

ABSTRACT BOOK



Chitosan Based Polymeric Nanoparticles of Anticancer Drug Pomalidomide

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Aim and Objectives: The research work was aimed to developed chitosan based polymeric nanoparticles of anticancer drug Pomalidomide. The basic objective was to enhance the aqueous solubility, permeability of drug and rate of dissolution of anticancer drug.

Methodology: The formulation of chitosan nanoparticles was done by Ionic gelation method which improves 2- or 3-fold saturation solubility and drug release profile as compared to pure API. Total 3 formulations were prepared using different concentration of polymer. The chitosan-based nanoparticles were evaluated for Particle's size, Zeta potential, Polydispersity index, Entrapment efficiency, Drug loading as well as Saturation solubility.

Results and Discussion: Formulations were evaluated for *in vitro* drug release in 0.1N HCl, over a period of 90 min using USP type II (paddle) dissolution apparatus at 50 rpm. The dissolution profiles of the batches were compared with that pure API. Form the above result it can be concluded that batch F2 showed comparable result.

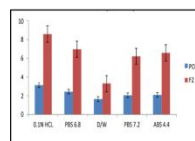


Fig.1: Solubility analysis

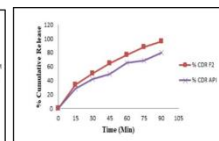


Fig.2: % Drug release

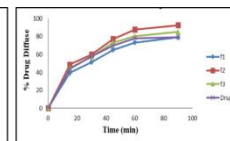


Fig. 3: Diffusion study

Conclusion: Chitosan based polymeric nanoparticles of anticancer drug were enhance the solubility, permeability and dissolution rate of Pomalidomide.

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