



Polystyrene Sulfonate Analysis by Aqueous SEC

Agilent PL aquagel-OH MIXED-H 8 μ m Columns

Technical Overview

Introduction

The PL aquagel-OH packing exhibits excellent stability, and so eluent modification is possible with no loss of the high column efficiency (>35,000 plates/meter). This ability permits the investigation of hydrophobic compounds such as polystyrene sulfonate by aqueous size exclusion chromatography.

To counteract ionic interactions between polystyrene sulfonate standards and the column packing, the eluent is modified by the addition of salt. Due to the hydrophobic nature of these samples, further modification of the eluent is done by the addition of a weak organic solvent (methanol).



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Conditions

Columns: 3 x PL aquagel-OH MIXED-H 8 μ m,
300 x 7.5 mm (p/n PL1149-6800)

Eluent: 0.2M NaNO₃ + 0.01M NaH₂PO₄ at
pH 7 + 30% methanol

Flow Rate: 1 mL/min

Detector: RI

Peak Identification

1. 400,000

2. 35,000

3. 4,600

Figure 1 is a typical raw data chromatogram for a mixture of polystyrene sulfonate standards, showing how the PL aquagel-OH MIXED-H 8 μ m column offers excellent resolution over a broad molecular weight range. This ability to deliver high resolution over a very wide range of molecular weights simplifies column selection and provides a versatile analytical system.

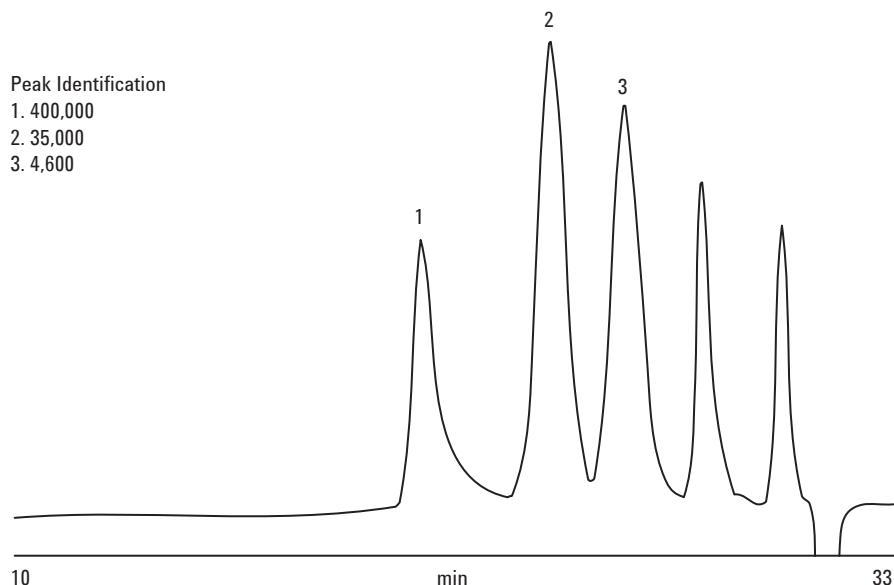


Figure 1. Excellent separation of a broad range of polystyrene sulfonate standards using PL aquagel-OH MIXED-H columns

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

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Published in UK, September 20, 2010

SI-01660



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