Bifidobacterium Agar

Bifidobacterium Agar is used for the cultivation and maintenance of *Bifidobacterium* species.

**Composition**

**Ingredients**

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Gms / Litre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Special peptone</td>
<td>23.000</td>
</tr>
<tr>
<td>Sodium chloride</td>
<td>5.000</td>
</tr>
<tr>
<td>Glucose</td>
<td>5.000</td>
</tr>
<tr>
<td>Starch, soluble</td>
<td>1.000</td>
</tr>
<tr>
<td>L-Cysteine hydrochloride</td>
<td>0.300</td>
</tr>
<tr>
<td>Agar</td>
<td>15.000</td>
</tr>
</tbody>
</table>

**Final pH (at 25°C)** 6.8±0.2

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

**Directions**

Suspend 49.3 grams in 1000 ml distilled water. Mix well and heat to boiling to dissolve the medium completely. Distribute in tubes or flasks as desired. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Mix well and pour into sterile Petri plates.

**Principle And Interpretation**

The genus *Bifidobacterium* is the third most numerous bacterial populations found in the human intestine after *Bacteroides* and *Eubacterium*. It is an anaerobic bacteria that makes up the gut microbial flora. It resides in the colon and have health benefits for their hosts. Bifidobacteria are also associated with lower incidences of allergies (1, 2). Bifidobacterium Agar is used for the cultivation and maintenance of *Bifidobacterium* species (3).

Special peptone provides essential growth nutrients. Starch acts as protective colloid and shields organisms from harmful substances present in the medium. Glucose is the energy source and sodium chloride maintains isotonic conditions. L-Cysteine hydrochloride helps in creating reduced conditions required for the growth of Bifidobacteria.

**Quality Control**

**Appearance**

Cream to yellow homogeneous free flowing powder

**Gelling**

Firm, comparable with 1.5% Agar gel

**Colour and Clarity of prepared medium**

Amber coloured clear to slightly opalescent gel forms in Petri plates

**Reaction**

Reaction of 4.93% w/v aqueous solution at 25°C. pH: 6.8±0.2

**pH**

6.60-7.00

**Cultural Response**

Cultural characteristics observed after an incubation at 35-37°C for 24-48 hours

**Cultural Response**

<table>
<thead>
<tr>
<th>Organism</th>
<th>Inoculum (CFU)</th>
<th>Growth</th>
<th>Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Bifidobacterium bifidum</em> ATCC 15696</td>
<td>50-100</td>
<td>good-luxuriant</td>
<td>&gt;=50%</td>
</tr>
<tr>
<td><em>Bifidobacterium breve</em> ATCC 50-100</td>
<td>15698</td>
<td>good-luxuriant</td>
<td>&gt;=50%</td>
</tr>
</tbody>
</table>
**Bifidobacterium infantis**  
*ATCC 25962*

**Storage and Shelf Life**  
Store below 30°C in tightly closed container and use freshly prepared medium. Use before expiry date on the label.

**Reference**