



How to Take Bacteriological Samples



Proper sampling techniques are extremely important in obtaining accurate water quality information. An improperly taken coliform sample may indicate bacteriological contamination of your water when the water is actually safe. You can avoid the cost of additional testing by using good sampling procedures.

Carefully follow these steps in taking a sample for bacteriological testing:

- (1) **Select the sampling point.** The sampling point must be a faucet from which water is commonly taken for public use.
 - The sampling point should be a non-swivel faucet whenever possible.
 - Remove any aerator or screen.
 - It should not be a faucet that leaks as leaking faucets can promote bacterial growth.
 - If an outside faucet is used, disconnect any hoses or attachments.
 - Do not sample from fire hydrants or frost-free faucets.
 - Do not sample from faucets that have water that has gone through treatment devices such as carbon filters or softeners.
 - Do not dip the bottle in reservoirs or storage tanks in order to collect the sample.
- (2) **Use only sample bottles provided by the lab that does your analysis.** Bottles from the State Health Lab have a white cap with no markings. Do not use a bottle if the cap has come off. Do not rinse the bottles. A chemical placed in the bottle by the lab is necessary for correct test results.
- (3) **Do not open the sample bottle until the moment of filling.** This helps prevent contamination of the sterile sample bottle.
- (4) **Flush the line.** Run water through the faucet for at least two to three minutes before opening the bottle to take the sample. If tap cleanliness is questionable, swab or spray a solution of sodium hypochlorite (100 mg NaOCl/L) or household bleach on faucet before sampling and then let water run for additional two to three minutes after treatment. If sampling from a mixing faucet, run hot water for two minutes, then cold water for two to three minutes.
- (5) **Reduce the water flow to a steady stream, uncap the sample bottle, and gently fill the bottle.** Hold the bottle near the base and be sure not to put your fingers inside the sample bottle or on the inside of the lid. Do not set the lid down while taking the sample. Any of these things can contaminate the sample. Be careful not to splash out the chemical already in the bottle. Only fill the bottle to the neck, do not allow water to "run over" the bottle.
- (6) **Replace the cap immediately.** Be sure that it is tight so it cannot leak. If you drop the lid or think you have contaminated the sample, do not use it. Use another bottle and collect a new sample.
- (7) **Fill out data slip.** Be sure to fill the slip out as completely as possible. See attached example.
- (8) **Mail or deliver the sample to the lab immediately.** The lab cannot accept samples older than 30 hours. The water quality of the sample has changed too much by then to give correct results. It is a good idea to collect samples during the first two weeks of each month and sample only on Monday, Tuesday, or Wednesday and mail the same day.