

Environmental

Fast anion determinations in environmental waters using a compact IC system

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Introduction

This application proof note demonstrates a method for the determination of inorganic anions in municipal drinking water, which is based on the method published in Thermo Fisher Scientific Application Update 200.¹ In this proof note, the method is performed using a new, innovative IC system that uses an electrolytic eluent generator to automatically produce eluent.

Method

IC system	Thermo Scientific™ Dionex™ Inuvion™ ion chromatography system (P/N 22185-60108) with a Thermo Scientific™ Dionex™ AS-DV autosampler (P/N 068907)
Columns	Thermo Scientific™ Dionex™ IonPac™ AS18-Fast-4µm (4 × 150 mm) (P/N 076034) Thermo Scientific™ Dionex™ IonPac™ AG18-Fast-4µm (4 × 30 mm) (P/N 076035)
Eluent	15–44 mM KOH from 0.2 to 6 min, 44 mM KOH from 6 to 9 min, 15 mM KOH from 9 to 12 min
Eluent source	Thermo Scientific™ Dionex™ EGC 500 KOH with Thermo Scientific™ Dionex™ CR-ATC 600 continuously regenerated anion trap column (P/N 088662), Thermo Scientific™ Dionex™ RFIC eluent degasser (P/N 106-60001)
Flow rate	1 mL/min
Injection volume	10 µL
Column temperature	30 °C
Detection	Suppressed conductivity, Thermo Scientific™ Dionex™ ADRS 600 (4 mm) suppressor (P/N 088666CMD), recycle mode, 109 mA, constant current mode
System backpressure	2,700 psi
Background conductivity	0.38 µS/min
Noise	<1.5 nS
Run time	12 min

Results

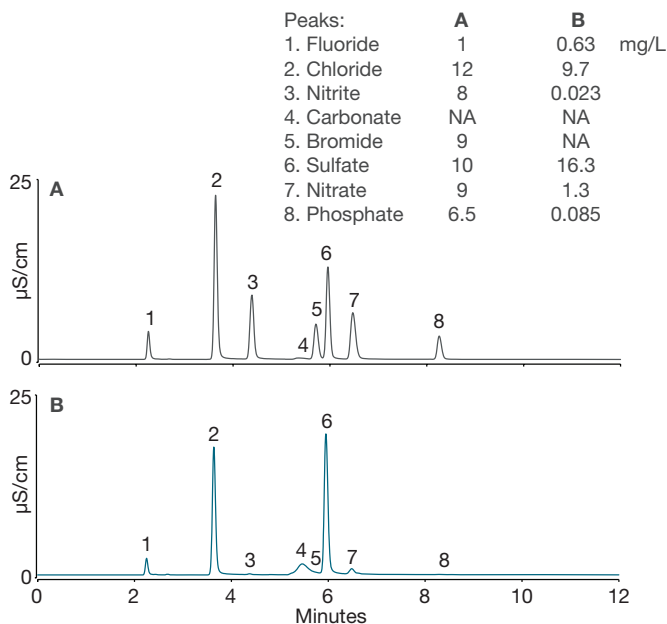


Figure 1. Separation of seven anions in a standard (A) and municipal drinking water sample (B)

Reference

1. Thermo Scientific Application Update 200: Fast Anion Determinations in Environmental Waters Using a High-Pressure Compact Ion Chromatography System.

Learn more at thermofisher.com/inuvion