

Cover Page

Order ID : P4674

Project ID : Southern Product Finishing

Client : RSB Environmental

Lab Sample Number

P4674-01

Client Sample Number

OUTFALL-001

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Signature : _____

Date: 11/11/2024

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

DATA REPORTING QUALIFIERS- INORGANIC

For reporting results, the following “ Results Qualifiers” are used:

J	Indicates the reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL), but greater than or equal to the Instrument Detection Limit (IDL).
U	Indicates the analyte was analyzed for, but not detected.
ND	Indicates the analyte was analyzed for, but not detected
E	Indicates the reported value is estimated because of the presence of interference
M	Indicates Duplicate injection precision not met.
N	Indicates the spiked sample recovery is not within control limits.
S	Indicates the reported value was determined by the Method of Standard Addition (MSA).
*	Indicates that the duplicate analysis is not within control limits.
+	Indicates the correlation coefficient for the MSA is less than 0.995.
D	Indicates the reported value is from a secondary analysis with a dilution factor. The original analysis exceeded the calibration range.
M	Method qualifiers “P” for ICP instrument “PM” for ICP when Microwave Digestion is used “CV” for Manual Cold Vapor AA “AV” for automated Cold Vapor AA “CA” for MIDI-Distillation Spectrophotometric “AS” for Semi -Automated Spectrophotometric “C” for Manual Spectrophotometric “T” for Titrimetric “NR” for analyte not required to be analyzed
OR	Indicates the analyte’s concentration exceeds the calibrated range of the instrument for that specific analysis.
Q	Indicates the LCS did not meet the control limits requirements
H	Sample Analysis Out Of Hold Time

APPENDIX A

QA REVIEW GENERAL DOCUMENTATION

Project #: P4674

Completed

For thorough review, the report must have the following:

GENERAL:

Are all original paperwork present (chain of custody, record of communication,airbill, sample management lab chronicle, login page)

✓

Check chain-of-custody for proper relinquish/return of samples

✓

Is the chain of custody signed and complete

✓

Check internal chain-of-custody for proper relinquish/return of samples /sample extracts

✓

Collect information for each project id from server. Were all requirements followed

✓

COVER PAGE:

Do numbers of samples correspond to the number of samples in the Chain of Custody on login page

✓

Do lab numbers and client Ids on cover page agree with the Chain of Custody

✓

CHAIN OF CUSTODY:

Do requested analyses on Chain of Custody agree with form I results

✓

Do requested analyses on Chain of Custody agree with the log-in page

✓

Were the correct method log-in for analysis according to the Analytical Request and Chain of Castody

✓

Were the samples received within hold time

✓

Were any problems found with the samples at arrival recorded in the Sample Management Laboratory Chronicle

✓

ANALYTICAL:

Was method requirement followed?

✓

Was client requirement followed?

✓

Does the case narrative summarize all QC failure?

✓

All runlogs and manual integration are reviewed for requirements

✓

All manual calculations and /or hand notations verified

✓

QA Review Signature: PRADIP PRAJAPATI

Date: 11/11/2024



LAB CHRONICLE

OrderID:	P4674	OrderDate:	11/1/2024 11:13:40 AM
Client:	RSB Environmental	Project:	Southern Product Finishing
Contact:	Efrain Trejo	Location:	K51

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
P4674-01	OUTFALL-001	WATER			10/31/24 13:00			11/01/24
			Anions Group1	300.0			11/04/24 14:18	
			TSS	SM2540 D			11/04/24 09:30	



SAMPLE DATA

Report of Analysis

Client:	RSB Environmental	Date Collected:	10/31/24 13:00
Project:	Southern Product Finishing	Date Received:	11/01/24
Client Sample ID:	OUTFALL-001	SDG No.:	P4674
Lab Sample ID:	P4674-01	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Nitrite	0.011	U	1	0.011	0.60	mg/L		11/04/24 14:18	300.0
Nitrate	0.37	J	1	0.0034	0.50	mg/L		11/04/24 14:18	300.0
Nitrate+Nitrite	0.37	J	1	0.010	1.10	mg/L		11/04/24 14:18	300.0
TSS	107		1	1.00	4.00	mg/L		11/04/24 09:30	SM 2540 D-15

Comments: _____

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

H = Sample Analysis Out Of Hold Time

J = Estimated Value

B = Analyte Found in Associated Method Blank

* = indicates the duplicate analysis is not within control limits.

E = Indicates the reported value is estimated because of the presence of interference.

OR = Over Range

N =Spiked sample recovery not within control limits



QC RESULT SUMMARY

Initial and Continuing Calibration Verification

Client: RSB Environmental

SDG No.: P4674

Project: Southern Product Finishing

RunNo.: LB133251

Analyte	Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID: ICV1						
Bromide	mg/L	10	10	100	90-110	10/16/2024
Chloride	mg/L	3	3	100	90-110	10/16/2024
Fluoride	mg/L	2	2	100	90-110	10/16/2024
Nitrite	mg/L	3	3	100	90-110	10/16/2024
Nitrate	mg/L	2.5	2.5	100	90-110	10/16/2024
Sulfate	mg/L	14.9	15	99	90-110	10/16/2024
Orthophosphate as P	mg/L	4.8	5	96	90-110	10/16/2024
Sample ID: CCV1						
Bromide	mg/L	9.9	10	99	90-110	11/04/2024
Chloride	mg/L	3	3	100	90-110	11/04/2024
Fluoride	mg/L	2	2	100	90-110	11/04/2024
Nitrite	mg/L	3	3	100	90-110	11/04/2024
Nitrate	mg/L	2.5	2.5	100	90-110	11/04/2024
Sulfate	mg/L	14.7	15	98	90-110	11/04/2024
Orthophosphate as P	mg/L	5	5	100	90-110	11/04/2024
Sample ID: CCV2						
Bromide	mg/L	10	10	100	90-110	11/04/2024
Chloride	mg/L	3	3	100	90-110	11/04/2024
Fluoride	mg/L	2	2	100	90-110	11/04/2024
Nitrite	mg/L	3	3	100	90-110	11/04/2024
Nitrate	mg/L	2.5	2.5	100	90-110	11/04/2024
Sulfate	mg/L	14.8	15	99	90-110	11/04/2024
Orthophosphate as P	mg/L	4.9	5	98	90-110	11/04/2024
Sample ID: CCV3						
Bromide	mg/L	10	10	100	90-110	11/04/2024
Chloride	mg/L	3	3	100	90-110	11/04/2024
Fluoride	mg/L	2	2	100	90-110	11/04/2024
Nitrite	mg/L	3	3	100	90-110	11/04/2024
Nitrate	mg/L	2.5	2.5	100	90-110	11/04/2024
Sulfate	mg/L	14.8	15	99	90-110	11/04/2024
Orthophosphate as P	mg/L	4.9	5	98	90-110	11/04/2024

Initial and Continuing Calibration Verification

Client: RSB Environmental

SDG No.: P4674

Project: Southern Product Finishing

RunNo.: LB133251

Analyte	Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
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Initial and Continuing Calibration Blank Summary

Client: RSB Environmental
Project: Southern Product Finishing

SDG No.: P4674
RunNo.: LB133251

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID: ICB1							
Bromide	mg/L	< 1.0000	1.0000	U	0.034	2	10/16/2024
Chloride	mg/L	< 0.3000	0.3000	U	0.011	0.6	10/16/2024
Fluoride	mg/L	< 0.2000	0.2000	U	0.057	0.4	10/16/2024
Nitrite	mg/L	< 0.3000	0.3000	U	0.011	0.6	10/16/2024
Nitrate	mg/L	< 0.2500	0.2500	U	0.0034	0.5	10/16/2024
Sulfate	mg/L	< 1.5000	1.5000	U	0.032	3	10/16/2024
Orthophosphate as P	mg/L	< 0.5000	0.5000	U	0.079	1	10/16/2024
Sample ID: CCB1							
Bromide	mg/L	< 1.0000	1.0000	U	0.034	2	11/04/2024
Chloride	mg/L	< 0.3000	0.3000	U	0.011	0.6	11/04/2024
Fluoride	mg/L	< 0.2000	0.2000	U	0.057	0.4	11/04/2024
Nitrite	mg/L	< 0.3000	0.3000	U	0.011	0.6	11/04/2024
Nitrate	mg/L	< 0.2500	0.2500	U	0.0034	0.5	11/04/2024
Sulfate	mg/L	< 1.5000	1.5000	U	0.032	3	11/04/2024
Orthophosphate as P	mg/L	< 0.5000	0.5000	U	0.079	1	11/04/2024
Sample ID: CCB2							
Bromide	mg/L	< 1.0000	1.0000	U	0.034	2	11/04/2024
Chloride	mg/L	< 0.3000	0.3000	U	0.011	0.6	11/04/2024
Fluoride	mg/L	< 0.2000	0.2000	U	0.057	0.4	11/04/2024
Nitrite	mg/L	< 0.3000	0.3000	U	0.011	0.6	11/04/2024
Nitrate	mg/L	< 0.2500	0.2500	U	0.0034	0.5	11/04/2024
Sulfate	mg/L	< 1.5000	1.5000	U	0.032	3	11/04/2024
Orthophosphate as P	mg/L	< 0.5000	0.5000	U	0.079	1	11/04/2024
Sample ID: CCB3							
Bromide	mg/L	< 1.0000	1.0000	U	0.034	2	11/04/2024
Chloride	mg/L	< 0.3000	0.3000	U	0.011	0.6	11/04/2024
Fluoride	mg/L	< 0.2000	0.2000	U	0.057	0.4	11/04/2024
Nitrite	mg/L	< 0.3000	0.3000	U	0.011	0.6	11/04/2024
Nitrate	mg/L	< 0.2500	0.2500	U	0.0034	0.5	11/04/2024
Sulfate	mg/L	< 1.5000	1.5000	U	0.032	3	11/04/2024
Orthophosphate as P	mg/L	< 0.5000	0.5000	U	0.079	1	11/04/2024

Preparation Blank Summary

Client: RSB Environmental

SDG No.: P4674

Project: Southern Product Finishing

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID: LB133251BLW							
Bromide	mg/L	< 1.0000	1.0000	U	0.034	2	11/04/2024
Chloride	mg/L	< 0.3000	0.3000	U	0.011	0.6	11/04/2024
Fluoride	mg/L	< 0.2000	0.2000	U	0.057	0.4	11/04/2024
Nitrite	mg/L	< 0.3000	0.3000	U	0.011	0.6	11/04/2024
Nitrate	mg/L	< 0.2500	0.2500	U	0.0034	0.5	11/04/2024
Sulfate	mg/L	< 1.5000	1.5000	U	0.032	3	11/04/2024
Orthophosphate as P	mg/L	< 0.5000	0.5000	U	0.079	1	11/04/2024
Sample ID: LB133266BL							
TSS	mg/L	< 2.0000	2.0000	U	1	4	11/04/2024

Matrix Spike Summary

Client:	RSB Environmental	SDG No.:	P4674
Project:	Southern Product Finishing	Sample ID:	P4674-01
Client ID:	OUTFALL-001MS	Percent Solids for Spike Sample:	0

Analyte	Units	Acceptance Limit %R	Spiked Result	Conc. Qualifier	Sample Result	Conc. Qualifier	Spike Added	Dilution Factor	% Rec	Qual	Analysis Date
Bromide	mg/L	80-120	10.0		0.034	U	10	1	100		11/04/2024
Chloride	mg/L	80-120	9.00	OR	0.31	J	3	1	290	*	11/04/2024
Fluoride	mg/L	80-120	2.00		0.24	J	2	1	88		11/04/2024
Nitrite	mg/L	80-120	2.00		0.011	U	3	1	67	*	11/04/2024
Nitrate	mg/L	80-120	3.10		0.37	J	2.5	1	109		11/04/2024
Sulfate	mg/L	80-120	4090	OR	4270	OR	15	1	-1200	*	11/04/2024
Orthophosphate as P	mg/L	80-120	2.70		0.32	J	5	1	48	*	11/04/2024

Matrix Spike Summary

Client:	RSB Environmental	SDG No.:	P4674
Project:	Southern Product Finishing	Sample ID:	P4674-01
Client ID:	OUTFALL-001MSD	Percent Solids for Spike Sample:	0

Analyte	Units	Acceptance Limit %R	Spiked Result	Conc. Qualifier	Sample Result	Conc. Qualifier	Spike Added	Dilution Factor	% Rec	Qual	Analysis Date
Bromide	mg/L	80-120	10.2		0.034	U	10	1	102		11/04/2024
Chloride	mg/L	80-120	9.10	OR	0.31	J	3	1	293	*	11/04/2024
Fluoride	mg/L	80-120	2.10		0.24	J	2	1	93		11/04/2024
Nitrite	mg/L	80-120	2.00		0.011	U	3	1	67	*	11/04/2024
Nitrate	mg/L	80-120	3.20		0.37	J	2.5	1	113		11/04/2024
Sulfate	mg/L	80-120	4100	OR	4270	OR	15	1	-1133	*	11/04/2024
Orthophosphate as P	mg/L	80-120	3.00		0.32	J	5	1	54	*	11/04/2024

Duplicate Sample Summary

Client:	RSB Environmental	SDG No.:	P4674
Project:	Southern Product Finishing	Sample ID:	P4638-02
Client ID:	COMPDUP	Percent Solids for Spike Sample:	0

Analyte	Units	Acceptance Limit	Sample Result	Conc. Qualifier	Duplicate Result	Conc. Qualifier	Dilution Factor	RPD/ AD	Qual	Analysis Date
TSS	mg/L	+/-5	734		740		1	0.81		11/04/2024

Duplicate Sample Summary

Client: RSB Environmental	SDG No.: P4674
Project: Southern Product Finishing	Sample ID: P4674-01
Client ID: OUTFALL-001MSD	Percent Solids for Spike Sample: 0

Analyte	Units	Acceptance Limit	Sample Result	Conc. Qualifier	Duplicate Result	Conc. Qualifier	Dilution Factor	RPD/AD	Qual	Analysis Date
Nitrite	mg/L	+/-20	2.00		2.00		1	0		11/04/2024
Sulfate	mg/L	+/-20	4090	OR	4100	OR	1	0		11/04/2024
Chloride	mg/L	+/-20	9.00	OR	9.10	OR	1	1		11/04/2024
Orthophosphate as P	mg/L	+/-20	2.70		3.00		1	11		11/04/2024
Bromide	mg/L	+/-20	10.0		10.2		1	2		11/04/2024
Nitrate	mg/L	+/-20	3.10		3.20		1	3		11/04/2024
Fluoride	mg/L	+/-20	2.00		2.10		1	5		11/04/2024

Laboratory Control Sample Summary

Client: RSB Environmental

SDG No.: P4674

Project: Southern Product Finishing

Run No.: LB133251

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID	LB133251BSW							
Bromide	mg/L	10	10.0		100	1	90-110	11/04/2024
Chloride	mg/L	3	3.00		100	1	90-110	11/04/2024
Fluoride	mg/L	2	2.00		100	1	90-110	11/04/2024
Nitrite	mg/L	3	3.00		100	1	90-110	11/04/2024
Nitrate	mg/L	2.5	2.50		100	1	90-110	11/04/2024
Sulfate	mg/L	15	14.7		98	1	90-110	11/04/2024
Orthophosphate as P	mg/L	5	5.00		100	1	90-110	11/04/2024

Laboratory Control Sample Summary

Client: RSB Environmental

SDG No.: P4674

Project: Southern Product Finishing

Run No.: LB133266

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID	LB133266BS							
TSS	mg/L	550	538		98	1	90-110	11/04/2024



RAW DATA

Ident	Instrument IC-1				Analyst: NF		Method: 300.0 / 9056A		date time	Initial \ Analyst	
	Con F-	Con CL-	Con NO2	Con BR-	Con NO3	Con HPO4	Con SO4	Method name			
STD1	0	0	0	0	0	0	0	0	IC1-101624	10/16/2024 10:55	10 NF/IZ
STD2	0.424	0.632	0.639	2.106	0.535	1.072	3.276	IC1-101624	10/16/2024 11:17	10 NF/IZ	
STD3	0.796	1.206	1.205	4.013	1	2	6.052	IC1-101624	10/16/2024 11:38	10 NF/IZ	
STD4	1.032	1.537	1.531	5.116	1.277	2.557	7.662	IC1-101624	10/16/2024 11:59	10 NF/IZ	
STD5	1.966	2.927	2.921	9.77	2.439	4.871	14.51	IC1-101624	10/16/2024 12:21	10 NF/IZ	
STD6	3.88	5.901	5.91	19.683	4.912	9.831	29.286	IC1-101624	10/16/2024 12:42	10 NF/IZ	
STD7	5.102	7.598	7.593	25.312	6.337	12.67	37.714	IC1-101624	10/16/2024 13:04	10 NF/IZ	
ICV	1.966	2.997	3	9.969	2.497	4.753	14.85	IC1-101624	10/16/2024 13:37	10 NF/IZ	
ICB	0	0	0	0	0	0	0	IC1-101624	10/16/2024 13:59	10 NF/IZ	
CCV	1.988	2.979	2.984	9.93	2.495	4.965	14.701	IC1-101624	11/4/2024 9:38	10 NF/IZ	
CCB	0	0	0	0	0	0	0	IC1-101624	11/4/2024 10:00	10 NF/IZ	
LB133251BLW	0	0	0	0	0	0	0	IC1-101624	11/4/2024 10:21	10 NF/IZ	
LB133251BSW	1.991	2.997	2.992	9.955	2.498	4.962	14.723	IC1-101624	11/4/2024 10:43	10 NF/IZ	
P4673-01	0.411	26.77	0.383	0.335	1.559	0.355	3257.035	IC1-101624	11/4/2024 11:26	10 NF/IZ	
P4673-02	1.198	13.1	0	0.308	1.343	0.726	3367.603	IC1-101624	11/4/2024 11:47	10 NF/IZ	
P4673-03	0.407	11.504	0	0	0.463	0.417	3428.48	IC1-101624	11/4/2024 12:09	10 NF/IZ	
P4673-04	0.488	14.938	0.152	0.297	2.225	0.385	3320.606	IC1-101624	11/4/2024 12:30	10 NF/IZ	
P4673-05	0.474	14.064	0	0.299	2.209	0.361	3234.733	IC1-101624	11/4/2024 13:13	10 NF/IZ	
P4673-06	0.525	15.104	0	0.269	1.651	0.441	3072.351	IC1-101624	11/4/2024 13:35	10 NF/IZ	
P4673-07	0.307	8.987	0	0	0.73	0.324	3255.556	IC1-101624	11/4/2024 13:56	10 NF/IZ	
P4674-01	0.242	0.312	0	0	0.372	0.324	4269.759	IC1-101624	11/4/2024 14:18	10 NF/IZ	
CCV	1.994	3.001	2.991	9.999	2.504	4.931	14.771	IC1-101624	11/4/2024 15:01	10 NF/IZ	
CCB	0	0	0	0	0	0	0	IC1-101624	11/4/2024 15:22	10 NF/IZ	
P4674-01MS	2.02	9.011	1.984	9.966	3.136	2.74	4092.952	IC1-101624	11/4/2024 15:44	10 NF/IZ	
P4674-01MSD	2.108	9.101	1.999	10.195	3.229	2.995	4099.017	IC1-101624	11/4/2024 16:05	10 NF/IZ	
CCV	1.971	2.991	2.997	10.007	2.506	4.882	14.803	IC1-101624	11/4/2024 16:48	10 NF/IZ	
CCB	0	0	0	0	0	0	0	IC1-101624	11/4/2024 17:09	10 NF/IZ	

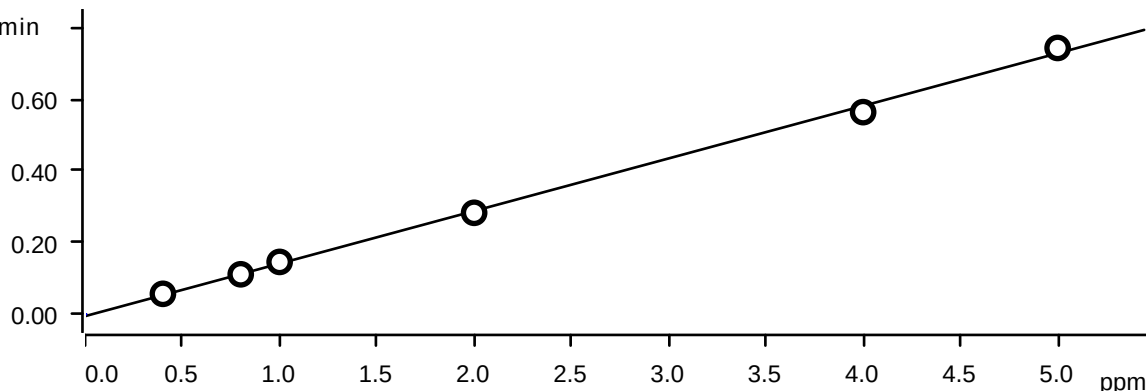
Clear table

Instrument ID: IC-2 Analyst : IZ Method: 300.0 / 9056A

concentra tion F-		concentratio n CL-	concentrati on NO2	concentrati on BR-	concentrati on NO3	concentratio n HPO4	concentrati on SO4	file name	date time	Initial wt/ Final	Analyst
STD1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000 IC1-101624	10/16/2024 10:55	10	NF/IZ
STD2	0.424	0.632	0.639	2.106	0.535	1.072	3.276	IC1-101624	10/16/2024 11:17	10	NF/IZ
STD3	0.796	1.206	1.205	4.013	1.000	2.000	6.052	IC1-101624	10/16/2024 11:38	10	NF/IZ
STD4	1.032	1.537	1.531	5.116	1.277	2.557	7.662	IC1-101624	10/16/2024 11:59	10	NF/IZ
STD5	1.966	2.927	2.921	9.77	2.439	4.871	14.51	IC1-101624	10/16/2024 12:21	10	NF/IZ
STD6	3.88	5.901	5.91	19.683	4.912	9.831	29.286	IC1-101624	10/16/2024 12:42	10	NF/IZ
STD7	5.102	7.598	7.593	25.312	6.337	12.67	37.714	IC1-101624	10/16/2024 13:04	10	NF/IZ
True Value F-		True Value CL-	True Value NO2	True Value BR-	True Value NO3	True Value HPO4	True Value SO4				
STD1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000				
STD2	0.4000	0.6000	0.6000	2.0000	0.5000	1.0000	3.0000				
STD3	0.8000	1.2000	1.2000	4.0000	1.0000	2.0000	6.0000				
STD4	1.0000	1.5000	1.5000	5.0000	1.2500	2.5000	7.5000				
STD5	2.0000	3.0000	3.0000	10.0000	2.5000	5.0000	15.0000				
STD6	4.0000	6.0000	6.0000	20.0000	5.0000	10.0000	30.0000				
STD7	5.0000	7.5000	7.5000	25.0000	6.2500	12.5000	37.0000				
Relative Error F-		Relative Error CL-	Relative Error NO2	Relative Error BR-	Relative Error NO3	Relative Error HPO4	Relative Error SO4				
STD1		5.3333	6.5000	5.3000	7.0000	7.2000	9.2000				
STD2	6.0000	0.5000	0.4167	0.3250	0.0000	0.0000	0.8667				
STD3	-0.5000	2.4667	2.0667	2.3200	2.1600	2.2800	2.1600				
STD4	3.2000	-2.4333	-2.6333	-2.3000	-2.4400	-2.5800	-3.2667				
STD5	-1.7000	-1.6500	-1.5000	-1.5850	-1.7600	-1.6900	-2.3800				
STD6	-3.0000	1.3067	1.2400	1.2480	1.3920	1.3600	1.9297				
STD7	2.0400										

Fluoride (Anions)

($\mu\text{S}/\text{cm}$) x min



Function: $A = -5.06114E-3 + 0.0146570 \times Q$

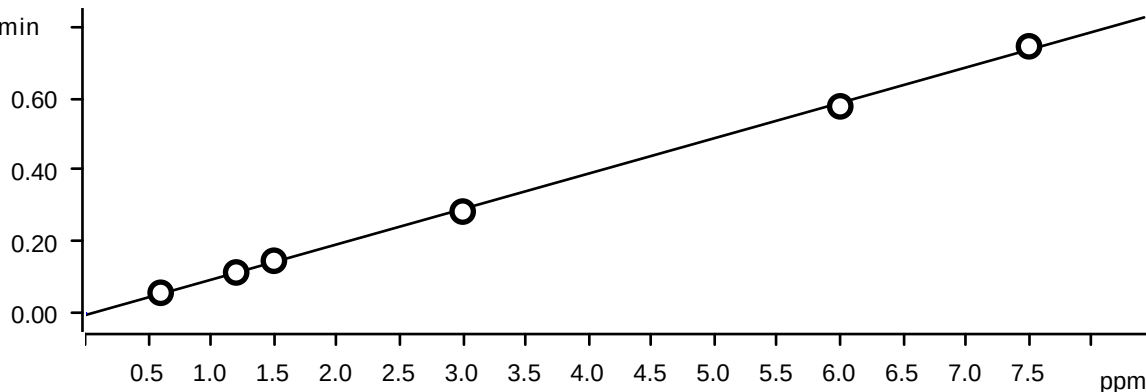
Relative standard deviation 3.824450 %

Correlation coefficient 0.999229

Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date	Used
Standard 1	1	0.000	10.0	1.0	1.0	n. d.	STD1	2024-10-16 10:55:46 UTC-4	used
Standard 2	1	0.400	10.0	1.0	1.0	0.057	STD2	2024-10-16 11:17:08 UTC-4	used
Standard 3	1	0.800	10.0	1.0	1.0	0.112	STD3	2024-10-16 11:38:32 UTC-4	used
Standard 4	1	1.000	10.0	1.0	1.0	0.146	STD4	2024-10-16 11:59:57 UTC-4	used
Standard 5	1	2.000	10.0	1.0	1.0	0.283	STD5	2024-10-16 12:21:22 UTC-4	used
Standard 6	1	4.000	10.0	1.0	1.0	0.564	STD6	2024-10-16 12:42:48 UTC-4	used
Standard 7	1	5.000	10.0	1.0	1.0	0.743	STD7	2024-10-16 13:04:15 UTC-4	used

Chloride (Anions)

($\mu\text{S}/\text{cm}$) x min

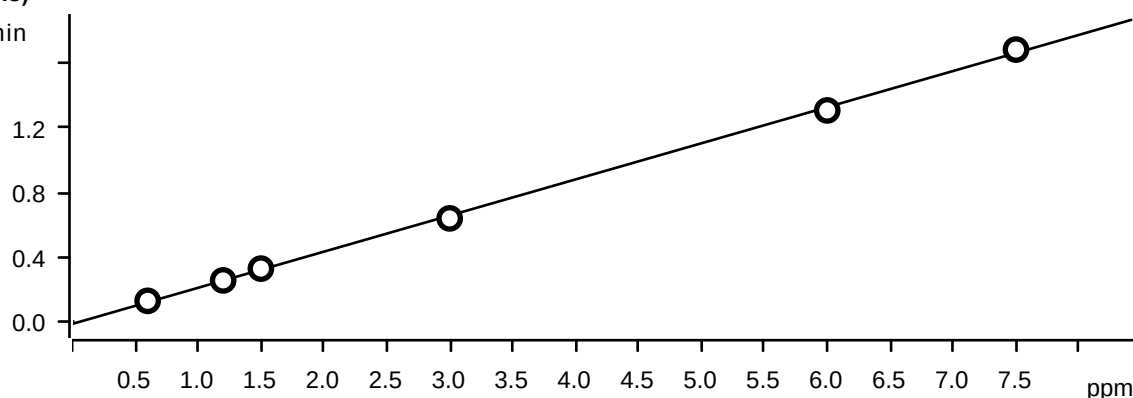


Function: $A = -4.66155E-3 + 9.86442E-3 \times Q$

Relative standard deviation 2.532075 %

Correlation coefficient 0.999661

Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date	Used
Standard 1	1	0.000	10.0	1.0	1.0	n. d.	STD1	2024-10-16 10:55:46 UTC-4	used
Standard 2	1	0.600	10.0	1.0	1.0	0.058	STD2	2024-10-16 11:17:08 UTC-4	used
Standard 3	1	1.200	10.0	1.0	1.0	0.114	STD3	2024-10-16 11:38:32 UTC-4	used
Standard 4	1	1.500	10.0	1.0	1.0	0.147	STD4	2024-10-16 11:59:57 UTC-4	used
Standard 5	1	3.000	10.0	1.0	1.0	0.284	STD5	2024-10-16 12:21:22 UTC-4	used
Standard 6	1	6.000	10.0	1.0	1.0	0.577	STD6	2024-10-16 12:42:48 UTC-4	used
Standard 7	1	7.500	10.0	1.0	1.0	0.745	STD7	2024-10-16 13:04:15 UTC-4	used

Nitrite (Anions) $(\mu\text{S}/\text{cm}) \times \text{min}$ Function: $A = -0.0158639 + 0.0223869 \times Q$

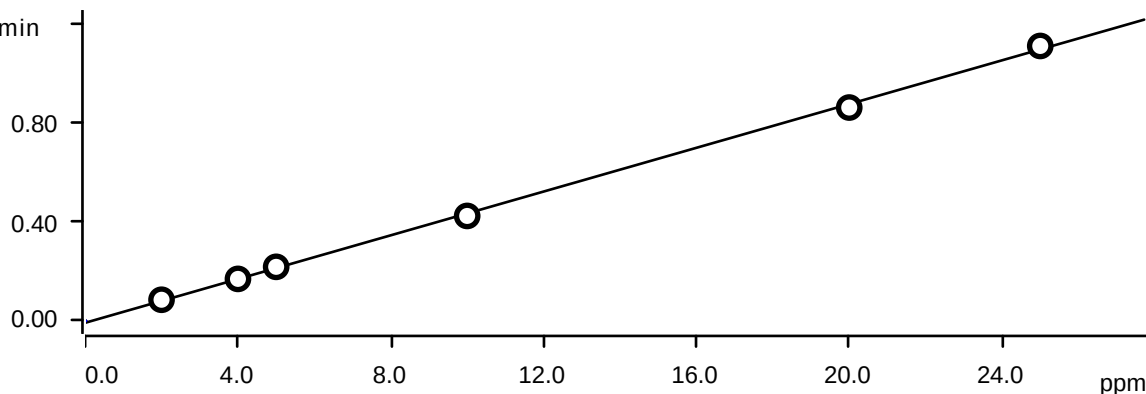
Relative standard deviation 2.476730 %

Correlation coefficient 0.999680

Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date	Used
Standard 1	1	0.000	10.0	1.0	1.0	n. d.	STD1	2024-10-16 10:55:46 UTC-4	used
Standard 2	1	0.600	10.0	1.0	1.0	0.127	STD2	2024-10-16 11:17:08 UTC-4	used
Standard 3	1	1.200	10.0	1.0	1.0	0.254	STD3	2024-10-16 11:38:32 UTC-4	used
Standard 4	1	1.500	10.0	1.0	1.0	0.327	STD4	2024-10-16 11:59:57 UTC-4	used
Standard 5	1	3.000	10.0	1.0	1.0	0.638	STD5	2024-10-16 12:21:22 UTC-4	used
Standard 6	1	6.000	10.0	1.0	1.0	1.307	STD6	2024-10-16 12:42:48 UTC-4	used
Standard 7	1	7.500	10.0	1.0	1.0	1.684	STD7	2024-10-16 13:04:15 UTC-4	used

Bromide (Anions)

($\mu\text{S}/\text{cm}$) $\times$ min



Function: $A = -7.83486E-3 + 4.40426E-3 \times Q$

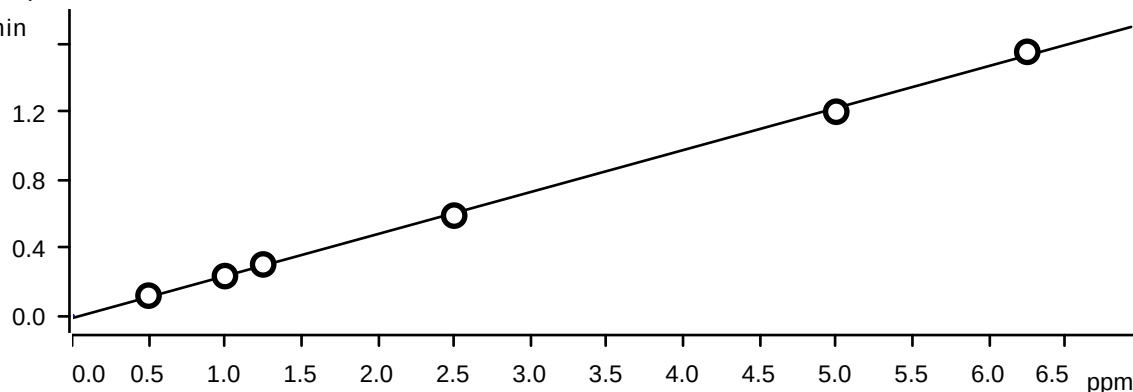
Relative standard deviation: 2.425045 %

Correlation coefficient: 0.999690

Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date	Used
Standard 1	1	0.000	10.0	1.0	1.0	n. d.	STD1	2024-10-16 10:55:46 UTC-4	used
Standard 2	1	2.000	10.0	1.0	1.0	0.085	STD2	2024-10-16 11:17:08 UTC-4	used
Standard 3	1	4.000	10.0	1.0	1.0	0.169	STD3	2024-10-16 11:38:32 UTC-4	used
Standard 4	1	5.000	10.0	1.0	1.0	0.217	STD4	2024-10-16 11:59:57 UTC-4	used
Standard 5	1	10.000	10.0	1.0	1.0	0.422	STD5	2024-10-16 12:21:22 UTC-4	used
Standard 6	1	20.000	10.0	1.0	1.0	0.859	STD6	2024-10-16 12:42:48 UTC-4	used
Standard 7	1	25.000	10.0	1.0	1.0	1.107	STD7	2024-10-16 13:04:15 UTC-4	used

Nitrate (Anions)

($\mu\text{S}/\text{cm}$) $\times$ min

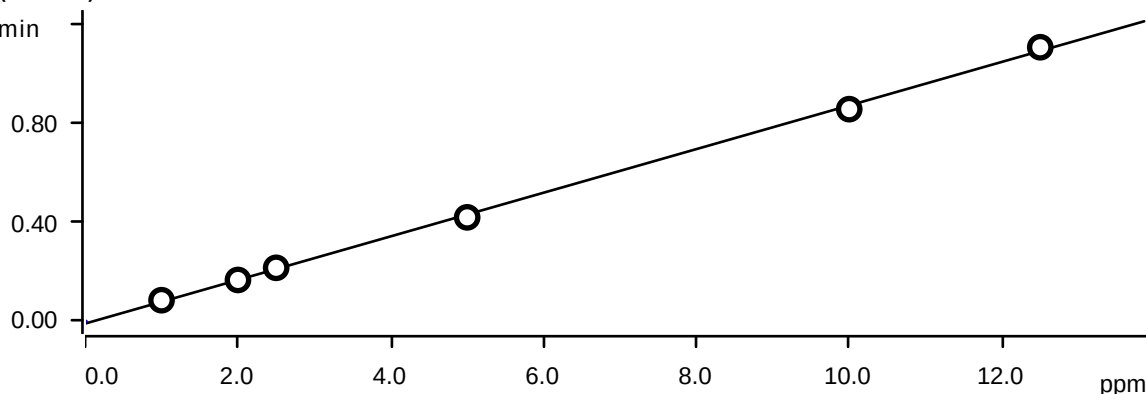


Function: $A = -0.0159932 + 0.0247327 \times Q$

Relative standard deviation: 2.693966 %

Correlation coefficient 0.999623

Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date	Used
Standard 1	1	0.000	10.0	1.0	1.0	n. d.	STD1	2024-10-16 10:55:46 UTC-4	used
Standard 2	1	0.500	10.0	1.0	1.0	0.116	STD2	2024-10-16 11:17:08 UTC-4	used
Standard 3	1	1.000	10.0	1.0	1.0	0.231	STD3	2024-10-16 11:38:32 UTC-4	used
Standard 4	1	1.250	10.0	1.0	1.0	0.300	STD4	2024-10-16 11:59:57 UTC-4	used
Standard 5	1	2.500	10.0	1.0	1.0	0.587	STD5	2024-10-16 12:21:22 UTC-4	used
Standard 6	1	5.000	10.0	1.0	1.0	1.199	STD6	2024-10-16 12:42:48 UTC-4	used
Standard 7	1	6.250	10.0	1.0	1.0	1.551	STD7	2024-10-16 13:04:15 UTC-4	used

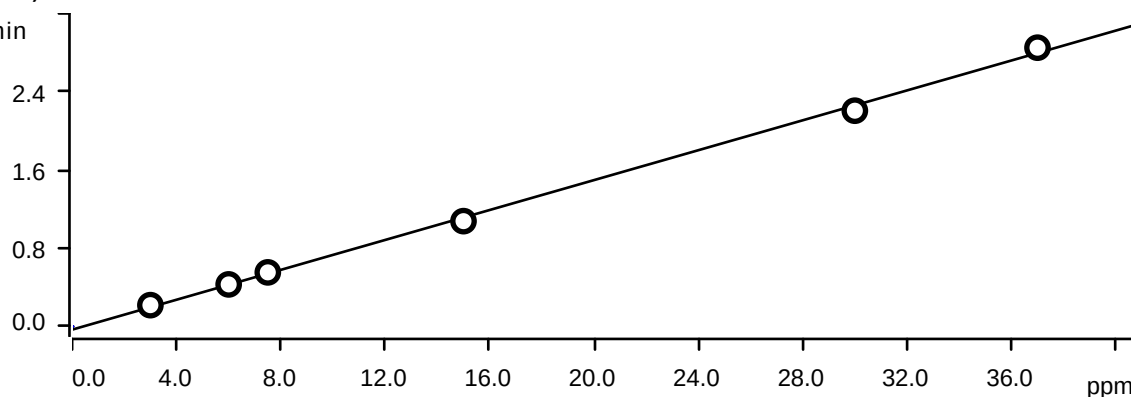
Phosphate (Anions) $(\mu\text{S}/\text{cm}) \times \text{min}$ Function: $A = -9.96170E-3 + 8.78405E-3 \times Q$

Relative standard deviation 2.667639 %

Correlation coefficient 0.999628

Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date	Used
Standard 1	1	0.000	10.0	1.0	1.0	n. d.	STD1	2024-10-16 10:55:46 UTC-4	used
Standard 2	1	1.000	10.0	1.0	1.0	0.084	STD2	2024-10-16 11:17:08 UTC-4	used
Standard 3	1	2.000	10.0	1.0	1.0	0.166	STD3	2024-10-16 11:38:32 UTC-4	used
Standard 4	1	2.500	10.0	1.0	1.0	0.215	STD4	2024-10-16 11:59:57 UTC-4	used
Standard 5	1	5.000	10.0	1.0	1.0	0.418	STD5	2024-10-16 12:21:22 UTC-4	used
Standard 6	1	10.000	10.0	1.0	1.0	0.854	STD6	2024-10-16 12:42:48 UTC-4	used
Standard 7	1	12.500	10.0	1.0	1.0	1.103	STD7	2024-10-16 13:04:15 UTC-4	used

Sulfate (Anions)

 $(\mu\text{S}/\text{cm}) \times \text{min}$ Function: $A = -0.0322401 + 7.64234E-3 \times Q$

Relative standard deviation 3.651427 %

Correlation coefficient 0.999303

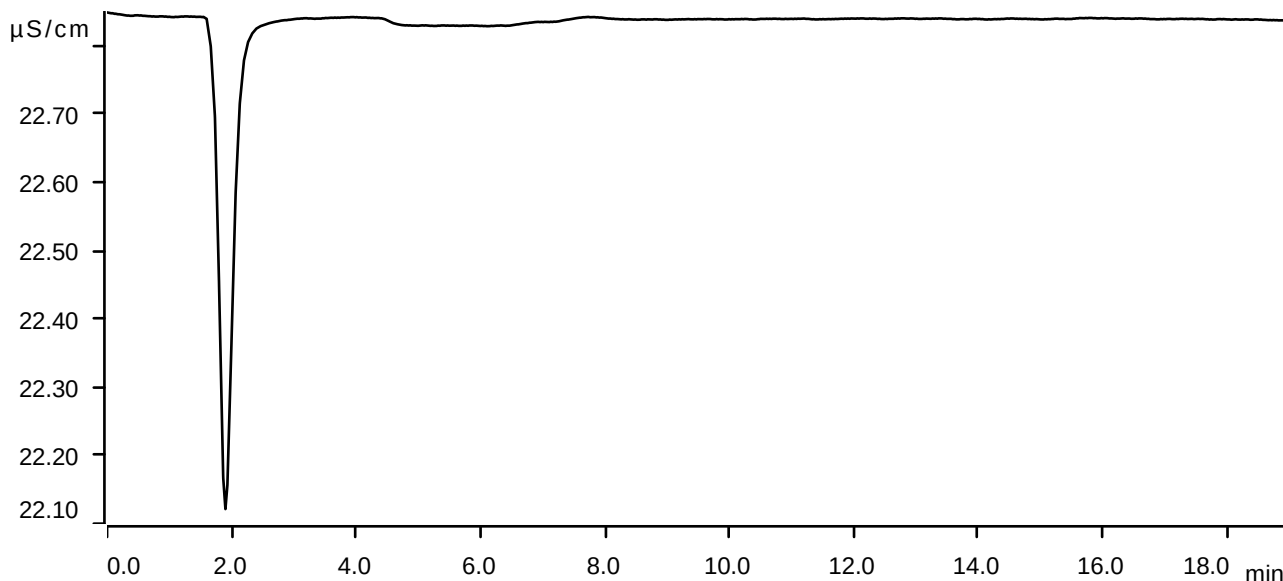
Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date	Used
Standard 1	1	0.000	10.0	1.0	1.0	n. d.	STD1	2024-10-16 10:55:46 UTC-4	used
Standard 2	1	3.000	10.0	1.0	1.0	0.218	STD2	2024-10-16 11:17:08 UTC-4	used
Standard 3	1	6.000	10.0	1.0	1.0	0.430	STD3	2024-10-16 11:38:32 UTC-4	used
Standard 4	1	7.500	10.0	1.0	1.0	0.553	STD4	2024-10-16 11:59:57 UTC-4	used
Standard 5	1	15.000	10.0	1.0	1.0	1.077	STD5	2024-10-16 12:21:22 UTC-4	used
Standard 6	1	30.000	10.0	1.0	1.0	2.206	STD6	2024-10-16 12:42:48 UTC-4	used
Standard 7	1	37.000	10.0	1.0	1.0	2.850	STD7	2024-10-16 13:04:15 UTC-4	used

Sample data

Ident STD1
Sample type Standard 1
Determination start 2024-10-16 10:55:46 UTC-4
Method IC1-101624
Operator

Anions

Data source Conductivity detector 1 (Eco IC 1)
Channel Conductivity
Recording time 19.0 min
Integration Automatically
Column type Metrosep A Supp 19 - 150/4.0
Eluent composition not defined
Flow 0.700 mL/min
Maximum flow monitored yes
Pressure 12.33 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions

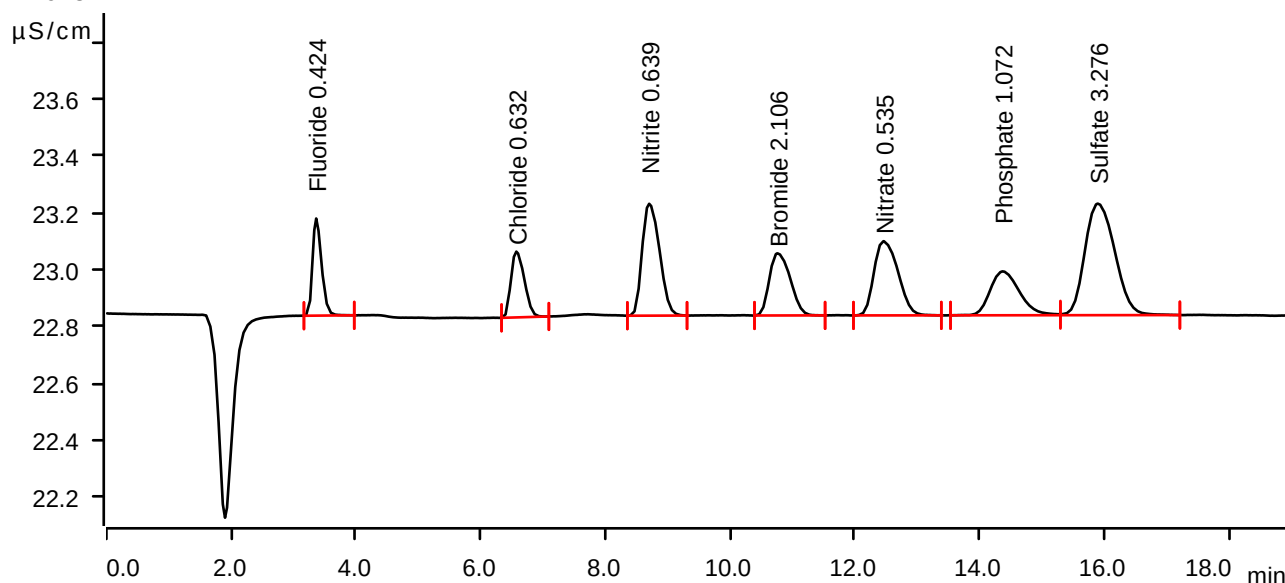
Sample data

Ident STD2
Sample type Standard 2
Determination start 2024-10-16 11:17:08 UTC-4
Method IC1-101624
Operator

Anions

Data source Conductivity detector 1 (Eco IC 1)
Channel Conductivity
Recording time 19.0 min
Integration Automatically
Column type Metrosep A Supp 19 - 150/4.0
Eluent composition not defined
Flow 0.700 mL/min
Maximum flow monitored yes
Pressure 12.56 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions



Peak number	Retention time min	Area (µS/cm) x min	Height µS/cm	Concentration ppm	Component name
1	3.365	0.0571	0.341	0.424	Fluoride
2	6.573	0.0576	0.231	0.632	Chloride
3	8.703	0.1273	0.393	0.639	Nitrite
4	10.758	0.0849	0.219	2.106	Bromide
5	12.458	0.1163	0.261	0.535	Nitrate
6	14.368	0.0842	0.154	1.072	Phosphate
7	15.893	0.2181	0.392	3.276	Sulfate

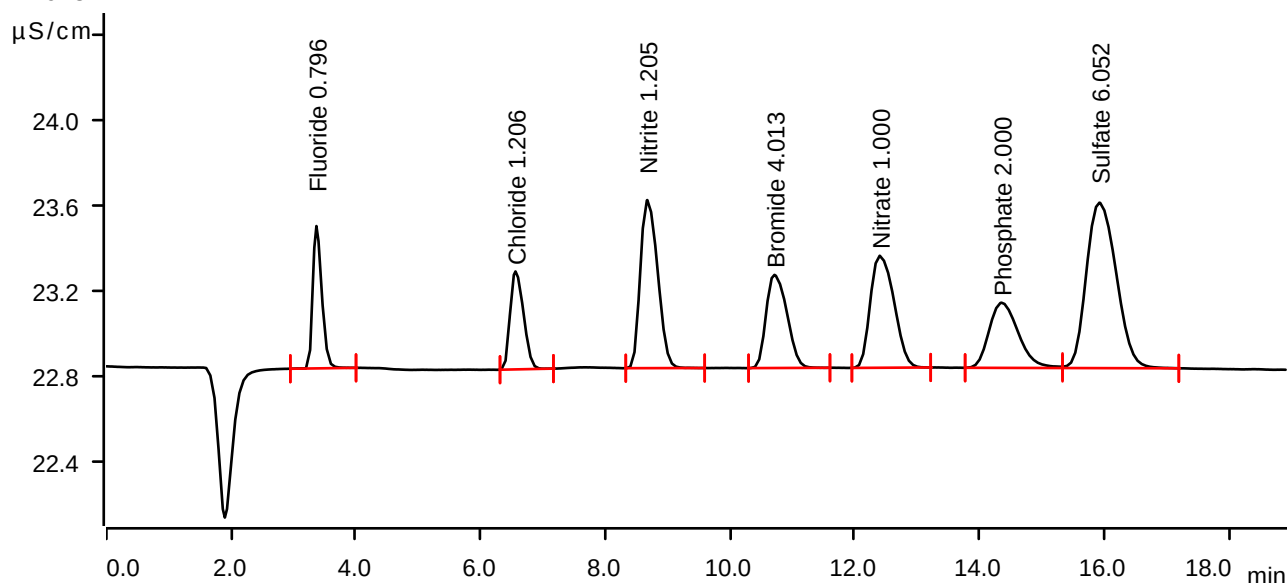
Sample data

Ident STD3
Sample type Standard 3
Determination start 2024-10-16 11:38:32 UTC-4
Method IC1-101624
Operator

Anions

Data source Conductivity detector 1 (Eco IC 1)
Channel Conductivity
Recording time 19.0 min
Integration Automatically
Column type Metrosep A Supp 19 - 150/4.0
Eluent composition not defined
Flow 0.700 mL/min
Maximum flow monitored yes
Pressure 12.11 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions



Peak number	Retention time min	Area (µS/cm) x min	Height µS/cm	Concentration ppm	Component name
1	3.368	0.1116	0.667	0.796	Fluoride
2	6.560	0.1143	0.459	1.206	Chloride
3	8.673	0.2538	0.788	1.205	Nitrite
4	10.712	0.1689	0.436	4.013	Bromide
5	12.398	0.2314	0.525	1.000	Nitrate
6	14.353	0.1657	0.305	2.000	Phosphate
7	15.922	0.4302	0.775	6.052	Sulfate

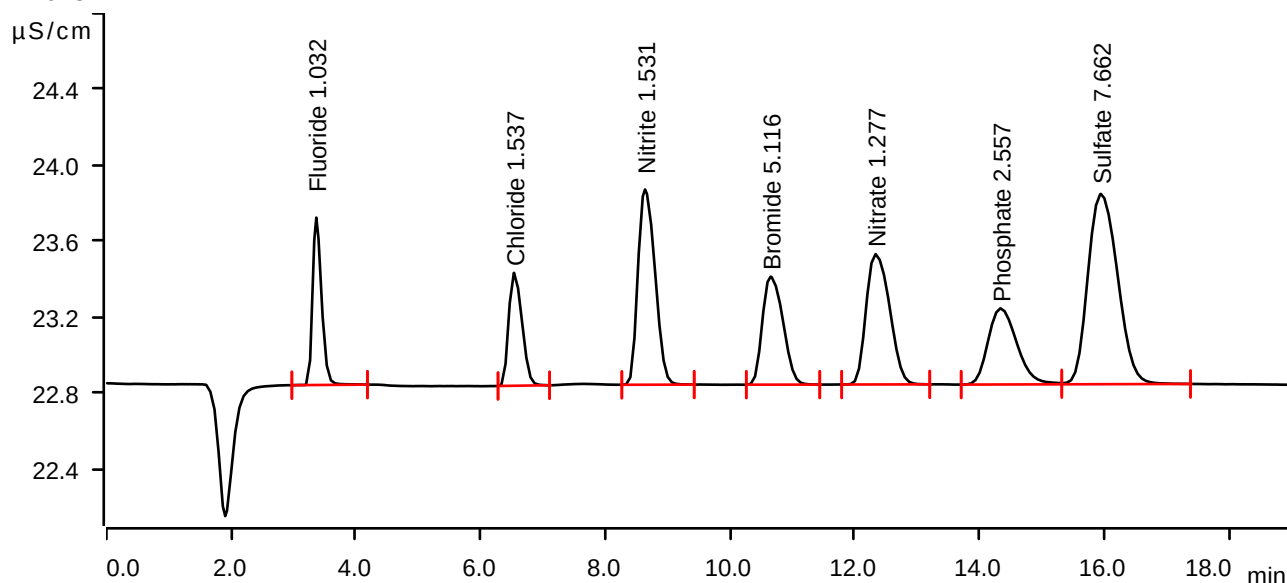
Sample data

Ident STD4
Sample type Standard 4
Determination start 2024-10-16 11:59:57 UTC-4
Method IC1-101624
Operator

Anions

Data source Conductivity detector 1 (Eco IC 1)
Channel Conductivity
Recording time 19.0 min
Integration Automatically
Column type Metrosep A Supp 19 - 150/4.0
Eluent composition not defined
Flow 0.700 mL/min
Maximum flow monitored yes
Pressure 11.94 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions



Peak number	Retention time min	Area (µS/cm) x min	Height µS/cm	Concentration ppm	Component name
1	3.367	0.1462	0.882	1.032	Fluoride
2	6.537	0.1469	0.595	1.537	Chloride
3	8.637	0.3270	1.029	1.531	Nitrite
4	10.650	0.2175	0.569	5.116	Bromide
5	12.332	0.2999	0.687	1.277	Nitrate
6	14.337	0.2147	0.401	2.557	Phosphate
7	15.945	0.5533	1.003	7.662	Sulfate

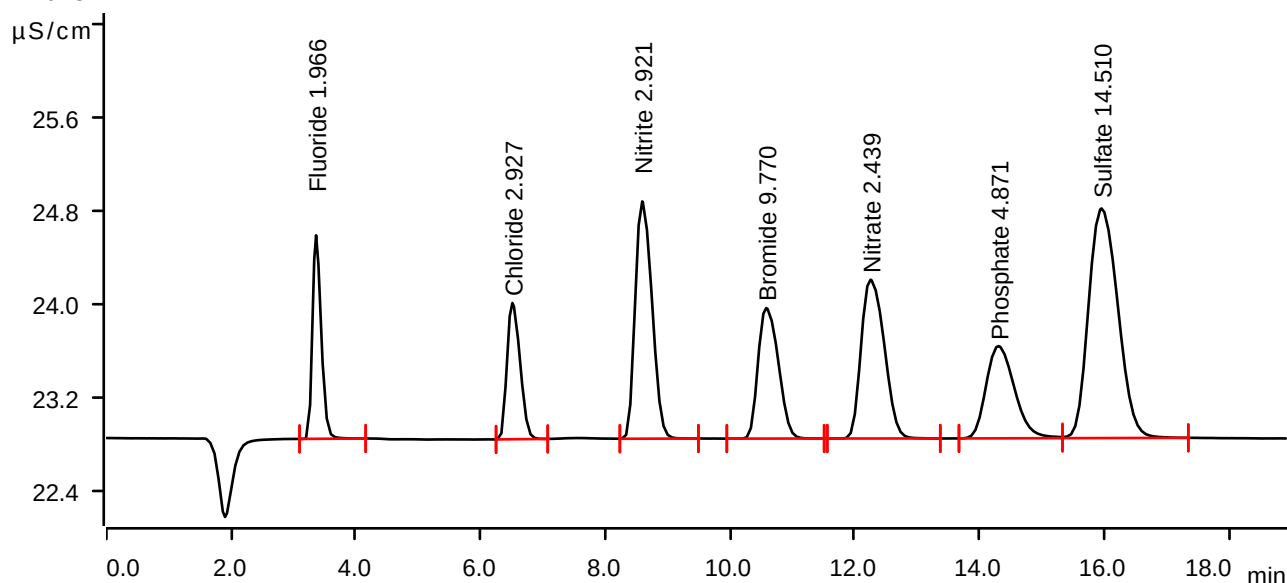
Sample data

Ident STD5
Sample type Standard 5
Determination start 2024-10-16 12:21:22 UTC-4
Method IC1-101624
Operator

Anions

Data source Conductivity detector 1 (Eco IC 1)
Channel Conductivity
Recording time 19.0 min
Integration Automatically
Column type Metrosep A Supp 19 - 150/4.0
Eluent composition not defined
Flow 0.700 mL/min
Maximum flow monitored yes
Pressure 11.99 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions



Peak number	Retention time min	Area (µS/cm) x min	Height µS/cm	Concentration ppm	Component name
1	3.363	0.2831	1.748	1.966	Fluoride
2	6.510	0.2841	1.170	2.927	Chloride
3	8.592	0.6381	2.038	2.921	Nitrite
4	10.580	0.4225	1.121	9.770	Bromide
5	12.252	0.5873	1.364	2.439	Nitrate
6	14.302	0.4179	0.793	4.871	Phosphate
7	15.955	1.0767	1.972	14.510	Sulfate

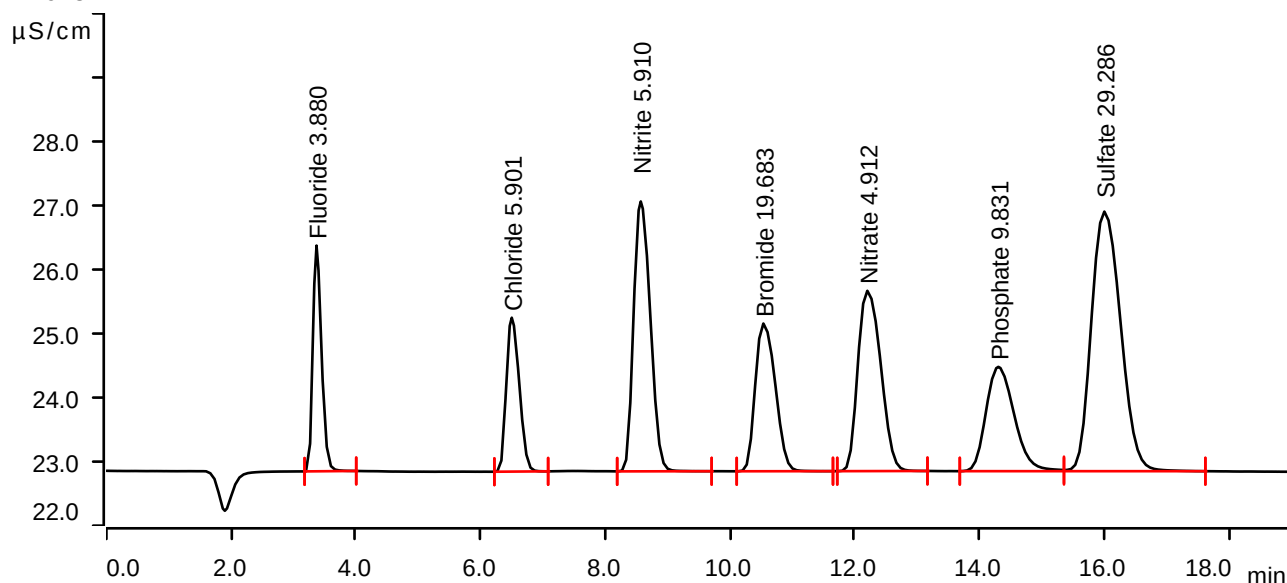
Sample data

Ident STD6
Sample type Standard 6
Determination start 2024-10-16 12:42:48 UTC-4
Method IC1-101624
Operator

Anions

Data source Conductivity detector 1 (Eco IC 1)
Channel Conductivity
Recording time 19.0 min
Integration Automatically
Column type Metrosep A Supp 19 - 150/4.0
Eluent composition not defined
Flow 0.700 mL/min
Maximum flow monitored yes
Pressure 11.88 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions



Peak number	Retention time min	Area (µS/cm) x min	Height µS/cm	Concentration ppm	Component name
1	3.370	0.5637	3.525	3.880	Fluoride
2	6.500	0.5774	2.404	5.901	Chloride
3	8.568	1.3072	4.215	5.910	Nitrite
4	10.535	0.8590	2.306	19.683	Bromide
5	12.202	1.1988	2.815	4.912	Nitrate
6	14.302	0.8536	1.629	9.831	Phosphate
7	16.002	2.2059	4.054	29.286	Sulfate

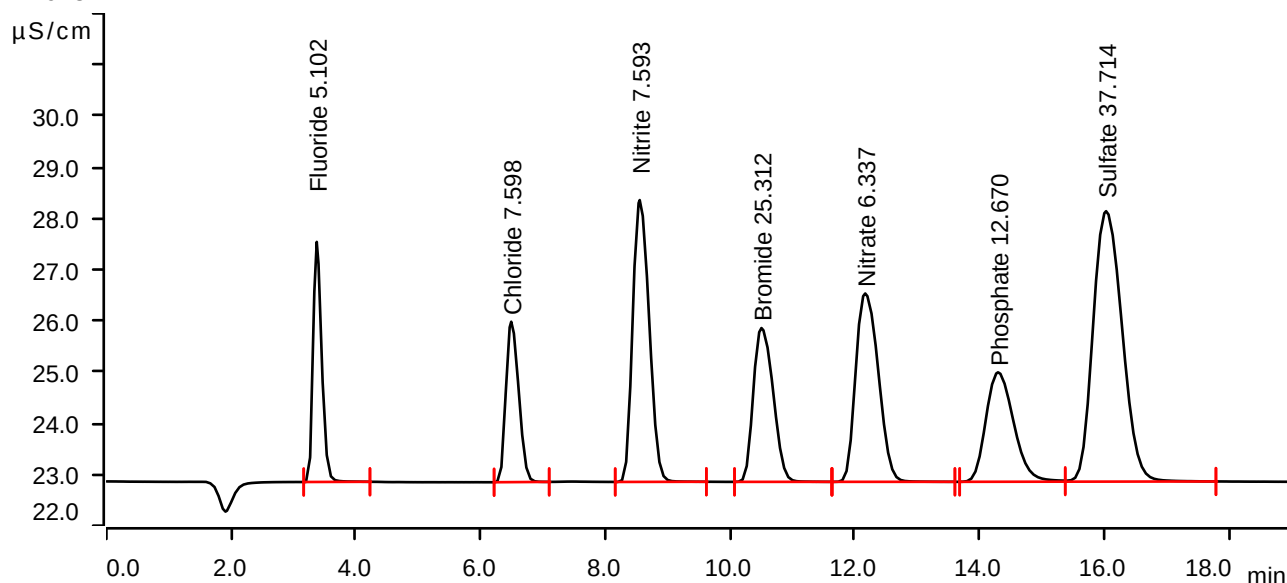
Sample data

Ident STD7
Sample type Standard 7
Determination start 2024-10-16 13:04:15 UTC-4
Method IC1-101624
Operator

Anions

Data source Conductivity detector 1 (Eco IC 1)
Channel Conductivity
Recording time 19.0 min
Integration Automatically
Column type Metrosep A Supp 19 - 150/4.0
Eluent composition not defined
Flow 0.700 mL/min
Maximum flow monitored yes
Pressure 12.73 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions



Peak number	Retention time min	Area (µS/cm) x min	Height µS/cm	Concentration ppm	Component name
1	3.373	0.7427	4.687	5.102	Fluoride
2	6.492	0.7448	3.132	7.598	Chloride
3	8.552	1.6841	5.502	7.593	Nitrite
4	10.503	1.1070	3.003	25.312	Bromide
5	12.167	1.5512	3.678	6.337	Nitrate
6	14.297	1.1030	2.137	12.670	Phosphate
7	16.028	2.8500	5.280	37.714	Sulfate

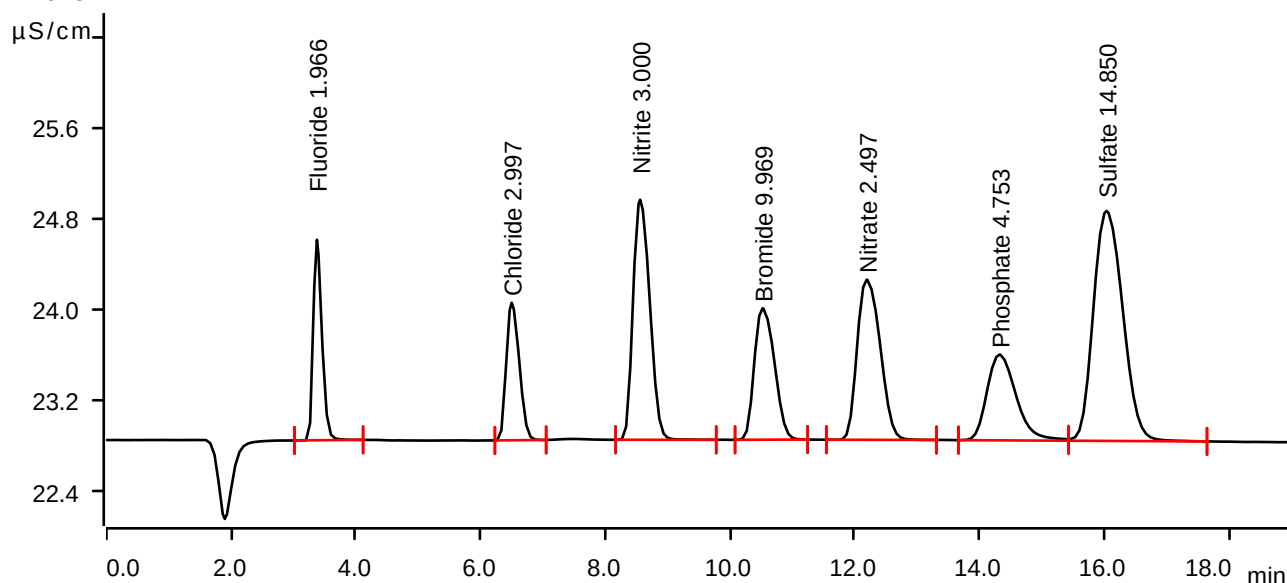
Sample data

Ident ICV
Sample type Check standard 1
Determination start 2024-10-16 13:37:49 UTC-4
Method IC1-101624
Operator

Anions

Data source Conductivity detector 1 (Eco IC 1)
Channel Conductivity
Recording time 19.0 min
Integration Automatically
Column type Metrosep A Supp 19 - 150/4.0
Eluent composition not defined
Flow 0.700 mL/min
Maximum flow monitored yes
Pressure 11.66 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions



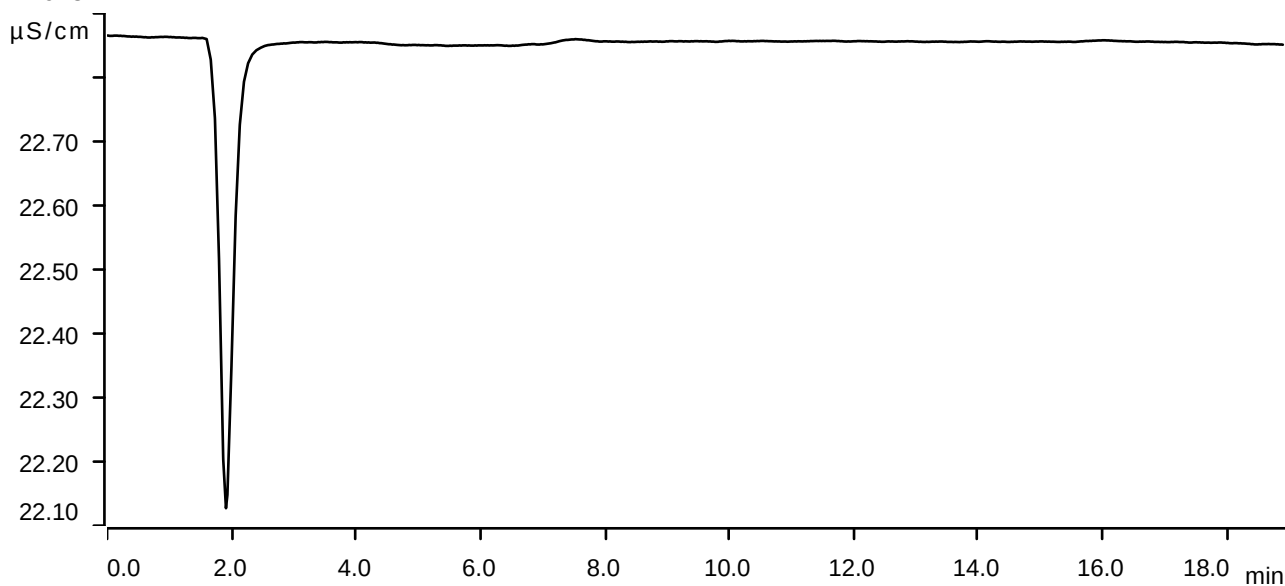
Peak number	Retention time min	Area (µS/cm) x min	Height µS/cm	Concentration ppm	Component name
1	3.377	0.2830	1.762	1.966	Fluoride
2	6.498	0.2910	1.209	2.997	Chloride
3	8.558	0.6557	2.109	3.000	Nitrite
4	10.522	0.4312	1.155	9.969	Bromide
5	12.190	0.6017	1.407	2.497	Nitrate
6	14.320	0.4076	0.753	4.753	Phosphate
7	16.035	1.1027	2.020	14.850	Sulfate

Sample data

Ident ICB
Sample type Sample
Determination start 2024-10-16 13:59:18 UTC-4
Method IC1-101624
Operator

Anions

Data source Conductivity detector 1 (Eco IC 1)
Channel Conductivity
Recording time 19.0 min
Integration Automatically
Column type Metrosep A Supp 19 - 150/4.0
Eluent composition not defined
Flow 0.700 mL/min
Maximum flow monitored yes
Pressure 11.60 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions

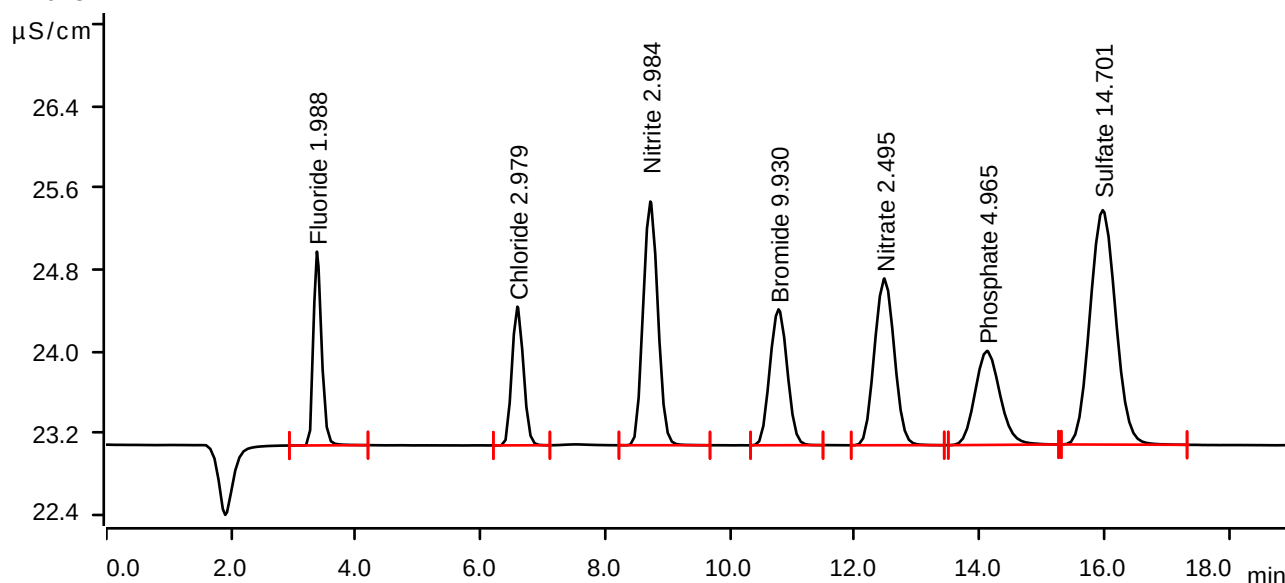
Sample data

Ident CCV
Sample type Check standard 1
Determination start 2024-11-04 09:38:30 UTC-5
Method IC1-101624
Operator

Anions

Data source Conductivity detector 1 (Eco IC 1)
Channel Conductivity
Recording time 19.0 min
Integration Automatically
Column type Metrosep A Supp 19 - 150/4.0
Eluent composition not defined
Flow 0.700 mL/min
Maximum flow monitored yes
Pressure 12.27 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions



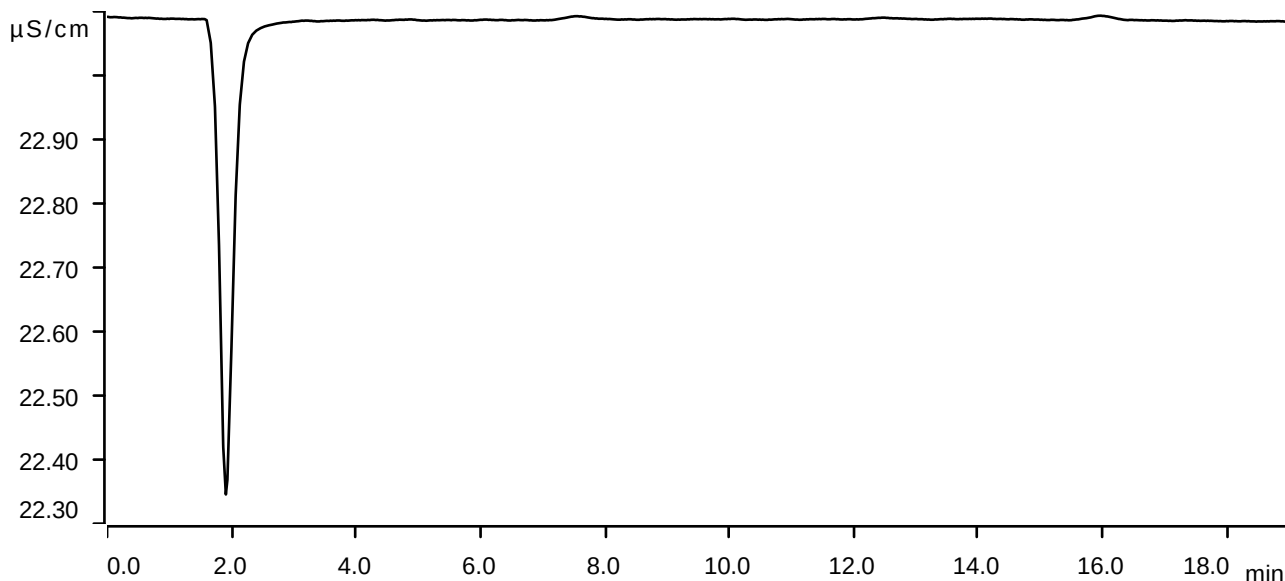
Peak number	Retention time min	Area (µS/cm) x min	Height µS/cm	Concentration ppm	Component name
1	3.377	0.2863	1.892	1.988	Fluoride
2	6.590	0.2892	1.354	2.979	Chloride
3	8.723	0.6521	2.379	2.984	Nitrite
4	10.777	0.4295	1.326	9.930	Bromide
5	12.475	0.6010	1.628	2.495	Nitrate
6	14.120	0.4262	0.918	4.965	Phosphate
7	15.975	1.0912	2.288	14.701	Sulfate

Sample data

Ident CCB
Sample type Sample
Determination start 2024-11-04 10:00:00 UTC-5
Method IC1-101624
Operator

Anions

Data source Conductivity detector 1 (Eco IC 1)
Channel Conductivity
Recording time 19.0 min
Integration Automatically
Column type Metrosep A Supp 19 - 150/4.0
Eluent composition not defined
Flow 0.700 mL/min
Maximum flow monitored yes
Pressure 12.16 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions

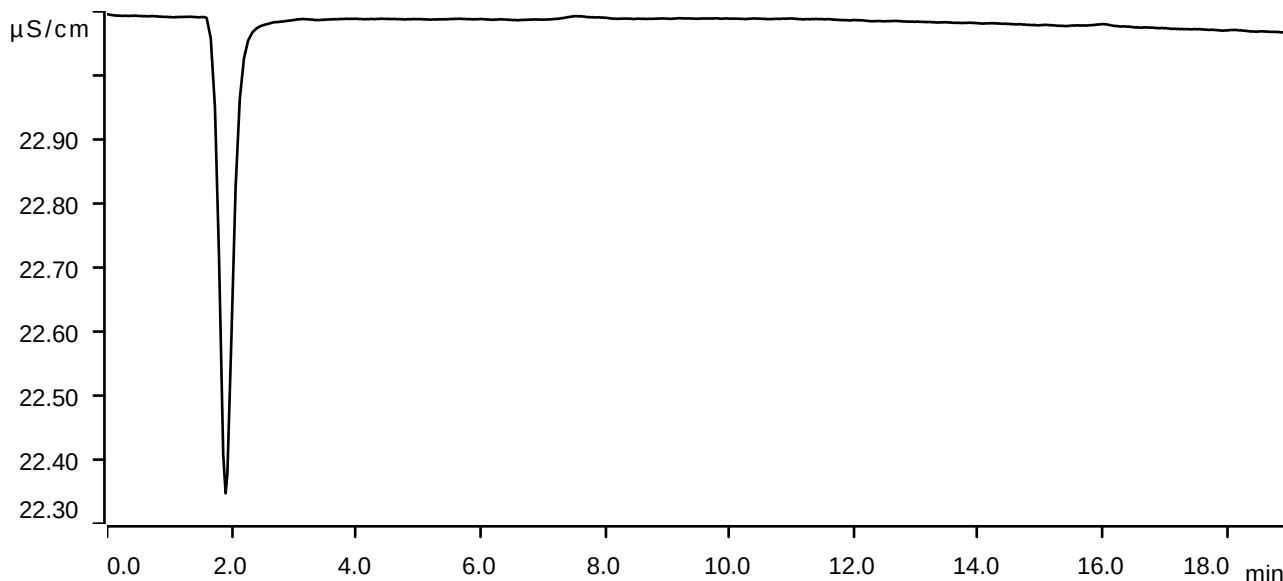
Sample data

Ident LB133251BLW
Sample type Sample
Determination start 2024-11-04 10:21:29 UTC-5
Method IC1-101624
Operator

Anions

Data source Conductivity detector 1 (Eco IC 1)
Channel Conductivity
Recording time 19.0 min
Integration Automatically
Column type Metrosep A Supp 19 - 150/4.0
Eluent composition not defined
Flow 0.700 mL/min
Maximum flow monitored yes
Pressure 12.27 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions



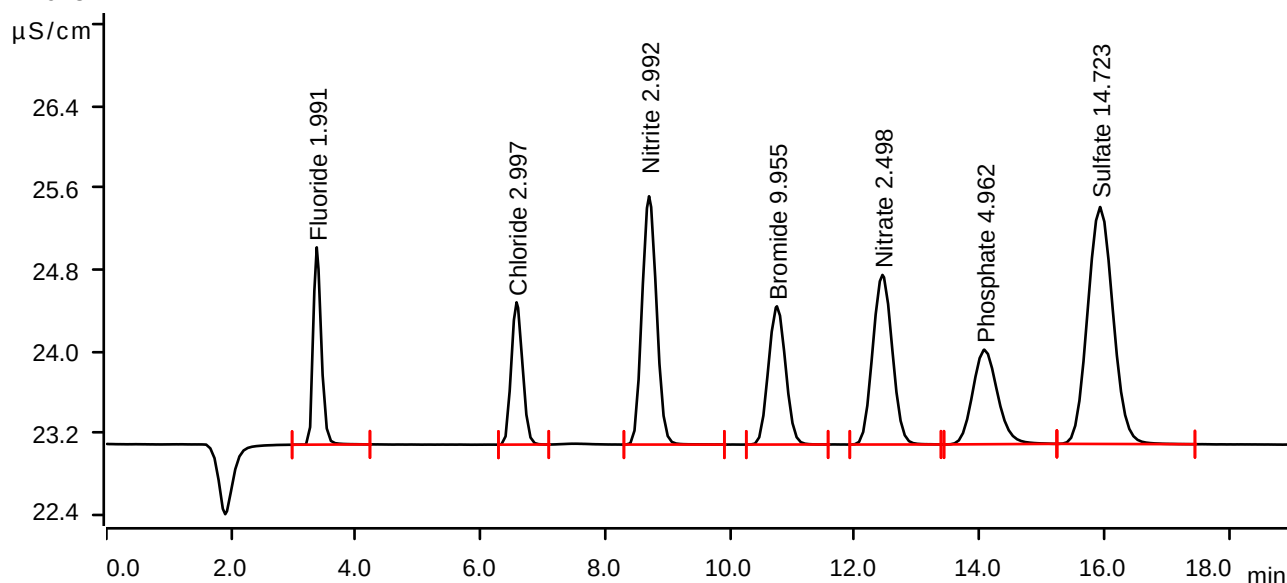
Sample data

Ident LB133251BSW
Sample type Check standard 1
Determination start 2024-11-04 10:43:00 UTC-5
Method IC1-101624
Operator

Anions

Data source Conductivity detector 1 (Eco IC 1)
Channel Conductivity
Recording time 19.0 min
Integration Automatically
Column type Metrosep A Supp 19 - 150/4.0
Eluent composition not defined
Flow 0.700 mL/min
Maximum flow monitored yes
Pressure 12.22 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions



Peak number	Retention time min	Area (µS/cm) x min	Height µS/cm	Concentration ppm	Component name
1	3.373	0.2868	1.926	1.991	Fluoride
2	6.577	0.2910	1.389	2.997	Chloride
3	8.702	0.6540	2.424	2.992	Nitrite
4	10.752	0.4306	1.349	9.955	Bromide
5	12.443	0.6019	1.655	2.498	Nitrate
6	14.077	0.4259	0.923	4.962	Phosphate
7	15.932	1.0929	2.313	14.723	Sulfate

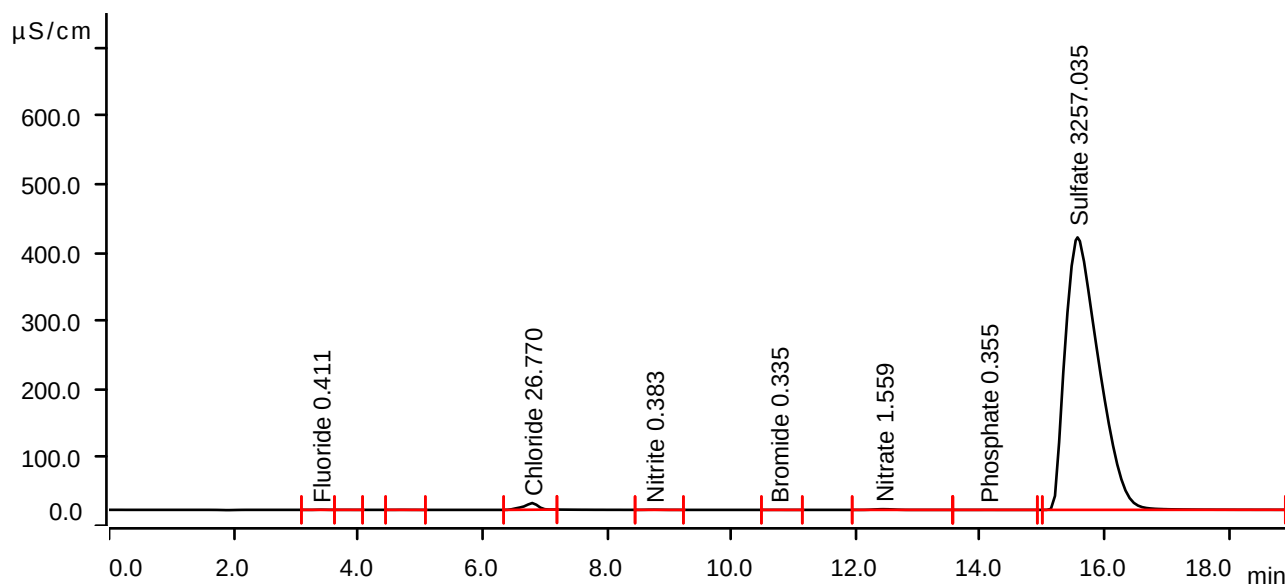
Sample data

Ident P4673-01
Sample type Sample
Determination start 2024-11-04 11:26:05 UTC-5
Method IC1-101624
Operator

Anions

Data source Conductivity detector 1 (Eco IC 1)
Channel Conductivity
Recording time 19.0 min
Integration Automatically
Column type Metrosep A Supp 19 - 150/4.0
Eluent composition not defined
Flow 0.700 mL/min
Maximum flow monitored yes
Pressure 12.11 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions



Peak number	Retention time min	Area ($\mu\text{S/cm}$) x min	Height $\mu\text{S/cm}$	Concentration ppm	Component name
1	3.398	0.0552	0.289	0.411	Fluoride
2	3.715	0.0119	0.053	invalid	
3	4.703	0.0212	0.109	invalid	
4	6.802	2.6361	9.738	26.770	Chloride
5	8.753	0.0699	0.264	0.383	Nitrite
6	10.757	0.0069	0.023	0.335	Bromide
7	12.443	0.3695	1.018	1.559	Nitrate
8	14.127	0.0212	0.040	0.355	Phosphate
9	15.563	248.8815	398.987	3257.035	Sulfate

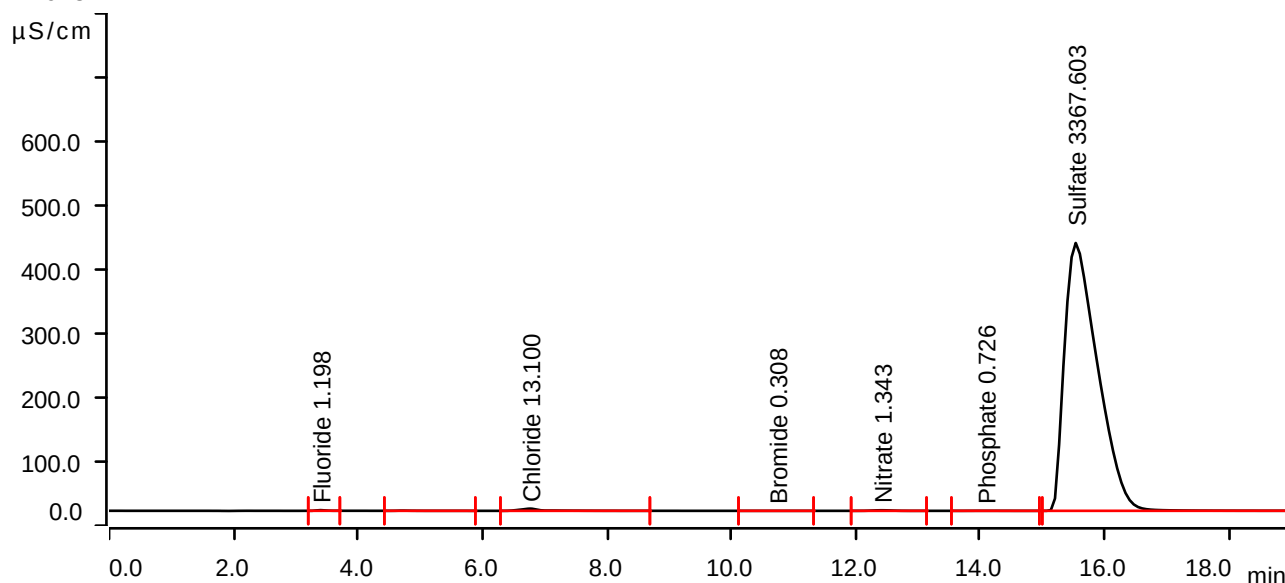
Sample data

Ident P4673-02
Sample type Sample
Determination start 2024-11-04 11:47:38 UTC-5
Method IC1-101624
Operator

Anions

Data source Conductivity detector 1 (Eco IC 1)
Channel Conductivity
Recording time 19.0 min
Integration Automatically
Column type Metrosep A Supp 19 - 150/4.0
Eluent composition not defined
Flow 0.700 mL/min
Maximum flow monitored yes
Pressure 12.16 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions



Peak number	Retention time min	Area (µS/cm) x min	Height µS/cm	Concentration ppm	Component name
1	3.398	0.1706	1.035	1.198	Fluoride
2	4.717	0.0881	0.342	invalid	
3	6.768	1.2876	3.435	13.100	Chloride
4	10.735	0.0057	0.016	0.308	Bromide
5	12.420	0.3162	0.875	1.343	Nitrate
6	14.083	0.0538	0.106	0.726	Phosphate
7	15.533	257.3315	418.307	3367.603	Sulfate

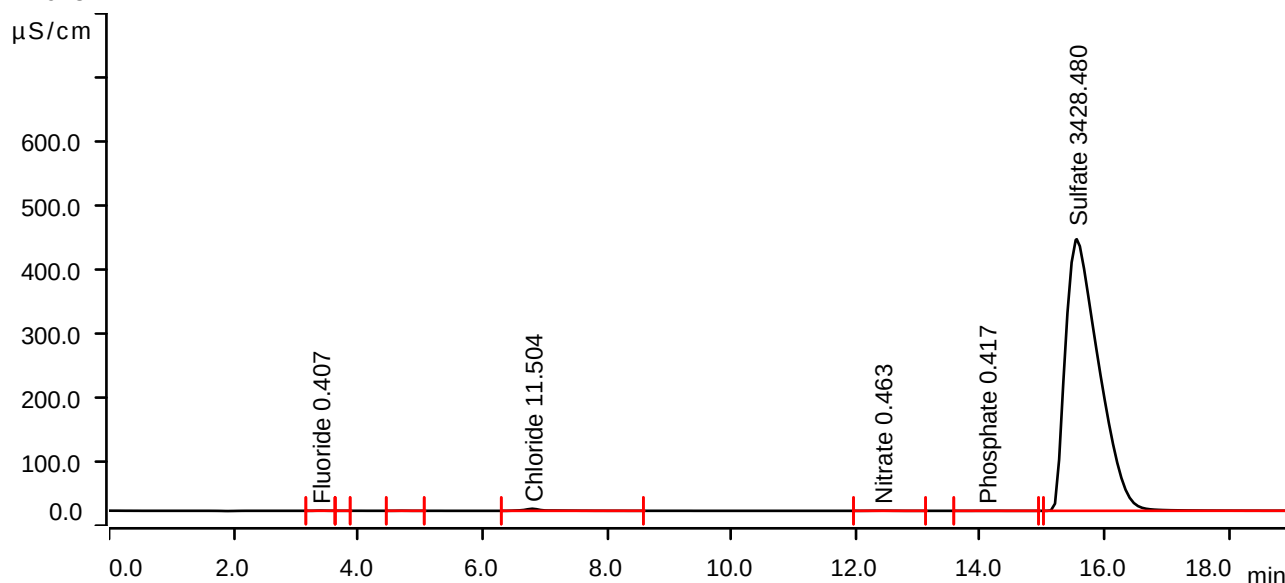
Sample data

Ident P4673-03
Sample type Sample
Determination start 2024-11-04 12:09:11 UTC-5
Method IC1-101624
Operator

Anions

Data source Conductivity detector 1 (Eco IC 1)
Channel Conductivity
Recording time 19.0 min
Integration Automatically
Column type Metrosep A Supp 19 - 150/4.0
Eluent composition not defined
Flow 0.700 mL/min
Maximum flow monitored yes
Pressure 11.99 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions



Peak number	Retention time min	Area (µS/cm) x min	Height µS/cm	Concentration ppm	Component name
1	3.393	0.0546	0.317	0.407	Fluoride
2	3.717	0.0020	0.015	invalid	
3	4.705	0.0337	0.171	invalid	
4	6.803	1.1301	3.264	11.504	Chloride
5	12.425	0.0985	0.272	0.463	Nitrate
6	14.100	0.0266	0.051	0.417	Phosphate
7	15.550	261.9840	424.269	3428.480	Sulfate

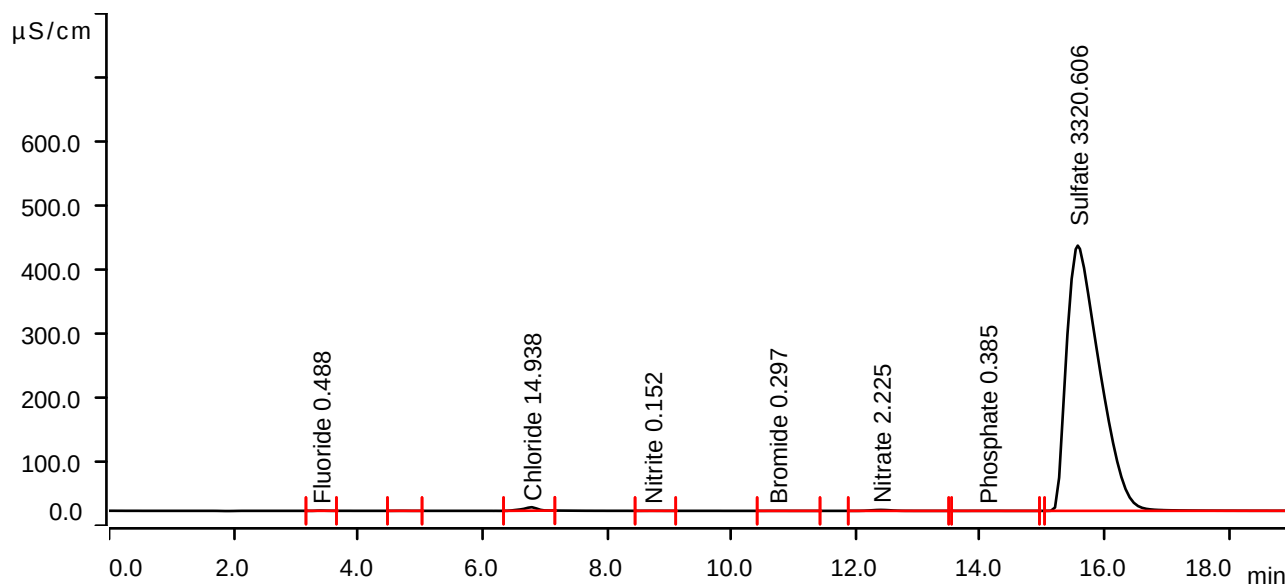
Sample data

Ident P4673-04
Sample type Sample
Determination start 2024-11-04 12:30:46 UTC-5
Method IC1-101624
Operator

Anions

Data source Conductivity detector 1 (Eco IC 1)
Channel Conductivity
Recording time 19.0 min
Integration Automatically
Column type Metrosep A Supp 19 - 150/4.0
Eluent composition not defined
Flow 0.700 mL/min
Maximum flow monitored yes
Pressure 11.99 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions



Peak number	Retention time min	Area ($\mu\text{S/cm}$) x min	Height $\mu\text{S/cm}$	Concentration ppm	Component name
1	3.398	0.0665	0.391	0.488	Fluoride
2	4.708	0.0200	0.105	invalid	
3	6.787	1.4689	5.407	14.938	Chloride
4	8.727	0.0181	0.070	0.152	Nitrite
5	10.738	0.0052	0.014	0.297	Bromide
6	12.402	0.5342	1.493	2.225	Nitrate
7	14.085	0.0239	0.046	0.385	Phosphate
8	15.567	253.7398	414.290	3320.606	Sulfate

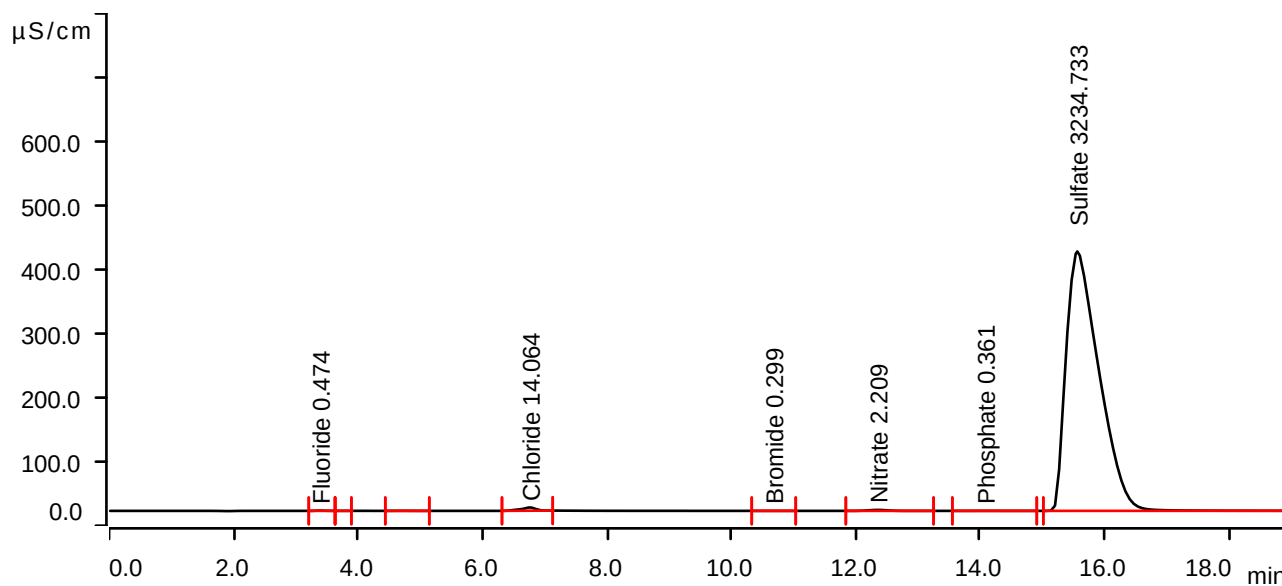
Sample data

Ident P4673-05
Sample type Sample
Determination start 2024-11-04 13:13:44 UTC-5
Method IC1-101624
Operator

Anions

Data source Conductivity detector 1 (Eco IC 1)
Channel Conductivity
Recording time 19.0 min
Integration Automatically
Column type Metrosep A Supp 19 - 150/4.0
Eluent composition not defined
Flow 0.700 mL/min
Maximum flow monitored yes
Pressure 11.94 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions



Peak number	Retention time min	Area ($\mu\text{S/cm}$) x min	Height $\mu\text{S/cm}$	Concentration ppm	Component name
1	3.388	0.0645	0.388	0.474	Fluoride
2	3.717	0.0023	0.016	invalid	
3	4.697	0.0279	0.132	invalid	
4	6.763	1.3827	5.046	14.064	Chloride
5	10.670	0.0053	0.017	0.299	Bromide
6	12.350	0.5303	1.492	2.209	Nitrate
7	14.073	0.0218	0.042	0.361	Phosphate
8	15.560	247.1772	405.153	3234.733	Sulfate

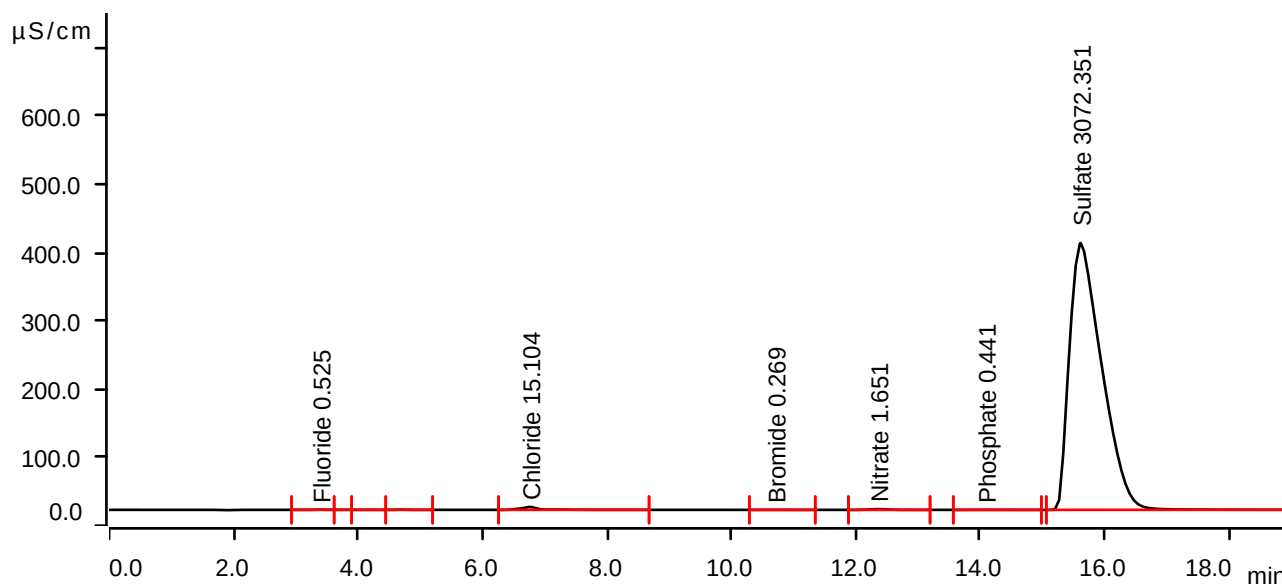
Sample data

Ident P4673-06
Sample type Sample
Determination start 2024-11-04 13:35:18 UTC-5
Method IC1-101624
Operator

Anions

Data source Conductivity detector 1 (Eco IC 1)
Channel Conductivity
Recording time 19.0 min
Integration Automatically
Column type Metrosep A Supp 19 - 150/4.0
Eluent composition not defined
Flow 0.700 mL/min
Maximum flow monitored yes
Pressure 11.82 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions



Peak number	Retention time min	Area (µS/cm) x min	Height µS/cm	Concentration ppm	Component name
1	3.400	0.0719	0.374	0.525	Fluoride
2	3.732	0.0209	0.094	invalid	
3	4.003	0.0188	0.059	invalid	
4	4.710	0.0684	0.349	invalid	
5	6.765	1.4852	4.303	15.104	Chloride
6	10.682	0.0040	0.011	0.269	Bromide
7	12.358	0.3923	1.100	1.651	Nitrate
8	14.090	0.0288	0.055	0.441	Phosphate
9	15.613	234.7674	390.770	3072.351	Sulfate

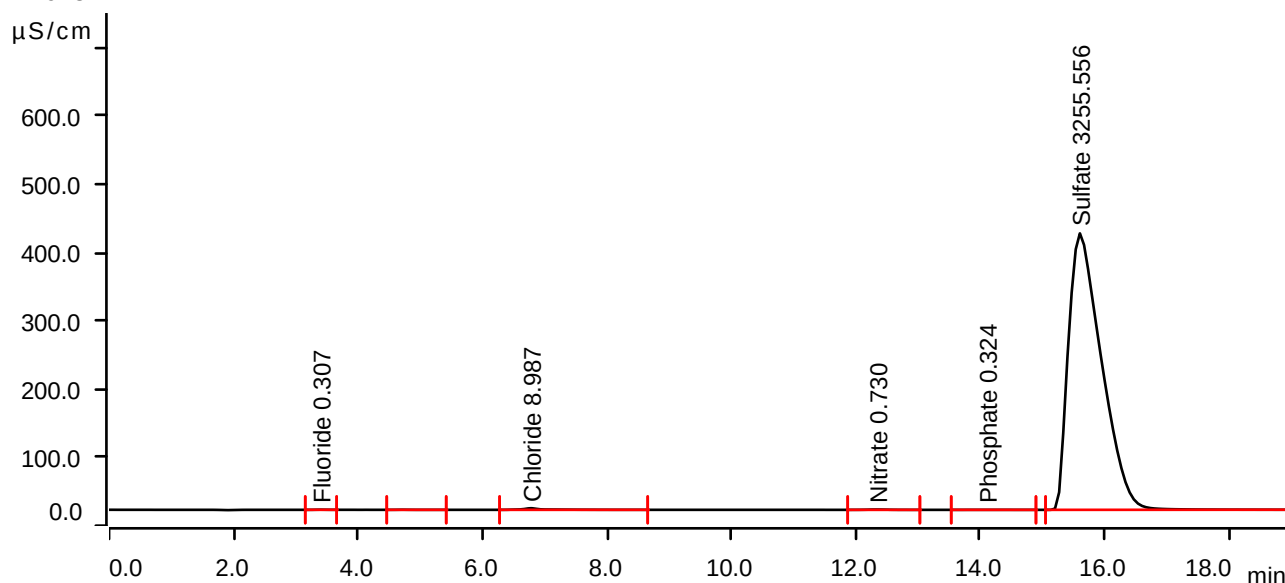
Sample data

Ident P4673-07
Sample type Sample
Determination start 2024-11-04 13:56:45 UTC-5
Method IC1-101624
Operator

Anions

Data source Conductivity detector 1 (Eco IC 1)
Channel Conductivity
Recording time 19.0 min
Integration Automatically
Column type Metrosep A Supp 19 - 150/4.0
Eluent composition not defined
Flow 0.700 mL/min
Maximum flow monitored yes
Pressure 11.82 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions



Peak number	Retention time min	Area (µS/cm) x min	Height µS/cm	Concentration ppm	Component name
1	3.397	0.0400	0.230	0.307	Fluoride
2	4.705	0.0302	0.153	invalid	
3	6.780	0.8819	2.365	8.987	Chloride
4	12.343	0.1646	0.466	0.730	Nitrate
5	14.105	0.0185	0.036	0.324	Phosphate
6	15.602	248.7685	404.794	3255.556	Sulfate

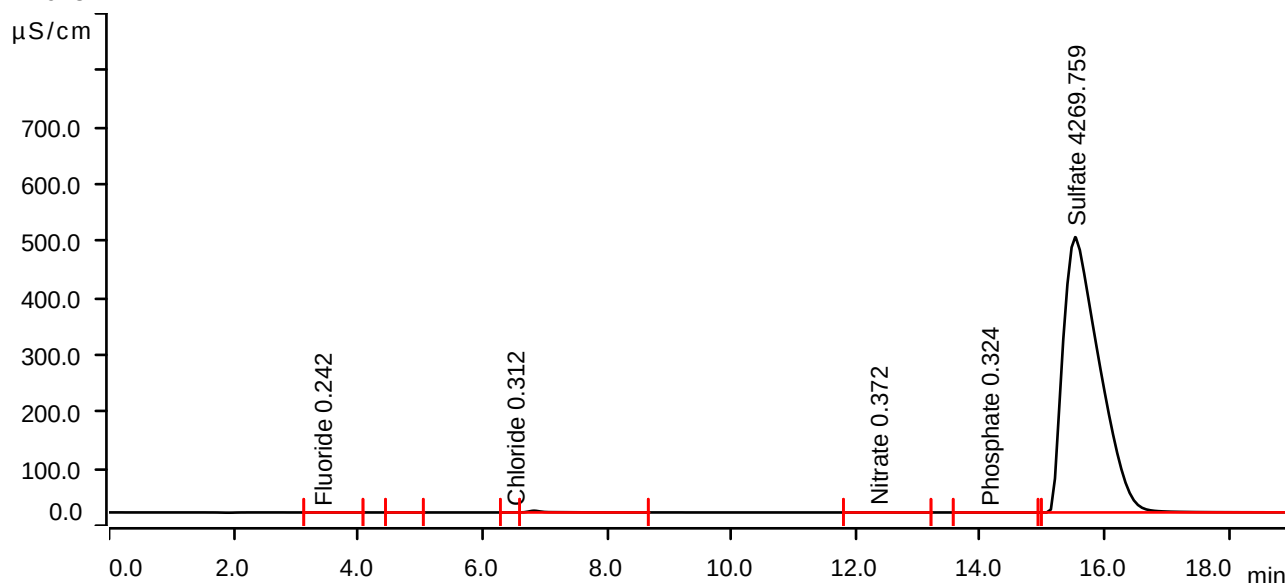
Sample data

Ident P4674-01
Sample type Sample
Determination start 2024-11-04 14:18:18 UTC-5
Method IC1-101624
Operator

Anions

Data source Conductivity detector 1 (Eco IC 1)
Channel Conductivity
Recording time 19.0 min
Integration Automatically
Column type Metrosep A Supp 19 - 150/4.0
Eluent composition not defined
Flow 0.700 mL/min
Maximum flow monitored yes
Pressure 11.82 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions



Peak number	Retention time min	Area (µS/cm) x min	Height µS/cm	Concentration ppm	Component name
1	3.422	0.0304	0.122	0.242	Fluoride
2	4.705	0.0067	0.034	invalid	
3	6.515	0.0261	0.163	0.312	Chloride
4	6.830	0.9756	3.059	invalid	
5	12.352	0.0760	0.213	0.372	Nitrate
6	14.140	0.0185	0.035	0.324	Phosphate
7	15.525	326.2773	483.782	4269.759	Sulfate

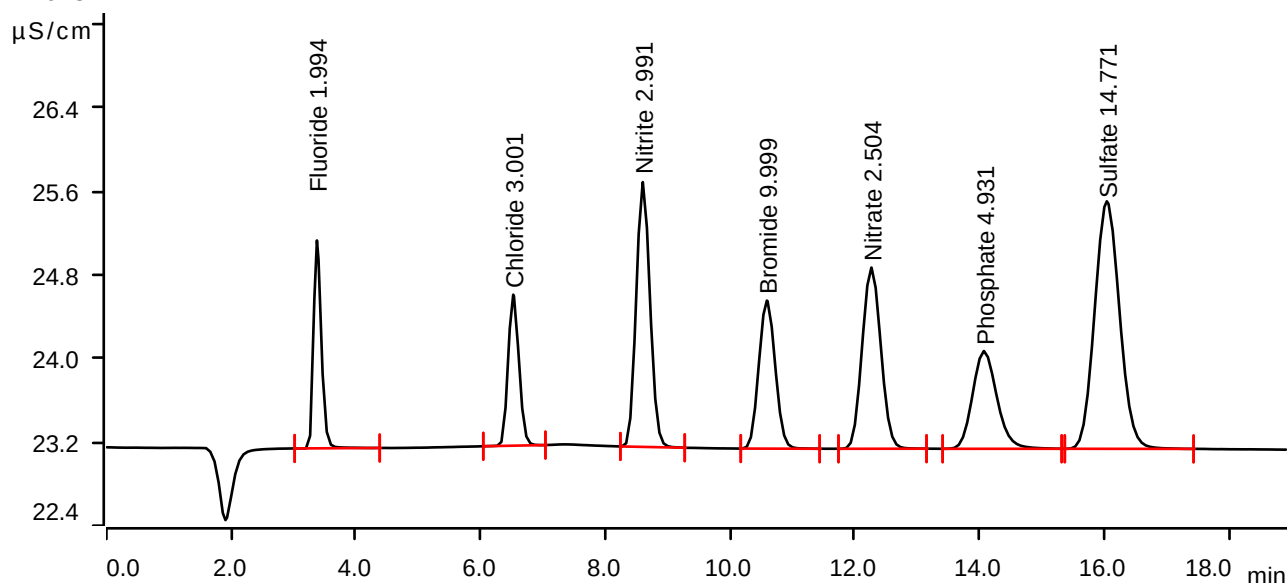
Sample data

Ident CCV
Sample type Check standard 1
Determination start 2024-11-04 15:01:12 UTC-5
Method IC1-101624
Operator

Anions

Data source Conductivity detector 1 (Eco IC 1)
Channel Conductivity
Recording time 19.0 min
Integration Automatically
Column type Metrosep A Supp 19 - 150/4.0
Eluent composition not defined
Flow 0.700 mL/min
Maximum flow monitored yes
Pressure 11.77 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions



Peak number	Retention time min	Area (µS/cm) x min	Height µS/cm	Concentration ppm	Component name
1	3.377	0.2871	1.989	1.994	Fluoride
2	6.523	0.2914	1.445	3.001	Chloride
3	8.602	0.6538	2.533	2.991	Nitrite
4	10.590	0.4326	1.416	9.999	Bromide
5	12.265	0.6034	1.733	2.504	Nitrate
6	14.072	0.4232	0.935	4.931	Phosphate
7	16.040	1.0966	2.368	14.771	Sulfate

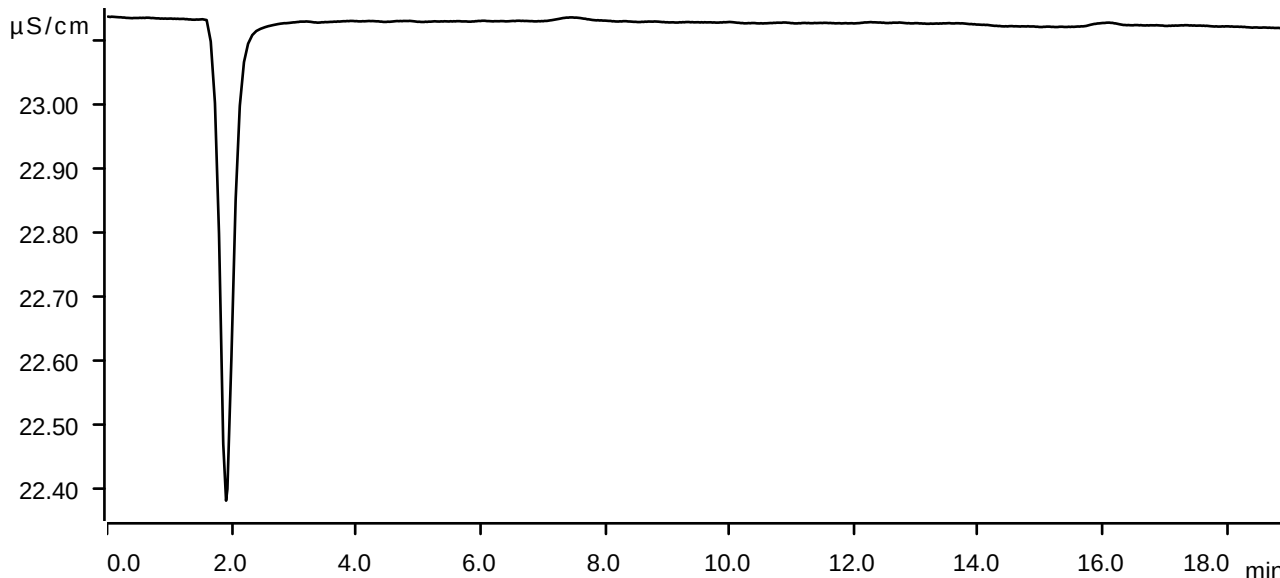
Sample data

Ident CCB
Sample type Sample
Determination start 2024-11-04 15:22:42 UTC-5
Method IC1-101624
Operator

Anions

Data source Conductivity detector 1 (Eco IC 1)
Channel Conductivity
Recording time 19.0 min
Integration Automatically
Column type Metrosep A Supp 19 - 150/4.0
Eluent composition not defined
Flow 0.700 mL/min
Maximum flow monitored yes
Pressure 11.77 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions



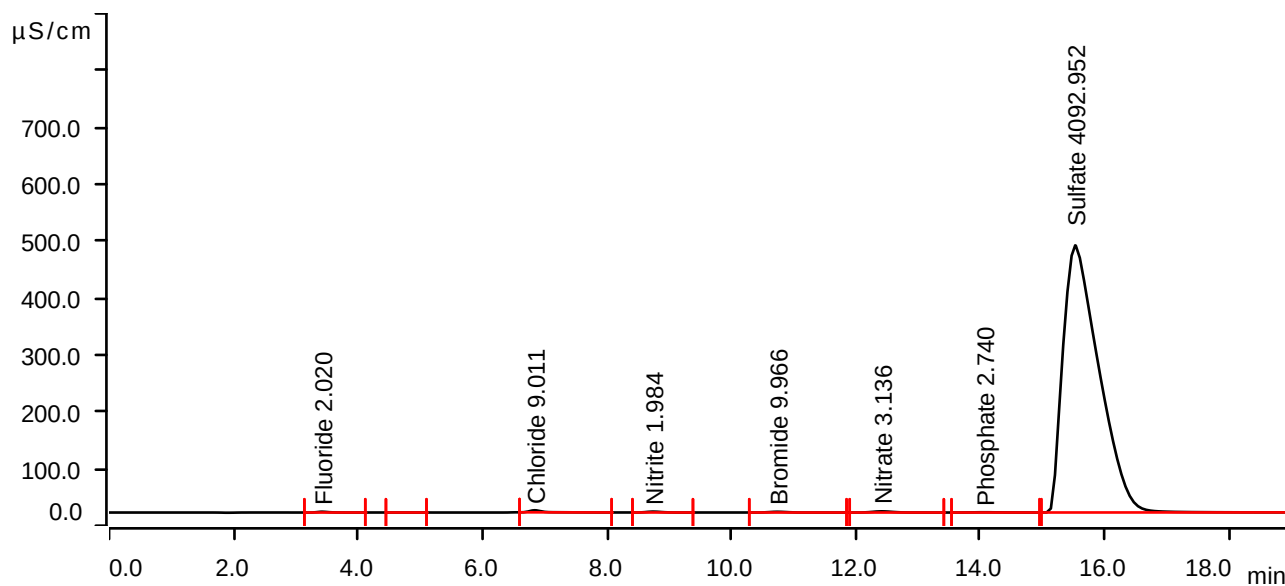
Sample data

Ident P4674-01MS
Sample type Sample
Determination start 2024-11-04 15:44:12 UTC-5
Method IC1-101624
Operator

Anions

Data source Conductivity detector 1 (Eco IC 1)
Channel Conductivity
Recording time 19.0 min
Integration Automatically
Column type Metrosep A Supp 19 - 150/4.0
Eluent composition not defined
Flow 0.700 mL/min
Maximum flow monitored yes
Pressure 11.94 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions



Peak number	Retention time min	Area ($\mu\text{S/cm}$) x min	Height $\mu\text{S/cm}$	Concentration ppm	Component name
1	3.425	0.2909	1.439	2.020	Fluoride
2	4.703	0.0064	0.034	invalid	
3	6.840	0.8843	3.672	9.011	Chloride
4	8.747	0.4283	1.593	1.984	Nitrite
5	10.742	0.4311	1.338	9.966	Bromide
6	12.418	0.7595	2.083	3.136	Nitrate
7	14.063	0.2307	0.433	2.740	Phosphate
8	15.525	312.7652	469.384	4092.952	Sulfate

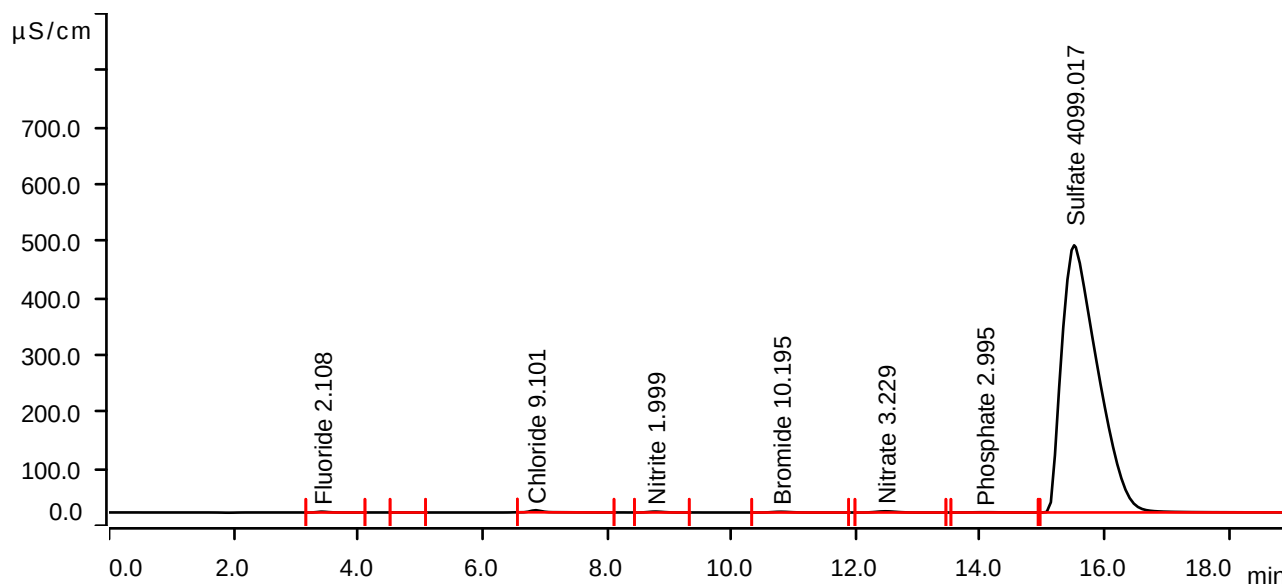
Sample data

Ident P4674-01MSD
Sample type Sample
Determination start 2024-11-04 16:05:43 UTC-5
Method IC1-101624
Operator

Anions

Data source Conductivity detector 1 (Eco IC 1)
Channel Conductivity
Recording time 19.0 min
Integration Automatically
Column type Metrosep A Supp 19 - 150/4.0
Eluent composition not defined
Flow 0.700 mL/min
Maximum flow monitored yes
Pressure 12.16 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions



Peak number	Retention time min	Area ($\mu\text{S/cm}$) x min	Height $\mu\text{S/cm}$	Concentration ppm	Component name
1	3.422	0.3040	1.495	2.108	Fluoride
2	4.705	0.0065	0.035	invalid	
3	6.855	0.8931	3.664	9.101	Chloride
4	8.778	0.4317	1.594	1.999	Nitrite
5	10.795	0.4412	1.361	10.195	Bromide
6	12.478	0.7826	2.126	3.229	Nitrate
7	14.065	0.2531	0.480	2.995	Phosphate
8	15.508	313.2287	469.462	4099.017	Sulfate

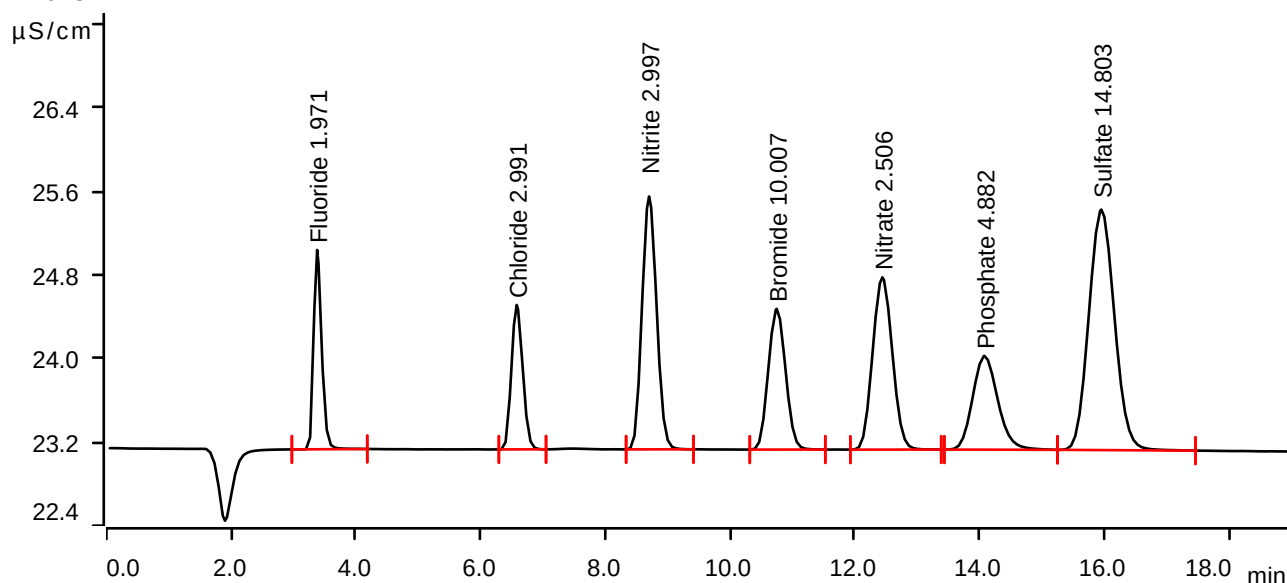
Sample data

Ident CCV
Sample type Check standard 1
Determination start 2024-11-04 16:48:37 UTC-5
Method IC1-101624
Operator

Anions

Data source Conductivity detector 1 (Eco IC 1)
Channel Conductivity
Recording time 19.0 min
Integration Automatically
Column type Metrosep A Supp 19 - 150/4.0
Eluent composition not defined
Flow 0.700 mL/min
Maximum flow monitored yes
Pressure 12.22 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions



Peak number	Retention time min	Area (µS/cm) x min	Height µS/cm	Concentration ppm	Component name
1	3.380	0.2838	1.907	1.971	Fluoride
2	6.580	0.2904	1.382	2.991	Chloride
3	8.702	0.6552	2.419	2.997	Nitrite
4	10.748	0.4329	1.347	10.007	Bromide
5	12.442	0.6039	1.648	2.506	Nitrate
6	14.078	0.4189	0.897	4.882	Phosphate
7	15.953	1.0990	2.301	14.803	Sulfate

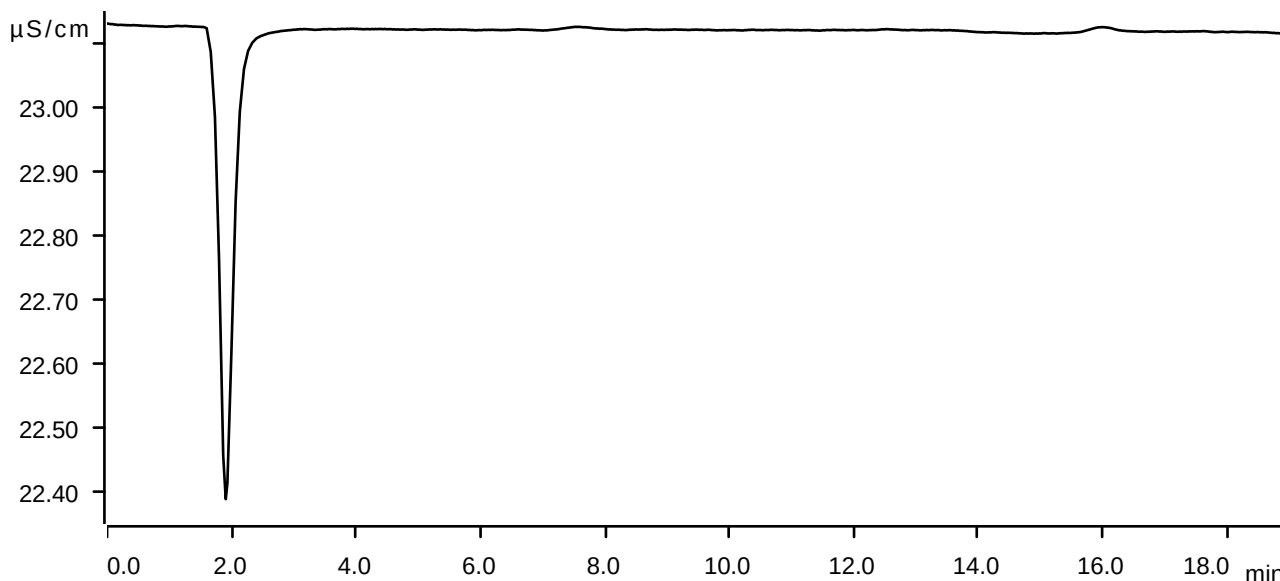
Sample data

Ident CCB
Sample type Sample
Determination start 2024-11-04 17:09:52 UTC-5
Method IC1-101624
Operator

Anions

Data source Conductivity detector 1 (Eco IC 1)
Channel Conductivity
Recording time 19.0 min
Integration Automatically
Column type Metrosep A Supp 19 - 150/4.0
Eluent composition not defined
Flow 0.700 mL/min
Maximum flow monitored yes
Pressure 12.27 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions



TOTAL SUSPENDED SOLIDS - SM2540D

TEMP1 IN: 103 °C 11/01/2024 14:00 **TEMP1 OUT:** 104 °C 11/01/2024 15:00
TEMP2 IN: 103 °C 11/01/2024 15:30 **TEMP2 OUT:** 104 °C 11/01/2024 16:30
TEMP3 IN: 104 °C 11/04/2024 09:30 **TEMP3 OUT:** 103 °C 11/04/2024 11:00
TEMP4 IN: 104 °C 11/04/2024 11:30 **TEMP4 OUT:** 103 °C 11/04/2024 13:00

SUPERVISOR: Iwona

ANALYST: Niha

Date: 11/01/2024

Run Number: LB133266

BalanceID: WC SC-6

OvenID: WC OVEN-1

FilterID: 17416528

ThermometerID: WET OVEN#1

Dish #	Lab ID	Client ID	Empty Dish Weight (g)	Final Empty Dish Weight (g)	Sample Volume (ml)	1st Empty Dish+Sample weight after 1.5hr drying @103-@105°C (g)	2nd Empty Dish+Sample weight after 1.5hr drying @103-@105°C (g)	Final Empty Dish+Sample weight after 1.5hr drying @103-@105°C (g)	Weight (g)	Result mg/L
1	LB133266BL	LB133266BL	1.4012	1.4012	100	1.4012	1.4012	1.4012	0.0000	0
2	LB133266BS	LB133266BS	1.4132	1.4132	100	1.4670	1.4670	1.4670	0.0538	538
3	P4638-02	COMP	1.3988	1.3988	50	1.4355	1.4355	1.4355	0.0367	734
4	P4638-02DUP	COMPDUP	1.4021	1.4021	50	1.4391	1.4391	1.4391	0.0370	740
5	P4649-01	MC0JZ7	1.3994	1.3994	1000	1.6624	1.6624	1.6624	0.2630	263
6	P4649-02	MC0JZ9	1.3908	1.3908	1000	1.3938	1.3938	1.3938	0.0030	3
7	P4649-03	MC0K01	1.4168	1.4168	1000	1.4184	1.4184	1.4184	0.0016	1.6
8	P4649-04	MC0K04	1.4040	1.4040	1000	1.4046	1.4046	1.4046	0.0006	0.6
9	P4649-05	MC0K06	1.4134	1.4134	1000	1.4138	1.4138	1.4138	0.0004	0.4
10	P4649-06	MC0K08	1.4151	1.4151	1000	1.4155	1.4155	1.4155	0.0004	0.4
11	P4649-07	MC0K10	1.4021	1.4021	1000	1.4032	1.4032	1.4032	0.0011	1.1
12	P4649-08	MC0K12	1.3961	1.3961	1000	1.3976	1.3976	1.3976	0.0015	1.5
13	P4649-09	MC0K14	1.4068	1.4068	1000	1.4074	1.4074	1.4074	0.0006	0.6
14	P4649-10	MC0K16	1.4059	1.4059	1000	1.4065	1.4065	1.4065	0.0006	0.6
15	P4649-11	MC0K18	1.3990	1.3990	1000	1.4111	1.4111	1.4111	0.0121	12.1

TOTAL SUSPENDED SOLIDS - SM2540D

SUPERVISOR: Iwona

ANALYST: Niha

Date: 11/01/2024

Run Number: LB133266

BalanceID: WC SC-6

OvenID: WC OVEN-1

FilterID: 17416528

ThermometerID: WET OVEN#1

TEMP1 IN: 103 °C 11/01/2024 14:00 TEMP1 OUT: 104 °C 11/01/2024 15:00
 TEMP2 IN: 103 °C 11/01/2024 15:30 TEMP2 OUT: 104 °C 11/01/2024 16:30
 TEMP3 IN: 104 °C 11/04/2024 09:30 TEMP3 OUT: 103 °C 11/04/2024 11:00
 TEMP4 IN: 104 °C 11/04/2024 11:30 TEMP4 OUT: 103 °C 11/04/2024 13:00

Dish #	Lab ID	Client ID	Empty Dish Weight (g)	Final Empty Dish Weight (g)	Sample Volume (ml)	1st Empty Dish+Sample weight after 1.5hr drying @103-@105°C (g)	2nd Empty Dish+Sample weight after 1.5hr drying @103-@105°C (g)	Final Empty Dish+Sample weight after 1.5hr drying @103-@105°C (g)	Weight (g)	Result mg/L
16	P4649-12	MC0K20	1.4052	1.4052	1000	1.4055	1.4055	1.4055	0.0003	0.3
17	P4649-13	MC0K22	1.3714	1.3714	1000	1.3772	1.3772	1.3772	0.0058	5.8
18	P4674-01	OUTFALL-001	1.4101	1.4101	750	1.4905	1.4905	1.4905	0.0804	107.2

A = Sample Volume (ml)
 B = Final Empty Dish Weight (g)
 C = Final Empty Dish + Sample weight after 1.5 hr drying @105°C(g)
 D = Weight (g)

Weight (g) = C - B

Result mg/L = $\frac{D}{A} \times 1000 \times 1000$

WORKLIST(Hardcopy Internal Chain)

LB133266

WorkList Name : TSS-10312024 WorkList ID : 184987 Department : Wet-Chemistry Date : 10-31-2024 11:45:53

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
P4674-01	OUTFALL-001	Water	TSS	Cool 4 deg C	RSBE01	K51	10/31/2024	SM2540 D
P4649-01	MC0JZ7	Water	TSS	Cool 4 deg C	TETR16	K61	10/29/2024	SM2540 D
P4649-02	MC0JZ9	Water	TSS	Cool 4 deg C	TETR16	K61	10/29/2024	SM2540 D
P4649-03	MC0K01	Water	TSS	Cool 4 deg C	TETR16	K61	10/29/2024	SM2540 D
P4649-04	MC0K04	Water	TSS	Cool 4 deg C	TETR16	K61	10/29/2024	SM2540 D
P4649-05	MC0K06	Water	TSS	Cool 4 deg C	TETR16	K61	10/29/2024	SM2540 D
P4649-06	MC0K08	Water	TSS	Cool 4 deg C	TETR16	K61	10/29/2024	SM2540 D
P4649-13	MC0K22	Water	TSS	Cool 4 deg C	TETR16	K61	10/29/2024	SM2540 D
P4649-07	MC0K10	Water	TSS	Cool 4 deg C	TETR16	K61	10/29/2024	SM2540 D
P4649-08	MC0K12	Water	TSS	Cool 4 deg C	TETR16	K61	10/29/2024	SM2540 D
P4649-09	MC0K14	Water	TSS	Cool 4 deg C	TETR16	K61	10/29/2024	SM2540 D
P4649-10	MC0K16	Water	TSS	Cool 4 deg C	TETR16	K61	10/29/2024	SM2540 D
P4649-11	MC0K18	Water	TSS	Cool 4 deg C	TETR16	K61	10/29/2024	SM2540 D
P4649-12	MC0K20	Water	TSS	Cool 4 deg C	TETR16	K61	10/29/2024	SM2540 D
P4638-02	COMP	Water	TSS	Cool 4 deg C	ARAM01	L11	10/30/2024	SM2540 D

Date/Time 11.04.2024, 09:00
 Raw Sample Received by: NF(wc)
 Raw Sample Relinquished by: CP

Date/Time 11.04.2024, 11:00
 Raw Sample Received by: CP
 Raw Sample Relinquished by: NF(wc)

Instrument ID: IC-2

Daily Analysis Runlog For Sequence/QC Batch ID # LB133251

Review By	Niha	Review On	11/6/2024 9:26:19 AM
Supervise By	Iwona	Supervise On	11/6/2024 10:12:15 AM
SubDirectory	LB133251	Test	Anions
STD. NAME	STD REF.#		
ICAL Standard	WP110250,WP110251,WP110252,WP110253,WP110254,WP110255,WP110256,WP110257		
ICV Standard	WP110258		
CCV Standard	WP110534		
ICSA Standard	N/A		
CRI Standard	N/A		
LCS Standard	WP110535		
Chk Standard	WP110260,WP110261		

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	STD1	STD1	CAL1	10/16/24 10:55	All standards, samples, and	NF/IZ	OK
2	STD2	STD2	CAL2	10/16/24 11:17	QC are filtered through	NF/IZ	OK
3	STD3	STD3	CAL3	10/16/24 11:38	0.45um, filter lot W2865	NF/IZ	OK
4	STD4	STD4	CAL4	10/16/24 11:59		NF/IZ	OK
5	STD5	STD5	CAL5	10/16/24 12:21		NF/IZ	OK
6	STD6	STD6	CAL6	10/16/24 12:42		NF/IZ	OK
7	STD7	STD7	CAL7	10/16/24 13:04		NF/IZ	OK
8	ICV1	ICV1	ICV	10/16/24 13:37		NF/IZ	OK
9	ICB1	ICB1	ICB	10/16/24 13:59		NF/IZ	OK
10	CCV1	CCV1	CCV	11/04/24 09:38		NF/IZ	OK
11	CCB1	CCB1	CCB	11/04/24 10:00		NF/IZ	OK
12	LB133251BLW	LB133251BLW	MB	11/04/24 10:21		NF/IZ	OK
13	LB133251BSW	LB133251BSW	LCS	11/04/24 10:43		NF/IZ	OK
14	P4673-01	OUTFALL-001	SAM	11/04/24 11:26		NF/IZ	OK
15	P4673-02	OUTFALL-002	SAM	11/04/24 11:47		NF/IZ	OK
16	P4673-03	OUTFALL-003	SAM	11/04/24 12:09		NF/IZ	OK
17	P4673-04	OUTFALL-004	SAM	11/04/24 12:30		NF/IZ	OK
18	P4673-05	OUTFALL-005	SAM	11/04/24 13:13		NF/IZ	OK

Instrument ID: IC-2

Daily Analysis Runlog For Sequence/QC Batch ID # LB133251

Review By	Niha	Review On	11/6/2024 9:26:19 AM
Supervise By	Iwona	Supervise On	11/6/2024 10:12:15 AM
SubDirectory	LB133251	Test	Anions
STD. NAME	STD REF.#		
ICAL Standard	WP110250,WP110251,WP110252,WP110253,WP110254,WP110255,WP110256,WP110257		
ICV Standard	WP110258		
CCV Standard	WP110534		
ICSA Standard	N/A		
CRI Standard	N/A		
LCS Standard	WP110535		
Chk Standard	WP110260,WP110261		

19	P4673-06	OUTFALL-006	SAM	11/04/24 13:35		NF/IZ	OK
20	P4673-07	OUTFALL-007	SAM	11/04/24 13:56		NF/IZ	OK
21	P4674-01	OUTFALL-001	SAM	11/04/24 14:18		NF/IZ	OK
22	CCV2	CCV2	CCV	11/04/24 15:01		NF/IZ	OK
23	CCB2	CCB2	CCB	11/04/24 15:22		NF/IZ	OK
24	P4674-01MS	OUTFALL-001MS	MS	11/04/24 15:44	9.5ml of sample, 0.5mL W3091	NF/IZ	OK
25	P4674-01MSD	OUTFALL-001MSD	MSD	11/04/24 16:05	9.5ml of sample, 0.5mL W3091	NF/IZ	OK
26	CCV3	CCV3	CCV	11/04/24 16:48		NF/IZ	OK
27	CCB3	CCB3	CCB	11/04/24 17:09		NF/IZ	OK

Instrument ID: WC SC-3

Daily Analysis Runlog For Sequence/QC Batch ID # LB133266

Review By	Niha	Review On	11/4/2024 2:44:16 PM
Supervise By	Iwona	Supervise On	11/4/2024 4:46:27 PM
SubDirectory	LB133266	Test	TSS
STD. NAME	STD REF.#		
ICAL Standard	N/A		
ICV Standard	N/A		
CCV Standard	N/A		
ICSA Standard	N/A		
CRI Standard	N/A		
LCS Standard	N/A		
Chk Standard	N/A		

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	LB133266BL	LB133266BL	MB	11/04/24 09:30		Niha	OK
2	LB133266BS	LB133266BS	LCS	11/04/24 09:30		Niha	OK
3	P4638-02	COMP	SAM	11/04/24 09:30		Niha	OK
4	P4638-02DUP	COMPDUP	DUP	11/04/24 09:30		Niha	OK
5	P4649-01	MC0JZ7	SAM	11/04/24 09:30		Niha	OK
6	P4649-02	MC0JZ9	SAM	11/04/24 09:30		Niha	OK
7	P4649-03	MC0K01	SAM	11/04/24 09:30		Niha	OK
8	P4649-04	MC0K04	SAM	11/04/24 09:30		Niha	OK
9	P4649-05	MC0K06	SAM	11/04/24 09:30		Niha	OK
10	P4649-06	MC0K08	SAM	11/04/24 09:30		Niha	OK
11	P4649-07	MC0K10	SAM	11/04/24 09:30		Niha	OK
12	P4649-08	MC0K12	SAM	11/04/24 09:30		Niha	OK
13	P4649-09	MC0K14	SAM	11/04/24 09:30		Niha	OK
14	P4649-10	MC0K16	SAM	11/04/24 09:30		Niha	OK
15	P4649-11	MC0K18	SAM	11/04/24 09:30		Niha	OK
16	P4649-12	MC0K20	SAM	11/04/24 09:30		Niha	OK
17	P4649-13	MC0K22	SAM	11/04/24 09:30		Niha	OK
18	P4674-01	OUTFALL-001	SAM	11/04/24 09:30		Niha	OK

Prep Standard - Chemical Standard Summary

Order ID : P4674

Test : Anions Group1,TSS

Prepbatch ID :

Sequence ID/Qc Batch ID: LB133251, LB133266,

Standard ID :

WP110250, WP110251, WP110252, WP110253, WP110254, WP110255, WP110256, WP110257, WP110258, WP110259, WP110260, WP110261, WP110534, WP110535,

Chemical ID :

M6041, W2647, W3058, W3062, W3063, W3112,

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
2487	Anions 300/9056 calibration standard 1	WP110250	10/16/2024	10/17/2024	Iwona Zarych	None	None	Jignesh Parikh 10/17/2024

FROM 10.00000ml of W3112 = Final Quantity: 10.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
24	Anions 300/9056 calibration standard 2	WP110251	10/16/2024	10/17/2024	Iwona Zarych	None	WETCHEM_FIPETTE_3 (WC)	Jignesh Parikh 10/17/2024

FROM 0.20000ml of W3062 + 9.80000ml of W3112 = Final Quantity: 10.000 ml



<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
25	Anions 300/9056 calibration standard 3	WP110252	10/16/2024	10/17/2024	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 10/17/2024
<u>FROM</u> 0.40000ml of W3062 + 9.60000ml of W3112 = Final Quantity: 10.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
26	Anions 300/9056 calibration standard 4	WP110253	10/16/2024	10/17/2024	Iwona Zarych	None	WETCHEM_FIPETTE_3 (WC)	Jignesh Parikh 10/17/2024
<u>FROM</u> 0.50000ml of W3062 + 9.50000ml of W3112 = Final Quantity: 10.000 ml								



<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3680	Anions 300/9056 calibration standard 5-CCV	WP110254	10/16/2024	10/17/2024	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 10/17/2024
<u>FROM</u> 45.00000ml of W3112 + 5.00000ml of W3062 = Final Quantity: 50.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3679	Anions 300/9056 calibration standard 6	WP110255	10/16/2024	10/17/2024	Iwona Zarych	None	WETCHEM_PIPETTE_3	Jignesh Parikh
(WC) FROM 2.00000ml of W3062 + 8.00000ml of W3112 = Final Quantity: 10.000 ml								



<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3681	Anions 300/9056 calibration standard 7	WP110256	10/16/2024	10/17/2024	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 10/17/2024
<u>FROM</u> 2.50000ml of W3062 + 7.50000ml of W3112 = Final Quantity: 10.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
34	Anions 300/9056 calibration standard 8	WP110257	10/16/2024	10/17/2024	Iwona Zarych	None	WETCHEM_FIPETTE_3 (WC)	Jignesh Parikh 10/17/2024
<u>FROM</u> 5.00000ml of W3062 + 5.00000ml of W3112 = Final Quantity: 10.000 ml								



<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3233	Anions 300/9056 ICV-LCS std	WP110258	10/16/2024	10/17/2024	Iwona Zarych	None	WETCHEM_FIPETTE_3 (WC)	Jignesh Parikh 10/17/2024
<u>FROM</u> 45.00000ml of W3112 + 5.00000ml of W3063 = Final Quantity: 50.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
4035	IC ELUENT CONCENTRATE FOR IC-1	WP110259	10/16/2024	04/16/2025	Iwona Zarych	WETCHEM_SCALE_5 (WC SC-5)	None	Jignesh Parikh 10/17/2024
FROM 2.10000gram of W2647 + 84.75000gram of W3058 + 913.15000ml of W3112 = Final Quantity: 1000.000 ml								

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
4036	IC ELUENT FOR IC-1	WP110260	10/16/2024	11/16/2024	Iwona Zarych	None	Glass Pipette-A	Jignesh Parikh 10/17/2024

FROM 1980.00000ml of W3112 + 20.00000ml of WP110259 = Final Quantity: 2000.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
4037	IC H2SO4 FOR IC-1	WP110261	10/16/2024	11/16/2024	Iwona Zarych	None	Glass Pipette-A	Jignesh Parikh 10/17/2024

FROM 5.60000ml of M6041 + 994.40000ml of W3112 = Final Quantity: 1000.000 ml

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3680	Anions 300/9056 calibration standard 5-CCV	WP110534	11/04/2024	11/05/2024	Niha Farheen Shaik	None	None	Jignesh Parikh 11/07/2024

FROM 45.00000ml of W3112 + 5.00000ml of W3062 = Final Quantity: 50.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3233	Anions 300/9056 ICV-LCS std	WP110535	11/04/2024	11/05/2024	Niha Farheen Shaik	None	None	Jignesh Parikh 11/07/2024

FROM 45.00000ml of W3112 + 5.00000ml of W3063 = Final Quantity: 50.000 ml

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9673-33 / Sulfuric Acid, Instra-Analyzed (cs/6c2.5L)	23D2462010	03/20/2028	08/16/2024 / mohan	08/16/2024 / mohan	M6041

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	J3506-5 / SODIUM BICARBONATE, PWD, ACS, 2.5KG	0000240594	06/03/2026	02/24/2020 / AMANDEEP	01/20/2020 / apatel	W2647

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	EM-SX0395-3 / SODIUM CARBONATE ANHYDR 2.5KG	2023012653	10/19/2028	09/03/2024 / jignesh	10/19/2023 / lwona	W3058

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	300-CAL-A-500ML / 300.0 Calibration Standard, 500 ml	T2-MEB716667	02/12/2025	02/12/2024 / lwona	10/30/2023 / lwona	W3062

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	300-CAL-A-500ML / 300.0 Calibration Standard, 500 ml	U2-MEB735684	04/09/2025	04/09/2024 / lwona	11/16/2023 / lwona	W3063

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	DIW / DI Water	Daily Lab-Certified	07/03/2029	07/03/2024 / lwona	07/03/2024 / lwona	W3112

Sodium Bicarbonate, Powder
BAKER ANALYZED® A.C.S. Reagent

(sodium hydrogen carbonate)



Material No.: 3506-05
Batch No.: 0000240594
Manufactured Date: 2019/06/05
Retest Date: 2026/06/03
Revision No: 1

Certificate of Analysis

Meets ACS Reagent Chemical Requirements,

Test	Specification	Result
Assay (NaHCO ₃) (dried basis)	99.7 – 100.3 %	100.1
Insoluble Matter	<= 0.015 %	< 0.002
Chloride (Cl)	<= 0.003 %	0.003
Phosphate (PO ₄)	<= 0.001 %	0.001
Sulfur Compounds (as SO ₄)	<= 0.003 %	0.003
Calcium (Ca)	<= 0.02 %	0.02
Trace Impurities – Iron (Fe)	<= 0.001 %	0.001
Magnesium (Mg)	<= 0.005 %	0.005
Potassium (K)	<= 0.005 %	0.005
Ammonium (NH ₄)	<= 5 ppm	5
Trace Impurities – ACS – Heavy Metals (as Pb)	<= 5 ppm	5

For Laboratory, Research or Manufacturing Use
Meets Reagent Specifications for testing USP/NF monographs

Country of Origin: US
Packaging Site: Paris Mfg Ctr & DC

James Ethier
Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700

Certificate Of Analysis



W 3058

Re. 10/19/23 12

Date of Release: 1/27/2023

Name: **Sodium Carbonate, Anhydrous**

Powder, ACS

Item No: **SX0395 All Sizes**

Lot / Batch No: **2023012653**

Country of Origin: **India**

Item	Specifications	Analysis
Assay (calculated on dried substance)	99.5% min.	100.2%
Calcium (Ca)	0.03% max.	0.004%
Chloride (Cl)	0.001% max.	<0.001%
Color	White	Passes Test
Form	Powder	Passes Test
Heavy metals (by ICP-OES)	5 ppm max.	<5 ppm
Insoluble Matter	0.01% max.	0.003%
Iron (Fe)	5 ppm max.	<5 ppm
Loss on heating at 285C	1.0% max.	0.1%
Magnesium (Mg)	0.005% max.	0.0008%
Phosphate (PO ₄)	0.001% max.	<0.001%
Potassium (K)	0.005% max.	0.003%
Silica (SiO ₂)	0.005% max.	<0.005%
Sulfur compounds (as SO ₄)	0.003% max.	<0.003%

Joe Schoellkopf

Quality Control Manager

This document has been produced electronically and is valid without a signature.

EMD Millipore is a division of Merck KGaA, Darmstadt, Germany

EMD Millipore Corporation

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Form number: 00005624CA, Rev. 2.0

Certificate of Analysis

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N 3062

rec on 10/30/23
12

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Ion Chromatography Solution
Catalog Number: 300-CAL-A
Lot Number: T2-MEB716667
Matrix: H2O
Value / Analyte(s):
150 µg/mL ea:
Sulfate,
100 µg/mL ea:
Bromide,
50 µg/mL ea:
o-Phosphate as P,
30 µg/mL ea:
Chloride, Nitrite as N,
25 µg/mL ea:
Nitrate as N,
20 µg/mL ea:
Fluoride

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Bromide, Br	100.0 ± 0.5 µg/mL	Chloride, Cl	30.00 ± 0.13 µg/mL
Fluoride, F-	20.00 ± 0.06 µg/mL	Nitrate as N, NNO3-	25.00 ± 0.09 µg/mL
Nitrite as N, NNO2-	30.00 ± 0.15 µg/mL	o-Phosphate as P, PPO4	50.00 ± 0.30 µg/mL
Sulfate, SO4	150.0 ± 0.9 µg/mL		

Density: 0.999 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Br	IC Assay	3184	151130
Br	Fajans	999c	999c
Cl	IC Assay	3182	060925
Cl	Fajans	999c	999c
Cl	Calculated		See Sec. 4.2
F-	IC Assay	3183	140203
NNO3-	IC Assay	3185	050517
NNO2-	IC Assay		traceable to 40h
PPO4	IC Assay	3186	170606
SO4	IC Assay	3181	080603

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of $k = 2$.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum (w_i) (X_i)$$

X_i = mean of Assay Method i with standard uncertainty $u_{char i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char i}^2) / (\sum (1/(u_{char i}^2)))$$

$$CRM/RM \text{ Expanded Uncertainty } (z) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char} = [\sum ((w_i)^2 (u_{char i}^2))]^{1/2}$ where $u_{char i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) (u_{char a})$$

X_a = mean of Assay Method A with

$u_{char a}$ = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (z) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 CHROMATOGRAM

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 17, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **March 17, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

W3063
rec. 11/16/23 12

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Ion Chromatography Solution
Catalog Number: 300-CAL-A
Lot Number: U2-MEB735684
Matrix: H₂O
Value / Analyte(s):
150 µg/mL ea:
Sulfate,
100 µg/mL ea:
Bromide,
50 µg/mL ea:
o-Phosphate as P,
30 µg/mL ea:
Chloride, Nitrite as N,
25 µg/mL ea:
Nitrate as N,
20 µg/mL ea:
Fluoride

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Bromide, Br	100.0 ± 0.5 µg/mL	Chloride, Cl	30.00 ± 0.14 µg/mL
Fluoride, F-	20.00 ± 0.06 µg/mL	Nitrate as N, NNO ₃ -	25.00 ± 0.09 µg/mL
Nitrite as N, NNO ₂ -	30.00 ± 0.15 µg/mL	o-Phosphate as P, PPO ₄	50.00 ± 0.18 µg/mL
Sulfate, SO ₄	150.0 ± 0.8 µg/mL		

Density: 0.999 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Br	IC Assay	3184	151130
Br	Fajans	999c	999c
Cl	IC Assay	3182	190830
Cl	Fajans	999c	999c
F-	IC Assay	3183	140203
NNO3-	IC Assay	3185	170309
NNO2-	IC Assay		traceable to 40h
PPO4	IC Assay	3186	170606
SO4	IC Assay	3181	080603

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of $k = 2$.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i) (X_i)$$

X_i = mean of Assay Method i with standard uncertainty $u_{char i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char i}^2) / (\sum(1/u_{char i}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (z) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char} = [\sum(w_i)^2 (u_{char i}^2)]^{1/2}$ where $u_{char i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) (u_{char a})$$

X_a = mean of Assay Method A with

$u_{char a}$ = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (z) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 CHROMATOGRAM

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, <https://www.inorganicventures.com/terms-and-conditions-sale>. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.
- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.
- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; info@inorganicventures.com;

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

August 10, 2023

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **August 10, 2028**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0

NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Justin Dirico
Stock Processing Supervisor



Certificate Approved By:

Nicholas Plymale
Custom VSM Coordinator



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



Sulfuric Acid
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis
Low Selenium

avantor™



M 6041-4b
MS

Material No.: 9673-33
Batch No.: 23D2462010
Manufactured Date: 2023-03-22
Retest Date: 2028-03-20
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
ACS – Assay (H ₂ SO ₄)	95.0 – 98.0 %	96.1 %
Appearance	Passes Test	Passes Test
ACS – Color (APHA)	≤ 10	5
ACS – Residue after Ignition	≤ 3 ppm	< 1 ppm
ACS – Substances Reducing Permanganate (as SO ₂)	≤ 2 ppm	< 2 ppm
Ammonium (NH ₄)	≤ 1 ppm	1 ppm
Chloride (Cl)	≤ 0.1 ppm	< 0.1 ppm
Nitrate (NO ₃)	≤ 0.2 ppm	< 0.1 ppm
Phosphate (PO ₄)	≤ 0.5 ppm	< 0.1 ppm
Trace Impurities – Aluminum (Al)	≤ 30.0 ppb	< 5.0 ppb
Arsenic and Antimony (as As)	≤ 4.0 ppb	< 2.0 ppb
Trace Impurities – Boron (B)	≤ 10.0 ppb	8.5 ppb
Trace Impurities – Cadmium (Cd)	≤ 2.0 ppb	< 0.3 ppb
Trace Impurities – Chromium (Cr)	≤ 6.0 ppb	< 0.4 ppb
Trace Impurities – Cobalt (Co)	≤ 0.5 ppb	< 0.3 ppb
Trace Impurities – Copper (Cu)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities – Gold (Au)	≤ 10.0 ppb	0.5 ppb
Heavy Metals (as Pb)	≤ 500.0 ppb	< 100.0 ppb
Trace Impurities – Iron (Fe)	≤ 50.0 ppb	1.3 ppb
Trace Impurities – Lead (Pb)	≤ 0.5 ppb	< 0.5 ppb
Trace Impurities – Magnesium (Mg)	≤ 7.0 ppb	0.8 ppb
Trace Impurities – Manganese (Mn)	≤ 1.0 ppb	< 0.4 ppb
Trace Impurities – Mercury (Hg)	≤ 0.5 ppb	< 0.1 ppb
Trace Impurities – Nickel (Ni)	≤ 2.0 ppb	0.3 ppb
Trace Impurities – Potassium (K)	≤ 500.0 ppb	< 2.0 ppb
Trace Impurities – Selenium (Se)	≤ 50.0 ppb	< 0.1 ppb
Trace Impurities – Silicon (Si)	≤ 100.0 ppb	31.5 ppb
Trace Impurities – Silver (Ag)	≤ 1.0 ppb	< 0.3 ppb

>>> Continued on page 2 >>>

Sulfuric Acid
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis
Low Selenium

 **avantor™**

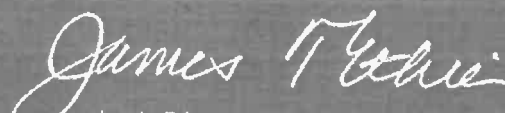


Material No.: 9673-33
Batch No.: 23D2462010

Test	Specification	Result
Trace Impurities – Sodium (Na)	≤ 500.0 ppb	5.4 ppb
Trace Impurities – Strontium (Sr)	≤ 5.0 ppb	< 0.2 ppb
Trace Impurities – Tin (Sn)	≤ 5.0 ppb	< 0.8 ppb
Trace Impurities – Zinc (Zn)	≤ 5.0 ppb	0.4 ppb

For Laboratory, Research, or Manufacturing Use

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC


Jamie Ethier
Vice President Global Quality



SHIPPING DOCUMENTS

CHEMTECH

CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 • Fax (908) 789-8922
www.chemtech.net

CHEMTECH PROJECT NO. P4674
QUOTE NO. 2041049
COC Number 2041049

CLIENT INFORMATION

REPORT TO BE SENT TO:
COMPANY: RSB Environmental
ADDRESS: 6001 Savoy Dr Ste 110
CITY: Houston STATE: TX ZIP: 77036
ATTENTION: Efrain Trigo
PHONE: 832-206-4101 FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: Southern Product Finishing
PROJECT NO.: LOCATION: Houston TX
PROJECT MANAGER: Efrain Trigo
e-mail: efrain.trigo@AllianceTg.com
PHONE: 832-206-4101 FAX:

CLIENT BILLING INFORMATION

BILL TO: RSB Environmental PO#:
ADDRESS:
CITY STATE ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION

FAX (RUSH) 2 DAYS*
HARDCOPY (DATA PACKAGE): DAYS*
EDD: DAYS*

*TO BE APPROVED BY CHEMTECH
STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

☐ Level 1 (Results Only) ☐ Level 4 (QC + Full Raw Data)
☐ Level 2 (Results + QC) ☐ NJ Reduced ☐ US EPA CLP
☐ Level 3 (Results + QC) ☐ NYS ASP A ☐ NYS ASP B
+ Raw Data ☐ Other
☐ EDD FORMAT

TSS metals mercury Nitrate + Nitrite
1 2 3 4 5 6 7 8 9

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE		SAMPLE COLLECTION		# OF BOTTLES	PRESERVATIVES									COMMENTS
			COMP	GRAB	DATE	TIME		E	B	B	C						
1.	<u>outfall 001</u>	<u>SW</u>		<u>X</u>	<u>10/31/14</u>	<u>13:00</u>	<u>4</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>						← Specify Preservatives A-HCl D-NaOH B-HNO3 E-ICE C-H2SO4 F-OTHER
2.																	
3.																	
4.																	
5.																	
6.																	
7.																	
8.																	
9.																	
10.																	

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER: 1. <u>EFRAIN</u>	DATE/TIME: <u>10/31/14 13:00</u>	RECEIVED BY: 1. <u>[Signature]</u>	Conditions of bottles or coolers at receipt: ☐ COMPLIANT ☐ NON COMPLIANT ☐ COOLER TEMP <u>5.6</u> °C Comments: <u>at Cont 1</u> Page ____ of ____
RELINQUISHED BY SAMPLER: 2. <u>[Signature]</u>	DATE/TIME: <u>11-1-24</u>	RECEIVED BY: 2. <u>[Signature]</u>	
RELINQUISHED BY SAMPLER: 3. <u>[Signature]</u>	DATE/TIME:	RECEIVED BY: 3. <u>[Signature]</u>	

CLIENT: ☐ Hand Delivered ☐ Other
CHEMTECH: ☐ Picked Up ☐ Field Sampling
Shipment Complete ☐ YES ☐ NO



284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Laboratory Certification

Certified By	License No.
CAS EPA CLP Contract	68HERH20D0011
Connecticut	PH-0830
DOD ELAP (ANAB)	L2219
Maine	2024021
Maryland	296
New Hampshire	255424 Rev 1
New Jersey	20012
New York	11376
Pennsylvania	68-00548
Soil Permit	525-24-234-08441
Texas	T104704488