SUPPLEMENTARY TABLE 1

Overall mean, standard deviation, minimum mean, and maximum mean amino acid concentrations (mg/L).

Amino acid	Mean	Standard deviation	Min	Max
PRO	697.69	410.30	186.18	1638.23
ARG	388.35	168.26	185.63	765.56
GLN	111.57	41.83	61.06	216.37
TRP	105.67	55.27	47.33	214.29
GABA	100.18	19.92	69.21	136.60
ALA	85.17	34.91	38.55	145.08
SER	75.16	16.61	49.14	104.56
THR	70.27	24.30	35.49	116.10
GLU	61.12	18.65	35.23	100.96
HIS	31.07	8.64	21.11	51.92
VAL	28.81	5.43	20.52	37.74
PHE	27.62	12.19	10.09	49.75
ASP	25.69	8.44	11.98	37.86
ILE	19.92	5.89	13.93	32.78
LEU	16.07	8.03	5.38	32.02
HYP	10.85	3.48	2.79	16.91
LYS	3.91	1.27	2.32	6.07
MET	3.64	3.01	0.66	9.96
GLY	3.28	1.19	1.08	5.25
ORN	2.01	1.41	0.43	4.75

SUPPLEMENTARY TABLE 2

Average concentration and percentage of branched-chain and aromatic amino acids per cultivar.

	Concentration (mg/L)		**Percentage**	
Cultivar	**Branched-chain**	**Aromatic**	**Branched-chain**	**Aromatic**
Cabernet Franc	66.4	144,9	3.7	8.2
Cabernet Sauvignon	59.2	89,1	2.7	4.1
Chardonnay	53.8	118,5	2.6	5.6
Chenin Blanc	57.2	90,3	3.9	6.2
Cinsaut	99.0	198,6	4.6	9.2
Grenache Blanc	41.3	117,3	3.2	9.1
Merlot	60.9	99,1	2.6	4.2
Pinotage	85.7	234,0	3.4	9.3
Roussanne	88.8	264,0	4.5	13.4
Sauvignon Blanc	46.3	77,8	3.2	5.5
Semillon	48.2	75,0	3.6	5.6
Shiraz	63.0	116,1	3.4	6.3
Viognier	72.5	108,0	3.9	5.8
Overall average	133.3	64,8	3.5	7.1

SUPPLEMENTARY TABLE 3

Percentage of amino acids per cultivar (%).

Cultivar	***Cabernet Franc***	***Cabernet Sauvignon***	***Chardon-nay***	***Chenin Blanc***	***Cinsaut***	***Grenache Blanc***	***Merlot***	***Pinotage***	***Rouss-anne***	***Sauvignon Blanc***	***Semillon***	***Shiraz***	***Viognier***	***Average***
ALA	2.17	2.72	6.91	7.11	6.28	5.10	1.71	5.13	3.03	7.14	5.97	2.80	5.17	4,71
ARG	15.88	9.57	10.58	21.50	29.51	34.82	7.84	30.42	16.84	24.55	30.34	17.61	30.65	21,55
ASP	0.67	0.66	1.57	2.24	1.10	1.75	0.55	1.49	1.47	2.65	2.21	1.18	1.43	1,46
GABA	4.79	6.20	5.06	6.51	6.33	5.36	3.98	4.98	4.31	6.54	6.06	5.75	4.87	5,44
GLN	5.25	3.02	6.05	5.78	8.16	9.95	2.58	8.60	4.67	7.23	6.58	5.16	6.38	6,11
GLU	2.62	1.95	2.75	4.34	3.81	3.87	1.49	4.01	4.09	5.69	3.64	3.02	2.66	3,38
GLY	0.21	0.17	0.22	0.18	0.24	0.11	0.10	0.19	0.06	0.20	0.23	0.21	0.19	0,18
HIS	1.19	1.26	2.16	1.78	1.04	2.43	1.04	2.06	1.70	1.97	2.01	1.53	1.99	1,70
HYP	0.64	0.59	0.70	0.73	0.39	0.64	0.53	0.11	0.86	0.51	0.74	0.71	0.66	0,60
ILE	1.31	0.73	0.76	1.24	1.35	1.19	0.68	0.80	1.67	1.04	1.04	0.92	1.43	1,09
LEU	1.06	0.78	0.39	0.64	1.48	0.42	0.80	1.13	1.13	0.57	0.72	1.10	0.56	0,83
LYS	0.15	0.28	0.14	0.16	0.26	0.30	0.20	0.24	0.12	0.22	0.26	0.22	0.19	0,21
MET	0.07	0.15	0.47	0.32	0.21	0.08	0.03	0.36	0.09	0.19	0.48	0.05	0.07	0,20
ORN	0.10	0.05	0.02	0.08	0.22	0.34	0.06	0.15	0.02	0.11	0.21	0.03	0.12	0,12
PHE	0.61	0.88	1.19	2.39	1.68	3.07	0.43	0.91	2.53	2.14	1.52	0.84	2.37	1,58
PRO	49.59	61.79	46.36	27.34	20.71	14.42	69.21	20.79	37.10	24.56	22.08	44.56	25.95	35,73
SER	2.77	2.65	4.85	5.15	3.70	4.65	2.42	4.15	4.35	4.77	5.20	4.19	4.88	4,13
THR	2.03	2.06	3.95	6.72	4.26	3.92	1.50	4.61	3.37	4.98	4.76	3.33	5.08	3,89
TRP	7.54	3.25	4.45	3.77	7.52	6.01	3.76	8.39	10.89	3.32	4.09	5.42	3.43	5,53
VAL	1.36	1.23	1.41	2.02	1.75	1.59	1.09	1.48	1.72	1.63	1.85	1.37	1.91	1,57

SUPPLEMENTARY TABLE 4

Mean concentrations of the various cultivars included in the survey (mg/L).

Cultivar	***Cabernet Franc***	***Cabernet Sauvignon***	***Chardonnay***	***Chenin Blanc***	***Cinsaut***	***Grenache Blanc***	***Merlot***	***Pinotage***	***Roussanne***	***Sauvignon Blanc***	***Semillon***	***Shiraz***	***Viognier***
ALA	38.55	58.75	145.08	104.16	135.57	65.80	40.59	129.22	59.64	101.88	79.89	52.04	96.09
ARG	282.13	206.47	222.11	314.98	637.03	449.62	185.63	765.56	331.56	350.44	405.98	327.09	569.91
ASP	11.98	14.16	32.98	32.83	23.83	22.59	13.11	37.54	28.98	37.86	29.60	21.86	26.68
GABA	85.08	133.81	106.33	95.43	136.60	69.21	94.22	125.26	84.79	93.35	81.02	106.80	90.47
GLN	93.38	65.24	127.15	84.66	176.25	128.49	61.06	216.37	92.01	103.19	88.10	95.88	118.63
GLU	46.50	42.05	57.84	63.61	82.28	49.94	35.23	100.96	80.58	81.27	48.76	56.13	49.46
GLY	3.70	3.69	4.54	2.57	5.25	1.39	2.32	4.75	1.08	2.82	3.10	3.87	3.55
HIS	21.11	27.19	45.41	26.02	22.52	31.34	24.68	51.92	33.41	28.10	26.86	28.32	37.08
HYP	11.34	12.75	14.72	10.66	8.39	8.31	12.55	2.79	16.91	7.22	9.93	13.26	12.24
ILE	23.27	15.71	15.92	18.16	29.24	15.37	16.02	20.09	32.78	14.81	13.93	17.05	26.57
LEU	18.90	16.88	8.19	9.41	32.02	5.38	19.00	28.41	22.19	8.17	9.57	20.41	10.36
LYS	2.60	6.07	2.86	2.41	5.56	3.88	4.79	5.98	2.32	3.21	3.53	4.12	3.57
MET	1.19	3.28	9.96	4.62	4.57	1.06	0.66	8.99	1.68	2.69	6.43	0.88	1.27
ORN	1.83	1.12	0.47	1.10	4.75	4.40	1.31	3.69	0.43	1.51	2.80	0.60	2.15
PHE	10.93	19.03	25.06	35.00	36.31	39.66	10.09	22.89	49.75	30.48	20.28	15.53	44.09
PRO	881.33	1333.56	973.52	400.57	447.03	186.18	1638.2	523.28	730.35	350.55	295.45	827.50	482.41
SER	49.14	57.29	101.86	75.49	79.86	60.04	57.17	104.56	85.66	68.04	69.54	77.77	90.70
THR	36.05	44.48	83.01	98.48	91.91	50.60	35.49	116.10	66.27	71.13	63.65	61.86	94.49
TRP	133.96	70.08	93.42	55.27	162.33	77.66	89.02	211.11	214.29	47.33	54.75	100.58	63.86
VAL	24.19	26.65	29.66	29.58	37.74	20.52	25.91	37.22	33.85	23.33	24.74	25.53	35.55

SUPPLEMENTARY TABLE 5

Standard deviations of the various cultivars included in the survey (mg/L).

Cultivar	***Cabernet Franc***	***Cabernet Sauvignon***	***Chardonnay***	***Chenin Blanc***	***Cinsaut***	***Grenache Blanc***	***Merlot***	***Pinotage***	***Rouss-anne***	***Sauvignon Blanc***	***Semillon***	***Shiraz***	***Viognier***
ALA	18.33	48.50	78.35	58.60	67.06	30.25	24.46	53.34	70.85	59.43	45.87	35.37	43.41
ARG	224.02	168.24	134.43	201.49	321.92	288.64	233.83	412.63	314.71	249.18	219.29	212.79	278.74
ASP	10.88	16.47	26.66	24.87	14.27	15.02	10.49	12.91	26.91	28.02	25.64	15.03	21.02
GABA	34.77	56.88	46.93	50.24	39.32	28.53	24.80	45.96	75.18	43.88	32.96	39.30	48.30
GLN	77.47	45.05	122.30	81.22	101.65	114.47	47.32	139.20	115.11	91.02	82.34	80.03	107.34
GLU	38.16	36.61	34.16	40.91	31.92	38.64	19.64	39.60	43.50	53.43	21.00	30.49	28.58
GLY	1.84	1.79	2.11	1.94	2.19	1.49	1.76	3.63	1.55	1.98	2.32	3.66	1.89
HIS	18.33	17.72	27.84	20.51	26.27	23.98	13.43	45.05	60.93	23.85	18.10	17.36	23.90
HYP	7.85	7.99	11.80	8.57	6.21	8.23	7.78	5.45	17.61	6.74	7.29	7.76	9.56
ILE	10.12	7.55	8.86	11.77	20.35	10.52	8.30	13.67	27.72	11.68	5.58	6.65	10.37
LEU	14.57	10.63	11.13	13.30	24.55	8.29	10.82	21.13	15.40	11.96	11.21	11.79	13.99
LYS	2.66	7.64	3.85	3.01	2.07	4.75	4.48	4.81	3.18	4.05	2.77	4.21	3.99
MET	1.56	8.58	10.29	4.92	4.34	2.42	1.15	8.72	3.29	3.48	6.85	1.94	2.08
ORN	1.87	1.37	0.82	1.94	4.11	5.29	1.67	3.88	0.92	1.96	2.40	1.24	2.02
PHE	11.02	15.82	13.83	25.31	24.09	20.25	9.17	12.74	68.50	25.62	12.01	10.46	24.22
PRO	673.70	913.16	594.82	272.24	188.69	138.10	743.15	209.83	904.33	317.29	105.50	593.68	579.76
SER	16.05	30.26	39.73	38.54	21.69	37.08	15.19	31.90	50.06	32.94	24.05	51.28	42.02
THR	17.93	24.66	41.54	56.93	39.64	33.47	16.23	49.48	81.87	37.48	33.28	28.77	43.64
TRP	79.10	89.58	112.59	72.13	77.26	85.36	105.97	151.86	149.17	62.62	56.92	52.34	78.45
VAL	9.11	7.47	14.30	17.09	20.37	13.43	5.60	18.95	34.22	13.33	10.01	8.68	13.15

SUPPLEMENTARY TABLE 6

Median concentrations of the various cultivars included in the survey (mg/L).

Cultivar	***Cabernet Franc***	***Cabernet Sauvignon***	***Chardonnay***	***Chenin Blanc***	***Cinsaut***	***Grenache Blanc***	***Merlot***	***Pinotage***	***Rouss-anne***	***Sauvignon Blanc***	***Semillon***	***Shiraz***	***Viognier***
ALA	33.19	43.38	134.52	94.62	116.76	56.98	29.15	124.33	44.20	91.63	67.21	47.33	88.59
ARG	201.12	158.52	188.81	264.41	525.59	343.01	103.31	721.02	248.22	283.71	370.60	290.71	515.98
ASP	11.78	8.61	25.03	27.01	21.83	16.23	11.92	38.25	18.23	31.56	20.47	18.95	22.08
GABA	72.61	121.15	99.14	84.49	133.59	60.47	88.04	105.91	59.41	84.19	75.47	111.52	74.75
GLN	69.05	51.97	109.35	63.09	137.17	74.42	49.22	181.10	55.55	70.04	72.05	69.08	74.33
GLU	37.23	30.36	48.88	54.42	72.91	33.93	29.67	105.66	72.35	66.23	46.63	50.36	37.86
GLY	3.34	3.98	4.71	2.42	5.61	1.29	2.66	4.49	ND	2.69	2.75	3.55	3.75
HIS	18.82	27.14	37.82	19.79	12.44	24.49	26.89	57.82	20.99	21.10	24.12	26.47	38.32
HYP	12.02	12.93	12.18	9.24	6.62	6.55	13.13	ND	14.06	6.01	8.62	12.85	13.11
ILE	24.29	15.91	13.69	15.25	21.61	13.17	14.57	14.68	25.20	11.62	14.54	16.44	27.04
LEU	20.67	19.43	0.77	0.21	22.45	ND	19.08	28.36	25.41	1.06	1.66	18.95	0.53
LYS	2.07	3.64	1.92	1.77	5.22	1.37	3.82	6.77	ND	2.21	3.56	3.50	2.57
MET	0.13	0.13	7.25	3.78	2.08	ND	0.13	7.68	0.13	1.69	5.07	0.13	0.13
ORN	2.00	ND	ND	0.28	2.96	3.09	ND	3.47	ND	0.82	2.45	ND	2.33
PHE	7.49	15.07	21.66	28.97	26.91	34.58	7.39	21.38	33.26	23.73	18.47	15.43	37.21
PRO	908.65	1169.09	797.46	320.50	438.28	138.78	1884.42	507.14	284.72	274.19	291.72	707.67	326.98
SER	48.23	44.95	94.36	68.41	73.70	54.76	53.96	107.89	68.07	60.72	73.98	65.17	79.26
THR	39.59	36.97	76.34	85.16	76.79	35.15	31.94	120.66	41.65	61.94	53.14	60.83	90.13
TRP	138.47	33.75	39.58	18.16	153.71	45.15	63.74	203.24	249.81	21.27	33.35	94.84	25.54
VAL	25.55	27.76	25.49	25.72	28.22	14.07	26.42	37.41	26.84	20.33	26.25	24.85	32.42

SUPPLEMENTARY TABLE 7

Minimum concentrations of the various cultivars included in the survey (mg/L).

Cultivar	***Cabernet Franc***	***Cabernet Sauvignon***	***Chardonnay***	***Chenin Blanc***	***Cinsaut***	***Grenache Blanc***	***Merlot***	***Pinotage***	***Rouss-anne***	***Sauvignon Blanc***	***Semillon***	***Shiraz***	***Viognier***
ALA	12.43	5.06	18.65	12.43	50.68	36.77	15.99	55.08	13.72	0.03	17.72	0.55	11.84
ARG	30.79	13.56	43.69	32.52	271.11	102.32	30.96	108.99	44.04	21.38	110.27	22.56	44.65
ASP	ND	ND	ND	ND	ND	4.26	ND	10.74	3.47	ND	ND	ND	3.06
GABA	44.79	54.77	30.53	14.47	78.34	40.28	50.54	75.15	38.90	13.90	37.43	ND	25.47
GLN	0.11	0.11	ND	ND	69.61	13.80	0.11	36.07	21.44	ND	ND	10.55	ND
GLU	ND	ND	12.46	13.75	44.53	16.71	ND	33.28	24.72	11.29	18.86	13.80	12.20
GLY	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
HIS	ND	ND	ND	ND	ND	ND	ND	ND	3.93	ND	ND	ND	ND
HYP	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ILE	11.53	0.46	0.46	ND	11.56	0.46	0.46	0.46	11.12	ND	5.12	0.46	8.42
LEU	ND	ND	ND	ND	12.44	ND	ND	ND	ND	ND	ND	ND	ND
LYS	ND	ND	ND	ND	2.38	ND	ND	ND	ND	ND	ND	ND	ND
MET	0.13	0.13	ND	ND	0.13	ND	0.13	0.13	ND	ND	ND	0.13	ND
ORN	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PHE	ND	ND	7.29	ND	13.43	15.78	ND	ND	7.42	ND	6.45	ND	11.88
PRO	178.96	76.37	130.11	78.43	235.50	33.22	159.70	257.60	195.74	62.53	111.94	51.18	141.55
SER	24.98	27.32	28.96	0.17	52.13	24.82	23.73	53.55	41.86	7.98	29.15	19.42	36.75
THR	ND	ND	12.38	12.03	43.39	18.55	14.31	40.41	20.08	7.31	21.19	11.61	9.87
TRP	ND	ND	6.24	ND	36.24	8.78	ND	46.40	7.96	ND	3.10	7.39	ND
VAL	12.06	6.98	ND	6.19	21.34	1.31	13.14	12.84	13.98	ND	10.59	7.89	16.18

SUPPLEMENTARY TABLE 8

Maximum concentrations of the various cultivars included in the survey (mg/L).

Cultivar	***Cabernet Franc***	***Cabernet Sauvignon***	***Chardonnay***	***Chenin Blanc***	***Cinsaut***	***Grenache Blanc***	***Merlot***	***Pinotage***	***Rouss-anne***	***Sauvignon Blanc***	***Semillon***	***Shiraz***	***Viognier***
ALA	73.59	215.38	538.30	433.21	254.52	141.10	99.81	232.81	311.35	465.02	211.39	176.98	234.83
ARG	712.47	771.80	775.51	1345.35	1251.89	1150.68	1210.58	1616.56	1381.61	1406.85	924.14	1067.62	1332.49
ASP	44.21	66.44	121.53	122.38	53.99	57.45	43.90	66.43	105.08	163.94	83.21	65.68	109.45
GABA	169.01	285.22	261.76	389.66	208.67	126.94	145.56	217.31	328.02	331.51	148.91	188.84	244.69
GLN	274.74	203.64	988.05	546.35	372.29	398.81	181.41	552.57	477.64	470.88	351.37	469.23	379.27
GLU	155.47	172.23	207.44	244.46	160.28	145.10	80.76	162.28	190.81	428.29	97.51	153.59	127.74
GLY	6.97	7.30	9.68	11.77	8.61	6.32	5.78	11.61	4.73	9.67	8.21	23.25	7.59
HIS	53.58	61.28	139.79	131.76	93.32	75.51	56.95	140.21	251.38	162.91	56.38	83.45	99.36
HYP	29.77	36.51	86.88	49.48	24.83	28.44	32.04	16.47	68.16	42.25	21.87	35.07	35.43
ILE	36.69	36.01	41.69	72.55	69.85	38.91	41.40	50.13	129.01	70.74	21.33	36.59	54.08
LEU	47.38	40.27	50.23	53.65	83.07	29.48	52.63	74.94	41.70	67.52	30.47	72.87	41.51
LYS	8.19	34.19	21.44	15.73	9.21	12.68	18.73	11.75	9.94	20.51	9.77	23.16	13.97
MET	4.91	39.60	43.73	28.08	12.52	8.53	4.40	24.68	8.99	22.59	19.00	10.11	7.27
ORN	4.86	4.19	3.18	12.63	12.85	19.47	5.13	10.45	3.31	10.71	8.68	6.29	7.08
PHE	26.58	81.75	77.81	195.12	88.61	79.15	32.96	47.80	293.21	165.30	51.87	53.75	118.05
PRO	2122.94	3171.60	3148.46	1810.55	1028.90	550.07	2637.99	919.36	2835.06	2593.47	455.05	3445.43	3283.74
SER	83.94	162.78	236.36	310.53	123.24	176.76	91.04	170.10	243.10	254.07	109.20	275.72	211.24
THR	63.79	108.69	240.60	373.20	158.13	138.70	83.38	201.04	355.98	238.12	152.04	158.67	214.78
TRP	262.46	431.74	583.73	331.87	298.91	298.20	513.04	556.15	426.27	386.13	222.26	245.40	286.53
VAL	4ND	40.76	81.79	91.32	78.68	43.64	38.32	82.83	154.41	82.83	41.96	49.50	74.47

SUPPLEMENTARY TABLE 9

Range of amino acid concentrations of the various cultivars included in the survey (mg/L).

Cultivar	***Cabernet Franc***	***Cabernet Sauvignon***	***Chardonnay***	***Chenin Blanc***	***Cinsaut***	***Grenache Blanc***	***Merlot***	***Pinotage***	***Rouss-anne***	***Sauvignon Blanc***	***Semillon***	***Shiraz***	***Viognier***
ALA	61.16	210.32	519.65	420.77	203.85	104.33	83.82	177.73	297.63	464.99	193.67	176.43	222.99
ARG	681.67	758.25	731.82	1312.83	980.78	1048.36	1179.62	1507.58	1337.56	1385.47	813.87	1045.06	1287.84
ASP	44.21	66.44	121.53	122.38	53.98	53.19	43.89	55.69	101.61	163.94	83.20	65.67	106.39
GABA	124.22	230.45	231.23	375.19	130.34	86.66	95.02	142.17	289.13	317.61	111.48	188.84	219.22
GLN	274.63	203.53	988.05	546.35	302.67	385.01	181.30	516.50	456.20	470.88	351.37	458.68	379.27
GLU	155.47	172.23	194.97	230.71	115.75	128.39	80.76	129.00	166.09	417.00	78.65	139.80	115.54
GLY	6.97	7.30	9.68	11.77	8.61	6.32	5.78	11.61	4.73	9.67	8.21	23.25	7.59
HIS	53.58	61.28	139.79	131.75	93.31	75.51	56.95	140.21	247.45	162.91	56.38	83.44	99.36
HYP	29.77	36.51	86.88	49.48	24.83	28.44	32.04	16.47	68.16	42.25	21.87	35.07	35.43
ILE	25.16	35.55	41.23	72.55	58.29	38.45	40.94	49.67	117.89	70.74	16.21	36.13	45.66
LEU	47.38	40.27	50.23	53.65	70.62	29.48	52.63	74.94	41.70	67.52	30.47	72.87	41.51
LYS	8.19	34.19	21.44	15.73	6.83	12.68	18.73	11.75	9.94	20.51	9.77	23.16	13.97
MET	4.78	39.46	43.73	28.08	12.39	8.53	4.27	24.55	8.99	22.59	19.00	9.98	7.27
ORN	4.86	4.19	3.18	12.63	12.85	19.47	5.13	10.45	3.31	10.71	8.68	6.29	7.08
PHE	26.58	81.75	70.52	195.12	75.17	63.38	32.96	47.80	285.79	165.30	45.42	53.75	106.17
PRO	1943.98	3095.23	3018.35	1732.12	793.40	516.85	2478.29	661.76	2639.32	2530.93	343.11	3394.25	3142.19
SER	58.96	135.46	207.40	310.36	71.11	151.94	67.31	116.54	201.24	246.09	80.05	256.30	174.50
THR	63.79	108.69	228.21	361.17	114.75	120.15	69.07	160.63	335.89	230.81	130.85	147.06	204.91
TRP	262.46	431.74	577.50	331.87	262.67	289.42	513.04	509.76	418.31	386.13	219.17	238.01	286.53
VAL	27.94	33.78	81.79	85.13	57.34	42.33	25.18	69.99	140.43	82.83	31.37	41.62	58.29

SUPPLEMENTARY TABLE 10

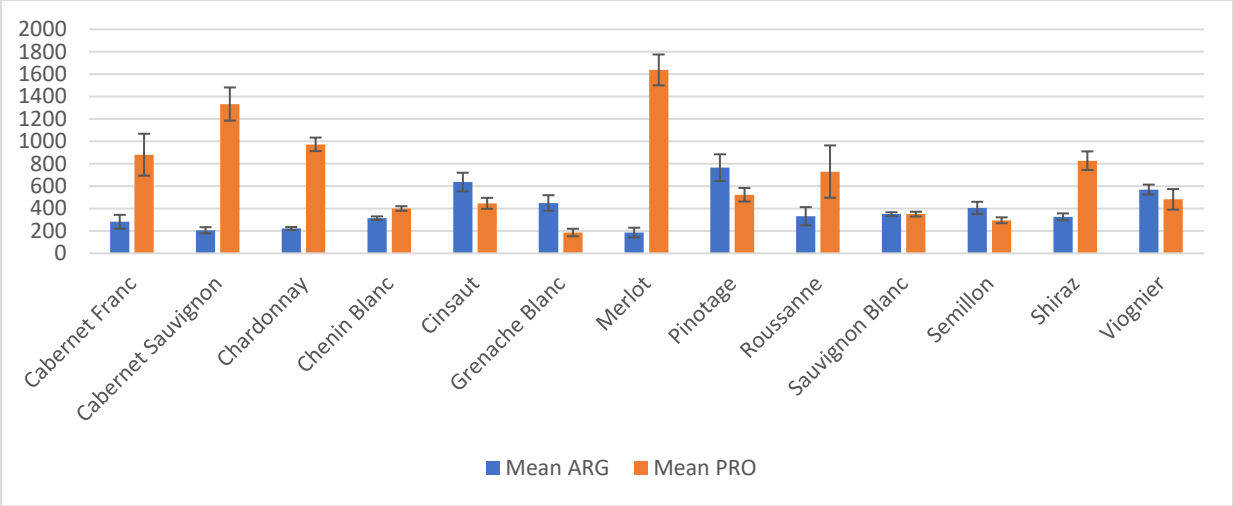
Interquartile range of the various cultivars included in the survey (mg/L).

Cultivar	***Cabernet Franc***	***Cabernet Sauvignon***	***Chardonnay***	***Chenin Blanc***	***Cinsaut***	***Grenache Blanc***	***Merlot***	***Pinotage***	***Rouss-anne***	***Sauvignon Blanc***	***Semillon***	***Shiraz***	***Viognier***
ALA	27.76	54.24	76.37	72.95	130.57	43.96	28.68	64.63	22.60	59.01	54.10	26.97	53.03
ARG	374.25	246.85	158.36	241.46	598.36	382.08	119.11	559.88	192.96	273.58	310.94	219.84	340.27
ASP	7.94	18.11	29.46	24.92	15.53	22.54	12.31	11.35	24.71	32.32	38.87	19.30	22.18
GABA	40.50	71.03	68.89	51.97	49.15	32.97	37.20	70.33	36.38	50.68	55.55	49.38	53.37
GLN	50.06	65.00	111.80	82.80	145.08	199.87	72.09	182.44	87.42	97.81	73.42	85.90	129.38
GLU	34.60	33.86	31.27	45.90	34.37	33.89	28.30	46.21	58.46	64.50	21.42	33.18	40.74
GLY	2.21	2.38	2.48	1.94	3.03	1.30	3.96	5.87	1.93	2.26	2.15	2.46	2.33
HIS	31.83	29.29	25.14	23.21	30.51	39.08	15.53	54.83	17.75	26.31	30.69	19.92	30.21
HYP	10.32	10.01	11.69	7.81	5.57	13.69	11.72	5.22	20.78	6.59	11.22	7.94	17.01
ILE	21.78	8.40	9.65	10.99	22.06	12.15	5.85	16.37	12.42	8.61	11.48	7.99	14.17
LEU	23.03	16.99	16.28	19.58	32.46	11.07	12.46	28.84	36.69	14.72	20.85	9.21	20.89
LYS	4.90	8.71	4.15	3.73	3.88	8.82	3.85	10.69	5.50	4.43	4.92	5.32	5.82
MET	2.22	2.82	15.19	6.63	7.51	0.26	ND	15.17	ND	4.29	12.88	ND	2.22
ORN	3.71	2.17	0.54	1.65	5.74	4.11	2.60	6.85	0.65	2.50	3.44	0.25	3.36
PHE	22.92	14.59	12.98	21.18	21.17	32.39	9.43	18.66	14.35	19.75	15.81	10.08	27.23
PRO	1259.06	1613.80	593.91	201.27	202.55	149.00	955.29	275.49	198.17	145.23	177.71	371.31	207.45
SER	18.05	34.52	47.59	41.41	32.59	38.48	22.07	34.21	56.98	36.93	38.09	50.23	42.86
THR	28.85	31.13	38.11	60.38	83.40	45.29	23.40	52.67	25.95	41.96	38.62	36.41	50.35
TRP	117.69	80.93	129.71	76.02	120.62	106.11	60.35	141.47	306.08	49.12	69.84	68.87	70.87
VAL	15.72	9.65	14.88	18.48	26.12	23.19	5.69	20.79	15.68	12.78	17.59	11.28	16.89

SUPPLEMENTARY TABLE 11

The best subset of predictor variables that were identified through general discriminant analysis for the prediction of white and red cultivars and the number of times these predictor variables occurred in the 20 best models.

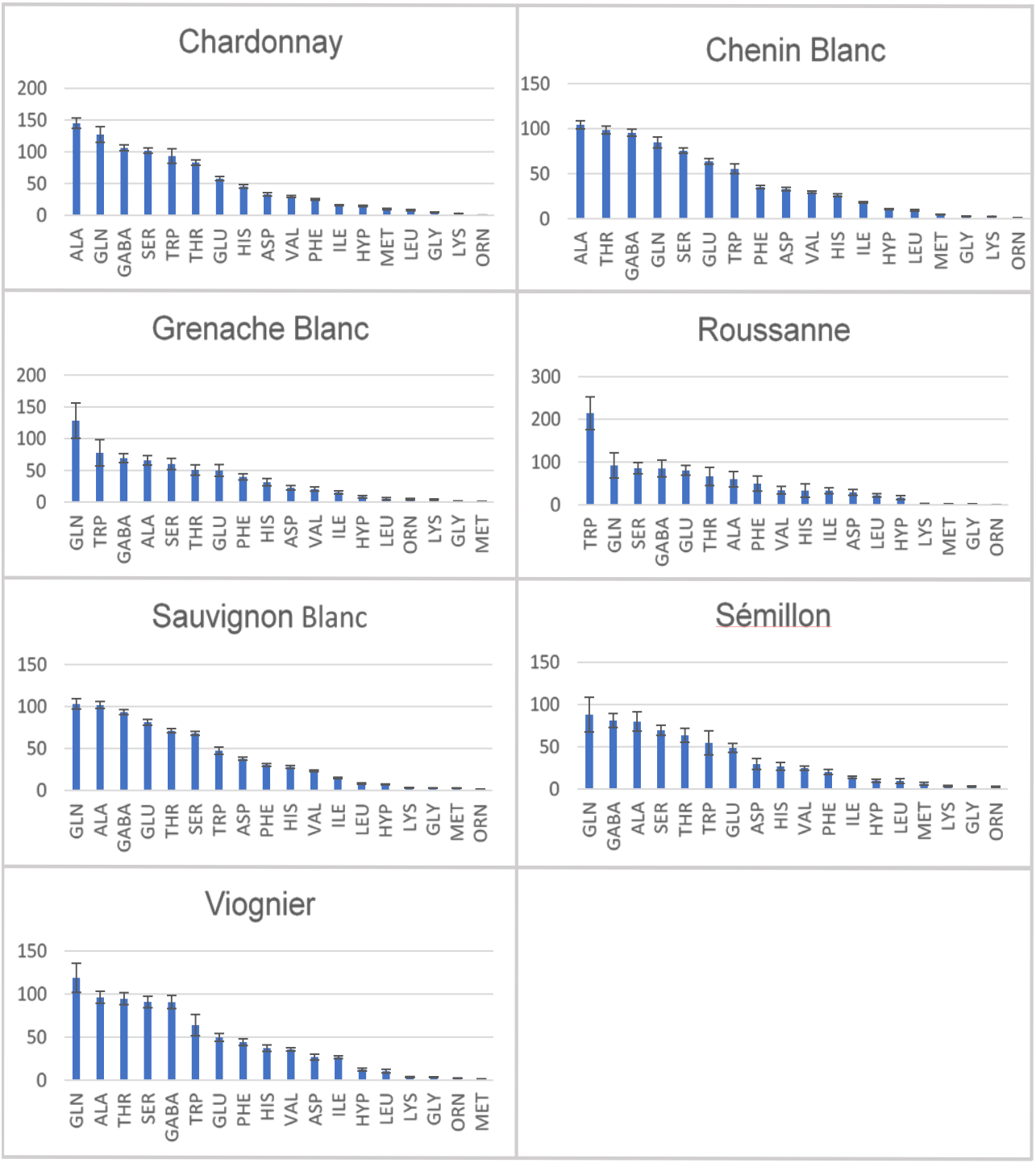
Best Subset	**Number of times AA appears**
Red vs. White	
ALA	19
LEU	18
GABA	17
PRO	6
White	
ARG	20
MET	20
THR	18
PRO	17
ALA	15
GLU	9
Red	
GABA	20
PRO	19
PHE	17
HYP	12
THR	11
ILE	6



SUPPLEMENTARY FIGURE 1

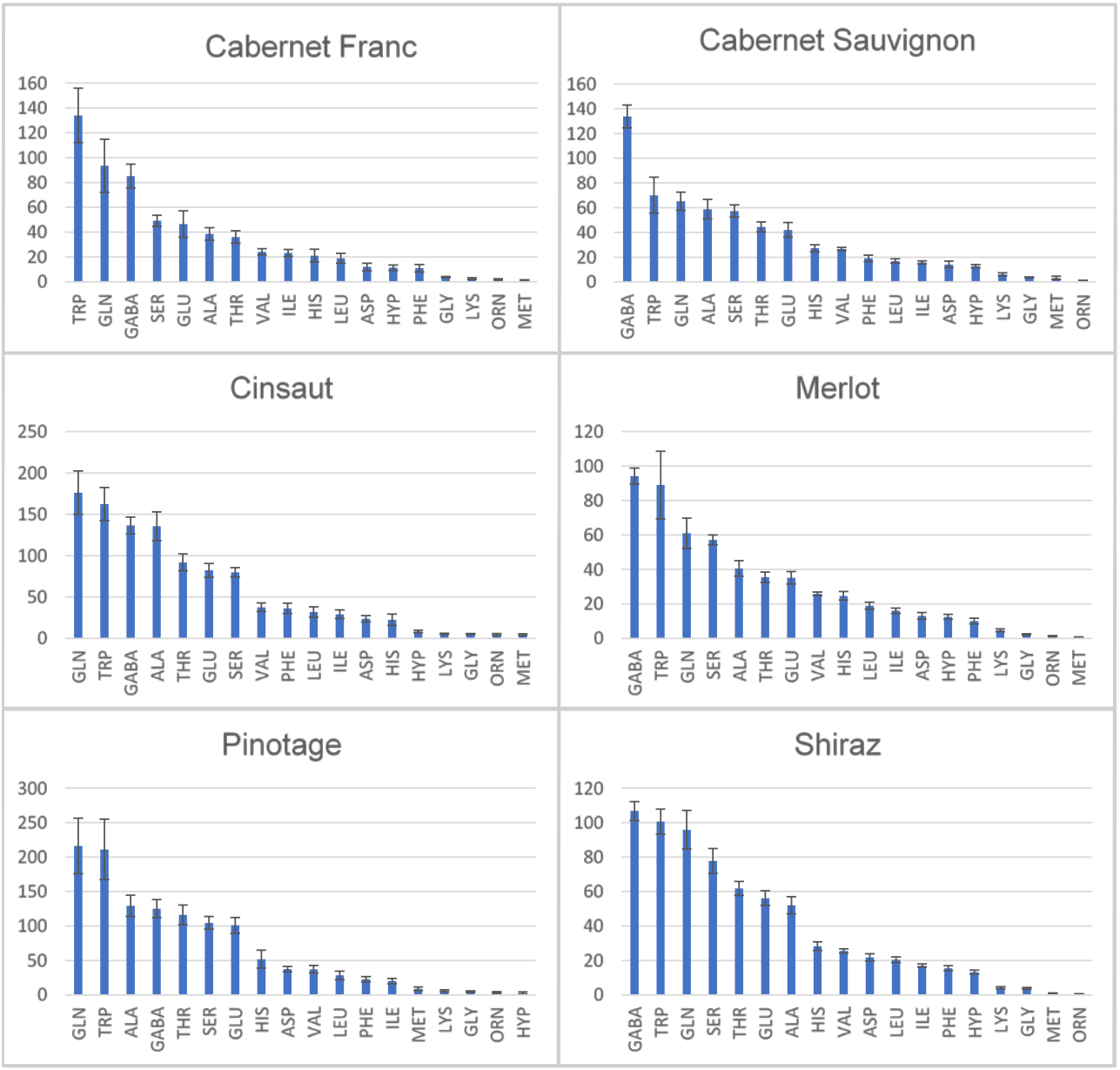
Mean proline and arginine concentrations of the various cultivars investigated in the survey (mg/L).

Error bars indicate the standard error.



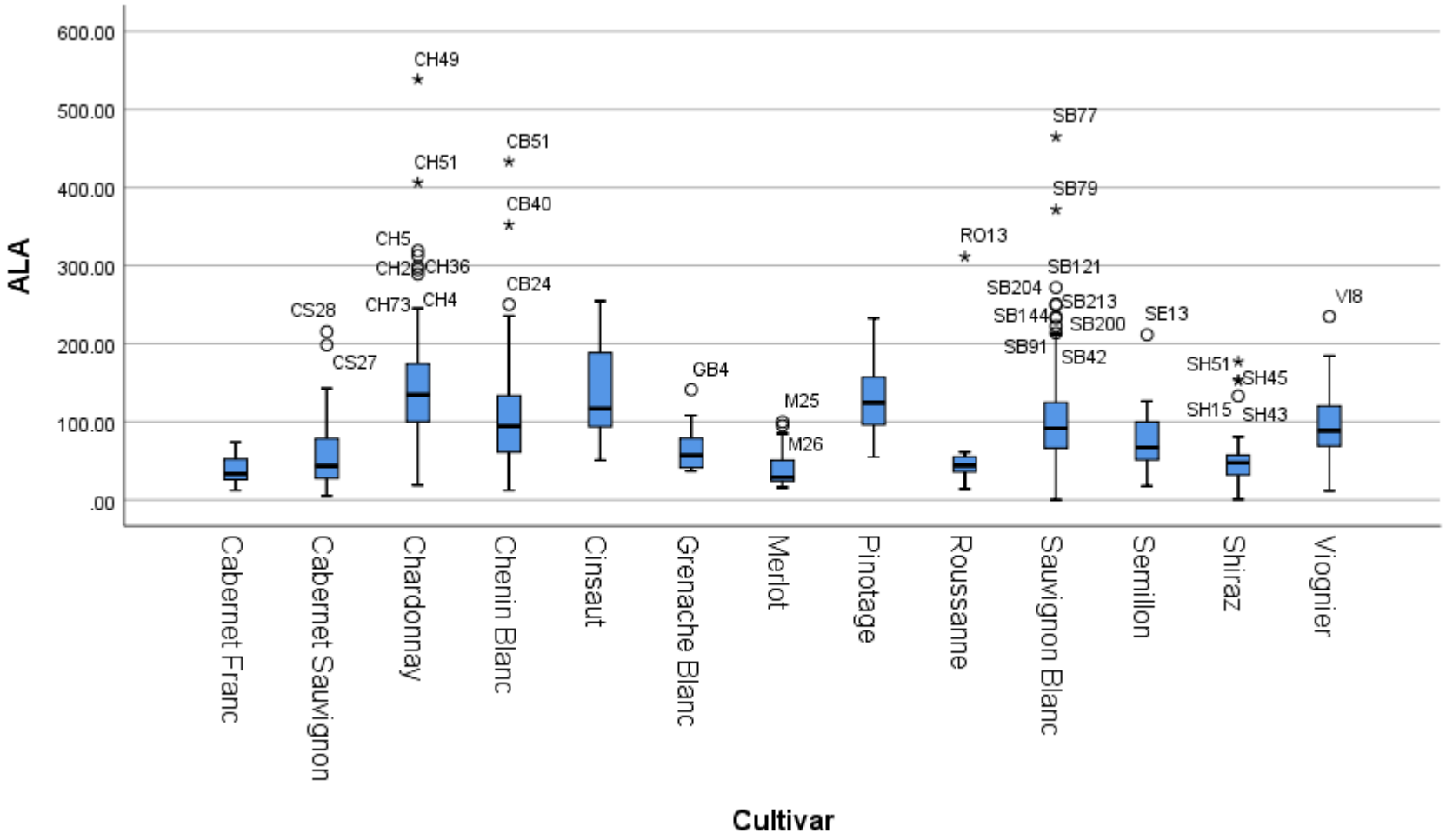
SUPPLEMENTARY FIGURE 2

Mean concentrations of amino acids, excluding proline and arginine, of white cultivars included in the survey, arranged from most to least. Error bars indicate the standard error.



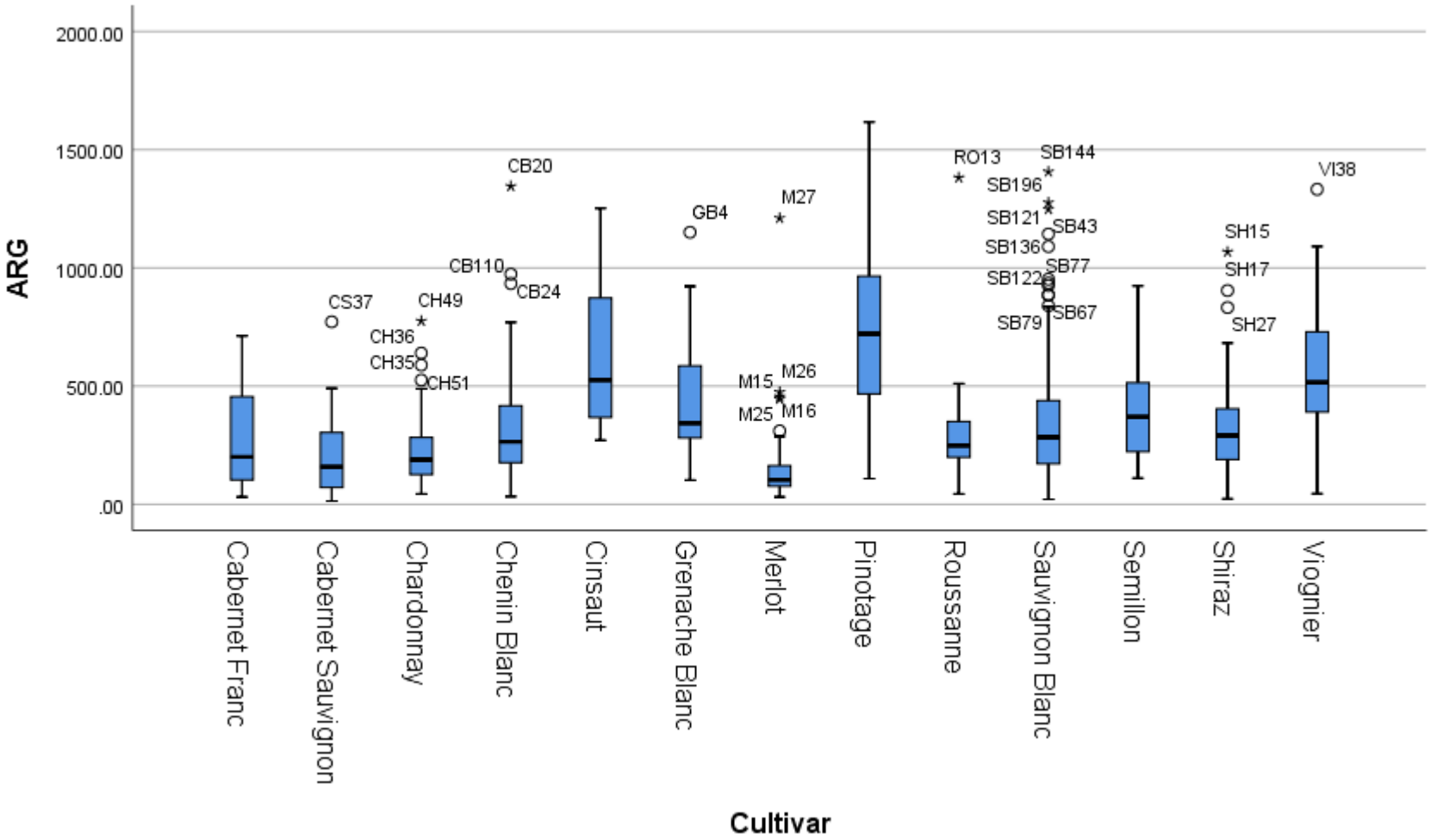
SUPPLEMENTARY FIGURE 3

Mean concentrations of amino acids, excluding proline and arginine, of red cultivars included in the survey, arranged from most to least. Error bars indicate the standard error.



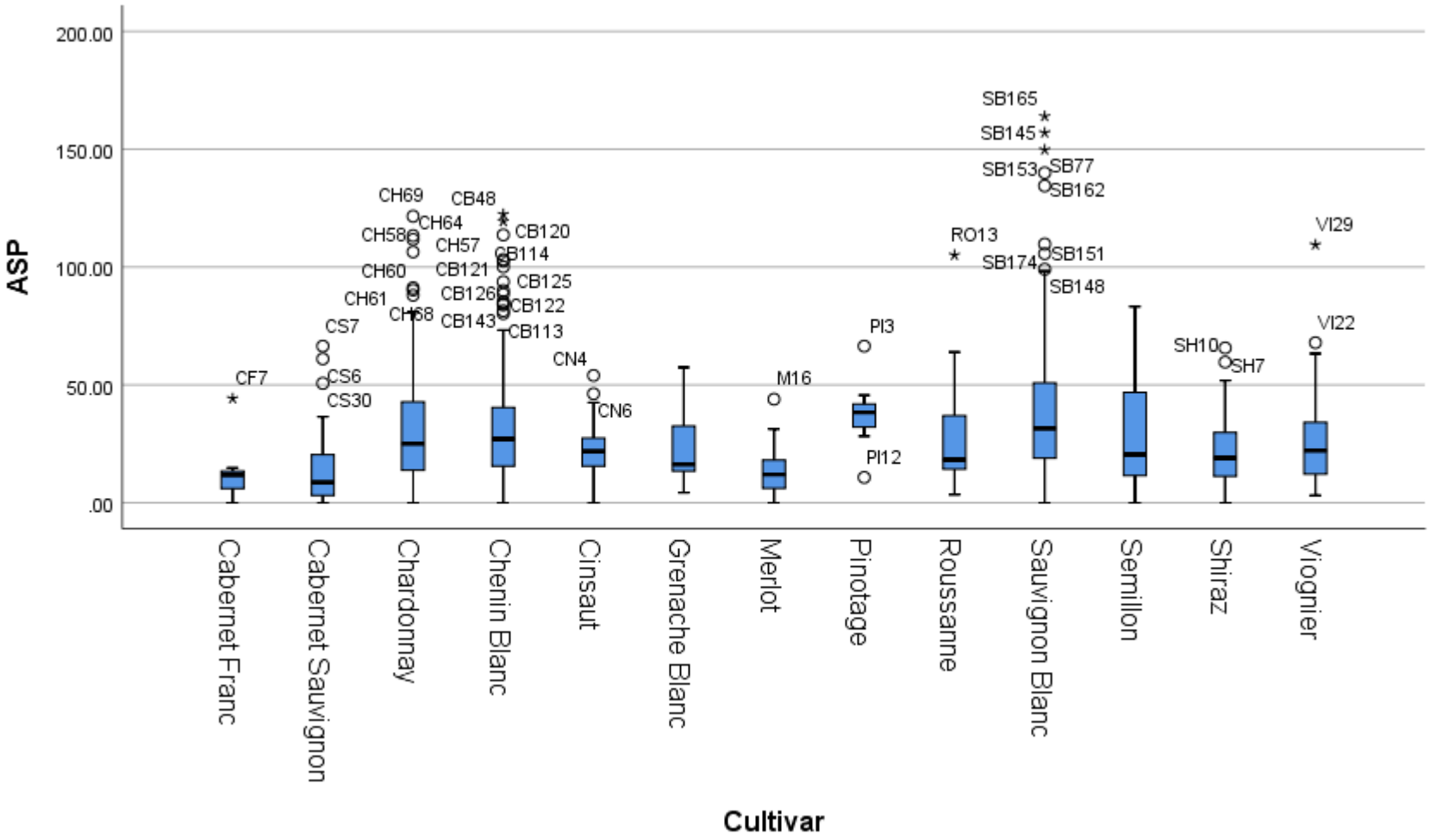
SUPPLEMENTARY FIGURE 4

Box plots of alanine concentrations per cultivar (mg/L).



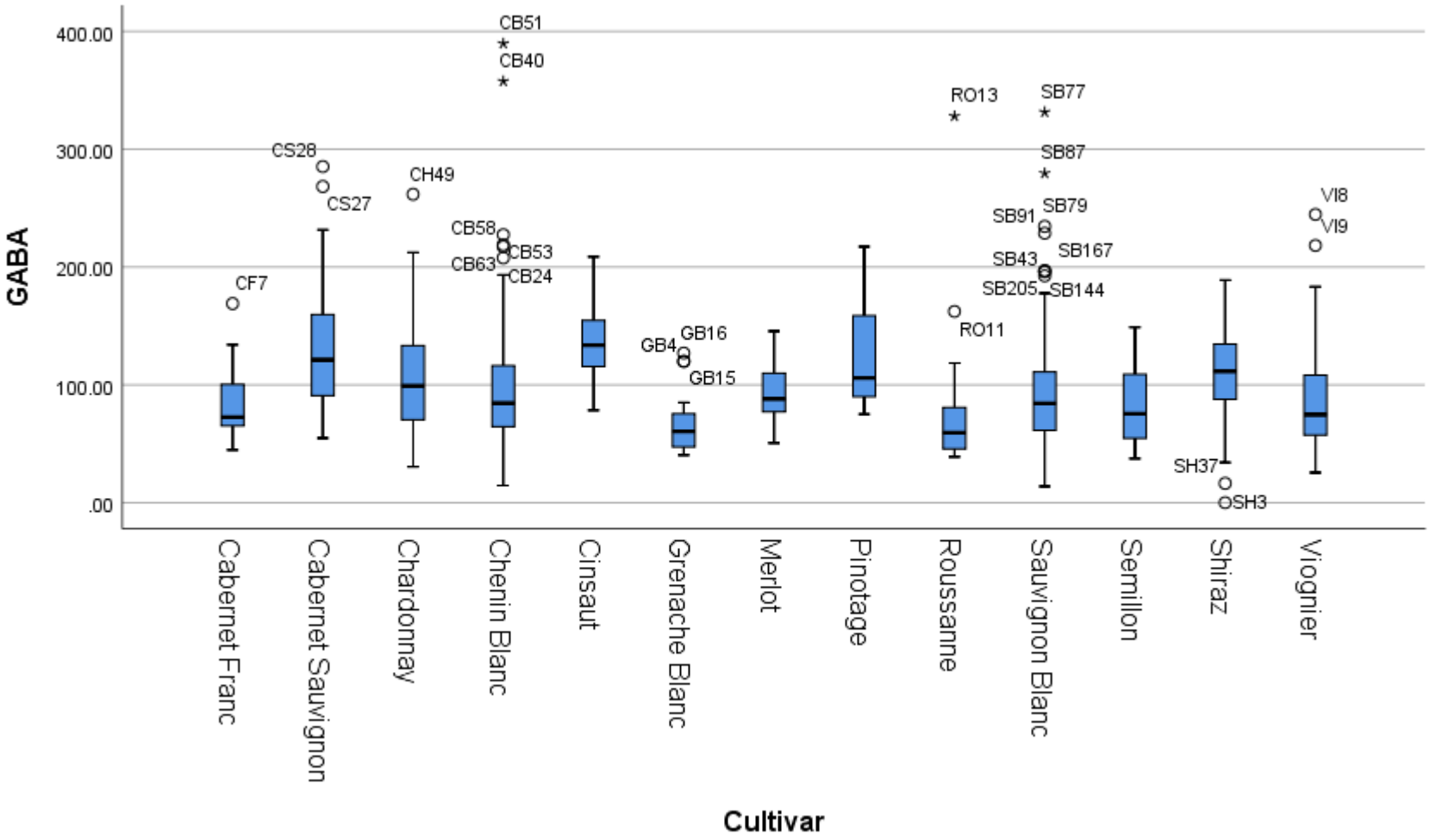
SUPPLEMENTARY FIGURE 5

Box plots of arginine concentrations per cultivar (mg/L).



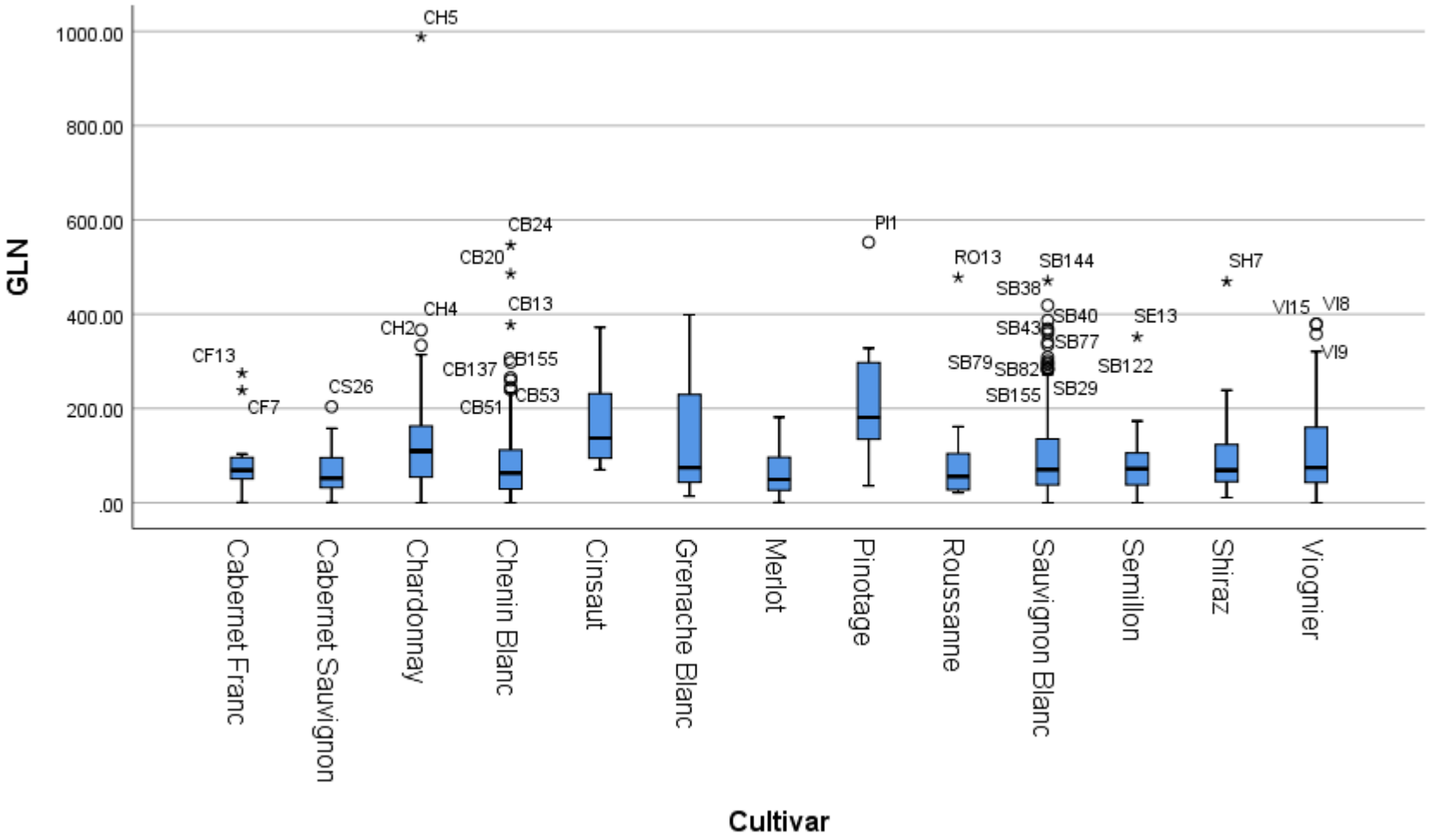
SUPPLEMENTARY FIGURE 6

Box plots of aspartic acid concentrations per cultivar (mg/L).



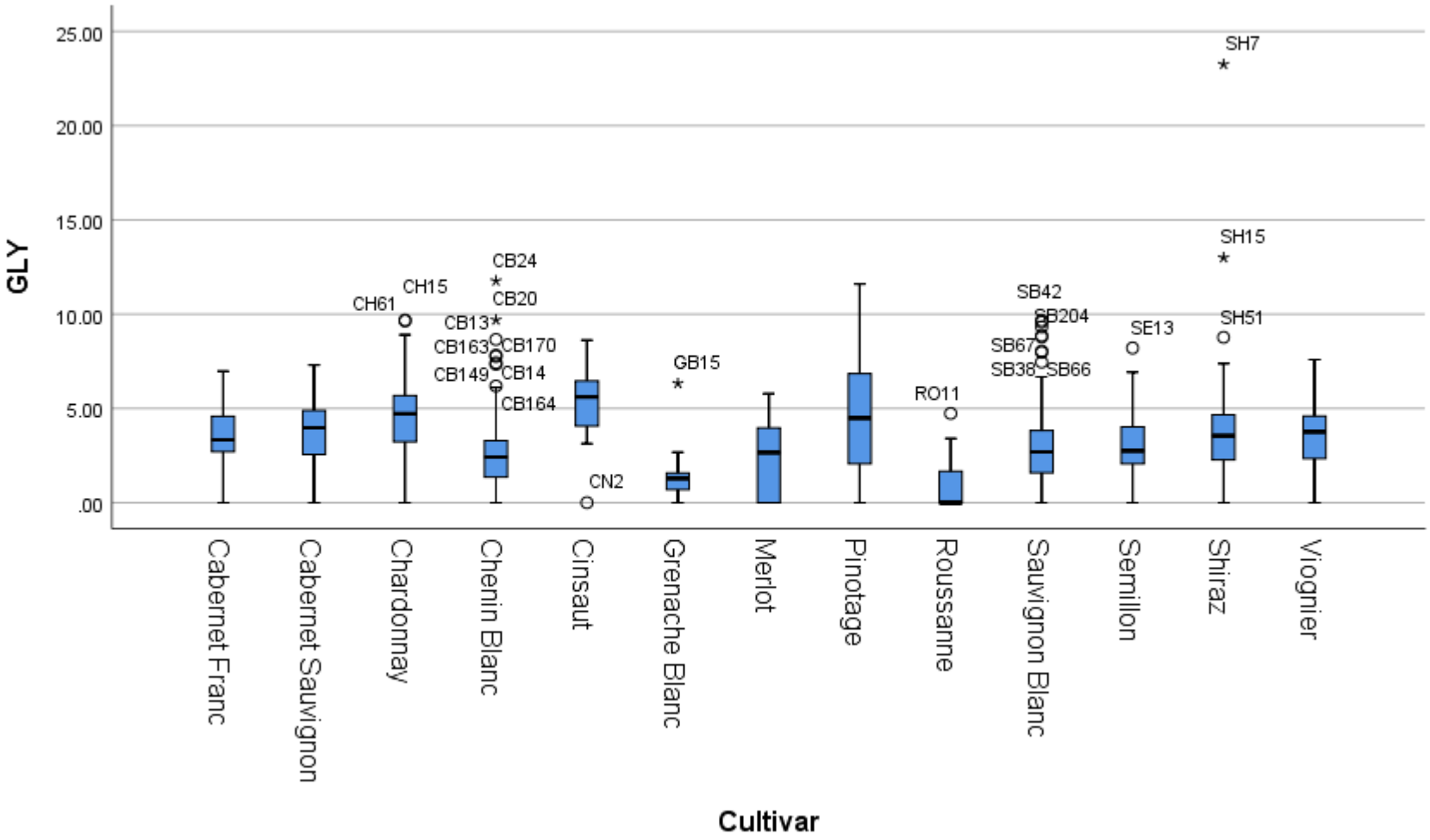
SUPPLEMENTARY FIGURE 7

Box plots of GABA concentrations per cultivar (mg/L).



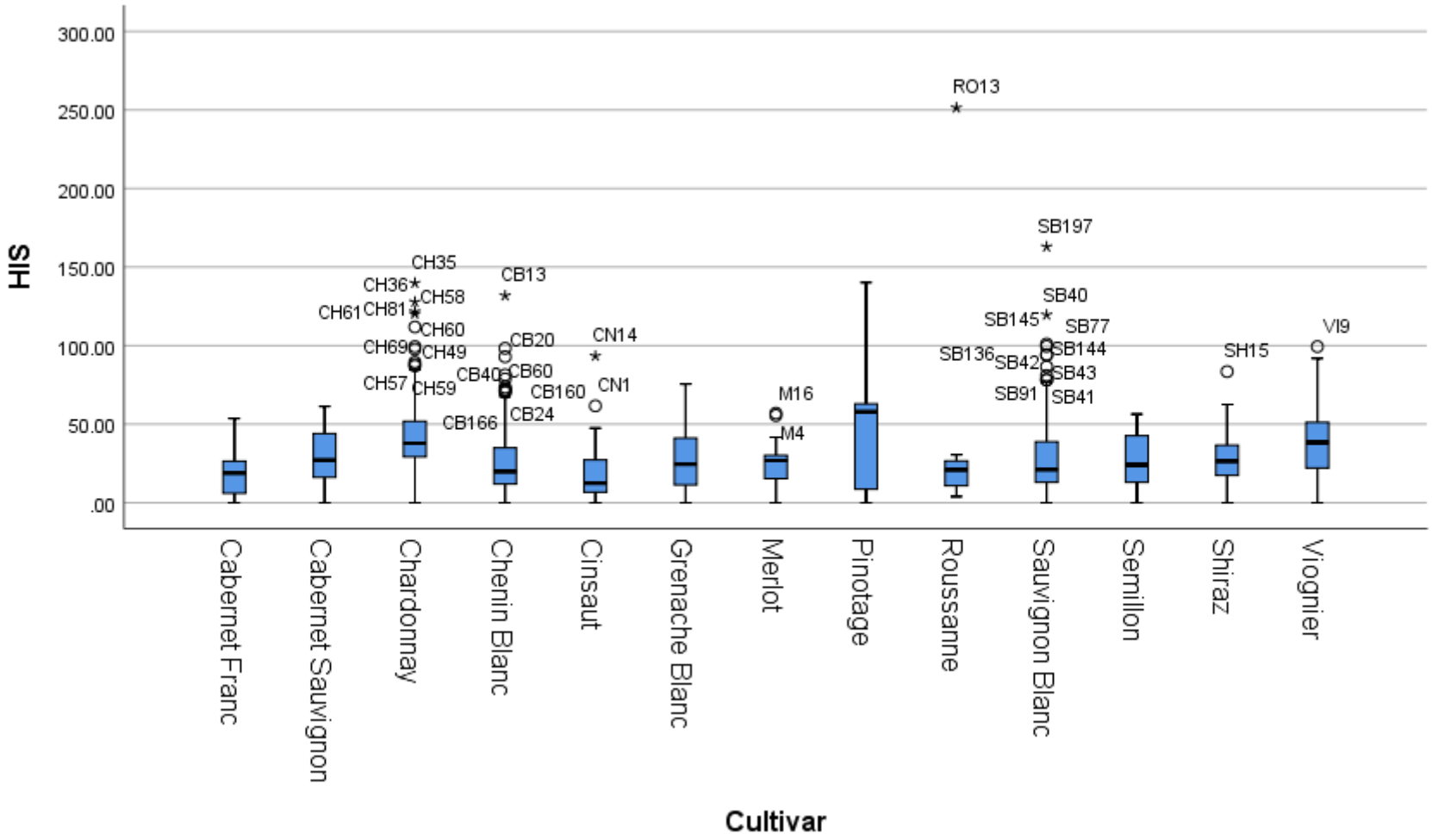
SUPPLEMENTARY FIGURE 8

Box plots of glutamine concentrations per cultivar (mg/L).



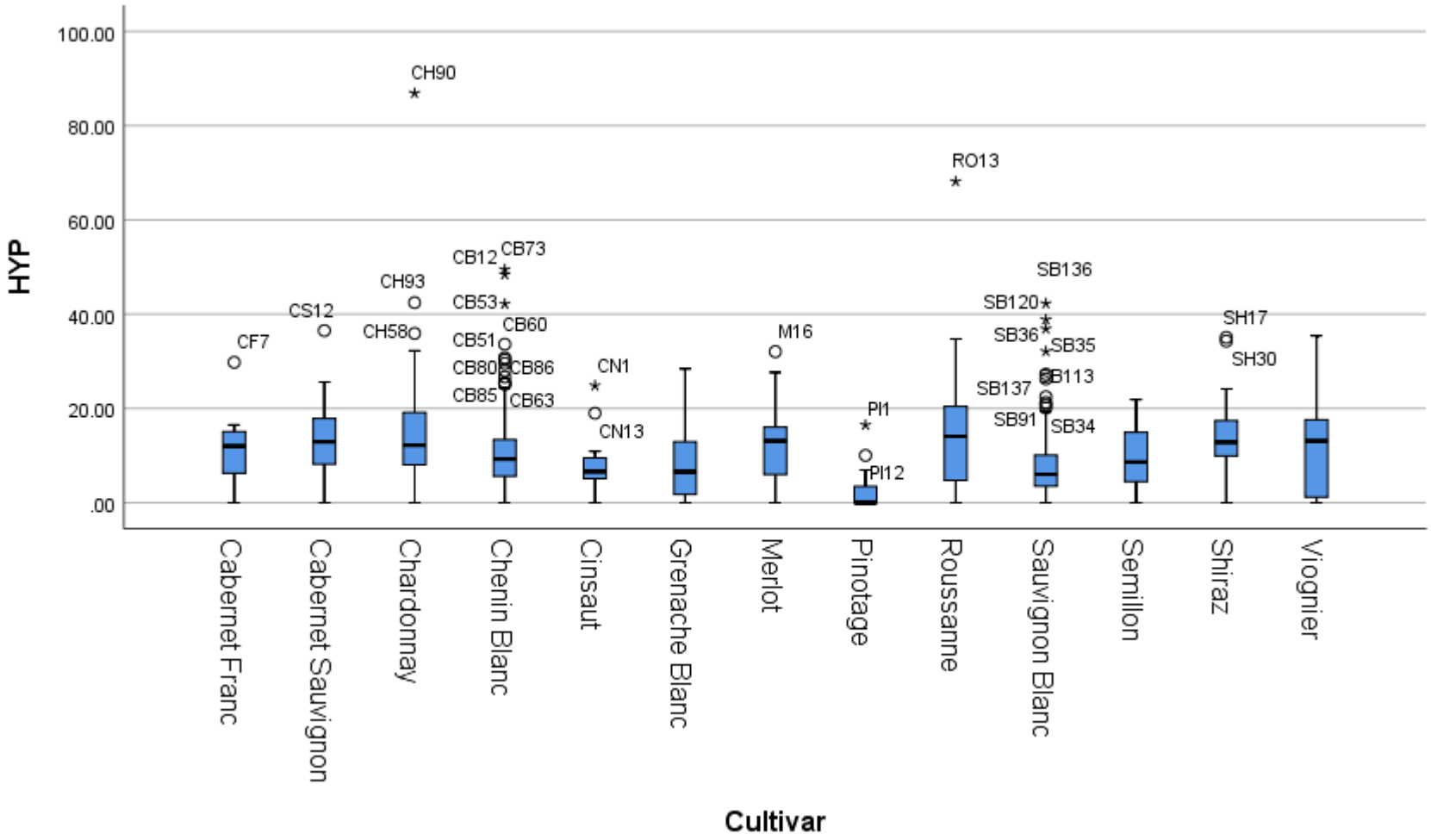
SUPPLEMENTARY FIGURE 9

Box plots of glycine concentrations per cultivar (mg/L).



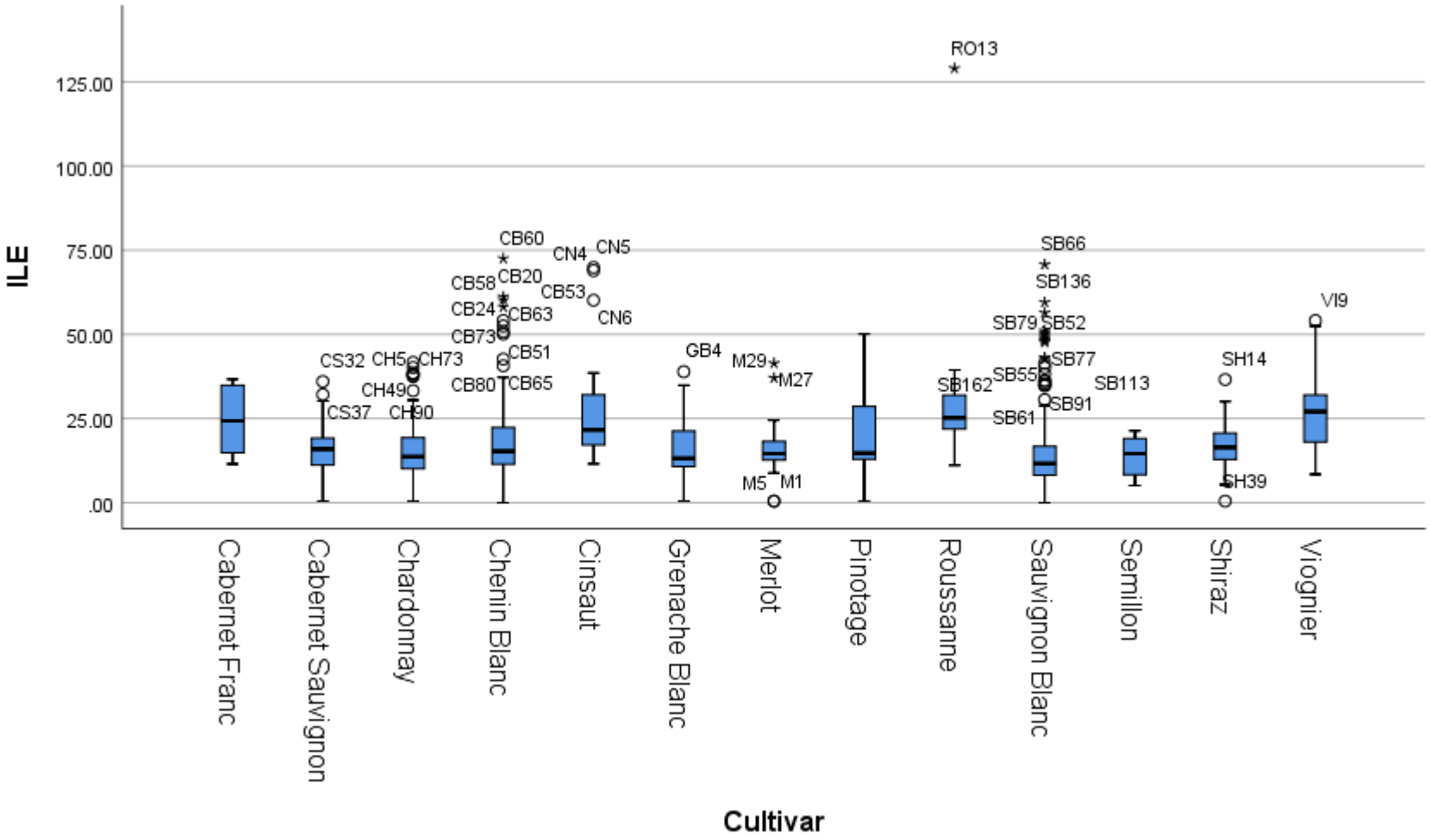
SUPPLEMENTARY FIGURE 10

Box plots of histidine concentrations per cultivar (mg/L).



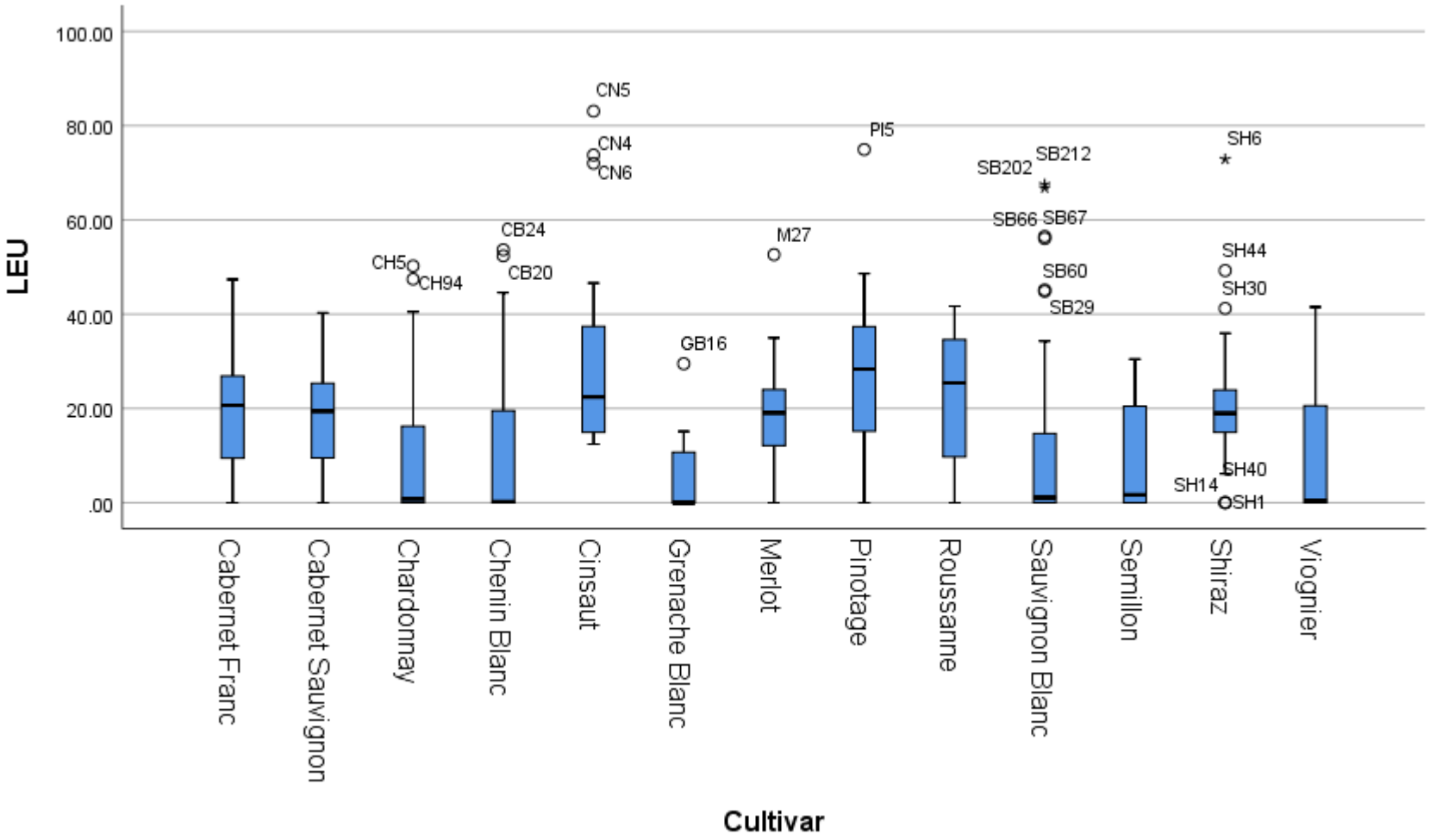
SUPPLEMENTARY FIGURE 11

Box plots of hydroxyproline concentrations per cultivar (mg/L).



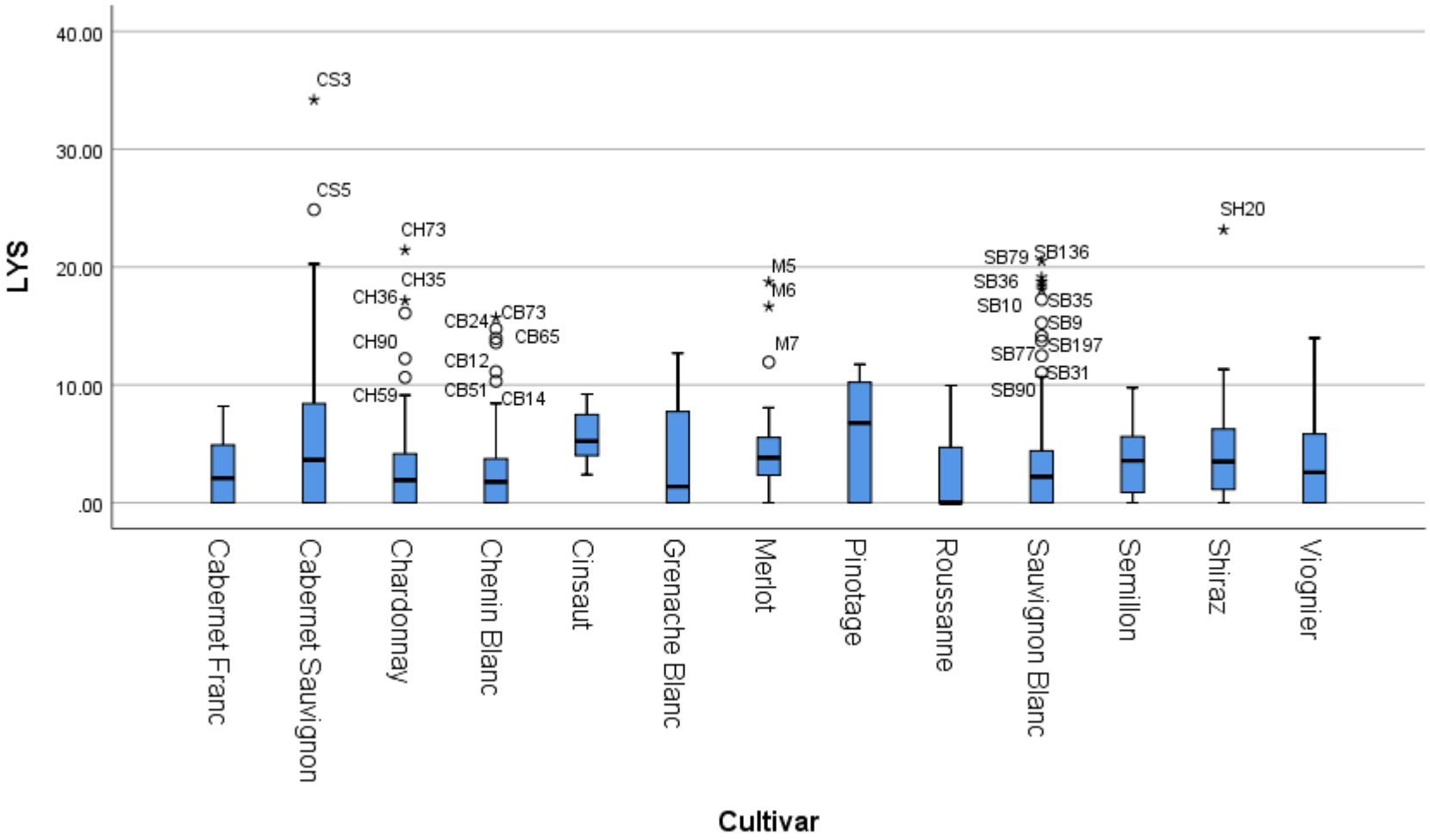
SUPPLEMENTARY FIGURE 12

Box plots of isoleucine concentrations per cultivar (mg/L).



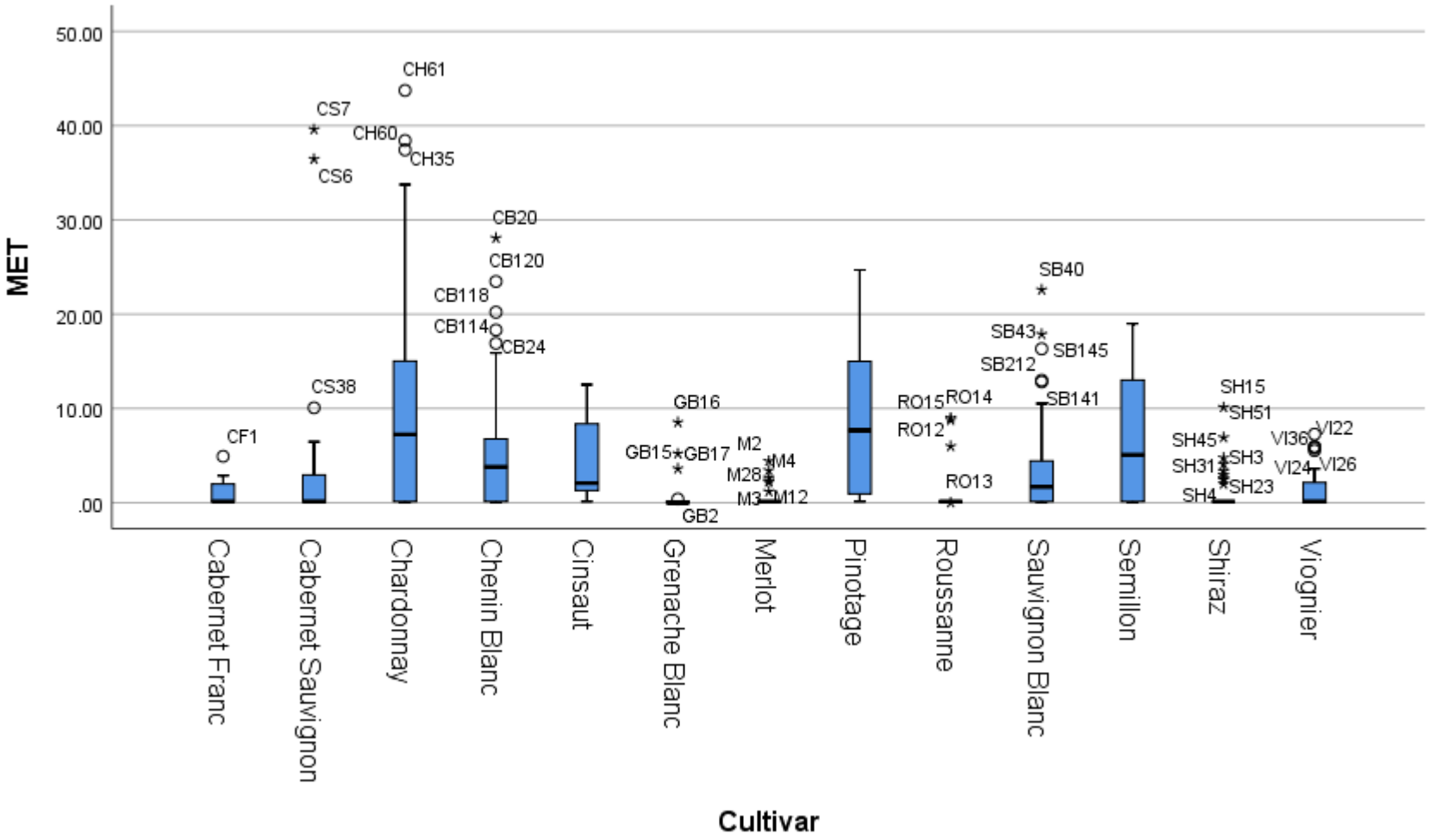
SUPPLEMENTARY FIGURE 13

Box plots of leucine concentrations per cultivar (mg/L).



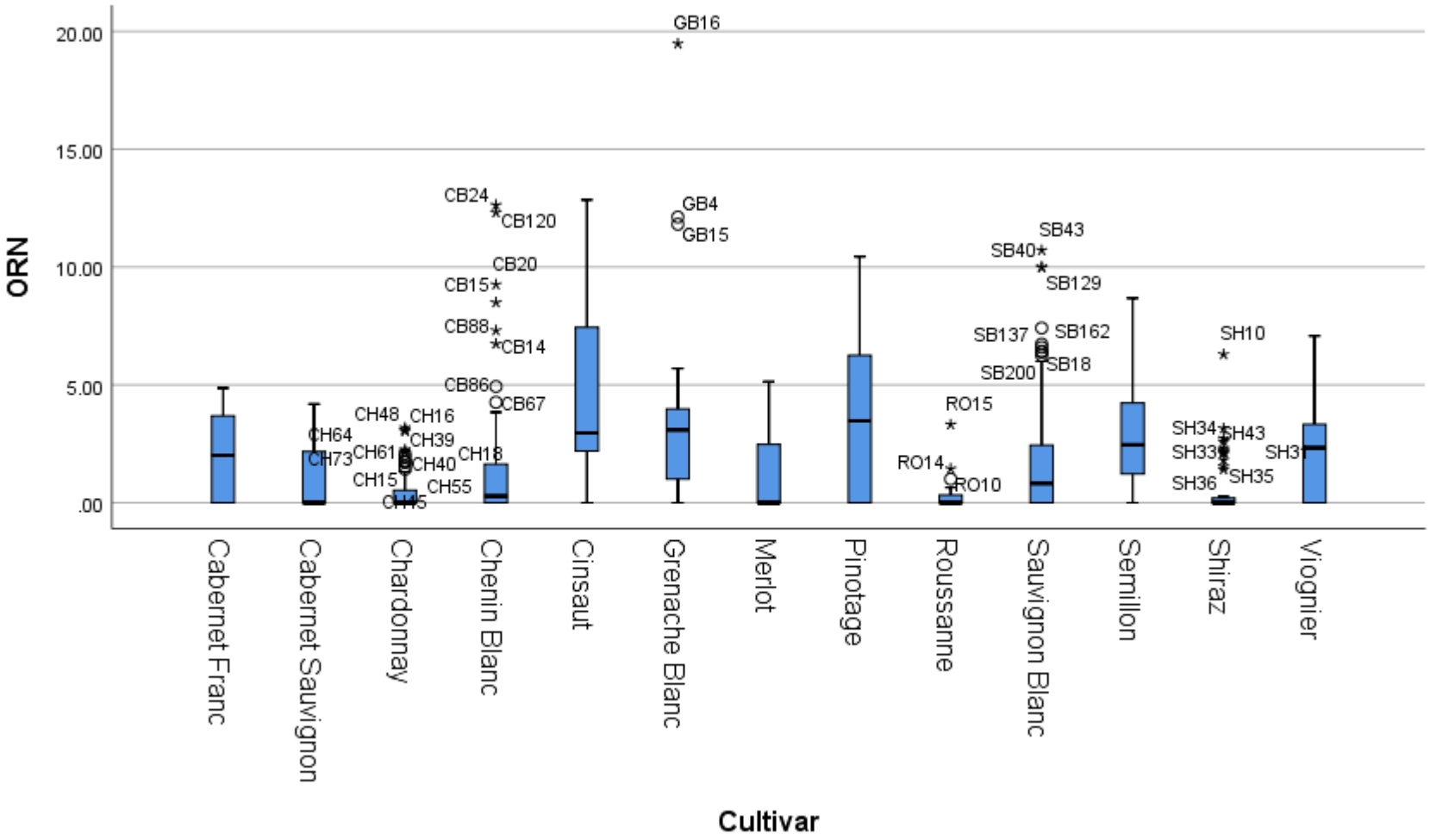
SUPPLEMENTARY FIGURE 14

Box plots of lysine concentrations per cultivar (mg/L).



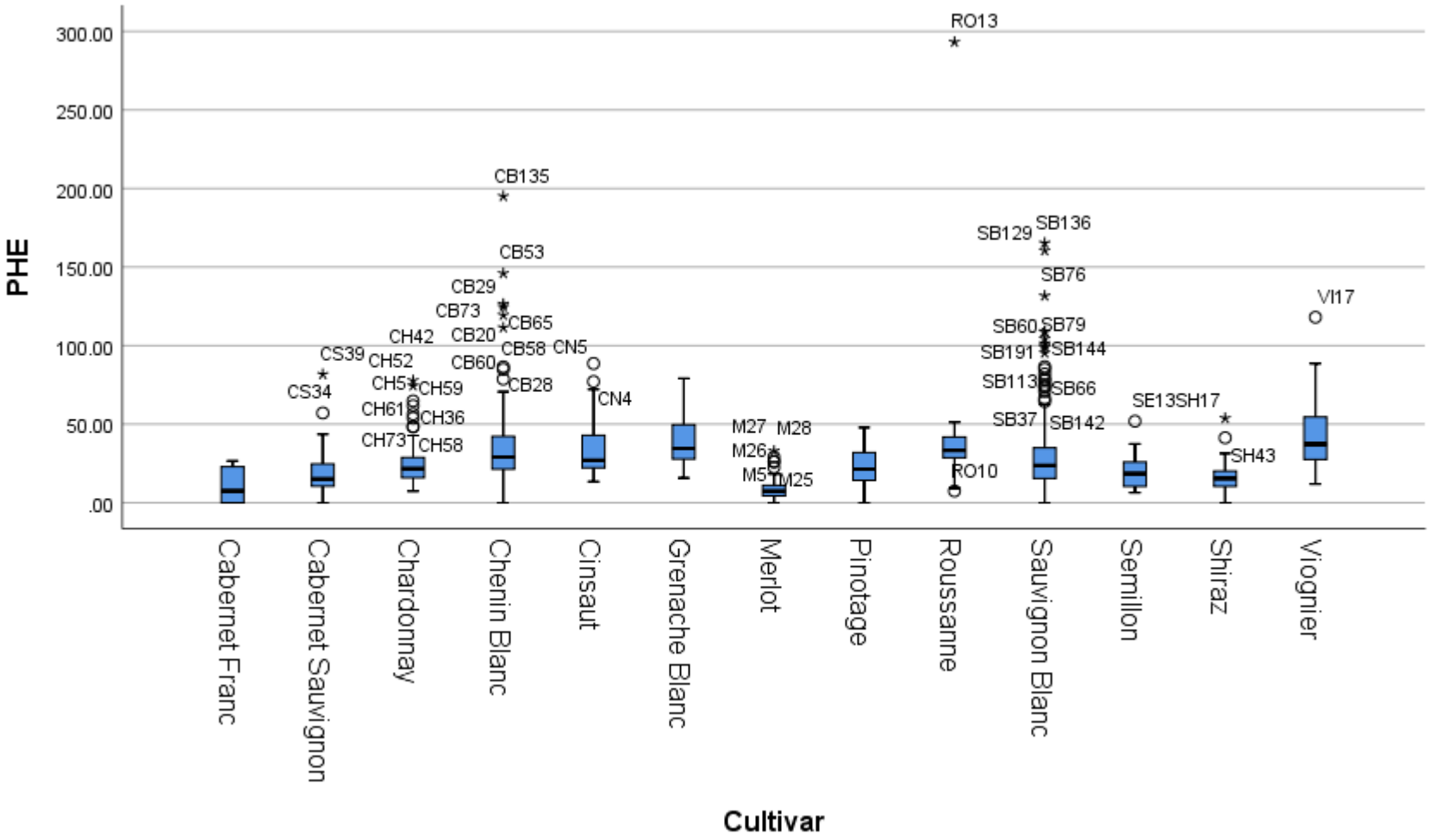
SUPPLEMENTARY FIGURE 15

Box plots of methionine concentrations per cultivar (mg/L).



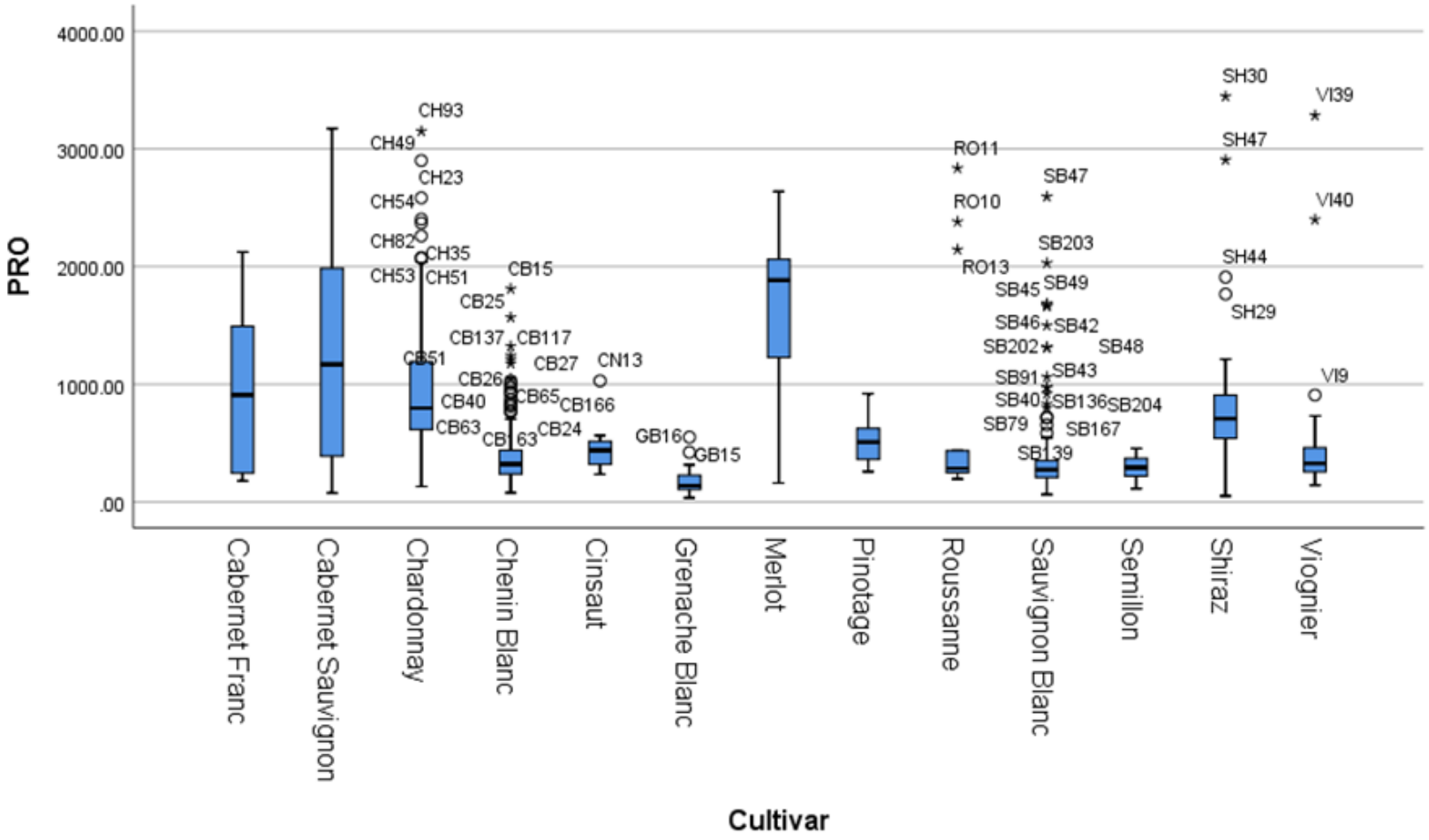
SUPPLEMENTARY FIGURE 16

Box plots of alanine concentrations per cultivar (mg/L).



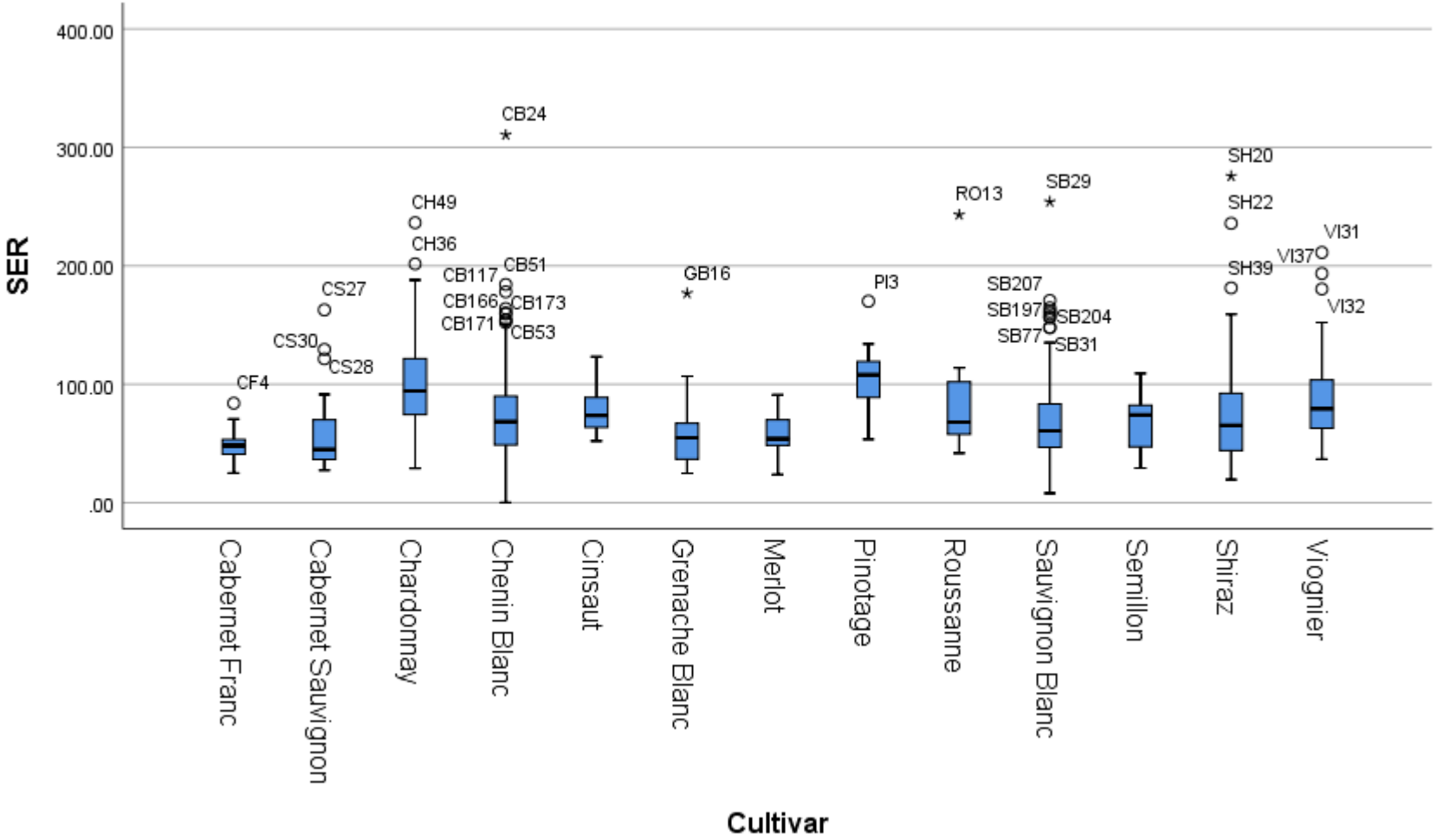
SUPPLEMENTARY FIGURE 17

Box plots of phenylalanine concentrations per cultivar (mg/L).



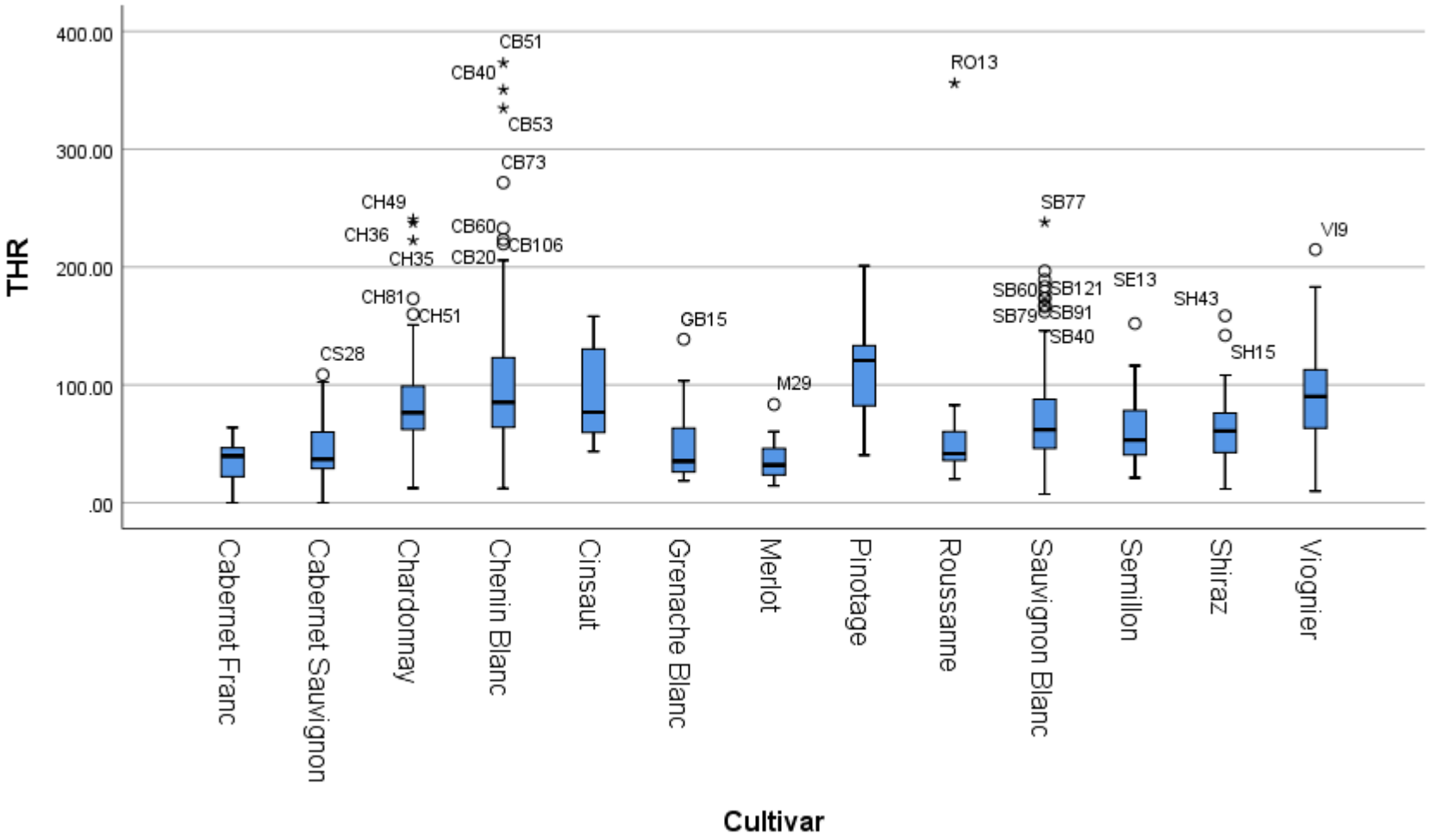
SUPPLEMENTARY FIGURE 18

Box plots of proline concentrations per cultivar (mg/L).



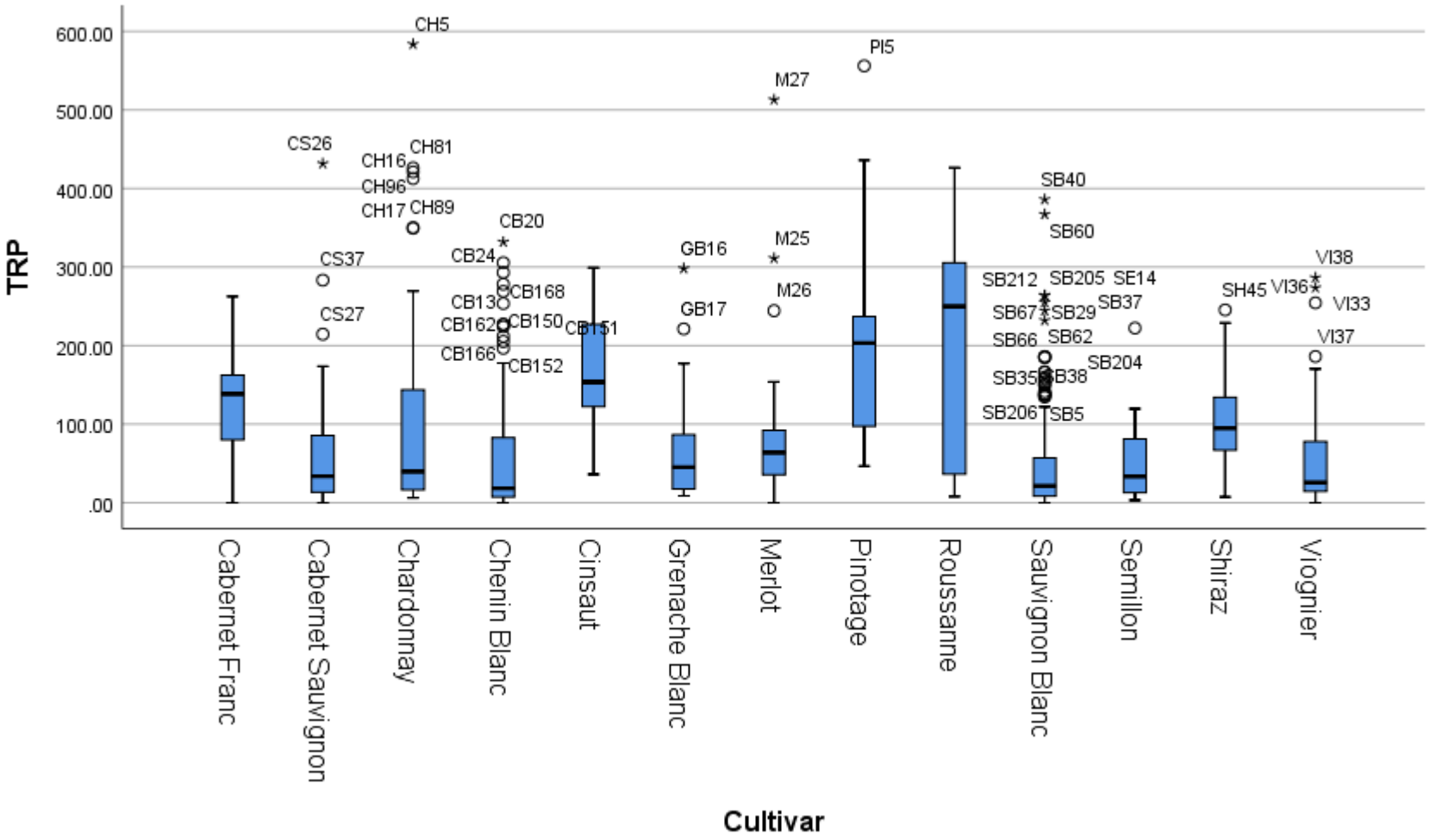
SUPPLEMENTARY FIGURE 19

Box plots of serine concentrations per cultivar (mg/L).



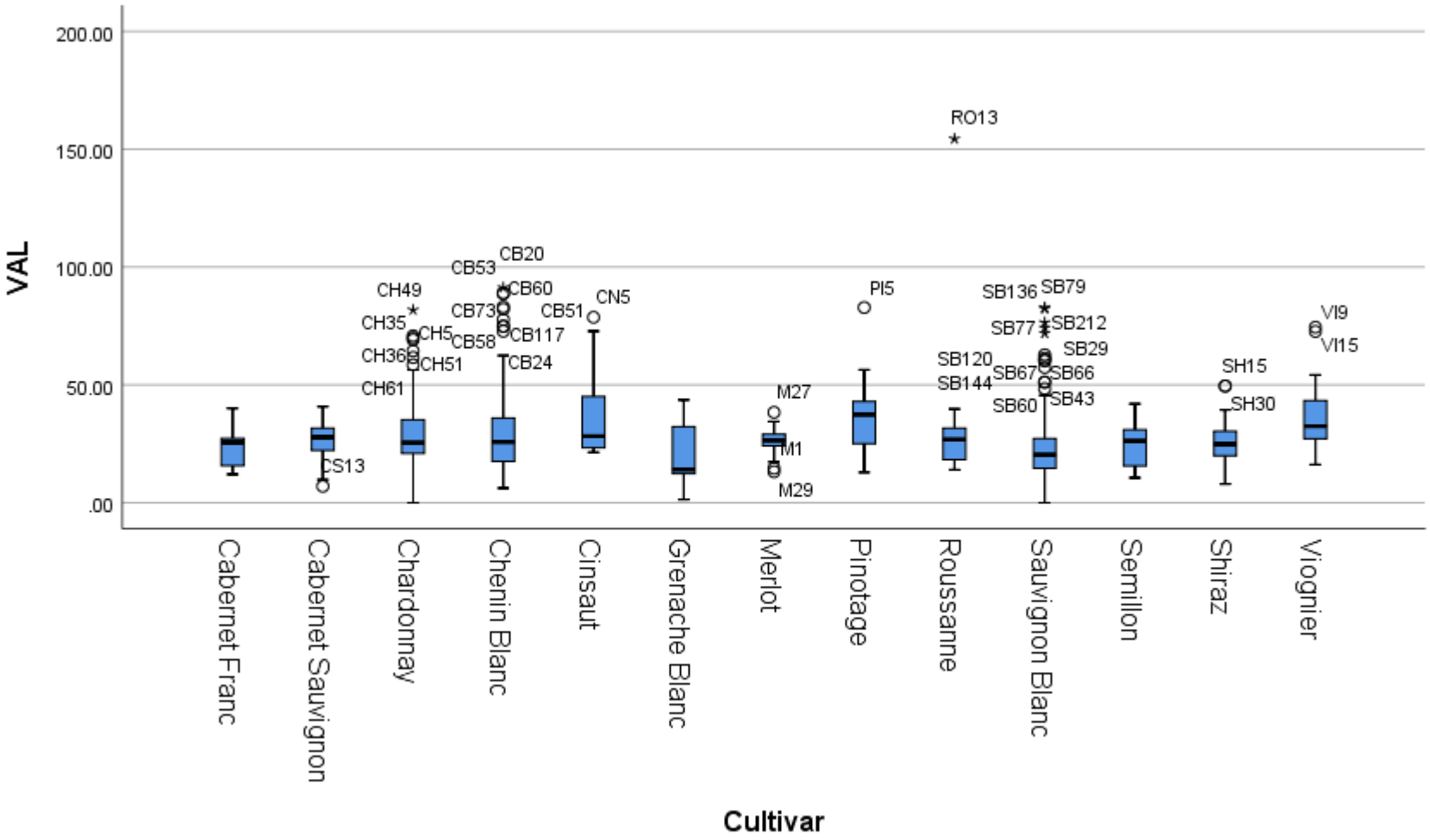
SUPPLEMENTARY FIGURE 20

Box plots of threonine concentrations per cultivar (mg/L).



SUPPLEMENTARY FIGURE 21

Box plots of tryptophan concentrations per cultivar (mg/L).



SUPPLEMENTARY FIGURE 22

Box plots of valine concentrations per cultivar (mg/L).