

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

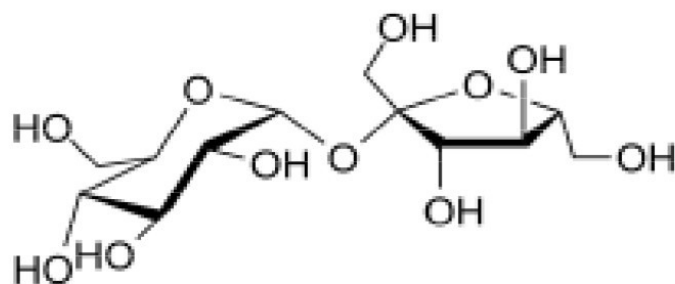
This application brief describes analysis of food sugars in sport drink using ACQUITY UPLC BEH Amide Column.

Introduction

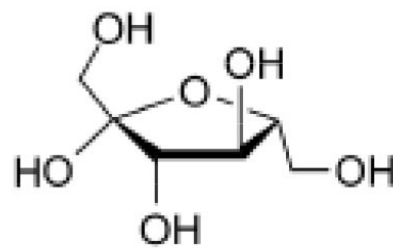
Compounds used for this study includes:

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

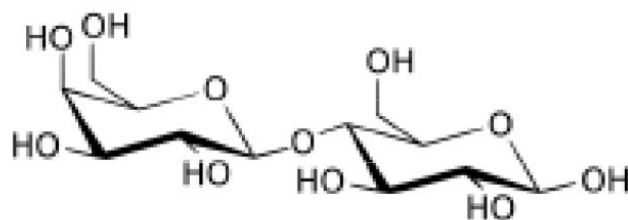
6. Lactose



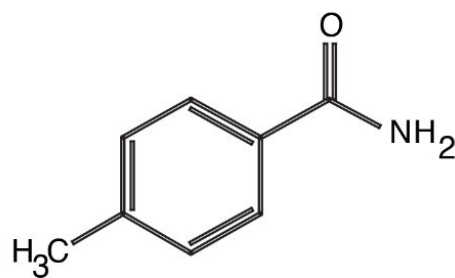
Sucrose



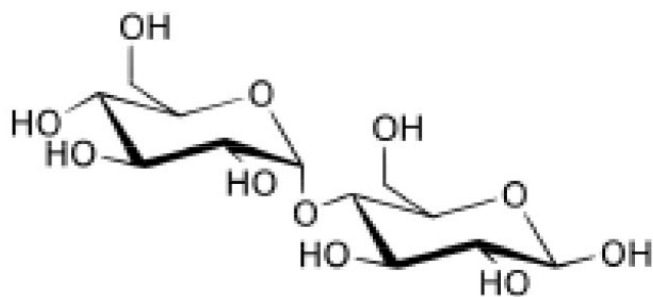
Fructose



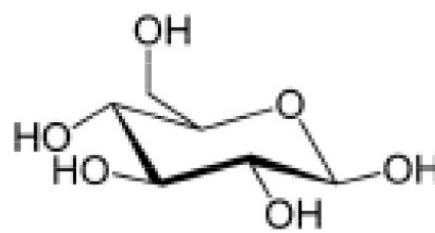
Lactose



p-Toluamide
(unretained compound)



Maltose



Glucose

Experimental

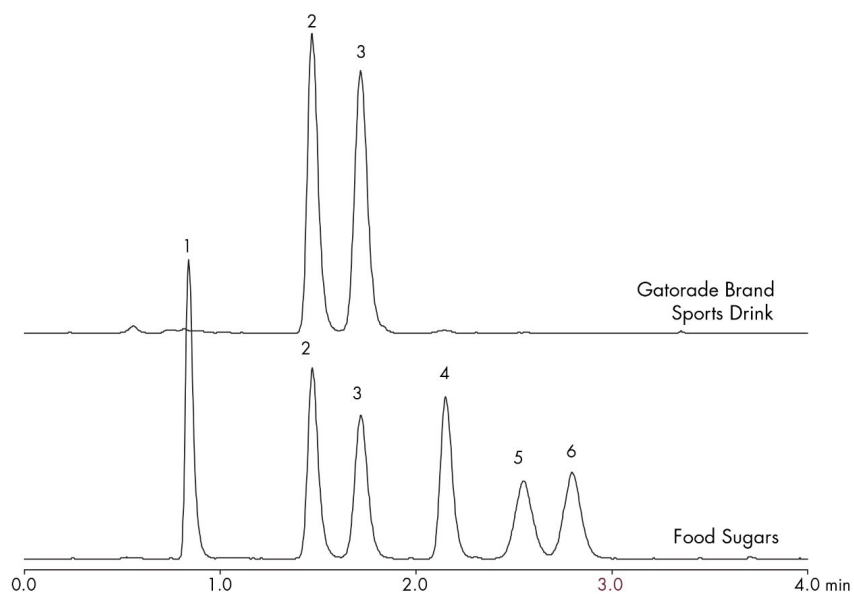
Chromatographic Conditions

Column:	ACQUITY UPLC BEH Amide 2.1 x 50 mm, 1.7 μ m
Part number:	186004800
Mobile phase A:	80/20 acetone/H ₂ O with 0.05% triethylamine [TEA]
Mobile phase B:	30/70 acetone/H ₂ O 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 μ L (PLNO)
Sample concentration:	Standards at 1 mg/mL each
Sample diluent:	50/50 MeCN/H ₂ O
Column temperature:	85 $^{\circ}$ C
Strong needle wash:	20/80 MeCN/H ₂ O (800 μ L)
Weak needle wash:	75/25 MeCN/H ₂ O (500 μ L)
Seal wash:	50/50 MeCN/H ₂ O
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



Featured Products

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

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