

Title The effect of harvest time on storability of plum (*Prunus domestica* L. 'Stanley')

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Abstract

Plum fruits of the cultivar 'Stanley' were harvested at six different times in the orchard of Research Institute for Fruitgrowing and Ornamentals, Budapest. The fruits were stored at ULO conditions for 2 months, then samples were stored for another 5 and 10 days in refrigerator ($7 \pm 1^\circ\text{C}$) in paper boxes without covering (post storage/shelf life experiment). The color of the fruit surface and fruit flesh was measured at harvest. The color of surface and flesh differed as a function of harvest (L^* , a^* , DE^* and DC^*), especially between the 4th and the 6th harvests. The color compounds increased from 550 nm to 650 nm of wavelengths as a function of harvest time both in the skin and in the flesh. The activity of β -galactosidase of fresh plums was very low. The activity of β -galactosidase increased significantly between the 3rd and the 5th harvests after 5-10 days of post storage, then it decreased. Very low activity of polygalacturonase was found in fresh plums. After 5 days of post storage, the polygalacturonase activity showed a maximum at the 4th harvest, then the activity declined sharply. After 10 days of post storage, the polygalacturonase activity was permanently higher than it was found in fresh samples.