Enantiomers

Analysis of γ-lactones

Application Note

Materials Testing & Research

Authors

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Introduction

Gas chromatography with an Agilent CP-Chirasil-DEX CB column separates enantiomers of eight gamma-lactones in 35 minutes.

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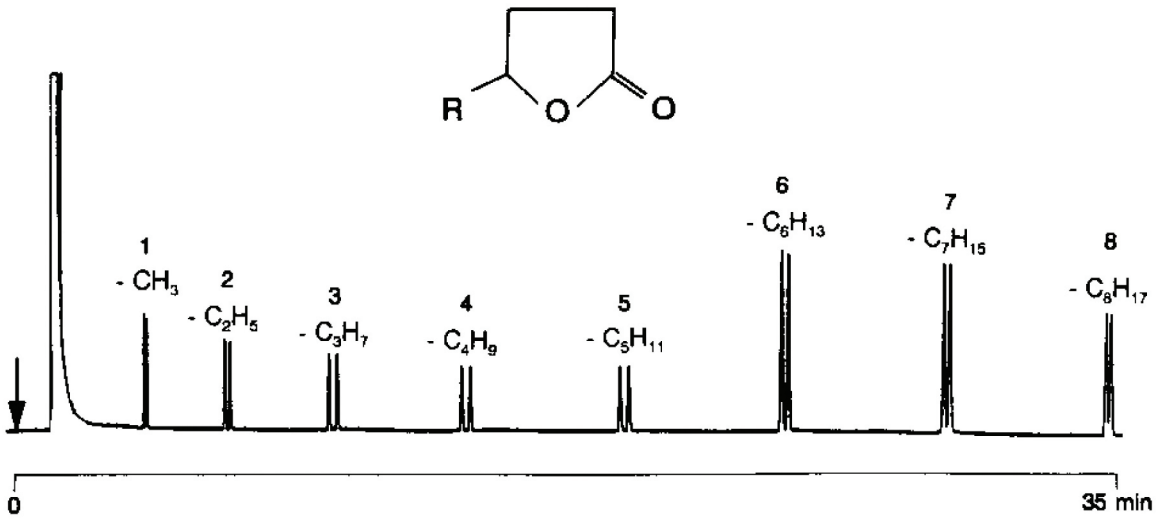
Conditions

Technique	:	GC-capillary
Column	:	Agilent CP-Chirasil-DEX CB, 0.25 mm x 25 m fused silica WCOT CP-Chirasil-DEX CB (df = 0.25 µm) (Part no. CP7502)
Temperature	:	100 °C (1 min) ⟶ 180 °C, 2 °C/min
Carrier Gas	:	H_2, 65 kPa (0,65 bar, 9.3 psi)
Injector	:	Split, 100 mL/min T = 250 °C
Detector	:	FID T = 275 °C

Peak identification

1. (±)-y-methyl-y-butyrolactone
2. (±)-y-ethyl-y-butyrolactone
3. (±)-y-propyl-y-butyrolactone
4. (±)-y-butyl-y-butyrolactone
5. (±)-y-pentyl-y-butyrolactone
6. (±)-y-hexyl-y-butyrolactone
7. (±)-y-heptyl-y-butyrolactone
8. (±)-y-octyl-y-butyrolactone



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