

Abstract:

Mangosteen fruits at the turning stage were stored in air or controlled atmospheres (CA) of 2-6% O₂ and 10-15% CO₂ at 13°C and evaluated for ripening changes and shelf life. All CA treatments reduced weight loss and retarded peel color development, softening and subsequent hardening, calyx chlorophyll loss, respiration and ethylene production. As a result, storage life increased to 28 days instead of 16 days under normal atmosphere, except for fruits in 2% O₂ + 15% CO₂ which kept 4 days shorter due to fermented flavor. Post-CA shelf life at 20°C was better with 10% CO₂ than 15% CO₂.