ABSTRACT

THE EFFECT OF CHITOSAN AS EDIBLE COATING ON THE QUALITY OF TOMATO (*Lycopersicum esculentum* Mill.) AT VARIOUS RIPENESS LEVEL DURING STORAGE

By

Nahda Maulina
NPM 185001041

Supervisors:
Suhardjadinata
Nur Arifah Qurota A'yunin

Tomato is a horticultural commodity that is easily damaged, without profer postharvest handling process, the quality of tomato will be reduced. One of the method that can be used to extend shelflife and maintain quality is coating. This research aims to determine the most effective type of chitosan to extend shelf life and maintain quality at each level of ripeness of tomato. This research was conducted from August to November 2022 at the Laboratory of the Agriculture Faculty, Siliwangi University, Tasikmalaya. This research used a factorial Randomized Block Design with 2 experimental factors, the first factor is the types of chitosan consist of 3 levels (without chitosan, commercial crab chitosan and manufactured shrimp chitosan) and the second factor consist of various ripeness level of tomato, there are 3 levels of ripeness (breakers, turning and pink). Each treatment was repeated 3 times. Data was analyzed using variance with F test and continued with Duncan's Multiple Distance test at significant level of 5%. The results showed that there was no interaction between the types of chitosan and the ripeness level of tomato for all observation parameters. Independently the ripeness level of tomato affected the total dissolved solids, total titrated acid at 0, 5 and 10 days after treatment. The results of the Friedman test showed that there were difference in organoleptic tests (color, degree of freshness and degree of preference) between the types of chitosan and the degree of ripeness of the tomato 0, 5 and 10 days after treatment.

Keywords: edible, chitosan, tomato.