**Intended Use:**
Recommended for the detection and enumeration of *Escherichia coli* in foods without further confirmation on membrane filtration or by indole reagent.

**Composition**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Gms / Litre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tryptone</td>
<td>14.000</td>
</tr>
<tr>
<td>Peptone, special</td>
<td>5.000</td>
</tr>
<tr>
<td>Bile salts mixture</td>
<td>1.500</td>
</tr>
<tr>
<td>Disodium hydrogen phosphate</td>
<td>1.000</td>
</tr>
<tr>
<td>Sodium dihydrogen phosphate</td>
<td>0.600</td>
</tr>
<tr>
<td>Sodium chloride</td>
<td>2.400</td>
</tr>
<tr>
<td>X-Glucuronide</td>
<td>0.075</td>
</tr>
<tr>
<td>Agar</td>
<td>12.000</td>
</tr>
<tr>
<td><strong>Final pH (at 25°C)</strong></td>
<td>7.2±0.2</td>
</tr>
</tbody>
</table>

**Directions**
Either streak, inoculate or surface spread the test inoculum (50-100 CFU) aseptically on the plate.

**Principle And Interpretation**
HiCrome™ E.coli Agar Plate is based on Tryptone Bile Agar to detect *Escherichia coli* in foods (1), where recovery of *E.coli* is faster, more reliable and accurate. Most of the *E.coli* strains can be differentiated from other coliforms by the presence of enzyme glucuronidase, which is highly specific for *E.coli* (3). The chromogenic agent X-glucuronide used in this medium helps to detect glucuronidase activity of *E.coli*. *E.coli* cells absorb X-glucuronide and the intracellular glucuronidase enzyme splits the bond between the chromophore and the glucuronide. The released chromophore gives bluish green colouration to the *E.coli* colonies. This medium is recommended for isolation of *E.coli* from water, food and clinical samples.

Tryptone and peptone special provides carbon, nitrogen compounds, long chain amino acids, vitamins and other essential growth nutrients to the organisms. Bile salts mixture inhibits gram-positive organisms. Sodium chloride and phosphates maintain osmotic balance and buffering action respectively. The surface of the plated medium is dried before use. Dilute food samples 1:5 or 1:10 with 0.1% (w/v) sterile Peptone Water (M028) and homogenize in a blender or a stomacher. Pipette 0.5 ml or 1.0 ml of the homogenized food sample on to the plate and spread with sterile glass spreader. Incubate the plates at 30°C for 4 hours and then at 44°C for 18 hours.

**Type of specimen**
Water samples, Food samples

**Specimen Collection and Handling**
For water samples, follow appropriate techniques for sample collection, processing as per guidelines and local standards (2). For food samples, follow appropriate techniques for sample collection and processing as per guidelines (6). After use, contaminated materials must be sterilized by autoclaving before discarding.

**Warning and Precautions**
Read the label before opening the pack. 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. $\beta$-glucuronidase is present in 97% of *E.coli* strains, however few *E.coli* may be negative.
2. Certain species of *Salmonella* and *Shigella* are $\beta$-glucuronidase positive.
3. Individual organisms differ in their growth requirement and may show variable growth patterns on the medium.

4. Each lot of the medium has been tested for the organisms specified on the COA. It is recommended to users to validate the medium for any specific microorganism other than mentioned in the COA based on the user’s unique requirement.

**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**

Sterile HiCrome™ E.coli Agar in 90 mm disposable plates.

**Colour of medium**

Light yellow coloured medium

**Quantity of medium**

25 ml of medium in 90 mm disposable plates.

**pH**

7.00-7.40

**Sterility Test**

Passes release criteria

**Cultural Response**

Cultural characteristics observed after an incubation at 44°C for 18-24 hours.

<table>
<thead>
<tr>
<th>Organism</th>
<th>Growth</th>
<th>Inoculum (CFU)</th>
<th>Recovery</th>
<th>Colour of Colony</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staphylococcus aureus subap.</td>
<td>inhibited</td>
<td>&gt;=10^4</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td>aureus ATCC 25923 (00034*)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Escherichia coli ATCC</td>
<td>luxuriant</td>
<td>50-100</td>
<td>&gt;=50%</td>
<td>bluish green</td>
</tr>
<tr>
<td>25922 (00013*)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Salmonella Enteritidis ATCC</td>
<td>luxuriant</td>
<td>50-100</td>
<td>&gt;=50%</td>
<td>colourless</td>
</tr>
<tr>
<td>13076 (00030*)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Key : *Corresponding WDCM numbers.

**Storage and Shelf Life**

On receipt store between 2-8°C 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 sample must be decontaminated and disposed of in accordance with current laboratory techniques (4,5).

**Reference**

Disclaimer:

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