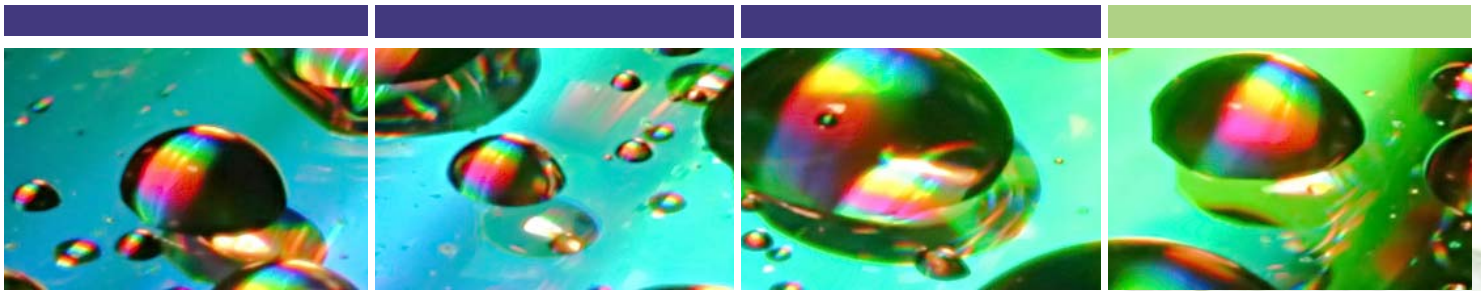




# CellActive<sup>®</sup> - HYDRO

The Apple-fresh Moisturiser



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# CellActive® - HYDRO

**CellActive®-HYDRO has been specially developed to provide a long term skin moisturising effect. Malic acid and water-binding substances present in apple help optimise the fluid balance of the epidermis. The bioferment Essential Cell Boost-Factor improves skin firmness. Skin becomes smoother, firmer and full of moisture – not unlike an apple.**



## Confirmed efficacy

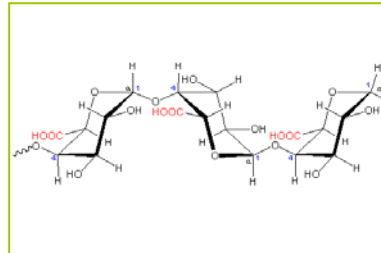
- (A) Long term moisturising effect 12 hours persistence effect (*in vivo*)
- (B) Less flaking of skin Visibly improved skin surface (*in vivo*)
- (C) Firming of skin tissue Improved mechanical stability (*in vitro*)

## Active principle

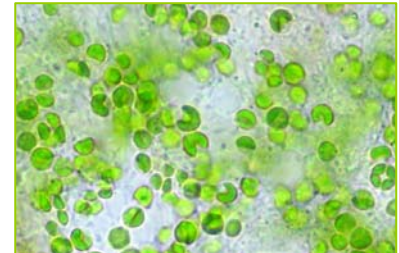
CellActive®-HYDRO optimises the fluid balance of the epidermis. The skin becomes moister and better protected against loss of moisture by evaporation. It becomes firmer and less flaky in appearance.



**Malic acid** stabilises the natural protective acid layer on the skin. The production of lamellar lipid matrix is promoted and the natural process of skin desquamation is optimised

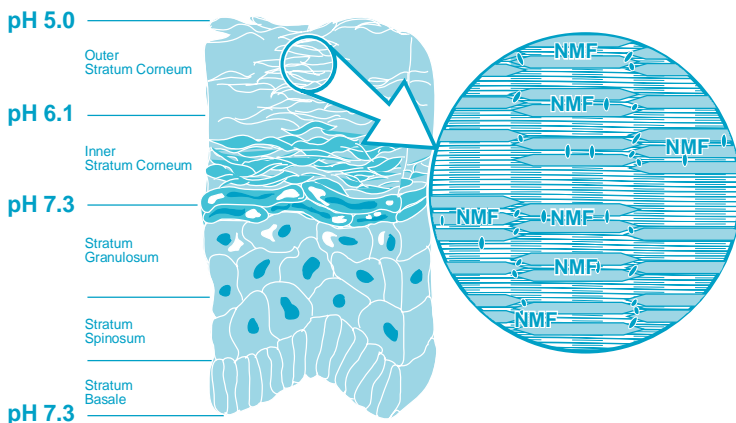


**Apple pectins** form a layer of moisture on the surface of the skin. The **water-binding molecules** of the apple support the skin's own natural moisturising factor (NMF)



**Essential Cell-Boost-Factor** promotes the production of cell adhesion proteins and enhances the mechanical stability of the skin

## The epidermal fluid balance system



### Lamellar lipid matrix

- The lamellar structure prevents fluid loss by evaporation
- Consists of free fatty acids, ceramides and cholesterol
- Synthesis requires an acidic pH environment

### Natural moisturising factor

- A combination of very hydrophilic substances
- Present in corneocytes
- Synthesis requires an acidic pH environment

### Corneodesmolysis

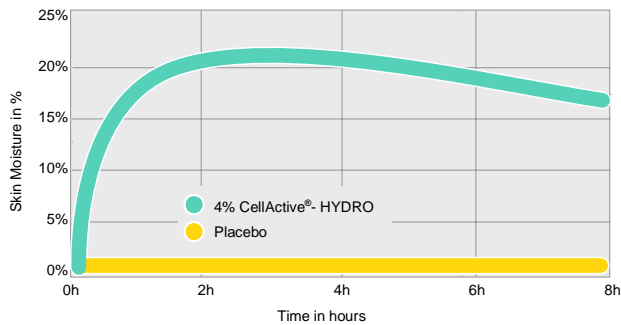
- Corneodesmosomes bind cells to cells
- Enzymatic cleavage causes desquamation of cells
- This process requires an acidic pH environment

# The Apple-fresh Moisturiser

## Studies of efficacy

### *In vivo* trial: skin moisturising

4% CellActive®- HYDRO in an emulsion



**Test parameter:** Extent of hydration of the stratum corneum

**Method:** Application of 4% CellActive®-HYDRO; 20 trial subjects, age 37 years; evaluation tool: corneometer

**Result:** 20% increase in hydration in comparison with placebo; efficacy in emulsion confirmed

### *In vivo* trial: corneodesmolysis

with 4% CellActive®- HYDRO



**Test parameter:** Optical skin desquamation

**Method:** Application of 4% CellActive®-HYDRO; duration: 21 days, 20 trial subjects, age 37 years; evaluation tool: video microscope and visual evaluation

**Result:** Visibly improved skin desquamation; good moisturised skin

## INCI

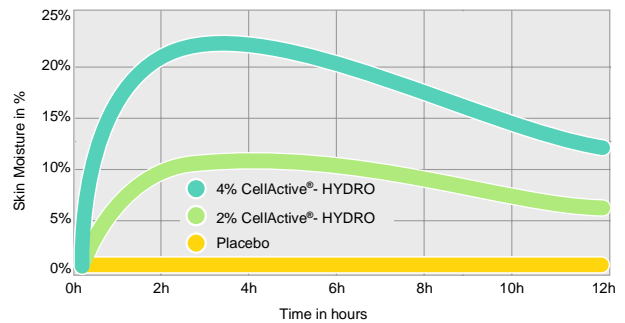
**EU:** Glycerin, Aqua, Pyrus Malus Fruit Extract, Pectin, Chlorella Vulgaris/Lupinus Albus Protein Ferment

**USA:** Glycerin, Water, Pyrus Malus (Apple) Fruit Extract, Pectin, Chlorella Vulgaris/Lupinus Albus Protein Ferment

**Japan:** Glycerin, Water, Pyrus Malus (Apple) Fruit Extract, Pectin, Chlorella Vulgaris/Lupinus Albus Protein Ferment

### *In vivo* trial: skin moisturising

2% and 4% CellActive®- HYDRO in a gel



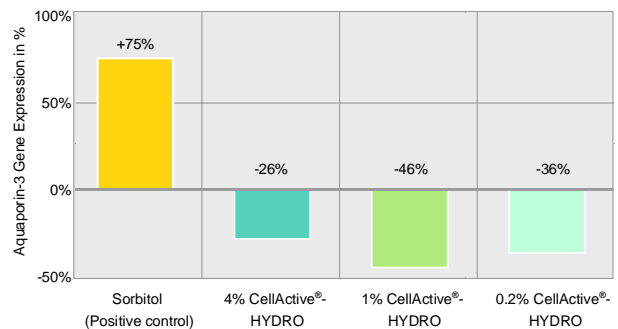
**Test parameter:** Extent of hydration of the stratum corneum

**Method:** Application of 2% and 4% CellActive®-HYDRO; 21 trial subjects, age 30 years; evaluation tool: corneometer

**Result:** 23% increase in hydration in comparison with placebo; efficacy in gels confirmed

### *In vitro* trial: Aquaporin-3 Gen (AQP-3)

Gene expression



**Test parameter:** Expression of AQP-3 Gens

**Method:** PCR (Polymerase Chain Reaction)

**Result:** Improved hydration of the epidermis leads of reduced AQP-3 gene expression

## Concentrations

0.5 - 4%

## Applications

Moisturising skin care for face and body. Can be used in O/W and W/O emulsions and gels

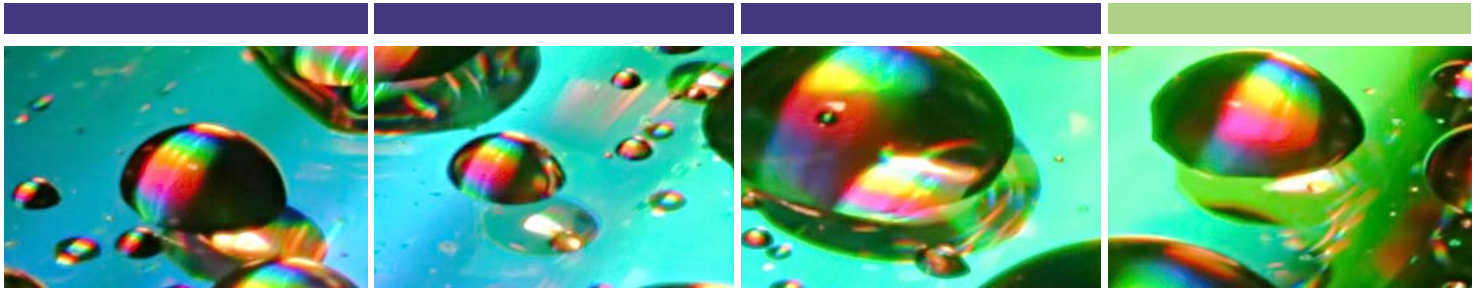
## Additional information

**Preservative:** 1% phenoxyethanol

**Animal testing:** Not tested on animals. Contains no substances of animal origin

**Toxicology:** Non-toxic for humans and environment.

**Safety:** GMO-free, BSE-free, CMR-free; contains no pesticides, mineral oil or heavy metals



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