Polyethylene glycol
SigmaUltra

Product Number P 4338
Store at Room Temperature

Product Description
General formula: H(OCH₂CH₂)nOH, average value of n is 75.7.
Average Molecular Weight: 3,350 (3,000-3,700)
CAS Number: 25322-68-3
Melting Point: 54-58 °C
Density: 1.0926 g/ml (60 °C); 1.0764 g/ml (80 °C)
Synonyms: PEG 1000, Carbowax 1000, Macrogol 1000

Trace elemental analyses have been performed on SigmaUltra Polyethylene glycol 3,350. The Certificate of Analysis provides lot-specific results. SigmaUltra Polyethylene glycol 3,350 is for applications which require tight control of elemental content.

Polyethylene glycol (PEG) is a condensation polymer of ethylene oxide and water. PEG's are susceptible to oxidative degradation in the presence of air. Minimizing the exposure of PEG to elevated temperatures and/or exposure to oxygen, or addition of an antioxidant can limit the amount of degradation.

PEG has been used in many different applications. A single-step method is described for the activation of PEG for binding to polypeptides and proteins.¹ PEG has been used in the precipitation of proteins,² as a fusing agent in enhancing the effect of macrophages on hybridoma,³ in the separation and purification of biomolecules,⁴ and in induction of cell hybridization.⁵

PEG is incompatible with phenol and may reduce the antimicrobial action of other preservatives. Both penicillin and bacitracin are rapidly inactivated by PEG. PEG is also incompatible with sorbitol, tannic acid and salicylic acid and may affect the integrity of plastics.⁶

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

Preparation Instructions
PEG is soluble in water (approximately 670 mg/ml, 20 °C). PEGs are also soluble in many polar solvents such as acetone, alcohols, and chlorinated solvents. They are insoluble in nonpolar solvents such as hydrocarbons.

References

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