Versatile Polymethylmethacrylate Standards

Agilent PLgel 10 µm MIXED-B Columns

Technical Overview

Introduction

PLgel 10 µm MIXED-B columns are designed for high MW polymer analysis and demanding eluent conditions. The PLgel 10 µm MIXED-B spans a wide range of molecular weights, up to 10 million, with a linear calibration curve.

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Methyl ethyl ketone (MEK) is a good solvent for PMMA and can be used with PLgel columns. Although not ideal for use with a UV detector, MEK has a lower refractive index than THF, a property which may be used to some advantage in optimizing RI signal response (see Figures 1 and 2).

PLgel 10 µm MIXED-B is particularly useful for molecular weight distributions where slightly higher than average MWs are encountered. The 10 µm particle size provides good resolution with relatively low pressures for enhanced lifetimes in demanding conditions.

Conditions

Columns: 2 x PLgel 10 µm MIXED-B, 300 x 7.5 mm (p/n PL1110-6100)
Eluent: Methyl ethyl ketone
Flow Rate: 1.0 mL/min
Detection: RI

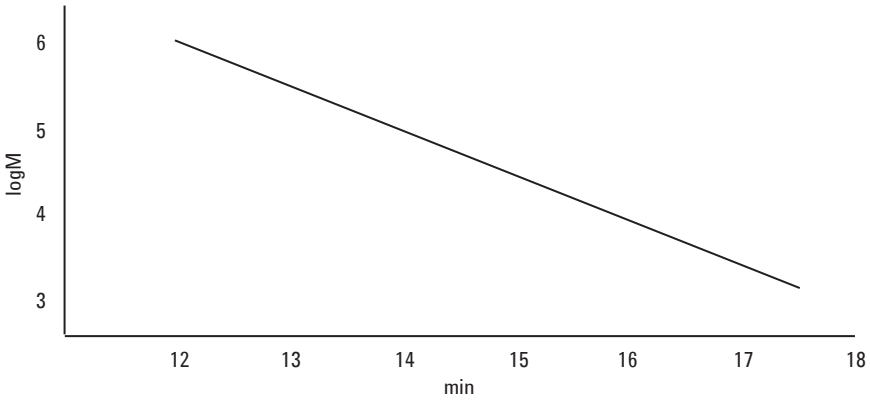
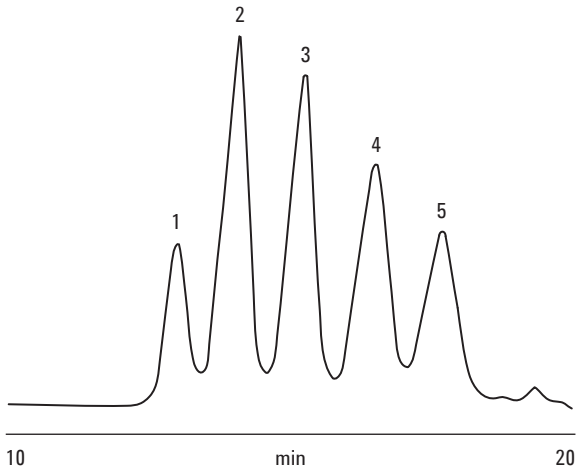


Figure 1. PMMA calibration curve



Peak Identification

PMMA standards:
1. 1,400,000
2. 330,000
3. 60,000
4. 10,500
5. 1,950

Figure 2. Separation of Agilent PMMA standards

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