

4-3. Laboratory Assessment of A Formulated *Bacillus thuringiensis* var. *israelensis* against Five Species of Mosquito larvae

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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 aegypti*, *Anopheles sinensis*, *Culex pipiens pallens*, *Cx. pipiens molestus* and *Ochlerotatus togoi*. The mosquito larvae were reared under standard insect rearing room conditions for the test. Susceptibility tests with the larvae were conducted with the *B.t.i.* according to procedures provided by WHO. Lots of 25 larvae were exposed in 350 ml paper cups in 25°C room temperature for 24 hours. Mortality was recorded at the end of 24 hours. Each test consisted of four concentration levels and three replicates. As a result, *Ae. aegypti* showed the most highly susceptible to Bactosec[®] with LC₅₀ of 0.29 mg/l followed by *Oc. togoi*, *An. sinensis*, *Cx. pipiens molestus*, and *Cx. pipiens pallens* with 0.78, 0.80, 0.90, and 1.42 mg/l in LC₅₀, respectively. The *B.t.i.* appeared LC_{90s} of 1.35, 1.56, 1.94, 1.94, 2.60 mg/l to *Ae. aegypti*, *Oc. togoi*, *Cx. pipiens molestus*, *An. sinensis*, and *Cx. pipiens pallens* larvae, respectively. Bactosec[®] was the least susceptible to *Cx. pipiens pallens* and *An. sinensis* larvae among them with LC₉₉ of 2.87 and 2.20 mg/l, respectively.