

Formulation and evaluation of floating tablets of liquorice extract

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ABSTRACT

Background Floating tablets prolong the gastric residence time of drugs, improve bioavailability, and facilitate local drug delivery to the stomach. With this objective, floating tablets containing aqueous extract of liquorice as drug was prepared for the treatment of *Helicobacter pylori* and gastric ulcers. **Methods** The aqueous extract of liquorice was standardized by HPTLC. Tablets containing HPMC K100M (hydrophilic polymer), liquorice extract, sodium bicarbonate (gas generating agent), talc, and magnesium stearate were prepared using direct compression method. the formulations were evaluated for physical parameters like diameter, thickness, hardness, friability, uniformity of weight, drug content, buoyancy time, dissolution, and drug release mechanism. the formulations were optimized on the basis of buoyancy time and in vitro drug release. **Results** The diameter of all formulations was in the range 11.166-11.933 mm; thickness was in the range 4.02-4.086 mm. The hardness ranged from 3.1 to 3.5 kg/cm². all formulations passed the USP requirements for friability and uniformity of weight. The buoyancy time of all tablet formulations was less than 5 min and tablet remained in floating condition throughout the study. All the tablet formulations followed zero-order kinetics and Korsemeyer-Peppas model in drug release. **Conclusion** The optimized formulation was found to be F6 which released 98.3% of drug in 8 h in vitro, while the buoyancy time was 3.5 min. Formulations containing psyllium husk, sodium bicarbonate and HPMC K100M in combination can be a promising for gastroretentive drug delivery systems.

KEYWORDS

Buoyancy time . floating tablets . korsemeyer . liquorice extract

REFERENCES