

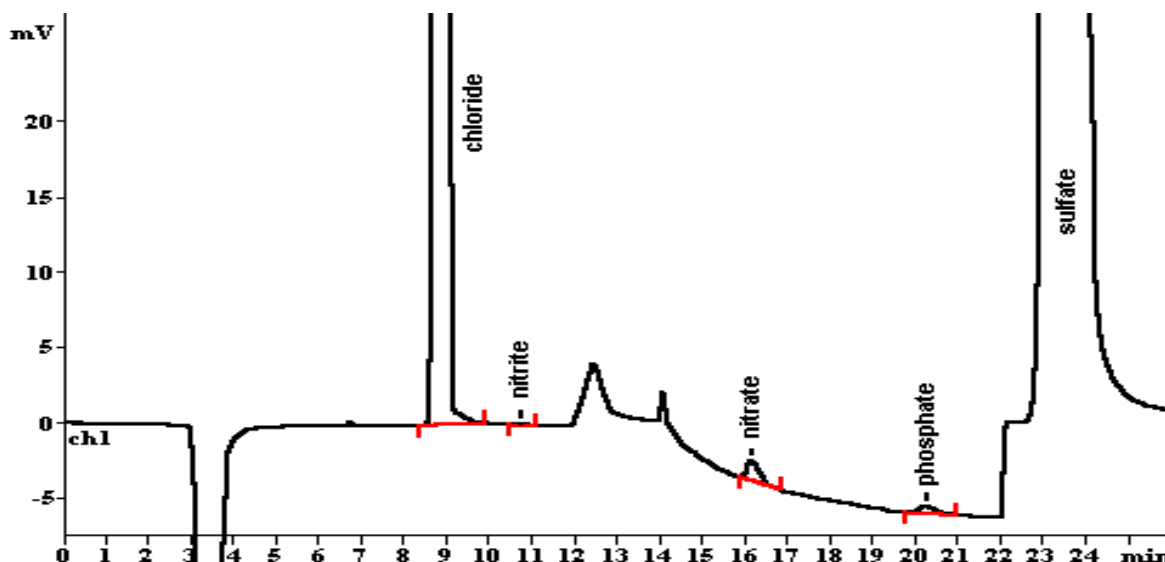
# IC Application Note No. S-108

**Title:** Five anions in an electroplating bath after in-line elimination of heavy metals

**Summary:** Determination of chloride, nitrite, nitrate, phosphate and sulfate in an electroplating bath after inline elimination of heavy metals by cation exchange on the 793 IC Sample Prep Module using anion chromatography with conductivity detection after chemical suppression.

**Sample:** Electroplating bath  
**Sample Preparation:** Dilution 1:100; in-Line cation exchange using 793 Sample Prep Module in the Na<sup>+</sup>-form: (permitting nitrite determination).  
 Regeneration: oxalic acid, perchloric acid, acetone  
 Rinsing: NaOH

**Column:** 6.1006.530 Metrosep A Supp 5-250  
**Eluent:** 1.0 mmol/L sodium hydrogencarbonate, 3.2 mmol/L sodium carbonate  
**Suppressor:** Metrohm Suppressor Module (MSM, 50 mmol/L H<sub>2</sub>SO<sub>4</sub>)  
**Flow:** 0.7 mL/min  
**Injection Volume:** 20 µL



Results:	Chloride	Nitrite	Nitrate	Phosphate	Sulfate
	mg/L	mg/L	mg/L	mg/L	mg/L
	11233	n.d.	1.53	0.84	n.q.

Full Scale : 100 µS/cm. Between 14.0 and 22.0 min. reduced to 5 µS/cm.