



HiCrome™ Aureus Agar Base

M1468

Intended use

HiCrome™ Aureus Agar Base is recommended for isolation and identification of Staphylococci from environmental samples.

Composition**

Ingredients	Gms / Litre
Tryptone	12.000
Gelatin peptone	3.000
HM Peptone B#	6.000
Yeast extract	5.000
Sodium pyruvate	10.000
Lithium chloride	5.000
Chromogenic mixture	2.100
Agar	20.000
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 15lbs 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 substances 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

Food samples ;

Specimen Collection and Handling

For food and dairy samples, follow appropriate techniques for sample collection and processing as per guidelines (2,3,4). After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

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 specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations

1. Though the medium is recommended for detection of coagulase positive *Staphylococcus aureus*, other bacteria may grow.
2. Some strains may show poor growth due to nutritional variations.

Performance and Evaluation

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

Quality Control

Appearance

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.

pH

6.80-7.20

Cultural Response

Cultural characteristics observed with added Egg Yolk Tellurite Emulsion (FD046) after an incubation at 35-37°C for 24-48 hours.

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

Key : *Corresponding WDCM numbers.

Storage and Shelf Life

Store dehydrated powder and the prepared medium at 2-8° C in tightly closed container . 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 (5,6).

Reference

1. Baird Parker, Ac (1962) J appl. Bact., 25:12.
2. American Public Health Association, Standard Methods for the Examination of Dairy Products, 1978, 14th Ed., Washington D.C.
3. Downes F. P. and Ito K., (Ed.), 2001, Compendium of Methods for the Microbiological Examination of Foods, 4th Ed., American Public Health Association, Washington, D.C.
4. Wehr H. M. and Frank J. H., 2004, Standard Methods for the Microbiological Examination of Dairy Products, 17th Ed., APHA Inc., Washington, D.C.

5. Isenberg, H.D. Clinical Microbiology Procedures Handbook. 2nd Edition.

6. 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.

Disclaimer :

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