TM 1997 – BENNET'S BROTH

INTENDED USE

For the cultivation and maintenance of species of *Nocardia, Streptomyces* and *Micromonospora.*

PRODUCT SUMMARY AND EXPLANATION

Aerobic actinomycetes are commonly termed nocardioform. These nocardioform bacteria include organisms that are recognized human pathogens, as well as several species that are primarily found in the environment developments in cultivation and selective isolation procedures have yielded information on the occurrence, distribution, number and activity of *Nocardiaceae* family for cultivation of *Nocardiae*. Bennet's liquid medium (devoid of agar) is used for the enrichment of cultivation of Nocardiae which eventually can be isolated on Bennet's agar.

Nocardia are found worldwide in soil that is rich with organic matter. Most *Nocardia* infections are acquired by inhalation of the bacteria or through traumatic introduction. *Nocardia* are opportunistic pathogens, causing disease primarily among the young, the elderly, and those who are immunocompromised. *Nocardia* typically induce a pyogenic response with abscess formation. *Nocardia* cause disease in every region of the body. However, the regions of the body most affected are lungs, skin, eyes, and muscle. *Streptomycetes* are found predominantly in soil and in decaying vegetation, and most produce spores. *Streptomyces* are most commonly limited to causing actinomycotic mycetoma. Areas of the body more prone to formation of mycetomas are those that are frequently traumatized or that come into contact with soil. Developments in cultivation and selective isolation procedures have yielded information on the occurrence, distribution, number and activity of *Nocardiaceae* family members

COMPOSITION

Ingredients	Gms / Ltr
Yeast extract	1.000
Beef extract	1.000
Casein enzymic hydrolysate	2.000
Dextrose	10.000

PRINCIPLE

The medium contains nitrogenous nutrients such as yeast extract, beef extract and casein enzymic hydrolysate. They also serve as sources of carbon and essential growth factors. Dextrose is an energy source.

INSTRUCTION FOR USE

- Dissolve 14 grams in 1000 ml distilled water.
- Heat if necessary to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes. Dispense as desired.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder	: Cream to yellow homogeneous free flowing powder.
Appearance of prepared medium	: Light yellow coloured clear solution.
pH (at 25°C)	: 7.3±0.2

INTERPRETATION

Cultural characteristics observed after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Incubation Temperature	Incubation Period
Streptomyces griseus	10137	50-100	Luxuriant	30°C	24-48 Hours
Streptomyces lavendulae	8664	50-100	Luxuriant	30°C	24-48 Hours
Nocordia salmonicolor	39043	50-100	Luxuriant	30°C	24-48 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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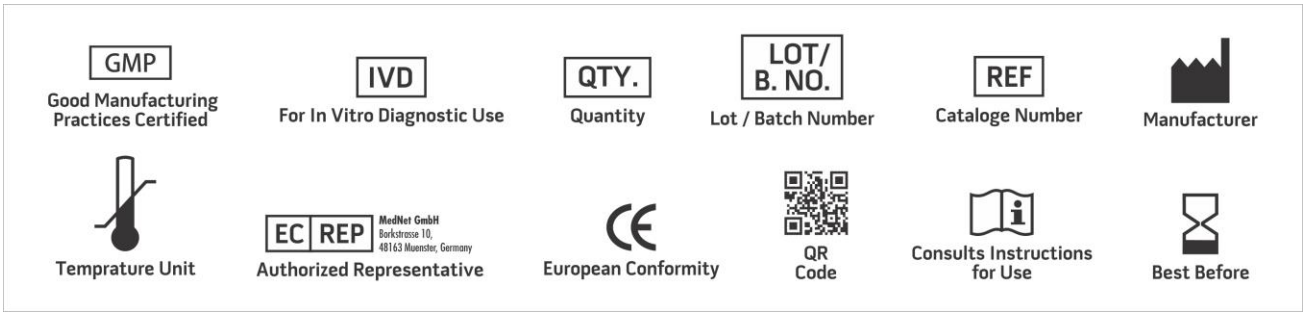
4.Murray P. R., Baron E. J., Jorgensen J. H, Pfaller M. A., Yolken R. H, (Eds.), 8th Ed., 2003, Manual of Clinical Microbiology, ASM, Washington, D.C.
5.Mahgoub E.S., 1990, Principles and Practice of Infectious Disease, 3rd Ed., Churchill Livingstone, New York. 6.Goodfellow M. and A.G. O Donnell, 1989, In: S. Baumberg, M. Rodes andI. Hunter (Ed) Microbial Products: New Approaches. Cambridge University Press, Cambridge. 343-383.



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