



Free fatty acids $C_3 - C_{18}$

Separation of C_3 - C_{18} free fatty acids
on a wide bore capillary column

Application Note

Food Testing & Agriculture

Authors

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Introduction

Gas chromatography with an Agilent CP-Sil 5 CB column separates 15 C_3 to C_{18} free fatty acids in 14 minutes.



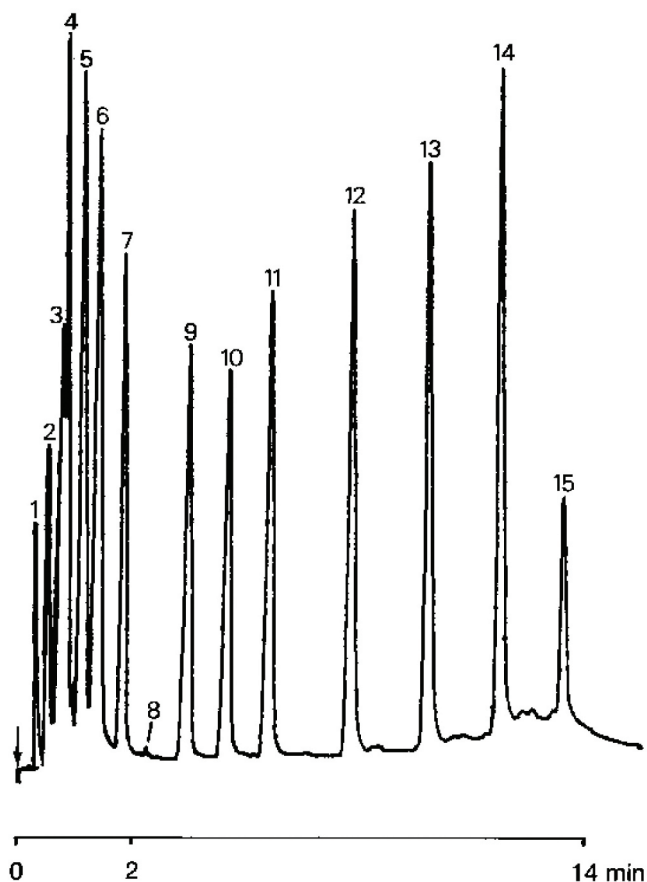
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Conditions

Technique : GC-capillary
Column : Agilent CP-Sil 5 CB, 0.53 mm x 10 m fused silica
WCOT CP-Sil 5 CB (5.0 μ m) (Part no. CP7645)
Temperature : 100 °C \rightarrow 250 °C, 10 °C/min
Carrier Gas : N₂, 10 kPa (0.1 bar, 1.5 psi), 50 cm/s
Injector : Direct
T = 290 °C
Detector : FID, 100 x 10⁻¹² Afs
T = 275 °C
Sample Size : 0.2 μ L
Concentration Range : 0.5 %/component
Solvent Sample : CS₂

Peak identification

1. acetic acid
2. propionic acid
3. isobutyric acid
4. butyric acid
5. isovaleric acid
6. valeric acid
7. caproic acid
8. heptanoic acid (enanthic acid)
9. octanoic acid (caprylic acid)
10. nonanoic acid (pelargonic acid)
11. decanoic acid (capric acid)
12. dodecanoic acid (lauric acid)
13. tetradecanoic acid (myristic acid)
14. hexadecanoic acid (palmitic acid)
15. octadecanoic acid (stearic acid)



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