



## Salt Meat Broth

M155

Salt Meat Broth is used as an enrichment medium for the isolation of staphylococci from grossly contaminated specimens.

### Composition\*\*

Ingredients	Gms / Litre
Beef extract	10.000
Peptic digest of animal tissue	10.000
Neutral ox-heart tissue	30.000
Sodium chloride	100.000
Final pH ( at 25°C)	7.6±0.2

\*\*Formula adjusted, standardized to suit performance parameters

### Directions

Suspend 15 grams in 100 ml distilled water. Soak for 5 minutes. Heat if necessary to dissolve the medium completely. Disperse and dispense in a 5/8 inch diameter test tube. 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.

Peptic digest of animal tissue and beef extract 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).

### 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

#### pH

7.40-7.80

#### Cultural Response

M155: Cultural characteristics observed after an incubation at 35 - 37°C for 18 - 48 hours.

Organism	Inoculum (CFU)	Growth
<i>Escherichia coli</i> ATCC 25922	>=10 <sup>3</sup>	inhibited
<i>Proteus vulgaris</i> ATCC 13315	>=10 <sup>3</sup>	inhibited

*Staphylococcus aureus* 50-100 luxuriant  
ATCC 25923

### Storage and Shelf Life

Store below 30°C in tightly closed container and the prepared medium below 2-8°C. Use before expiry date on the label.

### Reference

1. Maitland H. B., and Martyn G., 1948, J. Path. Bacteriol., 60:553.
2. Fairbrother R. W. and Southall J. E., 1950, Mon. Bull. Min. Hlth. Publ. Hlth. Serv., 9:170.
3. Collee J. G., Fraser A. G., Marmion B. P., Simmons A., (Eds.), Mackie and McCartney, Practical Medical Microbiology, 1996, 14th Edition, Churchill Livingstone.

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