

n-Dodecyl-beta-D-maltoside, ULTROL(R) Grade CAS 69227-93-6 is a non-ionic detergent similar to n-octyl-beta-D-glucopyranoside, however, increased alkyl chain length has been shown to increase thermal stability of lipid-free rhodopsin in solution.

Art. ID SAF-324355-100GM
Unit 1 x 100 g
Deliverydetails No Dangerous Good /not restricted

Description

Non-ionic detergent similar to n-octyl-beta-D-glucopyranoside, however, increased alkyl chain length has been shown to increase thermal stability of lipid-free rhodopsin in solution. Useful in membrane-protein solubilization studies. Aggregation number: 98., Absorbance (10%, H₂O, 260 nm): <1.0., A water-soluble nonionic detergent. Studies on rhodopsin have shown that alkyl glycosides with longer alkyl chains are better at preserving the protein's properties. In addition, dodecyl maltoside's longer hydrophilic group confers higher solubility in water. This is in contrast to undecyl and dodecyl glucosides, which have low solubility in water. Due to its low CMC, dodecyl maltoside is not easily removed by dialysis. The half time for dialysis is 20 h. This detergent is milder than nonyl glucoside. Of several glycosides tested, dodecyl maltoside was found to be the most useful for the preparation of active cytochrome oxidase from Neurospora. In octyl glucoside, cytochrome oxidase dissociated into its subunits and became inactive. Similarly, beef heart oxidase when equilibrated in octyl glucoside formed a mixture of polymer, dimer, and lower molecular weight forms and underwent denaturation. In contrast, the enzyme, when equilibrated in dodecyl maltoside, was found to exist as a uniform species of 30 kDa, which is consistent with an active dimeric form. Dodecyl maltoside has a critical micelle concentration (CMC) of 100-600 µM and a micellar weight of 70,000. Aggregation number: 98.

Text/Information	Analyte/Parameter	CAS number	Concentration/Value	Unit	Method	Source
	n-Dodecyl beta-D-maltoside	[69227-93-6]				