# AKTIVITAS ANTIOKSIDAN, KUALITAS FISIK DAN SENSORIS NUGGET AYAM DENGAN SUBSTITUSI EKSTRAK BUAH NAGA MERAH (*Hylocereus polyrhizus*)

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## INTISARI

Penelitian ini bertujuan untuk mengetahui pengaruh ekstrak buah naga merah terhadap aktivitas antioksidan, kualitas fisik, dan sensoris nugget ayam. Penelitian ini menggunakan ekstrak buah naga merah yang disubtitusi ke adonan nugget ayam sebagai pengganti air dengan 5 imbangan air:ekstrak yaitu 100:0, 75:25, 50:50, 25:75, dan 0:100% ($^{w}/_{w}$). Parameter yang diukur meliputi aktivitas antioksidan, kualitas fisik, dan sensoris. Data aktivitas antioksidan dianalisis secara deskriptif. Data kualitas fisik (pH, keempukan, dan rendemen) dianalisis menggunakan rancangan acak lengkap pola searah (ANOVA), bila menunjukkan hasil yang signifikan dilanjutkan dengan uji Duncan's New Multiple Range Test (DMRT). Data kualitas sensoris (warna, rasa, aroma, tekstur, kekenyalan, dan daya terima) dianalisis secara statistik menggunakan analisis non-parametrik yaitu uji Hedonik menurut Kruskal-Wallis. Hasil penelitian menunjukkan substitusi ekstrak buah naga merah berpengaruh nyata terhadap aktivitas antioksidan ($P<0,05$). Substitusi ekstrak buah naga merah dapat meningkatkan aktivitas antioksidan nugget ayam sebanyak 4,60% hingga level imbangan air:ekstrak 1:100%. Substitusi ekstrak buah naga merah dapat menurunkan keempukan dan nilai pH nugget ayam ($P<0,05$). Substitusi ekstrak buah naga tidak berpengaruh terhadap rendemen, warna, rasa, aroma, tekstur, kekenyalan dan daya terima nugget ayam. Kesimpulan penelitian ini yaitu, substitusi ekstrak buah naga merah dengan imbangan yang berbeda dapat menaikkan aktivitas antioksidan, menurunkan nilai keempukan dan pH nugget ayam, serta tidak berpengaruh terhadap rendemen, warna, rasa, aroma, tekstur, kekenyalan, dan daya terima nugget ayam.

(Kata Kunci : Nugget Ayam, Buah Naga Merah, Kualitas Fisik, Kualitas Sensoris, Aktivitas Antioksidan)

# ANTIOXIDANT ACTIVITY, PHYSICAL AND SENSORY QUALITIES OF CHICKEN NUGGET WITH SUBTITUTION OF RED DRAGON FRUIT EXTRACT (*Hylocereus polyrhizus*)

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## ABSTRACT

This study aims to determine the effect for red dragon fruit extract on antioxidant activity, physical and sensory qualities chicken nugget. This research was conducted using the addition of red dragon fruit extract as a replacement of water, with various ratio of water:extract 100:0, 75:25, 50:50, 25:75, and 0:100% ($^{w}/_{w}$). Parameters measured included antioxidant activity, physical, and sensory qualities. The data of antioxidant activity were obtained and analyzed by descriptive analysis. Data on physical qualities (pH, tenderness, and rendering) were analyzed using one way analysis (ANOVA). When it showed significant results followed by analysis of Duncan's New Multiple Range Test (DMRT). Data on sensory qualities (color, taste, aroma, texture, elasticity, and acceptability) were analyzed statistically using non-parametric analysis ie Hedonic test according to Kruskal-Wallis. The results showed that the substitution of red dragon fruit extract had significant effect on antioxidant activity ($P<0,05$). The substitution of red dragon fruit extract could increase the antioxidant activity of chicken nugget as much as 4,60% until the level of substitution ratio 0:100%. The subtitution of red dragon fruit extract reduced the tenderness and pH value of chicken nugget ($P<0,05$). The subtitution of red dragon fruit extract could not affect the rendemen, color, taste, aroma, texture, elasticity and acceptability of chicken nugget. The conclusion of this research was the substitution of red dragon fruit extract with various ratio increased antioxidant activity, decreased pH and tenderness, and not affect the rendemen, color, taste, aroma, and acceptability of chicken nugget.

(Keywords: Chicken Nugget, Red Dragon Fruit, Physical Quality, Sensory Quality, Antioxidant Activity).