



Ready Prepared Media

Technical Information

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

Product Code: PM 1217

Application: For detection, selective isolation, differentiation and presumptive identification of *Candida albicans* and *Candidatropicalis* .

Composition**

Ingredients	Gms / Litre
Yeast extract	1.000
Glycine	10.000
Dextrose	10.000
Bismuth ammonium citrate	5.000
Sodium sulphite	3.000
Agar	16.000

**Formula adjusted, standardized to suit performance parameters

Principle & 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 (1,2) and further modified by Haley (3) 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 (3) and vaginal smears (6). TSA plates (4).

Directions

Ready to use sterile poured plates of Bi.G.G.Y. agar plate, requires no preparation of media & helps to obtain exact no. of the microorganisms. These plates are very useful in detecting the presence of microorganisms by conventional inoculation method; also growth promotion test can be carried out by ISO 11130. Or Either streak, inoculate or surface spread the test inoculum (50-100 CFU) aseptically on the plate.

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 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.
3. It is recommended to store the plates at 24-30°C to avoid minimum condensation .



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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 .

Methodology

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

Quality Control

Appearance

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

Colour

White to Off white coloured medium

Quantity of medium

25ml of medium in disposable plate

Reaction

6.60- 7.00

Cultural response

Cultural characteristics observed after incubation at 25-30°C for 18-48 hours.

Sterility test

Passes release criteria

Cultural Response

Oragnism	Inoculum (CFU)	Growth	Recovery	Colony morphology
Cultural response				
<i>Candida albicans</i> ATCC 10231	50-100	luxuriant	>=50%	smooth, circular intently brown black, no colour diffusionand no sheen
<i>Candida krusei</i> ATCC 24408	50-100	luxuriant	>=50%	large flat, wrinkled silvery brown,black colonieswith brown peripheries, yellow halo
<i>Candida tropicalis</i> ATCC 750	50-100	luxuriant	>=50%	smooth discrete, dark brown with black centres, diffused blackening after 72 hours, sheen, slight mycelial fringe
<i>Escherichia coli</i> ATCC 25922	>=10 ³	Inhibited	0%	
<i>Staphylococcus Aureus</i> ATCC 25923	>=10 ³	Inhibited	0%	
<i>Candida pseudotropicalis</i>	50-100	Good	40-50%	Dark reddishbrown, glistening colony

Storage and Shelf Life

Store at 15-25°C. Use before expiry date on the label.

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 (2,4).



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Further Reading

1. Nickerson W.J., 1947, The Chronica, Botanica Co.
2. Nickerson W.J., 1953, J. Inf. Dis., 93:43.
3. Haley L.D., 1959, Trans. N.Y. Acad. Sci., 21(8):708.
4. Lennette, Balows, Hausler and Shadomy (Eds.), 1985, Manual of Clinical Microbiology, 4th ed., A.S.M. Washington, D.C.
5. MacFaddin J.F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. I, Williams and Wilkins, Baltimore.
6. Mendel E.B., Naberman S. and Hall D. K., 1960, Obstet and Gynec. 16, 180-184.

Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
- The product conform solely to the technical information provided in this booklet and to the best of knowledge research and development work carried at **CDH** is true and accurate
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