Agar Medium C (Sabouraud-Glucose Agar Medium with Chloramphenicol)

Sabouraud Glucose Agar Medium with Chloramphenicol is recommended for selective cultivation of yeasts and moulds in accordance with British Pharmacopeia.

**Composition**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Gms / Litre</th>
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</thead>
<tbody>
<tr>
<td>Peptones (meat and casein)</td>
<td>10.000</td>
</tr>
<tr>
<td>Glucose monohydrate</td>
<td>40.000</td>
</tr>
<tr>
<td>Chloramphenicol</td>
<td>0.050</td>
</tr>
<tr>
<td>Agar</td>
<td>15.000</td>
</tr>
<tr>
<td>Final pH (at 25°C)</td>
<td>5.6±0.2</td>
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</tbody>
</table>

**Directions**

Suspend 61.41 grams of dehydrated medium in 1000 ml purified/distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Mix well before pouring into sterile Petri plates.

**Principle And Interpretation**

Sabouraud Glucose Agar Medium with Chloramphenicol is cited as Medium C and recommended for cultivation of yeasts and moulds by British Pharmacopoeia (1). This medium was described originally by Sabouraud (2) for the cultivation of fungi, particularly useful for the fungi associated with skin infections. The medium is often used with antibiotics such as Chloramphenicol (3) for the isolation of pathogenic fungi from materials containing large numbers of fungi or bacteria. Peptones (from meat and casein) provide nitrogenous compounds. Glucose monohydrate provides an energy source. Chloramphenicol inhibits a wide range of Gram-positive and Gram-negative bacteria, which makes the medium selective for fungi (4). The low pH favours fungal growth and inhibits contaminating bacteria from clinical specimens (5).

Some pathogenic fungi may produce infective spores which are easily dispersed in air, so examination should be carried out in safety cabinet.

**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

pH of 6.14% w/v aqueous solution at 25°C (after sterilization).

**pH**

5.40-5.80

**Growth Promotion Test**

Cultural response was observed in accordance with BP, after an incubation at 20-25 °C for <=5 days. Recovery rate is considered as 100% for bacteria growth on Soybean Casein Digest Agar and fungus growth on Sabouraud Dextrose Agar.
Cultural response

**Candida albicans ATCC 10231**
- 50 -100 Luxuriant (white colonies) 25 - 100 >50 % 20 - 25 °C <=5 d

*Aspergillus brasiliensis ATCC 16404*
- 50 -100 luxuriant 25 - 100 >50 % 20 - 25 °C <=5 d

**Candida albicans ATCC 2091**
- 50 -100 luxuriant 25 - 100 >50 % 20 - 25 °C <=5 d

**Saccharomyces cerevisiae ATCC 9763**
- 50 -100 luxuriant 35 - 100 >50 % 20 - 25 °C <=5 d

**Escherichia coli ATCC 25922**
- >=10⁹ inhibited 0 0 % 20 - 25 °C <=5 d

**Escherichia coli ATCC 8739 >=10⁹**
- inhibited 0 0 % 20 - 25 °C <=5 d

**Escherichia coli NCTC 9002 >=10⁹**
- inhibited good 0 0 % 20 - 25 °C <=5 d

**Trichophyton rubrum ATCC 50 -100 28191**
- good inhibited 0 0 % 20 - 25 °C <=5 d

**Lactobacillus casei ATCC 334**
- >=10⁹ inhibited 0 0 % 20 - 25 °C <=5 d

Key: * - Formely 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


Disclaimer:

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