THE MEDITERRANEAN IS OUR INSPIRATION

NATURAL INGREDIENTS FOR NUTRACEUTICAL AND COSMETIC APPLICATIONS

BIONAP srl
Bioactive Natural Products
Who we are
Founded in 1997, BIONAP is an Italian company which produces standardized extracts for nutraceuticals and cosmeceuticals. Our mission is to discover active substances contained in Mediterranean foods and plants and to create ingredients for wellbeing and beauty products.

Quality and Research
From the initial selection of raw materials to the final extracts, BIONAP strictly controls the whole production process to ensure the highest manufacturing standards. The efficacy and safety of BIONAP extracts are supported by continuous scientific research and the effectiveness of BIONAP ingredients has been proven by several experimental and clinical trials, published in international scientific journals. Innovative technologies and our qualified team of experts make BIONAP a serious and reliable partner.
SKIN MOON®
TESTED SKIN-WHITENING EFFECT FROM PLANT EXTRACTS

OPUNTIA BIOCOMPLEX SH
OPUNTIA POLYSACCHARIDES FOR SKIN MOISTURIZING AND REPAIR

SKIN SAVE®
The power of Mediterranean extracts for sensitive skin

OLEA-HT 10
To prevent the signs of photoaging on your skin

RENEGRAPE®
The ancient tradition for a safe skin renewal

FLAVOSLIM™
To improve cellulite skin appearance, the lipolytic effect of bergamot flavonoids

MUCOSAVE®CG
Topical active protection of sensitive mucosae

FROM BY-PRODUCTS OF MEDITERRANEAN AGRICULTURAL PRODUCTION
MADE IN SICILY
PRESERVATIVES FREE
To survive in dry climate, Opuntia ficus indica plant uses its “leaves” (cladodes) to save water. Under the prickly surface, cladodes contain a juicy and tender gel full of mucilages and other polysaccharides that bind and preserve water molecules. In the southern Italy, the farmers working in the fields know very well the properties of this natural gel and they are used to putting Opuntia cladodes on to moisturize and protect skin and wounds. **OPUNTIA BIOCOMPLEX SH** can be considered a plant origin Hyaluronic Acid. **OPUNTIA BIOCOMPLEX SH** is a powder extract obtained from the juice of Opuntia cladodes, containing the natural blend of mucilages and fibers. When topically applied, it produces a physical barrier on the skin, protects against environmental stress factors, deeply moisturizes skin and promotes cutaneous reparative processes.

<table>
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<tr>
<th>COMPOSITION</th>
<th>OPUNTIA BIOCOMPLEX SH % (w/w)</th>
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<tbody>
<tr>
<td>Polysaccharides (Spectrophotometric method)</td>
<td>30-40</td>
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**What it does**  
**OPUNTIA BIOCOMPLEX SH** can be used to keep skin moisturized and promote cutaneous reparative processes. As reported in several testing studies, topical application of Opuntia polysaccharides has the power to increase skin hydration degree and the rate of skin regeneration by re-epithelialization of cutaneous lesions (1).

**How to use**  
**OPUNTIA BIOCOMPLEX SH** can be used to formulate several cosmetic products such as skin moisturizer, anti-aging, wound-healing products for face, body and hair.

Recommended usage concentration: 2-5% (w/w) in 3-7 pH range.

**INCI NAME:**  
Opuntia ficus-indica extract  
Maltodextrin
Skin repairing and moisturizing effects of **OPUNTIA BIOCOMPLEX SH**

Opuntia cladodes mucilage, contained in **OPUNTIA BIOCOMPLEX SH**, differs for their chemical nature and the molecular weight (MW) distribution. Recently, the high MW components of Opuntia mucilage have been identified as a linear galactan polymer and a highly branched xyloarabininan. The low MW components have been attributed to lactic acid, mannitol and phenolic compounds such as piscid acid, a chelator of free iron ions, and eucomic acid (1).

**Skin repairing and hydrating effects** of **OPUNTIA BIOCOMPLEX SH** have been newly proved by in vitro model and clinical evaluation (1,2).

Tests on keratinocyte cell line (Scratch assay and Time Lapse Experiment) showed that **OPUNTIA BIOCOMPLEX SH** (OP) can induce strong skin repair effects (wound-healing action) (Fig.1). Time-lapse video microscopy has been used to observe on line the migration and proliferation of keratinocytes cells to repair the wound, with and without **OPUNTIA BIOCOMPLEX SH** extract (1).

Results showed that total reparation (WH%) in presence of **OPUNTIA BIOCOMPLEX SH** occurred within 30h (Fig.1a) and the 80% of closure occurred in 20 h (Fig 1b).

**OPUNTIA BIOCOMPLEX SH** owns a hyaluronic-like action and the application a formulation with **OPUNTIA BIOCOMPLEX SH** (2%) produced about 15% skin hydration increase after two weeks of treatment in volunteers (2). This activity is related to the ability of polysaccharides to form a molecular network able to retain a large amount of water.

**REFERENCES**

WHAT'S THIS?

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http://www.bionap.com/

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