Waters™

Application Note

Analysis of Food Sugars/Saccharides in Honey Using ACQUITY UPLC BEH Amide Columns

Waters Corporation

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

Abstract

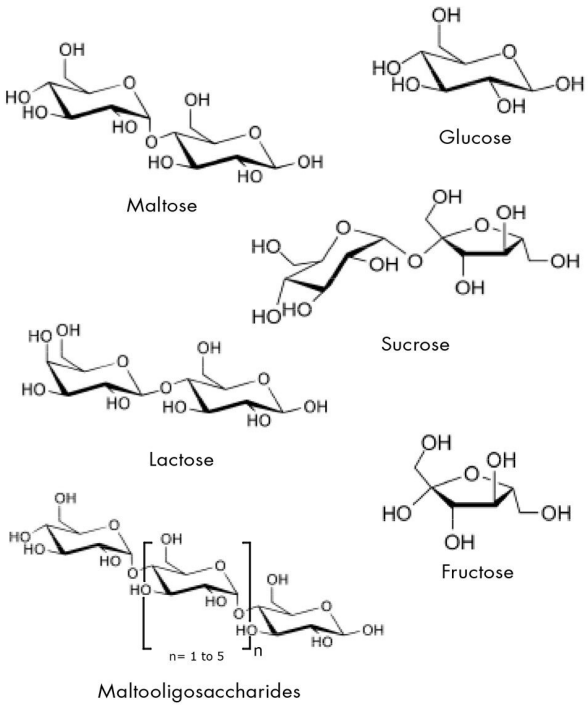
This application brief demonstrates analysis of food Sugars/Saccharides in honey.

Introduction

Compounds analysed in this application brief :

1. Fructose
2. Glucose
3. Sucrose
4. Maltose
5. Maltotriose
6. Maltotetraose
7. Maltopentaose

Structures



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 0.2% triethylamine [TEA]
Mobile Phase B:	30/70 MeCN/H_2O with 0.2% triethylamine [TEA]

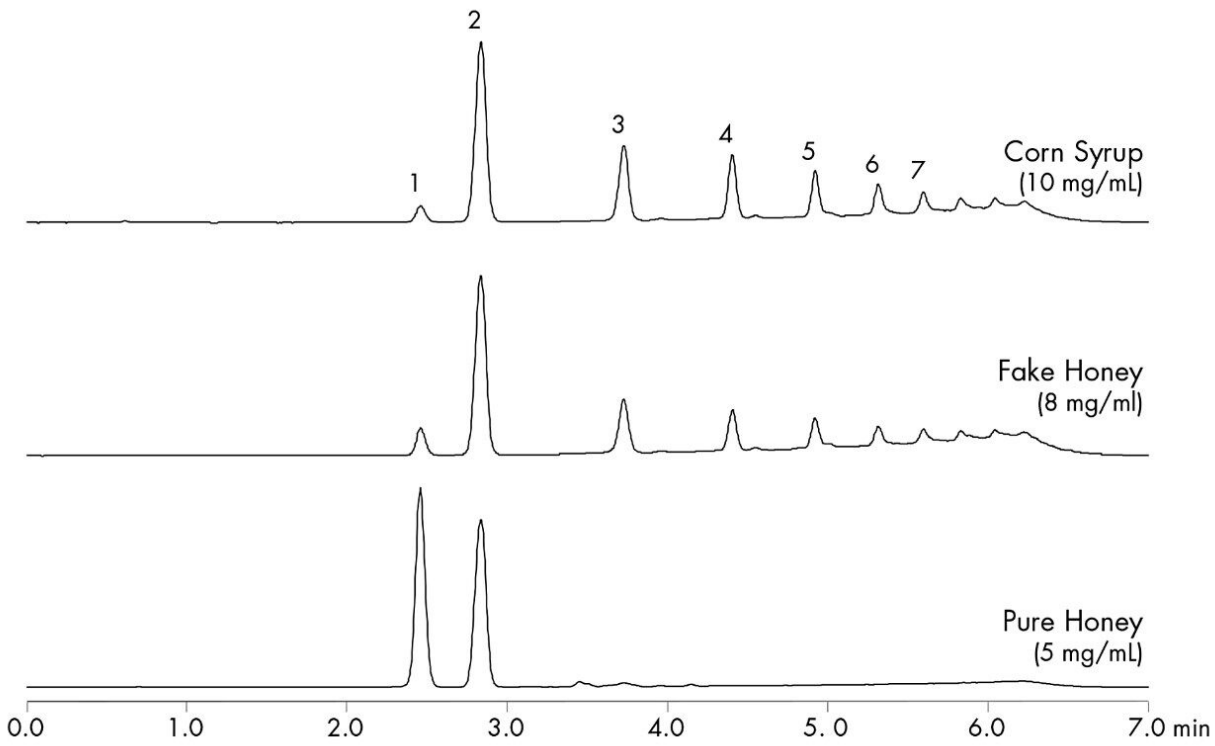
Flow Rate:	0.15 mL/min
Injection Volume:	0.7 µL (PLNO)
Sample Concentration:	Honey and corn syrup at 5-10 mg/mL each
Sample Diluent:	50/50 MeCN/H_2O
Column Temperature:	45 °C
Strong Needle Wash:	20/80 MeCN/H_2O (800 µL)
Weak Needle Wash:	75/25 MeCN/H_2O (500 µL)
Seal Wash:	50/50 MeCN/H_2O
Instrument:	Waters ACQUITY UPLC with ELSD
Gradient:	5 minute gradient, 80%-50% MeCN (w/0.2% TEA) with 10 minute re-equilibration

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

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



1. Fructose, 2. Glucose, 3. Sucrose, 4. Maltose, 5. Maltotriose, 6. Maltotetraose, 7. Maltopentaose

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

2424 Evaporative Light Scattering (ELS) Detector <https://www.waters.com/514428>

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