Thesis Title The Study on The Efficiency of Using Detergent against Aedes aegypti.

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ABSTRACT

Aedes aegypti is the greatest carrier of Dengue haemorrhagic fever in Thailand. Their larvae are frequently found in ant traps through the year. To change water in them once a week is not comfortable. The household detergents may be the effective larvicides to be added into them. So four experiments had been performed in order to study the efficiency of detergents against Ae. aegypti .

The first,second and third experiments were designed to study the efficiency of detergents in preventing oviposition of Ae. aegypti. Four kinds of detergent solutions were offered into the cages of gravid females of Ae. aegypti . The 0.04,0.05,0.06,0.07 and 0.08 % of Fab solutions , the 0.07 % of Fab solutions which had been kept under laboratory condition for various days and 0.07 % of Fab,Breeze ,Pao and Paic solutions were used in the first,second and third experiments,respectively. The results showed that the lowest effective concentration of Fab solutions which could prevent oviposition of Ae. aegypti was 0.07 % and its effectiveness was lasting for 22 days.

The comparision of the effectiveness of 0.07% of these four detergents revealed that Fab,Breeze and Pao could prevent oviposition of Ae. aegypti as well, while Paic of the same concentration did not exhibit this activity.

The fourth experiment was designed to determine the toxicity of detergents on the third instar larvae of Ae. aegypti. The 24 hr. LC_{50} of Fab,Breeze,Paic and Pao were 0.0127,0.0169,0.0178 and 0.0193% ,respectively. The 24 hr.LC_{50} of Fab was significantly different from that of Paic. However, no significantly different were found in 24 hr. LC_{50} values of other pairs of comparisions. Consequently, this experiment showed that Fab solution was the most effective larvicide among the four detergents.

The results of this study suggested that these detergents could be added into ant traps, in order to prevent oviposition and destroy the larvae , if present.