1. Infection Control

Personnel who collect specimens from suspected monkeypox cases should use personal protective equipment (PPE) in accordance with recommendations for healthcare settings.

PPE used by healthcare personnel who take samples should include:

- Gown
- Gloves
- Eye protection (i.e., goggles or a face shield that covers the front and sides of the face)
- NIOSH-approved particulate respirator equipped with N95 filters or higher

See the document on the sequence for putting on and taking off personal protective equipment: [https://www.cdc.gov/hai/pdfs/ppe/PPE-Sequence.pdf](https://www.cdc.gov/hai/pdfs/ppe/PPE-Sequence.pdf)

2. Testing Options

Commercial options for monkeypox testing currently available are:

- ARUP
- Labcorp
- Mayo Clinic Laboratories
- Quest Diagnostics
- Aegis Sciences Corporation
- Sonic Healthcare

Quest Diagnostics is using a monkeypox lab-developed test (LDT) whereas the rest are performing the CDC non-variola orthopoxvirus test. If samples are positive for orthopoxvirus (the genus of viruses that includes monkeypox virus), the labs send some of the samples to CDC to perform viral characterization testing, including a PCR assay and potential sequencing. Since there are no other circulating orthopoxviruses within the United States detected with the non-variola orthopoxvirus test, a positive test is probable for monkeypox infection. A positive orthopoxvirus test result is enough for public health
authorities to take the actions necessary to care for the patient and help prevent additional spread.

Public health options for monkeypox testing:
- Arizona Public Health Laboratory (ASPHL)
  250 N. 17th Avenue, Phoenix AZ  85007
  Phone: 602-542-1190; Fax: 602-364-0758

ASPHL performs the CDC non-variola orthopoxvirus test. Please contact your local health department prior to submission and include a microbiology submission form with each specimen.

3. Specimen Collection Details for ASPHL Testing

The specimen type for testing for monkeypox is skin lesion material.

Acceptable specimen material:
- Dry swabs of lesion material
- Swabs of lesion material in viral transport media
- Lesion crusts

4. Specimen Collection Instructions for ASPHL Testing

Two swabs from one lesion should be collected for testing. If there are multiple lesions that are different enough to suggest different etiologies, more than one lesion may be sampled and tested, as long as this need is communication to the county health department following the case.

- Use two sterile synthetic swabs (polyester) with a plastic, wood, or thin aluminum shaft. Swab the lesion vigorously to collect adequate DNA. Do not use cotton tipped swabs.
- When possible, use a plastic, sterile, leak-proof container rather than glass materials for specimen collection.
• Swab the lesion **vigorously** (this is important so that enough human DNA is collected in the sample otherwise the results might be inconclusive). It is not necessary to de-roof the lesion before swabbing. Break off the end of each swab’s applicator into a 1.5-mL or 2-mL screw-capped tube with O-ring or place the entire swab in a sterile container that has a gasket seal and is able to be shipped under the required conditions.

• Swabs and other specimens should each be placed in different, sterile containers, and each container should be clearly labeled with at least two patient identifiers (e.g. Full Name and DOB) as well as the specimen source (i.e. the anatomical site). Viral transport media is not necessary but can be used. **Do NOT use universal or other transport media.**

• For lesion crusts, just ensure they are collected aseptically and placed in a sterile container.

5. **Specimen storing and shipping to ASPHL**

• Specimens of suspect monkeypox being sent for testing should be stored refrigerated (2-8°C) or frozen (-20°C or lower) within an hour of collection.
• When possible, ship specimens on dry ice.
• Specimens received at a temperature of greater than 8°C upon receipt cannot be tested under the CDC’s protocol at this time. Laboratory testing has indicated that the current monkeypox outbreak is associated with the West African clade of monkeypox virus.
• The U.S. government does not consider the West African clade of monkeypox virus as meeting the definition of Category A infectious substance under the Hazardous Materials Regulations (HMR). Therefore, specimens and material suspected or confirmed to contain the West African clade of monkeypox virus can be shipped as UN 3373 Biological Substance, **Category B**. Please remember that Category B specimens shipped with dry ice must also be properly labeled with a type 9 hazardous cargo symbol (UN1845) and the amount of dry ice used declared on the box.
• See U.S. Department of Transportation's (DOT) Transporting Infectious Substances Safely and Managing Solid Waste Contaminated with a Category A Infectious Substance (pg. 94) for further guidance.
6. **Specimen Collection Instructions for Commercial Labs Testing**
   Please refer to the instructions in the appropriate laboratory website or contact the specific commercial lab directly.

7. **Turn-around time for testing:**
   a. For APHL Testing: 1-2 days from receipt of the specimen
   b. For commercial laboratories please refer to the corresponding web site.