

Pseudoalteromonas Ferment Extract

- **Collagen I increases 128% in 15 days**
- **Collagen IV increases 81% in 15 days**
- **Elastin levels increase 31% in 15 days**

During the Antarctic summer of 1988, a Spanish scientific expedition collected mud samples from the inlet Admiralty Bay, on King George Island, Antarctica. A new bacterial strain, *Pseudoalteromonas Antarctica*, was isolated from these samples and characterized.

During growth, the bacteria produced an extracellular material, an exopolymer of glycoproteins believed to help the bacteria retain water, adhere to surfaces, and withstand the extreme cold.

Its protective function in nature is applied in cosmetics to regenerate and protect the skin.

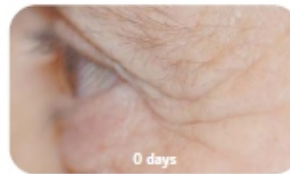
- **Pseudoalteromonas Ferment Extract** helps the skin retain water
- **Pseudoalteromonas Ferment Extract** presents a cryoprotective effect due to its ability to modify the morphology of ice crystals
- **Pseudoalteromonas Ferment Extract** stimulates fibroblast adhesion and keratinocyte growth, regenerating tissues and enabling a faster healing of wounds
- **Pseudoalteromonas Ferment Extract** increases collagen type I and IV, as well as elastin, resulting in a restructured skin and a reduction in wrinkles
- **Pseudoalteromonas Ferment Extract** reduces the depth of expression wrinkles, especially in the forehead and around the eyes

In nature, **Pseudoalteromonas Ferment Extract** has the function of protecting the bacteria against harsh conditions. In cosmetics, **Pseudoalteromonas Ferment Extract** maintains its natural bioprotective properties and promotes keratinocyte growth and fibroblast adhesion for a skin regenerating effect and enhanced wound healing.

In Vitro Test

An in vitro skin model composed of keratinocytes and fibroblasts was used to monitor the levels of Collagen I, Collagen IV and Elastin.

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In Vivo test on volunteers

Skin topography analyses were performed by obtaining silicon imprints from around the eyes of 10 healthy women volunteers.

The product tested was a cream containing 5% *Pseudoalteromonas Ferment Extract* and it was applied twice daily for 30 days.

Silicon imprints were obtained pre-test and after 30 days. Analyses of the imprints were performed by confocal laser scanning microscopy to assess the evolution of the skin surface before and after the treatment. Skin topography images from the three dimensional reconstruction of optical sections are shown in the figure. The depth of the wrinkle decreased significantly, with maximum values between 50 and 60%.