

MASTDISCS® ID Bacitracin Discs

D40/D41

Intended use

For the identification of Lancefield Group A streptococci (*Streptococcus pyogenes*).

FOR IN VITRO DIAGNOSTIC USE ONLY

Contents

100 discs in a vial (D40/D41) or a pack of 5 cartridges (D40C/D41C), each cartridge containing 50 discs.

Formulation

Order Code	Material:	Content per disc:
D40/D40C	Bacitracin	0.04 units
D41/D41C	Bacitracin	0.1 unit

Storage and shelf life

Store at 2 to 8°C in the containers provided until the expiry date shown on the pack label. Allow to equilibrate to room temperature before opening.

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. Subculture the test beta-haemolytic streptococcus by spreading over the surface of a blood agar plate e.g. MAST® Blood Agar Base Special (DM101D) supplemented with 5 to 7% sterile defibrinated horse or sheep blood. Alternatively discs can be applied directly to media inoculated with suitable clinical specimens e.g. throat swabs.
2. Place a Bacitracin Disc of either strength on the inoculated medium.
3. Incubate for 18 to 24 hours at 35 to 37°C.

Interpretation of results

The presence of any zone of inhibition around a 0.04 unit Bacitracin Disc (D40), or a zone of inhibition of 12mm or greater around a 0.1 unit Bacitracin Disc (D41) is considered positive for a presumptive identification of Lancefield Group A streptococci.

Any known bacitracin sensitive strain of Lancefield Group A *Streptococcus* may be used as a sensitive control organism.

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>Streptococcus pyogenes</i> ATCC® 19615	Appropriate zone of inhibition
<i>Streptococcus agalactiae</i> ATCC® 13813	No zone of inhibition

Limitations

It is recommended that biochemical and/or serological tests are performed on colonies from pure culture to confirm identification e.g. MAST®STREP Enzyme extraction (RST201). It is important that an inoculum resulting in confluent growth be used. If an excessive inoculum is used, some group A streptococci may not show a zone of inhibition. If the inoculum is too light, this may result in false zones of inhibition. Some group B, C and G strains of streptococci are reported to be bacitracin sensitive.

References

Bibliography available on request.