Technical Data

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

MV167

Antibiotic HiVeg Assay Medium No. 20 is used for the microbiological assay of Amphotericin B using *Candida tropicalis*

Composition**

Ingredients	Gms / Litre
HiVeg hydrolysate	10.000
HiVeg peptone	5.000
Yeast extract	6.500
HiVeg 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

Directions

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

Principle And Interpretation

Antibiotic HiVeg Assay Medium No. 20 is prepared by incorporating vegetable peptones in place of animal peptones, making the medium BSE, TSE risks free. This can be used for 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 HiVeg peptone, yeast extract, HiVeg extract and HiVeg hydrolysate provides excellent medium for growth of *Candida tropicalis* . Dextrose provides carbon and energy for growth of the organism. Osmotic equilibrium to maintain cell intergrity and viability is provided by sodium chloride, 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.

Note: For Antibiotic Assay Methods and Selection of Antibiotic HiVeg Assay Medias Refer Section Antibiotic HiVeg Assay Media.

Quality Control

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
6.40-6.80

Cultural Response
MV167: Cultural characteristics observed after an incubation at 35-37°C for 18-48 hours.

Organism	Growth	Serial dilution with
Cultural Response		
Candida tropicalis ATCC 13803	luxuriant	Amphotericin B

Storage and Shelf Life
Store below 30°C in tightly closed container and use freshly prepared medium . Use before expiry date on the label

Reference
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).

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