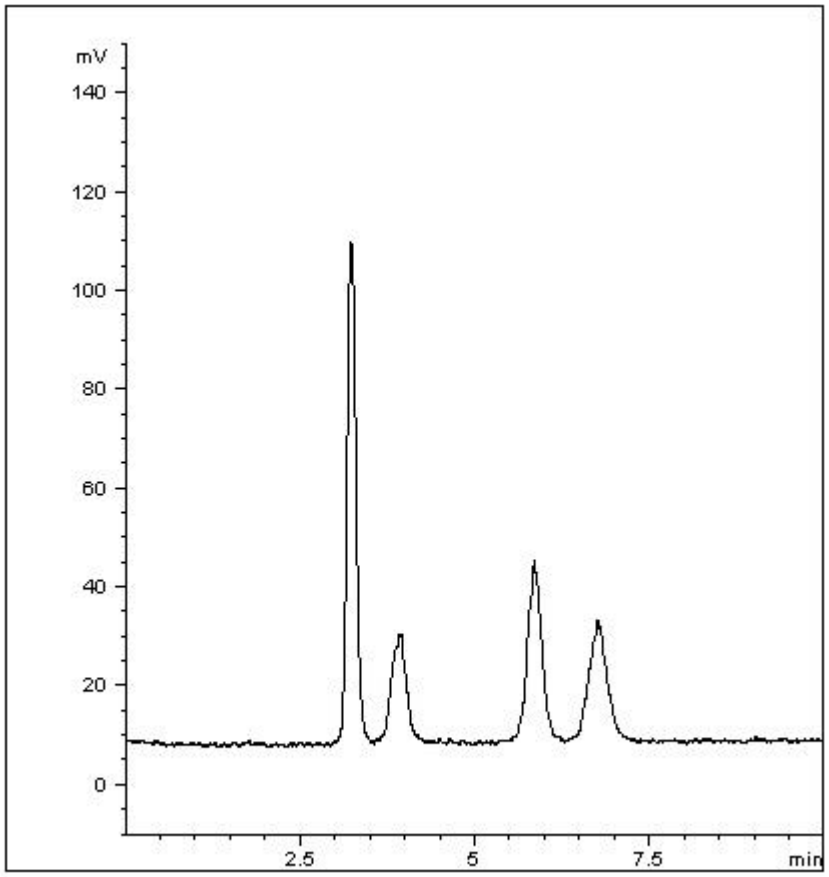
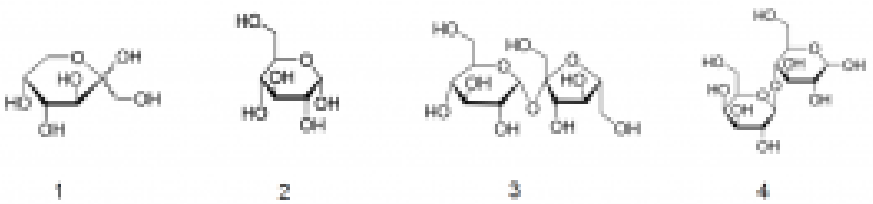
Sugar Mixture Analyzed with ELSD – AppNote

Retention and Separation of Mono and Disaccharides

Click *HERE* for Column Ordering Information.

This Method demonstrates the ability to retain two highly polar test solutes. Lactose, for example, has a log P of -4.7 and hence would be unlikely to retain in Reversed Phase. Great separation is observed for these Mono and Disaccharides.





Peaks:

1. Fructose

2. D-Galactose
3. Sucrose
4. Lactose

Method Conditions

Column: Cogent Amide™, 4µm, 100Å
Catalog No.: 40036-10P
Dimensions: 4.6 x 100mm
Mobile Phase: 85% Acetonitrile 15% DI Water / 0.1% Triethylamine (TEA) (v/v)
Flow rate: 1.0 mL/minute
Detection: ELSD (Evaporative Light Scattering Detector) Gain: 10; Temperature: 65°C;
Injection vol.: 1µL
Sample Preparation: Reference standards (1 mg/mL) in diluent of 50% Acetonitrile / 50% DI Water (v/v)
t0: 1.50 Minutes
K1: 0.39

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.

Capacity Factor - Relative Retention k = (tR-t0)/t0

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