



WELL WATER BACTERIOLOGY INTERPRETATION

Drinking water is tested for the presence of two groups of bacteria. The first number represents total coliform bacteria. Total coliform bacteria are always present in animal wastes and sewage but are also found in soil and on vegetation. The second number represents E. coli. E. coli are only found in intestinal contents of warm-blooded animals. The presence of E. coli is more likely to represent sewage contamination and is of greater concern because the risk of disease agents also being present in the water is higher.

Should you have any questions regarding your particular well results or well water quality in general, please call the Environmental Health Branch of the Ottawa-Carleton Health Department at 722-2200 during normal business hours. Our 24 hour information and service line is 560-1335.

Total	E. Coli	Interpretation	> means greater than < means less than
1->80	1->80	Unsafe for drinking. This water is contaminated and should not be used for drinking under any circumstances. Do not attempt to apply these standards and interpretations to surface waters used for swimming	
6-80	0	Unsafe for drinking. Contamination is not likely to be of sewage origin unless far removed from the water source or unless there has been a delay in receipt of sample. Common with new wells before disinfection and shallow dug wells which are not properly sealed.	
1-5	0	Doubtful for a single sample, but safe for drinking if condition remains stable (3 consecutive samples with this designation taken 1-3 weeks apart) and supply is protected and located at least 30.5 m (100 ft.) from any human or animal wastes.	
0	0	Safe for drinking.	
0/G		Doubtful condition and not recommended for drinking. No coliform bacteria could be detected because of "overgrowth" by other bacteria. This condition frequently occurs with new wells, dug wells receiving soil drainage, or wells which have been idle for some time. Disinfect the well and collect another sample and identify clearly "REPEAT SAMPLE."	



WELL DISINFECTION AND SAMPLING

Chlorine is used to kill bacteria in a well, pump and distribution system. There are two main methods of chlorination. Shock chlorination involves adding a large amount of chlorine to the water in the well and pumping it through the system. The chlorinated water is left in the system long enough to ensure complete disinfection. Continuous chlorination involves addition of low levels of chlorine to a water supply.

For shock chlorination, liquid laundry bleach is the most common source of chlorine. Most brands contain 5 to 5.25 percent sodium hypochlorite. When you chlorinate a well, buy fresh bleach to make sure it is effective. The chlorine in this solution is not stable and evaporates over time. Even if properly stored, the solution can lose half its strength in six months.

CHLORINATION INSTRUCTIONS (USING LIQUID BLEACH)

CHLORINATION

1.	Pour the required amount of chlorine (see table) into the well through the air vent or by removing the well seal.
2.	If possible, agitate or mix the water in the well by using a clean hose to pump the chlorinated water back into the well, and flushing down the well casing and water lines above the water level.
3.	After adding chlorine to the well, remove or bypass any carbon filters that are in the system for water treatment. These filters will remove the chlorine from the water, and any pipes beyond the filter will not be disinfected.
4.	Put in a new filter after chlorination to avoid reintroducing bacteria into the system.
5.	Run water at every faucet in the house until a strong chlorine odour is detected. Be aware that your nose may lose its ability to detect chlorine.
6.	If there is no chlorine smell or it is very weak, add more chlorine to the well.
7.	Drain the water heater and fill with chlorinated water.
8.	Backflush the water softener and all water filters (except carbon filter).
9.	Let the chlorinated water stand in the system for at least 12 hours.
10.	Clear the chlorine from the well by running an outside hose to the ground surface, then run clear water through the faucets.
11.	Avoid putting too much chlorine into the septic system as the bacteria needed for septic decomposition will be killed.
12.	Don't drink the water until test results show the water is safe to drink.
13.	Small quantities of water may be treated by: i) bringing water to a rolling boil, then by continuing to boil at least 1 to 5 extra minutes, or, ii) adding 2 drops of chlorine to 1 litre of water, stirring thoroughly and letting stand for 30 minutes.

RETEST

1.	Take a water sample 48 hours after chlorination.
2.	Two consecutive safe tests performed on samples obtained over a period of 1 to 3 weeks will probably indicate that the treatment has been effective.
3.	If bacteria are still present, repeat chlorination and retest.
4.	If the above steps do not alleviate the problem, it is recommended that the source of the ongoing contamination be determined and corrected, possibly with professional help. If remediation is not possible, a permanent alternative solution, such as a new well or a drinking water disinfection device, should be considered.