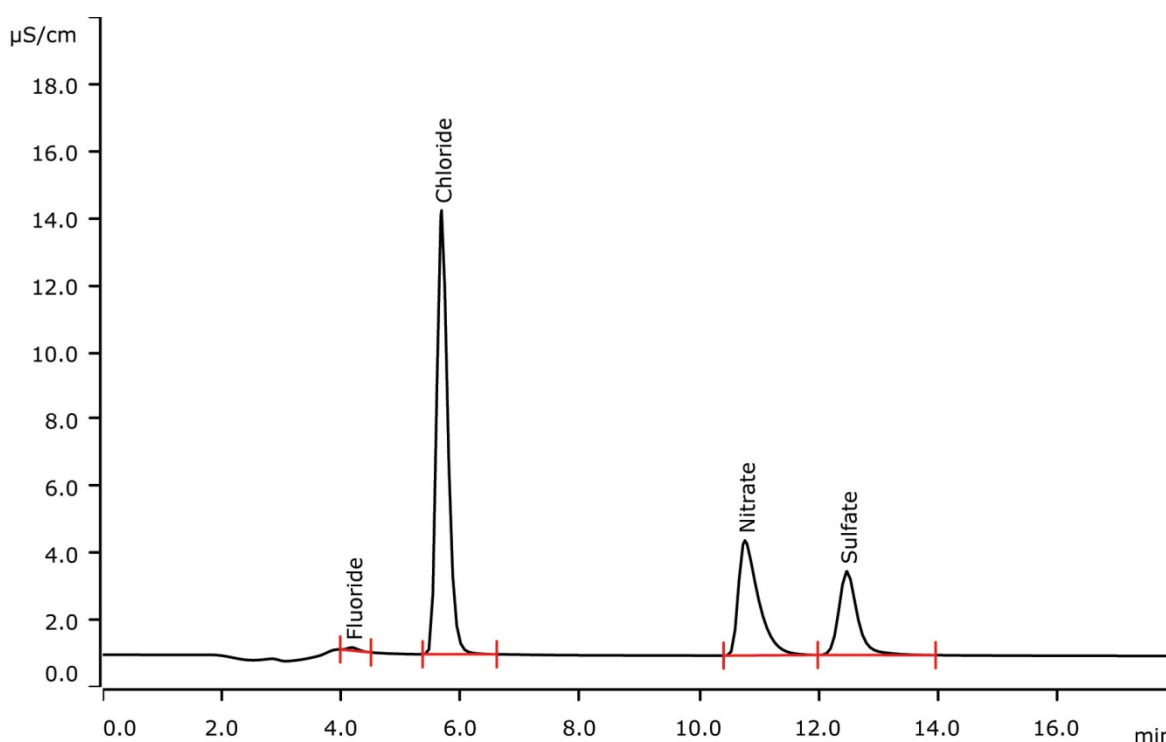


Anions in small water volumes by using Intelligent Pick-up Technique (MiPuT)



With Metrohm intelligent Pick-up Technique (MiPuT), the determination of anions in small sample volumes is straightforward. MiPuT allows to inject a very small aliquot of a very limited sample volume: only 10 µL out of 100 µL sample are required. Calibration is performed by injecting different volumes of a single mixed standard solution. For corresponding cation determination, see AN-C-141.

Results

	Tap water [mg/L] (n = 6)	RSD [%] (n = 6)
Fluoride	0.05	1.1
Chloride	9.32	0.4
Nitrate	8.93	0.8
Sulfate	4.56	0.8

Sample

Tap water

Sample preparation

Intelligent Pick-up Technique (MiPuT)

Columns

Metrosep A Supp 16 - 150/2.0	6.1031.220
Metrosep A Supp 16 Guard/2.0	6.1031.600

Solutions

Eluent	7.5 mmol/L sodium carbonate 0.75 mmol/L sodium hydroxide
Suppressor regenerant	100 mmol/L sulfuric acid
Rinsing solution	Ultrapure water

Parameters

Flow rate	0.3 mL/min
Injection volume	10 µL
P _{max}	16 MPa
Recording time	18 min
Column temperature	45 °C

Analysis

Conductivity after sequential suppression

Instrumentation

850 Professional IC AnCat – MCS	2.850.3030
IC Conductivity Detector	2.850.9010
858 Professional Sample Processor – Pump	2.858.0020
Sample rack 159 × 2 mL + 3 × 300 mL (for Eppendorf vials)	6.2041.480
Pick-up needle MF	6.2624.100
800 Dosino (liquid handling)	2.800.0010
Dosing unit 2 mL	6.3032.120

Calibration MiPCT

Calibration range	Factor of 10
Standard solution:	
Fluoride	0.05 mg/L
Chloride, nitrate	2.0 mg/L
Bromide	0.1 mg/L
Sulfate	5.0 mg/L
1. Level	5 µL
2. Level	10 µL
3. Level	15 µL
4. Level	25 µL
5. Level	50 µL

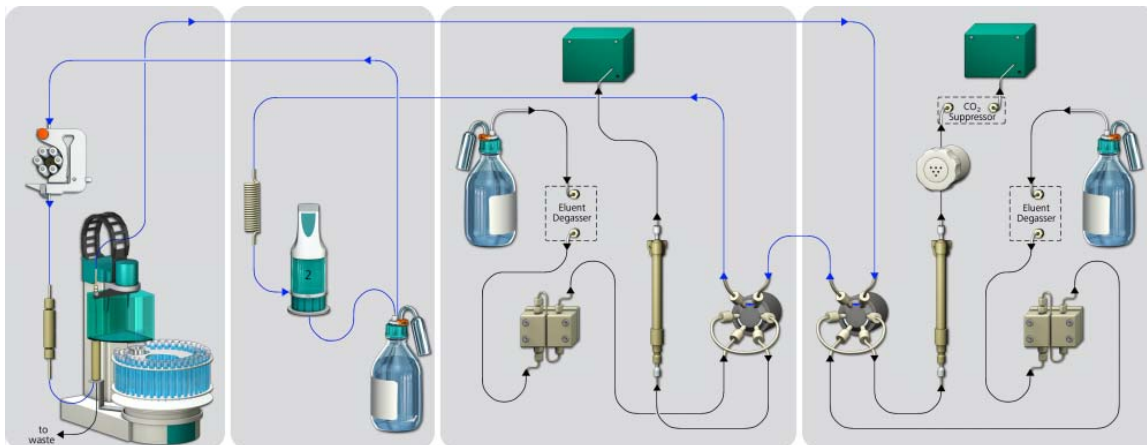


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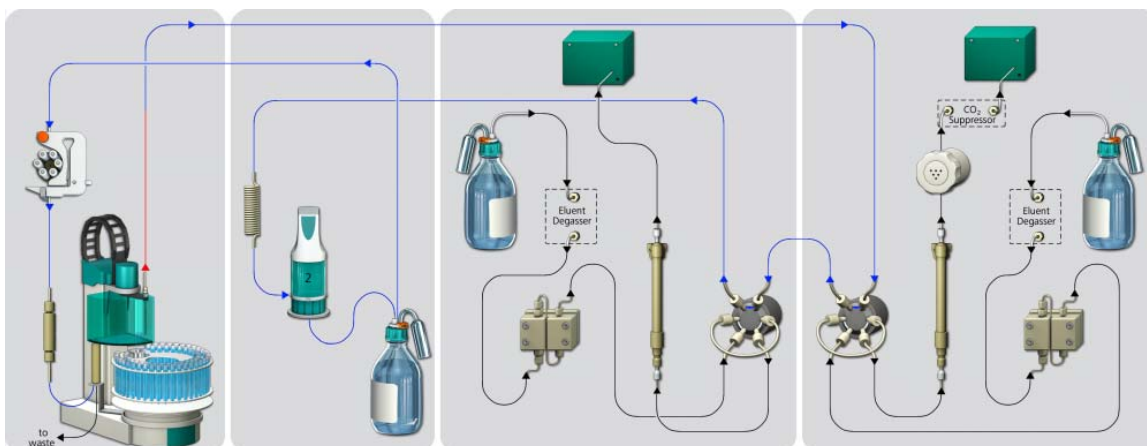
 **Metrohm**

Flow chart (AnCat setup)

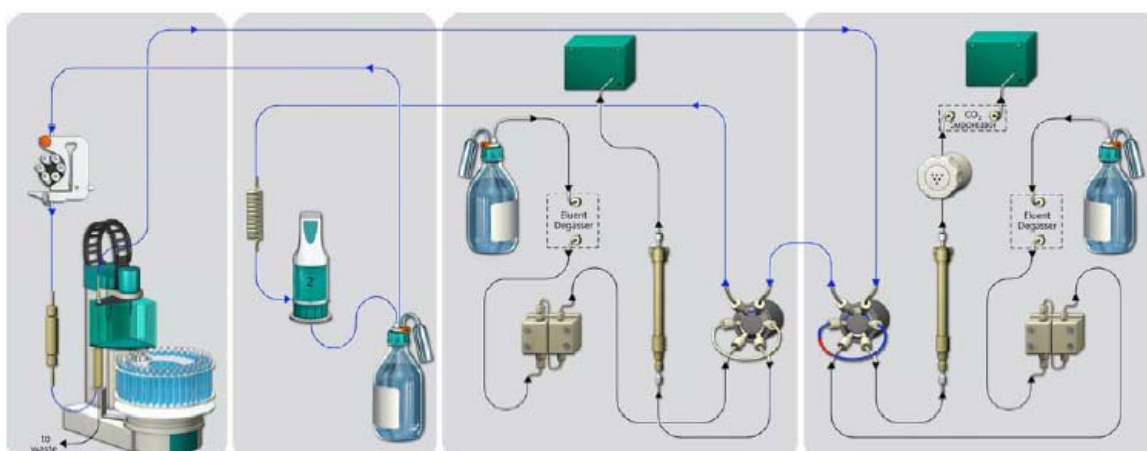
Rinsing:



Pick-up:



Transfer:



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