Plate Count Agar w/ BCP is used for enumeration of Lactobacilli in cultured milk, yoghurt and sour creams.

**Composition**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Gms / Litre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peptic digest of animal tissue</td>
<td>5.000</td>
</tr>
<tr>
<td>Yeast extract</td>
<td>2.500</td>
</tr>
<tr>
<td>Dextrose</td>
<td>1.000</td>
</tr>
<tr>
<td>Polysorbate 80 (Tween 80)</td>
<td>1.000</td>
</tr>
<tr>
<td>L-Cysteine</td>
<td>0.100</td>
</tr>
<tr>
<td>Bromo cresol purple</td>
<td>0.040</td>
</tr>
<tr>
<td>Agar</td>
<td>15.000</td>
</tr>
<tr>
<td>Final pH (at 25°C)</td>
<td>6.8±0.2</td>
</tr>
</tbody>
</table>

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

**Directions**

Suspend 24.64 grams in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Mix well and pour into sterile Petri plates.

**Principle And Interpretation**

Plate Count Agar with BCP is a slight modification of the medium recommended by APHA (1) for enumeration of Lactobacilli in cultured milk, yoghurt and sour creams. Lactobacilli grow on this medium and form colonies with yellowish peripheries in the depth and on the surface of the medium. Addition of polysorbate 80 and L-cysteine enhanced the growth of lactobacilli on this medium. *Lactobacillus bulgaricus* invariably forms yellowish colonies its detection and determination is easy.

Peptic digest of animal tissue supply nitrogenous and carbonaceous compounds. Yeast extract provides vitamin B complex and dextrose is the fermentable carbohydrate and energy source. Bromocresol purple is a pH indicator. Plate Count Agar can be incubated at 30°C for up to 72 hours for detection of mesophilic organisms. Polysorbate 80 supplies fatty acids required for the metabolism of lactobacilli.

**Quality Control**

**Appearance**
Light yellow to light green homogeneous free flowing powder

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

**Colour and Clarity of prepared medium**
Purple coloured clear to slightly opalescent gel forms in Petri plates

**Reaction**
Reaction of 2.46% w/v aqueous solution at 25°C. 6.8±0.2 pH : 6.8±0.2

**pH**
6.60-7.00

**Cultural Response**
M1351: Cultural characteristics observed after an incubation at 35-37°C for 18-48 hours.

<table>
<thead>
<tr>
<th>Organism</th>
<th>Inoculum (CFU)</th>
<th>Growth</th>
<th>Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Lactobacillus acidophilus</em> ATCC 4356</td>
<td>50-100</td>
<td>luxuriant</td>
<td>&gt;=70%</td>
</tr>
<tr>
<td><em>Lactobacillus lactis</em> ATCC 19435</td>
<td>50-100</td>
<td>luxuriant</td>
<td>&gt;=70%</td>
</tr>
</tbody>
</table>
**Lactobacillus bulgaricus**  
*ATCC 11842*  
50-100  
luxuriant  
>=70%

**Streptococcus thermophilus**  
*ATCC 14485*  
50-100  
luxuriant  
>=70%

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

**Reference**  