PENGARUH EKSTRAK BROKOLI (*Brassica oleracea*) TERHADAP AKTIVITAS ANTIOKSIDAN DAN KUALITAS KIMIA SOSIS AYAM YANG DISIMPAN PADA SUHU REFRIGERATOR

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INTISARI

Penelitian ini bertujuan untuk mengetahui pengaruh ekstrak brokoli terhadap aktivitas antioksidan dan kualitas kimia sosis ayam yang disimpan pada suhu refrigerator. Penelitian ini menggunakan ekstrak brokoli yang disuplementasikan ke adonan sebagai pengganti air dengan konsentrasi 0% (sampel kontrol) dan 2%. Sosis ayam disimpan di dalam refrigerator selama 1 bulan, kemudian dilakukan pengujian antioksidan dan kualitas kimia pada hari ke 0, 7, 14, dan 21, dengan 3 kali ulangan setiap perlakuan. Parameter yang diukur meliputi aktivitas antioksidan dan kualitas kimia (kadar air, kadar protein dan kadar lemak). Data aktivitas antioksidan dan kualitas kimia dianalisis menggunakan Rancangan Petak Terpisah (*Split Plot Design*) yang terdiri atas 2 faktor, faktor A konsentrasi penambahan ekstrak brokoli dan faktor B lama penyimpanan. Perbedaan rerata yang nyata dari perlakuan diuji dengan *Duncan`s New Multiple Range Test* (DMRT). Hasil analisis statistik menunjukkan suplementasi ekstrak brokoli meningkatkan aktivitas antioksidan dan kadar air sosis ayam ($P<0,01$), namun tidak berpengaruh nyata terhadap kadar protein dan kadar lemak sosis ayam ($P>0,05$). Perlakuan penyimpanan meningkatkan aktivitas antioksidan, kadar protein dan kadar lemak sosis ayam ($P<0,01$), namun tidak berpengaruh terhadap kadar air sosis ayam ($P>0,05$). Aktivitas antioksidan terbaik pada perlakuan 2% yaitu sebesar 2,96 ml Eq/1.000 g. Kadar air tertinggi pada perlakuan 2% yaitu sebesar 60,77%, sedangkan kadar protein dan kadar lemak tertinggi pada perlakuan 0% yaitu sebesar 17,13% dan 3,59%. Berdasarkan hasil yang diperoleh dapat disimpulkan bahwa suplementasi ekstrak brokoli sebanyak 2% dapat memperpanjang masa simpan produk daging seperti sosis ayam dan meningkatkan nilai gizi produk.

(Kata Kunci : Ekstrak brokoli, Sosis ayam, Lama penyimpanan, Aktivitas antioksidan dan Kualitas kimia)

THE EFFECT OF BROCCOLI (*Brassica oleracea*) EXTRACT ON THE ANTIOXIDANT ACTIVITY AND CHEMICAL QUALITY OF CHICKEN SAUSAGES STORED ON THE REFRIGERATOR TEMPERATURE

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ABSTRACT

This study aims to determine the effect of broccoli flour extract on the antioxidant activity and chemical quality of chicken sausages stored at refrigerator temperatures. This study used broccoli extract substituted into the dough as a substitute for water with a concentration of 0% (control sample) and 2%. Chicken sausages were stored in the refrigerator for 1 month, then tested for antioxidant and chemical qualities on days 0, 7, 14, and 21, with 3 replications each treatment. The parameters measured include antioxidant activity and chemical qualities (water content, protein content and fat content). Data on antioxidant activity and chemical qualities were analyzed using a Split Plot Design consisting of 2 factors, factor A concentration of addition of broccoli extract and factor B duration of storage. Significant mean differences from the treatment were tested with Duncan's New Multiple Range Test (DMRT). The statistical analysis showed that the suplementation of broccoli extract increased antioxidant activity and water content of chicken sausages ($P<0,01$), but has no effect on protein content and fat content of chicken sausages ($P>0,05$). Storage treatment increases antioxidant activity, protein content and fat content of chicken sausages ($P<0,01$), but has no effect on water content of chicken sausages ($P>0,05$). The best antioxidant activity at 2% treatment is 2,96 ml Eq/1.000 g. The highest water content in the 2% treatment is 60,77%, while the highest protein content and fat content in the 0% treatment is 17,13% and 3,59%. Based on the results obatained it can be concluded that the suplementation of broccoli extract by 2% can extend the shelf life of meat product such as chicken sausages and increase the nutritional value of the product.

(Keywords : Broccoli extract, Chicken sausage, Storage time, Antioxidant activity, Chemical quality)