

PRODUCT DATA SHEET

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

Catalog No: 1255

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

Source: synthetic

Solubility: ethanol, methanol, hexane, chloroform

CAS No: 13058-52-1

Molecular Formula: C₁₉H₃₄O₂

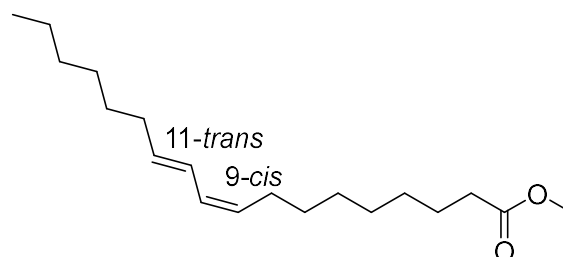
Molecular Weight: 294

Storage: -20°C

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

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

Appearance: liquid



IUPAC Name: (9Z,11E)octadeca-9,11-dienoate

Application Notes:

This product is a methyl ester and is ideal as a gas chromatography standard. 9(Z),11(E)-Octadecadienoic acid is a conjugated linoleic acid (CLA), 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(Z),11(E)-Octadecadienoic acid is the major natural isomer of CLA constituting 73% to 93% of the total CLA in dairy products² and it appears to be the most biologically active isomer. It appears to enhance animal growth and inhibit osteoclast formation and activity from human cells,³ as well as decrease LDL:HDL and total:HDL cholesterol levels in humans.⁴

Selected References:

1. Helen B. MacDonald "Conjugated Linoleic Acid and Disease Prevention: A Review of Current Knowledge" *Journal of the American College of Nutrition*, Vol. 19, No. 90002, 111S-118S, 2000
2. M. Belury, "DIETARY CONJUGATED LINOLEIC ACID IN HEALTH: Physiological Effects and Mechanisms of Action" *Annual Review of Nutrition* July Vol. 22: 505, 2002
3. Ilana Platt, Ahmed El-Soheby "Effects of 9-*cis*,11-*trans* and 10-*trans*,12-*cis* CLA on osteoclast formation and activity from human CD14+ monocytes" *Lipids in Health and Disease*, 8:15, 2009
4. S. Tricon, et al. "Opposing effects of *cis*-9,*trans*-11 and *trans*-10,*cis*-12 conjugated linoleic acid on blood lipids in healthy humans" *The American Journal of Clinical Nutrition*, 80:614, 2004

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.