PRODUCT DATA SHEET

MATREYA LLC
Lipids and Biochemicals
A Cayman Chemical Company

Rapeseed Oil Reference Mixture (AOCS) (quantitative)

Catalog number: 1083
Solvent: methylene chloride
Storage: -20°C
Concentration: 25mg/ml
Volume: 1ml

GC Conditions:

Column:	SP2330 or RTX2330	**Detector:**	FID, 250°C
Carrier Gas:	helium	**Linear Velocity:**	20cm/sec
Make-up Gas:	helium	**Program Rate:**	10°C/min
Split Ratio:	100:1	**Hold Time:**	17min
Oven Initial:	170°C	**Injector:**	250°C
Oven Final:	190°C		

Elution Order	Carbon Number	Component Name	% Conc. by weight
1	C14:0	Methyl tetradecanoate (myristate)	1.0
2	C16:0	Methyl hexadecanoate (palmitate)	4.0
3	C18:0	Methyl octadecanoate (stearate)	3.0
4	C18:1	Methyl octadecenoate (*cis*-9), (oleate)	60.0
5	C18:2	Methyl octadecadienoate (all *cis*-9,12), (linoleate)	12.0
6	C20:0	Methyl eicosanoate (arachidate)	3.0
7	C18:3	Methyl octadecatrienoate (all *cis*-9,12,15), (linolenate)	5.0
8	C20:1	Methyl eicosenoate (*cis*-11), (gondoate)	1.0
9	C22:0	Methyl docosanoate (behenate)	3.0
10	C22:1	Methyl docosenoate (*cis*-13), (erucate)	5.0
11	C24:0	Methyl tetracosanoate (lignocerate)	3.0

Application Notes:

This methyl ester mixture contains 11 naturally occurring fatty acid methyl esters that are for the quantitative identification of unknowns. The mixture is prepared from high purity stock material and contains saturated and unsaturated fatty acid methyl esters that are ready for GC analysis. By studying problems with the quantitative analysis of animal and vegetable oils and fats, the American Oil Chemists' Society has found certain mixtures to be useful as reference standards. The composition of this mixture is similar to the fatty acid distribution of rapeseed oils. This is an excellent standard for identifying unknown fatty acid isomers in samples.

Selected References:

1. Z. Li, T. Gu, B. Kelder and J. J. Kopchick "Analysis of fatty acids in mouse cells using reversed-phase high-performance liquid chromatography" *Chromatographia,* Oct. Vol. 54 pp. 463-467 *2001*
2. L. D. Metcalfe, A. A. Schmitz, J. R. Pelka "The Rapid Preparation of Fatty Acid Esters from Lipids for Gas Chromatographic Analysis" Analytical Chemistry, March, Vol. 38(3) pp. 514-515 *1966*

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