

IC Application Note No. S-252

Title: Standard anions and organic acids in Bayer liquor applying Inline Matrix Neutralization

Summary: Determination of fluoride, acetate, formate, chloride, sulfate, malonate, succinate and oxalate in Bayer liquor using anion chromatography with conductivity detection after sequential suppression.

Sample: Bayer liquor

Sample Preparation: Dilution 1:100 and subsequent Inline Matrix Neutralization

Column: 6.1006.630 Metrosep A Supp 7 – 250

Eluent: 3.6 mmol/L sodium carbonate
2% acetone

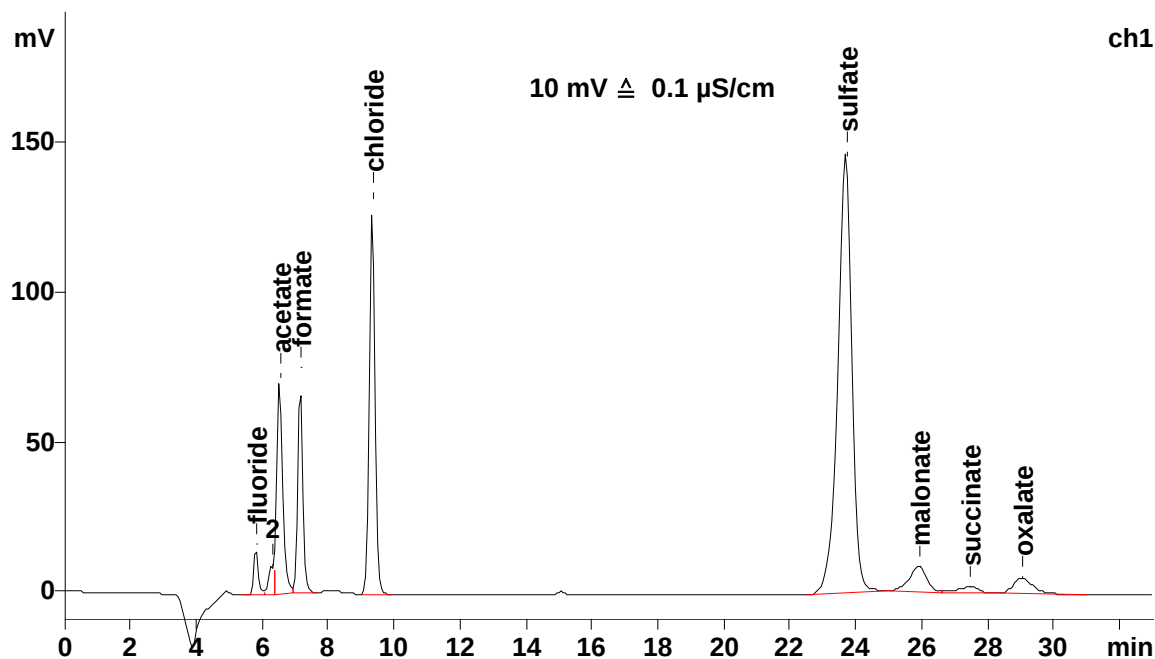
Suppressor: Sequential suppression: MSM (100 mmol/L H₂SO₄), MCS

Sample Prep Module: 500 mmol/L perchloric acid (aluminum removal)

Flow: 0.8 mL/min

Temperature: 45 °C

Injection Volume: 5 µL



Results:	Fluoride	Acetate	Formate	Chloride	Sulfate	Malonate	Succinate	Oxalate
Diluted (mg/L)	0.37	9.15	3.73	5.68	22.89	3.90	1.94	2.13
RSD n=50 (%)	4.83	0.39	0.58	0.20	0.67	1.11	1.18	1.08

Schematic setup:

