

Project	Application of Edible Coating from Hydrocolloids in Combination with Green tea Extract for Extend Quality and Shelf-life of fresh-cut Dragon Fruit.
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Abstract

This research studied the concentration of 3 types of hydrocolloid *e.g.* sodium alginate (1.0 and 2.0%), chitosan (0.5 and 1.0%) and carboxy methyl cellulose (0.5 and 1.0%) for minimally-processed dragon fruit. The results showed that the concentration of 1.0% chitosan could retarded weight loss and showed the best visual appearance. Therefore, the application of 1.0% chitosan in combination with 0.5 and 1.0% of green tea extract to extend the shelf life of minimally-processed dragon fruit were studied in next experiment. The changes in physical, chemical and microbiological during storage for 12 days at $4\pm 2^{\circ}\text{C}$ were studied. The results showed that 1.0% chitosan in combination with both levels of green tea extract could delay weight loss which was not different from the control. However, it could maintain chemical qualities such as total soluble solids (%TSS), titratable acidity (%TA) and TSS/TA ratio better than the 1.0% chitosan as the control. Moreover, it could delay the change in chemical qualities longer than the control around 3 days. The addition of green tea extract helps increase the antioxidant capacity of DPPH. The consideration of eating quality, the sample coated with 1% chitosan in combination with 0.5% green extract has the most suitable for coating minimally-processed dragon fruit. Shelf life of all treatments was approximately 6 days at $4\pm 2^{\circ}\text{C}$ due to the significantly low in L^* value.

The total microbial counts was not exceeded the standard criteria of 10^6 CFU/g and was not detected coliform throughout the storage period.

Keywords Dragon fruit Coating Hydrocolloid Shelf life Green tea

