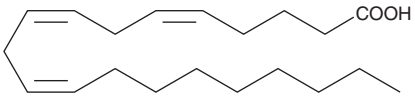
PRODUCT INFORMATION

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

Item No. 90190

CAS Registry No.: 20590-32-3
Formal Name: 5Z,8Z,11Z-eicosatrienoic acid
Synonyms: Mead Acid, FA 20:3
MF: $C_{20}H34O_2$
FW: 306.5
Purity: ≥98%
Supplied as: A 10 mg/ml solution in ethanol
Storage: -20°C
Stability: ≥4 years
Special Conditions: Oxygen and light sensitive



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

Laboratory Procedures

Eicosatrienoic acid (mead acid) 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 mead acid in these solvents is approximately 100 mg/ml.

Mead acid is sparingly soluble in aqueous buffers. 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 is needed, it can be prepared by evaporating the ethanol and directly dissolving the neat oil in aqueous buffers. Mead acid can be directly disolved in 0.1 M sodium carbonate (1.7 mg/ml) and then diluted with PBS (pH 7.2) to achieve the desired concentration or pH. Store aqueous solutions of mead acid on ice and use within 12 hours of preparation. Although the aqueous solution of mead acid may be stable for more than 12 hours, we strongly recommend using a fresh preparation each day.

Description

Mead acid accumulates in the tissues of animals fed diets deficient in both ω-3 and ω-6 fatty acids. It can be converted to 3-series cysteinyl-leukotrienes but cannot serve as a COX substrate.[1] The kidneys from essential fatty acid deficient rats are less immunogenic when transplanted, and the metabolites of eicosatrienoic acid are believed to play a role in altering the immune status of these organs.[2]

References

1. Lefkowith, J.B. Essential fatty acid deficiency: Probing the role of arachidonate in biology. *Adv. Prostaglandin Thromboxane Leukotriene Res.* **20,** 224-231 (1990).
2. Schreiner, G.F., Flye, W., Brunt, E., *et al.* Essential fatty acid depletion of renal allografts and prevention of rejection. *Science* **240(4855),** 1032-1033 (1988).

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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