

macaderm™

Firm skin, healthy skin

FIRM

NESS

NATbeauty™

Market Opportunities

Aging results in reduced skin renewal.

One of the consequences of aging is the disorganization of basement membrane. Production of collagen IV is reduced, and the lattice structure of basement membrane loses its density. Then cohesion between dermis and epidermis decreases, reducing important biochemical functions between the tissues.



Keratinocytes: essential cells of the epidermis

Keratinocytes are the main cells of epidermis' basement. Integrins are located at the surface of the keratinocytes, promoting cellular adhesion with the Extra Cellular Matrix and the basement membrane. This adhesion is essential for the health of skin tissue. As the Extra Cellular Matrix enables the chemical and mechanical communication between the cells, this adhesion ensures that the epidermis cells are healthy and function properly. As a consequence, the skin is rejuvenated.

The basement membrane is the link between the dermis and the epidermis. Collagen IV, produced by keratinocytes too, is one of its main components. It gives to the basement membrane a lattice structure to which other components and adjacent cells can affix themselves.

As keratinocytes play a great role in skin rejuvenation, it was key for Naturex to develop a natural botanical active to boost their activity.

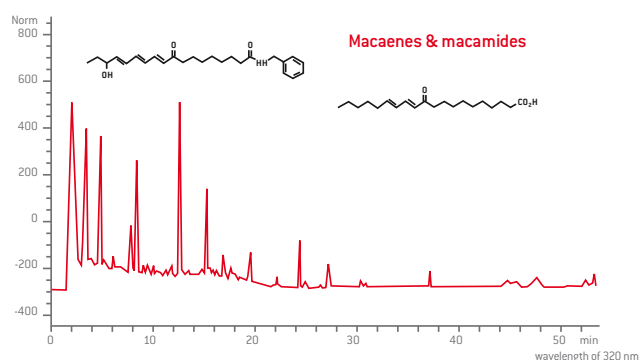
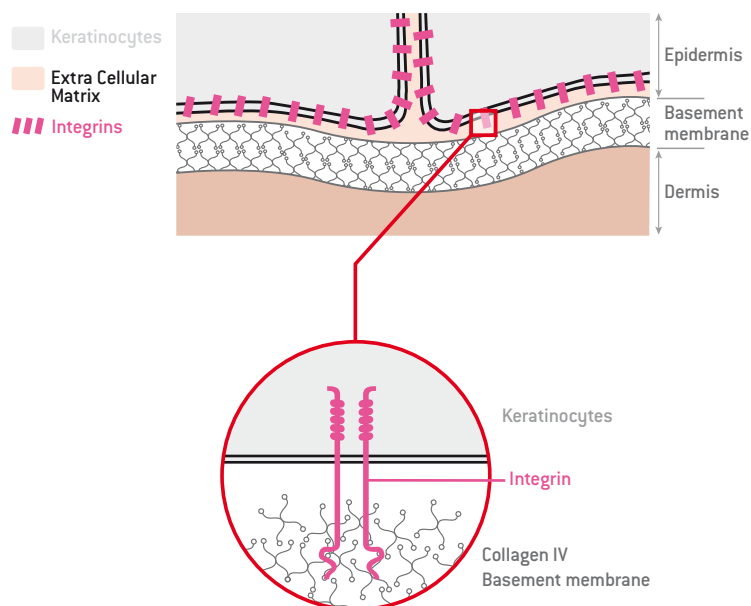
Premium characteristics:

The vitality secret of the Inca, maca (*Lepidium meyenii*) is a treasure from the Peruvian Andes that promotes energy and endurance.

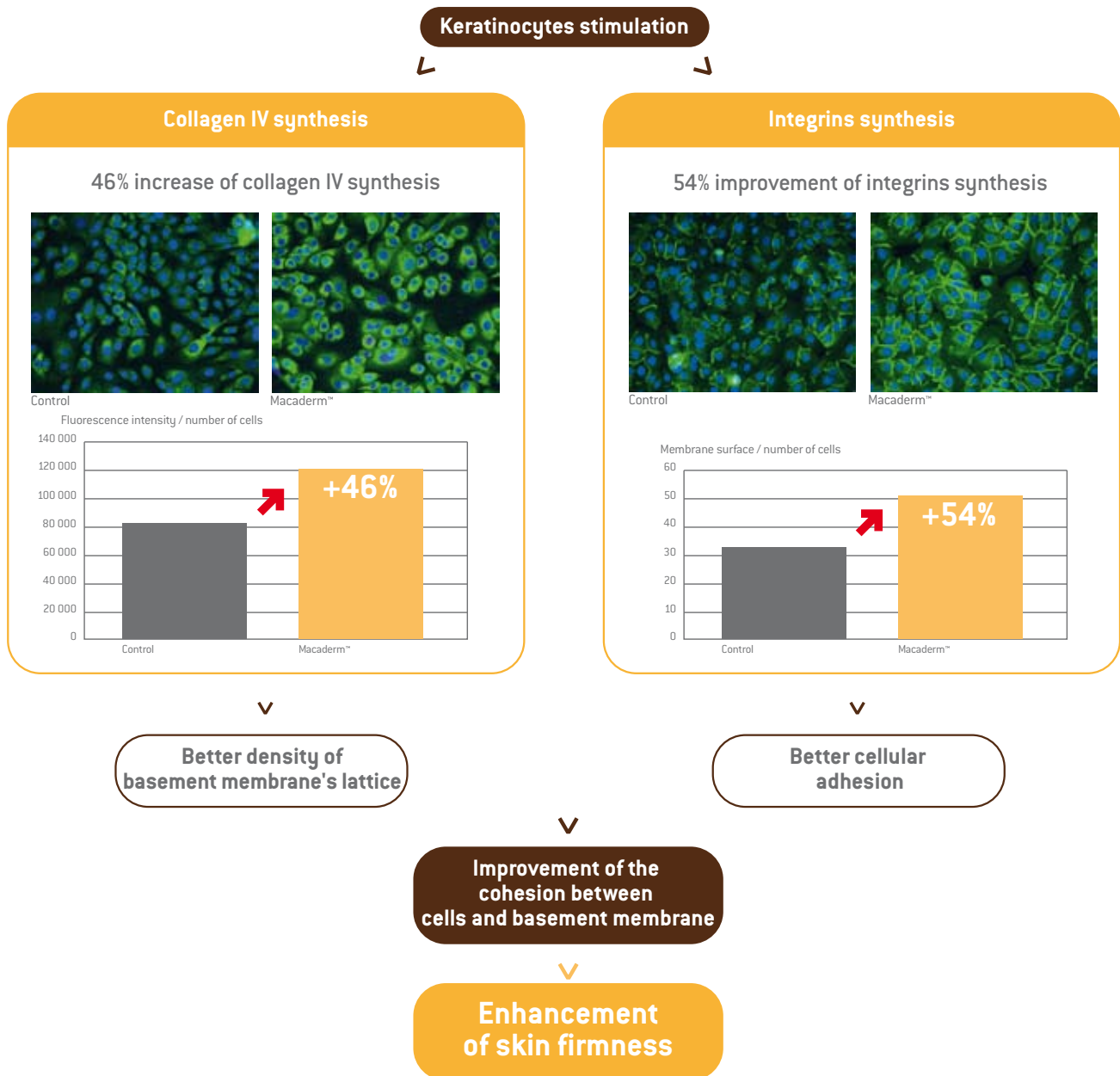
Maca presents interesting qualities, which enables it to survive in harsh climatic conditions, where no other plant can grow. As a result, the plant is traditionally used by Native Peruvians for both nutritional and medicinal purposes.

Naturex research has developed Macaderm™, and has successfully demonstrated its significant impact on the cellular cohesion.

Focus on the epidermis basement



Macaderm™'s action



Benefits of Macaderm™'s action:

- Better chemical interaction between the cells and their environment
- Improved physical and mechanical cellular cohesion
- Firmer skin

Macaderm™ can be used:

- To prevent or treat aging signs
- To improve the results of other treatments, via a better cohesion and communication between dermis and epidermis



Macaderm™ is an innovative anti-aging active from maca. It makes skin firmer by improving epidermis cohesion and structure.

Commercial name	Macaderm™
Complete name	Maca root extract - <i>Lepidium meyenii</i>
Active markers	Macamides and macaenes
Scientific Results	<i>In vitro study</i> Macaderm™: - Increases collagen IV synthesis by 46%. - Enhances integrins synthesis by 54% These results contribute to: - Improve density of basement membrane lattice - Boost cellular adhesion mechanism
Claims	Enhances skin firmness by improving cohesion between cells and basement membrane
Applications	In skin care application to prevent or treat aging signs
Safety	This product has been evaluated by Eurotox toxicologist

Specific data

Version INCI name Solubility Recommended dosage Labels	In powder form Maltodextrin (and) Lepidium meyenii root extract (and) silica Water, ethanol 0.2 - 0.5% Also available Organic EEC n°2092/91 and NOP 7 CFR 205
Version INCI name Solubility Recommended dosage Labels	In glycerol form Glycerin (and) Lepidium meyenii root extract Water, ethanol 2 - 4% ECOCERT validated
Version INCI name Solubility Recommended dosage	In propylene glycol form Propylene glycol (and) Lepidium meyenii root extract Water, ethanol 2 - 4%



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