HiCrome Improved Salmonella HiCynth™ Agar

HiCrome Improved Salmonella HiCynth™ Agar is used as an improved selective and differential medium for *Salmonella* species.

**Composition**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Gms / Litre</th>
</tr>
</thead>
<tbody>
<tr>
<td>HiCynth™ Peptone No.3</td>
<td>8.000</td>
</tr>
<tr>
<td>HiCynth™ Peptone No.5</td>
<td>2.000</td>
</tr>
<tr>
<td>Synthetic detergent</td>
<td>1.000</td>
</tr>
<tr>
<td>Chromogenic mixture</td>
<td>3.250</td>
</tr>
<tr>
<td>Agar</td>
<td>12.000</td>
</tr>
</tbody>
</table>

**Final pH (at 25°C)** 7.3±0.2

**Directions**

Suspend 26.25 grams in 1000 ml distilled water. Gently heat to boiling to dissolve the medium completely. DO NOT AUTOCLAVE. Cool to 45-50°C. Mix well and pour into sterile Petri plates.

**Principle And Interpretation**

*Salmonella* species have been isolated from humans and almost all animals throughout the world. They cause many types of infections from mild, self-limiting gastroenteritis to life threatening typhoid fever. *Salmonella* Typhi and *Salmonella* Paratyphi A & B cause gastroenteritis, bacteremia and enteric fever, *Salmonella* Choleraesuis causes gastroenteritis and enteric fever, especially in children. *Salmonella Typhimurium* is the most frequently isolated serotype of *Salmonella* (1).

HiCrome™ Improved Salmonella Agar is a modification of the original formulation of Rambach (2) and is used for the differentiation of *Salmonella* species from other enteric bacteria. Rambach formulation differentiates *Salmonella* based on propylene glycol utilization and presence of a chromogenic indicator. However, HiCrome™ Improved Salmonella HiCynth™ Agar uses only a chromogenic mixture which contains chromogenic substrate and indicator dye for identification and differentiation of *Salmonella* species. It is prepared by completely replacing animal based peptone and vegetable peptone with chemically defined peptone to avoid BSE/TSE risks associated with animal peptones. HiCynth™ Peptone No.3 and HiCynth™ Peptone No.5 provides nitrogenous, carbonaceous compounds, long chain amino acids and other essential growth nutrients. *Escherichia coli* and *Salmonella* are easily distinguishable due to their colony characteristics.

All *Salmonella* species isolated from food or clinical sample exhibit pink to red colonies including *Salmonella Typhi*. *E. coli* exhibits a characteristic blue to purple colour, due to presence of the enzyme specific for chromogenic substrate. Synthetic detergent inhibits gram-positive organisms.

**Quality Control**

**Appearance**
Light yellow to pink homogeneous free flowing powder

**Gelling**
Firm, comparable with 1.2% Agar gel.

**Colour and Clarity of prepared medium**
Reddish pink coloured, slightly opalescent gel forms in Petri plates

**Reaction**
Reaction of 2.62% w/v aqueous solution at 25°C. pH : 7.3±0.2

**pH**
7.10-7.50

**Cultural Response**
Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.
Organism | Inoculum (CFU) | Growth | Recovery | Colour of Colony |
--- | --- | --- | --- | --- |
Bacillus subtilis ATCC 6633 | >=10⁹ | inhibited | 0% | |
Escherichia coli ATCC 25922 | 50-100 | luxuriant | >=50% | green to blue |
Proteus vulgaris ATCC 13315 | 50-100 | good | 40-50% | light brown |
Salmonella Typhimurium ATCC 14028 | 50-100 | luxuriant | >=50% | pink to red |
Salmonella Enteritidis ATCC 50-100 13076 | 50-100 | luxuriant | >=50% | pink to red |
Salmonella Typhi ATCC 6539 | 50-100 | good-luxuriant | >=50% | light pink |
Staphylococcus aureus ATCC 25923 | >=10⁹ | inhibited | 0% | |

Storage and Shelf Life

Store dehydrated powder in tightly closed container and prepared medium at 2-8°C. Use before expiry period on the label.

Reference


Disclaimer:

User must ensure suitability of the product(s) in their application prior to use. Products conform solely to the information contained in this and other related HiMedia™ publications. The information contained in this publication is based on our research and development work and is to the best of our knowledge true and accurate. HiMedia™ Laboratories Pvt Ltd reserves the right to make changes to specifications and information related to the products at any time. Products are not intended for human or animal or therapeutic use but for laboratory, diagnostic, research or further manufacturing use only, unless otherwise specified. Statements contained herein should not be considered as a warranty of any kind, expressed or implied, and no liability is accepted for infringement of any patents.