

Table S1 The fuzzy judgment matrix of the evaluating indicators

evaluating indicators	Scale											Extraction yield
	Berberine hydrochloride	Baicalin	Coptisine	Epiberberine	Palmatine	Chrysin-7-o-β-glucuronide	Wogonoside	Baicalein	Wogonin	Oroxylin A	Atractylodin	
Berberine hydrochloride	0.5	0.5	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.8	0.9
Baicalin	0.5	0.5	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.8	0.9
Coptisine	0.4	0.4	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.7	0.8
Epiberberine	0.4	0.4	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.7	0.8
Palmatine	0.4	0.4	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.7	0.8
Chrysin-7-o-β-glucuronide	0.3	0.3	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.6	0.7
Wogonoside	0.3	0.3	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.6	0.7
Baicalein	0.3	0.3	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.6	0.7
Wogonin	0.3	0.3	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.6	0.7
Oroxylin A	0.3	0.3	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.6	0.7
Atractylodin	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.5	0.6
Extraction yield	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.4	0.5

Table S2 The characteristic matrix of the evaluating indicators

evaluating indicators	Scale											Extraction yield
	Berberine hydrochloride	Baicalin	Coptisine	Epiberberine	Palmatine	Chrysin-7-o- β - glucuronide	Wogonoside	Baicalein	Wogonin	Oroxylin A	Atractylodin	
Berberine hydrochloride	0.5	0.5	0.52	0.52	0.52	0.55	0.55	0.55	0.55	0.55	0.58	0.61
Baicalin	0.5	0.5	0.52	0.52	0.52	0.55	0.55	0.55	0.55	0.55	0.58	0.61
Coptisine	0.48	0.48	0.5	0.5	0.5	0.53	0.53	0.53	0.53	0.53	0.56	0.59
Epiberberine	0.48	0.48	0.5	0.5	0.5	0.53	0.53	0.53	0.53	0.53	0.56	0.59
Palmatine	0.48	0.48	0.5	0.5	0.5	0.53	0.53	0.53	0.53	0.53	0.56	0.59
Chrysin-7-o- β - glucuronide	0.45	0.45	0.47	0.47	0.47	0.5	0.5	0.5	0.5	0.5	0.53	0.56
Wogonoside	0.45	0.45	0.47	0.47	0.47	0.5	0.5	0.5	0.5	0.5	0.53	0.56
Baicalein	0.45	0.45	0.47	0.47	0.47	0.5	0.5	0.5	0.5	0.5	0.53	0.56
Wogonin	0.45	0.45	0.47	0.47	0.47	0.5	0.5	0.5	0.5	0.5	0.53	0.56
Oroxylin A	0.45	0.45	0.47	0.47	0.47	0.5	0.5	0.5	0.5	0.5	0.53	0.56
Atractylodin	0.42	0.42	0.44	0.44	0.44	0.47	0.47	0.47	0.47	0.47	0.5	0.53
Extraction yield	0.39	0.39	0.41	0.41	0.41	0.44	0.44	0.44	0.44	0.44	0.47	0.5

Table S3 The data normalization processing

No.	Coptisine	Epiberberine	Berberine hydrochloride	Palmatine	Baicalin	Chrysin-7-O- β - glucuronide	Wogonoside	Baicalein	Wogonin	Oroxylin A	Atractylodin	Extraction yield
1	0.92	0.91	0.89	0.88	1.04	1.04	1.01	0.91	0.92	1.02	0.89	0.96
2	0.95	0.98	0.89	0.94	0.83	0.93	0.87	1.01	0.86	0.95	0.93	0.92
3	1.01	1.1	1.16	1.15	1.07	1.12	1.03	1.12	1.14	1.27	0.79	1
4	1.07	0.91	0.97	0.87	0.96	0.96	0.97	1.16	0.92	0.86	1.12	0.96
5	0.92	0.98	0.93	0.87	0.96	0.97	0.99	0.84	0.85	0.87	0.71	0.98
6	0.89	0.93	0.89	0.85	0.94	0.92	0.92	0.93	0.78	0.75	1.04	0.93
7	0.93	1.03	1.02	1.06	1.05	0.99	1.02	1	1.15	1.05	0.62	1.07
8	0.9	0.85	0.83	0.83	0.79	0.8	0.79	0.75	0.75	0.73	1.06	1.03
9	1.11	1.12	0.99	0.88	1.05	1.08	1.03	1.04	1.07	1.2	0.98	0.98
10	1.3	1.04	1.04	0.98	1.07	0.99	1.03	1.03	0.95	0.93	1.19	1.04
11	1.04	1	1.02	0.97	1	0.95	0.99	1.14	1.01	1.01	0.92	1.01
12	1.25	1.07	1.18	1.04	1.12	1.05	1.1	1.05	1.14	1.14	0.55	1.1
13	0.9	0.99	1.03	1.14	1.02	1.04	1.04	1	1.09	1.04	1.23	1.02
14	0.98	1.06	1.06	1.17	1.02	1.04	1.04	1	1.09	1.04	1.23	1.03
15	0.98	1.02	1.05	1.16	1.02	1.04	1.04	1	1.08	1.03	1.23	0.97
16	0.91	0.99	1.03	1.14	1.02	1.04	1.05	0.99	1.09	1.06	1.22	1.02
17	0.93	1.01	1.03	1.06	1.03	1.06	1.05	1.03	1.1	1.04	1.28	0.98
the optimal reference sequence	1.3	1.12	1.18	1.17	1.12	1.12	1.1	1.16	1.15	1.27	1.28	1.1
the worst reference sequence	0.89	0.85	0.83	0.83	0.79	0.8	0.79	0.75	0.75	0.73	0.55	0.92