



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

MV006

Antibiotic HiVeg Assay Medium No.5 (Streptomycin HiVeg Assay Agar w/Yeast extract) is used for microbiological assay of Streptomycin using *Bacillus subtilis* .

### Composition\*\*

Ingredients	Gms / Litre
HiVeg peptone	6.000
HiVeg 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

### Directions

Suspend 25.50 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 Dactinomycin, Dihydrostreptomycin, Kanamycin B, Streptomycin, Framycetin .*

### Principle And Interpretation

Antibiotic HiVeg Assay Medium No. 5 ( Streptomycin HiVeg Assay Agar w/Yeast Extract) 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.5 (1). Groove and Randall had elucidated the methods to perform these assays (2). This medium is recommended for assaying Streptomycin by cylinder plate using *Bacillus subtilis* as test organism. It can be used in the assay of commercial preparations of antibiotics as well as for antibiotics in body fluids, feeds etc. This medium 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 provides optimum conditions for *Bacillus subtilis* (3).

HiVeg peptone, HiVeg extract, yeast extract provides necessary growth nutrients for the test organisms like *Bacillus subtilis* .

To perform the antibiotic assay the Base Agar 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, seed layer inoculated with the standardized test culture can be overlaid. Even distribution of the layer is critical.

*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

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 : 7.9±0.2

#### pH

7.70-8.10

#### Cultural Response

MV006: Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

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Organism	Inoculum (CFU)	Growth	Recovery	Antibiotics assayed
<i>Bacillus subtilis</i> ATCC 6633	50-100	good-luxuriant	>70%	Dihydrostreptomycin, Framycetin, Kanamycin 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. 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

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