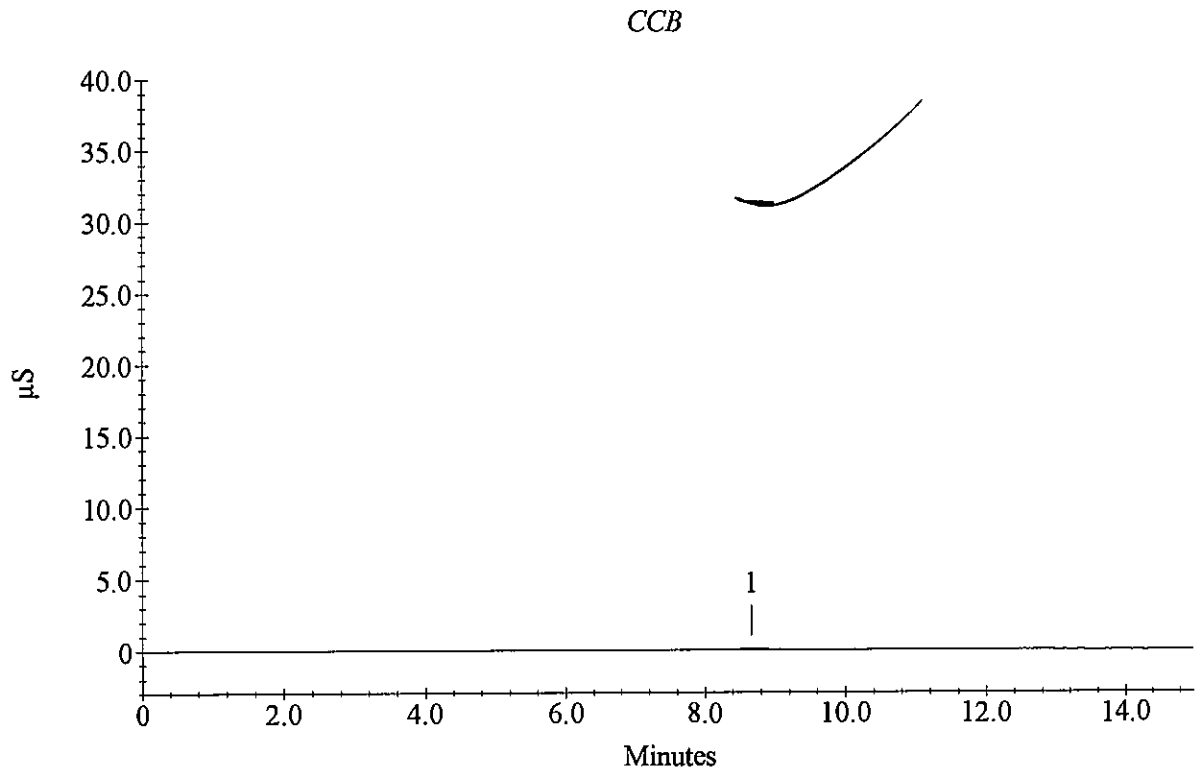
Sample Name : CCB
Data File Name : c:\peaknet2\data02\170524ic2\170524_025.DXD

Method File Name : c:\peaknet2\method02\170516bic2.met
Date, Time Analyzed : 5/24/17 12:30:53 PM
System Operator : amg
Calibration Updated : 5/24/17 9:31:22 AM

Current Date : 5/24/17
Current Time : 12:45:58 PM
Datafile Updated : 5/24/17 12:45:57 PM

Peak Information : All Components

Peak Number	Analyte	Retention Time (min.)	Concentration (ug/L)	Limit Exceeded	Peak Area
1	Orthophosphate as P Chloride Nitrite as N Bromide Nitrate as N	8.67	208.8	-	36098
1	Orthophosphate as P Sulfate Nitrate/Nitrite as N	8.67	208.8	-	36098



Sample Analysis Report

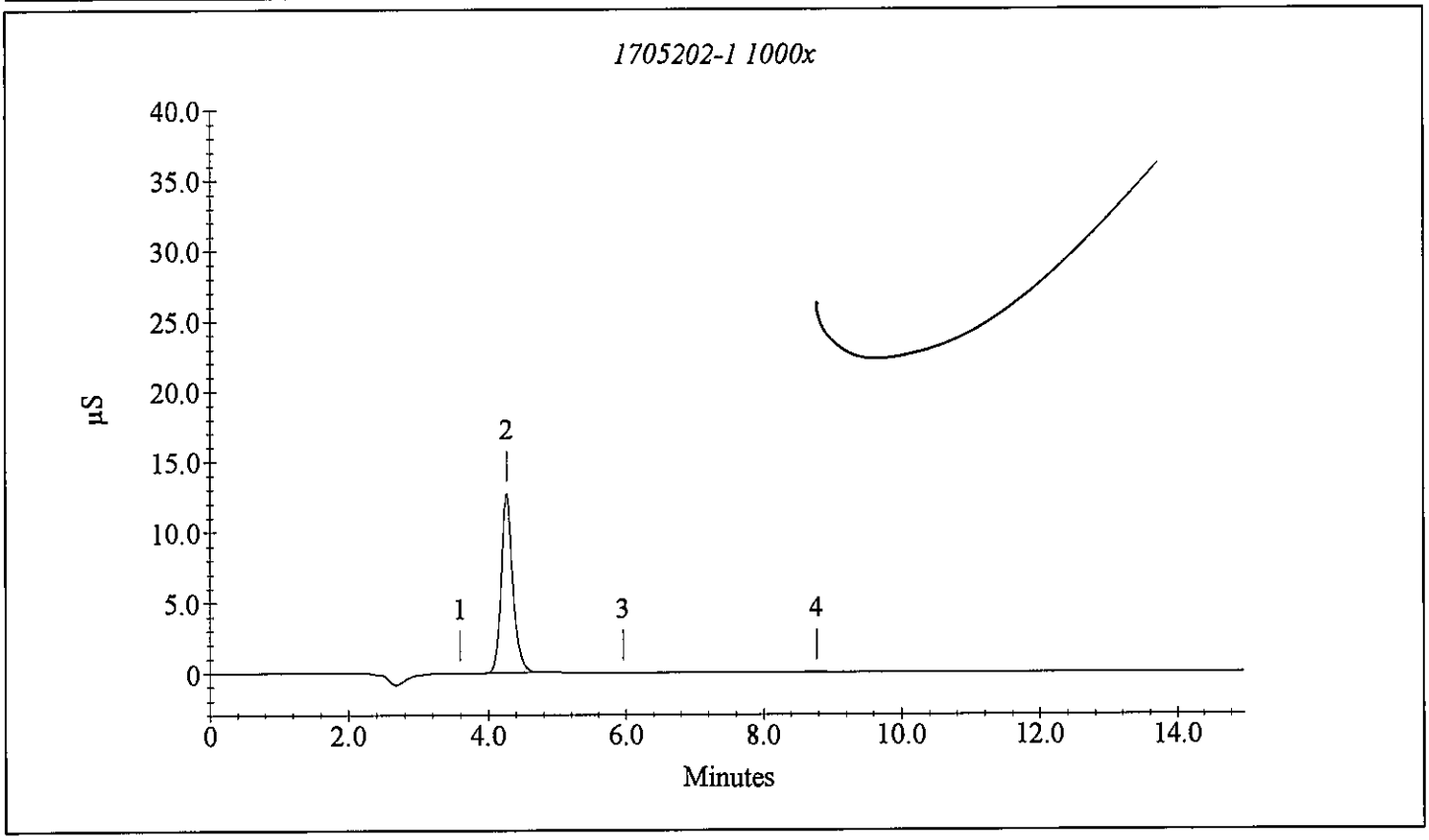
Sample Name : 1705202-1 1000x
Data File Name : c:\peaknet2\data02\170524ic2\170524_031.DXD

Method File Name : c:\peaknet2\method02\170516bic2.met
Date, Time Analyzed : 5/24/17 2:01:33 PM
System Operator : amg
Calibration Updated : 5/24/17 9:31:22 AM

Current Date : 5/24/17
Current Time : 2:16:37 PM
Datafile Updated : 5/24/17 2:16:37 PM

Peak Information : All Components

Peak Number	Analyte	Retention Time (min.)	Concentration (ug/L)	Limit Exceeded	Peak Area
1		3.59	0.0		985
2	Chloride Nitrite as N	4.27	9653.1		1494424
3	Bromide Nitrate as N	5.96	62.6	-	2820
4	Orthophosphate as P Sulfate Nitrate/Nitrite as N	8.77	10.4	-	10866



Sample Analysis Report

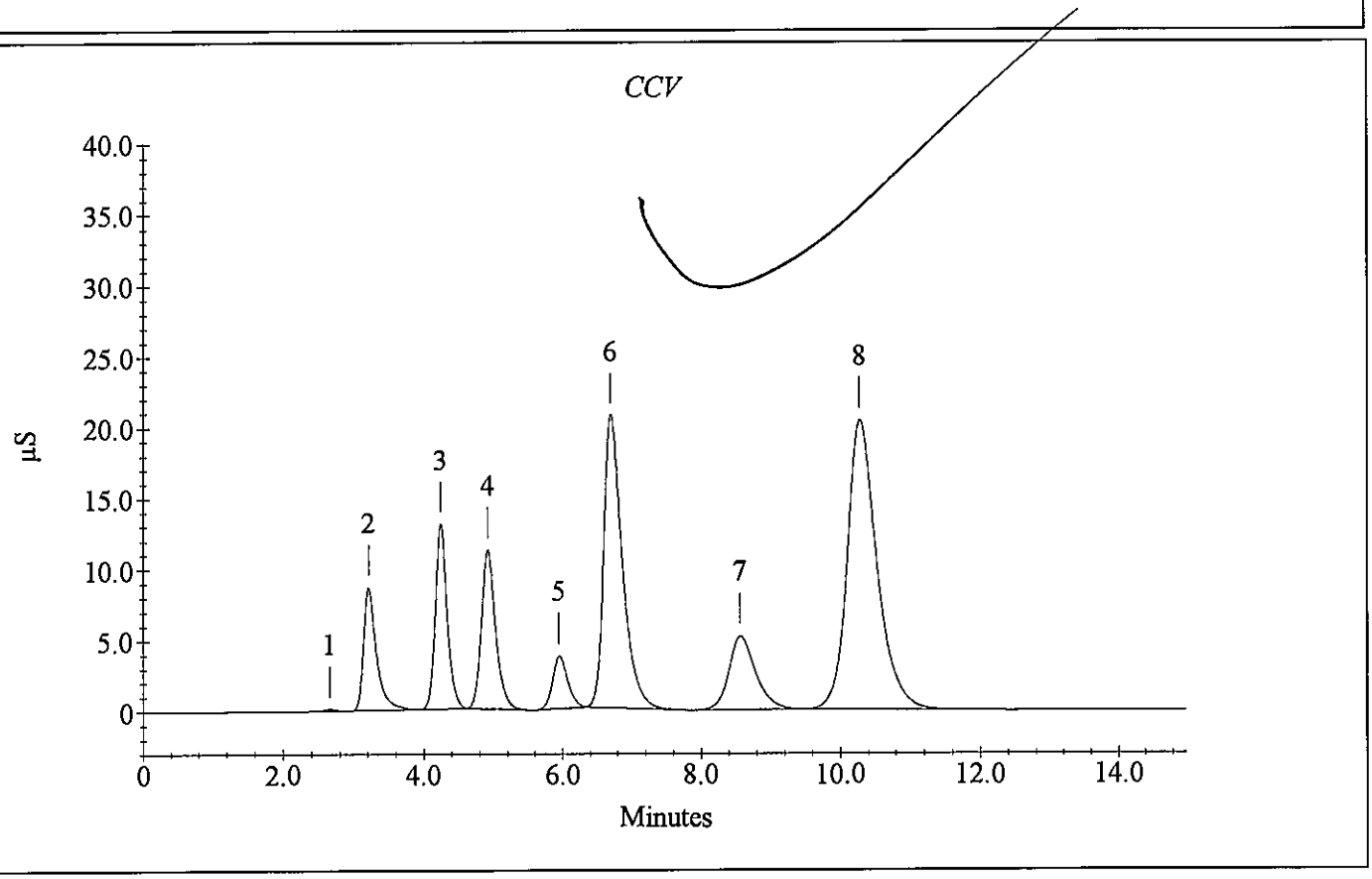
Sample Name : CCV
Data File Name : c:\peaknet2\data02\170524ic2\170524_036.DXD

Method File Name : c:\peaknet2\method02\170516bic2.met
Date, Time Analyzed : 5/24/17 3:17:08 PM
System Operator : amg
Calibration Updated : 5/24/17 9:31:22 AM

Current Date : 5/24/17
Current Time : 3:32:13 PM
Datafile Updated : 5/24/17 3:32:13 PM

Peak Information : All Components

Peak Number	Analyte	Retention Time (min.)	Concentration (ug/L)	Limit Exceeded	Peak Area
2	Fluoride	3.21	5145.3		1096936
3	Chloride	4.24	9871.8		1530758
4	Nitrite as N	4.92	4966.3		1595694
5	Bromide	5.95	9573.6		565249
6	Nitrate as N	6.69	9863.7		3860027
7	Orthophosphate as P	8.56	10142.8		1390448
8	Sulfate	10.28	49701.1		6050794
	Nitrate/Nitrite as N				



Sample Analysis Report

Sample Name : CCB
Data File Name : c:\peaknet2\data02\170524ic2\170524_037.DXD

Method File Name : c:\peaknet2\method02\170516bic2.met
Date, Time Analyzed : 5/24/17 3:32:16 PM
System Operator : amg
Calibration Updated : 5/24/17 9:31:22 AM

Current Date : 5/24/17
Current Time : 3:47:20 PM
Datafile Updated : 5/24/17 3:47:20 PM

Peak Information : All Components

Peak Number	Analyte	Retention Time (min.)	Concentration (ug/L)	Limit Exceeded	Peak Area
1		3.56	0.0		1054
2	Chloride Nitrite as N Bromide Nitrate as N	4.39	4.7	-	3526
3	Orthophosphate as P Sulfate Nitrate/Nitrite as N	8.65	146.0	-	28100