

Analysis of Food Sugars in Ketchup Using ACQUITY UPLC BEH Amide Columns

Waters Corporation

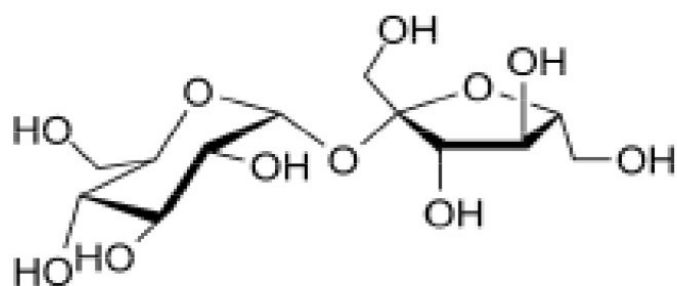
This is an Application Brief and does not contain a detailed Experimental section.

Abstract

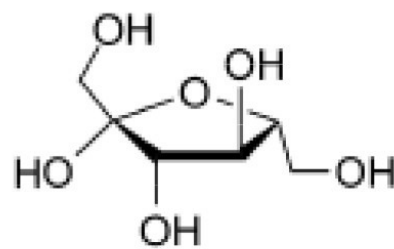
This application brief highlights the analysis of food sugars in ketchup using ACQUITY UPLC BEH Amide Columns.

Introduction

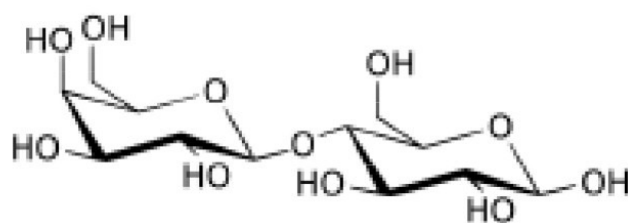
Structures



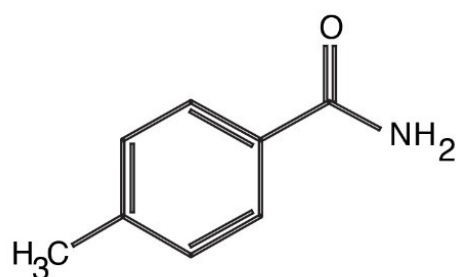
Sucrose



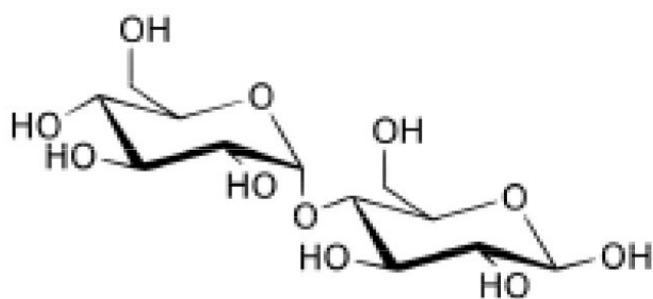
Fructose



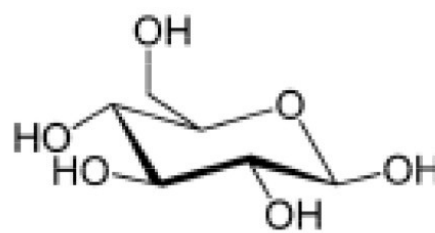
Lactose



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 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 µL (PLNO) |
| Sample Concentration: | Standards at 1 mg/mL each |
| Sample Diluent: | 50/50 MeCN/H ₂ O |
| Column Temperature: | 85 °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 |

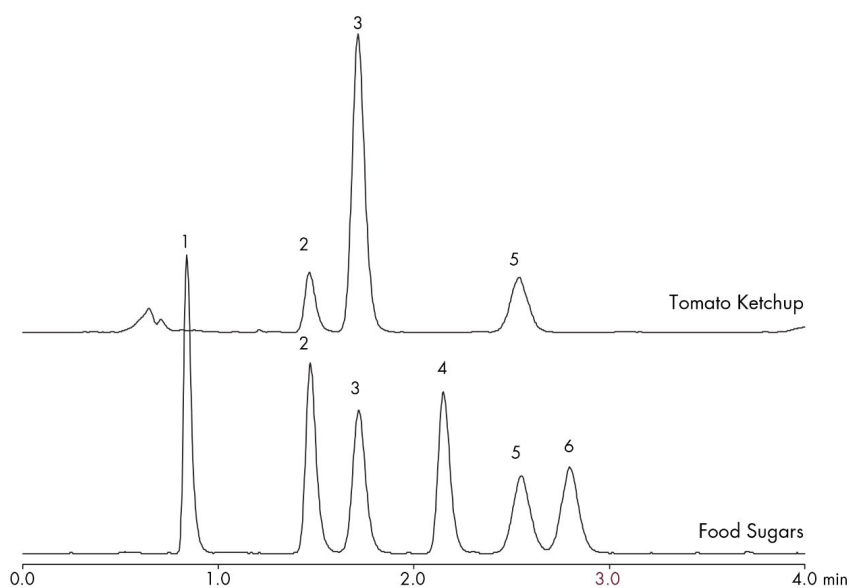
ELSD Conditions

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



Featured Products

2424 Evaporative Light Scattering (ELS) Detector <<https://www.waters.com/514428>>

WA60117, October 2009

© 2022 Waters Corporation. All Rights Reserved.