

Supplementary data

Supplementary data 1

Table S1. Must composition at the end of alcoholic fermentation.

Condition*	Total acidity (g/L tartaric acid)	Volatile acidity (g/L tartaric acid)	Ethanol (% v/v)	Sugar (g/L)	pH	Density
BP	5.53 ±0.03**	0.16 ±0.00	13.77 ±0.01	1.50 ±0.00	3.24 ±0.01	0.992 ±0.001
BPG	5.52 ±0.08	0.15 ±0.01	13.73 ±0.06	1.45 ±0.07	3.26 ±0.03	0.992 ±0
BPQ	5.49 ±0.12	0.15 ±0.01	13.70 ±0.06	1.90 ±0.14	3.26 ±0.05	0.992 ±0.002
BPS	5.44 ±0.10	0.13 ±0.02	13.64 ±0.11	2.00 ±0.00	3.27 ±0.02	0.992 ±0.001

*BP: bioprotection, BPG: bioprotection and gall nuts tannin addition, BPQ: bioprotection and quebracho tannins addition, BPS: bioprotection and SO₂ addition.

**Results are the mean ±standard deviation of biological replicates, no significative differences are detected with Anova test ($\alpha = 0.05$)

Supplementary data 2

Table S2. CIELab tristimulus coordinates and colorimetric variation (ΔE^*) of aged wines.

Table S2a. Tristimulus coordinates L^* (brightness), a^* (red hue), b^* (yellow hue), the chroma (C^*) and the hue (h^* in degree) of aged wines.

Condition*	L^*	a^*	b^*	C^*	h^*
BP	67.56 \pm 2.92**	30.32 \pm 1.92	27.67 \pm 3.04	42.32 \pm 3.46	42.32 \pm 1.34
BPG	62.95 \pm 0.81	32.55 \pm 0.28	31.36 \pm 0.40	45.20 \pm 0.08	43.93 \pm 0.62
BPQ	58.99 \pm 1.92	34.12 \pm 1.10	32.70 \pm 0.16	47.27 \pm 0.68	43.79 \pm 1.06
BPS	60.61 \pm 1.52	36.18 \pm 0.42	31.08 \pm 0.65	47.70 \pm 0.10	40.66 \pm 0.92

*BP: bioprotection, BPG: bioprotection and gall nuts tannin addition, BPQ: bioprotection and quebracho tannins addition, BPS: bioprotection and SO₂ addition.

**Results are the mean \pm standard deviation of biological replicates,

Table S2b. Colorimetric variation (ΔE^*) between conditions and replicates of aged wines

Comparison*	ΔE^* **
BP rep 1 vs BP rep 2	6,55
BPG rep 1 vs BPG rep 2	1,34
BPQ rep 1 vs BPQ rep 2	3,14
BPS rep 1 vs BPS rep 2	2,41
BP vs BPG	6,30
BP vs BPQ	10,64
BP vs BPS	9,70
BPG vs BPQ	4,47
BPG vs BPS	4,33
BPQ vs BPS	3,08

*BP: bioprotection, BPG: bioprotection and gall nuts tannin addition, BPQ: bioprotection and quebracho tannins addition, BPS: bioprotection and SO₂ addition.

**Results are calculated with tristimulus coordinates table S2a.