

IC Application Note No. S-219

Title: Anions and organic acids in engine coolant

Summary: Determination of glycolate, formate, chloride, nitrite, nitrate, phosphate, sulfate and oxalate in engine coolant applying anion chromatography with conductivity detection after chemical suppression.

Sample: Engine coolant

Sample Preparation: Dilution 1 : 500 with ultrapure water, inline ultrafiltration prior to injection

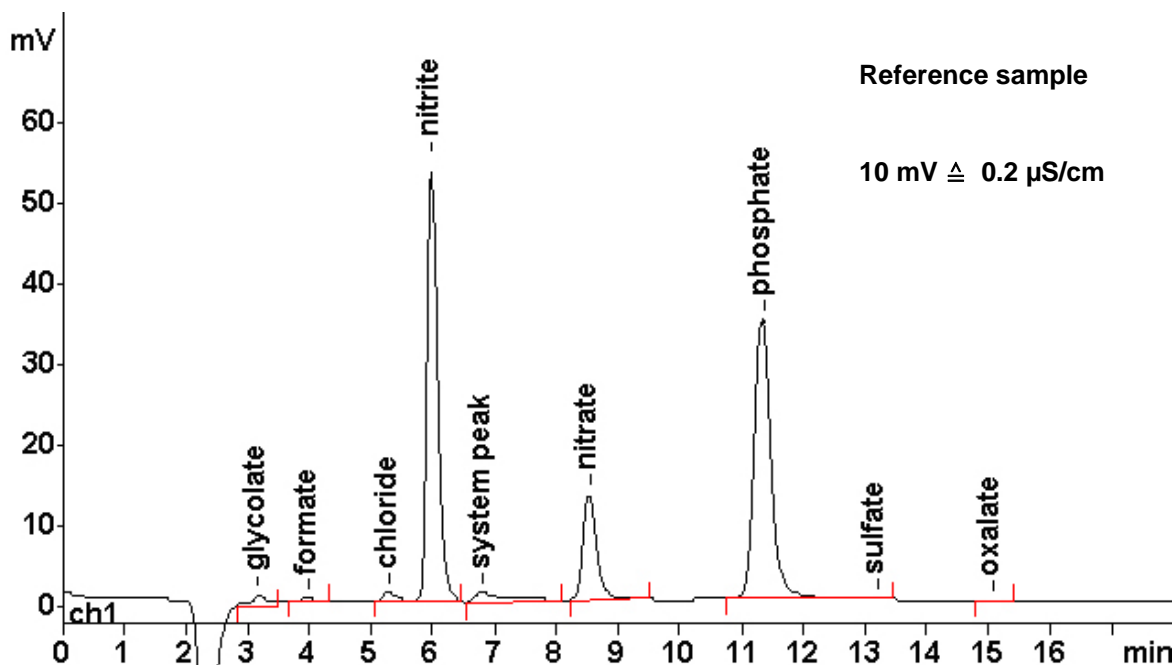
Column: 6.1006.520 Metrosep A Supp 5 – 150

Eluent: 3.2 mmol/L sodium carbonate
1.0 mmol/L sodium hydrogencarbonate

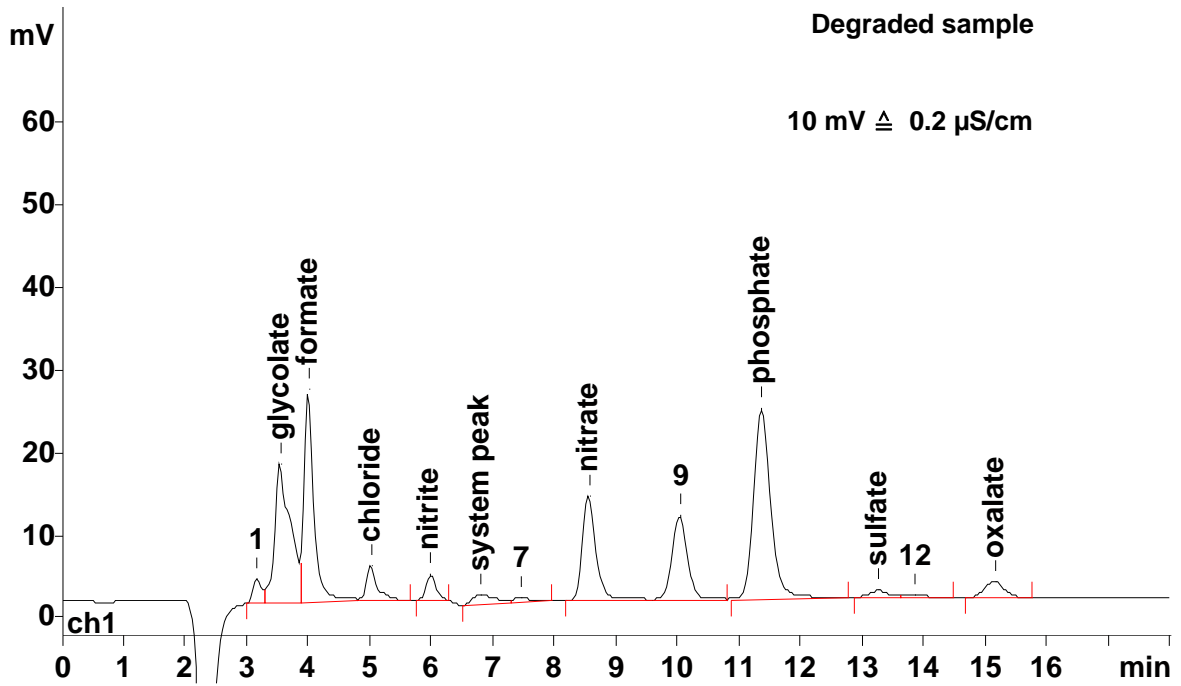
Suppressor: Metrohm Suppressor Module (MSM, 100 mmol/L sulfuric acid)

Flow: 1.0 mL/min

Injection Volume: 20 μ L



Results:	Glycolate mg/L	Formate mg/L	Chloride mg/L	Nitrite mg/L	Nitrate mg/L	Phosphate mg/L	Sulfate mg/L	Oxalate mg/L
	0.033	0.079	0.034	2.87	28.12	0.805	5.45	0.015



Results:	Glycolate mg/L	Formate mg/L	Chloride mg/L	Nitrite mg/L	Nitrate mg/L	Phosphate mg/L	Sulfate mg/L	Oxalate mg/L
	2.32	1.22	0.155	0.156	0.078	3.65	0.026	0.210