

## **GREEN CHEMISTRY & SUSTAINABLE COSMETIC BIOTECHNOLOGY & COSMETIC APPLICATIONS**

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### **Myrti'lla®, a new anti-redness cosmetics active ingredient which improves microcirculation**

Over time, blood vessels at the surface of the skin are weakened and microcirculation becomes slower. This phenomenon leads to redness formation and to the reduction of cellular exchanges between dermis and epidermis. Most often temporary, skin redness can settle and become permanent.

In order, in a global way, to fight against this problem which is accentuated with age, Berkem has developed an active ingredient which reduces redness and improves microcirculation: Myrti'lla®. This active ingredient, extracted from bilberry leaves [1, 2], is a 100% plant-origin powder, preservative free and carrier free. It is rich in polyphenols ( $\geq 12\%$ ), in particular from the chlorogenic acid family ( $\geq 7\%$ ). Its efficiency has been proven by several in vivo and in vitro tests.

The anti-redness activity was evaluated on 17 volunteers in a face cream at 0.5% of Myrti'lla®. The immediate effect was demonstrated thanks to a siascope by haemoglobin quantification. After only 30 minutes of application, redness decreased by 7%. In addition, a clinical scoring was carried out to prove the long term effect (cream versus placebo). After 28 days of use, the cream with 0.5% of Myrti'lla® reduced redness by 10%. The placebo cream had no effect on the redness. Then, the efficiency of Myrti'lla® on microcirculation was tested in vitro. This active ingredient increased the endothelial cell formation of pseudo-tubes by 10%. By stimulating the formation of new vessels, it improves microcirculation. Thanks to its properties, Myrti'lla® acts on redness and on microcirculation. Day after day, this active ingredient decreases redness and brings fresh complexion.

1. Monograph. *Vaccinium myrtillus* (bilberry). *Altern Med Rev*, 2001. 6(5): p. 500-504.
2. Hokkanen, J., et al., Identification of Phenolic Compounds from Lingonberry (*Vaccinium vitis-idaea* L.), Bilberry (*Vaccinium myrtillus* L.) and Hybrid Bilberry (*Vaccinium x intermedium* Ruthe L.) Leaves. *Journal of Agricultural and Food Chemistry*, 2009. 57(20): p. 9437-9447.