

Overview

Useful For

Viral identification and confirmation

Testing Algorithm

When this test is ordered, the reflex tests may be performed and charged.

Special Instructions

- [Infectious Specimen Shipping Guidelines](#)

Reflex Tests

Test Id	Reporting Name	Available Separately	Always Performed
VID2	Additional Testing Virus Ident	No	No
SVIR	Viral Smear, Shell Vial	No	No

Method Name

Shell Vial Assay for Appropriate Virus and/or Tube Cell Culture

NY State Available

Yes

Specimen

Specimen Type

Varies

Ordering Guidance

Suspected isolates of the following viruses **will not be accepted** at Mayo Clinic Laboratories and should be submitted directly to your state health department or the CDC for confirmatory testing:

- Measles
- Mumps
- Ebola and other causative agents of viral hemorrhagic fevers
- Avian influenza
- Severe Acute Respiratory Syndrome (SARS)
- Middle Eastern Respiratory Syndrome Coronavirus (MERS-CoV)

Shipping Instructions

1. See [Infectious Specimen Shipping Guidelines](#) in Special Instructions.
2. Place specimen in a large infectious container (T146) and label as an etiologic agent/infectious substance.

Necessary Information

1. Specimen source is required and must include anatomical site of original specimen collected.

2. Isolate description is required. Include morphology and list any previous tests performed.

Specimen Required

Supplies: Infectious Container, Large (T146)

Specimen Type: Pure culture of organism from source cultured

Container/Tube: Cell (viral) culture tube

Specimen Volume: Entire specimen

Collection Instructions:

1. Organism must be in pure culture, actively growing.
2. Completely fill culture tube with appropriate culture medium before shipment.

Reject Due To

Hemolysis	NA
Lipemia	NA
Icterus	NA
Other	Agar plate

Specimen Stability Information

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

Clinical & Interpretive

Clinical Information

Viruses are responsible for a broad spectrum of clinical symptoms and diseases. The most commonly isolated viruses are adenovirus, cytomegalovirus (CMV), enteroviruses, herpes simplex virus (HSV), influenza virus, parainfluenza virus (types 1-3), respiratory syncytial virus (RSV), and varicella-zoster virus (VZV).

Some viral infections can be treated with antiviral drugs. Early laboratory diagnosis by isolation may be helpful in the medical management of these patients.

Viruses that may be recovered in cell culture include adenovirus, CMV, enterovirus, HSV, VZV, RSV, influenza virus, and parainfluenza virus. HSV and enterovirus are the most commonly recovered viruses.

A number of viruses are not routinely detected in cell culture. These include Epstein-Barr virus (EBV), rubella virus (must order serology), human papillomavirus (HPV), Norwalk or norovirus, and West Nile virus.

Reference Values

Not applicable

Interpretation

A positive result indicates that virus was present in the specimen submitted. Clinical correlation is necessary to determine the significance of the result.

Negative results may be seen in a number of situations including absence of viral disease, inability of the virus to grow in culture (examples of organisms not detected by culture include Epstein-Barr virus, rubella virus, human papilloma virus, norovirus and West Nile virus), and nonviable organisms submitted. Parainfluenza virus type 4 also may not be detected

by viral culture.

Cautions

Viral isolation and detection depends on the proper collection and transport of the specimen.

Some viruses (eg, cytomegalovirus) take up to 2 weeks to grow in viral cell culture. Molecular tests (ie, real-time PCR) should be used for rapid diagnosis.

Clinical Reference

1. Clinical and Laboratory Standards Institute (CLSI). Viral Culture. Proposed Guideline. 2005 CLSI document M41-P. CLSI, Wayne, PA
2. Ginocchio CC, Van Horn G, Harris PC: In Manual of Clinical Microbiology. Chapter 80: Reagents, stains, and cell culture: virology. 11th edition. Edited by J Versalovic, KC Carroll, et al. Washington, DC, ASM Press, 2015, pp 1422-1431

Performance**Method Description**

Results of viral cultures are reported from presence of typical cytopathic effect, and/or confirmation by immunofluorescence with specific antisera, or rapid PCR, depending on the specific virus.(Smith TF: Antibody-enhanced detection of viruses in cell cultures. In Manual of Clinical Laboratory Immunology. Fifth edition. Edited by NR Rose, EC de Macario, JD Folds, et al: Washington, DC, ASM Press, 1997, pp 618-624)

PDF Report

No

Specimen Retention Time

Until reported

Performing Laboratory Location

Rochester

Fees & Codes**Test Classification**

This test has been cleared, approved, or is exempt by the US Food and Drug Administration and is used per manufacturer's instructions. Performance characteristics were verified by Mayo Clinic in a manner consistent with CLIA requirements.

CPT Code Information

87253-Additional Testing Virus Identification (if appropriate)

87254-Viral Smear, Shell Vial(if appropriate)

LOINC® Information

Test ID	Test Order Name	Order LOINC Value
VRID2	Culture Referred for ID, Virus	6584-7

Result ID	Test Result Name	Result LOINC Value
VRID2	Culture Referred for ID, Virus	6584-7