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Total Coliform Bacteria

Total Coliform Bacteria Background

There are many types of bacteria on earth, but not all pose a health threat to animals and humans. Some consume organic debris or produce byproducts that kill some pathogens. Total Coliform bacteria are a group of closely related species that are generally not harmful; therefore they have been selected as an indicator of other harmful biological organisms in drinking water for two main reasons. First, if total coliform bacteria are found in a water sample, it indicates surface contamination (from construction or recent repairs) has reached the water and disease causing organisms may be present. Second, total coliform bacteria can be killed by disinfection, meaning chlorination or boiling of the water.



Negative Positive

Sources of Bacteria

- Human and animal waste (feedlots and animal yards)
- Seepage or discharge from septic tanks, sewage treatment facilities, and natural soil and plant bacteria
- Insects, rodents, or other animals entering well
- Flood waters or surface runoff
- Any system with casings or caps that are not water-tight

Health Concerns

Fecal Coliform and *Escherichia coli* bacteria (found in greater amounts in animal fecal matter than total coliform) can cause diarrhea, vomiting, typhoid fever, dysentery, salmonellosis, hepatitis, cholera, possibly jaundice, headaches, and fatigue. A positive total coliform result could indicate the presence of these bacteria.



Remedies

If a present or “unsafe” result is returned to you, the water should not be used unless it is boiled for one minute, the water source is disinfected with chlorine (well owner or licensed well driller or pump installer can do this), filtration, ultraviolet irradiation, ozonation, silver treatment, iodination, or pasteurization is completed, or buy bottled water.

Why Test for Coliform Bacteria

- If an infant is living in the home
- If you have recently installed a new well, pump, or pipes
- If family members have reoccurring gastrointestinal illnesses
- If you are buying a new home with a private water supply.
- If you wish to monitor the performance and quality of home treatment systems
- If there is a change in odor, taste, or appearance of your water

Acknowledgements

University of Minnesota Extension Service
Minnesota Department of Health
wellowner.org



For more information please contact
RMB Environmental Laboratories, Inc.