

MASTDISCS® ID X&V Factor Discs

D43/D44/D45

Intended use

For the differentiation of *Haemophilus* spp.

FOR IN VITRO DIAGNOSTIC USE ONLY

Contents

100 discs in a vial (D43/D44/D45) or a pack of 5 cartridges (D43C/D44C/D45C), each cartridge containing 50 discs.

Formulation*

6mm filter paper discs printed with the appropriate letter or letters and impregnated with carefully controlled concentrations of the appropriate factor or factors.

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

- Using a sterile swab evenly spread a suspension of the test strain of *Haemophilus* spp., approximately equivalent in density to McFarland 0.5 standard, over the surface of an agar plate prepared from a medium containing neither X or V growth factors e.g. MAST® Peptone Agar (DM184D).
- Place X, V, and X&V factor discs well apart on the surface of the medium.
- Incubate aerobically at 37°C for 18 to 24 hours.

Interpretation of results

A clearly defined zone of growth, which may need viewing under magnification, around one or more discs identifies the species of *Haemophilus* as shown in the table.

H. influenzae produces discrete zones, about 20mm in size but *H. parainfluenzae* gives more diffuse zones generally of a larger size.

Species	Growth around disc containing:		
	X Factor	V Factor	XV Factor
<i>H. influenzae</i>	-	-	+
<i>H. aegyptius</i>	-	-	+
<i>H. parainfluenzae</i>	-	+	+
<i>H. haemolyticus</i>	-	-	+
<i>H. para-haemolyticus</i>	-	+	+
<i>H. ducreyi</i>	+	-	+

An alternative method for the interpretation of growth factor requirements is the porphyrin test which confirms the haemin independence of certain *Haemophilus* spp. It is recommended that this test be performed in conjunction with an X&V satellite test using MASTDISCS® IDALA Discs (D49/D49C).

Quality control

Check for signs of deterioration. Quality control must be performed with at least one organism to demonstrate a positive 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>Haemophilus influenzae</i> ATCC® 49766	Growth and correct X & V response
<i>Haemophilus parainfluenzae</i> ATCC® 7901	Growth and correct X & V response

Limitations

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

References

Bibliography available on request.