



Opuntia ficus indica gel

**The strength and vitality
From a precious cactus**



HAIR, A BEAUTY ASSET

For centuries, hair is the **symbol of beauty and healthy**.

In the hour of "selfie generation", people pay attention to their appearance and hair.

However, hair are daily exposed to aggressions:

Environmental aggressions :
Sun, pollution...
Lifestyle (Tobacco)
...

Chemical aggressions:
hair coloring,
bleaching...

Mechanical aggressions :
hairdryer, hair
straightener...

These factors directly **affect hair fiber**.



HAIR, A BEAUTY ASSET

Intrinsic factors such as aging and genetics could also damage hair fiber.

All these factors can stress hair as well as weakened hair causing dryness and breakage.

To **repair hair fiber** and **improve hair appearance**, **Biocosmethic** has developed **Rep'HairEthic**, hair care active ingredient coming from **prickly pear**, a precious cactus.

STRUCTURE OF HAIR FOLLICLE

The cuticle:

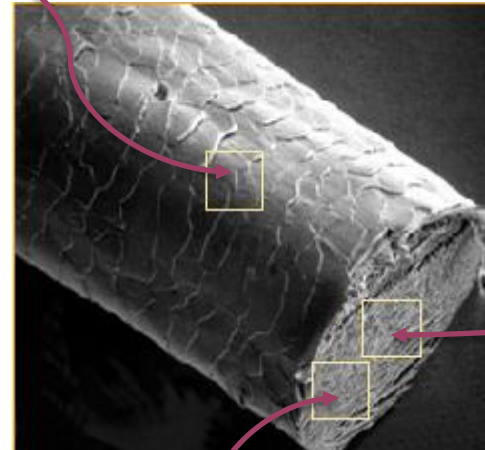
The outer covering of the hair

The medulla:

The central area of the hair

The cortex:

the largest portion of the hair and imparts strength to the hair shaft



BOTANY

Opuntia ficus indica, cactus plant

Opuntia ficus indica is a tropical and subtropical cactus plant widely distributed in all American hemispheres as well as Africa and the Mediterranean basin. This xerophytic cactus has a water retention capacity as it is able to live under hydric stressed conditions.



Class:	Magnoliophyta
Order:	Caryophyllales
Family:	Cactaceae
Genus:	<i>Opuntia</i>
Specie:	<i>ficus indica</i>

→ **REP'HAIRETHIC** is a hydrosoluble gel obtained from juice of *Opuntia ficus indica* cladode coming from native community in Bolivia.

A SUSTAINABLE PROGRAM

Opuntia ficus indica, cactus plant

Biocosmethic works in partnership with farmers coming from local communities located in the South of La Paz (Bolivia).



This **sustainable program** is in accordance with our values:

→ **Environmental commitment:** None of chemicals products or pesticides is used in the plantation

→ **Social commitment:** all children of the farmers attend school

CHEMISTRY

Opuntia ficus indica prickly pads are an important **source of** several **nutritional elements** like minerals.

Minerals	Quantity in <i>Opuntia ficus indica</i> (mg/kg)
Magnesium	1527
Potassium	683
Calcium	327
Sodium	339
Phosphorus	50

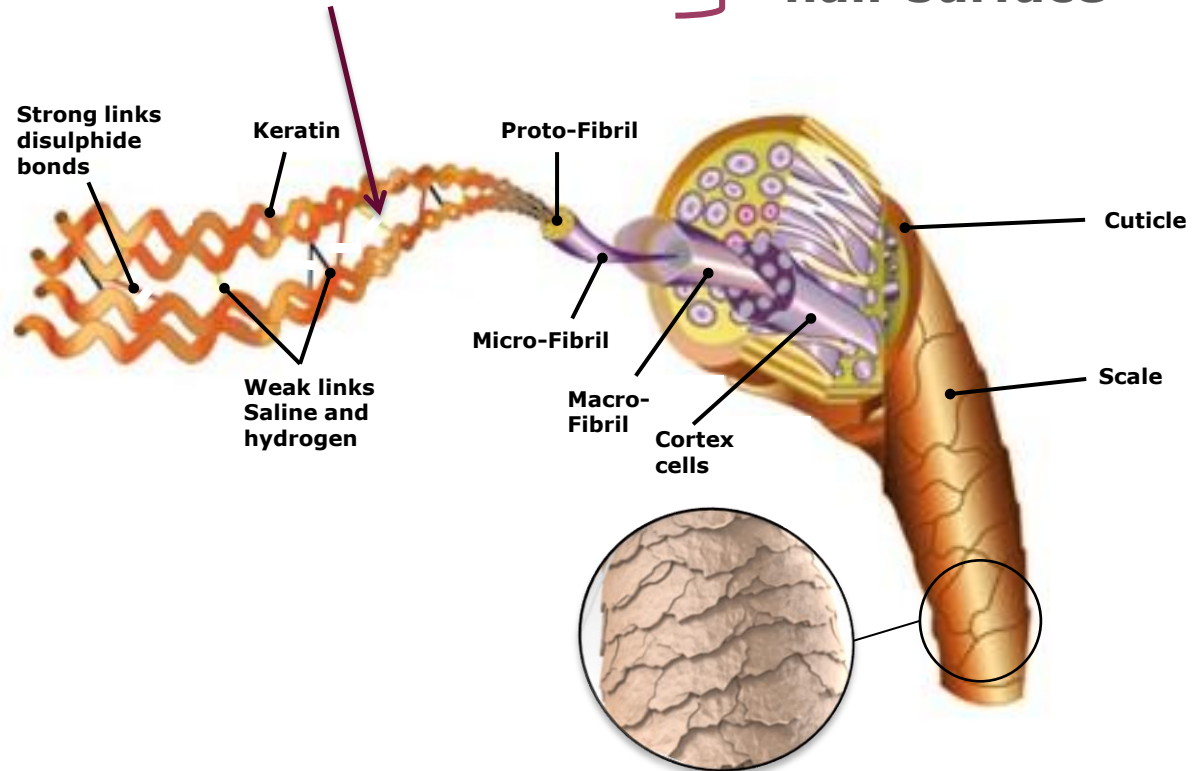
Cladode is characterized by the production of a hydrocolloid commonly known as **mucilage**, which forms molecular networks that are **able to retain large amounts of water**. It's a complex polymeric substances of carbohydrate nature.

Thanks to its cocktail of minerals and mucilage, Cladode of *Opuntia ficus indica* offers a **cure to your hair**.

DAMAGED HAIR

Disulphide bonds, salt bonds, hydrogen bonds between keratin fiber are **broken down**

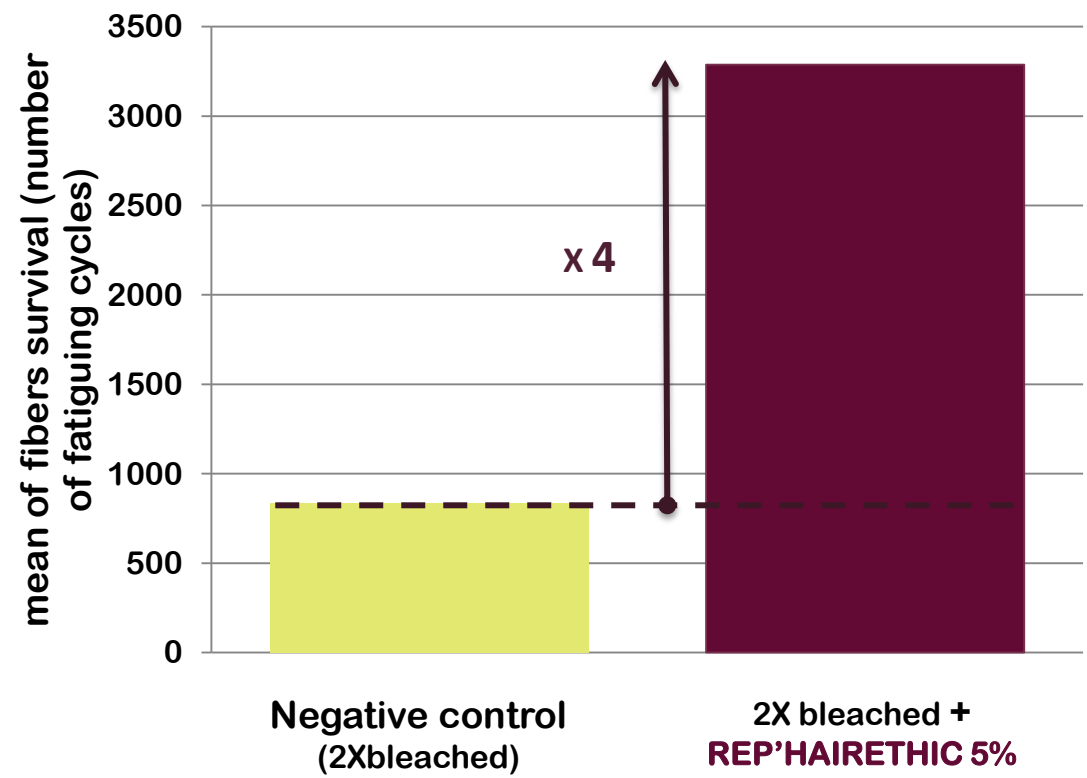
Cuticle scales opened on the hair surface



Thanks to **REP'HAIRETHIC**, **Biocosmethic** offers a new lease of life to your tired and stressed hair.

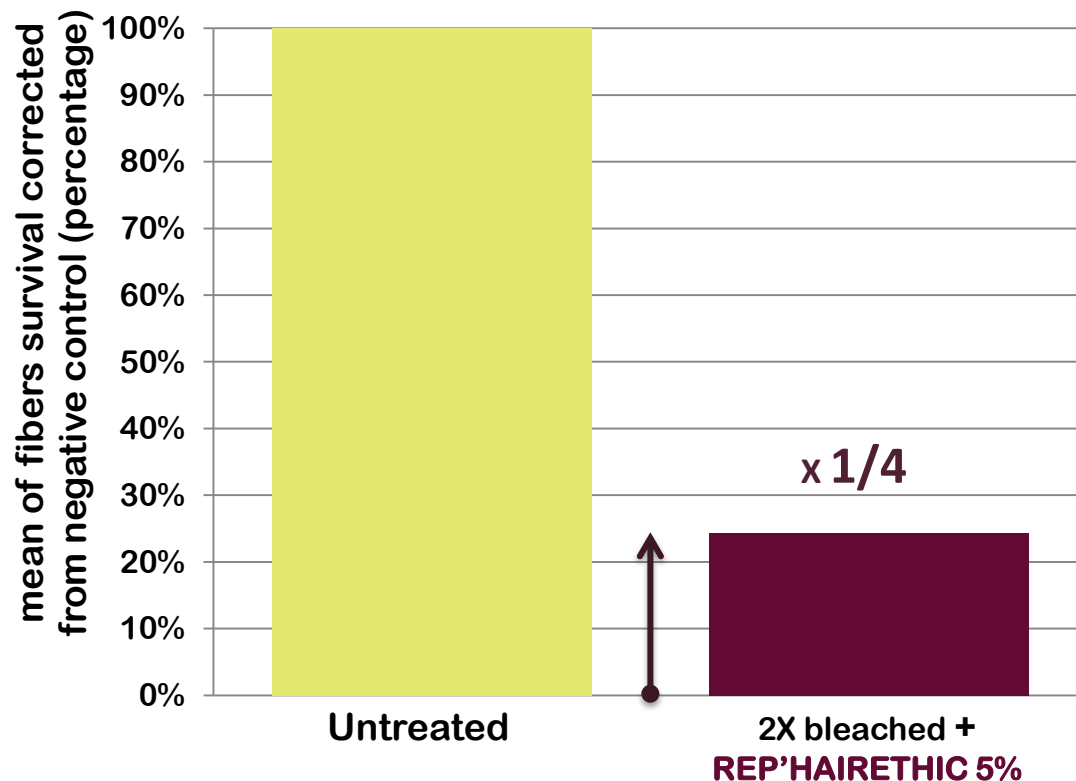


REP'HAIRETHIC repairs hair fibers in *in-vitro* study (cyclic test CYC 800)



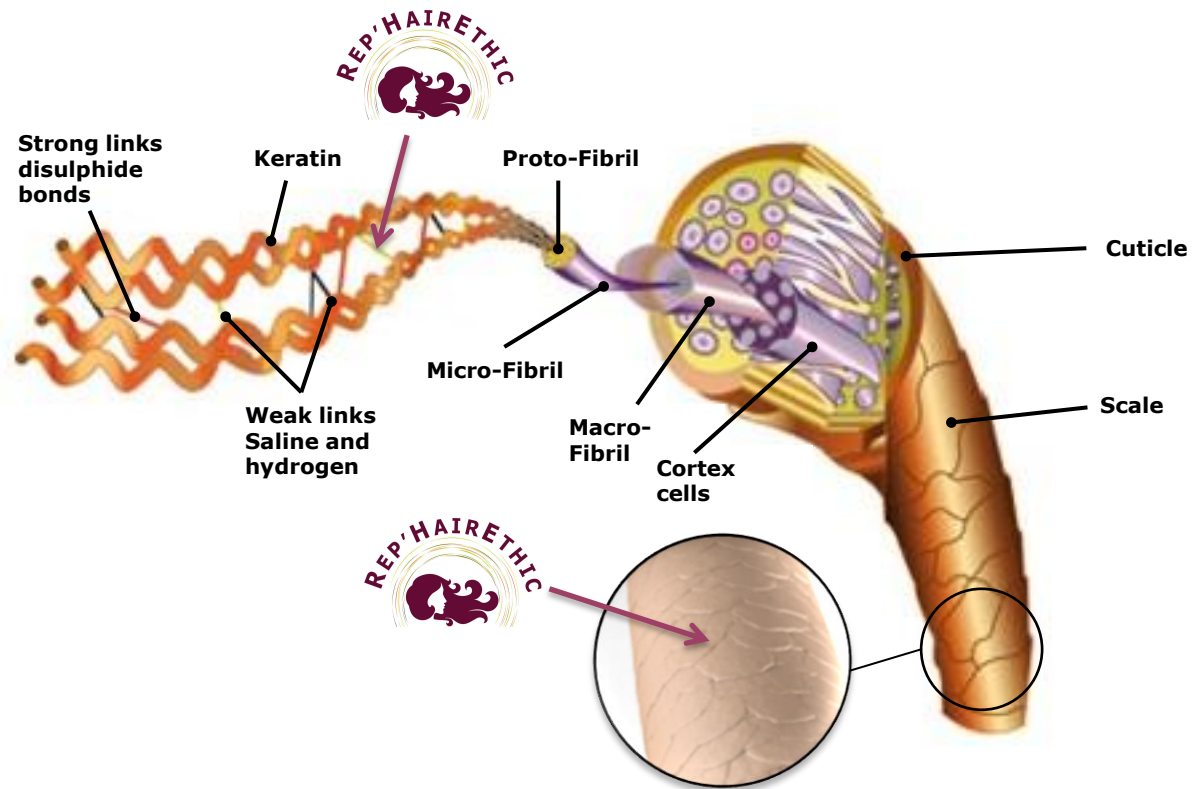
A single **REP'HAIRETHIC 5%** application during 8 hours on hair fibers improves fibers survival by **4 times**. **REP'HAIRETHIC repairs hair fiber. Hair recover their vitality.**

REP'HAIRETHIC strengthens hair fibers in *in-vitro* study (cyclic test CYC 800)



A single **REP'HAIRETHIC 5%** application during 8 hours on hair fibers **recover 1/4 initial capacity** of hair fiber strengthens. **REP'HAIRETHIC** consequently **delays the fatigue of hair**.

MECHANISM OF REP'HAIRETHIC



Rep'Hairethic improves **longevity of hair fibers** thanks to its mucilage and minerals content. Mucilage smooth cuticle and helps minerals to penetrate in the centre of hair. Consequently, minerals strengthening weak links.

REP'HAIRETHIC, GLOBAL EFFICACY

Thanks to its efficacy, **REP'HAIRETHIC** offers a global hair care program by giving **vitality** and **strength** to your hair while preserving the **youthful hair appearance**:

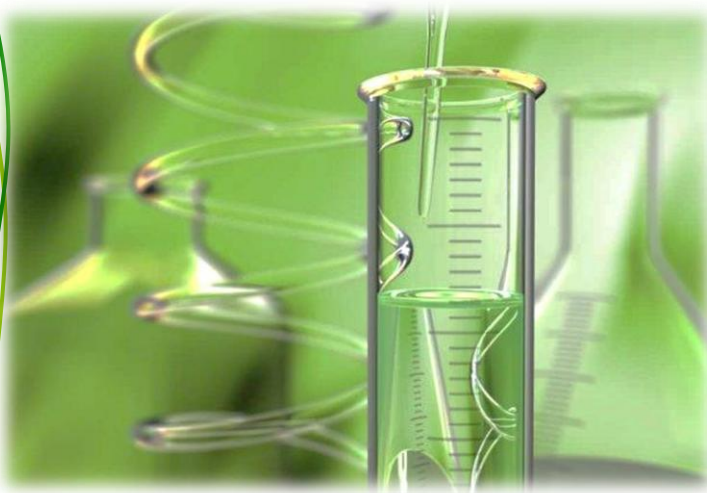
- **It repairs** hair by improving fiber survival (*in vitro* test).
- **It strengthens** hair fiber by delaying the hair tiredness (*in vitro* test)



Cosmetic applications:

Leave-on products for weakened hair (cream, serum, spray, foam...)

Toxicological & Regulatory data



① Skin irritation (Patch Test)

→ NON IRRITANT

② Ocular irritation (HET-CAM)

→ NON IRRITANT

REP'HAIRETHIC

repairing & protective ingredient

INCI name: *Opuntia ficus-indica stem extract**

Description: Hydrosoluble liquid

Recommended % of use: 3% to 5%

Nagoya compliant

* China: Listed in IECIC 2015

Biocosmethic



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