



nano hydroxy acids

Whitening Action

Active Ingredients: Glycolic, Lactic and Citric Acid, Licorice Extract and Oat Oil.

Nano Hydroxy Acids is a blend of active ingredients encapsulated in lipid particles with particle diameter larger than 200 nm. Encapsulation through the technology developed by Nanovetores allows the stabilization of sensitive components, therefore, complex of being formulated in their free form. The active blend promotes a mild chemical peel that does not irritate the skin, preventing flaking caused by traditional peelings, enabling everyday use, delivering greater efficiency.



Characteristics

Aspect: Milky white to cream liquid
Usage Concentration: 0,5 to 10%
Stability pH: 1,5 to 7,0
Solubility: Water Dispersible
Particle: Lipid
Release Trigger: Enzimatic



Benefits

- Whitening Effect
- Non-Aggressive Peeling
- Melasma Reduction
- Cell Renewal



Usage

Gels, cream-gels and emulsions in general.

Description

Nano Hidroxy Acids is a blend of active ingredients encapsulated in lipid particles with particle diameter between 200-400 nm and enzymatic release trigger. The active blend has a prolonged release, releasing about 80% of its contents gradually over a period of 8 hours after product application. Prolonged release by Nanovetores Technology adds safety and performance to the components of Nano Hydroxy Acids, which in their free form, in their active pH, can cause burning and flaking on the skin, causing discomfort to the consumer.

Topical application of Nano Hydroxy Acids decreases the thickness of the hyperkeratotic corneal layer, promoting the reduction of corneocytes cohesion. The blend has emollient, astringent and skin lightening action. It is suitable for several applications related to photoaging, as it works by reducing the appearance of fine lines and wrinkles, making the skin smoother, firmer and rejuvenated (1). It is also suitable for the treatment of acne, actinic keratoses, age spots, dry skin and its variants (2).

Licorice extract has topical anti-inflammatory property, promoting the reduction of skin redness and hyperpigmentation. The main asset of licorice extract is glabridin, which acts as a depigmentation agent by inhibiting tyrosinase, an enzyme present in melanocytes, essential in melanin synthesis. Another extract in the active blend is liquiritin, which induces skin lightening by dispersing melanin (3). Oat oil acts as a source of vitamins, proteins, lipids and minerals. It possesses antioxidant and anti-inflammatory properties, in addition to being an efficient moisturizer for dry or sensitive skin. Furthermore, it is a cleaning agent and soothes the skin (4). Licorice extract and oat oil act synergistically, softening the irritant effect of the acids from the active ingredients, making the use of Nano Hydroxy Acids pleasant and with noticeable results from its first application.

Regulatory Information

INCI NAME	CAS NUMBER
AQUA	7732-18-5
GLYCOLIC ACID	79-14-1
LACTIC ACID	50-21-5
CITRIC ACID	77-92-9
OLEIC ACID	112-80-1
STEARIC ACID	57-11-4
PALMITIC ACID	57-10-3
AVENA SATIVA KERNEL OIL	84012-26-0
GLYCYRRHIZA GLABRA ROOT EXTRACT	38775-66-6
PPG-15 STEARYL ETHER	25231-21-4
STEARETH-2	9005-00-9
STEARETH-21	9005-00-9
BHT	128-37-0
POLYSORBATE 80	9005-65-6
PHENOXYETHANOL	122-99-6
CAPRYLYL GLYCOL	1117-86-8

Physical-Chemical Information

PHYSICAL STATE	LIQUID
FORM	MILK
COLOR	WHITE TO CREAM
ODOR	CHARACTERISTIC
pH	1,5 TO 3,5
SOLUBILITY	WATER DISPERSIBLE
RELATIVE DENSITY	0,9 A 1,1 g/ML
CHEMICAL IDENTITY	ORGANIC
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.



STORAGE:
MAINTAIN IN TEMPERATURE BETWEEN 20°C - 25°C



COMPATIBILITY::
GELS, CREAM-GELS, SERUNS, EMULSIONS IN
GENERAL AND LIQUID SOAPS.



INCOMPATIBILITY:
ETHANOL AND OTHER ORGANIC SOLVENTS.

Approved by International Regulations:



China - IECIC



Europa - EC Cosing



EUA - CIR



Australia - AICS Inventor



Brasil - ANVISA

References

1 - STILLER, M. J.; et al. Tropical 8% Glycolic Acid and 8% L-Lactic Acid Cream for the Treatment of Photodamaged Skin: A Double-blind Vehicle-Controlled Clinical Trial. Archives of Dermatology, v. 132, n. 6, p. 631-636, 1996.

2 - MOY, L.S.; MURAD, H.; MOY, R.L. Glycolic Acid peels for treatment of wrinkles and photoaging. The Journal of Dermatologic Surgery and Oncology, v. 19, n. 3, p. 243-6, 1993.

3 - CRONIN, H. DRAELOS, Z.D. Original Contribution: Top 10 botanical ingredients in 2010 anti-aging creams. Journal of Cosmetic Dermatology, v. 9, n. 3, p 218-225, 2010.

4 - PAZYAR, N. et al. Oatmeal in dermatology: A brief review. Indian J Dermatol Venereol Leprol. v. 78, p. 142-145, 2012.

Effectiveness Test

Nano Hydroxy Acids has been clinically tested, evaluating the effectiveness of the whitening effect and melasma reduction.

Evaluated Product: Nano Hydroxy Acids 10% cream.

Evaluated Period: 7 days in vivo evaluation in normal use of the product.

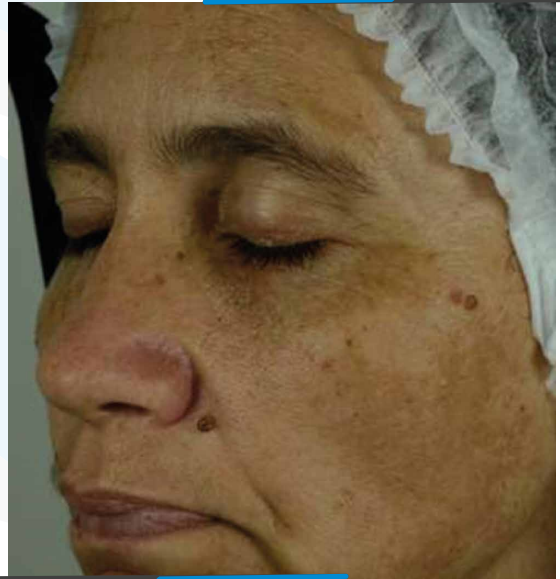
Sensorial evaluation by clinical effectiveness:

This evaluation consisted of anamnesis performed individually for each participant in the study, in order to assess the intensity, quantity and size of melasma. This evaluation was performed using a 5-point scale.

Before Application



After 7 days of use

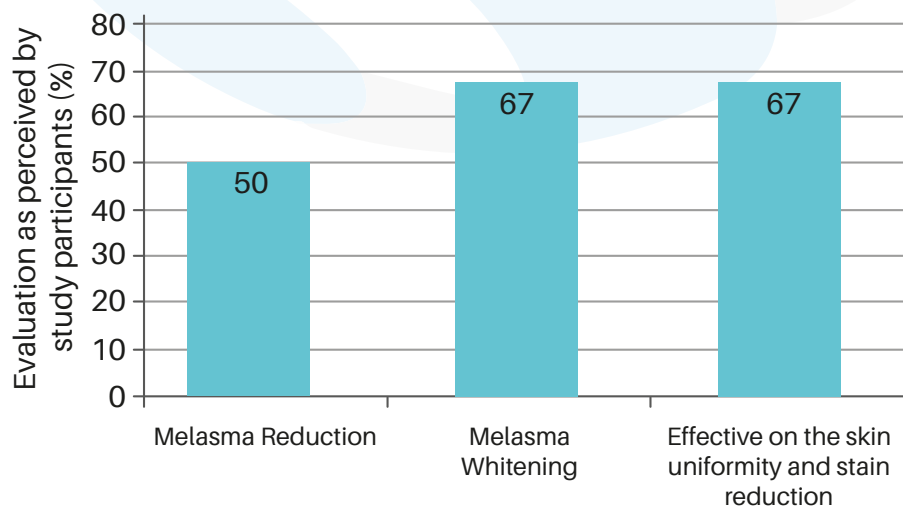


Results:

There was a 33% reduction in the intensity of melasma.

Sensorial evaluation by perceived effectiveness:

This analysis consisted of the evaluation of the investigational product as perceived by study participants.



Formula Suggestion

Hydroxy Acids 10% Cream

PHASE I %

Glycerine.....3,00
Water qsp..... 100,00

Technique: Reserve

PHASE II %

Hydroxyethyl cellulose0,30

Technique: Disperse cold in stage 1
under agitation

PHASE III %

Oliwax..... 1,00
Olivem 10003,00
Glyceryl monostearate6,00
Cetostearyl alcohol2,00
BHT.....0,05
DC350 Silicone..... 1,00
Triglycerides of caprylic and
capricacid..... 10,00

Technique: Heat until 75°C

PHASE IV %

Preservative.....qs
Fragrance.....0,2

Technique: Reserve

PHASE V %

Nano Hydroxy Acids..... 10,0

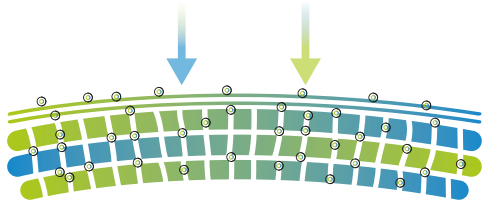
Technique: Reserve

- 1- Heat 1+2 to 75°C
- 2 - Add 3 on 1+2 under vigorous agitation
- 3 - Keep agitation and temperature (75 °) for 10 minutes
- 4 - Start cooling
- 5 - Below 40 °C add stage 4 and 5 and homogenize

Usage Protocol

- 1 On a clean face, apply a small amount of product in the affected area, twice a day.

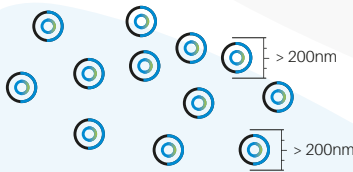
Nanovetores Encapsulation Technology



Multifunctional Lipid Particles that promote hydration and high permeation.



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.



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

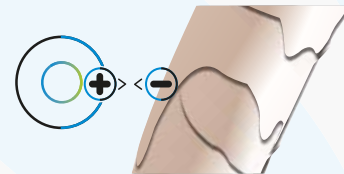


Active ingredient deposition when applied freely



Greater permeation of the active ingredient when encapsulated

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