Effect of Both pH and Organic Content on a Separation of Sugars, Amino Acids, and Carboxylic Acids

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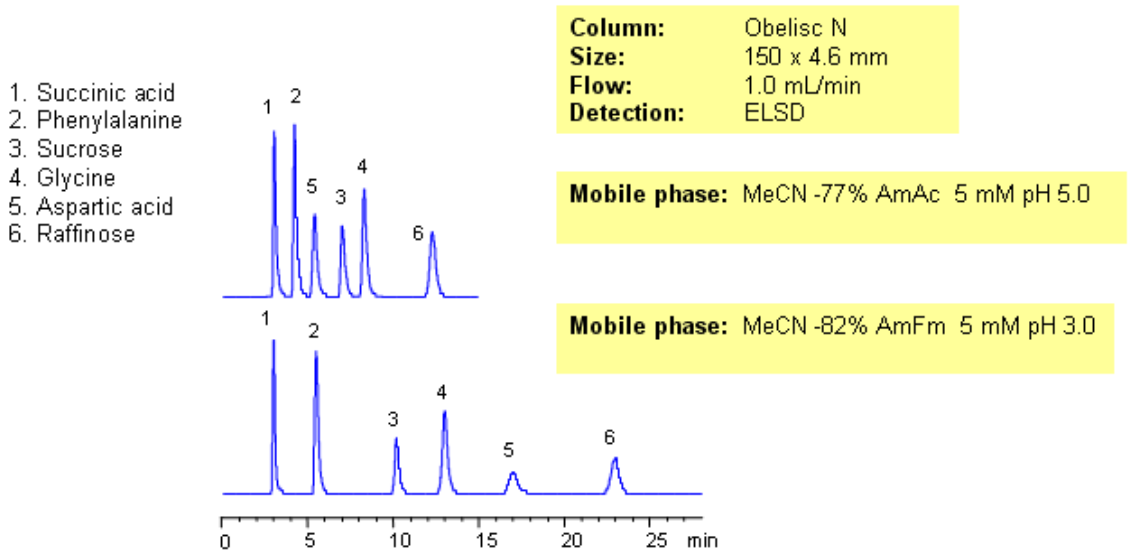
Chromatogram



Description

In mixed-mode HILIC chromatography, selectivity of separation can be adjusted by amount of acetonitrile, amount of buffer and buffer pH. Buffer concentration and pH will affect retention of ionizable compounds to a different degree. Retention of neutral compounds can be adjusted by the amount of acetonitrile. Carboxylic acid, three amino acids and two sugars are separated by combination of HILIC and ion-exchange mechanisms. Compounds can be monitored by ELSD, Corona (CAD), LC/MS or low UV. UV-transparent mobile phase /buffer is required for UV monitoring of this mixed-mode separation. This HPLC method can be adopted as general approach for analysis of sugars, amino acids and carboxylic acids.

Method Parameters

Mobile Phase	MeCN/H2O
Buffer	AmAc
Flow Rate	1.0 ml/min
Detection	ELSD
Class of Compounds	Drug, Acid, Hydrophilic, Ionizable, Vitamin, Supplements, Amino acid
Analyzing Compounds	Succinic Acid, Phenylalanine, Sucrose, Glycine, Aspartic Acid, Raffinose

HPLC Column Used

Obelisc N, 4.6×150 mm, 5 µm, 100A

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