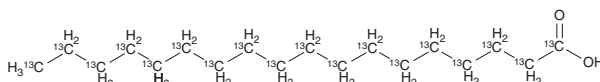


PRODUCT INFORMATION



Stearic Acid-¹³C₁₈ Item No. 45768

CAS Registry No.: 287100-83-8
Formal Name: octadecanoic-¹³C₁₈ acid
Synonyms: C18:0-¹³C₁₈, FA 18:0-¹³C₁₈,
Octadecanoic Acid-¹³C₁₈
MF: [¹³C]₁₈H₃₆O₂
FW: 302.4
Purity: ≥95%
Supplied as: A 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-¹³C₁₈ 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-¹³C₁₈ is supplied as a solid. A stock solution may be made by dissolving the stearic acid-¹³C₁₈ in the solvent of choice, which should be purged with an inert gas. Stearic acid-¹³C₁₈ is slightly soluble (0.1-1 mg/ml) in ethanol.

Description

Stearic acid is a long-chain saturated fatty acid. It is a major component of cocoa butter, milk fats, and hydrogenated oils, but it can also be synthesized endogenously from acetyl-CoA (Item No. 16160).¹ Stearic acid is a poor substrate for triacylglycerol or cholesteryl ester synthesis and is rapidly desaturated into oleic acid (Item Nos. 90260 | 24659) by stearoyl-CoA desaturase *in vivo*. Unlike lauric, myristic, or palmitic acids, stearic acid does not increase plasma LDL in an animal model and reduces hepatic total cholesterol levels.²

References

1. Sampath, H. and Ntambi, J.M. The fate and intermediary metabolism of stearic acid. *Lipids* **40**(12), 1187-1191 (2005).
2. Woollett, L.A., Spady, D.K., and Dietschy, J.M. Regulatory effects of the saturated fatty acids 6:0 through 18:0 on hepatic low density lipoprotein receptor activity in the hamster. *J. Clin. Invest.* **89**(4), 1133-1141 (1992).

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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