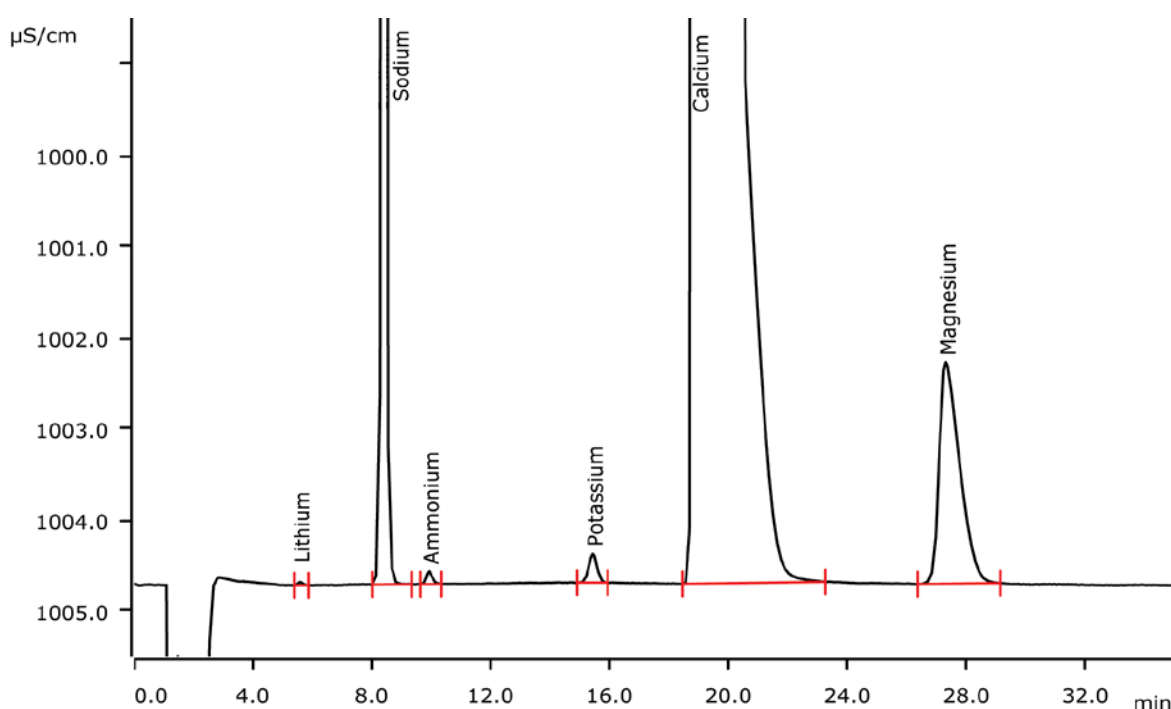


Ammonium traces besides excess sodium using 940 Professional IC Vario and direct conductivity detection



The determination of low ammonium concentrations besides excess sodium is demanding due to the small retention time difference of these two cations. This Application Note shows direct conductivity detection as an ideal means to detect ammonium in a wastewater sample containing 400 mg/L sodium. AN-S-313 shows the analysis of nitrite traces.

Results

	Conc. [mg/L]		Conc. [mg/L]
Lithium	n.q.	Potassium	59
Sodium	424	Calcium	9230
Ammonium	12	Magnesium	522

Sample

Wastewater

Sample preparation

Inline Dilution 1 : 10

Columns

Metrosep C 6 - 250/4.0	6.1051.430
Metrosep C 4 Guard/4.0	6.1050.500

Solutions

Eluent (inline eluent preparation)	1.7 mmol/L nitric acid 1.7 mmol/L dipicolinic acid
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Analysis

Direct conductivity detection

Parameters

Flow rate	1.2 mL/min
Injection volume	1.5 µL
P _{max}	20 MPa
Recording time	35 min
Column temperature	30 °C

Instrumentation

940 Professional IC Vario TWO/SeS/PP	2.940.2500
2 × IC Conductivity Detector	2.850.9010
944 Professional UV/VIS Detector Vario (for anions only)	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
IC equipment: Inline Dilution	6.5330.120
MSM rotor A (for anions only)	6.2832.000
Adapter sleeve for Suppressor Vario	6.2842.020



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