



Triglycerides, $C_{46} - C_{56}$

Analysis of palm oil

Application Note

Food Testing & Agriculture

Authors

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Introduction

Gas chromatography with an Agilent CP-TAP CB for Glycerides column separates 24 C_{46} to C_{56} triglycerides in palm oil in 16 minutes.



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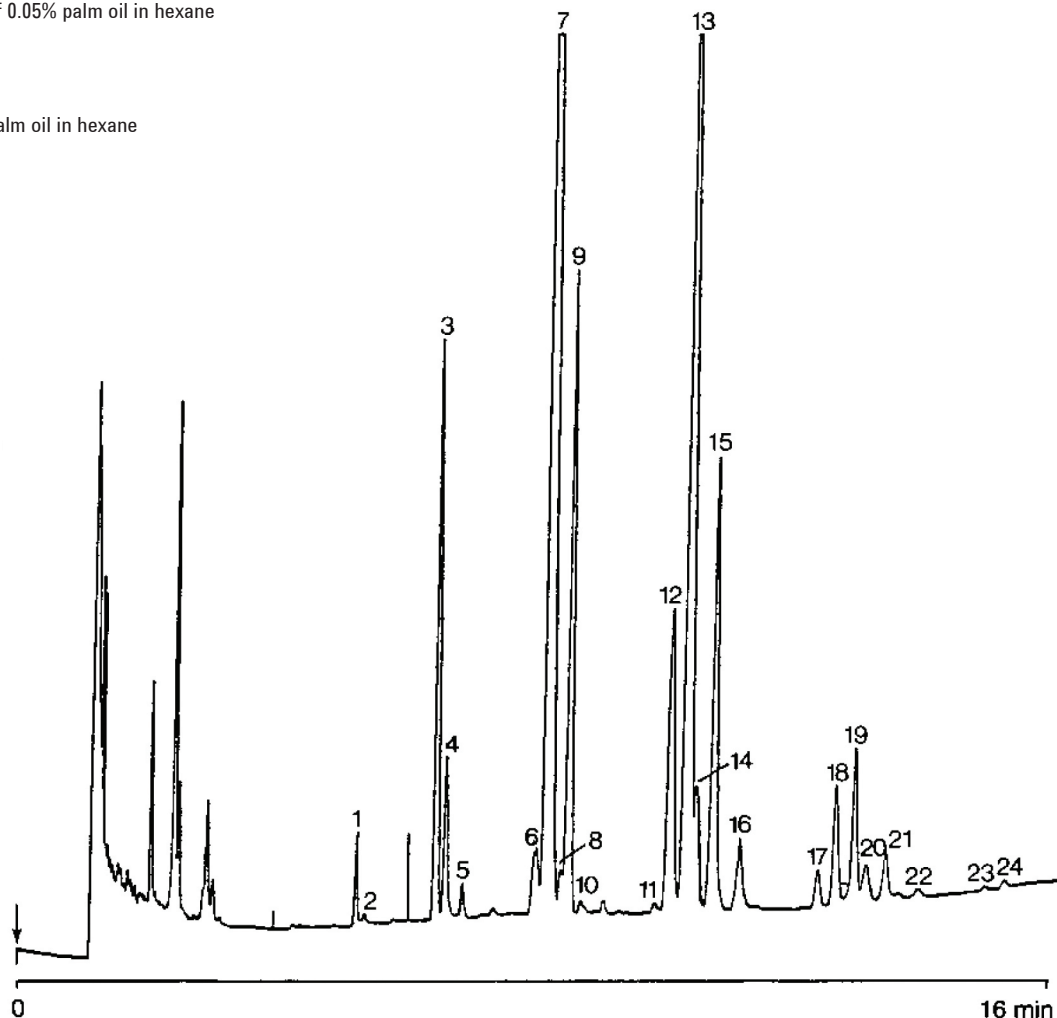
Conditions

Technique : GC-capillary
 Column : Agilent CP-TAP CB, 0.25 mm x 25 m WCOT fused silica coated with TAP (0.10 µm) (Part no. CP7483)
 Temperature : 340 °C (1 min) → 355 °C, (1 °C/min)
 Carrier Gas : H₂, 100 kPa (1 bar, 15 psi)
 Injector : on-column
 Injection : 0.2 µL of 0.05% palm oil in hexane
 Detector : FID
 Sample Size : 0.2 µL
 Concentration Range : 0.05% palm oil in hexane

M : Myristic acid (tetradecanoic acid) C₁₄: 0
 P : Palmitic acid (hexadecanoic acid) C₁₆: 0
 O : Oleic acid (cis-9-octadecanoic acid) C₁₈: 1
 L : Linoleic acid (cis,cis-9,12-octadecadienoic acid) C₁₈: 2
 S : Stearic acid (octadecanoic acid) C₁₈: 0
 A : Arachidic acid (eicosanoic acid) C₂₀: 0

Peak identification

	Carbon No.
1. MPP	46
2. MOM	46
3. PPP	48
4. MOP	48
5. MLP	48
6. PPS	50
7. POP	50
8. MOO	50
9. PLP	50
10. MLO	50
11. PSS	52
12. POS	52
13. POO	52
14. PLS	52
15. PLO	52
16. PLL	52
17. SOS	54
18. SOO	54
19. OOO	54
20. SLO	54
21. OLO	54
22. OLL	54
23. SOA	56
24. AOO	56



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