

AMSA001

Mannitol Salt Agar

For selective isolation of pathogenic Staphylococci species.

Composition	Ingredients Gms / Litre
Peptone from casein	5.000
Enzymatic digest of animal tissue	5.000
Beaf extract	1.000
Sodium chloride	75.000
D (-)Mannitol	10.000
Phenol red	0.025
Agar -Agar	12.000

Appearance:

Red with purplish tinge colour Sterile Mannitol Salt Agar in 90 mm Petri Plates

pH (at 25°C):

7.20 to 7.60

Principle:

Mannitol Salt Agar is used for the selective isolation and enumeration of Staphylococci species. Chapman formulated Mannitol Salt Agar to isolate staphylococci by inhibiting growth of most other bacteria with a high salt concentration. 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. Lipase activity of Staphylococcus aureus can be detected by supplementing the medium with egg yolk emulsion. Sodium chloride in high concentration serves as an inhibitory agent against bacteria other than Staphylococci. Beef extract gives essential growth factors and trace nutrients to the growing bacteria. Phenol Red is the pH indicator. Agar acts as the solidifying agent. Inoculate Mannitol Salt Agar (TM 206) medium with a small number (not more than 100 cfu) of the appropriate microorganism and incubate at 35 - 37°C for 18 - 48 hours. Recovery rate is considered as 100% by sub culturing on Soyabean Casein Digest Agar (TM 335) at 35 ± 2°C for 18 - 48 hours. Agar is a solidifying agent.

Quantity of Medium

30ml of medium in 90mm plates

Dose of Gamma irradiation

12to 17 KGy

Cultural Response

Cultural characteristics observed by using standard ATCC cultures after an incubation 24 hours at 30-35°C and recovery should be greater than 70%.

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Sterility Test:

Passes release criteria.

Shelf Life and Storage Conditions:

Use before expiry date on the label and store below 25°C.

Reference Pharmacopoeia:

USP/EP / BP / JP / IP

