



Essences loaded in nanoparticles for a successful dermal therapy

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phenol-derived aromatic components, interest in pharmaceutical, cosmetic. essential oils have been widely used for bactericidal, virucidal, fungicidal, antiparasitical, insecticidal, and other medicinal properties .sedative, anti-inflmmatory, spasmolytic, and locally anaesthetic remedies. In this review their nano structures in drug delivery system for dermal therapy has been proposed. Two categories of nanocarriers can be proposed: polymeric nanoparticulate formulations, extensively studied with signifiant improvement of the essential oil antimicrobial activity, and lipid carriers, including liposomes, solid lipid nanoparticles, nanostructured lipid particles, and nano- and microemulsions. Introduction: Essential oils are hydrophobic components derived of plant .They are unstable.Nanotechnology is a big boon for dermal product, the application of nanotechnology in the fild of dermatology is the Nanodermatology. In this review after an introduction of nanotechnology, we will describe various types of nanoparticles containing essences for dermal therapy Methods:One possible solutions for increasing stability of nano essences is nanoencapsulation. encapsulating menthapiperita in chitosan formulations is the most common .Nanoemulsions are used for cumin and rice bran lemongrass, lemon, lemon myrtle, oregano, sage, thyme, clove and tea. The common methods in nanoemulsion preparation are homogenization and ultrasonication. Nanoemulsions of pine nut oil was used in the encapsulation of paclitaxel Betulin inhibits the formation of new capillaries. This activity was further enhanced using nanoemulsion formulation.rosemary EO was loaded into lipid nanoparticles (NLCs) consisting of cetyl palmitate as a solid lipid, and non-ionic surfactants. SLNs containing Z. multiflora were prepared. Hydro distillation is the common method of producing essential oils.DLS and PCS used for measuring particle size.also The PH is determined by pH meter.

Abstract Essential oils are complex blends of a variety of volatile molecules such as terpenoids,

Results :the encapsulation of piperita essence into chitosan has been successful for antibacterial therapy..A transdermal nanoemulsion formulation of cumin essential oil showed effctive *invitro* and *invivo* antioxidant and hepatoprotective activities. A rice bran oil nanoemulsion protected the stability and antioxidant effct of the propolis extract. A soybean oil based nanoemulsion caused 90% inactivation of Bacillus spores. Essential oils of lemongrass,lemon,lemon myrtle,oregano, sage,thyme,clove and tea tree are known to exhibit antimicrobial activity.In rosemary therapy Skin elasticity increased. for the treatment of cutaneous alterations.Betulin nanoemulsion tested on mouse skin reduced skin lesions . that the combinational effcts of nanoemulsion encapsulated PTX and CER showed higher cytotoxic effcts in brain tumor cells .SLNs carriers for *Z. multiflora* essential oil ,control the fungal pathogens. (SLN) Containing Juniper Oil as Anti-Acne Topical Carriers.

Conclusions: The combinational effcts of essences and nano careers would demonstrate enhanced efficy to a greater extent. Moreover, this could serve as an effctive drug delivery system with targeted site of action. The could meet the patient's compliance in a better way. it could be used as an alternative tomstandard/conventional antibiotic therapy and chemotherapy by minimizing dosage concentration and by limiting multiple dose.

Keywords: essential oils; nano particles; dermatology; therapy

Grants: However, there is still room for improvement. One of the goals in the future could be an optimization of the release profile. For example, by experimenting with other solvents or by applying other conditions.

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