

User Guide

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Bed Bug Basics

Bed Bug Biology

Life cycle of the bed bug

Bed bugs hatch from an egg after 1-2 weeks and progress through five nymphal stages to become an adult.

They can survive for months without feeding, but each nymphal stage requires a blood meal to develop.

Both male and female adults continue to feed on blood throughout their lifespan, which is required to reproduce.

Identification

Eggs are approx. 0.05 inches long, pearl-colored and usually identifiable from other insect eggs.

Nymphs are pale yellow-brown and translucent when starved, changing to brown-red when fed.

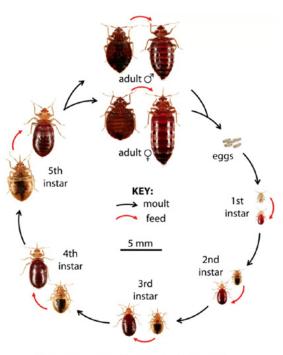
Adults have a clearly segmented abdomen, which is not covered by wings (unlike beetles) and are about the size of an apple pip.

Fecal spots, which appear as small black, ink-like spots on bedding, are a tell-tale sign of bed bug presence. It is important to note that similar spots can be produced by flies, spiders and cockroaches.

Bites are not always noticeable, as many people do not react. Bed bugs feed on exposed skin at night, and bite marks typically appear in straight lines. Bites can be caused by a number of pests other than bed bugs, including midges, mosquitoes, fleas and lice.

For further information on bed bug identification, visit: www.bedbugfoundation.org





Life cycle (source: bedbugfoundation.org)

Why are bed bugs hard to control?

Early identification difficulty: Bed bugs can be described as cryptic. They hide away in cracks and crevices close to where humans sleep – in furniture, around the headboard, behind wallpaper or under floorboards. They hide away in 'harborages' or 'refuges' during the day and are activated at night by the presence of a sleeping human, returning to the harborage after their meal.

Spread rapidly: If an infestation is left untreated, it can spread from bed bugs crawling between floors and rooms. The females often move from an established harborage to create a new harborage away from the adult males.

Survive starvation: Bed bugs can survive for months without feeding, enabling them to persist even in vacant accommodations.

Hitchhikers: Bed bugs can be moved around when the clothing, laundry, suitcase or furniture from an infested room is moved to another. International travel is thought to have fueled the spread of bed bugs globally.

Resistance to insecticides: Bed bugs have developed resistance to many commonly used insecticides, including pyrethroids and neonicotinoids. This resistance is due to genetic mutations that allow them to detoxify insecticides, resist their penetration or evade their effects. Overuse of these insecticides has contributed to the spread of resistant strains, making bed bug control more challenging.

Why is it important to detect bed bugs early?

Early detection of bed bugs is crucial for effective control and prevention of widespread infestations. Bed bugs reproduce quickly, and a low-level activity can escalate rapidly, making eradication more difficult and costly. Their ability to hide in cracks, furniture and bedding allows them to spread undetected, increasing the risk of activity in multiple areas. Early identification enables targeted treatments, reducing reliance on extensive insecticide use and minimizing disruption in homes, hotels and commercial spaces. Additionally, detecting bed bugs before they reach high populations helps prevent bites, allergic reactions and psychological distress for those affected.

Introduction to BugScents[™] Sentry Pro -Powered by Liphatech

BugScents[™] Sentry Pro is designed for professional use, offering enhanced sensitivity and durability for both rapid detection and long-term monitoring of bed bugs in residential, hospitality and commercial settings.

BugScents Sentry Pro has been developed by experts in insect behavior. It is a pioneer in scent-based bed bug monitoring, featuring a scientifically formulated lure to attract and capture bed bugs and an insectinspired design, enabling effective early detection and proactive pest management.



Key Features and Benefits

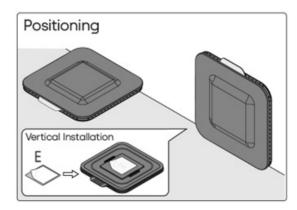
Patented Pheromone Attractant

Adding the patented BugScents[™] attractant to a bed bug trap actively attracts bed bugs for more rapid detection than passive monitors that rely on random chance.

The attractant is a mimic of the bed bug's natural aggregation pheromone, which bed bugs follow to find their harborage. By mimicking this pheromone and placing it in a trap, bed bugs are stimulated to choose the trap over other refuges.

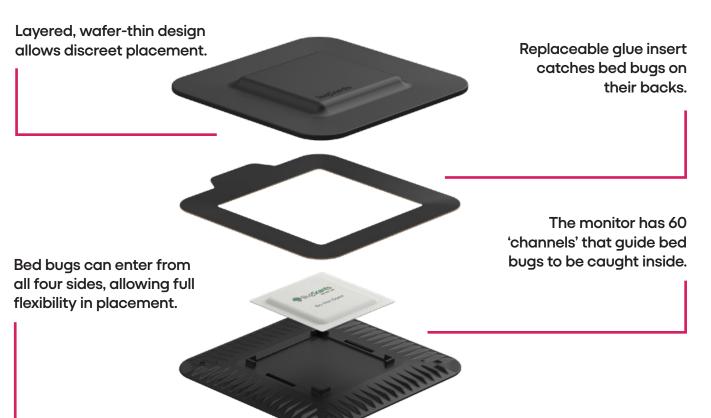
Insect-Inspired Design

Designed by a team of experts in entomology, every inch of the BugScents detector has been built with bed bugs in mind, from the color and texture to the size of the opening.



Wafer-Thin Design Allows Discreet Placement

The wafer-thin design with 360° entry allows it to fit even under a divan bed. Additionally, it can be placed horizontally and vertically, making discreet placement possible and opening up commercial opportunities with hotels, care homes, hospitals and cruise ships.

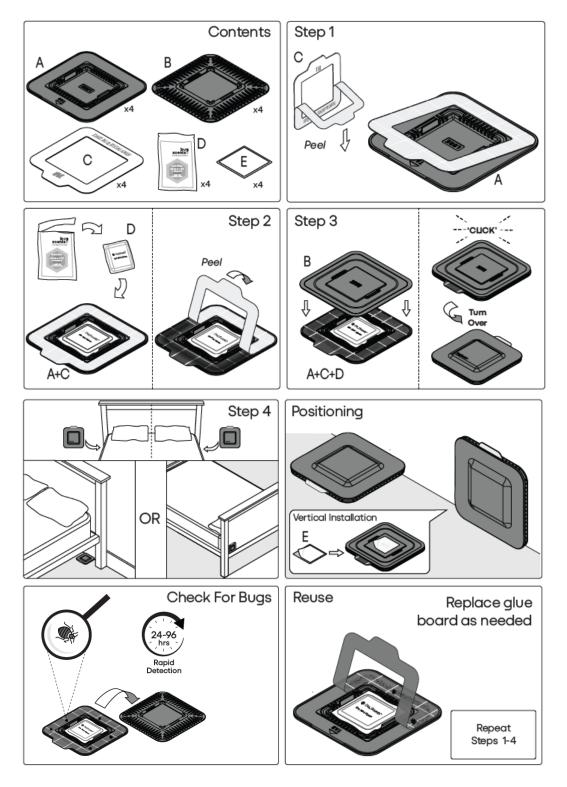


Assembly and Installation

Assembly

It is important to assemble the product according to the instructions. Watch the instruction video found here: <u>BugScents Sentry Pro: How to Assemble</u>

Installation



5

How many devices do I use, and what is the best placement?

Two traps per bed is recommended for optimal coverage, though a single trap may suffice in smaller sleeping areas. Position the traps at the head end of the bed, ideally near the headboard, where bed bugs are most likely to be active. In settings like hotels, an alternative placement is under the bed or behind the headboard. Ensure the trap is positioned so that the glue board is on the "ceiling", allowing bed bugs to be caught on their backs as they move. Proper placement increases the likelihood of capturing bed bugs early.

How often do I need to replace the attractant?

You should replace the attractant sachet 3 months after opening.

Tip: You can write the date of opening on the paper sachet so you can keep track of when it should be replaced.

When do I need to replace the glue board?

You should replace the glue board 3 months after opening it or when it expires (the expiration date of the glue board will be on the glue board packet).

How do I dispose of the glue board?

Place in an outdoor trash can.

Storage

Store the product in a cool dry place. If stored in a warm place (e.g. 77°F/25°C) the glue may be affected.

Safety

Is it safe to use around pets and children?

Yes, when used as directed.

Does it contain insecticides?

No.

Usage Instructions

For Pest Management Professionals

For the assessment of bed bug infestations: Install the monitors in the suspected room(s) and those adjacent (above, below and next to) if conducting perimeter monitoring. While infestations have been detected in as little as 24 hours, leaving the traps for 72-96 hours will provide a more thorough assessment.

Tip: Detection in unoccupied rooms may take longer than 72-96 hours since bed bugs will not be activated to move around to feed.

Tip: Contrary to instinct, detection may take longer when there is a heavy infestation, as there are already a lot of harborage containing pheromone.

For post-treatment monitoring: Set at least two monitors in the treated room **after** completing treatment and return to check after 72-96 hours. Treatment can sometimes cause bed bugs to disperse and therefore an assessment of adjacent rooms would be recommended as described above.

It is recommended the monitors are left in place and checked periodically over 2-4 weeks for early detection of nymphs that hatch from eggs that may not have been killed by the initial treatment.

For continuous monitoring of new infestations: Leave the BugScents[™] monitors discreetly in locations where they can be checked quickly and easily on a regular basis to facilitate the early detection of new infestations. Replace the pheromone attractant at 3-month intervals and glue board as needed.

Key benefits to PMPs:

- **Time efficiency:** It takes a lot of training to be able to identify low-level bed bug infestations. With BugScents Sentry Pro that training time is reduced, giving PMPs more confidence and a toolbox they can rely on.
- Inspection speed: A trained professional typically requires at least 30 minutes to inspect an average hotel room. Professional use of BugScents Sentry Pro makes inspections more consistent and reliable.
- Reliable detection: Cluttered environments increase the difficulty in identifying bed bugs due to multiple hiding spots. BugScents Sentry Pro is a reliable tool to support initial visual inspections by leaving the product in place and checking the trap a few days later.

For Hotels

It is recommended that hotels work with a trained professional for their pest control management, including proactive and preventative actions.

Place the trap in a discreet location at the head end (either side) of a double bed.

The trap can be attached to the back of the headboard or underneath the bed.

The pheromone attractant released from the trap acts like a beacon to hitchhiking bed bugs, inviting them into the trap.

Check the traps at regular intervals (e.g. once per month) and replace the lure and glueboard as needed.

Key benefits for hotels:

- Unique discreet design: BugScents[™] Sentry Pro's versatile placement options and slim profile has been made specifically with hotels in mind, to ensure it can be placed discreetly with any type of bedroom furniture.
- Brand protection: Guest complaints typically start after 10 weeks of an infestation, providing ample time for BugScents Sentry Pro to detect bed bugs early in the process. This early intervention reduces the likelihood of complaints, as well as the potential for guests to have encounters with pests, which can lead to negative reviews and lost business.
- **Reduced losses:** Early detection leads to more successful treatment outcomes and minimizes the spread of bed bugs to additional rooms.



POWERED BY LIPHATECH

BugScents Sentry Pro is a slim, discreet and reusable detector, powered by patented and highly effective lure technology that detects bed bugs fast for active monitoring.

We are changing the bed bug control landscape by arming PMPs with the fastest way to confirm detection and monitor bed bugs.

For more information, get in touch:

www.liphatech.com/bugscents