



**Missouri Department of Health and Senior Services**

P.O. Box 570, Jefferson City, MO 65102-0570 Phone: 573-751-6400 FAX: 573-751-6010  
RELAY MISSOURI for Hearing and Speech Impaired 1-800-735-2966 VOICE 1-800-735-2466

**Gail Vasterling**  
Acting Director



**Jeremiah W. (Jay) Nixon**  
Governor

**MISSOURI STATE PUBLIC HEALTH LABORATORY  
VIROLOGY LABORATORY**

**MONKEYPOX INFORMATION**

**INSTRUCTIONS FOR SUBMITTING SPECIMENS FOR MONKEYPOX TESTING TO  
THE MISSOURI STATE PUBLIC HEALTH LABORATORY**

Please contact the Missouri Dept. of Health and Senior Services Section of Disease Investigation (SDI) at 573-751-6113 (800-392-0272, after hours) for consultation to determine if specimens should be collected.

**I. Precautions for specimen collection and handling**

Note: Only successfully vaccinated (within 3 years) personnel wearing appropriate barrier protection (N95 or equivalent respirator, gloves, gown, etc.) should be involved in specimen collection for suspected cases of monkeypox. Masks and eyewear or face shields should be used if splashing is anticipated.

After contacting the SDI (see above) for approval to send the specimens, the samples should be collected in the manner outlined below and placed in an appropriate biosafety-shipping container. See the following web site for IATA Guidelines for Packaging and Transporting Biological Specimens.

<http://www.cdc.gov/ncidod/monkeypox/pdf/specimenguide.pdf>

Specimens collected from patients with poxvirus infections can be stored under refrigeration and shipped on freeze packs if shipped within 24 hours.

Note: Each patient's lesions specimens must be packaged separately from other patient specimens to avoid Cross-contamination.

**The following information is for specimens to be tested by the Missouri State Public Health Laboratory.**

**Go to the following web site for more detailed instructions on specimen collection:**

<http://www.cdc.gov/ncidod/monkeypox/pdf/specimenguide.pdf>

**II. Specimen Collection Procedure**

Suitable specimens for virologic tests are: Please collect all specimens listed below.

- Vesicular or pustular tissue and fluid
- Roof of lesion or Scabs
- Serum for serological tests

[www.dhss.mo.gov](http://www.dhss.mo.gov)

Healthy Missourians for life.

The Missouri Department of Health and Senior Services will be the leader in promoting, protecting and partnering for Health.

AN EQUAL OPPORTUNITY / AFFIRMATIVE ACTION EMPLOYER: Services provided on a nondiscriminatory basis.

## ALL SPECIMENS MUST BE LABELED WITH PATIENTS NAME

### Stepwise collect procedure for patients with vesicular or pustular lesions

Try to obtain digital photographs of lesions sampled. Please send with specimens.

Put on personal protective equipment described above.

1. Put on personal protective equipment described above
2. Use scalpel (or a sterile 26 gauge needle) to open, and remove, the top of the vesicle or pustule.
3. Place the skin of the vesicle top into a 1.5 to 2- ml sterile screw-capped plastic tube with O-ring. Leave the material dry.
4. Scrape the base of the vesicle or pustule with the blunt edge of the scalpel, or with the wooden end of an applicator stick or swab.
5. Smear the scrapings onto a clean glass microscope slide.
6. Apply a microscope slide to the vesicular fluid multiple times, with progressive movement of the slide, to make a touch prep. Make 2-3 different slides.
7. If a slide is not available, swab the base of the lesion with a polyester or cotton swab place in a screw-capped plastic vial, break off swab handle and screw on lid. **Do not add transport medium to the vial.**
8. Allow slides to air-dry for approximately 10 minutes.
9. Store slides in plastic slide holders for shipping. Parafilm may be used to wrap the slide holder to prevent accidental opening. Store slides from different patients in **separate** plastic slide holders to prevent cross contamination.
10. Draw blood samples.
  - a. 7 to 10 cc into a plastic marble -topped tube, plastic red-top, or a plastic yellow-topped serum separator tube for serologic assays.
  - b. **If glass tubes are used**, place in Styrofoam tube protector for shipment

Note: Blood samples from person with severe, dense rash may be difficult to draw as the skin may slough off. A central line may be needed for access in cases where a peripheral blood draw is difficult.

11. Place specimens from a **single patient** into a biohazard bag with an outside label that includes:
  - a. Patient name
  - b. Date of collection
12. Package specimens from a single patient (except biopsies):
  - a. On gel packs at 4°C
  - b. In appropriate biosafety shipping containers in a manner to withstand all shocks, pressure changes, or other conditions incident to ordinary handling in transportation
  - c. In a manner to avoid leakage of contents.
13. Specimens may be stored in conditions outlined above if shipped within 24 hours of collection. If this is not possible, store all samples, except serum, on dry ice or at -20°C to -70° C until, and through shipment. Serum should be kept at 4C until, and through shipment. If there will be a delay in shipping, spin serum in marble or yellow-top tubes to separate from clot, store at 4°C, and ship at 4°C.
14. After specimen collection is completed, all protective materials worn by the specimen collector (gloves, mask, gown, etc.) and all used sample collection materials (vacutainer holders, swabs, etc.) must be placed in red biohazard bags and autoclaved or incinerated prior to disposal. Needles should be disposed of in an appropriate sharps container.

**Submit specimens with a CDC Monkeypox form.** This form can be found at:  
<http://www.cdc.gov/ncidod/monkeypox/pdf/specimenform2.pdf>

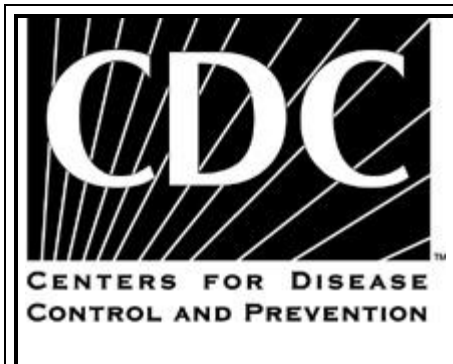
Send Specimens to: Missouri Dept. of Health and Senior Services Laboratory  
Attention: Virology Unit  
101 North Chestnut Street  
Jefferson City, MO 65101

## **TESTING RESULTS**

Serum will not be tested but will be sent to CDC if lesion material tests positive for Orthopox. Lesion material, slides or vesicular swab, will be tested by Polymerase Chain Reaction (PCR) for Non-Variola Orthopox.

**POSITIVE PCR:** Indicates the presence of Non-Variola Orthopox Virus DNA. Specimens will be sent to CDC for confirmation and species identification.

**NEGATIVE PCR:** Non-Variola Orthopox not detected.



**HUMAN CASES  
INTERIM FIELD SPECIMEN COLLECTION FORM  
ACCESSIONING FORM**

CDC/NCID/POXVIRUS SECTION  
1600 CLIFTON ROAD MS G-18  
ATLANTA, GA 30333

*III. TEL: (404) 639-4931 FAX: (404) 639-3111*

*NI = No information available State or Local ID# \_\_\_\_\_ CDC Pox unique ID# \_\_\_\_\_*

CASE NUMBER <i>(Poxvirus Lab use only)</i>	DATE RECEIVED
	____ / ____ / ____
Consultation with the state epidemiologist ( <a href="http://www.cste.org/members/state_and_territorial_epi.asp">www.cste.org/members/state_and_territorial_epi.asp</a> ) and state health laboratory ( <a href="http://www.aphl.org/public_health_labs/index.cfm">www.aphl.org/public_health_labs/index.cfm</a> ) is necessary for submission instructions before sending specimens to CDC.	

PATIENT INFORMATION	PROVIDER INFORMATION (SUBMITTED BY)
<input type="radio"/> CLINICAL <input type="radio"/> ENVIRONMENTAL Last Name: _____ First Name: _____ CITY: _____ STATE: _____ COUNTY: _____ ZIP CODE: _____ COUNTRY: _____ SPECIES (If other than human): _____ SEX: M / F / NI    DOB: ____ / ____ / ____ NI HOSPITAL PATIENT NUMBER: _____	LAST NAME: _____ FIRST NAME: _____ ADDRESS: _____ _____ CITY: _____ STATE: _____ COUNTY: _____ ZIP CODE: _____ COUNTRY: _____ TELEPHONE:_(____) _____ TEL 2:_(____) _____ FAX:_(____) _____ EMAIL: _____ DATE CASE IDENTIFIED: ____ / ____ / ____

**CLINICAL HISTORY**

PATIENT HOSPITALIZED? Y / N / NI  
OUTCOME? RECOVERED DIED DATE OF DEATH:\_\_\_\_/\_\_\_\_/\_\_\_\_ NI  
FEVER: Y / N / NI FEVER ONSET DATE:\_\_\_\_/\_\_\_\_/\_\_\_\_  
RASH: Y / N / NI RASH ONSET DATE: \_\_\_\_/\_\_\_\_/\_\_\_\_

LESION TYPE: \_\_\_\_\_MACULES APPROX  
NUMBER:\_\_\_\_\_LOCATION:\_\_\_\_\_  
\_\_\_\_\_PAPULES APPROX  
NUMBER:\_\_\_\_\_LOCATION:\_\_\_\_\_  
\_\_\_\_\_VESICLES APPROX  
NUMBER:\_\_\_\_\_LOCATION:\_\_\_\_\_  
\_\_\_\_\_PUSTULES APPROX  
NUMBER:\_\_\_\_\_LOCATION:\_\_\_\_\_

**VACCINE HISTORY**

HAS THE PATIENT EVER HAD SMALLPOX? Y / N /  
HAS THE PATIENT EVER RECEIVED THE VACCINIA (SMALLPOX) VACCINE? Y / N /  
VACCINATION DATE 1:\_\_\_\_\_VACCINATION DATE  
2:\_\_\_\_\_  
DOES THE PATIENT HAVE A VACCINATION SCAR? Y / N /  
HAS THE PATIENT EVER HAD CHICKENPOX? Y / N /  
HAS THE PATIENT RECEIVED THE VARICELLA VACCINE? Y / N /  
VACCINATION DATE 1:\_\_\_\_\_VACCINATION DATE  
2:\_\_\_\_\_  
WAS THE PATIENT RECENTLY EXPOSED TO SMALLPOX? Y / N / NI # OF DAYS  
AGO:\_\_\_\_\_ CHICKENPOX? Y / N / NI # OF  
DAYS AGO:\_\_\_\_\_  
DID THE PATIENT TAKE STEROIDS OR IMMUNOSUPPRESSANT DRUGS DURING THE  
MONTH PRIOR TO THE RASH ONSET?  
Y / N / NI

**ADDITIONAL CLINICAL OBSERVATIONS AND BRIEF PATIENT HISTORY**

Empty box for additional clinical observations and patient history.

**DIAGNOSTIC NOTES**

Empty box for diagnostic notes.

\_\_\_\_\_

**CLINICAL DIAGNOSIS**

\_\_\_\_ ORTHOPOX  
\_\_\_\_ VACCINIA  
\_\_\_\_ MONKEYPOX  
\_\_\_\_ VARIOLA  
\_\_\_\_ VARICELLA  
\_\_\_\_ VARICELLA ZOSTER  
\_\_\_\_ COWPOX  
\_\_\_\_ OTHER      SPECIFY: \_\_\_\_\_

**INVESTIGATOR INFORMATION**  
*(Person submitting case history and specimens)*

LAST NAME: \_\_\_\_\_  
FIRST NAME: \_\_\_\_\_  
TITLE: \_\_\_\_\_  
ORGANIZATION: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_  
CITY: \_\_\_\_\_ STATE: \_\_\_\_\_ ZIP: \_\_\_\_\_  
TELEPHONE: \_\_ (    ) \_\_\_\_\_ - \_\_\_\_\_ FAX: \_\_ (    ) \_\_\_\_\_ - \_\_\_\_\_  
EMAIL: \_\_\_\_\_

*SPECIMEN MATERIAL*

DATE COLLECTED: \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_

**SAMPLE MATERIAL**

- MACULE/PAPULE
- VESICLE SKIN
- VESICLE FLUID
- PUSTULE SKIN
- PUSTULE FLUID
- CRUST
- OROPHARYNGEAL TISSUE
- OTHER TISSUE
- CSF
- BLOOD
- SERUM
- OTHER
- NO INFORMATION

**METHOD**

- SWAB
- SLIDE
- VACUTAINER
- CONTAINER
- EM GRID
- TOUCHPREP
- BIOPSY/ FORMALIN
- BIOPSY/ DRY

**DASH NUMBER:**  
**ASTRO:**

**BRRAT:**

**BT NUMBER:**

ANATOMICAL SITE: \_\_\_\_\_

*SPECIMEN MATERIAL*

DATE COLLECTED: \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_

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