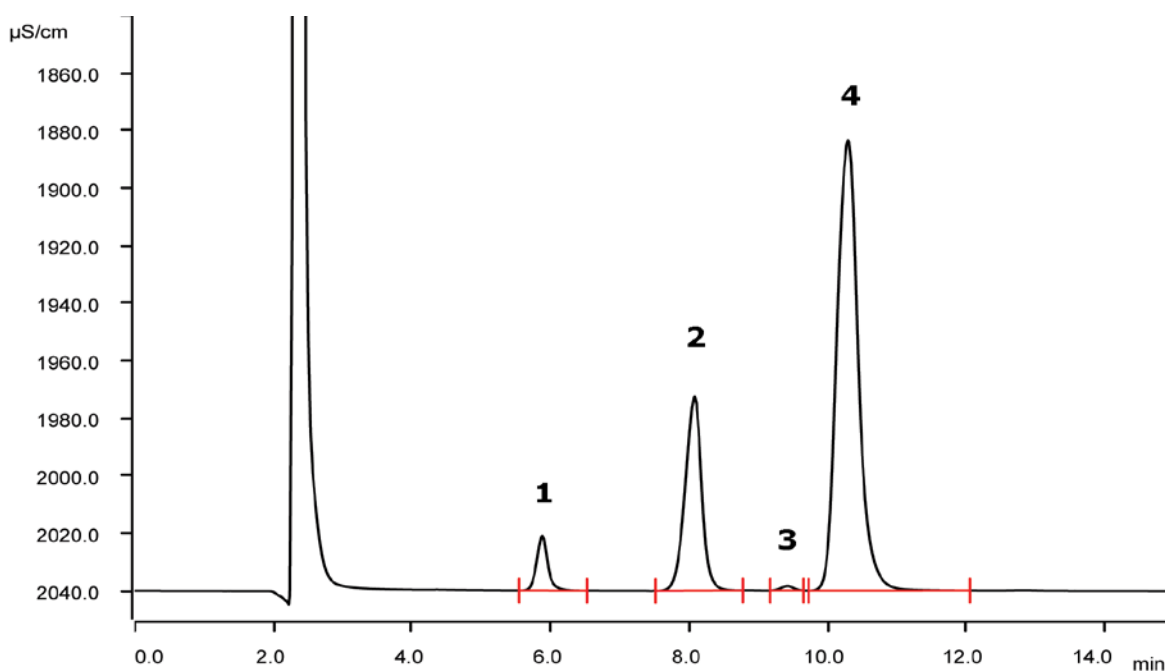


Fast cation determination in drinking water on a microbore column



Cation analysis in drinking water is a routine task in ion chromatography and can be achieved on many types of separation columns. The use of a microbore Metrosep C 6 - 250/2.0 column with a high eluent concentration allows to reduce the analysis time to less than 12 minutes. It also yields in very symmetrical peaks with high sensitivity for the divalent cations. Direct conductivity detection is applied.

Results

Cation	Concentration [mg/L]
1 Sodium	7.5
2 Magnesium	21.3
3 Potassium	2.8
4 Calcium	109.6

Sample

Drinking water

Sample preparation

Inline Ultrafiltration

Columns

Metrosep C 6 - 250/2.0	6.01051.230
Metrosep C 6 Guard/2.0	6.01051.600

Solutions

Eluent	6.75 mmol/L nitric acid
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Analysis

Direct conductivity detection

Instrumentation

930 Compact IC Flex Oven/Deg	2.930.2160
IC Conductivity Detector	2.850.9010
858 Professional Sample Processor	2.858.0020

Parameters

Flow rate	0.25 mL/min
Injection volume	10 μ L
P _{max}	20 MPa
Recording time	12 min
Column temperature	30 °C

