

Table S7 Factor loadings and contribution rates of ‘Merlot’ grape quality under different canopy thicknesses

NO.	Quality index	Principal componet			
		2023		2024	
		PC1	PC2	PC1	PC2
1	Brix(%)	0.22	0.43	0.35	0.26
2	Acid (g·L ⁻¹)	0.24	0.36	0.37	-0.03
3	Phenol (mg·g ⁻¹)	-0.41	-0.08	0.38	-0.06
4	Flavonoid (mg·g ⁻¹)	-0.16	0.34	0.39	-0.03
5	Flavan-3-ol (mg·g ⁻¹)	0.45	-0.07	0.06	0.60
6	Anthsyenin (mg·g ⁻¹)	0.35	-0.23	0.38	0.07
7	Tannin (mg·g ⁻¹)	-0.35	0.01	-0.35	0.06
8	Mono-anthsyenin (mg·L ⁻¹)	0.46	-0.07	0.34	0.23
9	Mono-phenolics (mg·L ⁻¹)	0.16	-0.49	-0.18	0.50
10	Total aroma (μg·L ⁻¹)	0.13	0.52	0.16	-0.51
	Eigenvalue	4.66	3.44	6.50	2.70
	Account %	46.59	34.43	65.01	27.03
	Total Account %	47.71	81.02	63.72	92.04