

PRODUCT DATA SHEET

RM-3 Mixture (AOCS) (quantitative)

Catalog number: 1086
Solvent: methylene chloride
Storage: -20°C
Concentration: 50mg/ml
Volume: 1ml
Source: synthetic and plant

GC Conditions:
Column: SP-2330, 30m x 0.25mm x 0.2µm
Oven: 180°C (isothermal)
Carrier: helium @ 20cm/sec.
Detector: FID, 250°C
Injector: 250°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 (<i>cis</i> -9); (oleate)	45.0
5	C18:2	Methyl octadecadienoate (<i>cis</i> -9,12); (linoleate)	15.0
6	C20:0	Methyl eicosanoate; (arachidate)	3.0
7	C18:3	Methyl octadecatrienoate (<i>cis</i> -9,12,15); (linolenate)	3.0
8	C22:0	Methyl docosanoate; (behenate)	3.0
9	C22:1	Methyl docosenoate (<i>cis</i> -13); (erucate)	20.0
10	C24:0	Methyl tetracosanoate; (lignocerate)	3.0

Application Notes:

This fatty acid reference mixture contains saturated and mono- and polyunsaturated fatty acid methyl esters for the qualitative identification and quantitation of samples. This AOCS RM mixture is especially ideal as a standard for peanut, rapeseed, and mustard seed oils. 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 each mixture is similar to the fatty acid distribution of certain oils. This is an excellent standard for identifying unknown fatty acid isomers in samples.

All materials are analyzed to verify their identity and to determine their purity. All analytes are 99% pure. This standard is accurately prepared by gravimetric technique (+/- 0.5%) and all glassware is class A rated. Ampules are purged with nitrogen/argon before and after filling and chilled before being flame sealed. Store ampules sealed as received and process without delay immediately after opening the ampule.

Selected References:

1. G. Vujkovic et al. "Composition of muscle tissue lipids of silver carp and bighead carp" *JAOCS*, vol. 76 pp. 475-480, 1999
2. 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

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