

## عنوان مقاله:

The effect of polyethylene glycol-coated chitosan nanoparticles on levothyroxine release

## محل انتشار:

چهارمین همایش ملی شیمی، پتروشیمی و نانو ایران (سال: 1395)

تعداد صفحات اصل مقاله: 6

## نویسنده:

E Rostami - Faculty of Science, Department of Chemistry, Shahid Chamran University of Ahvaz, Ahvaz, Iran

## خلاصه مقاله:

We report the formation and characterization of PEG stearate (PEG)-coated Chitosan (CS) nanoparticles. Chitosan nanoparticles were synthesized using tripolyphosphate (TPP) via the ionic crosslinking method. Preparation of PEG-grafted Chitosan is essential to improve the biocompatibility and water solubility of chitosan. The size and morphologies of Chitosan nanoparticles were measured with transmission electron microscopy and scanning electron microscopy. Sizes of Chitosan nanoparticles were in the range of 200-300 nm and encapsulation efficiencies of drug were 90%. Properties nanoparticles were affected by the preparation variables and coating layer. Chitosan nanoparticles showed smooth surface and globular shape. In this study, we explored the release behaviour of levothyroxine was affected by coating layer. Coating surface leads to a decrease in the burst release effect compared to uncoated nanoparticle due to gradual release of adsorbed levothyroxine from PEG coated Chitosan nanoparticles.

## کلمات کلیدی:

Chitosan, nanoparticle, PEG

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/587273>

