

# Varicella (Chickenpox) Specimen Collection Instructions

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## Collecting and Shipping Specimens for VZV PCR/Genotyping<sup>1</sup>

To make a laboratory diagnosis of VZV infection using polymerase chain reaction (PCR) method, the presence of the virus DNA should be demonstrated in tissues, vesicular fluid, maculopapular lesions, or crusts from lesions. The following methods are recommended:

Polyester swab method

(Best suited to sampling vesicular lesions)

1. A sterile needle should be used to unroof the top of the vesicle.
2. A sterile swab<sup>†</sup> is then used to vigorously swab the base of the lesion—applying enough pressure to collect epithelial cells without causing bleeding—and collect vesicular fluid. It is important to collect infected epithelial cells from the base of the lesion because they usually contain a significant amount of virus.

<sup>†</sup>We recommend swabs made from synthetic fibers, such as polyester, because it is difficult to elute virus from cotton swabs, and wooden swab supports usually absorb extraction buffer and inhibit PCR. **NOTE:** swabs used for flu specimen collection can be also used and are available from your local health department.

3. Swabs must be placed individually into separate, empty tubes to avoid contamination. Place swabs directly into tubes—**Do not place transport medium into the tube; the specimen MUST be kept dry.** Tubes must be individually labeled and must be resistant to breakage.
4. See shipping instructions on next page.

Glass slide method (This method is critical for the collection of material from maculopapular lesions)

1. Rake the edge of the slide over the selected lesion, abrading the lesion with sufficient vigor to ensure that skin cells are gathered onto the slide. Use a sterile polyester swab to scrub the abraded lesion and (using the same swab) collect the material collected on the edge of the slide. Note: with young children, it may be less stressful if you ask them to help with this. If more than one lesion is sampled, a separate swab should be used for each one.
2. Insert the swab into a tube and close it (many swabs are provided with a tube that includes a label for marking the specimen).
3. Ship in a padded envelope. The swab for each sampled lesion must be placed in a separate swab tube, but multiple tubes can be shipped in the same envelope. Dry maculopapular lesion material is stable for several weeks at ambient temperature.
4. See additional shipping instructions on next page.

Collecting crusts (scabs)

Crusts are also excellent samples for PCR detection of VZV DNA. Crusts can be lifted off the skin (a glass slide is useful for this purpose) and transferred directly into break-resistant, snap-cap or screw-top tubes. See shipping instructions on next page.

<sup>1</sup> <http://www.cdc.gov/chickenpox/lab-testing/collecting-specimens.html>

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## Additional Shipping Information

Dried specimens for PCR can be stored at ambient temperature indefinitely, although we prefer to receive specimens as soon after collection as possible. Do not refrigerate or freeze dry specimens intended for testing by PCR. Specimens can be mailed by regular post unless a result is urgently required. **Do not suspend specimens in transport medium: they should be shipped dry.** Tubes containing swabs should be placed in plastic, re-sealable baggies and shipped in a padded envelope with a completed Specimen Collection Form to:

Division of Infectious Disease Epidemiology  
Attention: Carrie A. Thomas, PhD  
350 Capitol Street, Room 125  
Charleston, WV 25301