

Skatol in Drinking Water

Skatol is a contaminant that has been found in surface waters that could be used as drinking water sources in Minnesota. Skatol has not been found in drinking water. The Minnesota Department of Health (MDH) found that there is not enough information about the health effects of skatol to develop a guidance value.

What is skatol?

Skatol is a fragrance ingredient used in consumer products such as soaps, detergents, lotions, and perfumes. It is also used as an artificial flavor in food products such as non-alcoholic beverages, ice cream, candy, baked goods, and chewing gum. Skatol has an unpleasant odor at high concentrations—it contributes to the foul odor of human and animal waste—but at low concentrations it can be combined with other ingredients to make more pleasant aromas. The same molecule that makes you want to stay away from the outhouse can help your laundry smell fresh.

How much skatol is in Minnesota drinking water?

Skatol has not been found in drinking water in Minnesota.

Has skatol been found in other waters in Minnesota?

The United States Geological Survey (USGS) found skatol in Minnesota wastewater and surface water at maximum concentrations of 27 parts per billion (ppb).¹ Skatol was found in about 14 percent of all water samples in this study. The Minnesota Pollution Control Agency (MPCA) also found skatol at very low levels in groundwater.² Very few studies have measured skatol concentrations in drinking water, surface water, groundwater or wastewater.

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

MDH reviewed available information about skatol in 2011. MDH did not develop a guidance value for skatol because there is not enough information about potential health effects. If more information becomes available, MDH may consider further review of skatol.

What health information was found when MDH reviewed skatol?

There is some evidence from animal studies that skatol harms the lungs when inhaled at very high doses.

At a Glance

Skatol is...

- Found in human and animal waste.
- Produced naturally in the human body.
- Used in small amounts in fragrances and as an artificial food flavor.



Skatol enters your body from...

- Using fragrances containing skatol.
- Eating foods containing skatol.

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

MDH does not have any recommendations for individual action at this time.

MDH did not develop health based guidance for skatol because...

There is currently not enough information about the health effects from skatol in drinking water.

Can skatol in drinking water affect my health?

There is not currently enough data about the potential for health effects from skatol in drinking water or the amount of skatol in drinking water to determine whether or not skatol in drinking water can affect health.

However, MDH does not anticipate at this time that skatol in drinking water is of concern.

How does skatol get into my body?

Skatol is produced inside your body through natural digestive processes.

Skatol also gets into your body from using scented products or eating foods that contain skatol.

How does skatol get into the environment?

Skatol naturally occurs in feces of humans and some animals, including some farm animals. When it rains, skatol in animal feces may be washed into lakes, rivers, streams, and possibly groundwater. Skatol in human waste may enter the environment through wastewater. It also gets washed down the drain and mixed with wastewater when we use products that contain skatol. Skatol may also be released into the environment when it is manufactured for use as a fragrance or food additive.

How long does skatol stay in the environment?

Once skatol is in soil, it tends to stay attached to soil. Some skatol may move through soil into groundwater. Skatol in surface water is likely to attach to particles in surface water, although some will go into the air.

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

Evaluates health risks from contaminants in drinking water.

References

1. USGS. Presence and Distribution of Organic Wastewater Compounds in Wastewater, Surface, Ground, and Drinking Waters, Minnesota, 2000-02. Scientific Investigation Report 2004-5138 (<http://pubs.usgs.gov/sir/2004/5138/20045138.pdf>).
2. MPCA. Endocrine Active Chemicals and Other Contaminants of Emerging Concern in Minnesota's Groundwater, 2009-2010. (www.pca.state.mn.us/index.php/view-document.html?gid=17244)

More information on pharmaceuticals and personal care products in water is available from the US Environmental Protection Agency (EPA):

<http://water.epa.gov/scitech/swguidance/ppcp/index.cfm>



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