

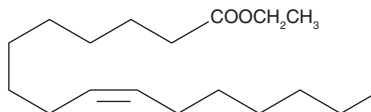
Product Information



Palmitoleic Acid ethyl ester

Catalog No. 10008204

CAS Registry No.:	56219-10-4
Formal Name:	9Z-hexadecenoic acid, ethyl ester
Synonym:	Ethyl Palmitoleate
MF:	C ₁₈ H ₃₄ O ₂
FW:	282.5
Purity:	≥95%
Stability:	≥1 year at -20°C
Supplied as:	A solution in ethanol



Laboratory Procedures

For long term storage, we suggest that palmitoleic acid ethyl ester (ethyl palmitoleate) be stored as supplied at -20°C. It will be stable for at least one year.

Ethyl palmitoleate is supplied as a solution in ethanol. To change the solvent, simply evaporate the ethanol under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as DMSO and dimethyl formamide purged with an inert gas can be used. The solubility of ethyl palmitoleate in these solvents is approximately 30 mg/ml.

Ethyl palmitoleate is sparingly soluble in aqueous buffers. If aqueous stock solutions are required for biological experiments, they can best be prepared by diluting the organic solvent solution into aqueous buffers or isotonic saline. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations.

Palmitoleic acid (9-hexadecenoic acid) is an unsaturated fatty acid that is found in highest concentration in the liver. It is a common component of the glycerides of human adipose tissues. Two other sources of palmitoleic acid are macadamia oil and sea buckthorn oil which contain about 20% and 40% of total fatty acid composition, respectively.^{1,2} Ethyl palmitoleate is a more lipophilic form of the free acid. It is one of the fatty acid ethyl esters that increase cytosolic Ca²⁺ concentration leading to pancreatic acinar cell injury due to excessive consumption of ethanol. Ethyl palmitoleate (10-100 µM) in addition to 850 mM ethanol resulted in sustained, concentration-dependent increases in Ca²⁺ that caused cell death.³ This fatty acid ethyl ester is also a potential biomarker for fetal exposure to alcohol.⁴

References

1. Yang, B. and Kallio, H.P. Fatty acid composition of lipids in sea buckthorn (*Hippophaë rhamnoides* L.) berries of different origins. *J. Agric. Food Chem.* **49**, 1939-1947 (2001).
2. Fard, A.M., Turner, A.G., and Willett, G.D. High-resolution electrospray-ionization fourier-transform ion cyclotron resonance and gas chromatography-mass spectrometry of macadamia nut oil. *Aust. J. Chem.* **56**, 499-508 (2003).
3. Criddle, D.N., Raraty, M.G.T., Neoptolemos, J.P., et al. Ethanol toxicity in pancreatic acinar cells: Mediation by nonoxidative fatty acid metabolites. *Proc. Natl. Acad. Sci. USA* **101**(29), 10738-10743 (2004).
4. Moore, C., Jones, J., Lewis, D., et al. Prevalence of fatty acid ethyl esters in meconium specimens. *Clin. Chem.* **49**(1), 133-136 (2003).

Related Products

Fatty Acid ethyl ester Standard-PAK - Cat. No. 10008188 • Stearic Acid ethyl ester - Cat. No. 10008196 • Myristic Acid ethyl ester - Cat. No. 10008197 • Linoleic Acid ethyl ester - Cat. No. 10008198 • Linolenic Acid ethyl ester - Cat. No. 10008199 • Arachidonic Acid ethyl ester - Cat. No. 10008200 • Oleic Acid ethyl ester - Cat. No. 10008201 • Palmitic Acid ethyl ester - Cat. No. 10008202 • Lauric Acid ethyl ester - Cat. No. 10008203

Cayman Chemical

Mailing address
1180 E. Ellsworth Road
Ann Arbor, MI
48108 USA

Phone
(800) 364-9897
(734) 971-3335

Fax
(734) 971-3640

E-Mail
custserv@caymanchem.com

Web
www.caymanchem.com

WARNING: THIS PRODUCT IS NOT INTENDED OR APPROVED FOR HUMAN OR VETERINARY USE. USE OF THIS PRODUCT FOR HUMAN OR ANIMAL TESTING IS EXTREMELY HAZARDOUS AND MAY RESULT IN DISEASE, SEVERE INJURY, OR DEATH.

MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent under separate cover to the MSDS supervisor at your institution.

WARRANTY AND LIMITATION OF REMEDY

Cayman Chemical Company makes **no warranty or guarantee** of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals hereof. Cayman **warrants only** to the original customer that the material will **meet our specifications at the time of delivery**.

Cayman will carry out its delivery obligations with due care and skill. Thus, in no event will Cayman have **any obligation or liability**, whether in tort (including negligence) or in contract, for any direct, indirect, incidental or consequential damages, even if Cayman is informed about their possible existence.

This limitation of liability does not apply in the case of intentional acts or negligence of Cayman, its directors or its employees.

Buyer's **exclusive remedy** and Cayman's sole liability hereunder shall be limited to a **refund** of the purchase price, or at Cayman's option, the **replacement**, at no cost to Buyer, of all material that does not meet our specifications.

Said refund or replacement is conditioned on Buyer giving written notice to Cayman within thirty (30) days after arrival of the material at its destination. Failure of Buyer to give said notice within thirty (30) days shall constitute a waiver by Buyer of all claims hereunder with respect to said material.

For further details, please refer to our **Warranty and Limitation of Remedy located on our website and in our catalog**.

Copyright Cayman Chemical Company, 12/01/2007