Bi.G.G.Y Agar Plate (Nickerson Agar Plate)

**Intended Use:**
Recommended for detection, selective isolation, differentiation and presumptive identification of *Candida albicans* and *Candida tropicalis*.

**Composition**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Gms / Litre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yeast extract</td>
<td>1.000</td>
</tr>
<tr>
<td>Glycine</td>
<td>10.000</td>
</tr>
<tr>
<td>Dextrose (Glucose)</td>
<td>10.000</td>
</tr>
<tr>
<td>Ammonium Bismuth Citrate</td>
<td>5.000</td>
</tr>
<tr>
<td>Sodium sulphite</td>
<td>3.000</td>
</tr>
<tr>
<td>Agar</td>
<td>16.000</td>
</tr>
<tr>
<td>Final pH (at 25°C)</td>
<td>6.8±0.2</td>
</tr>
</tbody>
</table>

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

**Directions**

Either streak, inoculate or surface spread the test inoculum (50-100 CFU) aseptically on the plate.

**Principle And Interpretation**

In a study of sulphite reduction by yeasts, the ability of many types of yeast to reduce bismuth sulphite was noted. Growth on an acidic or neutral medium containing bismuth sulphite produced black colonies because of the extra cellular reaction of the bismuth sulphite to bismuth sulphide.

Bi.G.G.Y. Agar (Nickerson Agar) was originally formulated by Nickerson (7,8) and further modified by Haley (1) following study of sulphite reduction. This medium is only a part of the identification process of organisms. Other tests may be required. Bismuth ammonium citrate and sodium sulphite together act as selective agents for *Candida* species suppressing bacterial growth, at the same time indicating substrate reduction to yield bismuth sulphite which helps to presumptively identify *Candida* species. Yeast extract, dextrose and glycine serve as nutrients. Bi.G.G.Y. Agar can be directly inoculated with clinical specimens such as tissues, skin scrapings, hair, nail clipping etc. (4,5). Do not use slants of medium. Precipitate present in molten medium should be uniformly suspended while plating the agar.

This medium may be used for the isolation and presumptive identification of *C.albicans* and *C.tropicalis* from sputum (1) and vaginal smears (6).

**Type of specimen**
Clinical samples - blood, sputum, vaginal swabs, tissues, skin scrapings, hair, nail clipping

**Specimen Collection and Handling:**

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (2,3). After use, contaminated materials must be sterilized by autoclaving before discarding.

**Warning and Precautions :**

In Vitro diagnostic Use only. 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 clinical specimens. Safety guidelines may be referred in individual safety data sheets.

**Limitations:**

1. Individual organisms differ in their growth requirement and may show variable growth patterns on the medium
2. Each lot of the medium has been tested for the organisms specified on the COA. It is recommended to users to validate the medium for any specific microorganism other than mentioned in the COA based on the user’s unique requirement.

Please refer disclaimer Overleaf.
Technical Data

Organism

Inoculum (CFU) | Growth | Recovery | Colony morphology
---|---|---|---
*Candida albicans ATCC 10231 (00054*) | 50-100 | luxuriant | >=50% smooth, circular intensly brown black, no colour diffusion and no sheen
*Candida kruusei ATCC 24408 | 50-100 | luxuriant | >=50% large flat, wrinkled silvery brown, black colonies with brown peripheries, yellow halo smooth
candid *Candida tropicalis ATCC 750 | 50-100 | luxuriant | >=50% discrete, dark brown with black centres, diffused blackening after 72 hours, sheen, slight mycelial fringe

Escherichia coli ATCC 25922 (00013*)
>=10^4 | inhibited | 0%

Staphylococcus aureus subsp. aureus ATCC 25923 (00034*)
>=10^4 | inhibited | 0%

*Candida pseudotropicalis
50-100 | Good | 40-50% Dark reddish brown, glistening colony

Key : *Corresponding WDCM numbers.

3. DO NOT AUTOCLAVE OR OVERHEAT. Overheating will destroy the selective properties.
4. Further biochemical and serological tests must be carried out for further identification.
5. It is recommended to store the plates at 24-30°C to avoid minimum condensation.

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
Sterile Bi.G.G.Y.(Nickerson) Agar in 90mm disposable plates.

Colour of medium
White to Off white coloured medium

Quantity of medium
25ml of medium in 90 mm disposable plate

Reaction
6.60-7.00

Sterility Test
Passes release criteria

Cultural Response
Cultural characteristics observed after an incubation at 25-30°C for 18-48 hours.
Storage and Shelf Life
On receipt store between 20-30°C. 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 (2,3).

Reference

Disclaimer:
User must ensure suitability of the product(s) in their application prior to use. Products conform solely to the information contained in this and other related HiMedia™ publications. The information contained in this publication is based on our research and development work and is to the best of our knowledge true and accurate. HiMedia™ Laboratories Pvt Ltd reserves the right to make changes to specifications and information related to the products at any time. Products are not intended for human or animal or therapeutic use but for laboratory, diagnostic, research or further manufacturing use only, unless otherwise specified. Statements contained herein should not be considered as a warranty of any kind, expressed or implied, and no liability is accepted for infringement of any patents.