

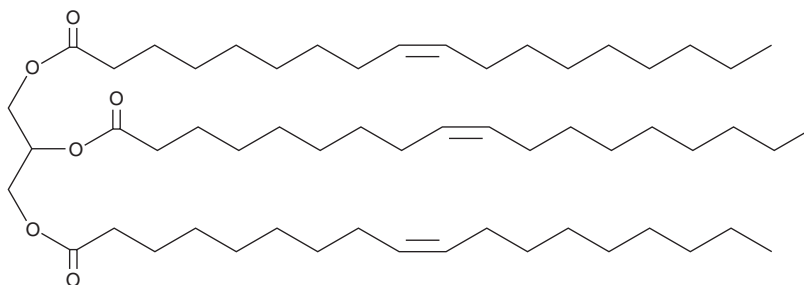
# PRODUCT INFORMATION



## 1,2,3-Trioleoyl Glycerol

Item No. 26871

**CAS Registry No.:** 122-32-7  
**Formal Name:** 9Z-octadecenoic acid, 1,1',1''-(1,2,3-propanetriyl) ester  
**Synonyms:** Glyceryl Trioleate, TG(18:1/18:1/18:1), Triolein  
**MF:** C<sub>57</sub>H<sub>104</sub>O<sub>6</sub>  
**FW:** 885.4  
**Purity:** ≥50%  
**Supplied as:** A neat oil  
**Storage:** -20°C  
**Stability:** ≥1 year



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

### Laboratory Procedures

1,2,3-Trioleoyl glycerol is supplied as a neat oil. A stock solution may be made by dissolving the 1,2,3-trioleoyl glycerol in the solvent of choice, which should be purged with an inert gas. 1,2,3-Trioleoyl glycerol is miscible in organic solvents such as ethanol, DMSO, and dimethyl formamide.

### Description

1,2,3-Trioleoyl glycerol is a triacylglycerol that contains oleic acid (Item Nos. 90260 | 24659) at the *sn*-1, *sn*-2, and *sn*-3 positions. It inhibits oxidized LDL-induced decreases in cell viability and superoxide dismutase (SOD) and glutathione peroxidase (GPX) activities and increases in apoptosis in endothelial cells when used at a concentration of 10 μM.<sup>1</sup> 1,2,3-Trioleoyl glycerol has been found in sunflower, corn, and extra virgin olive oils.<sup>2,3</sup> It has been used as a standard for the quantification of triacylglycerols in extra virgin olive oil by high temperature gas chromatography-(ionic trap)mass spectrometry (HTGC-(IT)MS).<sup>3</sup> 1,2,3-Trioleoyl glycerol is a major component of Lorenzo's oil.<sup>4</sup>

### References

1. Luo, T., Deng, Z.Y., Li, X.P., *et al.* Triolein and trilinolein ameliorate oxidized low-density lipoprotein-induced oxidative stress in endothelial cells. *Lipids* **49**(5), 495-504 (2014).
2. Gao, B., Luo, Y., Lu, W., *et al.* Triacylglycerol compositions of sunflower, corn and soybean oils examined with supercritical CO<sub>2</sub> ultra-performance convergence chromatography combined with quadrupole time-of-flight mass spectrometry. *Food Chem.* **218**, 569-574 (2017).
3. Ruiz-Samblás, C., Rodríguez-Cuadros, L., González-Casado, A., *et al.* A straightforward quantification of triacylglycerols (and fatty acids) in monovarietal extra virgin olive oils by high-temperature. *GC. Anal. Methods* **4**(3), 753-758 (2012).
4. Moser, H.W., Moser, A.B., Hollandsworth, K., *et al.* "Lorenzo's oil" therapy for X-linked adrenoleukodystrophy: Rationale and current assessment of efficacy. *J. Mol. Neurosci.* **33**(1), 105-113 (2007).

#### 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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