

HiCrome™ Aureus Agar Base

Recommended for isolation and identification of *Staphylococci* from environmental samples.

M1468

Composition **

Ingredients	Grams/Litre
Tryptone	12.00
Gelatin peptone	3.00
HM peptone B#	6.00
Yeast extract	5.00
Sodium pyruvate	10.00
Lithium chloride	5.00
Chromogenic mixture	2.10
Agar	20.00

Final pH (at 25°C) 7.0 ± 0.2

** Formula adjusted, standardized to suit performance parameters

#Equivalent to Beef extract

Directions

Suspend 63.1 grams in 950 ml distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C and aseptically add 50 ml concentrated Egg Yolk Tellurite Emulsion (FD046). Mix well and pour into sterile Petri plates.

Principle and Interpretation

HiCrome™ Aureus Agar Base is recommended for isolation and enumeration of coagulase positive *Staphylococcus aureus* from environment samples. Coagulase positive *S. aureus* gives brown black colonies with clear zone around the colony whereas *S. epidermidis* gives slightly brownish colonies. Other organisms give either colourless colonies or bluish coloured colonies due to the presence of chromogen. *Listeria monocytogenes* colonies are bluish in colour whereas *Bacillus*, *E. coli* and *Micrococcus* give colourless colonies.

Tryptone, gelatin peptone, HM peptone B and yeast extract provide nitrogenous, carbonaceous compounds, long chain amino acids, vitamin B complex and other essential growth nutrients. Sodium pyruvate protects injured cells, helps recovery and enhances growth of *Staphylococcus*. Lithium chloride and potassium tellurite inhibit most of the contaminating microflora except *Staphylococcus aureus* (1). Due to addition of egg yolk, proteolytic bacteria produce a clear zone around colony (1).

Type of specimen

Clinical samples, Environmental samples

Specimen Collection and Handling

For clinical samples, follow appropriate techniques for sample collection, processing as per guidelines and local standards (2, 3). After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

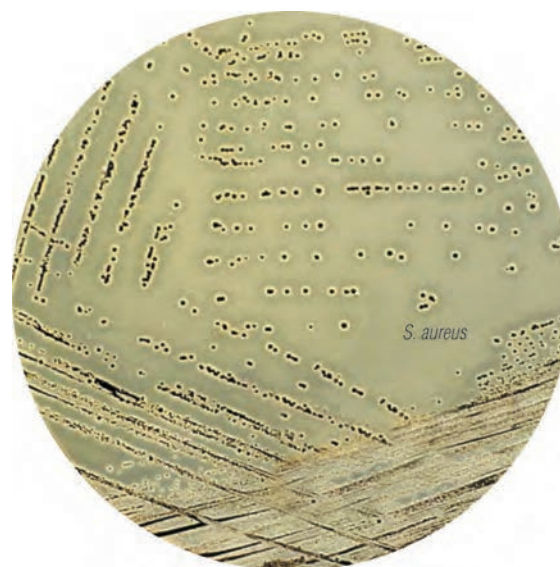
In Vitro diagnostic use only. Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets

Limitations

1. Due to variable nutritional requirements, some strains may show poor growth on this medium.
2. Slight colour variation may be observed depending upon the utilization of the substrate by the organism.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the recommended temperature.



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Quality Control

- Appearance of Powder** : Cream to yellow homogeneous free flowing powder
- Gelling** : Firm, comparable with 2.0 % Agar gel.
- Colour and Clarity of prepared medium** : Yellow coloured opaque gel forms in Petri plates.
- Reaction** : Reaction of 6.31% w/v aqueous solution at 25°C. pH:7.0±0.2
- Cultural Response** : Cultural characteristics observed with added Egg Yolk Tellurite Emulsion (FD046) after an incubation at 35-37°C for 24-48 hours.

Organism (ATCC)	Inoculum (CFU)	Growth	Recovery	Colour of colony	Lecithinase activity
<i>Bacillus subtilis</i> subsp. <i>spizizenii</i> (6633) (00003*)	50-100	none to poor	≤10%	colourless	Negative reaction
<i>Escherichia coli</i> (25922) (00013*)	50-100	none to poor	≤10%	colourless	Negative reaction
<i>Listeria monocytogenes</i> (19112)	50-100	fair - good	30-40%	bluish	Negative reaction
<i>Micrococcus luteus</i> (10240)	50-100	none to poor	≤10%	colourless	Negative reaction
<i>Staphylococcus aureus</i> subsp <i>aureus</i> (25923) (00034*)	50-100	good-luxuriant	≥50%	brown-black halo or clear zone around the colony	Positive reaction
<i>Staphylococcus epidermidis</i> (12228) (00036*)	50-100	none to poor	≤10%	yellow-slight brownish	Negative reaction

Key : * : Corresponds to WDCM number

Storage and Shelf-life

Store between 2-8°C in a tightly closed container and the prepared medium at 2-8°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use. Use before expiry date on the label.

Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (2, 3).

References

1. Baird Parker, Ac (1962) J appl. Bact., 25:12.
2. Isenberg, H.D. Clinical Microbiology Procedures Handbook. 2nd Edition.
3. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock, D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1