

# DCH-0772, INSTRUCTIONS FOR SUBMISSION OF SPECIMENS FOR VIRUS ISOLATION AND VIRAL POLYMERASE CHAIN REACTION (PCR)

Michigan Department of Health and Human Services (MDHHS)

Bureau of Laboratories

(Revised 06-22)

## **FREEZE COOLANT UPON RECEIPT OF THIS UNIT.**

**IMPORTANT: Specimens not properly labeled, test requisitions not completed or failing to match specimen labels will result in specimens not being tested. No special patient preparation is required.**

**NOTE:** If this is part of an outbreak investigation, you must indicate the name of the outbreak under “Test Reason” on the test requisition as testing of this type must have prior approval from the Bureau of Epidemiology (517-335-8900).

1. Complete a test requisition for each specimen submitted indicating the virus suspected. Place requisition(s) and specimen in plastic bag provided to protect them from moisture. More than one properly packaged specimen may be submitted in each shipping unit.
2. Wash hands. Put on gloves; consider mask and eye protection. Collect the specimen(s) appropriate for the disease or agent suspected. Refer to Laboratory Services Guide – [www.michigan.gov/mdhhs/lab](http://www.michigan.gov/mdhhs/lab)
3. Specimen Collection
  - a. Feces – Recommended for enterovirus and norovirus recovery. Collect an olive-sized portion of formed feces or 10 milliliters (mL) of liquid stool. Place in sterile 50 mL tube provided.
  - b. CSF – Recommended for enterovirus recovery. Submit 3-5 mL of spinal fluid in a sterile, plastic, tightly capped tube (not provided). Note: A minimum of 0.5 mL is required for PCR analysis.
  - c. Upper Respiratory Tract Specimens – Check expiration date on viral transport. If expired – do not use. Request replacement by emailing [mdhhs/lab@michigan.gov](mailto:mdhhs/lab@michigan.gov).

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## **SECTION 1 – INSTRUCTIONS FOR COLLECTION NASOPHARYNGEAL (NP) SPECIMAN (ONLY PERFORMED BY A TRAINED MEDICAL PROFESSIONAL, PER FACILITY PROTOCOLS)**

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Recommended for respiratory virus recovery. See attached figure.

1. Explain the procedure to the patient.
2. Use flexible plastic-shafted Dacron swab provided.
3. Select an unobstructed nostril.
  - a. Can the patient breathe out of both nostrils?
  - b. Has the patient ever had an injury or surgery to the nose?
  - c. Perform a visual inspection for evidence of a deviated septum.
4. Provide the patient with tissues. Instruct them to blow their nose to remove mucus. A second tissue may be needed for watery eyes.
5. Tilt the patient’s head back about 70 degrees.
6. Aseptically remove the sterile flexible swab from package.
7. Hold swab lightly between the thumb and index finger thus allowing a quick release in the event the patient moves.
8. Gently and slowly insert swab through the nostril parallel to the palate (not upwards) until resistance is encountered or the distance is equivalent to that from the ear to the nostril of the patient, indicating contact with the nasopharynx. If any resistance to insertion occurs, STOP immediately to prevent injury.
9. Gently rub and roll the swab.

10. Leave the swab in place for several seconds to absorb secretions.
11. Withdraw the swab and insert into transport vial. Rotate swab in the transport medium. Express swab by pressing against the side of the vial. Discard swab properly.

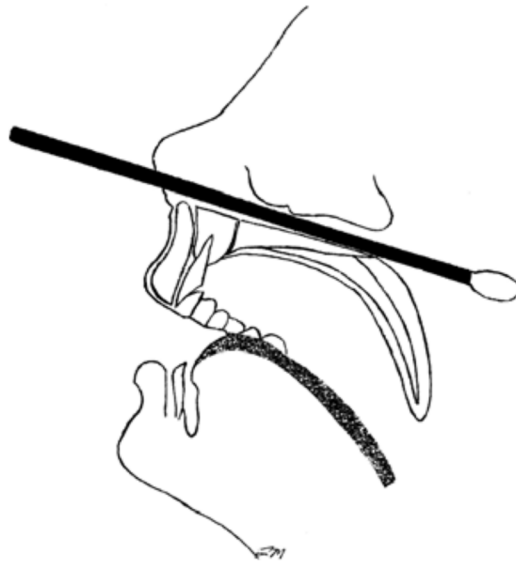


Figure 1 Diagram of NP Swab Collection

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## **SECTION 2 – INSTRUCTIONS FOR COLLECTING OROPHARYNGEAL (OP OR THROAT) SWABS**

(Only performed by a trained medical professional, per facility protocols)

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Recommended for enterovirus recovery and detection of measles or mumps virus by PCR.

1. Explain the procedure to the patient.
  2. Use the stiff, plastic-shafted swab provided.
  3. Moisten swab with saline and vigorously rub over tonsils and pharynx. Place swab, tip first, in transport medium and rotate.
  4. Express swab by pressing against the side of the vial. Discard swab properly.
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## **SECTION 3 – INSTRUCTIONS FOR BUCCAL SWAB** (Only performed by a trained medical professional, per facility protocols)

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Preferred specimen for mumps PCR. Mumps specimens should be collected as close to symptom onset as possible, preferably within 1-3 days of onset of parotitis. The preferred viral specimen is a swab of the buccal mucosa near the parotid (Stensen's) duct area, collected as follows:

1. Massage the parotid gland area (area forward of the ear and slightly below) for 30 seconds.
2. Use a Dacron swab to wipe the space between the inside of the cheek and the upper molar teeth.
3. Place swab in a tube containing viral transport media. Rotate swab in the transport medium. Express swab by pressing against the side of the vial. Discard swab properly.
4. Send specimens on cold pack via overnight courier to the MDHHS Lansing laboratory.

**NOTE:** Mumps testing must be pre-approved by the Bureau of Epidemiology by calling 517-331-4964.

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## **SECTION 4 – INSTRUCTIONS FOR URINE COLLECTION**

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Recommended for mumps virus recovery. Submit 10 mL of clean catch or catheter-collected urine in sterile 50 mL tube provided.

**NOTE:** Mumps testing must be pre-approved by the Bureau of Epidemiology by calling 517-331-4964.

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## **SECTION 5 – INSTRUCTIONS FOR ANTERIOR NASAL SWAB COLLECTION**

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1. Remove the swab from the package without touching the soft end with your hands or anything else.
  2. Insert the entire soft end of the swab into your nostril no more than  $\frac{3}{4}$  of an inch into your nose.
  3. Slowly rotate the swab, gently pressing against the inside of your nostril at least 4 times for a total of 15 seconds. Get as much nasal discharge as possible on the soft end of the swab.
  4. Gently remove the swab.
  5. Using the same swab, repeat steps 2-4 in your other nostril with the same swab.
  6. Place the swab in the transport media and tighten the cap to prevent specimen from leaking.
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## **SECTION 6 – NP ASPIRATES** (Only performed by a trained medical professional, per facility protocols)

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Recommended for respiratory virus recovery.

1. Explain the procedure to the patients.
  2. Collect specimen using a sterile rubber bulb syringe and place in the transport media provided.
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## **SECTION 7 – NP WASHES** (Only performed by a trained medical professional, per facility protocols)

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Recommended for respiratory virus recovery

1. Explain the procedure to the patient.
  2. Collect with sterile saline and sterile rubber bulb syringe, and place in a sterile container. **Do not add to transport media.**
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## **SECTION 8 – SPUTUM** (Only performed by a trained medical professional, per facility protocols)

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1. Explain the procedure to the patient.
  2. After rinsing mouth with sterile water, patient should breathe deep and cough up mucous into a sterile container.
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## **SECTION 9 – BRONCHOALVEOLAR LAVAGE (BAL)** (Only performed by a trained medical professional, per facility protocols)

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1. Explain the procedure to the patient.
  2. During a standard bronchoscopy, use sterile saline solution put through the bronchoscope to wash the airways and capture a fluid sample in a sterile container.
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## **SECTION 10 – AUTOPSY OR BIOPSY MATERIAL** (Only performed by a trained medical professional, per facility protocols)

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Submit a large (1 – 2 cm<sup>2</sup>) piece of tissue in sterile 50 mL specimen tube containing sterile saline; place smaller pieces of tissue in transport medium, one piece per vial, to prevent drying.

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## **SECTION 11 – PACKAGING AND SHIPPING INSTRUCTIONS**

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1. Tighten caps securely on all vials and tubes.
2. Label all specimens with the same name/unique identifier used on the test requisition. Record the name/unique identifier, as you will use it to link the specimen to the patient.
3. Remove personal protective equipment and wash hands.
4. Refrigerate all specimens – **DO NOT FREEZE** – until ready to ship by the most rapid means to the laboratory. Ship specimen(s) on cold packs within 24 hours of collection. Do not collect the specimen if it cannot be shipped within 24 hours of collection.

5. When ready to ship, place properly labeled specimen vial, wrapped in absorbent provided, into aluminum screw-capped can and secure cap with tape. Place aluminum can with completed test requisition into screw-capped cardboard container and secure cap.
6. **Complete** the Shipping Label and apply it along with the "Refrigerate Upon Arrival" label and the Biological Substance label to corrugated shipping box containing specimen in the screw-capped can, pre-frozen coolant, test requisition(s), and polystyrene foam container.
7. Transport by the quickest means available, e.g., courier, UPS, or FedEx.

**Note:** The shipper is responsible for ensuring that their package complies with the current shipping regulations.

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The Michigan Department of Health and Human Services will not exclude from participation in, deny benefits of, or discriminate against any individual or group because of race, sex, religion, age, national origin, color, height, weight, marital status, partisan considerations, or a disability or genetic information that is unrelated to the person's eligibility.

**AUTHORITY OF ACT 368, P.A. 1978**