nano skin healer

Active ingredients

Aloe Vera, Chamomile and Onion Extract.

Description

Nano Skin Healer is a blend of active ingredients encapsulated in biopolymeric nanoparticles (VAM ® Multifunctional Active Vectors) with an enzymatic release trigger. It has a prolonged release, releasing the encapsulated active ingredients gradually over a period of 12 hours after application.

The encapsulation through Nanovetores Technology protects and stabilizes the active ingredients, increasing its permeation efficiency.

Nano Skin Healer acts as regenerator of damaged skin, anti-inflammatory and helps to minimize the appearance of scars.

Aloe Vera has analgesic, antipruritic, anti-allergic, healing and anti-inflammatory properties. Some Aloe Vera substances are partially responsible for the anti-inflammatory and healing properties and several mechanisms have been proposed to explain their influence in these processes. Acemannan, polysaccharide found in large quantities in Aloe Vera, is able to stimulate macrophages to release interleukin-6, tumor necrosis factor-α and nitric oxide. It is also able to increase fibroblast proliferation and stimulate the secretion of keratinocyte growth factor - 1 (KGF-1) and vascular endothelial growth factor (VEGF), in addition to collagen type I. All these substances are directly related to the healing process, since they play important roles, such as tissue epithelialization, formation of blood vessels and connective tissue formation. Mannose-6-phosphate, polysaccharide present in Aloe Vera accelerates the healing process and decreases the inflammation due to its connection to receptors present in fibroblasts. Proteins and glycoproteins isolated from Aloe Vera also exhibited anti-inflammatory activity in vitro by reducing significantly the COX-2 enzyme and lipoxygenase (FREITAS; RODRIGUES; GASPI, 2014). The sap of Aloe Vera is rich in aloin, allantoin and anthraquinones, which are excellent healing elements (RAMOS; PIMENTEL, 2011). In addition, Aloe Vera has antimicrobial, antioxidant, and moisturizing properties, as well as it strengthens the scalp. It helps in the prevention of photoaging, as anthraquinones glycosides present in Aloe Vera absorb UVB rays (PEREIRA; FRASSON, 2007).

The essential oil of chamomile has calming effect, helps skin cell regeneration, soothes inflammation, acts as an antioxidant, fighting the damage caused by free radicals and has emollient properties. It contains in its composition chamazulene, which has recognized anti-inflammatory activity, enhanced by the presence of matricine and α -bisabolol, wherein α -bisabolol has antiphlogistic, antibacterial and antimycotic properties. It also has quercetin which gives antioxidant properties, as well as anti-inflammatory and antimicrobial ones (TABASSUM, HAMDANI, 2014; HARTMANN, 2010).

Onion extract has anti-inflammatory, antimicrobial and antioxidant properties. The flavonoids present in the onion extract,

particularly quercetin and kaempferol, play an important role in reducing the formation of scar tissue through the inhibition of fibroblast activity and regulation of metalloproteinase-1 (collagenase), which reduces the fibroproliferative activity and extracellular matrix production (CHO et al, 2010; DRAELOS, 2008).

Technical information

INCI NAME: AQUA, ALOE BARBADENSIS LEAF EXTRACT, ALOE BARBADENSIS LEAF POLYSACHARIDES, ALLIUM CEPA BULB EXTRACT, CHAMOMILLA RECUTITA FLOWER EXTRACT, POLYSORBATE 80, SODIUM BENZOATE, POTASSIUM SORBATE.

Usage Concentration: 0.5% to 10.0%.

pH stability: 2.0 to 7.0.

Aspect: Slightly viscous liquid.

Color: Amber to nut-brown.

pH: 2,0 - 5,0

Density: 0,9 - 1,1

Dispersibility: Water dispersion of encapsulated active ingredients.

How to Use: Add the formulation below 40 degrees Celsius under light stirring.

Storage: Keep in a well-ventilated place, away from light and heat.

Compatibility: Emulsions in general, non-ionic gels, serums.

Incompatibility: Ethanol and anionic polymers.

References

FREITAS, V.S.; RODRIGUES, R.A.F.; GASPI, F.O.G. Propriedades farmacológicas da Aloe vera (L.) Burm. f. Rev. bras. plantas med. 16 (2), 2014.

RAMOS, A.P.; PIMENTEL, L.C. Ação da Babosa no reparo tecidual e cicatrização. Braz J Health. 1: 40-48, 2011.

PEREIRA, D.C.; FRASSON, A.P.Z. Uso da Aloe vera em produtos farmacêuticos e análise da estabilidade físico-química de creme aniônico contendo extrato glicólico desta planta. Revista Contexto & Saúde, 6(12): 27-34, 2007

TABASSUM, N.; HAMDANI, M. Plants used to treat skin diseases. Phcog Rev. 8:52-60, 2014

HARTMANN, K. C. Atividade antimicrobiana de óleos essenciais da camomila (Matricaria chamomilla L.) Magazine Saúde e Pesquisa. 3 (3): 279-284, 2010.

CHO, J. et al. Onion extract and quercetin induce matrix metalloproteinase-1 in vitro and in vivo. International Journal of Molecular Medicine. 25 (3): 347-352, 2010.

DRAELOS, Z. D. The ability of onion extract gel to improve the cosmetic appearance of postsurgical scars. Journal of Cosmetic Dermatology. 7: 101–104, 2008.