

PRODUCT DATA SHEET

Docosahexaenoic acid (all *cis*-4,7,10,13,16,19)

Catalog number: 1136

Common Name: DHA; C22:6 (all *cis*-4,7,10,13,16,19) *omega*-3 Fatty acid

Source: natural, algae

Solubility: ethyl ether, hexane, methylene chloride, ethanol, DMSO, DMF

CAS number: 6217-54-5

Molecular Formula: C₂₂H₃₂O₂

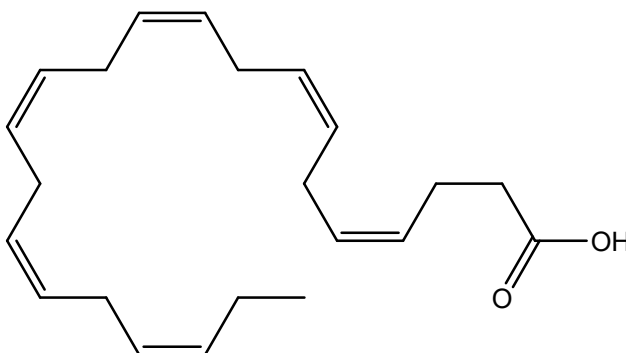
Molecular Weight: 329

Storage: -20°C

Purity: TLC 99%, GC 99%

TLC System: hexane/ethyl ether/acetic acid (85:15:1 by vol.)

Appearance: liquid



Application Notes:

This product is an ideal standard for analysis and for use in biological systems. Docosahexaenoic acid (DHA) is a major component of fish oils, animal phospholipids, and algae. Supplements of this acid are widely popular due to possible improvements in cognitive and behavioral functions, sight defects, inflammation disorders, and cancer.¹ It is essential to many neurological functions and is present in very high levels in the mammalian brain, brain synaptosomal plasma membranes and synaptic vesicles. It is essential for the early neural development of mammals² and it inhibits the prostaglandin synthase-cyclooxygenase enzymes. DHA is the precursor of the docosanoids which have potent anti-inflammatory and immuno-regulatory actions. In the retina it is a major structural component of the photoreceptor outer segment membranes. DHA can depress prostaglandin E₂ production and, along with EPA, has been shown to cause a significant growth inhibition of human lung carcinoma.³

Selected References:

1. F. Muskiet et al. "Is Docosahexaenoic Acid (DHA) Essential? Lessons from DHA Status Regulation, Our Ancient Diet, Epidemiology and Randomized Controlled Trials" *The Journal of Nutrition*, Vol. 134 pp. 183-186, 2004
2. N. Salem et al. "Mechanisms of Actions of Docosahexaenoic Acid in the Nervous System" *Lipids*, Vol. 36:9 pp. 945-959, 2001
3. M. de Brava et al. "Effects of an Eicosapentaenoic and Docosahexaenoic Acid Concentrate on a Human Lung Carcinoma Grown in Nude Mice" *Lipids*, Vol. 26:11 pp. 866-870, 1991

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