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Adulticiding

What is used to kill adult mosquitoes?

The division uses **Anvil 2+2 ULV**, a synergized synthetic pyrethroid, as a spray to reduce possibly-disease carrying mosquitoes. It is relatively nontoxic to humans and other mammals, and health risks associated with the use of a pyrethroid in accordance with U.S. Environmental Protection Agency (EPA) and the Indiana Office of the State Chemist guidelines are negligible.

How are Synthetic Pyrethroids Used in Adult Mosquito Control?

Most pyrethroid mosquito control products can be applied only by public health officials and trained personnel of mosquito control districts. Mosquito control professionals apply pyrethroids as an ultra low volume (ULV) spray. ULV sprayers dispense very fine aerosol droplets that stay aloft and kill adult mosquitoes on contact. Pyrethroids used in mosquito control are typically mixed with a synergist compound, such as piperonyl butoxide, which enhances the effectiveness of the active ingredient. The product is often diluted in water or oil and applied at rates less than 1/100th of a pound of active ingredient or less than 4 fluid ounces of mixed formulation per acre.

Do Pyrethroids Pose Risks to Human Health?

Pyrethroids can be used for public health mosquito control programs without posing unreasonable risks to human health when applied according to the label. Pyrethroids are considered to pose slight risks of acute toxicity to humans, but at high doses, pyrethroids can affect the nervous system.

Do Pyrethroids Pose Risks to Wildlife or the Environment?

Pyrethroids used in mosquito control programs do not pose unreasonable risks to wildlife or the environment. Pyrethroids, when applied at mosquito control rates, are low in toxicity to mammals, and are practically nontoxic to birds. Mosquito control formulations of permethrin break down in the environment, and high temperatures and sunlight accelerate this process. However, some pyrethroids are toxic to fish and to bees. For that reason, EPA has established specific precautions on the label to reduce such risks, including restrictions that prohibit the direct application of products to open water or within 100 feet of lakes, streams, rivers or bays. The Vector Control Division is using Anvil, a pyrethoid, when used properly, not toxic to fish.

What is The Current Regulatory Status of Pyrethroids?

As part of its responsibility to reassess all pesticides registered before 1984, EPA has given highest priority to reviewing more acutely toxic pesticides such as organophosphates and carbamates. Organophosphates are currently under review. Comprehensive reviews of the synthetic pyrethroids are scheduled for approximately 2004.

Where Can I Get More Information About the Chemicals Used in Mosquito Control?

Indiana Office of State Chemist
(765) 494-1594
www.isco.purdue.edu

Environmental Protection Agency
www.epa.gov/pesticides/factsheets/skeeters.htm

Centers for Disease Control and Prevention (CDC)
Tel: 970-221-6400
Fax: 970-221-6476
E-mail: dvbid@cdc.gov
Web site: http://www.cdc.gov/

National Pesticide Information Center (NPIC)
Tel: 1-800-858-7378
E-mail: npic@ace.orst.edu
Web site: http://npic.orst.edu/

West Nile Virus Resource Guide: http://npic.orst.edu/wnv/

American Mosquito Control Association (AMCA)
Tel: 732-932-0667
Fax: 732-932-0930
E-mail: mailto:amca@mosquito.org
Web site: www.mosquito.org