

PREPARATION AND EVALUATION OF COLON-SPECIFIC PROBIOTIC DELIVERY SYSTEM: *SACCHAROMYCES BOULARDII*

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ABSTRACT

Probiotics are beneficial microbes that have a beneficial effect on humans as well as animals. Despite their advantages, probiotics face viability challenges during storage and while passing through the upper gastrointestinal tract. This study was designed to develop an encapsulated system of *Saccharomyces boulardii* (SB) probiotics to overcome challenges with oral administration and develop a colon-targeted delivery system. Pectin and sodium carboxy methyl cellulose encapsulated microbeads of probiotics: polymer ratio (1:1, 1:2, and 1:3) were prepared using the ionotropic gelation technique and then coated with Eudragit® S 100 and cellulose acetate phthalate. They were then evaluated for efficacy and compared for bead size, flow properties, entrapment efficiency, percent yield, swelling index, mucoadhesive ness, *in vitro* release and viability of probiotics. The microencapsulated probiotics showed higher viability in the colon as compared to gastric and intestinal environments. Hence, microencapsulation is a potential delivery system for the administration of viable probiotics.