Potato Dextrose Agar w/ 0.1 Chloramphenicol

Potato Dextrose Agar w/ chloramphenicol is recommended for the selective isolation and enumeration of yeasts and moulds from dairy and other food products.

**Composition**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Gms / Litre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potatoes, infusion from</td>
<td>200.000</td>
</tr>
<tr>
<td>Dextrose</td>
<td>20.000</td>
</tr>
<tr>
<td>Agar</td>
<td>15.000</td>
</tr>
<tr>
<td>Chloramphenicol</td>
<td>0.100</td>
</tr>
<tr>
<td>Final pH (at 25°C)</td>
<td>5.6±0.2</td>
</tr>
</tbody>
</table>

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

**Directions**

Suspend 39.10 grams in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15lbs pressure (121°C) for 15 minutes. Mix well before dispensing. In specific work, when pH 3.5 is required, acidify the medium with sterile 10% tartaric acid. The amount of acid required for 100 ml. of sterile, cooled medium is approximately 1 ml. Do not heat the medium after addition of the acid.

**Principle And Interpretation**

Potato Dextrose Agar is recommended by APHA (1) and F.D.A. (2) for plate counts of yeasts and moulds in the examination of foods and dairy products (3). Potato Dextrose Agar is also used for stimulating sporulation, for maintaining stock cultures of certain dermatophytes and for differentiation of typical varieties of dermatophytes on the basis of pigment production (4). Potato Dextrose Agar with chloramphenicol is recommended for the selective isolation of fungi.

Potato infusion and dextrose promote luxuriant fungal growth. Adjusting the pH of the medium by tartaric acid to 3.5, inhibits the bacterial growth. Heating the medium after acidification should be avoided as it may hydrolyse the agar which can render the agar unable to solidify. Chloramphenicol inhibits a wide range of Gram-positive and Gram-negative bacteria which makes the medium selective for fungi (5).

**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 amber coloured clear to slightly opalescent gel forms in Petri plates

**Reaction**

pH of 3.91% w/v aqueous solution at 25°C. pH : 5.6±0.2

pH 5.40-5.80

**Cultural Response**

Cultural Response was observed at 20-25°C for 2-7 day's. Recovery rate is considered as 100% for fungus growth on Sabouraud Dextrose Agar

**Cultural Response**

<table>
<thead>
<tr>
<th>Organism</th>
<th>Inoculum (CFU)</th>
<th>Growth</th>
<th>Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Aspergillus brasiliensis</em> ATCC 16404</td>
<td>50-100</td>
<td>good-luxuriant</td>
<td></td>
</tr>
</tbody>
</table>
Candida albicans ATCC 10231 50-100 good-luxuriant >=50%
Escherichia coli ATCC 25922 >=10³ inhibited 0%
Lactobacillus casei ATCC 334 >=10³ inhibited 0%
Saccharomyces cerevisiae ATCC 9763 50-100 good-luxuriant >=50%
Trichophyton rubrum ATCC 28191 50-100 good-luxuriant
Escherichia coli NCTC 9002 >=10³ inhibited 0%
Escherichia coli ATCC 8739 >=10³ inhibited 0%

*Key: Formerly known as Aspergillus niger

Storage and Shelf Life
Store between 15-25°C in tightly closed container and the prepared medium at 2-8°C. Use before expiry date on the label.

Reference
5. Lorian (Ed.), 1980, Antibiotics In Laboratory Medicine, Williams and Wilkins, Baltimore

Revision: 0/2014

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