

Mannitol Salt Agar

Use and description:

The medium is used for the selective isolation, cultivation and enumeration of staphylococci from clinical and nonclinical specimens. *Staphylococcus aureus* ferment mannitol and acid production is indicated by the phenol red as medium turns yellow. Non-pathogenic staphylococci produce red colonies. The high sodium chloride concentration inhibits the growth of most bacteria except staphylococci. With addition of sterile Egg Yolk Emulsion the lipase activity of staphylococci can be detected.

Composition per liter:

Agar.....	15.000 g
Phenol red.....	0.025 g
D-mannitol.....	10.000 g
Sodium chloride.....	75.000 g
Peptones.....	11.000 g
Meat extract.....	1.000 g

Final pH of the ready to use medium: 7.4 ± 0.2

Medium preparation:

Add 112 grams of dehydrated culture medium to 1 liter of distilled water. Heat with repeated stirring and boil for one minute to dissolve completely. Distribute and autoclave for 15 min at 121°C.

Quality specifications:

Dehydrated medium: homogeneous, fine pinkish, powder.

Ready to use medium: red, slightly opalescent agar.

Microbiological response:

Organism	Result
<i>Staphylococcus aureus</i> ATCC 25923	Colonies surrounded by a yellow halo
<i>Staphylococcus epidermidis</i> ATCC 12228	Colonies surrounded by a red zone
<i>Escherichia coli</i> ATCC 25922	Inhibited
<i>Proteus mirabilis</i> ATCC 29906	Inhibited

Storage:

Dehydrated medium should be stored between 10 to 25°C. Once opened, place the container in a dark, dry place. The dehydrated medium should not be used if there is any lump or the color has changed from the original.