

Preparative Gel Permeation Chromatography - Recycling

Technical Overview

Introduction

In preparative gel permeation chromatography, resolution of sample components can be improved by recycling the sample back through the column a number of times before fraction collection. This is a convenient way of minimizing cross-fraction contamination. The high column volume of the Agilent PLgel 10 μm 100 Å, 25 \times 300 mm prep column facilitates recycle capability (Figure 1). The improved resolution after three cycles is apparent in Figure 2.

Conditions

Column	2 \times Agilent PLgel 10 μm 100Å, 25 \times 300 mm (p/n PL1210-6120)
Eluent	THF
Flow rate	9.0 mL/min
Detector	VWD, 254 nm
System	Agilent 1260 Infinity GPC-SEC Analysis System



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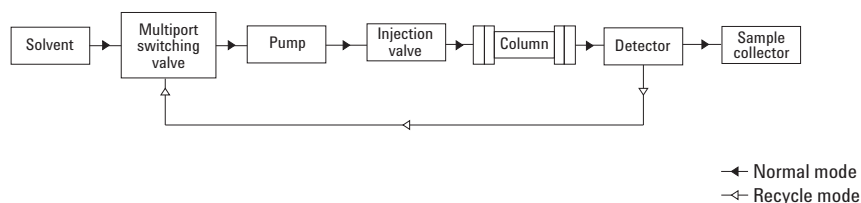


Figure 1. Schematic diagram of a preparative GPC system set up for recycling before fraction collection.

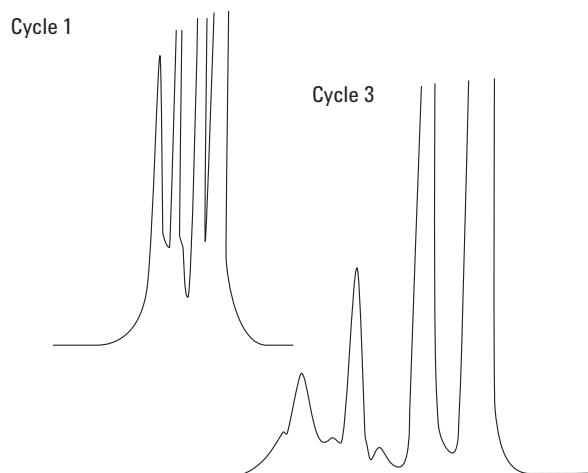


Figure 2. Improved resolution of sample components after three cycles on a set of preparative Agilent PLgel 10 μm columns

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