

ABSTRAK

Ratu anai-anai sudah lama digunakan oleh masyarakat sebagai obat tradisional. Untuk menjamin keseragaman mutu obat dan keamanan penggunaan ratu anai-anai maka dilakukan standardisasi simplisia dan uji toksisitas akut dan sub-akut. Pemeriksaan standardisasi berdasarkan penetapan dari Departemen Kesehatan yang meliputi parameter spesifik dan non spesifik. Hasil *freeze drying* ratu anai-anai *Macrotermes gilvus* Hagen., berupa serbuk berwarna krem, memiliki bau yang khas, dan rasa yang sedikit anyir. Parameter non spesifik simplisia ratu anai-anai berupa susut pengeringan diperoleh 1,22%, kadar abu total 8,72%, kadar abu tidak larut asam 1,63%, kadar sari larut air 63,34% dan kadar sari larut etanol 33,80%. Uji toksisitas akut dilakukan dalam 2 tahap terhadap hewan uji. Pada tahap 1 terdiri dari 4 kelompok dosis yaitu 50; 200; 400; dan 800 mg/kg. Tahap 2 terdiri dari 3 kelompok dosis yaitu 1000; 1500; dan 2000 mg/kg. Tidak terdapat kematian hewan uji dalam 24 jam sehingga dapat dikatakan bahwa LD₅₀ dari hasil *freeze drying* ratu anai-anai > 2000 mg/kg. Pada uji toksisitas sub-akut digunakan sebanyak 24 ekor mencit putih betina berumur 2-3 bulan dengan berat badan 20-30 gram. Hewan uji dibagi menjadi 4 kelompok, yaitu 1 kelompok kontrol dan 3 kelompok perlakuan dengan dosis 500; 1000; dan 2000 mg/kg yang diberi hasil *freeze drying* ratu anai-anai sekali sehari secara oral selama 21 hari. Data konsentrasi SGPT dan SGOT serta rasio berat organ hati, ginjal, dan jantung dianalisis dengan ANOVA satu arah. Hasil penelitian menunjukkan perbedaan dosis tidak memberikan pengaruh signifikan terhadap konsentrasi SGPT dan SGOT serta rasio berat organ hati, ginjal, dan jantung ($p>0,05$).

Kata kunci: *Macrotermes gilvus* Hagen., *freeze drying*, standardisasi, toksisitas

ABSTRACT

Queen termite has been used by people as a traditional medicine. The standardization, acute and sub-acute toxicity of *freeze-dried* queen termite has been investigated to ensure the quality and safety use of queen termite. The examination of standardization based on the determination of the Department of Health which includes specific and non-specific parameters. *Freeze-dried* queen termite *Macrotermes gilvus* Hagen is cream-colored powder, typical smell, and slightly rancid taste. Non-specific parameters such as the drying shrinkage obtained 1.22%, total ash level was 8.72%, the level of acid-insoluble ash was 1.63%, water-soluble compounds was 63.34% and ethanol-soluble compounds was 33.80%. Acute toxicity test divided in two stages to the experimental animals. Stage 1 consists of 4 dose groups of 50; 200; 400; and 800 mg/kg. Stage 2 consists of 3 dose groups of 1000; 1500; and 2000 mg/kg. There were no death of animals in 24 hours so the LD₅₀ of *freeze-dried* queen termite > 2000 mg/kg. In sub-acute toxicity test, a number of 24 white female mice aged 2-3 months, weighing 20-30 g have been used. The animals were divided into 4 dose groups which consisted of 1 control group and 3 dose groups given 500; 1000; and 2000 mg/kg administrated orally once a day for 21 days. The SGPT and SGOT concentration also the weight ratio of liver, kidney, and heart were analyzed by one-way ANOVA. The results showed that distinction doses groups did not affect significantly the SGPT and SGOT concentration, also the weight ratio of liver, kidney, and heart ($p>0.05$).

Keywords: *Macrotermes gilvus* Hagen., freeze drying, standardization, toxicity