

**Field Stimulation of BioVectrol™ BV 20EW (Etofenprox)
against laboratory *Aedes aegypti* using STIHL 420™ mist-blower**

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TEST DETAILS

The insecticide BioVectrol™ BV 20EW (active ingredient : Etofenprox) was supplied by Bio-X Techno Sdn Bhd (formally known as BIOVECTROL INTERNATIONAL SDN BHD).

The trial was conducted at Jalan Fletcher, Kuala Lumpur on 20th February 2014. A back-packed mist-blower, STIHL 420. The spray started at 8.30 am for outdoor spray and 9.00 am for indoor. Spray duration for outdoor covering 11 x 4 meters area was 2 minutes.

The formulation was diluted 100X with water and sprayed at a rate of 4L/ha using the mist-blower.

For outdoor spray application, a total of 3 replicates of paper cups containing 250ml of seasoned water were placed accordingly at 2, 4, 6 meter far from the spray line. The length between replicates was 2 meters away.

For indoor spray application, 3 houses were selected and 6 test paper cups contained seasoned water were placed at hall, toilet, kitchen, two bedrooms, and shaded corridor, accordingly.

Magnesium-coated glass slides were set up next to test cages. Thirty minutes after spraying, the slides were collected & the droplets measured under an imaging system.

RESULTS

1.1 Evaluation of outdoor spray of Etofenprox using STIHL 420.

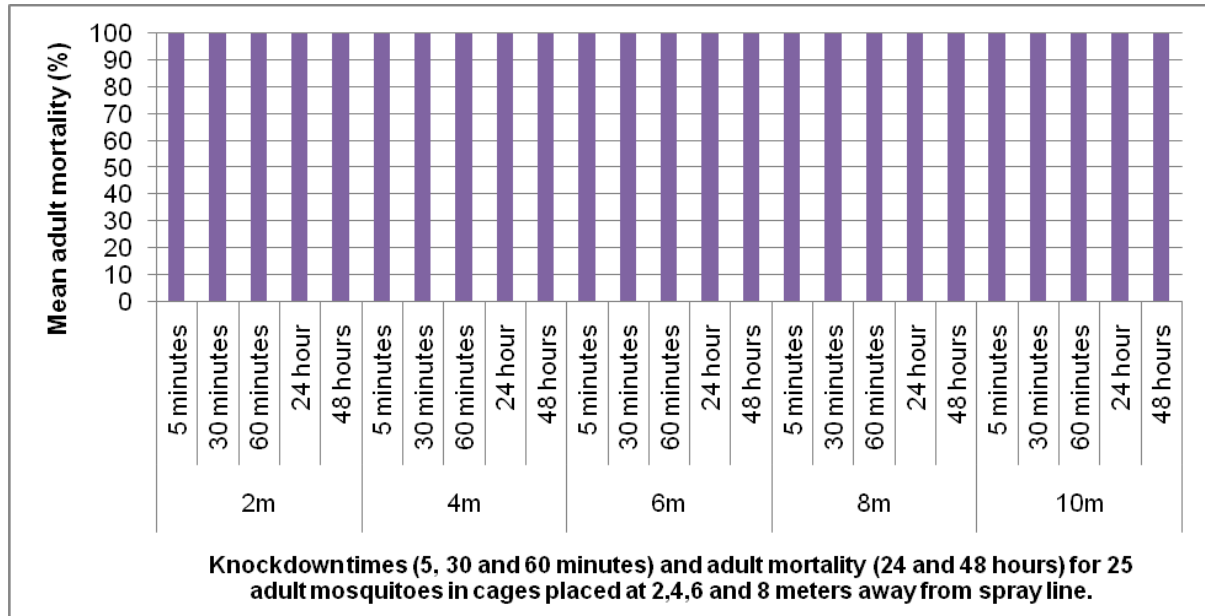


Figure 1 : Mean knockdown and adult mortality (%) of *Aedes aegypti* (laboratory strain) against Etofenprox using STIHL 420™ mist blower.

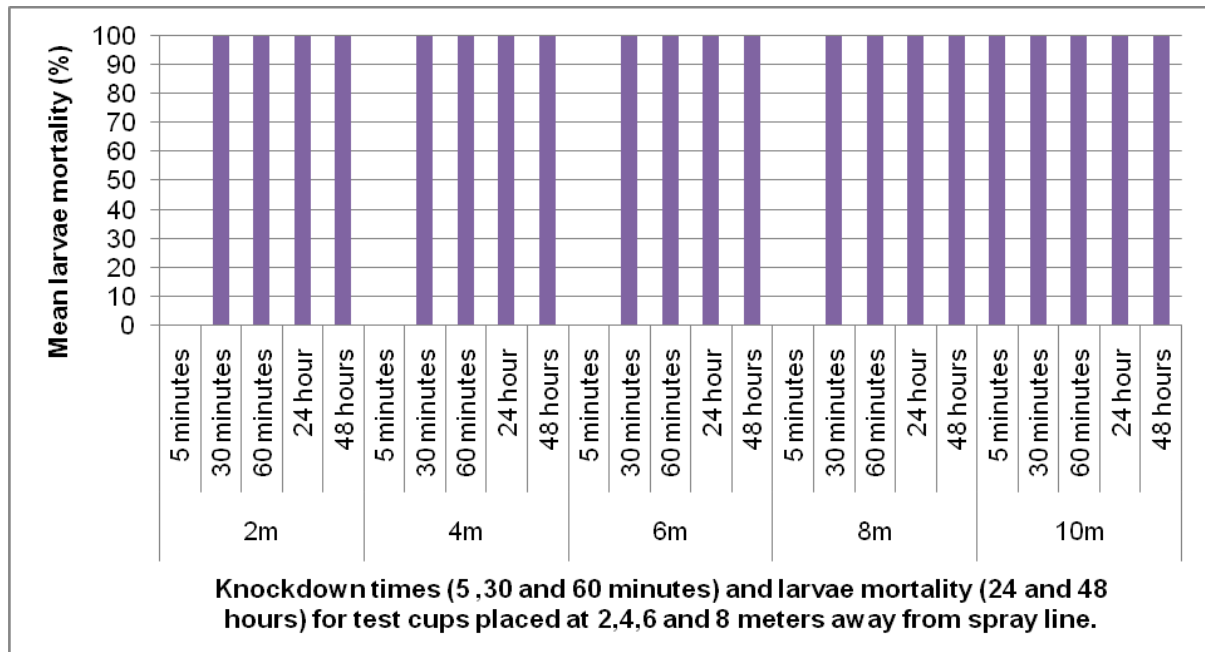


Figure 2 : Mean knockdown and larvae mortality (%) of *Aedes aegypti* (laboratory strain) against Etofenprox using STIHL 420™ mist blower.

1.2 Evaluation of indoor spray of Etofenprox using STIHL 420

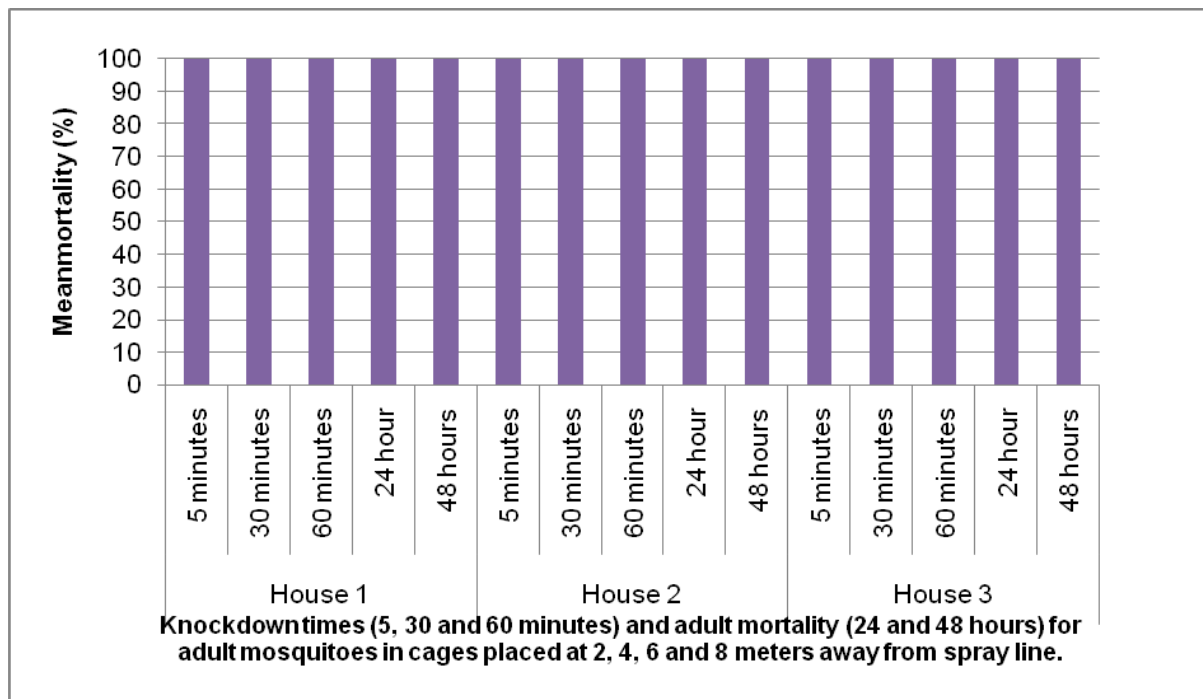


Figure 3 : Mean knockdown and adult mortality (%) of *Aedes aegypti* (laboratory strain) against Etofenprox using STIHL 420™ mist blower.

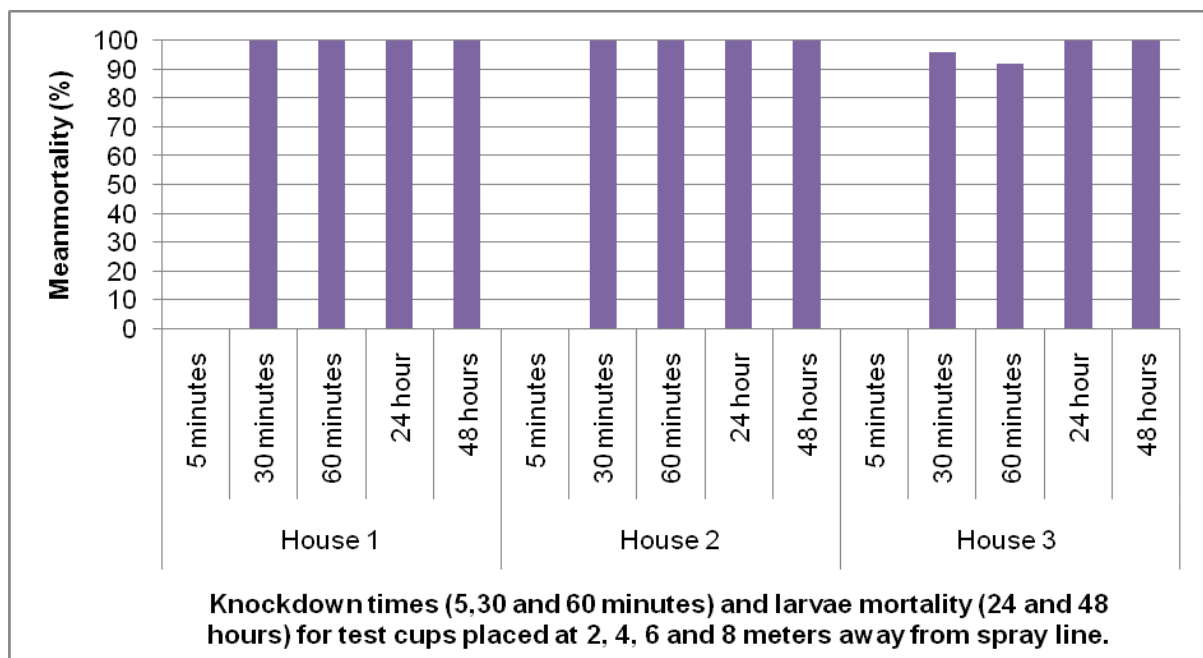


Figure 4 : Mean knockdown and larvae mortality (%) of *Aedes aegypti* (laboratory strain) against Etofenprox using STIHL 420™ mist blower.

DISCUSSION

Indoor spray showed complete adult mortality in cages placed in hall, toilet, bedroom and kitchen. The droplets ranged from 17 to 150 micron with high mean droplets ranging from 85,000 to 14,000.

For outdoor spray evaluation, complete mosquito mortality was also observed. The droplet profile was not analyzable since the droplets on MgO coated slides dispersed unevenly and appeared fuzzy under microscopic observation.

CONCLUSION

Cold space application of BioVectrol™ BV 20EW (Etofenprox) under semi-field indoor and outdoor conditions induced complete mortality in *Aedes aegypti* adults.

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