

UPLC-MS Analysis of Mono-, Di- and Oligosaccharides Using ACQUITY UPLC BEH Amide Columns

Waters Corporation

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

Abstract

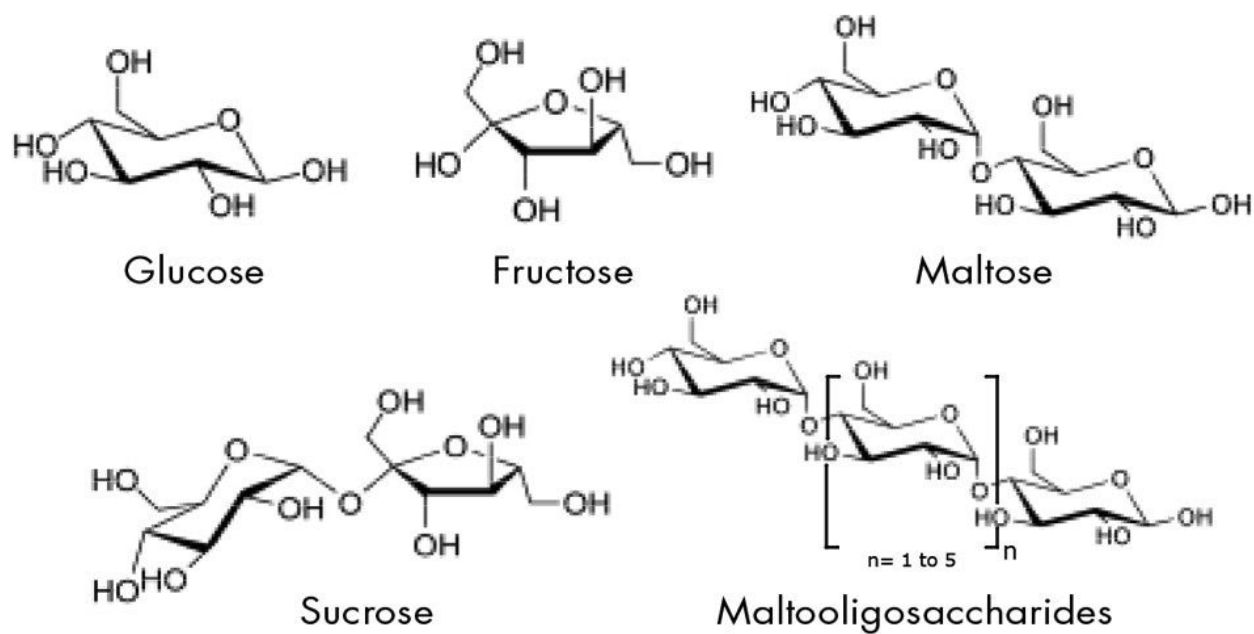
This application brief highlights the UPLC-MS analysis of mono-, di-, and oligosaccharides using ACQUITY UPLC BEH Amide Columns.

Introduction

Compounds used for this study includes:

1. Fructose
 2. Glucose
 3. Sucrose
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4. Maltose
5. Maltotriose
6. Maltotetraose
7. Maltopentaose
8. Maltohexahose
9. Maltoheptaose



Experimental

Chromatographic Conditions

Column: ACQUITY UPLC BEH Amide 2.1 x 50 mm, 1.7 μm

Part number:	186004800
Mobile phase A:	80/20 MeCN/H ₂ O with 0.10% ammonium hydroxide [NH ₄ OH]
Mobile phase B:	30/70 MeCN/H ₂ O with 0.10% ammonium hydroxide [NH ₄ OH]
Flow rate:	0.17 mL/min
Gradient:	5 minute gradient, 80%–50% MeCN with 10-minute re-equilibration
Injection volume:	0.7 µL (PLNO)
Sample concentration:	10 µg/mL each
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 ACQUITY TQD

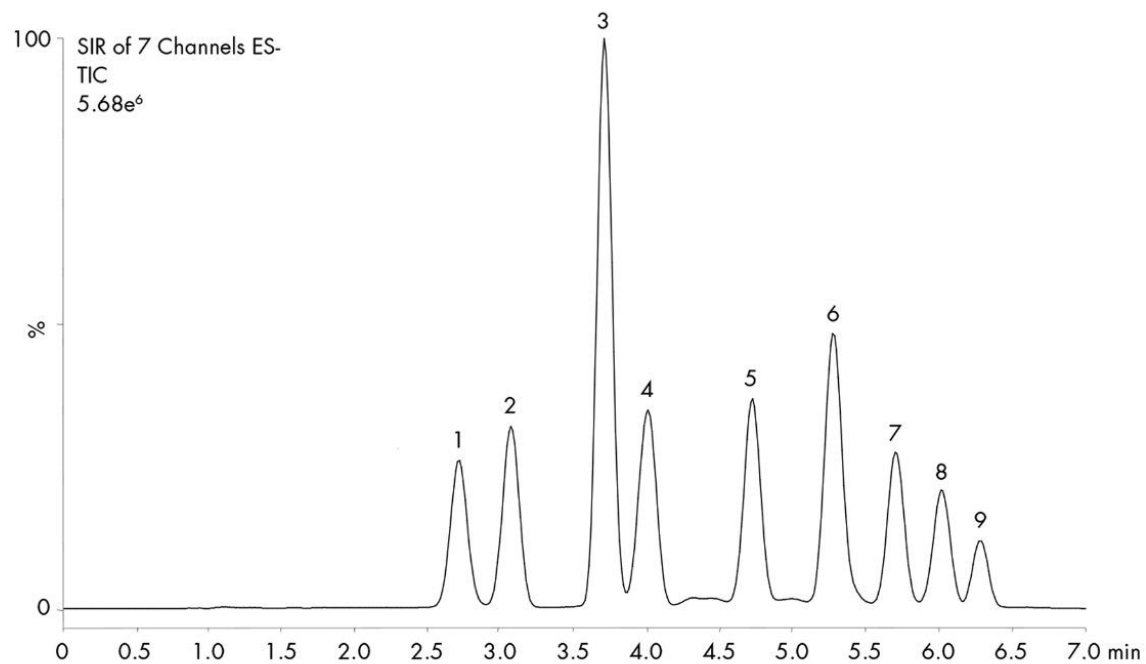
Gradient:

Time (min)	%A	%B
0.00	100.00	0.00
5.00	40.00	60.00
5.01	100.00	0.00
15.00	100.00	0.00

Mass Spectrometer Conditions

Ionization mode:	ES
Capillary:	2.8 kV
Cone voltage:	25 V
Source temperature:	120 °C
Desolvation temperature:	350 °C
Desolvation gas flow:	500 L/Hr
Cone:	50 L/Hr
SIR (<i>m/z</i>):	179.2 (fructose, glucose); 341.3 (sucrose, maltose); 503.4, 665.5, 827.6, 989.7, 1151.8 (maltooligosaccharides [n=1 to 5])
Dwell time:	0.08 s

Results and Discussion



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ACQUITY UPLC System <<https://www.waters.com/514207>>

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