

Determination of Sugars in Fruit Juice Using a Compact IC System

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Key Words

HPIC, HPAE-PAD, Integriion, CarboPac PA20, Sugar, Glucose, Fructose, Sucrose, Fruit Juice

Introduction

Excess sugar consumption is tied to poor health outcomes. The Nutrition Labeling and Education Act requires that for a pre-packaged food or drink the amount of sugar be displayed on the Nutrition Facts label. This application proof note demonstrates a high-performance anion-exchange with pulsed amperometric detection (HPAE-PAD) method to accurately determine sugar concentrations. The method is performed using a Thermo Scientific™ Dionex™ Integriion™ HPIC™ system, which allows fast determination of sugars in fruit juice with no eluent preparation or sample derivatization.

Method

IC System:	Thermo Scientific Dionex Integriion HPIC system
Columns:	Thermo Scientific™ Dionex™ CarboPac™ PA20 Analytical (3 × 150 mm) Thermo Scientific Dionex CarboPac PA20 Guard (3 × 30 mm)
Eluent:	33 mM KOH
Flow Rate:	0.5 mL/min
Injection Volume:	10 µL
Temperature:	30 °C
Detection:	Pulsed amperometry, with four-potential carbohydrate waveform, using a Thermo Scientific Dionex Gold on PTFE Disposable Electrode

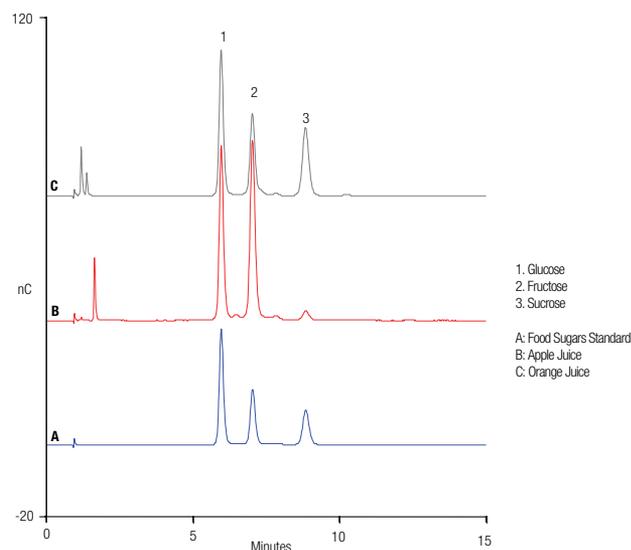


Figure 1. Separation of sugars in fruit juice using HPIC.

For application support, visit the [AppsLab Library](http://www.thermoscientific.com/appslib) 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



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