

US EPA ARCHIVE DOCUMENT

8-10-78

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IRB EFFICACY REVIEW

IN 5-9 OUT 8-10

FILE OR REG. NO. 4822-RAN

PETITION OR EXP. PERMIT NO. \_\_\_\_\_

DATE DIV. RECEIVED 3-21-78

DATE OF SUBMISSION 3-21-78

DATE SUBMISSION ACCEPTED \_\_\_\_\_

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

DATA ACCESSION NO(S). 233263

PRODUCT MGR. NO. 17

PRODUCT NAME(S) off! Formula III Spray Insect Repellent

COMPANY NAME S.C. Johnson

SUBMISSION PURPOSE New Repellent.

CHEMICAL & FORMULATION 18% Deet Pump Spray

MR10 1022, 1031,  
1103, 1104, 1105, 1113

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200.0 Introduction

This is a 2 b submission for new registration.

200.1 Uses.

1. See the attached label copy.
2. Hours of Protection from Mosquitoes.
3. Repels: deerflies, ticks, chiggers, gnats, fleas.
4. "Not greasy. Won't stain. Resists perspiration. Most effective repellent ingredient ever developed. Longest lasting ingredient."  
"Will not damage nylon, cotton, or wool."

200.2 Background.

According to the applicant, this product is merely a result of putting their old off! pressurized product into a pump sprayer.

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2010 Data Summary.

ACN 233263.

1. This volume contains 1 lab test against A. aegypti and Stomoxys calcitrans. Also included are 1 field test in Maine against blackflies, 1 test from Va. against Chrysops atlanticus, and 1 test from Va. against sandflies, Culicoides spp.

a.) In general, these tests were contributory but of insufficient value to entirely support a registration. There were no controls and no recounts in any of the tests. A positive registered standard was used in all tests, however.

b.) Copies of the following reference material was also submitted:

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Smith, Carroll N., "Insect Repellents" USDA, Orlando, Florida  
Soap and Chemical Specialties Part I 34 (2) 105-12, 203, 1957. (See Attachment)

Gertler, S.I., Gouch, K., Gilbert, H.; "N-Alkyl Toluamides in Cloth as  
Repellents for Ticks, Mosquitoes, and Chiggers".  
Journal of Economic Entomology, 55 #4, page 451-2. 1961 (See Attachment)

Gilbert, I.H., Gouck, H.K., Smith, C.N., "New Insect Repellent-Part I"  
Soap and Chemical Specialties, May, 1957; pages 115-117, 129, 131, 133;  
Part II, June, 1957, pages 95-99, 109 (See Attachment)

Pierce, H.F., "Diethyl toluamide in Aerosol Repellents"  
Soap and Chemical Specialties, June, 1958j (See Attachment)

Smith, C.N., Gilbert, I.H., and Gouck, H.K. ARS-33-26 Report,  
Revised November, 1960, USDA, Agricultural Research Service,  
"Use of Insect Repellents" (See Attachment)

Technical Bulletin: "Methadephino, The All Purpose Insect Repellent",  
#NS-292 dated March 22, 1961. Hercules Powder Co., Wilmington, Delaware  
(See Attachment)

These references indicate probable efficacy  
against the following pests, for the active  
ingredient:

- |                             |                                  |
|-----------------------------|----------------------------------|
| <u>Pedes aegypti</u>        | <u>Anopheles quadrimaculatus</u> |
| <u>A. taeniorhynchus</u>    | <u>Amblyomma americanum</u>      |
| <u>Trombicula splendens</u> | <u>Stomoxys calcitrans</u>       |
| <u>Chrysops atlanticus</u>  | <u>Culicoides canthorax</u>      |
| <u>Mansonella spp.</u>      | <u>Ctenocephalides felis</u>     |
| <u>Xenopsylla cheopsis</u>  |                                  |

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202.0 Conclusions

1. While the actual data on this formulation are inadequate to stand alone, it is the opinion of the reviewer that the product will adequately perform all intended functions, and that the historical background (as provided by reprints) makes up for the lack of hard data on this only slightly revised product.

2. Deet is a strong plasticizer. It was unclear as to whether the product will be marketed in bottles with plastic pumps, and if so, how will 18% Deet affect the pump & bottle over normal shelf-life periods. Therefore we called John Wingo of S.C. Johnson concerning this matter. Mr. Wingo said that he would have someone call us, because he was sure that they had done in containers for quite some time.

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202.0 Claims Not Supported

1. The formulation performance is acceptable. No one ever returned our call about the plastic containers. This item still needs to be addressed

2. The following label revisions are required:

a.) Delete the negative statements on the label: i.e. "not greasy, won't stain"

b.) Add a statement concerning the necessity to avoid contact with plastics, i.e. glasses & water crystals. Additionally, a statement should be included for acetate rayon and synthetic fabrics. The statements regarding nylon, cotton & wool may remain.

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Phil Hutton, Entomologist.

V.S.S. , I.R.B.

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