

Effects of Post harvest UV-C and Hot Water Applications on Fruit Quality and Cold Storage in Ziraat 900 Sweet Cherry Cultivar

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In this study, the aim is to determine the storage condition of Ziraat 900 sweet cherry cultivar in province of Mersin in Turkey and to find out the effectiveness of treating the UV-C, Hot Water and the combination of both in protecting the fruit quality during storage in MAP (modified atmosphere packaging). For this aim, clusters of control group were not subjected to any application in the postharvest period, while clusters of treatment group were performed with VilberLourmat UV-C lamp glimmered 254 nm wavelength from 100 (0.25 kJ / m²) cm distance for 4 minutes in the sterile cabinet without any fumigation. Hot water application was also performed by maintaining of clusters in the water bath at 50 °C for 1 minutes. After treatment, by covering of all clusters (in the control and treatment groups) with stretch film with packing containers called modified atmosphere packaging, all clusters were stored at 0 ± 1 °C and 90 ± 5% relative humidity conditions in the cold storage room. For this purpose, cherry fruits was kept for 20 days in 0°C cold storage. Weight loss and color (L*, a*, b*, Chroma, and Hue), SSC (soluble solid content), titratable acidity, pH, total phenolics and total antioxidant changes that occurred postharvest storage were examined. As a result of this study, an increase in weight loss was detected during storage in all applications. As a result of study, it was concluded that cluster of Ziraat 900 sweet cherry cultivars subjected to hot water and UV-C can be stored for optimal 20 days by covering with stretch film.

Key Word: Sweet cherry, storage, UV-C, hot water application, modified atmosphere packaging

Biography:

Seyda Cavusoglu has graduated from Department of Horticulture, Faculty of Agricultural of Van YuzuncuYil University in 1996, got her master degree from same department and university in 2000, her master thesis was "A research on the optimum harvest dates and storage of some pear varieties grown in Van province" and got her Phd from Department of Horticulture, Faculty of Agricultural of Ankara University in 2008, her doctorate thesis was "The effect of pre-harvest cytokinin application on post harvest physiology of cauliflower *Brassica oleracea* L. botrytis". Interested with post harvest, controlled atmosphere, plant hormone, fruit and vegetable. Works since the December of 1997 at the Department of Horticulture, Faculty of Agricultural of Van YuzuncuYil University and now she is Assistant Professor since 2010.