# ACTIVE INGREDIENTS CATALOGUE

MOISTURIZERS

PRODOTTIGIANNI





### SKIN REGENERATION COMFORT ON SKIN



#### **KEY POINT**

It restores HLF production of epidermal fatty acids.

#### DESCRIPTION

It improves the water storage capacities of the dermis to increase the global water reservoir of the skin and reinforces stratum corneum cohesion to trap water diffusing from the deeper layers.

#### MECHANISM OF ACTION

it reconstitutes the HLF of the skin by promoting the synthesis of its main components: surface lipids (Epidermal lipids + Balanced sebum) and surface water.



#### **IN VITRO TEST**

Humans ebocytes cultivated with specific concentration of DHT (DiHydro-Testosteron) to imitate dry skin conditions. Incubation with 0.01% Wakapamp for 6 days, Quantification of lipids synthesis.



#### **EX VIVO TEST**

Topical application of 0.1% Wakapamp on reconstructed human skin for 24H. Full genome analysis of genes expression.

Human sebocytes cultivated with 0.02% Wakapamp for 24H. Analysis of genes expression (mRNA) by RT-qPCR.



#### **IN VIVO TEST**

Within 4 hours dry skins recover the hydration level of normal skins.

Within 2 weeks the luminosity and satin aspect of the skin are significantly increased, Without significant increase in skin shininess. This demonstrates a homogenous improvement of sebum distribution and HLF production on the whole face.

Within 2 weeks the suppleness of the skin is significantly improved.

Within 2 weeks the discomfort characteristic of very dry skins is significantly decreased. Evaluation using discomfort scale based on discomfort facial expressions of subjects in response to facial motor sequences (Facial Action Coding System).

#### **INCI NAME**

Caprylic/capric triglyceride (and) Undaria pinnatifida extract

CLAIMS Skin regeneration Comfort on skin

#### **IDEAL FOR**

In a rebalancing of hydrolipidic film formula In a product line for dry skin

**ORIGIN** Marine

HYDRO/LIPO Lipo

**DOSAGE** 0,1%

#### **FORMULATION SUGGESTIONS**

Oil soluble active ingredient to formulate up to 80°C. Formulation guide available on request.





## RODACEA

### PLUMPS THE SKIN WITH WATER REGENERATES



#### **KEY POINT**

It protects the skin from water losses by reinforcing skin barrier.

#### DESCRIPTION

Hydrolyzed extract of the microalgae Rhodella violacea, rich in polysaccharides, phospholipids and glycoglycerolipids.

#### MECHANISM OF ACTION

It improves oxygenation of the skin by increasing expression of proteins involved in mitochondrial activity.



#### IN VITRO TEST

Rodacea is topically applied at 1% on reconstituted human skin for 72h. SPRR2A expression is analysed by RT-qPCR. Rodacea is applied at 0.5% on the culture medium of the reconstituted human skin for 11 days. CYP26B1 and KDF1 expression is analysed with full genome.

Rodacea is applied at 0.5% on the culture medium of the reconstituted human skin for 11 days. HAS1, EGF and FGF7 expression is analysed with full genome, HYAL3 and IL1B expression is analysed with full genome, ACAN expression is analysed with full genome, Gene expression is analysed with full genome.

Rodacea is applied at 0.5% on the culture medium of the reconstituted human skin for 11 days. FGFR3, FGF13, FGF7 and FGF5 expression is analysed with full genome. Rodacea is topically applied at 1% on reconstituted human skin for 72h. PGF expression is analysed by RT-qPCR.



#### **IN VIVO TEST**

After applying a mask for 15 min, Rodacea induces a significant improvement in the cutaneous hydration, it increases significantly the suppleness, softness and hydration aspect of the skin.

23 volunteers  $\rightarrow$  Aged between 30-55 years old  $\rightarrow$  Application of a lotion containing 1% Rodacea PE on the face twice daily for 14 days  $\rightarrow$  Rodacea induces a significant improvement in the cutaneous hydration.

#### INCI NAME

Rodacea PG: Maris Aqua, Glycerin, Propanediol, Hydrolyzed Rhodophyceae Extract

**Rodacea PE:** Maris Aqua, Phenoxyethanol, Hydrolyzed Rhodophyceae Extract, Ethylhexylglycerin

### CLAIMS

Protection Plumps the skin with water Improves oxygenation Regenerates

#### **IDEAL FOR**

In an anti ageing sheet mask In a sleeping mask In a day cream In a BB cream

**ORIGIN** Marine

HYDRO/LIPO Hydro

**DOSAGE** 1%-4%

#### **FORMULATION SUGGESTIONS**

Water soluble active ingredient to formulate up to 60°C. Formulation guide available on request.

#### **CERTIFICATIONS**





AP hyceae Extract



## **EPIDERMIST**

ANTI-IMPERFECTION ANTI AGEING



#### **KEY POINT**

It stimulates cell renewal, it reactivates skin's natural defences, pro-acne bacteria growth is inhibited, it smooths skin texture and it can improve acne-scars.

#### DESCRIPTION

Marine exopolysaccharide secreted by a planktonic micro-organism that can be found along the Brittany coast. It is mainly formed by galactose and N-acetyl glucosamine.

#### MECHANISM OF ACTION

Epidermist increases the synthesis of proteins involved in keratinocytes differentiation and activates cellular renewal.



#### **IN VITRO TEST**

1% Epidermist 4.0 applied topically  $\rightarrow$  assessment of gene expression on human reconstituted epidermis.

Human dermis fibroblasts cultivated with or without Epidermist 4.0 for 72 hours  $\rightarrow$  Dosage of the amount of hyaluronic acid synthesized, in culture environment.



EX VIVO TEST 1% Epidermist 4.0 on a skin explant → Hydration levels are measured using corneometer.



IN VIVO TEST 17 volunteers aged between 18 and 59  $\rightarrow$  Skin Renewal Evaluation.

20 volunteers aged between 35 and 45  $\rightarrow$  Evaluation of skin texture smoothing effect and visibility of pores.

INCI NAME Epidermist P 1.5: Water, Saccharide Isomerate, Phenoxyethanol Epidermist 4.0 PA: Water, Saccharide Isomerate, Phenethyl alcohol CLAIMS Anti imperfections Hydration Anti ageing

#### **IDEAL FOR**

A lotion or face essence A hydrating anti ageing personal care product A BB perfecting product

ORIGIN Biotechnology

HYDRO/LIPO Hydro

DOSAGE 1%

FORMULATION SUGGESTIONS Formulate below 50°C.







## HYDRANOV

### ANTI AGEING HYDRATION

#### **KEY POINT**

"Hyaluronic Like" & "Epidermal Hyaluronic Activator".

#### DESCRIPTION

A concentrate of Oligofurcellaran obtained from the red algae furcellaria lumbricalis which is very common in Scandinavian waters.

#### **MECHANISM OF ACTION**

It acts as a moisturizing agent on skin surface thanks to its water-holding ability, it stimulates epidermal hyaluronic acid, filaggrin and ceramide synthesis, it promotes the formation of tight junctions stimulating claudin synthesis.



#### IN VITRO TEST

Pure samples of Hydranov and hyaluronic acid are put in specific cells with a relative humidity  $\rightarrow$  The polymers capture water molecules to reach a maximum called "gain mass at sorption equilibrium".

The value of gain mass reflects the ability of each polymer to trap water molecules.



#### **EX VIVO TEST**

Human skin explants  $\rightarrow$  Staining, rinsing, drying and observation of the surface using Scanning Electron Microscopy.

Reconstructed human epidermis  $\rightarrow$  Analysis of genes expression using RTqPCR.

Human skin explants  $\rightarrow$  Quantification of epidermal hyaluronic acid synthesis, quantification of Ceramids synthesis, quantification of Claudin 1, Filaggrin synthesis using immuno-labelling.



**IN VIVO TEST** 15 volunteers  $\rightarrow$  Measure of skin hydration level using corneometer.

INCI NAME	
Hydranov P:	Water, Phenoxyethanol, Sodium Carrageenan, Sea Salt
Hydranov PA:	Water, Phenethyl alcohol, Sodium Carrageenan, Sea Salt



CLAIMS Hydration Anti ageing

#### **IDEAL FOR**

A volume enhancing anti-ageing product An anti wrinkle product A "City Defence" personal care product

**ORIGIN** Marine

HYDRO/LIPO Hydro

**DOSAGE** 1,5%

**FORMULATION SUGGESTIONS** Formulate below 50°C.







## PHEOHYDRANE

**HYDRATION** 



#### **KEY POINT**

It is a complete moisturising active substance. It promotes an immediate and prolonged moisturization.

#### DESCRIPTION

Solution in sea water of a polysaccharide extracted from the brown seaweed Laminaria digitata, blended with aminoacids from the seaweed Chlorella vulgaris.

#### **MECHANISM OF ACTION**

The elements complexed to the polysaccharide are NMF elements. Thanks to their strong hygroscopic potential, they have a restructuring effect on the hydrolipidic film and the skin barrier, thus preventing dehydration phenomena. It allows the active binding of water to various layers of the epidermis and has an intense, residual effect on the skin's water reserves.



**IN VIVO TEST** 15 volunteers between 20 and 59 years of age Measurement of Transient Thermal Transfer (TTT).

INCI NAME Aqua, Hydrolyzed Algin, Maris Aqua, Chlorella Vulgaris Extract

#### CLAIMS Hydration

**IDEAL FOR** A flash hydration formula A quenching detox fluid A restructuring hydrating fluid

**ORIGIN** Marine

HYDRO/LIPO Hydro

**DOSAGE** 1%

**FORMULATION SUGGESTIONS** Formulate below 50°C.





### HYLASOME EG10

### RADICAL SCAVENGER MOISTURIZING



High moisturization with slow release of water thanks of crosslinked Hyaluronic acid.

#### DESCRIPTION

Five times the water binding capacity of hyaluronic acid with a delivery system for water and free radical scavenger activity.

#### **MECHANISM OF ACTION**

Hylasome® EG10 has a unique nonequilibrium gel structure with gel domains that hold tightly bound water. The material forms a film on the skin and delivers this water over time.



#### **EX VIVO TEST**

Results of an ex vivo skin moisturization experiment  $\rightarrow$  The Hylasome EG10 treated skin had 5x more stratum corneum moisture than the hyaluronic acid-treated skin.

Antioxidant activity measured in vitro [xanthine oxidase/hypoxanthine]  $\rightarrow$  Hylasome EG10 is a more effective free radical scavenger than hyaluronic acid.

**INCI NAME** Sodium Hyaluronate Crosspolymer



CLAIMS Moisturizing Radical scavenger

#### **IDEAL FOR**

Skin care creams, lotions and treatment products Body washes Leave-in hair conditioners and styling aids Liquid make-up foundations Sun care

ORIGIN Synthetic

HYDRO/LIPO Hydro

**DOSAGE** 1%-5%

**FORMULATION SUGGESTIONS** No particular formulation restriction

### PRODOTTIGIANNI

## DISTINCTIVE COCONUT WATER CLEAR

REMINERALIZING REFRESHING



#### **KEY POINT**

A filtered concentrate of coconut water that offers full clarity for clear gel cosmetic formulations.

#### DESCRIPTION

Liquid made from the cold-processed juice of unripened coconuts. Rich in proteins, sugars, aminoacids, salts and vitamins, it shows a superior inhibition of advanced glycation end products (AGEs), antimicrobial, remineralizing, moisturizing and regenerating activity.

#### **MECHANISM OF ACTION**

Coconut Water is the liquid collected from green, unripe coconuts. This liquid is rich in proteins, amino acids, sugars, vitamins, compounds such as:

Cytokinins  $\rightarrow$  Kinetin, a plant growth substance active in promoting cell division and in cell growth and differentiation. In personal care applications, it is believed to be a key component in providing effective cell renewal activity to both skin and hair (scalp) treatments;

Electrolytes  $\rightarrow$  Calcium, potassium, and magnesium. Coconut Water is an isotonic solution which can be used to help replace the body's fluids and minerals and help normalize cell function.

Monolaurin  $\rightarrow$  An antiviral, antibacterial and antiprozoal monoglyceride that is used to kill lipid-coated viruses such as HIV, Herpes, cytomegalovirus, flu and various pathogenic bacteria.



IN VITRO TEST

Data suggests that kinetin is a strong inhibitor of oxidative and glycoxidative proteindamage generated in vitro.

Kinetin was tested for protection against oxidative and glycoxidative protein damage generated in vitro by sugars and by an iron/ascorbate system.

It was found was more efficient than adenine: 82% vs 49% inhibition of bovine serum albumin (BSA)-pentosidine formation.

Kinetin also inhibited the formation of BSA-carbonyls after oxidation significantly more than adenine did.

Both compounds inhibited the advanced glycation end product (AGE) formation to the same extent (59-68% inhibition).

INCI NAME Cocos Nucifera Water, Glycerin, Cocos Nucifera Fruit Juice

#### CLAIMS

Anti microbial/anti fungal Remineralizing Anti ageing Moisturizing Anti viral Refreshing Revitalizing/regenerating Balancing

**IDEAL FOR** Anti age formulation Hydrating formulation

**ORIGIN** Synthetic

HYDRO/LIPO Hydro

**DOSAGE** 5%-80%

#### FORMULATION SUGGESTIONS

This form is particularly indicated to obtain transparent gels.



## PROPOLIS OLÉOACTIF

PROTECTING&PURIFYING WRINKLES FILLER



#### **KEY POINT**

It scavenges free radicals, protects skin from photo-induced oxidative stress, visibly fills and smooths wrinkles and fine lines, it helps keep the skin healthy.

#### DESCRIPTION

Extract of propolis in sunflower oil, rich in flavonoids phenolic acids, provitamin A and tocopherols. Suitable for anti-age and anti-wrinkle products dedicated to mature skins.

#### **MECHANISM OF ACTION**

Numerous scientific studies have demonstrated Propolis antibacterial, antioxidant and anti-inflammatory properties.



**IN VITRO TEST** Evaluation of ORAC value in comparison to Sunflower oil  $\rightarrow$  Evaluation of protection from free radicals aggressions, the major cause of skin aging.



**EX VIVO TEST** DCFH-DA test performed on reconstructed human epidermis → Evaluation of oxidative stress by UV exposure.



**IN VIVO TEST** Clinical Study of 28 days  $\rightarrow$  Evaluation of wrinkles depth and volume.

INCI NAME Helianthus Annuus Seed Oil, Propolis Extract CLAIMS Wrinkle Filler Wrinkle smoother Protecting & Purifying Moisturizing & Relipidant

**IDEAL FOR** Smoothing Skin Care Purifying Skin Care Relipidant Skin Care

**ORIGIN** Vegetable

HYDRO/LIPO Lipo

**DOSAGE** 0,5%-5%

#### **FORMULATION SUGGESTIONS**

It can be introduced either in the lipid phase of an emulsion or at the end of the emulsion process. Compatible with anhydrous formulas.







### DIPOTASSIUM GLYCYRRHIZINATE

### MOISTURIZING SOOTHING



#### **KEY POINT**

A licorice derivative with anti inflammatory and soothing properties.

**DESCRIPTION** Glycyrrhizic acid salt, with soothing and anti-inflammatory properties.

**MECHANISM OF ACTION** Inhibitory Effect on Hyaluronidase Activity.



**IN VITRO TEST** In-vitro data of moisturizing effect  $\rightarrow$  evaluation of involcurin and Transglutaminase Synthesis Effect.



**IN VIVO TEST** 38 patients with atopic detmatitis  $\rightarrow$  evaluation of objective symptom of skin rash, subjective symptom of itching.

7 patients  $\rightarrow$  evaluation of suppression effect of erythema formation.

6 female who have experienced stinging sensation/discomfort after application of cosmetic products  $\rightarrow$  cream containing 5% lactic acid and 0.2% DPG (control: without 0.2% DPG)  $\rightarrow$  discomfort evaluation by test volunteers.

**INCI NAME** Dipotassium Glycyrrhizate CLAIMS Moisturizing Soothing Anti inflammatory

**IDEAL FOR** Soothing formulation

**ORIGIN** Synthesis

HYDRO/LIPO Hydro

**DOSAGE** 0,1%

**FORMULATION SUGGESTIONS** No particular formulation restriction



Via M. F. Quintiliano, 30 20138 Milano – Italy Tel: +39 02 5097 1 Fax: +39 02 5097 266

www.prodottigianni.it www.cosmesi.it cosmetico@prodottigianni.com