**PRODUCT DATA SHEET**

**Methyl α-eleostearate**

**Catalog No:** 1233  
**Other Name:** Methyl 9(Z),11(E),13(E)-octadecatrienoate; α-eleostearic acid methyl ester; Conjugated linolenic acid methyl ester; CLnA  
**Source:** natural, plant  
**Solubility:** hexane, ethanol, methanol, chloroform  

**CAS No:** 4175-47-7  
**Mol. Formula:** C_{19}H_{32}O_{2}  
**Mol. Weight:** 293  
**Storage:** -20°C  
**Purity:** TLC, GC > 98%; identity confirmed by MS  
**TLC System:** Hexane/Ethyl ether 80:20 by vol.  
**Appearance:** liquid  

**Application Notes:**  
α-eleostearic acid is a conjugated linolenic acid (CLnA) that is found in high amounts in several natural oils, including tung oil. CLnAs contain 3 or 4 double bonds (which can be any combination of cis or trans) and predominantly 9,11,13- and 8,10,12-octadecatrienoic acid positional isomers. Research indicates that CLnAs possess strong anti-diabetic, antiobesity, anti-proliferative, and anticarcinogenic activities as well as a significant affect on lipid metabolism. Some studies suggest that punicic acid and other CLnAs can reduce adipose tissue in mouse models, making it potentially useful as a weight-controlling lipid. CLnAs, including punicic, jacaric, and α-eleostearic acids, have been shown to suppress tumor cell growth through lipoperoxidation and apoptotic pathways and exhibit potent anti-inflammatory effects. In addition α-eleostearic acid has been show to be significantly involved in the anti-adiposity function of mice.

**Selected References:**  
7. G. Chen et al. The anti-adiposity effect of bitter melon seed oil is solely attributed to its fatty acid components. Lipids Health Dis. Vol. 16(186) pp. 1-10, 2017

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