Supporting information for

Preparation of Salbutamol imprinted magnetic nanoparticles via boronate affinity oriented surface imprinting for selective analysis of trace salbutamol residues

Zijun Bie[a,b] Weiman Zhao[b], Zhongyuan Lv[a], Songlin, Liu[a] and Yang Chen[a,b*]

a. Department of Chemistry, Bengbu Medical University, 2600 Donghai Avenue, Bengbu 233000, China

b. School of Pharmacy, Bengbu Medical University, 2600 Donghai Avenue, Bengbu 233000, China

**Corresponding author: Dr. Yang Chen. Tel:+86 552 3175 452*

E-mail: nbastuff@yeah.net

Supplementary Figures

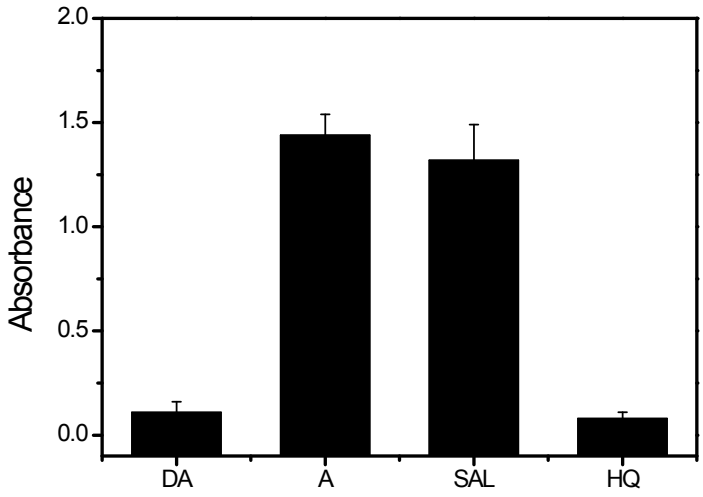

Figure S1. Binding capability of boronic acid-functionalized MNPs towards different molecules.

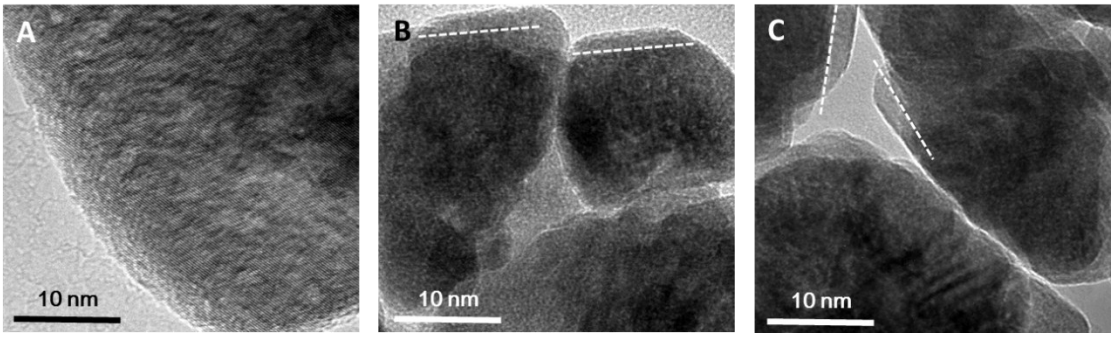

Figure S2. TEM images for (A) boronate affinity MNPs, (B) imprinted and (C) non-imprinted MNPs.

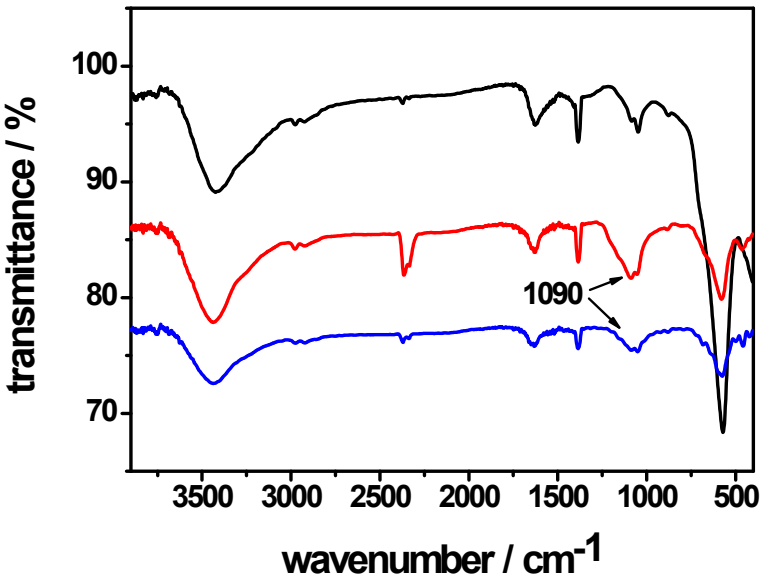

Figure S3. FI-IR spectra for of boronic acid-functionalized MNPs (black), SAL-imprinted MNPs (red) and non-imprinted MNPs (blue).

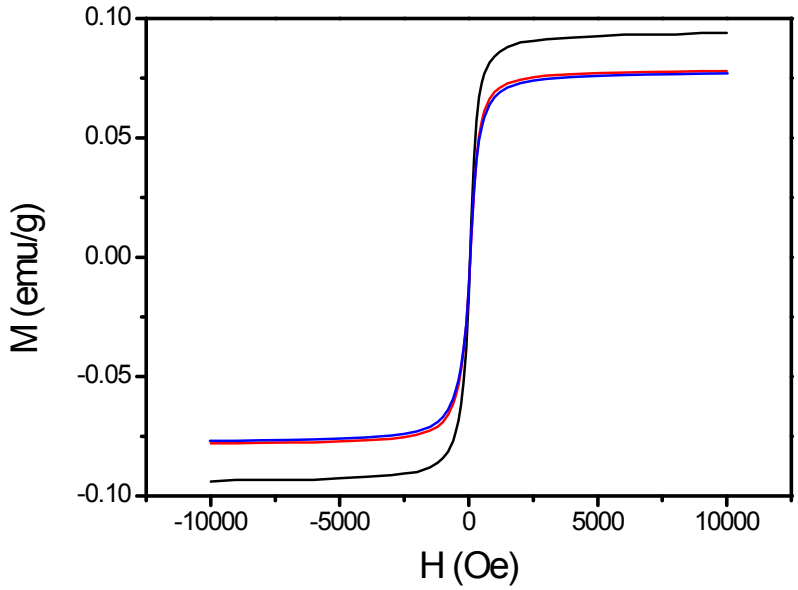

Figure S4. Magnetization curve of boronic acid-functionalized MNPs (black), SAL-imprinted MNPs (red) and non-imprinted MNPs (blue).

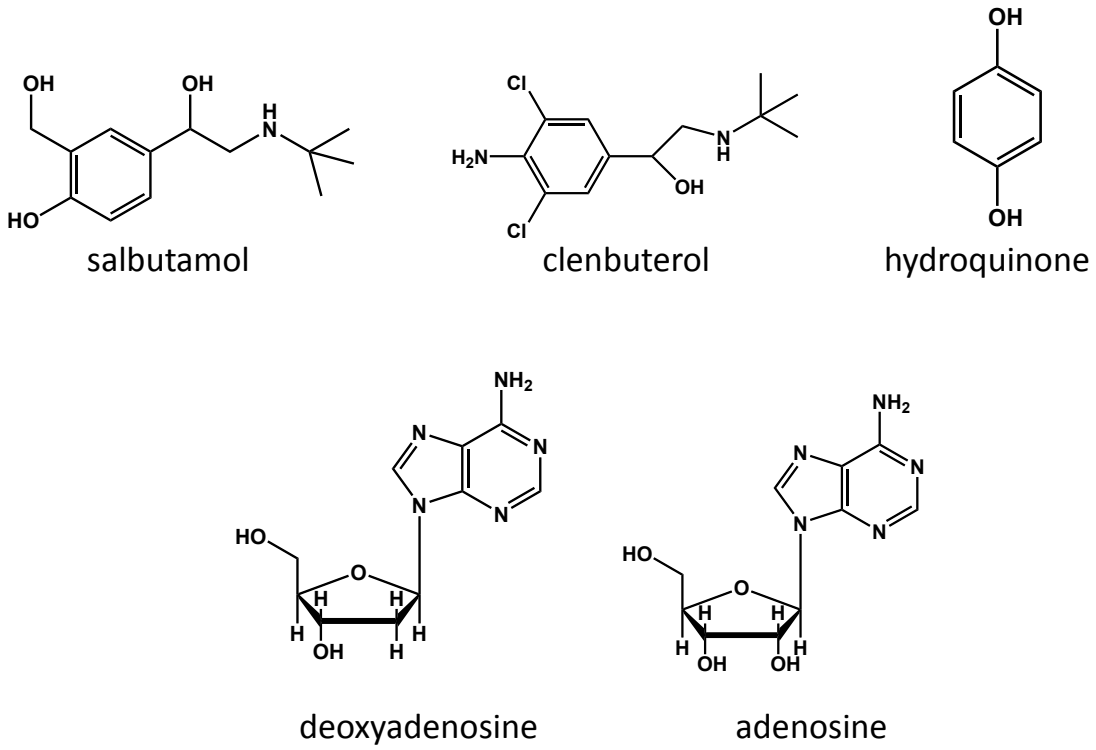

Figure S5. Structure of SAL and interferences.

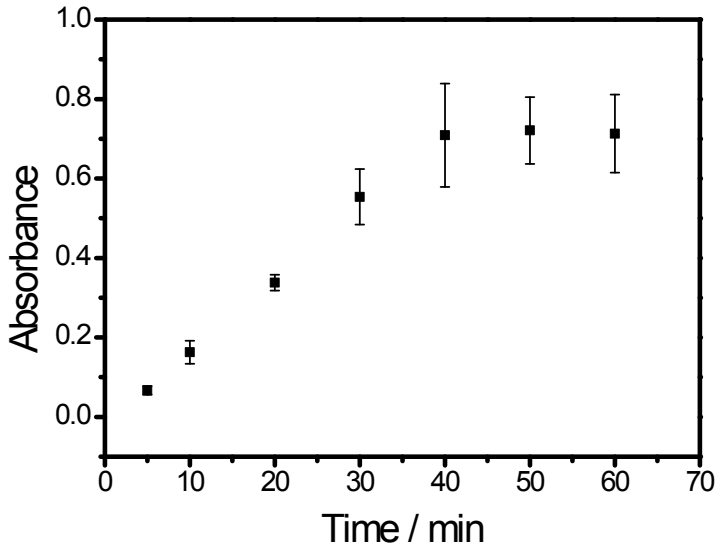

Figure S6. Binding dynamics of SAL-imprinted MNPs.

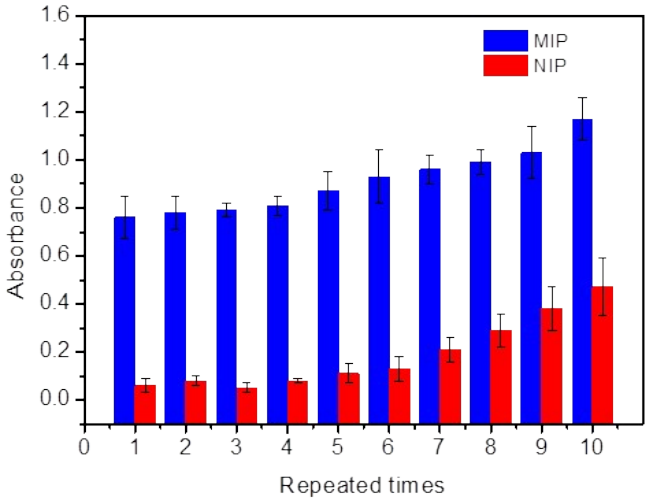

Figure S7. Reproducibility of SAL-imprinted MNPs.

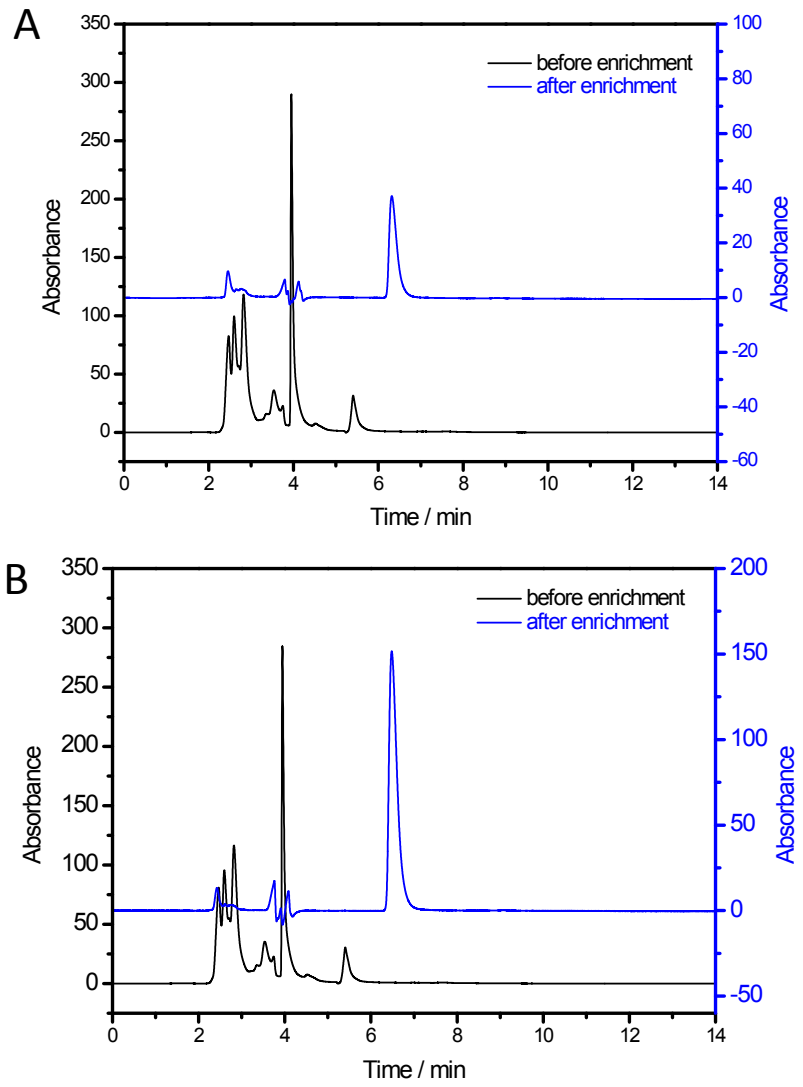

Figure S8. Chromatographic analysis of SAL spiked pretreament pork before and after enrichment with SAL-imprinted MNPs（A） 800 ng/kg and (B) 3 μg/kg.

Table S1. Calculated length of the template and the estimated coverage of the imprinting layer

under the conditions used in this study*

Template	Calculated length (nm)	Calculated length with ligand (nm)	Estimated thickness (nm)	Estimated coverage(%)
salbutamol	0.75	1.85	1.3	70.3

* The length was calculated by ChemBio 3D