

SILPEARL

*The harmonious union of pearls
and the silanol technology*

SATIN-SMOOTH SKIN
MOISTURIZER
ANTI-WRINKLE
SKIN PROTECTION

EXSYMOL
MONACO

SILPEARL

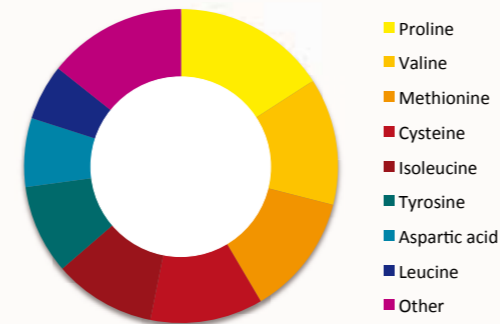
INCI name: SILANETRIOL (and) HYDROLYZED PEARL (and) WATER



Pearl and Beauty

Pearl powder has been used in beauty products for centuries. Indeed, in the Chinese Ming dynasty, it was said that « applying the pearl on the face can make the skin moisturized and glossy [...] comfort the mind and eliminate the poxes and the toxicity ».

Pearl powder is rich in amino-acids, calcium, proteins stimulating cell regeneration and polysaccharides. Recent studies have shown that pearl powder is able to increase skin hydration by reducing trans-epithelial water loss and to promote skin tone uniformity by inhibition of tyrosinase activity.



Pearl powder is rich in amino acid especially in Proline (16%), Valine (13%), Cystein (12%) and Methionine (13%) which has high anti-oxydative properties.

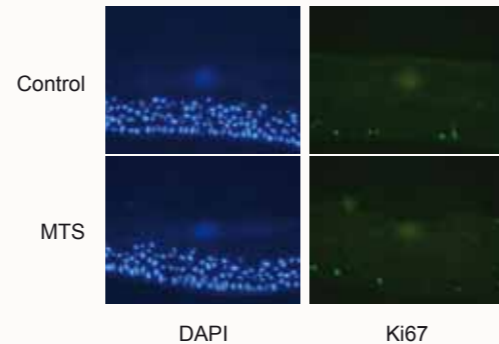
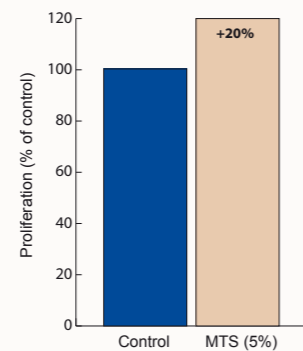
Pearl powder is also very rich in calcium as it composes more than 16% of it. Calcium is involved in epidermis cohesion thus improving defensive capabilities of the skin.

SILPEARL IS THE FUSION OF PEARL POWDER AND ORGANIC SILICIUM FOR MAXIMAL SKIN BENEFITS

Silpearl participates to epidermis renewal

We assessed the ability of organic silicium to stimulate keratinocyte proliferation by measuring the expression of Ki67 (a marker of keratinocyte proliferation).

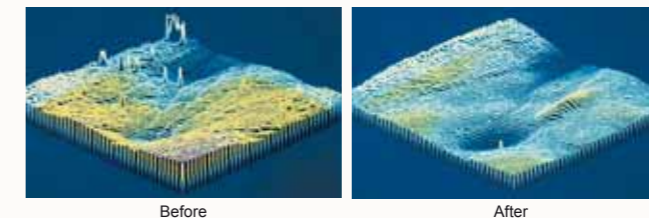
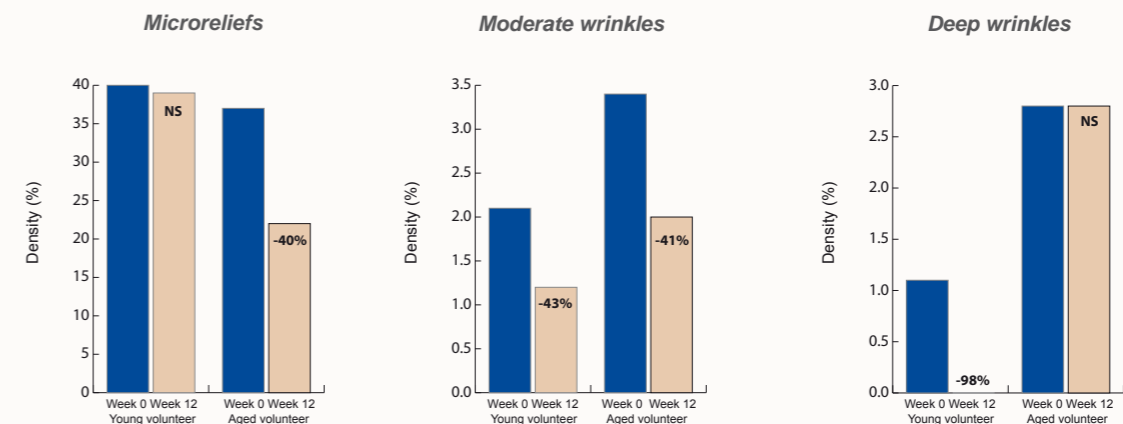
Silpearl stimulates keratinocyte proliferation.



Organic silicium stimulates cell proliferation. The number of proliferative cells in human reconstructed epidermis was assessed by measuring the ratio between proliferative cells (marked in green with Ki67) and the total amount of cells (marked in blue with DAPI).

Silpearl reduces wrinkles

Realized on 15 volunteering women aged 35 to 50, this *in vivo* study demonstrated Silpearl's efficacy to reduce crow feet wrinkles.

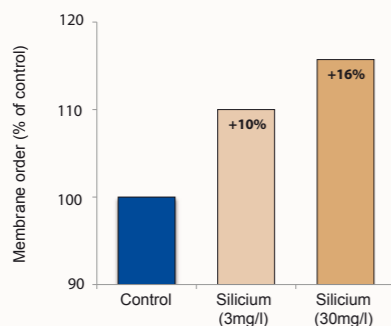


Reduction of wrinkles. In young skin, we observed an obvious reduction of deep (> 112 µm) and moderate (56-110 µm) wrinkles. Deeper wrinkles were turned into microreliefs (4-54 µm) thanks to the treatment with organic silicium. In older skins, the treatment reduced microreliefs and moderate wrinkles, but had no effect on deep wrinkles number as, even if reduced, they were still too deep to be classified as moderate.

After a 12 weeks treatment with a daily administration of organic silicium (Silanetriol 400mg of Si/l in compress), we observed a significant reduction of all types of skin depression.

Silpearl is able to efficiently smooth the skin and to reduce crow feet wrinkles as shown *in vivo*.

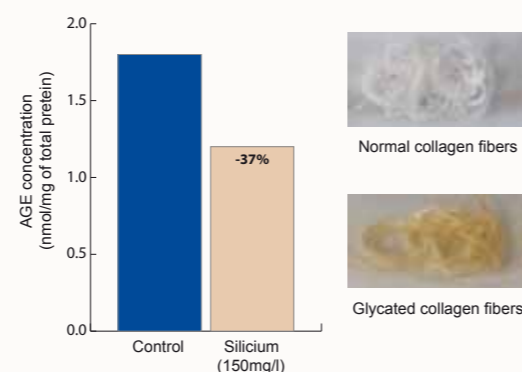
Silpearl protects skin cells from oxidative stress



Cell membrane resistance. Using electron paramagnetic resonance (EPR), we measured fibroblasts' membrane resistance when treated with organic silicium.

Silpearl is able to protect skin cells from free radicals-induced damages.

Silpearl protects collagen fibers from the glycation process



Silpearl is able to prevent protein glycation hence preserving skin tone uniformity and elasticity.

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Silpearl is the combination of pearls for their benefits on the skin and of the silanol technology for an optimized structure of the dermis

COSMETIC APPLICATION

Anti-aging
Skin tone uniformity
Hydration
Satin-smooth skin

ANALYTICAL COMPOSITION

Silanetriol..... 0.3%
 including silicium..... 0.09%
Hydrolyzed pearl..... 1%
Preservatives..... 1.2%
Water..... (SQ)

TECHNICAL CHARACTERISTICS

Limpid colorless liquid.
pH: ≈4-6.
Density at 20°C: ≈1.
Miscible with water, alcohol and glycols.
Non miscible with hexane, mineral and vegetal oils.

PRESERVATIVES

Phenoxyethanol (0.9-1.1%)
Sodium Benzoate (0.15-0.25%)

TOLERANCE AND TOXICITY STUDIES

Silpearl does not show any toxicity. Tolerance studies were performed using both *in vitro* (cell culture and reconstructed epidermis) and *in vivo* (human volunteers) methods.

FORMULATION

Advised doses: 1 to 5 %
No particular formulation restriction.

AVAILABILITIES

Silpearl is available in 5, 30 and 60 kg drums.