

Fecal Coliform Bacteria

Indicates contamination with the fecal material of man or other animal
Used as an indicator of disease bacteria in the water

What are Bacteria?

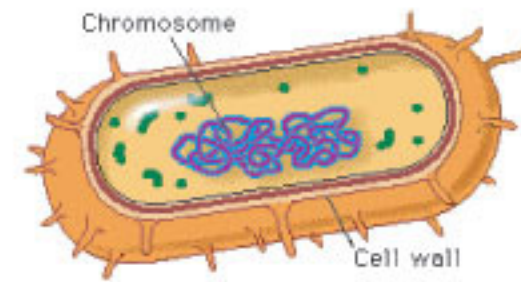
Bacteria are single-celled organisms that live in and around us. They can be either free-living or parasitic and some cause illness in humans and/or animals.

What are Fecal Coliform Bacteria?

Bacteria of the coliform group are often used to assess water quality. They are considered primary indicators of fecal contamination and disease bacteria in the water.

Fecal coliforms (FC) are bacteria that live in the digestive tract of warm-blooded animals (humans, pets, farm animals, and wildlife) and are excreted in the feces. In themselves, fecal coliforms generally do not pose a danger to people or animals but they indicate the presence of other disease-causing bacteria, such as those that cause typhoid, dysentery, hepatitis A, and cholera.

Fecal coliform bacteria live in the digestive tract of:



Farm Animals
Humans
Wildlife
Pets



Fecal coliform bacteria were sampled and tested for in selected rivers and ditches in the Blue Earth River Basin. Both abundance and frequency of detection can be used as an indication of the level of contamination.

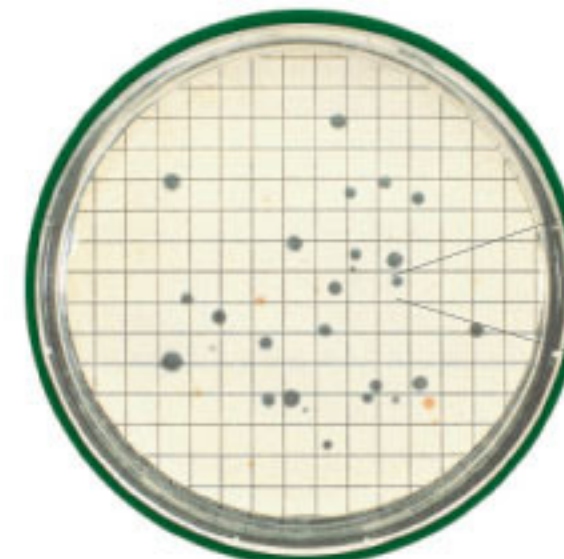
How are FC Bacteria Analyzed?



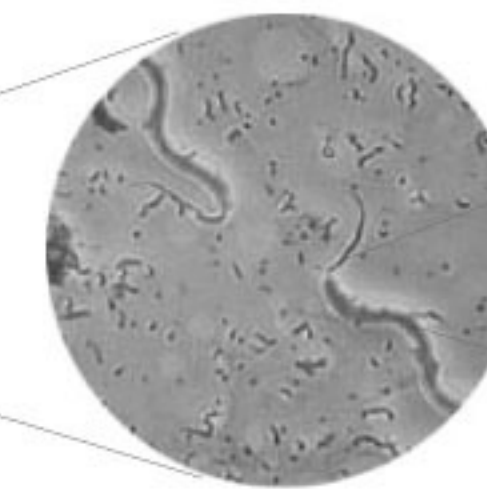
Water samples are collected throughout the basin.



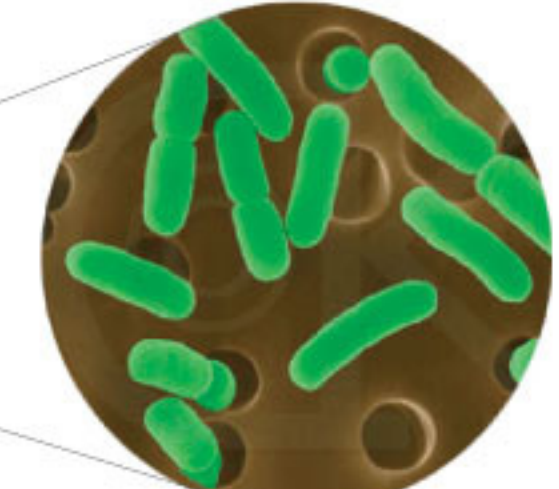
Samples are analyzed in a lab.



Fecal coliform bacteria are cultured in colonies.



The number of colonies are counted.



Why should we be concerned?



Bacteria levels are important indicators of the health of recreational and drinking waters. Fecal coliform levels are used to indicate if water is safe for human contact during water-related activities, such as swimming. The standard is based on health risks for individuals exposed to this water.

What is the Standard for Fecal Coliform?

- Not more than 200 organisms per 100 milliliters (minimum 5 samples, in any month)
- Not more than 2,000 organisms per 100 milliliters (10% of all samples during any month)

The water quality standard states that fecal coliform shall not exceed 200 organisms per 100 milliliters as a geometric mean of not less than five samples in any calendar month, nor shall more than ten percent of all samples taken during any calendar month individually exceed 2,000 organisms per 100 milliliters. The standard applies between April 1 and October 31.

Fecal Coliform or E. coli?

The US EPA and State of Minnesota have established several standards for bacteria. Fecal coliform levels have been used for decades as the prime indicator, but the E. coli (*Escherichia coli*) level is now being phased in by most states at EPA's recommendation.

E. coli, a subgroup of fecal coliform bacteria, is also present in the intestinal tracts and feces of warm-blooded animals. Like fecal coliform, it is also used as an indicator of the potential presence of pathogens. Many water quality monitoring groups are using both indicators during the transition.

