Antibiotic assay medium No. 36

Antibiotic assay medium No. 36 is used for inoculum preparation of *Mycobacterium smegmatis* for the assay of Bleomycin in accordance with Indian Pharmacopoeia.

**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>pH after sterilization</td>
<td>7.3±0.1</td>
</tr>
</tbody>
</table>

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

# Pancreatic digest of casein

## Papaic digest of soyabean meal

**Directions**

Suspend 40 grams in 1000 ml purified/ distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C. Mix well and pour into sterile Petri plates.

**Principle And Interpretation**

Grove and Randall have elucidated the antibiotic assays and medias in their comprehensive treatise on antibiotic assays (1). Antibiotic assay Medium No. 36 is recommended for preparation of inoculum of *Mycobacterium smegmatis* for the assay of Bleomycin. This medium is also used for the cultivation of a wide variety of microorganisms and sterility testing of pharmaceutical preparations. (3). This medium is formulated in accordance with Indian Pharmacopoeia (2).

The combination of Tryptone and soya peptone makes this medium nutritious by providing amino acids and long chain peptides for the growth of microorganisms. Sodium chloride maintains the osmotic balance of the medium.

**Quality Control**

**Appearance**

Cream to yellow homogeneous free flowing powder

**Gelling**

Firm, comparable with 1.5% Agar gel

**Colour and Clarity of prepared medium**

Light yellow coloured clear to slightly opalescent gel forms in Petri plates

**pH**

7.20-7.40

**Cultural Response**

MM1666: Cultural characteristics observed after an incubation at 36-37.5°C for 18-48 hours.

<table>
<thead>
<tr>
<th>Organism</th>
<th>Inoculum (CFU)</th>
<th>Growth</th>
<th>Recovery</th>
<th>Antibiotics assayed</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Mycobacterium smegmatis</em> ATCC 607</td>
<td>50-100</td>
<td>luxuriant</td>
<td>&gt;=50%</td>
<td>Bleomycin</td>
</tr>
</tbody>
</table>

**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**

Please refer disclaimer Overleaf.

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