

응용 자료

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

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Waters Corporation

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

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### Abstract

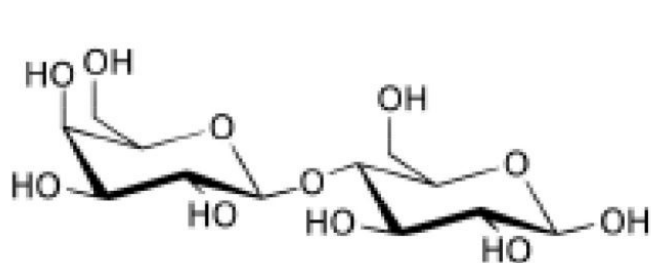
This application brief highlights the analysis of food sugars/saccharides in potato chips using ACQUITY UPLC BEH Amide Columns.

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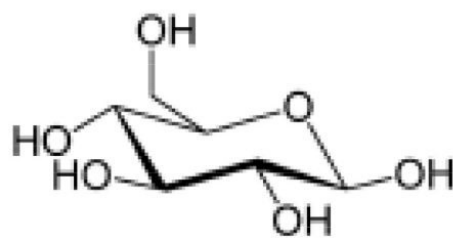
### Introduction

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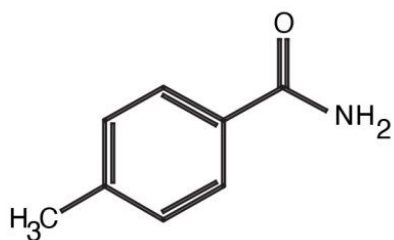
## Structures



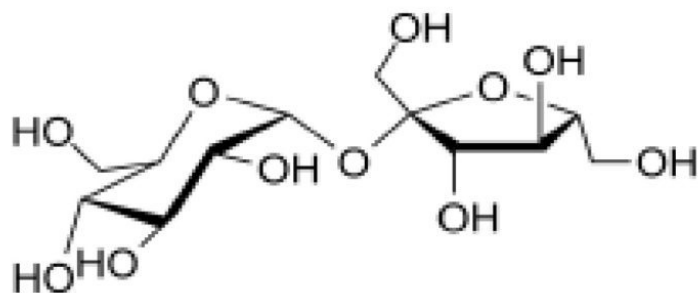
Lactose



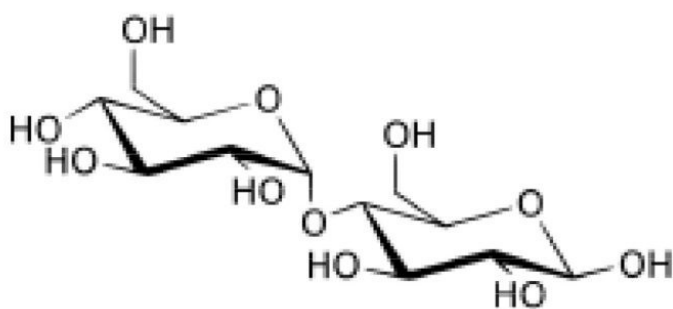
Glucose



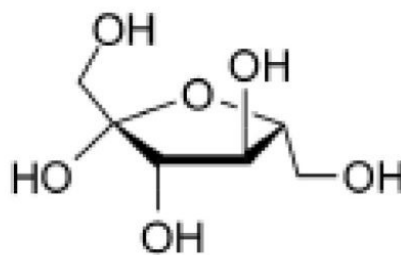
p-Toluamide  
(unretained compound)



Sucrose



Maltose



Fructose

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## 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 <sub>2</sub> O with 0.2% triethylamine [TEA]                     |
| Mobile Phase B:       | 30/70 MeCN/H <sub>2</sub> 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 <sub>2</sub> O                                                   |
| Column Temperature:   | 35 °C                                                                         |
| Strong Needle Wash:   | 20/80 MeCN/H <sub>2</sub> O (800 µL)                                          |
| Weak Needle Wash:     | 75/25 MeCN/H <sub>2</sub> O (500 µL)                                          |
| Seal Wash:            | 50/50 MeCN/H <sub>2</sub> O                                                   |

Instrument:

Waters ACQUITY UPLC with ELSD

## Gradient

| Time<br>(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  |

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## Results and Discussion

The compounds analysed in this study are:

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1. p-Toluamide

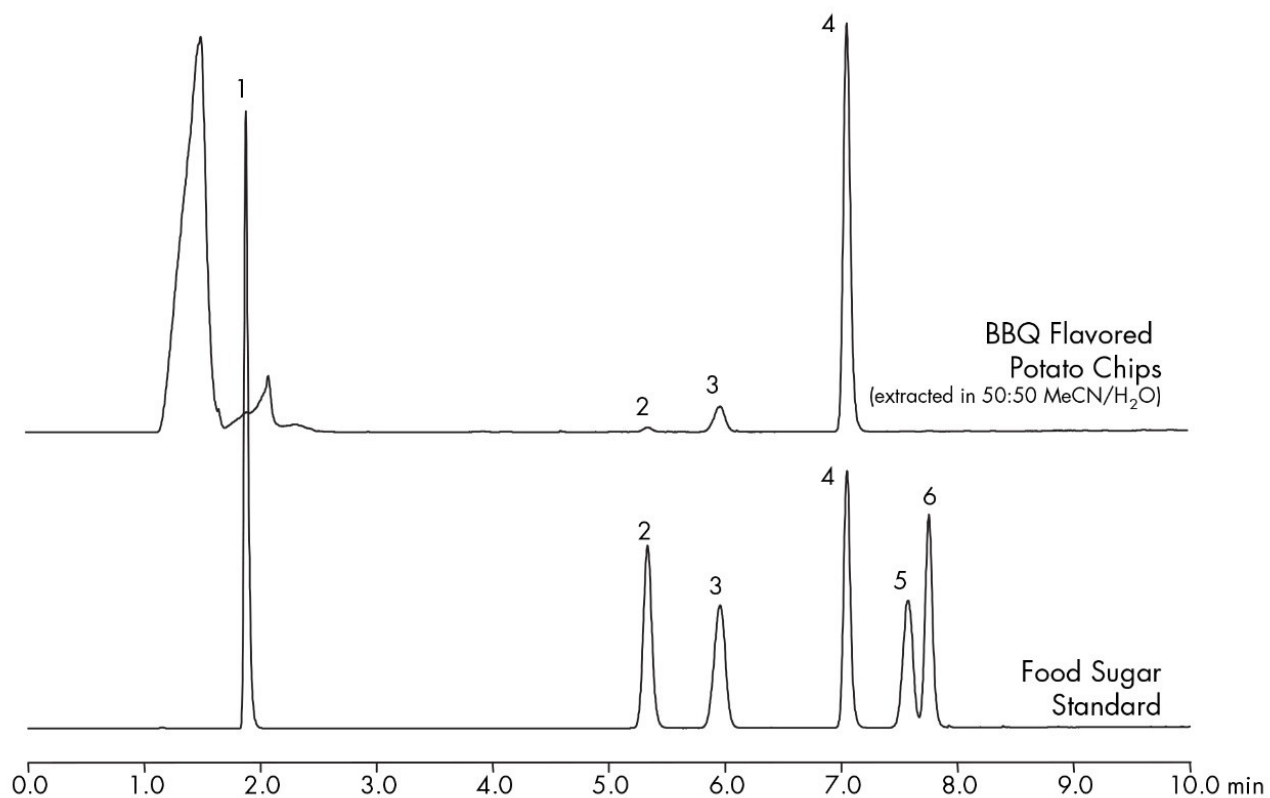
2. Fructose

3. Glucose

4. Sucrose

5. Maltose

6. Lactose



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## Featured Products

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

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