# Bennet's HiVeg™ Agar

**MV694**

## Intended Use:

Recommended for cultivation and enhancement of sporulation of *Nocardia* and *Streptomyces.*

## Composition**

| Ingredients | g / L |
|---|---|
| Yeast extract | 1.000 |
| HiVeg™ extract | 1.000 |
| HiVeg™ hydrolysate | 2.000 |
| Dextrose (GLucose) | 10.000 |
| Agar | 15.000 |
| Final pH ( at 25°C) | 7.3±0.2 |

**Formula adjusted, standardized to suit performance parameters

## Directions

Suspend 29.0 grams in 1000 ml purified / distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C. Mix well and pour into sterile Petri plates.

## Principle And Interpretation

*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 (1). *Streptomycetes* are found predominantly in soil and in decaying vegetation, and most produce spores. *Streptomyces* are most commonly limited to causing actinomycotic mycetoma (2). 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 (3). Bennets Agar has been recommended by Jones (4) for cultivation of Nocardia. Bennet's HiVeg™ Agar is prepared by using vegetable peptones in place of animal based peptones which make the media free of BSE/TSE risks. The medium contains nitrogenous and carbonaceous nutrients supplied by yeast extract, HiVeg™ extract and HiVeg™ hydrolysate. They also serve as sources of long chain amino acids, vitamins and essential growth factors. Dextrose is an energy source.

## Type of specimen

Please add specimens

## Specimen Collection and Handling:

After use, contaminated materials must be sterilized by autoclaving before discarding.

## 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 specimens. Safety guidelines may be referred in individual safety data sheets.

## Limitations :

1. Further biochemical and serological tests must be carried out for further identification.

## 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.

## Quality Control

**Appearance**

Cream to yellow homogeneous free flowing powder

**Gelling**

Firm, comparable with 1.5% Agar gel

**Colour and Clarity of prepared medium**

Light yellow coloured, clear to slightly opalescent gel forms in Petri plates.

**Reaction**

Reaction of 2.9% w/v aqueous solution at 25°C. pH : 7.3±0.2

**pH**

7.10-7.50

**Cultural Response**

Cultural characteristics observed after an incubation at 25-30°C for 24-48 hours.

| Organism | Growth |
|---|---|
| *Streptomyces griseus* ATCC 10137 | luxuriant |
| *Streptomyces lavendulae* ATCC 8664 | luxuriant |

## Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 20-30°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use. Product performance is best if used within stated expiry period.

## 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 sample must be decontaminated and disposed of in accordance with current laboratory techniques (5,6).

## Reference

1. 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.
2. Mahgoub E.S., 1990, Principles and Practice of Infectious Disease, 3rd Ed., Churchill Livingstone, New York.
3. Goodfellow M. and A.G. ODonnell, 1989, In: S. Baumberg, M. Rodes andI. Hunter (Ed) Microbial Products: New Approaches. Cambridge University Press, Cambridge. 343-383.
4. Jones K.L., 1949, J. Bacteriol. 57:141-145.
5. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
6. 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.

Revision : 03/2024