

Supporting Information

Removal of Pb(II) ions from aqueous solution using modified starch

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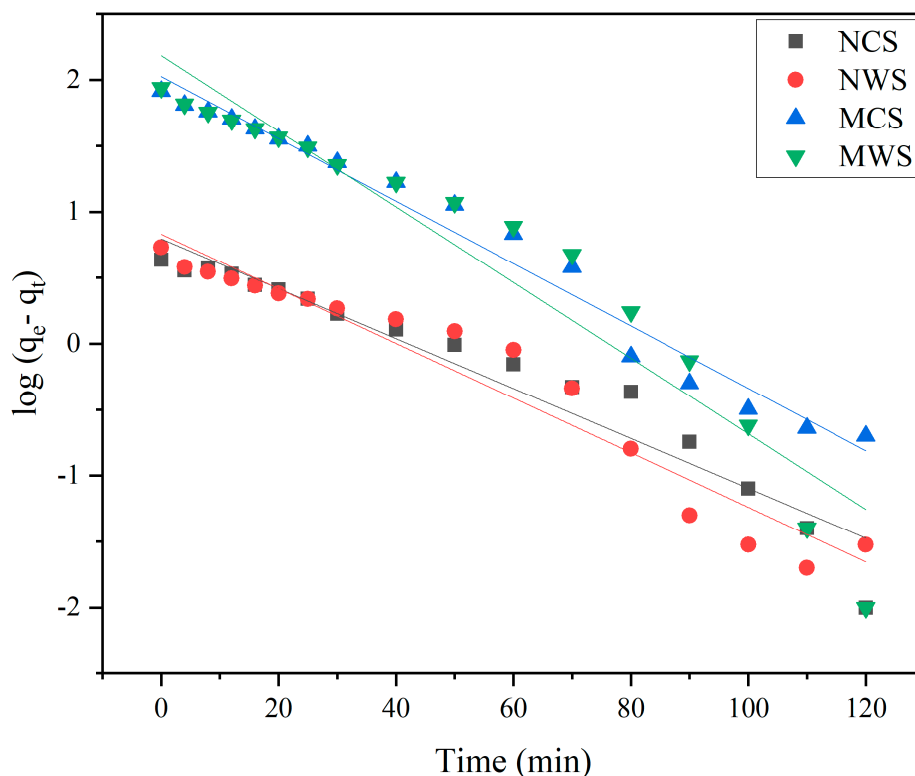
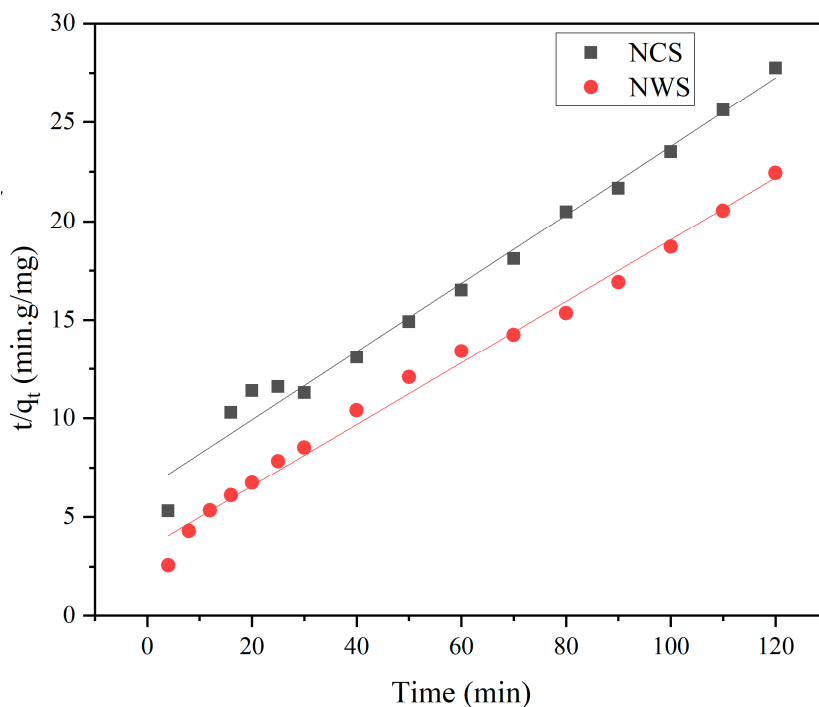


Figure S1: Kinetics of Pb(II) adsorption onto starch (NCS, NWS, MCS, and MWS) samples according to the pseudo-first-order model (initial Pb(II) concentration 100 mg/L, speed 150 rpm, temp 22 °C, pH 4.4, adsorbent dose 1 g/l).



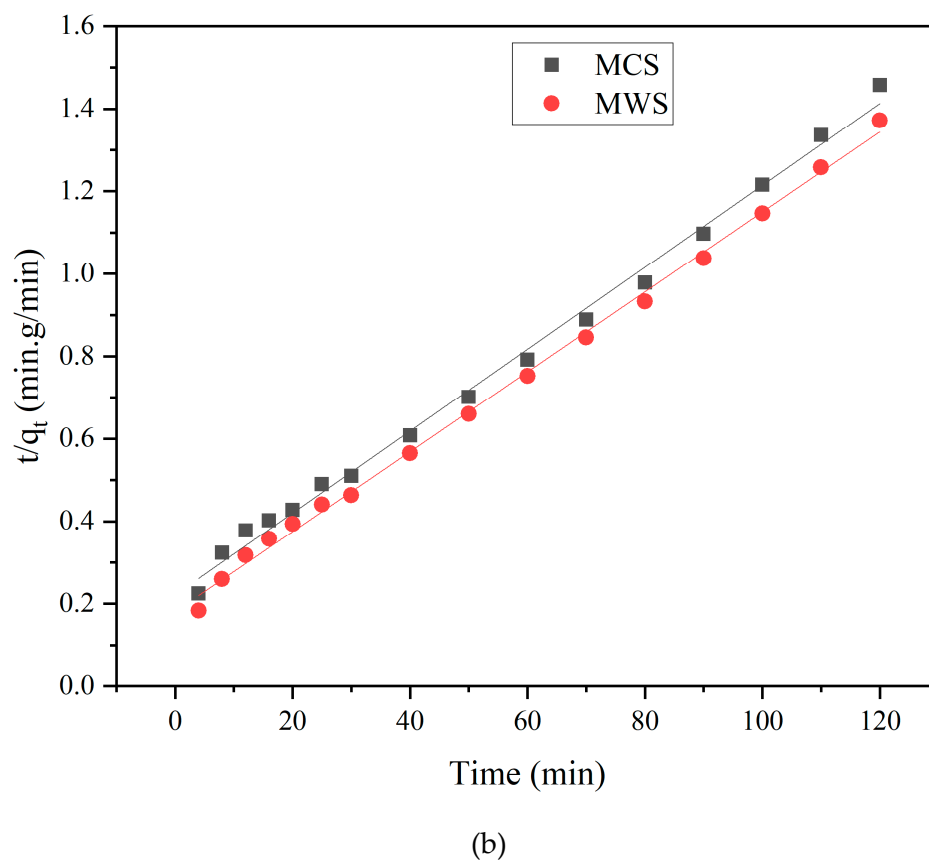


Figure S2: Kinetics of Pb(II) adsorption onto (a) NCS and NWS (b) MCS and MWS samples according to the pseudo-second-order model (initial Pb(II) concentration 100 mg/L, speed 150 rpm, temp 22 °C, pH 4.4, adsorbent dose 1 g/l).

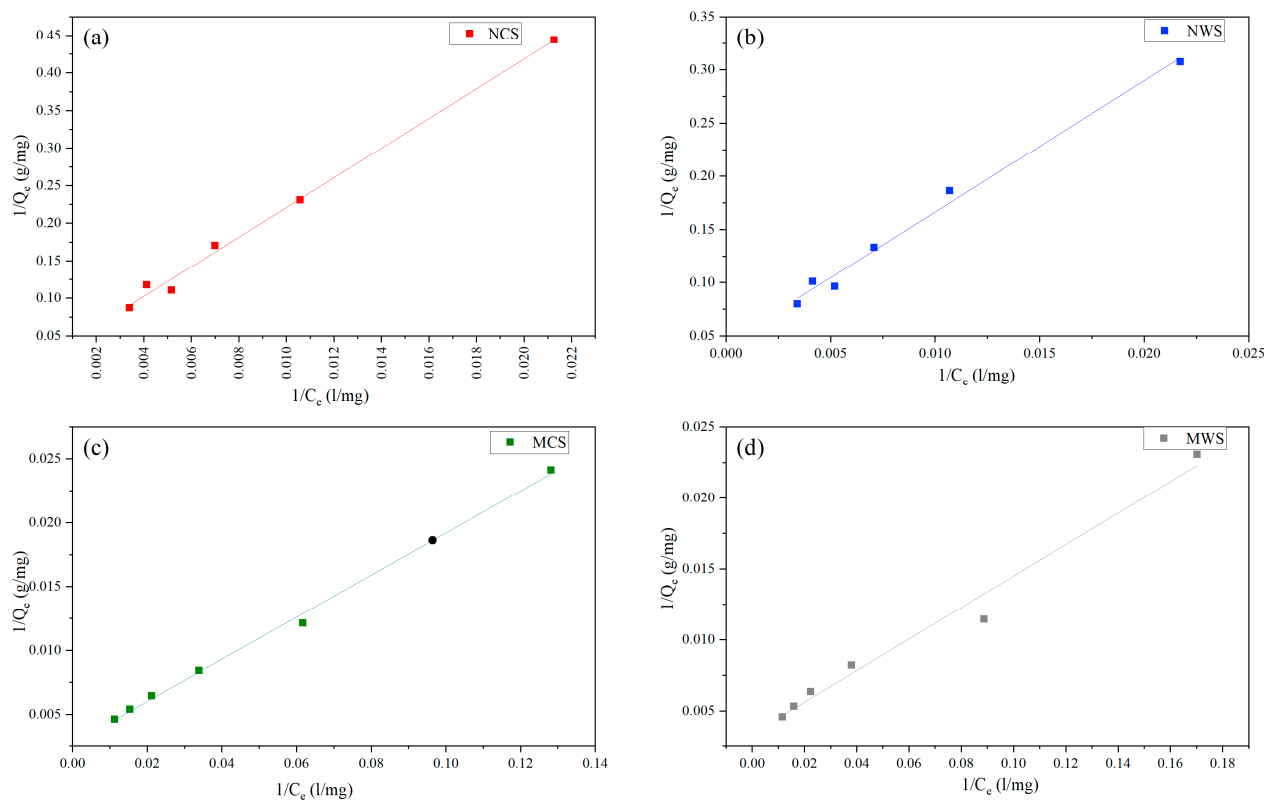


Figure S3: Langmuir isotherms of Pb(II) adsorption for (a) NCS, (b) NWS, (c) MCS, and (d) MWS (initial Pb(II) concentration 100 mg/L, speed 150 rpm, temp 22 °C, pH 4.4, adsorbent dose 1 g/l).

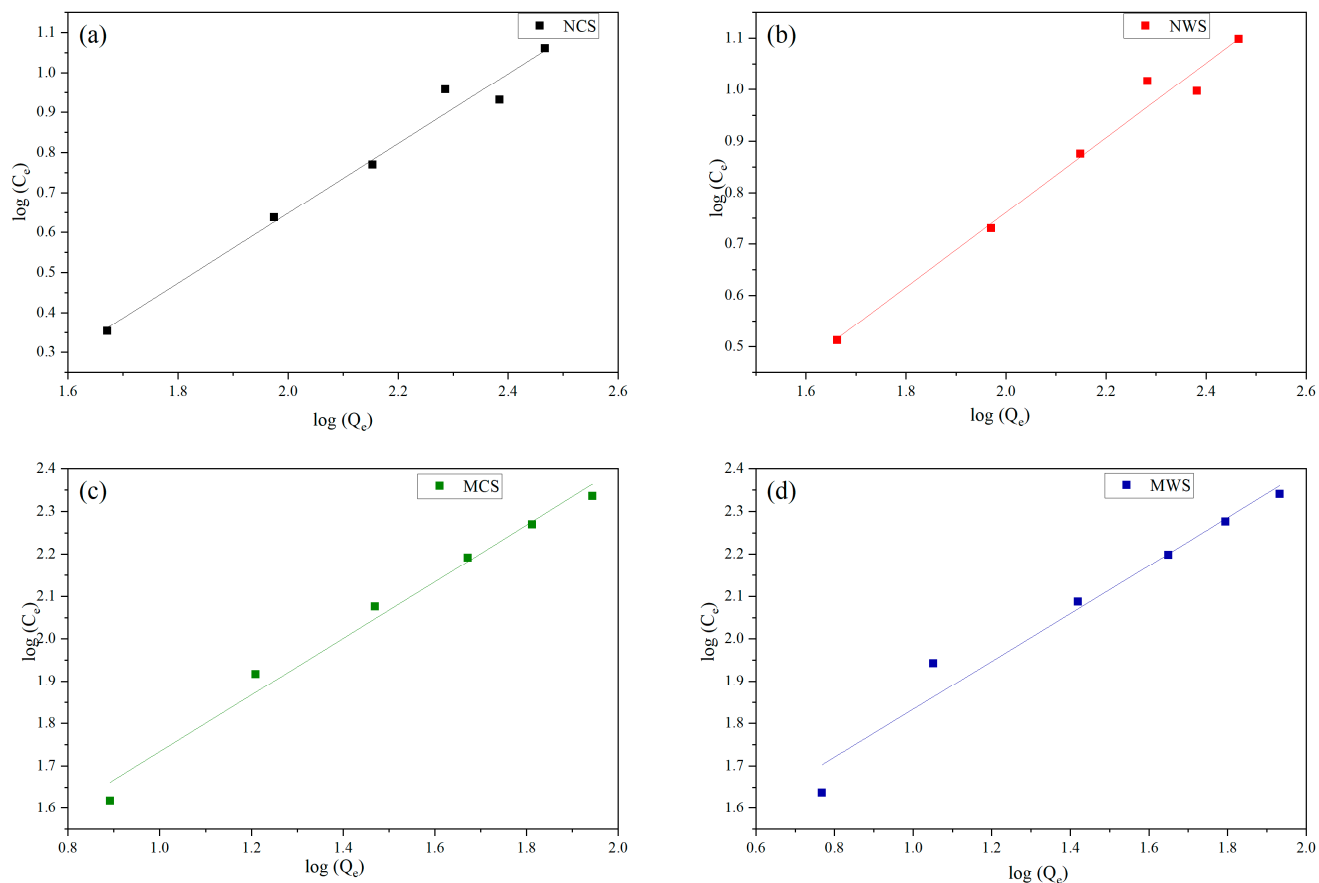


Figure S4: Freundlich isotherms of Pb(II) adsorption for (a) NCS, (b) NWS, (C) MWS, and (d) MWS (initial Pb(II) concentration 100 mg/L, speed 150 rpm, temp 22 °C, pH 4.4, adsorbent dose 1 g/l).

Table S1. R_L values for the equilibrium batches

Initial concentration	R_L values			
	NCS	MCS	NWS	MWS
49.25	0.85	0.40	0.95	0.55
98.75	0.75	0.25	0.90	0.38
148.51	0.66	0.18	0.85	0.29
202.38	0.59	0.14	0.81	0.23
250.93	0.53	0.12	0.77	0.20
304.54	0.49	0.10	0.74	0.17