

IRON IN PRIVATE WATER WELLS FREQUENTLY ASKED QUESTIONS



Q: What are the sources of iron in water wells?

A: Iron is a common element in the earth's crust. Minerals containing iron dissolve over time and are released into groundwater. Occasionally iron pipes may be a source of iron in water. Iron bacteria are non-harmful bacteria that can lead to unpleasant tastes, smells, or stains from the water.

Q: What are the potential health effects from drinking water containing iron?

A: Iron is an essential nutrient. The United States Environmental Protection Agency (US-EPA) considers iron a secondary water contaminant, with no direct threat to human health. Elevated levels of iron can disrupt disinfectants like chlorine, which may allow harmful bacteria to grow.

Q: What levels are considered acceptable for iron found in water wells?

A: For public water supply systems, the EPA established a secondary maximum contaminant drinking water level of 0.3 milligrams per liter (mg/L) for iron. The National Secondary Drinking Water Standard is a non-enforceable guideline regarding contaminants that may cause cosmetic or aesthetic effects in drinking water. For more information on secondary drinking water standards go to <https://www.epa.gov/dwstandardsregulations/secondary-drinking-water-standards-guidance-nuisance-chemicals#table-of-secondary>.

Q: Should I test my private water well for iron?

A: If you use your private well for drinking water purposes you should have your well tested. You can contact your local KDHE district office to ask for assistance in sample collection and testing (http://www.kdheks.gov/befs/dist_office.html). Additionally, you can go to KDHE's Private Water Well website http://www.kdheks.gov/wellwateraware/local_resource_map.htm to access contact information for certified water well testing labs, sampling protocols, testing procedures and guidance documents.

Q: What if my test shows elevated levels of iron in my private well? How do you treat it and what are the costs?

A: If elevated levels are found, consider using bottled water for drinking and cooking, research how to connect your home with a local public water supply or consider in-home treatment methods. Common methods for homeowners to remove iron are activated carbon filtration and oxidizing filtration. Please visit https://www.watersystemscouncil.org/download/wellcare_information_sheets/well_water_testing_&_treatment_information_sheets/DrinkingWaterTreatmentsandCostsFINAL.pdf for more information on treatment for homeowners, including estimated treatment costs. Iron bacteria can be treated with shock chlorination. For guidance on shock chlorination, visit http://www.kdheks.gov/download/disaster_recovery/Shock_Chlorination_for_Private_Systems.pdf.

Q: Are the public water supplies in my community safe?

A: Yes. The Safe Drinking Water Act (SDWA) authorizes and permits EPA to set national standards for drinking water contaminants. Through the Kansas Department of Health and Environment all public water supply systems are required to monitor and comply with those standards. There is no contamination standard for iron because it is considered a secondary water contaminant.

Q: Are there ways to mitigate the health impacts for people who have been consuming contaminated water for a long period of time?

A: Because high iron concentration may cause increased levels of bacteria, you should have additional testing done. If you are concerned, you should talk to your health care provider about your exposure and develop a plan for screening.

Q: If livestock drink contaminated water is the meat or milk contaminated?

A: The brevity of lifetime for cattle limits the time for any mineral residue buildup. There are no studies that show a mineral buildup in the meat or milk.

Q: If root vegetables are grown in areas with soil or water contamination is it safe to eat?

A: The brevity of lifetime for plants limits the time for any mineral residue buildup. Generally, if the amount measured in soil and water used to grow produce is low, the amount deposited in the produce would likely fall below the detection limits.

Sources:

- Kansas State University Extension. 1995. EP-26 Quality Water: Red Water (Iron). Available at <http://www.kdheks.gov/nps/lepp/download/EP26RedIron.pdf>. Accessed on July 16, 2019.
- Water Systems Council. 2007. Wellcare® information for you about Iron. Available at https://www.watersystemscouncil.org/download/wellcare_information_sheets/potential_groundwater_contaminant_information_sheets/1534665INSERT_7C.PDF. Accessed on July 15, 2019.