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 Recycling Preparative HPLC  
LaboACE LC-5060

## Separation of Stereoisomers by GPC by Column 2

### Keyword:

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

### Introduction

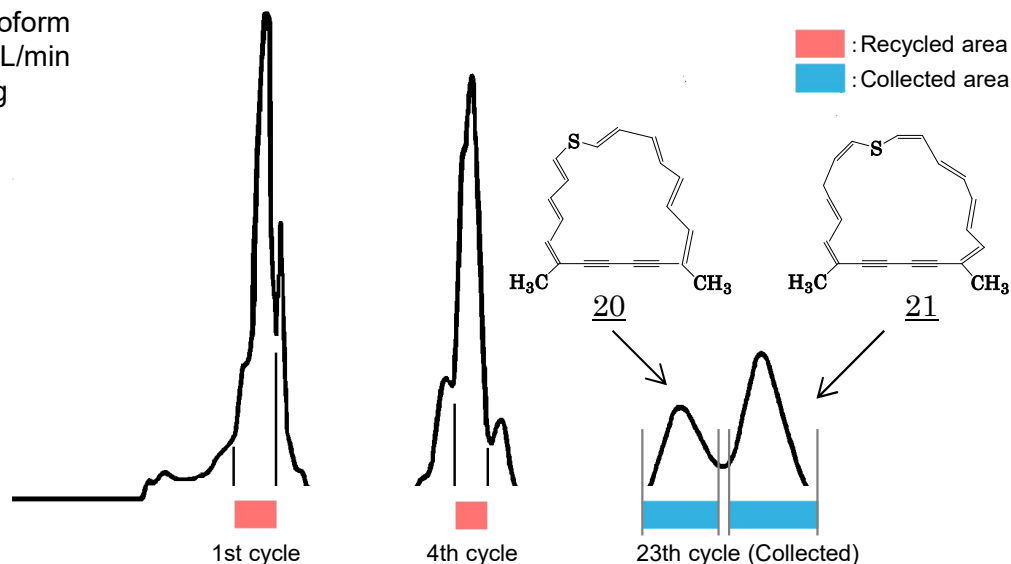
Separation of stereoisomers usually requires columns designed exclusively for them. In separation of enantiomers and diastereomers, such special columns are often used in combination with recycling preparative HPLC. However, the problem is that loading capacity of such columns is extremely small. You can normally inject only 1 or 2mg at most even with 20mm inside diameter column.

GPC column is not good for separation of enantiomers but can easily separate cis/trans isomers and process as much as 200mg at a time when used with recycling Preparative HPLC.

### Experiment

We tried to separate the cis/trans isomers 20 and 21 using recycling Preparative HPLC with GPC column.

Instrument : LC-908 (Detector : UV)  
 Column : JAIGEL-1H + JAIGEL-2H in series  
 Mobile phase : Chloroform  
 Flow rate : 3.5 mL/min  
 Injection qty. : 70 mg



Separation of Thiaannulene compounds

### Result

The isomers were separated at the 23rd cycle.

### References

J. Ojima, and G. Yamamoto et al., *J. Chem. Soc. Perkin trans 1*, 1996, 2755-2763