Pseudomonas Agar (For Pyocyanin)

Pseudomonas Agar (For Pyocyanin) is recommended for the detection of pyocyanin production by Pseudomonas species.

**Composition**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Gms / Litre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peptic digest of animal tissue</td>
<td>20.000</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>7.0±0.2</td>
</tr>
</tbody>
</table>

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

**Directions**

Suspend 46.4 grams in 1000 ml distilled water containing 10 ml glycerol. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

**Principle And Interpretation**

Pseudomonas Agar is based on the formulation described by King et al (1) and as recommended in U.S. Pharmacopoeia (2) for detecting pyocyanin, a water soluble pigment by Pseudomonas species (3). This medium enhances the elaboration of pyocyanin but inhibits the formation of fluorescein pigment. The fluorescein pigment diffuses from the colonies of Pseudomonas into the agar and shows blue colouration. Some Pseudomonas strains produce small amounts of fluorescein resulting in a blue-green colouration.

Potassium sulphate and magnesium chloride, which enhances the pyocyanin production and suppresses the fluorescein production. A pyocyanin-producing Pseudomonas strain will usually also produce fluorescein. It must, therefore, be differentiated from other simple fluorescent pseudomonads by other means. Temperature can be a determining factor as most other fluorescent strains will not grow at 35°C. Rather, they grow at 25-30°C (3).

**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 4.64% w/v aqueous solution containing 1% v/v glycerol at 25°C, pH: 6.80-7.20

**pH**
6.80-7.20

**Cultural Response**
Cultural response was 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>Observed Lot value (CFU)</th>
<th>Recovery</th>
<th>Colour of Medium</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pseudomonas aeruginosa</td>
<td>50 -100</td>
<td>luxuriant</td>
<td>25 -100</td>
<td>&gt;=50 %</td>
<td>blue-green</td>
</tr>
<tr>
<td>ATCC 9027</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
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<td>25 -100</td>
<td>&gt;=50 %</td>
<td>blue-green</td>
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<tr>
<td>ATCC 27853</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Please refer disclaimer Overleaf.
Storage and Shelf Life

Store below 30°C in tightly closed container and the prepared medium at 2 - 8°C. Use before expiry date on the label.

Reference


Disclaimer:

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