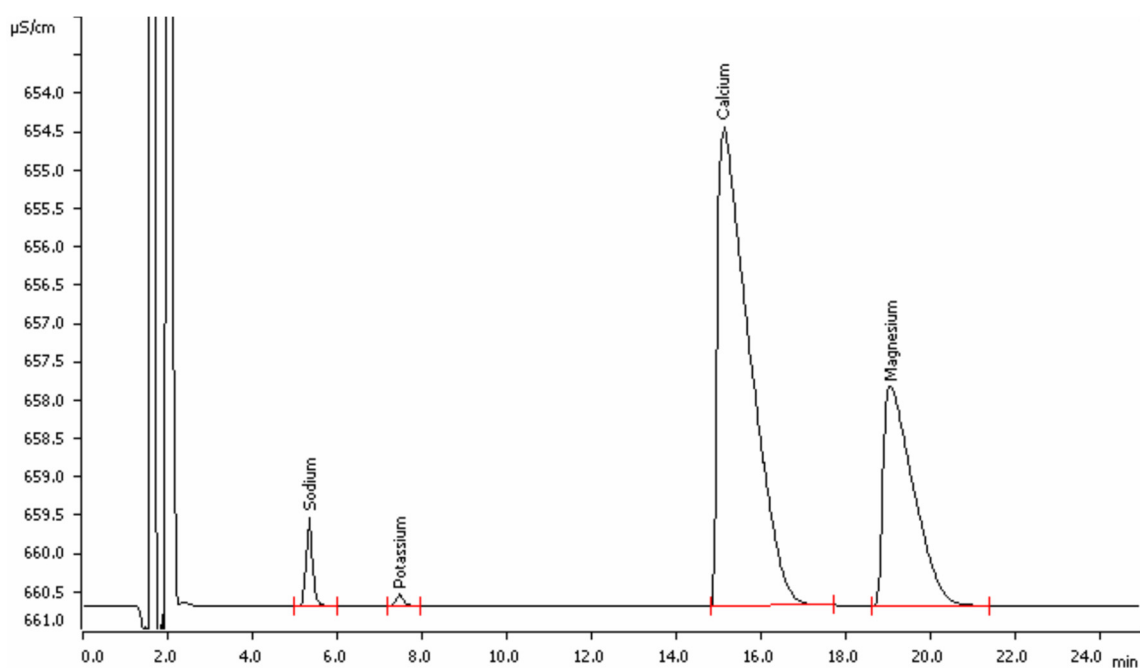


Tap water analysis for cations using Metrohm intelligent Partial Loop Technique (MiPT)



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 anion results are shown in [Application Note S-287](#).

Results

Sodium	2.10 mg/L
Potassium	0.53 mg/L
Calcium	65.2 mg/L
Magnesium	14.1 mg/L

Method description

Sample

Tap water, mineral water

Sample preparation

Direct injection, partial loop mode

Column

Metrosep C 4 - 150/4.0	6.1050.420
Metrosep C 4 Guard/4.0	6.1050.500

Solutions

<u>Eluent</u>	1.7 mmol/L nitric acid 0.7 mmol/L dipicolinic acid
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Analysis

Non-suppressed conductivity detection

Parameters

Flow rate	0.9 mL/min
Sample loop	250 µL
Injection volume	variable
P _{max}	15.0 MPa
Recording time	25 min
Column temperature	30 °C



Instrumentation

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

System setup

