

## Analysis of Cellulosic Hydrolysates 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 cellulosic hydrolysates using ACQUITY UPLC BEH Amide Columns.

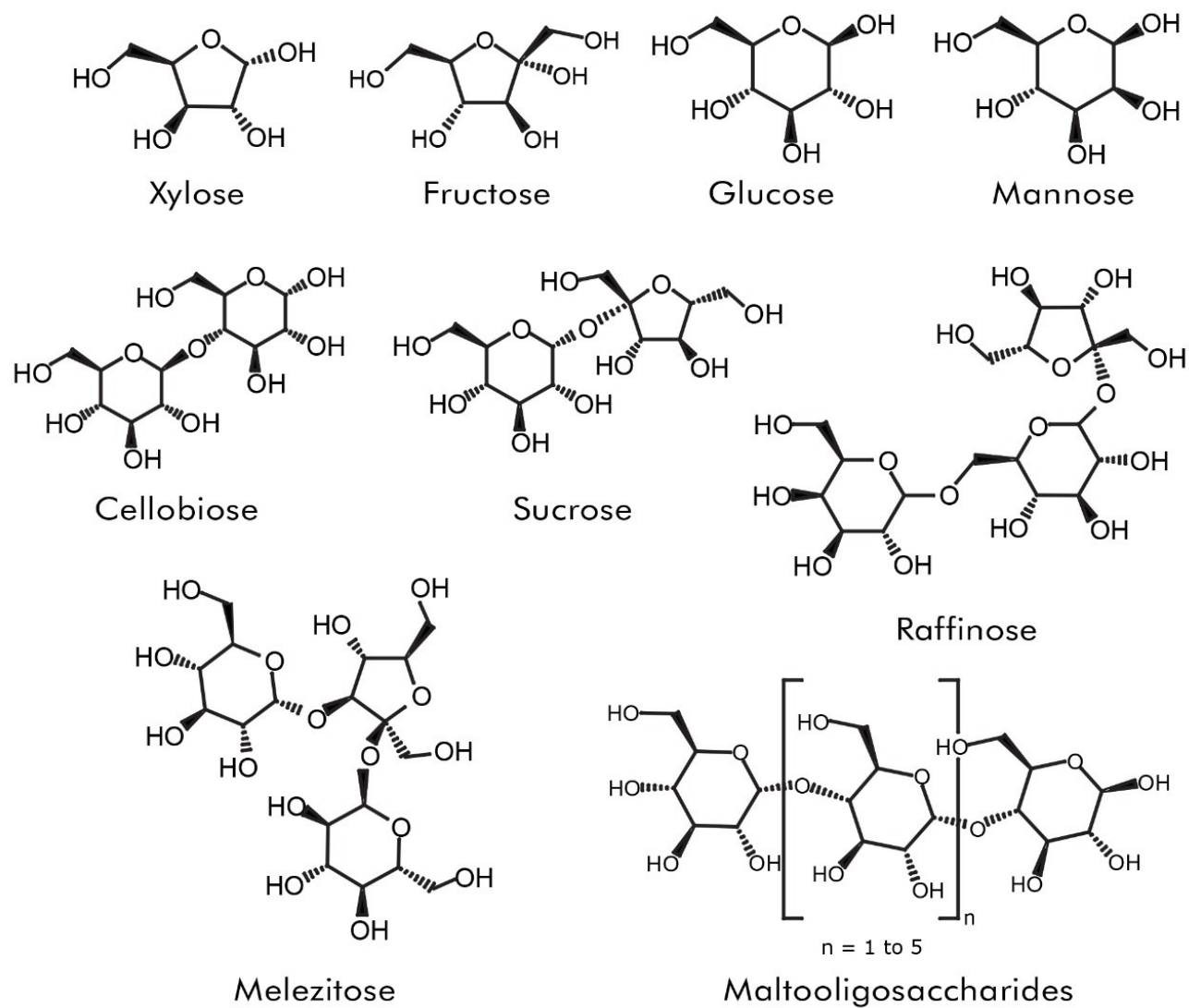
---

### Introduction

The compounds analysed in this study are:

1. Xylose
  2. Fructose
  3. Mannose
  4. Glucose
-

5. Sucrose
6. Cellobiose
7. Melezitose
8. Raffinose
9. Maltotriose
10. Maltotetraose
11. Maltopentaose
12. Maltohexaose
13. Maltoheptaose




---

## Experimental

### Chromatographic Conditions

Column:

ACQUITY UPLC BEH Amide 2.1 x 100 mm, 1.7  $\mu\text{m}$

---

|                       |                                                                               |
|-----------------------|-------------------------------------------------------------------------------|
| 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:            | 0.12 mL/min                                                                   |
| Gradient:             | 10 minute gradient, 80%-50% MeCN (w/0.2% TEA) with 30 minute re-equilibration |
| Injection Volume:     | 1.3 µL (PLNO)                                                                 |
| Sample Concentration: | 1 mg/mL each                                                                  |
| 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

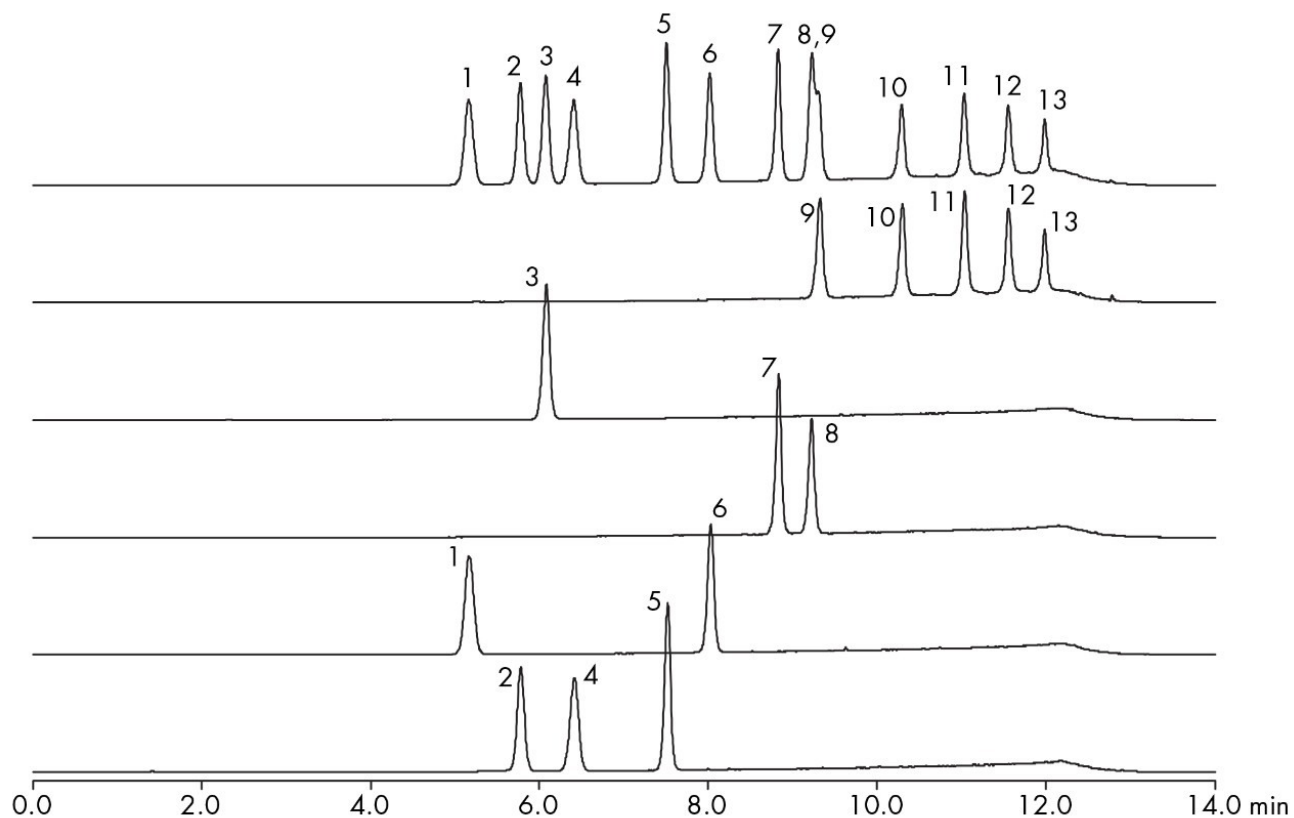
| Time<br>(min) | Profile |       |
|---------------|---------|-------|
|               | %A      | %B    |
| 0.00          | 100.00  | 0.00  |
| 10.00         | 60.00   | 40.00 |
| 10.01         | 100.00  | 0.00  |
| 40.00         | 100.00  | 0.00  |

## 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



---

## Featured Products

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

WA60127, October 2009

© 2022 Waters Corporation. All Rights Reserved.