



FAME, C₁₈

Analysis of fatty acid methyl esters (cis/trans C18:1 isomers) of milk

Application Note

Food Testing & Agriculture

Authors

Agilent Technologies, Inc.

Introduction

Gas chromatography with an Agilent CP-Sil 88 for FAME, Column separates 16 fatty acid methyl esters (cis/trans C18:1 isomers) in milk in 30 minutes.



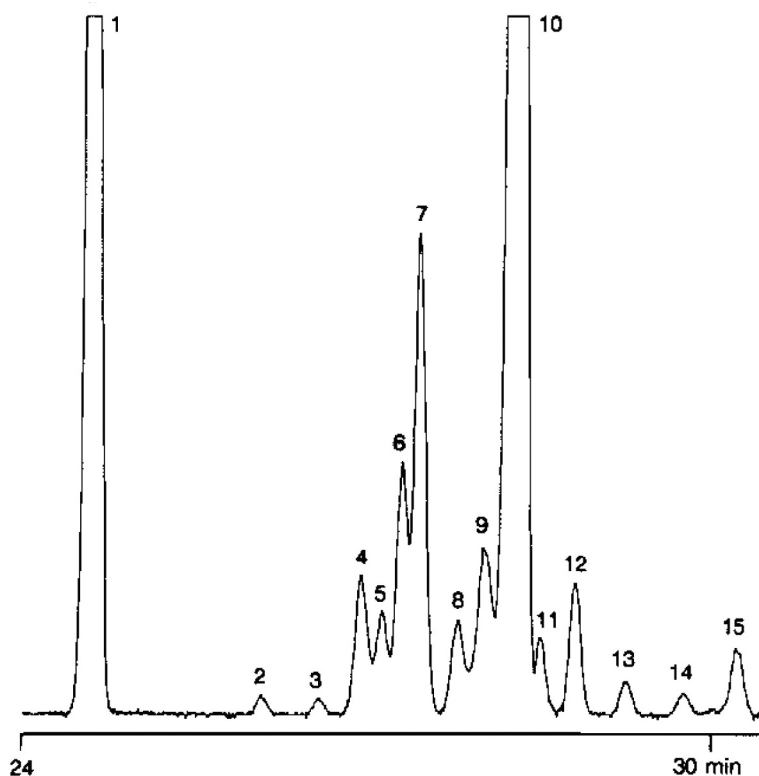
Agilent Technologies

Conditions

Technique : GC-capillary
Column : Agilent CP-Sil 88 for FAME, 0.25 mm x 100 m fused silica WCOT CP-Sil 88 (df = 0.2 µm)
(Part no. CP7489)
Temperature : 175 °C
Carrier Gas : H₂, 160 kPa (1.6 bar, 23 psi), 0.6 mL/min
Injector : Split, 1:100
T = 255 °C
Detector : FID
T = 255 °C
Sample Size : 0.5 µL
Concentration Range : 1%
Solvent Size : heptane
Courtesy : Dr. D. Precht and Dr. J. Molkentin,
Federal Dairy Research, Kiel, Germany

Peak identification

1. FAME C18:0 (stearic acid)
2. FAME C18:1ω4 trans
3. FAME C18:1ω5
4. FAME C18:1ω6 trans
5. FAME C18:1ω9 trans (elaidic acid)
6. FAME C18:1ω10 trans
7. FAME C18:1ω11 trans
8. FAME C18:1ω12 trans
9. FAME C18:1ω13 trans, FAME C18:1ω7 cis
10. FAME C18:1ω9 cis (oleic acid methyl ester)
11. FAME C18:1ω15 trans
12. FAME C18:1ω11 cis
13. FAME C18:1ω12 cis
14. FAME C18:1ω13 trans
15. FAME C18:1ω16 trans, FAME C18:1ω14 cis
16. FAME C18:1ω15 cis (not shown)



www.agilent.com/chem

This information is subject to change without notice.

© Agilent Technologies, Inc. 2011

Printed in the USA

31 October, 2011

First published prior to 11 May, 2010

A00899



Agilent Technologies