

Determination of Anions in Municipal Drinking Water Using a Compact Ion Chromatography System

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Key Words

HPIC, Integrion, Dionex IonPac AS22-Fast-4 μ m Column, Dionex AS22 Eluent Concentrate, Dionex AERS 500 Suppressor, Inorganic Anions, Water Analysis

Introduction

This application proof note demonstrates a 5-minute, fast separation of anions in a municipal drinking water sample on the 4 μ m resin particle format Thermo Scientific™ Dionex™ IonPac™ AS22-Fast-4 μ m column. This method upgrades the method published in [Application Brief 120](#)¹ by improving the separation using the 4 μ m resin particle column to produce more efficient peaks. In this proof note, the method is performed using a Thermo Scientific™ Dionex™ Integrion™ HPIC™ system, which works with the high pressures generated by the 4 μ m particles to deliver improved separation.

Method

IC System:	Thermo Scientific Dionex Integrion HPIC system
Columns:	Thermo Scientific™ Dionex™ IonPac™ AS22-Fast-4 μ m Analytical (2 $\times$ 150 mm) Thermo Scientific Dionex IonPac AG22-Fast-4 μ m Guard (2 $\times$ 30 mm)
Eluent:	4.5 mM Sodium Carbonate/1.4 mM Bicarbonate
Flow Rate:	0.5 mL/min
Injection Volume:	2.5 μ L
Temperature:	30 °C
Detection:	Suppressed conductivity, Thermo Scientific™ Dionex™ AERS™ 500 Carbonate Suppressor, 2 mm, 17 mA, recycle mode

Reference

1. Thermo Scientific Application Brief 120: Municipal Drinking Water Analysis by Fast IC, Sunnyvale, CA [Online] <http://www.thermoscientific.com/content/dam/tfs/ATG/CMD/CMD%20Documents/Application%20&%20Technical%20Notes/Chromatography/GC%20HPLC%20and%20UHPLC%20Columns%20and%20Accessories/Chromatography%20Column%20Accessories/109811-AB120-IC-Drinking-Water-Carbonate-Eluents-19Jan2011-LPN2712.pdf> (accessed Jan. 14, 2016)

For application support, visit the [AppsLab Library](#) where you can find detailed method information, chromatograms and related compound information. All the information needed to run, process and report the analysis is available in ready-to-use eWorkflows, which can be executed directly in your chromatography data system. www.thermoscientific.com/appslib

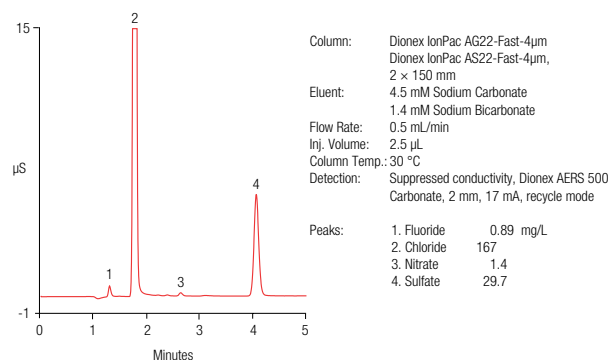


Figure 1. Determination of anions in a municipal drinking water sample.

www.thermoscientific.com/integrion

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