

Table S2. Available extraction protocols for obtaining polyphenols from TPW with corresponding yields. Values in italics are obtained by spectrophotometry, otherwise HPLC. All the parameters significant for extraction procedure were noted (Type of TPW, extraction solvent, extraction conditions specific for the type of extraction method). If available, the reference extraction method yields were also noted.

Extraction method	Type of TPW	Extraction solvent	Extraction conditions	Yield (mg/100g)**	Reference extraction method yield (mg/100g)	Reference
UAE	Seedless pomace	water	20 min, 45 °C, 90 W, 100%, 3 cycles with a 10-min pause in between	kaempferol-3-O-glucoside: 415.4; procyanidin B2: 76.6; luteoilin-7-O-glucoside: 55.8; phloretin: 26.7; ferulic acid: 9.1; gallic acid: 6.9; coumaric acid: 2.6; phloridzin: 1.4; apigenin-7-O-glucoside: 0.20; genistein: 0.20; rutin: 0.07; epicatechin: 0.03; daidzein: 0.02; quercitrin: 0.003; kaempferol: < 0.001; quercetin: < 0.001	-	[110]
	Seeds	water	20 min, 45 °C, 90 W, 100%, 3 cycles with a 10-min pause in between	luteoilin-7-O-glucoside: 57.6; procyanidin B2: 28.0; quercetin: 7.7; ferulic acid: 3.7; phloridzin: 2.6; phloretin: 1.7; gallic acid: 0.5; rutin: 0.01; apigenin-7-O-glucoside: < 0.001; coumaric acid: < 0.001; daidzein: < 0.001; epicatechin: < 0.001; genistein: < 0.001; kaempferol: < 0.001; kaempferol-3-O-glucoside: < 0.001; quercitrin: < 0.001;	-	[110]
	Tomato industry waste (peels, seeds, rotten and unripe pieces)	80% EtOH; 80% EtOH:0.5 M HCl 99.5:0.5 (v/v)	60 min, 25 kHz, 150 W	80% EtOH <i>TPC: 81.1</i> kaempferol rutinoside: 231.0; quercetin: 94.6; 80% EtOH:0.5 M HCl 99.5:0.5 (v/v) <i>TPC: 87.1</i>	CSE (80% EtOH, 60 min, RT) <i>TPC: 92.4</i> (80% EtOH:0.5 M HCl 99.5:0.5 (v/v), 60 min, RT) <i>TPC: 80.7</i>	[32]
	Peel	70% EtOH	15 min, 400 W, 30 kHz, 95%, continuous cycle mode, SSR 1:50 (m/V)	<i>TPC: 3644</i> <i>TFC: 358.0</i>		[115]
	Pomace	NaDESs (glucose:lactic acid (5:1)), 15% water	1 h, 40 °C, SSR 2:40 (g/ml)	<i>TPC: 191.6</i> <i>TFC: 141.1</i>	CSE (glucose:glycerol (3:1), 2 h, 40 °C, SSR 2:32 (g/mL)) TFC: 44.0 CSE	[116]

				(glucose:glycerol (8:1), 30 min, 50 °C, SSR 3.4:20 (g/mL)) TFC: 5.1 UAE (glycerol:L-proline (1:2.5), 1 h, 40 °C, SSR 2:20 (g/mL)) TFC: 89.4	
Pomace	lactic acid:glucose (5:1)/15% water/0.1% (v/v) formic acid	30 min, 40 °C, 200 W, 20 kHz, SSR 75 mg/mL	catechin: 49.1; rutin: 32.5; naringenin: 11.7; caffeic acid: 9.8; quercetin: 6.3	-	[111]
Pomace	20% EtOH	60 min, 20 °C, 50%, 10 kHz, SSR 1:8	TPC: 382.0 chlorogenic acid: 72.9; rutin: 27.5; quercetin: 2.6	-	[117]
Seeds	61% EtOH	15 min, 85 %	TPC: 161 naringenin: 1.9; rutin: 0.75; chlorogenic acid: 0.58	-	[118]
choline chloride:1,2-propanediol (1:2)					
		TPC: 39.1 TFC: 21.2		CSE (EtOH/H ₂ O (70:30 v/v)) TPC: 27.1 TFC: 8.7	
Pomace	NaDESs (choline chloride:1,2-propanediol (1:2)); (choline chloride:lactic acid (1:2))	60 min; 65 °C, 100 W, 30 kHz, SSR 1:20	chlorogenic acid: 37.2; gallic acid: 10.2; caffeic acid: 2.0; quercetin: 1.0; ferulic acid: 0.87 choline chloride:lactic acid (1:2) TPC: 51.8 TFC: 17.3 chlorogenic acid: 52.3; gallic acid: 14.4; caffeic acid: 5.0; ferulic acid: 1.5; quercetin: 1.5	gallic acid: 51.7; chlorogenic acid: 12.3; caffeic acid: 1.0; quercetin: 0.67; ferulic acid: n.d.	[109]
MAE	Peel	10 min, 90 °C, 500 W (max TPC); 5 min, 90 °C, 500 W (max TFC);	TPC: 7806 TFC: 10747	-	[119]
	Pomace	95% EtOH 90 s, 180 W (max TPC); 30 s, 450 W (max TFC);	TPC: 280 TFC: 9833	-	[93]

	Seeds	63% EtOH	15 min, 80 °C	TPC: 172 naringenin: 3.0; rutin: 1.4; chlorogenic acid: 1.1	-	[118]
HPE	Peel	water	5 min, 45 °C, 600 MPa	TPC: 4947	-	[115]
					CSE (50% EtOH) TPC: 94.1	
HVACP	Pomace	nitrogen followed by CSE (50% EtOH)	15 min, 60 kV	TPC: 103.3 gallic acid: 89.2; chlorogenic acid: 76.1; naringenin: 49.9; rutin: 18.9; ferulic acid: 6.7; quercetin: 3.4; caffeic acid: 3.3; I: 2.7	gallic acid: 86.1; chlorogenic acid: 64.5; rutin: 18; ferulic acid: 7.2; quercetin: 3; caffeic acid: 2.7; I: 2.5 naringenin: 42.4	[121]
					CSE (MetOH) TPC: 320	
				TPC: 360 Polyphenols (gallic acid: 18.6; cinnamic acid: 16.4; chlorogenic acid: 7.4; P-coumaric acid: 1.2; ferulic acid: 0.93; caffeic acid: 0.87; vanillic acid: 0.26; sinapic acid: 0.22); Flavonoids (naringenin chalcone: 108.2; naringenin: 32.8; quercetin: 7.8; apigenin: 3.9; kaempferol: 2.4; myricetin: 0)	Polyphenols (chlorogenic acid: 27.2; gallic acid: 22.3; cinnamic acid: 8.9; P-coumaric acid: 6.5; caffeic acid: 6.2; ferulic acid: 2.2; sinapic acid: 0.25; vanillic acid: 0.11); Flavonoids (naringenin chalcone: 126.1; naringenin: 65.9; apigenin: 6.6; quercetin: 5.3; myricetin: 0.25; kaempferol: 0)	[107]
Fermentation assisted extraction	Pomace	MetOH	CSE			

HVACP-high voltage atmospheric cold plasma, SOX-soxhlet extraction, TPC- total phenolic content, TFC- total flavonoid content, NaDES-natural deep eutectic solvents, RT-room temperature, n.d.- not detected, **obtained under optimal extraction condition