

CONFIDENTIAL

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Passage prevention effect of "Clear Shield"  
against the Asian tiger mosquito, *Aedes albopictus* in laboratory

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1. Test sample : stainless steel security "Clear Shield"
2. Test insect : Female adults of the Asian tiger mosquito, *Aedes albopictus* (Ikaken colony)  
13~17 days-old
3. Test periods : 23 May 2006~24 May 2006 (Room temperature : 24.0~26.0°C)
4. Materials and method : The test proceeded with the following steps.
  - ①Prepare 2 stainless steel cages (W30cm×L30cm×H30cm:Cage A and B).
  - ②Release 34-50 mosquitoes into Cage-B with a bottle of syrup.
  - ③Put a mouse in a 20 mesh stainless steel net and hung it in Cage-A.
  - ④Combine 2 stainless steel cages (Cage A and B) sandwiching a stainless steel security "Clear Shield".
  - ⑤Put the cages under lightened in laboratory for 24 hours.
  - ⑥After 24 hours, count the number of the blood-sucking mosquitoes and the number of mosquitoes in each cage.
  - ⑦Calculate % blood-sucking mosquitoes and prevention index of blood-sucking mosquitoes as following formulas.
  - ⑧As a control, similar connected cage without "Clear Shield" was prepared.
  - ⑨Repeat the same procedure 2 times.

$$\% \text{ blood-sucking} = \frac{\text{the number of blood - sucking}}{\text{the number of test mosquitoes}}$$

$$\text{Prevention Index} = \left(1 - \frac{T}{C}\right) \times 100$$

T: % blood-sucking mosquitoes in cage with sample.

C: % blood-sucking mosquitoes in control.

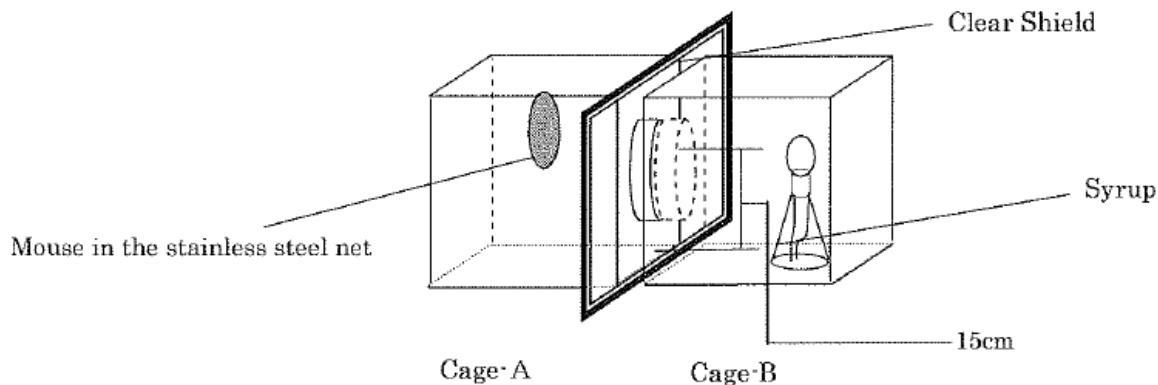


Fig 1 A figure of placement

5. Result :

Table 1. The number the blood-sucking and the staying mosquitoes in each cage.

Sample	Replication	No. of test mosquitoes	blood-sucking insect			staying insect in cage	
			Cage-A	Cage-B	Total	Cage-A	Cage-B
Installed	1	50	0	0	0	0	50
	2	34	0	0	0	0	34
Non-installed	1	47	34	6	40	34	13
	2	50	41	6	47	41	9

Table 2. The percent blood-sucking and staying mosquitoes in each cage.

Sample	Replication	Percent blood-sucking insect (%)	Percent staying insect in cage(%)	
			Cage-A	Cage-B
Installed	1	0	0	100
	2	0	0	100
	Average	0	0	100
Non-installed	1	85.1	72.3	27.7
	2	94.0	82.0	18.0
	Average	89.6	77.2	22.9

Table 3. Prevention index of blood-sucking and staying against the Asian tiger mosquito.


Sample	Prevention index of blood-sucking	Prevention index of staying
Setting	100	100

6. Discussion:

The percent of blood sucking mosquitoes (24 hours) in treatment with the stainless steel security "Clear Shield" was 0%, while that percent in without "Clear Shield" was 89.6%.

The percent of mosquitoes in the cage with mouse (source of sucking blood) was 0% in "Clear Shield" installed, while that percent in non-installed was 77.2%.

Therefore when it was installed in openings such as windows, "Clear Shield" was seemed to be available for an invasion of the mosquito.

Approved by   
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