

عنوان مقاله:

Preparation of crosslinked PVA-PMMA copolymeric nanoparticles as methotrexate delivery system

محل انتشار:

دومین کنفرانس بین المللی در شیمی و مهندسی شیمی (سال: 1400)

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خلاصه مقاله:

A successful synthesis of amphiphilic copolymer poly (vinyl alcohol- methyl methacrylate) with ۱,۴-Butanediol dimethacrylate as a cross-linking agent was prepared using emulsion polymerization. PVAc-PMMA copolymer was characterized by degree of conversion, rate of polymerization, FTIR, and FE-SEM techniques. The Optimal sample was hydrolyzed and PVA-PMMA nanoparticles were obtained by comparison of the FTIR for the original PVAc-PMMA and the produced PVA-PMMA. The crosslinked PVA-PMMA was further loaded with methotrexate, and the drug release was observed for a total of ۹۶ h at a pH of ۵.۸ and ۷.۴. The developed nanoparticles present great potential as a system for biomedical applications

کلمات کلیدی:

PVA-co-PMMA, Polymer nanoparticles, Methotrexate, Drug delivery

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