

# PRODUCT DATA SHEET

## GLC-40 Mixture (quantitative)

**Catalog number:** 1098  
**Solvent:** methylene chloride  
**Storage:** -20°C  
**Concentration:** 50mg/ml  
**Volume:** 1ml  
**Source:** synthetic or plant

### GC Conditions:

**Column:** SP-2330 or RTX-2330, 30 x 0.25mm x 0.2µm  
**Oven:** 100°C Hold 3 minutes.  
10°C/min.  
200°C Hold 14 minutes.  
**Carrier:** helium @ 20cm/sec.  
**Detector:** FID, 250°C  
**Injector:** 230°C

<b>Elution Order</b>	<b>Carbon Number</b>	<b>Component Name</b>	<b>% Conc. by weight</b>
1	C16:0	Methyl palmitate (hexadecanoate)	25.0
2	C18:0	Methyl stearate (octadecanoate)	25.0
3	C20:0	Methyl arachidate (eicosanoate)	25.0
4	C22:0	Methyl behenate (docosanoate)	25.0

### Application Notes:

This fatty acid methyl ester mix contains four long-chain saturated fatty acid methyl esters for the qualitative identification and quantitation of samples by gas chromatography. This mix is ideal for studying problems with the quantitative analysis of animal and vegetable oils and fats. Knowledge of the fatty acid content of bacteria can be of great benefit in understanding microbials and can be of great nutritional importance in animals.<sup>1</sup> Understanding the role of enzymes and regulatory pathways in human pathogens is important in drug development.<sup>2</sup> Microbial fatty acid profiles are unique from one species to another and can therefore be used in the determination of bacterial identity.<sup>3</sup> 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. M. Or-Rashid, N. Odongo and B. McBride, "Fatty acid composition of ruminal bacteria and protozoa, with emphasis on conjugated linoleic acid, vaccenic acid, and odd-chain and branched-chain fatty acids" *Journal of Animal Science* vol. 85 pp. 1228, 2007
2. Y-M Zhang, S. White, and C. Rock "Inhibiting Bacterial Fatty Acid Synthesis" *The Journal of Biological Chemistry* vol. 281 pp. 17541, 2006
3. N. Rozès, S. Garbay, M. Denayrolles, A. Lonvaud-Funel "A rapid method for the determination of bacterial fatty acid composition" *Applied Microbiology* vol. 3(17) pp. 126, 1993

This product is to be used for research only. It is not intended for drug or diagnostic use, human consumption or to be used in food or food additives. Matreya assumes no liability for any use of this product by the end user. We believe the information, offered in good faith, is accurate.