IJARSCT
International Journal of Advanced Research in Science, Communication and Technology
International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal
ISSN: 2581-9429
Volume 5, Issue 1, October 2025
Impact Factor: 7.67

To An In – Vitro Evaluation of the Anthelmintic Activity of Piper Betle on the Pheritima Posthuma Model

Ghare Kiran Somnath[1], Pavale Vishal Rajendra[2], Asst. Prof. Vaibhav Ghongate[3]
Students, Dr. Kolpe Institute of Pharmacy, Kolpevadi[1,2]
Asst. Professor, Dr. Kolpe Institute of Pharmacy, Kolpevadi[3]
Corresponding author- Ghare Kiran Somnath
kiranghare087@gmail.com

Abstract: *Helminthiasis is a serious global health issue particularly in tropical regions. The present study aims to evaluate the in vitro anthelmintic activity of Piper betle leaf extract against Pheritima posthuma (earthworm). The methanolic extract of Piper betle leaves was tested at different concentrations, and the time of paralysis and death was recorded. The results demonstrated significant anthelmintic activity comparable to standard albendazole. The findings suggest that Piper betle contains potent phytochemicals with anthelmintic properties, supporting its traditional use. Background: Piper betle Linn. (Piperaceae) is traditionally used as anthelmintic and antioxidant. This study evaluated its in vitro anthelmintic activity. Methods: Dried leaf powder (500 mg) was macerated in methanol, filtered, and concentrated to yield crude extract. The extract was tested at concentrations of 10, 20, 40, 60, and 80 mg/mL against Pheritima posthuma (n = 5), with albendazole (10 mg/mL) as standard. Paralysis and death times were recorded. Data were analyzed by one-way ANOVA ($p < 0.05$).*
Conclusion: The methanolic extract of P. betle leaves has significant in vitro anthelmintic activity, supporting its traditional use. Further phytochemical characterization and in vivo studies are warranted

Keywords: *Helminthiasis*

DOI: 10.48175/IJARSCT-29180