

Title Effect of controlled atmosphere on the preservation of minimally processed cactus pears
Authors J. Anorve Morgia, E.N. Aquino Bolanos, E. Mercado Silva
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Abstract

Mexico is the largest producer of fresh cactus pear in the world. Markets for the fresh product regularly become saturated during the peak of the harvest season, however, suggesting that alternatives must be sought to increase commercialization in national and international markets. One possibility is to offer the fruit as a minimally processed product. The objective of this work was to determine the composition of the most appropriate controlled atmosphere (CA) for maintaining the quality of minimally processed cactus pears. Peeled 'Cristalina' cactus pears were stored at 2°C in different CAs (air, 3% O₂, air + 3% O₂, air + 10% CO₂, and 10% CO₂). The sensory quality, color, soluble solids content, total sugars, phenols and texture were periodically evaluated. During storage at 2°C in 10% CO₂ atmospheres, peeled fruit showed high values of visual quality, SSC and sugars, as well as a reduced tendency toward browning. Under those conditions, the quality of minimally processed fruit was preserved for up to 20 days.