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**Brucella Selective Medium Base**

Brucella Selective Medium Base is used for the enrichment, cultivation and identification of Brucella species.

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| REF: V.1/MB01.100 100 Gram  REF: V.1/MB01.500 500 Gram | REF: V.1/MB01.250 250 Gram |

## CLINICAL SIGNIFICANCE

## Brucellosis is a zoonotic disease with a domestic animal reservoir. It is an occupational disease of veterinarians, microbiologists, farmers etc. The route of infections is genital, nasopharyngeal, gastrointestinal, conjunctival, and respiratory and through abraded skin (1, 2). Brucellosis in humans has a variable incubation period, an insidious or abrupt onset and no pathognomic symptoms or signs. Brucella Agar was designed for cultivating Brucella species from diagnostic specimens. With the incorporation of blood or other nutritious substances, it facilitates the cultivation of variety of fastidious anaerobic organisms (3). However, Brucella Medium is supplemented with antibiotics to prevent overgrowth of other accompanying organisms. Brucella Agar Base w/ 1.0 % Dextrose was originally developed by Jones and Morgan (4) for preparations of serum-dextrose-antibiotic medium used for the isolation and cultivation of Brucella species.

## METHOD PRINCIPLE

## The medium contains beef heart infusion and tryptose, which facilitates cultivation of variety of fastidious anaerobic organisms; by providing essential nutrients. Gelatin serves as a source of nutrients. Glucose serves as source of energy. Addition of antibiotics (as FD) makes the medium highly selective for Brucella species. Ethyl violet and circulin, which were recommended initially, are no longer used (5).

## MEDIA COMPOSITION

|  |  |
| --- | --- |
| **Item** | **Formula per liter of medium** |
| * Beef heart, infusion from * Tryptose * Sodium chloride * Gelatin * Glucose * Agar | 500.00gm  10.00 gm  5.000 gm  1.000 gm  2.500 gm  15.00 gm |

***pH 7.4 ± 0.2 at 25 °C***

**PRECAUTIONS AND WARNINGS**

Media to be handled by entitled and professionally educated person. Do not ingest or inhale.

Good Laboratories practices using appropriate precautions should be followed in:

* Wearing personnel protective equipment (overall, gloves, glasses,).
* Do not pipette by mouth.
* In case of contact with eyes or skin; rinse immediately with plenty of soap and water. In case of severe injuries; seek medical advice immediately.
* Respect country requirement for waste disposal.

S56: dispose of this material and its container at hazardous or special waste collection point.

S57: use appropriate container to avoid environmental contamination.

S61: avoid release in environment.

For further information, refer to the Brucella selective medium base material safety data sheet.

## STORAGE AND STABILITY

**Lab.Vie**. Brucella Selective Medium Base should be stored between 10-30°C in a firmly 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 avoid lump development due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in a 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.

## PREPARATION

Suspend 21.75 grams in 500 ml 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 and aseptically add sterile 10 % v/v sheep blood and sterile 5% v/v inactivated horse serum inactivate by heating at 56°C for 30 minutes).

Also add rehydrated contents of one vial of Brucella Selective Supplement.

Mix well before pouring into sterile Petri plates.

**Deterioration**

The color of **Lab.Vie**. Brucella Selective Medium Base is Cream to yellow homogeneous free flowing powder. Prepared medium is Light yellow coloured, clear to slightly opalescent gel forms in Petri plates On addition of 10% v/v sterile sheep blood cherry red coloured opalescent gel forms in Petri plates. If there are any physical changes for powder or signs of deterioration (shrinking, cracking, or discoloration), and contaminations for hydrated media, discard the medium.

## SPECIMEN

Clinical sample

**EQUIPMENT REQUIRED NOT PROVIDED**

* + Petri plates
  + Sterile Test tubes
  + Incubator
* Autoclave

## PERFORMANCE CHARACTERISTICS

Reactions after incubation at 37°C for 18 hours

|  |  |
| --- | --- |
| **Oranism** | **Growth** |
|
| *Brucella melitensis ATCC 4309* | luxuriant |
| *Brucella suis ATCC 4314* | luxuriant |
| *Escherichia coli ATCC 25922* | Inhibited |
| *Staphylococcus aureus ATCC 25923* | Inhibited |

## QUALITY CONTROL

To ensure adequate quality control, it is recommended that positive and negative control included in each run. If control values are found outside the defined range, check the system performance. If control

still out of range please contact **Lab.Vie**. technical support.

## REFERENCES

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. Young E. J., 1983, Human Brucellosis, Rev. Infect. Dis., 5:821-842

3. Atlas R. M., 1997, Handbook of Microbiological Media, 2nd Edi., Parks L.C. (Ed.), CRC Press, New York.

4. Jones Lois M. and Brinley Morgan W. J., 1958, Bull. Wld. Hlth. Org., 19:200-203

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| SYMBOLS IN PRODUCT LABELLING | | |
| IVD | For in-vitro diagnostic use | Number of <n> test in the pack |
| LOT | Batch Code/Lot number | Caution |
|  |  |  |
| REF | Catalogue Number | Do not use if package is  damaged |
|  | Temperature Limitation | Consult Instruction for use |
|  | Expiration Date |  |
|  | Manufactured by |  |

5. Alton G. G. and Jones L. M., 1967, Lab Technique in Brucellosis, WHO, Geneva.





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**Post code-4151**

**E-mail :** [**admin@labvielab.com**](mailto:admin@labvielab.com)

**Website:** [**www.labvielab.com**](http://www.labvielab.com)