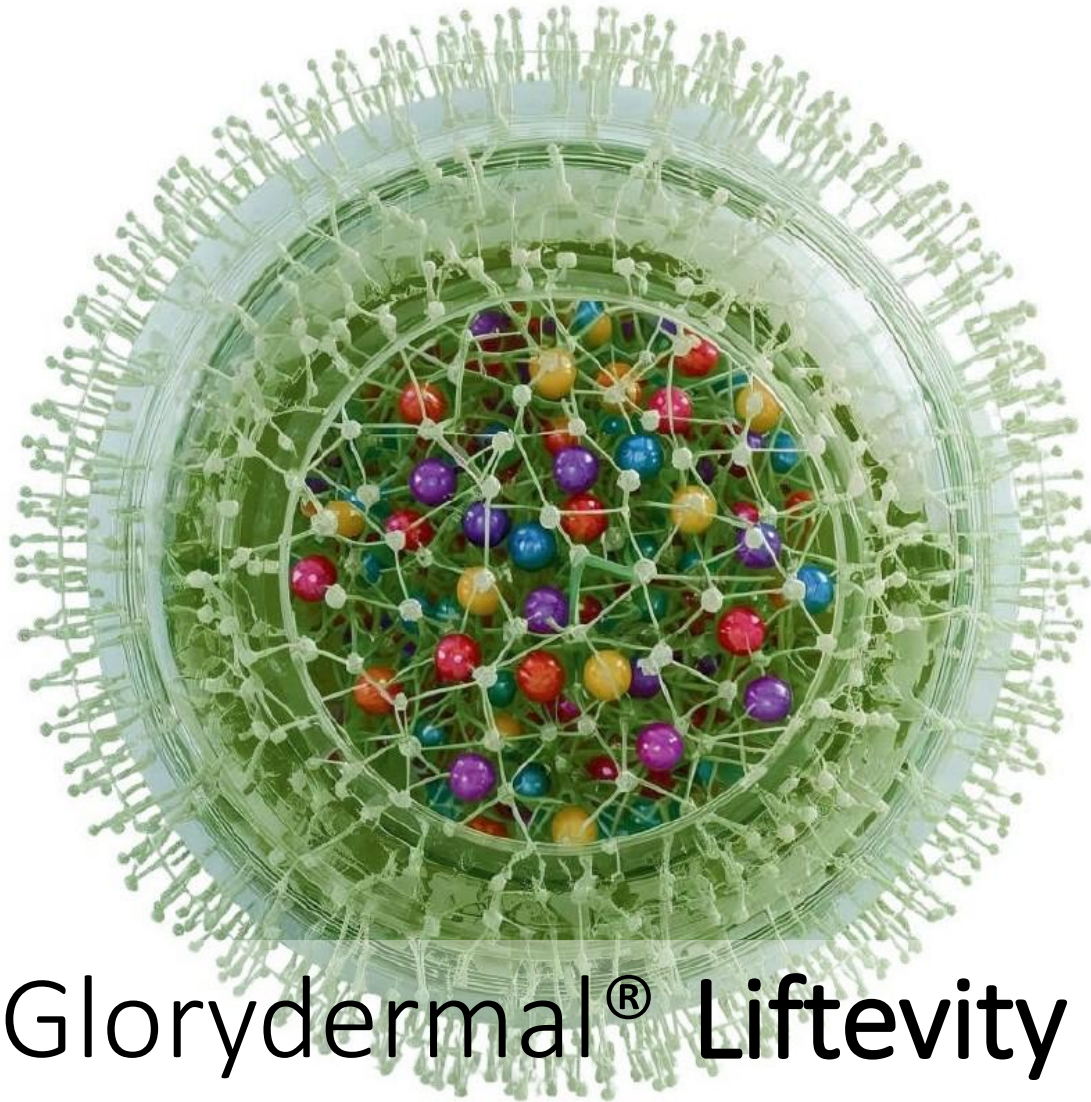
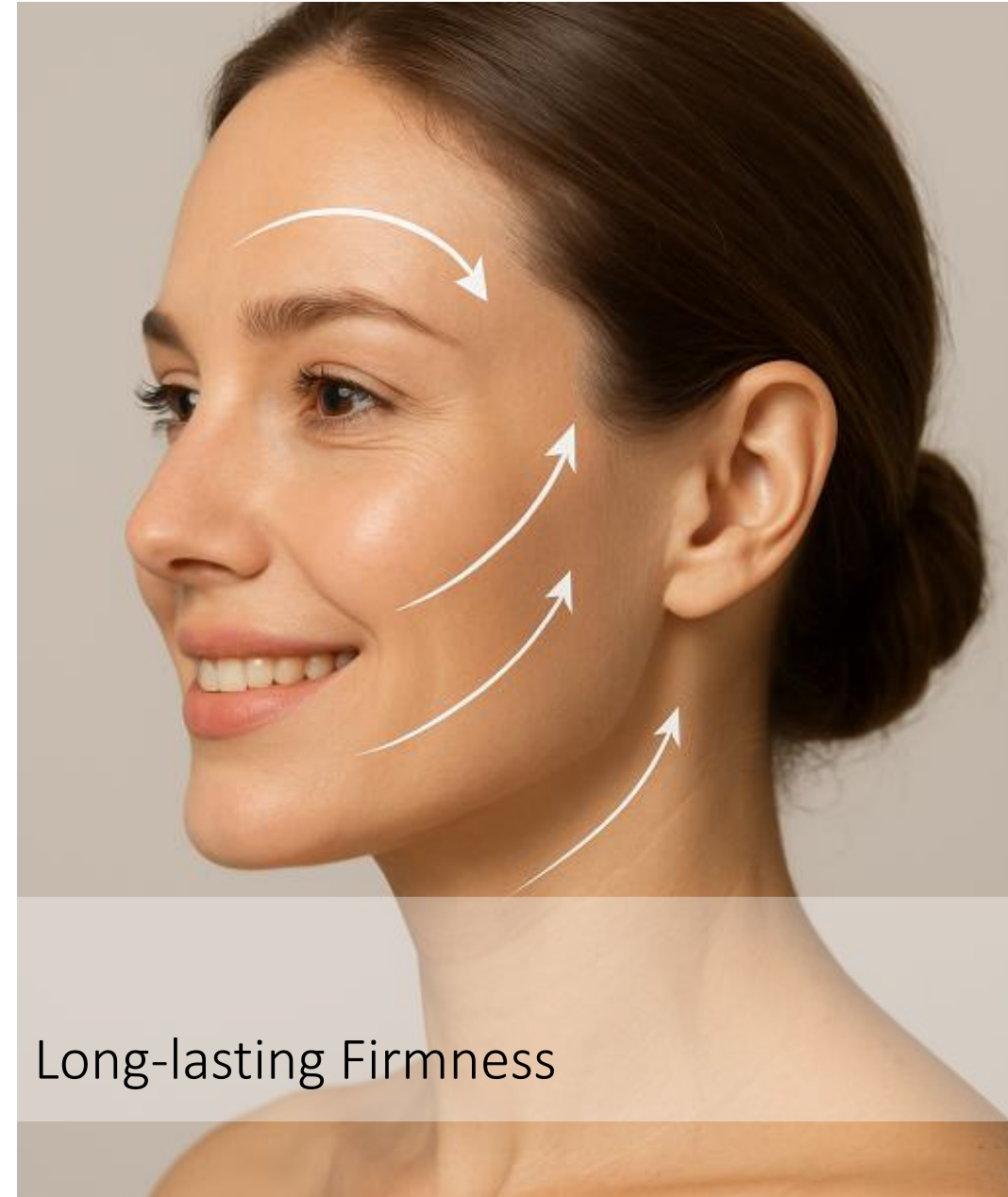


LONGEVITY & PROTECTIVE BEAUTY



Glorydermal® Lifteivity



Long-lasting Firmness



Lifteivity – Lifting and Longevity – Protective Beauty



Well-Ageing

Longevity concepts in cosmetics target skin ageing in different ways with the common goal to **maintain skin vitality in the long term** and to **support resilient and nourished skin**.

A reduction in **skin firmness** and **elasticity** are key issues of mature skin, which should be addressed within the longevity concept as a consequence of natural skin ageing.

But: The signs of the **years we lived** should not be combated completely. They should be **cherished** and allowed to be **beautifully maintained (Well-Ageing)**.



Lifteivity – Lifting and Longevity – Protective Beauty



Well-Ageing

Longevity is primarily associated with **long-term effects**. The best results can be achieved with **powerful active ingredients** that are **continuously released in the skin**.

The active ingredient **Glorydermal® Lifteivity** ideally matches the **longevity approach**, combining **strengthening** and **lifting properties** with **long-lasting efficacy** to **protect the beauty of the skin**.



Product Description

Innovative green capsules with a gradual release effect for a long-lasting firmer skin structure and long-term skin renewal

3 High Performance Peptides in 1 Green Capsule:

Palmitoyl Pentapeptide-4 (peptide in **Matrixyl®**), **Tripeptide-1** and **Hexapeptide-9** united within a **marine-derived alginate capsule**, coated with a **lecithin lipid layer** to improve skin compatibility, penetration and active delivery.

Together, they

- **boost collagen and elastin synthesis,**
- **support skin repair and**
- **restore vital firmness and radiance.**

➡ All through a **sustainable, next-generation delivery system.**



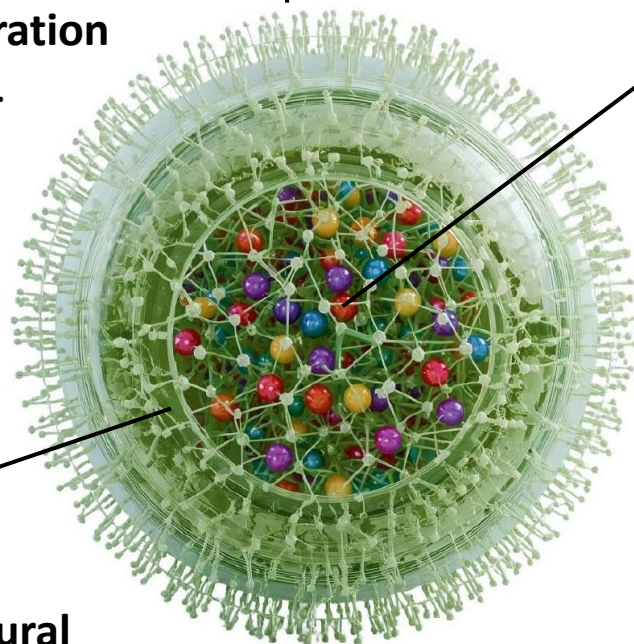
Product Description

LECITHIN COATING

Forms a **lipid layer** surrounding the alginate capsule to enhance skin compatibility, **improve penetration** and preserve peptide bioactivity.

ALGINATE CORE

200-1000 nm particles. A **natural polysaccharide capsule** ensuring **protection**, stability and **controlled release** of peptides.



ENCAPSULATED PEPTIDES

Palmitoyl Pentapeptide-4

Peptide in Matrixyl®,

stimulates extracellular matrix renewal and helps to reduce wrinkle depth.

Tripeptide-1

Promotes collagen and elastin synthesis, improving skin firmness and elasticity.

Hexapeptide-9

Supports tissue repair and smoothes fine lines.



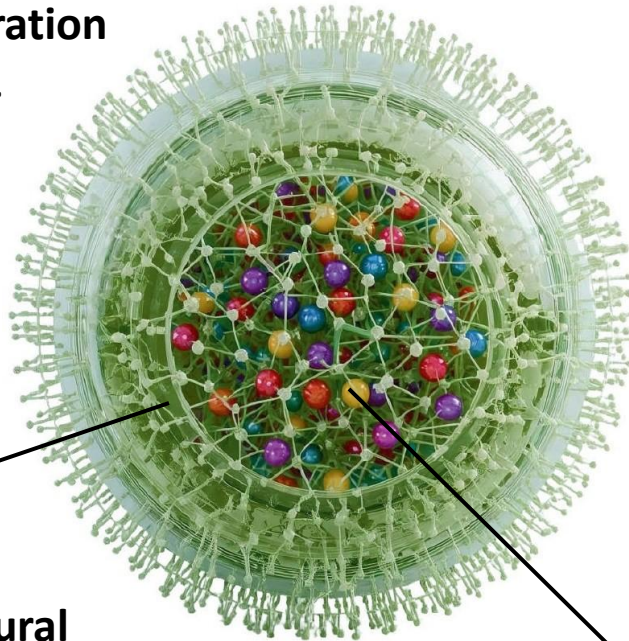
Advantages of the Innovative Green Capsule

LECITHIN COATING

Forms a **lipid layer** surrounding the alginate capsule to enhance skin compatibility, **improve penetration** and preserve peptide bioactivity.

ALGINATE CORE

200-1000 nm particles. A **natural polysaccharide capsule** ensuring **protection**, stability and **controlled release** of peptides.



HYBRID BETWEEN CAP AND LIPOSOME:

- Combining the **high stability of caps** (alginate core) with the **enhanced and fast penetration of liposomes** (lecithin coating)
- **Gradual release** of the encapsulated peptides offers **long-lasting effects**
- **Natural capsule material** (alginate) as an alternative for synthetic polymers often used for caps
- **first of its kind, completely new** in the market

ENCAPSULATED PEPTIDES

Palmitoyl Pentapeptide-4 (peptide in **Matrixyl®**),
Tripeptide-1 and Hexapeptide-9



Enabling Effective Longevity

Effect & Efficacy

An effect without efficacy is meaningless!

The **effect** of a substance describes the **pure response** that this substance **produces**.
(→ e.g. boost of collagen synthesis)



EFFECT



EFFICACY

Efficacy describes the **extent** to which the **intended effect is achieved**.
(→ e.g. rate of collagen synthesis)

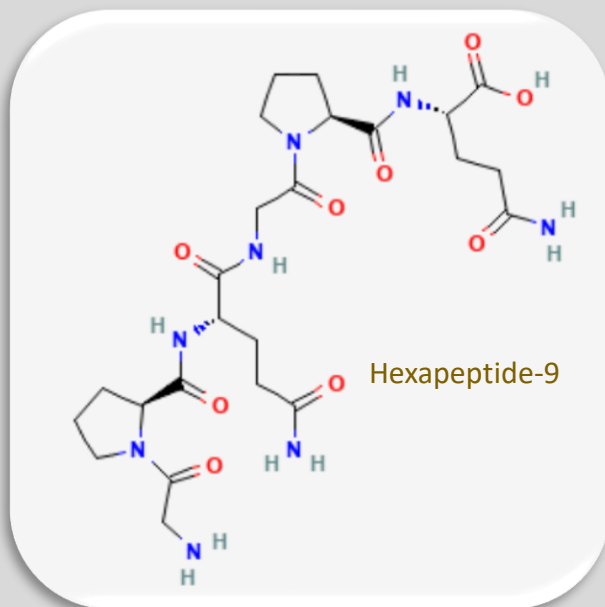
Many active ingredients **cannot fully exploit their effective potential**. This is primarily due to **stability issues** of the active ingredients, **insufficient penetration** to the site of action in the skin, and a **lack of protection against the body's own degradation processes**.



Enabling Effective Longevity

Effect & Efficacy

An effect without efficacy is meaningless!



Source: PubChem (PubChem CID: 16129319)

In this context, **peptides** are excellent examples of **highly potent longevity actives**, as they act as signalling molecules in **cellular communication** and can **regulate, stabilise and support important skin functions over the long term**. However, their **efficacy** can be **severely limited**.

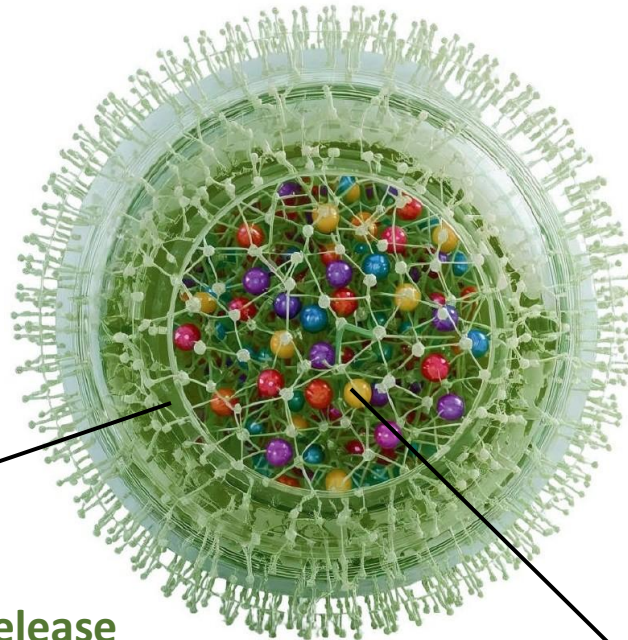
One limiting factor is the presence of **body's own proteases**, which can degrade peptides in the skin before they have had a chance to exert their effect in the deeper layers of the skin (dermis).



How Does the Innovative Green Capsule Enable Effective Longevity?

LECITHIN COATING

→ Improved penetration



ALGINATE CORE

→ Protection and controlled release of the peptides

HYBRID BETWEEN CAP AND LIPOSOME

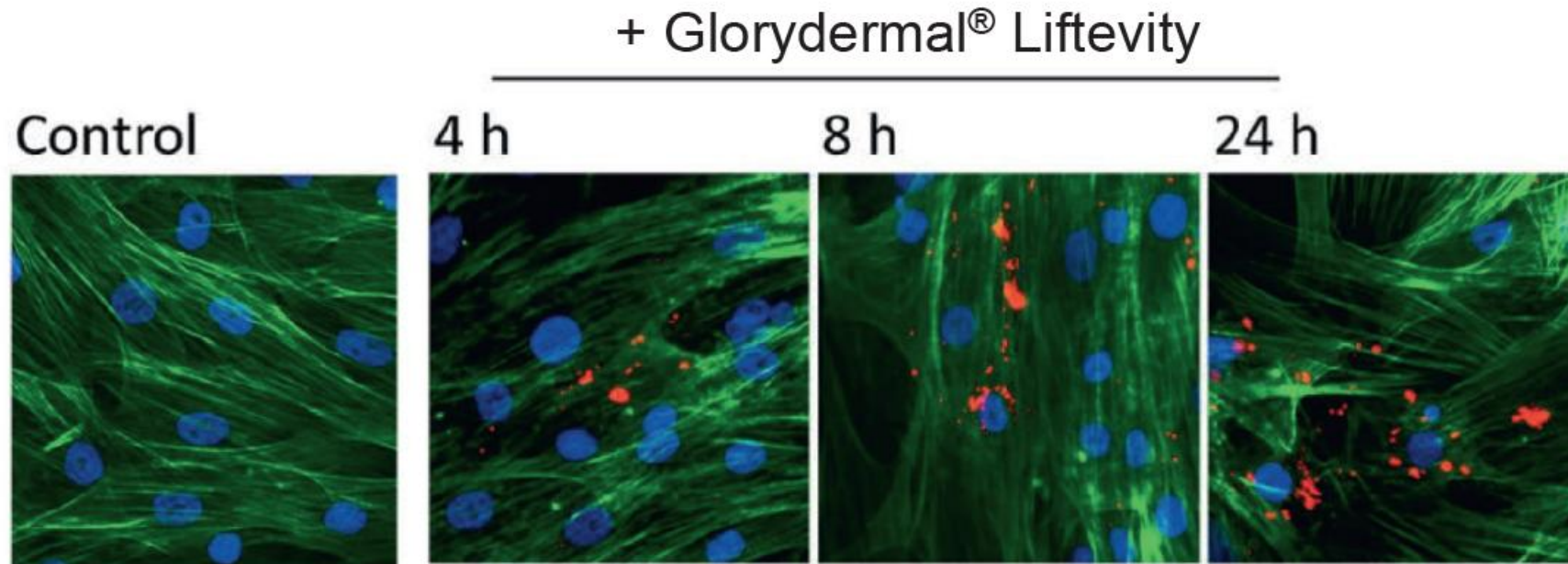
Balanced combination of protection, penetration and delivery to enable the applied peptides to reach their specific site of action in the skin and to be able to exert their full potential there.

ENCAPSULATED PEPTIDES

Palmitoyl Pentapeptide-4 (peptide in **Matrixyl®**),
Tripeptide-1 and Hexapeptide-9



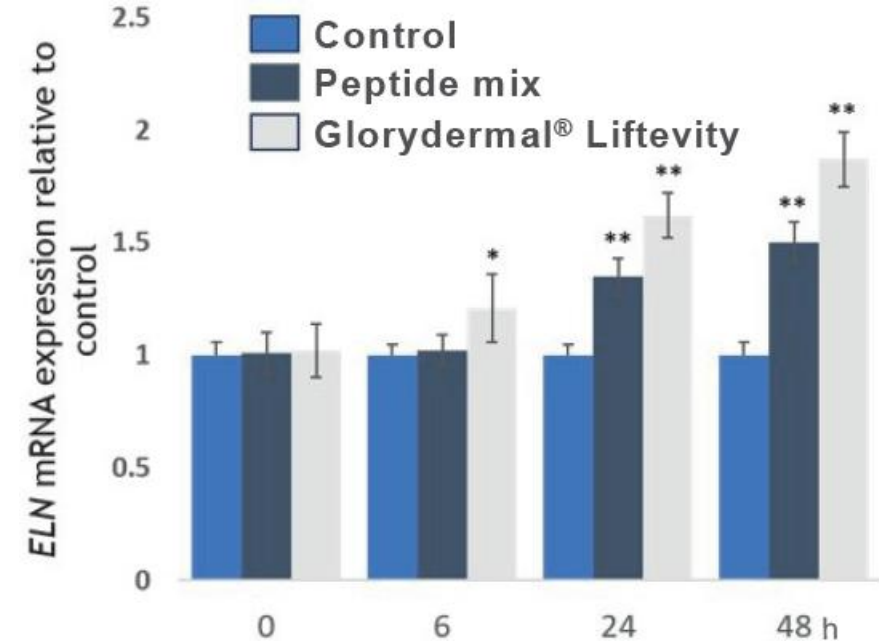
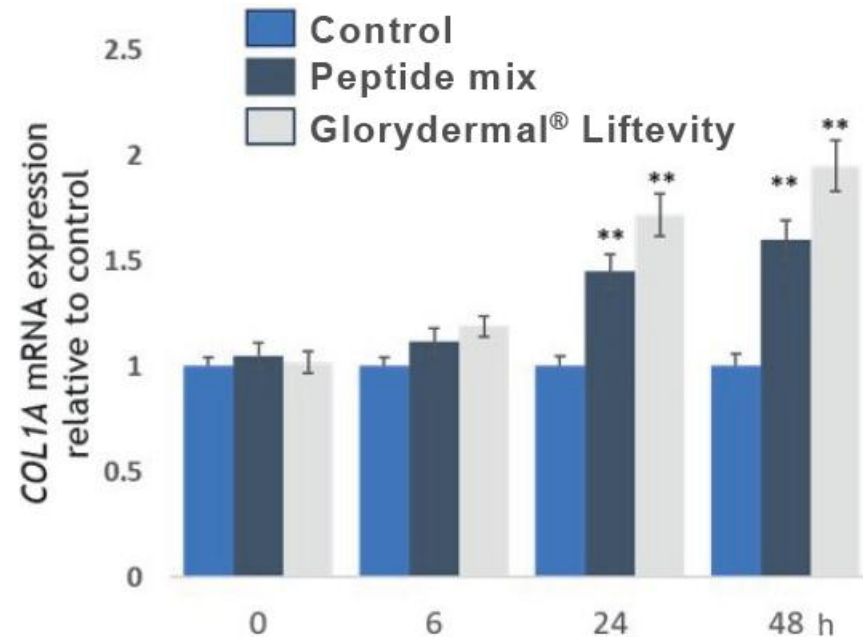
In vitro Study – Cellular Uptake by Fibroblasts



Confocal microscopy images of human dermal fibroblasts incubated with 20 µg/mL Glorydermal® Lifteivity containing Cy5-labeled particles (red). Actin cytoskeleton stained with phalloidin (green), cell nuclei labelled in blue. Images show **progressive cellular uptake at 4, 8 and 24 hours**.



In vitro Study – Boosted Collagen I and Elastin Expression



Treatment with 0.3% Glorydermal® Lifteivity significantly upregulated collagen and elastin mRNA expression in human dermal fibroblasts after 48 hours, showing greater induction than the free peptide mix. These results demonstrate **Glorydermal® Lifteivity's superior ability to stimulate ECM synthesis and promote skin firmness and elasticity.**



In vivo Study – Improved Skin Firmness and Elasticity

Cream containing 3% Glorydermal® Lifteivity

20 women (aged 35-55 years)

28 days, twice daily application

Cutometer® MPA 580: measurements before treatment (D0) and after 28 days of treatment (D28)

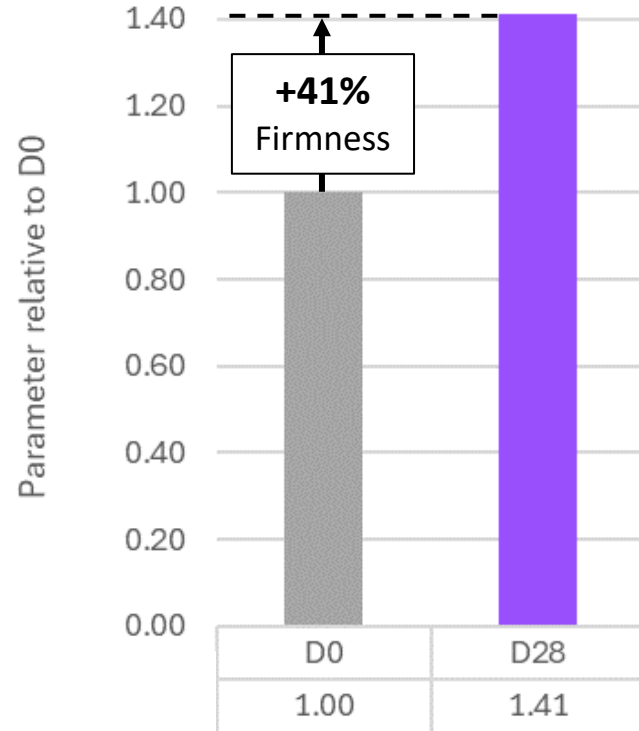
5 repeated measurements on the cheek of each volunteer at D0 and D28

VISIA®-CR: highresolution images at D0 and at D28



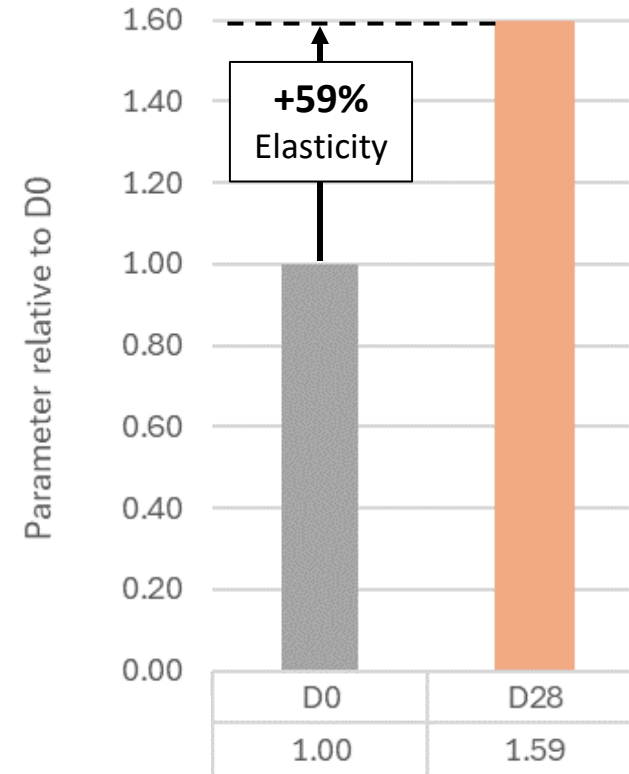
In vivo Study – Improved Skin Firmness and Elasticity (Cutometer®)

95% of the volunteers showed increased **skin firmness**



The volunteers showed a significant increase in skin firmness reaching up to **41%** (best responder, mean 13.8% ($p < 0.0001$)).

70% of the volunteers showed increased **skin elasticity**



The volunteers showed a significant increase in skin elasticity reaching up to **59%** (best responder, mean 11.9% ($p < 0.05$)).



In vivo Study – Improved Skin Firmness and Elasticity (VISIA®-CR)



Representative macroscopic images taken with VISIA®-CR before (D0) and after 28 days (D28) treatment with a cream containing 3% Glorydermal® Lifteivity showing improved skin firmness.



Technical Data

Glorydermal® Lifteivity

Product Code: GD-LE-001

INCI EU (CTFA/PCPC):

AQUA (WATER), GLYCERIN, LECITHIN, ALGIN, PALMITOYL PENTAPEPTIDE-4, TRIPEPTIDE-1, HEXAPEPTIDE-9, XANTHAN GUM, CALCIUM CHLORIDE.

ADDITIVES, PRESERVATIVES:

PROPANEDIOL, 1,2-HEXANEDIOL, CAPRYLYL GLYCOL.

Appearance: beige to light brown, viscous solution

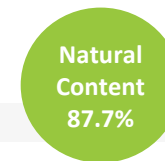
Solubility: dispersible in water

Recommended dosage: 1-3%

Formulation: at the end of the production at a temperature < 40°C



COMPLIANT



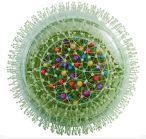
ISO 16128



ISO 16128



VEGAN



Summary – LONGEVITY & PROTECTIVE BEAUTY

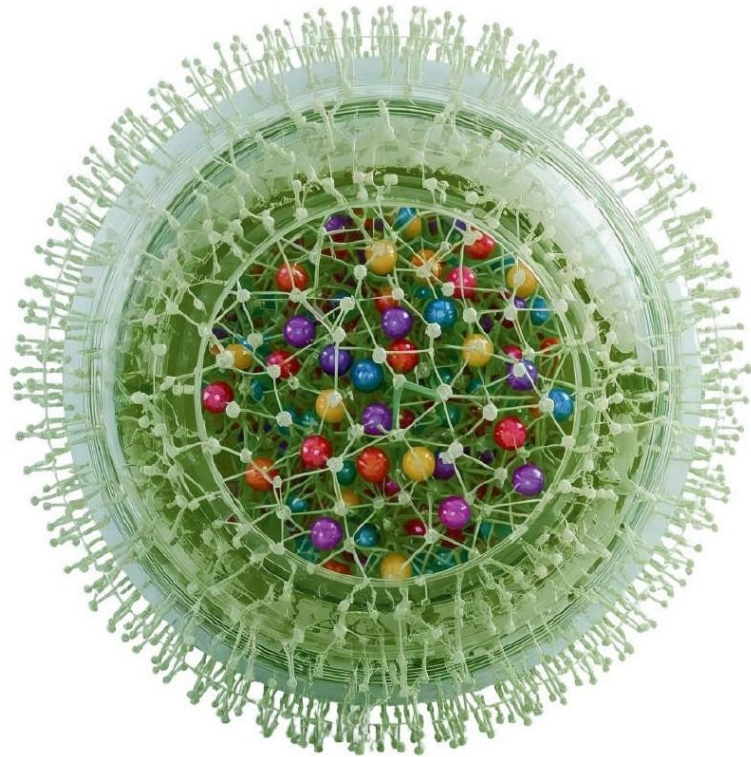


- Next-generation delivery system, **completely new** in the market
- **3 high performance peptides** in 1 **green capsule** with **gradual release effect**
- **Hybrid between cap and liposome: marine-derived alginate capsule**, coated with a **lecithin lipid layer** for enhanced skin compatibility, penetration and delivery
- **Gradual release** of the encapsulated peptides offers **long-lasting effects**:
 - **Boosting of collagen and elastin synthesis**
 - **Support of skin repair**
 - **Restoring of vital firmness and radiance**

The active ingredient **Glorydermal® Lifteivity** ideally matches the **longevity approach**, combining **strengthening** and **lifting properties** with **long-lasting efficacy** to **protect the beauty of the skin**.



Glorydermal® Liftevity



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