Polyisocyanate Analysis on Agilent PLgel MIXED-E with Gel Permeation Chromatography

Application Note

Materials Testing and Research, Polymers

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Introduction

Polyisocyanates are made from multiple isocyanate functional groups. They are used as raw materials for the manufacture of polyurethane insulation, coatings, adhesives and sealants.

Analysis of polyisocyanate analysis is easy with gel permeation chromatography using Agilent PLgel 3 µm MIXED-E columns. These columns are ideal for low molecular weight samples that contain oligomeric fractions, as well as polymers, up to 30,000 MW.

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Analysis of a polyisocyanate

The chromatogram in Figure 1 shows the separation of a low molecular weight polyisocyanate using two Agilent PLgel 3 µm MIXED-E columns in series.

Conditions

Column	2 × Agilent PLgel 3 µm MIXED-E, 300 × 7.5 mm (p/n PL1110-6300)
Eluent	Dichloromethane
Flow rate	1.0 mL/min
Detector	RI
System	Agilent PL-GPC 50

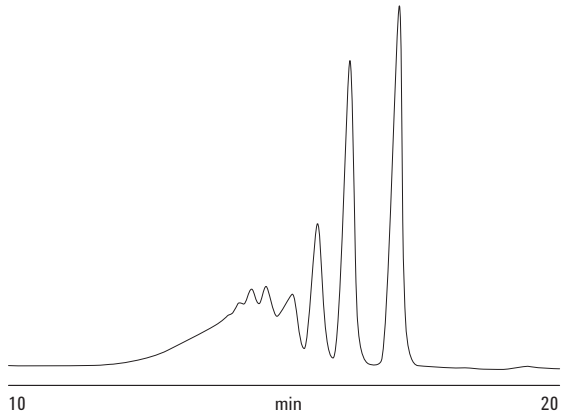

Figure 1. The separation of a low molecular weight polyisocyanate on an Agilent PLgel 3 µm MIXED-E two-column set.

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