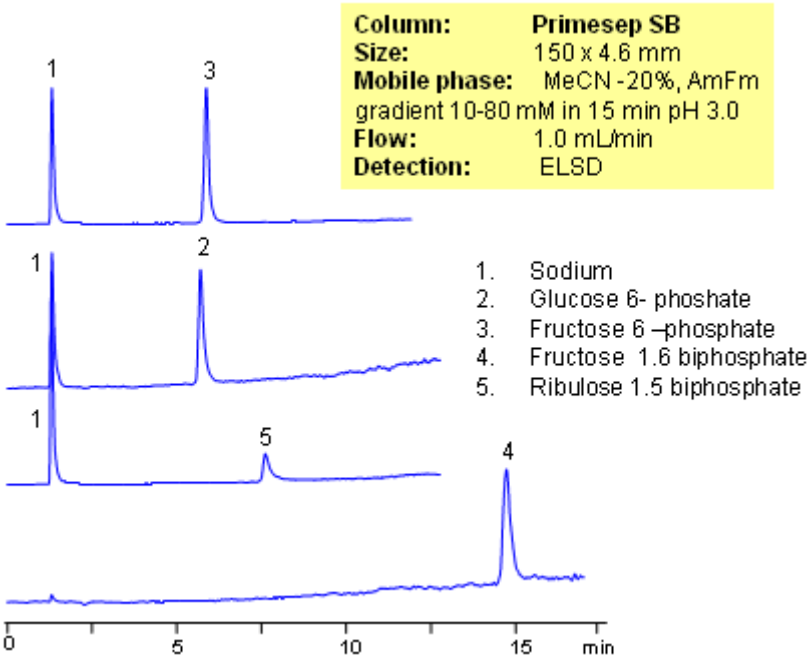
HPLC Separation of Sugar Phosphates

https://sielc.com/Application-HPLC-Separation-of-Sugar-Phosphates

Chromatogram



Description

Sugar phosphates occur in biological systems. Sugar phosphates are parts of two metabolic pathways: glycolisis and pentose phosphate pathways. One of the purposes of sugar phosphates is to store and transfer energy in cells. Because of the presence of sugar fragment and phosphate moiety these molecules are very polar in nature. Mixed-mode chromatography was applied for separation of glucose and fructose phosphates and diphosphates. Compounds are separated based on anion-exchange properties with diphosphates retaining longer than mono phosphates. Monitoring is done by ELSD.

Method Parameters

Mobile Phase	MeCN/H2O – 20/80%
Buffer	AmFm – pH 3.0
Flow Rate	1.0 ml/min
Detection	ELSD
Class of Compounds	Sugars
Analyzing Compounds	Sodium, Glucose 6- phosphate, Fructose 6 –phosphate, Fructose 1.6 biphosphate, Ribulose 1.5 biphosphate

HPLC Column Used

Primesep SB, 4.6×150 mm, 5 µm, 100A

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