

INTISARI

Penyakit infeksi cacing usus terutama oleh cacing *Ascaris lumbricoides* memiliki prevalensi yang tinggi di Indonesia sehingga memerlukan pengobatan. Daun *Macaranga tanarius* L. diduga mengandung senyawa yang berkhasiat anthelmintika sebagai alternatif obat modern. Penelitian ini bertujuan untuk mengetahui ada atau tidaknya daya anthelmintika dalam infusa daun *M. tanarius* L. terhadap cacing *Ascaridia galli* serta mengidentifikasi adanya senyawa yang diduga memiliki daya anthelmintika. Besarnya daya anthelmintika infusa daun *Macaranga* tersebut dinyatakan dengan nilai *Median Lethal Concentration* (LC₅₀) dan *Median Lethal Time* (LT₅₀).

Jenis penelitian ini adalah ekperimental murni dengan rancangan acak lengkap pola searah. Uji daya anthelmintika dibagi dalam 3 kelompok perlakuan, yaitu kelompok perlakuan perendaman cacing *A. galli* dalam infusa daun *M. tanarius* (konsentrasi 10, 20, 40, 60, 80%), kelompok kontrol positif dengan piperazin sitrat (konsentrasi 0,2; 0,4; 0,6; 0,8; dan 1%), dan kelompok kontrol negatif menggunakan larutan garam fisiologis NaCl 0,9% b/v. Data kematian cacing yang diperoleh diuji menggunakan ANOVA satu arah dengan *post hoc* LSD, kemudian dianalisa dengan menggunakan probit untuk menentukan nilai LC₅₀ dan LT₅₀.

Hasil penelitian menunjukkan rata-rata waktu kematian cacing dalam kontrol negatif NaCl 0,9% b/v adalah 28,6 jam. Nilai LC₅₀ infusa daun *M. tanarius* sebesar 17,3% dengan LT₅₀, yaitu 15,8 jam. LC₅₀ piperazin sitrat sebesar 0,3% dengan LT₅₀, yaitu 10,2 jam. Identifikasi kandungan senyawa dengan metode KLT menunjukkan adanya senyawa terpineol dari golongan monoterpenoid pada infusa daun *M. tanarius*. Dari hasil penelitian disimpulkan bahwa infusa daun *M. tanarius* memiliki daya anthelmintika terhadap cacing *A. galli*.

Kata kunci : infusa daun *Macaranga tanarius* L., anthelmintika, piperazin sitrat, *Ascaridia galli*, *Median Lethal Concentration* (LC₅₀), *Median Lethal Time* (LT₅₀)

ABSTRACT

The intestinal worm infection caused by *Ascaris lumbricoides* has a quite high prevalence in Indonesia and required a treatment. The use of herbal medicine should be developed as an alternative to modern anthelmintics. It is suspected that *Macaranga tanarius* L. contains compounds which have anthelmintic activity. Thus, this study was aimed to determine the presence of anthelmintic activity in the infusion of *M. tanarius* L.'s leaves against *Ascaridia galli* worms and identify the presence of the compounds which have an anthelmintic activity. The amount of anthelmintic activity of *M. tanarius*'s leaves infusion was stated at the Median Lethal Concentration (LC₅₀) and Median Lethal Time (LT₅₀).

This study was purely experimental research with completely randomized one direction design. Subject samples used were *A. galli* worms as substitution for *Ascaris lumbricoides*. Anthelmintic activity test was divided into three treatment groups, first was a treated group, *A. galli* was soaked in *M. tanarius*'s leaves infusion (concentrations of 10, 20, 40, 60, 80% w/v), positive control group using piperazin citrate (concentration of 0.2, 0.4, 0.6, 0.8, and 1% w/v), and negative control group using saline solution NaCl 0.9% w/v. The obtained worm mortality data were tested using one-way ANOVA with post hoc LSD test, then were analyzed by using probit analysis with 95% confidence level to determine LC₅₀ and LT₅₀ value.

The result showed an average time of death of worms in the negative control NaCl 0.9% w/v was 28.6 hours.. From the test using the probit analysis obtained LC₅₀ of *M. tanarius*'s leaves infusion was equal to 17.3% and LT₅₀ of *M. tanarius*'s leaves infusion was 15.8 hours. LC₅₀ of piperazin citrate was 0.3% and LT₅₀ piperazin citrate was 10.2 hours. Phytochemical compounds identification with TLC method showed the existence of terpineol, a terpenoid compounds in *M. tanarius*'s leaf infusion. From these result, it was concluded that *M. tanarius*'s leaf infusion had anthelmintic activity to the *A. galli* worm.

Key words: *Macaranga tanarius*, L.'s leaves infusion, anthelmintics, piperazin citrate, *Ascaridia galli*, Median Lethal Concentration (LC₅₀), Median Lethal Time (LT₅₀)