

Title Effect of active modified atmosphere packaging and storage temperature on shelf life and quality of 'Gola' Indian jujube (*Ziziphus mauritiana* Lamk.) fruit

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Abstract

The investigation entitled "Effect of active modified atmosphere packaging and storage temperature on shelflife and quality of 'Gola' Indian jujube (*Ziziphus mauritiana* Lamk.) fruit" was carried out in 2011. The seven gas composition (21 % O₂ + 0.03% CO₂, 2% O₂ + 5% CO₂, 2% O₂ + 10% CO₂, 2% O₂ + 15% CO₂, 5% O₂ + 5% CO₂, 5% O₂ + 10% CO₂, 5% O₂ + 15 CO₂) and three storage temperatures -ambient (20-22°C), 12°C, and 6°C were tried. The fruits were filled in 20 micron polythene bags with different gas composition and placed at different storage temperature. The various physico-chemical and sensory observation were recorded at 7 days interval. The individual effect of G_s (5% O₂ + 5% CO₂) and storage temperature 6°C and 12°C was found to be significantly effective in improving the shelf-life and postharvest quality of fruits during storage up to 35 days. The combined effect of above two factors was found to be superior to their individual application for some characteristics viz., CPL W, firmness, tristimulus color, ethylene evolution, respiration rate, sugars, ascorbic acid, pH, acidity, head space, and sensory evaluation of fruits during storage. Among all the treatments, the application of 5% O₂+5% CO₂ storage. Among all the treatments, the application of 5% O₂+5% CO₂ with 6°C storage temperature was found to be most effective treatment to enhance the postharvest shelflife of Indian jujube fruits up to 35days of storage.