Potato Infusion Broth

M1833

Intended Use:

Recommended for isolation of *Brucella* species.

Composition**

Ingredients	Gms / Litre
Potato infusion from	200.000
Peptone	10.000
HM peptone B #	5.000
Dextrose (Glucose)	10.000
Sodium chloride	5.000
Final pH (at 25°C)	6.8±0.2

**Formula adjusted, standardized to suit performance parameters

Equivalent to Beef extract

Directions

Suspend 34.0 grams in 1000 ml of purified / distilled water containing 20 ml of glycerol. Heat if necessary to dissolve the medium completely. Dispense into tubes or flasks or as desired. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Principle And Interpretation

Brucella is a strictly aerobic, gram-negative coccobacilli which causes Brucellosis. This organism is sometimes carried by animals and only causes incidental infections in humans. Infection usually occurs due to consumption of contaminated milk, meat or direct contact. Potato Infusion Broth is used for the isolation of *Brucella* species (2). It is also used for the cultivation of *Brucella* species in large scale for antigen and vaccine preparation. This medium enables *Brucella* species to form typical colonies when isolated from infected materials.

Potato Infusion Broth contains infusion of Potato, Peptone and HM peptone B which provide necessary nutrients required for the growth of *Brucella*. Dextrose (Glucose) serves as source of energy and sodium chloride maintains the osmotic equilibrium of the medium.

Type of specimen

Dairy samples - Milk samples.

Specimen Collection and Handling

For dairy samples, follow appropriate techniques for sample collection and processing as per guidelines (1,5).
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. Some strains may show poor growth due to nutritional variations.
2. 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

Colour and Clarity of prepared medium
Yellow coloured clear to slightly opalescent gel forms in Petri plates.

Reaction
Reaction of 3.4% w/v aqueous solution (containing 2% v/v Glycerol) at 25°C. pH : 6.8±0.2

pH
6.60-7.00

Cultural Response
Cultural characteristics observed after an incubation at 35 - 37°C for 24 - 72 hours.

Organism	Inoculum (CFU)	Growth
Bordetella bronchiseptica ATCC 4617	50-100	luxuriant
Brucella melitensis ATCC 4309	50-100	luxuriant
Brucella suis ATCC 6597	50-100	luxuriant
Streptococcus pneumoniae ATCC 6303	50-100	luxuriant

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 15-25°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 (3,4).

Reference

1. American Public Health Association, Standard Methods for the Examination of Dairy Products, 1978, 14th Ed., Washington D.C.
2. Atlas R. M., 1993, Handbook of Microbiological Media, CRC Press, Inc., Boca Raton.
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.
5. Wehr H. M. and Frank J. H., 2004, Standard Methods for the Microbiological Examination of Dairy Products, 17th Ed., APHA Inc., Washington, D.C.

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