Varicella Zoster Virus (VZV) Quantitative Real-time PCR
Test Code: 9500

Some specimen types for this assay are reported as qualitative results; please see our Specimen Information section below for more information.

Clinical and Procedure

Clinical Utility
VZV reactivation is commonly seen in immunocompromised individuals. These patients are more likely to have disseminated disease with extensive skin lesions, pneumonia, hepatitis, or encephalitis. Proper management is dependent upon early diagnosis; quantitative DNA PCR is a rapid and sensitive tool useful for detecting the virus, tracking the course of the infection, and monitoring response to treatment.

Procedure
Extraction of varicella-zoster viral DNA from specimen followed by amplification and detection using real-time, quantitative PCR. An internal control is added to ensure the extraction was performed correctly and the PCR reaction was not inhibited. This test has not been cleared or approved for diagnostic use by the U.S. Food and Drug Administration.

Specificity
The primers and probes used in this assay are specific for VZV based on similarity search algorithms. Additionally, no cross reactivity was detected when tested against adenoviruses, BKV, CMV, EBV, HSV-1, HSV-2, HHV-6 variant A, HHV-6 variant B, HHV-7, HHV-8, JCV, parvovirus B19, and SV-40.

Turnaround Time
Same day (within 8 - 12 hours from receipt of specimen), Monday through Saturday.

Specimen Information

<table>
<thead>
<tr>
<th>Specimen Type</th>
<th>Order Code</th>
<th>CPT Code</th>
<th>NY Approved</th>
<th>Volume</th>
<th>Assay Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>aqueous fluid</td>
<td>9545</td>
<td>87799</td>
<td>Yes</td>
<td>1 mL (min. 0.05 mL)</td>
<td>3,160 copies/mL to 1x10^8 copies/mL</td>
</tr>
<tr>
<td>Special Instructions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Transfer collected amount to sterile, screw top tube for shipment.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Do not add water, saline or other fluid media to container.</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>- Do not ship specimen in syringe.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Store frozen and ship on dry ice for overnight delivery.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| BAL             | 9509       | 87799    | Yes         | 2 mL (min. 0.5 mL) | 221 copies/mL to 1x10^8 copies/mL |
| Special Instructions |
| - Collect in a sterile, screw top tube. |
| - Can be shipped at ambient or frozen temperature Monday through Friday. |
| - Specimens shipped at ambient temperature must be received within 96 hrs. of collection. |

<p>| bronch wash     | 9526       | 87799    | Yes         | 2 mL (min. 0.5 mL) | 221 copies/mL to 1x10^8 copies/mL |</p>
<table>
<thead>
<tr>
<th>Specimen Type</th>
<th>Order Code</th>
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<th>Volume</th>
<th>Assay Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSF</td>
<td>9503</td>
<td>87799</td>
<td>Yes</td>
<td>2 mL (min. 0.5 mL)</td>
<td>251 copies/mL to 1x10^8 copies/mL</td>
</tr>
<tr>
<td>eye swab</td>
<td>9527</td>
<td>87798</td>
<td>Yes</td>
<td>2 mL</td>
<td>Detected/Not Detected</td>
</tr>
<tr>
<td>plasma</td>
<td>9501</td>
<td>87799</td>
<td>Yes</td>
<td>2 mL (min. 0.5 mL)</td>
<td>278 copies/mL to 1x10^8 copies/mL</td>
</tr>
<tr>
<td>serum</td>
<td>9510</td>
<td>87799</td>
<td>Yes</td>
<td>2 mL (min. 0.5 mL)</td>
<td>278 copies/mL to 1x10^8 copies/mL</td>
</tr>
<tr>
<td>skin swab</td>
<td>9529</td>
<td>87798</td>
<td>Yes</td>
<td>2 mL</td>
<td>Detected/Not Detected</td>
</tr>
<tr>
<td>tissue [Qual]</td>
<td>9506</td>
<td>87798</td>
<td>Yes</td>
<td>5 mg fresh tissue (approximately ½ of a pencil eraser size)</td>
<td>Detected/Not Detected</td>
</tr>
<tr>
<td>tissue [Quant]</td>
<td>9505</td>
<td>87799</td>
<td>Yes</td>
<td>5 mg fresh tissue (approximately ½ of a pencil eraser size)</td>
<td>23 copies/mg to 1x10^7 copies/mg</td>
</tr>
</tbody>
</table>

Special Instructions
- Collect in a sterile, screw top tube.
- Can be shipped at ambient or frozen temperature Monday through Friday.
- Specimens shipped at ambient temperature must be received within 96 hrs. of collection.

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- Can be shipped at ambient or frozen temperature Monday through Friday.
- Specimens shipped at ambient temperature must be received within 96 hrs. of collection.

- Place sterile swab placed in 2 mL sterile saline, M4, or viral transport media in a sterile, screw top tube.
- Do not use calcium alginate swab or wood shafted swab.
- Can be shipped at ambient or frozen temperature Monday through Friday.
- Specimens shipped at ambient temperature must be received within 96 hrs. of collection.

- Place sterile swab placed in 2 mL sterile saline, M4, or viral transport media in a sterile, screw top tube.
- Do not use calcium alginate swab or wood shafted swab.
- Can be shipped at ambient or frozen temperature Monday through Friday.
- Specimens shipped at ambient temperature must be received within 96 hrs. of collection.

- Collect 4-5 mL whole blood in EDTA or ACD tube.
- Avoid using gel separator tubes; samples collected in gel separator tubes have increased rate of PCR inhibition.
- Centrifuge and transfer 2 mL plasma to sterile, screw top tube.
- Can be shipped at ambient or frozen temperature Monday through Friday.
- Specimens shipped at ambient temperature must be received within 96 hrs. of collection.

- Collect 4-5 mL whole blood in red top tube.
- Avoid using gel separator tubes; samples collected in gel separator tubes have increased rate of PCR inhibition.
- Centrifuge and transfer 2 mL serum to sterile, screw top tube.
- Can be shipped at ambient or frozen temperature Monday through Friday.
- Specimens shipped at ambient temperature must be received within 96 hrs. of collection.

- Place fresh tissue in a sterile, screw top container.
- The preferred handling is not to add water, saline or other fluid media to the tissue container; however, fluid media filled containers will be accepted for qualitative results.
- Store frozen and ship on dry ice for overnight delivery.
- Formalin fixed, paraffin embedded tissue will not be accepted.

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- The preferred handling is not to add water, saline or other fluid media to the tissue container; however, fluid media filled containers will be accepted for qualitative results.
- Store frozen and ship on dry ice for overnight delivery.
- Formalin fixed, paraffin embedded tissue will not be accepted.
### Specimen Type | Order Code | CPT Code | NY Approved | Volume | Assay Range
---|---|---|---|---|---
trach asp | 9519 | 87799 | Yes | 2 mL (min. 0.5 mL) | 221 copies/mL to 1x10^8 copies/mL

**Special Instructions**
- Place fresh tissue in a sterile, screw top container.
- Do not add water, saline or other fluid media to container.
- Store frozen and ship on dry ice for overnight delivery.
- Formalin fixed, paraffin embedded tissue will not be accepted.

trach wash | 9548 | 87799 | Yes | 2 mL (min. 0.5 mL) | 221 copies/mL to 1x10^8 copies/mL

**Special Instructions**
- Collect in a sterile, screw top tube.
- Can be shipped at ambient or frozen temperature Monday through Friday.
- Specimens shipped at ambient temperature must be received within 96 hrs. of collection.

vitreous fluid | 9514 | 87799 | Yes | 1 mL (min. 0.05 mL) | 3,160 copies/mL to 1x10^8 copies/mL

**Special Instructions**
- Transfer collected amount to sterile, screw top tube for shipment.
- Do not add water, saline or other fluid media to container.
- Do not ship specimen in syringe.
- Store frozen and ship on dry ice for overnight delivery.

### Shipping
Ship Monday through Friday. Friday shipments must be labeled for Saturday delivery. All specimens must be labeled with patient's name and collection date. A Viracor Eurofins test requisition form must accompany each specimen. Multiple tests can be run on one specimen. Ship specimens FedEx Priority Overnight® to: Viracor Eurofins, 1001 NW Technology Dr, Lee's Summit, MO 64086

### Causes for Rejection
Whole blood frozen, specimens received in trap containers, specimens beyond their acceptable length of time from collection as listed in the specimen handling, or specimen types other than those listed.

### Disclaimer
Specimens are approved for testing in New York only when indicated in the Specimen Information field above.

The CPT codes provided are based on Viracor Eurofins' interpretation of the American Medical Association's Current Procedural Terminology (CPT) codes and are provided for informational purposes only. CPT coding is the sole responsibility of the billing party. Questions regarding coding should be addressed to your local Medicare carrier. Viracor Eurofins assumes no responsibility for billing errors due to reliance on the CPT codes illustrated in this material.