

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 properties.
- 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 ± 0.2 |

INTERPRETATION

Cultural characteristics observed after incubation.

| Microorganism | ATCC | Inoculum (CFU/ml) | Growth | Recovery | Colony morphology | Incubation Temperature | Incubation Period |
|--|-------|-------------------|-----------|----------|---|------------------------|-------------------|
| <i>Escherichia coli</i> | 25922 | >=104 | Inhibited | 0% | - | 25-30°C | 18-48 Hours |
| <i>Candida krusei</i> | 24408 | 10-100 | Luxuriant | >=50% | Large flat, wrinkled silvery brown, black colonies with brown peripheries, yellow halo | 25-30°C | 18-48 Hours |
| <i>Candida tropicalis</i> | 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 |
| <i>Candida albicans</i> | 00054 | 10-100 | Luxuriant | >=50% | Smooth, circular intensely brown black, no colour diffusion and no sheen | 25-30°C | 18-48 Hours |
| <i>Staphylococcus aureus subsp. aureus</i> | 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

- Haley L.D., 1959, Trans. N.Y. Acad. Sci., 21(8):708.
- Lennette, Balows, Hausler and Shadomy (Eds.), 1985, Manual of Clinical Microbiology, 4th ed., A.S.M. Washington, D.C.
- MacFaddin J.F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. I, Williams and Wilkins, Baltimore..
- Mendel E.B., Naberman S. and Hall D. K., 1960, Obstet and Gynec.16, 180-184. Revision : 02 / 2019 HiMedia Laboratories Technical Data
- 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.
- Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.



7. Nickerson W.J., 1947, The Chronica, Botanica Co.
8. Nickerson W.J., 1953, J. Inf. Dis., 93:43.

| | | | | | |
|---|---|---|---|---|--|
|  GMP Good Manufacturing Practices Certified |  IVD For In Vitro Diagnostic Use |  QTY. Quantity |  LOT/ B. NO. Lot / Batch Number |  REF Catalogue Number |  Manufacturer |
|  Temperature Unit |  EC REP Authorized Representative <small>MedNet GmbH Borkstrasse 10, 48163 Moenster, Germany</small> |  European Conformity |  QR Code |  Consults Instructions for Use |  Best Before |

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**
Revision: 08 Nov., 2019