Antibiotic Assay Medium G

Antibiotic Assay Medium G is used for the microbiological assay of Bleomycin sulphate using *Mycobacterium smegmatis*, as a test organism in accordance with European Pharmacopoeia.

**Composition**

**Ingredients**

<table>
<thead>
<tr>
<th>Gms / Litre</th>
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</thead>
<tbody>
<tr>
<td>Peptone</td>
</tr>
<tr>
<td>Meat extract</td>
</tr>
<tr>
<td>Sodium chloride</td>
</tr>
<tr>
<td>Agar</td>
</tr>
<tr>
<td>pH after sterilization</td>
</tr>
</tbody>
</table>

**Directions**

Suspend 38 grams in 1000 ml R-water/ purified/ distilled water containing 10 grams glycerol. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

*Advice : Recommended for the microbiological assay of Bleomycin sulphate.*

**Principle And Interpretation**

This medium is formulated in accordance to European Pharmacopoeia (1). This medium is employed widely as base agar for agar diffusion assay of Bleomycin using *Mycobacterium smegmatis*. It is also used for preparing the inoculum of *Mycobacterium smegmatis* for assay.

The nutrients essential for growth of test organism is provided by peptone and meat extract in this medium. Agar provides excellent solid substratum for support and over layering of seed agar, for the assay of Bleomycin. Addition of glycerol is important for provision of carbon to the test organism.

To perform the antibiotic assay the Base Agar should be prepared on the same day as the test. For the cylinder method, a base layer of 21 ml is required. Once the base medium has solidified, seed layer inoculated with the standardized culture can be overlaid. Even distribution of the layer is important.

**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.

**Reaction**

After sterilization, reaction of 3.8% w/v aqueous solution containing 1% glycerol. pH : 7.0±0.1

**pH**

6.90-7.10

**Cultural Response**

ME553: 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>Recovery</th>
<th>Antibiotic assayed</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Mycobacterium smegmatis</em> ATCC 607</td>
<td>50-100</td>
<td>good-luxuriant</td>
<td>&gt;=70%</td>
<td>Bleomycin sulphate</td>
</tr>
</tbody>
</table>

**Storage and Shelf Life**

Please refer disclaimer Overleaf.
Store below 30°C in tightly closed container and use freshly prepared medium. Use before expiry date on the label.

**Reference**

1. European Pharmacopoeia, 2011, European Department, for the Quality of Medicines.