

MAST® *ID* Motility Test Agar

IDM28/A/NCE

Intended use

Motility Test Agar dehydrated culture medium powder is intended for use to produce a medium to aid differentiation of members of the Enterobacteriales family based on their ability to demonstrate motility of a flagellated bacterium. When prepared in accordance with the instructions for use, it produces a semi-solid medium capable of supporting the growth of Enterobacteriales. In semi-solid agar media, motile bacteria produce a diffuse spreading growth. Visualisation of this is enhanced by the inclusion in the medium of a tetrazolium salt that is reduced by bacteria to form an insoluble red pigment. Diffuse pink or red bacterial growth in the medium is interpreted as a positive result. This medium can also be used in conjunction with additional identification products to produce a phenotypic biochemical profile of the bacterial isolate in order to generate specific fingerprints or datasets that can be used, for example, to detect or rule out cross-infection or elucidate bacterial transmission.

Motility Test Agar is intended to be used in conjunction with other phenotypic tests to aid epidemiological typing of previously isolated and identified pure cultures of members of the Enterobacteriales family derived from, animal, food, environmental or human samples. It is a non-automated, qualitative device, intended to be used by professional, trained laboratory users for *in vitro* use and is not intended for use in the diagnosis of disease or other conditions in humans or as the basis of treatment or case management decisions.

Contents

See pack label.

Formulation*

Material:	Concentration in medium:
Peptone mixture	10.0g/litre
Meat extract	1.0g/litre
Sodium chloride	5g/litre
Triphenyltetrazolium chloride	0.05g/litre
Agar	2.0g/litre
Final pH: 7.3 ± 0.2	

Storage and shelf life

All dehydrated culture media containers should be kept tightly closed and stored in a dry place at 10 to 25°C until the expiry date shown on the pack label.

Precautions

For *in vitro* use only. Observe approved hazard 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 or via MAST® website). Motility Test Agar is not intended for use in the diagnosis of disease or other conditions in humans.

Materials required but not provided

Standard microbiological supplies and equipment such as loops, swabs, applicator sticks, incinerators and incubators, etc.

Procedure

1. Refer to pack label for quantities and volumes required. Prepare MAST® *ID* Motility Test Agar (IDM28/A) by suspending the powder in distilled or deionised water. For sachet packs, dissolve the entire contents of the sachet in the volume shown on the label.
2. Sterilise by autoclaving at 121°C (15 p.s.i.) for 15 minutes.
3. Either, mix well and pour into square 25 compartment Petri dishes and allow to set. Poured plates may be used immediately after drying, or stored in sealed plastic bags at 4°C for up to 1 week before use.
4. Or, the medium may be used in multipoint inoculation procedures if poured into the wells of Mast P.T.F.E. Inoculum Pots. Allow to set and cover with the lid of a sterile Petri dish.
5. Prepare a suspension of each organism equivalent in density to a 0.5 McFarland standard. If compartmented Petri dishes have been used; inoculate each compartment by stabbing into the medium from the test organism suspensions. In multipoint inoculation procedures, inoculate the P.T.F.E. Inoculum Pots using a replicating device, e.g. the SCANURIDOT Multipoint Inoculator, to deliver each inoculum into the wells. Ensure that the pins penetrate the medium
6. Incubate plates and pots (lid uppermost) aerobically for 18 to 24 hours at 35 to 37°C (or alternative temperatures according to the methodology followed).

Interpretation of results

After incubation record growth and colour development in the medium. A positive result is indicated by a diffuse pink cloud throughout the medium. Non-motile organisms form a bright red line along the track of the inoculation stab.

Quality control

Check for signs of deterioration. Quality control must be performed with at least one organism to demonstrate expected performance. Do not use the product if the result with the control organism is 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	Positive
<i>Salmonella typhimurium</i> ATCC® 14028	Positive
<i>Klebsiella pneumoniae</i> ATCC® 13883	Negative

References

Bibliography available on request.