Effect of Fruit Size and Coating Material on Quality of Tangerine Fruit cv. *Sai Nam Phueng*

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ABSTRACT

Small (No. 4; 92-98 g) and large (No. 6; 134-142 g) tangerine fruit coated with either Zivdar or Fomesa as well as a non-coated control were stored at room temperature (24±3°C) and 59±6% relative humidity for 10 days. The results showed that large fruit had lower weight loss, less off-flavor and better visual appearance than small fruit. Fruit size also had an effect on hue angle of peel color, pH, total soluble solids (TSS) and titratable acidity (TA) but had no effect on internal O_2, internal CO_2, ethanol content in juice, pyruvate decarboxylase (PDC) and alcohol dehydrogenase (ADH) activity, L* and chroma of peel color, TSS/TA ratio and vitamin C content. Tangerine fruit coated with Fomesa had the lowest weight loss. Fruit coated with Zivdar had higher O_2 and CO_2 exchange and lower internal ethanol in fruit juice than fruit coated with Fomesa. The coating affected the flavor and visual appearance quality of tangerine fruit, but had no effect on enzyme activities, peel color and chemical composition.

Keywords: Tangerine fruit, Fruit size, Coating material, Visual appearance, Internal gas

INTRODUCTION

Tangerine or mandarin (*Citrus reticulata* Blanco) is the most common citrus fruit grown in Thailand. Harvested tangerines are typically brought to a packinghouse soon after harvest to begin the steps of preparing the fruit for market – cleaning, coating, grading and packing. In addition, fruit destined for export may need to be treated with the natural ripening agent ethylene in order to improve the external peel color, best done before cleaning and grading (Ministry of Fisheries, Crops and Livestock; New Guyana Marketing Corporation; and National Agricultural Research Institute, 2004).