PRODUCT DATA SHEET

FIM-FAME-6 Mixture (quantitative)

Catalog Number: 2009
Solvent: heptane
Storage: -20°C
Concentration: 33mg/ml
Volume: 1ml
Source: synthetic and plant

GC Conditions:
Column: SP-2560, 100 x 0.25mm x 0.2µm
Oven: 100°C (hold 5 min.) to 230°C @ 5°C/min. (hold 19 min.)
Carrier: helium @ 20cm/sec.
Detector: FID, 250°C
Injector:250°C

Elution Order	Carbon Number	Component Name	% Conc. by weight
1	C4:0	Methyl tetranoate, (butyrate)	3.0
2	C6:0	Methyl hexanoate (caproate)	3.0
3	C8:0	Methyl octanoate (caprylate)	3.0
4	C10:0	Methyl decanoate (caprate)	3.0
5	C11:0	Methyl undecanoate (hendecanoate)	3.0
6	C12:0	Methyl dodecanoate (laurate)	3.0
7	C13:0	Methyl tridecanoate	3.0
8	C14:0	Methyl tetradecanoate (myristate)	3.0
9	C14:1(*cis*-9)	Methyl tetradecenoate (*cis*-9), (myristoleate)	3.0
10	C15:0	Methyl pentadecanoate	3.0
11	C15:1(*cis*-10)	Methyl pentadecenoate (*cis*-10)	3.0
12	C16:0	Methyl hexadecanoate (palmitate)	6.0
13	C16:1(*cis*-9)	Methyl hexadecenoate (*cis*-9), (palmitoleate)	3.0
14	C17:0	Methyl heptadecanoate (margarate)	3.0
15	C17:1(*cis*-10)	Methyl heptadecenoate (*cis*-10)	3.0
16	C18:0	Methyl octadecanoate (stearate)	3.0
17	C18:1(*trans*-9)	Methyl octadecenoate (*trans*-9), (elaidate)	3.0
18	C18:1(*cis*-9)	Methyl octadecenoate (*cis*-9), (oleate)	3.0
19	C18:2(*cis*-9,12)	Methyl octadecadienoate (all *cis*-9,12), (linoleate)	3.0
20	C20:0	Methyl eicosanoate (arachidate)	3.0
21	C18:3(*cis*-6,9,12)	Methyl octadecatrienoate (all *cis*-6,9,12), (gamma-linolenate)	3.0
22	C20:1(*cis*-11)	Methyl eicosenoate (*cis*-11)	3.0
23	C18:3(*cis*-9,12,15)	Methyl octadecatrienoate (all *cis*-9,12,15), (linolenate)	3.0
24	C20:2(*cis*-11,14)	Methyl eicosadienoate (all *cis*-11,14)	3.0
25	C22:0	Methyl docosanoate (behenate)	3.0
26	C20:3(*cis*-8,11,14)	Methyl eicosatrienoate (all *cis*-8,11,14), (homogamma-linolenate)	3.0
27	C22:1(*cis*-13)	Methyl docosenoate (*cis*-13), (erucate)	3.0
28	C20:3(*cis*-11,14,17)	Methyl eicosatrienoate (all *cis*-11,14,17)	3.0
29	C20:4(*cis*-5,8,11,14)	Methyl eicosatetraenoate (all *cis*-5,8,11,14), (arachidonate)	3.0
30	C22:2(*cis*-13,16)	Methyl docosadienoate (all *cis*-13,16)	3.0
31	C24:1(*cis*-15)	Methyl tetracosenoate (*cis*-15), (nervonate)	3.0
32	C22:6(*cis*-4,7,10,13,16,19)	Methyl docosahexaenoate, (all *cis*-4,7,10,13,16,19)	3.0

Application Notes:

This fatty acid mixture contains saturated and mono and polyunsaturated fatty acids in heptane for the qualitative identification and quantitation of unknowns. Microbial fatty acid profiles are unique from one species to another and can therefore be used in the determination of bacterial identity. 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*