

Step IV. Take a BIOFILM sample.

(SKIP for location 4)

1. Take off the faucet or showerhead aerators. You might need a wrench (If you cannot remove either of these easily, make a note in table and skip this step).
2. Open the swab from the handle end, doing your best to never touch the tip or any of the wood within 2-3 inches from the tip.
3. Swab as much surface as you can inside the faucet, twirling the swab as you do. (If you couldn't get the aerator off, do your best to get as much area from the outside as possible.)
4. Screw off the cap on the small tube for swabs, place the swab into the tube and snap off as much of the wood as possible so that the swab will fit with the cap screwed on.
5. Screw the cap back on.

After conclusion of sampling at all locations:






1. Ensure all bottles are capped tight.
2. Put all bottles, capped swab tubes (with swabs), other tubes, hose and **this booklet** into the box kit.
3. Ship overnight to our laboratory:



Tolu Odimayomi
Virginia Tech ICTAS II
1075 Life Science Circle
Blacksburg VA 24060
Phone: 317-205-6903

CITIZEN SAMPLING OF HOUSEHOLD PLUMBING FOR PATHOGENS

Your sampling kit contains:

 x 6 1-L bottles	 x 3 swabs for biofilm	 x 3 tubes for swabs	 x 6 50-mL test tubes	 x 2 non-latex gloves
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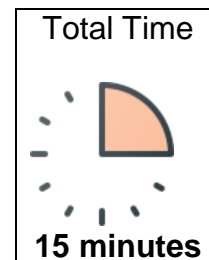
One water hose

Please bring:

- Thermometer
- Chlorine meter and reagents
- pH meter
- Sharpie (permanent marker)
- Pen
- Adjustable wrench
- Bucket

Before you start:

1. Watch this video:
www.uswaterstudy.org/collect
2. Find a clean table or similar space to work from and lay out all supplies.
3. Wear gloves to minimize contamination.



If you have questions, please call Tolu at 317-205-6903.

Fill in the blanks:

Date/time of sampling: _____ Address: _____

of floors: _____ # of taps: _____ # of showers/baths: _____

Step I. Sample locations in the following order:

1. Bathroom tap or spigot
 - 1a. cold water
 - 1b. hot water
 - 1c. swab
2. Bathroom showerhead
 - 2a. cold water
 - 2b. hot water
 - 2c. swab
3. Location where water enters the home, like outside hose bib
 - 3a. cold water
 - 3b. swab
4. Water heater – *if accessible*
 - 4a. cold water

FROM THE KIT, YOU WILL NEED
For locations 1 & 2:
<ul style="list-style-type: none"> • 2 50-mL tubes • 2 1-liter bottles • 1 swab • 1 tube for swab
For location 3:
<ul style="list-style-type: none"> • 1 50-mL tube • 1 1-liter bottle • 1 swab • 1 tube for swab
For location 4:
<ul style="list-style-type: none"> • 1 50-mL tube • 1 1-liter bottle

Make sure you also have the following at all 4 locations before you start:

Sharpie, Wrench, Thermometer, Bucket, Chlorine meter and reagents, and pH meter.

Fill in this table as you sample at each location:

#	Location	Chlorine	pH	Temp	Notes
1a	Bathroom tap COLD				
1b	Bathroom tap HOT				
2a	Showerhead COLD				
2b	Showerhead HOT				
3a	Hose Bib or Water inlet				
4a	Water heater				

Step II: Take a COLD water sample

Important exception for location 3:

Flush the tap first, holding the thermometer in the stream, until there is a steady temperature.

Important exception for location 4:

Is the bottom drain valve accessible? No – skip location 4. Yes – connect the water hose and place bucket at other end.

1. Take a 50-mL tube and open its cap. Fill the tube up by slowly opening the cold water tap. Turn off the tap.
2. Transfer 10-mL from the tube to the field chlorine meter.
3. First, measure temperature and pH of the water remaining in the 50-mL tube and note in table. Discard remaining water.
4. Next, measure total chlorine. Record results in the table.
5. Take a 1-liter bottle and flick it so that if there is any liquid in the cap, it goes down to the bottom. Open the bottle and place the cap to the side on a clean surface and facing up.
6. Hold the open bottle under the tap and carefully turn on the cold water tap. Fill the bottle up to just below the brim. Cap the bottle tight and gently invert to mix with the liquid.
7. Turn off the tap.

Step III. Take a HOT water sample

(SKIP for locations 3 and 4)

1. Turn on the hot water tap and run for 60 seconds.
2. Follow all steps as with the cold water (**Step II**) to obtain temperature, pH, and chlorine readings and water sample. Turn off the tap when done.