

PRODUCT DATA SHEET

11-Hexadecenoic acid (92% *cis*, 8% *trans*)

Catalog number: 1208

Common Name: C16:1 (*cis*-11/*trans*-11) Fatty acid

Source: synthetic

Solubility: hexane, chloroform, ethanol, methanol

CAS No: 2271-34-3

Molecular Formula: C₁₆H₃₀O₂

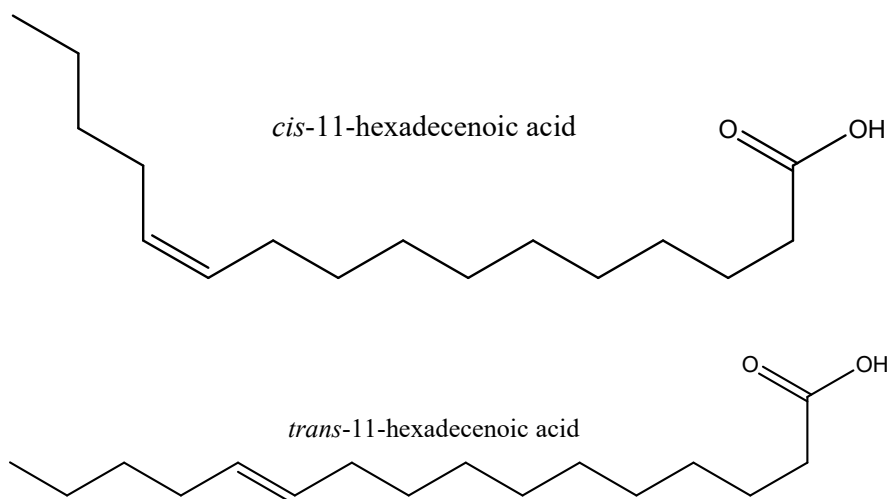
Molecular Weight: 254

Storage: -20°C

Purity: TLC >98%, GC >92% *cis*, <8% *trans*; identity confirmed by MS

TLC System: hexane/ethyl ether/acetic acid (70:30:1 by vol.)

Appearance: liquid



Application Notes:

This high purity monounsaturated fatty acid is ideal as a standard and for use in biological systems. *cis*-11-hexadecenoic acid is found in some insects where it acts as a pheromone precursor.¹ It is the main monoene fatty acid of some organisms, such as the myxobacteria *Cytophaga hutchinsonii*, where it is predominantly found acylated to phosphatidylethanolamine.² *cis*-11-hexadecenoic acid is formed by the *delta* 11-desaturase enzyme from palmitic acid.³

Selected References:

1. H. Wang et al. "Biosynthesis of Unusual Moth Pheromone Components Involves Two Different Pathways in the Navel Orangeworm, *Amyelois transitella*" *J Chem Ecol.*, vol. 36(5) pp. 535-547, 2010
2. R. Walker "Cis-11-hexadecenoic acid from *Cytophaga hutchinsonii* lipids" *Lipids*, vol. 4(1) pp. 15-18, 1969
3. M. Serra et al. "Biosynthesis of 10,12-dienoic fatty acids by a bifunctional Δ^{11} desaturase in *Spodoptera littoralis*" *Insect Biochemistry and Molecular Biology*, vol. 36(8) pp. 634-641, 2006

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