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# Volatile compounds and phenolic composition of skins and seeds of 'Cabernet Sauvignon' grapes under different deficit irrigation regimes

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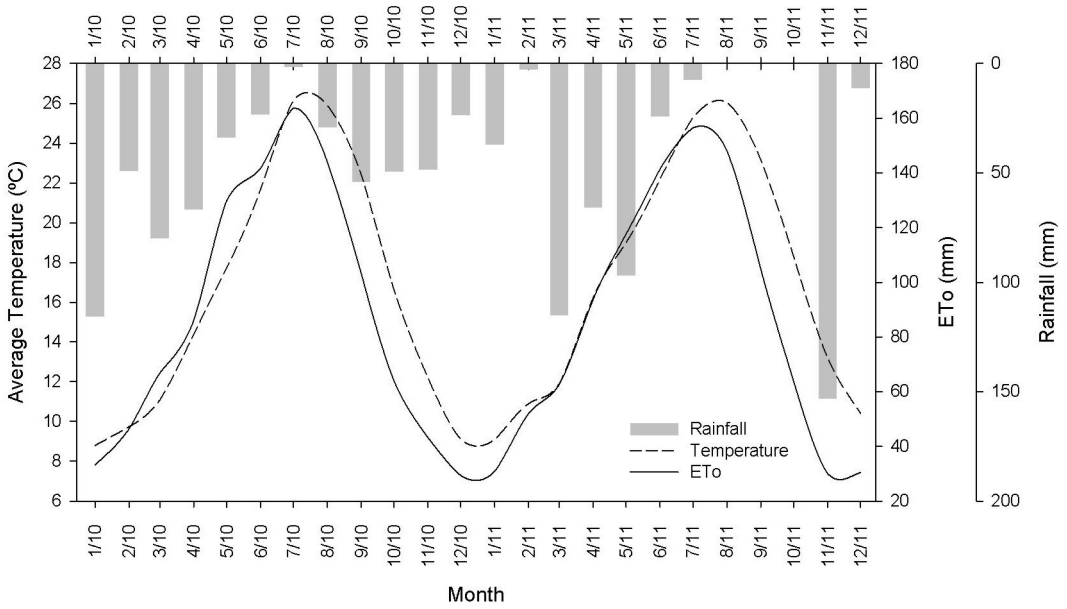


Supplementary Fig. 1: Average monthly temperature (°C), total monthly reference evapotranspiration, $ET_0$ (mm) and monthly rainfall (mm) in the 'Cabernet Sauvignon' vineyard during the experimental period (2010-2011).

Supplementary Table 1

Post-veraison water stress integral (MPa*day) in the rainfed application and in the treatments watered with 25, 50 and 75 % of the estimated crop evapotranspiration ($ET_C$) during the post-veraison period

| Year | T | | | |
|---|---|---|---|---|
| | Rainfed | $0.25ET_C$ | $0.50ET_C$ | $0.75ET_C$ |
| 2010 | 35.00 | 28.33 | 22.85 | 22.88 |
| 2011 | 30.02 | 24.54 | 19.52 | 18.15 |

Supplementary Table 2

Volatile compounds identified in grape samples during 2010 and 2011

| Volatile compound | RT | RI | ID |
|---|---|---|---|
| Alcohols | | | |
| 2-Butanol | 9.33-10.24 | 1039-1067 | MS;RI;B;St |
| 1-Propanol | 9.84-10.81 | 1055-1085 | MS;RI;B |
| 2-Methyl-1-propanol | 11.85-12.99 | 925-1127 | MS;RI;B;St |
| 1-Butanol | 13.87-15.17 | 950-1182 | MS;RI;B |
| 3-Methyl-1-butanol | 16.14-17.54 | 1045-1120 | MS;RI;B |
| 1-Pentanol | 17.78-19.25 | 1061-1240 | MS;RI;B;S |
| 1-Hexanol | 21.60-23.14 | 1087-1286 | MS;RI;B;S |
| (Z) 3-Hexen-1-ol | 22.9-24.44 | 1107-1358 | MS;RI;B;S |
| (E) 2-Hexen-1-ol | 23.17-25.21 | 1121-1425 | MS;RI;B |
| 2-Octanol | 23.88-25.42 | 1413-1458 | MS;RI;B |
| 1-Heptanol | 25.29-26.84 | 1453-1498 | MS;RI;B;S |
| 2-Ethyl-1- hexanol | 26.48-28.04 | 1487-1534 | MS;RI;B |
| Aldehydes | | | |
| 2-Methyl-propanal | 4.04-4.26 | 814-829 | MS |
| 2-Methyl-butanal | 5.97-6.39 | 826-922 | MS;RI |
| 3-Methyl-butanal | 6.07-6.50 | 833-927 | MS;RI;B;S |
| Hexanal | 11.32-12.40 | 921-1112 | MS;RI;B;S |
| Heptanal | 15.22-16.54 | 1201-1217 | MS;RI;B;S |
| (E) 2-Hexenal | 16.97-18.32 | 1052-1229 | MS;RI;B;St |
| Esters | | | |
| Methyl acetate | 4.30-4.55 | 831-846 | MS |
| Ethyl propionate | 7.10-7.70 | 961-986 | MS;RI;B |
| Ethyl 2-methylpropionate | 7.25-7.89 | 968-993 | MS;RI;B |
| Ethyl butanoate | 9.56-10.48 | 1046-1075 | MS;RI;B |
| Ethyl 3-methylbutanoate | 10.66-11.68 | 1080-110 | MS;RI |
| Hexyl acetate | 18.45-19.91 | 1240-1258 | MS;RI;B |
| Ethyl octanoate | 24.37-25.89 | 1427-1472 | MS;RI;B |
| Terpenes | | | |
| D-limonene | 15.19-16.49 | 1201-1217 | MS;RI;B;S |
| 3,7-Dimethyl- 1,6-octadien-3-ol | 29.06-30.65 | 1565-1615 | MS;RI;B;St |

RT (retention time); RI (Linear retention indices calculated). ID: Method of identification (MS-comparison with mass spectrum stored in NIST library; RI-comparison of linear retention indices with the literature; B- comparison of other authors; St-comparison of retention time and mass spectrum with those of authentic standards).