SEC Analysis of a Water Soluble Copolymer

Application Note

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Introduction

This sample is a copolymer of N-vinyl pyrrolidone / p-amino styrene. It was assessed by aqueous SEC with Agilent PL aquagel-OH 50 8 µm columns. These columns combine high pore volume and high column efficiency (>35,000 plates/ meter) for maximum resolution.

Verified for Agilent
1260 Infinity
GPC/SEC System

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Conditions

Sample: Water soluble copolymer
Columns: 2 x PL aquagel-OH 50 8 µm,
300 x 7.5 mm (p/n PL1149-6850)
Eluent: 0.2 M $NaNO_3$ + 0.01 M NaH_2PO_4 at
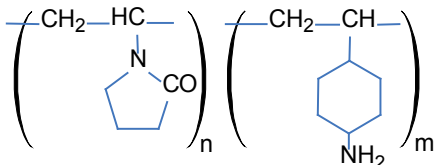pH 7
Flow Rate: 1.0 mL/min
Detection: RI

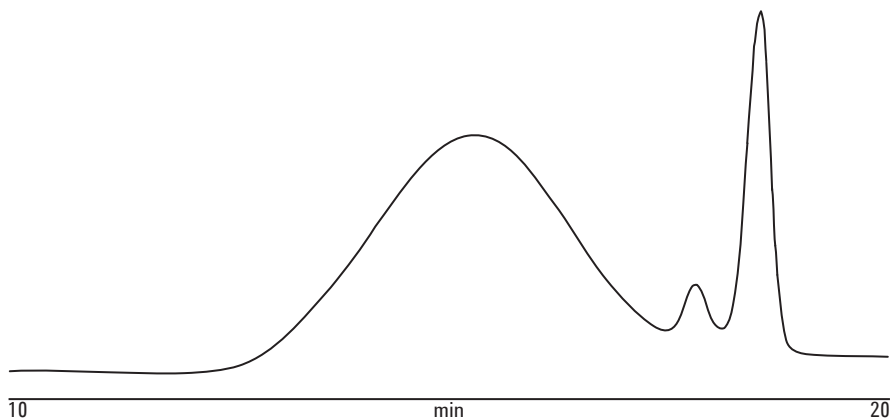*Figure 1. Raw data chromatogram of poly 2-vinyl pyridine*

Figure 2. Raw data chromatogram of N-vinyl pyrrolidone / p-amino styrene copolymer

Conclusion

Size exclusion chromatography using PL aquagel-OH columns successfully analyzed a sample of water soluble copolymer. Aqueous SEC with PL aquagel-OH columns provides information not only on the molecular weight of the polymer but also on the polydispersity and the shape of the molecular weight distribution. The excellent chemical and mechanical stability of these columns offer high performance with good repeatability and column lifetime.

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