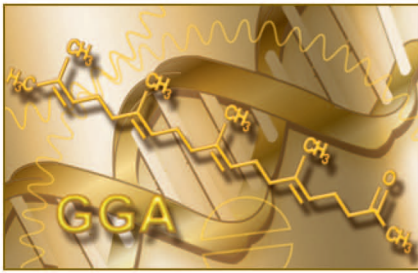




Patent pending

RENOVAGE™



Geranylgeranone

Function:

Comprehensive anti-ageing.

Definition:

Geranylgeranone (GGA) in a lipophilic solvent.

Properties:

Fights against all signs of ageing:

functional: dehydration, age spots, ineffective barrier function.

structural: ptosis, wrinkles, pores, erythrosis.

Characteristics:

Anti-ageing and protective effect against stress, by telomere stabilization and DNA maintenance (cell division).

Improvement of tissue quality by optimal cell interactions (cell communication).

Rebalance of cell functions (metabolism).

Point of interest:

By delaying senescence, Renovage™ can extend cell lifespan by 1/3.

INCI name (proposed):

(Check CTFA on-line dictionary for latest INCI name)

Caprylic/Capric Triglyceride
Teprenone –

Applications:

Anti-ageing creams, gel-creams.

Formulation:

Oil soluble.

Incorporate to oil phase at 60°C prior to forming the emulsion.

Recommended use level:

3%

Warning:

Not to be sold or used in a cosmetic product in Japan.



Visible results in just one month



Member of Croda International Plc

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Protocol: Simple blind study including 24 women, 58±6 years old, with wrinkles and not having used anti-age products for at least 1 month. No intentional UV exposure. Twice daily application of a cream formulated with 3% Renovage™, for 6 months. Evaluation of the functional and structural signs of ageing at 1 and 6 months.

In vivo tests: Efficacy on functional signs of ageing

- **Skin moisturisation** **+30%* up to +58%****, improvement for **100% panellists**
Measurement by corneometry of the remnant skin moisture 24h after the last application. (*significant/T0 p<<0.01)
- **Epidermal barrier integrity**..... **+19%* up to +46%****, improvement for **75% panellists**
Measurement by vapometer of the transepidermal water loss. (*significant/T0 p<0.05)
- **UV Sun spots** **- 42%* up to -56%****, improvement for **100% panellists**
Measurement of invisible UV spots by VISIA® system under UV light. (*significant/T0 p<<0.01) ** = 1st quartile

In vivo tests: Efficacy on structural signs of ageing

● **Micro depressionary network**

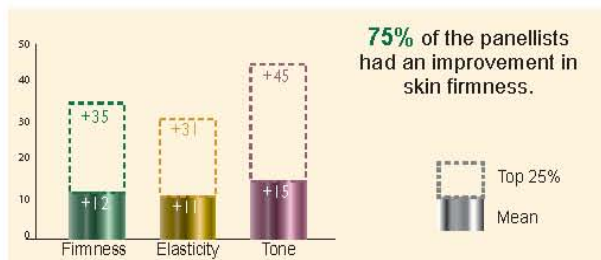
Measurement of roughness, lines and their homogeneity of the forearm (after 1 month) and the neckline (after 6 months), by skin replicas.

Renovage™ significantly improves the surface of the skin. Skin is smoother, more uniform and looks younger.

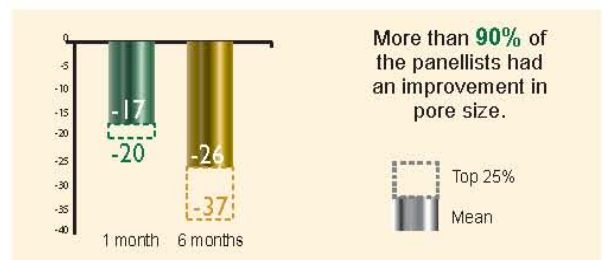


% / T0	Forearm		Neckline	
	Mean	1 st quartile	Mean	1 st quartile
Line homogeneity	+31	+103	+28	+109
Roughness	-11	-26	-14	-36
25-50µm	-4	-22	-12	-38
50-75µm	-13.5	-54	-34.5	-66.5
>75µm	-29	-64	-47	-56

● **Firmness / Elasticity / Tone**
Measurement by cutometry after 1 month



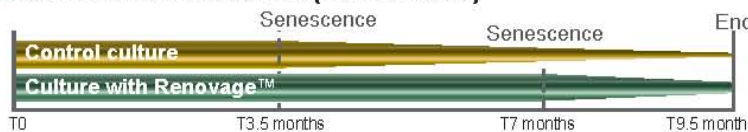
● **Dilated pores**
Measurement of dilated pores by Visia® system



- **Erythrosis (redness)** **- 30.5%***
Measurement of skin redness by Doppler ultrasound after 1 month on 23 panellists. (*significant/Placebo p<0.05)

In vitro tests: Effect of Renovage™ on the functional and structural ageing markers

- **Function loss** **- 60%**
Apoptotic cells after UVB irradiation, skin explants.
- **Cell resistance** **+75 and +100%**
HSP 27 & 70 reduction after UVB irradiation, skin explants.
- **Self-defence** **+100%**
Catalase activity after UVB irradiation, skin explants
- **Wound healing capacity** **+++**
Cell re-colonization after lesion and irradiation, keratinocytes
- **Skin cell senescence (fibroblasts)**



For a total culture duration of 9.5 months, cell life span is significantly increased by 1/3. With Renovage™, cell senescence is delayed by 3.5 months.

Renovage™ works on the origin of youth and targets the cell actors that ensure lifespan and youth. Renovage™ creates the optimal conditions in the epidermis and the dermis for visible effects on the skin surface.

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