

Table S1. Tannin formulations used in this experiment.

Code	Origin	Formulation	Maximum suggested dose (g/hL)	Total phenolics assessment		Antioxidant capacity	
				Folin-Ciocalteu assay richness ^a	Total phenolics (A ₂₈₀) index ^b	DPPH ^c	FRAP ^c
ELQ	Wood from <i>Quercus spp.</i>	Liquid	10	20.4 ± 3.6	27.7 ± 0.6	314 ± 49	858 ± 41
QBR	Quebracho (<i>Schinopsis spp.</i>)	Powder	50	74.9 ± 3.7	60.5 ± 2.9	747 ± 59	1377 ± 119
SER	Grape seeds from red varieties of <i>Vitis vinifera L.</i>	Powder	20	22.1 ± 1.3	31.0 ± 1.8	276 ± 19	845 ± 34
SEW	Grape seeds from white varieties of <i>Vitis vinifera L.</i>	Powder	25	62.1 ± 1.8	51.7 ± 2.2	761 ± 45	1390 ± 29
SKW	Grape skins from white varieties of <i>Vitis vinifera L.</i>	Powder	30	56.6 ± 4.0	39.9 ± 1.9	577 ± 36	1121 ± 43

Data are expressed as average value ± standard deviation (n = 3). ^aFolin-Ciocalteu assay richness and ^bTotal phenolics (A₂₈₀) index results are expressed as g of gallic acid/100 g of exogenous tannin formulation. ^cDPPH and ^cFRAP assays results are expressed as mg of Trolox equivalent/g of exogenous tannin formulation.

Table S2. Grape must composition for unsorted and sorted berries.

Grape variety	Sample type	pH	Titratable acidity g/L as tartaric acid	Tartaric acid g/L	Malic acid g/L	Reducing sugars g/L
Montepulciano	Unsorted	3.19 ± 0.05	6.40 ± 0.07	7.73 ± 0.06	0.78 ± 0.11	255 ± 9
	Sorted (1110 kg/m ³)	3.25 ± 0.01	5.43 ± 0.10	6.77 ± 0.01	0.67 ± 0.02	267 ± 1
Merlot	Unsorted	3.27 ± 0.02	6.11 ± 0.16	8.52 ± 0.51	1.34 ± 0.04	230 ± 8
	Sorted (1100 kg/m ³)	3.27 ± 0.01	6.19 ± 0.05	8.40 ± 0.11	1.07 ± 0.04	239 ± 1
Cabernet sauvignon	Unsorted	3.42 ± 0.05	5.06 ± 0.17	6.53 ± 0.19	1.39 ± 0.24	248 ± 5
	Sorted (1106 kg/m ³)	3.55 ± 0.02	5.62 ± 0.02	6.82 ± 0.27	1.47 ± 0.19	267 ± 1
Syrah	Unsorted	3.55 ± 0.05	6.08 ± 0.22	7.19 ± 0.10	1.89 ± 0.04	259 ± 1
	Sorted (1114 kg/m ³)	3.78 ± 0.01	4.85 ± 0.02	6.70 ± 0.18	1.61 ± 0.01	270 ± 4
Aglianico	Unsorted	3.12 ± 0.01	7.46 ± 0.01	9.42 ± 0.48	1.31 ± 0.00	267 ± 4
	Sorted (1114 kg/m ³)	3.11 ± 0.03	7.39 ± 0.05	9.55 ± 0.07	1.23 ± 0.15	272 ± 1
Sangiovese	Unsorted	3.48 ± 0.02	4.26 ± 0.03	6.51 ± 0.09	1.06 ± 0.11	246 ± 3
	Sorted (1106 kg/m ³)	3.47 ± 0.02	4.28 ± 0.11	7.11 ± 0.09	1.69 ± 0.56	260 ± 3
Nebbiolo	Unsorted	3.23 ± 0.04	5.63 ± 0.16	7.91 ± 0.34	1.58 ± 0.02	253 ± 3
	Sorted (1106 kg/m ³)	3.21 ± 0.01	5.70 ± 0.05	8.32 ± 0.18	1.34 ± 0.01	254 ± 8

Data are expressed as average value ± standard deviation (n = 2).

Table S3. CIEL*a*b* color components calculated on the extract after a simulated maceration of 72 h.

Grape variety	Parameter	Control	ELQ	QBR	SER	SEW	SKW	Sign.
Montepulciano	L*	14.0 ± 0.4	13.6 ± 1.3	12.8 ± 0.4	13.2 ± 1.7	14.8 ± 1.2	14.1 ± 0.6	ns
	a*	45.1 ± 0.5	44.7 ± 1.6	43.7 ± 0.5	44.1 ± 2.1	45.9 ± 1.3	45.1 ± 0.7	ns
	b*	23.9 ± 0.7	23.2 ± 2.1	21.9 ± 0.7	22.6 ± 2.7	25.1 ± 1.8	24.0 ± 1.0	ns
	C*	51.1 ± 0.7	50.4 ± 2.4	48.9 ± 0.8	49.6 ± 3.1	52.3 ± 2.0	51.1 ± 1.1	ns
	H*	27.9 ± 0.4	27.4 ± 1.3	26.6 ± 0.5	27.0 ± 1.8	28.7 ± 1.1	28.0 ± 0.7	ns
	ΔE*	-	0.92	2.75	1.89	1.62	0.10	
Merlot	L*	47.4 ± 2.0	39.9 ± 7.7	41.9 ± 0.7	43.9 ± 4.0	39.6 ± 2.3	39.2 ± 3.3	ns
	a*	61.9 ± 2.6	59.4 ± 10.1	64.1 ± 1.0	61.4 ± 1.4	56.1 ± 0.5	58.8 ± 2.9	ns
	b*	13.6 ± 2.4a	16.6 ± 3.3ab	21.0 ± 0.3b	16.4 ± 2.9ab	17.1 ± 1.1ab	18.9 ± 1.1ab	*
	C*	63.4 ± 2.9	61.7 ± 10.7	67.5 ± 1.0	63.6 ± 1.9	58.7 ± 0.6	61.8 ± 2.6	ns
	H*	12.4 ± 1.8a	15.6 ± 0.6ab	18.1 ± 0.1b	14.9 ± 2.4ab	16.9 ± 1.0b	17.8 ± 1.5b	**
	ΔE*	-	8.41	9.48	4.49	10.29	10.13	
Cabernet sauvignon	L*	44.7 ± 2.0	44.5 ± 3.3	37.1 ± 5.5	38.3 ± 5.5	42.9 ± 3.1	35.7 ± 3.6	ns
	a*	59.1 ± 0.9	59.8 ± 1.7	58.6 ± 3.2	56.8 ± 4.5	60.1 ± 2.8	56.3 ± 2.2	ns
	b*	12.4 ± 1.2a	13.3 ± 0.8a	17.9 ± 2.2b	15.3 ± 1.0ab	17.0 ± 0.7b	17.0 ± 0.8b	***
	C*	60.4 ± 1.1	61.2 ± 1.6	61.3 ± 2.4	58.9 ± 4.3	62.4 ± 2.5	58.8 ± 1.9	ns
	H*	11.8 ± 0.9a	12.6 ± 0.9ab	17.0 ± 2.9b	15.1 ± 1.6ab	15.8 ± 1.2ab	16.8 ± 1.3b	**
	ΔE*	-	1.20	9.39	7.36	5.06	10.52	
Syrah	L*	24.8 ± 0.8	24.2 ± 1.4	23.7 ± 2.0	21.2 ± 2.9	25.2 ± 0.8	24.0 ± 1.9	ns
	a*	55.9 ± 0.7	55.4 ± 1.5	55.4 ± 2.2	52.2 ± 3.8	56.7 ± 1.0	55.5 ± 2.6	ns
	b*	29.3 ± 0.5	29.0 ± 1.1	30.9 ± 0.6	28.2 ± 2.1	31.8 ± 0.5	30.8 ± 2.9	ns
	C*	63.2 ± 0.7	62.5 ± 1.5	63.5 ± 2.0	59.3 ± 4.3	65.0 ± 0.8	63.4 ± 3.7	ns
	H*	27.7 ± 0.5	27.6 ± 1.0	29.2 ± 1.0	28.4 ± 0.4	29.2 ± 0.6	29.0 ± 1.3	ns
	ΔE*	-	0.86	1.92	5.33	2.57	1.69	
Aglianico	L*	32.3 ± 3.1	30.7 ± 1.1	29.2 ± 1.5	29.8 ± 2.8	32.7 ± 1.0	30.5 ± 0.5	ns
	a*	60.6 ± 2.6	59.6 ± 0.6	58.4 ± 2.1	57.7 ± 3.2	61.5 ± 0.6	60.0 ± 0.4	ns
	b*	26.2 ± 1.0ab	28.1 ± 1.8abc	28.7 ± 2.3abc	26.1 ± 0.6a	30.1 ± 1.0bc	31.2 ± 1.1c	**
	C*	66.1 ± 2.0	65.9 ± 0.9	65.0 ± 2.8	63.3 ± 3.2	68.5 ± 0.4	67.7 ± 0.7	ns
	H*	23.4 ± 1.7a	25.2 ± 1.5ab	26.2 ± 1.2ab	24.3 ± 0.7ab	26.1 ± 0.9ab	27.5 ± 0.8b	*
	ΔE*	-	2.69	4.59	3.83	4.01	5.36	
Sangiovese	L*	28.8 ± 2.4	31.4 ± 1.3	30.0 ± 2.4	32.2 ± 2.5	29.6 ± 5.1	30.3 ± 2.8	ns
	a*	54.0 ± 2.7	57.5 ± 0.6	57.7 ± 1.7	57.2 ± 2.0	56.0 ± 5.2	56.7 ± 3.1	ns
	b*	28.5 ± 1.5a	30.4 ± 0.9ab	35.1 ± 2.1c	30.3 ± 1.1ab	32.3 ± 2.4abc	33.4 ± 1.5bc	**
	C*	61.0 ± 2.9	65.0 ± 0.2	67.6 ± 1.7	64.8 ± 2.0	64.6 ± 5.7	65.8 ± 3.4	ns
	H*	27.8 ± 1.0a	27.8 ± 1.0a	31.3 ± 1.8b	27.9 ± 0.9a	30.0 ± 0.5ab	30.5 ± 0.3ab	**
	ΔE*	-	4.82	7.75	5.11	4.45	5.84	
Nebbiolo	L*	68.8 ± 2.0	65.9 ± 3.7	63.9 ± 2.6	68.7 ± 0.6	66.2 ± 3.5	65.3 ± 1.8	ns
	a*	46.3 ± 1.7	50.0 ± 2.0	52.3 ± 1.6	46.9 ± 2.7	49.4 ± 3.3	51.2 ± 2.5	ns
	b*	7.8 ± 0.1a	9.1 ± 1.2a	13.0 ± 0.6b	9.5 ± 0.8a	13.3 ± 0.8b	14.3 ± 1.6b	***
	C*	47.0 ± 1.7a	50.9 ± 2.0ab	53.9 ± 1.5b	47.8 ± 2.8ab	51.1 ± 3.4ab	53.1 ± 2.8ab	*
	H*	9.5 ± 0.2a	10.3 ± 1.4a	14.0 ± 0.9b	11.5 ± 0.3a	15.0 ± 0.4b	15.6 ± 1.0b	***
	ΔE*	-	4.86	9.33	1.84	6.81	8.83	

Data are expressed as average ± standard deviation ($n = 3$). Hue angle (h) values are expressed in degrees. ΔE* values for each tannin were calculated from unrounded L*, a*, b* values with respect to control. Sign.: *, **, ***, and “ns” indicate significant differences at $p < 0.05$, 0.01, 0.001, and not significant, respectively, among values within the same row. Different Latin letters within the same row indicate significant differences among treatments according to Tukey HSD test ($p < 0.05$).