What is a pesticide?

Pesticides are unique among toxic substances. Most environmental toxins are an unwanted by-product of another process (for example, outflow from a manufacturing plant or emissions from an automobile engine). Pesticides are chemicals designed to be harmful to a target pest and purposely introduced into the environment to do their job of managing insects, bacteria, weeds, rodents, or other pests.

Farmers use pesticides to control the pests that can destroy or damage food and other crops. Health agencies use pesticides to combat insects and other organisms known to carry disease (like West Nile virus). Hospitals use disinfecting pesticides to destroy viruses and other “germs” on floors and equipment. Many of us use pesticides to control pests in our homes and gardens.

Because most pesticides are designed to be toxic to their target pest—and because any substance can be harmful if used improperly—pesticide use is strictly controlled. The Department of Pesticide Regulation (DPR) protects human health and the environment by regulating pesticide sales and use and by fostering reduced-risk pest management. Pesticides must be registered with both the U.S. Environmental Protection Agency and DPR before they can be sold or used in California. DPR will not allow any pesticide to be registered unless it determines it can be used safely. DPR’s strict oversight also includes environmental monitoring, residue testing of fresh produce, licensing of pesticide professionals, strict rules to protect workers and consumers, and local use enforcement administered by the county agricultural commissioners.

While pesticides can be useful, they can also harm people, animals or the environment if misused or used indiscriminately. That is why the most desirable pest control is to prevent pests in the first place. If that doesn’t work and you choose to use pesticides, use the least-toxic product available and make sure to follow the label directions carefully.

What is a pesticide?

People often think pesticide means insecticide. Pesticide refers to not only insecticides but many other kinds of chemicals. Under state and federal law, a pesticide is any substance intended to control, destroy, repel, or attract a pest.
California also regulates adjuvants as pesticides. This class of chemicals is exempt from federal licensing but must be registered in California. Adjuvants are emulsifiers, spreaders, and other compounds added to improve the effectiveness of a pesticide.

What is a pest?
Any living organism that causes damage or economic loss or transmits or produces disease may be the target pest. Pests can be animals (like insects or mice), unwanted plants (weeds), or microorganisms (like plant diseases, bacteria and viruses).

Do household products contain pesticides?
Many household products are pesticides, including cockroach sprays, mosquito repellents, rat baits, kitchen and bath disinfectants, products that kill mold and mildew and many lawn-and-garden and swimming pool chemicals.

What about pest control devices?
State law requires specific types of pest control devices to be registered by DPR. The devices that require registration are those that control wood-destroying insects including termites, carpenter ants and powder post beetles. Devices are defined as “any method, instrument, or contrivance intended to be used to prevent, eliminate, destroy, repel, attract, or mitigate any wood-destroying pest.”

Exempt from registration are devices that claim to control wood-decaying fungi, general household pests such as cockroaches, and vertebrate pests such as rats and mice.

Pesticides, equipment used to apply pesticides, and firearms are not considered devices.

Are consumer products treated with pesticides regulated?
Many products, ranging from toothbrushes to children’s toys, are treated with antimicrobial pesticides to get rid of bacteria. The pesticides are usually added to the product during manufacture (for example, plastic shower curtains), but may be added afterwards (for example, mixing a mold-preventing pesticide into paint).

If a treated product makes public health claims—that is, it claims to “fight germs,” or “control fungus”—the article must be registered as a pesticide. If no public health claims are made, the product is exempt from federal or state regulation.

In either instance, the product label must make clear that the benefits of pesticide treatment do not extend beyond the article itself. Products like sponges or cutting boards, used in the kitchen or other areas where disease-causing organisms may be present, can give the false impression that the treated article provides extended protection against food-borne and disease-causing bacteria. Therefore, the law requires that the label make clear the treatment is to protect the article, not to prevent infection of people or animals with bacteria or other microbes.

What substances are not regulated as pesticides?
California’s definition of pesticides is broad, but does have some exclusions:

- Over-the-counter and prescription treatments for head lice, which are regulated by the U.S. Food and Drug Administration.
- Cosmetics and similar products (including antibacterial soaps and lotions, and antifungal creams) intended to be applied to the human body.
- Fertilizers, nutrients and other substances used to promote plant survival and health.
- Biological control agents, except for certain microorganisms. (Biological control agents include beneficial predators such as birds or ladybugs that eat insect pests.)
- Certain products which contain low-risk ingredients, such as garlic and cedar. (California exemptions differ from those at the federal level. For more information, go to www.cdpr.ca.gov, click on “A-Z Index,” then, “Section 25b - Exempted pesticide products.”)

Want more information?