Eau de Raisin®: a New Moisturising and Soothing Active

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Abstract

Water is fundamental for life. It constitutes 20% to 30% of the skin mass and is mainly located in the superficial layers. As the skin is our major protection against external attacks, it is very important to preserve its components and thus, the water content. Cutaneous moisturisation is a complex phenomenon involving numerous biological mechanisms such as water and solutes flow, transport processes and trapping of water by hygroscopic compounds.

With this knowledge our company, in partnership with a laboratory in Paris, has highlighted the biological ways used by the active Eau de Raisin® for its moisturising and soothing activities. Firstly, using the transcriptomic technique, data have demonstrated the numerous biological mechanisms involved in the moisturising and calming processes of this active. Additionally, to complete the previous results, two clinical studies have been performed. Statistical analyses have shown significant results for both activities on volunteers. In fact, for the moisturisation measure, data demonstrate that Eau de Raisin® induces a significant increase ($p<0.05$) in the corneometric value by 125.29%, in comparison to the control. Also, for the soothing evaluation, results show that the active leads to a statistically significant decrease ($p<0.05$) by 61.47% in tingling sensations on irritated nostrils, *versus* the control. Therefore, all of these studies have confirmed the moisturising and soothing activities on the skin of the active, Eau de Raisin®.

Introduction

Water is essential for life. It represents over 65% of the body mass. This water is essential for the physiological functions of the body. It plays an important role in blood flow, tissue hydration including skin moisturisation, digestion and thermoregulation. This water exists in our organism in two forms: the first one is found embedded in molecular structures (known as the bound water) and the second form is a free one that circulates and contributes in particular to nutrient transport and waste removal.

The skin contains 20 to 30% of water, mainly located in the superficial cutaneous layers. The water homeostasis of the epidermis is important for both the physical appearance and the physiological properties of the skin and for the water balance of the body. The fact is that every day the body evaporates at least two litres of water, mainly through sweat or perspiration. The homeostasis of water in the epidermis depends on several factors such as quality of the epidermal barrier, amount of water in the epidermis, concentration of hygroscopic substances that hold water and external humidity. The cutaneous moisturisation allows the skin to retain its flexibility, softness, tone and appearance.

Water Flows into the Skin

Skin moisturising is a complex phenomenon that can be considered as a constant flow of water from the dermis to the epidermis and is expressed as the percentage of water in the superficial layers of the epidermis forming the *stratum corneum*. When the skin is well moisturised, this percentage is 13%. Of course, with ageing, this rate decreases to 10% or even to 7%.

Daily, the skin has to fight against dehydration due to external aggressions (sun, wind, temperature changes, pollution stress or irritation…). But when the skin is well moisturised, it can counteract against most of these attacks and ageing phenomena. In contrast, dehydration is a major cause of speeding up the appearance of ageing signs such as fine lines, wrinkles, loss of tone and elasticity. Also, it is a factor increasing the phenomena of irritation and cutaneous inflammations.

It is important to note that before arriving at the *stratum corneum* and allowing skin moisturisation, water follows a long pathway. Water travels from the blood vessels to the dermis where it is stored. Then, water passes through the