

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ
مَا تَعْلَمُ إِلَّا مَا عَلَّمْنَا



العنوان

Routine Bacteriological
Examination of Specimens
Eight and nine modular unit



Many types of specimen are received daily in a bacteriology laboratory, both from in-patients and out patients. When collect any sample for bacterial laboratory investigation must be care about possibility of contamination happened, so it must collect the specimens under sterile condition, and using sterile containers.

The specimen should be properly labeled with the patient's name, hospital number, word and date of collection. This is essential in order to prevent confusion of specimens from patients similar.

The samples may be:-

Blood

Faeces (Stool)

Gastric contents

Hair

Pus

Saliva

Sputum

Urine

C.S.F (cerebrospinal fluid)

Effusions like:-Pleural fluid

Peritoneal fluid

Seminal fluid and others

Swabs like: - Throat Swabs

Pharyngeal Swabs

Laryngeal Swabs

Mouth Swabs

Nasal Swabs

Abacuses Swabs

Ear Swabs

Eye Swabs

Wounds Swabs

Rectal Swabs

Genitourinary swabs:

(High-vaginal Swabs, Urethral discharge Swabs)

And others

POSTAGE OF PATHOLOGICAL SPECIMENS

Certain regulations are laid down by the Postmaster-General for the sending of specimens through the post. Universal containers wrapped in absorbent cotton wool and sent in thick cardboard boxes are permissible, providing that the label is clearly marked „pathological specimen“ and „Fragile with care“. These regulations may be obtained from the Post Office, and if the suitability of any box or container is in doubt, it should be submitted to the General Post Office, for confirmation of its suitability. Failure to do so may lead to the prosecution of the person sending the specimen.

It is difficult to lay down hard and fast rules for the treatment of specimens. For this reason only a board outline will be given for the examination of specimens.

Examination of specimens

BACTERIOLOGICAL EXAMINATION OF SPECIMENS

A general plan for examination specimens is as follows.

1-MACROSCOPIC EXAMINATION:- Note the following:

1. Color, opacity, consistency.
2. Presence of blood, mucus or pus.
3. Presence of macroscopic bodies, such as parasites.

2-MICROSCOPIC EXAMINATION

A- Unstained film or wet preparation

When looking for cells or casts in urine deposit and protozoa parasites in stool or looking for motile bacteria... ect.

B- Stained film by (a) simple stain

(b) Gram stain

(c) Acid-fast bacilli stain.

(d) Special stains.

(e) Negative staining



3-CULTURE: inoculated accurate media according the suggested microorganisms found in the sample, then incubated aerobically and anaerobically, mostly using Blood agar.

Special media and MacConkey agar..

4-EXAMINATION OF CULTUERS

a-Keep extensive notes on the examination of the cultures set up as fellows:

*****Plate cultures***

Note types of colony seen

Note the shape, color, size, consistency, haemolysis....

*****Liquid cultures***

Note nature of the medium such as colour, type of growth (granular, smooth, surface, etc.) or deposit.

*****Microscopic appearance of bacteria (wet and stained smears)***

Note shape, size, arrangement, and motility, staining reaction, spores, capsules, pleomorphism and Gram stain reaction.

b-Biochemical test:-oxidase, catalase, coagulase , IMVIC tests, motility,TSI...

c-Serology test and serotyping. agglutination test with specific anti sera

d-Phage typing.

e-Genetic tests.

f- Toxin production.

g-Animal inoculation : is carried out only if necessary.

h- SENSITIVITY TEST Antimicrobial Susceptibility Testing

(susceptibility test)

Susceptibility Testing sensitivity of organisms to antibacterial

antibiotics (penicillin, streptomycin, tetracycline, chlorimphenicol, fusidic acid, kanamycin, gentamycin, ampicillin, neomycin, furazolidone, polymyxins...ect.) is an important factor in the treatment of patients. There are two main methods of sensitivity testing, namely: *incorporation* methods like discs method and *diffusion* methods. Each of these may be carried out by a variety of techniques

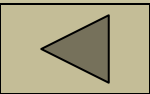


5- THE REPORT

For the final report, however, it is only necessary to report the organism or organisms seen in smear and isolated on culture together with the sensitivity pattern







شكراً
لأصغائكم

