

Bureau of Laboratory Quality Standards Ministry of Public Health

This is to certify that

The laboratory of

Division of Microbiology, King Chulalongkorn Memorial Hospital

1873 Rama 4 Road, Pathumwan, Bangkok 10330, Thailand

has been accepted as an accredited laboratory complying with the ISO 15189: 2012 and the requirements of the Bureau of Laboratory Quality Standards

The laboratory has been accredited for specific tests listed in the scope within the field of

Medical Laboratory

(Dr. Patravee Soisangwan)

Director of Bureau of Laboratory Quality Standards

atravee Soisonpua

Date of Accreditation: 18 August 2021

Valid Until : 17 August 2025

Accreditation Number 4112/55



Bureau of Laboratory Quality Standards Ministry of Public Health

This is to certify that

The laboratory of

Division of Microbiology, King Chulalongkorn Memorial Hospital

1873 Rama 4 Road, Pathumwan, Bangkok 10330, Thailand

has been accepted as an accredited laboratory complying with the ISO 15190: 2003 and the requirements of the Bureau of Laboratory Quality Standards within the field of

Medical Laboratory Safety

(Dr. Patravee Soisangwan)

Director of Bureau of Laboratory Quality Standards

atravee Soisonyma

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| No. | Type of Sample | Test | Method |
|----------|----------------------------|--------------------------|---------------------------|
| Laborate | ory of Bacteriology | | |
| 1. | CSF, Urine, Sputum, Stool | Aerobic culture with AST | - Culture |
| | & Rectal Swab, Throat | (MB001) | - Isolation |
| | Swab, Urethral Swab, | | - Identification |
| | Vaginal, Cervical Swab, | | (Biochemical Test: |
| | Endotracheal Aspirate, | | Conventional And |
| | Nasopharyngeal Swab, Ear | | Commercial Kit using |
| | Swab, Eye Swab, Nose | | VITEK®2 and VITEK® MS) |
| | Swab, Conjunctiva, Corneal | | - Serology Test |
| | Scrap, Pus Swab, Catheter | | - Disk Diffusion Test |
| | Tip, Body Fluids and | | - E-Test |
| | Isolated Colony | | |
| 2. | CSF, Urine, Sputum, | Gram Stain (MB015) | - Gram Stain |
| | Urethral Swab, Vaginal | | - Microscopic Examination |
| | Swab, Cervical Swab, | | |
| | Endotracheal Aspirate, Ear | | |
| | Swab, Eye Swab, | | |
| | Conjunctival Scrap, | | |
| | Cornea Scrap, Body Fluids | | |
| | And Pus Swab | | |

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| No. | Type of Sample | Test | Method |
|-----|-------------------------------|----------------------------|---------------------------------|
| 3. | Blood | Blood Culture: Aerobic | - Culture using |
| | | Bacteria (MB059) | BD BACTEC™ Blood Culture |
| | | | - Isolation |
| | | | - Identification |
| | | | (Biochemical Test: Conventional |
| | | | and Commercial Kit using |
| | | | VITEK®2 and VITEK® MS) |
| | | | - Serology Test |
| | | | - Disk Diffusion Test |
| | | | - E-Test |
| 4. | Aerobic bacteria pure culture | Special identification for | - Culture using |
| | | bacteria (MB022) | BD BACTEC™ Blood Culture |
| | | | - Isolation |
| | | | - Identification |
| | | | (Biochemical Test: Conventional |
| | | | and Commercial Kit using |
| | | | VITEK®2 and VITEK® MS) |
| | | | - Serology Test |
| | | | - Disk Diffusion Test |
| | | b 在"序者"。 | - E-Test |
| 5. | Serum | C. pneumoniae IgG Ab (MB | Micro-Immuno Fluorescence |
| | | 010) | Assay (MIF) |

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| No. | Type of Sample | Test | Method |
|---------|-------------------------------|---|---------------------------------|
| 6. | Serum | C. pneumoniae IgM Ab (MB | Micro-Immuno Fluorescence |
| | | 011) | Assay (MIF) |
| Laborat | ory of Anaerobe | | |
| 7. | Stool | Clostridium difficile toxin A&B (MB013) | Enzyme Immunoassay (EIA) |
| 8. | Blood, Bone Marrow, Bile, | Anaerobic Culture (MB005) | - Anaerobic culture |
| | Bladder Urine, Suprapubic | | - Isolation |
| | Aspirate, CSF, Pericardial, | | - Identification |
| | Peritoneal, Pleural, Deep | | (conventional method and |
| | Bronchial Secretion, Joint | | Commercial Kit using VITEK®2 |
| | Fluid, Synovial Fluid, Tissue | | and VITEK® MS) |
| | Biopsy | | - E-Test |
| 9. | Blood | Blood Culture: Anerobic | - Culture using |
| | | Bacteria (MB060) | BD BACTEC™ Blood Culture |
| | | | - Isolation |
| | | | - Identification |
| | | | (Biochemical Test: Conventional |
| | | | and Commercial Kit using |
| | | | VITEK®2 and VITEK® MS) |
| | | | - E-Test |

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| No. | Type of Sample | Test | Method |
|-----------|------------------------------|---------------------------|------------------------------|
| Laborator | ry of Mycobacteriology | | |
| 10. | Blood, CSF, Urine, Sputum, | Acid Fast Bacilli Stain | - Culture |
| | Stool, Urethral Swab, | (MB004) | - Isolation |
| | Vaginal Swab, Cervical | | - Microscopic examination |
| | Swab, Endotrachial Aspirate, | | |
| | Ear Swab, Eye Swab, Nose | | |
| | Swab, Conjunctival Scrap, | | * |
| | Cornea Scrap, Body Fluids | | |
| | and Pus Swab | | |
| 11. | CSF, Urine, Sputum, | Mycobacterium culture and | 1. Culture |
| | Urethral Swab, Vaginal | AST (Automate : I,R,S,E) | 2. Isolation |
| | Swab, Cervical Swab, | (MB002) | 3. Identification: |
| | Endotrachial Aspirate, Ear | | - Line probe assay (Reverse- |
| | Swab, Eye Swab, Nose | | Hybridization Techniques) |
| | Swab, Conjunctival Scrap, | | 4. AST for Mycobacterium |
| | Cornea Scrap, Body Fluids, | | tuberculosis using BACTEC |
| | Pus Swab | | MGIT 960 System |
| 12. | Blood, body fluid in Myco/F | Mycobacterium culture: | 1. Culture |
| | lytic culture vial | Blood, body fluid (MB029) | 2. Isolation |
| | | | 3. Identification: |
| | | | - Line probe assay (Reverse- |

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|----------|-------------------------------|----------------------------|----------------------------|
| | | | Hybridization Techniques) |
| | | | 4. AST for Mycobacterium |
| | | | tuberculosis using BACTEC |
| | | | MGIT 960 System |
| 13. | Isolated organism | Identification of | Line probe assay (Reverse- |
| | (Positive for AFB Stain) | Mycobacterium species | Hybridization Techniques) |
| | | (Line probe assay) (MB068) | |
| 14. | Isolated organism | MTBC : AST (Automate: | AST using BACTEC MGIT 960 |
| | MTBC Positive MGIT tube | I,R,S,E) (MB072) | System |
| 15. | Isolated organism | MTBC : AST (Automate: Z) | AST using BACTEC MGIT 960 |
| | MTBC Positive MGIT tube | (MB074) | System |
| Laborato | ory of Molecular Bacteriology | | |
| 16. | 1. Respiratory secretion: | PCR for MTBC (MB020) | Real-time PCR |
| | sputum, bronchoalveolar | | Anyplex MTB/NTM Real-time |
| | lavage (BAL), | | Detection (V2.0) |
| | endotracheal suction | | |
| | 2. Blood, bone marrow | | |
| | aspirate | | |
| | 3. Body fluid: pleural fluid, | | |
| | CSF, pericardial effusion | | |
| | 4. Pus | | |
| | 5. Tissue: fresh tissue, | | |

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|----------|---|-------------------------------|--|
| | paraffin-embedded tissue | | |
| | 6. Urine | | |
| | 7. Feces | | |
| Laborato | ry of Mycology | | |
| 17. | CSF, lymph node, Pus | India Ink Preparation (MF005) | Direct Wet Mount |
| 18. | Skin, Hair, Nail, Tissue biopsy, Pus, Lymph node, BAL, Smeared Slide | KOH Preparation (MF006) | Direct Wet Mount |
| 19. | CSF, Urine, Sputum, Stool & Rectal swab, Throat swab, Urethral swab, Vaginal swab, Cervical swab, Endotracheal Aspirate, Nasopharyngeal swab, Ear Swab, Eye Swab, Nose Swab, Conjunctiva, Corneal Scrap, Pus Swab, Catheter Tip, Body Fluids, Hair, Skin, Nail, Other | Fungus culture (MF003) | - Culture - Isolation - Identification (Biochemical Test: Conventional And Commercial Kit using VITEK®2) |

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|----------|-------------------------------|-------------------------------------|---|
| 20. | Clotted blood CSF | Cryptococcus antigen (LA) (MF001) | Dipstick sandwich immunochromatography |
| | | | for detection of Cryptococcus antigen |
| Laborato | ry of Immunology | | |
| 21. | Serum, Plasma | CA19-9 (MI015) | 1.Electrochemiluminescence Immunoassay (ECLIA): cobas 8000, Roche |
| 22. | Serum, Plasma, Amniotic Fluid | Alpha-fetoprotein (MI016, MI178) | 1.Electrochemiluminescence Immunoassay (ECLIA): cobas 8000, Roche |
| 23. | Serum, Plasma | Anti-HIV (MI034) | Electro Chemiluminescent Immunoassay (ECLIA): cobas 8000, Roche |
| 24. | Serum, Plasma | HIVAntigen (MI036) | 1.Electro Chemiluminescent Immunoassay (ECLIA): cobas e411, Roche |
| 25. | Serum, Plasma | HBe Antigen (MI037) | 1.Electro Chemiluminescent Immunoassay (ECLIA): cobas 8000, Roche |
| 26. | Serum, Plasma | HBs Antigen (MI038) | 1.Electro Chemiluminescent Immunoassay (ECLIA): cobas |

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|-----|----------------|-----------------------------|---|
| | | | 8000, Roche |
| 27. | Serum, Plasma | HBc Antibody (MI039) | 1.Electro Chemiluminescent Immunoassay (ECLIA): cobas 8000, Roche |
| 28. | Serum, Plasma | HBs Antibody (MI040) | 1.Electro Chemiluminescent Immunoassay (ECLIA): cobas 8000, Roche |
| 29. | Serum, Plasma | HBc IgM Antibody (MI042) | 1.Electro Chemiluminescent Immunoassay (ECLIA): cobas 8000, Roche |
| 30. | Serum, Plasma | HAV IgM Antibody (MI043) | 1.Electro Chemiluminescent Immunoassay (ECLIA): cobas 8000, Roche |
| 31 | Serum, Plasma | Anti HAV (Total Ig) (MI044) | 1.Electro Chemiluminescent Immunoassay (ECLIA): cobas 8000, Roche |
| 32. | Serum, Plasma | Anti HCV (MI045) | 1.Electro Chemiluminescent Immunoassay (ECLIA): cobas 8000, Roche |
| 33. | Serum, Plasma | HBsAg quantitative (MI151) | Electro Chemiluminescent Immunoassay (ECLIA): cobas |

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|-----|----------------|---------------------------|---|
| | | | 8000, Roche |
| 34. | Serum, Plasma | Anti HIV (Urgent) (MI035) | 1.Electro Chemiluminescent Immunoassay (ECLIA): cobas 8000, Roche |
| 35. | Serum, Plasma | HBsAg (Urgent) (MI104) | Electro Chemiluminescent Immunoassay (ECLIA): cobas 8000, Roche |
| 36. | Serum, Plasma | Anti HBs (Urgent) (MI105) | Electro Chemiluminescent Immunoassay (ECLIA): cobas 8000, Roche |
| 37. | Serum, Plasma | Anti HBc (Urgent) (MI106) | Electro Chemiluminescent Immunoassay (ECLIA): cobas 8000, Roche |
| 38. | Serum, Plasma | Anti HCV (Urgent) (MI109) | Electro Chemiluminescent Immunoassay (ECLIA): cobas 8000, Roche |
| 39. | Serum, Plasma | IgG (MI001) | Nephelometry, BN Prospec Analyzer Turbidimetry, COBAS 8000, ROCHE |

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|-----|----------------|-------------------|------------------------------|
| 40. | Serum, Plasma | IgM (MI002,) | 1. Nephelometry, BN Prospec |
| | | | Analyzer |
| | | | 2. Turbidimetry, COBAS 8000, |
| | | | ROCHE |
| 41. | Serum, Plasma | IgA (MI003) | 1. Nephelometry, BN Prospec |
| | | | Analyzer |
| | | | 2. Turbidimetry, COBAS 8000, |
| | | | ROCHE |
| 42. | Serum, Plasma | Total IgE (MI004) | 1. Nephelometry, BN Prospec |
| | | | Analyzer |
| | | | 2.Electrochemiluminescence |
| | | | Immunoassay (ECLIA), COBAS |
| | | | 8000, ROCHE |
| 43. | Serum, Plasma | IgG1 (MI006) | 1. Nephelometry, BN Prospec |
| | | | Analyzer |
| | | | 2. Turbidimetry, SPA PLUS |
| 44. | Serum, Plasma | IgG2 (MI007) | 1. Nephelometry, BN Prospec |
| | | | Analyzer |
| | | | 2. Turbidimetry, SPA PLUS |
| 45. | Serum, Plasma | IgG3 (MI008) | 1. Nephelometry, BN Prospec |
| | | | Analyzer |
| | | | 2. Turbidimetry, SPA PLUS |

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|-----|----------------|---------------------------|------------------------------|
| 46. | Serum, Plasma | IgG4 (MI009) | 1. Nephelometry, BN Prospec |
| | | | Analyzer |
| | | | 2. Turbidimetry, SPA PLUS |
| 47. | Serum, Plasma | C3 (MI013) | 1. Nephelometry, BN Prospec |
| | | | Analyzer |
| | | | 2. Turbidimetry, SPA PLUS |
| 48. | Serum, Plasma | C4 (MI014) | 1. Nephelometry, BN Prospec |
| | | | Analyzer |
| | | | 2. Turbidimetry, SPA PLUS |
| 49. | Serum, Plasma | β2-Microglobulin (MI017) | 1. Nephelometry, BN Prospec |
| | | | Analyzer |
| | | | 2. Turbidimetry, COBAS 8000, |
| | | | ROCHE |
| | | | 3. Turbidmetry, SPA PLUS |
| 50. | Serum, Plasma | Rheumatoid Factor (MI026) | 1. Nephelometry: BN Prospec |
| | | | Analyzer |
| | | | 2. Turbidimetry, COBAS 8000, |
| | | | ROCHE |
| 51. | Serum, Plasma | CRP (MI051) | 1. Nephelometry: BN Prospec |
| | | | Analyzer |
| | | | 2. Turbidimetry, COBAS 8000, |
| | | | ROCHE |

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|-----|----------------|-------------------------|---------------------------------|
| 52. | Serum, Plasma | ASO (MI054) | 1. Nephelometry: BN Prospec |
| | | | Analyzer |
| | | | 2. Turbidimetry, COBAS 8000, |
| | | | ROCHE |
| 53. | Serum, Plasma | Anti-DNase B (MI098) | 1. Nephelometry: BN Prospec |
| | | | Analyzer |
| | | | 2. Turbidimetry, COBAS 8000, |
| | | | ROCHE |
| 54. | Serum, Plasma | CRP (High sensitivity) | 1. Nephelometry: BN Prospec |
| | | (MI110) | Analyzer |
| | | | 2. Electro Chemiluminescent |
| | | | Immunoassay (ECLIA): cobas |
| - 2 | | | 8000, Roche |
| 55. | Serum | Immunofixation (MI131) | 1. Immunofixation, Quick gel |
| | | | 2. Immunofixation, SPIFE3000 |
| | | | 3. Immunofixation, Interlab G26 |
| 56. | Serum | Serum free light chain: | 1. Nephelometry: BN Prospec |
| | | Kappa (MI135) | Analyzer |
| | | | 2. Turbidimetry, SPA PLUS |
| 57. | Serum | Serum free light chain: | 1. Nephelometry: BN Prospec |
| | | Lambda (MI136) | Analyzer |
| | | | 2. Turbidimetry, SPA PLUS |

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|-----|----------------|--|---|
| 58. | Serum | Serum Protein Electrophoresis (SPEP) (MI011) | College of American Pathologists (CAP)illary Electrophoresis |
| 59. | Serum | Serum Immunotyping Electrophoresis (MI158) | College of American Pathologists (CAP)illary Electrophoresis |
| 60. | Serum, Plasma | Specific IgE to Peanut (f13) (MI113) | Fluoroenzyme immunoassay (FEIA): ImmunoCOLLEGE OF AMERICAN PATHOLOGISTS (CAP) |
| 61. | Serum, Plasma | Specific IgE to Soya bean (f14) (MI114) | Fluoroenzyme immunoassay (FEIA): ImmunoCOLLEGE OF AMERICAN PATHOLOGISTS (CAP) |
| 62. | Serum, Plasma | Specific IgE to Wheat (f4) (MI115) | Fluoroenzyme immunoassay (FEIA): ImmunoCOLLEGE OF AMERICAN PATHOLOGISTS (CAP) |
| 63. | Serum, Plasma | Specific IgE to Fish (f3) (MI116) | Fluoroenzyme immunoassay (FEIA): ImmunoCOLLEGE OF AMERICAN PATHOLOGISTS (CAP) |
| 64. | Serum, Plasma | Specific IgE to Shrimp (f24) | Fluoroenzyme immunoassay |

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|-----|----------------|---|---|
| | | (MI117) | (FEIA): ImmunoCOLLEGE OF AMERICAN PATHOLOGISTS (CAP) |
| 65. | Serum, Plasma | Specific IgE to Egg white (f1) (MI118) | Fluoroenzyme immunoassay (FEIA): ImmunoCOLLEGE OF AMERICAN PATHOLOGISTS (CAP) |
| 66. | Serum, Plasma | Specific IgE to Milk (f2) (MI119) | Fluoroenzyme immunoassay (FEIA): ImmunoCOLLEGE OF AMERICAN PATHOLOGISTS (CAP) |
| 67. | Serum, Plasma | Specific IgE to House dust mite (d1-Dp) (MI120) | Fluoroenzyme immunoassay (FEIA): ImmunoCOLLEGE OF AMERICAN PATHOLOGISTS (CAP) |
| 68. | Serum, Plasma | Specific IgE to House dust mite (d2-Df) (MI121) | Fluoroenzyme immunoassay (FEIA): ImmunoCOLLEGE OF AMERICAN PATHOLOGISTS (CAP) |
| 69. | Serum, Plasma | Specific IgE to Cat dander (e1) (MI122) | Fluoroenzyme immunoassay (FEIA): ImmunoCOLLEGE OF AMERICAN PATHOLOGISTS |

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|-----|----------------|---|---|
| | | | (CAP) |
| 70. | Serum, Plasma | Specific IgE to Dog dander (e5) (MI123) | Fluoroenzyme immunoassay (FEIA): ImmunoCOLLEGE OF AMERICAN PATHOLOGISTS (CAP) |
| 71. | Serum, Plasma | Specific IgE to Cockroach (i206) (MI124) | Fluoroenzyme immunoassay (FEIA): ImmunoCOLLEGE OF AMERICAN PATHOLOGISTS (CAP) |
| 72. | Serum, Plasma | Specific IgE to Latex (k82) (MI125) | Fluoroenzyme immunoassay (FEIA): ImmunoCOLLEGE OF AMERICAN PATHOLOGISTS (CAP) |
| 73. | Serum, Plasma | Specific IgE to Mixed grass (gx2) (MI127) | Fluoroenzyme immunoassay (FEIA): ImmunoCOLLEGE OF AMERICAN PATHOLOGISTS (CAP) |
| 74. | Serum, Plasma | Specific IgE to Fire ant (i70) (MI150) | Fluoroenzyme immunoassay (FEIA): ImmunoCOLLEGE OF AMERICAN PATHOLOGISTS (CAP) |

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| No. | Type of Sample | Test | Method |
|-----|----------------|-------------------------------|--------------------------|
| 75. | Serum, Plasma | Specific IgE to Crab (f23) | Fluoroenzyme immunoassay |
| | | (MI152) | (FEIA): ImmunoCOLLEGE OF |
| | | | AMERICAN PATHOLOGISTS |
| | | | (CAP) |
| 76. | Serum, Plasma | Specific IgE to Squid (f258) | Fluoroenzyme immunoassay |
| | | (MI153) | (FEIA): ImmunoCOLLEGE OF |
| | | | AMERICAN PATHOLOGISTS |
| | | | (CAP) |
| 77. | Serum, Plasma | Specific IgE to Amoxilloyl | Fluoroenzyme immunoassay |
| | | (c6) (MI154) | (FEIA): ImmunoCOLLEGE OF |
| | | | AMERICAN PATHOLOGISTS |
| | | | (CAP) |
| 78. | Serum, Plasma | Specific IgE to Penicilloyl G | Fluoroenzyme immunoassay |
| | | (c1) (MI155) | (FEIA): ImmunoCOLLEGE OF |
| | | | AMERICAN PATHOLOGISTS |
| | | | (CAP) |
| 79. | Serum, Plasma | Specific IgE to egg white | Fluoroenzyme immunoassay |
| | | panel (f1, f232, f233) | (FEIA): ImmunoCOLLEGE OF |
| | | (MI179) | AMERICAN PATHOLOGISTS |
| | | | (CAP) |
| 80. | Serum, Plasma | Specific IgE to milk panel | Fluoroenzyme immunoassay |
| | | (f2, f77, f78) (MI180) | (FEIA): ImmunoCOLLEGE OF |

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|-----|----------------|---|---|
| | | | AMERICAN PATHOLOGISTS (CAP) |
| 81. | Serum, Plasma | Specific IgE to wheat panel (f4, f416) (MI181) | Fluoroenzyme immunoassay (FEIA): ImmunoCOLLEGE OF AMERICAN PATHOLOGISTS (CAP) |
| 82. | Serum, Plasma | Specific IgE to egg yolk (f75) (MI187) | Fluoroenzyme immunoassay (FEIA): ImmunoCOLLEGE OF AMERICAN PATHOLOGISTS (CAP) |
| 83. | Serum, plasma | Specific IgE to Allergen Panel (MI210) | Immunoblot: Indirect/EURO Blot Master II |
| 84. | Serum, Plasma | Tryptase (MI130) | Fluoroenzyme immunoassay (FEIA): ImmunoCOLLEGE OF AMERICAN PATHOLOGISTS (CAP) |
| 85. | EDTA Blood | Lymphocytic study CD4/CD8 (MI067) | Flow Cytometry |
| 86. | EDTA Blood | Leukocyte markers (CD3, CD4, CD8, CD19, CD56) (MI068) | Flow Cytometry |
| 87. | EDTA Blood | CD3, CD4 counts (MI088) | Flow Cytometry |

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|-----|----------------|---------------------------|-----------------------------|
| 88. | EDTA blood | NK cell count (CD16+56) | Flow Cytometry |
| | | (MI111) | |
| 89. | EDTA Blood | B cell count (CD19) | Flow Cytometry |
| | | (MI112) | |
| 90. | Serum | Scrub typhus Ab-IgG | Indirect Immunofluorescence |
| | | (MI076) | Assay |
| 91. | Serum | Scrub typhus Ab IgM | Indirect Immunofluorescence |
| | | (MI077) | Assay |
| 92. | Serum | Murine typhus Ab-IgG | Indirect Immunofluorescence |
| | | (MI133) | Assay |
| 93. | Serum | Murine typhus Ab-IgM | Indirect Immunofluorescence |
| | | (MI134) | Assay |
| 94. | Serum | Anti HEV IgG (MI163) | Enzyme Linked Immunosorbent |
| | | | Assay |
| 95. | Serum | Anti HEV IgM (MI164) | Enzyme Linked Immunosorbent |
| | | | Assay |
| 96. | Serum, Plasma | M. pneumoniae IgG (MI100) | Enzyme Linked Immunosorbent |
| | | | Assay |
| 97. | Serum, Plasma | M. pneumoniae IgM | Enzyme Linked Immunosorbent |
| | | (MI101) | Assay |
| 98. | Serum, plasma | Anti Tetanus (MI199) | Enzyme Linked Immunosorbent |

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|------|----------------|----------------------------|--------------------------------|
| | | | Assay |
| 99. | Serum, plasma | Anti Diphtheria Toxoid IgG | Enzyme Linked Immunosorbent |
| | | (MI216) | Assay |
| 100. | Serum, plasma | Anti Bordetella pertussis | Enzyme Linked Immunosorbent |
| | | Toxin IgG (MI217) | Assay |
| 101. | Serum, plasma | Anti Bordetella FHA IgG | Enzyme Linked Immunosorbent |
| | | (MI218) | Assay |
| 102. | EDTA Blood | HLA Class II DNA TYPING | 1.Polymerase Chain Reaction – |
| | | (MI080) | Sequence Specific Primer (PCR- |
| | | | SSP) |
| | 1 号 9 . 电轴路 | | 2.Polymerase Chain Reaction – |
| | | | Sequence Specific |
| | | | Oligonucleotide probes (PCR- |
| | | | SSO) |
| 103. | EDTA Blood | HLA Class I DNA TYPING | 1.Polymerase Chain Reaction – |
| | | (MI089) | Sequence Specific Primer (PCR- |
| | | | SSP) |
| | | | 2.Polymerase Chain Reaction – |
| | | | Sequence Specific |
| | | | Oligonucleotide probes (PCR- |
| | | | SSO) |

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|------|---|------------------|--------------------------------|
| 104. | EDTA Blood | HLA-B27 (MI091) | 1.Polymerase Chain Reaction – |
| | | | Sequence Specific Primer (PCR- |
| | | | SSP) |
| | | | 2.Polymerase Chain Reaction – |
| | | | Sequence Specific |
| | | | Oligonucleotide probes (PCR- |
| | • | | SSO) |
| 105. | EDTA Blood | HLA-A DNA TYPING | 1.Polymerase Chain Reaction – |
| | | (MI107) | Sequence Specific Primer (PCR- |
| | | | SSP) |
| | | | 2.Polymerase Chain Reaction – |
| | | | Sequence Specific |
| | | | Oligonucleotide probes (PCR- |
| | | | SSO) |
| 106. | EDTA Blood | HLA-B DNA TYPING | 1.Polymerase Chain Reaction – |
| | | (MI108) | Sequence Specific Primer (PCR- |
| | | | SSP) |
| | | | 2.Polymerase Chain Reaction – |
| | | | Sequence Specific |
| | | | Oligonucleotide probes (PCR- |
| | | | SSO) |

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|------|----------------|--------------------|--|
| 107. | EDTA Blood | HLA-B*5701 (MI144) | 1.Polymerase Chain Reaction — Sequence Specific Primer (PCR- SSP) 2.Polymerase Chain Reaction — Sequence Specific Oligonucleotide probes (PCR- SSO) |
| 108. | EDTA Blood | HLA-B*5801 (MI145) | 1.Polymerase Chain Reaction — Sequence Specific Primer (PCR- SSP) 2.Polymerase Chain Reaction — Sequence Specific Oligonucleotide probes (PCR- SSO) |
| 109. | EDTA Blood | HLA-B*1502 (MI149) | 1.Polymerase Chain Reaction — Sequence Specific Primer (PCR- SSP) 2.Polymerase Chain Reaction — Sequence Specific Oligonucleotide probes (PCR- SSO) |

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|------|--------------------|------------------------|--------------------------------|
| 110. | EDTA Blood | HLA-B51 (MI162) | 1.Polymerase Chain Reaction – |
| | | | Sequence Specific Primer (PCR- |
| | | | SSP) |
| | | | 2.Polymerase Chain Reaction – |
| | | | Sequence Specific |
| | | | Oligonucleotide probes (PCR- |
| | | | SSO) |
| 111. | Serum, Plasma | Treponemal Ab (MI160) | 1. Electro Chemiluminescent |
| | | | Immunoassay (ECLIA): cobas |
| | | | 8000, Roche |
| 112. | Serum, Plasma | Treponemal Ab (Urgent) | 1. Electro Chemiluminescent |
| | | (MI161) | Immunoassay (ECLIA): cobas |
| | | | 8000, Roche |
| 113. | Serum, Plasma, CSF | VDRL (RPR) (MI046) | Flocculation Reaction |
| 114. | Serum, Plasma | TPHA (TP-PA) (MI047) | Hemagglutination (HA) |
| | | | Particle Agglutination (PA) |
| 115. | CSF | FTA (CSF) (MI048) | Indirect Immunofluorescence |
| | | | Assay (IFA) |
| 116. | Serum | FTA-ABS IgG (MI049) | Indirect Immunofluorescence |
| | | | Assay (IFA) |
| 117. | Serum | FTA-ABS IgM (MI050) | Indirect Immunofluorescence |

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|------|----------------|--------------------------------|---|
| | | | Assay (IFA) |
| 118. | Serum, Plasma | Antinuclear Ab (MI018) | Indirect Immunofluorescence Assay (IFA) |
| 119. | Serum, Plasma | Anti dsDNA (MI019) | Enzyme Linked Immunosorbent Assay |
| 120. | Serum, Plasma | Anti RNP (MI021) | Enzyme Linked Immunosorbent Assay |
| 121. | Serum, Plasma | Anti Sm (MI022) | Enzyme Linked Immunosorbent Assay |
| 122. | Serum, Plasma | Anti SS-A (MI023) | Enzyme Linked Immunosorbent Assay |
| 123. | Serum, Plasma | Anti SS-B (MI024) | Enzyme Linked Immunosorbent Assay |
| 124. | Serum, Plasma | Anticardiolipin IgG (MI029) | Enzyme Linked Immunosorbent Assay |
| 125. | Serum, Plasma | Anticardiolipin IgM (MI030) | Enzyme Linked Immunosorbent Assay |
| 126. | Serum, Plasma | Antimitochondria Ab (MI032) | Indirect Immunofluorescence Assay (IFA) |
| 127. | Serum, Plasma | Antismooth muscle Ab (MI033) | Indirect Immunofluorescence Assay (IFA) |

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|------|-------------------|------------------------------------|---|
| 128. | Serum, Plasma | ANA profile 1 (MI132) | Immunoblot |
| 129. | Serum, Plasma | Anti CCP (MI146) | Enzyme Linked Immunosorbent Assay |
| 130. | Serum, Plasma | Anti β2 glycoprotein I-IgG (MI156) | Enzyme Linked Immunosorbent Assay |
| 131. | Serum, Plasma | Anti β2 glycoprotein I-IgM (MI157) | Enzyme Linked Immunosorbent Assay |
| 132. | Serum, Plasma | ANCA (IFA) (MI182) | Indirect Immunofluorescence Assay |
| 133. | Serum, Plasma | Anti PLA2R (MI186) | Enzyme Linked Immunosorbent Assay |
| 134. | Serum, Plasma | Anti dsDNA (IFA) (MI209) | Indirect Immunofluorescence Assay (IFA) |
| 135. | Serum, Plasma | Myositis profile 4 (MI176) | Immunoblot |
| 136. | Serum, Plasma | Antithyroglobulin (MI027) | Electrochemiluminescence Immunoassay (ECLIA) |
| 137. | Serum, Plasma | Anti thyroid Peroxidase (MI028) | Electrochemiluminescence Immunoassay (ECLIA) |
| 138. | Serum, Plasma | Thyroglobulin (MI202) | Electrochemiluminescence Immunoassay (ECLIA) |
| 139. | Heparinized blood | QuantiFERON-TB Gold | Enzyme Linked Immunosorbent |

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|------|----------------|---|---|
| | | (MI183) | Assay |
| 140. | Serum, Plasma | Anticardiolipin IgA (MI031) | Enzyme Linked Immunosorbent Assay |
| 141. | Serum, Plasma | Specific IgE to Bermuda grass (g2) (MI225) | Fluoroenzyme immunoassay (FEIA): ImmunoCOLLEGE OF AMERICAN PATHOLOGISTS (CAP) |
| 142. | Serum, Plasma | Specific IgE to Johnson grass (g10) (MI226) | Fluoroenzyme immunoassay (FEIA): ImmunoCOLLEGE OF AMERICAN PATHOLOGISTS (CAP) |
| 143. | Serum, Plasma | Specific IgE to peanut panel- 1 (f13, f422, f423, f424) (MI228) | Fluoroenzyme immunoassay (FEIA): ImmunoCOLLEGE OF AMERICAN PATHOLOGISTS (CAP) |
| 144. | Serum, Plasma | Specific IgE to peanut panel- 2 (f352, f427) (MI229) | Fluoroenzyme immunoassay (FEIA): ImmunoCOLLEGE OF AMERICAN PATHOLOGISTS |

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|---------|----------------------|------------------------|----------------|
| | | | (CAP) |
| Laborat | ory of Virology | | |
| 145. | Clotted Blood, Serum | CMV IgG (MV001) | Indirect ELISA |
| 146. | Clotted Blood, Serum | CMV IgM (MV002) | Indirect ELISA |
| 147. | Clotted Blood, Serum | HSV IgG (MV007) | Indirect ELISA |
| 148. | Clotted Blood, Serum | HSV IgM (MV008) | Indirect ELISA |
| 149. | Clotted Blood, Serum | Rubella IgG (MV010) | Indirect ELISA |
| 150. | Clotted Blood, Serum | Rubella IgM (MV011) | Indirect ELISA |
| 151. | Clotted Blood, Serum | Measles IgG (MV032) | Indirect ELISA |
| 152. | Clotted Blood, Serum | Measles IgM (MV033) | Indirect ELISA |
| 153. | Clotted Blood, Serum | Mumps IgG (MV070) | Indirect ELISA |
| 154. | Clotted Blood, Serum | Mumps IgM (MV071) | Indirect ELISA |
| 155. | Clotted Blood, Serum | VZV IgG (MV030) | Indirect ELISA |
| 156. | Clotted Blood, Serum | VZV IgM (MV031) | Indirect ELISA |
| 157. | Clotted Blood, Serum | EBV Ab IgG (MV005) | Indirect ELISA |
| 158. | Clotted Blood, Serum | EBV (EBNA) IgG (MV051) | Indirect ELISA |
| 159. | Clotted Blood, Serum | EBV Ab IgM (MV006) | Indirect ELISA |
| 160. | Clotted Blood, Serum | Parvovirus B19 IgG | Indirect ELISA |
| | | (MV025) | |
| 161. | Clotted Blood, Serum | Parvovirus B19 IgM | Indirect ELISA |
| | | (MV026) | |

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|------|--------------------------|-------------------------|----------------------------------|
| 162. | Clotted Blood, Serum | Dengue IgG (MV068) | College of American Pathologists |
| | | | (CAP)ture ELISA |
| 163. | Clotted Blood, Serum | Dengue IgM (MV092) | College of American Pathologists |
| | | | (CAP)ture ELISA |
| 164. | Plasma | HIV Viral Load (MV035) | Real time PCR |
| 165. | Plasma | HBV Viral Load (MV037) | Real time PCR |
| 166. | Plasma | HCV Viral Load (MV039) | Real time PCR |
| 167. | Plasma | CMV Viral Load (MV041) | Real time PCR |
| 168. | Plasma/Body Fluid | CMV-DNA (Qualitative) | Real time PCR |
| | | (MV042) | |
| 169. | Plasma/CSF | EBV Viral Load (MV066) | Real time PCR |
| 170. | Plasma/Body Fluid | VZV-DNA (Qualitative) | Real time PCR |
| | | (MV069) | |
| 171. | Plasma/Body Fluid | HSV-DNA (Qualitative) | Real time PCR |
| | | (MV052) | |
| 172. | Nasopharyngeal Swab/ | Influenza A/B/RSV | Multiplex real time PCR |
| | Suction | (MV081) | |
| 173. | Nasopharyngeal Swab/ | Respiratory Virus 19 | Multiplex polymerase chain |
| | Suction | Subtypes (MV082) | reaction and bead hybridization: |
| 174. | Plasma/Body fluid/ Urine | HSV 1-8 and Enterovirus | Multiplex.polymerase Chain |
| | | (CLART ENTHERPEX) | Reaction (PCR) and low density |

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|------|---|--------------------|----------------|
| | | (MV083) | DNA Microarray |
| 175. | Nasopharyngeal and Throat swab, Nasal and Throat swab, Nasopharyngeal swab, Nasal swab, Throat swab, Sputum | SARS-CoV-2 (MV107) | Real time PCR |

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