

49862 Nitrocefin disks

For the rapid detection of β -lactamase enzymes in isolated colonies of *Neisseria gonorrhoeae*, *Moraxella catarrhalis*, *Staphylococcus* spp., *Haemophilus influenzae* and anaerobic bacteria.

Contents:

(1 package contains 50 discs in a light resistant plastic vial.)
6mm diameter filter paper discs impregnated with Nitrocefin.

Storage:

Store in the freezer below -10°C in the containers provided. Allow to equilibrate to room temperature before opening then return to freezer storage immediately after use.

Directions:

Place the required number of Nitrocefin disks into a clean empty Petri dish or onto a microscope slide. Discs may be moistened with one drop of deionised water. Do not over-moisten. Using a sterile loop or applicator stick remove several well-isolated and similar colonies and smear onto the surface of a disc. Alternatively: moisten the disc with one drop of deionised water, then holding the disc in forceps, wipe across a colony on an agar plate. Observe the inoculated disc for the development of a red colour.

Interpretation of results:

Positive - Development of a red colour in the area of the disc where the culture was applied. Note the colour change does not normally develop over the whole of the disc.
Negative - No colour change.

A positive result should be interpreted as resistance to penicillin or cephalosporin activity. Susceptibility should be confirmed by standard growth-dependent susceptibility testing methods. Negative results imply but do not guarantee susceptibility.



Quality control:

The list below illustrates a range of performance control strains in routine use:

Test Organisms (ATCC)	Result
<i>Haemophilus influenzae</i> (35036)	positive
<i>Neisseria gonorrhoeae</i> (31426)	positive
<i>Staphylococcus aureus</i> (11632)	positive
<i>Escherichia coli</i> (25922)	negative

User quality control:

Check for signs of deterioration. Quality control must be performed with at least one organism to demonstrate a positive reaction and at least one organism to demonstrate a negative reaction. Do not use the product if the reactions with the control organisms are incorrect.

Limitations:

It is recommended that biochemical and/or serological tests are performed on colonies from pure culture to confirm identification.

For most bacterial strains a positive result will develop within 5 minutes. However, positive reactions for some staphylococci and anaerobic species may take up to 60 minutes to develop.

Detection of staphylococcal β -lactamase is enhanced by testing growth from a medium containing sub-inhibitory concentrations of a β -lactam antibiotic.

References:

1. MacFaddin J.F., Biochemical tests for the identification of medical bacteria., 3rd ed. Philadelphia: Lippincott Williams & Wilkins (2000)
2. Murray P.R., Baron E., Pfaffer M., Tenover F., Yolken R., Manual of clinical microbiology., 7th ed. Washington, DC: ASM, (1999)
3. Tu K.K., Jorgensen J.H., Stratton C.W., A rapid paper-disk test for penicillinase., Am J. Clin. Pathol., 75:557-9 (1981)
4. Escamilla J., Susceptibility of *Haemophilus influenzae* to ampicillin as determined by use of a modified one-minute beta-lactamase test., Antimicrob. Ag. Chemo., 9:196-8 (1976)
5. Thornsberry C., Biddle J.W., Kirven L.A., Penicillin resistance in *Neisseria gonorrhoeae* due to beta-lactamase production., Microblos 20:39-46 (1977)

Precautions and Disclaimer

For in vitro diagnostic use only. Observe approved biohazard precautions and aseptic techniques. To be used only by adequately trained and qualified laboratory personnel. Sterilise all biohazard waste before disposal.

Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

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