

ABSTRAK

PENGARUH KONSENTRASI KALSIMUM KLOORIDA (CaCl_2) DAN LAMA PERENDAMAN TERHADAP KARAKTERISTIK MANISAN JAMBU KRISTAL (*Psidium guajava*)

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Jambu kristal merupakan buah yang dapat diolah menjadi manisan. Kalsium klorida (CaCl_2) merupakan jenis bahan tambahan pangan (BTP), berperan sebagai bahan pengeras yang dapat mempengaruhi hasil akhir manisan jambu kristal. Penelitian ini bertujuan untuk mengetahui pengaruh konsentrasi CaCl_2 , lama perendaman dan interaksi keduanya terhadap karakteristik manisan jambu kristal. Penelitian ini menggunakan Rancangan Acak Kelompok Lengkap (RAKL) dengan dua faktor dan tiga ulangan. Faktor pertama adalah konsentrasi CaCl_2 dengan 3 taraf yaitu K1 (1%), K2 (3%), dan K3 (5%). Faktor kedua adalah lama perendaman dengan 3 taraf yaitu L1 (1 jam), L2 (2 jam), dan L3 (3 jam). Pengamatan yang dilakukan meliputi tekstur, kadar air, derajat keasaman (pH), sensori (tekstur, rasa, penerimaan keseluruhan), dan kadar kalsium. Data yang diperoleh dianalisis secara statistik menggunakan uji Barlett dan uji Tukey lalu dilanjutkan dengan analisis ragam dan uji Beda Nyata Jujur (BNJ) pada taraf 5%. Hasil penelitian menunjukkan bahwa konsentrasi CaCl_2 berpengaruh nyata terhadap pH dan berpengaruh sangat nyata terhadap kadar air, tekstur dan sifat sensori manisan jambu kristal. Lama perendaman berpengaruh sangat nyata terhadap kadar air, tekstur dan sifat sensori, namun tidak berpengaruh nyata terhadap pH manisan jambu kristal. Interaksi keduanya berpengaruh sangat nyata terhadap sifat sensori, namun tidak berpengaruh nyata terhadap pH, kadar air dan tekstur manisan jambu kristal. Perlakuan manisan jambu kristal terbaik adalah K3L3 (5% CaCl_2 dan 3 jam perendaman) yang menghasilkan tekstur 783,917 gf, kadar air 79,83%, pH 4,21, sensori tekstur 4,4 (renyah), rasa 4,12 (suka), penerimaan keseluruhan 4,46 (suka) dan kadar kalsium 339,2 mg/kg.

Kata kunci: jambu kristal, kalsium klorida (CaCl_2), lama perendaman, manisan

ABSTRACT

THE EFFECT OF CALCIUM CHLORIDE (CaCl_2) CONCENTRATION AND SOAKING DURATION ON THE CHARACTERISTICS OF CANDIED CRYSTAL GUAVA (*Psidium guajava*)

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Crystal guava is a fruit that can be processed into candied fruit. Calcium chloride (CaCl_2) is a food additive that functions as a firming agent and may affect the final quality of the candied guava. This study aimed to determine the effect of CaCl_2 concentration, soaking duration, and their interaction on the characteristics of candied crystal guava. A Completely Randomized Block Design (CRBD) was used with two factors and three replications. The first factor was CaCl_2 concentration: K1 (1%), K2 (3%), K3 (5%). The second factor was soaking duration: L1 (1 hours), L2 (2 hours), L3 (3 hours). The parameters observed included texture, moisture content, pH, sensory properties (texture, taste, and overall acceptance), and calcium content. Data were analyzed using Bartlett's and Tukey's tests, followed by ANOVA and HSD (Honestly Significant Difference) at a 5% significance level. The results showed that CaCl_2 concentration significantly affected pH and had a highly significant effect on moisture, texture, and sensory characteristics. Soaking duration had a highly significant effect on moisture, texture, and sensory properties, but not on pH. The interaction between both factors had a highly significant effect on sensory properties, but no significant effect on pH, moisture, or texture. The best treatment was 5% CaCl_2 with 3 hours of soaking (K3L3), resulting in a texture of 783.917 gf, moisture content of 79.83%, pH 4.21, texture score of 4.4 (crunchy), taste score of 4.12 (liked), overall acceptance of 4.46 (liked), and calcium content of 339.2 mg/kg.

Keywords: crystal guava, calcium chloride (CaCl_2), soaking duration, candied.