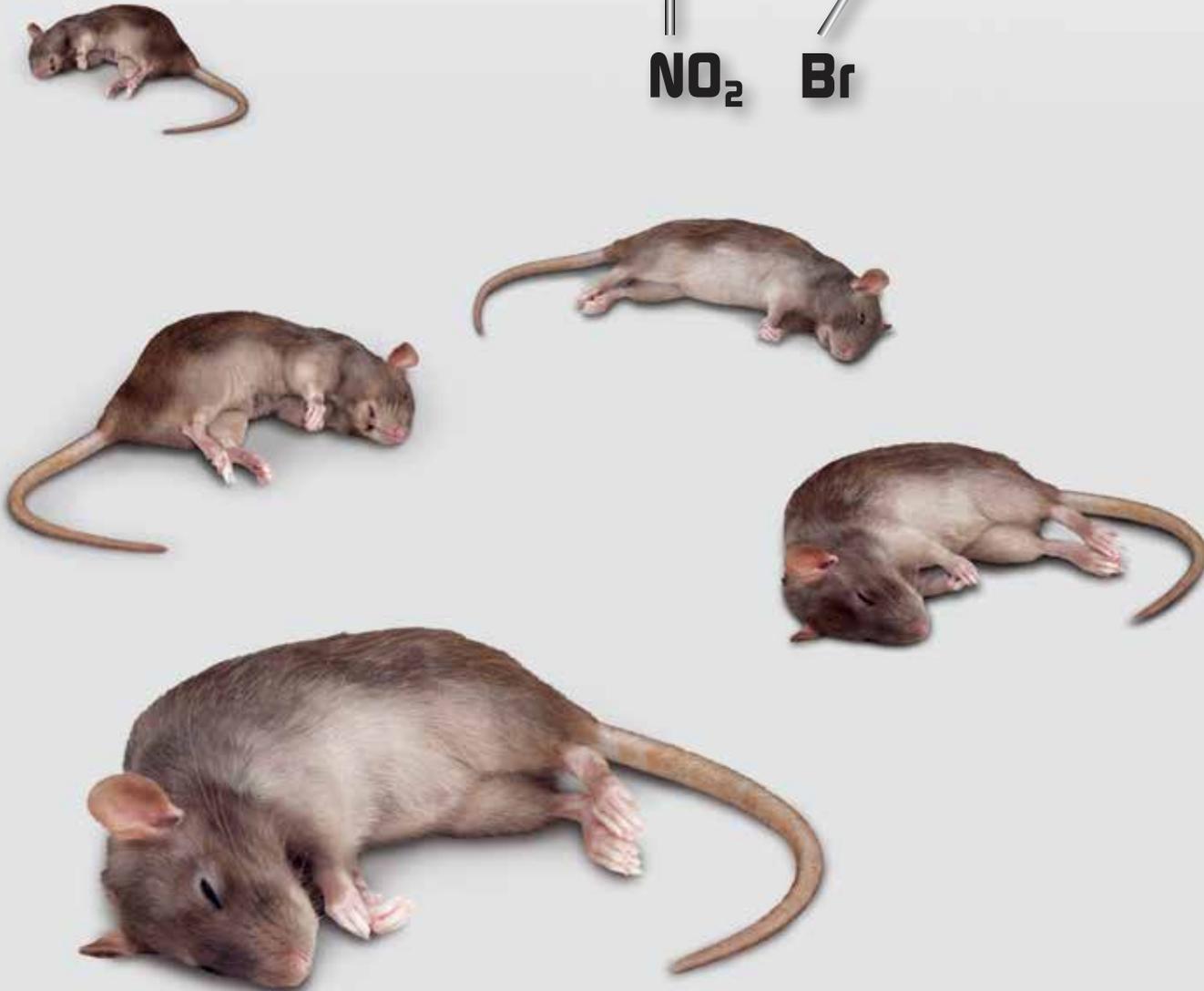
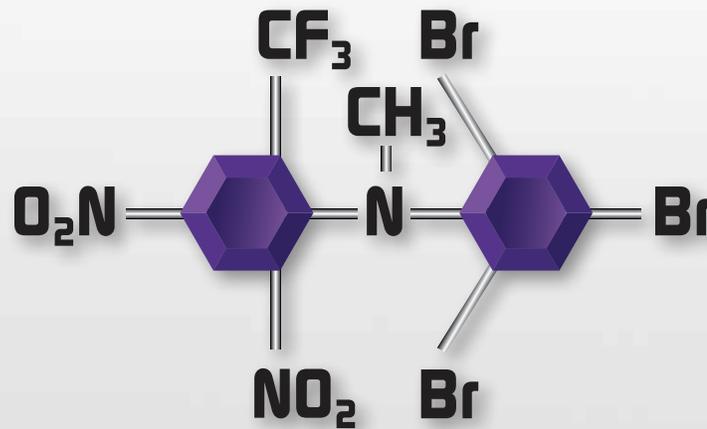


Bromethalin Rodenticide Best Practices

Tough infestations require PMPs to think strategically about rodenticide use. Bromethalin, an acute neurotoxin, has been available off and on since the 1980s as an alternative to anticoagulant formulations. As a neurotoxin, it directly attacks the central nervous system instead of causing internal bleeding. This bulletin outlines the advantages of bromethalin rodenticides, highlights how they differ from more common anticoagulant rodenticides and provides recommendations on their use.



Benefits

Because of its unique mode of action, bromethalin is especially useful for PMPs dealing with heavy infestations and preventing anticoagulant-resistant populations in commercial and select residential accounts. With results in as soon as 2-3 days, compared to 4-5 days for anticoagulants, it can be an efficient means of reducing heavy rodent populations and showing your customer faster results. As a neurotoxin, not an anticoagulant, it is ideal for an anticoagulant resistance prevention program.

See Results: Bromethalin vs. Anticoagulants



Bromethalin Rodenticide Use

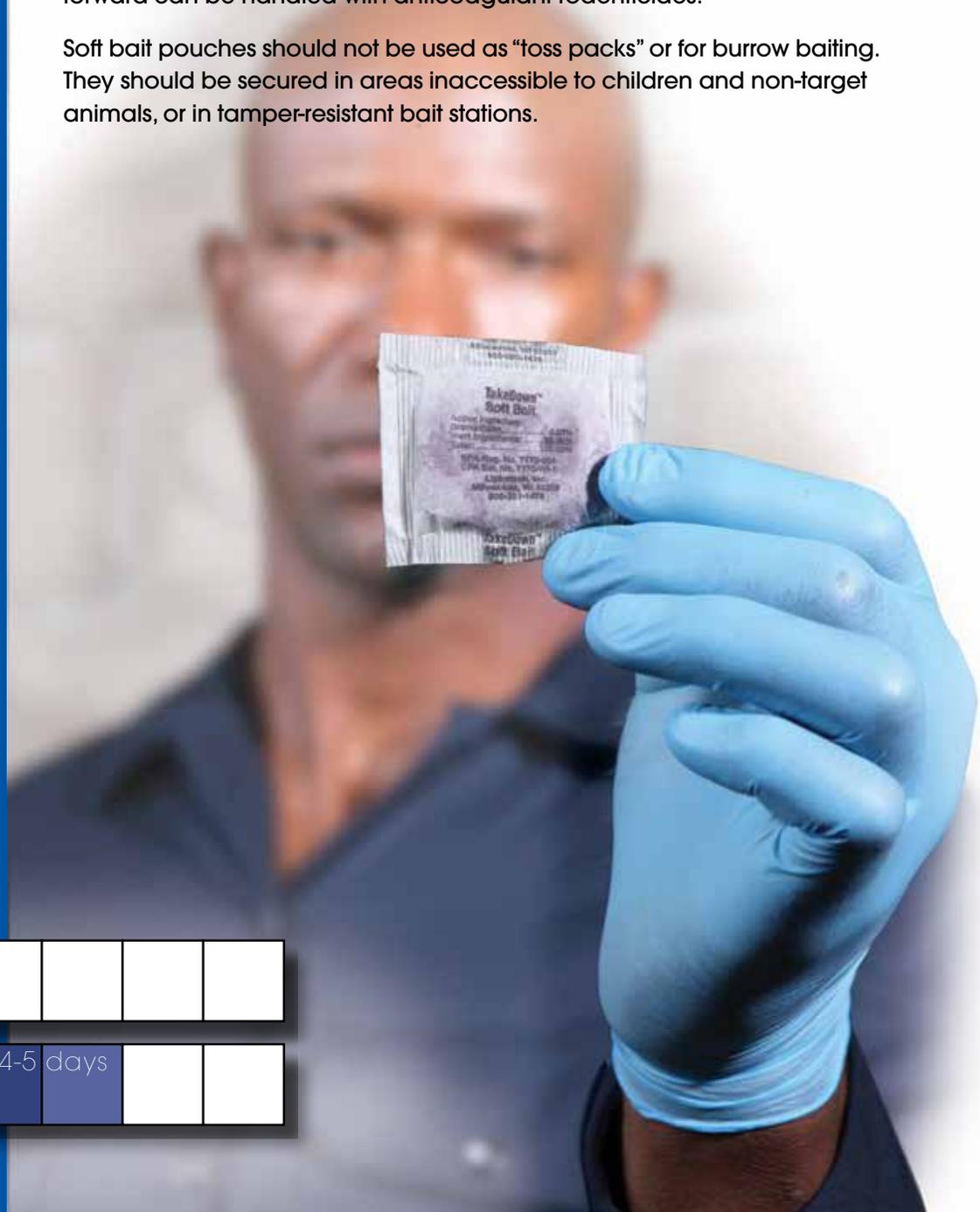
Placement and timing are the keys to effective use of bromethalin soft bait. Keep an uninterrupted supply of bait available until feeding stops, and be sure to reduce access to other food sources as much as possible.

A single night's feeding is usually enough to provide a lethal dose to any rodent that eats it, but several waves of feeding activity may occur as new animals arrive or low-ranking animals are allowed access. Bait supply should be maintained accordingly.

Because bromethalin is faster-acting than anticoagulants, there may be more dead rodents found out in the open. Regularly recover rodent carcasses and replace any contaminated or spoiled bait.

After 1-3 weeks, most PMPs will find that bromethalin rodenticides have decreased the rodent population enough that maintenance going forward can be handled with anticoagulant rodenticides.

Soft bait pouches should not be used as "toss packs" or for burrow baiting. They should be secured in areas inaccessible to children and non-target animals, or in tamper-resistant bait stations.



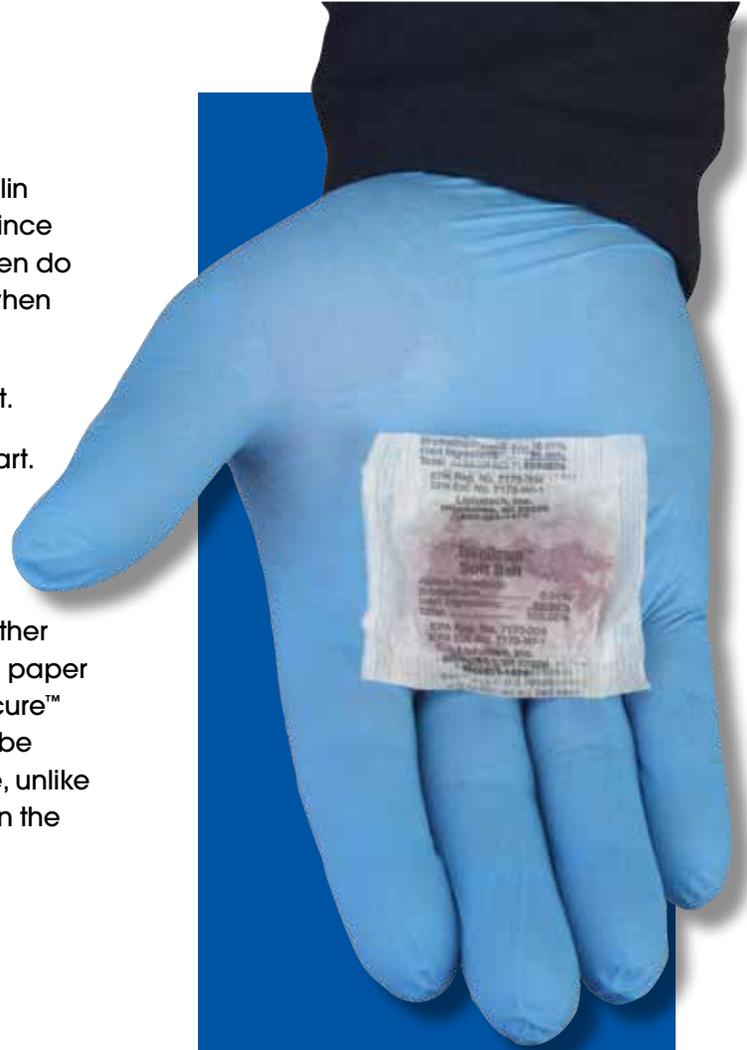
TakeDown™

TakeDown is the first soft bait formulated with bromethalin for the professional pest management (PMP) market. Since rodents ingesting a lethal dose of bromethalin bait often do not feed again, significantly less bait is needed than when using anticoagulants.

Mice - Use 1-2 pouches, usually spaced 8-12 feet apart.

Rats - Use 4-24 pouches, usually spaced 15-30 feet apart. Adjust the amount of bait applied to the level of rat feeding expected at each bait placement.

TakeDown comes in 8g pouches (100 parts per million bromethalin) packaged in 4 lb. bags. As with other Liphatech soft baits, the label allows for removal of the paper pouch before securing with bait station rods or SoftSecure™ Technology. Bromethalin products like TakeDown can be sold in the professional market in sizes of 4 lbs. or more, unlike the 16 lb. requirement for anticoagulant rodenticides in the professional market.



Bait Shyness

The rapid onset of bromethalin symptoms will likely cause rodents to stop feeding. Rodents that do not eat a lethal dose may connect the symptoms they feel with what they ate and become bait shy.

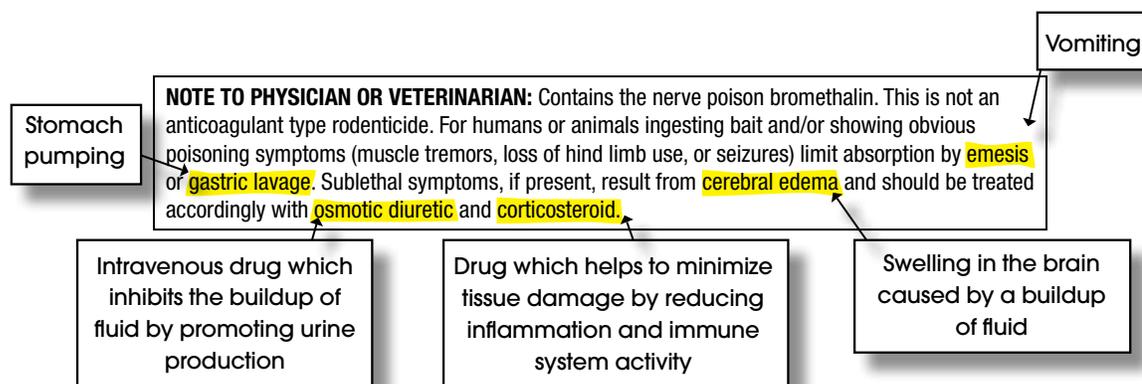
For this reason, TakeDown is best used quickly to take down an infestation. Follow up with a highly palatable and effective anticoagulant such as FirstStrike® or Resolv.®



Safety

Proper safety procedures must be followed whenever handling any rodenticide or dead rodents. Wearing gloves will prevent the applicator from contact with the active ingredient and will also prevent the contamination of the bait with chemicals or other residue that may be on your hands. Read and carefully follow the label instructions on the specific product that you are using. Collect and dispose of any dead rodents that are in plain view along with any leftover bait. Immediately remove any bait that has become accessible to non-target animals.

The “Note to Physician or Veterinarian” section below is from the TakeDown soft bait rodenticide label with the clinical definitions of related terms explained.



Direct exposure to bromethalin causes moderate eye irritation, and it can be absorbed through the skin. However, when used according to the label directions, including use of the specified PPE, the risk of exposure to the applicator from applying the bait is minimal.

Bromethalin is highly toxic to humans, pets, and wildlife if ingested directly. Although there are LD₅₀ numbers published for dogs and cats, individual animals vary in their sensitivity to the rodenticide and even consumption of amounts less than the LD₅₀ could cause severe symptoms and death.

There is no antidote to bromethalin poisoning, so **pets suspected to have ingested bromethalin bait should be treated immediately**. Multiple doses with activated charcoal can aid in decontamination for dogs; multiple doses of activated charcoal may not be as effective for cats. Although the “Note to Physician or Veterinarian” on the label recommends that “animals ingesting bait and/or showing obvious poisoning symptoms limit absorption by emesis or gastric lavage,” the ASPCA’s Animal Poison Control Center does not recommend inducing emesis (vomiting) in animals that are symptomatic. It also states that corticosteroids and osmotic diuretics have not been effective in treating cats and dogs. Vitamin K₁, the treatment for anticoagulant rodenticides, will have no effect. The Bromethalin Addendum to The Veterinarian’s Guide has additional information on how to recognize and treat symptoms of bromethalin toxicity. This literature and other information can be found at liphatech.com.