

Table S1. Sum of the concentrations of the major volatile compounds identified (mg·L⁻¹) grouped by chemical families, in white varieties.

| Variety-origin | Alcohols | Alcohols* | C ₆ | Esters | Acetates | Acetates* | Acids | Acids* | Carbonyls | Others | Others* |
|------------------------|----------|-----------|----------------|--------|----------|-----------|--------|--------|-----------|----------|---------|
| ‘Albana–A’ | 212.04 | 184.39 | 10.28 | 16.00 | 74.36 | 4.60 | 168.70 | 10.33 | 59.66 | 6136.98 | 727.08 |
| ‘Albana–C’ | 405.87 | 362.55 | 115.82 | 111.57 | 96.31 | 7.94 | 351.44 | 4.81 | 24.16 | 10083.19 | 1417.32 |
| ‘Albilla do Avia’ | 304.62 | 277.92 | 157.65 | 29.38 | 42.94 | 7.89 | 200.72 | 10.38 | 48.95 | 6521.73 | 1079.69 |
| ‘Albillo del Pozo’ | 249.39 | 217.06 | 9.34 | 23.78 | 53.05 | 9.74 | 121.97 | 7.69 | 65.81 | 5701.89 | 818.29 |
| ‘Bastardo Blanco’ | 369.67 | 336.96 | 20.31 | 45.42 | 67.55 | 20.15 | 87.82 | 7.52 | 29.28 | 8415.25 | 849.84 |
| ‘Castellana Blanca–CM’ | 321.50 | 289.29 | 29.64 | 30.86 | 46.31 | 13.27 | 137.18 | 9.93 | 65.62 | 6145.55 | 683.64 |
| ‘Castellana Blanca–M’ | 305.85 | 282.36 | 194.80 | 43.11 | 53.29 | 14.67 | 146.39 | 10.05 | 68.01 | 6086.54 | 752.74 |
| ‘Castellana Blanca–N’ | 309.87 | 277.26 | 30.91 | 24.41 | 67.21 | 13.25 | 180.38 | 27.20 | 51.41 | 6574.80 | 636.11 |
| ‘Cayetana’ | 310.85 | 273.00 | 52.97 | 22.72 | 66.63 | 17.57 | 72.46 | 9.72 | 58.82 | 4007.16 | 782.84 |
| ‘Diega 2’ | 347.35 | 317.07 | 67.40 | 14.64 | 56.41 | 19.70 | 159.07 | 6.11 | 62.32 | 5880.89 | 705.10 |
| ‘Evena 1’ | 280.19 | 239.88 | 18.52 | 32.30 | 96.87 | 13.16 | 128.75 | 8.68 | 59.82 | 5931.23 | 958.50 |
| ‘Folgasao’ | 414.13 | 394.54 | 12.78 | 45.16 | 84.64 | 32.66 | 226.90 | 7.05 | 47.19 | 7969.71 | 623.65 |
| ‘Greta’ | 234.90 | 204.14 | 22.43 | 15.87 | 62.31 | 4.38 | 208.80 | 7.80 | 65.26 | 5499.29 | 685.40 |
| ‘Hebén-E’ | 351.23 | 317.26 | 2.59 | 27.47 | 51.31 | 20.70 | 235.22 | 9.52 | 168.09 | 7283.17 | 487.95 |
| ‘Hebén-M’ | 293.93 | 267.20 | 24.28 | 18.11 | 50.37 | 12.59 | 224.93 | 7.74 | 95.62 | 6987.60 | 965.40 |
| ‘Indiana’ | 217.01 | 192.21 | 21.74 | 20.23 | 42.35 | 4.88 | 145.77 | 11.26 | 40.24 | 4926.84 | 634.07 |
| ‘Jarrosuelto-A’ | 265.90 | 235.85 | 9.93 | 67.63 | 78.08 | 8.70 | 147.11 | 8.48 | 69.50 | 6286.68 | 744.28 |
| ‘Jarrosuelto-CM’ | 249.43 | 225.20 | 95.82 | 28.34 | 45.57 | 13.92 | 174.27 | 36.11 | 82.09 | 6270.36 | 768.05 |
| ‘Jarrosuelto-N’ | 386.70 | 349.00 | 42.67 | 23.10 | 62.79 | 23.20 | 76.59 | 4.49 | 174.21 | 8304.19 | 905.71 |
| ‘Maquías’ | 309.83 | 281.98 | 61.49 | 39.76 | 47.65 | 14.70 | 163.91 | 20.09 | 73.97 | 7005.29 | 977.46 |
| ‘Marco 1 (MC1)’ | 340.97 | 301.81 | 104.06 | 33.63 | 57.34 | 8.26 | 377.74 | 16.88 | 62.94 | 10169.07 | 1982.57 |
| ‘Montonera del Casar’ | 331.75 | 272.41 | 6.34 | 25.78 | 39.67 | 9.50 | 158.46 | 7.13 | 65.73 | 6004.42 | 723.80 |
| ‘Ratiño’ | 369.22 | 338.98 | 107.61 | 28.68 | 69.26 | 30.37 | 274.49 | 18.62 | 47.47 | 8308.25 | 1335.43 |
| ‘Riera 46’ | 274.90 | 250.53 | 118.81 | 18.84 | 37.24 | 7.06 | 134.02 | 14.75 | 30.28 | 5576.90 | 611.07 |
| ‘Rufete Serrano’ | 355.69 | 321.02 | 148.05 | 23.13 | 70.25 | 18.76 | 160.12 | 8.53 | 37.22 | 8873.11 | 1267.32 |
| ‘Verdejo Serrano’ | 354.25 | 315.04 | 103.67 | 46.23 | 64.49 | 20.45 | 319.43 | 7.20 | 51.63 | 9221.78 | 1056.96 |

| | | | | | | | | | | | |
|------------------------|--------|--------|--------|-------|-------|-------|--------|-------|-------|---------|--------|
| 'Zurieleles-CM' | 285.94 | 247.30 | 44.92 | 21.42 | 54.24 | 21.97 | 184.56 | 50.90 | 90.13 | 6490.28 | 748.97 |
| 'Zurieleles-E' | 310.91 | 277.66 | 115.08 | 26.95 | 53.63 | 17.14 | 155.49 | 9.54 | 51.06 | 8230.04 | 971.54 |

Varieties specifications: See **Table 1**. Alcohols*: sum of the concentrations of alcoholic compounds without methanol; Acetates*: sum of the concentrations of acetate compounds without ethyl acetate; Acids*: sum of the concentrations of acid compounds without acetic acid; Others*: sum of the concentrations of compounds classified in 'others' group without glycerol.

Table S2. Sum of the concentrations of the minor volatile compounds identified (lactones in mg·L⁻¹ and terpenes and C₁₃ norisoprenoids in µg·L⁻¹) grouped by chemical families, in white varieties.

| Variety-origin | Lactones | Terpenes | C ₁₃ norisoprenoids |
|------------------------|----------|----------|--------------------------------|
| ‘Albana-A’ | 7.12 | 39.31 | 0.83 |
| ‘Albana-C’ | 14.06 | 28.90 | 0.55 |
| ‘Albilla do Avia’ | 6.51 | 168.82 | 0.26 |
| ‘Albillo del Pozo’ | 5.48 | 24.81 | 0.41 |
| ‘Bastardo Blanco’ | 6.95 | 37.67 | 0.50 |
| ‘Castellana Blanca-CM’ | 5.75 | 25.43 | 0.84 |
| ‘Castellana Blanca-M’ | 6.60 | 29.61 | 0.58 |
| ‘Castellana Blanca-N’ | 7.93 | 54.57 | 0.51 |
| ‘Cayetana’ | 4.53 | 30.75 | 0.44 |
| ‘Diega 2’ | 6.37 | 24.43 | 0.92 |
| ‘Evena 1’ | 5.61 | 24.46 | 0.35 |
| ‘Folgasao’ | 14.59 | 66.01 | 0.53 |
| ‘Greta’ | 6.29 | 32.22 | 0.75 |
| ‘Hebén-E’ | 13.11 | 47.44 | 0.99 |
| ‘Hebén-M’ | 7.49 | 36.64 | 1.60 |
| ‘Indiana’ | 5.22 | 37.80 | 0.37 |
| ‘Jarrosuelto-A’ | 9.67 | 48.45 | 0.46 |
| ‘Jarrosuelto-CM’ | 5.28 | 39.32 | 0.25 |
| ‘Jarrosuelto-N’ | 10.44 | 22.37 | 0.41 |
| ‘Maquías’ | 6.38 | 32.93 | 1.26 |
| ‘Marco 1 (MC1)’ | 8.68 | 112.41 | 0.40 |
| ‘Montonera del Casar’ | 6.82 | 37.17 | 0.62 |
| ‘Ratiño’ | 21.40 | 55.80 | 0.30 |
| ‘Riera 46’ | 5.29 | 29.42 | 0.64 |
| ‘Rufete Serrano’ | 9.32 | 34.21 | 0.74 |
| ‘Verdejo Serrano’ | 12.66 | 77.63 | 1.05 |
| ‘Zurieleles-CM’ | 4.37 | 32.29 | 0.92 |
| ‘Zurieleles-E’ | 11.39 | 43.83 | 0.55 |

Varieties specifications: See **Table 1**.

Table S3. Sum of the concentrations of the major volatile compounds identified (mg·L⁻¹) grouped by chemical families, in red varieties.

| Variety-origin | Alcohols | Alcohols* | C ₆ | Esters | Acetates | Acetates* | Acids | Acids* | Carbonyls | Others | Others* |
|----------------------|----------|-----------|----------------|--------|----------|-----------|--------|--------|-----------|----------|---------|
| ‘Benedicto’ | 474.62 | 362.71 | 114.96 | 20.65 | 81.04 | 27.84 | 220.88 | 5.09 | 63.94 | 8441.01 | 1409.77 |
| ‘Cadrete-N’ | 529.63 | 407.18 | 93.49 | 74.76 | 84.54 | 12.90 | 184.12 | 7.78 | 51.50 | 9329.76 | 1360.47 |
| ‘Callet’ | 553.94 | 382.41 | 43.95 | 141.26 | 82.64 | 27.84 | 546.61 | 6.66 | 61.68 | 9264.67 | 944.38 |
| ‘Cenicienta’ | 700.80 | 428.77 | 148.36 | 148.64 | 106.29 | 19.44 | 143.53 | 10.65 | 61.18 | 8237.96 | 1408.44 |
| ‘Corchera’ | 551.99 | 331.07 | 76.87 | 59.98 | 79.79 | 12.00 | 212.52 | 6.58 | 25.99 | 8677.42 | 1119.59 |
| ‘Diega 1’ | 563.76 | 410.67 | 48.38 | 85.45 | 58.59 | 9.19 | 214.32 | 5.09 | 51.80 | 8243.19 | 783.88 |
| ‘Estaladiña’ | 696.73 | 481.75 | 40.32 | 205.14 | 66.40 | 16.50 | 139.60 | 9.53 | 23.64 | 10087.67 | 1058.98 |
| ‘Garró’ | 455.00 | 336.39 | 149.29 | 44.05 | 60.43 | 24.23 | 160.64 | 3.98 | 65.27 | 7216.70 | 1129.25 |
| ‘Gorgollosa’ | 508.16 | 357.29 | 63.53 | 55.95 | 123.72 | 28.64 | 513.45 | 4.31 | 166.54 | 8653.90 | 874.44 |
| ‘Hondarribi Beltza’ | 559.55 | 407.88 | 206.76 | 62.43 | 132.71 | 62.08 | 257.96 | 3.05 | 72.83 | 9551.80 | 1010.00 |
| ‘Mandregue’ | 475.11 | 310.21 | 69.75 | 24.77 | 88.92 | 38.36 | 343.79 | 9.04 | 122.32 | 11442.08 | 1595.07 |
| ‘Marco 2 (MC2)’ | 473.23 | 325.54 | 93.02 | 66.98 | 56.81 | 6.94 | 495.60 | 27.36 | 45.13 | 8880.56 | 925.31 |
| ‘Melonera’ | 523.75 | 336.55 | 110.73 | 22.39 | 85.12 | 9.01 | 235.25 | 7.91 | 61.61 | 9651.20 | 1776.43 |
| ‘Morate-M’ | 542.34 | 341.54 | 72.04 | 45.40 | 51.08 | 17.01 | 235.71 | 5.87 | 50.01 | 8505.04 | 1276.56 |
| ‘Morate-N’ | 573.50 | 364.77 | 169.38 | 42.86 | 62.68 | 15.28 | 322.66 | 5.48 | 70.28 | 9100.24 | 1254.80 |
| ‘Rayada Melonera’ | 435.16 | 297.19 | 196.04 | 41.26 | 64.25 | 6.93 | 212.93 | 7.51 | 34.90 | 8991.60 | 1255.08 |
| ‘Riera 2’ | 658.53 | 412.59 | 54.05 | 22.01 | 107.56 | 26.58 | 547.77 | 3.91 | 94.91 | 14013.48 | 1857.32 |
| ‘Riera 43’ | 408.09 | 327.90 | 40.78 | 38.40 | 67.08 | 26.01 | 249.89 | 8.66 | 100.11 | 8309.86 | 782.49 |
| ‘Sanguina-C’ | 494.08 | 324.02 | 46.98 | 58.78 | 70.23 | 17.75 | 439.61 | 3.86 | 66.93 | 10513.86 | 1311.42 |
| ‘Sanguina-CM’ | 547.77 | 380.54 | 68.93 | 37.97 | 39.51 | 14.37 | 203.62 | 5.05 | 50.15 | 8338.96 | 1134.35 |
| ‘Santa Fé-A’ | 409.25 | 302.59 | 55.07 | 13.32 | 53.78 | 6.63 | 194.26 | 5.69 | 131.67 | 8444.05 | 1155.25 |
| ‘Terriza-CM’ | 541.36 | 434.56 | 130.22 | 47.09 | 62.99 | 14.08 | 161.29 | 7.08 | 48.65 | 7036.80 | 944.35 |
| ‘Terriza-M’ | 525.67 | 366.65 | 197.45 | 67.09 | 59.36 | 14.83 | 265.55 | 6.91 | 47.36 | 8081.57 | 1216.46 |
| ‘Tinta Jeromo-CL’ | 629.81 | 366.81 | 78.54 | 173.88 | 135.43 | 16.07 | 141.15 | 10.35 | 72.62 | 10560.34 | 1667.79 |
| ‘Tinta Jeromo-CM’ | 631.93 | 386.07 | 36.20 | 63.02 | 73.10 | 18.76 | 249.92 | 4.59 | 66.46 | 7457.95 | 724.42 |
| ‘Tortozona Tinta-A’ | 531.64 | 349.44 | 85.99 | 36.60 | 75.03 | 8.86 | 159.33 | 4.97 | 60.49 | 7208.07 | 943.46 |
| ‘Tortozona Tinta-CM’ | 368.35 | 303.49 | 99.04 | 35.42 | 45.42 | 8.48 | 282.31 | 8.09 | 112.13 | 6333.24 | 764.14 |

| | | | | | | | | | | | |
|----------------------------|--------|--------|--------|--------|-------|-------|--------|-------|-------|----------|---------|
| 'Tortozona Tinta-M' | 463.14 | 329.13 | 289.44 | 64.35 | 72.95 | 17.85 | 267.58 | 20.33 | 45.89 | 8377.99 | 1299.62 |
| 'Tortozona Tinta-N' | 601.97 | 391.61 | 189.62 | 67.71 | 79.54 | 11.18 | 301.98 | 4.10 | 75.21 | 10402.78 | 1281.70 |
| 'Trobat' | 621.14 | 405.66 | 98.15 | 99.59 | 75.50 | 32.93 | 367.79 | 4.10 | 26.94 | 8747.33 | 1163.85 |
| 'Xafardán' | 573.38 | 449.91 | 361.16 | 150.93 | 71.71 | 30.89 | 321.63 | 12.07 | 31.38 | 10526.43 | 1674.48 |
| 'Zamarrica' | 561.02 | 383.19 | 218.37 | 152.20 | 94.96 | 6.56 | 354.37 | 8.57 | 24.52 | 10010.69 | 1363.62 |

Varieties specifications: See **Table 1**. Alcohols*: sum of the concentrations of alcoholic compounds without methanol; Acetates*: sum of the concentrations of acetate compounds without ethyl acetate; Acids*: sum of the concentrations of acid compounds without acetic acid; Others*: sum of the concentrations of compounds classified in 'others' group without glycerol.

Table S4. Sum of the concentrations of the minor volatile compounds identified (lactones in mg·L⁻¹ and terpenes and C₁₃ norisoprenoids in µg·L⁻¹) grouped by chemical families, in red varieties.

| Variety-origin | Lactones | Terpenes | C ₁₃ norisoprenoids |
|----------------------|----------|----------|--------------------------------|
| 'Benedicto' | 10.45 | 21.04 | 1.18 |
| 'Cadrete-N' | 15.84 | 57.23 | 0.64 |
| 'Callet' | 21.86 | 37.63 | 1.73 |
| 'Cenicienta' | 17.03 | 36.83 | 0.58 |
| 'Corchera' | 12.69 | 31.67 | 1.34 |
| 'Diega 1' | 8.73 | 100.40 | 1.51 |
| 'Estaladiña' | 14.02 | 67.75 | 0.90 |
| 'Garró' | 7.68 | 21.93 | 0.92 |
| 'Gorgollosa' | 19.20 | 46.21 | 0.77 |
| 'Hondarribi Beltza' | 12.07 | 31.40 | 1.28 |
| 'Mandregue' | 12.92 | 87.70 | 1.19 |
| 'Marco 2 (MC2)' | 22.33 | 41.12 | 0.83 |
| 'Melonera' | 8.78 | 36.38 | 0.91 |
| 'Morate-M' | 8.47 | 97.46 | 1.29 |
| 'Morate-N' | 9.39 | 32.70 | 0.81 |
| 'Rayada Melonera' | 7.66 | 39.56 | 0.64 |
| 'Riera 2' | 19.59 | 68.63 | 1.26 |
| 'Riera 43' | 7.85 | 22.32 | 2.43 |
| 'Sanguina-C' | 21.03 | 32.84 | 2.24 |
| 'Sanguina-CM' | 11.78 | 67.61 | 1.87 |
| 'Santa Fé-A' | 8.55 | 39.78 | 2.10 |
| 'Terriza-CM' | 7.85 | 64.33 | 1.64 |
| 'Terriza-M' | 8.39 | 48.38 | 0.83 |
| 'Tinta Jeromo-CL' | 26.87 | 44.73 | 1.41 |
| 'Tinta Jeromo-CM' | 7.07 | 63.65 | 0.67 |
| 'Tortozona Tinta-A' | 7.56 | 92.31 | 1.60 |
| 'Tortozona Tinta-CM' | 7.22 | 39.99 | 2.47 |
| 'Tortozona Tinta-M' | 8.36 | 32.43 | 1.17 |
| 'Tortozona Tinta-N' | 18.62 | 53.32 | 1.98 |
| 'Trobat' | 15.45 | 64.80 | 1.90 |
| 'Xafardán' | 13.70 | 61.70 | 0.84 |
| 'Zamarrika' | 21.73 | 45.77 | 0.62 |

Varieties specifications: See **Table 1**.