















TABLE 3

Glycosidically bound compounds of grape samples. Relative area (standard deviation).

Compound	First harvest date			Second harvest date			KI	ID
	HUA <sub>0</sub>	CAU <sub>0</sub>	ITA <sub>0</sub>	HUA <sub>1</sub>	CAU <sub>1</sub>	ITA <sub>1</sub>		
<i>Alcohols</i>								
<b>2-Methyl-2-butanol</b>	20.3 (1.1) <sup>a</sup>	22.3 (1.9) <sup>a</sup>	21.5 (1.2) <sup>a</sup>	19.1 (0.2)	24.8 (0.7)	30.3 (0.3)*	1005	A
<b>Butanol</b>	3.21 (0.31) <sup>b</sup>	1.89 (0.21) <sup>a</sup>	4.99 (0.02) <sup>c</sup>	3.02 (0.26)	8.63 (0.06)*	3.28 (0.3)*	1170	A
<b>2-Ethyl-1-hexanol</b>	169 (2) <sup>a</sup>	204 (8) <sup>a</sup>	204 (21) <sup>a</sup>	178 (26)	338 (4)*	298 (32)*	1574	A
<b>Benzyl alcohol</b>	12.6 (1.5) <sup>a</sup>	19.8 (1.2) <sup>a,b</sup>	27.1 (4.1) <sup>b</sup>	30.8 (4.2)*	42.9 (1.8)*	40.7 (3.1)*	1906	B
<b>2-phenylethanol</b>	ND <sup>a</sup>	43.8 (1.5) <sup>c</sup>	24.3 (2.9) <sup>b</sup>	ND	134 (19)*	66.8 (2.8)*	1921	A
<b>Total</b>	<b>205<sup>a</sup></b>	<b>292<sup>b</sup></b>	<b>282<sup>b</sup></b>	<b>231</b>	<b>557*</b>	<b>439*</b>		
<i>Aldehydes</i>								
<b>Hexanal</b>	17.1 (0.4) <sup>a</sup>	20.4 (1.2) <sup>a</sup>	17.7 (1.8) <sup>a</sup>	14.2 (1.2)	19.8 (2.8)	17.1 (1.2)	1081	A
<b>Nonanal</b>	13.6 (0.3) <sup>a</sup>	13.5 (0.5) <sup>a</sup>	18.4 (0.4) <sup>b</sup>	13.2 (0.8)	23.5 (5.9)	18.4 (0.5)	1413	A
<b>Benzaldehyde</b>	113 (1) <sup>a</sup>	168 (14) <sup>b</sup>	144 (9) <sup>a,b</sup>	125 (6)*	265 (17)*	255 (7)*	1564	A
<b>2,5-Dimethyl benzaldehyde</b>	20.5 (1.6) <sup>a</sup>	42.5 (8.8) <sup>a</sup>	45.9 (8.4) <sup>a</sup>	28.1 (2.6)	102 (12)*	45.2 (6.9)	1930	A
<b>Total</b>	<b>164<sup>a</sup></b>	<b>244<sup>b</sup></b>	<b>226<sup>b</sup></b>	<b>181</b>	<b>410*</b>	<b>336*</b>		
<i>Terpenes</i>								
<b>Limonene</b>	15.8 (0.5) <sup>a</sup>	67.2 (3.6) <sup>b</sup>	27.8 (3.8) <sup>a</sup>	21.6 (0.5)*	60.4 (5.3)	21.4 (0.4)	1230	A
<b>β-Linalool</b>	ND <sup>a</sup>	4.1 (0.63) <sup>b</sup>	3.42 (0.03) <sup>b</sup>	1.97 (0.04)*	6.66 (0.74)	5.22 (0.04)*	1580	A
<b>Myrcenol</b>	ND <sup>a</sup>	2.91 (0.34) <sup>b</sup>	2.72 (0.19) <sup>b</sup>	ND	4.84 (0.14)*	4.93 (0.71)	1610	B
<b>Ocimenol</b>	1.05 (0.04) <sup>a</sup>	9.39 (0.57) <sup>b</sup>	9.21 (0.94) <sup>b</sup>	4.37 (0.71)*	14.1 (1.4)	18.85 (1.82)*	1750	C
<b>α-terpineol</b>	9.75 (0.01) <sup>a</sup>	16.3 (0.5) <sup>b</sup>	16.8 (1.9) <sup>b</sup>	11.3 (1.3)	25.8 (3.1)	25.2 (3.4)	1730	A
<b>6,7-Dihydro-7-hydroxylinalool</b>	2.87 (0.23) <sup>a</sup>	15.2 (0.8) <sup>b</sup>	26.5 (2.6) <sup>c</sup>	21.4 (3.1)*	16.5 (1.4)	43.9 (5.1)*	2025	C
<b>Total</b>	<b>29.5<sup>a</sup></b>	<b>115<sup>c</sup></b>	<b>85<sup>b</sup></b>	<b>60.6*</b>	<b>137</b>	<b>120*</b>		
<i>Ketones</i>								
<b>Cyclohexanone</b>	14.3 (0.1) <sup>a</sup>	15.8 (1) <sup>a,b</sup>	18.4 (0.9) <sup>b</sup>	16.9 (0.3)*	26.7 (5.1)	26.8 (2.2)	1360	C
<b>Acetophenone</b>	14.6 (0.1) <sup>a</sup>	18.7 (0.6) <sup>a</sup>	20.1 (2.6) <sup>a</sup>	17.1 (2.9)	34.2 (2.2)*	29.4 (2.5)	1695	B
<b>Total</b>	<b>28.9<sup>a</sup></b>	<b>34.5<sup>b</sup></b>	<b>38.5<sup>b</sup></b>	<b>34.0</b>	<b>59.1*</b>	<b>56.2*</b>		
<i>Acids</i>								
<b>Acetic acid</b>	33.2 (3.2) <sup>a</sup>	97.4 (18.7) <sup>b</sup>	53.2 (0.2) <sup>a,b</sup>	35.7 (4.6)	99.5 (13.1)	53.2 (2.8)	1523	A
<b>Hexanoic acid</b>	14.9 (1.7) <sup>b</sup>	ND <sup>a</sup>	19.2 (1.2) <sup>b</sup>	19.4 (2)	28.9 (0.1)*	21.3 (2.5)*	1907	A
<b>Total</b>	<b>48.1<sup>a</sup></b>	<b>97.4<sup>b</sup></b>	<b>72.4<sup>a,b</sup></b>	<b>55.1</b>	<b>119</b>	<b>74.5</b>		
<i>C<sub>13</sub>-norisoprenoids</i>								
<b>α-Ionene</b>	6.29 (0.7) <sup>a</sup>	26.9 (0.1) <sup>c</sup>	22.8 (0.9) <sup>b</sup>	9.07 (1.36)	52.6 (3.2)*	51.1 (3.1)*	1552	B
<b>TDN</b>	4.44 (0.21) <sup>a</sup>	98.7 (2.2) <sup>c</sup>	71.1 (10.5) <sup>b</sup>	23.7 (2.6)*	177 (4)*	191 (33)*	1733	B
<b>β-Damascenone</b>	7.45 (0.95) <sup>b</sup>	12.4 (1.4) <sup>c</sup>	ND <sup>a</sup>	8.52 (1.17)	15.5 (0.6)	ND	1845	A
<b>Total</b>	<b>18.8<sup>a</sup></b>	<b>138<sup>c</sup></b>	<b>94<sup>b</sup></b>	<b>41.2*</b>	<b>244*</b>	<b>242*</b>		
<i>Benzenes</i>								
<b>p-Xylene</b>	2.54 (0.14) <sup>b</sup>	0.942 (0.123) <sup>a</sup>	3.19 (0.41) <sup>b</sup>	2.42 (0.04)	3.85 (0.03)*	2.45 (0.09)*	1220	A

<sup>a</sup> Different letters in different columns indicate significant differences ( $p < 0.05$ ) between locations. \*Significant differences according to Tukey's test ( $p < 0.05$ ) with the first maturation stage of every location.

ID: reliability of identification: A, mass spectrum and LRI agreed with standards; B, mass spectrum agreed with mass spectral data base and LRI agreed with the literature data: <sup>14, 17, 27, 39</sup>; C, tentatively identified, mass spectrum agreed with mass spectral database.

KI: Kovats Index

ND: not detected







