TRM 206 –MANNITOL SALT AGAR

INTENDED USE

For selective isolation of pathogenic staphylococci from clinical and non-clinical samples.

PRODUCT SUMMARY AND EXPLANATION

Staphylococci are widespread in nature, although they are mainly found on the skin, skin glands and mucous membranes of mammals and birds. The coagulase-positive species i.e *Staphylococcus aureus* is well documented as a human opportunistic pathogen. Mannitol Salt Agar is a selective medium prepared according to the recommendations of Chapman for the isolation of presumptive pathogenic staphylococci. It is recommended for the isolation of coagulase positive staphylococci from cosmetics, milk, food and other specimens. The USP General Chapter recommends Mannitol Salt Agar as a test medium for isolating *Staphylococcus aureus* in the Microbiological Examination of Nonsterile Products.

COMPOSITION

Ingredients	Gms / Ltr
Sodium chloride	75.000
Agar	15.000
Proteose peptone	10.000
D-Mannitol	10.000
Peptone	1.000
Phenol red	0.025

PRINCIPLE

Mannitol Salt Agar is a nutritive medium due to its content of peptones and beef extract, which supply essential growth factors, such as nitrogen, carbon, sulfur and trace nutrients. Sodium chloride serves as an inhibitory agent against bacteria other than staphylococci. Mannitol is the fermentable carbohydrate, fermentation of which leads to acid production, detected by phenol red indicator. *S. aureus* ferment mannitol and produce yellow coloured colonies surrounded by yellow zones. Coagulase-negative strains of *S. aureus* are usually mannitol non-fermenters and therefore produce pink to red colonies surrounded by red-purple zones. Presumptive coagulase-positive yellow colonies of *S. aureus* should be confirmed by performing the coagulase test [tube or slide]. Lipase activity of *S. aureus* can be detected by supplementing the medium with egg yolk emulsion.

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

Cultural characteristics observed after an 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 subsp.aureus	6538	50-100	Luxuriant	>=50%	Yellow/white colonies surrounded by yellow zone	35-37˚C	18-72 Hours
Staphylococcus aureus subsp.aureus	25923	50-100	Luxuriant	>=50%	Yellow/white colonies surrounded by yellow zone	35-37˚C	18-72 Hours
Staphylococcus epidermidis	14990	50-100	Fair-Good	30-40%	Red	35-37˚C	18-72 Hours
Staphylococcus epidermidis	12228	50-100	Fair-Good	30-40%	Red	35-37˚C	18-72 Hours
Proteus mirabilis	12453	50-100	None-Poor	0-10%	Yellow	35-37˚C	18-72 hours
Escherichia coli	25922	≥1000	Inhibited	0%	-	35-37˚C	>=72 Hours
Escherichia coli	8739	≥1000	Inhibited	0%	-	35-37˚C	>=72 Hours
# Klebsiella aerogenes	13048	≥1000	Inhibited	0%	-	35-37˚C	>=72 Hours

Formerly known as *Enterobacter aerogenes*

PACKAGING

100 ml glass bottles.

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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4. Salfinger Y., and Tortorello M.L. Fifth (Ed.), 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.
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Quantity

Lot / Batch Number


Temprature Unit


Manufacturer


Best Before

Certification of
Good Manufacturing Practices

Catalogue No.

Authorized Representative


European Conformity


QR
Code


Consults Instructions for use :

For In Vitro Diagnostic Use

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

***For Lab Use Only**

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