Microbiology Primary Sample Collection Manual

Prepared By	**Department of Microbiology, Government Medical College, Surat**
	MI:C\Internal Documents\0012\b\ Primary sample collection manual
Effective Date:	**20th June 2024**
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1. Amendment records

Sr. No	Page	Chapter Name/Number	Date of Amendment	Amendment made	Reasons for amendment	Signature of person authorizing amendment

2. Introduction and List of services provided by Microbiology department

This manual is designed to give an overall view of the services available in the Microbiology Laboratory at Government Medical College, Surat which cater services under NEW CIVIL HOSPITAL SURAT LABORATORY SERVICES.It is intended as a quick reference guide for all users of the Microbiology service to patients of New civil Hospital, Surat and as reference centre for PHCs and CHCs of South Gujarat.

- The laboratory will be responsible for the impartiality of its laboratory activities and will not allow commercial, financial or other pressures to compromise impartiality.
- Laboratory will be responsible for the management of all patient information obtained or created during the performance of laboratory activities including privacy and confidentiality. The laboratory will inform the user and/or the patient in advance, of the information it intends to place in the public domain. Except for information that the user and/or the patient makes publicly available, or when agreed between the laboratory and the patient (e.g. for the purpose of responding to complaints), all other information is considered proprietary information and will be regarded as confidential.

Please note this manual is intended for use as a guide only.

1.1 Service Description

- The department offers a comprehensive range of diagnostic services in routine Bacteriology, Parasitology, Serology, Virology, Mycology, Molecular Testing.
- The department also offers consultation in microbiology, infectious diseases and antibiotic utilization and provision of statistical and cumulative data for infectious disease monitoring.
- The proper selection, collection and transport of specimens to the laboratory is, an essential part of the quality assurance of the microbiology laboratory. Results are reported rapidly and phoned if necessary to ensure timely intervention for optimum patient care. As part of the quality assurance process within the laboratory, turnaround times are routinely audited.
- The department is accredited by the National Accreditation Board for Laboratories (NABL) for various tests.

1.2 Scope of the Service

- Diagnostic Bacteriology including Antimicrobial susceptibility testing.
- Diagnostic Microbial Serology,Virology,Mycology,Parasitology and molecular testing.
- Guidance on Antimicrobial therapy.
- Guidance on infection Control and Outbreak Management

List of Medical Services Provided by Microbiology department

SR. NO.	SPECIFIC TESTS/ EXAMINATION	NABL /NON NABL
1.	Aerobic Culture and antimicrobial susceptibility for urine	NABL
2.	Aerobic Culture and antimicrobial susceptibility for pus	NABL
3.	Aerobic Culture and antimicrobial susceptibility for Swab	NABL
4.	Aerobic Culture and antimicrobial susceptibility for body fluid (Acsitic fluid/ Pleural fluid, synovial fluid, CSF, Peritoneal fluid, Bronchoalveolar lavage, gastric Lavage)	NABL
5.	Aerobic Culture and antimicrobial susceptibility for Blood	NABL
6.	Aerobic Culture and antimicrobial susceptibility for Bile	NABL
7.	Aerobic Culture and antimicrobial susceptibility for Sputum	NABL
8.	Aerobic Culture and antimicrobial susceptibility for Stool	NABL
9.	Gram Stain	NABL
10.	Acid Fast Stain	NABL
11.	Albert's stain	NABL
12.	Special stain (Toluidine blue stain,Giemsa, Fontana, Modified AFB stain)	Non NABL
13.	Water sample culture	Non NABL
14.	OT sample culture	Non NABL
15.	Hepatitis-B Rapid test for HBs Antigen detection	NABL
16.	Hepatitis-B ELISA test for HBs Antigen detection	NABL
17.	Slide Widal test	NABL
18.	Rapid plasma reagin test.(RPR)	NABL
19.	Anti Streptolysin O test (ASO)	NABL
20.	C Reactive Protein (CRP)	NABL
21.	Rheumatoid Factor (RA test)	NABL
22.	Ig M antibody detection for HAV by rapid test	NABL
23.	Ig M antibody detection for HEV by Rapid test	NABL
24.	Ig M antibody detection for HAV by ELISA test	NABL
25.	Ig M antibody detection for HEV by ELISA test	NABL
26.	Ig M and Ig G antibody detection for Measles	Non NABL
27.	Ig M antibody detection for HCV by rapid test	NABL
28.	Ig M antibody detection for HCV by ELISA test	NABL
29.	Rapid test for typhoid fever- Enterocheck	NABL
30.	Ig M antibody detection for Chikungunya	Non NABL
31.	NS1 antigen for Dengue	Non NABL
32.	Ig M ELISA - antibody detection for Dengue	Non NABL
33.	Fungal culture	Non NABL
34.	KOH Preparation	Non NABL
35.	Indian ink preparation for Cryptococcus	Non NABL
36.	Stool for Ova- Cyst	Non NABL
37.	Leptospirosis -Rapid test for Ig M antibody detection	NABL
38.	Leptospirosis -ELISA test for Ig M AND Ig G antibody detection	NABL
39.	Leptospirosis(MAT-Microscopic agglutination) for Ig M &Ig G	NABL
40.	Leptospirosis(PCR- Polymerase chain reaction)	Non NABL
41.	HIV test for Antibody detection	NABL

42.	CD4 Count	Non NABL
43.	HIV – 1 Viral Load Test- Quantitative	NABL
44.	H1N1 influenza (PCR-polymerase chain reaction)	Non NABL
45.	HBV viral load test-Quantitative	NABL
46.	HCV viral load test-Quantitative	NABL
47.	COVID-19 RT PCR test-Qualitative	NABL

3. Instructions to clinicians for communication and selection of examinations

Please refer to the list of microbiology laboratory services provided to find whether an examination intended is available or not before sample collection. Please make sure that examination is requested and sample is collected in such a way that it reaches microbiology sample receiving centre at stipulated time.

Location during working hours (Monday to Friday: 9-5 pm, Saturday: 9-1 pm): Microbiology department, 3rd floor, Govt. med. college, Surat. Phone no.-0261-2231236 Extension no.-408

For OPD Samples (Monday to Saturday: 10-6 pm): OPD 10 sample collection centre, Old OPD building and Laboratory No. 19, 20 sample collection centre , Kidney building

For HIV testing (Monday to Friday: 9-5 pm, Saturday: 9-1 pm): ART centre OPD-21, Old OPD building

Location during emergency hours (Monday to Friday: After 5 pm Saturday: After 1 pm & Sunday, Holidays**)**: Microbiology department, 3rd floor, Govt. med. college, Surat.

SR. NO.	SPECIFIC TESTS/ EXAMINATION	Reference range	Working hours
1.	Aerobic Culture and antimicrobial susceptibility for urine	Not applicable	Monday to Friday: 9-5 pm Saturday: 9-1 pm
2.	Aerobic Culture and antimicrobial susceptibility for pus		
3.	Aerobic Culture and antimicrobial susceptibility for swab		
4.	Aerobic Culture and antimicrobial susceptibility for body fluid (Acsitic fluid/ Pleural fluid, synovial fluid, CSF, Peritoneal fluid, Bronchoalveolar lavage, gastric Lavage)		
5.	Aerobic Culture and antimicrobial susceptibility for Blood		
6.	Aerobic Culture and antimicrobial susceptibility for Bile		
7.	Aerobic Culture and antimicrobial susceptibility for Sputum		
8.	Aerobic Culture and antimicrobial susceptibility for Stool		
9.	Gram stain		
10.	Acid Fast Stain		
11.	Special stain (Albert's stain, Toluidine blue stain,Giemsa, Fontana, Modified AFB stain)		
12.	Water sample culture		
13.	OT sample culture		
14	Hepatitis-B Rapid test for HBs Antigen detection		

15.	Hepatitis-B ELISA test for HBs Antigen detection		
16.	Slide Widal test	O≥1:80,H≥1:80,AH≥1:80,BH≥1:80	
17.	Rapid plasma reagin test.(RPR)	>1:2 titre	
18.	Anti Streptolysin O test (ASO)	≥200 IU/ml	
19.	C Reactive Protein (CRP)	≥0.6 mg/dl	
20..	Rheumatoid Factor (RA test)	≥8 IU/ml	
21.	Ig M antibody detection for HAV by rapid test	Not applicable	
22.	Ig M antibody detection for HEV by Rapid test		
23.	Ig M antibody detection for HAV by ELISA test		
24.	Ig M antibody detection for HEV by ELISA test		
25.	Ig M and Ig G antibody detection for Measles		
26.	Ig M antibody detection for HCV by rapid test		
27.	Ig M antibody detection for HCV by ELISA test		
28.	Rapid test for typhoid fever- Enterocheck		
29.	Ig M antibody detection for Chikunguniya		
30.	NS1 antigen for Dengue		
31.	Ig M ELISA - antibody detection for Dengue		
32.	Fungal culture		
33.	KOH Preparation		
34.	Indian ink preparation for Cryptococcus		
35.	Stool for Ova- Cyst		
36.	H1N1 influenza (PCR-polymerase chain reaction)		
37.	COVID-19 RT PCR test		
38.	Leptospirosis -Rapid test for Ig M antibody detection		
39.	Leptospirosis(PCR- Polymerase chain reaction)		
40.	Leptospirosis -ELISA test for Ig M AND Ig G antibody detection	> 11 pan bio unit	
41.	Leptospirosis(MAT-Microscopic agglutination) for Ig M &Ig G	≥1:100 titre	
42.	CD4 cell Count (ART CENTRE, OPD-21)	**Adult:** Male:381-1565cells/µl, Female:447-1846 cells/µl **Paediatric:** Up to 1 year:400-5300 cells/µl,1-5 year:500-5500 cells/µl,5-16 year:300-2100 cells/µl	

43.	HIV test for Antibody detection	Not applicable	
44.	HIV – 1 Viral Load Test (2^{nd} floor, HIV viral load lab, Govt. medical college, Surat)	Not applicable	Monday to Friday: 10am -4 pm Saturday: 10-12 am
45.	HBV viral load test	Not applicable	Sample collection at Hemophilia OPD: Tuesday and Friday (10 am to 12 pm) Report Dispatch: Friday (10 am to 12 pm)
46.	HCV viral load test		

SR. NO.	**SPECIFIC TESTS/ EXAMINATION**	**Emergency hours**
1	Gram stain (Suspected gas gangrene, Diphtheria, CSF meningitis, precious body fluids)	Monday to Friday: After 5 pm Saturday: After 1 pm Sunday
2	HIV rapid test for Antibody detection	
3	Hepatitis-B Rapid test for HBs Antigen detection	
4	Leptospirosis -Rapid test for antibody detection	
5	Rapid test for HCV antibody detection	
6	Stool darting motility for suspected cholera cases	
7	India ink preparation in CSF sample for cryptococcal meningitis	

Note: A negative Microbiology result does not exclude the presence of infection

TEST REQUEST

Routine Test Request

All test requests for laboratory tests should be made by a clinician /resident doctors using different microbiology request forms.

Ward Samples are transported to microbiology department by collection person appointed for same who deliver the sample at 11 am and 4 pm daily or by servant or ward attendant of respective wards with due precautions regarding sample transportation with proper cold chain maintenance. Ward reports are collected by same person who is responsible for sample collection at 10 and 1pm and deliver to respective wards.

OPD samples are collected in OPD collection centre and appointed servant of microbiology goes to both OPD collection area for sample receipt at 10 am and 1 pm. Sample collected in evening OPD are kept in refrigerator and collected next day by same servant. OPD reports are available from opd itself.

HBV HCV viral load reports are to be collected from haemophilia OPD on Friday at 10am-12pm.
HIV reports to be collected from OPD 21 at 4pm.

URGENT Test Request
If the laboratory test result is required urgently for patient(s)' management, please write in red using bold letter "**URGENT** " on the request form and call the laboratory for informing us and urgent pick-up. The laboratory will notify the doctor immediately once the results are ready, followed by written reports. Critical reports are also informed immediately telephonically or in person and documented also.

Add-On Test
We discourage additional tests to be requested on sample drawn earlier due to sample degradation because of storage changes and sample integrity which can affect test results.
However, if you need to add on a test after the sample has been collect by the laboratory, please call the respective diagnostic centre/main laboratory to check if the sample is still available and suitable for performing the additional test request.

Oral test request
We discourage the oral request for sample testing, though sample is sent without request form and oral request is received, with in time documentation of such is done in routine register with red mark and asked for duly filled request form and report is dispatched.

Special test request
Some special microbiological test not catered by lab and asked by physician, then testing lab for that particular test is identified. Treating physician is guided regarding sample collection, packaging of sample, infection control measure and filling of lab request form. Testing lab is communicated regarding arrival of sample in triple layer packaging with duly filled request form and Communication details. Once result is received from lab, it is communicated with treating physician.

Process flow of sample collection at the hemophilia opd for HBV HCV viral load testing

Whole blood Samples for HBV HCV viral load testing are collected on every Tuesday and Friday at Hemophilia OPD between 10 to 12 pm. Blood sample is transported to lab by assigned person in cold chain maintenance on same day. Reports are to be collected from there on Friday after 14 days of sample receiving.Contact person at haemophilia centre: Dr.Kristin (Medical officer) ,Mobile no.9898326416

4. Laboratory request form essentials

The test request must be made in **Microbiology Request Form**

Mandatory Information Needed on All Patient Requisitions

- **Patient's name**

Correct identification is essential for patient safety "
Each patient must be identified positively, using active communication techniques by means of two patient identifiers (patient's name/Identification number before collecting a sample for clinical testing).

In an in-patient setting, the patient's room number or physical location should NOT be used as an identifier. The patient's name and hospital ID number may be used as the two identifiers.

The patient's identity should be verified by asking the patient to identify him or herself, prior to collecting the samples. The identifying label must be attached to the sample container(s) at the time of collection. The containers used for laboratory samples should be labelled with the identifiers in the presence of the patient. Please write the patient's name clearly and legibly. Correct spelling of patient's name and provision of other relevant bio-data are essential to ensure that the sample collected and received by the laboratory come from the correct patient.

- **Patient's identification Number**

This is unique identification number used as patient's identifiers.

- **Patient's Mobile Number**

- **Patient's Informed Consent**

Please provide clear explanation to the patients about the laboratory tests and how they will be collected. Where necessary, such as HIV testing, HBV Viral load testing, HCV Viral load testing, please obtain written informed consent.

In HIV testing consent and recognized counselling is required, which is in examination under scope in Microbiology section. However, all examination under scope of Microbiology section requires oral consent after explanation of need for examination and need for sample collection. Every requisition form is signed by doctor. For HIV testing written consent is mandatory and pre-test counselling of patient is must. In HBV and HCV viral load testing, Consent is mandatory in request form which is obtained after briefing regarding need for testing. If obtaining consent is not possible during emergency situations, though testing is performed and communication is done with relevant clinician and consent is further obtained while dispatching the result.

- **Date and Time of Sample Collection**

The exact date and time of sample collection should be indicated to enable monitoring of sample integrity. The laboratory will counter check the availability at the time of reception. This information is critical for proper evaluation of the results, especially for test results affected by diurnal differences, such as some of hormonal tests.

- **Nature of Sample**

Identify sample source by indicating the specific body site from which the sample had been taken.

- **Name and Details of Ordering Doctor**

Details of the requesting doctor (i.e. name, address, telephone and fax number of the organization, and e-mail address) should be included in the requesting form. The requesting doctor must sign the requesting form. This is to facilitate communication of test results, including notification of critical laboratory results, urgent test results or further discussion of the case (if needed). The use of pre-signed forms is strongly

discouraged.

- **Clinical History,Epidemiological details, Age and Gender**

This information is useful in assisting the laboratory to interpret test results, where the appropriate reference ranges can be included in the patient's laboratory reports.
Please include the clinical diagnosis, suspected disease/organism, brief clinical history, name, date and duration of treatment given, previous test results with dates and previous laboratory numbers, patient's immune status (e.g. any underlying diseases, cancer chemotherapy, immunosuppressive treatment), and any other relevant patient or clinical data in the special instruction section of the requesting form. These information are useful in assisting the laboratory staff interpret the results.

Relevant clinical information for given tests

Sr. no	Specific tests/ examination performed	Required clinical information in request form along with result of previous test/ reference number of laboratory
1.	Aerobic Culture and antimicrobial Susceptibility for urine	Probable clinical diagnosis, date and time of sample collection
2.	Aerobic Culture and antimicrobial Susceptibility for pus	Probable clinical diagnosis& site, date and time of sample collection
3.	Aerobic Culture and antimicrobial Susceptibility for swab	
4.	Aerobic Culture and antimicrobial Susceptibility for body fluid (Acsitic fluid/ Pleural fluid, synovial fluid, CSF, Peritoneal fluid, Bronchoalveolar lavage, gastric Lavage)	Probable clinical diagnosis & time of Collection
5.	Aerobic Culture and antimicrobial Susceptibility for Blood	Probable clinical diagnosis, date and time of sample collection & address
6.	Aerobic Culture and antimicrobial Susceptibility for stool	
7.	Aerobic Culture and antimicrobial Susceptibility for Sputum	Probable clinical diagnosis, date and time of sample collection
8.	Aerobic Culture and antimicrobial Susceptibility for Bile	Probable clinical diagnosis & time of collection, date and time of sample collection
9.	Gram stain	Probable clinical diagnosis, date and time of sample collection
10.	Acid fast Stain	
11.	Special stain (Albert's stain, toludine blue stain)	
12.	Water sample	Probable clinical diagnosis, date and time of sample collection & address
13.	OT sample	Site, date and time of sample collection & address
14.	Hepatitis-B Rapid test for HBs Antigen detection	Probable clinical diagnosis & Liver function test value, if available.
15.	Hepatitis-B ELISA test for HBs Antigen detection	Probable clinical diagnosis
16.	Widal test for Typhoid (Tube agglutination test)/ Rapid test for typhoid	Probable clinical diagnosis & address, h/o fever duration
17.	Test for Syphilis-Rapid plasma reagin test. (latex agglutination test)	Probable clinical diagnosis

18.	Anti Streptolysin O test (latex agglutination card test)	
19.	C Reactive Protein(CRP)(latex agglutination card test)	
20.	Rheumatoid Factor (RA test)(latex agglutination card test)	
21.	Ig M antibody detection for HAV by rapid test	Probable clinical diagnosis & liver function test results
22.	Ig M antibody detection for HEV by rapid test	
23.	Ig M antibody detection for HAV by ELISA test	
24.	Ig M antibody detection for HEV by ELISA test	
25.	Ig M antibody detection for HCV by rapid test	Probable clinical diagnosis
26.	Ig M antibody detection for HCV by ELISA test	
27.	Ig M antibody detection for Chikunguniya	Probable clinical diagnosis & address
28.	Ig M antibody detection for Dengue	Probable clinical diagnosis & address, Plat let count, total count, duration of fever
29.	Ig M &Ig G antibody detection for Measles	Probable clinical diagnosis & address, age, History of fever, rashes, vaccination
30.	FUNGAL culture	Probable clinical diagnosis, date and time of sample collection
31.	KOH Preparation	Probable clinical diagnosis& site of collection
32.	Indian ink preparation of CSF for Cryptococci	Probable clinical diagnosis & address
33.	Stool for ova- cyst	
34.	Leptospirosis -Rapid test for Ig M antibody detection	Probable clinical diagnosis,days of illness, fever, clinician's mobile number
35.	Leptospirosis -ELISA test for Ig M and Ig G antibody detection	
36.	HIV rapid test for Antibody detection	
37.	HIV ELISA test for Antibody detection	
38.	CD 4 count	
39.	HIV – 1 Viral Load Testing	Probable clinical diagnosis, Unique Patient ID for viral load, HIV status
40.	Leptospirosis(MAT-Microscopic agglutination)	Probable clinical diagnosis ,days of illness, fever, clinician's mobile number
41.	Leptospirosis(PCR- Polymerase chain reaction)	
42.	NS1 antigen for Dengue	
43.	H1N1 influenza	Probable clinical diagnosis, category of patient, x-ray findings, days of illness, fever, clinician's mobile number
44	COVID-19 RT PCR test	
45	HBV viral load test	HbsAg status, Liver function test
46	HCV viral load test	HCV IgM Ab, Liver function test

5. Laboratory requisition forms

NCHSLS Microbiology Examination Request From

Name			Dept/Unit /Ward /Reg. ID/OPD No	
Age				
Sex				

Type Sample (make circle)	Pus/Swab/ Sputum/Urine/Pleural fluid/ asctic fluid/ CSF/ Drain any other -for culture Sensitivity, Scraping material for KOH and Fungal culture, Stool for ova cyst, OT swab Others		
Complete address		Provisional Diagnosis	

Clinical history:_____
Investigation:- Hb:_____ TC:_____
PLT:_____LFT:_____
RFT:_____ Results of previous test if any:-

Examination requested with initials of requester

Sr.No	Tick"	Investigation	Sr.No	Tick"	Investigation
1		Microscopy Gram/ AFB stain	13		Chikungunya
2		Culture & sensitivity	14		Fungal culture
3		HBsAg	15		KOH
4		HAV	16		TORCH
5		HEV	17		ANA
6		Measles	18		HSV-1
7		HCV	19		HSV-2
8		Widal test/ Rapid test	20		Special stain
9		ASO	21		India ink preparation
10		CRP	22		Stool ova cyst
11		RA	23		others

Remarks of Sender:(if any)

Date and time of sample collectio	Initial of person collecting Sample must be	Date and time of sample receipt with initials laboratory technician and Sample	

Box below is kept blank for any special notes:
Critical Report to be informed to contact phone No/ inter com No._____

---FOR LABORATORY USE:

Ensure all Entries in this Form are completed before dispatch of Sample to Laboratory
Sample receipt time: _____am/pm. Date: _____ Lab.I.D. No: _____ Quality of Primary sample: Good/Poor (if Poor_____)
REMARKS: ( ) Accepted / ( ) Rejected. Send proper & fresh sample with new request form.
Name & signature of the Person who received the Sample:

INSTRUCTIONS TO CLINICIANS:

1. Select the appropriate container for the prescribed investigation. Specimen container must be properly labeled with

Patient's Name, Ward/Unit, Date & Time. This Request Form should accompany each sample & all entries should be complete & legible. Incomplete form may lead to rejection of sample.

2.Results of the laboratory investigations are dependent upon the quality of the sample. It should be transported to the laboratory withproperly filled request form, immediately after the collection and maintain cold chain whenever required.

3.Remarks of the sender regarding clinical information, previous reports & drug therapy are helpful to laboratory. Any additionalrequirements can be entered in remarks for sender.

4.When patient is in Intensive care/critical /infectious condition or any urgency, then put the remark of patient status in the request form.

5.International guidelines of ISO15189:2007 as per NABL India are now being implemented in this Laboratory.

6.Any specimen should not be falsely labeled urgent. Emergency laboratory is working after Office hours in routine days & round the clock on Sunday & holidays.

7.Any query from the sender is directed to the Laboratory In -charge.

Instructions for specific tests:

For Serological tests

1. Collect 3 - 5 ml blood in PLAIN test tube / vacutainer.

2If there is delay in transportation, refrigerate at 2 - 8^0 C.

3Expected time required by the laboratory to process specimen & give test report is

Culture & sensitivity

1.CONTAINER: Container must be STERILE for culture & sensitivity testing.

 Dry, clean. leak proof container with lid.

 Wide mouth container to be used for urine, stool & sputum with lid.

2. URINE: Clean catch midstream sample, preferably early morning

3.SPUTUM:

After mouthwash with drinking water

 After deep breathing, cough out sputum

Taking due care that not to mix mucopurulent part of sputum with saliva.

4.SWAB: Collect from active area of wound / inflammation.

5.Expected time required by the laboratory to process specimen & give test report is: For Negative: after one

overnight incubation. For positive: after 2 overnight incubations.

6.BLOOD FOR CULTURE : During collection of blood, do not touch the site after venupuncture site after the skin preparation. Aseptically withdraw adequate amount of blood; 5-10 for adult; 2-5ml for pediatric & 0.5 - 2ml for neonates. Remove the protective cover from top of culture bottle. Wipe the top of bottle by using 70% ethanol and transfer to blood culture bottle. Preferably collect blood at the time of rising of fever. Preferably collect blood before giving Antimicrobial drug.

7. Expected time required by the laboratory to process specimen & give test report for Blood & Fungal culture Up to 7 days of sample receipt.

NEW CIVIL HOSPITAL SURAT LABORATORY SERVICES
MAJURA GATE, SURAT, PHONE NO .0261-2244456
DEPARTMENT OF MICROBIOLOGY,

INTEGRATED COUNSELLING & TESTING CENTRE (ICTC)

LABORATORY REQUEST FORM FOR HIV TESTING

(TO BE FILLED BY THE REQUESTING DOCTOR AFTER PRETEST COUNSELLING)

Registration NO. / Patient ID NO.: _____ AGE: _____ GENDRE: MALE/FEMALE

Patients Name (Optional): _____ WARD/UNIT: _____

Address:_____

Requesting Doctor with Name/Unit: _____ Contact No/Extension no. _____

Brief Clinical Information & Treatment given:_____

Reason of Urgency: _____

I am informed about HIV testing & have been given counseling.

_____**Signature Of the Patient**

Type of Primary Sample: Blood in Plain Vacuttee / Serum.

Date: _____ Time of sample collection: _____ am / pm

Remarks of Sender (if any): _____

Signature of the Requesting Doctor: _____

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FOR LABORATORY USE ONLY:

(Ensure All Entries in This Form Are Completed Before Dispatch of Sample to Laboratory)

SAMPLE RECIEPT Date: _____ TIME: _____am/pm. Lab ID no: _____

Quality of Primary Sample: Good/Poor (If Poor: _____)

REMARKS: ( ) ACCEPTED / ( ) REJECTED. Send Proper & Fresh Sample With New Request Form.

Name & Signature of the Person Who Received the Sample: _____

GENERAL INSTRUCTIONS:

1. Select the appropriate container for the prescribed investigation. Specimen container must be properly labeled with Patient's Name, Ward/Unit, and Date & Time. This request Form should accompany each sample & all entries should be complete & legible. Incomplete Form may lead to rejection of sample.
2. Results of the laboratory investigations are dependent upon the quality of the sample. It should be transported to the laboratory with properly filled request form, immediately after the collection.
3. Remarks of the sender regarding clinical information, previous reports & drug therapy are helpful to laboratory. Any additional requirements can be entered in remarks for sender.
4. When patient is in Intensive care/infectious condition or any urgency, then put the remark of patient status in the request form.
5. International guidelines of ISO 15 189:2012 as per NABL India are now being implemented in this laboratory.
6. Any specimen should not be falsely labeled urgent. Emergency laboratory is working
7. after Office hours in routine days & round the clock on Sunday.
8. Any query from the sender is directed to the Laboratory In –charge.
9. Select the appropriate container for the prescribed investigation. Specimen container must be properly labeled with Patient's Name, Ward/Unit, and Date & Time. This request Form should accompany each sample & all entries should be complete & legible. Incomplete Form may lead to rejection of sample.
10. Results of the laboratory investigations are dependent upon the quality of the sample. It should be transported to the laboratory with properly filled request form, immediately after the collection.
11. Remarks of the sender regarding clinical information, previous reports & drug therapy are helpful to laboratory. Any additional requirements can be entered in remarks for sender.
12. When patient is in Intensive care/infectious condition or any urgency, then put the remark of patient status in the request form.
13. International guidelines of ISO 15 189:2012 as per NABL India are now being implemented in this laboratory.
14. Any specimen should not be falsely labeled urgent. Emergency laboratory is working after Office hours in routine days & round the clock on Sunday.
15. Any query from the sender is directed to the Laboratory In –charge.

Specific Instructions for the Test:

1. Collect 3-5 ml blood in **PLAIN VACUTTEE**.
2. If there is delay in transportation, refrigerate at 2-8^0 C.

HIV Viral Load test

All mandatory details to be filled clearly like:

- Write the patient's full name clearly, legibly and correct spelling of patient's name, age and Gender.
- Write 17 digit unique Patient ID for Viral Load. (describe in details below)
- Mention patients HIV Status and Population Type.
- If there is repeat testing, mention it's Reason.
- Mention details of patient's previous date of Viral load test and previous viral load result.
- Date of sample collection and time should be mentioned.
- Authorizing clinician name and signature should be there in TRF form.

❖ **Sample identification by Unique ART Number 17 digits**

For example,

If a patient with ART number –00876 from NCH ART centre (ART centre ID:ART-GJ-SRT-01) is undergoing his/her second Viral Load test, then the unique Viral Load test ID will be - Unique Viral Load Test ID = ART centre ID (10 digit) + Patient's ART number (5 digit) + Viral Load test number (2 digit).

ARTGJSRT01/00876/02/G

LABORATORY TEST REQUEST CUM RESULT FORM FOR HIV-1 VIRAL LOAD TESTING

To be filled by ART Centre

Patient Details **ART Centre LAB NO.**

_____

Unique Viral Load Test Id : **ARTGJ____**/_____/_____/G / T / R *

Name _____Age : _____

Gender : M / F / TG-TS

HIV Status: ☑ HIV-1 ☐ HIV-1 & 2

Viral Load Sample Details

If Repeat Testing. Reason ☐ Previous Sample Rejected ☐ Inconclusive Result ☐ Other _____

Date of Previous Viral Load Test : _____Result of previous viral load test : _____

Date Of Sample Collection _____Time Of Sample Collection _____

Date Of Sample Dispatch : _____ Date Of receiving result _____

Authorizing clinician name and signature _----------

TO BE FILLED BY VIRAL LOAD LABORATORY

Unique Viral Load Test Id : **ARTGJ____**/_____/_____/G / T / R *

Name _____Age : _____

Gender : M / F / TG-TS

Name of Laboratory : HIV VIRAL LOAD LAB, GMC, SURAT

Date of Sample received : _____ Lab Number : _____

Time of Sample received : _____:_____ Sample received in proper condition ☐Yes ☐No

Date of which sample tested : _____

Viral load by real time PCR*** : _____[copies/mL]

If no result is given, please specify reason :

Date of result dispatched : _____ Platform used: Abbott

Name & Signature of lab technician : _____Sign_____

Name & Signature of laboratory In-charge :_____Sign_____

*Code for reason of viral load testing should be entered in parenthesis after the viral load test number : 'G' for routine testing, 'T' for targeted testing and 'R' for repeat testing

** HIV-2 samples should not be sent for viral load testing

*** A sample with a result of "Target not detected [TND]" cannot be presumed to be negative for HIV-1 RNA

SAMPLE COLLECTION AND HANDLING

- All registered individuals on ART who are scheduled for VL testing should be referred by the Medical Officer to the technician at the ARTC for sample collection with filled the Test Requisition Form (TRF)
- On receiving the patient, the laboratory technician shall verify the TRF, confirm the identity of the patient by Unique ART Number and at least one other identifier such as name, age, gender etc. Unique VL test ID (17 digit) is generated by the laboratory technician at the ART centre at the time of blood collection.
- The blood collection tube should be labeled with 17 digit number/ any of two identifiers and the date and time of collection using cryo labels.
- Standard precautions should be strictly followed and blood sample should be collected wearing **powder free nitrile gloves**.
- 6 ml of whole blood sample should be collected in a K2 EDTA evacuated tube while 3 ml blood should be drawn from infants less than one year.
- Following sample collection the date and time of sample collection should be entered in the TRF. This information should be also entered manually and digitally respectively in the register and SOCH.
- The laboratory identification number of the centre and previous date and result of Viral load testing should be provided with TRF of patients.
- Completed TRF should accompany the sample throughout handling and transport.

NEW CIVIL HOSPITAL SURAT LABORATORY SERVICES
MAJURA GATE, SURAT, PHONE NO .0261-2244456
DEPARTMENT OF MICROBIOLOGY,
LEPTOSPIROSIS LABORATORY

Patient's Name:			
Father's Name /Mother's name			
Age/Gender:			
Address:		**Taluka**	**District**
Village/area			
Hospital Name :			
Ward-Unit / Registration No:			
1ST Sample / 2nd Sample:			
Date of Sample collection:			

Symptoms	
Date of onset of fever	
Course of fever :	**continuous/intermittent/remittent**
Type of fever:	**Low grade/high grade**
Condition of patient:	**Stable/critical**

Whether visited any other area during last one month:	**YES/NO**
Any other person ill with fever in the family	
Occupation	**Farmer/labour/other**

Chills	**YES**	**NO**	**Cough**	**YES**	**NO**
Vomiting	**YES**	**NO**	**Headache**	**YES**	**NO**
Conjunctival suffusion	**YES**	**NO**	**Jaundice**	**YES**	**NO**
Epitasis	**YES**	**NO**	**Heamoptysis**	**YES**	**NO**
Myalgia &arthralgia	**YES**	**NO**	**Sever joint pain**	**YES**	**NO**
Tenderness of calf muscles	**YES**	**NO**	**Rash/petechiae**	**YES**	**NO**
Photophobia	**YES**	**NO**	**Renal failure**	**YES**	**NO**
Fatigue	**YES**	**NO**	**Weakness**	**YES**	**NO**
Drowsiness	**YES**	**NO**	**Abdominal pain**	**YES**	**NO**
Retro orbital pain	**YES**	**NO**	**Altered sensorium**	**YES**	**NO**
Rigidity of neck	**YES**	**NO**	**OTHERS**		

Liver Function Test: Renal Function Test:

1. S.Bilirubin		**2.SGPT**		**1.BLOOD UREA**	
Direct		**3.SGOT**		**2.CREATININE**	
Indirect		**4.ALP**		**Other test:**	
Total					

TESTS FOR LEPTOSPIROSIS (√ Tick the required investigation)

1.Rapid	**2.ELISA**	**3.MAT**
4.PCR	**5.Other tests**	

Name of requesting doctor:	
Contact number:	
Email ID:	

NEW CIVIL HOSPITAL SURAT LABORATORY SERVICES
MAJURA GATE, SURAT, PHONE NO .0261-2244456
DEPARTMENT OF MICROBIOLOGY,
CLINICAL & EPIDEMIOLOGICAL DATA FOR H1N1 INFLUENZA

Category: " "

Patient's Name:			
Age/Gender:			
Address: **Village/area**		**District**	**State**
Patient's Tel No:			
Hospital Name :			
Ward-Unit / Registration No:			
Date of onset of illness:			

Clinical signs & Symptoms:

Fever >38°C	**YES**	**NO**
Oral > 38.5°C	**YES**	**NO**
Cough	**YES**	**NO**
Sore throat	**YES**	**NO**
Nasal catarrah	**YES**	**NO**
Shortness of breath difficulty in breathing	**YES**	**NO**

Exposure History:

Close contract with a person (within 7 days) who is confirmed case of influenza A (H1N1)	**YES**	**NO**
Travel to community (within 7 days) where one or more confirmed cases of influenza A (H1N1) have been reported	**YES**	**NO**
Resides in a community where there are one or more confirmed influenza cases	**YES**	**NO**
Country visit	**YES**	**NO**
Date of visit		
Name Country visited		

Sample Collection:

Date of samples collected			
Sample collected	**Throat swab**	**Nasopharyngeal swab**	**Other**
No of samples collected			

Treatment History:

Treatment taken:	**YES**	**NO**
If yes what & when		

Investigations:

X- Ray findings:

Name of requesting doctor:	
Contact number:	
Hospital Email ID:	

(SIGN /MEDICAL OFFICER)

Modal Diagnostic Centre for Viral Hepatitis Testing
DEPARTMENT OF MICROBIOLOGY
Government Medical College,Surat

Laboratory Request Form for HCV Viral RNA

Patient's Name: _____ Age: _____ Gender: Male / Female
Address: _____
Unique ID:_____Registration No.: _____
Requesting Doctor Name / Unit: _____Contact No./ Extension No. _____
Brief Clinical Information & Treatment given: _____
_____

Type of Primary Sample: Blood in **EDTA Test tube / Plasma**_____

Date: _____ Time of sample collection: _____am/pm

HCV Antibody by ELISA / Rapid – Reactive / Non-reactive (Please Tick √)

HCV RNA Previously done –Yes/ No(Please Tick √)

If yes, Name of the lab where test was done - _____

Date of Previous rRTPCRtest if done-

Previous test Result with HCV RNA – Positive / Negative (Please Tick √)

Consent:

I am informed about HCV viral RNA testing & have been given counselling.
મારાલોહીનીએચ.□□.વી.માટેનીતપાસઅંગેનીમનેસંપૂર્ણજાણકારીઆપેલછે. હુંમારીસંમતીથીઆતપાસ કરાવુંછું.

Signature of the Patient

Remarks of Sender (if any): _____
Name of the Sender: _____ (Doctor / Nurse / Technician)
Signature _____

FOR LABORATORY USE ONLY
Specimen Receipt Time: _____ am / pm. Date: _____ Lab I.D. No.: _____
Quality of Primary Sample: Good / Poor (if poor _____)

REMARK: ( ) Accepted / ( ) Rejected. Send proper & fresh sample with new Request Form.

Name & Signature of the Person who received the Sample: _____

GENERAL INSTRUCTIONS:

- Select appropriate container for the prescribed investigation. Specimen container must be properly labelled with Patient Name, Ward/unit, and Date& Time. This request form should accompany each specimen & all entries should be completed & legible. Incomplete form may lead to rejection of sample.
- Results of the laboratory investigation are dependent upon the quality of the sample. It should be transported to the laboratory with the properly filled request form, immediately after the collection in Cold chain at 2-8℃.
- Remarks of sender regarding clinical information, previous reports & drug therapy are helpful to the laboratory. Any additional requirements can be entered in the remarks for sender.
- Any query from sender is directed to Laboratory In-charge.

INSTRUCTION FOR SAMPLE COLLECTION AND TRANSPORT:

- Collect 5-8 ml blood in EDTA test tube/vacuttee.
- Transport it immediately to the laboratory in Cold chain at 2-8℃.
- If there is delay in transportation,Separate the plasma with in 6 hours of sample collection in sterile sv2 vial then transportthe sample in cold chain at 2-8℃ in triple layer packaging attached with laboratory request form.(LRF)
- Do not collect sample in Heparin tube.

Remarks if any:

Modal Diagnostic Centre for Viral Hepatitis Testing
DEPARTMENT OF MICROBIOLOGY
Government Medical College,Surat

Laboratory Request Form for HBV Viral DNA

Patient's Name: _____ Age: _____ Gender: Male / Female
Address: _____
Unique ID:_____Registration No.: _____
Requesting Doctor Name / Unit: _____Contact No./ Extension No. _____
Brief Clinical Information & Treatment given: _____
_____

Type of Primary Sample: Blood in **EDTA Test tube / Plasma**_____

Date: _____ Time of sample collection: _____am/pm

HBs Ag by ELISA / Rapid – Reactive / Non-reactive (Please Tick √)

HBV DNA Previously done –Yes/ No(Please Tick √)

If yes, Name of the lab where test was done - _____

Date of Previous rRTPCR test if done-

Previous test Result with HBV DNA – Positive / Negative (Please Tick √)
Consent:

I am informed about HBV viral DNA testing & have been given counselling.
મારાલોહીનીએચ.□□.વી.માટેનીતપાસઅંગેનીમનેસંપૂર્ણજાણકારીઆપેલછે. હુંમારીસંમતીથીઆતપાસ કરાવુંછું.

Signature of the Patient

Remarks of Sender (if any): _____
Name of the Sender: _____ (Doctor / Nurse / Technician)
Signature _____

FOR LABORATORY USE ONLY
Specimen Receipt Time: _____ am / pm. Date: _____ Lab I.D. No.: _____
Quality of Primary Sample: Good / Poor (if poor _____)

REMARK: ( ) Accepted / ( ) Rejected. Send proper & fresh sample with new Request Form.

Name & Signature of the Person who received the Sample: _____

GENERAL INSTRUCTIONS:

- Select appropriate container for the prescribed investigation. Specimen container must be properly labelled with Patient Name, Ward/unit, and Date& Time. This request form should accompany each specimen & all entries should be completed & legible. Incomplete form may lead to rejection of sample.
- Results of the laboratory investigation are dependent upon the quality of the sample. It should be transported to the laboratory with the properly filled request form, immediately after the collection in Cold chain at 2-8°C.
- Remarks of sender regarding clinical information, previous reports & drug therapy are helpful to the laboratory. Any additional requirements can be entered in the remarks for sender.
- Any query from sender is directed to Laboratory In-charge.

INSTRUCTION FOR SAMPLE COLLECTION AND TRANSPORT:

- Collect 5-8 ml blood in EDTA test tube/vacuttee.
- Transport it immediately to the laboratory in Cold chain at 2-8°C.
- If there is delay in transportation,Separate the plasma with in 6 hours of sample collection in sterile sv2 vial then transportthe sample in cold chain at 2-8°C in triple layer packaging attached with laboratory request form.(LRF)
- Do not collect sample in Heparin tube.

Remarks if any:

NEW CIVIL HOSPITAL SURAT LABORATORY SERVICES
MAJURA GATE, SURAT, PHONE NO .0261-2244456
DEPARTMENT OF MICROBIOLOGY,

COMMON COLLECTION CENTRE.

(Telephone No. 2244456-59 Ext. 348)

NAME: AGE: Yrs. SEX.M/F.

Reg.No. Address:

MICROBIOLOGY(Serology)

INVESTIGATION	METHOD	RESULT
HBsAg.	ELISA	
	Rapid	
R.P.R./V.D.R.L.	Agglutination	
CRP	Latex agglutination	
ASO	Latex agglutination	
RA	Latex agglutination	
HCV	ELISA	
	Rapid	
WIDAL	Slide agglutination	S.typhi-H
		S.typhi-O
		S.Paratyphi-AH
		S.Paratyphi-BH
	Tube agglutination	S.typhi-H
		S.typhi-O
		S.Paratyphi-AH
		S.Paratyphi-BH
Other		

DHR-ICMR Virus Research and Diagnostic Laboratory Network
(Medical colloege / Referral hospital form)

A: IDENTIFICATION SECTION

1	Lab code		2. Year:		3. Date:
					Patient visit date (OP) Admission date (IP)
4	Patient ID				

B: PATIENT INFORMATION

5	Patient Name				
6a	Age in completed years	or	6b For infants	Months	Days
7	Sex	☐ Male ☐ Female ☐ Transgender	8 Contact Number		
9	Citizenship	☐ Indian ☐ Others			
10	Present Address	State	District	Taluk/Tehsil	
		Village/Town/Ward	Street	House No	
		☐ Rural ☐ Urban		PINCODE	
11	Parmanent address same as present address ☐				
12	Permanent Address	State	District	Taluk/Tehsil	
		Village/Town/Ward			
		☐ Rural ☐ Urban		PINCODE	
13	Patient type	☐ OP ☐ IP	14 Hospital IP/OP Number		
15a	Name of the clinician		15b Referral Hospital		
16	Type of visit for the current illness	☐ First Visit	☐ Follow-up		

C: CLINICAL DETAILS

17a	Date of onset of illness	17b Duration of illness (in days)	
18	Syndrome (s) that best describes the patient's current disease condition		

Write ❶ in the box for primary syndrome and ❷ in the box for secondary syndrome

	1. Acute Diarrheal Disease		*7. Severe Acute Respiratory Infection (SARI)*		*13. Fever with Bleeding*
	2. Dysentery		*8. Cough <=2 weeks without fever*		*14. Fever with Rash*
	3. Acute Flaccid Paralysis		*9. Cough <=2 weeks with fever*		*15. Hemorrhagic fever*
	4. Acute Hepatitis		*10. Cough >=2 weeks with fever*		*16. Jaundice of <4 weeks*
	5. ARI/Influnza Like illness (ILI)		*11. Acute Encephalitis Syndrome (AES)*		*17. Only Fever < 7 days*
	6. Fever with Altered sensorrium		*12. Conjunctivitis*		*18a. Other*
	18b If Other Please Specify the Syndrome (s)				

19 Symptom (s)

☐ *1. Headache*	☐ *13. Chills*	☐ *25. Jaundice*
☐ *2. Irritability*	☐ *14. Rigors*	☐ *26. Dark Urine*
☐ *3. Altered Sensorium*	☐ *15. Breathlessness*	☐ *27. Hepatomegaly*
☐ *4. Increased Somnolence*	☐ *16. Cough*	☐ *28. Arthralgia*
☐ *5. Neck Rigidity*	☐ *17. Rhinorrhea*	☐ *29. Malaise*
☐ *6. Seizures*	☐ *18. Sore Throat*	☐ *30. Myalgia*
☐ *7. Diarrhea*	☐ *19. Bullae*	☐ *31. Redness of Eyes*
☐ *8. Dysentery*	☐ *20. Papular Rash*	☐ *32. Discharge from Eyes*
☐ *9. Nausea*	☐ *21. Pustule*	☐ *33. Crusting in Eyes*
☐ *10. Vomiting*	☐ *22. Macular Rash*	☐ *34. Swelling of Eyes*
☐ *11. Abdominal Pain*	☐ *23. Maculo - Papular Rash*	☐ *35. Retro-orbital pain*
☐ *12. Fever*	☐ *24. Eschar*	☐ *36.a Other*
☐ *36b If Other, Please Specify the Symptom (s)* ____________		

20	Provisional Diagnosis	
21	Investigation Requested	

D: EPIDEMIOLOGICAL DETAILS

22	Presence of similar case in the house	☐ Yes ☐ No	
23	Presence of similar case(s) in the village / Locality	☐ Yes ☐ No	☐ Don't Know
24a	History of travel in last 10 days	☐ Yes ☐ No	If Yes, *Specify the place*

ICMR NIE

DHR-ICMR Virus Research and Diagnostic Laboratory Network
(Medical colloege / Referral hospital form)

E: SAMPLE COLLECTION DETAILS			
25	Type of Sample	Samples collected	Date of collection
1	*Blood-Plasma (P)*	☐ Yes ☐ No	
2	*Blood-Serum (S)*	☐ Yes ☐ No	
3	*CSF(C)*	☐ Yes ☐ No	
4	*NP Swab (N)*	☐ Yes ☐ No	
5	*Throat Swab (T)*	☐ Yes ☐ No	
6	*Rectal Swab (R)*	☐ Yes ☐ No	
7	*Faeces/Stool (F)*	☐ Yes ☐ No	
8	*Urine (U)*	☐ Yes ☐ No	
9		☐ Yes ☐ No	
10		☐ Yes ☐ No	
11		☐ Yes ☐ No	
12		☐ Yes ☐ No	
13		☐ Yes ☐ No	
14		☐ Yes ☐ No	
15		☐ Yes ☐ No	

F: LABORATORY RESULTS							
26	Pathogen Name	Date of Testing	Sample Type	Test Done	Test Result	Referred	Name of the referral lab
1					☐Positive ☐Negative ☐Equivocal	☐Yes ☐No	
2					☐Positive ☐Negative ☐Equivocal	☐Yes ☐No	
3					☐Positive ☐Negative ☐Equivocal	☐Yes ☐No	
4					☐Positive ☐Negative ☐Equivocal	☐Yes ☐No	
5					☐Positive ☐Negative ☐Equivocal	☐Yes ☐No	
6					☐Positive ☐Negative ☐Equivocal	☐Yes ☐No	
7					☐Positive ☐Negative ☐Equivocal	☐Yes ☐No	
8					☐Positive ☐Negative ☐Equivocal	☐Yes ☐No	
9					☐Positive ☐Negative ☐Equivocal	☐Yes ☐No	
10					☐Positive ☐Negative ☐Equivocal	☐Yes ☐No	
11					☐Positive ☐Negative ☐Equivocal	☐Yes ☐No	
12					☐Positive ☐Negative ☐Equivocal	☐Yes ☐No	
13					☐Positive ☐Negative ☐Equivocal	☐Yes ☐No	
14					☐Positive ☐Negative ☐Equivocal	☐Yes ☐No	
15					☐Positive ☐Negative ☐Equivocal	☐Yes ☐No	

NEW CIVIL HOSPITAL SURAT LABORATORY SERVICES
MAJURA GATE, SURAT, PHONE NO .0261-2244456
DEPARTMENT OF MICROBIOLOGY,

EMERGENCY LABORATORY

Patient's name:_____Age:_____Gender:_____

Registration No:_____WARD/OPD:_____

Primary sample collection Type:_____(blood, CSF, Tissue, Throat swab, others (specify)

Date of primary sample collection:_____Time:_____(am/pm)

Quality of primary sample: Good/ poor (If poor-_____

Requesting Doctor with Name/Unit:_____

Date of Sample receipt in Lab:_____Lab I.D. No:_____

Date of Test Report:_____Time:_____am/pm

Investigation	**Test method**	**Test result**
staining	Gram's stain	
	AFB stain	
	Albert's stain	
Stool-Darting motility	Microscopy	
Anti HIV antibody	Rapid test	
Anti HCV antibody	Rapid test	
HBsAg	Rapid test	
Anti-Leptospirosis antibody	Rapid test	

Comments/Opinion:_____

Signature of Authority

END OF REPORT

6. Type and amount of sample to be collected

Sr No.	Specific tests examination	Material for examination	Container for sample	Type	Optimum Quantity of sample
1.	Aerobic Culture and antimicrobial sensitivity for urine	Urine	Sterile Universal container	Urine	10-20 ml
2.	Aerobic Culture and antimicrobial sensitivity for pus	Pus	Sterile Universal container/ Sterile swab	Pus	About 2- 5ml of pus /swab/ in syringe
3.	Aerobic Culture and antimicrobial sensitivity for swab	Swab contain material taken from any site of the body and wound	Sterile cotton swabs in plastic or glass test tube	Pus/any Discharge/ High vaginal swab, or swab taken from any body lesion	Material to be immersed in the swab
4.	Aerobic Culture and antimicrobial sensitivity for body Fluid	body fluid	Sterile Universal container, Blood culture bottle	Ascitic fluid, Pleural fluid, CSF, pericardial fluid, synovial fluid	Body fluids : 2- 5ml
5.	Aerobic Culture andantimicrobial susceptibility for Blood	Blood	Blood culture bottle for adult & Pediatric	Whole Blood	For adult :10-20 ml For pediatrics: 2-5ml For infant: 0.5-2 ml blood in blood culture bottle
6.	Aerobic Culture and antimicrobial susceptibility for CSF	CSF	Sterile Universal container, Blood culture bottle	CSF	Up to 3 ml
7.	Aerobic Culture and antimicrobial sensitivity for Sputum	Sputum	Sterile Universal container	Sputum	5-10 ml
8.	Aerobic Culture and antimicrobial sensitivity for Stool	Stool	Sterile Universal container	Stool	2-5gm
9.	Gram's stain	Any Sample	Sterile universal container *swab /* smear on glass slide	Any	5-10 ml, For CSF 2-3 ml

10.	Acid fast Stain	Any Sample	Sterile universal container swab/smear on glass slide	Sputum, any body fluid, Urine:early morning fresh sample is collected.	5-10 ml, For CSF 2-3 ml
11.	Special stain (Albert's stain, Toludine blue stain)	Throat swab/sputum sample/pus/ broncheo alveolar lavage	Sterile universal container or sterile disposable swab stick	Throat Swab/sputum sample/pus sample/broncheo alveolar lavage	Throat swab: Sputum & Pus: 2-5 ml
12.	Water sample	Water	Sterile glass bottle and with cold chain maintenance	Water	150-200ml
13.	OT sample	Swab from different sites in the OT	Sterile swab in tube	Swab/Petri dish	Sufficient quantity
14.	Hepatitis-B Rapid / ELISA test for HBs Antigen detection	Serum	Plain Tube	Whole Blood	2-5ml
15.	Widal test for typhoid	Serum	Plain Tube	Whole Blood	2-5ml
16.	Test for Syphilis-Rapid plasma regain Test(Slide flocculation test)	Serum	Plain Tube	Whole Blood	2-5ml
17.	Anti Streptolycin**O** test (agglutination test)	Serum	Plain Tube	Whole Blood	2-5ml
18.	C Reactive Protein(CRP) (latex agglutination test)	Serum	Plain Tube	Whole Blood	2-5ml
19.	Rheumatoid Factor (RA test) (latex agglutination test)	Serum	Plain Tube	Whole Blood	2-5ml
20.	Ig M antibody detection for HAV by rapid / ELISA test	Serum	Plain Tube	Whole Blood	2-5ml
21.	Ig M antibody detection for HEV by rapid / ELISA test	Serum	Plain Tube	Whole Blood	2-5ml
22.	Ig M and Ig G antibody detection for Measles	Serum	Plain Tube	Whole Blood	2-5ml
23.	Ig M antibody detection for HCV by rapid / ELISA test	Serum	Plain Tube	Whole Blood	2-5ml
24.	Ig M antibody detection for Chikunguniya	Serum	Plain Tube	Whole Blood	2-5ml

25.	Ig M / NS1 antibody detection for Dengue	Serum	Plain Tube	Whole Blood	2-5ml
26.	FUNGAL culture	Scrapping material from lesion of any site	Strile container	Scrapping material from lesion	Strile container, wrape in strile clean paper
27.	KOH Preparation	Scrapping material from lesion,sputum, nail, hair, skin, biopsy material, Sputum, any body fluid	Warp in dry clean paper or put the material in between two silde which is remain together tightly with wrapper	Scrapping material from lesion,sputum, nail, hair, skin, biopsy material, Sputum, any body fluid	-
28.	Indian Ink preparation for Cryptococci	CSF	sterile universal container	CSF	2-5 ml
29.	Stool for Ova- cyst	stool	sterile universal container	stool	2 gm
30.	Leptospirosis -Rapid test for Ig M antibody detection	Serum	Plain Tube	Whole Blood	2-5ml
31.	Leptospirosis -ELISA test for Ig M and Ig G antibody detection	Serum	Plain Tube	Whole Blood	2-5ml
32.	HIV rapid/ ELISA test for Antibody detection	Serum	Plain Tube	Whole Blood	2-5ml
33.	CD 4 count	Serum	EDTA Tube	Whole. Blood	2-5ml
34.	Leptospirosis (Microscopic agglutination test)	Serum	Plain Tube	Whole Blood	2-5ml
35.	Leptospirosis(PCR-Polymerase chain reaction)	Serum/EDTA	Plain Tube	Whole Blood	2-5ml
36.	H1N1 influenza (PCR-polymerase chain reaction)	Nasopharyngeal swab & throat swab	Viral transport media	secretions	---
37.	HIV -1 Viral load test	Plasma	Sterile O- ring screw cap Tube	Whole Blood	1-3ml
38.	HCV Viral load test	EDTA	EDTA Tube	Whole Blood	2-5ml
39.	HBV Viral load test	EDTA	EDTA Tube	Whole Blood	2-5ml

7. Specimen containers

1. Universal sterile containers

2. Blood culture bottles

3.Transport swabs

4. Blood collection vacutainer

5 .Charcoal swabs

6. Viral Transport Media

7. Sterile O-ring Screw cap tube for HIV Viral load testing

8. Sample collection procedures

HOW TO HANDWASH?

• Wash hands only when visibly soiled!

1 • Wet hands with water

2 • Apply enough soap to cover all hand surfaces.

3 • Rub hands palmto palm.

4 • Right palm over left dorsum with interlaced fingers and vice versa,

5 • Palm to palm with fingers interlaced,

5 • Backs of fingers to opposing palms with fingers interlocked ,

7 • Rotational rubbing, of left thumb clasped in right palm and vice versa

8 • Rotational rubbing, backwards and forwards with clasped fingers of right hand in left palm and vice versa

9 • Rinse hands with water

10 • Dry thoroughly with a single use towel

11 • Use towel to turn off faucet

12 • Your hands are safe.

HOW TO HANDRUB?

• Otherwise, use handrub!

1 • Apply a palmful of the product in a cupped hand and cover all surfaces.

2 • Rub hands palm to palm;

3 • Right palm over left dorsum with interlaced fingers and vice versa;

4 • Palm to palm with fingers interlaced;

5 • Backs of fingers to opposing palms with fingers interlocked;

6 • Rotational rubbing of left thumb clasped in right palm and vice versa;

7 • Rotational rubbing, backwards and forwards with clasped fingers of right hand in left palm and vice versa.

8 • Once dry... your hands are safe.

Donning and Doffing of PPE

PURPOSE: This SOP describes the standard protocol for donning and doffing of Personal protective equipment (PPE) by laboratory personnel

MATERIALS AND REAGENT

- Disinfectants
- Hand sanitizer
- Disposable gloves
- N95 respirator
- Surgical mask
- Shoe cover

Donning:

- Procedure must be carried out exclusively in clean room identified for donning procedure.
- The laboratory personnel must have adequate liquid or drinks in order to avoid interruption of sample collection due to thirst or dehydration.
- PPE requires a tight fitting therefore, one may lose fluid due to perspiration and as a result dehydration may occur.
- Remove Personal Clothing and Items and Change into surgical scrubs (or disposable garments). No personal items (e.g., jewelry, watches, cell phones, pagers, pens) should be brought into patient room.
- Visually inspect the PPE ensemble to be worn to ensure it is in serviceable condition, all required PPE and supplies are available, and that the sizes selected are correct for the laboratory personnel.
- The trained observer reviews the donning sequence with the laboratory personnel before the laboratory personnel begins and reads it to the laboratory personnel in a step-by-step fashion
- Perform hand hygiene with hand sanitizer and allow hands to dry before moving to next step.
- Wear on first pair of gloves.
- Put on gown.
- Ensure gown is large enough to allow unrestricted freedom of movement
- . Ensure cuffs of inner gloves are tucked under the sleeve of the gown or coverall to prevent skin from getting exposed.
- Put on Boot if available if not wear Shoe Covers.
- Put on N95 respirator. Complete a user seal check.
- Put on second pair of gloves (with extended cuffs). Ensure the cuffs are pulled over the sleeves of the gown or coverall.
- Put on full face shield over the N95 respirator and surgical hood to provide additional protection to the front and sides of the face, including skin and eyes.
- After completing the donning process, the integrity of the ensemble is verified by the trained observer. The laboratory personnel should be comfortable and able to extend the arms bend at the waist and go through a range of motions to ensure there is sufficient range of movement while all areas of the body remain covered.
- Disinfect outer-gloved hands with 70% ethanol and allow drying prior to patient contact.

This is undertaken outside the patient's room.

Pre-donning instructions

- ensure healthcare worker hydrated
- tie hair back
- remove jewellery
- check PPE in the correct size is available

Perform hand hygiene before putting on PPE

1 Put on the long-sleeved fluid repellent disposable gown

2 Respirator

Perform a fit check.

3 Eye protection

4 Gloves

Doffing:

Prior to doffing PPE, the trained observer must remind laboratory personnel to avoid reflexive actions that may put them at risk, such as touching their face. Post this instruction and repeat it verbally during doffing. Although the trained observer should minimize touching laboratory personnel or their PPE during the doffing process, the trained observer may assist with removal of specific components of PPE as outlined The trained observer disinfects the outer-gloved hands immediately after handling any laboratory personnel PPE.

❖ Doffing procedure

- Inspect the PPE to assess for visible contamination, cuts or tears before starting to remove. If any PPE is visibly contaminated, then disinfect with 70% ethanol.
- Disinfect and Remove Outer Gloves without contaminating the inner gloves
- Inspect inner gloves for any visible contamination (Note: Change Inner Gloves in case if there are visible tears and wears. Remove and discard gloves taking care not to contaminate bare hands during removal process and don a new pair of gloves)
- Remove the apron away from the body taking care not to contaminate the suit.
- Roll the apron inside out and discard safely in the bio-hazard box.
- Disinfect the inner gloves with 70% ethanol and inspect PPE for any visible contamination
- Remove the full face shield by tilting the head slightly forward, grabbing the rear strap and pulling it over the head, gently allowing the face shield to fall forward and discard. Avoid touching the front surface of the face shield.
- Disinfect the inner gloves with 70% ethanol and remove gown.
- Laboratory personnel can seek assistance by the trained observer to remove the gown suit. Avoid contact of scrubs or disposable garments with outer surface of gown during removal. Pull gown suit away from body, rolling inside out and touching only the inside of the gown.
- To remove suit, with one hand unzip the suit from inside. Unzip or unfasten suit completely before rolling down and turning inside out. Avoid contact of scrubs with outer surface of coverall during removal, touching only the inside of the suit.
- Disinfect the inner gloves with 70% ethanol and remove the N95 respirator by tilting the head slightly forward, grasping first the bottom tie or elastic strap, then the top tie or elastic strap, and remove without touching the front of the N95 respirator. Discard N95 respirator
- Disinfect the shoe covers with 70% ethanol and remove while sitting down on comfortable chair. Disinfect the inner gloves with 70% ethanol Remove inner gloves safely and clean your hand with hand sanitizer.
- Perform hand hygiene and wear clean slippers or shoe. Remove surgical scrubs and shower (Note: Showers are recommended after every collection of sample

PPE should be removed in an order that minimises the potential for cross contamination.

The order of removal of PPE is as follows:

1 **Gloves –**
the outsides of the gloves are contaminated

Clean hands with alcohol gel

2 **Gown –**
the front of the gown and sleeves will be contaminated

3 **Eye protection -**
the outside will be contaminated

4 **Respirator**
Clean hands with alcohol hand rub. Do not touch the front of the respirator as it will be contaminated

5 Wash hands with soap and water

Prerequisite for sample collection

Please note that the sample collection process is dependent on test required and the accuracy and timeliness of test results begin with a successful sample collection. Each patient must be verified positively by active communication before sample collection.

1. Determine the **type of tests to be ordered and the accompanying instructions** for sample collection (e.g. fasting, non-fasting, pre- or post-medication, pre- or post-dialysis). Determine the time of last medication/meal (if required).

2. Identify the **correct containers/tube types** to be used with the correct additives (if required). Samples must be collected into appropriate containers supplied by or approved by microbiology department.

3. Please **check containers** for any defects **before use**.

4. Aseptic techniques must be employed during sample collection to prevent the introduction of micro-organisms into the patient's anatomical space, and to prevent the sample from being contaminated.

5. Collect sufficient amount of sample to enable the test(s) to be carried out, especially when multiple tests are ordered. In the case the amount of sample is insufficient please state which tests should be done in order of priority.

6. Please check the containers again after sample collection for any leakage and tighten the lids of containers properly to prevent leakage of samples during handling and transportation. A leaked sample container can pose infection hazards to the transportation and laboratory staff, besides risking the sample to be insufficient.

7. Please ensure that the outer surfaces of the containers are not contaminated by the patients' samples.

8. Please place the sample container in the plastic bag provided. Please in insert the Request Form in the pocket on the side of the bag and not in the sample compartment.

9. All samples should be regarded as potentially infectious and the standard universal precaution guidelines should be adhered by all healthcare workers during sample collection and handling.

10. Request form should be duly filled in legible handwriting with all correct information. Recording of person collecting the sample, collection date and time should be there in request form. If the primary sample needs to be separated for different tests in two different labs, it must be specified in the form.

11. Check the storage condition if delay in delivery to lab

12. Safe disposal of materials should be done as per BMW guideline 2016.

Instruction for sample collection and transport for HBV HCV viral load testing:

- Collect 5-8 ml blood in EDTA test tube/vacuttee.
- Transport it immediately to the laboratory in Cold chain at 2-8℃.
- If there is delay in transportation,Separate the plasma with in 6 hours of sample collection in sterile sv2 vial then transportthe sample in cold chain at 2-8℃ in triple layer packaging attached with laboratory request form.(LRF)
- Do not collect sample in Heparin tube.

Unacceptable Samples (Rejection Criteria)

The following criteria will be used to consider a sample is unacceptable and will be rejected. The Laboratory staff will inform the ordering clinician will be notified.

- incompletely filled or no sample identify on the request form
- Sample without accompanying request form
- Sample without any label
- Discrepancy in patient's identity between the request form and sample label
- Inappropriate test sample, e.g. wrong use of container/preservative
- Leaking specimen container
- Grossly haemolysed sample
- Sample received with intact needles
- Quantity of sample not sufficient for testing
- Lipemic sample
- Contaminated samples
- Temperature deviation
- Sample from HIV-2 infected Individuals (for HIV-1 Viral load testing)
- The separated plasma samples can be kept upright in a plastic box with ice packs or stored in a refrigerator maintained at 2-8 C.

➢ In case of any discrepancy observed or rejection of sample: Viral Load Lab to inform the ARTC immediately by phone or email

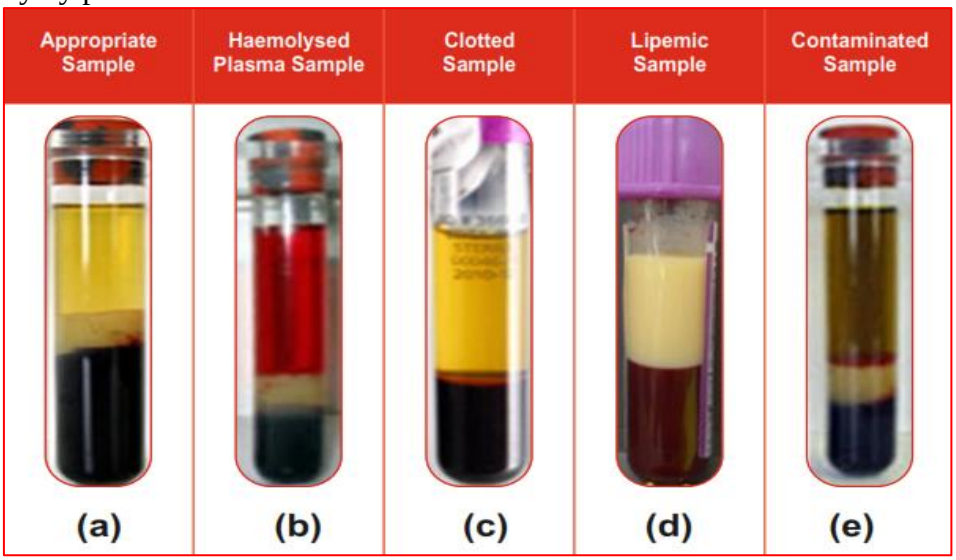


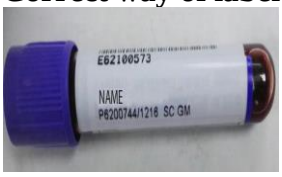
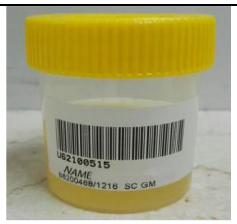
Figure: Ready reckoner for identification of an ideal and sample which has to be rejected.

Labelling of primary samples

Label all sample containers prior to collection at the patient's side. Together, we can instil the right culture to ensure the right specimen is collected from the right patient and the right order of test being filled in the request form.
The following information is mandatory

- Patient Name
- Patient ID
- Department + Unit + Location
- Date and time of Sample collection
- Sample ID given by laboratory (as soon as it is generated)

Please stick the label lengthwise.
Unlabelled samples will be rejected.

Correct way of label	Incorrect way of label
	
	

Packaging the sample

Primary Package

Clinical/biological samples should be placed in a sealed container, for example a sealed Vacutainer™ or a specimen container. For discipline specific container, please refer to the relevant sections in the specific sample collection.

Secondary Package

If the sample is liquid, then the sealed primary container should be placed inside a sealed leak proof secondary package such as a sealed plastic bag or another watertight container which would be sufficient to contain all of the liquid content if the primary container breaks. Put absorbent material to prevent/ protect any type of leakage around primary package.

Please do the following:

 One bag per patient

 Insert the paper request form into the bag's side compartment/pouch/pocket

Do not put the request form together with the sample in same pouch

 Do not use staples

 Needles must be removed from all sample collection devices before transporting. Samples received with intact needles will be rejected

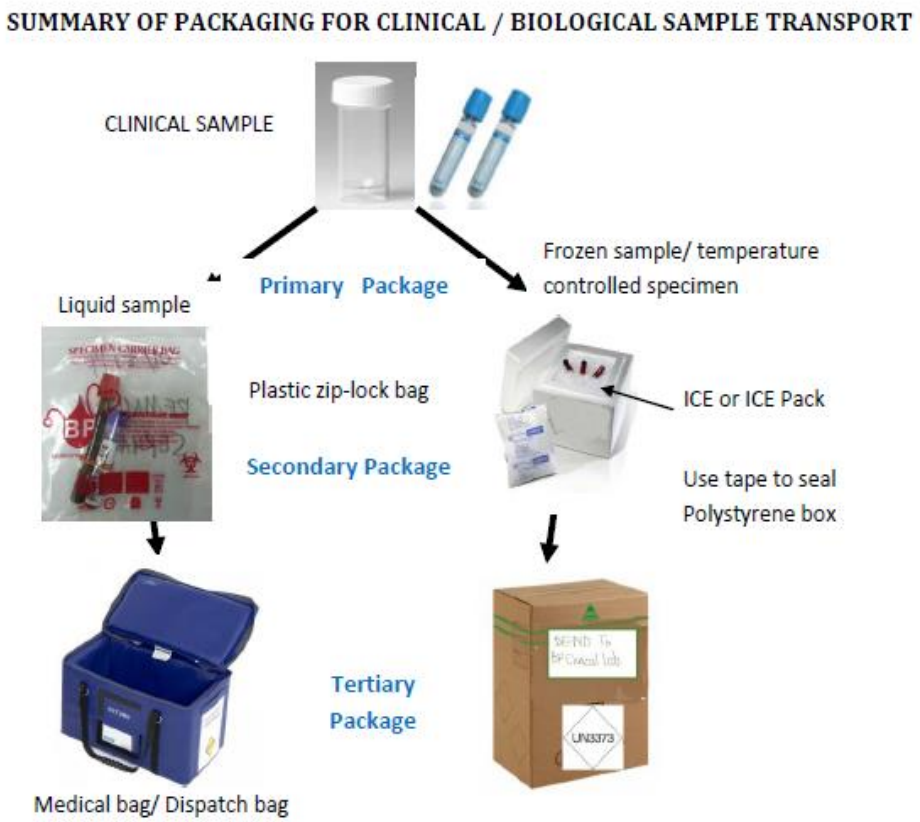
Tertiary Package

A rigid sealed/secured outer container e.g. a cardboard box or plastic container, to house the secondary package. Please label the laboratory address clearly and biohazard symbol.

Special Requirement for Frozen Samples

 For temperature sensitive samples the secondary container may also be a polystyrene box containing wet/dry ice. The box should be sealed with tape

 The polystyrene box is then placed inside a tertiary package with proper labelling.



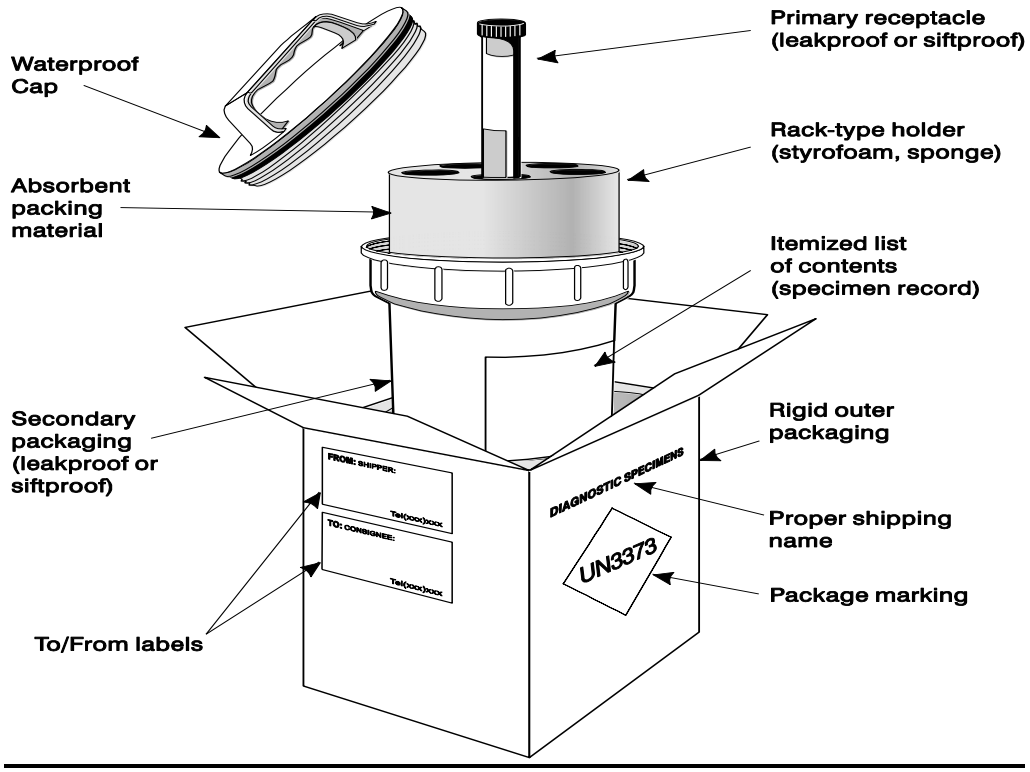


Figure-1 *Diagrammatic representation of 3 layer system for packaging infectious material*

Figure 2: Ready Reckoner showing the process of sample packing

WHO guidelines for drawing blood

Purpose and scope

The following guidelines summarize the best practices in phlebotomy to improve the outcomes for health workers and patients, for all levels of health care where phlebotomy is practiced. They extend the scope of the existing guidelines from the World Health Organization (WHO) and the Safe Injection Global Network (SIGN), which is a WHO-hosted network.

Objective

• To improve knowledge and awareness of the risks associated with phlebotomy among all health workers involved in the practice;

• To increase safe practices and reduce blood borne virus exposure and transmission; improve patient confidence and comfort;

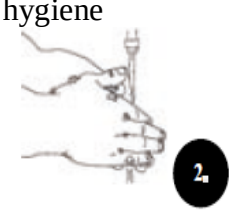
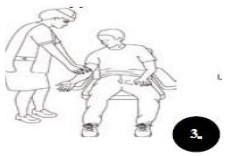
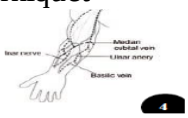
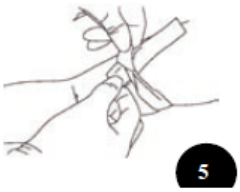
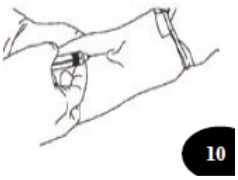
• To improve the quality of laboratory tests.

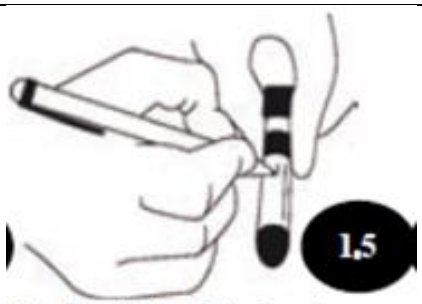
Infection Prevention and Controls at all times. follow the strategies for infection prevention and control as listed below:-

DO	DO NOT
• DO carry out hand hygiene (use soap & water or alcohol rub), & wash carefully, including wrists & spaces between the fingers for at least 30 seconds (Please note the WHO's 'My 5 moments for hand hygiene)	○ DO NOT forget to clean your hands
• DO use one pair of non-sterile gloves per procedure or per patient	○ DO NOT use the same pair of gloves for more than one patient ○ DO NOT wash gloves for reuse
• DO use a single-use device for blood sampling & • Drawing	○ DO NOT use a syringe, needle or lancet for more than one patient
• DO disinfect the skin at the venipuncture site	○ DO NOT touch the puncture site after disinfecting it
• DO discard the used device (a needle and syringe is a single unit) immediately into a robust sharps container	○ DO NOT leave an unprotected needle lying outside the sharps container
• Where recapping of a needle is unavoidable, DO use the one-hand scoop technique	○ DO NOT recap a needle using both hands
• DO seal the sharps container with a tamper-proof lid	○ DO NOT overfill or decant a sharps container
• DO place laboratory sample tubes in a sturdy rack before injecting into the rubber stopper	○ DO NOT inject into a laboratory tube while holding it with the other hand
• DO immediately report any incident or accident linked to a needle or sharp injury, and seek assistance; start PEP as soon as possible, following protocols	○ DO NOT delay PEP after exposure to potentially contaminated material; beyond 72 hours, PEP is NOT effective

Practical Guidance on Venipuncture for Laboratory Testing

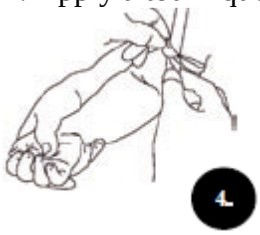
(WHO guidelines on drawing blood: Best practices in phlebotomy)

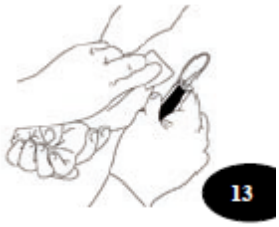
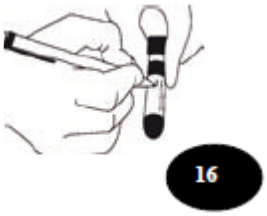
1. Assemble equipment to include needle and syringe or vacuum tube, depending on which is to be use 	2. Perform hand hygiene 	3. Identify and prepare the patient. Ask the patient to state his full name. 	11 Select the site (preferably at the bend of the elbow). Palpate the area; locate a vein of a good size that is visible, straight and clear. The vein should be visible without applying the tourniquet 
5. Apply a tourniquet 4–5 finger widths above the selected site 	6. Ask the patient to form a fist so that the veins are more prominent 	7. Put on well fitting, non-sterile gloves 	8. Disinfect the site. Use 70% isopropyl alcohol and allow to dry. **DO NOT touch the site once disinfected.** 
9. Anchor the vein by holding the patient's arm and placing a thumb BELOW the venipuncture site. DO NOT touch the cleaned site; in particular, DO NOT place a finger over the vein to guidethe needle 	10. Perform venipuncture. Enter the vein swiftly at a30 degree angle 	11. Once sufficient blood has been collected, release the tourniquet BEFOREwithdrawing the needle 	12. Withdraw the needle gently. Give the patient a clean gauze or dry cotton-wool ball to press gently on the site. Ask the patient **NOT to bend the arm** 

Filling tubes **1**. If the tube does not have a rubber stopper, press the plunger in slowly to reduce haemolysis (This is safer than removing the needle). **2. Place the stopper in the tube. 3.** Following laboratory instructions, invert the sample gently to mix the additives with the blood before dispatch**.**	13. Discard the used needle and syringe or blood-sampling device immediately into the sharps container.  	 14. Check the label and forms for accuracy

Practical Guidance on Paediatric and Neonatal Blood Sampling

(WHO guidelines on drawing blood: Best practices in phlebotomy)

1. Collect supplies and equipment. Use a winged steel needle  	2. Perform hand hygiene  	3. Immobilize the baby or child  	4. Apply a tourniquet 
5. Put on well-fitting, non-sterile gloves  	6. Attach the end of a winged infusion set to the end of the vacuum tube  	7. Remove the plastic sleeve from the end of the butterfly  	8. Disinfect the collection site 
9. Use a thumb to draw the skin tight and insert the needle  	10. Push the vacuum tube completely onto the needle  	11. Blood should begin to flow into the tube. Fill the tube until it is full or until the vacuum is exhausted  	12. Release the tourniquet 

13. Place dry gauze over the venipuncture site and slowly withdraw the needle 	14. Ask the parent to continue applying mild pressure 	15. Remove the butterfly from the vacuum tube holder. Dispose of the butterfly in a sharps container 	16. Label the tube with the patient identification number and date 

SAMPLE COLLECTION

Blood Sample

Most laboratory tests are performed on anti-coagulated whole blood, plasma or serum.

Whole Blood

Draw sufficient blood into appropriate tube. Invert the tube gently, 6 to 8 times immediately after collection. Please do not vigorously shake the tube for it will cause haemolysis. Send sample to the laboratory as soon as possible.

Plasma

Draw sufficient blood into appropriate tube. Invert the tube gently, 6 to 8 times immediately after collection. Send sample to the laboratory as soon as possible. If required, separate the plasma from the clot within 20-30 minutes, by centrifuging.

Serum

Draw sufficient blood into appropriate tube. Allow blood to clot at room temperature. Send sample to the laboratory immediately. If required, separate serum from the clot within 20-30 minutes, by centrifuging.

Vacuum Tube System Reminders

1. Tubes with powdered anticoagulants should be tapped near the stopper to dislodge any anticoagulant that may be between the stopper and the tube wall.

2. All tubes with liquid anticoagulants should be filled to the exhaustion of the vacuum to ensure proper ratio of anticoagulant to blood.

Order of Draw Guideline

The following order-of-draw is recommended when drawing multiple samples for clinical laboratory testing during a single venipuncture. Its purpose is to avoid possible test result error due to cross contamination from tube additives. This procedure should be followed for both, glass and plastic venous blood collection tubes:

1. Blood culture tube

2. Coagulation tube (e.g. blue closure)

3. Serum tube with or without clot activator, with or without gel (e.g. red closure)

4. Heparin tube with or without gel plasma separator (e.g. green closure)

5. EDTA (e.g. lavender closure)

6. Glycolytic inhibitor (e.g. gray closure)

When using a winged blood collection set for venipuncture and a coagulation tube is the first tube to be drawn, a discard tube should be drawn first. The discard tube must be used to fill the blood collection tubing dead space and to assure maintenance of the proper anticoagulant/blood ratio and need not be completely filled. The discard tube should be a non-additive or a coagulation tube.

Order of Draw for Multiple Tube Collections: Blood should be collected in the RECOMMENDED order based on the test(s) being collected to prevent contamination

Order of Draw	Description	Tube Content	Draw Volume	Determinations	Instructions
1		BACTEC Blood Cultures	8-10 mL per bottle	Aerobic & Anaerobic Cultures	Sample for Blood cultures should be done separately. However, if blood samples are also needed, then **blood cultures are done first** to avoid contamination by additives from other blood tubes
2	Blue 	Sodium Citrate	2.7 mL	PT/PTT PT/INR Platelets Function Test (PFT) (use 7 tubes for PFT)	Allow tube to fill completely. Mix by inverting **4** times

3	Red 	Plain	6 mL	Antibody identifications	Mix by inverting **5** times
4	Gold 	SST (Plain with Gel)	5 mL	For Biochemistry tests	Mix by inverting **5** times
5	Green 	Lithium Heparin	4 mL	Ammonia **(please send in with ice-pack)**, HLAB27 (use 2 tubes), Cytogenetic investigations	Mix by inverting **8** times
6	Pink 	K2EDTA 10.8 mg	6 mL	Strictly for Group X-Match, Pre-transfusion Tests (Blood Group, Antibody Screen, Compatibility test)	Mix by inverting **8** times
7	Lavender 	K2EDTA 5.4 mg	3 mL	FK506, Cyclosporin, G6PD, FBC, HbA1c, Homocysteine**(please send in with ice-pack)**	Mix by inverting **8** times
8	Grey 	Sodium Fluoride	6 mL	Blood glucose analysis, Lactate **(please send in with ice-pack)**, Pyruvate, GTT	Mix by inverting **8** times

Blood Collection

a) It is recommended to take blood from a seated patient before breakfast to avoid interference from food, diurnal variation and variations arising from body position (exception for hospital in-patients).

b) Venous blood is used for testing most substances except for blood pH and blood gases measurement (whole arterial blood is 54egain54s5454d in a tube with minimal head space or syringe in which it was taken).

c) Avoid prolonged venous stasis by releasing the tourniquet soon after the needle enters the vein. Refrain from taking blood from a limb with a running intravenous infusion.

d) Observe careful technique and gentle handling to prevent haemolysis and trauma to the surrounding tissues.

e) Collect blood samples in standard colour-coded vacutainers.

f) Fill all tubes until the vacuum is exhausted and blood ceases to flow. For accurate results, fill the tubes to the marked line to ensure the correct blood anticoagulant ratio is attained and invert the tubes gently 6 to 10 times immediately after venipuncture.

Draw sufficient blood

- Fill to the “BLACK” mark on the tube

Special Instruction for Microbiology sample collection

General Guidelines for Proper Specimen Collection and Transport

 Collect specimen before administering antimicrobial agents where possible.

 Use sterile containers and aseptic technique to collect specimens to prevent introduction of microorganisms during the invasive procedures.

 Collect an adequate amount of specimen. Inadequate amounts of specimen may yield false negative results.

 Transport of swabs in suitable media is essential for reliable results.

 Specimens obtained using needle aspiration should be transferred to a sterile container and transported to the laboratory as soon as possible. If there is only a small volume of material in the syringe, add some sterile saline, mix and then transfer to a sterile container.

 Formalin must not be used to preserve microbiology samples.

 All specimens from high risk patients (HIV, Hep B, TB, and others) must be clearly marked as high risk.

 The specimen container must be properly placed in a Vaccine container or ice box accompanied by a

completed laboratory request form.

 Specimens should be transported to the laboratory as soon as possible and preferably within 24 hours.

1. Urine Culture

A clean mid-stream specimen is essential. In urinary tract infection (UTI) the bacterial count exceeds 100,000 organisms/ml in the majority of cases.

Urine acts as a culture medium and therefore specimens should be stored at 4oC to prevent subsequent multiplication of bacteria after collection of the patient's sample which would invalidate the bacterial count. Any sample which may be subject to delay of more than 2 hours before being sent to the lab should be refrigerated.

Urines for culture should be collected as described below in a sterile 90mL container. The patient's full name, I.C. Number, source of specimen and date and time of collection should be specified on the request form and sample container. Also include additional relevant information concerning pregnancy, antibiotic medication, drug allergies, etc. On the requisition.

A "mid-stream clean catch" urine sample is necessary for culture so that any bacteria present around the urethra and on the hands do not contaminate the specimen.

Collection of a Mid-stream Urine Samples

(a) Early morning urine specimens are preferred, although urine collected at other times of the day are acceptable.

(b) Use a sterile container for collection.

(c) Complete the information requested on the container label: full name, IC Number, source of specimen and date and time of collection.

(d) Instruction given to the patient:

 Wash and dry your hands thoroughly.

 Remove the container lid and set it aside. Do not touch inner surfaces of container

 Wash your urogenital area ("lower parts") with the toiletries.

 For women, wipe from front to back between the folds of skin labia separated with both hands

 For men, retract the foreskin (if un-circumcised), and clean the glans (head of the penis)

 Pass a small amount of urine into the toilet (a women needs to hold the skin folds apart) and then midway through urination, urinate into the container. The container should only be ½ to 2/3 full.

 Replace the lid and tighten firmly.

 Wash and dry your hands thoroughly.

(e) Immediately refrigerate the specimen and dispatch to the laboratory within 24 hours of collection (maintain at 2-8°C when transporting).

(f) If transportation to the laboratory is expected to go beyond 24 hours, transfer 10mL of urine into container with boric acid preservative. Maintain preserved urine at room temperature and submit to the

laboratory within 72 hours of collection.

Supra pubic bladder aspiration:

The bladder must be full before performing the procedure.

Clean the area, from central to periphery with spirit, 1% tincture iodine from supra pubic symphysis, up to umbilicus.

Urine is aspirated directly in to syringe through a percutaneous inserted needle, thereby ensuring contamination free specimen.

Tapping method:

a) Stimulating urine flow in baby by tapping just above the pubis with two fingers,1hr after a feed.

b) One tap per second is given for 1 min an interval of 1 min is allowed, and then tapping is resumed in this cycle.

Indwelling catheter:

Sample collection in patients with indwelling catheter requires scrupulous aseptic technique. Anyone who handles the catheter should wear the gloves.

Catheter should be clamped off above the port to allowed collection of freshly voided urine.

The catheter port or wall of the tubing should then be cleaned vigorously with 70% ethanol, then urine is aspirated via a needle and syringe. The integration of the closed drainage system must be maintained to prevent the introduction of organism in to the bladder.

Note: Specimen obtained from the collection bag should be rejected.

2. Blood Culture

Ensuring that blood cultures are obtained in a manner that prevents contamination is a cornerstone of an infection prevention and control process. In addition, the increasing use of blood cultures obtained through vascular/arterial devices necessitates meticulous technique and timely communication with the microbiology laboratory.

Timing and Number

Acute Sepsis: Collect two or three sets of culture from separately prepared sites prior to initiating antimicrobial therapy. Each set consists of two bottles, one aerobic and one anaerobic or two aerobic.

Acute Endocarditis:

Obtain three blood cultures from separate venipuncture sites over 1 – 2 hours, prior to initiating therapy. These cultures are often obtained 30 minutes apart in order to document persistent bacteraemia.

Sub-acute Endocarditis:

Obtain three blood cultures on day 1 (15 minutes or more apart). If cultures are negative after 24 hours, obtain 3 more.

Volume of Blood:

Collection of Blood for Blood cultures

o Venous blood
 infants: 0.5 – 2 ml
 children: 2 – 5 ml
 adults: 5 – 10 ml
o Requires aseptic technique
 if suspect bacterial endocarditis: 2 sets of blood culture are required

The volume of blood is critical because the concentration of organisms in most cases of bacteraemia is low, especially if the patient is already on antimicrobial therapy. However, in infants and children, the concentration of organisms during bacteremia is higher than in adults, so less volume of blood is required.

Adults: 10 ml of blood per culture bottle. In the event that less than 10 ml of blood is obtained from an adult, put it all into one aerobic blood culture bottle.

Children and infants: 1 – 3 ml of blood per culture bottle. The minimum volume is dependent upon the weight of the child/infant, please contact the microbiology department prior to obtaining the blood if assistance is needed in determining the correct amount of blood needed for the child/infant.

Procedure for blood Collection

Blood can be collected by venipuncture of peripheral veins or arteries. Collection from intravascular catheters is not recommended as they are intrinsically contaminated. If a line must be used, indicate the type of line or port through which the blood was obtained.

Technique is important to prevent contamination of the blood resulting in inaccurate results. The following are the basic tips to prevent contamination of blood collection:

 Perform hand hygiene, explain the procedure to the patient prior to collection of all specimen, and adhere to all appropriate safety equipment.

 Locate the venipuncture site prior to skin disinfection.

 Disinfect the venipuncture site and the stoppers of the bottles prior to blood collection.

 Use chlorhexidine/alcohol combination (e.g. ChloraPrep™) for skin disinfection for optimal results.

 Disinfect the top of the blood culture bottle(s) with 70% isopropyl or ethyl alcohol.

 Scrub the site with a chlorhexidine/alcohol swab or wand, using single stroke.

 Allow the disinfectant to dry. (DO NOT palpate the vein after disinfecting the skin, prior to inserting the needle).

 Draw blood using a sterile safety syringe and needle, or safety butterfly, designed to attach to a vacutainer holder and dispense the appropriate amount of blood into the bottles.

NOTE: The blood culture bottles can be used with the vacutainer adapter, but it may not deliver a controlled draw. Care must be taken to dispense the appropriate amount of blood into the culture bottle.

 After venipuncture and inoculation of bottles, engage safety device on needle or butterfly and

immediately dispose of collection materials in a sharps container. Wipe residual chlorhexidine/alcohol from skin with alcohol to prevent irritation of the skin.

 Indicate site of draw, date and time of draw, and initials of person drawing blood.

 If blood has been obtained through an indwelling intravascular device, provide specific information including lumen and location of the device.

 Transport blood cultures to the Laboratory immediately. Do not refrigerate. Delay in transport may compromise the specimen and recovery of organisms.

3. Nasal Swab

A nasal swab is not usually useful for the investigation of sinusitis. Antral lavage or pus from sinus should be sent if acute maxillary sinusitis is suspected.

Nasal swabs are useful for the investigation of carriage of Staphylococcus, including MRSA.

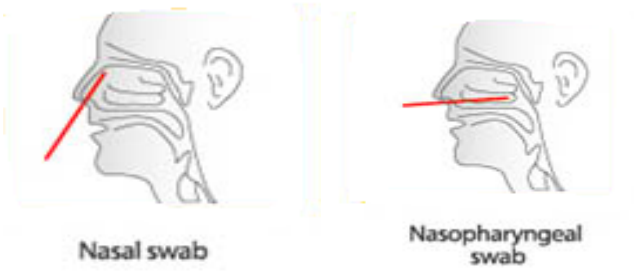
Use Infection Control Precautions

 Wear a surgical mask and disposable gloves.

 Wash hands thoroughly with soap and water or alcohol-based hand gel before and after the procedure.

 When completed, dispose of all PPE and other contaminated materials in the trash.

How to Do a Nasopharyngeal Swab



 Remove patient's surgical mask to perform the procedure and replace with a new one when done.

 Use a flexible fine-shafted swab with polyester (Dacron or rayon, not cotton or calcium alginate) tip.

 The distance from the patient's nose to the ear givesan estimate of the distance the swab should be inserted.

 Insert swab into one nostril down and backward into the nasopharynx and leave in place for a few seconds.

 slowly withdraw swab with a rotating motion.

 Place tip of the swab into a vial containing 2–3 ml of VTM* and cut the shaft.

Storage

 Specimen can be kept refrigerated at 4°C for up to 72 hours

 Specimens that cannot be processed within 48-72 hours should be kept in the refrigerator at 4°C

4. Genital Infections Sexually Transmitted Diseases

Specimens Required

Females: Cervical or High vaginal swabs, Urethral swabs

Males: Urethral swab, penile swab

Genital tract swabs

Cervical and high vaginal swabs should be taken with the aid of a speculum. It is important to avoid vulvar contamination of the swab. For trichomonas, the posterior fornix, including any obvious candida plaques should be swabbed. If pelvic infection, including gonorrhoea, is suspected, the cervical os should be swabbed.

High Vaginal Swabs

After the introduction of the speculum, the swab should be rolled firmly over the surface of the vaginal vault. The swab should then be placed in transport medium preferably with charcoal.

Cervical Swabs

After introduction of the speculum into the vagina, the swab should be rotated inside the endocervix. The swab should then be placed in transport medium preferably with charcoal.

Urethral Swabs

Thin swabs are available for collection of specimens.

The patient should not have passed urine for at least 1 hour.

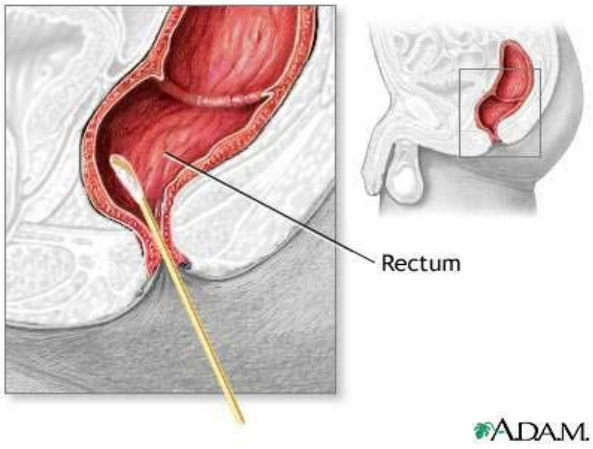
For males, the swab is gently passed through the urethral meatus and rotated. Place the swab in transport medium preferably with charcoal.

Intrauterine Contraceptive Devices (IUCDs)

The entire device should be sent in a sterile universal container.

5. Rectal Swabs

Rectal swabs should be taken via a proctoscope.



Advantages of rectal swabs:
• Convenient
• Adapted to small children, debilitated patients and othersituations where voided stool sample not feasible
Drawbacks of rectal swabs:
• No macroscopic assessment possible
• Less material available
• Not recommended for viruses

6. Pus Samples/ Wound Swabs

Wound swabs should only be taken when signs of clinical infection are present. Deep rather than superficial swabs give more accurate representation of bacteria/fungi if present.

Please indicate clearly on the request form and the swab, the site of the wound to facilitate interpretation of culture results.

Specimens Required

1. Pus sample (always preferable to a wound or pus swab) in sterile universal container.

2. Wound swab in transport medium.

Wound or Pus samples are screened for all likely bacterial pathogens and, if present, these organisms and their antibiotic sensitivity results will be reported. The inclusion of relevant clinical information on the request form will assist in determining the bacterial isolates.

Abscess

1. Decontaminate the surface with 70-95% alcohol and 1-2% tincture of iodine.

2. Collect the purulent material aseptically from an un-drained abscess, using a sterile needle and syringe. Open 60egain60s abscesses with a sterile scalpel and collect the expressed material with a sterile needle and syringe.

3. Transfer 5-10 ml of the aspirated material to an anaerobic transport vial. Transport immediately. Anaerobic transport media is not recommended for AFB culture. If requesting AFB culture, transfer at least 1 ml of the aspirated material into a sterile container.

4. Swabs are a poor choice because they dry easily and because of the limited amount of material obtained. Swabs are not optimal for fungal, anaerobe cultures, or decubitus ulcers. Swabs are not accepted for mycobacterial cultures, perirectal abscesses and oral abscesses. Gram stains cannot be provided from a

single swab. If a Gram stain is needed, collect two swabs.

Eye Swab

 Explain the procedure and the purpose of the investigation to the patient to obtain informed consent, gain co-operation, and allay any fears and anxieties.

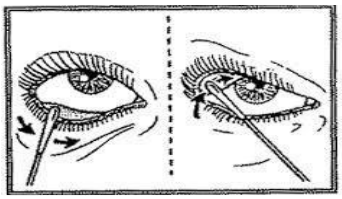
 Sit or lay the patient with head well-supported and with the chair at an appropriate height to ensure safety for the patient and the nurse.

 Do hand hygiene to reduce the risk of cross infection

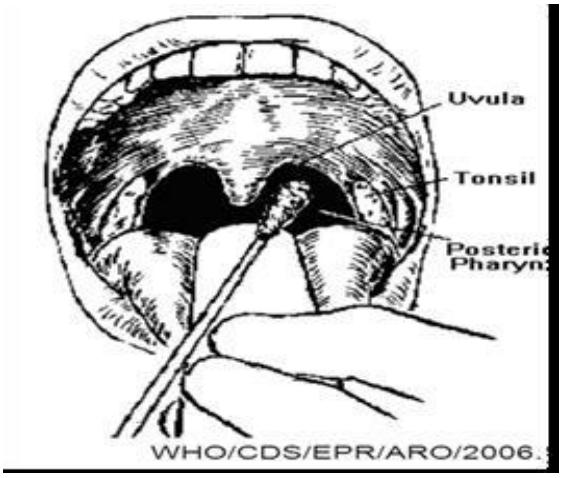
 Ask the patient to look up and gently pull down the lower lidexposing the conjunctiva.

 Gently sweep the swab stick along the lower fornix, from inner to outer canthus, taking care not to touch the eyelids. Place swab immediately into bacterial medium container, then ask patient to close the eye for a few seconds. This will ensure safe technique of swab taking and avoid damage to the cornea.

 Repeat the procedure to the other eye if necessary to comply with investigatory request, wash hands in between to minimize the risk of contamination to the other eye. A separate swab is required for each eye.



Throat Swab
(Posterior pharyngeal swab)
 Hold tongue away with tongue depressor.
 Locate areas of inflammation and in posterior pharynx, tonsillar region of throat behind Uvula.
 Avoid swabbing soft palate.
 Do not touch tongue.
 Rub the affected area back and forth with cotton or Dacron swab



9. Fungal nail and skin infections
Affected areas should be scraped with a blunt scalpel to harvest affected hairs,broken-off hair stubs and scalp scale. This is preferable to plucking, which mayremove uninvolved hairs. Scrapings should be transported in a folded square ofpaper preferably fastened with a paper clip, but commercial packs are

alsoavailable (e.g. 'Mycotrans'). It is easier to see affected hairs on white paperrather than black.

10. Sputum

A good quality purulent or mucopurulent sputum specimen should be obtained, preferably before antimicrobial therapy although antimicrobial therapy should not be delayed unnecessarily while awaiting a sputum specimen. The specimen should be transported to the laboratory within 2h. Salivary or mucosalivary specimens are unsuitable and as such are not processed.

Instructions for the patients:

a. Do mouth wash.
b. Take a deep breath.
c. Cough deeply to produce sputum.
d. Collect the sputum in sterile universal container provided.
e. Take care not to mix it with saliva.
f. Cap the lid securely.
g. Early morning sputum sample is preferable

Specific aetiological agents have been associated with certain underlying diseases. It is therefore important to include all relevant clinical information.

11. Tip culture

Distal 3 cm of the line cut with a sterile scissors should be sent in to sterile universal container. Only send tips from lines that are suspected to be infected. Specimens received without appropriate clinical information will not be cultured.

12. Collection of Body fluids:

o Collect Body fluids in appropriate sterile vaccumised tube after releasing cap and removing vacuum.

O After aspiration of synovial, pleural, pericardial, peritoneal, or hydrocele fluid, aseptically dispense the fluid (2-5ml), in a sterile universal container and transport immediately to the bacteriology laboratory.

Collection of CSF sample:

o Collect CSF in a sterile container.

O Cerebrospinal fluid must be collected aseptically from the subarachnoid space by lumbar puncture by the trained personnel and the CSF is allowed to drip into a dry sterile container and transport immediately to the laboratory.

O If there is any delay in transport, do not refrigerate it. Keep it at room temperature. Use recommended transport media whenever necessary.

9. SAMPLE TRANSPORTATION TO LABORATORY

Transportation of Samples within the Same Building:

Please follow instruction as for Primary Package and Secondary Package.

1) Send the sample to the lab as early as possible.

2) Keep the samples at 2 to 8 º C till analyzed.

3) Sample to be transported in Transportation box/vaccine carrier with ice pack with biohazard symbol on it.

4) Samples should be transported in a manner to prevent contamination to workers, patients, and environment.

5) Samples must be transported in a secondary container to prevent accidental spillage and breakage

6) All specimens should be collected or transferred into a leak-proof primary container with a secure closure.

7) Care should be taken by the person collecting the specimen not to contaminate the outside of the primary container.

8) Laboratory requisitions slips should be protected from contamination and separated from the primary container.

9) Person who transport specimens must be trained in safe handling practices and in decontamination procedures in case of a spill.

10) Gloves should be worn when removing specimens from the primary container and for all manipulations of the primary container.

11) If delay in transport of Urine is more than 2 hours then refrigerate the sample at 4º C or add boric acid (0.1gm/10ml) if the sample is not refrigerated.

12) If immediate delivery of Body fluid sample is not possible then stored the sample at 4 -8 º C.

13) Do not refrigerate CSF for Culture and Sensitivity, transport at ambient temperature.

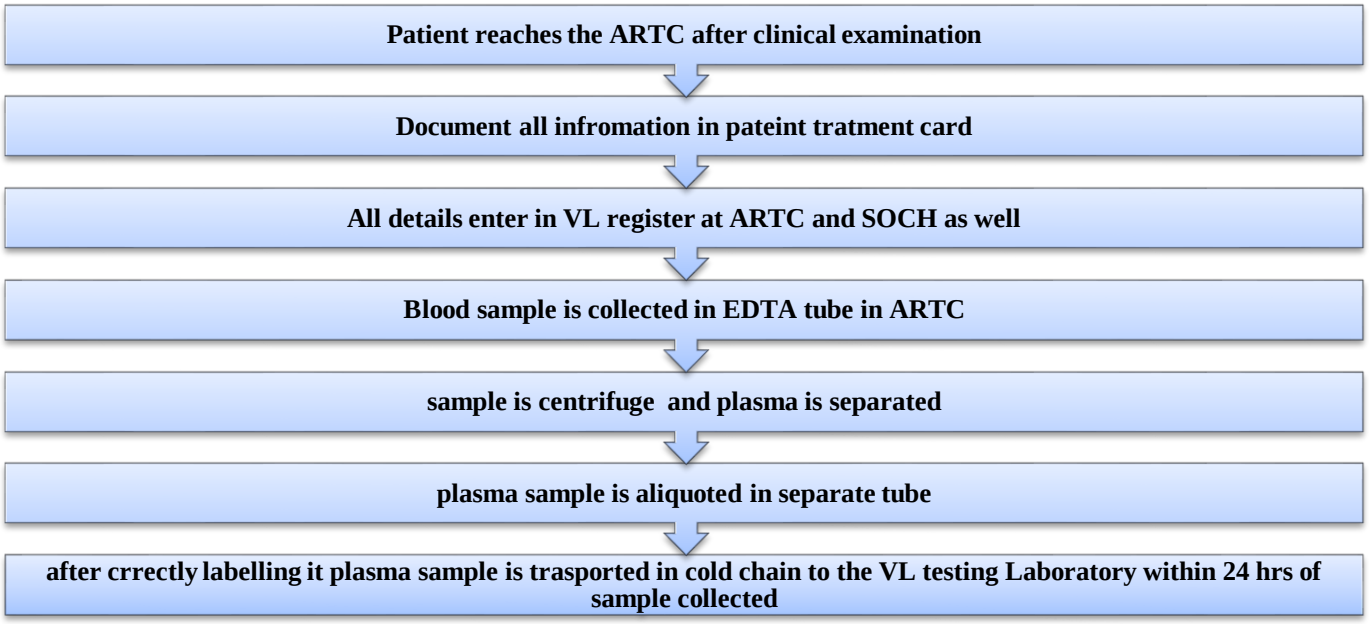
14) Blood culture bottle must be kept at room temperature and send to lab.

Transport of Samples to Other Areas Not Within the Same Building:

Samples should be packaged as per instruction as Triple layer packaging with biohazard symbol outside the all sides of container along with upside mark as per placement of sample. Communication details including name of department head, address, Mobile no, email ID of sender and receiver should be written in legible handwriting.

PROCESS FLOW OF SAMPLE COLLECTION AT THE ART CENTRE FOR HIV 1 VIRAL LOAD TEST

- Plasma should be separated from whole blood within six hours of sample collection.
- The whole blood cannot be frozen for later use for viral load testing.
- The sample tubes should be centrifuged at 2000-2500 rpm for 10-15 minutes.
- Following centrifugation, maximum amount (**minimum 3 – 4 ml**) of clear straw colored plasma should be separated using a sterile Pasteur pipette or sterile filter tips and transferred into sterile tubes screw cap labeled with patient details using cryo labels
- If the sample collection centre & viral load testing laboratory are located in the same premises or nearby, the plasma sample can be transported within 2-3 hours in the sample transportation box with ice packs (the samples and the ice pack should be in different container).
- When the samples have to be transported over long distance through courier, triple package system mentioned below should be used to maintain bio-safety and integrity of the sample.
- During packaging it is important to record the temperature inside the box once the ice packs are kept and before sealing.
- Sample transport begins at the ART centre where packaging takes place and ends at the testing laboratory where samples are received and subsequently tested.
- The samples must be properly packaged according to all safety guidelines (IATA- International Air Transport Association) and ice packs used must be frozen.
- TRF must be filled out, checked and signed. If the samples have to be transported from an ART centre which is far away from the viral load testing laboratory, the samples will be transported with the TRF in duplicate and ensure delivery to the testing lab at 2 - 8 C within 24 hours of sample collection.



Sr. no	Specific tests/ examination performed	Transport timeframe (time between collection and receipt)	Special transport care
1.	Aerobic Culture and antimicrobial Susceptibility for urine	<2hrs at 2' C – 8 ' C	If >2hrs is anticipated, add boric acid preservative or keep at 2˚C – 8˚ C
2.	Aerobic Culture and antimicrobial Susceptibility for pus	<2hrs	If >2hrs is anticipated, keep at 2˚C -8˚ C
3.	Aerobic Culture and antimicrobial Susceptibility for swab	<2hrs	If >2hrs is anticipated, keep at 2˚C -8˚ C
4.	Aerobic Culture and antimicrobial Susceptibility for body fluid	<2hrs	If >2hrs is anticipated, keep at 2˚C -8˚ C
5.	Aerobic Culture and antimicrobial Susceptibility for Blood	<2hrs	Room temperature/ Incubator Do not refrigerate
6.	Aerobic Culture and antimicrobial Susceptibility for CSF	<2hrs	Room temperature/ incubator-37°C.Do not refrigerate
7.	Aerobic Culture and antimicrobial Susceptibility for Sputum	<2hrs	If >2hrs is anticipated, keep at 2˚C -8˚ C
8.	Aerobic Culture and antimicrobial Susceptibility for Stool	<2hrs	If >2hrs is anticipated, keep at 2˚C -8˚ C
9.	Gram stain	<2hrs	-----
10.	Acid fast Stain	<2hrs	------
11.	Special stain (Albert's stain, toludine blue stain)	<2hrs	Recommended transport media
12.	Water sample	<2hrs	If >2hrs is anticipated, keep at 2˚C -8˚ C
13.	OT sample	<2hrs	If >2hrs is anticipated, keep at 2˚C -8˚ C
14.	Hepatitis-B Rapid test for surface Antigen detection(HbsAg)	<2hrs	If >2hrs is anticipated, keep at 2˚C -8˚ C
15.	Hepatitis-B ELISA test for surface Antigen detection (HbsAg)	<2hrs	If >2hrs is anticipated, keep at 2˚C -8˚ C
16.	Widal test for Typhoid (Tube agglutination test)/ Rapid test for Typhoid	<2hrs	If >2hrs is anticipated, keep at 2˚C -8˚ C
17.	Test for Syphilis-Rapid plasma 65egain test. (Slide flocculation test)	<2hrs	If >2hrs is anticipated, keep at 2˚C -8˚ C
18.	Anti Streptolysin O test (latex agglutination card test)	<2hrs	If >2hrs is anticipated, keep at 2˚C -8˚ C
19.	C Reactive Protein(CRP)(latex agglutination card test)	<2hrs	If >2hrs is anticipated, keep at 2˚C -8˚ C
20.	Rheumatoid Factor (RA test)(latex agglutination card test)	<2hrs	If >2hrs is anticipated, keep at 2˚C -8˚ C
21.	Ig M antibody detection for HAV(Rapid test)	<2hrs	If >2hrs is anticipated, keep at 2˚C -8˚ C
22.	Ig M antibody detection for HAV(ELISA Test)	<2hrs	If >2hrs is anticipated, keep at 2˚C -8˚ C

23.	Ig M antibody detection for HEV(Rapid test)	<2hrs	If >2hrs is anticipated, keep at 2˚C -8˚ C
24.	Ig M antibody detection for HEV (ELISA Test)	<2hrs	If >2hrs is anticipated, keep at 2˚C -8˚ C
25.	Ig M antibody detection for HCV by rapid test	<2hrs	If >2hrs is anticipated, keep at 2˚C -8˚ C
26.	Ig M antibody detection for HCV by ELISA test	<2hrs	If >2hrs is anticipated, keep at 2˚C -8˚ C
27.	Ig M antibody detection for Chikungunya	<2hrs	If >2hrs is anticipated, keep at 2˚C -8˚ C
28.	Ig M antibody / NS1 detection for Dengue	<2hrs	If >2hrs is anticipated, keep at 2˚C -8˚ C
29.	Ig M&Ig G antibody detection for Measles	<2hrs	If >2hrs is anticipated, keep at 2˚C -8˚ C
30.	FUNGAL culture	<2hrs	If >2hrs is anticipated, keep at 2˚C -8˚ C
31.	KOH Preparation	<2hrs	Room temperature
32.	Indian ink preparation of CSF for Cryptococci	<2hrs	Room temperature
33.	Stool for ova- cyst	<2hrs	Room temperature
34.	Leptospirosis –Rapid test for Ig M antibody detection	<2hrs	If >2hrs is anticipated, keep at 2˚C -8˚ C
35.	Leptospirosis –ELISA test for Ig M and Ig G antibody detection	<2hrs	If >2hrs is anticipated, keep at 2˚C -8˚ C
36.	HIV test for Antibody detection	<2hrs	If >2hrs is anticipated, keep at 2˚C -8˚ C
37.	CD 4 count	<2hrs	If >2hrs is anticipated, keep at 22˚C , at room temperature
38.	Leptospirosis(MAT-Microscopic agglutination)	<2hrs	If >2hrs is anticipated, keep at 2˚C -8˚ C
39.	Leptospirosis(PCR- Polymerase chain reaction)	<2hrs	If >2hrs is anticipated, keep at 2˚C -8˚ C
40.	H1N1 swine influenza PCR (Category “C” only)	<2hrs	In cold chain only at 2-8 ℃
41.	Rapid test for typhoid fever-WB	<2hrs	If >2hrs is anticipated, keep at 2˚C -8˚ C
42.	Ig M and Ig G antibody detection for HSV-1	<2hrs	If >2hrs is anticipated, keep at 2˚C -8˚ C
43.	Ig M and Ig G antibody detection for HSV-2	<2hrs	If >2hrs is anticipated, keep at 2˚C -8˚ C
44.	HBV/ HCV viral load test	<2hrs	In cold chain only at 2-8 ℃

10. Safe disposal of materials after sample collection

- Bio medical waste management rules 2016 must be strictly followed
- Puncture proof containers must be used for sharps disposal
- Standard precautions including hand hygiene should be followed
- All staff should be vaccinated against HBV

Decontamination of premises

- Freshly prepared 1% hypochlorite must be available for routine decontamination like decontamination of work benched and spill management etc.

Discard of samples

Categories of waste generated by the laboratory should be identified. All the objects or materials should be effectively decontaminated or disinfected by an approved procedure before disposal. It should be packaged in an approved manner for immediate on-site treatment or transfer to another facility with treatment facility as per the Bio-Medical Waste Management Rules, 2016, Ministry of Forest, Environment and Climate change, Government of India. For each category of waste generated, applicable state guidelines must be followed in segregating, packaging, labeling / color-storage and disposal of waste. Tracking of waste disposal within the laboratory, outside the laboratory, and outside the facility to comply with the applicable regulations should be determined, documented and records maintained for retrieval. An information poster should be readily available in all sections of the laboratory.

Category	Type of waste	Type of Bag or Container to be used	Treatment and Disposal options
Yellow 	(a)Human Anatomical Waste: Human tissues, organs, body parts and fetus below the viability period (as per the Medical Termination of Pregnancy Act 1971, amended from time to time). (b)Animal Anatomical Waste: Experimental animal carcasses, body parts, organs, tissues, including generated animals the used waste from in experiments or testing in veterinary hospitals or colleges or animal houses.	Yellow coloured non-chlorinated plastic bags	Incineration or Plasma Pyrolysis or deep burial*

	(c) Soiled Waste: Items contaminated with blood, body fluids like dressings, plaster casts, cotton swabs and bags containing residual or discarded blood and blood components.		Incineration or Plasma Pyrolysis or deep burial* In absence of above facilities, autoclaving or micro-waving/hydroclaving followed by shredding or mutilation or combination of sterilization and shredding. Treated waste to be sent for energy recovery.
Yellow	(d) Expired or Discarded Medicines: Pharmaceutical waste like antibiotics, cytotoxic drugs including all items contaminated with cytotoxic drugs along with glass or plastic ampoules, vials etc.	Yellow coloured non-chlorinated plastic bags or containers	Expired `cytotoxic drugs and items contaminated with cytotoxic drugs to be returned back to the manufacturer or supplier for incineration at temperature >1200 0C or to common bio-medical waste treatment facility or hazardous waste treatment, storage and disposal facility for incineration at >12000C Or Encapsulation or Plasma Pyrolysis at >12000C. All other discarded medicines shall be either sent back to manufacturer or disposed by incineration.

	(e) Chemical Waste: Chemicals used in production of biological and used or discarded disinfectants.	Yellow coloured containers or non-chlorinated plastic bags	Disposed of by incineration or Plasma Pyrolysis or Encapsulation in hazardous waste treatment, storage and disposal facility.
Yellow	(f) Chemical Liquid Waste: Liquid waste generated due to use of chemicals in production of biological and used or discarded disinfectants, Silver X-ray film developing liquid, discarded Formalin, infected secretions, aspirated body fluids, liquid from laboratories and floor washings, cleaning, house-keeping and disinfecting activities etc.	Separate collection system leading to effluent treatment system	
	(g) Discarded linen, mattresses, beddings contaminated with blood or body fluid, routine mask and gown	Non-chlorinated yellow plastic bags or suitable packing material	Non- chlorinated chemical disinfection followed by incineration or Plazma Pyrolysis or for energy recovery. In absence of above facilities, shredding or mutilation or combination of sterilization and shredding. Treated waste to be sent for energy recovery or incineration or Plazma Pyrolysis.

	(h) Microbiology, Biotechnology and other clinical laboratory waste: Blood bags, Laboratory cultures, stocks or specimens of micro- organisms, live or attenuated vaccines, human and animal cell cultures used in research, industrial laboratories, production of biological, residual toxins, dishes and devices used for cultures, vacutainers with blood	Autoclave or Microwave or Hydroclave safe plastic bags or containers	Pre-treat to sterilize with non-chlorinated chemicals on-site as per as per World Health Organisation guidelines on Safe management of Waste from healthcare activities and WHO Blue Book,2014 and thereafter sent for incineration;
Red  	Contaminated Waste (Recyclable) (a) Wastes generated from disposable items such as tubing, bottles, intravenous tubes and sets, catheters, urine bags, syringes (without needles and fixed needle syringes) and gloves.	Red coloured non-chlorinated plastic bags or containers	Autoclaving or micro-waving/ hydroclaving followed by shredding or mutilation or combination of sterilization and shredding. Treated waste to be sent to registered or authorized recyclers or for energy recovery or plastics to diesel or fuel oil or for road making, whichever is possible. Plastic waste should not be sent to landfill sites.

White Category 	Waste sharps including Metals: Needles, syringes with fixed needles, needles from needle tip cutter or burner, scalpels, blades, or any other contaminated sharp object that may cause puncture and cuts. This includes both used, discarded and contaminated metal sharps	Puncture proof, Leak proof, tamper proof containers	Autoclaving or Dry Heat Sterilization followed by shredding or mutilation or encapsulation in metal container or cement concrete; combination of shredding cum autoclaving; and sent for final disposal to iron foundries (having consent to operate from the State Pollution Control Boards or Pollution Control Committees) or sanitary landfill or designated concrete waste sharp pit.
Blue  Category 	(a) Glassware: Broken or discarded and contaminated glass including medicine vials and ampoules except those contaminated with cytotoxic wastes.	Puncture proof, leak proof boxes or containers with blue coloured marking	Disinfection (by soaking the washed glass waste after cleaning with detergent and Sodium Hypochlorite treatment) or through autoclaving or microwaving or hydroclaving and then sent for recycling.
	(b) Metallic Body Implants	Puncture proof, leak proof boxes or containers with blue coloured marking	

11. Spill Management

Spill kit contains: (kept handy in all areas of hospital)

1. PPE

2. Absorbent material

3. Chalk/Pen/thread

4. Waste collection bag

5. Cleaning equipment: Bucket, mop cloth, hypochlorite solution

STEPS IN SPILL MANAGEMENT:

Blood spillage may occur because a laboratory sample breaks or because there is excessive bleeding during phlebotomy. In this situation, clean up the spillage and record the incident, using the following procedure.

a. Evacuate the contaminated area. Use stop/caution board if available.

b. Wear gloves and rest PPE as required.

c. Mark the contaminated area with a chalk or pen or thread.

d. Use a pair of forceps or tongs or a pan and brush to sweep up as much of the broken glass (or container) as possible. Do not pick up pieces with your hands (even with gloves) .

e. Discard the broken glass in a sharps container. If this is not possible due to the size of the broken glass, wrap the glass or container in several layers of paper and discard it carefully in a separate container. Do not place it in the regular waste container.

f. Use disposable paper towels / absorbent material (gauze pieces, cotton, blotting paper, etc.) to absorb as much of the sample as possible

g. Saturate the area again with 1% sodium hypochlorite (which should be prepared daily)

from the periphery to the centre. Wait for 15-20 minutes.

h. Discard the absorbent material and wipe the area clean with a disinfectant.

i. Clean and disinfect the forceps/tongs/ brush and pan.

j. Remove gloves and discard them.

k. Wash hands carefully with soap and water and dry thoroughly with single-use towels.

l. Dispose the used PPE appropriately as per BMW rules.

12. Storage of examined samples

1) From receiving of urine sample to inoculation period urine sample are stored at 4-8^0 C.
2) After inoculation of all bacteriology sample for culture are stored at 4-8^0 C for 72 hours. And CSF for culture, stored in GPB or BHI broth at room temperature.
3) All other samples are stored at 2-8^0 C for 72 hours.
4) In accordance with guidelines prescribed by NACO, Plasma can be stored at 2-8 C for a maximum of 5 days.
5) If there is a delay in testing more than 5 days, the samples are to be stored at -20 degree centigrade
6) Post testing, the samples are to be stored at-70 C or lower, to preserve RNA, for1 year.
7) Once plasma is frozen, it must be always transported frozen to avoid freeze thaw cycles.

Recommendations for time of transportation and storage at various conditions for plasma and whole-blood samples for HIV-1 ,HBV,HCV viral load testing

Temperature	15-30 degree C	2-8 degree C	-70 degree C or below
Whole blood	**6 hrs.**	**-**	**-**
Plasma	**-**	**5 days**	**5 years**

Procedure for Storage of samples are mentioned in SOPs all section of Microbiology department.

13. Repeat examination due to analytical failure

- Whenever there is analytical failure following action is taken

  -If (residual primary sample/secondary sample is sufficient) and (sample integrity is not in doubt) .Then examinations are repeated and reported

  -If (residual primary sample and secondary sample are insufficient) or (sample integrity is in doubt) then clinician is informed of analytical failure on phone or in writing or in person
- Clinician is requested to resend the new sample.
- Analytical failure is reported against the concerned examination in concerned sample ID and also in NC register of respective section.

14. TURN AROUND TIME

Sr. no	Specific tests/ examination performed	Maximum Turnaround time	
		OPD	WARD
1	Aerobic Culture and antimicrobial Susceptibility for urine	Negative: 54hr, Positive: 80hr	Negative: 54 hr, Positive: 80hr
2	Aerobic Culture and antimicrobial Susceptibility for pus	Negative: 54 hr, Positive: 80 hr	Negative: 54 hr, Positive: 80 hr
3	Aerobic Culture and antimicrobial Susceptibility for swab	Negative: 54 hr, Positive: 80 hr	Negative: 54 hr, Positive: 80 hr
4	Aerobic Culture and antimicrobial Susceptibility for body fluid	Negative: 54 hr, Positive: 80 hr	Negative: 54 hr, Positive: 80 hr
5	Aerobic Culture and antimicrobial Susceptibility for Blood	Negative: 5 days Positive: 6 days	Negative: 5 days Positive: 6 days
6	Aerobic Culture and antimicrobial Susceptibility for CSF	Negative: 54 hr, Positive: 80 hr	Negative: 54 hr, Positive: 80 hr
7	Aerobic Culture and antimicrobial Susceptibility for Sputum	Negative: 54 hr, Positive: 80 hr	Negative: 54 hr, Positive: 80 hr
8	Aerobic Culture and antimicrobial Susceptibility for Stool	Negative: 54 hr, Positive: 80 hr	Negative: 54 hr, Positive: 80 hr
9	Gram stain	If sample received before 1 pm: 6hrs If sample received after 1 pm: 24hrs	If sample received before 1 pm: 6hrs If sample received after 1 pm: 24 hrs
10	Acid fast Stain	If sample received before 1 pm: 6hrs If sample received after 1 pm: 24hrs	If sample received before 1 pm: 6hrs If sample received after 1 pm: 24 hrs
11	Special stain (Albert's stain, toludine blue stain)	If sample received before 1 pm: 6hrs If sample received after 1 pm: 24hrs	If sample received before 1 pm: 6hrs If sample received after 1 pm: 24 hrs
12	Water sample	72 hrs	72 hrs
13	OT sample	48hrs	48 hrs
14	Hepatitis-B Rapid test for HBs Antigen detection	If sample received between 9 am to 3 pm: 6hrs If sample received after 3 pm: 24hrs	If sample received between 9 am to 3 pm: 6hrs If sample received after 3 pm: 24hrs
15	Hepatitis-B ELISA test for HBs Antigen detection	If sample received before10 am: 6 hrs If sample received after 10 am : 30hrs	If sample received before 10 am: 6hrs If sample received after 10Am: 30 hrs

16	Widal test for Typhoid (Slide agglutination test)	If sample received before3 pm: 6 hrs If sample received after 3 pm: 24hrs	If sample received before3 pm: 6 hrs If sample received after 3 pm: 24 hrs
17	Test for Syphilis-Rapid plasma reagin test.(Slide flocculation test)	If sample received before 10 am: 6 hrs If sample received after 10am: 30 hrs	If sample received before 10 am: 6hrs If sample received after 10pm: 30 hrs
18	Anti-Streptomycin O test (latex agglutination test)	If sample received between 9 am to 3 pm: 6hrs If sample received after 3 pm: 24hrs	If sample received between 9 am to 3 pm: 6hrs If sample received after 3 pm: 24hrs
19	C Reactive Protein(CRP)(latex agglutination test)	If sample received between 9 am to 3 pm: 6hrs If sample received after 3 pm: 24hrs	If sample received between 9 am to 3 pm: 6hrs If sample received after 3 pm: 24hrs
20	Rheumatoid Factor (RF test)(latex agglutination test)	If sample received between 9 am to 3 pm: 6hrs If sample received after 3 pm: 24hrs	If sample received between 9 am to 3 pm: 6hrs If sample received after 3 pm: 24hrs
21	Ig M Antibody detection for HAV by ELISA test	If sample received before 10 am: 6 hrs If sample received after 10am: 30 hrs	If sample received before 10 am: 6 hrs If sample received after 10am: 30 hrs
22	Ig M Antibody detection for HEV by ELISA test	If sample received before 10 am : 6 hrs If sample received after 10am: 30 hrs	If sample received before 10 am: 6 hrs If sample received after 10am: 30 hrs
23	Ig M Antibody detection for HAV by rapid test	If sample received between 9 am to 3 pm: 6hrs If sample received after 3 pm: 24hrs	If sample received between 9 am to 3 pm: 6hrs If sample received after 3 pm: 24hrs
24	Ig M Antibody detection for HEV by rapid test	If sample received between 9 am to 3 pm: 6hrs If sample received after 3 pm: 24hrs	If sample received between 9 am to 3 pm: 6hrs If sample received after 3 pm: 24hrs
25	Ig M and Ig G antibody detection for Measles	72hrs	72 hrs

26	Ig M Antibody detection for HCV by rapid test	If sample received between 9 am to 3 pm: 6hrs If sample received after 3 pm: 24hrs	If sample received between 9 am to 3 pm: 6hrs If sample received after 3 pm: 24hrs
27	Ig M Antibody detection for HCV by ELISA test	If sample received before 10 am :6 hrs If sample received after 10 am: 30hrs	If sample received before10 am: 6hrs If sample received after 10 pm: 30 hrs
28	Ig M antibody detection for Chikungunya	72 hours	72 hours
29.	Ig M ELISA antibody detection for Dengue	If sample receive before 11 am: report given till 5 pm If sample received after 11am: next working day till 5 pm	If sample receive before 11 am: report given till 5 pm If sample received after 11am: next working day till 5 pm
30.	NS1 antigen detection for Dengue	If sample receive before 11 am: report given till 5 pm If sample received after 11am: next working day till 5 pm	If sample receive before 11 am: report given till 5 pm If sample received after 11am: next working day till 5 pm
31.	Fungal culture	Negative: 21 days Positive: In between 1-21 days	Negative: 21 days Positive: In between 1-21 days
32.	KOH preparation	6 hrs	6 hrs
33.	Indian ink preparation of CSF for Cryptococci	6 hrs	6 hrs
34	Stool for Ova and Cyst	6 hrs	6hrs
35	Leptospirosis –Rapid test for Ig M antibody detection*	If sample receive before 11 am: report given till 5 pm If sample received after 11am: next working day till 5 pm	If sample receive before 11 am: report given till 5 pm If sample received after 11am: next working day till 5 pm
36	Leptospirosis –ELISA test for Ig M and Ig G antibody detection*	If sample receive before 11 am: report given till 5 pm If sample received after 11am: next working day till 5 pm	If sample receive before 11 am: report given till 5 pm If sample received after 11am: next working day till 5 pm
37	In ICTC: HIV rapid test for Antibody detection	If sample received before 1 pm: 4 pm If sample received after 1 pm: 24 hrs	If sample received before 1 pm: 4 pm If sample received after 1 pm: 24 hrs

38	In SRL: HIV Rapid and ELISA test for Antibody detection	Reports are dispatched in fourth week of quarter month. (Jan, April, July, October) For indeterminate samples, reports are given within 1 week.	
39	CD 4 count	If sample received before 1 pm: 4 pm If sample received after 1 pm: 24 hrs	If sample received before 1 pm: 4 pm If sample received after 1 pm: 24 hrs
40	HIV -1 Viral Load Testing	Test result will be sent from HIV-1 VL to the ARTC within 72 hours of successful testing and within 14 days of sample collection via SOCH platform	
41	Leptospirosis(MAT-Microscopic agglutination)	If sample receive before 11 am: report given till 5 pm If sample received after 11am: next working day till 5 pm	If sample receive before 11 am: report given till 5 pm If sample received after 11am: next working day till 5 pm
42	Leptospirosis(PCR- Polymerase chain reaction)	If sample receive before 11 am: report given till 5 pm If sample received after 11am: next working day till 5 pm	If sample receive before 11 am: report given till 5 pm If sample received after 11am: next working day till 5 pm
43	Rapid test for typhoid fever	If sample received between 9 am to 3 pm: 6hrs If sample received after 3pm: 24hrs	If sample received between 9 am to 3 pm: 6hrs If sample received after 3pm: 24hrs
44	H1N1 swine influenza PCR (Category "C" only)	If sample receive before 11 am: report given till 5 pm If sample received after 11am: next working day till 5 pm	If sample receive before 11 am: report given till 5 pm If sample received after 11am: next working day till 5 pm
45	COVID 19 RT PCR test	If sample receive before 11 am: report given till 5 pm If sample received after 11am: next working day till 5 pm	If sample receive before 11 am: report given till 5 pm If sample received after 11am: next working day till 5 pm
46	HBV Viral Load Testing	Test result will be sent within 14 days of sample recei. Report collection for NCH patients-Friday from hemophilia opd	
47	HCV Viral Load Testing		

SR. NO.	SPECIFIC TESTS/ EXAMINATION IN EMERGENCY	Maximum turn around time	
		Interim report	Final report
1	Gram stain (Suspected gas gangrene, Diphtheria, CSF meningitis, precious body fluids)	2 hrs	24 hrs
2	HIV rapid test for Antibody detection	Negative report: 2 hrs, Positive: awaited, refer patient to ICTC	Negative report: 2 hrs, Positive: 24 hrs from ICTC
3	Hepatitis-B Rapid test for HBs Antigen detection	2 hrs	24 hrs
4	Leptospirosis -Rapid test for Ig M antibody detection	2 hrs	24 hrs
5	IgM rapid test for HCV antibody detection	2 hrs	24 hrs
6	Stool darting motility for suspected cholera cases	2 hrs	2 hrs
7	India ink preparation in CSF sample for cryptococcal meningitis	2 hrs	2 hrs

- **On holiday result will be given on next working day.**
- **Total turnaround time will be applicable only for the available test kits & reagents for particular tests requested.**

HANDLING OF TEST RESULTS

 All test results are treated with strict confidentiality.

 Laboratory management is responsible for ensuring that reports are received by the appropriate individuals within an agreed-upon time interval. When results transmitted as an interim report, the final report will be forwarded to the requester.

 Total turnaround time will be applicable only for the available test kits & reagents for particular tests requested.

 All shortfalls in the turnaround time are investigated and where necessary, corrective action are taken immediately to address any problems.

 Copies or files of reported results are retained electronically in the Laboratory Information System. This facilitates retrieval of the information.

 The laboratory will notify the physician (or other clinical personnel responsible for patient care) when the test results for critical properties fall within established “alert” or “critical” interval and when an urgent test is requested.

 Hard copy of the test result will be sent from HIV-1 VL to the ARTC within 72 hours of testing and within 14 days of sample collection

 Results will be entered in the hard copy report form at the HIV-1 VL lab

 Filled and signed report form will be sent to ARTC by VL lab.

15. CRITICAL LABORATORY VALUES

Definition:

Critical laboratory Result

Test result or value that falls outside the critical limits or the presence of any unexpected abnormal findings, cells or organisms which may cause imminent danger to the patient, and/or require immediate medical attention

Critical Limit

Boundaries of low and high laboratory test values beyond which may cause imminent danger to the patient and/or require immediate medical attention

Who Do We Inform?

To the clinician who had ordered the test or to the next designated person if the responsible clinician is not around.

Critical intervals and properties for examination

Sr. no	Specific tests/ examination performed	Samples	Critical values
1.	Aerobic Culture and antimicrobial Susceptibility for urine	Urine	No critical values
2.	Aerobic Culture and antimicrobial Susceptibility for pus	Pus	No critical values
3.	Aerobic Culture and antimicrobial Susceptibility for swab	Swab	No critical values
4.	Aerobic Culture and antimicrobial Susceptibility for body fluid	Body fluids	No critical values
5.	Aerobic Culture and antimicrobial Susceptibility for Blood	Blood	**Positive**
6.	Aerobic Culture and antimicrobial Susceptibility for CSF	CSF	**Positive**
7.	Aerobic Culture and antimicrobial Susceptibility for Sputum	Sputum	No critical values

8.	Aerobic Culture and antimicrobial Susceptibility for Stool	Stool	**If Salmonella, shigella isolation in culture and darting motility of vibrio from stool sample.**
9.	Gram stain	Any sample	**Throat swab: Gram positive bacilli, rash exudates &CSF: Gram negative diplococcic, Pus exudates: gram positive bacilli, blood culture: if any organism seen.**
10.	Acid fast Stain	Sputum, body fluids, urine etc..	No critical values
11.	Special stain (Albert's stain, toluidine blue stain)	Throat swab	**Corynebacterium diphtheria**
12.	Water sample	Water in sterile bottle	No critical values
13.	OT sample	Swab , petri dish	No critical values
14.	Hepatitis-B Rapid test for HBs Antigen detection	Serum	No critical values
15.	Hepatitis-B ELISA test for HBs Antigen detection	Serum	No critical values
16.	Widal test for Typhoid (Tube agglutination test)	Serum	No critical values
17.	Test for Syphilis-Rapid plasma reagin test. (latex agglutination test)	Serum	No critical values
18.	Anti Streptolysin O test (latex agglutination card test)	Serum	No critical values
19.	C Reactive Protein(CRP)(latex agglutination card test)	Serum	No critical values
20.	Rheumatoid Factor (RA test)(latex agglutination card test)	Serum	No critical values
21.	Ig M antibody detection for HAV by rapid test	Serum	No critical values
22.	Ig M antibody detection for HEV by rapid test	Serum	No critical values
23.	Ig M antibody detection for HAV by ELISA test	Serum	No critical values
24.	Ig M antibody detection for HEV by ELISA test	Serum	No critical values
25.	Ig M and Ig G antibody detection for Measles	Serum	No critical values
26.	Ig M antibody detection for HCV by rapid test	Serum	No critical values
27.	Ig M antibody detection for HCV by ELISA test	Serum	No critical values
28.	Ig M antibody detection for Chikunguniya	Serum	No critical values

29.	Ig M antibody detection for Dengue	Serum	**Positive**
30.	FUNGAL culture		No critical value
31.	KOH Preparation	Scrapping from affected area	**Positive corneal scrapping**
32.	Indian ink preparation of CSF for Cryptococci	CSF	**Positive**
33.	Stool for ova- cyst	Stool	No critical values
34.	Leptospirosis -Rapid test for Ig M antibody detection	Serum	**Positive**
35.	Leptospirosis -ELISA test for Ig M and Ig G antibody detection	Serum	**Positive**
36.	HIV test for Antibody detection	Serum	No critical values
37.	CD 4 count	Whole blood in EDTA	No critical values
38.	Leptospirosis(MAT- Microscopic agglutination)	Serum	**Positive**
39.	Leptospirosis(PCR- Polymerase chain reaction)	Serum	**Positive**
40.	NS1 antigen	Serum	**Positive**
41.	Rapid test for typhoid fever	Serum	No critical values
42.	H1N1 swine influenza PCR (Category "C" only)	Nasopharyngeal swab and throat swab in VTM	**Positive**
43.	HIV 1 VIRAL LOAD TEST	Plasma	No critical values
44.	HBV Viral load test	Plasma	No critical values
45.	HCV Viral load test	Plasma	No critical values
46.	COVID RT PCR test	Nasopharyngeal sample/throat swab	**Positive**

16. Laboratory complaint process

1. Complain or feedback forms are available in all the different sections of laboratory services, GMCS,.
2. In case of complain or feedback, fill the forms available and put in to complain box located at sample receiving area, microbiology department , 3rd floor, Government medical college, Surat or contact Section In-charge.
3. Complain box is checked weekly on Monday by person working at receiving centre, microbiology dept. She categorized complains section wise and handover to respective section incharge.
4. Section incharge consult same with section staff about complain and necessary actions are taken within 7 to 10 working days or as soon as early to resolve it and ensure future prevention of such. If possible, the respective lab section will also acknowledge the receipt of complain to complainant and provide the outcome and corrective action by telephonically. Documentation of all this maintained in MI:C/records/File/10/complain register

New civil Hospital Surat laboratory services

નવી સિવિલ હોસ્પિટલ સુરત લેબોરેટરી સેવા

DEPARTMENT OF MICROBIOLOGY

Complaint form (ફરિયાદ/પ્રતિસાદફોર્મ)

(Fill in duplicate, Give a copy to the person giving Complaint/Feedback)

Name, address, department and phone number of person giving complaint/feedback:

(અભિપ્રાય આપનારનું નામ , વિભાગ , સરનામુ અને ફોનનંબર) :

Detalis of Complaint/Feedback (ફરિયાદ/પ્રતિસાદ ની વિગતો)

Date and signature of person giving Complaint/Feedback:

(ફરિયાદ/પ્રતિસાદ આપનાર વ્યક્તિની તારીખ અને હસ્તાક્ષર)

Action taken with Date and signature of person directing action:
(લેવામા આવેલા પગલા, પગલા લેનારની સહી અને તારીખ)

17. Abbreviations

ART	Antiretroviral therapy
EDTA	Ethylene Diamine Tetra Acetic acid
HIV	Human Immunodeficiency Virus
IATA	International Air Transport Association
PCR	Polymerase Chain Reaction
PPE	Personal Protective Equipment
RT-PCR	Real-Time Polymerase Chain Reaction
SOCH	Strengthening Overall Care for HIV beneficiaries
TRRF	Test Requisition Report Form
VL	Viral Load
WHO	World Health Organization