

Glyoshield™ is an all-natural liquid version of the high-performing biostatic agent Caprylyl Glyceryl Ether (CGE). CGE is an important biolipid (alkyl glyceryl ether) originally found in human breast milk and marine animals (e.g., shark liver oil). It is more stable and effective than glyceryl esters and diols. 100% vegetable origin. The natural replacement for Ethylhexylglycerin.

INCI Caprylyl Glyceryl Ether (and) Glycerin

Guidelines

Add to the water phase up to 90°C. Use at 0.2% to 1.0% as a preservative booster. Use at 0.9% to 1.25% as a deodorant booster.

Up to 0.3% it may give a clear solution in water with the aid of glycols. At higher concentrations, it may give a hazy dispersion.

Benefits

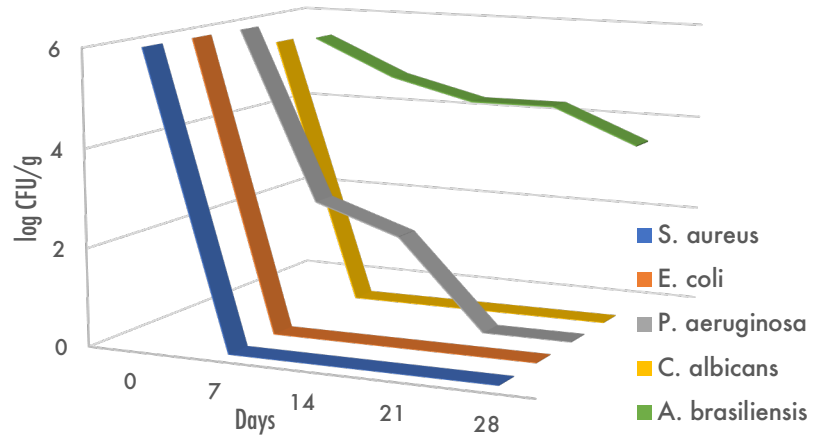
- Easy-to-use liquid blend for all pH ranges.
- Boosts deodorant activity for natural concepts.
- Optimized for effective, stable, gentle, and natural preservation.
- Unlike Glyceryl Caprylate (GMCY), CGE will not degrade at temperatures commonly used in cosmetic production and storage.
- More potent antimicrobial than Ethylhexylglycerin.
- More potent antifungal than Phenoxyethanol and Caprylyl Glycol.
- Superior preservative performance when compared to Hexanediol and Caprylyl Glycol.

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Performance

A) Reliably reduces bacteria and yeast counts in challenge tests (more than 3-log reduction within 7 days):



Challenge test with Glyoshield at 0.85%

*In a similar formulation, Hexanediol and Caprylyl Glycol failed against Staphylococcus aureus and Pseudomonas aeruginosa, respectively, while CGE was highly effective.

Skin lotion pH 4.5*

Water q.s. 100.0%
Xanthan gum 0.5%
Emulsifiers 6.0%
MCT Oil 10.0%
Glyoshield™ 0.85%

B) CGE presents more potent antifungal activity than other conventional materials:

Antimicrobial Activity - MIC (%)*					
Microorganisms		CGE	Phenoxyethanol	Caprylyl Glycol	Ethylhexylglycerin
Bacteria	<i>E. coli</i>	0.19	0.50	0.13	0.25
	<i>P. aeruginosa</i>	0.50	0.50	0.38	1.00
	<i>S. aureus</i>	0.09	1.00	0.38	0.19
Fungi	<i>C. albicans</i>	0.03	0.50	0.25	0.19
	<i>A. brasiliensis</i>	0.03	0.25	0.09	0.09

*MIC is the lowest concentration necessary to inhibit visible growth.