

# Analysis of Polyvinyl Pyrrolidone with DMF

## Application Note

Materials Testing and Research, Polymers

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### Introduction

Agilent PLgel 10  $\mu\text{m}$  MIXED-B columns are designed for high MW polymer analysis and demanding eluent conditions such as polyvinyl pyrrolidone in dimethyl formamide.

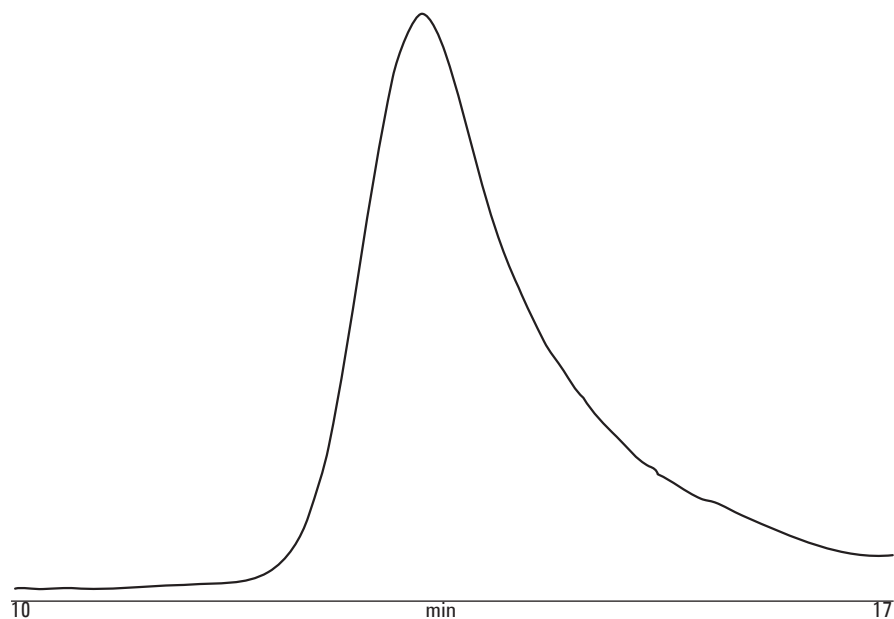
Polyvinyl pyrrolidone is soluble in both polar organics and water. DMF is used with LiBr to minimize any polyelectrolyte effects. The response in DMF is relatively small using an RI detector. Polyvinyl pyrrolidone can be chromatographed successfully with PLgel MIXED-B columns.



The PLgel 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  $\mu\text{m}$  particle size provides good resolution with relatively low pressures for enhanced lifetimes in demanding conditions.

### Conditions

Columns:	2 x PLgel 10 $\mu\text{m}$ MIXED-B, 300 x 7.5 mm (part number PL1110-6100)
Eluent:	DMF + 0.1% LiBr
Flow Rate:	1.0 mL/min
Temperature:	60 $^{\circ}\text{C}$
Detection:	390-MDS Multi Detector Suite (differential refractive index)



**Figure 1. Analysis of polyvinyl pyrrolidone using PLgel 10  $\mu\text{m}$  MIXED-B columns**

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