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OIL FROM EUCALYPTUS CAMALDULENSIS DEHNH FOR PERSONAL PROTECTION
AGAINST Aedes Aegypti LINNAEUS AND Culex quinquefasciatus SAY.

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The following specific purposes of this research were: (1) to extract eucalyptus oil from fresh leaves of *Eucalyptus camaldulensis*, (2) to calculate the extracted eucalyptus oil quantity and (3) to assess the repellent efficiency of eucalyptus oil in preventing mosquito bites.

Eucalyptus camaldulensis Dehnh was chosen for study of repellent property against *Aedes aegypti* Linnaeus and *Culex quinquefasciatus* Say. Wet steam distillation was used to derive 38.5 ml of essential oil from 4.8 kgs of fresh leaves. Four different concentrations, 25%, 50%, 75% and 100% were tested in laboratory against *Aedes aegypti* and *Culex quinquefasciatus* in order to evaluate the repellent optimity.

With *Aedes aegypti*, eucalyptus oil concentrations of 25%, 50%, 75% and 100% provided effective protection 94%, 86%, 86%, 88% against bites for 0.5h, 1h, 0.7h, 1h, respectively. The duration of protection time provided by eucalyptus oil in laboratory tests against *Culex quinquefasciatus* increased with higher concentrations of repellent with 25%, 50%, 75% and 100% concentrations giving 94%, 92%, 94% and 88% effective protection for 150, 160, 200 and 210 minutes respectively.

Based on the laboratory results, 50% eucalyptus oil was evaluated against *Aedes aegypti* in semi-field test and 25% was used for *Culex quinquefasciatus* in the field test. The 50% oil conferred 84% protection and lasted for 27 minutes against the former species while 25% oil provided 95% protection with 146 minutes protection time against the latter species.

There was significantly different repellency against each species of mosquito. Protection provided by eucalyptus oil against *Culex quinquefasciatus* was significantly better than against *Aedes aegypti*. Therefore, 25% eucalyptus oil can be applied as a personal protection against the bite of *Culex quinquefasciatus*.