

ABSTRAK

PENGARUH PEMBERIAN EKSTRAK BIJI KOPI ROBUSTA (*Coffeacanephora*) LAMPUNG TERHADAP MEMORI SPASIAL TIKUS PUTIH JANTAN (*Rattus norvegicus*) GALUR *Sprague dawley* YANG DIINDUKSI MONOSODIUM GLUTAMAT

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Latar Belakang: Monosodium glutamat (MSG) sebagai penyedap rasa apabila diberikan secara berlebihan akan mengaktifkan reseptor glutamat berlebihan sehingga dapat menyebabkan kerusakan otak. Kopi mengandung asam klorogenat yang bersifat neuroprotektif. Tujuan penelitian ini untuk mengetahui pengaruh pemberian ekstrak kopi robusta (*Coffeacanephora*) Lampung terhadap memori spasial tikus putih jantan (*Rattus norvegicus*) yang diinduksi MSG.

Metode: Penelitian ini dilakukan dengan metode eksperimen dengan rancangan acak lengkap. Jumlah sampel yang digunakan sebanyak 25 ekor dan dibagi 5 kelompok, masing-masing terdiri dari 5 ekor tikus. Pada penelitian ini tikus diinduksi MSG peroral dengan dosis 2 gr/kg BB/hari untuk kelompok kontrol positif dan secara berurutan kelompok perlakuan 1, 2, dan 3 disertai induksi ekstrak kopi robusta Lampung dengan dosis 0,5 mg/mL/hari, 1 mg/mL/hari, dan 2 mg/mL/hari. Selanjutnya penilaian memori spasial dilakukan dengan metode *Morris Water Maze* (MWM).

Hasil: Hasil rerata memori spasial secara berurutan kelompok K(-), K(+), P1, P2, P3 adalah 22.75 ± 4.50 detik, 15.80 ± 9.91 detik, 16.80 ± 5.71 detik, 25.00 ± 15.13 detik, 25.60 ± 10.47 detik. Hasil analisis statistik *One Way Anova*, nilai $p=0,294$ sehingga dapat dinyatakan bahwa tidak terdapat perbedaan rerata pada semua kelompok.

Simpulan: Tidak terdapat pengaruh pemberian ekstrak kopi robusta (*coffeacanephora*) Lampung terhadap memori spasial tikus putih jantan (*rattus novergicus*) galur *spraguedawley* yang diinduksi MSG.

Kata Kunci: kopi robusta, memori spasial, monosodium glutamat

ABSTRACT

THE EFFECT OF EXTRACT COFFEE ROBUSTA (*Coffeacanephora*) LAMPUNG AGAINSTS TO SPATIAL MEMORY IN MALE RATS STRAIN (*Rattusnorvegicus*) *Sprague dawley* INDUCED BY MONOSODIUM GLUTAMATE

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Background: Monosodium glutamate (MSG) as a flavor when given in excess will activate excess glutamate receptors so that it can cause brain damage. Coffee contains neuroprotective chlorogenic acid. The purpose of this study was to determine the effect of Lampung Robusta coffee (*Coffeacanephora*) extract on the spatial memory of MSG-induced male white rats (*Rattusnorvegicus*).

Method: This research was carried out using an experimental method with a completely randomized design. The number of samples used was 25 and divided into 5 groups, each consisting of 5 rats. In this study rats were induced by oral MSG at a dose of 2 gr / kgBW / day for the positive control group and sequentially treatment groups 1, 2, and 3 were accompanied by induction of Lampung robusta coffee extract at a dose of 0.5 mg / mL / day, 1 mg / mL / day, and 2 mg / mL / day. Furthermore, the assessment of spatial memory was carried out by the Morris Water Maze (MWM) method.

Results: The average results of spatial memory sequentially groups K (-), K (+), P1, P2, P3 are 22.75 ± 4.50 second, 15.80 ± 9.91 second, 16.80 ± 5.71 second, 25.00 ± 15.13 second, 25.60 ± 10.47 second. The results of One Way Anova analysis have a result of 0.294, $p > 0.05$. So that it can be stated that there is no difference in mean in all group.

Conclusion: There is no effect on the administration of Robusta coffee extract (*Coffeacanephora*) Lampung to the spatial memory of male white rats (*rattusnovergicus*) spraguedawley lines induced by monosodium glutamate.

Keywords: monosodium glutamate, robusta coffee, spatial memory