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The effects of preharvest 1-methylcyclopropene (1-MCP) treatment on the fruit quality parameters of cold-stored 'Szampion' cultivar apples

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Supplementary Table S1. Results of lightness L* coordinate of color of blush measured for 'Szampion' cultivar apples in preharvest period compared for group treated with 1-MCP and control group not treated with 1-MCP.

Assessment		Preharvest 1-MCP treatment	No preharvest 1-MCP treatment	*p*
1st preharvest	Mean±SD	40.6±0.7	42.2±3.3	0.3808
	Median (min-max)	40.5 (39.9-41.4)	42.4 (38.5-45.3)	
2nd preharvest	Mean±SD	42.1±1.2	42.5±3.2	0.8322
	Median (min-max)	42.2 (40.8-43.2)	42.6 (39.4-45.3)	
3rd preharvest	Mean±SD	41.5±3.4	42.3±1.2	0.6469
	Median (min-max)	41.9 (37.0-45.0)	42.4 (40.9-43.7)	
4th preharvest	Mean±SD	42.0±1.0	38.4±3.8	0.1224
	Median (min-max)	42.4 (40.5-42.8)	39.6 (32.9-41.6)	
5th preharvest	Mean±SD	42.3±1.3	41.2±1.2	0.2579
	Median (min-max)	42.8 (40.4-43.3)	40.8 (40.4-42.9)	
6th preharvest	Mean±SD	41.0±1.0	-	-
	Median (min-max)	40.8 (40.1-42.5)	-	

* non-parametric distribution (verified using Shapiro-Wilk test – $p \leq 0.05$); 1-MCP – 1-methylcyclopropene.

Supplementary Table S2. Results of a* coordinate of color measured for 'Szampion' cultivar apples in preharvest period compared for group treated with 1-MCP and control group not treated with 1-MCP.

Assessment		Preharvest 1-MCP treatment	No preharvest 1-MCP treatment	*p*
1st preharvest	Mean±SD	36.1±1.1	34.0±3.4	0.2747
	Median (min-max)	36.1 (34.9-37.3)	33.7 (30.9-37.6)	
2nd preharvest	Mean±SD	34.0±2.2	33.6±4.2	0.8731
	Median (min-max)	34.1 (31.2-36.7)	32.7 (29.5-39.5)	
3rd preharvest	Mean±SD	31.3±3.6	28.3±0.5	0.1528
	Median (min-max)	30.8 (27.5-36.0)	28.2 (27.9-29.0)	
4th preharvest	Mean±SD	29.5±2.0	30.2±2.3	0.6255
	Median (min-max)	29.0 (27.6-32.2)	29.6 (28.3-33.4)	
5th preharvest	Mean±SD	29.0±0.8	32.2±0.6	0.0007
	Median (min-max)	29.0 (28.1-29.9)	32.0 (31.6-33.0)	
6th preharvest	Mean±SD	27.3±1.1	-	-
	Median (min-max)	27.5 (25.9-28.4)	-	

* non-parametric distribution (verified using Shapiro-Wilk test – $p \leq 0.05$); 1-MCP – 1-methylcyclopropene.

Supplementary Table S3. Results of b* coordinate of color measured for 'Szampion' cultivar apples in preharvest period compared for group treated with 1-MCP and control group not treated with 1-MCP.

Assessment		Preharvest 1-MCP treatment	No preharvest 1-MCP treatment	*p*
1st preharvest	Mean±SD	21.4±0.6	18.6±1.2	0.0058
	Median (min-max)	21.5 (20.7-22.0)	18.6 (17.1-20.0)	
2nd preharvest	Mean±SD	18.9±1.2	18.3±1.9	0.6241
	Median (min-max)	18.9 (17.8-20.1)	17.8 (16.7-21.0)	
3rd preharvest	Mean±SD	13.7±1.9	11.0±0.6	0.3134
	Median (min-max)	13.2 (12.2-16.2)	10.8 (10.5-11.7)	
4th preharvest	Mean±SD	12.2±1.8	12.4±1.0	0.8882
	Median (min-max)	11.5 (11.0-14.8)	12.3 (11.4-13.4)	
5th preharvest	Mean±SD	11.9±1.1	12.4±0.5	0.4326
	Median (min-max)	12.2 (10.2-12.8)	12.5 (11.7-12.9)	
6th preharvest	Mean±SD	10.5±0.4	-	-
	Median (min-max)	10.7 (10.0-10.9)	-	

* non-parametric distribution (verified using Shapiro-Wilk test – $p \leq 0.05$); 1-MCP – 1-methylcyclopropene.

Supplementary Table S4. Results of ethylene production [μL $kg^{-1} h^{-1}$] measured for 7 days for each preharvest period for 'Szampion' cultivar apples compared for groups treated with 1-MCP and control group not treated with 1-MCP.

Assessment		Preharvest 1-MCP treatment	No preharvest 1-MCP treatment	*p*
1st preharvest	1st day	0.05±0.001	0.04±0.004	0.0256
	2nd day	0.17±0.162	0.07±0.030	0.4889
	3rd day	0.27±0.141	0.13±0.002	0.2635
	4th day	0.69±0.141	5.16±2.898	0.0615
	5th day	1.30±0.248	10.29±5.933	0.0639
	6th day	2.56±1.794	24.73±15.058	0.0705
	7th day	3.93±3.367	61.34±25.809	0.0254
2nd preharvest	1st day	0.10±0.049	1.16±0.180	0.0153
	2nd day	0.14±0.123	5.71±0.999	0.0160
	3rd day	0.25±0.104	41.13±39.605	0.2818
	4th day	0.40±0.100	76.54±78.160	0.3022
	5th day	0.65±0.077	306.37±32.081	0.0055
	6th day	0.74±0.259	357.30±1.917	0.0000
	7th day	2.52±1.594	363.99±102.685	0.0381
3rd preharvest	1st day	1.38±1.195	4.38±0.112	0.0714
	2nd day	1.73±1.211	56.09±3.748	0.0026
	3rd day	1.44±0.347	127.39±2.189	0.0002
	4th day	2.41±1.591	163.15±18.132	0.0064
	5th day	3.70±2.399	199.21±38.403	0.0188
	6th day	5.1±4.448	179.95±30.928	0.0157
	7th day	5.56±4.171	199.37±67.288	0.0500
4th preharvest	1st day	0.07±0.047	1.12±0.673	0.1571
	2nd day	0.25±0.089	13.09±11.234	0.2473
	3rd day	2.26±0.882	32.01±21.733	0.1927
	4th day	18.17±11.925	77.94±33.728	0.1419
	5th day	34.11±24.733	105.78±14.253	0.0710
	6th day	37.18±15.867	102.54±5.677	0.0317
	7th day	47.24±14.082	131.60±3.529	0.0145
5th preharvest	1st day	6.34±8.318	21.13±6.771	0.1139
	2nd day	16.20±20.878	140.72±19.806	0.0066
	3rd day	45.01±54.927	263.57±67.185	0.0325
	4th day	134.79±131.299	361.38±122.273	0.1420
	5th day	224.37±174.213	408.34±96.882	0.2133
	6th day	287.67±182.119	398.59±47.155	0.3572
	7th day	342.78±175.205	361.78±33.061	0.8551

* non-parametric distribution (verified using Shapiro-Wilk test – $p \leq 0.05$); 1-MCP – 1-methylcyclopropene.