

NPHL Supplemental Guidance: Collecting and Handling Specimens for Measles PCR

Laboratory confirmation should be pursued for all patients with suspected measles. The Nebraska Department of Health and Human Services recommends that specimens for testing be collected as soon as possible following rash onset. Providers should collect a nasopharyngeal swab (NP) or oropharyngeal swab AND urine for reverse transcription polymerase chain reaction (RT-PCR). A blood sample for serology is optional.

- Within 3 days of Rash Onset: Throat swab or (NP) in universal (UTM) or viral transport media (VTM) AND urine in a sterile cup (if able to self-void) for RT-PCR
- Within 4-10 days of Rash Onset: Urine in a sterile cup (catheterize, if necessary) for RT-PCR; ideally with a NP or throat swab in UTM media for RT-PCR

The NPHL can be utilized for RT-PCR testing requests; however, serology must be obtained through a reference laboratory.

Preparations – Notification

- Communicate with facility infection prevention (IP) of a potential measles case.
- **Notify your LHD that measles testing is being ordered**
- If necessary, order supplies from NPHL: [NPHL supply orders](#)
- Register for and set up NUIrt account if not already done: [NUIrt sign-up](#)

Supplies Needed

If ordering the NPHL Measles specimen collection kit:

- Measles specimen collection and shipping kit, (**not suitable for frozen specimens**) (NPHL7)
- Measles specimen collection kit w/o shipping materials (NPHL8)

Specimen Collection/ Handling (Nasopharyngeal or Throat Swab)

- Use standard nasopharyngeal/ throat sample collection technique to swab the patient
 - Swab the nasal passage of the nasopharynx ([video](#))
 - **OR -**
 - Vigorously swab tonsillar areas. Use tongue to depress tongue to prevent contamination
- Place the sample swab in the specimen tube with 2-3 ml of transport media and tighten the lid
- Label specimen container with patient full name, DOB, time and date of collection, source, and collector initials
- Confirm specimen label matches the patient's ID band or badge
- Place the labeled specimen tube into a biohazard bag
- Refrigerate specimen after collection and maintain refrigerated temperature (2-8°C) until ready to ship
- Specimens being stored longer than 7 days after collection should be frozen at -70°C

Specimen Collection/ Handling (Urine)

- Collect a minimum of 5-10ml of urine in a sterile, leakproof container
- Label specimen container with patient full name, DOB, time and date of collection, source, and collector initials
- Confirm specimen label matches the patient's ID band or badge
- Place the labeled specimen container into a biohazard bag
- Refrigerate specimen after collection and maintain refrigerated temperature (2-8°C) until ready to ship
- Specimens being stored longer than 7 days after collection should be frozen at -70°C

Ordering and Shipping

- Order patient test (MEASLE) in NUIrt for EACH specimen type and populate all required information.
 - If the facility does not have an ordering physician, please use Dr. Timothy Tesmer, Nebraska Chief Medical Officer
- Print off MEASLE Batch List in NUIrt.
- Package specimen(s) in a size and temperature appropriate insulated Category B transport system
 - Ship refrigerated specimens on frozen cold pack to maintain 2-8°C
 - Ship frozen specimens on dry ice
 - Storage temperature must be maintained during specimen transport (via courier or overnight shipping)
- Ship to NPHL via courier or FedEx (See shipping quick guide)

Note: An approximate 24-hour turn-around time for results is expected following receipt of the specimen in the Nebraska Public Health Laboratory

Please call NPHL at (402) 559-9444 with questions or if you need any assistance

Measles Specimen Shipping Guide

Prepare the specimens securely to prevent leakage:

- Seal the primary specimen container (e.g., sealed tube, vial or urine cup) with Parafilm
- Place the primary container in a watertight secondary container (e.g., plastic biohazard bag) with absorbent material



NOTE: When sending multiple specimens, each specimen must be individually packaged so no leakage occurs into the secondary packaging. **Urine and NP swabs are considered separate specimens.**

- For both NP and urine specimens: If the specimens will be frozen, freeze them in an up-right position to prevent leaking when thawed

Package the specimen for shipment using triple-packaging:

1. Place the properly labeled, primary specimen containers into a leak-proof, pressure-tested secondary packaging (e.g., 95kPa bag)



2. Place the leak-proof, pressure-tested secondary packaging into the white Saf-T-Pak Tyvek outer envelope



NOTE: Include an itemized list of contents in the space provided on the front of both bags

3. Place secondary packaging into the insulated bubble folder with a frozen icepack and seal the envelope



4. Pack the sealed bubble envelope into the white cardboard shipping box. Place the [NPHL requisition paper](#) (if applicable) or the NUIrt batch list between the bubble shield and the cardboard outer packaging.



NOTE: Do not place any paperwork inside biohazard bags or the Tyvek outer envelope

- Using the labels provided, mark the package for shipment as shown. Use the clear resealable sleeve provided for either the FedEx shipping label, if using FedEx, or the Ground Category B Shipping Paper, if using a courier service.



NOTE: Please call NPHL at (402) 559-9444 with questions or if you need any assistance with ordering or scheduling a FedEx shipment