



ALGOMEGA NP[®]

Strengthens the skin's barrier function

*

Improves skin hydration & reduces water loss

Regulates skin desquamation

*Guarantees full cell membrane functionality
after barrier function damage*



Dry skin is a common and uncomfortable condition marked by scaling, itching and cracking. It results from lack of water in the *stratum corneum* that loses its flexibility and becomes dry and scaly.

In order to help resolve this problem, GELYMA has developed ALGOMEGA NP®.

ALGOMEGA NP® is a reparative moisturizer based on the synergistic combination of liposoluble fractions extracted from the association of two algae rich in omega-3 fatty acids: a microalga *Nannochloropsis oculata* (Droop) Hibberd and a macroalga *Porphyra umbilicalis* (Linne) Kützing in a vegetable oil *Silybum marianum* seed oil, well-supplied in omega-6 polyunsaturated fatty acids mainly linoleic acid.

Mechanisms of action

ALGOMEGA NP® nourishes the upper layers of the epidermis in polyunsaturated fatty acids and sterols

Skin dryness is caused by a deficit in the lipids in the skin.

Oleic acid	C18 :1	27.0% *
Linoleic acid	C18 :2	50.8%
EPA (marine origin)	C20 :5	2.3%

β sitosterol	41.9% **
Δ 7 stigmasterol	25.5%

* % total fatty acids from a control batch.

** % total phytosterols.

ALGOMEGA NP® restores the lipid barrier in the *stratum corneum*, offering essential fatty acids vital for healthy skin functioning.

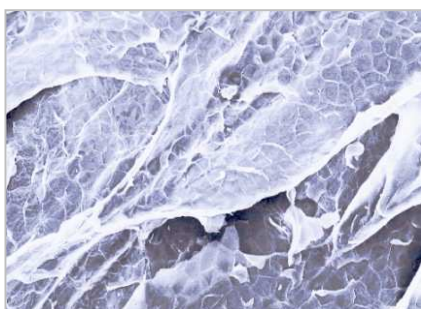
ALGOMEGA NP® reconstitutes the lipid surface film and reequilibrates lipid deficient skins.

ALGOMEGA NP® brings a soothing effect due to the presence of β-sitosterol.

ALGOMEGA NP® decreases desquamation

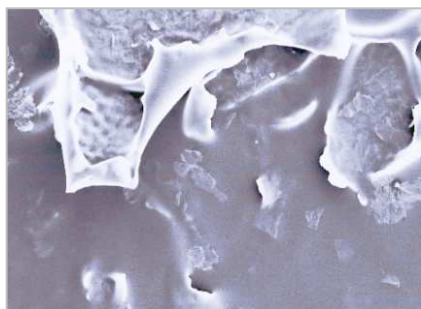
Dry skin is caused by abnormal desquamation linked to a disruption of the water barrier function and water loss in the upper cell layers.

In vivo study performed on 3 volunteers submitted to unique standardised application of a cream containing 3% ALGOMEGA NP®. Desquamation examined on skin-trapping (D-squames) by scanning electron microscopy.



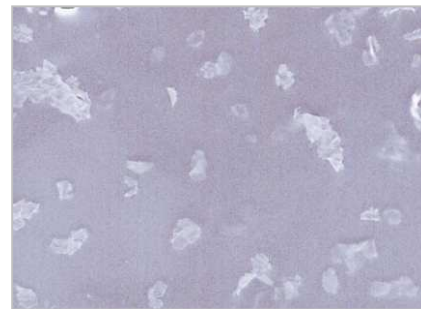
Control

Extremely dry skin with severe scaly appearance.



Placebo cream

The *stratum corneum* shows large scales.



Cream with 3% ALGOMEGA NP®

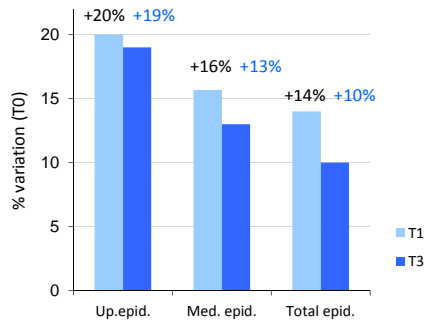
The *stratum corneum* appears well hydrated with small groups of corneocytes.

ALGOMEGA NP® regulates desquamation that leads to healthy and smoother appearance of skin surface.

ALGOMEGA NP® protects skin barrier function by improving the integrity of the *stratum corneum*.

ALGOMEGA NP® increases skin hydration and reduces water loss (TEWL)

Dry skin is caused by a lack of moisture



In vivo study performed on 10 volunteers by using transient thermal transfer. Unique standardised application of a cream with 5% active. Measurements realized at 1h (T1) and 3h (T3) (DERMSCAN – FRANCE).

Transient thermal transfer measures the moisturising power of a preparation on the surface (0.15 µm) “Up epid.” and in depth (> 300 µm) “Med. epid.” of the epidermis (cf. opposite graph).

ALGOMEGA NP® is an excellent moisture agent.

TEWL moisturizing properties of ALGOMEGA® NP also measured *in vivo* on 12 volunteers by TEWL after a unique application of a cream with 5% active. (DERMSCAN – FRANCE).

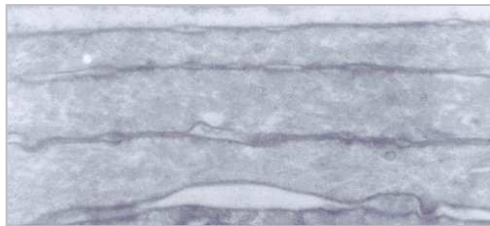
Trans Epidermal Water Loss (TEWL) measures the level of water barrier function.

ALGOMEGA NP® decreases by -38.4% the TEWL after 3h application and thus reduces water loss.

ALGOMEGA NP® guarantees full cell membrane functionality after barrier function damage

Dry skin may be caused by factors that alter the *stratum corneum*.

Ex vivo study performed on reconstituted epidermis (Skin Ethic model) submitted to irritant treatment with 10% DMSO for 12 h that damages barrier function. ALGOMEGA NP® applied either before treatment or after DMSO treatment. Skin samples prepared for observations by transmission electron microscopy 24h after treatment.



Control - No treatment

The ultrastructure of cell layers appears well preserved.



Treated control - DMSO treatment

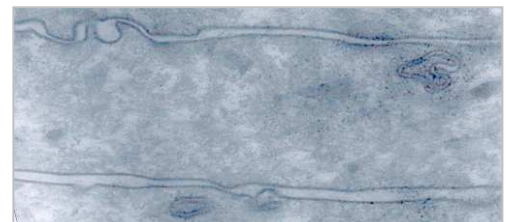
DMSO treatment induces important damage of cell layers structure. Intercellular spaces are irregularly enlarged between corneocytes layers. The structure of cell membranes is poorly preserved.



Application 3% ALGOMEGA NP® before DMSO treatment.

ALGOMEGA NP® is able to preserve cell layers structure when the active is applied before DMSO treatment. The intercellular spaces between corneocytes layers appear straight and well regular.

ALGOMEGA NP® offers a preventive effect on the fine structure of cell layers before skin barrier damage.



Application 3% ALGOMEGA NP® after DMSO treatment.

ALGOMEGA NP® is also able to preserve cell layers structure when the active is applied after DMSO treatment. The intercellular spaces between corneocytes layers appear straight and well regular.

ALGOMEGA NP® brings a curative effect on the fine structure of cell membrane after skin barrier damage.

ALGOMEGA NP® improves the fine structure of epidermal cell layers that guarantees good and functional protection of the *stratum corneum*.

ALGOMEGA NP®

Strengthens the skin's barrier function



Algal source rich in omega-3 fatty acids

Nannochloropsis oculata named incorrectly "marine *Chlorella*" is a microalga used as feedstuff in fish aquaculture.

Porphyra umbilicalis is a red macrolaga known as "nori" in Japan.

Solvent well-supplied in omega-6 fatty acids

Silybum marianum is an herb named commonly "Lady's thistle" in Great Britain, "Mariendistel" in Germany and "Chardon Marie" in France.

Cosmetic benefits

Thanks to its balanced composition in unsaturated fatty acids and phytosterols, ALGOMEGA NP® helps nourish the skin, re-equilibrate lipid deficient skins and replenish skin's moisture barrier, giving it back suppleness and elasticity. So the skin can naturally defend itself against dryness.

ALGOMEGA NP® decreases desquamation and improves the intercellular cohesion.

ALGOMEGA NP® reduces Trans Epidermal Water Loss and reinforces the skin barrier function for more firmness.

ALGOMEGA NP® improves the structure of cytomembranes after damage caused by irritant agent and restores the skin barrier for optimum function.

Thus, ALGOMEGA NP® is able to relieve dryness of sensitive and reactive skins.

Cosmetic applications

Skin care for dry, reactive and sensitive skins - Lip care - After sun care.

Recommended use levels: 3% - 5%.

Characteristics

INCI names *Silybum marianum* seed oil
Porphyra umbilicalis extract
Nannochloropsis oculata extract

CAS n° 84604-20-6
CAS n° 223751-76-6

EINECS n° 283-298-7

Oily liquid yellow to lightly greenish colored.

Preservative free.

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



China listed 2014 as
Algae extract (*Porphyra umbilicalis*/*Nannochloropsis oculata* extracts)

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