

PRODUCT DATA SHEET

Methyl 9(E),11(E)-octadecadienoate

Catalog No: 1257

Common Name: Methyl esters of CLA
(9-*trans*,11-*trans*)

Source: synthetic

Solubility: ethanol, methanol, hexane,
chloroform

CAS No: 13038-47-6

Molecular Formula: C₁₉H₃₄O₂

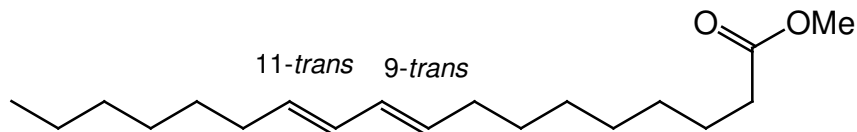
Molecular Weight: 294

Storage: -20°C

Purity: TLC > 98%, GC > 98%;
identity confirmed by MS

TLC System: hexane/ethyl ether (85:15)

Appearance: liquid



Application Notes:

This product is a methyl ester of 9(E),11(E)-Octadecadienoic acid, a conjugated linoleic acid (CLA) which is an isomer of linoleic acid. CLA is found mostly in lipids originating in ruminant animals including dairy products. It has several biological properties including anti-carcinogenic activity, suppressing *in vitro* growth of human melanoma, colorectal, and breast cancer cells, and exhibiting anti-atherogenic activity.¹ It is thought that CLA itself may not have anti-oxidant capabilities but may produce substances which protect cells from the detrimental effects of peroxides. 9(E),11(E)-CLA is a minor component in natural sources of CLA and is used as a marker for free radical activity. Also, due to its being a minor component it is very helpful as a comparison to the major isomers 9(Z),11(E)-CLA and 10(E),12(Z)-CLA. 9(E),11(E)-CLA can exert antiinflammatory effects by increasing an endogenous repressor of IL-1 signaling². It can induce expression of genes involved in lipid metabolism of human macrophages and is a dietary occurring agonist of liver X receptor alpha.³

Selected References:

1. H. MacDonald "Conjugated Linoleic Acid and Disease Prevention: A Review of Current Knowledge" *Journal of the American College of Nutrition*, Vol. 19 pp. 111S-118S, 2000
2. Y. Lee, J. Thompson and J. Heuvel "9E,11E-Conjugated Linoleic Acid Increases Expression of the Endogenous Antiinflammatory Factor, Interleukin-1 Receptor Antagonist, in RAW 264.7 Cells" *The Journal of Nutrition*, Vol. 139:10 pp. 1861-1866, 2009
3. J. Ecker et al. "The conjugated linoleic acid isomer *trans*-9,*trans*-11 is a dietary occurring agonist of liver X receptor alpha" *Biochemical and biophysical research communications*, Vol. 388:4 pp. 660-666, 2009

This product is to be used for research only. It is not intended for drug or diagnostic use, human consumption or to be used in food or food additives. Matreya assumes no liability for any use of this product by the end user. We believe the information, offered in good faith, is accurate.