

Premier Integrated Labs Pantai Hospital Melaka (PIL PHMK)
Test Methodology List
Issue 1, 10 June 2026

DEPARTMENT	ANALYTE	TEST METHODOLOGY
BIOCHEMISTRY	Alanine Transaminase	Modified Wroblewski and LaDue, Modified IFCC without P5P
BIOCHEMISTRY	Albumin	Bromocresol Purple (BCP)
BIOCHEMISTRY	Albumin, 24 Hour Urine	Calculated
BIOCHEMISTRY	Albumin, Urine	PEG-enhanced immunoturbidimetric
BIOCHEMISTRY	Albumin/Creatinine Ratio	Calculated (Ratio)
BIOCHEMISTRY	Albumin/Globulin Ratio	Calculated (Ratio)
BIOCHEMISTRY	Alkaline Phosphatase	Bowers and McComb, IFCC Standardization
BIOCHEMISTRY	Amylase	Ethylidene Blocked -pNPG7
BIOCHEMISTRY	Amylase, 24 Hour Urine	Calculated
BIOCHEMISTRY	Amylase, Fluid	Ethylidene Blocked -pNPG7
BIOCHEMISTRY	Amylase, Urine (Diastase)	Ethylidene Blocked -pNPG7
BIOCHEMISTRY	Aspartate Transaminase	Modified IFCC without P5P
BIOCHEMISTRY	Bilirubin, Direct	Vanadate Oxidation
BIOCHEMISTRY	Bilirubin, Indirect	Calculated (Bilirubin, Total minus Bilirubin, Direct)
BIOCHEMISTRY	Bilirubin, Neonatal	Vanadate Oxidation
BIOCHEMISTRY	Bilirubin, Total	Vanadate Oxidation
BIOCHEMISTRY	Brain Natriuretic Peptides (NT ProBNP)	Two Monoclonal Antibodies Lateral Flow Test
BIOCHEMISTRY	Calcium	Arsenazo III
BIOCHEMISTRY	Calcium, 24 Hour Urine	Calculated
BIOCHEMISTRY	Calcium, Urine	Arsenazo III
BIOCHEMISTRY	Calcium/Creatinine Ratio, Urine	Calculated (Ratio)
BIOCHEMISTRY	Chloride	Indirect Integrated Multisensor Technology (IMT)
BIOCHEMISTRY	Chloride, 24 Hour Urine	Calculated
BIOCHEMISTRY	Chloride, post	Indirect Integrated Multisensor Technology (IMT)
BIOCHEMISTRY	Chloride, Urine	Indirect Integrated Multisensor Technology (IMT)
BIOCHEMISTRY	Cholesterol, HDL	Accelerator Selective Detergent
BIOCHEMISTRY	Cholesterol, LDL	Calculated (Sampson-NIH equation)
BIOCHEMISTRY	Cholesterol, Non-HDL	Calculated (TCHOL-HDL)
BIOCHEMISTRY	Cholesterol, Total	Enzymatic cholesterol oxidase, esterase, peroxidase
BIOCHEMISTRY	Cholesterol/HDL Ratio	Calculated (Ratio)
BIOCHEMISTRY	Creatine Kinase	Modified IFCC
BIOCHEMISTRY	Creatine Kinase-MB (CK-MB)	Chemiluminescence (CLIA)
BIOCHEMISTRY	Creatinine	Enzymatic
BIOCHEMISTRY	Creatinine Clearance	Calculated (Creatinine clearance adjusted equation)
BIOCHEMISTRY	Creatinine, 24 Hour Urine	Calculated
BIOCHEMISTRY	Creatinine, post	Enzymatic
BIOCHEMISTRY	Creatinine, Urine	Enzymatic
BIOCHEMISTRY	Estimated - GFR (CKD-EPI)	Calculated (2009 CKD-EPI creatinine equation without ethnicity co-efficient)
BIOCHEMISTRY	Ferritin	Chemiluminescence (CLIA)
BIOCHEMISTRY	Fibrosis Score, FIB4	Calculated (2006 study by Sterling et al.)
BIOCHEMISTRY	Gamma-Glutamyl Transferase	L-γ-glutamyl-3-carboxy-4-nitroanilide substrate reaction/ IFCC (Kinetic enzymatic)
BIOCHEMISTRY	Globulin	Calculated (TP-ALB)
BIOCHEMISTRY	Glucose	Hexokinase
BIOCHEMISTRY	Glucose (1-Hour)	Hexokinase
BIOCHEMISTRY	Glucose (2-Hour)	Hexokinase
BIOCHEMISTRY	Glucose, Urine	Automated reflectance spectroscopy
BIOCHEMISTRY	Glucose, Urine (Fasting)	Automated reflectance spectroscopy
BIOCHEMISTRY	Glucose, Urine (1- Hour)	Automated reflectance spectroscopy
BIOCHEMISTRY	Glucose, Urine (2- Hour)	Automated reflectance spectroscopy
BIOCHEMISTRY	HbA1c, NGSP unit	Ion-exchange high-performance liquid chromatography (HPLC)
BIOCHEMISTRY	High Sensitive Troponin I	Chemiluminescence (CLIA)
BIOCHEMISTRY	Iron	Ferrozine
BIOCHEMISTRY	Lactate Dehydrogenase	Lactate to pyruvate, nicotinamide adenine dinucleotide (NAD)
BIOCHEMISTRY	LiverFast Select	Calculated
BIOCHEMISTRY	Magnesium	Modified xylidyl blue reaction
BIOCHEMISTRY	Osmolality, Serum (Calculation)	Calculated
BIOCHEMISTRY	Osmolality, Urine (Calculation)	Calculated
BIOCHEMISTRY	Phosphate	Phosphomolybdate
BIOCHEMISTRY	Potassium	Indirect Integrated Multisensor Technology (IMT)
BIOCHEMISTRY	Potassium, 24 Hour Urine	Calculated
BIOCHEMISTRY	Potassium, post	Indirect Integrated Multisensor Technology (IMT)
BIOCHEMISTRY	Potassium, Urine	Indirect Integrated Multisensor Technology (IMT)
BIOCHEMISTRY	Procalcitonin (PCT)	Chemiluminescence (CLIA)
BIOCHEMISTRY	Protein, 24 Hour Urine	Calculated
BIOCHEMISTRY	Protein, Urine	Pyrogallol red-molybdate
BIOCHEMISTRY	Sodium	Indirect Integrated Multisensor Technology (IMT)
BIOCHEMISTRY	Sodium, 24 Hour Urine	Calculated
BIOCHEMISTRY	Sodium, post	Indirect Integrated Multisensor Technology (IMT)
BIOCHEMISTRY	Sodium, Urine	Indirect Integrated Multisensor Technology (IMT)
BIOCHEMISTRY	Total Cholesterol HDL-LDL	Calculated
BIOCHEMISTRY	Total Iron Binding Capacity	Sequential release and uptake of iron
BIOCHEMISTRY	Total Protein	Biuret reaction
BIOCHEMISTRY	Transferrin	Polyethylene glycol (PEG) enhanced immunoturbidimetric
BIOCHEMISTRY	Transferrin Saturation	Calculated (Ratio)
BIOCHEMISTRY	Triglycerides	Glycerol Phosphate Oxidase reaction

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BIOCHEMISTRY	Urea Breath Test	C14 Liquid Scintillation Counting (LSC)
BIOCHEMISTRY	Urea Breath Test, Headway	C14 ionization-based beta-ray detection
BIOCHEMISTRY	Urea Nitrogen	Urease/ glutamate dehydrogenase
BIOCHEMISTRY	Urea Nitrogen, 24 Hour Urine	Calculated
BIOCHEMISTRY	Urea Nitrogen, post	Urease/ glutamate dehydrogenase
BIOCHEMISTRY	Urea Nitrogen, Urine	Urease/ glutamate dehydrogenase
BIOCHEMISTRY	Urea Reduction Ratio, URR	Calculated (Ratio)
BIOCHEMISTRY	Uric Acid	Uricase
BIOCHEMISTRY	Uric Acid, 24 Hour Urine	Calculated
BIOCHEMISTRY	Uric Acid, Urine	Uricase
BIOCHEMISTRY	Urine Protein to Creatinine Ratio	Calculated (Ratio)
IMMUNOLOGY & SEROLOGY	Alpha-fetoprotein	Chemiluminescence (CLIA)
IMMUNOLOGY & SEROLOGY	Anti-Nuclear Antibodies	Chemiluminescence (CLIA)
IMMUNOLOGY & SEROLOGY	Anti-Streptolysin O Test (ASOT)	Latex agglutination
IMMUNOLOGY & SEROLOGY	CEA	Chemiluminescence (CLIA)
IMMUNOLOGY & SEROLOGY	CA 125	Chemiluminescence (CLIA)
IMMUNOLOGY & SEROLOGY	CA 15-3	Chemiluminescence (CLIA)
IMMUNOLOGY & SEROLOGY	CA 19-9	Chemiluminescence (CLIA)
IMMUNOLOGY & SEROLOGY	Chikungunya IgM	Immunochromatographic
IMMUNOLOGY & SEROLOGY	Chikungunya IgG	Immunochromatographic
IMMUNOLOGY & SEROLOGY	COVID-19 (SARS-CoV-2) Antigen	Lateral Flow chromatographic immunoassay
IMMUNOLOGY & SEROLOGY	C-Reactive Protein	Particle enhanced turbidimetric immunoassay (PETIA)
IMMUNOLOGY & SEROLOGY	Dengue IgG	Fl uorescence Immunoassay
IMMUNOLOGY & SEROLOGY	Dengue IgM	Fl uorescence Immunoassay
IMMUNOLOGY & SEROLOGY	Dengue NS1 Antigen	Fl uorescence Immunoassay
IMMUNOLOGY & SEROLOGY	Filariasis IgG	Rapid chromatographic immunoassay
IMMUNOLOGY & SEROLOGY	Filariasis IgM	Rapid chromatographic immunoassay
IMMUNOLOGY & SEROLOGY	Helicobacter pylori IgG	Chemiluminescence (CLIA)
IMMUNOLOGY & SEROLOGY	Hepatitis A IgM	Chemiluminescence (CLIA)
IMMUNOLOGY & SEROLOGY	Hepatitis A Total Antibody	Chemiluminescence (CLIA)
IMMUNOLOGY & SEROLOGY	Hepatitis B Core Ab	Chemiluminescence (CLIA)
IMMUNOLOGY & SEROLOGY	Hepatitis Be Antibody	Chemiluminescence (CLIA)
IMMUNOLOGY & SEROLOGY	Hepatitis Be Antigen	Chemiluminescence (CLIA)
IMMUNOLOGY & SEROLOGY	Hepatitis Bs Antibody	Chemiluminescence (CLIA)
IMMUNOLOGY & SEROLOGY	Hepatitis Bs Antigen	Chemiluminescence (CLIA)
IMMUNOLOGY & SEROLOGY	HCV Antibody	Chemiluminescence (CLIA)
IMMUNOLOGY & SEROLOGY	HIV Ag/Ab Screening	Chemiluminescence (CLIA)
IMMUNOLOGY & SEROLOGY	HIV-1/HIV-2 Antibody Differentiation Immunoassay	Immunochromatographic
IMMUNOLOGY & SEROLOGY	hsCRP	Latex-enhanced immunoturbidimetric
IMMUNOLOGY & SEROLOGY	Total hCG	Chemiluminescence (CLIA)
IMMUNOLOGY & SEROLOGY	Influenza A	Fl uorescence Immunoassay
IMMUNOLOGY & SEROLOGY	Influenza B	Fl uorescence Immunoassay
IMMUNOLOGY & SEROLOGY	Leptospira IgM	Immunochromatographic
IMMUNOLOGY & SEROLOGY	Mycoplasma pneumoniae IgM	Immunochromatographic
IMMUNOLOGY & SEROLOGY	Prostate Specific Ag, Total	Chemiluminescence (CLIA)
IMMUNOLOGY & SEROLOGY	RPR	Nontreponemal Flocculation Test
IMMUNOLOGY & SEROLOGY	Respiratory Tract Infection Combo 6 Rapid Test	Immunochromatographic
IMMUNOLOGY & SEROLOGY	Rheumatoid Factor	Latex-enhanced immunoturbidimetric
IMMUNOLOGY & SEROLOGY	TPPA	Passive Particle Agglutination
IMMUNOLOGY & SEROLOGY	Treponema pallidum Ab	Chemiluminescence (CLIA)
IMMUNOLOGY & SEROLOGY	Salmonella typhi IgG	Immunochromatographic
IMMUNOLOGY & SEROLOGY	Salmonella typhi IgM	Immunochromatographic
ENDOCRINE	Cortisol	Chemiluminescence (CLIA)
ENDOCRINE	Cortisol 30 Min	Chemiluminescence (CLIA)
ENDOCRINE	Cortisol, 60 Min	Chemiluminescence (CLIA)
ENDOCRINE	Free T3	Chemiluminescence (CLIA)
ENDOCRINE	Free T4	Chemiluminescence (CLIA)
ENDOCRINE	Thyroid Stimulating Hormone	Chemiluminescence (CLIA)
ENDOCRINE	Thyroid Stimulating Hormone, Cord Blood	Chemiluminescence (CLIA)
DRUG	Urine Amphetamine (Qualitative)	Chemiluminescence (CMIA)
DRUG	Urine Cannabinoids (Qualitative)	Enzyme Immunoassay (EIA)
DRUG	Urine Opiates (Qualitative)	Enzyme Immunoassay (EIA)
MICROBIOLOGY	Rotavirus Antigen, Stool	Immunochromatographic
MICROBIOLOGY	Streptococcus pneumoniae Antigen	Immunochromatographic
HAEMATOLOGY	APTT	Viscosity-Based (Mechanical) Detection System (VBDS)
HAEMATOLOGY	Bleeding Time	Duke method
HAEMATOLOGY	Clotting Time	Lee-White method
HAEMATOLOGY	D-Dimer	Two Monoclonal Antibodies Lateral Flow Test
HAEMATOLOGY	Erythrocyte Sedimentation Rate	Photometric rheoscope
HAEMATOLOGY	Fibrinogen	Viscosity-Based (Mechanical) Detection System (VBDS)
HAEMATOLOGY	Full Blood Count	Sheath flow impedance method (Cell differentiation) Colorimetric (Haemoglobin measurement)
HAEMATOLOGY	G6PD	UV method
HAEMATOLOGY	Malaria Parasite	Microscopic examination
HAEMATOLOGY	Microfilaria Screen, Direct Smear	Microscopic examination
HAEMATOLOGY	Peripheral Blood Film	Microscopic examination
HAEMATOLOGY	Prothrombin Time (PT)	Viscosity-Based (Mechanical) Detection System (VBDS)
HAEMATOLOGY	Reticulocyte	Microscopic examination
HAEMATOLOGY	Bone Marrow Aspiration Report (BMR)	Microscopic examination
HAEMATOLOGY	Bone Marrow Biopsy Report (BMBX)	Histology examination
HAEMATOLOGY	Thrombin Time	Turbidensitometric (Clotting)
MOLECULAR	Gastrointestinal Panel	Nested multiplex PCR

DEPARTMENT	ANALYTE	TEST METHODOLOGY
MOLECULAR	Pneumonia Panel	Nested multiplex PCR
MOLECULAR	Respiratory Panel	Nested multiplex PCR
MOLECULAR	Influenza/RSV rt-PCR	Automated multiplex real-time, RT-PCR
MOLECULAR	COVID Rapid PCR, M10	Real-time-PCR
MOLECULAR	ME PCR Panel	Nested multiplex PCR
MOLECULAR	MRSA Rapid Screening (PCR)	Automated Real-time-PCR
MOLECULAR	MTB/RIF PCR	Nested Real-time-PCR
FEME	Urine FEME	Automated Reflectance Spectrophotometry (urine chemistry) & digital microscopy imaging technology (urine sediment)
FEME	Urine Pregnancy Test	Rapid chromatographic immunoassay
FEME	Feecal Occult blood	Lateral Flow chromatographic immunoassay
FEME	Seminal Analysis	Microscopic examination
FEME	Stool FEME	Microscopic examination
FEME	CSF FEME	Microscopic examination
FEME	Fluid FEME	Microscopic examination
FEME	Peritoneal Fluid FEME	Microscopic examination
FEME	Synovial Fluid FEME	Microscopic examination
FEME	Pleural Fluid FEME	Microscopic examination
MICROBIOLOGY	Acid-Fast Smear for Mycobacterium (Auramine Stain)	Fluorochrome stain used in the microscopic detection
MICROBIOLOGY	M2-PK, stool	Immunochromatographic
MICROBIOLOGY	Direct Smear for Gram stain	Manual method & Microscopic Examination
MICROBIOLOGY	Direct Smear for Trichomonas, Gonococci, Yeast, Clue Cells and Bacterial Vaginosis Score	Microscopic examination
MICROBIOLOGY	Direct Smear for fungus	Direct Microscopic Examination
MICROBIOLOGY	Aerobic Blood Culture (Paeds)	Automated blood culture system (Colorimetric method)
MICROBIOLOGY	Culture & Sensitivity, Blood	Automated blood culture system (Colorimetric method)
MICROBIOLOGY	Culture & Sensitivity, Nasal Swab	Manual culture method
MICROBIOLOGY	Culture & Sensitivity, Throat Swab	Manual culture method
MICROBIOLOGY	Culture & Sensitivity, Tracheal Scretion	Manual culture method
MICROBIOLOGY	Culture & Sensitivity, Fluids	Manual culture method
MICROBIOLOGY	Culture & Sensitivity, Peritoneal Fluid	Manual culture method
MICROBIOLOGY	Culture & Sensitivity, Pleural Fluid	Manual culture method
MICROBIOLOGY	Culture & Sensitivity, CSF	Manual culture method
MICROBIOLOGY	Culture & Sensitivity, Ascites Fluid	Manual culture method
MICROBIOLOGY	Culture & Sensitivity, Joint/ Synovial Fluid	Manual culture method
MICROBIOLOGY	Culture & Sensitivity, Stool	Manual culture method
MICROBIOLOGY	Culture & Sensitivity, Rectal swab	Manual culture method
MICROBIOLOGY	Culture & Sensitivity, Vaginal	Manual culture method
MICROBIOLOGY	Culture & Sensitivity, Urethral	Manual culture method
MICROBIOLOGY	Culture & Sensitivity, Cervical	Manual culture method
MICROBIOLOGY	Culture & Sensitivity, Penile swab	Manual culture method
MICROBIOLOGY	Culture & Sensitivity, Urine	Manual culture method
MICROBIOLOGY	Culture & Sensitivity, Eye	Manual culture method
MICROBIOLOGY	Culture & Sensitivity, Ear	Manual culture method
MICROBIOLOGY	Culture & Sensitivity, Catheter Tip	Manual culture method
MICROBIOLOGY	Fungal Culture (Including Blood for Fungal Culture)	Manual culture method
MICROBIOLOGY	Culture & Sensitivity, Pus	Manual culture method
MICROBIOLOGY	Culture & Sensitivity, Swab	Manual culture method
MICROBIOLOGY	Culture & Sensitivity, Tissue	Manual culture method
BLOOD BANK	ABO & Rh D Blood Grouping	Automated column agglutination (gel card)/Manual method
BLOOD BANK	ABO & Rh D Blood Grouping	Tube Method (Hemagglutination)
BLOOD BANK	Cross-matching	Column agglutination (gel card)
BLOOD BANK	Direct Antiglobulin Test	Column agglutination (gel card)/Manual method
BLOOD BANK	Antibody Screening / Indirect Antiglobulin Test	Column agglutination (gel card)/Manual method
BLOOD BANK	ABO & Rh D Blood Grouping	Automated column agglutination (gel card)/Manual method
BLOOD BANK	Cross-matching	Column agglutination (gel card)
BLOOD BANK	Direct Antiglobulin Test	Column agglutination (gel card)/Manual method
BLOOD BANK	Antibody Screening / Indirect Antiglobulin Test	Column agglutination (gel card)/Manual method