# INTISARI

**Yamlean, A. K. 2025. Pengaruh Paparan Asap Obat Nyamuk Bakar Terhadap Histopatologi Alveolus Tikus Galur Wistar (*Rattus Norvegicus*). Program Studi D4 Analis Kesehatan, Fakultas Ilmu Kesehatan, Universitas Setia Budi.**

Asap obat nyamuk bakar mengandung polutan berbahaya seperti pyrethroid dan partikulat halus yang dapat merusak struktur alveolus paru-paru. Menganalisis perbedaan gambaran histopatologi alveolus tikus Wistar akibat paparan berbagai merek obat nyamuk bakar.

Penelitian dilakukan dengan kelompok kontol tanpa perlakuan A dan dengan kelompok perlakuan dengan tiga merek obat nyamuk bakar B, C, D terhadap hewan uji tikus galur wistar (*Rattus norvegicus*). Kerusakan jaringan dinilai melalui pewarnaan *Hematoxylin-Eosin* (HE) dengan parameter penebalan dinding alveolus, infiltrasi sel inflamasi, dan edema. Data dianalisis menggunakan uji statistik *Kruskal-Wallis*.

Pemeriksaan histopatologi menunjukkan perbedaan tingkat kerusakan alveolus yang signifikan di antara kelompok perlakuan. Uji statistik mengonfirmasi bahwa variasi merek memengaruhi derajat toksisitas terhadap jaringan paru. Paparan asap obat nyamuk bakar berpengaruh signifikan terhadap perubahan struktur alveolus tikus. Tingkat kerusakan jaringan paru bervariasi tergantung pada merek produk, yang mencerminkan perbedaan konsentrasi bahan aktif dan potensi toksisitasnya.

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**Kata kunci:** Obat nyamuk bakar, Histopatologi alveolus, Tikus Wistar, Toksisitas paru, Pewarnaan Hematoxylin-Eosin.

## *ABSTRACT*

**Yamlean, A. K. 2025 The Effect Of Exposure To Mosquito Repellent Smoke On The Histopathology Of The Alveolus Of Wistar Rats *(Rattus Norvegicus*). D4 Health Analyst Study Program, Faculty Of Health Sciences, Universitas Setia Budi.**

Mosquito coil smoke contains hazardous pollutants such as pyrethroids and fine particulates that can damage the structure of the lung alveoli. This study analyzed differences in the histopathological appearance of Wistar rat alveoli following exposure to various brands of mosquito coils.

The research was conducted with a group of rats without treatment A and with a treatment group with three brands of mosquito coils B, C, D on test animals of the Wistar strain of rats (*Rattus norvegicus*). Tissue damage was assessed using Hematoxylin-Eosin (HE) staining, with parameters including alveolar wall thickening, inflammatory cell infiltration, and edema. Data were analyzed using the Kruskal-Wallis statistical test.

Histopathological examination revealed significant differences in the level of alveolar damage among the treatment groups. Statistical tests confirmed that brand variation affected the degree of toxicity to lung tissue. Exposure to mosquito coil smoke significantly altered the structure of the rat alveoli. The extent of lung tissue damage varied depending on the product brand, reflecting differences in active ingredient concentration and potential toxicity.


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**Keywords:** Mosquito coils, Alveolar histopathology, Wistar rats, Pulmonary toxicity, Hematoxylin-Eosin staining.