

Analysis of Polyvinyl Pyrrolidone with DMAc

Application Note

Materials Testing and Research, Polymers

Authors

Greg Saunders, Ben MacCreath
Agilent Technologies, Inc.

Introduction

Used as a constituent in a soap formulation, a polyvinyl pyrrolidone sample was found to be soluble in the polar eluent, dimethylacetamide. It was successfully analyzed using Agilent PLgel 10 μ m MIXED-B columns.

To minimize polyelectrolyte effects, lithium chloride was added to the eluent.



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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. It 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.

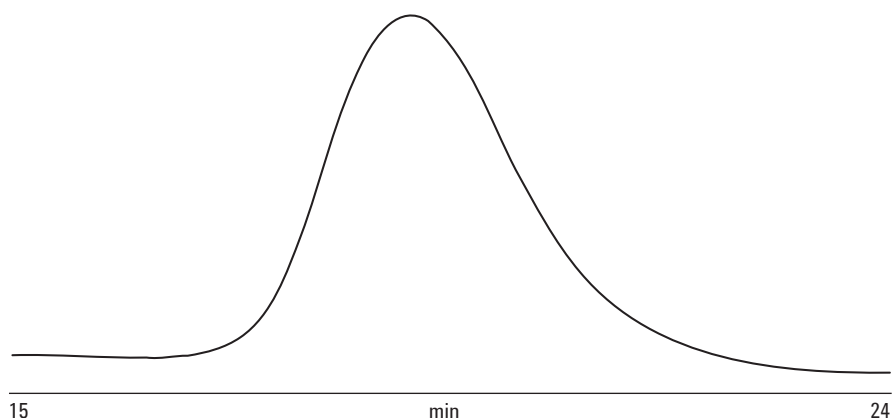


Figure 1. Analysis of polyvinyl pyrrolidone using PLgel 10 μm MIXED-B columns

Conditions

Columns:	3 x PLgel 10 μm MIXED-B, 300 x 7.5 mm (part number PL1110-6100)
Eluent:	DMAc + 0.5% LiCl
Flow Rate:	1.0 mL/min
Loading:	0.2% w/v, 100 μL
Temperature:	60 $^{\circ}\text{C}$
Detection:	390-MDS Multi Detector Suite (differential refractive index)

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