

Some members of the coli form indicator group occur naturally in the intestines of humans as well as other warm-blooded animals and are discharged in great numbers in human and animal waste. Others occur naturally in surface water of varying quality and in topsoil. A positive analysis for coli form bacteria indicates that the well sample may have been contaminated by surface water or fecal material. This may suggest that the water well may not be properly constructed to protect it from sources of bacteriological contamination. Negative results indicate there was no contamination at the time of sampling.

NITRATES A new water supply should be tested for nitrates. Levels above 10 milligrams per liter (mg/l) as nitrogen may cause illness in infants 6 months of age or younger. Nitrates found in ground water are usually produced by agricultural fertilizers, livestock wastes or septic systems.

SAMPLE COLLECTION All bacteriological water sample bottles are sterilized prior to distribution. Handle them carefully to avoid introducing contaminants during the sampling process itself and be sure to follow closely the instructions included with the bottle. Select a sampling point as close as possible to the water supply source. Do not collect from garden hoses, dirty faucets or swing-type faucets where foreign material may contaminate the sample. Remove faucet screens or aerators prior to sampling.

Before collecting the sample, open the tap and allow the water to run full flow until the pump starts and runs for several minutes. This allows the sample to be drawn directly from the ground water supply, rather than water that has been in storage for a period of time. Before collecting the sample, adjust the flow of water to a stream approximately the size of a pencil.

Remove the cap from the sterile bottle and take the sample immediately. Do not rinse the bottle or touch the rim of the bottle or the inside of the cap with your fingers or with the spout of the sampling point. Fill the bottle to the fill line, leaving an air space, and immediately replace the cap.

Complete the report form that was enclosed with the bottle. It is particularly important that the date of collection, sampling point, and return address be completed accurately. After completing the report form, place it in the box with the water sample bottle. Attach the mailing label and the required postage and mail the water sample as soon as possible. (Samples received more than 30 hours after being collected are too old for testing and will be disregarded.) Samples should reach the laboratory no later than Thursday of any week.

WATER SAMPLE RESULTS Water sample testing results are sent to the Livingston County Health Department for interpretation and mailing to homeowners.

If a sample is positive for coli form bacteria, the following procedures are recommended;

- The well should be re-sampled immediately to see if further testing shows the presence of coli forms. This will help to eliminate the possibility of contamination of the sample itself due to improper collection techniques, contaminated sample bottle or the incidental contamination of the pump or plumbing fittings.
- If the resample is not satisfactory, the Livingston County Health Department should be consulted. The well should be inspected to determine if it is properly constructed and located. Proper construction and location of a well reduces the possibility of contamination. Modification of the well may be necessary in order to assure a safe supply of water. Until a satisfactory analysis is obtained, the water should not be used for drinking or cooking unless brought to a rolling boil for at least three minutes. **Please note that boiling will not eliminate a high nitrate concentration. In fact, boiling will increase the nitrate concentration.**
- If the resample is negative for coli form bacteria and the nitrate concentration is less than 10 mg/l as nitrogen, the water supply may be considered safe for drinking based on those sample results. Annual testing of the well should be performed to assure the well is providing a safe supply of water.

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