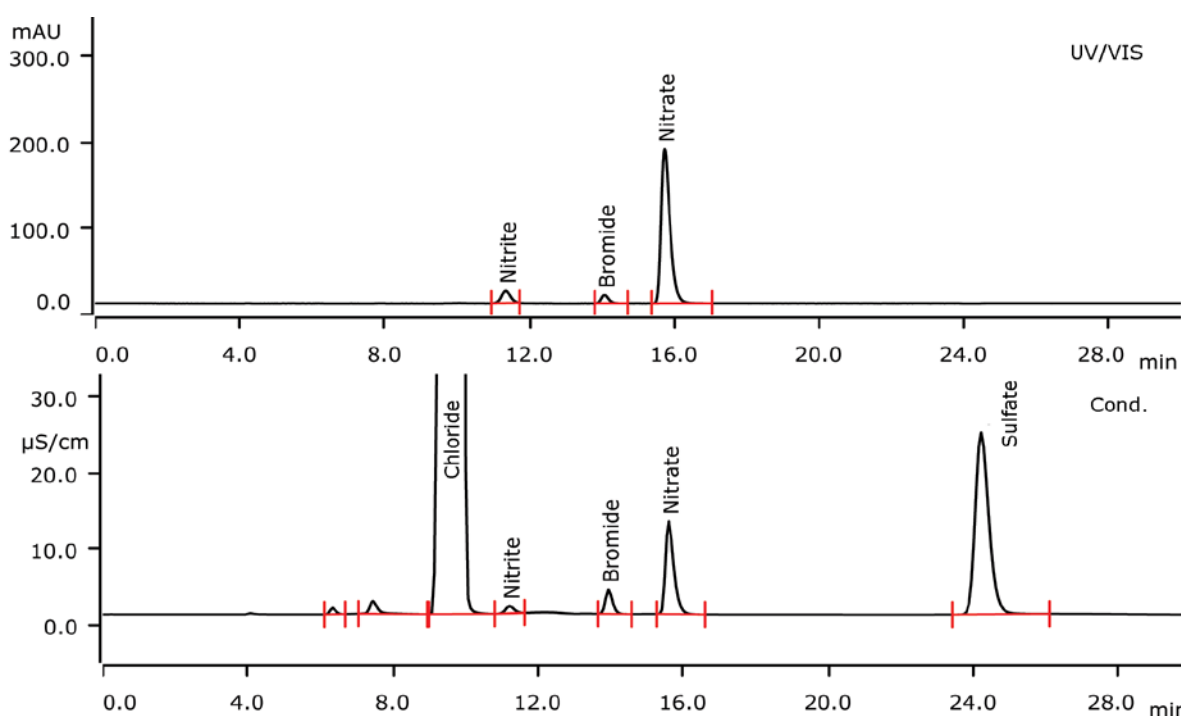


Nitrite traces besides excess chloride on the 940 Professional IC Vario applying conductivity and UV/VIS detection



The determination of low nitrite concentrations besides excess sodium chloride is demanding due to the small retention time difference of these two anions. Dual detection – conductivity and UV/VIS – is a powerful means to accurately determine nitrite traces in a 20 g/L chloride matrix. The UV/VIS chromatogram shows no chloride interferences. AN-C-145 shows the determination of ammonium traces besides excess sodium.

Results

	Conc.(Cond.) [mg/L]	Conc. (UV) [mg/L]		Conc.(Cond.) [mg/L]	Conc. (UV) [mg/L]
Chloride	21167	n.d.	Nitrate	575	575
Nitrite	41	41	Sulfate	1341	n.d.
Bromide	170	170			

Sample

Wastewater

Sample preparation

Inline Dilution 1 : 10

Columns

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

Solutions

Eluent (Inline Preparation)	Eluent	3.2 mmol/L sodium carbonate 1.0 mmol/L sodium hydrogen carbonate
Suppressor regenerant		100 mmol/L sulfuric acid
Suppressor rinsing		STREAM

Parameters

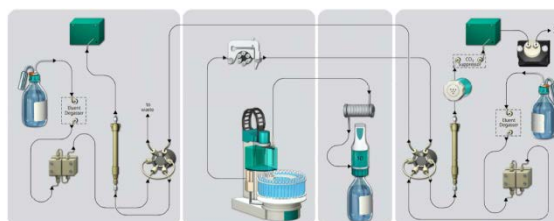
Flow rate	0.7 mL/min
Injection volume	5 µL
P _{max}	15 MPa
Recording time	30 min
Column temperature	30 °C
Detection wavelength [nm]	225 nm
Reference wavelength [nm]	no

Analysis

Conductivity after sequential suppression and UV/VIS detection in series

Instrumentation

940 Professional IC Vario TWO/SeS/PP	2.940.2500
2 × IC Conductivity Detector	2.850.9010
944 Professional UV/VIS detector Vario	2.944.0010
858 Professional Sample Processor – Pump	2.858.0020
741 Magnetic Stirrer	2.741.0010
800 Dosino	2.800.0010
941 Eluent Production Module	2.941.0010
MSM rotor A	6.2832.000
Adapter sleeve for Suppressor Vario	6.2842.020
IC equipment: Inline Dilution	6.5330.120



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