Van Niel's Yeast Broth (ATCC Medium 112)

M1961

Intended Use:

Recommended for cultural isolation of *Heliobacterium chlorum.*

Composition**

Ingredients	Gms / Litre
Dipotassium hydrogen phosphate	1.000
Magnesium Sulphate	0.500
Yeast Extract	10.000
Final pH (at 25°C)	7.1±0.1

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 11.50 grams in 1000ml purified / distilled water. Heat if necessary to dissolve the medium completely. Sterilize by autoclaving at 15lbs (121°C) for 15 minutes. Dispense as desired.

Principle And Interpretation

Heliobacteria are photoheterotrophic, requiring organic carbon sources. They convert light energy into chemical energy by photosynthesis. And even though they are phototrophic they can grow without light by fermentation of pyruvate. They are found in soils(2). This medium is recommended by ATCC for the cultivation and isolation of *Heliobacterium chlorum* (2).

Yeast extract in the medium is the source of nitrogen and growth factors required for the growth of microorganisms. Phosphates buffer the medium.

Type of specimen

Isolated Microorgansim

Specimen Collection and Handling

For isolated microorgansim samples follow appropriate techniques for handling specimens as per established guidelines (1). 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 testing is required for complete 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

Colour and Clarity of prepared medium

Light amber coloured clear solution in tubes

Reaction

Reaction of 1.11% w/v aqueous solution at 25°C. pH : 7.1±0.1

pH

7.00-7.20

Cultural Response
Cultural characteristics observed under anaerobic conditions after an incubation at 25-30°C for 48-72 hours.

Organism	Inoculum (CFU)	Growth
Heliobacterium chlorum ATCC 35205	50-100	good

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 clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (3,4).

Reference
1. American Type Culture Collection. Catalogue of Bacteria and phages. 18th Edition 1992.
2. Gest, H., Favinger, J. L. (1983). *Heliobacterium chlorum*, a anoxygenic brownish-green photosynthetic bacterium containing a new form of bacteriochlorophyll. Arch.Microbiol. 136 : 11-16.
3. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
4. 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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