Δ²-cis-Hexadecenoic Acid
Item No. 11133

CAS Registry No.: 2825-68-5
Formal Name: 2-hexadecenoic acid
MF: C₁₆H₃₀O₂
FW: 254.4
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid

Laboratory Procedures
For long term storage, we suggest that Δ²-cis-hexadecenoic acid be stored as supplied at -20°C. It should be stable for at least two years.

Δ²-cis-Hexadecenoic acid is supplied as a crystalline solid. A stock solution may be made by dissolving the Δ²-cis-hexadecenoic acid in the solvent of choice. Δ²-cis-Hexadecenoic acid is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of Δ²-cis-hexadecenoic acid in these solvents is approximately 30 mg/ml.

Δ²-cis-Hexadecenoic acid is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, Δ²-cis-hexadecenoic acid should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. Δ²-cis-Hexadecenoic acid has a solubility of approximately 0.25 mg/ml in a 1:7 solution of ethanol:PBS (pH 7.2) using this method.

One of the first organisms in which quorum sensing was observed were Myxobacteria, a group of gram-negative bacteria, found mainly in soil and also common to marine and freshwater systems. The cellular membranes of autotrophic bacteria contain mono-unsaturated fatty acids. The specific composition and abundance of membrane fatty acids can be used to identify specific genera of bacterial populations in natural environments (e.g., mining lakes, etc.). Δ²-cis-Hexadecenoic acid is an unusual fatty acid unique to some Myxococcus species."1

Reference

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