

IC Application Note No. S-40

Title: Five anions in cutting oil emulsions using dialysis as sample preparation

Summary: Determination of chloride, nitrite, nitrate, phosphate and sulfate in cutting oil emulsion using anion chromatography with conductivity detection after chemical suppression and dialysis as sample preparation.

Sample: Cutting oil emulsion

Sample Preparation: Dilution 1 : 10 with ultrapure water, direct injection using 754 Dialysis Unit

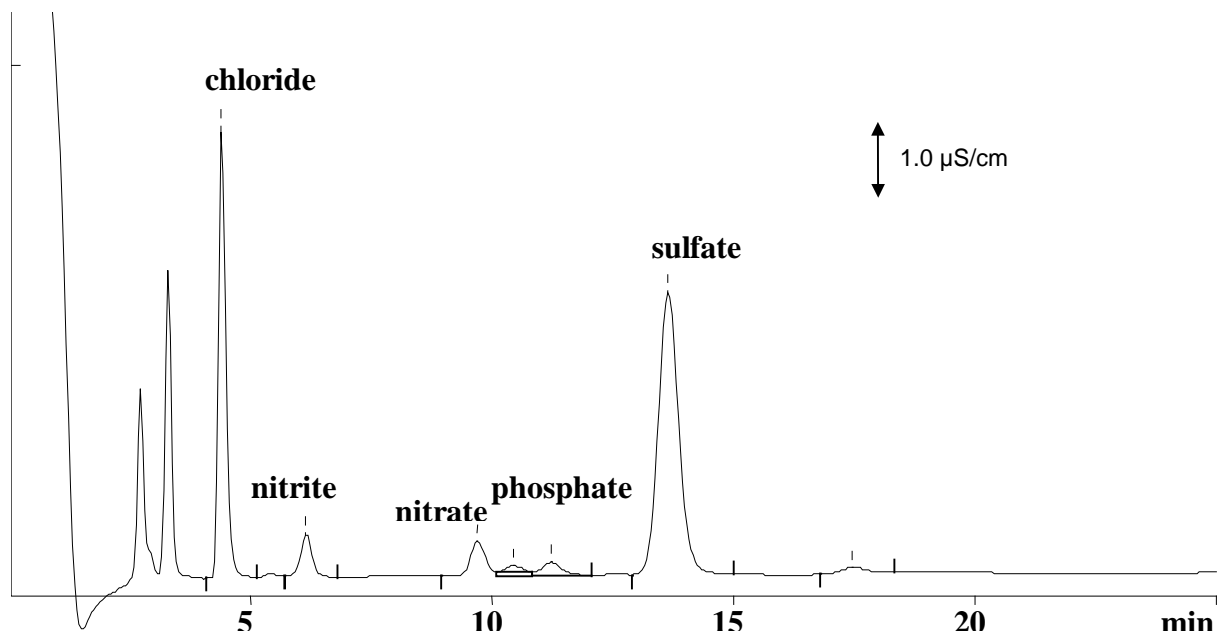
Column: 6.1006.100 Metrosep Anion Dual 2

Eluent: 2.0 mmol/L sodium hydrogencarbonate,
1.3 mmol/L sodium carbonate

Suppressor: Metrohm Suppressor Module (MSM, 50 mmol/L H₂SO₄)

Flow: 0.8 mL/min

Injection Volume: 20 µL after dialysis



Results:	chloride mg/L	nitrite mg/L	nitrate mg/L	phosphate mg/L	sulfate mg/L
	74.7	20.5	23.9	25.2	192.7

Peak no. 4 and 7 unknown