

## Bacteriological Culture Methods and its Uses in Clinical Pathology

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**Abstract :** Microbial cultures determine the type of organism, its abundance in the tested sample, or both. It is one of the primary diagnostic methods of microbiology. It is used to determine the cause of infectious disease by letting the agent multiply in a predetermined medium. Different bacteria produce colonies that may be very distinct from the bacterial species that produced them. To culture any pathogen or microorganism, we should first know about the types of media used in microbiology for culturing. Sometimes sub culturing is also done in various microorganisms if some mixed growth is seen in culture. Nearly 3 types of culture media based on consistency - solid, semi-solid, and liquid (broth) media; are further explained in the report. Then, The Five I's approach is a method for locating, growing, observing, and characterizing microorganisms, including inoculation and incubation. Isolation, inspection, and identification. For identification of bacteria, we have to culture the sample like urine, sputum, blood, etc., on suitable media; there are different methods of culturing the bacteria or microbe like pour plate method, streak plate method, swabbing by needle, pipetting, inoculation by loop, spreading by spreader, etc. After this, we see the bacterial growth after incubation of 24 hours, then according to the growth of bacteria antibiotics susceptibility test is conducted; this is done for sensitive antibiotics or resistance to that bacteria, and also for knowing the name of bacteria. Various methods like the dilution method, disk diffusion method, E test, etc., do antibiotics susceptibility tests. After that, various medicines are provided to the patients according to antibiotic sensitivity and resistance.

**Keywords :** inoculation, incubation, isolation, antibiotics susceptibility test, characterizing

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