Waters™

Application Note

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

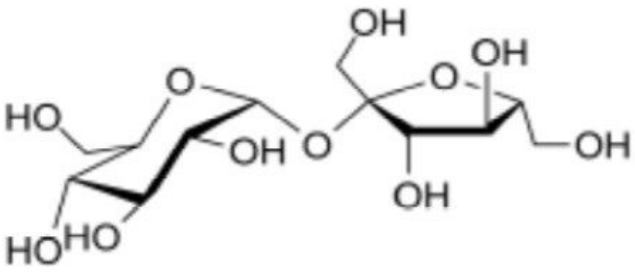
This application brief describes the analysis of Oligosaccharides using ACQUITY UPLC BEH Amide Columns.

Introduction

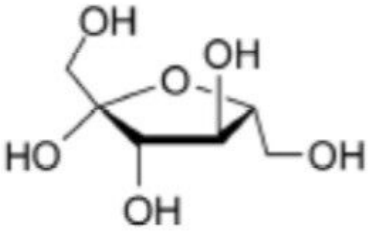
Compounds used for this tudy includes:

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

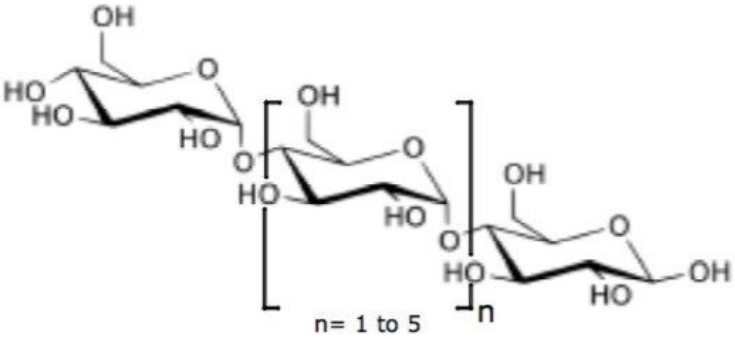
STRUCTURES



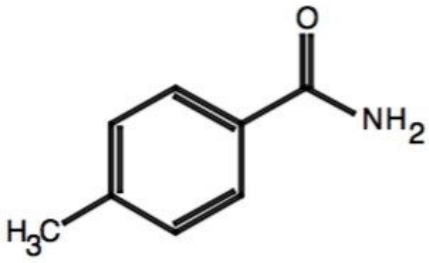
Sucrose



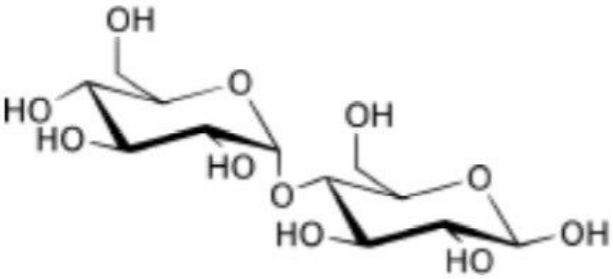
Fructose



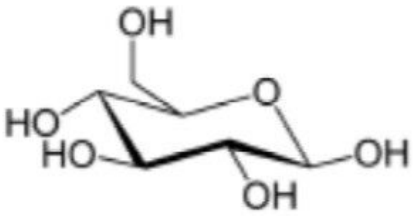
Maltooligosaccharides



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 MeCN/H_2O with 0.05% triethylamine [TEA]
Mobile Phase B:	30/70 MeCN/H_2O with 0.05% triethylamine [TEA]
Flow Rate:	0.17 mL/min
Gradient:	5 minute gradient, 80%-50% MeCN
Injection Volume:	0.7 µL (PLNO)
Sample Concentration:	1 mg/mL each
Sample Diluent:	50/50 MeCN/H_2O
Column Temperature:	35 °C
Strong Needle Wash:	20/80 MeCN/H_2O (800 µL)
Weak Needle Wash:	75/25 MeCN/H_2O (500 µL)
Seal Wash:	50/50 MeCN/H_2O
Instrument:	Waters ACQUITY UPLC with ELSD

Gradient:

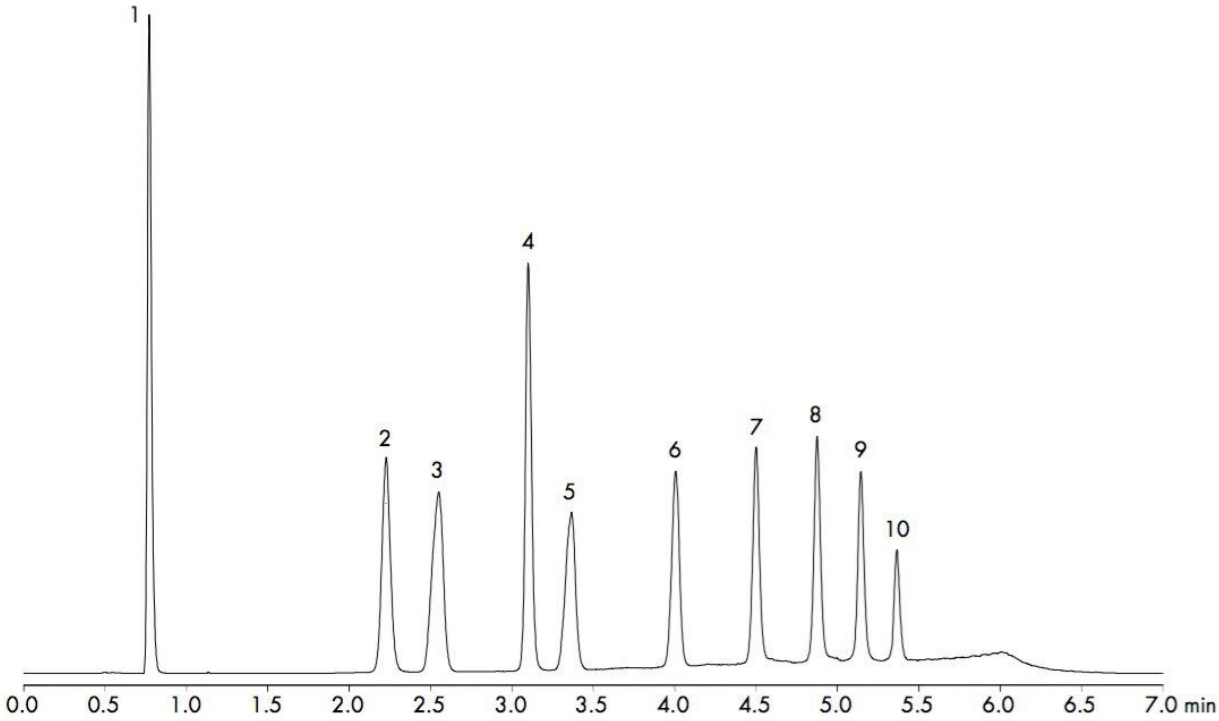
Time (min)	%A	%B
0.00	100.00	0.00

Time (min)	%A	%B
5.00	40.00	60.00
5.01	100.00	0.00
15.00	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 System <https://www.waters.com/514207>

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

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