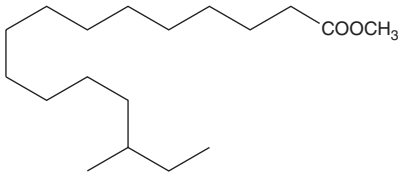
PRODUCT INFORMATION

14-methyl Palmitic Acid methyl ester

Item No. 24821

CAS Registry No.: 2490-49-5
Formal Name: 14-methyl-hexadecanoic acid, methyl ester
Synonyms: Methyl 14-methylhexadecanoate, SFE 18:0
MF: $C_{18}H_{36}O_2$
FW: 284.5
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

14-methyl Palmitic acid methyl 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 14-methyl palmitic acid methyl ester in these solvents is approximately 20 mg/ml.

Description

14-methyl Palmitic acid methyl ester is a methylated fatty acid methyl ester that has been found in *A. indica* leaf extract, *S. alboflavus* TD-1, and as a minor component in biodiesel produced from *C. sorokiniana* microalgae.[1-3] It is a volatile compound released by maize that reduces growth of *F. verticillioides* in a concentration-dependent manner.[4] 14-methyl Palmitic acid methyl ester has been used as a standard for the quantification of 14-methyl palmitic acid (Item No. 24820) in various foods by GC-MS.[5]

References

1. Ravi, S., Shanmugam, B., Subbaiah, G.V., *et al.* Identification of food preservative, stress relief compounds by GC-MS and HR-LC/Q-TOF/MS; evaluation of antioxidant activity of *Acalypha indica* leaves methanolic extract (in vitro) and polyphenolic fraction (in vivo). *J. Food Sci. Technol.* **54(6)**, 1585-1596 (2017).
2. Wang, Z., Wang, C., Li, F., *et al.* Fumigant activity of volatiles from *Streptomyces alboflavus* TD-1 against *Fusarium moniliforme* Sheldon. *J. Microbiol.* **51(4)**, 477-483 (2013).
3. Dong, T., Wang, J., Miao, C., *et al.* Two-step *in situ* biodiesel production from microalgae with high free fatty acid content. *Bioresour. Technol.* **136**, 8-15 (2013).
4. Fauguel, C.M., Campos-Bermudez, V.A., Iglesias, J., *et al.* Volatile compounds released by maize grains and silks in response to infection by *Fusarium verticillioides* and its association with pathogen resistance. *Plant Pathol.* **66(7)**, 1128-1138 (2016).
5. Thurnhofer, S. and Vetter, W. Application of ethyl esters and d_3-methyl esters as internal standards for the gas chromatographic quantification of transesterified fatty acid methyl esters in food. *J. Agric. Food Chem.* **54(9)**, 3209-3214 (2006).

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