

**ANTI-INFLAMMATORY AND ANTI-
BACTERIAL ACTIVITIES OF *Chromolaena*
odorata ETHANOL LEAVES EXTRACTS**

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ABSTRACT

ANTI-INFLAMMATORY AND ANTI-BACTERIAL ACTIVITY OF *Chromolaena odorata* ETHANOL LEAVES EXTRACT

Chromolaena odorata also known as ‘pokok kapal terbang’ in Malaysia is a herbaceous plant that is usually used as traditional medicine in healing minor wounds. In this study, the anti-inflammatory, anti-bacterial properties and the phytochemical constituents of *C. odorata* leaves extract were investigated. The leaves of *C. odorata* were collected, prepared, and extracted through maceration procedures with 70% and 95% of aqueous ethanol. The anti-bacterial activity was performed according to the disc diffusion method on the following microorganism: *Escherichia coli* and *Bacillus licheniformis*. The anti-inflammatory activity was evaluated by an *in-vitro* method where the extract at different concentrations (1, 0.5, 0.25 mg/ml) was incubated with egg albumin in controlled experimental conditions. Diclofenac sodium was used as the reference drug (positive control) and the performances were measured by the hindrance of egg white denaturation. The phytochemical screening was carried out according to qualitative tests by following the standard protocol. 70% ethanolic extract of *C. odorata* showed high anti-bacterial activity against *B. licheniformis* compared to 95% ethanolic extract. Meanwhile, both extract (70% and 95% ethanolic extracts) showed lower anti-bacterial activity against *E. coli* compared to the control, which is in resistance to intermediate range. Moreover, the results obtained showed the anti-inflammatory activity for 70% ethanol extract of *C. odorata* is higher compared to 95% ethanol extract but lower compared to the standard. The phytochemical analysis evaluated the presence of flavonoid, alkaloid, terpenoid, and saponin in the leaves extract. In conclusion, 70% ethanolic extract has a potential to be natural anti-bacterial and anti-inflammatory drugs.

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