

# Herpes Simplex Virus (HSV) PCR

## Testing Update

As of January 13, 2020, the Spectrum Health Microbiology Laboratory will switch any **viral culture orders placed on cutaneous or mucocutaneous lesion specimens to molecular PCR testing** as the preferred diagnostic method.

### Why this change?

- Historically, HSV has been identified in patient specimens by performing a viral culture.
- The viral culture method is:
  - Insensitive
  - Slow
  - Labor intensive (involving the growth of virus within mammalian cell lines followed by immunostaining and fluorescence microscopy)

### What is replacing cultures?

- Molecular testing for HSV DNA is now considered to be the gold standard method for HSV detection and is the preferred diagnostic approach as discussed in current clinical guidelines.

### What makes molecular testing the gold standard?

- Significantly enhanced performance; including sensitivity
- Results are faster
- Testing is less expensive
- Allows us to differentiate between HSV-1 and HSV-2 viruses

	Viral Culture	Molecular
Performance	Sensitivity: 50-75% as compared to molecular Specificity: 95+%	Sensitivity: 95+% Specificity: 95+%
Turnaround time	2-7 days	Same day, 7 days/week
Patient cost	Most expensive method (CPT charges for culture plus shell vial staining)	Less expensive than culture
Subtype differentiation	Does not differentiate HSV-1 vs HSV-2, but can be requested as an add-on test.	Always differentiates HSV-1 vs HSV-2

**\*Despite these benefits, viral culture may still be performed on specimen types that are not FDA-approved for molecular testing.**

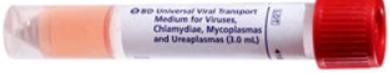
*\*Please see the reverse side for how to appropriately order by specimen type*

**The most appropriate order is determined by specimen type.**

HSV PCR testing is recommended for the following specimen types:

Specimen Type		Interface Code	Test Name
Blood	CSF	10830	<a href="#">Herpes Simplex (HSV 1/2) PCR</a> 
Genital Swab	Anorectal/Perianal	55010	<a href="#">Herpes Simplex PCR for Lesions</a> 
Skin Swab	Swab		
Ocular Swab	Nasal Swab Oral Swab		

HSV Viral Culture orders will be accepted for the following specimen types:

Specimen Type		Interface Code	Test Name
Aqueous Fluid	Sputum	50029	<a href="#">Herpes Simplex Viral Culture</a> 
BAL	Tissue		
Body Fluid	Tracheal Aspirate		
Bronchial Wash	Tracheal Wash		
NP Swab	Vitreous Fluid		

Additional molecular testing may be sent to a reference lab depending on the specimen type:

Specimen Type	Interface Code	Test Name
Aqueous Fluid	1230247	<a href="#">Herpes Simplex 1/2 Quantitative PCR, Aqueous Fluid</a>
BAL	1230248	<a href="#">Herpes Simplex 1/2 Quantitative PCR, BAL</a>
Bronchial Wash	1230246	<a href="#">Herpes Simplex 1/2 Quantitative PCR, Bronch Wash</a>
Tissue	1230250	<a href="#">Herpes Simplex 1/2 Quantitative PCR, Tissue</a>
Tracheal Aspirate	1230251	<a href="#">Herpes Simplex 1/2 Quantitative PCR, Trach Aspirate</a>
Tracheal Wash	1230252	<a href="#">Herpes Simplex 1/2 Quantitative PCR, Trach Wash</a>
Vitreous Fluid	1230253	<a href="#">Herpes Simplex 1/2 Quantitative PCR, Vitreous Fluid</a>
Eye Swab	1230243	<a href="#">Herpes Simplex 1/2 Qualitative PCR, Eye Swab</a>
NP Swab	1230244	<a href="#">Herpes Simplex 1/2 Qualitative PCR, NP Swab</a>
Tissue	1230413	<a href="#">Herpes Simplex 1/2 Qualitative PCR, Tissue</a>

Please review the lab catalog for specimen collection, CPT codes, reference ranges and other information.

<https://spectrumhealth.testcatalog.org/>

For questions or inquiries, please contact the Laboratory Call Center: 616-774-7721.

**References**

- 1.) Miller, J.M., Binnicker, M.J., Campbell, S, et al. A Guide to Utilization of the Microbiology Laboratory for Diagnosis of Infectious Diseases: 2018 Update by the Infectious Diseases Society of America and the American Society for Microbiology. *Clin Infect Dis*, 2018; 67: 813-816.
- 2.) Centers for Disease Control and Prevention. 2015 Sexually Transmitted Diseases Treatment Guidelines. <https://www.cdc.gov/std/tg2015/herpes.htm>
- 3.) Glass, N, Nelson, H. D., and Huffman, L. Screening for Genital Herpes Simplex: Brief Update for the U.S. Preventative Services Task Force. AHRQ Pub. No. 05-0573-B. March 2005.