

INTISARI

Pada saat ini, dengan semakin berkembangnya lingkungan sosial budaya, teknologi dan industrialisasi, maka diperkirakan dapat meningkatkan tekanan mental (stress) di masyarakat. Walaupun stress dapat sembuh dengan sendirinya, namun penggunaan obat sedatif mungkin cocok untuk terapi ini. Bengle (*Zingiber purpureum* Roxb.) merupakan tanaman yang berkhasiat sebagai sedatif dengan minyak atsiri sebagai salah satu kandungan utamanya. Tujuan dari penelitian ini untuk membuktikan adanya daya sedatif dan besarnya daya sedatif pada minyak atsiri rimpang bengle.

Penelitian ini mengikuti rancangan acak lengkap pola searah. Tiga puluh ekor mencit jantan (galur Swiss, berat badan 20-30 gram, dan umur 2-3 bulan), dibagi secara acak menjadi enam kelompok sama banyak. Kelompok I diberi suspensi CMC 1% sebagai kontrol negatif. Kelompok II sebagai kontrol positif diberi suspensi diazepam dosis 0,91 mg/kgBB. Kelompok III sampai VI diberi emulsi minyak atsiri rimpang bengle dengan dosis berturut-turut 11,20 ul/kgBB, 36,95 ul/kgBB, 121,94 ul/kgBB, dan 402,40 ul/kgBB. Semua pemberian dilakukan secara peroral. Lima menit setelah penyuntikan, mencit diletakkan diatas rotarod dan diputar selama 2 jam dengan selang waktu tertentu. Data berupa jumlah kumulatif jatuhnya mencit selama 2 jam diolah dengan uji *Kolmogorov Smirnov* untuk melihat distribusinya, selanjutnya dilakukan analisis varian pola satu arah dan dilanjutkan uji LSD dengan taraf kepercayaan 95%. Sedangkan untuk uji kualitas minyak atsiri yang dilakukan meliputi penentuan kadar, bobot jenis, indeks bias, spektrofotometri infra merah, dan kromatografi lapis tipis (KLT).

Hasil penelitian menunjukkan bahwa emulsi minyak atsiri rimpang bengle dosis 36,95 ul/kgBB, 121,94 ul/kgBB, dan 402,40 ul/kgBB mempunyai daya sedatif, yang besarnya berturut-turut adalah 11,1 %, 111,1 %, dan 305,5 %. Pada uji kualitas minyak atsiri rimpang bengle, didapat kadar minyak atsiri sebesar $2,54 \pm 0,069$ % b/v, bobot jenis $0,95749 \pm 0,00006$, indeks bias $1,48748 \pm 0,003$. Pada kromatogram minyak atsiri didapat 3 bercak dengan Rf 0,30, 0,50, dan 0,64, serta pembanding (timol) Rf 0,57. Hasil spektrofotometri infra merah menunjukkan adanya gugus alkohol, C-C (alkil dan aldehyd), C=C (alifatik dan aromatik), dan daerah "sidik jari" yang khas dari minyak atsiri rimpang bengle.

ABSTRACT

Nowadays, along with the socio-cultural, technological and industrial development, it is predicted that mental stress will increase in society. Although stress can subside naturally, the use of sedative remedy may be considered as a proper therapy. Bengle (*Zingiber purpureum* Roxb.) is kind of medicinal plant for sedative function and contains the essential oil as its main substance. This research was aimed at finding out the existence of the sedative power and its percentage in the essential oil produced by bengle rhizome.

This research based on one-way complete random design. The first step was to divide 30 male mice (Switzerland, weight between 20-30 gram, and age between 2-3 months) into six groups. The number of mice for each group is similar. Group I was given 1 % CMC suspension as negative control. Group II, as positive control, was given diazepam suspension dosage 0,91 mg/kgBW. Group III to VI were given essential oil emulsion and the dosage was 11,20 ul/kgBW, 36,95 ul/kgBW, 121,94 ul/kgBW, and 402,40 ul/kgBW respectively. All of the treatments were orally done. After five minutes injection, the mice were put the rotarod and rotated for two hours with certain time interval. The data of the cumulative number of the falling mice for two hours was processed using *Kolmogorov Smirnov* test to observe its distribution. After that, the data was analysed by Anova, continued by LSD with limit confidence of 95%. Meanwhile, there were some methods to test the quality of the essential oil; they were the determination of the percentage, refraction index, density, infra-red spectrophotometric, and thin layer chromatography (TLC).

This research showed that the essential oil emulsion of bengle rhizome whose dosage was 36,95 ul/kgBW, 121,94 ul/kgBW, and 402,40 ul/kgBW had 11,1%, 111,1%, and 305,5 % sedative power respectively. The determination of the percentage was $2,54 \pm 0,069$ % b/v, refraction index was $0,95749 \pm 0,00006$, and density was $1,48748 \pm 0,003$. The result of the essential oil chromatogram showed that there were three spots with Rf values are 0,30, 0,50, and 0,64 respectively, and the comparing Rf (thymol) was 0,57. Based on infra-red spectogram showed that was alcohol raw, C-C (alkil and aldehyde), C=C (alifatic and aromatic), and "finger print" are specific from the essential oil bengle rhizome.