Electronic Supplementary Material (ESI) for RSC Advances.

Supplementary Table: Details of adsorption study for other adsorbate using BFA and its activated forms

Sr. No.	Adsorbate	Variable	Details of adsorption study	Maximum adsorption capacity (mg of metal/g of BFA)*	Reference
1	Phenol & p-Nitrophenol	Adsorbent dose, pH, Contact time, Initial concentration, Effect of surfactant	Adsorption isotherms (Batch); Thermodynamic study; Kinetic analysis; Regeneration of adsorbent	7.11 & 8.33 X 10^6 mol/g	1
2	Lindane & Malathion	Adsorbent dose, pH, Contact time, Initial concentration, Temperature, Particle size	Adsorption isotherms (Batch and Column); Thermodynamic study; Kinetic analysis; Regeneration of adsorbent	0.00251 & 0.00208	2
3	Acrylonitrile	Adsorbent dose, pH, Contact time, Initial concentration, Particle size	Thermodynamic study; Kinetic analysis	83.34 (Psuedo-second-order)	3
4	COD from diary effluent	Adsorbent dose, Contact time, , Temperature,	Adsorption isotherms (Batch), Thermodynamic study; Kinetic analysis	278.497	4
5	Pyridine	Adsorbent dose, pH, Contact time, Initial concentration, Temperature	Adsorption isotherms (Batch); Thermodynamic study; Kinetic analysis; Error analysis	31.06	5
6	2-Picoline	Adsorbent dose, pH, Contact time, Initial concentration	Adsorption isotherms (Batch); Kinetic analysis; Regeneration of adsorbent	60.976	6
7	4-Picoline	Adsorbent dose, pH, Contact time, Initial concentration, Temperature	Adsorption isotherms (Batch); Kinetic analysis; Regeneration of adsorbent	60.61	7
8	Colour from printing ink industry	pH	Adsorption isotherms (Batch); Kinetic analysis	29.07	8
9	COD and colour from molasses spent wash	Adsorbent dose, pH, Contact time, Initial concentration	Adsorption isotherms (Batch); Kinetic analysis; Statistical analysis	124.80	9
10	Quinoline	Adsorbent dose, pH,	Adsorption isotherms	175	10

		Contact time, Initial concentration, Temperature	(Batch); Kinetic analysis; Regeneration of adsorbent		
11	Pyridine & Quinoline	Initial concentration, Temperature	Adsorption isotherms (Batch); Thermodynamic study	174.72 & 20.3	11
12	Furfural	Adsorbent dose, pH, Contact time, Initial concentration, Temperature	Adsorption isotherms (Batch); Kinetic analysis; Thermodynamic study	81.9672	12
13	Phenol	Adsorbent dose, pH, Contact time, Initial concentration, Temperature	Adsorption isotherms (Batch); Regeneration of adsorbent	35.43	13
14	p-Nitrophenol	Adsorbent dose, pH, Contact time, Initial concentration, Temperature	Adsorption isotherms (Batch); Thermodynamic study; Kinetic analysis; Regeneration of adsorbent	91.99	14
15	2-Chlorophenol	pH, Initial concentration, Temperature	Adsorption isotherms (Batch); Thermodynamic study; Kinetic analysis; Regeneration of adsorbent	85.68	15
16	Aniline	Adsorbent dose, pH, Contact time, Initial concentration, Temperature	Adsorption isotherms (Batch); Thermodynamic study; Kinetic analysis	49.45	16
17	Monocrotophos	Adsorbent dose, pH, Contact time, Initial concentration, Temperature	Adsorption isotherms (Batch); Thermodynamic study; Kinetic analysis	52.632	17
18	COD & colour of paper mill effluents	Adsorbent dose, pH, Contact time, Initial concentration	Adsorption isotherms (Batch); Thermodynamic study; Kinetic analysis; Regeneration of adsorbent	2156.4 & 307.1	18
19	Phenol	Column (Flow rate, Bed height, Initial concentration)	Adsorption isotherms (Batch and Column)	9.93	19
20	Benzoic acid	Adsorbent dose, Contact time, Initial concentration, Temperature	Adsorption isotherms (Batch); Thermodynamic study; Kinetic analysis; Regeneration of adsorbent	25.10	20
21	Phenol	Adsorbent dose, Contact time, Initial concentration, Temperature	Adsorption isotherms (Batch and Column); Thermodynamic study; Kinetic analysis; Regeneration of adsorbent	77.28	21

22	COD from PTA effluent	Adsorbent dose, Contact time, Initial concentration, Temperature	Adsorption isotherms (Batch); Thermodynamic study; Kinetic analysis	26.9	22

* The value of the maximum adsorption capacity is corresponds to the Langmuir Isotherm.

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