Deoxycholate Citrate Agar w/o Sucrose

**Intended Use:**
Recommended for differentiation and identification of enteric pathogens.

**Composition**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Gms / Litre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biopeptone</td>
<td>7.000</td>
</tr>
<tr>
<td>HM extract</td>
<td>3.000</td>
</tr>
<tr>
<td>Sodium deoxycholate</td>
<td>2.500</td>
</tr>
<tr>
<td>Sodium citrate</td>
<td>10.500</td>
</tr>
<tr>
<td>Lactose</td>
<td>5.000</td>
</tr>
<tr>
<td>Sodium thiosulphate</td>
<td>5.000</td>
</tr>
<tr>
<td>Neutral red</td>
<td>0.030</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**
Suspend 45.03 grams in 1000 ml purified / distilled water. Heat to boiling to dissolve the medium completely. DO NOT OVERHEAT OR AUTOCLAVE. Cool to 45-5

**Principle And Interpretation**
Deoxycholate Citrate Agar without Sucrose is used for differentiation and identification of members of *Enterobacteriaceae*. Leifson (1) developed Deoxycholate Agar as a differential medium containing pure chemicals. Deoxycholate Citrate Agar without Sucrose contains biopeptone and HM extract, which supply essential nutrients for the support of bacterial growth. Citrate and deoxycholate act as inhibitors. Sodium deoxycholate and sodium citrate inhibit gram-positive organisms. Lactose helps in differentiating enteric bacilli as lactose fermenters produce red coloured colonies while lactose non-fermenters form colourless colonies. Citrate and iron (Fe) combination has a strong hydrolyzing effect on agar when the medium is heated, producing a soft and unelastic agar. If autoclaved the agar becomes soft and almost impossible to streak (3).

**Type of specimen**
Clinical- faeces

**Specimen Collection and Handling**
For clinical samples follow appropriate techniques for handling specimens as per established guidelines (1,2). 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. Further biochemical identification is required for confirmation of species.
2. Due to nutritional variations some organisms may show poor growth.
**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**
Light yellow to pink homogeneous free flowing powder

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

**Colour and Clarity of prepared medium**
Reddish orange coloreted, clear to slightly opalescent gel forms in Petri plates

**Reaction**
Reaction of 4.5% w/v aqueous solution at 25°C. pH : 7.2±0.2

**pH**
7.00-7.40

**Cultural Response**
Cultural characteristics observed 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>Bacillus subtilis subsp. spizizenii</em> ATCC 6633 (00003*)</td>
<td>&gt;=10⁴</td>
<td>inhibited</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td><em>Escherichia coli</em> ATCC 25922 (00013*)</td>
<td>50-100</td>
<td>good-luxuriant</td>
<td>&gt;=50%</td>
<td>pink with bile precipitate</td>
</tr>
<tr>
<td><em>Klebsiella aerogenes</em> ATCC 13048 (00175*)</td>
<td>50-100</td>
<td>good-luxuriant</td>
<td>&gt;=50%</td>
<td>pink</td>
</tr>
<tr>
<td><em>Salmonella Typhimurium</em> ATCC 14028 (00031*)</td>
<td>50-100</td>
<td>good-luxuriant</td>
<td>&gt;=50%</td>
<td>colourless</td>
</tr>
<tr>
<td><em>Enterococcus faecalis</em> ATCC &gt;=10⁴ (00087*)</td>
<td></td>
<td>inhibited</td>
<td>0%</td>
<td></td>
</tr>
</tbody>
</table>

Key : (*) Corresponding WDCM numbers.
(#{}) Formerly known as *Enterobacter aerogenes*

**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 (1,2).

**Reference**


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In vitro diagnostic medical device

CE Marking

Storage temperature

10°C to 30°C

Do not use if package is damaged

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