**Supplementary Materials**

**Biosorption of Oil From Wastewaters By A New Modified Chitosan/Cellulose@Agarose Composite**

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**Table S1. Equations and parameters of the kinetic models**

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| --- | --- | --- |
| Kinetic model | Linear equations | Parameters |
| The pseudo – first order | ln(qe–qt) = ln(qe) – k1 t | qe (mg/g) is the amount of adsorbed metal ions at equilibriumqt (mg/g) is the amount of adsorbed metal ions at time (t)k1 (min-1) is the pseudo-first order rate constant |
| The pseudo-second order model | t/qt = 1/(k2\*qe2)+(1/qe) t | qt (mg/g) is the amount of adsorbed metal ions at time (t)k2 (g.mg-1.min-1) is the pseudo-second order rate constantqe (mg/g) is the amount of adsorbed metal ions at equilibrium |

**Table S2. Equations and parameters of the isotherm models**

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| Isotherm model | Linear equations | Parameters |
| Langmuir isotherm model | Ce /qe = 1/(qm\*KL) + Ce/qmRL = 1/(1 + KL\*Co) | Ce (mg/L) is the equilibrium concentration of the adsorbate ionsqe (mg/g) is the amount of adsorbed metal ions at equilibriumqm (mg/g) is the maximum adsorption capacityKL (L/mg) is Langmuir isotherm constantRL is the separation factor (0 < RL< 1)Co (mg/L) is the initial concentration of the adsorbate ions |
| Freundlich isotherm model | log(qt) = log(Kf) + 1/n log(Ce) | qt (mg/g) is the amount of adsorbed metal ions at time (t)KF (mg/g) is the measure of adsorption capacity (1/n) is the adsorption intensityCe (mg/L) is the equilibrium concentration of the adsorbate ions |