

PENGARUH SUBSTITUSI AIR DENGAN JUS BUAH NAGA MERAH (*Hylocereus polyrhizus*) TERHADAP AKTIVITAS ANTIOKSIDAN, KUALITAS KIMIA, DAN SENSORIS BAKSO DAGING AYAM

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INTISARI

Penelitian ini bertujuan untuk mengetahui pengaruh substitusi jus buah naga merah (*Hylocereus polyrhizus*) terhadap aktivitas antioksidan, kualitas kimia, dan sensoris bakso daging ayam. Penelitian ini akan dilakukan pada bulan Juni 2024 hingga September 2024 di Laboratorium Ilmu dan Teknolologi Daging, Departemen Teknologi Hasil Ternak, Fakultas Peternakan, Universitas Gadjah Mada, Yogyakarta. Penelitian ini menggunakan jus buah naga merah (*Hylocereus polyrhizus*) yang disubstitusi ke adonan bakso ayam sebagai bahan pengganti air dengan 5imbangan air:jus berbeda yaitu 100:0%, 75:25%, 50:50%, 25:75%, dan 0:100%. Penelitian dilakukan dengan pengulangan sebanyak tiga kali untuk masing-masing level perlakuan. Data aktivitas antioksidan dan kimia (kadar air, protein, lemak, dan kolagen dianalisis menggunakan Rancangan Acak Lengkap pola searah (ANOVA), bila menunjukkan hasil signifikan dilakukan uji *Duncans New Multiple Rangers Test* (DMRT). Data kualitas sensoris (warna, aroma, rasa, tekstur, dan daya terima) dianalisis secara statistik menggunakan analisis non-parametrik yaitu Uji Hedonik menurut Kruskal-Wallis. Hasil penelitian menunjukkan bahwa semakin meningkat substitusi air dengan jus buah naga merah semakin meningkat pula aktivitas antioksidan pada bakso daging ayam $P(<0,05)$. Substitusi jus buah naga merah tidak mempengaruhi kualitas kimia bakso daging ayam $P(>0,05)$. Substitusi jus buah naga merah sangat mempengaruhi kualitas sensoris pada warna dan daya terima $P(<0,01)$. Hasil substitusi terbaik didapat pada level 50%, karena aktivitas antioksidan sudah naik dan kualitas sensoris paling disukai terutama warna dan daya terima.

Kata kunci: Bakso, Daging ayam, Jus buah naga merah, Antioksidan, Kualitas kimia, Uji sensoris.

EFFECT OF WATER SUBSTITUTION WITH DRAGON FRUIT JUICE (*Hylocereus polyrhizus*) ON ACTIVITY ANTIOXIDANT ACTIVITY, CHEMICAL QUALITY, AND SENSORY CHICKEN MEATBALLS

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ABSTRACT

This study aims to determine the effect of red dragon fruit (*Hylocereus polyrhizus*) juice substitution on antioxidant activity, chemical quality, and sensory of chicken meatballs. This research will be conducted from June 2024 to September 2024 at the Meat Science and Technology Laboratory, Department of Animal Products Technology, Faculty of Animal Science, Gadjah Mada University, Yogyakarta. This study used red dragon fruit (*Hylocereus polyrhizus*) juice substituted into chicken meatball dough as a water substitute with 5 different water:juice balances of 100:0%, 75:25%, 50:50%, 25:75%, and 0:100%. The study was repeated three times for each treatment level. Antioxidant and chemical activity data (water, protein, fat, and collagen content) were analyzed using a one-way Randomized Complete Block Design (ANOVA) pattern, if significant results were shown, Duncans New Multiple Rangers Test (DMRT) was conducted. Sensory quality data (color, aroma, taste, texture, and acceptability) were statistically analyzed using non-parametric analysis, namely the Hedonic Test according to Kruskal-Wallis. The results showed that the increasing substitution of water with red dragon fruit juice increased the antioxidant activity of chicken meatballs $P(<0.05)$. Substitution of red dragon fruit juice did not affect the chemical quality of chicken meatballs $P(>0.05)$. Substitution of red dragon fruit juice significantly affected the sensory quality on color and acceptability $P(<0.01)$. The best substitution results were obtained at the 50% level, because the antioxidant activity had increased and the sensory quality was most preferred, especially color and acceptability.

Keywords: Meatballs, Chicken meat, Red dragon fruit juice, Antioxidant, Chemical quality, Sensory test.