

US EPA ARCHIVE DOCUMENT

IRB PRODUCT PERFORMANCE REVIEW

PM: 15

05-04-90

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50704-5
Coulston International Corporation
Easton, PA 18044

AC: 310
RN: 262135
MRID: 414167-00
02
03

FORMULATION

Permethrin.....00.500%

Aerosol

INTRODUCTION

Application for amended registration. New use pattern not previously registered.

USES

See proposed label. Clothing treatment. Label adds mosquitoes. Application rate remains the same. (30 seconds per side).

SUBMITTED DATA

414167-00. A Larry Feller summary of wash and use data. Only a summary of the efficacy data are provided, and this summary lacks important details. Most important, these data do not describe the method of application. Aerosols have been described as being unreliable in resulting in the target deposition of 0.125 mg/cm².

414167-02. This is an article by Lines, Myamba, and Curtis describing hut trials with treated mosquito netting. The method of application is a water soak. These data are not pertinent to the support of the subject application which concerns an aerosol treatment of cotton and nyco uniforms.

414167-03. Shreck, C.E. 1990. Laboratory Testing of Clothing Treatment Formulations as Personal Protection against Biting Arthropods of Military Importance. This study uses the subject product as a low dose treatment. (12 sec. per side). ASTM laboratory type assays (forearm tests). Small and large cages. 3 replications per trial. Results:

<u>Percent Protection</u>		<u>Washings</u>			
<u>Species</u>	<u>Material</u>	<u>0</u>	<u>10</u>	<u>15</u>	<u>25</u>
Small Cage;					
<u>Aedes aegypti</u>	c	95	95	95	95
	nyco	95	95	95	95
<u>Anopheles albimanus</u>	c	95	95	100	95
	nyco	95	95	100	95
<u>Aedes taeniorhynchus</u>	c	55	85	90	90
	nyco	65	80	85	80
Large Cage;					
<u>Aedes aegypti</u>	c	95	90	90	90
	nyco	90	95	90	90
<u>Anopheles albimanus</u>	c	95	95	90	90
	nyco	90	95	90	90
Mean for all studies		87	92	92	91

CONCLUSIONS

We called Larry Feller of Coulston, asking for information as follows:

1. What was the test method for the small cage studies?
2. The data indicate more washes than were assayed. Why?
3. How come the product works better after washing than after the initial treatment?

Carl Schreck of the USDA IAMA lab called us back and explained that the Army originally wanted more assays but that time and money dictated that some of the samples be deleted. The test method is the forearm method of Rutledge. Treated cloth over the forearm is compared to untreated cloth. This appears to be the case because of the bias of the small cage for taeniorhynchus. This mosquito is a very shy indoor biter, and thus does not land on the treated cloth until the material has degraded somewhat. If you discount the taeniorhynchus data the performance is really about constant. In addition, Carl indicated that the reason for only a 6 wash duration on the label is because of the tick claim.

No Adverse Comments

Phil Hutton