

Effect of UV-C Irradiation on Fruit Quality and Storage Life of Two Apple Cultivars

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Abstract

Two apple cultivars (Golden Delicious and Red Delicious) were irradiated with UV-C (254nm) for 0, 20, 40 and 60 minutes to evaluate fruit quality and storage life. Evaluated characteristics included firmness, total soluble solids (TSS), pH, titratable acidity (TA), ascorbic acid, weight loss, decay and visible quality recorded at beginning, mid and end of the storage. The experiment was carried out with a factorial experiment in completely randomized design with four replications. The results indicated that UV-C treatments were significant on evaluated characteristics during and at the end of the storage. But decay and visible quality were not significant between cultivars. Also interaction of cultivar and UV-C treatment exerted no significant effect on measuring factors. According to the obtained results, UV-C radiation with 40 and 60 minutes treatment was more effective on evaluated characteristics.

Keywords: *Radiation, Golden delicious, Storage life, Fruit firmness, Decay, Total soluble solids*