

Linear Hydrocarbon Standards on Agilent PLgel 5 μm with Gel Permeation Chromatography

Technical Overview

Introduction

The extremely high column efficiency of the Agilent PLgel 5 μm 50Å packing permits resolution of even very low molecular weight components, such as linear hydrocarbons. In this example, the difference in peak height reflects the rapid change in refractive index from $\text{C}_{12}\text{H}_{26}$ (nd 1.4216) through to $\text{C}_{32}\text{H}_{66}$ (nd 1.4550) (Figure 1).

Conditions

Columns	2 \times Agilent PLgel 5 μm 50Å, 300 \times 7.5 mm (p/n PL1110-6515)
Eluent	THF
Flow rate	1.0 mL/min
Concentration	0.5% solution of each hydrocarbon
Injection volume	Equal injections of each hydrocarbon
Detector	RI
System	Agilent PL-GPC 50



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Agilent PLgel 5 μm Columns

Agilent PLgel individual pore size columns offer high resolution over a specific molecular weight range. The linear portion of the calibration curve, where the slope is at its shallowest, defines the molecular weight region over which optimum resolution is achieved. For the Agilent PLgel 5 μm 50Å column, the effective molecular weight range extends to 2,000, with a guaranteed efficiency greater than 60,000 plates per meter.

GPC/SEC Columns and Calibrants from Agilent

Agilent offers a comprehensive portfolio of GPC/SEC columns and calibrants for high-performance separations based on molecular size in solution. Agilent delivers leading solutions for characterizing and separating polymers by GPC/SEC, and manufactures all components for accurate polymer analysis.

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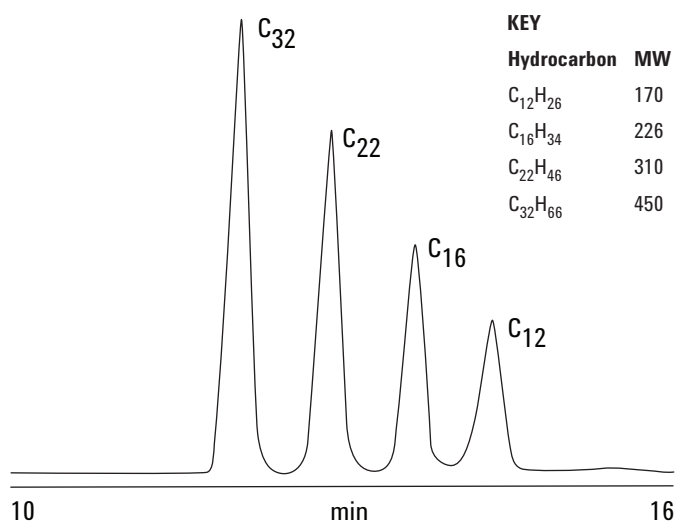


Figure 1. Separation of very low molecular weight linear hydrocarbons on an Agilent PLgel 5 μm column.

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