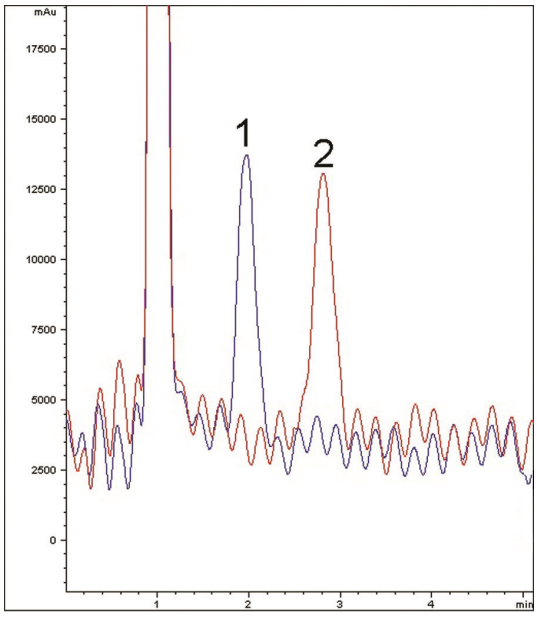
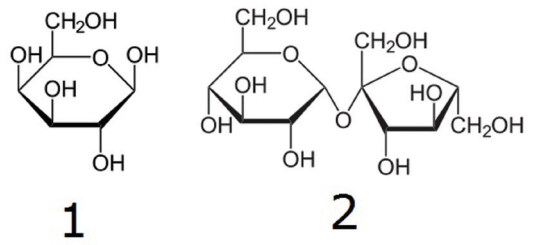
Galactose and Sucrose

Retention and separation of mono and disaccharides





Note: Galactose is a monosaccharide and sucrose (common name "table sugar") is a disaccharide. Although a ubiquitous component of sweet foods and beverages today, refined sucrose was once considered a luxury in many parts of the world.

Method Conditions

Column: **Cogent Amide™**, 4µm, 100Å

Catalog No.: 40036-05P

Dimensions: 4.6 x 50 mm

Solvents: A: 90% DI water / 10% acetonitrile / 0.1% formic acid (v/v)
B: Acetonitrile / 0.1% formic acid (v/v)

Mobile Phase: 10% Solvent A, 90% Solvent B

Injection vol.: 4µL

Flow rate: 1.0mL/min

Detection: Refractive index

Sample: D-galactose and sucrose reference standards (1 mg/mL) in diluent of 30% acetonitrile / 70% DI water (v/v)

Peaks: 1. D-Galactose
2. Sucrose

Discussion

This application demonstrates the ability of the Cogent Amide column to retain two highly polar test solutes. Sucrose, for example, has a log P of -3.7 and hence would be unlikely to retain in reversed phase. Excellent separation is obtained here for these mono and disaccharides. The noisy baseline is simply due to the inherent limitations of the refractive index detector, used in this case due to the lack of chromophores in these molecules. The large peak at 1 min is from the solvent front.

MANUFACTURED BY:
MICROSOLV TECHNOLOGY CORPORATION
9158 Industrial Blvd NE
Leland, NC 28451
p: 1.732.380.8900
f: 1.910.769.9435
customers@mtc-usa.com
www.Cogent-HPLC.com