

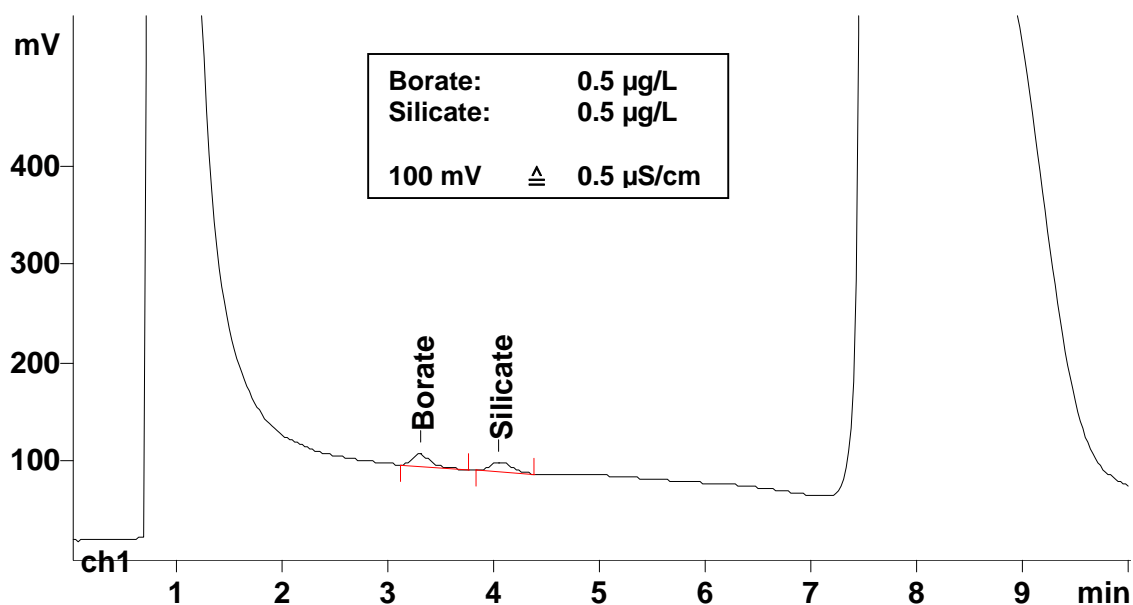
IC Application Note No. N-58

Title: LOD and LOQ for silicate and borate determination according to EPA (MDL procedure)

Summary: Determination of silicate and borate and their limits of determination (LOD) and quantification (LOQ) according to the EPA procedure for method detection limit (MDL) using anion chromatography with direct conductivity detection and Metrohm Inline Calibration.

Sample: 0.5 µg/L silicate and borate standard solutions
Sample Preparation: 10 mL preconcentrated (Metrosep A PCC HC, 6.1006.310)

Column: 6.1005.000 PRP X-100
Eluent: 3.2 mmol/L sodium hydroxide
 0.5 mmol/L sodium carbonate
Flow: 2.0 mL/min
Injection Volume: 10 µL (for calibrations)



Results: (µg/L)	LOD (EPA) area	LOD (EPA) height	LOQ (EPA) area	LOQ (EPA) height
Silicate / silicon	0.05 / 0.02	0.05 / 0.02	0.16 / 0.07	0.15 / 0.07
Borate / boron	0.07 / 0.01	0.05 / 0.01	0.20 / 0.04	0.6 / 0.03