

PRODUCT DATA SHEET

Heptadecenoic acid (*cis*-10)

Catalog number: 1204

Common names: C17:1 (*cis*-10) Fatty acid

Source: synthetic

Solubility: chloroform, hexane, ethyl ether

CAS number: 29743-97-3

Molecular Formula: C₁₇H₃₂O₂

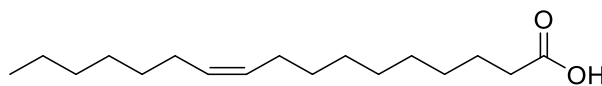
Molecular Weight: 268

Storage: -20°C

Purity: TLC: 99%, GC: 99%

TLC System: hexane/ethyl ether/acetic acid
(70:30:1 by vol.)

Appearance: liquid



Application Notes:

This high purity monounsaturated fatty acid 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.¹ *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.² 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.³

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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