

Table S1. Identification of chemical profile of BHGZD *in vitro* by UFLC-Q-TOF-MS/MS.

No.	Rt (mins)	Identification	Mass (Da)	Formula	Positive Ion (m/z)		Characteristic fragment ions in positive ion mode (m/z)	Negative Ion (m/z)		Characteristic fragment ions in negative ion mode (m/z)
					Mass [M+H] ⁺	Error (ppm)		Mass [M-H] ⁻	Error (ppm)	
1	1.35	Arginine ²	174.1117	C ₆ H ₁₄ N ₄ O ₂	175.1191	0.9	158.0908 [M+H-NH ₃] ⁺ , 130.0974 [M+H-COOH] ⁺ , 116.0702 [M+H-CH ₃ N ₃] ⁺ , 70.0688 [M+H-HCOOH-CH ₄ N ₃] ⁺ , 60.0603 [M+H-C ₃ H ₉ NO ₂] ⁺	—	—	
2	1.55	Proline ²	115.0633	C ₅ H ₉ NO ₂	116.0713	6.2	70.0688 [M+H-HCOOH] ⁺ , 68.0534	—	—	
3	1.56	Pipecolic acid ²	129.0790	C ₆ H ₁₁ NO ₂	130.0867	3.4	84.0474 [M+H-HCOOH] ⁺ , 70.0691, 56.0551 [M+H-C ₃ H ₆ O ₂] ⁺	—	—	
4	2.01	Nicotinic acid ²	123.0320	C ₆ H ₅ NO ₂	124.0405	9.6	106.0337 [M+H-H ₂ O] ⁺ , 78.0375 [M+H-HCOOH] ⁺ , 53.0451 [M+H-H ₂ O-C ₃ H ₃ N] ⁺	—	—	
5	2.04	Citric acid ²	192.0270	C ₆ H ₈ O ₇	—	—		191.0212	7.6	129.0193 [M-H-OH-COOH] ⁻ , 111.0092 [M-H-OH-COOH-H ₂ O] ⁻ , 87.0104 [M-H-COOH-CH ₂ COOH] ⁻ , 85.0311, 67.0225, 57.0394 [C ₃ H ₅ O] ⁻
6	2.16	Isoleucine ^{1, 2}	131.0946	C ₆ H ₁₃ NO ₂	132.1025	4.8	86.0999 [M+H-HCOOH] ⁺ , 69.0738 [M+H-HCOOH-NH ₃] ⁺ , 56.0548 [M+H-HCOOH-CH ₄ N] ⁺	—	—	
7	3.14	Phenylalanine ²	165.0790	C ₉ H ₁₁ NO ₂	166.0866	1.8	120.0822 [M+H-HCOOH] ⁺ , 103.0559 [M+H-HCOOH-NH ₃] ⁺ , 77.0416 [M+H-HCOOH-C ₂ H ₂ -NH ₃] ⁺ , 51.0281	—	—	
8	3.66	Pantothenic acid	219.1107	C ₉ H ₁₇ NO ₅	220.1180	0.3	202.1045 [M+H-H ₂ O] ⁺ , 174.1048 [M+H-HCOOH] ⁺ , 142.0860 [M+H-CH ₃ OH-HCOOH] ⁺ , 124.0765 [M+H-CH ₃ OH-HCOOH-H ₂ O] ⁺ , 98.0283 [M+H-CH ₂ COOH-CH ₂ OH-CH ₃ -OH] ⁺ , 90.0583 [M+H-C ₅ H ₁₀ O ₂] ⁺ , 70.0314 [M+H-CH ₂ COOH-C ₄ H ₉ O-H ₂ O] ⁺	218.1040	2.9	146.0784 [C ₆ H ₁₂ NO ₃] ⁻ , 96.9602 [M-H-CH ₂ COOH-CH ₂ OH-CH ₃ -OH] ⁻ , 88.0405 [M-H-C ₅ H ₁₀ O ₂] ⁻ , 71.0524 [M-H-C ₅ H ₁₀ O ₂ -OH] ⁻
9	4.46	Protocatechuic acid ^{1, 2}	154.0266	C ₇ H ₆ O ₄	155.0343	2.7	137.0255 [M+H-H ₂ O] ⁺ , 109.0309 [M+H-HCOOH] ⁺ , 93.0372 [C ₆ H ₅ O] ⁺ , 65.0428 [C ₅ H ₅] ⁺	—	—	
10	5.05	Tryptophan ²	204.0899	C ₁₁ H ₁₂ N ₂ O ₂	205.0970	-0.7	188.0819 [M+H-NH ₃] ⁺ , 146.0610 [C ₉ H ₁₀ N ₂] ⁺ , 143.0736 [M+H-NH ₂ -HCOOH] ⁺ , 118.0663 [M+H-C ₂ H ₂ NH ₂ COOH] ⁺ , 91.0564 [M+H-C ₄ H ₄ -HCOOH-NH ₂] ⁺	203.0833	3.5	142.0646 [M-H-NH ₂ -COOH] ⁻ , 116.0491 [M-H-C ₂ H ₂ NH ₂ COOH] ⁻ , 74.0271 [C ₂ H ₄ NO ₂] ⁻
11	6.35	Benzaldehyde	106.0412	C ₇ H ₆ O	107.0501	8.7	91.0556, 77.0414 [M+H-HCHO] ⁺ , 65.0412 [C ₅ H ₅] ⁺ , 51.0275	—	—	
12	6.71	p-Hydrobenzoic acid ^{1, 2}	138.0317	C ₇ H ₆ O ₃	139.0402	9.0	121.0308 [M+H-H ₂ O] ⁺ , 93.0368 [M+H-HCOOH] ⁺ , 77.0428 [M+H-OH-COOH] ⁺ , 65.0436 [M+H-OH-COOH-CH] ⁺	137.0266	16.2	93.0358 [C ₆ H ₅ O] ⁻ , 65.0431 [M-H-COOH-C ₂ H ₃] ⁻
13	7.53	Neomangiferin ^{1, 2}	584.1377	C ₂₅ H ₂₈ O ₁₆	585.1449	-0.2	567.1313 [M+H-H ₂ O] ⁺ , 435.0911 [M+H-C ₅ H ₁₀ O ₅] ⁺ , 387.0707 [M+H-H ₂ O-Glc] ⁺ , 369.0602 [M+H-3H ₂ O-Glc] ⁺ , 327.0497 [M+H-Glc-C ₅ H ₄ O ₂] ⁺ , 303.0497 [M+H-Glc-C ₄ H ₈ O ₄] ⁺ , 273.0497 [M+H-Glc-C ₅ H ₁₀ O ₅] ⁺	583.1304	-0.1	565.1227 [M-H-H ₂ O] ⁻ , 493.0999 [M-H-C ₃ H ₆ O ₃] ⁻ , 463.0887 [M-H-C ₄ H ₈ O ₄] ⁻ , 421.0798 [M-H-Glc] ⁻ , 403.0692 [M-H-Glc-H ₂ O] ⁻ , 331.0458 [M-H-Glc-C ₃ H ₆ O ₃] ⁻ , 301.0353 [M+H-Glc-C ₄ H ₈ O ₄] ⁻ , 259.0253 [M-2Glc] ⁻
14	8.51	Caffeic acid ^{1, 2}	180.0423	C ₉ H ₈ O ₄	—	—		179.0367	9.5	135.0436 [C ₈ H ₇ O ₂] ⁻ , 99.9995 [M-H-OH-C ₂ H ₂ COOH] ⁻
15	9.64	p-Hydroxyphenyl-propionic acid ²	166.0630	C ₉ H ₁₀ O ₃	167.0706	1.9	121.0582 [M+H-HCOOH] ⁺ , 107.0454 [M+H-CH ₃ COOH] ⁺ , 84.9650 [M+H-C ₆ H ₅ O] ⁺ , 77.0411 [M+H-OH-C ₂ H ₄ COOH] ⁺	—	—	
16	9.95	Mangiferin ^{1, 2}	422.0849	C ₁₉ H ₁₈ O ₁₁	423.0926	0.9	369.0615 [M+H-3H ₂ O] ⁺ , 339.0507 [M+H-3H ₂ O-CH ₂ O] ⁺ , 327.0506 [M+H-C ₅ H ₂ O] ⁺ , 315.0509 [M+H-C ₆ H ₄ O ₂] ⁺ 303.0497 [M+H-C ₄ H ₈ O ₄] ⁺ , 273.0394 [M+H-C ₅ H ₁₀ O ₅] ⁺ , 257.0450 [M+H-C ₅ H ₁₀ O ₆] ⁺	421.0780	0.8	331.0457 [M-H-C ₃ H ₆ O ₃] ⁻ , 301.0351 [M-H-C ₄ H ₈ O ₄] ⁻ , 271.0249 [M-H-C ₅ H ₁₀ O ₅] ⁻ , 259.0253 [M-Glc] ⁻ , 243.0294 [M-H-Glc-OH] ⁻
17	11.86	p-Coumaric acid ²	164.0473	C ₉ H ₈ O ₃	165.0550	2.4	147.0422 [M+H-H ₂ O] ⁺ , 119.0494 [M+H-HCOOH] ⁺ , 93.0337 [M+H-C ₂ H ₃ COOH] ⁺ , 91.0551 [M+H-HCOOH-CO] ⁺ , 65.0423 [C ₅ H ₅] ⁺	163.0422	13.2	119.0500 [C ₈ H ₇ O] ⁻ , 93.0360 [C ₆ H ₅ O] ⁻ , 65.0456 [C ₅ H ₅] ⁻
18	12.32	Isoschaftoside ²	564.1479	C ₂₆ H ₂₈ O ₁₄	565.1540	-2.1	511.1218 [M+H-3H ₂ O] ⁺ , 481.1125 [M+H-2H ₂ O-CHOH] ⁺ , 427.1018 [M+H-C ₄ H ₈ O ₄ -H ₂ O] ⁺ , 409.0911 [M+H-C ₄ H ₈ O ₄ -2H ₂ O] ⁺ 391.0811 [M+H-C ₇ H ₁₀ O ₅] ⁺ , 379.0814 [M+H-C ₄ H ₈ O ₄ -2H ₂ O-CHOH] ⁺ , 325.0704 [M+H-2C ₄ H ₈ O ₄] ⁺	563.1408	0.4	473.1101 [M-H-C ₃ H ₆ O ₃] ⁻ , 443.1006 [M-H-C ₄ H ₈ O ₄] ⁻ , 383.0773 [M-H-C ₄ H ₈ O ₄ -C ₂ H ₂ O ₂] ⁻ , 353.0677 [M-H-C ₄ H ₈ O ₄ -C ₃ H ₆ O ₃] ⁻

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					Mass [M+H] ⁺	Error (ppm)		Mass [M-H] ⁻	Error (ppm)	
19	12.71	Orientin ²	448.1006	C ₂₁ H ₂₀ O ₁₁	449.1076	-0.4	431.0984 [M+H-H ₂ O] ⁺ , 413.0842 [M+H-2H ₂ O] ⁺ , 395.0774 [M+H-3H ₂ O] ⁺ , 329.0647 [M+H-C ₄ H ₈ O ₄] ⁺ , 299.0575 [M+H-C ₅ H ₁₀ O ₅] ⁺	447.0937	0.9	357.0610 [M-H-C ₃ H ₆ O ₃] ⁻ , 327.0531 [M-H-C ₄ H ₈ O ₄] ⁻ , 299.0534, 297.0412 [M-H-C ₅ H ₁₀ O ₅] ⁻ , 284.0299 [M-H-Glu] ⁻
20	13.15	Schaftoside ²	564.1479	C ₂₆ H ₂₈ O ₁₄	565.1546	-1.1	547.1380 [M+H-H ₂ O] ⁺ , 529.1333 [M+H-2H ₂ O] ⁺ , 511.1218 [M+H-3H ₂ O] ⁺ , 445.1068 [M+H-C ₄ H ₈ O ₄] ⁺ , 397.0964 [M+H-C ₄ H ₈ O ₄ -H ₂ O-CHOH] ⁺ , 379.0814 [M+H-C ₄ H ₈ O ₄ -2H ₂ O-CHOH] ⁺ ,	—	—	
21	13.62	Ferulic acid ^{1,2}	194.0579	C ₁₀ H ₁₀ O ₄	—	—		193.0530	12.4	178.0240 [M-H-CH ₃] ⁻ , 148.9005 [M-H-COOH] ⁻ , 133.0312 [M-H-COOH-CH ₃] ⁻
22	13.83	7-O-Methyl mangiferin ²	436.1006	C ₂₀ H ₂₀ O ₁₁	437.1075	-0.8	341.0661, 317.0646 [M+H-C ₄ H ₈ O ₄] ⁺ , 287.0560 [M+H-C ₅ H ₁₀ O ₅] ⁺	435.0936	0.7	345.0624 [M-H-C ₃ H ₆ O ₃] ⁻ , 330.0356 [M-H-C ₃ H ₆ O ₃ -CH ₃] ⁻ , 315.0499 [M-H-C ₄ H ₈ O ₄] ⁻ , 272.0306 [M-H-Glc] ⁻
23	13.86	Liquiritigenin-7,4-diglucoside	580.1792	C ₂₇ H ₃₂ O ₁₄	581.1865	0.2	419.1346 [M+H-Glc] ⁺ , 257.0821 [M+H-2Glc] ⁺ , 137.0246 [M+H-2Glc-C ₆ H ₆ O] ⁺	579.1719	1.0	417.1198 [M-H-Glc] ⁻ , 255.0644 [M-H-2Glc] ⁻ , 135.0067 [M-H-2Glc-C ₆ H ₆ O] ⁻
24	14.22	Vitexin ²	432.1057	C ₂₁ H ₂₀ O ₁₀	433.1133	0.9	415.1030 [M+H-H ₂ O] ⁺ , 397.0913 [M+H-2H ₂ O] ⁺ , 367.0820 [M+H-2H ₂ O-CHOH] ⁺ , 337.0719 [M+H-2H ₂ O-C ₂ H ₄ O ₂] ⁺ , 313.0715 [M+H-C ₄ H ₈ O ₄] ⁺ , 283.0611 [M+H-C ₅ H ₁₀ O ₅] ⁺	431.0988	0.9	341.0675 [M-H-C ₃ H ₆ O ₃] ⁻ , 311.0571 [M-H-C ₄ H ₈ O ₄] ⁻ , 283.0623
25	14.24	Licochalcone B	286.0841	C ₁₆ H ₁₄ O ₅	—	—		285.0771	1.0	242.0889 [M-H-C ₂ H ₃ O] ⁻ , 109.0297, 93.0371 [C ₆ H ₅ O] ⁻
26	14.28	Liquiritin ^{1,2}	418.1264	C ₂₁ H ₂₂ O ₉	—	—		417.1195	1.1	255.0663 [M-H-Glc] ⁻ , 135.0091 [M-H-Glc-C ₆ H ₆ O] ⁻ , 119.0510 [M-H-Glc-C ₇ H ₄ O ₃] ⁻ , 91.0209 [M-H-Glc-C ₉ H ₈ O ₃] ⁻
27	14.49	Liquiritin apioside ^{1,2}	550.1686	C ₂₆ H ₃₀ O ₁₃	551.1754	-1.0	257.0820 [M+H-Api-Glc] ⁺ , 137.0240 [M+H-Api-Glc-C ₆ H ₆ O] ⁺	549.1620	1.1	417.1209 [M-H-Api] ⁻ , 255.0659 [M-H-Api-Glc] ⁻ , 135.0092 [M-Api-Glc-C ₆ H ₆ O] ⁻ , 119.0510 [M-H-Api-Glc-C ₇ H ₄ O ₃] ⁻ , 91.0209 [M-H-Api-Glc-C ₉ H ₈ O ₃] ⁻
28	14.78	Isovitexin ²	432.1057	C ₂₁ H ₂₀ O ₁₀	433.1134	1.1	397.0928 [M+H-2H ₂ O] ⁺ , 379.0822 [M+H-3H ₂ O] ⁺ , 367.0830 [M+H-2H ₂ O-CHOH] ⁺ , 337.0718 [M+H-2H ₂ O-C ₂ H ₄ O ₂] ⁺ , 313.0717 [M+H-C ₄ H ₈ O ₄] ⁺ , 283.0622 [M+H-C ₅ H ₁₀ O ₅] ⁺	431.0987	0.8	341.0676 [M-H-C ₃ H ₆ O ₃] ⁻ , 311.0568 [M-H-C ₄ H ₈ O ₄] ⁻ , 283.0612
29	16.32	Isoquercitrin	464.0955	C ₂₁ H ₂₀ O ₁₂	465.1021	-1.4	447.0894 [M+H-H ₂ O] ⁺ , 369.0630 [M+H-C ₅ H ₁₀ O ₅] ⁺ , 303.0513 [M+H-Glc] ⁺ , 273.0375 [M+H-Glc-CO] ⁺	463.0886	0.8	331.0469 [M-H-C ₅ H ₁₀ O ₄] ⁻ , 301.0351 [M-H-Glc] ⁻ , 259.0244 [M-H-Glc-C ₂ H ₂ O] ⁻
30	16.84	Coumarin ²	146.0368	C ₉ H ₆ O ₂	147.0447	4.3	119.0466 [M+H-CO] ⁺ , 103.0556 [M+H-CO ₂] ⁺ , 91.0564 [M+H-C ₂ O ₂] ⁺ , 77.0416 [M+H-C ₃ H ₂ O ₂] ⁺ , 65.0423 [M+H-C ₄ H ₂ O ₂] ⁺	—	—	
31	17.27	Hydroxygenkwanin ²	300.0634	C ₁₆ H ₁₂ O ₆	301.0709	0.9	283.0616 [M+H-H ₂ O] ⁺ , 167.0336 [M+H-C ₈ H ₈ O ₂] ⁺ , 134.0376 [C ₈ H ₈ O ₂] ⁺	299.0571	3.3	239.0346 [M-H-OH-C ₂ H ₃ O] ⁻ , 199.0394
32	17.92	Genistin ²	432.1057	C ₂₁ H ₂₀ O ₁₀	433.1133	0.8	271.0605 [M+H-Glc] ⁺ , 153.0203 [M+H-Glc-C ₆ H ₆ O] ⁺	431.0986	0.5	269.0411 [M-H-Glc] ⁻ , 151.0047 [M-Glc-C ₆ H ₆ O] ⁻
33	18.94	Timosaponin N	936.4930	C ₄₅ H ₇₆ O ₂₀	—	—		935.4863	0.6	917.4835 [M-OH] ⁻ , 755.4289 [M-H-OH-Glc] ⁻
34	18.94	Timosaponin E	936.4930	C ₄₅ H ₇₆ O ₂₀	—	—		935.4865	0.8	773.4419 [M-H-Glc] ⁻ , 611.3839 [M-H-Glc-Gal] ⁻
35	19.46	Glycyroside	562.1686	C ₂₇ H ₃₀ O ₁₃	563.1751	-1.4	269.0818 [M+H-Api-Glc] ⁺	—	—	
36	19.85	Isoliquiritin apioside	550.1686	C ₂₆ H ₃₀ O ₁₃	551.1759	-0.1	419.1346 [M+H-Api] ⁺ , 257.0815 [M+H-Api-Glc] ⁺ , 137.0245 [M+H-Api-Glc-C ₆ H ₆ O] ⁺	549.1614	0.0	297.0764, 255.0662 [M-H-Api-Glc] ⁻ , 135.0245 [M-H-Api-Glc-C ₆ H ₆ O] ⁻
37	19.95	Ononin ²	430.1264	C ₂₂ H ₂₂ O ₉	431.1335	-0.4	269.0812 [M+H-Glc] ⁺ , 254.0580 [M+H-Glc-CH ₃] ⁺	—	—	
38	20.37	Isoliquiritin ²	418.1264	C ₂₁ H ₂₂ O ₉	419.1337	0.9	257.0817 [M+H-Glc] ⁺ , 147.0446 [M+H-Glc-C ₆ H ₆ O ₂] ⁺ , 137.0242 [M+H-Glu-C ₆ H ₈ O] ⁺ , 119.0495 [M+H-Glu-C ₇ H ₆ O ₃] ⁺	417.1191	0.3	255.0662 [M-H-Glc] ⁻ , 148.0163, 135.0085 [M-H-Glc-C ₆ H ₆ O] ⁻ , 119.0503 [M-H-C ₇ H ₄ O ₃] ⁻
39	20.86	Timosaponin E1	936.4930	C ₄₅ H ₇₆ O ₂₀	—	—		935.4859	0.1	773.4401 [M-H-Glc] ⁻ , 611.3850 [M-H-Glc-Gal] ⁻
40	20.88	Officialisninsin I	920.4981	C ₄₅ H ₇₆ O ₁₉	921.4954	-10.8	759.4396 [M+H-Glc] ⁺ , 597.3895 [M+H-Glc-Gal] ⁺ , 433.3319 [M+H-Glc-Gal-Glc] ⁺ , 415.3207 [M+H-Glc-Gal-Glc-H ₂ O] ⁺ , 271.2051	—	—	
41	20.96	Neoisoliquiritin ^{1,2}	418.1264	C ₂₁ H ₂₂ O ₉	419.1337	0.2	257.0824 [M+H-Glc] ⁺ , 137.0243 [C ₇ H ₅ O ₃] ⁺ , 119.0507 [M+H-Glc-C ₇ H ₅ O ₃] ⁺	417.1191	0.2	255.0663 [M-H-Glc] ⁻ , 148.0614 [M-H-Glc-C ₇ H ₅ O ₃] ⁻ , 135.0087 [M-H-Glc-C ₆ H ₆ O] ⁻ , 119.0510 [M-H-C ₇ H ₄ O ₃] ⁻ , 91.0207 [M-H-Glc-C ₉ H ₇ O ₃] ⁻

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					Mass [M+H] ⁺	Error (ppm)		Mass [M-H] ⁻	Error (ppm)	
42	21.39	Liquiritigenin ^{1,2}	256.0736	C ₁₅ H ₁₂ O ₄	—	—		255.0663	0.6	135.0084 [M-H-C ₈ H ₆ O] ⁻ , 119.0509 [M-H-C ₇ H ₄ O ₃] ⁻ , 91.0196 [M-H-C ₉ H ₈ O ₃] ⁻
43	21.96	Cinnamic acid ^{1,2}	148.0524	C ₉ H ₈ O ₂	149.0601	2.4	131.0498 [M+H-H ₂ O] ⁺ , 103.0552 [M+H-HCOOH] ⁺ , 77.0417 [C ₆ H ₅] ⁺ , 51.0289 [M+H-C ₄ H ₄ -HCOOH] ⁺	147.0470	12.8	103.0539 [M-COOH] ⁻ , 77.0383 [C ₆ H ₅] ⁻ , 61.9927
44	22.89	Timosaponin B II ^{1,2}	920.4981	C ₄₅ H ₇₆ O ₁₉	—	—		919.4932	2.6	757.4462 [M-H-Glc] ⁻ , 595.3910 [M-H-Glc-Gal] ⁻
45	22.93	Xilingsaponin B	902.4875	C ₄₅ H ₇₄ O ₁₈	903.4939	-1.0	741.4363 [M+H-Glc] ⁺ , 579.3856 [M+H-2Glc] ⁺ , 417.3345 [M+H-2Glc-Gal] ⁺ , 399.3247 [M+H-2Glc-Gal-H ₂ O] ⁺ , 273.2204 [M+H-2Glc-Gal-H ₂ O-C ₈ H ₁₄ O] ⁺ , 255.2099 [M+H-2Glc-Gal-H ₂ O-C ₈ H ₁₅ O ₂] ⁺ , 163.0804 [M+H-2Glc-Gal-H ₂ O-C ₁₄ H ₂₁ O ₂] ⁺ , 145.0500	—	—	
46	24.98	Timosaponin D	918.4824	C ₄₅ H ₇₄ O ₁₉	919.4888	-1.0	757.4351 [M+H-Glc] ⁺ , 595.3837 [M+H-Glc-Gal] ⁺ , 433.3320 [M+H-Glc-Gal-Glc] ⁺ , 289.2172 [M+H-Glc-Gal-Glc-C ₈ H ₁₄ O-H ₂ O] ⁺ , 271.2060 [M+H-Glc-Gal-Glc-C ₈ H ₁₄ O-2H ₂ O] ⁺ , 163.0605 [M+H-Glc-Gal-Glc-C ₁₆ H ₂₈ O ₂ -H ₂ O] ⁺	917.4759	0.8	755.4307 [M-H-Glc] ⁻
47	26.54	Genkwanin ²	284.0685	C ₁₆ H ₁₂ O ₅	—	—		283.0628	5.6	268.0386 [M-H-CH ₃] ⁻ , 224.0485 [M-H-OCH ₃ -CO] ⁻ , 211.0385, 135.0083 [M-H-C ₉ H ₈ O ₂] ⁻ , 91.0188 [M-H-C ₁₀ H ₈ O ₄] ⁻
48	27.10	Glypallichalcone	284.1049	C ₁₇ H ₁₆ O ₄	—	—		283.0986	3.7	268.0382 [M-H-CH ₃] ⁻ , 221.0966 [M-H-OCH ₃ -OCH ₃] ⁻ , 133.0656 [M-H-C ₉ H ₁₀ O ₂] ⁻
49	28.96	Pseudoprotimosaponin AIII ^{1,2}	902.4875	C ₄₅ H ₇₄ O ₁₈	903.4937	-1.2	741.4362 [M+H-Glc] ⁺ , 579.3856 [M+H-Glc-Gal] ⁺ , 417.3344 [M+H-Glc-Gal-Glc] ⁺ , 399.3249 [M+H-Glc-Gal-Glc-H ₂ O] ⁺ , 273.2211 [M+H-Glc-Gal-Glc-H ₂ O-C ₈ H ₁₄ O] ⁺ , 163.0804 [M+H-Glc-Gal-Glc-H ₂ O-C ₁₄ H ₂₁ O ₂] ⁺ ,	901.4811	1.0	739.4352 [M-H-Glc] ⁻
50	30.27	Isoliquiritigenin ^{1,2}	256.0736	C ₁₅ H ₁₂ O ₄	—	—		255.0663	3.0	135.0079 [M-H-C ₈ H ₆ O] ⁻ , 119.0494 [M-H-C ₇ H ₄ O ₃] ⁻ , 91.0240 [M-H-C ₉ H ₈ O ₃] ⁻
51	30.38	Formononetin ²	268.0736	C ₁₆ H ₁₂ O ₄	269.0810	0.7	253.0512 [M-CH ₃] ⁺ , 237.0542 [M-OCH ₃] ⁺ , 226.0628 [M-C ₂ H ₂ O] ⁺ , 213.0912 [M+H-C ₃ H ₄ O] ⁺ , 197.0612, 181.0646, 169.0640 [M+H-CHO-2CO-CH ₃] ⁺ , 118.0435 [M+H-C ₇ H ₄ O ₃ -CH ₃] ⁺	267.0677	5.3	252.0424 [M-H-CH ₃] ⁻ , 251.0336 [M-H-O] ⁻ , 223.0402 [M-H-O-CO] ⁻ , 195.0451 [M+H-O-2CO] ⁻ , 167.0493 [M+H-CHO-2CO-CH ₃] ⁻ , 132.0218 [M-H-C ₇ H ₃ O ₃] ⁻ , 91.0188 [M-H-C ₉ H ₅ O ₃ -CH ₃] ⁻
52	32.03	Glabrolide ²	468.3240	C ₃₀ H ₄₄ O ₄	469.3310	-0.4	451.3201 [M+H-H ₂ O] ⁺ , 439.3194 [M+H-CHOH] ⁺ , 217.1597, 189.1633	—	—	
53	33.20	Anemarrhasaponin III	756.4296	C ₃₉ H ₆₄ O ₁₄	—	—		755.4226	0.4	593.3697 [M-H-Glc] ⁻ , 161.0428 [C ₆ H ₉ O ₅] ⁻
54	33.33	Anemarrhasaponin I ^{1,2}	758.4453	C ₃₉ H ₆₆ O ₁₄	—	—		757.4374	-0.8	595.3901 [M-H-Glc] ⁻ , 161.0428 [C ₆ H ₉ O ₅] ⁻
55	33.35	Smilageninoside	740.4347	C ₃₉ H ₆₄ O ₁₃	741.4407	-1.7	417.3358 [M+H-Glc-Man] ⁺ , 399.3256 [M+H-Glc-Man-H ₂ O] ⁺ , 381.3148 [M+H-Glc-Man-2H ₂ O] ⁺ , 271.2057 [M+H-Glc-Man-C ₈ H ₁₈ O ₂] ⁺ , 253.1951 [M+H-Glc-Man-C ₈ H ₁₈ O ₂ -H ₂ O] ⁺ , 145.0507 [M+H-Glc-Man-C ₁₆ H ₂₈ O ₂ -H ₂ O] ⁺	—	—	
56	33.63	Glycycomarin	368.1260	C ₂₁ H ₂₀ O ₆	369.1333	0.0	313.0706 [M+H-C ₄ H ₈] ⁺ , 285.0760 [M+H-C ₅ H ₉ -CH ₃] ⁺ , 271.0594 [M+H-C ₆ H ₈ -H ₂ O] ⁺ , 243.0654 [M+H-C ₆ H ₄ O ₂ -H ₂ O] ⁺ , 211.0381	367.1194	1.7	335.0916, 309.0390, 298.0482 [M-H-C ₅ H ₉] ⁻ , 283.0228 [M-H-C ₅ H ₉ -CH ₃] ⁻ , 255.0294 [M-H-C ₇ H ₁₂ O] ⁻
57	34.26	Glycyrrhizic acid ^{1,2}	822.4038	C ₄₂ H ₆₂ O ₁₆	823.4085	-3.1	647.3766 [M+H-GlcA] ⁺ , 471.3766 [M+H-2GlcA] ⁺ , 453.3361 [M+H-2GlcA-H ₂ O] ⁺	821.3981	2.0	351.0576 [M-H-C ₃₀ H ₄₆ O ₄] ⁻ , 193.0353 [C ₅ H ₉ O ₅ COOH] ⁻ , 175.0251 [C ₅ H ₉ O ₄ COOH] ⁻ , 113.0253 [M+H-2GlcA-C ₂₄ H ₃₅ O ₂] ⁻
58	34.28	Glycyrrhetic acid-3-O-β-D-glucuronide	646.3717	C ₃₆ H ₅₄ O ₁₀	647.3778	-1.8	471.3439 [M+H-C ₅ H ₇ COOH] ⁺ , 453.3363 [M+H-C ₆ H ₉ O ₇] ⁺ , 435.3250 [M+H-C ₆ H ₉ O ₇ -H ₂ O] ⁺ , 407.3289 [M+H-C ₆ H ₉ O ₇ -HCOOH] ⁺	—	—	
59	35.15	Timosaponin G	756.4296	C ₃₉ H ₆₄ O ₁₄	—	—		755.4231	1.0	593.3715 [M-H-Glc] ⁻ , 161.0455 [C ₆ H ₉ O ₅] ⁻
60	35.23	Yamogenin	414.3134	C ₂₇ H ₄₂ O ₃	415.3203	-0.8	397.3093 [M+H-H ₂ O] ⁺ , 283.2418, 271.2072 [M+H-C ₈ H ₁₄ O ₂] ⁺ , 253.1952 [M+H-C ₁₁ H ₁₄ O] ⁺ , 159.1166, 143.0850 [M+H-C ₁₈ H ₂₄ O ₂] ⁺ , 69.0730 [C ₅ H ₉] ⁺	—	—	
61	35.23	Neogitogenin	432.3240	C ₂₇ H ₄₄ O ₄	433.3313	0.2	397.3099 [M+H-H ₂ O] ⁺ , 283.2418, 271.2073 [M+H-C ₈ H ₁₄ O ₂] ⁺ , 253.1958 [M+H-C ₁₁ H ₁₄ O] ⁺ , 159.1177	—	—	

Table S1. Identification of chemical profile of BHGZD *in vitro* by UFLC-Q-TOF-MS/MS.

No.	Rt (mins)	Identification	Mass (Da)	Formula	Positive Ion (<i>m/z</i>)		Characteristic fragment ions in positive ion mode (<i>m/z</i>)	Negative Ion (<i>m/z</i>)		Characteristic fragment ions in negative ion mode (<i>m/z</i>)
					Mass [M+H] ⁺	Error (ppm)		Mass [M-H] ⁻	Error (ppm)	
62	36.88	cis-Hinokiresinol	252.1150	C ₁₇ H ₁₆ O ₂	—	—		251.1086	3.3	235.0755 [M-H-OH] ⁻ , 157.0648 [M-H-C ₆ H ₅ O] ⁻ , 117.0335 [M-H-C ₉ H ₁₀ O] ⁻ , 93.0353 [M-H-C ₁₁ H ₁₀ O] ⁻
63	36.89	Biochanin A	284.0685	C ₁₆ H ₁₂ O ₅	—	—		283.0628	5.6	268.0368 [M-H-CH ₃] ⁻ , 211.0388 [M-H-COH-OCH ₃] ⁻ , 239.0294 [M-H-C ₂ H ₃ O] ⁻
64	37.17	Licoisoflavone A	354.1103	C ₂₀ H ₁₈ O ₆	355.1179	0.7	337.1033 [M+H-H ₂ O] ⁺ , 201.0922 [C ₁₃ H ₁₃ O ₂] ⁺ , 189.0924, 179.0339 [M+H-C ₁₁ H ₁₂ O ₂] ⁺ , 151.0393, 127.0409 [C ₆ H ₇ O ₃] ⁺ , 123.0451 [M+H-C ₉ H ₅ O ₄ -C ₄ H ₇] ⁺	353.1035	1.2	227.0706 [C ₁₄ H ₁₄ O ₃] ⁻ , 150.0316 [M-H-C ₁₀ H ₄ O ₄ -CH ₃] ⁻ , 125.0238 [C ₆ H ₅ O ₃] ⁻
65	37.33	Semilicoisoflavone B	352.0947	C ₂₀ H ₁₆ O ₆	353.1018	-0.3	311.0548 [M+H-C ₃ H ₆] ⁺ , 153.0193 [M+H-C ₁₃ H ₁₂ O ₂] ⁺	351.0875	0.2	283.0980 [M-H-C ₅ H ₉] ⁻ , 265.0891 [C ₁₅ H ₅ O ₃] ⁻ , 241.0884, 199.0768 [M-H-C ₇ H ₄ O ₄] ⁻
66	37.63	Timosaponin A II	756.4296	C ₃₉ H ₆₄ O ₁₄	757.4363	-0.7	595.3844 [M+H-Glc] ⁺ , 433.3333 [M+H-Glc-Gal] ⁺ , 289.2172 [M+H-Glc-Gal-C ₉ H ₁₃ O ₂] ⁺ , 163.0616 [C ₆ H ₁₁ O ₅] ⁺	755.4221	-0.3	593.3731 [M-H-Glc] ⁻ , 161.0443 [C ₆ H ₉ O ₅] ⁻
67	37.67	Diosgenin ²	414.3134	C ₂₇ H ₄₂ O ₃	415.3206	-0.1	397.3090 [M+H-H ₂ O] ⁺ , 301.2545 [M+H-C ₆ H ₁₀ O ₂] ⁺ , 271.2053 [M+H-C ₈ H ₁₆ O ₂] ⁺ , 253.1958 [M+H-C ₁₁ H ₁₄ O] ⁺ , 69.0738 [C ₅ H ₉] ⁺	—	—	
68	37.67	Markogenin	432.3240	C ₂₇ H ₄₄ O ₄	433.3309	-0.8	289.2177 [M+H-C ₈ H ₁₆ O ₂] ⁺ , 271.2053, 253.1964 [M+H-C ₁₁ H ₁₄ O] ⁺ , 161.1332, 145.1023 [C ₆ H ₁₇ O ₂] ⁺ , 69.0738 [C ₅ H ₉] ⁺	—	—	
69	38.11	Licoflavonol	354.1103	C ₂₀ H ₁₈ O ₆	355.1174	-0.5	299.0546 [M+H-C ₄ H ₈] ⁺ , 165.0209	353.1035	1.2	297.0391 [M-H-C ₄ H ₈] ⁻ , 285.1113 [M-C ₅ H ₉] ⁻ , 151.0768 [M-H-C ₁₁ H ₆ O ₄] ⁻ , 133.0286 [M-H-C ₁₂ H ₁₂ O ₄] ⁻
70	38.27	Glycyrrhisoflavanone	368.1260	C ₂₁ H ₂₀ O ₆	369.1336	0.9	313.0723 [M+H-C ₃ H ₆ O] ⁺ , 285.0766 [M+H-C ₉ H ₆ O] ⁺ , 270.0525 [M+H-C ₉ H ₆ O-CH ₃] ⁺ , 257.0806, 243.0659, 123.0442 [M+H-C ₁₄ H ₁₄ O ₄] ⁺	367.1195	2.2	309.0406 [M-H-C ₃ H ₆ O] ⁻ , 297.0406 [M-H-C ₉ H ₆ O] ⁻ , 284.0321, 201.0184 [M-H-C ₈ H ₆ O ₄] ⁻
71	38.42	Uralenin	356.1260	C ₂₀ H ₂₀ O ₆	357.1334	0.3	301.0709 [M+H-C ₂ H ₂ O ₂] ⁺ , 283.0596, 179.0378 [M+H-C ₁₁ H ₁₄ O ₂] ⁺ , 175.0387, 147.0451, 153.0527 [M+H-C ₁₃ H ₁₆ O ₂] ⁺	355.1185	-0.5	229.0856 [M-H-C ₃ H ₆ -C ₄ H ₄ O ₂] ⁻ , 174.0322, 125.0238 [C ₆ H ₅ O ₃] ⁻
72	38.71	Licoisoflavone B	352.0947	C ₂₀ H ₁₆ O ₆	353.1023	1.0	335.0907 [M+H-H ₂ O] ⁺ , 311.0551 [M+H-C ₃ H ₆] ⁺ , 307.0980, 227.0706 [M+H-C ₆ H ₄ O ₂ -H ₂ O] ⁺ , 153.0188 [M+H-C ₁₃ H ₁₂ O ₂] ⁺	351.0881	2.0	336.0603 [M-H-CH ₃] ⁻ , 333.0780 [M-H-H ₂ O] ⁻ , 321.0394 [M-H-C ₂ H ₆] ⁻
73	38.84	Glyasperin C	356.1624	C ₂₁ H ₂₄ O ₅	357.1699	0.8	301.1079 [M+H-C ₄ H ₈] ⁺ , 221.1173 [M+H-C ₈ H ₈ O ₂] ⁺ , 179.0710 [M+H-C ₆ H ₅ O ₂ -C ₅ H ₉] ⁺ , 165.0559, 153.0549 [M+H-C ₁₃ H ₁₆ O ₂] ⁺ , 137.0602 [M+H-C ₁₃ H ₁₆ O ₃] ⁺ , 123.0451 [M+H-C ₁₄ H ₁₈ O ₃] ⁺	355.1561	2.7	323.1271 [M-H-CH ₃ -OH] ⁻ , 233.1179 [M-H-C ₇ H ₆ O ₂] ⁻ , 207.1014 [M-H-C ₉ H ₈ O ₂] ⁻ , 147.0442, 135.0454 [M-H-C ₁₃ H ₁₆ O ₃] ⁻ , 109.0307 [M-H-C ₁₅ H ₁₈ O ₃] ⁻
74	39.29	Glyasperin F	354.1103	C ₂₀ H ₁₈ O ₆	—	—		353.1040	2.8	338.1161 [M-H-CH ₃] ⁻ , 298.0449, 218.0932 [M-H-C ₇ H ₃ O ₃] ⁻ , 151.0735 [M-H-C ₁₃ H ₁₄ O ₂] ⁻ , 133.0636
75	39.65	Gancaonin Z	340.1311	C ₂₁ H ₂₄ O ₄	—	—		339.1246	2.5	219.0653 [M-H-C ₇ H ₄ O ₂] ⁻ , 183.0096, 133.0640 [C ₉ H ₉ O] ⁻ , 119.5000 [M-H-C ₉ H ₁₀ O ₂ -C ₅ H ₁₀] ⁻
76	39.81	Phaseollinisoflavan	324.1362	C ₂₀ H ₂₀ O ₄	325.1436	0.6	269.0754, 189.0902 [M+H-C ₈ H ₈ O ₂] ⁺ , 171.0814 [M+H-C ₈ H ₈ O ₂ -H ₂ O] ⁺ , 123.0445 [M+H-C ₁₃ H ₁₄ O ₂] ⁺	—	—	
77	39.93	Inflacoumarin A	322.1205	C ₂₀ H ₁₈ O ₄	—	—		321.1145	3.9	306.0861 [M-H-CH ₃] ⁻ , 175.0796 [M-H-C ₉ H ₆ O ₂] ⁻ , 145.0270 [M-H-C ₁₁ H ₁₂ O ₂] ⁻ , 107.0512 [M-H-C ₁₁ H ₁₂ O ₃] ⁻
78	40.01	Gancaonin C	354.1103	C ₂₀ H ₁₈ O ₆	355.1174	-0.5	299.0554 [M+H-C ₃ H ₄ O] ⁺ , 287.0560 [M+H-C ₄ H ₄ O] ⁺ , 243.0695 [M+H-C ₆ H ₆ O-H ₂ O] ⁺ , 69.0737 [C ₅ H ₉] ⁺	353.1030	-0.2	297.0392 [M-H-C ₃ H ₄ O] ⁻ , 269.0469 [M-H-C ₆ H ₈ O] ⁻
79	40.76	Glycyrrhisoflavone	354.1103	C ₂₀ H ₁₈ O ₆	355.1179	0.9	337.1070 [M+H-H ₂ O] ⁺ , 201.0919, 189.0914 [M+H-C ₁₀ H ₁₄ O ₂] ⁺ , 179.0344 [M+H-C ₁₁ H ₁₄ O ₂] ⁺ , 153.0539 [M+H-C ₁₃ H ₁₄ O ₂] ⁺ , 151.0393 [M+H-C ₁₁ H ₁₈ O ₄] ⁺ , 123.0441 [M+H-C ₉ H ₅ O ₄ -C ₄ H ₇] ⁺	353.1042	3.2	228.0772 [M-H-C ₆ H ₅ O ₃] ⁻ , 125.0248 [M-H-C ₁₄ H ₁₂ O ₃] ⁻ , 57.0397 [M-H-C ₁₈ H ₁₆ O ₄] ⁻
80	40.96	Licoflavone A	322.1205	C ₂₀ H ₁₈ O ₄	—	—		321.1141	2.6	306.0888 [M-H-CH ₃] ⁻ , 261.0918, 248.0794 [M-H-C ₄ H ₈ -OH] ⁻ , 213.0794 [M-H-CH ₃ -C ₆ H ₅ O] ⁻
81	41.10	Timosaponin A IV	740.4347	C ₃₉ H ₆₄ O ₁₃	741.4407	-1.8	579.3901 [M+H-Glc] ⁺ , 417.3374 [M+H-Glc-Man] ⁺ , 399.3266 [M+H-2Glc-Man-OH] ⁺ , 271.2072, 253.1961 [M+H-C ₃₀ H ₄₈ O ₃] ⁺ , 145.0503 [C ₆ H ₉ O ₄] ⁺	739.4277	0.4	577.3766 [M-H-Glu] ⁻ , 161.0452 [C ₆ H ₉ O ₅] ⁻

Table S1. Identification of chemical profile of BHGZD *in vitro* by UFLC-Q-TOF-MS/MS.

No.	Rt (mins)	Identification	Mass (Da)	Formula	Positive Ion (<i>m/z</i>)		Characteristic fragment ions in positive ion mode (<i>m/z</i>)	Negative Ion (<i>m/z</i>)		Characteristic fragment ions in negative ion mode (<i>m/z</i>)
					Mass [M+H] ⁺	Error (ppm)		Mass [M-H] ⁻	Error (ppm)	
83	41.26	Licoricone	382.1416	C ₂₂ H ₂₂ O ₆	383.1493	0.9	327.0866 [M+H-C ₄ H ₇] ⁺ , 299.0908 [M+H-C ₅ H ₉ -CH ₃] ⁺ , 191.0727 [M+H-C ₉ H ₅ O ₃ -OCH ₃] ⁺ , 178.0643	381.1347	0.9	351.0884 [M-OCH ₃] ⁻ , 323.0568
84	41.42	Isolicoflavonol	354.1103	C ₂₀ H ₁₈ O ₆	355.1178	0.5	299.0562 [M+H-C ₄ H ₈] ⁺ , 243.0662, 217.0495 [M+H-C ₉ H ₁₄ O] ⁺ , 153.0194 [M+H-C ₁₃ H ₁₄ O ₂] ⁺ , 147.0430 [M+H-C ₉ H ₅ O ₃ -CH ₃] ⁺ , 123.0450 [M+H-C ₁₄ H ₁₆ O ₃] ⁺	353.1040	2.6	284.0326 [M-H-C ₅ H ₉] ⁻ , 243.1010 [M-H-C ₇ H ₁₀ O] ⁻ , 216.0422, 201.0910 [M-H-C ₇ H ₄ O ₄] ⁻
85	42.91	Timosaponin A III ^{1,2}	740.4347	C ₃₉ H ₆₄ O ₁₃	741.4403	-2.3	579.3868 [M+H-Glc] ⁺ , 417.3369 [M+H-Glc-Gal] ⁺ , 399.3255 [M+H-Glc-Gal-H ₂ O] ⁺ , 273.2220, 255.2111 [C ₉ H ₁₉ O ₈] ⁺ , 163.0607 [C ₆ H ₁₁ O ₅] ⁺ , 145.0502 [C ₆ H ₉ O ₄] ⁺	739.4275	0.1	277.3790 [M-H-Glc] ⁻ , 161.0454 [C ₆ H ₉ O ₃] ⁻
86	42.92	Timosaponin A I	578.3819	C ₃₃ H ₅₄ O ₈	579.3886	-0.9	417.3375 [M+H-Glc] ⁺ , 273.2224 [M+H-C ₂₀ H ₃₄ O ₂] ⁺ , 255.2119 [C ₉ H ₁₉ O ₈] ⁺	—	—	
87	42.93	Sarsasapogenin ²	416.3291	C ₂₇ H ₄₄ O ₃	417.3362	-0.3	273.2225 [M+H-C ₈ H ₁₆ O ₂] ⁺ , 255.2121 [M+H-C ₈ H ₁₆ O ₂ -H ₂ O] ⁺ , 173.1335, 147.1181, 145.1025 [C ₈ H ₁₇ O ₅] ⁺ , 69.0740 [C ₈ H ₉] ⁺	—	—	
88	42.94	Licoflavone C	338.1154	C ₂₀ H ₁₈ O ₅	—	—		337.1094	3.7	293.0432 [M-H-C ₂ H ₄ O] ⁻ , 281.0472 [M-H-C ₄ H ₈] ⁻
89	43.12	Glabrocoumarin	336.0998	C ₂₀ H ₁₆ O ₅	337.1069	-0.4	295.0618 [M+H-C ₃ H ₆] ⁺ , 283.0625, 201.0548 [M+H-C ₇ H ₄ O ₃] ⁺ , 137.0232 [M+H-C ₁₃ H ₁₂ O ₂] ⁺	335.0926	0.4	320.0704 [M-H-CH ₃] ⁻ , 291.1007 [M-H-CO ₂] ⁻ , 135.0094 [M-H-C ₁₃ H ₁₂ O ₂] ⁻
90	43.67	Glabridin ²	324.1363	C ₂₀ H ₂₀ O ₄	325.1437	0.8	189.0909 [M+H-C ₈ H ₈ O ₂] ⁺ , 149.0596, 147.0800, 123.0453 [M+H-C ₁₃ H ₁₄ O ₂] ⁺	323.1301	3.6	201.0895 [M-H-C ₇ H ₆ O ₂] ⁻ , 187.0754 [M-H-C ₈ H ₈ O ₂] ⁻ , 135.0440 [M-H-C ₁₂ H ₁₂ O ₂] ⁻ , 121.0289 [M-H-C ₁₃ H ₁₄ O ₂] ⁻
91	44.42	Glepidotin B	340.1311	C ₂₀ H ₂₀ O ₅	—	—		339.1249	3.3	219.0651 [M-H-C ₈ H ₈ O ₂] ⁻ , 119.0504 [M-H-C ₁₂ H ₁₂ O ₄] ⁻
92	44.76	Gancaonin A	352.1311	C ₂₁ H ₂₀ O ₅	353.1386	0.6	189.0901 [M+H-C ₄ H ₈ -C ₇ H ₈ O] ⁺ , 177.0585 [M+H-C ₁₁ H ₁₂ O ₂] ⁺ , 171.0816, 153.0556 [M+H-C ₁₂ H ₈ O ₃] ⁺ , 147.0803 [M+H-C ₁₂ H ₁₄ O ₃] ⁺	—	—	
93	44.88	Glepidotin A	338.1154	C ₂₀ H ₁₈ O ₅	—	—		337.1100	5.6	
94	46.12	Glycyrrin	382.1416	C ₂₂ H ₂₂ O ₆	383.1489	0.0	299.0912 [M+H-C ₅ H ₉ -CH ₃] ⁺ , 284.0677 [M+H-C ₅ H ₉ -CH ₃ -CH ₃] ⁺	—	—	
95	47.55	Glabrone ²	336.0998	C ₂₀ H ₁₆ O ₅	337.1073	0.8	295.0616 [M+H-C ₃ H ₆] ⁺ , 153.0185 [M+H-C ₁₁ H ₁₄ O ₃] ⁺	335.0934	2.7	319.0615 [M-H-OH] ⁻ , 305.0464 [M-H-C ₂ H ₆] ⁻
96	47.72	Glyasperin B	370.1416	C ₂₁ H ₂₂ O ₆	371.1490	0.2	315.0870 [M+H-C ₄ H ₇] ⁺ , 297.0753 [M+H-C ₄ H ₇ -OH] ⁺ , 193.0475 [M+H-C ₅ H ₉ -C ₆ H ₅ O ₂] ⁺ , 123.0444 [C ₇ H ₆ O ₂] ⁺	369.1349	1.4	207.1000 [C ₁₂ H ₁₅ O ₃] ⁻ , 192.0773, 161.0234 [M-H-C ₅ H ₉ -OCH ₃ -C ₆ H ₅ O ₂] ⁻ , 149.0220 [M-H-C ₁₃ H ₁₆ O ₃] ⁻ , 137.0223 [C ₈ H ₉ O ₂] ⁻ , 124.0156
97	48.26	Gancaonin B	368.1260	C ₂₁ H ₂₀ O ₆	369.1332	-0.2	313.0701 [M+H-C ₄ H ₇] ⁺ , 295.0582 [M+H-C ₄ H ₇ -OH] ⁺ , 179.0338 [M+H-C ₅ H ₉ -C ₇ H ₇ O ₂] ⁺ , 149.0239 [M+H-C ₁₂ H ₁₂ O ₄] ⁺	—	—	
98	48.38	Licoagroisoflavone	336.0998	C ₂₀ H ₁₆ O ₅	337.1074	1.1	321.0742 [M+H-CH ₃] ⁺ , 319.0999 [M+H-OH] ⁺	—	—	
99	48.53	Glyasperin D	370.1780	C ₂₂ H ₂₆ O ₅	371.1856	0.8	315.1242 [M+H-C ₄ H ₇] ⁺ , 303.1232 [M+H-C ₄ H ₇ -CH ₃] ⁺ , 235.1339 [M+H-C ₈ H ₈ O ₂] ⁺ , 193.0857 [M+H-C ₄ H ₇ -CH ₃ -C ₆ H ₅ O ₂] ⁺ , 181.0859, 167.0713 [M+H-C ₁₃ H ₁₆ O ₂] ⁺ , 123.0453 [M+H-C ₁₅ H ₂₀ O ₃] ⁺ , 69.0737 [C ₅ H ₉] ⁺	369.1719	3.1	217.0826 [M-H-C ₈ H ₈ O ₃] ⁻ , 147.0443, 135.0434 [M-H-C ₁₄ H ₁₈ O ₃] ⁻
100	49.00	Anemarrhenasaponin Ia	772.4609	C ₄₆ H ₆₈ O ₁₄	—	—		771.4445	-11.8	725.4410 [M-H-CH ₂ OH-CH ₃] ⁻ , 563.3923 [M-H-Glc-OCH ₃] ⁻
101	52.74	Glyurallin A	352.1311	C ₂₁ H ₂₀ O ₅	353.1383	0.0	297.0762 [M+H-C ₄ H ₇] ⁺ , 267.0630 [M+H-C ₄ H ₇ -OCH ₃] ⁺	—	—	
102	52.79	β-Glycyrrhetic acid ²	470.3396	C ₃₀ H ₄₆ O ₄	471.3468	-0.2	425.3403 [M+H-COOH] ⁺ , 407.3302 [M+H-COOH-OH] ⁺ , 317.2114 [M+H-C ₁₀ H ₁₈ O] ⁺ , 235.1708 [M+H-C ₁₅ H ₂₄ O ₂] ⁺ , 189.1649 [M+H-C ₁₅ H ₂₄ O ₂ -COOH] ⁺	469.3327	0.8	425.3410 [M-H-COOH] ⁻ , 355.2645 [M-H-C ₆ H ₁₀ O ₂] ⁻
103	69.00	Stigmasterol	412.3705	C ₂₉ H ₄₈ O	413.3810	7.8	367.3759 [M+H-OH-C ₂ H ₅] ⁺ , 350.3483, 301.1405 [M+H-C ₈ H ₁₆] ⁺ , 69.0743 [C ₅ H ₉] ⁺	—	—	