



Alcohols, C₁ – C₇

Analysis of a standard congener mixture used as reference for distilled spirits

Application Note

Food Testing & Agriculture

Authors

Agilent Technologies, Inc.

Introduction

The Agilent CP-Wax 57 CB phase provides a unique selectivity for the analysis of impurities in alcoholic beverages. Besides the separation of the two fusel alcohols (peaks 12 and 13), the ethyl acetate is separated from the diethyl acetal and the isobutanol from the iso-amylacetate.

The CP-Wax 57 CB has an excellent stability for samples containing high levels of water or water-ethanol mixtures which makes the phase suitable for the analysis of distilled spirits.



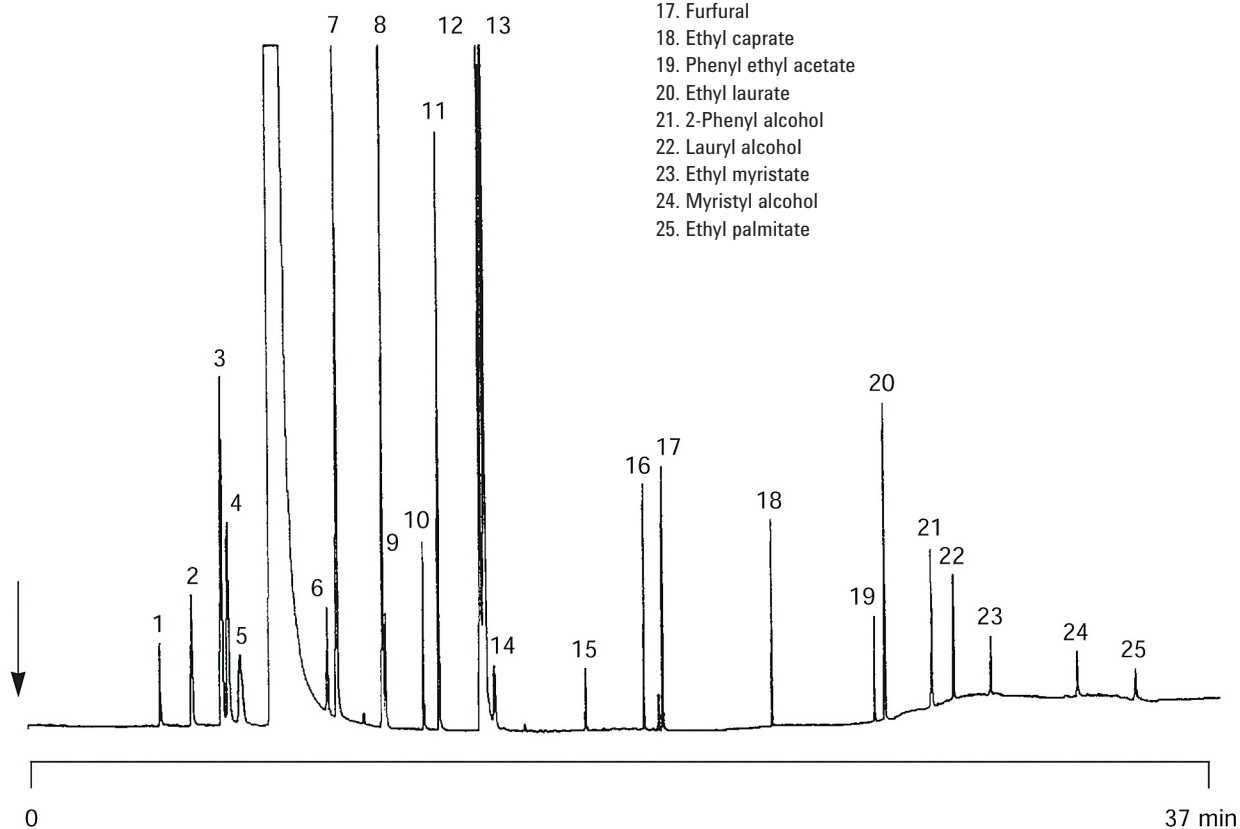
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Conditions

Technique : GC-capillary
Column : Agilent CP-Wax 57 CB, 0.25 mm × 50 m, 0.25 μm
(p/n CP97723)
Temperature : 40 °C (5 min) → 200 °C, 5 °C/min
Carrier Gas : H₂, 37 kPa (0.37 bar, 5.2 psi)
Injector : Split, 1:50
T = 200 °C
Detector : FID
T = 200 °C
Sample Size : 1.0 μL
Solvent Sample : 40% ethanol, 60% water
Courtesy : K. MacNamara, Irish Distillers LTD

Peak identification

1. Acetaldehyde
2. Methyl acetate
3. Ethyl acetate
4. Diethyl acetal
5. Methanol
6. Butanol-2
7. Propanol
8. Isobutanol
9. Isoamyl acetate
10. Butanol-1
11. 4-Methyl-2-pentanol
(internal standard)
12. 2-Methyl-1-butanol
13. 3-Methyl-1-butanol
14. Ethyl caproate
15. Ethyl lactate
16. Ethyl caprylate
17. Furfural
18. Ethyl caprate
19. Phenyl ethyl acetate
20. Ethyl laurate
21. 2-Phenyl alcohol
22. Lauryl alcohol
23. Ethyl myristate
24. Myristyl alcohol
25. Ethyl palmitate



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This information is subject to change without notice.

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