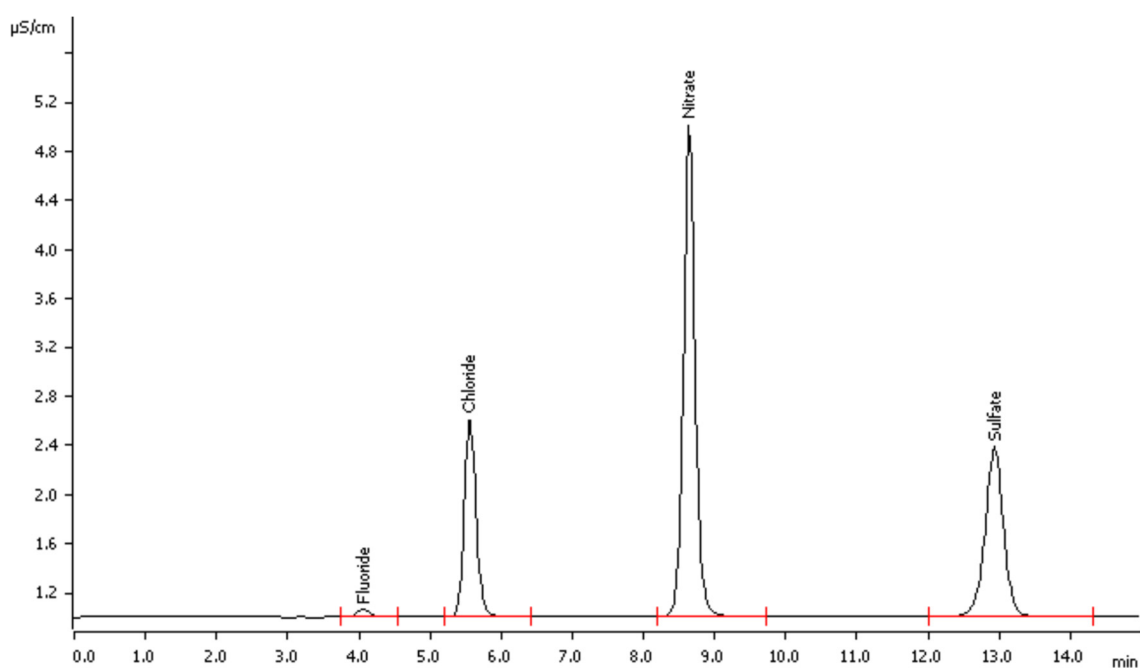


Tap water analysis for anions using Metrohm intelligent Partial Loop Technique (MiPT)



Partial loop injection is a well known way of sample introduction to HPLC. In ion chromatography it is not yet used to a large extent. Liquid handling with Metrohm's Dosino technology now enables to use partial loop injection on a highly reproducible and accurate level. It includes multi-level calibration out of one standard solution. This AN shows its use for parallel anion and cation determination in tap water applying one single Sample Processor. The cation results are shown in [Application Note C-133](#).

Results

Fluoride	0.04 mg/L
Chloride	1.40 mg/L
Nitrate	6.03 mg/L
Sulfate	2.52 mg/L

Method description

Sample

Tap water

Sample preparation

Direct injection, partial loop mode

Column

Metrosep A Supp 5 - 250/4.0	6.1006.530
Metrosep A Supp 4/5 Guard/4.0	6.1006.500

Solutions

Eluent	3.2 mmol/L sodium carbonate 1.0 mmol/L sodium hydrogen carbonate
Regenerant	50 mmol/L sulfuric acid
Rinsing solution	Ultrapure water

Analysis

Suppressed conductivity

Parameters

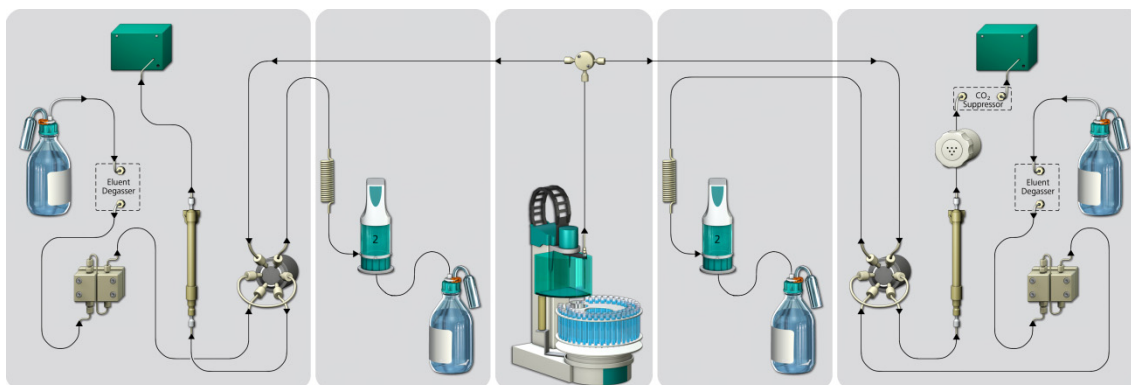
Flow rate	0.7 mL/min
Sample loop	250 µL
Injection volume	variable
P _{max}	15.0 MPa
Recording time	16 min
Column temperature	30 °C



Instrumentation

881 Compact IC pro – Anion – MCS	2.881.0030
881 Compact IC pro – Cation (for cation part, not shown)	2.881.0010
858 Professional Sample Processor	2.858.0010
800 Dosino	2.800.0010

System setup



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