

Supplementary Table S1. Major chemical compounds of RR identified by UHPLC-Q-Exactive**MS**

NO.	<i>t</i> R/min	Formula	Measured mass (<i>m/z</i>)	Presumed compound
1	0.85	C ₅ H ₅ N ₅	134.0474	Adenine
2	0.86	C ₆ H ₈ O ₇	191.0201	Citric acid
3	1.07	C ₄ H ₆ O ₅	133.0144	Malic acid
4	2.12	C ₁₃ H ₁₆ O ₁₀	331.0677	Galloyl glucoside
5	2.15	C ₇ H ₆ O ₅	169.0145	Gallic acid
6	2.58	C ₁₉ H ₂₆ O ₁₅	493.1212	Gallic-O-di-glucoside
7	2.65	C ₉ H ₁₁ NO ₂	164.072	Phenylalanine
8	5.03	C ₈ H ₈ O ₅	183.0302	Methyl gallate
9	5.13	C ₁₅ H ₁₈ O ₈	325.0938	P-coumaric acid-O-glucoside
10	5.83	C ₇ H ₆ O ₃	137.0246	Salicylic acid
11	5.89	C ₃₀ H ₂₆ O ₁₂	577.1365	Procyanidin B
12	5.89	C ₁₅ H ₁₄ O ₆	289.0725	(+)-epicatechin
13	6.39	C ₂₀ H ₂₀ O ₁₄	483.0787	Gallic acid-O-galloyl-glucoside
14	6.85	C ₁₅ H ₁₄ O ₆	289.0724	(+)-Catechin
15	7.05	C ₁₆ H ₂₀ O ₉	355.1052	Ferulic acid-O-glucoside
16	7.52	C ₁₉ H ₂₂ O ₉	393.1207	6-Hydroxy-musizin-8-O-glucoside
17	8.29	C ₂₇ H ₃₀ O ₁₅	593.1528	Emodin-O-di-glucoside
18	9.25	C ₄₅ H ₃₈ O ₁₈	865.1944	Tri-catechin
19	9.48	C ₂₀ H ₂₀ O ₁₂	451.0841	1-O-p-hydroxybenzoyl-6-O-galloyl-glucoside
20	9.69	C ₂₂ H ₂₂ O ₁₂	477.1041	1-O-p-coumaryl-6-O-galloyl-glucoside/1-O-galloyl-6-O-p-coumaryl-glucoside
21	9.96	C ₄₄ H ₃₄ O ₂₀	881.1594	ProcyanidinB-2,3,3'-di-O-gallate/procyandin B-5,3,3'-di-O-gallate
22	9.96	C ₉ H ₈ O ₃	163.0403	P-Coumaric acid
23	10.13	C ₂₃ H ₂₄ O ₁₃	507.1155	Ferulic acid-O-gallyl-glucoside

24	10.4	C ₂₈ H ₂₈ O ₁₅	603.137	Catechin-O-gallioyl- Glucoside/epicatechin-O-gallioyl- glucoside
25	10.44	C ₁₂ H ₁₀ O ₅	233.0462	2-methyl-5-carboxymethyl-7- hydroxychromogen
26	10.47	C ₁₁ H ₁₀ O ₃	189.0561	2,5-dimethyl-7-hydroxychromone
27	10.93	C ₂₁ H ₂₀ O ₁₀	431.099	Vitexin
28	10.98	C ₂₇ H ₃₀ O ₁₆	609.1459	Rutinum
29	11.16	C ₂₃ H ₂₆ O ₁₁	477.1415	Isolindleyin
30	11.22	C ₄₄ H ₃₄ O ₂₀	881.1595	ProcyanidinB-2,3,3'-di-O- gallate/procyanidin B-5,3,3'-di-O- gallate
31	11.25	C ₄₂ H ₃₈ O ₂₀	861.1909	Sennoside B
32	11.41	C ₂₁ H ₁₈ O ₁₁	445.0798	Rhein-8-O-glucoside
33	11.57	C ₂₃ H ₂₆ O ₁₁	477.1421	Lindleyin
34	11.7	C ₂₂ H ₁₈ O ₁₀	441.0834	(+) Catechin gallate/ (-) Epicatechin gallate
35	11.83	C ₂₁ H ₂₂ O ₉	417.1192	Aloin/Isomer
36	11.92	C ₃₇ H ₃₀ O ₁₆	729.1494	Procyanidin B-O-gallate
37	12.02	C ₂₂ H ₂₂ O ₁₂	477.1034	1-O-p-coumaryl-6-O-galloyl- glucoside/1-O-galloyl-6-O-p- coumaryl-glucoside
38	12.05	C ₁₅ H ₁₀ O ₇	303.0518	Quercetin
39	12.26	C ₁₃ H ₁₄ O ₄	233.0824	2-(2'-hydroxypropyl)-5-methyl-7- hydroxychromone
40	12.33	C ₄₂ H ₄₀ O ₁₉	847.2122	Sennoside C
41	12.33	C ₂₇ H ₂₆ O ₁₂	541.1367	Resveratrol-4'-O-(6"-O-galloyl)- glucoside/resveratrol-4'-O-(2"- O-galloyl)-glucoside
42	12.5	C ₁₅ H ₁₈ O ₇	309.0974	2-O-cinnamoyl-beta-D-glucose
43	12.56	C ₂₉ H ₂₆ O ₁₆	629.1159	P-coumaric acid-O-di-galloyl- glucoside
44	12.76	C ₄₂ H ₃₈ O ₂₀	861.1907	Sennoside A
45	12.79	C ₁₃ H ₁₂ O ₄	231.0667	2-methyl-5-acetonyl-7- hydroxychromone
46	13.03	C ₂₄ H ₂₂ O ₁₃	517.0998	Emodin-O-malony- glucoside/aloe-emodin-O-malony- glucoside

47	13.61	C ₂₄ H ₂₂ O ₁₂	501.1051	Chrysophanol-8-O-β-D-(6'-O-acetyl) glucoside
48	13.7	C ₁₉ H ₂₂ O ₉	393.1202	Aloesone-O-glucoside
49	13.77	C ₂₆ H ₂₈ O ₁₃	547.1451	2-(2'-hydroxypropyl)-5-methyl-7-hydroxytryptane-O-galloyl-glucoside
50	13.87	C ₁₆ H ₁₂ O ₆	299.0566	Fallacinol
51	14.14	C ₃₀ H ₃₀ O ₁₅	629.1538	4-(4'-hydroxyphenyl)-2-butanone-O-butanone-O-di-galloyl-glucoside
52	14.24	C ₂₁ H ₂₀ O ₁₀	431.0991	Aloe-emodin-8-O-β-D-glucoside
53	14.24	C ₂₂ H ₂₂ O ₁₁	461.1103	1-O-galloyl-2-O-cinnamoyl-β-D-glucoside
54	14.53	C ₂₂ H ₂₀ O ₁₁	459.0938	Carboxyl chrysophanol-O-glucoside
55	15.21	C ₄₂ H ₄₀ O ₁₉	847.2116	Sennoside D
56	15.45	C ₄₂ H ₄₀ O ₁₈	831.2167	Chrysophanol (10-10') rhein type sennosides
57	15.66	C ₂₃ H ₂₀ O ₁₂	487.0842	Rhein-O-acetyl-glucoside
58	15.93	C ₂₀ H ₂₄ O ₉	407.1351	Torachrysone-8-O-glucoside
59	16.37	C ₁₅ H ₁₂ O ₆	287.0566	Eriodictyol
60	16.51	C ₂₃ H ₂₂ O ₁₁	473.1098	Emodin-O-acetyl-glucoside
61	16.8	C ₂₁ H ₂₀ O ₉	415.103	Chrysophanol 8-O-glucoside/Chrysophanol 1-O-glucoside
62	17	C ₄₅ H ₄₂ O ₂₁	917.2175	Chrysophanol (10-10') rhein type sennosides
63	17.03	C ₂₆ H ₃₀ O ₁₀	501.1783	4-(4'-hydroxyphenyl)-2-butanone-O-feruloyl-glucoside
64	17.17	C ₂₁ H ₂₀ O ₁₀	431.0992	Emodin-8-glucoside
65	17.26	C ₂₁ H ₂₀ O ₉	415.1042	Chrysophanol 8-O-glucoside/Chrysophanol 1-O-glucoside
66	17.3	C ₂₉ H ₂₆ O ₁₅	613.1213	Cinnamic acid-O-di-galloyl-glucoside
67	17.98	C ₁₆ H ₁₀ O ₇	313.0362	Laccaic acid D
68	19.2	C ₂₃ H ₂₂ O ₁₀	457.1133	Chrysophanol-O-acetyl-glucoside
69	19.26	C ₂₂ H ₂₂ O ₁₀	445.1156	Physcion-8-O-β-D-glucoside

70	19.26	C ₁₆ H ₁₂ O ₅	283.0618	Physcion
71	20.01	C ₃₂ H ₃₂ O ₁₃	623.1789	4- (4' -hydroxyphenyl) -2- butanone-O-cinnamyl-gallyl- glucoside
72	20.01	C ₁₅ H ₁₀ O ₆	285.0411	Citreorosein
73	20.11	C ₂₃ H ₂₂ O ₁₁	473.11	Aloe-emodin-O-acetyl-glucoside
74	20.32	C ₃₃ H ₃₄ O ₁₄	653.1899	4- (4' -hydroxyphenyl) -2- butanone-O-feruloyl-gallyl- glucoside
75	21.11	C ₂₄ H ₂₄ O ₁₁	487.1264	Physcion-O-acetyl-glucoside
76	21.11	C ₁₆ H ₁₂ O ₅	283.0618	6-methyl-aloe-emodin
77	21.48	C ₁₆ H ₁₀ O ₆	297.0411	6-methyl-rhein
78	22.76	C ₃₃ H ₃₀ O ₁₃	633.1622	2, 5-dimethyl-7-hydroxytryptane- O-cinnamyl-gallyl-glucoside
79	22.79	C ₁₅ H ₁₀ O ₅	269.0461	Aloe-emodin
80	23.62	C ₃₂ H ₃₂ O ₁₂	607.1846	4-(4'-hydroxyphenyl)-2-butanone- 4'-O-(2"-O-cinnamoyl-6"-O- galloyl)-glucoside
81	23.86	C ₁₅ H ₈ O ₆	283.0255	Rhein
82	24.69	C ₁₅ H ₁₂ O ₄	255.0669	Emodinanthrone
83	24.84	C ₃₁ H ₂₆ O ₁₂	589.1365	1-methyl-8-hydroxy-9,10- anthraquinone-3-O-(6'-O- cinnamoyl)-glucoside
84	27.76	C ₁₅ H ₁₂ O ₃	239.0719	Chrysophanol-9-anthrone
85	29.24	C ₁₅ H ₁₀ O ₅	269.0461	Emodin
86	30.93	C ₃₀ H ₂₀ O ₉	523.1045	Sennidin C
87	31.59	C ₁₅ H ₁₀ O ₆	285.0411	Kaempferol
88	33.63	C ₁₅ H ₁₀ O ₄	253.0512	Chrysophanol
89	33.63	C ₃₀ H ₂₂ O ₈	509.125	Emodin bianthrone
90	0.87	C ₅ H ₅ N ₅	136.0621	Adenine
91	1.33	C ₁₀ H ₁₃ N ₅ O ₄	268.1043	Adenosine
92	1.46	C ₇ H ₆ O ₅	171.0291	Gallic acid
93	4.47	C ₃₀ H ₂₆ O ₁₂	579.1486	Procyanidin B
94	6.83	C ₁₅ H ₁₄ O ₆	291.0871	(+)-Catechin

95	11.97	C ₁₅ H ₁₄ O ₄	259.0969	Rhapontigenin
96	12.79	C ₁₆ H ₁₀ O ₇	315.0505	Laccaic Acid D
97	14.55	C ₁₆ H ₁₀ O ₆	299.0555	6-methyl-rhein
98	16.73	C ₂₀ H ₂₄ O ₉	409.1498	Torachrysone 8-O-glucoside
99	17.25	C ₂₁ H ₂₀ O ₉	439.1007	Chrysophanol 8-O-glucoside/Chrysophanol 1-O-glucoside
100	23.71	C ₁₆ H ₁₂ O ₅	285.0762	Physcion