

Summary of Bed Bug Treatment Methods

The following table has been published by the National Center for Healthy Housing and summarizes the different treatment methods discussed in the [Treatment section](#). Information in the table is supported by case study and scientific literature. Retail costs in the table are relative to the time of publishing and region of the country.

Management Method	Primary Responsibility	Retail Cost Per System	Commentary	Compatibility with other methods
Laundering*	Resident	Dissolvable Bag: \$22 for 10 bags	Laundered fabrics will be free of bed bugs as long as they are kept isolated from infested areas.	Include in every control effort.
Unit Preparation*	Resident	Varies	Poor housekeeping, sanitation, etc., are not necessarily conducive to bed bug infestations, but bed bugs are more likely to remain undetected and pest management efforts are more likely to fail in a cluttered home.	Include in every area so that the Pest Management Professional (PMP) can properly inspect the property.
Encasements*	Resident	\$50 or more each for box spring and mattress	Bed bugs that are trapped in an encasement designed for use in bed bug control will not be able to feed or escape and will eventually die. Encasements keep bed bugs from infesting mattresses and box springs.	Use encasements either after treatment or before an infestation is found.
Monitors	PMP, resident, or staff	4 interceptors for \$8. Carbon dioxide attractant devices \$15-\$950 initial cost.	Monitors will catch bed bugs, but are not meant to control infestations.	Monitors can be used alone or in combination with other detection and control methods to confirm active bed bug infestations.
Vacuuming*	PMP, trained staff, or trained resident	HEPA Vacuum for \$250-\$500	Vacuuming is not reliable as an exclusive control method.	PMPs, staff, and residents should use a vacuum to remove bed bugs during inspections and unit preparation.
Steam	PMP or trained staff	\$500-\$1,500	Steam wand must be moved at a rate that heats the area to a lethal temperature.	Use with other methods such as insecticidal dust for voids that steam cannot penetrate. Mattresses and box springs must be dry prior to encasement.

Management Method	Primary Responsibility	Retail Cost Per System	Commentary	Compatibility with other methods
Thermal Remediation Using Ambient Heat	PMP or trained staff	\$330 for luggage-sized container. \$90,000 for whole unit heater. \$800-\$2,000 to treat an apartment.	Lethal temperatures must penetrate all items for the treatment to kill all stages of bed bugs.	Heat treatment is a good option for cluttered homes where preparation is a struggle.
Bed Bug Detecting Canine	PMP	\$10,000 to purchase. \$1,300 per team per day.	Dogs are effective and efficient for large-scale (multi-unit) inspections.	Use with visual inspection. Treat in areas where the dog alerts.
Pesticides	PMP	Varies by product.	Consider the location of application, effectiveness of chemical, residual, and ovicidal properties of each product before selecting it.	Pesticides are used as needed in combination with other treatment methods.
Freezing Using Dry Ice/Liquid CO2	PMP	\$6,900 for a machine.	Not widely used in the US, but widely used in Europe. Insufficient information for adequate assessment at this time.	More research is needed comparing the penetration of both heat and cold.
* Should be incorporated into <u>every</u> treatment plan for optimal success				

The following table summarizes the most common bed bug treatment methods. Deciding which method(s) to use depends on many factors. The pros and cons of each method are discussed below, with added recommendations for effective use.

Management Method	Pros	Cons	Recommendations
Steam	<ul style="list-style-type: none"> • Short exposure time for effective kill • No chemical residue • Useful in sensitive locations and on items that cannot be laundered or treated with pesticides • Efficacious and relatively inexpensive • Available to the public and facility managers for use 	<ul style="list-style-type: none"> • Time consuming • Does not penetrate materials deeply • May blow bed bugs away • Moisture can damage electronics and other treated surfaces • Residual moisture raises mold concerns • Every location must be treated, no residual effect 	<ul style="list-style-type: none"> • Use dry steam method if available • Move steam wand slowly to assure sufficient contact time (20 seconds/linear foot) • Diffuse pressurized air by using a nozzle attachment wrapped in fabric. This keeps bed bugs from blowing away. • Use as part of a comprehensive management program.