



Please visit our video tutorial for coliform sample collection by clicking “How to take a sample for coliform analysis” at greenwayeng.com/educational-resources

Water Sample Rejection Policy – If the sample does not meet these requirements, it will be rejected.

The sample must:

- **Be collected in the proper container (a 100-mL sterile sampling container w/ sodium thiosulfate).** All of the containers necessary for sampling for Total Coliform & E. coli are provided by the laboratory as a “kit.” Samples CANNOT be collected in mason jars, spring water bottles, drinking cups/glasses, or any other type of container that is not sterile. The sample will be rejected if delivered in these types of containers.
- **Be properly identified** (label on bottle filled out) and **delivered with completed Chain of Custody and delivered with proof of payment.**
- Have **BOTH bottles filled ABOVE the 100-mL line.**
- **Be less than 25 degrees Celcius** (77 Farenheit) on arrival. Samples may need chilled/iced to meet this requirement.
- **NOT contain chlorine** if the water source is NOT a chlorinated source.
- **Arrive at Greenway Engineering’s Environmental Laboratory within 30 hours of collection** (leave ample time for login and analysis, at least 45 minutes). Samples accepted Monday – Thursday 9 am to 5 pm.

Sampling Instructions – please read prior to taking sample and collect in provided container only.

- Do not use the container if the seal is broken or the bottle is damaged in any way.
- Do not open **sterile** sampling container until you are ready to take the water sample.
- Do not empty anything out of the sampling containers (“pills,” powders, or liquids)
- **Do not attempt to collect sample until the aerator screen has been removed and the tap sterilized with alcohol. If you do not use the appropriate type of faucet, and/or you do not remove the aerator screen and sterilize the sample tap, the laboratory will not be able to tell you if any contamination present in your sample is actually in your water or if it is from a contaminated sample tap. Please eliminate questionable results by following instructions (choosing the right type of tap, removing the aerator screen and sterilizing tap prior to collection).**

1. **Remove Devices:** Water taps used for sampling should be free of aerators, strainers, hose attachments, mixing type faucets, and purification devices. Remove such devices prior to sampling. **Do not use swivel-type faucets. Do not use mixing faucets** (there should be separate hot and cold taps).
2. **Sterilize Faucet:** Use a cotton ball saturated with isopropyl (household rubbing) alcohol to swab the inside and outside of the faucet very well. If an outside tap must be used (this is **not** preferred), run the water from the tap to get the faucet wet then heat the exterior of the faucet to dryness with a propane torch and then sterilize with rubbing alcohol and a cotton swab.
3. **Re-sterilize Faucet:** It can be very difficult to thoroughly sterilize a faucet. To help ensure thorough sterilization, pour rubbing alcohol into a Ziploc bag and hold the bag open directly beneath the tap. Carefully but forcefully squeeze the bag, forcing the alcohol up into the faucet to help disinfect further areas.
4. **Run Water:** Run cold water through the faucet for at least 5 minutes. Proceed to Step #4 only if you “shocked” (added chlorine or bleach) to your well. If you are simply performing routine testing of bacteria, and have not recently “shocked” your well, please proceed to step 7.
5. **(ONLY PERFORM STEPS 5 AND 6 IF YOU SHOCKED YOUR WELL WITH CHLORINE BLEACH) Check Chlorine:** Use the container labeled “QC Check Bottle – Temp, pH, FC12” and fill it to the red line (about 1/10 of the way, 10 mL). Open one packet of DPD (foil pouch) and empty it into the partially filled container. Mix well and then allow 1 minute for a color reaction to occur. If the water turns even a faint pink, Chlorine is still present. Continue to flush/drain the well by letting the water run several more hours (see shocking instructions) until you feel that the Chlorine has been removed. Proceed to Step 6



- and continue to repeat Steps 5 & 6 until no pink color is present (water should be completely “clear” of color). Do not proceed to Step #7 until you no longer observe a pink color change.
- Rinse Check Bottle:** Rinse the Temperature, pH, and Chlorine Check Bottle several times with non-chlorinated (e.g. bottled) water to remove any traces of chlorine in between uses and before filling with final sample to return to laboratory.
 - Open Container:** Remove the plastic seal from the sterile bottle and open the sterile container – ensure that you do not touch the inside of the lid or the inside of the container with your hands or any surfaces. **(NOTE: completely remove the plastic seal, the seal is NOT STERILE and must be removed or it can contaminate the sample if it gets under the threads of the bottle).**
 - Fill Containers:** Fill both the Sterile Coliform sampling container and your QC check bottle with sample from your sterilized tap. Be careful not to touch the inside of the bottle or the lid with your hands. Do not let the inside of the lid or the bottle come into contact with any surface (e.g. countertop, water faucet, etc.).
Fill above Line: Carefully fill the container **above** the 100-mL line - do not rinse, overflow, or dump water out. The sterile container will contain a preservative in pill or powder formula (Sodium Thiosulfate) that will neutralize any traces of Chlorine left in your water. Please leave this preservative in the bottle - do not dump it out of the container.
 - Replace Cap:** Replace the cap and tighten or if applicable, close the clasp.
 - Keep sample cold** (< 10°C) either by refrigeration or in an ice-chest or cooler until transport to the laboratory. **The sample MUST be <25°C on arrival or it will be rejected.**
 - Fill out Labels:** Complete the labels on the bottle containers. Please complete all sections of the labels on your sampling containers including Client name, Date and Time of Collection, Sample Location, etc.
 - Fill out Forms:** If not already completed, the Chain of Custody must be completed immediately after taking the sample. Please fill in all highlighted areas and write “N/A” in the spaces that do not apply to your sample. **If results are to be given to the Health Dept., you must provide a Tax Map Number.**
 - Deliver to Lab:** Coliform samples must arrive at Greenway Engineering Environmental Testing Laboratory within 30 hours of collection. Please try to deliver it to the laboratory within at least 29 hours. If payment was not provided at sample kit pickup, payment must be received at the time of sample delivery to the laboratory. Cash, checks, and credit card payments are accepted. Please make checks payable to: Greenway Engineering.

General Information

Laboratory Hours: 9:00 am – 5:00 pm Monday - Friday. Please call after these hours and on Saturdays or Sundays to determine if after-hours sample delivery is available that day. **Coliform samples are NOT accepted on Fridays.** **Coliform samples are accepted Monday through Thursday.** If you need to deliver a coliform sample on Friday, please contact the laboratory in advance to see if a Friday sample can be accommodated.

Laboratory Location: Greenway Engineering 151 Windy Hill Lane Winchester, VA 22602 (behind Garber’s Ice Cream)
Directions: **From I-81S** (travelling from the north) take the Winchester exit 313A (second exit) and follow the large curve, keep to the right and turn right onto 522S (Front Royal Pike). **From I-81N** (travelling from the south) take the Winchester exit 313 and go straight through the light onto 522 S (Front Royal Pike). Proceed south on 522 S (toward Costco). When you are travelling south on 522, Costco will be on your left-hand side. After passing Costco on 522 S., Windy Hill Lane is the second road on the right. Turn right onto Windy Hill Lane immediately before the Garber’s Ice Cream Plant. If you reach Garber’s on 522, you went too far. After turning right onto Windy Hill Lane, Greenway Engineering is on the left-hand side of Windy Hill Lane. Turn left into Greenway Engineering’s parking lot and proceed through the metal gates. Follow the signage to the laboratory by turning right at the large green garage. There are designated parking spots for laboratory sample drop off on the right side toward the end of the parking lot. Enter the laboratory through the double doors at the very rear of the building – the side that faces 81. The laboratory is marked with a sign. Ring the door bell for assistance if you do not immediately see an employee. Please do not hesitate to contact us if necessary!

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Instructions to Collect Coliform Bacteria Samples. Rev5 (ark) 092313.