Arcobacter Selective Broth Base

For the enrichment and cultivation of Arcobacter spp.

**Composition**

**Ingredients**

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Gms / Litre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peptone</td>
<td>18.000</td>
</tr>
<tr>
<td>Sodium chloride</td>
<td>5.000</td>
</tr>
<tr>
<td>Yeast extract</td>
<td>1.000</td>
</tr>
<tr>
<td><strong>Final pH (at 25°C)</strong></td>
<td>7.2±0.2</td>
</tr>
</tbody>
</table>

**Formula adjusted, standardized to suit performance parameters**

**Directions**

Suspend 24 grams in 1000 ml distilled water. Heat if necessary to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 50°C and aseptically add rehydrated contents of one vial of Arcobacter Selective Supplement (FD304) and add 5% w/v sterile lysed defibrinated horse blood. Mix well and dispense into sterile tubes.

**Principle And Interpretation**

Arcobacter selective isolation from food and environment samples, prior enrichment in Arcobacter selective isolation broth should be performed (1). Arcobacter are aerotolerant, Campylobacter -like organisms frequently isolated from cattle and pigs suffering form abortion and enteritis (2).

Only two of the four Arcobacter species have been associated with human infections. _A. butzleri_ has been isolated from patients with bacteremia, endocarditis, peritonitis and diarrhoea.(3,4). _A. cryaerophilus_ group 1B has been isolated from patients with bacteremia and diarrhoea (5,6) although it is a much less common human isolate than _A. butzleri_ (7)

Peptones and yeast extract provide essential growth nutrients for the growth of Arcobacter species. Sodium chloride maintains osmotic equilibrium in addition to providing essential ions for growth. Cefoperazone, amphotericin-B, 5-fluorouracil, novobiocin and trimethoprim are used as selective supplement (FD304) which eliminate the contaminating microflora.

**Quality Control**

**Appearance**

Cream to yellow homogeneous free flowing powder

**Colour and Clarity of prepared medium**

Basal Medium: Light yellow coloured clear solution. After addition of 5 %w/v sterile lysed defibrinated horse blood: Cherry red coloured opaque solution.

**Reaction**

pH of 2.4% w/v aqueous solution at 25°C. pH : 7.2±0.2

**Cultural response**

Cultural characteristics observed with added Arcobacter Selective Supplement, after an incubation at 28°C for 48 hours under microaerobic conditions.

**Cultural Response**

<table>
<thead>
<tr>
<th>Organism</th>
<th>Inoculum (CFU)</th>
<th>Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arcobacter butzleri ATCC</td>
<td>50-100</td>
<td>good-luxuriant</td>
</tr>
<tr>
<td>12481</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Escherichia coli ATCC 25922</td>
<td>&gt;=10³</td>
<td>inhibited</td>
</tr>
</tbody>
</table>

Please refer disclaimer Overleaf.
Enterococcus faecalis ATCC >=10³ inhibited
Proteus mirabilis ATCC >=10³ 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 label.

Reference

Disclaimer:
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