Antibiotic Assay Medium No.11

Antibiotic Assay Medium No.11 is used for microbiological assay of antibiotics in accordance with United States Pharmacopoeia.

### Composition**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Gms / Litre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peptone</td>
<td>6.000</td>
</tr>
<tr>
<td>Pancreatic digest of casein</td>
<td>4.000</td>
</tr>
<tr>
<td>Yeast extract</td>
<td>3.000</td>
</tr>
<tr>
<td>Beef extract</td>
<td>1.500</td>
</tr>
<tr>
<td>Dextrose</td>
<td>1.000</td>
</tr>
<tr>
<td>Agar</td>
<td>15.000</td>
</tr>
<tr>
<td>pH after sterilization</td>
<td>8.3±0.1</td>
</tr>
</tbody>
</table>

**Formula adjusted, standardized to suit performance parameters

### Directions

Suspend 30.5 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 or as desired.

Advice: Recommended for the microbiological assay of Erythromycin, Gentamycin, Neomycin, Sisomycin, Netilmicin and Paromomycin.

### Principle And Interpretation

This medium is formulated in accordance to USP and CFR; and is employed to analyze the neomycin content as per FDA and the USP (1,2). It is indentical numerically with the name assigned by Grove and Randall (3). This medium provides a pH range of 8.3 while Antibiotic assay medium no.1 provides pH range of 6.5-6.7.

Peptone, pancreatic digest of casein, yeast and beef extract supply essential nutrients, vitamins, mineral, trace elements and growth factors. Dextrose in the medium serves as the carbon source for stimulating the growth of the test microorganism. Agar provides excellent medium for antibiotic diffusion and gives well defined zones of inhibition. Higher pH provides the optimal conditions for activity of antibiotic and also supports the growth of test organisms.

Freshly prepared plates should be used for antibiotic assays. Test organisms are inoculated in sterile seed agar pre-cooled to 40-45°C and spread evenly over the surface of solidified base agar. All conditions in the microbiological assay must be controlled carefully.

### 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 of 3.05% w/v aqueous solution after sterilization.

- **pH**
  8.20-8.40

- **Growth Promotion Test**
  As per US Pharmacopoeia

### Cultural Response

Please refer disclaimer Overleaf.
MU004: Cultural characteristics observed after an incubation at 32-35°C for 24 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>Micrococcus luteus ATCC 9341</em></td>
<td>50-100</td>
<td>luxuriant</td>
<td>&gt;=70%</td>
<td>Erythromycin</td>
</tr>
<tr>
<td><em>Staphylococcus epidermidis ATCC 12228</em></td>
<td>50-100</td>
<td>luxuriant</td>
<td>&gt;=70%</td>
<td>Gentamicin, Netilmicin, Neomycin, Sisomicin, Paromomycin</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**


Disclaimer:

User must ensure suitability of the product(s) in their application prior to use. Products conform solely to the information contained in this and other related HiMedia™ publications. The information contained in this publication is based on our research and development work and is to the best of our knowledge true and accurate. HiMedia™ Laboratories Pvt Ltd reserves the right to make changes to specifications and information related to the products at any time. Products are not intended for human or animal or therapeutic use but for laboratory, diagnostic, research or further manufacturing use only, unless otherwise specified. Statements contained herein should not be considered as a warranty of any kind, expressed or implied, and no liability is accepted for infringement of any patents.