

Supplementary information

Specific adsorption and determination of aspartame in soft drinks with a zein magnetic molecularly imprinted modified MGCE sensor

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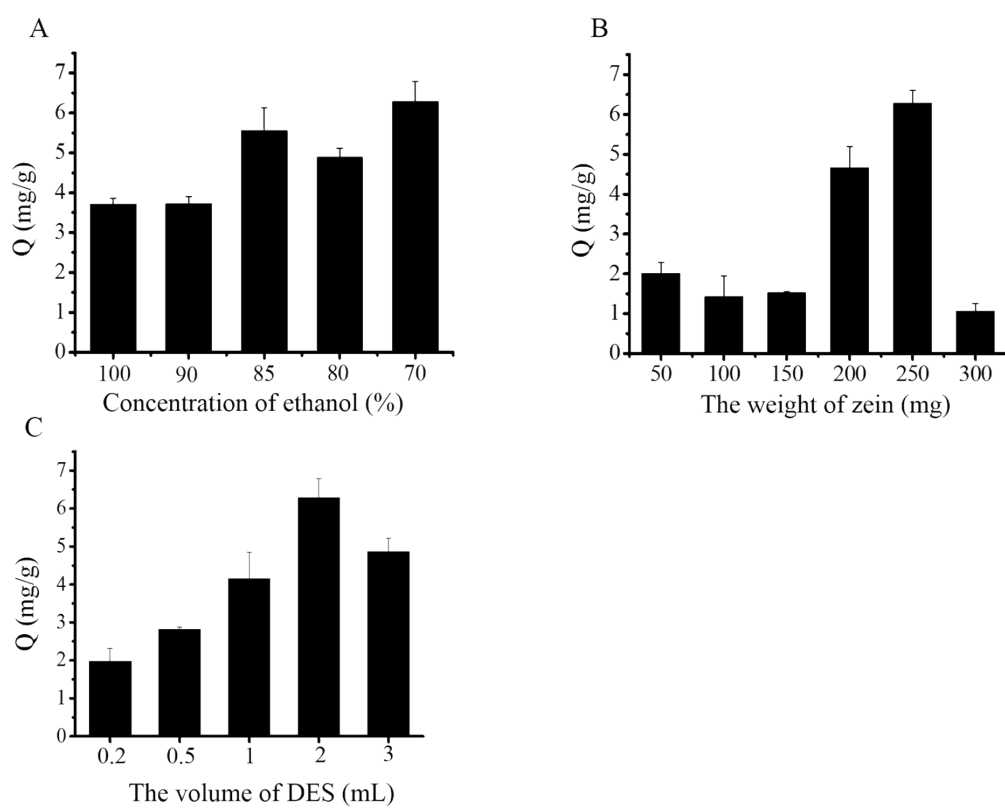


Figure S1. Effect of solvent system (A), the weight of zein (B), and the volume of DESs (C) on synthesis of ZDM-MIPs.

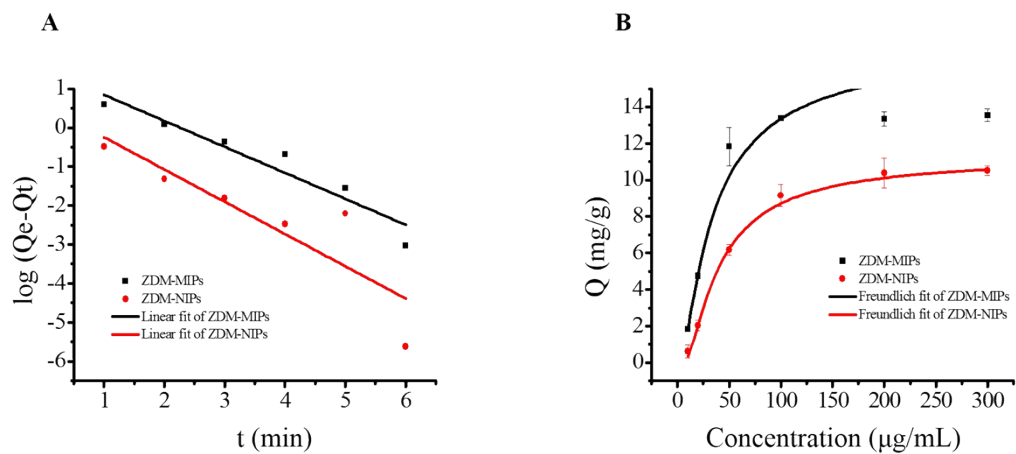


Fig. S2. (A) First-order kinetics model;

(B) ZDM-MIPs and ZDM-NIPs static adsorption results of ASP and Freundlich fit.

Table S1. Kinetic constants for the pseudo-first-order rate equations and

pseudo-second-order rate equations

	Pseudo-first-order		Pseudo-second-order	
	$K_1(\text{min}^{-1})$	R^2	$K_1(\text{min}^{-1})$	R^2
ZDM-MIPs	0.667	0.899	0.032	0.999
ZDM-NIPs	0.827	0.715	0.270	0.999

Table S2. Adsorption isotherm constants for Langmuir and Freundlich equations

	Langmuir			Freundlich		
	Q_m	K_L	R^2	m	K_F	R^2
ZDM-MIPs	14.95	0.002	0.999	0.557	0.792	0.998
ZDM-NIPs	10.76	6.76	0.998	0.817	0.150	0.997

Table S3. The selectivity parameters of ZDM-MIPs and ZDM-NIPs

	Aspartame	Acesulfame	Glycyrrhizin acid
Q_{ZDM-MIPs}	10.01	1.57	1.63
Q_{ZDM-NIPs}	2.02	1.38	1.19
α	4.95	1.13	1.36
β	--	4.38	3.64