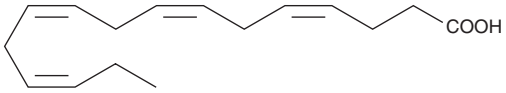
PRODUCT INFORMATION

4(Z),7(Z),10(Z),13(Z)-Hexadecatetraenoic Acid

Item No. 9002202

CAS Registry No.:	29259-52-7
Formal Name:	4Z,7Z,10Z,13Z-hexadecatetraenoic acid
Synonym	C16:4 *n*-3, C16:4(4Z,7Z,10Z,13Z). FA 16:4
MF:	$C_{16}H_{24}O_2$
FW:	248.4
Purity:	≥90%
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

4(Z),7(Z),10(Z),13(Z)-Hexadecatetraenoic acid 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 purged with an inert gas can be used. The solubility of 4(Z),7(Z),10(Z),13(Z)-hexadecatetraenoic acid in these solvents is approximately 50 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 4(Z),7(Z),10(Z),13(Z)-hexadecatetraenoic acid is needed, it can be prepared by evaporating the ethanol and directly dissolving the neat oil in aqueous buffers. The solubility of 4(Z),7(Z),10(Z),13(Z)-hexadecatetraenoic acid in PBS, pH 7.2, is approximately 0.1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

4(Z),7(Z),10(Z),13(Z)-Hexadecatetraenoic acid is a polyunsaturated fatty acid (PUFA) that has been found in algae.[1,2] It inhibits the development of starfish (*A. pectinifera*) embryos past the one-cell stage when used at a concentration of 25 µg/ml.[1]

References

1. Murakami, M., Makabe, K., Yamaguchi, K., *et al.* Cytotoxic polyunsaturated fatty acid from *Pediastrum*. *Phytochemistry* **28(2)**, 625-626 (1989).
2. Ishihara, K., Murata, M., Kaneniwa, M., *et al.* Purification of stearidonic acid (18:4(n-3)) and hexadecatetraenoic acid (16:4(n-3)) from algal fatty acid with lipase and medium pressure liquid chromatography. *Biosci. Biotechnol. Biochem.* **64(11)**, 2454-2457 (2000).

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