

Anapoe® Detergents



Polyoxyethylene detergents are available under trade names, such as Triton®, Tween®, Genapol®, Brij®, Thesit®, Lubrol®, etc. In addition to the numerous trade names, industrial grade detergents are often a non-specific mixture of closely related molecules. This may vary from lot-to-lot and may also contain other additives and contaminants that can result in undesirable effects during protein extraction. One such contaminant is peroxide. Light and age can accelerate peroxide formation and concentration⁽¹⁾.

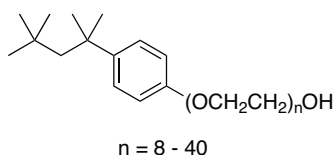
Peroxides in biological systems will react with macromolecules such as membrane proteins and create the potential to inactivate, or even fragment, the molecule^(2,4,6-10). Biochemically speaking, peroxides oxidize the sulfhydryl groups in the protein tertiary structure and interfere with natural protein folding. Tween and Triton often contain hydrogen peroxide levels as high as 0.2%⁽⁵⁾, and these levels build as the product sits on the research shelf in your lab.

To combat these problems, Anatrace® Anapoe® reagents are crafted and purified using chromatography to contain less than 20 µM of equivalent peroxide, supplied as a 10% aqueous solution, and then stored under argon for stability. Anapoe detergents are prepared and enhanced so you get the functionality you need, without the side effects.

FIG. 1. C_xE_y AND TRITON DETERGENTS



$$\begin{aligned} x &= 8 - 12 \\ y &= 5 - 8 \end{aligned}$$



COMMON POLYOXYETHYLENE DETERGENTS	ANAPOE VERSION	PRODUCT NO.	COMMON POLYOXYETHYLENE DETERGENTS	ANAPOE VERSION	PRODUCT NO.
Tween 20	Anapoe-20	APT020	C ₁₂ E ₁₀	Anapoe-C ₁₂ E ₁₀	AP1210
Brij-35	Anapoe-35	APB035	C ₁₃ E ₈	Anapoe-C ₁₃ E ₈	APO138
Brij-58	Anapoe-58	APB058	Nonidet P40 Substitute	Anapoe-NID-P40	APND40
Tween 80	Anapoe-80	APT080	Triton X-100	Anapoe-X-100	APX100
C ₁₀ E ₆	Anapoe-C ₁₀ E ₆	APO106	Triton X-114	Anapoe-X-114	APX114
C ₁₀ E ₉	Anapoe-C ₁₀ E ₉	APO109	Triton X-305	Anapoe-X-305	APX305
C ₁₂ E ₈	Anapoe-C ₁₂ E ₈	APO128	Triton X-405	Anapoe-X-405	APX405
C ₁₂ E ₉	ANAPOE-C ₁₂ E ₉	APO129			

References:

1. Chang, H. W. and Bock, E. (1980) *Anal. Biochem.* **104**, 112-117.
2. Lever, M. (1977) *Anal. Biochem.* **83**, 274-284.
3. Miki, T. and Orii, Y. (1985) *Anal. Biochem.* **146**, 28-34.
4. Jaeger, J., Sorensen, K. and Wolff, J. (1994) *Biochem. Biophys. Methods* **29**, 77-81.
5. Ashani, Y. and Catravas, G. (1980) *Anal. Biochem.* **109**, 55-62.
6. Chang, H. W. (1974) *Proc. Nat. Acad. Sci. USA* **71**, 2113-2117.
7. O'Brien, R. D. and Gibson, R. E. (1975) *ABB* **169**, 458-463.
8. Chang, H. W. and Neumann, E. (1976) *Proc. Nat. Acad. Sci. USA* **73**, 3364-3368.
9. Heath, R. L. and Tappel, A. L. (1976) *Anal. Biochem.* **76**, 184-191.
10. Stutzenberger, F. J. (1992) *Anal. Biochem.* **207**, 249-254.

Anatrace and Anapoe are registered trademarks of Anatrace Products, LLC. All other trademarks are the property of their respective owners.