

PRODUCT INFORMATION



Palmitoleic Acid-d₁₄

Item No. 9000431

CAS Registry No.: 184708-66-5

Formal Name: (9Z)-hexadecenoic-
2,2,3,3,4,4,5,5,6,6,7,7,8,8-d₁₄ acid

Synonyms: FA 16:1-d₁₄, 9-cis-Hexadecenoic Acid-d₁₄,
n-7 Palmitoleate-d₁₄, Palmitoleate-d₁₄,
cis-Palmitoleic Acid-d₁₄

MF: C₁₆H₁₆D₁₄O₂

FW: 268.4

Chemical Purity: ≥98% (Palmitoleic acid)

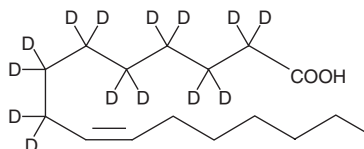
Deuterium

Incorporation: ≥99% deuterated forms (d₁-d₁₄); ≤1% d₀

Supplied as: A 1 mg/ml solution in ethanol

Storage: -20°C

Stability: ≥1 year



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Palmitoleic acid-d₁₄ contains 14 deuterium atoms at the 2, 2', 3, 3', 4, 4', 5, 5', 6, 6', 7, 7', 8, and 8' positions. It is intended for use as an internal standard for the quantification of palmitoleic acid (Item No. 10009871) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated *versus* unlabeled).

Palmitoleic acid-d₁₄ 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 palmitoleic acid-d₁₄ in these solvents is approximately 30 mg/ml.

Description

Palmitoleic acid is an ω-7 monounsaturated fatty acid that is a common constituent of the triglycerides of human adipose tissue. It is found mainly in animal fats, particularly in fish and marine mammals, and is also present in the seeds of plants of the Proteaceae family. In contrast to a diet enriched with oleic acid (Item No. 90260), palmitoleic acid-based diets raise low density lipoprotein (LDL) cholesterol and lower high density lipoprotein (HDL) cholesterol much like that of a saturated fatty acid, even when dietary intake of cholesterol is maintained at a low level.¹

Reference

1. Nestel, P., Clifton, P., and Noakes, M. Effects of increasing dietary palmitoleic acid compared with palmitic and oleic acids on plasma lipids of hypercholesterolemic men. *J. Lipid Res.* **35**, 656-662 (1994).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM