

Metribuzin Degradates in Drinking Water

Metribuzin degradates are contaminants that have 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 metribuzin degradates in drinking water and, based on this value, does not expect levels in drinking water to harm Minnesotans.

What are metribuzin degradates?

Metribuzin is an herbicide used to control weeds in agricultural settings. In the environment, it may break down into three primary degradation products (degradates): deaminated metribuzin (DA), diketometribuzin (DK), and deaminated diketometribuzin (DADK). In Minnesota, metribuzin is used almost exclusively on potato crops.

How much metribuzin degradates are in Minnesota drinking water?

Monitoring for metribuzin degradates in Minnesota is conducted using monitoring wells and not drinking water wells.

Have metribuzin degradates been found in other waters in Minnesota?

The Minnesota Department of Agriculture (MDA) reports that metribuzin and its degradates have been detected in groundwater samples from monitoring wells in potato-growing regions (the Central Sands area) of Minnesota since monitoring for the degradates began in 2000. The monitoring wells are located in areas deemed to be vulnerable to contamination, e.g., areas with shallow groundwater and high soil permeability. Among metribuzin and degradate detections, metribuzin DADK concentrations are highest, with maximum values ranging from 9.28 parts per billion (ppb) to 2.23 ppb.

What is the MDH guidance value for metribuzin degradates in drinking water?

MDH developed a guidance value of 10 ppb for metribuzin degradates in drinking water.¹

At a Glance

Metribuzin is...

- an herbicide.

Metribuzin enters your body from...

- drinking contaminated water, and
- potentially through eating produce that was treated with metribuzin.



Metribuzin degradates in drinking water are safe if...

The level is lower than the MDH guidance value of 10 ppb.

Can metribuzin degradates in drinking water affect my health?

Based on the environmental monitoring described above, there are locations and times when surface water concentrations of metribuzin have exceeded MDH guidance. Concentrations of metribuzin degradates in monitoring wells (*not* drinking water wells) in Minnesota have come close to exceeding the guidance. Potential exposure to metribuzin degradates appears to be highest for people living in potato-growing regions of Minnesota who get their drinking water from wells.

How do metribuzin degradates get into the environment?

Metribuzin degradates are transported to the water system when rain and irrigation water carry them through the soil into shallow aquifers, or transport them to water bodies via surface runoff. Pesticide application regulations are based in part on preventing this contamination. When contamination occurs, the MDA takes additional steps to protect the environment. MDA has developed a set of metribuzin best management practices (BMPs), which are voluntary guidelines that go beyond the mandatory use restrictions on the product label. The BMPs for metribuzin include reducing the amount used and alternating the use of metribuzin annually with other, unrelated herbicides.

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

Evaluates health risks from contaminants in drinking water.

References

1. www.health.state.mn.us/divs/eh/risk/guidance/gw/metribuzindeg.pdf



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