Consumer Factsheet on: TOXAPHENE

List of Contaminants

As part of the Drinking Water and Health pages, this fact sheet is part of a larger publication:
National Primary Drinking Water Regulations

This is a factsheet about a chemical that may be found in some public or private drinking water supplies. It may cause health problems if found in amounts greater than the health standard setby the United States Environmental Protection Agency (EPA).

What is Toxaphene and how is it used?

Toxaphene is an amber, waxy organic solid with a piney odor. Toxaphene was used as an insecticide for cotton and vegetables, and on livestock and poultry. These uses have been restricted, and toxaphene is now used only for special needs, mainly in southern states.

The list of trade names given below may help you find out whetheryou are using this chemical at home or work.

Trade Names and Synonyms:

Chlorinated camphene
Octachlorocamphene
Camphochlor
Agricide Maggot Killer
Alltex
Crestoxo
Compound 3956
Estonox
Fasco-Terpene
Geniphene
Hercules 3956
M5055
Melipax
Motox
Penphene
Phenacide
Phenatox
Strobane-T
Toxadust
Toxakil
Vertac 90%
Toxon 63
Attac
Anatox
Royal Brand Bean Tox 82
Cotton Tox MP82
Security Tox-Sol-6
Security Tox-MP cotton spray
Security Motox 63 cotton spray
Agro-Chem Brand Torbidan 28
Dr Roger's TOXENE

Why is Toxaphene being Regulated?

In 1974, Congress passed the Safe Drinking Water Act. This law requires EPA to determine safe levels of chemicals in drinking water which do or may cause health problems. These non-enforceable levels, based solely on possible health risks and exposure, are called Maximum Contaminant Level Goals.

The MCLG for toxaphene has been set at zero because EPA believes this level of protection would not cause any of the potential health problems described below.

Based on this MCLG, EPA has set an enforceable standard called a Maximum Contaminant Level (MCL). MCLs are set as close to the MCLGs as possible, considering the ability of public water systems to detect and remove contaminants using suitable treatment technologies.

The MCL has been set at 3 parts per billion (ppb) because EPA believes, given present technology and resources, this is the lowest level to which water systems can reasonably be required to remove this contaminant should it occur in drinking water.

These drinking water standards and the regulations for ensuring these standards are met, are called National Primary Drinking Water Regulations. All public water supplies must abide by these regulations.

What are the Health Effects?

Short-term: EPA has found toxaphene to potentially cause the following health effects when people are exposed to it at levels above the MCL for relatively short periods of time: central nervous system effects including restlessness, hyperexcitability, tremors, spasms or convulsions.

Long-term: Toxaphene has the potential to cause the following effects from a lifetime exposure at levels above the MCL: liver and kidney degeneration; central nervous system effects; possible immune system suppression; cancer.

How much Toxaphene is produced and released to the environment?

Production of toxaphene in 1977 was nearly 40 million pounds. By 1982, when EPA canceled most of its uses, consumption was reported at 12 million pounds. Toxaphene is released into the environment primarily from its application as an insecticide for the protection of cotton, mostly in southern states.

What happens to Toxaphene when it is released to the environment?

Toxaphene is very persistent, remaining in soil for up to 14 years. It is not expected to leach to groundwater. It will not break down by microbial or other means. Though it strongly binds to soils and the sediments of water bodies, it may gradually evaporate to the air where it is slowly broken down by sunlight. Toxaphene has a high potential to accumulate in aquatic life.

How will Toxaphene be Detected in and Removed from My Drinking Water?

The regulation for toxaphene became effective in 1992. Between 1993 and 1995, EPA required your water supplier to collect water samples every 3 months for one year and analyze them to find out if toxaphene is present above 1 ppb. If it is present above this level, the system must continue to monitor this contaminant.

If contaminant levels are found to be consistently above the MCL, your water supplier must take steps to reduce the amount of toxaphene so that it is consistently below that level. The following treatment methods have been approved by EPA for removing toxaphene: Granular activated charcoal.

How will I know if Toxaphene is in my drinking water?

If the levels of toxaphene exceed the MCL, 3 ppb, the system must notify the public via newspapers, radio, TV and other means. Additional actions, such as providing alternative drinking water supplies, may be required to prevent serious risks to public health.

Drinking Water Standards:

Mclg: zero

Mcl: 3 ppb

Learn more about your drinking water!

EPA strongly encourages people to learn more about their drinking water, and to support local efforts to protect and upgrade the supply of safe drinking water. Your water bill or telephone book's government listings are a good starting point.

Your local water supplier can give you a list of the chemicals they test for in your water, as well as how your water is treated.

Your state Department of Health/Environment is also a valuable source of information.

For help in locating these agencies or for information on drinking water in general, call: EPA's Safe Drinking Water Hotline: (800) 426-4791.

For additional information on the uses and releases of chemicals in your state, contact the: Community Right-to-Know Hotline: (800) 424-9346

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