PENGARUH LEVEL EKSTRAK BROKOLI (*Brassica oleracea*) TERHADAP KUALITAS FISIK, SENSORIS DAN MIKROSTRUKTUR *NUGGET* AYAM

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INTISARI

Tujuan penelitian ini yaitu untuk mengetahui pengaruh ekstrak brokoli terhadap kualitas fisik, sensoris dan mikrostruktur dalam *nugget* ayam. Penelitian ini membutuhkan bahan-bahan seperti daging ayam, brokoli, air, tepung terigu, tepung tapioka, tepung roti, bawang putih, ketumbar bubuk, merica bubuk, telur, garam, gula dan minyak goreng. Penambahan level ekstrak brokoli pada *nugget* ayam yaitu 0, 0,5, 1,0, 1,5 dan 2,0%. Variabel yang diuji adalah kualitas fisik yang terdiri dari nilai pH, daya ikat air, dan keempukan, kemudian kualitas sensoris terdiri dari warna, rasa, kekenyalan, tekstur dan *juiciness,* serta mikrostruktur. Analisis data kualitas fisik menggunakan analisis variansi pola searah dan perbedaan rerata diuji dengan *Duncan's New Multiple Range Test*, analisis data kualitas sensoris menggunakan analisis statistik non parametic Kruskal and Wallis Test, serta analisis data mikrostruktur menggunakan deskriptif kulitatif. Berdasarkan penelitian *nugget* ayam yang ditambahkan ekstrak brokoli level 0, 0,5, 1,0, 1,5 dan 2,0% telah didapatkan hasil bahwa uji kualitas fisik variabel pH menunjukkan perbedaan yang nyata ($P<0,05$) pada level 2,0%, sedangkan pada level 0 sampai 1,5% tidak berbeda nyata ($P>0,05$). Hasil analisis kualitas fisik variabel daya ikat air (DIA) dan keempukan dengan penambahan ekstrak brokoli level 0 sampai 2,0% tidak berpengaruh nyata ($P>0,05$). Hasil analisis kualitas sensoris yang terdiri dari warna, rasa, tekstur, kekenyalan dan *juiciness* dengan penambahan ekstrak brokoli level 0 sampai 2,0% tidak berpengaruh nyata ($P>0,05$). Mikrostruktur *nugget* ayam dengan penambahan ekstrak brokoli 1,0% memiliki struktur yang kompak walaupun masih terdapat sedikit partikel non daging. Berdasarkan penelitian dapat disimpulkan pemberian ekstrak brokoli untuk kualitas fisik variabel pH yang berpengaruh pada level 2,0%, sedangkan DIA, keempukan dan kualitas sensoris tidak berpengaruh nyata serta mikrostruktur *nugget* ayam dengan penambahan ekstrak brokoli yang baik pada level 1,0%.

Kata kunci: *Nugget* ayam, Brokoli, Kualitas fisik, Kualitas sensoris, Mikrostrukur

EFFECT OF BROCCOLI EXTRACT (*Brassica oleracea*) LEVEL ON THE PHYSICAL, SENSORICAL AND MICROSTRUCTURAL QUALITY OF CHICKEN NUGGET

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ABSTRACT

The purpose of this study was to determine the effect of broccoli extract on physical, sensory and microstructural qualities of chicken nuggets. This research requires ingredients such as chicken, broccoli, water, flour, tapioca flour, bread flour, garlic, coriander powder, pepper powder, eggs, salt, sugar and cooking oil. Addition levels of broccoli extract on chicken nuggets divided into 4 level, there were 0, 0,5, 1,0, 1,5 and 2,0%. Variable observe were physical quality consisting of pH level, water holding capacity, and tenderness, sensory quality test consisting of color, taste, elasticity, texture and juiciness, and microstructure test. Data of physical quality test were analyzed by using one way variance analysis, sensory quality were analyzed by using non parametric Kruskal and Wallis Test, and microstructure data were analyzed descriptively. Based on the research of chicken nuggets added with broccoli extract levels 0, 0,5, 1,0, 1,5 and 2,0%, it was found that the physical quality test of pH variables showed significant differences (P <0,05) at the 2,0% level, whereas at level 0 to 1,5% were not significantly different (P> 0,05). The results of physical quality analysis of the variable water holding capacity (DIA) and tenderness with the addition of broccoli extract level 0 to 2% had no significant effect (P> 0,05). The results of sensory quality analysis consisting of color, taste, texture, elasticity and juiciness with the addition of broccoli extract level 0 to 2,0% had no significant effect (P> 0,05). Chicken nugget microstructure with the addition of 1,0% broccoli extract has a compact structure although there are still a few non-meat particles. Based on research brocolli extract for pH variable significantly affects on level 2,0%, while for water holding capacity, tenderness and sensorical quality had no significant effect and microstructure on level 1,0% has a compact structure.

Keywords: Chicken nugget, Broccoli, Physical quality, Sensory quality, Microstructure