

IC Application Note No. S-278

Title: Anions in sodium tetraborate with Metrohm Inline Acidification, Inline Matrix Elimination and Inline Calibration

Summary: Determination of fluoride, chloride, phosphate and sulfate in sodium tetraborate using anion chromatography with conductivity detection after sequential suppression. Inline acidification is applied to convert tetraborate into boric acid which is not retained on the preconcentration column. Inline calibration minimizes the anion contamination.

Sample: $\text{Na}_2\text{B}_4\text{O}_7$

Sample Preparation: 2 g dissolved in 98 g ultrapure water

Column: 6.1006.630 Metrosep A Supp 7 – 250

Temperature: 45 °C

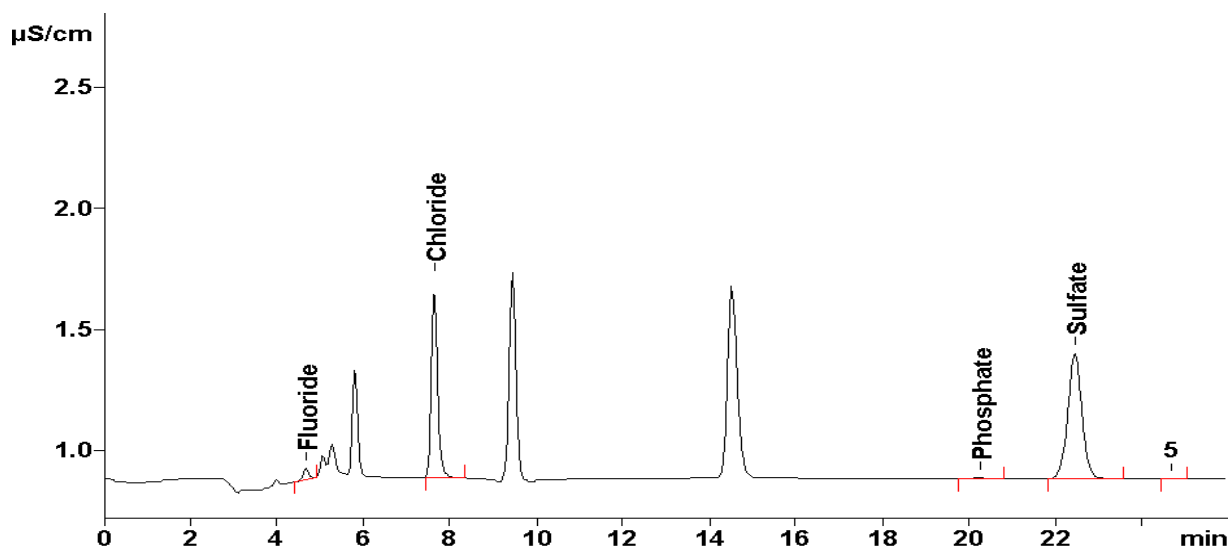
Eluent: 3.6 mmol/L sodium carbonate

Suppressor: Sequential suppression (MSM: 50 mmol/L HNO_3)

SPM: Sample Prep Module (50 mmol/L HNO_3)

Flow: 1.0 mL/min

Injection Volume: 2 mL preconcentrated



Results:	Fluoride (µg/L)	Chloride (µg/L)	Phosphate (µg/L)	Sulfate (µg/L)
	0.44	17.7	0.45	31.5