

# DoD Global, Laboratory-based, Influenza Surveillance Program Summary of Specimen Collection, Storage, and Shipping Guidelines

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## PURPOSE

The purpose of this document is to highlight guidance for personnel involved in the collection, storage, and shipping of respiratory viral specimens for the DoD Global, Laboratory-based, Influenza Surveillance Program. It is not intended to replace the USAFSAM Epidemiology Laboratory Service Laboratory Guide. To access the laboratory guide visit <https://kx2.afms.mil/kj/kx5/EPIlab/Pages/home.aspx> or <https://gumbo2.area52.afnoapps.usaf.mil/epi-consult/influenza/lab>.

## SPECIMEN TYPES

USAFSAM prefers to receive nasal wash specimens. Each nasal wash collection kit contains all necessary supplies to collect a viable specimen. However, nasopharyngeal (NP) swabs can be accepted and tested if received in viral transport medium (VTM). If NP swabs are preferred at your location, we recommend ordering them through our program to ensure they are consistent with what is acceptable at our lab.

*Nasal Wash Collection (using the collection kit provided by USAFSAM):*

1. Have patients blow their nose into a tissue to clear excess mucus.
2. Tuck bib into patients' shirt collar.
3. Uncap pre-filled saline syringe and specimen collection container. Break the seal on the syringe by gently expressing a small amount of saline into the tip of the hub.
4. Have patients tilt their head back so they are able to look directly at the ceiling while they hold the specimen collection container up to their chin area.
5. Encourage patients not to swallow saline by saying "Ka Ka Ka" or by making a constant "choking sound" while saline is expressed into their nostrils.
6. Gently express 2-4 mL of sterile saline into right nostril of patients. Saline will drain back into the back of the nasopharynx.
7. After a few seconds, have patients lean their head far enough forward so the saline will drain into the specimen collection container. Repeat for second nostril.
8. Offer patients a facial tissue or have them use the bib to wipe away excess saline from their face.
9. Transfer the contents to the M4RT VTM vial. Squeezing the rim of the cup will help in pouring the contents into the VTM tube.
10. Package each specimen *individually* in the biohazard bag included in the collection kit and transport specimen immediately to the laboratory's shipping department (See "Shipping" section below for more information).
11. Place questionnaire in the pocket that is on the outside of the specimen bag.

To view an instructional nasal wash collection video visit  
<https://gumbo2.area52.afnoapps.usaf.mil/epi-consult/influenza/lab>

## **SPECIMEN LABELING**

All specimens submitted for testing must be adequately labeled to ensure positive identification and optimum integrity of patient specimens from the time of collection until testing is completed and results reported. The label on the specimen container must have, at a minimum, two unique patient identifiers (e.g., the patient's full name, FMP/SSN, DoD ID#, date of birth) that are unique to that patient and will allow auditing back to positive patient identification. The collection date/time must also be on the specimen container.

## **SPECIMEN TEMPERATURE AND STABILITY AFTER COLLECTION**

1. Specimens should be refrigerated immediately after collection and submitted to the laboratory as quickly as possible for optimal recovery of viruses.
2. Specimens must be placed in VTM and then either quickly frozen at -70°C or kept cold at 2-8°C throughout the entire transport.
3. A specimen sent at 2-8°C is acceptable for only 48 hours from the time of collection.
4. Do not freeze at ANY temperatures warmer than -70°C or allow temperature fluctuations after freezing has occurred.
5. If there is any reason to believe a virus is present when a negative result is reported, then a new specimen should be submitted, making every effort to ship at optimal conditions.

## **ORDERING TESTING**

Order testing in CHCS via laboratory interoperability or using a Citrix (for Guard/Reserve units) connection. The influenza testing panel is named "RESPIRATORY CULTURE PNL (EPI)" or a similar name that has been designated by your installation.

## **SHIPPING**

### ***FEDERAL REGULATIONS***

It is essential that each specimen be packaged and shipped properly. To control or eliminate health and financial liabilities (criminal and civil), MTFs must adhere to the regulations set forth by the U.S. Department of Transportation (DOT) and the International Air Transport Association (IATA). Each laboratory is responsible for implementing the procedures that comply with Federal regulations.

IATA regulations are updated annually. Each packer/shipper is responsible for being familiar with these regulations and must have an IATA training record on file with USAFSAM. Certification is valid for 2 years and each person must be retrained and recertified at the end of the 2-year period. The following web sites, as well as others not listed, can provide information on training:

- Office of Hazardous Materials Safety, DOT: <http://phmsa.dot.gov/hazmat>
- SAFTPACK, Inc.: [www.saftpak.com](http://www.saftpak.com)

USAFSAM must maintain a copy of current IATA training for OCONUS personnel who pack specimen shipments to comply with CDC requirements. Once training is completed, print your certificate and send to [usafsam.phecussv@us.af.mil](mailto:usafsam.phecussv@us.af.mil). Once your certificate is received, you will be sent the laboratory import permit that is required with each shipment.

**BEST:** Frozen Box

The preferred method is to freeze specimens immediately at -70°C and ship to USAFSAM on dry ice. Please contact USAFSAM if dry ice is not available. **Note that specimens frozen at -20°C are not acceptable.** This results in rapid loss of virus, which will yield false negative results. Frozen specimens should be shipped in the following manner:

1. Place individually packed biohazard bags of specimens in box.
2. Place a barrier device (i.e., chuck) between the specimens and the dry ice.
3. Add pellets or block dry ice, making sure to fill any “dead” space with packing material, such as newspaper. Do not leave dead air space, which leads to faster evaporation of the dry ice.
4. Ensure enough block dry ice is added to keep the specimens frozen for any unexpected delay.  
*A good rule of thumb is 5 lb for CONUS and 15 lb for OCONUS, or 5 lb for each estimated day of travel.*
5. Do not use flaked dry ice, as it evaporates much faster.

**ACCEPTABLE:** Refrigerated Box

A specimen may be shipped on frozen gel packs at refrigerated (2-8°C) temperature, *only if received at the USAFSAM lab within 48 hours of collection from patient.* Specimens received over 8°C or over 48 hours from collection cannot be accepted.

1. Place individually packed biohazard bags of specimens in box.
2. Add enough coolant packs to keep specimens cool until arrival. A minimum of six is recommended. Be sure to place gel packs under and on top of specimen.
3. Fill any “dead” space with packing material, such as newspaper.

**SPECIMEN REJECTION**

The following examples represent some reasons for specimen rejection or test cancellation:

- Improper specimen transport temperature (e.g., frozen specimens received thawed, refrigerated specimens received at ambient temperatures)
- Insufficient volume (i.e., less than 1.5 mL)
- Improperly labeled specimen (i.e., without at least 2 patient identifiers)
- Inappropriate specimen container (i.e., wooden applicator sticks, cotton swabs, calcium alginate swabs, specimen received without transport medium)
- Leaking specimen
- Specimen submitted using expired transport medium
- Incorrect specimen type (i.e., specimens other than nasal wash or NP swab)
- No paperwork (transmittal/shipping list) received or paperwork does not match the contents of the box

When a specimen has been rejected for testing, the laboratory’s Customer Service Team will notify the submitting laboratory via telephone or e-mail and CHCS.

## PREPARING BOX

1. Place paperwork in box pertaining to that shipment, ensuring that only the paperwork for that particular individual box is included.
2. Seal the box and properly identify box with labels, according to IATA/DOT shipping guidelines.
3. Do not ship boxes on a day that will have the shipment arrive on a holiday.
4. Affix courier waybill to the outside of the box, using the following address:

Epidemiology Laboratory Service  
USAFSAM/PHE  
Bldg 20840  
2510 Fifth Street  
Wright-Patterson AFB, OH 45433-7951

## FEDERAL EXPRESS (FEDEX) SHIPPING

1. Use the FedEx number 425177729.
2. Ship specimens **“Priority Overnight”** to arrive Tuesday through Friday. FedEx does not make Sunday deliveries.
3. Specimens sent for Saturday arrival require special handling.
  - a. By 1400 the prior Friday, notify the USAFSAM/PHE Customer Service Team at 937-938-4140 (DSN: 798-4140) that you are sending a Saturday shipment.
  - b. Mark the shipment for both **“Priority Overnight” AND “Saturday Delivery”** or your package will not be delivered until Monday. Delayed shipments are usually rejected because they are out of temperature.
4. Check the box for dry ice and include the estimated weight of the dry ice.
5. When you print the shipment paperwork out, you will see the dry ice amount listed in the upper right-hand corner of the waybill. This amount must be written on the dry ice sticker.
6. If there is not already a pickup scheduled, you can create that under Pickup/Drop Off on the FedEx website.
7. Print 3 copies for the driver.
8. For OCONUS shipments please email the FedEx tracking number to [usafsam.phecussv@us.af.mil](mailto:usafsam.phecussv@us.af.mil).
9. Track your shipments. Tracking your own shipments is critical in preventing shipping problems. When you program your shipment you can select “email notifications” to alert you to delivery status or delays or retain the FedEx tracking number provided and check the tracking periodically on FedEx.com.

## CONTACT INFORMATION

For general information about surveillance program guidelines, ordering collection kits, IATA training, or submission of specimens, please call (937) 938-3196, DSN 798-3196, or email [usafsam.phrflu@us.af.mil](mailto:usafsam.phrflu@us.af.mil).

If you have laboratory or shipping questions, request that your laboratory staff call the USAFSAM/PHE Customer Service Team at (937) 938-4140, DSN 798-4140, or email [usafsam.phecussv@us.af.mil](mailto:usafsam.phecussv@us.af.mil). The USAFSAM Epidemiology Laboratory Service Guide can be obtained here: <https://kx2.afms.mil/kj/kx5/EPI/Lab/Pages/home.aspx> or <https://gumbo2.area52.afnoapps.usaf.mil/epi-consult/influenza/lab>.