

## Supporting Information

**Magnetic molecularly imprinted polymers for the detection of aminopyralid in milk using dispersive solid-phase extraction**

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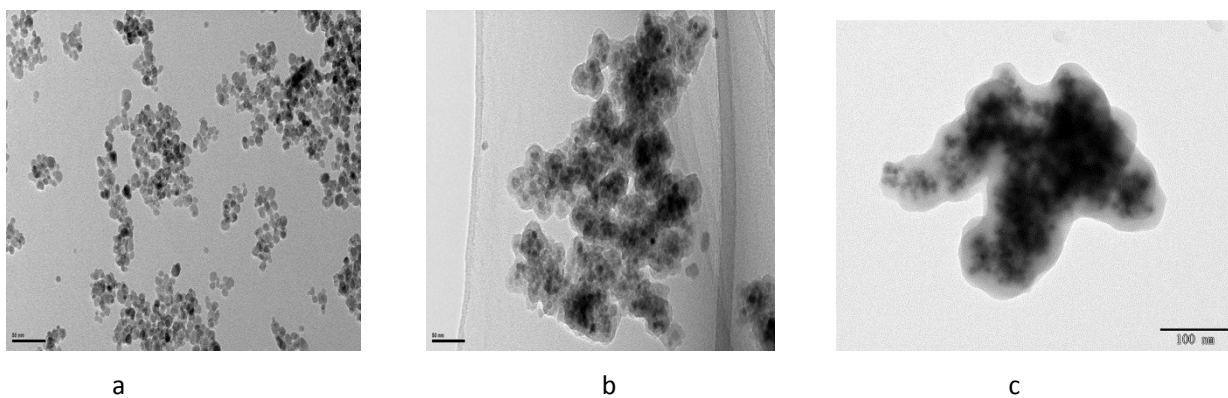
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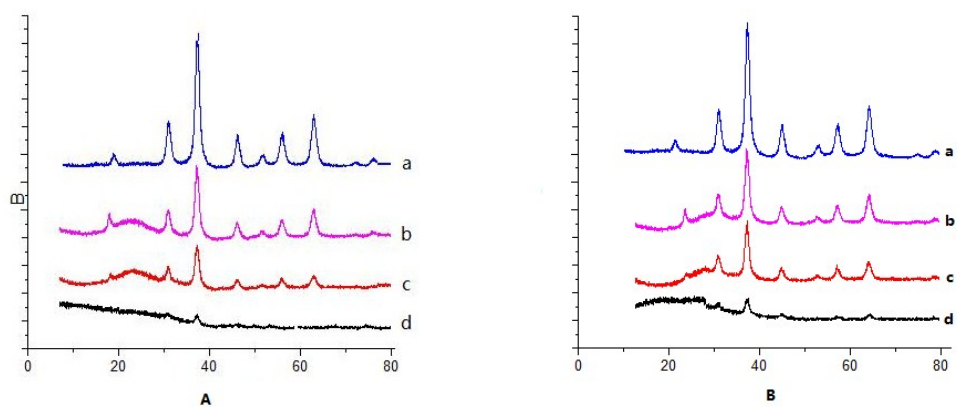
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**Table S1.** The design and optimization of the polymerization system

Template	Functional monomer	Cross-linker	Porogen	Molar ratio	Adsorption quantity ( $\mu\text{g}\cdot\text{g}^{-1}$ )
aminopyralid	4-VP	TRIM	Methanol	1:2:6	1297.5
				1:4:6	1348.2
				1:6:6	1403.1
aminopyralid	4-VP	TRIM	Methanol	1:2:10	1228.4
				1:4:10	1232.1
				1:6:10	1303.7
aminopyralid	4-VP	EGDMA	Methanol	1:2:20	892.3
				1:4:20	942.5
				1:6:20	992.6
aminopyralid	4-VP	TRIM	Dichloromethane	1:2:6	863.2
				1:4:6	720.1
				1:6:6	792.4
aminopyralid	4-VP	TRIM	Dichloromethane	1:2:10	817.5
				1:4:10	735.2
				1:6:10	808.3
aminopyralid	MAA	TRIM	Methanol	1:2:6	1001.5
				1:4:6	1209.2
				1:6:6	1159.9
aminopyralid	MAA	TRIM	Methanol	1:2:10	953.9
				1:4:10	1025.0
				1:6:10	939.1
aminopyralid	MAA	EGDMA	Methanol	1:2:20	704.2
				1:4:20	967.3
				1:6:20	883.4



**Fig.S1** the TEM images of Fe<sub>3</sub>O<sub>4</sub>(a), Fe<sub>3</sub>O<sub>4</sub>@SiO<sub>2</sub>-COOH(b), and Fe<sub>3</sub>O<sub>4</sub>@SiO<sub>2</sub>-NH<sub>2</sub>@NIP(c).



**Fig. S2. A.** The XRD patterns of Fe<sub>3</sub>O<sub>4</sub> nanoparticles(a), Fe<sub>3</sub>O<sub>4</sub>@SiO<sub>2</sub> (b), Fe<sub>3</sub>O<sub>4</sub>@SiO<sub>2</sub>-COOH (c), Fe<sub>3</sub>O<sub>4</sub>@SiO<sub>2</sub>-COOH@MIP (d)

**B.** The XRD patterns of Fe<sub>3</sub>O<sub>4</sub> nanoparticles(a), Fe<sub>3</sub>O<sub>4</sub>@SiO<sub>2</sub> (b), Fe<sub>3</sub>O<sub>4</sub>@SiO<sub>2</sub>-NH<sub>2</sub> (c), Fe<sub>3</sub>O<sub>4</sub>@SiO<sub>2</sub>-NH<sub>2</sub>@MIP (d)

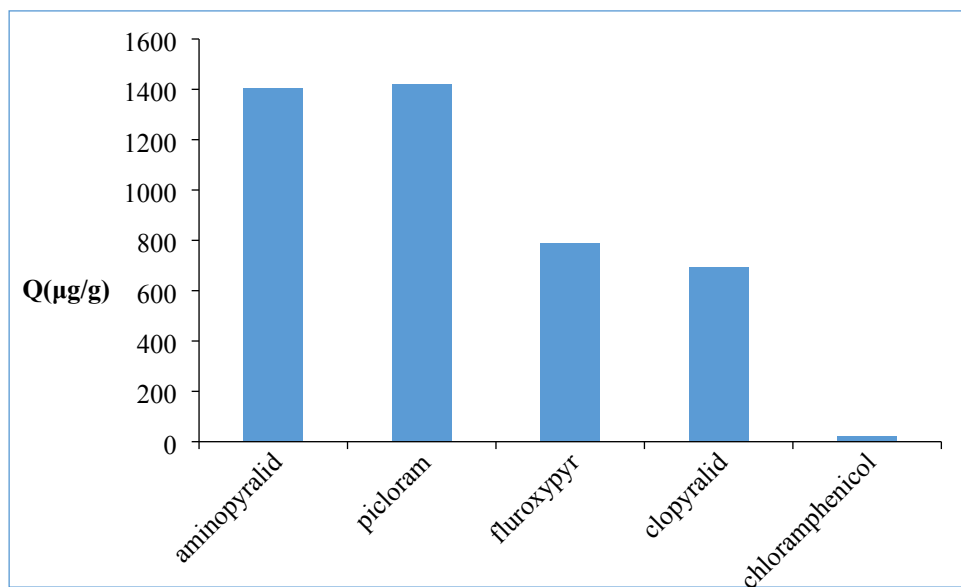


Fig.S3. the selectivity of MMIP