

INTISARI

Senggani (*Melastoma polyanthum* Bl.) merupakan tumbuhan yang digunakan secara tradisional oleh masyarakat Indonesia untuk mengobati gangguan pencernaan makanan, diare, sariawan, dan pendarahan rahim. Untuk mengetahui batas keamanan penggunaannya diperlukan penelitian toksisitas akut. Penelitian toksisitas akut ekstrak etanol akar senggani terhadap tikus jantan dan betina dilakukan untuk mengetahui kisaran dosis letal, gejala toksik, dan kerusakan yang diakibatkan oleh ekstrak etanol akar senggani.

Jenis penelitian adalah eksperimental murni menggunakan rancangan acak lengkap pola searah. Tiga puluh ekor tikus jantan dan betina dibagi dalam lima kelompok. Kelompok I sebagai kontrol diberi aquadest. Kelompok II-V diberi ekstrak etanol akar senggani sesuai dosisnya yaitu 439,84 mg/kgBB, 879,68 mg/kgBB, 1759,36 mg/kgBB, 3518,72 mg/kgBB. Pemejanaan dilakukan satu kali. Pengamatan secara kuantitatif berdasarkan perubahan berat badan dan jumlah kematian hewan uji pada masing-masing kelompok selama 14 hari. Pengamatan secara kualitatif meliputi gejala toksik dan pemeriksaan histopatologi. Setelah hari ke-14, tikus yang hidup dikorbankan dan diambil organ hati, ginjal, usus, lambung, dan limpa untuk diperiksa histopatologinya.

Gejala toksik yang muncul adalah aktivitas lokomotor turun, sensitivitas turun, penjilatan naik, menggosok hidung, kelemahan, lesu. Hasil pemeriksaan histopatologi menunjukkan adanya kelainan pada hati, ginjal, usus, dan lambung. Hati mengalami pelebaran sinusoid, hiperemi, hemoraghi, sel radang, dan degenerasi melemak difus. Organ ginjal mengalami hiperemi, hemoraghi, paradangan, ada masa hialin. Kerusakan organ usus dan lambung tergolong ringan yaitu hanya terjadi erosi ringan, sel radang dan peningkatan sel goblet.

Data dianalisis menggunakan Anava dengan tingkat kepercayaan 95%. Berdasarkan hasil penelitian diperoleh harga LD_{50} semu $>3518,72$ mg/kgBB. Ketoksikan akut ekstrak etanol akar senggani termasuk dalam kategori toksik sedang. Hasil histopatologi menunjukkan bahwa ekstrak etanol akar senggani mengakibatkan kerusakan pada hati dan ginjal.

ABSTRACT

Senggani (*Melastoma polyanthum* BL.) is a plant, which used traditionally by Indonesian society to treat whitish sick, digestion disorder, dysentery, diarrhea, ulceration, and womb hemorrhaging. For understanding the safety limits of its usage an acute toxicity research is required. Acute toxicity research of ethanol extract of senggani's root toward male and female rats was conducted to investigate the range of lethal dosage, appeared toxic symptoms, and damages resulted.

The kind of this research was a pure experimental by using one way pattern complete random plan. Thirty male and female rats were divided into five groups. Group I as a control was only given aquadest. Group II-V were given ethanol extract of senggani's root appropriate with its dosage that were, 439,84 mg/kgBB, 978.68 mg/kgBB, 1759,36 mg/kgBB, and 3518.72 mg/kgBB. The give was conducted only once. Quantitative observation was based on the change of weight and the death amounts of experimental animal on each group for 14 days. Qualitative observation included toxic symptoms and hispathology examination. After day of 14th, alive rats were sacrificed and rat's heart, kidney, intestines, and flank organs were taken to be checked their histopatology.

Appeared toxic symptoms were locomotor activity declined, sensitivity declined, apple polishing inclined, rubbed nose, weak, and sluggish. Results of hispathology examination have shown the existence of disorder on heart, kidney, intestines, and flank. Heart underwent sinusoid, hyperemi, hemorrhage expansions, inflamed cell, and degeneration of diffus-fatted. Kidney organ experienced hyperemi, hemorrhage, inflammation, and hialin times occurred. The damage on intestines, and flank organs be classified light, that was only a light erosion, inflamed cell, and increasing of goblet cell were happened.

Data obtainted were analyzed using Anova with 95% level of confidence. Research yields $LD_{50} > 3518.72$ mg/kgBB value. The acute toxicity potential of ethanol extract of senggani's rhizome included into middle toxic category. Hispathology results showed that ethanol extract of senggani's rhizome yielded a damage on heart and kidney.