

nanovetor Q-10



Ativos

Coenzyme Q-10 (ubiquinone).

Descrição

Nanovetor Q-10 contains encapsulated Coenzyme Q₁₀ in lipid nanoparticles (VAM® - Multifunctional Actives Vectors) with enzyme trigger release. It has extended release, releasing about 80% of its contents in the course of 8 hours after application of the product.

The encapsulation of the active through Nanovetores Technology allows stabilization of highly sensitive components and complex to be formulated in its free form also provides to the actives, an increase of skin permeation, sensory increment in the final product, and as multifunctionality it provides high hydration since they operate in the lipid replacement and prevent transepidermal water loss.

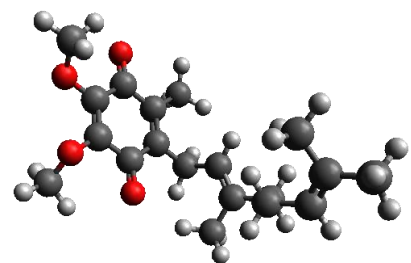
Nanovetor Q-10 acts as a potent antioxidant for treatment and prevention of photo aging and consequent reduction of wrinkle depth and increased skin elasticity.

Coenzyme Q₁₀ (CoQ₁₀) or ubiquinone is a lipophilic antioxidant found in all human cells, part of the electron transport chain, responsible for energy production, and up to 95% of the body's energy requirements are provided by CoQ₁₀ (SOURCES, 2013). Execute its antioxidant activity by transferring protons from the mitochondrial membrane to neutralize free radicals and preventing damage to biomolecules (SCOTTI et al., 2007).

Studies showed that CoQ₁₀ protects against oxidative stress produced by UVA radiation in keratinocytes, being capable of suppressing the action of collagenase after exposure to UV radiation, increasing tissue oxygenation, improving elasticity of the skin and reducing wrinkles. It was also demonstrated in vivo that CoQ₁₀ reduces the production of reactive oxygen species, as well as minimizes the DNA damage induced by UVA radiation in human keratinocytes. In vitro, CoQ₁₀ reduced matrix metalloproteinases (MMP) induced by UVA in cultures of human dermal fibroblasts and inhibited IL-6 production (which stimulates dermal fibroblasts) (MUTA-TAKADA et al, 2009; INUI; OOE; FUJII, 2009).

*VAM® partículas lipídicas e biopoliméricas de origem natural, biocompatíveis e biodegradáveis, produzidas em meio aquoso que agregam multifuncionalidade aos ativos e possuem gatilhos de liberação específicos (Tecnologia Patenteada Nanovetores®)

Chemical structure of the major component:



Ubiquinone

Referências Bibliográficas

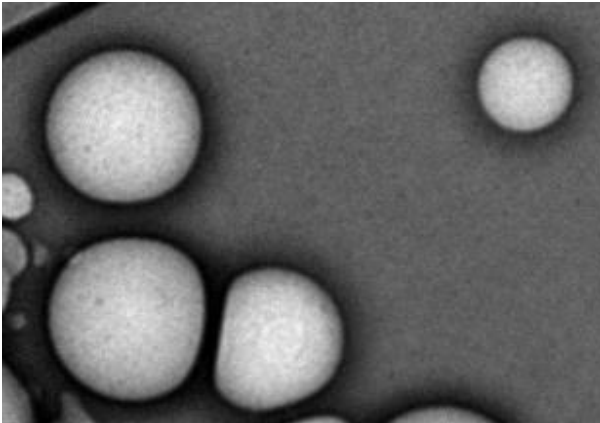
FONTES, I.J.G. Antioxidantes como substâncias cosmetologicamente activas [dissertação] Lisboa: Universidade Lusófona de Humanidades e Tecnologias, Curso de Ciências Farmacêuticas, Faculdade de Ciências e Tecnologias da Saúde, 2013, 42p.

SCOTTI, Luciana et al. Modelagem molecular aplicada ao desenvolvimento de moléculas com atividade antioxidante visando ao uso cosmético. Rev. Bras. Cienc. Farm. 43(2), 2007.

MUTA-TAKADA K, et al. Coenzyme Q₁₀ protects against oxidative stress-induced cell death and enhances the synthesis of basement membrane components in dermal and epidermal cells. Biofactors, 35(5):435-41, 2009.

INUI M; OOE M; FUJII K. Mechanisms of inhibitory effects of CoQ₁₀ on UVB-induced wrinkle formation in vitro and in vivo. Biofactors, 35(5):435- 41, 2009.

MORPHOLOGY



Microscopy Image.
Source: Nanovetores®

Technical Information

INCI NAME: AQUA, LINOLEIC ACID, OLEIC ACID, UBIQUINONE, CAMELLIA SINENSIS LEAF OIL, LINUM USITATISSIMUM SEED OIL, BHT, POLYSORBATE 80, PHENOXYETHANOL, CAPRYLYL GLYCOL.

Appearance: milky yellow liquid.

Use concentration: 0,5 to 10%.

pH Stability: 3,0 to 7,0

Solubility: Water dispersible.

How to use: Add to the formulation below 40°C under gentle agitation.

Storage: Keep in a temperature between 20°C - 25°C.

Compatibility with vehicle: Gels-cream and emulsions in general.

Incompatibility: Ethanol.