

Virology

Viral culture requests submitted to AML are referred to and performed by our preferred reference laboratory vendor, Mayo Medical Laboratories (MML).

Traditional viral cultures are inoculated into cell culture tubes for vial detection with results reported immediately on positive cultures and within 14 days for negative cultures. The most common specimen submitted for traditional testing include body fluid, bronchial washing/brushing, bronchoalveolar lavage, CSF (Cerebral Spinal Fluid), ocular, rectal, sputum, stool and throat.

PCR is the preferred method of viral detection for the most common specimen types: Blood, Dermal, Urine, CSF, Genital and many body fluids.

Proper collection of specimens is very important to the success of any subsequent laboratory examinations. The optimal time to collect viral culture specimens and acute phase serum is within the first week following onset of illness.

VIRAL CULTURE ISOLATION

Specimen	Collection	Test
Blood	Blood specimens are not acceptable for viral culture as they are unproductive and often toxic in culture. Most molecular methods are appropriate for this specimen type.	See individual PCR assay test code: 4493/PCM CMV by Rapid PCR
Body Fluids (Pericardial, Pleural)	1.0 ml in M5 Transport Media. Do not spin. Maintain sterility and transport to lab promptly	4720/VFL-Viral Culture, Fluids
Bone Marrow	Bone marrow specimens are not acceptable for viral culture as they are unproductive and often toxic in culture. Most molecular methods are appropriate for this specimen type.	See individual PCR assay test code: 4493/PCM CMV by Rapid PCR
Bronchial Wash/Brush or Bronchoalveolar Wash	2.0 ml in a sterile container. Transport refrigerated	4724/VRP Viral Culture – Respiratory
CSF	1 ml (0.5ml minimum) in a sterile container for Culture only. DO NOT SPIN 1.3 ml for HSV	4718/VCS Viral Culture – CSF 4495/HSD HSV by Rapid PCR
Dermal (Skin)	Dermal (skin) specimens are not acceptable for viral culture	For requests for HSV/Varicella-Zoster virus on dermal specimens see: 4495/HSD HSV by Rapid PCR 4771/VZP VZV by Rapid PCR 7898/HVP HSV+VZV by Rapid PCR
Eye (Ocular)	Swab or scrapings in 1.5 ml of Refrigerated M4/ M5 Transport Media. Transport Refrigerated	7635/VGC Viral Culture - General
Genital	Genital specimens are not acceptable for viral culture	For requests for HSV/Varicella-Zoster virus on genital specimens see: 4495/HSD HSV by Rapid PCR 4771/VZP VZV by Rapid PCR 7898/HVP HSV+VZV by Rapid PCR
Nasopharyngeal (NP)	Two NP swabs in Refrigerated M4/ M5 Transport media. Transport refrigerated	4724/VRP Viral Culture – Respiratory NOT Bordetella.

Specimen	Collection	Test
Ocular (Eye)	Swab in 1.5 ml of M5 Transport Media. Transport Refrigerated	7635/VGC Viral Culture - General
Oral	Oral specimens are not acceptable for viral culture	Mayo recommends the following for virus testing on Oral specimens: 4495/HSD HSV by Rapid PCR
Rectal	Rectal swab in M5 Transport Media.	7635/VGC Viral Culture - General
Skin Sites (Dermal)	Dermal (skin) specimens are not acceptable for viral culture	For requests for HSV/Varicella-Zoster virus on dermal specimens see: 4495/HSD HSV by Rapid PCR 4771/VZP VZV by Rapid PCR 7898/HVP HSV+VZV by Rapid PCR
Sputum	1.0 ml in a sterile container. Transport refrigerated	4724/VRP Viral Culture - Respiratory
Stool	Pea Size if Formed (approximately 1 gram) or 1.0 ml if liquid, in a screw-capped sterile container. Transport refrigerated - Specimen CAN NOT be frozen.	4726/VST Viral Culture - Stool
Throat	Swab in Refrigerated M4/M5 Transport media. Transport refrigerated	4724/VRP Viral Culture - Respiratory
Tissue (Brain, Colon, Kidney, Liver, Lung etc)	Sample in 1.5 ml of sterile saline or Refrigerated M4/ M5 Viral Transport Media. Transport Refrigerated	4728/VTS Viral Culture - Tissue
Urine	Urine is acceptable for MUMPS CULTURE ONLY. Submit 0.5ml of urine in Refrigerated M4/M5 Viral Transport Media. Transport Refrigerated	7635/VGC Viral Culture - General

SPECIMEN AND TEST GUIDE FOR SPECIFIC VIRUSES

Virus	Specimen	Test
Cytomegalovirus (CMV)	<ul style="list-style-type: none"> • 5 ml EDTA Whole Blood • 0.5ml Body Fluid or CSF • 1.5ml Bronchial Washing or Lavage, Nasopharyngeal aspirate or washing, sputum or tracheal aspirate • Throat Swab • Tissue 	4493/PCM Cytomegalovirus by Rapid PCR
Herpes simplex Virus (HSV)	<ul style="list-style-type: none"> • Body fluid, CSF or bronchial washing • Dermal, Genital or Throat swab 	4495/HSD HSV by Rapid PCR
Herpes simplex Virus (HSV) + Varicella zoster Virus (VZV)	Swab from lesion or vesicle	7898/HVP HSV+VZV PCR, Dermal
Respiratory syncytial Virus (RSV)	<ul style="list-style-type: none"> • Bronchial Brushing • Bronchial Washing • Bronchoalveolar Lavage • Endotracheal (ET) Tube Aspirate • Nasopharyngeal Swab 	4724/VRP Viral Culture - Respiratory
Varicella zoster Virus (VZV)	<ul style="list-style-type: none"> • Dermal, vesicle or genital swab • CSF • Tissue 	4771/VZP VZ Virus by Rapid PCR