Technical Information

Brucella MiVeg Agar Base, Modified

Product Code : VM1074A

Application:- Brucella MiVeg Agar Base, Modified is used for the enrichment, isolation and cultivation of *Brucella species* and *Campylobacter* species from clinical and non-clinical specimens.

Composition

Ingredients	Gms / Litre
MiVeg hydrolysate	15.000
MiVeg peptone	5.000
Yeast extract	2.000
Dextrose	1.000
Sodium chloride	5.000
Sodium citrate	1.000
Sodium bisulphate	0.100
Agar	15.000
Final pH (at 25°C)	7.0±0.2

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

Brucella MiVeg Agar Base, Modified is prepared by using MiVeg peptone and MiVeg hydrolysate inplace of peptic digest of animal tissue and casein enzymic hydrolysate so the medium becomes BSE/TSE risks free. This medium is the modification of Brucella Agar Base ,Modified that is formulated to support luxuriant growth of fastidious bacteria like *Brucella* species, *Streptococci, Pneumococci, Listeria, Neisseria meningitidis* and *Haemophilus influenzae* (1).

It contains MiVeg peptone and MiVeg hydrolysate provide organic nitrogen to the organisms. Yeast extract mainly serves as a source of Vitamin B complex and it also supplies nitrogenous nutrients. Dextrose serves as an energy source. Sodium bisulphite is a reducing agent while sodium citrate acts an anticoagulant in detection of Brucella from blood cultures. The medium can be enriched with 5% v/v sterile defibrinated horse blood. Antibiotic mixtures are incorporated into the base, for selective isolation of *Brucella* species, (2, 3). Farrel and Robinson formulated a highly selective antibiotic medium (4). Ethyl violet and Circulin, which were recommended originally, are no longer used (5). When non-selective medium is required, Brucella Broth Base may be employed with the addition of serum only (i.e. without antibiotics).

Brucella species are highly infectious so while handling extreme care should be taken . All presumptive organisms should be further confirmed by additional tests.

Methodology

Suspend 22.05 grams of powder 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 (BA2239, inactivated by heating at 56°C for 30 minutes). For *Brucella* species add rehydrated contents of one vial of Brucella Selective Supplement, Modified (MS2161). For cultivation of *Campylobacter* add rehydrated contents of one vial of Campylobacter Supplement III (Skirrow) (MS2008) and sterile reconstituted contents of one vial of Campylobacter Growth Supplement (MS2009). Mix well and pour into sterile Petri plates .

Quality Control

Physical Appearance

Cream to yellow coloured, may have slightly greenish tinge, homogeneous, free flowing powder.

Gelling

Firm, comparable with 1.5% Agar gel

Colour and Clarity of prepared medium

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

Reaction

Reaction of 4.41% w/v aqueous solution pH: 7.0±0.2 at 25°C

pH range

6.8-7.20

Cultural Response/Characteristics

Cultural characteristics observed under 10% Carbon dioxide (CO2), with added Brucella selective supplement (MS2161) and , Campylobacter Supplement III (Skirrow) (MS2008) after an incubation at 35 - 37°C for 24 - 72 hours.

Organisms (ATCC)	Inoculum(CFU)	Growth w/ MS2161	Growth w/ MS2008
Brucella melitensis ATCC(4309)	50-100	Good-luxuriant	-
Brucella suis ATCC(4314)	50-100	Good-luxuriant	-
Campylobacter jejuni ATCC(33291)	50-100	-	Good-luxuriant
Campylobacter coli ATCC(33559)	50-100	-	Good-luxuriant
Escherichia coli ATCC(25922)	>=10^3	inhibited	inhibited
Staphylococcus aureus ATCC (25923)	>=10^3	inhibited	inhibited

Storage and Shelf Life

Dried Media: Store below 30°C in tightly closed container and use before expiry date as mentioned on the label.
Prepared Media: 2-8^0 in sealable plastic bags for 2-5 days.

Further Reading

1.Finegold SM, Martin WJ, Scott EG, editors. Bailey and Scott's Diagnostic Microbiology. 5 ed. St. Louis. : The C.V. Mosby Co; 1978.
2.Jones LM, Brinley MWJ. Bull Wld Hlth Org. 1958;19.
3.Kuzdas C.D. aMEV, 1953, J. Bact., 66 (4):502.
4.Farrell I.D. and Robinson L., J.Appl. Bact., 35:625.
5.Alton G.G. and Jones L.M., Lab Technique in Brucellosis WHO, Geneva.

Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
- The product conform solely to the technical information provided in this booklet and to the best of knowledge research and development work carried at **CDH** is true and accurate
- **Central Drug House Pvt. Ltd.** reserves the right to make changes to specifications and information related to the products at any time.
- Products are not intended for human or animal diagnostic or therapeutic use but for laboratory, research or further manufacturing of diagnostic reagents extra.
- Statements contained herein should not be considered as a warranty of any kind, expressed or implied, and no liability is accepted for in fingement of any patents. Do not use the products if it fails to meet specificatons for identity and performens parameters.