



Figure S1 The chemical composition of SPLs, (A) Moisture; (B) Ashes; (C) Crude protein; (D) Crude fat; (E) Total carbohydrates. Values were mean \pm standard deviation, $n=3$. The lowercase letters indicate significant differences between species, respectively, by the Tukey test ($p < 0.05$)

Table S1. Compounds identification, compound formula, retention times, measured m/z of molecular and mass fragments (MS²) in SPL.

NO.	Compound	Rt [min]	Compound formula	Measured m/z	MS/MS m/z	Reference
1	5-O-Caffeoylquinic acid (5-CQA)	11.090	C ₁₆ H ₁₈ O ₉	353.0886	191.0555, 179.0555, 173.0342, 161.0105, 135.0441	1
2	3-O-Caffeoylquinic acid (3-CQA)	13.195	C ₁₆ H ₁₈ O ₉	353.0886	191.0555, 179.0555, 173.0447, 135.0441	1
3	4-O-Caffeoylquinic acid (4-CQA)	14.328	C ₁₆ H ₁₈ O ₉	353.0886	191.0555, 179.0342, 173.0447, 135.0441	1,2
4	Caffeic acid (CA)	15.309	C ₉ H ₈ O ₄	179.0339	135.0480, 134. 0152	1,2
5	Quercetin-3-O-hexoside	19.024	C ₂₄ H ₂₂ O ₁₅	463.0458	300.0328, 301.0228, 271.0468, 255.0513, 179.0490	3
6	3,4-Dicaffeoylquinic acid (3,4-CQA)	21.028	C ₂₅ H ₂₄ O ₁₂	515.1197	353.0891, 335.0794 ,191.0555, 179.0343, 135.0440	1,3
7	3,5-Dicaffeoylquinic acid (3,5-CQA)	21.453	C ₂₅ H ₂₄ O ₁₂	515.1197	353.0891, 335.0794,191.0555, 179.0343, 135.0440	1
8	Quinine acid	21.788	C ₁₁ H ₉ NO ₃	191.0561	191.0243, 85.0273, 126.8311, 93.3069, 87.1055	1
9	4,5-Dicaffeoylquinic acid (4,5-CQA)	22.097	C ₂₅ H ₂₄ O ₁₂	515.1197	353.0749, 335.0794,191.0555, 173.0343 135.0440	1
10	3-Caffeoyl-4-feruloylquinic acid	24.086	C ₂₆ H ₂₆ O ₁₂	529.1351	367.1043, 353.0910, 193.0535, 191.0573, 179.0412,	1
11	Quercetin	25.019	C ₁₅ H ₁₀ O ₇	301.0354	151.0214, 121.0983, 107.0258, 179.0583	1
12	3,4,5-Tricaffeoylquinic acid (3,4,5-CQA)	26.483	C ₃₄ H ₃₀ O ₁₅	677.1521	515.0723, 353.0328	1,4

Abbreviations: Rt (retention time)

Table S2. Contents changes of the phenolic profile in SPLs after each digestion stage, different lowercase letter indicates significant difference between species by the Turkey test ($p < 0.05$).

		CQAs							Phenolic	
		3-CQA	4-CQA	5-CQA	3,4-CQA	3,5-CQA	4,5-CQA	3,4,5-CQA	CA	Quinine acid
Undigested mg CGE /g DW	F18	1.66±0.04 ^{ab}	0.27±0.01 ^a	0.25±0.02 ^b	1.39±0.03 ^b	2.78±0.03 ^b	0.29±0.03 ^b	0.14±0.03 ^a	0.44±0.01 ^b	nd
	N1	1.46±0.03 ^b	0.28±0.03 ^a	0.33±0.04 ^a	0.83±0.03 ^d	2.71±0.01 ^b	0.26±0.02 ^b	0.14±0.01 ^a	0.14±0.05 ^d	nd
	X1	1.25±0.05 ^c	0.27±0.02 ^a	0.25±0.03 ^b	0.86±0.01 ^{cd}	2.54±0.03 ^c	0.25±0.01 ^b	0.14±0.02 ^a	0.39±0.01 ^c	nd
	F23	1.06±0.01 ^d	0.26±0.01 ^a	0.29±0.01 ^a	0.99±0.03 ^c	2.28±0.01 ^d	0.53±0.02 ^a	0.09±0.02 ^b	0.33±0.04 ^c	nd
	EC10	1.93±0.02 ^a	0.30±0.01 ^a	0.25±0.00 ^b	1.88±0.01 ^a	3.45±0.04 ^a	0.24±0.01 ^b	0.14±0.03 ^a	0.55±0.02 ^a	nd
Oral µg CGE /g DW	F18	9.63±0.04 ^b	nd	nd	10.01±0.03 ^b	9.45±0.01 ^c	3.89±0.02 ^c	nd	67.804±0.01 ^b	10.13±0.02 ^a
	N1	5.99±0.02 ^c	nd	6.27±0.03 ^b	8.05±0.01 ^c	9.21±0.03 ^c	1.92±0.04 ^d	0.87±0.02 ^b	383.82±0.03 ^a	nd
	X1	6.38±0.01 ^c	nd	6.30±0.02 ^b	nd	68.58±0.04 ^a	6.35±0.02 ^b	nd	18.76±0.02 ^d	nd
	F23	9.12±0.02 ^b	9.20±0.01 ^a	11.57±0.05 ^a	12.08±0.03 ^a	8.89±0.03 ^c	21.62±0.02 ^a	6.71±0.05 ^a	10.73±0.04 ^c	nd
	EC10	10.62±0.03 ^a	nd	6.20±0.04 ^b	nd	11.04±0.02 ^b	6.55±0.01 ^b	6.13±0.01 ^a	66.94±0.03 ^c	nd

Gastric µg CGE /g DW	F18	4.48±0.02 ^c	nd	9.38±0.03 ^c	nd	3.89±0.04 ^d	4.29±0.01 ^c	5.45±0.02 ^c	215.64±0.02 ^b	5.45±0.03 ^b
	N1	11.83±0.01 ^b	9.66±0.03 ^a	11.09±0.04 ^b	9.05±0.01 ^a	7.86±0.02 ^c	6.47±0.03 ^b	9.16±0.01 ^b	1.75±0.04 ^c	nd
	X1	nd	nd	nd	nd	11.43±0.03 ^a	9.98±0.04 ^a	35.14±0.02 ^a	90.44±0.01 ^c	nd
	F23	nd	nd	nd	9.80±0.01 ^a	9.80±0.05 ^b	9.59±0.02 ^a	nd	53.30±0.03 ^d	nd
	EC10	18.72±0.02 ^a	nd	16.43±0.01 ^a	nd	11.73±0.03 ^a	9.22±0.04 ^a	9.56±0.05 ^b	379.56±0.02 ^a	14.11±0.04 ^a
Intestinal µg CGE /g DW	F18	16.10±0.03 ^b	nd	9.25±0.02 ^b	30.58±0.02 ^b	6.95±0.04 ^d	9.34±0.01 ^b	9.63±0.03 ^a	18.30±0.05 ^b	nd
	N1	9.78±0.02 ^d	3.70±0.05 ^c	5.97±0.03 ^d	10.79±0.02 ^c	12.74±0.01 ^a	9.85±0.03 ^b	9.63±0.04 ^a	18.06±0.01 ^b	nd
	X1	6.50±0.02 ^c	9.18±0.02 ^b	7.40±0.01 ^c	10.32±0.04 ^c	9.14±0.03 ^c	9.65±0.01 ^b	nd	nd	nd
	F23	14.20±0.05 ^c	9.20±0.02 ^b	9.45±0.03 ^b	10.69±0.02 ^c	10.72±0.03 ^b	9.33±0.04 ^b	nd	nd	nd
	EC10	188.18±0.04 ^a	172.17±0.01 ^a	198.43±0.03 ^a	123.14±0.05 ^a	9.32±0.01 ^c	31.63±0.02 ^a	7.17±0.01 ^b	2110.24±0.03 ^a	nd
post-dialysis µg CGE /g DW	F18	7.30±0.01 ^b	nd	5.65±0.02 ^d	12.09±0.04 ^b	nd	3.42±0.03 ^c	4.55±0.03 ^b	14.34±0.02 ^b	nd
	N1	5.64±0.02 ^d	0.50±0.03 ^d	4.82±0.04 ^d	4.40±0.04 ^d	4.34±0.05 ^b	7.77±0.02 ^b	5.79±0.05 ^a	13.22±0.01 ^c	nd
	X1	3.63±0.01 ^c	6.08±0.04 ^c	6.15±0.03 ^c	7.05±0.01 ^c	3.81±0.05 ^b	6.70±0.03 ^b	3.63±0.02 ^c	6.08±0.04 ^d	nd
	F23	7.62±0.03 ^b	6.93±0.04 ^b	8.15±0.01 ^b	6.51±0.02 ^c	4.33±0.03 ^b	6.84±0.02 ^b	nd	nd	nd
	EC10	112.93±0.02 ^a	118.56±0.05 ^a	127.03±0.04 ^a	97.44±0.03 ^a	5.87±0.01 ^a	28.30±0.02 ^a	4.83±0.05 ^b	1611.98±0.03 ^a	nd

Abbreviations: nd (not detected)

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