Flavors and aromas

Analysis of Essence de Térébenthine

Application Note

Materials Testing & Research

Authors

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Introduction

Gas chromatography with an Agilent CP-Wax 52 CB column identifies 14 components in turpentine in 20 minutes.

The most polar, bonded Carbowax phase, is the only column of this kind that separates β-phellandrene from 1,8-cineol and α-terpinene from 1,4-cineol.

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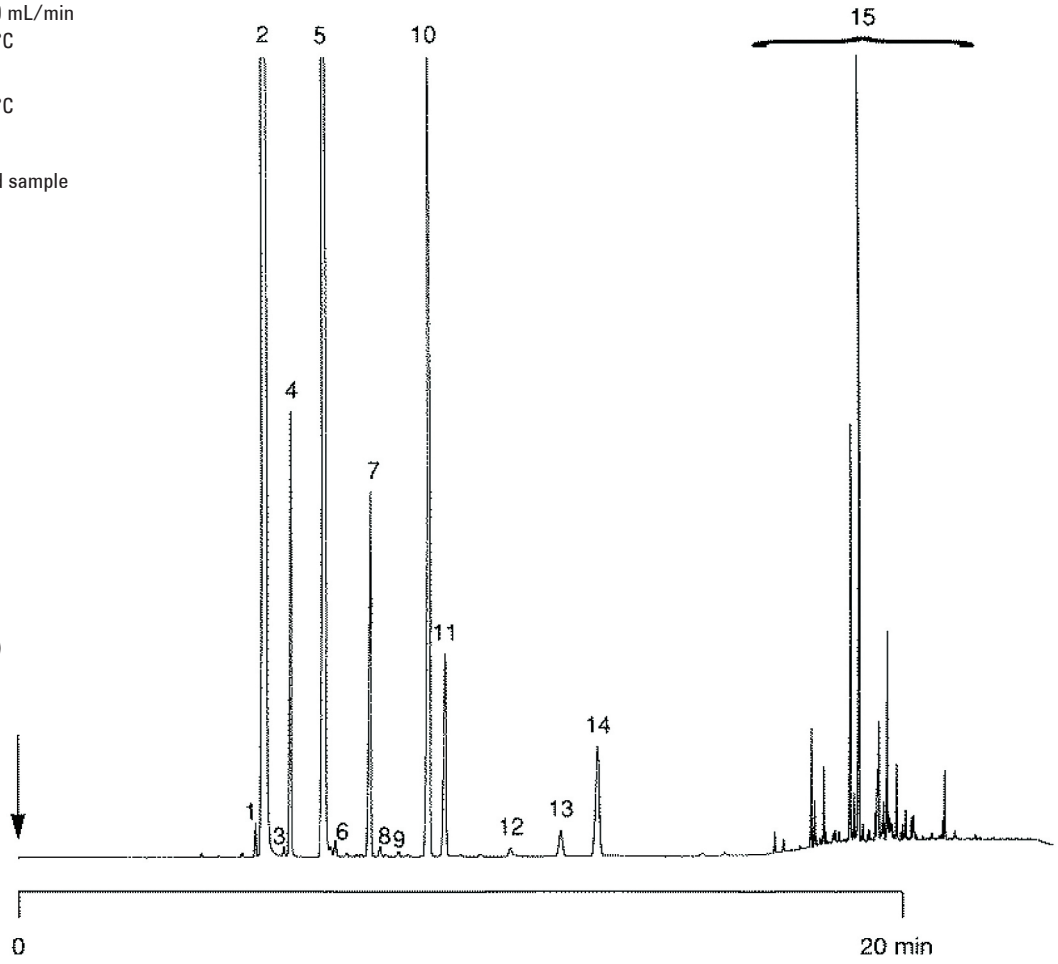
Conditions

Technique	:	GC-capillary
Column	:	Agilent CP-Wax 57 CB, 0.32 mm x 50 m fused silica WCOT (df = 0.2 µm) (Part no. CP97753)
Temperature	:	70 °C (15 min) ⟶ 210 °C, 30 °C/min
Carrier Gas	:	N_2, 90 kPa (0 .9 bar, 13 psi)
Injector	:	Split, 150 mL/min T = 210 °C
Detector	:	FID T = 240 °C
Sample Size	:	0.03 µL
Concentration Range	:	undiluted sample

Peak identification

1. tricyclene
2. α-pinene
3. α-fenchene
4. camphene
5. β-pinene
6. unknown
7. β-myrcene
8. α-phe!landrene
9. α-terpinene
10. limonene (dipentene)
11. β-phellandrene
12. y-terpinene
13. p-isopropyltoluene (p-cymene)
14. terpinolene
15. sesquiterpenes



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