

**Laboratory Preparedness and Response Branch
Biological Response Section**

**Specimen Requirements for Real-Time Polymerase Chain Reaction (PCR) Assay for
the Detection of *Varicella Zoster Virus* (VZV) DNA in Clinical Samples**

Methodology:	<i>Varicella-zoster</i> virus Real-Time PCR
Performed:	The real-time PCR assay is a CDC-developed test for the qualitative presumptive detection of <i>varicella-zoster</i> virus DNA in clinical specimens. FRET PCR Assays and VZV genotyping to confirm a vaccine-adverse event are performed at the CDC.
Criteria for testing:	Clinical signs and symptoms compatible with <i>varicella-zoster</i> virus infection.
Turn-Around-Time:	Only specimens meeting the case definition set by the Disease Investigation Branch (DIB) of the Disease Outbreak Control Division of the Department of Health will be tested. Testing will commence after approval is received from the DIB and receipt of appropriate specimen(s).
Specimen type required:	The following specimens may be submitted for VZV PCR: 1. Swab of the vesicular lesion Sanitize skin with alcohol wipe and allow to completely dry. Unroof the top of the vesicle with a sterile scalpel or a sterile 26-gauge needle. Use a sterile swab (see below) to vigorously swab the base of the lesion – applying enough pressure to collect epithelial cells without causing bleeding - and collect vesicular fluid. 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. 2. Slide (touch prep) from the lesions Unroof the top of the vesicle with a sterile scalpel or a sterile 26-gauge needle.

Touch a microscopic slide multiple times to the open lesion. Collect at least 2 slides.
Allow slides to air dry for approximately 10 minutes.
Labeled slides must be placed individually into separate, empty 50-ml. tubes to avoid contamination. **Do not place transport medium; the specimen MUST be kept dry.**
Tubes containing the slides must be individually labeled and must be resistant to breakage.

3. Vesicle “roof” or crusts (scabs)

Open and remove the top of the lesion with a sterile scalpel or a sterile 26-gauge needle.
Transfer specimen directly into a dry, sterile, break-resistant snap-cap or screw-top tubes. **NO VTM.**

For other specimen types not listed, please contact the DIB or the State Laboratories Division, Laboratory Preparedness and Response Branch for guidance.

Specimen storage and transport:

Use only swabs made from synthetic fibers, such as polyester or Dacron® tip swabs with a plastic shaft or flocked synthetic swabs. Calcium alginate swabs with metal shaft or cotton swabs with wooden sticks are unacceptable because they may cause PCR inhibition.

Swab and crust (scab) specimens must be kept dry (**Do not suspend specimens in transport medium**) and shipped at ambient temperature. Do not refrigerate or freeze dry specimens intended for testing by PCR.

Follow packing and shipping instructions of the U.S. Department of Transportation (U.S. DOT), and the International Air Transport Association (IATA) for Biological Substance, Category B.

For further instructions on specimen collection and handling, refer to <http://www.cdc.gov/chickenpox/lab-testing/collecting-specimens.html>

Specimen submission:

Submitters (Clinical Laboratories and Epidemiology Specialists of the Disease Investigation Branch).
Notification of DIB and the laboratory is requested prior to the submission of specimens.

Criteria for rejection:

- Specimen was not properly collected or special handling instructions were not followed;
- Use of improper swab(s);
- Unlabeled specimens;
- Incomplete specimen labeling/documentation

Requisition Form:

Each specimen submitted must have a completed Form 81.3. Submitter is responsible for completing SLD Form 81.3 (including but not limited to the following information: patient identifier, date of onset of illness, signs and symptoms, travel history, immunization history, name and address of submitter).

Requisition form(s) shall be placed in a separate bag or the outside pocket of the specimen bag. It shall not be placed with the specimen(s).

Normal Value:

No *Varicella zoster* virus Nucleic Acid Detected

Result Notification:

Laboratory results are reported to the submitters by electronic reporting system or via FAX. Laboratory reports for the Disease Investigation Branch (DIB) of the DOH Disease Outbreak Control Division (DOCD) will be posted to the DOCD SharePoint.

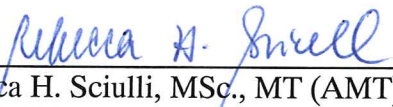
Test performed at:

Biological Response Section (BRS)
Laboratory Preparedness and Response Branch
State Laboratories Division
Department of Health
2725 Waimano Home Road
Pearl City, Hawaii 96782


Contact:

Remedios Gose at 808-453-5984

Approved By:



Rebecca H. Sciulli, MSc., MT (AMT), R.B.P.
Branch Chief
Laboratory Preparedness and Response Branch
State Laboratories Division



Date