

# PRODUCT INFORMATION



## MEL-A

Item No. 33858

**Formal Name:** (2R,3S,4S,5R,6R)-5-acetoxy-6-(acetoxymethyl)-2-((2S,3R)-2,3,4-trihydroxybutoxy)tetrahydro-2H-pyran-3,4-diyl dipropionate

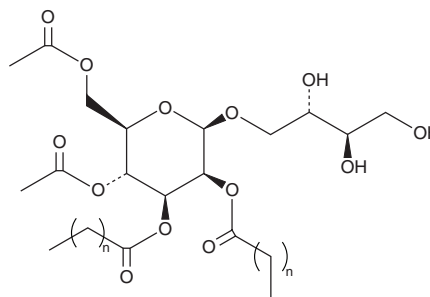
**Synonym:** Mannosylerythritol Lipid A

**Purity:** ≥95% (mixture of congeners)

**Supplied as:** A neat oil

**Storage:** -20°C

**Stability:** ≥2 years



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

### Laboratory Procedures

MEL-A is supplied as a neat oil. A stock solution may be made by dissolving the MEL-A in the solvent of choice, which should be purged with an inert gas. MEL-A is soluble in organic solvents such as ethanol and chloroform. The solubility of MEL-A in these solvents is approximately 10 mg/ml.

### Description

MEL-A is a glycolipid biosurfactant that is produced from vegetable oils by *Pseudozyma* yeasts.<sup>1,2</sup> Mixtures of MEL-A isoforms have been used as moisturizing agents in cosmetics, as well as to improve the low-temperature fluidity of biodiesel and hydrocarbon fuels.<sup>1,3</sup> This product is a mixture of MEL-A isoforms with variable fatty acid chain lengths.

### References

1. Imura, T., Hikosaka, Y., Worakitkanchanakul, W., *et al.* Aqueous-phase behavior of natural glycolipid biosurfactant mannosylerythritol lipid A: Sponge, cubic, and lamellar phases. *Langmuir* **23**(4), 1659-1663 (2007).
2. Im, J.H., Nakane, T., Yanagishita, H., *et al.* Mannosylerythritol lipid, a yeast extracellular glycolipid, shows high binding affinity towards human immunoglobulin G. *BMC Biotechnol.* **1**, 5 (2001).
3. Madihalli, C., Sudhakar, H., and Doble, M. Mannosylerythritol lipid-A as a pour point depressant for enhancing the low-temperature fluidity of biodiesel and hydrocarbon fuels. *Energ. Fuel.* **30**(5), 4118-4125 (2016).

#### 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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