

SHORT COMMUNICATION

FORMULATION AND EVALUATION OF CURCUMINOID-BASED GASTRO-RETENTIVE FLOATING TABLET USING NATURAL POLYMERS FOR ANTI-ULCER THERAPY

ABSTRACT

The present study aimed to formulate and evaluate curcuminoid-based gastro-retentive floating tablets using natural polymers for anti-ulcer therapy. Curcumin possesses potent antioxidant and anti-inflammatory properties but suffers from poor oral bioavailability. To overcome this limitation, a floating drug delivery system was developed using flaxseed mucilage and hydroxypropyl methylcellulose (HPMC). Curcumin was extracted from turmeric rhizomes by maceration and incorporated into floating tablets prepared by direct compression using sodium bicarbonate and citric acid as effervescent agents. The formulations were evaluated for pre-compression and post-compression parameters, floating behavior, and *in vitro* drug release. The optimized formulation exhibited good flow properties, acceptable mechanical strength, short floating lag time, prolonged buoyancy, and sustained drug release up to 24 h. The study concludes that natural polymers are effective in developing gastro-retentive floating tablets of curcumin for improved anti-ulcer therapy.