



St. Clair County Health Department

Division of Environmental Health
3415 28th Street, Port Huron, MI 48060
(810) 987-5306
www.stclaircounty.org/offices/health

Nitrate in Drinking Water FAQ

Information for Private Water Well Owners

What is nitrate?

Nitrate (NO_3) is a form of nitrogen combined with oxygen. It can be converted in the body to nitrite (NO_2). The major adult intake of nitrate is from food rather than water, but sometimes excessive amounts of nitrate can get into drinking water.

How does nitrate get into drinking water?

Nitrate can get into drinking water if a well is improperly constructed or located where it is subject to contamination sources. Typical sources of nitrate include septic tank and drain field effluent, crop and lawn fertilizers, waste from livestock operations, and natural geological nitrogen.

What illnesses can nitrate cause?

Large amounts of nitrate in drinking water can cause a serious illness in infants under six months of age called *Methemoglobinemia*, or Blue Baby Syndrome. *Methemoglobinemia* is a condition in which the ability of the red blood cells to carry oxygen is reduced and the acutely poisoned person will have a blue discoloration of the skin due. Also, because nitrate contamination can be related to human, animal or industrial wastes, excessive levels of nitrate in drinking water may indicate potential for the presence of other types of contaminants.

What is the procedure for testing my well water for nitrate?

A water sample bottle must be purchased at the St. Clair County Health Department for \$20. The day you collect your water sample the bottle must be submitted to the St. Clair County Health Department Environmental Health Division by 1:00pm. Samples are analyzed in our lab and results are available within 24 hours and will be mailed to you.

How do I know if my water tests "excessive" for nitrates?

The U.S. Environmental Protection Agency has established a Maximum Contaminant Level (MCL) value for nitrate at 10 milligrams per liter (mg/l) and nitrite at 1.0mg/l. The St. Clair County Health Department will notify you by phone the same day you submit your water sample to the lab if your results show an elevated level of nitrates.

How often should I sample my water for nitrates?

Unlike public water supplies, private household water systems are not required by law to sample on a routine basis. The St. Clair County Health Department does recommend testing a private water supply for nitrates once a year.

Where can I get more information?

Please contact the Environmental Health Division of the St. Clair County Health Department, 3415 28th Street, Port Huron, Mondays 10:00am – 6:30pm and Tuesday – Fridays 8:00am – 4:30pm at (810) 987-5306.