

Instructions for Measles Virus Submission Division of Laboratories

General Information

Throat (oropharyngeal) or nasopharyngeal (NP) swabs are the preferred samples for the detection of measles RNA by RT-PCR. The specimen should be collected as soon as possible after the onset of the rash because samples collected more than five days after rash onset are less likely to successfully detect virus.

Specimens should be collected and stored at 2-8°C. Since heat decreases the stability and infectivity of measles virus, specimens must be shipped on multiple cold packs to maintain consistent temperature during transit. Be aware that storing specimens at $\leq -70^{\circ}\text{C}$ is permissible but *requires* that sample(s) be shipped on dry ice to the testing laboratory. Avoid freeze-thawing of specimen(s) as this also decreases infectivity of the virus.

Specimens MUST be received by the Illinois Department of Public Health laboratory no later than eight days from the date of collection. For any questions pertaining to sample collection, storage, or shipping, contact one of the IDPH laboratories using the contact information below.

Collection Instructions for Throat and Nasopharyngeal Swabs

(Submission kits can be requested through the Electronic Test Ordering and Reporting (ETOR) system. Contact dph.labs.dmg@illinois.gov for question regarding ETOR enrollment.

1. Do not use expired media or swabs. Store viral transport media (VTM) or universal transport media (UTM) in the refrigerator until use. Use Dacron- or Nylon-tipped swabs for collecting samples. Flocked swabs are preferred. Examples of acceptable swabs include FLOQSwabs™ (Copan) and BD flocked swabs. **Do not use cotton-tipped, wooden-shafted, or calcium alginate swabs, as these contain PCR inhibitors. Samples collected using unapproved materials will be rejected for testing.**
2. Obtain specimens early in the acute phase of illness, preferably within three days of onset of symptoms.
3. **Collecting Nasopharyngeal Swab:** Aseptically remove sterile swab from package and collect the nasopharyngeal swabs by gently inserting swab through each nostril deeply into the nasopharynx (aiming towards the ear).
4. **Collecting Oropharyngeal Swab:** Aseptically remove sterile swab from package and collect epithelial cells by vigorously swabbing the posterior pharynx and tonsil regions of the throat.
 - 4.1. If collecting both a throat and a nasopharyngeal swab, both swabs should be combined in the same vial of viral transport medium.
5. Insert the swab into the transport medium and break the shaft of the swab at the scored line. Securely close the container.
6. Ensure that the patient's name, date-of-birth, and time/date of collection are recorded on the specimen tube along with the name or initials of the individual collecting the sample.
7. Complete all the demographic information on the Communicable Disease Laboratory Test Requisition form available at <http://dph.illinois.gov/topics-services/lab-testing-services/clinical-testing>. **The authorization number provided by the IDPH Communicable Disease Control Section MUST be included on the requisition form.**

8. Refrigerate the specimen between 2-8°C and ship the specimen(s) on frozen cold packs. If the specimen was stored at ≤ -70°C, the specimen *must* be shipped on dry ice. Avoid freeze-thawing the specimen.
9. The specimen(s) *must* be received at the laboratory **no later than** eight days *from the date of collection*. Do not ship specimens over weekends or holidays as they will not be received until next business day, and cold-packs will not maintain the required ≤8°C specimen temperature.
10. For any questions pertaining to sample collection, storage, or shipping, contact one of the IDPH laboratories using the contact information below.

Instructions for Specimen Transport

11. **Messenger/Courier by ground transport** Place specimen(s) into a biohazard labeled bag and seal securely. Place the test requisition(s) on the outside of the biohazard labeled bag. Place the sealed biohazard bag and test requisition(s) inside the shipping container. Place cold packs, which have been frozen for at least 24 hours, in the leak-proof outer container. The shipping container must be rigid, such as a Styrofoam cooler, and labeled with the UN 3373 Biological Substance Category B marking. Close securely.
12. **Commercial carrier by ground/air transport** Place the specimen(s) inside a biohazard labeled bag and seal securely. Place the test requisition(s) on the outside of the biohazard labeled bag. Place the sealed bag and completed test requisitions(s) inside the outer shipping container. Place cold packs, which have been frozen for at least 24 hours, in the leak-proof outer container. Label the outer shipping container with the Illinois Department of Public Health laboratory address listed below. Complete the return address section to include the name of the person shipping the package, business name and address, and a business phone number. The shipping container must include the UN3373 Biological Substance Category B marking.
13. *Ship specimens by overnight delivery* to the attention of the Molecular or Virology lab at the Springfield or Chicago testing laboratories. This can be accomplished by use of local courier, shipping corporations, or U.S. Postal Service.
14. The specimen(s) *must* be received at the laboratory **no later than** eight days *from the date of collection*. Do not ship specimens over weekends or holidays as they will not be received until next business day, and cold-packs will not maintain the required ≤8°C specimen temperature.

NOTE: Testing may be delayed, or specimens may be considered UNSATISFACTORY if the above instructions are not followed or the requisition form is not filled out completely. If there are any questions about specimen collection, handling, or shipping contact one of the Illinois Department of Public Health laboratories listed below and speak to molecular laboratory personnel.

Ship specimens by a local courier or overnight by commercial carrier to the designated laboratories indicated below.

Send to: Illinois Department of Public Health
 Division of Laboratories
 ATTN: Molecular Lab
 825 N. Rutledge St.
 Springfield, IL 62702
 Phone 217-782-6562

Illinois Department of Public Health
 Division of Laboratories
 ATTN: Virology Lab
 2121 W. Taylor St.
 Chicago, IL 60612
 Phone 312-793-4760