MANUAL OF LABORATORY INVESTIGATIONS

Vardhman Mahavir Medical College

and

Safdarjung Hospital
Foreword

It has been very frequently observed that several patients/ patient relatives are wandering in OPD and wards for want of information regarding where they should submit the samples for various investigations viz. biochemistry, pathology, microbiology, lab medicine, hematology lab and Apex Regional STD lab. In addition, they do not know what are the timings of various sample collection counters, various report dispatch counters and their timings. This causes lot of inconvenience to public as the same information is not even available with their treating doctors. Due to this, the Public Grievance Redressal Cell (PGRC) receives lot of complainants everyday.

The PGRC, SJH under the chairmanship of Dr. R.K. Anand has taken initiative of compiling this comprehensive booklet to serve as a ready reference for the clinicians in the hospital so that they can appropriately guide the patients and their relatives regarding the sample collection counters and report dispatch counters for the various laboratory investigations.

The faculty and the residents of all clinical departments in the hospital are expected to consult this booklet and provide the requisite information to the patients while advising any laboratory tests.

I hope the booklet will serve its intended purpose well!

Dr Sunil Gupta
Medical Superintendent, Safdarjang Hospital
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DEPARTMENT OF PATHOLOGY

1. List of investigations –

TESTS DONE IN HISTOPATHOLOGY:
1. Routine H & E staining,
2. Frozen section and scrape Cytology,
3. Special Stains,
4. Immunohistochemistry and
5. Immunofluorescence.

TESTS DONE IN CYTOPATHOLOGY
1. FNAC,
2. Special Stains,
3. Immunocytochemistry,
4. PAP and
5. Liquid based cytology
6. Cytological examination of body fluids like urine, pleural, CSF, synovial, peritoneal and pericardial fluid for malignant cells
7. Sputum, BAL fluid, bronchial brush, TBNA and EBUS examination for malignant cells.

TEST DONE IN CLINICAL PATHOLOGY:-
1. IgM,
2. IgG,
3. IgA,
4. IgE
5. ANA
6. DsDNA
7. Anti-cardiolipin antibody- IgG
8. Anti-cardiolipin antibody - IgM
9. Complement assay
10. C3
11. C4

Cancer Markers
12. AFP, hCG
13. CEA
14. PSA
15. CA15.3
16. CA19.9
17. CA-125
18. Serum electrophoresis for M Band

Diabetic profile
19. Serum Insulin
20. Glycosylated Hemoglobin

Fertility Panel
22. Serum FSH
23. Serum LH
24. Serum Prolactin
25. Serum Estradiol
26. Serum Progesterone
27. Serum T3,T4,TSH (only for infertility patients)
28. DHEAS
29. Anti sperm antibody
30. Testosterone

Thyroid Profile
31. Serum T3, T4, TSH
32. TPO
33. Thyroglobulin Ab

Haematological investigations
34. Haemoglobin estimation
35. Total leukocyte count
36. Total Erythrocyte count
37. Platelet count
38. MCV, MCH, PCV,MCHC
39. Differential leukocyte count
40. ESR
41. Peripheral smear reporting for haemoparasite
42. Peripheral smear reporting for haematological abnormalities
43. Reticulocyte count
44. Absolute eosinophil count
45. LE cell Phenomenon
46. Bleeding time
47. Clotting time
48. Coagulation Profile

Urine analysis
49. Urine albumin and 24 hours estimation
50 Urine for microalbumin
51 Urine glucose/sugar
52 Urine for ketone bodies
53 Urine for bile salts, pigments & urobilinogen
54 Urine for blood
55 Urine pH
56 Urine specific gravity
57 Urine for leucocytes/Nitrates
58 Microscopy examination of urine sediments
59 Bence Jones protein (Urine)

Miscellaneous
60 Serum Cortisol estimation
61 PTH
62 Vitamin D levels
63 Serum Ferritin
64 ANA and dsDNA

SPECIAL HAEMATOLOGY

1. Flow Cytometry
2. Cytochemistry for leukemia
3. Bone marrow aspiration and bone marrow biopsy examination
4. Nephelometry
5. Coagulation profile
6. Platelet aggregometry

MOLECULAR LAB

1. HLA Typing studies

TESTS DONE IN CENTRAL COLLECTION CENTRE

1. Hemoglobin estimation
2. Total leukocyte count
3. Total Erythrocyte count
4. Platelet count
5. MCV, MCH, PCV,MCHC
6. Differential leukocyte count
7. ESR
8. Peripheral smear reporting for haemoparasite
9. Peripheral smear reporting for haematological abnormalities
10. Reticulocyte count
11. Absolute eosinophil count
12. LE cell Phenomenon
13. Bleeding time
14. Clotting time

Urine analysis
15. Urine albumin and 24 hours estimation
16. Urine for microalbumin
17. Urine glucose/sugar
18. Urine for ketone bodies
19. Urine for bile salts, pigments & urobilinogen
20. Urine for blood
21. Urine pH
22. Urine specific gravity
23. Urine for leucocytes/Nitrates
24. Microscopy examination of urine sediments

Stool Examination
25. Stool for occult blood
26. Stool for ova/cyst or any other microscopically detected parasites
27. Sputum examination for malignant cells

TESTS DONE IN GYNAE LAB
1. Hemoglobin estimation
2. Total leukocyte count
3. Total Erythrocyte count
4. Platelet count
5. MCV, MCH, PCV,MCHC
6. Differential leukocyte count
7. Peripheral smear reporting for haemoparasite
8. Peripheral smear reporting for haematological abnormalities
9. Urine examination
10. Thyroid profile
11. Blood grouping
12. Urine for pregnancy test
TESTS DONE IN BURNS & PLASTIC LAB

1. Hemoglobin estimation
2. Total leukocyte count
3. Total Erythrocyte count
4. Platelet count
5. MCV, MCH, PCV, MCHC
6. Differential leukocyte count
7. ESR
8. Peripheral smear reporting for haemoparasite
9. Peripheral smear reporting for haematological abnormalities
10. Serum electrolytes
11. Blood urea

TESTS CARRIED OUT IN PATHOLOGY LABORATORY, NEW EMERGENCY BLOCK

1. CBC
   i. Hb
   ii. TLC/DLC
   iii. Platelet Count
   iv. RBC Count
   v. MCV
   vi. MCH
   vii. MCHC
   viii. RDW
   ix. Peripheral Smear for hemoparasite

2. Absolute Eosinophil Count

3. Coagulation Profile
   i. PT
   ii. APTT
   iii. INR

4. Urine Examination – Routine & Microscopy
   a. **Routine**
      i. Protein
      ii. Sugar
      iii. Ketones
      iv. S. Gravity
      v. pH
   b. **Microscopy**
      i. Pus Cells
      ii. Epithelial Cells
      iii. Casts
      iv. Crystals
      v. Others

5. Body Fluids for Cell Count
6. CSF for Cell Count

(Fluid Cytology for malignant cell is done in Cytology Lab. R.No. 410, VMMC College Building on all working days).

2. List of sample collection counters/rooms and sample collection timings

a) Central Collection Centre:
Central Collection Centre is situated at OPD Phase –III (Ground Floor), Room No. 19 where the samples from OPD and wards are collected for Departments of Clinical Pathology /Laboratory Medicine, Biochemistry and Microbiology.
All routine haematology/ urine/ stool samples for pathological tests are processed in this lab. Reports are dispatched to the various OPD and wards the same evening.

**Registration & Sample collection Time for OPD**
- Monday to Friday: 9:00 A.M. to 11:30 A.M.
- Saturdays: 9:00 A.M. to 10:00 A.M.

**Sample collection for ward**
- Monday to Friday: 9:00 A.M. to 11:30 A.M.
- Saturdays: 9:00 A.M. to 10:30 A.M.

b) Gynae Lab:
Gynae Lab is situated at First floor, Gynae OPD where the samples from ANCOPD and wards are collected for Department of Obst. & Gynae.

**Sample collection Time for OPD**
- Monday to Friday: 9:00 A.M. to 11:30 A.M.
- Saturdays: 9:00 A.M. to 10:00 A.M.

**Sample collection for ward**
- Monday to Friday: 9:00 A.M. to 11:30 A.M.
- Saturdays: 9:00 A.M. to 10:30 A.M.

c) Burn and Plastic Lab:
Burns & Plastic Lab is situated at Ground floor, Burns & Plastic OPD where the samples from OPD and wards are collected for Department of Burns & Plastic.
It caters to all indoor and outdoor cases of Burn and Plastic Department

**Sample collection Time for OPD**
- Monday to Friday: 9:00 A.M. to 11:30 A.M.
Saturdays : 9:00 A.M. to 10:00 A.M.

**Sample collection for ward**

Monday to Friday: 9:00 A.M. to 11:30 A.M.
Saturdays : 9:00 A.M. to 10:30 A.M.

**d) Emergency lab:**

Emergency lab is located at First floor, New Emergency building (NEB). Samples from casualty (24 hrs) and all indoor patients after 4:00 P.M.
Operational 24 hours all days, including Sundays and holidays, providing emergency services.

**e) Super speciality block lab (SSB) –**

Super speciality block lab is located at Third floor, Super speciality block building (SSB).

**Sample collection Time for OPD**

Monday to Friday: 9:00 A.M. to 11:30 A.M.
Saturdays : 9:00 A.M. to 10:00 A.M.

**Sample collection for ward**

Monday to Friday: 9:00 A.M. to 11:30 A.M.
Saturdays : 9:00 A.M. to 10:30 A.M.

**f) Histopathology:**

Histopathology lab is situated at 4th floor, VMMC College building. All surgical specimens / tissue biopsies from the various departments of Safdarjung Hospital are received, processed and examined microscopically to reach a definite diagnosis.

**Sample Receiving Time:**

- 10:00 A.M. – 12:00 Noon (Monday to Friday)
- 2:00 P.M. – 3:00 P.M. (Monday to Friday)
- 10:00 A.M. – 11:30 A.M. (Saturday)

**g) Cytopathology:**

Fine Needle Aspiration Cytology (FNAC) done in Room No. 557, 5th Floor, OPD Building

Timings: **Registration:** 9:30 A.M. – 11:00 A.M. (Monday to Friday)

- 9:30 A.M. – 10:30 A.M. (Saturday)

All the patients registered undergo FNAC procedure on the same day.
Pap's Smears & fluid Cytology: Room No.410, in Fourth Floor, Deptt. of Pathology, Vardhman Mahavir Medical College building.

    Receiving time: 9:30 A.M. – 12:00 Noon daily.

h) Main Lab:
Main lab is situated in 2nd Floor, B wing, Old casualty building

Registration & Sample Collection time:

<table>
<thead>
<tr>
<th>Days</th>
<th>Time</th>
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</thead>
<tbody>
<tr>
<td>Mon to Fri. (OPD)</td>
<td>09:00 A.M. to 11:30 A.M.</td>
</tr>
<tr>
<td>Mon to Fri. (Ward)</td>
<td>09:00 A.M. to 12:00 Noon</td>
</tr>
<tr>
<td>On Sat. (OPD)</td>
<td>09:00 A.M. to 10:30 A.M.</td>
</tr>
<tr>
<td>On Sat. (Ward)</td>
<td>09:00 A.M. to 11:00 A.M.</td>
</tr>
</tbody>
</table>

All tests done as per the list of tests done in clinical pathology.

i) Special hematology:
Special hematology lab is situated in Room No. 212, 2nd Floor, B wing, Old casualty building

Sample Collection time: 9:00 A.M. – 12:00 Noon

j) Molecular Lab:
Molecular lab is situated in Room No. 216, 2nd Floor, B wing, Old casualty building HLA typing of all the cases referred from renal transplant unit and others.

3. Report dispatch counters:-

a) Central Collection Centre [OPD Blood Sample Collection for multiple test]:
Report dispatch – All ward reports are dispatched to the respective wards on the same day.

    All OPD reports are dispatched to the respective OPDs, early morning next day.

b) Gynae Lab:

    Report dispatch –
    All ward reports are dispatched to the respective wards on the same day.
    All OPD reports are distributed at the report distribution counter in Gynae OPD under Deptt. of Obst. & Gynae.
    Some OPD reports like Hb and urine are given at the same time to the patient.

c) Burn and Plastic Lab:

    Report dispatch –
    All ward reports are dispatched to the respective wards on the same day.
All OPD reports are distributed at the report distribution counter in Burns & Plastic OPD under Deptt. of Burns & Plastic surgery.

d) **Emergency lab:**
Reports dispatched to the respective units by MTW worker.

e) **Histopathology:**
- **Report dispatch** – Room No. 413, 4th Floor, Vardhman Mahavir Medical College building.
  Time – 9:00 A.M. to 12:00 Noon (Monday to Saturday)

f) **Cytopathology:**
- **FNAC report dispatch** – Room No. 557, 5th Floor, OPD Building
  Time – 9:30 A.M. to 12:00 Noon
- **Pap smear and LBC report dispatch** – All reports are dispatched to be distributed at the report distribution counter in Gyane OPD under Deptt. of Obst. & Gynae.
- **Fluid cytology report** – Room No. 410, 4th floor, Vardhman Mahavir Medical College building
  Time – 9:00 A.M. to 12:00 Noon

g) **Main Lab:**
- **Report dispatch** –
  All ward reports are dispatched to the respective wards.
  All OPD reports are dispatched to be distributed at the report distribution counter No. 3 in Room No. 211, lInd floor, B-wing, Old casualty building.
  
  **Time:**
  - Mon to Fri. (OPD) – 09:00 A.M. to 11:30 A.M.
  - Mon to Fri. (Ward) – 09:00 A.M. to 12:00 Noon
  - On Sat. (OPD) – 09:00 A.M. to 10:30 A.M.
  - On Sat. (Ward) – 09:00 A.M. to 11:00 A.M.

h) **Special hematology:**
- **Report dispatch** –
  All reports are to be collected from Room No. 212, lInd floor, B-wing, Old casualty building.
  Time – 9:00 AM to 12:00 Noon

i) **Molecular Lab:**
- **Report dispatch** –
  All reports are to be collected from Room No. 216, lInd floor, B-wing, Old casualty building.
  Time – 9:00 A.M. to 12:00 Noon
1) LIST OF INVESTIGATIONS:

CLINICAL BIOCHEMISTRY UNIT + BIOCHEMISTRY LAB, NEW EMERGENCY BLOCK

A) Clinical Biochemistry Unit:

1. Blood Sugar
   - Fasting
   - PP
   - Random
   - OGT T
2. KFT
   - Urea
   - Creatinine
3. Serum Electrolyte
   - Na+
   - K+
4. LFT
   - T. Bil
   - D. Bil
   - I. Bil
   - AST
   - ALT
   - ALP
5. S. Protein
   - Albumin
   - Globulin
6. Lipid Profile
   - Triglycerides
   - Total Cholesterol
   - LDL
   - HDL
   - TC: HDL Ratio
7. Cardiac
   - Total CK
   - CK-MB
   - LDH
8. Sr. Ca+
9. Sr. Phosphorous
10. Sr. Amylase
11. Sr. Uric Acid
12. Urinary Creatinine
13. Creatinine Clearance
14. Asitic/Plural Fluid Protein
15. 24hr. Urinary Calcium
B) Biochemistry Lab, New Emergency Block:

1. Blood Sugar
   - Fasting
   - Random
2. KFT
   - Urea
   - Creatinine
3. Serum Electrolytes
   - Sodium
   - Potassium
4. LFT
   - Total Billirubin
   - Direct Billirubin
   - AST
   - ALT
   - ALP
5. Cardiac Enzymes
   - Total CK
   - CK-MB
6. CSF
   - CSF-Sugar
   - CSF-Protein
7. Amylase
8. Asitic/Pleural Fluid
   - Sugar
   - Protein

2) SAMPLE COLLECTION COUNTERS:

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Sample Collection Counters</th>
<th>Timing</th>
</tr>
</thead>
<tbody>
<tr>
<td>a)</td>
<td>Central Collection, Room No. 19, OPD Block</td>
<td>9am To 11:30am</td>
</tr>
<tr>
<td>b)</td>
<td>Biochemistry Collection at Biochemistry Department, Old Emergency Block, 3rd Floor</td>
<td>9am To 11:30am</td>
</tr>
<tr>
<td>c)</td>
<td>For Blood Sugar &amp; Lipid Profile, Room No. 415, Biochemistry Department, Old Emergency Block, 3rd Floor</td>
<td>8:30am To 11:30am</td>
</tr>
<tr>
<td>d)</td>
<td>Room No. 312, 3rd Floor, Super Specialty Building</td>
<td>9am To 11:30am</td>
</tr>
<tr>
<td>e)</td>
<td>Sample Collection Counter, Waiting Hall, 1st Floor, New Emergency Block</td>
<td>24 Hrs.</td>
</tr>
</tbody>
</table>
3) **DISPATCH COUNTERS**: Reports are dispatched in:-

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Dispatch Counters</th>
<th>Timing</th>
</tr>
</thead>
<tbody>
<tr>
<td>a)</td>
<td>Reporting room of all OPDs in OPD Block</td>
<td>9am To 11:30am</td>
</tr>
<tr>
<td>b)</td>
<td>All Wards, ICU in all Old Emergency Block, NEB, SSB, H-Block, Surgical, Ortho, Gynae wards.</td>
<td>4pm To 5pm</td>
</tr>
</tbody>
</table>
DEPARTMENT OF MICROBIOLOGY

1. LIST OF INVESTIGATIONS

Bacteriology Test

1. Urine Section
   a) Culture using conventional method
   b) Antibiotic susceptibility of isolated pathogens

2. Sterile Fluids including CSF Section
   a) Direct gram stain of all sample
   b) Culture using conventional method
   c) Antibiotic susceptibility of isolated pathogens
   d) Latex agglutination for selected pathogens (*Streptococcus pneumonia, Neisseria meningitides, Haemophilus influenza, Group B Streptococcus*) (on request)

3. Pus and Miscellaneous Section
   a) Direct gram stain of sputum samples, endotracheal aspirate or any other sample that is requested
   b) Culture of all samples (pus swabs, pus aspirate, throat swab, sputum, endotracheal aspirate, broncho-alveolar lavage, high vaginal swabs, semen, placental membrane, corneal scrapping, knee aspirate) by conventional method
   c) Albert’s stain for throat swabs
   d) Antibiotic susceptibility of isolated pathogens

4. Blood Section
   a) Culture using conventional and automated methods
   b) Antibiotic susceptibility of isolated pathogens
   c) Antibiotic MIC by automated (on request)
Serology

1. Widal
2. Typhi Dot
3. CRP test
4. Serum Procalcitonin (PCT) (Semiquantititative)
5. ASLO test
6. RA Factor test
7. Anti CCP Antibody test
8. Anti Leptospirosis Antibody test (Rapid and ELISA)
9. Anti Scrub Typhus Antibody test (Rapid and ELISA)

Parasitology

1. Stool Routine Microscopy for ova and cyst
2. Stool for vibrio (Hanging Drop)
3. Stool culture and susceptibility
4. Stool for special parasites
5. Blood for microfilaria
6. Liver Abscess aspirate for Entamoeba histolytica/Hydatid cysts
7. Hydatid serology
8. Rapid Malaria Antigen test
9. Peripheral smear for malarial parasite
10. Kala Azar (rK39 Test)
11. Anti-Neurocysticercosis antibody Test
12. Anti-Entamoeba histolytica antibody Test
13. Filarial antigen test

Anaerobic

1. Culture
2. Clostridium difficile toxin detection

Tuberculosis

1. ZN Stain
2. Culture (MGIT)
3. Molecular tests (on request)

Mycology

1. KOH mount
2. India ink
3. Mycology stains – grams and giemsa
4. Culture
5. Antifungal susceptibility test
6. Galactomannan
7. Pan Fungal PCR

Virology other than Hepatitis

1. TORCH panel Test
2. Dengue NS1
3. Anti Dengue IgM
4. Anti Chikungunya IgM

Influenza A H1N1 (Swine Flu)

1. Qualitative Real Time PCR
2. Respiratory Viral pathogens (on request)

Hepatitis

1. Anti HBs Antibody titres for Health care workers
2. HBsAg ELISA
3. HBsAg Card Test
4. Anti HBe core Ab IgM
5. HBeAg ELISA
6. Anti HCV ELISA
7. HCV DOT Card Test
8. Anti HAV ELISA
9. Anti HEV ELISA
10. Anti HBS Ag ELISA (Semiquantitative)

STD

1. HIV 1 & 2 Antibody Test (Immuno-chromatography, Lateral Flow)
2. HIV 1 & 2 Antibody Test (Immuno-concentration, Flow through)
3. HIV 1 & 2 Antibody Test (Enzyme Immuno Assay)
4. HIV 1 & 2 Antibody Test (ELISA)
5. CD4 Cell Count
6. VDRL (Qualitative and Quantitative)
7. RPR (Qualitative and Quantitative)
8. TPHA
9. FTA-Abs
10. TP IgG ELISA
11. Gram Stain for Neisseria gonorrhoea, H ducreyi, Candida, Bacterial vaginosis
12. Giemsa stain for MNGC, Donovan Bodies
13. Dark Ground examination for Treponema pallidum
14. Wet mount for Trichomonas vaginalis, KOH mont for Candida
15. Aerobic Culture for Neisseria gonorrhoea, Candida, Trichomonas vaginalis
16. Antimicrobial susceptibility testing for Neisseria gonorrhoea
17. Antimicrobial susceptibility testing for fluconazole

NEB

1. Urine culture
2. Blood culture by Automated blood culture system - BacTAlert 3D system
3. Pus culture - Aspirate and swab
4. ET culture
5. Tissue culture
6. Culture of sterile body fluids - pleural fluid, peritoneal fluid, pericardial fluid, CSF
7. Throat swab culture
8. Gram stain
9. Albert's stain
10. India Ink preparation
11. Malarial antigen - rapid card test
12. CRP - latex agglutination
13. ASO - latex agglutination
14. RA factor - latex agglutination
15. Susceptibility testing - disk diffusion and automated ID and AST system (Vitek 2)
16. Urine microscopy - uncentrifuged specimen
17. HBSAg - Immunochromatographic test
18. Anti-HCV antibodies - Rapid test (ICT/Flow through)

2. LIST OF SAMPLE COLLECTION COUNTERS, THE SAMPLES COLLECTED THERE AND SAMPLE COLLECTION TIMING

1. Routine samples – Room No 9, OPD Building, Ground Floor (Monday to Friday: 9AM-11:30AM, Saturday 9AM to 10:30AM)
2. Ward samples – collection counter, near office of Department of Microbiology, 5th Floor, College Building
   Routine Samples up to 12:00PM (Monday to Friday) & 10:30AM (Saturday)
   Emergency Samples up to 3:30PM (Monday to Friday) & 12:30AM(Saturday)
3. All other samples beyond routine sample timings are accepted in NEB, Room No.107, 1st Floor, NEB Building.

Note: Urine samples for culture & sensitivity will not be accepted after 12:30 PM in Main Laboratory and after 4.00 PM in NEB
3. REPORT DISPATCH COUNTERS

All the reports are dispatched to the respective OPDs and departments by laboratory attendants. Important/Critical reports are communicated on the telephone

<table>
<thead>
<tr>
<th>Name of the test</th>
<th>Turn around time</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BACTERIOLOGY</strong></td>
<td></td>
</tr>
<tr>
<td>Bacteriological Culture</td>
<td>24-48hrs (Some cases up to 72hrs)</td>
</tr>
<tr>
<td>Gram’s Stain, Albert’s Stain, Wet mount, Stool hanging drop</td>
<td>Available same day. Reports dispatched next day</td>
</tr>
<tr>
<td><strong>SEROLOGY</strong></td>
<td></td>
</tr>
<tr>
<td>WIDAL</td>
<td>24hrs</td>
</tr>
<tr>
<td>Typhi Dot</td>
<td>Available same day. Reports dispatched next day</td>
</tr>
<tr>
<td>CRP test</td>
<td>Available same day. Reports dispatched next day</td>
</tr>
<tr>
<td>Serum Procalcitonin (PCT) (Semiquantitative)</td>
<td>Tested in batches (once in 15 days)</td>
</tr>
<tr>
<td>ASLO test</td>
<td>Available same day. Reports dispatched next day</td>
</tr>
<tr>
<td>RA Factor test</td>
<td>Available same day. Reports dispatched next day</td>
</tr>
<tr>
<td>Anti CCP Antibody test</td>
<td>Tested in batches (once in 15 days)</td>
</tr>
<tr>
<td>Anti Leptospirosis Antibody test (Rapid and ELISA)</td>
<td>Rapid- Available same day. Reports dispatched next day</td>
</tr>
<tr>
<td>Anti Scrub Typhus Antibody test (Rapid and ELISA)</td>
<td>Rapid- Available same day. Reports dispatched next day</td>
</tr>
<tr>
<td></td>
<td>ELISA- Tested in batches</td>
</tr>
<tr>
<td><strong>PARASITOLOGY</strong></td>
<td></td>
</tr>
<tr>
<td>Stool Routine Microscopy for ova and cyst</td>
<td>Available same day. Reports dispatched next day</td>
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<tr>
<td>Stool for vibrio (Hanging Drop)</td>
<td>Available same day. Reports dispatched next day</td>
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<td>Stool culture and susceptibility</td>
<td>24-48hrs</td>
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<td>Stool for special parasites</td>
<td>Available same day. Reports dispatched next day</td>
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<tr>
<td>Blood for microfilaria</td>
<td>Available same day. Reports dispatched next day</td>
</tr>
<tr>
<td>Liver Abscess aspirate for Entamoeba histolytica/Hydatid cysts</td>
<td>Available same day. Reports dispatched next day</td>
</tr>
<tr>
<td>Hydatid serology</td>
<td>Tested in batches (once in 15 days)</td>
</tr>
<tr>
<td>Rapid Malaria Antigen test</td>
<td>Available same day. Reports dispatched next day</td>
</tr>
<tr>
<td>Peripheral smear for malarial parasite</td>
<td>Reports dispatched next day</td>
</tr>
<tr>
<td>Test</td>
<td>Time frame</td>
</tr>
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<td>----------------------------------------------------------------------</td>
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</tr>
<tr>
<td>Kala Azar (rK39 Test)</td>
<td>Tested in batches (once in 15 days)</td>
</tr>
<tr>
<td>Anti-Neurocysticercosis antibody Test</td>
<td>Tested in batches (once in 15 days)</td>
</tr>
<tr>
<td>Anti- Entamoeba histolytica antibody Test</td>
<td>Tested in batches (once in 10 days)</td>
</tr>
<tr>
<td>Filarial antigen test</td>
<td>Tested in batches (once in 15 days)</td>
</tr>
<tr>
<td>Clostridium difficile toxin detection</td>
<td>Reports dispatched next day</td>
</tr>
<tr>
<td><strong>MYCOBACTERIOLOGY</strong></td>
<td></td>
</tr>
<tr>
<td>Mycobacterium Culture</td>
<td>4-6 weeks</td>
</tr>
<tr>
<td>ZN Stain</td>
<td>Dispatched the next day.</td>
</tr>
<tr>
<td>Molecular Test for TB</td>
<td>Tested in batches (bi-monthly to monthly)</td>
</tr>
<tr>
<td><strong>MYCOLOGY</strong></td>
<td></td>
</tr>
<tr>
<td>Mycology Culture (Molds)</td>
<td>7-28 days</td>
</tr>
<tr>
<td>Mycology Culture (Yeast)</td>
<td>1-3 days</td>
</tr>
<tr>
<td>KOH Mounts, India Ink</td>
<td>Available same day. Reports dispatched next day</td>
</tr>
<tr>
<td>Mycology Stains (Gram’s and Giemsa)</td>
<td>Available same day. Reports dispatched next day</td>
</tr>
<tr>
<td>Galactomannan</td>
<td>Tested in batches (weekly)</td>
</tr>
<tr>
<td>Pan Fungal PCR</td>
<td>Tested in batches (bimonthly to monthly)</td>
</tr>
<tr>
<td><strong>VIROLOGY</strong></td>
<td></td>
</tr>
<tr>
<td>TORCH panel Test</td>
<td>Tested in batches (10 days)</td>
</tr>
<tr>
<td>Dengue NS1</td>
<td>Seasonal – 24hrs, Non-seasonal (Tested in batches – 3-4 days)</td>
</tr>
<tr>
<td>Anti Dengue IgM</td>
<td>Seasonal – 24hrs, Non-seasonal (Tested in batches – 3-4 days)</td>
</tr>
<tr>
<td>Anti Chikungunya IgM</td>
<td>Seasonal – 24hrs, Non-seasonal (Tested in batches – 3-4 days)</td>
</tr>
<tr>
<td><strong>H1N1</strong></td>
<td></td>
</tr>
<tr>
<td>Qualitative Real Time PCR for H1N1</td>
<td>24-48hrs</td>
</tr>
<tr>
<td>Respiratory Viral pathogens (on request)</td>
<td>Tested in batches (bi-monthly to monthly)</td>
</tr>
<tr>
<td><strong>Hepatitis</strong></td>
<td></td>
</tr>
<tr>
<td>Anti HBs Antibody titres for Health care workers</td>
<td>4 days</td>
</tr>
<tr>
<td>HBsAg ELISA</td>
<td>4 days</td>
</tr>
<tr>
<td>HBsAg Card Test</td>
<td>Available same day</td>
</tr>
<tr>
<td>Anti HBcore Ab IgM</td>
<td>4 days</td>
</tr>
<tr>
<td>HBeAg ELISA</td>
<td>4 days</td>
</tr>
<tr>
<td>Anti HCV ELISA</td>
<td>4 days</td>
</tr>
<tr>
<td>HCV DOT Card Test</td>
<td>Available same day</td>
</tr>
<tr>
<td>Anti HAV ELISA</td>
<td>7 days</td>
</tr>
<tr>
<td>Anti HEV ELISA</td>
<td>7 days</td>
</tr>
<tr>
<td>Anti HBS Ag ELISA (Semiquantitative)</td>
<td>4 days</td>
</tr>
<tr>
<td><strong>STD</strong></td>
<td></td>
</tr>
<tr>
<td>HIV 1 &amp; 2 Antibody Test (Immuno-)</td>
<td>1 working day</td>
</tr>
<tr>
<td>Test Description</td>
<td>Duration</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>Chromatography, Lateral Flow)</td>
<td></td>
</tr>
<tr>
<td>HIV 1 &amp; 2 Antibody Test (Immuno-concentration, Flow through)</td>
<td>1 working day</td>
</tr>
<tr>
<td>HIV 1 &amp; 2 Antibody Test (Enzyme Immuno Assay)</td>
<td>1 working day</td>
</tr>
<tr>
<td>HIV 1 &amp; 2 Antibody Test (ELISA)</td>
<td>7 working days</td>
</tr>
<tr>
<td>CD4 Cell Count</td>
<td>1 working day</td>
</tr>
<tr>
<td>VDRL (Qualitative and Quantitative)</td>
<td>1 working day</td>
</tr>
<tr>
<td>RPR (Qualitative and Quantitative)</td>
<td>1 working day</td>
</tr>
<tr>
<td>TPHA</td>
<td>7 working days</td>
</tr>
<tr>
<td>FTA-Abs</td>
<td>15 working days</td>
</tr>
<tr>
<td>TP IgG ELISA</td>
<td>15 working days</td>
</tr>
<tr>
<td>Gram Stain for Neisseria gonorrhoea, H ducreyi, Candida, Bacterial vaginosis</td>
<td>1 hour</td>
</tr>
<tr>
<td>Giemsa stain for MNGC, Donovan Bodies</td>
<td>1 hour</td>
</tr>
<tr>
<td>Dark Ground examination for Treponema pallidum</td>
<td>1 hour</td>
</tr>
<tr>
<td>Wet mount for Trichomonas vaginalis, KOH mont for Candida</td>
<td>1 hour</td>
</tr>
<tr>
<td>Aerobic Culture for Neisseria gonorrhoea, Candida, Trichomonas vaginalis</td>
<td>2 days, 7 days, 7 days</td>
</tr>
<tr>
<td>Antimicrobial susceptibility testing for Neisseria gonorrhoea</td>
<td>4 days</td>
</tr>
<tr>
<td>Antimicrobial susceptibility testing for fluconazole</td>
<td>5 days</td>
</tr>
<tr>
<td><strong>NEB</strong></td>
<td></td>
</tr>
<tr>
<td>Urine culture</td>
<td>24-48hrs</td>
</tr>
<tr>
<td>Blood culture by Automated blood culture system - BacTAlert 3D system</td>
<td>24hrs-5days</td>
</tr>
<tr>
<td>Pus culture - Aspirate and swab</td>
<td>24-48hrs</td>
</tr>
<tr>
<td>ET culture</td>
<td>24-48hrs</td>
</tr>
<tr>
<td>Tissue culture</td>
<td>24-48hrs</td>
</tr>
<tr>
<td>Culture of sterile body fluids - pleural fluid, peritoneal fluid, pericardial fluid, CSF</td>
<td>24-48hrs</td>
</tr>
<tr>
<td>Throat swab culture</td>
<td>24-48hrs</td>
</tr>
<tr>
<td>Gram stain</td>
<td>Available same day. Reports dispatched immediately</td>
</tr>
<tr>
<td>Albert’s stain</td>
<td>Available same day. Reports dispatched immediately</td>
</tr>
<tr>
<td>India Ink preparation</td>
<td>Available same day. Reports dispatched immediately</td>
</tr>
<tr>
<td>Malarial antigen - rapid card test</td>
<td>Available same day. Reports dispatched immediately</td>
</tr>
<tr>
<td>CRP - latex agglutination</td>
<td>Available same day. Reports dispatched immediately</td>
</tr>
<tr>
<td>ASO - latex agglutination</td>
<td>Available same day. Reports dispatched immediately</td>
</tr>
<tr>
<td>RA factor - latex agglutination</td>
<td>Available same day. Reports dispatched immediately</td>
</tr>
<tr>
<td>Test</td>
<td>Turnaround time</td>
</tr>
<tr>
<td>------------------------------------------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>Susceptibility testing - disk diffusion and automated ID and AST system (Vitek 2)</td>
<td>24-48hrs</td>
</tr>
<tr>
<td>Urine microscopy - uncentrifuged specimen</td>
<td>Available same day. Reports dispatched immediately</td>
</tr>
<tr>
<td>HBsAg - Immunochromatographic test</td>
<td>Available same day. Reports dispatched immediately</td>
</tr>
<tr>
<td>Anti-HCV antibodies - Rapid test (ICT/Flow through)</td>
<td>Available same day. Reports dispatched immediately</td>
</tr>
</tbody>
</table>
DEPARTMENT OF HEMATOLOGY

1) Name of Tests

1. Complete Hemogram (Hb, TLC, PCV, MCV, MCH, MCHC, RBC, PLATELET, RDW, PCT)
2. DLC on P.S
3. ESR
4. RETICULOCYTE
5. Bone Marrow & Biopsy Staining
6. Cytochemistry:
   7. PAS, Px, Sudan Black, Fe.stain
7. Serum Iron
8. TIBC
9. % Saturation, of Transferrin
10. Serum ferritin
11. s. Vit B12
12. S. folic Acid
13. Special Hematology Bio-Chemistry Test (G6PD, Osmotic Fragility, Sucrose lysis Test for PNH, Sickling, Inclusion/ Heinz bodies, Plasma Hb, Urine for Hemocrydrine, Urine BJ protein, Nitro-blue test (NBT), Autohemolysis 48hrs, Meth –Haemoglobin, LE Cell, Acid Elution Test)
14. CSF Cytology
15. S. Protein Electrophroies
16. Serum Immunofixation
17. Immunohistochemistry
18. HPLC For Thalassemia
19. Platelet Aggregation (PFT)
20. Coagulation Profile Test
21. BT, CT, PT, INR, TT, APPT,
22. MIXING Study
23. FDP/D- Dimer
24. S. Fibrinogen assay
25. Special test coagulation
26. Factor VIII Assay
27. Factor IX Assay
28. Factor XIII (Clot solubility )
29. Protein C
29. Protein S
30. A PL A
31. VwF Ag

OTHER TEST

32. RNA /DN A
33. FLOW CYTOMETRY

In the department of haematology, only referred patients are seen. The tests are performed in haematology Lab. located on first floor H-Block extension.

2) Collections counter (Room No.1) and advised haematology investigations are done in haematology Laboratory. Timing of collection 9 AM To 11.30 AM.

3) Patients are seen by clinical haematologist in room No. 5 and 5A located on ground floor of H-Block extension.

4) Reports are attached to the haematology file and can be collected from Room No. 1 of haematology OPD on the direction of treating clinical haematologist. Timing (9 AM TO 4PM ).
<table>
<thead>
<tr>
<th>INVESTIGATION</th>
<th>Sample centre</th>
<th>Collection centre</th>
<th>Dispatch / report collection centre</th>
</tr>
</thead>
<tbody>
<tr>
<td>HISTOPATH (Tissue &amp; Bone Biopsy)</td>
<td>CIO LAB</td>
<td>Timing (9 am TO 4pm)</td>
<td>CIO LAB Timing (9 am TO 4pm)</td>
</tr>
<tr>
<td>CYTOPATH (FNAC)</td>
<td>CIO LAB</td>
<td>Timing (9 am TO 4pm)</td>
<td>CIO LAB Timing (9 am TO 4pm)</td>
</tr>
<tr>
<td>HEMATOLOGY (CBC WITH ESR ) Biochemistry &amp; serology (only for orthopedic patient)</td>
<td>ROOM NO. 5G</td>
<td>Timing (9am TO 11.30 am )</td>
<td>Room no 10 , Ground Floor Timing (9 am TO 4pm)</td>
</tr>
</tbody>
</table>