

Title Effect of modified atmosphere packaging on chemical composition, antioxidant activity, anthocyanin, and total phenolic content of cherry fruits

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Abstract

The trend of postharvest changes in sweet cherry (*Prunus avium*) cv. Siah-e Mashhad, sour cherry (*Prunus cerasus*) cv. Érdi Bőtermő and Iranian local cultivar named Albaloo Mohallai were investigated. The traits were recorded included antioxidant activity, total anthocyanin and phenolic content, flesh firmness, titratable acidity (TA), soluble solids concentration (SSC), Juice pH, SSC/TA ratio and percentage of weight loss. They were evaluated at harvest after 15, 30, 45 and 60 days of storage in packages with modified atmosphere (MAP) and regular atmosphere (RAP) (control) and refrigerated at $0 \pm 1^\circ\text{C}$. The results showed that the fruits packed in modified atmosphere had better quality than the ones packed in air due to higher SSC, TA, firmness, and lower pH, SSC/TA ratio and weight loss. All quality attributes diminished with storage time, while fruit firmness did not exhibit any particular trend during storage. The trends of total anthocyanin, phenolic content, and antioxidant activity during storage varied, depending on the cherry type. The negative correlation between antioxidant activity and fruit deformation (r from -0.49 to -0.72) was found.

<http://www.springerlink.com/content/0985154778037268/fulltext.pdf>