



OKINACEA®

The anti-aging power behind
Green caviar / Sea grape

*

Improves skin functional integrity by reinforcing the DEJ

Increases skin firmness by increasing the dermal structure

Reduces skin roughness



Skin aging affects the dermal epidermal junction (DEJ) as the dermis.

At the DEJ, the rete-ridges flatten out, making the skin more fragile. In the dermis, the glycosaminoglycans (GAGs) and collagen production decrease, leading to a disorganization of the extracellular matrix (ECM). All these events conduct to the apparition of wrinkles and fine lines, thinning of the skin, loss of firmness, elasticity and moisture.

In order to limit such aging signs, GELYMA proposes OKINACEA®, an extract prepared from Green caviar associated with hydrolysed Rice proteins.

Green caviar, also known as Sea grape, is the green macroalga *Caulerpa lentillifera* highly appreciated as delicacy in Okinawa, the Japanese island of centenarians.

Mechanisms of action

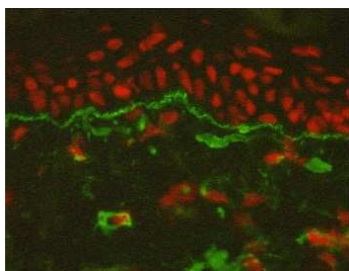
Ex vivo studies on human skin explants treated over 9 days with a gel (2% OKINACEA) (LABORATORY BIO-EC-FRANCE).

In vitro studies on human normal fibroblasts (SEPhRA-PHARMA – FRANCE).

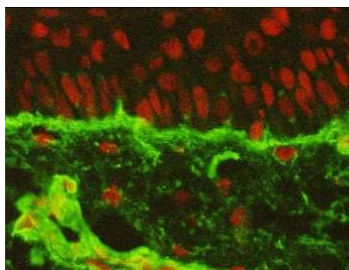
OKINACEA® improves skin functional integrity by reinforcing the dermal epidermal junction

The dermal epidermal junction (DEJ) is a key player maintaining skin cohesion through mechanisms involving epidermis & dermis.

► Increase of collagen IV synthesis



Control –Untreated explant



Treated explant

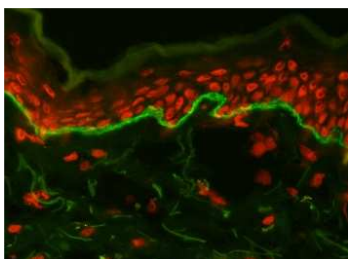
Collagen IV constitutes a major constituent in basement membranes. It is involved especially in maintaining a functional interface between the epidermis and the dermis by providing a framework for other molecules. It is also important in the maintenance of mechanical stability.

In sun-exposed skin, it has been proved a significant diminution of collagen IV in the bottom of wrinkles compared to the flanks of wrinkles. This loss of collagen IV may affect the mechanical stability of the DEJ and contribute to wrinkle formation.

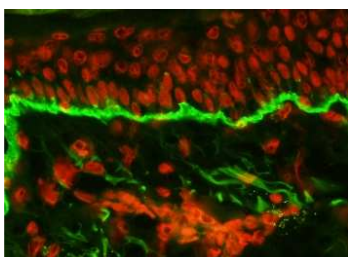
OKINACEA® increases the overexpression of collagen IV, thus

- reinforces the physiological state between the dermis and the epidermis.
- improves skin organization.

► Activation of laminin-5 synthesis



Control –Untreated explant



Treated explant

Laminin-5 is the major adhesive component of the DEJ. It plays a key role together with the basement membrane in cell communication, adhesion and skin regeneration.

Its synthesis has been proven to decrease in aged skin. This causes a loss of contact between dermis and epidermis and results in the skin losing elasticity and becoming saggy.

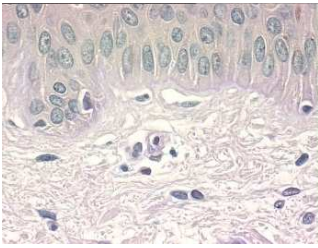
OKINACEA® increases the overexpression of the laminin-5 in the DEJ and the basal keratinocytes, thus

- contributes maintain or repair normal epidermal basement membrane structure and its function.
- restores the functional interface.

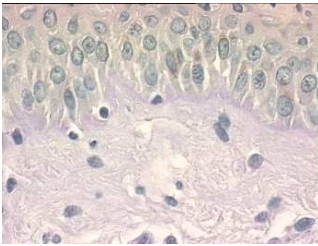
By influencing the DEJ, OKINACEA® guarantees efficient functionality and integrity between the epidermis and the dermis.

OKINACEA® increases skin tonicity by increasing the dermal structure

► Increase of GAGS synthesis



Control – Untreated explant

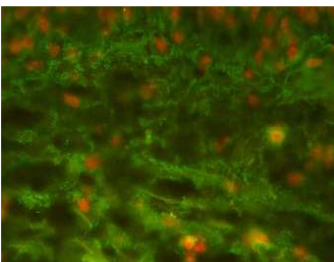


Treated explant

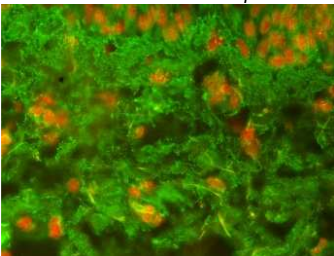
With age, significant reductions in the content of GAGs may lead to a reduction in water content and changes in skin thickness. As result, the aged skin appears dried and wrinkled.

OKINACEA® stimulates the biosynthesis of glycosaminoglycans (GAGs) thus helps to improve skin moisturizing and to replenish skin volume.

► Increase of collagen I synthesis



Control – Untreated explant



Treated explant

Intrinsic aging has a dramatic effect on the network of collagen fibers. Likewise, the prolonged exposure to UV rays can damage the architecture of collagen.

OKINACEA® increases significantly the synthesis of collagen I (+118 %) compared to untreated explants at day 9.

This result has been completed by *in vitro* Elisa study on normal human fibroblasts.

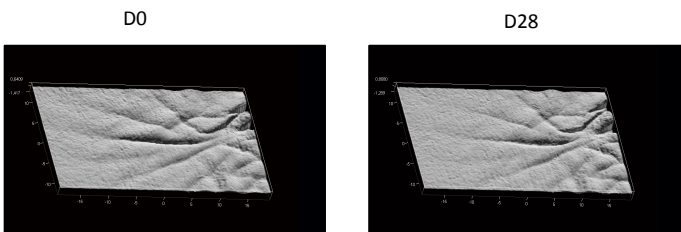
With 0.5% active, the procollagen I synthesis increases by more than 50%.

By activating the extracellular matrix compounds, OKINACEA® revitalizes the dermal structure, increases skin firmness and prevents wrinkle formation.

OKINACEA® reduces skin roughness & improves skin appearance

Clinical study

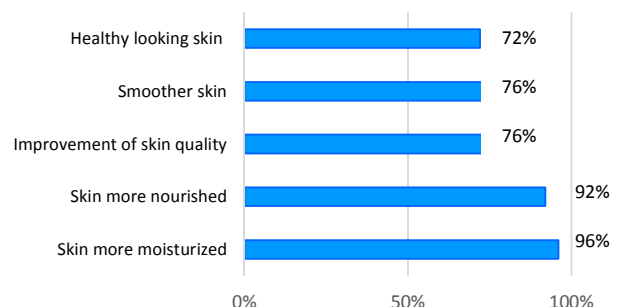
Panel of 15 volunteers – Treatment for 28 days using a unique active ingredient OKINACEA® at 5% (EUROFINS-FRANCE).



Significant reduction of skin roughness after only 28 days: - 21%.

Consumer test

- 72% of volunteers have a positive opinion on the product efficacy.
- 84% of them have purchase intention.



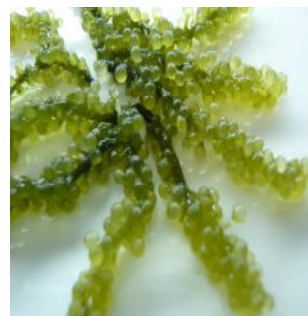
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Algal source

Caulerpa lentillifera is a highly favoured species for human consumption, due to its soft and succulent texture, in some Asian places especially Japan, the Philippines, Malaysia and Indonesia.

It is known as "lato", "lato-bilog", "ar-rosep" in the Philippines, "Rong Nho" in Vietnam, sea grapes, "umi-budo" in Okinawa (lit. Sea grape) or green caviar.



Morphology of Green caviar / Sea grape

Cosmetic benefits

Focused on skin anti-aging, OKINACEA® targets both the dermal epidermal junction and the dermis.

OKINACEA®

- ▶ stimulates collagen IV & laminin-5, thus
 - improves skin organization
 - increases exchanges between the epidermis and the dermis
- ▶ revitalizes the dermal network by increasing the synthesis of GAGs and collagen I, thus
 - helps to return volume and structure to the tissues
 - makes the skin firmer.

The anti-aging effect of OKINACEA®, also demonstrated in clinical and consumer tests, is an innovative answer to obtain visible benefits for combating skin aging, reducing wrinkles and skin sagging, effects perceived by final consumers.

Cosmetic applications

Anti-aging face care - Specific skin care for mature skin - Repairing and restructuring skin care - Firming body care.

Recommended use level: 1% - 5%.

Characteristics

INCI names	water	CAS n° 7732-18-5	EINECS n° 231-791-2
	<i>Caulerpa lentillifera</i> extract		
	Hydrolyzed Rice Bran protein	CAS n° 94350-05-7	EINECS n° 305-224-5

Limpid liquid amber colored.

Preservatives by selection: microcare SB or phenoxyethanol.


Packing size: 1kg - 5kg -10kg.



Version OKINACEA EL

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/-
Hydrolyzed Rice Bran protein		
	CAS n° 94350-05-7	EINECS n° 305-224-5

Preservatives by selection: microcare SB or phenoxyethanol.

 CHINA listed 2014 as "Algae extract (*Caulerpa lentillifera* extract)"

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