

US EPA ARCHIVE DOCUMENT

EFFICACY REVIEW

DATE: IN 3-11-93 OUT 5-28-93

FILE OR REG. NO. 45987-L

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

DATE DIV. RECEIVED January 13, 1993

DATE OF SUBMISSION January 7, 1993

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

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

DATA ACCESSION NO(S). 426230-03, 426262-03 & 426263-03; D189097; S436876; Case # 008242; AC:160

PRODUCT MCR. NO. 14-Forrest/Erickson

PRODUCT NAME(S) Bugchaser™ Insect Repellent Tablecloth

COMPANY NAME Rod Products Company

SUBMISSION PURPOSE Provide performance data in support of claims for repellency against mosquitoes, flies, ants, "no see-ums", other flying & crawling pests.

CHEMICAL & FORMULATION	<u>d-limonene</u>	<u>4.015%</u>
	<u>Dihydro-5-pentyl-2(3H)-furanone</u>	<u>0.024%</u>
	<u>Dihydro-5-heptyl-2(3H)-furanone</u>	<u>0.049%</u>
	<u>(0.915 g/cc? bulk density imprgntd material)</u>	

CONCLUSIONS & RECOMMENDATIONS The data presented in EPA Accession (MRID) Number 426230-03, although obtained from standard laboratory testing conducted according to § 95-9(a)(2) and (3) on p. 263 of the Product Performance Guidelines, are not adequate to support a claim for repelling mosquitoes for the subject product when used according to label directions since, as indicated by Experiments I, III, IV and V, the subject formulation failed completely to keep mosquitoes from probing the skin of test subjects, and in at least the last 3 there is some indication that biting took place as well, although bite counts are not given. This conclusion is tentative at best since none of the experiments in this volume involved use as a plastic sheet. This is in sharp contrast to the results as reported in MRID No. 426263-03, an unofficial field test conducted according to no standard protocol but which indicated in Experiment I protection of up to 2 hours against landing and biting mosquitoes and annoying flies was afforded by placing Insect Repelling Fragrance strips 3 meters above the ground and about 4 meters apart, using 4 strips; alternatively, even better protection (continued)

was provided by attaching the strips to the corners of the table used to prepare food, suggesting the possibility of use as a tablecloth. Further laboratory and field testing according to standard protocols is warranted in order to determine the conditions for successful use. MRID No. 426262-03 indicates flies are repelled by this product for several days when strips are hung in areas flies frequent, and that little if any alighting of flies on surfaces protected by the strips occurs for 72 hours. This would presumably be true in the form of a tablecloth as well since the formulations of the 2 products are identical. The claim for repelling ants requires at least minimal data on crawling insects, since data previously reviewed for EPA File Symbol 45987-E on 12/19/91 apparently contained no repellency tests. It is suggested that a choice-box test in which ants are substituted for cockroaches be run to satisfy the requirement. Since we are not aware of any standard protocols for repellent impregnated materials in the public domain, we will accept a successful field test where protection was maintained against mosquitoes landing and/or biting for at least 2 hours or bite counts were reduced 95% when the subject product was used according to label directions. This will also satisfy data requirements for biting flies if annoyance from these insects is similarly reduced during the same test period. In order to support the claim for days of welcomed protection it will be necessary to repeat this test several times over a span of at least 3 days.

OBJ Vern L. McFarland, IRB