

List of Tests done in the Department of Microbiology

A: TESTS DONE IN BACTERIOLOGY LABORATORY :

S.N	TEST NAME	SAMPLE	SAMPLE QUANTITY/ VOLUME	Collection container	SPECIAL COMMENTS
1	Bacterial culture and sensitivity testing (Aerobic)	Urine	3- 5 mL	Universal Container	Midstream urine sample is preferred after cleaning the local periurethral area
		Sputum	2-5 ml	Universal Container	Avoid Saliva
		Endotracheal aspirate	2-5 ml	Universal Container	
		Pus	2-3 ml	Either universal container or Swab	
		CSF/Body fluids	2-5ml	Universal container	Do not send syringes with needles
		Stool	Pea size	Universal container	Avoid mixing with urine
2	Automated bacterial culture sensitivity testing	Same as above	Same as above	Same as above	Same as above
3	Gram Stain	Sputum	1-2 ml	Universal container	Avoid Saliva
		ET aspirate	1-2 ml	Universal container	
		Body fluids	1-2 ml	Universal container	
4	Bacterial Anaerobic culture and sensitivity	Pus aspirate	3-5ml	Universal container	Swabs not preferable. Maintain strict anaerobic environment

					while transportation of samples
5	Clostridium difficile toxin assay	Stool	1-2 ml; fresh or refrigerated liquid or unformed stool	Universal container	
6	Blood culture and sensitivity	Blood	8-10ml per bottle. Send a set of 2 bottles (Aerobic/A naerobic) inoculated from single venupuncture (Adults). Send 2 sets preferably from 2 separate venupuncture from 2 sites	Blood culture bottles	Skin asepsis to be done by either "alcoholic chlorhexidine" or "70% alcohol + 10% Povidone Iodine"
			1-5ml (Neonates & Children)/bottle	Blood culture bottles	For newborns 2 separate alcohol wipes for skin asepsis
7	Water Testing for coliforms	Water Source (tap water)	50ml	Water testing bottle	Clean the tap area aseptically and before collection of tap water, let it run for 15minutes.

B: TESTS DONE IN VIROLOGY LABORATORY:

S.N	VIRUS	Test Name	SAMPLE	SAMPLE QUANTITY/ VOLUME	Collection container
1	Hepatitis A	Anti Hepatitis A IgM	SERUM	2-3ml whole blood	Plain Vial
2	Hepatitis B	HBsAg	SERUM	2-3ml whole blood	Plain Vial
3		Anti-HBs IgM	SERUM	2-3ml whole blood	Plain Vial
4		Anti-HBc IgM	SERUM	2-3ml whole blood	Plain Vial
5		HBeAg	SERUM	2-3ml whole blood	Plain Vial
6		Anti-Hbe IgM	SERUM	2-3ml whole blood	Plain Vial
7		HBV DNA (quantitative)	BLOOD	5ml whole blood	EDTA Vial
8		Hepatitis C	Anti HCV antibody	SERUM	2-3ml whole blood
9	HCV genotyping		BLOOD	5ml whole blood	EDTA Vial
10	HCV RNA (quantitative)		BLOOD	5ml whole blood	EDTA Vial
11	Hepatitis E	Anti HEV IgM	SERUM	2-3ml whole blood	Plain Vial
12	Japanese Encephalitis	IgM ELISA	CSF / SERUM / BLOOD	2-3ml whole blood	Plain Vial
13	Herpes Simplex virus	Tzanck smear for inclusion bodies	Vesicular fluid	2-3ml fluid	Plain Vial

C: TESTS DONE IN SEROLOGY LABORATORY:

S.N	TEST NAME	SAMPLE	SAMPLE QUANTITY/ VOLUME	Collection container	SPECIAL COMMENTS
1	Procalcitonin assay	SERUM	5mL whole blood	Plain Vial	
2	RA (Quantitative)	SERUM	2-3ml whole blood	Plain Vial	
3	RA factor (Semiquantitative)	SERUM	2-3ml whole blood	Plain Vial	
4	CRP (Quantitative)	SERUM	2-3ml whole blood	Plain Vial	
5	CRP (Semiquantitative)	SERUM	2-3ml whole blood	Plain Vial	
6	ASO (Quantitative)	SERUM	2-3ml whole blood	Plain Vial	
7	ASO (Semiquantitative)	SERUM	2-3ml whole blood	Plain Vial	
8	Anti-CCP antibodies (ELISA)	SERUM	2-3ml whole blood	Plain Vial	
9	Rapid card test for Typhoid- IgM/IgG	SERUM	2-3ml whole blood	Plain Vial	
10	WIDAL tube test	SERUM	5ml whole blood	Plain Vial	
11	Rapid Leptospira IgM test	SERUM	2-3ml whole blood	Plain Vial	
12	RPR (Rapid Plasma Reagin)	SERUM	2-3ml whole blood	Plain Vial	
13	Treponema pallidum haemagglutination test (TPHA)	SERUM	2-3ml whole blood	Plain Vial	
14	Chikungunya antibody test (IgM Capture ELISA)	SERUM	2-3ml whole blood	Plain Vial	Test is free of cost as kits are supplied by NIV Pune

D: TESTS DONE IN IMMUNOLOGY LABORATORY

S.N	TEST NAME	SAMPLE	SAMPLE QUANTITY/ VOLUME	Collection container	SPECIAL COMMENTS
1	CMV IgM ELISA	SERUM	1ml (2ml)	Plain Vial	
2	HIV (CARD TEST)	SERUM	1ml (2ml)	Plain Vial	
3	Dengue IgM ELISA	SERUM	1ml (2ml)	Plain Vial	Free of cost, since the kit is provided by NIV Pune
4	HIV ELISA	SERUM	1ml (2ml)	Plain Vial	
5	HSV 1+2 IgM ELISA	SERUM	1ml (2ml)	Plain Vial	
6	Rubella IgM ELISA	SERUM	1ml (2ml)	Plain Vial	
7	TORCH IgM ELISA (Toxoplasma, Rubella, Cytomegalovirus, Herpes simplex)	SERUM	1ml (2ml)	Plain Vial	
8	Toxoplasma IgM ELISA	SERUM	1ml (2ml)	Plain Vial	
9	NS1 Antigen	SERUM	1ml (2ml)	Plain Vial	
10	CMV IgG ELISA	SERUM	1ml (2ml)	Plain Vial	

E: TESTS DONE IN MYCOBACTERIOLOGY LABORATORY:

S.N	TEST NAME	SAMPLE	SAMPLE QUANTITY/ VOLUME	Collection container	SPECIAL COMMENTS
1	Slit skin smear for M.leprae	Scraping from skin/site	--	--	Patient to be referred to Microbiology Dept.
2	AFB smear for TB	Sputum/ CSF/ Pus/ Body fluid/ Tissue	Sputum > 2ml Tissue > 1gm CSF > 3ml Pus > 2ml Body fluid > 3ml Urine – early morning urine max 500 ml	Sputum in sterile wide mouth container after rinse/gargle. Cough deeply. Others by aseptic/standard procedures. CSF/body fluid in sterile container. Tissue in sterile container with or without Normal saline	
3	Routine Mycobacterial culture and sensitivity	Sputum/CSF/pus/ body fluid/ tissue	Sputum > 2ml Tissue > 1gm CSF > 3ml Pus > 2ml Body fluid > 3ml Urine – early morning urine max 500 ml	Same as above	
4	MGIT TB culture	Sputum/CSF/pus/ body fluid/ tissue	Sputum > 2ml Tissue > 1gm CSF > 3ml Pus > 2ml Body fluid > 3ml Urine – early morning urine max 500 ml	Same as above	
5	MGIT TB culture and AST for primary	Sputum/CSF/pus/ body fluid/ tissue	Sputum > 2ml Tissue > 1gm CSF > 3ml Pus > 2ml	Same as above	

	and secondary drugs		Body fluid > 3ml Urine – early morning urine max 500 ml		
6	MTB Complex genotype and RIF and INH RE (LPA for MDR TB)	Only pulmonary samples	Sputum > 2ml BAL >1ml Pleural fluid >3ml	Sputum in sterile wide mouth container after rinse/gargle. Cough deeply. Other respiratory samples by aseptic/standard procedures.	
7	Real Time PCR for Mycobacterium tuberculosis	Sputum/ CSF/ Pus/ Body fluid/ Tissue (Except Blood)	Sputum > 2ml Tissue > 1gm CSF > 3ml Pus > 2ml Body fluid > 3ml Urine – early morning urine max 500 ml	Sputum in sterile wide mouth container after rinse/gargle. Cough deeply. Others by aseptic/standard procedures. CSF/body fluid in sterile container. Tissue in sterile container with or without Normal saline	
8	GeneXpert test for TB	Sputum/ CSF/ Pus/ Body fluid/ Tissue (Except Blood and urine)	Sputum > 2ml Tissue > 1gm CSF > 3ml Pus > 2ml Body fluid > 3ml	Sputum in sterile wide mouth container after rinse/gargle. Cough deeply. Others by aseptic/standard procedures. CSF/body fluid in sterile container. Tissue in sterile container with or without Normal saline	

F: TESTS DONE IN PARASITOLOGY LABORATORY:

S.N	TEST NAME	SAMPLE	SAMPLE QUANTITY/ VOLUME	Collection container	SPECIAL COMMENTS
1	Malaria antigen (rapid test)	Whole blood	2ml	EDTA vial	
2	Blood smear for MP	Whole blood	2ml	EDTA vial	
3	Antigen detection for Filariasis (rapid test)	Whole blood	2ml	EDTA vial	
4	Blood smear for MF	Whole blood	2ml	EDTA vial	
5	Stool for Occult blood	Stool	Pea size	Universal Container	
6	Microscopy Stool (Routine)	Stool	Pea size	Universal Container	
7	Special staining for opportunistic parasite (Stool)	Stool	Pea size	Universal Container	
8	IgG ELISA for Echinococcus	Serum	1ml (2ml blood)	Plain vial	
9	Microscopy for Hydatid cyst	Cyst fluid	1ml	Universal Container	
10	IgG ELISA for Cysticercosis	Serum	1ml (2ml blood)	Plain vial	

G: TESTS DONE IN MYCOLOGY LABORATORY :

S.N	TEST NAME	SAMPLE	SAMPLE QUANTITY/ VOLUME	Collection container	SPECIAL COMMENTS
1	Cryptococcal diagnostic assay (Antigen + Microscopy)	CSF, SERUM	CSF – 1ml Serum – 1ml	Plain vial	Do not send syringes with needles
2	KOH Mount for Mycology (Skin Scraping)	Skin/Nail/Hair		Sterile Black paper	Patient to be referred to Mycology Laboratory for sample collection
3	Culture – Fungal Routine	Respiratory sample/Body fluid/Pus/Urine/Tissue	1-2ml	Universal container	Do not send syringes with needles
4	Fungal Blood Culture	Blood	8-10ml/bottle. Send a set of 2 bottles inoculated from single venupuncture (Adult). Send 2 sets preferably, 2 separate venupuncture from 2 sites	Blood culture bottle	
5	Microscopy for fungi	Respiratory sample/Body fluid/Pus/Urine/Tissue	1-2ml	Universal container	
6	Special staining – sputum for opportunistic pathogen	Respiratory sample/Body fluid	1-2ml	Universal container	Do not send syringes with needles
7	Automated Yeast Identification Culture and		---	---	When yeast is isolated in all the above samples, requisition

	sensitivity				for Automated Yeast identification culture and sensitivity can done from ward/clinic in consultation with Mycology Laboratory
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H: MICROBIOLOGY TESTS DONE IN EMERGENCY LABORATORY :

S.N	TEST NAME	SAMPLE	SAMPLE QUANTITY/ VOLUME	Collection container	SPECIAL COMMENTS
1	DENGUE NSI ANTIGEN/ANTIBODY combo (Rapid test)	SERUM	1ml(2ml blood)	Plain vial	Only available in emergency. Results must be confirmed with ELISA
2	HIV (Rapid test)	SERUM	1ml(2ml blood)	Plain vial	Only available in emergency. Results must be confirmed with ELISA
3	HBsAg (Rapid test)	SERUM	1ml(2ml blood)	Plain vial	Only available in emergency. Results must be confirmed with ELISA
4	HCV (Rapid test)	SERUM	1ml(2ml blood)	Plain vial	Only available in emergency. Results must be confirmed with ELISA