

Molecular Diagnostics/Virology

INTRODUCTION

The Molecular Diagnostics department utilizes various methodologies for the extraction, amplification and detection of DNA. Each PCR test is intended to detect DNA sequences diagnostic of specific viruses, bacteria, and genetic mutations. Specific primers and probes are used to amplify and detect the target DNA. State-of-the-art automated extraction bio-robots and real-time PCR instrumentation are used to insure timely and high quality results.

The Virology department performs culture, shell vial and fluorescent staining techniques to detect viruses in various specimens. The quality of the results obtained in both of these areas is highly dependent on proper collection and transport of the specimens.

Test Name	Test Code	Tube Type	CPT Code(s)	Specimen Requirements
Baseline HIV-1 Quantitative RNA (400-600,000 copies/ml)	73458	L, PPT	87536	2 mL EDTA plasma (lavender top). Whole blood EDTA tubes may be stored at room temperature or refrigerated. Separate the plasma within 6 hours by centrifugation at 800-1600 x g for 20 minutes at room temperature. Store plasma refrigerated for up to 5 days, or frozen for longer. Vacutainer PPT tubes. Centrifuge tube at 1100 x g for 10 minutes within 2 hours of collection. Spun PPT tubes may be stored at room temperature for up to 24 hours. Plasma must be poured off within 24 hours. Store plasma refrigerated for up to 5 days, or frozen for longer.
Bordetella Pertussis PCR (Whooping cough)	74258		87798	Culturette swab, Nasopharyngeal swab (minitip swab), aspirate, or wash.
Chlamydia Culture	690		87110	Swab from endocervical, urethral, conjunctival or respiratory sites in Multi Microbe Media , or equivalent. Multi Microbe Media is available through the laboratory.
Chlamydia trachomatis, Amplified DNA	8502		87491	Collection kit (supplied by laboratory) must be used. See kit for instructions. First catch urine also acceptable (store refrigerated). Culture should be done in addition to amplified DNA in cases of suspected sexual abuse and when source is not genital.
Chlamydia/Gonorrhea (GC) Amplified DNA Panel	6919		87491 87591	Collection kit (supplied by laboratory) must be used. See kit for instructions. First catch urine also acceptable (store refrigerated). Culture should be done in addition to amplified DNA in cases of suspected sexual abuse and when source is not genital.
Culture, Chlamydia	690		87110	Swab from endocervical, urethral, conjunctival or respiratory sites in Multi Microbe Media , or equivalent. Multi Microbe Media is available through the laboratory.
Culture, Cytomegalovirus (CMV), Blood and Bone Marrow	71097	L	87254	1 tube (5 - 10 ml) EDTA lavender top tube. Minimum specimen for bone marrow 1 ml in EDTA (lavender top) tube. Collect aseptically
Culture, Cytomegalovirus (CMV), Blood	71097	L	87254	1 tube (5 -10 mL) lavender top EDTA tube. Collect aseptically.
Culture, Cytomegalovirus (CMV), Urine	5423		87254	Clean-catch urine in sterile container. Store refrigerated after collection. Minimum volume 2 ml.
Culture, Herpes Simplex	665		87255	Specimen in viral transport medium. CSF should be sent to the laboratory in the primary collection tube. Do not add viral transport medium. Store refrigerated after collection.
Culture, Herpes Simplex with Typing	71504		87252 87140X2	Specimen in viral transport medium. CSF should be sent to the laboratory in the primary collection tube. Do not add viral transport medium. Store refrigerated after collection.

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Test Name	Test Code	Tube Type	CPT Code(s)	Specimen Requirements
Culture, Virus	689		87252 87254	Specimen in viral transport medium. Please specify specimen source. CSF and urine do not require viral transport media. Transport in sterile container. Store refrigerated after collection.
Cytomegalovirus (CMV) Culture, Blood	71097	L	87254	1 tube (5 -10 mL) EDTA lavender top tube. Collect aseptically.
Cytomegalovirus (CMV) Culture, Urine or Body Fluid	5423		87254	Clean-catch urine or body fluid in sterile container. Store refrigerated after collection.
DFA (Direct Fluorescent Assay) for Virus	73547		87299	Specimen in viral transport medium. Store refrigerated after collection. MUST specify virus (HSV, VZV, RSV, influenza, parainfluenza, adenovirus, respiratory screen).
DFA for Virus (must specify) with reflex to viral culture	73904		87299	Specimen in viral transport medium. Store refrigerated after collection. MUST specify virus (HSV, VZV, RSV, influenza, parainfluenza, adenovirus, respiratory screen). Culture performed if screen is negative.
Factor V Leiden Mutation by PCR	76196	L	83891 83898 83896x2 83912	5 mL EDTA whole blood (lavender top). Transport at room temperature. Whole blood is stable for up to 10 days.
GC (N. gonorrhoeae) Amplified DNA	8501		87591	Collection kit (supplied by laboratory) must be used. See kit for instructions. First catch urine also acceptable (store refrigerated). Culture must be requested instead of amplified DNA in cases of suspected sexual abuse and when source is not genital.
GC/Chlamydia, Amplified DNA Panel	6919		87491 87591	Collection kit (supplied by laboratory) must be used. See kit for instructions. First catch urine also acceptable (store refrigerated). Culture must be requested instead of amplified DNA in cases of suspected sexual abuse and when source is not genital.
Group A Streptococcus DNA by PCR	74272		87651	Throat swab of the tonsillar area
Group B Streptococcus DNA by PCR	74273		87798	Vaginal/Rectal culture swab
Herpes Simplex Virus (HSV) Culture	665		87255	Specimen in viral transport medium. CSF should be sent to the laboratory in the primary collection tube. Do not add viral transport medium. Store refrigerated after collection. Must include source of specimen.
Herpes Simplex Virus PCR	73562		87529	1 mL CSF in sterile tube. All other sources send in viral transport media. Store refrigerated after collection. Must specify source of specimen.

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Test Name	Test Code	Tube Type	CPT Code(s)	Specimen Requirements
HIV-1 Quantitative RNA, Standard Baseline (73458) or Ultrasensitive (91498)	73458 or 91498	L, PPT	87536	2 mL EDTA plasma (lavender top). Whole blood EDTA tubes may be stored at room temperature or refrigerated. Separate the plasma within 6 hours by centrifugation at 800-1600 x g for 20 minutes at room temperature. Store plasma refrigerated for up to 5 days, or frozen for longer. Vacutainer PPT tubes. Centrifuge tube at 1100 x g for 10 minutes within 2 hours of collection. Spun PPT tubes may be stored at room temperature for up to 24 hours. Plasma must be poured off within 24 hours. Store plasma refrigerated for up to 5 days, or frozen for longer.
HIV-1 Quantitative RNA, Ultrasensitive (50-100,000 copies/ml)	91498	L, PPT	87536	2 mL EDTA plasma (lavender top). Whole blood EDTA tubes may be stored at room temperature or refrigerated. Separate the plasma within 6 hours by centrifugation at 800-1600 x g for 20 minutes at room temperature. Store plasma refrigerated for up to 5 days, or frozen for longer. Vacutainer PPT tubes. Centrifuge tube at 1100 x g for 10 minutes within 2 hours of collection. Spun PPT tubes may be stored at room temperature for up to 24 hours. Plasma must be poured off within 24 hours. Store plasma refrigerated for up to 5 days, or frozen for longer.
HPV (Human Papillomavirus) DNA, high risk genotypes	9662		87621	Specimen collection kit available from laboratory. Thin Prep Pap (PreservCyt) is also acceptable.
HSV PCR	73562		87529	1 mL CSF in sterile tube. All other sources send in viral transport media. Store refrigerated after collection. Must specify source.
Human Papillomavirus (HPV) DNA, high risk genotypes	9662		87621	Specimen collection kit available from laboratory. Thin Prep Pap (PreservCyt) is also acceptable.
Influenza Virus A DFA (direct fluorescent assay)	73472		87276	Nasal aspirate/wash or nasal pharyngeal swab in viral transport media. Store refrigerated after collection.
Influenza Virus A DFA (direct fluorescent assay) with reflex to culture.	73901		87276	Nasal aspirate/wash or nasopharyngeal swab in viral transport medium. Store refrigerated after collection. Culture is performed if screen is negative.
Influenza Virus B DFA (direct fluorescent assay)	73706		87275	Nasal aspirate/wash or nasopharyngeal swab in viral transport medium. Store refrigerated after collection.
Influenza Virus B DFA (direct fluorescent assay) with reflex to culture.	73902		87275	Nasal aspirate/wash or nasopharyngeal swab, in viral transport medium. Store refrigerated after collection. Culture is performed if screen is negative.
Methylenetetrahydrofolate Reductase (MTHFR), DNA	36165	L	83891 83896x2 83898 83912	5 mL EDTA whole blood (lavender top).
MTHFR, DNA (Methylenetetrahydrofolate Reductase)	36165	L	83891 83896x2 83898 83912	5 mL EDTA whole blood (lavender top).

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Test Name	Test Code	Tube Type	CPT Code(s)	Specimen Requirements
N. gonorrhoeae & Chlamydia trachomatis Amplified DNA Panel	6919		87491 87591	Collection kit (supplied by laboratory) must be used. See kit for instructions. First catch urine also acceptable (store refrigerated). Culture must be requested in addition to amplified DNA in cases of suspected sexual abuse and when source is not genital.
N. gonorrhoeae (GC) Amplified DNA	8501		87591	Collection kit (supplied by laboratory) must be used. See kit for instructions. First catch urine also acceptable (store refrigerated). Culture must be requested in addition to amplified DNA in cases of suspected sexual abuse and when source is not genital.
Neisseria gonorrhoeae (GC) Amplified DNA	8501		87591	Collection kit (supplied by laboratory) must be used. See kit for instructions. First catch urine also acceptable (store refrigerated). Culture must be requested in addition to amplified DNA in cases of suspected sexual abuse and when source is not genital..
Prothrombin G20210A Gene Mutation by PCR	30326	L	83891 83896x2 83898 83912	5 mL EDTA whole blood (lavender top). Transport at room temperature. Whole blood is stable for up to 10 days
Respiratory Syncytial Virus (RSV) DFA (direct fluorescent assay)	8467		87280	Nasal wash, aspirate or nasopharyngeal swab in viral transport medium. Store refrigerated after collection.
Respiratory Syncytial Virus (RSV) DFA (direct fluorescent assay) with reflex to culture	73903		87280	Nasal wash, aspirate or nasopharyngeal swab in viral transport medium. Store refrigerated after collection. Culture is performed if screen is negative.
Streptococcus, Group A, DNA by PCR	74272		87651	Throat swab of tonsillar area
Streptococcus, Group B, DNA by PCR	74273		87798	Vaginal/Rectal culture swab.
Viral Culture	689		87252 87254	Specimen in viral transport medium. Please specify specimen source. Submit CSF and urine in sterile container. Store refrigerated after collection.
Viral DFA (Direct Fluorescent Assay)	73547		87299	Specimen in viral transport medium. Store refrigerated after collection. MUST specify virus (HSV, VZV, RSV, influenza, parainfluenza, adenovirus, respiratory screen). Do not submit slides.
Viral DFA (must specify) with reflex to viral culture	73904		87299	Specimen in viral transport medium. Store refrigerated after collection. MUST specify virus (HSV, VZV, RSV, influenza, parainfluenza, adenovirus, respiratory screen). Culture performed if screen is negative.

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