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# Impregnation of Chitosan Microspheres with the Natural Dye Curcuma

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***SUMMARY.*** **The purpose of this study was to investigate the impregnation of chitosan microspheres with the natural dye curcuma. The impregnation with curcuma dye was investigated in aqueous medium at pH 9.0, 9.5 and 10.0. The process of impregnation was monitored using capillary electrophoresis analysis which was carried out to observe the presence of dye in the impregnated microspheres. The microspheres loaded with dye at pH 10.0 were evaluated by infrared spectroscopy, optical microscopy, scanning electron microscopy and thermal analysis. The dye was impregnated in the chitosan microspheres through an adsorption process and was released when placed in contact with acidic solutions at pH 1.0–5.0. The dye was released from the chitosan in less than 3 h, regardless of the pH, although most of the microspheres dissolved within 1 h. The release mechanism followed the Super Case II transport release model.**

*KEY WORDS:* Chitosan, Controlled Release, Curcuma Dye, Impregnation, Microencapsulation.

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