

## THE VERMONT DEPARTMENT OF HEALTH LABORATORY

Physical: 359 South Park Drive, Colchester, VT 05446

Mailing: PO Box 1125, Burlington, VT 05402-1125

1-800-660-9997 (VT only) or 1-802-338-4724

### Instructions for Collecting and Shipping Specimens for Measles Real-Time Reverse Transcriptase PCR (rRT-PCR) or Measles Viral Isolation

#### VDHL Kit #11

This document contains detailed information on reporting, collecting, shipping, and testing of clinical specimens.

The kit should contain:

- Insulated shipping container
- Refrigerant (e.g., Gel-Pak)
- Labeled screw-cap tube of viral transport medium (VTM)
- (1) flocked synthetic swab (Do NOT use cotton swabs)
- Metal inner container
- Biohazard bag
- VDHL Clinical Test Request form (Micro 220)

Health care providers **should notify the VDH Epidemiology Program** at 802-863-7240 or 1-800-640-4374 (VT only) to make arrangements for testing. Epidemiologists are available at these numbers 24 hours a day, 7 days a week.

#### Specimen Type

- Throat (oropharyngeal), nasal or NP (nasopharyngeal) swabs are the preferred samples for detection of measles RNA by RT-PCR. Synthetic swabs are recommended. Urine specimens and specimens for virus isolation are considered on a case by case basis and, if approved, will be sent to the Centers for Disease Control and Prevention for testing.
- Collect samples as soon after rash as possible. Detection of measles RNA and measles virus isolation are most successful when samples are collected on the first day of rash through the 3 days following onset of rash. However, detection of measles RNA by RT-PCR may be successful as late as 10–14 days post rash onset.

#### Specimen Collection and Storage

- Collect throat, NP or nasal swabs and transfer to 1-3ml of viral transport medium (do not allow to dry). Urine specimens can be collected in a sterile, sealable urine specimen container.
- Measles virus is sensitive to heat and viability decreases markedly when samples are not kept cold. The entire sample can be frozen at -70°C and shipped on dry ice or, if low temperature freezers are not available, keep the sample at 4°C and ship on cold packs within 24 hours of collection.
- Avoid repeat freeze-thaw cycles or freezing at -20°C (standard freezer temp) because formation of ice crystals decreases infectivity and the success of measles virus isolation. If -70°C freezers are not available, it is recommended to keep the sample in the refrigerator (4°C).

## Shipment of Specimen

1. Fill out the requisition form (Micro 220) completely. All information is required to ensure accurate and efficient processing of the specimen and reporting of test results.

- Name and address of health care provider
- Patient's name, address, and date of birth
- Patient's gender
- Date of specimen collection
- Source of specimen (throat, nasal, NP swab or urine)
- Test requested (check "Other" in Virology and write in "Measles rRT-PCR")

2. Place the completed requisition form in the outside pocket of the biohazard bag. Place the metal container containing the specimen into the Ziploc portion of the biohazard bag. Place into the insulated shipping cooler.

3. After collection, the specimen should be maintained at 4°C and shipped to the VDH Laboratory on cold packs (4°C) within 24 hours. If there is a delay in shipment, the specimen is best preserved by freezing at -70°C. Frozen specimens should be shipped on dry ice. Processing the specimens at the VDH Laboratory within 24 hours of collection will enhance the sensitivity of the rRT-PCR.

Please use your regular courier for transport of the specimen(s) to the VDH Laboratory.

**THE LABORATORY WILL DECONTAMINATE AND DISCARD ANY SPECIMEN WHICH IS IMPROPERLY PACKAGED AND MAY PRESENT A RISK TO PERSONNEL.**

**The specimen may be rejected if:**

- Patient information is missing on the specimen and requisition form
- Medical provider name/address is missing on the requisition form
- Specimen container is leaking
- Date of collection is missing on the form
- Specimens other than a Throat (oropharyngeal), nasal or NP (nasopharyngeal) swab or urine
- Cotton swab used instead of the synthetic flocked swab provided
- Swab specimens that are not submitted in the Viral Transport Medium provided
- Specimens received at ambient temperature and received more than 24 hours after collection

If you have any comments or questions regarding these instructions, please call one of the telephone numbers listed on the front of this form.