

## **DATA PACKAGE GENERAL CHEMISTRY**

**PROJECT NAME : NWIRP BETHPAGE 112G08005-WE13**

**TETRA TECH NUS, INC.  
661 Andersen Drive  
Suite 200  
Pittsburgh, PA - 15220-2745  
Phone No: 412-921-7090**

**ORDER ID : Q2697  
ATTENTION : Ernie Wu**



**Laboratory Certification ID # 20012**



|                                                       |    |
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## Cover Page

**Order ID :** Q2697

**Project ID :** NWIRP Bethpage 112G08005-WE13

**Client :** Tetra Tech NUS, Inc.

### Lab Sample Number

Q2697-01  
Q2697-02  
Q2697-03

### Client Sample Number

RW7-SP100-20250724  
RW7-SP201-20250724  
RW7-SP303-20250724

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: 7/30/2025

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012



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

## **CASE NARRATIVE**

**Tetra Tech NUS, Inc.**

**Project Name: NWIRP Bethpage 112G08005-WE13**

**Project Manager : Ernie Wu**

**Order ID # Q2697**

**Test Name: Anions Group4**

### **A. Number of Samples and Date of Receipt:**

1 Water sample was received on 07/25/2025.

### **B. Parameters:**

According to the Chain of Custody document, the following analyses were requested: Anions Group4. This data package contains results for Anions Group4.

### **C. Analytical Techniques:**

The analysis of Anions Group4 was based on method 300.0.

### **D. QA/ QC Samples:**

The Holding Times were met for all analysis.

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:**

The laboratory certifies that the all-electronic diskette deliverable exactly match the data summary forms (i.e. Form Is).

---

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:

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

**GENERAL CHEMISTRY CONFORMANCE/NON-CONFORMANCE SUMMARY**

ORDER ID: Q2697

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.                                            |    |    |     |
| 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:

The laboratory certifies that the all-electronic diskette deliverable exactly match the data summary forms (i.e. Form Is).

\_\_\_\_\_  
QA REVIEW

\_\_\_\_\_  
Date

APPENDIX A

**QA REVIEW GENERAL DOCUMENTATION**

Project #: Q2697

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: 07/30/2025

### LAB CHRONICLE

|                 |                      |                   |                               |
|-----------------|----------------------|-------------------|-------------------------------|
| <b>OrderID:</b> | Q2697                | <b>OrderDate:</b> | 7/25/2025 10:41:00 AM         |
| <b>Client:</b>  | Tetra Tech NUS, Inc. | <b>Project:</b>   | NWIRP Bethpage 112G08005-WE13 |
| <b>Contact:</b> | Ernie Wu             | <b>Location:</b>  | D51                           |

| LabID    | ClientID               | Matrix | Test          | Method | Sample Date       | Prep Date | Anal Date         | Received |
|----------|------------------------|--------|---------------|--------|-------------------|-----------|-------------------|----------|
| Q2697-01 | RW7-SP100-2025072<br>4 | WATER  | Anions Group4 | 300.0  | 07/24/25<br>12:15 |           | 07/25/25<br>14:43 | 07/25/25 |



# SAMPLE DATA

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

## Report of Analysis

|                   |                               |                 |                |
|-------------------|-------------------------------|-----------------|----------------|
| Client:           | Tetra Tech NUS, Inc.          | Date Collected: | 07/24/25 12:15 |
| Project:          | NWIRP Bethpage 112G08005-WE13 | Date Received:  | 07/25/25       |
| Client Sample ID: | RW7-SP100-20250724            | SDG No.:        | Q2697          |
| Lab Sample ID:    | Q2697-01                      | Matrix:         | WATER          |
|                   |                               | % Solid:        | 0              |

| Parameter       | Conc. | Qua. | DF | MDL   | LOD  | LOQ / CRQL | Units | Prep Date | Date Ana.      | Ana Met. |
|-----------------|-------|------|----|-------|------|------------|-------|-----------|----------------|----------|
| Nitrite         | 0.30  | U    | 1  | 0.074 | 0.30 | 0.60       | mg/L  |           | 07/25/25 14:43 | 300.0    |
| Nitrate         | 3.00  |      | 1  | 0.095 | 0.25 | 0.50       | mg/L  |           | 07/25/25 14:43 | 300.0    |
| Nitrate+Nitrite | 3.00  |      | 1  | 0.17  | 0.55 | 1.10       | mg/L  |           | 07/25/25 14:43 | 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

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

## Initial and Continuing Calibration Verification

**Client:** Tetra Tech NUS, Inc.

**SDG No.:** Q2697

**Project:** NWIRP Bethpage 112G08005-WE13

**RunNo.:** LB136635

| Analyte                | Units | Result | True Value | % Recovery | Acceptance Window (%R) | Analysis Date |
|------------------------|-------|--------|------------|------------|------------------------|---------------|
| <b>Sample ID: ICV1</b> |       |        |            |            |                        |               |
| Bromide                | mg/L  | 9.5    | 10         | 95         | 90-110                 | 07/21/2025    |
| Chloride               | mg/L  | 2.8    | 3          | 93         | 90-110                 | 07/21/2025    |
| Fluoride               | mg/L  | 1.9    | 2          | 95         | 90-110                 | 07/21/2025    |
| Nitrite                | mg/L  | 2.8    | 3          | 93         | 90-110                 | 07/21/2025    |
| Nitrate                | mg/L  | 2.3    | 2.5        | 92         | 90-110                 | 07/21/2025    |
| Sulfate                | mg/L  | 14.2   | 15         | 95         | 90-110                 | 07/21/2025    |
| Orthophosphate as P    | mg/L  | 4.8    | 5          | 96         | 90-110                 | 07/21/2025    |
| <b>Sample ID: CCV1</b> |       |        |            |            |                        |               |
| Bromide                | mg/L  | 10.1   | 10         | 101        | 90-110                 | 07/25/2025    |
| Chloride               | mg/L  | 3.1    | 3          | 103        | 90-110                 | 07/25/2025    |
| Fluoride               | mg/L  | 2      | 2          | 100        | 90-110                 | 07/25/2025    |
| Nitrite                | mg/L  | 3      | 3          | 100        | 90-110                 | 07/25/2025    |
| Nitrate                | mg/L  | 2.5    | 2.5        | 100        | 90-110                 | 07/25/2025    |
| Sulfate                | mg/L  | 14.9   | 15         | 99         | 90-110                 | 07/25/2025    |
| Orthophosphate as P    | mg/L  | 5      | 5          | 100        | 90-110                 | 07/25/2025    |
| <b>Sample ID: CCV2</b> |       |        |            |            |                        |               |
| Bromide                | mg/L  | 10.2   | 10         | 102        | 90-110                 | 07/25/2025    |
| Chloride               | mg/L  | 3.1    | 3          | 103        | 90-110                 | 07/25/2025    |
| Fluoride               | mg/L  | 2      | 2          | 100        | 90-110                 | 07/25/2025    |
| Nitrite                | mg/L  | 3      | 3          | 100        | 90-110                 | 07/25/2025    |
| Nitrate                | mg/L  | 2.5    | 2.5        | 100        | 90-110                 | 07/25/2025    |
| Sulfate                | mg/L  | 15.1   | 15         | 101        | 90-110                 | 07/25/2025    |
| Orthophosphate as P    | mg/L  | 5.1    | 5          | 102        | 90-110                 | 07/25/2025    |
| <b>Sample ID: CCV3</b> |       |        |            |            |                        |               |
| Bromide                | mg/L  | 10.2   | 10         | 102        | 90-110                 | 07/25/2025    |
| Chloride               | mg/L  | 3.1    | 3          | 103        | 90-110                 | 07/25/2025    |
| Fluoride               | mg/L  | 2      | 2          | 100        | 90-110                 | 07/25/2025    |
| Nitrite                | mg/L  | 3      | 3          | 100        | 90-110                 | 07/25/2025    |
| Nitrate                | mg/L  | 2.5    | 2.5        | 100        | 90-110                 | 07/25/2025    |
| Sulfate                | mg/L  | 15     | 15         | 100        | 90-110                 | 07/25/2025    |
| Orthophosphate as P    | mg/L  | 5.1    | 5          | 102        | 90-110                 | 07/25/2025    |



## Initial and Continuing Calibration Blank Summary

**Client:** Tetra Tech NUS, Inc.

**SDG No.:** Q2697

**Project:** NWIRP Bethpage 112G08005-WE13

**RunNo.:** LB136635

| Analyte                | Units | Result   | Acceptance Limits | Conc Qual | MDL   | RDL | Analysis Date |
|------------------------|-------|----------|-------------------|-----------|-------|-----|---------------|
| <b>Sample ID: ICB1</b> |       |          |                   |           |       |     |               |
| Bromide                | mg/L  | < 1.0000 | 1.0000            | U         | 0.37  | 2   | 07/21/2025    |
| Chloride               | mg/L  | < 0.3000 | 0.3000            | U         | 0.19  | 0.6 | 07/21/2025    |
| Fluoride               | mg/L  | < 0.2000 | 0.2000            | U         | 0.11  | 0.4 | 07/21/2025    |
| Nitrite                | mg/L  | < 0.3000 | 0.3000            | U         | 0.074 | 0.6 | 07/21/2025    |
| Nitrate                | mg/L  | < 0.2500 | 0.2500            | U         | 0.095 | 0.5 | 07/21/2025    |
| Sulfate                | mg/L  | < 1.5000 | 1.5000            | U         | 0.46  | 3   | 07/21/2025    |
| Orthophosphate as P    | mg/L  | < 0.5000 | 0.5000            | U         | 0.34  | 1   | 07/21/2025    |
| <b>Sample ID: CCB1</b> |       |          |                   |           |       |     |               |
| Bromide                | mg/L  | < 1.0000 | 1.0000            | U         | 0.37  | 2   | 07/25/2025    |
| Chloride               | mg/L  | < 0.3000 | 0.3000            | U         | 0.19  | 0.6 | 07/25/2025    |
| Fluoride               | mg/L  | < 0.2000 | 0.2000            | U         | 0.11  | 0.4 | 07/25/2025    |
| Nitrite                | mg/L  | < 0.3000 | 0.3000            | U         | 0.074 | 0.6 | 07/25/2025    |
| Nitrate                | mg/L  | < 0.2500 | 0.2500            | U         | 0.095 | 0.5 | 07/25/2025    |
| Sulfate                | mg/L  | < 1.5000 | 1.5000            | U         | 0.46  | 3   | 07/25/2025    |
| Orthophosphate as P    | mg/L  | < 0.5000 | 0.5000            | U         | 0.34  | 1   | 07/25/2025    |
| <b>Sample ID: CCB2</b> |       |          |                   |           |       |     |               |
| Bromide                | mg/L  | < 1.0000 | 1.0000            | U         | 0.37  | 2   | 07/25/2025    |
| Chloride               | mg/L  | < 0.3000 | 0.3000            | U         | 0.19  | 0.6 | 07/25/2025    |
| Fluoride               | mg/L  | < 0.2000 | 0.2000            | U         | 0.11  | 0.4 | 07/25/2025    |
| Nitrite                | mg/L  | < 0.3000 | 0.3000            | U         | 0.074 | 0.6 | 07/25/2025    |
| Nitrate                | mg/L  | < 0.2500 | 0.2500            | U         | 0.095 | 0.5 | 07/25/2025    |
| Sulfate                | mg/L  | < 1.5000 | 1.5000            | U         | 0.46  | 3   | 07/25/2025    |
| Orthophosphate as P    | mg/L  | < 0.5000 | 0.5000            | U         | 0.34  | 1   | 07/25/2025    |
| <b>Sample ID: CCB3</b> |       |          |                   |           |       |     |               |
| Bromide                | mg/L  | < 1.0000 | 1.0000            | U         | 0.37  | 2   | 07/25/2025    |
| Chloride               | mg/L  | < 0.3000 | 0.3000            | U         | 0.19  | 0.6 | 07/25/2025    |
| Fluoride               | mg/L  | < 0.2000 | 0.2000            | U         | 0.11  | 0.4 | 07/25/2025    |
| Nitrite                | mg/L  | < 0.3000 | 0.3000            | U         | 0.074 | 0.6 | 07/25/2025    |
| Nitrate                | mg/L  | < 0.2500 | 0.2500            | U         | 0.095 | 0.5 | 07/25/2025    |
| Sulfate                | mg/L  | < 1.5000 | 1.5000            | U         | 0.46  | 3   | 07/25/2025    |
| Orthophosphate as P    | mg/L  | < 0.5000 | 0.5000            | U         | 0.34  | 1   | 07/25/2025    |

## Preparation Blank Summary

**Client:** Tetra Tech NUS, Inc.

**SDG No.:** Q2697

**Project:** NWIRP Bethpage 112G08005-WE13

| Analyte                       | Units | Result   | Acceptance<br>Limits | Conc<br>Qual | MDL   | RDL | Analysis<br>Date |
|-------------------------------|-------|----------|----------------------|--------------|-------|-----|------------------|
| <b>Sample ID: LB136635BLW</b> |       |          |                      |              |       |     |                  |
| Bromide                       | mg/L  | < 1.0000 | 1.0000               | U            | 0.37  | 2   | 07/25/2025       |
| Chloride                      | mg/L  | < 0.3000 | 0.3000               | U            | 0.19  | 0.6 | 07/25/2025       |
| Fluoride                      | mg/L  | < 0.2000 | 0.2000               | U            | 0.11  | 0.4 | 07/25/2025       |
| Nitrite                       | mg/L  | < 0.3000 | 0.3000               | U            | 0.074 | 0.6 | 07/25/2025       |
| Nitrate                       | mg/L  | < 0.2500 | 0.2500               | U            | 0.095 | 0.5 | 07/25/2025       |
| Sulfate                       | mg/L  | < 1.5000 | 1.5000               | U            | 0.46  | 3   | 07/25/2025       |
| Orthophosphate as P           | mg/L  | < 0.5000 | 0.5000               | U            | 0.34  | 1   | 07/25/2025       |

## Matrix Spike Summary

|                   |                               |                                         |          |
|-------------------|-------------------------------|-----------------------------------------|----------|
| <b>Client:</b>    | Tetra Tech NUS, Inc.          | <b>SDG No.:</b>                         | Q2697    |
| <b>Project:</b>   | NWIRP Bethpage 112G08005-WE13 | <b>Sample ID:</b>                       | Q2695-01 |
| <b>Client ID:</b> | RW5-SP100-20250724MS          | <b>Percent Solids for Spike Sample:</b> | 0        |

| Analyte             | Units | Acceptance<br>Limit %R | Spiked<br>Result | Conc.<br>Qualifier | Sample<br>Result | Conc.<br>Qualifier | Spike<br>Added | Dilution<br>Factor | %<br>Rec | Qual | Analysis<br>Date |
|---------------------|-------|------------------------|------------------|--------------------|------------------|--------------------|----------------|--------------------|----------|------|------------------|
| Bromide             | mg/L  | 80-120                 | 10.1             |                    | 0.37             | U                  | 10             | 1                  | 101      |      | 07/25/2025       |
| Chloride            | mg/L  | 80-120                 | 13.4             | OR                 | 10.8             | OR                 | 3              | 1                  | 87       |      | 07/25/2025       |
| Fluoride            | mg/L  | 80-120                 | 2.00             |                    | 0.11             | U                  | 2              | 1                  | 100      |      | 07/25/2025       |
| Nitrite             | mg/L  | 80-120                 | 3.00             |                    | 0.074            | U                  | 3              | 1                  | 100      |      | 07/25/2025       |
| Nitrate             | mg/L  | 80-120                 | 6.30             | OR                 | 3.90             |                    | 2.5            | 1                  | 96       |      | 07/25/2025       |
| Sulfate             | mg/L  | 80-120                 | 16.9             |                    | 2.60             | J                  | 15             | 1                  | 95       |      | 07/25/2025       |
| Orthophosphate as P | mg/L  | 80-120                 | 5.10             |                    | 0.34             | U                  | 5              | 1                  | 102      |      | 07/25/2025       |

## Matrix Spike Summary

|                   |                               |                                         |          |
|-------------------|-------------------------------|-----------------------------------------|----------|
| <b>Client:</b>    | Tetra Tech NUS, Inc.          | <b>SDG No.:</b>                         | Q2697    |
| <b>Project:</b>   | NWIRP Bethpage 112G08005-WE13 | <b>Sample ID:</b>                       | Q2695-01 |
| <b>Client ID:</b> | RW5-SP100-20250724MSD         | <b>Percent Solids for Spike Sample:</b> | 0        |

| Analyte             | Units | Acceptance<br>Limit %R | Spiked<br>Result | Conc.<br>Qualifier | Sample<br>Result | Conc.<br>Qualifier | Spike<br>Added | Dilution<br>Factor | %<br>Rec | Qual | Analysis<br>Date |
|---------------------|-------|------------------------|------------------|--------------------|------------------|--------------------|----------------|--------------------|----------|------|------------------|
| Bromide             | mg/L  | 80-120                 | 10.0             |                    | 0.37             | U                  | 10             | 1                  | 100      |      | 07/25/2025       |
| Chloride            | mg/L  | 80-120                 | 13.4             | OR                 | 10.8             | OR                 | 3              | 1                  | 87       |      | 07/25/2025       |
| Fluoride            | mg/L  | 80-120                 | 2.00             |                    | 0.11             | U                  | 2              | 1                  | 100      |      | 07/25/2025       |
| Nitrite             | mg/L  | 80-120                 | 2.90             |                    | 0.074            | U                  | 3              | 1                  | 97       |      | 07/25/2025       |
| Nitrate             | mg/L  | 80-120                 | 6.30             | OR                 | 3.90             |                    | 2.5            | 1                  | 96       |      | 07/25/2025       |
| Sulfate             | mg/L  | 80-120                 | 16.7             |                    | 2.60             | J                  | 15             | 1                  | 94       |      | 07/25/2025       |
| Orthophosphate as P | mg/L  | 80-120                 | 5.00             |                    | 0.34             | U                  | 5              | 1                  | 100      |      | 07/25/2025       |

### Duplicate Sample Summary

|                   |                               |                                         |          |
|-------------------|-------------------------------|-----------------------------------------|----------|
| <b>Client:</b>    | Tetra Tech NUS, Inc.          | <b>SDG No.:</b>                         | Q2697    |
| <b>Project:</b>   | NWIRP Bethpage 112G08005-WE13 | <b>Sample ID:</b>                       | Q2695-01 |
| <b>Client ID:</b> | RW5-SP100-20250724MSD         | <b>Percent Solids for Spike Sample:</b> | 0        |

| Analyte             | Units | Acceptance Limit | Sample Result | Conc. Qualifier | Duplicate Result | Conc. Qualifier | Dilution Factor | RPD/AD | Qual | Analysis Date |
|---------------------|-------|------------------|---------------|-----------------|------------------|-----------------|-----------------|--------|------|---------------|
| Fluoride            | mg/L  | +/-20            | 2.00          |                 | 2.00             |                 | 1               | 0      |      | 07/25/2025    |
| Chloride            | mg/L  | +/-20            | 13.4          | OR              | 13.4             | OR              | 1               | 0      |      | 07/25/2025    |
| Nitrate             | mg/L  | +/-20            | 6.30          | OR              | 6.30             | OR              | 1               | 0      |      | 07/25/2025    |
| Bromide             | mg/L  | +/-20            | 10.1          |                 | 10.0             |                 | 1               | 1      |      | 07/25/2025    |
| Sulfate             | mg/L  | +/-20            | 16.9          |                 | 16.7             |                 | 1               | 1      |      | 07/25/2025    |
| Orthophosphate as P | mg/L  | +/-20            | 5.10          |                 | 5.00             |                 | 1               | 2      |      | 07/25/2025    |
| Nitrite             | mg/L  | +/-20            | 3.00          |                 | 2.90             |                 | 1               | 3      |      | 07/25/2025    |

### Laboratory Control Sample Summary

|                 |                               |                 |          |
|-----------------|-------------------------------|-----------------|----------|
| <b>Client:</b>  | Tetra Tech NUS, Inc.          | <b>SDG No.:</b> | Q2697    |
| <b>Project:</b> | NWIRP Bethpage 112G08005-WE13 | <b>Run No.:</b> | LB136635 |

| Analyte             | Units       | True Value | Result | Conc. Qualifier | % Recovery | Dilution Factor | Acceptance Limit %R | Analysis Date |
|---------------------|-------------|------------|--------|-----------------|------------|-----------------|---------------------|---------------|
| Sample ID           | LB136635BSW |            |        |                 |            |                 |                     |               |
| Bromide             | mg/L        | 10         | 10.2   |                 | 102        | 1               | 90-110              | 07/25/2025    |
| Chloride            | mg/L        | 3          | 3.10   |                 | 103        | 1               | 90-110              | 07/25/2025    |
| Fluoride            | mg/L        | 2          | 2.00   |                 | 100        | 1               | 90-110              | 07/25/2025    |
| Nitrite             | mg/L        | 3          | 3.00   |                 | 100        | 1               | 90-110              | 07/25/2025    |
| Nitrate             | mg/L        | 2.5        | 2.50   |                 | 100        | 1               | 90-110              | 07/25/2025    |
| Sulfate             | mg/L        | 15         | 15.0   |                 | 100        | 1               | 90-110              | 07/25/2025    |
| Orthophosphate as P | mg/L        | 5          | 5.10   |                 | 102        | 1               | 90-110              | 07/25/2025    |



# RAW DATA

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| Ident          | Con F- | Con CL-  | Con NO2 | Con BR- | Con NO3 | Con HPO4 | Con SO4 | Method name | date time       | Initial \ Analyst |
|----------------|--------|----------|---------|---------|---------|----------|---------|-------------|-----------------|-------------------|
| STD1           | 0.000  | 0.000    | 0.000   | 0.000   | 0.000   | 0.000    | 0.000   | IC1-072125  | 7/21/2025 15:51 | 10 RM/IZ          |
| STD2           | 0.421  | 0.581    | 0.637   | 2.105   | 0.531   | 1.061    | 3.266   | IC1-072125  | 7/21/2025 16:12 | 10 RM/IZ          |
| STD3           | 0.807  | 1.166    | 1.210   | 4.034   | 1.010   | 2.025    | 6.067   | IC1-072125  | 7/21/2025 16:34 | 10 RM/IZ          |
| STD4           | 1.035  | 1.665    | 1.541   | 5.126   | 1.284   | 2.567    | 7.677   | IC1-072125  | 7/21/2025 16:55 | 10 RM/IZ          |
| STD5           | 1.936  | 2.890    | 2.908   | 9.732   | 2.422   | 4.827    | 14.481  | IC1-072125  | 7/21/2025 17:17 | 10 RM/IZ          |
| STD6           | 3.931  | 5.899    | 5.898   | 19.673  | 4.913   | 9.865    | 29.296  | IC1-072125  | 7/21/2025 17:38 | 10 RM/IZ          |
| STD7           | 5.071  | 7.599    | 7.605   | 25.329  | 6.340   | 12.655   | 37.713  | IC1-072125  | 7/21/2025 18:00 | 10 RM/IZ          |
| ICV            | 1.900  | 2.803    | 2.815   | 9.537   | 2.323   | 4.754    | 14.170  | IC1-072125  | 7/21/2025 18:21 | 10 RM/IZ          |
| ICB            | 0.000  | 0.000    | 0.000   | 0.000   | 0.000   | 0.000    | 0.000   | IC1-072125  | 7/21/2025 18:42 | 10 RM/IZ          |
| CCV            | 2.037  | 3.065    | 3.019   | 10.110  | 2.521   | 5.049    | 14.895  | IC1-072225  | 7/25/2025 11:50 | 10 RM/IZ          |
| CCB            | 0.000  | 0.076    | 0.000   | 0.000   | 0.000   | 0.000    | 0.000   | IC1-072225  | 7/25/2025 12:12 | 10 RM/IZ          |
| LB136635BLW    | 0.000  | 0.078    | 0.000   | 0.000   | 0.000   | 0.000    | 0.000   | IC1-072225  | 7/25/2025 12:33 | 10 RM/IZ          |
| LB136635BSW    | 2.035  | 3.072    | 3.021   | 10.164  | 2.545   | 5.115    | 14.989  | IC1-072225  | 7/25/2025 12:55 | 10 RM/IZ          |
| Q2695-01       | 0.000  | 10.777   | 0.000   | 0.249   | 3.921   | 0.000    | 2.627   | IC1-072225  | 7/25/2025 13:16 | 10 RM/IZ          |
| Q2695-01MS     | 2.037  | 13.432   | 2.968   | 10.116  | 6.340   | 5.074    | 16.942  | IC1-072225  | 7/25/2025 13:38 | 10 RM/IZ          |
| Q2695-01MSD    | 2.007  | 13.440   | 2.945   | 10.009  | 6.320   | 5.021    | 16.678  | IC1-072225  | 7/25/2025 14:00 | 10 RM/IZ          |
| Q2696-01       | 0.000  | 12.185   | 0.000   | 0.232   | 0.150   | 0.000    | 9.534   | IC1-072225  | 7/25/2025 14:21 | 10 RM/IZ          |
| Q2697-01       | 0.000  | 7.436    | 0.000   | 0.223   | 3.029   | 0.000    | 1.436   | IC1-072225  | 7/25/2025 14:43 | 10 RM/IZ          |
| Q2704-01       | 0.225  | 408.661  | 0.000   | 0.231   | 0.065   | 0.000    | 350.807 | IC1-072225  | 7/25/2025 15:04 | 10 RM/IZ          |
| Q2704-02       | 0.381  | 2397.121 | 0.000   | 0.210   | 0.000   | 0.000    | 10.982  | IC1-072225  | 7/25/2025 15:26 | 10 RM/IZ          |
| Q2704-03       | 0.260  | 1962.958 | 0.000   | 0.208   | 0.000   | 0.000    | 71.683  | IC1-072225  | 7/25/2025 15:47 | 10 RM/IZ          |
| CCV            | 1.991  | 3.065    | 3.023   | 10.163  | 2.534   | 5.057    | 15.079  | IC1-072225  | 7/25/2025 16:30 | 10 RM/IZ          |
| CCB            | 0.000  | 0.077    | 0.000   | 0.000   | 0.000   | 0.000    | 0.000   | IC1-072225  | 7/25/2025 16:52 | 10 RM/IZ          |
| Q2704-01DLX100 | 0.000  | 2.889    | 0.000   | 0.000   | 0.000   | 0.000    | 3.220   | IC1-072225  | 7/25/2025 17:56 | 10 RM/IZ          |
| Q2704-02DLX500 | 0.000  | 3.120    | 0.000   | 0.000   | 0.000   | 0.000    | 0.000   | IC1-072225  | 7/25/2025 18:39 | 10 RM/IZ          |
| Q2704-03DLX500 | 0.000  | 2.530    | 0.000   | 0.000   | 0.000   | 0.000    | 0.586   | IC1-072225  | 7/25/2025 19:22 | 10 RM/IZ          |
| CCV            | 2.034  | 3.073    | 3.020   | 10.153  | 2.528   | 5.081    | 14.956  | IC1-072225  | 7/25/2025 20:05 | 10 RM/IZ          |
| CCB            | 0.000  | 0.080    | 0.000   | 0.000   | 0.000   | 0.000    | 0.000   | IC1-072225  | 7/25/2025 20:26 | 10 RM/IZ          |



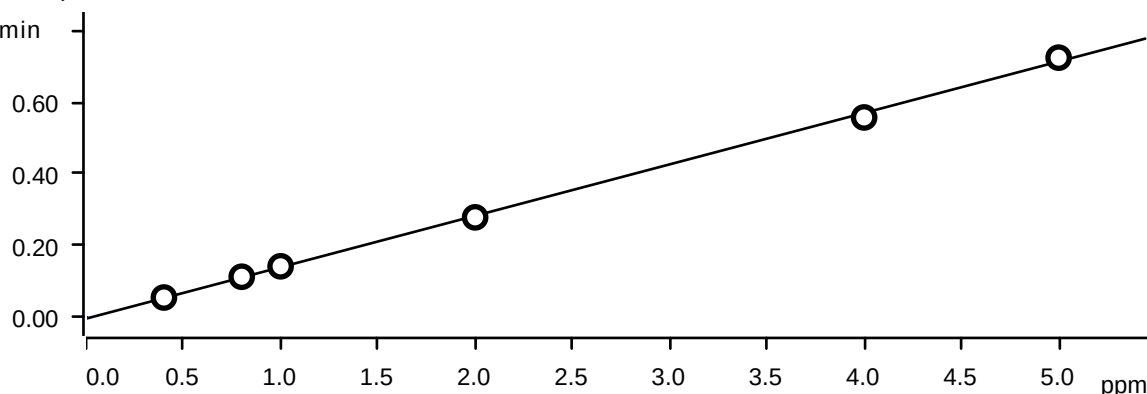
Clear table

| Instrument ID: IC-2 Analyst : IZ Method: 300.0 / 9056A |                      |                       |                       |                       |                       |                        |                       |            |                         |
|--------------------------------------------------------|----------------------|-----------------------|-----------------------|-----------------------|-----------------------|------------------------|-----------------------|------------|-------------------------|
| ident                                                  | concentra<br>tion F- | concentratio<br>n CL- | concentrati<br>on NO2 | concentrati<br>on BR- | concentrati<br>on NO3 | concentratio<br>n HPO4 | concentrati<br>on SO4 | file name  | Initial<br>wt/<br>Final |
| STD1                                                   | 0.0000               | 0.0000                | 0.0000                | 0.0000                | 0.0000                | 0.0000                 | 0.0000                | IC1-072225 | 10 RM/IZ                |
| STD2                                                   | 0.4100               | 0.6170                | 0.6240                | 2.0670                | 0.5210                | 1.0490                 | 3.2130                | IC1-072225 | 10 RM/IZ                |
| STD3                                                   | 0.8140               | 1.2160                | 1.2160                | 4.0280                | 1.0140                | 1.9750                 | 6.0380                | IC1-072225 | 10 RM/IZ                |
| STD4                                                   | 1.0180               | 1.5360                | 1.5370                | 5.1300                | 1.2780                | 2.5790                 | 7.7180                | IC1-072225 | 10 RM/IZ                |
| STD5                                                   | 1.9700               | 2.9530                | 2.9420                | 9.8490                | 2.4540                | 4.9430                 | 14.6590               | IC1-072225 | 10 RM/IZ                |
| STD6                                                   | 3.9130               | 5.8540                | 5.8490                | 19.5060               | 4.8730                | 9.7400                 | 28.9480               | IC1-072225 | 10 RM/IZ                |
| STD7                                                   | 5.0750               | 7.6250                | 7.6320                | 25.4200               | 6.3600                | 12.7160                | 37.9230               | IC1-072225 | 10 RM/IZ                |
|                                                        |                      |                       |                       |                       |                       |                        |                       |            |                         |
| ident                                                  | True<br>Value F-     | True Value<br>CL-     | True Value<br>NO2     | True Value<br>BR-     | True Value<br>NO3     | True Value<br>HPO4     | True Value<br>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<br>Error F- | Relative<br>Error CL- | Relative<br>Error NO2 | Relative<br>Error BR- | Relative<br>Error NO3 | Relative<br>Error HPO4 | Relative<br>Error SO4 |            |                         |
| STD1                                                   |                      |                       |                       |                       |                       |                        |                       |            |                         |
| STD2                                                   | 2.5000               | 2.8333                | 4.0000                | 3.3500                | 4.2000                | 4.9000                 | 7.1000                |            |                         |
| STD3                                                   | 1.7500               | 1.3333                | 1.3333                | 0.7000                | 1.4000                | -1.2500                | 0.6333                |            |                         |
| STD4                                                   | 1.8000               | 2.4000                | 2.4667                | 2.6000                | 2.2400                | 3.1600                 | 2.9067                |            |                         |
| STD5                                                   | -1.5000              | -1.5667               | -1.9333               | -1.5100               | -1.8400               | -1.1400                | -2.2733               |            |                         |
| STD6                                                   | -2.1750              | -2.4333               | -2.5167               | -2.4700               | -2.5400               | -2.6000                | -3.5067               |            |                         |
| STD7                                                   | 1.5000               | 1.6667                | 1.7600                | 1.6800                | 1.7600                | 1.7280                 | 2.4946                |            |                         |

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### Fluoride (Anions)

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



Function: . . . . .  $A = -3.58174E-3 + 0.0143356 \times Q$

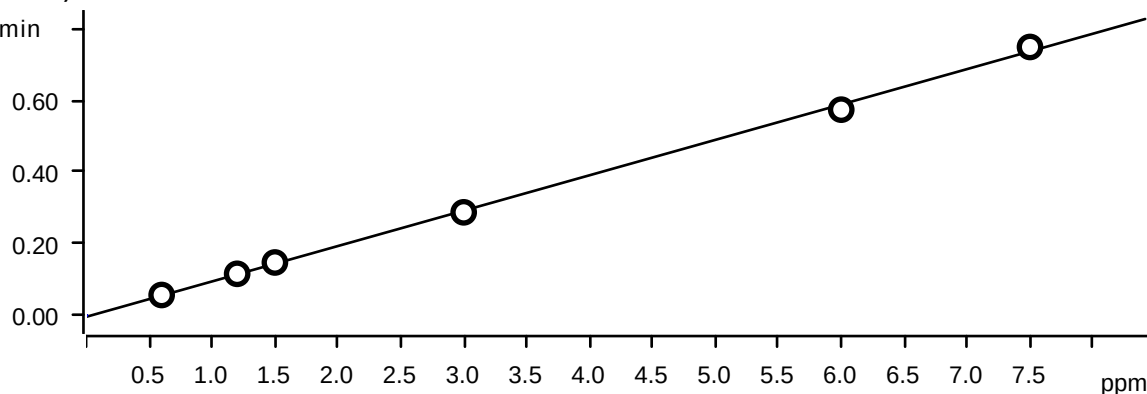
Relative standard deviation . . . . . 2.796546 %

Correlation coefficient . . . . . 0.999584

| 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  | 2025-07-22 09:56:27 UTC-4 | used |
| Standard 2  | 1     | 0.400 | 10.0   | 1.0      | 1.0           | 0.055 | STD2  | 2025-07-22 10:17:50 UTC-4 | used |
| Standard 3  | 1     | 0.800 | 10.0   | 1.0      | 1.0           | 0.113 | STD3  | 2025-07-22 10:39:14 UTC-4 | used |
| Standard 4  | 1     | 1.000 | 10.0   | 1.0      | 1.0           | 0.142 | STD4  | 2025-07-22 11:00:38 UTC-4 | used |
| Standard 5  | 1     | 2.000 | 10.0   | 1.0      | 1.0           | 0.279 | STD5  | 2025-07-22 11:22:04 UTC-4 | used |
| Standard 6  | 1     | 4.000 | 10.0   | 1.0      | 1.0           | 0.557 | STD6  | 2025-07-22 11:43:30 UTC-4 | used |
| Standard 7  | 1     | 5.000 | 10.0   | 1.0      | 1.0           | 0.724 | STD7  | 2025-07-22 12:04:57 UTC-4 | used |

### Chloride (Anions)

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



Function: . . . . .  $A = -3.86940E-3 + 9.86796E-3 \times Q$

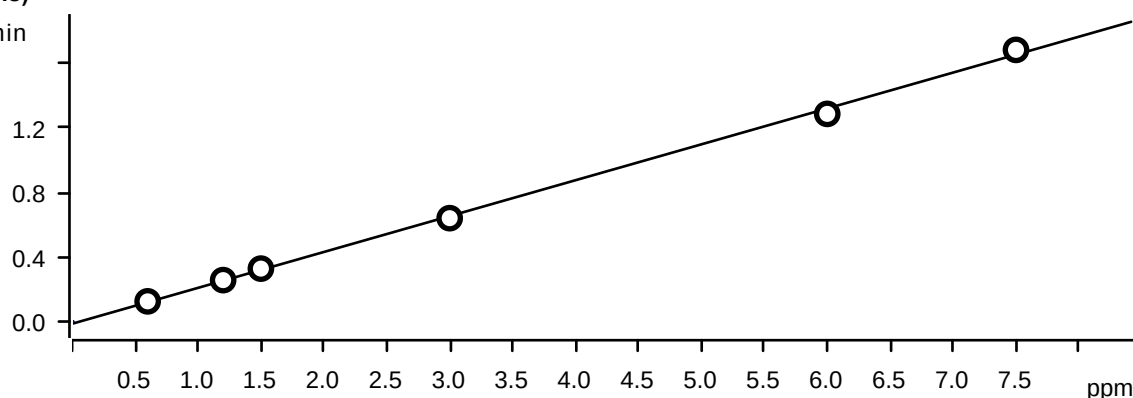
Relative standard deviation . . . . . 3.106817 %

Correlation coefficient . . . . . 0.999487

| 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  | 2025-07-22 09:56:27 UTC-4 | used |
| Standard 2  | 1     | 0.600 | 10.0   | 1.0      | 1.0           | 0.057 | STD2  | 2025-07-22 10:17:50 UTC-4 | used |
| Standard 3  | 1     | 1.200 | 10.0   | 1.0      | 1.0           | 0.116 | STD3  | 2025-07-22 10:39:14 UTC-4 | used |
| Standard 4  | 1     | 1.500 | 10.0   | 1.0      | 1.0           | 0.148 | STD4  | 2025-07-22 11:00:38 UTC-4 | used |
| Standard 5  | 1     | 3.000 | 10.0   | 1.0      | 1.0           | 0.288 | STD5  | 2025-07-22 11:22:04 UTC-4 | used |
| Standard 6  | 1     | 6.000 | 10.0   | 1.0      | 1.0           | 0.574 | STD6  | 2025-07-22 11:43:30 UTC-4 | used |
| Standard 7  | 1     | 7.500 | 10.0   | 1.0      | 1.0           | 0.749 | STD7  | 2025-07-22 12:04:57 UTC-4 | used |

**Nitrite (Anions)**

(μS/cm) x min

Function: . . . . .  $A = -0.0146099 + 0.0222310 \times Q$ 

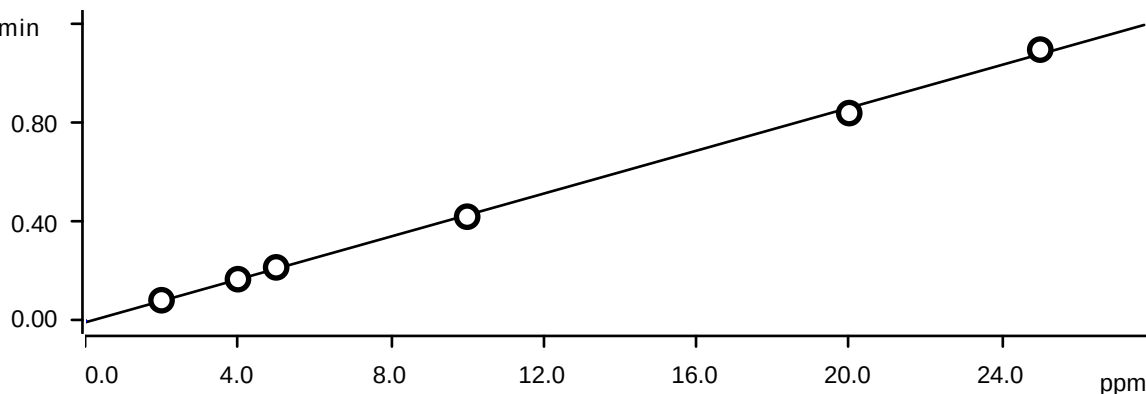
Relative standard deviation . . . . . 3.309342 %

Correlation coefficient . . . . . 0.999427

| 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  | 2025-07-22 09:56:27 UTC-4 | used |
| Standard 2  | 1     | 0.600 | 10.0   | 1.0      | 1.0           | 0.124 | STD2  | 2025-07-22 10:17:50 UTC-4 | used |
| Standard 3  | 1     | 1.200 | 10.0   | 1.0      | 1.0           | 0.256 | STD3  | 2025-07-22 10:39:14 UTC-4 | used |
| Standard 4  | 1     | 1.500 | 10.0   | 1.0      | 1.0           | 0.327 | STD4  | 2025-07-22 11:00:38 UTC-4 | used |
| Standard 5  | 1     | 3.000 | 10.0   | 1.0      | 1.0           | 0.639 | STD5  | 2025-07-22 11:22:04 UTC-4 | used |
| Standard 6  | 1     | 6.000 | 10.0   | 1.0      | 1.0           | 1.286 | STD6  | 2025-07-22 11:43:30 UTC-4 | used |
| Standard 7  | 1     | 7.500 | 10.0   | 1.0      | 1.0           | 1.682 | STD7  | 2025-07-22 12:04:57 UTC-4 | used |

# Bromide (Anions)

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



Function:  $A = -6.30685E-3 + 4.32181E-3 \times Q$

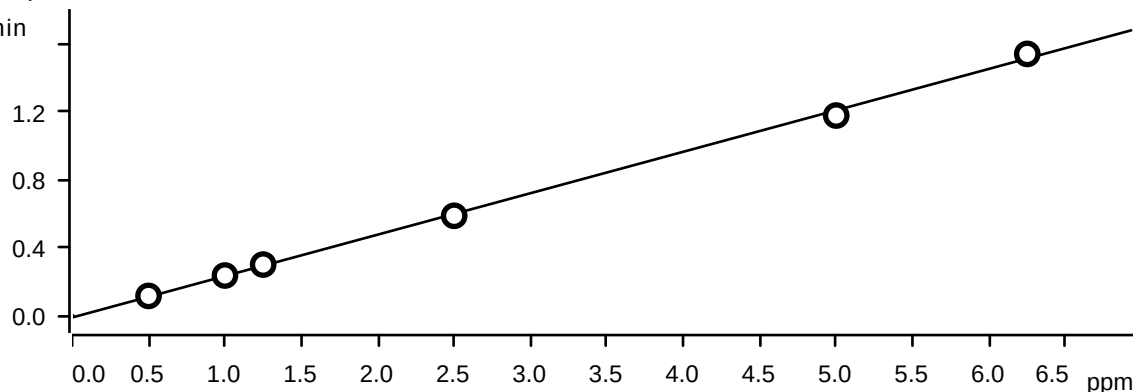
Relative standard deviation: 3.140470 %

Correlation coefficient: 0.999477

| 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  | 2025-07-22 09:56:27 UTC-4 | used |
| Standard 2  | 1     | 2.000  | 10.0   | 1.0      | 1.0           | 0.083 | STD2  | 2025-07-22 10:17:50 UTC-4 | used |
| Standard 3  | 1     | 4.000  | 10.0   | 1.0      | 1.0           | 0.168 | STD3  | 2025-07-22 10:39:14 UTC-4 | used |
| Standard 4  | 1     | 5.000  | 10.0   | 1.0      | 1.0           | 0.215 | STD4  | 2025-07-22 11:00:38 UTC-4 | used |
| Standard 5  | 1     | 10.000 | 10.0   | 1.0      | 1.0           | 0.419 | STD5  | 2025-07-22 11:22:04 UTC-4 | used |
| Standard 6  | 1     | 20.000 | 10.0   | 1.0      | 1.0           | 0.837 | STD6  | 2025-07-22 11:43:30 UTC-4 | used |
| Standard 7  | 1     | 25.000 | 10.0   | 1.0      | 1.0           | 1.092 | STD7  | 2025-07-22 12:04:57 UTC-4 | used |

# Nitrate (Anions)

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



Function:  $A = -0.0124015 + 0.0243912 \times Q$

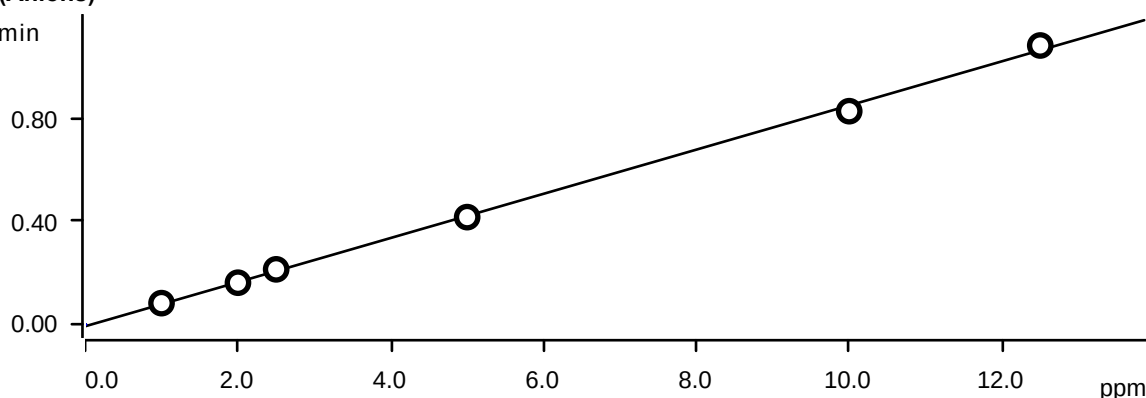
Relative standard deviation: 3.299301 %

Correlation coefficient . . . . . 0.999429

| 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  | 2025-07-22 09:56:27 UTC-4 | used |
| Standard 2  | 1     | 0.500 | 10.0   | 1.0      | 1.0           | 0.115 | STD2  | 2025-07-22 10:17:50 UTC-4 | used |
| Standard 3  | 1     | 1.000 | 10.0   | 1.0      | 1.0           | 0.235 | STD3  | 2025-07-22 10:39:14 UTC-4 | used |
| Standard 4  | 1     | 1.250 | 10.0   | 1.0      | 1.0           | 0.299 | STD4  | 2025-07-22 11:00:38 UTC-4 | used |
| Standard 5  | 1     | 2.500 | 10.0   | 1.0      | 1.0           | 0.586 | STD5  | 2025-07-22 11:22:04 UTC-4 | used |
| Standard 6  | 1     | 5.000 | 10.0   | 1.0      | 1.0           | 1.176 | STD6  | 2025-07-22 11:43:30 UTC-4 | used |
| Standard 7  | 1     | 6.250 | 10.0   | 1.0      | 1.0           | 1.539 | STD7  | 2025-07-22 12:04:57 UTC-4 | used |

**Phosphate (Anions)**

(μS/cm) x min

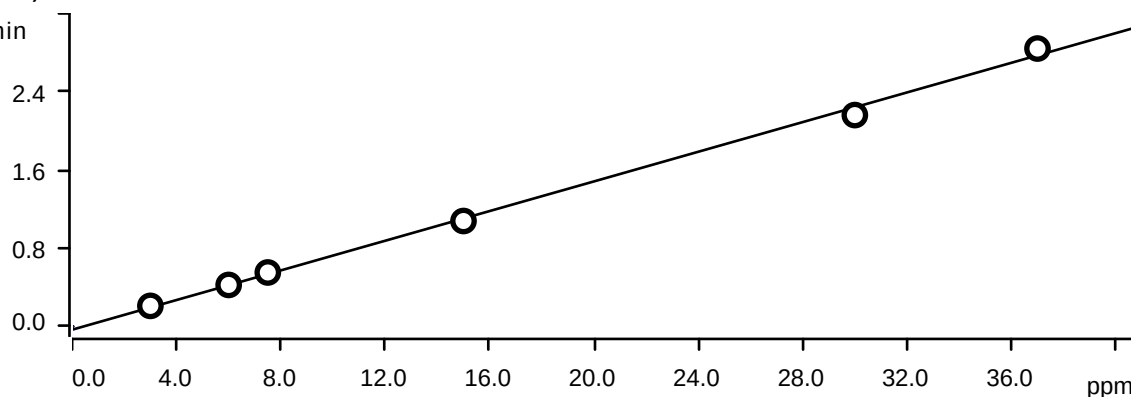
Function: . . . . .  $A = -6.54124E-3 + 8.55235E-3 \times Q$ 

Relative standard deviation . . . . . 3.281294 %

Correlation coefficient . . . . . 0.999430

| 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  | 2025-07-22 09:56:27 UTC-4 | used |
| Standard 2  | 1     | 1.000  | 10.0   | 1.0      | 1.0           | 0.083 | STD2  | 2025-07-22 10:17:50 UTC-4 | used |
| Standard 3  | 1     | 2.000  | 10.0   | 1.0      | 1.0           | 0.162 | STD3  | 2025-07-22 10:39:14 UTC-4 | used |
| Standard 4  | 1     | 2.500  | 10.0   | 1.0      | 1.0           | 0.214 | STD4  | 2025-07-22 11:00:38 UTC-4 | used |
| Standard 5  | 1     | 5.000  | 10.0   | 1.0      | 1.0           | 0.416 | STD5  | 2025-07-22 11:22:04 UTC-4 | used |
| Standard 6  | 1     | 10.000 | 10.0   | 1.0      | 1.0           | 0.826 | STD6  | 2025-07-22 11:43:30 UTC-4 | used |
| Standard 7  | 1     | 12.500 | 10.0   | 1.0      | 1.0           | 1.081 | STD7  | 2025-07-22 12:04:57 UTC-4 | used |

## Sulfate (Anions)

 $(\mu\text{S}/\text{cm}) \times \text{min}$ Function: . . . . .  $A = -0.0328648 + 7.57930E-3 \times Q$ 

Relative standard deviation . . . . . 4.607752 %

Correlation coefficient . . . . . 0.998893

| 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  | 2025-07-22 09:56:27 UTC-4 | used |
| Standard 2  | 1     | 3.000  | 10.0   | 1.0      | 1.0           | 0.211 | STD2  | 2025-07-22 10:17:50 UTC-4 | used |
| Standard 3  | 1     | 6.000  | 10.0   | 1.0      | 1.0           | 0.425 | STD3  | 2025-07-22 10:39:14 UTC-4 | used |
| Standard 4  | 1     | 7.500  | 10.0   | 1.0      | 1.0           | 0.552 | STD4  | 2025-07-22 11:00:38 UTC-4 | used |
| Standard 5  | 1     | 15.000 | 10.0   | 1.0      | 1.0           | 1.078 | STD5  | 2025-07-22 11:22:04 UTC-4 | used |
| Standard 6  | 1     | 30.000 | 10.0   | 1.0      | 1.0           | 2.161 | STD6  | 2025-07-22 11:43:30 UTC-4 | used |
| Standard 7  | 1     | 37.000 | 10.0   | 1.0      | 1.0           | 2.841 | STD7  | 2025-07-22 12:04:57 UTC-4 | used |

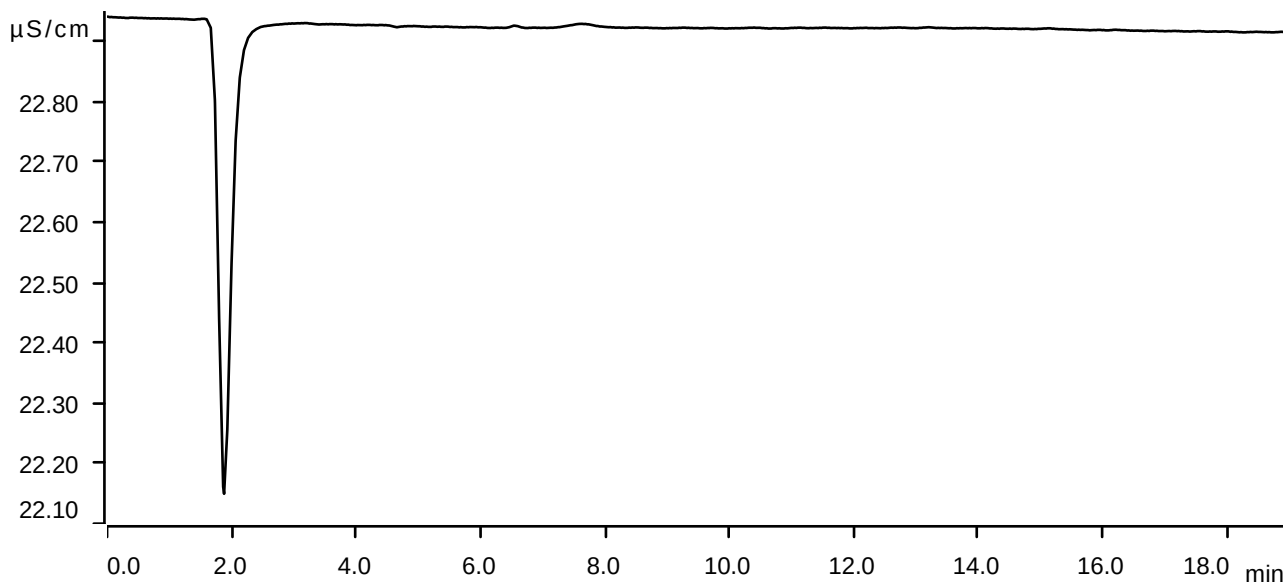
## Sample data

Ident . . . . . STD1  
Sample type . . . . . Standard 1  
Determination start . . . . . 2025-07-22 09:56:27 UTC-4  
Method . . . . . IC1-072225  
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 . . . . . 12.95 MPa  
Maximum pressure monitored . . . . . yes  
Temperature . . . . . ---- °C

## Anions



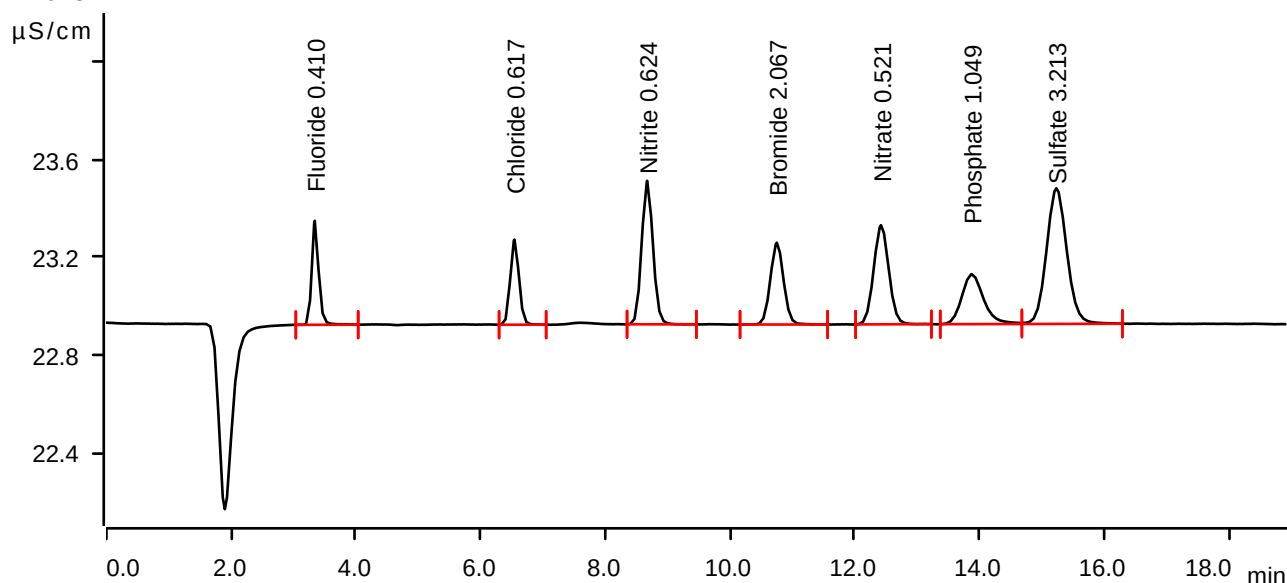
## Sample data

Ident . . . . . STD2  
Sample type . . . . . Standard 2  
Determination start . . . . . 2025-07-22 10:17:50 UTC-4  
Method . . . . . IC1-072225  
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 . . . . . 12.78 MPa  
Maximum pressure monitored . . . . . yes  
Temperature . . . . . ---- °C

## Anions



| Peak number | Retention time<br>min | Area<br>(µS/cm) x min | Height<br>µS/cm | Concentration<br>ppm | Component name |
|-------------|-----------------------|-----------------------|-----------------|----------------------|----------------|
| 1           | 3.342                 | 0.0552                | 0.426           | 0.410                | Fluoride       |
| 2           | 6.543                 | 0.0570                | 0.349           | 0.617                | Chloride       |
| 3           | 8.672                 | 0.1241                | 0.588           | 0.624                | Nitrite        |
| 4           | 10.750                | 0.0830                | 0.336           | 2.067                | Bromide        |
| 5           | 12.420                | 0.1146                | 0.406           | 0.521                | Nitrate        |
| 6           | 13.872                | 0.0831                | 0.205           | 1.049                | Phosphate      |
| 7           | 15.230                | 0.2106                | 0.556           | 3.213                | Sulfate        |



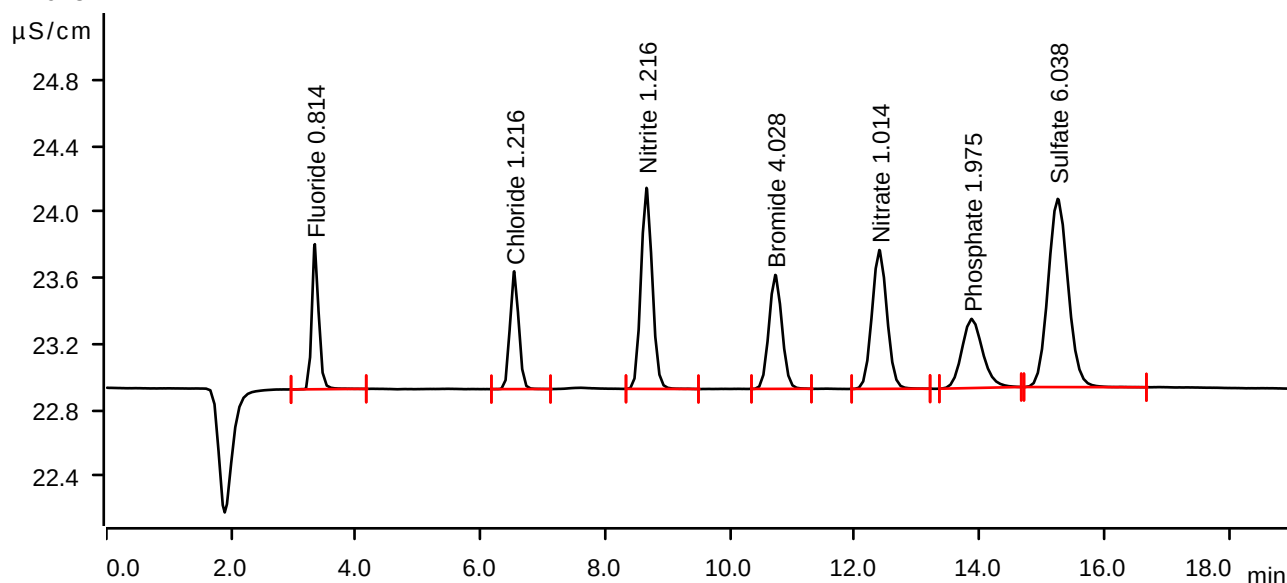
## Sample data

Ident . . . . . STD3  
Sample type . . . . . Standard 3  
Determination start . . . . . 2025-07-22 10:39:14 UTC-4  
Method . . . . . IC1-072225  
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<br>min | Area<br>(µS/cm) x min | Height<br>µS/cm | Concentration<br>ppm | Component name |
|-------------|-----------------------|-----------------------|-----------------|----------------------|----------------|
| 1           | 3.343                 | 0.1132                | 0.878           | 0.814                | Fluoride       |
| 2           | 6.540                 | 0.1161                | 0.713           | 1.216                | Chloride       |
| 3           | 8.660                 | 0.2557                | 1.217           | 1.216                | Nitrite        |
| 4           | 10.725                | 0.1678                | 0.690           | 4.028                | Bromide        |
| 5           | 12.393                | 0.2349                | 0.840           | 1.014                | Nitrate        |
| 6           | 13.875                | 0.1623                | 0.418           | 1.975                | Phosphate      |
| 7           | 15.253                | 0.4248                | 1.139           | 6.038                | Sulfate        |

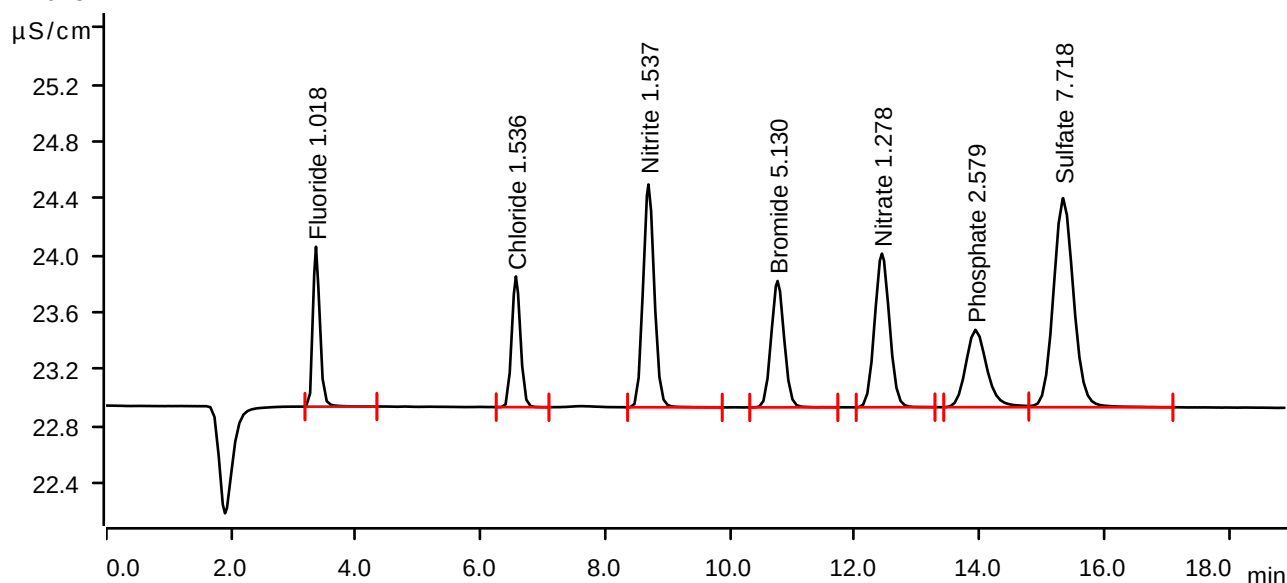
## Sample data

Ident . . . . . STD4  
Sample type . . . . . Standard 4  
Determination start . . . . . 2025-07-22 11:00:38 UTC-4  
Method . . . . . IC1-072225  
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<br>min | Area<br>(µS/cm) x min | Height<br>µS/cm | Concentration<br>ppm | Component name |
|-------------|-----------------------|-----------------------|-----------------|----------------------|----------------|
| 1           | 3.362                 | 0.1423                | 1.123           | 1.018                | Fluoride       |
| 2           | 6.567                 | 0.1477                | 0.919           | 1.536                | Chloride       |
| 3           | 8.692                 | 0.3270                | 1.566           | 1.537                | Nitrite        |
| 4           | 10.762                | 0.2154                | 0.888           | 5.130                | Bromide        |
| 5           | 12.435                | 0.2992                | 1.080           | 1.278                | Nitrate        |
| 6           | 13.935                | 0.2140                | 0.544           | 2.579                | Phosphate      |
| 7           | 15.340                | 0.5521                | 1.470           | 7.718                | Sulfate        |

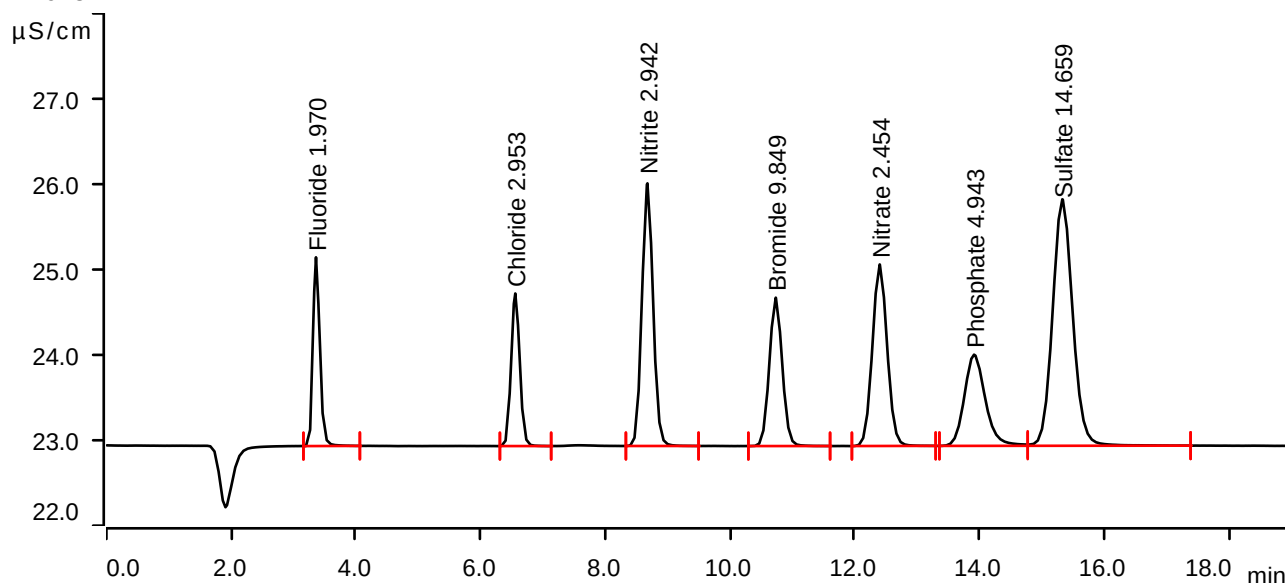
## Sample data

Ident . . . . . STD5  
Sample type . . . . . Standard 5  
Determination start . . . . . 2025-07-22 11:22:04 UTC-4  
Method . . . . . IC1-072225  
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<br>min | Area<br>(µS/cm) x min | Height<br>µS/cm | Concentration<br>ppm | Component name |
|-------------|-----------------------|-----------------------|-----------------|----------------------|----------------|
| 1           | 3.362                 | 0.2788                | 2.210           | 1.970                | Fluoride       |
| 2           | 6.557                 | 0.2875                | 1.787           | 2.953                | Chloride       |
| 3           | 8.675                 | 0.6394                | 3.077           | 2.942                | Nitrite        |
| 4           | 10.732                | 0.4194                | 1.738           | 9.849                | Bromide        |
| 5           | 12.398                | 0.5862                | 2.127           | 2.454                | Nitrate        |
| 6           | 13.912                | 0.4162                | 1.068           | 4.943                | Phosphate      |
| 7           | 15.327                | 1.0782                | 2.887           | 14.659               | Sulfate        |

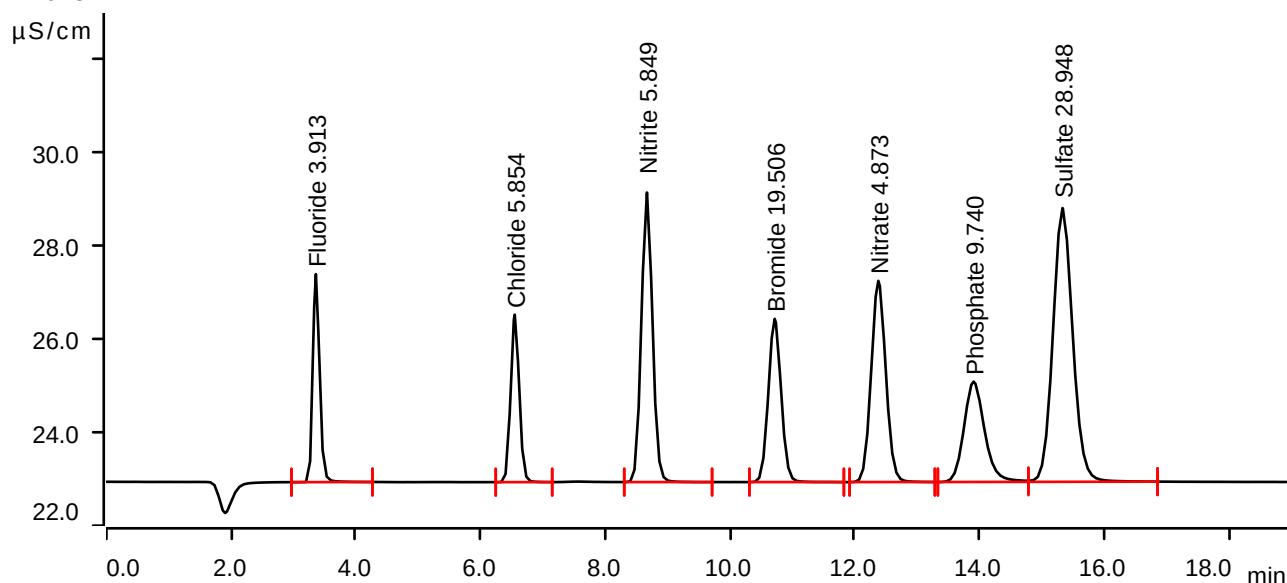
## Sample data

Ident . . . . . STD6  
Sample type . . . . . Standard 6  
Determination start . . . . . 2025-07-22 11:43:30 UTC-4  
Method . . . . . IC1-072225  
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<br>min | Area<br>(µS/cm) x min | Height<br>µS/cm | Concentration<br>ppm | Component name |
|-------------|-----------------------|-----------------------|-----------------|----------------------|----------------|
| 1           | 3.360                 | 0.5573                | 4.466           | 3.913                | Fluoride       |
| 2           | 6.548                 | 0.5738                | 3.596           | 5.854                | Chloride       |
| 3           | 8.667                 | 1.2857                | 6.219           | 5.849                | Nitrite        |
| 4           | 10.715                | 0.8367                | 3.507           | 19.506               | Bromide        |
| 5           | 12.377                | 1.1762                | 4.321           | 4.873                | Nitrate        |
| 6           | 13.905                | 0.8264                | 2.155           | 9.740                | Phosphate      |
| 7           | 15.330                | 2.1612                | 5.877           | 28.948               | Sulfate        |

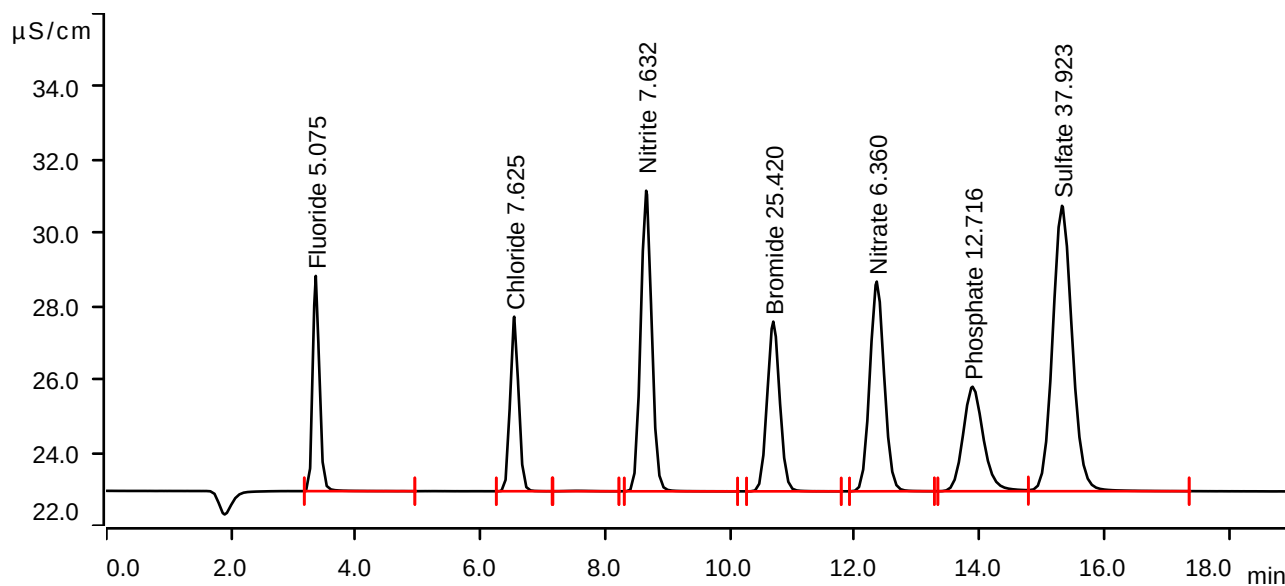
**Sample data**

Ident . . . . . STD7  
Sample type . . . . . Standard 7  
Determination start . . . . . 2025-07-22 12:04:57 UTC-4  
Method . . . . . IC1-072225  
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<br>min | Area<br>( $\mu\text{S}/\text{cm}$ ) x min | Height<br>$\mu\text{S}/\text{cm}$ | Concentration<br>ppm | Component name |
|-------------|-----------------------|-------------------------------------------|-----------------------------------|----------------------|----------------|
| 1           | 3.358                 | 0.7240                                    | 5.880                             | 5.075                | Fluoride       |
| 2           | 6.540                 | 0.7486                                    | 4.770                             | 7.625                | Chloride       |
| 3           | 7.532                 | 0.0048                                    | 0.011                             | invalid              |                |
| 4           | 8.655                 | 1.6821                                    | 8.216                             | 7.632                | Nitrite        |
| 5           | 10.693                | 1.0923                                    | 4.639                             | 25.420               | Bromide        |
| 6           | 12.352                | 1.5390                                    | 5.732                             | 6.360                | Nitrate        |
| 7           | 13.888                | 1.0809                                    | 2.856                             | 12.716               | Phosphate      |
| 8           | 15.322                | 2.8415                                    | 7.800                             | 37.923               | Sulfate        |

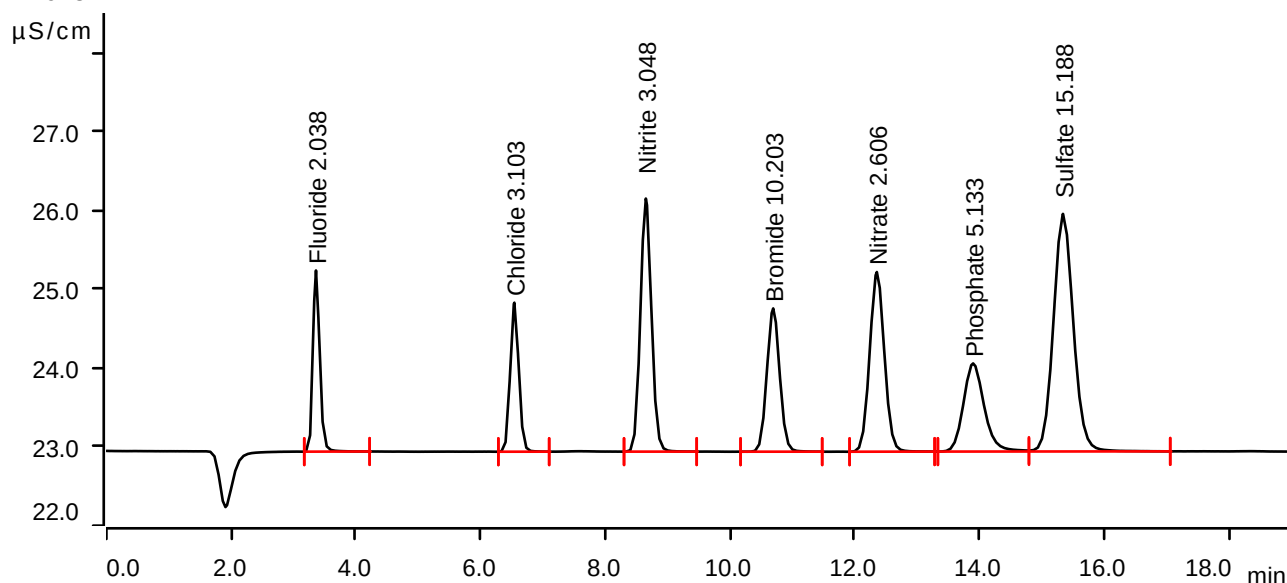
## Sample data

Ident . . . . . ICV  
Sample type . . . . . Check standard 1  
Determination start . . . . . 2025-07-22 12:26:25 UTC-4  
Method . . . . . IC1-072225  
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<br>min | Area<br>(µS/cm) x min | Height<br>µS/cm | Concentration<br>ppm | Component name |
|-------------|-----------------------|-----------------------|-----------------|----------------------|----------------|
| 1           | 3.362                 | 0.2885                | 2.298           | 2.038                | Fluoride       |
| 2           | 6.542                 | 0.3023                | 1.891           | 3.103                | Chloride       |
| 3           | 8.650                 | 0.6629                | 3.211           | 3.048                | Nitrite        |
| 4           | 10.692                | 0.4347                | 1.818           | 10.203               | Bromide        |
| 5           | 12.353                | 0.6232                | 2.280           | 2.606                | Nitrate        |
| 6           | 13.897                | 0.4324                | 1.119           | 5.133                | Phosphate      |
| 7           | 15.338                | 1.1182                | 3.014           | 15.188               | Sulfate        |

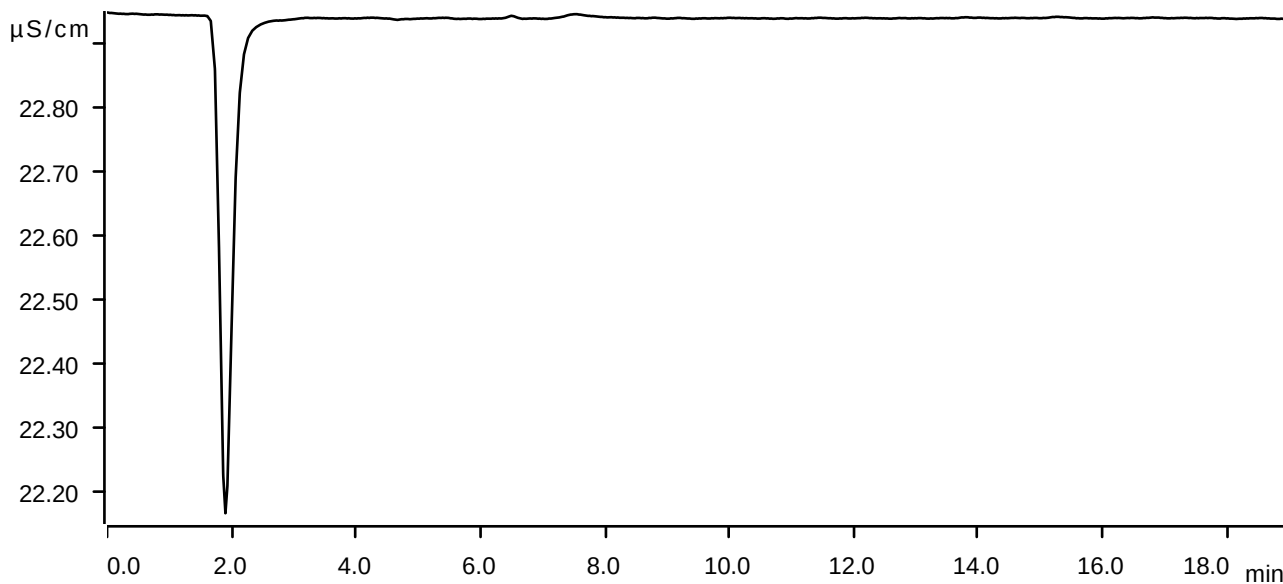
## Sample data

Ident . . . . . ICB  
Sample type . . . . . Sample  
Determination start . . . . . 2025-07-22 12:47:54 UTC-4  
Method . . . . . IC1-072225  
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





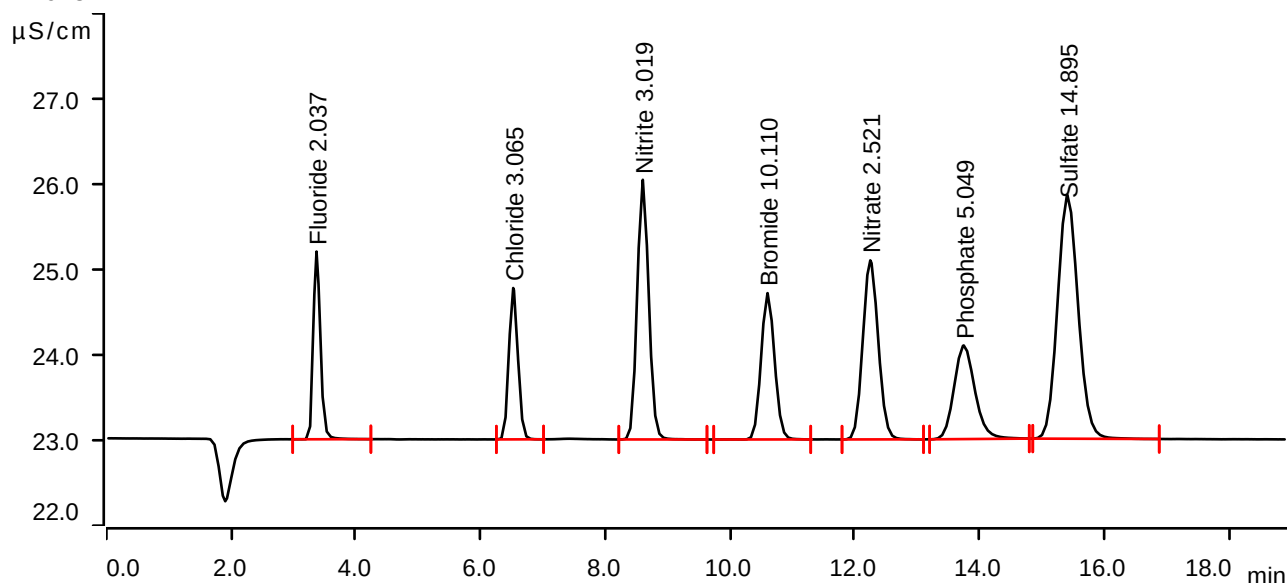
## Sample data

Ident . . . . . CCV  
Sample type . . . . . Check standard 1  
Determination start . . . . . 2025-07-25 11:50:52 UTC-4  
Method . . . . . IC1-072225  
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<br>min | Area<br>(µS/cm) x min | Height<br>µS/cm | Concentration<br>ppm | Component name |
|-------------|-----------------------|-----------------------|-----------------|----------------------|----------------|
| 1           | 3.370                 | 0.2884                | 2.199           | 2.037                | Fluoride       |
| 2           | 6.523                 | 0.2986                | 1.773           | 3.065                | Chloride       |
| 3           | 8.600                 | 0.6566                | 3.042           | 3.019                | Nitrite        |
| 4           | 10.602                | 0.4306                | 1.714           | 10.110               | Bromide        |
| 5           | 12.248                | 0.6025                | 2.097           | 2.521                | Nitrate        |
| 6           | 13.747                | 0.4253                | 1.097           | 5.049                | Phosphate      |
| 7           | 15.408                | 1.0961                | 2.854           | 14.895               | Sulfate        |

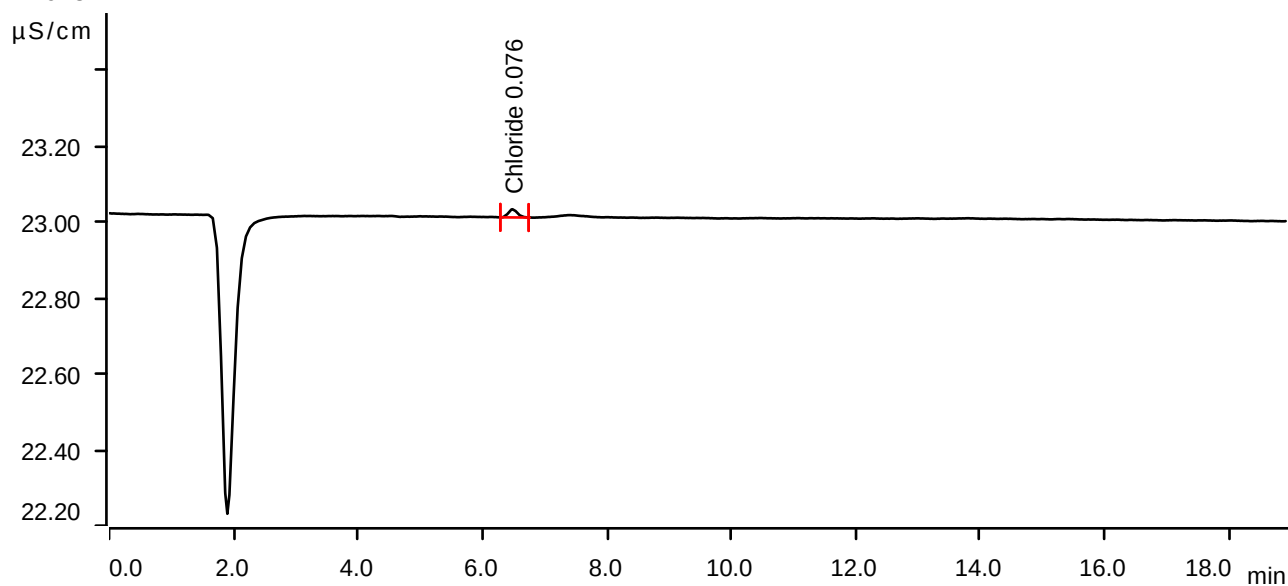
## Sample data

Ident . . . . . CCB  
Sample type . . . . . Sample  
Determination start . . . . . 2025-07-25 12:12:22 UTC-4  
Method . . . . . IC1-072225  
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 | Area          | Height | Concentration | Component name |
|-------------|----------------|---------------|--------|---------------|----------------|
|             | min            | (μS/cm) x min | μS/cm  | ppm           |                |
| 1           | 6.483          | 0.0036        | 0.021  | 0.076         | Chloride       |

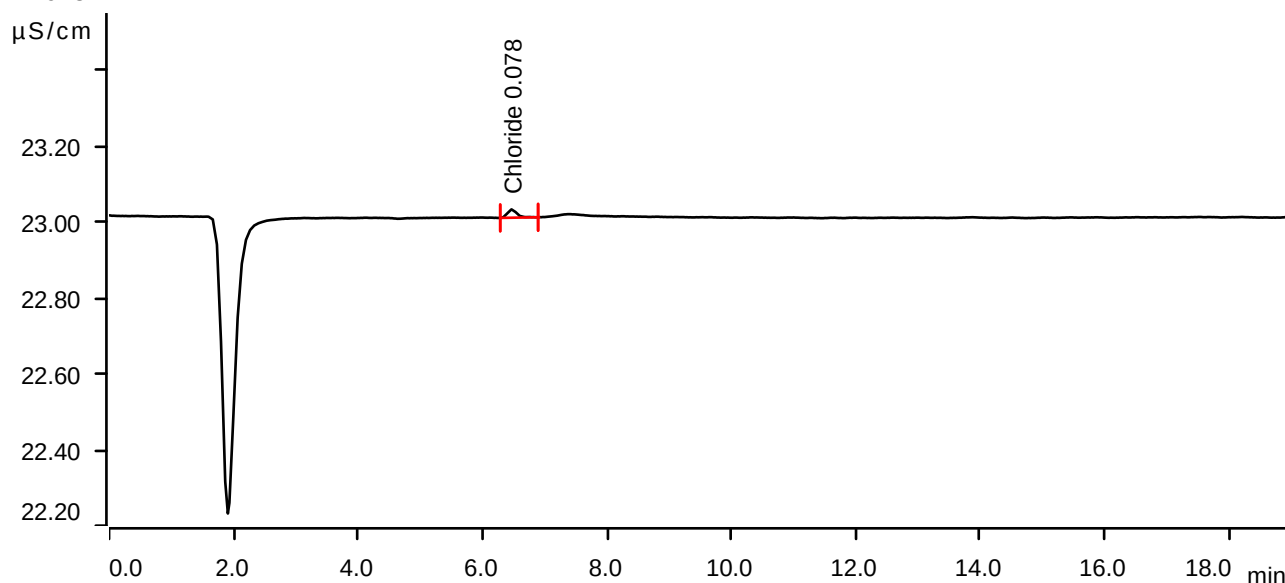
## Sample data

Ident . . . . . LB136635BLW  
Sample type . . . . . Sample  
Determination start . . . . . 2025-07-25 12:33:52 UTC-4  
Method . . . . . IC1-072225  
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<br>min | Area<br>(μS/cm) x min | Height<br>μS/cm | Concentration<br>ppm | Component name |
|-------------|-----------------------|-----------------------|-----------------|----------------------|----------------|
| 1           | 6.468                 | 0.0038                | 0.022           | 0.078                | Chloride       |

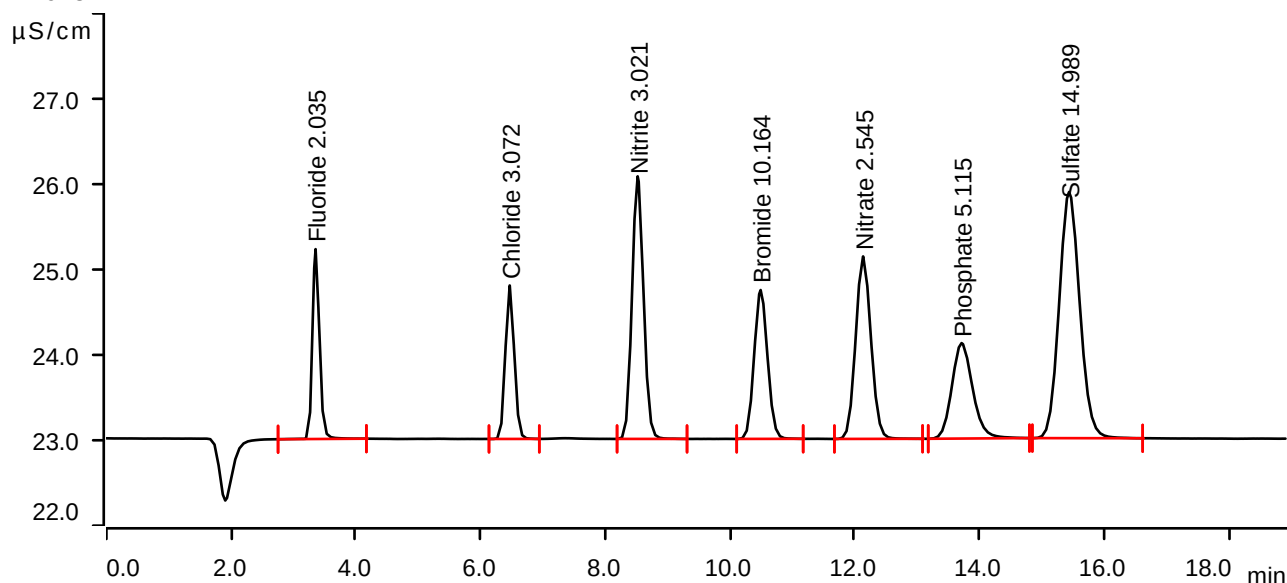
## Sample data

Ident . . . . . LB136635BSW  
Sample type . . . . . Check standard 1  
Determination start . . . . . 2025-07-25 12:55:23 UTC-4  
Method . . . . . IC1-072225  
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<br>min | Area<br>(µS/cm) x min | Height<br>µS/cm | Concentration<br>ppm | Component name |
|-------------|-----------------------|-----------------------|-----------------|----------------------|----------------|
| 1           | 3.355                 | 0.2881                | 2.224           | 2.035                | Fluoride       |
| 2           | 6.467                 | 0.2992                | 1.798           | 3.072                | Chloride       |
| 3           | 8.518                 | 0.6570                | 3.076           | 3.021                | Nitrite        |
| 4           | 10.490                | 0.4330                | 1.744           | 10.164               | Bromide        |
| 5           | 12.132                | 0.6085                | 2.137           | 2.545                | Nitrate        |
| 6           | 13.712                | 0.4309                | 1.118           | 5.115                | Phosphate      |
| 7           | 15.435                | 1.1032                | 2.883           | 14.989               | Sulfate        |

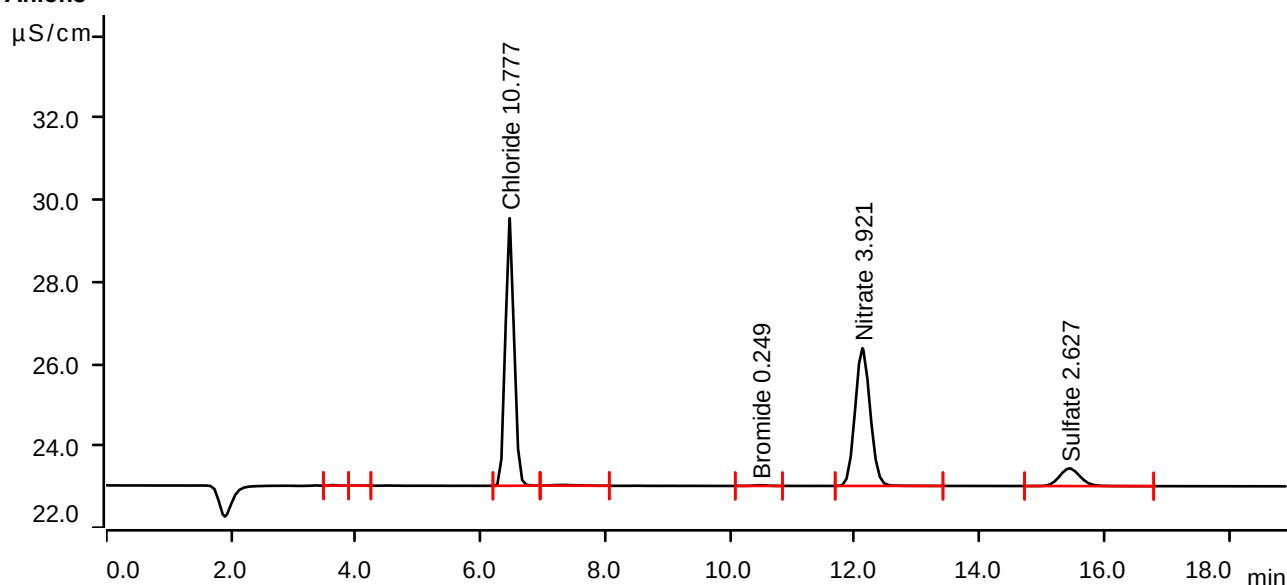
## Sample data

Ident . . . . . Q2695-01  
Sample type . . . . . Sample  
Determination start . . . . . 2025-07-25 13:16:56 UTC-4  
Method . . . . . IC1-072225  
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<br>min | Area<br>(µS/cm) x min | Height<br>µS/cm | Concentration<br>ppm | Component name |
|-------------|-----------------------|-----------------------|-----------------|----------------------|----------------|
| 1           | 3.625                 | 0.0023                | 0.015           | invalid              |                |
| 2           | 3.958                 | 0.0002                | 0.001           | invalid              |                |
| 3           | 6.465                 | 1.0596                | 6.530           | 10.777               | Chloride       |
| 4           | 7.285                 | 0.0083                | 0.018           | invalid              |                |
| 5           | 10.480                | 0.0045                | 0.017           | 0.249                | Bromide        |
| 6           | 12.122                | 0.9439                | 3.361           | 3.921                | Nitrate        |
| 7           | 15.442                | 0.1663                | 0.431           | 2.627                | Sulfate        |

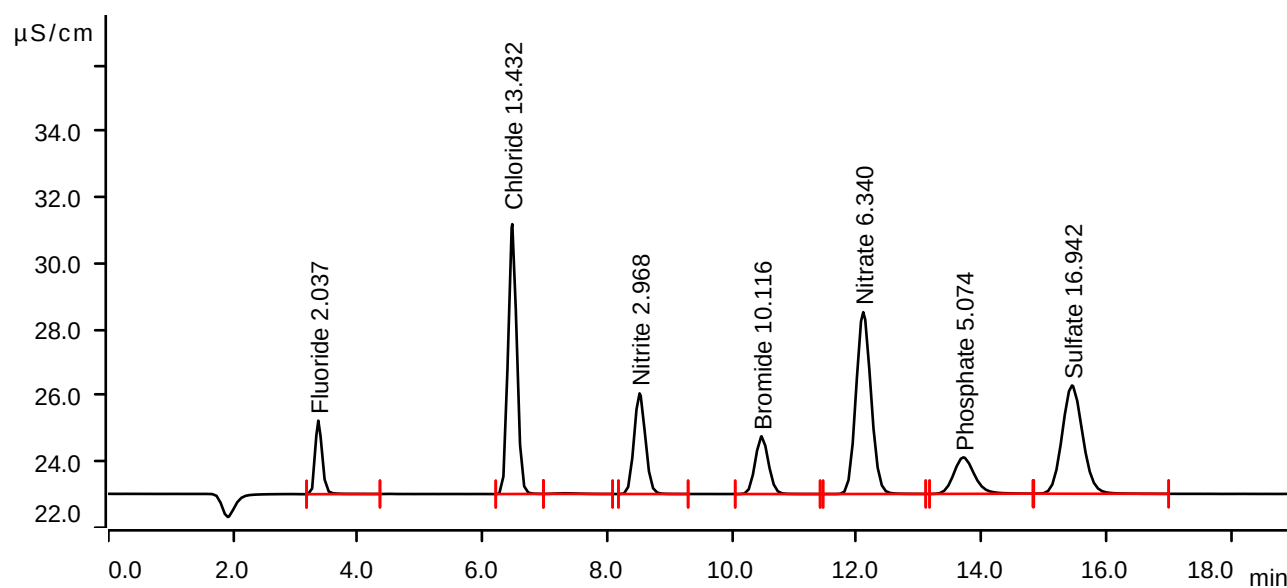
**Sample data**

Ident . . . . . Q2695-01MS  
Sample type . . . . . Sample  
Determination start . . . . . 2025-07-25 13:38:29 UTC-4  
Method . . . . . IC1-072225  
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<br>min | Area<br>( $\mu\text{S/cm}$ ) x min | Height<br>$\mu\text{S/cm}$ | Concentration<br>ppm | Component name |
|-------------|-----------------------|------------------------------------|----------------------------|----------------------|----------------|
| 1           | 3.367                 | 0.2884                             | 2.223                      | 2.037                | Fluoride       |
| 2           | 6.477                 | 1.3216                             | 8.165                      | 13.432               | Chloride       |
| 3           | 7.300                 | 0.0083                             | 0.019                      | invalid              |                |
| 4           | 8.517                 | 0.6451                             | 3.045                      | 2.968                | Nitrite        |
| 5           | 10.473                | 0.4309                             | 1.746                      | 10.116               | Bromide        |
| 6           | 12.103                | 1.5340                             | 5.503                      | 6.340                | Nitrate        |
| 7           | 13.708                | 0.4274                             | 1.105                      | 5.074                | Phosphate      |
| 8           | 15.450                | 1.2512                             | 3.276                      | 16.942               | Sulfate        |

**Sample data**

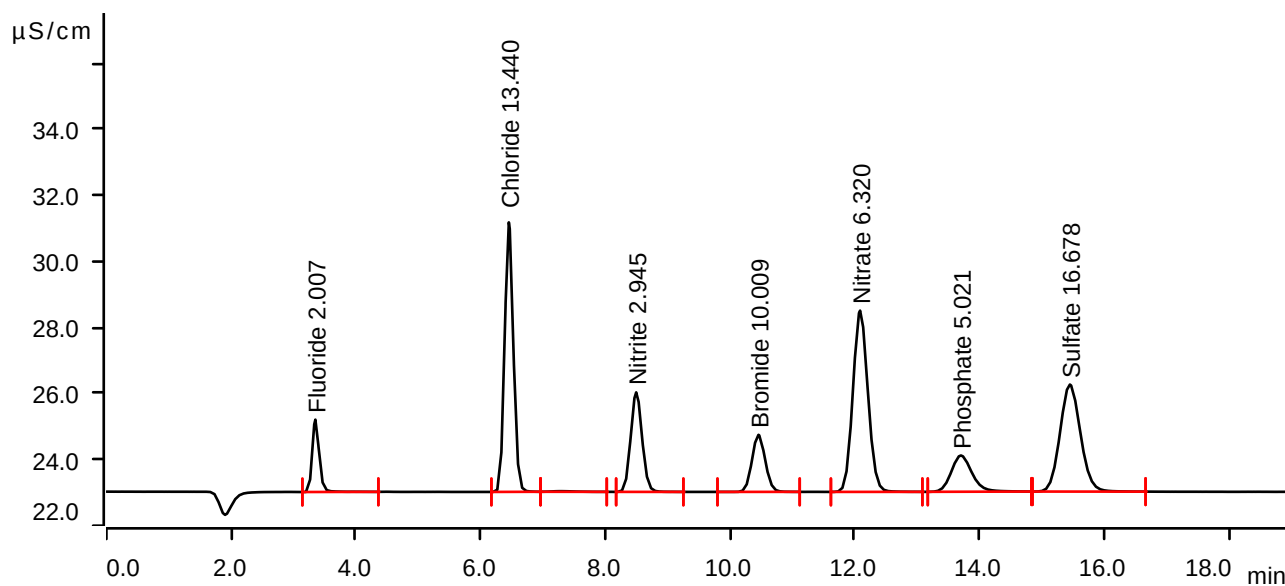
Ident . . . . . Q2695-01MSD  
Sample type . . . . . Sample  
Determination start . . . . . 2025-07-25 14:00:02 UTC-4  
Method . . . . . IC1-072225  
Operator . . . . .

**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<br>min | Area<br>( $\mu\text{S/cm}$ ) x min | Height<br>$\mu\text{S/cm}$ | Concentration<br>ppm | Component name |
|-------------|-----------------------|------------------------------------|----------------------------|----------------------|----------------|
| 1           | 3.352                 | 0.2841                             | 2.189                      | 2.007                | Fluoride       |
| 2           | 6.453                 | 1.3224                             | 8.155                      | 13.440               | Chloride       |
| 3           | 7.302                 | 0.0077                             | 0.019                      | invalid              |                |
| 4           | 8.495                 | 0.6401                             | 3.012                      | 2.945                | Nitrite        |
| 5           | 10.455                | 0.4263                             | 1.727                      | 10.009               | Bromide        |
| 6           | 12.085                | 1.5290                             | 5.486                      | 6.320                | Nitrate        |
| 7           | 13.702                | 0.4229                             | 1.098                      | 5.021                | Phosphate      |
| 8           | 15.448                | 1.2312                             | 3.240                      | 16.678               | Sulfate        |

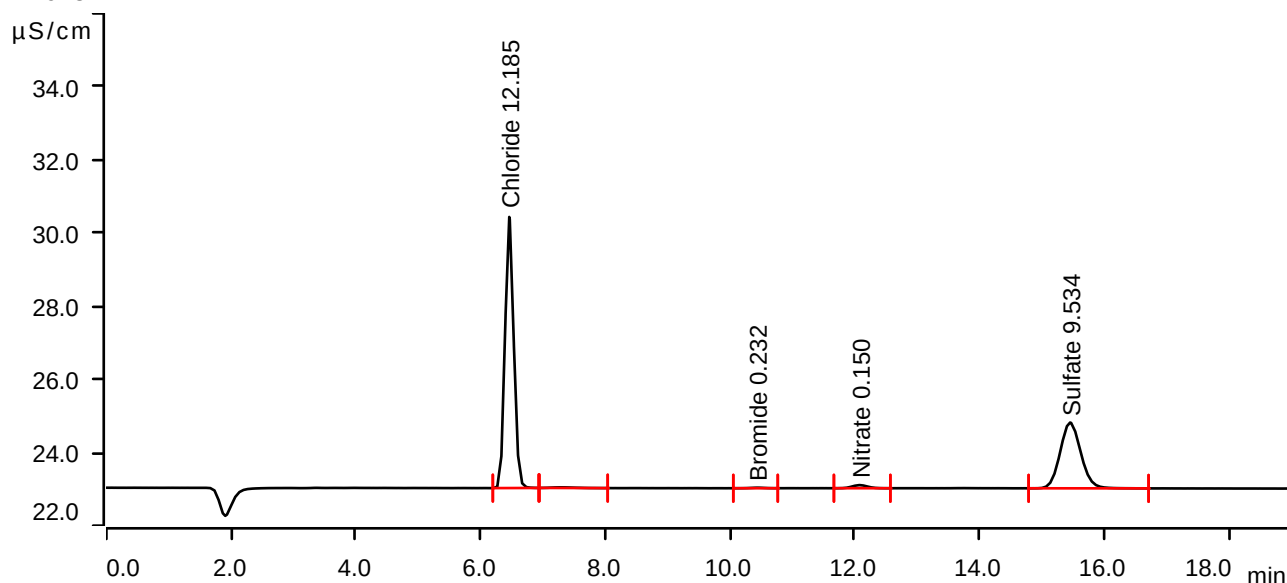
## Sample data

Ident . . . . . Q2696-01  
Sample type . . . . . Sample  
Determination start . . . . . 2025-07-25 14:21:37 UTC-4  
Method . . . . . IC1-072225  
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 . . . . . 11.71 MPa  
Maximum pressure monitored . . . . . yes  
Temperature . . . . . ---- °C

## Anions



| Peak number | Retention time<br>min | Area<br>(µS/cm) x min | Height<br>µS/cm | Concentration<br>ppm | Component name |
|-------------|-----------------------|-----------------------|-----------------|----------------------|----------------|
| 1           | 6.460                 | 1.1985                | 7.409           | 12.185               | Chloride       |
| 2           | 7.300                 | 0.0074                | 0.017           | invalid              |                |
| 3           | 10.432                | 0.0037                | 0.015           | 0.232                | Bromide        |
| 4           | 12.080                | 0.0242                | 0.085           | 0.150                | Nitrate        |
| 5           | 15.452                | 0.6898                | 1.798           | 9.534                | Sulfate        |

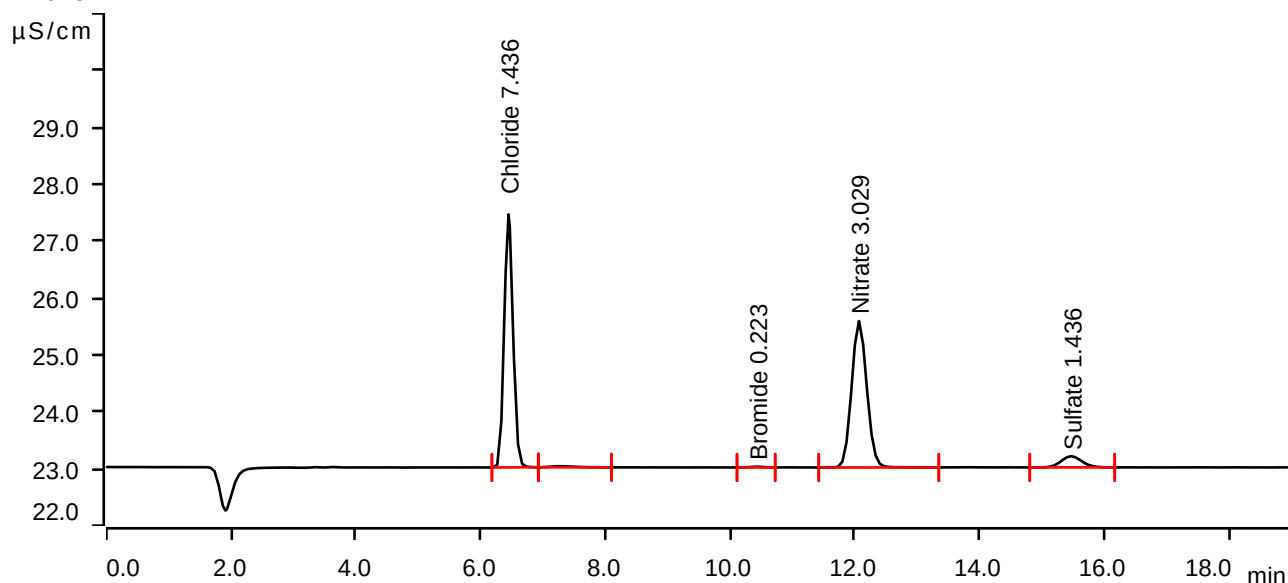
## Sample data

Ident . . . . . Q2697-01  
Sample type . . . . . Sample  
Determination start . . . . . 2025-07-25 14:43:11 UTC-4  
Method . . . . . IC1-072225  
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 . . . . . 11.71 MPa  
Maximum pressure monitored . . . . . yes  
Temperature . . . . . ---- °C

## Anions



| Peak number | Retention time<br>min | Area<br>(µS/cm) x min | Height<br>µS/cm | Concentration<br>ppm | Component name |
|-------------|-----------------------|-----------------------|-----------------|----------------------|----------------|
| 1           | 6.448                 | 0.7299                | 4.446           | 7.436                | Chloride       |
| 2           | 7.265                 | 0.0086                | 0.019           | invalid              |                |
| 3           | 10.437                | 0.0033                | 0.013           | 0.223                | Bromide        |
| 4           | 12.067                | 0.7263                | 2.572           | 3.029                | Nitrate        |
| 5           | 15.472                | 0.0760                | 0.196           | 1.436                | Sulfate        |

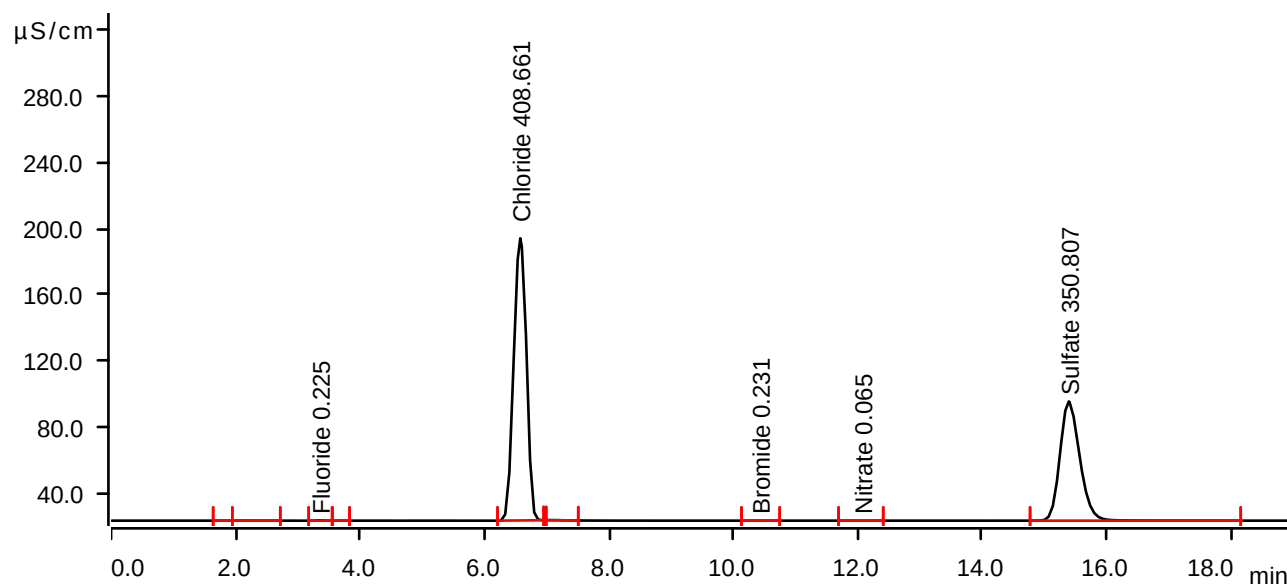
**Sample data**

Ident . . . . . Q2704-01  
Sample type . . . . . Sample  
Determination start . . . . . 2025-07-25 15:04:46 UTC-4  
Method . . . . . IC1-072225  
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



| Peak number | Retention time | Area                       | Height           | Concentration | Component name |
|-------------|----------------|----------------------------|------------------|---------------|----------------|
|             | min            | ( $\mu\text{S/cm}$ ) x min | $\mu\text{S/cm}$ | ppm           |                |
| 1           | 1.833          | 0.0047                     | 0.029            | invalid       |                |
| 2           | 2.092          | 0.0092                     | 0.033            | invalid       |                |
| 3           | 3.355          | 0.0287                     | 0.225            | 0.225         | Fluoride       |
| 4           | 3.648          | 0.0011                     | 0.008            | invalid       |                |
| 5           | 6.577          | 40.3227                    | 170.758          | 408.661       | Chloride       |
| 6           | 7.075          | 0.0164                     | 0.057            | invalid       |                |
| 7           | 10.425         | 0.0037                     | 0.015            | 0.231         | Bromide        |
| 8           | 12.070         | 0.0034                     | 0.012            | 0.065         | Nitrate        |
| 9           | 15.390         | 26.5558                    | 72.161           | 350.807       | Sulfate        |

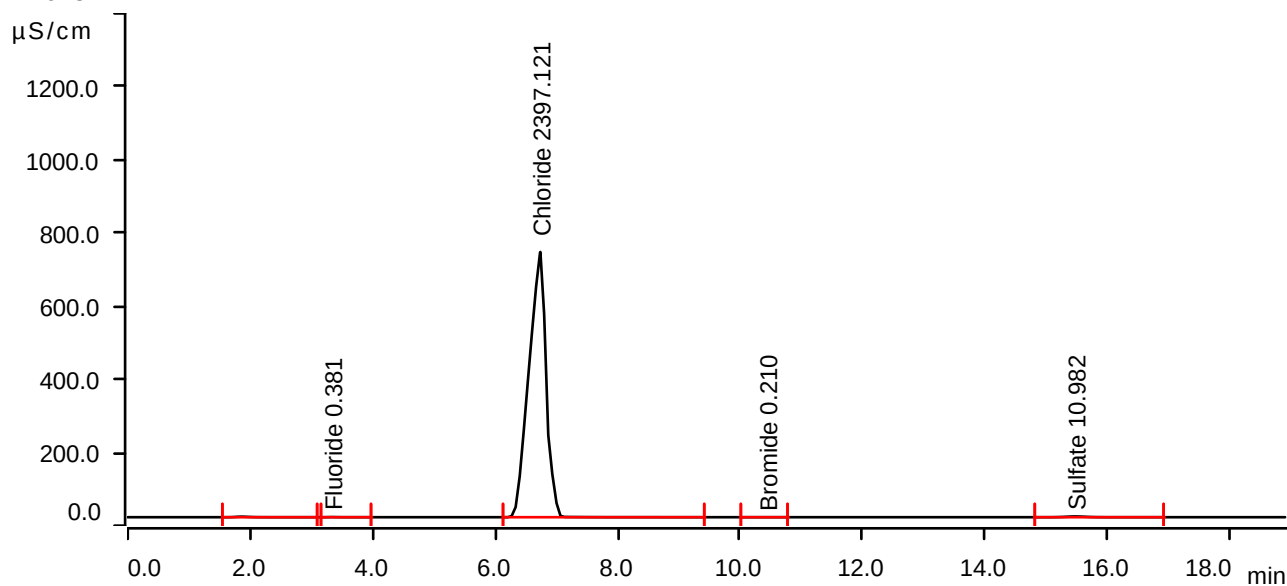
## Sample data

Ident . . . . . Q2704-02  
Sample type . . . . . Sample  
Determination start . . . . . 2025-07-25 15:26:20 UTC-4  
Method . . . . . IC1-072225  
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 . . . . . 11.71 MPa  
Maximum pressure monitored . . . . . yes  
Temperature . . . . . ---- °C

## Anions



| Peak number | Retention time<br>min | Area<br>(µS/cm) x min | Height<br>µS/cm | Concentration<br>ppm | Component name |
|-------------|-----------------------|-----------------------|-----------------|----------------------|----------------|
| 1           | 1.857                 | 0.3886                | 1.531           | invalid              |                |
| 2           | 3.338                 | 0.0510                | 0.365           | 0.381                | Fluoride       |
| 3           | 6.738                 | 236.5432              | 724.889         | 2397.121             | Chloride       |
| 4           | 10.440                | 0.0028                | 0.011           | 0.210                | Bromide        |
| 5           | 15.473                | 0.7995                | 2.100           | 10.982               | Sulfate        |

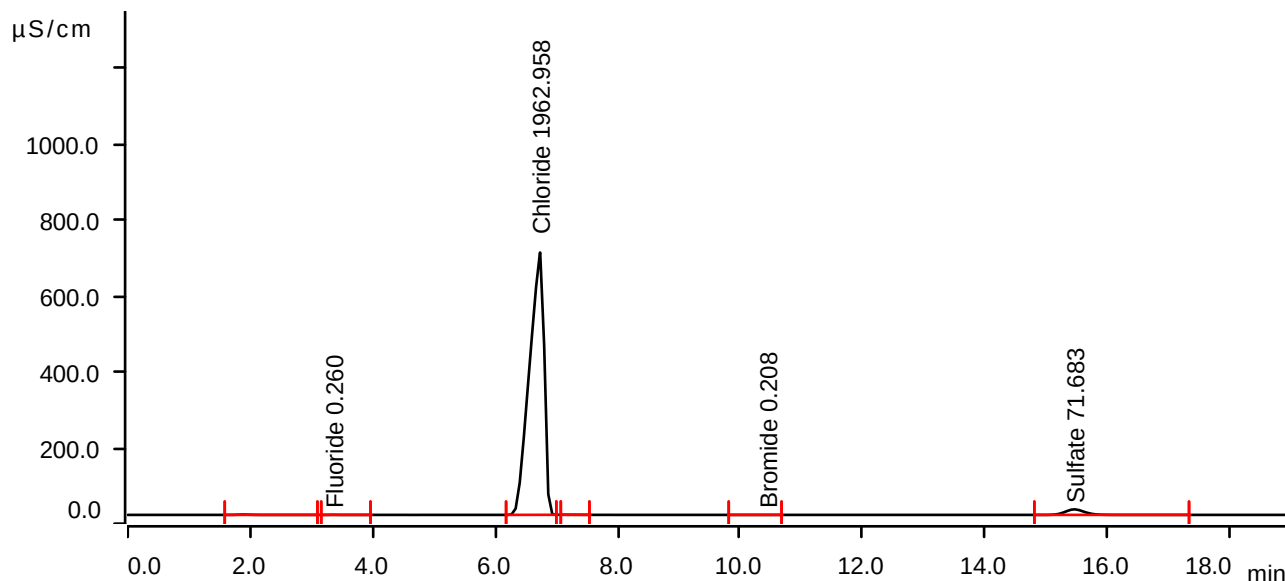
## Sample data

Ident . . . . . Q2704-03  
Sample type . . . . . Sample  
Determination start . . . . . 2025-07-25 15:47:52 UTC-4  
Method . . . . . IC1-072225  
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



| Peak number | Retention time<br>min | Area<br>(µS/cm) x min | Height<br>µS/cm | Concentration<br>ppm | Component name |
|-------------|-----------------------|-----------------------|-----------------|----------------------|----------------|
| 1           | 1.880                 | 0.2183                | 0.874           | invalid              |                |
| 2           | 3.353                 | 0.0337                | 0.245           | 0.260                | Fluoride       |
| 3           | 6.732                 | 193.7001              | 691.411         | 1962.958             | Chloride       |
| 4           | 7.138                 | 0.0165                | 0.066           | invalid              |                |
| 5           | 10.410                | 0.0027                | 0.010           | 0.208                | Bromide        |
| 6           | 15.455                | 5.4002                | 14.626          | 71.683               | Sulfate        |

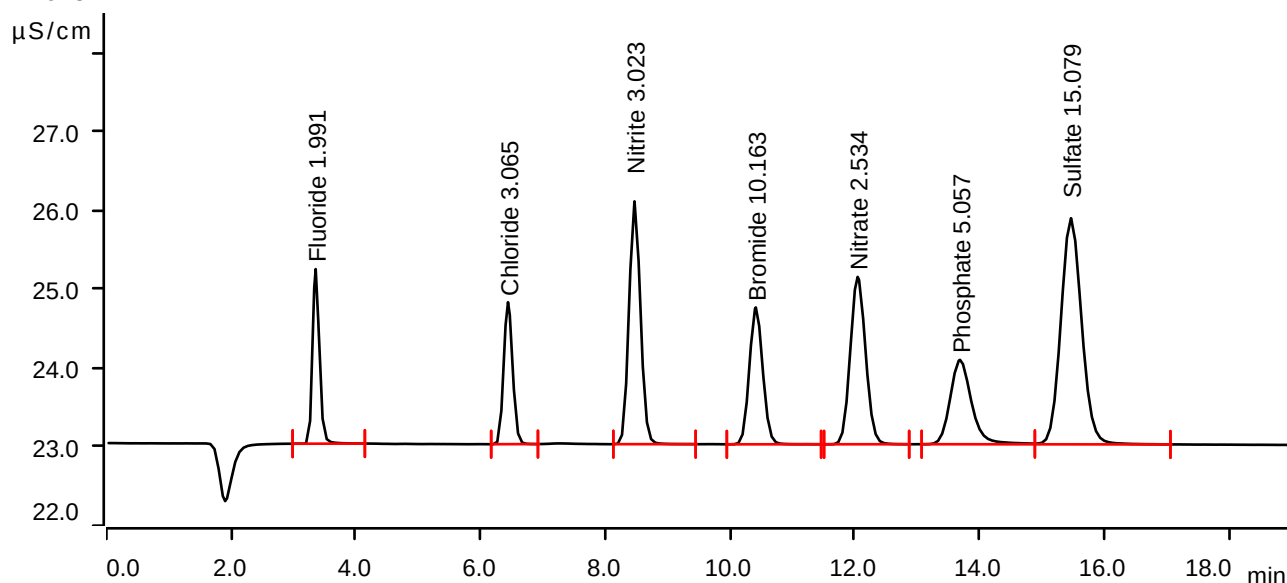
## Sample data

Ident . . . . . CCV  
Sample type . . . . . Check standard 1  
Determination start . . . . . 2025-07-25 16:30:41 UTC-4  
Method . . . . . IC1-072225  
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 . . . . . 11.71 MPa  
Maximum pressure monitored . . . . . yes  
Temperature . . . . . ---- °C

## Anions



| Peak number | Retention time<br>min | Area<br>(µS/cm) x min | Height<br>µS/cm | Concentration<br>ppm | Component name |
|-------------|-----------------------|-----------------------|-----------------|----------------------|----------------|
| 1           | 3.357                 | 0.2819                | 2.215           | 1.991                | Fluoride       |
| 2           | 6.440                 | 0.2986                | 1.801           | 3.065                | Chloride       |
| 3           | 8.468                 | 0.6575                | 3.081           | 3.023                | Nitrite        |
| 4           | 10.413                | 0.4329                | 1.737           | 10.163               | Bromide        |
| 5           | 12.045                | 0.6057                | 2.124           | 2.534                | Nitrate        |
| 6           | 13.687                | 0.4260                | 1.071           | 5.057                | Phosphate      |
| 7           | 15.465                | 1.1100                | 2.870           | 15.079               | Sulfate        |



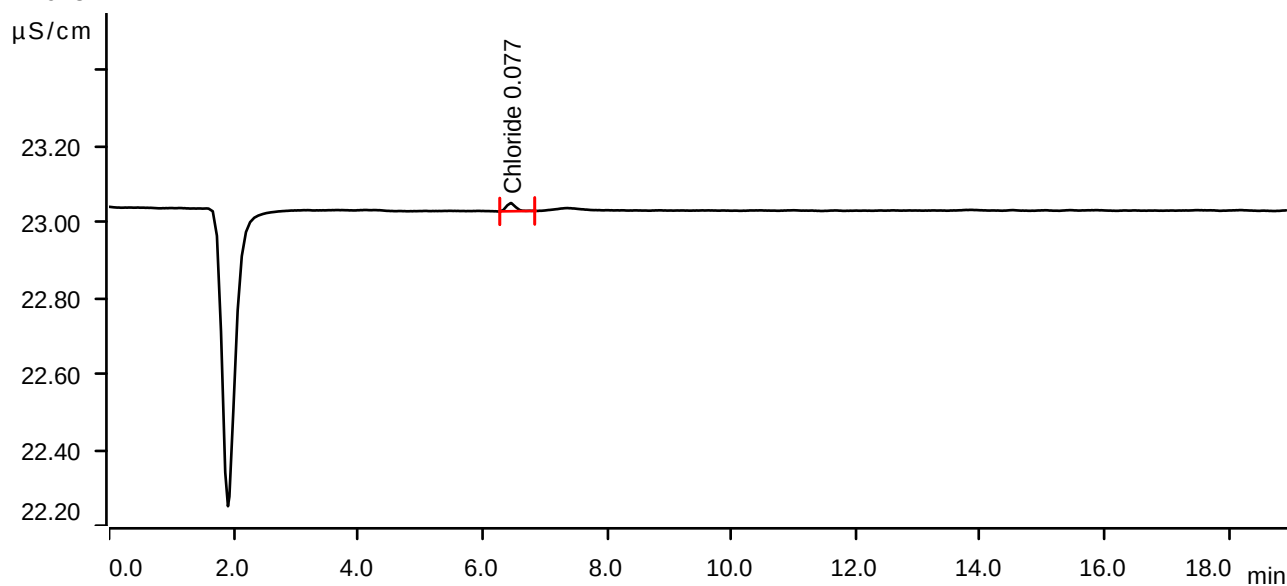
## Sample data

Ident . . . . . CCB  
Sample type . . . . . Sample  
Determination start . . . . . 2025-07-25 16:52:00 UTC-4  
Method . . . . . IC1-072225  
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<br>min | Area<br>(µS/cm) x min | Height<br>µS/cm | Concentration<br>ppm | Component name |
|-------------|-----------------------|-----------------------|-----------------|----------------------|----------------|
| 1           | 6.457                 | 0.0037                | 0.022           | 0.077                | Chloride       |

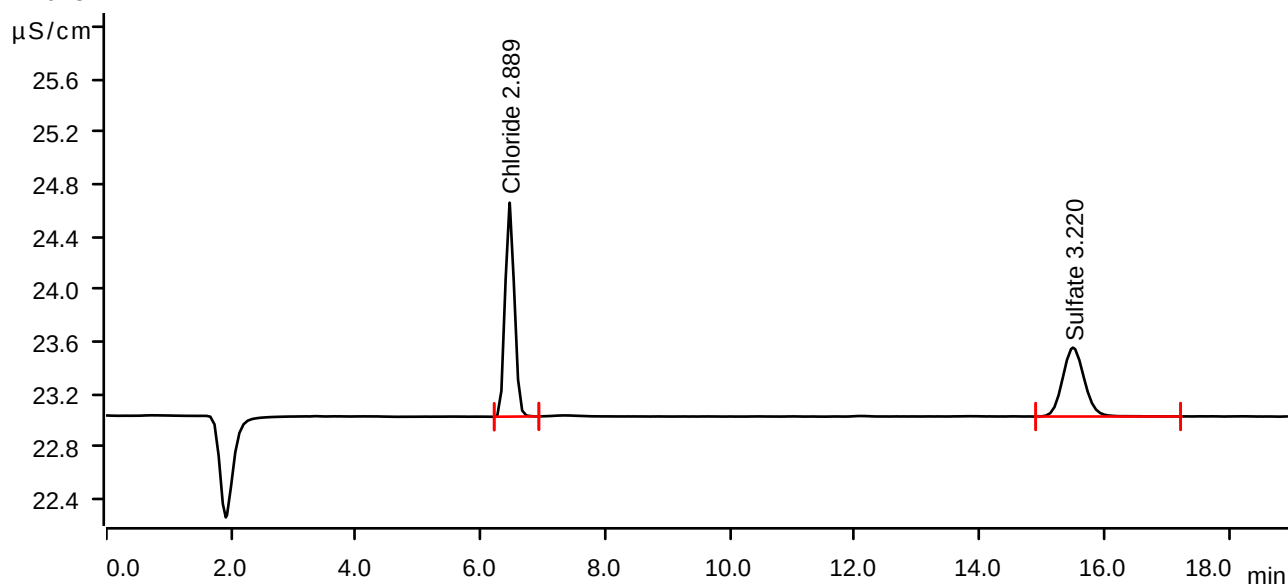
## Sample data

Ident . . . . . Q2704-01DLX100  
Sample type . . . . . Sample  
Determination start . . . . . 2025-07-25 17:56:29 UTC-4  
Method . . . . . IC1-072225  
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<br>min | Area<br>(µS/cm) x min | Height<br>µS/cm | Concentration<br>ppm | Component name |
|-------------|-----------------------|-----------------------|-----------------|----------------------|----------------|
| 1           | 6.465                 | 0.2812                | 1.629           | 2.889                | Chloride       |
| 2           | 15.498                | 0.2112                | 0.524           | 3.220                | Sulfate        |

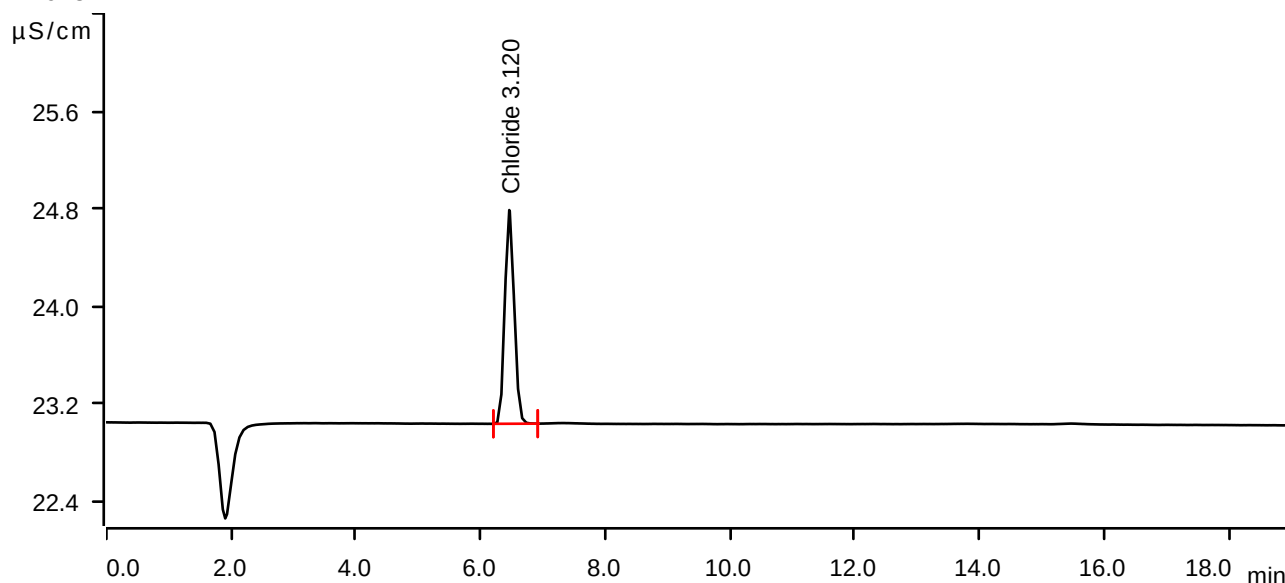
## Sample data

Ident . . . . . Q2704-02DLX500  
Sample type . . . . . Sample  
Determination start . . . . . 2025-07-25 18:39:30 UTC-4  
Method . . . . . IC1-072225  
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 | Area          | Height | Concentration | Component name |
|-------------|----------------|---------------|--------|---------------|----------------|
|             | min            | (µS/cm) x min | µS/cm  | ppm           |                |
| 1           | 6.460          | 0.3040        | 1.752  | 3.120         | Chloride       |

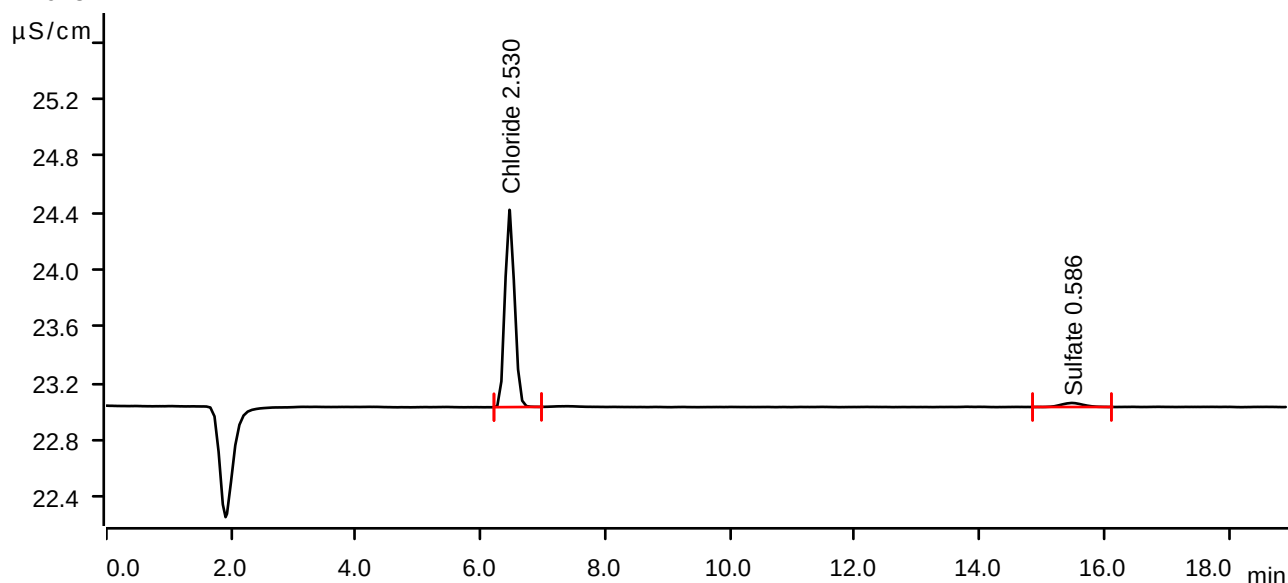
## Sample data

Ident . . . . . Q2704-03DLX500  
Sample type . . . . . Sample  
Determination start . . . . . 2025-07-25 19:22:27 UTC-4  
Method . . . . . IC1-072225  
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<br>min | Area<br>(µS/cm) x min | Height<br>µS/cm | Concentration<br>ppm | Component name |
|-------------|-----------------------|-----------------------|-----------------|----------------------|----------------|
| 1           | 6.463                 | 0.2458                | 1.387           | 2.530                | Chloride       |
| 2           | 15.480                | 0.0116                | 0.028           | 0.586                | Sulfate        |

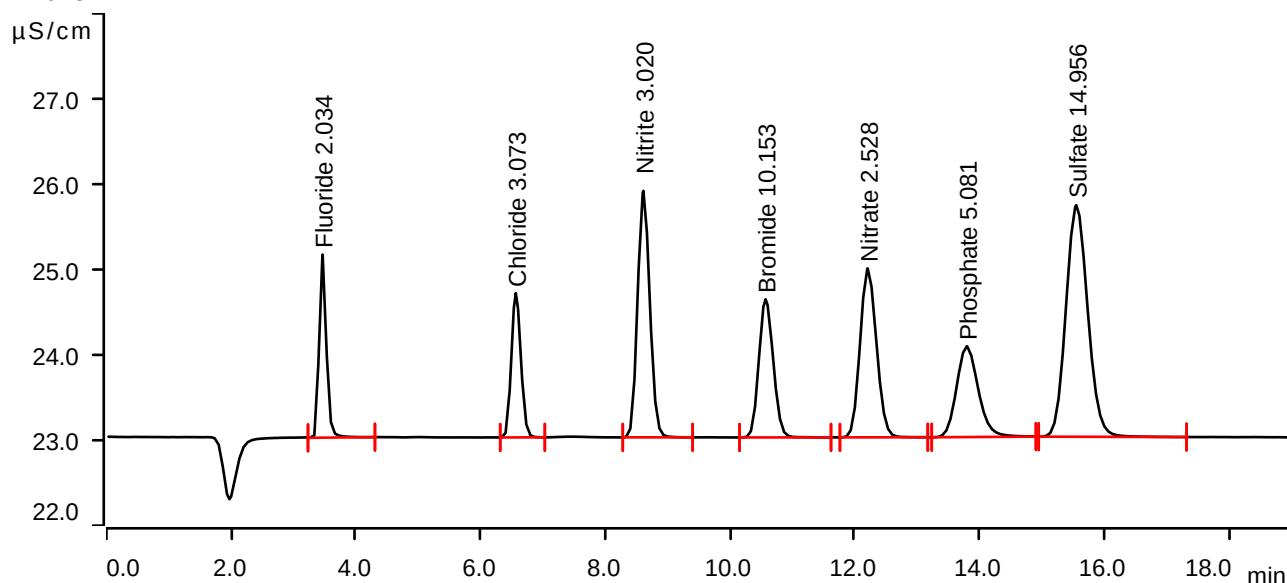
## Sample data

Ident . . . . . CCV  
Sample type . . . . . Check standard 1  
Determination start . . . . . 2025-07-25 20:05:20 UTC-4  
Method . . . . . IC1-072225  
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<br>min | Area<br>(µS/cm) x min | Height<br>µS/cm | Concentration<br>ppm | Component name |
|-------------|-----------------------|-----------------------|-----------------|----------------------|----------------|
| 1           | 3.465                 | 0.2880                | 2.144           | 2.034                | Fluoride       |
| 2           | 6.565                 | 0.2994                | 1.690           | 3.073                | Chloride       |
| 3           | 8.610                 | 0.6569                | 2.888           | 3.020                | Nitrite        |
| 4           | 10.570                | 0.4325                | 1.619           | 10.153               | Bromide        |
| 5           | 12.207                | 0.6042                | 1.979           | 2.528                | Nitrate        |
| 6           | 13.795                | 0.4280                | 1.064           | 5.081                | Phosphate      |
| 7           | 15.552                | 1.1007                | 2.712           | 14.956               | Sulfate        |

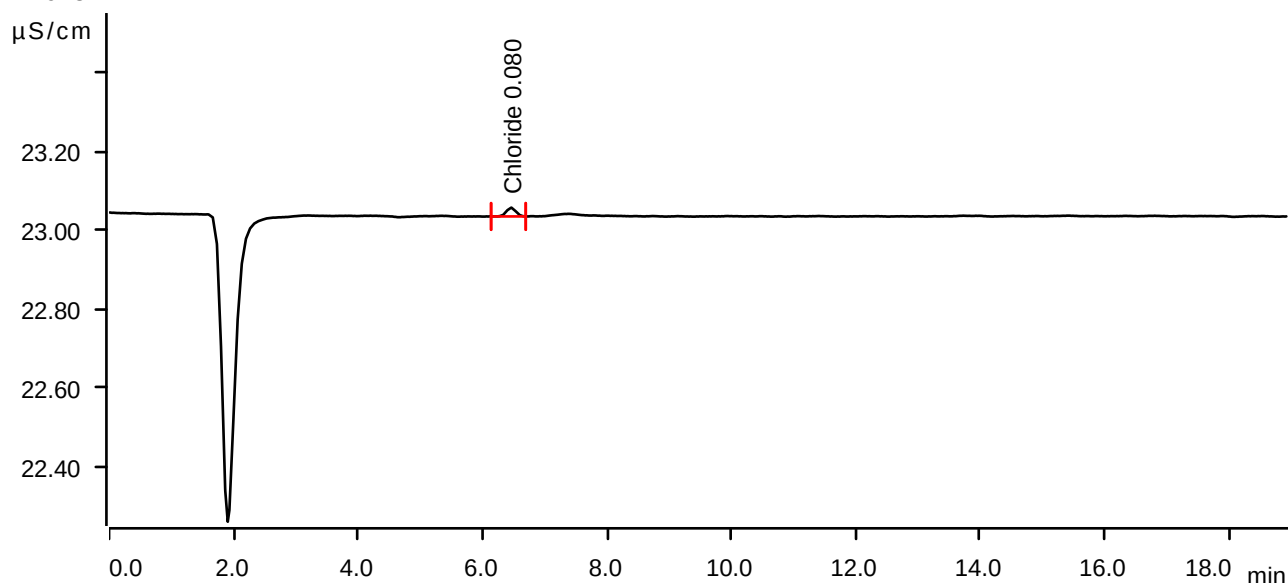
## Sample data

Ident . . . . . CCB  
Sample type . . . . . Sample  
Determination start . . . . . 2025-07-25 20:26:50 UTC-4  
Method . . . . . IC1-072225  
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<br>min | Area<br>(µS/cm) x min | Height<br>µS/cm | Concentration<br>ppm | Component name |
|-------------|-----------------------|-----------------------|-----------------|----------------------|----------------|
| 1           | 6.463                 | 0.0040                | 0.022           | 0.080                | Chloride       |

## WORKLIST(Hardcopy Internal Chain)

LB136635

WorkList Name : Anions-072525

WorkList ID : 190958

Department : Wet-Chemistry

Date : 07-25-2025 11:08:05

| Sample   | Customer Sample    | Matrix | Test          | Preservative | Customer | Raw Sample Storage Location | Collect Date | Method |
|----------|--------------------|--------|---------------|--------------|----------|-----------------------------|--------------|--------|
| Q2695-01 | RW5-SP100-20250725 | Water  | Anions Group4 | Cool 4 deg C | TETR06   | D31                         | 07/24/2025   | 300.0  |
| Q2696-01 | RW8-SP100-20250724 | Water  | Anions Group4 | Cool 4 deg C | TETR06   | D31                         | 07/24/2025   | 300.0  |
| Q2697-01 | RW7-SP100-20250724 | Water  | Anions Group4 | Cool 4 deg C | TETR06   | D51                         | 07/24/2025   | 300.0  |

Date/Time 07/25/25 12:20  
 Raw Sample Received by: 12(WC)  
 Raw Sample Relinquished by: 28(WC)

Date/Time 07/25/25 13:35  
 Raw Sample Received by: 28(WC)  
 Raw Sample Relinquished by: 12(WC)

## WORKLIST(Hardcopy Internal Chain)

LB136635

WorkList Name : Anions-072525-2

WorkList ID : 190963

Department : Wet-Chemistry

Date : 07-25-2025 13:56:46

| Sample   | Customer Sample | Matrix | Test          | Preservative | Customer | Raw Sample Storage Location | Collect Date | Method |
|----------|-----------------|--------|---------------|--------------|----------|-----------------------------|--------------|--------|
| Q2704-01 | MW3             | Water  | Anions Group1 | Cool 4 deg C | GENV01   | D31                         | 07/23/2025   | 300.0  |
| Q2704-02 | MW4             | Water  | Anions Group1 | Cool 4 deg C | GENV01   | D31                         | 07/23/2025   | 300.0  |
| Q2704-03 | MW2D            | Water  | Anions Group1 | Cool 4 deg C | GENV01   | D31                         | 07/23/2025   | 300.0  |

Date/Time 07/25/25 14:30  
Raw Sample Received by: 12(20)  
Raw Sample Relinquished by: 28(20)

Date/Time 07/25/25 15:25  
Raw Sample Received by: 28(20)  
Raw Sample Relinquished by: 12(20)



Instrument ID: IC-1

**Daily Analysis Runlog For Sequence/QC Batch ID # LB136635**

|                  |                                                                |              |                      |
|------------------|----------------------------------------------------------------|--------------|----------------------|
| Review By        | rubina                                                         | Review On    | 7/29/2025 1:27:38 PM |
| Supervise By     | Iwona                                                          | Supervise On | 7/29/2025 1:29:58 PM |
| SubDirectory     | LB136635                                                       | Test         | Anions               |
| <b>STD. NAME</b> | <b>STD REF.#</b>                                               |              |                      |
| ICAL Standard    | WP114024,WP114025,WP114026,WP114027,WP114028,WP114029,WP114030 |              |                      |
| ICV Standard     | WP114031                                                       |              |                      |
| CCV Standard     | WP114091                                                       |              |                      |
| ICSA Standard    | N/A                                                            |              |                      |
| CRI Standard     | N/A                                                            |              |                      |
| LCS Standard     | WP114092                                                       |              |                      |
| Chk Standard     | WP114032,WP114033                                              |              |                      |

| Sr# | SampleId    | ClientID          | QcType | Date           | Comment                      | Operator | Status |
|-----|-------------|-------------------|--------|----------------|------------------------------|----------|--------|
| 1   | STD1        | STD1              | CAL1   | 07/21/25 15:51 | All standards, samples, and  | RM/IZ    | OK     |
| 2   | STD2        | STD2              | CAL2   | 07/21/25 16:12 | QC are filtered through      | RM/IZ    | OK     |
| 3   | STD3        | STD3              | CAL3   | 07/21/25 16:34 | 0.45um, filter lot W3160     | RM/IZ    | OK     |
| 4   | STD4        | STD4              | CAL4   | 07/21/25 16:55 |                              | RM/IZ    | OK     |
| 5   | STD5        | STD5              | CAL5   | 07/21/25 17:17 |                              | RM/IZ    | OK     |
| 6   | STD6        | STD6              | CAL6   | 07/21/25 17:38 |                              | RM/IZ    | OK     |
| 7   | STD7        | STD7              | CAL7   | 07/21/25 18:00 |                              | RM/IZ    | OK     |
| 8   | ICV1        | ICV1              | ICV    | 07/21/25 18:21 |                              | RM/IZ    | OK     |
| 9   | ICB1        | ICB1              | ICB    | 07/21/25 18:42 |                              | RM/IZ    | OK     |
| 10  | CCV1        | CCV1              | CCV    | 07/25/25 11:50 |                              | RM/IZ    | OK     |
| 11  | CCB1        | CCB1              | CCB    | 07/25/25 12:12 |                              | RM/IZ    | OK     |
| 12  | LB136635BLW | LB136635BLW       | MB     | 07/25/25 12:33 |                              | RM/IZ    | OK     |
| 13  | LB136635BSW | LB136635BSW       | LCS    | 07/25/25 12:55 |                              | RM/IZ    | OK     |
| 14  | Q2695-01    | RW5-SP100-2025072 | SAM    | 07/25/25 13:16 |                              | RM/IZ    | OK     |
| 15  | Q2695-01MS  | RW5-SP100-2025072 | MS     | 07/25/25 13:38 | 9.5ml of sample, 0.5mL W3092 | RM/IZ    | OK     |
| 16  | Q2695-01MSD | RW5-SP100-2025072 | MSD    | 07/25/25 14:00 | 9.5ml of sample, 0.5mL W3092 | RM/IZ    | OK     |
| 17  | Q2696-01    | RW8-SP100-2025072 | SAM    | 07/25/25 14:21 |                              | RM/IZ    | OK     |
| 18  | Q2697-01    | RW7-SP100-2025072 | SAM    | 07/25/25 14:43 |                              | RM/IZ    | OK     |

Instrument ID: IC-1

**Daily Analysis Runlog For Sequence/QC Batch ID # LB136635**

|                  |                                                                |              |                      |
|------------------|----------------------------------------------------------------|--------------|----------------------|
| Review By        | rubina                                                         | Review On    | 7/29/2025 1:27:38 PM |
| Supervise By     | Iwona                                                          | Supervise On | 7/29/2025 1:29:58 PM |
| SubDirectory     | LB136635                                                       | Test         | Anions               |
| <b>STD. NAME</b> | <b>STD REF.#</b>                                               |              |                      |
| ICAL Standard    | WP114024,WP114025,WP114026,WP114027,WP114028,WP114029,WP114030 |              |                      |
| ICV Standard     | WP114031                                                       |              |                      |
| CCV Standard     | WP114091                                                       |              |                      |
| ICSA Standard    | N/A                                                            |              |                      |
| CRI Standard     | N/A                                                            |              |                      |
| LCS Standard     | WP114092                                                       |              |                      |
| Chk Standard     | WP114032,WP114033                                              |              |                      |

|    |            |        |     |                |             |       |          |
|----|------------|--------|-----|----------------|-------------|-------|----------|
| 19 | Q2704-01   | MW3    | SAM | 07/25/25 15:04 | Cl is high  | RM/IZ | Dilution |
| 20 | Q2704-02   | MW4    | SAM | 07/25/25 15:26 | Cl is high  | RM/IZ | Dilution |
| 21 | Q2704-03   | MW2D   | SAM | 07/25/25 15:47 | Cl is high  | RM/IZ | Dilution |
| 22 | CCV2       | CCV2   | CCV | 07/25/25 16:30 |             | RM/IZ | OK       |
| 23 | CCB2       | CCB2   | CCB | 07/25/25 16:52 |             | RM/IZ | OK       |
| 24 | Q2704-01DL | MW3DL  | SAM | 07/25/25 17:56 | 100X For Cl | RM/IZ | Confirms |
| 25 | Q2704-02DL | MW4DL  | SAM | 07/25/25 18:39 | 500X For Cl | RM/IZ | Confirms |
| 26 | Q2704-03DL | MW2DDL | SAM | 07/25/25 19:22 | 500X For Cl | RM/IZ | Confirms |
| 27 | CCV3       | CCV3   | CCV | 07/25/25 20:05 |             | RM/IZ | OK       |
| 28 | CCB3       | CCB3   | CCB | 07/25/25 20:26 |             | RM/IZ | OK       |

## Prep Standard - Chemical Standard Summary

**Order ID :** Q2697

**Test :** Anions Group4

**Prepbatch ID :**

**Sequence ID/Qc Batch ID:** LB136635,

**Standard ID :**

WP112796,WP114024,WP114025,WP114026,WP114027,WP114028,WP114029,WP114030,WP114031,WP114032,WP114033,WP114091,WP114092,

**Chemical ID :**

M6041,W2647,W3112,W3163,W3180,W3197,

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

## 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 | <a href="#">WP112796</a> | 04/22/2025       | 10/22/2025             | Iwona Zarych       | WETCHEM_SCALE_5 (WC SC-5) | None             | Jignesh Parikh<br>04/22/2025 |
| <b>FROM</b> 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 | <a href="#">WP114024</a> | 07/22/2025       | 07/23/2025             | Iwona Zarych       | None           | None             | Jignesh Parikh<br>07/22/2025 |
| <b>FROM</b> 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 | <a href="#">WP114025</a> | 07/22/2025       | 07/23/2025             | Iwona Zarych       | None           | WETCHEM_FIPETTE_3<br>(WC) | Jignesh Parikh<br>07/22/2025 |
| <b>FROM</b> 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 | <a href="#">WP114026</a> | 07/22/2025       | 07/23/2025             | Iwona Zarych       | None           | WETCHEM_FIPETTE_3<br>(WC) | Jignesh Parikh<br>07/22/2025 |
| <b>FROM</b> 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 | <a href="#">WP114027</a> | 07/22/2025       | 02/19/2026             | Iwona Zarych       | None           | WETCHEM_FIPETTE_3<br>(WC) | Jignesh Parikh<br>07/22/2025 |
| <b>FROM</b> 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 | <a href="#">WP114028</a> | 07/22/2025       | 07/23/2025             | Iwona Zarych       | None           | WETCHEM_FIPETTE_3<br>(WC) | Jignesh Parikh<br>07/22/2025 |
| <b>FROM</b> 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 | <a href="#">WP114029</a> | 07/22/2025       | 07/23/2025             | Iwona Zarych       | None           | WETCHEM_F<br>IPETTE_3<br>(WC) | Jignesh Parikh<br><br>07/22/2025 |
| <b>FROM</b> 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 | <a href="#">WP114030</a> | 07/22/2025       | 07/23/2025             | Iwona Zarych       | None           | WETCHEM_F<br>IPETTE_3<br>(WC) | Jignesh Parikh<br><br>07/22/2025 |
| <b>FROM</b> 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 | <a href="#">WP114031</a> | 07/22/2025       | 07/23/2025             | Iwona Zarych       | None           | WETCHEM_F<br>IPETTE_3<br>(WC) | Jignesh Parikh<br><br>07/22/2025 |
| <b>FROM</b> 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 | <a href="#">WP114032</a> | 07/22/2025       | 08/22/2025             | Iwona Zarych       | None           | Glass<br>Pipette-A | Jignesh Parikh<br><br>07/22/2025 |
| <b>FROM</b> 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 | <a href="#">WP114033</a> | 07/22/2025       | 08/22/2025             | Iwona Zarych       | None           | Glass Pipette-A  | Jignesh Parikh<br>07/22/2025 |

**FROM** 5.60000ml of M6041 + 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 | <a href="#">WP114091</a> | 07/25/2025       | 07/26/2025             | Iwona Zarych       | None           | WETCHEM_FIPETTE_3 (WC) | Jignesh Parikh<br>07/28/2025 |

**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 | <a href="#">WP114092</a> | 07/25/2025       | 07/26/2025             | Iwona Zarych       | None           | WETCHEM_F<br>IPETTE_3<br>(WC) | Jignesh Parikh<br><br>07/28/2025 |
| <b>FROM</b> 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 | 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 # |
|------------------|---------------------|---------------------|-----------------|-------------------------|-----------------------------|----------------|
| 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 <sub>3</sub> ) (dried basis)     | 99.7 – 100.3 % | 100.1   |
| Insoluble Matter                              | <= 0.015 %     | < 0.002 |
| Chloride (Cl)                                 | <= 0.003 %     | 0.003   |
| Phosphate (PO <sub>4</sub> )                  | <= 0.001 %     | 0.001   |
| Sulfur Compounds (as SO <sub>4</sub> )        | <= 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 <sub>4</sub> )                   | <= 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

  
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™



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 <sub>2</sub> SO <sub>4</sub> )                | 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 <sub>2</sub> ) | ≤ 2 ppm       | < 2 ppm     |
| Ammonium (NH <sub>4</sub> )                                  | ≤ 1 ppm       | 1 ppm       |
| Chloride (Cl)                                                | ≤ 0.1 ppm     | < 0.1 ppm   |
| Nitrate (NO <sub>3</sub> )                                   | ≤ 0.2 ppm     | < 0.1 ppm   |
| Phosphate (PO <sub>4</sub> )                                 | ≤ 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**

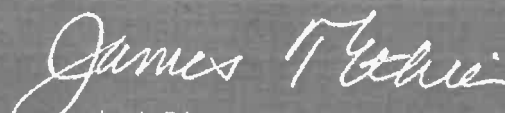


Material No.: 9673-33  
Batch No.: 23D2462010

| 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.<br><br>This document has been electronically produced and is valid without a signature.<br><br>Leona Edwardson, Quality Control Sr. Manager - Solon<br>VWR Chemicals, LLC.<br>28600 Fountain Parkway, Solon OH 44139 USA | Analysis may have been rounded to significant digits in specification limits<br><br>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: H<sub>2</sub>O  
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 <sub>3</sub> -   | 25.00 ± 0.10 µg/mL |
| Nitrite as N, NNO <sub>2</sub> - | 30.00 ± 0.10 µg/mL | o-Phosphate as P, PPO <sub>4</sub> | 50.00 ± 0.18 µg/mL |
| Sulfate, SO <sub>4</sub>         | 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](https://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](mailto: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

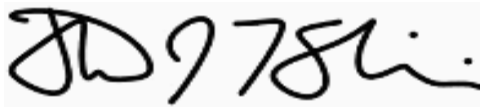
### Certificate Prepared By:

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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### 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       |