

INTERIM GUIDANCE ON MPOX SAMPLE COLLECTION, STORAGE AND SHIPMENT

Objective of the document

To provide guidance and assist healthcare workers in the;

- Collection of appropriate specimen(s) from patients who are suspected to have Mpox infection
- Safe specimen referral to the Royal Centre for Disease Control (RCDC) and near by PCR testing laboratories for testing and confirmation
- Strengthening of communication and maximizing safety of all involved in sample collection, reception, packing, shipping, and testing

Documentary Requirements

Healthcare centers requesting Mpox PCR testing must ensure that the case investigation form is duly completed prior to sample collection and is shipped together with the specimen. Case investigation form can be found in the RCDC website.

Indications for testing

Any individual meeting the locally adapted WHO case definition for a suspected or clinically compatible case of Mpox should be subjected for testing. The decision to test should be based on both clinical and epidemiological factors, linked to an assessment of the likelihood of infection and the risk of further spread.

Biosafety Considerations

All specimens collected for laboratory investigations for Mpox are potentially infectious and should be handled with caution.

- All personnel collecting specimens shall wear appropriate personal protective equipment (PPE) (i.e., gloves, disposable laboratory gown, foot cover, goggles, coverall, fit-tested respirator) to protect against contact and droplet exposure.
- Appropriate PPE shall depend on the risk assessment. Safe work practices should be ensured (e.g., proper donning and doffing of PPE, limiting touching of surfaces, changing gloves when torn or heavily contaminated, performing frequent hand hygiene).

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Patient Preparation

Explain the procedure to be done to the patient/guardian as multiple specimens shall be taken, and the procedure may cause some pain or discomfort.

Specimen Collection Materials

- Alcohol wipe
- Forceps or blunt instrument (for removal of crusts/scabs)
- Dry synthetic swab (e.g., Dacron, Rayon, Polyester)
- Sterile screw capped plastic tubes/VTM (NOTE: glass tubes are not recommended)
- Parafilm (to secure the cover of the tube and prevent leakage)
- Ziplock bag (for the documents)

Preferred Specimen

Skin lesion material is the recommended specimen type for the confirmation of Mpx virus. This includes swabs of lesion surface, exudates, or lesion crusts collected as per following:

- Two (2) swabs from characteristic lesions from different locations in the body placed in a VTM/sterile container
- Roof (if recovered) should be placed in a separate container
- If sampled, scabs/crusts should be placed in a separate container



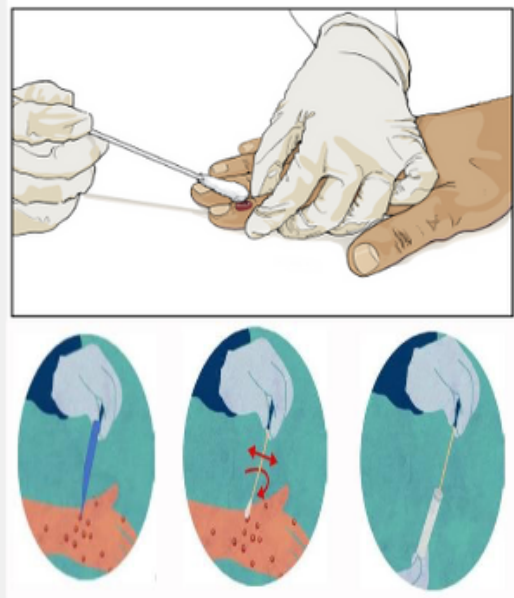
Stages of MPOX rashes

(Note: In addition to a lesion specimen, the collection of an oropharyngeal swab is encouraged especially for the people meeting the suspected case definition but with an absence of skin or mucosal lesions. However, data on the accuracy of this specimen type for diagnosis is limited for Mpx, therefore a negative throat swab specimen should be interpreted with caution)

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Collection of lesion roof/vesicle top and swabs from skin lesions

- Sanitize lesions using alcohol wipe
- Vigorously swab vesicular and pustular lesions. This is done in order to ensure adequate viral DNA is collected (**NOTE: Vigorous swabbing may already unroof the lesion. Use of sharp instruments (scalpel or needle) is not recommended to prevent injury to the patient or to the collector. Swab should be of synthetic material. Use a swab with a rigid shaft (nasopharyngeal swab may be too soft to use and will make it difficult to swab vigorously). Do not use cotton/wooden swabs**)
- Place the swabs in a sterile container or preferably in VTM. Place no more than two swabs collected from different locations in the body in the same VTM/sterile container. Do not mix swabs and tissues in one container.
- Secure the cap of the VTM/sterile container with parafilm to prevent leakage or dislodging of the cover during transportation.
- Place the roof of the lesions sampled in a separate sterile container
- Secure the cap of the container with Parafilm to prevent dislodging of the cover during transport.



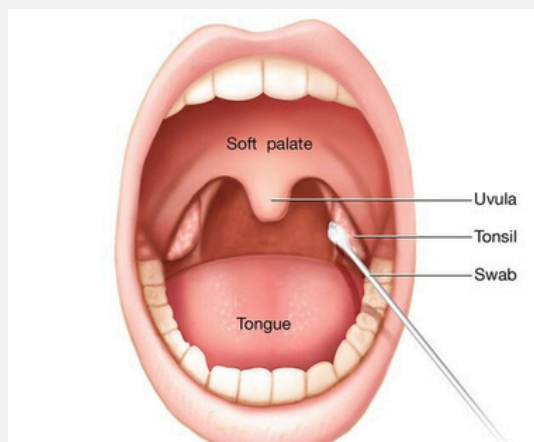
Collection of scabs/crusts from lesions

- Sanitize lesions
- Use a forceps or other blunt-tipped sterile instrument to remove all or a piece of the crust measuring at least 4mm x 4mm. (**NOTE: Use of sharp instruments such as scalpel or needle is not recommended to prevent injury to the patient or to the collector**)
- Place the crust into a dry, sterile container
- Secure the cap of the container with Parafilm to prevent dislodging of the cover during transport

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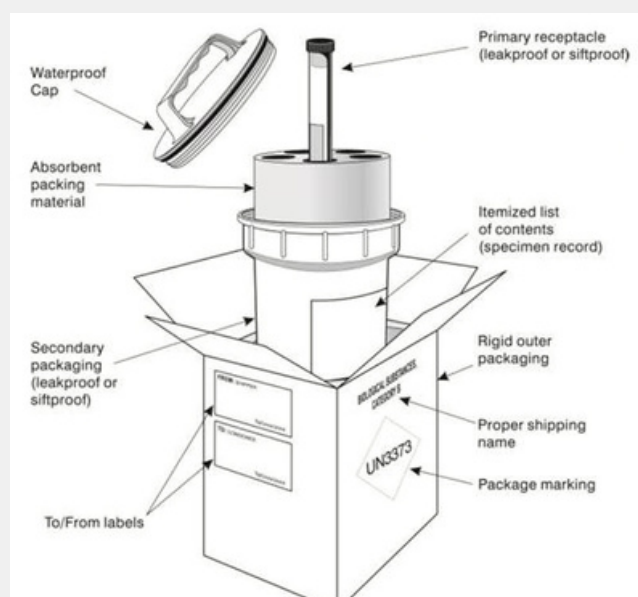
Collection of Oropharyngeal swab

- Ask patient (adults) to sit comfortably on chair or lay down the patient (infants/young children) in a supine position on bed with extended positioning of the patient's arms above the head
- Hold the tongue with a tongue depressor (especially required for children).
- Use a sweeping motion to swab the posterior pharyngeal wall and tonsillar pillars. Have the subject say "aahh" to elevate the uvula. Avoid swabbing the soft palate and do not touch the tongue with the swab tip
- Open and put the swab into VTM.
- Immediately close the VTM tube and store in 2-4°C till the sample is shipped for testing.



Specimen Storage and Shipment

- Patient identifiers and specimen labels must be written on VTM/sample containers (patient name, age/sex, and date of specimen collection)
- Specimens should be stored refrigerated or frozen prior to making the shipment
- Follow WHO Triple Packaging System. Use 3 packaging layers (i) Primary receptacle holds specimens, (ii) Secondary container durable, watertight, leak-proof, (iii) An outer container should be rigid, durable and insulated



Triple Packaging System

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- Seal the sample container/VTM (primary receptacle) with parafilm and wrap with tissue paper to absorb the accidental leakage, and pack the sample inside a watertight zip-lock bag or a tight rigid container (secondary container)
- Place adequate ice/cold packs between Sample container/VTM and secondary container to ensure the packing box contains enough ice packs to keep the specimens for few days
- Place all documents between the secondary and outer container in a plastic zip-lock bag or polythene bag to avoid from getting wet
- Mark and label the outer container properly, this should include address of the shipper and the consignee (UN number is not necessary for in-country shipment)
- Contact the focal points at PCR testing laboratories prior to shipment to ensure the samples arrive at the laboratory on time

References

1. World Health Organization (WHO). Diagnostic testing for the monkeypox virus (MPXV): Interim Guidance. 10 May 2024. <https://www.who.int/publications/i/item/WHO-MPX-Laboratory-2024>.
2. WHO Online course on Monkeypox. <https://openwho.org/courses/monkeypox-intermediate>
3. CDC. Lab Advisory for Mpox Testing. https://www.cdc.gov/locs/2024/08-27-2024-Lab-Advisory_Recommendations_Mpox_Specimen_Testing.html
4. CDC. Guidelines for Collecting and Handling Specimens for Mpox testing. <https://www.cdc.gov/poxvirus/mpox/clinicians/prep-collection-specimens.html>