Healthy Shine Lilac

For renewed balance and shine

NATURE EXPANDED


HAIR

Healthy Shine Lilac

For renewed balance and shine

A STORY

The lilac | *Syringa vulgaris, Oleaceae*

Fragrant flowers, a precious remnant of the19th century

The scientific name of « syringa » comes from the hollow stem of lilac shoots; despite its small size – 2 to 5 m – this shrub can live for up to 40 years. Originally from the outer reaches of South-Eastern Europe, it made its way into European gardens in the 16th century, when it was introduced to Italy.
In the19th century, people liked the fragrant creamy white and purple flowers so much that they were used as decoration inside houses and the French horticulturist Victor Lemoine created numerous lilac cultivars. Regarding medicinal uses, only the tonic and antipyretic effects of its leaves are known. A symbol of love and fertility in Antiquity, lilac is now only used for ornamental purposes.

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.

Total balancing action
Repairs and restores for healthy hair.

Because hair can be affected by numerous environmental and internal factors, (UVB, stress, pollution, etc.) that damage it and make it dull, it is necessary to repair and strengthen its basic defence and growth mechanisms. For healthier, shinier hair.

HAIR

PRODUCT BENEFITS

Hair health

Restoring shine and damaged hair
Smoothes away hair scales, reinforces natural protection. Harmonizes hair along its entire length. Restores natural shine.

Soothing
Reduces irritation of the scalp and roots.

Energizing
Reinforces the production of cell energy in the hair roots.

Protective (antioxidant and anti-pollution)
Reduces the formation of free radicals, including after exposure to UVB and residues of pollutants. Prevents damage.

To be used in hair products such as mask, serum, balm, etc. In any hair product dedicated to strengthen and repair hair and scalp.
Any type of hair, especially damaged hair.

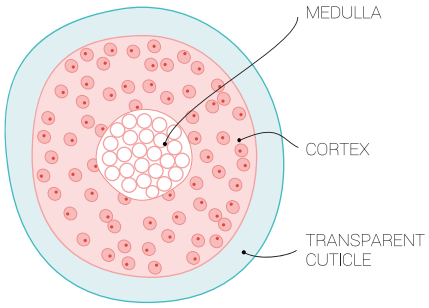
Related products: BALANCING ENERGY ASIAN GINSENG | FRAGILE COTTON | PURIFY WHITE WATER LILY

NAOLYS

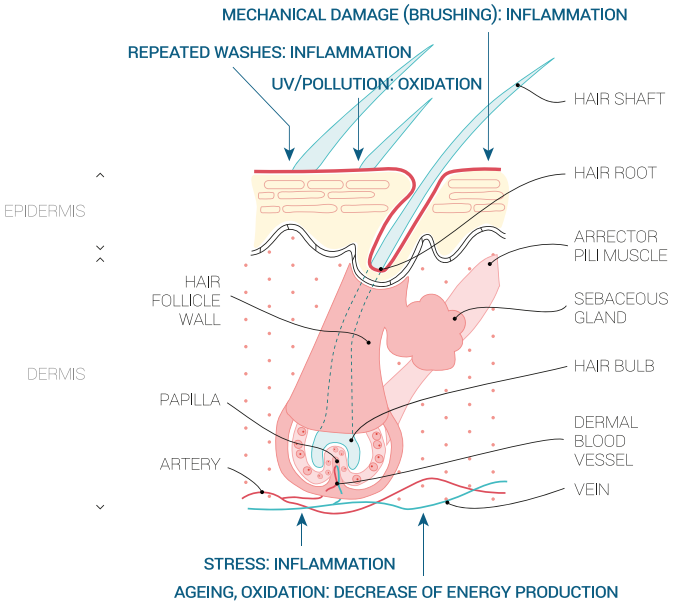
HOW IT WORKS

Healthy Shine Lilac: restoring biological balance

In everyday life, many factors can damage hair; making it dull, brittle, and irritated.
Today, we know that this indicates a deterioration of the hair shaft and its cuticle that can be due to several factors, that damage hair at the root. There is also the effect of ageing, which results in a decrease in energy creation and in oxidation. Hair dye can also cause inflammation and oxidation of the scalp and roots, as can repeated washing and mechanical manipulation such as excessive brushing and drying. We should also keep in mind that hair is sensitive to stress, which can lead to irritation. Finally sun and pollution can further increase hair oxidation.



STRUCTURE OF HAIR SHAFT



HAIR FOLLICLE

Multifunctional action in the heart of the hair follicle

To fight against the harmful effects of all these factors, Naolys proposes a reparative and preventive action in order to restore healthy hair.
Healthy Shine Lilac has a multifunctional effect on hair, acting on all three parts of the hair: the root, the scalp and shaft.

Rebalancing hair at its source

The hair root, the living part of hair, is located in the dermis: it is embedded at an angle in the scalp and contains the hair follicle in a little sack. At the base is a "bulb" or hair matrix, that has a small cavity in its lower part, the papilla, where numerous small vessels bring nutrients via the blood and nerve fibres. It is here and on the scalp that imbalances due to environmental and internal factors become apparent.

At the level of the bulb and epidermal cells:
Healthy Shine Lilac reduces inflammation at the level of the hair bulb and scalp.
Healthy Shine Lilac reduces oxidation at the level of the hair bulb.
Healthy Shine Lilac increases energy production at the level of the hair bulb.

Repairing the hair shaft and cuticle

The visible hair shaft, a very strong filament, is made mainly of keratin, dead cells that have migrated from the root. Its structure consists of three tubular layers one inside the other, the medullar canal in the centre, the thick cortex, that produces melanin, and the cuticle that forms an impermeable protective barrier, made of layers of cells arranged in scales. This outer layer suffers mechanical damage on a daily basis.

At the level of the hair shaft:
Healthy Shine Lilac repairs and enhances shine.

Repaired, soothed, protected, and strengthened by Healthy Shine Lilac, hair will become shiny and healthy again, and will be better protected against damage from the environment and internal factors.

CLINICAL TEST RESULTS

Hair repaired and shinier in 28 days

The panel's verdict

90% declared that their hair was shinier

80% declared that their hair was less damaged

At a concentration of 0.5%

IN VITRO TEST RESULTS

A complete rebalancing of the hair bulb

Energizing effect
Due to an increase in energy metabolism indicated by an increase in ATP synthesis at the cellular and mitochondrial levels.

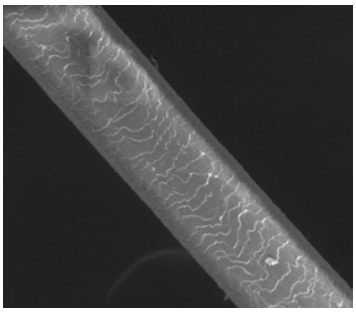
Soothing effect
Due to a decrease of the release of inflammation mediators, IL1-alpha **(-25%)**, IL-6 **(-22%)** and PGE2 **(-20%)**. And similar decreases at scalp level: IL1-alpha **(-28%)**, IL-6 **(-24%)** and PGE2 **(-23%)**.

Antioxidant and anti-pollution effects
Due to a decrease in free radicals indicated by a **20%** decrease in the production of endogenous MDA, a **25%** decrease in production caused by UVB and a **23%** decrease in production caused by residues of pollutants.

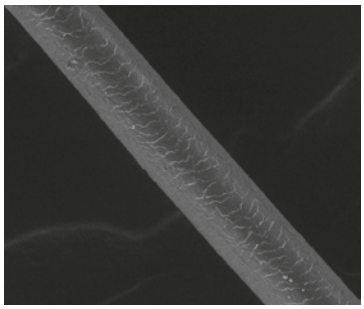
At a concentration of 0.5%

Clinical study

Repairing effect on the hair after 28 days



DAY 0



DAY 28

Increased shine after 28 days

Study conditions:

→ Testing for 28 days on 20 women aged 20-45 years with black damaged hair
→ Application once a day to the entire scalp and hair
→ Emulsion with 0.5% of Healthy Shine Lilac

Technical information on the formulation of Healthy Shine Lilac

INCI name of cells	form	aspect	concentration	dispersible
syringa vulgaris (Lilac) leaf cell extract	cells (20%) in glycerin or sunflower oil (80%)	liquid	starting at 0.5%	in any formulation (emulsion, lotion, fluid)

In vitro testing results

Rebalancing hair at its source

The hair bulb

Healthy Shine Lilac acts on all parts of the hair, from the root to the scales.
Concerning the root and scalp, Naolys decided to focus on the activities essential to maintaining healthy hair both from a preventive and restorative perspective in the hair bulb, i.e. its general metabolism and the regulation of inflammation and oxidation.

The hair bulb refers to the enlarged base of the hair follicle or root. The dermal papilla is at the base of the bulb, where blood capillaries irrigate, nourish and oxygenate the cells in the germinal membrane enabling rapid growth in the form of mitosis. At the base of the hair follicle, cells are gradually pushed upwards by the growth of subsequent cells. As the cells rise in the follicle their walls deteriorate, they become longer, keratinized, and move towards the outside, thereby forming the cuticle. As for the cortex, these cells are located above the papilla and have a tapered shape toward the axis of the follicle. It also contains the melanocytes, responsible for melanin synthesis which is transmitted to the keratinocytes. Furthermore, it is at this level that cellular waste is removed.

In the hair bulb,

→ Energy

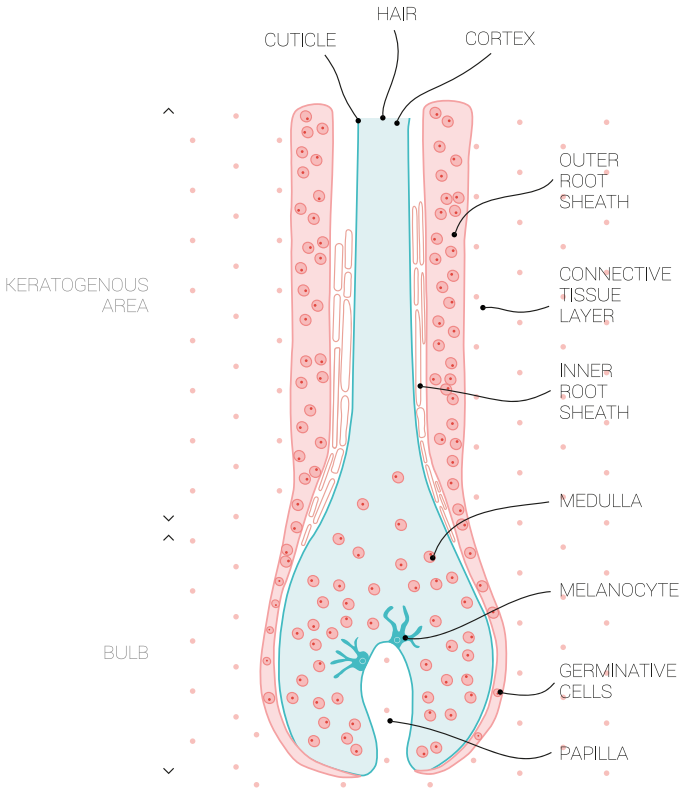
To improve both the energy metabolism required for the birth and development of a healthy hair (i.e. cell multiplication) and disposal of cellular waste, Naolys studied the absorption of oxygen and the speed of ATP synthesis via cellular respiration.

→ Inflammation

To reduce inflammation caused by mechanical manipulation and chemical agents on the hair, which can develop in all parts of the hair follicle, from the scalp to the root, Naolys considered the key inflammation mediators: IL1-alpha, IL-6 and PGE2.

→ Oxidation

Finally, Naolys studied the release of MDA (malondialdehyde), which is produced during physiological and induced lipid peroxidation. Usually endogenous production of free radicals (physiological lipid peroxidation) is counterbalanced by various defence mechanisms. However, many situations can lead to an excess of free radicals (induced lipid peroxidation) such as intense sun exposure, intoxication by certain chemical products (colouring and atmospheric pollution), contamination by toxins (during respiration), and intense inflammatory reactions, etc. which affect the hair.



HAIR ROOT

Study of energy metabolism

In the hair bulb

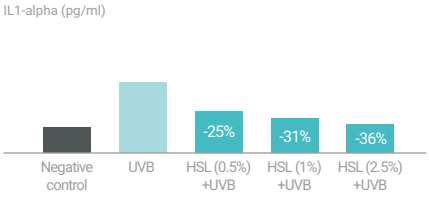
At a concentration of 0.5%, Healthy Shine Lilac in contact with keratinocytes in culture, induces a significant increase in:

→ the speed of basal cellular and mitochondrial respiration,
→ the speed of cellular and mitochondrial ATP synthesis,
→ ATP and ADP cellular synthesis after 5 days in contact with the product.

Study of inflammation mediators

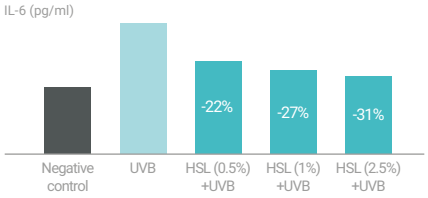
In the hair bulb and in the scalp at concentrations of 0.5%, 1% and 2.5%

In the hair bulb



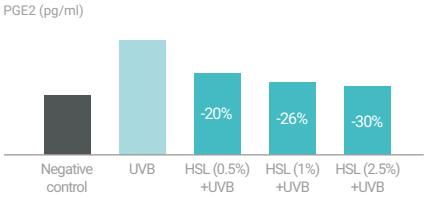
Decrease of IL1-alpha

→ In reaction of UVB, decrease of the release of inflammation mediator, IL1-alpha respectively by 25%, 31% and 36%.



Decrease of IL-6

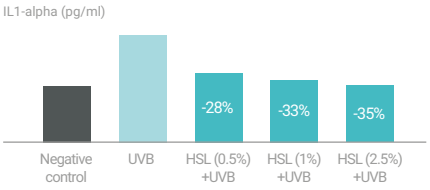
→ In reaction of UVB, decrease of the release of inflammation mediator, IL-6 respectively by 22%, 27% and 31%.



Decrease of PGE2

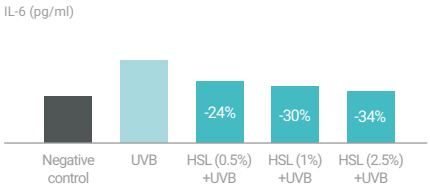
→ In reaction of UVB, decrease of the release of inflammation mediator, PGE2, respectively by 20%, 26% and 30%.

In the scalp



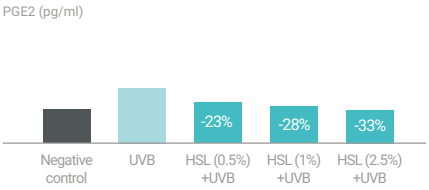
Decrease of IL1-alpha

→ In reaction of UVB, decrease of the release of inflammation mediator, IL1-alpha respectively by 28%, 33% and 35%.



Decrease of IL-6

→ In reaction of UVB, decrease of the release of inflammation mediator, IL-6 respectively by 24%, 30% and 34%.



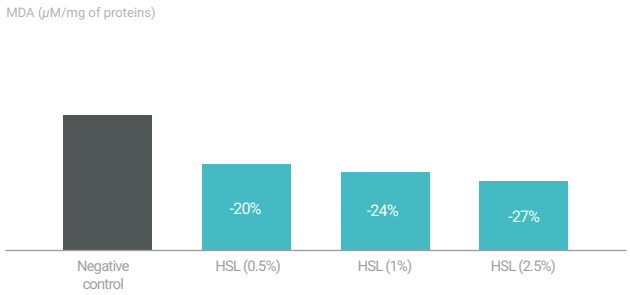
Decrease of PGE2

→ In reaction of UVB, decrease of the release of inflammation mediator, PGE2, respectively by 23%, 28% and 33%.

Study of lipid peroxidation

In the hair bulb

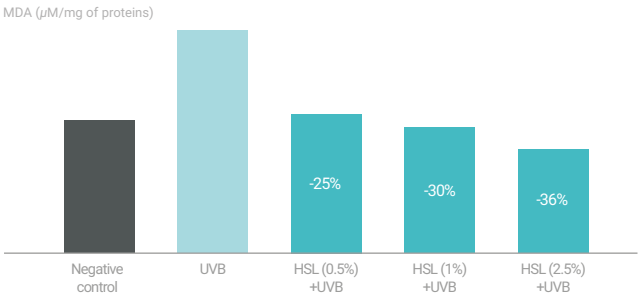
Physiological lipid peroxidation



Decrease of MDA rate

→ At concentrations of 0.5%, 1% and 2.5%, decrease of the physiological lipid peroxidation, translated by a decrease of MDA rate respectively by 20%, 24% and 27%.

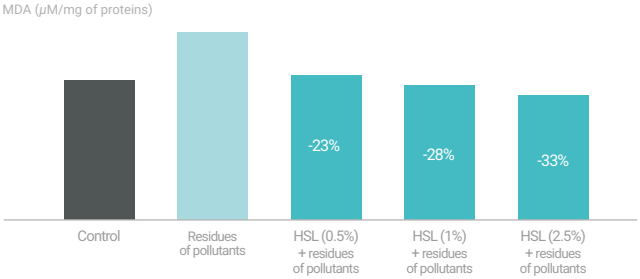
Lipid peroxidation induced by UVB



Decrease of MDA rate

→ At concentrations of 0.5%, 1% and 2.5%, decrease of the lipid peroxidation induced by UVB, translated by a decrease of MDA rate respectively by 25%, 30% and 36%.

Lipid peroxidation induced by residues of pollutants



Decrease of MDA rate

→ At concentrations of 0.5%, 1% and 2.5%, decrease of the lipid peroxidation induced by residues of pollutants, translated by a decrease of MDA rate respectively by 23%, 28% and 33%.