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Extraction and Evaluation of *Mangifera indica* Gum as a Sustained Release Polymer in Glibenclamide Matrix Tablets

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ABSTRACT

The aim of this study was to extract and evaluate *Mangifera indica* gum as sustain release polymer in glibenclamide matrix tablets. By using formal processes the gum of MI was tested for physicochemical and phytochemical properties and the results turned out favorable. The formulations were Intended and evaluated for the various parameters like weight uniformity, friability, content percent, hardness and *in vitro* dissolution studies. Moreover, all the matrix tablets formulations were within limits of the Pharmacopoeial standards. After a period of 24 h, *in vitro* release studies, the findings of F1, F2, F3 and were 10.89%, 10.69%, 9.99% and 9.55%, respectively. The best sustained drug release among those formulations (of 10.89%) was been achieved with formulation F1 at the end of 24 h, which indicated that the drug release from the matrix tablets was dependent on gum concentration, also MI gum give effective results even with very low concentrations (below 1%).

So the study provided a clue about the evaluation of MIG as a release retardant in the formulation of sustained release matrix tablets because of its good swelling, good flow and suitability for matrix formulations. The results of this study demonstrated that MIG sustained the drug release. The polymer obtained was of high purity and the method of extraction and characterization is economic and gave a high yield.

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