

Title Post-harvest application of selected antioxidants to improve the shelf life of guava fruit
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Abstract

An experiment was conducted to study the influence of three antioxidant chemicals, ascorbic acid (500 and 1000 ppm), benzyl adenine (25 and 50 ppm) and sodium benzoate (500 and 1000 ppm) on postharvest physio-chemical changes in guava (*Psidium guajava* L.). Benzyl adenine (50 ppm) recorded the highest fruit firmness (4.03 kg cm^{-2}) over the control (1.93 kg cm^{-2}). Maximum oBrix acid ratio was observed in fruits treated with benzyl adenine at 50 ppm (21.21) and 25 ppm (20.31), while the untreated fruits recorded the lowest ratio (15.57). Total sugars increased up to the sixth day (8.36%) and subsequently declined, while TSS, ascorbic acid and acidity decreased with the advancement of storage period. The least reducing sugars content (3.27%) was found in untreated fruits, while benzyl adenine (50 ppm) recorded the highest reducing sugars (4.45%). Total chlorophyll decreased significantly during storage. The mean pectin content of the fruits (0.66%) on 3rd day decreased to 0.34 per cent by 12th day of storage. Benzyl adenine at 25 ppm registered the highest total phenol content (0.204%), which was significantly higher than other treatments. The shelf life of untreated fruits was 7.0 days, while benzyl adenine treated fruits recorded significantly the longest shelf life of 14.0 days (50 ppm) and 13.33 days (25 ppm).