FULL SPECTRUM PHOTOPROTECTION CATALOGUE

BLUE LIGHT PROTECTION UV LIGHT PROTECTION

PRODOTTIGIANNI



BLUE NEW OLÉOACTIF

BLUE LIGHT PROTECTION ANTIOXIDANT



KEY POINT

It protects cells from external aggressions such as urban pollution and blue light emission by blocking pollutants penetration into the skin and boosting cellular defense and repairing systems.

DESCRIPTION

Extract in organic soybean oil of brown rice germ and red and black rice extracts. It is rich in omega-3,6 and 9, carotenoids, tocopherols (soybean oil) and gamma-oryzanol, phytosterols, phytic and ferulic acid, procyanidins and antocyanins (rice).

MECHANISM OF ACTION

Reduces COX-2, GPX2 and TYR expression protecting cells from stress and pollution. Increases GSTM1 expression, boosting cells' repairing and detoxifying systems.



EX VIVO TEST

Preventive study:

2 caucasian females skin explants of 55 and 57 years old, 8 days study, skin stressed during 1% BLUE OLÉOACTIF application \rightarrow evaluation of urban pollution protection (COX2 inflammation marker repression and CellROX for ROS reduction) and blue light defense (GPX2 detoxification marker and tyrosinase skin pigmentation marker repression).

Curative study:

2 caucasian females skin explants of 55 and 57 years old, 8 days study, skin stressed before 1% BLUE OLÉOACTIF application \rightarrow evaluation of the curative and regenerative effect (GSTM1 detoxification marker boost and CellROX for ROS reduction).

INCI NAME Glycine Soja Oil, Polyglyceryl-3 Diisostearate, Oryza Sativa Germ Extract, Oryza Sativa Extract

CLAIMS Blue light protection Antioxidant Skin regenerating Anti pollution

IDEAL FOR

Hyperpigmentation reducing serum Regenerative cream Skin repair product line Urban shield protective cream Anti pollution primer

ORIGIN Vegetable

HYDRO/LIPO Lipo

DOSAGE 1%-5%

FORMULATION SUGGESTIONS

In the fatty phase before emulsification or directly in anhydrous formulas (skin care, oil, oily serum, make-up...).











ENTADINE

LIGHT PROTECTION **ANTI PHOTOAGING**



KEY POINT

It reduces sun-induced skin damages by boosting skin natural defenses, and prevents sunburn consequences and skin premature aging.

DESCRIPTION

Natural molecule extracted from the seeds of tropical vine Entada phaseoloides.

MECHANISM OF ACTION

Limits UV-induced isomerization of trans-UCA into the noxious and immunosuppressive cis form. Acts as a chromophore and efficiently supports melanin scavenging activity. It inhibits galectin-7, IL-8 and TNF- α expression and inactivates MMP-1.



IN VITRO TEST

2.5% ENTADINE prevents CPDs formation by 92% on human reconstituted epidermis \rightarrow Prevents DNA damages induced by UV-B direct absorbance or ROS.

2.5% ENTADINE prevents IL-8 synthesis by 81% on human reconstituted epidermis \rightarrow Prevents inflammation.

2.5% ENTADINE prevents galectin-7 expression by 72%, on human reconstituted epidermis \rightarrow Protects barrier function.

1.5% ENTADINE prevents TNF-a release by 28% on human reconstituted epidermis \rightarrow Prevents collagen synthesis inhibition.

0.025% ENTADINE prevents MMP-1 activity by -74% on fibroblasts \rightarrow Prevents collagen degradation due to artificial radiations.



EX VIVO TEST

2.5% ENTADINE prevents sunburn cells formation by 91% on skin explant \rightarrow Protects skin from UV, IR, VIS radiations.

2.5% ENTADINE decreases galectin-7 expression by 98% on skin explant → Ensures skin homeostasis.

2.5% ENTADINE prevents DNA damages by 62% on skin explant \rightarrow Prevents metabolic disorders.

INCI NAME Entada phaseoloides bark/seed extract

CLAIMS Anti photoaging **UV** protection Anti-inflammation Light protection

IDEAL FOR

Sun care line for sensitive skin Anti oxidant and anti age products

ORIGIN

HYDRO/LIPO

DOSAGE

FORMULATION SUGGESTIONS No particular formulation









BLUE LIGHT PROTECTION ANTI OXIDATIVE STRESS



KEY POINT

It stimulates skin's detox response and prevents the noxious effects of an evergrowing exposure to urban pollution. It protects cells from urban pollutants and domestic radiations, stimulates micro-circulation, limits toxin accumulation and prevents cell intoxication and premature skin aging.

DESCRIPTION

Extract from red vine leaves, with high content of polyphenols and tannins.

MECHANISM OF ACTION

Redivine increases the translocation of cell's sentinel Nrf2 into the nucleus, thus inducing the activation of anti-oxidant response element (ARE) and stimulating the synthesis of detoxifying cytoprotective enzymes glutathione and NQO-1.



EX VIVO TEST

Evaluation of keratinocytes' damaged DNA in the presence of domestic light \rightarrow Redivine efficiently protects DNA, limits cell oxidation, and prevents premature aging.

Evaluation of keratinocytes' viability in the presence of house dust \rightarrow Redivine protects skin from cell intoxication.

Evaluation of fibroblasts' MMP-1 and collagen I expression in the presence of domestic light \rightarrow Redivine limits MMP-1 expression and stimulates collagen I, improving skin's density.

INCI NAME Vitis Vinifera (Grape) Leaf Extract

CLAIMS Blue light protection Anti age Anti oxidative stress Anti pollution

IDEAL FOR

Blue light shield skin care Anti pollution primer Restructuring skin care cream

ORIGIN Vegetable

HYDRO/LIPO Hydro

DOSAGE 1%-5%

FORMULATION SUGGESTIONS No particular formulation restriction.







SOLEXYL

UV PROTECTION ANTI INFLAMMATION



KEY POINT

Anti-photoaging and anti-inflammatory "nature-inspired" molecule which strengthens skin defences against the harmful effects of UV.

DESCRIPTION

Active molecule isolated from tropical liana seeds found in Africa and Southern Asia.

MECHANISM OF ACTION

It absorbs UV, decreasing the direct damages of sun rays and is naturally recycled into and from Entadamide A, a completely safe natural UV absorber and anti-inflammatory compound. It offers DNA protection, anti-oxidant and anti-immunosuppression benefits.



IN VITRO TEST

UVB-irradiated human reconstituted epidermis \rightarrow Evaluation of the % of *trans*-UCA isomerization into noxious *cis*-UCA.

Galectin-7 expression in UVB-irradiated HaCaT keratinocytes \rightarrow Evaluation of anti-immunosuppression properties.

Monitoring of DNA cyclopyrimidine dimers (CPDs) production in UVB-exposed HaCaTkeratinocytes \rightarrow Evaluation of DNA photoprotection.

Monitoring of \mathcal{Y}_{o} -H2AX histone phosphorylation (DNA repair) in UVB-irradiated HaCaT keratinocytes \rightarrow Evaluation of DNA repair.

Cell viability (MTT assay) of UVA-irradiated HaCaT keratinocytes \rightarrow Evaluation of antioxidant properties.

TNF- α released from HRE 24 hours after UVB-irradiation \rightarrow Evaluation of antiinflammatory properties.



EX VIVO TEST Percutaneous absorption study on human skin explants.

INCI NAME Methylpropanediol, Hydroxyethyl Methylthiopropenamide CLAIMS Anti age UV protection Anti-inflammation

IDEAL FOR

After sun soothing lotion Sun protective cream Anti photoaging serum

ORIGIN Synthesis

HYDRO/LIPO Hydro

DOSAGE 0,5%-1%

FORMULATION SUGGESTIONS No particular formulation restriction.



LIPOSHIELD HEV MELANIN



UV PROTECTION BOOSTER

KEY POINT

A fractionated melanin compound designed to protect the skin from damaging high energy visible light.

DESCRIPTION

Liposhield HEV Melanin is a fractionated melanin compound, designed to be used topically as an additional environmental defense against High Energy Visible light (HEV). It is designed to shield the skin from high energy blue/violet visible light.

MECHANISM OF ACTION

It absorbs light in the range of 400-500 nm wavelengths. It was designed to have a molecular weight that is estimated to be 5,000 to10,000 Daltons and will not penetrate healthy, intact skin.



IN VITRO TEST

An in vitro study was conducted by gene expression in artificial skin samples obtained from MatTekto compare the effect of HEV light alone and in presence of Liposhield HEV Melanin as a filter of HEV light.

INCI NAME Aqua, Melanin

CLAIMS UV protection booster

IDEAL FOR

Daily wear moisturizing creams and lotions. Anti ageing treatment products. Sunscreen products. Foundation make up.

ORIGIN

Synthetic

HYDRO/LIPO Hydro

DOSAGE 0,2%-0,5%

FORMULATION SUGGESTIONS

It is not suitable for gel formulations, as colorless formulations can not be obtained. It is also not compatible with cationic ingredients, resulting in the formation of a precipitate. It is heat sensitive and therefore should not be heated above 50°C. Incorporation into formulations at temperatures below 45°C is recommended.



ALISTIN

ANTI GLYCATION ANTI AGE



KEY POINT

Pseudodipeptide that protects skin from oxidative stress' damages and maintains cells'optimal metabolic activities. It acts as an anti-aging, anti-oxidant, anti-inflammatory, protective and sunscreen agent.

DESCRIPTION

Hydroglycolic solution of 10% carcinine hydrochloride.

MECHANISM OF ACTION

Alistin scavenges glucose and avoids collagen cross-linking. It reduces the fatty acid hydroperoxides into harmless alcohols and repairs the oxidative damages in the cell's membrane. It stimulates the production of DNA protecting proteins, decreasing the number of apoptotic cells.



IN VITRO TEST Collagen lattice \rightarrow Evaluation of fibroblasts' contraction of collagen fibers.

the secretion of pro-inflammatory cytokines such as TNF- α , IL-1 α and IL-8.

UV-irradiated keratinocyte culture \rightarrow Evaluation of cell apoptosis and DNA damage.

Collagen fibers \rightarrow Evaluation of protein cross-linking.



EX VIVO TEST Topical application of 1% Alistin on human reconstituted epidermis \rightarrow Reduction of



IN VIVO TEST 35 female volunteers aged between 30 to 59 treated with Alistin (0.75%) or placebo twice a day for 28 days \rightarrow PRIMOS skin assessment (smoothness, wriknles, sagging).

INCI NAME Aqua, Decarboxy Carnosine HCl, Butylene Glycol CLAIMS Antioxidant Anti age Skin repair Anti glycation

IDEAL FOR

Antioxidant skin care Skin revitalizing products Sun protection product line

ORIGIN Synthesis

HYDRO/LIPO Hydro

DOSAGE 0,5%-1,5%

FORMULATION SUGGESTIONS No particular formulation restriction.







OTZ 10

RADICAL SCAVENGING SKIN PROTECTION

KEY POINT

Photo-protective compound with optimized bioavailability. It targets the deepest layers of the skin, protecting them from UV-B, UV-A and IR rays-induced damages, with anti-stress and radical scavenging properties.

DESCRIPTION

Hydroglycolic solution containing 10% of 2-oxo-1,3-thiazolidine.

MECHANISM OF ACTION

It scavenges noxious radicals such as ROS, RNS and RCS releasing taurine as a safe by product.



IN VITRO TEST Pre-incubation of human dermal fibroblasts with OTZ \rightarrow decrease in MMP-1 expression in response to IR exposure.

PIK3R3 and IL6ST expression in response to IR exposure \rightarrow OTZ normalizes the expression of genes involved in tissue quality and response to stress.



EX VIVO TEST Irradiated (UV-A 15J/cm2) real human skin treated with $OTZ \rightarrow Evaluation of fibroblasts' DNA and mitochondrial protection.$

TUNEL assay on irradiated (200 mJ/cm2) human reconstructed epidermis \rightarrow OTZ reduces UV-induced DNA damages and the resulting apoptotic cells.

Penetration study on human explants \rightarrow OTZ can permeate into the dermis.

INCI NAME Aqua, Butylene Glycol, Oxothiazolidine CLAIMS Photo protection Anti stress Anti photoaging Radical scavenging

IDEAL FOR

After sun repairing lotion Sun protective cream Anti aging serum

ORIGIN Synthesis

HYDRO/LIPO Hydro

DOSAGE 0,2%

FORMULATION SUGGESTIONS No particular formulation restriction.



ROSE MYRTLE EXTRACT BG80

PHOTO PROTECTION ANTI PHOTOAGING



KEY POINT

A natural extract to fight UV rays damages.

DESCRIPTION Hydroglycolic extract of the fruit of Rhodomyrtus tomentosa, plant original of south-east Asia, China and Japan.

MECHANISM OF ACTION

It shows SOD-like activity, it promotes glutathione synthesis and prevents DNA damages caused by UV rays.



IN VITRO TEST Preventative effect of erythema formation.

Inhibition of cell death induced by UV-B: ROSE MYRTLE EXTRACT BG80 inhibits cell death derived from DNA damage, a cause of erythema formation and photo-aging symptoms.

Inhibition of DNA damage: ROSE MYRTLE EXTRACT BG80 inhibits DNA damage/fragmentation which leads to cell death and defective genes.

Inhibition of CPD production & removal of CPD: Cyclobutane Pyrimidine Dimer (CPD) is a causative substance of DNA damage/fragmentation and shows inhibition and removal effect of the substance.

Inhibition of p53 protein increase stimulated by UV-B: The test confirms the consistency between DNA damage prevention effect of ROSE MYRTLE EXTRACT BG80 with other natural biological responses.



IN VIVO TEST

5 volunteers → 1% ROSE MYRTLE EXTRACT BG80 lotion and placebo lotion → 6 sites of the inner forearms were irradiated with 6 grades of UV-B intensity (from 30 to 90 mJ/cm2) → 6 hrs after UV-B irradiation, the intensity of skin redness (erythema score) was judged by visual observation.

INCI NAME

Butylene Glycol, Aqua, Rhodomyrtus Tomentosa Fruit Extract

CLAIMS Anti photoaging Anti erythema formation Sun protection

IDEAL FOR Sun care product line After sun cream

ORIGIN Vegetable

HYDRO/LIPO Hydro

DOSAGE

FORMULATION SUGGESTIONS No particular formulation restriction.



UJI TEA EXTRACT (B)-BG

PHOTO PROTECTION SUN PROTECTION



KEY POINT

Japanese Green Tea to fight cell damage and to reduce erythema induced by UVB.

DESCRIPTION

Hydroglycolic extract form the leaves of a high quality japanese green tea with activity against UV-irradiation.

MECHANISM OF ACTION

It inhibits calpain expression, Ca-dependent protein, blocking in this way the calpain-IL1-alpha cascade responsible of the late phase of ROS generation after UV-irradiation.



IN VIVO TEST

8 human subjects \rightarrow sites on the forearms of the panelists were treated with the test formulation (cream) and then irradiated with 1.5 MED (UVB+UVA). Test creams were applied immediately after application again, and the erythemas were evaluated 24 hours after irradiation.

7 human subjects \rightarrow sites on the forearms of the panelists were treated with the test formulation (cream) and then irradiated with 1.5 MED (UVB+UVA). Test creams were applied immediately after application again. After that test creams were applied twice daily for 4 weeks. After 4 weeks corneocytes were collected from all sites by tape stripping L-1Ra/IL-1alpha ratio was evaluated.

INCI NAME Aqua, Butylene Glycol, Camellia Sinensis Leaf Extract CLAIMS Photo protection Anti erythema formation

IDEAL FOR Sun care product After sun cream

ORIGIN Vegetable

HYDRO/LIPO Hydro

DOSAGE 1%-3%

FORMULATION SUGGESTIONS No particular formulation restriction.





PHORMISKIN BIOPROTECH G

DNA PROTECTION SPF STABILIZER



KEY POINT

It stimulates the synthesis of photoprotective Thioredoxin in the dermal and epidermal cells, preserving scavengers integrity and activating cellular repairing processes and de novo mechanisms, thus providing the skin with total protection against the formation of sun burn cells.

DESCRIPTION

Concentrate of the ancestral blue-green microalga Phormidium Persicinum.

MECHANISM OF ACTION

Thioredoxin protects mitochondrial membrane against oxidation and cells against the cytotoxic products generated by free radicals. It plays an important role in the regeneration of ascorbic acid, which is a natural inhibitor of melanogenesis.



EX VIVO TEST

Human skin explants \rightarrow Identification of pyrimidine dimers and Caspase by immunolabelling. Before and after UVs stress: quantification of Sun Burn Cells by immunolabelling.

Human dermal cultivated fibroblasts \rightarrow Analysis of cells density by Hoechst coloration.

B16 melanocytes \rightarrow Evaluation of Phormoskin Bioprotech G on melanogenesis.



IN VIVO TEST 15 volunteers aged between 45 and 65 years \rightarrow Evaluation of global homogeneity of the complexion.

INCI NAME Maris Sal, Maltodextrin CLAIMS Anti photoaging DNA protection Antioxidant SPF stabilizer

IDEAL FOR

Sun protective cream Anti spot product Ageing preventive serum

ORIGIN Marine

HYDRO/LIPO Hydro

DOSAGE 2%

FORMULATION SUGGESTIONS Formulate below 50°C.

CERTIFICATIONS



APPROVED





HYDROFILTRAT STATICE G

RADICAL SCAVENGER UV PROTECTION



KEY POINT

It preserves and prolongs the sunlight capital of skin, scavenging free radicals and protecting biological structures from UVA and UVB rays.

DESCRIPTION

Hydroglyceric extract of the seashore plant Limonium narbonense (Statice).

MECHANISM OF ACTION

It acts as a cellular shield and neutralises the free radicals generated by UV rays, providing protection to the skin during exposure to the sun and repairing efficacy towards the harmful effect of UV exposure and photo-ageing.



IN VITRO TEST

Evaluation of the ability to reduce or inhibit the formation of free radicals with respect to powerful antioxidant molecules such as quercetin and cranberry \rightarrow 3 tests employing 3 free radical generating systems:

- ORAC test: evaluation of the overall antioxidant capacity
- DPPH test: correlated to the total polyphenol content
- Hypoxanthin/Xantin oxydase, generator of super-oxide anion

Culture of fibroblasts are incubated with Hydrofiltrat Statice G during 24H before and after UVA and UVB exposure \rightarrow Hydrofiltrat Statice G provides significant protection and repairing effect towards UV rays.



IN VIVO TEST

12 volunteers \rightarrow Evaluation of the level of lipids peroxidation after UV exposure with or without Hydrofiltrat Statice G 2% treatment \rightarrow peroxidation levels are less than those of non-exposed skin.

INCI NAME Hydrofiltrat Statice G:

Glycerin, Aqua, Limonium Narbonense Flower/Leaf/ Stem Extract CLAIMS Radical scavenger UV protection Antioxidant Anti photoaging

IDEAL FOR

Sun protective cream After sun product line Antioxidant serum

ORIGIN Vegetable

HYDRO/LIPO Hydro

DOSAGE

FORMULATION SUGGESTIONS No particular formulation restriction.







MIXED TOCOTRIENOLS 92 ANTI PIGMENTATION ANTI WRINKLE



KEY POINT

A smart vitamin E effective as natural anti-oxidant. It prevents pigmentation of skin and improves wkinkle appearence.

DESCRIPTION

Blend of tocopherols and tocotrienols made of 60% min of alpha and beta-tocotrienols.

MECHANISM OF ACTION

It shows an activity against protein oxidation and lipid peroxidation stronger than tocopherols. It can reduce skin damages caused by UV radiations.



EX VIVO TEST Evaluation of whitening effect with 3D skin model.



IN VIVO TEST 21 subjects \rightarrow Test creams were applied on irradiated area of skin immediately after irradiation twice daily \rightarrow evaluation of results after 1 week of treatment.

INCI NAME Tocotrienols CLAIMS Anti pigmentation Antioxidant Anti wrinkle Anti age

IDEAL FOR Anti age cosmetic proc

Anti age cosmetic product line Anti wrinkle product

ORIGIN Synthesis

HYDRO/LIPO Lipo

DOSAGE 0,5%-2%

FORMULATION SUGGESTIONS No particular formulation restriction.







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

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