No.A-018E

Recycling Preparative HPLC
LaboACE LC-5060

Related Product : Recycling Preparative HPLC Series

Separation of Stereoisomers by Recycling Preparative HPLC 1

Keyword:
Silica Gel Column, Recycling Preparative HPLC

Introduction

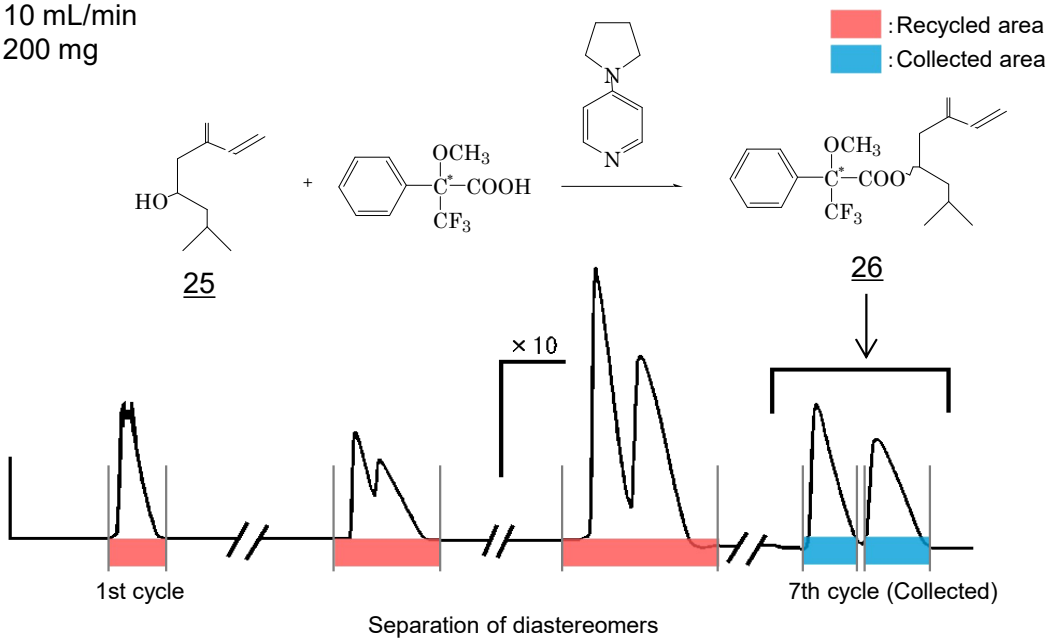
Separation of stereoisomers usually requires columns designed exclusively for them. In separation of enantiomers and diastereomers, such special columns are often used in combination with recycling preparative HPLC . However, the problem is that loading capacity of such columns is extremely small. You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

Here is a good example of a very efficient separation of diastereomers by Recycling Preparative HPLC using silica gel column that processed as much as 200mg at a time.

Experiment

Chemical synthesis of compound 25, known as one of pheromones, gives stereoisomers. To make it easier to separate them, we added MTPA to form diastereomers 26 and separate them with Recycling Preparative HPLC using GPC column.

Instrument	: LC-908 (Detector : UV)
Column	: Nucleosil Silica 50 (10mm × 500mm)
Mobile phase	: n - pentane - acetone (100 : 0.2 v/v)
Flow rate	: 10 mL/min
Injection qty.	: 200 mg



Separation of diastereomers

Result

The isomers were completely separated at the7th cycle.

References

Isao Kubo, Sakae Komatsu, Tetsuo Iwagawa, and David L. Wood, J. of Chromatogr. 363, pp 309-314 (1986)

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