

fensebiome™

peptide

Reconnect with your
origins for healthier skin

prêmio itehpec
de inovação
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GOLD

Strengthening the double barrier function

DESCRIPTION

Heptapeptide that strengthens vulnerable urban skin by promoting microbiota balance, diversity and an increase in beneficial bacteria, characteristics of a healthy skin in higher contact with nature. **fensebiome™ peptide** helps reinforce the skin's microbial and physical barrier function and prevents dehydration.

APPEARANCE

Translucent solution containing 0.05% Acetyl Heptapeptide-4.

INCI

Water (Aqua), Acetyl Heptapeptide-4, Caprylyl Glycol.

USE LEVEL

1%

SOLUBILITY

Water soluble.

Metagenomics analysis on urban skin

SCIENCE

Discomfort, dehydration and scaling are characteristics of sensitive skin lacking an effective defense system. These traits are common among urban individuals. A reduced exposure to nature, linked to modernization, has been shown to increase the risk of inflammatory skin conditions. The underappreciated link between nature and skin health involves the skin microbiota, which provides vital functions to the skin. Research has shown that people in close contact with nature and uncontacted populations, similar to our ancestors, present a high bacterial diversity and an increase in anti-inflammatory bacteria, associated with a healthier and more protected skin.

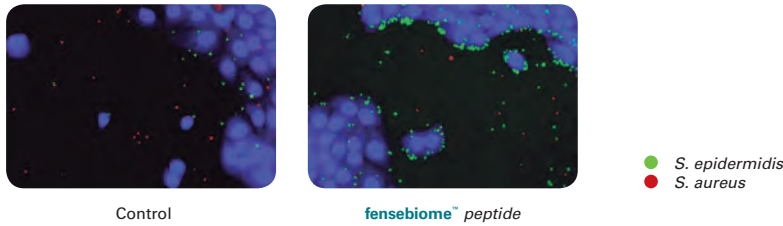
fensebiome™ peptide helps boost the skin's own defense system by favoring the presence of beneficial bacteria and by improving the skin immune response and the physical barrier integrity. On urban skin, it promoted a healthy microbiome similar to that of our ancestors living in closer contact with nature. A reinforcement in cell cohesion and a barrier protective effect were also observed.



In vitro efficacy

1. PROMOTING THE ADHESION OF BENEFICIAL SKIN MICROBIOTA

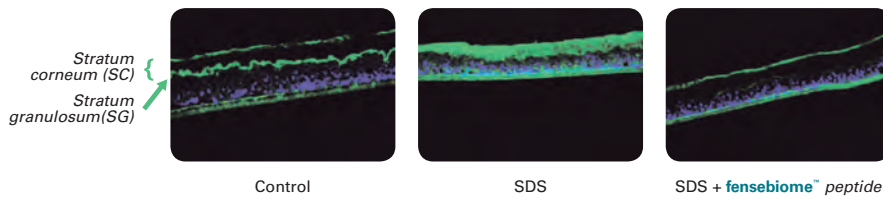
Keratinocytes were treated with **fensebiome™ peptide** and exposed to *S. epidermidis* and inactivated *S. aureus*, whose adhesion to the cells was determined by fluorescence.



Favored adhesion of *S. epidermidis* over pathogenic *S. aureus*

2. IMPROVED EPIDERMAL BARRIER FUNCTIONALITY

Epidermal models were treated with **fensebiome™ peptide** and sodium dodecyl sulfate (SDS), which deteriorates the SG integrity and allows the diffusion of a tracer. The functionality of the barrier was evaluated by the inhibition of the tracer diffusion to the SC.



Reinforced barrier to resist damage
64.8% inhibition of tracer diffusion, showing an improved stratum granulosum integrity.

In vivo efficacy

1. STUDY OF THE SKIN MICROBIOME

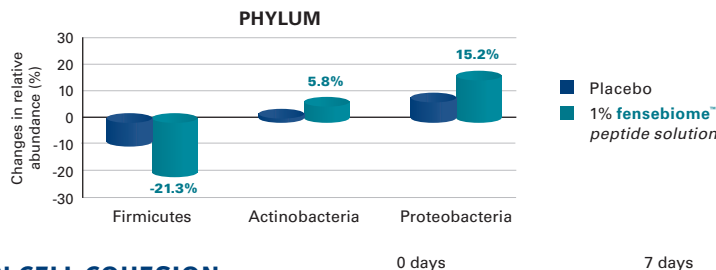
Metagenomics analysis performed on 21 urban women, who applied a cream with 1% **fensebiome™ peptide solution** on the cubital fossa of the arm for 7 days.

• Microbial diversity

The diversity of skin bacteria, which is higher in the skin of people in close contact with nature, was determined by the Shannon index, used as an indicator of skin health.

• Microbial composition

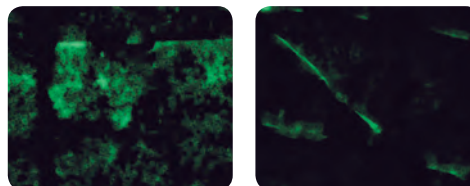
The relative abundance was evaluated at different taxonomic levels.



Higher bacterial diversity for a rewilding effect
Balanced microbiota for a healthy and protected skin

2. ENHANCED SKIN CELL COHESION

18 urban women with dry skin applied a cream with 1% **fensebiome™ peptide solution** on the shin. Corneocytes cohesion was assessed on samples obtained by tape stripping.



Reduced skin scaliness
18.6% less sloughed corneocytes.

3. BARRIER PROTECTION EFFECT

20 urban women applied a cream with 1% **fensebiome™ peptide solution** on the forearm for 7 days. The transepidermal water loss (TEWL) was evaluated after surfactant damage.

Better protection to prevent dehydration
53.6% lower TEWL values versus placebo.

SKIN'S MICROBIAL BARRIER

SKIN'S PHYSICAL BARRIER

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