

## Curcumin Loaded Modified Chitosan Nanocarrier for Tumor Specificity

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**Abstract :** An effective nanodrug delivery system was developed by using chitosan for increased encapsulation efficiency and retarded release of curcumin. Potential ionotropic gelation method was used for the development of chitosan nanoparticles with TPP as cross-linker. The characterization was done for analysis of size, structure, surface morphology, and thermal behavior of synthesized chitosan nanoparticles. The encapsulation efficiency was more than 80%, with improved drug loading capacity. The in-vitro drug release study showed that curcumin release rate was decreased significantly. These chitosan nanoparticles could be a suitable platform for co-delivery of curcumin and anticancer agent for enhanced cytotoxic effect on tumor cells.

**Keywords :** Curcumin, chitosan, nanoparticles, anticancer activity

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