US EPA ARCHIVE DOCUMENT

FILE
112701

P.C. Code 112701 DP Barcode: D210477 Date Out:

April 10, 1995

MEMORANDUM:

Subject: Response to Zeneca's Letter (10/28/94) Concerning the Status of the Brodifacoum Studies: Hydrolysis, Aerobic Soil Metabolism, Adsorption/Desorption and Soil Column Leaching

To: Barbara Briscoe, PM 81, and Franklin Rubis, PM Team Reviewer, Registration Division

From: John Hunt Jordan, Ph.D. Microbiologist, Review Section 3 EFGWB (7507C)

THRU: Akiva D. Abramovitch, Ph.D., Head
Environmental Chemistry, Review Section 3 EFGWB (7507C)

Henry Jacoby, Chief EFGWB (7507C) 4/10/95

The attached memorandum addresses the current data requirement(s) for reregistration.

2065835

BRODIFACOUM

Response to Zeneca's Comments of October 28, 1994

EFGWB accepts Zeneca's claim that the parent is stable to hydrolysis at pH 5, 7, and 9, and that brodifacoum is unstable in the presence of acetonitrile cosolvent. No hydrolysis degradation products can be expected. The ads./des. study is invalid because brodifacoum is soluble (20,000 ppm) in acetone cosolvent used in the study. However, unaged soil column leaching studies showed the parent to be immobile. Field dissipation studies are required by 158.290 but the data have been waived because of the limited (around structures) use pattern. Only hydrolysis, aerobic soil metabolism, and (aged) soil column leaching or ads./des. were required.

Discussion

Although some brodifacoum data are deficient, EFGWB has sufficient information to assess the environmental fate, therefore, no further data are required. Brodifacoum is stable to hydrolysis at pH 5, 7, and 9 and is persistent (t-1/2 = 157 days) and immobile in soil. Although brodifacoum is persistent, its limited use pattern and immobility should limit ground and surface water exposure.

According to the label use directions, the use pattern for brodifacoum products is restricted to bait locations out of reach of children, pets, domestic animals and non-target wildlife or in tamper resistant bait stations. Therefore, the exposure and resulting environmental risk is greatly reduced.

Zeneca's data indicate that the calculated maximum possible (worst case) residue concentration in soil from the major degradate is 0.3 ppb. Therefore, major degradate characterization is not required.

Because brodifacoum products are rodenticides, they are used in and around domestic, agricultural, commercial, industrial, public and similar man-made structures. Weather Bait with Bitrex is also used in and around transport vehicles (ships, trains, aircraft) and related port or terminal buildings. No broadcast or field use is registered.

DP BARCODE: D210477 REREG CASE # 2755

CASE: 819451 DATA PACKAGE RECORD DATE: 03/27/95
SUBMISSION: S478956 BEAN SHEET Page 1 of 1

* * * CASE/SUBMISSION INFORMATION * * *

CASE TYPE: REREGISTRATION ACTION: 614 DATA WAIVER REQUEST
CHEMICALS: 112701 Brodifacoum 100.00 %

ID#: 112701
COMPANY:
PRODUCT MANAGER: 81 BARBARA BRISCOE 703-308-8177 ROOM: CS1 1F4
PM TEAM REVIEWER: FRANKLIN RUBIS 703-308-8184 ROOM: CS1 1N4
RECEIVED DATE: 11/02/94 DUE OUT DATE: 01/11/95

* * * DATA PACKAGE INFORMATION * * *

DP BARCODE: 210477 EXPEDITE: Y DATE SENT: 12/28/94 DATE RET.: / /
CHEMICAL: 112701 Brodifacoum
DP TYPE: 999 Miscellaneous Data Package
CSF: LABEL:

ASSIGNED TO	DATE IN	DATE OUT
DIV : EFED	01/02/95	/ /
BRAN: EFGB	01/03/95	/ /
SECT: CRS3	01/03/95	/ /
REVR : AABRAMOV	01/03/95	/ /
CONTR:	/ /	/ /

ADMIN DUE DATE: 02/16/95
NEGOT DATE: / /
PROJ DATE: / /

* * * DATA REVIEW INSTRUCTIONS * * *

Please review the attached letter from Zeneca regarding our letter to them dated 10/28/93. A copy of our letter is also attached. Frank Rubis, 308-8184.

* * * DATA PACKAGE EVALUATION * * *

No evaluation is written for this data package

* * * ADDITIONAL DATA PACKAGES FOR THIS SUBMISSION * * *

DP BC	BRANCH/SECTION	DATE OUT	DUE BACK	INS	CSF	LABEL

OCT 28 1993

OCT 28 1993

Mr. S. K. Theodakis
Senior Regulatory Coordinator
ICI Agricultural Products
Wilmington, Delaware 19897

Dear Mr. Theodakis:

This letter is in regard to studies that you have submitted in support of reregistration of brodifacoum and the Agency's review of them.

Guideline 81-2, Acute Dermal LD_{50}-rat.

The study defines a dermal LD_{50} of 5.21 mg/kg (male rats) and 3.16 mg/kg (female rats) for material containing 95.6% brodifacoum, which is in toxicity category I in terms of its dermal toxicity hazard potential. While this study, MRID 422321-01, is classified as core minimum data, it is not acceptable in satisfying guideline requirement 81-2 to support data for products containing 0.25% brodifacoum because of the uncertainties in extrapolating the dermal LD_{50} value to the 0.25% formulating-use only product.

Although the study is acceptable in fulfilling the guideline requirement to support registration and/or reregistration of products containing approximately 95.6% brodifacoum, the information that the Agency has available indicates that a "technical" for brodifacoum containing 90-100% active ingredient is not sold in this country. Instead, there is a "concentrate" containing 0.25% active ingredient, and this is what is used to formulate end-use products (which generally contain 0.005% active).

The battery of acute toxicity studies (oral LD_{50}, dermal LD_{50}, primary dermal and eye irritation, dermal sensitization) should be done on the 0.25% concentrate used for manufacturing end-use products (or that registered product having the highest percentage content of active ingredient).

A new study must be submitted to the Agency within two years, from the date of this letter, or the Agency will take appropriate regulatory action.

A copy of the data evaluation record is enclosed.

Guideline 85-1, Metabolism-rat.

This study, MRID 420075-02, is classified core supplementary. The study is deficient and does not satisfy the general metabolism data guideline requirements. The study does not provide information as to how much brodifacoum was retained in carcasses of animals dosed with 0.02 or 0.35 mg/kg. There are insufficient analytical data relating to amount of label present in excrement, so it is not possible to correlate loss of label via the feces and/or urine with the half-life for elimination from the liver and other organs.

The major findings of this study involve the high retention and long-term persistence of the parent compound in the liver following a single oral dose of brodifacoum at both subtoxic (0.02 and 0.15 mg/kg) and toxic dose levels (0.35 mg/kg). We can accept the summary statement (p.10) that: "The elimination of radioactivity from liver following administration of a toxic dose of brodifacoum was biphasic. There was a rapid phase which also corresponded to a reduction in clotting factor synthesis followed by a slower terminal phase during which blood clotting function was normal. The half life of elimination during the rapid phase (days 1-4) was approximately 4 days and for the slower phase (days 28-84) was 128 days. At non-toxic dose levels the results showed that probably only the slow elimination phase was present for which the half-life was 350 days.

There is no indication that any attempt was made to determine whether or not the label present in urine and/or feces was present as metabolite(s) or parent compound, and what the proportions might have been.

In addition, the way the study was conducted does not conform to the protocol recommendations in the Subdivision F Guidelines. The study did not include a group given a low-dose of non-labelled brodifacoum daily for 14 days, followed by a single non-toxic dose of labelled test material, nor did it include a group receiving an intravenous dosage of test material (although this deficiency, by itself, would not necessarily make the study unacceptable, considering that most of the oral dose was apparently absorbed).

A new study must be submitted to the Agency within two years, from the date of this letter, or the Agency will take appropriate regulatory action.

A copy of the data evaluation record is enclosed.

Guideline 86-1, Antidotal-dog

This study, MRID 420075-01 is acceptable. The findings of this study are part of the toxicological data base for brodifacoum and may be taken into consideration in any regulatory decision the Agency may make regarding this active ingredient.

It is concluded that the vitamin K_1 treatments were effective in preventing mortality from spontaneous hemorrhaging in the dogs, and that the findings of this study are in agreement with material previously received by the Agency.

A copy of the data evaluation record is enclosed.

Guideline 161-1, Hydrolysis.

This study, MRID 422377-01, was found to be unacceptable. These data are considered to be of uncertain value and should not be used to predict the environmental behavior of brodifacoum residues. Degradates were not adequately identified and evidence of storage stability was not provided although samples were stored frozen before analysis. Brodifacoum appeared to degrade rapidly for 24 hours at pH 5, 7, and 9, but no degradation was observed after that time. No explanation was offered for this unusual chemical behavior aside from the admission of possible methodology problems.

In the event that this problem cannot be resolved a new study must be submitted to the Agency within one year, from the date of this letter, or the the Agency will take appropriate regulatory action.

A copy of the data evaluation record is enclosed.

Guideline 162-1, Aerobic Soil Metabolism.

This study, MRID 425794-01, was found to be unacceptable. Brodifacoum degraded with a half-life of 157 days in sandy clay loam soil incubated in the dark at 21 C and 75% of 0.33 bar moisture capacity. No nonvolatile degradates other than $^{14}CO_2$ were identified. $^{14}CO2$ comprised 36% of the applied radioactivity at 52 weeks posttreatment. Up to eleven [compounds other than [^{14}C] brodifacoum were isolated from the soil extracts at 2.07 to 17.34% of the applied (0.008 to 0.067 ppm), but none were identified. In order for this study to fulfill the aerobic soil metabolism data requirements, all [^{14}C compounds isolated from the soil at $\geq$0.01 ppm must be identified, especially compounds D, E, F, and K. Additional information may be required on the aerobic soil metabolism of brodifacoum labeled in other positions of the molecule.

A new study must be submitted to the Agency within two years, from the date of this letter, or the Agency will take appropriate regulatory action.

A copy of the data evaluation record is enclosed.

Guideline 163-1, Mobility/Aged Column Leaching.

This study, MRID 425683-01 was found to be acceptable. Based on column leaching experiments, aged (30 days) brodifacoum residues (89-97% as brodifacoum) were relatively immobile in columns of sand, sandy clay loam, silty clay, or clay soils from Great Britain that were leached with 20 inches of 0.01 M calcium chloride solution. Following leaching, 78.81-94.87% of the applied radioactivity remained in the layer of aged soil and $\leq$0.32% was recovered in the leachate. No degradates were identified in the soil or leachate. Degradates examined in this study included "A" and "C" from the aerobic metabolism study. Mobility data (either batch equilibrium or column leaching) will also be required for degradates "D", "E", "F", and "K", the major degradates in the aerobic soil metabolism study. Because so little degradation was observed, this study will be considered as fulfilling the unaged mobility data requirement. Additional data will be needed on the mobility of brodifacoum degradates in order to satisfy the aged mobility data requirement.

A copy of the data evaluation record is enclosed.

Guideline 163-1, Mobility-Adsorption/Desorption.

This study, MRID 420245-01, was found to be unacceptable. These data are considered to of uncertain value and should not be used to predict the environmental behavior of brodifacoum residues. This study is unacceptable because acetone was used as a co-solvent, resulting in brodifacoum concentrations far in excess of possible concentrations in the field. Brodifacoum is soluble in acetone at up to 20,000 ppm. Brodifacoum was applied to a 2 g soil/20 ml water slurry at 0.9-4.5 ppm, although the study author stated that brodifacoum solubility in water is <0.1 ppm in 0.01 N $CaCl_2$ solution. It is not possible to extrapolate these results into realistic solubility ranges, or to discount the likelihood that brodifacoum was partitioned out of the aqueous solution and into the acetone co-solvent. In addition, Freundlich K values were not calculated.

A new study must be submitted to the Agency within one year, from the date of this letter, or the Agency will take appropriate regulatory action.

A copy of the data evaluation record is enclosed.

If you have any questions concerning this letter, please contact Frank Rubis at (703) 308-8184.

Sincerely yours,

James H. Kearns, Chief
Planning and Reregistration Branch
Special Review and
Reregistration Branch

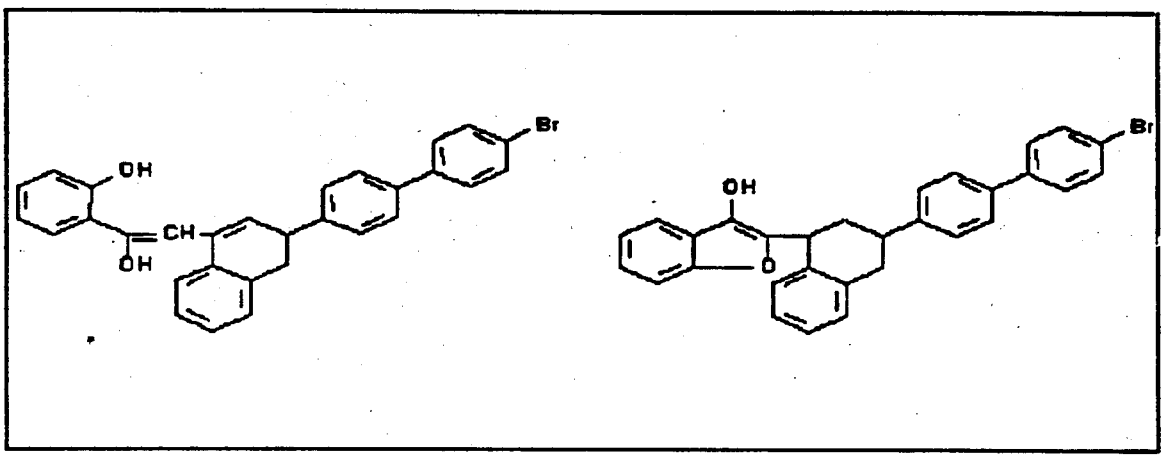
Enclosures

CONCLUSIONS

From the information derived from the isolation and spectroscopic analysis the following characterisation has been derived;

a) degradate E/K has Rf values of 0.73 and 0.69 in solvent systems chloroform and toluene, propanol, acetic acid(9:1:1) respectively(Silica gel TLC plates). MRID 425794-01.
b) compound E/K is present in at least two isomeric forms which are separated by HPLC, Figure 2a and have the same mass spectra.
c) the molecular ion of the isomers is m/z 495 and contains the bromine atom, Figure 2b.
d) a fragment ion at m/z 135 suggests that the degradation has taken place on the 4 hydroxycoumarin ring, Figure 2b.
e) ion m/z 135 suggests a loss of 28amu from the 4 hydroxycoumarin.

The following structures have been proposed,



3/16" PELLETS

ZENECA Professional Products

Talon®-G

RODENTICIDE PELLETS

CONTAINS Bitrex™

For Effective Control of Commensal Rats and House Mice

ACTIVE INGREDIENT:	
Brodifacoum-3-[3-(4′-bromo-[1,1′-biphenyl]-4-yl)-1,2,3,4-tetrahydro-1-naphthalenyl]-4-hydroxy-2H-1-benzopyran-2-one	0.005%
INERT INGREDIENTS	99.995%
TOTAL	100.000%

KEEP OUT OF REACH OF CHILDREN

CAUTION

EPA Reg. No. 10182-336
EPA Est. No. 61282-WI-1

Read Additional Precautionary Statements on Side Panels.

Kills warfarin-resistant Norway Rats and house mice. Rodents may consume a lethal dose in one feeding with first dead rodents appearing four or five days after treatment begins.

Net Contents: 45 lb (20.4 kg) 3/16" Pellets

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION

MAY BE HARMFUL OR FATAL IF SWALLOWED. KEEP AWAY FROM HUMANS, DOMESTIC ANIMALS, AND PETS. WASH HANDS AFTER HANDLING BAIT.

IF BAIT IS EATEN BY HUMANS, CALL A PHYSICIAN AT ONCE.

IF BAIT IS EATEN BY ANIMALS OR PETS, CALL A VETERINARIAN AT ONCE.

For 24-hour emergency assistance call ZENECA Medical Emergency Information Network 1-800-327-8633.

NOTE TO PHYSICIAN OR VETERINARIAN

This product may reduce the clotting ability of the blood and cause hemorrhaging. If poisoning occurs, intramuscular and oral administration of vitamin K_1 are indicated, as in poisoning from overdose of bishydroxy coumarin. For human cases, vitamin K_1 is antidotal at doses of 10 to 20 mg (not mg/kg). For animal cases, vitamin K_1 is antidotal at 2 to 5 mg/kg. Repeated doses may need to be given up to two weeks (based on monitoring of prothrombin times). In severe cases, blood transfusions may be necessary.

ENVIRONMENTAL HAZARDS

This product is toxic to fish, birds and wildlife. This product can pose a secondary hazard to birds of prey and mammals. Keep out of any body of water.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

READ THIS LABEL: Read this entire label and follow all use directions and use precautions.

IMPORTANT: Do not expose children, pets, or other nontarget animals to rodenticides. To help to prevent accidents:

1. Store product not in use in a location out of reach of children or pets.
2. Apply bait in locations out of reach of children, pets, domestic animals and nontarget wildlife, or in tamper-resistant bait stations. These stations must be resistant to destruction of dogs and by children under six years of age, and must be used in a manner that prevents such children from reaching into bait compartments and obtaining bait. If bait can be shaken from stations when they are lifted, units must be secured or otherwise immobilized. Even stronger bait stations are needed in areas open to hoofed livestock, raccoons, bears, or other potentially destructive animals, or in areas prone to vandalism.
3. Dispose of product container, and unused, spoiled, and unconsumed bait as specified on this label.

USE RESTRICTIONS—For control of Norway rats, roof rats, and house mice in and around homes, industrial, commercial, agricultural and public buildings, and similar manmade structures. This product may also be used in and around transport vehicles (ships, trains, aircraft) and related port or terminal buildings. Do not use in sewers. Do not place bait in areas where there is a possibility of contaminating food or surfaces that come in direct contact with food. Do not broadcast bait.

SELECTION OF TREATMENT AREAS: Determine areas where rats and/or mice will most likely find and consume the bait. Generally, these areas are along walls, by gnawed openings, in or beside burrows, in corners and concealed places, between floors and walls, or in locations where rodents or their signs have been observed. Remove as much food as possible.

APPLICATION DIRECTIONS

Norway and Roof Rats:

Apply 4 to 16 ounces of bait (usually at intervals of 15 to 30 feet) per placement. Maintain an uninterrupted supply of fresh bait for 10 days or until signs of rat activity cease.

House Mice:

Apply ¼ to ½ ounce of bait per placement. Space placements at intervals of 8 to 12 feet. Larger placements (up to 2 ounces) may be needed at points of very high mouse activity. Maintain an uninterrupted supply of fresh bait for 15 days or until signs of mouse activity cease.

Rats & Mice:

Replace contaminated or spoiled bait immediately. Collect and dispose of all dead animals and unconsumed bait according to "Disposal" paragraph. To prevent reinfestation, eliminate food, water, and harborage as much as possible. If reinfestation does occur, repeat treatment. Where a continuous source of infestation is present, establish permanent bait stations and replenish bait as needed.

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal. Do not reuse empty container except for holding additional TALON rodenticide.

STORAGE: Store in original container only in a dry place inaccessible to children and pets.

PESTICIDE DISPOSAL: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL: Dispose of bait container in a sanitary landfill or by incineration if allowed by state and local authorities.

NOTICE TO BUYER AND USER: Seller warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in accordance with directions under normal conditions of use. This warranty does not extend to the use of this product contrary to label instructions, or under abnormal use conditions, or under conditions not reasonably foreseeable to Seller, and Buyer and User assume the risk of any such use. SELLER DISCLAIMS ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING ANY WARRANTY OF FITNESS OR MERCHANTABILITY. SELLER SHALL NOT BE LIABLE FOR CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT AND SELLER'S SOLE LIABILITY AND BUYER'S AND USER'S EXCLUSIVE REMEDY SHALL BE LIMITED TO THE REFUND OF THE PURCHASE PRICE.

TALON® is a trademark of a ZENECA Group Company.
Bitrex® is a trademark of Macfarlan Smith Ltd., Edinburgh, Scotland.
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Made in U.S.A.

ZENECA Professional Products

ZENECA Inc.
Wilmington, Delaware 19897

8693022

ZENECA Professional Products

WeatherBlok®

BAIT with Bitrex®

CONTAINS Bitrex™

Made with TALON® Rodenticide

ACTIVE INGREDIENT:

Brodifacoum 3-[3-(4'-bromo-[1,1'-biphenyl]-4-yl)-1,2,3,4-tetrahydro-1-naphthalenyl]-4-hydroxy-2H-1-benzopyran-2-one	0.005%
INERT INGREDIENTS	99.995%
TOTAL	100.000%

EPA Reg. No. 10182-339
EPA Est. No. 61282-WI-1

Read Additional Precautionary Statements on Side Panels.

Keep Out of Reach of Children

CAUTION

Kills warfarin-resistant Norway Rats and House Mice. Rodents may consume a lethal dose in one feeding with first dead rodents appearing four or five days after treatment begins.

May be Harmful or Fatal if Swallowed. Refer to Precautionary Statements.

Net Contents: 12 ½ lb (5.67 kg)

Weather

Made with TALON

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION

MAY BE HARMFUL OR FATAL IF SWALLOWED. KEEP AWAY FROM HUMANS, DOMESTIC ANIMALS AND PETS. WASH HAND AFTER HANDLING BAIT.

IF BAIT IS EATEN BY HUMANS, CALL A PHYSICIAN AT ONCE.
IF BAIT IS EATEN BY ANIMALS OR PETS, CALL A VETERINARIAN AT ONCE.

FOR 24-HOUR EMERGENCY MEDICAL ASSISTANCE, CALL 1-800-F-A-S-T-M-E-D (327-8633).
FOR CHEMICAL EMERGENCY: Spill, leak, fire, exposure, or accident call CHEMTREC 1-800-424-9300.

NOTE TO PHYSICIAN OR VETERINARIAN

This product may reduce the clotting ability of the blood and cause hemorrhaging. If poisoning occurs, intramuscular and or administration of vitamin K_1 are indicated, as in poisoning from overdose of bishydroxy coumarin. For human cases, vitamin K_1 i antidotal at doses of 10 to 20 mg (not mg/kg). For animal cases, vitamin K_1 is antidotal at 2 to 5 mg/kg. Repeated doses may nee to be given up to two weeks (based on monitoring of prothrombin times). In severe cases, blood transfusions may be necessary.

ENVIRONMENTAL HAZARDS

This product is toxic to fish, birds and wildlife. This product can pose a secondary hazard to birds of prey and mammals. Keep o of any body of water.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

READ THIS LABEL: Read this entire label and follow all use directions and use precautions.

IMPORTANT: Do not expose children, pets, or other nontarget animals to rodenticides. To help to prevent accidents:

1. Store product not in use in a location out of reach of children and pets.
2. Apply bait in locations out of reach of children, pets, domestic animals and nontarget wildlife, or in tamper-resistant bait st tions. These stations must be resistant to destruction by dogs and by children under six years of age, and must be used in manner that prevents such children from reaching into bait compartments and obtaining bait. If bait can be shaken from st tions when they are lifted, units must be secured or otherwise immobilized. Even stronger bait stations are needed in areas ope to hoofed livestock, raccoons, bears, or other potentially destructive animals, or in areas prone to vandalism.
3. Dispose of product container, and unused, spoiled, and unconsumed bait as specified on this label.

USE RESTRICTIONS—For control of Norway rats, roof rats, and house mice in and around sewers, homes, industrial, commercia agricultural and public buildings, and similar manmade structures. WeatherBlok® Bait with Bitrex® may also be used in and arour transport vehicles (ships, trains, aircraft) and related port or terminal buildings. Do not place bait in areas where there is a possibi ity of contaminating food or surfaces that come in direct contact with food. Do not broadcast bait.

SELECTION OF TREATMENT AREAS: Determine areas where rats and/or mice will most likely find and consume the bait. Generall these areas are along walls, by gnawed openings, in or beside burrows, in corners and concealed places, between floors and wall or in locations where rodents or their signs have been observed. Remove as much food as possible.

Blok®

BAIT with Bitrex®

CONTAINS Bitrex™

Rodenticide

APPLICATION DIRECTIONS

Norway and Roof Rats:

Apply 8 to 23 WeatherBloks (usually at intervals of 15 to 30 feet) per placement. Maintain an uninterrupted supply of fresh bait for 10 days or until signs of rat activity cease.

For use in sewers, securely attach one end of wire to WeatherBlok and the other end to a stationary structure such as the bottom step of a manhole ladder or to a sewer grate, allowing just enough wire for the block to rest on manhole benching. If benching is not present, suspend block a few inches above the high water line or place WeatherBlok on a board supported by opposing steps of the ladder. Securing WeatherBlok in this manner will prevent removal by rats or water. Place at least 15 WeatherBloks per manhole. Maintain an uninterrupted supply of fresh bait for at least 10 days or until feeding stops.

House Mice:

Use one bait block per placement. Space placements at intervals of 8 to 12 feet. Two blocks may be needed at points of very high mouse activity. Maintain an uninterrupted supply of fresh bait for 15 days or until signs of mouse activity cease.

Rats and Mice:

Collect and dispose of all dead animals and (when baiting operations are to be ceased) unconsumed bait according to the "Disposal" paragraph. To prevent reinfestation, eliminate food, water and harborage as much as possible. Where a continuous source of infestation is present, establish bait stations and replenish bait as needed.

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal. Do not reuse empty container except for holding additional WeatherBlok rodenticide.

STORAGE: Store in original container only in dry place inaccessible to children and pets.

PESTICIDE DISPOSAL: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL: Dispose of bait container in a sanitary landfill or by incineration if allowed by State and local authorities.

NOTICE TO BUYER AND USER: Seller warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in accordance with directions under normal conditions of use. This warranty does not extend to the use of this product contrary to label instructions, or under abnormal use conditions or under conditions not reasonably foreseeable to Seller, and Buyer and User assumes the risk of any such use. SELLER DISCLAIMS ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING ANY WARRANTY OF FITNESS OR MERCHANTABILITY. SELLER SHALL NOT BE LIABLE FOR CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT AND SELLER'S SOLE LIABILITY AND BUYER'S AND USER'S EXCLUSIVE REMEDY SHALL BE LIMITED TO THE REFUND OF THE PURCHASE PRICE.

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ZENECA Professional Products

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Wilmington, Delaware 19897

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