

Development and Evaluation of Gastro Retentive Floating Tablets of Ayurvedic Vati Formulation

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Abstract : Floating tablets of Marichyadi Vati were developed with an aim to prolong its gastric residence time and increase the bioavailability of drug. Rapid gastrointestinal transit could result in incomplete drug release from the drug delivery system above the absorption zone leading to diminished efficacy of the administered dose. The tablets were prepared by wet granulation technique, using HPMC E50 LV act as Matrixing agent, Carbopol as floating enhancer, microcrystalline cellulose as binder, sodium bi carbonate as effervescent agent with other excipients. The simplex lattice design was used for selection of variables for tablets formulation. Formulation was optimized on the basis of floating time and in vitro drug release. The results showed that the floating lag time for optimized formulation was found to be 61 second with about 97.32 % of total drug release within 3 hours. The in vitro release profiles of drug from the formulation could be best expressed zero order with highest linearity $r^2 = 0.9943$. It was concluded that the gastroretentive drug delivery system can be developed for Marichyadi Vati containing piperine to increase the residence time of the drug in the stomach and thereby increasing bioavailability.

Keywords : piperine, Marichyadi Vati, gastroretentive drug delivery, floating tablet

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