FORMULATION AND CHARACTERIZATION OF ITRACONAZOLE LOADED ORAL *IN SITU* GEL

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ABSTRACT

The purpose of the present work was formulation of oral *in situ* raft-forming gel containing the antifungal agent itraconazole. A solid dispersion technique was employed for enhancement of the drug's solubility in gastric fluid by using a hydrophilic carrier. Design-Expert® software was used for the formula optimization using gellan gum, cross-linking and gas generating agent and viscosity builder hydrophilic polymer as independent variables, while floating lag time, % drug release at 1 h and 6 h were opted as dependent variables. Complete amorphization was confirmed by thermal analysis and X-ray diffractogram. The optimized formulation has less than 30 seconds of floating lag time with upto 50% of drug release within 6 h. The formulation followed the Fickian law of sustain drug release pattern. A greater zone of inhibition in the antifungal assay was obtained in comparison to the marketed capsule. The prepared stomach-specific formulation shows minimum water uptake and sustained drug release.