

PRODUCT DATA SHEET

Methyl octadecadienoate (all *cis*-9,12)

Catalog number: 1025

Common Name: Methyl linoleate; C18:2
(all *cis*-9,12) methyl ester

Source: natural, plant

Solubility: chloroform, hexane, ethyl ether

CAS number: 112-63-0

Molecular Formula: C₁₉H₃₄O₂

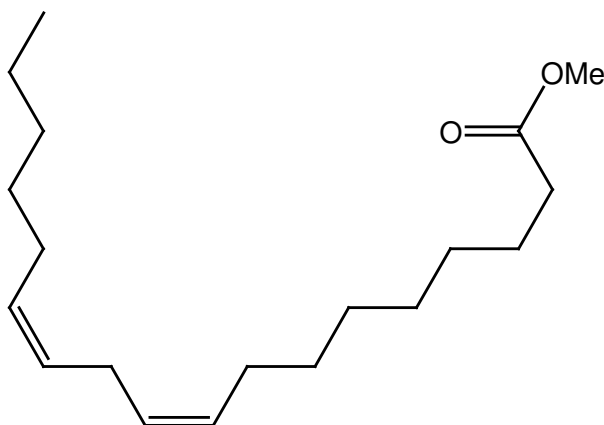
Molecular Weight: 294

Storage: -20°C

Purity: TLC 99%, GC >99%

TLC System: hexane/ethyl ether (80:20)

Appearance: liquid



Application Notes:

This product is a high purity methyl ester fatty acid that is ideal as a standard for gas chromatography. Linoleic acid is an eighteen carbon, *omega*-6 fatty acid that is abundant in many plant oils. It is an essential fatty acid in animals and is the precursor in the synthesis of arachidonic acid and other polyunsaturated fatty acids. The conjugated linoleic acids *cis*-9, *trans*-11 and *trans*-10, *cis*-12 inhibit linoleic acid elongation to eicosadienoic acid.¹ Linoleic acid supplements have been used to try to help prevent cystic fibrosis, dermatitis, and diabetes but the precise mechanisms have proven elusive. It is commonly used in dermatological cosmetics, soaps, and emulsifiers. In some fungus linoleic acid is converted to oxylipins, important compounds of the fungal life cycle,² and it may play a direct role in the epidermal permeability barrier.³

Selected References:

1. L. Chuang et al. "Inhibitory effect of conjugated linoleic acid on linoleic acid elongation in transformed yeast with human elongase" *Lipids*, Vol. 36(10), pp. 1099-1103, 2001
2. M. Wadman et al. "Conversion of linoleic acid into novel oxylipins by the mushroom *Agaricus bisporus*" *Lipids*, Vol. 40(11) pp. 1163-1170, 2005
3. P. Elias, B. Brown, V. Ziboh "The Permeability Barrier in Essential Fatty Acid Deficiency: Evidence for a Direct Role for Linoleic Acid in Barrier Function" *Journal of Investigative Dermatology*, Vol.74 pp. 230-233, 1980

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