

Bromadiolone

Bromadiolone is a second-generation anticoagulant rodenticide. As an anticoagulant, it prevents blood from clotting which causes death through internal bleeding. Unlike most other anticoagulants that require multiple feeds before being fatal, bromadiolone can be fatal after just one feed. It does not require a licence to use and can be used by landowners to control rats and possums on their land.

Bromadiolone baits are dyed blue and are used to control rodents (rats and mice), which prey on native animals and eat the fruit, seeds and leaves of native plants, causing immense damage to our ecosystems and threatening the survival of our taonga species.



Above: Bromadiolone block (tradename: Contrac®)

The Northland Regional Council currently sells bromadiolone products only in block form that are designed to go into lockable bait stations, limiting the risk of interference from non-target species.

Trade names include: Contrac®, Rentokil Rid Rat

Safe usage

Bromadiolone must only be used in bait stations. To ensure that it is being used safely always read and follow label instructions for the product you are using. This will generally include:

- Bait must be stored in a dry area away from foodstuffs or food preparation areas
- Bait must be stored in its original container in areas inaccessible to children or pets

- Warning signs must be placed at public accessways where bait stations have been placed
- Bait stations must be out of reach of children, pets and stock (this may mean removing stock from treatment areas)
- Wear suitable protective gear when handling bait
- Do not eat, drink, smoke or vape when handling the bait
- Dispose of empty bait bags and spoiled bait as per label instructions
- Wash hands after working with bait

Risks

What are the risks to humans?

The toxicity of bromadiolone to humans is not well established; however, the risk is likely to be lower but similar to that posed by brodifacoum, where a considerable amount of bait would need to be consumed to cause illness. Repeated ingestion of bromadiolone can negatively impact human health, so measures must be taken to minimise exposure.

Toxicity symptoms common to anticoagulant poisons may include:

- Bleeding gums and excessive bleeding from cuts.
- Greater tendency to bruise.
- Blood in urine and faeces.
- Nose bleeds.

If bromadiolone bait has been consumed, seek medical attention or contact **National Poisons Centre 0800 764766**.

What are the risks to non-target animals?

If deployed as per label instructions in bait stations, the risk of non-target species consuming bromadiolone baits is very low. Bromadiolone is generally less potent than brodifacoum, although can remain in the liver of poisoned animals for weeks, making repeated exposure a concern. Bromadiolone is more potent than common rodent toxins, like pindone or diphacinone. Accordingly, the best way to protect animals and pets is through prevention.

Bromadiolone poses a medium risk of secondary poisoning to birds of prey (kahu, kārearea, ruru) with a high risk of secondary poisoning to mammals.

Preventing pets eating the bait and/or scavenging carcasses is the most effective way to keep them safe. This means:

- Keeping dogs on a lead in area where toxin is being used
- Do not allow pets to scavenge dead animals
- Keeping bait within the bait stations, and not allowing it to fall on the ground
- Safely disposing of dead animals by burying

If poisoning is suspected in your dog, take it to the vet immediately. A vet can administer Vitamin K as an antidote. Cats are unlikely to be attracted to the cereal-based bait but may scavenge on carcasses.

All practical measures must be taken to minimise access to baits by livestock, pets, and other non-target species. Furthermore, access to poisoned carcasses by livestock and other non-target species must be prevented by removing and burying or burning them, if practical.

While early-stage poisoning can sometimes be treated, it is important to prevent accidental poisoning by ensuring animals do not eat toxic bait or carcasses. There is a moderate to high risk of secondary poisoning to cats and dogs if they scavenge on carcasses. Regular removal of rodent carcasses can greatly reduce this risk. Dogs should be kept away from areas where bait is deployed and should not be allowed to scavenge carcasses.

Risks to livestock

Stock (grazing animals, pigs, domestic fowl) should not have access to areas where bait stations are deployed as they could be interfered with, resulting in bait being spilt on the ground and then consumed. If you suspect that this has happened, relocate stock immediately to an untreated area. Also, you need to inform the Ministry for Primary Industries (MPI), Food Safety Section (phone 0800 693 721) and follow their advice.

What are the risks to the environment?

Bromadiolone is unlikely to enter the atmosphere and has a low water solubility. It has low soil mobility and is bound quickly in soils rich in organic compounds and clay. It is considered to significantly degrade in soil. It is unlikely to reach waterways when used correctly.

Plants are unlikely to absorb bromadiolone due to its low water solubility, with only trace amounts detected in plants. Bromadiolone accumulates in the liver of poisoned rodents and can persist for weeks.

Disposal

Surplus or spoiled bait should be disposed of as per label instructions.