

Brucella Selective Medium Base

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

REF: BS.1/BSMB01.100.0100 100 Gram
REF: BS.1/BSMB01.500.0500 500 Gram

REF: BS.1/BSMB01.250.0250 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	500.00gm
- Tryptose	10.00 gm
- Sodium chloride	5.000 gm
- Gelatin	1.000 gm
- Glucose	2.500 gm
- Agar	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.

EQUIPMENT REQUIRED NOT PROVIDED

- Petri plates
- Sterile Test tubes
- Incubator
- Autoclave

- 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 datasheet.

STORAGE AND STABILITY

BioScien 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 (RM1239) (Inactivate RM1239 by heating at 56°C for 30 minutes). Also add rehydrated contents of one vial of Brucella Selective Supplement, (FD005). Mix well before pouring into sterile Petri plates.

Deterioration

The color of **BioScien** 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

PERFORMANCE CHARACTERISTICS

Reactions after incubation at 37°C for 18 hours

Organism	Growth
<i>Brucella melitensis</i> ATCC 4309	luxuriant
<i>Brucella suis</i> ATCC 4314	luxuriant
<i>Escherichia coli</i> ATCC 25922	Inhibited
<i>Staphylococcus aureus</i> 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 **BioScien** technical support.

REFERENCES

1. Murray P. R., Baron E. J., Jorgensen J. H., Tenover F. C., White
- (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 Edn., 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
5. Alton G. G. and Jones L. M., 1967, Lab Technique in Brucellosis, WHO, Geneva.

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



