



Salt Agar, Modified

M1767

Intended Use:

For isolation and differentiation of the enterococcal group D Streptococci from non enterococcal group D Streptococci based on salt tolerance.

Composition**

Ingredients	g/ L
Peptone	10.000
HMH infusion #	10.000
Dextrose (Glucose)	1.000
Sodium chloride	65.000
Bromocresol purple	0.016
Agar	15.000
Final pH (at 25°C)	7.2±0.2

**Formula adjusted, standardized to suit performance parameters

#- Equivalent to Heart muscle infusion

Directions

Suspend 101.01 grams in 1000 ml purified / distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C. Mix well and pour into sterile Petri plates.

Principle And Interpretation

Salt Agar, Modified is used for differentiating enterococcal group D streptococci from non-enterococcal group D streptococci. Medium containing 6.5% sodium chloride is used to differentiate Enterococci by determining salt tolerance of bile esculin positive and catalase negative cocci (1). High salt content of this medium acts as a differential and selective agent by interfering with membrane permeability and osmotic equilibrium (2). Enterococcal group D *Streptococcus* species (*Enterococcus faecalis*, *Enterococcus faecium*, *Enterococcus durans* and *Enterococcus avium*) can be easily differentiated from the non-enterococcal species like *Streptococcus bovis*, *Streptococcus equines*, by the 6.5% sodium chloride tolerance test.

Peptone and HMH infusion provide essential nitrogenous nutrients while glucose is the carbohydrate source in the medium. Bromocresol purple is the pH indicator which turns yellow from purple at acidic pH (1). Sodium chloride serves as differential and selective agent. Growth is indicated by sometimes changes in colour of the indicator. A change in colour from purple to yellow also may occur due to utilization of glucose and thereby acid production. Serological group D streptococci or bile esculin positive isolate may be easily identified as an *Enterococcus* species.

Type of specimen

Isolated microorganisms from clinical samples.

Specimen Collection and Handling:

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (3,4).

After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions :

In Vitro diagnostic Use only. For professional use only. Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets

Limitations :

1. Individual organisms differ in their growth requirement and may show variable growth patterns on the medium.
2. Each lot of the medium has been tested for the organisms specified on the COA. It is recommended to users to validate the medium for any specific microorganism other than mentioned in the COA based on the user's unique requirement.
3. Further biochemical and serological tests must be carried out for confirmation.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance

Cream to greenish yellow homogeneous free flowing powder

Gelling

Firm, comparable with 1.5% Agar gel

Colour and Clarity

Purple coloured clear to slightly opalescent solution

Reaction

Reaction of 10.1% w/v aqueous solution at 25°C. pH : 7.2±0.2

pH

7.00-7.40

Cultural Response

Cultural characteristics observed after an incubation at 35-37°C for 24-48 hours.

Organism	Inoculum (CFU)	Growth	Recovery
<i>Streptococcus bovis</i> ATCC 9809	≥10 ⁴	inhibited	0%
<i>Enterococcus faecalis</i> ATCC 50-100 29212 (00087*)		good	≥50%

Key : *Corresponding WDCM numbers.

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 20-30°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (3,4).

Reference

1. Murray P. R., Baron J. H., Pfaller M. A., Jorgensen J. H. and Tenover F. C., (Ed.), 2003, Manual of Clinical Microbiology, 8th Ed., American Society for Microbiology, Washington, D.C.
2. MacFaddin J. F., 1985, Media for Isolation-Cultivation-Identification- Maintenance of Medical Bacteria, Vol. 1, Williams Wilkins, Baltimore, Md.
3. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
4. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock, D.W.(2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.

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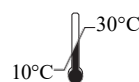
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