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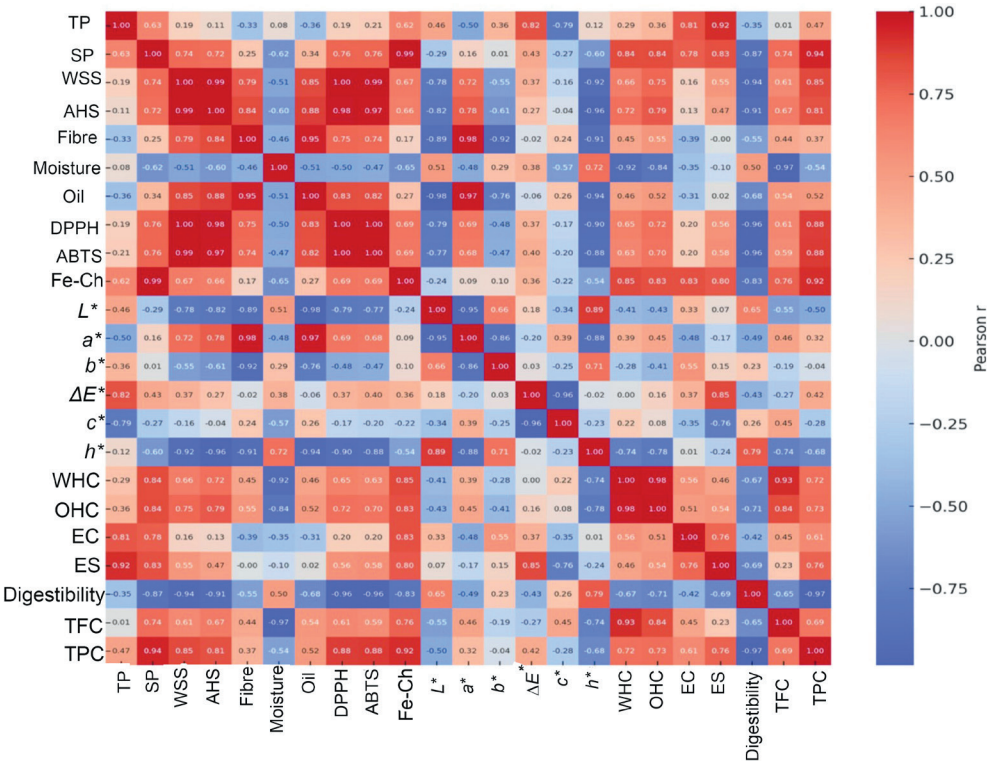

Fig. S1. Correlation heatmap showing Pearson correlation coefficients (p<0.05) between chemical composition, techno-functional, antioxidant and digestibility parameters of soy protein concentrates with 0–10 % black mulberry pomace. TP=total protein, SP=soluble protein, WSS=water-soluble sugar, AHS=acid-soluble sugar, ABTS=radical scavenging activity, Fe-Ch=Fe(II) chelating ability, WHC=water-holding capacity, OHC=oil-holding capacity, DPPH=radical scavenging activity, TFC=total phenol content, TFC=total flavonoid content, *L**=lightness, *a**=red--green coordinate, *b**=yellow-blue coordinate, *C**=chroma, *h*°=hue angle, *ΔE*=total colour difference

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Table S1. Characteristic FTIR absorption bands of soy protein concentrates with different mass fractions of mulberry pomace and their shifts relative to the control (0 % pomace)

Functional group (Region/cm^{-1})	$\nu_{max}(P_0)$/cm^{-1}	$\Delta\nu(P_0$ *vs* $P_0)$/cm^{-1}	$\nu_{max}(P_1)$/cm^{-1}	$\Delta\nu(P_1$ *vs* $P_0)$/cm^{-1}	$\nu_{max}(P_2)$/cm^{-1}	$\Delta\nu(P_2$ *vs* $P_0)$/cm^{-1}	$\nu_{max}(P_5)$/cm^{-1}	$\Delta\nu(P_5$ *vs* $P_0)$/cm^{-1}	$\nu_{max}(P_{10})$/cm^{-1}	$\Delta\nu(P_{10}$ *vs* $P_0)$/cm^{-1}
O–H (3700–3000)	3400.50	0.00	3292.49	–108.01	3294.42	–106.08	3294.42	–106.08	3296.35	–104.16
C–H (2970–2850)	2933.73	0.00	2960.73	27.00	2960.73	27.00	2958.80	25.07	2933.73	0.00
Amide I (1700–1600)	1651.07	0.00	1651.07	0.00	1651.07	0.00	1651.07	0.00	1651.07	0.00
Amide II (1580–1480)	1519.91	0.00	1531.48	11.57	1531.48	11.57	1531.48	11.57	1531.48	11.57
Amide III (1300–1200)	1236.37	0.00	1236.37	0.00	1236.37	0.00	1234.44	–1.93	1236.37	0.00
C–O (1150–1000)	1055.06	0.00	1070.49	15.43	1068.56	13.50	1068.56	13.50	1068.56	13.50
I_{1650}/I_{1540}	1.15		1.13		1.14		1.14		1.17	

Negative values indicate a shift to lower wavenumbers than the control (0 % pomace). P_0, P_1, P_2, P_5 and P_{10}=mass fractions of added pomace (0, 1, 2, 5 and 10 %)