Antibiotic Assay Medium C

Antibiotic Assay Medium C is used as the broth medium in turbidimetric or serial dilution assay of a wide variety of antibiotics in accordance with Indian Pharmacopoeia.

**Composition**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Gms / Litre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peptone</td>
<td>5.000</td>
</tr>
<tr>
<td>Yeast extract</td>
<td>1.500</td>
</tr>
<tr>
<td>Beef extract</td>
<td>1.500</td>
</tr>
<tr>
<td>Dextrose</td>
<td>1.000</td>
</tr>
<tr>
<td>Sodium chloride</td>
<td>3.500</td>
</tr>
<tr>
<td>Dipotassium hydrogen phosphate</td>
<td>3.680</td>
</tr>
<tr>
<td>Potassium dihydrogen phosphate</td>
<td>1.320</td>
</tr>
<tr>
<td>pH after sterilization</td>
<td>7.0±0.05</td>
</tr>
</tbody>
</table>

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

**Directions**

Suspend 17.5 grams in 1000 ml purified/distilled water. Heat if necessary to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

*Advice: Recommended for the microbiological assay of Amikacin, Doxycycline, Gentamicin, Neomycin, Novobiocin, Oxytetracycline, Streptomycin, Tetracycline, Tobramycin, Tylosin.*

**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. 3 is used as the broth medium in the turbidimetric or serial dilution assay of a wide variety of antibiotics. This medium is formulated in accordance with the Indian Pharmacopoeia (2). Turbidimetric antibiotic assay is based on the change or inhibition of growth of a test microorganism in a liquid medium containing a uniform concentration of an antibiotic. After incubation of the test organism in the working dilutions of the antibiotics, the amount of growth is determined by measuring the light transmittance using spectrophotometer. The concentration of antibiotic is determined by comparing amounts of growth obtained with that given by the reference standard solutions. Use of this method is appropriate only when test samples are clear.

Peptone, yeast extract and beef extract are the sources of essential nutrients and growth factors. Dextrose is the source of energy. Sodium chloride maintains the osmotic equilibrium of the medium. Phosphates maintain the buffering action in the medium.

**Quality Control**

**Appearance**
Cream to yellow coloured homogeneous free flowing powder

**Colour and Clarity of prepared medium**
Light yellow coloured clear solution without any precipitate

**pH**
6.95-7.05

**Cultural Response**
MM042: Cultural characteristics observed after an incubation at specified temperature for 24 hours.

<table>
<thead>
<tr>
<th>Organism</th>
<th>Inoculum (CFU)</th>
<th>Growth</th>
<th>Serial dilution with</th>
<th>Incubation Temperature</th>
</tr>
</thead>
</table>

Please refer disclaimer Overleaf.
### Klebsiella pneumoniae
**ATCC 10031**
- luxuriant growth
- Requires Streptomycin at 36-37°C

### Staphylococcus aureus
**ATCC 29737**
- luxuriant growth
- Resistant to Amikacin, Doxycycline, Kanamycin sulphate, Oxytetracycline, Tetracycline, Tobramycin, Tylosin
  
- Requires 32-35°C

### 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
2. Indian Pharmacopoeia 2010, Ministry of Health and Family welfare, Government of India, New Delhi

---

**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.