

Laboratory Assessment of An Industrial Formulation of *Bacillus thuringiensis* var. *israelensis* against *Aedes togoi* and *Aedes aegypti* (Culicidae, Diptera) Larvae

Won Ja Lee and Dong-Kyu Lee¹

Division of Medical Zoology, National Institute of Health,

¹Department of Biological Sciences, Kosin University

Laboratory assessment was made with a formulation of *Bacillus thuringiensis* var. *israelensis* de Barjac (*B.t.i.*). A study was conducted to determine the activity of the test material, Bactosec[®] against third-stage larvae of *Aedes togoi* and *Ae. aegypti*. The mosquito larvae were reared under standard insect rearing room conditions for the test. Susceptibility tests with larvae were conducted with *B.t.i.* according to procedures provided by WHO. Lots of 25 larvae were exposed in 10 liter polyethylene tanks(42cm x 28cm x 18cm) in 25 °C room temperature for 24 hours. Mortality was recorded at the end of 24 hours. Each test consisted of six replicates per concentration and four concentration levels. The *B.t.i.* appeared 1.407 ppm in LC₉₀, 1.558 ppm in LC₉₅, and 1.678 ppm in LC₉₉ against *Ae. togoi* larvae. Against *Ae. aegypti* larvae, the *B.t.i.* showed 1.138 ppm in LC₉₀, 1.349 ppm in LC₉₅, and 1.517 ppm in LC₉₉. The laboratory assays with Bactosec[®] revealed differences in susceptibility between two *Aedes* species. *Ae. togoi* required 1.24, 1.15 and 1.11 times as much *B.t.i.* for 90%, 95% and 99% mortalities tend to be slightly less susceptible than *Ae. aegypti*.