

## TMV 015 – ANTIBIOTIC ASSAY MEDIUM NO. 3 (ASSAY BROTH) (VEG.)

### INTENDED USE

For microbiological assay of antibiotics.

### PRODUCT SUMMARY AND EXPLANATION

Antibiotic Veg Assay Medium No.3 is prepared using vegetable peptones in place of animal peptones, making the medium BSE, TSE risks free. Antibiotic Veg Assay Medium No.3, can be used for the same purpose of Antibiotics Assay Medium No.3, used for the assay of various antibiotics. Grove and Randall have elaborately elucidated the methods to perform these assays and various media used for that. Schmidt and Moyer have reported the use of antibiotic assay medium for the liquid formulation used in the performance of antibiotic assay. These media are also recommended by USP and FDA generally in the turbidimetric antibiotic assay of Amikacin, Bacitracin, Kanamycin, Streptomycin and other antibiotics. Antibiotic Veg Assay Medium No. 3 (Assay Veg Broth) can also be used in the microbiological assay of different antibiotics in pharmaceutical and food products by the turbidimetric method. Ripperre et al reported that turbidimetric methods for determining the potency of antibiotics are inherently more accurate and more precise than agar diffusion procedure. Turbidimetric antibiotic assay is based on the change or inhibition of growth of a test microorganisms in a liquid medium containing a uniform concentration of an antibiotic. After incubation of the test organism in the working dilutions of the antibiotics, the amount of growth is determined by measuring the light transmittance using spectrophotometer. The concentration of antibiotic is determined by comparing amounts of growth obtained with that given by the reference standard solutions. Use of this method is appropriate only when test samples are clear.

### COMPOSITION

Ingredients	Gms / Ltr
Veg Peptone	5.000
Yeast extract	1.500
Veg extract	1.500
Dextrose	1.000
Sodium chloride	3.500
Dibasic potassium phosphate	3.680
Monobasic potassium phosphate	1.320

### PRINCIPLE

Veg Peptone, Veg extract and yeast extract provides essential nutrients and growth factors for enhanced microbial growth. Sodium chloride maintains the osmotic equilibrium of the medium and retains the cell viability and cell integrity. Phosphates in the medium provide good buffering action. Dextrose serves as the carbon and energy source

### INSTRUCTION FOR USE

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

Advice: Recommended for the Microbiological assay of Amikacin, Capreomycin, Chloramphenicol, Chlortetracycline, Cycloserine, Demeclocycline, Dihydrostreptomycin, Doxycycline, Gramicidin, Kanamycin, Methacycline, Oxytetracycline, Rolitetracycline, Streptomycin, Tetracycline, Tobramycin and Troleandomycin according to official methods.

### QUALITY CONTROL SPECIFICATIONS



**Appearance of Powder** : Cream to yellow homogeneous free flowing powder.  
**Appearance of prepared medium** : Light yellow coloured clear solution in tubes.  
**pH (at 25°C)** : 7.0±0.2

## INTERPRETATION

Cultural characteristics observed after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Serial dilution with	Incubation Temperature	Incubation Period
<i>Escherichia coli</i>	10536	50-100	Luxuriant	Chloramphenicol	32-35°C	24 Hours
<i>Klebsiella pneumoniae</i>	10031	50-100	Luxuriant	Capreomycin, Dihydrostreptomycin, Streptomycin, Troleandomycin	36-37.5°C	16-24 Hours
<i>Staphylococcus aureus</i>	29737	50-100	Luxuriant	Amikacin, Chlortetracycline, Cycloserine, Demeclocycline, Doxycycline, Kanamycin,,, Lincomycin, Methacycline, Oxytetracycline, Rolitetracycline , Tetracyclin, Tobramycin	32-35°C	24 Hours
<i>Enterococcus hirae</i>	10541	50-100	Luxuriant	Gramicidin	36-37.5°C	16-18 Hours
<i>Staphylococcus aureus</i>	9144	50-100	Luxuriant	Tylosin	35-39°C	16-18 Hours

## PACKAGING:

In pack size of 100 gm and 500 gm bottles.

## STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.

**Product Deterioration:** Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.







## DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

## REFERENCES

1. Grove and Randall, 1955, Assay Methods of Antibiotics Medical Encyclopedia, Inc. New York.
2. Rippere R. A.. Some principles of microbiological turbidimetric assays of antibiotics. J. Assoc. off. Anal. Chem. 1979 62(4):951-6.



<b>GMP</b> Good Manufacturing Practices Certified	<b>IVD</b> For In Vitro Diagnostic Use	<b>QTY.</b> Quantity	<b>LOT/ B. NO.</b> Lot / Batch Number	<b>REF</b> Catalogue Number	 Manufacturer
 Temperature Unit	<b>EC REP</b> Authorized Representative <small>MedNet GmbH Buckstrasse 10 48163 Münster, Germany</small>	 European Conformity	 QR Code	 Consults Instructions for Use	 Best Before

**NOTE:** Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

**\*For Lab Use Only**  
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