Nano-Lipobelle A/E

SWISS QUALITY PRODUCT

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Description

Nano-Lipobelle is a transparent nano-emulsion which consists of well characterized particles. Tiny oil droplets form the core of these nanoparticles. A unimolecular shell of natural soya phospholipids with a high proportion of phosphatidylcholine stabilizes the encapsulated oil phase from coalescence.
The oil core is used as carrier for the important vitamins. A and E.

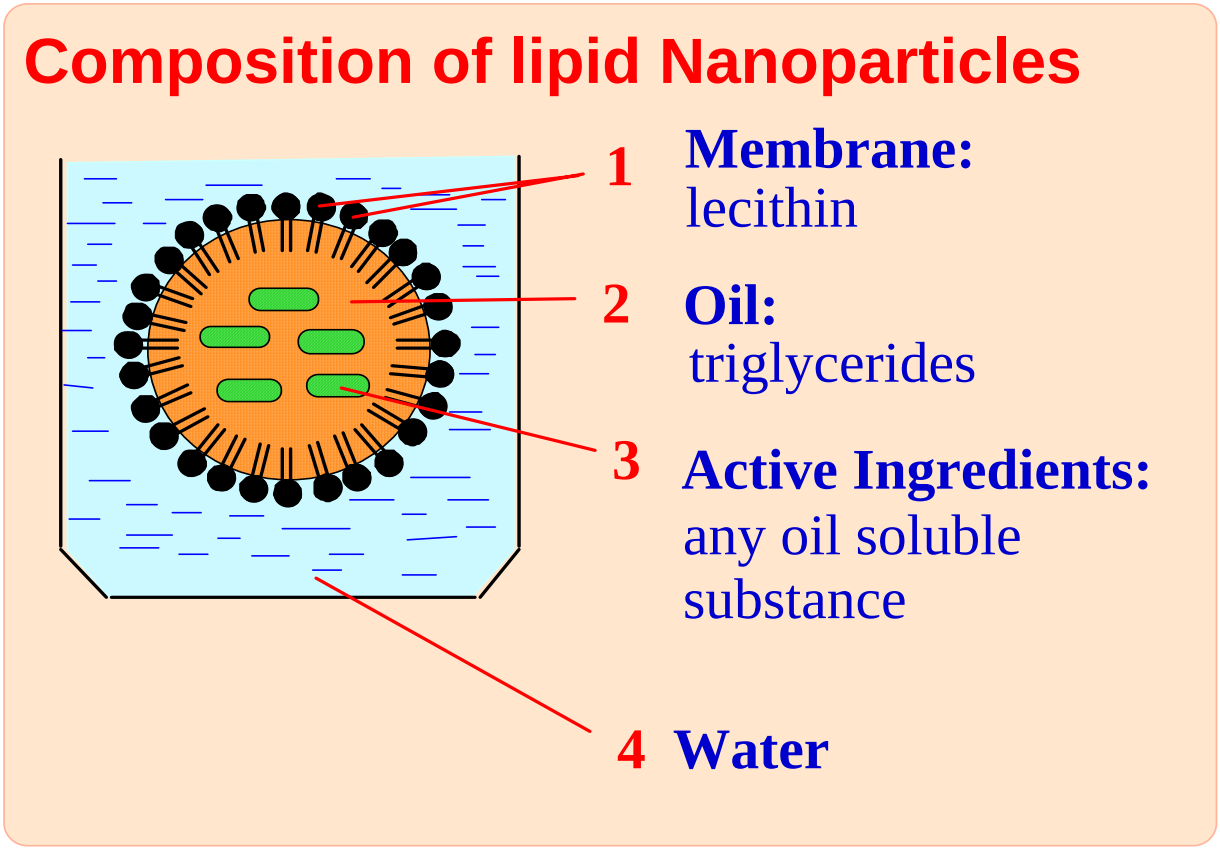


Fig. 1: Schematic diagram of a nanoparticle loaded with vitamins.

Cosmetic properties

- ☆ Nano-Lipobelle A/E is both an active principle and a carrier of active substances at the same time.
- ☆ Nanoparticles are extremely small and outstandingly well suited for cosmetic applications.
- ☆ Nano-Lipobelle penetrates rapidly and leaves skin with a smooth silky feel.
- ☆ Nano-Lipobelle increases substantive skin humidity. The well-known moisturizing effect of phosphadidylcholine, an essential part of the nanoparticles shell has been proved in volunteers who applied Nano-Lipobelle A/E for two weeks.
- ☆ Nano-Lipobelle improves lasting skin smoothness. Figure 2 displays the influence of Nano-Lipobelle A/E on skin roughness. Nano-Lipobelle A/E induced a pronounced smoothing effect of fine lines and wrinkles up to 20%. This effect lasted after application ended.

EM of Nanoparticles in a Creme

Magnification:

45'000 X

Freeze Fracture Electron Micrograph

Magnification:

100'000 X

Freeze Fracture Electron Micrograph

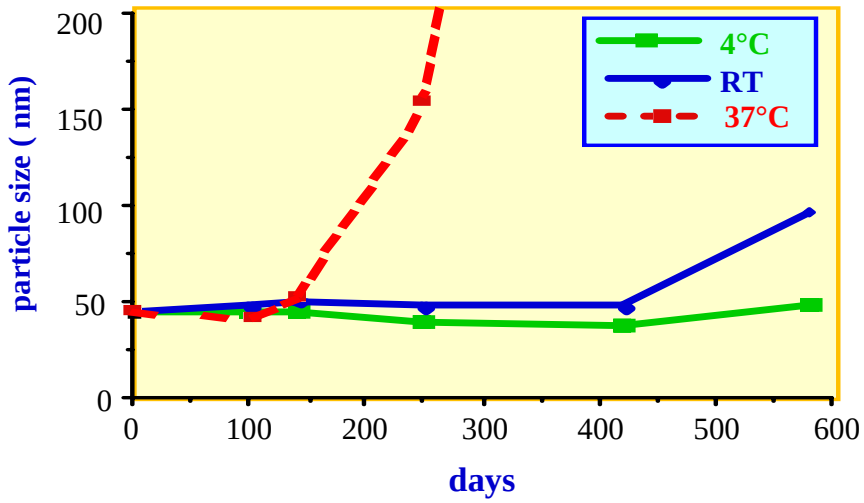
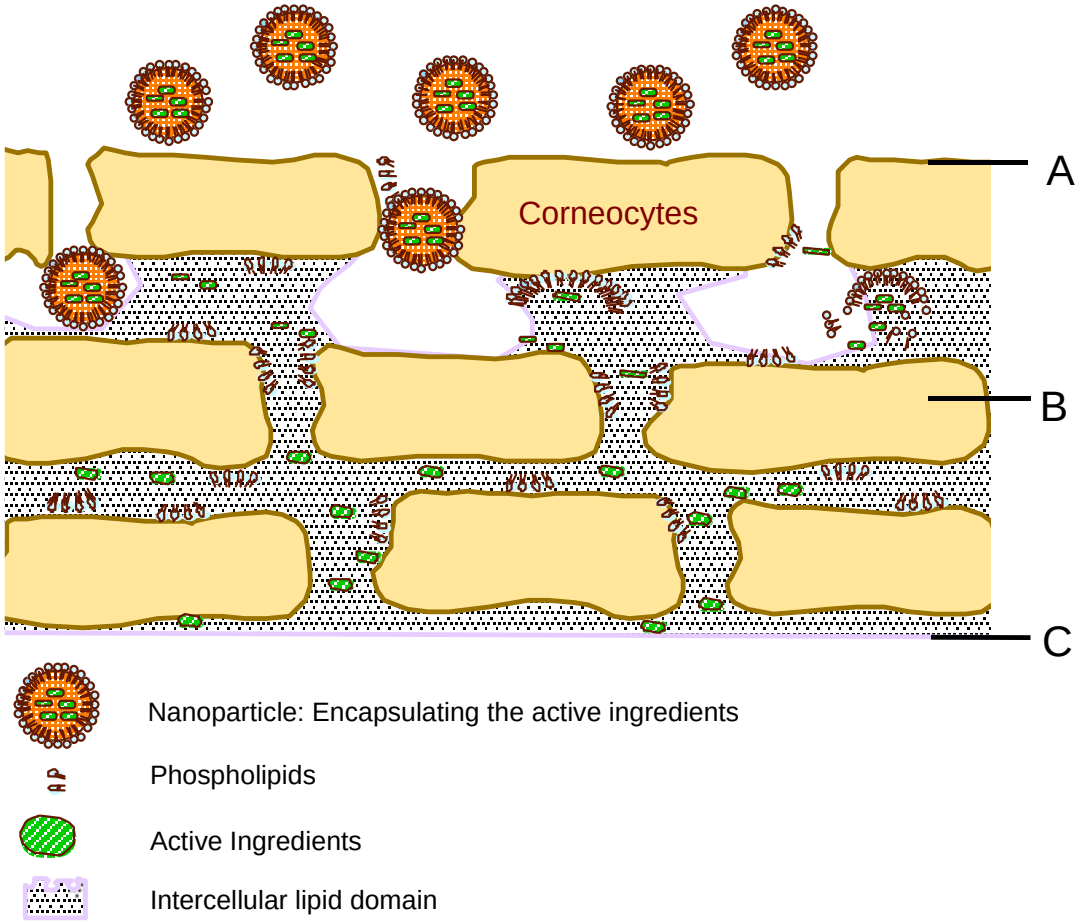


Figure 2. Stability of a nanoparticle preparation containing 3% vitamine E acetate and 1% vitamine A palmitate at different temperatures.

Schematic Presentation of Nanoparticle - Skin Penetration of Nanoparticles into Skin



Description : Adsorbtion and fusion of the vesicles at the surface of the stratum corneum (A and A-B). Changements in the macromolecular structure organisation. In the external layer of the stratum corneum interaction with keratin and intercellular lipid domain (A-B). In the deeper layer of the stratum corneum (B-C)an possible "depot effect" for the entrapped substances can reached.

Hypothetical interaction of Nano Lipobelle (liposome or nanoparticle) with the stratum corneum.

Dermatological tolerance

The dermatological tolerance of the nanoparticles and the encapsulated materials has been carefully proved in healthy volunteers.

Application

Nano-Lipobelle products can be used in a wide variety of skin care products:

Anti-aging products
Pre-/After-Sun Lotions
Hydrating Lotions
Eye-wrinkle gels
Moisturizing gels
Rejuvenating skin care
Eye wrinkle treatments
Emollient body preparations
Nourishing skin care products

Recommended concentrations

1 to 10% depending upon the desired effect.

Manufacturing of products

Disperse Nano-Lipobelle products into the aqueous phase. Homogenization and short temperature rises to 50°C do not affect the stability of the nanoemulsion.