Penicillin and Pimaricin Pseudomonas Agar Base (PP Pseudomonas Agar Base)

**Intended Use:**
Recommended for selective isolation of *Pseudomonas* species on addition of supplements.

**Composition**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Gms / Litre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gelatin peptone</td>
<td>16.000</td>
</tr>
<tr>
<td>Tryptone</td>
<td>10.000</td>
</tr>
<tr>
<td>Potassium sulphate</td>
<td>10.000</td>
</tr>
<tr>
<td>Magnesium chloride</td>
<td>1.400</td>
</tr>
<tr>
<td>Agar</td>
<td>15.000</td>
</tr>
<tr>
<td>Final pH (at 25°C)</td>
<td>7.2±0.2</td>
</tr>
</tbody>
</table>

**Directions**

Suspend 52.4 grams in 1000 ml purified / distilled water containing 5 ml glycerol. 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 and aseptically add sterile rehydrated contents of PP Pseudomonas Selective Supplement (FD264) and PP Pseudomonas Selective Supplement II (FD265). Mix well and pour into sterile Petri plates.

**Principle And Interpretation**

*Pseudomonas* species are aerobic, non-spore forming, gram negative rods, found in water, soil and plants including fruits and vegetables. *Pseudomonas aeruginosa* has become increasingly recognized as an emerging opportunistic pathogen of clinical relevance especially in patients with compromised host defense mechanisms. Several different epidemiological studies have found its occurrence as a nosocomial pathogen (6). *P. aeruginosa* strains produces two types of soluble pigments, the fluorescent pigment pyoverdin and the blue pigment pyocyanin. Pyocyanin (from "pyocyaneus") refers to "blue pus", which is a characteristic of suppurative infections caused by *P. aeruginosa*. Penicillin and Pimaricin Pseudomonas Agar Base is formulated as recommended by ISO Committee (3). The medium contains gelatin peptone and tryptone which serves provides essential nitrogenous nutrients and carbon, long chain amino acids and vitamins required for the growth of *Pseudomonas*. Potassium sulphate and magnesium chloride serves to enhance pigment production. Addition of PP Pseudomonas Selective Supplement which contains Penicillin and PP Pseudomonas Selective Supplement II which contains Pimaricin (natamycin) to the medium helps in the selective isolation of *Pseudomonas*, thereby inhibiting the accompanying flora.

**Type of specimen**

Food and dairy samples; Water samples

**Specimen Collection and Handling**

For food and dairy samples, follow appropriate techniques or sample collection and processing as per guidelines (1,6,7). For water samples, follow appropriate techniques or sample collection, processing as per guidelines and local standards (2). After use, contaminated materials must be sterilized by autoclaving before discarding.

**Warning and Precautions**

Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling specimens. Safety guidelines may be referred in individual safety data sheets.
Limitations
1. Due to variable nutritional requirements, some strains show poor growth on this medium.

Performance and Evaluation
Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control
Appearance
Cream to yellow homogeneous free flowing powder

Gelling
Firm, comparable with 1.5% Agar gel

Colour and Clarity of prepared medium
Yellow coloured clear to slightly opalescent gel forms in Petri plates

Reaction
Reaction of 5.24% w/v aqueous solution (containing 1% v/v glycerol) at 25°C. pH : 7.2±0.2

pH
7.00-7.40

Cultural Response
Cultural characteristics observed with added 1% glycerol after an incubation at 35-37°C for 18-24 hours.

<table>
<thead>
<tr>
<th>Organism</th>
<th>Inoculum (CFU)</th>
<th>Growth</th>
<th>Recovery</th>
<th>Colour of colony</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Pseudomonas fluorescens</em> ATCC 13525</td>
<td>50-100</td>
<td>luxuriant</td>
<td>&gt;=50%</td>
<td>greenish yellow</td>
</tr>
<tr>
<td><em>Pseudomonas aeruginosa</em> ATCC 27853 (00025*)</td>
<td>50-100</td>
<td>luxuriant</td>
<td>&gt;=50%</td>
<td>greenish yellow</td>
</tr>
<tr>
<td><em>Escherichia coli</em> ATCC 25922 (00013*)</td>
<td>&gt;=10⁴</td>
<td>inhibited</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td>Subspecies aureus ATCC 25923 (00034*)</td>
<td>&gt;=10⁴</td>
<td>inhibited</td>
<td>0%</td>
<td></td>
</tr>
</tbody>
</table>

Key : (*) Corresponding WDCM numbers.

Storage and Shelf Life
Store between 10-30°C in a tightly closed container and the prepared medium at 2-8°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle inorder to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use. Use before expiry date on the label. Product performance is best if used within stated expiry period.

Disposal
User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (4,5).

Reference

Please refer disclaimer Overleaf.

Disclaimer:

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