Technical Information

Antibiotic MiVeg Assay Medium No.20 (Yeast Beef MiVeg Broth)

Product Code : VM1167

Application:- Antibiotic MiVeg Assay Medium No. 20 is used for the microbiological assay of Amphotericin B using *Candida tropicalis*

Composition

Ingredients	Gms / Litre
MiVeg hydrolysate	10.000
MiVeg peptone	5.000
Yeast extract	6.500
MiVeg extract	1.500
Dextrose	11.000
Sodium chloride	3.500
Dipotassium phosphate	3.680
Potassium dihydrogen phosphate	1.320
Final pH (at 25°C)	6.6±0.2

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

Antibiotic MiVeg Assay Medium No. 20 is prepared by vegetable peptones in place of animal peptones, which makes the medium free from BSE/ TSE risks. This medium serves the same purpose of Antibiotic Assay Medium No. 20 (Yeast beef broth), used in the assay of various antibiotics. Grove and Randall have elaborately elucidated the methods to perform these assays and various media used for that (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 can be used for the turbidometric assay of Amphotericin B using *Candida tropicalis* ATCC 13803 as test organism and also in the assay of mycostatic activity in pharmaceutical preparations.

High nutritional content like MiVeg peptone, yeast extract, MiVeg extract and Veg hydrolysate provides excellent medium for growth of *Candida tropicalis* . Dextrose serve as the source of carbon and energy for growth of the organism. Sodium chloride provides osmotic equilibrium to maintain cell intergrity and viability, while phosphate functions to provide proper buffering action.

Turbidimetric antibiotic assay is based on the change or inhibition of growth of a test microorganism in a liquid medium containing a uniform concentration of an antibiotic. After incubation of the test organism in the working dilutions of the antibiotics, the amount of growth is determined by measuring the light transmittance using spectrophotometer. The concentration of antibiotic is determined by comparing amounts of growth obtained with that given by the reference standard solutions. Use of this method is appropriate only when test samples are clear.

Methodology

Suspend 42.5 grams of powder media in 1000 ml purified/distilled water. Mix thoroughly. Heat if neccessary to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool and dispense as desired.

Quality Control

Physical Appearance

Cream to yellow homogeneous free flowing powder

Colour and Clarity of prepared medium

Medium amber coloured clear solution in tubes

Reaction

Reaction of 4.25 % w/v aqueous solution at 25°C pH: 6.6±0.2

pH range

6.40-6.80

Cultural Response/Characteristics

Cultural characteristics observed after an incubation at 35-37°C for 18-48 hours

Organisms (ATCC)	Inoculum (CFU)	Serial dilution with
Candida tropicalis ATCC 13803	luxuriant	Amphotericin 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. 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 pg 242-259 (April 1).

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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