TMV 206 - MANNITOL SALT AGAR BASE (VEG.)

INTENDED USE

For selective isolation of pathogenic Staphylococci.

PRODUCT SUMMARY AND EXPLANATION

These media are prepared by completely replacing animal based peptones with vegetable peptones which makes the medium free of BSE/TSE risks. Mannitol Salt Veg media are the modification of Mannitol Salt media which are prepared as suggested by Chapman and are used for the selective isolation of pathogenic *Staphylococci* and also are recommended for the detection and enumeration of coagulase-positive *Staphylococci* in milk food and other specimens.

COMPOSITION

Ingredients	Gms / Ltr
Veg peptone No. 3	10.00
Veg extract	1.00
Sodium chloride	75.00
D-Mannitol	10.00
Phenol red	0.025
Agar	15.00

PRINCIPLE

The medium contains Veg extract and Veg Peptone No. 3 which makes it very nutritious as they provide essential growth factors and trace nutrients. Many other bacteria except *Staphylococci* are inhibited by 7.5% sodium chloride. Mannitol is the fermentable carbohydrate source. The differential action of the medium is attributed to D-Mannitol. *Staphylococcus aureus* grows on this medium and ferment mannitol to produce yellow colonies with yellow zones. Most coagulase-negative species of *Staphylococci* and Micrococci do not ferment mannitol and grow as small red colonies surrounded by red or purple zones. The colour of colonies and medium is due to the reactivity of phenol red to the pH of the medium; phenol red is red at pH 8.4 and yellow at 6.8. Yellow colonies should be tested for production of coagulase. Addition of 5% v/v Egg Yolk Emulsion enables to detect lipase activity of Staphylococci along with mannitol fermentation. The salt clears egg yolk emulsion and the lipase production is detected as yellow opaque zone around the colonies. Presumptive coagulase-positive Staphylococci produces colonies surrounded by bright yellow zones while non- pathogenic Staphylococci produce colonies with reddish purple zones.

INSTRUCTION FOR USE

- Dissolve 111.02 grams in 1000 ml purified/distilled water.
- Heat to boiling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- Cool to 45-50°C. If desired, add 5% v/v Egg Yolk Emulsion.
- Mix well and pour into sterile Petri plates.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Light pink homogeneous free flowing powder.
Appearance of prepared medium : Red coloured clear to slightly opalescent gel forms in Petri plates.
pH (at 25°C) : 7.4±0.2

INTERPRETATION

Cultural characteristics observed after an incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Colour of colony	Incubation Temperature	Incubation Period
Escherichia coli	8739	>=10^3	Inhibited	0%	-	35-37°C	>=72 Hours
Staphylococcus aureus	25923	50-100	Luxuriant	>=70 %	Yellow/white colonies surrounded by yellow zone	35-37°C	18-72Hours
Staphylococcus epidermidis	14990	50-100	Fair-good	20 -40 %	Red	35-37°C	18-72Hours
Proteus mirabilis	12453	50-100	None-poor	0-10%	Yellow	35-37°C	18-72Hours
Escherichia coli	25922	>=10^3	Inhibited	0%	-	35-37°C	>=72 Hours
Enterobacter aerogenes	13048	>=10^3	Inhibited	0%	-	35-37°C	>=72 Hours

PACKAGING:

In pack size of 100 gm and 500 gm bottles.

STORAGE

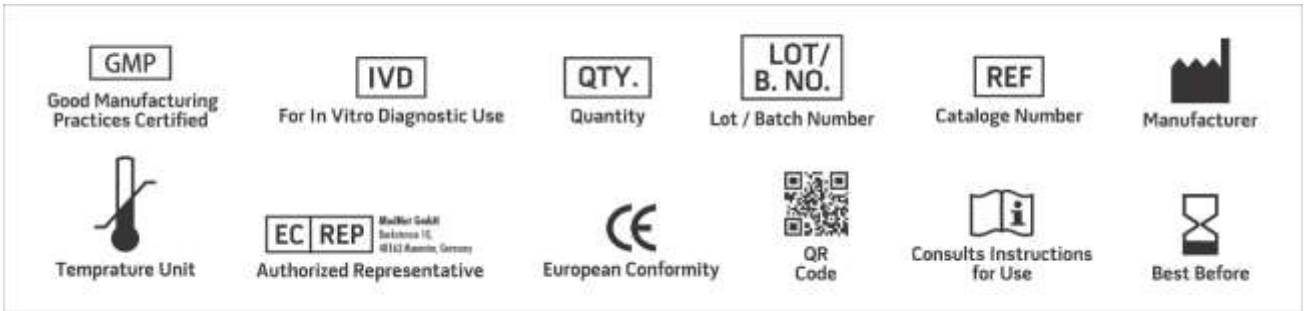
Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.
Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES

1. Chapman G.H., 1945, J. Bact., 50:201.
2. Standard Methods for the Examination of Dairy Products. 17th Edition, 2004 Edited by H. Michael Wehr and Joseph H.Frank.
3. Bacteriological Analytical Manual, 1995, Food and Drug Administration, 8th ed., AOAC, International, U.S.A.
4. Gunn B.A., Dunkelberg W.E. and Creitz J.R., 1972, Am. J. Clin. Path., 57:236.



NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**

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