Insecticidal Bedding for the Control and Prevention of Mite Infestations in Lab Animals

• Effective - even in cases of severe infestation
• Saves valuable technician time
• Easy to use - no time-consuming dips, dusts, or injections
• Readily accepted by mice for nesting material

Lee Marban
(a MidAtlantic Hospital)

"I am very pleased. The animals like it. The animals made cozy nests and they seemed happy. MITEARREST caused no irritation or ill effects. We even used the product during mating and found we had no problem with offspring. Originally we had a bad mite infestation. Even animals with significant infestations improved significantly. I found MITEARREST to be more effective than other methods."

Mark A. Connell
(Major Pharmaceutical Company)

"The mice in our colony suffer from lesions that develop because of mites. Other products were cumbersome to use, but the MITEARREST bedding is easy to use and the mice love it. MITEARREST presents no health problems to our animals and the treatment is a great success."

Tom Ferrell
(Ivy League Research Center)

"I'm really happy with the stuff - it's so easy to use, it is idiot proof. Absolutely less labor intensive than any other product - there is no manipulation of animals like with other products - either injected drugs or powders."

Chalman Malhan
(Major Medical Center)

"It worked. I like it better than any other product on the market, and it is also very effective."

Greg Taborn
(a Midwestern Medical School)

"The product worked very well; every animal had no mites on it. I am positive that MITEARREST worked absolutely in killing mite infestations."

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INTRODUCTION

Fur mites, *Myobia musculi*, *Radfordia affinis* and *Myocoptes musculinus* can infest whole colonies of laboratory rodents and may adversely affect the general health of mice. Mite infestations often cause hypersensitivity-induced skin lesions which can promote secondary bacterial infection. Infested mice may have altered immune statuses, and epidermis and hair regrowth may be affected in some mouse strains. A mouse experiencing a severe or prolonged mite infestation may permanently disfigure itself by vigorous scratching.

Until recently the control of fur mites in laboratory mice has been difficult, expensive, unpleasant, and stressful for the mice. The development of MITE ARREST® has changed all of this.

MITE ARREST® is an insecticidal bedding consisting of cotton, (92.6%), and permethrin, (7.4%), developed at Harvard University, for the control and prevention of fur mites in laboratory rodents. MITE ARREST® is simply added to standard bedding material and enlists the natural nesting instincts of laboratory rodents to deliver a potent acaricide to the fur of the animal. Rodents readily accept it, and quickly turn it into nests. Constant contact with the treated bedding kills the existing mites, and use over the entire treatment cycle kills mites as they hatch from eggs.

BENEFITS

**Efficacy**
When used correctly MITE ARREST will eradicate even the most severe infestation. The acaricide used is highly toxic to mites, and simple contact with it is deadly to them. Prolonged use of MITE ARREST kills new mites emerging from eggs, and can prevent the reinfestation of the colony from newly acquired animals.

**Ease of Use**
Simply add MITE ARREST to the cage when changing the bedding. There are no dips, dusts, or injections to administer. No mixing is required. The product comes ready to use. Furthermore, it is verifiable. The quantity of product used and its condition is easily monitored by a visual inspection of the cage.

**Cost-Effectiveness**
Reduces time previously spent treating each animal. Treatment is just another part of changing the bedding. By eliminating the labor intensive procedure of treating each animal, technicians can focus on other important tasks.

**Reduces Animal Stress**
Traditional mite removal treatments involve a great deal of handling, sometimes including forced submersion, which greatly stresses the animals. MITE ARREST makes this handling unnecessary. Moreover, MITE ARREST reinforces the natural nest-building behavior of mice and other rodents, perhaps making them less prone to other stresses.

DIRECTIONS

Place MITE ARREST directly in the cages to be treated. Several balls per mouse are recommended. Replace MITE ARREST when bedding is changed. Continue treatment for six weeks to capture the entire 23 day natural life cycle of mites. MITE ARREST is not ovicidal. Treatment must continue until eggs have hatched to assure effectiveness. To prevent reinfestation from infected new colony members, contaminated bedding, or wild mice, we also recommend using a few balls per cage when the bedding is changed as a prophylactic treatment.

TECHNICAL DATA

Permethrin, the active ingredient in MITE ARREST, has been shown to have a low degree of toxicity to mammals and their caretakers. Acute, short-term and long-term studies show that dermal or oral exposure of as much as 2,000 - 5,000 mg permethrin per kg body weight is not toxic to mice. MITE ARREST delivers only 1,800 mg of permethrin per kg of body weight. Furthermore, manufacturing binds much of the toxicant to the nesting material so that it is not readily available for absorption, (T. Mather, et al, Lab Animal, March, 1990). Additional toxicity information is available from the manufacturer.

MITE ARREST is available in two sizes: a small box containing enough bedding to treat approximately 60 mice; and a large box containing enough bedding to treat approximately 300 mice for the full six week cycle.