

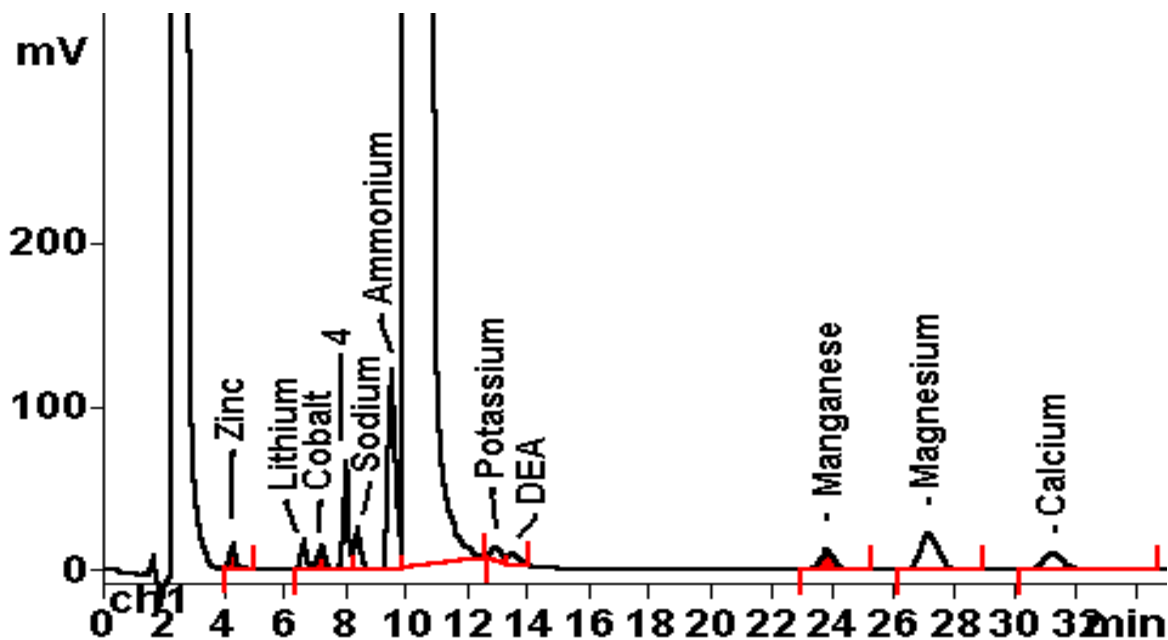
IC Application Note No. C-49

Title: Trace cations in power plant feed water stabilized with 7 ppm monoethanolamine (MEA)

Summary: Determination of zinc, lithium, cobalt, sodium, ammonium, potassium, manganese, magnesium and calcium in power plant feed water stabilized with 7 ppm monoethanolamine using cation chromatography with direct conductivity detection.

Sample: Feed water sample containing 7 ppm of MEA (synthetic)
Sample Preparation: 2.6 mL preconcentrated, inline addition of the cations of interest

Column: 6.1010.230 Metrosep C 2-250
Eluent: 5.0 mmol/L tartaric acid, 0.08 mmol/L dipicolinic acid
Flow: 1.0 mL/min
Injection Volume: 2.6 mL preconcentrated



Results:	Zn ⁺ µg/L	Li ⁺ µg/L	Co ⁺ µg/L	Na ⁺ µg/L	NH ₄ ⁺ µg/L	K ⁺ µg/L	DEA µg/L	Mn ²⁺ µg/L	Mg ²⁺ µg/L	Ca ⁺ µg/L
	7.21	0.70	6.80	3.68	8.45	6.8	0.307	6.80	6.80	6.80

Peak 4 is a unidentified amine which is a decomposition product of MEA