**HiCrome™ EC O157 : H7 Selective Agar Base, Modified**

**Intended Use:**
Recommended for selective isolation and easy detection of *Escherichia coli* O157:H7 from food and clinical samples.

**Composition**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Gms / Litre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tryptone</td>
<td>5.000</td>
</tr>
<tr>
<td>Yeast extract</td>
<td>3.000</td>
</tr>
<tr>
<td>Sorbitol</td>
<td>7.000</td>
</tr>
<tr>
<td>Bile salts mixture</td>
<td>1.500</td>
</tr>
<tr>
<td>Sodium lauryl sulphate</td>
<td>0.100</td>
</tr>
<tr>
<td>Chromogenic mixture</td>
<td>0.250</td>
</tr>
<tr>
<td>Agar</td>
<td>15.000</td>
</tr>
<tr>
<td><strong>Final pH (at 25°C)</strong></td>
<td>6.8±0.2</td>
</tr>
</tbody>
</table>

**Directions**

Suspend 31.85 grams in 990 ml purified / 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. Add rehydrated contents of 1 vial of HiCrome™ EC O157:H7 Selective Supplement (FD187) aseptically. Mix well and pour into sterile Petri plates.

**Principle And Interpretation**

Enterohaemorrhagic *E. coli* strains are also termed as verocytotoxin-producing *E. coli* (VTEC/ EHEC). Although many different serotypes of *Escherichia coli* are known to produce verocytotoxin (5) those of *Escherichia coli* and O157:H are so far the common types causing human infections. O157 VTEC strains have several unusual biochemical characters that are exploited in methods for their laboratory identification. They belong to the minority of *E. coli* that are ß-glucuronidase negative and do not ferment sorbitol or rhamnose within 24 hours. These can be isolated from faecal specimens by plating on media containing D-sorbitol instead of lactose.

HiCrome™ EC O157:H7 Agar is based on the formulation described by Rappaport and Henigh (5). The medium contains sorbitol as fermentable carbohydrate and chromogenic mixture instead of lactose and indicator dyes respectively.

The chromogenic substrate is specifically and selectively cleaved by *Escherichia coli* O157: H7 resulting in a dark purple to magenta coloured moiety. *E. coli* forms bluish green coloured colonies.


**Type of specimen**
Clinical samples - stool samples; Food samples.

**Specimen Collection and Handling**
For clinical samples follow appropriate techniques for handling specimens as per established guidelines (1,2).
For food samples, follow appropriate techniques for sample collection and processing as per guidelines (4).
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 show poor growth on this medium.

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 1.5% Agar gel

Colour and Clarity of prepared medium

Light amber coloured, clear to slightly opalescent gel forms in Petri plates

Reaction

Reaction of 3.18% w/v aqueous solution at 25°C. pH : 6.8±0.2

pH

6.60-7.00

Cultural Response

Cultural characteristics observed with added HiCrome™ EC 0157:H7 Selective Supplement (FD187) after an incubation at 35-37°C for 18-24 hours.

<table>
<thead>
<tr>
<th>Organism</th>
<th>Inoculum (CFU)</th>
<th>Growth</th>
<th>Recovery</th>
<th>Colour of Colony</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Escherichia coli</em> ATCC 25922</td>
<td>50-100</td>
<td>none to poor</td>
<td>&lt;=10%</td>
<td>Bluish green</td>
</tr>
<tr>
<td><em>Escherichia coli</em> O157:H7 NCTC 12900</td>
<td>50-100</td>
<td>luxuriant</td>
<td>&gt;=50%</td>
<td>dark purple-magenta</td>
</tr>
<tr>
<td><em>Klebsiella pneumoniae</em> ATCC 13883 (00097*)</td>
<td>50-100</td>
<td>fair-good</td>
<td>30-40%</td>
<td>colourless-mauve(mucoid)</td>
</tr>
<tr>
<td><em>Pseudomonas aeruginosa</em> ATCC 27853 (00025*)</td>
<td>50-100</td>
<td>fair to good</td>
<td>30-40%</td>
<td>colourless</td>
</tr>
<tr>
<td><em>Staphylococcus aureus</em> subsp. aureus ATCC 25923 (00034*)</td>
<td>&gt;=10³</td>
<td>inhibited</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td><em>Bacillus spizizenii</em> subsp. subtilis ATCC 6633 (00003*)</td>
<td>&gt;=10³</td>
<td>Inhibited</td>
<td>0%</td>
<td></td>
</tr>
</tbody>
</table>

Storage and Shelf Life

Store dehydrated powder and the prepared medium at 2-8º 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 (1,2).
Reference


Disclaimer:
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