

ABSTRACT

Lathifa, Hafidzatul. 2013. **Effect of Type Starch Edible Coating for Basic Materials and Storage Temperature on the Quality of Tomato Fruit (*Lycopersicon esculentum* Mill.)**. Thesis, Department of Biology, Faculty of Science and Technology of the State Islamic University of Maulana Malik Ibrahim Malang. Supervisor: Ir. Liliek Harianie AR, M.P. and Umaiatus Syarifah, M. A.

Keywords: Edible coatings, Cassava (*Manihot esculenta*) Starch, Canna (*Canna edulis* Ker.) Starch and Tomato (*Lycopersicon esculentum* Mill.).

Tomatoes (*Lycopersicon esculentum* Mill.) is one of the horticultural commodities that are susceptible to degradation. Degradation caused by physiological processes of respiration and transpiration continue after the fruit is harvested. Proper storage techniques to maintain fruit quality during storage. One technique that can be used to slow down the process of respiration and transpiration are edible coating. Edible coating cassava (*Manihot esculenta*) starch and canna (*Canna edulis* Ker.) starch can be applied to coat the tomatoes (*Lycopersicon esculentum* Mill.). Edible coatings made of polysaccharides serve as a selective barrier to gas exchange of CO₂ and O₂, so that the process can be inhibited respiration and quality of tomato (*Lycopersicon esculentum* Mill.) can be maintained. This study is to find out: (1) the effect of starch edible coating materials on the quality of tomato (*Lycopersicon esculentum* Mill.), (2) the effect of storage temperature on the quality tomato (*Lycopersicon esculentum* Mill.). (3) the interaction effect edible coatings and storage temperature on the quality of tomato (*Lycopersicon esculentum* Mill.).

The research was conducted at the Laboratory of Plant Physiology Department of Biology, Faculty of Science and Technology of the State Islamic University of Maulana Malik Ibrahim Malang in April-May 2013. The study design used was a completely Randomized design with 2 factors and 3 replications. The first factor is the type of starch edible coating materials, including without coating, cassava (*Manihot esculenta*) starch edible coating and canna (*Canna edulis* Ker.) starch edible coating. The second factor is the storage temperature, storage temperature is cold (8-10 ° C) and storage at room temperature (25-27 ° C). Data obtained from this study were analyzed by Analysis of Variants (ANOVA) Two Way with a level of 5%.

The results showed that (1) there is the influence of the type of starch edible coating material on the quality of tomato (*Lycopersicon esculentum* Mill.), (2) there is the influence of storage temperature on fruit quality of tomato (*Lycopersicon esculentum* Mill.), Cold storage (8-10 ° C) to maintain weight, reduce the rate of respiration, texture, color changes and contents of vitamin C). (3) there is the influence effect of the type starch edible coating materials and storage temperature on fruit quality of tomato (*Lycopersicon esculentum* Mill.).