

BerryFlux Vita

Oil-soluble Raspberry stem cells to preserve skin moisture and elasticity.

ACTIVITY

Water is an indispensable element for the well-being of the skin. Good hydration helps preserve the most important characteristics of youthful, healthy skin, such as suppleness, elasticity and tone. **BerryFlux Vita** is a blend of carotenoids, lipids, phenolic acids and ellagitannins, naturally found in all the different organs of the plant and present in the extract thanks to a stem cell culture technology. These actives confer powerful antioxidant and skin hydration properties to **BerryFlux Vita**.

BerryFlux Vita is a patented oil-soluble extract of Raspberry cultured stem cells with a strong moisturising activity.

BerryFlux Vita moisturises the skin and protects it from dehydration through a wide range of complementary activities:

- By increasing the dermal and epidermal hyaluronic acid content,
- By enhancing water and glycerol transport in the epidermis,
- By helping maintain water and other moisturisers in the skin,
- By improving the production of ceramides in the *stratum corneum*.



GENERAL PRINCIPLES

The natural moisture of the skin is mainly related to three classes of molecules:

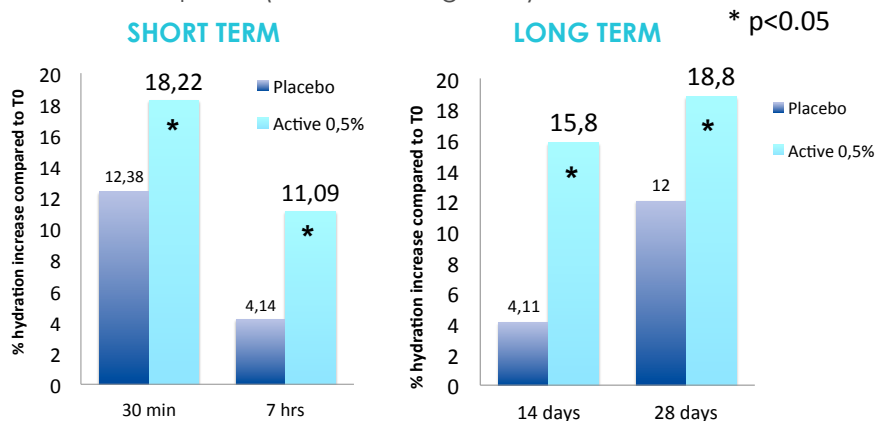
- **GLYCOSAMINOGLYCANS:** water is captured by the body through glycosaminoglycans (GAGs). These polymers fix large quantities of water in the extracellular matrix. Hyaluronic acid (HA) is a glycosaminoglycan distributed widely throughout connective, epithelial and neural tissues.
- **PROTEINS:** water is captured and retained in the cells thanks to highly insoluble, cross-linked proteins, the main ones being Aquaporin 3, Filaggrin and Involucrin, which are all involved in different mechanisms to maintain the hydration level necessary for the skin's proper functioning.
- **LIPIDS:** on the surface of the skin, water constantly evaporates. An adjustment of this phenomenon takes place thanks to the lipids that bind the corneocytes and, with them, form the permeability barrier of the skin (hydrolipidic film).

BerryFlux Vita acts on all three classes of molecules to improve skin moisture.

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SHORT AND LONG TERM HYDRATION: IN-VIVO TEST

A clinical in vivo moisturizing efficacy test was performed on 20 volunteers with 20-60 years of age, having dry and very dry skin. Twice a day, the panelists applied a cream containing 0.5% of **Berry Flux Vita** and the skin hydration level was measured by CORNEOMETER®CM850 at different time points (short and long term).



Berry Flux Vita had a positive short term effect of skin hydration (+18% after 30 minutes and +11% after 7 hours from application), and kept the skin hydrated even over a longer time period (+16% after 14 days and +19% after 28 days), compared to the skin areas treated with the placebo.

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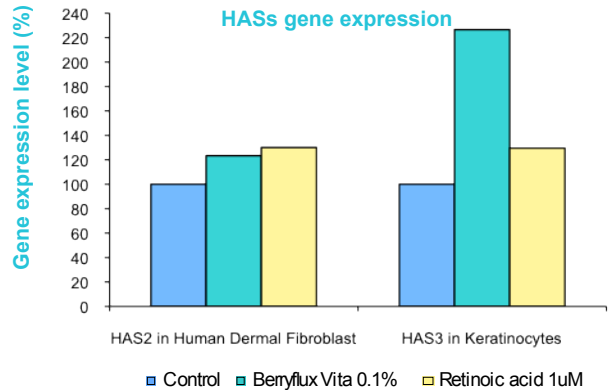
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IMPROVED HYDRATION THROUGH HYALURONIC ACID STIMULATION

BerryFlux Vita acts on the gene expression of **hyaluronic acid synthase**, the enzyme that polymerises HA, increasing it by 20% in fibroblasts and by 126% in keratinocytes.

An essential molecule in hydration regulation, hyaluronic acid plays a predominant role in the epidermis and in the dermis, enabling these tissues to maintain their hydration level thanks to its high water retention ability.

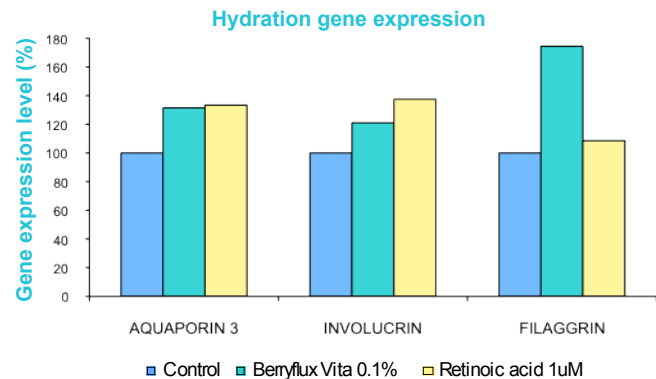


IMPROVED HYDRATION THROUGH PROTEIN STIMULATION

BerryFlux Vita induces gene expression of **Filaggrin** by 75%, of **Involucrin** by 21% and of **Aquaporin 3** by 31%.

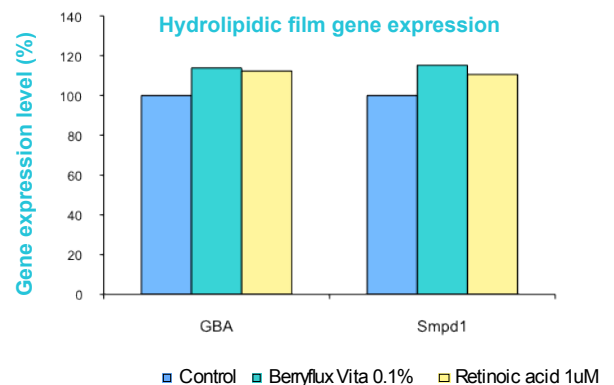
Higher levels of Involucrin and Filaggrin are associated with accelerated recovery after skin barrier disruption, Involucrin being a structural support of the *stratum corneum* and Filaggrin being a source of natural moisturising factor.

Aquaporin 3 increase is linked with enhanced water and glycerol transport and therefore better skin irrigation.



IMPROVED HYDRATION THROUGH EPIDERMAL LIPID STIMULATION

BerryFlux Vita induces the expression of two enzymes involved in the formation of ceramides: it boost the expression of **β-glucocerebrosidase** (GBA) by 13% and of **Sphingomyelin phosphodiesterase** (Smpd1) by 15%. This provides a beneficial effect on the production of ceramides in the *stratum corneum* and enhances the skin's barrier function.



TECHNICAL INFORMATION

Trade name: BerryFlux Vita

INCI name: Rubus Idaeus Leaf Cell Culture (and) Caprylic/Capric Triglyceride

CAS number: 84929-76-0/ 65381-09-1

Final product: Oil-soluble fraction in caprylic/capric triglyceride

Recommended use dose: 0.5 %