10(E), 12(Z)-Octadecadienoic acid

Catalog No: 1249
Common Name: 10-trans, 12-cis CLA
Source: synthetic
Solubility: chloroform, ethanol, hexane, methanol
CAS No: 2420-56-6
Molecular Formula: C₁₈H₃₂O₂
Molecular Weight: 280
Storage: -20°C
Purity: TLC: >98%; GC: >98%;
TLC System: hexane/ethyl ether/acetic acid
(80:20:1 by Vol.)
Appearance: liquid

Application notes:
10(E), 12(Z)-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. Animals fed a diet containing high levels of CLA have been observed to have improved feed efficiency (lean body mass increased while body fat decreased) and this seems to be due, mainly or exclusively, to the 10(E), 12(Z)-Octadecadienoic acid.² However, this isomer appears to increase oxidative stress and inflammatory biomarkers in obese men, which can lead to insulin resistance.³,⁴ 10(E), 12(Z)-Octadecadienoic acid increases LDL:HDL cholesterol and total:HDL cholesterol in humans.

Selected References:
3. Ulf Risérus, MMed, Samar Basu, PhD; Stefan Jovinge, MD, PhD; Gunilla Nordin Fredriksson, PhD; Johan Ärnlöv, MD; Bengt Vessby, MD, PhD “Supplementation With Conjugated Linoleic Acid Causes Isomer-Dependent Oxidative Stress and Elevated C-Reactive Protein” Circulation, 106:1925, 2002

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.