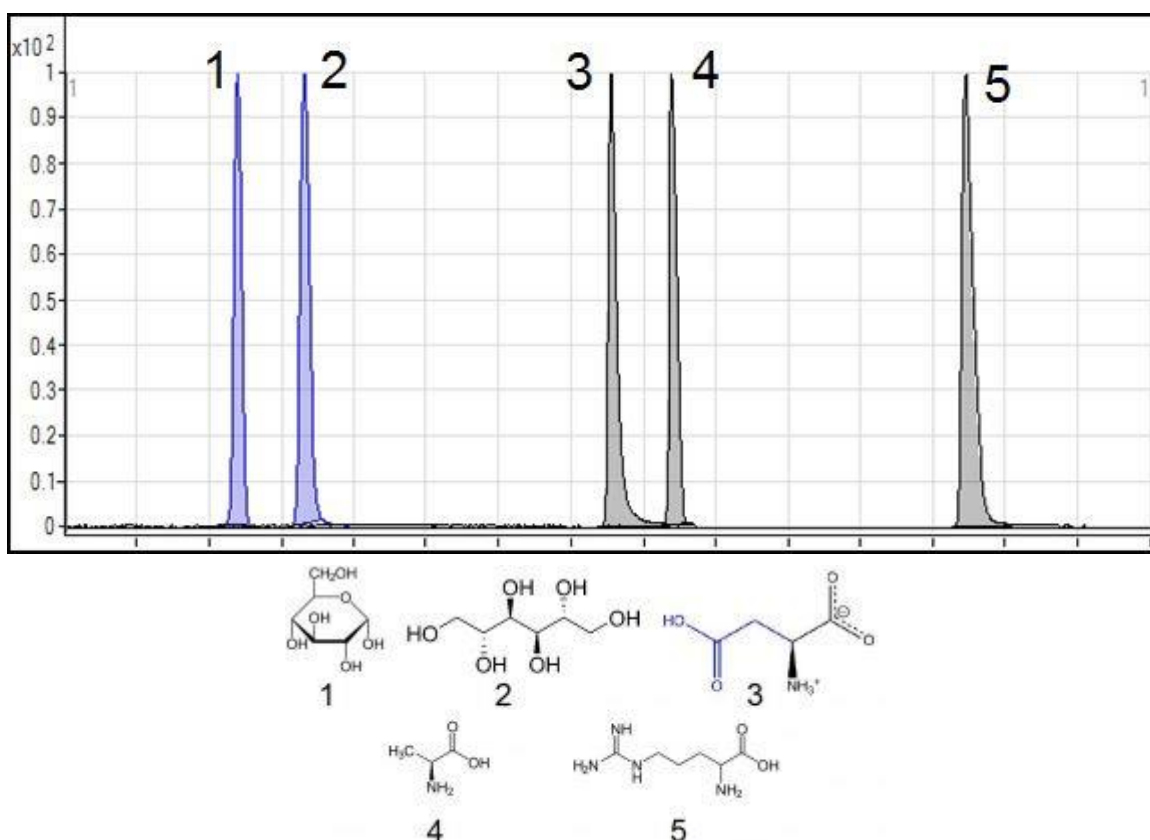


Glucose, Mannitol, Aspartic Acid, Alanine and Arginine Separation with LCMS - AppNote

Sugars, Sugar Alcohols & Amino Acids Separation Glucose, Mannitol, Aspartic Acid, Alanine and Arginine

Metabolomics analysis encompasses a vast array of molecules with disparate hydrophobic/hydrophilic properties. Many of these analytes are in fact quite polar and problematic to retain by conventional Reversed Phase Chromatography.

The Cogent Diamond Hydride Column is quite well-suited to their separation. This application demonstrates this property through the separation of five notable polar compounds that may be of interest to metabolomics separations.



Peaks:

1. Glucose
2. Mannitol
3. Aspartic Acid
4. Alanine
5. Arginine

Method Conditions

Column: Cogent Diamond Hydride™, 4µm, 100Å

Catalog No.: [70000-15P-2](#)

Dimensions: 2.1 x 50 mm

Mobile Phase:

A: 50% DI Water/ 50% Acetonitrile/ 0.1% Formic Acid/ 100µM Sodium Acetate

B: Acetonitrile/ 0.1% Formic Acid

Gradient:

Time (Minutes)	%B
0	90
1	90
3	80
4	80
5	50
6	50
7	25
10	25
11	90

Post Time: 5 minutes

Injection vol.: 1µL

Flow rate: 0.6 mL/minute

Detection: ESI – POS - Agilent 6210 MSD TOF Mass Spectrometer

Notes: Sugar Alcohols differ from Sugars in that the Carbonyl group of the former has been reduced to an Alcohol group. They don't raise blood sugar levels to the same extent that regular Sugars do and hence are often used in diabetic foods when a sweet taste is still desired. Amino Acids have many biological functions and are the building blocks of Peptides and Proteins.



Attachment No 366 Sugars Sugar Alcohols and Amino Acids AppNote 0.2 Mb [Download File](#)

Printed from the Chrom Resource Center

Copyright 2025, All Rights Apply

MicroSolv Technology Corporation

9158 Industrial Blvd. NE, Leland, NC 28451

Tel: (732) 380-8900

Fax: (910) 769-9435

Email: customers@mtc-usa.com

Website: www.mtc-usa.com