

NV TAMANU ULTRA REGEN



MULTIFUNCTIONALITY

Active Tamanu and
Ingredients: Rose hip oil.

Hair benefits:

- Shiny hair strands;
- Minimizes hair loss;
- Hair follicle stimulus;
- Scalp rejuvenation.

Hair benefits:

- Skin healing and regeneration;
- Increased collagen production;
- Acne treatment;
- Stretch mark treatment;
- Moisturizing;
- Reduced spots.

Usage

Gels, cream gels, emulsions in general, liquid soaps, shampoos, conditioners, and hair finishers.



DESCRIPTION

NV Tamanu Ultra Regen is an active ingredient encapsulated in lipid particles with a particle diameter greater than 200nm. Encapsulation through Nanovetores Technology allows the stabilization of sensitive components, therefore, complex of being formulated in their free form. The active

ingredient acts synergistically on the skin, in regeneration and healing, enabling the treatment of acne, eczema and scars, and on hair follicles, enabling the growth and regeneration of hair strands in a healthy way.

TAMANU OIL

Tamanu (*Calophyllum inophyllum*) is a tropical evergreen tree that can reach up to 20 meters in height and grows along coastal areas and adjacent floodplain forests. The tree is composed of a dense canopy of glossy elliptical leaves, fragrant white flowers, and large round nuts. The plant is native to East Africa, India, Southeast Asia, Australia, and the South Pacific, was widely planted in the tropics and is naturalized in the Hawaiian Islands¹.

The Tamanu tree is highly valued for its robustness and beauty, where it provides shade and shelter from the winds in the streets and coastal areas. From its nuts, a power-

ful oil is extracted that is traditionally used for medicine and cosmetics. The oil is rich in fatty acids such as oleic (30-61%), linoleic (11-39%), palmitic (12 - 21%) and stearic (8 - 20%), providing great benefits to dry skin, promoting powerful moisturizing abilities^{1,2,3,4}.

Tamanu oil increases the production of collagen and glycosaminoglycans*, promoting skin repair and wound healing. Moreover, it promotes a series of benefits, such as: scalp rejuvenation, supporting strong and healthy hair growth, antioxidant effects, delays aging (anti-UV action), as well as promotes antimicrobial and anti-inflammatory action^{4,5,6}.

Rose hip oil

A *Rosa mosqueta* (*Rosa canina*) is a shrub 2 to 3 meters tall, grows wild in Europe, northwest Africa, and Western Asia. In America, the species is distributed in Chile, Argentina, Peru, and the USA. Its flowers are normally pale pink, are pollinated by insects or can be self-pollinated^{7,8}.

The seeds are composed of high concentrations of unsaturated fatty acids, highlighting linoleic, linolenic, and oleic acids, polyphe-

nols, carotenoids, ascorbic acid and, to a lesser extent, saturated fatty acids. It also contains trans retinoic acid or natural tretinoin (vitamin A derivative, retinol)⁸.

From its seeds, the oil that contains all the properties is extracted. These compounds promote cell membrane regeneration, helping to heal skin wounds, soften spots and have anti-inflammatory and antioxidant effects^{9,10}.

* Glycosaminoglycans, known as GAGS, are a family of carbohydrates that assist in the maintenance and support of collagen and elastin.



IN VITRO TEST: HAIR FOLLICLE STIMULUS

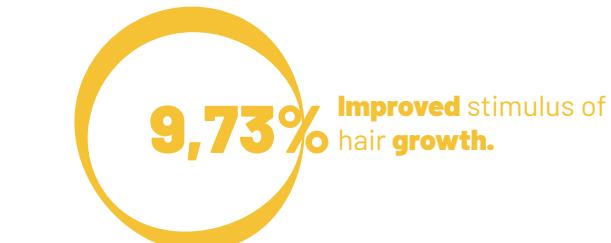
To perform the test in vitro, samples of **Serum NV Tamanu Ultra Regen** and control group (culture medium with reduced growth factors) were submitted.

The objective was to evaluate the potential of the sample to stimulate cell proliferation using human keratinocyte cell culture and human dermal papilla cells.

The result is shown in **Graph 1** and indicates the percentage of keratinocyte cell viability after 24 hours of exposure, with the control

group being normalized to 100%. **Serum NV Tamanu Ultra Regen** showed a 19.79% increase in the proliferation of human keratinocytes when compared to the control group.

The percentage of cell viability of human mesenchymal cells from dermal papilla after 24 hours of exposure is shown in **Graph 2**. The control group was normalized to 100%. **Serum NV Tamanu Ultra Regen** showed a 9.73% increase in the proliferation of human mesenchymal cells from dermal papilla.



Graph 1: Result of the analysis of keratinocyte cell proliferation.

Conclusion of the tests confirms the increase in the proliferation of keratinocytes and mesenchymal cells in the hair follicle of

Graph 2: Result of the analysis of cellular proliferation of mesenchymal cells of the dermal papilla.

humans, stimulating hair follicle cells and stimulating hair growth.

NV TAMANU ULTRA REGEN

Regulatory information

INCI Name	Cas Number	EINECS Number
AQUA	7732-18-5	231-791-2
BUTYROSPERMUM PARKII BUTTER	194043-92-0 / 91080-23-8	93-515-7
CALOPHYLLUM INOPHYLLUM SEED OIL	-	-
SORBITAN OLIVATE	223706-40-9	-
PROPANEDIOL	504-63-2	207-997-3
ROSA CANINA FRUIT OIL	84603-93-0	283-652-0
DECYL GLUCOSIDE	54549-25-6	259-218-1
GLYCERYL CAPRYLATE	26402-26-6	247-668-1
LAURYL GLUCOSIDE	110615-47-0	-
GLYCERYL UNDECYLENATE	65684-27-7	-
TOCOPHEROL	1406-66-2	200-201-5
HELIANTHUS ANNUUS SEED OIL	8001-21-6	232-273-9

Physical-Chemical Information

Appearance	Milky Liquid.
Color	Cream to green.
Odor	Characteristic.
pH	5.0 to 7.0
Dispersibility	Dispersion of encapsulated active ingredients in water.
Relative density	0.9 to 1.1 g/mL.

Usage concentration

0.5 to 5.0%

Stability pH

3.0 to 8.0

Storage

Keep in a well-ventilated place, away from light and heat. Add to formulation below 40°C under light stirring.

Compatibility

Gels, cream gels, emulsions in general, liquid soaps, shampoos, conditioners, and hair finishers.

Incompatibility

Ethanol and other organic solvents.

Notes

As it contains natural active ingredients, the product may change in color and odor.





Our production process is based on Green Chemistry, being water-based and free of organic solvents, totally sustainable. We do not generate waste that could be harmful to users or the environment



We do not test on animals. All tests are conducted in trustworthy laboratories with human volunteers.



Essential oils, Vitamins, Acids and Natural Extracts are highly oxidative substances that degrade quickly and react constantly with the medium and other cosmetic compounds (light, oxygen, packaging, preservatives, fragrances, surfactants, etc.). By encapsulating it, we guarantee the stability of the active ingredients and protect them from potential reactions with the formulation or the environment.

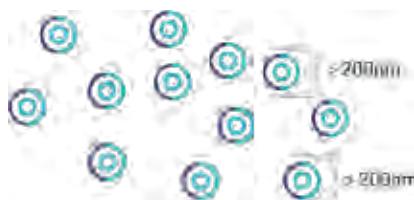
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Nanovetores Encapsulation Technology



Active Ingredient Protection against oxidation resulted from interaction with external environment and other components of the cosmetic formulation.



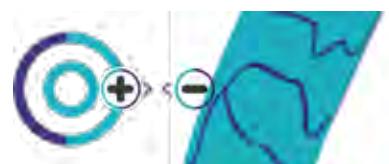
Monodispersity, that ensures control of the particle size, providing adequate permeation to its proposed action.



Secure particles larger than 200nm, biocompatible and biodegradable.



Greater Permeation on the contact surface due to the small size of the capsule.



Surface Charge Control of the particle, promoting greater affinity with the contact surface.



Water Base. Active ingredients are manufactured without the use of organic solvents, ensuring safety for users and the environment.

Use Encapsulated Active Ingredients and Ensure:

- Stability Improvement
- Increased compatibility in the formulation
- Occlusion of odors
- Increased skin permeation
- Reduced dose
- Use of sensitive active ingredients (without refrigeration)
- Increased Solubility
- Prolonged release
- Increased effectiveness



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