



Missouri Department of Health and Senior Services

P.O. Box 570, Jefferson City, MO 65102-0570 | Phone: 573-751-6400 | FAX: 573-751-6010
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Sarah Willson
Director

Mike Kehoe
Governor

State Public Health Laboratory Submission of Positive Influenza and SARS-CoV-2 Specimens for Virologic Surveillance

Updated November 2025

In coordination with the Centers for Disease Control and Prevention (CDC), the Missouri State Public Health Laboratory (MSPHL) actively conducts virologic surveillance of Influenza and SARS-CoV-2 viruses circulating throughout the state. These efforts enable us to track currently circulating strains, detect emerging variants in real time, and provide critical data to the CDC to support antiviral resistance testing and vaccine strain selection.

In addition to routine testing, the MSPHL participates in the CDC's Advanced Molecular Detection (AMD) Program by incorporating next-generation sequencing and bioinformatics into our surveillance of SARS-CoV-2 and influenza. This integration enhances our ability to monitor significant changes in respiratory viruses, and contributes to research on transmission dynamics, host response, and viral evolution.

Why is this important?

Routine analysis of genetic sequence data enables public health experts to identify and characterize variant viruses and to investigate how these variants may impact disease severity and the effectiveness of vaccines and therapeutics. Surveillance of emerging viruses helps detect variants with:

- Ability to spread more quickly throughout the population
- Ability to cause more severe disease
- Ability to evade detection by specific diagnostic tests
- Ability to evade natural or vaccine-induced immunity
- Decreased susceptibility to therapeutics

Selection criteria

Specimens submitted for influenza and/or SARS-CoV-2 surveillance testing should have a previous positive diagnostic test, such as Real-Time PCR or other nucleic acid amplification test.

- Please continue to send **all** specimens that test as "unsubtypable" on in-house testing methods (regardless of Ct value) as soon as possible.
- For influenza specimens, submit at least 5-10 samples per week using the following criteria:
 - Specimens from patients with severe illness, particularly those who are hospitalized or in the ICU, should be prioritized.
 - Mixture of influenza A and influenza B samples
 - Facilities who perform subtyping: submit a sampling of Influenza A positives (H3N2, H1N1)
- For SARS-CoV-2 specimens, submit 5 specimens per week.
- Prioritize specimens with a PCR Ct value of ≤ 28 (Not required if Ct value is not available)

PROMOTING HEALTH AND SAFETY

Our vision is optimal health and safety for all Missourians, in all communities, for life.

Specimen collection

- Use only a Dacron/flocked swab or equivalent. Do not use wood-shafted or cotton swabs for specimen collection.
- Collect a Nasopharyngeal Swab, Nasal Swab or Throat Swab for respiratory testing.
- You may use either MSPHL-supplied viral transport media or other commercially available viral transport media.

Temporary storage of specimens

- Specimens should be shipped to the Missouri State Public Health Laboratory as soon as possible.
 - Store the specimen at refrigerator temperature (2-8°C) pending shipment and ship with freezer packs.
- Specimens may be batched and shipped on a weekly basis. Specimens that will not be received by the MSPHL within 72 hours of collection should be stored frozen ($\leq -20^{\circ}\text{C}$) and shipped on dry ice.
 - Please continue to submit all influenza-positive specimens that could not be subtyped using your in-house testing methods as soon as possible.

Specimen submission

Complete an MSPHL Test Request Form (TRF) for each specimen using one of the following options:

- Electronic submission using Lab Web Portal (Contact us for registration information)
- [Manual \(Paper\) Test Request Form available online.](#)
- The TRF should include the following information at a MINIMUM:
 - In the “MOLECULAR (PCR)” section of the TRF, choose Influenza or SARS-CoV-2 (all surveillance specimens will be tested for both Influenza & SARS-CoV-2)
 - Select the specimen type in the “Specimen Information” section
 - Collection date
 - Patient first and last name
 - Patient DOB
 - Submitting facility name and contact information
 - Although not required, additional patient information such as address/onset date is helpful
- At least 500 μL of Viral Transport Media (VTM) should be in specimen vial
- Specimens should arrive at the MSPHL within 72 hours of collection with freezer packs. Freezer packs should be stored in freezer for at least 24 hours prior to shipping.
- If specimens will not be received by the MSPHL within 72 hours of collection, specimens should be stored frozen ($\leq -20^{\circ}\text{C}$) and shipped on dry ice.

Packaging specimens for shipment

- Place dry ice/freezer packs in Styrofoam box. Dry ice is required for specimens that will not be received at the MSPHL within 72 hours of collection. Do not use ice made with water when shipping specimens.
- Place specimen tube inside biohazard bag and seal
- Fold Test Request Form and slide into pocket on outside of bag
- Place the bags inside Styrofoam box with dry ice/freezer packs & close box

Shipment of specimens

The MSPHL will provide all shipping materials and cover shipping costs. Please contact the MSPHL to have collection kits sent to your facility.

Specimens may be sent via the MSPHL Courier System. If utilizing the courier, samples should be sent out no later than the Thursday pickup of each week.

* Effective Nov.1, 2025: The Friday courier will only operate on the holiday/weekend routes. *

[Specimen Delivery and Courier Information](#)

If you do not have access to the MSPHL Courier, samples may be sent via FedEx. If utilizing FedEx to send in samples, ensure that they will not arrive in Jefferson City on Saturday, Sunday, or a holiday. Please contact the Molecular Unit at the MSPHL and a FedEx shipping account number will be provided for your facility to use.

Do not ship clinical specimens via USPS

Please send all specimens to this address:

Missouri State Public Health Laboratory
ATTN: Molecular Unit
101 North Chestnut Street
Jefferson City, MO 65102
Phone: 573-751-3334, Option 2

Have questions or need assistance?

Melissa Markham
Laboratory Supervisor, Molecular Unit
Missouri State Public Health Laboratory
Missouri Department of Health and Senior Services
Melissa.Markham@health.mo.gov

Joshua Featherston
Unit Chief, Molecular Unit
Missouri State Public Health Laboratory
Missouri Department of Health and Senior Services
Joshua.Featherston@health.mo.gov