Technical Information

Antibiotic MiVeg Assay Medium No. 5 (Streptomycin MiVeg Assay Agar w/ Yeast Extract)

Product Code : VM1006

Application:- Antibiotic MiVeg Assay Medium No.5 (Streptomycin MiVeg Assay Agar w/Yeast extract) is recommended for microbiological assay of *Sterpyomycin* using *Bacillus subtilis.*

Composition

Ingredients	Gms / Litre
MiVeg peptone	6.000
MiVeg extract	1.500
Yeast extract	3.000
Agar	15.000
Final pH (at 25°C)	7.9±0.2

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

Antibiotic MiVeg Assay Medium No. 5 (Streptomycin MiVeg Assay Agar w/Yeast Extract) is prepared by using vegetable peptones instead of animal peptones, which makes the medium free from BSE,TSE risks. This medium can be used for the same purpose of Antibiotic Assay Medium No.5 (1). Groove and Randall had elucidated the methods to perform these assays (2). It is recommended for assaying Streptomycin by cylinder plate using *Bacillus subtilis* as test organism. This medium used in the assay of commercial preparations of antibiotics as well as for antibiotics in body fluids, feeds etc. It can also be used to prepare the base as well as seed layer in the microbiological assay of antibiotics such as Dihydrostreptomycin, Framycetin , Dactinomycin, Streptomycin and Kanamycin B. The pH of 7.9 supports optimum conditions for *Bacillus subtilis* (3).

This medium contains MiVeg peptone, MiVeg extract, yeast extract which supplies necessary growth nutrients for the test organisms like *Bacillus subtilis* .

The Base Agar should be prepared on the same day of the test for the antibiotic assay. For the cylinder method, a base layer of 21 ml is required. After solidification of base layer , seed layer inoculated with the standardized test culture can be overlaid. Even distribution of the layer is critical.

Methodology

Suspend 25.50 grams of powder media in 1000 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.

Suggestions : *Recommended for the Microbiological assay of Dactinomycin, Dihydrostreptomycin, Kanamycin B, Streptomycin, Framycetin* .

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

Medium amber coloured clear to slightly opalescent gel forms in petri plates

Reaction

Reaction of 2.55 % w/v aqueous solution pH: 7.9 ±0.2 at 25°C

pH range

7.70-8.10

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	good-luxuriant	>70%	Dihydrostreptomycin, Framycetin, Kanamycin B

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. Grove and Randall, 1955, Assay Methods of Antibiotics Medical Encyclopedia, Inc.New York.
3. Stearn and Steran,J.Bacteriol.1933.26(1):37-55

Disclaimer :

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