

MANNITOL SALT AGAR

INSTRUCTION FOR USE READY-TO-USE PLATED MEDIA

For professional use

Intended use: Mannitol Salt Agar is used for the selective isolation *Staphylococcus* spp..

Ref .	Type of medium:	Packaging:
201050	ready-to-use medium-plate	1x20 pcs (90 mm)

1. Principle: enzymatic digest of casein and enzymatic digest of animal tissue and beef extract provide the nitrogen, vitamins, and carbon in Mannitol Salt Agar. D-mannitol is the carbohydrate source. In high concentrations, sodium chloride inhibits most bacteria other than staphylococci. Phenol red is the pH indicator. Agar is the solidifying agent. 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. Typical pathogenic staphylococci ferment mannitol and form yellow colonies with yellow zones. Typical non-pathogenic staphylococci do not ferment mannitol and form pink colonies

2. Formula/Liter:

Enzymatic digest of casein	5.0 g
Enzymatic digest of animal tissue	5.0 g
Beef extract	1.0 g
D-mannitol	10.0 g
Sodium chloride	75.0 g
Phenol red	0.025 g
Agar	15.0 g

3. pH: 7.4 ± 0.2 at 25°C.

4. Appearance:

Prepared Appearance: prepared medium is clear and pink.

5. Sample: all samples in which a *Staphylococcus* spp. are expected.

6. Test procedure: if the agar plate has been refrigerated, allow to warm to room temperature before inoculation. Streak the specimen for isolation onto the surface of the medium. If the specimen is cultured from a swab, roll the swab gently over a small area of the surface at the edge, then streak from this area with a loop. Incubate plates aerobically at $36 \pm 2^\circ\text{C}$ for 24-48 hours in an inverted position.

7. Results: after incubation time observe growth of characteristic microorganisms. Coagulase-positive *Staphylococcus* spp. will produce luxuriant growth of yellow colonies and may have a yellow halo around the colony. Coagulase-negative *Staphylococcus* spp. will produce small colourless to pink colonies with no colour change to the medium. Identification of the microorganism should be confirmed by biochemical test.

8. Quality control: perform quality control testing for both negative and positive reaction by inoculating a representative sample of plates with pure cultures of stable control organisms that produce known, desired reactions. Graso uses following strains for performing quality control. Please note that other strains can be used in accordance with applicable local, state and laboratory's standard Quality Control.

Microorganism:	Appearance of colony
<i>Staphylococcus aureus</i> ATCC 25923	yellow with yellow zone around colonies
<i>Staphylococcus epidermidis</i> ATCC 12228	pink without change of zone around colonies
<i>Enterococcus faecalis</i> ATCC 29212	no growth

9. Precautions: due to nutritional variation, some strains may be encountered that grow poorly or fail to grow on this medium

10. Disposal of waste: after use, all plates and any other contaminated materials must be sterilized or disposed of in line with appropriate internal procedures and in accordance with local legislations. Plates can be destroyed by autoclaving at 121°C for at least 20 minutes.

11. Storage: on receipt, store plates at 2-12°C away from direct sun light in an inverted position. Do not overload a refrigerator with excessive amounts of plates to avoid water condensation on the lids during storage. Plates must not come into direct contact with the inner walls of refrigerator, as the media may freeze, invalidating the tests. Prepared plates, stored in their original sleeve wrapping at 2-12°C until just prior to use, may be inoculated up to the expiration date and incubated for recommended incubation times. Plates from opened stacks of 10 plates should be used for two weeks when stored in a clean area at 2 to 12° C. Do not use plates if they show evidence of microbial contamination, discoloration, drying, cracking or others signs of deterioration. Allow the medium to warm to the room temperature before inoculation.

All microbiological media containing dyes or light-sensitive components should be protected from light and stored in the dark.

Note that shelf life of the growth media changes after the addition of supplements. Complete media containing protein supplement tend to degrade faster than basal media alone.

13. Shelf life: 3 months.

14. Required supplements not supplied together with medium base: not applicable.

15. References: available on request.



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