

Title Ripening and Volatile Alterations of ‘Keaw Sawoey’ Mango treated with 1-MCP and CA
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Abstract

‘Kheaw Sawoey’ mango (*Mangifera indica* L.) is a favorite one of Thailand cultivated mangoes that Thais prefer consuming the mature fruit with crispy and firm. In the present study, mature green ‘Kheaw Sawoey’ mango were treated with 1-MCP and CA conditions and stored at 13°C, 90-95%RH. Controlled atmosphere (CA) at 3% O₂ and 5% CO₂ was best to delay ripening of stored fruit compared to fruit pre-treated with 500 ppb 1-MCP at 25°C for 16 h prior to storage and non-treated fruit. CA storage was most effective to reduce peel colour changes and firmness loss of mango, resulting at least 28 days of storage life. Aroma volatiles of stored mango are 3-hexenal, 1-R-alphapinene and hexanal. Mango produced in high 3-hexenol had high ratio in all treatments while control had the highest. In day 28, 3-Hexenol was distributed 56.97% in control, 37.95% in mango fumigated with 1-MCP and 30.32% in mango kept under CA. Moreover control and 1-MCP fumigated mango contained 1-R-alphapinene of 30.69 and 8.69% while it was only 3.22% in mango stored under CA.