

PRODUCT DATA SHEET

Octadecenoic acid (*cis*-9)

Catalog No: 1022

Common Name: Oleic acid; C18:1 (*cis*-9) Fatty acid

Source: natural, plant

Solubility: chloroform, hexane, ethyl ether

CAS No: 112-80-1

Molecular Formula: C₁₈H₃₄O₂

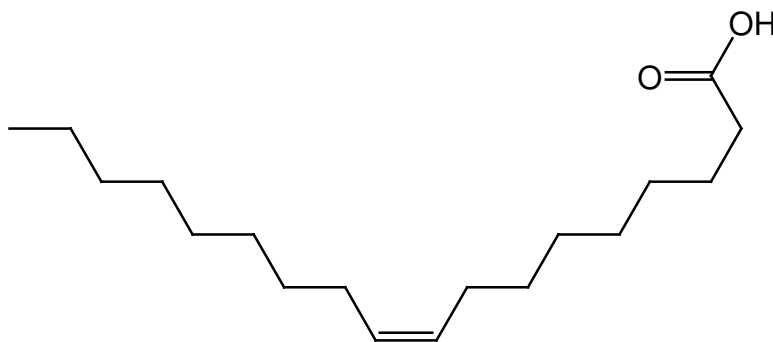
Molecular Weight: 282

Storage: -20°C

Purity: TLC 99%, GC >99%

TLC System: hexane/ethyl ether/acetic acid
(80:20:1 by vol.)

Appearance: liquid



Application Notes:

This product is a high purity unsaturated fatty acid that is ideal as a standard and for use in biological systems. Oleic acid is the most abundant natural monounsaturated fatty acid in plants and animals. Oleic acid and linoleic acid can modulate some of the functions of neutrophils, thereby influencing the inflammatory process.¹ It inhibits protein kinase C activity in lymphocytes, the release of myeloperoxidase, and the chemotaxis of human neutrophils. It can promote necrosis and apoptosis of human lymphocytes and it has been associated with a reduction in cardiovascular disease,² rheumatoid arthritis and a variety of cancers.³ Oleic acid has been demonstrated to be responsible for reducing blood pressure when consumed as a dietary source.⁴ It is an insect pheromone that is released when the insect dies and is a component of pheromones used by other animals. Oleic acid and phosphatidylethanolamine form oleoylethanolamide which has various biological functions such as anorexigenic and body fat loss properties.

Selected References:

1. H. Rodrigues et al. "Dietary Free Oleic and Linoleic Acid Enhances Neutrophil Function and Modulates the Inflammatory Response in Rats" *Lipids*, Vol. 45 pp. 809-819, 2010
2. L. Gillingham et al. "Dietary Monounsaturated Fatty Acids Are Protective Against Metabolic Syndrome and Cardiovascular Disease Risk Factors" *Lipids*, Vol. 46 pp. 209-228, 2011
3. E. Waterman and B. Lockwood "Active components and clinical applications of olive oil." *Altern Med Rev*, Vol. 12 pp. 331-342, 2007
4. S. Teres et al. "Oleic acid content is responsible for the reduction in blood pressure induced by olive oil" *Proc Natl Acad Sci USA*, Vol. 105(37) pp. 13811-13816, 2008

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