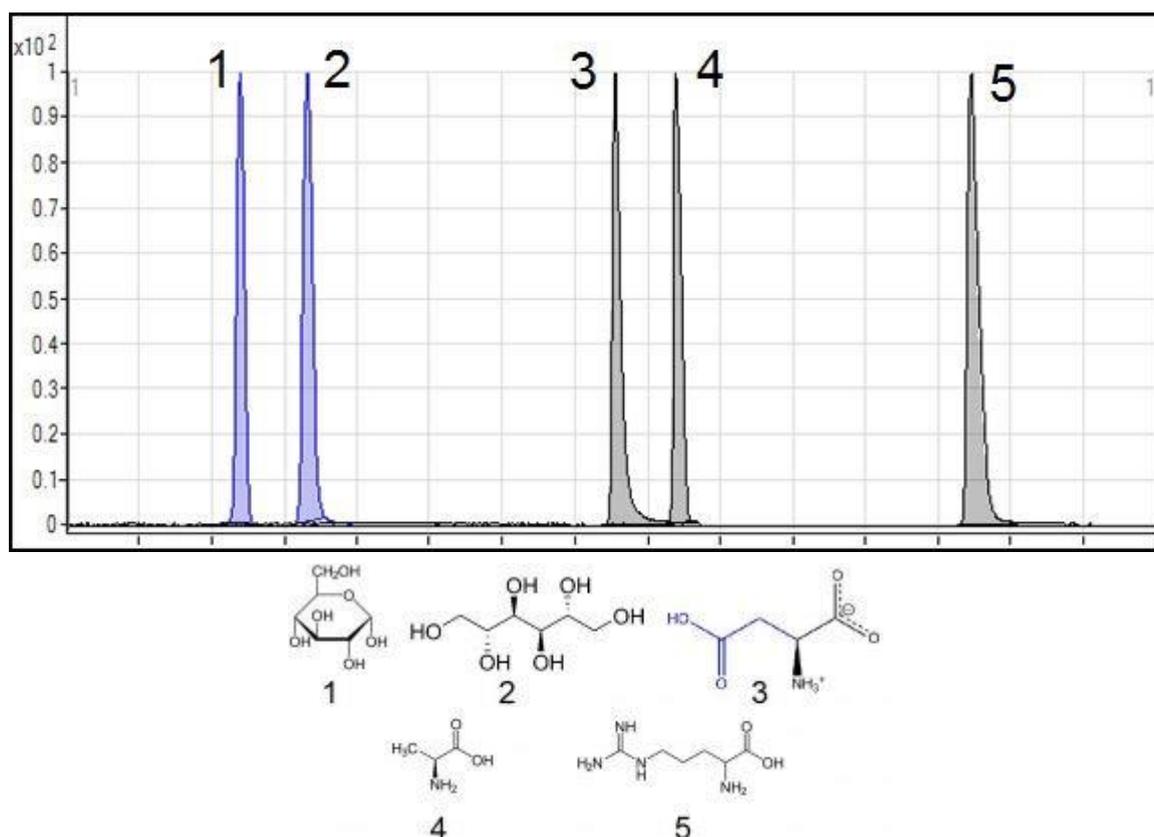


## Glucose, Mannitol, Aspartic Acid, Alanine and Arginine Separation with LCMS - AppNote

### 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™, 4  $\mu\text{m}$ , 100 Å

**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.:** 1 µL

**Flow rate:** 0.6 mL / minute

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

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**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.

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

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