



Product Information

Triton X-100 Reduced

Product Number **X-100-RS**

Store at Room Temperature

Product Description

CAS Number: 92046-34-9

Density: 1.029 g/ml

Critical micellar concentration (CMC): 0.25 mM¹

pH (1% in water): 4.4-6.0

To make this product, the benzene ring in TRITON™ X-100 has been reduced to a cyclohexane ring.¹ This makes the product useful in the study of fluorescence and UV absorption properties of proteins in solution. The benzene ring in TRITON X-100 has fluorescent and UV absorption properties that overlap those of proteins and nucleic acids (260-280 nm).

TRITON X-100 often preserves the native conformation of proteins isolated from the cellular membrane in solution.^{2,3,4}

It has been reported that a 1% solution of TRITON X-100 reduced did not inhibit enzymatic activity, distort the HPLC resolution of peptides, or contain UV-absorbing contaminants that could interfere with peptide identification.⁵ It has been used in the enzymatic digestion of membrane-bound proteins by either trypsin or endoproteinase Lys-C. The enzymes have activity in the presence of 1% TRITON X-100 reduced, 100 mM Tris HCl, pH 8, for 24 hours at 37 °C.

Precautions and Disclaimer

For Laboratory Use Only. Not for drug, household or other uses.

Preparation Instructions

This product is miscible with water (100 µl/ml, with sonication as necessary), yielding a very slightly hazy, colorless solution.

References

1. Tiller, G. E., et al., Hydrogenation of Triton X-100 eliminates its fluorescence and ultraviolet light absorption while preserving its detergent properties. *Anal. Biochem.*, **141(1)**, 262-266 (1984).
2. Helenius, A. and Simons, K., Solubilization of membranes by detergents. *Biochim. Biophys. Acta*, **415(1)**, 29-79 (1975).
3. Tanford, C. and Reynolds, J. A., Characterization of membrane proteins in detergent solutions. *Biochim. Biophys. Acta*, **457(2)**, 133-170 (1976).
4. Lichtenberg, D., et al., Solubilization of phospholipids by detergents. Structural and kinetic aspects. *Biochim. Biophys. Acta*, **737(2)**, 285-304 (1983).
5. Fernandez, J. et al., Internal protein sequence analysis: enzymatic digestion for less than 10 micrograms of protein bound to polyvinylidene difluoride or nitrocellulose membranes. *Anal. Biochem.*, **201(2)**, 255-264 (1992).

TRITON is a trademark of Union Carbide Corporation, a wholly owned subsidiary of The Dow Chemical Company.

IRB/RXR 12/03

Sigma brand products are sold through Sigma-Aldrich, Inc.

Sigma-Aldrich, Inc. warrants that its products conform to the information contained in this and other Sigma-Aldrich publications. Purchaser must determine the suitability of the product(s) for their particular use. Additional terms and conditions may apply. Please see reverse side of the invoice or packing slip.