

Pesticide Action Network North America

Advancing Alternatives to Pesticides Worldwide

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Triclosan Facts

Used to control	Bacteria
Top Uses	Soaps, deodorants, toothpastes, lotions, anti-bacterial cleaners, plastics
Known Health Effects	Skin irritant, compounds allergies, possible carcinogen

Use and Exposure

Triclosan is a non-agricultural pesticide used mainly for antibacterial purposes in personal hygiene products such as soaps, lotions and toothpaste. Triclosan is also used as an additive in plastics, polymers and textiles, in clothing, kitchen utensils, and play toys. It is derived from a class of chemicals known as chlorophenols which are suspected carcinogens.¹ Chlorophenols are chemically related to dioxin, which can lead to weakened immune systems, reproductive abnormalities and cancer.² It has been shown that dioxin can be found in triclosan in both the manufacturing process and in its breakdown product when exposed to sunlight.¹

Exposure to triclosan occurs both directly through contact with consumer products containing the pesticide and indirectly through traces found in streams from wastewater treatment facilities. It is estimated that up to one million pounds a year are flushed into wastewater in the United States.³

Researchers have found that triclosan negatively affects biodiversity among algae species in rivers where the pesticide is present, an impact that can drastically alter river/stream food systems.⁴ It has also been documented that triclosan has bioaccumulative properties; fish were found to carry signifi-

cantly higher levels of the chemical than levels in surrounding water.⁵ The half-life of triclosan is between 2 and 2,000 days, depending on latitude and time of year.⁶

Few studies have shown the efficacy of including triclosan or any antimicrobial in consumer products. Of serious concern is evidence that common use of triclosan may lead to bacterial resistance to antimicrobials.⁷

Health Effects

Exposure to triclosan can cause skin irritations, create susceptibilities to allergies, increase exposure to dioxin, produce carcinogenic effects, lead to bacterial resistance, and negatively alter aquatic ecosystems.^{1, 4, 5, 7}

Triclosan works by inhibiting the bacterial enzyme FabI, previously considered ubiquitous in bacteria. The appearance of a new enzyme in some bacteria (FabK) that is not susceptible to triclosan, suggests that mutations imparting resistance have occurred. Widespread resistance will make many antimicrobial soaps ineffective—a serious threat to those with medical reasons to use them.⁸ Furthermore, when triclosan does kill bacteria it tends to kill not only potentially harmful bacteria but beneficial bacteria as well.⁹

Company that Manufactures Triclosan in the U.S.

Ciba Specialty Chemicals under the trade name IRGASAN®

Companies that Manufacture Products Containing Triclosan

Lysol, Colgate, Dial, Dawn, Right Guard, Gillette, Faberware, Teva, Merrell Shoes, Playskool¹⁰

References

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