



Least-Toxic Pesticide Product Use for Health Care Facilities

What is a Least-Toxic Pesticide?

A least-toxic pesticide is a pesticide that has low human and environmental health hazards. Many least-toxic pesticides are derived from botanicals, essential oils or other natural minerals. **In a prioritized and defined IPM program, managers should only apply least-toxic pesticides after cultural, mechanical, and biological controls have been attempted and proven ineffective.**

Sampling of Least-Toxic Products that Effectively and Safely Manage Pest and Weed Problems

INSECTICIDES

Powdered insecticides: Diatomaceous earth and silica gels free of selective chemicals provide an excellent alternative for lawn and garden use. A light coating on the lawn will effectively control fleas, ticks, and beetles.

Product examples: **Ants/Cockroaches:** [Safer Brand Ant and Crawling Insect Killer Diatomaceous Earth Powder](#); **Cockroaches:** [Harris Diatomaceous Earth Crawling Insect Killer](#)

Boric acid is available in numerous forms, including dusts, liquids, granules, pellets, tablets, wettable powders, rods, or baits. Commonly applied indoors for ants.

Product examples: **Ants:** [Gourmet Liquid Ant Bait](#);

Over 100 Crawling Insects: [Best Sellers from Green Dragon's Natural Pest](#)

Ants/Cockroaches: [Niban Boric Acid Bait](#)

Cockroaches/Crickets/Earwigs/Silverfish/Carpenter Ants: [Niban Nisus FG Granular Pest Control](#);

Termites: [JECTA® Diffusible Boracide](#) and [DIY Pest -Jecta Gel Diffusible Boracide](#)

Insecticidal soaps: These products use potassium salts of fatty acids to suffocate and kill insects that come into direct contact with the spray. Avoid spraying these contact killers around beneficial insects, such as bees and butterflies.

Microbes for drain cleaning/eliminating organic material: Even small amounts of organic material can be a breeding source for **small flies** like, Clean Blitz and [Batzner-CleanBlitz-tablets](#) and [Steritech-CleanBlitz-Tablets and Foam](#) and [Invade Bio Bullets](#) non-toxic products designed to break up organic material. They work to control small flies and drain flies with microorganisms scientifically chosen for their ability to digest the fats, oils, proteins, starches, and other organic wastes commonly found in hard-to-clean areas.

Other botanicals: Derived from essential oils, these botanical products desiccate insects and dry out their waxy outer layer. Common botanical active ingredients include rosemary, peppermint, thyme, and clove oil. [Avenger Organics Weed Killer](#) is an herbicide that uses concentrated citrus oil in the form of d-limonene to strip the waxy outer layer of plants and dry them out. [Soiltech](#) produces Phydura, an herbicide with clove oil as the active ingredient.

[Download chart](#) on example **Essential Oil & Botanicals for Common Pests**

OTHER LEAST-TOXIC PEST MANAGEMENT SOLUTIONS

Fungicides: Active ingredients in organic fungicides are generally quite similar to those in insecticides. Organic fungicide products such as [Monteray's 70% Neem Oil](#) and [Safer 3 in 1 Spray](#) are also marketed as insecticides.

Herbicides: Least toxic herbicides kill plants on contact and need to cover the entire plant for the most effectiveness. These herbicides better control young weeds, compared to larger plants that may require multiple applications. These products are usually most effective when sprayed on a bright day. These pesticides are non-selective, meaning that they can kill grass if improperly applied.

Herbicidal Soaps: These soaps penetrate the waxy coating of plant leaves to dry them out.

Vinegars: Horticultural vinegars are a popular mainstay of least-toxic alternative herbicides. They work in a similar way to the other herbicides above, but are quite harsh, and acutely toxic to weeds. It's important that customers follow the label and any wear protective equipment prescribed therein. Look for horticultural vinegars with at least 15% acetic acid. [Contact Organics](#) offers an effective alternative to synthetic chemical weed killers.

Least-Toxic Pesticides include:

- 1) [EPA-Classified Minimum Risk Pesticides](#)
- 2) USDA organic certified pesticides reviewed for their health and environmental impacts [USDA Organic 101 allowed and prohibited substances](#) and [USDA National organic program](#)

This includes all of the following:

- Boric acid-based products
- Silica gels and diatomaceous earth
- Nonvolatile insect and rodent baits in tamper resistant containers;
- Microbe-based pesticides
- Pesticides made with horticultural soaps and oils

The Term Least-Toxic Pesticides does not include:

- Pesticides labeled "Danger" or "Warning"
- Pesticides classified as a possible, known, probable, or likely carcinogen
- Pesticides classified as a developmental or reproductive toxicant
- Pesticides classified as a known, probable, or suspected endocrine disruptor
- Broadcast spray, dust, tenting, fogging, or baseboard pesticide spray application

Your contract pest management vendor works under your facility's direction. Provide this list of [Hazardous Pesticides to Avoid](#) to your vendor and require they do not use the chemicals listed to ensure your facility is "first doing no harm" and protecting the people you serve and your staff.

Learn more: Contact the IPM in Health Care Facilities Project, carolyn@mdpestnet.org
[Visit our website](#)