

# CONTROL OF MOSQUITO VECTORS OF TROPICAL INFECTIOUS DISEASES: (2) PYRETHROID SUSCEPTIBILITY OF *Aedes aegypti* (L.) COLLECTED FROM DIFFERENT SITES IN THAILAND

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**Abstract.** Four strains (SS, BS, A and B) of *Aedes aegypti* collected from different sites in Bangkok and at different times were examined for their pyrethroid susceptibility. Mosquito coils containing *dl, d*-T80-allethrin, *d, d*-T-prallethrin and methoxymethyl-tetrafluorobenzyl tetramethyl-cyclopropanecarboxylate (K-3050) with or without a synergist were tested by the 25 m<sup>3</sup> semi-field test method. One strain (SS) was the most susceptible with  $KT_{50}$  values of about <30 minutes for all mosquito coils, while the other three strains (BS, A and B) were found to be around 10 to 20 times more tolerant to pyrethroids than the SS strain. A similar tendency for the pyrethroid susceptibility of the four strains was obtained with tests by topical application method. In field efficacy tests, mosquito coils with *d, d*-T-prallethrin 0.20% plus N-(2-ethylhexyl)bicyclo-[2,2,1]-hept-5-ene-2,3-dicarboximide as a synergist exhibited a repellent effect of about 85%, while those with K-3050 0.10% plus the synergist exhibited a greater repellent effect of about 90%. In contrast, the repellent effect of commercial *dl, d*-T80-allethrin 0.20% coils was as low as about 50%. The *d, d*-T-prallethrin and K-3050 coils with the synergist were confirmed to be highly effective in repelling *Ae. aegypti*.

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