Mono-, Di-, and Tristearoylglycerol Analysis on Agilent PLgel by GPC

Application Note

Materials Testing and Research, Polymers

Author

Graham Cleaver

Agilent Technologies, Inc.

Introduction

Stearoylglycerols are esters of glycerol and stearic acid. They can be produced as stable intermediates during the microbial metabolism of vegetable oils and animal fats. Microbial transformation of natural oils is used in the search for commercially valuable compounds.

Analysis of stearoylglycerols is straightforward using gel permeation chromatography (GPC) with Agilent PLgel columns.

Verified for Agilent
1260 Infinity
GPC/SEC System

Agilent Technologies

Analysis of Stearoylglycerols

GPC with an Agilent PLgel 5 µm 50Å column separates mono-, di, and tristearoylglycerol from stearic acid in less than 16 minutes (Figure 1).

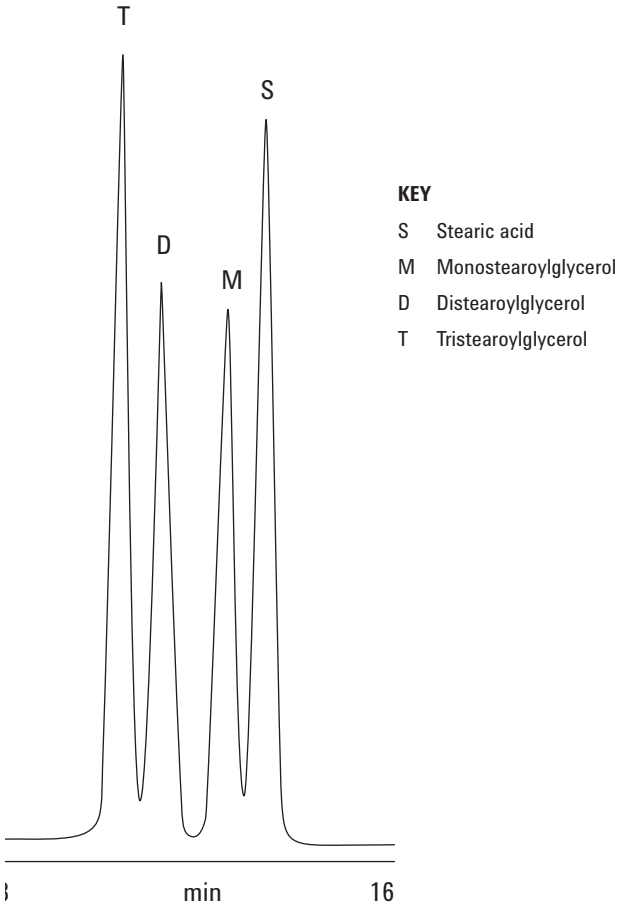

Figure 1. Stearoylglycerols separated on an Agilent PLgel 5 µm column.

Conditions

Column	Agilent PLgel 5 µm 50Å, 300 × 7.5 mm (p/n PL1110-6515)
Eluent	THF
Flow rate	0.5 mL/min
Detector	RI
System	Agilent PL-GPC 50

Conclusion

Low-pore-size PLgel columns are well suited to the separation of complex esters produced by metabolic processes.

Acknowledgment

Data supplied by Dr G J Jones, Dept of Agricultural and Environmental Science, University of Newcastle upon Tyne, UK.

For More Information

These data represent typical results. For more information on our products and services, visit our Web site at www.agilent.com/chem.

www.agilent.com/chem

Printed in the USA
April 30, 2015
5990-8322EN

Agilent Technologies