

## 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 (proximity to agricultural areas or pesticide related industries), quantity of pesticide applications or size of spill, well depth and construction, soil type, 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 go online and search for:

**"Agricultural Chemicals in Wisconsin Groundwater - 2007"**

## Center for Watershed Science and Education



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## INTERPRETING THE RESULTS OF YOUR DIAMINOCHLOROTRIAZINE (DACT) SCREEN



The diaminochlorotriazine (DACT) screen is a test that detects agricultural chemicals called "triazines". Triazines are a class of herbicides that include atrazine, simazine and cyanazine. The DACT screen is an approximate test that 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 one of the three breakdown products of atrazine (and other triazine) herbicides and is found more often and at higher concentrations than atrazine itself.

Wisconsin **has set a health-based groundwater standard of 3 parts per billion (also expressed as 3 micrograms per liter) 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 –

- < 0.1 PART PER BILLION (PPB) – NO TRIAZINE HERBICIDES WERE DETECTED IN YOUR WATER SAMPLE.
- 0.1 TO 1.0 PPB, TRIAZINE HERBICIDES WERE DETECTED BUT IT IS UNLIKELY THAT YOUR WATER EXCEEDS THE 3.0 PPB TOTAL ATRAZINE STANDARD.
- 1.0 TO 2.0 PPB, THERE IS A CHANCE THAT YOUR WATER SUPPLY EXCEEDS THE 3.0 PPB TOTAL ATRAZINE STANDARD.
- GREATER THAN 2.0 PPB, IT IS LIKELY THAT YOUR WATER SUPPLY EXCEEDS THE 3.0 PPB TOTAL ATRAZINE STANDARD.
- GREATER THAN 3.0 PPB, IT IS HIGHLY LIKELY THAT YOUR WATER SUPPLY EXCEEDS THE 3.0 PPB 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 \$125. If you have the more detailed test done, be sure to use a certified laboratory that is able to test for atrazine and some or all of its breakdown products. If you have a well water test at a private lab, staff at WEAL (715)346-3753 can help you interpret the results in comparison to your DACT results from our lab.

When DACT concentrations are higher than 2 ppb, 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 ppb and you are interested in follow up testing contact Jeff Postle, Water Quality Staff, DATCP at 608-224-4503.***

## IF THE LEVEL OF TOTAL ATRAZINE RESIDUE EXCEEDS 3 PPB –

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 foods, clothing, or dishes, lawn watering, etc. At levels exceeding 3 ppb, 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.