Article Details

FORMULATION AND EVALUATION OF BUOYANT MICROSPHERES OF NIZATIDINE BY SPRAY DRYING TECHNIQUE

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ABSTRACT

The objective of the present investigation was to formulate multiparticulate buoyant dosage form of nizatidine, a H2-receptor antagonist widely prescribed in gastric ulcers, duodenal ulcers. The short biological half-life (1 -2 hours), maximum absorption in initial part of small intestine, colonic metabolism of nizatidine favors, development of gastro retentive floating dosage form. Buoyant microspheres of nizatidine were prepared by spray drying technique using hydroxylpropyl methylcellulose and ethylcellulose as the rate controlling polymers. The prepared multiparticulate system were evaluated for various physicochemical parameters such as flow properties, in vitro buoyancy (floating lag time, total floating time), swelling studies, drug content and in vitro drug release. The shape and surface morphology of prepared microspheres were characterized by scanning electron microscopy. The formulated multiparticulate buoyant dosage form of nizatidine may be used in clinic for prolonged drug release in stomach for at least 12 hrs, thus improving the bioavailability of the drug during ulcer treatment.

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