

contrapest

COMPLETE MANUAL

FOR RESIDENTIAL
PEST CONTROL



SENESTECH

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ContraPest® is registered federally as a General Use Product when used as directed. However, in some states, due to applicator expertise, it is a Restricted Use Product. Please check with your local state regulatory agency to determine restriction status. Read and follow all label instructions for target species Norway and roof rats.



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COMPLETE MANUAL

ContraPest, the first and only rodent contraceptive registered with the United States Environmental Protection Agency (US EPA). It was developed for wild Norway rats, *Rattus norvegicus*, and roof rats, *R. rattus*. Although there are many methods on the market used to manage rats, these techniques have limitations due to the rapid reproduction rates seen in rats. Remember, two rats can be responsible for producing up to 15,000 pups per year. ContraPest is an additional tool that can be used to combat the high reproductive rate and fits seamlessly into all pest control programs, helping to provide a long-term solution. Our non-lethal bait is proven to reduce rats by preventing new offspring from entering the population. At SenesTech, we don't just eliminate rats. We strive to make a better world.

1. PRODUCT OVERVIEW

ContraPest is compatible with two different bait stations - PROTECTA® EVO EXPRESS* and JT Eaton Rat Fortress bait stations:

PROTECTA® EVO EXPRESS* BAIT STATIONS

ContraPest (400mL tanks)

ContraPest contains active ingredients of 4-Vinylcyclohexene diepoxide (VCD) and Triptolide.

Note: CA, CT, DC, and NY are RUP-restricted states.

Trays (Pair) 400mL

Ordered as a pair, with universal components.



PROTECTA® EVO EXPRESS* Bait Stations

JT EATON RAT FORTRESS BAIT STATIONS

ContraPest (550mL tanks)

ContraPest contains active ingredients of 4-Vinylcyclohexene diepoxide (VCD) and Triptolide.

Note: CA, CT, DC, and NY are RUP-restricted states

Trays (Left & Right) 550mL

Ordered as a pair, with Left and Right components.



JT Eaton Rat Fortress Bait Stations

2. SITE ASSESSMENT

Before integrating ContraPest into any new or existing pest management program, an in-person, on-site evaluation is recommended. Individuals are encouraged to take past rodent activity into account when determining the best strategy for optimal outcomes.

EXAMPLES OF RODENT HABITATS INCLUDE, BUT ARE NOT LIMITED TO:

- o Man-made access points (i.e. utility or manhole covers) or natural openings along the ground
- o Urban sprawl or residential development in surrounding area
- o Trash accumulated nearby or on-site
- o Shrubbery or foliage in contact with buildings
- o Location relative to water sources like hoses, sinks, or standing water
- o Cluttered areas, spaces not in regular use
- o Residential or commercial access points, i.e. doorways, windows
- o Sanitation or trash collection locations

Always place ContraPest in a manner that ensures the majority population of rats will have access to the bait.



WITHOUT CLEAR COMMUNICATION BEFOREHAND, HOMEOWNERS RUN THE RISKS OF:

1) Underestimating the necessary expenditure to achieve acceptable control; 2) Not realizing the anticipated and desired results from the product.

Man-made Structures

Place ContraPest bait stations externally within 1 foot of perimeter of structure such sheds, fences, and/or other man-made structures. ContraPest may also be used internally in non-kitchen areas. Refer to the label for additional details.

Foraging Areas

Successful bait uptake in any rodent control program is imperative. ContraPest should be placed near frequent foraging areas. These areas may not necessarily be rat runs, burrows, or areas with obvious rat signs. To locate best baiting locations, non-toxic baits can be used. Known rodenticide hotspot bait stations can also be considered foraging areas:

- o Dumpsters
- o Fruit trees
- o Heavy foliage
- o Feed bins
- o Animal waste
- o Any area where rats may be searching for food

**Carefully review your site's
rodent habitats to ensure
optimal ContraPest
placement for maximum
consumption.**



Population Dynamics

Using ContraPest will help decrease populations by preventing births of new generations. Adding ContraPest to a rodent control program that utilizes lethal means will help decrease populations quicker. This will help balance the population dynamics and keep populations low.

- o If the number of births is greater than the number of deaths, the population will increase.
- o If the number of births and the number of deaths are equal, the population will remain the same.
- o Only when the number of deaths exceed the number of births will the population decrease.

CONSIDERATIONS

Hot Temperatures

Excessive heat may cause bait to evaporate. This is why we recommend placing bait stations in shaded areas, away from direct sunlight. If possible, use white or gray bait stations. If signs of evaporation are seen due to excessive heat, please refer to our troubleshooting section.

Cold Temperatures

ContraPest has been observed to freeze in temperatures under 17°F but will perform normally upon thawing. For optimal success, during the colder months, place bait stations within building structures.

Neophobic Behaviors (Bait Aversion/Bait Shyness)

Neophobic rats are wary of new objects in their environment, including new foods and bait stations. Neophobia may have been initiated after a poisoning campaign or other human pressures. It is likely that neophobic rats will take longer to feed and will require a different deployment strategy for ContraPest.

Neophobic behaviors are specified by one of two realities: bait aversion or bait shyness.



Using ContraPest will help decrease populations by preventing births of new generations.

Bait aversion is the avoidance of bait due to experience or changes in rat behavior. In other words, any ill effects caused by consuming a particular bait will stop a rat from consuming more of it.

Bait shyness is defined as the natural avoidance of new objects and situations. For rats, this translates as taking very small samples, rather than consume the entire food source.

3. DEPLOYMENT OVERVIEW

PERSONAL PROTECTION EQUIPMENT

Applicators are required to wear personal protective equipment (closed-toed shoes, protective nitrile or butyl gloves ≥ 14 mm, long-sleeved shirts, and long pants) while working with ContraPest. If ContraPest comes in contact with skin, thoroughly wash any areas exposed with soap and water (refer to Safety Data Sheet for more information).

STEPS FOR DEPLOYMENT

1. PLACE STATIONS

- o Best baiting locations are where rats are known to be feeding on site (ex: dumpsters, animal feed, loose trash, etc.)
- o In addition, utilize areas where previous baiting has been successful (keep bait stations at least 30 feet away from lethal methods).

1



2. DEPLOY CONTRAPEST

Place one (1) ContraPest tank and tray in the station(s) in either the left or right side.

2



3. MONITOR

- o Add a second ContraPest tank and tray to stations when 50% or more of the tank has been consumed between service visits to ensure a constant supply.
- o If consumption is repeatedly low or ceases, try relocating the bait station to a different location as rats may migrate.

3



4. MAINTAIN

Replace ContraPest trays monthly, or as often as needed to retain optimum flow of bait.

4



4. MAINTENANCE AND SERVICING

MONTHLY MAINTENANCE

ContraPest needs to be maintained at minimum on a once-monthly interval. During each visit, the bait station should be checked to ensure that a continuous supply of ContraPest is made available to the rats.

- o If no consumption is evident after a 30-day period, it may be necessary to re-evaluate the bait station location.
- o If there is no ContraPest left after a 30-day period, it may be necessary to add additional stations to the site. This can also occur if there is only one tank in each bait station as foraging patterns may have shifted and/or rat migration may have taken place, resulting in greater demand in a foraging area or ContraPest feeding station area.

DURING MAINTENANCE CHECKS

- o Ensure that there is a supply of ContraPest in the bait station (enough to last until the next service date). It is required that tanks be replaced every 30 days.
- o Make sure that ContraPest is flowing freely into the feeding trays attached to the tanks (no coagulation, build up, or film). It is recommended to replace trays on a monthly basis.
- o Clean any debris that may have accumulated inside of the bait stations, such as leaf litter or nesting material.
- o Ensure that trays and tanks have not been chewed by rats. If they have, replace them.



DISPOSAL PROCESS:

IF TANK IS EMPTY

Place container in trash or offer for recycling.
NOTE: Do not re-use empty tanks.

IF PARTIALLY FILLED

Cap the tank and place in the trash container.

WHY SO SIMPLE?

The U.S. EPA performed a risk assessment and reviewed the disposal procedure provided on the label when ContraPest was registered and found the procedure was sufficient because of the following:

- o Low concentration of active ingredients, less than 0.1%
- o The remaining 99.9% of ContraPest is composed of Generally Recognized As Safe ingredients

The key to ContraPest is consistency. Always ensure you have a continuous supply ready for rats on your property.



5. EXPECTATIONS

When Should a Decline in the Rat Population be Noticed?

ContraPest impacts fertility shortly after consumption but takes several breeding cycles to translate into population declines. ContraPest can remain effective in the rats for as long as 60 days. The below factors also contribute:

- o **Size of the site:** The site needs to be large enough that it encompasses the entire population of the rat infestation as mentioned in Site Evaluation (Section 1 of this document). If not, the results will be diluted.

ContraPest should be used as part of an integrated pest management (IPM) program, which will hasten as lethal methods are used to increase the death rate. Adding ContraPest to an IPM program allows the populations to decrease quickly and maintains a manageable level by minimizing reproduction and therefore, limiting population rebounds. You will notice decreasing signs of rats and fewer juveniles as you continue to use ContraPest.

- o **Please note:** Lethal methods should be placed 15–30 ft. away from all ContraPest stations.

ContraPest targets reproduction, limiting fertility in male and female rats, beginning with the first breeding cycle following consumption.

- o **History of Rodent Control at the Site:** If there has been an ongoing rodent control program on the site, it is possible that rats have become bait-averse. This may delay or even cease consumption of ContraPest. This is true when lethal methods, such as rodenticides, are used in a responsible fashion which ensures rats do not become bait-averse.

Impacts individual fertility shortly after consumption.

How Long Must I use ContraPest?

ContraPest is a contraceptive, not a sterilant or one-dose product. The effects of ContraPest are reversible, but this is a slow process. Continuous baiting will provide the best results and ensure the population does not rebound due to migration and renewed reproduction. When consumed, ContraPest targets reproduction, limiting fertility in male and female rats beginning with the first breeding cycle following consumption. The average duration of infertility ranges from 77 to over 180 days (2 to 6 months) but averages 119 days (± 4.6 days, $N=61$)¹. Both in the lab and in the field, ContraPest consumption has documented effects on fertility reduction and therefore in reducing rat populations.

However, as part of a maintenance program, you will need to still supply continuous levels or amounts of ContraPest to ensure maximum success. As the population sizes decrease, consumption of ContraPest will decrease. Noticeable signs of rat-infested areas will also decrease, evidenced by the decreased number of juveniles and nests seen onsite.

Our monthly subscription program makes it easy to keep your bait stations stocked and your rat control program working for you. Learn more about the program on our website.



6. TROUBLESHOOTING

INSECTS

Ants and other insects have been reported inside stations. The bait is made of sweeteners and is an attractant to not only rats, but also ants.

This does not occur frequently and is a sign that rats are not feeding in the station. In this case, stations should be relocated to a better location or an area where insects are not a problem.

1 + 1 = 15,000.

Let's change it.

7. SAFETY

Applicators should always refer to the Safety Data Sheet (SDS) for the most updated information as this overview is not intended to keep pace with real time SDS updates.

ENVIRONMENTAL SAFETY

The concentration of active ingredients in ContraPest is formulated specifically for rats, and the bait is delivered inside a tamper-resistant bait station that prohibits access to non-target species. The impact on fertility is reversible, so any incidental consumption by other animals will not lead to infertility.

The active ingredients in ContraPest break down to inactive compounds within 15 minutes of consumption and are excreted by rats. Due to low concentrations of the actives as well as their short half-lives, there is minimal risk to non-targets that may prey upon rats that have consumed ContraPest. Active ingredients also break down when exposed to water and soil, so there is no accumulation in the environment.

USER/HANDLER SAFETY

ContraPest, when used as directed and while wearing personal protective equipment, is not harmful to the skin and cannot be inhaled. Results of a six-pack acute toxicology study revealed only a slight dermal reaction.

Applicators are required to wear personal protective equipment (closed-toed shoes, protective nitrile or butyl gloves ≥ 14 mm, long-sleeved shirts, and long pants) while working with ContraPest. If ContraPest comes into contact with skin, thoroughly wash any areas exposed with soap and water (refer to SDS for more information).

ContraPest comes in single use containers that require no mixing. ContraPest liquid in partially-consumed tanks cannot be combined for reuse.



AGRIBUSINESS



COMMERCIAL



MUNICIPALITIES



RESIDENTIAL

contrapest

SenesTech is always here to answer any questions and support our customers. If you have any questions about ContraPest, how to deploy or how to implement into your current rodent control program, please do not hesitate to reach out.

For more information,
contact us today.

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