

US EPA ARCHIVE DOCUMENT

IRB PERFORMANCE REVIEW

IN 1-24-80 OUT 4-8-80

FILE OR REG.NO. 4822-RAO

PETITION, EXP. PERMIT, S. 18, 24c, NO. _____

DATE OF SUBMISSION 12-17-79

DATE DIV. RECEIVED 12-27-79

TYPE PRODUCT(S): (I), D, H, F, N, R, S _____

DATA ACCESSION NO(S). 241552

PRODUCT MGR. NO. 15

PRODUCT NAME(S) Raid Indoor Fogger

COMPANY NAME S.C. Johnson & Son, Inc.

SUBMISSION PURPOSE Registration

CHEMICAL & FORMULATION .50% DDVP

.05% Pyrethrins

200.0 Introduction - The submission is an application for registration of Raid Automatic Indoor Fogger Formula 5066D63-2[.50%, DDVP and .05% Pyrethrins] for use as a total-release fogger in homes, apartments and restaurants for control of exposed stages of certain pests including the following public health pests: roaches, fleas, ticks, spiders, flies, mosquitoes, wasps, hornets, yellow jackets, and waterbugs. Dosage rate of the container is 8 ounces per 6000 cu. ft.

201.0 Data Summary - The data consist of laboratory tests for the control of roaches, fleas, ticks, flies, mosquitoes, wasps, hornets and yellow jackets. Raid Automatic Indoor Fogger [4822-135] which is registered for control of roaches, waterbugs, fleas, ticks, flies, mosquitoes and spiders was included as a standard in all of the testing.

The fly data consisted of 1000 cu. ft. chamber testing of 5 replicates using 500 flies per replicate. The strain of flies tested was not indicated. The strain of flies tested was not indicated. Results are summarized below.

Treatment	Dosage (gms.)	Mean % Knockdown				Mean % Dead 24 hours
		5 min.	10 min.	15 min.	2 hrs	
Standard	37.66	78	88	92	99	99
Subject Formulation	37.8	34	63	90	100	100
Untreated	---	--	--	--	0	0

Results indicated that the subject formulation was comparable to the standard for 15 minutes and 2 hour knockdown and 24 hour mortality.

The mosquito data consisted of 100 cu. ft. chamber testing of replicates using 100 mosquitoes per replicate (Aedes aegypti). Results are summarized below.

Treatment	Dosage (gms.)	Mean % Knockdown				Mean % Dead 24 hours
		5 min.	10 min.	15 min.	2 hrs	
Standard	37.66	99.8	100	100	100	100
Subject Formulation	37.80	90	99.8	100	100	100
Untreated	---	--	--	--	0	0

Results indicated that the subject formulation was comparable to the standard for mosquito control.

18-A
78

The cockroach testing consisted of tests of exposed and sheltered German roaches in both 1000 and 6000 cu. ft. chambers.

In the exposed cockroach testing in the 1000 cu. ft. chamber a container of 25 roaches was placed in each corner of the chamber and exposed for 2 hours and then held in clean containers. Results are summarized below.

Treatment	Dosage (gms.)	Mean % Knockdown	Mean % Dead & Moribund	
		2 hrs.	24 hrs.	48 hrs.
Standard	37.66	100	87	92
Subject Formulation	37.88	100	100	100
Untreated	---	0	0	0

Results indicated that the subject formulation was superior to the standard for the 24 and 48 hour counts.

In the 6000 cu. ft. chamber testing of exposed German roaches, the containers of roaches were placed in 6 locations. The chamber was made up of 3 rooms connected by doors. Two replicates were tested. Results are summarized below.

Treatment	Dosage (gms.)	Mean % Knockdown	Mean % Dead & Moribund	
		24 hrs.	24 hrs.	48 hrs.
Standard	226.2	95	86	86
Subject Formulation	226.2	100	100	100
Untreated	---	0	0	0

Results indicated that the subject formulation was superior to the standard.

The sheltered cockroach testing procedure was similar to the exposed cockroach testing (for both the 1000 cu. ft. and 6000 ft. chambers) except for the use of a plastic tray containing a half pint container with a cover elevated .25 inches above the top of the container in which the roaches were confined, so that flushing could be measured. Results are summarized below.

1000 cu. ft. chamber testing.

Treatment	Dosage (gms.)	Mean % Knockdown 24 hrs.	Mean % Dead & Moribund 24 hrs.	48 hrs.	Mean % Flushed 2 hrs.
Standard	37.66	95	81	84	81
Subject Compound	37.88	95	98	99	95
Untreated	---	0	0	0	--

6000 cu. ft. chamber testing

Treatment	Dosage (gms.)	Mean % Knockdown 24 hrs.	Mean % Dead & Moribund 24 hrs.	48 hrs.	Mean % Flushed 24 hrs.
Standard	226	93	75	75	89
Subject Compound	226	98	99	99	95
Untreated	---	0	0	0	--

Results for both the 1000 and 6000 cu. ft chamber tests indicated that the subject compound was superior to the standard.

The flea testing consisted of confining 25 cat fleas in a plexiglass box lined with terrycloth on the bottom. A replicate consisted of a box placed in each corner of a 1000 cu. ft. chamber. Four replicates were tested. Results are summarized below.

Treatment	Dosage (gms.)	Mean % Knockdown 2 hrs.	Mean % Dead 24 hrs.	48 hrs.
Standard	37.64	98	96	97
Subject Compound	37.38	97.8	99.8	99.8
Untreated	---	0	2.4	10.3

Results indicated that the subject compound was comparable to the standard.

19-P
11m

The wasp testing consisted of 100 cu. ft. chamber testing with Polistes sp. by releasing 20 wasps in the chamber. Five replicates were tested. Results are summarized below.

Treatment	Dosage (gms.)	Mean % Knockdown				Mean % Dead	
		5 min.	10 min.	15 min.	2 hrs	24 hrs.	48 hrs.
Standard	37.16	72	85	91	100	86	100
Subject Compound	37.16	59	81	93	100	83	100
Untreated	---	--	--	--	0	0	0

Results indicated that the subject compound was effective against wasps.

The hornet testing procedure was the same as the wasp testing. Results are summarized below.

Treatment	Dosage (gms.)	Mean % Knockdown				Mean % Dead	
		5 min.	10 min.	15 min.	2 hrs	24 hrs.	48 hrs.
Standard	37.16	71	84	89	97	94	99
Subject Compound	37.20	52	78	90	100	81	100
Untreated	---	--	--	--	0	0	0

Results indicated that the subject compound was active against hornets.

The yellow jacket data consisted of testing in the 6000 cu. ft. chamber. Twenty-~~five~~ flying yellow jackets were released in the chamber. Five replicates were included. Results are summarized below.

Treatment	Dosage (gms.)	Mean % Knockdown				Mean % Dead	
		5 min.	10 min.	15 min.	2 hrs	24 hrs.	48 hrs.
Standard	223.5	72	85	91	100	86	100
Subject Compound	232.2	59	81	93	100	83	100
Untreated	---	--	--	--	0	0	0

Results indicated that the subject compound was active against yellow jackets.

The tick data consisted of 1000 cu. ft. chamber testing of exposed Brown Dog Ticks (25 ticks in a 5 qt. plastic jar with one jar in each corner of the chamber). Four replicates were tested. Results are summarized below.

Treatment	Dosage (gms.)	Mean % Knockdown	Mean % Dead & Moribund	
		2 hrs.	24 hrs.	48 hrs.
Standard	37.77	100	99.8	100
Subject Compound	37.74	100	99.8	100
Untreated	---	0	1.6	1.6

Results indicated that the subject compound was comparable to the standard against the Brown Dog Tick.

202.0 Conclusions - While there are no 6000 cu. ft. chamber data for flies and mosquitoes, the 1000 cu. ft. chamber data indicate good activity for the subject compound. The 6000 cu. ft. chamber data for yellow jackets indicate that the product will adequately fill a 6000 cu. ft. room and contact flying insects in this volume of space.

The flea and tick data do not contain tests in a 6000 cu. ft. room. However, the results of the sheltered cockroach testing in the 6000 cu. ft. room indicate that the product will adequately fill a 6000 cu. ft. room and contact crawling insects in this volume of space.

The data support the proposed claims for control of cockroaches, fleas, ticks, flies, mosquitoes, wasps, hornets and yellow jackets.

There are no data included for control of spiders and waterbugs. However, since comparability of the subject formulation to the Raid Automatic Indoor Fogger formulation (4822-135) has been established by the submitted data and since Raid Automatic Indoor Fogger is currently registered for control of spiders and waterbugs these claims would be acceptable for the subject compound subject to referencing the Raid Automatic Indoor Fogger data after the subject compound has been registered.

R. S. Van Denburgh

4-8-80

15
R.S.VANDENBURG:IRB:TSB506:TX10:pam:DCR#43975:RAVEN:479-2018:04/04/80