

Premier Integrated Labs Pantai Hospital Sungai Petani (PIL PHSP)
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	Spectrophotometric
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	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	Reflectance photometry
BIOCHEMISTRY	Glucose, Urine (Fasting)	Semi-automated Reflectance photometry
BIOCHEMISTRY	Glucose, Urine (1- Hour)	Semi-automated Reflectance photometry
BIOCHEMISTRY	Glucose, Urine (2- Hour)	Semi-automated Reflectance photometry
BIOCHEMISTRY	HbA1c, NGSP unit	Ion-exchange high-performance liquid chromatography (HPLC)
BIOCHEMISTRY	Lactate Dehydrogenase	Lactate to pyruvate, nicotinamide adenine dinucleotide (NAD)
BIOCHEMISTRY	LiverFast Select	Calculated
BIOCHEMISTRY	Phosphate	Phosphomolybdate
BIOCHEMISTRY	Phosphate, 24 Hour Urine	Calculated
BIOCHEMISTRY	Phosphate, Urine	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	Protein, 24 Hour Urine	Calculated
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 Protein	Biuret reaction
BIOCHEMISTRY	Triglycerides	Glycerol Phosphate Oxidase reaction
BIOCHEMISTRY	Troponin T	Two Monoclonal Antibodies Lateral Flow Test
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

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BIOCHEMISTRY	Uric Acid, Urine	Uricase
BIOCHEMISTRY	Urine Protein to Creatinine Ratio	Calculated (Ratio)
IMMUNOLOGY & SEROLOGY	Alpha-fetoprotein	Chemiluminescence (CLIA)
IMMUNOLOGY & SEROLOGY	Anti-Streptolysin O Test (ASOT)	Latex agglutination
IMMUNOLOGY & SEROLOGY	CEA	Chemiluminescence (CLIA)
IMMUNOLOGY & SEROLOGY	CA 19-9	Chemiluminescence (CLIA)
IMMUNOLOGY & SEROLOGY	C-Reactive Protein	Particle enhanced turbidimetric immunoassay (PETIA)
IMMUNOLOGY & SEROLOGY	Dengue IgG	Immunochromatographic
IMMUNOLOGY & SEROLOGY	Dengue IgM	Immunochromatographic
IMMUNOLOGY & SEROLOGY	Dengue NS1 Antigen	Immunochromatographic
IMMUNOLOGY & SEROLOGY	Helicobacter pylori Antibody	Immunochromatographic
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	Total hCG	Chemiluminescence (CLIA)
IMMUNOLOGY & SEROLOGY	Influenza A	Fl uorescence Immunoassay
IMMUNOLOGY & SEROLOGY	Influenza B	Fl uorescence Immunoassay
IMMUNOLOGY & SEROLOGY	Influenza A&B+RSV+Adenovirus Combo Screening	Immunochromatographic
IMMUNOLOGY & SEROLOGY	Leptospira IgM	Immunochromatographic
IMMUNOLOGY & SEROLOGY	Mycoplasma pneumoniae IgM	Immunochromatographic
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	Treponema pallidum Ab	Chemiluminescence (CLIA)
IMMUNOLOGY & SEROLOGY	Salmonella typhi IgG	Immunochromatographic
IMMUNOLOGY & SEROLOGY	Salmonella typhi IgM	Immunochromatographic
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)	Lateral Flow Immunoassay (LFIA)
DRUG	Urine Opiates (Qualitative)	Lateral Flow Immunoassay (LFIA)
MICROBIOLOGY	Rotavirus Antigen, Stool	Immunochromatographic
HAEMATOLOGY	APTT	Photo-optical turbidensitometric
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 method
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)	Photo-optical turbidensitometric
HAEMATOLOGY	Reticulocyte	Microscopic examination
MOLECULAR	Pneumonia Panel	Nested multiplex PCR
MOLECULAR	ME PCR Panel	Nested multiplex PCR
FEME	Urine FEME	Semi-Automated Reflectance Spectroscopy
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	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

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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	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