Salt Broth, Modified

M1290

Intended Use:

Recommended an enrichment medium for the isolation of *Staphylococci* from grossly contaminated specimens.

Composition**

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

**Formula adjusted, standardized to suit performance parameters
Equivalent to Heart infusion

Directions

Suspend 86.01 grams in 1000 ml purified/ distilled water. Heat if necessary to dissolve the medium completely. Dispense in tubes or flasks as desired. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Principle And Interpretation

Salt Broth, 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. HI solids and peptone 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 turbidity and 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. 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. 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

Colour and Clarity of prepared medium

Purple coloured clear to slightly opalescent solution

Reaction

Reaction of 8.6% 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
Streptococcus bovis ATCC 9809	>=10^4	inhibited
Enterococcus faecalis ATCC 29212 (00087*)	50-100	good

Key : *Corresponding WDCM numbers.

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 2-8°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 Yolken R. H., (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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IVD *In vitro* diagnostic medical device

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