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## **Bilayer Delivery System Based on Polymeric Composition for Effective Management of Inflammatory Bowel Disease**

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The use of multiparticulate drug delivery systems in preference to single unit dosage forms for colon targeting purposes dates back to 1985 when scientist showed that multiparticulate systems enabled the drug to reach the colon quickly and were retained in the ascending colon for a relatively long period of time. Site-specific colonic drug delivery systems of anti-inflammatory drug with natural polymer were reported with pH sensitive polymer. Chitosan nanoparticles consisting of a hydrophobic core enteric coated with pH-dependent polymer of Eudragit series are proposed, for the effective delivery of drug to the colon for treatment of ulcerative colitis. Nanoparticles were prepared by ionotropic gelation method showed number of hurdle during process. We have optimized stirring speed, polymer composition and tripolyphosphate concentration to get nano size carrier with uniform distribution. Chitosan nanoparticles (CTNP) and Eudragit chitosan nanoparticles (ECTNP) was characterized for shape and surface morphology by scanning electron microscopy (SEM) appeared to be spherical in shape. The in vitro drug release was investigated using USP dissolution test apparatus in different simulated GIT fluids showed promising release. In vivo experiments are in further proceeding for fruitful results.

**Keywords:** Colon targeting, Nanoparticles, 5-amino salicylic acid and Eudragit