



Standard Operating Procedure for Transportation of Manual Wastewater Samples to Public Health Laboratories

Purpose and scope: To describe procedures for safe transfer of wastewater samples from Wastewater Treatment Plants to your State Health Department's Laboratory for RNA extraction and analysis.

Manual (grab) sampling: A manual or grab sample is appropriate for influent wastewater monitoring when automatic sampling is unavailable. The best method to manually collect a sample is to use the actual sample container which will be used to transport the sample to the laboratory. This eliminates the possibility of contaminating the sample with intermediate collection containers. If the wastewater stream cannot be physically reached by the sampling personnel or it is not safe to reach for the sample, an intermediate collection container may be used, from which the sample can be redistributed to other containers. If this is done, however, the container used to collect the sample must be properly cleaned according to the [SESD Operating Procedure for Field Equipment Cleaning and Decontamination \(SESDPROC-205\)](#).

In some cases it may be best to use a pump, either power or hand operated, to withdraw a sample from the water or wastewater stream. If using a pump, it is imperative that all components of the pump that come in contact with the sample are properly cleaned according to [\(SESDPROC-205\)](#) to ensure the integrity of the sample. In general, samples are manually collected by first selecting a location in the wastestream that is well mixed, then dipping the container in the wastewater stream so the mouth of the container faces upstream. The minimum volume of wastewater influent required per sample may vary by lab, but typically 50mL of wastewater influent is needed for SARS-CoV-2 monitoring.

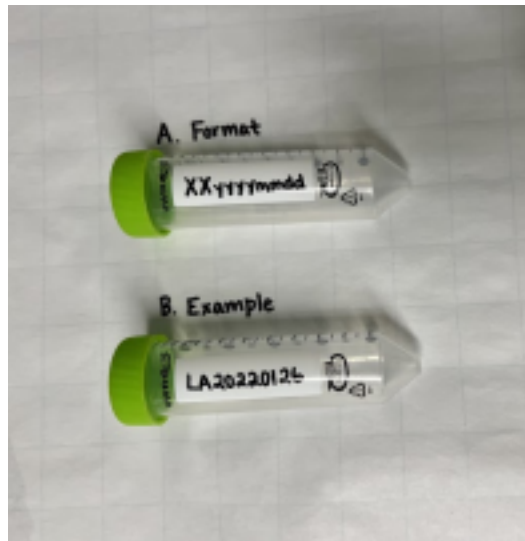
Supplies:

- Sample containers - must be sterile prior to collection and leakproof.
- Cold packs.
- Absorbent shipping pad or paper towels.
- Reusable insulated foam shipping cooler with cardboard exterior - 6x5x4.5in Uline or similar.
- Zip-top quart bag for double sample containment.
- Zip-top gallon bag for sample documentation.
- Bleach or alcohol wipes.
- Alcohol resistant marker for labeling.
- PPE.

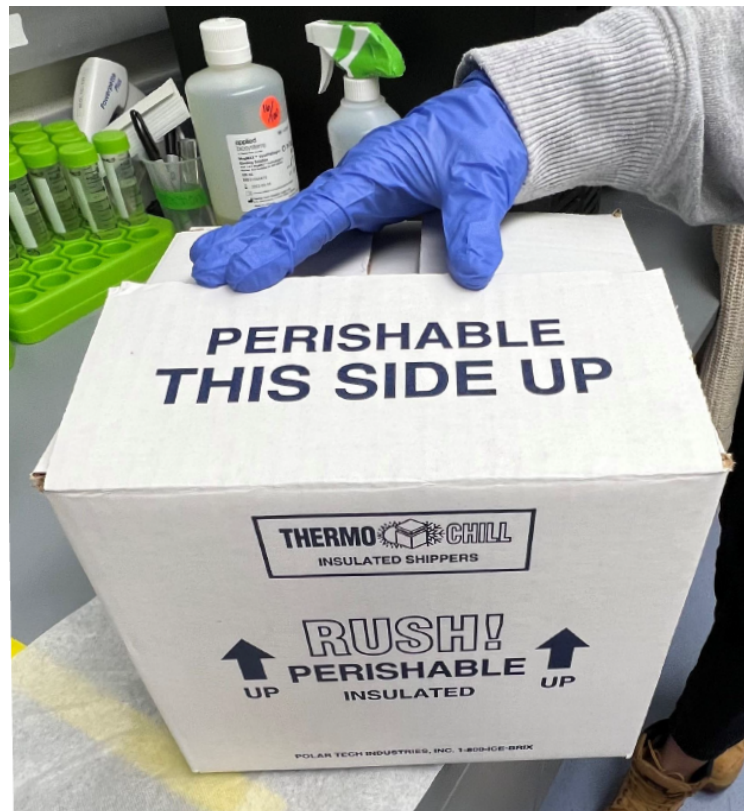


Sampling and packing procedure:

- Wear appropriate PPE, including but not limited to gloves, lab coat, goggles, and face shield, while handling sample bottles.
- Ensure that all lids are tight and will not leak.
- After filling, wipe the outside of all containers with 70% ethanol or 10% bleach solution.
- Clearly label bottles with alcohol-resistant ink using a unique sample identifier provided by the wastewater coordinator followed by the year, month, and day such as “IDyyyymmdd”.



- Place bottles inside a zip-top bag and seal the bag.
- Insert the samples into a polystyrene shipping box, with an ice pack (include two ice packs if using the three ounce packs). Fill the remaining space with absorbent material (newspaper, paper towels).
- Fill out and print the appropriate lab requisition or chain of custody form from your participating laboratory and place it inside with sample for shipping.
- Close and tape the lid.





Shipping procedure:

If using a courier service:

- Work with your participating laboratory to coordinate a courier service to pick up your samples.
 - **Enter your health department's instructions for scheduling a courier service**

If using FedEx:

- Request a FedEx account number from the *enter wastewater program point of contact here*.
- Ship the samples via FedEx **PRIORITY OVERNIGHT** so they arrive by **enter arrival time here** on the following day.
Shipping address
Enter your health department laboratory shipping location here

Sample receiving procedure:

Don PPE before unpacking the box.

- Unpack the box next to the Biosafety Level 2 (BSL2) cabinet and transfer bags containing samples to storage without opening.
- Before being opened, transfer containers into the BSL2 cabinet and wipe them down with bleach or ethanol. Only people wearing appropriate PPE should open samples inside the BSL2 cabinet.
- Transfer containers showing any signs of leakage or cracking to fresh tubes inside the BSL2 cabinet or simply autoclave and discard.

Contact information:

- **Enter your team's contact info here**