

ORIGINAL RESEARCH ARTICLES

DEVELOPMENT AND EVALUATION OF METFORMIN TABLETS: EFFECT OF SUPERDISINTEGRANTS

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ABSTRACT

Metformin is an oral antihyperglycemic medication used to treat type 2 diabetes. BCS-III classification of medications includes metformin hydrochloride, which has a high solubility and a low permeability. This study's objective was to develop wet granulated metformin hydrochloride tablets using various synthetic superdisintegrants. On disintegration and dissolution, the effects of different superdisintegrants have been studied. After evaluation, it was observed that post-compression properties such as weight variability, thickness, hardness, and friability were within the IP ranges. The formulation F4 with Croscarmellose sodium (CCS) in low concentration was chosen as the best formulation. By increasing the quantity of Croscarmellose sodium (CCS), the *in vitro* dissolution profile increased, and *in vitro* disintegration time also increased in the formulated tablets using wet granulation method. The statistical significance was determined using one-way ANOVA, and there is no significant difference between formulations.