

Proniosomal sunscreen gel based formulation – A promising approach for improving quality of life (QOL)

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Proniosomes are thirist areas for Pharmaceutical and cosmoceutical drug delivery; they are made up of non-ionic based surfactants, cholesterol and other additives. These structures are liquid crystalline compact niosomal hybrids that can be converted into niosomes immediately upon hydration are used as such in the topical applications. Use of proniosome gel in dermal delivery does not require hydration prior to application, but they can be applied as such or loaded on a base material of emulsion, gel, ointment, etc. prior to application. O-Padimate is a UV-B Filter widely used as a sunscreen agent. The aim of this study was to investigate the combined influence of 3 independent variables in the preparation of O-Padimate Proniosomes. A 3-factor, 3-level Box-Behnken design was used to optimize formulation with independent variables selected were molar ratio of Span: Brij, surfactant loading and amount of drug, derived equation and contour plots in predicting the values of dependent variables. Trial batches were prepared by the slurry method and characterized for Vesicle size, morphology & Encapsulation efficiency, Skin permeation studies, Rheological properties and Sun Protection Factor (SPF). Results reveal that optimized O-Padimate Proniosomal formulations showing high SPF and low TWEL (Trans epidermal water loss). In Conclusion, a novel sunscreen semisolid formulations which are incorporated with proniosomal delivery systems can satisfy the problems encountered with conventional sunscreen formulations during the course study of Quality of Life.

Biography

Sandeep G is pursuing his Ph.D from department of Pharmaceutical Sciences, JNTU Anantapur, Anantapur, India. He is enriched with 5 years of teaching and 2 of year's Industrial experience. He is a chapter member for more than 10 professional societies governing pharmacy profession like IPA, IPGA, ISPOR, etc. To his credentials 20 publication of research in peer reviewed indexed and impact factor journals of international. He is an editorial member for 5 journals with International. He has guided 6 students of M. Pharmacy and 3 more are undergoing. He authored a chapter in Book of Novel Drug Delivery Systems.

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