



## Antibiotic Assay Medium No. 39

M1142

### Intended Use:

Recommended for the microbiological assay of Neomycin and Streptomycin using *Klebsiella pneumoniae* as the test organism.

### Composition\*\*

Ingredients	Gms / Litre
Peptone	5.000
HM peptone B #	1.500
Yeast extract	1.500
Dextrose (Glucose)	1.000
Sodium chloride	3.500
Dipotassium hydrogen phosphate	3.680
Potassium dihydrogen phosphate	1.320
Final pH ( at 25°C)	7.9±0.2

\*\*Formula adjusted, standardized to suit performance parameters

# Equivalent to Beef extract

### Directions

Suspend 17.5 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.

### Principle And Interpretation

Antibiotic Assay media are used in the performance of antibiotic assays. 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).

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

### Type of specimen

Pharmaceutical sample

### Specimen Collection and Handling:

For pharmaceutical sample samples follow appropriate techniques for handling specimens as per established guidelines (3). After use, contaminated materials must be sterilized by autoclaving before discarding.

### Warning and Precautions :

Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling specimens. Safety guidelines may be referred in individual safety data sheets.

### Limitations :

1. Freshly prepared medium plates must be used or it may result in erroneous results.
2. Use of this method is appropriate only when test samples are clear.

### Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

## Quality Control

### Appearance

Cream to yellow homogeneous free flowing powder

### Colour and Clarity of prepared medium

Yellow coloured clear solution

### Reaction

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

### pH

7.70-8.10

### Cultural Response

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

Organism	Inoculum (CFU)	Serial dilution with
<i>Klebsiella pneumoniae</i> ATCC 10031	50-100	Neomycin
<i>Staphylococcus aureus</i> ATCC 9144 (00035*)	50-100	Tylosin

Key : \*Corresponding WDCM numbers.

## Storage and Shelf life

Store freshly prepared medium. Store in dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use. Product performance is best if used within stated expiry period.

## Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with sample must be decontaminated and disposed of in accordance with current laboratory techniques (1,2).

## 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 2009, 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).

Revision : 1 / 2011

### Disclaimer :

User must ensure suitability of the product(s) in their application prior to use. Products conform solely to the information contained in this and other related HiMedia™ publications. The information contained in this publication is based on our research and development work and is to the best of our knowledge true and accurate. HiMedia™ Laboratories Pvt Ltd reserves the right to make changes to specifications and information related to the products at any time. Products are not intended for human or animal or therapeutic use but for laboratory, diagnostic, research or further manufacturing use only, unless otherwise specified. Statements contained herein should not be considered as a warranty of any kind, expressed or implied, and no liability is accepted for infringement of any patents.