

عنوان مقاله:

Encapsulation of Tamoxifen Citrat in Functionalized Nanoporous porous Silica and Investigation of its Release

محل انتشار:

دومین کنفرانس ملی ژئولیت ایران (سال: 1394)

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خلاصه مقاله:

Several nanoporous silica (MCM-41, SBA-15, MCF-17 and MCF) with different texture, pore size and surface area was synthesized by a hydrothermal method. These parent materials were then functionalized with 3-mercaptopropyl trimethoxysilane (MPTMS), and this followed by oxidation of thiol groups to the corresponding sulfonic group. After characterization of materials by infrared spectroscopy, X-ray diffraction, thermal and elemental analysis, they used as carriers to study loading and release of tamoxifen citrate as an anti-cancer drug by UV-Vis spectroscopy. The optimization measurements of time and amount of drug loading indicated a higher loading of tamoxifen citrate in SBA-15-SO₃H and MCM-41-SO₃H. Release of tamoxifen as a function of time and pH in the presence and absence of NaCl was investigated. Results showed a fast kinetic of drug release in MCF-SO₃H in acidic condition in presence of NaCl.

کلمات کلیدی:

Nanoporous silica; Tamoxifen citrate; SO₃H factor; Drug loading; Drug release

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