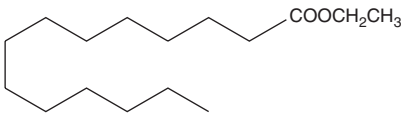
PRODUCT INFORMATION

Myristic Acid ethyl ester

Item No. 10008197

CAS Registry No.: 124-06-1
Formal Name: tetradecanoic acid, ethyl ester
Synonyms: Ethyl Myristate, Ethyl Tetradecanoate, NSC 8917, SFE 16:0
MF: $C_{16}H_{32}O_2$
FW: 256.4
Purity: ≥98%
Supplied as: A solution in ethanol
Storage: -20°C
Stability: ≥2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Myristic acid ethyl ester is supplied as a solution in ethanol. To change the solvent, simply evaporate the ethanol under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as DMSO and dimethyl formamide purged with an inert gas can be used. The solubility of myristic acid ethyl ester in these solvents is approximately 20 mg/ml.

Myristic acid ethyl ester is sparingly soluble in aqueous buffers. If aqueous stock solutions are required for biological experiments, they can best be prepared by diluting the organic solvent solution into aqueous buffers or isotonic saline. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

Description

Myristic acid is a saturated fatty acid commonly found in animal and vegetable fats that is frequently used in cosmetics, soaps, perfumes, and flavorings. It increases low density lipoprotein cholesterol making it one of the most hypercholesterolemic of the saturated fatty acids.[1] Myristic acid ethyl ester is a more hydrophobic form of the free acid. It is a marker of excessive ethanol consumption that can be isolated from the hair of an individual.[2]

References

1. Hughes, T.A., Heimberg, M., Wang, X., *et al.* Comparative lipoprotein metabolism of myristate, palmitate, and stearate in normolipidemic men. *Metabolism* **45(9)**, 1108-1118 (1996).
2. Hartwig, S., Auwärter, V., and Pragst, F. Fatty acid ethyl esters in scalp, public, axillary, beard, and body hair as markers for alcohol misuse. *Alcohol & Alcoholism* **38(2)**, 163-167 (2003).

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