

ABSTRACT BOOK



Enhancement of the Solubility of Lipophilic Drug by Self Micro-Emulsifying Drug (SMEDDS) for Oral Administration

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Keywords: Antidiabetic activity, SEMMDS, Surfactants, Eucalyptus oil.

Aim and Objectives: The aim of this research work is the formulation, development and evaluation of self-micro emulsifying drug delivery system (SMEEDS) to enhance the solubility of poorly soluble drugs and improve the thermodynamic solubility of drug delivery system.

Methodology: SMEDDS prepared by water titration method to improve the solubility of drug.

Results and Discussion: The drug content in optimized formulation was around 96% of added amount the solubility of system for high entrapment in internal phase. SMEDDS F1 having percentage transmittance above 90% consider for globule size analysis. Droplet size analysis and zeta potential value confirm reduction of particle size and improve solubility.

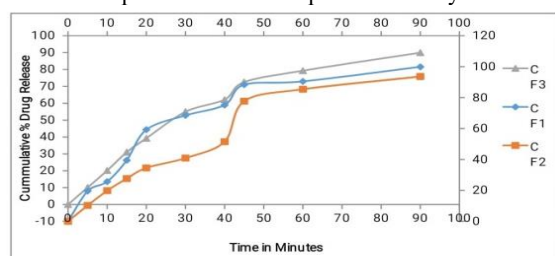


Fig. 1: *In vitro* dissolution profile of SEMDD

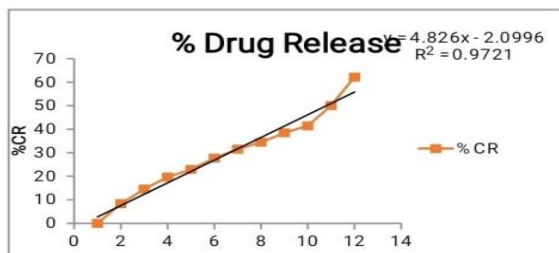


Fig. 2: % Drug release profile

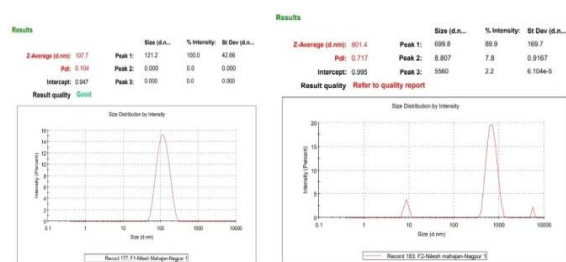


Fig. 3: Droplet size analysis of SMEDDS F1 & F2 formulation

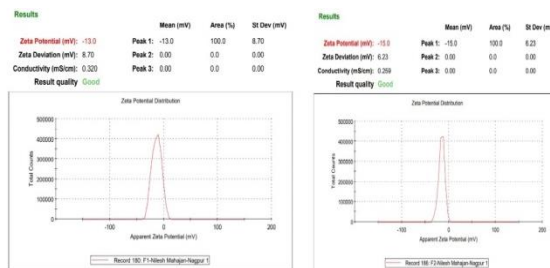


Fig. 4: Zeta potential analysis of SMEDDS F1 & F2 formulation

Conclusion: The solubility of hydrophobic drug can be enhance by various method and one of them are self micro- emulsifying drug delivery system(SMEDDS) or self emulsifying drug delivery system (SEDDS) they enhance permeability and bioavailability of hydrophobic drugs without going into first pass metabolism.

References:

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Acknowledgements: I express my gratitude and sincere thanks to Dr. Purushottam Gangane sir, as guide and HOD Dr. Nilesh M. Mahajan sir, who with his dynamic approach boosted my moral, which helped me to a very great extent in the completion of the abstract and also my sincere thanks to Dr.Mrs.U.N.Mahajan ma'am, principal of Dadasaheb Balpande College of Pharmacy. I also thanks to my parents and my friends who have more or less contributed to the preparation of abstract.