

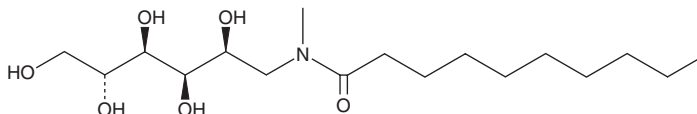
# PRODUCT INFORMATION



## MEGA-10

Item No. 25703

**CAS Registry No.:** 85261-20-7  
**Formal Name:** 1-deoxy-1-[methyl(1-oxodecyl)amino]-D-glucitol  
**Synonym:** N-decanoyl-N-Methylglucamine  
**MF:** C<sub>17</sub>H<sub>35</sub>NO<sub>6</sub>  
**FW:** 349.5  
**Purity:** ≥98%  
**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

MEGA-10 is supplied as a crystalline solid. A stock solution may be made by dissolving the MEGA-10 in the solvent of choice, which should be purged with an inert gas. MEGA-10 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of MEGA-10 in ethanol is approximately 1 mg/ml and approximately 30 mg/ml in DMSO and DMF.

MEGA-10 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, MEGA-10 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. MEGA-10 has a solubility of approximately 0.33 mg/ml in a 1:2 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

MEGA-10 is a nonionic detergent that can be used to solubilize membrane proteins.<sup>1</sup> It has a critical micelle concentration (CMC) of 4.88 mM under no salt conditions, which decreases in the presence of sodium chloride.<sup>2</sup> MEGA-10 has been used to reconstitute amino acid transporters from rat liver plasma membrane vesicles into artificial phospholipid membranes.<sup>3</sup> It has also been used to solubilize the melibiose transport carrier from *E. coli* membranes and reconstitute it into liposomes.<sup>4</sup>

### References

1. Hildreth, J.E.K. N-D-Gluco-N-methylalkanamide compounds, a new class of non-ionic detergents for membrane biochemistry. *Biochem. J.* **207**(2), 363-366 (1982).
2. Molina-Bolívar, J.A., Hierrezuelo, J.M., and Carnero Ruiz, C. Self-assembly, hydration, and structures in N-decanoyl-N-methylglucamide aqueous solutions: Effect of salt addition and temperature. *J. Colloid. Interface Sci.* **313**(2), 656-664 (2007).
3. Quesada, A.R. and McGivan, J.D. A rapid method for the functional reconstitution of amino acid transport systems from rat liver plasma membranes. Partial purification of System A. *Biochem J.* **255**(3), 963-969 (1988).
4. Hanatani, M., Nishifuji, K., Futai, M., *et al.* Solubilization and reconstitution of membrane proteins of *Escherichia coli* using alkanoyl-N-methylglucamides. *J. Biochem.* **95**(5), 1349-1353 (1984).

#### 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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