

## PRODUCT DATA SHEET

### Methyl heptadecenoate (*cis*-10)

**Catalog number:** 1203

**Common Name:** C17:1 (*cis*-10) Methyl ester

**Source:** synthetic

**Solubility:** chloroform, hexane, ethyl ether

**CAS number:** 75190-82-8

**Molecular Formula:** C<sub>18</sub>H<sub>34</sub>O<sub>2</sub>

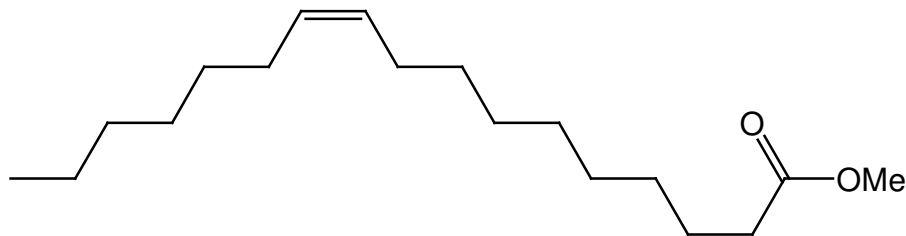
**Molecular Weight:** 282

**Storage:** -20°C

**Purity:** TLC: 99%, GC >99%

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

**Appearance:** liquid



### **Application Notes:**

This high purity monounsaturated fatty acid methyl ester is ideal as a standard and for biological systems. *cis*-10-heptadecenoic acid has been claimed to be a minor component of ruminant fats but this finding has recently been disputed with *cis*-9-heptadecenoic acid being identified as the fatty acid in question.<sup>1</sup> *cis*-10-Heptadecenoic acid has been shown to have some inhibitory activity against human cancer cells HL-60 although less than some other saturated long chain fatty acids.<sup>2</sup> This fatty acid has a *cis* double bond at an even carbon (carbon 10) and therefore cannot be enzymatically degraded via the usual *beta*-oxidation pathway. Instead, a reductase-isomerase or an epimerase pathway must be employed in the metabolism of this fatty acid.<sup>3</sup>

### **Selected References:**

1. S. Alves et al. "Short Communication: The Nature of Heptadecenoic Acid in Ruminant Fats" *Journal of Dairy Science*, vol. 89 pp. 170-173, 2006
2. M. Fukuzawa et al. "Possible involvement of long chain fatty acids in the spores of *Ganoderma lucidum* (Reishi Houshi) to its anti-tumor activity" *Biol Pharm Bull*, vol. 31 pp. 1933-1937, 2008
3. L. Allenbach and Y. Poirier "Analysis of the Alternative Pathways for the  $\beta$ -Oxidation of Unsaturated Fatty Acids Using Transgenic Plants Synthesizing Polyhydroxyalkanoates in Peroxisomes" *Plant Physiology*, vol. 124 pp. 1159-1168, 2000

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