

**Cyromazine imprinted polymer for selective stir bar sorptive
extraction of melamine in animal feed and milk samples**

Wenying Fan, Mingqi Gao, Man He, Beibei Chen, Bin Hu*

Key Laboratory of Analytical Chemistry for Biology and Medicine (Ministry of Education),

Department of Chemistry, Wuhan University, Wuhan 430072, P R China

Supplementary materials

* Corresponding author, tel: 86-27-68752162; fax: 86-27-68754067, email: binhu@whu.edu.cn (B. Hu)

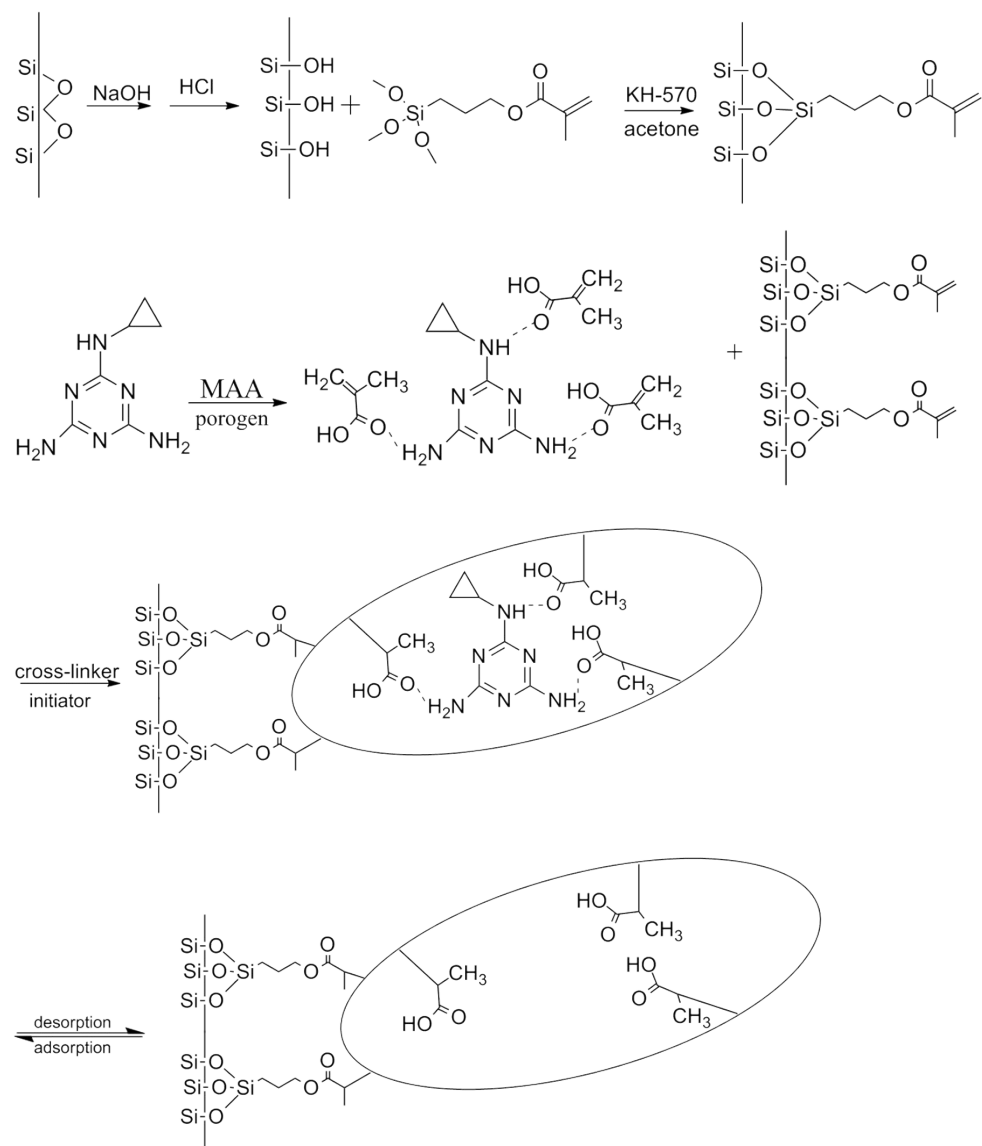


Fig.S1 The synthesis process of MIP coated stir bar by in situ polymerization.

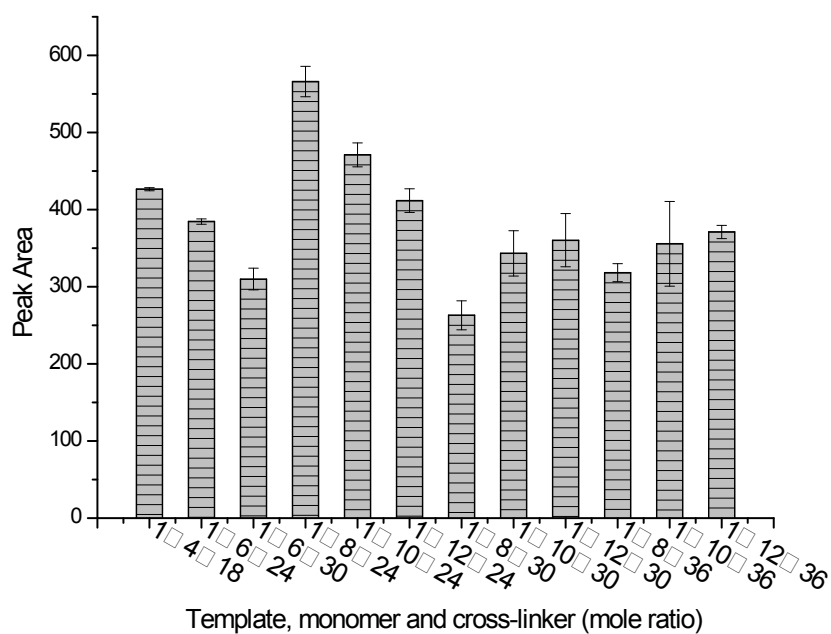


Fig.S2 Extraction performance of MIP coated stir bar prepared by different mole ratio of template, monomer and cross-linker for target melamine.

Conditions: melamine, $100 \mu\text{g L}^{-1}$; sample solvent, methanol; stirring rate, 600 rpm; extraction time, 90 min; desorption solvent, $400 \mu\text{L}$ 10 % (v/v) ammonia in methanol; desorption time, 15 min.

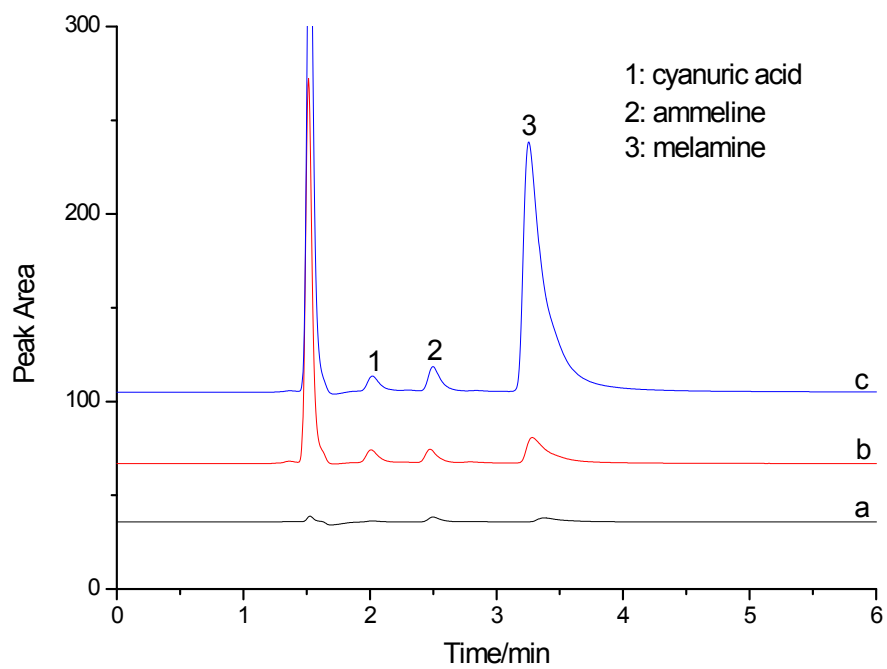


Fig.S3 HPLC-UV chromatography of melamine and its metabolites ($100 \mu\text{g L}^{-1}$) by direct injection (a), NIP-SBSE (b), and MIP-SBSE (c), respectively.

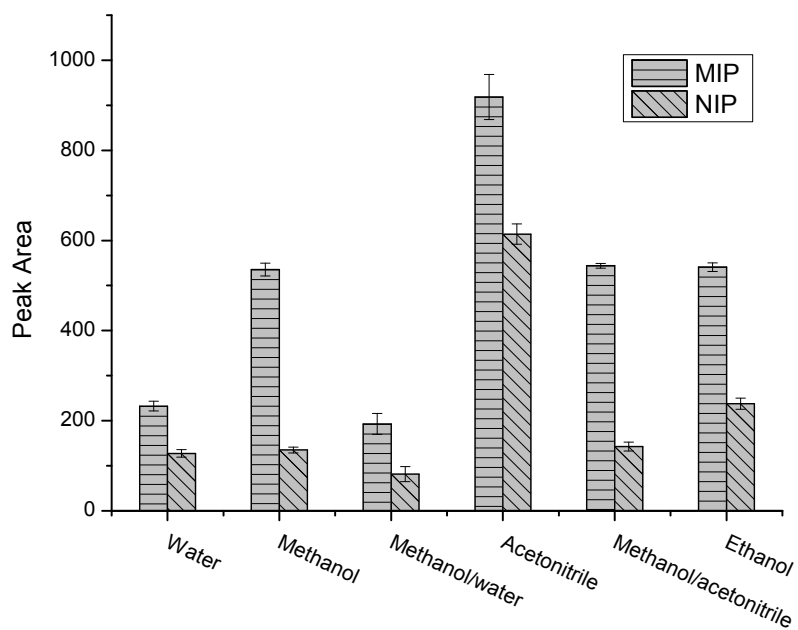


Fig.S4 Effect of extraction solvent on the extraction selectivity of melamine.
Conditions: melamine, 100 $\mu\text{g L}^{-1}$; stirring rate, 600 rpm; extraction time, 90 min;
desorption solvent, 400 μL 10 % (v/v) ammonia in methanol; desorption time, 15 min.

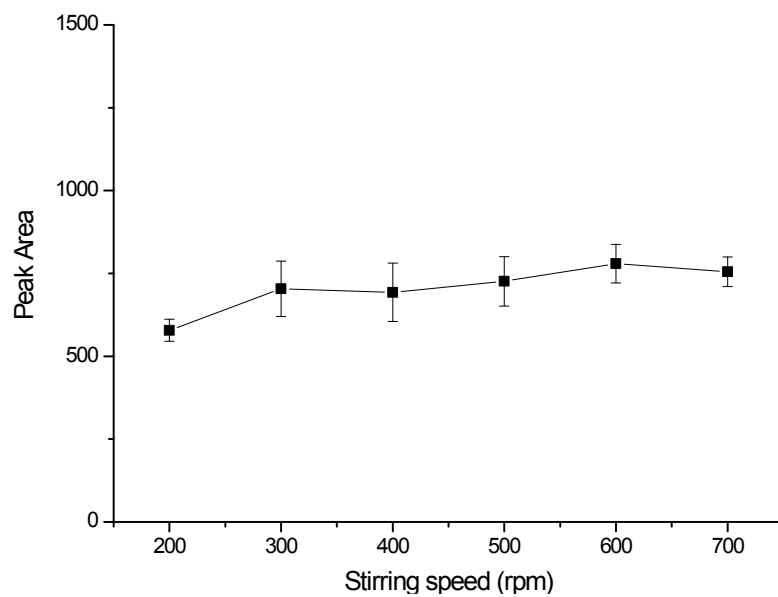


Fig.S5 Effect of stirring rate on the extraction of melamine by MIP coated stir bar. Conditions: melamine, $100 \mu\text{g L}^{-1}$; sample solvent, methanol; extraction time, 90 min; desorption solvent, $400 \mu\text{L}$ 10 % (v/v) ammonia in methanol; desorption time, 15 min.

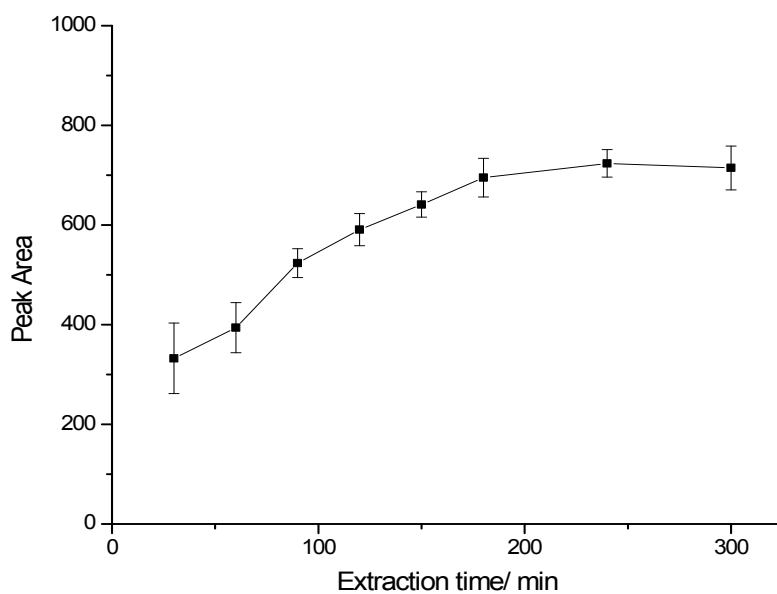


Fig. S6 Effect of extraction time on the extraction of melamine by MIP coated stir bar.

Conditions: melamine, $100 \mu\text{g L}^{-1}$; sample solvent, methanol; stirring rate, 600 rpm; desorption solvent, $400 \mu\text{L}$ 10 % (v/v) ammonia in methanol; desorption time, 15 min.

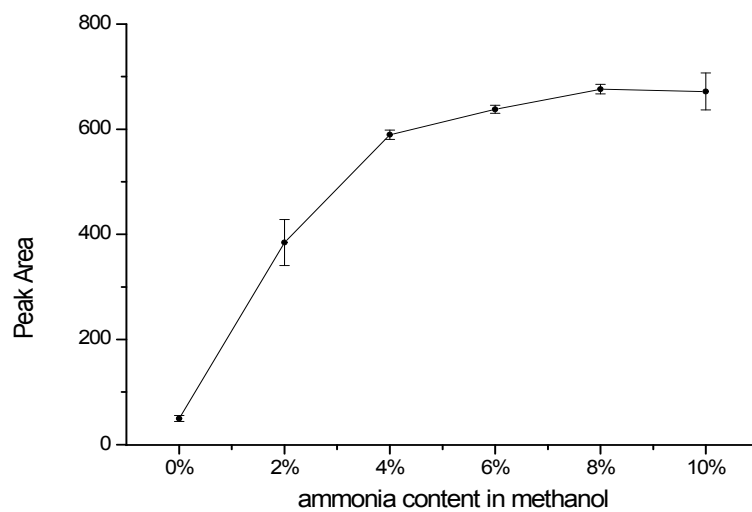


Fig.S7 Effect of ammonia content in methanol as desorption solvent on the desorption of melamine by MIP coated stir bar.

Conditions: melamine, $100 \mu\text{g L}^{-1}$; sample solvent, methanol; stirring rate, 600 rpm; extraction time, 90 min; desorption time, 15 min.

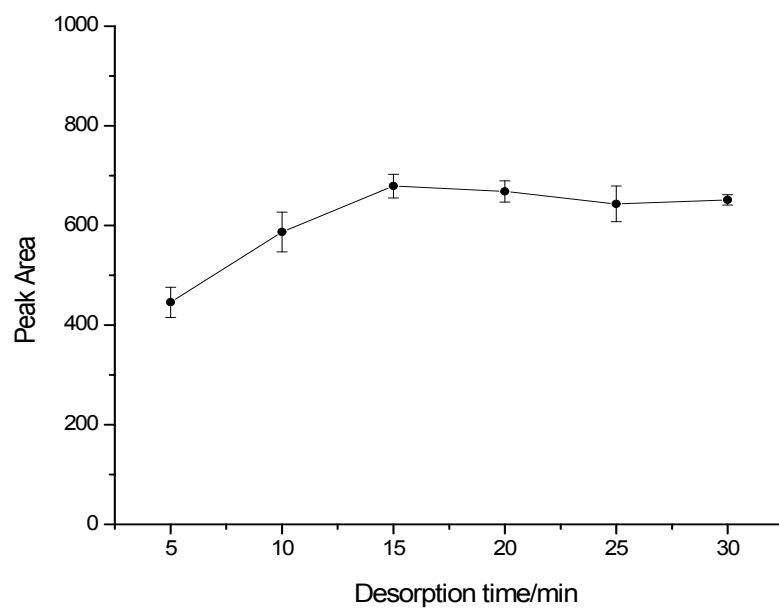


Fig. S8 Effect of desorption time on the desorption of melamine by MIP coated stir bar.

Conditions: melamine, $100 \mu\text{g L}^{-1}$; sample solvent, methanol; stirring rate, 600 rpm; extraction time, 90 min; desorption solvent, $400 \mu\text{L}$ 10 % (v/v) ammonia in methanol.