

Analysis of Food Sugars in Prepared Foods Using ACQUITY UPLC BEH Amide Columns

Waters Corporation

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

Abstract

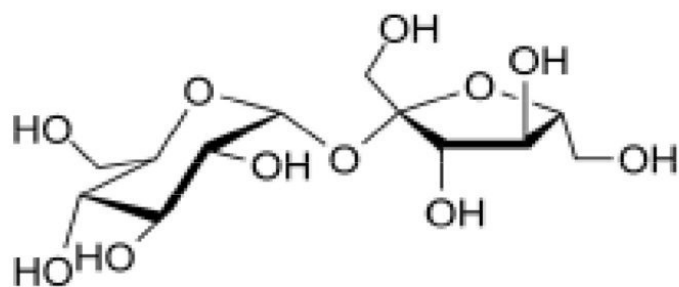
This application brief describes the analysis of food sugars in prepared food using ACQUITY UPLC BEH Amide Columns.

Introduction

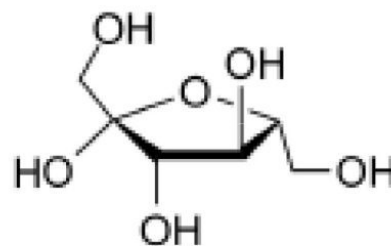
Compounds used for this study includes:

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

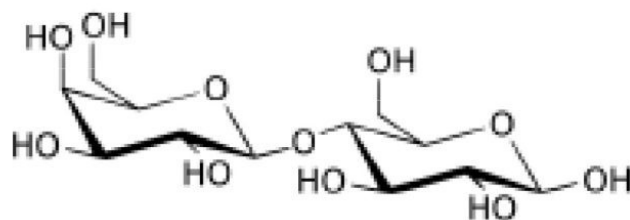
6. Lactose



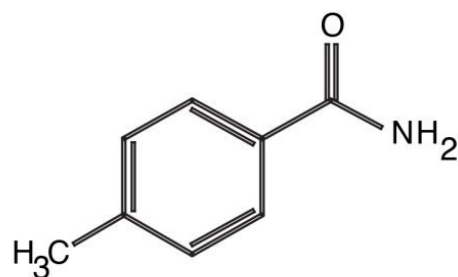
Sucrose



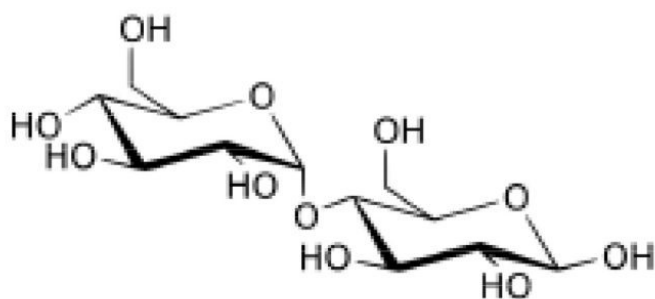
Fructose



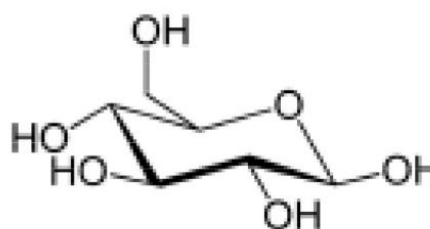
Lactose



p-Toluamide
(unretained compound)



Maltose



Glucose

Experimental

Chromatographic Conditions

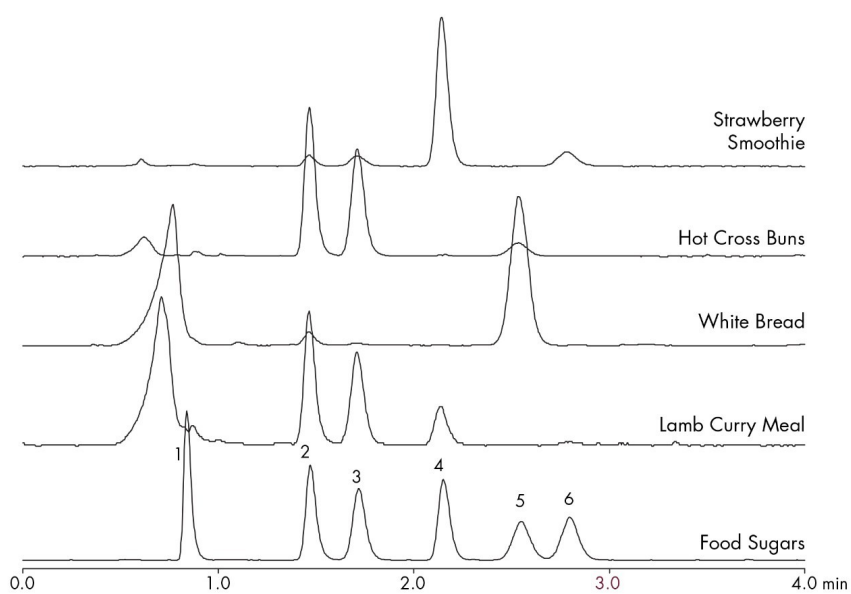
| | |
|-----------------------|--|
| Column: | ACQUITY UPLC BEH Amide 2.1 x 50 mm, 1.7 μ m |
| Part number: | 186004800 |
| Mobile phase A: | 80/20 acetone/H ₂ O with 0.05% triethylamine [TEA] |
| Mobile phase B: | 30/70 acetone/H ₂ O with 0.05% triethylamine [TEA] |
| Flow rate: | 0.15 mL/min |
| Flow 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



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

WA60115, October 2009

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