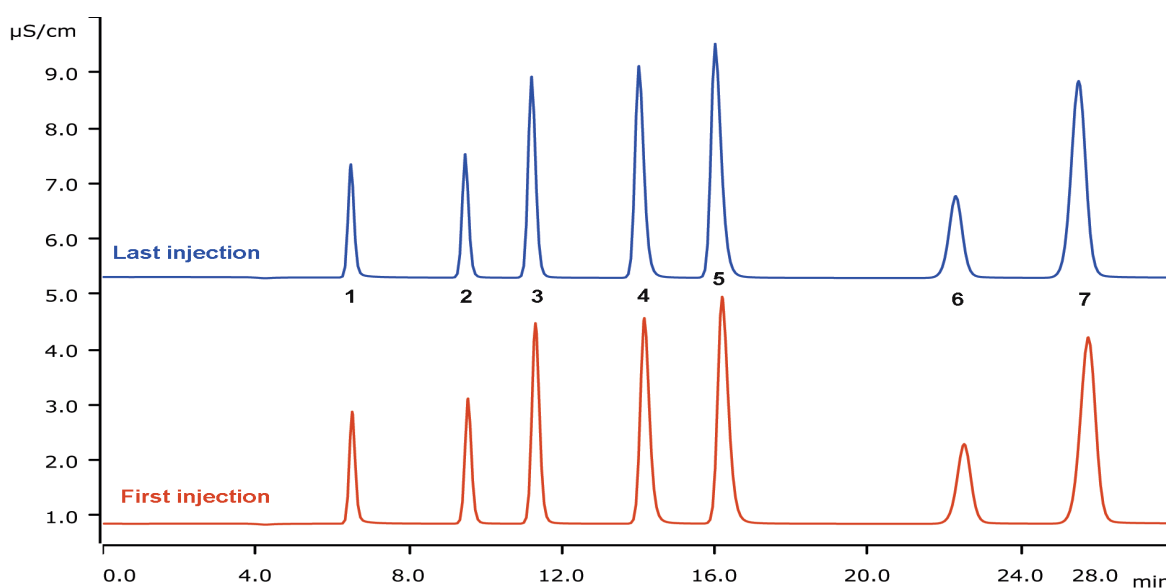


Column stability of Metrosep A Supp 5 - 250/4.0 applying Inline Ultrafiltration and Inline Eluent Preparation



The stability of the standard size Metrosep A Supp 5 - 250/4.0 has been tested under lab conditions. For six consecutive days, two series of injections were done – 9 × tap water, 3 × check standard, 6 × tap water –; on the 7th day, the system was shut down. The instrument was running for over 10 weeks with a total of 2150 injections. The excellent data reproducibility underlines the very stable column performance.

Results

	Anion (check standard)	Concentration [mg/L]		Anion (check standard)	Concentration [mg/L]
1	Fluoride	1	5	Nitrate	10
2	Chloride	2	6	Phosphate	10
3	Nitrite	5	7	Sulfate	10
4	Bromide	10			

Reproducibility of QC injections

n = 350	RSD [%]		
	Retention time	Theor. plates	Recovery
Fluoride	0.2	1.5	2.2
Chloride	0.3	0.8	1.1
Nitrite	0.5	0.7	1.1
Bromide	0.4	1.5	0.9
Nitrate	0.5	1.9	0.8
Phosphate	0.4	1.5	1.3
Sulfate	0.4	2.3	1.6

Sample

Standard solution, tap water

Sample preparation

Inline Ultrafiltration, intelligent Partial Loop Injection Technique (MiPT)

Columns

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

Solutions

Eluent concentrate	64 mmol/L sodium carbonate 20 mmol/L sodium hydrogen carbonate
Eluent	3.2 mmol/L sodium carbonate 1.0 mmol/L sodium hydrogen carbonate
Suppressor regenerant	100 mmol/L sulfuric acid
Rinsing solution	STREAM

Analysis

Conductivity detection after sequential suppression

Parameters

Flow rate	0.7 mL/min
Injection volume (MiPT)	20 µL
P _{max}	15 MPa
Recording time	28 min
Column temperature	30 °C

Instrumentation

940 Professional IC Vario ONE/SeS/PP	2.940.1500
IC Conductivity Detector	2.850.9010
858 Professional Sample Processor	2.858.0020
941 Eluent Production Module	2.941.0010
800 Dosino	2.800.0010
ELGA PURELAB® Flex 6	
MSM Rotor A	6.2832.000
Adaptor sleeve for Suppressor Vario	6.2842.020
IC equipment: Inline Ultrafiltration	6.5330.110
IC equipment: MiPT	6.5330.180



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