

**EFFICACY OF TALAMPUNAY (*Datura metel*) LEAF EXTRACT IN
THE CONTROL OF DOG TICKS (*Rhipicephalus sanguineus*)
AND FLEAS (*Ctenocephalides* sp.)**

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ABSTRACT

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The study was conducted to determine the efficacy of Talampunay (*Datura metel*) leaf extract as control option against dog ticks (*Rhipicephalus sanguineus*) and fleas (*Ctenocephalides* spp.).

A total of six hundred (600) each of adult ticks and fleas were manually collected from dogs in different small animal clinics in upland Cavite. These were allocated to different treatment concentrations (5%, 10%, 15%, 20%) of *Datura metel* leaf extract as well as Carbaryl serving as positive control and 5% SDS as negative control for *in vitro* bioassay. The number of dead ticks and fleas were counted at 15, 30, 60, 120 and 240 minutes post exposure, and the mortality percentage of each treatment per time interval was analyzed through analysis of variance (ANOVA). The difference in the efficacy of *D. metel* leaf extract between tick and flea populations was then computed using t-Test.

Results of the study show that all concentrations of *Datura metel* leaf extract are able to kill both the tick and flea populations. Furthermore, it was observed that as the concentration of *Datura metel* leaf extract increases, the efficacy in killing both tick and flea population also increases and that the 20% concentration was found out to be the most efficacious among all treatment concentrations in controlling both populations. Moreover, the flea population shows to be more susceptible to the effect of *D. metel* leaf

extract compared with tick population. The efficacy of *D. metel* leaf extract was further analyzed using Log-Probit Regression analysis and results showed that the leaf extract has low LC50 values of 19.5% at 15 minutes post exposure, 11.8% at 30 minutes post exposure and 6.3% at 60 minutes post exposure against *R. sanguineus* and even lower LC50 values of 10.5%, 4.4%, and 2.1% observed at specific exposure time (15, 30 and 60 minutes) against *Ctenocephalides* sp. The analysis thus proves that *D. metel* leaf extract has high potency against the target tick and flea populations.

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