

Title Changes in polyphenol oxidase and peroxidase activity in 'Rong-rein' rambutan fruits under controlled atmosphere

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Abstract

'Rong-rein' rambutan fruits were stored in air or 10% CO₂ at 13 or 20 deg C with 90-95% RH and evaluated for changes in polyphenol oxidase (PPO), peroxidase (POD) and phenolics content in relation to pericarp browning. At 13 deg C, CO₂ retarded spintern and peel browning. Correspondingly, PPO, POD and phenolics decreased. Browning also correlated well with water loss (weight loss), with the CO₂-treated fruits having much lower weight loss than untreated fruits. At 20 deg C, CO₂ caused injury, resulting to comparable browning as untreated fruits. However, it still reduced PPO, POD, phenolics and weight loss, suggesting a different mechanism underlying CO₂-induced discoloration.