



LIGHTOCEANE®

Potent skin lightener from the Ocean

*

*Influences all main pathways involved in melanogenesis
Complementary anti-aging & radicals scavenging activities*



Skin pigmentation for face and body care becomes an international concern. Moreover it is seen as a part of the anti-aging skin care.

GELYMA has developed LIGHTOCEANE®, a patented calibrated active ingredient showing a clever mechanism of action against melanogenesis with complementary activities: anti-oxidant and anti-aging.

LIGHTOCEANE® is extracted selectively from the Atlantic brown seaweed *Halidrys siliquosa* (L.) Lyngbye known to be rich in oligomers of phloroglucinol.

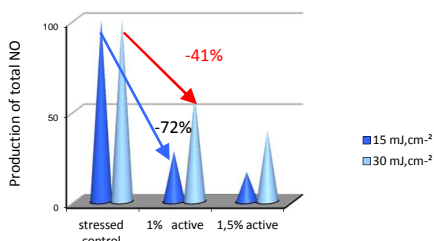
Mechanisms of action

LIGHTOCEANE® influences all main pathways involved in melanogenesis

LIGHTOCEANE® is able to inhibit the chain reaction of melanogenesis by focusing several steps occurring before, during and after melanin synthesis.

► Action before melanin synthesis

- ◆ Decreases the production of the melanogenic mediator nitric oxide (NO)



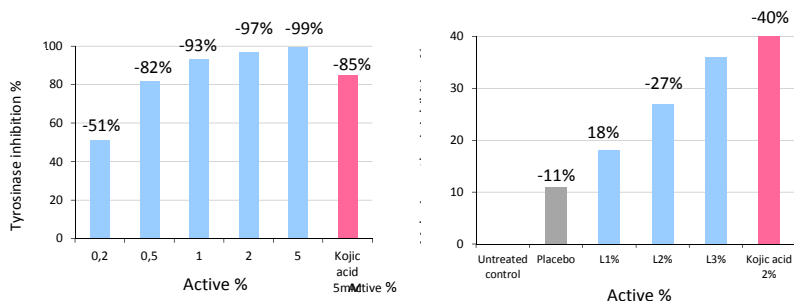
At 1% LIGHTOCEANE® reduces the release of NO on keratinocytes by:

- 72% with a dose of 15 mJ.cm² UVB
- 41% with a dose of 30 mJ.cm² UVB

LIGHTOCEANE® inhibits the activation of UV-melanogenesis before it starts.

► Action during and after melanin synthesis

- ◆ Inhibits tyrosinase activity and melanin synthesis



At 1% LIGHTOCEANE® inhibits more than -93% tyrosinase activity.

LIGHTOCEANE® exhibits a better depigmenting effect than kojic acid (-85%).

At 3% LIGHTOCEANE® reduces melanin synthesis by -36% on reconstituted pigmented skin at day 7, compared to untreated control.

The depigmenting effect of LIGHTOCEANE® is confirmed by the reduction of melanin synthesis.



Irradiated untreated explant

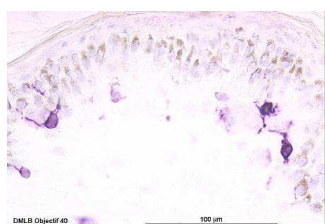


Irradiated treated explant

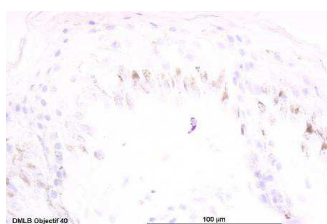
Ex vivo studies on human skin explants irradiated with UVA for 9 days. Topic application each two days of a cream (2% active). Observations at day 10.

- Compared to irradiated control, 2% active
 - decrease clearly melanin synthesis (thus lightening action) after 10 days treatment.
 - inhibit practically completely the melanocyte dendricity at day 10.

- ◆ Reduces melanosome transfer to keratinocytes



Irradiated untreated explant



Irradiated treated explant

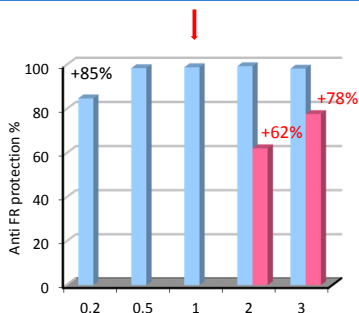
A significant decrease of 98% of the number of positive TRP-1 cells is observed at day 10 with 2% active.

LIGHTOCEANE® decreases melanin transfer to keratinocytes.

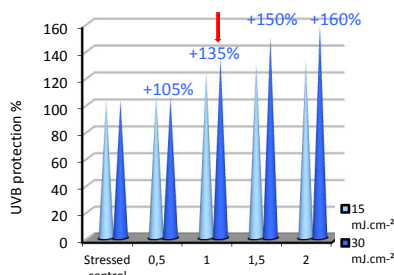
At 2% LIGHTOCEANE® induces clearly lightening action after 10 days only.

LIGHTOCEANE® exhibits a significant effect on TRP-1 (DHICA-oxidase) which is implied in the synthesis of eumelanins (brown melanins). LIGHTOCEANE® is able to inhibit melanosome transport to keratinocytes by action on melanocyte dendricity and thus reduces skin pigmentation.

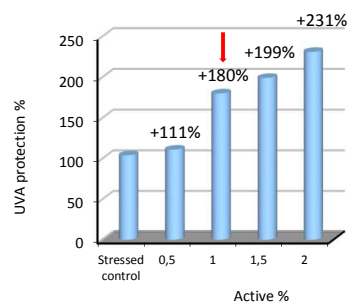
LIGHTOCEANE® protects against free radicals and UVA - UVB irradiations



The anti-free radical protection of LIGHTOCEANE® reaches + 99% with 1%. The performance is superior than those to tocopherol (red lines) at 2%-3%.



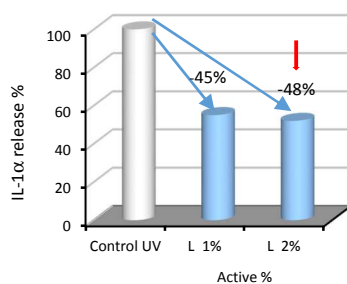
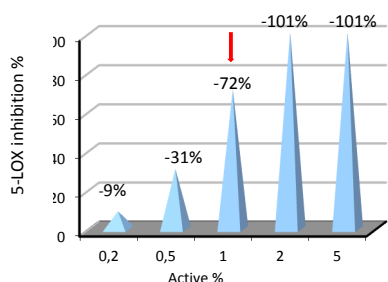
The protection of LIGHTOCEANE® against UVB irradiation (dose 30 mJ.cm²) reaches + 135% with 1% .



The protection of LIGHTOCEANE® against UVA irradiation (dose 15J.cm²) reaches + 180% with 1% .

LIGHTOCEANE® shows powerful protection against free radicals and both UVA-UVB irradiations.

LIGHTOCEANE® fights inflammation



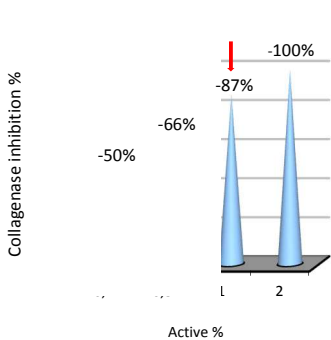
With 1% active, LIGHTOCEANE® inhibits by -72% the 5-lipoxygenase activity ↓ .

With 2% active, LIGHTOCEANE® inhibits by -48% ↓ the release of IL-1α on reconstituted skin submitted to UVB (300 mJ.cm²) after 72h cultivation.

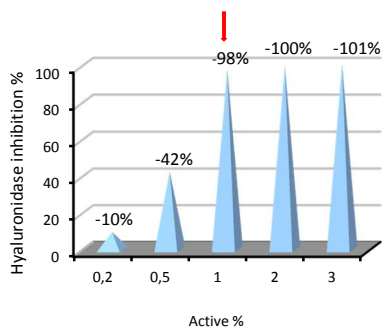
Note: IL-1α is suspected to be involved in the formation of age spots.

LIGHTOCEANE® prevents inflammation by inhibiting both 5-lipoxygenase and IL-1α.

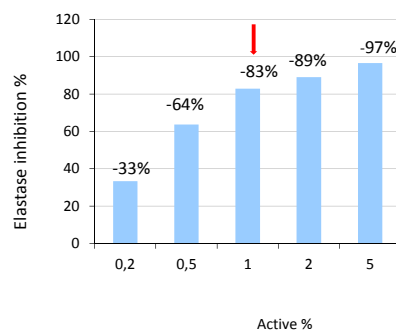
LIGHTOCEANE® protects the dermal fibers against proteases deterioration



With 1% LIGHTOCEANE®inhibits by 87% ↓ collagenase activity.



With 1% LIGHTOCEANE®inhibits by 98% ↓ hyaluronidase activity.



With 1% LIGHTOCEANE®inhibits by 83% ↓ elastase activity

LIGHTOCEANE® inhibits the release of several proteases that attack the extracellular matrix.

LIGHTOCEANE®

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Algal source

LIGHTOCEANE® offers a complete and innovative mode of action linked to functions derived from specific polyphenols present in the seaweed *Halidrys siliquosa*. These oligomers of phloroglucinol are responsible for the anti-oxidant and anti-inflammatory effects.

Patent FR 2 942 136

Cosmetic Benefits

LIGHTOCEANE® acts with a clever mechanism of action at different levels of the melanogenesis cascade: before, during and after melanin synthesis.

By influencing all main pathways involved in the melanogenesis, LIGHTOCEANE®

- ◆ reduces the release of nitric of melanin
- ◆ inhibits the dendricity of melanocytes and controls the transfer of melanosomes to keratinocytes.

As results, the skin shows a reduced overall pigmentation.

LIGHTOCEANE® offers other advantages

- ◆ anti-oxidant and protective activities against both UVB and UVA
- ◆ complementary properties linked to the prevention of skin aging: anti-inflammatory, anti-elastase, anti-collagenase and anti-hyaluronidase properties.

All these properties make LIGHTOCEANE® as very attractive active in anti-aging products.

Cosmetic applications

Lightening gels and emulsions skin care products, lightening ranges for body care products (hand, forearms), anti-age skin care, anti-age spot creams and serums.

Recommended use level: 1% - 3%.

Characteristics

INCI names water CAS n° 7732-18-5 EINECS n°231-791-2
Halidrys siliquosa extract

Limpid liquid brown colored.

Preservatives by selection: microcare SB or phenoxyethanol.

Packing size: 1kg – 5kg -10kg.

[See joined sheet](#)

- ◆ Possible other versions
- ◆ China approved



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GELYMA

Parc d'Affaires Marseille Sud (C4) - 1 Boulevard de l'Océan - 13009 Marseille - France
Phone: +33 4 96 14 09 82 - Fax: +33 4 96 14 09 83 - E-mail: gelyma@wanadoo.fr