Flavors and aromas
Menthol analysis in peppermint oil

Application Note

Food Testing & Agriculture

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Introduction
Gas chromatography with an Agilent CP-Cyclodextrin-B-2,3,6-M-19 column separates five menthols in peppermint oil in 32 minutes.
Conditions

Technique: GC-capillary

Column: Agilent CP-Cyclodextrin-B-2,3,6-M-19, 0.25 mm x 25 m fused silica WCOT CP-Cyclodextrin-B-2,3,6-M-19 (df = 0.25 µm) (Part no. CP7900)

Temperature: 50 °C (5 min) → 180 °C, 3 °C/min

Carrier Gas: He, 90 kPa (0.9 bar, 13 psi)

Injector: Splitter, 100 mL/min

Detector: FID, Attn. 2²
T = 250 °C

Sample Size: 0.2 µL

Concentration Range: 1% peppermint oil

Courtesy: Mr. Williams, International Distillers & Vintners, Essex, U.K.

Peak identification

1. (+)-neomenthol
2. (-)-neomenthol
3. (+)-menthol
4. (-)-menthol
5. isomenthol

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