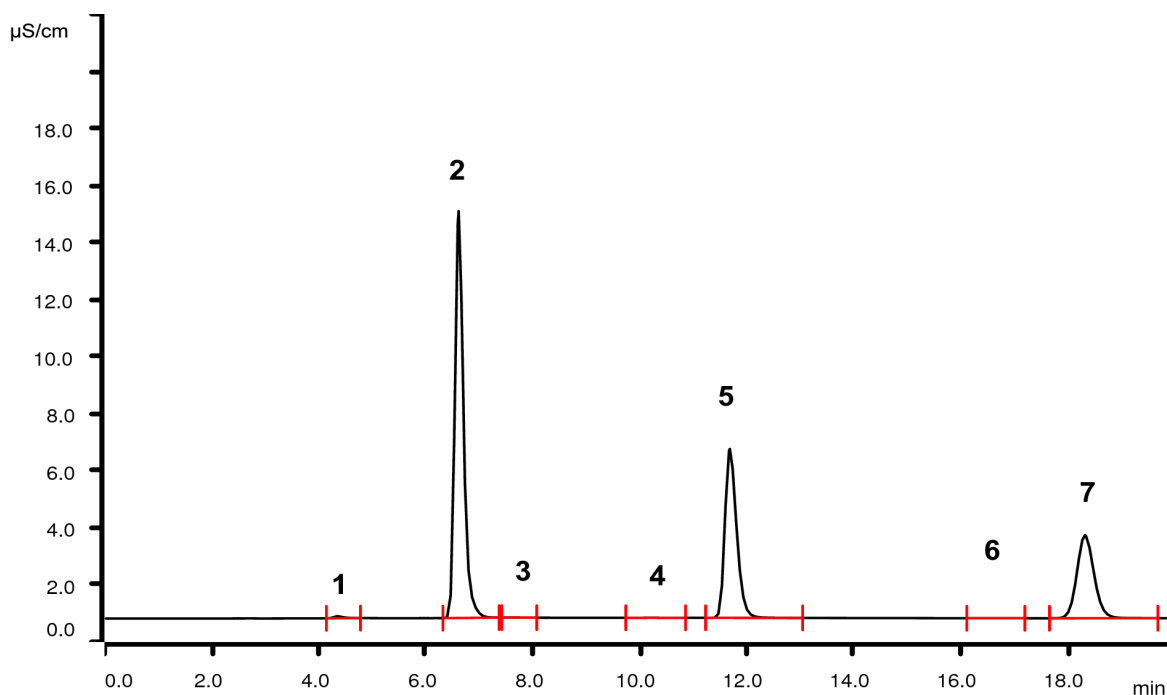


Dissolved anions in water according to EN ISO 10304-1 applying Inline Ultrafiltration



EN ISO 10304-1 is one of the most important standards for the determination of the seven standard anions in water samples. Many other standards refer to EN ISO 10304-01 if anion determination by IC is required. This standard asks for a membrane filtration for samples to avoid bacteria and solids, if required. This application shows the determination of anions according EN ISO 10304-1 applying Inline Ultrafiltration. This setup avoids tedious manual sample filtration and handles any samples fully automatically.

Results

Anion	Conc. [mg/L]	RSD [%, N = 10]	Anion	Conc. [mg/L]	RSD [%, N = 10]
1 Fluoride	< 0.05	-	5 Nitrate	8.1	0.3
2 Chloride	8.2	0.2	6 Phosphate	< 0.05	-
3 Nitrite	< 0.05	-	7 Sulfate	4.9	0.2
4 Bromide	< 0.05	-			

Sample

Direct injection after Inline Ultrafiltration

Sample preparation

Metrohm Inline Ultrafiltration.

Columns

Metrosep A Supp 7 - 150/4.0	6.1006.620
Metrosep A Supp 5 Guard/4.0	6.1006.500

Solutions

Eluent	3.6 mmol/L sodium carbonate
Suppressor regenerant	100 mmol/L sulfuric acid
Rinsing solution	STREAM

Analysis

Conductivity detection after sequential suppression

Instrumentation

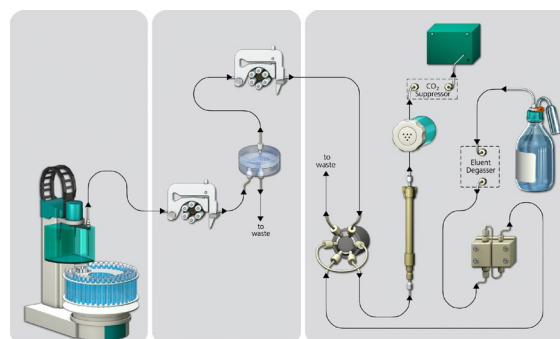
940 Professional IC Vario ONE/SeS/PP	2.940.1400
IC Conductivity Detector	2.850.9010
858 Professional Sample Processor	2.858.0020
IC equipment: Inline Ultrafiltration	6.5330.130
MSM Rotor A	6.2832.000
Adapter sleeve for Suppressor Vario	6.2842.020

Parameters

Flow rate	0.7 mL/min
Injection volume	20 µL
P _{max}	15 MPa
Recording time	20 min
Column temperature	45 °C

Setup scheme

The installation is done according to the AB 365 ProfIC Vario 2 Anion.



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