

## ABSTRAK

Fascioliasis merupakan penyakit parasit penting yang menyerang manusia disebabkan oleh cacing *Fasciola hepatica*. Menurut Wibisono (2021), tahun 2015 sebanyak 384 sampel hewan qurban di Surabaya terinfeksi fascioliasis. Cacing ini dapat menular ke manusia melalui daging yang tidak dimasak dengan benar. Pengobatan cacing sintesis yang memiliki banyak efek samping mendorong peneliti untuk menguji ekstrak rimpang temulawak, temu kunci, dan temu hitam sebagai anthelmintik terhadap kematian cacing *Fasciola hepatica* secara in vitro. Penelitian ini dilakukan di Laboratorium Parasitologi Jurusan Teknologi Laboratorium Medis Politeknik Kesehatan Kemenkes Surabaya pada bulan Mei 2022. Jenis penelitian ini adalah true-experimental dengan rancangan penelitian post-test only group design. Subjek penelitian adalah cacing *Fasciola hepatica*. Penelitian menggunakan 6 kelompok perlakuan yaitu albendazole 0,40% sebagai kontrol positif, larutan NaCl 0,9% sebagai kontrol negatif, serta ekstrak etanol temulawak, temu kunci, dan temu hitam dengan konsentrasi 5%, 20%, 35%, dan 50%. Pada setiap perlakuan diberi 4 ekor cacing *Fasciola hepatica*. Hasil penelitian didapatkan ekstrak temulawak, ekstrak temu kunci dan ekstrak temu hitam bermanfaat sebagai anthelmintik terhadap cacing *Fasciola hepatica*. Ekstrak temu kunci 50% mampu membunuh 100% cacing *Fasciola hepatica* dalam waktu 240 menit, ekstrak temulawak 50% mampu membunuh 100% cacing *Fasciola hepatica* dalam waktu 120 menit, ekstrak temu hitam 50% mampu membunuh 100% cacing *Fasciola hepatica* dalam waktu 30 menit. Oleh karena itu ekstrak temu hitam konsentrasi 50% adalah yang paling efektif sebagai anthelmintik terhadap cacing *Fasciola hepatica* karena setara dengan jumlah kematian cacing dan waktu kematian cacing pada kontrol positif.

**Kata kunci :** Anthelmintik, Temulawak, Temu Kunci, Temu Hitam, *Fasciola hepatica*

## ABSTRACT

Fascioliasis is an important parasitic disease that attacks humans caused by the worm *Fasciola hepatica*. According to Wibisono (2021), in 2015 as many as 384 samples of sacrificial animals in Surabaya were infected with fascioliasis. These worms can be transmitted to humans through meat that is not cooked properly. Synthetic worm treatment which has many side effects prompted researchers to test the rhizome of temulawak, temu kunci, and temu hitam as anthelmintics against the death of *Fasciola hepatica* worms in vitro. The design of the research is an experimental with a post test only group design research and *Fasciola hepatica* as the subject of the research. The search was conducted at the Parasitology Laboratory of the Health Analyst Department Ministry of Health, Surabaya in May 2022 by using six methods that are albendazole 0.40% as positive control, 0.9% NaCl as negative control, and a 5%, 20%, 35%, and 50% concentration of temulawak rhizome, fingerroot, and temu hitam rhizome ethanol extract. In each treatment, 4 *Fasciola hepatica* worms were given. The experimental was using The *Kolmogrov-Smirnov* statistical test, the *Kruskal Wallis* Test to analyze the data, then continued using the *Post-Hoc* test to determine the difference in the anthelmintic power of each temulawak rhizome, fingerroot, and temu hitam rhizome ethanol extract concentration against the positive control. The results showed that temulawak extract, temu kunci extract and temu hitam extract were useful as anthelmintics against *Fasciola hepatica* worms. Intersection 50% temu kunci extract was able to kill 100% of *Fasciola hepatica* worms within 240 minutes, 50% temulawak extract was able to kill 100% of *Fasciola hepatica* worms within 120 minutes, 50% temu hitam extract was able to kill 100% of *Fasciola hepatica* worms within 30 minutes. Therefore, the extract of temu hitam with a concentration of 50% was the most effective as an anthelmintic against *Fasciola hepatica* worms because it was equivalent to the number of worm deaths and the time of worm death in positive controls.

**Key words** : Anthelmintic, Temulawak Rhizome (*Curcuma xanthorrhiza*, Roxb), Temu Kunci (*Boesenbergia pandurata*, Roxb), Temu Hitam Rhizome (*Curcuma aeruginosa*, Roxb), *Fasciola hepatica*