

This fact sheet answers the most frequently asked health questions (FAQs) about toxaphene. For more information, call the ATSDR Information Center at 1-888-422-8737. This fact sheet is one in a series of summaries about hazardous substances and their health effects. This information is important because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.

HIGHLIGHTS: Toxaphene is an insecticide which is currently banned for all uses in the United States. Breathing, eating, or drinking high levels of toxaphene could damage the lungs, nervous system, and kidneys, and can even cause death. Toxaphene has been found in at least 58 of the 1,430 National Priorities List sites identified by the Environmental Protection Agency (EPA).

What is toxaphene?

(Pronounced tɒk/sə-fēn)

Toxaphene is an insecticide containing over 670 chemicals. It is usually found as a solid or gas, and in its original form it is a yellow to amber waxy solid that smells like turpentine.

It does not burn and evaporates when in solid form or when mixed with liquids. Toxaphene is also known as campechlor, chlorocamphene, polychlorocamphene, and chlorinated camphene.

Toxaphene was one of the most heavily used insecticides in the United States until 1982, when it was canceled for most uses; all uses were banned in 1990. It was used primarily in the southern United States to control insect pests on cotton and other crops. It was also used to control insect pests on livestock and to kill unwanted fish in lakes.

What happens to toxaphene when it enters the environment?

- Toxaphene may enter the environment from hazardous waste sites.
- It may enter the air by evaporation.

- It does not dissolve well in water, so it is more likely to be found in air, soil, or sediment at the bottom of lakes or streams, than in surface water.
- Toxaphene breaks down very slowly in the environment.
- Toxaphene accumulates in fish and mammals.

How might I be exposed to toxaphene?

- People who breathe air near a hazardous waste site where toxaphene was disposed could be exposed to it.
- Infants or toddlers could be exposed by eating contaminated soil.
- People who eat large quantities of fish and shellfish which were contaminated with toxaphene could be exposed.
- People who drink water from wells containing toxaphene could also be exposed.

How can toxaphene affect my health?

Breathing, eating, or drinking high levels of toxaphene could damage the lungs, nervous system, and kidneys, and can even cause death. However, since toxaphene is no longer used in the United States, most people would not be exposed to high levels of it.

People could be exposed to low levels of it; however,

ToxFAQs Internet address via WWW is <http://www.atsdr.cdc.gov/toxfaq.html>

there is no information on how low levels affect people.

Studies show that animals which ate food or drank water containing toxaphene had effects on the liver, kidneys, adrenal glands, and immune system.

It is not known whether toxaphene can affect reproduction or cause birth defects in people. Animal studies have reported that toxaphene affects the development of newborn animals when their mothers are exposed during pregnancy.

How likely is toxaphene to cause cancer?

It is not known whether toxaphene causes cancer in people. An animal study reported that toxaphene caused cancer of the thyroid gland when the animals were exposed to high levels over their lifetimes.

The Department of Health and Human Services (DHHS) has determined that toxaphene may reasonably be anticipated to be a carcinogen.

Is there a medical test to show whether I've been exposed to toxaphene?

Toxaphene and its breakdown products can be detected in blood, urine, breast milk, and body tissues. Urine and blood tests are the most common tests used. These tests aren't available at most doctors' offices, but can be done at special laboratories that have the right equipment. However, these tests cannot determine how much toxaphene you have been exposed to, or whether you will experience any health effects.

Has the federal government made recommendations to protect human health?

The EPA has set a drinking water standard of 0.003 milligrams of toxaphene per liter of drinking water (0.003 mg/L).

The EPA also requires spills or accidental releases into the environment of 1 pound or more of toxaphene be reported.

The Occupational Safety and Health Administration (OSHA) has set a permissible exposure limit of 0.5 milligrams toxaphene per cubic meter of air (0.5 mg/m³) for an 8-hour workday, 40 hour workweek.

The National Institute for Occupational Safety and Health (NIOSH) recommends that toxaphene levels should be as low as possible in the workplace due to its potential carcinogenicity.

The American Conference of Governmental Industrial Hygienists (ACGIH) recommend 0.5 mg/m³ for an 8-hour workday, 40-hour workweek. They also recommend that 1 mg/m³ be considered a level that should not be exceeded in a 15-minute period.

Glossary

Carcinogen: A substance with the ability to cause cancer.

CAS: Chemical Abstracts Service.

Insecticide: A substance that kills insects.

Milligram (mg): One thousandth of a gram.

Sediment: Mud and debris that have settled to the bottom of a body of water.

References

This ToxFAQs information is taken from the 1996 Toxicological Profile for Toxaphene produced by the Agency for Toxic Substances and Disease Registry, Public Health Service, U.S. Department of Health and Human Services, Public Health Service in Atlanta, GA.

Where can I get more information? For more information, contact the Agency for Toxic Substances and Disease Registry, Division of Toxicology, 1600 Clifton Road NE, Mailstop F-32, Atlanta, GA 30333. Phone: 1-888-422-8737, FAX: 770-488-4178. ToxFAQs Internet address via WWW is <http://www.atsdr.cdc.gov/toxfaq.html> ATSDR can tell you where to find occupational and environmental health clinics. Their specialists can recognize, evaluate, and treat illnesses resulting from exposure to hazardous substances. You can also contact your community or state health or environmental quality department if you have any more questions or concerns.

