

Efficacy of EcoRaider Spray against Bed Bugs

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Experiment 2

Objective: To determine the lethal time to kill 50% and 90% bed bugs using EcoRaider sprays.

Materials: EcoRaider spray in a ready-to-use bottle.

Methods: Used 4ml of solution in spray tower to distribute 1gal/1,000ft² of pesticide onto a field strain bed bugs. After the bed bugs were treated (9:50am) they were then transferred to new dishes with clean harborages. Each dish contained roughly 5 males and 5 large nymphs. Water was used in the control. The treatment was replicated three times. Mortality was observed hourly in the first four hours and again at 6 days.

Results: The mean mortality of bed bugs at 1 and 2 h were 77 and 80% respectively. There was no mortality in the control at same time period. After 6 days, all bed bugs died as a result of the treatment. The mean mortality in the control was 16% after 6 days.

Table 4. Mortality bed bugs after directly spray with EcoRaider spray.

Percent Mortality	Replicate	Mortality				
		1 Hour	2 Hours	3 Hours	4 Hours	6 days
Control	1	0%	0%	0%	0%	18%
Control	2	0%	0%	0%	0%	20%
Control	3	0%	0%	0%	0%	10%
EcoRaider	1	60%	60%	60%	70%	100%
EcoRaider	2	90%	90%	90%	90%	100%
EcoRaider	3	80%	90%	90%	90%	100%

Conclusion: EcoRaider killed >50% of the bed bugs within one hour and 80% mortality after 2 hours. One hundred percent mortality occurred in the treatment after 6 days. This experiment confirmed the results from the 1st experiment which showed that EcoRaider was able to cause 100% mortality to bed bug adults and nymphs as direct spray when applied at 1 gallon/1,000 ft² rate.