

Technical Information

Modified Salt Broth

Product Code: DM 2068

Application: - Modified Salt Broth is recommended for the differentiation of Enterococcal group D Streptococci from non-enterococcal 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

Principle & Interpretation

Modified Salt Broth is used for differentiating enterococcal group D Streptococci from non-enterococcal 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 supply essential nitrogenous nutrients while dextrose acts as carbohydrate source in the medium. Bromo cresol purple act as 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 non-enterococcal 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.

Methodology

Suspend 86 grams of dehydrated powder media in 1000 ml distilled water. Mix thoroughly & heat if necessary to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Quality Control

Appearance

Light yellow to greenish yellow homogeneous free flowing powder

Colour and Clarity

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 Range

7.00-7.40

Cultural Response

DM2068: Cultural characteristics observed after an incubation at 35 - 37°C for 48 hours.

Organism	Inoculum (CFU)	Growth
<i>Enterococcus faecalis</i> ATCC 29212	50-100	luxuriant



Dehydrated Culture Media
Bases / Media Supplements

Streptococcus bovis ATCC 27960

$\geq 10^3$

inhibited

Storage and Shelf Life

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

Prepared Media: 2-8° in sealable plastic bags for 2-5 days.

Further Reading

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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