

Supplementary Material (ESI) FOR RSC Advances

Synthesis and evaluation of the oil removal potential of 3-bromo-benzimidazolone polymer grafted silica gel

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1. RSM design and the actual values of responses.

Run	Oil concentration (mg/L)	Sorbent dosage (g)	Contact time (h)	Percentage adsorption
1	9250	0.0026	38.2	97.1
2	9250	0.0045	38.2	97.9
3	704	0.0011	16.0	75.7
4	9250	0.0026	38.2	98.1
5	704	0.0040	60.5	75.5
6	6650	0.0011	60.5	96.7
7	6650	0.0040	60.5	96.0
8	704	0.0040	16.0	76.5
9	7200	0.0026	38.2	96.8
10	9250	0.0001	38.2	98.2
11	9250	0.0026	38.2	97.8
12	6650	0.0040	16.0	97.9
13	9250	0.0026	38.2	98.3
14	9250	0.0026	75.6	98.1
15	704	0.0011	60.5	75.7
16	6650	0.0011	16.0	97.4
17	9250	0.0026	38.2	98.2
18	9250	0.0026	38.2	98.2

19	9250	0.0026	0.85	97.7
20	192	0.0026	38.2	14.6

2. ANOVA for model and model terms.

Source	% Removal	
	F-value	p-value
Model	561.73	< 0.0001
A-Oil concentration	815.58	< 0.0001
B-sorbent dosage	0.2294	0.6434
C-contact time	0.0189	0.8938
AB	0.6528	0.4400
AC	0.5746	0.4678
BC	2.15	0.1763
A ²	364.55	< 0.0001
B ²	0.4508	0.5188
C ²	0.1251	0.7317
Lack of fit	2.02	0.2296