LICKSON®

CE

TECHNICAL SHEET

MANNITOL SALT AGAR

IVD in Class A, EU Reg. 2017/746
For in vitro diagnostic use **IVD**

Mannitol Salt Agar is used for the selective isolation of staphylococci and the detection of Staphylococcus aureus from clinical specimens.

DESCRIPTION

Mannitol Salt Agar is a formulation devised by Chapman for the differentiation of coagulase positive staphylococci (e.g., Staphylococcus aureus) from coagulase negative staphylococci. Mannitol Salt Agar is used for isolating staphylococci from clinical specimens, from cosmetics, and in microbial limit tests.
Meets United States Pharmacopeia (USP), European Pharmacopoeia (EP) and Japanese Pharmacopoeia (JP) performance specifications, where applicable

PRINCIPLE

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.

COMPOSITION	g/L
Beef Extract	1.0
Pancreatic Digest of Casein	5.0
Peptic Digest of Animal Tissue	5.0
Sodium Chloride	75.0
D-Mannitol	10.0
Phenol Red	0.025
Agar	15.0

Final pH 7,4 ± 0,2 at 25°C

WARNING AND PRECAUTIONS

For in vitro diagnostic use.
Observe the precautions normally taken when handling laboratory reagents.
Dehydrated medium: HIGHLY HYGROSCOPIC. During the handling, wear dust protection mask. Avoid the eye contact. Do not use beyond the expiration date or if the product shows signs of deterioration, an altered color or has compacted.
Prepared Medium: The product does not contain hazardous substances in concentrations exceeding the limits set by current legislation and therefore is not classified as dangerous.
Safety Data Sheet is available on request for professional users.
All wast must be disposed of according to local directives.

STORAGE AND STABILITY	
Dehydrated medium:	10-30°C
Prepared medium:	10-25°C

MANNITOL SALT AGAR is stable until the expiration date indicated on the label under the recommended storage conditions.

PREPARATION

Dehydrated medium: Suspend 111 g of the powder in 1 liter of distilled or deionized water. Mix thoroughly. Heat with frequent agitation and boil for 1 minute to completely dissolve the powder. Autoclave at 121°C for 15 minutes.
Prepared medium (bottles): Melt the content of the bottle in a water bath at 100°C (loosing the cap partially removed) until completely dissolved. Then screw the cap and check the homogeneity of the dissolved medium, if it is the case turning the bottle upside down. Cool at 45-50°C, mix well avoiding foam formation and aseptically distribute into Petri dishes.
Prepared medium (plates): ready to use.

SAMPLE COLLECTION

For clinical specimens, refer to laboratory procedures for details on specimen collection and handling.
For cosmetic and pharmaceutical samples, follow appropriate standard methods for details on sample collection and preparation according to sample type and geographic location.

PROCEDURE

Streak the specimen as soon as possible after it is received in the laboratory. The streak plate is used primarily to isolate pure cultures from specimens containing mixed flora. Alternatively, if material is being cultured directly from a swab, roll the swab over a small area of the surface at the edge and streak from this inoculated area. A nonselective medium such as Columbia Agar with 5% Sheep Blood must also be inoculated to provide an indication of other organisms present in the specimen. Incubate plates at 24 to 48 h at 35 ± 2°C in an aerobic atmosphere.

RESULTS

After the recommended incubation period, the plates should show isolated colonies in streaked areas and confluent growth in areas of heavy inoculation. Coagulase-positive staphylococci produce growth of yellow colonies with yellow zones. Coagulase negative staphylococci produce small red colonies with no color change to the medium. Micrococcus produce large, white to orange colonies, with no color change to the medium. Most other bacteria will be inhibited.

QUALITY CONTROL

Dehydrated medium: free-flowing, homogeneous, beige-pink.
Prepared medium: slightly opalescent, pinkish-red.

Typical response after incubation at 35±2°C for 24-48 hours, in aerobiosis

MICROORGANISM	GROWTH/COLONIES
Staphylococcus aureus ATCC® 25923	Good Yellow colonies with yellow zone
Staphylococcus epidermidis ATCC® 12228	Good Red colonies
Escherichia coli ATCC® 25922	Inhibited

REFERENCES

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8. Forbes, Sahm and Weissfeld. 2007. Bailey and Scott's diagnostic microbiology, 12th ed. Mosby, Inc., St. Louis, Mo.
9. MacFaddin. 2000. Biochemical tests for identification of medical bacteria, 3rd ed. Lippincott Williams & Wilkins, Baltimore, Md.
10. Winn, Koneman, Allen, Janda, Procop, Schreckenberger and Woods (eds.). 2005. Koneman's Color atlas and textbook of diagnostic microbiology, 6th ed. Lippincott Williams & Wilkins, Baltimore, Md.
11. Isenberg and Garcia (ed.). 2004 (update, 2007). Clinical microbiology procedures handbook, 2nd ed. American Society for Microbiology, Washington, D.C

PRESENTATION	Packaging	REF.
Dehydrated medium: MANNITOL SALT AGAR	**500 g (4.5 L)**	**10105**
Prepared medium: MANNITOL SALT AGAR	**6 x 100 mL bottles**	**63323**
	6 x 200 mL bottles	**63223**
	12 x 200 mL bottles	**63223/12**
	20 pcs (60 mm ready-to-use plates)	**1814407/20**
	20 pcs (90 mm ready-to-use plates)	**1804306/20**

SYMBOLS

Read the instructions
Biological hazard
CE Mark (product complies with the requirements of Regulation (EU) 746/2017)
Temperature limitation
Use by
For in vitro diagnostic use
Manufacturer