

Review Artikel : Perbandingan Hasil *Edible Coating* Berbasis Kitosan, Pektin, Pati, Dan Karagenan Terhadap Mutu Dan Lama Penyimpanan Buah Tomat (*Solanum lycopersicum L.*)

Article Review: Comparison of Edible Coating Results Based on Chitosan, Pectin, Starch, and Carrageenan on the Quality and Storage Time of Tomato Fruit (*Solanum lycopersicum L.*)

La Asrafil*^{1,2}, Daniel^{1,2}

1. Jurusan Kimia, Fakultas Matematika dan Ilmu Pengetahuan Alam, Universitas Mulawarman, Samarinda, Indonesia
2. Laboratorium Kimia Organik, Fakultas Matematika dan Ilmu Pengetahuan Alam, Universitas Mulawarman, Samarinda, Indonesia

*Corresponding Author : asrafilasrafil04@gmail.com

ABSTRACT

*Tomato (*Solanum lycopersicum L.*) is a fruit-shaped vegetable that has the characteristics of being easily damaged. Tomato plants before, during and after harvest can be damaged quickly if the handling is not done properly, resulting in a decrease in quality. It is necessary to improve the quality and storage time of tomatoes, by using one type of coating, namely edible coating which has a function to improve the quality and storage time of tomatoes. Edible coating is a type of thin layer that is environmentally friendly and safe for consumption, which functions to maintain the quality of tomatoes from decay for a certain time. The study was conducted on edible coating research based on chitosan, pectin, starch, and carrageenan. The purpose of this article review is to compare the results of edible coatings from chitosan, pectin, starch, and carrageenan on the quality and storage time of tomatoes. The method used is the literature review method. The results showed that edible coating from cassava starch where tomatoes coated with edible coating with starch made from cassava was able to maintain the quality of tomatoes when stored until the 15th day. Chitosan showed chitosan coating with a concentration of 50 ppm was the best level for storage of tomatoes for 7 days of observation. Grapefruit peel pectin showed the best treatment was found in 3% pectin which was effective for 14 days with a weight of 0.063%. Carrageenan shows that 1.5% carrageenan edible coating stored at room temperature can extend the shelf life of tomatoes from 6 days to 10 days.*

Keyword : edible coating, carrageenan, chitosan, starch, pectin, tomato

ABSTRAK

Tomat (*Solanum lycopersicum L.*) adalah sayuran berbentuk buah yang mempunyai karakteristik bersifat mudah rusak. Tanaman tomat yang sebelum, selama dan sesudah panen dapat mengalami proses kerusakan dengan cepat jika penanganan yang dilakukan tidak tepat sehingga mengakibatkan penurunan mutu. Perlu dilakukan peningkatan mutu dan lama penyimpanan buah tomat, dengan menggunakan salah satu jenis lapisan yaitu *edible coating* yang memiliki fungsi untuk meningkatkan kualitas dan lama penyimpanan dari tomat. *Edible coating* adalah salah satu jenis lapisan tipis yang ramah lingkungan dan aman dikonsumsi, berfungsi dapat mempertahankan mutu dari tomat dari pembusukan selama waktu tertentu. Studi dilakukan pada penelitian *edible coating* berbasis kitosan, pektin, pati, dan karagenan. Tujuan dari review artikel ini untuk mengetahui perbandingan hasil *edible coating* dari kitosan, pektin, pati, dan karagenan terhadap mutu dan lama penyimpanan buah tomat. Metode yang digunakan yaitu metode kajian literatur. Hasil menunjukkan *edible coating* dari pati ubi kayu dimana tomat yang dilapisi *edible coating* dengan pati berbahan ubi kayu mampu dalam mempertahankan kualitas tomat saat disimpan hingga hari ke-15. Kitosan