

63567 Mannitol Salt Phenol Red Agar

Selective agar for the detection of pathogenic staphylococci in milk, food and other material acc. to Chapman (modified). It is recommended in U.S.P. for use in the performance of microbial limit test.

Composition:

Ingredients	Grams/Litre
Meat extract	1.0
Casein peptone	5.0
Meat peptone	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.	

Store prepared media below 8°C, protected from direct light. Store dehydrated powder, in a dry place, in tightly-sealed containers at 2-25°C.

Directions:

Dissolve 111 g in 1 litre distilled water. Sterilize by autoclaving at 121°C for 15 minutes. Pour plates.

Principle and Interpretation:

Meat extract, Casein peptone and Meat peptone acts as source of carbon, nitrogen, minerals, vitamins and other essential growth nutrients. Mannitol is the fermentable carbohydrate. Phenol red is a pH indicator and change the color from red to yellow if mannitol is fermented and acid products are produced. Typical pathogenic staphylococci (coagulase-positive staphylococci) ferment mannitol and form yellow colonies with yellow zones around the colonies. Typical non-pathogenic staphylococci do not ferment mannitol and form red colonies. Sodium Chloride, in high concentration, inhibits most bacteria other than staphylococci.

Cultural characteristics after 18-48 hours at 35-37°C.

Organisms (ATCC)	Growth	Color of colonies
<i>Staphylococcus aureus</i> (25923)	+++	yellow
<i>Staphylococcus epidermis</i> (12228)	++	red
<i>Escherichia coli</i> (25922)	-	-



References:

1. G.H. Chapman, The significance of sodium chloride in studies of staphylococci. J. Bacteriol. 50, 201 (1945)
2. R. Marshall (Ed.), Standards Method for the Examination of of Dairy Products, 16th ed., APHA Washington D.C. (1992)
3. W.E. Kloos, T. L. Bannerman, Staphylococcus and Micrococcus. In P.R. Murray, E.J. Baron, M.A. Pfaller, F.C. Tenover, R.H. Tenover (ed.), Manual of clinical microbiology, 6th ed. American Society for Microbiology, Washington, D.C. (1995)
4. A.D. Hitchins, T.T. Tran, J.E. McCarron, Microbiology methods for cosmetics, p. 23.01-23.12. In Bacteriological analytical manual, 8th ed. AOAC International, Gaithersburg, MD (1995)
5. United States Pharmacopeial Convention, The United States pharmacopeia, 23rd ed. The United States Pharmacopeial Convention. Rockville, MD. (1995)

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

The vibrant M, Millipore, and Sigma-Aldrich are trademarks of Merck KGaA, Darmstadt, Germany or its affiliates. Detailed information on trademarks is available via publicly accessible resources.
© 2018 Merck KGaA, Darmstadt, Germany and/or its affiliates. All Rights Reserved.

The life science business of Merck KGaA, Darmstadt, Germany operates as MilliporeSigma in the US and Canada.

