

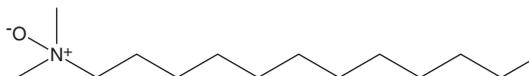
PRODUCT INFORMATION



LDAO

Item No. 25699

CAS Registry No.: 1643-20-5
Formal Name: N,N-dimethyl-1-dodecanamine, N-oxide
Synonyms: Dimethyldodecylamine N-oxide, Lauramine Oxide, Lauryldimethylamine Oxide, N-Lauryldimethylamine N-oxide
MF: C₁₄H₃₁NO
FW: 229.4
Purity: ≥95%
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥2 years



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

Laboratory Procedures

LDAO is supplied as a crystalline solid. A stock solution may be made by dissolving the LDAO in the solvent of choice. LDAO is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of LDAO in these solvents is approximately 15, 0.1, and 0.3 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of LDAO can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of LDAO in PBS, pH 7.2, is approximately 0.1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

LDAO is a zwitterionic detergent that can be used to solubilize membrane proteins.¹ It has a critical micelle concentration (CMC) of 1-2 mM. LDAO has been used to solubilize and extract colicin A from the plasma membrane and for inactivation of enveloped viruses.^{2,3} It has also been used in combination with 1-decanoyl-*rac*-glycerol (10MAG) to encapsulate proteins and nucleic acids dissolved in low viscosity fluids.³

References

1. Metola, A., Bouchet, A.M., Alonso-Mariño, M., *et al.* Purification and characterization of the colicin A immunity protein in detergent micelles. *Biochim. Biophys. Acta Biomembr.* **1859(11)**, 2181-2192 (2017).
2. Conley, L., Tao, Y., Henry, A., *et al.* Evaluation of eco-friendly zwitterionic detergents for enveloped virus inactivation. *Biotechnol. Bioeng.* **114(4)**, 813-820 (2017).
3. Dodevski, I., Nucci, N.V., Valentine, K.G., *et al.* Optimized reverse micelle surfactant system for high-resolution NMR spectroscopy of encapsulated proteins and nucleic acids dissolved in low viscosity fluids. *J. Am. Chem. Soc.* **136(9)**, 3465-3474 (2014).

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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