Soyabean Casein Digest Agar Plate w/ 1% Glycerol (γ irradiated) (TriplePack)

**Intended use**
A general purpose medium used for cultivation of a wide variety of microorganisms.

**Composition**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Gms / Litre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tryptone #</td>
<td>15.000</td>
</tr>
<tr>
<td>Soya peptone</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>
<tr>
<td>Glycerol</td>
<td>10ml</td>
</tr>
<tr>
<td>Final pH (at 25°C)</td>
<td>7.3±0.2</td>
</tr>
</tbody>
</table>

**Directions**
Either streak, inoculate or surface spread the test inoculum (50-100 CFU) aseptically on the plate.

**Principle And Interpretation**
Soyabean Casein Digest Agar is a widely used medium, which supports the growth of wide variety of organisms even that of fastidious ones such as Neisseria, Listeria, and Brucella etc. The medium with addition of blood provides perfectly defined haemolysis zones, while preventing the lysis of erythrocytes due to its sodium chloride content. It has been frequently used in the health industry to produce antigens, toxins etc. It’s simple and inhibitor-free composition makes it suitable for the detection of antimicrobial agents in the food and other products. Tryptone Soya Agar is recommended by various pharmacopoeias as sterility testing medium (6, 3).

Tryptone Soya Agar conforms as per USP (6) and is used in microbial limit test and antimicrobial preservative - effective test. Gunn et al (2) used this medium for the growth of fastidious organisms and study of haemolytic reaction after addition of 5%/v/v blood. The combination of tryptone and soya peptone makes this media nutritious by providing amino acids and long chain peptides for the growth of microorganisms. Sodium chloride maintains the osmotic balance.

Soyabean Casein Digest Agar does not contains X and V growth factors. It can be conveniently used in determining the requirements of these growth factors by isolates of Haemophilus by the addition of X-factor (DD020), V-factor (DD021), and X+V factor discs (DD022) factor to inoculated TSA plates (1).

**Type of specimen**
Pharmaceutical samples

**Specimen Collection and Handling:**
For Pharmaceutical samples follow appropriate techniques for sample collection, handling and processing as per pharmacopeia. After use, contaminated materials must be sterilized by autoclaving before discarding.

**Warning and Precautions**
Read the label before opening the pack. Wear protective gloves/protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling specimens. Safety guidelines may be referred in individual safety data sheets.

**Limitations :**
1. Individual strain of a microorganism may have unique growth requirements with respect to nutrients and physical conditions. Based on which the growth pattern of each varies on a medium and some even may display significant delay in development.

*Please refer disclaimer Overleaf.*
Performance and Evaluation
Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance
Sterile Soyabean Casein Digest Agar Plate w/ 1% Glycerol in 90mm plates

Colour
Light yellow coloured medium.

Quantity of Medium
30ml of medium in 90mm plates

pH
7.10-7.50

Dose of irradiation
10.00-25.00

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
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.

<table>
<thead>
<tr>
<th>Organism</th>
<th>Inoculum (CFU)</th>
<th>Growth</th>
<th>Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Growth promoting</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Bacillus subtilis subsp. spizizenii</em> ATCC 6633 (0003*)</td>
<td>50 -100</td>
<td>luxuriant</td>
<td>&gt;=70 %</td>
</tr>
<tr>
<td><em>Staphylococcus aureus subsp. aureus</em> ATCC 25923 (0003*)</td>
<td>50 -100</td>
<td>luxuriant</td>
<td>&gt;=70 %</td>
</tr>
<tr>
<td><em>Staphylococcus aureus subsp. aureus</em> ATCC 6538 (0003*)</td>
<td>50 -100</td>
<td>luxuriant</td>
<td>&gt;=70 %</td>
</tr>
<tr>
<td><em>Escherichia coli</em> ATCC 25922 (0001*)</td>
<td>50 -100</td>
<td>luxuriant</td>
<td>&gt;=70 %</td>
</tr>
<tr>
<td><em>Escherichia coli</em> ATCC 8739 (00012*)</td>
<td>50 -100</td>
<td>luxuriant</td>
<td>&gt;=70 %</td>
</tr>
<tr>
<td><em>Escherichia coli</em> NCTC 9002 50 -100</td>
<td>luxuriant</td>
<td>&gt;=70 %</td>
<td></td>
</tr>
<tr>
<td><em>Pseudomonas aeruginosa</em> ATCC 27853 (00025*)</td>
<td>50 -100</td>
<td>luxuriant</td>
<td>&gt;=70 %</td>
</tr>
<tr>
<td><em>Pseudomonas aeruginosa</em> ATCC 9027 (00026*)</td>
<td>50 -100</td>
<td>luxuriant</td>
<td>&gt;=70 %</td>
</tr>
<tr>
<td><em>Salmonella Abony</em> NCTC 6017 (00029*)</td>
<td>50 -100</td>
<td>luxuriant</td>
<td>&gt;=70 %</td>
</tr>
</tbody>
</table>

Environmental Monitoring Test: Exposure of media plates for 4 h as a settle plate or in air sampler or even under laminar air flow may lead reduction in some available moisture on the surface. This may cause development of tiny cracks in the agar or slight shrinkage. This however, does not impact the performance of the media.

3) Each lot of the medium has been tested for the organisms specified on the COA. It is recommended to users to validate the medium for any specific microorganism other than mentioned in the COA based on the user’s unique requirement.

4) It is recommended to store the plates ta 24-30°C to avoid minimum condensation.
Storage and Shelf Life

On receipt store between 20-30°C. Use before expiry date on the label. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with sample must be decontaminated and disposed of in accordance with current laboratory techniques (4,5).

Reference

3. Indian Pharmacopoeia, 2018, Govt. of India, Ministry of Health and Family Welfare, New Delhi, India.