

ABSTRACT

APPLICATION OF EDIBLE COATING BASED ON GLUCOMANAN PORANG FLOUR AND CMC WITH THE ADDITION OF GLYCEROL DURING THE STORAGE OF CURLY CHILI (*Capsicum annum L.*)

By

A ZAIDAN AN NAAFI

This study was to determine the effect and the best concentration of glycerol added to the edible coating of glucomannan flour and carboxymethyl cellulose applied to curly chili (*Capsicum annum L.*). The treatment was arranged in a Complete Randomized Block Design (CRBD) with a single factor totaling 6 levels with 4 repetitions. The factor used was the concentration of glycerol in 6 levels namely G0 (0%), G1 (0.99%), G2 (1.96 %), G3 (2.91%) G4 (3.84%) G5 (4.76%). The research consisted of the process of making edible coatings and the application of edible coatings to curly chilies.). Observations made included sensory tests (color, texture, and aroma), physical analysis such as weight loss, and chemical analysis such as testing the water content of chilies. The data obtained were analyzed for variance followed by the DMRT test with a level of 5% if the treatment showed a significant effect. The results showed that increasing the concentration of glycerol significantly affected the characteristics of the edible coating and the quality of curly chili such as the aroma, texture and color, weight loss, and vitamin C content. The best treatment for adding glycerol to the edible coating of porang glucomannan flour and CMC was the P5 treatment with the addition of glycerol equal to 4.76% with a sensory score. The sensory score on day 3 produces a color of 3.97 (likes), an aroma score of 4.19 (likes), and a texture score of 4.08 (likes). the sensory score on the 6th day produced a color of 3.32 (rather like), aroma score of 3.32 (rather like), and texture score of 3.03 (rather like). the 9th-day sensory score produced a color of 2.52 (didn't like it), an aroma score of 3.00 (rather liked), and a texture score of 2.68 (didn't like it). This treatment also resulted in an average weight loss of 55.17% and vitamin C levels on the 9th day of 1.6093 mg/g.

Key words: *Edible coating, glucomannan, curly chili, glycerol*

ABSTRAK

APLIKASI EDIBLE COATING BERBASIS TEPUNG GLUKOMANAN PORANG DAN CMC DENGAN PENAMBAHAN GLISEROL SELAMA PENYIMPANAN CABAI KERITING (*Capsicum annuum L.*)

Oleh

A ZAIDAN AN NAAFI

Penelitian ini untuk mengetahui pengaruh dan konsentrasi terbaik dari gliserol yang ditambahkan pada edible coating tepung glukomanan dan karbosimetil selulosa yang diaplikasikan pada cabai keriting (*Capsicum annuum L.*). Perlakuan disusun dalam Rancangan Acak Kelompok Lengkap (RAKL) dengan faktor tunggal berjumlah 6 taraf dilakukan 4 kali ulangan, Faktor yang digunakan adalah konsentrasi gliserol dalam 6 taraf yaitu G0 (0%), G1 (0,99%), G2 (1,96%), G3 (2,91%) G4 (3,84%) G5 (4,76%). Penelitian terdiri dari proses pembuatan edible coating dan aplikasi edible coating pada cabai keriting. Pengamatan yang dilakukan meliputi uji sensori (warna, tekstur, dan aroma), analisis fisik seperti susut bobot dan analisis kimia seperti uji vitamin C pada cabai. Data yang diperoleh dianalisis ragam dilanjutkan dengan uji DMRT dengan taraf 5% jika perlakuan menunjukkan pengaruh yang nyata. Hasil penelitian menunjukkan bahwa peningkatan konsentrasi gliserol berpengaruh nyata terhadap karakteristik edible coating dan kualitas mutu cbai keriting seperti aroma tekstur dan warna serta susut bobot dan kandungan vitamin C. Perlakuan terbaik penambahan gliserol pada edible coating tepung glukomanan porang dan CMC yaitu perlakuan P5 dengan penambahan gliserol sebesar 4,76% dengan skor sensori skor sensori hari ke-3 menghasilkan warna 3,97 (suka), skor aroma 4,19 (suka), skor tekstur 4,08 (suka). skor sensori hari ke-6 menghasilkan warna 3,32 (agak suka), skor aroma 3,32 (agak suka), skor tekstur 3,03 (agak suka). skor sensori hari ke-9 menghasilkan warna 2,52 (tidak suka), skor aroma 3,00 (agak suka), skor tekstur 2,68 (tidak suka). Perlakuan ini juga menghasilkan rata-rata susut bobot bernilai 55,17% dan kadar vitamin C hari ke-9 bernilai 1,6093mg/g.

Kata Kunci: *edible coating, glucomannan, cabai keriting, gliserol*