

**EFEKTIVITAS EKSTRAK ETANOL
DAUN SALAM (*Syzygium polyanthum* (Wight) Walp.)
UNTUK PENGENDALIAN LARVA
Aedes aegypti (Linnaeus, 1762) DARI WONOSOBO**

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INTISARI

Kabupaten Wonosobo mengalami peningkatan kasus DBD yang signifikan dalam beberapa tahun terakhir, dengan Kecamatan Kaliwiro tercatat sebagai wilayah dengan kasus tertinggi. Pengendalian vektor di Wonosobo masih bergantung pada insektisida sintesis seperti fogging yang berbahaya bagi lingkungan, organisme non target, hingga menyebabkan resistensi nyamuk. Oleh karena itu, diperlukan alternatif pengendalian yang lebih aman dan ramah lingkungan. Salah satu upaya pengendalian hayati adalah pemanfaatan tanaman berpotensi larvasida, seperti daun salam (*Syzygium polyanthum*). Penelitian ini bertujuan untuk mengetahui indeks kepadatan larva melalui pengukuran *House Index* (HI) dan Angka Bebas Jentik (ABJ) di Desa Tanjunganom, Kecamatan Kaliwiro, Kabupaten Wonosobo, Jawa Tengah; mengetahui dan menjelaskan potensi ekstrak etanol 70% daun salam sebagai biolarvasida terhadap larva *Aedes aegypti*; mengidentifikasi kandungan metabolit sekunder yang berperan dalam aktivitas biolarvasida; serta menentukan konsentrasi efektif yang menyebabkan kematian larva. Ekstrak diperoleh melalui metode maserasi simplisia daun salam kering menggunakan pelarut etanol 70%. Pengukuran indeks kepadatan larva dilakukan dengan penempatan ovitrap pada 100 rumah di RW 1 Desa Tanjunganom. Uji fitokimia dilakukan secara kualitatif menggunakan Kromatografi Lapis Tipis, sedangkan uji larvasida dilakukan terhadap larva instar III selama 24 jam pada konsentrasi 1%, 2%, 3%, 4%, dan 5%, dengan kontrol negatif berupa akuades dan DMSO, serta kontrol positif berupa abate (temephos). Data dianalisis menggunakan uji parametrik dan analisis probit. Hasil penelitian menunjukkan bahwa nilai HI di Desa Tanjunganom sebesar 75% dan ABJ sebesar 25%. Uji fitokimia menunjukkan bahwa ekstrak daun salam mengandung senyawa flavonoid, tanin, saponin, dan fenol, yang berperan dalam aktivitas larvasidal dengan nilai LC_{50} sebesar 1,96% dan LC_{90} sebesar 5,47%.

KATA KUNCI: *Aedes aegypti*, Biolarvasida, DBD, *Syzygium polyanthum*,

Wonosobo

**EFFECTIVENESS OF ETHANOL EXTRACT OF
BAY (*Syzygium polyanthum* (WIGHT) WALP.) LEAVES
FOR THE CONTROL
OF *Aedes aegypti* (LINNAEUS, 1762) LARVAE FROM WONOSOBO**

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ABSTRACT

Wonosobo Regency has experienced a significant increase in Dengue Hemorrhagic Fever (DHF) cases in recent years, with Kaliwiro District recorded as the area with the highest incidence. Vector control in Wonosobo still relies heavily on synthetic insecticides such as fogging, which pose environmental hazards, harm non-target organisms, and may lead to mosquito resistance. Therefore, alternative control methods that are safer and more environmentally friendly are needed. One such biological control approach involves the use of plants with larvicidal potential, such as bay leaves (*Syzygium polyanthum*). This study aimed to determine the larval density index through the measurement of the *House Index* (HI) and Larvae-Free Rate (Angka Bebas Jentik, ABJ) in Tanjunganom Village, Kaliwiro District, Wonosobo Regency, Central Java; to evaluate and explain the potential of 70% ethanol extract of bay leaves as a biolarvicide against *Aedes aegypti* larvae; to identify the secondary metabolites responsible for biolarvicidal activity; and to determine the effective concentration that causes larval mortality. The extract was obtained by macerating dried bay leaf *simplicia* using 70% ethanol as a solvent. The larval density index was assessed by placing ovitraps in 100 houses in RW 1 of Tanjunganom Village. Phytochemical screening was carried out qualitatively using Thin Layer Chromatography (TLC), while larvicidal assays were performed on third-instar *Aedes aegypti* larvae for 24 hours at concentrations of 1%, 2%, 3%, 4%, and 5%, using aquadest and DMSO as negative controls and abate (temephos) as the positive control. Data were analyzed using parametric tests and probit analysis. The results showed that the HI in Tanjunganom Village was 75% and the ABJ was 25%. Phytochemical screening revealed that the bay leaf extract contained flavonoids, tannins, saponins, and phenols, which contribute to its larvicidal activity. The LC_{50} value was 1.96%, and the LC_{90} was 5.47%.

Keywords: *Aedes aegypti*, biolarvicide, DHF, *Syzygium polyanthum*, Wonosobo