

Thesis Title Predicting of Fermentation for Waxed Tangerine Fruit
cv. Sai Nam Peung

Author Miss Sasimet Fongsa

Degree Master of Science (Postharvest Technology)

Thesis Advisory Committee Associate Professor Supasark Limpiti Advisor
Professor Dr. Nithiya Rattanapanone Co-advisor

ABSTRACT

This project studied the effect of different temperatures on waxed tangerine fruit in order to predict their storage lives. Tangerine fruit cv. 'Sai Num Peung' were coated with a commercial wax 'CITROSOL-AK' and stored at 10 ± 2 , 16 ± 2 , 22 ± 2 , and 28 ± 2 °C (RH 70 ± 2 , 75 ± 2 , 78 ± 2 and 82 ± 2 % respectively). Storage at low level of temperatures could reduce the changes in term of weight loss, internal gas and ethanol content better than storage at higher level of temperatures. The tangerine fruit could be stored at 10 ± 2 °C for 40 days with acceptable quality. The values of weight loss, internal oxygen, internal carbon dioxide, pH, titratable acidity, soluble solid content and vitamin C were 9.05%, 6.96 %, 3.72%, 4.11, 0.57%, 12.97 % and 22.41 mg/100 g of juice, respectively. The relation between weight loss, ethanol content and storage period showed that the prediction equations for weight loss and ethanol in the juice of tangerine fruit stored at 10 ± 2 , 16 ± 2 and 22 ± 2 °C had the coefficient of determination (R^2) of 0.91 and 0.98, respectively. Nonetheless, the accuracy of the prediction decreased when the temperature was higher than 22 °C.