

nanovetor dmae



Anti-aging Action and Wrinkle Reduction

Active ingredient: Dimethylaminoethanol bitartrate

Nanovetor DMAE is an active ingredient encapsulated in biopolymer particles that acts significantly on skin aging. Encapsulation using the technology developed by Nanovetores enables occlusion of unpleasant odors and stabilization of components complex of being formulated when in its free form, providing a better sensory experience for the final product. Furthermore, it enables prolonged release, releasing the encapsulated active ingredient during 12 hours after product application.



Features

Aspect: Low viscosity transparent liquid, colorless to yellowish color.
Usage Concentration: 1.0 to 10%
pH stability: 2.5 to 7.0 **Solubility:** Water Dispersible **Particle:** Biopolymer
Release Trigger: Enzyme



Benefits

- Anti-aging, anti-inflammatory, antioxidant and moisturizing action
- Wrinkle reduction
- Increases skin firmness



Usage

Primers, facial creams, facial masks, serums, gels and makeup removers

Description

Nanovetor DMAE is an active ingredient made of Dimethylaminoethanol bitartrate encapsulated in biopolymer nanoparticles, with an enzymatic release trigger. Encapsulation technology ensures multifunctionality and prolonged release of the encapsulated active ingredient, which occurs up to 12 hours after applying the product.

DMAE is a nutritional substance found in fish such as anchovies, sardines and salmon. It is used to combat sagging, reduce fine wrinkles and promote tensor effect on the skin. It is an active ingredient that improves the overall appearance of the skin with immediate (lifting) as well as long-term effect. DMAE is considered an analogue of choline, responsible for increasing the synthesis of acetylcholine in the central system and the dermis ⁽¹⁾⁽²⁾⁽³⁾.

With aging, nutritional precursors and chemicals substances toning the muscles begin to decrease. A mediator that regulates muscle contractions is acetylcholine, a neurotransmitter synthesized in the nerve endings from the choline. Thus, DMAE acts by stimulating the release of acetylcholine which, in turn, stimulates the muscles of the face, causing a tensor effect on the skin ⁽⁴⁾⁽⁵⁾. Furthermore, DMAE has a strong anti-inflammatory, antioxidant and moisturizing action, acting expressively on skin aging ⁽⁶⁾.

DMAE in its free form has a characteristic unpleasant odor from amines ⁽⁷⁾. Encapsulating the active ingredient allows reducing the odor, enabling perfuming the formulation with the desired fragrance. Nanovetor DMAE has anti-aging action, reduces wrinkles and increases skin firmness.

Regulatory Information

INCI NAME	CAS NUMBER
AQUA	7732-18-5
DIMETHYL MEA	108-01-0
POLYSORBATE 80	9005-65-6
HYDROXYPROPYL GUAR	68442-94-4 / 39421-75-5
PHENOXYETHANOL	122-99-6
CAPRYLYL GLYCOL	1117-86-8

Physical-chemical Information

PHYSICAL STATE	LIQUID
FORM	TRANSPARENT WITH LOW VISCOSITY
COLOR	COLOURLESS TO YELLOWISH COLOR
ODOR	CHARACTERISTIC
pH	2.5 TO 4.5
SOLUBILITY	WATER DISPERSIBLE
RELATIVE DENSITY	0.9 TO 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, agitate before using.



STORAGE:

KEEP IN TEMPERATURE BETWEEN 20°C - 25°C



COMPATIBILITY WITH VEHICLE:

COMPATIBLE WITH NONIONIC VEHICLES. THE INPUT FEATURES ACID PH, BUT AFTER INCORPORATION IN THE FORMULATION PH CAN BE NEUTRALIZED UPTO 6.5.



INCOMPATIBILITY:

INCOMPATIBLE WITH EDTA (DISODIUM EDTA AND TETRASODIUM EDTA) AND WITH SYSTEMS PRESENTING XANTHAN GUM, CARBOPOL, ARISTOFLEX AVC AND OTHER ANIONIC POLYMERS IN THEIR COMPOSITION AND ETHANOL.

Approved by International Regulations:



China - IECIC



Europa - EC Cosing



EUA - CIR



Australia - AICS Inventor



Brazil - ANVISA

References

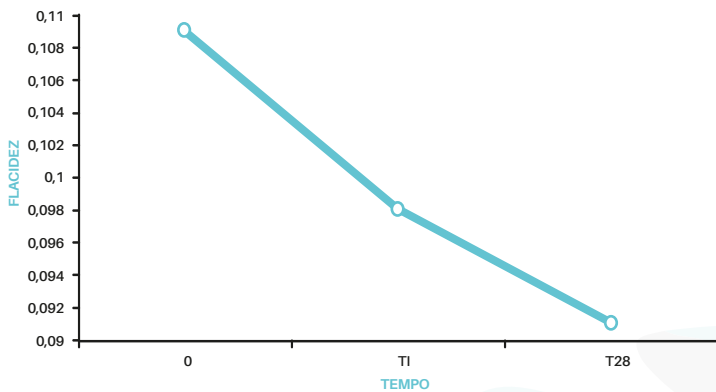
- 1 - FIORINI, D. et al. Dimetilaminoetanol - DMAE: uma revisão bibliográfica. Infarma - Ciências Farmacêuticas. 20 (5/6): 17-20, 2008.
- 2 - PERRICONE, N. O guia para ter a pele mais jovem. 3 ed. Rio de Janeiro: Elsevier, 2005.
- 3 - REBELLO, T. Guia de produtos cosméticos. 6 ed. São Paulo: Senac São Paulo, 2006.
- 4 - RIBEIRO, C. Cosmetologia aplicada a dermocosmética. São Paulo: Pharmabooks, 2006.
- 5 - GIANNOCCARO, F. B.; FILHO, A.G.; FERREIRA, L.M. Cultivo de fibroblastos humanos com DMAE. Cosmetics & Toiletries. 19, 2007.
- 6 - GROSSMAN, R. The Role of Dimethylaminoethanol in Cosmetic Dermatology. American Journal of Clinical Dermatology. 6(1): 39-47, 2005.
- 7 - DECCACHE, D.S. Formulação dermocosmética contendo DMAE glicolato. 2006.153 f. Dissertação (mestrado) - Universidade Federal do Rio de Janeiro, Rio de Janeiro, 2006.



nanovetores
INOVANDO NATURALMENTE

Effectiveness Test

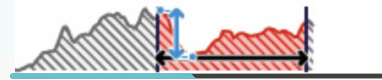
Skin Firmness- Average of performed tests



Before



Wrinkle length: 8.8 mm
Wrinkle width: 8.9 mm
Wrinkle depth: 17.4



After (10 minutes)



Wrinkle length: 5.0 mm
Wrinkle width: 4.0 mm
Wrinkle length: 9.3



Conclusion: 85% of the volunteers had a positive effect after 10 minutes of product application

Features	Nanovetor DMAE	DMAE Free Form
Concentration Active Ingredient	0,3%	3%
Initial Results	4 weeks	18 weeks
T1 Effectiveness (10min)	10%	ND
T28 Effectiveness (28 days)	16%	ND (16 weeks)

Suggested Formula

Cream with Nanovetor DMAE 10%

PHASE I %

Glycerin.....3,00
Procondition 22.....0,40
Water qsp.....100

Technique: Solubilize at 75-80°C under stirring and adjust pH=4 with citric acid

PHASE IV %

Preservative.....qs

Técnica: Reserve

PHASE II %

Hydroxyethyl.....0,30

Technique: Disperse in phase 1 under stirring

PHASE V %

Nanovetor DMAE.....10

Técnica: Reserve

PHASE III %

Oliwax LC.....3,00
Brij S2.....2,00
Brij S21.....2,00
Armlamol PS15E.....4,00
Glyceryl Monostearate.....8,00
Cetostearyl Alcohol.....1,00
BHT.....0,05
Silicone DC350.....1,00
Triglycerides of caprylic and capric acid.....5,00

Technique: Heat to 75-80 °C

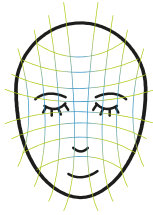
- 1 - Disperse 2 in 1 and heat to 75-80 °C
- 2 - Add 3 on 1+2 under vigorous stirring
- 3 - Keep stirring and temperature (75-80°) for 10 minutes

- 4 - Start cooling
- 5 - Below 40 °C add stage 4 and 5 and mix

Usage Protocol

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

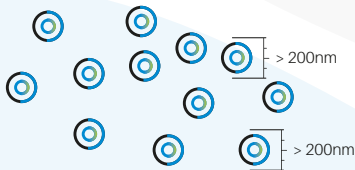
Nanovetores Encapsulation Technology



Multifunctional biopolymeric particles that increase the capillary adhesion and form a shielding film.



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.

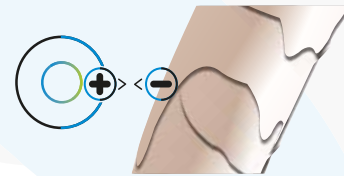


Deposição do ativo quando aplicado de forma livre



Maior permeação do ativo quando encapsulado

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