# nano caribbean oil

## Extreme Repair

**Active Ingredients:** Batana and Avocado Oil.

Nano Caribbean Oil is a blend of active ingredients encapsulated in lipid particles with particle diameter larger than 200 nm. The blend encapsulation through the technology developed by Nanovetores allows the stabilization of sensitive components, therefore, complex of being formulated in their free form. Due to its natural features and non-existent chemical aggression, the active ingredient is indicated for damaged, dry and breaking hair, because it promotes extreme repair and protection against daily aggressions suffered by hair.

### Characteristics

**Aspect:** Beige to caramel milky liquid.
**Use Concentration:** 0,1 to 5%
**Stability pH:** 3,0 to 7,0
**Solubility:** Water dispersible
**Particle:** Lipidic
**Release Trigger:** Enzimatic

### Benefits

- Extreme repair
- Restores shine, vitality and strength
- Protection against daily aggressions to hair

### Usage

Shampoos, conditioners, finishers, split end repair, hair masks. Compatible with nonionic, anionic and cationic systems.

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# Description

Nano Caribbean Oil is formed by multifunctional particles containing encapsulated batana oil, known and popularized in recent years as Ojon oil.

Batana oil is used for hair treatments and is considered revolutionary among cosmetic raw materials, as it presents hair restoring and strengthening properties. Extracted from Elaeis oleifera palm walnut, a plant from Central America and the Caribbean, batana oil is known to be used as a hair tonic in the treatment of dandruff [1]. It has cysteine in its composition, a non-essential amino acid naturally present in hair [2] and high concentrations of lipids, mainly palmitic acid, stearic acid, oleic acid and palmitoleic acid [3].

Avocado oil has a unique nutritional value and is used by both, pharmaceutical and cosmetic industries, for skin and hair treatments. It has in its composition, several medicinal substances, among the most active, we have lecithins, phytosterols (beta-sitosterol especially), omega 9 (oleic acid), vitamin A, D and a high content of vitamin E. These components are important in maintenance of the wires' lubricity, giving glow and softness, as well as strong antioxidant activity, which preserves hair coloration [4].

O Nano Caribbean Oil is indicated for damaged, dry and breaking hair, as it promotes extreme repair, recovering shine, vitality, and strength, as well as protection from daily aggressions to hair.

## Regulatory Information

| INCI NAME | CAS NUMBER |
|---|---|
| AQUA | 7732-18-5 |
| ELAEIS OLEIFERA KERNEL OIL | 8002-75-3 |
| PERSEA GRATISSIMA OIL | 8024-32-6 |
| POLYSORBATE 80 | 9005-65-6 |
| PHENOXYETHANOL | 122-99-6 |
| CAPRYLIL GLYCOL | 1117-86-8 |
| TOCOPHERYL ACETATE | 7695-91-2 |

## Physical-Chemical Information

| | |
|---|---|
| PHYSICAL STATE | LIQUID |
| FORM | MILKY |
| COLOR | BEIGE TO CARAMEL |
| ODOR | CHARACTERISTIC |
| pH | 3.0 TO 6.0 |
| SOLUBILITY | WATER DISPERSIBLE |
| RELATIVE DENSITY | 0.9 TO 1.1 g/ml |
| CHEMICAL IDENTITY | INORGANIC |
| CHARACTERIZATION | BLEND |

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

**As it is a suspension of nanoparticles, agitate before using.

## Approved by International Regulations:

- Brazil – ANVISA
- Europe – EC Cosing
- USA - CIR
- Australia – AICS Inventor
- China - IECIC

**STORAGE:**
MAINTAIN IN TEMPERATURE BETWEEN 20°C – 25°C.

**COMPATIBILITY:**
COMPATIBLE WITH NONIONIC, ANIONIC AND CATIONIC SYSTEMS.

**INCOMPATIBILITY:**
ETHANOL AND OTHER ORGANIC SOLVENTS.

# References


1 - PLOTKIN, M.J.; BALICK, M.J. Medicinal uses of South American palms. Journal of Ethnopharmacology, v. 10, n. 2, p. 157-179, 1984.

2 - DEKIO, S.; JIDOI, J. Cysteine contents of purified human hair low-sulfur protein components. Journal of Dermatological Science, v. 1, n. 2, p.132, 1990.

3 - SAMBANTHAMURTHI, R.; OO, K.C.; ONG, A.S.H. Lipid metabolism in oil palm (Elaeisguineensis and Elaeisoleifera) protoplasts. Plant Science, v. 51, n. 1, p. 97-103, 1987.

4 - DING, H.; et al. Chemopreventive characteristics of avocado fruit. Seminars in Cancer Biology, 17: 386-394, 2007.


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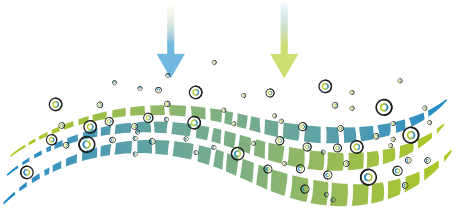
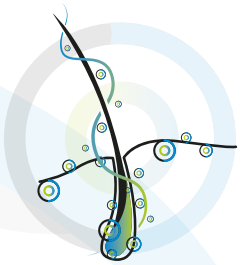
# Nanovetores Encapsulation Technology



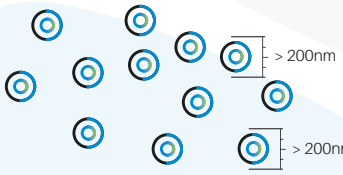
**Multifuncional Lipid Particles** that promote hydration and high permeation.

**Enzymatic Specific Release Trigger**, in which the enzymes present in our skin promote the degradation of the capsule, releasing the active ingredient.

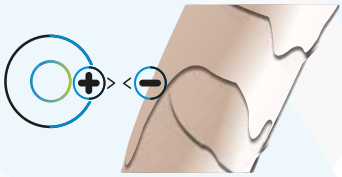
**Active Ingredient Protection** against oxidation resulted from interaction with external environment and other components of the cosmetic formulation.



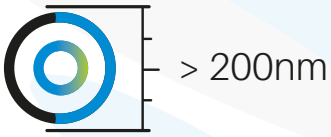
**Greater Permeation** on the contact surface due to the small size of the capsule.




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



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




**Secure particles** larger than 200nm, biocompatible and biodegradable.

**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

Nanovetores Tecnologia S.A.
Sapiens Parque, InovaLab, Av. Luiz Boiteux Piazza, 1302,
Cachoeira do Bom Jesus,Florianópolis – SC, 88056-000

nanovetores
INOVANDO NATURALMENTE

Phone: +55 (48) 3205-6262
Mobile: +55 (48) 9664-0099
E-mail: contato@nanovetores.com.br