

Supplementary Material

Phenolic, Carotenoid and Saccharide Compositions of Vietnamese *Camellia sinensis* Teas and Herbal Teas

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Table S1. MRM transitions of the phenolics screened in the study.

Compound	ESI	Molecular Ion	Product Ion	DP, volts	EP, volts	CE, eV	CXP, volts
Acacetin	–	283	268	–87	–9	–33	–36
Apigenin	–	269	117	–90	–11	–46	–13
Caffeic acid	–	179	135	–62	–7	–19	–8
Catechin	–	289	245	–97	–11.3	–22.1	–14.7
Chlorogenic acid	–	353	191	–76.5	–3.9	–20	–21.3
Cinnamic acid	–	147	103	–65	–10	–12	–12
Cyanidin chloride	+	287	287	95	5	41	12
Daidzein	–	253	224	–106.8	–12.2	–36.4	–12
Delphinidin chloride	+	303	229	101.3	3.9	43	14
Epicatechin	–	289	125	–74	–10.2	–29.7	–21.3
Ferulic acid	–	193	134	–62	–7	–23	–8
Gallic acid	–	169	125	–61	–9	–20	–7
Genistein	–	269	133	–86	–12	–39	–7
Hesperetin	+	303	177	91	6	24	11
Kaempferol	–	285	117	–133	–5	–52	–14
Luteolin	–	285	133	–97	–11	–48	–8
Naringenin	–	271	151	–99	–13	–24	–12
Naringenin chalcone	–	271	151	–83	–8	–23	–12
p-Coumaric acid	–	163	119	–42	–9	–20	–15
Phloretin	–	273	167	–75	–3	–22	–14
Proanthocyanidin A2	–	575	285	–112.7	–6	–34.5	–35.1
Procyanidin B2	–	577	289	–87.6	–3.9	–30.9	–18.2
Protocatechuic acid	–	153	109	–73	–12.8	–20.7	–12.3
Quercetin	–	301	151	–95	–11	–29	–11
Quercetin-3-galactoside	–	463	300	–78.3	–10	–40.5	–8.9
Quercetin-3-glucoside	–	463	300	–90	–12	–29	–12.9
Resveratrol	–	227	143	–77	–7	–37	–17
Rutin	–	609	300	–138	–9.8	–47	–32.9
Syringic acid	–	197	121	–87	–12	–21	–14
Vanillic acid	–	167	123	–8.6	–4.1	–16.7	–14.1

Table S2. Retention times, calibration equations, correlation coefficients, sensitivity and repeatability of the monitored phenolics.

Compound	Retention Time, min	Linear Equation	Correlation Coefficient R ²	LOD, µg/L LOQ, µg/L		Repeatability, %	
						Intraday	Interday
Gallic acid	1.69	y = 4,481,700x	0.9996	0.49	1.63	1.7	10.4
Protocatechuic acid	2.89	y = 2,010,835x	0.9999	0.12	0.40	2.1	4.3
Catechin	4.12	y = 1,009,730x	0.9994	0.33	1.09	0.5	3.5
Chlorogenic acid	4.20	y = 4,996,159x	0.9991	0.12	0.36	0.5	4.4
Procyanidin B2	4.64	y = 2,350,135x	0.9996	0.17	0.56	0.8	1.3
Vanillic acid	5.01	y = 449,059x	0.9996	0.75	2.47	2.0	4.5
Caffeic acid	5.11	y = 6,055,373x	0.9996	0.14	0.45	1.0	4.1
Syringic acid	5.32	y = 271,734x	0.9982	0.33	1.08	4.4	7.1
Epicatechin	5.41	y = 367,725x	0.9995	0.57	1.89	1.0	1.0
p-Coumaric acid	6.92	y = 5,646,083x	0.9999	0.23	0.75	1.0	4.0
Ferulic acid	7.73	y = 1,995,261x	0.9991	0.19	0.63	1.4	4.9
Rutin	7.73	y = 4,882,345x	0.9999	0.19	0.64	1.7	2.4
Quercetin galactoside	8.00	y = 8,923,578x	0.9991	0.29	0.97	0.4	5.1
Procyanidin A2	8.08	y = 1,321,803x	0.9984	0.17	0.57	1.0	1.1
Quercetin glucoside	8.23	y = 4,360,387x	0.9999	0.15	0.51	1.1	2.2
Resveratrol	10.84	y = 2,229,418x	0.9998	0.05	0.17	1.2	5.3
Daidzein	11.12	y = 1,709,516x	0.9965	0.02	0.07	1.4	6.1
Luteolin	11.43	y = 6,622,982x	0.9989	0.04	0.13	1.6	8.3
Quercetin	11.47	y = 8,768,515x	0.9979	0.03	0.10	0.8	7.2
Cinnamic acid	11.73	y = 1,240,614x	0.9995	0.31	1.03	2.1	7.1
Naringenin chalcone	11.95	y = 9,245,948x	0.9993	0.07	0.24	4.3	8.3
Phloretin	12.00	y = 25,489,951x	0.9999	0.01	0.03	1.5	9.3
Naringenin	12.05	y = 6,140,859x	0.9984	0.05	0.16	3.5	6.2
Apigenin	12.09	y = 5,146,699x	0.9994	0.03	0.11	0.4	5.9
Genistein	12.10	y = 1,299,352x	0.9962	0.07	0.22	0.3	5.6
Kaempferol	12.22	y = 318,331x	0.9996	0.17	0.55	1.6	5.4
Hesperetin	12.28	y = 4,828,599x	0.9981	0.01	0.03	2.8	12.2
Acacetin	13.60	y = 36,608,428x	0.9999	0.04	0.12	1.6	5.6

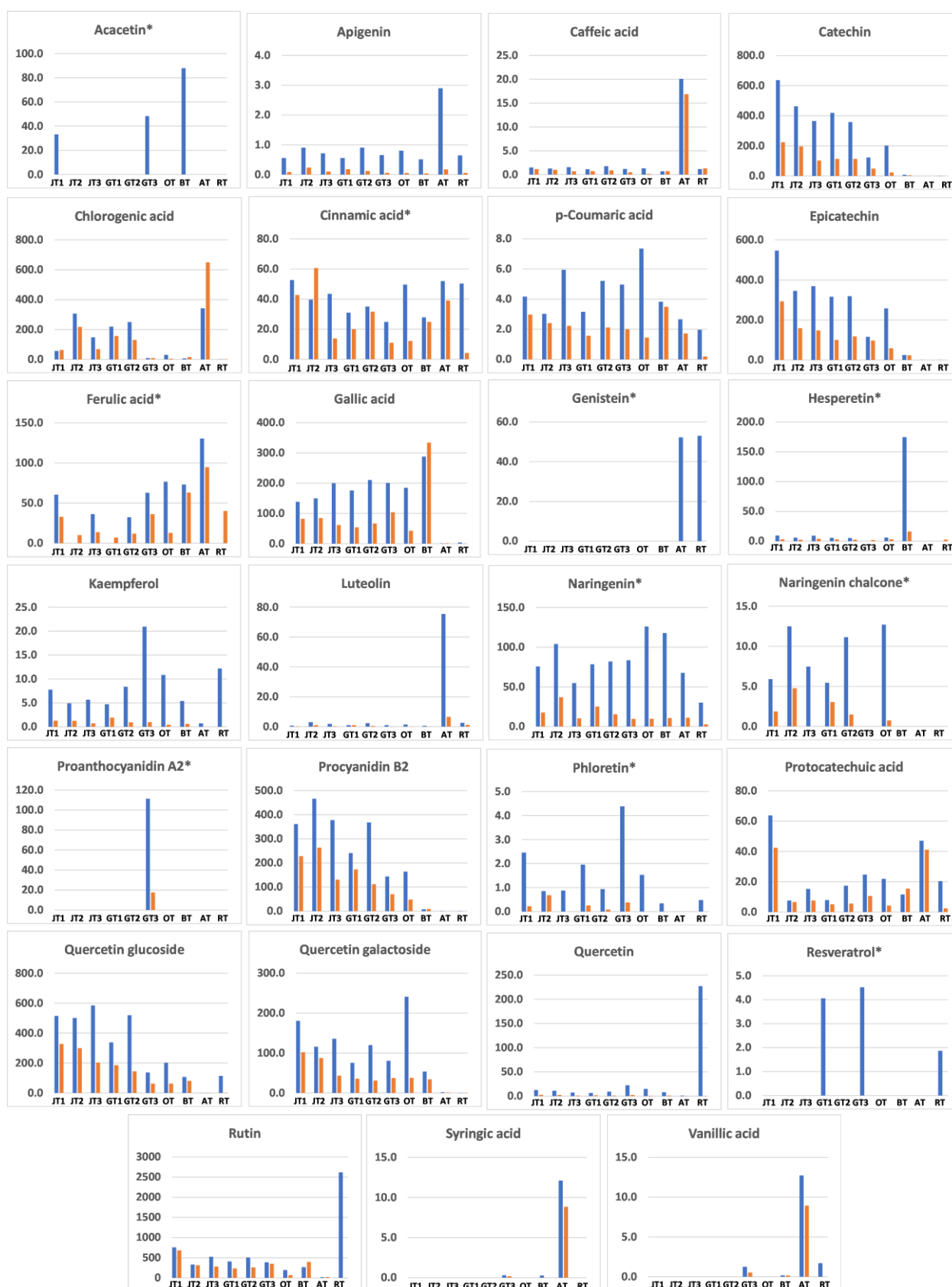


Figure S1. Comparisons of phenolic profiles between the methanol and aqueous extracts. Blue and red bars represent methanolic and water extracts, respectively. Y-axis indicates the concentration of phenolics (µg/g DW). * indicates the compound concentration reported in µg/100 g of dry weight. Abbreviations: JT1—jasmine tea 1; JT2—jasmine tea 2; JT3—jasmine tea 3; GT1—green tea 1; GT2—green tea 2; GT3—green tea 3; OT—oolong tea; BT—black tea; AT—artichoke tea; RT—refreshing tea.