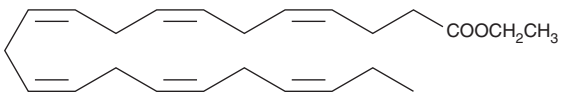
PRODUCT INFORMATION

Docosahexaenoic Acid ethyl ester

Item No. 9090310

CAS Registry No.: 81926-94-5
Formal Name: 4Z,7Z,10Z,13Z,16Z,19Z-docosahexaenoic acid, ethyl ester
Synonyms: C22:6(4Z,7Z,10Z,13Z,16Z,19Z) ethyl ester, Cervonic Acid ethyl ester, DHA ethyl ester, DHA-EE, Ethyl Docosahexaenoate, SFE 24:6
MF: $C_{24}H_{36}O_2$
FW: 356.5
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

Docosahexaenoic acid ethyl ester (DHA 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 ethanol, DMSO, and dimethyl formamide (DMF) purged with an inert gas can be used. The solubility of DHA ethyl ester in ethanol is approximately 500 mg/ml and is approximately 100 mg/ml in DMSO and DMF.

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 DHA ethyl ester is needed, it can be prepared by evaporating the ethanol and directly dissolving the neat oil in aqueous buffers. The solubility of DHA ethyl ester in PBS (pH 7.2) is approximately 0.15 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

DHA ethyl ester is an esterified form of the ω-3 fatty acid DHA (Item Nos. 90310 | 17950). DHA ethyl ester increases plasma and erythrocyte membrane DHA levels in rats without altering the content of the ω-6 fatty acid arachidonic acid (Item Nos. 90010 | 90010.1 | 10006607) when administered in the diet at a dose equivalent to 8 mg/kg of DHA.[1] DHA ethyl ester (300 mg/kg per day) reduces the number of reference memory errors in an eight-arm radial maze in 100-week old rats.[2] Formulations containing DHA ethyl ester, in combination with EPA ethyl ester, have been used as adjuncts in the treatment of hypertriglyceridemia.

References

1. Valenzuela, A., Valenzuela, V., Sanhueza, J., *et al.* Effects of supplementation with docosahexaenoic acid ethyl ester and sn-2 docosahexaenyl monoacylglyceride on plasma and erythrocyte fatty acids in rats. *Ann. Nutr. Metab.* **49(1)**, 49-53 (2005).
2. Gamoh, S., Hashimoto, M., Hossain, S., *et al.* Chronic administration of docosahexaenoic acid improves the performance of radial arm maze task in aged rats. *Clin. Exp. Pharmacol. Physiol.* **28(4)**, 266-270 (2001).

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