



Wastewater Sampling and Transport Protocol

Thank you for working with the Quadrant Laboratories and New York State on testing the wastewater in your area. This document will serve as a guide to sampling and transporting samples to our team for analysis.

Prior to sampling, please contact wastewater@quadrantbiosciences.com to set up sample delivery date and time.

Quadrant Laboratories can provide shipping kits at an additional charge, please reach out to wastewater@quadrantbiosciences.com if interested in a shipping quote.

Sampling

***NOTE:** 24-hour composite samples are preferred and strongly recommended. If this cannot be done, a composite sample may be made up from multiple grab samples (a minimum of 6) over a 12-18-hour period. Refer to section **Composite with Grab Samples**.*

Required Materials:

- 250 mL bottles (Recommended: Nalgene Wide Mouth Packing Bottles, HDPE).
- A wastewater sampler with the ability to take composite samples in a single bottle configuration. The recommended samplers to be used are portable with refrigerated capabilities to allow for the sample temperature to be maintained at approximately 4°C during collection.
- Insulated container (i.e. cooler or insulated styrofoam shipping box).
- Optional but highly recommended: A flow meter compatible with the sampler, pH meter, and thermometer.

24-Hour Composite Samples:

- 1) Samples should be collected from the influent stream of a wastewater treatment plant or other wastewater facility.
- 2) Following your organization's safety protocol, follow the wastewater sampler manufacturer's protocol for collecting single bottle composite samples.
- 3) The sampler should be set to collect a sample at a minimum of every hour with a preferred 30-minute time interval between each collection for up to 24 hours. If available, during collections, a flow meter should be used to measure flow of the influent stream. Document flow on the Chain of Custody associated with the sample(s).

- 4) Once the sampler has completed collecting the 24-hour composite sample(s), carefully remove the composite sample collection container, place the cap on it, and shake the container until contents are thoroughly mixed. If equipment is available, after shaking, record the pH and temperature of the sample(s). Document reading on Chain of Custody associated with sample(s).
- 5) Transfer contents of the composite sample collection container from the sampler to the 250 mL bottle. Secure cap on bottle to ensure no leaking. Each sample container should be labeled with the collection site/facility name, institution/municipality, date collected, and what type of sample collection was used: composite or grab. Place the bottle in an insulated container with ice, preferably ice packs if available, for transfer to the SARS2-EWSP team. **DO NOT USE DRY ICE OR ADD THIOSULFATE TABLETS TO THE BOTTLE.**
- 6) Repeat steps 1-5 for each designated collection location.

Composite with Grab Samples:

- 1) If a continuous 24-hour composite sample cannot be collected, a composite sample made up of multiple grab samples (a minimum of 6) may be used. The grab samples should come from an influent stream.
- 2) Following your organization's safety protocol, follow the wastewater sampler manufacturer's protocol for collecting grab samples.
- 3) Collect all grab samples into the same stock container with a maximum time interval of 2 hours between each sample grab. A minimum of six samples should be collected in a 12 to 18-hour period.
- 4) Once the last sample is collected, place the cap on the stock container and shake it until the contents are thoroughly mixed. If equipment is available, after shaking, record the pH and temperature of the sample(s). Document reading on Chain of Custody associated with sample(s).
- 5) Transfer contents of the stock container to the 250 mL bottle, secure cap on bottle to ensure no leaking. Each sample container should be labeled with the collection site/facility name, Institution/municipality, date collected, and what type of sample collection was used: composite or grab. Place the bottle in an insulated container with ice, preferably ice packs if available, for transfer to the SARS2-EWSP team. **DO NOT USE DRY ICE OR ADD THIOSULFATE TABLETS TO THE BOTTLE.**
- 6) Repeat steps 1-5 for each collection location.

Transporting

Within 24 hours of completing sample collection, samples will need to be transported to Quadrant Biosciences in Syracuse in an insulated container with ice or ice packs. **DO NOT USE DRY ICE FOR TRANSPORT.**

Driving Samples to Syracuse:

- 1) Prior to transporting the sample(s), ensure the chain of custody is included with accurate documentation of the samples. The chain of custody at a minimum should include the name of the collection site/facility name, the client name such as institution or municipality, date and time (if available) of collection, and type of sample collection used: composite or grab.
- 2) On the agreed upon specified time and date, samples should be delivered by a designated person to:

**Weiskotten Hall
766 Irving Ave
Syracuse, NY 13210**
- 3) Upon arrival, call the wastewater lab at 315-281-0240, and a team member will meet the designated person to collect the samples.
- 4) Coolers and ice packs will be returned to the designated person at the time of sample delivery.

Mailing Samples to Syracuse:

***NOTE:** If shipping samples, use Next Day Air Service.*

- 1) Prior to transporting the sample(s), ensure a chain of custody is included with accurate documentation of the samples. The chain of custody at a minimum should include the name of the collection site/facility name, the client name such as institution or municipality, date and time (if available) of collection, and type of sample collection used: composite or grab.
- 2) Ship samples via priority overnight in a shipping cooler/box via UPS or FedEx. On the exterior of the shipping cooler/box a UN3773 label should be clearly visible. It is recommended an insulated shipping box be used when shipping to ensure sample integrity during transport.
- 3) Samples should be shipped to:

**Quadrant Biosciences
STE 1600
841 E Fayette St.
Syracuse, NY 13210**

Quadrant Laboratories is a wholly owned subsidiary of Quadrant Biosciences
505 Irving Avenue, STE 3100AB, Syracuse, NY 13210

PROD-1172 (DOC-186) Ver. 2

Approved By:

[\(CO-460\) Revision to PROD-1171 and PROD-1172](#)

Description

Revised PROD-1171 Wastewater Sample Kit Instructions and PROD-1172 Wastewater Sampling and Transport Protocol with the following changes. PROD-1171: 1. Replaced Quadrant Viral logo with Quadrant Laboratories logo. 2. Changed team name from SARS-CoV-2 Early Warning Surveillance Platform to Quadrant Laboratories and NYS. 3. Revised Expectations: Changed sample cut off time for 1 day turnaround from 12pm to 1pm 4. Revised Kit Materials Provided: Removed reference to two to four sample shipping cooler and box. 5. Revised footer statement from Quadrant Viral Testing to Quadrant Laboratories. PROD-1172: 1. Replaced Quadrant Viral logo with Quadrant Laboratories logo. 2. Replaced former employee email with generic wastewater email for inquiries. 3. Revised footer statement from Quadrant Viral Testing to Quadrant Laboratories.

Justification

Revisions needed to reflect updates to entity name and wastewater kit materials.

Assigned To:	Initiated By:	Priority:	Impact:
Allison Iles	Allison Iles	Medium	Minor

Version History:

Author	Effective Date	CO#	Ver.	Status
Allison Iles	December 16, 2022 11:27 AM EST	CO-460	2	Published
Allison Iles	April 25, 2022 2:48 PM EDT	CO-246	1	Superseded
Stacy Masterson	June 9, 2021 2:21 PM EDT	CO-10	0	Superseded