Enantiomers

Application Note

Materials Testing & Research

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Introduction
Gas chromatography with an Agilent CP-Chirasil-DEX CB column separates cyclohexane enantiomers in eight minutes.
**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: 140 °C → 160 °C, 1 °C/min

Carrier Gas: \( H_2 \), 100 kPa (1 bar, 14.5 psi)

Injector: Split

Detector: FID

Courtesy: Prof. V. Schurig, Universität Tübingen, Tübingen, Germany

**Peak identification**

1. 1 (S)-ethyl-2(S)-methylcyclohexane
   \[ + 1 \text{(R)-ethyl-2(R)-methylcyclohexane} \]
2. 1 (R)-ethyl-2(S)-methylcyclohexane
   \[ + 1 \text{(S)-ethyl-2(R)-methylcyclohexane} \]
3. 1 (S)-methyl-2(S)-n-propyl cyclohexane
   \[ + 1 \text{(R)-methyl-2(R)-n-propyl cyclohexane} \]
4. 1 (R)-methyl-2(S)-n-propylcyclohexane
   \[ + 1 \text{(S)-methyl-2(R)-n-propyl cyclohexane} \]

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