

Analysis of Food Sugars/Saccharides in Potato Chips Using ACQUITY UPLC BEH Amide Columns

Waters Corporation

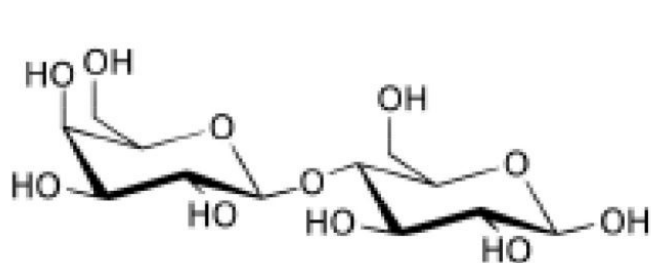
This is an Application Brief and does not contain a detailed Experimental section.

Abstract

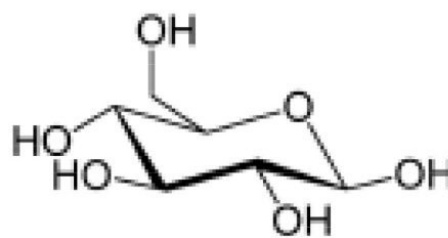
This application brief highlights the analysis of food sugars/saccharides in potato chips using ACQUITY UPLC BEH Amide Columns.

Introduction

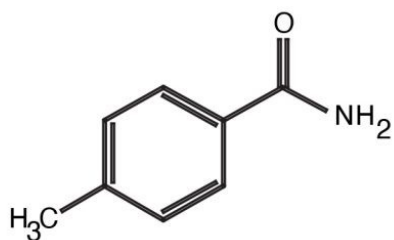
Structures



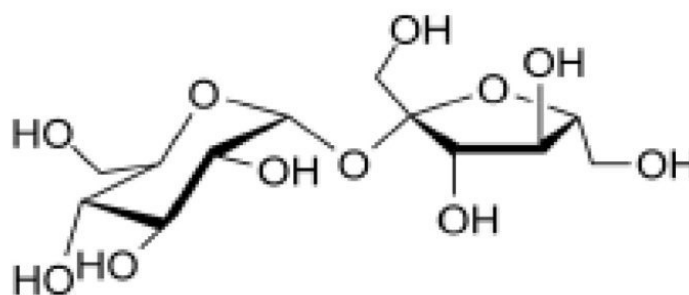
Lactose



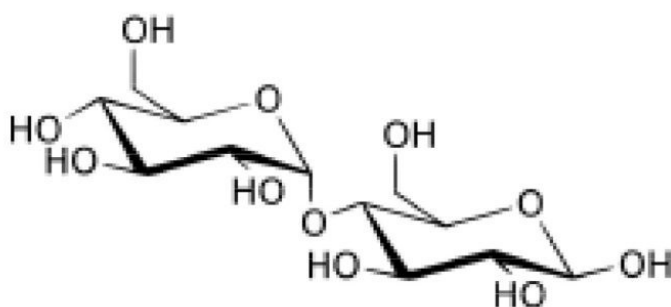
Glucose



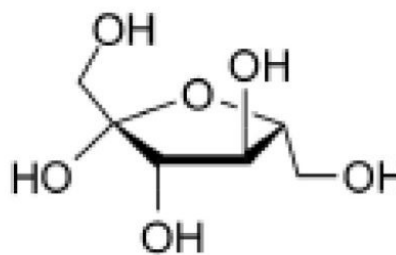
p-Toluamide
(unretained compound)



Sucrose



Maltose



Fructose

Experimental

Chromatographic Conditions

Column:	ACQUITY UPLC BEH Amide 2.1 x 100 mm, 1.7 μm
Part Number:	186004801
Mobile Phase A:	80/20 MeCN/H ₂ O with 0.2% triethylamine [TEA]
Mobile Phase B:	30/70 MeCN/H ₂ O with 0.2% triethylamine [TEA]
Flow Rate:	0.13 mL/min
Gradient:	10 minute gradient, 80%-50% MeCN (w/0.2% TEA) with 25 minute re-equilibration
Injection Volume:	1.3 μL (PLNO)
Sample Concentration:	Standards at 1 mg/mL each, potato chips extracted at 120mg/mL
Sample Diluent:	50/50 MeCN/H ₂ O
Column Temperature:	35 °C
Strong Needle Wash:	20/80 MeCN/H ₂ O (800 μL)
Weak Needle Wash:	75/25 MeCN/H ₂ O (500 μL)
Seal Wash:	50/50 MeCN/H ₂ O

Instrument:

Waters ACQUITY UPLC with ELSD

Gradient

Time (min)	Profile	
	%A	%B
0.00	100.00	0.00
10.00	40.00	60.00
10.01	100.00	0.00
35.00	100.00	0.00

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

The compounds analysed in this study are:

1. p-Toluidide

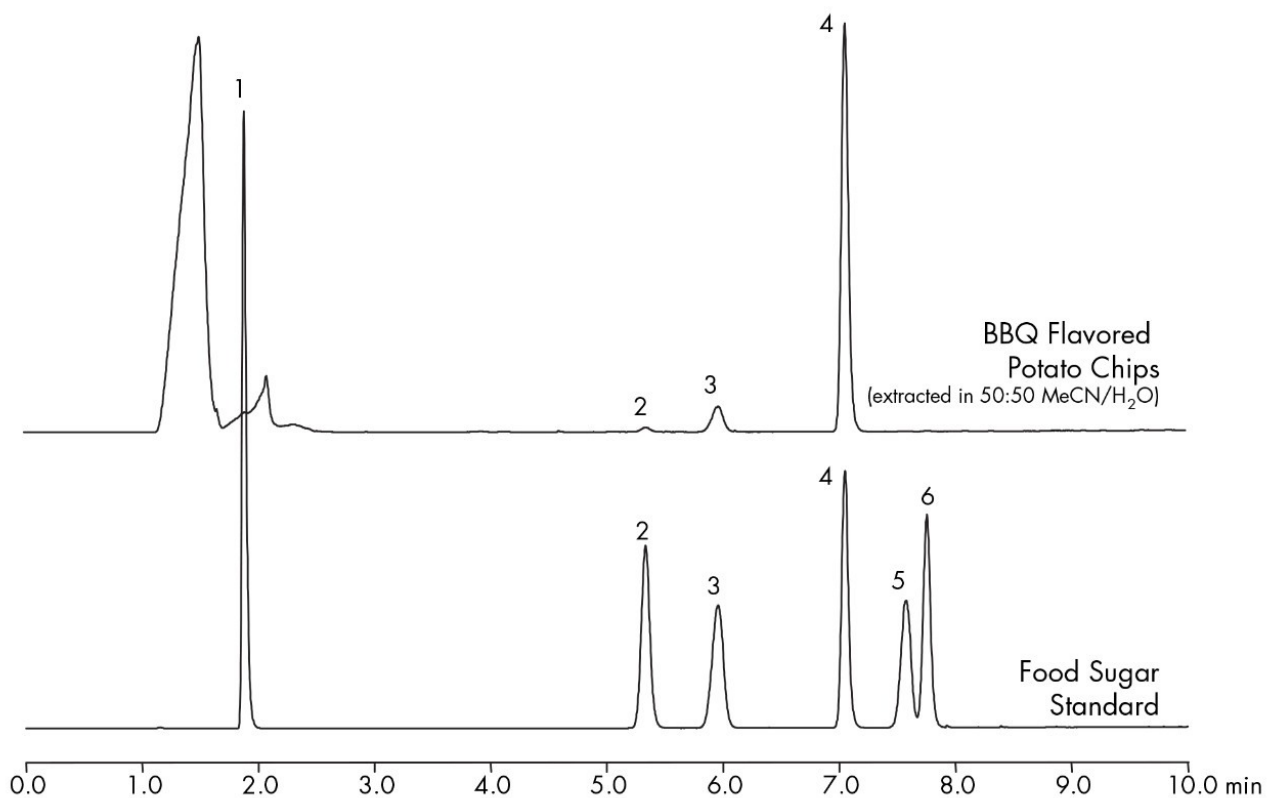
2. Fructose

3. Glucose

4. Sucrose

5. Maltose

6. Lactose



Featured Products

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

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