

Technical Data

Salt Meat Broth(Revised as Salt M Broth)

Intended Use:

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

Ingredients	g/ L
HM peptone B #	10.000
Peptone	10.000
HMM peptone \$	30.000
Sodium chloride	100.000
Final pH (at 25°C)	7.6±0.2

**Formula adjusted, standardized to suit performance parameters

Equivalent to Beef extract \$ Equivalent to Neutral ox-heart tissue

Directions

Suspend 15.0 grams in 100 ml purified/distilled water. Soak for 5 minutes. Heat if necessary to dissolve the medium completely. Dispense in 5/8 inch diameter test tubes. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Principle And Interpretation

Salt Meat Broth is an enrichment medium used for the isolation of halophilic Staphylococci from contaminated samples such as faeces especially in case of food poisoning. The medium is sensitive as it can detect even low numbers of staphylococci from samples having large proportions of heterogeneous microbial flora (1,2). The medium is selective for staphylococci because of the presence of sodium chloride in high concentration. *Staphylococcus aureus* is tolerant to high concentration of sodium chloride that inhibits most other bacteria (3). Salt Meat Broth can also be used to cultivate some halophilic micrococci associated with hides and raw salt supplies. Staphylococci growing on this medium cannot be directly tested for coagulase production; therefore they should be first subcultured on a medium containing less salt such as Blood Agar.

HM peptone B, Peptone and HMM peptone provide essential nutrients for bacterial metabolism. Sodium chloride maintains osmotic equilibrium. Emulsify the food specimen in Peptone Water (M028) and inoculate in Salt Meat Broth. After an incubation at 35°C for 24 to 48 hours, subculture on Mannitol Salt Agar (M118) or Staphylococcus Medium No. 110 (M521).

Type of specimen

Clinical samples : Pus, wounds; Food samples

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (4,5). For food samples, follow appropriate techniques for sample collection and processing as per guidelines (6). 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. Staphylococci growing on this medium cannot be directly tested for coagulase production; therefore they should be first subcultured on a medium containing less salt such as Blood Agar.

2. Individual organisms differ in their growth requirement and may show variable growth patterns on the medium.

3.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.

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.

M155

Quality Control

Appearance

Cream to yellow homogeneous free flowing powder

Colour and Clarity of prepared medium

Yellow coloured clear solution without any precipitate

Reaction

Reaction of 15% w/v aqueous solution at 25°C. pH : 7.6±0.2

pН

7.40-7.80

Cultural Response

Cultural characteristics observed after an incubation at 35 - 37°C for 18 - 48 hours.

Inoculum (CFU)	Growth
>=10 ⁴	Inhibited
>=10 ⁴	Inhibited
50-100	luxuriant
	Inoculum (CFU) >=10 ⁴ >=10 ⁴ 50-100

Key : (*) Corresponding WDCM numbers.

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 15-30°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 (4,5).

Reference

1. Fairbrother R. W. and Southall J. E., 1950, Mon. Bull. Min. Hlth. Publ. Hlth. Serv., 9:170.

2. Maitland H. B., and Martyn G., 1948, J. Path. Bacteriol., 60:553.

3. Collee J. G., Fraser A. G., Marmion B. P., Simmons A., (Eds.), Mackie and McCartney, Practical Medical Microbiology, 1996, 14th Edition, Churchill Livingstone.

4. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.

5. 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.

6. Salfinger Y., and Tortorello M.L. Fifth (Ed.), 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.

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