

# COVID-19 PCR Testing: Collection of Alternate Samples

## Site Applicability

All PHC Acute, Long Term Care, and Assisted Living sites

## Practice Level

Health care staff, which includes physicians, nurses and respiratory therapists, who may collect an alternate sample specimen for COVID-19 from patients/residents (hereafter referred to as patients).

## Need to Know

Specimens are processed in the PHC Virology and Reference Laboratory at St. Paul's Hospital. Contact the Medical Microbiologist for special requests.

Please do **NOT** order or collect specimens for testing if the results will not affect treatment decision making or care management.

PowerChart will auto-trigger [Droplet and Contact precautions](#) for all COVID-19 PCR tests.

- Follow [PHC IPAC COVID-19 guidelines for acute and long term care](#) for details on interpreting PCR results and managing positive patients.
- To discontinue precautions for negative results, refer to the [Discontinuing Droplet & Contact Precautions Education Practice Pointer](#).

Nasopharyngeal (NP) swabs are the preferred specimen type for COVID-19 diagnosis. Refer to [Viral Respiratory Infections \(VRI\) - Specimen Collection: Nasopharyngeal Swabs \(NPS\)](#) for detailed collection instructions for NP swabs.

In certain cases (e.g., patients who are unable or unwilling to undergo NP sampling, patients with advanced lower respiratory tract disease, etc.), alternate specimen types may be ordered by the treating physician. Alternate samples include:

- Sputum
- Saliva
- Tracheal aspirate (intubated patients)
- Bronchoalveolar lavage (BAL)

- Saline gargle
- Mouth rinse
- Throat swab

Refer to the latest [PHC Lab memo](#) on accepted swab types and specimen containers for the particular sample being collected. Testing for other respiratory viruses (e.g., influenza, RSV) can be performed on the same sample if collecting an NP swab, tracheal aspirate, or BAL.

## Procedure

### Collection Steps

Perform a [Point of Care Risk Assessment \(PCRA\)](#) prior to collecting a sample to determine the appropriate Personal Protective Equipment (PPE) to use (i.e., based on risk of body fluid exposure or presenting symptoms).

Hand hygiene should be performed prior to patient contact (including prior to donning PPE, if indicated) as well as after patient/patient environment contact.

Explain the procedure to the patient prior to collection.

Ensure correct label is printed and placed on the collection container (includes patient identifiers, date/time of collection, and clearly indicate specimen type). If using a collection container with transport medium, check the expiry date.

#### Sputum:

- Have the patient rinse his/her mouth with water.
- Allow the patient to deeply cough (not spit) into the screw-top, sterile container. True sputum will be a thick (not thin) liquid.
- Collect approximately 1 mL of sputum.
- Ensure the lid of the container is tightly closed. Place specimen in sealed biohazard bag.

#### Saliva:

- Ensure patient has not had anything to eat or drink, smoked or vaped or chewed gum for at least one hour before sample collection. Remove dentures, if applicable.
- Instruct patient to sit upright and allow saliva to pool and swish in their mouth. Have the patient gently spit into the screw-top, sterile container.

- Collect approximately 1 mL of saliva (excluding any superficial bubbles). This may take several minutes.
- Ensure the lid of the container is tightly closed. Place specimen in sealed biohazard bag.

**Saline Gargle:**

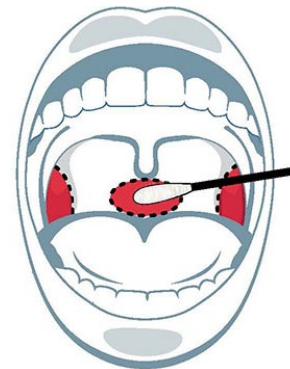
- Ensure patient has not had anything to eat or drink, smoked or vaped or chewed gum for at least one hour before sample collection.
- Provide the patient with the sterile container and 5 mL normal saline or tap water.
- Instruct patient to swish the saline around in mouth for 5 seconds, then tip head back and gargle for 5 seconds. Repeat swish and gargle two more times (30 seconds total).
- Instruct patient to spit the saline into the specimen container.
- Label the container with name, PHN or MRN, date and time of collection and note whether saline or tap water was used.
- Ensure the lid of the container is tightly closed. Place specimen in sealed biohazard bag.

**Mouth Rinse:**

- **NOTE:** This specimen should be collected only as a last resort, when collection of a NP swab, sputum, saliva and/or saline gargle is unsuccessful. This specimen type has not been fully evaluated.
- Ensure patient has not had anything to eat or drink, smoked or vaped or chewed gum for at least one hour before sample collection.
- Instruct the patient to sip from a cup of tap water but do not swallow the water. Ask the patient to sip a small volume of water that is comfortable for him/her (approximately 5 mL).
- Instruct the patient to gently swish the water within their mouth from side-to-side for 15 to 20 seconds.
- Instruct the patient to gently spit the water into a screw-top, sterile container.
- Ensure the lid of the container is tightly closed. Place specimen in sealed biohazard bag.

**Throat Swab:**

- If using the yellow-topped Roche dual swab collection kits, discard the thin flocked swab and use the larger woven swab for throat collections.
- Vigorously swab the back of the throat around the tonsillar area (see image).
- Place the swab into the transport medium and break off the swab stick at the score mark.
- Ensure the lid of the container is tightly closed. Place specimen in sealed biohazard bag.

**Order Entry**

For NP swab, BAL, tracheal aspirate, sputum, saline gargle, or throat swab:

- Add order in Cerner: "COVID-19 Virus (2019nCoV) NAT".
- Select the appropriate specimen type from the dropdown box.

For saliva, mouth rinse, or other:

- Add order in Cerner: "LAB – Miscellaneous Test (Non-Blood)".
- Free-text the specimen type (e.g., saliva) and the name of lab test (COVID-19 PCR).

**Transport of Specimens**

Transport all specimens to the laboratory as soon as possible. If specimens cannot immediately be transported to the laboratory, they should be refrigerated at 4 degrees Celsius until transport can occur.

**Related Documents**

- [B-00-07-13090](#) - COVID-19 - Infection Prevention and Control Guidelines in Acute Care
- [B-00-07-10097](#) - COVID-19 Response in Long-Term Care (LTC)
- [B-00-07-13079](#) - Droplet and Contact Precautions - Infection Control
- [B-00-07-13017](#) - Influenza-Like Illness (ILI) – Specimen Collection: Nasopharyngeal Swabs (NPS)
- [B-00-07-13081](#) - Point of Care Risk Assessment - IPAC Best Practice Guideline

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