

TO: Clinical Laboratories and Medical Providers
FROM: Helen Reid, MPH, Health Department Laboratory Director

Vermont Department of Health Laboratory Testing for Novel Coronavirus (COVID-19)

The Health Department Laboratory is performing testing for Novel Coronavirus (COVID-19). All requests for testing at the Health Department Laboratory must be approved by the Health Department ID-Epi team by calling 802-863-7240 (available 24/7) to coordinate submission and ensure that the appropriate infection prevention and movement restrictions have been put in place.

Clinicians should use their judgment to determine if a patient has signs and symptoms (fever, cough, shortness of breath) compatible with COVID-19, and whether the patient should be tested. Patients who have signs and symptoms compatible with COVID-19, and history of travel from an [affected geographic area](#) or history of contact with a confirmed COVID-19 patient within 14 days of symptom onset, should be tested for COVID-19. Decisions on which patients to test should be based on clinical judgment and a history of possible exposure. Clinicians are strongly encouraged to also test for other causes of respiratory illness, including infections such as influenza, through their routine clinical laboratories.

The turnaround time for testing is 24-48 hours. Samples received at the laboratory by 11:00 AM will be considered “same day” tests and a result will be reported out by the end of the business day. Samples received after 11:00 AM will typically be added to the test batch for the next day. Once ID-Epi has approved sample collection and testing, the laboratory can dispatch a statewide courier to the requester’s location or coordinate with the requester’s courier service. COVID-19 tests performed by the Health Department Laboratory are provided at no charge.

Specimen Requirements and Collection

Collecting diagnostic respiratory specimens is likely to induce coughing or sneezing. Individuals in the room during the procedure should, ideally, be limited to the patient and the health care provider obtaining the specimen. Health care providers who are collecting specimens 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.

All specimens must include a Health Department [Clinical Test Request Form](#). Label all specimens with the patient name and the collection date.

1. Upper respiratory tract

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. **NP and OP specimens must be kept in separate vials containing viral transport media.**

Note: E-swabs are not acceptable swabs.

a. Nasopharyngeal (NP) swab

- i. Pass the NP swab through the nares. Resistance will be met, and this will confirm contact with the nasopharynx.
- ii. Rub the swab tip several times across the mucosal surface. This will loosen and collect cellular material. Allow a time of contact of up to 30 seconds.
- iii. Withdraw the swab and place in the viral transport media. Make sure liquid medium covers the swab tip.
- iv. Break or cut the end of the swab and screw the vial lid on tightly.

b. Oropharyngeal (OP) swab

- i. Swab the posterior pharynx, avoiding the tongue.
- ii. Vigorously swab both the tonsils and the posterior pharynx.
- iii. Place swab into the transport media. Make sure liquid medium covers the swab tip.
- iv. Break or cut the end of the swab and screw the vial lid on tightly.

c. Nasopharyngeal wash/aspirate or nasal aspirate

- i. Collect 2-3 mL into a sterile, leak-proof, screw-cap sputum collection cup or sterile dry container.

2. Lower respiratory tract

a. Bronchoalveolar lavage, tracheal aspirate (if clinically indicated, e.g., in those receiving invasive mechanical ventilation)

- Collect 2-3 mL into a sterile, leak-proof, screw-cap sputum collection cup or sterile dry container.

b. Sputum (if the patient has a productive cough; induction of sputum is not recommended)

- Have the patient rinse the mouth with water and then expectorate deep cough sputum directly into a sterile, leak-proof, screw-cap sputum collection cup or sterile dry container.

Specimen Storage and Shipment

- Storage: 2-8°C for up to 72 hours after collection
-70°C or lower if >72 hours after collection
- Shipment: Ship as soon as possible at refrigerated temperature (2-8°C) or frozen if 72 hours after collection.

Please follow shipping regulations for UN 3373 Biological Substance, Category B when sending potential COVID-19 patient specimens. Refer to Interim Laboratory Biosafety Guidelines for Handling and Processing Specimens Associated with Coronavirus Disease 2019 (COVID-19): <https://www.cdc.gov/coronavirus/2019-ncov/lab/lab-biosafety-guidelines.html>

The Vermont Department of Health is not responsible for providing UN 3373 Biological Substance, Category B shipping materials. Category B shippers can be purchased or assembled, but must meet the requirements of the IATA Packaging Instructions (PI) 650: <https://www.iata.org/contentassets/b08040a138dc4442a4f066e6fb99fe2a/dgr-61-en-pi650.pdf>

Please consult your packaging and shipping guidelines for more information.

Specimens may be rejected for the following reasons:

- Absence of patient information on the specimen or request form
- Improper shipment temperature
- Too old to test
- Specimen leaked in transit and/or there is insufficient specimen for testing
- Inappropriate specimen type

Test Results

Test results will be sent to the requestor via the fax, email or phone information provided on the clinical test requisition form. A false negative result may occur if inadequate numbers of organisms are present in the specimen due to improper collection, transport or handling. Inconclusive test results will be tested again the next day and results provided by the end of that business day. If the repeated result remains inconclusive, the laboratory will contact the CDC for transfer of specimen to CDC for additional testing and further guidance.

Note: A positive test result is considered presumptive until confirmatory testing is performed by the CDC. The CDC is conducting confirmatory testing within 24-48 hours of receipt.

Please note this guidance is subject to change.

HAN Message Type Definitions

Health Alert: Conveys the highest level of importance; warrants immediate action or attention.

Health Advisory: Provides important information for a specific incident or situation may not require immediate action.

Health Update: Provides updated information regarding an incident or situation; unlikely to require immediate action.

Info Service Message: Provides general correspondence from VDH, which is not necessarily considered to be of an emergent nature.