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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

SEP 30 2004

MEMORANDUM

SUBJECT Science Review of efficacy studies designed to determine performance of B2E-01 containing 33.65 % (S)-Methoprene, against 4th instar larvae of floodwater mosquitoes, *Psorophora columbiae*, and Salt March mosquitoes *Ochlerotatus taeniorhynchus*.
DP Barcode: not found. DP not found. Case No. Not found. Submission reg. Not reported.

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ACTION REQUESTED

B2E BIOTECH LLC submitted 2 efficacy studies, MRID (not assigned), and MRID 462254-07 designed to evaluate the performance of formulation B2E-01 containing 33.6% (S)-Methoprene, against 4th instar larvae of floodwater mosquitoes, *Psorophora columbiae*, and salt marsh mosquitoes, *Ochlerotatus taeniorhynchus*.

RECOMMENDATIONS AND CONCLUSIONS

1. Studies MRID (not assigned) and MRID 462254-07 are supplemental, but upgradable pending characterization of application methods used in studies.

2. Based on the methods described in the submitted studies, it is likely that efficacy data will not support aerial applications and use of the product on deep water sites.

3. Product performance studies must be conducted according to use directions as specified on the product label.

STUDY SUMMARY

The registrant submitted the following product performance data to support registration of 75318-A-B2E-01, containing 33.6% (s)-Methoprene, active ingredient.

MRID (not assigned)	"Field Evaluation of B2E-01 against the Floodwater mosquito *Psorophora columbiae* in Outdoor Microcosms."
MRID 462254-07	"Assessment of B2E-01 insect growth regulator EC (33.6% AI) formulation against *Ochlerotatus taeniorhynchus* in small plot field studies. 2003."

BACKGROUND AND REVIEWER COMMENTS

Studies MRID (not assigned) and MRID 462254-07 are supplemental.

MRID (not assigned) The vast majority of mortality occurred at pupal stage, typical of methoprene mode of action. Within the dose range (0.25, 0.375, and 0.75 fl.oz. of formulation / Acre, corresponding to 2.13, 3.19, and 6.39 g./Acre of a.i. (S)-Methoprene, respectively), emergence was inhibited from 24 % to 84 % in cages set 1 hour prior to treatment application, and 10% to 49% in cages set 48 hours later.

MRID 462254-07 Application rates were at 0.75 and 1.0 fl. oz./ Acre. At both application rates, the product significantly reduced emergence by more than 99% relative to control.

The studies do not describe application techniques, and fail to test application rates as recommended on the product label for aerial and ground applications on shallow versus deeper waters, and on sites with dense vegetation. Application techniques need to be evaluated according to the rates and use instructions specified on the label.

MRID 462254-05, "B2E-01 Product Performance Summary and Bridging Data." page 7, last paragraph, explains the methodology for estimating labeled rates (0.5 oz. to 1.5 oz./ Acre [14.2 to 42.6 g./Acre] as recommended on the product label. Mulla (1991) explains that dosage response lines are establishing by plotting %IE against a range of concentrations or by using computer regression analysis. Although this is an acceptable method to estimate rates, labeled rates as recommended under Directions for Use on the product label must be tested for product efficacy.

Bibliography

Mulla, M.S. 1991. Insect growth regulators for the control of mosquito pests and disease vectors. Chinese J. Entomology, Special Publ. No. 6. Proc. Of the lvth National Vector Control Symposium. Taichung, taiwan. R.O.C. pp. 81-91.

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Chemical: S-Methoprene

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