Waters™

應用手冊

Analysis of Mono-, Di-, and Oligosaccharides Using ACQUITY UPLC BEH Amide Columns with Acetone as Organic Modifiers

Waters Corporation

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

Abstract

This application brief highlights the analysis of oligosaccharides using ACQUITY UPLC BEH Amide Columns with acetone as organic modifiers.

Introduction

Compounds used for this study includes:

1. p-Toluamide

2. Fructose

3. Glucose

4. Sucrose

5. Maltose

6. Maltotriose

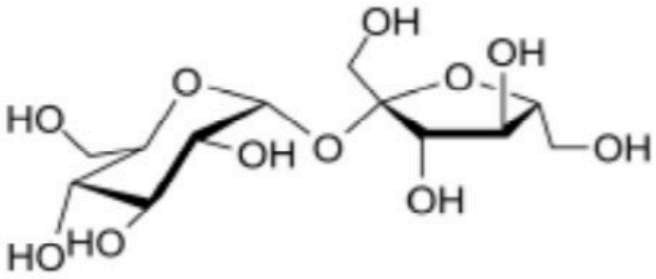
7. Maltotetraose

8. Maltopentaose

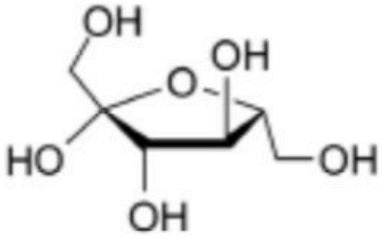
9. Maltohexahose

10. Maltoheptaose

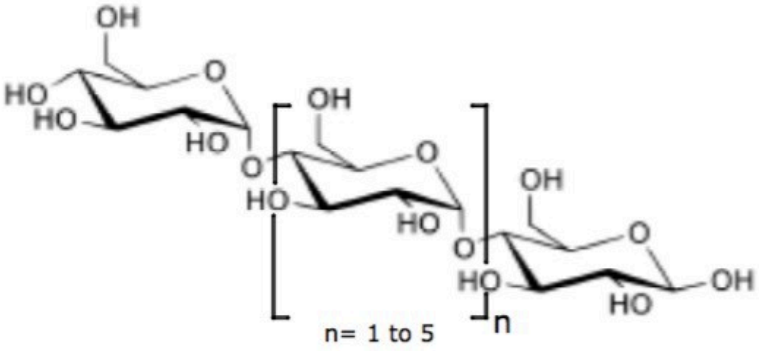
STRUCTURES



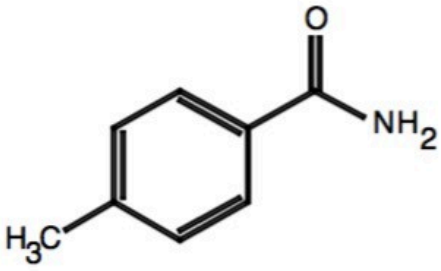
Sucrose



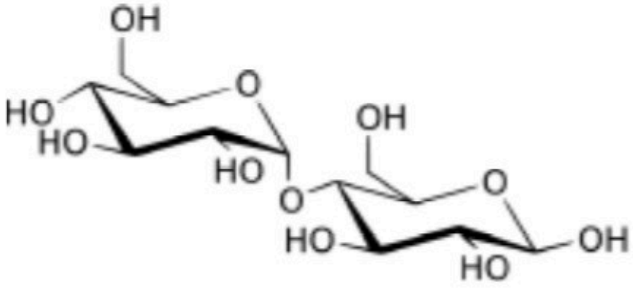
Fructose



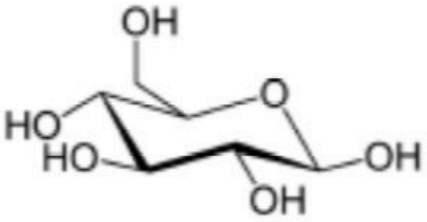
Maltooligosaccharides



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 acetone/H_2O with 0.05% triethylamine [TEA]
Mobile phase B:	30/70 acetone/H_2O with 0.05% triethylamine [TEA]
Flow rate:	0.17 mL/min
Gradient:	5 minute gradient, 80%–60% MeCN with 10 minute re-equilibration
Injection volume:	0.7 µL (PLNO)
Sample concentration:	1 mg/mL each
Sample diluent:	50/50 MeCN/H_2O
Column temperature:	85 °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

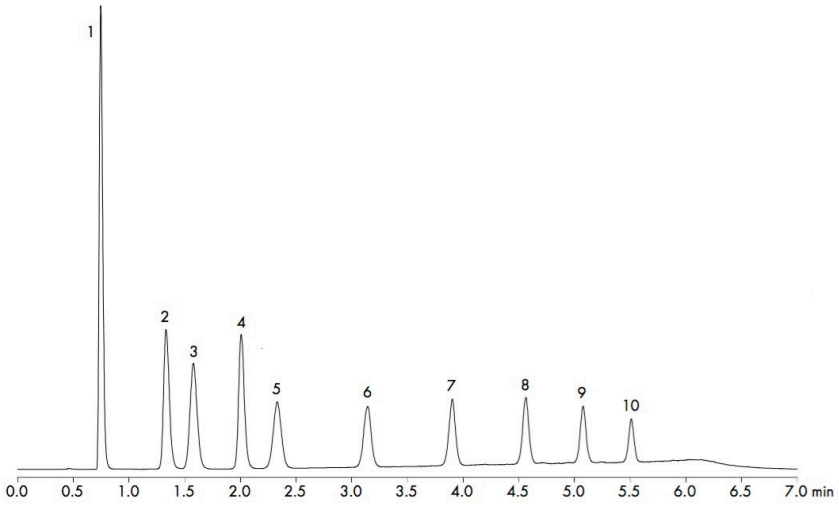
Gradient:

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



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WA60111, October 2009