Application Note
Date: 1992.6.24 No. 220044H-E

Analysis of fatty acids in sucrose fatty acid ester

Sucrose-fatty acid ester usually contains several kinds of fatty acids being esterified to sucrose. Sucrose-fatty acid ester in starch dialysis solution was hydrolyzed into sucrose and fatty acids. The fatty acids were then derivatized with p-bromophenacyl bromide and were separated on a reversed phase chromatography (RPC). After the sample preparation, 20 ul of the sample was injected. The sample preparation procedure and the chromatogram are shown below.

Conditions:

Pump:	PU-980
Detector :	UV-970
Wavelength :	250 nm
Sensitivity :	0.064 AUFS
Column :	Finepak SIL C18S
Eluent :	A : CH_3CN / H_2O (50/50)
	B : CH_3CN
Flow rate :	1.0 ml/min
Sample :	Starch dialysis solution

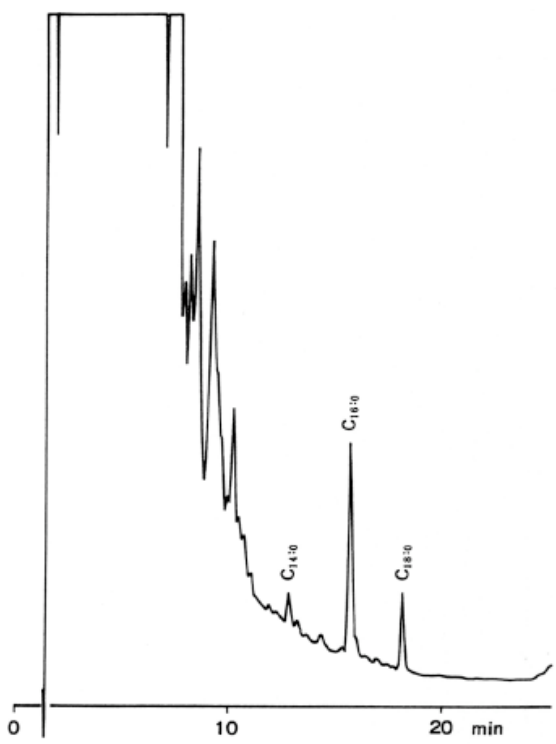
Preparation procedure of sample

1 ml starch dialysis solution
↓
Add 200 µl of 7.0% KOH in methanol
↓
Hydrolysis (90 °C, 30 min)
↓
Cool down to room temperature
↓
React with 90 °C for 30 min
← Add 800 µl of 17 mM 18-crown-6-ether in acetone
← Add 1.0 ml of 170 mM p-bromophenacyl bromide in acetone
↓
Filtrate with 0.45 µm membrane filter
↓
Inject (20 µl)

Gradient profile

A/B(50/50) —15 min, Linear→ (0/100)
—5 min, Hold→ (0/100)

Fig. 1



JASCO INTERNATIONAL CO., LTD.
4-21, Sennin-cho 2-chome, Hachioji, Tokyo 193-0835, Japan
Tel: +81-42-666-1322, Fax: +81-42-665-6512