

IC Application Note No. C-132

Title: Traces of lithium, sodium and ammonium besides ethanolamine (Metrosep C 4 – 250)

Summary: Determination of lithium, sodium, ammonium and monoethanolamine (MEA) using cation chromatography with direct conductivity detection applying Metrohm Inline Preconcentration and Inline Calibration.

Sample: Standard solution

Sample Preparation: Preconcentration of 2.5 mL

Column: 6.1050.430 Metrosep C 4 – 250

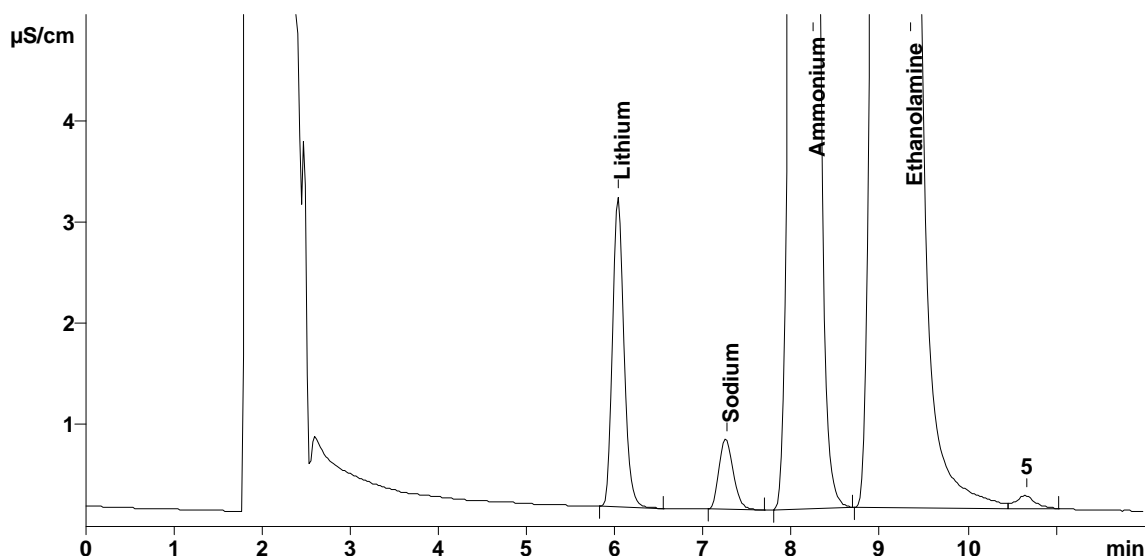
Preconc. Column: 6.1010.310 Metrosep C PCC1 HC

Temperature: 45 °C

Eluent: 2.5 mmol/L nitric acid

Flow: 1.0 mL/min

Injection Volume: 2.5 mL preconcentrated



Results:	Lithium	Sodium	Ammonium	MEA
Concentration (µg/L)	0.8	0.8	40	400
Relative standard deviation (%; n=9)	0.6	1.6	0.3	0.4
Recovery (%; n=9)	104.5	96.4	104.3	105.4
Four-point calibration (µg/L)	0.4 ... 4.0	0.4 ... 4.0	20 ... 200	200 ... 2000
Correlation coefficient	0.99992	0.99991	0.99997	0.99992