

diseases

Communicable

diseases

needs

communication

to spread

to control

to diagnose

community

communication

INFORMATION BOOKLET

Published by :
Biocare Research (India) Pvt. Ltd.



COMMON KEYS TO CONTROL INFECTIOUS DISEASES



Nutrition

These four common keys are well recognized worldwide to control infectious diseases. WHO report shows only in Asian Countries still 7 million people dies every year due to common infectious diseases.

To control this govt., private sector and common men should be co-ordinated in a network.

- Everybody from higher to lower class people should understand necessity of proper nutritionally balanced diet requirement, which ultimately builds healthy human being.
- Everybody should 'honestly' try to avoid nuisance of bad habits of throwing garbage in public places, spoiling decency of general public places and should learn good, healthy, hygiene practice.
- Every doctors, other specialities and alternative therapist should understand and apply right treatment for identified infectious diseases.
- Govt., pharma companies, NGO, consultants, universities, academic institute should contribute tie-up for genuine research in this area.

These four keys of knowledge will make happy life on this earth.



Research



Hygiene



Treatment

DISCLAIMER

Methods, Technologies, Processes are everchanging according to the newer developments in the field, so "Biocare Research (I) Pvt. Ltd." requests to reader and users of this booklet, to be in touch with recent advances.

Laboratory reserves right of performing any assay with the help of other standard technique if particular indicated in the list is not available at the time of specimen receipt.

Diagnostic procedures and systems has it's own limitations, so laboratory does not claims that any patient should be treated only in the light of lab report, as other parameters like radio diagnosis, clinical exam, history of illness etc. should be co-related for the ultimate benefit of patient.

Our humble request :

In case of any disparity in the result, we request you to re-submit sample collected as per standard protocol with your specific note / comment as well as alongwith detailed clinical notes to set the test for a particular pathogen.

OUR GOAL

*We are committed to
customer satisfaction
by providing high quality services
“on time - every time”
perfect result at affordable / economical cost.*

PROCESS TO ACHIEVE GOAL

*To achieve this
we are taking care for
continuous improvement in
quality management system,
and
system based approach
through
continuous training.*

**QUALITY
POLICY**

STRIVE FOR QUALITY MANAGEMENT SYSTEM

ISO 9001:2000



Certificate of Registration

ISO 9001 Quality Register of business units of ISO 9001 Accredited Organisations

Biocare Research (I) Pvt. Ltd.

In Plot, Karthi Complex, Paldi (Ch. Road), Paldi, Ahmedabad - 380 015, Gujarat, India

ISO 9001 Quality Register is admitted in accordance to the Standard:

ISO 9001:2000

For the scope:

Microbiological analysis of clinical and food specimens.

After registration, the holder of this certificate will be approved to participate in international ISO 9001:2000 standard certification schemes.

Certificate Number : 43004333
 Issue Date : May 02, 2004
 Expiration Date : August 01, 2006
 Expiration Date : August 01, 2003

Shubhash

Shubhash
 Executive Director, IQAC



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 Registration does not constitute an endorsement or a guarantee of quality.
 ISO 9001 is a registered trademark of the International Organization for Standardization (ISO).

Date : 26.12.2003

S.No. 054

Indian Association of Medical Microbiologists External Quality assessment scheme (EQAS) PARTICIPATION CERTIFICATE

BIOCARE RESEARCH (I) PVT. LTD. BNDL. AHMEDABAD

has participated in the Microbiology EQAS under
 the auspices of the IAMM for the year 2003

Subcommittee :
 Dr. T. Jacob Jaffer
 Col. Dr. A. Nagendra (Secretary, IAMM)
 Dr. S. Reddyiah
 Dr. Mary V. Jayaraman

Mary V. Jayaraman
 Prof. Mary V. Jayaraman, MD, DCP, MAMS
 EQAS Co-ordinator
 Department of Clinical Microbiology
 Christian Medical College
 Vellore - 517 004

National Centre for Quality Management Certificate of Membership

Conferring

Dr. Dilip Natvarlal Laveri

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INDIVIDUAL LIFE MEMBER

in recognition of his support to Quality Movement

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in accordance with its rules and regulations

Admitted on : March 5, 1999

Cert. No. / 19-03- / 12-02-2003

N. Manjiv
 Executive Director



Striving for Excellence

Dilip Natvarlal Laveri
 President

Biocare is established in 1992 with the aim of developing a unique and advanced microbiology centre with all modern facilities. Biocare is an organization that is committed to bring you excellence in the field of diagnostic and industrial microbiology. We offer a wide range of quality assured clinical laboratory tests as well as industrial testing. We also conduct research using ultra modern technologies meeting international standards.

Biocare aims at popularizing the use of microbiology for better diagnosis, patient's management, industrial product testing, raw material testing etc. All there we aim to improve quality of living from viewpoint of microbiology. Better food, clean and germ free water, pathogen free food products is our ultimate goal to improve common man's life through science of microbiology.

In keeping with this philosophy we provide consultancy and management service to existing clinical and industrial laboratories for introducing new technologies and ensuring quality testing.

We also offer our services for contract research, clinical trials, industrial R & D on a turnkey basis.

Biocare's microbiology facility is the first in Gujarat State to provide, under one roof, wide range of microbiological testing.

Biocare's Directors are supported in their endeavors by panel of consultants who are renowned experts in their fields.



We believe that :-

“Accurate and sensitive diagnosis is a key for better health care.”

For accurate and sensitive diagnosis the quality of diagnostic reagent is of paramount importance. Realizing this importance we have decided to step in the manufacturing of quality diagnostic reagents.

We intend to be innovative in our product range and hence our R & D efforts are going on. The areas of activities to begin with are “Microbiology, immunology, histopathology and cytology.”

Biocare aims to achieve its mission by :

Standardized methodologies and protocols.

Developing new arrays through research and development.

Under taking clinical and industrial research for other organization.

Dissemination and microbiology knowledge through:

Training programs for beginners.

Guidance for setting up other diagnostic laboratory facilities.

Data processing, analysis data base setup and publishing relevant findings.

Providing information through meetings, seminars, workshops and publications.

Affiliation with academic and industrial organization for teaching, training and their work at Ph.D., Postgraduate and Undergraduate levels.

State-of-the-art facilities :

Latest equipment such as Leader-50 (Genprobe, USA) Chemiluminometer for molecular testing, Mini API (Biomeriux, France), an automated bacteriology reader where automated bacterial identification and susceptibility is carried out. Bactec-9050 an automated blood culture and fluid culture system etc.

Phase Contrast Microscope : Detection of Cryptococcus species, Vibrio, semen examination, Treponema detection other Microscopic detection of Yeast and parasites from various preparations like: wet, Negative stain, etc.

Bactec - 9050 (BD, USA) : Blood culture study, Body fluid culture etc.

MGIT - System (BD, USA) : Mycobacterium Culture and Sensitivity.



Gen Probe Molecular System (USA) : Direct detection of Chlamydia, Gonococci and Mycobacterium tuberculosis from various Clinical specimens, Mycobacterium Identification from cultural growth.

Mini API (France) : Rapid automated sensitivity and identification of Microorganisms like Salmonella, Shigella, Acinetobacter, Yeast etc.

Biosafe workstations and Laminar air flow bench helps to work germ free and aseptic environment.

Qualified, Experienced and highly trained personals.

Quality reagent back-up from internationally renowned companies.

Quality systems according to NABL, BIS standards to deliver quality results to meet international standards.

COLLECTION OF MICROBIOLOGICAL SPECIMENS

Dear Collegues,

The value and reliability of microbiological reports are directly affected by the quality of the specimen received by the laboratory and the length of time between its collection and processing.

Following general instructions are requested to be followed by LAB staff/medical staff :-

- The amount and type of specimen required, containers to be used and need for any preservative or transport medium is decided by laboratory hence ask laboratory for such requirement.
- Aseptic and safe methods of collection to avoid contamination and accidental infection is always mandatory hence follow “universal precaution” all the time.
- Labeling of the specimens container is must to avoid error and it should have following information:
- Name, Age, Sex, Clinical information like antibiotic administered, Primary disease etc.
- Conditions in which specimens need to be kept prior to and during their transport to the laboratory is different for different specimen hence ask laboratory for such specimen collection.
- Arrangements for processing specimens that are urgent and those collected b medical staff should reach laboratory during laboratory routine hours within one hours of such specimen collection.
- The correct type of specimen collection will depend on the pathogens to be isolated, e.g. a cervical not a vaginal swab is required for the most successful isolation of N. gonorrhoeae from a woman. Sputum not saliva is essential for the isolation of respiratory pathogens hence we request ward staff to make themselves aware regarding such specimen collections before collecting specimen.

Time of collection

Specimens such as urine and sputum are best collected soon after a patient wakes when organisms have had the opportunity to multiply over several hours. Blood for culture is usually best collected when a patient's temperature begins to rise.

The time of collection for most other specimens will depend on the condition of the patient, and the times agreed between the medical, nursing and laboratory staff for their delivery of specimens to the laboratory.

IMPORTANT

EVERY EFFORT MUST BE MADE TO COLLECT SPECIMENS FOR MICROBIOLOGICAL INVESTIGATION BEFORE ANTIMICROBIAL TREATMENT IS STARTED.

Collection techniques : -

Apply following precaution while collection of any microbiological Specimens: -

- Use a collection technique that will ensure a specimen contains only those organisms from the site where it was collected. If contaminating organisms are introduced into a specimen during its collection or subsequent handling, this may lead to difficulties in interpreting cultures and delays in issuing reports.
- A strictly sterile (aseptic) procedure is essential when collecting from sites that are normally sterile, e.g. the collection of blood, cerebrospinal fluid, or effusions. An aseptic technique is necessary not only to prevent contamination of the specimen but also to protect the patient.
- Avoid contaminating discharges or ulcer material with skin commensals. The swab used to collect the specimen must be sterile and the absorbent cottonwool from which the swabs are made must be free from antibacterial substances.
- Collect specimens in sterile, easy to open leak proof, dry containers, free from all traces of disinfectant.
- We anticipate your co-operation to serve our patients. We welcome your suggestions to improve our services.

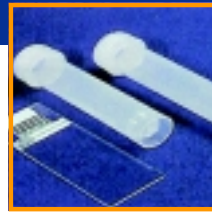
DR. D. N. ZAVERI

Director

BIOCARE RESEARCH (INDIA) PVT. LTD.

Ahmedabad

Tel. No. : 26577901



Few collection and transportation tools / system / containers for Microbiology specimen.

Container / System	Use
1) Sterile Uricol	For Urine, Sputum, Stool, Body Fluid, Semen, Tissue, Discharge tips, Vaginal discharge etc. culture.
2) Dip Slide	Used for Urine specimen transportation, if delay in occurs more than 2 hrs. Procedure * Dip the slide in Urine and drain off the excess urine on blotting paper. * Replace it into the vial. * Transport it if delay occurs refrigerate it.
3) Sterile Clinical	For Stool, Pus & Sputum culture.
4) Minicom	Paediatric Urine & Stool collection Bag. (below 2 years)
5) Himedia Transport Swab	For Pus, Wound discharge, Tissue, Conjunctival Swab, Corneal Swab, Vaginal & Cervical Swab, Throat Swab culture.
6) Mucus Extractor	For culture of Endotracheal secretion, Bronchial wash, Sputum, and other respiratory specimens.
7) Sterile Cotton Swab	For Pus, Wound discharge, Conjunctival Swab, Throat Swab, Vaginal, Cervical, Corneal Swab culture. Transport it in a transport media.
8) Autoclaved Swab	For Pus, Wound discharge, Conjunctival Swab, Corneal, Vaginal, Cervical, Throat etc. culture.
9) 1% Peptone Broth (Physiological pH)	For transportation of conjunctival Swab, Tissue, Material for culture swab.
10) Alkaline Peptone Water	For vibrio culture from Stool specimen.
11) Sterile Saline	For transportation of Tissue, other Material, Vaginal discharge, Cervical discharge for culture and microscopic observation. This container can be used to transport tissue, bone scraping and any other material (except Blood, Urine, Stool, Pus).
12) Sterile Vacutainer with Acid	Used for Blood, Material containing blood etc. for culture as well as molecular testing.

INFORMATION FOR COLLECTION, STORAGE, TRANSPORTATION OF SAMPLES FOR MOLECULAR TESTS

Specimen	Collection	Minimum Volume *	Storage	Transportation
Fresh tissue biopsies (including endometrial biopsies and menstrual blood)	In sterile normal saline	-	Refrigerator (4°C)	On ice or in gel pack box***
Blood **	Fasting whole blood in ACD vacutainer (yellow top tube)	One 5 ml tube	Refrigerator (4°C)	In gel pack box***
Bone marrow aspirate	In sterile container (2 drops of 20% sodium citrate should be added per 10 ml of fluid)	2 ml	Refrigerator (4°C)	In gel pack box ***
Exudative fluids / CSF	In sterile container (2 drops of 20% sodium citrate should be added per 10 ml of fluid)	2 ml	Refrigerator (4°C) or Freezer (-20°C)	On ice or in gel pack box***
Pleural / Peritoneal fluid	In sterile container	30 ml	Refrigerator (4°C) or Freezer (-20°C)	On ice or in gel pack box***
Urine	First morning urine	10 ml	Refrigerator (4°C) or Freezer (-20°C)	On ice or in gel pack box***
Sputum	In sterile container, first morning sputum on 3 consecutive days****	-	Refrigerator (4°C) or Freezer (-20°C)	On ice or in gel pack box***

* This is the minimum recommended volume. Although volumes lower than this will be processed, a negative report may not be reliable.

** Blood should only be sent in cases of miliary or disseminated tuberculosis.

*** Gel pack box with instructions for transportation can be obtained from Biocare Laboratories on request.

**** The sample can be stored at 4°C and pooled before sending to Biocare Laboratories.

INFORMATION FOR GYNAECOLOGISTS AND OBSTETRICIANS ON PCR FOR TUBERCULOSIS

In recent years gynaecologists have become increasingly aware of tuberculosis as a cause of infertility and dysfunctional uterine bleeding. The fact that, most of the patients are otherwise healthy and in their sexual prime has rendered the discovery all the more startling. In one study conducted in India it was found that the majority of the patient with genitourinary tuberculosis present with clinical sign and symptoms of infertility, abdominal pain and dysfunctional uterine bleeding, in that order. The diagnosis of male genitourinary tuberculosis is seldom apparent until the disease is far advanced. The earliest clinical symptoms in most cases are epididymitis, dysuria and hematuria. Infertility is an uncommon first sign of male infertility, but may be a clue to early diagnosis. First morning urine sample can be used for the diagnosis of genitourinary tuberculosis in such cases.

The accurate diagnosis of tuberculosis to treat infertility is very important since in misdiagnosis, the patient not only undergoes prolonged and repeated investigation but also suffers from psychosomatic disorders, which manifest as anxiety and depression to further compound the problem. Conventional methods such as direct microscopy and culture for detecting *Mycobacterium tuberculosis* have a sensitivity of as low 10-30% in cases of extra-pulmonary tuberculosis whereas PCR has sensitivity as high as 98%.

Biocare Laboratories, in a research study conducted on samples from gynaecology clinics found that genital tuberculosis was detected by in 66% of patients with menstrual irregularities. In these cases smear for AFB and culture was positive in only 23.07% of cases whereas PCR for tuberculosis was detected in 60% of cases. In infertile patients with menstrual irregularities it was detected in 66% & in patients with repeated abortions in 64.28% of patients by using PCR. Interestingly many of these patients did not have any conventional sign and symptoms of tuberculosis such as fever, weight loss or anorexia. In fact many of the patients had been treated by hormonal therapy for dysfunctional uterine bleeding for several months. Even though they had been investigated for tuberculosis by conventional methods (ZN smear, AFB culture on endometrial samples), the diagnosis had been missed because of low sensitivity of these techniques. In this study we found semen of male partner of infertile females to be positive for tuberculosis through PCR. In such cases it was observed that when both partners were put on chemotherapy, it increased their fertility rate. PCR for tuberculosis was found positive in a number of specimens of products of conception from patients with repeated abortions.

GENERAL INSTRUCTIONS

General guidelines for selection, collection, storage & transport of specimens

Specimen	Container / Transport Media	Transportation to Laboratory	Storage prior to Process
Abcess			
(also lesion, wound, pustule, ulcer)			
Superficial	Aerobic swab moistened with Stuart's or Amie's Medium	Within 24 hrs/RT	24 hrs/RT
Deep	Anaerobic transporter	Within 24 hrs/RT	24 hrs/RT
Blood or Bone Marrow	Blood culture media set (aerobic and anaerobic bottle) or Vacutainer tube with SPS	Within 24 hrs/RT	Must be incubated at 37° C on receipt in laboratory
Body Fluids			
Amniotic, abdominal, Ascites (peritoneal), Bile, joint (synovial), Pericardial, pleural	Sterile, screw-cap tube or anaerobic transporter	Immediately / RT	Plate as soon as received
Cerebrospinal Fluid	Sterile, screw-cap tube	Immediately / RT	6 hrs / 37° C except for viruses, which can be held at 4° C for upto 3 days
Ear			
Inner	Sterile, screw-cap tube or anaerobic transporter	Immediately / RT	6 hrs / RT
Outer	Aerobic swab moistened with Stuart's or Amie's Medium	Within 24 hrs / RT	24 hrs / RT
Eye			
Conjunctiva	Aerobic swab moistened with Stuart's or Amie's Medium	Within 24 hrs / RT	24 hrs / RT
Corneal scrapings	Beside inoculation of BA, CA, Sab, 7H10, Thio	Immediately / RT	Must be incubated at 28° C (sab) or 37° C (everything else) on receipt in Laboratory

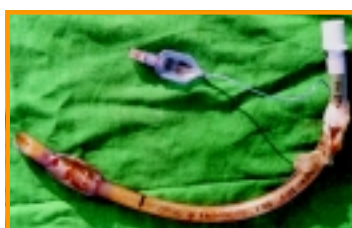
Specimen	Container / Transport Media	Transportation to Laboratory	Storage prior to Process
Foreign Bodies			
IUD	Sterile, screw-cap Container	Immediately / RT	Plate as soon as received
IV catheters, pins, Prosthetic valves	Sterile, screw-cap Container	Immediately / RT	Plate as soon as received
GI Tract			
Gastric aspirate	Sterile, screw-cap tube	Immediately / RT	Must be neutralized within 1 hr of collection
Gastric biopsy	Sterile, screw-cap tube	Immediately/4 ⁰ C	Must be set up immediately on receipt
Rectal swab	Swab placed in enteric Transport medium	Immediately/4 ⁰ C	72 hrs/4 ⁰ C
Stool culture	Clean, leak-proof container Stuart's media	Immediately/4 ⁰ C	72 hrs/4 ⁰ C
Genital Tract			
Female			
Bartholin cyst	Anaerobic transporter	Within 24 hrs/RT	24 hrs/RT
Cervix	Swab moistened with Stuart's or Amie's Medium	Within 24 hrs/RT	24 hrs/RT
Endometrium	Anaerobic transporter	Within 24 hrs/RT	24 hrs/RT
Urethra	Swab moistened with Stuart's or Amie's Medium	Within 24 hrs/RT	24 hrs/RT
Vagina	Swab moistened with Stuart's or Amie's Medium	Within 24 hrs/RT	24 hrs/RT
Male			
Prostate	Swab moistened with Stuart's or Amie's medium or sterile, screw-cap tube	Within 24 hrs/RT for swab; immediately if in tube/RT	Swab: 24 hrs / RT; Tube : plate secretions immediately
Hair, Nails, or Skin			
Scrapings (for fungal Culture)	Clean, screw-top tube	Within 24 hrs/RT	Immediately/RT

Specimen	Container / Transport Media	Transportation to Laboratory	Storage prior to Process
Foreign Bodies			
IUD	Sterile, screw-cap Container	Immediately / RT	Plate as soon as received
IV catheters, pins, Prosthetic valves	Sterile, screw-cap Container	Immediately / RT	Plate as soon as received
GI Tract			
Gastric aspirate	Sterile, screw-cap tube	Immediately / RT	Must be neutralized within 1 hr of collection
Gastric biopsy	Sterile, screw-cap tube	Immediately/4 ⁰ C	Must be set up immediately on receipt
Rectal swab	Swab placed in enteric Transport medium	Immediately/4 ⁰ C	72 hrs/4 ⁰ C
Stool culture	Clean, leak-proof container Stuart's media	Immediately/4 ⁰ C	72 hrs/4 ⁰ C
Genital Tract			
Female			
Bartholin cyst	Anaerobic transporter	Within 24 hrs/RT	24 hrs/RT
Cervix	Swab moistened with Stuart's or Amie's Medium	Within 24 hrs/RT	24 hrs/RT
Endometrium	Anaerobic transporter	Within 24 hrs/RT	24 hrs/RT
Urethra	Swab moistened with Stuart's or Amie's Medium	Within 24 hrs/RT	24 hrs/RT
Vagina	Swab moistened with Stuart's or Amie's Medium	Within 24 hrs/RT	24 hrs/RT
Male			
Prostate	Swab moistened with Stuart's or Amie's medium or sterile, screw-cap tube	Within 24 hrs/RT for swab; immediately if in tube/RT	Swab: 24 hrs / RT; Tube : plate secretions immediately
Hair, Nails, or Skin			
Scrapings (for fungal Culture)	Clean, screw-top tube	Within 24 hrs/RT	Immediately/RT

Specimen	Container / Transport Media	Transportation to Laboratory	Storage prior to Process
Respiratory Tract			
Lower			
BAL, BB, BW	Sterile, screw-top Container	Within 2 hrs/RT	24 hrs/4 ⁰ C
Sputum, tracheal aspirate (suction)	Sterile, screw-top Container	Within 2 hrs/RT	24 hrs/4 ⁰ C
Upper			
Nasopharynx	Swab moistened with Stuart's or Amie's Medium	Within 24 hrs/RT	24 hrs/RT
Pharynx (Throat)	Swab moistened with Stuart's or Amie's Medium	Within 24 hrs/RT	24 hrs/RT
Tissue	Anaerobic transporter or Sterile, screw-cap tube	Within 24 hrs/RT	24 hrs/RT
Urine			
Clean-voided midstream (CVS)	Sterile, screw-cap Container	Within 2 hrs/4 ⁰ C	24 hrs/4 ⁰ C
Straight catheter (in and out)	Sterile, screw-cap Container	Within 2 hrs/4 ⁰ C	24 hrs/4 ⁰ C
Indwelling catheter (Foley)	Sterile, screw-cap Container	Within 2 hrs/4 ⁰ C	24 hrs/4 ⁰ C
Suprapubic aspirate	Sterile, screw-cap Container or anaerobic transporter	Immediately/RT	Plate as soon as received



Few specimen collection containers



Endotracheal tube with respiratory secretion removed from patient kept on ventilator



Few specimen collection kit

MICROSCOPY



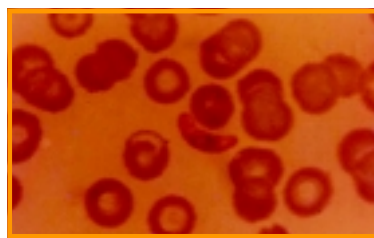
Test Code No.	Description of Test/Method/ Specimen	Specimen	Storage	Frequency	Turn around time	Price
MC 01	Gram's stain	Any	RT*	Daily	One day	50/-
MC 02	ZN Stain	Any	RT*	Daily	One day	75/-
MC 03	ZN modified	Any	RT*	Daily	One day	75/-
MC 04	Albert's stain	Any	RT*	Daily	One day	75/-
MC 05	Phase Microscopy For Vibrio/Parasite/Fungus	Any	RT*	Daily	One day	75/-
MC 06	Giemsa Stain	Any	RT*	Daily	One day	150/-
MC 07	Fungal Stain	Any	RT*	Daily	One day	100/-
MC 08	Spermato Morphology	Semen	RT*	Daily	Same day	150/-
MC 09	India Ink Preparation	CSF	RT*	Daily	Same day	150/-
MC 10	KOH Examination	Any	RT*	Daily	One day	150/-
MC 11	Wet Microscopy	Any	RT*	Daily	Same day	150/-

*Condition applies only to prepared, air dried & fixed smears on new glass slides (minimum four smears are required).

For any other specimen follow standard storage and transportation indicated in this booklet OR contact : 9825500945, 26577901, 26577903.



Candida in wet preparation with constricted germ tube formation



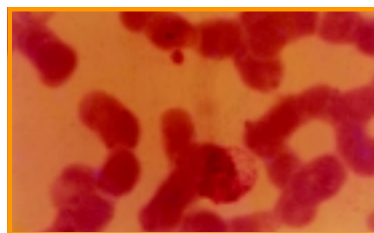
Leishman stain : Gametocyte of Plasmodium falciparum



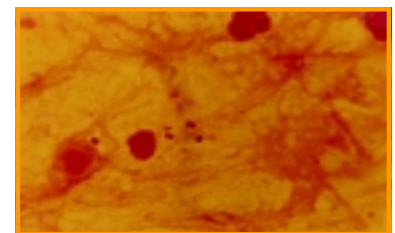
Trichomonas vaginalis in wet preparation from vaginal swab



Ziehl Neelsen's Staining Technique : Acid fast bacilli from sputum specimen



Leishman stain : various stages of Plasmodium vivax

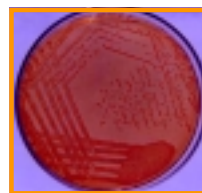


Extracellular gram negative diplococci in gram stained smear

AEROBIC CULTURE FOR PYOGENIC ORGANISMS (ROUTINE CULTURE)



Modified Thayer Martin agar plate : Growth of *Neisseria*



TCBS agar *Vibrio cholerae* isolated from faecal specimen



Growth of *Staphylococcus aureus* on blood agar plate

Test Code No.	Description of Test/Method/ Specimen	Specimen	Collection	Turn around time	Price
CU 01	Body fluid culture (any)	Body Fluid	Bactec Vial or Sterile Cont.	Prel. 2nd day Final 7th day	450/-
CU 02	Aspirated Material (any)	Material	Bactec Vial or Sterile Cont.	Prel. 2nd day Final 7th day	450/-
CU 03	Body fluid culture (any)	Body Fluid	Sterile Cont.	Prel. 2nd day Final 7th day	300/-
CU 04	Aspirated Material	Material	Sterile Cont.	Prel. 2nd day Final 7th day	300/-
CU 05	Blood Culture (Rapid)	Blood	Bactec Vial	Prel. 2nd day Final 7th day	450/-
CU 06	Blood Culture	Blood	TSB - broth	Prel. 2nd day Final 7th day	300/-
CU 07	Blood Culture for Salmonella	Blood	Bactec Vial	Prel. 2nd day Final 7th day	450/-
CU 08	CSF Culture	CSF Fluid	Bactec Vial or Sterile Con.	Prel. 2nd day Final 7th day	450/-
CU 09	CSF Culture	CSF Fluid	Sterile Cont.	Prel. 2nd day	300/-
CU 10	CSF for N. Meningitidis	CSF Fluid	Bactec Vial or Sterile Con.	Prel. 2nd day Final 7th day	450/-
CU 11	CSF for N. Meningitidis	CSF Fluid	Sterile Cont.	Prel. 2nd day Final 7th day	300/-
CU 12	Endotracheal Secretation for Culture	Tracheal Secretation	Sterile Con.	48 hours SOS 7 days	450/-
CU 13	EPS	Prostate Fluid	Sterile Con.	48 hours	300/-
CU 14	Gastric Biopsy for H. Pylori	Biopsy	Sterile Con.	1 day	600/-

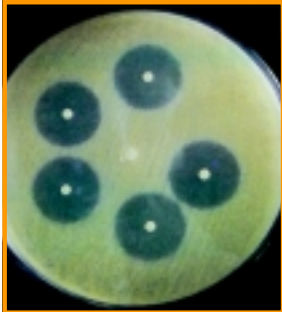
CONTINUE... (ROUTINE CULTURE)

Test Code No.	Description of Test/Method/ Specimen	Specimen	Collection	Turn around time	Price
CU 15	PUS	Pus	Sterile Con.	48 hours	300/-
CU 16	Semen	Semen	Sterile Con.	48 hours	300/-
CU 17	Sputum	Sputum	Sterile Con.	48 hours SOS 7 days	450/-
CU 18	Stool	Stool	Sterile Con.	48 hours SOS 7 days	300/-
CU 19	Throat Swab	Throat Swab	Sterile Con.	48-72 hours	300/-
CU 20	Urine	Urine	Sterile Con.	48 hours	300/-
CU 21	CX-Swab / Material For Gonococci Culture	Swab	Sterile Con.	48-72 hours	450/-
CU 22	Vaginal Swab for T.V.	Swab	Sterile Con.	Prel. 2nd day Final 7th day	300/-
CU 23	Vaginal Swab	Swab	Sterile Con.	Prel. 2nd day Final 7th day	300/-
CU 24	Conj. Swab	Swab	Sterile Con.	Prel. 2nd day Final 7th day	300/-
CU 25	Any Swab	Swab	Sterile Con.	48 hours	300/-

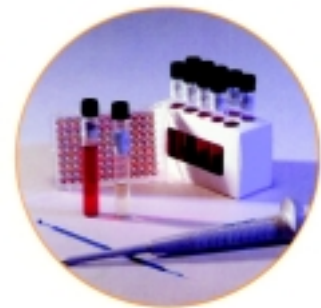
* "Routine Culture" means procedure applied for isolation of common pathogen is considered, for any special category pathogen, separate request is necessary.

SUSCEPTIBILITY

Test Code No.	Description of Test/Method/ Specimen	Specimen	Turn around time	Price
SU 01	Susceptibility - Non fastidious organism (Aerobic) - DD	Culture on suitable media	16-24 hours.	150/-
SU 02	Susceptibility - Fastidious ORG - DD	Culture on suitable media	24-48 hours	150/-
SU 03	Susceptibility - Fungus DD	Culture on suitable media	24-48 hours	400/-
SU 04	Susceptibility broth diln. - MIC/MBC (12 drugs x 8 dilu.)	Culture on suitable media	24 hours	300
SU 05	Susceptibility (two point) (Mini API, broth)	Culture on suitable media	4-24 hours.	400/-
SU 06	Susceptibility (two point) Yeast, Mini API	Culture on suitable media	24 hours	450/-
SU 07	Susceptibility TB	Pl. refer section on Mycobacteriology		



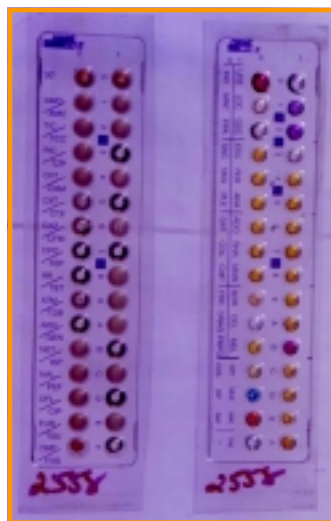
Susceptibility test by disc diffusion method



Susceptibility test by micro growth dilution technique for MIC & MBC determination



Automated rapid bacterial identification and two point susceptibility test



Automated rapid bacterial identification and two point susceptibility test



Ditch diffusion susceptibility test

ANAEROBIC CULTURE

Test Code No.	Specimen	Method	Collection	Transport	Turn around Time	Price
AN 01	Blood Culture	Bactec	Bactec Vial	Below 35 ⁰ C	Prel. 2nd day Final 7th day	600/-
AN 02	Blood Culture	Manual	Thiol broth	Below 35 ⁰ C	Prel. 2nd day Final 7th day	500/-
AN 03	Tissue	Manual	RCM / Thiol	Below 35 ⁰ C	Prel. 2nd day Final 7th day	450/-
AN 04	Fluid	Bactec	Bactec Vial	Below 35 ⁰ C	Prel. 2nd day Final 7th day	600/-
AN 05	Fluid	Manual	Thiol broth	Below 35 ⁰ C	Prel. 2nd day Final 7th day	500/-
AN 06	Pus	Bactec	Bactec Vial	Below 35 ⁰ C	Prel. 2nd day Final 7th day	600/-
AN 07	Pus	Manual	Thiol broth	Below 35 ⁰ C	Prel. 2nd day Final 7th day	500/-

* Anaerobic culture means isolation of pathogen growing in the absence O₂ is considered, Isolation and Identification is carried out up to preliminary level, unless and otherwise separate indication is not given.



Anaerobic jar for anaerobic culture

MYCOLOGY (FUNGUS CULTURE ETC.)

Mucur isolated from Mucromycosis



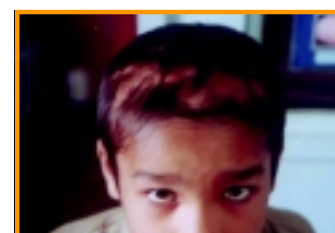
Test Code No.	Description	Specimen	Turn Around Time	Price
FU 01	Dermatophytes Culture	Nail, Hair Skin scrapping, Tissue specimen Any other specimen possible to process under this head	Prel. 2nd day Final 14th day	350/-
FU 02	KoH Examination	Nail, Hair Skin scrapping, Tissue specimen Any other specimen possible to process under this head	One day	150/-
FU 03	India Ink Preparation	CSF, body fluid	One day	150/-
FU 04	Yeast ID	Culture on SDA / BHI Agar	24-48 hours	400/-
FU 05	Yeast Susceptibility	Culture on SDA / BHI Agar	24-48 hours	400/-
FU 06	Mold / Yeast Susceptibility MIC (Broth dilu) 5 drugs x 8 dilutions	Culture on SDA / BHI Agar	24-48 hours 7th day	750/-
FU 07	Culture for Cryptococcus	CSF	7th day	350/-
FU 08	Vaginal swab for candida isolation	Quantitative	7th day	300/-
FU 09	Blood culture (Bactec)	Myco F lytic	7th day	600/-
FU 10	Aspergillus Antibody Detection	Serum	48 hours	600/-
FU 11	Sputum Culture for Mold / Yeast	Quantitative Method	Prel. 2nd day Final 7th day	450/-



*Sabouraud's dextrose agar slant :
Growth of Candida species*



Growth of aspegillus species

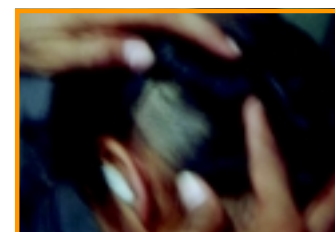


Fungal infection : Forehead



*A case of Madura Mycosis
(black grain mycetoma)*

*Taenea Capitis : Trichophyton rubrum
infection of scalp skin and hair*



MYCOBACTERIOLOGY (TB DIAGNOSIS)

Test Code No.	Specimen	Turn around Time	Price
Any specimen			
TB 01	ZN Stain direct smear (one specimen)	24 hours	75/-
TB 02	ZN Stain concentration (one specimen)	24 hours	100/-
TB 03	ZN Stain conc. x 3 specimen	4th day	250/-
TB 04	ZN Stain conc. x 5 specimen	6th day	350/-
TB 05	TB Culture lowenstein Jenson (L.J.) medium	Prel. 21 days Final 60th days	250/-
TB 06	TB Culture by middle brooke (MB7H9) medium	Prel. 21 days Final 60th days	300/-
TB 07	TB Culture by MGIT (Rapid technique)	Prel. 7th day Final 60th days	550/-
Only for blood & body fluid			
TB 08	TB culture by Bactec (Myco - F lytic medium) OR ACD Vacutainer for Bactec MGIT	Prel. 7th day Final 60th days	550/-
Primary			
TB 09	Susceptibility 4 drug (Conventional)	21-60 days	600/-
TB 10	Susceptibility 10 drugs (Conventional)	21-60 days	1500/-
TB 11	Susceptibility 1 drug (Conventional)	21-60 days	150/-

4 Drug - Includes Rifampicin, Isoniazide, Streptomycin and Ethambutol

10 Drug - Amikacin, Isoniazide, Ethionamide, Ciprofloxacin, Ethambutol, Pyrozinamide, Streptomycin, Cycloserin, Rifampicin, Kanamycin

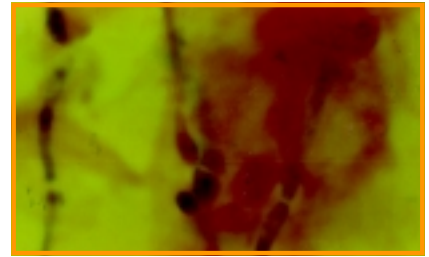
MOLECULAR TESTING



Test Code No.	Description	Specimen	Collection	Turn around time	Price
MB 01	MTB-PCR	Any	Sterile Container	7th day	1500/-
		Blood	ACD Vacutainer		
MB 02	MTB-TMA	Any	Sterile Container	7th day	2000/-
		Blood	ACD Vacutainer		
MB 03	HIV-PCR (Quali.)	Blood	ACD Vacutainer OR EDTA Vacutainer	7th day	2500/-
MB 04	HIV-PCR (Qunt.)	Blood	ACD Vacutainer OR EDTA Vacutainer	7th day	4500/-
MB 05	HCV PCR (Quali.)	Blood	ACD Vacutainer OR EDTA Vacutainer	7th day	3500/-
MB 06	HCV (Qunt.)	Blood	ACD Vacutainer OR EDTA Vacutainer	7th day	4500/-

Note : Follow instructions for collection and transportation given on page no. 10. In case of difficulty, please contact Lab Director - 98255 00945 OR 26577901, 26577903.

R/M EXAMINATIONS (ROUTINE AND MICROSCOPIC EXAMINATIONS)



Gram Stain : Pseudohyphae with blastospores of *Candida albicans* from stool specimen

Test Code No.	Specimen	Collection	Transportation	Turn around time	Price
RM 01	Urine MSU	Sterile Container	2 hours/2-8 ^o C	Same day	50/-
RM 02	CSF	Sterile Container Sterile EDTA Container	As earliest possible	Same day	250/-
RM 03	Synovial fluid	Sterile Container Sterile EDTA Container	As earliest possible	Same day	250/-
RM 04	Pleural fluid	Sterile Container Sterile EDTA Container	As earliest possible	Same day	250/-
RM 05	Pericardial fluid	Sterile Container Sterile EDTA Container	As earliest possible	Same day	250/-
RM 06	Ascitic fluid	Sterile Container Sterile EDTA Container	As earliest possible	Same day	250/-
RM 07	Stool	Sterile Container	As earliest possible	Same day	50/-
RM 08	Pus	Sterile Container	As earliest possible	Same day	150/-
RM 09	Sputum (including AFB microscopy)	Sterile Container	As earliest possible	Same day	150/-
RM 10	Blood (CBC ESR)	Sterile EDTA Container	As earliest possible	Same day	150/-
RM 11	Blood for malarial panarite	Sterile EDTA Container	As earliest possible	Same day	100/-
RM 12	Blood for P. falciparum antigen	Sterile EDTA Container	As earliest possible	Same day	150/-
RM 13	Urethral discharge	Sterile Swab	As earliest possible	Same day	150/-
RM 14	Vaginal discharge	Sterile Swab	As earliest possible	Same day	150/-
RM 15	Cervical discharge	Sterile Swab	As earliest possible	Same day	150/-
RM 16	Conjunctival swab	Sterile Swab	As earliest possible	Same day	150/-

BIO PROFILE

Test Code No.	Description
BP 01	Fever - Profile 1
	Fever - Profile 2
BP 02	STI Screen General
	STI Woman
	STI Man
BP 03	Myco Profile
	Dermeto Profile
BP 04	TB Profile (Mini)
	TB Profile (Major)
BP 05	Wound - Profile 1
	Wound - Profile 2
BP 06	HIV - Profile 1
	HIV - Profile 2
	HIV - Oppertunistic
BP 07	Meningitis - Profile (Mini)
	Meningitis - Profile (Major)
BP 08	Actinomycois - Profile
BP 09	Septiceamia - Profile
BP 10	Rhemetism - Profile
BP 11	Streptococcal - Profile
BP 12	Diarrhoea (Ped)
	Diarrhoea (Adult)

Note : For any profile, please discuss details about the patients clinical condition and select most appropriate combination of tests available.

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