**Soyabean Casein Digest Medium (Tryptone Soya Broth), Granulated**

Soyabean Casein Digest Medium, granulated is a general purpose medium used for cultivation of a wide variety of microorganisms and recommended for sterility testing of moulds and lower bacteria.

### Composition**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Gms / Litre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pancreatic digest of casein</td>
<td>17.000</td>
</tr>
<tr>
<td>Papaic digest of soyabean meal</td>
<td>3.000</td>
</tr>
<tr>
<td>Sodium chloride</td>
<td>5.000</td>
</tr>
<tr>
<td>Dextrose (Glucose)</td>
<td>2.500</td>
</tr>
<tr>
<td>Dipotassium hydrogen phosphate</td>
<td>2.500</td>
</tr>
<tr>
<td><strong>Final pH (at 25°C)</strong></td>
<td>7.3±0.2</td>
</tr>
</tbody>
</table>

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

### Directions

Suspend 30 grams in 1000 ml purified/distilled water. Heat if necessary to dissolve the medium completely. Dispense in tubes or flasks as desired. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Note: If any fibres are observed in the solution, it is recommended to filter the solution by using a 0.22 micron filter to eliminate the possibility of presence of fibres.

### Principle And Interpretation

Soyabean Casein Digest Medium is recommended by various pharmacopeias as a sterility testing and as a microbial limit testing medium (1, 2, 3). This medium is a highly nutritious medium used for cultivation of a wide variety of organisms (4).

The combination of pancreatic digest of casein and papaic digest of soyabean meal makes the medium nutritious by providing amino acids and long chain peptides for the growth of microorganisms. Dextrose and dibasic potassium phosphate serve as the carbohydrate source and the buffer, respectively in the medium. Sodium chloride maintains the osmotic balance of the medium.

### Quality Control

**Appearance**

Cream to yellow coloured granular medium

**Colour and Clarity of prepared medium**

Light yellow coloured clear solution without any precipitate.

**pH**

pH of 3.0% w/v aqueous solution at 25°C.

7.10-7.50

**Cultural Response**

Cultural characteristics observed after an incubation at 30-35°C for <= 3 days for Bacterial and at 20-25°C for <= 5 days for Fungal.

**Stability test**

Light yellow coloured clear solution without any precipitation or sedimentation at room temperature for 7 days

**Cultural Response**

<table>
<thead>
<tr>
<th>Organism</th>
<th>Inoculum (CFU)</th>
<th>Growth</th>
<th>Incubation temperature</th>
<th>Incubation period</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Growth promoting</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Staphylococcus aureus</em></td>
<td>50-100</td>
<td>luxuriant</td>
<td>30-35 °C</td>
<td>18 -24 hrs</td>
</tr>
<tr>
<td><em>ATCC 6538</em></td>
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<td><em>ATCC 25923</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Please refer disclaimer Overleaf.
### Escherichia coli
- **ATCC 8739**: 50 - 100 luxuriant at 30 - 35 °C, 18 - 24 hrs
- **ATCC 25922**: 50 - 100 luxuriant at 30 - 35 °C, 18 - 24 hrs

### Pseudomonas aeruginosa
- **ATCC 9027**: 50 - 100 luxuriant at 30 - 35 °C, 18 - 24 hrs

### Bacillus subtilis
- **ATCC 6633**: 50 - 100 luxuriant at 30 - 35 °C, 18 - 24 hrs

### Micrococcus luteus
- **ATCC 9341**: 50 - 100 luxuriant at 30 - 35 °C, 18 - 24 hrs

### Salmonella Typhimurium
- **ATCC 14028**: 50 - 100 luxuriant at 30 - 35 °C, 18 - 24 hrs

### Salmonella Abony NCTC 6017

### Streptococcus pneumoniae
- **ATCC 6305**: 50 - 100 luxuriant at 30 - 35 °C, 18 - 24 hrs

### Staphylococcus aureus
- **ATCC 6538**: 50 - 100 luxuriant at 20 - 25 °C, <=3 d
- **ATCC 25923**: 50 - 100 luxuriant at 20 - 25 °C, <=3 d

### Escherichia coli ATCC 8739
- 50 - 100 luxuriant at 20 - 25 °C, <=3 d

### Escherichia coli ATCC 25922
- 50 - 100 luxuriant at 20 - 25 °C, <=3 d

### Pseudomonas aeruginosa ATCC 9027
- 50 - 100 luxuriant at 20 - 25 °C, <=3 d

### Pseudomonas aeruginosa ATCC 27853

### *Aspergillus brasiliensis*
- **ATCC 16404**: 50 - 100 luxuriant at 20 - 25 °C, <=5 d

**Key:** * - Formerly known as *Aspergillus niger*

### Storage and Shelf Life
Store below 30°C in a tightly closed container and the prepared medium at 2 - 8°C. Use before expiry date on the label.
Reference
3. Indian Pharmacopoeia, 2014 Ministry of Health and Family Welfare, Govt. of India.