Waters™

应用纪要

Analysis of Food Sugars in Sports Drink Using ACQUITY UPLC BEH Amide Columns

Waters Corporation

This is an Application Brief and does not contain a detailed Experimental section.

Abstract

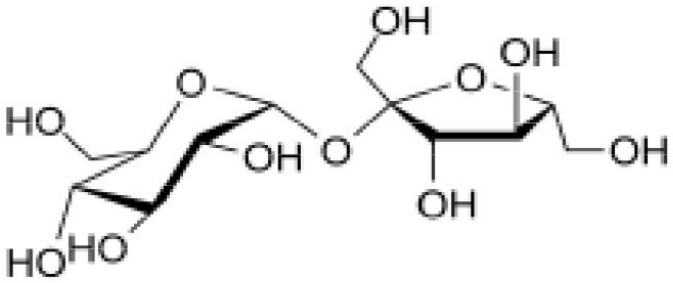
This application brief describes analysis of food sugars in sport drink using ACQUITY UPLC BEH Amide Column.

Introduction

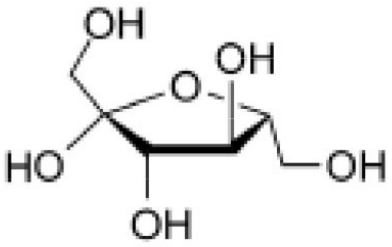
Compounds used for this study includes:

1. p-Toluamide
2. Fructose
3. Glucose
4. Sucrose
5. Maltose

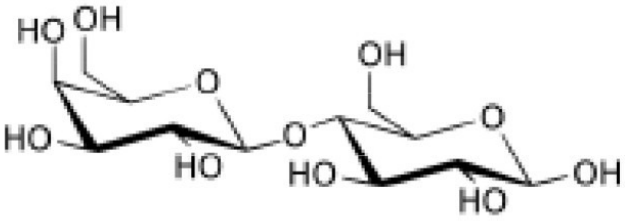
6. Lactose



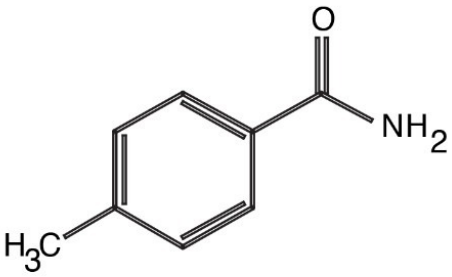
Sucrose



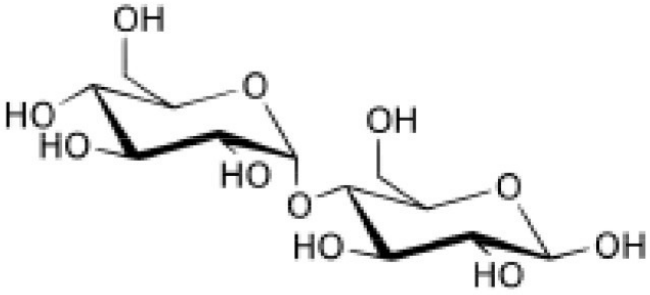
Fructose



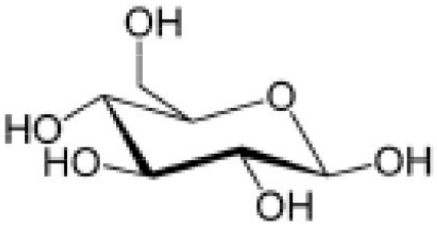
Lactose



p-Toluamide
(unretained compound)



Maltose



Glucose

Experimental

Chromatographic Conditions

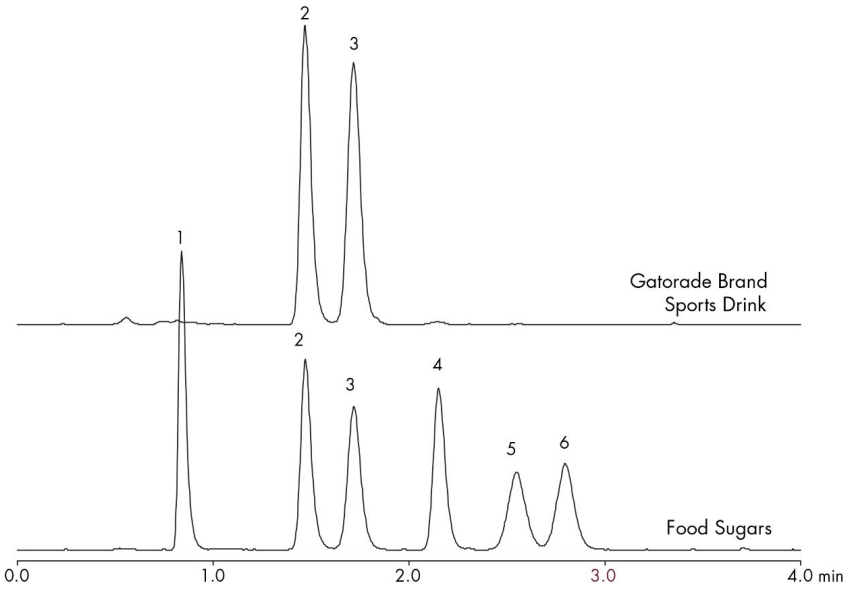
Column:	ACQUITY UPLC BEH Amide 2.1 x 50 mm, 1.7 µm
Part number:	186004800
Mobile phase A:	80/20 acetone/H_2O with 0.05% triethylamine [TEA]
Mobile phase B:	30/70 acetone/H_2O with 0.05% triethylamine [TEA]
Flow rate:	0.15 mL/min
Flow profile:	95% A/5% B (77.5% acetone with 0.05% TEA)
Injection volume:	0.7 µL (PLNO)
Sample concentration:	Standards at 1 mg/mL each
Sample diluent:	50/50 MeCN/H_2O
Column temperature:	85 °C
Strong needle wash:	20/80 MeCN/H_2O (800 µL)
Weak needle wash:	75/25 MeCN/H_2O (500 µL)
Seal wash:	50/50 MeCN/H_2O

Instrument:	Waters ACQUITY UPLC with ELSD

ELSD Conditions

Gain:	200
Pressure:	40 psi
Drift tube temperature:	40 °C
Nebulizer:	Cooling
Data rate:	10 pps
Filter time constant:	Normal

Results and Discussion



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ACQUITY UPLC ELS Detector <https://www.waters.com/514219>

WA60116, October 2009