



## Original Article

**Development and evaluation of sesbania grandiflora linn seed mucilage as a tablet binder****Shaikh M. Shoaib<sup>\*1</sup>, Vijay D. Wagh<sup>2</sup>, Zahid Zaheer<sup>3</sup>, Ghalib Hundekari<sup>1</sup>**<sup>1</sup>Kamla Nehru Polytechnic(Pharmacy), Auarangabad(MS), India.<sup>2</sup>R.C. Patel Institute of Pharmaceutical Education and Research, Shirpur, Dist- Dhule, (MS), India.<sup>3</sup>Y.B. Chavan College of Pharmacy, Aurangabad (MS) India.**Abstract**

The aim of the present study was to isolate the hydrophilic mucilage from the seeds of *Sesbania Grandiflora* (Leguminosae) and study the potential of mucilage in tablet formulation as a binder. The DSC thermogram of the drug, drug-mucilage mixture indicates no chemical interactions. The tablet formulations of SG I, SG II, SG III, SG IV and SG V were prepared by using 2, 4, 6, 8, and 10% of mucilage, using lactose as diluents, Diclofenac sodium as a model drug and 2% of talc and magnesium stearate used as a glidant and lubricant, respectively. The granules were prepared by wet granulation technique and evaluated the granules properties like flow rate, Carr index, Hausner ratio and angle of repose were studied and compared with starch which was used as standard binder at 10% concentration. The tablets were compressed and evaluate the various parameters of weight variations, hardness, friability, disintegration and *in vitro* dissolution. The result shows that the granules having the excellent flow property and tablet prepared using 8 and 10 % of mucilage shows drug release over a period of 5 h and it exhibits more hardness than other formulations.

**Keywords:** *Sesbania Grandiflora*, Hydrophilic mucilage, Granulation technique, Starch

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