



# ACTIVE INGREDIENTS CATALOGUE

HAIR CARE



**NEW**

# CAPIGUARD

**HAIR DETOX**  
**HAIR PROTECTION**



## KEY POINT

It strengthens, repairs and protects hair, even after a rinse.

## DESCRIPTION

A marine polysaccharide able to act at the surface of the cuticle providing a protective and resurfacing effect.

## MECHANISM OF ACTION

De-polluting action.

Reduces carbonylation (oxidation) of the hair.

Restores the cuticle and avoids hair stressors to penetrate the fibre.

Smooths the hair cuticle and facilitates detangling.



## EX VIVO TEST

Normal brown hair treated or not with pollution particles (wick of hair plunged into powder = Sunpro black iron oxide) → protection before exposition to pollution or cleansing after exposition with a shampoo and Capiguard diluted in water at 1%.

Rinsing hair with water after exposure to pollution is not enough to eliminate particles. Even with a shampoo the elimination is not perfect.

Capiguard in a shampoo reduces adhesion of pollution particles and improves their elimination up to -95 %.

By protecting hair from environmental stressors, Capiguard avoids oxidation reaction and reduces Carbonylation of Keratins -19% of protection, thus cuticles are less damaged.

Damaged hair (n=10 hair locks and each is combed 10 times) → Environmental factors destroy healthy cuticle of hair and in this way weaken and dry up hair.

When hair is damaged, the tactile sensation is deteriorated and noise from the brush in hair is modified. By catching the sound of hair, we can analyse their status.

Two parameters were analysed: the intensity and the duration of the sound.

## INCI NAME

**Capiguard P:** Water, Phenoxyethanol, Furcellaria lumbricalis extract

**Capiguard PA:** Water, Phenethyl alcohol, Furcellaria lumbricalis extract

## CLAIMS

**Hair detox**

**Hair cuticle protection**

## IDEAL FOR

In an anti pollution daily shampoo

In a hair care product with or without rinsing

In hairdressing products

In a repairing serum for damaged hair

## ORIGIN

Marine

## HYDRO/LIPO

Hydro

## DOSAGE

1%

## FORMULATION SUGGESTIONS

Water soluble active ingredient to formulate up to 75°C.

Formulation guide available on request.

## CERTIFICATIONS



# HAIR OLÉOBOOSTER

HAIR PROTECTION  
HAIR CARE BOOSTER



## KEY POINT

It protects against sun and heat damage and allows maintenance of hair colour and radiance.

## DESCRIPTION

Extract in coconut oil of shikakai and tamarind fruits. Rich in polyphenolic antioxidants, it is a natural alternative to silicones for protection of hair and scalp from the oxidative stress due to heat and sun.

## MECHANISM OF ACTION

Coconut oil is a natural oil rich in MCTs (Medium Chain Triglycerides) like lauric acid, that have a high stability. MCTs have a high affinity with hair proteins because of their low molecular weight and linear molecular chains.

They are able to penetrate more quickly and deeply inside the hair fiber than long chain fatty acids.



## EX VIVO TEST

Hair temperature, after a unique application of 3% Hair Oléobooster cream, is measured on 10 natural hair locks from European origin and compared to a placebo cream → Evaluation of hair temperature.

## INCI NAME

Cocos Nucifera Oil, Acacia Concinna Fruit Extract, Tamarindus Indica Fruit Extract.

## CLAIMS

**Hair protection**  
**Hair care booster**  
**Energizing**

## IDEAL FOR

Hair Care : Cream, Balm, Oil,  
Serum  
Hair Mask  
Shampoo  
Specific Treatments for damaged  
Hair

## ORIGIN

Vegetable

## HYDRO/LIPO

Lipo

## DOSAGE

1%-100%

## FORMULATION SUGGESTIONS

In the fatty phase before emulsification and directly in anhydrous formulas. It can be used pure as active hair oil.

## CERTIFICATIONS



# PRODEW 500

**CONDITIONING  
COLOUR PROTECTION**



## KEY POINT

PRODEW 500 imparts luster and brilliant appearance to hair.

## DESCRIPTION

PRODEW 500 is amino acids cocktail, designed for the efficient application of PCA and amino acids in hair care preparation.

## MECHANISM OF ACTION

Sodium PCA and PCA: moisturizing, conditioning, color protect.

Arginine (basic amino acids): enhances PCA and amino acids uptake.

Arginine & Aspartic Acid (acidic and basic amino acids): improve wet hair property.

Neutral amino acids: improve dry hair property.

Sodium Lactate: moisturizing, softening.



## EX VIVO TEST

Japanese hair, bleached 4 times → Alanine in a hair care conditioner increases hair surface hydrophobicity. Histidine and Phenylalanine improve the tensile strength of hair in water.

Japanese hair, bleached 4 times → Colour development of red semi-permanent hair dye was improved by post-dye treatment with a hair conditioner containing Sodium PCA.

## FORMULATION SUGGESTIONS

The pH of the product is around 5, suitable for wide range of formulations.

Addition to anionics/ amphoteric base formulations (i.e. shampoos) are not difficult at all.

Addition to emulsions are likely to cause the severe viscosity decrease due to high content of PCA-Na, but emulsion is possible.

Addition to alkaline formulations such as waving lotion or dye component is not necessarily recommended, because PCA is not so stable at highly alkaline condition.

## INCI NAME

Aqua, Sodium PCA, Sodium Lactate, Arginine, Aspartic Acid, PCA, Glycine, Alanine, Serine, Valine, Proline, Threonine, Isoleucine, Histidine, Phenylalanine

## CLAIMS

**Moisturizing  
Conditioning  
Color protection**

## IDEAL FOR

Hair shampoos  
Hair conditioners  
Post-dye conditioners for pH control  
Hair masks  
Hair sprays  
Hair styling gels

## ORIGIN

Synthetic

## HYDRO/LIPO

Hydro

## DOSAGE

0,5%-5% rinse-off formulations

0,2%-2% leave-on formulations

# VC-IP

## HAIR CUTICLE REPAIRING



### KEY POINT

A whitening agent that is also a repairing factor for hair cuticle.

### DESCRIPTION

Liposoluble derivative of Vitamin C, with improved percutaneous absorption and stability.

### MECHANISM OF ACTION

It promotes collagen synthesis, it is a strong whitening agent and it inhibits membrane lipid peroxidation.



### IN VITRO TEST

Reactivity of amino group with VC-IP.



### IN VIVO TEST

Evaluation of reactivity of amino group in hair with VC-IP.  
Efficacy of VC-IP in the realistic situation (water contact angle)

### INCI NAME

Ascorbyl Tetraisopalmitate

### CLAIMS

Hair cuticle repairing

### IDEAL FOR

Hair treatment products  
Hair strengthening products

### ORIGIN

Synthesis

### HYDRO/LIPO

Lipo

### DOSAGE

0,5%-3%

### FORMULATION SUGGESTIONS

To be use in combination with chelating agents.

# HYDROLYZED COIX SEED

## MOISTURIZING HAIR PROTECTOR



### KEY POINT

A new and unique moisturizer with botanical NMF, amino acids and saccharide.

### DESCRIPTION

Hydroglycolic solution of the hydrolyzed seeds of Coix lachryma jobi (Job's Tears), obtained through enzymatic treatment. It contains 50% of aminoacids (with composition similar to hair) and 30% saccharides.

### MECHANISM OF ACTION

It contains a high content of various kinds of amino acids and it support physiological NMF with its moisturizing properties.



### EX VIVO TEST

12.5ppm of solid of Hydrolyzed Coix Seed (Approx. 0.1% of the product) added into a cultivated human keratinocyte → The rate of proliferation increased by more than 20% when compared to the control .

5% Hydrolyzed Coix Seed solution on human hair → Evaluation of absorbtion capability.

5% Hydrolyzed Coix Seed solution on human hair → Observation of the improvement efficacy of 5% on damaged hair by electronic microscope.

5% Hydrolyzed Coix Seed solution on human hair → Observation of the hair flexibility potentiation.

### INCI NAME

Aqua, Butylene Glycol, Hydrolyzed Coix Lacryma-Jobi Ma-Yuen Seed

### CLAIMS

**Moisturizing  
Hair protector**

### IDEAL FOR

Hair care treatment

### ORIGIN

Vegetable

### HYDRO/LIPO

Hydro

### DOSAGE

5%

### FORMULATION SUGGESTIONS

No particular formulation restriction

# LPA

## HAIR GROWTH



### KEY POINT

Ultimate active ingredient for hair growth.

### DESCRIPTION

Obtained from soy lecithin by enzymatic hydrolysis, it contains 20-30% of lysophosphatidic acid.

### MECHANISM OF ACTION

It act on hair growth and on hair diameter.



### EX VIVO TEST

Human Keratinocytes → evaluation of LPA on tight junction proteins synthesis.



### IN VIVO TEST

10 volunteers → 0,2% LPA lotion on hair and scalp → evaluation of hair growth and diameter.

### INCI NAME

Lecithin, Lysolecithin, Lysophosphatidic Acid

### CLAIMS

Hair growth

### IDEAL FOR

Hair growth treatments

Hair strengthening products

### ORIGIN

Synthesis

### HYDRO/LIPO

Hydro

### DOSAGE

0,2%

### FORMULATION SUGGESTIONS

No particular formulation restriction



# LOQUAT LEAF EXTRACT CA

**HAIR GROWTH  
SOOTHING**



## KEY POINT

A botanical extract with anti-inflammatory and astringent effects.

## DESCRIPTION

Hydroglycolic extract of the leaves of *Eriobotrya japonica* (Loquat), with antioxidant and soothing properties.

## MECHANISM OF ACTION

It inhibits testosterone 5- $\alpha$ -reductase.



## IN VIVO TEST

Six healthy males (Age 33 - 49) → Loquat Leaf tonic → measure the diameter of each hair from the microscopic pictures taken before and after the test.

Test sample: 1% Loquat Leaf Extract CA solution.

Control sample: 1% butylene glycol solution → both solutions were applied on paper patch and placed on forearm for 10 minutes. After patch was removed, blood circulation was evaluated by two-dimensional laser analyzer.

## INCI NAME

Butylene Glycol, *Eriobotrya Japonica* Leaf Extract

## CLAIMS

Hair growth

## IDEAL FOR

Hair growth treatments  
Soothing Hair Care products  
Scalp Care treatment

## ORIGIN

Vegetable

## HYDRO/LIPO

Hydro

## DOSAGE

1%

## FORMULATION SUGGESTIONS

No particular formulation restriction

# ANGELICA KEISKEI EXTRACT (B)-BG70

HAIR ANTI AGEING



## KEY POINT

A botanical extract for hair renewal.

## DESCRIPTION

Hydroglycolic extract of leaves and stems of Angelica Keiskei.

## MECHANISM OF ACTION

it can give the consumer a re-vitalised image matching the goal of anti aging products for hair.



## EX VIVO TEST

Gray hair including hair follicle was taken from the skin (age: 73, woman) obtained by a surgery and incubated for 9 days in a medium containing 2% of ANGELICA KEISKEI EXTRACT (B)-BG70 → after the incubation and tissue fixation, DHICA oxidase (TRP-1) immunostaining was conducted.

10 male volunteers (age: ave.52.2±9.8) test sample: Lotion containing 2% of Angelica Keiskei Extract (B)-bg70 → Photo observation.

## INCI NAME

Butylene Glycol, Aqua, Angelica Keiskei Leaf/Stem Extract

## CLAIMS

Hair anti ageing  
Revitalizing

## IDEAL FOR

Anti grey hair products

## ORIGIN

Vegetable

## HYDRO/LIPO

Hydro

## DOSAGE

2%

## FORMULATION SUGGESTIONS

No particular formulation restriction.

# CAPALGIN

## HAIR STRENGTHENER ANTI HAIR LOSS



### KEY POINT

A Chondrus crispus extract capable of improving hair growth.

### DESCRIPTION

CAPALGIN is an “Overwintered” Chondrus crispus extract characterized by a very high concentration of citrullinyl-arginine together with high amounts of floridosides (combination of glycerol and galactose), and taurine.

### MECHANISM OF ACTION

CAPALGIN is therefore capable of improving hair growth rate and may also be responsible for thickening the hair shaft by increasing the proliferation rate of keratinocytes.



### IN VITRO TEST

After two days of treatment of hair follicles with CAPALGIN, the optimal expression of  $\beta 1$ -integrin is preserved, the hair is maintained in anagen phase. It is therefore capable of delaying the catagen phase by maintaining most hair in anagen phase, hence supporting hair growth as observed using histological cuts. A treatment of hair follicles with CAPALGIN increases the number of proliferative keratinocytes in the hair bulb.

### INCI NAME

Propanediol, Aqua, Chondrus Crispus Extract

### CLAIMS

**Hair protector**  
**Hair strengthener**  
**Anti ageing for hair**  
**Anti hair loss**

### IDEAL FOR

Hair strengthening products  
Anti hair loss treatments

### ORIGIN

Natural

### HYDRO/LIPO

Hydro

### DOSAGE

1%-4%

### FORMULATION SUGGESTIONS

No particular formulation restriction.

### CERTIFICATIONS





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