SSDC agar  

**Intended Use:**
Recommended for the selective isolation and differentiation of pathogenic *Yersinia enterocolitica*, in particular of *Y. enterocolitica* serogroup 0:3.

**Composition**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Gms / Litre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peptone</td>
<td>10.000</td>
</tr>
<tr>
<td>Yeast extract</td>
<td>5.000</td>
</tr>
<tr>
<td>Lactose</td>
<td>10.000</td>
</tr>
<tr>
<td>Bile salt mixture</td>
<td>8.500</td>
</tr>
<tr>
<td>Sodium deoxycholate</td>
<td>10.000</td>
</tr>
<tr>
<td>Calcium chloride</td>
<td>1.000</td>
</tr>
<tr>
<td>Sodium citrate</td>
<td>10.000</td>
</tr>
<tr>
<td>Sodium thiosulphate</td>
<td>5.420</td>
</tr>
<tr>
<td>Ammonium iron (III) citrate</td>
<td>1.000</td>
</tr>
<tr>
<td>Brilliant green</td>
<td>0.0003</td>
</tr>
<tr>
<td>Neutral red</td>
<td>0.025</td>
</tr>
<tr>
<td>Agar</td>
<td>15.000</td>
</tr>
<tr>
<td>Final pH ( at 25°C)</td>
<td>7.4±0.2</td>
</tr>
</tbody>
</table>

**Directions**

Suspend 75.94 grams in 1000 ml purified/distilled water. Heat to boiling by swirling regularly to dissolve the medium completely. DO NOT AUTOCLAVE OR DO NOT OVERHEAT. Cool to 45-50°C in water bath. Mix well and pour into sterile Petri plates. To avoid precipitation of bile salts, do not exceed the cooling phase for more than one hour.

**Principle And Interpretation**

SSDC Agar is suggested for detection of presumptive pathogenic *Yersinia enterocolitica* in accordance with ISO Committeee under specifications 10273 :1994 (1). Peptone, yeast extract provide carbon, nitrogen sources, long chain amino acids, vitamins and other essential growth nutrients. Lactose is the fermentable carbohydrate. Lactose positive organisms appear red due to lactose fermentation and neutral red indicator. Brilliant green, bile salts and thiosulphate selectively inhibit gram positive and coliform organisms. Certain species of enteric organisms reduce sodium thiosulphate to sulphite and H2S gas. *Yersinia enterocolitica* colonies appear as colourless colonies.

Pathogenic *Y. enterocolitica* strains, in particular those of serogroup 0:3 are known to tolerate high concentration of bile salts and deoxycholate. Due to the high content of bile salts along with the high sodium citrate concentration and the brilliant green content other accompanying microbial flora gets almost completely or completely inhibited.

**Type of specimen**

Clinical samples - faeces; Food samples

**Specimen Collection and Handling**

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (2,3). 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.

**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. Some species may show poor growth due to nutritional variations.

**Quality Control**

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

**Gelling**
Firm comparable with 1.5% Agar gel.

**Colour and Clarity of prepared medium**
Orange red coloured, clear to slightly opalescent gel forms in Petri plates.

**Reaction**
Reaction of 7.59% w/v aqueous solution at 25°C. pH : 7.4±0.2

**pH**
7.20-7.60

**Cultural Response**
Cultural characteristics observed after an incubation at 25-30°C for 24-48 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>Yersinia enterocolitica</em> 0.3 DSM 11502</td>
<td>50-100</td>
<td>good-luxuriant &gt;=50%</td>
<td>colourless round colonies, approximately 1mm diameter. A finely granulated centre can be seen under 10X magnification</td>
<td></td>
</tr>
<tr>
<td><em>Yersinia enterocolitica</em> biotype 4 serotype O:3 DSM 9676 (00039*)</td>
<td>50-100</td>
<td>good-luxuriant &gt;=50%</td>
<td>colourless round colonies, approximately 1mm diameter. A finely granulated centre can be seen under 10X magnification</td>
<td></td>
</tr>
</tbody>
</table>

**Escherichia coli** ATCC 25922 (00013*)

>=10⁴ inhibited 0%

**Bacillus cereus** ATCC 10876

>=10⁴ inhibited 0%

Key : (*) Corresponding WDCM numbers.

**Storage and Shelf Life**

Store between 10-30°C in a tightly closed container and the prepared medium at 20-30°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 clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (2,3).
Reference


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