



GROWTH OLÉOACTIF®

Hair growth, fuller lashes

Substantiated oil-based active ingredient concentrated by
Oléo-éco-extraction patented green process

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GROWTH OLÉOACTIF®

ACTIVE INGREDIENT FOR HAIR GROWTH AND FULLER LASHES

GROWTH Oléoactif® is a natural oil-based active ingredient dedicated to hair and eyelash beauty care. Made of powerful molecules from roselle flowers (*Hibiscus sabdariffa*) and safflower florets (*Carthamus tinctorius*) extracted in sunflower oil, GROWTH Oléoactif® is a multifunctional botanical complex that targets the biological pathways involved in hair follicle life cycle. Obtained through the patented Oléo-éco-extraction technology, it is eco-designed, totally safe and COSMOS-certified, with proven efficacy at 2%.

A HOLISTIC COMPLEX INSPIRED BY ANCIENT PRACTICES

In traditional Indian and Chinese systems of medicine, many polyherbal formulations are reported for hair growth promotion and for the improvement of quality of hair [1][2][3]. Among them, roselle and safflower are two extensively used plants, known for their interesting content in phytosterols (especially β -sitosterol) and polyphenols. Roselle is composed of flavonoids, phenolic acids and anthocyanins [4]. Safflower contains typical flavonoids (hydroxysafflor yellow A or HSYA, carthamin) and is described in the literature as an efficient anti-hair loss medicinal remedy (*in vitro* and *in vivo* efficacy) [5][6][7]. Sunflower oil is rich in linoleic acid (ω 6), β -sitosterol and vitamin E.

A NATURAL SOLUTION THAT ACTS ON HAIR FOLLICLE LIFE CYCLE

Thanks to its richness in multiple and synergistic bioactive compounds, GROWTH Oléoactif® modulates the key factors and signaling biological pathways involved in hair follicle life cycle. It acts simultaneously as a hair growth inducer (by increasing vasodilatation, blood circulation, VEGF, KGF, IGF-1 growth factors...) and as a hair loss inhibitor (by decreasing oxidative stress, inflammation and inhibiting 5 α -reductase, TGF β ...) [3][4][7][8][9][10][11][12][13][14]. Moreover, as hair and lash present a similar anatomy and physiology, GROWTH Oléoactif® is also effective in boosting lash growth.

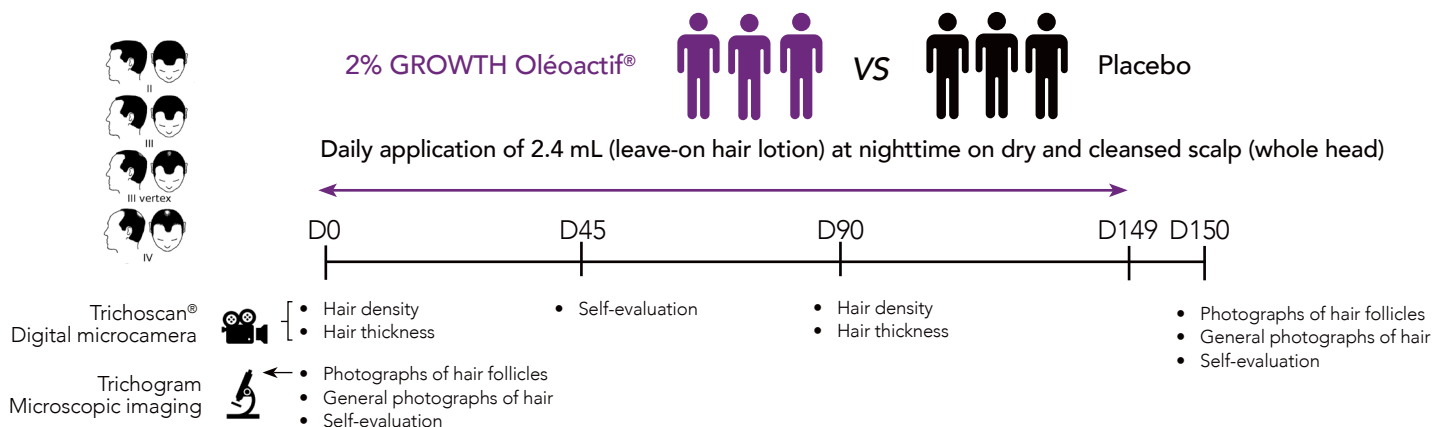
PROTECTION OF HAIR AND LASHES FROM OXIDATIVE STRESS

Induced by intrinsic or extrinsic factors, oxidative stress triggers the production of reactive oxygen species (ROS). ROS present deleterious effects on hair and lash follicles, impairing intracellular functions [1][15]. Thanks to its high level of polyphenols extracted from roselle and safflower (x98 versus solvent oil), GROWTH Oléoactif® is a natural source of effective antioxidants (x104 versus solvent oil) which protect follicles and limit hair and lash growth issues due to oxidative stress.



HAIR GROWTH EFFICACY AT 2% DOSE

The effect of GROWTH Oléoactif® on the reduction of hair loss and the promotion of hair regeneration is clinically evaluated after repeated application for 5 months. This single blind study is performed on 34 Caucasian men aged from 29 to 67 years old, separated into two distinct groups. All the volunteers present androgenetic alopecia (grades II-IV, Norwood-Hamilton scale) which is the most common hair loss issue affecting men and women nowadays [15][16].



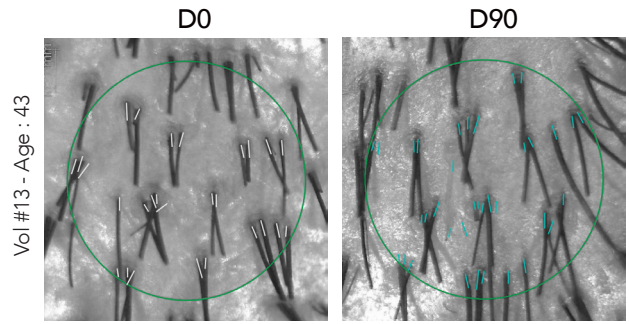
Boost of hair density and thickness

The parameters are evaluated after shaving the tested zone under standardized conditions, then using Trichoscan® method.

After 90 days of application and compared to D0, GROWTH Oléoactif® significantly increases:

- Hair density by +6%* (up to +29%) (placebo: +3%, n.s.)
- Hair diameter by +8%** (up to +29%) (placebo: +4%, n.s.)

*p≤0.1, **p<0.01



VISIBLE GROWTH OF NEW HAIR!

Stimulation of hair follicle activity

Hair follicle activity is determined using Trichogram method. It consists of microscopically examining the appearance of hairs plucked from the scalp.

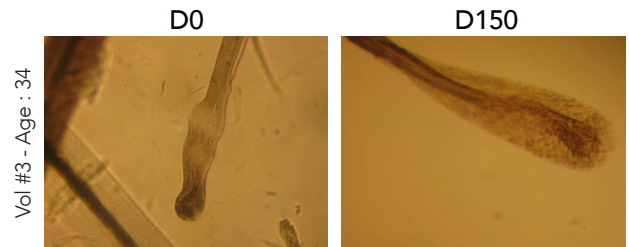
At D0:

- Irregular hair follicle, no presence of hair sheaths
- Hair poorly developed with insufficiently compacted and cohesive keratin

At D150, thanks to GROWTH Oléoactif®:

- Hair follicle presenting sheaths with a good cellular activity
- Anagen hair in its initial phase of regeneration

*p≤0.001



HAIR FOLLICLES ARE STIMULATED!

Anagen hairs

Average +14%* up to +109%*

Telogen hairs

Average -30%* up to -59%*

GROWTH Oléoactif® triggers a regenerative effect by relaunching growth of new hair. GROWTH Oléoactif® delays hair loss.

Self-evaluation and visible improvements



The progression of androgenetic alopecia is limited.
94% SATISFIED and 88% MORE CONFIDENT!

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[8] A.L. Hopkins et al. Hibiscus sabdariffa L. in the treatment of hypertension and hyperlipidemia: A comprehensive review of animal and human studies. *Fitoterapia.* 2013; 85: 84-94

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[10] J.S. Choi et al. In Vivo Hair Growth-Promoting Effect of Rice Bran Extract Prepared by Supercritical Carbon Dioxide Fluid. *Biol Pharm Bull.* 2014; 37(1): 44-53

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[13] J.M. Zingg et al. Induction of VEGF Expression by Alpha-Tocopherol and Alpha-Tocopheryl Phosphate via PI3K/PKB and HTAP1/SEC14L2-Mediated Lipid Exchange. *J Cell Biochem.* 2015; 116(3): 398-407.

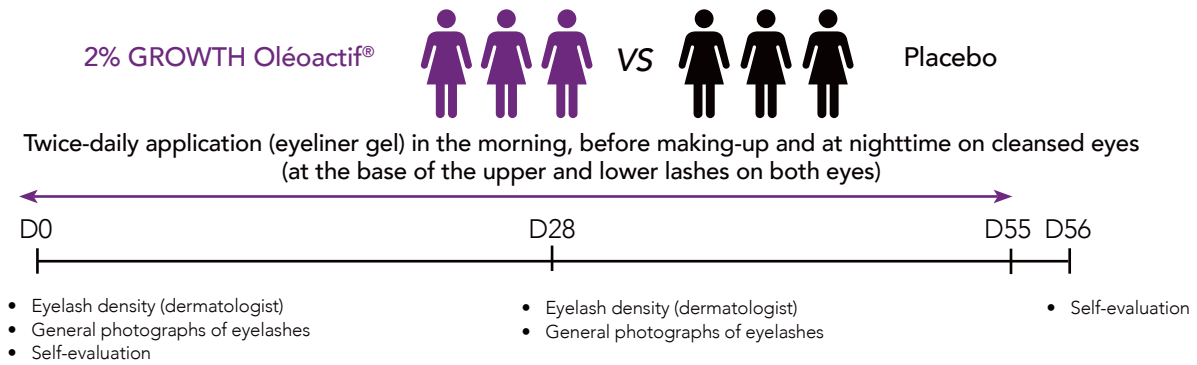
[14] H.Y. Peh et al. Vitamin E therapy beyond cancer: Tocopherol versus tocotrienol. *Pharmacol Ther.* 2016; 162: 152-169

[15] C.-C. Yang et al. Aging and Anti-Aging in Hair and Hair Loss. *Inflammation, Advancing age and Nutrition.* 2014; 19: 231-246

[16] U. Blume-Peytavi et al. S1 guideline for diagnostic evaluation in androgenetic alopecia in men, women and adolescents. *Br J Dermatol.* 2011; 164(1): 5-15

LASH BEAUTIFYING EFFECT AT 2% DOSE

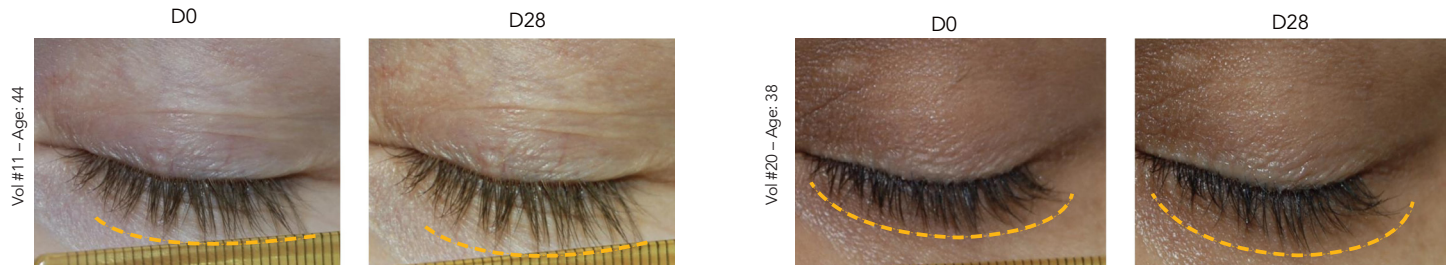
The effect of GROWTH Oléoactif® on lash enhancement is clinically evaluated after repeated application for 2 months. This single blind study is performed under dermatological and ophthalmological control on 41 Caucasian women aged from 20 to 50 years-old, separated into two distinct groups. All the volunteers present short, thin and low-density eyelashes.



Lash densifying efficacy

A clinical scoring is carried out by a dermatologist through a 10-degree visual scale. After 28 days of application and compared to D0, GROWTH Oléoactif® significantly increases lash density by +18%* (up to +100%) (placebo: +7%, n.s.). *p<0.005

Visible improvements and self-evaluation



NATURALLY DENSER AND LONGER LASHES!



TECHNICAL AND REGULATORY DATA

INCI NAME: Helianthus Annuus (Sunflower) Seed Oil (and) Polyglyceryl-3 Diisostearate (and) Carthamus Tinctorius (Safflower) Flower Extract (and) Hibiscus Sabdariffa Flower Extract

RECOMMENDED DOSE: 2% - 5%

RECOMMENDED pH: 3-10

SOLUBILITY: Liposoluble

FORMULATION: In the fatty phase before emulsification or at the end of the formulation process or directly in anhydrous formulas.

APPLICATIONS: Anti-hair loss prevention and treatment for men and women, hair rejuvenation, care for thinning and devitalized hair, anti-aging care, hair and lash growth, hair and lash strengthening, hair and lash beautifier. Hair care products: serum, lotion, mask, leave-on conditioner, styling gel. Lash care products: make-up, mascara, eyeliner, primer.



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