

**CORONAVIRUS DISEASE 2019 (COVID-19)
SPECIMEN COLLECTION AND SUBMISSION INSTRUCTIONS**

NOTE: Before collecting and handling specimens for COVID-19 testing, it must be determined whether the person meets the current definition for a “patient under investigation” (PUI) for novel Coronavirus disease 2019 (COVID-19) infection as defined by the Centers for Disease Control and Prevention (CDC). All suspect COVID-19 cases must be evaluated and approved for testing by the Division of Infectious Disease Epidemiology (DIDE) prior to submission. Please call (304) 558-5358, extension 1 or the answering service at (304) 347-0843 for consultation.

SPECIMEN COLLECTION

For initial diagnostic testing, CDC recommends collecting and testing upper respiratory (nasopharyngeal AND oropharyngeal swabs), and lower respiratory (sputum, if possible) for those patients with productive coughs. Induction of sputum is not recommended. Specimens should be collected as soon as possible once a PUI is identified, regardless of the time of symptom onset. Healthcare personnel collecting specimens from patients with known or suspected COVID-19 should adhere to Standard, Contact, and Airborne Precautions, including the use of eye protection. These procedures should take place in an airborne infection isolation room or in an examination room with the door closed. Ideally patient should not be placed in any room where room exhaust is recirculated within the building without HEPA filtration. Individuals in the room during the procedure should, ideally, be limited to the patient and the healthcare provider obtaining the specimen.

RESPIRATORY SPECIMENS

A. LOWER RESPIRATORY TRACT

a. Sputum (if possible, for those patients with productive coughs)

- Label a 50mL conical tube or other sterile, leak-proof, screw-cap collection cup with the patient’s name or other unique identifier and date of collection.
- Instruct the patient to rinse the mouth with water. Do not swallow.
- Take several deep breaths and cough hard from deep inside chest, 3 times. This allows the sputum to move up from the lungs.
- Expectorate the deep cough sputum directly into the sterile collection tube, avoiding touching the sides of the container.
- Repeat this process until you obtain 1-2 mL of sputum.
- Screw lid on tightly and refrigerate at 2-8°C and ship on cold packs.

B. UPPER RESPIRATORY TRACT (both nasopharyngeal swab AND oropharyngeal swab are required)

a. Nasopharyngeal (NP)

- Label a viral transport media tube with the patient’s name or other unique identifier and date of collection.
- Immobilize the patient’s head and insert the swab into the nasopharynx and leave in place for 10 seconds to absorb secretions.

NOTE: Use only synthetic fiber swabs with plastic shafts. Do not use calcium alginate swabs or swabs with wooden shafts, as they may contain substances that inactivate some viruses and inhibit PCR testing.

- Place swab immediately into labeled viral transport media tube, break swab at breakpoint, and close lid tightly.
- Refrigerate at 2-8°C for up to 72 hours and ship on cold packs.

b. Oropharyngeal (OP)

- Label a viral transport media tube with the patient's name or other unique identifier and date of collection.
- Swab the posterior pharynx, avoiding the tongue.
- Place swab immediately into labeled viral transport media tube, break swab at breakpoint, and close lid tightly.
- Refrigerate at 2-8°C for up to 72 hours and ship on cold packs.

NOTE: NP and OP swabs must be collected in SEPARATE tubes. They may be shipped together in the same box.

SPECIMEN TRANSPORT

Specimens from suspect COVID-19 cases must be packaged, shipped, and transported as Category B Biological Substances according to the current edition of the International Air Transport Association (IATA) Dangerous Goods Regulations 1.5 and 49CFR Section 172.0700 [U.S. Department of Transportation].

All specimens must be stored at 2-8°C and shipped on cold packs. If samples are unable to be shipped within 72 hours of collection, they should be stored at -70°C or lower and shipped on dry ice.

All specimens must be packed to prevent breakage and spillage. Specimen containers should be sealed with Parafilm® and placed in plastic zippered bags. Place enough absorbent material to absorb the entire contents of the Secondary Container (containing Primary Container) and separate the Primary Containers (containing specimen) to prevent breakage. Send specimens with cold packs or other refrigerant blocks that are self-contained, not actual wet ice.

- Do not place any dry ice in the "Primary Container" or "Secondary Container", foam envelopes, plastic zippered bags, cryovial boxes, or hermetically sealed containers.
- Do not place Primary Containers sideways or upside down in the plastic zippered bags.
- Do not place any paperwork in the Secondary Containers or plastic zippered bags, so as not to damage the paperwork.
- Do not use autoclave bags to pack your materials due to the inadequate seal of these bags.

OTHER INFORMATION

1. Ensure that specimen is properly labeled with the patient name or unique identifier and the date of collection and that the Microbiology Laboratory Specimen Submission Form is completed entirely. The “Test Requested” should be marked as “Sendout”. Write “COVID-19” in the comments section. The patient name or unique identifier on the form and collection container must be identical.
2. Do not delay specimen shipment.
3. Do not ship specimens on Friday or state holidays.
4. Specimens must ideally be received at OLS within 72 hours of collection.

CONTACT INFORMATION

Office of Laboratory Services
PH | 304-558-3530
FX | 304-558-3530

Office of Epidemiology and Prevention Services
Division of Infectious Disease Epidemiology
PH | 304-558-5358
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REFERENCE WEBSITES

Centers for Disease Control and Prevention

<https://www.cdc.gov/coronavirus/2019-nCoV/lab/index.html>

Office of Laboratory Services

<http://dhhr.wv.gov/ols>

Office of Epidemiology and Prevention Services

<https://oeps.wv.gov/2019-ncov/pages/default.aspx>