

Nanosponges : Formulation and Evaluation of Nanosponges

Ms. Samiksha S. Shendre¹, Ms. Shreya B. Bhale², Ms. Sakshi R. Shinde³, Ms. Purva A. Daware⁴,
Ms. Bhagyashri P. Devakr⁵, Ms. Vaishnavi D. Chavan⁶, Prof. S. W. Gawande⁷, Dr. M. D. Kitukale⁸

Students, P.Wadhvani College of Pharmacy, Yavatmal, Maharashtra, India¹⁻⁶

Assistant Professor & Guide, P.Wadhvani College of Pharmacy, Yavatmal, Maharashtra, India⁷

Principal, P.Wadhvani College of Pharmacy, Yavatmal, Maharashtra, India⁸

Abstract: *This review aims that the study of to formulate and evaluate nonosponges as a Novel drug delivery systems, exploiting their potential to improve the biological availability of drug with long half lives. Nanosponges, tiny mesh structure with enhanced ability to encapsulate water and lipid soluble drug, have gained significant attention in the field of pharmaceuticals. These spherical colloidal particles possess a hydrophobic core, allowing for the transport of therapeutic molecules with both hydrophilic and hydrophobic properties composed of 3D network with long -chain polyester backbones and cross -linkers, nonosponges can be synthesized through the treatment of cyclodextrins with appropriate cross-linkers. The study will investigate the physicochemical properties, in-vitro release profile and biological efficiency of nonosponges, providing insights into their potential applications in pharmaceutical technology.*

Keywords: Nanosponges ,3D Network , Cyclodextrin ,crosslinkers ,biological efficacy