



NATURA-TEC[®]
FRENCH RIVIERA



MICROALGAE ACTIVES

Sustainable Solutions to Reveal your Natural Beauty

BLUE
COSMETICS



Sustainable



Safe



Ecofriendly



Green Energy



Minimal CO₂
Footprint



Modern Patented
Technology

The dominant and future innovation for
the cosmetic industry

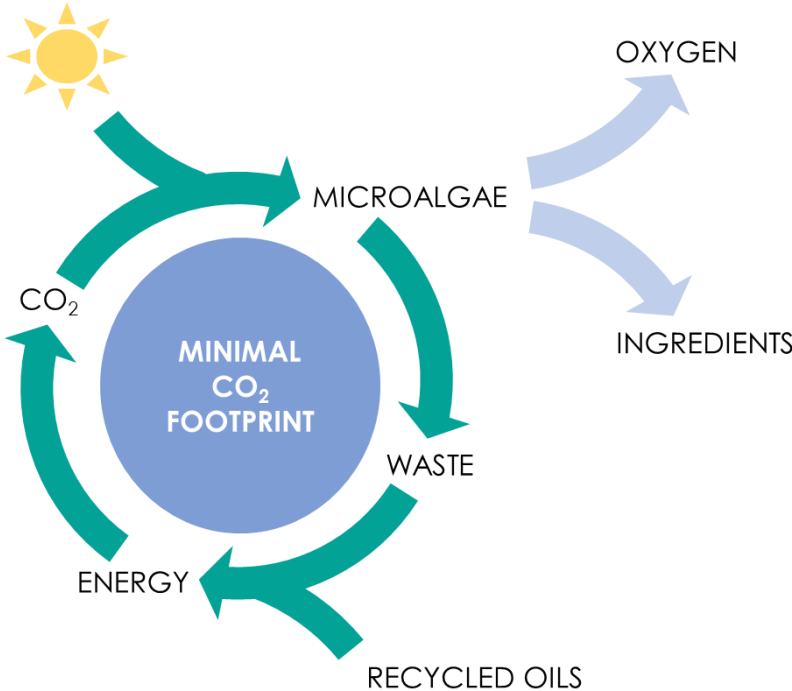
www.natura-tec.com

MICROALGAE TECHNOLOGY



Our modern patented technology allows us to obtain specific species in large quantities to satisfy the formulator's needs by controlling the farming environment and guaranteeing true sustainability and safety. An important step in the production phase is the use of green energy produced by a closed circuit waste recycling system where the resulting CO₂ is purified and fed as an essential metabolic element to

the microalgae ensuring the whole process has the lowest possible carbon footprint. This eco-friendly process makes our greenhouse an advanced sustainable production unit and energetically independent. In addition, the carefully controlled greenhouse system allows isolation from external contaminant whilst exploiting the most favorable climate and sunlight conditions of the Mediterranean thanks to its geographical location.





100% SUSTAINABLE

Direct conversion of solar energy and CO₂ into biomass
No chemical processes - No agrochemicals - No pollutants
Main platform to sustain interest in the use of innovative actives based on microalgae.



100% RENEWABLE ENERGY

Autonomous manufacturing plant for energy consumption thanks to transformation of waste into electricity performed by on site powerstation.



100% RECYCLING WASTE

Waste of vegetable oils and microalgae biomass production are recycled in an on-site powerstation to produce safe energy and feed microalgae with CO₂.



90% WATER SAVING

Reuse of almost all the process water required for the production of microalgae biomass to maintain integrity and quality of the farming environment.



MINIMAL CARBON FOOTPRINT

Photosynthesis converts water and anthropogenic CO₂ (from recycling waste) into carbohydrates and lipids which in turn can be exploited as raw material for natural active ingredients resulting in a substantially Minimal Carbon Footprint.

Natura-Tec Marine BlueVital C™

POWERFUL ANTI-WRINKLE ACTIVE

IDENTITY

INCI: Caprylic/Capric Triglyceride (and) Cylindrotheca Fusiformis Extract

DESCRIPTION: Liposoluble liquid active

APPEARANCE: Deep yellow to brown-orange

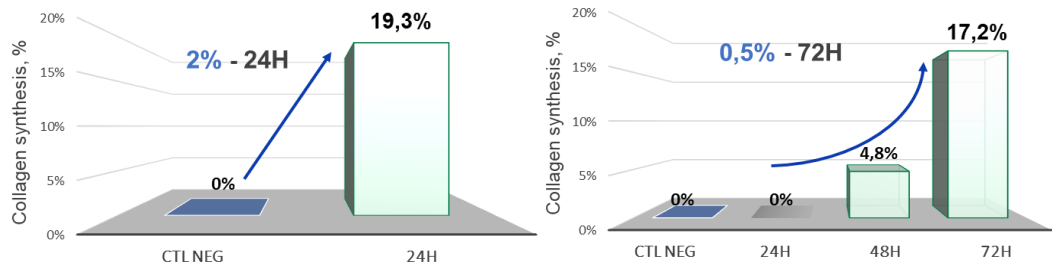
DOSAGE: 0,2 – 2%

EFFICACY

In-vitro study

STIMULATION OF COLLAGEN SYNTHESIS

Measurement of collagen synthesis in dermal fibroblasts exposed to 2% and 0,5% of **Natura-Tec Marine BlueVital C™** for 24H and 72H respectively.



Results:

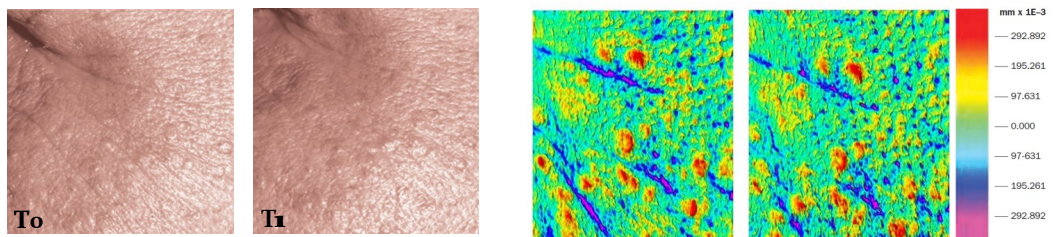
After 24H, **Natura-Tec Marine BlueVital C™** has an immediate and excellent efficacy on collagen synthesis at 2%.

Highly effective active : increase of 19,3% of collagen synthesis with 2% of use in 24H and almost the same collagen production with 0,5% over a slightly longer period.

In-vivo study

REDUCTION OF WRINKLE DEPTH AND VOLUME

Assessment of the anti-wrinkle effect after application of a cream containing 1,5% of **Natura-Tec Marine BlueVital C** for 2 months — Derasurf software analysis — 21 volunteers from 35 to 55 years old.



Results:

Decrease of 10,4% of wrinkle depth and 12% of wrinkle volume with a cream containing 1,5% in 2 months.

In the same time, volunteer panel confirm an improvement of the elasticity, hydration and softness of the skin.

Natura-Tec Marine BlueVital C™ strongly stimulates collagen synthesis.

Natura-Tec Marine BlueVital C™ reduces wrinkle depth and volume providing plumping effect.

Natura-Tec Marine Revitalys HP™

RESTRUCTURING AND CELL REVITALIZING ACTIVE



IDENTITY

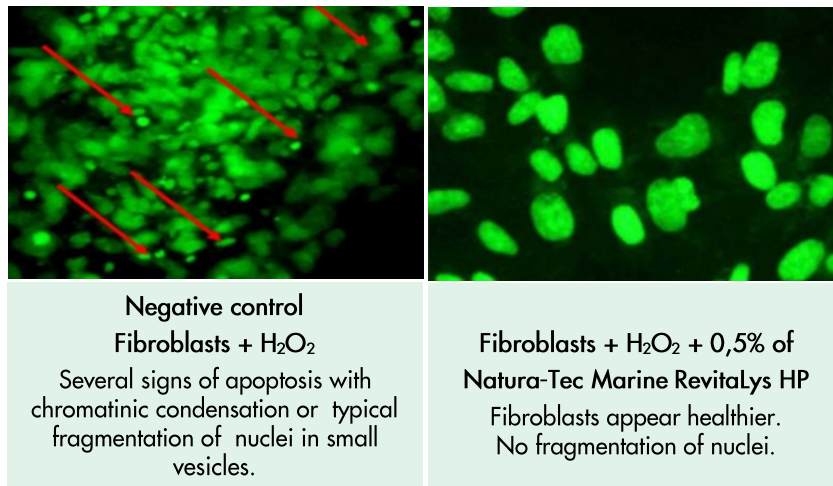
INCI: Water (and) Haematococcus Pluvialis Extract
DESCRIPTION: Hydrosoluble active — Preservative free
APPEARANCE: Green to light brown liquid
DOSAGE: 0,2 – 2%

EFFICACY

In-vitro study

PREVENTION OF APOPTOSIS PROCESS

Morphological analysis of dermal fibroblasts (NHDF) subjected to accelerated ageing process (H₂O₂ - 24H) with 0,5% of Natura-Tec Marine Revitalys HP™.



CELL LONGEVITY IMPROVEMENT BY COUNTERACTING SIGNS OF SENESCENCE

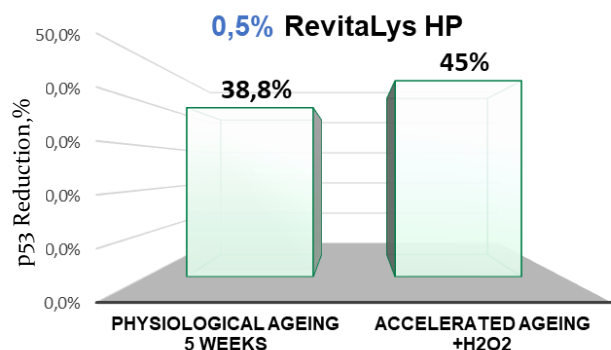
ELISA Test — Quantification of p53 expression reduction, a typical marker of the apoptosis process, in dermal fibroblasts (NHDF) incubated with 0,5% of Natura-Tec Marine Revitalys HP™ in 2 conditions:

Physiological ageing process:
Culture of NHDF for 5 weeks.

Accelerated ageing process:
NHDF under oxidative stress performed by H₂O₂ for 24H.

In normal and young cells: Low expression of p53 protein.

In mature cells: High expression of p53 protein.



A lower expression of the p53 protein synthesis is directly related to an improvement of cell vitality. Already at 0,5% of use, Natura-Tec Marine Revitalys HP™ reduces p53 expression by 38,8% in 5 weeks.

Natura-Tec Marine Revitalys HP™ protects cell integrity, decreasing the level of expressed p53.
Natura-Tec Marine Revitalys HP™ revitalizes and increases cell health and longevity.

Natura-Tec Marine CellShield AP™



ANTI-POLLUTION AND ENVIRONMENTAL STRESS DEFENSE ACTIVE

IDENTITY

INCI: Caprylic/Capric Triglyceride (and) Pavlova Lutheri Extract

DESCRIPTION: Liposoluble active

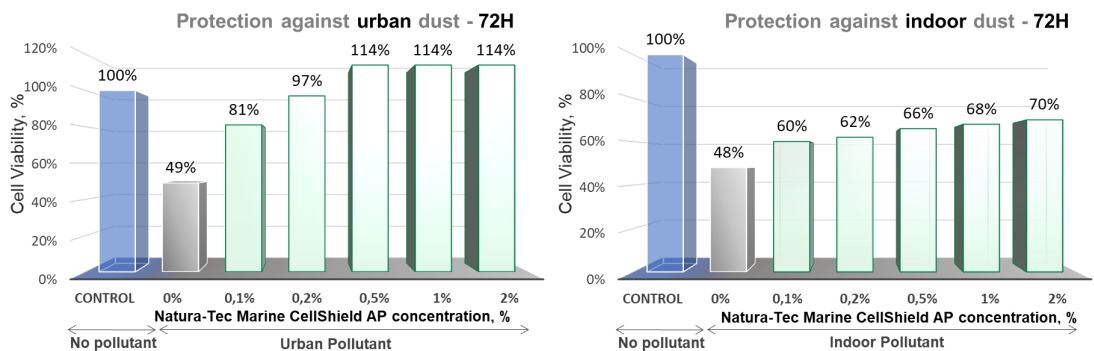
APPEARANCE: Deep yellow to brown-orange

DOSAGE: 0,2 – 2%

EFFICACY *In-vitro study*

PROTECTION FROM INDOOR AND URBAN POLLUTION

Measurement by photometry of cell viability of epidermal keratinocytes (NHEK) under pollutant exposure - indoor or urban dust - with **Natura-Tec Marine CellShield AP** from 0,1% to 2% - MTT Test.



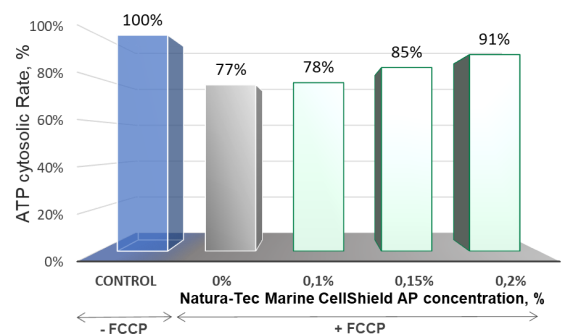
PRESERVING ENERGETIC METABOLISM



Mitochondria : Site of energetic metabolism, intracellular organelles, power plant of the cells, providing cells energy to function and survive. **Energetic metabolism** : Conversion of the energy of the organic molecules into ATP, energy usable by the cell to power the biological processes. **Mitochondrial membrane potential** : Electrochemical gradient located in the mitochondrial inner membrane ensuring ATP production.

ATP cytosolic rate and mitochondrial membrane potential measurement in dermal fibroblasts (NHDF) under stress conditions (+ FCCP *carbonyl-cyanide p-trifluoromethoxyphenylhydrazone*) with **Natura-Tec Marine CellShield AP** from 0,1% to 0,2%.

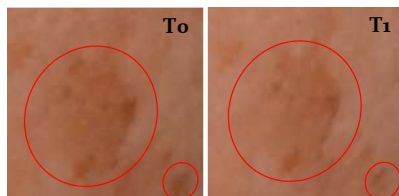
Results: With 0,2% of use, both processes increase significantly. **Natura-Tec Marine CellShield AP** restores cellular homeostasis under stress conditions.



In-vivo study

SKIN HOMOGENEITY IMPROVEMENT, REDNESS AND DARK SPOT REDUCTION

Skin tone effect evaluated after application of a cream with 1,5% of **Natura-Tec Marine CellShield AP** during 1 month – 20 volunteers from 44 to 75 years old – Quantitative colorimetric and morphological analysis by FRAMESCAN.



Results

Skin homogeneity is increased by 10% and skin spot surface is decreased by 34,8% with a maximum up to 60%.

Natura-Tec Marine CellShield AP shows a strong protective action against environmental stress which preserves skin functionality and energetic metabolism providing a superior skin tone.

Natura-Tec Marine BlueRevelation 50+™



REVEALS THE NATURAL GLOWING BEAUTY OF MATURE SKIN

IDENTITY

INCI: Triolein (and) Cyndrotheca Fusiformis Extract (and) Nannochloropsis Oceanica Extract

DESCRIPTION: Liposoluble liquid active

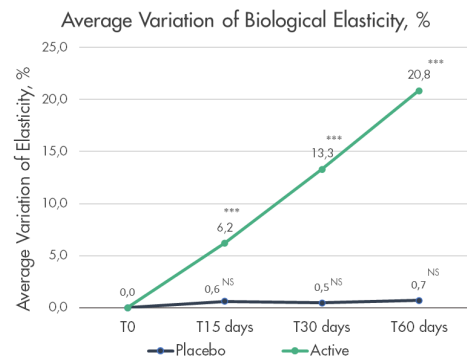
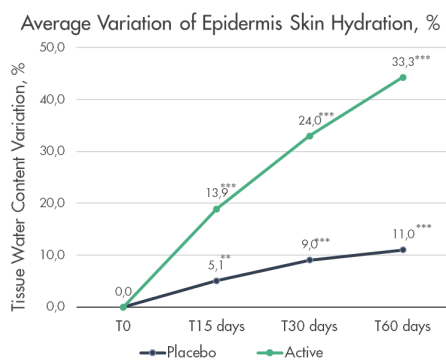
APPEARANCE: Deep yellow to brown

DOSAGE: 0,5-3%

EFFICACY In-vivo study

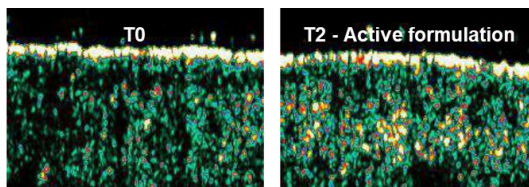
EFFECT ON MATURE SKIN BEAUTY

In vivo evaluation of skin hydration, elasticity, density and, wrinkles visibility and intensity, with **Natura-Tec Marine BlueRevelation™ 50+**, at 1,5% in a basic formulation, compared to a placebo, tested on 30 volunteers of 50+ years old.



Results: After 2 months, **Natura-Tec Marine BlueRevelation™ 50+** significantly increases skin hydration by 33% and up to 55% for the best volunteers and skin elasticity by 20% and up to 35% for the best volunteers.

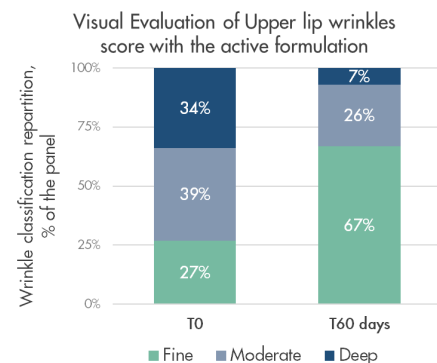
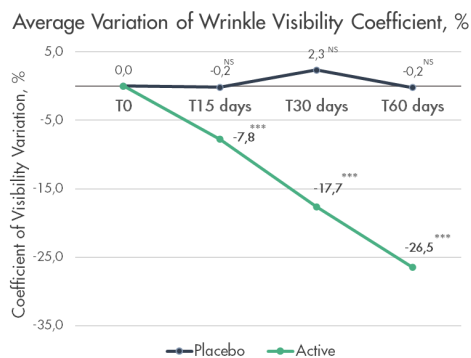
Skin density evaluation by echogenicity measurement:



Visual wrinkle reduction :



After 2 months, **Natura-Tec Marine BlueRevelation™ 50+** significantly increases concentration of collagen, elastin and skin nutrients, leading to an increase of skin density (indirect measurement of hyperechoic area increased by 17,5%).



After 2 months, **Natura-Tec Marine BlueRevelation™ 50+** significantly reduces wrinkles' visibility by 26% and up to 40% for the best volunteers. Intensity and number of moderate and deep wrinkles are reduced, turning them into fine wrinkles with a particular efficacy on the upper lip wrinkles.

Natura-Tec Marine BlueRevelation™ 50+ is a powerful cocktail of microalgae, providing an integrative approach to enhance mature skin beauty thanks to its remarkable ability to moisture, firm, densify and smooth mature skin.

Natura-Tec Marine OceanMist CL™



REPAIRING & MICROBIOTA-BALANCING ACTIVE FOR DELICATE SKIN

IDENTITY

INCI: Caprylic/Capric Triglyceride (and) Nannochloropsis Oceanica Extract

DESCRIPTION: Liposoluble liquid active

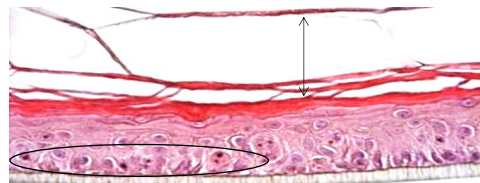
APPEARANCE: Light yellow to amber

DOSAGE: 0,5 – 5%

EFFICACY *In-vitro study*

SKIN HEALTH IMPROVEMENT ON ATOPIC AND SENSITIVE SKIN

Morphology analysis of Reconstructed Human Epidermis (RHE) stimulated by cytokines mimicking atopic skin ("Atopic RHE") with Natura-Tec Marine OceanMist CL™ at different concentrations during 48H.



Atopic RHE

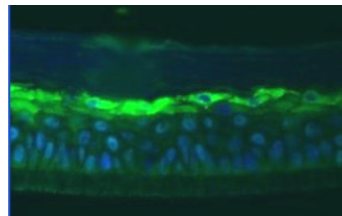
"Atopic RHE" presents an impaired barrier with alteration of morphology: pyknotic nuclei (black points), and typical oedema (clear interstice) specific of a damaged skin.



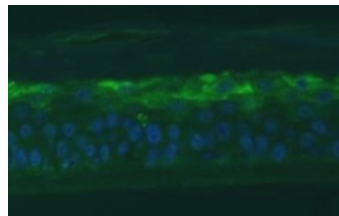
Atopic RHE with 3% Marine OceanMist CL

Results : Natura-Tec Marine OceanMist CL™ drastically reduces numbers of pyknotic nuclei and oedema, providing a cellular protection and a skin barrier repair, optimum with 3% of use.

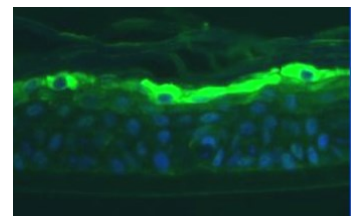
Immunofluorescence analysis, in atopic RHE, with 5% of Natura-Tec Marine OceanMist CL™ on Involucrin (INV) abundance.



Normal healthy RHE

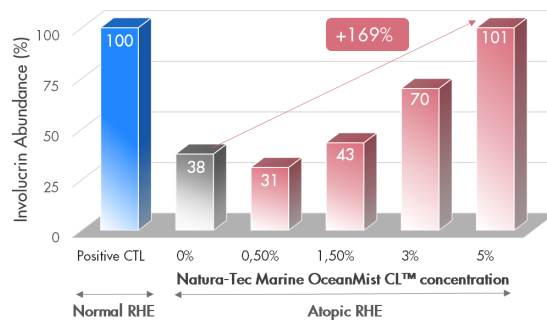


Atopic RHE



Atopic RHE
+5% Marine OceanMist CL™

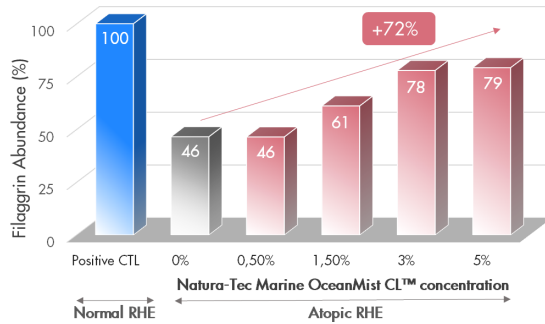
Abundance quantification of key proteins involved in atopic skin by Immunofluorescence analysis :



Involucrin : involved in the structure and formation of the cornified envelope of corneocytes is, in atopic skin, strongly decreased, inducing a defective barrier.

Results: Natura-Tec Marine OceanMist CL™ increases involucrin levels in atopic skin, reaching the initial healthy level with 5% of use.

Filaggrin : a major structural protein binding keratin and strengthens skin barrier is at the origin of the Natural Moisturizing Factor, involved in water retention and epidermal homeostasis .



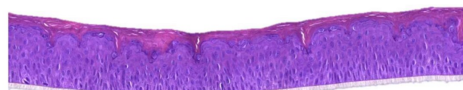
Results: Natura-Tec Marine OceanMist CL™ increases Filaggrin levels up to 72% with 5% of use, helping to strongly restore hydration.

By acting on specific skin biomarkers, Natura-Tec Marine OceanMist CL™ efficiently fights against biochemical and physical disorders of atopic and sensitive skin, restoring the essential protective skin barrier and inhibiting inflammatory skin conditions.

In-vitro study

BABY SKIN TOLERANCE

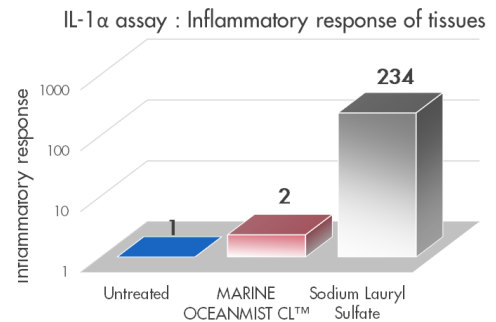
Baby skin tolerance assessment with Natura-Tec Marine OceanMist CL™ used at 100% on a 3D-reconstructed immature epidermis model, following OCDE guidelines.



“Mature RHE” : 17-day-old tissue cultures with a multi-layered stratum corneum.



“Immature RHE” : 10-day-old tissue cultures, less differentiated with a monolayer very thin stratum corneum and a higher skin sensitivity.



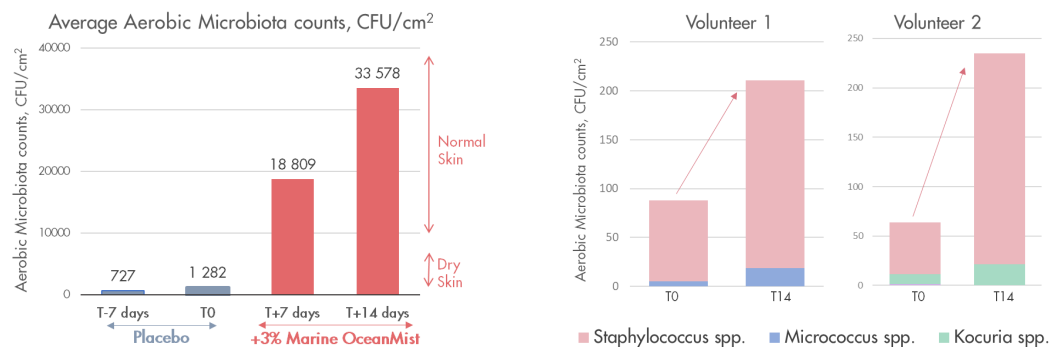
Results : Natura-Tec Marine OceanMist CL™ is non cytotoxic on baby skin (99% of cell viability when applied pure on immature RHE) and does not induce an inflammatory response, proving very good skin tolerance on baby skin.

In-vivo study

EFFECTS ON SKIN MICROBIOME ON VERY DRY AND SENSITIVE SKIN

A defective skin barrier induces dysbiosis of the skin microbiome with a drop in aerobic and anaerobic bacteria and a decrease in hydration level.

Face skin microbiota in vivo evaluation, with 3% of Natura-Tec Marine OceanMist CL™ in a simple formulation, compared to placebo (without), during 14 days, on a panel of very dry and sensitive skin.



Results: Placebo formulation doesn't impact the skin microbiome (absence of variation of the aerobic microbiota counts after 7 days of use).

Total aerobic and anaerobic microbiota counts increased, with 3% of Natura-Tec Marine OceanMist CL™, reaching a normal skin-type microbiota. No major changes in the microbiome composition or relative abundance is observed. In a short period of time, Natura-Tec Marine OceanMist CL™ demonstrated excellent microbiota nourishing and balancing properties on dry and sensitive skin, restoring a normal skin-type microbiota, whilst respecting each individual microbiome diversity.

Natura-Tec Marine OceanMist CL™ is a repairing and microbiota-balancing active for delicate skin, able to enhance skin defensive barrier, to reduce immune inflammation, to restore a normal skin-type and to provide a balanced skin microbiota in order to contribute to a healthier skin, dedicated to the wellness of all sensitive skin, including the youngest ones.

Natura-Tec SeaPassion™ CH



POWERFUL ACNE GENESIS REPRESSOR

IDENTITY

INCI: Hydrogenated Ethylhexyl Olivatate (and) Passiflora Edulis Seed Oil (and) Ribes Nigrum (Black currant) Seed Oil (and) Phospholipids (and) Docosahexaenoic Acid (and) Eicosapentaenoic Acid (and) Phytosterols
DESCRIPTION: Liposoluble liquid active
APPEARANCE: Light yellow to amber
DOSAGE: 2-4%

EFFICACY

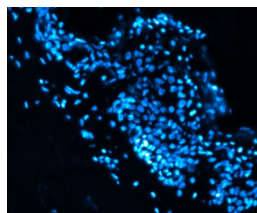
Ex vivo study

INHIBITION OF ACNE GENESIS VIA NUCLEAR FOXO1

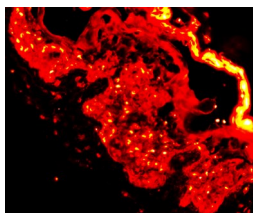
FoxO1 protein

Forkhead box O1 transcription factor is a key regulator of acne : growth factors (puberty, western life style) induce an export of FoxO1 from the nucleus into cytoplasm where FoxO1 loose its power of inhibition, leading to the acne pathogenesis.

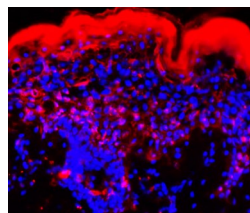
Immunohistochemistry measurement of FoxO1 expression levels in nuclei of ex-vivo human skin explants, treated without or with 2% of Natura-Tec SeaPassion™ CH, to evaluate its role in fighting acne pathogenesis.



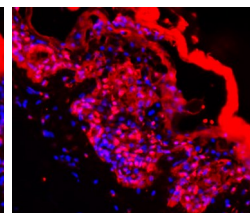
Nuclei



FoxO1 with 2% of Natura-Tec SeaPassion™



Superposition of Nuclei+FoxO1 : non treated epidermis



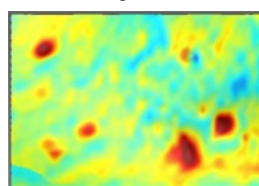
Superposition with 2% of Natura-Tec SeaPassion™

Results: 2% of Natura-Tec SeaPassion™ CH increases by 32% the nuclear FoxO1 concentration, allowing the protein to express its inhibiting role of acne. Natura-Tec SeaPassion™ CH decreases sebaceous lipogenesis, oxidative stress and inflammation.

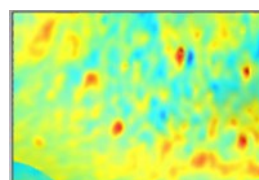
In-vivo study

REDUCTION OF INFLAMMATORY ACNE LESIONS

In vivo anti-acne evaluation with 2% of Natura-Tec SeaPassion™ CH incorporated in a basic formulation, compared to placebo, during 8 weeks, on 32 volunteers with acne-prone skin, and under dermatological surveillance.

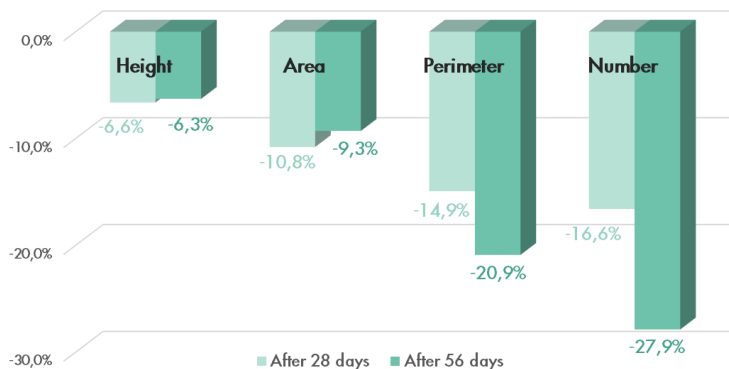


Before treatment



After 28 days with 2% of SeaPassion™ CH

Acne lesions evolution, with 2% of Natura-Tec SeaPassion™ CH, compared to placebo formulation



2% of Natura-Tec SeaPassion™ CH displays excellent anti-acne effects, highly significantly reducing area (-23,7%**), height (-15,0%*) , perimeter (-26,2%****) and number (-20,7% ***) of acne lesions, compared to D0. Placebo formulation is non comedogenic and doesn't have any significant effect on skin acne.

Natura-Tec SeaPassion™ CH has an excellent proven efficacy on Caucasian, Asian or Afro-American skin phenotype; similarly on teenager or adult; inhibiting acne induced by hormones, stress or diet. Natura-Tec SeaPassion™ CH is an excellent repressor of acne pathogenesis.

Natura-Tec SeaBerry Blue™



BIOMIMETIC BOOSTER OF SKIN ANTIOXIDANTS LIMITING UV AND BLUE LIGHT DAMAGES

IDENTITY

INCI: Triolein (and) Vaccinium Macrocarpon Seed Oil (and) Haematococcus Pluvialis Extract

DESCRIPTION: Liposoluble liquid active

APPEARANCE: Amber to brown orange

DOSAGE: 2-4%

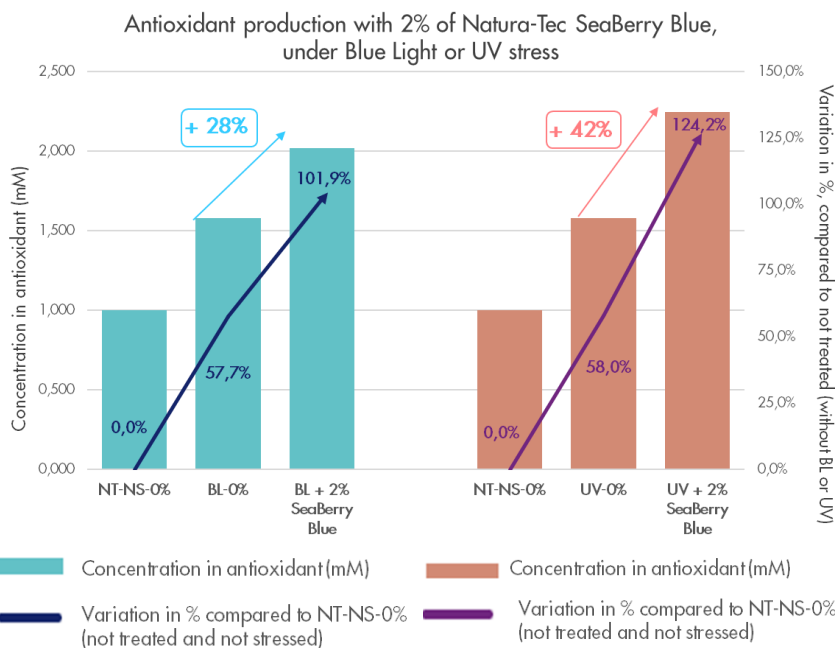
EFFICACY *Ex vivo study*

SKIN PROTECTION AGAINST UV AND BLUE LIGHT STRESS

Blue light (BL) and Ultra Violet (UV) lights are part of the solar radiation, providing light, heat and energy for the earth and its inhabitants. However, UVA, UVB and BL have a common thread : reactive oxygen species (ROS) production.

Once formed, ROS attack cellular components causing damage to lipids, proteins, and DNA, initiating skin aging or disorders. Skin is biologically able to naturally increase its antioxidant level, to limit the damages produced by ROS, generated by UV or BL.

Quantification, by spectrophotometry, of skin antioxidant concentration, in human skin explants, without or with 2% of Natura-Tec SeaBerry Blue™, under UVA+UVB or BL exposure.



Natura-Tec SeaBerry Blue™ potentializes skin physiobiological production of antioxidants. Under Blue light, compared to without, 2% of Natura-Tec SeaBerry Blue™ increases by 28% the skin antioxidant concentration. Under UVA and UVB, compared to without, 2% of Natura-Tec SeaBerry Blue™ increases by 42% the skin antioxidant concentration.

Natura-Tec SeaBerry Blue™ is a powerful antioxidant system against UV rays and blue light. Its daily use as a protective treatment against the sun's rays and dehydration will make it an ideal active ingredient to preserve the youthfulness of your skin and prevent skin ageing.

Natura-Tec SeaRenew™



HAIR GROWTH AND STRENGTH ACTIVE

IDENTITY

INCI: Pouteria Sapota Seed Oil (and) Nannochloropsis Oceanica Extract

DESCRIPTION: Liposoluble active

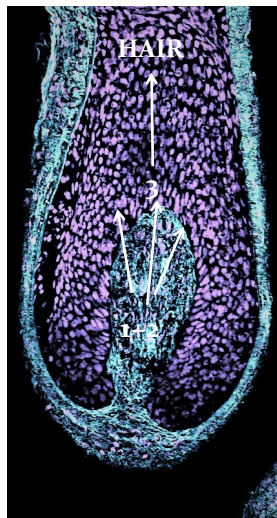
APPEARANCE: Light yellow to amber

DOSAGE: 0,5 – 5%

EFFICACY

In-vitro study

EFFECTS ON PROLIFERATION OF HUMAN FOLLICLE DERMAL PAPILLA FIBROBLASTS (HFDPF) INVOLVED IN HAIR GROWTH



Hair follicle: segment of epidermis that extends down into the dermis and is structured in several layers with separate functions:

Matrix (3): surrounding the dermal papilla, contains highly proliferative and undifferentiated cells, which are at the origin of the different cell types constituting the follicle.

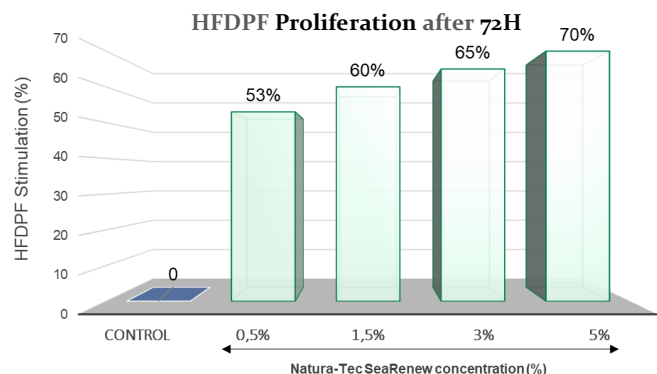
Hair papilla (2): permanent unit composed of connective tissue and mesenchymal cells called hair papilla fibroblasts. Contains capillaries, or tiny blood vessels that nourish the cells and fibroblasts.

Hair Papilla fibroblasts (1): involved in hair growth regulation: these cells generate signals causing the proliferation, migration and differentiation of cells of the matrix, essential for the growth of the hair follicle.

Measurement by photometry on the proliferation of human follicle dermal papilla fibroblasts (HFDPF) treated with **Natura-Tec SeaRenew™** from 0,5% to 5% after 72H.

Under the experimental conditions of this study, **Natura-Tec SeaRenew™** tested at 0,5%, 1,5%, 3% and 5%, clearly stimulates the proliferation of HFDPF, with a significant concentration-dependent effect from the lowest tested concentration.

Human Follicle Dermal Papilla Fibroblast proliferation is extremely significantly increased by 70% ($p < 0,001$) with 5% of **Natura-Tec SeaRenew™**.



Natura-Tec SeaRenew™ is a unique renewable concentrate of Sapote Oil enriched in microalgae active. **Natura-Tec SeaRenew™** has the ability to induce the cell proliferation of hair follicle fibroblasts which are the cells involved in hair growth regulation.

...transform your ideas into reality and let nature be your art
The Art of Nature



The Art of Nature
...transform your ideas into reality and let nature be your art



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Management system certified by
UNI EN ISO 9001: 2015 and ISO 22000: 2005