

Analysis of Food Sugars Using ACQUITY UPLC BEH Amide Columns

Waters Corporation



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

Abstract

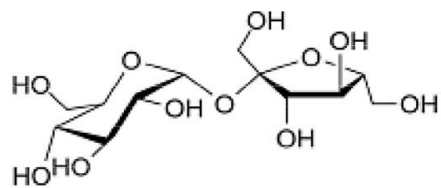
This application brief demonstrates analysis of food sugars.

Introduction

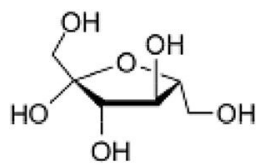
Compounds analysed in this application brief are:

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

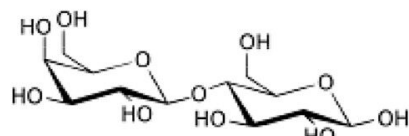
Structures



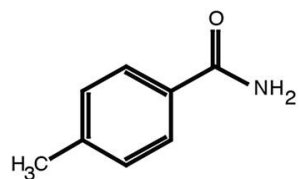
Sucrose



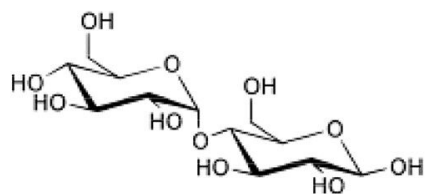
Fructose



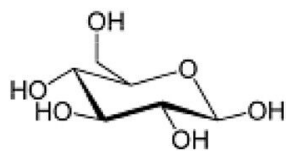
Lactose



p-Toluamide
(unretained compound)



Maltose



Glucose

Experimental

Test Conditions

Chromatographic Conditions

Column: ACQUITY UPLC BEH Amide 2.1 x 100 mm, 1.7 μ m

Part Number: 186004801

Mobile Phase A: 80/20 MeCN/H₂O with 0.2% triethylamine [TEA]

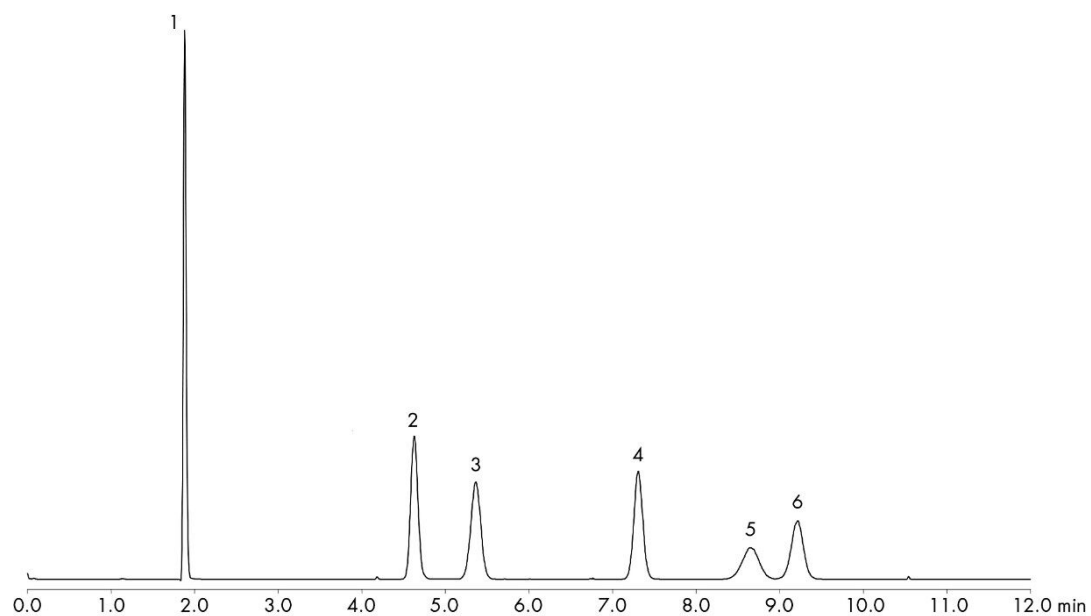
Mobile Phase B: 30/70 MeCN/H₂O with 0.2% triethylamine [TEA]

Flow Rate:	0.13 mL/min
Flow Profile:	90% A/10% B (75% MeCN with 0.2 % TEA)
Injection Volume:	1.3 μ L (PLNO)
Sample Concentration:	1 mg/mL each
Sample Diluent:	50/50 MeCN/H ₂ O
Column Temperature:	35 $^{\circ}$ 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 $^{\circ}$ 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>](https://www.waters.com/514219)

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