

## MASTDISCS® ID Nitrocefin Discs

### D59

#### Intended use

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

FOR IN VITRO DIAGNOSTIC USE ONLY

#### Contents

50 discs in a light-resistant plastic vial (D59).

#### Formulation\*

6mm diameter filter paper discs impregnated with Nitrocefin.

#### Storage and shelf life

Store in the freezer below minus 10°C in the containers provided until the expiry date shown on the pack label. Allow to equilibrate to room temperature before opening then return to freezer storage immediately after use.

#### Precautions

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. Refer to Product Safety Data sheet.

#### Materials required but not provided

Standard microbiological supplies and equipment such as loops, MAST® culture media, swabs, applicator sticks, incinerators and incubators, etc., as well as serological and biochemical reagents and additives such as blood.

#### Procedure

1. Place the required number of Nitrocefin discs into a clean empty Petri dish or onto a microscope slide.
2. Discs may be moistened with one drop of deionised water. Do not over-moisten.
3. 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.
4. 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

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. The list below illustrates a range of performance control strains which the end user can easily obtain.

Test Organisms	Result
<i>Bacteroides fragilis</i> NCTC 9343	Positive
<i>Staphylococcus aureus</i> NCTC 12973	Positive
<i>Clostridoides difficile</i> NCTC 11204	Negative

#### Limitations

For most bacterial strains a positive results 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  $\beta$ -lactamase is enhanced by testing growth from around the outer edge of the zone of inhibition of an Oxacillin 1  $\mu$ g disc (MASTDISCS® AST OX1 or OX1C).

#### References

Bibliography available on request.