

LABORATORY EVALUATION OF FOUR COMMERCIAL REPELLENTS AGAINST LARVAL *LEPTOTROMBIDIUM DELIENSE* (ACARI: TROMBICULIDAE)

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Abstract. Four commercial repellents were evaluated in the laboratory against *Leptotrombidium deliense* chiggers. Both *in vitro* and *in vivo* methods were used to determine repellency of the compounds. The repellents were Kellis[®] (containing citronella oil, jojoba oil and tea tree oil), Kaps[®] (containing citronella oil), BioZ[®] (containing citronella oil, geranium oil and lemon grass oil) and Off[®] (containing DEET). The combination of three active ingredients: citronella oil, geranium oil, lemon grass oil gave the highest repellency (87%) followed by DEET (84%). *In vitro* repellencies ranged from 73% to 87%. There was no significant difference between the four products. All the repellents had 100% *in vivo* repellency compared to 41-57% for the controls.

Key words: *Leptotrombidium deliense*, repellency, chigger, bioassay

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