

## Bug-Wise

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**Ready-to-use, Non-Aerosol Insecticide Sprays for Indoor Insect Control:** One of the major changes that has occurred in the homeowner insecticide market in recent years is a decline in availability of ‘mix-your-own’ insecticide concentrates and an increase in the availability of non-aerosol ready-to-use sprays. There are two main reasons for this change. A container of ready-to-use spray contains much lower concentrations of insecticide than a concentrate with the same active ingredient, which results in increased safety. If the homeowner has a spill, it is already in the diluted form.

Also, most homeowners seem to prefer the convenience of ready-to-use sprays, rather than having to get out the pump up sprayer, measure the concentrate, dilute it with water, make the application, and then clean out the sprayer when finished. Of course ready-to-use sprays cost a lot more per pound of active ingredient, but this is America, and convenience sells.

Today, most of the major suppliers of homeowner insecticides feature a ready-to-use indoor insecticide in their product line. These are usually available in at least two sizes, a trigger-pump spray bottle that contains around 24 to 32 fl. Oz. of pre-mixed spray and a one-gallon container that has a two to three foot hose with a spray nozzle at the end. Some of these large containers come with a hand-pump, so they can be pumped up and used like a typical pump-up sprayer. Others have a trigger pump, or some other type pump at the nozzle. Some even come with battery-powered pumps.

One thing that all of these products have in common is that the active ingredients all belong to the same class of insecticide chemistry, pyrethroids. This is the other big change that has occurred in homeowner insecticides in recent years. As organophosphate insecticides, like malathion, diazinon, and chlorpyrifos (Dursban), were phased out of this market, they were replaced by pyrethroids, which are generally considered ‘safer’, because of their lower mammalian toxicity. Fortunately, in addition to being safer to mammals, pyrethroids are highly toxic to insects.

Another advantage of pyrethroids is that they usually have little or no odor, which is also a big improvement over the organophosphates. Most organophosphates have a noticeable odor; some stink! There is one other important advantage. When applied indoors, where they are not exposed to direct sun light, pyrethroids provide relatively long-term residual control, as long as several months in many cases.

What does all this mean for homeowners? It means that homeowners have access to insecticides that really are “safer, more convenient, and more effective”. Examples of some of the more common ready-to-use insecticide sprays are shown in the following table. These are readily available at lawn and garden centers, Co-Ops, and similar local retail stores.

What insects do they control, and how are these ready-to-use sprays used? Pyrethroid insecticides are broad-spectrum, contact insecticides. This means that they kill a lot of different kinds of insects and they kill on contact, rather than having to be eaten by the target pest. The pest comes in contact with the insecticide due to either being sprayed directly or by crawling across a treated surface. As a result, these products will control practically any indoor crawling insect pest: ants, roaches, spiders, fleas, and many others. This does not mean that these products are the ultimate solution for every pest problem. If you've got Argentine ants or German cockroaches, you'll have to do a lot more than just squirt a little bug spray. Still, these are useful tools for addressing many household insect problems.

How these products can be used depends on what the label says. The five products listed in the table below are all labeled for indoor use as either spot sprays or 'crack and crevice' sprays. This means that they can be used to directly spray a roach or spider that is on the floor in the corner of the room, a spot spray. They can also be used to spray under and behind appliances and furniture, and in other 'cracks and crevices' where pest may breed or hide. On most ready-to-use spray containers the spray nozzle adjusts to apply a broad coarse spray or a pin-stream.

Many of these products are also labeled for application as 'barrier sprays', which involves applying a band of spray around a door or other point of entry, with the objective of killing invading insects. All of the products listed below are labeled for use in kitchens, and the labels on individual products list even more uses.

The bottom line is that these ready-to-use pyrethroid sprays provide homeowners with a convenient means of dealing with many day-to-day insect problems. As always it's important to **read the insecticide label twice**, once before you buy it and again before you spray it.

"Honey, get the bug spray! I think we've got ants."

### Ready-to-use Indoor Insecticides

Active Ingredient (Concentration)	Brand Name (Example)	Kitchen Use *
Bifenthrin (0.05%)	Ortho Home Defense Max	Yes
Cyfluthrin (0.05%)	Bayer Home Pest Control Indoor & Outdoor Insect Killer	Yes
Deltamethrin (0.02%)	Bonide Household Insect Control	Yes
Lambda-cyhalothrin (0.03%)	Spectracide Bug Stop Indoor Outdoor Insect Killer	Yes
Tralomethrin (0.03%)	Schultz RTU Home Insect Killer	Yes

\* Can be used in kitchen areas if appropriate precautions are taken. Read product label before spraying.