Whole Protection Red-flowered silk cotton tree, a global protection for skin

Because skin is continually aggressed by sun rays, it is necessary to protect it as a global way. To get a skin with a better resistance to fight external aggressions.

• How it works

Whole Protection Red-flowered silk cotton tree is dedicated to give skin means to protect itself by supplying a biological protection efficient till the heart of skin cells, against two natural sources of aggressions, UVA and UVB. First with an action of protection at two levels, at a global level by contributing to release defense proteins and, at a more precise level, by a protection of the DNA of epidermis cells. Then, it is efficient on irritation phenomena by limiting the release of the messengers of inflammation - they accentuate the sensation of irritation.
Thanks to those combinated actions, skin is protected longer and keeps its supply of defenses.

• A story - the Red-flowered silk cotton tree, a key tree in Africa

Bombax costatum, Bombacaceae

Big tree from the Western and centre of Africa, it can be 25 metres high, its fruit gives kapok, a white vegetal fibre, which looks like cotton. It can well resist dryness and fires in savannah, but it suffers now from late regeneration in particular zones (Burkina Faso) because of the aridity of soil and of the anthropic pression.
Recognized as essential to men and animals, many parts of this tree are used in food and medicinal purposes; it is also used as fodder for cattle.

• Marketing claims - protection & soothing

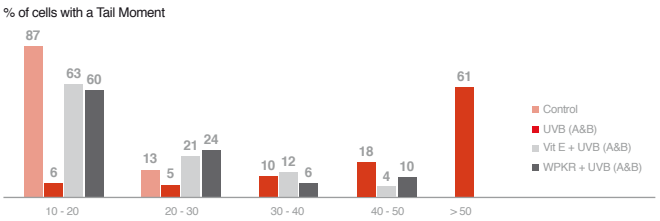
Biological protection, soothes, limits irritations, protects from environmental aggressions, anti-ageing, limits cell ageing, reinforces cell natural defenses, antioxidating.

To be used in skincare and make-up products like

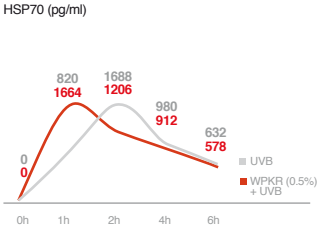
cream, fluid, serum, balm, lotion, milk, gel, foundation, lipstick, etc.

any cosmetic or skincare product dedicated to protect skin from aggressions of UV rays.

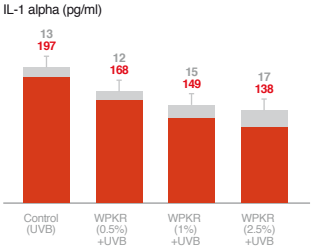
• Efficacy - *in vitro* testing results



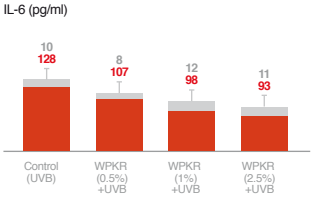
Decreasing of the fragmentation of DNA of keratinocytes



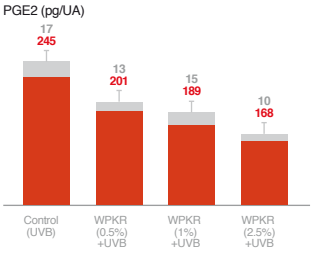
Modulation of the kinetics of the synthesis of HSP70



Decreasing of IL-1 alpha



Decreasing of IL-6



Decreasing of PGE2

Protective effect against aggressions of UVA and UVB (Comet testing): at **0.5%**

The obtained results have revealed that the majority of irradiated cells (90%) have a «tail moment» higher than 30%, and that 61% of cells have a «tail moment» higher than 50. That result means that DNA of cells was very fragmented by UVA and UVB rays. Only 10% of cells present a «tail moment» lower than 30.

In conclusion, in the conditions of irradiation, the product Whole Protection Red-flowered silk cotton tree (WPKR) induces a significant decreasing of the DNA fragmentation due to UVB and UVA rays.

Decreasing of irritation: at **0,5%**, **1%** and **2.5%**

- decreasing of the release of Interleukine 1-alpha (IL1-alpha) stimulated after UVB rays irradiation respectively by 15%, 24% and 30%
- decreasing of the release of Interleukine- 6 stimulated after UVB rays irradiation respectively by 16%, 23% and 27%
- decreasing of the production of Prostaglandine E2 (PGE2) stimulated after UVB rays irradiation respectively by 18%, 23% and 31%

Auto-protective effect: at **0.5%**

Modulation of the kinetics of the stress proteins (HSP70) synthesis. The quantification of the stress protein (HSP70) has been performed in the presence and in the absence of the product Whole Protection Red-flowered silk cotton tree (WPKR) after irradiation of reconstituted epidermis. Its protective effect has been translated by the speed of the apparition of stress proteins (HSP70) while maintaining the concentration of those proteins at the same level as the one induced by UVB rays only. Thanks to that mechanism, the product allows to repair damages induced by UV rays quickly.

• Technical information - Formulating Whole Protection Red-flowered silk cotton tree

- INCI name of cells: bombax costatum leaf cell extract
- form: cells (20%) dispersed in vegetal glycerine (80%)
- aspect: liquid
- concentration: starting at 0.5%
- dispersible in any formulation

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