Mannitol Salt Agar

Catalog : HB4128-2-5K

Mannitol Salt Agar is used for the selective isolation and enumeration of staphylococci from clinical and nonclinical materials.

Approximate Formula:

Ingredients	gm/liter
Pancreatic digest of casein	5.0
Peptic Digest of Animal Tissue	5.0
Beef Extract	1.0
D- Mannitol	10.0
Sodium Chloride	75.0
Phenol Red	0.025
Agar	15.0

Final pH7.4±0.2 at 25℃

*Adjusted and/or supplemented as required to meet performance criteria.

Directions:

Suspend 111.0g of the medium in one liter of deionized or distilled water. Mix well and heat with frequent agitation. Boil for 1 minute. Dispense into tubes or flasks. Sterilize in the autoclave at 121℃(15 lbs.) for 15 minutes.

Principle and Interpretation:

Mannitol Salt Agar is used for the isolation of presumptive pathogenic staphylococci.

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. The 7.5% concentration of sodium chloride results in the partial or complete inhibition of bacterial organisms other than staphylococci. Mannitol fermentation, as indicated by a change in the phenol red indicator, aids in the differentiation of staphylococcal species. Agar is a solidifying agent.

Appearance:

Dehydrated medium is a free-flowing Light red powder. The prepared medium is a kind of Red transparent gel.

Precautions:

This medium is for laboratory use only. Dried medium which is past shelf life, caking or color variation cannot be used.

Storage conditions and Shelf life:

Mannitol Salt Agar must be stored tightly capped in the original container at 5-30°C. The dehydrated medium has a shelf life of 5 years from date of manufacturing. Prepared medium may be stored, out of direct light at 2-8°C.

Quality control:

Cultural characteristics observed after an incubation at 36±1℃ for 24-48 hours.

Microorganism	Strains Number	Inoculum (CFU)	Growth	Recovery	Remarks
Staphylococcus Aureus	ATCC 6538	10-100	luxuriant	≥70%	Yellow colonies with yellow halo
Staphylococcus epidermidis	CMCC(B)26069	10-100	luxuriant	≥70%	Red colonies
Escherichia coli	ATCC 25922	/	inhibited	/	/
Staphylococcus Aureus	ATCC 25923	10-100	luxuriant	≥70%	Yellow colonies with yellow halo
Salmonella typhimurium	ATCC 14028	/	inhibited	/	/

Reference:

1. United States Pharmacopeial Convention, Inc. 2008. The United States pharmacopeia 31/The national formulary 26, Supp. 1, 8-1-08, online. United States Pharmacopeial Convention, Inc., Rockville, Md.
2. European Directorate for the Quality of Medicines and Healthcare. 2008.The European pharmacopoeia, 6th ed., Supp. 1, 4-1-08, online. European Directorate for the Quality of Medicines and Healthcare, Council of Europe, 226 Avenue de Colmar BP907-, F-67029 Strasbourg Cedex 1, France.

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