

# Knox Public Health

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## Water Collection Procedures for Bacteriological Examination

### 1. Select the sampling tap

- a. A tap, such as a faucet, petcock, or small valve is preferable. Do not sample from hoses or drinking water fountain. Avoid taps with a leak at the stem or taps with a swivel joint. Aerated or screened nozzles may harbor bacteria. The aerator or screen must be removed before collection of the sample.
- b. Place water softeners, carbon and sediment filters on bypass unless operated by a public water system.

### 2. Sterilize the nozzle of the tap with a chlorine solution

- a. Use a 5.25% sodium hypochlorite solution such as Clorox Liquid Bleach. Do not use chlorine solutions with special scents.
- b. Preparing the sanitizing solution that will contain about 400mg/l of available chlorine (as hypochlorite) from the 5.25% sodium hypochlorite, add one (1) ounce of bleach to one gallon of water or one (1) tablespoon per half gallon). Store the mixed solution in a tightly closed screw capped container. Discard the prepared solution after six (6) months. Stronger solutions may be used; however, some faucet discoloration may result.

### 3. Flushing the sample tap

- a. Flush the sample tap to waste for one minute and close the valve. Apply the sanitizing solution prepared in Step 2 (b) above to the nozzle. This may be done by using a spray bottle or a plastic bag.
- b. Using a spray bottle, saturate the tap opening with the sanitizing solution and wait at least two (2) minutes before proceeding. If using a plastic bag, place the bag over the nozzle and hold the top of the bag tightly on the tap. Alternately squeeze and release the bag to flush the solution in and out of the tap. Do this for two (2) minutes. A fresh solution and bag must be used to sanitize each tap.

### 4. Flush the tap

- a. The sample to be collected is intended to be representative of the water in the main. The tap must be opened fully and the water run to waste for at least 10 minutes to allow for adequate flushing of the piping between the tap and water main. Reduce the flow from the tap. This will allow the sample to be filled without splashing.

### 5. Remove the cap from the sample bottle

- a. Remove the plastic seal. Remove the cap and hold the exterior of the cap between fingers while filling the sample bottle. Do not touch the mouth of the bottle or the inside of the cap with fingers or the sample could be contaminated.
- b. The bottle must be open only during the collection sample.

### 6. Filling the sample bottle

- a. Do not rinse out the bottle before collecting the sample. The bottle contains a small amount of sodium thiosulfate to neutralize the chlorine in the water. This appears as white or brown crystals in the bottom or the side of the bottle. Do not touch the rim or the mouth of the bottle during collection of the sample. Do not overflow. Fill the bottle to within 1/2 inch of the brim. **(Above the mark on the bottle.)**

### 7. Immediately recap the sample bottle tightly

- a. If there is any question as to whether a sample or bottle has become contaminated during collection of the sample, the sample must be discarded and a new sample collected in a new sample bottle.