

Supplementary data for article:

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Supplementary Material

Ultra-high performance liquid chromatography-mass spectrometry (UHPLC–LTQ

OrbiTrap MS/MS) study of phenolic profile of Serbian poplar type propolis

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Figure S2. Extracted ion chromatograms with mean expected retention times and accurate masses, structures and MS/MS spectra of flavonoid glycosides founded in propolis samples: (A) Rutin (quercetin-3-*O*-rutinoside); (B) Isorhamnetin-3-*O*-rutinoside; (C) Apigetrin (apigenin-7-*O*-glucoside); (D) Kaempferol-*p*-coumaroyl-rhamnoside.

Table S1. Basic information about the propolis samples, geographical sites, wax content and classification of propolis according to the HPTLC fingerprint.

No.	Location	Location	Mass of sample (g)	Wax content %	Classification according to HPTLC fingerprint
1	West region - Serbia	Zlatibor	1.01	61.39	Blue
2	East region - Serbia	Petrovac na Mlavi	1.17	39.32	Orange
3	Central region - Serbia	Kragujevac	1.05	31.43	Orange
4	West region - Serbia	Koceljeva	1.00	29.00	Blue
5	West region - Serbia	Koceljeva	1.01	27.72	Blue
6	South region - Serbia	Leskovac	1.01	33.66	Orange
7	East region - Serbia	Homolje	1.01	25.74	Orange
8	East region - Serbia	Kamenovo	1.01	24.75	Orange
9	Vojvodina - Serbia	Vršački Ritovi	1.02	28.43	Orange
10	Central region - Serbia	Mali Jastrebac	1.09	27.52	Orange
11	Vojvodina - Serbia	Sombor	1.02	29.41	Orange
12	East region - Serbia	Banat	1.02	38.24	Orange
13	West region - Serbia	Cer	1.01	24.75	Orange
14	Belgrade region - Serbia	Belgrade	1.18	28.81	Orange
15	Vojvodina - Serbia	Ođžaci	0.99	35.35	Blue
16	Vojvodina - Serbia	Subotica	1.01	38.61	Orange
17	Vojvodina - Serbia	Subotica	1.04	45.19	Orange
18	Vojvodina - Serbia	Kelebija	0.95	36.84	Blue
19	Vojvodina - Serbia	Fruška Gora	1.02	31.37	Orange
20	West region - Serbia	Lajkovac	1.00	36.00	Orange
21	Central region - Serbia	Arandjelovac	1.01	38.61	Orange
22	South region - Serbia	Surdulica	1.01	26.73	Orange
23	South region - Serbia	Surdulica	1.02	32.35	Blue
24	South region - Serbia	Vladičin Han	1.01	22.77	Orange
25	South region - Serbia	Vladičin Han	1.03	29.13	Orange
26	South region - Serbia	Vladičin Han	0.99	19.19	Orange
27	South region - Serbia	Vladičin Han	1.01	12.87	Orange
28	Vojvodina - Serbia	Bačka Topola	1.04	21.15	Orange
29	Vojvodina - Serbia	Begeč	1.00	42.00	Orange
30	Vojvodina - Serbia	Fruška Gora	1.02	19.61	Orange
31	Vojvodina - Serbia	Karlovc	0.98	53.06	Orange
32	Vojvodina - Serbia	Banstol	1.08	52.78	Orange
33	South region - Serbia	Vučje	1.07	29.91	Orange
34	South region - Serbia	Kopašnica	1.04	29.81	Orange
35	Croatia	Sisak	1.12	17.86	Blue
36	Central region - Serbia	Kraljevo	1.05	28.57	Orange
37	West region - Serbia	Valjevo	1.03	9.71	Orange
38	Vojvodina - Serbia	Varvarin	1.39	25.18	Orange
39	East region - Serbia	Runjkovac	1.05	15.24	Orange
40	South region - Serbia	Vučje	1.04	39.42	Orange
41	Central region - Serbia	Brus	1.02	22.55	Orange

42	Central region - Serbia	Brus	1.00	49.00	Orange
43	Kosovo and Metohija - Serbia	Šar planina	1.04	11.54	Orange
44	Kosovo and Metohija - Serbia	Šar planina	1.00	31.00	Orange
45	Kosovo and Metohija - Serbia	Šar pplanina	1.08	15.74	Orange
46	Kosovo and Metohija - Serbia	Šar planina	1.03	17.48	Orange
47	East region - Serbia	Kraljevo	1.07	15.89	Blue
48	West region - Serbia	Valjevo	1.02	28.43	Orange
49	Central region - Serbia	Krusevac	1.03	29.13	Orange
50	West region - Serbia	Valjevo	1.01	34.65	Orange
51	West region - Serbia	Valjevo	1.04	32.69	Blue
52	Central region - Serbia	Kragujevac	0.66	30.30	Blue

Table S2. The content of quantified phenolics in orange and blue propolis samples. The compound name, correlation coefficient, limit of detection (*LOD*), limit of quantification (*LOQ*), recovery of the analyses, intercept and slope and corresponding concentration ranges are listed.

No.	Compound	<i>R</i> ²	<i>LOD</i> (mg/g)	<i>LOQ</i> (mg/g)	Recovery, %			Intercept	Slope	Concentration range (mg/g)	
					Level 1	Level 2	Level 3			Blue type	Orange type
1	Caffeic acid	0.9948	0.09	0.29	109	102	101	-7.93·10 ⁵	2.72·10 ⁷	LOD – 1.08	0.26 – 2.80
2	<i>p</i> -Coumaric acid	0.9918	0.1	0.36	107	93	100	2.55·10 ⁵	2.69·10 ⁶	LOD – 1.17	LOD – 2.35
3	Luteolin	0.9938	0.1	0.33	98	98	95	6.55·10 ⁵	3.82·10 ⁷	LOD- 0.16	LOD – 0.57
4	Quercetin	0.9930	0.1	0.34	98	89	94	-6.91·10 ⁵	1.55·10 ⁷	LOD -0.20	LOD – 0.64
5	Apigenin	0.9959	0.08	0.27	100	93	99	6.23·10 ⁵	3.99·10 ⁷	LOD – 0.51	0.10 – 0.95
6	Naringenin	0.9931	0.09	0.32	106	103	107	-8.34·10 ⁵	2.88·10 ⁸	LOD – 0.14	<LOD
7	Kaempferol	0.9979	0.05	0.19	94	107	95	-3.27·10 ⁵	3.45·10 ⁷	LOD – 0.75	0.48 – 1.32
8	Pinocembrin	0.9790	0.12	0.4	98	98	103	8.04·10 ⁶	7.73·10 ⁷	LOD – 3.49	0.81 – 8.91
9	Chrysin	0.9904	0.19	0.62	101	104	102	1.13·10 ⁶	5.20·10 ⁶	LOD – 6.99	1.39 – 16.84
10	Galangin	0.9982	0.05	0.16	109	85	110	-3.51·10 ⁵	1.18·10 ⁸	0.17 – 14.30	4.48 – 41.20



Figure S1. Regional map of Serbia with marked locations where propolis was sampled.

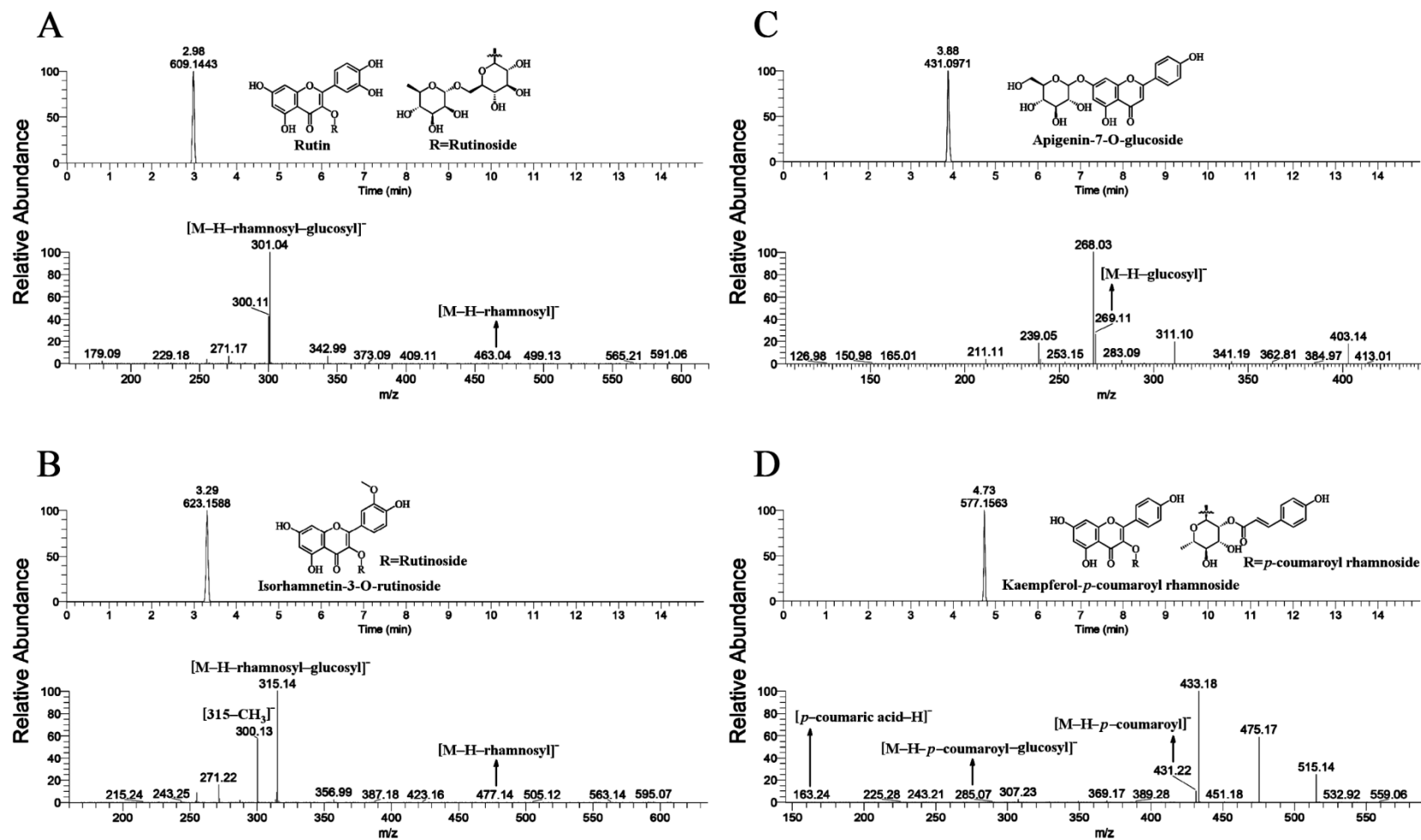


Figure S2. Extracted ion chromatograms with mean expected retention times and accurate masses, structures and MS/MS spectra of flavonoid glycosides founded in propolis samples: (A) Rutin (quercetin-3-*O*-rutinoside); (B) Isorhamnetin-3-*O*-rutinoside; (C) Apigenin (apigenin-7-*O*-glucoside); (D) Kaempferol-*p*-coumaroyl-rhamnoside.