

### Bridger Analytical Lab Suggestions for the Customer

#### There are three different ways to disinfect a well:


1. Use the table in this packet to disinfect the well with “unscented household bleach” (Caution: Bleach is extremely poisonous, use only as directed!)
2. Buy a disinfecting kit that uses chlorine pellets to disinfect your well.
3. Call a Purification Company to come and service you well directly (below are the two Purifications Companies Bridger Analytical Lab refers).



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\*All disinfecting information has been gathered from outside sources. B.A.L does not claim any rights to the materials. Thank you. Have a good day!



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## BACTERIAL CONTAMINATION AND YOUR WELL

### What are Bacteria?

Bacteria are among the simplest, smallest, and most abundant organisms on earth. These microscopic, single-celled organisms can be found in a wide range of environmental conditions.

Most bacteria are harmless, and are directly beneficial or even essential to animal and plant life. Bacteria are the beginning of the food chain. Their role as decomposers of organic matter is essential to plants and animals. They can be found on human skin surfaces and in our saliva. Bacteria are an essential part of the digestive process of animals and insects. Certain types of bacteria can be cultured and put to direct beneficial use in medicine and industry. In fact, the main principle behind septic systems and most wastewater treatment facilities is the use of bacteria to naturally breakdown waste components.

Some bacteria are harmful. These pathogenic microbes can infect humans, animals, and plants causing illness and disease.

### What are coliform bacteria?

**Coliform** bacteria are a group of closely related and generally harmless bacteria. As a common inhabitant of the intestinal tract of humans and warm-blooded animals (e.g. pets, livestock, wildlife, etc.), coliform bacteria are essential to the function of the digestive system. They can also be found in soil, untreated water (streams, ponds, rivers, etc.), and on the skin.

### Can coliform bacteria contaminate drinking water?

Two types of coliform bacteria are tested for when analyzing a water supply for potential contamination; **total coliform** and **fecal coliform**.

The presence of **total coliform** bacteria in drinking water indicates that other disease-causing organisms may also be present in the water. These include parasites like *Giardia* and *Cryptosporidium*, bacteria such as *Cholera* and viruses like Hepatitis. Since these pathogenic organisms can also be found in fecal material, coliform bacteria are used as an indicator for assessing water quality.

**Fecal coliform** bacteria are a subgroup of coliform bacteria. *Escherichia coli* (*E. coli*) is one species of fecal coliform bacteria. Because these bacteria inhabit the digestive system of humans and other warm-blooded animals, they are present in large numbers in fecal material. The presence of *E. coli* in a water supply is a direct indicator of fecal contamination.

### Can coliform bacteria get into a well?

A properly constructed well that is lined and grouted (sealed) usually obtains its water from a depth at which bacteria are no longer present.

However, there are many ways coliform bacteria can get into a well. They can migrate into ground water when there is insufficient filtration or travel time between the land surface and the ground water. Over time, old well casings may rust through leaving holes near the ground surface where surface water can seep into the well water. A well casing can become cracked due to impact damage, ground settling around the well, or earthquakes providing a conduit for contamination.

If a well has not been properly sealed, bacteria from upper soil layers may migrate down into the well.

