

US EPA ARCHIVE DOCUMENT

**EFFICACY REVIEW**

**PRODUCT:** Kaput Field Rodent Bait B

**REG. NUMBER:** 72500-11

**DATE:** December 15, 2008

**GLP:** Yes

**BARCODE:** D358909

**DECISION:** 394038

**CHEMICAL:** Diphacinone (0.0025%)  
Imidacloprid (0.025%)

**CHEMICAL NUMBER:** Diphacinone.....067701  
Imidacloprid.....129099

**PURPOSE:** Review data to determine if it supports the addition of claims for fleas infesting prairie dogs.

**MRIDS:** 47603301. Poche, R. (2008) *Determining the Blood Titer Levels and the Effectiveness of Kaput Field Rodent Bait B Against Oropsylla spp. Fleas on Black-Tailed Prairie Dogs (Cynomys Ludovicianus)*. Project Number: 08015, 138261/41/3/1, 82/66/6/9. Unpublished study prepared by Genesis Laboratories, Inc. 123 p.

**TEAM REVIEWER:** Dan Peacock

**EFFICACY REVIEWER:** Kable Bo Davis, M.S., Entomologist

**SECONDARY**

**EFFICACY REVIEWER:** Joanne Edwards, M.S., Entomologist

**BACKGROUND:**

Kaput Field Rodent B is a ready-to-use pesticide bait intended for the control of wild squirrels (*Spermophilus beecheyi*) and their infesting fleas. The registrant is wishing to add "aids in the control of fleas infesting prairie dogs" claims. The above referenced claim was objected to in Agency reviews dated November 13, 2007 (D345949) and November 27, 2007 (D346846). Both reviews stated that additional data would be required for the addition of this claim. MRID 47603301 has been submitted in an attempt to address these deficiencies.

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Handwritten signature of Joanne Edwards with date 12/15/08.

**DATA REVIEW:**

The following data review is comprised of explanations of materials and methods, and a summation of experimental results containing tables with reformatted data.

**47603301. Poche, R. (2008) Determining the Blood Titer Levels and the Effectiveness of Kaput Field Rodent Bait B Against Oropsylla spp. Fleas on Black-Tailed Prairie Dogs (Cynomys Ludovicianus). Project Number: 08015, 138261/41/3/1, 82/66/6/9. Unpublished study prepared by Genesis Laboratories, Inc. 123 p.**

The objective of this study was to determine if Kaput Field Rodent Bait B (EPA Reg. No. 72500-11) is efficacious against fleas after feeding on prairie dogs treated with pesticide. The experimental design consisted of dividing 15 prairie dogs into 3 groups of 5 (3 male/2 female). Prairie dogs (see Table 1) in both of the treatment groups were orally gavaged with solution containing active ingredient. All squirrels were assessed for disease, abnormalities and overall health prior to treatment.

Roughly 3 – 4 hours after oral gavage, all prairie dogs were infested with fleas (*Oropsylla* spp.) via an on-rodent feeding apparatus. Fleas were allowed to feed for ~3 to 3.5 hours, upon which time the apparatuses were removed. Observations on flea mortality were taken at 24 and 48 hours.

**Table 1. Treatment Group Applications**

Group	Dosage	# Fleas Per Animal
Treatment 1	5 g of bait (~1.25 mg imidacloprid)	22.2
Treatment 2	5 g of bait (~1.25 mg imidacloprid (~0.125 mg diphacinone)	29.6
Control	1 ml ethanol (no active ingredient)	35.8

Results-

**Table 2. Percent Mortality; *Oropsylla* spp.**

Group	Percent Mortality	
	24-hr	48-hr
Treatment 1	98% <sup>1</sup>	96%
Treatment 2	91%	96%
Control	1%	4%

<sup>1</sup> *inaccurate counting of the fleas*

The percent mortality of fleas feeding from prairie dogs treated with ~1.25 mg imidacloprid and ~0.125 mg diphacinone ranged from 91% (24-hr) to 96% (48-hr). The percent mortality of fleas within the control group remained at acceptable levels throughout the course of the study.

**RECOMMENDATIONS:**

The submitted data are adequate to support the addition of an “*aids in the reduction of populations of fleas infesting prairie dogs*” claim. More specifically, the data support the addition of claims for fleas within the genus *Oropsylla* (including *Oropsylla montana*).