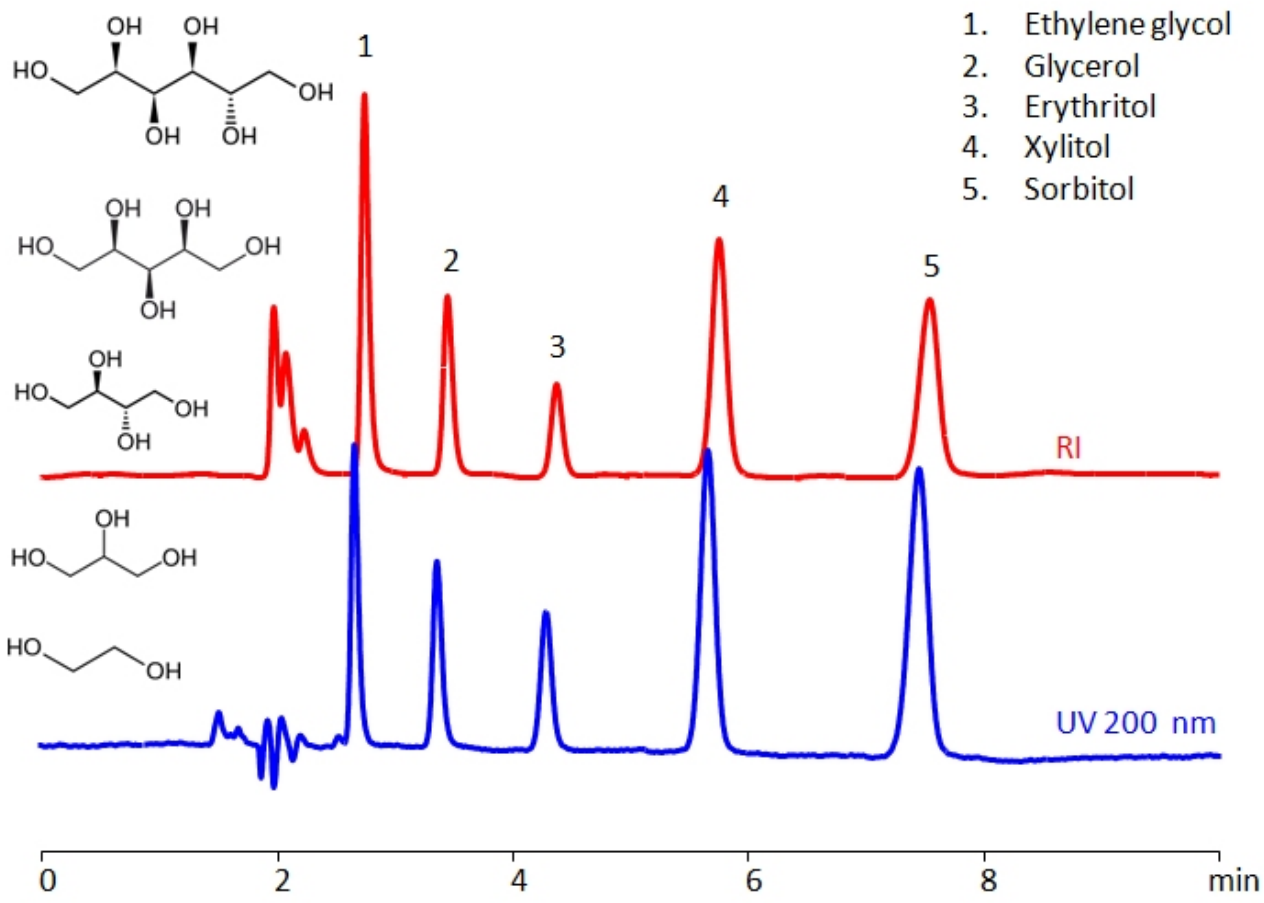
HPLC Method For Simultaneous Quantification of Sugar Alcohols (Polyols) on Primesep AP

https://sielc.com/hplc-method-for-simultaneous-quantification-of-sugar-alcohols-polyols

Chromatogram



Column:	Primesep AP
Column size:	4.6 × 150 mm, 5 µm
Column part number:	AP-46.150.0510
Mobile phase:	MeCN/H_2O – 75/25%
Buffer:	No
Flow rate:	1.0 mL/min
Detection:	UV 200 nm, RI

Description

High Performance Liquid Chromatography (HPLC) Method for Analysis of Glycerol , Xylitol , Sorbitol , Erythritol , Ethylene Glycol .

Ethylene glycol is an organic compound with the formula (CH 2 OH) 2 . It has a variety of uses, but it is primarily found as an antifreeze agent. Those coolants are often used in automobiles and air-conditioning systems. In the plastic industry, ethylene glycol is a precursor to polyester fibers and resins.

Glycerol is an organic compound with the molecular formula C 3 H 8 O 3 . It is a humectant, solvent, and sweetener that used in various industries including skin care, hygiene products, pharmaceuticals, and food. It is said to improve lubrication and smoothness in products. Historically, before ethylene glycol took over, glycerol was used as a antifreeze.

Erythritol is a naturally accruing sugar alcohol with the chemical formula C 4 H 10 O 4 . It is is typically used as a sweetener and flavor enhancer in a large variety of foods and bevarages, including but not limited to tea, juice blends, soft drinks, cookies, biscuits, sugar-free chewing gum, and confections. It does lead to a noticeably different texture in baked products if used as a sugar replacement.

Xylitol is a sugar alcohol with the chemical formula C 5 H 12 O 5 . It is primarily used as a sugar supplement in confections, toothpaste, and drugs. It is considered a safe option for those with diabetes as it has negligible effects on blood sugar. It is said to produce a cooling sensation when interacting with moisture, which makes it an interesting additive to textiles.

Sorbitol is a sugar alcohol with the chemical formula C 6 H 14 O 6 . It is used primarily as a sugar substitute, but it also provides some dietary energy. Medically, it can be used as a laxative. In modern cosmetics, it is also used as a humectant and thickener.

Glycerol , Xylitol , Sorbitol , Erythritol , Ethylene Glycol can be retained and analyzed using the Primesep AP stationary phase column. The analysis utilizes an isocratic method with a simple mobile phase consisting of water and acetonitrile (MeCN). Detection is performed using UV.

Method Parameters

Mobile Phase	MeCN/H2O – 75/25%
Buffer	No
Flow Rate	1.0 ml/min
Detection	UV 200 nm, RI
Class of Compounds	Drug, Basic, Hydrophobic, Ionizable, Zwitterionic
Analyzing Compounds	Glycerol,Xylitol,Sorbitol,Erythritol,Ethylene Glycol

HPLC Column Used

Primesep AP, 4.6 x 150 mm, 5 µm, 100 A, dual ended

Order this column at hplc-shop.de →