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Preparation of fluorescent magnetic molecularly imprinted polymer of gossypol and fluorescence polarization detection

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Fluorescent magnetic molecularly imprinted polymers of gossypol molecules were prepared and gossypol binding ability was detected by applying fluorescence polarization and ultraviolet methods. The experimental results showed that the fluorescent molecularly imprinted polymers had a high binding rate and high recognition ability of gossypol. Compared with the ultraviolet method, the fluorescence polarization method was more sensitive in evaluating the binding ability of molecularly imprinted polymers to gossypol. This is because the detection limit could be as low as 5 ng/L and the linear range of detection was 5-45 ng/L ($R^2=0.9958$). The preparation method of fluorescent magnetic molecularly imprinted polymers of gossypol was firstly discussed. It demonstrates that the fluorescence polarization applied in detection of molecularly imprinted polymers to gossypol is a sensitive and accurate detection method.

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