



Synthesis and Characterization of Magnetic Molecularly Imprinted Polymer for Aniline Recognition

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Aniline, the main representative of aromatic amines, occurs in a large number of industries, such as the production of textiles, plastics, medicines, pesticides, rubber, and varnishes.¹ Due to practicality and efficiency, a molecularly imprinted polymers (MIPs) can be used as sorbents for removing aniline.² In this study, magnetic molecularly imprinted polymer was synthesized via suspension copolymerization while characterization was performed by various methods in order to obtain an efficient sorbent for the aniline removal from an aqueous solution. Fourier transform infrared spectroscopy (FT-IR) confirmed characteristic vibrational bands which suggested successful synthesis of MIP, nitrogen gas adsorption-desorption measurements as well as mercury porosimetry have shown that the most dominant pores were mesopores, while scanning electron microscopy with energy dispersive X-ray spectroscopy (SEM-EDX) confirmed a 3D spherical porous structure with all the expected elements.

Keywords: molecularly imprinted polymers; MIPs; aniline; aromatic amine; characterization

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