

PRODUCT DATA SHEET

Methyl octadecanoate

Catalog number: 1021

Common name: Methyl stearate; C18:0
Methyl ester

Source: natural, plant

Solubility: chloroform, ethanol, ethyl ether

CAS number: 112-61-8

Molecular Formula: C₁₉H₃₈O₂

Molecular Weight: 298

Storage: room temperature

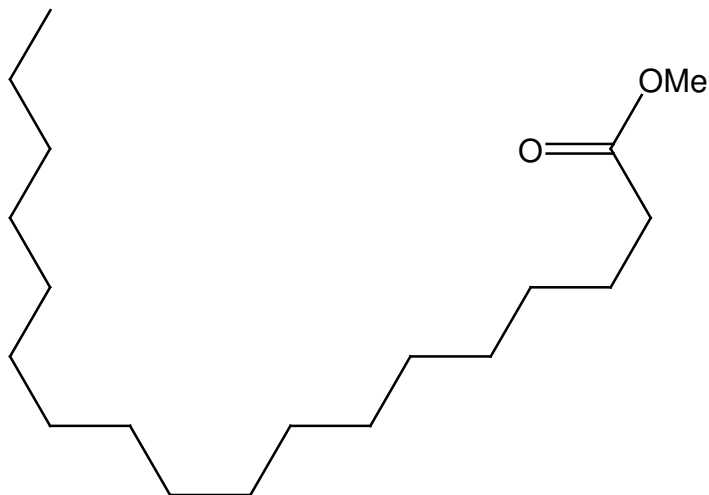
Purity: TLC: 99%, GC: 99%

TLC System: hexane/ethyl ether (85:15)

Appearance: solid

Application Notes:

This high purity fatty acid methyl ester is ideal as a standard and for biological studies. Stearic acid is the second most abundant fatty acid in nature and among the most abundant fatty acids in most animals as well as in some plants and bacteria. It has many biological functions as well as many pharmaceutical and industrial uses. It is especially prevalent in gangliosides where it can comprise as much as 80% of the total fatty acids present. A large amount of stearic acid is used as the precursor for oleic acid via the *delta*-9-desaturase enzyme. It has recently been proposed that stearic acid causes a lower risk of cardiovascular disease than other saturated fatty acids.¹ Stearic acid has been extensively used to aid in the delivery mechanisms of various therapeutical agents by forming micelles around the drug being delivered.^{2,3}



Selected References:

1. J. Hunter, J. Zhang, and P. Kris-Etherton "Cardiovascular disease risk of dietary stearic acid compared with *trans*, other saturated, and unsaturated fatty acids: a systematic review" *Am J Clin Nutr*, vol. 91 pp. 46-63, 2010
2. H. Uludag et al. "Formulation and Delivery of siRNA by Oleic Acid and Stearic Acid Modified Polyethylenimine" *Mol. Pharmaceuticals*, vol. 6 pp. 121-133, 2009
3. Y.-Z. Du et al "Shell cross-linked stearic acid grafted chitosan oligosaccharide self-aggregated micelles for controlled release of paclitaxel" *Colloids and Surfaces B: Biointerfaces*, vol. 50 pp. 97-103, 2006

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