Soyabean Casein Digest Agar Plate

For the subculture of aerobic organisms in accordance with harmonized method of USP/EP/BP/JP/IP.

**Composition**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Gms / Litre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pancreatic digest of casein</td>
<td>15.000</td>
</tr>
<tr>
<td>Papaic digest of soybean (soyabean)</td>
<td>5.000</td>
</tr>
<tr>
<td>Sodium chloride</td>
<td>5.000</td>
</tr>
<tr>
<td>Agar</td>
<td>15.000</td>
</tr>
</tbody>
</table>

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

**Directions**

Either streak, inoculate or surface spread the test inoculum (50-100 CFU) aseptically on the plate. Alternatively these plates can also be used as contact plates for environmental monitoring.

**Principle And Interpretation**

Various pharmacopoeias recommend Soybean Casein Digest Agar as sterility testing medium. It is also used in validation of sterility checking procedure in accordance with the microbial limit testing harmonized methodology of USP/EP/BP/JP (1,2,3,4).

This medium is used in microbial limit test and antimicrobial preservative - effective test. Gunn et al (5) used this medium for the growth of fastidious organisms and study of haemolytic reaction after addition of 5% v/v blood.

The combination of pancreatic digest of casein and papaic digest of soybean meal makes these media nutritious by providing amino acids and long chain peptides for the growth of microorganisms. Natural sugars of soya enhance growth of microorganism. Sodium chloride maintains the osmotic balance in the medium. Agar is the solidifying agent.

The total aerobic count is considered to be equal to the number of colony forming units found on this medium, if colonies of fungi are detected on this medium they are counted along with total aerobic count.

**Quality Control**

**Appearance**
Sterile Tryptone Soya Agar in 55mm plates

**Colour**
Light yellow coloured medium.

**Quantity of Medium**
18ml of medium in scored plates

**pH**
7.10-7.50

**Cultural Response**
Recovery rate is considered 100% for bacteria growth on Blood Agar and fungus growth on Sabouraud Dextrose Agar.

**Growth promoting properties**
Growth of microorganism comparable to that previously obtained with previously tested and approved lot of medium occurs at the specified temperature for not more than the shortest period of time specified inoculating <=100 cfu (at 30-35°C for 18 hours).

**Sterility Test**
Passes release criteria.

**Cultural Response**
SPH290G: Growth Promotion was carried out in accordance with the harmonized method and growth was observed after an incubation at 30-35°C for 18-24 hours.
Organism | Incubation period | Inoculum (CFU) | Incubation temperature | Observed Lot value (CFU) | Recovery |
--- | --- | --- | --- | --- | --- |
**Growth promoting**
*Candida albicans ATCC 2091* | <=5 d | 50 -100 | 30 -35 °C | 35 -100 | >=70 % |
*Candida albicans ATCC 10231* | <=5 d | 50 -100 | 30 -35 °C | 35 -100 | >=70 % |
*Aspergillus brasiliensis ATCC 16404* | <=5 d | 50 -100 | 30 -35 °C | 25 -70 |
*Escherichia coli NCTC 9002 18 -24 hrs* | 50 -100 | 30 -35 °C | 35 -100 | >=70 % |
*Pseudomonas aeruginosa ATCC 27853* | 18 -24 hrs | 50 -100 | 30 -35 °C | 35 -100 | >=70 % |
*Pseudomonas aeruginosa ATCC 9027 18 -24 hrs* | 50 -100 | 30 -35 °C | 35 -100 | >=70 % |
*Salmonella Abony NCTC 6017 18 -24 hrs* | 50 -100 | 30 -35 °C | 35 -100 | >=70 % |
*Micrococcus luteus ATCC 9341 18 -24 hrs* | 50 -100 | 30 -35 °C | 35 -100 | >=70 % |
*Streptococcus pneumoniae ATCC 6305 18 -24 hrs* | 50 -100 | 30 -35 °C | 35 -100 | >=70 % |
*Salmonella Typhimurium ATCC 14028 18 -24 hrs* | 50 -100 | 30 -35 °C | 35 -100 | >=70 % |
*Bacillus subtilis ATCC 6633 18 -24 hrs* | 50 -100 | 30 -35 °C | 35 -100 | >=70 % |
*Staphylococcus aureus ATCC 25923 18 -24 hrs* | 50 -100 | 30 -35 °C | 35 -100 | >=70 % |
*Staphylococcus aureus ATCC 6538 18 -24 hrs* | 50 -100 | 30 -35 °C | 35 -100 | >=70 % |
*Escherichia coli ATCC 8739 18 -24 hrs* | 50 -100 | 30 -35 °C | 35 -100 | >=70 % |
*Escherichia coli ATCC 25922 18 -24 hrs* | 50 -100 | 30 -35 °C | 35 -100 | >=70 % |

**Storage and Shelf Life**
Store between 15-25°C. Use before expiry date on the label.

**Reference**