



PEG/PEO Standards and Aqueous SEC

Agilent PL aquagel-OH 50 8 μm Columns

Technical Overview

Introduction

Size exclusion chromatography is widely used for the determination of molecular weight distributions of a variety of synthetic and naturally occurring water soluble polymers, and separations of oligomers and small molecules. The requirement to eliminate ionic and hydrophobic effects makes aqueous SEC very demanding. Durable and versatile PL aquagel-OH columns are packed with macroporous co-polymer beads with an extremely hydrophilic polyhydroxyl functionality to perform in even the most demanding conditions.

The 'neutral' surface and the capability to operate across a wide range of eluent conditions provide for high performance analyses of analytes with neutral, ionic and hydrophobic moieties, singly and in combinations. PL aquagel-OH 50 8 μm high performance columns are ideal for medium to high molecular weight separations, combining high pore volume and high column efficiency for maximum resolution. Due to the extremely hydrophilic nature of PL aquagel-OH columns, neutral polymers like polyethylene oxide/glycol (PEO/PEG) can be run in pure water as the eluent. Figure 1 shows raw data chromatograms of Agilent PEG standards obtained by SEC using a PL aquagel-OH 50 8 μm column.



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Conditions

Column: PL aquagel-OH 50 8 μm , 300 x 7.5 mm
(part number PL1149-6850)

Eluent: Water

Flow Rate: 1.0 mL/min

Detection: RI

Peak Identification

1. PEG 760,000

2. PEG 23,000

3. PEG 440

4. PEO 280,000

5. PEO 12,600

6. PEO 106

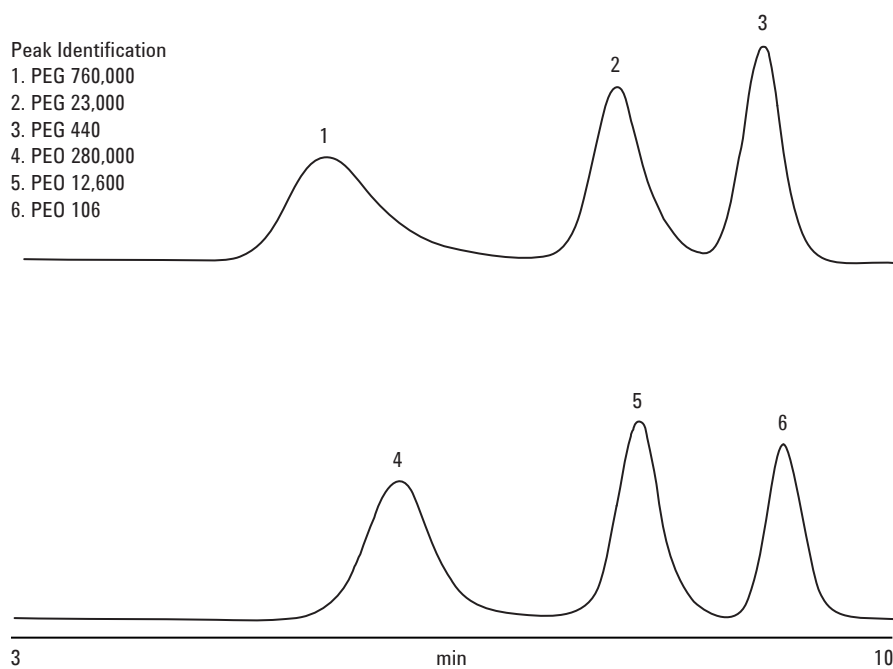


Figure 1. Raw data chromatograms of PEG standards

These data represent typical results. For further information, contact your local Agilent Sales Office.

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