



PROFIL BIOKIMIA DARAH AYAM PETELUR YANG DIBERI PAKAN DENGAN PENAMBAHAN ANTIOKSIDAN SINTETIS

Rizky Rodelta Nainggolan
20/462753/PT/08670

INTISARI

Pencegahan oksidasi pakan selama penyimpanan merupakan perhatian penting dalam manajemen pakan unggas. Salah satu cara efektif melalui penambahan antioksidan sintetis pada pakan. Penelitian ini bertujuan untuk mengevaluasi dampak penambahan produk komersial antioksidan sintetis dengan kandungan *Butylated Hydroxyanisole* (BHA), *Butylated Hydroxytoluene* (BHT), dan *ethoxyquin* terhadap profil biokimia darah ayam petelur. Sebanyak 300 ekor ayam petelur berumur 70 minggu dibagi ke dalam tiga perlakuan yaitu P0 (kontrol), P1 (P0 + 0,05% kandungan antioksidan rendah), dan P2 (P0 + 0,05% kandungan antioksidan tinggi). Setiap perlakuan terdiri atas 10 ulangan menggunakan masing-masing 10 ekor ayam. Pemberian pakan perlakuan dilakukan selama 56 hari. Sebanyak 15 sampel darah ayam petelur dikoleksi pada hari ke-57. Data penelitian dianalisis menggunakan metode *One Way ANOVA* dan apabila terdapat perbedaan yang signifikan dilanjutkan dengan uji *Duncan's Multiple Range Test* (DMRT). Hasil penelitian menunjukkan bahwa penambahan antioksidan sintetis tidak berbeda nyata terhadap kadar glukosa darah ($P > 0,05$). Total protein meningkat pada P1 ($P < 0,05$) sedangkan pada P2 tidak berbeda nyata dibandingkan kontrol. Kadar albumin darah tidak berbeda nyata dibandingkan kontrol pada penambahan antioksidan sintetis ($P > 0,05$). Trigliserida darah secara nyata menurun pada penambahan antioksidan sintetis dibandingkan kontrol ($P < 0,05$). Kadar kolesterol darah mengalami penurunan pada perlakuan P2 ($P < 0,05$) sedangkan pada P1 tidak berbeda dibandingkan kontrol. Kadar HDL meningkat pada P1 ($P < 0,05$) sedangkan P2 tidak berbeda dibandingkan kontrol. Kadar LDL pada penelitian ini tidak berbeda dibandingkan kontrol ($P > 0,05$). Asam urat menurun pada P1 ($P < 0,05$) sedangkan P2 tidak berbeda dibandingkan kontrol. Kadar kreatinin darah menurun pada P2 tetapi hasil pada P1 tidak berbeda dibandingkan kontrol. Kesimpulan pada penelitian ini yaitu pemberian antioksidan kadar rendah memberikan dampak yang lebih baik karena meningkatkan kadar total protein dan HDL darah.

Kata kunci: Antioksidan sintetis, Antioksidan kandungan rendah, Antioksidan kandungan tinggi, Biokimia darah, Ayam petelur.



BLOOD BIOCHEMICAL PROFILE OF LAYING HENS FED DIETS SUPPLEMENTED WITH SYNTHETIC ANTIOXIDANTS

Rizky Rodelta Nainggolan
20/462753/PT/08670

ABSTRACT

The prevention of feed oxidation during storage represents a crucial concern in poultry diet management. One effective strategy involves the incorporation of synthetic antioxidants in the feed. This study aimed to evaluate the impact of synthetic antioxidant, specifically those containing Butylated Hydroxyanisole (BHA), Butylated Hydroxytoluene (BHT), and ethoxyquin, on the blood biochemical profile of laying hens. A total of 300 laying hens aged 70 weeks were divided into three treatments, P0 (control), P1 (P0 + 0.05% low antioxidant content), and P2 (P0 + 0.05% high antioxidant content). Each treatment consisted 10 replicates with 10 chickens per replicate. Treatment feeding was carried out for 56 days. Fifteen blood samples were collected on the 57th day. Data analysis was conducted using the One Way ANOVA method and followed by Duncan's Multiple Range Test (DMRT) for significant difference. The results showed that the addition of synthetic antioxidants did not have a significant differences in blood glucose levels compared to control ($P > 0.05$). Total protein increased in P1 ($P < 0.05$) while in P2 was not significantly different compared to controls. Blood albumin levels were not significantly differences compared to controls when synthetic antioxidants were added ($P > 0.05$). Blood triglycerides significantly decreased with the addition of synthetic antioxidants compared to controls ($P < 0.05$). Blood cholesterol levels decreased in treatment P2 ($P < 0.05$) while in P1 was not different compared to controls. Levels of HDL increased in P1 ($P < 0.05$) while P2 did not different compared to controls. Levels of LDL in this study were not different compared to controls ($P > 0.05$). Uric acid decreased in P1 ($P < 0.05$) while P2 was not different compared to controls. Blood creatinine levels decreased at P2 but the results at P1 were not different compared to controls. In conclusion, treatment low content antioxidants exhibited a more favorable impact led to an increase in total protein and blood HDL levels.

Key Word: Synthetic antioxidant, Low content antioxidants, High content antioxidants, Blood biochemical, Laying hens