

Simmons Citrate Agar

DM211

Intended Use

For the differentiation of Enterobacterales based on citrate utilisation.

Contents

See pack label.

Formulation*

Material:	Concentration in medium:
Magnesium sulphate	0.2 g/litre
Ammonium dihydrogen phosphate	0.2 g/litre
Tri-sodium citrate	2.5 g/litre
Bromo-thymol blue	0.080 g/litre
Sodium ammonium phosphate	0.8 g/litre
Sodium chloride	5.0 g/litre
Agar	14.0 g/litre
Final pH: 6.9 ± 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* diagnostic 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).

Materials required but not provided

Standard microbiological supplies and equipment such as loops, MAST® selective supplements, swabs, applicator sticks, incinerators and incubators, etc., as well as serological and biochemical reagents and additives such as blood.

Procedure

1. Refer to pack label for quantities and volumes required. Prepare MAST® Simmons Citrate Agar (DM211D) 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. Allow to stand for 15 minutes and bring to the boil until completely dissolved.
3. Mix well and distribute into final containers (e.g. tubes or bottles).
4. Autoclave at 121°C (15 p.s.i.) for 15 minutes.
5. Allow to set in a slanted position to form a long slope and short butt.

6. Alternatively culture plates (15 to 20ml per plate) can be poured from autoclaved medium.
7. Prepared medium may be used immediately or stored in at 2 to 8°C for up to one week before use.
8. Lightly inoculate the surface of the medium with a pure culture of the organism to be tested by streaking with a straight wire. If slopes are used, also stab the butt.
9. Loosen the tube cap or closure and incubate aerobically for up to 48 hours at 35 to 37°C.

Interpretation of results

After incubation record colour development in the medium. A positive reaction (citrate utilisation) changes the colour of the medium from green to bright blue (alkaline reaction). For a negative (no citrate utilisation) the colour of the medium remains green and unchanged.

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	Result
<i>Escherichia coli</i> ATCC® 25922	Negative
<i>Klebsiella pneumoniae</i> ATCC® 13883	Positive
<i>Salmonella typhimurium</i> ATCC® 14028	Positive

References

Bibliography available on request.