

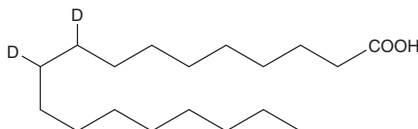
PRODUCT INFORMATION



Stearic Acid-9,10-d₂

Item No. 28868

CAS Registry No.: 57396-97-1
Formal Name: octadecanoic-9,10-d₂ acid
Synonyms: C18:0-d₂, FA 18:0-d₂, Octadecanoic Acid-d₂
MF: C₁₈H₃₄D₂O₂
FW: 286.5
Chemical Purity: ≥95% (Stearic Acid)
Deuterium
Incorporation: ≥99% deuterated forms (d₁-d₂); ≤1% d₀
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

Stearic acid-9,10-d₂ is intended for use as an internal standard for the quantification of stearic acid (Item No. 10011298) 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).

Stearic acid-9,10-d₂ is supplied as a crystalline solid. A stock solution may be made by dissolving the stearic acid-9,10-d₂ in the solvent of choice, which should be purged with an inert gas. Stearic acid-9,10-d₂ is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of stearic acid-9,10-d₂ in these solvents is approximately 25, 10, and 25 mg/ml, respectively.

Description

Stearic acid is a long-chain saturated fatty acid. It is a major component of cocoa butter and has also been found in beef fat and vegetable oils.¹⁻³ Unlike many long-chain saturated fatty acids, dietary stearic acid does not induce hypercholesterolemia or raise LDL-cholesterol.⁴

References

1. Chuparova, E., Chobanov, D., and Popov, A. Quantitative analysis of fatty acids by liquid-partition chromatography. *Izv. Inst. Org. Khim. Bulgar. Akad. Nauk* **2**, 31-35 (1965).
2. Westerling, D.B. and Hedrick, H.B. Fatty acid composition of bovine lipids as influenced by diet, sex and anatomical location and relationship to sensory characteristics. *J. Anim. Sci.* **48(6)**, 1343-1348 (1979).
3. Demirbaş, A. Chemical and fuel properties of seventeen vegetable oils. *Energy Sources* **25(7)**, 721-728 (2003).
4. Grundy, S.M. Influence of stearic acid on cholesterol metabolism relative to other long-chain fatty acids. *Am. J. Clin. Nutr.* **60(Suppl 6)**, 986S-990S (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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