Short Communication

Synthesis and Characterization of Magnetic Nanostructured Lipid Carriers (mNLCs) for Drug Delivery

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Magnetic nanoparticles (MNPs) are a class of nanoparticles, which can be manipulated using magnetic fields. Currently, MNPs are recognized as one of the most important mode as a drug carrier while they can also be potentially used as carriers for gene delivery. In this article, magnetic nanostructured lipid carriers (mNLCs) are prepared through co-precipitation method. The particle size and zeta potential, structure and thermal properties of the MNPS have been studied. The produced MNPs were also hydrophobically modified with a long chain of fatty acid namely lauric acid. These modified MNPs were mixed with nanostructured lipid carriers (NLCs) to form mNLCs. The heat capacity and flow of mNLCs was profigate in the presence of a magnetic field which is a worthy attribute for targeted drug delivery applications.

Keywords: Magnetic nanoparticles (MNPs), magnetic nanostructured lipid carriers (mNLCs), drug delivery.

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