1,2,3-TCP in Drinking Water

1,2,3-Trichloropropane (1,2,3-TCP) is a contaminant that may be in water that could be used as drinking water in Minnesota. The Minnesota Department of Health (MDH) developed a health-based guidance value for 1,2,3-TCP in drinking water.

What is 1,2,3-TCP?

1,2,3-TCP is a contaminant of soil fumigants that were once used in Minnesota. It is also an organic solvent used in industrial settings as a cleaner, degreasing agent, solvent, and paint/varnish remover.

How much 1,2,3-TCP is in Minnesota drinking water?

1,2,3-TCP has not been found in drinking water in Minnesota. However, most samples were analyzed using a reporting limit of 0.5 parts per billion (ppb) – which is higher than the level of concern.

Has 1,2,3-TCP been found in other waters in Minnesota?

The Minnesota Pollution Control Agency (MPCA) found 1,2,3-TCP in only one of 54,288 groundwater samples. The concentration of 1,2,3-TCP in this one sample was 4.3 parts per billion (ppb). These samples were taken at closed landfills from 1998-2007. This study used an older, less sensitive, test method.

MDH also conducted a small-scale study using a test method to measure 1,2,3-TCP at very concentrations (0.0007 ppb). 1,2,3-TCP was not found in the water sources tested.¹

What is the MDH guidance value for 1,2,3-TCP in drinking water?

MDH developed a guidance value of 0.003 ppb for 1,2,3-TCP in drinking water based on its potential to cause cancer in people.²

Can 1,2,3-TCP in drinking water affect my health?

Some factors that determine if a chemical can affect your health are its potential to harm your body (its toxicity) and how much gets in your body (your exposure). We currently do not know if 1,2,3-TCP is present in Minnesota drinking water. Therefore, we do not know if it poses a health risk. If you drink water containing up to 0.003 ppb 1,2,3-TCP over a lifetime there is little to no health risk of cancer or other effects.

1,2,3-TCP in drinking water is safe if...

The level is lower than the MDH guidance value of 0.003 ppb.

At a Glance

1,2,3-TCP is...
- a contaminant of soil fumigants and an organic solvent.

1,2,3-TCP enters your body from...
- using 1,2,3-TCP contaminated water to drink, shower, bath, or cook.

Your exposure to 1,2,3-TCP can be reduced by....
- MDH does not have specific recommendations for individual action at this time.

1,2,3-TCP in drinking water is safe if...

The level is lower than the MDH guidance value of 0.003 ppb.
How does 1,2,3-TCP get into the environment?

Based on the locations where it has been found, releases of 1,2,3-TCP to the environment are most likely to occur through the use of soil fumigants, and possibly through the disposal in landfills of chemical products containing 1,2,3-TCP.

References