The effect of TPP concentration on levothyroxin release from nanoclay/chitosan nanocomposite

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A nanoparticle polymer has been developed as a potential platform for drug delivery. Nanoclay/Chitosan nanocomposite were prepared with tripolyphosphate (TPP) by the ionic crosslinking method. The particle size of Nanoclay/Chitosan nanocomposite was in the range of 190-250 nm and encapsulation efficiencies of levothyroxine were 85%. A non-invasive way to deliver drugs to the deepest parts of the human body is ultrasound. To study how ultrasound causes levothyroxine to be released from chitosan nanoparticles, cumulative release was examined. In this report, we explore the effect of ultrasound on release behavior of levothyroxine from Nanoclay/Chitosan nanocomposite. The drug release from chitosan nanoparticles was enhanced using the ultrasound wave.

Keywords: nanoclay, chitosan, TPP, nanocomposite

References

[1] A. Sure Name, B. Sure Name, and C. Sure Name, *Journal Title*, **2017**, 35, 3523.
(Times New Roman 10)(Max 5 Refs)

1-M, Murugaiyan, P, Sivashanmugam and Sithique, M Aboobucker, Journal of Inorganic and Organometallic Polymers and Materials. 2020,13; 1-18

2-W, Wenqian, M, Qiuyu, Li, Qi, L, Jinbao, Z, Mo, J, Z Zhao, Kai, International journal of molecular sciences;2020,21;487

4-L, Li-Jyuan, N, Duc Dung, Journal of Controlled Release; 2020;317:246-25