

ADDITIONAL INFORMATION REGARDING PESTICIDES IN DRINKING WATER...

Triazines are only one class of pesticides used in Wisconsin. You may want to consider testing for other pesticides that you know have been applied, stored, or spilled in your area.

Based on Department of Agriculture, Trade and Consumer Protection well sampling surveys, the most frequently detected pesticides in Wisconsin are the breakdown products of alachlor (*Lasso*) and metolachlor (*Dual*) and atrazine and its breakdown products.

Several factors affect a well's vulnerability to pesticide contamination: well location, quantity of pesticide applications or size of spill, well depth and construction, soil type, groundwater flow direction and geologic setting.

When more than one pesticide is present in well water, there may be health effects to consider from each individual pesticide, pesticide breakdown products, or the combination of multiple pesticides.

More information regarding the extent of pesticides in the state's groundwater resources can be found in Department of Agriculture, Trade and Consumer Protection report. To view a copy of the report online search for:

"Agricultural Chemicals in Wisconsin Groundwater - 2017"



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INTERPRETING THE RESULTS OF YOUR DIAMINOCHLOROTRIAZINE (DACT) SCREEN



The diaminochlorotriazine (DACT) screen tests for agricultural chemicals called "triazines". Triazines are a class of herbicides that include atrazine, simazine and cyanazine. The DACT screen is performed as an inexpensive alternative to a more detailed test. It is a useful first step in determining whether your water is below the health-based groundwater standards set by the state of Wisconsin for triazine-type herbicides.

SOME BACKGROUND ON ATRAZINE...

Atrazine is a common herbicide (weed killer). It is one of the more commonly found agricultural chemicals in Wisconsin's groundwater. Over time, atrazine breaks down into three other related chemicals (deisopropyl atrazine, deethyl atrazine, and DACT). These chemicals are called breakdown products and they are also of environmental and health concern. DACT is found more often and at higher concentrations than atrazine itself.

Wisconsin has set a **health-based groundwater standard of 3 micrograms per liter ($\mu\text{g}/\text{l}$) (sometimes expressed as 3 parts per billion (ppb) for the total of atrazine and its three breakdown products.** DACT is regulated as part of the total atrazine standard even though it can come from other triazine herbicides such as simazine.

Health risks...

According to the Wisconsin Department of Health and Family Services (DHFS), long-term exposure to atrazine may cause a variety of health problems including weight loss, heart damage, and muscle spasms.

WHAT THE DACT RESULT TELLS YOU....

The **DACT screen usually underestimates the amount of total atrazine in a water sample.** The higher your DACT screen level, the more likely it is that your sample exceeds the groundwater standard for total atrazine. The only way to know for sure whether the water from your well is below the health standard is to have the more thorough test performed.

A limited number of comparisons have shown the likelihood that your well exceeds the total atrazine standard when your DACT screen is at a certain level. You can use the following as a guide to help you make this decision.

IF YOUR DACT SCREEN IS –

- LESS THAN 0.1 $\mu\text{g}/\text{l}$ – NO TRIAZINE HERBICIDES WERE DETECTED IN YOUR WATER SAMPLE.
- 0.1 TO 1.0 $\mu\text{g}/\text{l}$, TRIAZINE HERBICIDES WERE DETECTED BUT IT IS UNLIKELY THAT YOUR WATER EXCEEDS THE 3.0 $\mu\text{g}/\text{l}$ TOTAL ATRAZINE STANDARD.
- 1.0 TO 2.0 $\mu\text{g}/\text{l}$, THERE IS A CHANCE THAT YOUR WATER SUPPLY EXCEEDS THE 3.0 $\mu\text{g}/\text{l}$ TOTAL ATRAZINE STANDARD.
- GREATER THAN 2.0 $\mu\text{g}/\text{l}$, IT IS LIKELY THAT YOUR WATER SUPPLY EXCEEDS THE 3.0 $\mu\text{g}/\text{l}$ TOTAL ATRAZINE STANDARD.
- GREATER THAN 3.0 $\mu\text{g}/\text{l}$, IT IS HIGHLY LIKELY THAT YOUR WATER SUPPLY EXCEEDS THE 3.0 $\mu\text{g}/\text{l}$ TOTAL ATRAZINE STANDARD.

WHAT SHOULD YOU DO ABOUT FURTHER ATRAZINE TESTING?

Based on the information provided, you may decide to have a more detailed test on your well water. One such test is called Nitrogen and Phosphorus Pesticide analysis and typically costs around \$200. If you have the more detailed test done, be sure to use a certified laboratory that can test for atrazine and some or all of its breakdown products.

When DACT concentrations are higher than 2 $\mu\text{g}/\text{l}$, the Department of Agriculture, Trade and Consumer Protection (DATCP) can often perform the more detailed follow-up test for you at their expense. ***If your DACT result is over 2 $\mu\text{g}/\text{l}$ and you are interested in follow up testing contact Carla Romano, Water Quality Staff, DATCP at 608-224-4503 or datcpwg@wi.gov.***

IF THE LEVEL OF TOTAL ATRAZINE RESIDUE EXCEEDS 3 $\mu\text{g}/\text{l}$ –

We advise you to not consume the water on a long-term basis. Do not use the water for drinking or for soups, beverages, baby formula, etc. You may continue to use your water to bathe, wash food, clothing, or dishes, lawn watering, etc. At levels exceeding 3 $\mu\text{g}/\text{l}$, you may be eligible for state financial assistance to obtain safe drinking water. Please contact the DNR Private Water Supply office at (608) 266-0821 for additional information about obtaining a safe drinking water supply.