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Recycling Preparative HPLC  
LaboACE LC-5060

## Separation of Structural Isomers by GPC by Column 3

**Keyword:**GPC Column, SEC Column, Separation by Size Exclusion  
Chromatography, Recycling Preparative HPLC

### Introduction

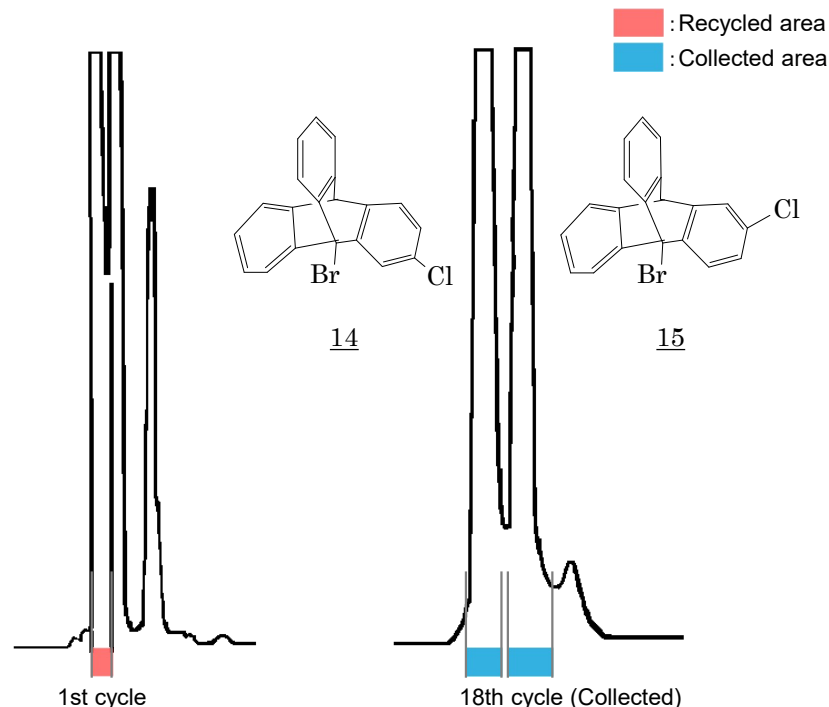
GPC (Gel Permeation Chromatography) separates compounds on the basis of molecular size. Therefore GPC is often considered unsuited for separation of isomers or compounds with similar molecular weight. However, there are cases where such compounds are easily separated by applying Recycling Preparative HPLC.

Here is an example of such studies by a professional who uses our Recycling Preparative HPLC system.

### Experiment

Isomers 14 and 15 are inseparable by silica HPLC. So we tried to separate them with Recycling Preparative HPLC with GPC column.

Instrument : LC-908 (Detector : UV (254 nm))  
Column : JAIGEL-1H + JAIGEL-2H in series  
Solvent : Chloroform  
Flow rate : 3.5 mL/min  
Injection qty. : 300 mg



Separation of 2- and 3-Chloro-9-Bromotriptycenes

### Result

These isomers were separated at the 18th cycle of Recycling Preparative HPLC using GPC column.

#### Reference

8. Yuzo Kawada and Hiizu Iwamura, *J. Am. Chem. Soc.*, Vol. 105, No. 6, pp 1449-1459 (1983)