Antibiotic Assay Medium E

Antibiotic Assay Medium E is used for microbiological assay of Neomycin sulphate and Framycetin sulphate using Bacillus subtilis ATCC 6633 and Bacillus pumilus NCTC 8241 in accordance with British 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>Disodium hydrogen phosphate,12H2O</td>
<td>26.900</td>
</tr>
<tr>
<td>Meat extract</td>
<td>3.000</td>
</tr>
<tr>
<td>Agar</td>
<td>10.000</td>
</tr>
<tr>
<td>pH after sterilization</td>
<td>7.9±0.1</td>
</tr>
</tbody>
</table>

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

**Directions**

Suspend 28.67 grams of dehydrated powder in 1000 ml R-water/ purified / distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Adjust the pH of the medium, using freshly prepared buffer solution as recommended by the British pharmacopoeia for the antibiotic assayed.

Advice: Recommended for the microbiological assay of Framycetin sulphate and Neomycin sulphate.

**Principle And Interpretation**

This medium is formulated in accordance to British Pharmacopoeia (1). This medium is widely used for as seed agar in plate assay of Framycetin sulphate and Neomycin sulphate using Bacillus subtilis and/or Bacillus pumilus as test organism.

Peptone and meat extract supplies nutrients essential for microbial growth. Phosphates are incorporated in the medium to provide good buffering action. The low concentration of agar facilitates proper diffusion of antibiotic in the seed agar.

Freshly prepared plates should be used for antibiotic assays. Test organisms are inoculated in sterile seed agar cooled to 40-45°C and spread evenly over the surface of solidified base agar. Zones of inhibition around the antibiotic are then measured. All conditions in the microbiological assay must be controlled carefully. The use of standard culture media in the test is one of the important step for the good results.

**Quality Control**

**Appearance**

Cream to yellow coloured homogeneous free flowing powder

**Gelling**

Firm, comparable with 1.0% Agar gel.

**Colour and Clarity of prepared medium**

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

**pH**

7.80-8.00

**Cultural Response**

M1347B: Cultural characteristics observed after an incubation at 30-37°C for 18-24 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>Bacillus pumilus NCTC 824150-100</td>
<td>luxuriant</td>
<td>&gt;=70%</td>
<td>Neomycin sulphate and Framycetin sulphate</td>
<td></td>
</tr>
</tbody>
</table>
Bacillus subtilis ATCC 6633  50-100  luxuriant  >=70%  Neomycin sulphate and Framycetin sulphate

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

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