HiCrome™ Staph Agar Base, Modified

**Intended Use**
Recommended as a selective medium recommended for the isolation and enumeration of *Staphylococcus aureus*.

**Composition**

**Ingredients**

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Gms / Litre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peptone special</td>
<td>23.000</td>
</tr>
<tr>
<td>Sodium pyruvate</td>
<td>4.000</td>
</tr>
<tr>
<td>Sodium chloride</td>
<td>40.000</td>
</tr>
<tr>
<td>Lithium chloride</td>
<td>5.000</td>
</tr>
<tr>
<td>Chromogenic mixture</td>
<td>5.300</td>
</tr>
<tr>
<td>Agar</td>
<td>15.000</td>
</tr>
<tr>
<td>Final pH (at 25°C)</td>
<td>7.2±0.2</td>
</tr>
</tbody>
</table>

*Formula adjusted, standardized to suit performance parameters*

**Directions**
Suspend 46.15 grams in 500 ml purified / 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.

**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. 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.

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 nitrogenous 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*.

**Type of specimen**
Clinical samples - pus

**Specimen Collection and Handling**
For clinical samples follow appropriate techniques for handling specimens as per established guidelines (1,2). After use, contaminated materials must be sterilized by autoclaving before discarding.

*Please refer disclaimer Overleaf.*
**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.

**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**
Cultural characteristics observed with added Polymyxin B Selective Supplement (FD003) after an incubation at 35-37°C for 24-48 hours.

<table>
<thead>
<tr>
<th>Organism</th>
<th>Inoculum (CFU)</th>
<th>Growth</th>
<th>Observed Lot value (CFU)</th>
<th>Recovery</th>
<th>Colour of colony</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Staphylococcus aureus</em> subsp. aureus ATCC 25923 (00034*)</td>
<td>50 -100</td>
<td>luxuriant</td>
<td>25 -100</td>
<td>&gt;=50%</td>
<td>greenish blue to blue</td>
</tr>
<tr>
<td><em>Staphylococcus aureus</em> subsp. aureus ATCC 6538 (00032*)</td>
<td>50 -100</td>
<td>luxuriant</td>
<td>25 -100</td>
<td>&gt;=50%</td>
<td>greenish blue to blue</td>
</tr>
<tr>
<td><em>Staphylococcus saprophyticus</em> ATCC 15305 (00159*)</td>
<td>50 -100</td>
<td>luxuriant</td>
<td>25 -100</td>
<td>&gt;=50%</td>
<td>greenish blue to blue</td>
</tr>
<tr>
<td><em>Bacillus cereus</em> ATCC 10876 50 -100</td>
<td>none- poor</td>
<td>0 -10</td>
<td>&lt;=10%</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Staphylococcus epidermidis</em> ATCC 12228 (00036*)</td>
<td>50 -100</td>
<td>none- poor</td>
<td>0 -10</td>
<td>&lt;=10%</td>
<td></td>
</tr>
<tr>
<td><em>Enterococcus faecalis</em> ATCC 50 -100</td>
<td>none- poor</td>
<td>0 -10</td>
<td>&lt;=10%</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Escherichia coli</em> ATCC 25922 (00013*)</td>
<td>&gt;=10⁴</td>
<td>inhibited</td>
<td>0</td>
<td>0%</td>
<td></td>
</tr>
</tbody>
</table>

Key : (*) Corresponding WDCM numbers.

**Storage and Shelf Life**
Store the dehydrated powder and the prepared medium in a tightly closed container and at 2-8°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle inorder 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 (1,2).

Please refer disclaimer Overleaf.
Reference


In vitro diagnostic medical device

CE Marking

Storage temperature

Do not use if package is damaged

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