

## ABSTRAK

### **UJI TOKSISITAS ORAL AKUT ESSEGUARD RESPIRATORY<sup>®</sup> DAN PENGARUHNYA TERHADAP BERAT BADAN, HEMATOLOGI, FUNGSI HATI DAN FUNGSI GINJAL AYAM BROILER**

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Industri perunggasan merupakan salah satu industri pemasok makanan terbesar di dunia. Penggunaan obat herbal sebagai pengganti obat sintetis mulai menjadi trend dalam industri peternakan. Esseguard Respiratory<sup>®</sup> diproduksi oleh PT. Ganeeta Formula Nusantara berasal dari kombinasi bahan herbal yang diformulasikan untuk menunjang produktivitas dan kesehatan ternak. Sebelum diedarkan, profil ketoksikan Esseguard Respiratory<sup>®</sup> perlu diketahui.

Penelitian ini bertujuan untuk mengetahui efek toksik Esseguard Respiratory<sup>®</sup> pada ayam broiler melalui uji toksisitas akut dengan metode *limit dose test* yang mengacu pada metode pengujian toksisitas Organisation for Economic Co-operation and Development (OECD) Guideline 223. Ayam broiler strain Lohman sebanyak 10 ekor dibagi menjadi 2 kelompok yaitu kelompok kontrol yang diberi akuades dan kelompok perlakuan yang diberi obat dengan dosis 2000 mg/kg berat badan. Pemberian akuades dan obat dilakukan secara satu kali per oral menggunakan spuit dan ayam selanjutnya dipelihara selama 14 hari. Selama 14 hari dilakukan pengamatan ada tidaknya mortalitas dan tanda-tanda toksisitas. Penimbangan berat badan dilakukan pada hari ke-0, 3, 7, dan 14 untuk melihat pengaruh pemberian Esseguard Respiratory<sup>®</sup> terhadap peningkatan atau penurunan berat badan. Pengambilan darah untuk pemeriksaan hematologi, fungsi hati, dan ginjal dilakukan pada hari ke-14. Data yang diperoleh kemudian dianalisis menggunakan SPSS 29. Kesimpulan uji diambil berdasar *Independent Sample T-test* untuk data yang terdistribusi normal dan *Mann Whitney Test* untuk data yang tidak terdistribusi normal.

Hasil menunjukkan bahwa Esseguard Respiratory<sup>®</sup> yang diberikan secara per oral dengan dosis 2000 mg/kg berat badan tidak menimbulkan perubahan signifikan ( $p > 0,05$ ) terhadap perubahan berat badan, profil hematologi, fungsi hati dan ginjal ayam.

Kata kunci: Esseguard Respiratory<sup>®</sup>, uji toksisitas oral akut, ayam broiler.

## ABSTRACT

### **ACUTE ORAL TOXICITY TESTING OF ESSEGUARD RESPIRATORY<sup>®</sup> AND ITS EFFECTS ON BODY WEIGHT, HEMATOLOGY, LIVER FUNCTION, AND KIDNEY FUNCTION IN BROILER CHICKENS**

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The poultry industry is one of the largest food suppliers in the world. The use of herbal medicine as a substitute for synthetic drugs is becoming a trend in the livestock industry. Esseguard Respiratory<sup>®</sup> is produced by PT. Ganeeta Formula Nusantara and is derived from a combination of herbal ingredients formulated to support the productivity and health of livestock. Before being marketed, the toxicity profile of Esseguard Respiratory<sup>®</sup> needs to be determined.

This study aims to determine the toxic effects of Esseguard Respiratory<sup>®</sup> on broiler chickens through an acute toxicity test using the limit dose test method, which refers to the Organisation for Economic Co-operation and Development (OECD) Guideline 223 for toxicity testing. Ten Lohman broiler chickens were divided into two groups: a control group that received distilled water and a treatment group that received the drug at a dose of 2000 mg/kg body weight. The administration of distilled water and the drug was done once, orally, using a syringe, then the chickens were maintained for 14 days. Throughout the 14 days, observations were made for mortality and signs of toxicity. Body weight measurements were taken on days 0, 3, 7, and 14 to assess the effect of Esseguard Respiratory<sup>®</sup> on weight gain or loss. Blood samples were collected on day 14 for hematological, liver function, and kidney function examinations. The data obtained were then analyzed using SPSS 29. Conclusion was deduced based on Independent Sample T-test or Mann Whitney-Test depending whether sets of data distribution were normal or not-normal, respectively.

The results showed that Esseguard Respiratory<sup>®</sup>, when administered orally at a dose of 2000 mg/kg body weight, did not have a significant effect ( $p > 0.05$ ) on changes in body weight, hematological profile, liver function, and kidney function in chickens.

**Key words:** Esseguard Respiratory<sup>®</sup>, acute toxicity testing, broiler chickens.