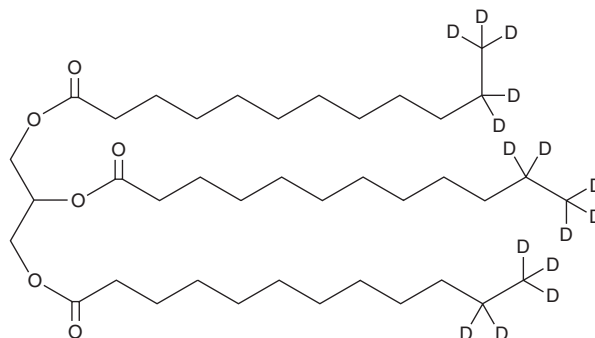


PRODUCT INFORMATION



1,2,3-Trilauroyl-d₁₅ Glycerol Item No. 43075

CAS Registry No.: 1219805-25-0
Formal Name: propane-1,2,3-triyl tris(dodecanoate-11,11,12,12,12-d₅)
Synonyms: Glycerol Tridodecanoate-d₁₅, Glycerol Trilaurate-d₁₅, TG(12:0-d₅/12:0-d₅/12:0-d₅), Tridodecanoin-d₁₅, Tridodecanoyl-d₁₅ Glycerol, Trilaurin-d₁₅
MF: C₃₉H₅₉D₁₅O₆
FW: 654.1
Chemical Purity: ≥98% (1,2,3-Trilauroyl Glycerol)
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₁₅); ≤1% d₀
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

1,2,3-Trilauroyl-d₁₅ glycerol is intended for use as an internal standard for the quantification of 1,2,3-trilauroyl glycerol (Item No. 23336) 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-Trilauroyl-d₁₅ glycerol is supplied as a solid. A stock solution may be made by dissolving the 1,2,3-trilauroyl-d₁₅ glycerol in the solvent of choice, which should be purged with an inert gas. 1,2,3-Trilauroyl-d₁₅ glycerol is slightly soluble (0.1-1 mg/ml) in chloroform.

Description

1,2,3-Trilauroyl glycerol is a triacylglycerol that contains lauric acid (Item No. 10006626) at the *sn*-1, *sn*-2, and *sn*-3 positions and is a component of coconut and seed oils.^{1,2} It increases the activity of HMG-CoA reductase in rat intestine and the production of cholesterol in the rat jejunal and ileal epithelium when administered at a dose of 10% (w/w) in the diet.³ A nanoemulsion of 1,2,3-trilauroyl glycerol (0.2%, w/v) is virucidal against severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and H1N1 influenza A virus in infected MDCK cells.⁴ 1,2,3-Trilauroyl glycerol has been used in the formation of solid lipid nanoparticles (SLNs) for the delivery of paclitaxel (Item No. 10461) in SKOV3 ovarian cancer cells.⁵ Formulations containing 1,2,3-trilauroyl glycerol have been used in cosmetics as skin conditioners and thickening agents.

References

1. Komaram, A.C., Anjaneyulu, E., Goswami, K., *et al.* *J. Food Sci. Technol.* **58**(11), 4420-4428 (2021).
2. Litchfield, C., Miller, E., Harlow, R.D., *et al.* *Lipids* **2**(4), 345-350 (1967).
3. Oku, H. and Sugano, M. *J. Nutr.* **115**(7), 880-889 (1985).
4. Weerapol, Y., Manmuan, S., Limmatvapirat, S., *et al.* *OpenNano* **17**, 100207 (2024).
5. Xu, W., Lim, S.-J., and Lee, M.-K. *J. Microencapsul.* **30**(8), 755-761 (2013).

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.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 03/20/2025

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