

**MIDDLE EASTERN RESPIRATORY SYNDROME (MERS)
SPECIMEN COLLECTION/SUBMISSION INSTRUCTIONS**
July 13, 2015

Important: All suspect MERS cases must be evaluated and approved for testing by your local Health Department Epidemiology representative prior to submission.

I. Specimen Collection Kits: MERS kits are prepared by DCLS and may be obtained from the Sample Kit Office at (804) 648-4480, ext.104 for patients meeting case definition criteria. Each kit provides enough material to sample one patient. Collect the specimens as close to clinical onset as possible. DCLS must receive the specimens within **72 hours of collection** using the provided shipper and cold packs.

Kit Contents:

- 2 - Sterile Viral Transport Media (VTM) broth. **Store at 2- 30°C. Do not use if turbid or expired.**
- 3 - Dacron swab, plastic shaft. **Do not use calcium alginate swabs or swabs with wooden shafts.**
- 4 – 95kPa secondary containment bags
- 1 – 8x10 biohazard
- 2 – Sterile screw cap collection cup
- 1 – Red top blood tube
- 1 – MERS Collection/Submission Instructions
- 1 – Green Clinical Microbiology/Virology Request Form (DGS-34-101 Rev 3/08)
- 1 – Billable stamp
- 6 – Cold packs (**Store frozen until used**).
- 1 – Insulated Shipper per IATA
- 1 - Itemized list of contents

II. Specimen Types Required for Testing (Collect all 3 specimen types per patient):

1. Lower Respiratory Tract Specimens:

- Sputum
- Bronchoalveolar lavage (BAL)
- Tracheal aspirate (TA)
- Pleural fluid (PF)

2. Upper Respiratory Tract Specimens:

- NP/OP combined swab (**combined swab is preferred**)

3. Blood/Serum

**** NOTE: CDC no longer recommends stool specimen collection for MERS-CoV testing.****

III. Specimen Collection

A. Collection Information for BAL, TA, PF and NA:

Specimen collections for BAL, TA, PF and/or serum specimens are invasive procedures and should be performed by appropriately trained medical staff.

B. Collection Instructions for Sputum:

- Instruct the patient to rinse the mouth with water. Do not swallow.
- Take several deep breaths.
- Cough hard from deep inside chest, 3 times. This allows the sputum to move up from the lungs.
- Spit the sputum into the sterile collection cup, avoiding touching the sides of the container.
- Repeat this process until you obtain 1-2 ml of sputum.
- Label the sterile cup with the patient's name and date of collection.

C. Collection Instructions for NP and OP Swab Specimens:

NP swab:

- Instruct the patient to sit with head tilted back slightly. Gently push the tip of the patient's nose back with your thumb.
- Insert the NP swab into the nose and back to the nasopharynx. The patient's eyes will momentarily tear. Slowly rotate the swab as it is being withdrawn.
- Repeat the process using the same swab in the second nostril.

OP Swab:

- Instruct the patient to open their mouth.
- Insert the OP swab into the mouth, swab the posterior pharynx and tonsillar areas, avoiding the tongue.
- **Insert both NP and OP swabs into one VTM container**, bending the wire if necessary to fit completely inside the vial.
Properly thread the cap onto the vial to prevent leakage.
- Label the VTM collection tube with the patient's name and date of collection.

D. Collection Instructions for Blood Specimens:

- Blood collection should be performed by appropriately trained medical staff.
- Blood specimen can be collected in **one** of the following tube:
 - Red top (RT)
 - Serum separator tube (SST)
 - Sodium heparin green top (GT)
 - EDTA heparin purple top (PT)
- Serum may be collected from blood specimens upon receipt at DCLS, and forwarded to CDC for serological testing once request for testing is approved by CDC.

IV. Instructions for Specimen Transport

All samples should be shipped refrigerated. Package specimen for transport to the laboratory in compliance with shipping regulations detailed in IATA 1.5 AND 49 CFR Section 1720700 [U.S. Department of Transportation] using the provided shipper.

1. Ensure that specimen is properly labeled and the Green Clinical Microbiology/Virology Request Form is complete (Include outbreak ID number on the request form). The patient identification on the form and collection container should be identical.
2. Place the samples into the 95 kPa secondary containment bags, and place bags into the shipper.
3. Place frozen cold packs into the shipper. Additional cold packs and newspaper may be used, if available, to better control the temperature.
4. Insert the completed Green Clinical Microbiology/Virology Request form into the outer pocket of the Ziploc bag and place into the insulated shipper.
5. Place the styrofoam lid on top of the box to seal its contents. Securely seal shipper, following the closing instructions found on the shipper.
6. Contact DCLS regarding package pick-up and delivery to DCLS via courier. **Emergency courier pick up can be arranged as needed.**
 - If package will be delivered by FEDEX, then proceed to **step #7**.
 - If your package is being delivered to the laboratory by any method other than FEDEX, proceed to **step #11**.
7. Place the "UN3373 Biological Substance Category B" label on a side of the box not occupied by the directional labels.
8. Complete Section 1 of the FedEx billable stamp with your name (preferably, or facility name), address, and phone number.
9. The left side of the FedEx billable stamp is for your records and the right side of the stamp should be placed on the top of the package.
10. Peel off the backing of the FedEx billable stamp and affix to the outside of the cardboard shipping box. This stamp should not cover any labeling and should not extend beyond any edge of the package.
11. **Ship specimens without delay. Specimens must be received at DCLS within 72 hours of collection.**

****ALL QUESTIONS AND INQUIRIES REGARDING LABORATORY TESTING SHOULD BE DIRECTED TO THE FOLLOWING DCLS CONTACTS:**

**DCLS Emergency Mobile 24/7 Number: 804-335-4617
Dr. LaToya Griffin-Thomas, DCLS BT Response Coordinator: 804-385-8057**