
Lab Dept: Microbiology/Virology

Test Name: CMV BY PCR, FLUID, TISSUE OR BONE MARROW

General Information

Lab Order Codes: PCRC

Synonyms: Cytomegalovirus (CMV) detection by Polymerase Chain Reaction (PCR), Spinal Fluid, Tissue or Bone Marrow; CMV Detection by Real-Time PCR

CPT Codes: 87496 - Infectious agent detection by nucleic acid (DNA or RNA); cytomegalovirus, amplified probe technique

Test Includes: Detection of CMV by Real-Time PCR reported as positive or negative.

Logistics

Test Indications: Useful for rapid qualitative detection of cytomegalovirus (CMV) DNA. This test is **not** intended for the monitoring of CMV disease progression.

Lab Testing Sections: Microbiology - Sendouts

Referred to: Mayo Clinic Laboratories (MML: CMVPV)

Phone Number: MIN Lab: 612-813-6280

STP Lab: 651-220-6550

Test Availability: Daily, 24 hours

Turnaround Time: 1 – 4 days; test performed on Monday - Sunday

Special Instructions: Specimens grossly contaminated with blood may inhibit the PCR and produce false negative results.

Specimen

Specimen Type: Body fluid (spinal [CSF], pleural, peritoneal, ascites, pericardial, amniotic, or ocular); Respiratory fluid (bronchial washing, bronchoalveolar lavage, nasopharyngeal aspirate or washing, sputum, or tracheal aspirate); Genital swab (cervix, vagina, urethra, anal/rectal, or other genital sources); Swab (dermal, eye, nasal, saliva, or throat); Tissue (brain, colon, kidney, liver, lung, etc.); Urine; Bone Marrow Aspirate.

Container:	<p>Body Fluid/CSF/Respiratory/ Urine: Sterile container</p> <p>Swab (Dermal, genital, eye, nasal, saliva or throat): Multimicrobe media (M4-RT, M4, or M5) and ESwabs (Note: Calcium alginate-tipped swab, wood swab, or transports swabs containing gel are NOT acceptable)</p> <p>Tissue: Sterile container containing 1-2 mL of sterile saline or multi-microbe medium (M4-RT, M4, or M5)</p> <p>Bone Marrow: Dry syringe immediately transferred at bedside to lavender vacutainer tube (EDTA).</p>
Draw Volume:	<p>CSF/Bone Marrow/Ocular fluid: 0.5 mL (minimum: 0.3 mL)</p> <p>Other Body Fluid: 0.5 mL (minimum: 0.5 mL)</p> <p>Respiratory Specimen: 1.5 mL (minimum: 1 mL)</p> <p>Swab: Entire collection</p> <p>Tissue: Entire collection (2x2-mm biopsy)</p> <p>Urine: 1 mL (minimum: 0.3 mL)</p>
Processed Volume:	Same as Draw Volume
Collection:	Aseptic collection and aliquot technique, deliver to the laboratory immediately after collection. Avoid hemolysis. Specify specific specimen source.
Special Processing:	<p>Lab Staff: Send specimen refrigerated in a screw-capped sterile vial or other collection container specified above. Maintain sterility and forward promptly.</p> <p>The high sensitivity of amplification by PCR requires the specimen to be processed in an environment in which contamination of the specimen by CMV DNA is not likely.</p> <p>Specimen stable refrigerated (preferred) or frozen for 7 days.</p>
Patient Preparation:	None
Sample Rejection:	Improperly labeled specimen. If an unacceptable specimen is received, the physician or nursing station will be notified and another specimen will be requested before the specimen is discarded.

Interpretive

Reference Range: Negative

Critical Values:	As defined by reference lab
Limitations:	<p>A negative result does not eliminate the possibility of CMV infection.</p> <p>This assay is only to be used for patients with a clinical history and symptoms consistent with CMV infection and must be interpreted in the context of the clinical picture.</p>
Methodology:	Real-Time Polymerase Chain Reaction (PCR)/DNA Probe Hybridization
References:	Mayo Clinic Laboratories September 2023
Updates:	<p>8/31/2010: Test expanded to include other specimen types beyond CSF.</p> <p>12/22/2022: Testing transitions to a new performing laboratory within Mayo Clinic to streamline processes of molecular microbiology.</p> <p>9/21/2023: Added specimen stability</p> <p>11/13/2023: Updated minimum required volumes.</p>