

Triclocarban and Drinking Water

Triclocarban is a contaminant that has been found in waters that could be used as drinking water sources in Minnesota. The Minnesota Department of Health (MDH) developed a health-based guidance value for triclocarban in drinking water and, based on this value, does not expect levels of triclocarban in drinking water to harm Minnesotans.

What is triclocarban?

Triclocarban is a chemical used as a disinfectant and antibacterial agent in deodorant soaps and body washes, and as a preservative in some personal care products. In the U.S., it is primarily found in antibacterial deodorant bar soaps at concentrations up to 1.5 percent.

Has triclocarban been found in Minnesota waters?

Triclocarban has the potential to be in rivers and streams that receive treated wastewater. In Minnesota, it has been found in treated wastewater at levels up to 0.4 parts per billion (ppb) and in rivers and streams at up to 0.37 ppb.¹ The highest levels are found just downstream of wastewater treatment plants. These concentrations are below MDH guidance values.

What is the MDH guidance value for triclocarban in drinking water?

Based on the available information, MDH derived a risk assessment advice value of 100 ppb for triclocarban in drinking water.² A person drinking water at or below this level daily for a lifetime would have little or no risk of any health effects from triclocarban.

Can triclocarban in drinking water affect my health?

There is not a lot of information available on triclocarban in drinking water. Triclocarban is not likely to be present in municipal drinking water because it is removed during treatment. It is not common in groundwater because it tends to adhere to soil and sediment.

Limited studies on the health effects of triclocarban have been conducted in laboratory animals. Exposure to high doses of triclocarban caused toxicity in the blood system, liver, kidney and testes. Some studies suggest that triclocarban may have endocrine effects but additional studies are needed before conclusions can be made.

At a Glance

Triclocarban is...

- an “antimicrobial” that is commonly used in deodorant soaps to give them bacteria-fighting qualities.

Triclocarban enters your body from...

- using “anti-bacterial” deodorant soaps that contain triclocarban.

Your exposure to triclocarban can be reduced by....

- checking labels and avoiding products that contain triclocarban.



Triclocarban in drinking water is safe if...

The level is lower than the MDH guidance value of 100 ppb.

How does triclocarban get into the environment?

Triclocarban enters the environment mostly through municipal wastewater. Personal care products containing triclocarban are washed down drains into the wastewater system. Wastewater treatment systems are able to remove most triclocarban before it is released to rivers and streams, but a small amount (about 6 percent) is not removed during treatment.

How long does triclocarban stay in the environment?

Most of the triclocarban that passes through a wastewater treatment plant will be captured in sludge, where it will biodegrade. A small amount may reach surface water, where conditions may allow it to last for weeks or months. Even though it may biodegrade in the environment, triclocarban is also constantly released to surface waters through wastewater.

What are the potential environmental impacts of triclocarban?

Triclocarban is highly toxic to fish and other animals that live in water. Limited data suggests that the levels of triclocarban being found in the environment could negatively impact reproduction of these animals. Triclocarban may bioaccumulate in animals and plants that live in water.^{3,4}

What Minnesotans Need to Know . . .

Triclocarban is an ingredient in some deodorant soaps. It is found in surface water, but at concentrations below the MDH health-based guidance value for drinking water. However, triclocarban in surface water may negatively impact fish and other animals that live in water. For most people, the main route of exposure to triclocarban is through use of antibacterial deodorant bar soaps. If you use these products, triclocarban may be present in your body at very low levels. If you do not use these products, you are not likely to be exposed, because these products are the only significant route of exposure.

The Contaminants of Emerging Concern (CEC) Program...

Evaluates health risks from contaminants in drinking water.

References

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