



## Modified Salt Broth

M1068

Modified Salt Broth is used for the differentiation of Enterococcal group D Streptococci from nonenterococcal group D Streptococci.

### Composition\*\*

Ingredients	Gms / Litre
Heart Digest	10.000
Peptic digest of animal tissue	10.000
Sodium chloride	65.000
Dextrose	1.000
Bromo cresol purple	0.016
Final pH ( at 25°C)	7.2±0.2

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

### Directions

Suspend 86 grams in 1000 ml distilled water. Heat if necessary to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

### Principle And Interpretation

Modified Salt Broth is used for differentiating enterococcal group D Streptococci from nonenterococcal group D Streptococci. High salt content of this medium acts as a differential and selective agent by interfering with membrane permeability and osmotic equilibrium (1). Salt tolerant strains grow within 48 hours. Heart digest and peptic digest of animal tissue provide essential nitrogenous nutrients while dextrose is the carbohydrate source in the medium. Bromo cresol purple is the pH indicator which turns yellow from purple at acidic pH (2). Enterococcal group D *Streptococcus* species ( *Enterococcus faecalis*, *Enterococcus faecium*, *Enterococcus durans* and *Enterococcus avium* ) can be easily differentiated from the nonenterococcal species like *Streptococcus bovis* , *Streptococcus equines* , by the 6.5% sodium chloride tolerance test. Serological group D Streptococci or bile esculin positive isolate may be easily identified as an *Enterococcus* species.

### Quality Control

#### Appearance

Light yellow to greenish yellow homogeneous free flowing powder

#### Colour and Clarity of prepared medium

Purple coloured clear solution may contain a slight precipitate.

#### Reaction

Reaction of 8.6% w/v aqueous solution at 25°C. pH : 7.2±0.2

#### pH

7.00-7.40

#### Cultural Response

M1068: Cultural characteristics observed after an incubation at 35 - 37°C for 48 hours .

Organism	Inoculum (CFU)	Growth
<b>Cultural Response</b>		
<i>Enterococcus faecalis</i> ATCC 50-100 29212		luxuriant
<i>Streptococcus bovis</i> ATCC 27960	≥10 <sup>3</sup>	inhibited

### Storage and Shelf Life

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

## Reference

1. MacFaddin J., 1985, Media for Isolation - Cultivation - Identification - Maintenance of Medical Bacteria, Vol.I, Williams and Wilkins, Baltimore.
2. Facklam and Caney, 1985, Manual of Clinical Microbiology, 4th ed., Lennette, Balows, Hausler and Shadomy (Eds), ASM, Washington, D.C.

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