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Research Article

SELF NANOEMULSIFYING DRUG DELIVERY SYSTEM (SNEDDS) : FORMULATION AND EVALUATION OF LIQUID AND SOLID SNEDDS (PELLETS) FOR HYDROPHOBIC DRUG CANDIDATES.

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ABSTRACT

Self nanoemulsifying drug delivery (SNEDDS) is utilised for drugs which exhibit low water solubility and as a result, low bioavailability. Dissolution is the rate limiting factor for these drugs (which are hydrophobic). SNEDDS can significantly increase the bioavailability of such drugs by improving dissolution as well as absorption. They are formulated by utilising an oil phase, surfactant and a co-surfactant. This formulation forms nanoemulsion (Oil/Water type) on contact with aqueous body fluids i.e gastric juices when administered orally. Solid SNEDDS (s-SNEDDS) can also be formulated in the form of pellets which exhibit greater advantages. Since this technology has a great potential, it will continue to aid novel applications in drug delivery and overcome limitations associated with the delivery of hydrophobic drugs, mainly those belonging to BCS class-II and class-IV.

Key words: *Self nanoemulsifying drug delivery system (SNEDDS), oil phase, surfactants, co-surfactants, Pseudo ternary phase diagrams, SEM, in-vitro lipolysis.*