

Attachment 13 Control Efficacy Testing Results Evaluation Standards for Environmental Agent Permit Registrations

Efficacy	Evaluation standards	Required efficacy testing report data
Pesticides efficacy Miticides efficacy Insect repellent effect	For residue control, mortality rate greater than 70 %.	1. 24 hour mortality. 2. For those testing reptiles with residue method and suitable for indoor uses, test report on residue period (2 weeks at least) is required.
	1. Mortality rate greater than 80 %. 2. Those added with knockdown agent shall comply with review criteria: KT_{50} less than 6 minutes for mosquitoes, KT_{50} less than 8 minutes for flies and KT_{50} less than 11 minutes for cockroaches are considered effective for knockdown.	1. 24 hour mortality. 2. The added knockdown agent shall have a 50% knockdown time (KT_{50}).
	For long release formulations (such as baits), mortality greater than 80 %.	There shall be mortality and the number of average days of mortality. Maximum observation period is 14 days.
	Flush-out time: FT_{50} less than or equal to 7 minutes is considered effective for flush-out.	Flush-out agent shall have 50% flush-out time.
Growth inhibition efficacy	Growth retarding rate (or mortality) greater than or equal to 70 % is considered effective for growth retarding.	Growth retarding rate for control of cockroaches, ants, fire ants and other insects.
	Pupal or eclosion retarding rate greater than or equal to 50 % is considered effective for growth regulation.	Those for control of larvae of mosquitoes, flies and fleas shall have pupal rate and eclosion rate.
Knockdown efficacy (mosquito coil, mosquito mat, mosquito liquid)	1. KT_{50} less than 6 minutes for mosquitoes, KT_{50} less than 8 minutes for flies and KT_{50} less than 11 minutes for cockroaches are considered effective for knockdown. 2. Knockdown agent with a mortality of 80% is considered effective for pest control.	1. Knockdown agent shall have 50% knockdown time KT_{50} . 2. The knockdown agent looking for not only knockdown effect but also control effect shall have 24 hour mortality.
Rat mortality	Greater than 80 %	Rodenticides shall have mortality and the number of average days of mortality.
Sterilization effect	Sterilization rate greater than 99.9 %.	Bactericides/fungicides shall be marked with disinfection rate (note 1).
Repelling effect	Repelling rate greater than 75 %.	1. Insect repellents shall have repelling effect of 24 hours. 2. The repellent rate of chemical repellents used by humans.

Note 1: The following bacteria should be included in Environmental Sanitation Germicide testing.

<i>Bacillus cereus</i>	<i>Bacillus cereus</i> BCRC 10603
<i>Escherichia coli</i>	<i>Escherichia coli</i> BCRC 10675
<i>Pseudomonas aeruginosa</i>	<i>Pseudomonas aeruginosa</i> BCRC 10944
<i>Salmonella choleraesuis</i>	<i>Salmonella choleraesuis</i> BCRC 10744
<i>Staphylococcus aureus subsp. aureus</i>	<i>Staphylococcus aureus subsp. aureus</i> BCRC12657
<i>Aspergillus niger</i> (note 2)	<i>Aspergillus niger</i> BCRC 30130

Note 2: For germicidal preparations used as environmental sanitation agents not targeting fungi, *Aspergillus niger* testing is not required.