



Flavors and aromas

Separation of optical isomers of menthol

Application Note

Food Testing & Agriculture

Authors

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Introduction

Cyclodextrin-modified phases are well suited for the the analysis of the optical isomers of menthol. The separation can be achieved without derivatization. The separation on the dissolved cyclodextrin-modified phase, Agilent CP-Cyclodextrin-B-2,3,6-M-19, is shown in chromatogram A. On CP-Chirasil-Dex CB the separation is improved due to the higher effectivity of the cyclodextrin interaction, see chromatogram B. Resolution factors can further be improved by using electronic pressure control or flow programming.



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Conditions

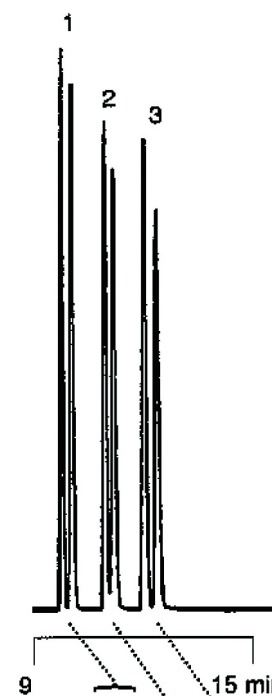
Technique	: GC-capillary
Column A	: Agilent CP-Cyclodextrin- β -2,3,6-M-19, 0.25 mm x 25 m fused silica WCOT CP-Cyclodextrin- β -2,3,6-M-19 (df = 0.25 μ m) (Part no. CP7500)
Column B	: Agilent CP-Chirasil-Dex CB 0.25 mm x 25 m fused silica WCOT CP-Chirasil-Dex CB (df = 0.25 μ m) (Part no. CP7502)
Temperature	: 110 °C
Carrier Gas	: H ₂ , 50 kPa (0.5 bar, 7 psi)
Injector	: Split, 100 mL/min T = 275 °C
Detector	: FID T = 300 °C
Sample Size	: 2 μ L
Concentration range	: 0.05%

Identical conditions for Chromatogram A and B

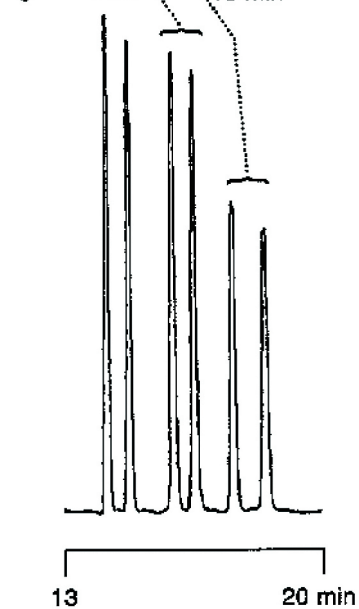
Peak identification

1. neomenthol
2. menthol
3. isomenthol

Chromatogram A



Chromatogram B



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This information is subject to change without notice.

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