

# NV GREEN TEA ECO

**Active Ingredient:**  
Green tea extract

## Hair Benefits

- Hair cleaning and balance;
- Helps to control oiliness;
- Hydration.

## Skin Benefits

- Microcirculation stimulus;
- Assists in anti-aging;
- Oiliness control;
- Assists in the treatment of dark circles;
- Contributes to acne treatment;
- Antioxidant and anti-inflammatory action;
- Promotes hydration;
- Prebiotic action;
- Stimulates the skin's microbiota.

## Usage

Emulsions in general, gels, cream gels, serums, liquid soaps, shampoos, conditioners, sprays, and hair finishers.



## DESCRIPTION

**NV Green Tea ECO** is an active ingredient encapsulated in biopolymer particles with a diameter greater than 200 nm, providing benefits for the skin and hair, focusing on anti-aging, hydration, antioxidant action, prebiotic action, antibacterial action, and microcirculation stimulus.

Encapsulation of the active ingredient through Nanovetores Technology allows its stabilization, increasing its permeation and effectiveness.



## ACTIVE INGREDIENT DESCRIPTION

*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 skin microcirculation, being effective in combating dark circles. It has a moisturizing action, due to the active compound catechin, as well as an antibacterial action<sup>2,3,5,6</sup>.

Green tea extract also has powerful antimicrobial properties due to its content of polyphenolic compounds as well as antioxidant properties. Studies indicate that the extract has antimicrobial activities against several pathogenic bacteria, revealing its potential in the balance of the skin's microbiota<sup>7</sup>.

The skin microbiota is an ecosystem of microorganisms of different species that colonize human skin. Over time, the skin microflora begins to undergo qualitative changes from these microorganisms, causing an imbalance<sup>7</sup>. To minimize this effect, the use of cosmetic products with prebiotic action is recommended.

In addition to all these benefits, the extract acts as an astringent, promoting cleanliness and balance for oily hair. The green tea extract contains epigallocatechin-3-gallate (EGCG), an important polyphenol, which stimulates hair growth and reduces follicular cell death, acting on the dermal papilla cells that are the source to hair follicles<sup>2,3,4,5</sup>.

Thus, **NV Green Tea ECO** delivers benefits safely and effectively due to the high permeation promoted by Nanovetores' encapsulation technology and the prolonged release of the active ingredient through innovative and specific triggers.

## REGULATORY INFORMATION

INCI Name	CAS Number	EINECS Number
AQUA	7732-18-5	231-791-2
GLYCERIN	56-81-5	200-289-5
PROPANEDIOL	504-63-2	207-997-3
SODIUM BENZOATE	532-32-1	208-534-8
CAMELLIA SINENSIS LEAF EXTRACT	84650-60-2	283-519-7
POTASSIUM SORBATE	24634-61-5	246-376-1
ALGIN	9005-38-3	-
CITRIC ACID	77-92-9	201-069-1
CALCIUM CITRATE	813-94-5	212-391-7



<b>Appearance</b>	Liquid
<b>Color</b>	Amber to brown
<b>Odor</b>	Characteristic
<b>pH</b>	4.5 - 6.5
<b>Density 25°C g/mL</b>	0.9 to 1.1

### HOW TO USE

Shake before use and add to formulation below 40°C.

### USAGE CONCENTRATION

0.5 - 10%

### COMPATIBILITIES

Emulsions in general, gels, cream gels and serum, liquid soaps, shampoos, conditioners, sprays and hair finishers.

### INCOMPATIBILITIES

Ethanol and others organics solvents.

### pH STABILITY

2.0 - 7.0

### STORAGE

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



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

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6. SECOLIN, Vanessa Aparecida. Microencapsulação de compostos bioativos de *Camellia sinensis* em sistemas lipídicos por spray drying. Tese de Doutorado. Universidade de São Paulo.
7. AL-TALIB, Hassanain et al. Antimicrobial effect of Malaysian green tea leaves (*Camellia sinensis*) on the skin microbiota. *Malaysian Journal of Microbiology*, v. 12, n. 6, p. 423-427, 2016.



# Nanovetores Encapsulation Technology



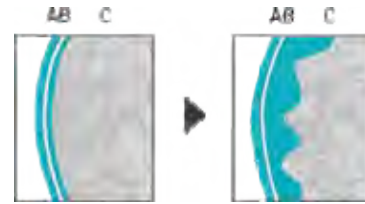
**Active Ingredient Protection** against oxidation resulted from interaction with external environment and other components of the cosmetic formulation.



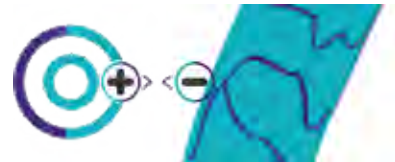
**Monodispersity**, that ensures control of the particle size, providing adequate permeation to its proposed action.



**Secure particles** larger than 200nm, bio-compatible 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 compability 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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