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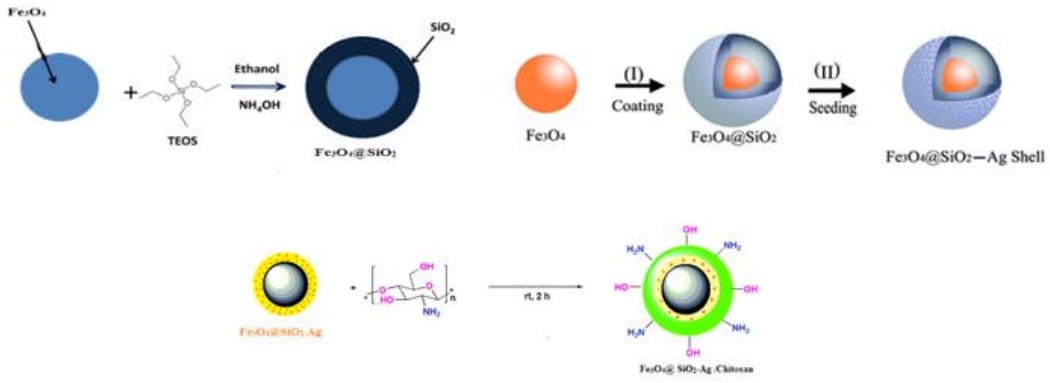
Synthesis and characterization of nanocomposite hydrogel based on nanobead chitosan in the presence of Fe_3O_4@SiO_2-Ag nanoparticles and its use to study surface absorption of vitamin B_{12}

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The use of nanoparticles in drug delivery systems has attracted a lot of attention over the last few years. Nanoparticles, which are made up of a mixture of Natural and Synthetic or Semisynthetic polymers, are colloidal particles. This study was conducted with the aim of developing an efficient catalyst, magnetic nanocomposite Fe3O4@SiO2-Ag, for the surface adsorption of vitamin B12 through a one-pot multicomponent reaction. [1]. Nanoparticles are of great importance because they can transfuse different components at the right time, which is important for drug carriers. [2]. The biodegradable biocompatible polymer chitosan has attracted considerable interest in drug delivery. In this study, a Chitosan nanocomposite based hydrogel was first created and then prepared and investigated with Fe3 o4 @ SiO2 Ag magnetic nanoparticles for studies of vitamin B12 adsorption. TGA, VSM, XRD, FTIR, TEM and SEM studies were carried out to determine the method for sample identification[3].



Keywords: Hydrogel - nanocomposite - chitosan - magnetic nanoparticles - surface absorption of vitamin B_{12}

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