**Corn Meal Agar**

**Intended use**

Corn Meal Agar is recommended for chlamyospore production by *Candida albicans* and the maintenance of fungal stock cultures.

**Composition**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Gms / Litre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corn meal, infusion from</td>
<td>50.000</td>
</tr>
<tr>
<td>Agar</td>
<td>15.000</td>
</tr>
<tr>
<td>Final pH ( at 25°C)</td>
<td>6.0±0.2</td>
</tr>
</tbody>
</table>

**Directions**

Suspend 17 grams in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. If desired add 1% polysorbate 80. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C. Mix well and pour into sterile Petri plates.

**Principle And Interpretation**

Chlamyospore production is an accepted criterion for the identification of *Candida* species. Corn Meal Agar is a well-established mycological medium used for the cultivation of fungi and to study chlamyospores production of *Candida* species (1). Corn Meal Agar is a general purpose medium used for the cultivation of fungi and for the study of *Candida* species for chlamyospore production. Pollack and Benham (1) have described the usefulness of this medium for studying the morphology of *Candida*. Walker and Huppert (2) modified this medium by adding polysorbate 80, which then stimulated faster and plenty of chlamyospore formation of *Candida* species.

This is a very simple formulation containing only cornmeal infusion and agar. However this infusion has enough nutrients to enhance the growth of fungi. Polysorbate 80 is a mixture of oleic esters, which activates the production of chlamyospore by *Candida albicans*, *Candida stellatoide* and *Candida tropicalis* (3). Some *Candida* species lose their ability of chlamyospore formation by repeated sub culturing.

Pick a suspected colony from Sabouraud Dextrose Agar (M063) using a straight wire, and make a deep cut in the Corn Meal Agar plate. Repeat for each colony. Place a flamed sterile coverslip over the line of inoculum. After incubation for 24-48 hours at 25-30°C, the streaks are examined microscopically, through the coverslip, using low and high power objectives. *C.albicans* produces mycelium bearing ball-like clusters of budding cells and characteristics thick walled round chlamyospores (4).

**Type of specimen**

Food and dairy samples

**Specimen Collection and Handling:**

For food and dairy samples, follow appropriate techniques for sample collection and processing as per guidelines (7,8). 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 :**

Further biochemical tests must be carried out for confirmation.

**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.

*Please refer disclaimer Overleaf.*
Quality Control

Appearance
Cream to yellow coarse free flowing powder

Gelling
Firm, comparable with 1.5% Agar gel

Colour and Clarity of prepared medium
Light amber coloured, opalescent gel forms in Petri plates

Reaction
Reaction of 1.7% w/v aqueous solution at 25°C. pH : 6.0±0.2

pH
5.80-6.20

Cultural Response
M146: Cultural characteristics observed after an incubation at 23-27°C for upto 4 days.

<table>
<thead>
<tr>
<th>Organism</th>
<th>Inoculum (CFU)</th>
<th>Growth</th>
<th>Chlamydospores</th>
<th>Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aspergillus brasiliensis ATCC 16404</td>
<td>50-100</td>
<td>luxuriant</td>
<td>negative</td>
<td></td>
</tr>
<tr>
<td>Candida albicans ATCC 10231 (00054*)</td>
<td>50-100</td>
<td>luxuriant</td>
<td>positive</td>
<td>&gt;=70%</td>
</tr>
<tr>
<td>Saccharomyces cerevisiae ATCC 9763 (00058*)</td>
<td>50-100</td>
<td>luxuriant</td>
<td>negative</td>
<td>&gt;=70%</td>
</tr>
<tr>
<td>Saccharomyces uvarum ATCC 28098</td>
<td>50-100</td>
<td>luxuriant</td>
<td>negative</td>
<td>&gt;=70%</td>
</tr>
</tbody>
</table>

Storage and Shelf Life
Store between 10-30°C in a tightly closed container and the prepared medium at 20-30°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 (5,6).

Reference

Revision : 03/2018

Disclaimer:
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