

Supplementary Materials

Table S1: Chromatographic conditions of the used methods.

| Method | Compounds of interest | Stationary phase | Mobile phase | Analysis | Flow (mL min ⁻¹) | Wavelength (nm) |
|----------|-----------------------------------|---|---|---|------------------------------|-----------------|
| A | cinnamic acids, flavonols | KINETEX—C18 column (4.6 × 150 mm, 5 μm) | A: 10 mM KH ₂ PO ₄ /H ₃ PO ₄ , pH = 2.8 B: CH ₃ CN | gradient analysis: 5% B to 21% B in 17 min + 21% B in 3 min | 1.5 | 330 |
| B | benzoic acids, catechins, tannins | KINETEX—C18 column (4.6 × 150 mm, 5 μm) | A: H ₂ O/CH ₃ OH/HCOOH (5:95:0.1, v/v/v), pH = 2.5 B: CH ₃ OH/HCOOH (100:0.1, v/v) | gradient analysis: 3% B to 85% B in 22 min + 85% B in 1 min | 0.6 | 280 |
| C | monoterpenes | KINETEX—C18 column (4.6 × 150 mm, 5 μm) | A: H ₂ O B: CH ₃ CN | gradient analysis: 30% B to 56% B in 15 min + 56% B in 2 min | 1.0 | 210-250 |
| D | organic acids | KINETEX—C18 column (4.6 × 150 mm, 5 μm) | A: 10 mM KH ₂ PO ₄ /H ₃ PO ₄ , pH = 2.8 B: CH ₃ CN | gradient analysis: 5% B to 14.4% B in 10 min + 14.4% B in 2 min | 0.6 | 214 |
| E | vitamins | KINETEX—C18 column (4.6 × 150 mm, 5 μm) | A: 50 mM KH ₂ PO ₄ B: 5 mM C ₁₆ H ₃₃ N(CH ₃) ₃ Br/CH ₃ OH/H ₂ O (5:95, v/v) | isocratic analysis: ratio of phase A and B: 95:5 in 10 min | 0.9 | 261, 348 |
| F | sugars | SphereClone—NH ₂ column (4.6 × 250 mm, 5 μm) | A: H ₂ O B: CH ₃ CN | isocratic analysis: ratio of phase A and B: 5:85 in 12 min | 0.5 | 267 |

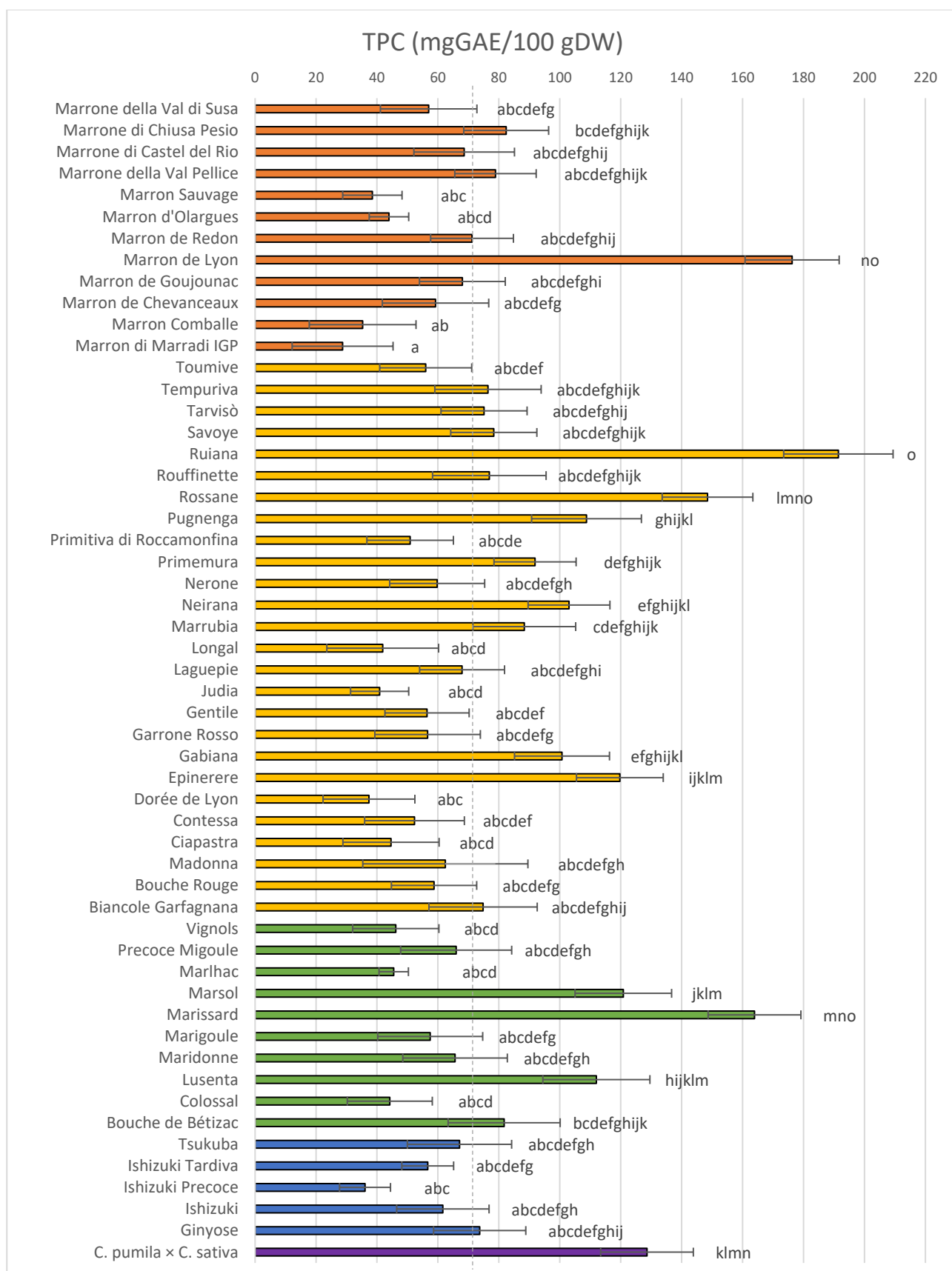


Figure S1: Total polyphenol content of the 54 chestnut cultivars. Different letters for each cultivar indicate the significant differences at $p < 0.05$. Orange colour: marrone-type chestnut (MT); yellow colour: sweet chestnut (SC); green colour: Euro-Japanese hybrid (EH); blue colour: Japanese chestnut (JC); purple colour: *C. pumila* hybrid (PH). The dashed line indicates the average.

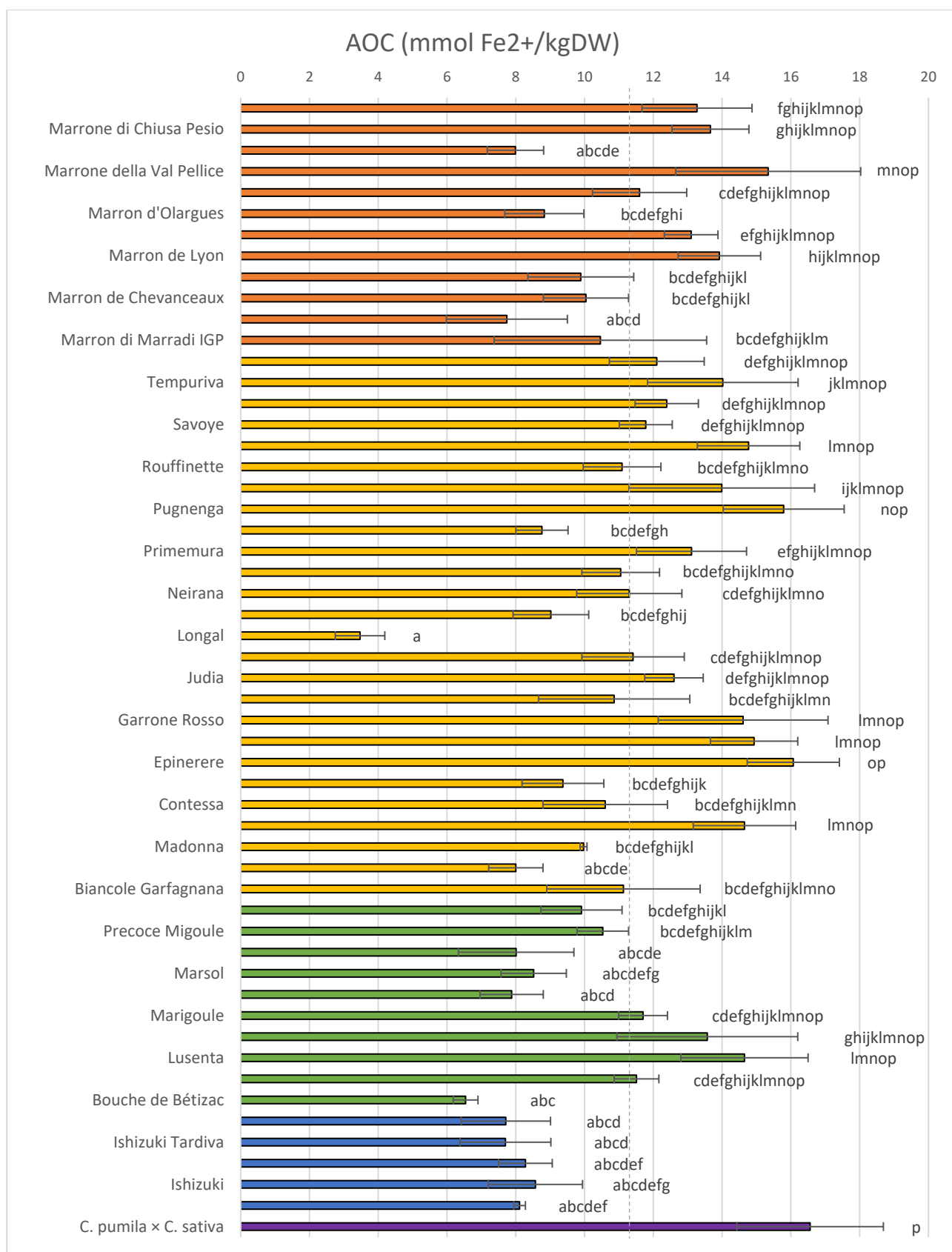


Figure S2: Antioxidant activity of the 54 chestnut cultivars. Different letters for each cultivar indicate the significant differences at $p < 0.05$. Orange colour: marrone-type chestnut (MT); yellow colour: sweet chestnut (SC); green colour: Euro-Japanese hybrid (EH); blue colour: Japanese chestnut (JC); purple colour: *C. pumila* hybrid (PH). The dashed line indicates the average.

Table S2: Chestnut phytochemical class profiles.

| Cv. Type | Cultivar | ID | Cinnamic Acids (mg/100 g _{DW}) | Flavonols (mg/100 g _{DW}) | Benzoic Acids (mg/100 g _{DW}) | Catechins (mg/100 g _{DW}) | Tannins (mg/100 g _{DW}) | Monoterpenes (mg/100 g _{DW}) | Vitamin C (mg/100 g _{DW}) |
|-----------|-------------------------------------|-----|---|--|--|--|--------------------------------------|---|--|
| PH | <i>C. pumila</i> × <i>C. sativa</i> | K24 | 43.48 ± 1.43 ^γ | 12.66 ± 0.40 ^{ij} | 3.30 ± 0.58 ^{abcde} | 25.89 ± 1.21 ^{qr} | 27.14 ± 0.05 ^{defg} | 1.32 ± 0.07 ^a | 9.45 ± 0.03 ^r |
| JC | Ginyose | D18 | 15.23 ± 0.05 ^{ghijklmnopqr} | 1.28 ± 0.43 ^{abc} | 2.16 ± 0.40 ^{abc} | 73.09 ± 4.26 ^t | 4.68 ± 0.10 ^a | 97.21 ± 2.22 ^{abcdef} | n.d. |
| | Ishizuki | F23 | 14.42 ± 0.10 ^{fghijklmn} | n.d. | 0.62 ± 0.20 ^a | 13.99 ± 0.14 ^{abcdef} | 11.91 ± 0.15 ^{abcd} | 129.03 ± 1.22 ^{abcdef} | n.d. |
| | Ishizuki Precoce | O15 | 21.73 ± 0.21 ^{xy} | 7.18 ± 0.39 ^{defghij} | 0.72 ± 0.01 ^a | 22.95 ± 0.03 ^{mnopqr} | 7.30 ± 0.03 ^{abc} | n.d. | 7.40 ± 0.26 ^{pq} |
| | Ishizuki Tardiva | E17 | 6.46 ± 0.01 ^{bc} | n.d. | 0.57 ± 0.02 ^a | 7.95 ± 0.08 ^{abc} | 17.87 ± 0.21 ^{abcdef} | 14.41 ± 0.04 ^{abcd} | n.d. |
| | Tsukuba | G14 | 0.62 ± 0.02 ^a | 1.36 ± 0.03 ^{abc} | 0.87 ± 0.03 ^{ab} | 6.80 ± 0.84 ^{ab} | 13.43 ± 0.03 ^{abcd} | 75.81 ± 2.05 ^{abcde} | n.d. |
| EH | Bouche de Bétizac | I10 | 12.65 ± 0.04 ^{fghij} | n.d. | 4.44 ± 0.05 ^{abcdef} | 14.37 ± 0.03 ^{bdefghijk} | 12.04 ± 0.05 ^{abcd} | n.d. | 5.87 ± 0.10 ^{iklm} |
| | Colossal | M22 | 14.78 ± 0.05 ^{fghijklmno} | 1.19 ± 0.12 ^{abc} | 2.77 ± 0.07 ^{abcd} | 12.94 ± 1.40 ^{abcdefghi} | 16.02 ± 0.14 ^{abcde} | 169.37 ± 9.44 ^{abcdefg} | n.d. |
| | Lusenta | M15 | 20.46 ± 0.09 ^{vwxxy} | 11.49 ± 0.36 ^j | 12.13 ± 0.12 ^{hijklmno} | 18.81 ± 0.05 ^{ghijklmnopq} | 21.38 ± 0.15 ^h | n.d. | 10.25 ± 0.09 ^s |
| | Maridonne | J14 | 22.14 ± 0.29 ^{yz} | 3.36 ± 0.16 ^{abcdefgh} | 0.50 ± 0.08 ^a | 5.30 ± 0.64 ^a | 22.34 ± 0.79 ^{abcdef} | 420.32 ± 6.38 ^{bdefghi} | 3.82 ± 0.06 ^{efgh} |
| | Marigoule | J13 | 12.05 ± 0.09 ^{efgh} | 6.57 ± 0.02 ^{cdefghij} | 1.86 ± 0.01 ^{abc} | 15.44 ± 0.12 ^{cdefghijklm} | 9.76 ± 0.02 ^{abcd} | n.d. | 9.20 ± 0.06 ^r |
| | Marissard | N14 | 18.85 ± 0.01 ^{qrstuvwxy} | n.d. | 7.86 ± 0.03 ^{cdefghij} | 11.11 ± 0.02 ^{abcdefg} | 7.96 ± 0.12 ^{abc} | n.d. | 5.56 ± 0.01 ^{ijkl} |
| | Marlhac | K05 | 2.28 ± 0.01 ^a | n.d. | 16.53 ± 0.01 ^{nopq} | 19.31 ± 0.02 ^{ijklmnopq} | 8.64 ± 0.08 ^{abc} | n.d. | 5.78 ± 0.09 ^{ijkl} |
| | Marsol | F06 | 14.74 ± 0.03 ^{fghijklmno} | n.d. | 14.94 ± 0.02 ^{klmnopq} | 22.95 ± 0.02 ^{mnopqr} | 16.52 ± 0.41 ^{abcde} | n.d. | n.d. |
| | Precoce Migoule | G18 | 17.29 ± 0.02 ^{mnopqrstuv} | n.d. | 0.43 ± 0.01 ^a | 13.66 ± 0.01 ^{bdefghij} | 11.90 ± 0.18 ^{abcd} | n.d. | 5.55 ± 0.01 ^{ijkl} |
| SC | Vignols | I17 | 19.62 ± 0.42 ^{tuvwxyz} | 2.22 ± 0.14 ^{ghij} | 16.21 ± 0.04 ^{nopq} | 23.99 ± 0.37 ^{pqr} | 34.97 ± 0.24 ^{fgh} | 901.68 ± 4.21 ^{lm} | 12.32 ± 0.01 ^t |
| | Biancole Garfagnana | B03 | 13.28 ± 0.09 ^{fghijk} | n.d. | 9.05 ± 0.55 ^{defghijk} | 20.83 ± 0.29 ^{ijklmnopq} | 9.98 ± 0.46 ^{abcd} | 259.23 ± 9.99 ^{abcdefghi} | n.d. |
| | Bouche Rouge | I18 | 15.85 ± 0.16 ^{ijklmnopqrs} | 0.43 ± 0.09 ^a | 2.34 ± 0.21 ^{abc} | 5.71 ± 0.90 ^a | 12.05 ± 0.37 ^{abcd} | 107.21 ± 5.83 ^{abcdef} | 5.95 ± 0.01 ^{iklm} |
| | Ciapastra | T02 | 11.17 ± 0.28 ^{def} | 1.40 ± 0.03 ^{abcdefghi} | 7.49 ± 0.81 ^{cdefghi} | 18.74 ± 3.36 ^{cdefghijkl} | 24.39 ± 0.09 ^{bdefg} | 224.21 ± 13.26 ^{abcdefg} | 3.19 ± 0.06 ^d |
| | Contessa | L02 | 16.35 ± 0.13 ^{ijklmnopqrstu} | 0.23 ± 0.08 ^a | 17.52 ± 1.97 ^{nopq} | 10.22 ± 0.90 ^{abcdef} | 10.93 ± 0.11 ^{abcd} | 588.06 ± 30.76 ^{ghij} | n.d. |
| | Dorée de Lyon | H23 | 17.04 ± 0.06 ^{klmnopqrstuv} | 1.15 ± 0.05 ^{abc} | 5.65 ± 0.04 ^{abcdefg} | 18.97 ± 0.03 ^{ijklmnopq} | 5.44 ± 0.09 ^a | n.d. | 6.87 ± 0.09 ^{op} |
| | Epinerere | M16 | 28.21 ± 0.39 ^{αβ} | 1.85 ± 0.45 ^{abcd} | 6.55 ± 0.01 ^{abcdefgh} | 18.93 ± 0.66 ^{hijklmnopq} | 21.07 ± 0.07 ^{abcdef} | 234.33 ± 2.17 ^{abcdefg} | 1.38 ± 0.43 ^b |

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|----|---------------------------|-----|--------------------------------------|----------------------------------|----------------------------------|-------------------------------------|--------------------------------|------------------------------------|------------------------------|
| | Gabiana | O03 | 18.48 ± 0.29 ^{opqrstuvwxy} | n.d. | 11.45 ± 0.12 ^{ghijklmn} | 23.30 ± 0.19 ^{nopqr} | 11.69 ± 0.27 ^{abcd} | 625.93 ± 35.08 ^{ijkl} | 3.61 ± 0.23 ^{def} |
| | Garrone Rosso | I03 | 18.99 ± 0.13 ^{rstuvwxy} | n.d. | 15.59 ± 0.35 ^{lmnopq} | 15.82 ± 0.51 ^{defghijklmn} | 18.58 ± 0.21 ^{abcdef} | 815.87 ± 19.80 ^{klm} | 5.90 ± 0.02 ^{ijklm} |
| | Gentile | P12 | 4.06 ± 0.03 ^{ab} | 1.59 ± 0.05 ^{abcd} | 3.67 ± 0.05 ^{abcdef} | 23.52 ± 0.41 ^{nopqr} | 12.70 ± 0.11 ^{abcd} | n.d. | 5.42 ± 0.39 ^{ijk} |
| | Judia | F21 | 31.70 ± 0.63 ^β | 7.53 ± 1.36 ^{efghij} | 4.86 ± 0.45 ^{abcdef} | 18.31 ± 0.14 ^{cdefghijklm} | 15.03 ± 0.16 ^{abcde} | 185.34 ± 5.72 ^{abcdefg} | 3.14 ± 0.62 ^d |
| | Laguepie | H24 | 18.04 ± 0.09 ^{opqrstuvwxy} | 3.18 ± 0.01 ^{abcdefgh} | 13.15 ± 0.12 ^{ijklmnop} | 29.42 ± 0.05 ^r | 15.95 ± 0.58 ^{abcde} | 540.38 ± 0.25 ^{ijk} | 6.00 ± 0.13 ^{klmn} |
| | Longal | E16 | 25.83 ± 0.10 ^{zu} | 8.62 ± 0.03 ^{hij} | 11.97 ± 0.01 ^{hijklmno} | 9.50 ± 0.51 ^{abcdef} | 15.54 ± 0.44 ^{abcde} | 725.50 ± 6.30 ^{abcdefghi} | 3.45 ± 0.15 ^{de} |
| | Marrubia | Q13 | 13.43 ± 0.36 ^{fghijkl} | 1.74 ± 0.04 ^{abcd} | 1.57 ± 0.05 ^{abc} | 14.83 ± 0.07 ^{cdefghijkl} | 10.18 ± 0.17 ^{abcd} | n.d. | 4.20 ± 0.14 ^{fgh} |
| | Neirana | U09 | 20.02 ± 0.15 ^{uvwxy} | 0.27 ± 0.05 ^a | 18.62 ± 0.46 ^{pq} | 8.33 ± 1.00 ^{abcd} | 21.11 ± 0.22 ^{abcdef} | 517.13 ± 17.73 ^{hijk} | n.d. |
| | Nerone | H08 | 18.77 ± 0.02 ^{pqrstuvwxy} | n.d. | 7.13 ± 0.36 ^{bcdefghi} | 10.43 ± 0.19 ^{abcdef} | 6.31 ± 0.34 ^{ab} | 241.59 ± 11.21 ^{abcdefg} | 5.96 ± 0.19 ^{ijklm} |
| | Primemura | X05 | 17.34 ± 0.21 ^{fghijklm} | 1.40 ± 0.15 ^{abc} | 1.82 ± 0.20 ^{abcdef} | 14.14 ± 2.17 ^{bcdefghij} | 24.79 ± 0.43 ^{cdefg} | 351.46 ± 10.60 ^{defghij} | 3.84 ± 0.08 ^{efgh} |
| | Primitiva di Roccamonfina | I07 | 19.32 ± 0.12 ^{stuvwxy} | n.d. | 2.29 ± 0.04 ^{abc} | 23.76 ± 0.16 ^{opqr} | 8.42 ± 0.25 ^{abc} | 1.63 ± 0.41 ^a | 5.73 ± 0.02 ^{ijkl} |
| | Pugnenga | P04 | 62.89 ± 0.22 ^δ | 6.24 ± 0.04 ^{bcdefghij} | 17.41 ± 0.06 ^{nopq} | 23.79 ± 0.29 ^{opqr} | 14.22 ± 0.34 ^{abcde} | 28.20 ± 0.15 ^{ab} | 5.50 ± 0.16 ^{ijkl} |
| | Rossane | N13 | 12.84 ± 0.45 ^{fghij} | 1.81 ± 0.02 ^{abcd} | 26.73 ± 0.02 ^r | 26.10 ± 0.41 ^{qr} | 14.91 ± 0.35 ^{abcde} | n.d. | 5.79 ± 0.13 ^{ijkl} |
| | Rouffinette | O11 | 12.36 ± 0.13 ^{fghi} | 0.98 ± 0.01 ^{abc} | 11.44 ± 0.01 ^{ghijklmn} | 25.70 ± 0.37 ^{qr} | 5.78 ± 0.09 ^a | 17.00 ± 0.13 ^{abc} | 5.38 ± 0.01 ^{ij} |
| | Ruiana | T11 | 19.00 ± 0.03 ^{rstuvwxy} | 2.24 ± 0.03 ^{abcde} | 16.93 ± 0.01 ^{nopq} | 11.99 ± 0.02 ^{bcdefghij} | 10.99 ± 0.08 ^{abcd} | 1300.55 ± 10.66 ⁿ | n.d. |
| | Savoye | J16 | 15.75 ± 0.09 ^{hijklmnopqrs} | n.d. | 5.31 ± 0.13 ^{bcdefg} | 22.15 ± 0.92 ^{lmnopqr} | 8.50 ± 0.63 ^{abc} | 201.46 ± 13.64 ^{bcdefg} | 6.86 ± 0.10 ^{op} |
| | Tarvisò | U06 | 9.44 ± 0.60 ^{fghi} | 4.92 ± 0.23 ^{bcdefghi} | 21.60 ± 0.02 ^{klmnopq} | 11.78 ± 0.51 ^{abcde} | 17.59 ± 0.27 ^{abcdef} | 724.62 ± 20.74 ^{ijk} | 4.32 ± 0.03 ^h |
| | Tempuriva | O12 | 17.87 ± 0.05 ^{mnopqrstuvw} | 2.10 ± 0.02 ^{abcde} | 5.10 ± 0.12 ^{abcdef} | 8.32 ± 0.16 ^{abcd} | 21.82 ± 0.15 ^{abcdef} | n.d. | 1.12 ± 0.31 ^b |
| | Toumive | D11 | 11.47 ± 0.10 ^{efg} | 1.74 ± 0.05 ^{abcd} | 9.86 ± 0.02 ^{fghijklm} | 39.40 ± 0.34 ^s | 7.44 ± 0.05 ^{abc} | n.d. | 6.44 ± 0.17 ^{mno} |
| MT | Marron di Marradi IGP | C03 | 7.57 ± 0.03 ^{bcd} | 0.47 ± 0.01 ^a | 6.43 ± 0.04 ^{bcdefgh} | 13.68 ± 0.07 ^{bcdefghij} | 40.92 ± 0.05 ^{gh} | 557.30 ± 3.61 ^{fghij} | 5.79 ± 0.06 ^{ijkl} |
| | Marron Comballe | G19 | 14.27 ± 0.38 ^{fghijklmn} | 1.04 ± 0.03 ^{abc} | 3.77 ± 0.03 ^{abcdef} | 14.16 ± 0.06 ^{bcdefghij} | 5.53 ± 0.24 ^a | 264.76 ± 2.11 ^{bcdefghi} | 4.15 ± 0.01 ^{fgh} |
| | Marron de Chevanceaux | L14 | 15.17 ± 0.20 ^{ghijklmnopq} | 0.35 ± 0.26 ^a | 1.79 ± 0.01 ^{abc} | 9.06 ± 0.57 ^{abcdef} | 7.19 ± 0.19 ^{abc} | 6.75 ± 0.01 ^a | n.d. |
| | Marron de Goujounac | F20 | 15.57 ± 0.08 ^{hijklmnopqrs} | 0.35 ± 0.04 ^a | 6.39 ± 0.18 ^{bcdefgh} | 15.84 ± 2.24 ^{defghijklmn} | 5.66 ± 0.30 ^a | 320.08 ± 17.84 ^{bcdefghi} | n.d. |
| | Marron de Lyon | G23 | 15.34 ± 0.47 ^{hijklmnopqr} | 0.16 ± 0.02 ^a | 9.07 ± 0.76 ^{efghijk} | 21.19 ± 0.51 ^{jklmnopq} | 8.18 ± 0.09 ^{abc} | 337.78 ± 26.97 ^{cdefghij} | 6.08 ± 0.53 ^{lmn} |
| | Marron de Redon | K22 | 15.07 ± 0.13 ^{shijklmnop} | 7.98 ± 0.01 ^{fghij} | 7.25 ± 0.08 ^{cdefghi} | 21.91 ± 0.09 ^{jklmnopqr} | 8.92 ± 0.63 ^{abcd} | 8.81 ± 0.03 ^a | 5.24 ± 0.04 ⁱ |

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|---------------------------|-----|--------------------------------------|-------------------------------|-----------------------------------|-------------------------------------|------------------------------|----------------------------------|----------------------------|
| Marron d'Olargues | F18 | 15.04 ± 0.15 ^{ghijklmnop} | 9.44 ± 0.01 ^{ij} | 15.76 ± 0.01 ^{mnpq} | 19.64 ± 0.29 ^{ijklmnopq} | 4.27 ± 0.07 ^a | n.d. | 6.42 ± 0.09 ^{mno} |
| Marron Sauvage | K20 | 8.38 ± 0.30 ^{de} | 2.66 ± 0.02 ^{abcdeg} | 4.57 ± 0.01 ^{abcdef} | 16.23 ± 0.05 ^{efghijklmno} | 5.70 ± 0.08 ^a | n.d. | 6.62 ± 0.29 ^{no} |
| Marrone della Val Pellice | V07 | 6.27 ± 0.13 ^{bc} | n.d. | 9.48 ± 0.04 ^{efghijklm} | 19.64 ± 0.01 ^{ijklmnopq} | 9.56 ± 0.08 ^{abcd} | n.d. | 6.59 ± 0.24 ^{no} |
| Marrone di Castel del Rio | G08 | 16.79 ± 0.16 ^{klmnopqrstuv} | 0.24 ± 0.09 ^a | 16.96 ± 0.69 ^{nopq} | 8.14 ± 0.62 ^{abcd} | 8.24 ± 0.02 ^{abc} | 530.06 ± 25.98 ^{ijk} | n.d. |
| Marrone di Chiusa Pesio | G02 | 17.04 ± 0.18 ^{klmnopqrstuv} | n.d. | 14.02 ± 0.30 ^{ijklmnopq} | 14.49 ± 0.14 ^{abcdegh} | 31.95 ± 0.62 ^{efgh} | 364.32 ± 11.05 ^{efghij} | 7.62 ± 0.41 ^q |
| Marrone della Val di Susa | P16 | 14.29 ± 0.52 ^{fghijklmn} | 2.15 ± 0.04 ^{abcde} | 6.53 ± 0.07 ^{abcdegh} | 11.99 ± 0.06 ^{abcdeghi} | 7.21 ± 0.06 ^{abc} | n.d. | 2.26 ± 0.32 ^c |

Mean value ± standard deviation of each sample is given ($n = 3$). Different letters (a, b, c, \dots, δ) for each descriptor indicate the significant differences at $p \leq 0.05$. N.d.: not detected. C. pumila hybrid (PH); Japanese chestnut (JC); Euro-Japanese hybrid (EH); sweet chestnut (SC); marrone-type chestnut (MT).

Table S3: Nutritional properties of analyzed chestnut cultivars.

| Cv. Type | Cultivar | ID | Organic Acids (mg/100 g _{DW}) | Sugars (g/100 g _{DW}) |
|----------|-------------------------------------|-----|--|--------------------------------------|
| PH | <i>C. pumila</i> × <i>C. sativa</i> | K24 | 713.44 ± 40.43 ^{abcde fghij} | 19.43 ± 1.22 ^{abcde fghij} |
| | Ginyose | D18 | 881.68 ± 16.25 ^{abcde fghi} | 4.55 ± 1.30 ^{abc} |
| | Ishizuki | F23 | 719.86 ± 167.71 ^{abcde fgh} | 16.93 ± 0.28 ^{abcde fghij} |
| JC | Ishizuki Precoce | O15 | 909.26 ± 27.73 ^{abcde fgh} | 3.84 ± 0.06 ^{ab} |
| | Ishizuki Tardiva | E17 | 575.76 ± 64.68 ^{abcde fg} | 4.28 ± 1.88 ^{abc} |
| | Tsukuba | G14 | 550.08 ± 107.04 ^{abcde fgh} | 2.74 ± 0.86 ^a |
| EH | Bouche de Bétizac | I10 | 324.23 ± 2.25 ^{abcde f} | 36.25 ± 0.14 ^{ghijklm} |
| | Colossal | M22 | 810.28 ± 43.29 ^{abcde fghij} | 5.82 ± 0.65 ^{abcde fghij} |
| | Lusenta | M15 | 935.62 ± 2.51 ^{bcde fghij} | 6.49 ± 1.31 ^{abcde} |
| | Maridonne | J14 | 607.84 ± 25.71 ^{abcde fg} | 15.03 ± 1.03 ^{abcde fghi} |
| | Marigoule | J13 | 982.77 ± 1.34 ^{cde fghij} | 3.53 ± 1.47 ^{ab} |
| | Marissard | N14 | 1171.26 ± 0.90 ^{fghijkl} | 49.56 ± 0.35 ^{fghijklm} |
| | Marlhac | K05 | 577.82 ± 0.64 ^{abcde fg} | 30.99 ± 1.12 ^{cde fghijklm} |
| | Marsol | F06 | 1386.06 ± 42.83 ^{hijkl} | 40.08 ± 0.61 ^{ijklm} |
| | Precoce Migoule | G18 | 1879.03 ± 4.06 ^l | 4.37 ± 1.96 ^{abc} |
| | Vignols | I17 | 1454.87 ± 209.16 ^{ikl} | 51.83 ± 0.02 ^{klm} |
| SC | Biancole Garfagnana | B03 | 849.24 ± 18.13 ^{abcde fghij} | 4.83 ± 1.51 ^{abcd} |
| | Bouche Rouge | I18 | 561.78 ± 46.22 ^{abcde fg} | 3.04 ± 0.04 ^{ab} |
| | Ciapastra | T02 | 566.00 ± 45.60 ^{abcde fg} | 16.88 ± 0.12 ^{abcde fgh} |
| | Contessa | L02 | 459.03 ± 115.60 ^{abcde f} | 25.56 ± 1.79 ^{abcde fghijk} |
| | Dorée de Lyon | H23 | 493.96 ± 1.67 ^{abcde f} | 3.27 ± 0.03 ^{ab} |
| | Epinerere | M16 | 309.97 ± 60.02 ^{abcde f} | 15.24 ± 1.54 ^{abcde fghi} |
| | Gabiana | O03 | 637.77 ± 82.34 ^{abcde fghij} | 13.89 ± 0.29 ^{abcde fg} |
| | Garrone Rosso | I03 | 899.78 ± 57.79 ^{abcde fghij} | 3.02 ± 1.53 ^{abcde} |
| | Gentile | P12 | 172.38 ± 55.48 ^{abcde fg} | 3.78 ± 1.21 ^{ab} |
| | Judia | F21 | 281.40 ± 53.12 ^{abc} | 9.18 ± 1.66 ^{abcde f} |
| | Laguepie | H24 | 1449.85 ± 0.66 ^{de fghijk} | 31.37 ± 0.01 ^{de fghijklm} |
| | Longal | E16 | 860.25 ± 14.53 ^{abcde fgh} | 12.42 ± 3.67 ^{abcde fgh} |
| | Marrubia | Q13 | 976.44 ± 0.78 ^{cde fghij} | 7.61 ± 0.03 ^{abcde} |
| | Neirana | U09 | 707.23 ± 57.63 ^{abcde fghij} | 17.27 ± 0.64 ^{abcde fghij} |
| | Nerone | H08 | 716.63 ± 90.25 ^{abcde fgh} | 13.83 ± 0.49 ^{abcde fghi} |
| | Primemura | X05 | 678.40 ± 22.25 ^{abcde fg} | 4.28 ± 1.40 ^{abc} |
| | Primitiva di Roccamonfina | I07 | 1390.76 ± 97.89 ^{cde fghij} | 6.30 ± 0.96 ^{abcde} |
| | Pugnenga | P04 | 894.59 ± 0.98 ^{abcde fghij} | 57.19 ± 3.74 ^m |

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|----|---------------------------|-----|--------------------------------------|--------------------------------------|
| | Rossane | N13 | 1151.17 ± 107.96 ^{defghijk} | 10.75 ± 2.21 ^{abcdefg} |
| | Rouffinette | O11 | 1420.24 ± 0.62 ^{ijkl} | 32.22 ± 1.52 ^{efghijklm} |
| | Ruiana | T11 | 966.65 ± 7.70 ^{cdefghij} | 29.34 ± 0.17 ^{bcddefghijkl} |
| | Savoye | J16 | 349.81 ± 34.71 ^{abcd} | 7.11 ± 0.05 ^{abcde} |
| | Tarvisò | U06 | 683.63 ± 46.99 ^{abcdefghi} | 11.02 ± 0.38 ^{abcdef} |
| | Tempuriva | O12 | 217.13 ± 4.28 ^{abc} | 12.88 ± 0.03 ^{abcdefgh} |
| | Toumive | D11 | 1259.86 ± 6.18 ^{bcddefghij} | 53.78 ± 0.33 ^{lm} |
| MT | Marron di Marradi IGP | C03 | 809.08 ± 3.62 ^{abcdefghij} | 4.93 ± 0.02 ^{abcd} |
| | Marron Comballe | G19 | 709.03 ± 69.35 ^{abcdefghij} | 5.74 ± 2.50 ^{abcde} |
| | Marron de Chevanceaux | L14 | 351.39 ± 58.12 ^{abcde} | 11.66 ± 0.26 ^{abcde} |
| | Marron de Goujounac | F20 | 575.06 ± 12.04 ^{abcdefg} | 4.90 ± 0.58 ^{ab} |
| | Marron de Lyon | G23 | 553.51 ± 32.28 ^{abcdefgh} | 7.10 ± 1.55 ^{abcde} |
| | Marron de Redon | K22 | 895.34 ± 0.32 ^{abcdefghij} | 52.43 ± 2.52 ^{lm} |
| | Marron d'Olargues | F18 | 804.68 ± 10.78 ^{abcdefghij} | 31.84 ± 0.65 ^{abcdefghij} |
| | Marron Sauvage | K20 | 1419.77 ± 54.86 ^{ijkl} | 5.21 ± 2.11 ^{abcd} |
| | Marrone della Val Pellice | V07 | 1574.82 ± 0.15 ^{ghijkl} | 6.44 ± 2.28 ^{abcdefghi} |
| | Marrone di Castel del Rio | G08 | 942.16 ± 35.47 ^{cdefghij} | 3.12 ± 1.41 ^{ab} |
| | Marrone di Chiusa Pesio | G02 | 826.84 ± 73.81 ^{abcdefghij} | 21.81 ± 1.37 ^{abcdefghij} |
| | Marrone della Val di Susa | P16 | 1809.85 ± 70.63 ^{kl} | 26.36 ± 0.36 ^{abcdefghij} |

Mean value and standard deviation of each sample is given ($n = 3$). Different letters (a,b,c,..., m) for each descriptor indicate the significant differences at $p \leq 0.05$. C. pumila hybrid (PH); Japanese chestnut (JC); Euro-Japanese hybrid (EH); Sweet chestnut (SC); Marrone-type chestnut (MT).