

**Answers to Health and Environmental Questions
About the Aerial Application of Dibrom (Naled)
For Mosquito Control**

August 20, 2004

Q: Has the possibility of adverse health effects been examined for Dibrom?

A: The EPA risk assessment for the use of Dibrom in mosquito control found the level of potential exposure during aerial application to be hundreds or more times lower than the levels that pose a human health concern. The assessment considered multiple exposures over several weeks and included ingestion by hand-to-mouth activity in toddlers, absorption by skin contact and inhalation of Dibrom.

Q: Why does Dibrom kill mosquitoes and yet doesn't present a major risk to people when applied aerially?

A: There is virtually no risk of adverse health effects in humans due to aerial application because they will be exposed to very small amounts of Dibrom. Like any chemical, the effects that occur in an individual depend on the amount that enters the body. A very small amount of Dibrom is applied during aerial spraying, less than 0.05 pounds per acre. To be active against adult mosquitoes, the Dibrom must stay in the air. The droplets of Dibrom are small enough to stay in the air, but larger than droplets that will enter the lungs. The application of Dibrom would produce about 0.000011 milligrams of Dibrom per cubic foot of air shortly after application (A teaspoon is 5000 milligrams). The concentration in air will decrease thereafter.

Q: What are the potential health effects of Dibrom exposure?

A: At the levels of exposure used for mosquito control, no adverse effects are expected. At much higher levels of exposure, Dibrom causes an increase in the activity of the nervous system. This results in nausea, dizziness, confusion, increased tearing and salivation, and increased sweating. These health signs and symptoms are not specific for Dibrom and can also occur with colds, allergies, and many other medical problems.

Q: What can people do if they think Dibrom might be making them sick?

A: If you are ill you should contact a physician. You can also contact the county health department or the Bureau of Community Environmental Health, Pesticide Surveillance at 1-800-606-5810 or the Florida Poison Information Center at 1-800-222-1222.

Q: What does the Florida Department of Health recommend for protecting health?

A: The most certain way to prevent adverse effects is to eliminate the possibility of exposure. The most drastic action is to leave the area that will be sprayed. This is usually not necessary or practical. You can reduce or prevent exposure to the pesticide by remaining indoors. If you must go outside during the application, you can reduce your exposure by wearing clothing that reduces skin contact with the Dibrom. There is very little likelihood that being outside during the spray application will cause any adverse health effects.

Q: Are some people unusually susceptible to aerially applied Dibrom?

A: The effect of a chemical for each individual depends on the amount of chemical that enters the body. This is called the dose. The dose that produces an effect in humans is usually about the same for most people. Although rare, some individuals may have an adverse effect

at a dose lower than would affect most other people. There is no way to predict when someone will respond at a lower dose. Again, this is a very rare event.

Q: What if my child puts fingers or unwashed toys in his or her mouth while playing outdoors?

A: The amount of Dibrom that contacts solid surfaces is too small to cause any adverse health effects. Dibrom also breaks down quickly when in contact with moisture or sunlight.

Q: Can I swim in my pool after Dibrom is sprayed?

A: Since Dibrom must remain in the air to kill adult mosquitoes; applications are made to minimize the amount of Dibrom that settles. Therefore, little Dibrom will enter your pool. Dibrom also breaks down quickly in water.

Q: Will Dibrom harm my pets?

A: The amount of Dibrom that enters the body of dogs, cats, or other animals will be very small. It is unlikely any adverse effects will occur if they are outside during the application of Dibrom. To further reduce any risk of adverse effects, the same precautions should be taken as for humans.

Q: Does Dibrom pose a risk to wildlife and the environment?

A: Dibrom used in mosquito control programs does not pose unreasonable risks to wildlife or the environment. Dibrom degrades rapidly in the environment and it displays low toxicity to birds and mammals. Acute and chronic toxicity to fish is not expected based on the low application rate used for mosquito control. EPA has established specific precautions on the label to reduce the risk to aquatic invertebrates from repeated use of Dibrom. Dibrom is considered toxic to bees. However, spraying operations are likely to be conducted when bees are not foraging thus minimizing the potential for exposure.

Q: Will Dibrom affect my fishpond?

A: Fish are more sensitive to the effects of Dibrom than mammals. Even with this extra sensitivity, it is unlikely that enough Dibrom will enter a pond to cause adverse effects. As an extra precaution, shallow fishponds could be covered during aerial spraying. Do not leave tarps on long enough to cause overheating or oxygen depletion. If practical, you could also consider bringing your fish inside.

Q: Why is EPA reviewing the use of Dibrom?

A: EPA is doing "re-registration" on all pesticides that were first registered before 1984. To continue the registration of any product under re-registration, the manufacturer must update the safety data for the product to assure the continued safe use of the product.

Q: How do I get more information about Dibrom?

A: More information is available on the EPA's pesticide program web site at <http://www.epa.gov/pesticides/factsheets/naled4mosquitos.htm>. Dibrom is one of the trade names for a pesticide called naled. Other web sites may provide information as well. It is important to see the difference between Dibrom as it is applied for mosquito control versus the concentrated product before it is diluted for application. See the Florida Department of Agriculture and Consumer Services (DACs), Bureau of Entomology and Pest Control at http://www.flaes.org/aes-ent/public_html/index.html or (850) 921-4177 and the DACs Bureau of Pesticides at <http://www.flaes.org/Pesticide/index.htm> (850) 487-0532.