

## Technical Information

### Brucella Agar Base w/ 1% Dextrose

**Product Code: DM 2638**

**Application:** - Brucella Agar Base w/ 1% Dextrose is recommended for the cultivation and isolation of *Brucella* species.

#### Composition\*\*

Ingredients	Gms / Litre
Peptic digest of animal tissue	10.000
Meat extract	5.000
Dextrose	10.000
Sodium chloride	5.000
Agar	15.000
Final pH ( at 25°C)	7.5±0.2

\*\*Formula adjusted, standardized to suit performance parameters

#### Principle & Interpretation

Brucella Agar is recommended for cultivating *Brucella* species from diagnostic specimens. 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, 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. 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 recommended for the isolation and cultivation of *Brucella* species.

The medium contains peptic digest of animal tissue and meat extract, which facilitates cultivation of variety of fastidious anaerobic organisms; by providing essential nutrients. Dextrose acts 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 recommended (5).

#### Methodology

Suspend 22.5 grams of dehydrated media in 500 ml distilled water. Mix thoroughly & 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 5% (v/v) inactivated horse serum BA 2239 (Inactivate BA 2239 by heating at 56°C for 30 minutes) and rehydrated contents of one vial Brucella Selective Supplement (MS2005). Shake well before pouring into sterile Petri plates.

#### Quality Control

##### Appearance

Cream to yellow homogeneous free flowing powder

##### Gelling

Firm, comparable with 1.5% Agar gel

##### Colour and Clarity

Light yellow coloured, clear to slightly opalescent gel forms in Petri plates

##### Reaction

Reaction of 4.5% w/v aqueous solution at 25°C. pH : 7.5±0.2



Dehydrated Culture Media  
Bases / Media Supplements

#### pH Range

7.30-7.70

#### Cultural Response

DM2638: Cultural characteristics observed in presence of 10% Carbon dioxide (CO<sub>2</sub>) atmosphere with added 5% sterile inactivated horse serum and Brucella Selective Supplement (MS 2005), after an incubation at 35-37°C for 24-48 hours.

Organism	Growth
<b>Cultural Response</b> <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

## Storage and Shelf Life

**Dried Media:** Store below 30°C in tightly closed container and the prepared medium at 2 - 8°C. Use before expiry date on the label.

**Prepared Media:** 2-8° in sealable plastic bags for 2-5 days.

## Further Reading

1. Murray P. R., Baron E. J., Jorgensen J. H., Pfaller M. A., Tenover F. C., Tenover F. C., (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 Ed., 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.

## Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
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