



## MASTASCREEN™ MRSA

**MRSA-ID.** For the selective screening of Methicillin resistant *Staphylococcus aureus*.

FOR IN VITRO DIAGNOSTIC USE ONLY

### Contents:

- 48 x 3ml tubes of MRSA Screening Broth
- 1 cartridge of approx. 50 MRSA-ID Discs
- 1 Single Hand Disc Dispenser

### Formulation\*

Material in broth:	Concentration in medium (g/litre):
Nutrient Broth	33.33
Mannitol	5.0
Trehalose	5.0
Salts	40.5
Material in disc:	
Phenol red	0.1
Aztreonam	0.02
Cefoxitin	0.002
Colistin	0.05
Final pH 7.2 ± 0.2	

### Storage and shelf life

Store at 2-8°C until expiry date shown on pack label.

### 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 (available on request).

### Materials required but not provided

Standard microbiological supplies and equipment.

### Procedure

- Using the Mast Single Hand Disc Dispenser (SHD1) aseptically add 1 MRSA-ID Disc to each broth tube.
- Recap the tube and leave at ambient temperature (18-25°C) for a minimum of 60 minutes. Discs can be added to tubes and left at 2-8°C overnight, for up to 30 hours. Ensure tubes are allowed to equilibrate to room temperature before inoculation. Gently mix to ensure a uniform red colour throughout the broth.
- Emulsify the swabbed specimen into the tube of broth containing the disc. Discard the used swab, recap the tube and mix.
- Incubate the tube at 35-37°C for 18-24 hours.

### Interpretation of results

After 18 hours incubation mix the tubes to evenly distribute any colour/growth and record results. A positive result is indicated by a colour change from red to orange/yellow. A negative result gives no colour change. Any negative tubes should be left at 35-37°C for a further 6 hours, then mix to ensure even colour/growth distribution before reading the results again. Tubes with no colour change after 24 hours incubation can then be reported as negative. A positive result can only be considered to be a presumptive identification. Positive cultures should be plated out onto a suitable nutrient medium and further tests should be conducted to confirm methicillin resistance conferred by the *mecA* gene product, PBP2a e.g. MASTALEX-MRSA (RST501), PCR testing or an appropriate conventional method.

### Limitations of use

The test cannot distinguish between MRSA and methicillin resistant coagulase negative staphylococci (MRCNS). Further testing such as a conventional coagulase test using Mast Plasma Coagulase EDTA Selectavial™ (SV78) or use of a *Staphylococcus latex* test, such as MASTASTAPH (RST101), can be used to further distinguish *Staphylococcus* spp. The incorporation of an excessive amount of charcoal transport medium into the broth from swabs may mask the colour reaction of the broth.

### 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. For QC purposes the recommended inoculum level per tube is 100µl of a 0.5 MacFarland suspension. 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 Organism	Result
<i>Escherichia coli</i> ATCC® 25922	Negative
<i>Staphylococcus aureus</i> ATCC® 25923	Negative
<i>Staphylococcus aureus</i> ATCC® 33591	Positive

### References

Bibliography available on request.