

RINGKASAN

Jambu biji (*Psidium guajava L.*) merupakan salah satu buah yang banyak digemari masyarakat dan mempunyai nilai ekonomis tinggi. Buah jambu biji memiliki masa simpan yang pendek dan mudah rusak, karena jambu biji termasuk buah klimaterik yaitu adanya peningkatan respirasi yang tinggi dan mendadak yang menyertai atau mendahului pemasakan melalui peningkatan CO₂ dan etilen. Masa simpan buah klimaterik yang pendek menjadikan kerusakan pascapanen yang cepat. Teknologi yang dapat diaplikasikan adalah *edible coating* yaitu lapisan tipis untuk menambah umur simpan dan mengurangi kehilangan mutu buah jambu biji. Bahan dasar *edible coating* yang digunakan yaitu pati dari umbi ganyong karena mengandung pati yang tinggi. *Plasticizer* yang digunakan adalah sorbitol untuk meningkatkan elastisitas *edible coating*. Tujuan dilakukannya penelitian ini adalah: 1) Mengetahui konsentrasi sorbitol sebagai *plasticizer* yang paling baik dalam pembuatan *edible coating* untuk menjaga kualitas jambu biji selama penyimpanan. 2) Mengetahui suhu penyimpanan yang paling baik dalam menjaga kualitas jambu biji selama penyimpanan. 3) Mempelajari pengaruh *edible coating* pada buah jambu biji selama masa penyimpanan dengan mengukur parameter susut bobot, kadar air, tekstur, warna, dan total padatan terlarut.

Metode penelitian yang digunakan adalah uji statistika dengan kinetika perubahan mutu. Jambu biji diberikan berbagai perlakuan yaitu penyimpanan suhu rendah (T1) dengan konsentrasi sorbitol 0% (T1S0), sorbitol 1% (T1S1), sorbitol 1,5% (T1S2), sorbitol 2% (T1S3), sorbitol 2,5% (T1S4), penyimpanan suhu ruang (T2) sorbitol 0% (T2S0), sorbitol 1% (T2S1), sorbitol 1,5% (T2S2), sorbitol 2% (T2S3), dan sorbitol 2,5% (T2S4). Variabel mutu yang diamati yaitu kadar air, susut bobot, kekerasan, total padatan terlarut, warna (Lab) yang diamati 2 hari sekali selama 10 hari.

Hasil penelitian menunjukkan jenis penggunaan *edible coating* dengan konsentrasi sorbitol dan suhu penyimpanan berpengaruh terhadap kadar air, susut bobot, tekstur, total padatan terlarut, dan warna. Perlakuan terbaik nilai kecerahan yaitu T1S2; nilai warna hijau (a-) yaitu T1S4; nilai warna kuning (b+) yaitu T1S4; kadar air yaitu T1S0; susut bobot yaitu T2S0; kekerasan yaitu T1S3; total padatan terlarut yaitu T2S1. Secara keseluruhan perlakuan yang terbaik yaitu T1S2 (penyimpanan suhu rendah dengan konsentrasi sorbitol 1,5%) yang mampu mempertahankan mutu dari buah jambu biji selama penyimpanan.

SUMMARY

Guava (Psidium guajava L.) is one of a kind fruit which be fond by people and has high of economic value. Guava has a short ability in its periode of storage and also perishable because it was classified as a type of climateric fruit through increasing in rate of respiration eastion as suddenly followed by ripening process, provide by raised of CO₂ and ethilen. Storage of periode this climateric fruit was short and change the post harvesting happened quickly. Technology that could be applied is edible coating which is like a thin layer to prolong periode of storage and minimize lose of quality from guava. Base material of edible coating that used is came from starch of ganyong potatoes because its contents high of starch. Plasticizer that used was sorbitol to improve the elasticity of edible coating. This research was aimed to 1) knowing concentration of sorbitol as plasticizer which best used for making edible coating to maintain the quality of guava during its storage 2) knowing temperature of storage properly to used for maintain the quality of guava during its storage. 3) Learning about the effect of edible coating to guava during its storage by measurement its reducement of weight, water content, texture, color and total soluble solid.

The method is used a statistical test with the kinetics of quality changes. Guava is given a variety of treatments, low temperature storage (T1) with a concentration of sorbitol 0% (T1S0), sorbitol 1% (T1S1), sorbitol 1.5% (T1S2), sorbitol 2% (T1S3), sorbitol 2.5% (T1S4), room temperature storage (T2) sorbitol 0% (T2S0), sorbitol 1% (T2S1), sorbitol 1.5% (T2S2), sorbitol 2% (T2S3), and sorbitol 2.5% (T2S4). Variable quality observed the water content, weight loss, hardness, total dissolved solids, color (Lab) observed two days for 10 days.

Results of the research showed that the type of use of edible coatings with concentrations of sorbitol and storage temperature affect the moisture content, weight loss, texture, total dissolved solids, and color. The best treatment for brightness value is T1S2; green color value (a-) is T1S4; yellow color value (b +) is T1S4; water content is T1S0; weight loss is T2S0; hardness that is T1S3; total dissolved solids is T2S1. Overall the best treatment is T1S2 (low temperature storage with sorbitol concentration of 1.5%) were able to maintain the quality of guava fruit during storage.