

City of Milwaukee Health Department Laboratory (MHDL)
841 N. Broadway, Room 205
Milwaukee, WI 53202
Tel: 414.286.3526

Specimen Collection Kit for the Detection of Influenza Virus

This kit is intended to be used for the collection of clinical specimens from patients for the laboratory diagnosis of influenza using culture and real-time reverse transcription polymerase chain reaction (RT-PCR) assay methods.

Contents:

- 1. M4RT Viral Transport Media (VTM, Remel)** (4 ml media and glass beads in **Red cap tube**)
- 2. Swab pack combo (Remel)** that contains:
 - One sterile nasopharyngeal (NP) swab (stainless steel/plastic unishaft swab)
 - One sterile plastic applicator swab (throat)
- 3. Instruction sheet** for collecting flu specimens
- 4. One Virology laboratory requisition form**

General instructions:

1. Appropriate personal protective equipment (PPE) is recommended while handling any suspected or confirmed influenza (*e. g.* swine flu, H5N1) patient. The PPE should include respiratory protection (a particulate respirator that fits well and has undergone a fit testing per National Institute of Occupational Safety and Health-NIOSH-approved N-95 mask), goggles, a face shield, non-sterile latex gloves, a gown and a head covering. If available, Powered air purifying respirators (PAPRs) may also be considered for certain workers and tasks (*e.g.*, high-risk activities)
2. Both oropharyngeal (throat) and nasopharyngeal (NP) swabs specimens are recommended for influenza testing. If available, lower respiratory tract specimens (*e.g.*, bronchoalveolar lavage or endo-tracheal aspirate) can also be collected and stored in a sterile container or M4 media tube.
3. Swabs used for specimen collection should have a Dacron/synthetic tip and an aluminum or plastic shaft. Swabs with calcium alginate or cotton tips and wooden shafts are not acceptable.
4. Specimens should be placed immediately into sterile viral transport medium and stored at 4°C until testing.

Collection of specimens:

1. Patient should be supine and head should be stable during specimen collection.
2. Gently insert the **NP swab** into one nostril and proceed to the posterior wall of the pharynx (see figure below). Rotate axially. Do **NOT** direct the swab upwards but let it creep along the floor of the nasal cavity. Hold the swabs in place for 10-15 sec to absorb mucus (do not force the swabs past obstructions) then remove the swab from the nostril and place into M4 medium tube and cap tightly. Label the tube with patient information such as name, date of birth, date and time of collection.
3. Throat swab should also be collected and stored in the same M4 tube along with the NP swab.
4. Place the tubes in zip-lock bag and fill out the laboratory requisition slip. Any additional information about the symptoms, length and stage of illness, date of exposure (contact history), immunization, treatment and travel history are highly recommended and should be recorded on

the requisition slip. Fold the requisition slip and place into the rear pouch of the bag. Close the bag and return to MHDL.

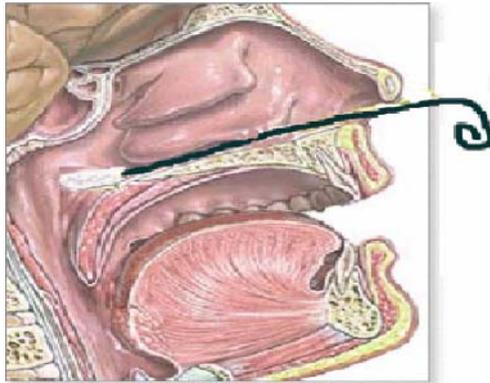


Figure: Specimen collection for Influenza testing

Specimen submission:

1. Hold the collected specimens at 4°C until transported to the laboratory: 8:00 AM until 4:45 PM Monday through Friday. Please contact the laboratory for delivery arrangements if necessary beyond these hours or during holidays.
2. The specimens should be transported in an insulated container. Use cold packs if transit time is expected to be more than 2 hrs.

Turn-around times for the laboratory methods:

PCR method: 24 hrs (if received before 12:00 noon)
Culture method: Up to 14 days (to rule out negative)

All POSITIVE test results are reported to the submitting agencies by Telephone or via FAX soon after the completion of testing. Printed reports are sent by regular mail.

Notes:

1. **Preferred respiratory specimens:** The NP swab, nasal aspirate or a combined NP and oropharyngeal swabs should be collected as soon as possible after illness onset. If these specimens cannot be collected, a nasal swab or oropharyngeal swab is acceptable. For patients who are intubated, an endotracheal aspirate should also be collected. Bronchoalveolar lavage (BAL) and sputum specimens are also acceptable.
2. Do **NOT** use expired VTM (M4). If viral transport medium is unavailable, MHDL will accept swab specimens transported in sterile, screw-cap tubes containing 3-5 ml of sterile 0.85 % saline or sterile phosphate buffered saline (pH 6.8-7.6) for PCR testing only.
3. Use **synthetic/Dacron** swabs (**NOT** cotton swabs) for specimen collection
4. To replenish the kit supplies or any other related questions, contact **MHDL** at **414.286.3526**.

Reference: CDC (<http://www.cdc.gov/flu/avian/professional/guidance-labtesting.htm>)