

NEW ECO-FRIENDLY POLYOXYETHYLENE SURFACTANT

What is it?

- Potential substitute for non-biodegradable Polyoxyethylene detergents
- Purified from EcoSurf™ EH-9, Anapoe® grade ($\leq 20 \mu\text{M}$ of equivalent peroxide)
- Promising for structural biology, general biochemistry as well as molecular biology applications

Why Use it?

- New detergent from the Polyoxyethylene group, which includes widely-used chemicals like Triton, Tween, Genapol, Brij, Thesit, and Lubrol.
- Compliant with recent European ecological regulations [1].
- Original formulation pre-approved by the US EPA to meet the criteria of their Safer Choice label [2].
- Low peroxide content does not disturb protein tertiary structure, making all Anapoe® detergents desirable for structural biology work.

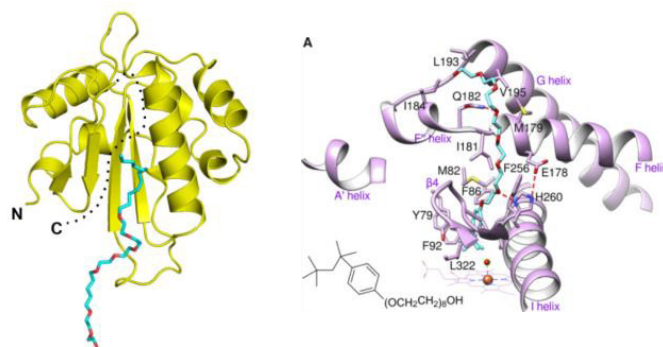
Background

Molecular Formula: $\text{C}_8\text{H}_{18}\text{O} \cdot (\text{C}_3\text{H}_6\text{O})_x \cdot (\text{C}_2\text{H}_4\text{O})_y$
 CAS Number: 64366-70-7
 CMC: $(\text{H}_2\text{O}) \sim 0.11\%$
 pH: 5-8 (1% solution in water)
 Solubility: $\geq 10\%$ (in water at 20°C)
 Peroxide (10% solution): $< 20 \mu\text{M}$
 Supplied as a 10% w/v solution

Ordering Information

Item #	Description	UOFM	UOM Price 2021
APEEH9 10X10 ML	Anapoe® EH-9	EA	\$224
APEEH9 50X1 ML	Anapoe® EH-9	EA	\$240
APEEH9 5X10 M	Anapoe® EH-9	EA	\$128

Supporting Documentation: SDS • CoA



Anapoe® detergents in XRD protein structures

Left: UDPglucose: glycoprotein glucosyltransferase; Anapoe-C12E8 in cyan [3].
 Right: P450 domain of *M. capsulatus* CYP51fx; Anapoe-X-114 in cyan [4].

Applications

- As a substitute for non-compliant detergents and surfactants [1,2]
- Solubilization of cell membranes and proteins
- Reducing surface tension of aqueous solutions
- Structural biology applications (similarly to POE detergents)

References

- [1] <https://echa.europa.eu/authorisation-list>
- [2] <https://www.epa.gov/saferchoice/2017-saferchoice-partner-year-award-winners-innovators#tab-8>
- [3] Zhu et al. Sci Rep 4, 7322 (2014). <https://doi.org/10.1038/srep07322>
- [4] Lamb et al. Mol Biol Evol 38, msaa260- (2020) <https://doi.org/10.1093/molbev/msaa260>
- [5] EcoSurf™ is a trademark of The Dow Chemical Company ("Dow") or an affiliated company of Dow