



Ready Prepared Media

## Technical Information

### Brucella Agar Plate

#### Product Code: PM 1074

**Application:** Recommended for selective isolation and cultivation of *Brucella* or *Campylobacter* species from clinical and non clinical Specimens .

#### Composition\*\*

Ingredients	Gms / Litre
Tryptone	10.000
Peptone	10.000
Yeast extract	2.000
Dextrose (Glucose)	1.000
Sodium chloride	5.000
Sodium bisulphite	0.100
Agar	15.000
Final pH ( at 25°C)	7.0±0.2

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

#### Principle & Interpretation

*Brucella* are intracellular parasites that cause epizootic abortions in animals and septicemic febrile illness or localized infections of bone, tissue or organ systems in humans (8,12). *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. Brucella Agar Base is used for the isolation and cultivation of *Brucella* species. The basal medium (with addition of Campylobacter Supplements) can be also used for the isolation of *Campylobacter* (9). Brucella Medium is a modified medium formulated to support luxuriant growth of fastidious bacteria like *Brucella*, streptococci, pneumococci, *Listeria*, *Neisseria meningitides* and *Haemophilus influenzae* (4). Brucella Agar is also recommended by APHA for isolation of Brucella species from foods (11).

Tryptone and peptone provide nitrogen and carbon source, long chain amino acids, vitamins and other essential nutrients Yeast extract serves as a source of vitamin B complex, and additionally it also supplies some nitrogenous nutrients. Sodium bisulphite is a reducing agent and sodium chloride helps to maintain the osmotic equilibrium of the medium. Dextrose serves as an energy source. The medium can also be enriched with 5 % v/v sterile defibrinated horse blood. For selective isolation of *Brucella* species antibiotic mixtures in the form of freeze dried supplements (FD) are incorporated into the base (3,5,10).

#### Type of specimen

Clinical :Blood

#### Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (2,4).

Swab specimens can be directly streaked on the plate. Liquid specimens can be inoculated by means of an inoculation loop. When non-selective medium is required, Brucella Broth Base may be employed with the addition of serum only (i. e.without antibiotics).

#### Warning and Precautions :

In Vitro diagnostic use only. 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 clinical specimens. Safety guidelines may be referred in individual safety data sheets



Ready Prepared Media

## 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.

## Methodology

Either streak, inoculate or surface spread the test inoculum (50-100 CFU) aseptically on the plate.

## Quality Control

### Appearance

Sterile Columbia Agar in 90 mm disposable plates.

### pH

6.80-7.20

### Quantity of medium

25 ml of medium in 90 mm disposable plates

### Colour of medium

yellow coloured medium

### Sterility Test

Passes release criteria

### Organism

### Growth

Brucella melitensis ATCC4309	luxuriant
Brucella suis ATCC 4314	luxuriant
Staphylococcus aureus subsp. aureus ATCC 25923 (00034*)	inhibited
Escherichia coli ATCC25922 (00013*)	inhibited

Key : (\*) Corresponding WDCM numbers.

## Storage and Shelf Life

On receipt store between 2-8°C. Use before expiry date on the label.

## 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 clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (2,4).

## Further Reading

1. Finegold et al, (Ed.), 1990, Bailey and Scotts Diagnostic Microbiology, 8th Ed., The C.V. Mosby Co., St. Louis
2. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2<sup>nd</sup> Edition.
3. Jones L. M. and Brinley M. W. J., 1958, Bull. Wld. Hlth. Org., 19:200.
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.

