Analysis of Butter Using Ultra ALLOY®-TRG, A Column Designed for Triglycerides Analysis

Ultra ALLOY®-TRG has been designed to separate and analyze triglyceride of butter, safflower oil, soybean oil, etc.

This column uses highly polar 65% diphenylpolysiloxane as liquid phase for the stationary phase, which is chemically bonded to form a stable polymer; therefore achieving a low bleeding at high temperatures. In the chromatogram shown below, in addition to the carbon number assignments (eg. T_{54}), peaks for triglyceride components, consisting of stearic acid (S), oleic acid (O), and palmitic acid (P), are shown to be well resolved, providing a good insight into the property of butter. Currently the column is used in the component analysis of a variety of fats and oils, such as soybean oil. Because the resolution of peaks degrades as the amount of sample injected increases, we recommend that the smallest possible amount of sample be used for analysis. Also we recommend that the insert at the injection port be deactivated, since the sample is susceptible to thermal decomposition, if the insert is not deactivated. (Deactivated quartz inserts available.)

Specifications : Ultra ALLOY®-TRG (65% diphenylpolysiloxane), 30 m (0.25 mm i.d.) 0.1 µm, Max. temp. Iso. 360ºC / Prog. 370ºC

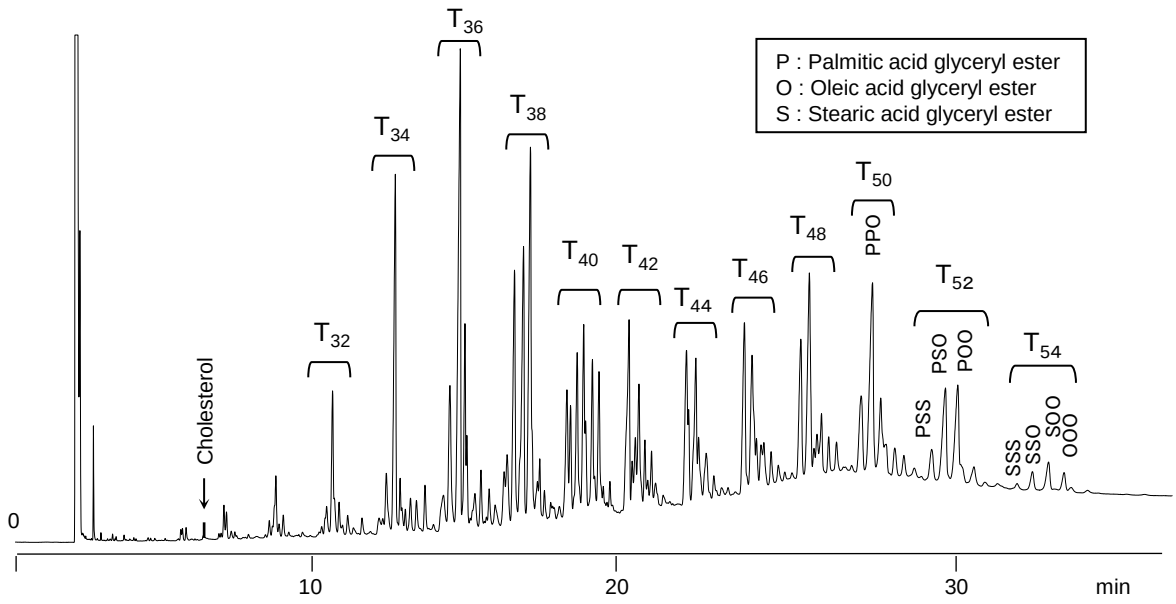

Fig. 1 Analysis of Butter

Column: Ultra ALLOY®-TRG (65% diphenylpolysiloxane), 30 m (0.25 mm i.d.) 0.1 µm
Oven temp.: 260 ~ 5 ºC/min ~ 360ºC (15min), Injector: Split 1/50 at 300ºC
Detector: FID at 350ºC, Carrier gas: He, 20 psi, Sample size: 1.0%, 1.0 µL (solvent n-C_6)

Keywords : Triglycerides, Butter

Products used : Multi-functional pyrolyzer, Ultra ALLOY®-TRG

Applications : Fats and Oils, Food Analysis

Related technical notes :

Please forward your inquiries via our web page or send us a fax message.

R&D and manufactured by :
Frontier Laboratories Ltd.
Phone: (81)24-935-5100 Fax: (81)24-935-5102
http://www.frontier-lab.com/

®: A registered trademark of Frontier Laboratories Ltd.