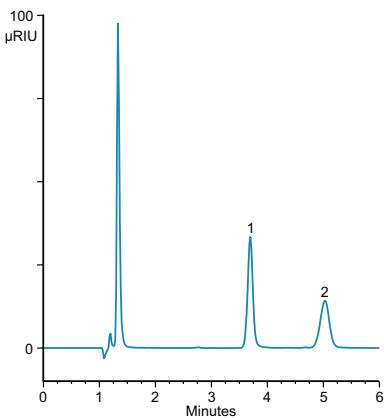
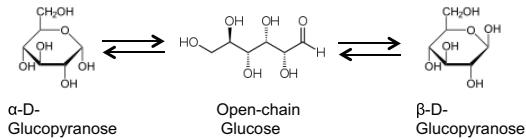


## Sugars in Cola Drink Using Accucore 150-Amide-HILIC



Column: Thermo Scientific™ Accucore™ 150-Amide-HILIC, 2.6 µm  
 Dimensions: 4.6 x 100 mm  
 System: Thermo Scientific™ Dionex™ UltiMate™ 3000 LC System  
 Mobile Phase: Acetonitrile:water 85:15 (v/v) + 10 mM sodium perchlorate  
 Flow: 1.00 mL/min  
 Temperature: 50 °C  
 Injection: 0.5 µL  
 Detector: Refractive index  
 Sample: Cola drink, degassed  
 Peaks: 1. Fructose  
 2. Glucose

Major forms of glucose in solution



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Soft drinks are frequently sweetened with high-fructose corn syrup that consists mainly of fructose and glucose. The Accucore 150-Amide-HILIC column is based on advanced superficially porous silica particles that is covalently modified with polyacrylamide polymer. As the result, it provides high efficiency and excellent interactions for highly polar analytes. Shown here is the separation of fructose and glucose in Cola. Glucose and fructose have internal hemi-acetal linkages that exists in solution as a mixture of isomeric forms in slow equilibrium. This causes peak broadening, so the column is operated at 50 °C to raise the rate of inter-conversion and so reduce the broadening effect. Since the sample contains a high concentration of sugars, the refractive index detector is convenient, and the only sample preparation is degassing.