

**PENGARUH EKSTRAK ETANOL DAUN SENDOK (*Plantago major* L.)
SECARA SUBKRONIS TERHADAP KADAR ALBUMIN DAN
GLOBULIN TIKUS PUTIH (*Rattus norvegicus*) JANTAN**

Uji Toksisitas Subkronis

ABSTRAK

Ekstrak daun sendok memiliki berbagai macam khasiat pengobatan. Namun, uji toksisitas subkronis belum banyak dilakukan. Uji toksisitas secara subkronis dilakukan dengan pemeriksaan kadar albumin dan globulin untuk menunjukkan fungsi hepar. Penelitian ini bertujuan untuk mengetahui pengaruh ekstrak etanol daun sendok secara subkronis terhadap kadar albumin dan globulin pada tikus putih (*Rattus norvegicus*) jantan. Metode penelitian ini adalah eksperimental dengan rancangan *post test only with control group*. Dua puluh lima tikus putih (*Rattus norvegicus*) jantan dibagi dalam lima kelompok. Kelompok A (larutan CMC) sebagai kontrol, kelompok B (50mg/200g BB), kelompok C (100mg/200g BB), kelompok D (200mg/200g BB), dan kelompok E (400mg/200g BB) diberikan daun sendok sebanyak 5 ml. Semua perlakuan diberikan selama 28 hari. Pada hari ke 29, tikus dianestesi kemudian diambil darah melalui *cardiac puncture* serta diukur kadar albumin dan globulin. Secara bivariat, kadar albumin menunjukkan tidak terdapat perbedaan yang signifikan kelompok A dengan kelompok B, C, D, dan E ($p=0,64$). Kadar globulin menunjukkan perbedaan signifikan kelompok A dengan kelompok C ($p=0,01$) dan antar kelompok perlakuan B, C, D, dan E ($p=0,01$). Secara klinis, rerata kadar albumin kelompok A sampai E secara berurutan adalah 3,77, 3,80, 3,67, 3,86, dan 3,70 dengan interpretasi masih dalam nilai normal (2,70 – 5,10 g/dl). Begitupun, rerata kadar globulin secara berurutan, yaitu : 3,44, 3,33, 4,07, 3,88, dan 3,89 dengan interpretasi masih dalam nilai normal (1,56 – 7,3 g/dl). Penelitian ini dapat disimpulkan bahwa tidak terdapat pengaruh ekstrak etanol daun sendok secara subkronis terhadap kadar albumin dan globulin pada tikus putih (*Rattus norvegicus*) jantan.

Kata kunci : daun sendok, subkronik, albumin, globulin

**THE SUB CHRONIC EFFECTS of ADMINISTRATION of EXTRACT
ETHANOL PLANTAIN (*Plantago major* L.) on ALBUMIN
AND GLOBULIN in MALE ALBINO RATS (*Rattus norvegicus*)**

Sub chronic Toxicity Test

ABSTRACT

Plantain has many benefits to cure many diseases. Meanwhile, sub chronic toxicity test often been held especially. Toxicity test has been held by measuring albumin and globulin as one of hepar test. This research is to determine the effects of sub chronic administration of extract ethanol plantain (*Plantago major* L.) on albumin and globulin in male albino rats (*Rattus norvegicus*). An experimental study with posttest only with control group design was involved 25 males of albino rats. They were divided into 5 groups (5 each). A group as a control received 5 ml CMC solution, B, C, D and E group received extract of 50mg/200gBW, 100mg/200gBW, 200mg/200gBW and 400mg/200gBW respectively. All treatments were given for 28 days and the end of study, rats were anesthetized by ketamine then done with blood sampling by cardiac puncture and measured albumin and globulin. In albumin calculation, mean of group among A group and all treatment groups are not significant ($p=0,64$). In globulin calculation, mean of group between A group and C group are significant ($p=0,01$), meanwhile mean of group among treatment group are significant ($p=0,01$). Clinically, mean of albumin on all experimental groups sequentially from A group until E group are 3,77, 3,80, 3,67, 3,86, and 3,70. It is still interpreted as normal condition (2,70–5,10 g/dl). Meanwhile, mean of globulin on all experimental groups sequentially from A group until E group are 3,44, 3,33, 4,07, 3,88, and 3,89 (1,56–7,3 g/dl). The results are interpreted as normal as albumin. In conclusions, there are no effects of sub chronic administration of extract ethanol plantain (*Plantago major* L.) on albumin and globulin in male albino rats (*Rattus norvegicus*).

Keywords: *Plantago major* L., sub chronic, albumin, globulin