

Formulation, Development and Evaluation of Herbal Antifungal Nanoemulgel Containing Neem Seed Oil, Tulsi Oil and Aloe-Vera Gel

Ms. Kashyab Tamboli¹, Ms. Shradha Khaldkar², Mr. Sahil Chaugule³,
Ms. Trupti Jadhav⁴, Ms. Swaranjali Shinde⁵

Samarth Institute of Pharmacy, Belhe, Pune, Maharashtra, India^{1,2,3,4}

Assistant Professor, Samarth Institute of Pharmacy, Belhe, Pune, Maharashtra, India⁵

Abstract: India has rich tradition of plant based knowledge of healthcare. Modern pharmaceutical technology is being combined with traditional health medicines to increase the efficacy. Fungal infection is now the fourth most common infection in the world. For topical delivery, poor permeability of drugs leads to high cost of therapy and decreased patient compliance. This problem can be overcome by preparing lipid based colloidal sub-micron drug delivery. Due to this technology high concentration of drug can be penetrate into the skin as the lipophilic intracellular pathway of skin allows penetration of materials of less than 20nm, hence drug depot is created in the stratum corneum and epidermis. The present study was aimed to formulate herbal nanoemulgel containing neem oil extract and aloe-vera gel for the treatment of cutaneous fungal infection against the *Candida albicans*. Nanoemulsion formulations were prepared by spontaneous emulsification method and characterization of the prepared nanoemulsion formulations were done and optimized NE formulation was incorporated into gel base to obtain nanoemulgel. From the results it can be concluded that nanoemulgel formulation is potential and effective topical drug delivery system for neem oil and aloe-vera gel for the topical treatment of fungal infections.

Keywords: Aloe-vera gel, Fungal infection, Nanoemulgel, Nanoemulsion, Neem oil, tulsi oil

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