

# 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:** C<sub>22</sub>H<sub>32</sub>O<sub>2</sub>

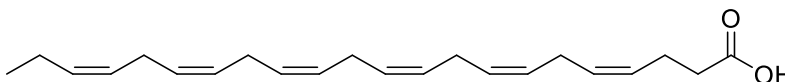
**Molecular Weight:** 329

**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.<sup>1</sup> 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 mammals<sup>2</sup> 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 E<sub>2</sub> production and, along with EPA, has been shown to cause a significant growth inhibition of human lung carcinoma.<sup>3</sup>

### 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

This product is to be used for research only. It is not intended for drug or diagnostic use, human consumption or to be used in food or food additives. Matreya assumes no liability for any use of this product by the end user. We believe the information, offered in good faith, is accurate.