International Journal of ChemTech Research
CODEN (USA): IJCRGG, ISSN: 0974-4290, ISSN(Online):2455-9555
Vol.12 No.04, pp 163-172, 2019

Formulation and Evaluation of Ranitidine Hydrochloride Fast Dissolving Tablets Using Fenugreek Seeds Mucilage

Saripilli Rajeswari*, Nirujogi Suneetha, Kuralla Hari, Panchagnula Uday Shankar

Department of Pharmaceutical Technology, Maharajah's College of Pharmacy, Phool Baugh, Vizainagaram-535002, India

Abstract : The aim of the present research work was to formulate fast dissolving tablets of ranitidine HCl by direct compression method and to evaluate *fenugreek* seeds mucilage as a natural superdisintegrating agent. The fast dissolving tablets were prepared by using *fenugreek* seed mucilage powder, crospovidone, croscarmellose sodium, sodium starch glycolate as superdisintegrants (2 and 4% w/w) and microcrystalline cellulose (34 and 36% w/w) as a directly compressible vehicle. All the prepared tablets were evaluated for hardness, friability, drug content uniformity, weight variation, disintegrating time, wetting time and *in vitro* drug release studies. All the prepared fast dissolving tablets formulations were within the Pharmacopoeial standards limits. Based on *in vitro* drug release studies (>90 % within 30 min), the two formulations were tested for the short term stability (40 ˚C/75% RH for 3 months) and drug excipient interaction (IR spectroscopy). From all the prepared formulations, the formulation FR8 prepared with 6% w/w *fenugreek* seeds mucilage and 34% w/w of MCC was optimised as the best formulation (>90 % within 30 min) compared to conventional commercial tablets formulation (>75 % within 30 min). There is no significant on drug content and *in vitro* drug release ($p < 0.05$) (Accelerated stability studies).

Keywords : Ranitidine HCl, *fenugreek* seeds mucilage, croscarmellose sodium, microcrystalline cellulose, fast dissolving tablets.

Saripilli Rajeswari *et al* /International Journal of ChemTech Research, 2019,12(4): 163-172.

DOI= http://dx.doi.org/10.20902/IJCTR.2019.120420

*****