

Determination of Sulfate and Sulfamate in Topiramate Using a Compact Reagent-Free Ion Chromatography System

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Key Words

Integrion, IonPac AS11, EGC 500, Suppressed Conductivity, RFIC System, Antiepileptic Drugs, Seizures

Introduction

Determination of the inorganic degradation products, sulfamate and sulfate, can be used to monitor and confirm topiramate degradation. This application proof note shows a determination of sulfamate and sulfate in topiramate with the method published in Application Note 238.¹ The method is performed using a Thermo Scientific™ Dionex™ Integrion™ Reagent-Free™ Ion Chromatography (RFIC™) system in combination with a Thermo Scientific™ Dionex™ IonPac™ AS11 column and suppressed conductivity detection.

Method

IC System:	Thermo Scientific Dionex Integrion RFIC system
Columns:	Thermo Scientific Dionex IonPac AS11 Analytical (2 × 250 mm) Thermo Scientific Dionex IonPac AG11 Guard (2 × 50 mm)
Eluent:	0.5 mM KOH (0–2 min), 0.5–5 mM (2–5 min), 5–38 mM (5–15 min), 38 mM (15–20 min)
Flow Rate:	0.25 mL/min
Injection Volume:	5 µL
Temperature:	30 °C
Detection:	Suppressed conductivity, Thermo Scientific™ Dionex™ AERS™ 500 Electrolytically Regenerated Suppressor, 2 mm, 24 mA, recycle mode

Reference

1. Thermo Scientific Dionex Application Note 238: Determination of Sulfate and Sulfamate in Topiramate Using a Reagent-Free Ion Chromatography System. Sunnyvale, CA [Online] <http://www.thermoscientific.com/content/dam/tfs/ATG/CMD/CMD%20Documents/Application%20&%20Technical%20Notes/Chromatography/Ion%20Chromatography/IC%20and%20RFIC%20Modules/IC%20and%20RFIC%20Autosamplers%20and%20Injectors/80929-AN238-IC-Topiramate-Sulfate-03Sept2009-LPN2316.pdf> (accessed Jan. 14, 2016)

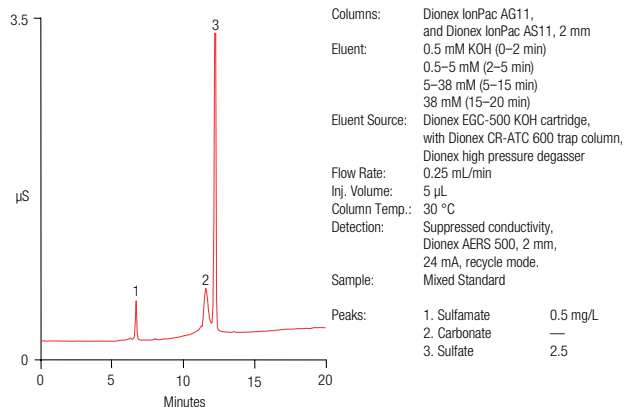


Figure 1. Sulfamate and sulfate in topiramate.

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/appslab



www.thermoscientific.com/integrion

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AB71934-EN 0116S



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