

Accepted Manuscript

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PII: S0021-9673(18)30990-7
DOI: <https://doi.org/10.1016/j.chroma.2018.08.005>
Reference: CHROMA 359601

To appear in: *Journal of Chromatography A*

Received date: 21-1-2018
Revised date: 5-7-2018
Accepted date: 1-8-2018

Please cite this article as: Baimani N, Azar PA, Husain SW, Panahi HA, Mehramizi A, Providing Hyper-Branched Dendrimer conjugated with β -cyclodextrin based on Magnetic Nanoparticles for the Separation of Methylprednisolone Acetate, *Journal of Chromatography A* (2018), <https://doi.org/10.1016/j.chroma.2018.08.005>

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Providing Hyper-Branched Dendrimer conjugated with β -cyclodextrin based on Magnetic Nanoparticles for the Separation of Methylprednisolone Acetate

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Highlights

- Efficient method for the extraction of the anti-inflammatory drug by nano-sorbent
- Representing excellent linearity, recovery, LOD and RSD by SPE technique with HPLC
- Developed method for dendritic β -CD in order to obtain high sorption capacity

Abstract

This study introduced a developed approach for dendritic β -cyclodextrin (β -CD) in order to obtain high sorption capacity. Synthetic strategy exploits the reactivity between acrylic acid and allyl glycidyl ether for high-yielding assembly via grafting on to the magnetic nanoparticles that are modified using 3-mercaptopropyltrimethoxysilane for various building branches and host-guest molecules of β -CD. The methodology has been applied for the preparation of a series of β -CD conjugated magnetic nanoparticles

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