



Montana Laboratory Sentinel

Updates from the MT Laboratory Services Bureau, 800-821-7284, www.lab.hhs.mt.gov

MEASLES EDITION

The measles virus has been a hot topic, as cases are cropping up across the nation and it is most likely just a matter of time before we see the measles virus in Montana. Providers are on alert and request for measles testing is on the rise. So here is what you need to know about specimen collection for this virus.

Specimens for Measles Virus RT-PCR Detection

Throat or nasopharyngeal swabs are generally the preferred specimen for virus isolation or RT-PCR detection. Urine specimens may also contain virus and when feasible to do so, collection of both respiratory and urine specimen can increase the likelihood of detecting virus. Collect samples as soon after rash as possible. The samples should be collected at the first contact with a suspected case of measles.

Measles virus isolation is most successful when samples are collected on the first day of rash through 3 days following onset of rash; however, it is possible to detect virus up to day 7 following rash onset.

Measles virus is sensitive to heat and desiccation. The viability decreases markedly when samples are not kept cold. It is important to transport samples with cold packs as soon as possible following sample collection and within 24 hours of collection.

If transport is delayed more than 24 hours after collection, freeze the sample at -70°C and ship on dry ice. Avoid repeat freeze-thaw cycles or freezing at -20°C .

If -40°C or -70°C freezers are not available, it is recommended to keep the sample refrigerated at 4°C , transporting as soon as possible.

Respiratory Specimen:

Throat, Nasopharyngeal or Nasal Dacron Swabs in 1-4ml of viral transport media.



Urine Specimens:

Measles virus is present in the cells that have been sloughed off in the urinary tract. Virus can be present in urine even a few days before rash appears and begins to diminish a few days following rash. For optimal virus preservation, 10-50 ml of urine should be collected in a sterile container and the processed by centrifuging at 2500 x g for 15 minutes at 4°C and resuspend the sediment in 2-3 ml of sterile viral transport medium or buffered saline. The optimum shipping to preserve the measles virus is to freeze the sample at -70°C and ship on dry ice.

*If only one specimen is obtained, the respiratory specimen in viral transport media is most important.

*If you are unable to centrifuge the urine, send only the respiratory specimens for PCR testing.

Specimens for IgG and IgM Serology Testing:

For IgM testing, specimens must be collect >48 hours post rash onset.

- Serum: 1-2 mL of serum. Can be sent in a spun serum separator tube , or can be poured off into a transport tube.
- Serum specimens should be shipped cold

Submission Reminders:

Complete a MTPHL laboratory requisition, and be sure to include the date of rash onset, along with the collection date and two patient identifiers (name, and DOB or medical record #)

Specimens can be transported overnight by courier (if available) or you can UPS or FedEx overnight to:

Montana Public Health Laboratory
1400 Broadway, Room B126
Helena, MT 59601

Specimens received by 10:00am will be reported out the same day. Specimens received after 10:00am will be reported the following afternoon. Testing will not be performed on the weekend, unless requested by State Epidemiologist.

Please contact the Montana Public Health Laboratory at 1-800-821-7284 for more information and remember to report any suspect measles to your local health department.

