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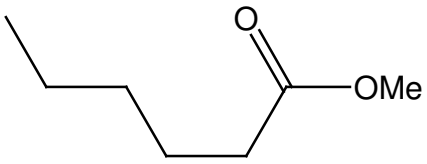
PRODUCT DATA SHEET

Methyl hexanoate

Catalog number: 1200
Common names: Methyl caproate; C6:0 Methyl ester
Source: natural, plant
Solubility: chloroform, ethanol, ethyl ether
CAS number: 106-70-7

Molecular Formula: $C_7H_{14}O_2$
Molecular Weight: 130
Storage: room temperature
Purity: TLC: 99%, GC >99%
TLC System: hexane/ethyl ether (80:20)
Appearance: liquid



Application Notes:

This high purity fatty acid methyl ester is ideal as a standard and for biological studies. Hexanoic acid is a short-chain fatty acid that has important biological functions and properties. It has been demonstrated to be able to induce resistance in some plants against certain bacteria and fungi.[1,2] X-linked adrenoleukodystrophy (X-ALD) is an inherited disorder of peroxisomal metabolism and is characterized by deficient β-oxidation of saturated very long-chain fatty acids (VLCFA) resulting in an accumulation of VLCFA and a subsequent decrease in shorter fatty acids such as hexanoic acid. Sphingolipids are normally acylated with long-chain fatty acids and are critical in many biological functions. When acylated with shorter fatty acids these sphingolipids can more easily cross the cell membrane barrier.[3] Hexanoic acid is a saturated fatty acid and saturated fatty acids have been found to cause moderate risk of coronary heart disease as compared with polyunsaturated fatty acids and they significantly lower the total cholesterol/high density lipoprotein-cholesterol ratio as compared with carbohydrates.[4]

Selected References:

1. B. Vicedo et al. "Hexanoic Acid-Induced Resistance Against *Botrytis cinerea* in Tomato Plants" *Molecular Plant-Microbe Interactions*, Vol. 22 pp. 1455-1465, *2009*
2. Z. Kravchuk et al. "Priming for JA-dependent defenses using hexanoic acid is an effective mechanism to protect *Arabidopsis* against *B. cinerea*" *Journal of Plant Physiology*, Vol. 168 pp. 359-366, *2011*
3. Y. Jiang et al. "Ceramide Stimulates ABCA12 Expression via Peroxisome Proliferator-activated Receptor delta in Human Keratinocytes" *The Journal of biological Chemistry*, Vol. 284 pp. 18942-18952, *2009*
4. R. Micha and D. Mozaffarian "Saturated Fat and Cardiometabolic Risk Factors, Coronary Heart Disease, Stroke, and Diabetes: a Fresh Look at the Evidence" *Lipids*, vol. 45 pp. 893-905, *2010*