

Biosil Basics SPQ® CE

Tests conducted by TRI Princeton

Ingredient Information

INCI Name: Silicone Quaternium-2 Panthenol Succinate
CAS# 205599-30-0
EINECS# Polymer Exempt

Specifications

Color	Clear to pale yellow (6 max)
Appearance	Clear to hazy liquid
pH (1% sol'n)	5.5 – 7.5
Solids	28 – 32%
Preservative	Ethylhexylglycerin & Caprylyl Glycol

Attributes

- Excellent wet combing characteristics
- Provides anti-breakage benefits
- Superb conditioning and manageability

Applications

- Hair care

Recommended use levels 0.50 – 5.00%

Biosil Basics SPQ® CE is the paraben and phenoxyethanol free version of the original and distinctive ingredient, **Biosil Basics SPQ®**, which combines cationic properties together with a silicone as well as panthenol. It is a water soluble, clear ingredient which can be readily incorporated into formulations requiring clarity.

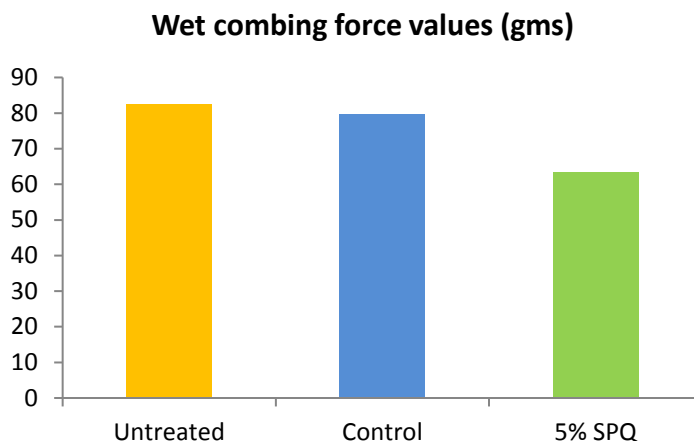
Biosil Basics SPQ® CE is a silicone panthenol quaternary compound that delivers the benefits of panthenol with a highly substantive silicone quat. Panthenol is a humectant, emollient and moisturizer. It spreads evenly on the surface of hair strands, forming a smooth film on the surface of the cuticle. The smooth film provides excellent slip between adjacent strands of hair and detangling properties. Panthenol is capable of penetrating the cuticle and entering the hair shaft as well where it aids in moisture retention and provides volume.

The objective of the studies below was to evaluate shampoos using wet and repeat combing tests. The control shampoo contained no conditioning agent while the test shampoo contained **5% Biosil Basics SPQ®** in the same base formulation.

Wet Combing

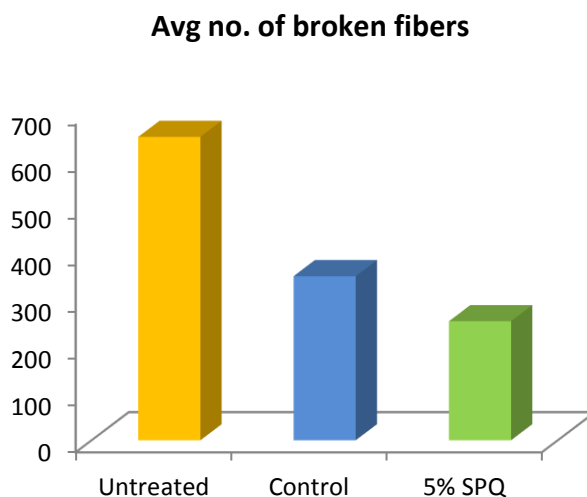
One of the primary technical functions of conditioning ingredients is to lubricate the hair surface to facilitate manageability and mediate damaged feel properties. Thus, protection, conditioning, and manageability claims often arise from performing combing experiments that quantify the lubrication magnitude.

The results of wet combing experiments *conducted by TRI Princeton* show that a beneficial effect in wet manageability for the shampoo containing 5% **Biosil Basics SPQ®** is **significantly better** than the untreated and common control.



Repeat Combing

Surface smoothness and fiber alignment reduces snags, entanglements and abrasion which result in less fiber breakage. As such, experiments that involve counting the number of broken fibers as a function of combing/brushing cycles are often used to make anti-breakage claims.



The results of repeat combing experiments *conducted by TRI Princeton* show the shampoo with 5% **Biosil Basics SPQ®** showed **significantly less broken fibers** compared with the untreated and common control. The shampoo with 5% **Biosil Basics SPQ®** is **2.5x better than untreated and 1.4x better than the common control**.

Storage and Handling

Before handling please read the Safety Data Sheet and container label for safe use, physical and health hazard information. Material must be shaken well prior to use and should not be exposed to freezing conditions.

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