

South African
Bureau of Standards

Private Bag X191 Pretoria 0001

TEST REPORT

(Private and confidential)

Suid-Afrikaanse
Buro vir Standaard

Privaatsak X191 Pretoria 0001

TOETSVERSLAG

(Privaat en vertroulik)

2000-10-12 15-2.



SABS
AZ6

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Price's Candles (SA) (Pty) Ltd
84 Carr Street
NEWTOWN
2001

REPORT / VERSLAG No. 561/84070/E62

Sample(s) / Monster(s) No. E18199

Your ref. / U verw.

Our ref. / Ons verw. 17/30

Enquiries / Navrae D v/d Linde

Ext. / Uitb. 2159

Date / Datum 1988-06-29

This report relates only to the specific sample(s) tested as identified herein and is issued subject to the conditions printed on the back of this page.

Hierdie verslag is van toepassing slegs op die bepaalde monster(s) wat getoets is soos hierin geïdentifiseer en word uitgereik behoudens die voorwaardes op die keersy van hierdie bladsy gedruk.

REPELLENCY TESTS

1. DESCRIPTION OF SAMPLES

- 1.1 Two containers marked "DEET saturated towlettes, SEF 47/88", coded A.
- 1.2 Two containers marked "Tabard lotion with sunscreen, SEF 46/88", coded B.
- 1.3 One aerosol marked "Tabard aerosol with sunscreen", coded C.
- 1.4 One aerosol marked "Tabard aerosol", coded D.

2. TEST REQUESTED

To determine the biological efficacy of the samples submitted with regard to their repellency properties.

3. TEST METHOD

SABS Method 695, Test Series A was followed.

4. RESULTS

The results obtained are given in Table 1.

/TABLE 1

TABLE 1

Sample SABS Code	Forearm	Test subject's Code	Number of bites inflicted in each 3 minute period			Number of bites in 9 minutes	Total number of bites for all test subject's
A	Treated	K	0	0	0	0	0
		L	0	0	0	0	
		H	0	0	0	0	
		J	0	0	0	0	
	Untreated	K	8	5	4	17	71
		L	5	8	6	19	
		H	5	5	4	14	
		J	7	6	8	21	
B	Treated	K	0	1	1	2	3
		L	0	0	1	1	
		H	0	0	0	0	
		J	0	0	0	0	
	Untreated	K	12	12	8	32	83
		L	7	3	7	17	
		H	3	3	1	7	
		J	7	14	6	27	
C	Treated	K	0	0	0	0	2
		L	0	0	0	0	
		H	1	1	0	2	
		J	0	0	0	0	
	Untreated	K	10	7	8	25	126
		L	8	9	8	25	
		H	9	9	10	28	
		J	20	15	13	48	
D	Treated	K	0	0	0	0	0
		L	0	0	0	0	
		H	0	0	0	0	
		J	0	0	0	0	
	Untreated	K	7	12	11	30	87
		L	0	5	3	8	
		H	4	9	8	21	
		J	11	8	9	28	

/5. REMARKS ...

This report relates only to the samples tested and is issued subject to the conditions printed on the back of Page 1. It does not imply approval by the South African Bureau of Standards of the quality and/or performance of the commodity that has been tested. It does not authorize the use of the

Hierdie verslag is van toepassing slegs op die getoetste monsters en word uitgereik behoudens die voorwaardes op die keersy van bladsy 1 gedruk. Dit beteken nie dat die Suid-Afrikaanse Buro vir Standaarde die kwaliteit en/of werkverrigting van die getoetste artikel goedkeur nie. Dit

5. REMARKS

Attention is drawn to the regulations governing the registration and sale of agricultural and stock remedies, promulgated under the Fertilizers, Farm Feeds, Agricultural Remedies and Stock Remedies Act, 1947 (Act 36 of 1947).


for DIRECTOR GENERAL

S A BUREAU OF STANDARDS

STANDARD METHODS
SABS Method 695
P. 1 (3 pp.)Pesticides - Biological properties - efficacy of mosquito
repellents (Metric units)

SECTION 1. EQUIPMENT

- a) Test rooms. To preclude the risk of contamination, all rearing and test rooms shall be maintained as separate units.
- b) Test cages. Two wooden-framed cages (coded X and Y) each having a height of 300 mm, a width of 300 mm, a length of 450 mm, phenolic laminated sheeting floors and acrylic resin base plastic tops. The sides shall be covered with nylon mosquito netting, and one of the 300 x 300 mm sides shall have a sleeve-inlet of diameter 170 mm.

SECTION 2. REFERENCE REPELLENT

2.1 A registered repellent containing dimethyl phthalate as active ingredient.

SECTION 3. TEST INSECTS

3.1 Healthy normal adult female mosquitoes, Aedes aegypti Linn. (SABS strain) of age (at the start of a test), preferably 4 to 6 days. The insects shall be starved for approximately 48 hours before being used in a test.

SECTION 4. TEST CONDITIONS

4.1 Conduct the tests in an artificially lit room, maintained at a temperature of $25 \pm 1^\circ\text{C}$ and a relative humidity of 60 ± 5 per cent.

SECTION 5. PROCEDURE

5.1 Test series A

5.1.1 Both arms of the test subject shall be thoroughly washed with soap and water before the start of a test.

5.1.2 Apply the repellent under test uniformly to the right forearm half-an-hour before commencement of the test, but leave the left forearm untreated.

5.1.3 With an aspirator connected to an adjustable suction apparatus set at its lowest speed, collect female mosquitoes from the rearing cages into a conical flask. (Females are distinguished by the absence of plumose (feathered) antennae.)

SABS Method 695
P. 2 (3 pp.)

5.1.4 Release 100 female mosquitoes (3.1) into each of the test cages.

5.1.5 Get the test subject to introduce, through the sleeve inlets, the left arm into cage X and the right arm into cage Y, and to expose them to the mosquitoes for a total period of 9 minutes.

5.1.6 After each 3 minutes of this period, get the test subject to dislodge the mosquitoes by shaking the arms vigorously, have a second person count the number of bites inflicted on each forearm, and then allow the insects to settle on the arm again.

5.1.7 Carry out the test four times using four different test subjects, each of whom shall expose his untreated arm to the mosquitoes in cage X and his treated arm to the mosquitoes in cage Y.

At the conclusion of all the exposures, get the test subject who has suffered the greatest number of bites on his untreated arm to expose this arm to the mosquitoes in cage Y (in which the treated arms were exposed) in order to establish beyond doubt that the mosquitoes in this cage are normal.

5.1.8 Thoroughly clean both cages before introducing fresh batches of mosquitoes for the next test.

5.2 Test series B. For biological tests to determine the efficacy of the reference repellent, use (with fresh batches of mosquitoes), the procedure described in 5.1 except that the reference repellent shall be applied to the right forearm (the left forearm again being left untreated).

5.3 Test series C. For comparative biological tests, compare the efficacy of the unknown sample with that of the reference repellent, by using the procedure described in 5.1 except that the repellent under test shall be applied to one forearm and the reference repellent to the other forearm.

5.4 Test series D. To determine the persistence of activity of an unknown repellent, use the procedure described in 5.1 except that the repellents shall be applied 6 hours before commencement of the test. ✓

2000-10-12

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SABS Method 695
D. 2 (7 mm)

SECTION 6. TABULATION OF RESULTS

1	2	3	4	5	6	7	8	9
Repel- lent Code No.	Test series	Forearm	Test note- jeff's Dist. A.	Number of bites inflicted in each three- minute period			Number of bites in 5 minutes	Total number of bites for all test subjects
		Treated						
		Untreated or ref. repellent- treated						

February 1971
Approved by the
COUNCIL OF THE SOUTH AFRICAN BUREAU OF STANDARDS
Egypt
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