



## SMALLPOX FACT SHEET – *Information for Lab Workers*

### Specimen Collection of Smallpox (*Vaccinia*) Vaccine Virus

*Laboratorians should follow the steps below for vaccinia virus specimen labeling and handling, infection control procedures, and specimen collection.*

#### **Specimen Labeling and Handling**

Label all tubes, vials, and microscope slide holders with patient's name, unique identifier, date of collection, source of specimen (vesicle, pustule, scab, or fluid), and name of person collecting the specimen.

#### **Infection Control Procedures**

Wear appropriate personal protective equipment. (Contact appropriate infection control personnel.)

#### **Specimen Collection**

##### ***Vesicular Material***

1. Sanitize the patient's skin with an alcohol wipe and allow skin to dry.
2. Open the top of a vesicle or pustule with a scalpel, sterile 26-gauge needle, or slide. Collect the skin of the vesicle top in a dry, sterile 1.5- to 2-mL screw-capped tube. Label the tube.
3. Scrape the base of the vesicle or pustule with the wooden end of an applicator stick or swab and smear the scrapings onto a glass or plastic light microscope slide. Allow slide to dry for 10 minutes.
4. Label the slide and place it in a slide holder. To prevent cross-contamination, do not place slides from more than one patient in the same slide holder.
5. Take another slide, and touch it repetitively to the opened lesion using progressive movements of the slide in order to make a touch prep. Allow slide to dry for 10 minutes.
6. Label the slides as touch preps and place in the same slide holder. To prevent cross-contamination, do not place slides from more than one patient in the same slide holder.
7. If plastic-coated electron microscopic (EM) grids are available, lightly touch the shiny side of 3 EM grids to the base of the open lesion, allow EM grids to air-dry for 10 minutes, and place grids in an appropriately labeled grid box. Use varying degree of pressure (minimal, light, and moderately firm) in application of the 3 grids to the unroofed lesion. EM grids and collection materials will soon be available at Laboratory Response Network (LRN) sites.
8. If a slide or EM grid is not available, swab the base of the lesion with a polyester or cotton swab, place in screw-capped plastic vial, break off applicator handle, and seal.
9. Repeat this procedure for 2 or more lesions.

##### ***Scab Specimens***

1. Sanitize the patient's skin with an alcohol wipe and allow skin to dry.
2. Use a 26-gauge needle to remove 2 to 4 scabs.
3. Place 1 or 2 scabs in each of 2 dry, sterile screw-capped plastic tubes.
4. Wrap parafilm around the juncture of the cap and vial.
5. Label the tube.

##### ***Biopsy Lesions***

(At least 2 specimens obtained by using a 3.5- or 4-mm punch biopsy kit.)

1. Use sterile technique and appropriate anesthetic.

2. Place 1 sample in formalin for immunohistochemical or histopathologic evaluation and store at room temperature.
3. The second specimen should be placed dry (do not add transport medium) in a sterile 1.5- to 2-mL screw-capped container (do not add transport medium).
4. Refrigerate if shipment occurs within 24 hours; otherwise, the specimen should be frozen.

### ***Serum Specimens***

1. Draw 10 mL of blood for serum separation and collection.
2. Send serum, stored refrigerated.

Additional information on specimen collection for suspect smallpox cases is available at <http://www.bt.cdc.gov/agent/smallpox/response-plan/files/guide-d.pdf>.

Additional information on packaging is available at <http://www.bt.cdc.gov/labissues/packaginginfo.pdf>.

For more information, visit [www.cdc.gov/smallpox](http://www.cdc.gov/smallpox), or call the CDC public response hotline at (888) 246-2675 (English), (888) 246-2857 (Español), or (866) 874-2646 (TTY)  
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