molecules

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Supplementary Material

Box–Behnken Design (BBD)-based optimization of microwave-assisted extraction of parthenolide from the stems of *Tarconanthus camphoratus* and cytotoxic analysis

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Table S1: R_f, Linear regression data for the calibration curve of parthenolide (n=6)

Parameters	**Parthenolide**
Linearity range (ng/band)	100-700
Regression equation	Y=9.126X + 936.07
Correlation (r^2) coefficient	0.9928
Slope ± SD	9.126 ± 0.08
Intercept ± SD	936.07 ± 25.76
Standard error of slope	0.032
Standard error of intercept	10.51
R_f	0.16 ± 0.001
LOD (ng)	28.46
LOQ (ng)	86.24

Table S2. Recovery as accuracy studies of the proposed HPTLC Method (n=6)

Percent (%) of Parthenolide added to analyte	Theoretical concentration of Parthenolide (ng/band)	Concentration found (ng/band) ± SD	%RSD	% Recovery
0	200	196.09 ± 3.73	1.902	98.04
50	300	296.19 ± 5.39	1.819	98.73
100	400	395.95 ± 6.87	1.735	98.99
150	500	488.20 ± 7.43	1.522	97.64

Table S3. Precision of the proposed HPTLC Method (n=6)

Conc. of standard added (ng/band)	Parthenolide			
	Intra-day Precision		Inter-day Precision	
	Average Conc. found ± SD	%RSD	Average Conc. found ± SD	%RSD
300	294.01 ± 5.33	1.81	292.91 ± 5.01	1.71
400	393.32 ± 6.98	1.77	390.03 ± 6.47	1.65
500	493.46 ± 7.57	1.53	489.29 ± 7.19	1.46

Table 4. Robustness of the proposed HPTLC Method (n=6)

Optimization condition	**Parthenolide (300 ng/band)**	
	SD	**% RSD**
Mobile phase composition; (hexane: ethyl acetate)		
(3:1)	5.11	1.79
(2.8:1.2)	5.19	1.82
(3.2:0.8)	5.23	1.84
Mobile phase volume (for saturation)		
(18 mL)	5.29	1.85
(20 mL)	5.18	1.81
(22 mL)	5.37	1.89
Duration of saturation		
(10 min)	5.61	1.93
(20 min)	5.53	1.90
(30 min)	5.67	1.95