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February 25, 2010

Results of Tests With NO MAS 018-A/02/22/2010
by Samuel T. Darling.

Donald R. Barnard, Ph.D.

U. S. Department of Agriculture
Agricultural Research Service
Center for Medical, Agricultural and Veterinary Entomology
1600 SW 23rd Drive
Gainesville, Florida 32608

Procedures and Summary of Results

(See attachment)

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Procedure: The 018-A formulation of NO MAS was evaluated on skin for repellency to female *Aedes aegypti* mosquitoes. In a single repellent duration test, a 1 milliliter dose of the formulation was applied to the left forearm of the test volunteer. The formulation was spread evenly from wrist to elbow (on approximately 650 cm² of skin surface area) and evaluated for repellency to caged female mosquitoes. One hour after the application of the formulation, the treated arm was exposed for 3 min to mosquitoes and then re-exposed in the same manner at hourly intervals thereafter until repellent failure. The test was conducted in a 40 cm³ cage containing 200 (6-9 day-old) female *Aedes aegypti* mosquitoes preselected for testing on the basis of demonstrated human host avidity. Repellency was calculated as Complete Protection Time (CPT), i.e., the time between repellent application and 2 or more probings of the skin on the treated arm, or the first probing followed by another probing within 30 min. A glove was worn to protect the untreated hand from mosquito bites during testing. Two negative controls were used in each test (observed once per hour until repellent failure) and comprised the number of female mosquitoes in the test cage and in a (separate) control cage that landed and remained on the untreated skin of the right forearm of the test volunteer for ≥ 5 sec during a 10 second exposure period.

Results. Table 1. Treated arm exposed for 3 minutes in cage containing 200 (6-9 day-old) female mosquitoes. The treatment was tested at 1 hour intervals until 2 or more probes by female mosquitoes on the skin were observed.

Formulation	Complete Protection Time ^{1,2,3,4}
	<i>Aedes aegypti</i>
NO MAS 018-A [02/22/2010]	9.0 hours

Footnotes

¹Both negative controls comprised ≥ 25 landings in 10 seconds throughout the test.

²These results are based on a single test with the NO MAS 018-A.

³Additional testing is required to estimate the mean and variance of the CPT for NO MAS 018-A for the test volunteer used in this study.

⁴Additional testing is required to estimate the mean and variance of the CPT for NO MAS 018-A for the general user population.

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 USDA-ARS-CMAVE, Gainesville, FL; Bldg 1, room 103
Aedes aegypti 200 females per cage (draw box)
 No Mas 018-A/02/22/2010
 1 ml - left forearm (ca. 650 cm²) @ 0700 h
 Test subject: DR Barnard

<u>Treatment - nos probes/3 min</u>		<u>Control - nos landing/10 sec¹</u>		<u>Time elapsed</u>
0800 h	0	0800 h	>25/>25	60 min
0900 h	0	0900 h	>25/>25	120 min
1000 h	0	1000 h	>25/>25	180 min
1100 h	0	1100 h	>25/>25	240 min
1200 h	0	1200 h	>25/>25	300 min
1300 h	0	1300 h	>25/>25	360 min
1400 h	0	1400 h	>25/>25	420 min
1500 h	0	1500 h	>25/>25	480 min
1600 h	2	1600 h	>25/>25	540 min

CPT: 540 minutes

¹Number landing on untreated forearm skin in treatment cage/number landing on untreated forearm skin in control cage