phenbiox

SMART NATURAL INGREDIENTS

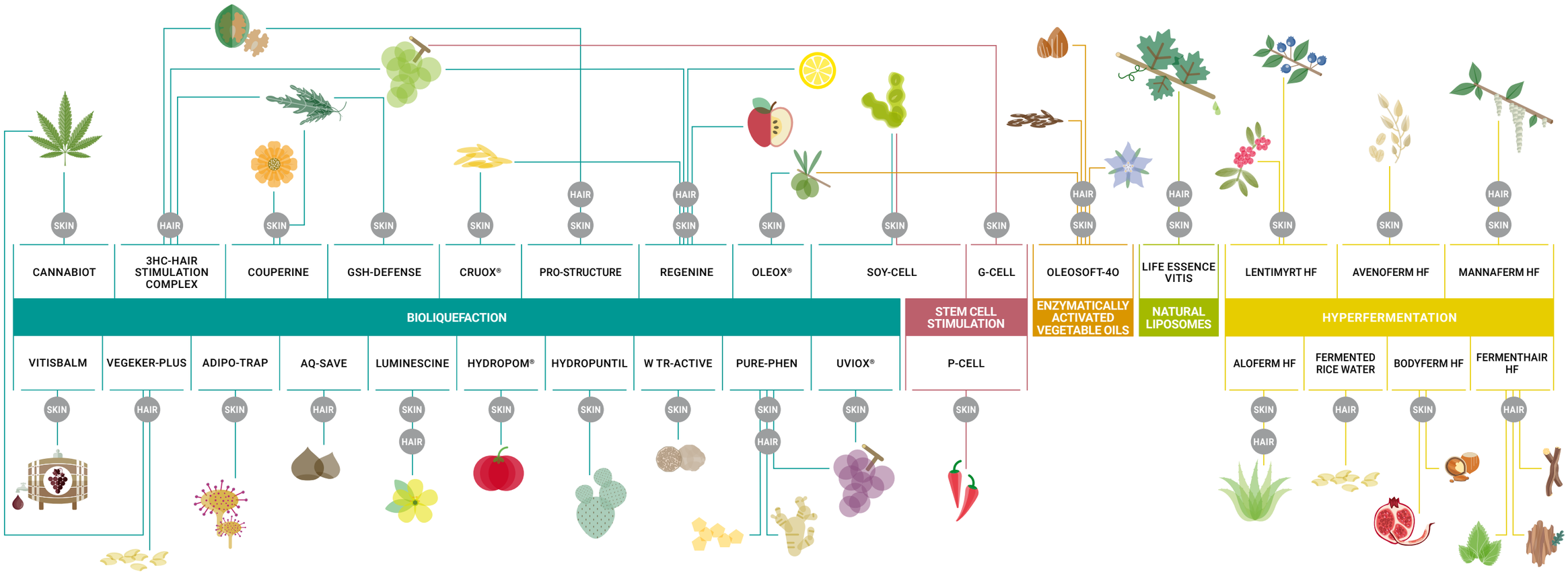
COSMETIC INGREDIENTS CATALOGUE

THIRD EDITION

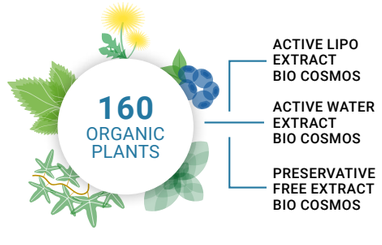
MADE IN ITALY

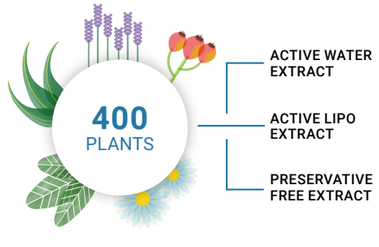
OUR 2000 INGREDIENTS FOR COSMETICS

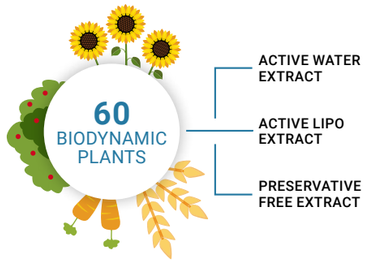
ACTIVE INGREDIENTS

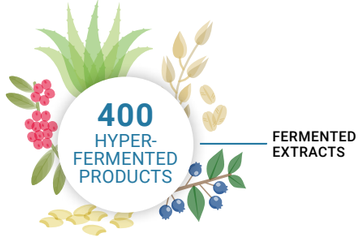


EXTRACTS









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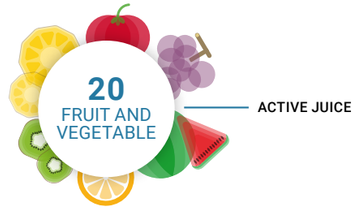

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INSPIRED BY ITALIAN BIODIVERSITY

Phenbiox: smart natural ingredients

Over 15 years
of research in cosmetic ingredient development

Operates in more than
40 countries

2000 plant
derived cosmetic ingredients

OVER 250 COSMOS
certified Ingredients

30 active ingredients

Set up in 2006 in Bologna (Italy) by researchers specialized in Industrial Biochemistry, Phenbiox now operates in more than 40 countries worldwide, producing and marketing over 2000 plant-based ingredients for the cosmetics industry, obtained through a number of production technologies.
The company's strategy is built on four essential points:

- **Scientific research**
- **Technological naturalness**
- **«Homemade» and Made in Italy**
- **Customization**

SCIENTIFIC RESEARCH

Our scientific research makes use of an innovative award-winning model, based on a well-established network of inter-departmental cooperation between a number of university research centres involved in Industrial Chemistry, Biology, Biotechnology, Pharmacology, and Dermatology, to name but a few.
This vast network of skills makes our technical-scientific approach highly transversal and effective.

TECHNOLOGICAL NATURALNESS

Plant mechanisms are our inspiration and our technology platforms are the method we use to transform plant intelligence into efficacious active cosmetic ingredients.
The choice of raw materials and processing techniques means that all our products are Organic or ones that can be used in certified organic formulas.
Our production technologies allow us to obtain natural, highly effective and avant-garde products.

«HOMEMADE» AND MADE IN ITALY

100% of the products that we put on the market are designed, developed and produced in house, right down to the last drop. This ensures complete control of the entire production process, constant product quality and fast delivery times. All our ingredients are Made in Italy and are infused with the inventiveness and the love for craftsmanship, so typical of Italy.

CUSTOMIZATION

Just like haute couture, the cosmetics sector needs personalized and high-quality raw materials, making us the right partner to work with in devising and producing new ingredients. Our in-house experts can work with your technical and marketing staff throughout the creative process in order to supply truly customized ingredients.

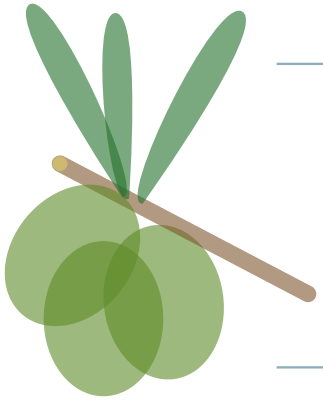
Technologies

OUR WAYS TO TRANSFORM PLANTS INTO COSMETIC INGREDIENTS

MOLECULAR BIOLIQUEFACTION®

HYPERFERMENTATION

ENZYMATIC ACTIVATION OF VEGETABLE OIL



STIMULATED STEM CELL

CENTRIFUGED

NATURAL LIPOSOMES

EXTRACTS

WATER-BASED

OIL-BASED

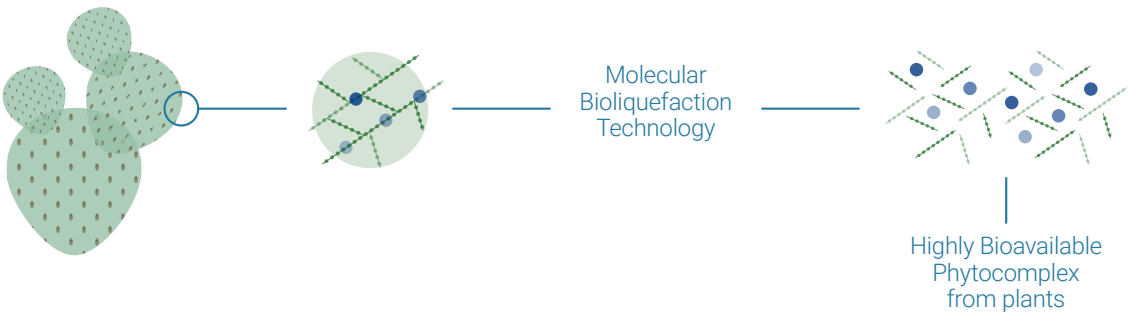
PRESERVATIVE-FREE

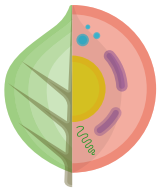
MOLECULAR BIOLIQUEFACTION®

Molecular Bioliquefaction® Technology is a patented technology developed by the "Toso Montanari" Department of Industrial Chemistry of the University of Bologna and exclusively licensed to Phenbiox. This enzyme-based technology makes it possible to recover 100% of plant bioactive compounds in a completely bio-available and active form as water-based liquid ingredients.

Plant-derived active ingredients still play a primary role in cosmetic products. To produce plant extracts traditional extraction technologies are still mainly used. In plants, thousands of different and interesting target molecules are present, and many of these molecules cannot be extracted with a traditional solvent-based process that is not effective on molecules covalently linked to the solid part of the plant.

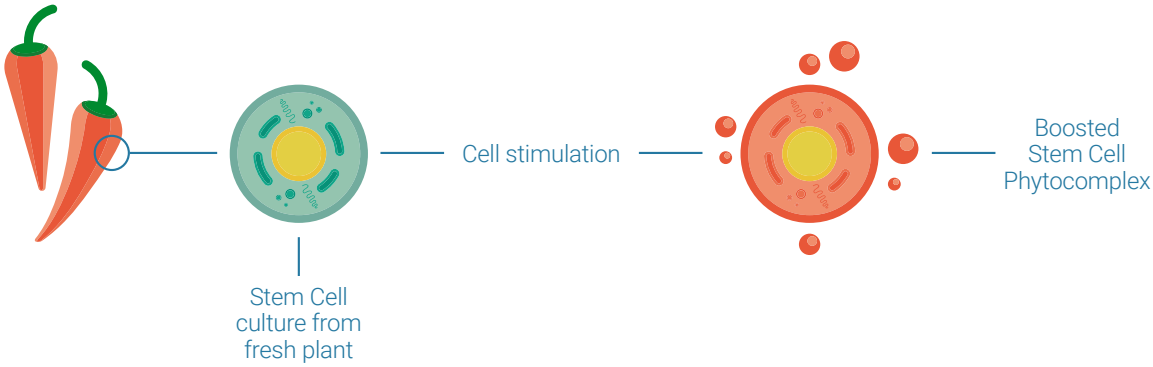
Molecular Bioliquefaction® Technology was developed to overcome the limitations of traditional extraction technologies. Through a combination of different treatments, it is possible to recover all the different molecules that make up the plant phytocomplex, obtaining end products that are also highly bioavailable. In fact, this approach is inspired by the human digestive system, able through a sequence of different enzymatic processes to make all the energy and beneficial molecules contained in food bioavailable for our metabolism. The skin has no proper digestive system of its own, so the use of poorly or non-bioavailable plant-derived ingredients can greatly compromise the delivery of the desired effect of a cosmetic formulation.





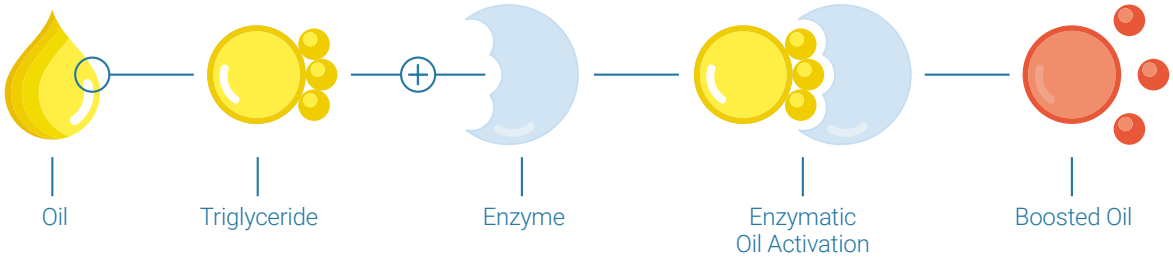
STIMULATED STEM CELL

Stimulated Stem Cell Technology is an innovative process that pushes plant stem cells to overproduce bioactive compounds to further boost the efficacy of the plant stem cell-derived active ingredients.
Plant stem cells are undifferentiated cells that serve as the origin of plant vitality, since they maintain themselves while providing a steady supply of precursor cells to form differentiated tissues and organs in the plant. Being totipotent cells, virtually any chemical that the plant is able to synthesize in any tissue can be produced from these cultures. Thus plant stem cells are the ideal starting material of cell culture for phytochemical production, as cells are successfully mass cultured while maintaining quality. Furthermore, in a stem cell culture it is possible to perform what is called Stem Cell Stimulation. This process foresees the introduction in the growth medium of some selected natural stress able to force the plant stem cell to overproduce secondary metabolites of interest, obtaining not only a more rich but also a more concentrated phytocomplex.



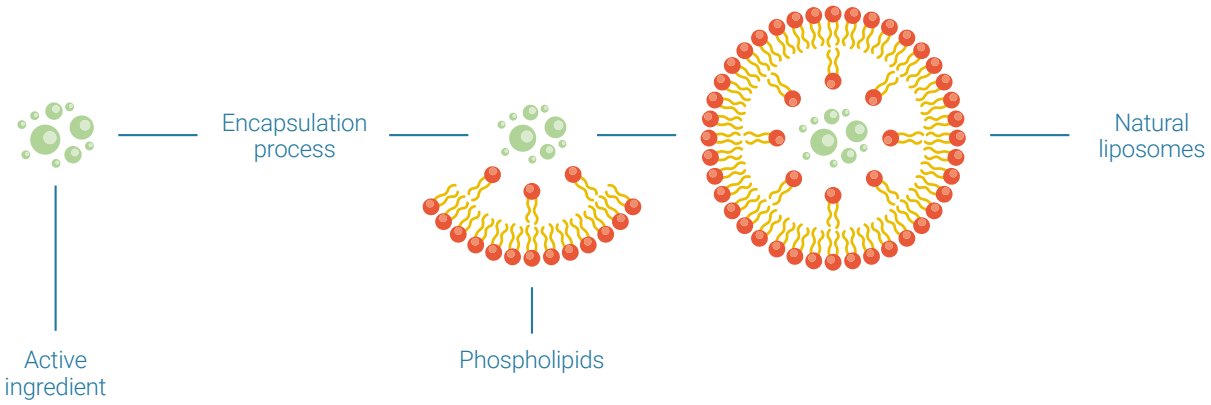
ENZYMATIC ACTIVATION OF VEGETABLE OIL

The Enzymatic Activation of Vegetable Oil is a bio-catalytic process able to break up triglycerides into their constituents (fatty acids and glycerides), releasing all the energy entrapped in vegetable oil.
In nature, oils are one of the most efficient forms of energy and carbon storage and are possibly the first cosmetic ingredient ever used. Plants generally store their oil in seeds, where they accumulate as triglycerides during maturation. This reserve of energy is mobilised during the germination process that involves a number of factors, one of the main ones being the process of oil activation. To be suitable for energy purposes, oils must in fact undergo an enzymatically-controlled activation process, which transforms the triglycerides into smaller molecules releasing free fatty acids and glycerides, and these are the real fuel that the plant uses for germination.
As in plant germination, human cells are unable to directly uptake and metabolise triglycerides. When any cell in our body has a specific metabolic need connected to the triglycerides transported by plasma lipoproteins, these triglycerides must go through an activation process catalysed by specific enzymes. This activation process enables the released free fatty acids and glycerides to cross the cell membrane, by means of active and passive transport mechanisms, and to be used in the various metabolic pathways.
Oils are used to “nourish” the skin but their main activity is only to repair and soften the outermost layers of it. Thanks to the Enzymatic Activation of Vegetable Oil, using specific enzymatic treatment mimicking the activation process that occurs in our body, the limitations on the bioavailability of the oils can be overcome and oils can become a real active ingredient.



NATURAL LIPOSOMES

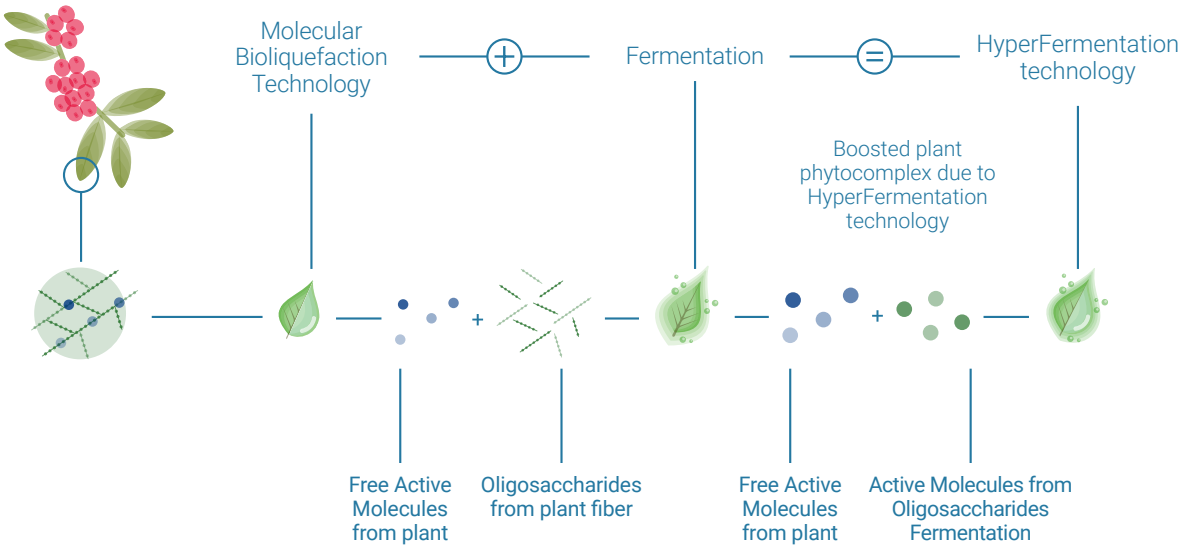
Our Natural Liposomes are an efficient and completely naturally derived, COSMOS compliant delivery system that can be used to protect and enhance the effectiveness of cosmetic ingredients.
Natural Liposomes are sphere-shaped vesicles consisting of phospholipid bilayers. The chemical structure of phospholipids, in water environment, forces these molecules to rearrange in a tail-tail position creating the double layer with hydrophilic properties both on the inner and the outer surface. These liposomes can therefore be used to facilitate the penetration into the cell of water-soluble actives contained in the liposomes, but also of oil-soluble actives that can be included in the double layer structure.
The main constituent of our Natural Liposome is plant-derived phosphatidylcholine from non-GMO soy. Phosphatidylcholines are major components of biological membranes and this facilitates the delivery effect of our liposomes as they are more easily able to merge with skin cell membranes, releasing the active ingredient inside the cell.
Natural Liposomes can be easily loaded with different kinds of ingredients, offering our customers a broad choice of customization.



HYPERFERMENTATION

In the cosmetics raw materials sector, fermentation is a transformation process of great potential interest since it can exploit a micro-organism to produce innovative active ingredients.
For thousands of years, fermentation has provided many cultures with the means of transforming food, increasing its nutritional value, preservability and bioavailability. One of the most detailed agricultural tests from ancient times is Columella's *De Re Rustica* (On Rural Affairs, 65 AD), on farming and fermentation connected with wine-making: this work summarizes everything the Romans knew about agriculture.

This millennia-old know how, typical of the Mediterranean area, combined with the latest biotechnologies at our disposal, has made it possible to develop a new and important production process:
HYPERFERMENTATION TECHNOLOGY (Bioliquefaction + Fermentation) the phytocomplex naturally contained in the plant is reinforced thanks to fermentation, transforming the inert fibres into even more active ingredients.

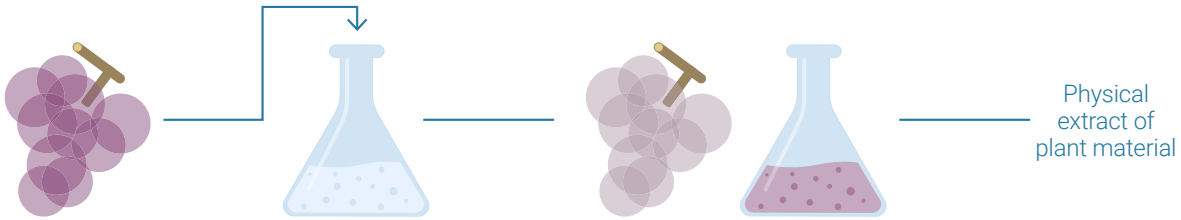


EXTRACTS

Plant extracts are liquid preparations obtained from fresh or dried medicinal plants by means of suitable physical extraction processes; these include the use of appropriate solvents and the employment of maceration or percolation, or other suitable procedures.
We can use various extraction solvents such as, for example, water, plant oils and plant glycerine.
Whatever technique is used, the production of any plant extract starts with selection of the medicinal substance, i.e. the part of the plant used for cosmetic purposes.
To ensure correct extraction of the substances, the plants must be ground to an appropriate degree of fragmentation, while the choice of solvent depends on the type of active ingredients to be extracted.

Three product lines were created with this technology:

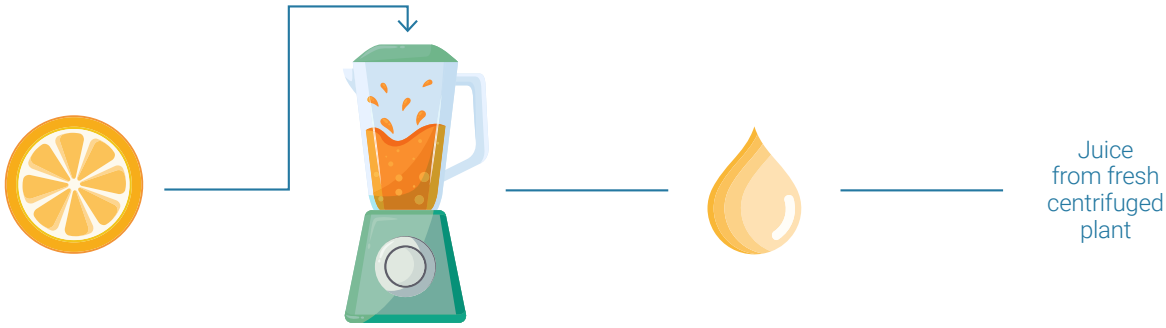
- **ACTIVE WATER EXTRACTS** – water-based extracts
- **ACTIVE LIPO EXTRACTS** – oil-based extracts
- **PRESERVATIVE-FREE EXTRACTS** – preservative-free hydroglycerine-based extracts



CENTRIFUGED

The best fresh fruits and vegetables are selected and placed in a drum fitted with a series of metal blades that rotate at a speed that develops a centrifugal force able to break down the plant cells and thus release the juice they contain.
We use a non-continuous treatment, alternating brief rotation cycles with pauses to avoid heating the juice and potentially degrading the active fraction. The resulting centrifuged product is then filtered until it runs clear and preserved to ensure an appropriate shelf life.

The following product line was created with this technology:
• **ACTIVE JUICES**



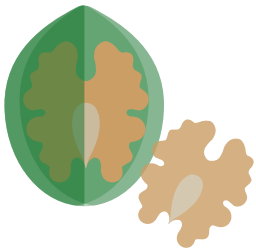
ACTIVE INGREDIENTS

Inspired by plant intelligence,
obtained through cutting edge nature
inspired technologies and supported
by state of the art substantiation data,
these are our active ingredients.

SEE VIDEO-BROCHURES
ON PHENBIOX YOUTUBE CHANNEL

GRAPE

ROCKET SALAD



WALNUT

— 3HC-HAIR STIMULATION COMPLEX —

TURNS ON THE DERMAL PAPILLA HAIR ENGINE

HAIR

COSMOS APPROVED

PRODUCT DESCRIPTION

3HC-Hair Stimulation Complex is a mix of plant-derived active ingredients able to boost the turnover of the Human Follicle Dermal Papilla Cells (HFDPC), a reservoir of multipotent stem cells regulating hair follicle development which can be considered the real engine of our hair.

3HC-Hair Stimulation Complex consists of green grape plant stem cell able to successfully influence microcirculation, a green walnut derived product acting as a powerful direct antioxidant and a rocket salad based product able to stimulate the natural synthesis of glutathione, an endogenous antioxidant that also protects DNA and detoxifies cells.

In vitro tests proved that the ingredients of 3HC-Hair Stimulation Complex are able to work at different levels on HFDPC metabolism inducing synergistic long-term stimulation effects on cell growth.

3HC-Hair Stimulation Complex was used in specific clinical trial showing the product is able to increase the hair's lifespan and reduce hair loss in just 3 weeks.

BENEFITS

- **Stimulates the Human Follicle Dermal Papilla Cells** (+70% *in vitro* tests)
- **Reinforces hair in just 3 weeks** (-21.3%, -38% in 8 weeks *in vivo* test)
- **Reduces hair loss in just 3 weeks** (-9.7%, -13.1% in 8 weeks *in vivo* test)
- **Prolongs hair lifespan** (+32.4% *in vivo* test)
- **Increases the number of growing hair** (+10.4% *in vivo* test)

TECHNICAL INFORMATION

INCI: aqua, *Vitis vinifera* fruit meristem cell culture, hydrolyzed *Eruca sativa* leaf, hydrolyzed walnut extract, citric acid, sodium benzoate, potassium sorbate.

PLANTS USED: rocket salad leaves freshly harvested in Italy, green walnuts fruit from the Veneto region, Italy, stem cell culture obtained from green unripened grapes from the Emilia-Romagna region, Italy.

TECHNOLOGY: Bioliquefaction Technology, Stimulated Stem Cell Technology.

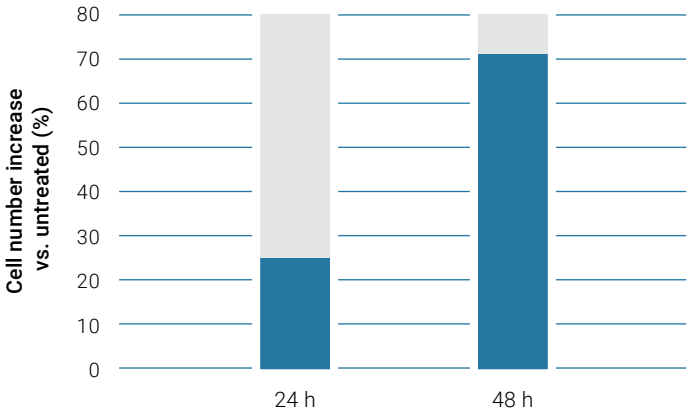
SUGGESTED CONCENTRATION OF USE: 3% w/w.

ORGANIC STATUS: COSMOS approved.

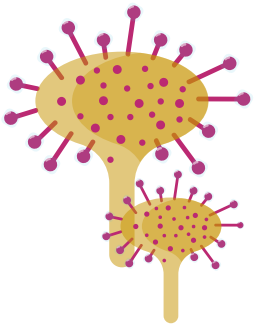
CHINA STATUS: also available in China compliant version.

T0 **T120 DAYS**

Phototrichogram before and after treatment with 3HC Hair Stimulation Complex 3% w/w



Human Follicle Dermal Papilla Cells number increase after treatment with 3HC Hair Stimulation Complex 1% w/w



SUNDEW

ADIPO-TRAP

A CARNIVOROUS PLANT TO RESHAPE THE BODY

SKIN

COSMOS APPROVED

PRODUCT DESCRIPTION

Carnivorous plants are rare and fascinating plants that, able to colonise very poor soils, developed their ability to trap and digest their pray in order to have an alternate source of nutrients. These special conditions forced the metabolism of these plants to produce a very unique phytocomplex.

ADIPO-TRAP is produced using sundew, a plant characterized by glandular tentacles, topped with sticky secretions, that cover its leaves/trap. The sundew is able to move its tentacles in response to contact with prey. Sundew phytocomplex is able to modulate adipocyte metabolism acting as a slimming, re-shaping and anti-cellulite active ingredient.

During *in vitro* tests performed using preadipocyte and adipocyte, ADIPO-TRAP was able to prevent fat accumulation and to reduce the adipocyte size, showing an efficient lipolysis effect.

In a within-patient clinical trial, ADIPO-TRAP was shown to be able to efficiently act as a slimming and reshaping active ingredient and to start reducing cellulite and cellulite-related pain just after 2 weeks.

BENEFITS

- **Prevents fat accumulation** (*in vitro* tests)
- **Lipolytic effect** (*in vitro* tests)
- **Slimming, re-shaping, body contouring** (-1.6 cm in 4 weeks *in vivo* test)
- **Reduce cellulite** (-5.5% *in vivo* test)
- **Reduce cellulite-related pain** (-23.5% *in vivo* test)

TECHNICAL INFORMATION

INCI: glycerin, hydrolyzed *Drosera ramentacea* leaf, citric acid, sodium benzoate, potassium sorbate.

PLANT USED: sundew (*Drosera ramentacea*) leaves from Madagascar.

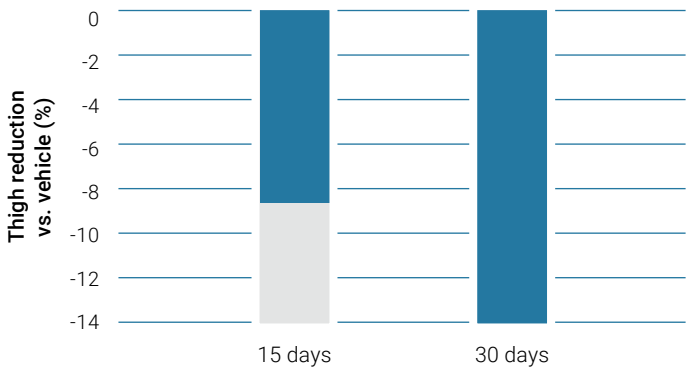
TECHNOLOGY: Bioliquefaction Technology.

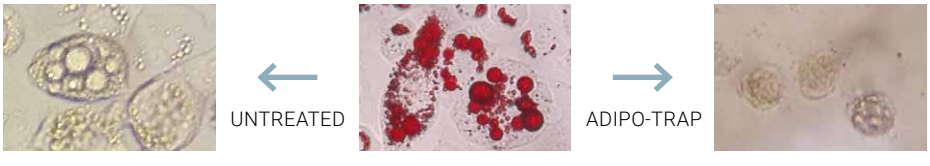
SUGGESTED CONCENTRATION OF USE: 3% w/w.

ORGANIC STATUS: COSMOS approved.

CHINA STATUS: also available in China compliant version.

Reduction of thigh circumference due to a 3% w/w ADIPO-TRAP containing gel vs. vehicle formulation





Lipolytic effect on adipocytes after incubation for 7 days with and without ADIPO-TRAP

ALOE VERA

ALOFERM HF

BOOSTED ALOE THROUGH FERMENTATION

SKIN HAIR COSMOS CERTIFIED

PRODUCT DESCRIPTION

Aloe vera is one of the oldest medicinal plants, used throughout the world thanks to its properties usually attributed to the phenols and polysaccharides contained in the gel of its leaves. The aloe leaves also contain a portion of polysaccharide fibers, inert from a cosmetic point of view, which can be converted into new active ingredients thanks to a process of HyperFermentation.

ALOFERM HF therefore contains a phytocomplex that is reinforced thanks to the combined action of enzymes and Saccharomyces cerevisiae. This process boosts the cosmetic action of aloe both at metabolic and skin level.

ALOFERM HF boosts keratinocytes metabolism and stimulates the wound healing process. In fibroblasts promotes the collagen synthesis, inhibits the release of metalloproteinases.

ALOFERM HF is much more effective in moisturizing the skin than aloe gel alone. The product acts both in the short and long term, moisturizing even the deepest layers of the skin, reducing scaliness and improving firmness.

ALOFERM HF has also been shown to be a valid ingredient thanks to its efficacy in personal hygiene products, since it gives a feeling of relief, freshness and comfort.

In hair care treatments, whether leave-on or rinse-off, studies have demonstrated that ALOFERM HF helps hair to retain moisture.

BENEFITS

- **Boosted phytocomplex through fermentation**
- **Boosts keratinocyte metabolism** *(in vitro test)*
- **Protects collagen and boosts its synthesis** *(in vitro test)*
- **Promotes wound healing** *(in vitro test)*
- **Five times more effective than standard aloe in moisturizing skin** *(in vivo test)*
- **Improves short-term, long-term and deep moisturization** *(in vivo test)*
- **Reduces skin scaliness** *(-16% in 15 days, in vivo test)*
- **Increases skin firmness** *(+33% in 30 days, in vivo test)*
- **Personal hygiene: gives a feeling of relief, freshness and comfort** *(clinical tests)*
- **Helps hair to retain moisture** *(+26% rinse-off, +54% leave-on, ex vivo test)*

TECHNICAL INFORMATION

INCI: aloe barbadensis leaf juice, saccharomyces ferment lysate filtrate, citric acid, sodium benzoate, potassium sorbate.

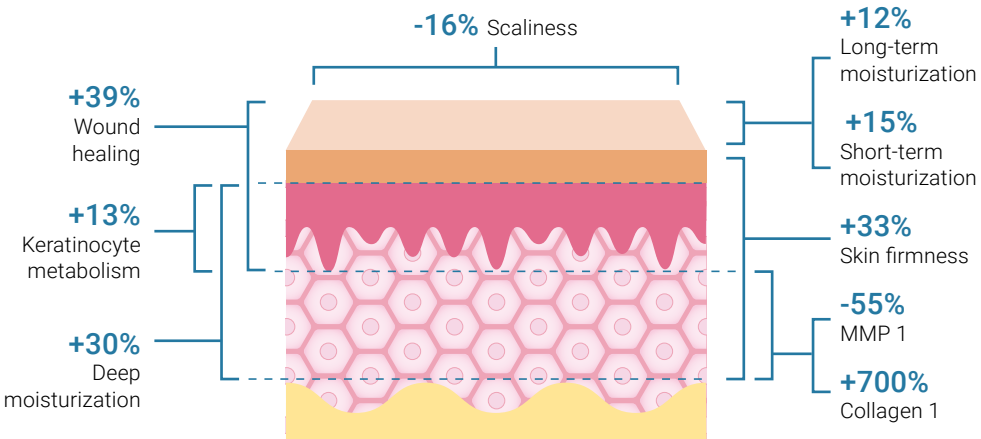
PLANT USED: organic aloe leaves.

TECHNOLOGY: HyperFermentation Technology.

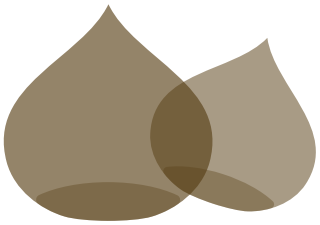
SUGGESTED CONCENTRATION OF USE: 3% w/w skin care and hair care.

ORGANIC STATUS: COSMOS certified.

CHINA STATUS: the product is China listed.



ALOFERM HF:
effectiveness in skin care applications



CHESTNUT

AQ-SAVE

ORGANIC CHESTNUTS TO REPAIR AND MOISTURIZE HAIR

HAIR

COSMOS CERTIFIED

PRODUCT DESCRIPTION

AQ-SAVE is an active ingredient specifically developed for hair care obtained from Italian organic certified chestnuts. Bespoke enzymatic treatments have been developed to reach a dimensional distribution of chestnuts' phytocomplex molecules allowing for successful interactions with hair surface.

The specific composition of AQ-SAVE is able to coat hair each hair strand, repairing damaged hair and closing hair cuticles. This repairing and filming process is also very important to avoid hair water loss and therefore keep hair healthier and more moisturized.

AQ-SAVE allows to better retain hair moisture even when hair is severely distressed by hot irons, and straightening, by preventing water loss on both healthy and distressed hair.

BENEFITS

- **Repairs damaged hair** (*ex vivo* test)
- **Keeps hair moisturized and healthy** (+30% *ex vivo* test)
- **Protects hair from stressful treatments** (+30% *ex vivo* test)

TECHNICAL INFORMATION

INCI: hydrolyzed chestnut extract, citric acid, sodium benzoate, potassium sorbate.

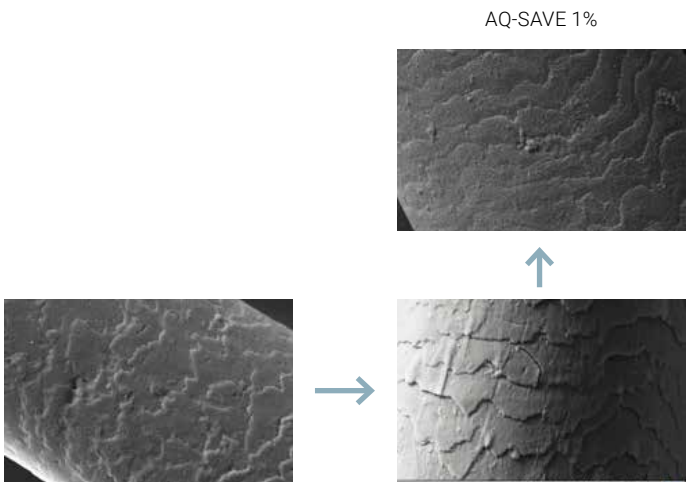
PLANT USED: Italian organic certified chestnuts.

TECHNOLOGY: Bioliquefaction Technology.

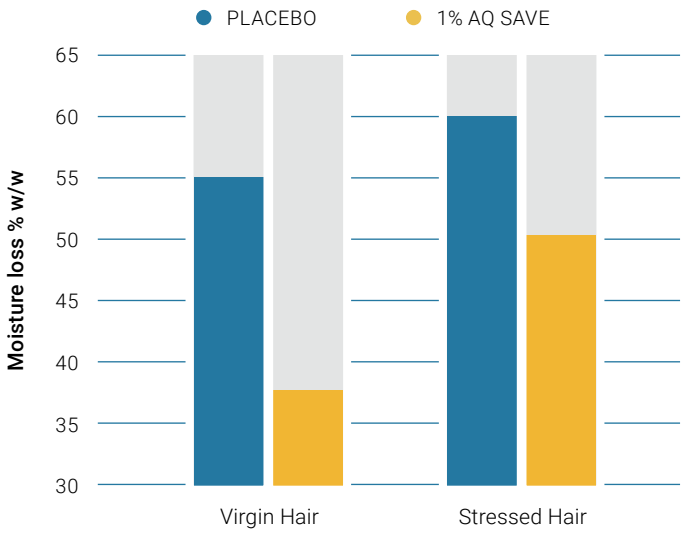
SUGGESTED CONCENTRATION OF USE: 1% w/w.

ORGANIC STATUS: COSMOS certified.

CHINA STATUS: also available in China compliant version.



Repairing effect of AQ-Save 1% w/w on damaged hair



Moisture loss preventing effect on hair treated with AQ save 1% w/w before flat iron straightening

OATS

AVENOFERM HF

OATS BENEFITS BOOSTED BY FERMENTATION

SKIN

COSMOS CERTIFIED

PRODUCT DESCRIPTION

Oats have been used successfully for millennia due to moisturizing and soothing properties. The Ancient Romans were used to add oats to thermal water to nourish the skin, treat chapping and irritation. Cleopatra also used oat flour mixed with warm milk as beauty treatment.

Oats are rich in proteins with a high content of lysine and are as an excellent source of soluble fiber and beta-glucans with prebiotic activities. There are also several antioxidant compounds having exceptional calming and soothing properties.

AVENOFERM HF is an active ingredient based on oat phitocomplex boosted trough Phenbiox's exclusive HyperFermentation Technology, process that transforms oat's oligosaccharides into a post-biotic complex with high cosmetic efficacy by enhancing the antioxidants and amino acids content.

AVENOFERM HF can act as soothing agent reducing inflammation by reducing the Interleukin 1-alpha production.

In skin care application AVENOFERM HF proved to be respectful of skin microbiota not reducing its biodiversity but at the same time inducing a positive modulation that reduces the content of *P. acnes*, preventing acne breakouts.

AVENOFERM HF is also able to keep skin protected, preventing skin dryness caused by surfactants.

BENEFITS

- **Reduces interleukins release** (-26% *in vitro* test)
- **Positively modulates skin microbiota inhibiting *P. acnes*** (*in vivo* test)
- **Prevents skin dryness caused by surfactants** (*in vivo* test)

TECHNICAL INFORMATION

INCI: aqua, avena sativa leaf extract, saccharomyces ferment lysate filtrate, citric acid, sodium benzoate, potassium sorbate

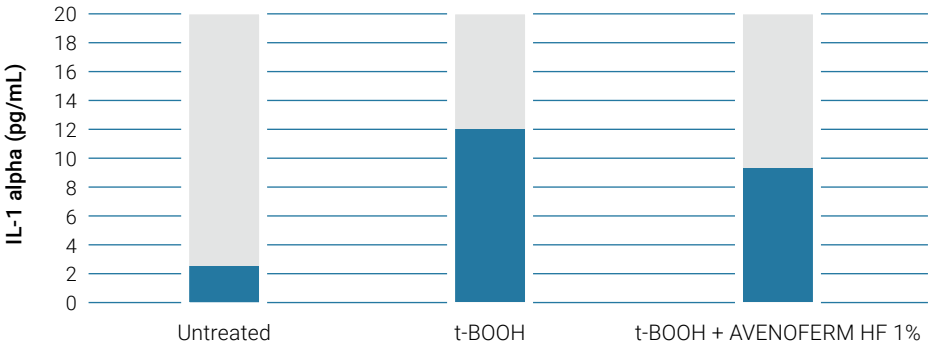
PLANT USED: Organic Italian Oat Apennine Mountains

TECHNOLOGY: Hyperfermentation Technology

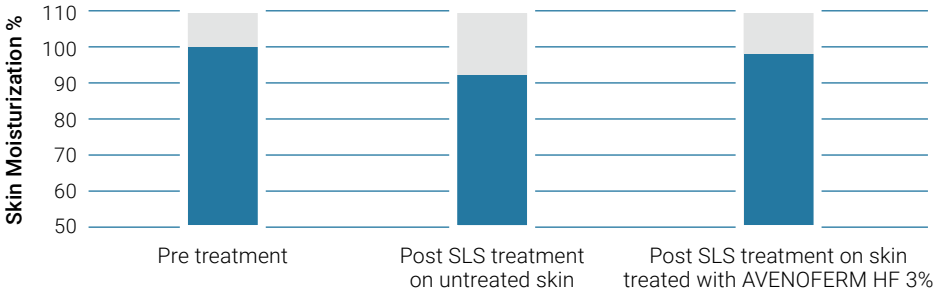
SUGGESTED CONCENTRATION OF USE: 3% w/w

ORGANIC STATUS: COSMOS certified

CHINA STATUS: product is China listed

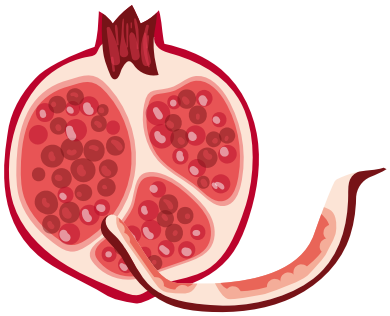


Inhibition of interleukin 1-alpha release due to treatment with AVENOFREM HF 1% w/w.



Prevention of skin dryness caused by surfactants on skin treated with AVENOFREM HF 3% w/w.

HAZELNUT



POMEGRANATE

BODYFERM HF

HAZELNUT AND POMEGRANATE SKINS FROM UP-CYCLING TO RESHAPE THE BODY

SKIN

COSMETIC INGREDIENT FROM UPCYCLING

COSMOS APPROVED

PRODUCT DESCRIPTION

BodyFerm HF is an active ingredient obtained from the up-cycling of two by-products from Italian productions of excellence: hazelnut skins from Piedmont and Emilian pomegranate peels.

These skins are by-products from the food sector but contain phytocomplexes that are very rich in active ingredients, part of the defensive barriers protecting the fruit.

Hazelnut and pomegranate skins have high concentrations of different kind of phenolics able to perform antioxidant, anti-inflammatory and microcirculation-promoting activities.

The two plant phytocomplexes are boosted through the exclusive Hyper-Fermentation technology able to transform the inert oligosaccharides into a post-biotic complex, with an increased content of antioxidants and amino acids, obtaining BodyFerm HF.

BodyFerm HF efficiently acts as body tightening and slimming active on arms, thighs and abdomen. It also has a breast firming action delivering total body reshaping effect in only 30 days.

BENEFITS

- **Reduces circumference on thighs, abdomen and arms** (-0,9 cm, -1,3 cm, -0,4 cm *in vivo* test)
- **Reduces subcutaneous fat on thighs, abdomen and arms** (-4,1%, -5,6%, -5,5% *in vivo* test)
- **Increases skin firmness** (+12%, *in vivo* test)
- **Reactivates microcirculations** (+11% *in vivo* test)
- **Breast firming effect** (according to 70% of volunteers, *in vivo* self-assessment under medical supervision)

TECHNICAL INFORMATION

INCI: glycerin, aqua, punica granatum pericarp extract, corylus avellana seed extract, saccharomyces ferment lysate filtrate, citric acid.

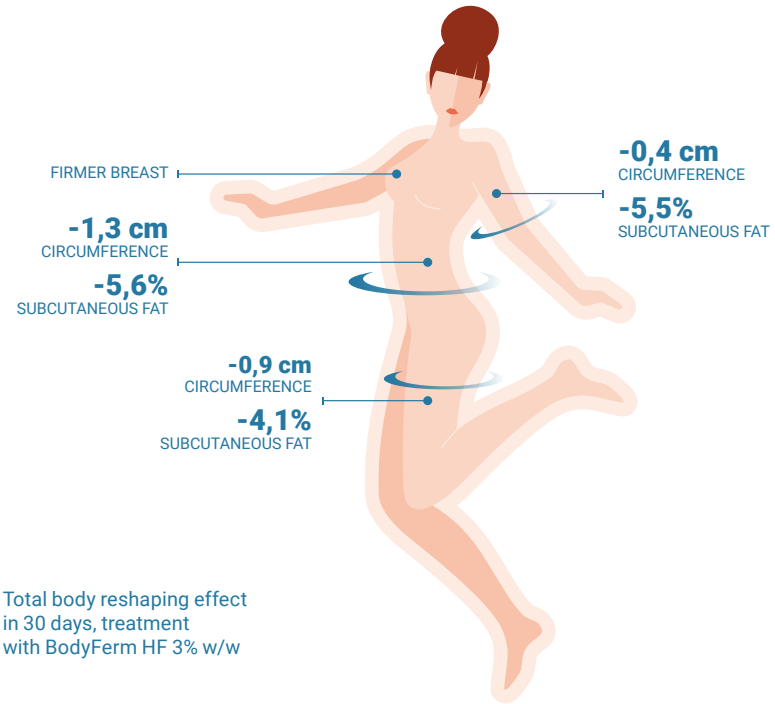
PLANT USED: hazelnut skins from Piedmont, pomegranate skins from Emilia-Romagna region.

TECHNOLOGY: Hyperfermentation technology.

SUGGESTED CONCENTRATION OF USE: 3% w/w.

ORGANIC STATUS: COSMOS approved.

STATUS CINA: the product is China listed.



Total body reshaping effect in 30 days, treatment with BodyFerm HF 3% w/w

HEMP

CANNABIOT

HEMP FOR SKIN AND MICROBIOTA WELLNESS

SKIN | COSMOS APPROVED | COSMOS CERTIFIED

PRODUCT DESCRIPTION

Hemp is a well-known effective remedy against dehydrated and dry skin as well as being a potent anti-inflammatory and it is becoming one of the must-have ingredients in the cosmetics sector also for marketing purposes.

Cannabiot is a hemp derived active ingredients produced from seeds treated with our exclusive Bioliquefaction Technology in order to release the complete phytocomplex of the plant.

Cannabiot is able to positively modulate the microbiota of healthy skin and helps skin and skin microbiota to recover from irritations and biodiversity depletion.

Cannabiot is a fast acting soothing agent able to help the skin to recover from erythema and to reduce the trans epidermal water loss.

Cannabiot is a hydrating agent able to increase skin moisturisation and to reduce skin scanlines. The product can also remarkably increase skin elasticity and reduce skin roughness.

BENEFITS

- **Positively modulates skin microbiota** (*in vivo* test)
- **Promotes the recovery of skin microbiota after insult** (*in vivo* test)
- **Soothes irritated skin** (*in vivo* test)
- **Reduces TEWL of irritated skin** (*in vivo* test)
- **Promotes skin hydration** (+ 15.4% *in vivo* test)
- **Reduces skin scaliness** (- 22.7% *in vivo* test)
- **Increases skin elasticity** (+ 49.7% *in vivo* test)
- **Reduces skin roughness** (- 7.7% *in vivo* test)

TECHNICAL INFORMATION

INCI: glycerin, *Cannabis sativa* seed extract, citric acid.

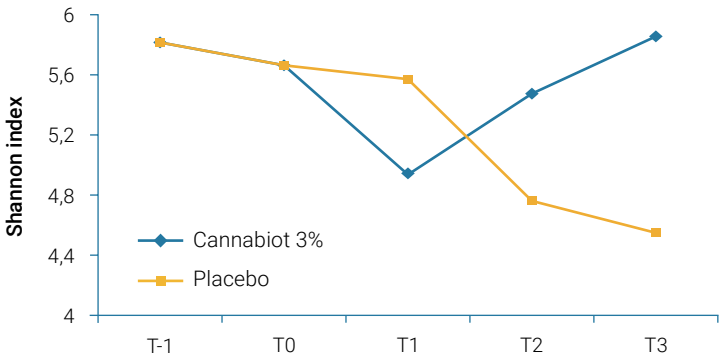
PLANT USED: hemp seeds (cannabinoids <2ppm).

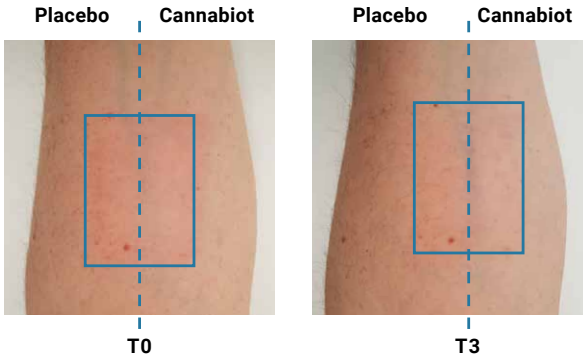
TECHNOLOGY: Bioliquefaction Technology.

SUGGESTED CONCENTRATION OF USE: 3% w/w.

ORGANIC STATUS: COSMOS approved / COSMOS certified.

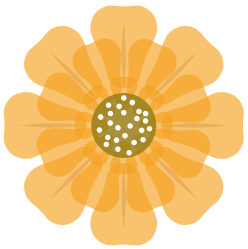
CHINA STATUS: not allowed in China.





Skin microbiota biodiversity (Shannon Index) recovery promoted by Cannabiot 3% w/w after a pro inflammatory insult (SLS treatment).

ROCKET SALAD



PRICKLY PEAR FLOWER

COUPERINE

REDUCES COUPEROSE FROM THE FIRST WEEK

SKIN

COSMOS APPROVED

PRODUCT DESCRIPTION

COUPERINE is a mix of bioliquified rocket salad leaves and prickly pear flowers able to help very sensitive skin to be less prone to develop couperose and to lessen it when already present.

Rocket salad contains isothiocyanates able to boost the synthesis of the tripeptide glutathione, the only endogenous antioxidant of our body. Glutathione participates directly in the neutralization of free radicals and maintains vitamins C and E in their active forms. Glutathione plays a prominent role in DNA protection, in the detoxification processes and in contrasting the inflammatory processes often related to radical presence.

Prickly pear flowers have been used in traditional medicine and in recent years the antioxidants and polysaccharides contained in it have been proven to be able to protect both large and small blood vessels from oxidative damage. They can also mitigate micro-vessel damage and maintain micro-capillary integrity by stabilizing capillary walls.

The combination of endogenous and exogenous antioxidants and protective molecules, as well as the soothing and conditioning effects of the mix of molecules contained in COUPERINE allow to effectively reduce couperose from the first week of application.

BENEFITS

- **Boosts endogenous and exogenous antioxidant defences of skin** (*in vitro* tests)
- **Reduces redness** (-13%), **tightness** (-8%) **and stinging sensation** (-9.1%) **on skin** (*in vivo* test)
- **Reduces couperose from the first week** (-10.4% *in vivo* test)

TECHNICAL INFORMATION

INCI: hydrolyzed *Eruca sativa* Leaf, hydrolyzed *Opuntia ficus-indica* flower extract, citric acid, sodium benzoate, potassium sorbate.

PLANTS USED: rocket salad leaves (*Eruca sativa*) freshly harvested in Italy and Mediterranean prickly pear flowers (*Opuntia ficus-indica*).

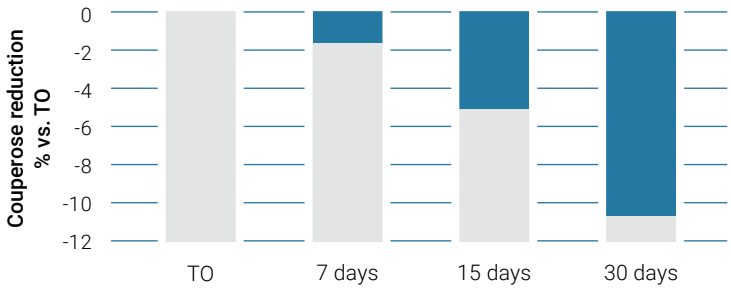
TECHNOLOGY: Bioliquefaction Technology.

SUGGESTED CONCENTRATION OF USE: 3% w/w.

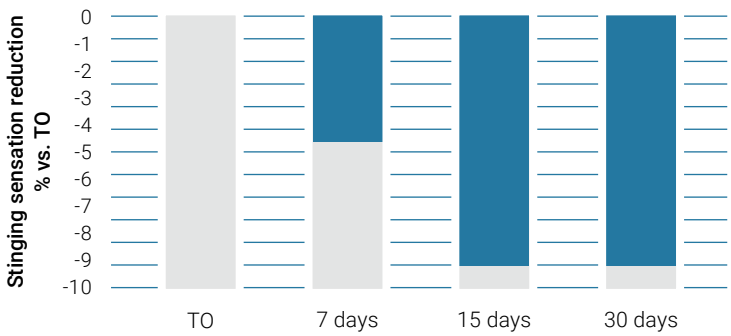
ORGANIC STATUS: COSMOS approved.

CHINA STATUS: also available in China compliant version.

Couperose reduction after a treatment with Couperine 3% w/w



Stinging sensation reduction after a treatment with Couperine 3% w/w



WHEAT BRAN

CRUOX®

ARABINOXYLANS TO PLUMP UP WRINKLES FROM THE INSIDE

SKIN

COSMETIC INGREDIENT FROM UPCYCLING

COSMOS CERTIFIED

PRODUCT DESCRIPTION

The settling in of wrinkles and expression lines is due to loss of skin firmness and elasticity generally caused by aging or photo-aging in healthy people. In mature skin there is a loss of efficiency of the fibroblast metabolism which produces micro-fibrils at a lower rate.

CRUOX® is bio-liquefied wheat bran that acts on wrinkles. Due to its complex and highly bio-available chemistry it reactivates the micro-fibril synthesis that internally plumps up wrinkles. The biocatalysts used cut polymeric structures at a molecular level, releasing a high content of arabinoxylans and biophenols, mostly ferulic acid, in the water phase, that are generally not bioavailable.

CRUOX® is able to increase skin elasticity working on the lower layers of the skin, thanks to the activation of fibril synthesis. This has also a positive effect on skin appearance causing wrinkles to be significantly reduced.

BENEFITS

- **Effectively increases biological elasticity in skin** (+9% *in vivo* test)
- **Drastically increases viscoelasticity in skin** (+33% *in vivo* test)
- **Reduces wrinkles** (-21% *in vivo* test)

TECHNICAL INFORMATION

INCI: hydrolyzed wheat bran, citric acid, sodium benzoate, potassium sorbate.

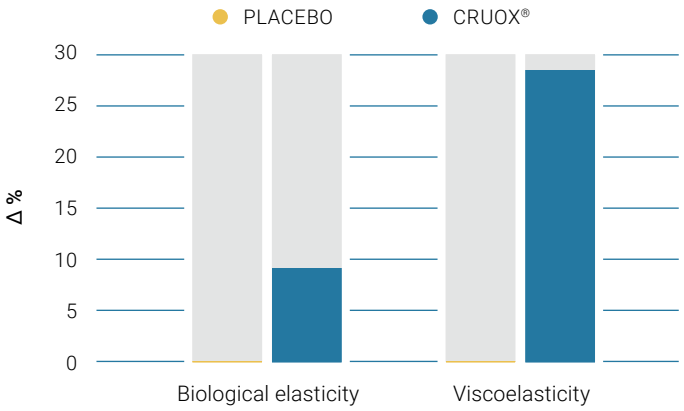
PLANT USED: organic wheat bran from the Po river valley.

TECHNOLOGY: Bioliquefaction Technology.

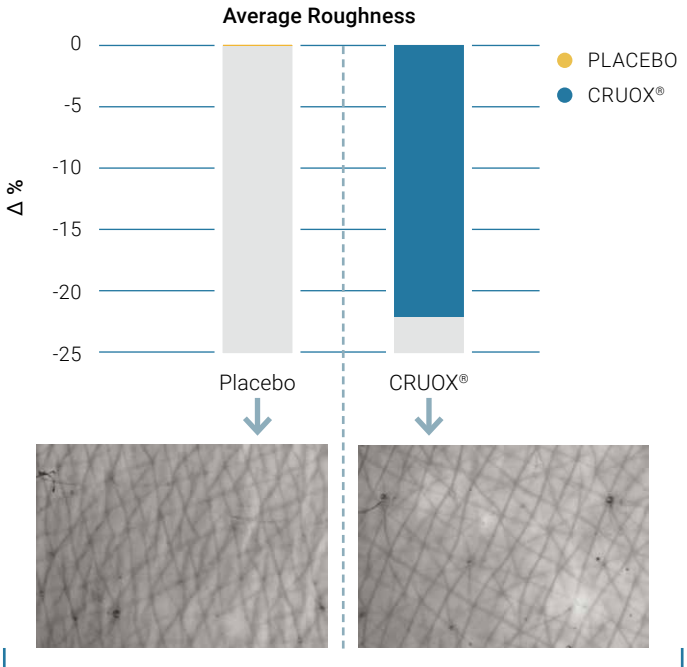
SUGGESTED CONCENTRATION OF USE: 3-5% w/w.

ORGANIC STATUS: COSMOS certified.

CHINA STATUS: also available in China compliant version.



Skin Elasticity increased due to the treatment with Cruox® 5% w/w



Wrinkle reduction due to the treatment with Cruox® 5% w/w

LIQUORICE ROOT

NETTLE LEAF

OAK BARK

FERMENTHAIR HF

LONG-LASTING HAIR HEALTH PROMOTION

HAIR

COSMOS APPROVED

PRODUCT DESCRIPTION

FermentHair HF is a blend of Italian plants used in different traditional medicines to reduce hair loss and stimulate hair growth. The phytocomplexes of nettle, liquorice and oak bark have been broadly studied for several beneficial properties such as high antioxidant and anti-inflammatory capacity, ability to modulate testosterone and DHT, stimulation of microcirculation, hair density and thickness.

The mix of plant of FermentHair HF has been processed through our exclusive HyperFermentation process in order to fully release the plant phytocomplexes and to boost it through the post biotic complex produced by yeast.

FermentHair HF reduces hair fall and telogen hair count delivering a prompt and effective anti-hair loss effect. FermentHair HF proved also to be able to increase the total hair count increasing the hair density. The improvement of hair conditions remains evident even after stopping the treatment confirming a long-lasting effect.

BENEFITS

- **Reduces hair loss** (Pull Test -9% in 30 days, -35% in 60 days *in vivo* test)
- **Increases hair lifespan** (Telogen hair count -8% in 60 days *in vivo* test)
- **Stimulates hair growth** (Anagen hair count +3,6% in 30, days +18% 60 days *in vivo* test)
- **Promotes hair density** (Total hair count +3,1% in 30 days, +10,3% 60 days *in vivo* test)
- **Long lasting effect even after treatment stop** (*in vivo* test)

TECHNICAL INFORMATION

INCI: aqua/water, urtica dioica leaf extract, glycyrrhiza glabra root extract, quercus robur bark extract, saccharomyces ferment lysate filtrate, citric acid, sodium benzoate, potassium sorbate.

PLANTS USED: nettle leaf and oak bark from Emilia-Romagna region, liquorice root from Calabria region.

TECHNOLOGY: Hyperfermentation Technology.

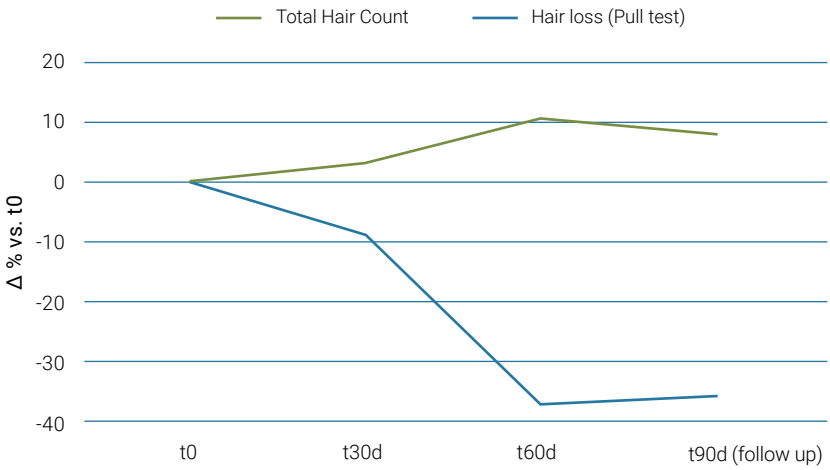
SUGGESTED CONCENTRATION OF USE: 3% w/w.

ORGANIC STATUS: COSMOS approved

CHINA STATUS: product is China listed.

T0 **T60 DAYS**

Phototrichogram of a 46-year-old male subject with moderate telogen effluvium (pictures at time 0 and 60 days)



Anti-hair loss effect/hair growth promotion of a scalp treatment with FermentHair HF 3% w/w at day 30 and 60 and 30 days after stopping the treatment (follow up)

RICE

FERMENTED RICE WATER

ANCIENT HAIR BEAUTY SECRET

HAIR

COSMOS CERTIFIED

PRODUCT DESCRIPTION

Nestled in the mountains of southern China is a village called Huangluo where women are famous all over the world for their long black hair that can exceed two meters in length and remains black, healthy and shiny, even in old age.

The secret of Yao women's hair would seem to be due to the ancient beauty tradition that involves the use of a self-produced shampoo based on fermented rice water. Phenbiox has scientifically investigated the advantages that fermentation brings to rice water by using our exclusive HyperFermentation technology.

The HyperFermentation technology allows the mono/oligosaccharides to be converted into a highly effective post-biotic complex including antioxidants, amino acids, proteins. Hence, the secret of the effectiveness of Phenbiox's Fermented Rice Water is revealed.

Phenbiox's FERMENTED RICE WATER was tested for its ability to prevent hair moisture loss, providing additional moisturisation with excellent results in both leave on and rinse off conditions.

Placebo | **Fermented Rice Water 3% W/W**

Comparison of hair appearance after leave on treatment

BENEFITS

- **Boosted phytocomplex through fermentation**
- **Post-Biotic concept**
- **Helps hair to retain moisture +30% rinse off**
- **Helps hair to retain moisture +60% leave on**

TECHNICAL INFORMATION

INCI NAME: Aqua, Oryza Sativa Extract, Saccharomyces Ferment Lysate Filtrate, Citric Acid, Sodium Benzoate, Potassium Sorbate

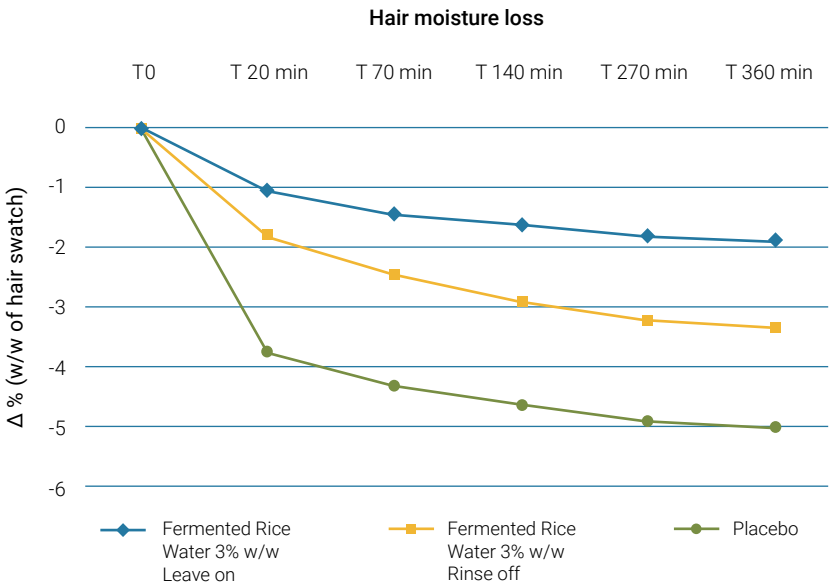
PLANT USED: Organic rice from Piedmont

TECHNOLOGY: HyperFermentation Technology

SUGGESTED CONCENTRATION OF USE: 3% w/w

ORGANIC STATUS: COSMOS certified

CHINA STATUS: the product is China listed



GRAPE

G-CELL

STIMULATED GREEN GRAPE STEM CELLS FOR LONG TERM ANTI-RADICAL PROTECTION

SKIN

COSMOS APPROVED

PRODUCT DESCRIPTION

Grapes are well known for the effective antioxidant phytocomplex that they are able to produce. Green unripened grapes were collected, as these young tissues are rich in highly viable cells, and used to obtain the stem cell culture used to produce G-Cell.

During the stem cells fermentation process we have been inducing the overexpression of interesting active molecules such as polyphenols and stilbenes in glycosylated form. These glycosylated molecules are very stable and highly bio-available.

G-Cell is an effective antioxidant ingredient able to efficiently counteract free-radicals and to also retain this property in finished cosmetic products.

In vivo G-Cell is able to drastically rise the antioxidant capacity of skin delivering an efficient protection against free-radical aggressions. G-Cell offers long-lasting skin protection active for over 6 hours.

BENEFITS

- **Rich in highly stable, bioavailable and effective antioxidants** (*in vitro* tests)
- **Drastically raises the antioxidant defences of the skin** (+124% *in vivo* test)
- **Delivers long-lasting protection** (over 6 hours *in vivo* test)

TECHNICAL INFORMATION

INCI: aqua, *Vitis vinifera* fruit meristem cell culture, citric acid, sodium benzoate, potassium sorbate.

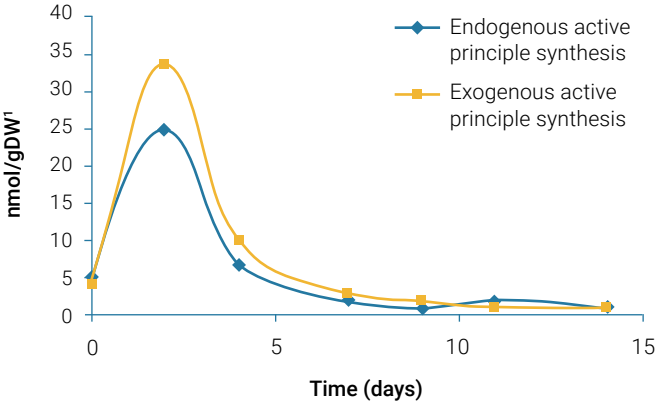
PLANT USED: stem cell culture obtained by green unripened grapes from the Emilia-Romagna region, Italy.

TECHNOLOGY: Stimulated Stem Cell Technology.

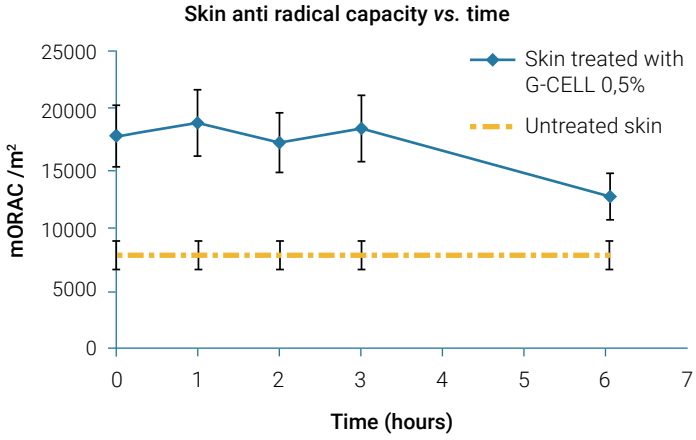
SUGGESTED CONCENTRATION OF USE: 0.5% w/w.

ORGANIC STATUS: COSMOS approved.

CHINA STATUS: also available in China compliant version.



Synthesis of endogenous and exogenous phenolics in grape meristem cell culture



Antiradical capacity of skin after treatment with G-Cell 0,5% w/w

ROCKET SALAD

GSH-DEFENSE

ROCKET SALAD BOOSTS ENDOGENOUS GSH TRIPEPTIDE TO STRENGTHEN SKIN DEFENSIVE SYSTEM

SKIN

COSMOS APPROVED

PRODUCT DESCRIPTION

Rocket salad (arugula) is one of the so called "healthy foods". When we eat it, the plant is able to release isothiocyanates that help our cells strengthen the phase II defence system in our body. Glutathione (GSH) is a tripeptide, one of the key molecule of this defensive system, and is the only antioxidant our cells are able to produce by themselves. GSH participates directly in the neutralization of free radicals and regenerates vitamins C and E keeping them in their active forms. GSH also plays a prominent role in DNA protection, in the detoxification processes and in contrasting the inflammatory processes.

GSH-Defense has been developed by applying bespoke enzymatic treatments able to release all the beneficial molecules contained in rocket salad in their bioavailable and biologically active form. GSH-Defence is therefore able to effectively promote the synthesis of glutathione in skin. This helps cells to strengthen the natural defences against radical related stress increasing their endogenous antioxidant capacity.

GSH-Defense is able to soothe and calm irritated skin improving its capacity to recover after stress, since the product is able to quickly and effectively enhance the defensive response, also acting as a protective barrier.

BENEFITS

- **Boosts the synthesis of the tripeptide glutathione** (*in vitro* tests)
- **Protects the skin raising its endogenous antioxidant defences** (*in vitro* tests)
- **Soothes and calms irritated skin** (+20% *in vivo* test)

TECHNICAL INFORMATION

INCI: hydrolyzed *Eruca sativa* leaf, citric acid, sodium benzoate, potassium sorbate.

PLANT USED: rocket salad leaves freshly harvested in Italy.

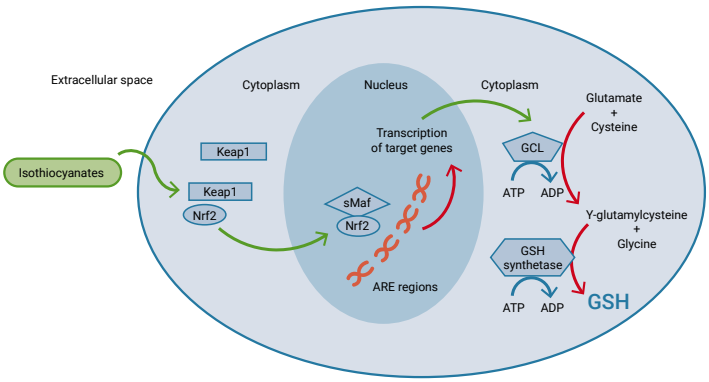
TECHNOLOGY: Bioliquefaction Technology.

SUGGESTED CONCENTRATION OF USE: 3% w/w.

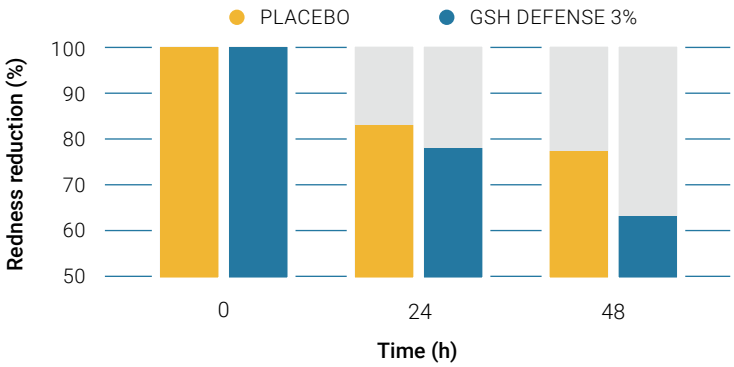
ORGANIC STATUS: COSMOS approved.

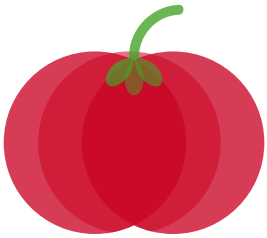
CHINA STATUS: also available in China compliant version.

Stimulation of phase II defensive system and glutathione (GSH) production through isothiocyanates contained in GSH-Defense



Soothing effect of GSH-Defence 3% w/w on mild irritation induced on skin





TOMATO

HYDROPOM®

A COSMETIC DIET TO PROTECT SKIN FROM UV AND POLLUTION

SKIN

COSMETIC INGREDIENT FROM UPCYCLING

PRODUCT DESCRIPTION

Hydropom® is a water based lycopene-containing product specifically created for the cosmetic sector. To reach this goal Phenbiox developed the new exclusively patented A.M.C. (Aquose Microdisperse Carotenoids) technology allowing for combining the bioliquefaction technologies to micro-dispersion of oil soluble molecules in water phase. Therefore, Hydropom® is a natural product, obtained using skins of tomatoes harvested in Italy, containing a completely water soluble lycopene.

Lycopene has been broadly studied for its protective effects due to its high anti radical potential, and a lycopene-rich diet is known to be able to protect skin from UV radiation. However, the main limitation of such a diet is the slow and non-homogenous delivery of skin protection. Hydropom® allows for quickly, effectively and homogenously delivery of the amount of lycopene needed to get efficient protection against UV radiation.

The protective effect of Hydropom® against environmental stress caused by anthropogenic pollution was assessed in different areas of our city, Bologna, Italy, in a very polluted crossroad and a park, with strictly monitored pollutions levels. Hydropom® is able to provide a very efficient protection against environmental pollution.

BENEFITS

- **Natural water soluble lycopene containing product**
- **Efficient delivery of UV protecting molecules on skin**
- **Anti-pollution effect** (+40% *in vitro* tests)

TECHNICAL INFORMATION

INCI: hydrolyzed tomato skin, citric acid, sodium benzoate, potassium sorbate.

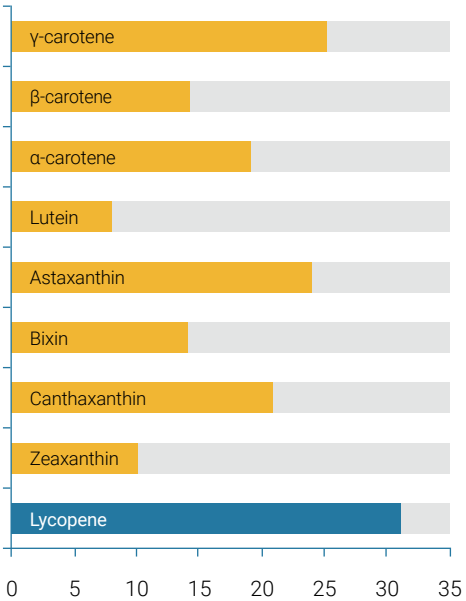
PLANT USED: tomato skins harvested in Italy.

TECHNOLOGY: Bioliquefaction Technology, Aquose Microdisperse Carotenoids Technology.

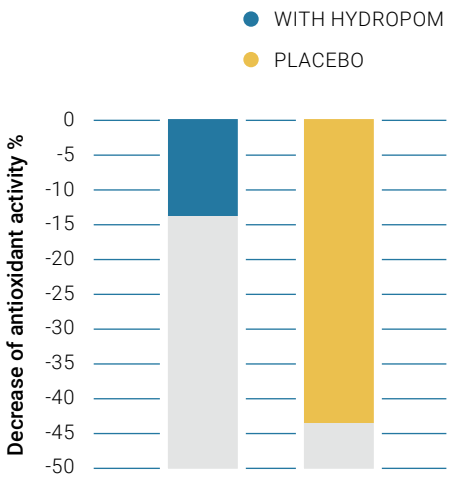
SUGGESTED CONCENTRATION OF USE: 3-5% w/w.

ORGANIC STATUS: generally accepted for organic certified formulations.

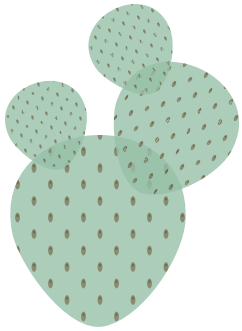
CHINA STATUS: also available in China compliant version.



Quenching constant values against singlet oxygen of some carotenoids



Protection of Vitamin E from pollution exposure due to the presence of Hydropom® 2% w/w



PRICKLY PEAR LEAVE

HYDROPUNTIL

A SICILIAN CACTUS TO MOISTURIZE AND PROTECT THE SKIN

SKIN

COSMETIC INGREDIENT FROM UPCYCLING

COSMOS APPROVED

COSMOS CERTIFIED

PRODUCT DESCRIPTION

HYDROPUNTIL is produced with prickly pear leaves harvested in Sicily. The internal part of the juicy leaves was traditionally used on skin as an emollient and anti-inflammatory remedy as well as in wound healing. Scientific studies have shown these effects are due to the specific polysaccharides in prickly pear leaves that recently have been found to have similar effects as hyaluronic acid.

HYDROPUNTIL is able to deliver an efficient protective effect thus increasing the antioxidant capacity of cell membranes and reducing the release of pro-inflammatory interleukins.

The application of the product has been proven to efficiently moisturize the skin in just one week and to also deliver a strong protecting effect reducing the onset of redness.

BENEFITS

- **Increases cell membrane antioxidant capacity** (*in vitro* tests)
- **Reduces interleukins release** (*in vitro* tests)
- **Moisturises the skin** (+35.0% *in vivo* test)
- **Prevents skin irritations** (-37.5% *in vivo* test)

TECHNICAL INFORMATION

INCI: glycerin, *Opuntia ficus-indica* stem extract, citric acid, sodium benzoate, potassium sorbate.

PLANT USED: juicy prickly pear leaves (*Opuntia ficus-indica*) harvested in Sicily, Italy.

TECHNOLOGY: Bioliquefaction Technology.

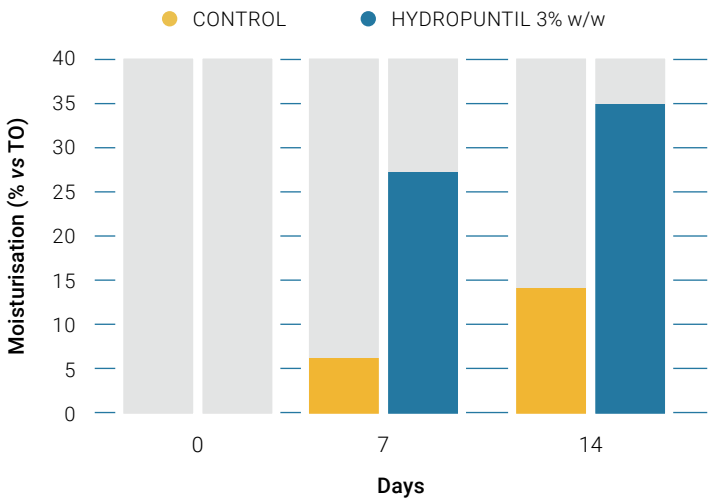
SUGGESTED CONCENTRATION OF USE: 3% w/w.

ORGANIC STATUS: COSMOS approved / COSMOS certified.

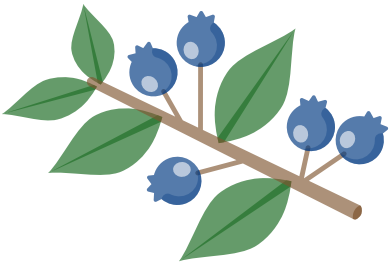
CHINA STATUS: the product is China listed.

PLACEBO HYDROPUNTIL

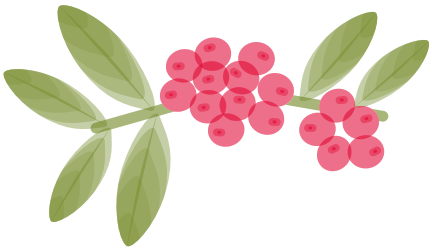
Induced irritation on skin treated with HYDROPUNTIL 3% w/w *vs.* placebo



Moisturisation improvement after a treatment with HYDROPUNTIL 3% w/w



MYRTLE



LENTISK

LENTIMYRT HF

MULTILEVEL SKIN BARRIER FUNCTION BOOSTER

SKIN

COSMOS APPROVED

PRODUCT DESCRIPTION

Myrtle and Lentisk are characteristic plants of the Mediterranean flora and of the diet of Sardinia, an Italian island known to be a region with a remarkable biodiversity.

The plants are treated with Phenbiox's Hyperfermentation technology (Bioliquefaction + Fermentation) to reinforce the plant phytocomplexes, released by Bioliquefaction, transforming the inert fibres into even more active ingredients thanks to Fermentation.

LentiMyrt HF is a natural active ingredient able to promote the barrier function working at different levels on the skin. LentiMyrt HF rises the skin defences increasing its antioxidant capacity, promotes a positive modulation of skin microbiota and improves the hydrolipidic film increasing moisturisation and sebometry.

BENEFITS

- **Rises the antioxidant defences of the skin** (+ 190% *in vivo* test)
- **Positively modulates skin microbiota** (*in vivo* test)
- **Promotes skin hydration** (+ 13.2% *in vivo* test)
- **Improves hydrolipidic film** (+ 59.6% *in vivo* test)

TECHNICAL INFORMATION

INCI: aqua, *Myrtus communis* leaf extract, *Pistacia lentiscus* leaf extract, *Saccharomyces* ferment lysate filtrate, citric acid, sodium benzoate, potassium sorbate

PLANT USED: Myrtle and Lentisk from Sardinia

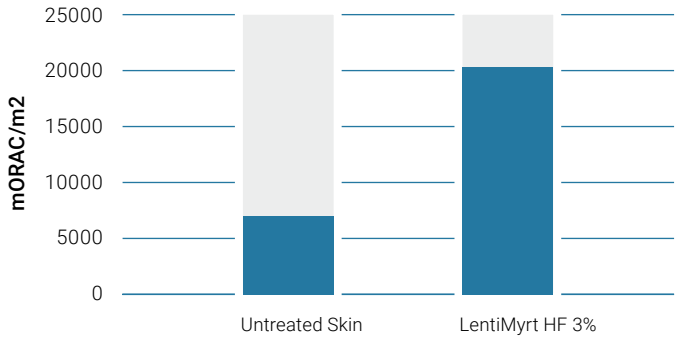
TECHNOLOGY: Hyperfermentation Technology.

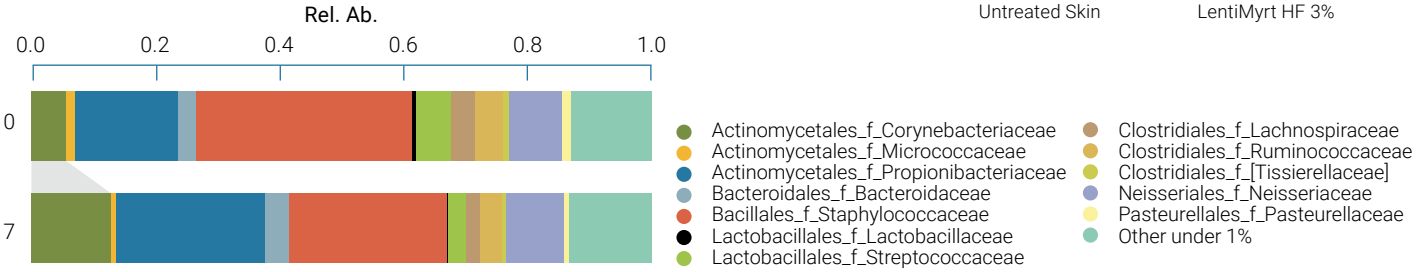
SUGGESTED CONCENTRATION OF USE: 3% w/w.

ORGANIC STATUS: COSMOS approved.

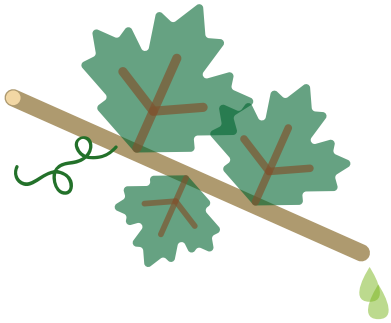
CHINA STATUS: also available in China compliant version.

Antiradical skin capacity of the skin after treatment with LentiMyrt HF 3% w/w.





Skin microbiota modulation after 1 week of treatment with LentiMyrt HF 3% w/w: increase of Corynebacteriaceae, associated to more efficient skin barrier functions.



GRAPE VINE SAP

LIFE ESSENCE-VITIS

FROM VINEYARDS ON THE ITALIAN HILLS THE ESSENCE OF LIFE

SKIN HAIR COSMOS APPROVED

PRODUCT DESCRIPTION

Spring has arrived in the Emilian hills and the warmth of the sun awakens the Malvasia vines from their long winter sleep. Noting this rise in temperature, the root of the vine activates the upward circulation of the precious tears of a powerful essence of life: vine sap

Vine sap contains a great vital force linked to the presence of a complex but extremely well-balanced mix of nutritional substances such as mineral salts, amino acids, natural saccharides, polyphenols, organic acids and auxins. This ideal plant cell nutrient is also a precious ally in nourishing and stimulating our cells and skin microbiota.

In order to effectively transfer vine sap to our skin and hair without altering its properties, we enclosed these precious tears inside plant liposomal systems.

LifeEssence-Vitis is therefore an essential nutrient able to improve the condition of the skin, increasing moisturisation and elasticity and repairing heavily damaged hair increasing elasticity and delaying breakage.

BENEFITS

- **Efficient skin nutrition and stimulation** (*in vitro* tests)
- **Increases skin elasticity** (+19.7% *in vivo* test)
- **Promotes skin moisturisation** (+10.3% *in vivo* test)
- **Increases hair elasticity** (+13.7% *ex vivo* test)
- **Reduces hair breakage** (-27.6% *ex vivo* test)
- **Positively modulates skin microbiota** (*in vivo* tests)

TECHNICAL INFORMATION

INCI: aqua, *Vitis vinifera* vine sap, glycerin, sorbitol, lecithin, citric acid, xanthan gum, sodium benzoate, potassium sorbate.

PLANT USED: vine sap from Emilian hills, Italy.

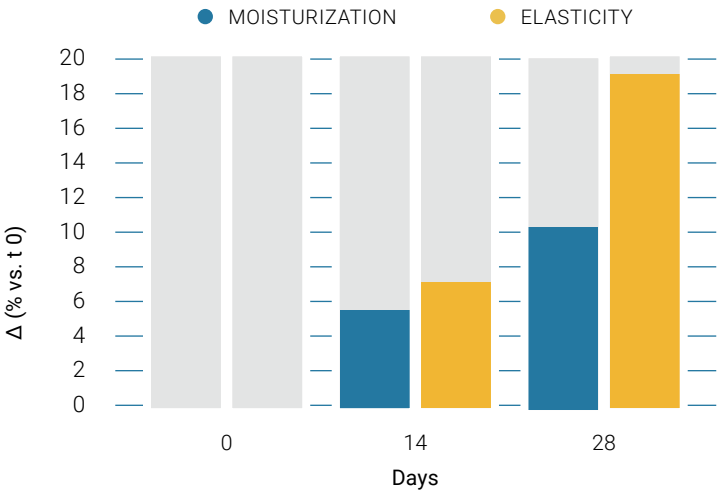
TECHNOLOGY: Natural Liposomes.

SUGGESTED CONCENTRATION OF USE: 1-1.5% w/w skin care, 1% w/w hair care.

ORGANIC STATUS: COSMOS approved.

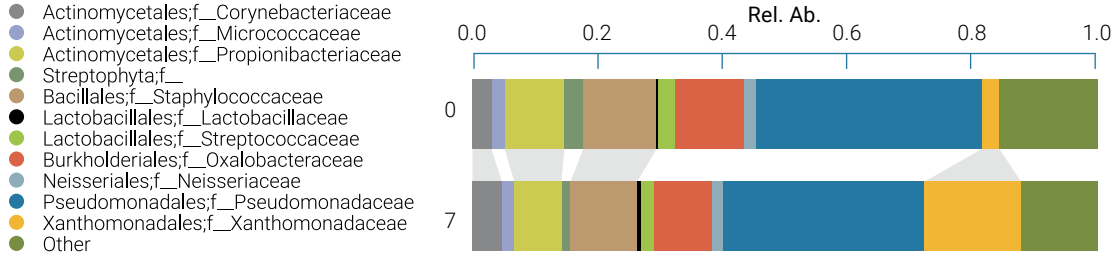
CHINA STATUS: the product is China listed.

Skin moisturisation and elasticity improvement after a treatment with Life Essence-Vitis 1.5% w/w



Skin microbiota modulation after 1 week of treatment with Life Essence-Vitis 1.5% w/w

- Increase of Corynebacteriaceae and Xanthomonadaceae, associated to healthier and more moisturized skin.
- Decrease of Propionibacteriaceae and Staphylococcaceae, potential skin threats.



MULLEIN

LUMINESCINE

A REVOLUTIONARY CONCEPT IN SKIN RADIANCE

SKIN HAIR COSMOS APPROVED COSMOS CERTIFIED

PRODUCT DESCRIPTION

LUMINESCINE is the first natural active ingredient for cosmetics based on plant photoluminescence, the emission of visible light by a substance caused by high (UV) energy light.

Flowers are the main tool for plant reproduction and they hide secret tricks to better compete for pollinating insects. Mullein (*Verbascum Thapsus*) flowers are able to harvest UV radiation and transform it into new visible light to appear brighter, becoming more visible in the meadow and therefore, having a greater chance to attract insects.

In creating LUMINESCINE we harvested this secret feature of flowers allowing to create highly innovative cosmetic products.

LUMINESCINE is able to protect from harmful high-energy UV radiation, transforming it into a source of light that radiates directly from the skin and hair making them looking more radiant, shinier, younger and healthier.

BENEFITS

- **Produces light due to photoluminescence** (*in vitro* tests)
- **Increases skin radiance** (+5.5 Δ L a.u. *in vivo* test)
- **Improve hair brightness and shine** (up to +10.3 Δ L a.u. *ex vivo* test)
- **Protects from UV-blue light induced photo-oxidative stress** (*in vitro* tests)
- **Inhibits tyrosinase and melanin synthesis** (*in vitro* tests)

TECHNICAL INFORMATION

INCI: glycerin, hydrolyzed *Verbascum thapsus* flower, citric acid, sodium benzoate, potassium sorbate.

PLANT USED: Mediterranean mullein (*Verbascum Thapsus*) flowers.

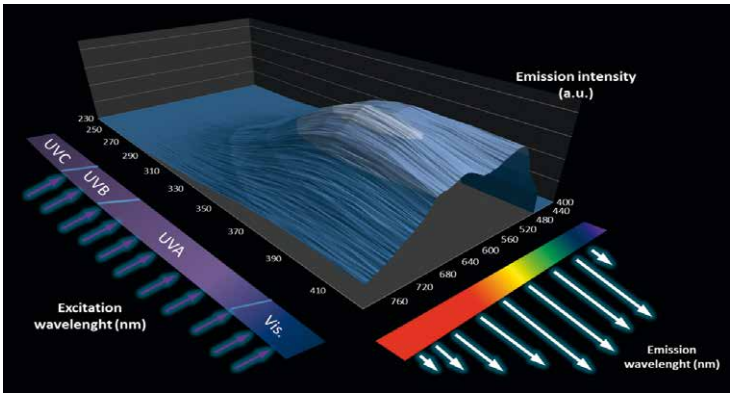
TECHNOLOGY: Bioliquefaction Technology.

SUGGESTED CONCENTRATION OF USE: 3-5% w/w.

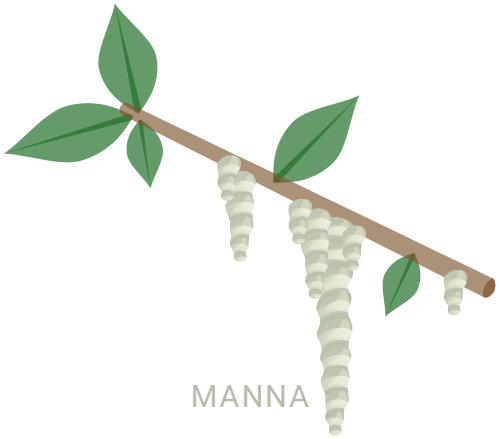
ORGANIC STATUS: COSMOS approved, COSMOS certified.

CHINA STATUS: also available in China compliant version.

Forearm treated on the right with a gel containing Luminescine 4% w/w, effect in full sunlight



Excitation-emission spectra of Luminescine



MANNAFERM HF

THE EXTRAORDINARY PROPERTIES OF FERMENTED SICILIAN MANNA

SKIN HAIR COSMETIC INGREDIENT FROM UPCYCLING COSMOS APPROVED

DESCRIPTION OF THE PRODUCT

In Ancient Rome, it was called Honey Dew or the Oozing of Stars. In the Bible it is described as a gift of God, sweet and white as frost. During the summer, the skilled hands of local ash tree growers harvest the precious product, maintaining a centuries-old tradition.

The sap of the ash tree is drawn from the bark of the trunks in the form of a liquid resin which the baking hot sun turns into white stalactites of Manna, rich in mannitol, organic acids, sugars, mucilage, resins, nitrogen compounds.

Enhanced by our exclusive hyperfermentation technology, the phytocomplex of Sicilian Manna becomes MANNAFERM HF, a strong aid in skin treatment.

BENEFITS

- **Protects cells against osmotic stress** (*in vitro* test)
- **Protects cell junctions for greater cohesion of the epidermis** (*in vitro* test)
- **Moisturizes skin for 24 hours after the first application** (*in vivo* test)
- **Total body moisturizing action: face, décolleté, arms, hands, legs, scalp** (*in vivo* test)
- **Deep moisturization (+17%) and long-term moisturization (+15,5%)** (*in vivo* test)
- **Reduces skin scaliness (-34%)** (*in vivo* test)
- **Increases skin firmness (+ 41%)** (*in vivo* test)
- **Reduces wrinkles (-40%) and smoothens skin (+9%)** (*in vivo* test)

TECHNICAL INFORMATION

INCI: glycerin, Fraxinus excelsior bark extract, saccharomyces ferment lysate filtrate, citric acid.

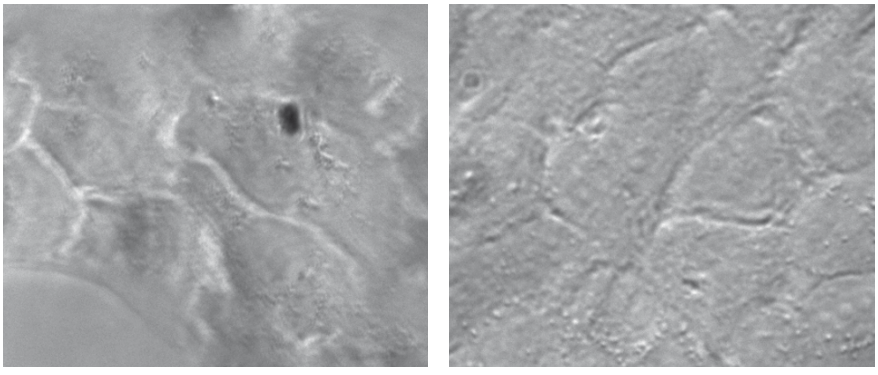
PLANT USED: Sicilian Manna.

TECHNOLOGY: Hyperfermentation Technology.

RECOMMENDED CONCENTRATION: 3% w/w.

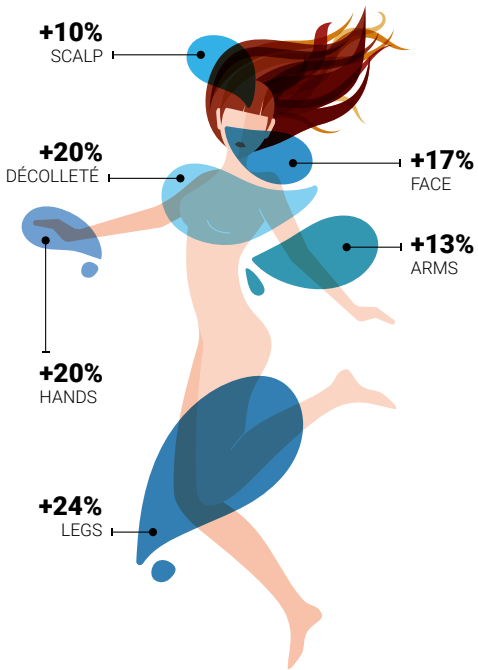
BIOLOGICAL STATUS: COSMOS approved.

CHINA STATUS: China listed.

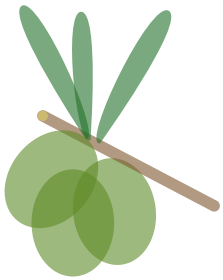


Osmotic Stress | **Osmotic Stress + MANNAFERM HF 1% w/w**

The morphological analysis of keratinocytes shows that MANNAFERM HF is able to protect cell junctions against osmotic stress, enhancing the cohesion of the epidermis



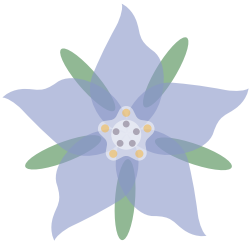
Total body hydrating action with MANNAFERM HF 3% w/w after 7 days of treatment



OLIVE

ALMOND

LINSEED



BORAGE SEED

OLEOSOFT-4O

ALL THE ENERGY OF VEGETAL OILS ENZYMATICALLY ACTIVATED

SKIN HAIR COSMOS APPROVED

PRODUCT DESCRIPTION

OleoSoft-4O has been developed applying our enzymatic activation technology to a mix of almond oil, olive oil, linseed oil and borage oil, chosen for their content in different classes of highly nourishing fatty acids. This technology is able to release all the energy entrapped in vegetal oil stored in plants under the form of triglycerides. This process allows to break up triglycerides into their constituents (fatty acids and glycerides), creating a completely new phytocomplex.

OleoSoft-4O is able to moisturize the skin being much more quickly absorbed compared with the mix of untreated oils and it leaves the skin far less greasy with an amazing silicone like touch.

OleoSoft-4O can deeply nourish the skin affected by stretch marks, improving the elasticity and smoothness of the skin while reducing the redness

OleoSoft-4O is able to improve hair elasticity, increasing the tensile strength.

BENEFITS

- **Boosts mitochondrial activity** (*in vitro* tests)
- **Anti-stretch mark effect** (+34.4% *in vivo* test)
- **Increases skin elasticity** (+45.6% *in vivo* test)
- **Improves skin moisturisation** (+24.9% *in vivo* test)
- **Higher antioxidant capacity** (+114% *in vitro* tests)
- **Increases hair elasticity** (+53.0% *ex vivo* test)
- **Quicker absorption** (*in vivo* test)
- **Reduced greasiness** (*in vivo* test)
- **Silicone like sensorial performances**

TECHNICAL INFORMATION

INCI: almond/borage/linseed/olive acids/glycerides, tocopherol.

OILS USED: olive oil, almond oil, linseed oil, borage seed oil.

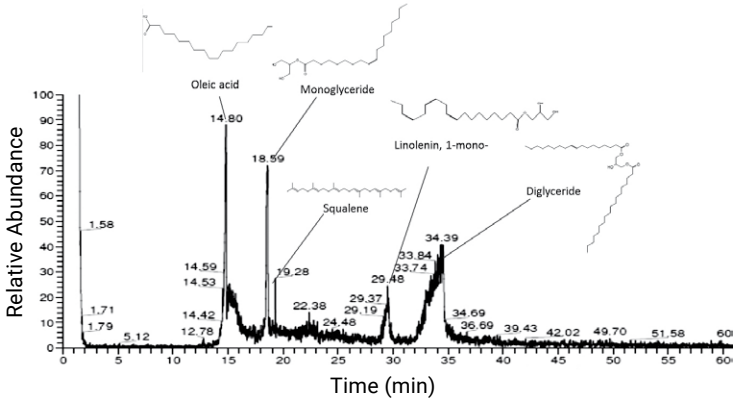
TECHNOLOGY: Enzymatic Activation of Vegetable Oils.

SUGGESTED CONCENTRATION OF USE: 3-5% w/w skin care, 1% w/w hair care.

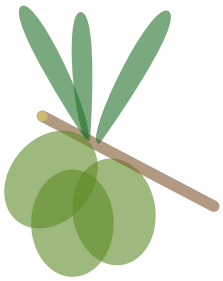
ORGANIC STATUS: COSMOS approved.

CHINA STATUS: also available in China compliant version.

Improvement of stretch marks treated with OleoSoft-4O 5% w/w



Chromatogram of direct GC injection of OleoSoft-4O showing the activated oil phytocomplex



OLIVE

OLEOX®

ORGANIC OLIVE FRUIT PHYTOCOMPLEX TO FIGHT RADICALS

SKIN

COSMETIC INGREDIENT FROM UPCYCLING

COSMOS CERTIFIED

PRODUCT DESCRIPTION

OLEOX® is obtained performing our bioliquefaction process on fresh olives, selected among the richest in bio-phenols and originating from organic certified agriculture. OLEOX® is a water based product with a total phenolic concentration up to 50 -folds higher than extra virgin olive oil. Moreover, the bioliquefaction process has been targeted to enhance the antioxidant properties of the product, bio-refining the phenolic fraction in order to release the antioxidant molecules in their most effective form.

The phenolic fraction that characterizes OLEOX® has an effective protective action against oxidative stress. Having a very high antioxidant potential can prevent the damages caused by free radicals rapidly acting as an effective back up system supporting the natural skin defences. OLEOX® is a powerful antioxidant because of its high content of hydroxytyrosol and other effective phenolic compounds that are able to synergistically act against radical stress due to high bioavailability.

BENEFITS

- **Bio-refined natural antioxidants to enhance bioavailability and activity** (*in vitro* tests)
- **Quick action against oxidative stress** (*in vitro* tests)

TECHNICAL INFORMATION

INCI: Hydrolyzed olive fruit, citric acid, sodium benzoate, potassium sorbate.

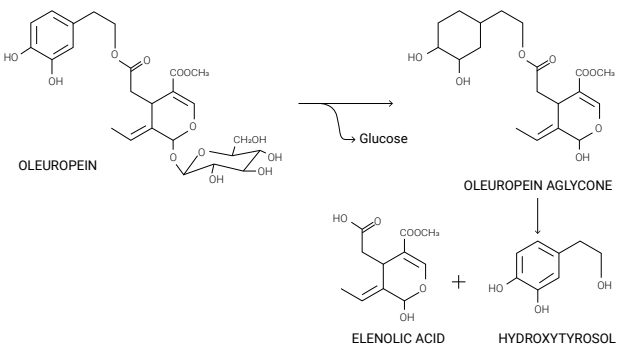
PLANT USED: organic certified olives from the Marche region, Italy.

TECHNOLOGY: Bioliquefaction Technology.

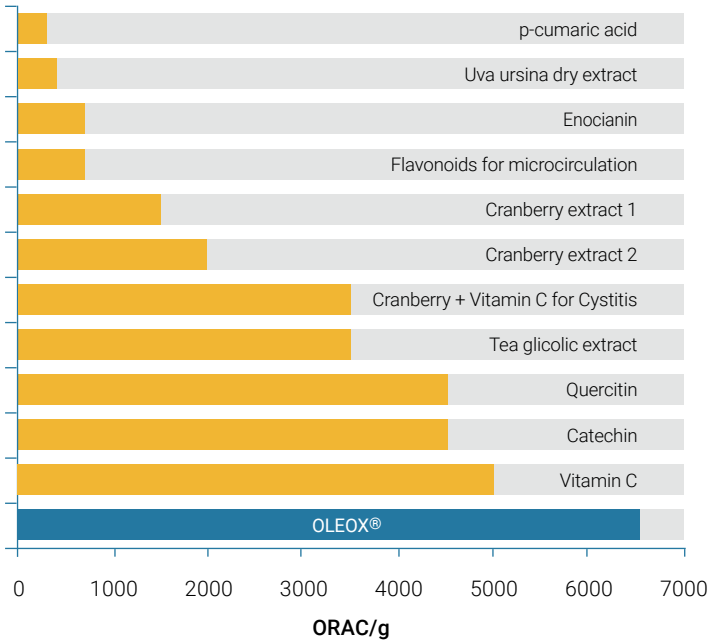
SUGGESTED CONCENTRATION OF USE: 2% w/w.

ORGANIC STATUS: COSMOS certified.

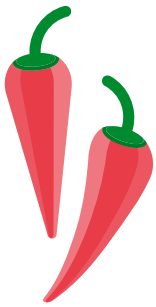
CHINA STATUS: also available in China compliant version.



Biorefining process of oleuropein through bioliquefaction® process



Comparison of antioxidant activity (expressed as ORAC/g) of OLEOX® and other solutions of commercial products



RED CHILI PEPPER

P-CELL

STIMULATED RED CHILI PEPPER STEM CELLS TO INCREASE SKIN ELASTICITY

SKIN

COSMOS APPROVED

PRODUCT DESCRIPTION

To produce P-Cell, we have carefully researched available literature to select a different variety of chili pepper. From each selected variety a stem cell culture was obtained and then each culture was assessed to evaluate its potential in producing a rich phytocomplex. This extensive lab research allowed us to select the better performing red chili pepper stem culture to produce P-Cell.

The stimulation process allowed to obtain a rich phytocomplex able to effectively boost skin metabolism promoting cell protein synthesis.

P-Cell is able to start delivering a significant effect in just ten days and can drastically increase skin elasticity within twenty days of treatment.

BENEFITS

- **Boosts skin metabolism promoting protein synthesis** (*in vitro* tests)
- **Starts increasing skin elasticity in just ten days** (+9% *in vivo* test)
- **Drastically improves skin elasticity within twenty days** (+20% *in vivo* test)

TECHNICAL INFORMATION

INCI: glycerin, *Capsicum annuum* fruit meristem cell, citric acid, sodium benzoate, potassium sorbate.

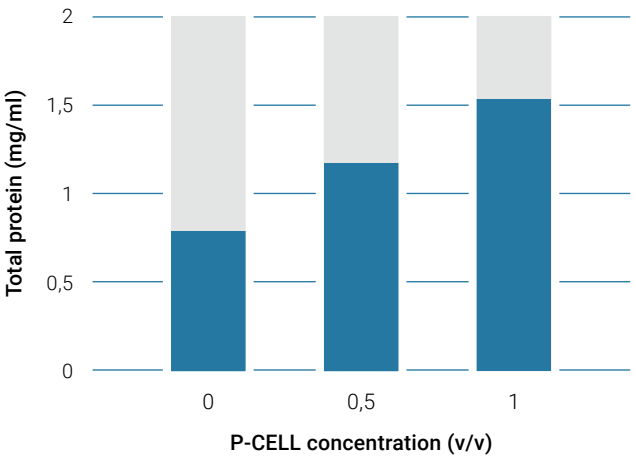
PLANT USED: stem cell culture obtained by selected red chili pepper harvested in the botanical garden of the University of Bologna, Italy.

TECHNOLOGY: Stimulated Stem Cell Technology.

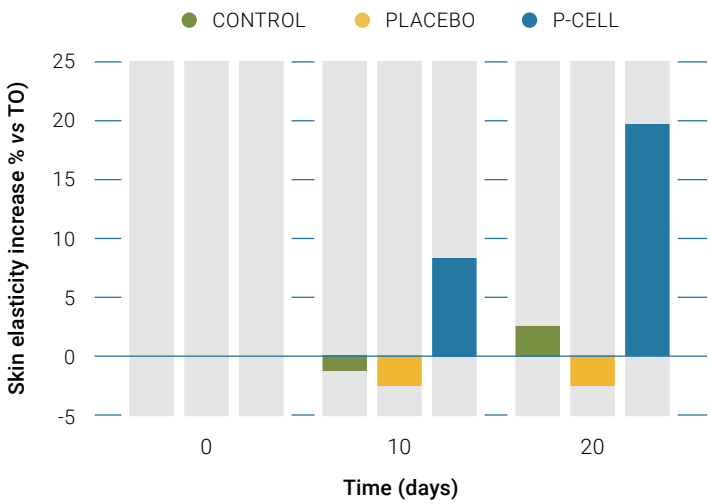
SUGGESTED CONCENTRATION OF USE: 1% w/w.

ORGANIC STATUS: COSMOS approved.

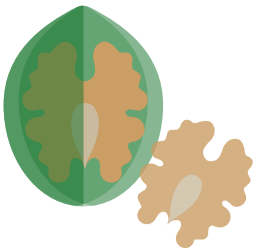
CHINA STATUS: also available in China compliant version.



Total protein concentration in Keratinocytes treated with P-Cell



Skin elasticity increase after treatment with P-Cell 1% w/w



WALNUT

PRO-STRUCTURE

GREEN WALNUTS TO PROTECT HAIR COLOUR AND INCREASE SKIN ELASTICITY

SKIN HAIR COSMETIC INGREDIENT FROM UPCYCLING COSMOS APPROVED

PRODUCT DESCRIPTION

In our laboratories we have spotted a particular stage of walnut ripening when the green walnuts are richer in active molecules. Large size phenolics are able to effectively interact with proteins and are also very efficient antioxidants, these molecules are the key of the efficacy of Pro-Structure.

Pro-structure due to its phytocomplex can create new interactions between corneocytes proteins improving skin elasticity.

The phenolic fraction of Pro-Structure is also able to interact well with hair, making the hair itself antioxidant and therefore protected. This also results in long term protection since hair are still well protected after 3 days.

This close and efficient interaction between hair and Pro-Structure active molecules is also able to provide efficient hair colour protection from the UV/radical induced colour fading.

BENEFITS

- **Improves skin elasticity** (+15% *in vivo* test)
- **Provides long term anti-radical protection to hair** (up to +400% *ex vivo* test)
- **Protects hair colour** (+53% *ex vivo* test)

TECHNICAL INFORMATION

INCI: hydrolyzed walnut extract, citric acid, sodium benzoate, potassium sorbate.

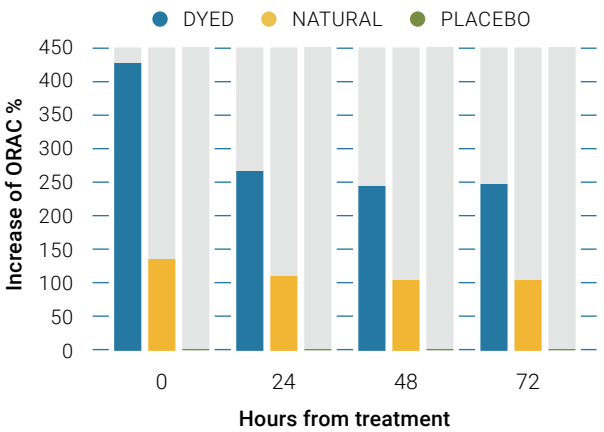
PLANT USED: green walnuts fruit from the Veneto region, Italy.

TECHNOLOGY: Bioliquefaction Technology.

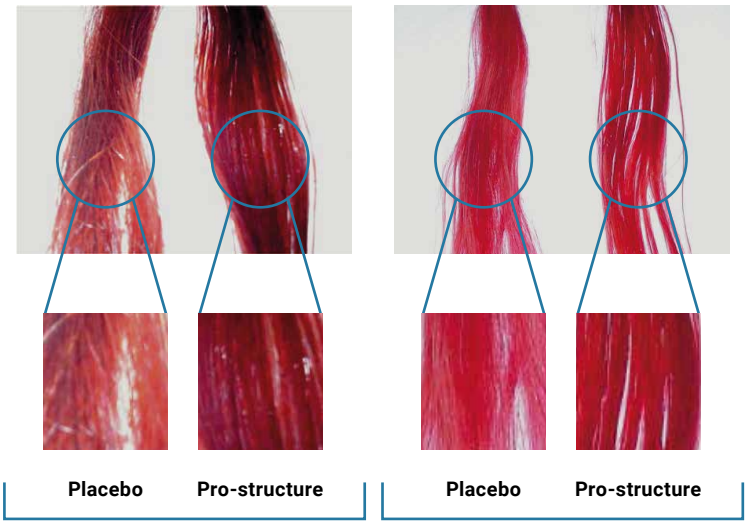
SUGGESTED CONCENTRATION OF USE: 2.5-5% w/w skin care, 1% w/w hair care.

ORGANIC STATUS: COSMOS approved.

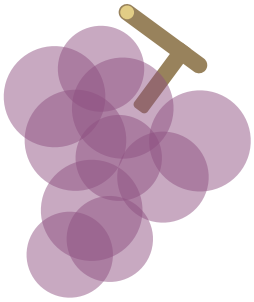
CHINA STATUS: also available in China compliant version.



Antiradical capacity (ORAC) of different hair after treatment with Pro Structure



Hair colour protection from UV induced fading. Leave on treatment with Pro-Structure 1% w/w *vs.* placebo.



GRAPE

GINGER

FRANKINCENSE

PURE-PHEN

PURIFIES THE SKIN RE-BALANCING THE MICROBIOTA

SKIN HAIR COSMOS APPROVED COSMOS CERTIFIED

PRODUCT DESCRIPTION

Ginger, frankincense and grape have been always known and used in different part of the world as medical plants as well as in purifying rituals. Different classes of molecules from each plant are able to act as purifying agents and as bacteriostatic molecules against potential pathogenic species, to sooth, protect and condition the skin.

Pure-Phen is a purifying, soothing, conditioning natural and preservative free active ingredient able to help the skin and the scalp to go back to healthy conditions with a mild but effective treatment, being more tolerable compared to synthetic ingredients.

Pure-Phen is not altering the physiological condition of the skin, helping it in re-balancing the microbiota, reducing imperfections, redness and unpleasant sensations related to acne and dandruff.

BENEFITS

- **Completely natural and preservative free ingredient**
- **More tolerable compared to synthetic benchmarks** (*in vitro* tests)
- **Reduces interleukins release** (*in vitro* tests)
- **Bacteriostatic effect against *Staphylococcus epidermidis* and *Malassezia furfur*** (*in vitro* tests)
- **Re-balances dysbiosis of skin microbiota** (*in vivo* test)
- **Does not alter healthy skin microbiota** (*in vivo* test)
- **Does not alter the physiological conditions of skin and scalp** (*in vivo* test)
- **Reduces skin redness** (-18.4% *in vivo* test)
- **Reduces the number of acne related skin lesions** (-13.3% *in vivo* test)
- **Reduces dandruff related scaling problems** (-17.0% *in vivo* test)
- **Promotes restoration of normal conditions of the scalp** (*in vivo* test)

TECHNICAL INFORMATION

INCI: glycerin, *Vitis vinifera* fruit extract, *Zingiber officinale* root extract, *Boswellia serrata* resin extract.

PLANT USED: ginger (*Zingiber officinale*) roots, frankincense (*Boswellia serrata*) resin and grape (*Vitis vinifera*) fruit.

TECHNOLOGY: Bioliquefaction Technology.

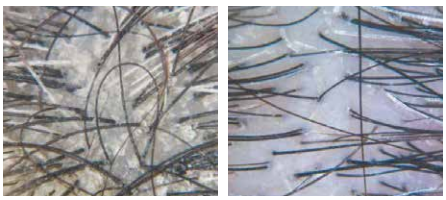
SUGGESTED CONCENTRATION OF USE: 3% w/w for skin care and hair care applications.

ORGANIC STATUS: COSMOS approved, COSMOS certified.

CHINA STATUS: the product is China listed.

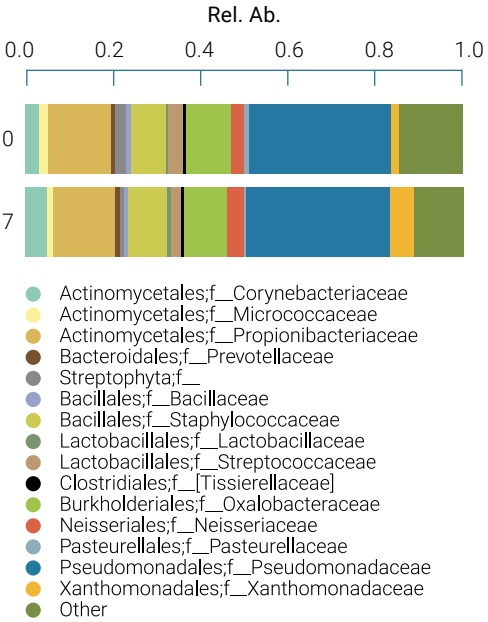
T0 T30

Improvement of acne treated with Pure-phen 3% w/w

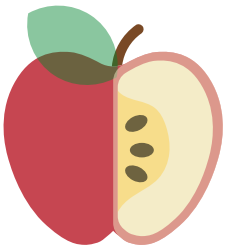


T0 T30

Improvement of dandruff treated with Pure-phen 3% w/w



Pure Phen 3% w/w not altering healthy skin microbiota (1 week treatment)



APPLE

LEMON

GRAPE

WHEAT BRAN

REGENINE

A MIX OF ITALIAN FRUITS FOR SKIN RENEWAL AND HAIR BEAUTY

SKIN HAIR COSMETIC INGREDIENT FROM UPCYCLING

PRODUCT DESCRIPTION

REGENINE was created by selecting several plants (grape, apple, lemon and wheat bran) produced in specific areas in Italy where their cultivation is a long-standing tradition, able to provide high quality products.

REGENINE can be used to gently but efficiently renew skin both from the outside, due to the natural AHA content, and from the inside, being able to nourish and protect the lower layers of the skin. This product can be used in professional rinse-off formulations as well as in leave-on products due to its high tolerability.

REGENINE is also ideal for several hair care applications due to the rich phytocomplex able to improve hair brightness thanks to its anti-limescale and anti-sea salt effect. It also protects dyed hair, sealing hair cuticles to prevent colour fading from dye washing out.

BENEFITS

- **Effective skin renewal** (+83% *in vivo* test)
- **Milder and safer than benchmark AHA** (*in vitro* tests)
- **Improve hair brightness due to an anti-limescale and anti-sea salt effect** (*ex vivo* test)
- **Protect dyed hair colour from fading due to washing out** (*ex vivo* test)

TECHNICAL INFORMATION

INCI: tartaric acid, *Pyrus malus* (apple) fruit extract, citric acid, *Citrus limon* (lemon) fruit extract, *Vitis vinifera* (grape) skin extract, *Triticum vulgare* (wheat) bran extract, sodium benzoate, potassium sorbate.

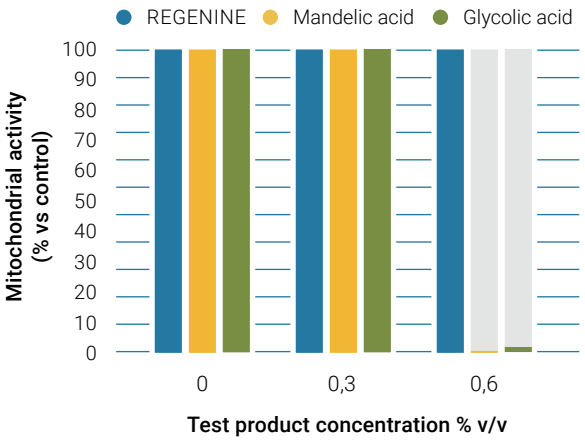
PLANT USED: red organic grape skin from the Emilia-Romagna region, lemons from Sicily, apples from Trentino-Alto Adige, organic wheat bran from the Po river valley.

TECHNOLOGY: Bioliquefaction Technology.

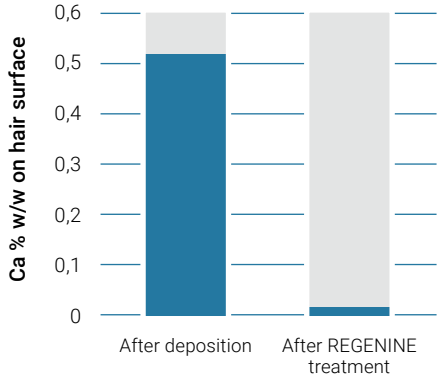
SUGGESTED CONCENTRATION OF USE: 1-10% w/w skin care, 1% w/w hair care.

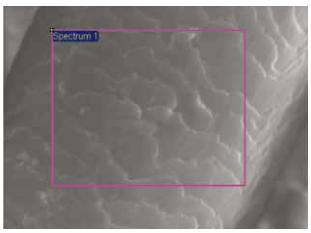
ORGANIC STATUS: generally accepted for organic certified formulations.

CHINA STATUS: product is China listed.

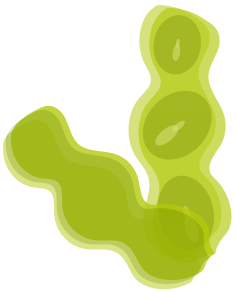


Tolerability of Regenine compared to benchmarks (on keratinocytes)





SEM x-ray elemental analysis: content of calcium on hair surface after limescale deposition and limescale deposition + REGENINE 1% w/w treatment



SOYBEAN

SOY-CELL

STIMULATED SOY STEM CELLS TO REDUCE WRINKLES AND MAKE SKIN FIRMER

SKIN

COSMOS APPROVED

PRODUCT DESCRIPTION

Soy is very well known for multiple activities that its phytocomplex, rich in isoflavones, is able to deliver such as re-activating skin metabolism and improving aging skin.

Soy stem cells were obtained forcing differentiated soy tissues to go back to their undifferentiated form and pushing them to overproduce their phytocomplex. An enzymatic process was associated to the stem cell stimulation process to further increase the bioavailability of this phytocomplex.

Soy-Cell is able to effectively protect skin cells from both photo-aging and radical-induced damage.

Soy-Cell effectively increases skin firmness after just one week of treatment and drastically reduces wrinkles within three weeks.

BENEFITS

- **Protects skin from photo aging and radical induced damages** (*in vitro* tests)
- **Increases skin firmness in one week** (+17.9%, 24.5% in 3 weeks *in vivo* test)
- **Drastically reduces wrinkles in three weeks** (-27.3% *in vivo* test)

TECHNICAL INFORMATION

INCI: aqua, *Glycine max* callus culture, citric acid, sodium benzoate, potassium sorbate.

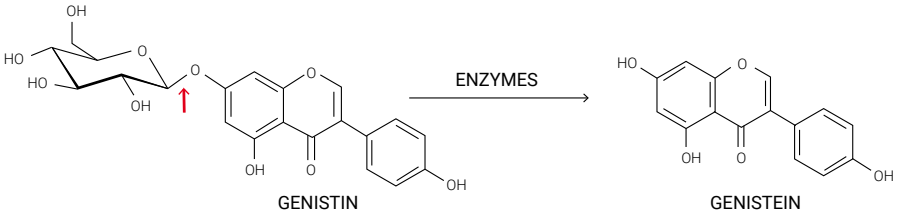
PLANT USED: stem cell culture obtained by non-GMO, organic certified soy seeds sprouted in our labs.

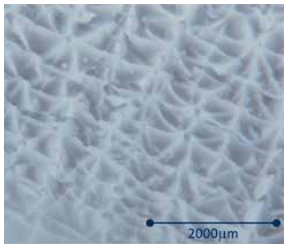
TECHNOLOGY: Stimulated Stem Cell Technology, Bioliquefaction Technology.

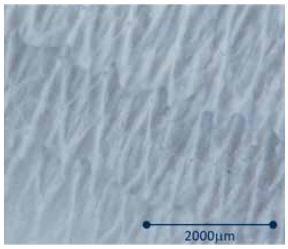
SUGGESTED CONCENTRATION OF USE: 1.5% w/w.

ORGANIC STATUS: COSMOS approved.

CHINA STATUS: also available in China compliant version.

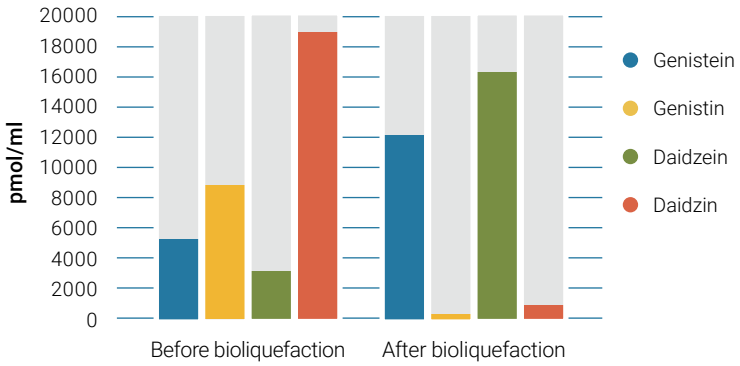




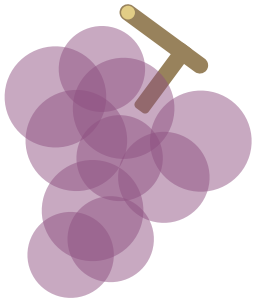


Before treatment **After 21 days with Soy Cell 1,5%**

Skin silicon replica before and after treatment with Soy-Cell 1.5% w/w



Biorefining process of soy isoflavones through bioliquefaction® process



GRAPE

UVIOX®

ORGANIC RED GRAPE SKIN PHYTOCOMPLEX TO PREVENT AGING

SKIN

COSMETIC INGREDIENT FROM UPCYCLING

COSMOS CERTIFIED

PRODUCT DESCRIPTION

Grape skins protect grapes from UV overexposure, pathogen attacks, environmental pollution and adverse weather conditions. The thousands of molecules that grapes are able to synthesize and accumulate in its fruit skin are the secret of its defences.

It was shown that grape polyphenols have an inhibitory activity on membrane metalloproteases 2 (MMP2) of some skin cell lines. MMP2, also called collagenases or gelatinases A, is one of the causes of degradation of collagen and other skin proteins, such as the insoluble form of elastin, causing decreased skin tone and elasticity as well as wrinkles.

UVIOX® allows for absorbing all the active molecules of organic certified grape skins in a bioavailable form. The cosmetic formulation become a shuttle able to deliver this active chemistry on skin helping it staying healthy and young.

BENEFITS

- **High anti-radical effect** (*in vitro* tests)
- **Acts as preventative anti age** (*in vitro* tests)

TECHNICAL INFORMATION

INCI: hydrolyzed grape skin, citric acid, sodium benzoate, potassium sorbate.

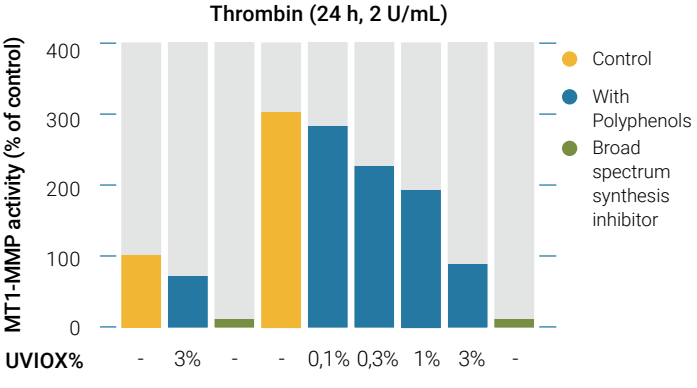
PLANT USED: red organic grape skin from the Emilia-Romagna region.

TECHNOLOGY: Bioliquefaction Technology.

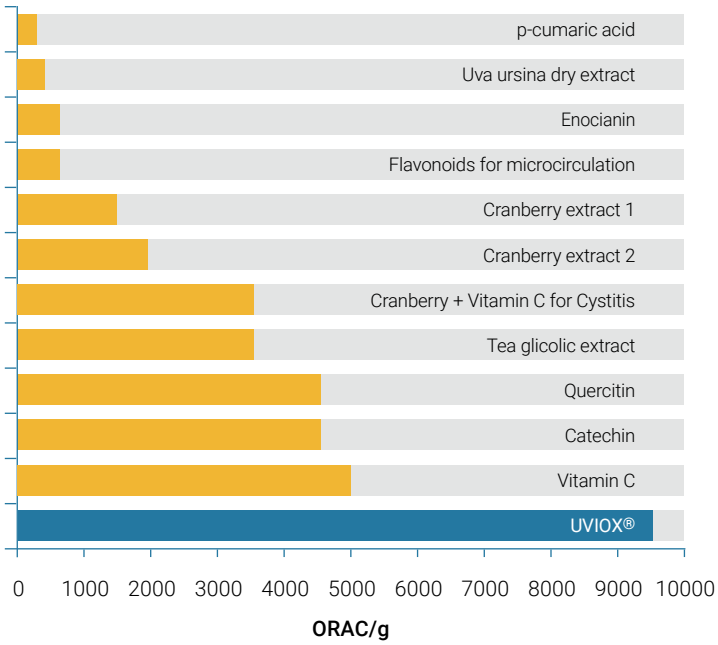
SUGGESTED CONCENTRATION OF USE: 1-3% w/w.

ORGANIC STATUS: COSMOS certified.

CHINA STATUS: also available in China compliant version.



Inhibitory effect of grape phenols on MMP2 correlated with the concentration of UVIOX® needed to reach the right concentration of phenols in a cosmetic formulation



Comparison of antioxidant activity (expressed as ORAC/g) of UVIOX® and other solutions of commercial products

HEMP

RICE

VEGEKER-PLUS

HEMP AND RICE PHYTOKERATIN

HAIR

COSMOS APPROVED

PRODUCT DESCRIPTION

Keratin is a highly stable and resistant filamentous protein, forming the main constituent component of hair and nails. It basically consists of long chains of amino acids, with an alpha-helix or beta-sheet secondary structure (for example in hair cuticle), in which vitamins, lipids and trace elements are also present.

One of the most commonly used cosmetic ingredients designed to improve the mechanical properties of hair is animal-origin keratin due to its effectiveness. Recently, however, the cosmetics sector has moved towards a more plant-based approach as an alternative to the use of animal-sourced raw materials.

Enzymatic Bioliquefaction technology was employed to hydrolyse a combination of Hemp and Rice proteins and obtain VEGEKER-PLUS, a completely plant-based product that acts as a replacement for animal keratin in cosmetic hair-care products, giving hair much greater strength and elasticity.

BENEFITS

- **Strengthens hair** (+ 85% *ex vivo* test)
- **Makes hair more elastic** (+ 8% *ex vivo* test)
- **Hemp based ingredient**
- **An alternative to animal keratin**
- **More effective than animal keratin**

TECHNICAL INFORMATION

INCI: aqua, hydrolyzed hemp seed extract, hydrolyzed rice protein, citric acid, sodium benzoate, potassium sorbate.

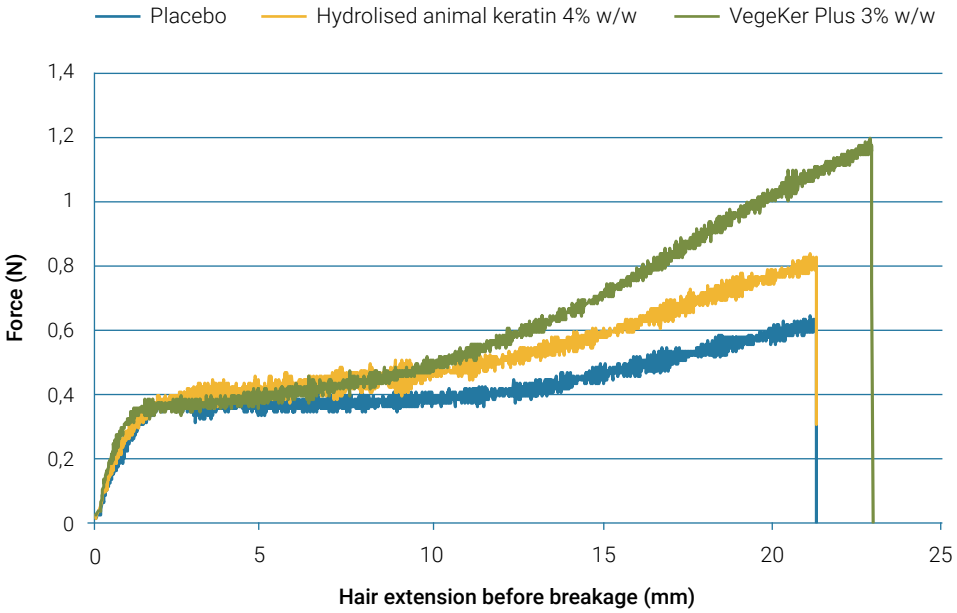
PLANT USED: Hemp and Rice.

TECHNOLOGY: Bioliquefaction Technology.

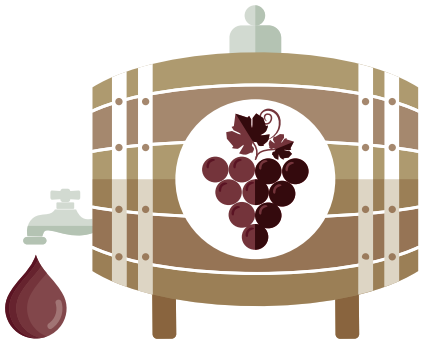
SUGGESTED CONCENTRATION OF USE: 3% w/w.

ORGANIC STATUS: COSMOS approved.

CHINA STATUS: not allowed in China.



Graph of the extension of the hair vs. force applied. VEGEKER-PLUS is more effective than animal keratin.



GRAPE BALM

VITISBALM

SLOWLY FERMENTED GRAPE BALM FOR TOTAL ANTI AGING FACIAL CARE

SKIN

COSMOS APPROVED

DESCRIPTION OF THE PRODUCT

Grape balm is an ancient tradition of small villages in the area of Modena, Italy. At the birth of a daughter, a "battery" of new casks, crafted with different woods, is prepared and the slow fermentation of grape juice is initiated and reinvigorated year after year. After twenty years of aging this "battery" and its balm, would represent an important part of the bride's dowry. Grape juice, with the passing of seasons and years, becomes enriched thanks to the slow fermentation and extraction of essences from the various woods in which it rests and is concentrated through slow evaporation. The resulting product was considered a real balm to be used in celebration after a feast, aid digestion and reinvigorate the body. It is extremely rare and precious, to be exchanged or given away to forge new ties and strengthen existing ones.

VitisBalm is an active ingredient based on Modena grape balm aged for decades which, thanks to Bioliquefaction Technology, releases all effective components of the fermented phytocomplex, rich in phenolics, tannins, flavonoids, amino acids, organic acids and polysaccharides. VitisBalm acts as a powerful active for facial care able to promote skin hydration, elasticity and thickness, to reduce dark circles and eye bags and fight wrinkles.

BENEFITS

- **Promotes skin hydration** (+12.2% *in vivo* test)
- **Increases deep moisturization** (+8.3% *in vivo* test)
- **Increases skin elasticity** (+19% *in vivo* test)
- **Reduces skin scaliness** (-20% *in vivo* test)
- **Reduces wrinkles** (-7.6% *in vivo* test)
- **Delivers a filler effect** (+9% *in vivo* test)
- **Reduces eye bags** (-15% *in vivo* test)
- **Reduces dark circles** (Melanin Index -5.7%, Hemoglobin Index -8.1% *in vivo* test)

TECHNICAL INFORMATION

INCI: glycerin, vitis vinifera juice, acetum, citric acid.

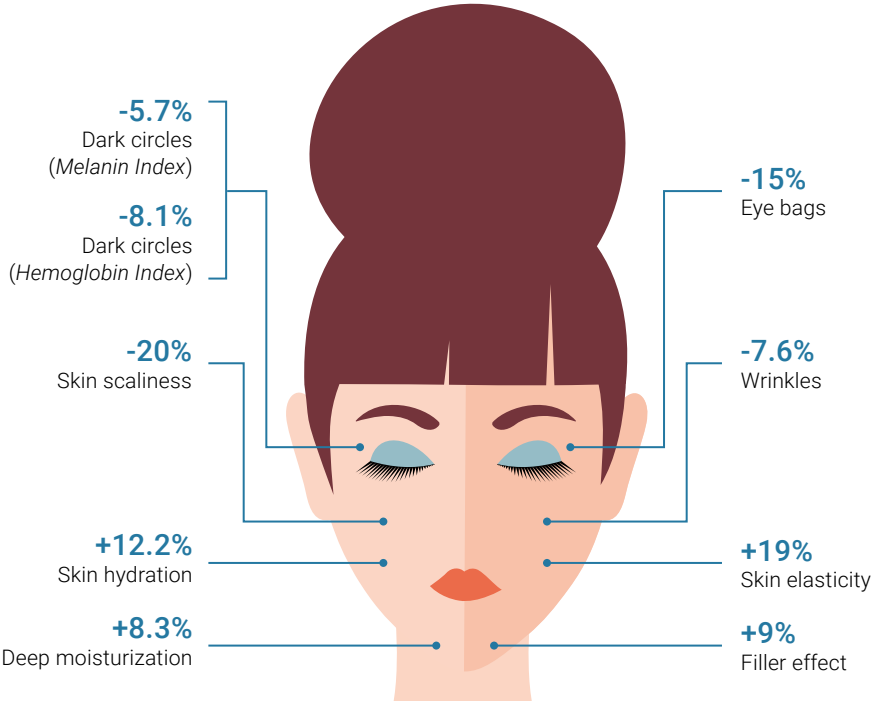
PLANT USED: Grape balm from Modena.

TECHNOLOGY: Bioliquefaction Technology.

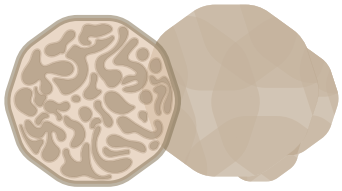
RECOMMENDED CONCENTRATION: 3% w/w.

ORGANIC STATUS: COSMOS approved.

CHINA STATUS: China listed.



Total anti aging facial care action with VitisBalm 3% w/w after 30 days of treatment



WHITE TRUFFLE

W TR-ACTIVE

MULTIPLE ANTI-AGING EFFECTS THROUGH EPIGENETIC MODULATION

SKIN

COSMOS APPROVED

PRODUCT DESCRIPTION

White truffle is one of the most exclusive food on the market, it is not only delicious but also extremely rare because it only grows in some specific areas and only in Italy.

Truffles have been known since the beginning of time and were greatly appreciated by the Romans, who believed this precious fungus was generated by lightning thrown by Jupiter near an oak. White truffles have also always been considered an aphrodisiac food and apparently Casanova was using them to seduce women. This feature seems to be triggered by the chemicals creating the truffle aroma, given that in nature truffles attract mammals consuming the fruiting bodies and contribute to spore dispersal due to pheromone-like molecules.

W Tr-Active was tested to evaluate the gene expression modulation of over 42,000 genes on two different cell lines. W Tr-Active was able to successfully modulate several groups of genes (MMPs, extracellular matrix proteins, aquaporins, and damaged protein degradation processes and vitagenes) involved in preventing skin from aging and promoting skin health by delivering a broad spectrum action.

The *in vivo* test proved that W Tr-Active was able to act as a powerful multiple anti-aging active ingredient able to reduce wrinkles and eye bags, increase skin tone and thickness (filler effect) and significantly improve skin moisture.

BENEFITS

- **Positive epigenetic modulation of anti-aging, repairing and protective genes** (*in vitro* tests)
- **Increases skin elasticity** (+35.0% *in vivo* test)
- **delivers a filler effect** (+0.39 mm *in vivo* test)
- **Reduces wrinkles** (-12.8% *in vivo* test)
- **Reduces eye bags** (-14.0% *in vivo* test)
- **Promotes skin hydration** (+13.0% in 24 hours, +45.0% in 15 days *in vivo* test)

TECHNICAL INFORMATION

INCI: glycerin, *Tuber magnatum* extract, sodium benzoate, potassium sorbate.

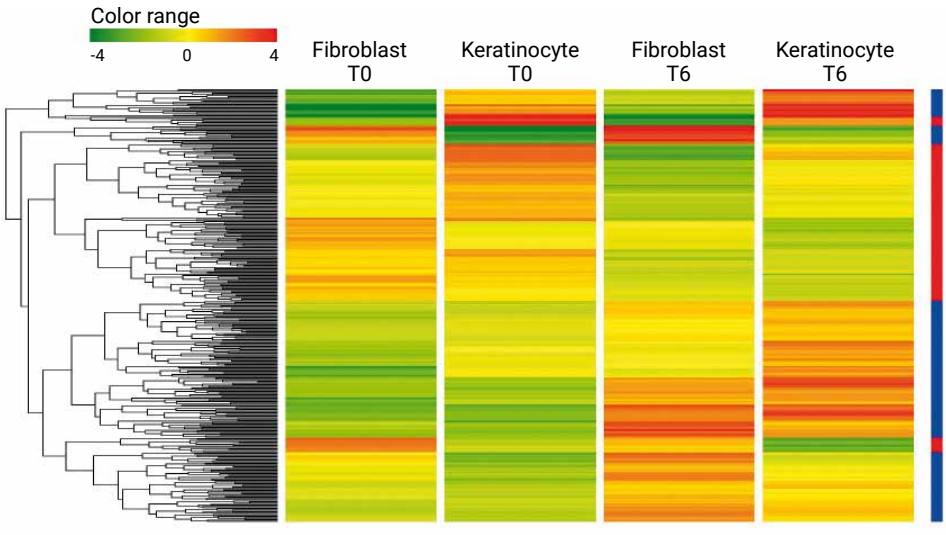
PLANT USED: white truffle (*Tuber magnatum* Pico) from the Alba area, Italy.

TECHNOLOGY: Bioliquefaction Technology.

SUGGESTED CONCENTRATION OF USE: 1% w/w.

ORGANIC STATUS: COSMOS approved.

CHINA STATUS: the product is China listed.



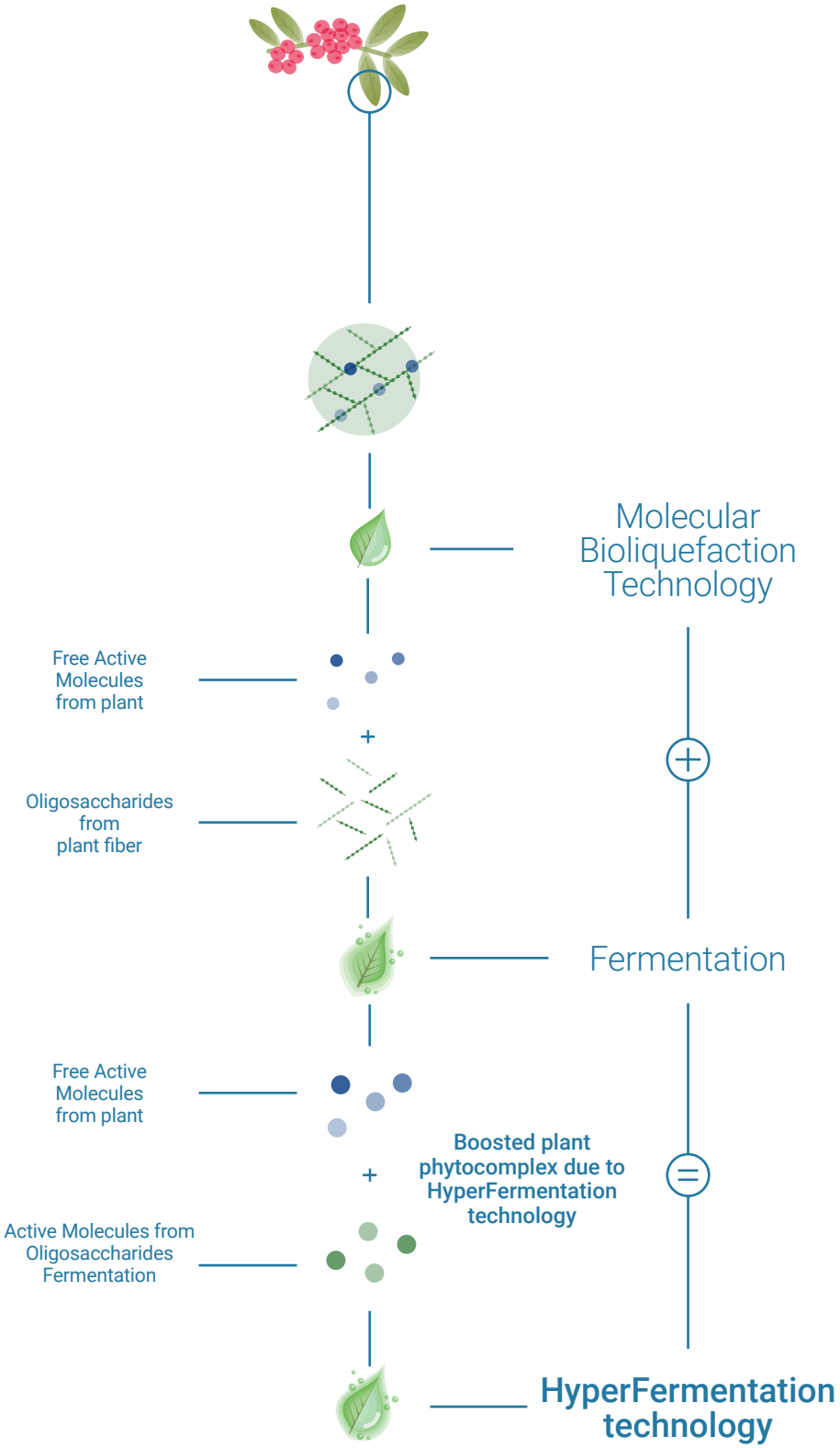
Graphic representation of the epigenetic investigation on keratinocytes and fibroblast treated with W Tr-Active 1% w/w

phenbiox

HYPERFERMENTED

Upgrading the traditional fermentation
to boost the efficacy of plants.

OUR HYPERFERMENTATION TECHNOLOGY



HYPERFERMENTED

In the cosmetics raw materials sector, fermentation is a transformation process of great potential interest since it can exploit a micro-organism to produce innovative active ingredients.
For thousands of years, fermentation has provided many cultures with the means of transforming food, increasing its nutritional value, preservability and bioavailability. One of the most detailed agricultural tests from ancient times is Columella's *De Re Rustica* (On Rural Affairs, 65 AD), on farming and fermentation connected with wine-making: this work summarizes everything the Romans knew about agriculture.

This millennia-old know how, typical of the Mediterranean area, combined with the latest biotechnologies at our disposal, has made it possible to develop a new and important production process:

HYPERFERMENTATION TECHNOLOGY (Bioliquefaction + Fermentation) the phytocomplex naturally contained in the plant is reinforced thanks to fermentation, transforming the inert fibres into even more active ingredients.

Over 400 plants and part of plants (see list on page 51) are available in our FERMENTED EXTRACTS line, all produced on-demand to guarantee the best preservation of the active molecules as well as the crisp freshness due to the excellence of the plant material used.
Because FERMENTED EXTRACTS are water-based products, they are very easy to use and can be added to the water phase of any formulation either before or after the heating phase.
All the products in this line can be used in organic certified cosmetic formulations.

FERMENTED EXTRACTS
Typical INCI name: aqua, [name of the plant] extract, *Saccharomyces ferment* lysate filtrate, citric acid, sodium benzoate, potassium sorbate.

phenbiox

EXTRACTS AND CENTRIFUGED

Over 1700 plant derived cosmetic ingredients produced through environmental friendly physical processes.

ACTIVE WATER EXTRACTS

The best available plants from selected suppliers are subjected to gentle water extraction to obtain rich and crisply fragrant liquids ideal to produce up-to-date, effective cosmetic formulations.
Over 400 plants and part of plants (see list on page 51) are available in our ACTIVE WATER EXTRACTS line, all produced on-demand to guarantee the best preservation of the active molecules as well as the crisp freshness due to the excellence of the plant material used.
Because ACTIVE WATER EXTRACTS are water-based products, they are very easy to use and can be added to the water phase of any formulation either before or after the heating phase.

No chemical solvent is used in any step of production, making the products completely safe and also environmentally friendly as all by-products generated during the production processes have a low impact on the environment. Using water is also beneficial for the environment because it has zero impact compared to the production and transportation of traditional solvents.
All the products in this line can be used in organic certified cosmetic formulations.

ACTIVE WATER EXTRACTS
Typical INCI name: aqua, [name of the plant] extract, citric acid, sodium benzoate, potassium sorbate.

PRESERVATIVE-FREE EXTRACTS

After many years of in-house research, we succeeded in developing a production process that makes it possible to obtain extremely stable and safe preservative-free products, ensuring a microbial load < 100 CFU in the cosmetic ingredient.
Our PRESERVATIVE-FREE EXTRACTS line combines the needs for naturalness and total absence of preservatives and chemical derivatives of the latest trends in cosmetics, with the reliability and quality of a microbiologically stable and safe product.
Over 400 plants and part of plants (see list on page 44) are available in our PRESERVATIVE-FREE EXTRACTS line, all produced on-demand to guarantee the best preservation of the active molecules as well as the crisp freshness due to the excellence of the plant material used.
The PRESERVATIVE-FREE EXTRACTS are produced using non-palm derived glycerine. No chemical solvent is used in any step of production, making the products completely safe and also environmentally friendly as all by-products generated during the production processes have a low impact on the environment.
All the products in this line can be used in organic certified cosmetic formulations.

PRESERVATIVE-FREE EXTRACTS
Typical INCI name: glycerin, [name of the plant] extract, aqua, citric acid.

ACTIVE LIPO EXTRACTS

The ACTIVE LIPO EXTRACTS line fulfils any need for oil-soluble extracts. Based on sunflower oil and stabilized with natural tocopherol, it is an ideal option for all water-free formulations.
Over 400 plants and part of plants (see list below) are available in our ACTIVE LIPO EXTRACTS line, all produced on-demand to guarantee the best preservation of the active molecules as well as the crisp freshness due to the excellence of the plant material used.
No chemical solvent is used in any step of production, making the products completely safe and also environmentally friendly as all by-products generated during the production processes have a low impact on the environment.
All the products in this line can be used in organic certified cosmetic formulations.

ACTIVE LIPO EXTRACTS
Typical INCI name: helianthus annuus seed oil, [name of the plant] extract, tocopherol.

LIST OF PLANTS AVAILABLE FOR:

Active Water Extracts line | Preservative Free Extracts line | Active Lipo Extracts line
Fermented Extracts line

Botanical name	Part of the plant	Common name
Achillea millefolium	Aerial Part with flower	Yarrow
Acorus calamus	Rhizome	Sweet flag
Adansonia digitata	Fruit	Baobab
Adiantum capillus-veneris	Weed	Southern maidenhair fern
Aesculus Hippocastanum	Leaf	Horse chestnut
Aesculus Hippocastanum	Bark	Horse chestnut
Aesculus Hippocastanum	Seed	Horse chestnut
Aframomum Melegueta	Seed	Ossame
Agave Tequilana	Stem	Agave
Agrimonia eupatoria	Aerial Part	Common agrimony
Agropyron Repens	Rhizome	Couchgrass
Alchemilla vulgaris	Weed	Lady's mantle
Alkanna tinctoria	Root	Dyer's Alkanet
Allium cepa	Bulb	Red onion
Allium cepa	Bulb	Onion
Allium sativum	Bulb	Garlic
Allium ursinum	Leaf	Ramsons
Aloe ferox	Leaf	Aloe ferox
Alpinia officinarum	Rhizome	Lesser galangal
Althaea officinalis	Leaf	Marshmallow
Althaea officinalis	Root	Marshmallow
Althaea rosea	Flower	Marshmallow
Ammi visnaga	Fruit	Ammi Visnaga
Amorphophallus konjac	Root	Konjac
Ananas sativus	Fruit	Pineapple
Andrographis paniculata	Weed	Andrographis paniculata
Anemopaegma mirandum	Bark	Catuaba
Anethum graveolens	Fruit	Dill
Angelica archangelica	Root	Angelica
Antennaria Dioica	Flower	Mountain everlasting

Botanical name	Part of the plant	Common name
Anthemis nobilis	Flower	Roman Chamomile
Anthriscus cerefolium	Aerial Part	Chervil
Apium Graveolens	Leaf	Celery
Apium Graveolens	Root	Celery
Arbutus unedo	Fruit	Strawberry tree fruit
Arbutus unedo	Leaf	Strawberry tree leaf
Arctium lappa	Leaf	Greater burdock
Arctium lappa	Root	Greater burdock
Arctostaphylos Uva - Ursi	Leaf	Bearberry
Aronia melanocarpa	Berry	Aronia
Artemisia abrotanum	Aerial Part	Southernwood
Artemisia absinthium	Aerial Part with flower	Absinthe wormwood
Artemisia dracunculus	Leaf	Tarragon
Artemisia umbelliformis	Aerial Part	Genepi
Artemisia vulgaris	Aerial Part	Common mugwort
Aspalathus Linearis	Leaf	Rooibos
Asparagus officinalis	Root	Asparagus
Astragalus membranaceus	Root	Mongolian milkvetch
Avena sativa	Seeds	Oat
Avena sativa	Bran	Oat bran
Azadirachta indica	Leaf	Neem
Backhousia Anisata	Leaf	Backhousia Anisata
Baptisia tinctoria	Root	Wild indigo
Barosma betulina	Leaf	Agathosma betulina
Bellis Perennis	Flower	Daisy
Bentonite		White clay
Berberis Aquifolium	Bark	Berberis Aquifolium
Berberis vulgaris	Bark	Common barberry
Berberis vulgaris	Bark	Berberis
Beta Vulgaris	Root	Beetroot

Botanical name	Part of the plant	Common name
Beta Vulgaris		White sugar
Betula alba	Leaf	Birch
Betula pendula	Sap	Birch sap
Bixa orellana	Seed	Bixa orellana
Borago officinalis	Aerial Part with Flower	Borage
Boswellia serrata	Gum / Resin	Boswellia
Brassica Alba	Seed	Wild mustard
Brassica Nigra	Seed	Black mustard
Brassica oleracea acephala	Plant	Kale
Bulnesia Sarmientoi	Wood	Verawood
Buxus sempervirens	Leaf	Common box
Caesalpinia echinata	Bark	Caesalpinia
Calamintha Officinalis	Leaf	Lesser calamint
Calendula officinalis	Flower	Pot marigold
Calluna vulgaris	Flower	Heather
Camellia sinensis	Leaf	Green tea
Camellia sinensis	Leaf	Black tea
Camellia sinensis	Leaf	White tea
Cannabis sativa	Seed	Hemp
Capsella bursa-pastoris	Weed	Shepherd's purse
Capsicum Annuum Var. Grossum	Fruit	Sweet paprica
Capsicum Annuum Var. Longum	Fruit	Strong paprica
Capsicum Frutescens	Fruit	Cayenne pepper
Carica Papaya	Fruit	Papaya
Carica Papaya	Leaf	Papaya leaf
Carlina acaulis	Root	Stemless carline thistle
Carthamus tinctorius	Flower	Safflower
Carum carvi	Fruit	Caraway
Cassia Angustifolia	Leaf	Indian Senna
Cassia fistula	Fruit	Golden rain tree
Cassia Italica	Leaf	Neutral Hina
Castanea sativa	Leaf	Chestnut
Castanea sativa	Bark	Chestnut
Centaurea cyanus	Flower	Cornflower
Centaurium erythraea	Aerial Part	Common centaury
Centella asiatica	Weed	Centella
Ceratonia siliqua	Hull	Carrob fruit
Cetraria Islandica	Thallus	Iceland moss
Chamomilla recutita	Flower	Chamomile
Charcoal		Charcoal
Chelidonium majus	Aerial Part	Greater celandine
Chenopodium Quinoa	Seed	Quinoa
Chlorella pyrenoidosa	Thallus	Chlorella pyrenoidosa
Chondrus Crispus	Thallus	Irish moss
Chondrus crispus	Thallus	Chondrus crispus
Chrysantemum parhenium	Aerial Part	Feverfew
Chrysanthemum balsamita	Weed	Costmary
Cicer Arietinum	Seed	Chickpeas
Cichorium intybus	Root	Common Chicory
Cimicifuga racemosa	Rhizome	Black cohosh

Botanical name	Part of the plant	Common name
Cinchona calisaya	Bark	Cinchona calisaya
Cinchona succirubra	Bark	Cinchona
Cinnamomum zeylanicum	Bark	Cinnamon
Citrullus Lanatus	Fruit	Watermelon
Citrus Aurantifolia	Peel	Lime
Citrus aurantium amara	Fruit	Bitter orange
Citrus aurantium bergamia	Peel	Bergamot
Citrus aurantium	Fruit	Blood orange
Citrus aurantium	Leaf	Orange
Citrus aurantium	Flower	Orange
Citrus Limon	Peel	Lemon
Citrus Limon	Leaf	Lemon
Citrus medica vulgaris	Fruit	Citron fruit
Citrus medica vulgaris	Bark	Citron bark
Citrus Nobilis	Peel	Mandarin orange
Citrus Paradisi	Seed	Grapefruit
Cochlearia armoracia	Root	Horseradish
Cochlearia officinalis	Weed	Common scurvygrass
Cocos nucifera	Fruit	Coconut milk
Coffea Arabica	Seed	Green coffee
Coffea Arabica	Seed	Coffee
Cola Nitida	Seed	Kola
Combretum micranthum	Leaf	Kinkeliba
Commiphora Myrrha	Gum / Resin	Myrrh
Convolvulus Arvensis	Weed	Small With-Weed
Coriandrum sativum	Fruit	Coriander
Corylus Avellana	Leaf	Hazel
Crataegus oxyacantha	Flower	Hawthorn
Crataegus oxyacantha	Berry	Hawthorn
Crithmum maritimum	Weed	Samphire
Crocus Sativus	Stigma	Saffron
Cucumis melo	Fruit	White melon
Cucumis melo	Fruit	Melon
Cucurbita Pepo	Seed	Pumpkin
Cuminum cyminum	Fruit	Cumin
Cupressus sempervirens	Berry	Mediterranean cypress
Curcuma longa	Rhizome	Curcuma/Turmeric
Curcuma Zedoaria	Rhizome	Zedoary
Cymbopogon citratus	Leaf	Lemongrass
Cynara scolymus	Leaf	Artichoke
Daemonorops Draco	Resin	Dragoon's Blood
Dahlia variabilis	Flower	Dahlia
Daucus carota	Fruit	Carrot
Dendrobium nobile	Flower	Orchid
Desmodium adscendens	Leaf	Desmondium
Dipteyx odorata	Seed	Tonka beans
Drosera ramentacea	Weed	Sundews
Dryopteris filix-mas	Rhizome	Male fern
Echinacea angustifolia	Weed	Echinacea angustifolia
Echinacea pallida	Root	Pale purple coneflower
Elettaria cardamomum	Seed	Cardamom

Botanical name	Part of the plant	Common name
Eleutherococcus senticosus	Root	Siberian ginseng
Epilobium angustifolium	Weed	Epilobium angustifolium
Epilobium parviflorum	Weed	Epilobium parviflorum
Equisetum arvense	Weed	Horsetail
Eschscholtzia californica	Weed	California poppy
Eucalyptus globulus	Leaf	Eucalyptus
Eugenia Caryophyllus	Clove	Clove
Eupatorium cannabinum	Weed	Hemp-Agrimony
Euphrasia officinalis	Aerial Part	Eyebright
Euterpe Oleracea	Berry	Açai
Evernia Prunastri	Thallus	Oakmoss
Ferula assa foetida	Gum	Ferula assa foetida
Ficus carica	Fruit	Fig
Foeniculum vulgare	Aerial Part	Fennel
Foeniculum vulgare	Fruit	Fennel
Foeniculum vulgare	Root	Fennel
Fragaria vesca	Leaf	Wild strawberry
Frangula alnus	Bark	Buchthorn
Fraxinus excelsior	Leaf	Ash
Fraxinus excelsior	Bark	Ash
Fraxinus Ornus	Cannula	Manna
Fucus vesiculosus	Thallus	Fucus
Fumaria officinalis	Aerial Part	Common fumitory
Galega officinalis	Weed	Galega
Galium aparine	Weed	Cleavers
Galium odoratum	Leaf	Sweetscented bedstraw
Galium verum	Weed	Lady's bed straw
Garcinia cambogia	Fruit	Garcinia cambogia
Gaultheria procumbens	Leaf	Eastern teaberry
Gelidium amansii	Thallus	AGAR AGAR
Gentiana acaulis	Flower - Leaf	Stemless gentian
Gentiana lutea	Root	Great yellow gentian
Geranium robertianum	Aerial Part	Herb-Robert
Geum urbanum	Root	Wood avens
Ginkgo biloba	Leaf	Ginkgo
Glechoma hederacea	Aerial Part	Ground-ivy
Glycine Max	Seed	Soybean
Glycyrrhiza Glabra	Root	Liquorice
Gossypium herbaceum	Aerial Part	Cotton
Grindelia Robusta	Aerial Part	Grindelia Robusta
Gymnema Sylvestre	Leaf	Gymnema Sylvestre
Gynostemma Pentaphyllum	Weed	Gynostemma Pentaphyllum
Haematoxylon campechianum	Bark	Blackwood
Hamamelis virginiana	Leaf	Common witch-hazel
Hamamelis virginiana	Bark	Common witch-hazel
Harpagophytum procumbens	Root	Devil's claw
Hedera helix	Leaf	Ivy
Helianthus annuus	Seed	Sunflower
Helianthus annuus	Petal	Sunflower
Helichrysum italicum	Aerial Part	Helichrysum
Helichrysum stoechas	Flower	Helichrysum stoechas

Botanical name	Part of the plant	Common name
Heracleum Sphondylium	Weed	Hogweed
Herniaria glabra	Aerial Part	Smooth rupturewort
Heterotheca inuloides	Flower	Arnica
Hibiscus Sabdariffa	Flower	Roselle
Hieracium Pilosella	Weed	Mouse ear hawkweed
Hippophae Rhamnoides	Fruit	Common sea buckthorn
Hordeum Vulgare	Seed	Barley
Humulus Lupulus	Flower	Hop
Hydrastis Canadensis	Rhizome	Goldenseal
Hypericum Perforatum	Aerial Part	Common St.John's wort
Hyssopus Officinalis	Aerial Part	Hyssop
Ilex aquifolium	Leaf	Holly
Illicium verum	Fruit	Star anise
Indigofera Tinctoria	Leaf	Indigofera Tinctoria
Inula helenium	Root	Elecampane
Iris germanica	Rhizome	German Iris
Jasminum officinale	Flower	Jasmine
Juglans Regia	Seed	Walnut
Juglans Regia	Leaf	Walnut
Juniperus communis	Berry	Juniper
Kigelia Africana	Fruit	Kigelia africana
Krameria Triandra	Root	Rhatany
Laminaria Cloustoni	Thallus	Laminaria
Lamium Album	Aerial Part	Lamium Album
Laurus nobilis	Berry	Laurel
Laurus nobilis	Leaf	Laurel
Lavandula Angustifolia	Flower	Lavender
Lavandula Hybrida	Flower	Lavandula Hybrida
Lavandula Hybrida	Aerial part with flower	Lavandula Hybrida
Lawsonia Inermis	Leaf	Red Hina
Lepidium Meyenii	Root	Maca
Lespedeza Capitata	Leaf	Lespedeza Capitata
Levisticum Officinale	Root	Lovage
Lilium candidum	Bulb	Lilium
Linum Usitatissimum	Seed	Linseed
Lippia Citriodora	Leaf	Lemon verbena
Litchi chinensis	Fruit	Litchi
Lithospermum Officinale	Aerial Part	Common gromwell
Lonicera caprifolium	Aerial Part	Honeysuckle
Lupinus Albus	Seed	Lupin
Lycium barbarum	Berry	Boxthorn
Lycopodium Clavatum	Weed	Common club moss
Lythrum Salicaria	Aerial Part	Purple loosestrife
Magnolia Officinalis	Bark	Houpu magnolia
Malva Sylvestris	Flower - Leaf	Mallow
Mangifera indica	Fruit	Mango
Marrubium Vulgare	Aerial Part	White Horehound
Marsdenia condurango	Bark	Condurango
Medicago sativa	Weed with flower	Alfalfa
Melilotus Officinalis	Aerial Part with Flower	Yellow Sweet clover
Melissa Officinalis	Leaf	Lemon Balmint
Mentha lonfigolia	Aerial Part	Horsemint
Mentha Piperita	Leaf	Peppermint

Botanical name	Part of the plant	Common name
Mentha Viridis	Leaf	Spearmint
Menyanthes Trifoliata	Leaf	Buckbean
Mimosa Tenuiflora	Bark	Mimosa Tenuiflora
Momordica cochinchinensis	Seed	Gak
Montmorillonite		Green clay
Moringa oleifera	Leaf	Moringa
Moroccan lava Clay		Red clay
Morus nigra	Leaf	Black mulberry
Myrciaria Dubia	Fruit	Camu camu
Myristica Fragrans	Seed	Nutmeg
Myristica Fragrans	Aril / Kernel	Mace
Myrtus Communis	Leaf	Myrtle
Myrtus Communis	Berry	Myrtle
Nasturtium Officinale	Weed	Garden nasturtium / Watercress
Nepeta Cataria	Aerial Part	Catnip
Nigella Sativa	Seed	Black Caraway
Nymphaea Lotus	Root	Water Lily
Ocimum basilicum	Leaf	Basil
Olea Europaea	Leaf	Olive
Olea Europaea	Fruit	Olive
Ononis Spinosa	Root	Spiny restharrow
Opuntia ficus indica	Flower	prickly pear
Origanum Majorana	Leaf	Marjoram
Origanum Vulgare	Leaf	Origan
Orthosiphon Stamineus	Leaf	Ortosiphon
Oxalis acetosella	Leaf	Wood sorrel
Paeonia Officinalis	Petal	Peony
Panax ginseng	Root	Red Ginseng
Panax ginseng	Root	Ginseng
Panicum Miliaceum	Fruit	Proso millet
Papaver Nigrum Var. Glabrum	Seed	Opium poppy / Breadseed poppy
Papaver Rhoeas	Flower	Red Poppy
Parietaria officinalis	Aerial part	Lichwort
Passiflora Incarnata	Aerial part	Purple passionflower
Paullinia Cupana	Seed	Guaranà
Pelargonium graveolens	Aerial Part	Geranium
Perilla Frutescens	Leaf	Perilla
Persea Gratissima	Fruit	Avocado
Petroselinum Crispum	Fruit	Parsley
Peumus boldus	Leaf	Boldo
Pfaffia Paniculata	Root	Suma
Phaseolus vulgaris	Hull	Bean
Phaseolus vulgaris	Hull	Green Beans
Phoenix Dactylifera	Fruit	Phoenix canariensis
Phyllanthus emblica	Fruit	Emblic
Physalis alkekengi	Fruit	Bladder cherry
Picea abies	Cone / Pine	Norway spruce
Pimenta Officinalis	Fruit	Allspice / Pimento
Pimpinella Saxifraga	Weed	Burnet saxifrage
Pinus Sylvestris	Bud / Sputs	Pine
Piper Cubeba	Fruit	Cubeb pepper / Tailed pepper
Piper Longum	Fruit	Long pepper
Piper Nigrum	Fruit	White pepper
Piper Nigrum	Fruit	Green pepper
Piper Nigrum	Fruit	Black pepper
Plantago lanceolata	Leaf	Broadleaf plantain
Plantago Psyllium	Seed	Plantain
Pogostemon Cablin	Leaf	Patchouli
Polygala Senega	Root	Milk worts
Polygonum aviculare	Weed	Common knotgrass
Polygonum bistorta	Rhizome	Bistort
Polypodium Vulgare	Rhizome	Polypody
Populus Nigra	Bud / Sputs	Black poplar
Populus Nigra	Wood	Black poplar
Portulaca Oleracea	Weed	Common purslane
Potentilla Erecta	Rhizome	Tormentil
Pouteria Lucuma	Fruit	Lucuma
Primula Officinalis	Flower	Cowslip
Prunus africana	Bark	Prunus africana
Prunus amygdalus Communis Var. Dulcis	Seed	Sweet Almond
Prunus cerasus	Fruit	Sour cherry
Prunus Spinosa	Flower	Blackthorn
Psidium guajava	Fruit	Guava
Pterocarpus Soyauxii	Wood	African padauk
Ptychopetalum Olacoides	Wood	Muira puama
Pueraria Lobata	Root	Kudzu
Pulmonaria Officinalis	Leaf	Lungwort
Punica Granatum	Peel	Pomegranate
Pyrus communis	Fruit	Pear
Pyrus Malus	Fruit	Apple
Quassia Amara	Wood	Bitterwood
Quercus Infectoria	Seed	Gall oak
Quercus Petraea	Bark	Sessile oak
Quillaja Saponaria	Bark	Soapbark
Raphanus Sativus Var. Niger	Root	Radish
Reseda Luteola	Aerial Part	Dyer's Rocket
Rhamnus purshiana	Bark	Cascara buckthorn
Rheum Rhaponticum	Rhizome	Rhubarb
Rhodiola Rosea	Root	Rhodiola Rosea
Rhododendron Ferrugineum	Leaf	Rose Bay
Ribes Nigrum	Fruit	Black currant
Ribes Nigrum	Leaf	Black currant
Robinia pseudoacacia	Flower	Black locust
Rosa Canina	Fruit	Hip rose
Rosa Centifolia	Petal	Provence rose
Rosa Gallica	Flower	French rose
Rosmarinus Officinalis	Leaf	Rosemary
Rubia Tinctorum	Root	Madder
Rubus Fruticosus	Leaf	Blackberry
Rubus Idaeus	Fruit	Raspberry
Rubus Idaeus	Leaf	Raspberry

Botanical name	Part of the plant	Common name
Rumex acetosa	Weed	Sorrel
Rumex Crispus	Root	Curled Dock
Ruscus Aculeatus	Rhizome	Butcheerbroom
Ruta Graveolens	Aerial Part	Rue
Sacarum Officinarum		Brown sugar
Salix Alba	Bark	White willow
Salix Purpurea	Bark	Red willow
Salvia hispanica	Seed	Chia
Salvia Officinalis	Leaf	Sage
Salvia Sclarea	Aerial Part with Flower	Clary sage
Sambucus Nigra	Flower	Elder
Sambucus Nigra	Berry	Elder
Sambucus Nigra	Wood	Elder
Sanguinaria Canadensis	Root	Blood Root
Santalum Album	Wood	Sandalwood
Sapindus Mukurossi	Fruit	Soapberries
Saponaria Officinalis	Root	Soap Wort
Sassafras Albidum	Wood	Sassafras
Satureja Hortensis	Aerial Part	Savory
Satureja montana	Leaf	Winter savory
Schinus Molle	Fruit	Pink pepper / American pepper
Schizandra Chinensis	Fruit	Schizandra Chinensis
Scrophularia Nodosa	Aerial Part	Figwort
Scutellaria Lateriflora	Weed	Scutellaria Lateriflora
Serenoa Serrulata	Fruit	Saw palmetto
Sesamum Indicum	Seed	Sesame
Silybum marianum	Fruit	Cardus marianus
Sisymbrium officinale	Aerial Part	Hedge mustard
Smilax Medica	Root	Mexican Sarsapareille
Solanum dulcamara	Stipe	Bittersweet
Solanum Lycopersicum	Fruit	Tomato
Solanum Tuberosum	Root	Potato
Solidago Virga-Aurea	Aerial Part with Flower	European goldenrod
Spartium junceum	Flower	Spanish broom
Spergularia rubra	Aerial Part	Red sand spurry
Spinacia Oleracea	Leaf	Spinach
Spirea ulmaria	Flower	Drop Wort
Spirea ulmaria	Aerial Part	Drop Wort
Spirulina Platensis	Thallus	Spirulina Platensis
Stachys officinalis	Weed	Common hedgenettle
Stevia rebaudiana	Aerial Part	Stevia
Symphytum officinale	Root	Comfrey
Syringa vulgaris	Flower	Lilac
Tabebuia Avellanedae	Bark	Tabebuia
Tamarindus Indica	Fruit	Tamarind
Tanacetum cinerariifolium	Flower	Mums
Tanacetum Vulgare	Aerial Part	Tansy
Taraxacum Officinale	Root	Dandelion
Taraxacum Officinale	Leaf	Dandelion
Terminalia Chebula	Fruit	Black myrobalan
Theobroma cacao	Seed	Cocoa
Thuja Occidentalis	Leaf	Thuja
Thymus Capitatus	Leaf	Spanish Origanum
Thymus Serpyllum	Leaf	Wild thyme
Thymus Vulgaris	Leaf	Thyme
Tilia Cordata	Flower	Linden cordata
Tilia Platyphyllos	Flower	Linden
Trifolium Pratense	Flower	Red Clover
Trigonella foenum graecum	Berry	Fenugreek
Tritticum aestivum	Germ	Wheat germ
Turnera diffusa	Leaf	Damiana
Tussilago farfara	Leaf	Tussilago farfara
Tussilago farfara	Flower	Tussilago farfara
Ulmus Campestris	Bark	Field helm
Uncaria Tomentosa	Bark	Uncaria Tomentosa
Undaria Pinnatifida	Weed	Undaria
Urtica Dioica	Leaf	Nettle
Urtica Dioica	Root	Nettle
Vaccinium Macrocarpon	Fruit	Cranberry
Vaccinium Myrtillus	Leaf	Bilberry
Vaccinium Myrtillus	Berry	Bilberry
Valeriana Officinalis	Root	Valerian
Vanilla Planifolia	Fruit	Vanilla
Verbascum Thapsus	Leaf	Mullein
Verbascum Thapsus	Flower	Mullein
Verbena Officinalis	Aerial Part	Verbena Officinalis
Veronica Officinalis	Aerial Part	Fluellen
Viburnum Prunifolium	Bark	Snowball
Vinca Minor	Aerial Part	Lesser piriwinkle
Viola Odorata	Flower	Viola odorata / Sweet violet
Viola Tricolor	Flower	Pansy
Viscum Album	Leaf - Sprig	Mistletoe
Vitex agnus castus	Fruit	Vitex
Vitis Vinifera	Leaf	Grape
Withania Somnifera	Root	Winter-cherry
Zanthoxylum Piperitum	Fruit	Prickly Ash / Japanese pepper
Zea Mays	Fruit	Corn
Zea Mays	Stigma	Corn
Zingiber Officinale	Rhizome	Ginger

OTHER EXTRACTS:

Beer
Champagne
Manuka honey
Muscat
Propolis
Mediterranean sea minerals
Sauvignon
Talc
Red wine

ACTIVE WATER EXTRACTS BIO COSMOS

COSMOS
CERTIFIED

The best organic certified plants are subjected to gentle water extraction to obtain rich and crisply fragrant liquids ideal for producing up-to-date, effective cosmetic formulations compliant with the COSMOS CERTIFIED standard.
Over 160 plants (see list below) are already available in our ACTIVE WATER EXTRACTS BIO COSMOS line, all produced on-demand to guarantee the best preservation of the active molecules as well as the crisp freshness due to the excellence of the plant material used.
The ACTIVE WATER EXTRACTS BIO COSMOS are water-based products, which means they are very easy to use and can be added to the water phase of any formulation either before or after the heating phase.
No chemical solvent is used in any step of the production, making the products completely safe and also environmentally friendly as all by-products generated during the production processes have a low impact on the environment. Using water is also beneficial for the environment because it has zero impact compared to the production and transportation of traditional solvents.

Our BIOEXTRACT 100 products are part of the ACTIVE WATER EXTRACTS BIO COSMOS therefore obtained according to the COSMOS CERTIFIED standard but specifically developed to allow cosmetic formulators to reach the required amount of organic certified ingredients in the final formulation with a pleasant, cost effective, natural, water-based ingredient.

ACTIVE WATER EXTRACTS BIO COSMOS
Typical INCI name: aqua, [name of the plant] extract, citric acid, sodium benzoate, potassium sorbate.

BIOEXTRACT 100
Typical INCI name: [name of the plant] extract, citric acid, sodium benzoate, potassium sorbate.

From the available organic certified plants also PRESERVATIVE FREE EXTRACTS ACTIVE LIPO EXTRACTS and FERMENTED EXTRACTS in a COSMOS CERTIFIED grade can be produced.

LIST OF ORGANIC CERTIFIED PLANTS AVAILABLE FOR:

Active Water Extracts BIO COSMOS line

Botanical name	Part of the plant	Common name
Achillea millefolium	Aerial part	Yarrow
Actinidia chinensis	Fruit	Kiwi
Aesculus hippocastanum	Seed	Horse chestnut
Agrimonia eupatoria	Aerial part	Common agrimony
Alchemilla vulgaris	Aerial part	Lady's mantle
Allium ursinum	Root	Ramsons
Aloe barbadensis	Leaf	Aloe Leaf
Althaea officinalis	Root	Marsh-mallow
Anthriscus cerefolium	Leaves	Garden Chervil
Arctium lappa	Root	Greater burdock root
Arctium lappa	Leaves	Greater burdock leaves
Aristotelia chilensis	Aerial part	Maqui
Arnica montana	Flower	Mountain arnica
Artemisia absinthium	Leaves	Absinthe wormowood
Aspalathus linearis	Leaves	Red tea - Rooibos
Avena sativa	Aerial part	Oats
Betula alba	Leaves	Birch
Calendula officinalis	Flower	Pot marigold
Calluna vulgaris	Flower	Common heather

Botanical name	Part of the plant	Common name
Camellia sinensis	Leaves	Green tea
Camellia sinensis	Leaves	Black tea
Carum carvi	Seed	Caraway
Castanea sativa	Fruit	Chestnut
Centaurea cyanus	Flower	Cornflower
Chamomilla recutita	Flower	Chamomile
Cinnamomum cassia	Bark	Ceylon cinnamon
Citrus aurantium amara/ Citrus aurantium dulcis	Flower	Sweet/Bitter Orange flower
Citrus aurantium dulcis	Peel	Sweet Orange peel
Citrus aurantium dulcis	Fruit	Sweet Orange fruit
Citrus grandis	Fruit	Pink grapefruit
Citrus limon	Peel	Lemon
Citrus limon	Fruit	Lemon
Cocos nucifera	Fruit	Coconut
Coffea arabica	Seed	Coffee
Coriandrum sativum	Fruit	Coriander
Corylus avellana	Leaves	Hazel
Crataegus oxyacantha	Flower-Leaves	Hawthorn
Cucumis sativus	Fruit	Cucumber

Botanical name	Part of the plant	Common name
Curbita maxima	Fruit	Pumpkin
Cynara scolymus	Leaves	Artichoke
Daucus carota	Root	Carrots
Echinacea pallida	Root	Pale purple coneflower
Equisetum arvense	Herb	Horsetail
Eucalyptus globulus	Leaves	Tasmanian blue gum
Foeniculum vulgare	Seed	Fennel
Fragaria vesca	Fruit	Strawberries
Frangula alnus	Bark	Alder buckthorn
Ginkgo biloba	Leaves	Ginkgo
Glycyrrhiza glabra	Root	Licorice
Hamamelis virginiana	Leaves	Common witch-hazel
Harpagophytum procumbens	Root	Devil's caw
Hedera Elix	Leaves	Ivy
Helianthus annuus	Seed	Sunflower
Helichrysum italicum	Flower	Helichrysum
Hibiscus sabdariffa	Flower	Roselle
Humulus lupulus	Fruit	Hop
Hypericum perforatum	Aerial part	Common St. John's wort
Hyssopus officinalis	Flower-Leaves	Hyssop
Iris pallida	Rhizomes debarked	Dalmatian iris
Juglans regia	Leaves	Walnut
Juniperus communis	Fruit	Juniper
Lavandula augustifolia	Flower	Lavender
Linum usitatissimum	Seed	Lineseed
Lycium barbarum	Fruit	Goji
Malva sylvestris	Flower/leaves	Mallow
Marrubium vulgare	Aerial part	White horehound
Medicago sativa	Leaves	Alfalfa
Melilotus officinalis	Aerial part	Yellow sweet dover
Melissa officinalis	Leaves	Lemon balm
Mel		Honey
Mentha piperita	Leaves	Peppermint
Mentha viridis	Leaves	Spearmint
Musa sapientum	Fruit	Banana
Myrtus communis	Leaves	Myrtle
Ocimum basilicum	Leaves	Basil
Olea europea	Leaves	Olive
Olea europea	Fruit	Olive
Origanum vulgare	Flower	Origan
Oryza sativa	Grain	Black rice
Oryza sativa	Grain	Rice
Panax Ginseng	Root	Ginseng
Passiflora incarnata	Aerial part	Purple passionflower
Petroselinum crispum	Leaves	Parsley
Phoenix dactylifera	Fruit	Date palm
Pimpinella anisum	Seed	Anise seed
Piper nigrum	Seed	Black pepper
Plantago Major	Leaves	Broadleaf plantain
Plantago Psyllium	Seed	Psyllium
Prunus amygdalus dulcis	Fruit	Almond
Prunus armeniaca	Fruit	Apricot
Prunus avium	Fruit	Wild cherry
Prunus domestica	Fruit	Plum
Prunus persica	Fruit	Peach fruit
Prunus spinosa	Fruit	Blackthorn
Punica granatum	Fruit	Pomegranate
Pyrus communis	Fruit	Pear
Pyrus malus	Fruit	Apple
Quercus robur	Bark	Oak tree
Ribes nigrum	Fruit	Black currant
Ribes nigrum	Leaves	Black currant
Rosa canina	Hip without seeds	Dog rose
Rosa damascena	Flower	Damask rose
Rosmarinus officinalis	Leaves	Rosemary
Rubus idaeus	Leaves	Raspberry
Rubus ulmifolius	Fruit	Blackberry fruit
Rumex crispus	Root	Curly dock
Ruscus aculeatus	Root	Butcher's broom
Salix alba	Bark	White willow
Salvia officinalis	Leaves	Sage
Sambucus nigra	Fruit	Black elder
Sambucus nigra	Flower	Black elder
Sasa Kurilensis	Leaves/Stem	Bamboo
Schinus molle	Seed	Pink peppercorns
Sesamum indicum	Seed	Sesame
Spinacia oleracea	Leaf	Spinach
Taraxacum officinale	Root	Common dandelion
Taraxacum officinale	Leaves	Common dandelion
Thymus serpillum	Aerial part	Breckland thyme
Thymus vulgaris	Leaves	Thyme
Tilia tomentosa	Flowers with bract	Silver linden
Urtica dioica	Leaves	Nettle
Urtica dioica	Root	Nettle
Vaccinium myrtillus	Leaves	Bilberry leaves
Vaccinium myrtillus	Fruit	Bilberry fruit
Verbena officinalis	Aerial part	Common vervain
Viola tricolor	Aerial part	Pansy flower
Viscum album	Leaves and sprigs	Mistletoe
Vitis vinifera	Leaves	Grape
Vitis vinifera	Fruit	Red grape

BIOEXTRACT 100

White grape

Apple

BIODYNAMIC PLANT EXTRACTS

Among “sustainable use” trends, cosmetics is surely one of the main players. Our company has always adopted this philosophy: reusing agricultural by-products, not using chemical solvents, using packaging with a low content of plastic, selecting wherever possible plants grown according to sustainable agriculture practices. This last concept is best expressed by the term Biodynamic Agriculture.

The term “Biodynamic Agriculture” refers to a cultivation method based on the ideas of the philosopher Rudolf Steiner regarding sustainable systems for agricultural production as a whole with respect to the ecosystem of the land. Biodynamics represents an interpretation of agricultural production centred on the sustainability of the land within the framework of a more general balance of the natural world.

The objectives of biodynamics are to keep the soil fertile, keep the plants healthy, increase the quality of the products and use completely natural manure and compost, excluding all artificially produced substances. Biodynamic Agriculture considers the land and man as integral parts of the universe, sensitive to its rules and influences. And a biodynamic farm ideally aims to become a self-sufficient biological unit, where land, vegetation, animals and man are in perfect equilibrium, each contributing to the sustainability of the other. Biodynamic Agriculture ensures maximizing the quality of plants and their content of beneficial active ingredients.

We selected the best Biodynamic plants to produce the extract lines for cosmetics:

ACTIVE WATER EXTRACT BD: water-based biodynamic plant extracts

ACTIVE LIPO EXTRACT BD: biodynamic plant extracts with sunflower oil

PRESERVATIVE FREE EXTRACT BD: hydroglycerine-based biodynamic plant extracts, containing no preservatives

LIST OF BIODYNAMIC PLANTS AVAILABLE FOR:

Active Water Extracts BD | Active Lipo Extracts BD | Preservative Free Extracts BD

Botanical name	Part of plant	Common name
Achillea millefolium	Aerial part	Yarrow
Aesculus hippocastanum	Seed	Horse chestnut
Anethum graveolens	Leaf	Dill
Artemisia dracunculus	Leaf	Tarragon
Artemisia vulgaris	Aerial part	Common mugwort
Avena sativa	Aerial part	Oats
Betula alba	Leaf	Birch
Carum carvi	Seed	Caraway
Chamomilla recutita	Flower	Chamomile
Coriandrum sativum	Fruit	Coriander
Cornus mas	Fruit	Cornelian cherry
Corylus avellana	Leaf	Hazel
Crataegus oxyacantha	Flower, leaf	Hawthorn
Echinacea pallida	Root	Pale purple coneflower
Eschscholtzia californica	Weed	Eschscholzia
Galega officinalis	Aerial part	Galega
Glycyrrhiza glabra	Root	Licorice
Hedera elix	Leaf	Ivy
Helianthus annuus	Flower	Sunflower
Helichrysum italicum	Flower	Helichrysum
Hibiscus sabdariffa	Flower	Roselle
Hieracium pilosella	Aerial part	Mouse ear hawkweed
Hypericum perforatum	Aerial part	Common st. John's wort
Hyssopus officinalis	Flower, leaf	Hyssop
Iris pallida	Rhizomes debarked	Dalmatian iris
Juglans regia	Leaf	Walnut
Juniperus communis	Fruit	Juniper
Lavandula augustifolia	Flower	Lavender
Leonorus cardiaca	Aerial part	Motherwort
Levisticum officinalis	Leaf	Lovage
Malva sylvestris	Flower, leaf	Mallow
Marrubium vulgare	Aerial part	White horehound
Medicago sativa	Leaf	Alfalfa
Melilotus officinalis	Aerial part	Yellow sweet dover

Botanical name	Part of plant	Common name
Melissa officinalis	Leaf	Lemon balm
Mentha piperita	Leaf	Peppermint
Mentha viridis	Leaf	Spearmint
Ocimum basilicum	Leaf	Basil
Origanum majorana	Leaf	Marjoram
Origanum vulgare	Flower	Origan
Pimpinella anisum	Seed	Anise seed
Prunus spinosa	Fruit	Blackthorn
Pyrus malus	Fruit	Apple
Quercus robur	Bark	Oak tree
Ribes nigrum	Leaf	Black currant
Ribes nigrum	Fruit	Black currant
Rosa canina	Hip without seeds	Dog rose
Rosa damascena	Flower	Damask rose
Rubus fructicosus	Leaf	Blackberry
Rumex crispus	Root	Curly dock
Ruta graveolens	Leaf	Rue
Salix alba	Bark	White willow
Salvia officinalis	Leaf	Sage
Salvia sclarea	Leaf	Clary sage
Satureja montana	Leaf	Winter savory
Silybum marianum	Leaf	Cardus marianus
Silybum marianum	Seed	Cardus marianus
Solidago virgaurea	Aerial part	European goldenrod
Tanacetum vulgare	Aerial part	Tansy
Taraxacum officinale	Leaf	Common dandelion
Taraxacum officinale	Root	Common dandelion
Thymus serpillum	Aerial part	Breckland thyme
Thymus vulgaris	Leaf	Thyme
Trigonella foenum-graecum	Seed	Fenugreek
Urtica dioica	Leaf	Nettle
Urtica dioica	Root	Nettle
Viola tricolor	Aerial part	Pansy flower

ACTIVE JUICES

ACTIVE JUICES is an innovative line of ingredients for cosmetics based on freshly centrifuged fruits and vegetables following the latest healthy foods and diet trends.
ACTIVE JUICES are produced on-demand with fresh fruits and vegetables to maximize the contents in active molecules and nutrients.
No chemical solvent is used in any step of production of our ACTIVE JUICES, making the products completely safe and environmentally friendly.

We can produce fresh centrifuged products and bespoke mixes according to our customers' requests.
All the products in this line can be used in organic certified cosmetic formulations.

Typical INCI name: [name of the plant] juice, citric acid, sodium benzoate, potassium sorbate.

LIST OF FRESH PLANTS AVAILABLE FOR:

Active Juices line

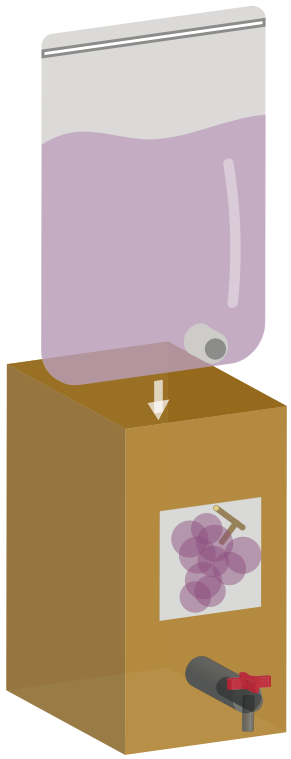
Botanical name	Part of the plant	Common name
Actinidia chinensis	Fruit	Kiwi
Ananas sativus	Fruit	Pineapple
Beta vulgaris	Root	Beetroot
Brassica oleracea	Plant	Broccoli
Capsicum annuum	Fruit	Pepper
Citrus aurantifolia	Fruit	Lime
Citrus aurantium dulcis	Fruit	Orange
Citrus lemon	Fruit	Lemon
Citrus nobilis	Fruit	Mandarin orange
Cucumus sativus	Fruit	Cucumber
Daucus carota sativa	Root	Carrot
Fragaria ananassa	Fruit	Strawberry
Lactuca Scariola sativa	Leaf	Lettuce
Mangifera indica	Fruit	Mango
Musa paradisiaca	Fruit	Banana

Botanical name	Part of the plant	Common name
Passiflora edulis	Fruit	Passion fruit
Prunus armeniaca	Fruit	Apricot
Prunus avium	Fruit	Italian Cherry
Prunus persica	Fruit	Peach
Punica granatum	Fruit	Pomegranate
Pyrus communis	Fruit	Pear
Pyrus malus	Fruit	Apple
Rubus fruticosus	Fruit	Blackberry
Rubus idaeus	Fruit	Rasperry
Solanum Lycopersicum	Fruit	Tomato
Solanum tuberosum	Fruit	Potato
Spinacia oleracea	Leaf	Spinach
Vitis vinifera	Fruit	Grape
Zingiber officinale	Root	Ginger

SOME MIX ALREADY AVAILABLE:

Botanical name	Part of the plant	Common name
Actinidia chinensis, Pyrus malus	Kiwi fruit, apple fruit	Kiwi-Green Apple
Citrus aurantium dulcis, Citrus lemon, Zingiber officinale	Orange fruit, lemon fruit, ginger root	DETOX
Citrus aurantium dulcis, Daucus carota sativa, Citrus lemon	Orange fruit, carrot root, lemon fruit	A.C.E.

Botanical name	Part of the plant	Common name
Daucus carota sativa, Carica papaya	Carrot root, Papaya fruit	Carrot and Papaya
Pyrus malus, Citrus aurantifolia, Actinidia chinensis	Apple fruit, Lime fruit, kiwi fruit	Apple, Lime, Kiwi
Rubus fruticosus, Vaccinium Angustifolium, Rubus idaeus	Blackberry fruit, Blueberry fruit, Raspberry fruit	Red fruits



- 85%
consumption of plastic material from non-renewable sources

72,5%
from recycled material

Functional & eco-friendly packaging

Since 2007 Phenbiox has been packaging its plant extracts in Bag-in-Box rather than the jerrycan. This functional packaging is widely used in the food sector.

The bag-in-box consists of an inner polyethylene bag containing the liquid product, inserted in an outer recyclable corrugated cardboard box. The polyethylene bag is fitted with a tap which makes it possible to very accurately measure out the required amount of product. As the product is extracted, the volume of the bag decreases without any air getting in. This prevents the creation of a headspace, reducing oxidative phenomena and thus the possible loss of product functionality. This system also prevents any microbial contamination of the remaining product.

It is possible to calculate the quantity of plastic (obtained from non-renewable oil-based materials) used per kg of extract packed in bag-in-boxes or in conventional jerrycans:
bag-in-box = 0.06 kg / 10 kg = 6 grams of plastic / kg of extract
Jerrycan = 1 kg / 25 kg = 40 grams of plastic / kg of extract.

Using Bag-in-box packaging we can reduce the consumption of plastic material from non-renewable sources by 85% compared to the classic HDPE packaging.

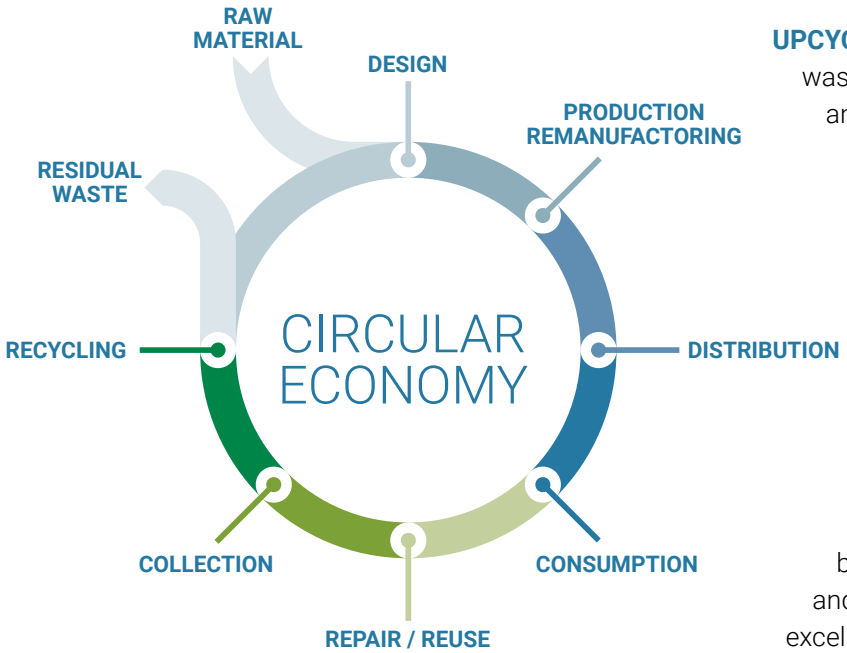
The bag-in-box system used by Phenbiox is produced with 72.5% recycled material helping to conserve natural resources, cut energy consumption and reduce waste sent to landfills and incinerators.

COSMETIC INGREDIENT FROM
UPCYCLING

OUR ACTIVES FROM UPCYCLING

Upcycling is one of the elements of a much wider topic: THE CIRCULAR ECONOMY, a model of production and consumption, which involves sharing, leasing, reusing, repairing, refurbishing and recycling existing materials and products as long as possible. In this way, the life cycle of products is extended reducing wastes as much as possible.
Life Cycle Assessment (LCA) studies the impacts of a product during its existence. The life cycle of a product includes the extraction of the raw materials, manufacturing, packaging, transport, distribution, use and possible reuse, collection, storage, recovery and final disposal of the waste resulting from its use. The goal is to extend the life cycle of materials by reusing them for other purposes before disposal.
Circular economy is not a new concept. Before industrialization, food production was considered to be circular due to its own nature. The traditional farmers' culture did not tolerate waste, respecting all raw materials, of animal or vegetable origin. Home economics was about subsistence and not about abundance. Everything was considered usable: *"Waste not want not"*
In 19th and 20th Century this circular approach was superseded by the linear economic model, which is based on a take-make-consume-throw away pattern. This model relies on large quantities of cheap, easily accessible materials and energy.

Today the circular economy is being re-evaluated in a modern context where the sustainability of resources and processes is again a key point for a fairer development of the society and the protection of the environment.
One of the most relevant factors of this circular approach is to prevent (precycling) or reduce as much as possible waste productions applying different strategies:



UPCYCLING
waste transformation into something of higher quality and value

RECYCLING
waste transformation into something of similar value compared to the starting material (plastic, glass, aluminium recycling)

DOWNCYCLING
waste transformation into something that has less value than the product from which it derives (biogas production)

Phenbiox offers several active ingredients derived by UPCYCLING processes of different co-products and by-products of Italian food productions of excellence.

Through the up cycling of by-products from excellent Italian agri-food productions, Phenbiox has developed 10 active ingredients for cosmetics highlighted by the logo

COSMETIC INGREDIENT FROM UPCYCLING

Exclusive customizations

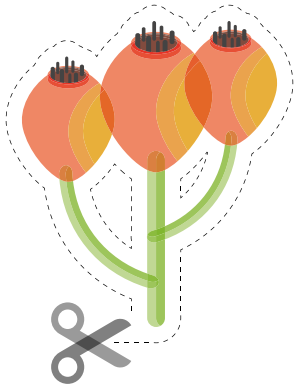
EXAMPLE OF THE CREATIVE PROCESS TO DEVELOP AN EXCLUSIVE CUSTOMIZED INGREDIENT

1. Share the idea/vision for the new cosmetic line
2. Selection of the plant according to the projects' needs
3. Selection of the best production technology
4. Prototype preparation and chemical characterization
5. Evaluation of possible use of delivery systems (liposomes)

The best way to stand out from the crowd is to be different from anyone else and the best way to be different is to have something unique.
Just like haute couture, the cosmetics sector needs personalized and high-quality raw materials, and Phenbiox is the right partner to work with in devising and producing new ingredients. Our in-house experts can work with your technical and marketing staff throughout the creative and technical processes in order to supply truly customized ingredients.
From a simple extract of an unusual plant to a high-tech, characterized, substantiated and even patented ingredient, we are willing to support you in the process of creating your own cosmetic ingredient to characterize your unique next cosmetic line.

- ☑ Literature review on peer-reviewed journals on selected plant
- ☑ Technical and safety data sheet issuing
- ☑ Support during substantiation tests
- ☑ Support during patent application process

- ☑ Supply of the customized ingredient



Our position on organic

Over 200
COSMOS CERTIFIED extracts

All 2000
suitable for ORGANIC CERTIFIED formulations

9
COSMOS CERTIFIED active ingredients

18
COSMOS APPROVED active ingredients

COSMOS APPROVED

COSMOS CERTIFIED

Phenbiox is a COSMOS CERTIFIED company since 2011. Whenever the organic certified plant is available we can easily go through the certification process to expand our line fulfilling the customer's demand of new ingredients.

All our ingredients are produced with environmental friendly and solvent-free processes and can therefore easily be used in natural and organic formulations. We can also quickly provide all the documents needed to let our customers use our products even if committed with different standards and rules such as ISO 16128.

		P. 14	P. 15	P. 16	P. 17	P. 18	P. 19	P. 20	P. 21	P. 22	P. 23	P. 24	P. 25	P. 26	P. 27	P. 28	P. 29	P. 30	P. 31	P. 32	P. 33	P. 34	P. 35	P. 36	P. 37	P. 38	P. 39	P. 40	P. 41	P. 42	P. 43
		3HC	ADIPO-TRAP	ALOFERM HF	AQ-SAVE	AVENOFERM HF	BODYFERM HF	CANNABIOT	COUPERINE	CRUOX®	FERMENTHAIR HF	FERMENTED RICE WATER	G-CELL	GSH-DEFENSE	HYDROPOM®	HYDROPUNTIL	LENTIMYRT HF	LIFE ESSENCE-VITIS	LUMINESCINE	MANNAFERM HF	OLEOSOFT-4O	OLEOX®	P-CELL	PRO-STRUCTURE	PURE-PHEN	REGENINE	SOY-CELL	UVIOX®	VEGEKER-PLUS	VITISBALM	W TR-ACTIVE
SKIN	Anti-Acne					•																			•						
	Anti-aging			•				•		•			•							•		•					•	•		•	•
	Anti-Blue Light																		•												
	Anti-Cellulite/Reshaping		•				•													•											
	Anti-Couperose								•																						
	Anti-Eya Bags / Dark Clrcles																													•	•
	Anti-Pollution														•																
	Anti-Stretch Marks																				•										
	Antioxidant												•		•	•	•				•	•						•		•	
	Breast firming						•																								
	Endogenous Antioxidant													•																	
	Epigenetic Modulation																														•
	Filler Effect																													•	•
	Firmness/Elasticity			•			•	•		•								•		•	•		•	•			•			•	•
	Metabolic Activation		•	•										•				•			•		•								•
	Microbiota Modulation					•		•									•	•							•						
	Moisturise			•		•		•								•	•	•		•	•									•	•
	Peeling/Skin Renewal																									•					
	Personal hygiene			•																											
	Radiance																		•												
	Reduce Lines/Wrinkles							•		•										•							•			•	•
	Skin Barrier Function																•			•	•										
	Soothe/Protection		•	•		•		•	•					•		•				•	•				•						
	UV Stress Protection														•				•								•				
	Whitening																		•												
	Wound healing			•																											
HAIR	Anti-Dandruff																								•						
	Anti-Hair Loss	•									•																				
	Anti-Limescale/ Anti-Sea Salt																										•				
	Antioxidant										•												•								
	Colour Protection																						•			•					
	Elasticity																	•			•								•		
	Moisturise			•	•							•																			
	Protection/Prevention	•		•	•						•	•											•	•							
	Radiance																		•												
	Repair/Reinforce	•			•						•							•											•		

designpeople

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