

ABSTRACT

In current study residual effect of *Bacillus thuringiensis* var. *israelensis* (*Bti* VectoBac® 5000 ITU/mg) Technical powder, WDG (Water Dispersible Granules) 3000 ITU/mg and a *Bacillus sphaericus* (*Bsph*) 2362 ITU/mg was evaluated against laboratory-reared *Anopheles stephensi* an Asian vector and field collected *Culex quinquefasciatus* late third instar larvae from Lahore, Pakistan. In general residual activity of *Bti* and *Bsph* in seven different concentrations (100, 10, 1, 0.1, 0.01, 0.001 and 0.0001 ppm) for laboratory reared and 0.2 mg/lit in a semifield bioassay varied in the above mentioned two different species of mosquito larvae. *Bti* TP residual activity varies from 51 days to 24 hours against maximum concentrations 100 ppm to minimum concentration 0.0001 ppm 24 hours post exposure (fresh stock replacement every 24 hours) for laboratory reared *A. stephensi* larvae as compared to *Bsph* TP where maximum residual effect was 18 days and minimum was 48 hours against the same specie. Percent mortality was significantly higher ($P = 0.000$) for *A. stephensi* against 100 ppm *Bti* as compared to *Bsph* while the same was ($P = 0.054$) for field collected *Culex quinquefasciatus* against 100 ppm *Bsph*. In conclusion field collected *Culex quinquefasciatus* larvae were more susceptible and have prolonged residual effect as compared to laboratory reared *A. stephensi* against *Bsph* while *Bti* have effect vice versa. Residual effect for field evaluation of *Bti* WDG low treatment (during August 06) against *Culex quinquefasciatus* lasted 14 days indicating higher treatments are required for field bioassays as compared to laboratory.