

ABSTRACT

Erlita Laily Rahmandani, 24020121130059. The Effect of Cassava Starch-Based Edible Coating with the Addition of Ginger Extract and Storage Duration on the Quality of Citra Wax Apple (*Syzygium samarangense* (Blume) Merr. & L.M. Perry). Supervised by Endah Dwi Hastuti and Yulita Nurchayati.

The decline in quality during storage poses a challenge in maintaining the freshness of citra wax apple (*Syzygium samarangense* (Blume) Merr. & Perry). Cassava starch-based edible coating can slow down transpiration and respiration, thereby preserving freshness and extending shelf life. The addition of ginger extract enhances its effectiveness through antibacterial compounds. Storage duration also affects the physical and chemical properties of the fruit. This study aimed to determine the effect of cassava starch-based edible coating with ginger extract and storage duration on the quality of citra wax apple. The research method involved applying an edible coating solution composed of a mixture of cassava starch, *carboxy methyl cellulose* (CMC), glycerol, and ginger extract, which was homogenized. The fruits were then dipped into the edible coating according to the treatment. The research used a Completely Randomized Design (CRD) with two factors: ginger extract concentration (0%, 3%, 5%, 7%) and storage duration (0, 4, 6 days). The observed parameters included shelf life, visual appearance, weight loss, total soluble solids, vitamin C content, and moisture content. Data were analyzed using ANOVA, followed by DMRT at a 95% confidence level if significant differences were found. The results showed that cassava starch-based edible coating effectively extended shelf life and maintained the quality of citra wax apple, particularly in terms of weight loss, vitamin C content, and moisture content. Different concentrations of ginger extract affected weight loss and moisture content, while storage duration influenced weight loss and vitamin C content. There was an interaction between edible coating treatment and storage duration on moisture content. The best treatment was edible coating with 3% ginger extract and storage for 4–6 days.

Keywords: *Postharvest, edible coating, wax apple quality, storage*