Product Data Sheet

MANNITOL SALT AGAR (as per USP/BP/EP/JP/IP)
Product No. GB-DCM-00412-1A

INTENDED USE
For selective isolation and enumeration of Staphylococci species.

PRODUCT SUMMARY
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..

Product Specifications

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

- Dissolve 111.02 grams of the medium in 1000 ml distilled water.
- Gently heat to boiling with gentle swirling and dissolve the medium completely.
- Sterilize by autoclaving at 15 psi (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

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Colour of colony	Recovery	Incubation Temperature	Incubation Period
Staphylococcus aureus	25923	50-100	Good-Inhibited	Yellow	≥50%	30 - 35°C.	18-72 hours
Staphylococcus aureus	6538	50-100	Good-Luxuriant	Yellow	≥50%	30 - 35°C.	18-72 hours
Staphylococcus epidermidis	12228	50-100	Fair	Red	30 -40 %	30 - 35°C.	18-72 hours
Proteus mirabilis	12453	50-100	None to poor	Red	≤10%	30 - 35°C.	18-72 hours
Escherichia coli	25922	≥1000	Inhibited	-	0%	30 - 35°C.	18-72 hours
Escherichia coli	8739	≥1000	Inhibited	-	0%	30 - 35°C.	18-72 hours

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UALITY CONTROL SPECIFICATIONS

Appearance of Powder : Light yellow to pink colour, homogeneous free flowing powder
Appearance of prepared medium : Red colour, clear to slightly opalescent gel
pH (at 25°C) : 7.4± 0.2

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.

This product is for research use only.

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