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

**Purpose & 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 a pump is used, it is imperative that all components of the pump that come in contact with the sample are properly cleaned according to the (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 very by lab, but typically 50mL of wastewater influent is needed for SARS-CoV-2 monitoring.

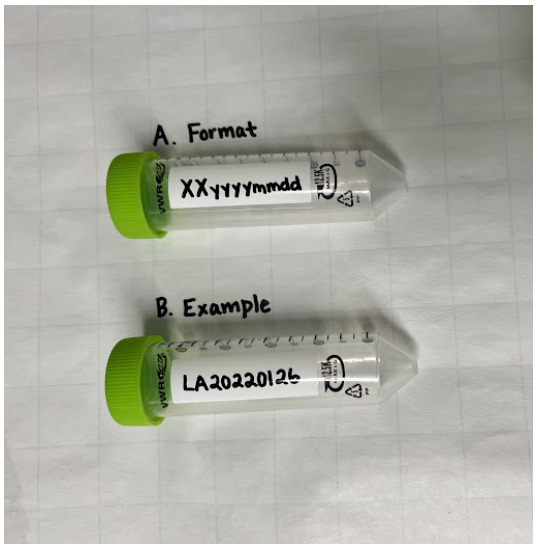
**Supplies:**

- Sample containers - Must be sterile prior to collection and leak proof
- Cold Packs
- Absorbent shipping pad or paper towels
- Reusable Insulated Foam Shipping Cooler with cardboard exterior - 6x5x4.5in Uline or similar
- Ziploc Quart bag for double sample containment
- Ziploc Gallon bag for sample documentation
- Bleach or alcohol wipes
- Alcohol resistant marker for labeling
- Sampling PPE

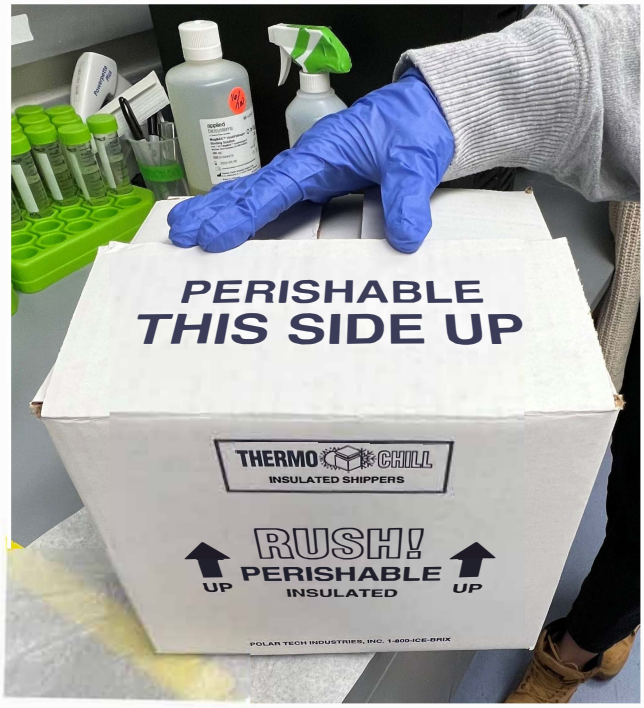
**Sampling & Packing Procedure:**

- Individuals handling sample bottles should wear appropriate PPE, including but not limited to gloves, lab coat, goggles, or face shield.

- 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.
- Label bottles clearly 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 Ziploc bag and seal the bag.
- Insert the samples into a polystyrene shipping box, with an ice pack (include 2 ice packs if using the 3oz 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 inside with sample for shipping.
- Close and tape the lid.



PERISHABLE
THIS SIDE UP
THERMO CHILL
INSULATED SHIPPERS
RUSH!
UP
PERISHABLE
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POLAR TECH INDUSTRIES, INC. 1-800-ICE-BRIX

## 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 departments instructions for scheduling a courier service**

If using FedEx:

- Please 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:**

- Lab staff will don PPE before unpacking the box.
- The box should be unpacked next to the Biosafety Level 2 (BSL2) cabinet and bags containing samples transferred to storage without opening.
- Before being opened, containers should be transferred into the BSL2 cabinet and be wiped down with bleach or ethanol. Samples should only be opened inside the BSL2 cabinet by individuals wearing appropriate PPE.
- Containers showing any signs of leakage or cracking should be transferred to fresh tubes inside the BSL2 cabinet or simply autoclaved and discarded.

**Contact Information:**

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