PRODUCT INFORMATION

Docosahexaenoic Acid methyl ester
Item No. 10006865

CAS Registry No.: 2566-90-7
Formal Name: 4Z,7Z,10Z,13Z,16Z,19Z-docosahexaenoic acid, methyl ester
Synonyms: Cervonic Acid methyl ester, DHA methyl ester
MF: C23H34O2
FW: 342.5
Purity: ≥98%
Supplied as: A solution in ethanol
Storage: -20°C
Stability: ≥1 year

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

Laboratory Procedures

Docosahexaenoic acid methyl ester (DHA 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 DHA 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 DHA methyl ester is needed, it can be prepared by evaporating the ethanol and directly dissolving the neat oil in aqueous buffers. The solubility of DHA methyl 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 is an essential fatty acid and the most abundant ω-3 fatty acid in neural tissues, especially in the retina and brain. DHA constitutes as much as 40% of the total polyunsaturated fatty acid pool in retinal and neuronal membranes. Supplementation of dietary DHA using fish oil inhibits the progression of atherosclerosis and delays photoreceptor degeneration in retinitis pigmentosa. Neonatal DHA deprivation causes developmental defects and can lead to hypertension in rats. DHA methyl ester is a less water soluble ester version of the free acid, but more amenable for the formulation of fatty acid-containing diets and dietary supplements.

References