Brucella Agar Base w/ 1% Dextrose

M1638

Brucella Agar Base w/ 1% Dextrose is used for the cultivation and isolation of *Brucella* species.

**Composition**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Gms / Litre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peptic digest of animal tissue</td>
<td>10.000</td>
</tr>
<tr>
<td>Meat extract</td>
<td>5.000</td>
</tr>
<tr>
<td>Dextrose</td>
<td>10.000</td>
</tr>
<tr>
<td>Sodium chloride</td>
<td>5.000</td>
</tr>
<tr>
<td>Agar</td>
<td>15.000</td>
</tr>
<tr>
<td><strong>Final pH (at 25°C)</strong></td>
<td>7.5±0.2</td>
</tr>
</tbody>
</table>

**Directions**

Suspend 22.5 grams in 500 ml 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 and aseptically add sterile 5% (v/v) inactivated horse serum RM1239 (Inactivate RM1239 by heating at 56°C for 30 minutes) and rehydrated contents of one vial Brucella Selective Supplement (FD005). Mix well before pouring into sterile Petri plates.

**Principle And Interpretation**

Brucellosis is a zoonotic disease with a domestic animal reservoir. It is an occupational disease of veterinarians, microbiologists, farmers etc. The route of infections is genital, nasopharyngeal, gastrointestinal, conjunctival, respiratory and through abraded skin (1, 2). Brucellosis in humans has a variable incubation period, an insidious or abrupt onset and no pathognomic symptoms or signs. Brucella Agar was designed for cultivating *Brucella* species from diagnostic specimens. With the incorporation of blood or other nutritious substances, it facilitates the cultivation of variety of fastidious anaerobic organisms (3). However, Brucella Medium is supplemented with antibiotics to prevent overgrowth of other accompanying organisms. Brucella Agar Base w/ 1.0% Dextrose was originally developed by Jones and Morgan (4) for preparations of serum-dextrose-antibiotic medium used for the isolation and cultivation of *Brucella* species.

The medium contains peptic digest of animal tissue and meat extract, which facilitates cultivation of variety of fastidious anaerobic organisms; by providing essential nutrients. Dextrose serves as source of energy. Addition of antibiotics (as FD) makes the medium highly selective for *Brucella* species. Ethyl violet and circulin, which were recommended initially, are no longer used (5).

**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 yellow coloured, clear to slightly opalescent gel forms in Petri plates

**Reaction**

Reaction of 4.5% w/v aqueous solution at 25°C. pH : 7.5±0.2

**pH**

7.30-7.70

**Cultural Response**

M1638: Cultural characteristics observed in presence of 10% Carbon dioxide (CO2) atmosphere with added 5% sterile inactivated horse serum and Brucella Selective Supplement (FD005), after an incubation at 35-37°C for 24-48 hours

<table>
<thead>
<tr>
<th>Organism</th>
<th>Growth</th>
</tr>
</thead>
</table>

Please refer disclaimer Overleaf.
Cultural Response

*Brucella melitensis ATCC 4309* luxuriant

*Brucella suis ATCC 4314* luxuriant

*Escherichia coli ATCC 25922* inhibited

*Staphylococcus aureus ATCC 25923* inhibited

Storage and Shelf Life
Store below 30°C in tightly closed container and the prepared medium at 2 - 8°C. Use before expiry date on the label.

Reference