

TM 238 – NICKERSON MEDIUM (Bi.G.G.Y. AGAR)

INTENDED USE

For selective isolation, differentiation & presumptive identification of Candida albicans & Candida tropicalis.

PRODUCT SUMMARY AND EXPLANATION

Bi.G.G.Y. Agar (Nickerson Agar) was originally formulated by Nickerson and further modified by Haley following study of sulphite reduction. This medium is only a part of the identification process of organisms. 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.

COMPOSITION

Ingredients	Gms / Ltr		
Yeast extract	1.000		
Glycine	10.000		
Dextrose	10.000		
Ammonium Bismuth Citrate	5.000		
Sodium sulphite	3.000		
Agar	16.000		

PRINCIPLE

In Nickerson Medium, Bismuth ammonium citrate and sodium sulphite together act as selective agents for Candida species which suppress the 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.

INSTRUCTION FOR USE

- Dissolve 45.0 grams in 1000 ml purified / distilled water.
- Heat to boiling to dissolve the medium completely. Do not autoclave or heat. Overheating will destroy the selective
- Disperse the flocculant precipitate formed by swirling prior to dispensing into Petri plates.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Cream to yellow homogeneous free flowing powder

Appearance of prepared medium : Light amber coloured, opalescent gel (with a dispersible flocculant precipitate)

forms in Petri plates.

pH (at 25°C) $: 6.8 \pm 0.2$

INTERPRETATION

Cultural characteristics observed after incubation.











Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Colony morphology	Incubation Temperature	Incubation Period
Escherichia coli	25922	>=104	Inhibited	0%	-	25-30°C	18-48 Hours
Candida kruisei	24408	10-100	Luxuriant	>=50%	Large flat, wrinkled silvery brown, black colonies with brown peripheries, yellow halo	25-30°C	18-48 Hours
Candida tropicalis	750	10-100	Luxuriant	>=50%	Smooth discrete, dark brown with black centres, diffused blackening after 72 hours, sheen, slight mycelial fringe	25-30°C	18-48 Hours
Candida albicans	00054	10-100	Luxuriant	>=50%	Smooth, circular intensly brown black, no colour diffusion and no sheen	25-30°C	18-48 Hours
Staphylococcus aureus subsp. aureus	25923	>=104	Inhibited	0%	-	25-30°C	18-48 Hours

PACKAGING:

In pack size of 500 gm bottles.

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.

Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES

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- 2. Lennette, Balows, Hausler and Shadomy (Eds.), 1985, Manual of Clinical Microbiology, 4th ed., A.S.M. Washington, D.C.
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- 5. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.
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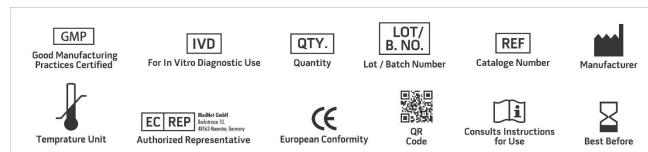








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- 8. Nickerson W.J., 1953, J. Inf. Dis., 93:43.



NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices. *For Lab Use Only Revision: 08 Nov., 2019





