

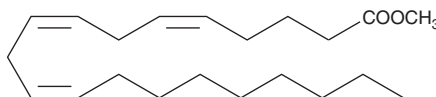
PRODUCT INFORMATION



5(Z),8(Z),11(Z)-Eicosatrienoic Acid methyl ester

Item No. 9000215

CAS Registry No.: 14602-39-2
Formal Name: 5Z,8Z,11Z-eicosatrienoic acid, methyl ester
Synonyms: Mead Acid methyl ester, SFE 21:3
MF: C₂₁H₃₆O₂
FW: 320.5
Purity: ≥98%
Supplied as: A 5 mg/ml solution in hexane
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

Mead Acid methyl ester is supplied as a solution in hexane. To change the solvent, simply evaporate the mead acid methyl ester under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as ethanol, DMSO, and dimethyl formamide purged with an inert gas can be used. The solubility of mead acid methyl ester in these solvents is approximately 100 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. If an organic solvent-free solution of mead acid methyl ester is needed, it can be prepared by evaporating the hexane and directly dissolving the neat oil in aqueous buffers. For greater aqueous solubility, mead acid methyl ester can be directly dissolved in 0.1 M Na₂CO₃ (solubility of 1 mg/ml) and then diluted with PBS (pH 7.2) to achieve the desired concentration or pH. We do not recommend storing the aqueous solution for more than one day.

Description

Mead acid is a 20-carbon ω-9 polyunsaturated fatty acid. Its level is elevated in plasma during essential fatty acid deficiency in humans.^{1,2} 5(Z),8(Z),11(Z)-Eicosatrienoic Acid methyl ester (Mead acid methyl ester) is typically used as a standard for the analysis of fatty acids, when the fatty acids have been transesterified to methyl esters before analysis.^{3,4}

References

1. Siguel, E.N., Chee, K.M., Gong, J., *et al.* Criteria for essential fatty acid deficiency in plasma as assessed by capillary column gas-liquid chromatography. *Clin. Chem.* **33**(10), 1869-1873 (1987).
2. Farrell, P.M., Gutcher, G.R., Palta, M., *et al.* Essential fatty acid deficiency in premature infants. *Am. J. Clin. Nutr.* **48**, 220-229 (1988).
3. Lepage, G. and Roy, C.C. Direct transesterification of all classes of lipids in a one-step reaction. *J. Lipid Res.* **27**, 114-120 (1986).
4. Masood, A., Stark, K.D., and Salem Jr., N. A simplified and efficient method for the analysis of fatty acid methyl esters suitable for large clinical studies. *J. Lipid Res.* **46**, 2299-2305 (2005).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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