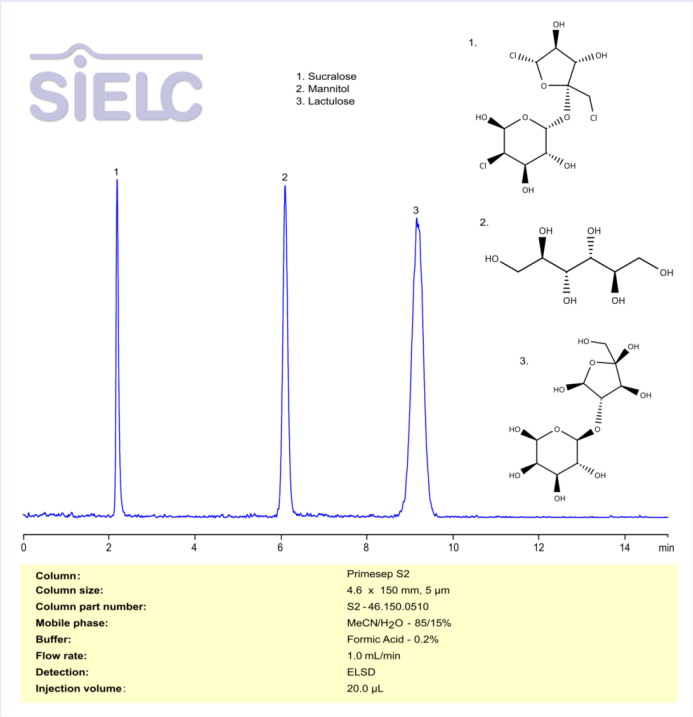
HPLC Method for Analysis of Sucralose, Mannitol, and Lactulose on Primesep S2 Column Using ELSD



High Performance Liquid Chromatography (HPLC) Method for Analysis of Sucralose , Mannitol , Lactulose

Sucralose is an synthetic organochlorine compound with the molecular formula C12H19Cl3O8 .

Properties: Appearance: Typically a white, odorless, crystalline powder.

Molecular weight: ~397.6 g/mol

Solubility: Soluble in water.

Uses: An artificial sweetener used to provide sweetness in food and beverages without the calories of sugar.

Mannitol is an organic compound with the molecular formula C6H14O6 .

Properties: Appearance: Typically a white, odorless, crystalline powder or granules.

Molecular weight: ~182.17 g/mol

Uses: A versatile medication with various uses in healthcare, primarily as an osmotic diuretic.

Lactulose is an synthetic disaccharide with the molecular formula C12H22O11 .

Properties: Appearance: Typically a white, odorless crystalline powder with a sweet taste.

Molecular weight: ~342.30 g/mol

Uses: Used for treating constipation and hepatic encephalopathy (HE).

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Sucralose , Mannitol , Lactulose can be retained and analyzed using the Primesep S2 stationary phase column. The analysis utilizes an isocratic method with a simple mobile phase consisting of water, acetonitrile (MeCN), and formic acid acid. Detection is performed using ELSD.

Method Parameters

Column	Primesep S2, 4.6 x 150 mm, 5 µm, 100 Å, dual ended
Mobile Phase	MeCN – 85%
Buffer	Formic Acid – 0.2%
Flow Rate	1.0 mL/min
Detection	ELSD

Quelle: https://sielc.com/hplc-method-for-analysis-of-sucralose-mannitol-and-lactulose