Sodium alginate-based composite films for effective removal of Congo Red and Coralene Dark Red 2B dyes: Kinetic, isotherm and thermodynamic analysis

Amina Mokeddem[1],Samir Benykhlef[1,2], Amine Ahmed Bendaoudi[1], Nacer Boudouaia[1], Hacene Mahmoudi[3], Zohra Bengharez[1,*],Seda Demirel Topel[4] and Önder Topel[5]

[1] Laboratory of Advanced Materials and Physicochemistry for Environment and Health, Djillali Liabes University, Sidi Bel Abbes22000, Algeria

[2] Ecole Supérieure en Sciences Appliquées de Tlemcen, ESSA-Tlemcen, BP 165 RP Bel Horizon, Tlemcen 13000, Algeria

[3] Faculty of Technology, University Hassiba Benbouali of Chlef, Chelf 02000, Algeria

[4] Department of Electrical and Electronics Engineering, Faculty of Engineeringand Natural Sciences, Antalya Bilim University, Dosemealtı, Antalya 07190, Turkey

[5] Department of Chemistry, Faculty of Science, Akdeniz University, Antalya 07058,Turkey;

***Correspondence: dzbengharez@yahoo.fr (Z.B); Tel: +213 5 41 76 15 78**

Supplementary Materials

Table S1. Zeta potential of Alg/Cs films at different pH

	Zeta Potential(mV)				
pH	M1	M2	M3	M4	M5
2	-41.83 ± 2,55	-11.61± 2.99	10.40 ± 3.32	39.83 ± 0.62	78.7± 7.06
4	-75.5 ± 2.53	-71.9 ± 4.86	2.66 ± 1.46	29.33 ± 8.71	78.63 ± 2.15
10	-71.5 ± 2.6	-48.7 ± 2.8	-3.33 ± 0.5	2.66 ± 2.91	48.16 ± 12.68
12	-69.63 ± 2.51	-44.23 ± 0.35	13.76 ± 2.24	-11.5 ± 0.26	60 ± 1.13

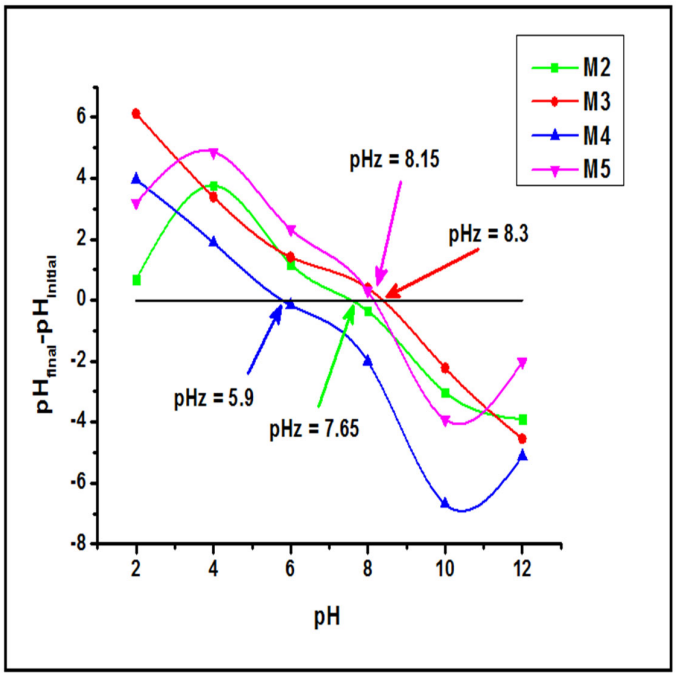

Figure S1. Point of zero charge pH_{pzc} of Alg/Cs films

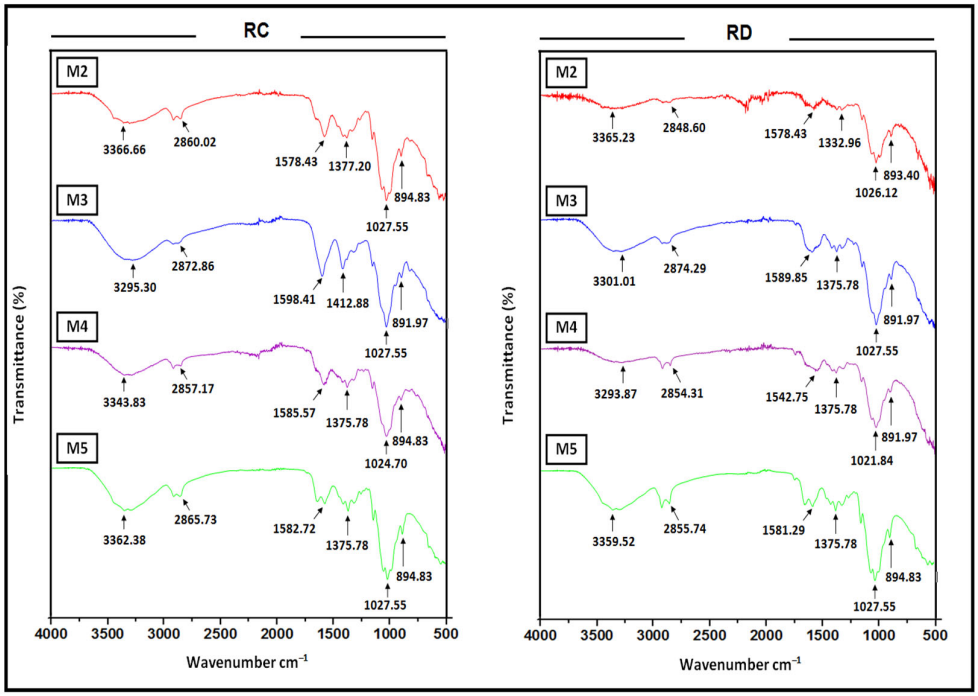

Figure S2. FTIR spectra of Alg/Cs films after adsorption (a) RC dye; (b) RD dye