

Supplementary material

Table S1. Effect of different concentration of PEG-6000 on fresh weight, dry weight, water content, and leaf area of *in vitro* culture of apple cultivars. Data are means \pm SD (n = 3). Values within column, followed by the same letter(s), are not significantly different according to Tukey's test ($p < 0.05$).

Cultivar	PEG concentration (g L ⁻¹)	Fresh weight (g)	Dry weight (g)	Water content (%)	Leaf area (mm ²)
Malinové holovouské	0	0.29 \pm 0.01 cdef	0.11 \pm 0.04 ab	85.91 \pm 1.11 defghi	214.6 \pm 10.6 ghi
	5	0.28 \pm 0.07 def	0.12 \pm 0.01 ab	84.88 \pm 1.06 efghij	264.9 \pm 35.0 fghi
	10	0.23 \pm 0.04 ef	0.12 \pm 0.01 ab	83.49 \pm 0.56 ijk	126.4 \pm 29.5 i
	25	0.27 \pm 0.10 def	0.14 \pm 0.03 ab	83.03 \pm 0.22 jklm	152.8 \pm 22.7 i
	50	0.40 \pm 0.07 abcdef	0.14 \pm 0.01 ab	81.24 \pm 1.07 klm	167.6 \pm 28.3 hi
Fragrance	0	0.45 \pm 0.08 abcde	0.11 \pm 0.03 ab	89.95 \pm 0.41 ab	720.0 \pm 90.8 b
	5	0.41 \pm 0.12 abcdef	0.16 \pm 0.02 ab	87.23 \pm 0.73 cdef	527.4 \pm 42.1 cd
	10	0.40 \pm 0.06 abcdef	0.10 \pm 0.001 b	86.75 \pm 0.63 cdefg	356.5 \pm 71.6 efg
	25	0.17 \pm 0.05f	0.11 \pm 0.01 ab	83.17 \pm 0.93 jklm	227.7 \pm 43.3 ghi
	50	0.27 \pm 0.09 def	0.14 \pm 0.02 ab	82.94 \pm 1.27 jklm	254.7 \pm 14.1 fghi
Rubinstep	0	0.60 \pm 0.15 a	0.16 \pm 0.01 ab	88.59 \pm 0.73 abcd	451.9 \pm 87.0 de
	5	0.35 \pm 0.07 abcdef	0.19 \pm 0.02 a	88.48 \pm 0.59 abcd	327.6 \pm 49.2 efgh
	10	0.47 \pm 0.05 abcde	0.16 \pm 0.02 ab	87.30 \pm 0.39 bcde	201.3 \pm 11.3 ghi
	25	0.29 \pm 0.04 cdef	0.16 \pm 0.01 ab	84.01 \pm 0.73 hij	134.0 \pm 16.2 i
	50	0.30 \pm 0.04 cdef	0.14 \pm 0.01 ab	84.22 \pm 0.62 ghij	156.4 \pm 17.2 i
Idared	0	0.55 \pm 0.17 abc	0.17 \pm 0.04 ab	87.62 \pm 0.98 abcd	952.1 \pm 110.5 a
	5	0.52 \pm 0.11 abcd	0.16 \pm 0.01 ab	87.93 \pm 0.56 cdef	487.9 \pm 52.7 cde
	10	0.42 \pm 0.08 abcdef	0.18 \pm 0.03 a	83.55 \pm 1.24 ijk	412.0 \pm 59.7 def
	25	0.21 \pm 0.06 ef	0.11 \pm 0.02 ab	80.47 \pm 1.28 m	215.4 \pm 26.7 ghi
	50	0.47 \pm 0.13 abcde	0.19 \pm 0.04 a	80.56 \pm 1.17 lm	265.8 \pm 11.7 fghi
Car Alexander	0	0.58 \pm 0.09 ab	0.16 \pm 0.04 ab	90.02 \pm 0.73 a	634.2 \pm 26.2 bc
	5	0.51 \pm 0.13 abcd	0.19 \pm 0.06 a	88.61 \pm 1.07 abc	521.9 \pm 38.9 cd
	10	0.39 \pm 0.03 abcdef	0.14 \pm 0.01 ab	86.41 \pm 0.85 cdefgh	358.8 \pm 26.9 efg
	25	0.31 \pm 0.05 bcdef	0.13 \pm 0.02 ab	86.62 \pm 0.51 cdefgh	278.2 \pm 67.7 fghi

	50	0.36±0.05 abcdef	0.15±0.01 ab	84.54±0.62 fghij	245.0±80.5 ghi
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Table S2. Effect of different concentration of PEG-6000 on fresh weight, dry weight, water content, and leaf area of *in vitro* culture of cherry cultivars. Data are means ± SD (n = 3). Results of statistic are the same as in Table 1.

Cultivar	PEG concentration (g L ⁻¹)	Fresh weight (g)	Dry weight (g)	Water content (%)	Leaf area (mm ²)
Regina	0	1.32±0.14 bc	0.16±0.003 bcd	88.49±0.84 ab	1030.3±4.1 c
	5	0.71±0.12 efghij	0.14±0.03 d	86.96±1.12 abcde	745.6±14.0 fghi
	10	0.60±0.12 ghij	0.16±0.04 bcd	87.14±0.58 abcde	662.8±58.0 hi
	25	1.89±0.21 a	0.15±0.03 bcd	87.31±1.06 abcd	689.8±62.7 ghi
	50	0.65±0.02 fghij	0.18±0.03 abcd	84.73±1.03 cdefg	447.5±6.0 jk
Napoleonova	0	1.59±0.20 ab	0.23±0.03 abc	86.55±1.19 abcde	1586.9±17.9 a
	5	0.66±0.16 fghij	0.18±0.08 abcd	85.61±1.00 bcdefg	951.7±46.5 cde
	10	0.75±0.17 defghij	0.16±0.01 bcd	85.76±0.81 bcdefg	892.9±69.9 cdef
	25	1.33±0.19 bc	0.18±0.003 abcd	86.20±0.87 abcdefg	650.9±104.1 hi
	50	1.10±0.02 bcdefg	0.19±0.01 abcd	85.15±1.06 cdefg	567.9±76.6 ij
Kaštánka	0	0.58±0.10 ghij	0.15±0.02 bcd	88.74±0.83 ab	879.6±7.9 cdefg
	5	0.41±0.03 j	0.18±0.01 abcd	86.39±1.14 abcdef	762.9±70.0 efghi
	10	0.97±0.17 cdefghi	0.20±0.05 abcd	87.16±0.66 abcde	989.0±76.9 cd
	25	0.43±0.09 j	0.13±0.02 d	84.10±0.93 efgh	435.8±80.1 jkl
	50	0.97±0.09 cdefghi	0.24±0.04 abc	83.27±0.86 fgh	436.2±92.8 jkl
Sunburst	0	0.89±0.10 cdefghij	0.20±0.02 abcd	89.12±1.01 a	1534.1±108.6 a
	5	1.16±0.27 bcdef	0.20±0.01 abcd	85.30±1.20 cdefg	1286.5±81.1 b
	10	1.24±0.22 bcde	0.19±0.01 abcd	84.22±1.19 defgh	742.0±72.2 fghi
	25	1.05±0.33 cdefgh	0.19±0.02 abcd	83.15±1.23 gh	677.3±50.2 hi
	50	0.72±0.23 defghij	0.15±0.03 bcd	81.52±1.03 h	392.2±64.0 jkl
P-HL-C	0	1.37±0.19 abc	0.17±0.04 abcd	88.58±0.66 ab	823.1±53.0 defgh
	5	0.89±0.25 cdefghij	0.24±0.02 ab	88.49±1.35 ab	649.9±4.7 hi
	10	1.25±0.08 bcd	0.15±0.03 bcd	87.59±0.96 abc	667.7±35.5 hi
	25	0.54±0.10 hij	0.18±0.03 abcd	85.94±0.93 bcdefg	360.4±38.7 kl

	50	0.44±0.02 ij	0.26±0.01 a	85.64±1.04 bcdefg	252.4±39.0 l
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Table S3. Effect of PEG-6000 concentration on chlorophylls and total carotenoids contents in *in vitro* culture of apple cultivars. Data are means ± SDs (n = 3). Results of statistic are the same as in Table 1.

Cultivar	PEG concentration (g L ⁻¹)	Chlorophyll <i>a</i> (mg g ⁻¹ FW)	Chlorophyll <i>b</i> (mg g ⁻¹ FW)	Chlorophyll <i>a + b</i> (mg g ⁻¹ FW)	Carotenoids (mg g ⁻¹ FW)
Malinové holovouské	0	0.82±0.06 cdef	0.33±0.05 abcd	1.15±0.11 bcd	0.15±0.01 abcdefghi
	5	0.80±0.06 cdefg	0.22±0.02 def	1.01±0.08 bcdefg	0.19±0.02 abcd
	10	0.37±0.05 j	0.15±0.02 def	0.52±0.08 h	0.07±0.01 i
	25	0.63±0.06 fgghi	0.25±0.02 cdef	0.88±0.08 defgh	0.12±0.01 defghi
	50	0.65±0.06 efgh	0.27±0.02 cdef	0.92±0.08 cdefg	0.12±0.01 defghi
Fragrance	0	0.53±0.06 hij	0.24±0.03 def	0.76±0.09 efgh	0.08±0.01 hi
	5	0.68±0.07 cdefgh	0.21±0.06 def	0.90±0.13 cdefgh	0.15±0.01 abcdefgh
	10	0.54±0.12 ghij	0.22±0.05 def	0.76±0.17 efgh	0.11±0.02 efghi
	25	0.39±0.11 ij	0.15±0.04 f	0.53±0.15 h	0.08±0.02 hi
	50	0.45±0.06 hij	0.19±0.03 def	0.64±0.09 gh	0.08±0.01 ghi
Rubinstep	0	0.96±0.05 abc	0.31±0.11 cd	1.28±0.15 abc	0.20±0.05 abc
	5	0.91±0.07 bcd	0.24±0.02 cdef	1.15±0.13 bcd	0.21±0.02 a
	10	0.65±0.13 efgh	0.25±0.05 cdef	0.90±0.17 cdefgh	0.12±0.02 defghi
	25	0.54±0.13 hij	0.22±0.05 def	0.75±0.17 efgh	0.10±0.02 efghi
	50	0.45±0.07 hij	0.19±0.03 def	0.65±0.10 gh	0.08±0.01 ghi
Idared	0	0.87±0.05 cdef	0.33±0.10 bcd	1.20±0.15 bcd	0.16±0.04 abcdefg
	5	0.86±0.08 cdef	0.24±0.03 cdef	1.10±0.11 bcde	0.21±0.02 ab
	10	0.69±0.07 defgh	0.27±0.03 cdef	0.97±0.10 cdefg	0.14±0.01 bcdefghi
	25	0.49±0.02 hij	0.20±0.02 def	0.69±0.04 fgh	0.09±0.001 fgghi
	50	0.53±0.05 hij	0.23±0.02 def	0.76±0.06 efgh	0.10±0.01efghi
Car Alexander	0	1.13±0.11 ab	0.48±0.02 ab	1.61±0.13 a	0.17±0.05 abcde
	5	0.83±0.13 cdef	0.23±0.02 def	1.06±0.15 bcdef	0.20±0.02 ab
	10	0.96±0.06 abc	0.39±0.03 abc	1.35±0.07 ab	0.16±0.03 abcdef
	25	1.17±0.02 a	0.48±0.03 a	1.65±0.04 a	0.21±0.03 a

	50	0.90±0.10 bcde	0.30±0.12 cde	1.20±0.22 bcd	0.20±0.02 abc
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Table S4. Effect of PEG-6000 concentration of on chlorophylls and total carotenoids contents in *in vitro* culture of cherry cultivars. Data are means ± SDs (n = 3). Results of statistic are the same as in Table 1.

Cultivar	PEG concentration (g L ⁻¹)	Chlorophyll <i>a</i> (mg g ⁻¹ FW)	Chlorophyll <i>b</i> (mg g ⁻¹ FW)	Chlorophyll <i>a + b</i> (mg g ⁻¹ FW)	Carotenoids (mg g ⁻¹ FW)
Regina	0	1.16±0.04 abc	0.47±0.01 abcd	1.63±0.05 abcd	0.14±0.01 c
	5	0.96±0.23 bc	0.26±0.06 ef	1.22±0.30 cd	0.23±0.05 abc
	10	1.16±0.11 abc	0.39±0.06 abcdef	1.55±0.13 abcd	0.23±0.05 abc
	25	0.90±0.09 bc	0.36±0.04 cdef	1.26±0.12 bcd	0.16±0.01 bc
	50	0.80±0.04 c	0.32±0.01 cdef	1.12±0.05 d	0.15±0.001 bc
Napoleonova	0	1.32±0.21 ab	0.56±0.08 a	1.89±0.29 a	0.15±0.02 bc
	5	0.89±0.07 c	0.24±0.02 f	1.13±0.10 d	0.23±0.01 abc
	10	1.19±0.12 abc	0.45±0.04 abcd	1.63±0.16 abcd	0.21±0.02 abc
	25	1.19±0.10 abc	0.46±0.04 abcd	1.65±0.14 abcd	0.20±0.02 abc
	50	0.93±0.17 bc	0.35±0.13 cdef	1.28±0.29 bcd	0.20±0.05 abc
Kaštánka	0	1.39±0.13 a	0.42±0.06 abcde	1.82±0.09 ab	0.30±0.08 a
	5	1.21±0.09 abc	0.46±0.04 abcd	1.67±0.12 abcd	0.21±0.02 abc
	10	0.89±0.19 abc	0.35±0.06 cdef	1.24±0.26 bcd	0.14±0.05 c
	25	0.97±0.09 abc	0.39±0.05 abcdef	1.36±0.14 abcd	0.15±0.001 bc
	50	0.96±0.07 abc	0.40±0.03 abcdef	1.36±0.10 abcd	0.16±0.01 bc
Sunburst	0	1.22±0.18 abc	0.55±0.09 ab	1.76±0.27 abc	0.15±0.02 bc
	5	0.98±0.09 abc	0.30±0.03 def	1.38±0.17 abcd	0.25±0.03 ab
	10	1.02±0.07 abc	0.39±0.03 abcdef	1.41±0.10 abcd	0.19±0.01 bc
	25	1.14±0.16 abc	0.39±0.07 abcdef	1.53±0.20 abcd	0.24±0.05 abc
	50	0.89±0.08 bc	0.37±0.03 cdef	1.26±0.11 bcd	0.15±0.01 bc
P-HL-C	0	1.12±0.23 abc	0.48±0.09 abc	1.60±0.33 abcd	0.14±0.03 c
	5	0.95±0.18 bc	0.27±0.04 ef	1.22±0.22 cd	0.21±0.05 abc
	10	0.82±0.02 c	0.33±0.01 cdef	1.14±0.02 d	0.15±0.01 bc
	25	0.96±0.11 bc	0.38±0.05 bcdef	1.34±0.16 abcde	0.17±0.03 bc

	50	0.94±0.13 bc	0.38±0.04 bcdef	1.32±0.17 abcd	0.17±0.02 bc
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