

Supplementary Materials

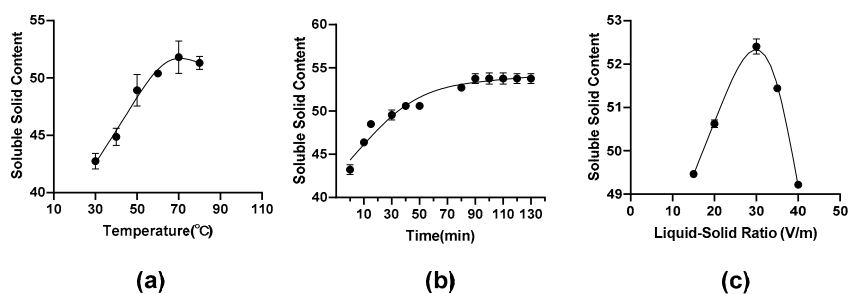


Figure S1. Influence of the time, temperature, and liquid-solid ratio on soluble solid extraction from Se-rich green tea. (a) Treatment conditions: liquid-solid ratio of 20 (v/m) for 30min extraction., (b) Treatment conditions: liquid-solid ratio of 20 (V/m) at 30°C extraction., (c) Treatment conditions: extraction 30min at 30°C.

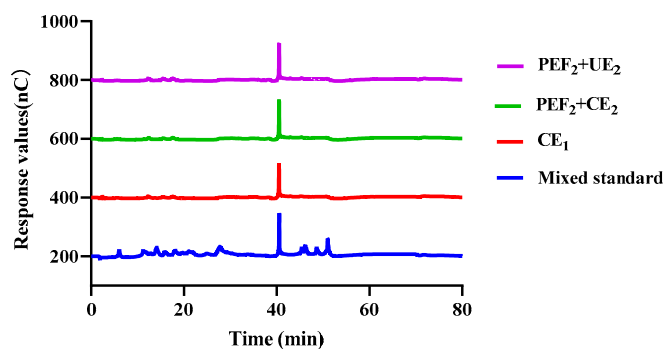


Figure S2. The ion chromatograms of Se-TPS obtained by different extraction methods.

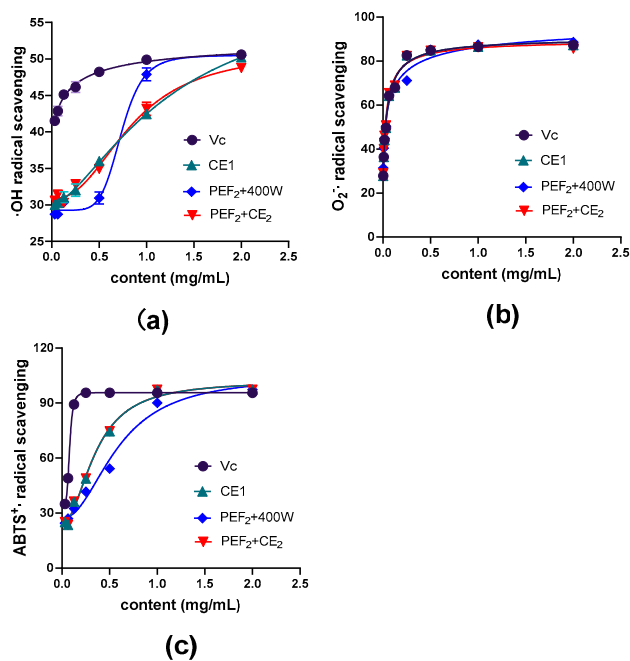


Figure S3 Antioxidant capacity of TPS from CE₁, PEF₂+CE₂, and PEF₂+UE₂. (a) ·OH assay, (b) O₂^{·-} assay, (c) ABTS^{·+} assay.

Table S1. The detailed information for TPS extraction tests.

Text	CE ₁	CE ₂	CE ₃	UE ₁	UE ₂	UE ₃	PEF ₁	PEF ₂
Temperature	30℃	50℃	70℃	30℃	30 ℃	30 ℃	30 ℃	30 ℃
Power	/	/	/	100W	400 W	700 W	/	/
electric field intensity	/	/	/	/	/	/	4k V/cm	10 kV/cm
Time	60	60	60	60	60	60	1.80 ms	1.80 ms
	min	min	min	min	min	min		
solid-liquid ratio	1:30	1:30	1:30	1:30	1:30	1:30	1:30	1:30

Table S2. The basic ingredient of selenium-rich tea

Samples	Water content (%)	Aqueous extract (%)	Tea protein (%)	Tea polyphenol (%)	Caffeine (%)	Free amino acid (%)	Total sugar (%)	Total selenium (mg/kg)
Se-enriched tea	5.28±0.02	47.88±0.57	28.70±0.60	22.61±0.46	4.36±0.11	4.97±0.09	13.69±0.88	2.16±0.08

Data are means ± standard deviation, n = 3 independent experiments with 3 replicates in each experiment.

Table S3. The correlation between chemical composition and antioxidative activity

	TS	ABTS	OH	O ²⁻	TPP	TP	UA	NS	RS
TS	1	0.794**	0.816**	0.596**	0.878**	0.883**	0.791**	0.856**	0.878**
ABTS	0.794**	1	0.924**	0.860**	0.895**	0.893**	0.877**	0.871**	0.893**
OH	0.816**	0.924**	1	0.705**	0.949**	0.943**	0.933**	0.941**	0.942**
O ²⁻	0.596**	0.860**	0.705**	1	0.692**	0.689**	0.681**	0.684**	0.688**
TPP	0.878**	0.895**	0.949**	0.692**	1	0.999**	0.985**	0.965**	0.999**
TP	0.883**	0.893**	0.943**	0.689**	0.999**	1	0.986**	0.953**	10.00**
UA	0.791**	0.877**	0.933**	0.681**	0.985**	0.986**	1	0.929**	0.987**
NS	0.856**	0.871**	0.941**	0.684**	0.965**	0.953**	0.929**	1	0.951**
RS	0.878**	0.893**	0.942**	0.688**	0.999**	1**	0.987**	0.951**	1

** indicates significant correlation (P<0.01).