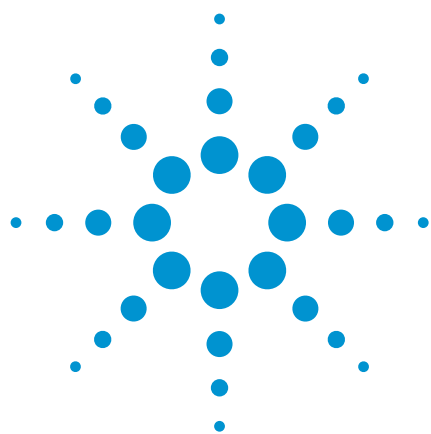




Efficient Separation of Polymethylmethacrylate Agilent PLgel 10 μ m MIXED-B Columns

Technical Overview

Introduction

PLgel 10 μ m MIXED-B columns are designed for high MW polymer analysis and demanding eluent conditions. The PLgel 10 μ m MIXED-B spans a wide range of molecular weights, up to 10 million, with a linear calibration curve. It is particularly useful for molecular weight distributions where slightly higher than average MWs are encountered. The 10 μ m particle size provides good resolution with relatively low pressures for enhanced lifetimes in demanding conditions.



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The figure shows the separation of a polymethylmethacrylate obtained using PLgel MIXED-B columns. By applying Mark-Houwink parameters (polystyrene $K = 14.1 \times 10^a$ $= 0.70$; polymethylmethacrylate $K = 12.8 \times 10^a = 0.69$)¹, the differences in molecular weight averages shown in Table 1 are revealed.

Conditions

Columns: 2 x PLgel 10 μ m MIXED-B,
300 x 7.5 mm (p/n PL1110-6100)

Eluent: Methyl ethyl ketone (MEK)

Flow Rate: 1.0 mL/min

Detection: RI

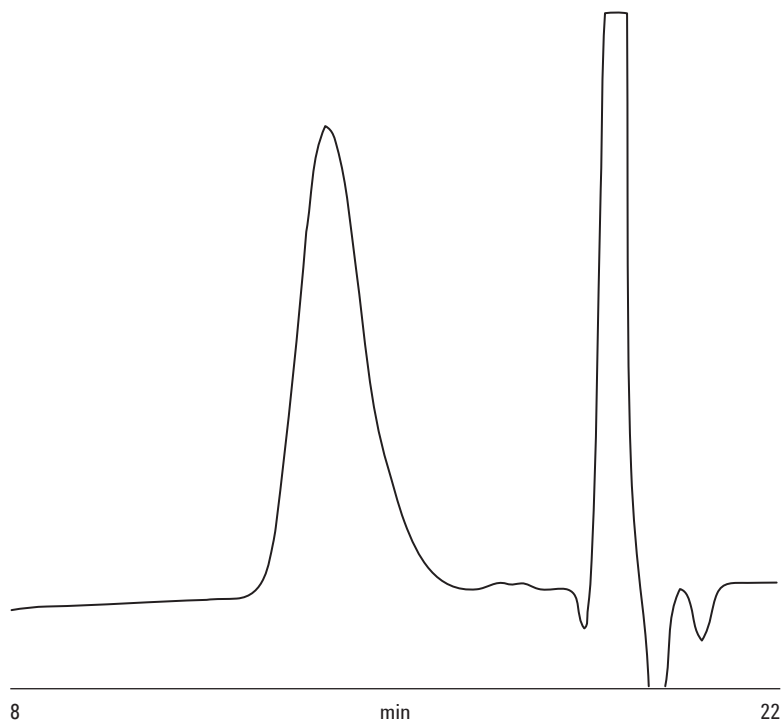


Figure 1. Separation of a polymethylmethacrylate obtained using PLgel MIXED-B columns

Table 1. *M_p*, *M_w* and *M_n* equivalents for PS and PMMA

	PS Equivalent	PMMA Equivalent
M_p	37521	42286
M_w	36669	41628
M_n	19354	21714

¹ B J Hunt and S R Holding (eds) (1989) Size Exclusion Chromatography. Blackie, UK.

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