PRODUCT DATA SHEET

MATREYA LLC
Lipids and Biochemicals
A Cayman Chemical Company

GLC-110 Mixture (bacterial lipid standard, qualitative)

Catalog number: 1105
Solvent: chloroform
Storage: -20°C
Concentration: 10mg/ml
Volume: 1ml
Source: various

GC Conditions:
Column: SPB-1 or RTX-1, 30m x 0.25mm x 0.2µm
Oven: 150°C to 250°C @ 4°C/min.
Carrier: helium @ 20cm/sec.
Detector: FID, 250°C
Injector: 250°C

Elution Order	Component Name
1	Methyl 12-methyltridecanoate (iso-C14:0)
2	Methyl tetradecanoate (myristate) (C14:0)
3	Methyl 12-methyltetradecanoate (anteiso-C15:0)
4	Methyl pentadecanoate (C15:0)
5	Methyl 14-methylpentadecanoate (iso-C16:0)
6	Methyl hexadecanoate (palmitate) (C16:0)
7	Methyl 14-methylhexadecanoate (anteiso-C17:0)

Application Notes:

This fatty acid methyl ester mixture contains branched and straight chain fatty acids in chloroform for qualitative identification. 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.[1] Understanding the role of enzymes and regulatory pathways in human pathogens is important in drug development.[2] Microbial fatty acid profiles are unique from one species to another and can therefore be used in the determination of bacterial identity.[3] This is a qualitative mixture and should not be used for quantitative determinations.

All materials are analyzed to verify their identity and to determine their purity. All analytes are 98^{+}% 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*