

**Supplementary Table S1.** Meteorological data (temperature and rainfall) during growth period May–September 2017.

Region	Area (regional unit)	Mean monthly temperature (°C)						Rainfall (mm)				Sum of rainfall for months May–September
		T5	T6	T7	T8	T9	R5	R6	R7	R8	R9	R5-9
Thrace	Rodopi	17.5	24.4	26	26.4	21.4	40.6	16.0	0.0	0.0	4.6	61.2
Eastern Macedonia	Kavala	17.9	24.5	26.4	26.8	21.8	35.8	7.8	1.8	1.6	14.8	61.8
Central Macedonia	Serres	18.5	24.9	26.7	26.1	20.9	78	25.2	10.6	36.4	206.8	357
Central Macedonia	Kilkis	19.6	26.1	27.7	26.6	21.3	112.8	39.0	10.2	16.8	113.0	291.8
Central Macedonia	Thessaloniki	19.4	25.8	27.2	26.5	21.6	79.4	7.4	24.8	42.2	91.4	245.2
Central Macedonia	Chalkidiki	18.5	24.6	26.3	25.8	21.7	42.8	13.6	2.0	27.4	374.4	460.2
Central Macedonia	Athos	18.9	25.2	27.2	27.3	22.8	141.0	12.0	3.8	0.6	75.2	232.6
Central Macedonia	Imathia	17.6	24.4	26.2	25.2	20.2	91.0	6.0	8.4	27.4	114.4	247.2
Central Macedonia	Pella	16.9	24.5	26.6	25.2	19.5	85.2	23.2	23.4	44	10.2	186
Western Macedonia	Florina	15.3	21.5	23.6	22.2	17.5	118.0	80.4	41.6	30.2	149.0	419.2
Thessaly	Larissa	20	26.9	28.6	27.6	22.2	33	6.2	0.4	0.2	98.2	138
North Aegean	Lemnos	18.5	24.8	27.1	27	22.7	43.4	0.0	0.0	0.0	0.0	43.4

Supplementary Table S2. Variation (minimum–maximum value observed) of Yeast Assimilable Nitrogen, Free Amino Nitrogen, ammoniacal Nitrogen in grape musts categorized per grape origin (mg N L⁻¹ must)¹

Regional unit	No of samples	YAN (N L ⁻¹)	FAN (N L ⁻¹)	NH ₄ -N Ammonia (N L ⁻¹)	Baume (Be)	pH	Total Acidity (g L ⁻¹ Tartaric Acid)
Rodopi	29	41.73-277.50 (157.25/152.46)	30.77-222.90 (106.97/105.80)	4.12-107.70 (50.28/47.10)	9.50-13.50 (11.88/12.00)	3.21-3.61 (3.38/3.39)	5,25-8,66 (6.73/6.53)
Kavala	10	114.07-190.40 (148.47/145.09)	63.46-135.70 (91.59/84.13)	45.21-64.78 (56.88/57.90)	10.86-12.50 (11.71/11.75)	3.19-3.65 (3.42/3.37)	5,36-8,81 (6.48/6.10)
Serres	20	84.00-265.55 (189.42/204.62)	51.53-193.00 (138.60/158.10)	18.04-81.87 (50.82/46.65)	9.11-12.70 (10.94/10.90)	3.34-3.79 (3.56/3.57)	3,83-6,38 (5.02/5.26)
Kilkis	13	63.12-231.58 (133.78/128.97)	35.10-170.60 (92.02/89.14)	17.08-60.98 (41.76/44.98)	11.00-12.70 (11.80/11.80)	3.28-3.47 (3.37/3.39)	5,14-7,61 (6.47/6.71)
Thessaloniki	46	114.38-271.86 (180.04/176.80)	60.13-212.10 (115.21/112.55)	0.70-142.86 (64.83/61.44)	9.80-14.00 (12.00/12.05)	3.27-3.68 (3.48/3.47)	3,51-8,78 (6.44/6.56)
Chalkidiki	78	70.00-249.49 (164.83/166.32)	31.53-176.10 (103.25/99.47)	4.66-98.57 (61.58/66.13)	9.10-16.10 (11.82/11.85)	3.04-3.65 (3.40/3.41)	4,46-9,94 (6.47/6.32)
Imathia	2	148.40-219.80 (184.10/184.10)	82.35-107.40 (94.88/94.88)	66.05-112.40 (89.23/89.23)	13.10-13.70 (13.40/13.40)	3.51-3.55 (3.53/3.53)	6,04-6,64 (6.34/6.34)
Pella	5	193.42-277.04 (236.14/220.91)	161.30-205.80 (192.18/194.80)	10.61-79.51 (43.96/32.12)	10.50-12.30 (11.06/10.80)	3.26-3.40 (3.35/3.35)	7,16-8,44 (7.66/7.69)
Florina	11	99.31-204.65 (164.90/173.94)	52.68-141.00 (100.29/101.00)	36.29-87.49 (64.61/59.80)	10.30-12.30 (11.30/11.10)	2.87-3.35 (3.05/3.02)	5,25-10,59 (9.48/9.94)
Larissa	30	89.60-275.41 (153.27/149.10)	46.33-191.90 (110.73/108.95)	3.40-97.64 (42.54/38.75)	9.80-13.50 (11.75/11.81)	3.32-3.60 (3.47/3.49)	3,60-7,20 (5.80/5.85)
Lemnos	12	39.79-174.94 (104.01/86.86)	30.58-145.60 (82.40/66.64)	9.21-31.67 (21.62/20.92)	10.90-13.20 (12.55/12.65)	3.33-3.58 (3.49/3.50)	4,87-7,39 (5.93/5.97)
Athos	18	73.06-154.00 (124.93/128.70)	62.04-137.80 (90.20/84.97)	2.30-77.94 (34.73/22.16)	11.20-14.10 (12.73/12.67)	3.17-3.65 (3.44/3.45)	4,50-8,40 (6.15/6.02)

¹ The mean/median values of the measurements are shown in parentheses