

# IC Application Note No. S-214

**Title:** Trace level fluoride and sulfate in 35% hydrochloric acid after inline neutralization

**Summary:** Determination of traces of fluoride and sulfate in 35% hydrochloric acid (HCl) using anion chromatography with conductivity detection after chemical suppression and sample preparation by inline neutralization.

**Sample:** Hydrochloric acid 35%

**Sample Preparation:** Dilution 1 : 20 with ultrapure water

**Column:** 6.1006.530 Metrosep A Supp 5 – 250

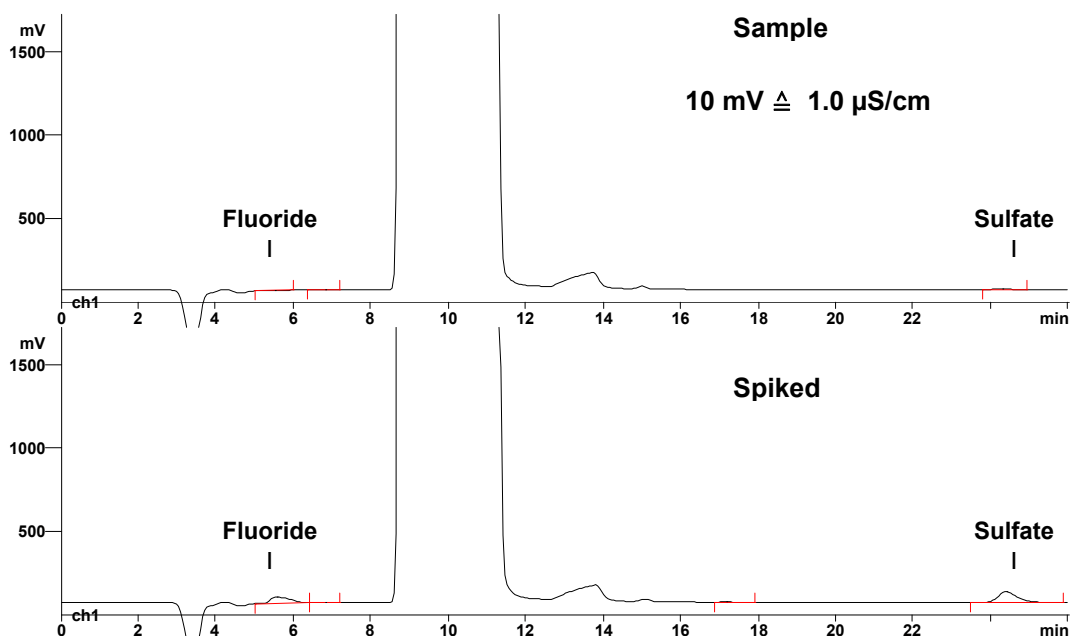
**Eluent:** 3.2 mmol/L sodium carbonate  
1.0 mmol/L sodium hydrogencarbonate

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

**Neutralizing:** Metrohm Sample Prep Unit ( 100 mmol/L sodium hydroxide)

**Flow:** 0.7 mL/min

**Injection Volume:** 10  $\mu$ L



**Results:**

Spiked with 6 mg/L each

Fluoride  
mg/L / recovery %

**0.0 / 99.6**

Sulfate  
mg/L / recovery %

**2.455 / 103.2**