

Quick Guide for Measles Specimen Collection and Testing

If measles is suspected, the [local health department \(LHD\)](#) or NJDOH can offer specimen collection guidance. All measles cases are reportable to the LHD where the case resides. Below is a one-page reference sheet. For more detailed guidance or information on test result interpretation, **please** refer to the [Measles Laboratory Testing FAQs](#).

Specimen Collection

CDC recommends that a nasopharyngeal or throat swab and blood specimen be collected from all patients with clinical features compatible with measles. Each specimen must be clearly labelled with the patient's name, date of birth, and date of collection.

Nasopharyngeal (NP) or throat swab: **preferred** specimen for real-time reverse transcriptase-polymerase chain reaction (rRT-PCR).

- Collect swab as soon as possible after rash onset, ideally within 3 days of rash onset but no later than 10 days after rash onset.
- Use commercial synthetic (non-cotton) swabs. This is the same type of swab used for influenza PCR testing.
- Place swabs in 1-3 ml of standard, commercially available viral transport medium (VTM) or universal transport media (UTM). Transport media with charcoal should *not* be used (e.g., agar-gel media is not acceptable).
- Keep specimens cold (2-8°C) and transport either via same-day courier or overnight shipping for delivery within 24 hours of collection.
 - Ship refrigerated specimens on frozen cold packs to maintain 2-8°C.
 - Specimens being stored longer than 24 hours after collection should be frozen at -70°C. Specimens frozen at -20°C will be accepted if -70°C is not available. Ship frozen specimens on dry ice.
 - Storage temperature must be maintained during specimen transport (via courier or overnight shipping). If not able to maintain frozen temperature during entire transport (i.e. on dry ice), keeping specimen refrigerated (2-8°C) for up to 72 hours and shipping on frozen cold packs is acceptable. Avoid freeze-thaw cycles.

Serologic testing:

- Collect minimum of 2 ml of blood in a red top or serum separator tube (red-speckled or gold).
- Keep specimens cold (2-8°C) and ship overnight on frozen cold packs or follow commercial laboratory guidance.

Urine: Urine specimens should only be collected if a NP or throat swab is not able to be collected*

- Urine should be collected as soon as possible after rash onset.
- Collect minimum of 5-10 ml of urine in a sterile, leakproof container.
- Keep specimens cold (2-8°C) and ship overnight on frozen cold packs.

Specimen Testing

- Measles serologic testing (IgM/IgG) should be performed by commercial laboratories.
- Measles rRT-PCR testing on NP or throat swab is the preferred testing methodology which is performed by the NJDOH Public Health and Environmental Laboratory (PHEL). *At this time, rRT-PCR testing on urine is not available at NJDOH PHEL but can be sent to Wadsworth (VPD Reference Laboratory).
- Approval is **required** by NJDOH prior to submission and should be **coordinated through the LHD**. Providers may collect and hold specimens pending approval. Upon approval, the LHD can assist with coordination of transport to PHEL.
- Once submission is approved by NJDOH, facility should create an order via [PHEL's Online Ordering Portal](#):
 - Search for "Measles RT-PCR" as the test order and select specimen type.
 - Include requisition form in shipment to PHEL. Incorrectly labeled specimens will be rejected.
- If online ordering is not available, a completed [SRD-1](#) form must accompany the specimens sent to PHEL. In "Tests Requested" section of the form, select "Other" and write in "Measles PCR".

In accordance with N.J.A.C. 8:57, measles is an **immediately reportable** disease. Suspected or confirmed cases of measles infection should be reported to the LHD in the jurisdiction in which the patient resides, via the

[Directory of Local Health Departments in New Jersey](#)

If unable to reach the LHD, please contact the NJDOH at 609-826-5964 during regular business hours or 609-392-2020 off-hours.