Electronic Supporting Information

Adsorption of naphthalene onto a high-surface-area nanoparticles loaded activated carbon by high performance liquid chromatography: Response surface methodology, isotherm and kinetic study

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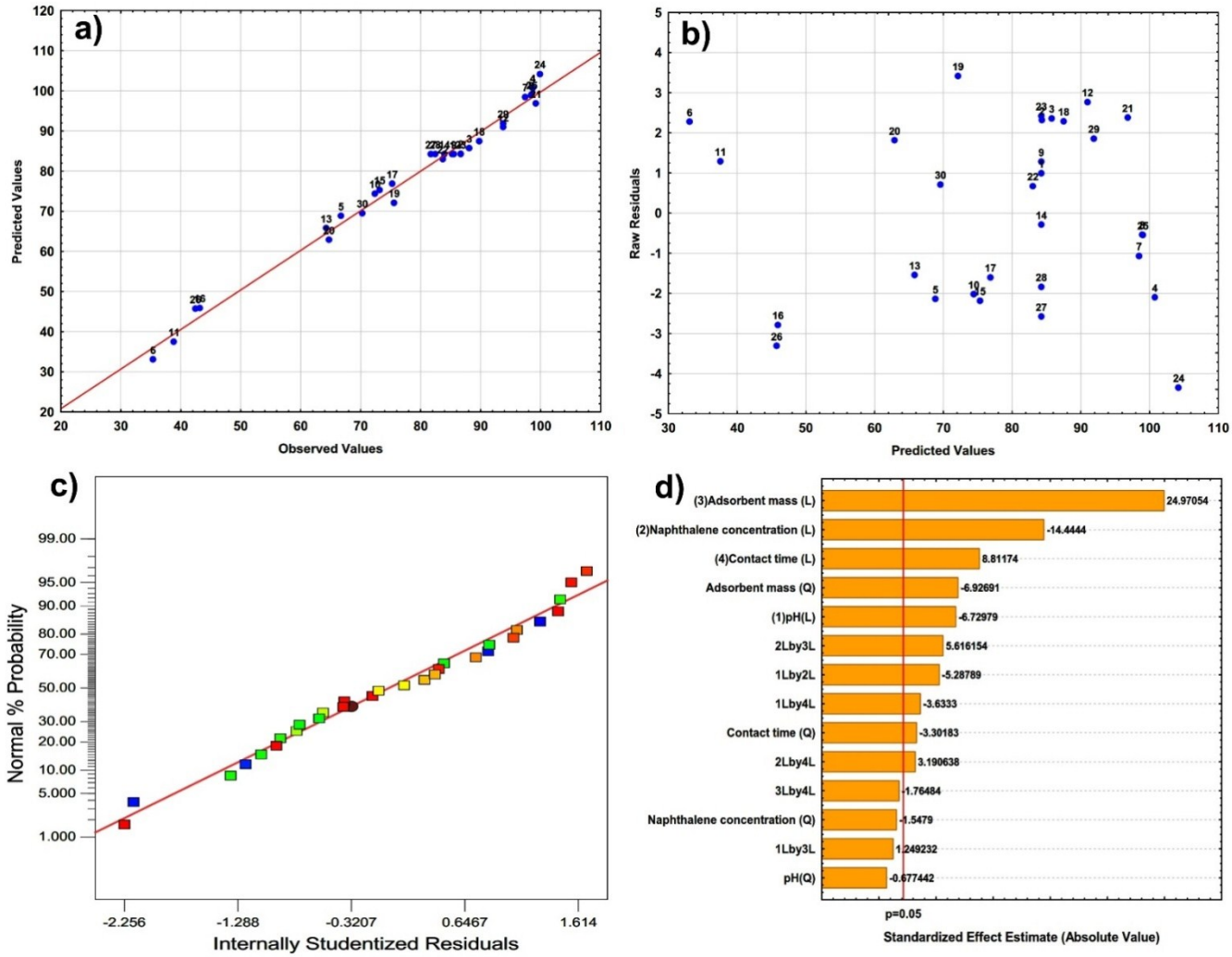
Table S1. Experimental design based on central composite design (CCD).

Factors	**Levels**				
	-α	Low (-1)	Central (0)	High (+1)	+α
A:pH	1.0	3.0	5.0	7.0	9.0
B: naphthalene concentration (mg L^{-1})	5	15	25	35	45
C: adsorbent mass (g)	0.005	0.010	0.015	0.020	0.025
D: contact time (min)	5	10	15	20	25

	Factors				**R% naphthalene**	
Run	A	B	C	D	Observed [a]	Predicted [b]
1 (C)	5.0	25	0.015	15	85.24	84.25
2	7.0	35	0.020	20	86.68	84.36
3	3.0	35	0.020	10	88.10	85.74
4	3.0	15	0.020	20	98.65	100.75
5	3.0	15	0.010	10	66.70	68.84
6	7.0	35	0.010	10	35.36	33.08
7	5.0	5	0.015	15	97.40	98.47
8	7.0	15	0.020	10	98.41	98.94
9 (C)	5.0	25	0.015	15	85.53	84.25
10	9.0	25	0.015	15	72.38	74.40
11	5.0	25	0.005	15	38.84	37.55
12	1.0	25	0.015	15	93.74	90.97
13	5.0	25	0.015	5	64.25	65.79
14 (C)	5.0	25	0.015	15	83.96	84.25
15	7.0	15	0.010	20	73.16	75.34
16	7.0	35	0.010	20	43.14	45.93
17	7.0	35	0.020	10	75.24	76.84
18	5.0	25	0.015	25	89.78	87.49
19	7.0	15	0.010	10	75.54	72.12
20	5.0	45	0.015	15	64.71	62.90
21	7.0	15	0.020	20	99.22	96.84
22	3.0	15	0.010	20	83.69	83.02
23 (C)	5.0	25	0.015	15	86.67	84.25
24	3.0	35	0.020	20	99.87	104.22
25	5.0	25	0.025	15	98.49	99.04
26	3.0	35	0.010	10	42.44	45.75
27 (C)	5.0	25	0.015	15	81.67	84.25
28 (C)	5.0	25	0.015	15	82.41	84.25
29	3.0	15	0.020	10	93.75	91.89
30	3.0	35	0.010	20	70.26	69.55

C: Center point, [a] Experimental values of response. [b] Predicted values of response by RSM proposed model.



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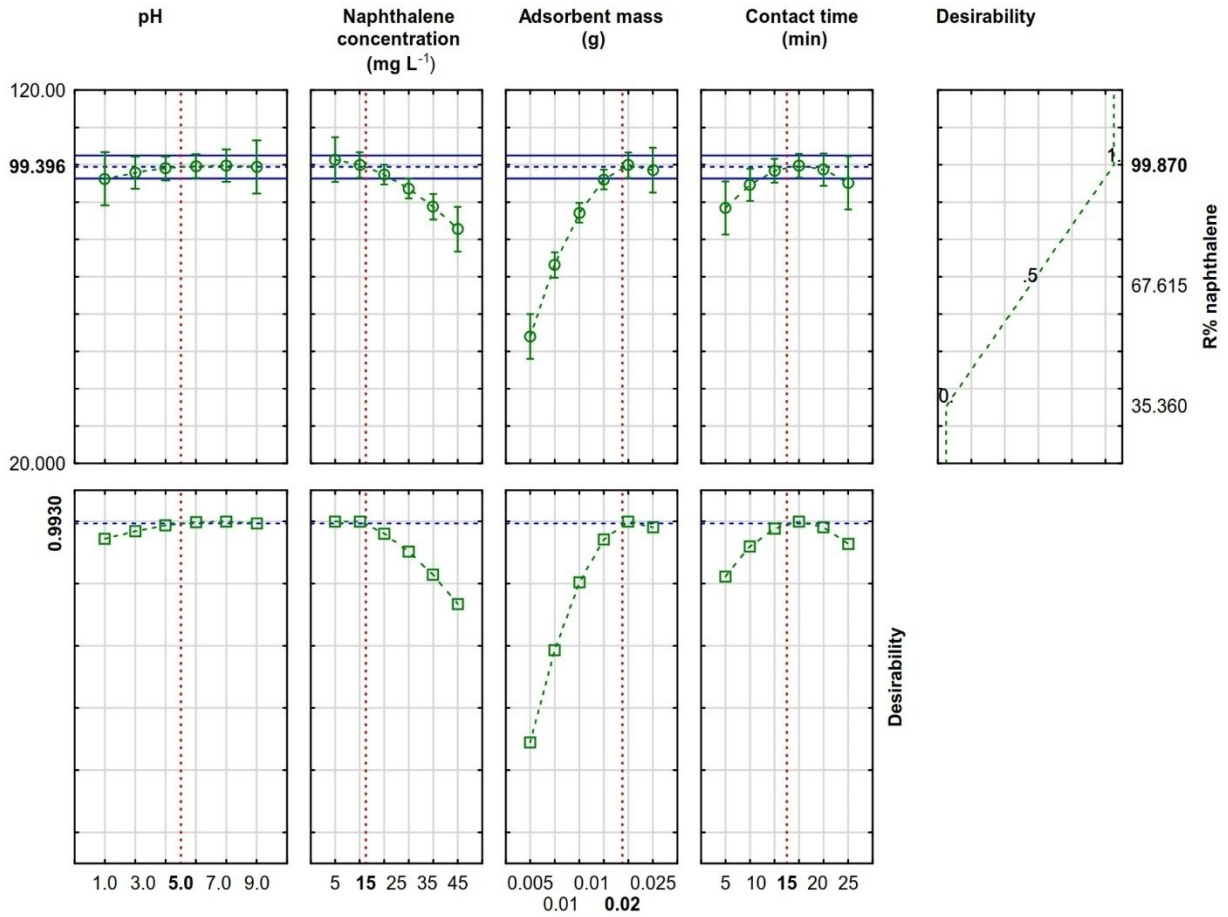

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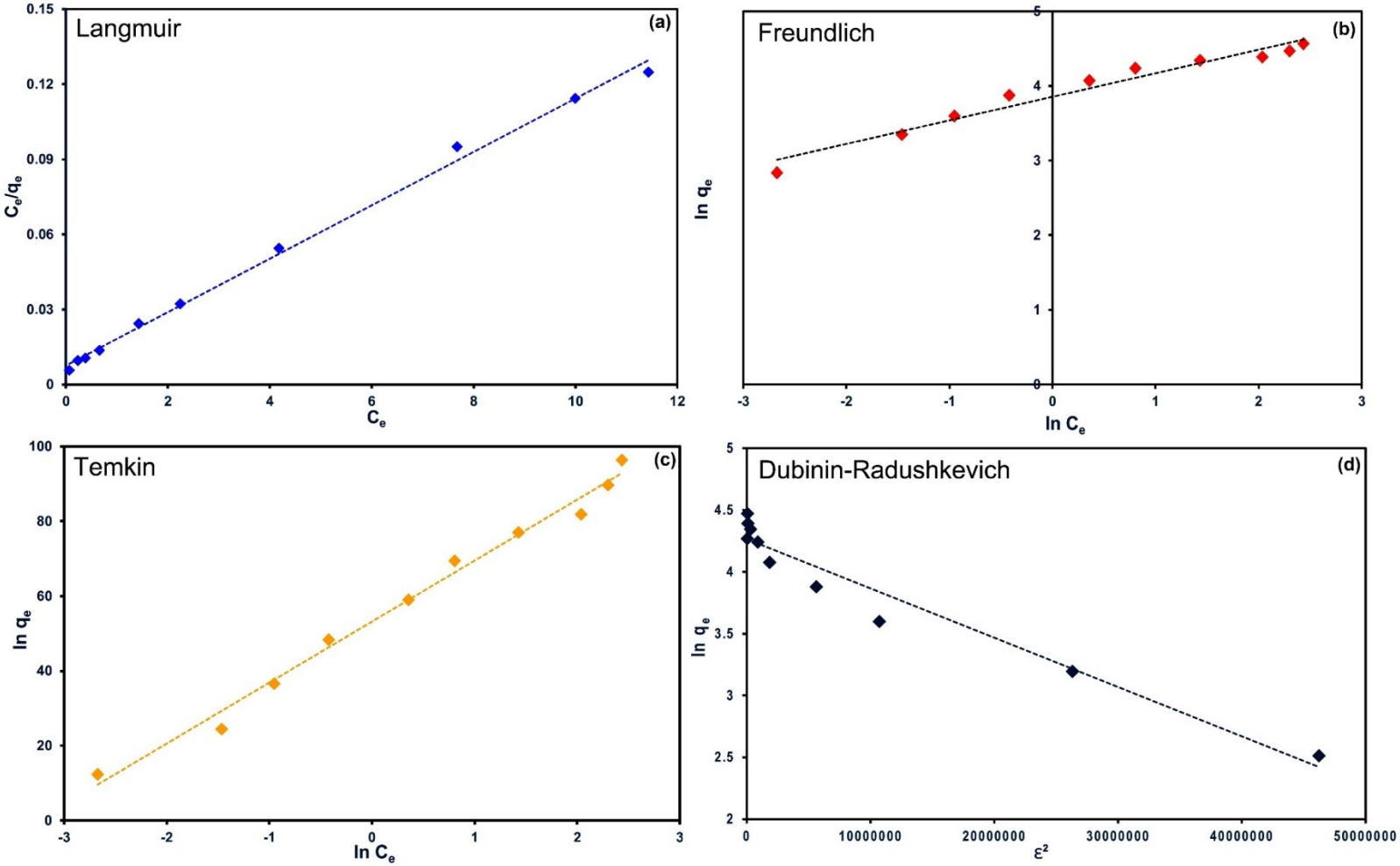

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