**EC0157:H7 Enrichment Broth**

**Intended Use:**
Recommended as an enrichment broth for the rapid growth of *E. coli* O157:H7 from food samples.

**Composition**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Gms / Litre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tryptone</td>
<td>15.000</td>
</tr>
<tr>
<td>Yeast extract</td>
<td>6.000</td>
</tr>
<tr>
<td>Bile Salts Mixture</td>
<td>1.500</td>
</tr>
<tr>
<td>Final pH (at 25°C)</td>
<td>7.1±0.2</td>
</tr>
</tbody>
</table>

**Directions**
Suspend 22.5 grams in 1000 ml purified/distilled water. Heat if necessary to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 mins. Mix well and dispense into sterile test tubes.

**Principle And Interpretation**

*E. coli* O157:H7 is a cause of food borne disease in the health industry. Most of the illnesses are associated with eating undercooked, contaminated ground beef; however, contaminated fruits and vegetables are currently increasingly implicated as sources of *E. coli* O157:H7 infections (1). The major concern is the outbreak of *E. coli* O157:H7 food poisoning in United States and Japan. *E. coli* O157:H7 has been recognized as a cause of haemorrhagic colitis (5). EC0157:H7 Enrichment broth is based on the formulation described by Rappaport and Henigh (6). EC0157:H7 Enrichment Broth was designed for the rapid enrichment of *E. coli* O157:H7.

Tryptone provides nitrogenous, carbonaceous compounds and other essential growth nutrients. Yeast extract serves as a source of vitamin B complex and other nutrients. Bile salt mixture inhibits most of the gram-positive organisms.

**Type of specimen**

Food samples - fruits and vegetables.

**Specimen Collection and Handling:**
For food and dairy samples, follow appropriate techniques for sample collection and processing as per guidelines (2,7,8). 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. This medium is general purpose medium and may not support the growth of fastidious organisms.

**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

**Colour and Clarity of prepared medium**
Light amber clear solution without any precipitate

**Reaction**
Reaction of 2.25% w/v aqueous solution at 25°C. pH : 7.1±0.2
pH
6.90-7.30

Cultural Response
Cultural characteristics observed after an incubation at 35 - 37°C for 4 - 6 hours.

<table>
<thead>
<tr>
<th>Organism</th>
<th>Inoculum (CFU)</th>
<th>Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Escherichia coli ATCC 25922 (00013</em>)*</td>
<td>50-100</td>
<td>luxuriant</td>
</tr>
<tr>
<td><em>Escherichia coli O157:H7 NCTC 12900 (00014</em>)*</td>
<td>50-100</td>
<td>luxuriant</td>
</tr>
<tr>
<td><em>Cronobacter sakazakii ATCC 12868</em></td>
<td>50-100</td>
<td>luxuriant</td>
</tr>
<tr>
<td><em>Klebsiella pneumoniae ATCC 13883 (00097</em>)*</td>
<td>50-100</td>
<td>luxuriant</td>
</tr>
<tr>
<td><em>Salmonella Enteritidis ATCC 13076 (00030</em>)*</td>
<td>50-100</td>
<td>luxuriant</td>
</tr>
<tr>
<td><em>Enterococcus faecalis ATCC &gt;=10^5</em> 29212 (00087*)*</td>
<td>inhibited</td>
<td></td>
</tr>
<tr>
<td><em>Staphylococcus aureus subsp. aureus ATCC 25923 (00034</em>)* &gt;=10^4</td>
<td>inhibited</td>
<td></td>
</tr>
</tbody>
</table>

Key: *Corresponding WDCM numbers.
# - Formerly known as *Enterobacter sakazakii*

Storage and Shelf Life
Store between 10-30°C in a tightly closed container and the prepared medium at 15-25°C. 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 sample must be decontaminated and disposed of in accordance with current laboratory techniques (3,4).

Reference