



Quick Guide for Measles Specimen Collection and Testing

If measles is suspected, the local health department (LHD) or NJDOH can offer specimen collection guidance. 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 found at: <https://www.nj.gov/health/cd/topics/measles.shtml#3>

Specimen Collection

CDC recommends that a nasopharyngeal/throat swab and blood specimen be collected from all patients with clinical features compatible with measles. Urine specimens may also contain virus and, when feasible to do so, collection of both respiratory and urine specimens can increase the likelihood of detecting virus. Each specimen must be clearly labelled with the patient's name, date of birth, and date of collection.

Nasopharyngeal or throat swab: **preferred** specimen for reverse transcriptase polymerase chain reaction (RT-PCR).

- Collect swab as soon as possible after rash onset. Most successful when specimens are collected within 3 days of rash onset; however, clinical specimens should be obtained within 7 days, and not more than 10 days, after rash onset.
- Use synthetic (non-cotton) swabs. Brands include Dacron® and Copan. 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). Transport media with charcoal should *not* be used. If VTM is not available, use sterile isotonic solution (e.g. phosphate buffered saline) in a sterile urine collection container or a blood collection tube that contains no gels or other agents.
- Keep specimens cold (4°C) and ship using cold packs.

Urine:

- Urine should be collected as soon as possible after rash onset.
- Collect 10-50 ml of urine in a sterile container.
- Keep specimens cold (4°C) and ship using cold packs.

Serologic testing:

- Blood should be collected as soon as possible after rash onset.
- Collect 7-10 ml of blood in a red top or serum separator tube (red-speckled or gold).
- Keep specimens cold (4°C) and ship using cold packs.

NOTE: Depending on type & timing of initial specimens collected, additional specimens may be requested. Please refer to Measles Laboratory Testing FAQs for more information.

Specimen Testing

- Measles serologic testing (IgM/IgG) can be performed by commercial laboratories.
- When there is a high index of suspicion, measles RT-PCR testing is the preferred testing methodology, which is performed by CDC and Wadsworth (CDC viral reference laboratory). At this time, commercial laboratories do not perform this testing. Approval is required by NJDOH prior to submission, and upon approval specimens are generally submitted through the NJDOH Public Health and Environmental Laboratory (PHEL).
- For specimens submitted to PHEL for testing at CDC/Wadsworth:
 - Approval for submission **must** be obtained from NJDOH and can be coordinated through the LHD. Once submission is approved by NJDOH, the LHD can also assist with coordination of transport to PHEL.
 - Any specimen submitted to PHEL must be accompanied by a NJDOH SRD-1 form (<http://web.doh.state.nj.us/apps2/forms/> - write "Attention: Virology for forwarding to CDC/Wadsworth" on the form). Incorrectly labeled specimens submitted to PHEL will be rejected and discarded.
 - Turnaround time for specimens sent to CDC/Wadsworth is approximately 1-2 weeks depending on collection timing and transportation. NJDOH will provide results to the LHD when they are available.

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.

Directory of LHDs in NJ available at: <http://www.state.nj.us/health/lh/community/index.shtml#1>

Directory of After Hour Emergency Contact Phone Numbers for LHDs in NJ available at:

http://www.nj.gov/health/lh/documents/lhd_after_hours_emerg_contact_numbers.pdf

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