



大黄素/Mg-Al-LDHs纳米杂化物的制备及缓释性能研究

Synthesis and Release Behavior of Emodin Intercalated Mg-Al Hydrotalcite-Like Compounds

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英文关键词: [layered double hydroxides\(LDHs\)](#) [emodin](#) [intercalation](#) [controlled release](#)

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中文摘要:

以Mg-Al型层状双金属氢氧化物(Mg-Al-LDHs)为载体, 将大黄素分子通过二次组装法成功插入其层间, 得到大黄素/Mg-Al-LDHs纳米杂化物。XRD结果显示, Mg-Al-LDHs粒子层间距由0.48 nm增大到3.35 nm。差热曲线(DTA曲线)分析结果表明, 该纳米杂化物分子中大黄素的分解温度比纯大黄素的分解温度高50℃。分别在pH 4.8和pH 7.5的缓冲溶液中测定了大黄素/LDHs的缓释性能, 结果表明大黄素/LDHs的药品释放速率明显低于二者的物理混合物, 并探讨了释放机理。

英文摘要:

In this paper, emodins were successfully intercalated into the gallery of Mg-Al hydrotalcite-like compounds (LDHs), to obtain nanohybrids. The results of X-ray powder diffraction (XRD) showed that the interlayer distance of Mg-Al-LDHs was increased from 0.48 nm to 3.35 nm. The DTA results suggested that the discomposition temperature of the nanohybrids increased by 50℃ in comparison with that of emodin. The determination results of the drug release indicated that the drug release rate from the emodin/LDHs nanohybrids was much slower than that from the corresponding physical mixture at either pH 4.8 or pH 7.5. The release mechanism was discussed.

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