

SILKgel-FX

Texturizing agent / UV Filter Booster



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SILKgel-FX

FOR CENTURIES,
SILK HAS BEEN USED FOR
ITS SOOTHING PROPERTIES.

SILKgel-FX is a new functional ingredient that valorises the silk/skin compatibility.



FOCUS ON THE PRODUCT

SILKgel-FX is a gel composed of microstructures of Fibroin. This silk protein is extremely compatible with water, oil compounds and the skin.

SILKgel-FX provides a good water-oil balance to the skin.

Unlike the common silk materials widely used in skin care, SILKgel-FX, by the conserved structure of the Fibroin, keeps the properties of silk fibers.

CLINICAL EVALUATION

The efficacy of SILKgel-FX as a functional ingredient was assessed by:

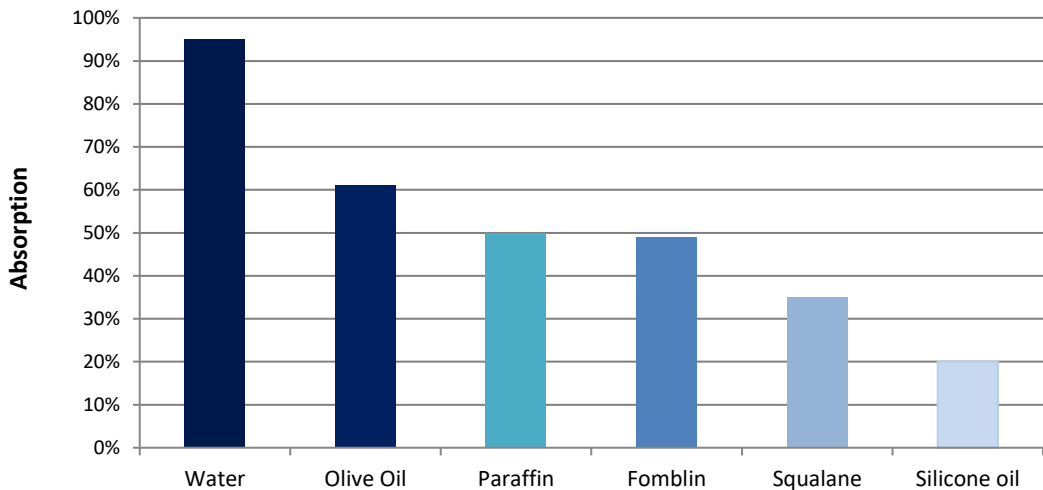
- Evaluating the silicone substitution power of SILKgel-FX
- Measuring the UV filter booster capabilities of SILKgel-FX

FORMULATION PROPERTIES

ABSORPTION CAPABILITY TEST

The absorption capability of SILKgel – FX was tested in water and in 5 oil compounds of interest: olive oil, paraffin, fomblin, squalane and silicone oil. Ingredients were mixed for 20 min without any surfactant.

RESULTS



SILKgel - FX is capable of retaining 95% of its weight in water.

The structure of SILKgel - FX allows it absorbing compounds without emulsifier and so makes it easy to formulate.

SILKgel – FX is compatible with all types of ingredients.

EFFICACY

SILICONE SUBSTITUTION

SUBSTITUTION TEST

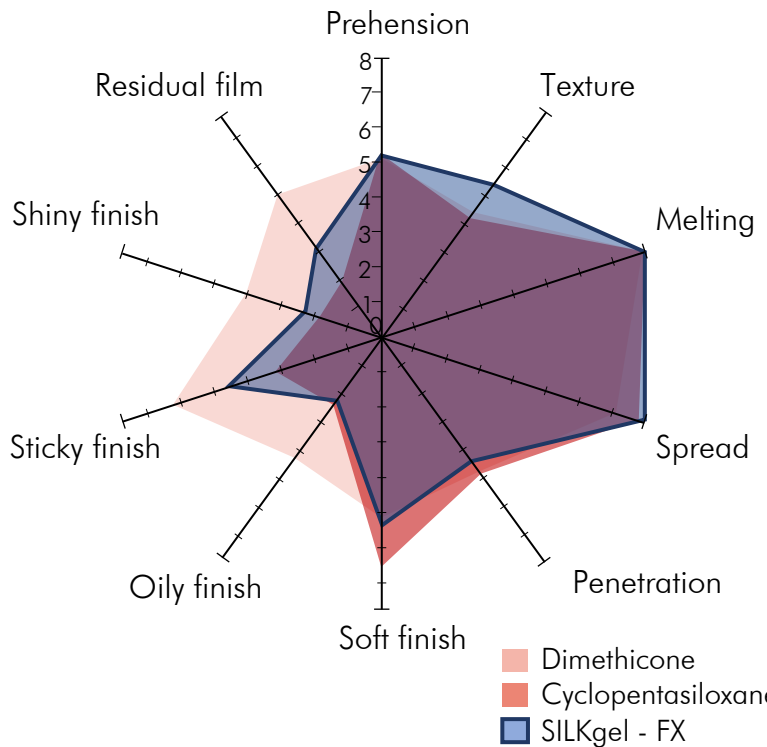
To evaluate the ingredient's potential to be used as a substitute for silicones, a sensory analysis was set up using 10 different criteria (prehension, texture, melting, spread, skin penetration, soft finish, oily finish, sticky finish, shiny finish, and residual film). SILKgel – FX was compared to two conventional silicones, Cyclopentasiloxane and Dimethicone at a concentration of 10%.

SENSORY EVALUATION

SILKgel-FX can be considered to **create a silicone-like film**.

SILKgel-FX obtains ratings that are similar to both silicones for the following criteria: prehension, texture, melting, spread, penetration and soft finish.

SILKgel – FX thanks to its compatibility with oil has mattifying effects. It brings a soft touch to the skin.



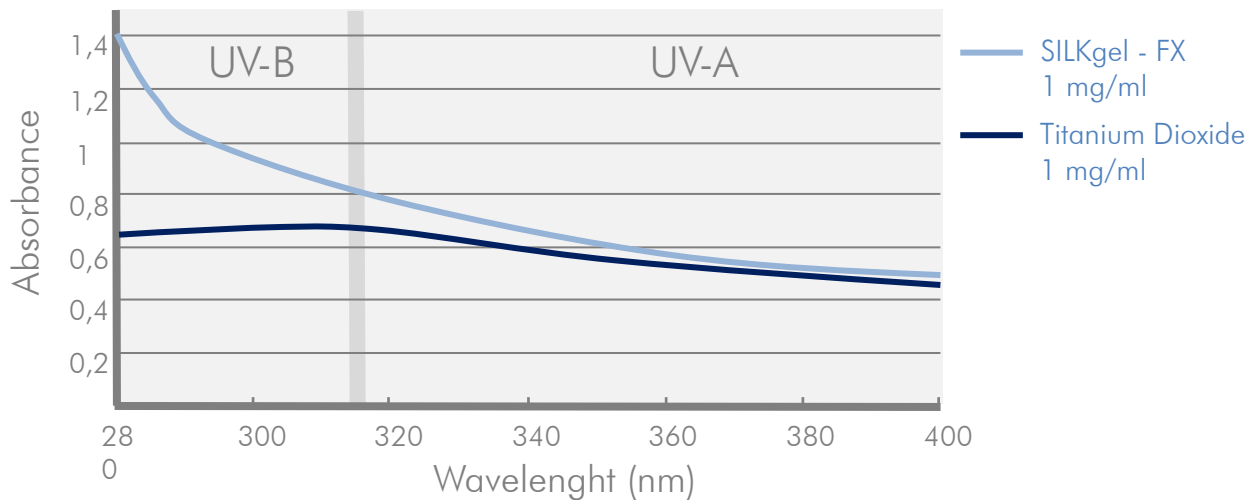
SILKgel – FX is a new alternative to the use of silicones in cosmetic.

UV ABSORBANCE

TEST CONDITIONS

UV absorbance tests were achieved between 280 and 400 nm of SILKgel – FX compared to Titanium Dioxide (TiO_2) at the same concentration.

UV ABSORBANCE RESULTS



SILKgel-FX has a very good UVB absorbance and also retains UVA.

UV tests revealed that SILKgel-FX product is a booster of UV filter which protects the skin from this environmental factor.

SILKgel – FX efficiently absorbs UV radiations.

UV FILTER BOOSTER

TEST CONDITIONS

The same formulation with or without SILKgel-FX was analyzed.

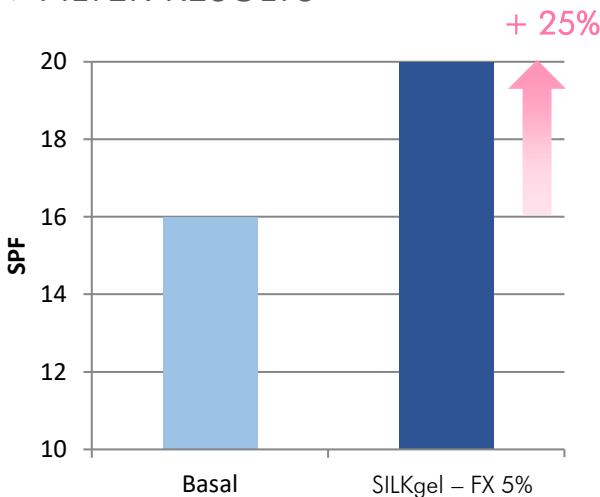
UV spectra were recording using a UVIKON 932 apparatus.

Spectra are recorded between 290 and 400 nm with a resolution of 1nm and a speed of 500 nm/min.

The Solar Protection Factor (SPF) is calculated by the equation of Diffey and Robson.

	Composition
No SILKgel – FX	6% Ethylhexylmethoxycinnamate 3% BMDBM 2% Octocrylene
5% SILKgel – FX	6% Ethylhexylmethoxycinnamate 5% SILKgel – FX 3% BMDBM 2% Octocrylene

UV FILTER RESULTS



The presence of SILKgel – FX boosts the SPF value

SILKgel – FX efficiently boosts UV filtration.

SILKgel-FX

Thanks to its high compatibility with water and oil, SILKgel-FX is an advantage for formulation.

SILKgel – FX power

- Texturizing agent
- Mattifying
- UV filter booster



TECHNICAL INFORMATION

INCI NAME > Fibroin, Water

DOSE OF USE >



SOLUBILITY >

Water
dispersible



ASPECT >

White to slightly ivory
opalescent gel



ODOR > No odor

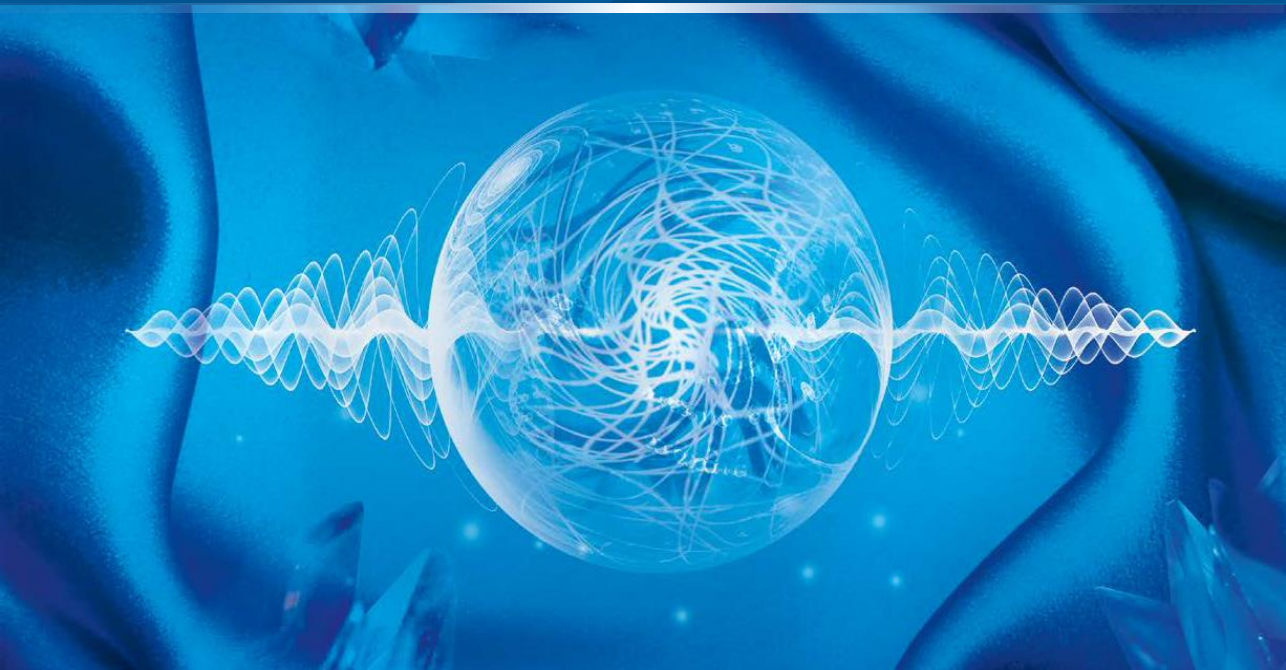
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