

EXAMPLE 10b

A device similar to that in Example 7 was constructed, but contained 42 mg of TNMT insecticide and was enlarged so as to contain a target area surface of 94 square centimeters. No plastic grill was used to cover the target area.

EXAMPLE 11

The devices of Example 10 were compared with other devices in hotel room tests with controlled numbers of flies in late spring in California. Eight independent tests of each device were made, using each device twice in each room. Room temperatures averaged 24° C. Raw mortality data after a 24 hour test was used to calculate binomial probability distributions; comparisons were then made by statistically testing a hypothesis that there existed no difference between the pairs tested. The following results were obtained:

(a) the device of Example 10b is as effective as the device of Example 4a with muscalure, despite the larger amount (100 mg) of insecticide contained in the latter.

(b) the device of Example 10a is as effective as the device of Example 6 altered to contain 42 mg of insecticide and a target area surface of 52 square centimeters. The same amount of insecticide is used in both of these devices, although the surface concentration is lower in the larger device of Example 10a.

(c) three devices of Example 6, altered to each contain 42 mg of insecticide and a target area surface of 52 square centimeters, are roughly equivalent in performance to one device of Example 4a with muscalure. Performances were found to vary according to placement of the devices within each room.

EXAMPLE 12

The hotel room tests conducted as in Example 11 were repeated in the summer (July) when wild fly activity is higher. Similar statistical analyses gave the following results:

(a) the device of Example 10a showed better performance in the spring tests than the summer tests. This was thought to be due to the increasing need of the flies for water in the summer months.

(b) the device of Example 10b appeared in one test to show equal performance in the summer and spring but appeared in another test to show better performance in the summer.

(c) the device of Example 10b showed performance superior to the other devices tested, i.e. devices of Examples 4a with muscalure, 10a, and devices of Examples 6 and 7, altered to each contain 42 mg of insecticide and a target area surface of 52 square centimeters.

EXAMPLE 13

The effect of accelerated storage (storage at 49° C. in open air with full air circulation) was tested on a 52.25 square centimeter black paper target area coated with an aqueous solution of 1 part TNMT insecticide, 1 part PVP and 6 parts corn syrup, so as to contain about 10 mg of insecticide. The results were determined using a one cubic foot cage containing 100 flies.

Days of Storage	KT ₅₀ (min.) ¹	mg of TNMT remaining
0	21	10
7	21	—
21	22	2.76

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Days of Storage	KT ₅₀ (min.) ¹	mg of TNMT remaining
56	—	0.69
70	27	—
84	30	—

A similar target area was tested for the effect of exposure to sunlight through glass. The target areas were placed on the west side of a greenhouse and received diffuse sunlight through whitewashed glass until early afternoon and sunlight through clean glass from 2 p.m. to sundown.

Days of Exposure	KT ₅₀ (min.) ¹	mg of TNMT remaining
0	21	10
2	34	3.1
7	32	0.52
28	46	—
39	—	0.51
53	80	—
84	220	—

¹Time required to incapacitate 50% of fly sample.

What is claimed is:

1. A device for combatting flies comprising:

(a) a target area of porous material comprising a sloped surface containing a dosage of tetrahydro-2-(nitromethylene)-2H-1,3-thiazine insecticide lethal to flies,

(b) a closely fitting grill covering said target area but allowing contact by the flies thereon,

(c) a sloped supporting member for said target area comprising a solid sheet of rigid impermeable material shaped to conform with the shape of the target area and having its upper surface affixed to the target area so as to support and define the configuration of the target area,

(d) a hollow base section having a bottom and side or sides surrounding the bottom and perimeter of said sloped target area supporting member, the side or sides of said base section extending up a sufficient distance to form a cavity between the side or sides of the base section and the target area supporting member, said cavity being of sufficient size for the containment and concealment of intoxicated flies; the base section being attached to the sloped supporting member such that a refillable reservoir for fluid storage or containment is formed in the hollow base section, said reservoir being defined on its top by the sloped supporting member and on its bottom by the bottom of the base section, and

(e) a means of establishing fluid contact between said target area and said refillable reservoir.

2. A device as defined in claim 1, wherein the means of establishing fluid contact between the target area and the fluid reservoir in the base is an extension of the target area material and a water-wicking material layered between the supporting member and the target area downward into the fluid reservoir to a point below the fluid level present when liquid is added to the fluid reservoir.

3. A device as defined in claim 1, wherein the cavity for containment and concealment of intoxicated flies extends around the entire perimeter of the target area supporting member.