Chaitanya Group Of Industries

ReadyMED®
Dehydrated Cell Culture Media

Technical Data Sheet

Mannitol Salt Broth RDM-MSB-01

Principle
Mannitol salt broth is a medium used for the detection and enumeration of *Staphylococci*. Mannitol salt broth is composed of pancreatic digest of casein, peptic digest of animal tissue and meat extract (equivalent to beef extract) as sources of carbon, nitrogen, vitamins and minerals. Sodium chloride, in high concentration (7.5%), act as selective agent, allow only to grow the *Staphylococci* and halophilic *Enterobacteria* and inhibit other bacteria. Phenol red is the pH indicator. D-Mannitol is the carbohydrate source. Mannitol fermentation with an accumulation of acid products, detected by the phenol red indicator which turns yellow.

Use: Recommended for selective enrichment and detection of *Staphylococci*.

Contents*

Ingredients	**Gram/Litre**
Pancreatic Digest of Casein	5.000
Peptic Digest of Animal Tissue	5.000
Meat Extract#	1.000
D-Mannitol	10.000
Sodium Chloride	75.000
Phenol Red	0.025
pH at 25˚C	7.4 ±0.2

* Formula adjusted for optimum performance and parameters
#Equivalent to beef extract

Directions: Dissolve 96.00 grams in 1000 ml distilled water. Boil to dissolve the medium completely. Sterilize by autoclaving at 15 lbs. pressure (121°C) for 15 min, cool it to 42-45 °C, and inoculate test sample aseptically.

Specimens' types analyzed
Pharmaceutical samples, clinical and non-clinical samples etc.

Precautions to be taken
These microbial media are intended for the in-vitro use only. All the handling, experiments, storage, and discarding should be performed with the help of skilled and knowledgeable technicians and as per the established guidelines. The material should be disposed only after proper sterilization by autoclaving. Please go through the MSDS of the media to avoid any accidents or in emergency.

Performance and Evaluation
The expected performance of the medium is liable to use as per the direction on the label when stored at optimum conditions and within expiry date.

Quality Control

Appearance	Light pink beige colored free flowing, homogeneous powder
Reaction of 9.6% solution	7.40 ±0.2 at 25 ˚C
pH	7.10- 7.60
Color and clarity of ready medium	Orange to red colored
Growth Promotion properties	Best at ≤ 100 CFU at 32-37 ºC for 18-72 h

Indicative properties	Optimum at ≤ 100 CFU at 32-37 ºC for 18-48 h
Negative control	Performed using sterile distilled water

Different Microbial Response

Organism	ATCC	Inoculum	Growth	Incubation period
Growth promoting and indicative				
Staphylococcus aureus	25923	50-100	Luxurious	33-37 ℃, 24-48 h
Inhibitory				
Escherichia coli	8739	50-100	Inhibited	33-37 ℃, 24-48 h

Storage and Shelf Life

Hygroscopic; keep container tightly closed. Store in cool dry place.

Disposal: To avoid the contamination or propagation of any hazardous microbes the used, unusable or modified preparation of this product must be disposed after autoclaving after completion of task.

Reference

1. Atlas, R. M. (2005). *Handbook of media for environmental microbiology*. CRC press.
2. Chapman, G. H. *The significance of sodium chloride in studies of Staphylococci*. J. Bacteriol. 50:201.
3. *Difco Manual* (1998). 11th Edition. Difco Laboratories., Division of Becton Dickinson and Company, Sparks, Maryland, USA.
4. Rand, M. C., Arnold E. Greenberg, and Michael J. Taras, (1976), *Standard methods for the examination of water and wastewater*. Prepared and published jointly by American Public Health Association, American Water Works Association, and Water Pollution Control Federation.

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