Bismuth Glucose Glycine Yeast Agar (BiGGY)

Intended Use
Bismuth Glucose Glycine Yeast Agar (BiGGY) is used for detection, selective isolation, differentiation and presumptive identification of *Candida albicans* and *Candida tropicalis.*

Summary
BiGGY Agar is a modification of the Nickerson medium. During the study of the sulfite reduction of *Candida* species, Nickerson detected differences in this ability between the *Candida* species. He described this medium for the isolation of *Candida albicans* which can be differentiated from other *Candida* species by means of colony colour and morphology.

Principle
In BiGGY Agar, yeast extract and glucose provide the nutrients necessary for yeast growth. Glycine is an additional nutrient but also inhibits many bacterial species at the high concentration used in this medium. 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. Bismuth and sulphite combine to a brownish to black precipitate which stains the colonies and may diffuse into the medium. Also, the bismuth and sulfur compounds are inhibitory to many bacteria.

Formula*
Ingredients	**g/L**
Bismuth Ammonium Citrate	5.0
Sodium Sulphite	3.0
Glucose	10.0
Glycine	10.0
Yeast Extract	1.0
Agar	16.0
Final pH (at 25°C)	6.8 ± 0.2

*Adjusted to suit performance parameters.

Storage and Stability
Store dehydrated medium below 30°C in tightly closed container and the prepared medium at 2ºC-8°C. Avoid freezing and overheating. Use before expiry date on the label. Once opened keep powdered medium closed to avoid hydration.

Type of specimen
Clinical samples

Specimen Collection and Handling
Ensure that all samples are properly labelled.
Follow appropriate techniques for handling samples as per established guidelines.
Some samples may require special handling, such as immediate refrigeration or protection from light, follow the standard procedure.
The samples must be stored and tested within the permissible time duration.
After use, contaminated materials must be sterilized by autoclaving before discarding.

Directions

1. Suspend 45.00 g of the powder in 1000mL purified / distilled water and mix thoroughly.
2. Heat to boiling to dissolve the powder completely. DO NOT AUTOCLAVE OR OVERHEAT (over heating will destroy the selective properties).
3. Dispense the flocculant precipitate formed by swirling prior to dispensing into petridishes.

Quality Control

Dehydrated Appearance: Light yellow to yellow coloured, homogenous free flowing powder.
Prepared Appearance: White to off white coloured, opalescent gel (with a dispensible flocculant precipitate) forms in petridishes.
Cultural Response: Cultural characteristics observed after an incubation at 25°C-30°C for 18-48 hours.

Organism (ATCC)	**Growth**	**Colony morphology**
Candida albicans 3147 (10231)	Good	Smooth, circular intensly brown black, no colour diffusion and no sheen
Candida kruisei (24408)	Good	large flat, wrinkled silvery brown, black colonies with peripheries, yellow halo
brown		
Candida tropicalis (750)	Good	smooth discrete, dark brown with black centres, diffused blackning after 72 hours, sheen, slight mycelial fringe
Escherichia coli (25922)	Inhibited	-
Staphylococcus aureus subsp.	Inhibited	-
aureus (25923)		

Performance and Evaluation

Performance of the product is dependent on following parameters as per product label claim:

1. Directions
2. Storage
3. Expiry

Warranty

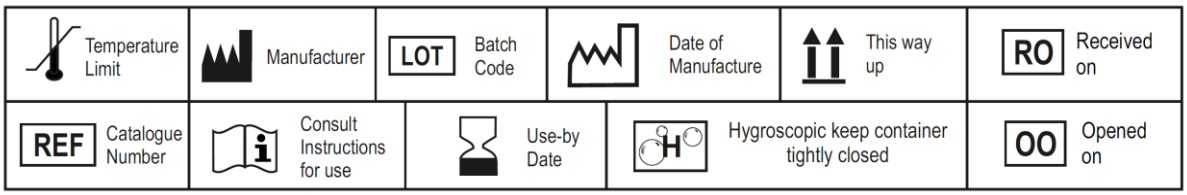
This product is designed to perform as described on the label and package insert. The manufacturer disclaims any implied warranty of use and sale for any other purpose.

Reference

1. Nickerson, W. J. 1947. Biology of pathogenic fungi. The Chronica Botanica Co., Waltham, MA. USA.
2. Nickerson, W. J. 1953. Reduction of inorganic substances by yeasts. I. Extracellular reduction of sulfite by species of Candida. J. Infect. Dis. 93:43.
3. Warren, N. G., and K. C. Hazen. 1995. Candida, Cryptococcus, and other yeasts of medical importance, p. 723-737. In P. R. Murray, E. J. Baron, M. A. Pfaller, F. C. Tenover and R. H. Yolken (ed.)., Manual of clinical microbiology, 6th ed. American Society for Microbiology, Washington, D.C.
4. MacFaddin, J. D. 1985. Media for isolation – cultivation – identification - maintenance of medical bacteria, vol. 1, p. 65-68. Williams & Wilkins, Baltimore, MD.
5. Atlas, R.M. 1993. Handbook of microbiological media. CRC Press, Boca Raton, FL, USA.
6. Larocco, M.T. 2003. Reagents, stains, and media: mycology. In: Murray, P. R., E. J. Baron, J.H. Jorgensen, M. A. Pfaller, and R. H. Yolken (ed.). Manual of clinical microbiology, 8th ed. American Society for Microbiology, Washington, D.C.
7. Data on file: Microxpress®, A Division of Tulip Diagnostics (P) Ltd.

Product Presentation:

Cat No.	Product description	Pack Size
201020170500	Dehydrated Culture Media	500 g



Revision: 0725/VER-03

Disclaimer

Information provided is based on our inhouse technical data on file, it is recommended that user should validate at his end for suitable use of the product.