

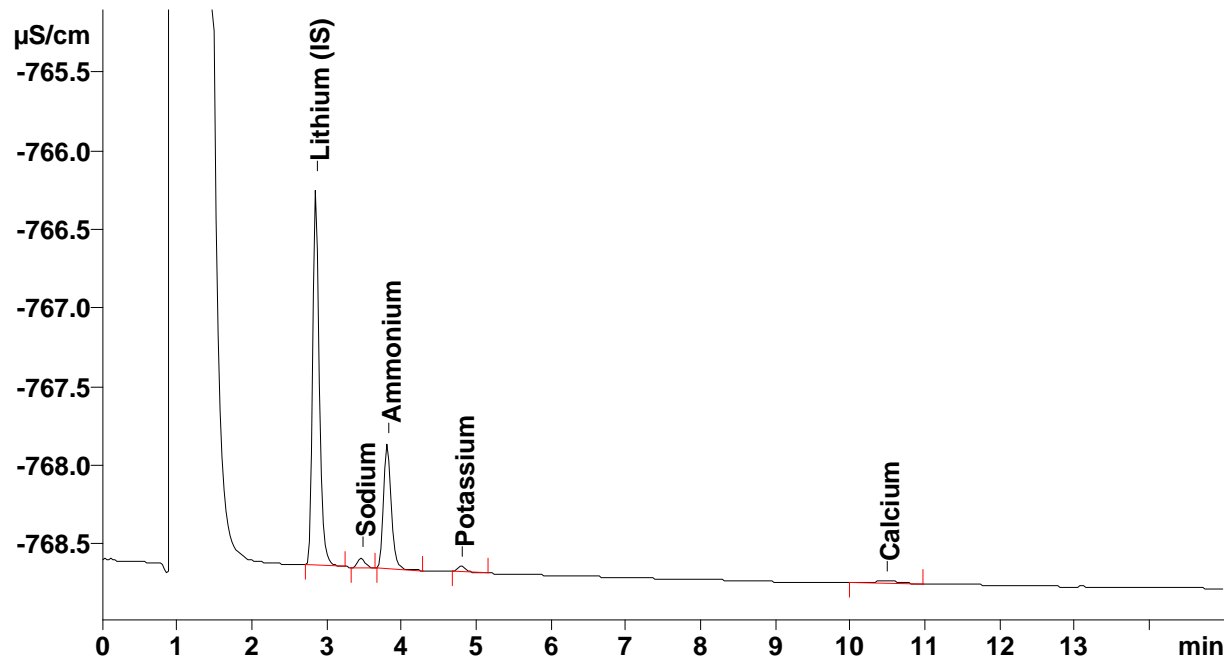
# IC Application Note No. C-114

**Title:** Semi-continuous determination of cations in aerosol applying PILS-IC

**Summary:** Determination of sodium, ammonium, potassium, magnesium and calcium in an ambient aerosol (PM<sub>2.5</sub>) applying aerosol sampling with the PILS (Particle Into Liquid Sampler) using cation chromatography with direct conductivity detection.

**Sample:** Ambient air (sampling rate three samples/h)  
**Sample Preparation:** Sampling 1 m<sup>3</sup>/h ambient air and feeding the collected aerosols (PM<sub>2.5</sub>) directly into the IC.

**Column:** 6.1050.410 Metrosep C 4 – 100  
**Eluent:** 1.7 mmol/L nitric acid  
 0.7 mmol/L dipicolinic acid  
**Flow:** 0.9 mL/min  
**Injection Volume:** 250 µL



<b>Results:</b>	Lithium (internal standard) µg/L	Sodium µg/m <sup>3</sup>	Ammonium µg/m <sup>3</sup>	Potassium µg/m <sup>3</sup>	Magnesium µg/m <sup>3</sup>	Calcium µg/m <sup>3</sup>
		80	6.16	91.0	11.4	n.d.