

Brucella HiVeg™ Broth Base

MV348

Intended Use:

Recommended for enrichment and cultivation of *Brucella* or *Campylobacter* species from various samples.

Composition**

Ingredients	g / L
HiVeg™ peptone	10.000
HiVeg™ hydrolysate	10.000
Yeast extract	2.000
Dextrose (Glucose)	1.000
Sodium chloride	5.000
Sodium bisulphite	0.100
Final pH (at 25°C)	7.0±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 14.05 grams in 500 ml purified / distilled water. Heat if necessary to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C and aseptically add sterile 5% v/v inactivated horse serum (RM1239, Inactivate by heating at 56°C for 30 minutes) and add rehydrated contents of one vial of NPBCVN Selective Supplement (FD005). Mix well before pouring into sterile tubes.

For *Campylobacter*: Aseptically add sterile rehydrated contents of 1 vial of Blaser-Wang Selective Supplement (FD006) or Butzler Selective Supplement (FD007) or Skirrow Selective Supplement (FD008) and Minerals Growth Supplement (FD009) to 500 ml of sterile medium.

Principle And Interpretation

Brucella Broth Base is formulated so as to support luxuriant growth of fastidious bacteria like *Brucella* species (1). *Brucella* is an intracellular parasite that causes epizootic abortions in animals and septicemic febrile illness or localized infections of bone, tissue or organ systems in humans (2,3). *Brucella* species are highly fastidious and therefore require a nutrient rich medium to be able to grow. Also, *Brucella* species are highly infective and so extreme care should be taken while handling. The basal medium (with addition of Campylobacter Supplements) can be also used for the isolation of *Campylobacter* (4). Brucella HiVeg™ Broth Base is prepared by using vegetable peptones in place of animal based peptones which make the media free of BSE/TSE risks. HiVeg™ peptone and HiVeg™ hydrolysate provide nitrogenous and carbonaceous compounds, long chain amino acids, vitamins and other nutrients to the organisms. Yeast extract also supply some nitrogenous nutrients but mainly it serves as a source of Vitamin B complex. Dextrose serves as an energy source. It can be enriched with 5% v/v sterile defibrinated horse blood. For selective isolation of *Brucella* species, antibiotic mixtures are incorporated into the base (5,6,7). When non-selective medium is required, Brucella Broth Base may be employed with the addition of serum only (i.e. without antibiotics). It is suggested that half the tubes to be incubated in the normal atmosphere, and half in a 10% CO₂ enriched atmosphere. *Brucella* species are highly infectious and so extreme care should be taken while handling.

Type of specimen

Please add specimen

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. All presumptive anaerobic organisms must be identified by confirmatory test

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 2.81% w/v aqueous solution at 25°C. pH : 7.0±0.2

pH

6.80-7.20

Cultural Response

Cultural characteristics observed under 10% Carbon dioxide (CO₂) with added 5%v/v inactivated horse serum (RM1239) and NPBCVN Selective Supplement (FD005), after an incubation at 35-37°C for 24-72 hours

Organism	Inoculum (CFU)	Growth
<i>Brucella melitensis</i> ATCC 4309	50-100	luxuriant
<i>Escherichia coli</i> ATCC 25922 (00013*)	≥10 ⁴	inhibited
<i>Staphylococcus aureus</i> subsp. <i>aureus</i> ATCC 25923 (00034*)	≥10 ⁴	inhibited

Key : *Corresponding WDCM numbers.

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 2 - 8°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 (8,9).

Reference

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