

PRODUCT DATA SHEET

WSFA-4 Mixture (qualitative)

Catalog No: 1108

Common Name: water-soluble fatty acid mixture

Solubility: water

Storage: room temperature

Components: acetic acid, propionic acid, isobutyric acid, n-butyric acid, 2-methylbutyric acid, isovaleric acid, and n-valeric acid

Appearance: liquid

GC Conditions:

Column: 80/ 120 Carbowax B-DA/ 4% Carbowax 20M

Carrier Gas: helium **Flow Rate:** 50ml/min

Make-up Gas: nitrogen **Flow Rate:** 40ml/min

Oven Initial: 175°C **Program Rate:** isothermal

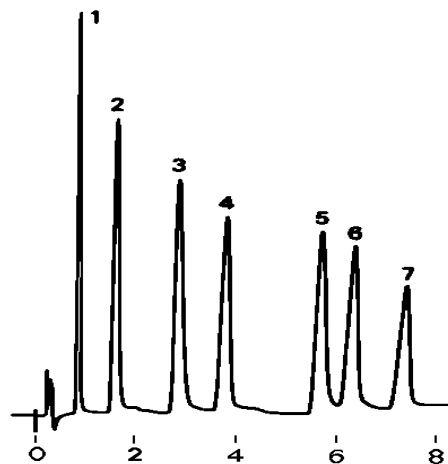
Detector (FID): 250°C **Injector:** 200°C

GC elution order:

1. Acetic acid
2. Propionic acid
3. Isobutyric acid
4. n-Butyric acid
5. 2-Methylbutyric acid
6. Isovaleric acid
7. n-Valeric acid

Application Notes:

This mixture contains seven water-soluble fatty acids and is ideal for their identification by gas chromatography, mass spectrometry, and high performance liquid chromatography. This mixture is prepared from high purity stock materials. Knowledge of the fatty acid content of bacteria can be of great benefit in understanding microbes and can be of great nutritional importance in animals and humans.^{1,2,3} This is a qualitative mixture and should not be used for quantitative purposes.



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. Zhang, S. White, and C. Rock "Inhibiting Bacterial Fatty Acid Synthesis" *The Journal of Biological Chemistry*, Vol. 281(26) pp. 17541, 2006
3. N. Rozès et al. "A rapid method for the determination of bacterial fatty acid composition" *Applied Microbiology*, Vol. 3(17) pp. 126, 1993

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