ABSTRAK

Elsa Christine Purba, NIM 4223210010 (2026). Aktivitas Anthelmintik Ekstrak Biji Pepaya (*Carica papaya L.*) Menggunakan Pelarut Heksana, Etil Asetat, dan Etanol Terhadap Telur Cacing *Ascaris lumbricoides.*

Infeksi cacing yang disebabkan oleh Ascaris lumbricoides masih menjadi masalah kesehatan di berbagai negara berkembang. Penggunaan obat anthelmintik sintetis secara terus-menerus berpotensi menimbulkan efek samping serta resistensi parasit, sehingga diperlukan alternatif pengobatan berbasis bahan alam. Biji pepaya (Carica papaya L.) diketahui mengandung berbagai senyawa metabolit sekunder yang berpotensi sebagai antiparasit. Penelitian ini bertujuan untuk mengetahui aktivitas anthelmintik ekstrak biji pepaya terhadap telur Ascaris lumbricoides secara in vitro, menganalisis perbedaan aktivitas berdasarkan pelarut ekstraksi, serta menentukan pelarut yang paling efektif menghasilkan aktivitas anthelmintik tertinggi. Ekstrak biji pepaya diperoleh melalui metode maserasi menggunakan pelarut n-heksana, etil asetat, dan etanol. Uji aktivitas anthelmintik dilakukan pada konsentrasi 20%, 40%, 60%, dan 80% dengan waktu inkubasi 30, 60, dan 120 menit. Aktivitas ovicidal diamati berdasarkan perubahan morfologi telur secara mikroskopik dan dinyatakan sebagai persentase kerusakan telur. Analisis FTIR menunjukkan keberadaan gugus fungsi O–H, C–H alifatik, C=O, C=C aromatik, dan C–O yang mengindikasikan adanya senyawa metabolit sekunder golongan alkaloid, fenolik, dan ester dalam ekstrak biji pepaya. Hasil penelitian menunjukkan bahwa ekstrak biji pepaya memiliki aktivitas anthelmintik terhadap telur Ascaris lumbricoides dengan adanya perbedaan aktivitas pada masing-masing pelarut. Aktivitas ovicidal tertinggi diperoleh pada ekstrak etanol konsentrasi 80% dengan waktu inkubasi 120 menit yang menghasilkan persentase kerusakan telur sebesar 66,67%, lebih tinggi dibandingkan ekstrak etil asetat sebesar 50% dan ekstrak n-heksana sebesar 33,3%.

Kata kunci: biji pepaya, *Carica papaya L.*, anthelmintik, *Ascaris lumbricoides*, metabolit sekunder.

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ABSTRACT

Elsa Christine Purba, NIM 4223210010 (2026). Anthelmintic Activity of Papaya Seed (*Carica papaya L.*) Extracts Using Hexane, Ethyl Acetate, and Ethanol Solvents Against *Ascaris lumbricoides* Eggs

Helminth infections caused by Ascaris lumbricoides remain a health problem in many developing countries. The continuous use of synthetic anthelmintic drugs may cause side effects and parasite resistance; therefore, alternative treatments based on natural ingredients are needed. Papaya seeds (Carica papaya L.) are known to contain various secondary metabolites with potential antiparasitic activity. This study aimed to determine the anthelmintic activity of papaya seed extracts against Ascaris lumbricoides eggs in vitro, analyze differences in activity based on extraction solvents, and determine the most effective solvent in producing the highest anthelmintic activity. Papaya seed extracts were obtained through the maceration method using n-hexane, ethyl acetate, and ethanol solvents. Anthelmintic activity tests were conducted at concentrations of 20%, 40%, 60%, and 80% with incubation times of 30, 60, and 120 minutes. Ovicidal activity was observed based on microscopic morphological changes in the eggs and expressed as the percentage of egg damage. FTIR analysis showed the presence of O–H, aliphatic C–H, C=O, aromatic C=C, and C–O functional groups, indicating the presence of secondary metabolites belonging to alkaloid, phenolic, and ester compounds in the papaya seed extracts. The results showed that papaya seed extracts possessed anthelmintic activity against Ascaris lumbricoides eggs, with differences in activity observed among the solvents used. The highest ovicidal activity was obtained from the ethanol extract at a concentration of 80% with an incubation time of 120 minutes, resulting in 66.67% egg damage, which was higher than the ethyl acetate extract (50%) and the n-hexane extract (33.3%).

Keywords: papaya seed, *Carica papaya L.*, anthelmintic activity, *Ascaris lumbricoides*, secondary metabolites.

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