# Antibiotic HiVeg Assay Medium No.39

**MV1142**

Antibiotic HiVeg Assay Medium No.39 is used for microbiological assay of Neomycin and Streptomycin using *Klebsiella pneumoniae* as the test organism.

## Composition**

| Ingredients | Gms / Litre |
|---|---|
| HiVeg peptone | 5.000 |
| HiVeg extract | 1.500 |
| Yeast extract | 1.500 |
| Dextrose | 1.000 |
| Sodium chloride | 3.500 |
| Dipotassium phosphate | 3.680 |
| Potassium dihydrogen phosphate | 1.320 |
| Final pH ( at 25°C) | 7.9±0.2 |

**Formula adjusted, standardized to suit performance parameters

## Directions

Suspend 17.5 grams in 1000 ml purified/distilled water. Heat to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

## Principle And Interpretation

Antibiotic HiVeg Assay Medium No. 39 is formulated by incorporating vegetable peptones in place of animal peptones, making the medium BSE-TSE risks free. Grove and Randall have elucidated those antibiotic assays and media in their comprehensive treatise on antibiotic assays (1). Schmidt and Moyer have reported the use of antibiotic assay medium for the liquid formulation used in the performance of antibiotic assay (2). This medium is prepared in accordance with the USP (3) and the FDA (4). This medium can be used for the same purpose of Antibiotic Medium No. 39 employed widely for turbidometric assay of Neomycin using *Klebsiella pneumonia* and Tylosin using *Staphylococcus aureus* as the test organisms. Turbidimetric methods for determining the potency of antibiotics are inherently more accurate and more precise than comparable agar diffusion procedures

Nutrients and growth factors are provided by ingredients like HiVeg peptone, HiVeg extract and yeast extract. Dextrose is the source of energy. Sodium chloride maintains the osmotic equilibrium whereas the phosphates act as the buffering system.

*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**
Light yellow clear solution in tubes

**Reaction**
Reaction of 1.75% w/v aqueous solution at 25°C. pH : 7.9±0.2

**pH**
7.70-8.10

**Cultural Response**
MV1142: Cultural characteristics observed after an incubation at 35 - 37°C for 18-24 hours.

| Organism | Inoculum (CFU) | Growth | Serial dilution with |
|---|---|---|---|
| *Klebsiella pneumoniae ATCC 10031* | 50-100 | luxuriant | Neomycin |

| | | | |
|---|---|---|---|
| *Staphylococcus aureus ATCC 9144* | 50-100 | luxuriant | Tylosin |

## Storage and Shelf Life

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