

Electronic Supplementary Information

Adsorption of reactive red dye (RR-120) on nanoadsorbent of O-carboxymethylchitosan/ γ - Fe_2O_3 : kinetic, equilibrium and factorial design studies

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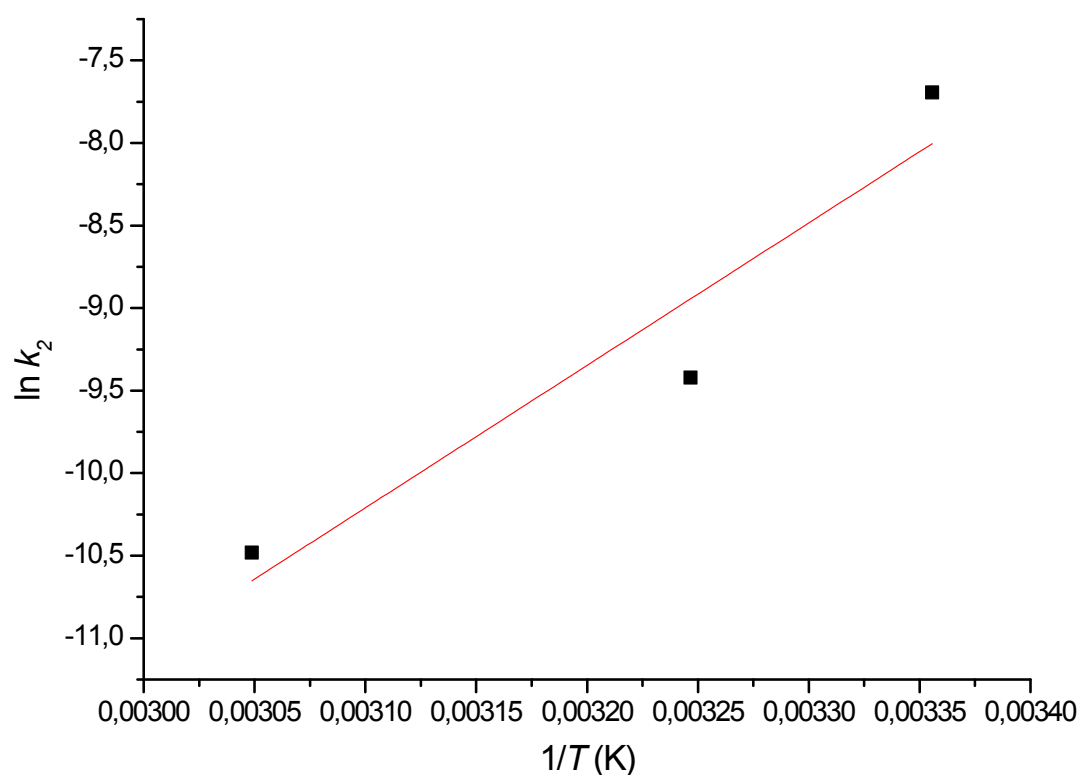


Fig. ESI1: Arrhenius plot for the adsorption of RR120 onto O-CM.

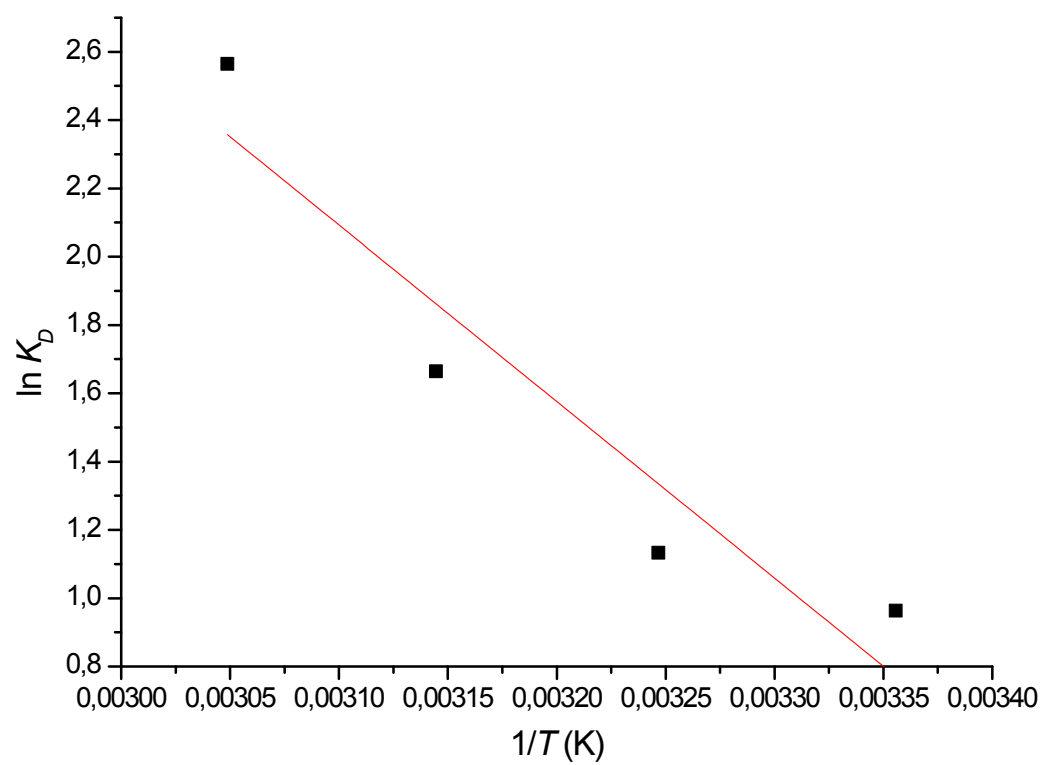


Fig. ESI2: Van't Hoff plot for the adsorption of RR120 onto O-CM.

Study of different adsorbent effect

The effect of adsorbent was determined using 20 mg of adsorbent (O-C, O-Fe₃O₄ and O-CM) 20 mL of RR120 solution 250 mg L⁻¹, and temperature of 25°C, under continuous agitation and initial pH 2.5 and 7.5. After 60 min of contact time, the concentrations of RR120 left in the supernatant solutions were determined, to study the effect of different adsorbent. The adsorbent was then separated using an external magnetic field or centrifugation, and the amount of RR120 adsorbed was calculated, as described in 2.5.

Table ESI 1: Effect of different adsorbent by adsorption of RR120.

adsorbent	Adsorption capacity (mg g ⁻¹)	
	pH 2.5	pH 7.5
Fe ₃ O ₄	66	75
Crosslinked O-C	245	128
O-CM	240	212