

What is a culture and sensitivity?

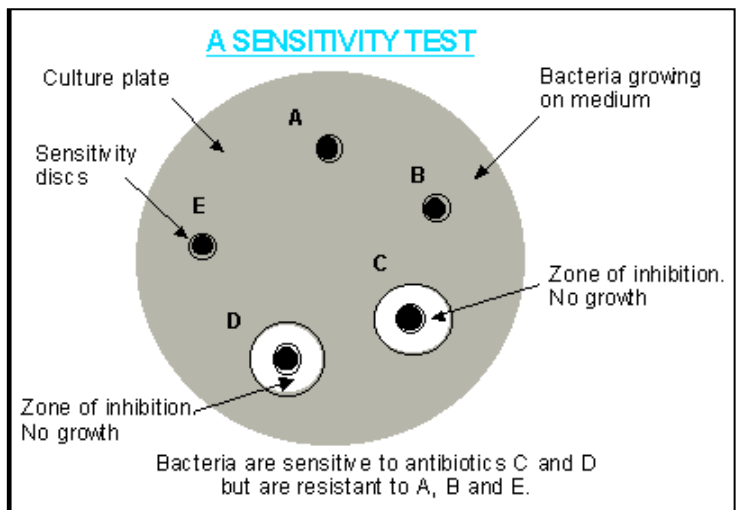
A culture and sensitivity is the name given to the laboratory test that determines what bacteria may be present in a sample, and what drug will kill that bacteria.

How is a culture and sensitivity performed?

Culture: Samples are taken from the affected area with sterile cotton swabs and the sample is sent to a laboratory. At the laboratory, the sample is spread across the surface of a jelly-like medium called agar, which is contained in a petri dish. The petri dish is nothing more than a plastic 3-inch dish with a cover. The agar and petri dish together are often called a culture plate. The organisms grow on the surface of the agar and after approximately 24-48 hours each organism has multiplied so many times that the large numbers of organisms actually form a small bump or colony on the agar. Each colony came from one organism. Sometimes, there is more than one kind or type of organism present. These can be separated by appearance and then re-inoculated (spread) onto another plate for another 24-48 hours. After a single kind or type has been isolated, it can be tested to determine what type of organism it is.



Sensitivity: For the sensitivity portion of the test, the isolated organism(s) will be spread across a culture plate so the whole plate is covered uniformly. Then small paper discs are dropped on the surface of the plate. Each of these discs contains a small quantity of an antibacterial medication. Usually, several different discs are placed on the culture plate therefore testing several different antibiotics. Then after approximately 24-48 hours, this plate is checked to see if the presence of any of the antibiotic-containing discs slowed or prevented growth of the organism. Around some of the discs, the bacteria will not be affected and will be seen growing right up against or very close to the disc, this means that they are resistant to that antibiotic. Around others, there will be an area in which no organisms have grown, called a zone of inhibition. In these examples, the medication has leached out of the disc into the agar medium and has prevented growth in that area. The organism, is therefore, said to be sensitive (versus resistant) to this antibacterial medication.



How long will it take to get the results?

Because it can take 24-48 hours for each step of the culture process, it can take up to 7 days to get results.

How are the results used?

The veterinarian determines the best method of treatment after knowing the kind of organism and the list of medications that would be appropriate to use against it.