

INTISARI

Rezka, Teresia Rynalda Tria. 2022. *Pengaruh Insektisida Golongan Karbamat Dengan Bahan Aktif Karbofuran Terhadap Kadar SGOT dan SGPT pada Tikus Putih (Rattus norvegicus) Wistar*. SKRIPSI. Program Studi D4 Analisis Kesehatan, Fakultas Ilmu Kesehatan, Universitas Setia Budi Surakarta.

Karbofuran merupakan racun kontak, racun perut, dan racun pernafasan. Karbofuran merupakan insektisida yang memiliki spektrum yang luas dan cepat terurai di alam. Cara kerjanya menghambat enzim *acetylcholinesterase* dan meningkatkan kadar enzim *transaminase* yaitu SGOT dan SGPT. Apabila terpapar karbamat akan menyebabkan gangguan pada fungsi hepar yang ditandai dengan peningkatan kadar SGOT dan SGPT.

Penelitian eksperimental dilakukan menggunakan hewan uji tikus putih Wistar jantan menggunakan 4 kelompok yang masing-masing terdiri dari 5 ekor tikus yang terdiri dari kelompok kontrol negatif, dan kelompok perlakuan P1, P2, P3. Diberi waktu aklimatisasi selama 7 hari, dan diberi perlakuan dalam waktu 28 hari. Kadar SGOT dan SGPT diuji menggunakan *Chemical Analyzer* Konelab 20 serta uji *One Way Anova* untuk mengetahui kadar rata-rata SGOT dan SGPT darah tiap minggu. Data dideskripsikan dalam bentuk tabel, gambar, dan analisa statistik dengan SPSS 26.

Berdasarkan hasil uji *One Way Anova* menunjukkan bahwa data $p < 0,5$ pada kelompok perlakuan 1, perlakuan 2, dan perlakuan 3 maka H_a diterima dan H_0 ditolak. Dapat dinyatakan bahwa terdapat perbedaan rata-rata kadar SGOT dan SGPT pada serum darah tikus sebelum dan sesudah diberikan perlakuan sehingga dapat disimpulkan ada pengaruh pemberian karbofuran terhadap kadar SGOT dan SGPT.

Kata Kunci : insektisida, karbofuran, *Rattus norvegicus*, SGOT, SGPT

ABSTRACT

Rezka, Teresia Rynalda Tria. 2022. Effect of Carbamate Insecticides with Carbofuran Active Ingredients on SGOT and SGPT Levels in Wistar White Rats (*Rattus norvegicus*). THESIS. D4 Health Analyst Study Program, Faculty of Health Sciences, Setia Budi University, Surakarta.

Carbofuran is a contact poison, stomach poison, and respiratory poison. Carbofuran is an insecticide which has a broad spectrum and rapidly decomposes in nature. The way it works is by inhibiting the *acetylcholinesterase* enzyme and increasing levels of transaminase enzymes, namely SGOT and SGPT. If exposed to carbamates, it will cause disturbances in liver function which is characterized by increased levels of SGOT and SGPT.

Experimental research was conducted using male Wistar white rats using 4 groups, each of them consisting of 5 rats from a negative control group, and treatment groups P1, P2, P3. They were given 7 days of acclimatization and 28 days of treatment. SGOT and SGPT levels were tested using the Konelab 20 Chemical Analyzer and the One-Way Anova test to determine the average weekly levels of SGOT and SGPT in the blood. The data were described in the form of tables, figures, and statistical analysis with SPSS 26.

Based on the results of the One-way Anova test, it showed that the data was $p < 0.5$ in the treatment group 1, treatment 2, and treatment 3, so H_a was accepted and H_0 was rejected. This can be stated that there is a difference in the average of SGOT and SGPT in the blood serum of rats before and after being given treatment, therefore, it can be concluded that there is an effect of giving carbofuran on the levels of SGOT and SGPT.

Keywords: insecticide, carbofuran, *Rattus norvegicus*, SGOT, SGPT