

## MASTDISCS®

### Intended use

An extensive range of individual antimicrobial susceptibility test discs in glass vials and plastic dispensing cartridges.

FOR IN VITRO DIAGNOSTIC USE ONLY

### Contents

100 discs in a vial or a pack of 5 cartridges each cartridge containing 50 discs.

### Formulation\*

6 mm diameter filter paper discs printed with an appropriate identification code of letters and/or numbers and impregnated with accurately assayed quantities of antimicrobial agent.

### Storage and shelf life

Store as indicated on the label in the containers provided until the expiry date shown on the pack label. Allow to equilibrate to room temperature before opening. Return to the refrigerator promptly 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. Suitable interpretive criteria from standardised reference methods. MAST® DiscMaster Dispenser.

### Procedure

**MASTDISCS®** should be used according to an appropriate standardised susceptibility test method. Various alternative methodologies are available and **MASTDISCS®** are compatible with these.

1. Remove the **MASTDISCS®** container from storage and allow to equilibrate to room temperature before opening.
2. Using a sterile needle or forceps, transfer each disc required onto the surface of a suitable plate of MAST® susceptibility test medium e.g. Mueller-Hinton Agar (DM170D) dried and pre-inoculated with test organism according to the methodology followed.
3. If using **MASTDISCS®** in cartridges, load each cartridge required into a MAST® DISCMASTER Dispenser.
4. Place the loaded MAST® DISCMASTER Dispenser over the Petri Dish and dispense discs (see DiscMaster instructions for full details).

5. Incubate plates in air at 35 to 37°C for 18 to 24 hours (or alternative incubation conditions according to the methodology followed).
6. Measure (to the nearest whole mm) and record the diameter of any zones of inhibition that are observed around the antibiotic impregnated discs.

### Interpretation of results

Interpret measured zones of inhibition by reference to published tables of critical zone diameter breakpoints provided by appropriate authorities and classify test isolate as Susceptible (S), Intermediate (I) or Resistant (R).

### Quality control

Check for signs of deterioration. Quality control must be performed with at least one organism to demonstrate a correct susceptibility pattern. 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	
<i>Escherichia coli</i> ATCC® 25922	Correct susceptibility pattern*
<i>Pseudomonas aeruginosa</i> ATCC® 27853	Correct susceptibility pattern*
<i>Staphylococcus aureus</i> ATCC® 25923	Correct susceptibility pattern*

\*See appropriate quality control table

### Limitations

Any deviation from the prescribed method may produce incorrect results.

**The latest published version of the method used should be consulted for complete details of test procedures and interpretive criteria.**

### References

Bibliography available on request.



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## MAST® CARBA PAcE

### PACE-ID

### Intended Use

For the rapid detection of carbapenemase producing Enterobacterales, *Pseudomonas*, OXA 48 and 23-like enzyme production in *Acinetobacter*.

FOR IN VITRO DIAGNOSTIC USE ONLY

### Contents

- **Vial PEL.** Freeze dried pellet\* - 4 vials containing inhibitors and lysis components, each designed for 12 tests.
- **Vial RB.** Reconstitution buffer\* - 4 vials containing chromogenic indicator resuspension buffer, each sufficient for 12 tests.
- Plastic 0.5 mL tubes, sufficient for 48 tests.

### 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. Once reconstituted, test solution stored at 2 to 8°C, must be used within 4 weeks.

### Precautions

For *in vitro* diagnostic use only. Observe approved biohazard and aseptic techniques. To be used by only trained and qualified laboratory personnel. Sterilise all biohazard waste before disposal. Refer to product safety data sheets.

### Materials required but not provided

Standard microbiological supplies and equipment such as loops, MAST Group Ltd. culture media, table top vortexes, pipettes, incinerators and incubators, etc.

### Procedure

1. Reconstitute the pellet by tipping the entire contents of vial RB into vial PEL.
2. Allow the pellet to fully dissolve at room temperature for 1 minute and mix contents by gently vortexing for 10 seconds. Reconstituted solution should be yellow, if the solution is any other colour do not use.
3. Dispense 250 µL of reconstituted solution into the tubes provided. One tube per test.
4. Using a pure, fresh culture of the test organism, take an approximate 1 to 5 µL loopful of organism, and add to the tube containing test solution. Mix well by vortexing for 20 seconds.

**Note: to obtain distinct results, ensure that the bacterial resuspension is similar to the turbidity of a 3.0 to 3.5 McFarland standard; Approx. 10<sup>9</sup> CFU/mL.**

5. Incubate at 35±1°C for 10 minutes.
6. Record the colour of the test solution immediately or up to 20 minutes after incubation.

Please refer to corresponding steps on the image page.

### Interpretation of results

If a colour change is recorded; from yellow to orange/red, record the organism as demonstrating carbapenemase activity.

If no colour change is recorded; solution remains yellow, record the organism as negative for carbapenemase activity.

### Quality control

Check for signs of deterioration. Quality control must be performed with at least one organism to demonstrate a positive reaction and another 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 Organism	Result
<i>Acinetobacter baumannii</i> NCTC 13301	Orange/Red Carbapenemase positive
<i>Pseudomonas aeruginosa</i> NCTC 13437	Orange/Red Carbapenemase positive
<i>Acinetobacter lwoffii</i> ATCC® 15309	Remains Yellow Carbapenemase negative
<i>Pseudomonas aeruginosa</i> ATCC® 25668	Remains Yellow Carbapenemase negative
<i>Klebsiella pneumoniae</i> NCTC 13438	Orange/Red Carbapenemase positive

### Limitations

1. Colonies isolated from indicator media are not recommended.
2. This product only detects the presence of a carbapenemase, differentiation can be carried out by using a suitable genotypic or phenotypic test (for example **MASTDISCS® Combi Carba Plus; D73C**).
3. Some GES-type carbapenemases might be difficult to detect.
4. To avoid potentially erroneous results, ensure that equipment used for testing is free of contamination.
5. Test results must be recorded within 20 minutes following the initial 10 minute incubation.
6. Results obtained with this kit must be considered alongside other clinically relevant data when diagnosing an infection.

### References

Bibliography available on request.

### Acknowledgement

HMRZ compound used in this product was developed by Dr. Hideaki Hanaki of Kitasato, Institute, Japan.



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