PENGARUH PENAMBAHAN ENZIM PAPAIN TERHADAP KARAKTERISTIK GELATIN CEKER AYAM KAMPUNG SUPER

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INTISARI

Penelitian ini bertujuan untuk mengetahui karakteristik gelatin dari ceker ayam kampung super dengan penambahan enzim papain dalam level yang berbeda. Penelitian ini dilakukan dengan memproduksi gelatin dari ceker ayam kampung super dengan empat perlakuan (P0, P1, P2, dan P3). Perlakuan P0 sebagai kontrol dengan konsentrasi enzim sebesar 0 unit, P1 dengan konsentrasi enzim sebesar 10 unit, P2 dengan konsentrasi enzim sebesar 15 unit, dan P3 dengan konsentrasi enzim sebesar 20 unit. Parameter uji yang dilakukan meliputi pengukuran rendemen, nilai pH, kekuatan gel, kadar air, kadar abu, kadar protein, dan analisis bobot molekul. Pengulangan dilakukan sebanyak tiga kali. Analisis statistik dilakukan dengan analisis ANOVA pola searah dengan level variansi 0,05 dan apabila menunjukkan perbedaan yang nyata maka dilanjutkan dengan uji Duncan Multiple Range Test (DMRT). Hasil penelitian menunjukkan bahwa pengaruh level konsentrasi enzim papain berbeda nyata ($P<0,05$) yang semakin tinggi terhadap rendemen dan kadar protein serta berbeda nyata yang semakin rendah terhadap nilai pH dan kekuatan gel, tetapi tidak berbeda nyata ($P>0,05$) terhadap kadar air dan kadar abu. Hasil analisis SDS-PAGE gelatin diketahui memiliki bobot molekul berkisar antara 10 kDa sampai dengan 180 kDa dengan penampakan pita protein yang tersebar tipis merata di seluruh permukaan gel. Penelitian ini memberikan kesimpulan sementara bahwa penambahan enzim papain dalam isolasi gelatin dari ceker ayam kampung super yang paling baik adalah enzim papain pada level penambahan sebanyak 20 unit.

Kata kunci: gelatin, ceker ayam kampung super, enzim papain, karakteristik, bobot molekul.

THE EFFECT OF ADDITIONAL PAPAIN ENZYME ON THE CHARACTERISTICS OF GELATIN FROM KAMPUNG SUPER CHICKEN'S FEET

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ABSTRACT

This research aims to determine the characteristics of gelatin from kampung super chicken's feet with the addition of papain enzyme in different levels. This research was carried out by making gelatin from kampung super chicken's with four treatments (P0, P1, P2, and P3). Treatment P0 as a control with an enzyme concentration of 0 units, P1 with an enzyme concentration of 10 units, P2 with an enzyme concentration of 15 units, and P3 with an enzyme concentration of 20 units. The research was repeated three times. The variables observed consisted of yield, pH value, gel strength, water content, ash content, protein content and molecular weight analysis. The data obtained from the observations were analyzed using One Way Anova design of variance at the 0,05 level and if it showed a significant difference, it was continued with Duncan's New Multiple Range Test (DNMRT). Based on the research results, the level of papain enzyme concentration had a significant effect (P<0,05) the higher on the yield and protein content, the lower on the pH value and gel strength, while the water content and ash content had no significant effect. Based on SDS-PAGE gelatin analysis on this research had molecular weight between 10 kDa to 180 kDa with the appearance of bands that are evenly distributed throughout the gel. This research provides a tentative conclusion that the best addition of papain enzyme in gelatin isolation from kampung super chicken's feet is papain enzyme at the level of addition of 20 units.

Keywords: gelatin, kampung super chicken's feet, papain enzyme, characteristics, and molecular weight.