FAME, C18:2 isomers

Application Note

Materials Testing & Research

Authors

Agilent Technologies, Inc.

Introduction

An Agilent CP-Sil 88 for FAME column separates 14 C18:2 conjugated FAME isomers of linoleic acid by gas chromatography in 43 minutes.

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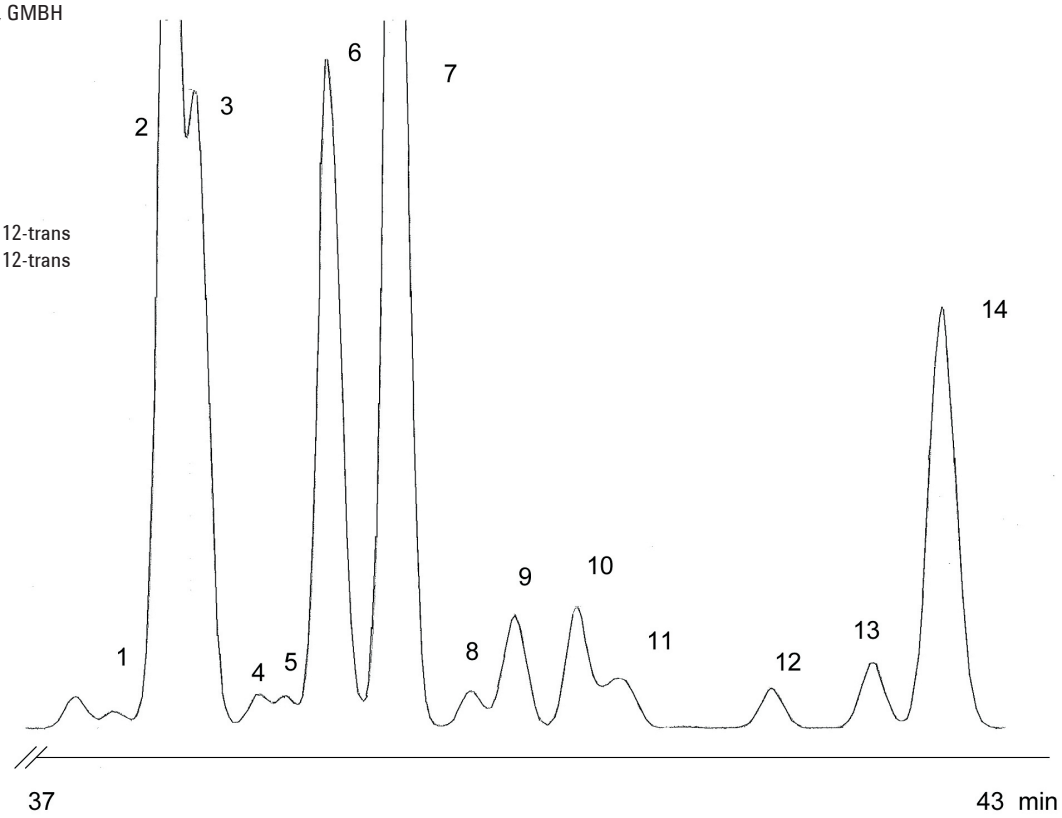
Conditions

Technique	:	GC
Column	:	Agilent CP-Sil 88 for FAME, 0.25 mm x 100 m fused silica (df = 0.2 µm) (Part no. CP7489)
Temperature	:	170 °C
Carrier Gas	:	Helium, 30 psi
Injector	:	Split, SGE Focus liner; T = 260 °C
Detector	:	FID, T = 260 °C
Sample Size	:	0.5 µL
Concentration Range	:	appro. 2%
Solvent Sample	:	tert butyl methyl ether
Derivatization	:	2 µL sample + 50 µL TBME + 50 µL TMSH
Courtesy	:	Dr. Dahlke, Hamburger Fettchemie Brinckman & Mergell, GMBH

Peak identification

1. C18:2 7 -cis, 9-trans
2. C18:2 9-cis, 11-trans
3. C18:2 8-trans, 10-cis
4. C18:2 9-trans, 11-cis/10-cis, 12-trans
5. C18:2 9-trans, 11-cis/10-cis, 12-trans
6. C18:2 11-cis, 13-trans
7. C18:2 10-trans, 12-cis
8. C18:2 cis, cis isomer
9. C18:2 cis, cis isomer
10. C18:2 cis, cis isomer
11. C18:2 cis, cis isomer
12. C18:2 trans, trans isomer
13. C18:2 trans, trans isomer
14 .C18:2 trans, trans isomer



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