

PRODUCT INFORMATION



1,2,3-Trilauroyl Glycerol

Item No. 23336

CAS Registry No.: 538-24-9
Formal Name: dodecanoic acid, 1,1',1''-(1,2,3-propanetriyl) ester

Synonyms: Glycerol Trilaurate, NSC 4061, TG(12:0/12:0/12:0), Tridodecanoate, Tridodecanoin, Tridodecanoyl Glycerol, Trilaurin, Trilauroylglycerol

MF: C₃₉H₇₄O₆

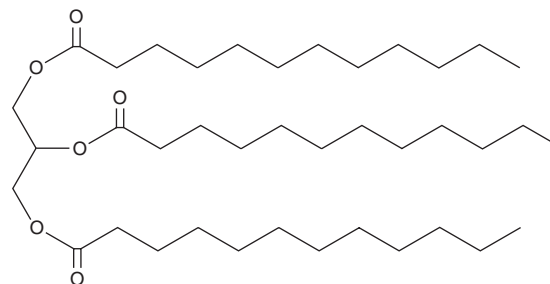
FW: 639.0

Purity: ≥95%

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-Trilauroyl glycerol is supplied as a crystalline solid. A stock solution may be made by dissolving the 1,2,3-trilauroyl glycerol in the solvent of choice. 1,2,3-Trilauroyl glycerol is soluble in organic solvents such as ethanol and dimethyl formamide, which should be purged with an inert gas. The solubility of 1,2,3-trilauroyl glycerol in these solvents is approximately 1 and 20 mg/ml, respectively.

Description

1,2,3-Trilauroyl glycerol is a triacylglycerol found in dietary fats.¹ 1,2,3-Trilauroyl glycerol increases HMG-CoA reductase activity and cholesterol synthesis in the jejunum of rats fed a diet containing it at 10% (w/w).² Formulations containing 1,2,3-trilauroyl glycerol are used in cosmetic products to condition skin and as thickening agents.³ 1,2,3-Trilauroyl glycerol is also used to form the lipid matrices of solid lipid nanoparticles (SLNs).⁴

References

1. Litchfield, C., Miller, E., Harlow, R.D., *et al.* The triglyceride composition of 17 seed fats rich in octanoic, decanoic, or lauric acid. *Lipids* **2**(4), 345-350 (1967).
2. Oku, H., and Sugano, M. Dietary fat dependence of intestinal 3-hydroxy-3-methylglutaryl coenzyme A (HMG-CoA) reductase activity in rats. *J. Nutr.* **115**(7), 880-889 (1985).
3. Johnson, W., Jr., and C.I.R.E. Panel. Final report on the safety assessment of trilaurin, triarachidin, tribehenin, tricaprin, tricaprilyn, trierucin, triheptanoin, triheptylundecanoin, triisononanoin, triisopalmitin, triisostearin, trilinolein, trimyristin, trioctanoin, triolein, tripalmitin, tripalmitolein, triricinolein, tristearin, triundecanoin, glyceryl triacetyl hydroxystearate, glyceryl triacetyl ricinoleate, and glyceryl stearate diacetate. *Int. J. Toxicol.* **20** (Suppl 4), 61-94 (2001).
4. Mohtar, N., Khan, N.A.K., and Darwis, Y. Solid lipid nanoparticles of atovaquone based on 2(4) full-factorial design. *Iran J. Pharm. Res.* **14**(4), 989-1000 (2015).

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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