

PRODUCT INFORMATION



Polysorbate 80

Item No. 42369

CAS Registry No.: 9005-65-6

Formal Name: poly(oxy-1,2-ethanediyl) derivs. mono-(9Z)-9-octadecenoate sorbitan

Supplied as: A liquid

Storage: -20°C

Stability: ≥4 years

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

Laboratory Procedures

Polysorbate 80 is supplied as a liquid. A stock solution may be made by dissolving the polysorbate 80 in water. We do not recommend storing the aqueous solution for more than one day.

Description

Polysorbate 80 is a nonionic surfactant and emulsifier.^{1,2} It has a critical micelle concentration (CMC) of approximately 13 μ M in water at room temperature.² Polysorbate 80 has been used to solubilize and stabilize proteins and in the formation of cationic nanoparticles, nanostructured lipid carriers (NLCs), and solid lipid nanoparticles (SLNs) and for the delivery of plasmid DNA, siRNA, and small molecules *in vitro* and *in vivo*.¹⁻⁴

References

1. Nayak, V.S., Tan, Z., Ihnat, P.M., *et al.* Evaporative light scattering detection based HPLC method for the determination of polysorbate 80 in therapeutic protein formulations. *J. Chromatogr. Sci.* **50(1)**, 21-25 (2012).
2. Hillgren, A., Lindgren, J., and Aldén, M. Protection mechanism of Tween 80 during freeze-thawing of a model protein, LDH. *Int. J. Pharm.* **237(1-2)**, 57-69 (2002).
3. Hattori, Y. Development of non-viral vector for cancer gene therapy. *Yakugaku Zasshi* **130(7)**, 917-923 (2010).
4. Wang, T., Xue, J., Hu, Q., *et al.* Preparation of lipid nanoparticles with high loading capacity and exceptional gastrointestinal stability for potential oral delivery applications. *J. Colloid. Interface Sci.* **507**, 119-130 (2017).

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.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 11/22/2024

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM