

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 performation	ance 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 nonselective 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



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 Oragnism Growth

Brucella melitensis ATCC4309	luxuriant
Brucella suis ATCC 4314	luxuriant
Staphylococcus aureussubsp. aureus	inhibited
ATCC 25923 (00034*)	
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 2nd 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.



Ready Prepared Media

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- 7. MacFaddin J. F., 2000, Biochemical Tests for Identification of Medical Bacteria, 3rd Ed., Lippincott, Williams and Wilkins, Baltimore
- 8. Moyer N. P., and Holcomb L. A., Laboratory Diagnosis and Infectious Diseases: Principles and Practice, Vol. I, Springer- Verlag, New York
- 9. 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.
- 10. Renoux G., 1954, Ann. Inst. Pasteur, 87 (3):325.
- 11. Salfinger Y., and Tortorello M.L. Fifth (Ed.), 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.
- 12. Smith L. D., and Fient T. A., 1990, Crit. Rev.Microbiol., 17 : 209-230

Disclaimer

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