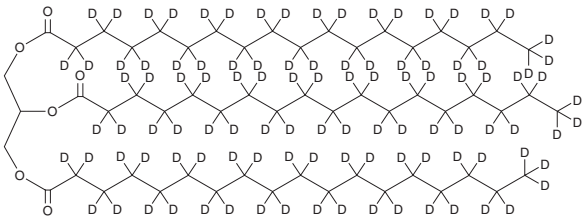
PRODUCT INFORMATION

1,2,3-Tristearoyl Glycerol-d_{105}

Item No. 28867

CAS Registry No.: 125941-88-0
Formal Name: octadecanoic-d_{35} acid, 1,2,3-propanetriyl ester
Synonyms: Glycerol Trioctadecanoate-d_{105}, TG(18:0/18:0/18:0)-d_{105}, Trioctadecanoyl Glycerol-d_{105}, Tristearin-d_{105}
MF: $C_{57}H_5D_{105}O_6$
FW: 997.1
Chemical Purity: ≥95% (1,2,3-Tristearoyl Glycerol)
Deuterium Incorporation: ≥99% deuterated forms (d_1-d_{105}); ≤1% d_0
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

1,2,3-Tristearoyl glycerol-d_{105} is intended for use as an internal standard for the quantification of 1,2,3-tristearoyl glycerol (Item No. 23335) 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).

1,2,3-Tristearoyl glycerol-d_{105} is supplied as a crystalline solid. A stock solution may be made by dissolving the 1,2,3-tristearoyl glycerol-d_{105} in the solvent of choice, which should be purged with an inert gas. 1,2,3-Tristearoyl glycerol-d_{105} is soluble in the organic solvent chloroform at a concentration of approximately 10 mg/ml.

Description

1,2,3-Tristearoyl glycerol is a triacylglycerol that contains stearic acid (Item No. 10011298) at the *sn*-1, *sn*-2, and *sn*-3 positions. It has been found in beef fat and fully hydrogenated soybean, rapeseed, cottonseed, and palm oils.[1] 1,2,3-Tristearoyl glycerol has been used to form the lipid matrices of solid lipid nanoparticles.[2] Formulations containing 1,2,3-tristearoyl glycerol have been used as skin conditioners and thickening agents in cosmetics.

References

1. deMan, L., deMan, J.M., and Blackman, B. Polymorphic behavior of some fully hydrogenated oils and their mixtures with liquid oil. *J. Am. Oil. Chem. Soc.* **66**, 1777–1780 (1989).
2. Esposito, E., Sguizzato, M., Drechsler, M., *et al.* Data on scaling up and in vivo human study of progesterone lipid nanoparticles. *Data Brief* **14**, 639-642 (2017).

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