Technical Information

Antibiotic MiVeg Assay Medium No. 8 (Base MiVeg Agar w/low pH)

Product Code : VM1041

Application:- Antibiotic MiVeg Assay Medium No. 8 is recommended for the microbiological assay of Mitomycin, Plicamycin and Vancomycin.

Composition

Ingredients	Gms / Litre
MiVeg peptone	6.000
Yeast extract	3.000
MiVeg extract	1.500
Agar	15.000
Final pH (at 25°C)	5.9±0.2

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

Antibiotic MiVeg Assay Medium No. 8 is prepared by using vegetable peptones instead of animal peptones, thus the medium becomes BSE, TSE risks free. This medium can be used for the same purpose of Antibiotic Assay Medium No. 8, for the assay of various antibiotics. Grove and Randall have elaborately elucidated the methods to perform these assays and various media used for the same (1). Schmidt and Moyer have reported the use of antibiotic assay medium for the liquid formulation used in the performance of antibiotic assay (2). These media are also recommended by USP (3) and FDA (4). This medium is used especially to prepare the base layer to assay Tetracyclines and other antibiotics. It provides a solidified substratum for growth of organisms. The medium has an optimal pH of 5.9 for assay of Tetracycline as these antibiotics are stable at slightly lower pH (5) and also supports the growth of test organisms. This medium is also used as base and seed agar medium for agar diffusion assay for Mitomycin, Mithramycin, Plicamycin and Vancomycin. MiVeg extract,Yeast extract and MiVeg Peptone in the medium provides all essential nutrients and growth factors.

Methodology

Suspend 25.5 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.

Suggestion: *This medium is recommended for the microbiological assay of Mitomycin, Plicamycin, Vancomycin, Oxytetracycline, Tetracycline .*

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

Light amber coloured slightly opalescent gel forms in Petriplates

Reaction

Reaction of 2.55 % w/v aqueous solution pH: 5.9±0.2 at 25°C

pH range

5.70-6.10

Cultural Response/Characteristics

Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours

Organisms (ATCC)	Inoculum (CFU)	Growth	Recovery	Antibiotics assayed
Bacillus subtilis ATCC 6633	50-100	luxuriant	>=70%	Mitomycin, Vancomycin
Bacillus cereus var mycoides ATCC 11778	50-100	luxuriant	>=70%	Oxytetracycline, Tetracycline

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. Grove and Randall, 1955, Assay Methods of Antibiotics Medical Encyclopedia, Inc. New York.
2. Schmidt and Moyer, 1944, J. Bact., 47:199.
3. United States Pharmacopoeia 2011 ,USP 34/NF 29 , US Pharmacopoeial Convention, Inc., Rockville, MD.
4. 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).
5. Chapin-Robertson and Edberg, 1991, Antibiotics in Laboratory medicine, New York pp 311.

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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