Technical Information

Antibiotic MiVeg Assay Medium No. 36

Product Code : VM2666

Application:- Antibiotic MiVeg Assay Medium No. 36 is recommended for isolating a wide variety of fastidious microorganisms and also used as a general purpose medium with or without blood or other enrichment.

Composition

Ingredients	Gms / Litre
MiVeg hydrolysate	15.000
Papaic digest of soyabean meal	5.000
Sodium chloride	5.000
Agar	15.000
Final pH (at 25°C)	7.3±0.2

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

Antibiotic MiVeg Assay Medium No. 36 is prepared by using vegetable peptones instead of animal peptones, which makes the medium BSE/TSE risks free. It can serve the same purpose of Antibiotic Assay Medium No. 36 which is as per CFR (1). This medium is recommended for sterility testing (2). Antibiotic Assay Medium No. 36 is widely employed as seed agar for agar diffusion assay of bleomycin and for the maintenance of the test organism *Mycobacterium smegmatis* . This medium is also used as maintenance medium of *Pseudomonas aeruginosa* for plate assay of ticarcillin and also for various other organisms. The medium like the conventional medium has also been reported to be used for a multitude of purposes including maintenance of stock cultures, plate counting, isolation of microorganisms from a variety of specimen types and a base for media containing blood (3,4).

The essential nutrients for maintenance and growth of the test organisms are provided by MiVeg hydrolysate and papaic digest of soyabean. Sodium chloride maintains osmotic balance. Agar provides excellent medium for antibiotic diffusion and gives well defined zones of inhibition. Freshly prepared plates should be prefered for antibiotic assays. Test organisms are inoculated in sterile seed agar pre-cooled to 40-45°C and spread evenly over the surface of solidified base agar. All conditions in the microbiological assay must be controlled carefully. The use of standard culture media in the test is one of the important step for the good results.

Methodology

Suspend 40 grams of powder media in 1000 ml purified/distilled water. Mix thoroughly. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. If desired aseptically add 5% v/v defibrinated blood in previously cooled medium at 45 - 50°C. Mix well before pouring.

Quality Control

Physical Appearance

Cream to yellow homogeneous free flowing powder

Gelling

Firm, comparable with 1.5% Agar gel.

Colour and Clarity of prepared medium

Basal Medium : Light yellow coloured clear to slightly opalescent gel. After addition of 5-7%w/v sterile defibrinated blood : Cherry red coloured opaque gel forms in Petri plates

Reaction

Reaction of 4.0 % w/v aqueous solution at 25°C(after sterilization) pH: 7.3±0.2

pH range

7.10-7.50

Cultural Response/Characteristics

Cultural characteristics observed with added 5-7% w/v sterile defibrinated blood after an incubation at 35-37°C for 18-48 hours.

Organisms (ATCC)	Inoculum (CFU)	Growth	Recovery	Growth w/blood	Recovery w/blood
Growth at 30-35°C for <= 3 days					
Bacillus subtilis ATCC 6633	50-100	luxuriant	>=70%	luxuriant	>=70%
Staphylococcus aureus ATCC25923	50-100	luxuriant	>=70%	luxuriant	>=70%
Staphylococcus aureus ATCC 6538	50-100	luxuriant	>=70%	luxuriant	>=70%
Escherichia coli ATCC 25922	50-100	luxuriant	>=70%	luxuriant	>=70%
Escherichia coli ATCC 8739	50-100	luxuriant	>=70%	luxuriant	>=70%
Escherichia coli NCTC 9002	50-100	luxuriant	>=70%	luxuriant	>=70%
Pseudomonas aeruginosa ATCC 27853	50-100	luxuriant	>=70%	luxuriant	>=70%
Pseudomonas aeruginosa ATCC 9027	50-100	luxuriant	>=70%	luxuriant	>=70%
Salmonella Abony NCTC 6017	50-100	luxuriant	>=70%	luxuriant	>=70%
Micrococcus luteus ATCC 9341	50-100	luxuriant	>=70%	luxuriant	>=70%
Salmonella Typhimurium ATCC 14028	50-100	luxuriant	>=70%	luxuriant	>=70%
Streptococcus pneumonia ATCC 6305	50-100	luxuriant	>=70%	luxuriant	>=70%
Growth at 20-25°C for < = 5 days					
**Aspergillus brasiliensis ATCC 16404*	50-100	luxuriant	>=70%	luxuriant	>=70%
Candida albicans ATCC 2091	50-100	luxuriant	>=70%	luxuriant	>=70%
Candida albicans ATCC 10231	50-100	luxuriant	>=70%	luxuriant	>=70%

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. Tests and Methods of Assay of Antibiotics and Antibiotic containing Drugs, FDA, CFR, 1983 Title 21, Part 436,Subpart D,Washington, D.C.: U.S. Government Printing Office, paragraphs 436, 100-436, 106, p. 242-259, (April 1).
2. Wright and Welch, 1959-60, Antibiotic Ann., 61.
3. MacFaddin 1985, Media for isolation-cultivation-identification-maintenance medical bacteria Vol, I, Williams, Wilkins, Baltimore, MD
4. Forbes BA, Sahm DF, Weissfeld AS, 2002, Bailey and Scott's Diagnostic Microbiology, 11th ed.

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
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