

Table S1. Independent parameters and their corresponding levels for percentage removal (% R) for BC

Run	X ₁ : Time (minutes)	X ₂ : Concentration (mg/L)	X ₃ : pH	Removal %
1	10	10	2	37.6
2	10	60	10	58.3
3	90	35	9	93.2
4	90	35	9	92.9
5	120	60	2	26.1
6	65	35	6	77.5
7	10	60	2	23.2
8	120	60	10	80.8
9	120	10	10	98.5
10	65	35	6	78.1
11	10	10	10	79.2
12	120	10	2	43.1
13	157.5	35	6	84.2
14	7.5	35	6	64.6

15	65	35	6	76.9
16	65	35	0.7	19.6
17	65	35	12.7	70.6
18	65	75	6	54.3
19	65	35	6	77.9
20	65	9.5	6	87.4

Table S2. The ANOVA analysis of variance quadratic model for removal of the dye

Source	F-value	p-value	
Model	249.38	< 0.0001	significant
A-Time	115.40	< 0.0001	
B-Concentration	182.64	< 0.0001	
C-pH	1396.93	< 0.0001	
AB	0.0089	0.9266	
AC	30.71	0.0002	
BC	1.29	0.2834	
A ²	12.98	0.0048	
B ²	17.45	0.0019	
C ²	525.87	< 0.0001	

Residual			
Lack of Fit	37.32	0.0018	significant