HiCrome Staph Agar Base, Modified

M1837

HiCrome Staph Agar Base, Modified is a selective medium recommended for the isolation and enumeration of *Staphylococcus aureus* .

Composition**

Ingredients	Gms / Litre
Peptone special	23.000
Sodium pyruvate	4.000
Sodium chloride	40.000
Lithium chloride	5.000
Chromogenic mixture	5.300
Agar	15.000
Final pH (at 25°C)	7.2±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 46.15 grams in 500 ml distilled water. Heat to boiling to dissolve the medium completely. DO NOT AUTOCLAVE.. Cool to 45-50°C and aseptically add rehydrated contents of 1 vial of Polymyxin B Selective supplement (FD003). Mix well and pour into sterile Petri plates.

Warning : Lithium Chloride is harmful. Avoid all bodily contact and inhalation of vapours. On contact with skin wash with plenty of water immediately .

Principle And Interpretation

Staphylococci are widespread in nature, though they are mainly found living on the skin, skin glands and mucous membranes of mammals and birds. Humans and animals are the primary source of this organism. Because of its widespread nature it is easily transferred to food and a cause of food poisoning if not handled properly.(1)

The coagulase positive species *S.aureus* is well documented as a human opportunistic pathogen. *Staphylococcus* species are a major cause of food poisoning and produces a wide variety of enterotoxins, thus causing various types of disease symptoms. The ability to clot plasma continues to be the most widely used and accepted criterion for the identification of pathogenic staphylococci associated with acute infections (2).

This medium is a selective chromogenic medium recommended for the isolation and enumeration of coagulase positive staphylococci in foods within 24 hours. This medium has an advantage over the traditional media which requires 48 hours Peptones in the medium supplies the essential nitrogeneous compounds required for the growth. The chromogenic mixture incorporated in the medium is specifically cleaved by *Staphylococcus aureus* to give bluish green coloured colonies which are clearly visible against the opaque background. Sodium pyruvate enhances the growth of *Staphylococcus* species. Sodium chloride in the medium helps to maintain the osmotic equilibrium of the medium. High concentration of sodium chloride also helps in inhibiting the accompanying microflora. Lithium chloride inhibits most of the contaminating microflora. Addition of Polymyxin B Sulphate (FD003) helps to restrict growth of gram-negative bacteria such as *Escherichia coli* and *Pseudomonas aeruginosa* .

Quality Control

Appearance
Cream to yellow homogeneous free flowing powder

Gelling
Firm, comparable with 1.5% Agar gel

Colour and Clarity of prepared medium
Off white coloured opaque gel forms in Petri plates

Reaction
Reaction of 9.23 % w/v aqueous solution 25°C. pH : 7.2±0.2

Cultural Response
M1837: Cultural characteristics observed with added Polymyxin B Selective Supplement (FD003) after an incubation at 35-37°C for 24 hours.

Organism	Inoculum (CFU)	Growth	Observed Lot value (CFU)	Recovery	Colour of colony
Cultural Response					
Staphylococcus aureus ATCC 25923	50 -100	luxuriant	25 -100	>=50 %	blue colonies
Staphylococcus aureus ATCC 6538	50 -100	luxuriant	25 -100	>=50 %	blue colonies
Staphylococcus saprophyticus ATCC 15305	50 -100	luxuriant	25 -100	>=50 %	blue colonies
Bacillus cereus ATCC 10876	50 -100	none- poor	0 -10	<=10 %	
Staphylococcus epidermidis ATCC 12228	50 -100	none- poor	0 -10	<=10 %	
Enterococcus faecalis ATCC 29212	50 -100	none- poor	0 -10	<=10 %	
Escherichia coli ATCC 25922	>=10^3	inhibited	0	0 %	

Storage and Shelf Life
Store dehydrated powder and prepared medium at 2-8°C. Use before expiry period on the label.

Reference
1.Murray P. R., Baron J. H., Pfaller M. A., Jorgensen J. H. and Yolken R. H., (Ed.), 2003, Manual of Clinical Microbiology, 8th Ed., American Society for Microbiology, Washington, D.C.
2.Victor , Lachica F, Weiss KF , Deibel RH (1969) Appl Microbiol 18 126-27

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