TRMH 114 –MANNITOL SALT AGAR (USP/EP/BP/JP/IP)

INTENDED USE

For selective isolation of pathogenic staphylococci from pharmaceutical products in accordance with microbial limit test

PRODUCT SUMMARY AND EXPLANATION

Staphylococci have the unique ability of growing on a high salt containing media. Isolation of coagulase-positive staphylococci on Phenol Red Mannitol Agar supplemented with 7.5%NaCl was studied by Chapman. The resulting Mannitol Salt Agar Base is recommended for the isolation of coagulase-positive staphylococci from cosmetics, milk, food and other specimens. It is also used in the performance of microbial limit tests for the selective isolation of Staphylococcus. The formulation is in accordance with the harmonization of USP/EP/BP/JP/IP.

COMPOSITION

Ingredients	Gms / Ltr
Sodium chloride	75.000
Agar	15.000
D-Mannitol	10.000
Peptic digest of animal tissue	5.000
Pancreatic digest of casein	5.000
Beef extract	1.000
Phenol red	0.025

PRINCIPLE

The medium contains Beef extract, Pancreatic digest of casein and Peptic digest of animal tissue which makes it very nutritious as they provide carbon, nitrogen compounds, long chain amino acids, vitamins and other essential growth factors and trace nutrients. Bacteria that grow in the presence of a high salt concentration and ferment mannitol produce acid products, turning the phenol red pH indicator from red to yellow. Mannitol is the fermentable carbohydrate which leads to acid production, detected by Phenol red indicator. *Staphylococcus aureus* ferment mannitol and produce yellow coloured colonies surrounded by yellow zones. The lipase activity can be visualized as yellow opaque zones around the colonies. Coagulase negative strains of *Staphylococcus aureus* are usually mannitol non-fermenters and therefore produce pink to red colonies surrounded by red-purple zones. Presumptive coagulase-positive yellow colonies of *Staphylococcus aureus* should be confirmed by performing the coagulase test. Agar is the solidifying agent. The additional property of lipase activity of *Staphylococcus aureus* can be detected by the addition of the Egg Yolk Emulsion (TS 002). The lipase activity can be visualized as yellow opaque zones around the colonies.

INSTRUCTION FOR USE

1. Mannitol Salt Agar is a ready to use solid media in glass bottle. The medium is pre-sterilized, hence sterilization is not required.
2. Prior to use, medium in the bottle can be melted either by using a pre-heated water bath or any other method.
3. Slightly loosen the cap before melting.
4. Pour liquefied agar into each plate as desired and allow them to solidify at room temperature. Plates are now ready to inoculate or refrigerate for later use

QUALITY CONTROL SPECIFICATIONS

Appearance	:	Red color, clear to slightly opalescent gel.
Quantity of Medium	:	100 ml of the medium in glass bottle
pH (at 25°C)	:	7.4± 0.2
Sterility Check	:	Passes release criteria

INTERPRETATION

Culture characteristics observed after incubation. Recovery rate is considered 100% for bacteria growth on Soya Agar.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Colour of colony	Incubation Temperature	Incubation Period
Staphylococcus aureus	6538	50-100	Luxuriant	>=50%	Yellow/white colonies surrounded by yellow zone	35 ± 2°C	18 - 48 Hours
Staphylococcus aureus	25923	50-100	Luxuriant	>=50%	Yellow/white colonies surrounded by yellow zone	35 ± 2°C	18 - 48 Hours
Staphylococcus epidermidis	12228	50-100	Fair-Good	30-40%	Red	35 ± 2°C	18 - 48 Hours
Proteus mirabilis	12453	50-100	None-Poor	0-10%	Red	35 ± 2°C	18 - 48 Hours
Escherichia coli	8739	≥1000	Inhibited	0%	-	35 ± 2°C	18 - 48 Hours
Escherichia coli	25922	≥1000	Inhibited	0%	-	35 ± 2°C	18 - 48 Hours

PACKAGING

100 ml glass bottle.

STORAGE

On receipt, store bottles in the dark at 10 to 25° C. Avoid freezing and overheating. The medium may be used up to the expiration date and incubated for the recommended incubation times. Bottles from unopened packages can be used up to the expiration date. Opened bottles must be used immediately. To prepare plates or tubes from the bottled medium, it must first be liquefied. Do not liquefy any leftovers for a second time

Product Deterioration: Do not use bottles if they show evidence of microbial contamination, discoloration, or any other signs of deterioration.

DISPOSAL

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

REFERENCES

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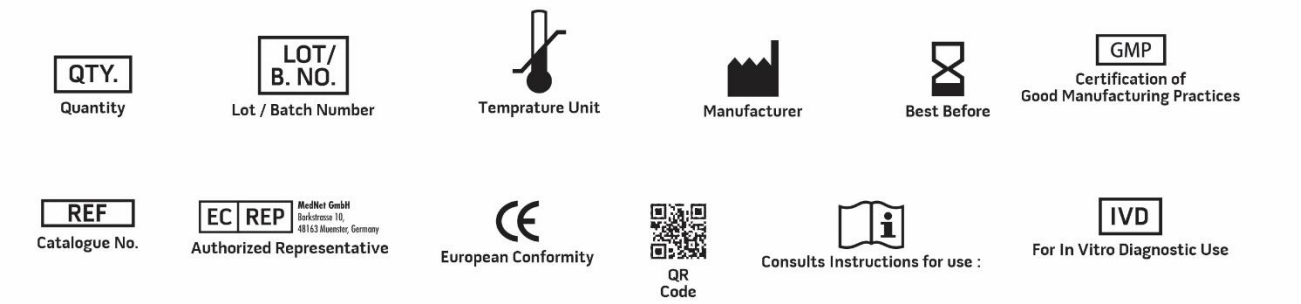

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**

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