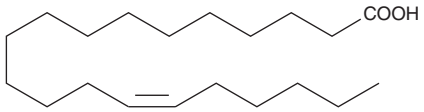
PRODUCT INFORMATION

14(Z)-Eicosenoic Acid

Item No. 10009375

CAS Registry No.: 17735-95-4
Formal Name: 14(Z)-eicosenoic acid
Synonym: FA 20:1
MF: $C_{20}H_{38}O_2$
FW: 310.5
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

14(Z)-Eicosenoic 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 DMSO and dimethyl formamide purged with an inert gas can be used. The solubility of 14(Z)-eicosenoic acid in these solvents is approximately 10 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 14(Z)-eicosenoic acid is needed, it can be prepared by evaporating the ethanol and directly dissolving the neat oil in aqueous buffers. The solubility of 14(Z)-eicosenoic acid in PBS (pH 7.2) is approximately 0.15 mg/ml.

For maximum solubility in aqueous buffers, the ethanolic solution of 14(Z)-eicosenoic acid should be diluted with the aqueous buffer of choice. 14(Z)-Eicosenoic acid has a solubility of approximately 1 mg/ml in a 0.15 M solution of Tris-HCl (pH 8.5) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

14(Z)-Eicosenoic acid is a monounsaturated fatty acid. It is found in small quantities in marine life including the sponge (*Tedania dirhaphis*) and goldfish (*Carassius auratus*).[1,2] Potentially it could be the product of fatty acid chain elongation of 12(Z)-oleic acid.

References

1. Rod'kina, S.A. Fatty acids from the sponge *Tedania dirhaphis*. *Chem. Nat. Compd.* **41(3)**, 289-292 (2005).
2. van Raaij, M.T.M., Breukel, R.-J., van den Thillart, G.E.E.J.M., *et al.* Lipid metabolism of goldfish, *Carassius auratus* (L.) during normoxia and anoxia. Indications for fatty acid chain elongation. *Comp. Biochem. Physiol.* **107B(1)**, 75-84 (1994).

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