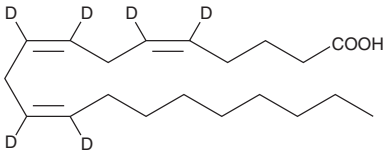
PRODUCT INFORMATION

5(Z),8(Z),11(Z)-Eicosatrienoic Acid-d_6

Item No. 10742

Formal Name:	5Z,8Z,11Z-eicosatrienoic-5,6,8,9,11,12-d_6 acid
Synonym:	Mead Acid-d_6
MF:	$C_{20}H_{28}D_6O_2$
FW:	312.5
Chemical Purity:	≥98% (5(Z),8(Z),11(Z)-Eicosatrienoic Acid)
Deuterium Incorporation:	≥99% deuterated forms (d_1-d_6); ≤1% d_0
Supplied as:	A solution in methyl acetate
Storage:	-20°C
Stability:	≥1 year



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

Laboratory Procedures

5(Z),8(Z),11(Z)-Eicosatrienoic acid-d_6 (mead acid-d_6) is intended for use as an internal standard for the quantification of mead acid (Item No. 90190) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated *versus* unlabeled).

Mead acid-d_6 is supplied as a solution in methyl acetate. To change the solvent, simply evaporate the methyl acetate 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-d_6 in these solvents is approximately 100 mg/ml.

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,** 1032-1033 (1988).

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