

Formulation and evaluation of alginate based mesalazine matrix tablets for intestinal delivery

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ABSTRACT:

The aim of this study is to develop alginate based mesalazine matrix tablets for intestinal delivery. Sodium alginate is a biocompatible natural polymer, with pH sensitive gel forming ability. Matrix tablets of Mesalazine were prepared using Sodium alginate with three different concentrations by wet granulation method. The granules were evaluated for angle of repose, bulk density, tapped density, compressibility index and Hausners ratio. The tablets were subjected to weight variation, hardness, friability and drug content test. The in vitro release characteristics of mesalazine from alginate tablets were compared with those of the commercial product Asacol.

The cumulative amount of released drug of S3 formulation was found to be almost the same as the of commercial product in acidic and basic media. The release profiles were affected by variable concentrations of Sodium alginate and hence, the release of Mesalazine was prevented in upper GIT with increase in the proportion of Sodium alginate. Mesalazine-alginate matrix tablet formulations can deliver drug to the small and large intestine. Thus, it may be a promising system for the treatment of Ulcerative colitis.

Keywords:

Mesalazine, Sodium alginate, Intestinal drug delivery, ulcerative colitis.