



Antibiotic HiVeg Assay Medium No. 2 (Base HiVeg Agar)

MV005

Antibiotic HiVeg Assay Medium No. 2 (Base HiVeg Agar) is used for microbiological assay of antibiotics.

Composition**

Ingredients	Gms / Litre
HiVeg peptone	6.000
HiVeg extract	1.500
Yeast extract	3.000
Agar	15.000
Final pH (at 25°C)	6.6±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 25.5 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 Bacitracin, Cephalexin, Cephaloglycin, Cephaloridine, Cephalothin, Cloxacillin, Cycloserine, Dicloxacillin, Methicillin, Nafcillin, Novobiocin, Oxacillin, Penicillin-G, Penicillin, Rifampicin, Spiramycin .

Principle And Interpretation

Antibiotic HiVeg Assay Medium No. 2 is prepared by incorporating vegetable peptones in place of animal peptones, making the medium BSE, TSE risks free. It can be used for the same purpose of Antibiotic Assay Medium No. 2 and is recommended for use as base agar for microbiological agar diffusion assays for wide variety of antibiotics. Agar diffusion assays can be performed by cylinders, punched-hole or paper disc tests. The equivalent animal based medium is identical numerically with the name assigned by Grove and Randall (1) that is equivalent to the Antibiotic Assay Medium No. B of Indian Pharmacopoeia (2). HiVeg Peptone, yeast extract and HiVeg extract provide the nitrogenous, vitamins and mineral requirement for the growth of test organisms. This medium provides solidified substratum for growth of organism and supports the overlaying of soft agar.

This medium is widely used to prepare the base layer in the microbiological assay of antibiotics such as Bacitracin, Cephalexin, Cephalothin, Cephapirin, Cloxacillin, Dicloxacillin, Methicillin, Nafcillin, Oxacillin, Chloramphenicol, Novobiocin and Penicillin. To perform the antibiotic assay the Antibiotic HiVeg Assay medium No.2 is used as base agar. This medium should be prepared on the same day as the test. For the cylinder method, a base layer of 21 ml is required. Once the base medium has solidified, Antibiotic assay medium No.1 as seed agar, inoculated with the standardized culture can be overlaid. Even distribution of the layer is important.

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 1.5% Agar gel

Colour and Clarity of prepared medium

Amber coloured, clear to slightly opalescent gel forms in Petri plates

Reaction

Reaction of 2.55% w/v aqueous solution at 25°C. pH : 6.6±0.2

pH

6.40-6.80

Cultural Response

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

Cultural Response

Organism	Inoculum (CFU)	Growth	Recovery	Basal layer
Cultural Response				
<i>Bacillus subtilis</i> ATCC 6633	50-100	luxuriant	>=70%	Spiramycin
<i>Micrococcus luteus</i> ATCC 10240	50-100	luxuriant	>=70%	Bacitracin
<i>Staphylococcus aureus</i> ATCC 9144	50-100	luxuriant	>=70%	Tylosin
<i>Staphylococcus aureus</i> ATCC 29737	50-100	luxuriant	>=70%	Amikacin,Cephalothin,Cephapirin,Chlortetracycline, Nafcillin,Oxytetracycline,Tetracycline,Cloxacillin Rolitetracycline,Cycloserine,Demeclocycline, Doxycycline,Kanamycin, Methacycline
<i>Staphylococcus epidermidis</i> ATCC 12228	50-100	good-luxuriant	>=70%	Novobiocin
<i>Klebsiella pneumoniae</i> ATCC 10031	50-100	luxuriant	>=70%	Capreomycin, Streptomycin, Troleandomycin
<i>Enterococcus hirae</i> ATCC 10541	50-100	luxuriant	>=70%	Gramicidin,Thiostrepton,Tobramycin
<i>Escherichia coli</i> ATCC 10536	50-100	luxuriant	>=70%	Chloramphenicol, Spectinomycin

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. Indian Pharmacopoeia 2010, Ministry of Health and Family Welfare, Govt. of India, Delhi.

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