

EFFICACY OF LIQUID BACTERIAL FORMULATION OF *BACILLUS THURINGIENSIS* SUBSP. *ISRAELENISIS* AND *BACILLUS SPHAERICUS* 1593 MIXTURE IN CONTROLLING MOSQUITO LARVAE IN BANGKOK

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Abstract. Subsequent to flood disasters in Thailand subsided, vast areas become breeding sites for mosquitoes, and people complained about the huge number of mosquitoes. The National Science and Technology Development Agency and the Faculty of Science together with the Faculty of Tropical Medicine, Mahidol University launched a project to use locally produced bacterial larvicide for controlling mosquito larvae numbers. A liquid formulation of a 1:1 mixture of *Bacillus thuringiensis* subsp. *israelensis* (10^8 cfu/ml) and *B. sphaericus* (10^4 cfu/ml) was applied in spraying on water surface at 0.1 liter/m². Over an 18-week study period, a test area was sprayed three times, on week 0 (W0), W7 and W14. Mosquito larvae were monitored using a dipping method and adults using a Center for Disease Control light trap. By W14 bacterial larvicide application achieved >80% and 50% reduction of immature and adult mosquito numbers, respectively, demonstrating the effectiveness of this bacterial larvicide formulation.

Keywords: *Bacillus thuringiensis*, *Bacillus sphaericus*, bacterial mosquito larvicide formulation, mosquito control

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