Nitrocefin

Cat. 7297

6-mm discs prepared by impregnating high quality absorbent paper with accurately determined amounts of nitrocefin for the detection of the ß-lactamase enzyme.

Practical information

Industry: Clinical / Antimicrobial susceptibility testing

CE
IVD

Principles and uses

The ß-lactamase enzyme, originally described by Abraham and Chain, is produced by various organisms and is a mechanism of their resistance to penicillins and cephalosporins. Since then, similar enzymes with somewhat different substrate specificities have been identified in various bacterial species. Some enzymes selectively hydrolyze penicillin class antibiotics (i.e., penicillinases), other enzymes hydrolyze all ß-lactam antibiotics except carbapenems (i.e., cephalosporinases), and still other enzymes hydrolyze both. Some bacteria produce enzymes that hydrolyze both cephalosporins and penicillins. Test methods used to detect ß-lactamase include iodometric, acidimetric, and chromogenic procedures.

Formula in g/L

Instructions for use

» For clinical diagnosis, the type of samples are pured cultures.

1.- Using forceps, place disc on a clean glass slide or in an empty petri dish lid.
2.- Moisten disc with a drop of demineralized water. Do not oversaturate the disk, which could dilute the reagent.
3.- Pick 5-6 colonies from the isolate to be tested from a pure culture, using a sterile loop.
4.- Smear the organism on the disc.
5.- Wait for 5 minutes at room temperature in order to see the results. Observe for a color change to orange/red colour.
6.- Positive reactions may take up to 60 minutes to develop for some staphylococci. Anaerobic bacteria may require up to 30 minutes for a positive reaction to occur.
7.- A positive reaction will show as an orange/red colour change in the area where the culture was applied. The colour change does not normally develop over the whole of the disc. A negative result will show no colour change on the disk.

Microbiological test

The product mentioned above has been approved according to the accepted procedures that are prescribed and validated thoroughly by the main microbiological circles.

The information mentioned above is accurate to the best of our knowledge and belief.

Microorganisms	Specification
Haemophilus influenzae ATCC 10211	Negative
Staphylococcus aureus ATCC 29213	Positive

Storage

Temp. Min.:-20 ºC
Temp. Max.:8 ºC

Bibliography

1. Gabay, E.L. 1981. Antimicrob. Chemother. 8:413-416.
2. Abraham, E.P. and E. Chain. 1940. Nature. 146:837.
3. McCarthy. 1980. Clin. Microbiol. Newsl. (2):1.
4. Montgomery, K., L. Raymundo, Jr.,and W. L. Drew.1979. J. Clin. Microbiol. 9(2):205-207