

First Light Snow Lotus

To restore an initial radiance

A STORY

The Snow lotus | *Saussurea involucrata*, Asteraceae
A precious Asian Alpine medicine herb

As an Alpine species growing in snowy mountain peaks throughout China, like the Huangshan mountains of Anhui in the West or in North of Tibet, it lives in rocks between 3500 and 5000m. It has become a good replacement for another species (saussurea laniceps), as it can be found at lower altitudes, and is now used most often in Chinese medicine. Indeed it is well known to heal head injuries, menstrual disorders, and as a remedy for arthritis or a tonic for weakness. Despite a long germination time and very hard soil environments. it gets brilliant white flowers on dark green leaves.

Key points

An active plant cell

Developed to deliver the highest amount of original active molecules.

A high tech natural ingredient

Created to preserve and improve the identity and the benefits of a natural product.

An essential radiance action

Rebalances skin essential mechanisms to get a better complexion

Because ageing and oxidative stress unbalance some essential mechanisms regarding complexion, it is necessary to put them back at their original level. For a more radiant and balanced skin.



PRODUCT BENEFITS

Balance & Radiance

Radiance, oxygenating

Helps skin to get a tone more radiant, by detoxifying and oxygenating skin cells.

Brightening

Helps to reduce brown spots and improves skin complexion

Regenerating

Increases epidermis cell regeneration.

Antioxidant

Slows down general cell oxidation, reduces excessive production of free radicals.

To be used in skincare or make-up products such as cream, fluid, serum, balm, lotion, milk, foundation, concealer, etc. In any cosmetic or skincare product dedicated to improve the skin's radiance.

NÆOLYS

Related products | SMOOTH LIGHTENING WHITE ROSE | ESSENTIAL BEING INDIAN JASMINE | PURIFY ALOE VERA

HOW IT WORKS

First Light Snow Lotus: to initiate the balance of essential mechanisms in the epidermis

First Light Snow Lotus balances four main processes in the epidermis that can be unbalanced by ageing or oxidative stress at the epidermis level: cell renewal, cellular respiration, production of melanin and cell oxidation. Then, it increases cell proliferation, that will remove melanin in the upper layers of the epidermis. By improving cell respiration, it increases the elimination of toxins that have been accumulated in skin. By limiting the production of melanin, it helps skin to be more uniform. At last, by decreasing cell oxidation, it allows cells to be in operation longer.

Thanks to those actions, skin gets a better balance and can improve its pigmentation aspect.

in vitro testing results

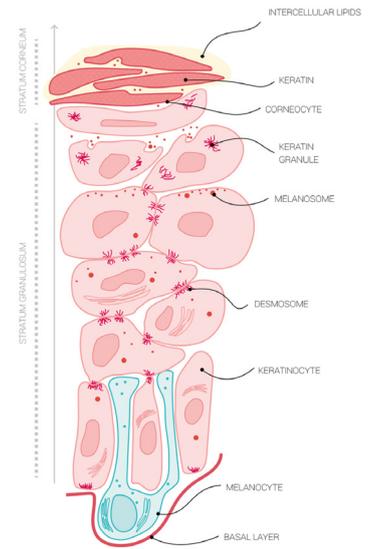
Study of cell renewal - epidermis level

The epidermis, the superficial layer of skin is first made of cells called keratinocytes which renew non stop according to a 21 days cycle. That renewal of the epidermis is made thanks to the cell proliferation and the differentiation that keep the balance of adult tissues, therefore keratinocytes, divide at the level of the basal layer of the epidermis, which is mainly made of non differentiated cells and migrate to the surface changing their form: they lose their nuclei and load hard filaments of keratine. When they reach the cornified layer, they become corneocytes, dead cells that create a solid membran (thanks to keratine) impermeable and protective: the protective natural barrier of the epidermis. Those built up corneocytes will naturally break away and be shed. The alteration of that balance, essential to the good of tissues called homeostasis is responsible for physical changings linked to ageing: skin wilting because of the decrease of cell proliferation, lack of healing in case of wounds, loss of hair...

Study of the proliferation of epidermis cells

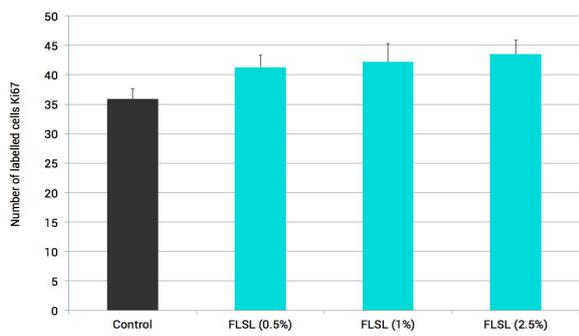
Naolys studied proliferation of epidermis cell using KI67, wich is a anti-gene to mark cell proliferation.

Studies have been made on reconstructed epidermis.



THE EPIDERMIS AND KERATINISATION PROCESS

Study of epidermis cell proliferation



Increase of KI 67

→ At concentrations of 0.5%, 1% and 2.5%, stimulation of the proliferation of keratinocytes in the basal layer for treated epidermis respectively by 15%, 18% and 21%

Technical information Formulating First Light Snow Lotus

INCI name of cells

saussurea involucreta callus extract

form

cells (20%) in glycerin or in sunflower oil (80%)

aspect

liquid

concentration

starting at 0.5%

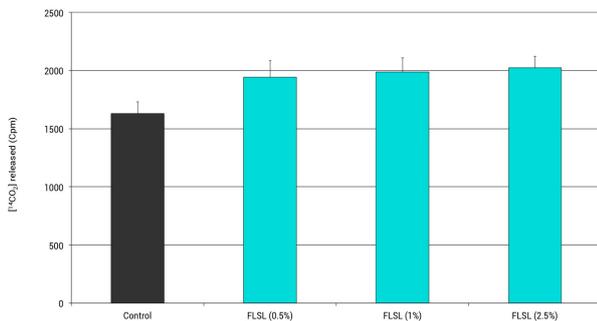
dispersible

in any formulation

Study of cellular respiration

Cellular respiration is a redox chemical reaction which supplies energy to cells to grow and to function. Cells produce energy with glucides, as ATP through cell respiration. The activity of First Light Snow lotus on the cell and respiratory metabolism has been evaluated by the metabolization of glucose by the cells of the epidermis in hypoxia conditions. In vitro hypoxia conditions induce deep alterations of cell electromechanical functions, with an increase in the production of lactate, a fall in the quantity of ATP, ADP, and a loss of LDH. The reoxygenation of hypoxiated cells (a reversible state) normalizes the loss of lactate, induces a resynthesis of ATP and a reduction in the release of LDH. The decrease in superoxyde dismutase and glutathion peroxydase activity is reduced

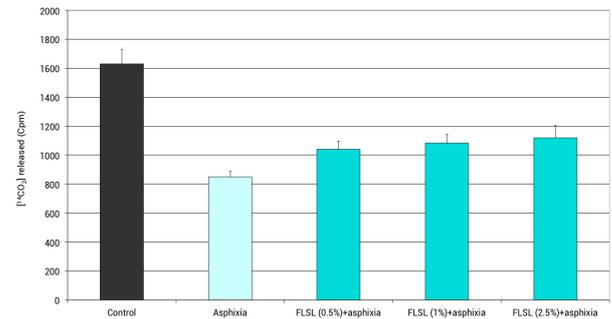
Study of cellular respiration in physiological conditions



Increase of release of CO₂

→ At concentrations of 0.5%; 1% and 2.5%, increase of the release of CO₂ respectively by 19%, 22% and 24%

Study of cellular respiration in asphixia conditions



Increase of release of CO₂

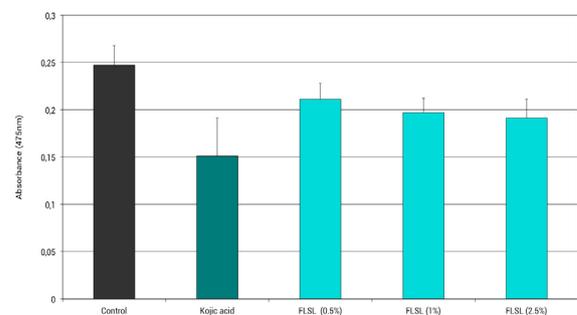
→ At concentrations of 0.5%; 1% and 2.5%, increase of the release of CO₂ respectively by 22%, 27% and 32%

Study of pigmentation

The skin pigmentation is the result of the production of melanin in the melanosomes, small organelles in melanocytes, and its transferred to keratinocytes, in the epidermis and hair follicles. The synthesis of melanin begins with an amino acid, tyrosine, which is catalysed by the enzyme, tyrosinase, itself synthesized in the form of a inactive precursor which is activated when the melanocytes are stimulated by alpha-MSH via cAMP. Tyrosine is transformed into DOPA (3,4-dihydroxyphenylalanine) which is then oxidized into DOPAquinone, which are oxidised into indole compounds. After several other chemical reactions, these indole compounds bond to each other to form eumelanin, a brown-black pigment, and pheomelanin, a yellow-red pigment, which gives, at the end of the process, melanin.

Naolys has chosen to study the quantity of global melanin in a culture of melanocytes.

Study of melanin



Decrease of melanin

→ At concentrations of 0.5%, 1% and 2.5%, decrease of melanin rate respectively by 15%, 20% and 23% at the level of melanocytes in culture compared to kojic acid (-39%)

Study of lipid peroxidation

Because it is a reaction indicating oxidative stress, Naolys chose to study the release of MDA during physiological lipid peroxidation and lipid peroxidation induced by UVB.

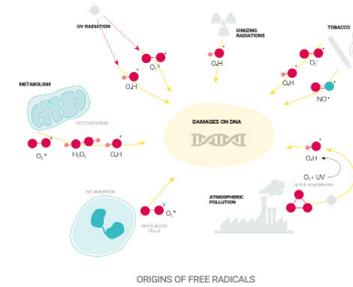
When we measure the MDA (malondialdehyde), one of the chemical products created by the chemical chain reaction induced by the free radicals, indicating of cytotoxicity by oxidative processes, then we have a good information about the anti-oxidant activity of a substance.

Normally, the endogenous production of free radicals (physiological lipid peroxidation) is counterbalanced by various defense mechanisms.

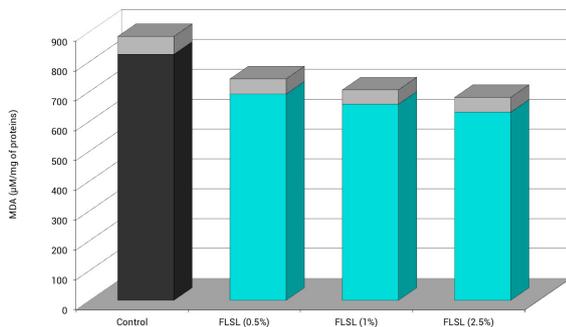
However, many situations can induce the appearance of an excess of free radicals (induced lipid peroxidation) such as intense exposition to sun, intoxication by certain chemical products, contamination by toxins, intense inflammatory reactions, etc.

These oxygenated free radicals attack phospholipid membranes, thereby altering the properties of the cell membrane.

They also induce the formation of lipid derived cytotoxic mediators which react with proteins. The consequences are numerous and can lead to several pathologies (inflammation, arteriosclerosis, etc.)



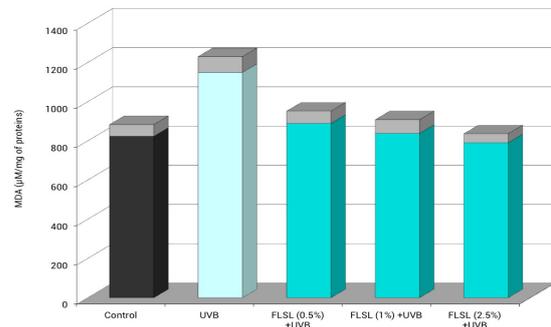
Physiological lipid peroxidation



Decrease of MDA rate

→ At concentrations of 0.5%, 1% and 2.5%, decrease of the lipid peroxidation which was translated by a decrease of the MDA rate respectively by 16%, 20% and 24%

Lipid peroxidation induced by UVB



Decrease of MDA rate

→ At concentrations of 0.5%, 1% and 2.5%, decrease of the lipid peroxidation induced by UVB which was translated by a decrease of the MDA rate respectively by 23%, 27% and 31%