

## Simultaneous Removal of Proteins and Determination of Ciprofloxacin by Molecularly Imprinted Polymer

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A novel ciprofloxacin imprinted polymer was synthesized by an in-situ therm-initiated copolymerization process in water-containing systems using methacrylic acid as monomer and ethylene glycol dimethacrylate as cross-linker. Molecular recognition properties, binding capability, and chromatographic applications of the MIP was evaluated and the results revealed the imprinted polymers have high affinity to ciprofloxacin in both in nonpolar and aqueous environment and the selectivity can be easily controlled by adjusting the acidity of the mobile phase. The obtained MIP was successfully used as special chromatographic stationary phase to selective extraction and separation of ciprofloxacin from human urine samples. After centrifugation, the urine samples were directly injected into the MIP column, proteins and other biological matrix were quickly washed out and ciprofloxacin could be selectively retained and enriched. Moreover, by increasing the injection volume, the sensitivity and detection limits could be greatly improved.