**Supplementary materials**

**Table S1.** Sugar and organic acid content of apple juice of different varieties

**Table S2.** Sugar and organic acid content of pear juice of different varieties

**Table S3.** Sugar and organic acid content of peach juice of different varieties

**Table S4.** Sugar and organic acid content of grape juice of different varieties

**Table S5.** Sugar and organic acid content of sweet cherry juice of different varieties

**Table S6.** Sugar and organic acid content of strawberry juice of different varieties

**Table S7.** Sugar and organic acid content of blueberry juice of different varieties

**Figure S1.** HPLC chromatogram of sugar and organic acid standards

**Table S1:** Sugar and organic acid content of apple juice of different varieties

|  |  |  |  |
| --- | --- | --- | --- |
| Variety | Sugar content (g/L) |  | Organic acid content (mg/100mL) |
| Sucrose | Glucose | Fructose | Sorbitol | Quinic | Malic | Shikimic | Citric | Fumaric\* |
| Beidou | 21.16±0.17h | 21.73±0.18g | 72.00±0.57d | 3.62±0.01e |  | 53.20±1.52i | 497.86±2.09f | 0.53±0.01h | 17.25±0.39a | 0.12±0.00g |
| Beizhixing | 25.82±0.14f | 20.67±0.11i | 64.93±0.25i | 2.27±0.02i |  | 57.42±1.08h | 543.22±1.96d | 1.13±0.03b | 17.13±0.24a | 1.58±0.04b |
| Pink lady | 38.39±0.20a | 21.03±0.22h | 70.30±0.48e | 3.26±0.02g |  | 77.36±1.99d | 705.00±3.54a | 0.45±0.02j | 15.60±0.47c | 0.05±0.00i |
| Huamei | 30.66±0.19d | 23.77±0.15e | 70.26±0.41e | 2.81±0.01h |  | 52.21±0.54ij | 303.42±0.15j | 1.06±0.01c | 13.65±0.09e | 0.32±0.01d |
| Huarui | 16.42±0.12j | 23.11±0.17f | 62.17±0.46j | 1.99±0.02j |  | 73.05±1.26e | 309.54±1.10i | 0.82±0.01f | 15.28±0.05c | 0.55±0.02c |
| Huashuo | 30.48±0.18d | 17.21±0.10j | 68.01±0.42g | 1.89±0.01m |  | 69.99±0.81f | 400.86±2.91g | 0.95±0.03d | 13.38±0.02e | 0.04±0.00ij |
| Golden delicious | 31.37±0.14c | 28.39±0.17c | 84.52±0.44a | 6.39±0.02a |  | 75.50±0.69d | 671.21±4.83b | 0.50±0.01i | 16.24±0.07b | 0.26±0.00e |
| Jonagold | 17.42±0.08i | 23.34±0.11f | 69.45±0.31f | 1.92±0.01k |  | 50.47±1.21j | 349.17±2.47h | 0.36±0.00k | 11.70±0.04f | 0.03±0.00ij |
| Fuji | 34.65±0.14b | 25.86±0.10d | 82.59±0.14b | 4.67±0.01c |  | 202.80±0.65a | 506.94±2.26ef | 0.88±0.01e | 14.27±0.42d | 1.69±0.03a |
| Qinguan | 8.99±0.02k | 34.10±0.10a | 54.10±0.19k | 6.12±0.02b |  | 86.63±2.44c | 580.72±2.77c | 1.23±0.01a | 17.24±0.21a | 0.02±0.00j |
| Sansa | 27.21±0.47e | 23.17±0.26f | 79.51±0.33c | 3.33±0.01f |  | 60.41±1.33g | 512.79±0.74e | 0.75±0.01g | 12.02±0.12f | 0.20±0.00f |
| Starkrimson | 24.08±0.17g | 28.86±0.15b | 65.98±0.44h | 4.39±0.03d |  | 91.82±0.18b | 307.76±2.54ij | 1.12±0.02b | 13.30±0.09e | 0.08±0.00h |
| Minimum | 8.99±0.02 | 20.67±0.11 | 54.10±0.19 | 1.89±0.01 |  | 50.47±1.21 | 303.42±0.15 | 0.36±0.00 | 11.70±0.04 | 0.02±0.00 |
| Maximum | 38.39±0.20 | 34.10±0.10 | 84.52±0.44 | 6.39±0.02 |  | 202.80±0.65 | 705.00±3.54 | 1.23±0.01 | 17.25±0.39 | 1.69±0.03 |
| Coefficient of variation | 32.95% | 18.45% | 12.30% | 43.91% |  | 52.02% | 29.58% | 36.32% | 13.47% | 143.96% |

Different letters for each variety indicate the significant differences at *p* < 0.05; \*: mg/L.

**Table S2:** Sugar and organic acid content of pear juice of different varieties

|  |  |  |  |
| --- | --- | --- | --- |
| Variety | Sugar content (g/L) |  | Organic acid content (mg/100mL) |
| Sucrose | Glucose | Fructose | Sorbitol | Quinic | Malic | Shikimic | Citric | Fumaric\* |
| 155 | 60.96±0.58b | 11.51±0.09k | 35.56±0.35g | 32.16±0.32e |  | 66.02±1.70fg | 204.17±1.02f | 3.43±0.01o | 100.21±0.12e | 0.21±0.00m |
| Jinchuan | 16.24±0.13i | 15.74±0.14h | 37.69±0.35f | 29.96±0.25fg |  | 39.04±0.69h | 113.44±1.06n | 8.73±0.06h | 82.62±0.74g | 1.80±0.03b |
| Nashi | 33.33±0.68f | 13.37±0.28j | 32.45±0.67h | 19.53±0.40i |  | 73.03±2.09d | 151.13±2.58j | 6.72±0.10j | 40.93±0.45k | 1.23±002d |
| Hongsucui | 12.15±0.06j | 22.75±0.12c | 48.84±0.26d | 35.55±0.18c |  | 64.76±0.80g | 127.27±0.40m | 13.08±0.03d | 119.99±0.85c | 0.40±0.01k |
| Huashan | 40.08±0.03e | 26.70±0.10b | 35.72±0.10g | 23.76±0.08h |  | 105.81±1.59b | 284.40±0.38bc | 16.20±0..04c | 51.67±0.24i | 0.91±0.00e |
| Whangkeumbae | 61.10±1.60b | 14.97±0.26i | 26.95±0.52j | 33.59±0.68d |  | 67.62±0.75ef | 311.84±3.60a | 4.13±0..07n | 103.19±1.65e | 0.84±0.01gh |
| Jinxing | 11.86±0.28j | 27.67±0.53a | 56.59±1.02b | 53.96±0.98a |  | 89.82±1.18c | 286.51±2.99b | 5.09±0..08m | 81.40±1.49g | 0.38±0.01k |
| Mantianhong | 29.00±0.62g | 15.14±0.30i | 45.84±0.84e | 33.93±0.67d |  | 63.37±0.40g | 193.17±3.05h | 21.75±0.38a | 258.14±7.24a | 0.53±0.00j |
| Meirensu | 41.26±0.30d | 16.70±0.08g | 38.22±0.19f | 16.99±0.12j |  | 74.61±1.92d | 212.58±3.84e | 16.56±0.13b | 252.57±1.75b | 14.89±0.12a |
| Tianhaung | 40.77±0.10de | 18.18±0.05f | 26.63±0.07j | 19.41±0.05i |  | 69.81±1.57e | 172.21±1.34i | 7.99±0.09i | 48.01±0.25j | 0.90±0.02fg |
| Yali | 8.17±0.17k | 21.86±0.42d | 36.48±0.68g | 44.59±0.85b |  | 74.35±1.65d | 197.99±5.20g | 11.86±0.24g | 119.11±2.30c | 0.83±0.01h |
| Wonhuwang | 69.92±0.78a | 7.34±0.06m | 29.96±0.30i | 19.20±0.23i |  | 74.61±1.88d | 280.40±1.90c | 12.63±0.10e | 94.40±0.74f | 0.57±0.00j |
| Zaosumi | 4.07±0.02m | 19.60±0.11e | 64.08±0.31a | 31.85±0.16e |  | 117.51±3.24a | 234.16±1.36d | 12.23±0.12f | 33.56±0.42m | 1.34±0.03c |
| Zhongli 1# | 20.74±0.63h | 21.83±0.54d | 51.25±1.25c | 29.22±0.74g |  | 36.53±0.80h | 133.63±1.06k | 6.46±0.04k | 76.19±0.49h | 0.66±0.02i |
| Zhongli 4# | 55.17±0.96c | 13.51±0.15j | 35.51±0.39g | 30.24±0.37f |  | 74.80±1.17d | 207.29±5.68f | 12.11±0.13f | 113.98±0.79d | 0.86±0.03fgh |
| Minimum | 4.07±0.02 | 7.34±0.06 | 26.63±0.07 | 16.99±0.12 |  | 36.53±0.80 | 113.44±1.06 | 3.43±0.01 | 33.56±0.42 | 0.21±0.00 |
| Maximum | 69.92±0.78 | 27.67±0.53 | 64.08±0.31 | 53.96±0.98 |  | 117.51±3.24 | 311.84±3.60 | 21.75±0.38 | 258.14±7.24 | 14.89±0.12 |
| Coefficient of variation | 63.43% | 31.68% | 27.30% | 33.05% |  | 28.64% | 30.11% | 48.77% | 63.88% | 208.01% |

Different letters for each variety indicate the significant differences at *p* < 0.05; \*: mg/L.

**Table S3:** Sugar and organic acid content of peach juice of different varieties

|  |  |  |  |
| --- | --- | --- | --- |
| Variety | Sugar content (g/L) |  | Organic acid content (mg/100mL) |
| Sucrose | Glucose | Fructose | Sorbitol | Quinic | Malic | Shikimic | Citric | Fumaric\* |
| NJN83 | 75.11±0.59f | 13.00±0.09c | 15.88±0.12b | 3.22±0.03f |  | 159.83±2.17f | 451.44±3.31a | 1.08±0.02h | 251.94±1.70a | 7.13±0.08k |
| Arctic star | 107.79±0.34a | 12.30±0.15d | 13.19±0.04d | 6.51±0.04b |  | 186.09±3.64d | 248.87±2.90g | 1.56±0.03f | 43.83±0.96i | 17.61±0.28c |
| Chunmi | 50.35±0.89j | 8.60±0.13i | 9.53±0.21i | 0.46±0.02i |  | 186.82±1.53d | 212.18±2.14i | 1.86±0.02e | 125.13±2.32e | 12.89±0.23e |
| Huangjinmi | 70.45±0.55g | 20.75±0.15a | 24.09±0.17a | 5.64±0.07d |  | 177.67±1.65e | 333.84±1.52b | 1.54±0.01f | 86.81±0.57f | 12.12±0.09gh |
| Maihuang pantao | 55.38±1.03i | 9.47±0.21h | 10.69±0.19g | 0.42±0.01i |  | 291.85±6.31a | 148.47±2.86m | 2.09±0.05c | 183.19±3.19b | 5.97±0.12m |
| Shuguang | 62.69±0.49h | 11.39±0.12e | 12.19±0.14f | 0.58±0.02h |  | 200.58±2.21c | 258.17±5.14f | 1.41±0.07g | 161.71±6.71d | 9.29±0.40j |
| Zaolu | 60.83±0.31h | 11.72±0.10e | 12.82±0.10e | 0.29±0.01j |  | 267.31±4.53b | 152.96±2.08k | 2.10±0.02c | 38.31±0.83j | 12.37±0.09f |
| Zhongtao 6# | 82.00±3.31e | 10.73±0.45f | 11.96±0.39f | 3.70±0.08e |  | 160.78±0.94f | 244.25±0.78h | 2.03±0.01d | 124.30±0.26e | 12.02±0.05h |
| Zhongtaohongyu | 87.13±2.12c | 9.96±0.06g | 10.15±0.07h | 8.51±0.09a |  | 162.49±2.18f | 327.06±3.04c | 2.56±0.02b | 77.93±0.47g | 21.77±0.15a |
| Xhongyou 5# | 50.46±0.28j | 7.30±0.04j | 7.90±0.07j | 0.27±0.01j |  | 184.94±0.69d | 172.81±1.66j | 2.14±0..02c | 62.22±0.31h | 19.63±0.01b |
| Zhongyou 8# | 91.78±1.80b | 14.55±0.30b | 15.45±0.26c | 6.08±0.15c |  | 140.72±2.21h | 319.91±0.42d | 2.12±0.00c | 64.89±0.38h | 17.32±0.06d |
| Zhongyou 13# | 84.65±0.60d | 11.50±0.08e | 12.85±0.11e | 1.93±0.01g |  | 152.49±0.80g | 283.30±1.76e | 3.28±0.03a | 177.99±1.39c | 11.26±0.02i |
| Minimum | 50.35±0.89 | 7.30±0.04 | 7.90±0.07 | 0.27±0.01 |  | 140.72±2.21 | 148.47±2.86 | 1.08±0.02 | 38.31±0.83 | 5.97±0.12 |
| Maximum | 107.79±0.34 | 20.75±0.15 | 24.09±0.17 | 8.51±0.09 |  | 291.85±6.31 | 451.44±3.31 | 3.28±0.03 | 251.94±1.70 | 21.77±0.15 |
| Coefficient of variation | 24.63% | 29.20% | 31.88% | 93.49% |  | 24.16% | 28.95% | 28.95% | 56.77% | 36.80% |

Different letters for each variety indicate the significant differences at *p* < 0.05; \*: mg/L.

**Table S4:** Sugar and organic acid content of grape juice of different varieties

|  |  |  |  |
| --- | --- | --- | --- |
| Variety | Sugar content (g/L) |  | Organic acid content (mg/100mL) |
| Sucrose | Glucose | Fructose | Tartaric | Malic | Shikimic | Citric | Fumaric\* |
| Ruby seedless | 0.28±0.00j | 86.05±0.57f | 95.89±0.61f |  | 589.94±13.13j | 109.18±2.63j | 1.05±0.01e | 28.15±0.43i | 8.08±0.01c |
| Red globe | 0.35±0.00g | 86.17±0.14ef | 90.48±0.13i |  | 472.18±3.82m | 221.53±1.55d | 0.73±0.01g | 47.93±1.39c | 7.40±0.05f |
| Gold finger | 0.69±0.00b | 90.60±0.36d | 105.05±0.43b |  | 657.35±9.96g | 284.26±5.06c | 0.55±0.01i | 40.15±0.23f | 9.47±0.13d |
| Jingxiu | 0.34±0.00h | 90.22±0.34d | 100.60±0.39e |  | 714.86±6.19f | 170.21±3.40f | 1.02±0.01f | 24.48±0.55k | 7.60±0.03e |
| Kyoho | 0.46±0.01d | 105.90±0.48a | 112.08±0.52a |  | 650.49±3.74gh | 199.38±2.63e | 0.62±0.00h | 45.15±0.88d | 5.19±0.03g |
| Jumeigui | 0.55±0.01c | 106.11±0.34a | 103.41±0.33d |  | 594.90±8.95ij | 204.74±3.24e | 0.41±0.00j | 52.52±0.98b | 3.73±0.03i |
| Moldova | 0.20±0.00m | 86.00±0.46f | 83.60±0.42j |  | 887.47±7.17b | 161.04±2.43g | 1.47±0.02c | 42.75±0.62e | 0.49±0.02n |
| Niagara | 3.43±0.01a | 84.14±1.94g | 91.19±0.35hi |  | 750.07±35.90cd | 97.04±3.82k | 0.63±0.02h | 18.01±0.38n | 0.94±0.02m |
| Centennial seedless | 0.28±0.00j | 87.12±0.30ef | 103.52±0.35cd |  | 733.20±28.48de | 89.04±1.45m | 0.33±0.01k | 26.87±0.40j | 7.76±0.11e |
| Victoria | 0.33±0.00i | 87.50±1.03e | 91.61±0.44h |  | 588.21±23.62j | 217.66±2.42d | 1.37±0.02d | 20.62±0.11m | 8.15±0.06c |
| Summer Black | 0.32±0.00i | 77.58±0.69h | 77.15±0.70k |  | 769.05±35.53c | 220.97±2.21d | 1.89±0.03a | 33.87±0.34g | 2.96±0.03j |
| Xiazhihong | 0.25±0.00k | 75.91±0.36i | 74.06±0.25m |  | 486.20±5.59m | 302.96±8.88a | 1.63±0.01b | 47.44±0.45c | 8.05±0.19c |
| Xiuyu | 0.41±0.00e | 97.26±0.47c | 98.20±0.48e |  | 672.66±3.32g | 293.31±5.02b | 0.53±0.00i | 64.18±1.41a | 10.82±0.07c |
| Shine-Muscat | 0.32±0.00i | 91.05±0.10d | 104.50±0.14bc |  | 621.03±6.58hi | 150.29±2.10h | 0.12±0.00p | 29.73±0.40h | 16.49±0.19a |
| Flame | 0.36±0.00fg | 98.07±1.60c | 103.93±1.63cd |  | 721.54±11.71de | 61.93±1.23n | 0.24±0.01m | 20.67±0.11m | 2.32±0.02k |
| Zexiang | 0.40±0.00e | 89.76±0.35d | 91.43±0.40hi |  | 532.06±7.08k | 288.26±6.78bc | 0.14±0.00n | 45.42±0.86d | 14.27±0.32b |
| Zuijinxinag | 0.36±0.00f | 100.58±0.84b | 94.76±0.82g |  | 976.08±26.91a | 131.98±3.33i | 0.14±0.00n | 53.19±0.33b | 4.13±0.09h |
| Minimum | 0.20±0.00 | 75.91±0.36 | 74.06±0.25 |  | 472.18±3.82 | 61.93±1.23 | 0.12±0.00 | 18.01±0.38 | 0.49±0.029 |
| Maximum | 3.43±0.01 | 106.11±0.34 | 112.08±0.52 |  | 976.08±26.91 | 302.96±8.88 | 1.89±0.03 | 64.18±1.41 | 16.49±0.1 |
| Coefficient of variation | 136.80% | 9.50% | 10.78% |  | 19.68% | 40.43% | 73.58% | 35.93% | 63.26% |

Different letters for each variety indicate the significant differences at *p* < 0.05; \*: mg/L.

**Table S5:** Sugar and organic acid content of sweet cherry juice of different varieties

|  |  |  |  |
| --- | --- | --- | --- |
| Variety | Sugar content (g/L) |  | Organic acid content (mg/100mL) |
| Glucose | Fructose | Sorbitol | Malic | Shikimic | Citric | Fumaric\* |
| Brooks | 42.52±0.89m | 31.16±0.62j | 7.50±0.12m |  | 638.97±3.47n | 3.04±0.09f | 12.97±0.03h | 3.20±0.08g |
| Chunlu | 71.21±0.46c | 54.54±0.35d | 19.28±0.14c |  | 1427.45±5.60c | 2.98±0.04f | 16.17±0.14e | 2.79±0.07i |
| Chunxiu | 54.93±0.66j | 41.54±0.51h | 14.01±0.17i |  | 964.63±5.66i | 4.12±0.09a | 13.61±0.03g | 3.75±0.07f |
| Hongdeng | 74.82±0.96b | 57.53±0.75b | 23.89±0.31b |  | 1214.85±4.68e | 3.19±0.05e | 18.76±0.27a | 7.13±0.05a |
| Hongmi | 81.43±0.45a | 75.91±0.47a | 25.86±0.12a |  | 1475.01±1.26b | 3.19±0.07e | 18.14±0.09b | 2.91±0.08h |
| Huangmi | 59.60±0.28h | 48.04±0.24g | 16.12±0.06f |  | 1321.65±5.79d | 3.27±0.04de | 18.14±0.33b | 2.45±0.05j |
| Longbao | 47.30±0.11k | 36.39±0.10i | 12.63±0.04j |  | 935.58±23.45j | 3.90±0.13b | 12.64±0.04i | 4.07±0.09e |
| Longguan | 57.43±0.38i | 49.30±0.34f | 12.15±0.08k |  | 1495.19±4.54a | 3.50±0.02c | 17.39±0.20c | 4.57±0.05d |
| Tieton | 68.88±0.34d | 54.94±0.26cd | 15.81±0.10g |  | 913.89±10.76k | 2.14±0.05i | 15.16±0.07f | 2.42±0.06j |
| Bigarreau moreau | 63.28±0.10g | 54.79±0.08cd | 12.62±0.04j |  | 777.03±6.16m | 2.61±0.02g | 11.65±0.10j | 6.80±0.03b |
| Summit | 73.83±0.27b | 57.55±0.21b | 18.04±0.06d |  | 1079.33±13.56f | 2.37±0.06h | 13.65±0.07g | 1.96±0.04n |
| Saiwei | 65.17±0.27f | 49.16±0.17f | 17.20±0.09e |  | 995.08±6.00h | 3.15±0.05ef | 17.12±0.47cd | 2.30±0.05k |
| Sunburst | 65.11±0.11f | 50.82±0.08e | 15.77±0.04g |  | 1029.61±4.27g | 3.37±0.09d | 16.82±0.07d | 2.11±0.07m |
| Zaodaguo | 67.48±1.52e | 55.58±1.21c | 15.24±0.35h |  | 1209.08±26.12e | 2.66±0.08g | 12.37±0.13i | 5.77±0.06c |
| Minimum | 42.52±0.89 | 31.16±0.62 | 7.50±0.12 |  | 638.97±3.47 | 2.14±0.05 | 11.65±0.10 | 1.96±0.04 |
| Maximum | 81.43±0.45 | 75.91±0.47 | 25.86±0.12 |  | 1495.19±4.54 | 4.12±0.09 | 18.76±0.27 | 7.13±0.05 |
| Coefficient of variation | 16.80% | 20.83% | 29.24% |  | 23.68% | 17.58% | 16.06% | 46.41% |

Different letters for each variety indicate the significant differences at *p* < 0.05; \*: mg/L.

**Table S6:** Sugar and organic acid content of strawberry juice of different varieties

|  |  |  |  |
| --- | --- | --- | --- |
| Variety | Sugar content (g/L) |  | Organic acid content (mg/100mL) |
| Sucrose | Glucose | Fructose | Malic | Citric | Fumaric\* |
| Toyonaka | 16.85±0.05c | 24.56±0.07a | 29.31±0.09a |  | 193.04±0.39d | 738.24±0.59b | 16.27±0.03a |
| Ganlu | 17.23±0.07b | 20.13±0.01de | 23.63±0.03d |  | 297.15±0.54a | 605.65±1.14g | 9.69±0.00c |
| Jinzangxiang | 11.44±0.16e | 18.17±0.08g | 21.46±0.07g |  | 135.06±0.38i | 697.19±0.04d | 3.99±0.01i |
| Jingchunxiang | 10.52±0.02g | 16.14±0.04i | 19.03±0.01i |  | 191.87±0.05d | 676.97±0.50e | 4.73±0.01h |
| Benihoppe | 31.12±0.45a | 21.50±0.16c | 24.34±0.23c |  | 182.01±0.14g | 898.34±3.98a | 5.70±0.00g |
| Ningyu | 10.92±0.28f | 19.11±0.04f | 22.55±0.12f |  | 185.70±0.07f | 440.38±0.82j | 8.51±0.01d |
| Sweet charlie | 4.56±0.04j | 19.99±0.07e | 23.30±0.02e |  | 216.93±0.56c | 652.13±0.26i | 7.21±0.01f |
| Akihime | 15.89±0.11d | 22.13±0.15b | 25.69±0.06b |  | 163.12±0.13h | 713.81±1.09c | 7.22±0.00f |
| Zijinxiangyu | 8.95±0.36h | 17.94±0.02h | 20.99±0.06h |  | 287.36±0.39b | 477.96±0.83g | 7.70±0.05e |
| Sagahonoka | 6.26±0.05i | 20.58±0.02d | 24.45±0.11c |  | 187.59±2.39e | 532.60±0.17h | 12.60±0.01b |
| Minimum | 4.56±0.04 | 16.14±0.04 | 19.03±0.01 |  | 135.06±0.38 | 440.38±0.82 | 3.99±0.01 |
| Maximum | 31.12±0.45 | 24.56±0.07 | 29.31±0.09 |  | 297.15±0.54 | 898.34±3.98 | 16.27±0.03 |
| Coefficient of variation | 7.56% | 2.38% | 2.82% |  | 25.09% | 21.07% | 44.51% |

Different letters for each variety indicate the significant differences at *p* < 0.05; \*: mg/L.

**Table S7:** Sugar and organic acid content of blueberry juice of different varieties

|  |  |  |  |
| --- | --- | --- | --- |
| Variety | Sugar content (g/L) |  | Organic acid content (mg/100mL) |
| Sucrose | Glucose | Fructose | Quinic | Malic | Shikimic | Citric | Fumaric\* |
| O'Neal  | 0.34±0.00b | 58.34±0.44b | 62.23±0.42b |  | 139.58±3.02b | 28.93±1.01a | 1.57±0.02c | 502.39±5.54c | 0.51±0.00b |
| Northland | 0.33±0.00b | 62.63±1.60a | 67.97±1.03a |  | 150.31±6.55a | 25.81±0.15b | 1.51±0.03c | 489.31±2.02c | 0.92±0.00a |
| Britewell | 0.31±0.00c | 56.93±1.01b | 61.02±0.98b |  | 132.64±5.43b | 25.10±0.94b | 1.69±0.04b | 500.08±14.32c | 0.51±0.00b |
| Duke | 0.84±0.02a | 54.43±0.49c | 56.78±0.52c |  | 99.32±3.01c | 28.26±1.85a | 2.42±0.08a | 910.65±46.70a | 0.53±0.00b |
| Bluecrop | 0.30±0.00c | 48.72±1.36d | 51.50±0.71d |  | 76.81±2.63d | 16.94±1.26c | 1.35±0.02d | 816.31±10.69b | 0.51±0.00b |
| Minimum | 0.30±0.00 | 48.72±1.36 | 51.50±0.71 |  | 76.81±2.63 | 16.94±1.26 | 1.35±0.02 | 489.31±2.02 | 0.51±0.00 |
| Maximum | 0.84±0.02 | 62.63±1.60 | 67.97±1.03 |  | 150.31±6.55 | 28.93±1.01 | 2.42±0.08 | 910.65±46.70 | 0.92±0.00 |
| Coefficient of variation | 55.27% | 9.14% | 10.29% |  | 25.59% | 19.14% | 24.36% | 31.60% | 30.47% |

Different letters for each variety indicate the significant differences at *p* < 0.05; \*: mg/L.

Sorbitol

Fructose

Glucose

Sucrose

a

Min

b

8

7

6

5

4

3

2

1

Min

1: Oxalic acid; 2: tartaric acid; 3: quinic acid; 4: malic acid;

5: shikimic acid; 6: lactic acid; 7: citric acid; 8: fumaric acid.

**Figure S1.** HPLC chromatogram of sugar (a) and organic acid (b) standards

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