

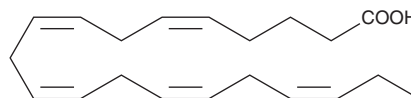
PRODUCT INFORMATION



Eicosapentaenoic Acid (peroxide free)

Item No. 90110.1

CAS Registry No.: 10417-94-4
Formal Name: 5Z,8Z,11Z,14Z,17Z-eicosapentaenoic acid
Synonyms: EPA (peroxide free), Timnodonic Acid (peroxide free)
MF: C₂₀H₃₀O₂
FW: 302.5
Purity: ≥98%
Supplied as: A solution in ethanol containing 0.1% BHT
Storage: -20°C
Stability: ≥1 year
Special Conditions: Oxygen and light sensitive



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

Laboratory Procedures

Eicosapentaenoic acid (peroxide free) is supplied as a solution in ethanol containing 0.1% of the antioxidant BHT (2,6-Di-*tert*-butyl-4-methylphenol).

EPA 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 methanol, DMSO, dimethyl formamide, and acetonitrile purged with an inert gas or nitrogen can be used. 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.

Organic solvent-free solutions of EPA can be prepared using concentrated basic buffers (pH > 8.0 and ionic strength ≥ 0.1 M). Add 400 µl of cold buffer (0°C) per mg of EPA and mix vigorously on a vortex mixer until all the EPA is dissolved. Store aqueous solutions of EPA on ice and use within 12 hours of preparation. Although the aqueous solutions of EPA may be stable for more than 12 hours, we strongly recommend using a fresh preparation each day.

Description

EPA is an ω-3 fatty acid abundantly available in marine organisms.¹ It is oxygenated by COX-1 and COX-2 at rates of about 5% and 30%, respectively, compared to arachidonic acid.² EPA has been shown to offer protection against coronary heart disease, thrombosis, ischemic brain injury, scaly dermatitis, and some inflammatory diseases.^{3,4} Eicosapentaenoic acid (peroxide free) contains the antioxidant BHT (Item No. 89910). BHT-free eicosapentaenoic acid (Item Nos. 90110 | 21908) is also available.

References

1. Henderson, R.J. The production of n-3 polyunsaturated fatty acids in marine organisms. *Lipid Technol.* **11(1)**, 5-10 (1999).
2. Wada, M., DeLong, C.J., Hong, Y.H., *et al.* Enzymes and receptors of prostaglandin pathways with arachidonic acid-derived versus eicosapentaenoic acid-derived substrates and products. *J. Biol. Chem.* **282(31)**, 22254-22266 (2007).
3. Yerram, N.R., Moore, S.A., and Spector, A.A. Eicosapentaenoic acid metabolism in brain microvessel endothelium: Effect on prostaglandin formation. *J. Lipid Res.* **30(11)**, 1747-1757 (1989).
4. Takeuchi, H., Inoue, J., Yoshida, M., *et al.* Dietary effects of n-3 eicosapentaenoic acid on essential fatty acid-deficiency symptoms of rats. *Agric. Biol. Chem.* **53(12)**, 3225-3232 (1989).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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