



**IN VITRO PEDICULICIDAL PROPERTY OF CAFFEINE FROM
Coffea spp. (COFFEE) BEAN PULP EXTRACT AGAINST
Pediculus humanus capitis (HUMAN HEAD LICE)**

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ABSTRACT

This study aims to assess the efficacy of Caffeine as a natural pediculocide to treat Pediculosis capitis caused by the human head lice. The researchers obtained ground coffee bean pulp from four varieties of *Coffee spp.* (*arabica*, *liberica*, *excelsa* and *robusta*) were obtained at Amadeo, Cavite and extracted the crude caffeine using solid-liquid and liquid-liquid extraction. The presence of caffeine in the crude extract was then determined by UV Wavelength Spectrophotometry. The caffeine extract was tested for its pediculicidal activity against human head lice via filter paper bioassay. Two different concentrations were prepared (50% and 100% concentration) and are compared to a frequently used synthetic pediculicidal agent Permethrin. After two hours, 100% of mortality was obtained in Permethrin, while 50% concentration caused 52% mortality rate and 76% mortality rate by 100% concentration. Both Permethrin and 100% concentration showed significant difference between the number of deaths and number of survivors of head lice. In comparison between Permethrin and 100% concentrations, 100% concentration can be used as a replacement Pediculocidal agent but is less effective than Permethrin.

KEYWORDS: *Pediculus humanus capitis* (Human Head Lice), *Coffee spp.* (Coffee), Caffeine, Pediculocidal effect



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