

## ABSTRAK

### **PENGUJIAN TOKSISITAS AKUT EKSTRAK SAMBILOTO PENYARIAN AIR TERHADAP GAMBARAN HISTOPATOLOGI HATI DAN GINJAL AYAM BROILER**

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Sambiloto (*Andrographis paniculata* (Burm.f) Nees) merupakan salah satu tanaman yang banyak dimanfaatkan dalam bidang kesehatan hewan. Tanaman sambiloto sering digunakan sebagai *feed additive* dalam pakan ayam broiler karena mengandung senyawa aktif yang memberikan efek samping lebih kecil daripada senyawa kimia sintetik sehingga berpotensi menggantikan *Antibiotic Growth Promoter* (AGP). Namun demikian, informasi mengenai ketoksikan sambiloto masih terbatas, sehingga ketoksikan sambiloto perlu diteliti lebih lanjut. Penelitian ini bertujuan untuk mengetahui efek toksik yang mungkin muncul akibat dari pemberian ekstrak sambiloto penyarian melalui uji toksisitas akut dan pengaruhnya terhadap hati dan ginjal.

Hewan uji yang digunakan berupa ayam broiler *strain* Lohman 202 berumur 31 hari sebanyak 6 ekor kemudian dibagi menjadi dua kelompok yaitu kelompok kontrol negatif (K1, K2, K3) dan perlakuan (P1, P2, P3). Uji toksisitas dilakukan berdasarkan metode OECD *Guideline* 223 dengan dosis awal 2000 mg/kg BB. Pengamatan dilakukan secara intensif selama 24 jam pertama dengan perhatian khusus pada 3 jam pertama. Pengamatan dilanjutkan sampai 14 hari bila tidak terdapat hewan uji yang mati dan selanjutnya dikorbankan untuk dilakukan pembuatan preparat histopatologi pengecatan hematoksilin-eosin dilanjutkan dengan pengamatan histopatologi secara deskriptif.

Hasil penelitian menunjukkan bahwa pemberian ekstrak sambiloto penyarian air dosis 2000 mg/kg BB secara oral dosis tunggal tidak menimbulkan perubahan pada hati dan ginjal secara makroskopik namun menimbulkan gambaran efek toksik yang ringan melalui pengamatan histopatologi.

Kata kunci: Sambiloto, uji toksisitas akut, OECD 223, histopatologi, ayam broiler

## ABSTRACT

### ACUTE TOXICITY TESTING OF SAMBILOTO WATER EXTRATION ON THE HISTOPATHOLOGY OF BROILER CHICKEN LIVER AND KIDNEY

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Sambiloto (*Andrographis paniculata* (Burm.f) Nees) is one of the plants widely utilized in the field of animal health. Sambiloto is often used as a feed additive in broiler chicken feed due to its active compounds that provide fewer side effects compared to synthetic chemical compounds, thus potentially replacing Antibiotic Growth Promoters (AGPs). However, information regarding the toxicity of sambiloto is still limited, necessitating further research on its toxicity. This study aims to determine the possible toxic effects resulting from the administration of sambiloto water extraction through acute toxicity testing and its impact on the liver and kidney of broiler chicken.

The test animals used were 6 Lohman 202 strain broiler chickens at the age of 31 days, which were divided into two groups: the negative control group (K1, K2, K3) and the treatment group (P1, P2, P3). Toxicity testing was conducted based on the OECD Guideline 223 method, with an initial dose of 2000 mg/kg body weight. Intensive observations were carried out for the first 24 hours, with special attention given to the first 3 hours. The observations were continued for 14 days if no test animals died, and subsequently, they were sacrificed to prepare hematoxylin-eosin staining histopathology slides for descriptive histopathological observations.

The research results indicate that the administration of sambiloto water extraction at a single oral dose of 2000 mg/kg BW does not cause macroscopic changes in the liver and kidneys, but it does present mild toxic effects based on histopathological observations.

**Keywords:** Sambiloto, acute toxicity test, OECD 223, histopathology, broiler chickens