Electronic Supplementary Material

Magnetic activated carbon as an adsorbent for extraction of DMMP from aqueous samples followed by GC-IMS analysis

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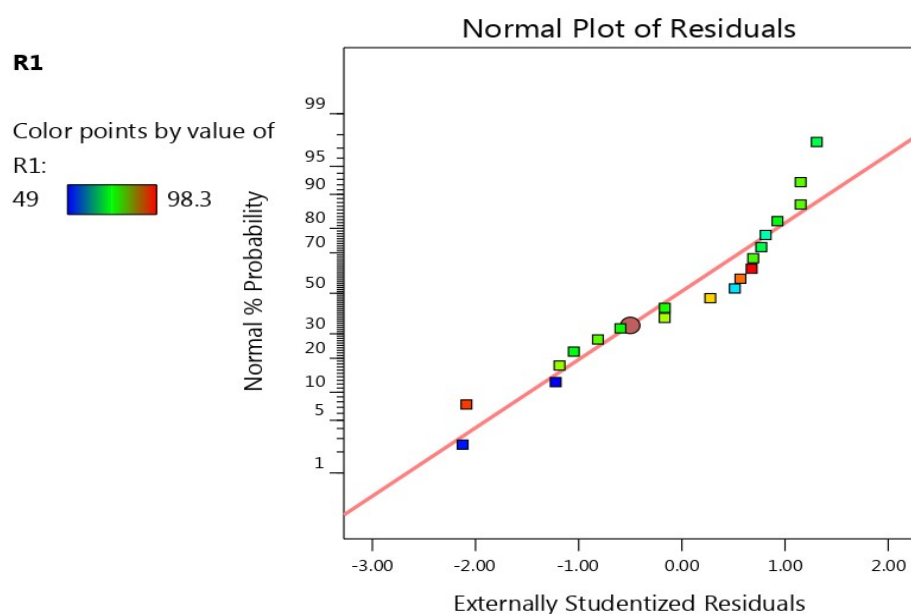## Correlation of laboratory data and predicted values of DMMP adsorption by experimental design

Fig S1 Comparison of predicted response values in the model with laboratory values
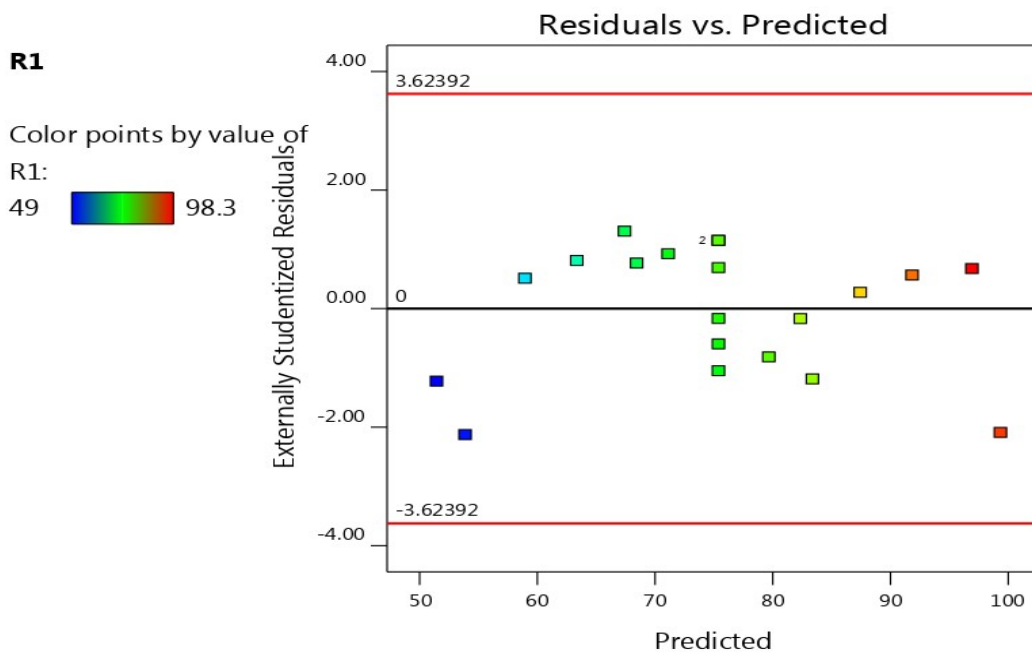
Fig. S2 The difference between the values obtained from the experiments and the model according to the predicted values
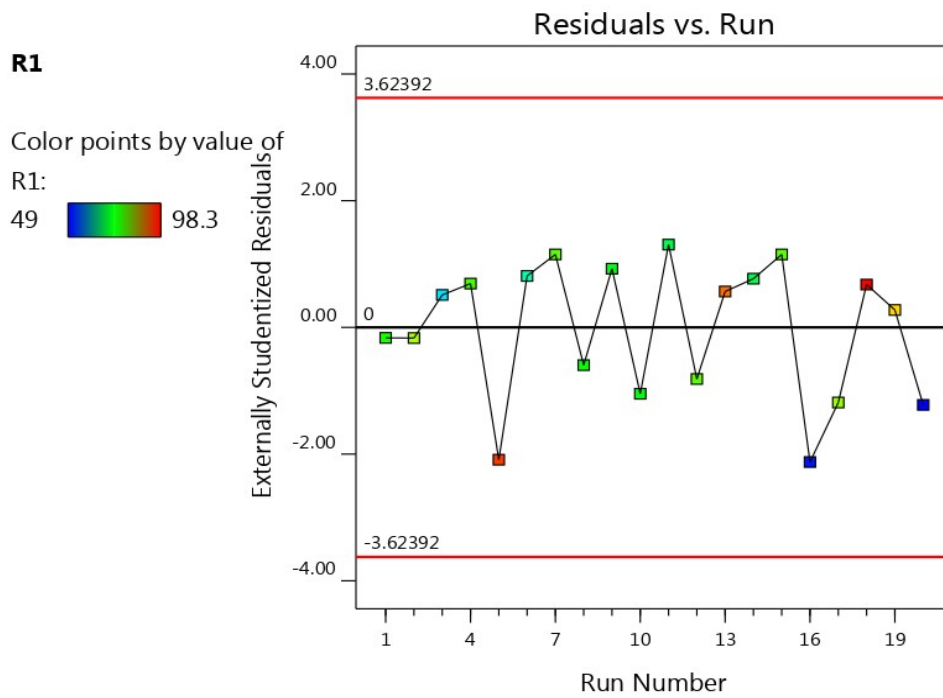

Fig. S3 The difference between the values obtained from the tests and the model according to the number of tests
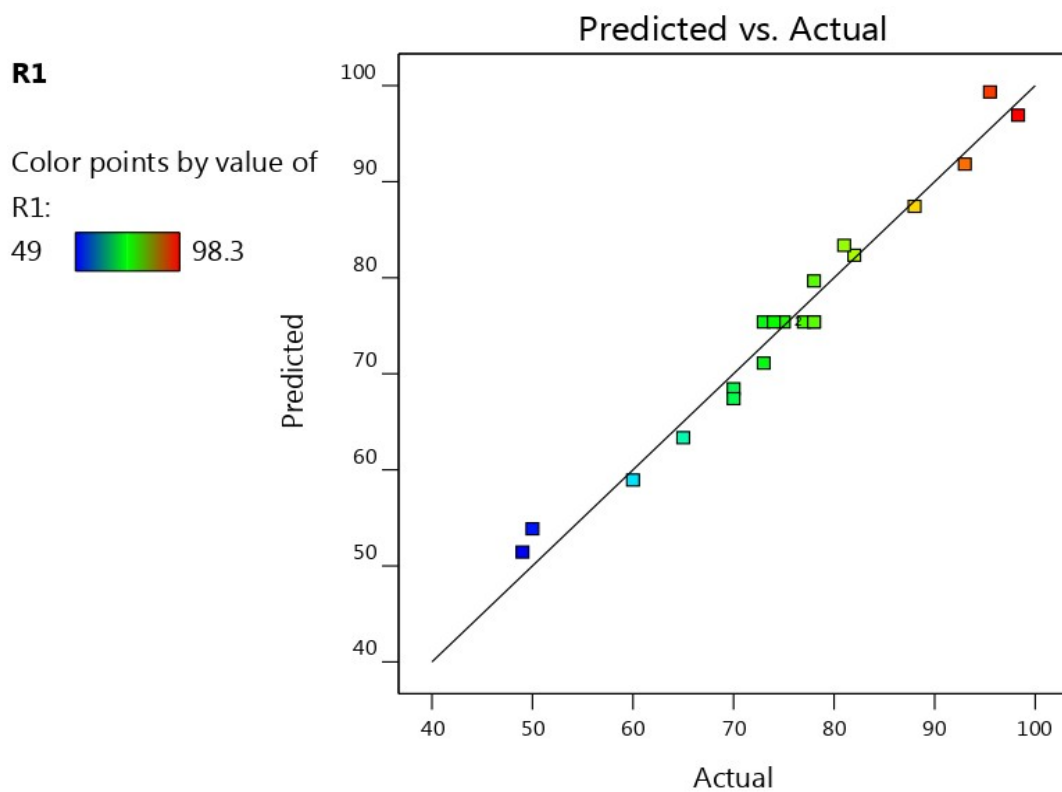
Fig. S4 Status of values obtained from experiments and predicted values

Table S1 Full report of calculation results related to each of the parameters in the order of number of experiments

Run Order	Actual Value	Predicted Value	Residual	Leverage	Internally Studentized Residuals	Externally Studentized Residuals	Cook's Distance	Influence on Fitted Value DFFITS	Standard Order
1	75.00	75.39	-0.3900	0.050	-0.170	-0.165	0.000	-0.038	17
2	82.00	82.35	-0.3458	0.270	-0.172	-0.167	0.003	-0.101	4
3	60.00	58.94	1.06	0.270	0.526	0.514	0.026	0.312	7
4	77.00	75.39	1.61	0.050	0.703	0.692	0.007	0.159	15
5	95.50	99.34	-3.84	0.257	-1.898	-2.088	0.312	-1.228	13
6	65.00	63.35	1.65	0.270	0.821	0.813	0.062	0.494	6
7	78.00	75.39	2.61	0.050	1.140	1.152	0.017	0.264	16
8	74.00	75.39	-1.39	0.050	-0.607	-0.595	0.005	-0.136	19
9	73.00	71.12	1.88	0.257	0.931	0.927	0.075	0.545	10
10	73.00	75.39	-2.39	0.050	-1.044	-1.047	0.014	-0.240	18
11	70.00	67.41	2.59	0.257	1.279	1.307	0.142	0.769	12
12	78.00	79.66	-1.66	0.257	-0.822	-0.813	0.058	-0.478	9
13	93.00	91.84	1.16	0.270	0.580	0.568	0.031	0.345	2
14	70.00	68.43	1.57	0.270	0.780	0.770	0.056	0.468	5
15	78.00	75.39	2.61	0.050	1.140	1.152	0.017	0.264	20
16	50.00	53.86	-3.86	0.270	-1.924	-2.125	0.342	-1.291	8
17	81.00	83.37	-2.37	0.257	-1.171	-1.185	0.119	-0.697	11
18	98.30	96.92	1.38	0.270	0.688	0.676	0.044	0.411	1
19	88.00	87.43	0.5712	0.270	0.285	0.276	0.007	0.168	3
20	49.00	51.44	-2.44	0.257	-1.204	-1.223	0.125	-0.719	14

Table S2 Precision and accuracy of the method for the determination of DMMP in water samples

Concentration (μg ml⁻¹)	Mean (μg ml⁻¹)	SD	Precision RSD (%)	Accuracy (%)	Percentage difference
Intra-day (n=3)					
0.2	0.19	0.03	3.0	95.0	-5.0
0.8	0.78	0.07	3.2	97.5	-2.5
Inter-day (n=9)					
0.2	0.19	0.04	5.1	95.0	5.0-
0.8	0.81	0.13	5.5	101.3	1.3

SD, standard deviation;