



FAME, C₁₂ - C₅₄

Analysis of dimeric fatty acids

Application Note

Materials Testing & Research

Authors

Agilent Technologies, Inc.

Introduction

Dimeric fatty acids are complex mixtures of mainly C₃₆ dicarboxylic acids, used in different application areas as coatings, engineering plastics and adhesives. These types of fatty acids can be determined by GC as methyl esters on a high temperature stable thin film poly dimethyl siloxane stationary phase. The best results are obtained using an Agilent UltiMetal Simdist column.



Agilent Technologies

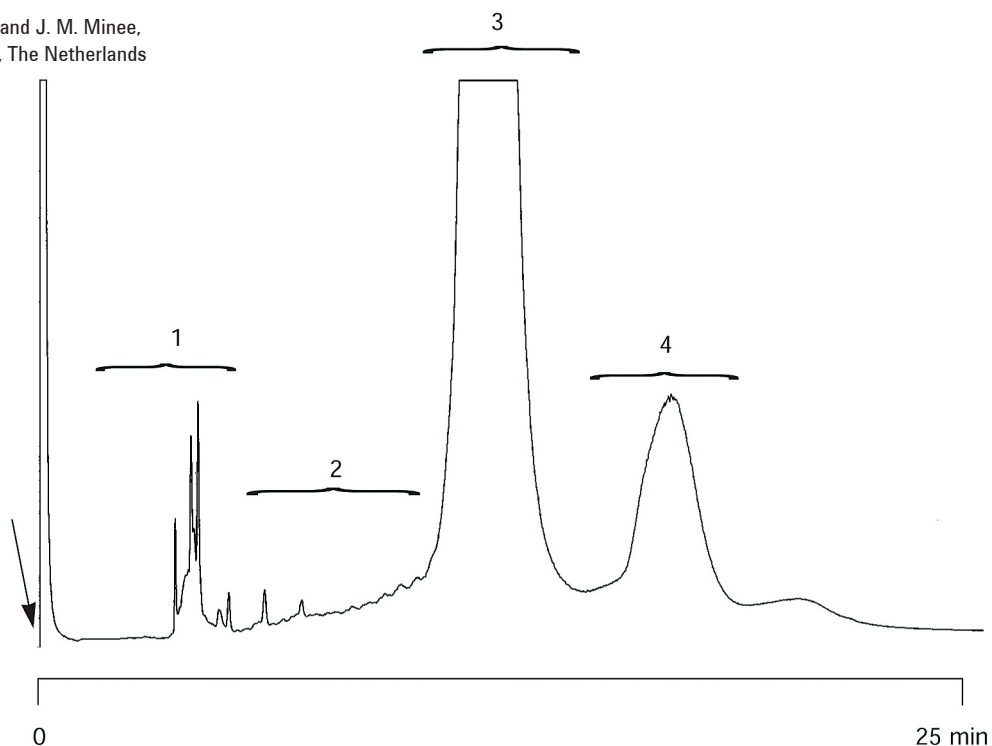
Conditions

Technique : GC-wide bore
Column : Agilent CP-SimDist UltiMetal, 0.53 mm x 5 m
(df = 0.17 μ m) (Part no. CP7532)
Temperature : 60 °C (1 min) \rightarrow 150 °C, 30 °C/min;
150 °C \rightarrow 380 °C (7 min), 12 °C/min
Carrier Gas : He, 20 mL/min
Injector : on column,
T = °C
Detector : FID
T = 380 °C
Sample Size : 1 μ L
Concentration Range : 1 - 2%
Sample Solvent : heptane

Courtesy : R. M. Hoefnagel and J. M. Minee,
Uniqema, Gouda, The Netherlands

Peak identification

1. FAME C12-C20 monomer
2. FAME C20-C36 intermediate
3. FAME C36 dimers
4. FAME C54 trimers



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

A01535



Agilent Technologies