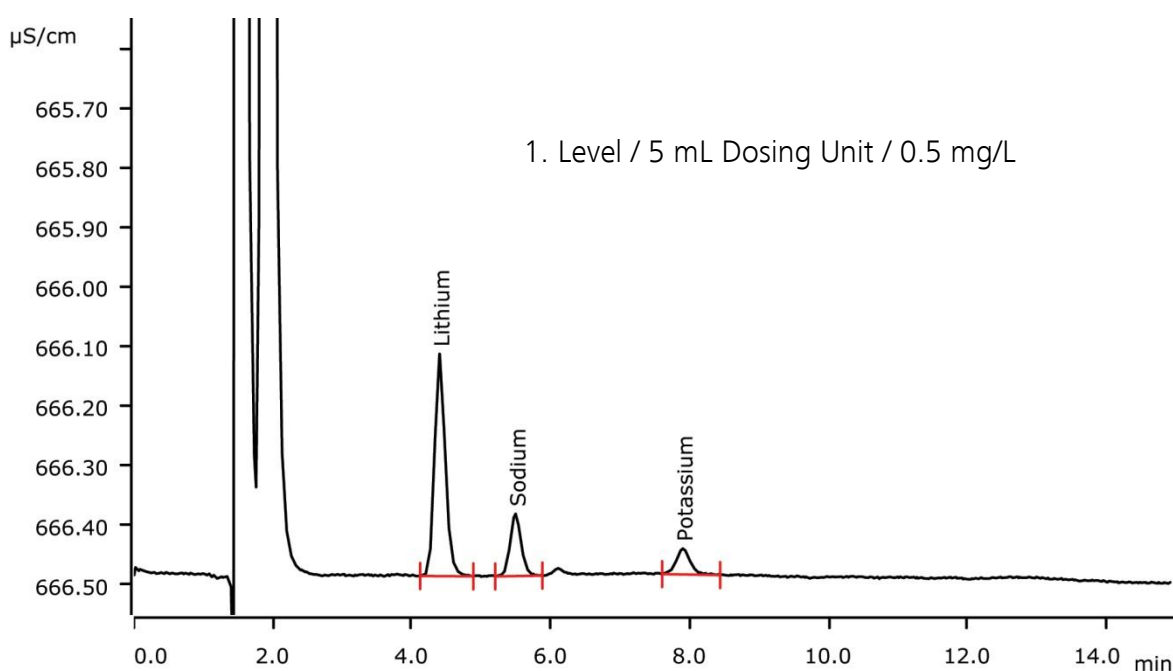


Metrohm intelligent Partial Loop Technique (MiPT) – a single standard calibration: 2 mL vs. 5 mL Dosing Unit



Metrohm intelligent Partial Loop Technique (MiPT) is a versatile injection mode in IC. In this application, injection volumes range from 4 to 200 μL (corresponding to 0.5...10 mg/L) using the 250 μL loop. Here, the use of 2 and 5 mL Dosing Units are compared.

Results

	Concentration [mg/L]	Corr. Coeff. 5 mL DU	Corr. Coeff. 2 mL DU	RSD [%] 5 mL DU	RSD [%] 2 mL DU
Lithium	0.50	0.99998	0.99994	0.541	1.053
Sodium	0.50	n.d.	n.d.	n.d.	n.d.
Potassium	0.50	n.d.	n.d.	n.d.	n.d.

Sample

Standard solution

Sample preparation

Metrohm intelligent Partial Loop Technique (MiPT)

Columns

Metrosep C 4 - 150/4.0	6.1050.420
Metrosep C 4 Guard/4.0	6.1050.500

Solutions

Eluent	1.7 mmol/L nitric acid 0.7 mmol/l dipicolinic acid
Liquid handling	Ultrapure water

Parameters

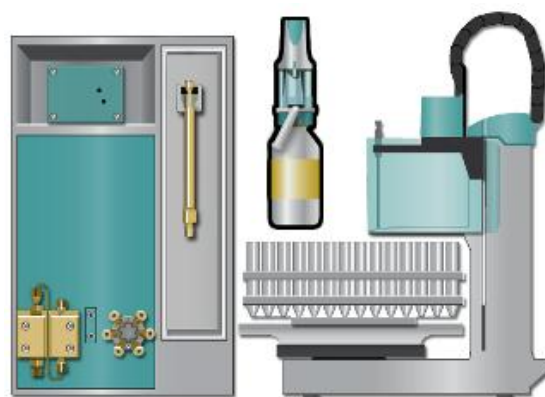
Flow rate	0.9 mL/min
Injection volume	4...200 μ L (MiPT)
P _{max}	20.0 MPa
Recording time	15 min
Column temperature	32 °C

Analysis

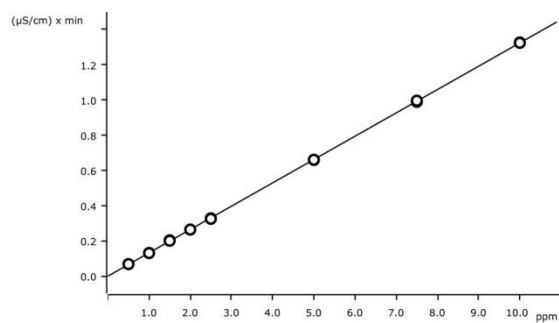
Direct conductivity detection

Instrumentation

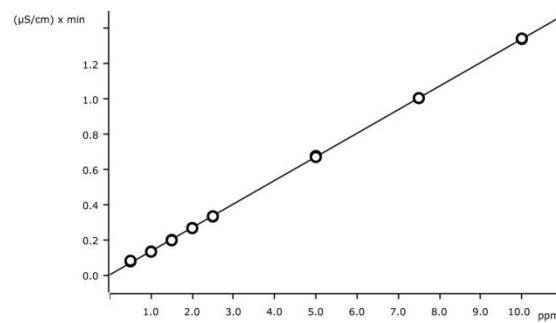
881 Compact IC pro – Cation	2.881.0010
IC Conductivity Detector	2.850.9010
858 Professional Sample	2.858.0010
800 Dosino	2.800.0020



Calibration curves



5 mL Dosing Unit



2 mL Dosing Unit