



OROSEA®

Safeguard the skin against
extreme environmental conditions

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Strengthens the skin's defences from outside aggressions

Protects against extreme environmental conditions

Provides the skin comfort via moisturizing



During the day, the skin is subject to many aggressions linked to environmental conditions and stress. The skin may be damaged.

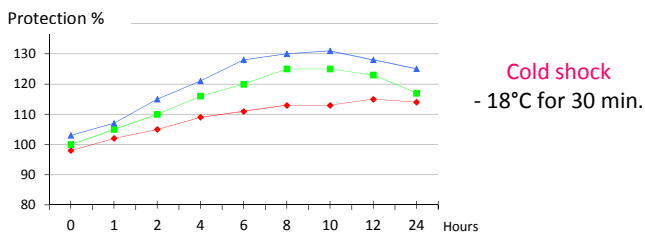
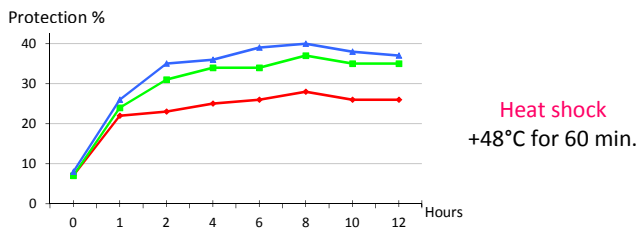
GELYMA proposes OROSEA® that acts as a protective shield to protect against cutaneous stress & deleterious environmental effects.

OROSEA® is a patented marine agent prepared from the red Mediterranean macroalga *Rissoella verruculosa* and based on the huge capacity of that algal species to survive and adapt to severe aggressive environmental conditions. Patent FR 2 867 072

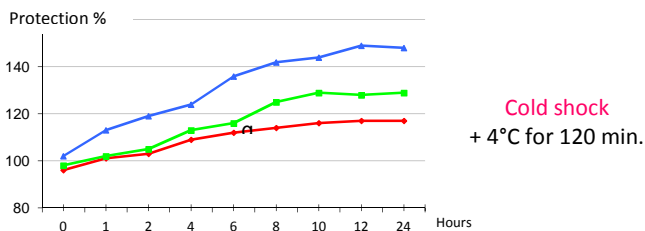
Mechanisms of action

OROSEA® protects the skin against extreme environmental conditions

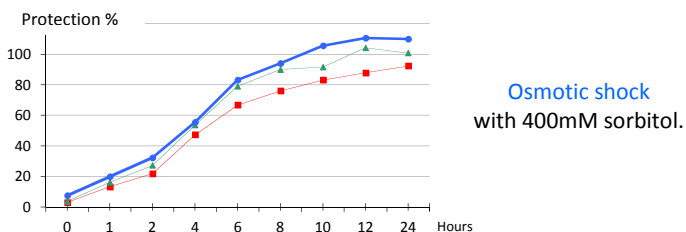
Human keratinocytes incubated under different cultivation and stress conditions (heat, cold & osmotic shocks). Viability evaluated by Alamar reduction over 12 or 24 hours cultivation. Two doses of actives tested: 1.5% (green line) and 3% (blue line) compared to stressed control without any active (red line).



Whatever cultivation conditions & kinds of shocks, OROSEA® enhances viability & proliferation of human keratinocytes comparatively to stressed control without any active.



OROSEA® helps skin cells adapt to external aggressions e.g. heat, cold and osmotic changes.



Reconstituted human skins (Skin Ethic model) submitted to heat shock (48°C - 1h) or cold shock (4°C - 2h) in the presence of either a cream containing 3% OROSEA® or the corresponding placebo (control). Samples prepared for transmission electron microscope observations 24h after stress.



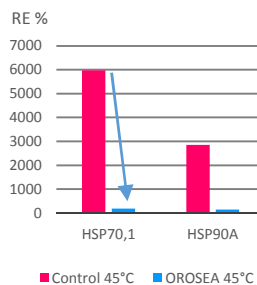
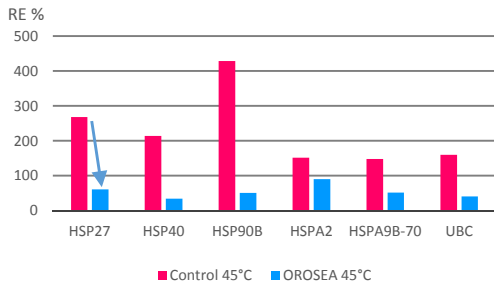
A cream with 3% OROSEA® induces an effective improvement to the epidermal fine structure of skins exposed to extreme conditions, compared to skins stressed in presence of placebo cream.

OROSEA® can protect skin from damage due to both heat or cold shocks.

OROSEA® modulates the expression of genes involved in cellular defence against heat stress

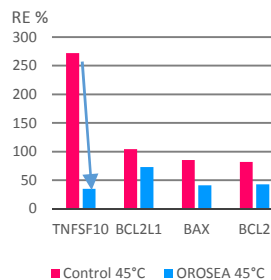
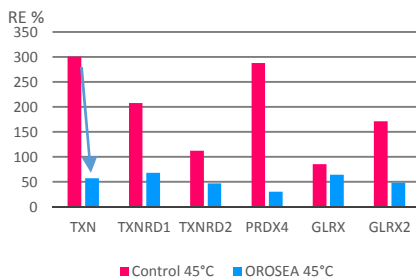
Several groups of stress proteins are implicated in cellular defence *e.g.* HSP, enzymatic anti-oxidants, metallothioneins.... They constitute a loose & dynamic complex in order to regulate cellular homeostasis. Under harmful stress, homeostasis becomes damaged, that leads to balanced chaperone induction. When stress becomes chronic, the chaperone induction signalling mechanisms are exhausted & damaged proteins begins to accumulate. So it is important to modulate responses of chaperones & associated proteins against cellular stress.

DNA microarray analysis related to normal keratinocytes submitted to heat shock (45°C - 30min) in the presence of 3% OROSEA®, compared to stressed control without active. Study at one time 101 genes encoding for proteins involved in heat shock response, cellular redox regulation, antioxidant protection, inflammation and cell death. Results expressed in % RE (relative units of expression).



Heat shock response

OROSEA® down-regulates stress protein genes *e.g.* HSP 27, HSP 40, HSP 70.1, HSP 90 A-B & UBS (Ubiquitin) that function as “molecular chaperones”.

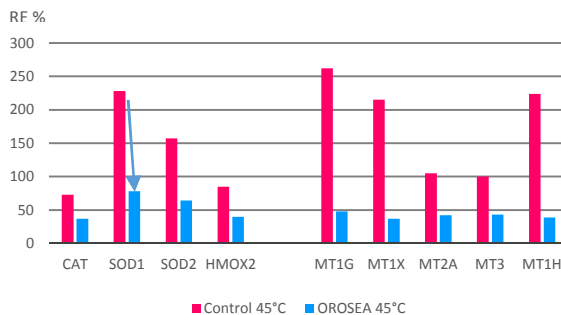


Cellular redox regulation

OROSEA® down-regulates both systems of redox regulation: thioredoxin (TXN) & glutaredoxin (GLR) essential to cell survival & homeostasis.

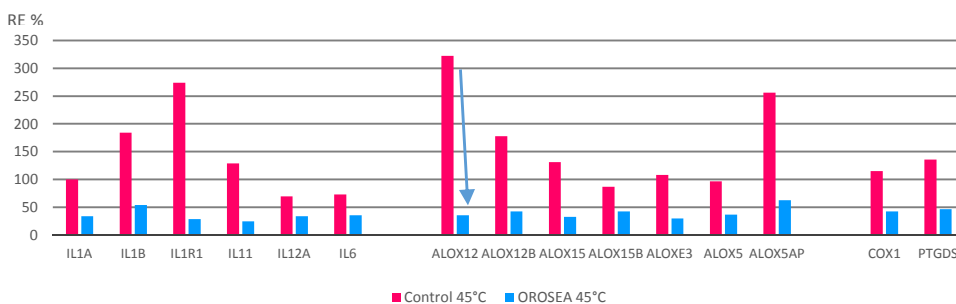
Cell apoptosis prevention

OROSEA® down-regulates four genes involved in cell death, especially the tumor necrosis factors (TNF) & the apoptosis regulators (BAX-BCL).



Antioxidant protection

OROSEA® down-regulates genes involved in oxidative stress *e.g.* enzymatic anti-oxidants [CAT (catalase), SOD, HMOX2 (heme oxygenase)] & metallothioneins (MT) playing important role in ions flow regulations.



Inflammation prevention

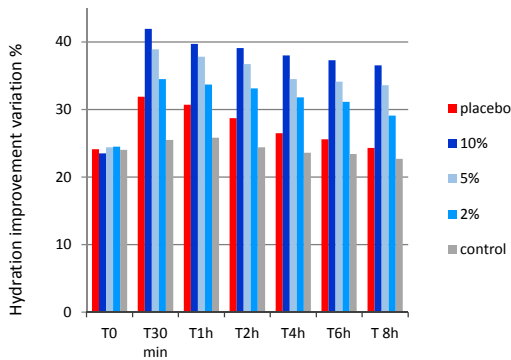
OROSEA® down-regulates genes involved in various inflammation pathways linked to interleukins (IL), lipoxygenases (ALOX) & prostaglandins (PTGDS-COX1).

OROSEA® improves thermotolerance by modulation defence mechanisms thus leads to enhanced survival & reduced damage.

OROSEA® provides the skin comfort via moisturizing and improves the skin's appearance

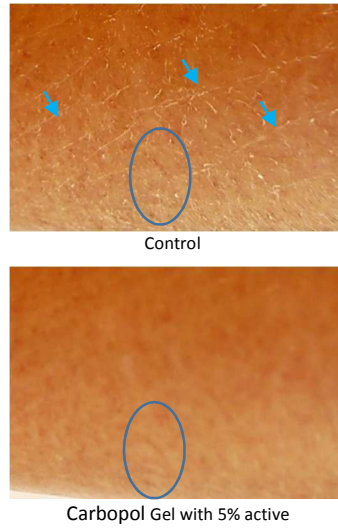
Extreme environmental conditions have disastrous effect on the skin that becomes dehydrated and scaled.

In vivo studies on 10 volunteers. Unique application of a gel with 10%-5% or 2% active on the leg. Corneometric evaluation.



Compared to placebo or control (no treated area), the unique application of OROSEA® causes a noticeable moisturizing effect that is maintained for at least 8h.

In vivo studies. Two daily applications of a gel with 5% active on the leg. Observations before application (control) and 48h after application.



The skin appears scaled and very dried

After 2 days application of a gel with 5% active, the skin appears smoother.

Note the improvement of appearance of the same area.

OROSEA confers a smoother and more hydrated feeling after two days applications only.

Cosmetic benefits

Thanks to its unique strategy, OROSEA® protects skin from harsh environmental influences due to temperature changes by acting as an efficacious shield.

OROSEA® preserves the youthfulness of the skin aggressed by all kinds of environmental stress (e.g. heat, cold and osmotic shocks) and thus combats premature skin aging by keeping skin metabolism at a suitable level with saving energy.

Extreme environmental conditions increase the dryness of the skin that becomes scaled. OROSEA® is able to prevent dryness and confer a smoother feeling.

Thanks to its unique strategy, OROSEA acts as an efficacious shield against cellular stress. It offers a new approach for the daily skin protection against severe climatic changes.

The skin is better adapted to resist to external insults. It remains healthy and well-hydrated. The premature skin aging is slowed down.

Patent FR 2 867 072.

Cosmetic applications

Extreme conditions & winter skin care. Daily skin care. Protecting care.

Recommended use levels: 0.5% - 10%.

Characteristics

INCI names water CAS N° 7732-18-5 EINECS N° 231-791-2
Rissoella verruculosa extract



Limpid liquid amber colored.

Preservatives by selection: microcare SB or phenoxyethanol.

Packing size: 1kg – 5 kg -10 kg.



Version OROSEA MSB

INCI names
water CAS n° 7732-18-5 EINECS n° 231-791-2
algae extract CAS n° 92128-82-0/68917-51-1
EINECS n° 295-780-4/-

Preservatives by selection: microcare SB or phenoxyethanol.

CHINA listed 2014 as “Algae extract (Rissoella verruculosa extract)”

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