



ADVICE SUMMARY

APPLICATION FOR REGISTRATION OF A CHEMICAL PRODUCT

Product name: AARON FAST KNOCKDOWN INSECT SPRAY
Applicant: AARON LABORATORIES PROPRIETARY LIMITED
Product number: 69568
Application number: 61141

Purpose of Application and Description of Use: Registration of a 3.82 g/kg tetramethrin, 1.19 g/kg bioallethrin and 1.50 g/kg d-phenothrin, aerosol product for killing insects such as spiders and flies fast with up to 7 days residual killing action for crawling insects.

Active Constituent(s): BIOALLETHRIN
D-PHENOTHRIN
TETRAMETHRIN

Regulatory Decision:

To grant the application subject to the following conditions:

Standard Conditions of Registration/Approval

1. Containers must meet AgVet Code Regulation 18
2. Agricultural products must meet Active Constituents Quality Assurance Requirements
3. Label must contain a Date of Manufacture and Batch Number

For full conditions, refer to Standard Conditions for Applications on the APVMA website.

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State/External Efficacy Reviewer

The results of four laboratory studies were provided to demonstrate the efficacy of the proposed aerosol product (3.82 g/kg tetramethrin, 1.19 g/kg bioallethrin and 1.50 g/kg phenothrin) against house flies (*Musa domestica*) and brown house mosquitoes (*Culex quinquefasciatus*).

In all trials, there were five replicates per aerosol treatment and control. Each replicate comprised 20 laboratory cultured, adult insects introduced to a test chamber. Knockdown of the insects was noted at various time intervals up to 1800 seconds, after which all flies were collected and placed in a holding container with a 10% sucrose pad to check for recovery. The differences in responses between treatments were evaluated using a standard statistical method for survival analysis, and survival curves were also compared.

The first two trials included an industry standard aerosol comparator product containing tetramethrin (3.82 g/kg), bioallethrin (1.19 g/kg) and bioresmethrin (0.75 g/kg). The first trial investigated the efficacy of each formulation against house flies. Both aerosol treatments achieved 50% knockdown within three minutes (180 sec), 90% knockdown within seven minutes (420 sec) and 100% knockdown within 24 hours after treatment. The untreated control recorded 7% knockdown. There were no statistically significant differences between the aerosol treatments at any of the knockdown points, or in the survival curves for house flies treated with either aerosol.

The second trial investigated the efficacy of each formulation against female brown house mosquitoes. Both aerosol treatments achieved 50% knockdown within four minutes (240 sec), 90% knockdown within 12 minutes (720 sec) and 100% knockdown within 24 hours after treatment. There were no mosquitoes knocked down in the untreated control. There were no statistically significant differences between treatments at the 50% knockdown point, and both aerosol treatments achieved 100% mortality within 24 hours after treatment. There were no statistically significant differences between the survival curves for either aerosol treatment.

The third and fourth trials included an industry standard aerosol comparator product containing esbiothrin (1.26 g/kg) and permethrin (0.5 g/kg). The third trial investigated the efficacy of each formulation against house flies. Both aerosol treatments achieved 50% knockdown within 2.5 minutes (150 sec) and 90% knockdown within 26 minutes (1560 sec). Both aerosol treatments achieved 100% mortality within 24 hours of treatment. There were no flies knocked down in the untreated control. There were no statistically significant differences between treatments at the 50% knockdown point. However, there were significant differences at the 90% knockdown point, with the proposed product achieving 90% knockdown 8 minutes faster than the industry standard comparator product.

The fourth trial investigated the efficacy of each formulation against female brown house mosquitoes. Both aerosol treatments achieved 50% knockdown within 2 minutes (120 sec) and 90% knockdown within 6 minutes (360 sec), with both treatments achieving 100% mortality within 24 after treatment. There were no mosquitoes knocked down in the untreated control.

The APVMA accepts the advice of the external efficacy reviewer, and is satisfied that the proposed product should be efficacious and safe when used according to the label instructions.

Data relied on to provide the advice

Data No	Data Source*	Author(s)	Title	Date	Data Type	Data Sub-type	Authorising Party	Inherited Application No.
87186	S	Insect Research Laboratory	Peet Grady chamber study to compare the knockdown of aaron fast knockdown and mortein fast knockdown against <i>Culex quinquefasciatus</i>	1 August 2013	Efficacy and safety	Efficacy	Applicant	
87187	S	Insect Research Laboratory	Peet Grady chamber study to compare the knockdown of woolworths select fast knockdown and aaron fast knockdown against <i>Musca domestica</i>	1 August 2013	Efficacy and safety	Efficacy	Applicant	
87188	S	Insect Research Laboratory	Peet Grady chamber study to compare the knockdown of woolworths select fast knockdown and aaron fast knockdown against <i>Culex quinquefasciatus</i>	4 August 2012	Efficacy and safety	Efficacy	Applicant	
87185	S	Insect Research Laboratory	Peet Grady Chamber Study to compare the knockdown of Aaron fast knockdown and mortein fast knockdown against <i>Musca domestica</i>	1 August 2012	Efficacy and safety	Efficacy	Applicant	

* S = Data submitted with the application