



NANO  
VETORES®  
GROUP

# NV PROTECTION ECO

MULTIFUNCTIONALITY

**Active** Green tea extract  
**Ingredients:** and soy protein.

## Hair benefits:

- Restores shine and texture;
- Recovery of split ends;
- Hair growth;
- Regeneration of hair strand structure;
- Cleaning and balancing of oily hair;

## Skin benefits:

- Anti-inflammatory action;
- Protection against UV rays;
- Assists in skin microcirculation.

## Usage

Non-ionic gels, liquid soaps, shampoos, conditioners, and hair finishers.



## DESCRIPTION

**NV Protection ECO** is a blend of encapsulated active ingredients that acts as a thermal protective layer that promotes shielding and increases capillary mass. The encapsulation through the technology developed by Nanovetores allows the stabilization of unstable active ingredients, increasing skin permeation, incrementing sensory input in the end product and high substantivity for hair and scalp. **NV Protection ECO** deeply treats the hair strands, restoring their shine and texture.

**NV Protection ECO** can be applied to hair products with or without rinse, finishers, and thermal protectors. For this capillary shielding effect in finishing products followed by thermoactivation, the use of concentrations between 8 to 10% is indicated.



### Green tea extract

*Camellia sinensis* is a plant cultivated in South Asia, including China, India, Japan, Thailand, Sri Lanka, and Indonesia<sup>1</sup>.

Green tea extract is a source of bioactive flavonoids with potent antioxidant activity. It fights free radicals responsible for aging and protects against damage caused by exposure to UV radiation. It also has anti-inflammatory action,

significantly improving microcirculation of the skin. It acts as an astringent, promoting cleanliness and balance for oily hair<sup>2,3</sup>.

In addition, the extract contains epigallocatechin-3-gallate(EGCG), an important polyphenol that stimulates hair growth and reduces follicular cell death, acting on the dermal papilla cells that are the source to hair follicles<sup>3,4</sup>.

### Soy protein

Soy protein is composed of amino acids that are widely used in hair care products, as it has the ability to restructure the cortex, the area most affected by the damage suffered by hair strands<sup>5</sup>.

This protein restores the structure of the hair to

its natural state, leaving hair healthier, more structured, resistant and, most importantly, with closed cuticles.

It provides silky hair with intense shine, promoting regeneration of the hair's internal structure.



## Regulatory information

INCI Name	Cas Number	EINECS Number
AQUA	7732-18-5	231-791-2
CAMELLIA SINENSIS LEAF EXTRACT	84650-60-2	283-519-7
HYDROLYZED SOY PROTEIN	68607-88-5	271-770-5
SODIUM BENZOATE	532-32-1	208-534-8
ALGIN	9005-38-3	-
POTASSIUM SORBATE	24634-61-5	246-376-1
CALCIUM CITRATE	813-94-5 / 5785-44-4	212-391-7

## Physical-Chemical Information

Appearance	Liquid
Color	Amber to brown
Odor	Characteristic
pH	4.5 to 6.5
Dispersibility	Dispersion of encapsulated active ingredients in water
Relative density	0.9 to 1.1 g/mL

### Usage Concentration

0.1 to 10.0%

### Stability pH

3.0 to 7.0

### How to use

Add to formulation below 40°C under light stirring.

### Notes

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

### Storage

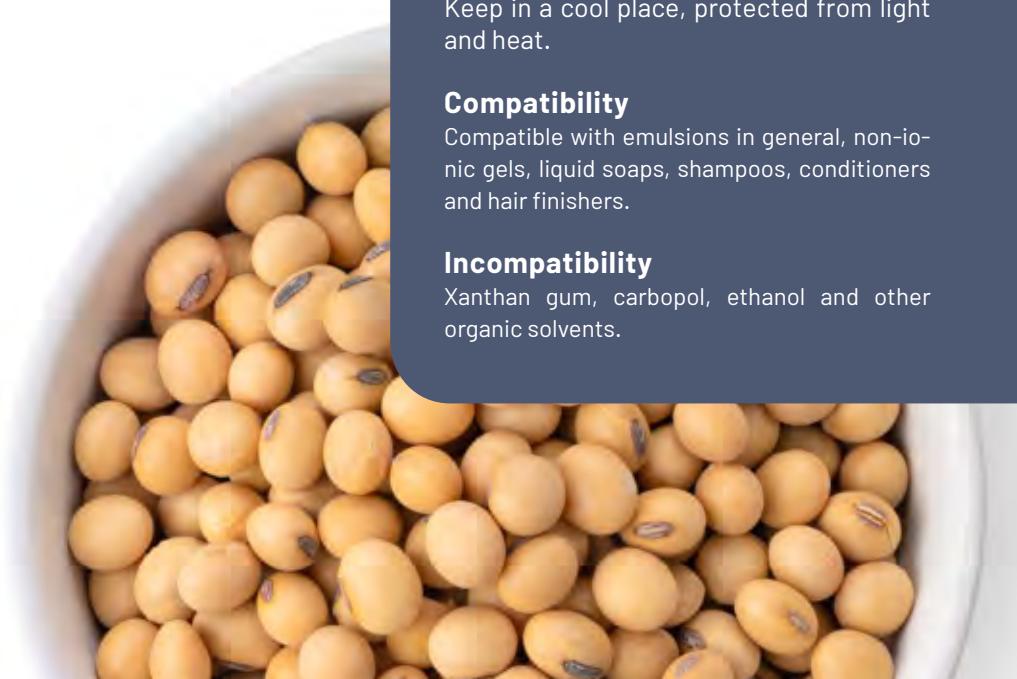
Keep in a cool place, protected from light and heat.

### Compatibility

Compatible with emulsions in general, non-ionic gels, liquid soaps, shampoos, conditioners and hair finishers.

### Incompatibility

Xanthan gum, carbopol, ethanol and other organic solvents.





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.

## References

1. SENGER, Ana Elisa Vieira; SCHWANKE, Carla HA; GOTTLIEB, Maria Gabriela Valle. **Chá verde (*Camellia sinensis*) e suas propriedades funcionais nas doenças crônicas não transmissíveis.** Scientia Medica, v. 20, n. 4, p. 292-300, 2010.
2. MIYAZAKI, Sabrina Freire. **Utilização do chá verde em cosméticos.** Cadernos de Prospecção, v. 1, n. 1, p. 10-13, 2008.
3. KOCH, Wojciech et al. **Applications of tea (*Camellia sinensis*) and its active constituents in cosmetics.** Molecules, v. 24, n. 23, p. 4277, 2019.
4. KWON, O. S. et al. **Human hair growth enhancement in vitro by green tea epigallocatechin-3-gallate (EGCG).** Phytomedicine, v. 14, n. 7-8, p. 551-555, 2007.
5. DE SOUZA GONÇALVES, Leociane; MEJIA, Orientadora Dayana Priscila Maia. **O uso da Nanotecnologia na Formulação de Cosméticos.**

# Nanovetores Encapsulation Technology



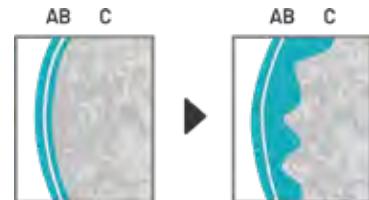
**Active Ingredient Protection** against oxidation resulted from interaction with external environment and other components of the cosmetic formulation.



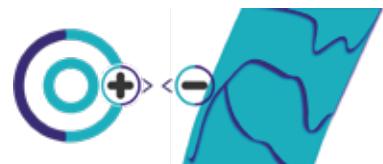
**Monodispersity**, that ensures control of the particle size, providing adequate permeation to its proposed action.



**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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