Antibiotic HiVeg Assay Medium No.19

MV101

Antibiotic HiVeg Assay Medium No.19 is used for the microbiological assay of Amphotericin B, Netamycin and Nystatin using *Saccharomyces cerevisiae* .

Composition**

Ingredients	Gms / Litre
HiVeg peptone	9.400
Yeast extract	4.700
HiVeg extract	2.400
Dextrose	10.000
Sodium chloride	10.000
Agar	23.500
Final pH (at 25°C)	6.1±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 60.0 grams in 1000 ml purified/distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Advice: Recommended for the microbiological assay of Amphotericin B , Candicidin, Netamycin and Nystatin

Principle And Interpretation

Antibiotic HiVeg Assay Medium No.19 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.19 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 as per specification of Krishbaum and Arett (5), used as seed agar for assay of antifungal agents like Amphotericin B, Nystatin, Netamycin and Candidicin etc. For similar applications, Antibiotic HiVeg Assay Medium No.19 MV101 can be used. The indicator organism used is *Saccharomyces cerevisiae* . This medium can also be used for maintenance and inoculum development of *Saccharomyces cerevisiae* as well as for assaying mycostatic activity in pharmaceutical formulations.

HiVeg Peptone, yeast extract and HiVeg extract provides nutrients and growth factor. Dextrose provides the energy source and sodium chloride maintains the osmotic equilibrium of the medium.

Freshly prepared plates should be used for antibiotic assays. Prediffusion of antibiotics for 20 minutes in the agar by incubating at temperature below the optimal growth temperature for microorganisms facilitates better diffusion of antibiotics followed by incubation of the plates at optimal temperature for microbial growth. Test organisms are inoculated in sterile seed agar precooled to 40-45°C and spread evenly over the surface of solidified base agar.

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

Gelling
Firm, comparable with 2.35% Agar gel.

Colour and Clarity of prepared medium
Yellow coloured clear to slightly opalescent gel forms in Petri plates

Reaction
Reaction of 6.0% w/v aqueous solution at 25°C. pH : 6.1±0.2

pH
5.90-6.30

Cultural Response
Cultural characteristics observed after an incubation at 29-31°C for 24-48 hours.

Cultural Response

Organism	Inoculum (CFU)	Growth	Recovery	Antibiotics assayed
Cultural Response				
Saccharomyces cerevisiae ATCC 2601	50-100	luxuriant	>=70%	Nystatin
Saccharomyces cerevisiae ATCC 9763	50-100	luxuriant	>=70%	Amphotericin B, Candicidin

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).
5. Krishbaum A and Areet B, 1967, J. Pharm Sci, 56: 512.

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