

**Table S1. The phenolic acids, flavanols, flavonols and stilbenes values obtained by the HPLC-MS method from red wines**

Compound	$\mu\text{g mL}^{-1}$															
	<b>FNI</b> <b>M</b>	<b>FNI</b> <b>V1</b>	<b>FNI</b> <b>V2</b>	<b>FNI</b> <b>V3</b>	<b>FNII</b> <b>M</b>	<b>FNII</b> <b>V1</b>	<b>FNII</b> <b>V2</b>	<b>FNII</b> <b>V3</b>	<b>CSI</b> <b>M</b>	<b>CSI</b> <b>V1</b>	<b>CSI</b> <b>V2</b>	<b>CSI</b> <b>V3</b>	<b>CSII</b> <b>M</b>	<b>CSII</b> <b>V1</b>	<b>CSII</b> <b>V2</b>	<b>CSII</b> <b>V3</b>
Gallic acid	3 months (december 2022)															
	16.32	13.72	14.27	15.62	20.76	17.81	14.76	14.48	13.60	9.91	9.76	11.80	12.14	9.13	9.49	7.94
	6 months (march2023)															
	150.68	130.98	129.07	130.09	153.17	137.43	132.84	123.37	119.78	88.17	74.12	77.10	70.29	44.38	50.00	61.09
	9 months (june 2023)															
	192.16	187.24	187.46	164.72	187.63	164.37	141.16	151.89	159.67	123.47	110.04	148.79	117.19	84.19	71.61	64.57
Caffeic acid	12 months (september 2023)															
	252.50	204.59	205.68	176.46	186.61	149.90	119.31	96.05	393.47	186.47	215.20	194.93	373.90	227.91	213.28	169.76
	3 months (december 2022)															
	9.79	9.02	8.83	10.98	11.22	14.02	12.47	12.26	3.79	3.71	3.59	3.36	4.63	4.73	4.59	3.59
	6 months (march2023)															
	5.29	4.98	4.63	5.45	5.19	6.00	6.37	5.34	1.89	1.97	1.59	1.36	1.62	1.75	1.57	1.02
Chlorogenic acid	9 months (june 2023)															
	11.25	13.37	12.62	16.04	15.30	19.28	16.33	16.48	7.06	6.36	5.35	6.58	5.37	5.53	4.19	3.32
	12 months (september 2023)															
	5.33	6.44	5.16	6.65	3.79	3.30	3.03	1.84	3.87	4.67	5.38	7.17	1.61	6.15	5.11	3.41
	3 months (december 2022)															
	6.25	6.52	6.84	7.75	7.21	8.28	6.89	6.46	10.75	12.93	11.26	12.07	11.11	11.27	11.12	9.82
Myricetin	6 months (march2023)															
	5.48	5.85	5.72	6.42	3.80	4.08	4.23	5.38	7.70	9.37	8.21	7.52	6.73	6.93	6.50	6.58
	9 months (june 2023)															
	3.60	4.40	3.88	4.66	4.84	5.29	4.71	5.61	5.68	5.30	5.10	4.92	3.73	4.30	3.89	2.95
	12 months (september 2023)															
	3.91	3.63	4.48	4.61	3.52	3.06	2.90	2.33	5.53	6.71	5.74	10.27	8.30	10.31	8.32	5.46
Quercetin	3 months (december 2022)															
	25.47	22.68	24.80	32.26	31.24	22.66	18.39	28.76	21.71	22.30	23.80	21.91	26.75	30.20	28.53	21.67
	6 months (march2023)															
	22.07	19.85	18.73	22.62	20.19	15.41	16.28	18.81	13.76	14.69	14.94	11.53	13.48	13.71	12.26	10.72
	9 months (june 2023)															
	28.69	30.74	29.28	41.38	43.33	33.17	30.80	43.19	26.81	28.10	27.34	22.94	25.98	29.62	24.29	18.82
Quercetin	12 months (september 2023)															
	19.73	21.55	16.93	24.57	13.82	7.39	7.76	6.70	9.68	10.83	18.58	24.84	24.70	30.74	21.39	14.41
Quercetin	3 months (december 2022)															
	16.59	17.72	19.17	23.07	24.49	17.66	13.62	20.20	27.06	26.09	27.09	23.78	28.91	30.41	29.10	25.92

	6 months (march2023)															
	17.37	15.21	14.50	20.98	19.70	12.05	13.08	12.11	23.19	22.00	22.46	17.39	18.08	18.55	17.54	15.40
	9 months (june 2023)															
	13.10	13.52	10.97	23.59	28.25	16.34	16.59	15.37	30.08	28.86	27.90	20.41	23.42	27.52	22.36	18.74
Quercitrin	12 months (september 2023)															
	9.26	8.13	5.24	9.39	7.25	3.37	3.62	2.26	15.14	15.21	22.99	31.07	26.58	32.58	24.05	19.26
	3 months (december 2022)															
	0.14	0.14	0.16	0.16	0.16	0.12	0.15	0.15	4.48	3.88	2.78	2.24	2.09	3.03	2.03	2.44
	6 months (march2023)															
	0.33	0.34	0.35	0.34	0.34	0.30	0.32	0.32	4.15	3.61	2.84	1.86	1.82	2.47	1.64	1.93
Quercetin 3- $\beta$ -D-glucoside	9 months (june 2023)															
	0.94	0.99	0.97	1.10	0.92	0.95	0.88	0.86	7.74	7.06	5.23	3.49	3.37	3.76	2.94	3.57
	12 months (september 2023)															
	0.53	0.76	0.65	0.93	0.47	0.33	0.37	0.33	3.05	2.84	2.73	2.13	1.90	2.73	2.09	2.25
	3 months (december 2022)															
	3.78	4.00	4.05	5.14	5.46	2.93	3.07	3.07	46.27	42.43	39.18	34.18	35.67	37.64	33.48	38.96
Rutin	6 months (march2023)															
	3.37	3.80	3.61	4.09	4.01	2.15	2.33	2.59	20.33	15.74	14.33	11.09	10.86	16.27	10.90	10.31
	9 months (june 2023)															
	5.13	8.03	7.61	9.25	8.39	5.39	4.66	5.64	109.39	100.17	90.76	73.40	71.49	73.72	59.99	66.49
	12 months (september 2023)															
	1.48	1.62	1.35	1.60	1.07	0.56	0.51	0.43	26.55	27.20	25.37	22.81	23.69	29.65	21.36	21.90
(-)-Catechin	3 months (december 2022)															
	1.30	1.16	1.10	1.36	1.49	1.07	1.08	1.27	4.74	4.88	3.66	2.59	2.86	3.26	2.81	3.05
	6 months (march2023)															
	0.62	0.62	0.62	0.80	0.85	0.70	0.73	0.73	2.76	2.71	2.12	1.22	1.29	1.59	1.22	1.48
	9 months (june 2023)															
	1.60	1.96	2.03	2.48	2.90	2.21	2.08	2.40	4.72	4.94	4.53	3.61	3.86	4.38	3.48	3.27
(-)-Catechin	12 months (september 2023)															
	0.10	0.12	0.08	0.15	0.11	0.09	0.11	0.06	-	-	-	-	-	-	-	-
	3 months (december 2022)															
	15.37	14.16	14.08	12.14	9.41	12.81	15.27	16.47	6.52	10.54	15.25	16.42	12.84	16.38	15.37	14.74
	6 months (march2023)															
	10.91	10.03	8.59	8.25	5.26	7.30	7.18	8.42	3.02	6.15	8.93	7.72	4.35	5.62	6.57	4.28
(-)-Catechin	9 months (june 2023)															
	12.48	20.04	19.09	17.23	12.53	15.66	15.77	21.76	11.64	16.02	21.77	21.80	15.76	19.11	18.67	16.52
	12 months (september 2023)															
	5.62	8.58	8.97	7.84	5.98	6.00	6.17	5.42	1.78	3.09	8.99	16.77	13.20	11.83	11.62	8.69

(+) -Catechin	3 months (december 2022)															
	31.18	25.30	26.48	31.92	33.54	39.18	32.59	32.29	62.01	75.69	60.25	63.34	54.91	56.92	56.80	43.88
	6 months (march2023)															
	34.02	25.72	24.97	30.04	29.89	35.08	32.78	27.80	46.75	50.37	44.61	42.49	30.96	37.05	33.23	24.83
	9 months (june 2023)															
	58.90	60.54	63.20	73.78	73.12	86.66	77.87	81.82	126.79	123.35	112.95	117.62	85.77	97.99	84.36	56.26
(-)- Epicatechin	12 months (september 2023)															
	43.60	57.38	44.81	60.81	32.72	29.14	26.22	20.16	75.14	94.25	135.48	177.89	127.49	162.28	128.34	77.38
	3 months (december 2022)															
	40.27	32.65	33.30	43.14	28.05	44.00	36.09	37.64	39.95	47.80	44.61	52.19	43.23	45.44	40.56	29.39
	6 months (march2023)															
	31.16	24.73	23.66	30.37	19.03	30.36	26.76	23.34	27.99	33.08	32.13	32.58	19.42	24.18	23.03	12.35
Resveratrol	9 months (june 2023)															
	50.32	56.62	53.62	69.28	46.22	78.53	59.14	64.70	69.08	77.52	75.57	84.36	51.46	63.59	55.82	35.17
	12 months (september 2023)															
	18.05	20.69	15.30	23.66	9.78	12.44	11.24	8.44	15.73	19.40	30.30	22.90	28.46	42.82	31.40	17.35
	3 months (december 2022)															
	12.85	12.61	14.98	19.28	9.57	7.28	12.06	14.03	11.07	8.07	19.28	21.22	9.29	13.20	7.91	11.82
Ellagic acid	6 months (march2023)															
	9.33	9.12	9.73	11.5	5.54	3.45	14.87	19.85	11.53	13.29	23.07	26.11	10.52	15.73	11.20	11.86
	9 months (june 2023)															
	7.58	9.15	7.33	10.33	9.94	7.30	15.33	12.46	11.20	13.20	14.23	11.77	13.68	19.13	12.37	12.13
	12 months (september 2023)															
	7.98	10.70	8.61	14.81	13.08	9.80	11.83	11.29	11.83	12.93	12.90	12.34	13.90	21.40	9.41	10.19
Ellagic acid	3 months (december 2022)															
	14.40	13.13	14.22	16.38	14.07	13.17	11.35	15.40	10.97	9.10	9.11	9.14	8.53	9.33	7.78	8.31
	6 months (march2023)															
	16.12	13.88	14.01	16.63	12.64	12.79	12.49	14.80	6.41	5.90	5.44	4.19	3.74	4.06	2.98	3.68
	9 months (june 2023)															
	34.85	37.76	38.55	46.41	41.83	42.68	35.97	53.82	29.78	24.68	23.07	22.06	19.00	20.45	14.93	14.45
Ellagic acid	12 months (september 2023)															
	23.16	24.38	22.16	26.09	13.58	9.44	9.78	8.84	8.84	9.13	13.61	19.06	16.05	20.15	12.48	4.69

The anthocyanidins and anthocyanins values obtained by the HPLC-MS method from red wines																
$\mu\text{g mL}^{-1}$																
Compunds	FNI M	FNI V1	FNI V2	FNI V3	FNII M	FNII V1	FNII V2	FNII V3	CSI M	CSI V1	CSI V2	CSI V3	CSII M	CSII V1	CSII V2	CSII V3
Delphinidin	3 months (december 2022)															
	1.27	1.28	1.29	1.30	1.26	1.27	1.26	1.27	1.31	1.32	1.28	1.27	1.30	1.34	1.31	1.33
	6 months (march2023)															
	2.59	2.53	2.46	2.58	2.29	1.79	1.92	2.05	2.23	2.40	2.19	1.75	1.61	1.81	1.71	1.71
	9 months (june 2023)															
	2.13	2.18	2.17	2.23	2.09	1.24	1.83	1.81	2.99	2.98	2.28	2.44	2.69	3.83	3.00	3.73
Delphinidin-3-glucoside	12 months (september 2023)															
	1.04	1.18	1.44	1.71	1.79	1.18	1.15	1.24	5.44	5.28	3.99	2.78	2.26	2.68	2.23	2.51
	3 months (december 2022)															
	564.31	534.26	558.05	688.37	561.53	456.51	459.10	635.21	787.14	921.56	823.60	628.11	804.27	950.80	877.57	832.50
	6 months (march2023)															
	610.25	596.23	612.44	747.76	560.71	366.72	496.00	572.78	362.48	396.86	378.37	255.32	271.56	319.08	271.66	221.65
Peonidin-3-glucoside	9 months (june 2023)															
	282.78	261.25	244.87	289.96	265.47	138.53	200.35	206.87	205.69	248.11	179.08	125.73	265.05	380.24	331.31	303.83
	12 months (september 2023)															
	65.14	71.66	79.83	118.14	125.12	90.48	98.14	102.06	81.38	112.47	97.38	70.19	79.54	95.38	84.93	81.88
	3 months (december 2022)															
	25.23	24.66	27.24	31.24	25.41	27.05	23.30	22.28	22.09	26.03	24.70	20.72	25.41	29.10	26.50	26.88
Cyanidin-3-glucoside	6 months (march2023)															
	20.80	20.15	20.29	26.04	18.40	22.45	19.07	21.79	12.89	8.34	14.64	10.35	11.01	12.50	11.57	10.05
	9 months (june 2023)															
	9.93	9.30	8.77	10.41	8.93	6.03	8.30	7.39	3.91	6.36	3.89	2.80	6.51	9.94	8.98	7.71
	12 months (september 2023)															
	5.46	6.27	7.96	11.80	12.32	1.15	11.54	10.63	6.14	9.93	8.92	7.19	7.39	9.21	7.90	8.05
Malvidin	3 months (december 2022)															
	1.80	2.07	2.42	3.19	2.32	2.18	1.85	2.70	4.32	6.39	5.78	3.82	5.21	7.30	6.25	6.03
	6 months (march2023)															
	2.93	3.06	3.28	4.24	2.88	2.49	2.68	3.76	2.77	4.27	3.84	2.30	2.51	3.38	2.71	2.77
	9 months (june 2023)															
	0.91	0.84	0.75	1.04	0.84	0.54	0.66	0.70	1.00	1.49	1.08	0.72	1.60	2.73	2.22	2.15
Malvidin	12 luni (septembrie 2023)															
	0.97	1.18	1.57	2.08	2.06	1.78	1.78	1.94	1.58	2.46	2.07	1.32	1.44	2.14	1.81	1.91
Malvidin	3 months (december 2022)															
	4.27	4.13	4.28	4.38	3.93	3.38	3.10	3.53	17.19	18.97	19.72	19.76	23.93	22.71	20.13	18.92

	6 months (march2023)															
	2.85	2.92	2.67	3.04	2.77	2.04	2.30	2.61	4.77	6.86	6.16	5.70	4.96	9.89	10.07	6.07
	9 months (june 2023)															
	1.63	1.71	1.65	1.85	1.67	0.95	1.42	1.40	4.29	5.08	4.00	3.50	6.29	7.72	7.05	6.03
Malvidin-3-glucoside	12 months (september 2023)															
	2.24	1.94	1.86	2.80	2.39	1.85	2.07	1.88	5.04	6.66	6.21	5.91	5.88	5.54	4.88	4.03
	3 months (december 2022)															
	708.74	656.63	680.08	708.34	704.28	585.03	571.34	644.04	539.50	566.18	569.14	565.22	668.01	688.32	632.10	598.86
	6 months (march2023)															
	677.73	633.92	620.96	683.06	581.64	520.02	518.03	594.92	279.53	286.25	298.71	252.31	241.92	240.13	228.98	169.92
Petunidin-3-glucoside	9 months (june 2023)															
	357.36	374.58	353.70	407.61	371.60	199.06	306.44	306.81	166.71	214.19	157.23	139.34	246.61	288.05	264.10	229.34
	12 months (september 2023)															
	153.50	163.51	181.95	224.48	264.63	193.84	211.61	213.58	112.79	154.73	150.03	144.05	147.20	157.49	142.38	132.96
	3 months (december 2022)															
	92.75	87.00	91.11	104.66	92.46	78.86	78.16	92.82	93.84	101.07	91.60	79.19	93.91	106.97	98.08	97.23
	6 months (march2023)															
	79.92	77.86	78.04	94.34	73.93	63.93	68.14	75.85	34.72	35.33	34.13	25.70	25.81	28.37	25.05	22.97
	9 months (june 2023)															
	39.09	38.16	35.67	43.34	38.97	20.57	30.30	30.21	19.53	23.05	16.00	11.82	22.46	29.96	26.35	25.58
	12 months (september 2023)															
	36.23	37.38	44.72	63.72	71.73	52.13	56.35	56.03	31.49	42.66	17.17	29.17	30.36	36.71	32.12	33.18

FN- Feteasca Neagra, CS- Cabernet Sauvignon, I-punch down, II-pumping over, M-control samples, V1- 50, V2-100, V3-500 µg of melatonin were applied to 1 kg of must.