

# CT DPH MEASLES VIRUS TESTING COLLECTION, PACKAGING, AND SHIPPING INSTRUCTIONS



- **Suspected measles cases must be reported immediately to the Connecticut Department of Public Health (CTDPH).**
  - **Business hours contact: Immunization Program Main Line 860-509-7929**
  - **After hours contact: Public Health Emergency Number 860-509-8000**
- CTDPH will arrange Real-time Reverse Transcriptase Polymerase Chain Reaction (rRT-PCR) testing at the Connecticut state public health laboratory (SPHL). While PCR testing may be available at a few commercial laboratories, the turnaround time is often longer, and the SPHL is preferable for rapid testing when there is reasonable suspicion for measles. SPHL can produce same day PCR results, if needed.
- Serology testing can be performed at several commercial laboratories and at the Centers for Disease Control and Prevention (CDC). Specimens for CDC testing must be routed through the SPHL. Turnaround time for CDC serology is approximately 7 days and routine shipments are not accepted on weekends/holidays.

## SPECIMEN COLLECTION AND STORAGE

- Viral PCR collection kits are available to order from the SPHL [Scientific Support Services](#) section. Requests can be made via email to [dph.outfitroom@ct.gov](mailto:dph.outfitroom@ct.gov) or via telephone, 860-920-6674 or 860-920-6675, Monday – Friday, 8:00 am to 4:00 pm. For additional information see the [Collection Kit Ordering Information](#) document.
- Providers should collect a nasopharyngeal (NP) or oropharyngeal swab (OP), urine, and blood as soon as possible after rash onset.<sup>1</sup>
  - Specimens should preferably be collected within 3 days of rash onset but can be collected up to 7–10 days after rash onset.
  - If more than 10 days after rash onset, blood should be collected for serology testing (IgM and IgG).

### NP Swab:

- Use standard aseptic specimen collection procedures.
- NP swab should be collected with flocced synthetic or synthetic swab (e.g. polyester or Dacron-tipped) with plastic or aluminum shafts. OP swab is acceptable if an NP swab cannot be collected.
- DO NOT use calcium alginate or cotton tipped swabs, or wood shafts, as they contain substances that inactivate some viruses and inhibit PCR.
- After swabbing, immediately place swab in 1–3 mL of viral transport media (VTM) and refrigerate for at least 1 hour at 4°C.
- Specimens that will be tested within 24 hours of collection can be refrigerated at 2–8° C. If specimens are not tested within 24 hours of collection, they must be stored frozen at <-70° C.

### Urine:

- Collect 10–50 mL of urine in a sterile container. Urine does not need to be obtained via sterile methods, should not contain preservatives, and should not be added to VTM.
- Specimens that will be tested within 24 hours of collection can be refrigerated at 2–8° C. If specimens are not tested within 24 hours of collection, they must be stored frozen at <-70° C.

### Blood (serologic IgM and IgG testing):

- Using aseptic venipuncture technique, collect 7–10 mL of blood in a red-top or serum-separator tube (SST).
  - Centrifuge blood no more than 2 hours after collection and transfer serum to separate sterile tube with an externally threaded cap with an O-ring seal to prevent leakage.

<sup>1</sup> If you only collect one specimen, it should be a NP swab for PCR test testing.

- Refrigerate serum within 8 hours of collection. Samples should be frozen at -20°C prior to shipping.
- DO NOT freeze whole blood.
- Providers may consider splitting the serum into 2 aliquots and shipping one aliquot to a commercial laboratory and the other aliquot to the SPHL for forwarding to CDC.

## PACKAGING

- Specimens must be labeled with at least 2 patient identifiers. Information must match all paperwork submitted. Acceptable identifiers include:
  - Patient's first and last name
  - Date of birth
  - Medical record number
  - Submitting laboratory's specimen accession number
- All specimens sent to the SPHL must be accompanied by a completed [OL-9B requisition form](#).
  - Required information: Name and address of submitter, 2 patient identifiers, town of residence (city, state, zip), specimen source/type, date collected, test(s) requested.
  - Select Measles PCR and, if including serum for forwarding, write "Measles IgM/IgG testing" under *Test, Agent, or Disease Not Listed*.
- Packaging must comply with [Category B shipping requirements](#).
- Refrigerated specimens:
  - Ship, overnight, to arrive within 24 hours of collection. Package with an ice pack, do not use wet ice or dry ice.
- Frozen specimens:
  - Ship on dry ice. Ensure quantity of dry ice is sufficient to keep specimen frozen for the duration of shipment. Avoid freeze-thaw cycles.

## SHIPPING

- Specimens shipped to the SPHL can be directed to:
 

Dr. Katherine A. Kelley State Public Health Laboratory  
395 West Street  
Rocky Hill, CT 06067  
Phone: 860-920-6500 (Main) 860-920-6680 (Sample Receiving)
- Courier services are also available.
  - Regularly scheduled courier services from SPHL to hospital laboratories can be used if pick-up times meet testing needs.
  - Local hospitals may have their own courier services. Check with the hospital's laboratory for additional information.
  - For specimens from patients with a high index of suspicion for measles: if a courier is not available or schedules cannot accommodate rapid testing, CT DPH staff can arrange transportation services by a staff member to the SPHL. Specimens must be appropriately packaged before pick-up.

## RESOURCES

CDC Specimen Storage and Shipping Guidance: <https://www.cdc.gov/laboratory/specimen-submission/pdf/Specimen-Packing-and-Shipping-Guidance-Infectious-Diseases-Laboratories.pdf>

Katherine A. Kelley State Public Health Laboratory measles testing: <https://portal.ct.gov/-/media/Departments-and-Agencies/DPH/laboratory/labhome/lab-pdf-files/Clinical-Tests/AMD-Clin-Dir-Serv-Measles-rRT-PCR-9-26-2023.pdf>

Measles Specimen Collection, Storage, and Shipment: <https://www.cdc.gov/measles/lab-tools/rt-pcr.html>