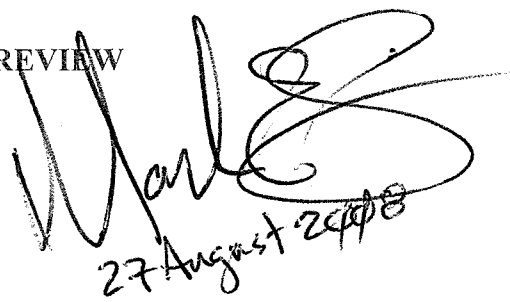


PRODUCT PERFORMANCE / EFFICACY REVIEW

Mark Suarez, Entomologist - IB



DATE: 26 August 2008

EPA REG. NUMBER: 75844-I

PRODUCT NAME: Freedom 50 Plus IGR Spot-On for Dogs
REGISTRANT: Andrew M Martin Co. NV. Inc.

PM: George LaRocca, PM 13
REVIEWER: Linda DeLuise

DECISION #.: 389796
DP BARCODE: 350265

ACTION: R301

ACTIVE INGREDIENT(S): 129032, Pyriproxyfen.....1.2%
109701, Permethrin.....50.0%

TYPE: Spot-On for Dogs

OPPTS GUIDELINE(S): 810.3300

MRID:

46062801	Cited	GLP? N/A
43396409	Cited	GLP? N/A
43396410	Cited	GLP? N/A
47346702	Submitted	GLP? No.

SITES: Dogs greater than 12 weeks of age

PESTS: Fleas (eggs, larvae, adults) Ticks, Mosquitoes,
Lice, & Mites

STUDY APPLICATION RATE: Variable

LABEL APPLICATION RATE: 25 mg Permethrin/lb, dogs up to 132 lbs
0.4 mg Nylar/lb, dogs up to 132 lbs

STUDY SUMMARY

The registrant used the selective method to support claims present on the label. The application was submitted as a me-too of EPA Reg. No. 67505-3. The cited me-too product contains the same amount of permethrin, but a greater percentage of pyriproxyfen than the subject formulation (5% compared to 1.2% pyriproxyfen).

The registrant submitted a rationale and two public literature papers in an attempt to support the desired claims (MRID 47346702). The rationale focused on the dosage of permethrin and pyriproxyfen applied to animals in cited trials in comparison to the proposed label directions for use.

The lowest amount of permethrin applied to dogs per the weight classes designated and label directions for use is 55 g Permethrin/kg dog body weight for dogs less than 100 lb.

$$\frac{0.045 \text{ mL Product}}{\text{lb dog BW}} \times \frac{0.50 \text{ g Permethrin}}{\text{g Product}} \times \frac{1.11 \text{ g Product}}{\text{mL Product}} = \frac{0.025 \text{ g Permethrin}}{\text{lb dog BW}}$$

The lowest amount of pyriproxyfen applied to dogs per the weight classes designated and label directions for use is 1.3 mg Pyriproxyfen/kg dog body weight for dogs less than 100 lb.

$$\frac{0.045 \text{ mL Product}}{\text{lb dog BW}} \times \frac{0.012 \text{ g Pyriproxyfen}}{\text{g Product}} \times \frac{1.11 \text{ g Product}}{\text{mL Product}} = \frac{0.0006 \text{ g Pyriproxyfen}}{\text{lb dog BW}}$$

The cited permethrin products were registered at application rates of 49.7 mg [75257-1] 49.4 mg [773-73] per kg dog BW. The registrant also cited public literature data in support of pyriproxyfen claims. In the Ross *et al.* 1997 study, dogs were effectively protected from adult fleas, ticks, and mosquitoes for 28 days as a result of permethrin in the formulation. Adult emergence of fleas was adequately reduced for up to 123 days. In the Stanneck *et al.* 2003 paper, hair samples from treated dogs were analyzed for pyriproxyfen residues over time. Stanneck *et al.* 2002 demonstrated effective suppression of flea egg and larval development at dosages of as little and 0.0001 mg/kg hair. Hair samples from dogs (and cats) in the cited paper indicate retention of pyriproxyfen at rates (mg/kg) greater than 0.0001 mg/kg for up to 8 weeks. The cited pyriproxyfen data were collected from trials with a maximum pyriproxyfen application rate of 1.0 mg/kg and 0.04 mL/kg, respectively.

ENTOMOLOGIST'S COMMENTS AND RECOMMENDATIONS:

The following claims involving product performance are proposed for the labeling:

1. Kills, repels and prevents re-infestation of fleas for up to 5 weeks
2. Kills, repels and prevents re-infestation for fleas for up to 4 weeks
3. Kills flea eggs and larvae for up to 8 weeks
4. Kills flea eggs and larvae for up to 6 weeks
5. Kills flea eggs and larvae for up to 4 weeks

6. BREAKS FLEA LIFE CYCLE!
7. Kills, repels and prevents re-infestation of ticks for up to 6 weeks
8. Kills, repels and prevents re-infestation of ticks for up to 4 weeks
9. Kills, repels mosquitoes, lice and mites on dogs for up to 4 weeks
10. 7 WAY PROTECTION
11. PROTECT 7 WAYS
12. Contains AMRx

The following claims are supported by the permethrin database and may be used:

1. Kills, repels and prevents re-infestation of fleas for up to 5 weeks
2. Kills, repels and prevents re-infestation for fleas for up to 4 weeks
3. Kills, repels and prevents re-infestation of ticks for up to 6 weeks
4. Kills, repels and prevents re-infestation of fleas for up to 4 weeks
5. Kills, repels mosquitoes, lice and mites on dogs for up to 4 weeks

The following claims are supported by the pyriproxyfen database and may be used:

1. Kills flea eggs and larvae for up to 8 weeks
2. Kills flea eggs and larvae for up to 6 weeks
3. Kills flea eggs and larvae for up to 4 weeks
4. BREAKS FLEA LIFE CYCLE!

The following claims are not supported remove them from the product labeling:

1. 7 WAY PROTECTION – **Remove**; misleading
2. PROTECT 7 WAYS – **Remove**; misleading
3. AMRx – **Remove**; heightened efficacy/comparative claim (added to EPA Reg. No. 75257-1 on 17 July 2006 by notification)

Enclosure
075844-00001 SS24637 final-ER