

DATA PACKAGE

GENERAL CHEMISTRY

PROJECT NAME : AMSTERDAM

G ENVIRONMENTAL

8 Carriage Ln

Succasunna, NJ - 07876

Phone No: 973-294-1771

ORDER ID : Q3172

ATTENTION : Gary Landis



Laboratory Certification ID # 20012



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Cover Page

Order ID : Q3172

Project ID : Amsterdam

Client : G Environmental

Lab Sample Number

Q3172-01
Q3172-02
Q3172-03

Client Sample Number

FW7D
FW6D
GB3W

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: 9/29/2025

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012



284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

CASE NARRATIVE

G Environmental

Project Name: Amsterdam

Project # N/A

Order ID # Q3172

Test Name: Anions Group1

A. Number of Samples and Date of Receipt:

1 Water sample was received on 09/22/2025.

B. Parameters:

According to the Chain of Custody document, the following analyses were requested: Anions Group1. This data package contains results for Anions Group1.

C. Analytical Techniques:

The analysis of Anions Group1 was based on method 300.0.

D. QA/ QC Samples:

The Holding Times were met for all analysis.

Sample FW7D was diluted due to high concentrations for Sulfate.

The Blank Spike met requirements for all compounds.

The Duplicate analysis met criteria for all compounds.

The Matrix Spike analysis met criteria for all compounds.

The Matrix Spike Duplicate analysis met criteria for all compounds.

The Blank analysis did not indicate the presence of lab contamination.

The Calibration met the requirements.

E. Additional Comments:

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. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature_____

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

GENERAL CHEMISTRY CONFORMANCE/NON-CONFORMANCE SUMMARY

ORDER ID: Q3172

MATRIX: Water

METHOD: 300.0

	NA	NO	YES
1. Blank Contamination - If yes, list compounds and concentrations in each blank:		✓	
2. Matrix Spike Duplicate Recoveries Met Criteria			✓
If not met, list those compounds and their recoveries which fall outside the acceptable range.			
The Blank Spike met requirements for all compounds .The Matrix Spike analysis met criteria for all compounds. The Matrix Spike Duplicate analysis met criteria for all compounds.			
3. Sample Duplicate Analysis Met QC Criteria			✓
If not met, list those compounds and their recoveries which fall outside the acceptable range.			
4. Digestion Holding Time Met			✓
If not met, list number of days exceeded for each sample:			

ADDITIONAL COMMENTS:

QA REVIEW

Date

APPENDIX A

QA REVIEW GENERAL DOCUMENTATION

Project #: Q3172

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 Custody

✓

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: SOHIL JODHANI

Date: 09/29/2025

LAB CHRONICLE

OrderID:	Q3172	OrderDate:	9/24/2025 9:00:00 AM
Client:	G Environmental	Project:	Amsterdam
Contact:	Gary Landis	Location:	J43,VOA Lab

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q3172-01	FW7D	WATER			09/22/25			09/22/25
			Anions Group1	300.0	12:39		09/24/25 10:46	
Q3172-01DL	FW7DDL	WATER			09/22/25			09/22/25
			Anions Group1	300.0	12:39		09/24/25 12:34	



SAMPLE DATA

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Report of Analysis

Client:	G Environmental	Date Collected:	09/22/25 12:39
Project:	Amsterdam	Date Received:	09/22/25
Client Sample ID:	FW7D	SDG No.:	Q3172
Lab Sample ID:	Q3172-01	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Sulfate	201	OR	1	0.46	3.00	mg/L		09/24/25 10:46	300.0

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

Report of Analysis

Client:	G Environmental	Date Collected:	09/22/25 12:39
Project:	Amsterdam	Date Received:	09/22/25
Client Sample ID:	FW7DDL	SDG No.:	Q3172
Lab Sample ID:	Q3172-01DL	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Sulfate	170	D	10	4.60	30.0	mg/L		09/24/25 12:34	300.0

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

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Initial and Continuing Calibration Verification

Client: G Environmental

SDG No.: Q3172

Project: Amsterdam

RunNo.: LB137286

Analyte	Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID: ICV1						
Bromide	mg/L	10	10	100	90-110	09/09/2025
Chloride	mg/L	3	3	100	90-110	09/09/2025
Fluoride	mg/L	2	2	100	90-110	09/09/2025
Nitrite	mg/L	3	3	100	90-110	09/09/2025
Nitrate	mg/L	2.5	2.5	100	90-110	09/09/2025
Sulfate	mg/L	14.8	15	99	90-110	09/09/2025
Orthophosphate as P	mg/L	5	5	100	90-110	09/09/2025
Sample ID: CCV1						
Bromide	mg/L	10	10	100	90-110	09/24/2025
Chloride	mg/L	2.9	3	97	90-110	09/24/2025
Fluoride	mg/L	2	2	100	90-110	09/24/2025
Nitrite	mg/L	3	3	100	90-110	09/24/2025
Nitrate	mg/L	2.4	2.5	96	90-110	09/24/2025
Sulfate	mg/L	14.8	15	99	90-110	09/24/2025
Orthophosphate as P	mg/L	4.6	5	92	90-110	09/24/2025
Sample ID: CCV2						
Bromide	mg/L	10	10	100	90-110	09/24/2025
Chloride	mg/L	2.9	3	97	90-110	09/24/2025
Fluoride	mg/L	2	2	100	90-110	09/24/2025
Nitrite	mg/L	3	3	100	90-110	09/24/2025
Nitrate	mg/L	2.4	2.5	96	90-110	09/24/2025
Sulfate	mg/L	14.7	15	98	90-110	09/24/2025
Orthophosphate as P	mg/L	5.1	5	102	90-110	09/24/2025

Initial and Continuing Calibration Blank Summary

Client: G Environmental

SDG No.: Q3172

Project: Amsterdam

RunNo.: LB137286

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID: ICB1							
Bromide	mg/L	< 1.0000	1.0000	U	0.37	2	09/09/2025
Chloride	mg/L	< 0.3000	0.3000	U	0.19	0.6	09/09/2025
Fluoride	mg/L	< 0.2000	0.2000	U	0.11	0.4	09/09/2025
Nitrite	mg/L	< 0.3000	0.3000	U	0.074	0.6	09/09/2025
Nitrate	mg/L	< 0.2500	0.2500	U	0.095	0.5	09/09/2025
Sulfate	mg/L	< 1.5000	1.5000	U	0.46	3	09/09/2025
Orthophosphate as P	mg/L	< 0.5000	0.5000	U	0.34	1	09/09/2025
Sample ID: CCB1							
Bromide	mg/L	< 1.0000	1.0000	U	0.37	2	09/24/2025
Chloride	mg/L	< 0.3000	0.3000	U	0.19	0.6	09/24/2025
Fluoride	mg/L	< 0.2000	0.2000	U	0.11	0.4	09/24/2025
Nitrite	mg/L	< 0.3000	0.3000	U	0.074	0.6	09/24/2025
Nitrate	mg/L	< 0.2500	0.2500	U	0.095	0.5	09/24/2025
Sulfate	mg/L	< 1.5000	1.5000	U	0.46	3	09/24/2025
Orthophosphate as P	mg/L	< 0.5000	0.5000	U	0.34	1	09/24/2025
Sample ID: CCB2							
Bromide	mg/L	< 1.0000	1.0000	U	0.37	2	09/24/2025
Chloride	mg/L	< 0.3000	0.3000	U	0.19	0.6	09/24/2025
Fluoride	mg/L	< 0.2000	0.2000	U	0.11	0.4	09/24/2025
Nitrite	mg/L	< 0.3000	0.3000	U	0.074	0.6	09/24/2025
Nitrate	mg/L	< 0.2500	0.2500	U	0.095	0.5	09/24/2025
Sulfate	mg/L	< 1.5000	1.5000	U	0.46	3	09/24/2025
Orthophosphate as P	mg/L	< 0.5000	0.5000	U	0.34	1	09/24/2025

Preparation Blank Summary

Client: G Environmental

SDG No.: Q3172

Project: Amsterdam

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID: LB137286BLW							
Bromide	mg/L	< 1.0000	1.0000	U	0.37	2	09/24/2025
Chloride	mg/L	< 0.3000	0.3000	U	0.19	0.6	09/24/2025
Fluoride	mg/L	< 0.2000	0.2000	U	0.11	0.4	09/24/2025
Nitrite	mg/L	< 0.3000	0.3000	U	0.074	0.6	09/24/2025
Nitrate	mg/L	< 0.2500	0.2500	U	0.095	0.5	09/24/2025
Sulfate	mg/L	< 1.5000	1.5000	U	0.46	3	09/24/2025
Orthophosphate as P	mg/L	< 0.5000	0.5000	U	0.34	1	09/24/2025

Matrix Spike Summary

Client:	G Environmental	SDG No.:	Q3172
Project:	Amsterdam	Sample ID:	Q3168-05
Client ID:	TOTES COMP#1MS	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	11.0	OR	0.37	U	10	1	110		09/24/2025
Chloride	mg/L	80-120	56.6		55.3	OR	3	1	43	*	09/24/2025
Fluoride	mg/L	80-120	2.10		0.11	U	2	1	105		09/24/2025
Nitrite	mg/L	80-120	3.00		0.074	U	3	1	100		09/24/2025
Nitrate	mg/L	80-120	2.40		0.095	U	2.5	1	96		09/24/2025
Sulfate	mg/L	80-120	16.2		1.70	J	15	1	97		09/24/2025
Orthophosphate as P	mg/L	80-120	5.00		0.34	U	5	1	100		09/24/2025

Matrix Spike Summary

Client:	G Environmental	SDG No.:	Q3172
Project:	Amsterdam	Sample ID:	Q3168-05
Client ID:	TOTES COMP#1MSD	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	11.0	OR	0.37	U	10	1	110		09/24/2025
Chloride	mg/L	80-120	56.2		55.3	OR	3	1	30	*	09/24/2025
Fluoride	mg/L	80-120	2.10		0.11	U	2	1	105		09/24/2025
Nitrite	mg/L	80-120	3.00		0.074	U	3	1	100		09/24/2025
Nitrate	mg/L	80-120	2.40		0.095	U	2.5	1	96		09/24/2025
Sulfate	mg/L	80-120	16.1		1.70	J	15	1	96		09/24/2025
Orthophosphate as P	mg/L	80-120	5.20		0.34	U	5	1	104		09/24/2025

Duplicate Sample Summary

Client:	G Environmental	SDG No.:	Q3172
Project:	Amsterdam	Sample ID:	Q3168-05
Client ID:	TOTES COMP#1MSD	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
Bromide	mg/L	+/-20	11.0		11.0		1	0		09/24/2025
Fluoride	mg/L	+/-20	2.10		2.10		1	0		09/24/2025
Nitrate	mg/L	+/-20	2.40		2.40		1	0		09/24/2025
Nitrite	mg/L	+/-20	3.00		3.00		1	0		09/24/2025
Sulfate	mg/L	+/-20	16.2		16.1		1	1		09/24/2025
Chloride	mg/L	+/-20	56.6	OR	56.2	OR	1	1		09/24/2025
Orthophosphate as P	mg/L	+/-20	5.00		5.20		1	4		09/24/2025

Laboratory Control Sample Summary

Client: G Environmental

SDG No.: Q3172

Project: Amsterdam

Run No.: LB137286

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID	LB137286BSW							
Bromide	mg/L	10	10.0		100	1	90-110	09/24/2025
Chloride	mg/L	3	2.90		97	1	90-110	09/24/2025
Fluoride	mg/L	2	2.00		100	1	90-110	09/24/2025
Nitrite	mg/L	3	3.00		100	1	90-110	09/24/2025
Nitrate	mg/L	2.5	2.40		96	1	90-110	09/24/2025
Sulfate	mg/L	15	14.7		98	1	90-110	09/24/2025
Orthophosphate as P	mg/L	5	4.70		94	1	90-110	09/24/2025



RAW DATA

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Instrument IC-1				Analyst: RM		Method: 300.0 / 9056A				
Ident	Con F-	Con CL-	Con NO2	Con BR-	Con NO3	Con HPO4	Con SO4	Method name	date time	Initial v Analyst
STD1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	IC1-090925	9/9/2025 10:21	10 RM/IZ
STD2	0.423	0.641	0.632	2.091	0.529	1.063	3.237	IC1-090925	9/9/2025 10:42	10 RM/IZ
STD3	0.794	1.189	1.197	3.984	0.997	2.006	6.010	IC1-090925	9/9/2025 11:25	10 RM/IZ
STD4	0.990	1.475	1.473	4.920	1.228	2.461	7.371	IC1-090925	9/9/2025 11:47	10 RM/IZ
STD5	2.008	3.012	3.027	10.105	2.514	4.978	15.047	IC1-090925	9/9/2025 13:36	10 RM/IZ
STD6	3.935	5.921	5.894	19.658	4.924	9.905	29.203	IC1-090925	9/9/2025 13:58	10 RM/IZ
STD7	5.050	7.561	7.577	25.243	6.308	12.587	37.633	IC1-090925	9/9/2025 14:41	10 RM/IZ
ICV	2.001	2.995	2.988	9.985	2.483	5.041	14.797	IC1-090925	9/9/2025 15:02	10 RM/IZ
ICB	0.000	0.063	0.000	0.000	0.000	0.000	0.000	IC1-090925	9/9/2025 15:45	10 RM/IZ
CCV	1.973	2.936	2.983	10.016	2.431	4.563	14.776	IC1-090925	9/24/2025 9:20	10 RM/IZ
CCB	0.000	0.000	0.000	0.000	0.000	0.000	0.000	IC1-090925	9/24/2025 9:42	10 RM/IZ
LB137286BLW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	IC1-090925	9/24/2025 10:03	10 RM/IZ
LB137286BSW	2.012	2.938	2.985	10.029	2.434	4.658	14.682	IC1-090925	9/24/2025 10:25	10 RM/IZ
Q3172-01	0.138	164.811	0.000	2.918	0.000	0.000	200.990	IC1-090925	9/24/2025 10:46	10 RM/IZ
Q3168-05	0.053	55.307	0.000	0.000	0.000	0.000	1.690	IC1-090925	9/24/2025 11:08	10 RM/IZ
Q3168-05MS	2.074	56.598	2.963	11.049	2.436	4.980	16.176	IC1-090925	9/24/2025 11:29	10 RM/IZ
Q3168-05MSD	2.051	56.211	2.959	10.965	2.428	5.204	16.108	IC1-090925	9/24/2025 11:51	10 RM/IZ
Q3168-06	0.054	49.652	0.000	1.151	0.000	0.000	1.313	IC1-090925	9/24/2025 12:13	10 RM/IZ
Q3172-01DLX10	0.000	12.707	0.000	0.404	0.000	0.000	16.952	IC1-090925	9/24/2025 12:34	10 RM/IZ
CCV	2.002	2.941	2.996	10.046	2.440	5.051	14.693	IC1-090925	9/24/2025 12:56	10 RM/IZ
CCB	0.000	0.000	0.000	0.000	0.000	0.000	0.000	IC1-090925	9/24/2025 13:17	10 RM/IZ

Clear table

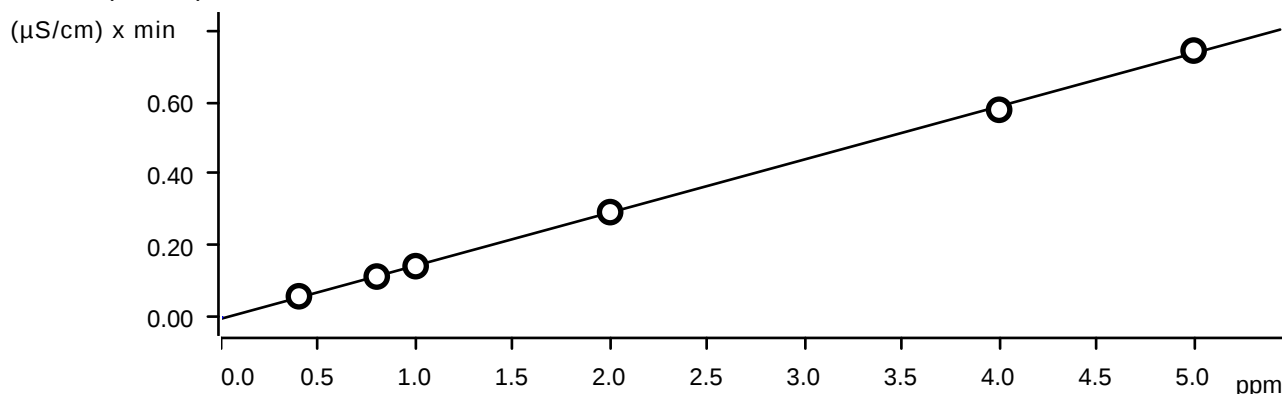
Instrument ID: IC-2 Analyst: IZ Method: 300.0 / 9056A											
ident	concentra tion F-	concentratio n CL-	concentratio on NO2	concentratio on BR-	concentratio on NO3	concentratio n HPO4	concentratio on SO4	file name	date time	Initial wt/ Final	Analyst
STD1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	IC1-090925	9/9/2025 10:21	10	RM/IZ
STD2	0.4230	0.6410	0.6320	2.0910	0.5290	1.0630	3.2370	IC1-090925	9/9/2025 10:42	10	RM/IZ
STD3	0.7940	1.1890	1.1970	3.9840	0.9970	2.0060	6.0100	IC1-090925	9/9/2025 11:25	10	RM/IZ
STD4	0.9900	1.4750	1.4730	4.9200	1.2280	2.4610	7.3710	IC1-090925	9/9/2025 11:47	10	RM/IZ
STD5	2.0080	3.0120	3.0270	10.1050	2.5140	4.9780	15.0470	IC1-090925	9/9/2025 13:36	10	RM/IZ
STD6	3.9350	5.9210	5.8940	19.6580	4.9240	9.9050	29.2030	IC1-090925	9/9/2025 13:58	10	RM/IZ
STD7	5.0500	7.5610	7.5770	25.2430	6.3080	12.5870	37.6330	IC1-090925	9/9/2025 14:41	10	RM/IZ

ident	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

ident	Relative Error F-	Relative Error CL-	Relative Error NO2	Relative Error BR-	Relative Error NO3	Relative Error HPO4	Relative Error SO4
STD1							
STD2	5.7500	6.8333	5.3333	4.5500	5.8000	6.3000	7.9000
STD3	-0.7500	-0.9167	-0.2500	-0.4000	-0.3000	0.3000	0.1667
STD4	-1.0000	-1.6667	-1.8000	-1.6000	-1.7600	-1.5600	-1.7200
STD5	0.4000	0.4000	0.9000	1.0500	0.5600	-0.4400	0.3133
STD6	-1.6250	-1.3167	-1.7667	-1.7100	-1.5200	-0.9500	-2.6567
STD7	1.0000	0.8133	1.0267	0.9720	0.9280	0.6960	1.7108

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

Fluoride (Anions)

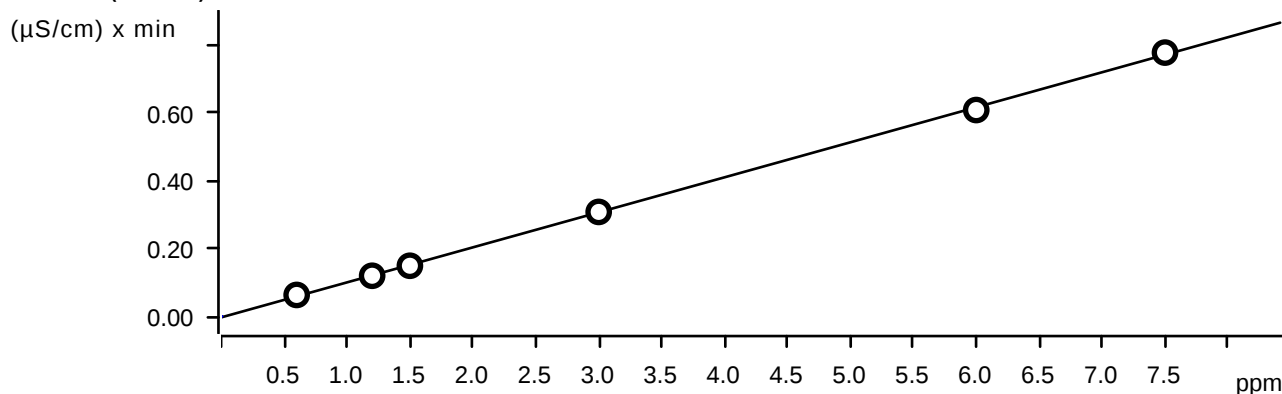
Function: $A = -3.91674E-3 + 0.0148053 \times Q$

Relative standard deviation 1.985504 %

Correlation coefficient 0.999790

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	2025-09-09 10:21:26 UTC-4	used
Standard 2	1	0.400	10.0	1.0	1.0	0.059	STD2	2025-09-09 10:42:49 UTC-4	used
Standard 3	1	0.800	10.0	1.0	1.0	0.114	STD3	2025-09-09 11:25:44 UTC-4	used
Standard 4	1	1.000	10.0	1.0	1.0	0.143	STD4	2025-09-09 11:47:10 UTC-4	used
Standard 5	1	2.000	10.0	1.0	1.0	0.293	STD5	2025-09-09 13:36:36 UTC-4	used
Standard 6	1	4.000	10.0	1.0	1.0	0.579	STD6	2025-09-09 13:58:07 UTC-4	used
Standard 7	1	5.000	10.0	1.0	1.0	0.744	STD7	2025-09-09 14:41:06 UTC-4	used

Chloride (Anions)

Function: $A = -2.97735E-3 + 0.0103068 \times Q$

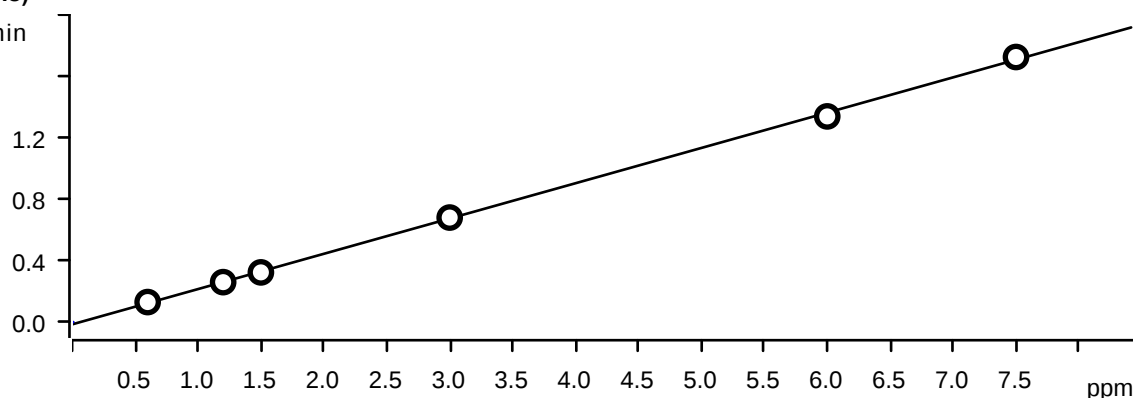
Relative standard deviation 1.712968 %

Correlation coefficient 0.999843

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	2025-09-09 10:21:26 UTC-4	used
Standard 2	1	0.600	10.0	1.0	1.0	0.063	STD2	2025-09-09 10:42:49 UTC-4	used
Standard 3	1	1.200	10.0	1.0	1.0	0.120	STD3	2025-09-09 11:25:44 UTC-4	used
Standard 4	1	1.500	10.0	1.0	1.0	0.149	STD4	2025-09-09 11:47:10 UTC-4	used
Standard 5	1	3.000	10.0	1.0	1.0	0.307	STD5	2025-09-09 13:36:36 UTC-4	used
Standard 6	1	6.000	10.0	1.0	1.0	0.607	STD6	2025-09-09 13:58:07 UTC-4	used
Standard 7	1	7.500	10.0	1.0	1.0	0.776	STD7	2025-09-09 14:41:06 UTC-4	used

Nitrite (Anions)

(μS/cm) x min

Function: $A = -0.0143669 + 0.0229543 \times Q$

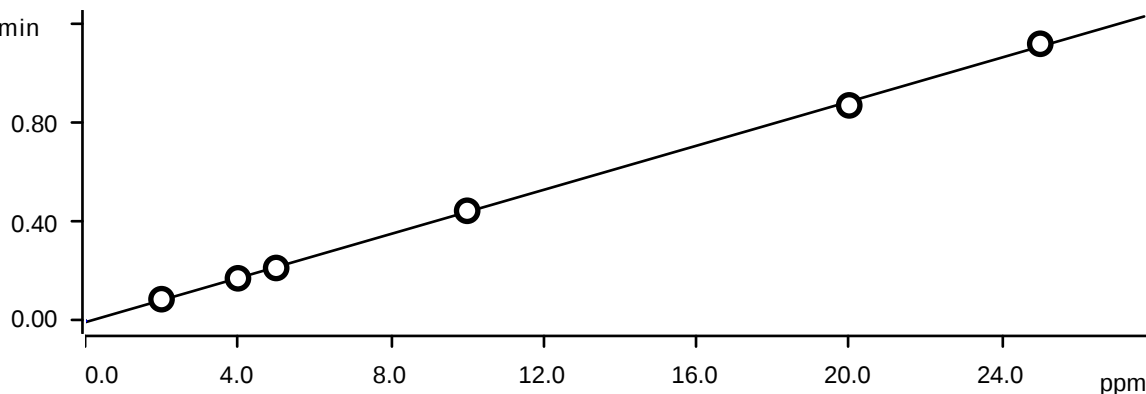
Relative standard deviation 2.170764 %

Correlation coefficient 0.999753

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	2025-09-09 10:21:26 UTC-4	used
Standard 2	1	0.600	10.0	1.0	1.0	0.131	STD2	2025-09-09 10:42:49 UTC-4	used
Standard 3	1	1.200	10.0	1.0	1.0	0.260	STD3	2025-09-09 11:25:44 UTC-4	used
Standard 4	1	1.500	10.0	1.0	1.0	0.324	STD4	2025-09-09 11:47:10 UTC-4	used
Standard 5	1	3.000	10.0	1.0	1.0	0.681	STD5	2025-09-09 13:36:36 UTC-4	used
Standard 6	1	6.000	10.0	1.0	1.0	1.339	STD6	2025-09-09 13:58:07 UTC-4	used
Standard 7	1	7.500	10.0	1.0	1.0	1.725	STD7	2025-09-09 14:41:06 UTC-4	used

Bromide (Anions)

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



Function: $A = -5.68247E-3 + 4.44287E-3 \times Q$

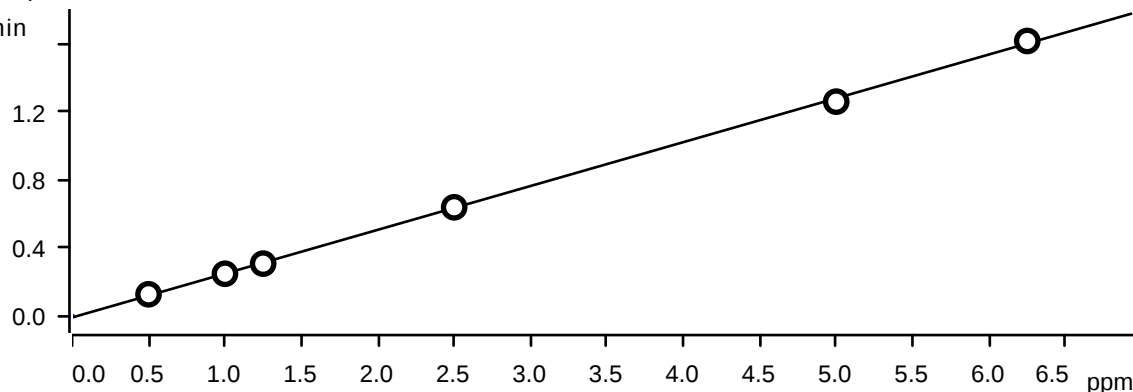
Relative standard deviation: 2.066849 %

Correlation coefficient: 0.999773

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	2025-09-09 10:21:26 UTC-4	used
Standard 2	1	2.000	10.0	1.0	1.0	0.087	STD2	2025-09-09 10:42:49 UTC-4	used
Standard 3	1	4.000	10.0	1.0	1.0	0.171	STD3	2025-09-09 11:25:44 UTC-4	used
Standard 4	1	5.000	10.0	1.0	1.0	0.213	STD4	2025-09-09 11:47:10 UTC-4	used
Standard 5	1	10.000	10.0	1.0	1.0	0.443	STD5	2025-09-09 13:36:36 UTC-4	used
Standard 6	1	20.000	10.0	1.0	1.0	0.868	STD6	2025-09-09 13:58:07 UTC-4	used
Standard 7	1	25.000	10.0	1.0	1.0	1.116	STD7	2025-09-09 14:41:06 UTC-4	used

Nitrate (Anions)

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

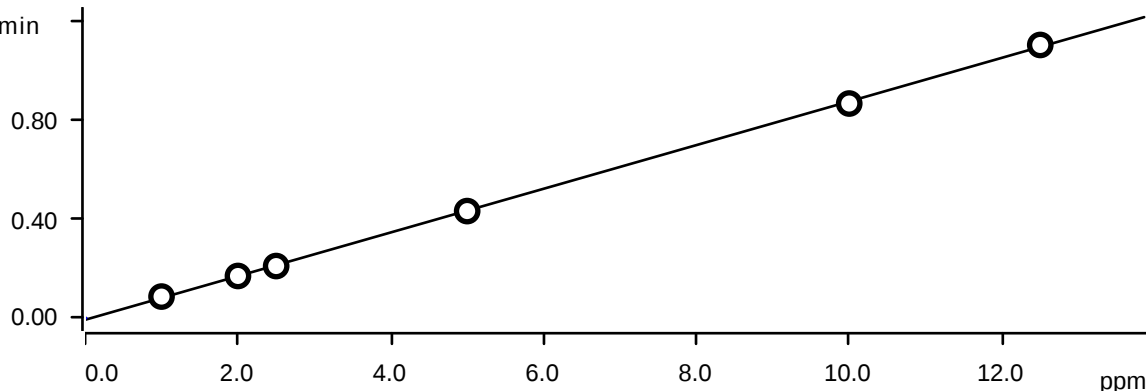


Function: $A = -0.0122982 + 0.0258010 \times Q$

Relative standard deviation: 1.914251 %

Correlation coefficient 0.999807

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	2025-09-09 10:21:26 UTC-4	used
Standard 2	1	0.500	10.0	1.0	1.0	0.124	STD2	2025-09-09 10:42:49 UTC-4	used
Standard 3	1	1.000	10.0	1.0	1.0	0.245	STD3	2025-09-09 11:25:44 UTC-4	used
Standard 4	1	1.250	10.0	1.0	1.0	0.305	STD4	2025-09-09 11:47:10 UTC-4	used
Standard 5	1	2.500	10.0	1.0	1.0	0.636	STD5	2025-09-09 13:36:36 UTC-4	used
Standard 6	1	5.000	10.0	1.0	1.0	1.258	STD6	2025-09-09 13:58:07 UTC-4	used
Standard 7	1	6.250	10.0	1.0	1.0	1.615	STD7	2025-09-09 14:41:06 UTC-4	used

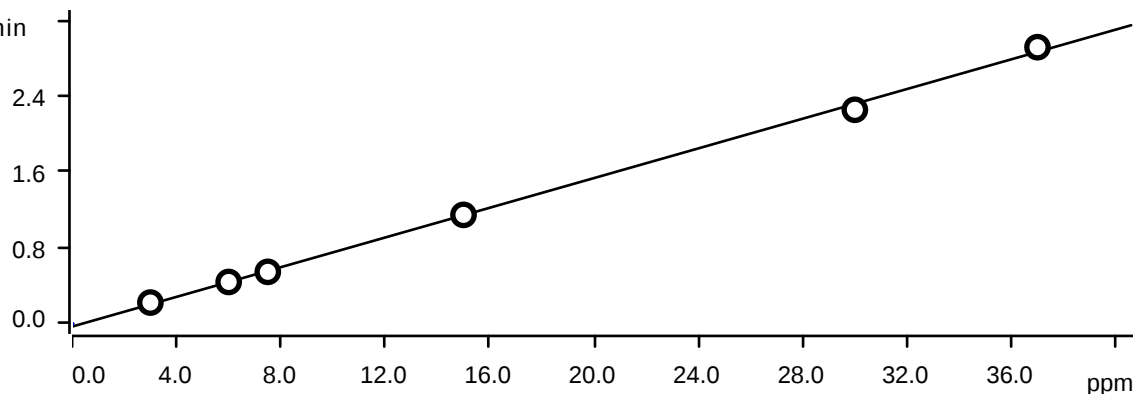
Phosphate (Anions) $(\mu\text{S}/\text{cm}) \times \text{min}$ Function: $A = -6.72192E-3 + 8.79335E-3 \times Q$

Relative standard deviation 1.384046 %

Correlation coefficient 0.999898

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	2025-09-09 10:21:26 UTC-4	used
Standard 2	1	1.000	10.0	1.0	1.0	0.087	STD2	2025-09-09 10:42:49 UTC-4	used
Standard 3	1	2.000	10.0	1.0	1.0	0.170	STD3	2025-09-09 11:25:44 UTC-4	used
Standard 4	1	2.500	10.0	1.0	1.0	0.210	STD4	2025-09-09 11:47:10 UTC-4	used
Standard 5	1	5.000	10.0	1.0	1.0	0.431	STD5	2025-09-09 13:36:36 UTC-4	used
Standard 6	1	10.000	10.0	1.0	1.0	0.864	STD6	2025-09-09 13:58:07 UTC-4	used
Standard 7	1	12.500	10.0	1.0	1.0	1.100	STD7	2025-09-09 14:41:06 UTC-4	used

Sulfate (Anions)

 $(\mu\text{S}/\text{cm}) \times \text{min}$ Function: $A = -0.0295615 + 7.81954E-3 \times Q$

Relative standard deviation 3.285067 %

Correlation coefficient 0.999433

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	2025-09-09 10:21:26 UTC-4	used
Standard 2	1	3.000	10.0	1.0	1.0	0.224	STD2	2025-09-09 10:42:49 UTC-4	used
Standard 3	1	6.000	10.0	1.0	1.0	0.440	STD3	2025-09-09 11:25:44 UTC-4	used
Standard 4	1	7.500	10.0	1.0	1.0	0.547	STD4	2025-09-09 11:47:10 UTC-4	used
Standard 5	1	15.000	10.0	1.0	1.0	1.147	STD5	2025-09-09 13:36:36 UTC-4	used
Standard 6	1	30.000	10.0	1.0	1.0	2.254	STD6	2025-09-09 13:58:07 UTC-4	used
Standard 7	1	37.000	10.0	1.0	1.0	2.913	STD7	2025-09-09 14:41:06 UTC-4	used

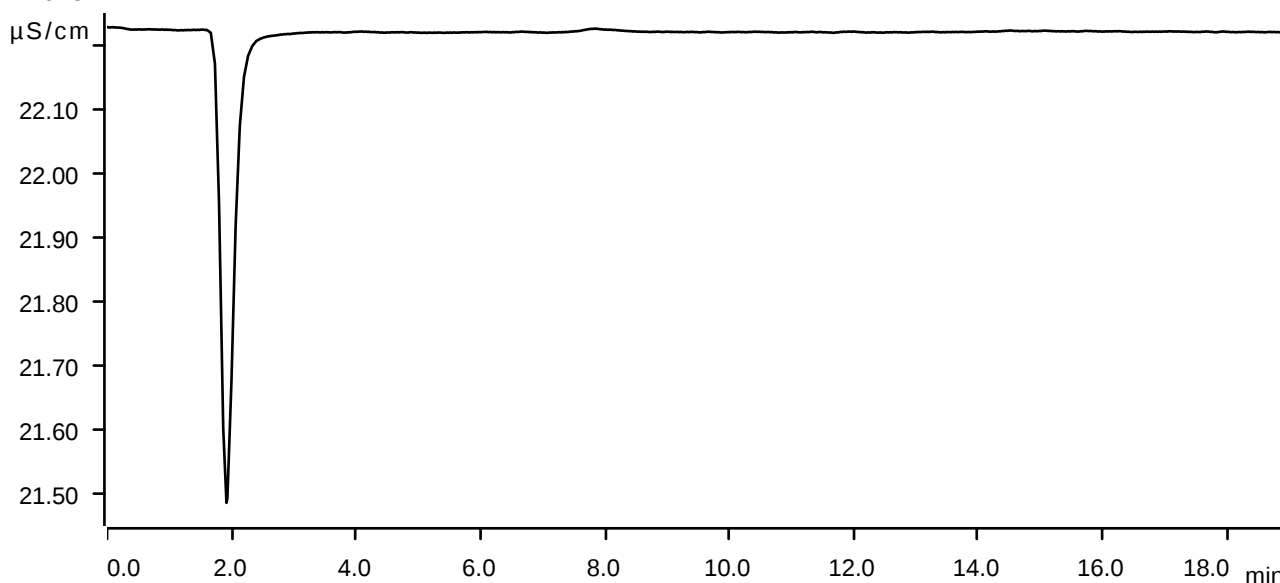
Sample data

Ident STD1
Sample type Standard 1
Determination start 2025-09-09 10:21:26 UTC-4
Method IC1-090925
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 13.06 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions



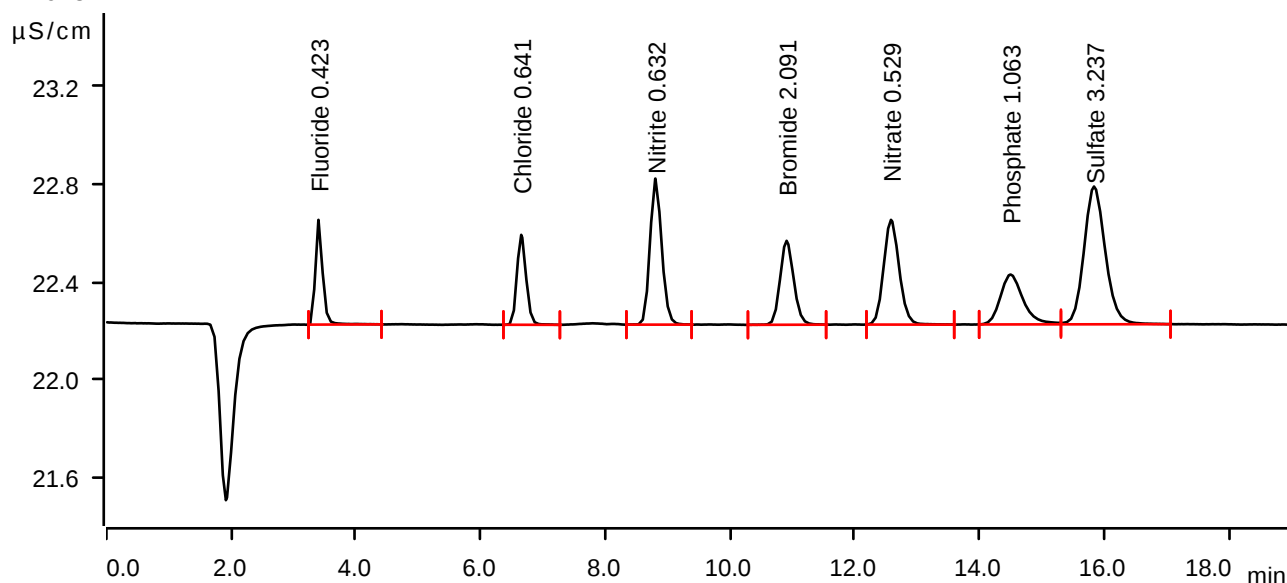
Sample data

Ident STD2
Sample type Standard 2
Determination start 2025-09-09 10:42:49 UTC-4
Method IC1-090925
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 12.84 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	0.0587	0.429	0.423	Fluoride
2	6.652	0.0631	0.369	0.641	Chloride
3	8.803	0.1306	0.599	0.632	Nitrite
4	10.907	0.0872	0.344	2.091	Bromide
5	12.580	0.1242	0.430	0.529	Nitrate
6	14.497	0.0867	0.205	1.063	Phosphate
7	15.835	0.2236	0.565	3.237	Sulfate

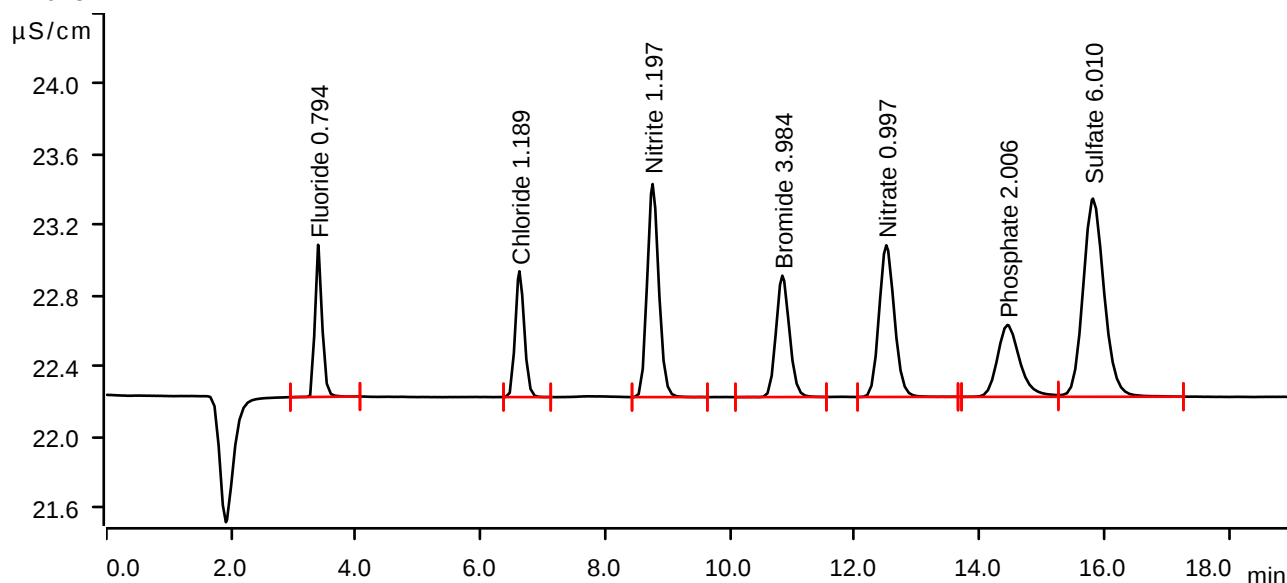
Sample data

Ident STD3
Sample type Standard 3
Determination start 2025-09-09 11:25:44 UTC-4
Method IC1-090925
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 12.67 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	3.395	0.1137	0.861	0.794	Fluoride
2	6.623	0.1196	0.712	1.189	Chloride
3	8.758	0.2603	1.206	1.197	Nitrite
4	10.838	0.1713	0.687	3.984	Bromide
5	12.505	0.2450	0.859	0.997	Nitrate
6	14.448	0.1697	0.407	2.006	Phosphate
7	15.818	0.4404	1.122	6.010	Sulfate

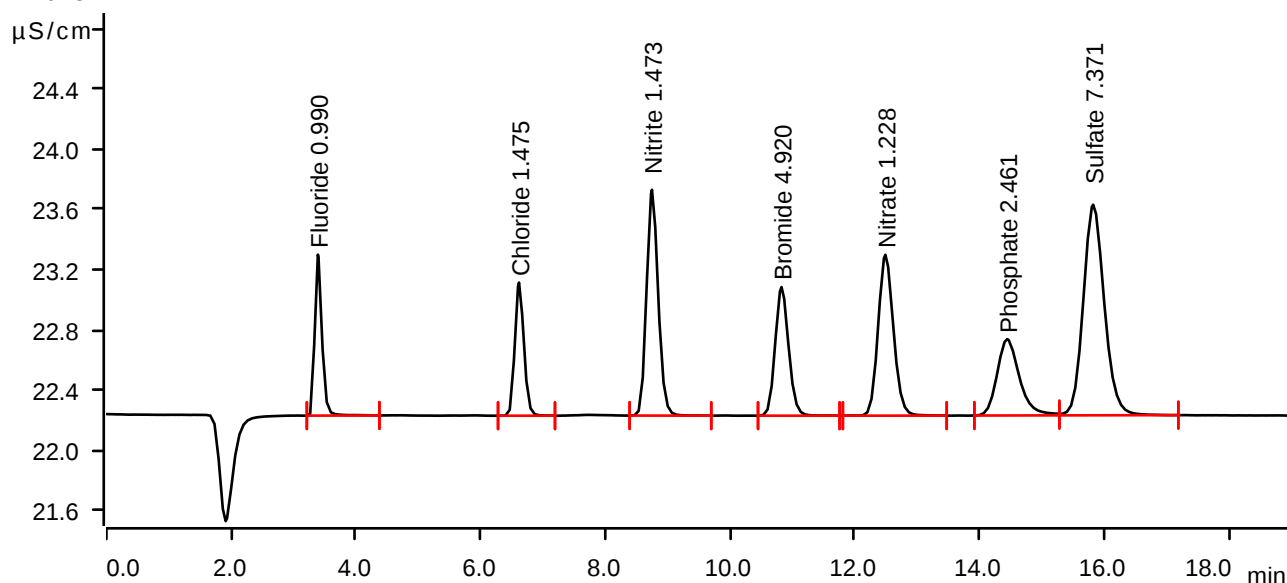
Sample data

Ident STD4
Sample type Standard 4
Determination start 2025-09-09 11:47:10 UTC-4
Method IC1-090925
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 12.61 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	3.392	0.1426	1.068	0.990	Fluoride
2	6.617	0.1490	0.884	1.475	Chloride
3	8.748	0.3238	1.499	1.473	Nitrite
4	10.825	0.2129	0.854	4.920	Bromide
5	12.490	0.3046	1.068	1.228	Nitrate
6	14.443	0.2097	0.507	2.461	Phosphate
7	15.822	0.5468	1.398	7.371	Sulfate

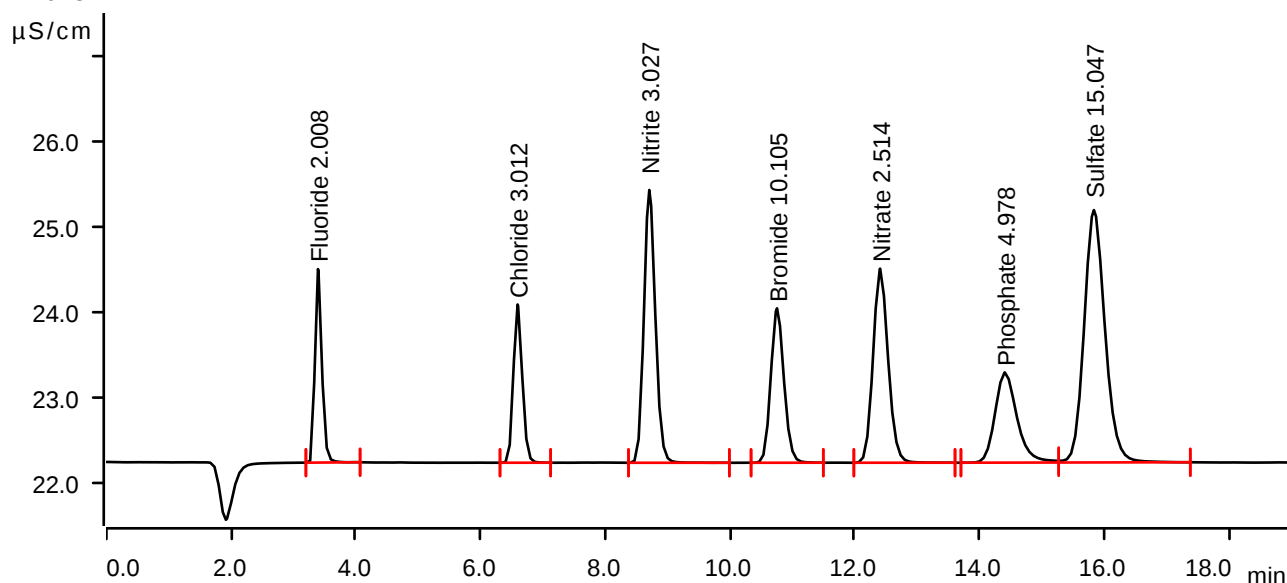
Sample data

Ident STD5
Sample type Standard 5
Determination start 2025-09-09 13:36:36 UTC-4
Method IC1-090925
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 12.50 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	0.2933	2.266	2.008	Fluoride
2	6.593	0.3075	1.854	3.012	Chloride
3	8.705	0.6805	3.195	3.027	Nitrite
4	10.753	0.4432	1.809	10.105	Bromide
5	12.407	0.6363	2.273	2.514	Nitrate
6	14.405	0.4310	1.057	4.978	Phosphate
7	15.833	1.1470	2.956	15.047	Sulfate

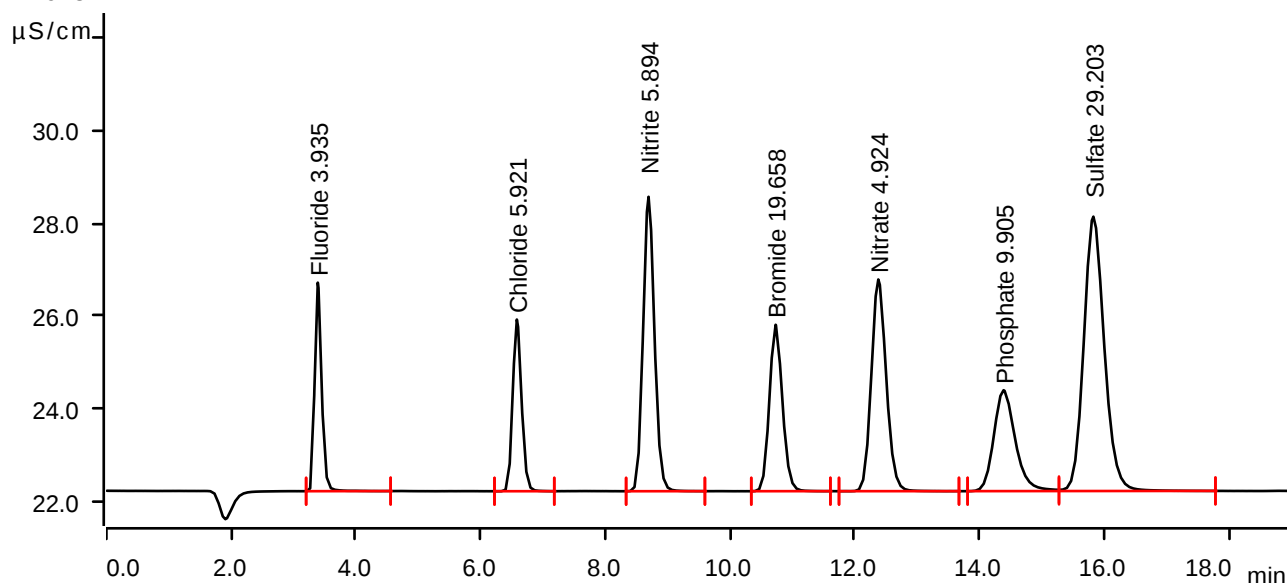
Sample data

Ident STD6
Sample type Standard 6
Determination start 2025-09-09 13:58:07 UTC-4
Method IC1-090925
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 12.44 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	3.390	0.5787	4.477	3.935	Fluoride
2	6.582	0.6073	3.687	5.921	Chloride
3	8.693	1.3385	6.323	5.894	Nitrite
4	10.730	0.8677	3.574	19.658	Bromide
5	12.377	1.2581	4.546	4.924	Nitrate
6	14.385	0.8642	2.167	9.905	Phosphate
7	15.825	2.2540	5.893	29.203	Sulfate

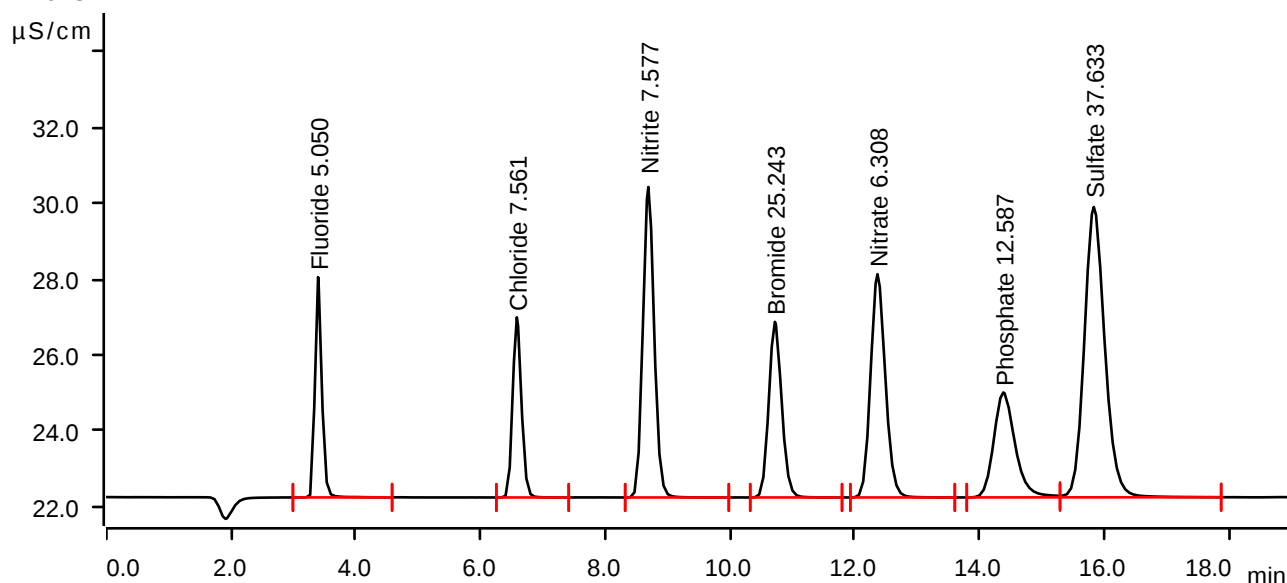
Sample data

Ident STD7
Sample type Standard 7
Determination start 2025-09-09 14:41:06 UTC-4
Method IC1-090925
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 12.39 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	3.395	0.7438	5.806	5.050	Fluoride
2	6.582	0.7764	4.748	7.561	Chloride
3	8.690	1.7250	8.184	7.577	Nitrite
4	10.718	1.1158	4.629	25.243	Bromide
5	12.363	1.6152	5.884	6.308	Nitrate
6	14.382	1.1001	2.766	12.587	Phosphate
7	15.832	2.9131	7.654	37.633	Sulfate

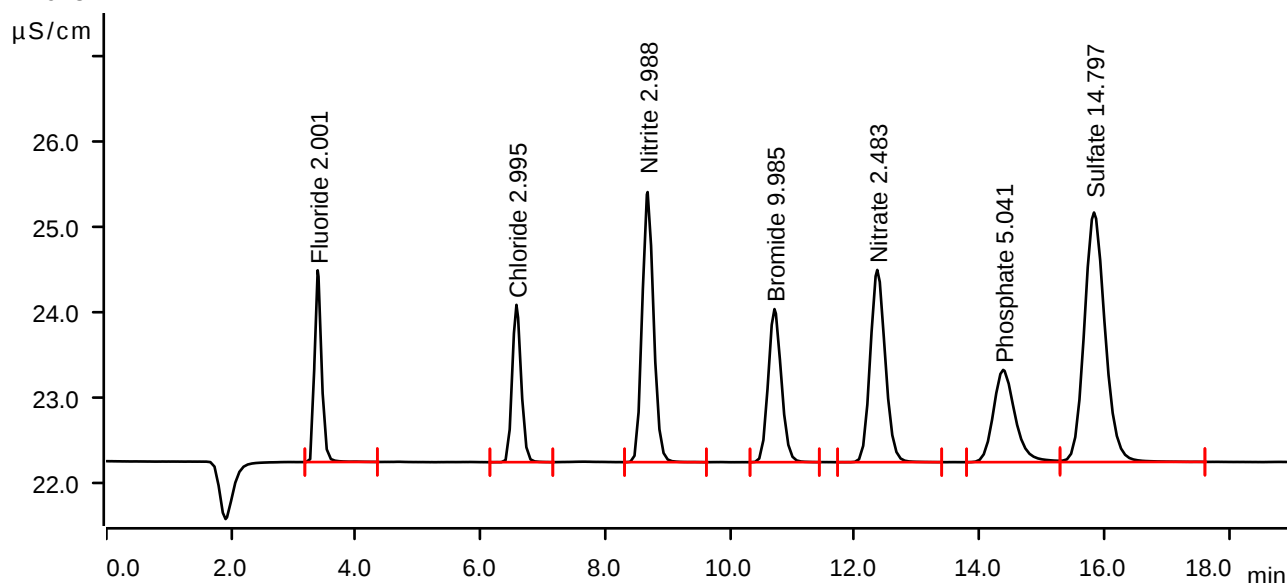
Sample data

Ident ICV
Sample type Check standard 1
Determination start 2025-09-09 15:02:34 UTC-4
Method IC1-090925
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 12.50 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	3.388	0.2923	2.246	2.001	Fluoride
2	6.575	0.3057	1.843	2.995	Chloride
3	8.678	0.6715	3.164	2.988	Nitrite
4	10.712	0.4379	1.793	9.985	Bromide
5	12.360	0.6282	2.252	2.483	Nitrate
6	14.378	0.4365	1.080	5.041	Phosphate
7	15.835	1.1275	2.923	14.797	Sulfate

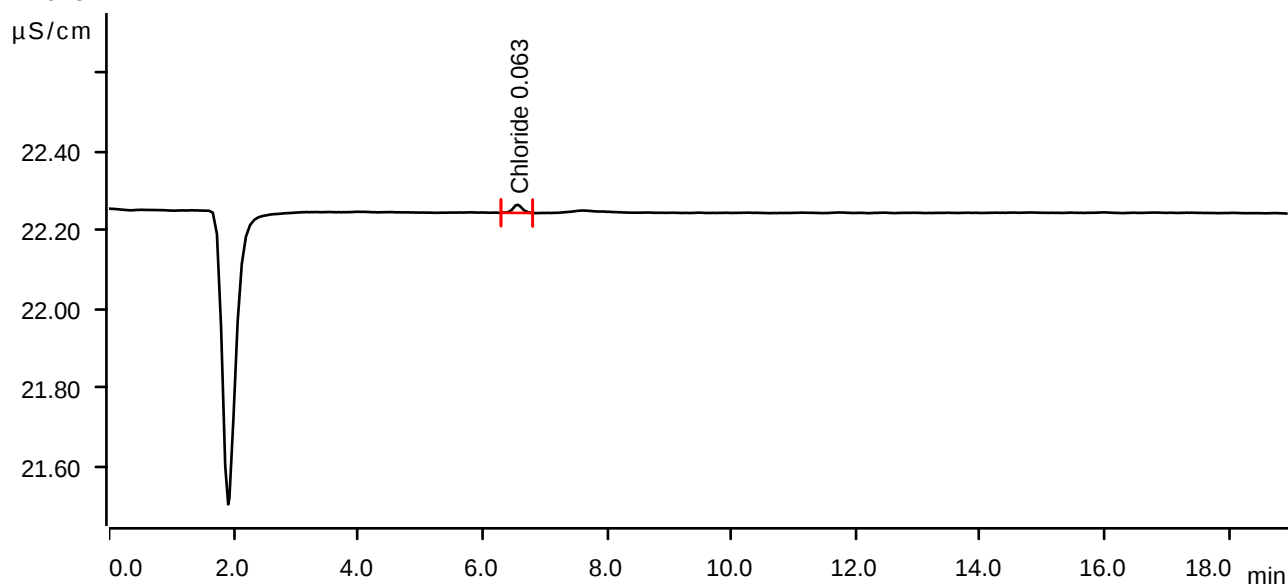
Sample data

Ident ICB
Sample type Sample
Determination start 2025-09-09 15:45:30 UTC-4
Method IC1-090925
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 12.39 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	6.568	0.0036	0.021	0.063	Chloride

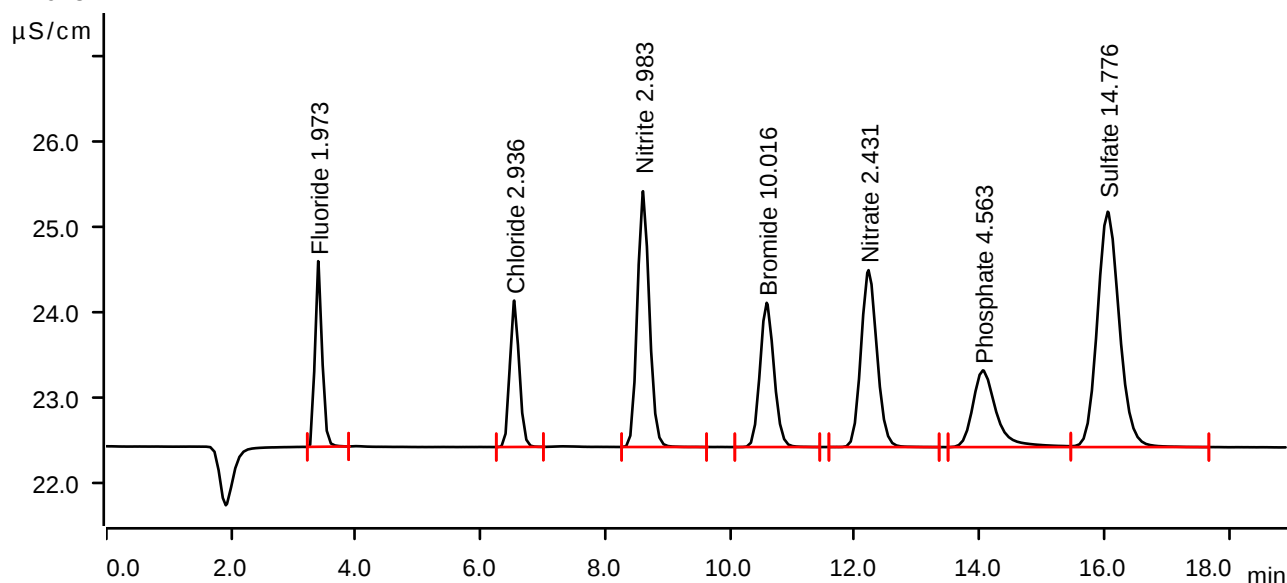
Sample data

Ident CCV
Sample type Check standard 1
Determination start 2025-09-24 09:20:39 UTC-4
Method IC1-090925
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 12.05 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	0.2883	2.174	1.973	Fluoride
2	6.540	0.2997	1.715	2.936	Chloride
3	8.605	0.6703	2.996	2.983	Nitrite
4	10.587	0.4393	1.689	10.016	Bromide
5	12.220	0.6148	2.072	2.431	Nitrate
6	14.053	0.3945	0.899	4.563	Phosphate
7	16.055	1.1259	2.757	14.776	Sulfate

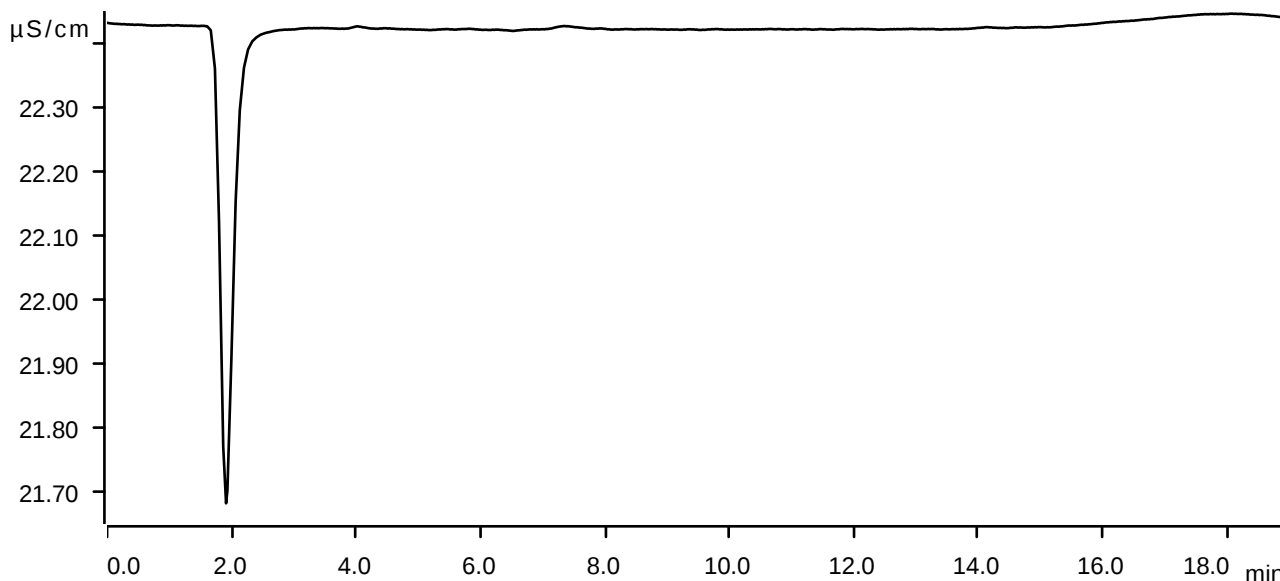
Sample data

Ident CCB
Sample type Sample
Determination start 2025-09-24 09:42:10 UTC-4
Method IC1-090925
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 12.05 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions



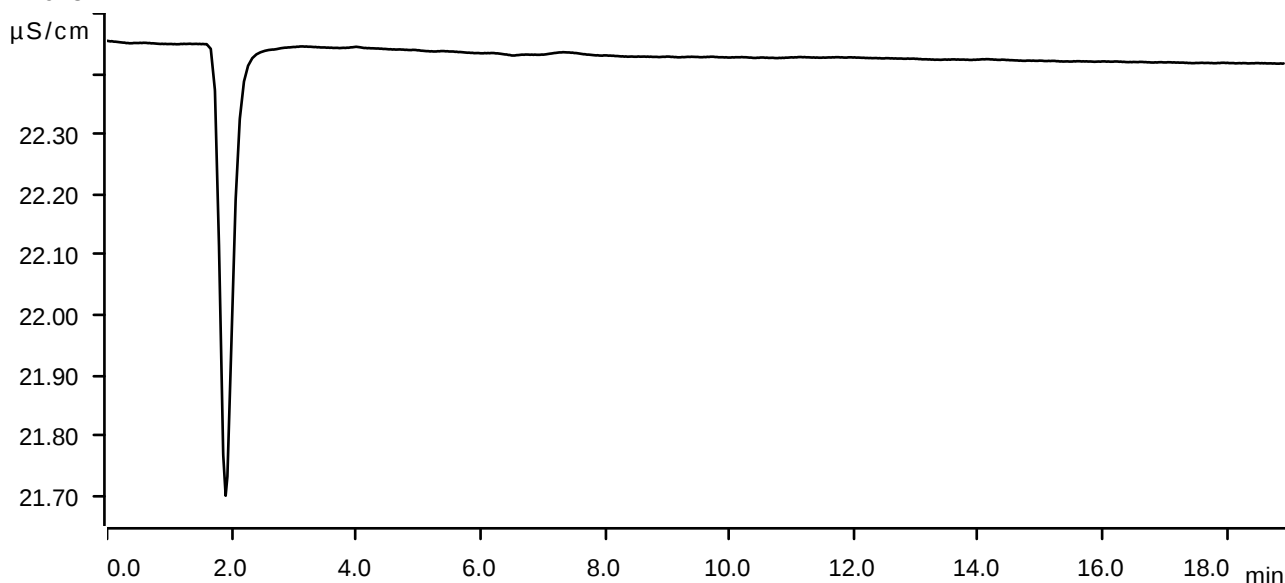
Sample data

Ident LB137286BLW
Sample type Sample
Determination start 2025-09-24 10:03:41 UTC-4
Method IC1-090925
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



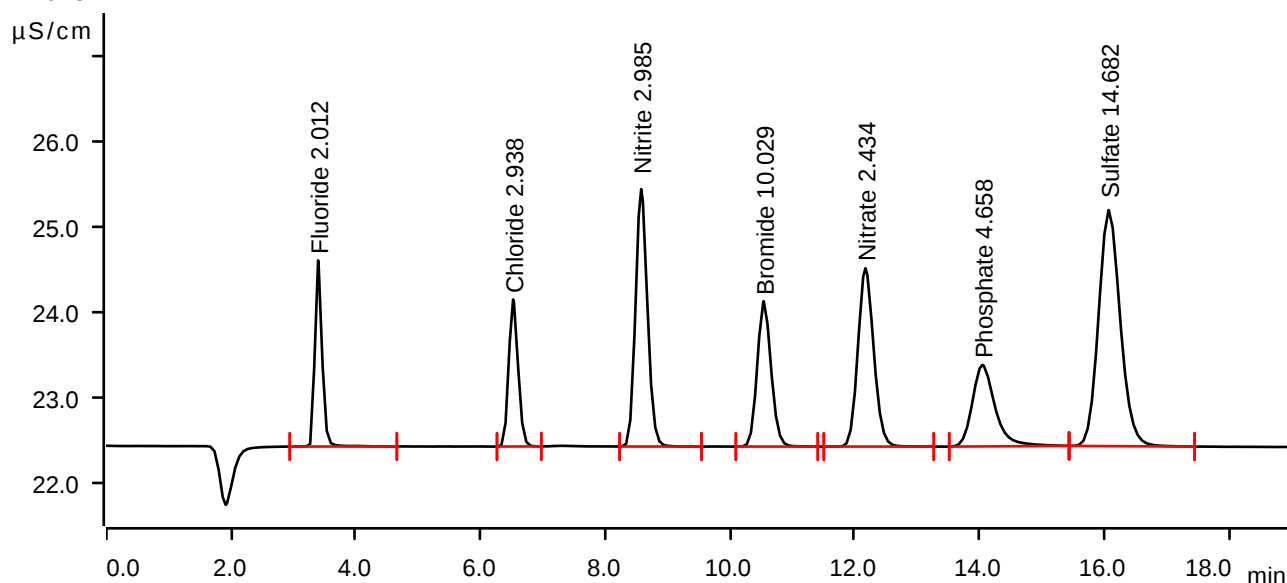
Sample data

Ident LB137286BSW
Sample type Check standard 1
Determination start 2025-09-24 10:25:12 UTC-4
Method IC1-090925
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	3.395	0.2939	2.181	2.012	Fluoride
2	6.522	0.2998	1.722	2.938	Chloride
3	8.575	0.6709	3.015	2.985	Nitrite
4	10.540	0.4399	1.702	10.029	Bromide
5	12.170	0.6156	2.088	2.434	Nitrate
6	14.045	0.4029	0.955	4.658	Phosphate
7	16.072	1.1185	2.764	14.682	Sulfate

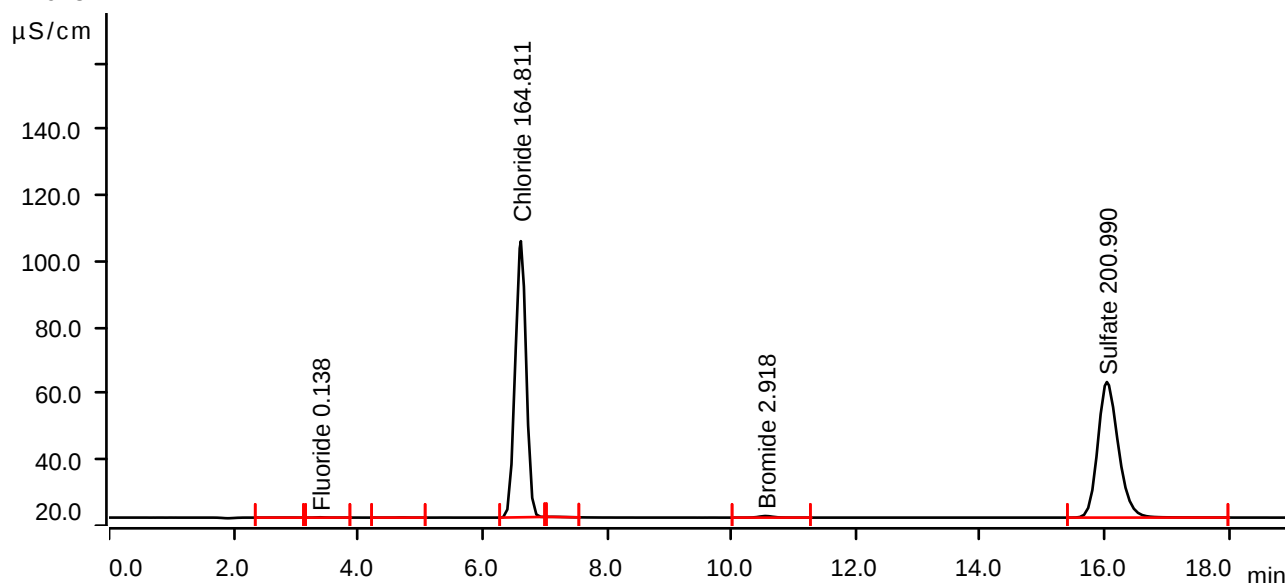
Sample data

Ident Q3172-01
Sample type Sample
Determination start 2025-09-24 10:46:45 UTC-4
Method IC1-090925
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	2.777	0.0072	0.014	invalid	
2	3.390	0.0166	0.105	0.138	Fluoride
3	4.697	0.0075	0.044	invalid	
4	6.618	16.9837	83.553	164.811	Chloride
5	7.115	0.0132	0.042	invalid	
6	10.548	0.1240	0.483	2.918	Bromide
7	16.035	15.6869	41.034	200.990	Sulfate

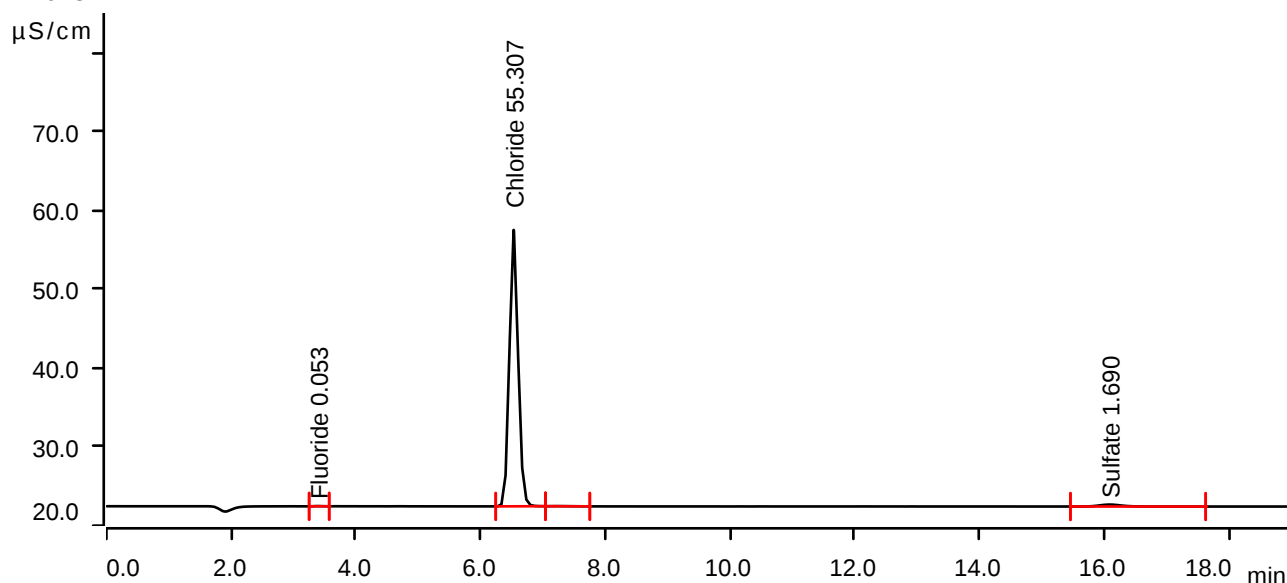
Sample data

Ident Q3168-05
Sample type Sample
Determination start 2025-09-24 11:08:20 UTC-4
Method IC1-090925
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	3.390	0.0040	0.031	0.053	Fluoride
2	6.530	5.6974	35.076	55.307	Chloride
3	7.235	0.0054	0.015	invalid	
4	16.083	0.1026	0.249	1.690	Sulfate

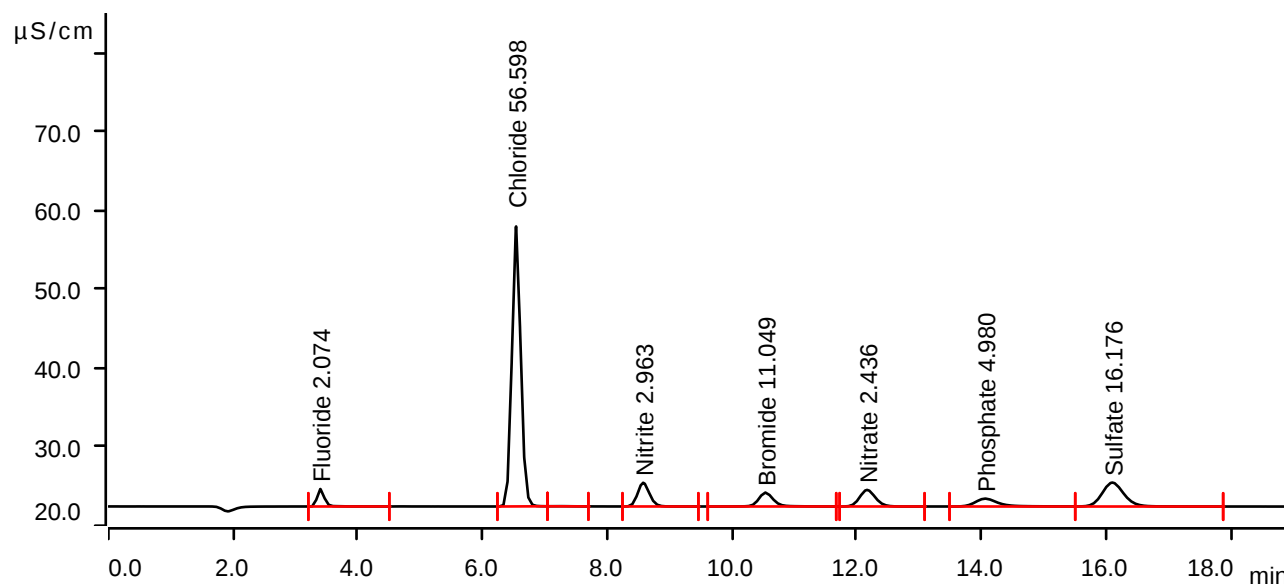
Sample data

Ident Q3168-05MS
Sample type Sample
Determination start 2025-09-24 11:29:53 UTC-4
Method IC1-090925
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	3.398	0.3032	2.217	2.074	Fluoride
2	6.538	5.8305	35.528	56.598	Chloride
3	7.257	0.0056	0.017	invalid	
4	8.575	0.6658	3.010	2.963	Nitrite
5	10.535	0.4852	1.766	11.049	Bromide
6	12.165	0.6163	2.104	2.436	Nitrate
7	14.058	0.4312	0.999	4.980	Phosphate
8	16.097	1.2353	3.041	16.176	Sulfate

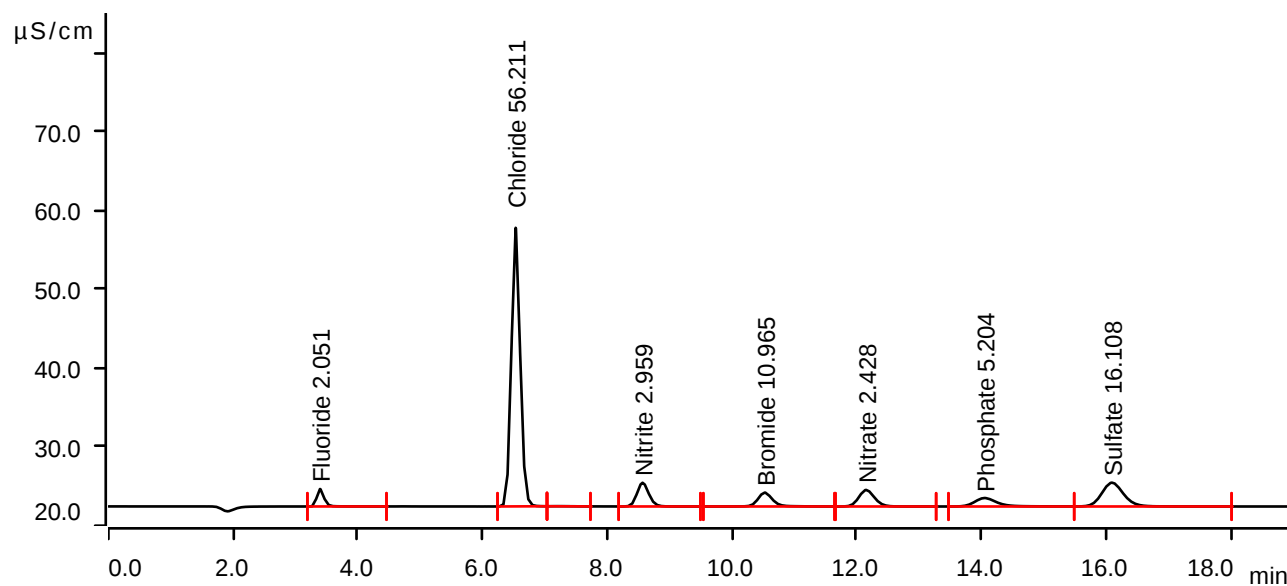
Sample data

Ident Q3168-05MSD
Sample type Sample
Determination start 2025-09-24 11:51:27 UTC-4
Method IC1-090925
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 ($\mu\text{S/cm}$) x min	Height $\mu\text{S/cm}$	Concentration ppm	Component name
1	3.393	0.2997	2.214	2.051	Fluoride
2	6.530	5.7906	35.354	56.211	Chloride
3	7.245	0.0057	0.017	invalid	
4	8.565	0.6649	3.009	2.959	Nitrite
5	10.523	0.4815	1.763	10.965	Bromide
6	12.150	0.6140	2.098	2.428	Nitrate
7	14.048	0.4509	1.074	5.204	Phosphate
8	16.090	1.2300	3.026	16.108	Sulfate

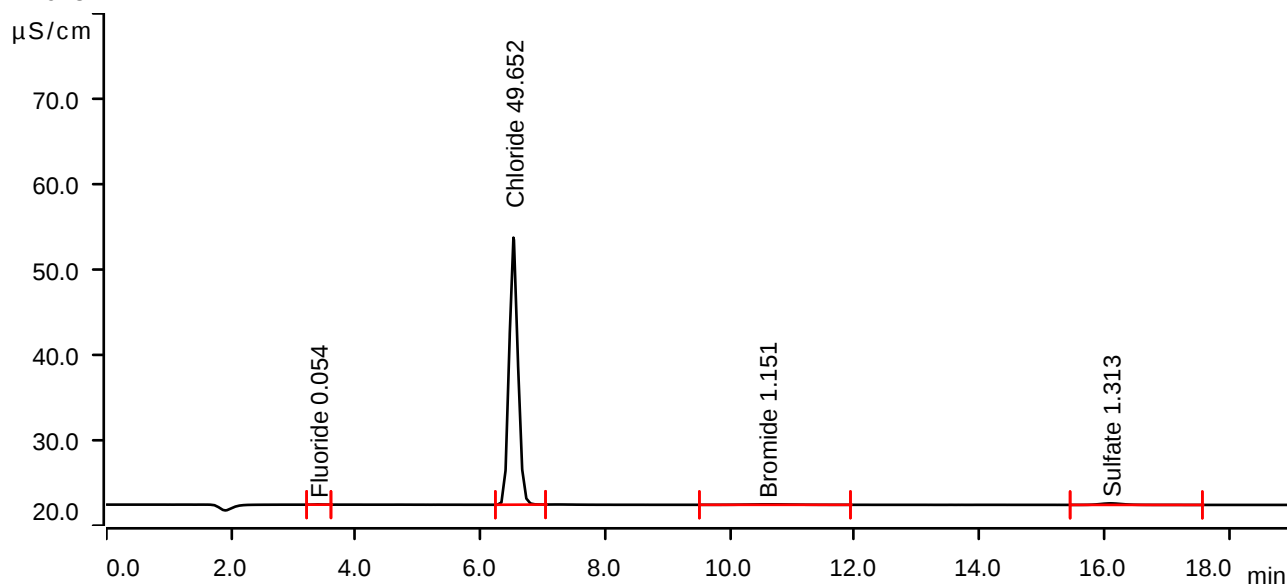
Sample data

Ident Q3168-06
Sample type Sample
Determination start 2025-09-24 12:13:02 UTC-4
Method IC1-090925
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	3.390	0.0041	0.031	0.054	Fluoride
2	6.527	5.1145	31.280	49.652	Chloride
3	10.588	0.0454	0.055	1.151	Bromide
4	16.098	0.0731	0.177	1.313	Sulfate

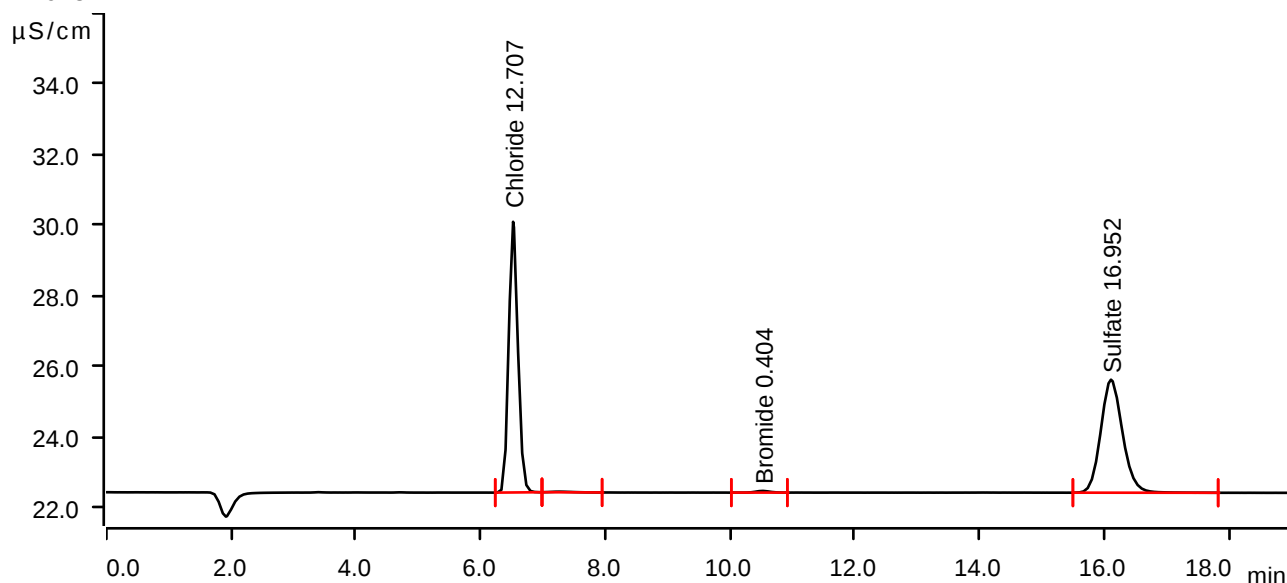
Sample data

Ident Q3172-01DLX10
Sample type Sample
Determination start 2025-09-24 12:34:37 UTC-4
Method IC1-090925
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	6.522	1.3067	7.662	12.707	Chloride
2	7.262	0.0069	0.018	invalid	
3	10.525	0.0123	0.047	0.404	Bromide
4	16.107	1.2960	3.200	16.952	Sulfate

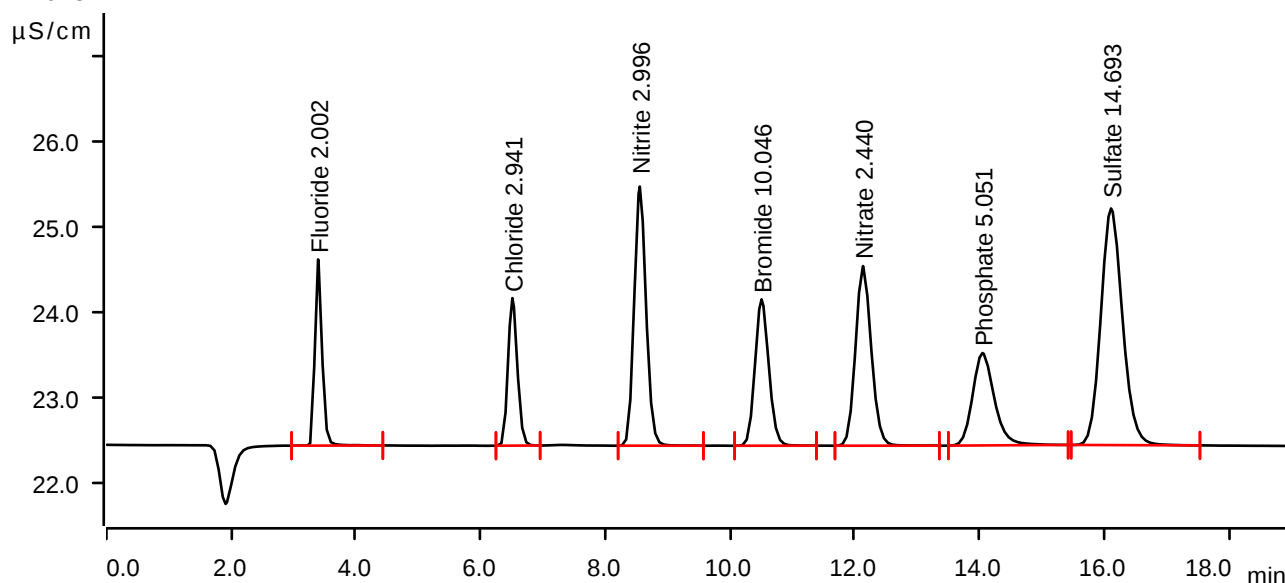
Sample data

Ident CCV
Sample type Check standard 1
Determination start 2025-09-24 12:56:11 UTC-4
Method IC1-090925
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	3.395	0.2924	2.181	2.002	Fluoride
2	6.510	0.3002	1.728	2.941	Chloride
3	8.553	0.6733	3.035	2.996	Nitrite
4	10.505	0.4407	1.714	10.046	Bromide
5	12.130	0.6171	2.104	2.440	Nitrate
6	14.047	0.4374	1.083	5.051	Phosphate
7	16.108	1.1193	2.772	14.693	Sulfate

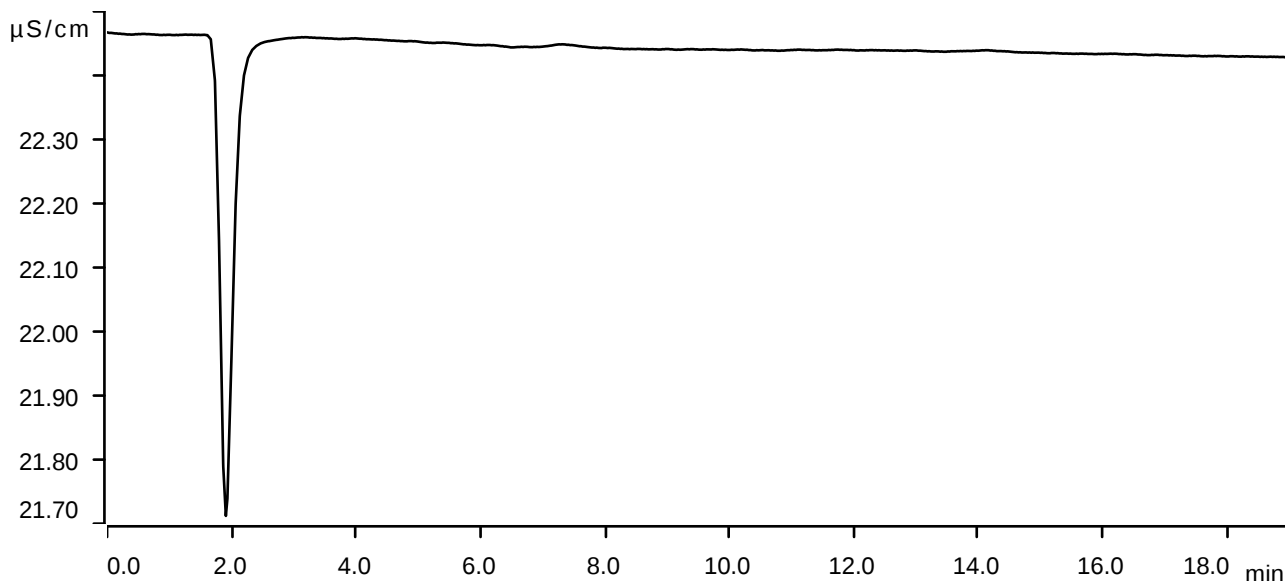
Sample data

Ident CCB
Sample type Sample
Determination start 2025-09-24 13:17:42 UTC-4
Method IC1-090925
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



WORKLIST(Hardcopy Internal Chain)

6137286

WorkList Name : anion-3168

WorkList ID : 192035

Department : Wet-Chemistry

Date : 09-24-2025 08:12:05

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q3168-05	TOTES COMP#1	Water	Anions Group1	Cool 4 deg C	PSEG03	J11	09/23/2025	300.0
Q3168-06	TOTES COMP#2	Water	Anions Group1	Cool 4 deg C	PSEG03	J11	09/23/2025	300.0
Q3172-01	FW7D	Water	Anions Group1	Cool 4 deg C	GENV01	J43	09/22/2025	300.0

Date/Time 09/24/25 10:05
Raw Sample Received by: 12 (WC)
Raw Sample Relinquished by: 28 (WC)

Date/Time 09/24/25 12:35
Raw Sample Received by: 28 (WC)
Raw Sample Relinquished by: 12 (WC)

Instrument ID: IC-1

Daily Analysis Runlog For Sequence/QC Batch ID # LB137286

Review By	rubina	Review On	9/26/2025 9:54:34 AM
Supervise By	Iwona	Supervise On	9/26/2025 10:40:57 AM
SubDirectory	LB137286	Test	Anions
STD. NAME	STD REF.#		
ICAL Standard	WP114677,WP114678,WP114679,WP114680,WP114681,WP114682,WP114683		
ICV Standard	WP114684		
CCV Standard	WP114879		
ICSA Standard	N/A		
CRI Standard	N/A		
LCS Standard	WP114880		
Chk Standard	WP114685,WP114686		

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	STD1	STD1	CAL1	09/09/25 10:21	All standards, samples, and	RM/IZ	OK
2	STD2	STD2	CAL2	09/09/25 10:42	QC are filtered through	RM/IZ	OK
3	STD3	STD3	CAL3	09/09/25 11:25	0.45um, filter lot W3160	RM/IZ	OK
4	STD4	STD4	CAL4	09/09/25 11:47		RM/IZ	OK
5	STD5	STD5	CAL5	09/09/25 13:36		RM/IZ	OK
6	STD6	STD6	CAL6	09/09/25 13:58		RM/IZ	OK
7	STD7	STD7	CAL7	09/09/25 14:41		RM/IZ	OK
8	ICV1	ICV1	ICV	09/09/25 15:02		RM/IZ	OK
9	ICB1	ICB1	ICB	09/09/25 15:45		RM/IZ	OK
10	CCV1	CCV1	CCV	09/24/25 09:20		RM/IZ	OK
11	CCB1	CCB1	CCB	09/24/25 09:42		RM/IZ	OK
12	LB137286BLW	LB137286BLW	MB	09/24/25 10:03		RM/IZ	OK
13	LB137286BSW	LB137286BSW	LCS	09/24/25 10:25		RM/IZ	OK
14	Q3172-01	FW7D	SAM	09/24/25 10:46	SO2-4 is high	RM/IZ	Dilution
15	Q3168-05	TOTES COMP#1	SAM	09/24/25 11:08		RM/IZ	OK
16	Q3168-05MS	TOTES COMP#1MS	MS	09/24/25 11:29	9.5ml of sample, 0.5mL W3092	RM/IZ	OK
17	Q3168-05MSD	TOTES COMP#1MSD	MSD	09/24/25 11:51	9.5ml of sample, 0.5mL W3092	RM/IZ	OK
18	Q3168-06	TOTES COMP#2	SAM	09/24/25 12:13		RM/IZ	OK

Instrument ID: IC-1

Daily Analysis Runlog For Sequence/QC Batch ID # LB137286

Review By	rubina	Review On	9/26/2025 9:54:34 AM
Supervise By	Iwona	Supervise On	9/26/2025 10:40:57 AM
SubDirectory	LB137286	Test	Anions

STD. NAME	STD REF.#
ICAL Standard	WP114677,WP114678,WP114679,WP114680,WP114681,WP114682,WP114683
ICV Standard	WP114684
CCV Standard	WP114879
ICSA Standard	N/A
CRI Standard	N/A
LCS Standard	WP114880
Chk Standard	WP114685,WP114686

19	Q3172-01DL	FW7DDL	SAM	09/24/25 12:34	10X For SO2-4	RM/IZ	Confirms
20	CCV2	CCV2	CCV	09/24/25 12:56		RM/IZ	OK
21	CCB2	CCB2	CCB	09/24/25 13:17		RM/IZ	OK

Prep Standard - Chemical Standard Summary

Order ID : Q3172

Test : Anions Group1

Prepbatch ID :

Sequence ID/Qc Batch ID: LB137286,

Standard ID :

WP112796,WP114677,WP114678,WP114679,WP114680,WP114681,WP114682,WP114683,WP114684,WP114685,WP114686,WP114879,WP114880,

Chemical ID :

M6186,W2647,W3112,W3163,W3180,W3197,

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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>
4035	IC ELUENT CONCENTRATE FOR IC-1	WP112796	04/22/2025	10/22/2025	Iwona Zarych	WETCHEM_SCALE_5 (WC SC-5)	None	Jignesh Parikh 04/22/2025
FROM 2.10000gram of W2647 + 84.75000gram of W3163 + 913.15000ml of W3112 = Final Quantity: 1000.000 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>
2487	Anions 300/9056 calibration standard 1	WP114677	09/09/2025	09/10/2025	Iwona Zarych	None	None	Jignesh Parikh 09/11/2025
FROM 10.00000ml of W3112 = Final Quantity: 10.000 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>
24	Anions 300/9056 calibration standard 2	WP114678	09/09/2025	09/10/2025	Iwona Zarych	None	WETCHEM_F IPETTE_3 (WC)	Jignesh Parikh 09/11/2025
FROM 0.20000ml of W3180 + 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	WP114679	09/09/2025	09/10/2025	Iwona Zarych	None	WETCHEM_F IPETTE_3 (WC)	Jignesh Parikh 09/11/2025
FROM 0.40000ml of W3180 + 9.60000ml of W3112 = Final Quantity: 10.000 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>
26	Anions 300/9056 calibration standard 4	WP114680	09/09/2025	09/10/2025	Iwona Zarych	None	WETCHEM_F IPETTE_3 (WC)	Jignesh Parikh 09/11/2025
FROM 0.50000ml of W3180 + 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	WP114681	09/09/2025	09/10/2025	Iwona Zarych	None	WETCHEM_F IPETTE_3 (WC)	Jignesh Parikh 09/11/2025
FROM 45.00000ml of W3112 + 5.00000ml of W3180 = Final Quantity: 50.000 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>
3679	Anions 300/9056 calibration standard 6	WP114682	09/09/2025	09/10/2025	Iwona Zarych	None	WETCHEM_F IPETTE_3 (WC)	Jignesh Parikh 09/11/2025
FROM 2.00000ml of W3180 + 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	WP114683	09/09/2025	09/10/2025	Iwona Zarych	None	WETCHEM_F IPETTE_3 (WC)	Jignesh Parikh 09/11/2025
FROM 2.50000ml of W3180 + 7.50000ml of W3112 = Final Quantity: 10.000 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>
3233	Anions 300/9056 ICV-LCS std	WP114684	09/09/2025	09/10/2025	Iwona Zarych	None	WETCHEM_F IPETTE_3 (WC)	Jignesh Parikh 09/11/2025
FROM 45.00000ml of W3112 + 5.00000ml of W3197 = 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>
4036	IC ELUENT FOR IC-1	WP114685	09/09/2025	10/09/2025	Iwona Zarych	None	Glass Pipette-A	Jignesh Parikh 09/11/2025
FROM 1980.00000ml of W3112 + 20.00000ml of WP112796 = Final Quantity: 2000.000 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>
4037	IC H2SO4 FOR IC-1	WP114686	09/09/2025	10/09/2025	Iwona Zarych	None	Glass Pipette-A	Jignesh Parikh 09/11/2025

FROM 5.60000ml of M6186 + 994.40000ml of W3112 = Final Quantity: 1000.000 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	WP114879	09/24/2025	09/25/2025	Iwona Zarych	None	WETCHEM_FIPETTE_3 (WC)	Jignesh Parikh 09/26/2025

FROM 45.00000ml of W3112 + 5.00000ml of W3180 = Final Quantity: 50.000 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>
3233	Anions 300/9056 ICV-LCS std	WP114880	09/24/2025	09/25/2025	Iwona Zarych	None	WETCHEM_F IPETTE_3 (WC)	Jignesh Parikh 09/26/2025
FROM 45.00000ml of W3112 + 5.00000ml of W3197 = 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	02/12/2026	08/13/2025 / Sagar	08/06/2025 / Sagar	M6186

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 #
Seidler Chemical	DIW / DI Water	Daily Lab-Certified	07/03/2029	07/03/2024 / lwona	07/03/2024 / lwona	W3112

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	24E3156178	09/30/2027	12/10/2024 / lwona	12/10/2024 / lwona	W3163

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	V2-MEB742616	02/19/2026	02/19/2025 / lwona	01/27/2025 / lwona	W3180

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	040525	04/05/2027	04/08/2025 / lwona	04/08/2025 / lwona	W3197

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

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

avantor™



M6186

Recieve Date :- 08/06/25

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

 **avantorsm**

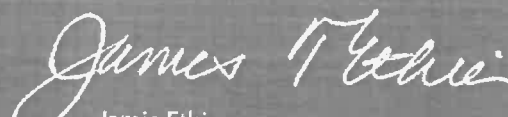


Material No.: 9673-33
Batch No.: 23D2462010

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



W3163 Rec. on 12/10/24 by IZ

Certificate of Analysis

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Material BDH9284-2.5KG
Material Description BDH SODIUM CARB ANHYD ACS 2.5KG
Grade U S P REAGENT (ACS GRADE)

Batch 24E3156178
Reassay Date 09/30/2027
CAS Number 497-19-8
Molecular Formula Na2CO3
Molecular Mass 105.99

Date of Manufacture 09/01/2023
Storage Room Temperature
Material is hygroscopic. Protect from Moisture.
Additional Product Description:

Characteristics	Specifications	Measured Values
Appearance	Fine white granular powder	Fine white granular powder
Calcium	<= 0.03 %	0.003 %
Chloride	<= 0.001 %	0.0003 %
Heavy Metals (as Pb)	<= 0.0005 %	0.0001 %
Insolubles	<= 0.01 %	0.001 %
Iron	<= 0.0005 %	0.0001 %
Loss on Heating	<= 1.0 %	0.03 %
Magnesium	<= 0.005 %	0.001 %
Phosphate	<= 0.001 %	0.001 %
Potassium	<= 0.005 %	0.003 %
Purity	>= 99.5 %	100.0 %
Silica	<= 0.005 %	0.001 %
Sulfur Compounds	<= 0.003 %	0.002 %
Extra Description:	Meets Reagent Specifications for testing USP/NF monographs	

Internal ID #: 710

Signature	Additional Information
We certify that this batch conforms to the specifications listed above. This document has been electronically produced and is valid without a signature. Leona Edwardson, Quality Control Sr. Manager - Solon VWR Chemicals, LLC. 28600 Fountain Parkway, Solon OH 44139 USA	Analysis may have been rounded to significant digits in specification limits Product meets analytical specifications of the grades listed.



Refine your results. Redefine your industry.

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

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: V2-MEB742616
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	30.01 ± 0.13 µg/mL
Fluoride, F-	20.00 ± 0.07 µg/mL	Nitrate as N, NNO ₃ -	25.00 ± 0.10 µg/mL
Nitrite as N, NNO ₂ -	30.00 ± 0.10 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	08228TH-H2
NNO2-	Calculated	40h	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:

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

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

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

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

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

April 02, 2024

- 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

- **April 02, 2029**

- 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:

Uyen Truong
Custom Processing Supervisor



Certificate Approved By:

Thomas Kozikowski
Stock VS Manager



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director





SHIPPING DOCUMENTS

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CLIENT INFORMATION

CLIENT PROJECT INFORMATION

CLIENT BILLING INFORMATION

COMPANY: G ENVIRONMENTAL
ADDRESS: 8 CARRIAGE
CITY: Success STATE: NJ ZIP:
ATTENTION:
PHONE: FAX:

PROJECT NAME: Amsterdam
PROJECT NO.: LOCATION: NJ
PROJECT MANAGER: GBC
e-mail:
PHONE: FAX:

BILL TO: G ENVIRONMENTAL PO#:
ADDRESS: 8 CARRIAGE
CITY: Success STATE: NJ ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION

DATA DELIVERABLE INFORMATION

FAX (RUSH) STANDARD DAYS*
HARDCOPY (DATA PACKAGE) STANDARD DAYS*
EDD: STANDARD DAYS*
*TO BE APPROVED BY CHEMTECH
STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS

☐ 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 NO ASP
EDD FORMAT Excel 12516

TCU VOL 15
THE Metals
Sulfate

ALLIANCE SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE		SAMPLE COLLECTION		# OF BOTTLES	PRESERVATIVES									COMMENTS	
			COMP	GRAB	DATE	TIME		1	2	3	4	5	6	7	8	9	← Specify Preservatives A-HCl D-NaOH B-HNO3 E-ICE C-H2SO4 F-OTHER	
1.	FW7D	GW		X	9/22/25	1039	4	X	X	X								
2.	FW6D	GW		X	9/22/25	1445	3	X	X									
3.	GB3W	GW		X	9/22/25	1200	2	X										
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>[Signature]</u>	DATE/TIME: <u>9/22/25</u>	RECEIVED BY: 1. <u>[Signature]</u>	Conditions of bottles or coolers at receipt: ☐ COMPLIANT ☐ NON COMPLIANT ☐ COOLER TEMP <u>2.2</u> °C
RELINQUISHED BY SAMPLER: 2. <u>[Signature]</u>	DATE/TIME:	RECEIVED BY: 2. <u>[Signature]</u>	Comments: <u>IF E-ICE</u>
RELINQUISHED BY SAMPLER: 3. <u>[Signature]</u>	DATE/TIME:	RECEIVED BY: 3. <u>[Signature]</u>	Page <u>1</u> of <u>1</u> CLIENT: ☐ Hand Delivered ☐ Other <u>Shipment Complete</u> ☐ YES ☐ NO

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Laboratory Certification

Certified By	License No.
Connecticut	PH-0830
DOD ELAP (ANAB)	L2219
Maine	2024021
Maryland	296
New Hampshire	255425
New Jersey	20012
New York	11376
Pennsylvania	68-00548
Soil Permit	525-24-234-08441
Texas	TX-C25-00189
Virginia	460312

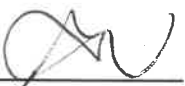
LOGIN REPORT/SAMPLE TRANSFER

Order ID : Q3172	GENV01	Order Date : 9/24/2025 9:00:00 AM	Project Mgr :
Client Name : G Environmental		Project Name : Amsterdam	Report Type : Level 4
Client Contact : Gary Landis		Receive DateTime : 9/23/2025 1:15:00 PM	EDD Type : HAZ/EXCEL
Invoice Name : G Environmental		Purchase Order :	Hard Copy Date :
Invoice Contact : Gary Landis			Date Signoff :

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD	FAX DATE	DUE DATES
Q3172-01	FW7D	Water	09/22/2025	12:39					
					VOCMS Group1		8260-Low	10 Bus. Days	
Q3172-02	FW6D	Water	09/22/2025	14:45					
					VOCMS Group1		8260-Low	10 Bus. Days	
Q3172-03	GB3W	Water	09/22/2025	12:00					
					VOCMS Group1		8260-Low	10 Bus. Days	

Relinquished By :

Date / Time :


9/24/25 0950

Received By :

Date / Time :


09/24/25 0950 Rgt 4

Storage Area : VOA Refridgerator Room