

STORGARD®

Early Warning Monitoring Systems

Indian Meal Moth

The STORGARD monitoring system for the Indian meal moth (*Plodia interpunctella*) is a cost effective method of detecting moth activity at the earliest possible stages. It utilizes a synthetic sex pheromone that lures adult Indian meal moths, and adults of several

other insect species, into a specially designed trap that contains a sticky capture surface. Early detection of moth activity allows control measures to be employed before large quantities of stored food products are contaminated by larvae.

Each STORGARD kit contains enough materials for six weeks of continuous monitoring.

Pheromone Attractant

In addition to the Indian meal moth, the pheromone in the STORGARD system also attracts:

1. almond moth (*Ephesia cautella*),
2. raisin moth (*Cadra figuilella*),

3. tobacco moth (*Ephesia elutella*),
4. Mediterranean flour moth (*Anagasta kuehniella*).

Pheromones are chemicals that adult insects produce to communi-

cate with each other. The synthetic pheromone in the STORGARD system simulates the natural lure female insects use to attract adult males for mating purposes.

Trap Design

A PHEROCON® II trap is employed in the STORGARD monitoring system for the Indian meal

moth and related insects. It has been used extensively for monitoring many agricultural pests and was

selected for the STORGARD system because of its efficacy in capturing flying insects.

When to Monitor

As a general rule, most insect development ceases at average temperatures below 55°F. In heated warehouses or in warm climates a year-around monitoring program is essential for early detection

of stored product pests. Even in unheated storage areas in cold climates, it is important to recognize locations that may provide sources of heat. For example, temperatures surrounding

machinery may be sufficient to promote insect development even though temperatures nearby are below the 55° threshold.

Tréce Incorporated • P.O. Box 6278 • Salinas, California 93912
Telephone (408) 758-0204

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Trap Density And Placement

A good rule of thumb when beginning a monitoring program is to place traps in a grid pattern at intervals of 50 feet to 60 feet.

Tighten the grid as needed in order to pinpoint the source of an infestation.

Other areas where traps should

be placed are near suspected sources of contamination, such as in or around equipment and close to ducts where dust may accumulate.

Trap Height

The main criteria for selecting trap height are convenience for monitoring personnel and protection against damage by equip-

ment, water, etc. Although trap height is not critical, research has shown that capture efficiency can be maximized by hanging traps

close to the ceiling, which may be done by using pulley systems.

Trap Inspection

Traps should be inspected at least once a week and twice weekly if an infestation is suspected. In some situations

may be desirable to check traps every day. Since moths are active at night, daily inspections should be made in the morning.

Keep a record of the number of insects caught in each trap and the monitoring site.

Service and Storage

The STORGARD monitoring system requires a minimum of service. However, it is important to replace the pheromone attractant caps every six weeks since their attractant properties eventually degrade. Remove dead insects and debris from liners when traps are inspected. Replace the sticky capture surface when the phero-

none is replaced, or more often under dusty conditions.

Please note: Like film, batteries and similar products, pheromone caps should be stored in a cool place. For longest possible storage life, store pheromone caps in a refrigerator and keep them in their foil pouches.

STORGARD systems are also available for monitoring insects of the genera *Trogoderma*, *Tribolium*, and *Oryzaephilus*. Their use is described in a separate bulletin.

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