Technical Information

Brucella MiVeg Broth Base

Product Code :VM1348

Application:- Brucella MiVeg Broth Base with supplement is recommended for enrichment, isolation and cultivation of *Brucella* or *Campylobacter* species from clinical and nonclinical specimens.

Composition

Ingredients	Gms / Litre
MiVeg hydrolysate	10.00
MiVeg peptone	10.00
Yeast extract	2.00
Dextrose	1.00
Sodium chloride	5.00
Sodium bisulphate	0.10
Final pH (at 25°C)	7.0±0.2

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

Brucella MiVeg Broth Base is prepared by using MiVeg peptone and MiVeg hydrolysate inplace of peptic digest of animal tissue and casein enzymic hydrolysate respectively in the conventional media, which makes the medium BSE/TSE risks free. *Brucella* species are highly infectious and so extreme care should be taken while handling. This medium is the modification of the media formulated so as 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 which supplies organic nitrogen to the organisms. Yeast extract provides Vitamin B complex and it also supplies some nitrogenous nutrients. Sodium bisulphite is a reducing agent while sodium chloride maintains the osmotic balance. Dextrose serves as an energy source. It 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, 4). Farrel and Robinson formulated a highly selective antibiotic medium (5). When non-selective medium is required, then it can be employed with the addition of serum only (i.e. without antibiotics). It is advised in case of broth medium that half the tubes be incubated in the normal atmosphere, and half in a 10% CO_2 enriched atmosphere. All presumptive anaerobic organisms must be further confirmed by additional tests.

Methodology

Suspend 14.05 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), (inactivate BA2239 by heating at 56°C for 30 minutes) and rehydrated contents of one vial of Brucella Selective Supplement, (MS2005). Mix well before pouring into sterile tubes.

Quality Control

Physical Appearance

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

Colour and Clarity of prepared medium

Yellow coloured, clear solution in tubes.

Reaction

Reaction of 2.81 % w/v aqueous solution pH: 7.0±0.2 at 25°C

pH range

6.8-7.2

Cultural Response/Characteristics

Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours in presence of 10% CO_2 with added sterile 5% v/v inactivated Horse Serum (BA2239) and Brucella Selective Supplement (MS2005).

Organisms (ATCC)	Growth
Brucella abortus (4315)	luxuriant
Brucella melitensis (4309)	luxuriant
Brucella suis (4314)	luxuriant
Escherichia coli (25922)	inhibited
Staphylococcus aureus (25923)	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 et al (Ed.), 1990, Bailey and Scott's Diagnostic Microbiology, 8th ed., The C.V. Mosby Co., St. Louis.
2. Jones L. M. and Brinley M.W.J., 1958, Bull. Wld. Hlth. Org., 19:200.
3. Kuzdas C.D., and Morse E.V., 1953, J. Bact., 66 (4):502.
4. Renoux G., 1954, Ann. Inst. Pasteur, 87 (3):325.
5. Farrell I.D. and Robinson L., 1972, J.Appl. Bact., 35:625

Disclaimer :

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