

Specimen Collection for COVID-19

Updated May 2021



Indigenous Services
Canada

Services aux
Autochtones Canada

Canada

COVID-19 Testing

Directive for Testing for COVID-19 under the Novel Corona Virus (Covid-19)
Nasopharyngeal Swab Collection

Allows **health care professionals** to test eligible **patients** for the novel coronavirus (COVID-19) using an approved swab without an authorized prescriber's order when a patient meets [the current screening criteria](#). This action falls under the Medical Officer of Health's authority under the *Public Health Act* (Alberta).

Please note

Health care professionals means an individual who is a member of a regulated health discipline, as defined by the *Health Disciplines Act* (Alberta) or the *Health Professions Act* (Alberta), and who practises within scope and role

COVID-19 Testing – Specimen Collection

- A single upper respiratory tract specimen is acceptable for COVID-19 Testing. Currently, in Alberta specimen collection for COVID-19 testing is done by either:
 - **Nasopharyngeal swab using NP swab** in a Universal Transport Medium (UTM) or Sterile Saline

OR

 - **Throat Swab** using the throat swab in a Universal Transport Medium (UTM) or Sterile Saline
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- Specimen collection should be performed by health care personnel who have **completed training and demonstrated competency in performing the skill.**

COVID-19 Test Kit Order

COVID-19 Test Kits can be ordered through the Provincial Lab.

Order form is available at

<https://www.albertahealthservices.ca/lab/Page3320.aspx>

Provincial Laboratory for Public Health → Forms → Specimen Collection Kit

Edmonton (PLPH-M) accepts Phone and Fax orders

Phone: (780) 407-8971 Fax: (780) 407-8984

Calgary (PLPH-M) accepts Fax orders only

Phone: (403) 944-2583 Fax: (403) 944-2317

COVID-19 Test Kit Order



SPECIMEN COLLECTION KIT/REQUISITION ORDER FORM

Edmonton Site:

8440-112 Street, Edmonton AB T6G 2J2

Phone: (780) 407-8971

Fax Edmonton area orders to: (780) 407-8984

Calgary Site:

3030 Hospital Drive NW, Calgary AB T2N 4W4

Phone: (403) 944-2583

Fax Calgary area orders to: (403) 944-2317

Complete your community information and contact

Order UTM/VTM, saline, and eSwab media

Testing Kits should be stored at room temperature.

Facility Name:		Phone:		
Facility Address:				
Contact Person:		Notes:		
Items	Quantity		Lot number (Laboratory use only)	Expiry Date
	Each	Box/Bag/Kit		
CONTAINERS, Sterile (urine or sputum c/s)				
CONTAINERS, Sterile (fecal c/s)				
BAGS, Water (TRI-WALL)				
BAGS, Biohazard specimen				
KIT, Aptima® Unisex Swab (endocervical/urethral)				
KIT, Aptima® Urine Specimen (male/female)				
KIT, Flu/UTM (insert 1) (insert 2)				
KIT, Gastric Wash (TB) (insert)				
KIT, HSV and VZV (non-blood) (insert)				
KIT, Ice Collection (Environmental)				
KIT, Mumps (insert)				
KIT, Mycology/Fungus (hair/skin/nails) (insert)				
KIT, Pertussis (insert 1) (insert 2)				
KIT, Serology (HIV / virus / syphilis / HEP)				
KIT, Sputum (TB) (insert)				
KIT, Stool (c/s or viral) (insert)				
KIT, Stool (o/p) SAF preservative (insert)				
KIT, Water Collection (Environmental)				
KIT, Other (please specify)				
MEDIA, Pertussis (Regan Lowe)				
MEDIA, SAF Preservative				
MEDIA, Universal Transport (UTM)				
REQUISITION PAD, Calgary Bacteriology				
REQUISITION PAD, Calgary Virology				
REQUISITION, Edmonton Culture and Serology #CHA 39				
REQUISITION, Request for Microbiological Analysis of Water				
SWAB, FLOQSwab™ (Nasopharyngeal)				
SWAB, Polyester swab				
SWAB, Throat (Clear)				
SWAB, Charcoal FEMALE				
SWAB, Rayon MALE (ULTRA Fine Tip)				
TUBES, Conical 50 mL (TB)				
TUBES, Vacutainer Blood Tube (5 mL)				
EDTA-PPT <input type="checkbox"/> SST <input type="checkbox"/> SPS <input type="checkbox"/>				
FOR LABORATORY USE ONLY				
Date Order Taken:		Date Order Filled:		Sent Via: <input type="checkbox"/> Trans-Med <input type="checkbox"/> CLS <input type="checkbox"/> Gov <input type="checkbox"/> ProvLab Driver <input type="checkbox"/> Picked up <input type="checkbox"/> Other
Order Taken By:		Order Filled By:		

COVID-19 Testing

Personal Protective Equipment (PPE) should be worn when collecting a respiratory specimen.

Remember to read the manufacturer's package for specific instruction regarding specimen collection and transport for the type of test kit

COVID-19 Additional Precautions

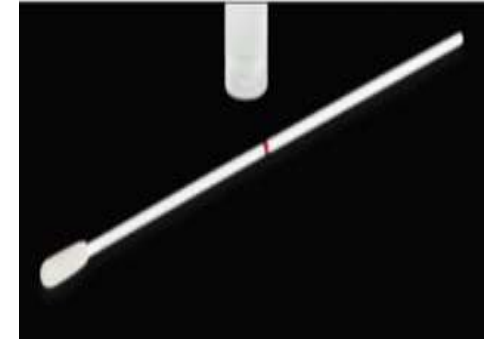
Required PPE for **Contact & Droplet Precautions** include;

- Gown
- Gloves (sterile/non-sterile depending on procedure)
- Procedure mask
- Eye protection - Goggles, face shield, or visor

As per current recommendations **N95 use only for** Aerosol Generating Procedures such as Intubation, CPR, Sputum induction, BiPaP; It **does not include** collecting nasopharyngeal (NP) or nasal swabs

Throat Swab Collection

1. Throat swabs will have a **shaft with a continuous thickness**. Nasopharyngeal (NP) swabs have a narrower flexible end and the swab head is smaller than the throat swab. The collection kits include a NP and throat swab with universal transport media.
2. Store collection kit at room temperature
3. Fill out the requisition provided for COVID-19 and label the tube with:
 - Name and date of birth
 - Unique identifiers (MRN or Alberta Health Care Number)
 - Time of collection
 - Site of collection (throat)
 - Include ordering provider (designated medical officer of health or other physician) on the requisition
 - If using a printed label make sure the label is properly affixed to the tube
4. Use personal protective equipment (PPE) as per protocol for collection of COVID-19 samples.
5. Explain procedure to the patient.



Throat Swab

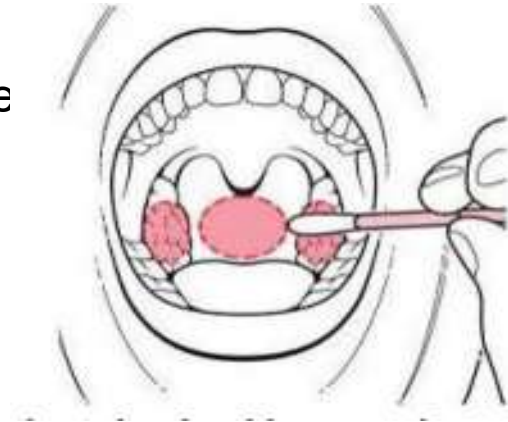
Source: Alberta Precision Laboratory

Throat Swab Collection

6. Collect throat swab. **VIGOROUSLY** swab the areas **highlighted in the figure**. Swabbing may activate the gag reflex.
7. While holding the swab in your hand, unscrew the tube cap. Do not spill the tube contents.

Break the shaft by bending it over the edge of the tube opening multiple times.

Alternatively, cut the shaft with scissors decontaminating the blades with alcohol wipes between collections.

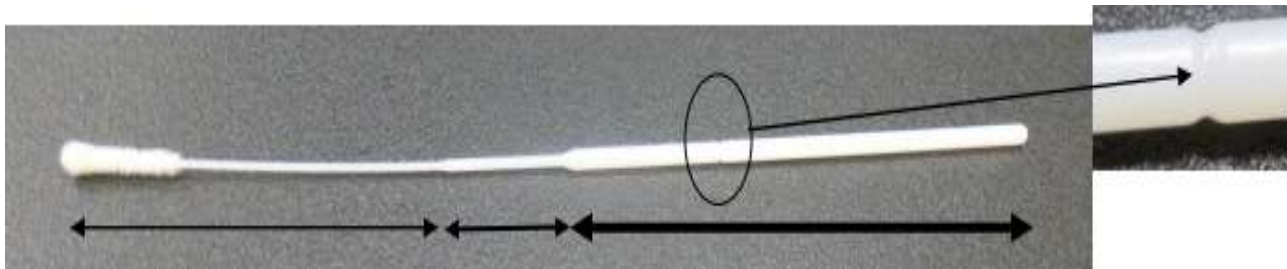


Source: Alberta Precision Laboratory

8. Discard the top portion of the shaft. **Tightly screw the cap onto the tube. Leaking specimens will be rejected by the laboratory.**
9. Place tube in transport bag. Place requisition in pouch outside of the bag.
10. Refrigerate tubes or store on ice if possible. If no refrigeration available, store at room temperature and ship to the lab within 48 hours.

Nasopharyngeal Swab Collection

1. Nasopharyngeal swab has a white plastic shaft, with 3 different thicknesses, ending in a “furry” or flock tip. There is a deep score on the thick part of the shaft where it can be snapped to fit into the transport medium container



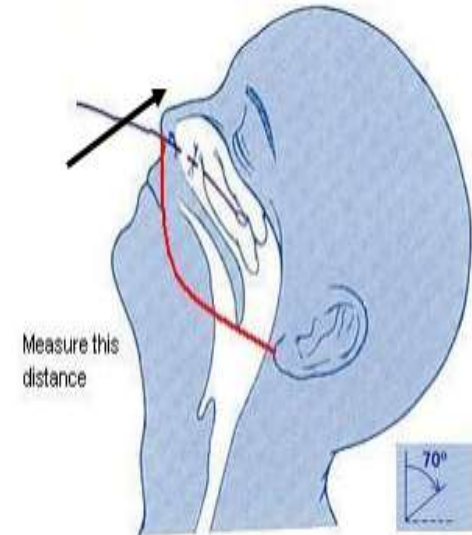
Nasopharyngeal Swab

Source: Alberta Precision Laboratory

2. Assemble all supplies such as PPE, pen, appropriate collection kit containing Lab requisition, nasopharyngeal swab and universal transport medium.
3. Check expiry date of transport medium.
4. Fill out the requisition provided for COVID-19 and label the tube
5. Use personal protective equipment (PPE) as per protocol for collection of COVID-19 samples.
6. Explain procedure to the patient.

Nasopharyngeal Swab Collection

7. Have the patient sit in a chair or lie on a bed – elevate the head of the bed so that their head can be tilted back (see diagram).
8. Remove any mucous from the patient's nose, with a tissue or cotton tipped swab prior to collecting the NP swab
9. **How deep is the NP swab inserted into the nasopharynx?** Measure the distance from the corner of the nose to the front of the ear and **insert the shaft ONLY half this length**. In adults, this distance is usually about 4 cm, (finest thickness of this swab shaft). In children this distance is less.
10. Tilt the patient's head **back slightly** (about 70 degrees) to straighten the passage from the front of the nose to the nasopharynx to make insertion of the swab easier.
11. **Gently** insert the swab along the medial part of the septum, along the base of the nose, until it reaches the posterior nares – gentle rotation of the swab may be helpful. (If resistance is encountered on one side, try the other nostril, as the patient may have a deviated septum).
12. Rotate the swab several times to dislodge the columnar epithelial cells, and then remove the swab.



Note – insertion of the swab usually induces a cough.

Nasopharyngeal Swab Collection

13. Put the NP swab into the transport medium and break it at the score mark on the shaft so that it does not protrude above the rim of the container. Failure to do so will result in the transport medium leaking and the sample being discarded.
14. **Ensure that the lid of the container is screwed on tight.** Place the specimen in the big inner pocket of the plastic biohazard bag provided
15. Remove and discard gloves. Perform hand hygiene by washing hands with soap and water or using alcohol hand rub. Remove and discard face mask, and repeat hand hygiene.
16. Follow the labelling and transport instructions given in the collection kit insert

Specimen Collection Video

The following videos demonstrates collection of Nasopharyngeal Swab for different age groups

Child

<https://www.youtube.com/watch?v=T4HwytFFtQU&list=PLi1tOF1I5ZoXMeW4LQruoKHPW-qmbtwoW&index=2>

Adult

<https://www.youtube.com/watch?v=6VdOCuuz8gQ&list=PLi1tOF1I5ZoXMeW4LQruoKHPW-qmbtwoW&index=3>




Senior

<https://www.youtube.com/watch?v=e1IGpxqzJXI&list=PLi1tOF1I5ZoXMeW4LQruoKHPW-qmbtwoW&index=4>

(Source Alberta Health Services)




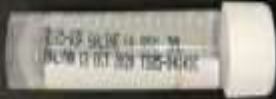
Acceptable Swab Types for COVID19 Testing

Acceptable Collection Kits for Nasopharyngeal Collection (Only)

<p>NP swab + Viral Transport Medium (VTM) aka Universal Transport Medium (UTM)</p> 	<p>Minitip Swab™ + eSwab™ Media</p> 
<p>Note: Different manufacturers will be distributed (eg. Copan or Oxoid M4RT)</p>	
<p style="text-align: center;">NP Swab + Sterile Saline</p> 	
<p>Note: The NP swab and tube used for sterile saline transport medium will change depending on available supplies. Regardless of tube appearance, tubes will be labelled as 0.85% saline with an expiration date.</p>	

Source: Alberta Precision Laboratory

Acceptable Swab Types for COVID19 Testing

Acceptable Swabs for Throat*	
<p>Swab™ + eSwab™ Media</p>  	<p>Throat Swab + Sterile Saline OR UTM/VTM</p>  
<p>Note: Hologic Aptima® Multitest Swab Kit and Hologic Aptima® Unisex Swab Kit were previously used for COVID testing. Due to shortages, these swab kits should be RESERVED for STI testing and no longer be used for COVID testing</p>	

*Source: Alberta Precision Laboratory

Acceptable Swab Types for COVID19 Testing



Source: Alberta Precision Laboratory

Specimen Collection – Lab Requisition

- ❑ For COVID-19 testing use the following requisition **COVID-19 Test Requisition (FNIHB)** available on One Health under **Community Health Nursing Manuals**



Coronavirus Pandemic Response Nursing Resource Manual



Forms

- ❑ There is also document with instruction for filling the lab requisition named **ISC COVID-19 Lab Requisition Instructions.**

Alberta Health Services		COVID-19 Test Requisition (FNIHB)	
<small>Edmonton Site: 112 St. TRG 2J2 Phone 780.407.1111 Fax 780.407.3854 Virologist/Microbiologist-on-call 780.407.8822</small>		<small>Calgary Site: 3030 Hospital Dr NW T2N 4W4 Phone 403.944.1200 Fax 403.270.2215 Virologist/Microbiologist-on-call 403.944.1200</small>	
<small>■ Consult the Site Virologist/Microbiologist-on-Call listed above for STAT requests, and when specified in the Guide to Services</small>			<small>Scanning Label or Accession # (see only)</small>
<small>■ See the Guide to Services (https://www.albertahealthservices.ca/lab/page2177.aspx?education=true) for information on sample type, transport and sealing</small>			
<small>PHN Prov Expiry Date of Birth (dd-Mon-yyyy)</small>			
<small>Legal Last Name Legal First Name Alternate identifier</small>			
<small>Middle Name Preferred Name</small>		<small><input type="checkbox"/> Male <input type="checkbox"/> Female <input type="checkbox"/> X Non-binary/Prefer not to disclose Phone</small>	
<small>Address City/Town</small>		<small>Prov Postal Code</small>	
<small>Authorizing Provider Name: Dr. Yacoub, Wadieh Ramses</small>		<small>Copy to Name (last first middle) Copy to Name (last first middle)</small>	
<small>Address: Canada Place, 730-9700 Jasper Ave NW, Edmonton</small>		<small>Address: Address</small>	
<small>Phone: 780-495-3391</small>		<small>Address: Address</small>	
<small>CC Provider ID: 156831 Millennium ID: 004699A</small>		<small>Phone: Phone</small>	
<small>Surquest ID: A2806</small>		<small>Phone: Phone</small>	
<small>Specimen/Type Source - Specify</small>			
<small>Date Collected (dd-Mon-yyyy) Time (24 hr) Location</small>		<small>Collector ID Outbreak (EI) if applicable (yyyy-mm)</small>	
<small>Specify Other Serology and Molecular Tests</small>		<small>Fluid</small>	
<small><input type="checkbox"/> COVID-19 only</small>		<small><input type="checkbox"/> Bronchoalveolar Lavage (BAL)</small>	
<small><input type="checkbox"/> COVID-19/Respiratory Pathogen Panel</small>		<small><input type="checkbox"/> Nasopharyngeal Aspirate</small>	
		<small><input type="checkbox"/> Endotracheal Suction</small>	
		<small><input type="checkbox"/> Swab</small>	
		<small><input type="checkbox"/> Nasopharyngeal</small>	
		<small><input type="checkbox"/> Throat</small>	
<small>Provide Clinical History or Reason for Testing below - Completion of this section is required</small>			
<small>Reason for Testing</small>		<small>List Countries visited within past 3 months of symptom onset OR provide relevant travel history</small>	
<small>Investigation for COVID-19 exposure</small>		<small><input type="checkbox"/> No Travel</small>	
<small>Check ONE: <input type="checkbox"/> Symptomatic <input type="checkbox"/> Asymptomatic</small>			
<small>Date of onset of symptoms (dd-Mon-yyyy)</small>		<small>Date of return (dd-Mon-yyyy)</small>	
<small>Relevant immunizations/dates</small>			
<small>Immunocompromised</small>			
<small><input type="checkbox"/> No <input type="checkbox"/> Yes (detail)</small>			
<small>Consent</small>			
<small>Contact Preference for COVID-19 Results:</small>			
<small><input type="checkbox"/> Text <input type="checkbox"/> Automated Dialer <input type="checkbox"/> Phone call from AHS</small>			
<small>Phone number: _____</small>			

Specimen Collection Guideline

- ❑ All patients who are under investigation for COVID-19 and are not hospitalized **should be advised to self-isolate** until they have received a phone call from Public Health with the results of their testing. They should not visit any other healthcare facilities, including outpatient imaging or labs, unless they are being admitted to hospital.
- ❑ Self Isolation information is available at <https://open.alberta.ca/publications/self-isolation-information-sheet>
- ❑ Contact your community lab for information regarding transportation of the specimen to the Provincial Laboratory

Reference

Alberta Health services, ProvLab. (2016). UTM/Flu Kit: for Detection of Respiratory Viruses.

<https://www.albertahealthservices.ca/assets/wf/plab/wf-provlab-utm-flu-kit-insert.pdf>

Alberta Health services, ProvLab. (2017). Collection of a Nasopharyngeal and Throat Swab for Detection of

Respiratory Infection. <https://albertahealthservices.ca/assets/wf/plab/wf-provlab-collection-of-nasopharyngeal-and-throat-swab.pdf>

Alberta Precision Labs – Public Health Laboratory. (May 2021). Acceptable Swab Types for COVID19 testing.

<https://www.albertahealthservices.ca/assets/wf/lab/wf-lab-apl-acceptable-swab-types-for-covid-testing.pdf>

Alberta Precision Labs – Public Health Laboratory. (10 July 2020). Interim recommendations for COVID-19 sample

collection <https://www.albertahealthservices.ca/assets/info/ppih/if-ppih-covid-19-saline-transport-medium-collection.pdf>

Alberta Health Services. (13 March 2020). COVID-19 Screening Criteria.

<https://www.albertahealthservices.ca/assets/info/ppih/if-ppih-ncov-case-def.pdf>

Alberta Health Services. Novel Corona Virus (Covid-19) Nasopharyngeal Swab collection Directive.

<https://extranet.ahsnet.ca/teams/policydocuments/1/clp-ahs-novel-coronavirus-nasopharyngeal-swab-hcs-253-01.pdf>

Ottawa Public Health. How to collect a Nasopharyngeal (NP) swab.

<https://www.ottawapublichealth.ca/en/professionals-and-partners/how-to-collect-a-nasopharyngeal--np--swab.aspx>

Public Health Agency Canada (February 2020). Coronavirus disease (COVID-19): For health professionals.

<https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection/health-professionals.html>