

PROOF® RAG IN A BAG® GIVES THE IDEA OF THROWING IN THE TOWEL AGAINST BED BUGS A WHOLE NEW MEANING.

HOW TO USE PROOF® RAG IN A BAG®

1. Put bed bug infested items in a large plastic garbage bag. Do not fill more than 2/3rds full.
2. Apply 1oz PROOF on a facecloth or rag of approximately 1.5 sq. ft.
3. Put 2-4 treated rags in a bag. Use 2 rags for items such as electronics, DVDs, footwear or handbags, and 4 rags for highly absorbant items such as books and clothing. Prevent the items from directly contacting the treated rags by placing a sufficient barrier, such as a plastic sheet between the rag and the items.
4. Close and seal the bag until it is airtight. Leave the bag sealed for 7 days. For best results store sealed bag at room temperature. Open bag and remove bed bug free items.
5. If dry, the rags and bags may be reused or disposed in trash. If still moist, allow to dry completely before reuse or disposal.

To view and print the Technical Bulletin (2ee recommendation) please visit: <http://bugproof.com/support>



TREATMENT RECOMMENDATIONS

VOLUME OF PROOF® (FL OZ)	BAG CONTENTS	LENGTH OF SEALED TIME	MORTALITY
4	Books	7 Days	100%
2	Electronics, DVDs, CDs, hard plastics/metals	7 Days	100%
4	Clothing	7 Days	100%
2	Footwear and Handbags	7 Days	100%
2	Mixed Items	7 Days	100%

PROOF® PLANT-BASED BIO-PESTICIDES ARE EPA REGISTERED AND DESIGNED TO MEET THE HIGHEST STANDARDS FOR SAFETY AND EFFICACY.

- KILLS 100% OF BED BUGS AND EGGS
- LONG LASTING PROTECTION
- EFFECTIVE AGAINST PYRETHROID-RESISTANT STRAINS
- BROAD AND FLEXIBLE INDOOR APPLICATION
- WORKS FAST
- BOTANICALLY-DERIVED ACTIVE INGREDIENT
- NON-TOXIC MODE OF ACTION
- EPA REGISTERED

If you are interested in learning more, or in buying PROOF®, please visit www.BugPROOF.com

WWW.BUGPROOF.COM

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HOW THROWING IN THE TOWEL CAN HELP WIN THE BATTLE AGAINST BED BUGS

Proof
RAG IN A BAG®

INTRODUCING

Proof

RAG IN A BAG®

This new bed bug treatment protocol from Terramera, further tested by Dr. Dini Miller from Virginia Tech University, shows tremendous promise for dealing with hard-to-treat items such as infested books and electronics. PROOF® RAG IN A BAG® has been optimized to achieve total efficacy, killing 100% of bed bugs and bed bug eggs in possessions sealed in a plastic bag along with PROOF® sprayed on a rag. This innovative technique addresses a longstanding need of all pest management professionals – delivering an effective way to deal with hard to treat personal items which have the potential to re-infest your home.

Typically, when we say that something is “in the bag” we mean there is nothing to worry about. This has not historically been the case when it comes to customer belongings from homes and apartments infested with bed bugs.

Your current options for saving your stuff all have challenges. You could just throw them out, but that’s not ideal. Spraying with contentional pesticides is likely to cause damage. Some exterminators use dichlorvos organophosphate strips, but they give off toxic vapors. And heat treatments are costly and complex.

“Overall, PROOF® performed very well in all laboratory evaluations. ... We thought these results were very impressive. Our laboratory has tested many bed bug products, and rarely have we seen a product that is effective at killing resistant strain (Richmond) eggs after it is dry.”

– Dr. Dini Miller, Entomologist, Virginia Tech University

It’s enough to make you want to just give up, but that’s a sure way to end up with a re-infested home.. Up to now, there was just no effective way to get rid of bed bugs in hardcover and softcover books, video game consoles, stereos, CDs and DVD players, etc.. With Terramera’s innovation, there’s a solution at last.

Terramera has discovered a unique characteristic of PROOF®: it is 100% effective against killing bed bugs and eggs without spraying them or infested materials directly. All you need to do is apply about one ounce of PROOF® to a cloth or rag, put the customer’s belongings into a non-porous bag (like a heavy-duty garbage bag), place a plastic sheet on top of the items, then place two to four PROOF-treated rags into the bag, tie up the bag and leave it to do the job.

“Consumers can save the items they would otherwise have to get rid of.”

– Shannon Lentz, Technical Support Manager, Terramera

“PROOF® RAG IN A BAG® gives professionals and regular civilians an important tool for effectively ridding households of bed bugs once and for all.”

– Shannon Lentz, Technical Support Manager, Terramera

This has led to the development of the PROOF® RAG IN A BAG®, something that Shannon Lentz, Senior Analytical Chemist and Technical Support Manager at Terramera Inc. describes as “A dead simple solution to a common concern for anyone with a bed bug infestation.”

“Just spray one ounce of PROOF® onto a rag (or paper towels), place two to four rags inside a plastic bag along with items that need ‘de-bugging’. Seal the bag and leave it closed for 7 days, and any bed bugs or eggs that are in these items will be killed.”

The benefits are significant. First, it not only works, but it works very well. Secondly, it’s a botanical product with a non-toxic mode of action, which means lower risk to people and pets. It’s a product everyone can feel good about using.

The protocol is highly effective. It addresses a major concern of anyone who’s ever suffered through a bed bug infestation: potential re-infestation from infested items that have been bagged, left untreated, and reintroduced into the home environment. Not only does this have the potential to renew the bed bug nightmare, it also leaves consumers to potentially foot the bill for another costly professional treatment .

“PROOF penetrates into cracks & crevices. It kills not only bed bug adults, but eggs as well.”

– Nate Woodbury, Senior Entomologist, Terramera

PROOF® RAG IN A BAG® can be used as a complementary treatment in conjunction with any professional pest removal service – including heat treatment.

According to Lentz, the key is putting effective treatment choices in the hands of the consumer. “Before now, there was no effective way of making sure bed bugs aren’t still in your possessions, even after the most thorough professional treatment. PROOF RAG IN A BAG solves this major problem. In fact, it makes the solution easy: it just works!”

This new protocol addresses a gap in the current Integrated Pest Management protocol and significantly reduces the likelihood of re-infestation and costly re-treatment.

The Study was designed to assess efficacy without direct contact with PROOF® spray. Substrates, e.g. paper towels or cloth rags treated with PROOF® spray were placed inside sealed plastic bags. The bed bugs and eggs were never sprayed directly or exposed to the treated substrate. From this an optimized protocol was produced: 100% bug and egg mortality was observed for all conditions after five days.

Previous laboratory studies conducted at Terramera PlantScience have demonstrated bed bugs exposed to PROOF without direct contact exhibiting 100% mortality in 1-5 days. The goal of testing an impregnated substrate was to create a solid protocol for treating delicate items (such as electronics, books, etc.) that cannot be directly sprayed with an insecticide, even a plant-based product such as PROOF.

INFESTED COMPUTER: Bed bugs were placed in a housing consisting of nylon stocking stretched taut over the ring of a Mason jar lid or a piece of cardboard of a similar size (Figure 1 and 2). A similar housing containing filter paper mounted with eggs was placed within a Mason jar lid ring inside a stretched nylon stocking. The computer housing was removed and the bed bug and egg samples were placed within the computer.

INFESTED BOOK: An entire book was encased in a nylon stocking along with 10 bed bugs (Figure 4). The infested book was then placed inside a 31” x 42” clear plastic bag along with 35 other books of random shapes and sizes. Eggs were mounted on filter paper and placed on the outside of a book, within a stretched nylon stocking (Figure 3).



Figure 1. Bed Bugs Placed on cardboard inside of stretched nylon stocking.



Figure 2. Bed bugs placed inside Mason Jar lid ring, inside stretched nylon stocking.



Figure 3. Eggs on filter paper infested onto book.

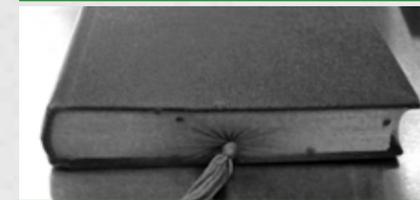


Figure 4. Book inside of stretched nylon stocking, infested with bed bugs.



Figure 5.

PROTOCOL: Cotton facecloths¹ were treated with PROOF® spray. Approximately 1 ounce of PROOF was applied to each rag. This translated to about 40 pumps of the current PROOF bottle. One to three rags were placed inside the sealed plastic bags for up to 5 days.²

Each bag of electronics contained one desktop computer, one keyboard and one desktop telephone. (Figure 5) Each bag of books contained the infested book as well as 34 randomly selected books (both hard and soft cover).

35 books (34 un-infested and 1 infested with 10 bugs and 5 live eggs) were placed inside a sealed bag for five days. This served as the untreated control group.

RESULTS: After 5 days the bags were opened and the bugs and eggs were transferred to petri dishes lined with filter paper for observation. All variations of the PROOF® RAG IN A BAG® protocol exhibited 100% mortality for both eggs and bed bugs over the course of five days. Materials were also inspected for residual odor of the product with very minimal odor noted on the books or electronics one day after opening the bag.

DISCUSSION: By treating rags or paper towels with PROOF® and placing them into a sealed plastic bag with infested books and electronics, we have demonstrated 100% efficacy at killing bed bugs and eggs. This was accomplished strictly through proximity to PROOF® and no direct or residual product coming into contact with the bugs, eggs, or infested materials.

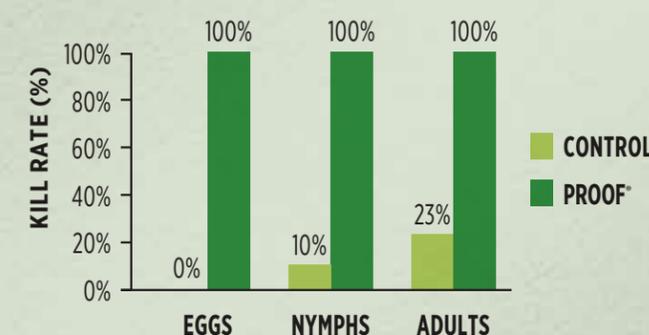
Please Note: To account for variations in tolerance levels in field strains, we recommend bags be left unopened for at least two days longer than the minimum time required for efficacy. Also, in order to avoid damage of delicate materials such as books or electronic wiring from contact with a wet rag, it is recommended the treated substrate (rag or paper towels) be placed on top of a plastic bag or similar material to provide a barrier between the damp product and any delicate items.

¹ 4 sheets of heavy-duty paper towel can be used instead of a rag

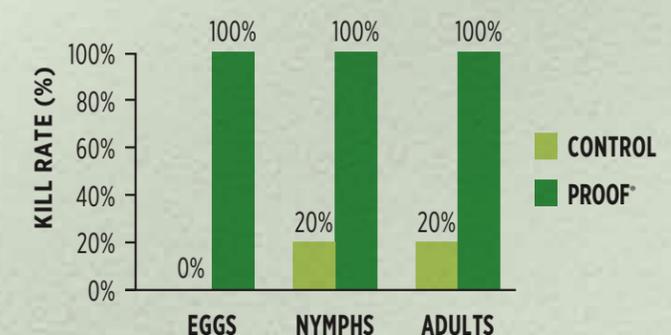
² To account for variations in tolerance levels in field strains, we recommend bags be left unopened for at least two days longer than the minimum time required for efficacy.

Summary of Dr. Miller’s Studies: These independent studies were conducted at The Dodson Urban Pest Management Laboratory at Virginia Tech University with highly pyrethroid resistant Richmond strain bed bug adults, nymphs and eggs.

RAG IN A BAG STUDY: ELECTRONICS



RAG IN A BAG STUDY: MIXED SHOES AND PURSES



The findings were presented in a PCT magazine webinar, which you can view at: www.pctonline.com/Vapor-Effects-Bed-Bugs-webinar.aspx