

Crystalline Polyester Analysis on Agilent PLgel with Gel Permeation Chromatography

Application Note

Materials Testing and Research, Polymers

Author

Graham Cleaver Agilent Technologies, Inc.

Introduction

Crystalline polyesters find use in a variety of thermosetting molding compounds and are usually available in a range of molecular weight grades. Their analysis by gel permeation chromatography is straightforward using Agilent PLgel columns, with a three-column set of different pore sizes to cover a broad range of molecular weight from such a polydisperse material.





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Analysis of a Crystalline Polyester

The unsaturated crystalline polyester is soluble in dimethyl formamide (DMF) at 60 °C.

Columns Agilent PLgel 5 μm 10⁴Å, 300 × 7.5 mm (p/n PL1110-6540)

> Agilent PLgel 5 μm 500Å, 300 × 7.5 mm (p/n PL1110-6525)

Agilent PLgel 5 μm 50Å, 300 × 7.5 mm (p/n PL1110-6515)

- Eluent DMF + 0.1% LiBr
- Flow Rate 1.0 mL/min
- Temp 70 °C
- Detector RI
- System Agilent PL-GPC 50

Conclusion

Agilent PLgel columns are suitable for analysis of the molecular weight distribution of crystalline polymers in polar solvents.

For More Information

These data represent typical results. For more information on our products and services, visit our Web site at www.agilent.com.



Figure 1. The molecular weight distribution of a polydisperse crystalline polyester revealed by Agilent PLgel 5 µm columns.

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