

**PENGARUH PEMBERIAN EKSTRAK ETANOL DAUN SENDOK
(*Plantago major L.*) SECARA SUBKRONIK TERHADAP KADAR BILIRUBIN
TIKUS PUTIH (*Rattus norvegicus*) JANTAN GALUR WISTAR**

**Uji Toksisitas Subkronik Ekstrak Etanol Daun Daun Sendok
(*Plantago major L.*) dalam Pengembangannya Sebagai Fitofarmaka**

ABSTRAK

Latar belakang : Ekstrak etanol daun sendok (EEDS) memiliki banyak senyawa aktif yang mendukung efek farmakologisnya. Namun, Daun sendok juga berpotensi menimbulkan efek toksik pada organ vital seperti hepar.

Tujuan : Mengetahui pengaruh pemberian EEDS (*Plantago major L.*) berbagai dosis secara subkronik terhadap kadar bilirubin tikus putih (*Rattus noervegicus*) jantan galur wistar.

Metode : Metode penelitian ini adalah eksperimental murni dengan desain *post test only with control group*. Setelah aklimatisasi selama 7 hari, dua puluh lima ekor tikus putih jantan dibagi dalam lima kelompok. Kelompok A (kontrol) diberi larutan *Carboxy Methyl Cellulose*, kelompok B (50 mg/200gramBB), kelompok C (100 mg/200gramBB), kelompok D (200 mg/200gramBB), dan kelompok E (400 mg/200gramBB) diberikan EEDS selama 21 hari. Pada hari ke 29, diambil sampel darah tikus kemudian dilakukan pemeriksaan kadar bilirubin serum (direk, indirek, dan total).

Hasil : Rerata kadar bilirubin total dan bilirubin indirek antar kelompok tidak berbeda secara signifikan. Rerata kadar bilirubin direk kelompok B signifikan lebih tinggi dibanding dengan kelompok lain. Kadar bilirubin direk kelompok A signifikan lebih tinggi dibanding dengan kelompok C dengan nilai $p < 0,05$.

Kesimpulan : Pemberian EEDS berbagai dosis tidak dapat meningkatkan kadar bilirubi total dan indirek tikus putih jantan galur wistar. Pemberian EEDS dosis 50 mg/200gramBB dapat meningkatkan kadar bilirubin tikus putih jantan galur wistar.

Kata kunci : daun sendok, ekstrak etanol, subkronik, bilirubin, toksisitas

**THE EFFECT OF ETHANOL PLANTAIN EXTRACT (*Plantago major L.*)
SUBCHRONICALLY ADMINISTRATION WITH LEVEL OF BILIRUBIN
IN MALE ALBINO RAT (*Rattus norvegicus*) WISTAR STRAIN**

**Subchronic Toxicity Test of Ethanol Plantain Extract (*Plantago major L.*) of
Its Development as Fitofarmaka**

ABSTRACT

Background : *Ethanol Plantain Extract (EPE) has many active compound those support the pharmacological effect. However, it is also potentially cause toxic effect for vital organ such as liver.*

Objective : *Knowing the effect of EPE in various dose subchronically administration with level of bilirubin in male albino rat (*Rattus norvegicus*) wistar strain.*

Methods : *The methode of this research is true experimental study with post test only with control group design. After the aclimatization as long as 7 days, 25 male albino rats divided into 5 groups. Group A (control) are given solution of Carboxy Methyl Cellulose, group B (50 mg/200gram of weight), group B (100 mg/200gram of weight), group B (200 mg/200gram of weight), and group B (400 mg/200gram of weight) are applied EPE as long as 21 days. On the 29th days are taken blood sample of the rats then researcher do test od serum bilirubin level (direct, indirect, and total).*

Results : *The average of total and indirect billirubin level are not significantly difference among the group. The average of direct bilirubin level group B significantly higher than the other groups. The average of direct bilirubin group A significantly higher than group C C with p value <0,05.*

Conclusion : *Administration of various doses of EPE can not increase the levels of total and indirect bilirubin in male albino rats wistar strain. The administration of EPE dose 50 mg/200gram of weight can increase the level of bilirubin in male albino rat wistar strain.*

Keywords : *Plantain, Ethanol Extract, Subchronic, Bilirubin, Toxicity*