 **Only use arrow down/up keys to navigate. Do not use tab key.**

**DCH-0772, Instructions for collection and Submission of Specimens**

**for virus isolation and viral Polymerase Chain Reaction (pcr)**

Michigan Department of Health and Human Services (MDHHS)

Bureau of Laboratories

(Revised 2-24)

**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, provide outbreak information in sections 4 and 8 of the Viral Respiratory Test Requisition form. Testing must have prior approval from the Bureau of Epidemiology (517-335-8165).**

1. Complete a test requisition for each specimen submitted and indicate the virus suspected. Place requisition(s) and specimen in plastic bag. Place the requisition form in the outer pocket of the biohazard bag to ensure it does not come into contact with the specimen. More than one properly packaged specimen may be submitted in each shipping unit.
2. Wash hands, put on gloves, consider mask and eye protection along with other required PEP.
3. Collect the specimen(s) appropriate for the disease or agent suspected. Refer to Laboratory Services Guide – [www.michigan.gov/mdhhslab](http://www.michigan.gov/mdhhslab) and search under A-Z menu.
	1. Feces – Recommended for norovirus recovery. Collect an olive-sized portion of formed feces or 10 milliliters (mL) of liquid stool. Place in sterile 50 mL tube provided.
	2. Upper Respiratory Tract Specimens – Check expiration date on viral transport media. If expired – do not use. Request replacement by emailing mdhhslab@michigan.gov.

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**section 1 – instructions for collecting nasopharyngeal (np) specimenS (Only performed by a trained medical professional, per facility protocols)**

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Recommended for respiratory virus recovery. See figure 1 diagram.

1. Explain the procedure to the patient.
2. Use flexible non-wooden shafted synthetic swab provided.
3. Select an unobstructed nostril.
	1. Can the patient breathe out of both nostrils?
	2. Has the patient ever had an injury or surgery to the nose?
	3. 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 at 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 detection of measles virus by PCR.

1. Explain the procedure to the patient.
2. Use the stiff, non-wooden shafted synthetic 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.

**NOTE:** Measles testing must be pre-approved by the Bureau of Epidemiology by calling 517-335-8165 or 517-331-4964.

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**section 3 – Instructions for collecting buccal swabS (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 from 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 non-wooden shafted synthetic 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.

**NOTE**: Mumps testing must be pre-approved by the Bureau of Epidemiology by calling 517-335-8165 or 517-331-4964.

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**section 4 – Instructions for Anterior Nasal Swab collection**

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1. Remove a non-wooden shafted synthetic swab from the package ensuring the soft end of the swab remains sterile.
2. Insert the entire soft end of the swab into the nostril no more than ¾ of an inch.
3. Slowly rotate the swab, gently pressing against the inside of the nostril at least 4 times for a total of 15 seconds. Obtain 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 the other nostril.
6. Express swab by pressing against the side of the vial. Discard swab properly.

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**section 5– Instructions for collecting 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 6 – Instructions for collecting 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 a sterile rubber bulb syringe, and place in a sterile container. **Do not add to transport media.**

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**section 7 – Instructions for collecting 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 8 – Instructions for collecting Bronchoalveolar Lavage (BAL) SPECIMENS (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, flush sterile saline solution through the bronchoscope to wash the airways and capture a fluid sample in a sterile container.

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**section 9 – COLLECTION OF Autopsy or biopsy material (Only performed by a trained medical professional, per facility protocols)**

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Submit a large (1 – 2 cm2) 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 10 – packaging and shipping instructions**

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1. Tighten caps securely on all vials and tubes.
2. Label all specimens with the same two unique identifiers used on the test requisition. Record the name/unique identifier, as this will be used to link the specimen to the patient.
3. Remove personal protective equipment and wash hands.
4. Reference the table attached to this document (Table 1: Sample Collection and Transport for Respiratory Testing and Table 2: Sample Collection and Transport for Respiratory Testing Requiring Prior Approval) for specific instructions.
5. When ready to ship, place each properly labeled specimen vial into a plastic zipper bag and seal shut. Place up to 10 zipper bags, along with an absorbent strip, into the biohazard bag. Place the biohazard bag into the shipping box and ship according to the references in Table 1 and Table 2.
6. Complete the Shipping Label and apply it along with the “Refrigerate Upon Arrival” label and the Biological Substance label to corrugated shipping box.
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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| **AUTHORITY of Act 368, P.A. 1978** |

**table 1: sample collection and transport for respiratory testing**

| **Test** | **Specimen Type** | **Transport Medium** | **Transport Temperature** | **Minimum Acceptable Volume** |
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| Influenza A and B | Nasopharyngeal (NP) swab, nasal swab, oropharyngeal (OP) or throat swab, or dual NP/OP swab in VTM or PBS. Use a synthetic swab with a non-wooden shaft.No dry swabs. Nasal aspirates, bronchoalveolar, bronchial wash, sputum, lung tissue, and viral isolates. | Viral Transport Medium (VTM) or PBSWashes, Aspirates or Lavage-sterile plastic container | Ship on frozen ice packs or frozen with dry ice | Swabs-3 mL VTM, PBS |
| Influenza SARS-CoV2 | Nasopharyngeal (NP) swab nasal swab, oropharyngeal (OP) or throat swab in VTM, PBS or Amies media.Use a synthetic swab with a non-wooden shaft.No dry swabs. Nasal aspirates, bronchoalveolar, bronchial wash, sputum, lung tissue, and viral isolates. | Viral Transport Medium (VTM), Amies, or PBS | Ship on frozen ice packs or frozen with dry ice | 3 mL preferred VTM, Amies, PBS |
| COVID-19(SARS-CoV-2) | Nasopharyngeal (NP) or nasal swab in VTM, UTM, or PBS using a synthetic swab on a non-wooden shaft.Cobas PCR Media Uni Swab Sample Packet.No dry swabs. | Cobas PCR Media, Universal transport media (UTM), Viral Transport Medium (VTM), or PBS | UTM, VTM, or PBS ship on frozen ice packs or frozen with dry ice. NP Cobas PCR Media may also be shipped ambient | Swabs-3 mL UTM, VTM, PBS, Cobas PCR Media |

**table 2: sample collection and transport for**

 **respiratory testing requiring prior approval**

| **Test** | **Specimen Type** | **Transport Medium** | **Transport Temperature** | **Minimum Acceptable Volume** |
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| Influenza/SARS-CoV-2/RSV (CEPHEID, 4-plex) \*PRIOR APPROVAL NEEDED\* | Nasopharyngeal (NP) swab in VTM or UTM, or nasal swabs in VTM. Use a synthetic swab with a non-wooden shaft. | Viral Transport Medium (VTM) or universal transport media (UTM) Washes Aspirates or Lavage- sterile plastic container | Ship on frozen ice packs or frozen with dry ice | Swabs – 3 mL VTM or UTM |
| BIOFIRE/Filmarray \*PRIOR APPROVAL NEEDED\* | Nasopharyngeal (NP) swab in VTM. Use a synthetic swab with a non-wooden shaft. | Viral Transport Medium (VTM) | Ship on frozen ice packs or frozen with dry ice | Swabs – 3 mL VTM |
| Measles \*PRIOR APPROVAL NEEDED\* | Nasopharyngeal (NP), Oropharyngeal (OP), or throat swab in VTM. Use a synthetic swab with a non-wooden shaft. | Viral Transport Medium (VTM) | Ship on frozen ice packs | Swabs – 3 mL VTM |
| Mumps \*PRIOR APPROVAL NEEDED\* | Oral/buccal swab in VTM using a synthetic swab with a non-wooden shaft. | Viral Transport Medium (VTM) | Ship on frozen ice packs | Swabs – 3 mL VTM |

**End of form**