

Abstract:

CO₂ atmospheres of 1%, 5%, 10% and 20% were tested to prolong the storage life of 'Rong-rein' rambutan fruits at 13°C or 20°C with 90-95% RH. Under normal atmosphere (0.03% CO₂), the fruits lasted for only 6 days at 20°C and 10 days at 13°C. Spintern and peel browning mainly caused fruit quality loss. CO₂ did not improve storage life at 20°C due to injury induction. At 13°C, the 1-20% CO₂ prolonged storage life by 2-8 days, with the 10% CO₂ as the best treatment prolonging storage life to 18 days due to reduced rates of browning, weight loss, respiration and ethylene production. Soluble solids, titratable acidity and ascorbic acid contents were not adversely affected.