San Antonio Testing Laboratory
WATER COLLECTION GUIDE 2024

The following guide is a step-by-step procedure to collecting your water samples for routine mineral analysis and bacteria testing for water quality. You may skip the sections of this guide that are not relevant to your testing needs. Please note that some tests require materials provided by the laboratory. If you have questions, call SATL at (210) 229 - 9920, Mon - Fri 8:00 - 5:00. SATL is TCEQ NELAP Certified and a part of TCEQ Drinking Water Lead and Copper Program.

Collect samples in the following order if sampling for all:

1. PFAS 2. Minerals & Metals 2. Bacteria

PFAS

PFAS can be found in a vast array of everyday items and thus chances for cross-contamination during sampling is high. In order to obtain accurate results, it is imperative to take enhanced precautions both while sampling and when preparing to sample. Preparation begins with awareness of the clothes that you plan to wear, the lotions you have applied, the food you eat during breaks, and the sampling supplies themselves.
Read on for our in-depth guidelines on PFAS sampling.

PERSONAL PREPERATION

AVOID: Clothing

- New and unwashed clothing
- Fabric softener laundered clothing
- Dry cleaned clothing
- Chemically treated to be waterproof, water resistant or stain resistant clothing
- UV ray protective clothing
- Teflon® (PTFE), Gore-TEX™, Tyvek®, Carhartt® waterproof products (Rain Defender, DWR, Rugged Flex, & more)
- Anti-fog protection from wipes or sprays

Approved: Clothing

- Clean laundered clothing (without fabric softeners)
- Clothing that has been washed 6 times or more
- Synthetic or cotton clothing
- PVC or polyurethane
- Rubber or neoprene
- Powderless nitrile gloves
- Wet weather gear made from polyurethane or PVC

AVOID: Personal Products

- Lotions, moisturizers, & hand creams
- Most sunscreens & insect repellents (please confirm with the approved list)
- Perfumes, deodorants, & antiperspirants

Approved: Personal Products

- Approved insect repellants and sunscreens (if applied prior to arrival at sampling area)
- Deep Woods Off ®
- Banana Boat® Sport Performance SPF 30
- Neutrogena® Ultra-Sheer Dry-Touch SPF 30
- Always thoroughly wash hands prior to sampling

AVOID: Food

- Chemically treated or recycled paper towels
- Chemical ice packs
- Aluminum foil
- Fast food packaging or wrappers
- Food should not be eaten in or near the sampling area
- Unwashed hands

Approved: Food

- Regular Ice
- PFAS-free water
- Gatorade® & Powerade® if consumed outside of the sampling area

SUPPLIES GUIDELINES

AVOID: Containers

- Used bottles or containers
- Bottles or containers not specified for PFAS Testing
- Glass bottles or containers
- Bottles or containers that have come in contact with carpet or upholstery from buildings or vehicles
- Teflon®-lined cap or lid

Approved: Containers

- New & unused sample bottles obtained from the laboratory & specified for the purpose of PFAS Testing
- Polyproplylene or HDPE container (without a Teflon®-lined cap or lid)
- Container lid that is unlined polyproplylene or HDPE

AVOID: Tools & Equipment

- Latex or vinyl gloves
- Chemical ice packs
- Plastic clipboards, binders, or folders
- Paper that has been treated with chemicals
- Waterproof or spiral bound notebooks
- Sharpies® or other permanent markers
- Post-Its® or other products with adhesive
- Any item containing or made from Teflon® (PFTE)
- Chemically treated or recycled paper towels
- Non-stick, stain-resistant, or waterproof items
- Aluminum foil
- Dawn® Dish detergent
- Decon 90

Approved: Tools & Equipment

- Approved insect repellants and sunscreens (if applied prior to arrival at sampling area)
- Deep Woods Off ®
- Banana Boat® Sport Performance SPF 30
- Neutrogena® Ultra-Sheer Dry-Touch SPF 30
- Always thoroughly wash hands prior to sampling

SAMPLE COLLECTION

Indoor Water Sample

Sampling Supplies

- 250 mL Sterile Sample Containers with PFAS analysis preservative -Lab Provided
- 250 mL Sterile Reagent Water Container with PFAS-free water and PFAS analysis preservative -Lab Provided
- 250 mL Sterile, empty Field Blank Container -Lab Provided
- Powderless nitrile gloves -Lab can provide, inquire if needed
- Labels -Lab Provided
- Ballpoint Pen
- Ice Chest to transport PFAS Samples ONLY -Lab can provide, inquire if needed
- Ice

Return Time

- Samples must be returned within 24 hours of collection.
- Please time sample collection accordingly.

1. Wash hands then put on powderless nitrile gloves. First, prepare to sample the Field Blank. The Field Blank ensures that the samples have not been contaminated prior to or during sampling.

2. Locate the 250 mL Field Blank Container provided by the Lab, which will be empty. Also locate the 250 mL Reagent Water Container provided by the Lab, which will have PFAS-free water and the PFAS analysis preservative.

3. Open both the containers, taking care not to touch the inside of the lid or bottle, and place the lids face up to prevent contamination. Carefully use the the Reagent Water Container contents to fill the Field Blank Container; it should fill up to the neck of the container.

4. Close both containers, taking care not to touch the inside of the lids, and record the date, time, and location of sampling on the Field Blank Container label provided along with the initials of the sample collector. **Example:** 11/01/23, 3:45 pm, Kitchen Sink, MH

5. Place the full Field Blank Container in a Ziploc® bag and seal. Place the now empty Reagent Water Container in a separate Ziploc® bag and seal. Then, place both sealed containers into the PFAS only designated ice chest along with ice. This completes the Field Blank Sampling.

6. Next, the on-site samples will be collected. Locate the remaining unused Sample Containers with the PFAS analysis preservative. Open the container, taking care not to touch the inside of the lid or bottle, and place the lid face up to prevent contamination.

7. Unscrew the screen and aerator from the faucet head and allow water to flow for 5 minutes. Then adjust water flow to prevent water from splashing. Carefully fill the Sample Container with the water from the faucet up to the neck of the bottle, taking care to avoid overfilling. If overfilled, some of the preservative may spill out and the sample results will be inaccurate.

8. Close the container, taking care not to touch the inside of the lid, and record the date, time, and location of sampling on the Sample Container label provided along with the initials of the sample collector. **Example:** 11/01/23, 3:45 pm, Kitchen Sink, MH

9. Place the Sample Container in a Ziploc® bag, seal, then place into the PFAS only designated ice chest. Repeat steps 6 - 9 for any remaining samples that need to be collected.

10. Once all samples have been collected and gathered into the PFAS designated ice chest, ensure that the temperature of the samples will be maintained between 2^{o} - 6^{o} Celsius. It is crucial that the samples do not exceed 10^{o} Celsius. Return the ice chest with the containers back to the laboratory within 24 hours of collection.

MINERALS & METALS ANALYSES

REQUIRES: 1000mL Sterile Container *Lab Provided
Label *Lab Provided
Ice Chest *Lab Provided
Sharpie or other marker
Ice

RETURN: Samples for Nitrate and Nitrite must be returned to the laboratory before 48 hours have passed since collection. Please time sample collection accordingly.

1. Prepare materials: Fill provided ice chest with ice and gather required materials. You will be collecting water within the first 1 minute after the tap is opened.

2. Open the faucet and adjust flow to avoid splashing of water.Place the container lid facing up to prevent contamination and collect water in the container provided up to the neck of the bottle (1000mLs).

3. Close the bottle and record the date, time, and location of sampling on the label provided along with the initials of the sample collector.
Example: 11/01/23, 3:45 pm, Kitchen Sink, MH

4. Place all filled containers into the ice chest with ice to maintain the temperature between 0 - 6 degrees celsius.

5. Return the ice chest with the containers back to the laboratory within one to two days to ensure holding time requirements for analysis with the expection of Nitrate and Nitrite which needs to be brought in before 48 hours.

BACTERIA ANALYSES FROM A METAL FAUCET

FAUCET TYPE: Metal vs non-metal faucets require different sterilizing before sample collection.

REQUIRES: 100mL Sterile Container with Sodium thiosulfate preservative *Lab Provided
Label *Lab Provided
Ice Chest *Lab Provided
Sharpie or other marker
Isopropyl Alcohol (rubbing alcohol)
A long-tipped lighter

RETURN: Samples must be returned within 24 hours of collection (or 30 hours for State compliant samples). The lab does not accept bacterias on Fridays or the day before holidays. Please time sample collection accordingly.

CAUTION: ALCOHOL IS A FLAMMABLE LIQUID. DO NOT BEND OVER THE SINK/FAUCET WHILE PERFORMING STEPS WITH THE LIGHTER.

1. Prepare all necessary materials before breaking the container seal. Unscrew the screen and aerator. Allow water to flow for 3 - 5 minutes, then turn water off.

2. Pour a tablespoon of Isopropyl Alcohol (rubbing alcohol available in grocery stores) from the bottle onto the faucet. Allow excess to drip off.

3. Carefully apply flame from lighter to the faucet where alcohol was applied. Please be careful as alcohol is FLAMMABLE and this will produce an almost invisible blue colored flame. Do not try to put out the flame by any means, including blowing on it.

4. Wait 20-30 seconds for the flame to burn out on its own. Once the flame has burned out, turn on the faucet and adjust to avoid splashing water.

5. Open the container and place lid face up to prevent contamination. Fill container only to the 100mL mark on the container, taking care to avoid overfilling. The preservative will only work for the first 100mL of water. If overfilled, the sample is invalid and the results will be inaccurate.

6. Close the container and record the date, time, and location of sampling on the label provided along with the initials of the sample collector.
   Example: 11/01/23, 3:45 pm, Kitchen Sink, MH

7. Place samples in the ice chest with ice, maintaining the temperature between 0 - 6 degrees celsius. Return to the laboratory.

BACTERIA ANALYSES FROM A NON-METAL FAUCET

FAUCET TYPE: Metal vs non-metal faucets require different sterilizing before sample collection.

REQUIRES: 100mL Sterile Container with Sodium thiosulfate preservative *Lab Provided
Label *Lab Provided
Ice Chest *Lab Provided
Sharpie or other marker
Container that can fit faucet head
Gloves *Lab can provide, inquire if needed
Bleach

RETURN: Samples must be returned within 24 hours of collection (or 30 hours for State compliant samples). The lab does not accept bacterias on Fridays or the day before holidays. Please time sample collection accordingly.

1. Prepare all necessary materials before breaking the container seal. Unscrew the screen and aerator. Allow water to flow for 3 - 5 minutes, then turn water off.

2. Using gloves, pour commercially available Bleach into a container big enough to completely dip the faucet head into for 15 minutes.

3. After soaking for 15 minutes, remove the container and open the faucet and adjust to prevent water from splashing. Allow water to run for another 15 minutes.

4. Open the container and place lid face up to prevent contamination. Fill container only to the 100mL mark on the container, taking care to avoid overfilling. The preservative will only work for the first 100mL of water. If overfilled, the sample is invalid and the results inaccurate.

5. Close the container and record the date, time, and location of sampling on the label provided along with the initials of the sample collector.
   Example: 11/01/23, 3:45 pm, Kitchen Sink, MH

6. Place the containers in the ice chest (lab provided if requested with containers) and fill with ice to maintain the temperature between 0 - 6 degrees celsius. Return to the laboratory.