Improving Analytical Quality in GPC by Changing Sample Concentration
Agilent PLgel MIXED-C Columns

Technical Overview

Introduction

PLgel 5 µm MIXED-C columns are designed for rapid polymer analysis. With its linear calibration up to 2 million MW, this is the column of choice for highest resolution and accuracy in molecular weight distribution analyses.

Rapid solvent change capability, excellent temperature stability and the high resolution of the PLgel 5 µm MIXED-C also provide the ideal versatility for the R&D laboratory.

Solution viscosity is dependent upon molecular weight and concentration. At high sample concentrations, increased solution viscosity can cause significant band broadening due to viscous streaming or viscous fingering on the trailing side of the solute band.

The advantage of choosing the appropriate sample concentration is demonstrated in the analysis of a broad polystyrene using PLgel 5 µm MIXED-C columns.

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Conditions

Sample:	Broad polystyrene
Column:	2 x PLgel 5 µm MIXED-C,
	300 x 7.7 mm
	(part number PL1110-6500)
Eluent:	THF
Flow Rate:	1.0 mL/min
Injection Volume:	200 µL
Detection:	RI
Calibrants:	Polystyrene standards
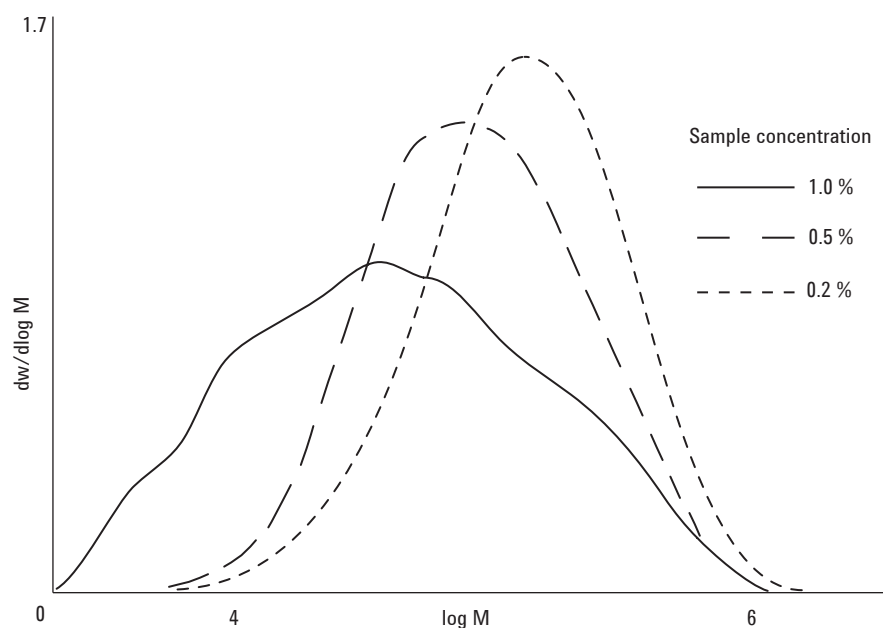
Figure 1. Analysis of a broad polystyrene using PLgel 5 µm MIXED-C columns

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