

Table S1. Factors and responses of the Box-Behnken design for microwave-assisted extraction.

Condition	Factors*			Responses**							
	X ₁	X ₂	X ₃	Y ₁	Y ₂	Y ₃	Y ₄	Y ₅	Y ₆	Y ₇	Y ₈
1	300	10	2	19.1	365.18	3.71	0.85	4.13	4.85	10.01	18.15
2	600	10	2	17.2	345.51	3.94	1.08	4.52	4.39	7.22	26.36
3	300	30	2	29.9	389.69	4.07	0.98	5.19	5.75	9.14	24.37
4	600	30	2	32.8	377.15	3.45	1.02	6.34	6.78	8.21	15.47
5	300	20	1	19.5	345.63	4.25	1.08	4.35	6.02	16.82	16.13
6	600	20	1	25.5	300.54	4.01	1.16	5.56	6.87	9.60	16.08
7	300	20	3	27.3	384.27	3.80	1.16	6.30	6.24	7.70	15.97
8	600	20	3	34.2	400.54	3.25	1.20	7.09	7.29	14.00	15.59
9	450	10	1	19.1	351.16	4.60	1.05	4.26	5.59	37.28	16.37
10	450	30	1	20.7	356.47	4.77	1.15	4.84	6.20	16.56	16.43
11	450	10	3	28.4	431.73	4.53	1.08	5.58	6.09	10.50	16.8
12	450	30	3	34.6	407.55	3.30	1.16	7.02	7.07	9.64	15.66
13	450	20	2	27.1	386.87	4.41	1.07	5.69	5.88	7.65	16.3
14	450	20	2	22.5	376.25	4.72	1.05	4.76	4.21	9.77	16.57
15	450	20	2	28.5	398.62	4.52	1.10	5.90	5.71	8.94	16.56
16	450	20	2	28.8	423.14	4.51	1.14	6.42	6.78	9.68	16.01
17	450	20	2	30.6	411.73	5.05	1.11	5.92	6.48	7.74	16.66

* X₁, X₂, and X₃ are the microwave power, the duration time, and the irradiation cycle, in the units of W, s, and cycle(s), respectively.

** Y₁ to Y₈ are average values of extraction yield, total phenolic content (TPC), gallic acid content, corilagin content, chebulagic acid content, chebulinic acid content, IC₅₀ from DPPH assay, and IC₅₀ from FRAP assay, in the units of %, mg GAE/g extract, %, %, %, %, µg/mL, and µg/mL, respectively.

Table S2. Factors and responses of the Box-Behnken design for tablet fabrication.

Formulation	Factors*			Responses**			
	X ₁	X ₂	X ₃	Y ₃	Y ₅	Y ₆	Y ₇
1	1000	0	1	4.72	2.00	2.81	19.79
2	2000	0	1	4.10	6.66	0.16	352.63
3	1000	4	1	4.64	1.87	100.00	22.56
4	2000	4	1	4.10	6.68	0.18	403.85
5	1000	2	0.5	4.66	1.79	3.45	20.81
6	2000	2	0.5	4.11	5.40	0.27	176.57
7	1000	2	1.5	4.58	2.32	100.00	26.82
8	2000	2	1.5	3.90	10.98	0.11	650.56
9	1500	0	0.5	4.26	4.91	0.34	88.23
10	1500	4	0.5	4.25	4.26	0.91	93.65
11	1500	0	1.5	4.22	3.98	0.80	117.75
12	1500	4	1.5	4.26	3.80	100.00	97.26
13	1500	2	1	4.25	3.93	0.88	117.02
14	1500	2	1	4.25	3.91	1.66	54.50
15	1500	2	1	4.14	4.50	0.93	82.67

* X₁, X₂, and X₃ are the compression force, the amount of sodium starch glycolate, and the amount of magnesium stearate, in the units of psi, %, and %, respectively.

** Y₃, Y₅, Y₆, and Y₇ are average values of tablet thickness, hardness, friability, and disintegration time, in the units of mm, kP, %, and s, respectively.

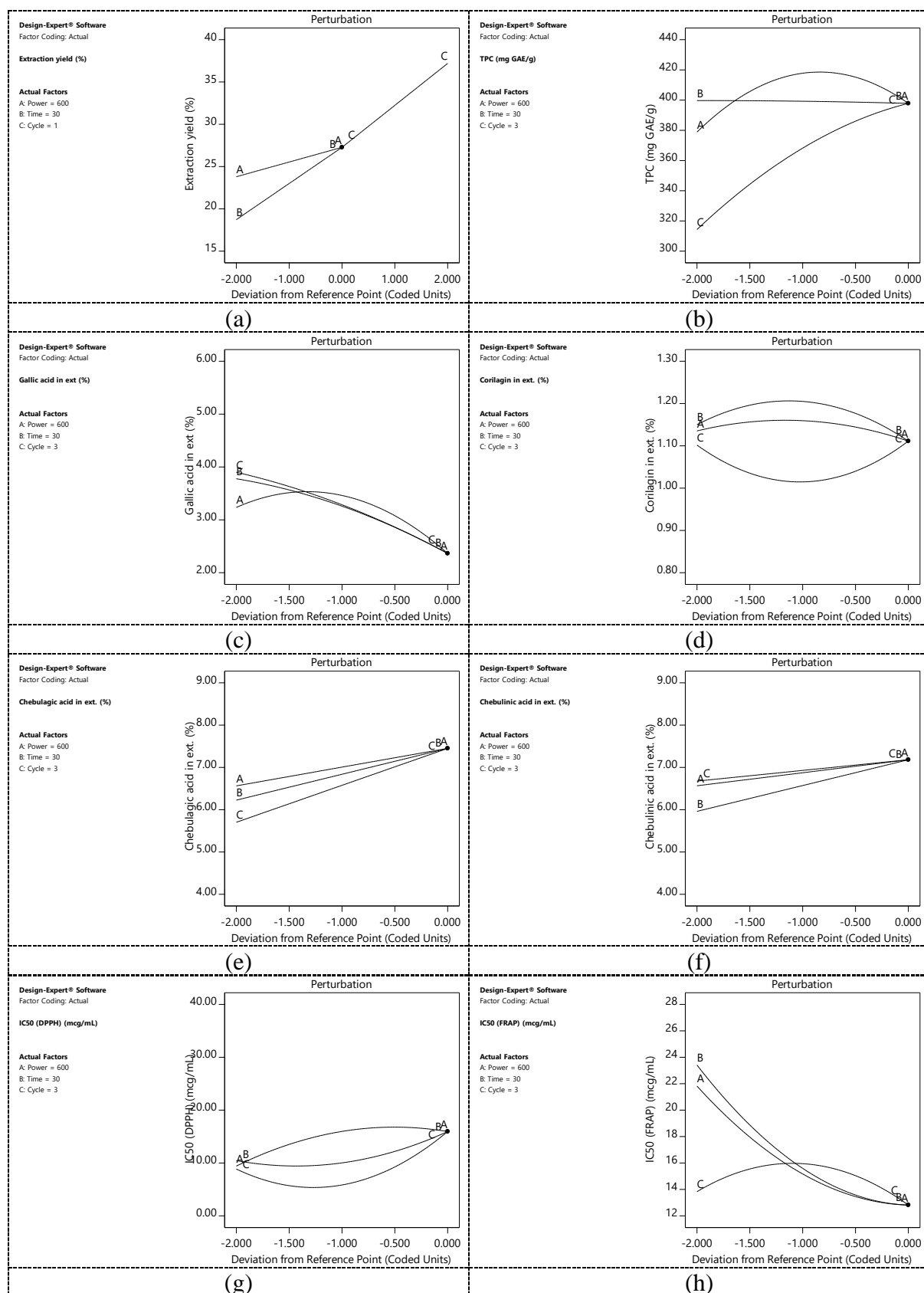


Figure S1. Perturbation plots of the Box-Behnken design for microwave-assisted extraction; (a) extraction yield, (b) TPC, (c) gallic acid content, (d) corilagin content, (e) chebulagic acid content, (f) chebulinic acid content, (g) IC₅₀ from DPPH assay, and (h) IC₅₀ from FRAP assay.

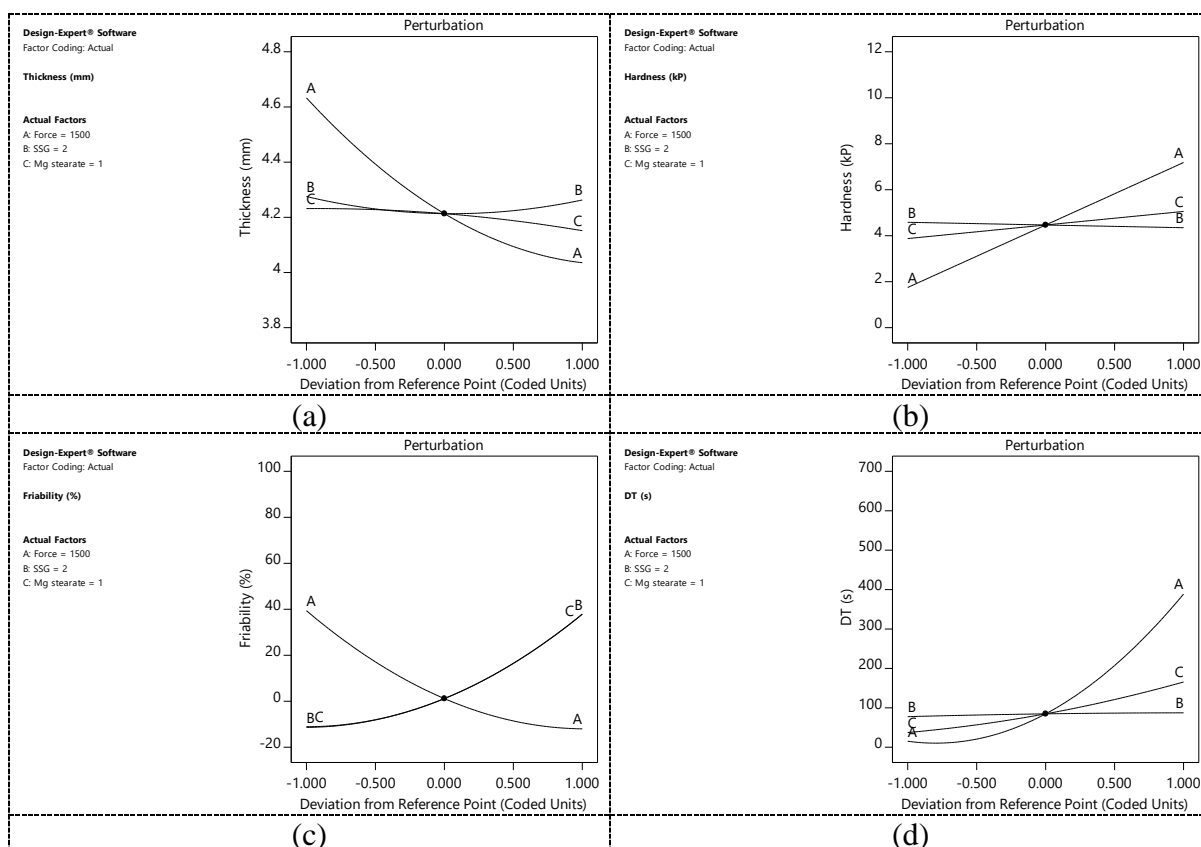


Figure S2. Perturbation plots of each response of the Box-Behnken design for tablet fabrication; (a) tablet thickness, (b) hardness, (c) friability, and (d) disintegration time.