

UNITED STATES

9-19-85 9-24-85
DATE: D _____ OF _____

FILE OF REG. NO. 4758 - RLR

INITIAL OF L.E. HENRY NO. _____

DATE FOR REVIEW 9-5-85

DATE OF SUBMISSION 9-4-85

DATE SUBMISSION ACCEPTED _____

TYPE PRODUCT(S): (1) I, I, J, I, I, I

DATE ACCEPTANCE NO(S). _____

PRODUCT REG. NO. 16

PRODUCT NAME(S) Hill's Holiday Flea Stop Pump Spray for Dogs and Cats
~~Hill's Holiday Flea Stop Pump Spray~~

CREATOR NAME Pet Chemicals, Inc.

SUBMISSION NUMBER Flea spray for pets and Pet bedding

CHEMICAL & FORMULATION Linalool _____ 0.925

Piperythyl Butoxide _____ 0.500

Phenyl Glycol _____ 10.000

BEST AVAILABLE COPY

Inert Ingredients _____ 28.575

CONCLUSIONS & RECOMMENDATIONS _____

UNITED STATES

9-19-85 9-24-85
DATE: D - OF

FILE OF REC. NO. 4758-RLG

INITIALS OF LE. HENRY NO.

DATE DIV. RECEIVED 9-5-85

DATE OF SUBMISSION 9-4-85

DATE SUBMISSION ACCEPTED

TYPE PRODUCT(S): (1) I. I. J. I. I. I.

DATE ACCEPTANCE NO(S).

PRODUCT NO. 16

PRODUCT NAME(S) Holiday Non-Aerosol Flea Spray

COMPANY NAME Pet chemicals, Inc.

SUBMISSION PURPOSE Flea spray for pets and pet bedding

CHEMICAL & FORMULATION	δ -Limonene	0.920
	Linalool	0.925
	Piperonyl butoxide	0.500
	Propylene glycol	10.000
	Water Inhibitors	87.685

CONCLUSIONS & RECOMMENDATIONS

Introduction - Refer to reviews of 6-18-85 and 8-23-85 of 4758-RLR for background information. The review of 8-23-85 indicated that there were sufficient data to substantiate claims for control of egg, larval, and adult flea stages, but that additional data for pupae were needed. The current submission contains additional data for ^{4758-RLR} activity against all flea stages and ⁹¹⁵⁰ data for the subject formulation.

Data Summary - The submitted data consist of a test report from Ohio State University. All flea stages were tested on 3" x 3" carpet squares by applying 10 cc. of spray/square. A total of 4 replicates were tested. For each stage there were 50 eggs, larvae, pupae and adults/replicate. Results are summarized below.

Formulation	Eggs % Adults emerging over 49 days	Larvae % Adults emerging over 42 days	Pupae % Adults emerging over 32 days	Adults % Adults emerging at 24 hrs.
Subject Formulation	0	0	0	100
10% propylene glycol + [REDACTED]	0	0	0	100
PA 02015	0	0	0	100
Control (water)	59	41	39	0

1) Linalool — 1.00%

Piperonyl butoxide — 0.50%

[REDACTED]

Propylene glycol — 10.00%

[REDACTED]

There were no developing adults from the treated eggs, larvae and pupae for the subject formulation and for 10% propylene glycol [REDACTED]. The investigator states "In the egg tests, all treatments were lethal to eggs since we could find no larvae". It should be noted that in the ~~report~~^{letter} submitted on 8-7 indicates that examination of flea eggs treated with the ~~subject formulation~~^{100% Linalol} has indicated that microscopic examination showed that hatching was prevented.

Data for adults indicated 100% control for the subject formulation and for 10% propylene glycol [REDACTED].

Conclusions. The test results for eggs, larvae and adults confirm earlier findings.

The test results for pupae demonstrate that both the subject formulation and 10% propylene glycol + [REDACTED] ^{as well as formulation PA 020} are effective against flea pupae. Label claims for control of flea pupae would be acceptable.

The front panel label statement "For use on ~~pets and their~~ ^{pets and their} bedding" should clearly state that this is use as a contact spray.

The back panel label claim that use of the product will result in a more complete 4

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Treatment is not acceptable. There are other insecticides which will kill pre-adult fleas.

The back panel label claim that "one treatment protects your pet and pet's bedding from flea buildup, your pets and family from irritating bites" should be modified to claim killing fleas on pets and on pet's bedding when applied as a contact spray. "one treatment" implies residual activity

R. S. Van Denburgh 9-24-85

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