



Influence of Excipient Type and Level on Quality Control Parameters of Tablets Formulated from Polysaccharides Matrix System

Dhiren P. SHAH¹* & Girish K. JANI²

¹ *C K Pithawalla Institute of Pharmaceutical Science and Research, Via Magdalla Port, Nr. Malvan Mandir, Gavior Gam, Dumas Road, Surat – 395 007, Gujarat, India.*

² *S S R College of Pharmacy, Silvassa-Sayli Road, Silvassa, U T of D & NH – 396 230, India.*

SUMMARY. In the present study, mucilage from leaves of *Hibiscus rosa-sinensis* L. was extracted and physico-chemical parameters like swelling ratio and angle of repose were determined. Diclofenac sodium matrix tablets containing dried mucilage of *H. rosa-sinensis* were prepared by direct compression (hydrophilic and hydrophobic). Level and type of excipients influence on drug release, as well as water uptake and mass loss studies were carried out. Stability study of tablets was carried out at 40 °C and 75 % RH for three months. The dried mucilage powder shows superior swelling in all three different media. Batches H and N full fills the entire set criterion. Drug release kinetics from these formulations corresponded best to the zero-order kinetics. There was no significant effect of agitation speed on water uptake while mass loss was significantly affected by agitation speeds of prepared tablets. Tablets are stable after storage.

KEY WORDS: Diclofenac sodium, *Hibiscus rosa-sinensis* L., *In vitro* drug release, Water uptake and mass loss.

* Author to whom correspondence should be addressed. *E-mail:* dhirenphshah1@gmail.com