Antibiotic Assay Medium No. 34

Antibiotic Assay Medium No. 34 is used for preparation of suspension of *Mycobacterium smegmatis* used as a test organism for the assay of Bleomycin.

**Composition**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Gms / Litre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peptic digest of animal tissue (Peptone)</td>
<td>10.000</td>
</tr>
<tr>
<td>Beef extract</td>
<td>10.000</td>
</tr>
<tr>
<td>Sodium chloride</td>
<td>3.000</td>
</tr>
<tr>
<td>Final pH (at 25°C)</td>
<td>7.0±0.2</td>
</tr>
</tbody>
</table>

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

**Directions**

Suspend 23 grams in 1000 ml distilled water containing 10 gms glycerol. Heat if necessary to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool and dispense as desired.

*Advice*: Recommended for the microbiological assay of Bleomycin

**Principle And Interpretation**

This medium is formulated in accordance with CFR (1). This medium is generally employed to prepare *Mycobacterium smegmatis* suspension required for assaying antineoplastic agents like Bleomycin.

This medium provides optimal conditions to maintain the viability of the test organism i.e *Mycobacterium smegmatis*. Peptic digest of animal tissue and beef extract in the medium provides nutrients essential for growth, while addition of glycerol provides slow and continuous supply of carbon and energy source. The osmotic equilibrium for integrity of cell and its viability is maintained in presence of sodium chloride present in this medium.

**Quality Control**

**Appearance**

Cream to yellow homogeneous free flowing powder

**Colour and Clarity of prepared medium**

Yellow coloured clear solution without any precipitate

**Reaction**

Reaction of 2.3% w/v aqueous solution containing 1% glycerol at 25°C, pH : 7.0±0.2

**pH**

6.80-7.20

**Cultural Response**

M797: 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>Serial dilution with</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Mycobacterium smegmatis</em></td>
<td>50-100</td>
<td>luxuriant</td>
<td>Bleomycin sulphate</td>
</tr>
<tr>
<td>ATCC 607</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Storage and Shelf Life**

Store below 30°C in tightly closed container and the prepared medium at 2 - 8°C. Use before expiry date on the label

**Reference**

Disclaimer:

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