**Table S1** **Total sugars, titratable acidity (TA), pH and berry weight** in *V. vinifera* treated with *A. nodosum* extract (SWE) and untreated plants (CTRL), under two irrigation regimes (WW, well-watered; WS, water stressed).

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | **Total sugars (°Brix)** | | **TA (gL-1 tartaric acid)** | | **pH** | | **Berry weight (g)** | |
| **Irrig. Regime** | **Samp. Time** | CTRL | SWE | CTRL | SWE | CTRL | SWE | CTRL | SWE |
|  | t0 | 16.9±0.2 a | 16.4±0.4 a | 13.6±1.0 a | 13.7±1.0 a | 3.09±0.03 a | 3.10±0.03 a | 1.1±0.1 a | 1.1±0.1 a |
| **WW** | t1 | 17.8±0.1 a | 17.9±0.2 a | 10.4±0.6 a | 12.4±0.5 a | 3.27±0.04 a | 3.22±0.07 a | 1.1±0.1 a | 0.9±0.1 a |
|  | t2 | 18.7±0.6 a | 18.9±0.5 a | 5.4±0.1 a | 5.6±0.2 a | 3.52±0.03 a | 3.47±0.03 a | 1.0±0.1 a | 1.1±0.1 a |
|  | t0 | 16.0±0.5 a | 16.2±0.5 a | 13.1±0.9 a | 13.0±0.9 a | 3.10±0.04 a | 3.09±0.04 a | 0.9±0.1 a | 0.9±0.1 a |
| **WS** | t1 | 18.1±0.1 a | 17.2±0.7 a | 10.7±1.3 a | 12.2±0.5 a | 2.99±0.06 a | 3.13±0.07 a | 1.0±0.1 a | 1.0±0.1 a |
|  | t2 | 19.1±0.7 a | 19.3±0.2 a | 5.6±0.3 a | 5.9±0.1 a | 3.50±0.05 a | 3.48±0.01 a | 0.9±0.1 a | 1.0±0.1 a |

Means (± SE, n=10) followed by distinct letters within the same parameter and row are significantly different according to the LSD test (P ≤ 0.05). Measurements were conducted at t0, t1 and t2.

**Table S2** Two-way ANOVA (P<0.05) for biochemical parameters in berry skin and enzymatic activities.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Parameter** | **Delph.** | **Cyan.** | **Petun.** | **Peon.** | **Malv.** | **Tot. Anth.** | **Methox/non-Methox** | **% Methox anth/tot** | **Hydr. Acid Skin** | **Q. Deriv. Skin** | **K. Deriv. Skin** | **Tot. Phen. Skin** | **F3'5'OH activity** | **3'OMT activity** | **5'OMT activity** |
| **Unit** | molg-1DW | molg-1DW | molg-1DW | molg-1DW | molg-1DW | molg-1DW |  |  | molg-1DW | molg-1DW | molg-1DW | molg-1DW |  |  |  |
| **Treatments** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| SWE | 0.80 | 0.30 | 1.01 | 2.87 | 11.39 | 15.94 | 12.32 | 92.27 | 3.06 | 3.89 | 0.26 | 6.92 | 3.99 | 9.15 | 13.05 |
| CTRL | 0.61 | 0.24 | 0.94 | 2.17 | 8.63 | 12.98 | 15.91 | 93.51 | 2.20 | 2.13 | 0.20 | 4.71 | 4.36 | 9.91 | 17.23 |
| **Irrig. Regime** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| WW | 0.64 | 0.28 | 0.88 | 2.36 | 8.16 | 12.23 | 13.06 | 92.17 | 2.57 | 2.68 | 0.16 | 5.37 | 3.73 | 8.55 | 13.80 |
| WS | 0.77 | 0.26 | 1.07 | 2.60 | 11.69 | 16.55 | 15.18 | 93.62 | 2.69 | 3.31 | 0.31 | 6.26 | 4.62 | 10.50 | 16.48 |
| **Significance** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Treatments | 0.056 | 0.205 | 0.135 | 0.019 | 0.132 | 0.014 | 0.001 | 0.523 | 0.011 | 0.008 | 0.2 | 0.003 | 0.349 | 0.419 | 0.002 |
| Irrig. Regime | 0.575 | 0.702 | 0.352 | 0.973 | 0.002 | 0.039 | 0.000 | 0.000 | 0.279 | 0.207 | 0.007 | 0.129 | 0.014 | 0.001 | 0.034 |
| Treat. x Irrig. Regime | 0.779 | 0.447 | 0.487 | 0.890 | 0.238 | 0.713 | 0.012 | 0.788 | 0.976 | 0.338 | 0.309 | 0.429 | 0.009 | 0.041 | 0.027 |

Values are the mean of each Parameter, considering Treatments and irrigation regime (Irrig. Regime) as factors. In the last 3 rows is indicated the Significance. Other abbreviation: Delphinidin-3-*O*-glucoside (Delph.), cyanidin-3-*O*-glucoside (Cyan.), petunidin-3-*O*-glucoside (Petun.), peonidin-3-*O*-glucoside (Peon.), malvidin-3-*O*-glucoside (Malv.), total anthocyanin content (Tot. Anth.), methoxylated to non-methoxylated ratio anthocyanins (Methox./non-Methox.), percentage of methoxylated anthocyanins among total content (% Methox. anth/tot), hydroxycinnamic acids in berry skin (Hydr. Acid. Skin), quercetin derivatives in berry skin (Q. Deriv. Skin), kaempferol derivatives in berry skin (K. Deriv. Skin), total phenolic content in berry skin (Tot. Phen. Skin).

**Table S3** Shapiro-Wilk’s test (P<0.05) (George and Mallery, 2010) results for each parameter.



Skewness and kurtosis values and their standard errors (SE), are indicated for each Parameter of treated and non-treated vines. Other abbreviation: Net assimilation rate (*Pn*), stomatal conductance (*gs*), transpiration (E), water use efficiency (WUE), predawn water potential (Ψpd), midday stem water potential (Ψstem), relative water content (RWC), total acidity (TA), Delphinidin-3-*O*-glucoside (Delph.), cyanidin-3-*O*-glucoside (Cyan.), petunidin-3-*O*-glucoside (Petun.), peonidin-3-*O*-glucoside (Peon.), malvidin-3-*O*-glucoside (Malv.), total anthocyanin content (Tot. Anth.), percentage of methoxylated anthocyanins among total content (% Methox. anth/tot), hydroxycinnamic acids in berry skin (Hydr. Acid. Skin), quercetin derivatives in berry skin (Q. Deriv. Skin), kaempferol derivatives in berry skin (K. Deriv. Skin), total phenolic content in berry skin (Tot. Phen. Skin).

George, D., Mallery, M. SPSS for Windows Step by Step: A simple Guide and reference, 17.0 update (10a ed.) Boston: Pearson. **2010**