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05662 HiCrome™ Aureus Agar Base (Aureus Agar Base HiCrome, Staphylococcus aureus Agar HiCrome)

HiCrome Aureus Agar Base is recommended for the isolation and enumeration of coagulase positive *Staphylococcus aureus* from environment samples. Coagulase positive *S. aureus* gives brown black colonies where as *S. epidermidis* gives yellow- slightly brownish colonies.

Composition:

Ingredients	Grams/Litre
Casein enzymic hydrolysate	12.0
Yeast extract	5.0
Pancreatic digest of of gelatin	3.0
Beef extract	6.0
Sodium pyruvate	10.0
Lithium chloride	5.0
Chromogenic mixture	2.1
Agar	20.0

Final pH 7.0 +/-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 :
Suspend 63.1 g in 950 ml distilled water. Boil to dissolve the medium completely. Sterilise by autoclaving at 121°C for 15 min. Cool to 50 °C and aseptically add 50 ml concentrated Egg Yolk Tellurite Emulsion (Fluka 75208). Mix well and pour into sterile petri plates. Inoculate the specimen and streak and incubate at 35°C for 24-48 hours.
Warning: Lithium chloride is harmful. Avoid bodily contact and inhalation of vapours. On contact with skin, wash with plenty of water immediately.

Principle and Interpretation:
Casein enzymic hydrolysate, Pancreatic digest of of gelatine, Beef extract and Yeast extract provide nitrogenous substances and other essential growth nutrients. Sodium pyruvate protects injured cells, helps recovery and enhances growth of *Staphylococci*. Lithium chloride and Potassium tellurite (present in the supplement) inhibit most of the contaminating microflora expect *Staphylococcus aureus*. With the addition of egg yolk the medium becomes yellow, opaque. Proteolytic bacteria produce a clear zone around colony. Coagulase positive *S. aureus* gives brown-black colonies with clear zone around the colony where as *S. epidermidis* gives yellow – slightly brownish colonies. Other organism give either colourless colonies or bluish or coloured colonies due to presence of chromogenic substrates (cleaved by phosphatidylinositol phospholipase). *Listeria monocytogenes* colonies are bluish in colour whereas *Bacillus*, *E. coli* and *Micrococcus* give colourless colonies.

Cultural characteristics after 24-48 hours at 35°C.

Organisms (ATCC)	Growth	Colour of Colony	Lecithinase
Staphylococcus aureus (25923)	+++	brown-black	+
Stapylococcus epidermidis (12228)	+/-	yellow – slightly brownish	-
Listeria monocytogenes (19112)	++	bluish	-
Micrococcus luteus (10240)	+/-	colourless	-
Bacillus subtilis (6633)	+/-	colourless	-
Escherichia coli (25922)	+/-	colourless	-

References:
1. A.C. Baird Parker, An improved diagnostic and selective medium for isolating coagulase-positive staphylococci. J. Appl. Bacteriol. 25, 12 (1962)
2. M. Manafi, New developments in chromogenic and fluorogenic culture media, Int. J. of Food Microbiol., 60, 205-218 (2000)