TEST CATALOGUE

PIHM HOSPITAL LABORATORY

Tel: +673 5221526 Ext 123 / 211

PIHM HOSPITAL LABORATORY

Department of Laboratory Services

The laboratory provides a range of services which includes phlebotomy, specimen reception, laboratory testing, blood donation, and supply distribution.

Phlebotomy services are provided in the hospital. Specimens are received from location within the hospital. Laboratory testing are done for routine tests in the disciplines of Clinical Chemistry, Haematology, Microbiology, and Blood Transfusion. Tests which are not done in the laboratory will be referred to reference laboratories in RIPAS Hospital and Sumbiling Biomedical Research Centre. This laboratory organizes blood donation campaign at the hospital, collaborates with other institution for blood donation drive, and accepts incoming blood donors at the laboratory. The laboratory stocks and distributes laboratory consumables to relevant locations by request.

Address

Hospital Pengiran Isteri Hajjah Mariam
Bangar, Temburong
PA 1511
Negara Brunei Darussalam

Contact

Telephone: 5221526, 5221527, 5221528, 5221529

Head of Section	EXT 211
General Inquiries	EXT 211
Clinical Chemistry	EXT 123
Haematology	EXT 123
Microbiology	EXT 123
Phlebotomy	EXT 125

Laboratory Personnel

Head of Section: Hjh Hairiah Hj Talib
Scientific Officer

Deputy Head of Section: Rogayah binti Hj Ahmad
Chief Laboratory Technician

Staff: Laboratory Technicians
Laboratory Assistant/Phlebotomists
Attendant

Operating Hours

Office hours:
Monday to Thursday & Saturday: 07:45 am – 12:15 pm & 1:30 pm – 4:30 pm

Phlebotomy: 07:45 am – 12:00 pm, 1:30 pm – 4:00 pm
Blood Donation: 8:30 am – 11:15 am, 2:00 pm – 3:30 pm

On-Call:

Monday to Thursday & Saturday: 12:15 pm to 07:45 am/08:00 am next day
Friday, Sunday and public holiday: 08:00 am to 08:00 am next day

REFERENCE RANGES FOR PAEDIATRIC

Please contact the laboratory for further information on these reference ranges.

PIHM HOSPITAL LABORATORY TEST CATALOGUE

A) CHEMISTRY

Alanine Transaminase (ALT, GPT) — **Clinical Chemistry Ext 123**

Specimen	Blood (SSTII gold top-5ml)
Unacceptable	Haemolysed
Method	NADH (without P-5'-P)
TAT	Routine: 1 day, STAT: 2 hours
Clinical Usage	Liver profile assessment
Reference Range	Adults Male: 0 – 44 U/L Female: 0 – 33 U/L

Albumin — **Clinical Chemistry Ext 123**

Specimen	Blood (SSTII gold top-5ml)
Unacceptable	Haemolysed, Lipemic
Method	Colorimetry
TAT	Routine: 1 day, STAT: 2 hours
Clinical Usage	Indicator of nutritional status
Reference Range	Adults: 35 – 50 g/L

Alkaline Phosphatase (ALP) — **Clinical Chemistry Ext 123**

Specimen	Blood (SSTII gold top-5ml)
Unacceptable	Haemolysed
Method	Para-nitrophenyl phosphate (*p*-NPP)
TAT	Routine: 1 day, STAT: 2 hours
Clinical Usage	Liver and bone profile assessment

Reference Range

AGE	RANGE U/L	GENDER
16 – 21 years	56-167	Male
16 – 29 years	44-107	Female
22-79 years	50-116	Male
30-79 years	46-122	Female

Amylase, serum **Clinical Chemistry Ext 123**

Specimen	Blood (SSTII gold top-5ml)
Unacceptable	Haemolysed, overnight
Method	Enzymatic/colorimetric
TAT	Routine: 1 day, STAT: 2 hours
Clinical Usage	Diagnosis of pancreatitis
Reference Range	Adults: 28 – 100 U/L

Bicarbonate, Serum (HCO3) **Clinical Chemistry Ext 123**

Specimen	Blood (SSTII gold top - 5mL), test not suitable for add-on.
Unacceptable	Add-on request
Transport	Send to the Lab immediately (not suitable for add on test)
Method	Enzymatic
TAT	Routine: 1 day, STAT: 2 hours
Clinical Usage	Acid-base balance
Reference Range	22 – 29 mmol/L

Bilirubin, Direct **Clinical Chemistry Ext 123**

Specimen	Blood (SSTII gold top - 5ml or green top- 4ml)
Unacceptable	Haemolysed
Transport	Protect sample from light and send to the Lab
Method	Enzymatic
TAT	Routine: 1 day, STAT: 2 hours
Clinical Usage	Differential diagnosis of jaundice
Reference Range	Adult < 8.7 µmol/L

Bilirubin, Total		**Clinical Chemistry Ext 123**
Specimen	Blood (SSTII gold top - 5ml or green top- 4ml)	
Unacceptable	Haemolysed, overnight	
Transport	Protect sample from light and send to the Lab	
Method	Colorimetry	
TAT	Routine: 1 day, STAT: 2 hours	
Clinical Usage	Diagnosis of jaundice	
Reference Range	Adult	5.1 – 20.5 µmol/L

Bone Panel		**Clinical Chemistry Ext 123**
Specimen	Blood (SSTII gold top - 5ml)	
Unacceptable	Haemolysed	
Method	*Panel test: Calcium, Phosphate, ALP*	
Performed	Daily	
TAT	Routine: 1 day, STAT: 2 hours	
Clinical Usage	Bone profile assessment	
Reference Range	Refer to individual analytes	

Calcium, Total			**Clinical Chemistry Ext 123**
Specimen	Blood (SSTII gold top - 5ml)		
Unacceptable	Haemolysed		
Method	Colorimetric		
TAT	Routine: 1 day, STAT: 2 hours		
Clinical Usage	Evaluation of calcium metabolism		
Reference Range	**AGE**	**REFERENCE RANGE**	**GENDER**
	20 – 39 years	2.28 – 2.60 mmol/L	Male
	20 – 39 years	2.25 – 2.53 mmol/L	Female
	40 – 79 years	2.25 – 2.55 mmol/L	Male & Female

Chloride (Cl)		**Clinical Chemistry Ext 123**
Specimen	Blood (SSTII gold top - 5ml)	
Method	Indirect ISE	
TAT	Routine: 1 day, STAT: 2 hours	
Clinical Usage	Electrolyte balance assessment	
Reference Range	98 – 107 mmol/L	

Cholesterol, HDL		**Clinical Chemistry Ext 123**
Specimen	Blood (SSTII gold top - 5ml), fasting 10 – 12 hrs	
Unacceptable	Fasting less than 10 hours	
Method	Homogeneous, colorimetric	
Performed	Daily	
TAT	Routine: 1 day, STAT: 2 hours	

Clinical Usage	Evaluation of lipid status
Reference Range	Low: < 1.04 mmol/L Desirable : > 1.55 mmol/L

Cholesterol, LDL (calculated value) **Clinical Chemistry Ext 123**

Specimen	Blood (SSTII gold top - 5ml), fasting 10 – 12 hrs
Unacceptable	Fasting less than 10 hours
Method	Calculated, homogenous, colorimetric
Performed	Daily
TAT	Routine: 1 day, STAT: 2 hours
Clinical Usage	Evaluation of lipid status
Reference Range	Desirable 0.00 - 3.36 mmol/L

Cholesterol, Total **Clinical Chemistry Ext 123**

Specimen	Blood (SST II gold top, 5mL), Fasting 10 – 12 hrs
Unacceptable	Fasting less than 10 hours
Method	Enzymatic
TAT	Routine: 1 day, STAT: 2 hours
Clinical Usage	Evaluation of lipid status
Reference Range	Desirable 0.00 - 5.18 mmol/L

C-Reactive Protein (CRP), high sensitivity **Clinical Chemistry Ext 123**

Specimen	Blood (SST II gold top, 5mL)
Unacceptable	Near Infrared Particle
Method	Immunoturbidimetric
TAT	1 day, STAT: 2 hours
Clinical Usage	Detect inflammation and tissue injury
Reference Range	≤0.5 mg/dL

Creatinine **Clinical Chemistry Ext 123**

Specimen	Blood (SST II gold top, 5mL)
Method	Kinetic Alkaline Picrate
Performed	Daily
TAT	Routine: 1 day, STAT: 2 hours
Clinical Usage	Renal function test

Reference Range

AGE	RANGE µmol/L	GENDER
19 – 40 years	53.0-106.1	Male
19 – 40 years	44.2-88.4	Female
41-60 years	53.0-114.9	Male
41-60 years	44.2-97.2	Female
61-100 years	61.9-114.9	Male
61-100 years	44.2-106.1	Female

Gamma-Glutamyl Transferase (GGT) **Clinical Chemistry Ext 123**

Specimen	Blood (SST II gold top, 5mL or heparin green top, 4mL)
Unacceptable	Haemolysed
Method	*L*-gamma-glutamyl-3-carboxy-4-nitroanilide substrate
Performed	Daily
TAT	Routine: 1 day, STAT: 2 hours
Clinical Usage	Liver profile assessment
Reference Range	Adults Male: 0 – 55 U/L Female: 0 – 38 U/L

Glucose Tolerance Test (GTT) **Clinical Chemistry Ext 123**

Specimen	Blood (grey top, 3mL). Submit 2 specimens: • Fasting and 2 hours after glucose (75g) intake
Unacceptable	Time taken not labelled on tubes
Method	Colorimetry
Performed	Daily
TAT	1 day

Clinical Usage	Diagnosis of diabetes mellitus		
Reference Range	Normal	Impaired	Diabetic
Fasting	3.5 – 6.0 mmol/L	6.1 – 6.9 mmol/L	≥7.0 mmol/L
2 hrs after glucose intake	4.0 – 7.7 mmo/L	7.8 – 11.0 mmol/L	≥11.1 mmol/L

Pregnancy Glucose Tolerance Test (GTT) **Clinical Chemistry Ext 123**

Specimen	Blood (grey top, 3mL). Submit 3 specimens: • Fasting, 1 hour and 2 hours after glucose (75g) intake		
Unacceptable	Time taken not labelled on tubes		
Method	Colorimetry		
Performed	Daily		
TAT	1 day		
Clinical Usage	Diagnosis of diabetes mellitus		
Reference Range	Normal	Impaired	Diabetic
Fasting	<5.3 mmol/L	5.3 – 6.9 mmol/L	≥7.0 mmol/L
1 hr after glucose intake	<10.6 mmol/L	≥10.6 mmol/L	
2 hrs after glucose intake	<9.0 mmo/L	9.0 – 11.0 mmol/L	≥11.1 mmol/L

Glucose, Fasting (FBS) **Clinical Chemistry Ext 123**

Specimen	Blood (grey top - 3mL) preferred or (SSTII gold top - 5mL)	
Unacceptable	Fasting less than 8 hours	
Method	Colorimetry	
TAT	Routine: 1 day, STAT: 2 hours	
Clinical Usage	Diagnosis and monitoring of diabetes mellitus	
Reference Range	Fasting	3.5 – 6.0 mmol/L

Glucose, Random		**Clinical Chemistry Ext 123**
Specimen	Blood (grey top - 3mL) preferred or (SSTII gold top - 5mL)	
Unacceptable	Time taken less than 2 hours after meal	
Method	Colorimetry	
TAT	Routine: 1 day, STAT: 2 hours	
Clinical Usage	Diagnosis and monitoring of diabetes mellitus	
Reference Range	Random	4.0 – 7.8 mmol/L
	Post-prandial	4.0 – 7.8 mmol/L
	Post breakfast	4.0 – 7.8 mmol/L
	Post lunch/dinner	4.0 – 7.8 mmol/L

Lipid Panel		**Clinical Chemistry Ext 123**
Specimen	Blood (SSTII gold top - 5ml). Fasting specimen (10-12 hrs) required	
Unacceptable	Non-fasting specimen, fasting less than 10 hrs	
Method	*Panel test:* (See individual test) • *Lipid 1: Cholesterol and Triglyceride* • *Lipid 2: Cholesterol, Triglyceride, HDL, LDL (calculated)*	
Performed	Daily	
TAT	Routine: 1 day, STAT: 2 hours	
Clinical Usage	Lipid profile assessment	
Reference Range	Refer to individual analytes	

Liver Function Test (LFT)		**Clinical Chemistry Ext 123**
Specimen	Blood (SST II gold top, 5mL)	
Unacceptable	Haemolysed	
Method	*Panel test: Total Protein, Albumin, Total Bilirubin, ALT, ALP, GGT see individual test*	
Performed	Daily	
TAT	Routine: 1 day, STAT: 2 hours	
Clinical Usage	Liver profile assessment	
Reference Range	Refer to individual analytes	

Phosphate (PO4)/Phosphorus, Serum	**Clinical Chemistry Ext 123**
Specimen	Blood (SST II gold top, 5mL)
Unacceptable	Haemolysed, overnight
Method	Colorimetry (Phosphomolybdate)
Performed	Daily
TAT	Routine: 1 day, STAT: 2 hours
Clinical Usage	Assessment of calcium and phosphate disorders
Reference Range	Adults : 0.81 – 1.45 mmol/L

Potassium (K)	**Clinical Chemistry Ext 123**
Specimen	Blood (SST II gold top, 5mL)
Unacceptable	Haemolysed, overnight
Method	Indirect ISE
Performed	Daily
TAT	Routine: 1 day, STAT: 2 hours
Clinical Usage	Evaluation/assessment of electrolyte imbalance
Reference Range	Adults 3.5 – 5.1 mmol/L

Protein, Total	**Clinical Chemistry Ext 123**
Specimen	Blood (SST II gold top, 5mL)
Unacceptable	Haemolysed
Method	Colorimetry (Biuret)
Performed	Daily
TAT	Routine: 1 day, STAT: 2 hours
Clinical Usage	Marker of nutritional status
Reference Range	Adults : 64 – 83 g/L

Renal Panel	**Clinical Chemistry Ext 123**
Specimen	Blood (SST II gold top, 5mL)
Unacceptable	Haemolysed
Method	*Panel Test:* • *RP1: Urea, Electrolytes, Creatinine, CO2, Chloride*

	• *RP2: Calcium, Phosphate, Uric Acid*
Performed	Daily
TAT	Routine: 1 day, STAT: 2 hours
Clinical Usage	Renal profile assessment
Reference Range	Refer to individual analytes

Sodium (Na)	**Clinical Chemistry Ext 123**
Specimen	Blood (SST II gold top, 5mL)
Unacceptable	Haemolysed, overnight or lipaemic
Method	Indirect ISE
Performed	Daily
TAT	Routine: 1 day, STAT: 2 hours
Clinical Usage	Evaluation/assessment of electrolyte imbalance
Reference Range	Adults 136 – 145 mmol/L

Troponin I, high sensitive STAT	**Clinical Chemistry Ext 123**
Specimen	Blood (SST II gold top, 5mL)
Unacceptable	Haemolysed sample
Method	Electrochemiluminescence Immunoassay
Performed	Daily
TAT	Routine: 1 day, STAT: 2 hours
Clinical Usage	Diagnosis of acute Myocardial Infarction
Reference Range	Male (21-73 Years): 0 – 34.2 ng/L
	Female (21-75 Years): 0 – 15.6 ng/L

Triglyceride	**Clinical Chemistry Ext 123**
Specimen	Blood (SST II gold top, 5mL), Fasting 10 – 12 hrs
Unacceptable	Fasting less than 10 hours
Method	Enzymatic (Glycerol Phosphate Oxidase)
TAT	Routine: 1 day, STAT: 2 hours

Clinical Usage	Evaluation of lipid status
Reference Range	Normal: 0.0 - 1.69 mmol/L

Urea

Clinical Chemistry Ext 123

Specimen	Blood (SST II gold top, 5mL)
Method	Enzymatic rate /Urease
Performed	Daily
TAT	Routine: 1 day, STAT: 2 hours
Clinical Usage	Assessment of fluid balance and renal function

Reference Range	AGE	RANGE mmol/L	GENDER
	19-59 years	2.1 -7.1	Male & Female
	60-99 years	2.9 -8.2	Male & Female

Uric Acid (UA)

Clinical Chemistry Ext 123

Specimen	Blood (SST II gold top, 5mL)
Unacceptable	Lipaemic
Method	Uricase
Performed	Daily
TAT	Routine: 1 day, STAT: 2 hours
Clinical Usage	Evaluation of uric acid metabolism

Reference Range	AGE	RANGE μmol/L	GENDER
	13 – 79 years	220-450	Male
	13 – 79 years	150-370	Female

B) HAEMATOLOGY

Activated Partial Thromboplastin Time (APTT)	**Haematology Ext 123**
Specimen	Blood (Sodium Citrate, blue top – up to the fill mark)
Transport	Send to the Lab immediately
Unacceptable	Below or above the fill mark, haemolysed, clotted
Method	Clotting
Performed	Daily
TAT	Routine: 1 day, STAT: 2 hours
Clinical Usage	Monitoring heparin therapy and screening test for clotting factors
Reference Range	26.6 – 39.0 sec

APTT 50% Correction	**Haematology Ext 123**
Specimen	Blood (Sodium Citrate, blue top – up to the fill mark)
Transport	Send to the Lab immediately
Unacceptable	Below or above the fill mark, haemolysed, clotted

Method	Clotting
Performed	Daily
TAT	1 day
Clinical Usage	To detect the presence of inhibitors of coagulation
Reference Range	26.6 – 39.0 sec

Differential Count (Diff) **Haematology Ext 123**

Specimen	Blood (EDTA, purple top, 4mL)
Unacceptable	Haemolysed, clotted
Method	Fluorescence Flow Cytometry
Performed	Daily
TAT	Routine: 1 day, STAT: 2 hours
Reference Range	See Lab Report

Erythrocyte Sedimentation Rate (ESR) **Haematology Ext 123**

Specimen	Blood (EDTA, purple top, 3.5mL)
Unacceptable	Haemolysed, clotted
Method	Photometric rheoscope
Performed	Daily
TAT	1 day, STAT: 2 hours
Clinical Usage	Liver profile assessment
Reference Range	Male: 1 - 31 mm/hr
	Female: 1 - 34 mm/hr

Full Blood Count (FBC) **Haematology Ext 123**

Specimen	Blood (EDTA, purple top, 4mL)
Unacceptable	Haemolysed, clotted
Method	Flow Cytometry, Hydrodynamic Focusing Detection, Photometry

Performed	Daily			
TAT	Routine: 1 day, STAT: 1.5 hours			
Reference Range		Newborn	Male	Female
	WBC x 10^9 /L	10.0 - 26.0	4.2 - 12.6	4.2 – 12.6
	RBC x 10^{12}/L	5.0 - 7.0	4.67 - 6.13	4.00 – 5.62
	HB g/dL	14.0 - 22.0	13.5 - 17.9	11.5 – 15.9
	PCV %	44.0 – 75.0	41.6 - 53.6	35.8 – 49.0
	MCV fL	100 – 120	81.0 - 95.4	81.0 – 95.4
	MCH pg	31 – 37	26.0 - 31.6	26.0 – 31.6
	MCHC g/dL	30 – 36	30.4 - 34.8	30.4 – 34.8
	PLT x 109 /L	100 - 450	174 – 430	174 – 430
	MPV x Fl		8.5 – 11.7	8.5 – 11.7

Malarial Parasites	**Haematology Ext 123**
Specimen	Blood (EDTA, purple top – 3mL)
Unacceptable	Haemolysed, clotted
Method	Light microscopy
Performed	Daily
TAT	Routine: 1 day, STAT: 2 hours
Clinical Usage	Detection of malarial parasites
Reference Range	No malaria parasite seen

Prothrombin Time –INR (PT-INR)	**Haematology Ext 123**
Specimen	Blood (Sodium Citrate, blue top, up to the fill mark)
Unacceptable	Below or above the fill mark, haemolysed, clotted
Method	Clotting
Performed	Daily

TAT	Routine: 1 day, STAT: 1.5 hours
Clinical Usage	Screening test for bleeding disorders. Monitoring of anticoagulation therapy.
Reference Range	Adult: PT: 9.5 – 11.9 sec INR: 0.9 – 1.1

PT 50% Correction	**Haematology Ext 123**
Specimen	Blood (Sodium Citrate, blue top, up to the fill mark)
Unacceptable	Below or above the fill mark, haemolysed, clotted
Method	Clotting
Performed	Daily
TAT	1 day
Clinical Usage	To detect presence of inhibitors of coagulation
Reference Range	9.5 – 11.9 sec

Reticulocyte Count **Haematology Ext 123**

Specimen	Blood (EDTA, purple top – 3mL)			
Unacceptable	Haemolysed, clotted			
Method	Fluorescence flow cytometry			
Performed	Daily			
TAT	Routine: 1 day, STAT: 1.5 hours			
Clinical Usage	Assessment of erythropoietic activity			
Reference Range		%	Absolute	
	0D – 1 month	2.3 – 5.4	0.12 – 0.40	10^6/µL
	1 – 6 months	0.7 – 1.1	0.02 – 0.06	10^6/µL
	6 months – 1 year	1.0 – 1.8	0.04 – 0.10	10^6/µL
	1 – 12 years	0.76 – 1.9	0.03 – 0.10	10^6/µL
	> 12 years	0.70 – 2.6	0.02 – 0.14	10^6/µL

Reticulocyte-Hemoglobin (Ret-He) **Haematology Ext 123**

Specimen	Blood (EDTA, purple top – 3mL)
Unacceptable	Haemolysed, clotted
Method	Fluoresence Flow Cytometry
TAT	Routine: 1 day, STAT: 1.5 hours
Clinical Usage	Assessment of erythropoietic activity
Reference Range	25.8 – 38.2 pg

C) BLOOD TRANSFUSION

ABO Group and Rh Type	**Blood Transfusion Ext 123**
Specimen	Blood (EDTA, pink top – 4mL)
Unacceptable	Haemolysed
Method	Immune agglutination or Column Agglutination Technology
TAT	Routine: 1 day, STAT: 1 hour
Clinical Usage	Determine ABO and Rh (D) blood groups

Antibody Screen (Red Cell)	**Blood Transfusion Ext 123**
Specimen	Blood (EDTA, pink top, 4mL)
Unacceptable	Haemolysed
Method	Column Agglutination Technology
Performed	Daily
TAT	Routine: 1 day, STAT: 1 hour
Clinical Usage	Detect clinically significant alloantibodies
Reference Range	Not detected

Crossmatch	**Blood Transfusion Ext 123**
Specimen	Blood (EDTA, pink top, 4mL)
Unacceptable	Haemolysed
Method	Column Agglutination Technology
Performed	Daily
TAT	Routine: 1-3 days, STAT: 2 hours
Clinical Usage	Compatibility for blood transfusion

Direct Antiglobulin (Coomb's) Test (DCT)	**Blood Transfusion Ext 123**
Specimen	Blood (EDTA, pink top, 4mL)
Method	Column Agglutination Technology
Performed	Daily
TAT	Routine: 1 day, STAT: 1.5 hours
Clinical Usage	To investigate the presence of globulins (IgG and C3d) coating red cells

Reference Range	Negative

Fresh Frozen Plasma	**Blood Transfusion Ext 123**
Specimen	Blood (EDTA, pink top – 4mL)
Unacceptable	Haemolysed
Method	Immune agglutination or Column Agglutination Technology
Performed	On request
TAT	1 hour
Clinical Usage	Therapeutic purpose

Platelets, Random	**Blood Transfusion Ext 123**
Specimen	Blood (EDTA, pink top – 4mL)
Unacceptable	Haemolysed
Method	Immune agglutination or Column Agglutination Technology
Performed	On request
TAT	1 day
Clinical Usage	Therapeutic purpose

D) MICROBIOLOGY

Amoebae, Microscropy	**Microbiology Ext 123**
Specimen	Stool and aspirate, fresh in sterile screw-capped container,10 mL
Unacceptable	Stool that appears to be dry on the surface or edges
Transport	Send to the Lab immediately (within 2 hours after collection)
Method	Light Microscopy
Performed	Daily
TAT	Routine: 1 day, STAT: 2 hours
Clinical Usage	Diagnosis of amoebiasis
Reference Range	Seen or Not seen

Pregnancy Test, Urine	**Microbiology Ext 123**
Specimen	Urine (sterile screw-capped container, 10mL), early morning specimen is preferred
Transport	Within 2 hours at room temperature or 24 hours if refrigerated
Method	Immunochromatography
Performed	Daily
TAT	Routine: 1 day, STAT: 1 hour
Clinical Usage	Diagnosis of pregnancy and gestational trophoblastic diseases
Reference Range	Positive or Negative

Stool Microscopic Examination (Stool ME)	**Microbiology Ext 123**
Specimen	Stool (sterile screw-capped container with attached spatula)
Unacceptable	Swab, leaking sample container
Method	Light microscopy
Performed	Daily
TAT	Routine: 2 days, STAT: 2 hours
Clinical Usage	Diagnosis of parasitic infections
Reference range	RBC : Not seen WBC : Not seen

	Ova : Not seen

Stool Occult Blood (SOB)	**Microbiology Ext 123**
Specimen	Stool in sterile screw-capped container with attached spatula
Unacceptable	Swab, leaking sample container
Method	Immunochromatography
Performed	Daily
TAT	Routine: 1 day, STAT: 2 hours
Clinical Usage	Detect the presence of blood in stool specimen
Reference Range	Negative

Urinalysis	**Microbiology Ext 123**
Specimen	Random urine (sterile screw-capped container, 10mL)
Unacceptable	More than 24 hours old
Transport	Within 2 hours at room temperature or 24 hours if refrigerated
Method	Manual Dipstick / microscopy
Performed	Daily
TAT	Routine: 1 day, STAT: 2 hours
Reference Range	pH : 5.5-8.5 Specific Gravity : 1.005-1.025 Leukocytes : Negative Nitrite : Negative Urine protein, total : Negative Glucose : Negative Ketone : Negative Urobilinogen : Normal Bilirubin : Negative Blood : Negative

Urine microscopy	**Microbiology Ext 123**
Specimen	Random urine (sterile screw-capped container, 10mL)
Unacceptable	Leaking sample container
Transport	Within 2 hours at room temperature or 24 hours if refrigerated
Method	Light microscopy
Performed	Daily
TAT	Routine: 1 day, STAT: 2 hours
Reference Range	RBC : Few (0-3/hpf) WBC : Few (0-3/hpf) Bacteria : Few (0-3/hpf) Casts : Nil Yeast : Nil Crystal : Nil Epithelial cells : Nil

Urine for Dysmorphic RBC	**Microbiology Ext 123**
Specimen	Random urine (sterile screw-capped container, 10mL), fresh
Transport	Send to the Lab immediately
Method	Light microscopy
Performed	Daily
TAT	Routine: 1 day, STAT: 2 hours
Clinical Usage	Evaluation of glomerular diseases