TMV 021– ANTIBIOTIC ASSAY MEDIUM NO. 10 (POLYMYXIN SEED AGAR) (VEG.)

INTENDED USE

For assay of Polymyxin-B, Carbenicillin, Colistin and Colistimethate sodium.

PRODUCT SUMMARY AND EXPLANATION

Antibiotic Veg Assay Medium No. 10 is prepared by incorporating vegetable peptones in place of animal peptones, making the medium BSE-TSE risks free. This can be used for the same purpose of Antibiotic Assay Medium No. 10 for the performance of various antibiotic assays. 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. Antibiotic Veg Assay Medium No. 10 is used as a seed agar for assay of Polymyxin B, Colistin methate sodium, Colistin & carbenicillin.

All conditions in the microbiological assay must be carefully controlled. Test organisms are inoculated in sterile seed agar cooled to 40-45°C and spread evenly over the surface of solidified base agar. After incubation, the concentration of the antibiotic being assayed is determined by measuring the zone of inhibition obtained, with that of reference standard antibiotic Polymyxins are reported to have slow diffusion in agar giving smaller zone of inhibition. However, the reduced agar concentration (1.2%) in this medium improves the diffusion of Polymyxin in the medium. Polysorbate 80 is reported to function synergistically with Polymyxins against spheroplasts of *Pseudomonas aeruginosa*. Polysorbate 80 enhances the penetration of Polymyxin through the cytoplasmic membrane and hence is an appropriate ingredient in the medium used for assay of Polymyxin.

COMPOSITION

Ingredients	Gms / Ltr
Veg hydrolysate	17.000
Papaic digest of soyabean meal	3.000
Sodium chloride	5.000
Dextrose	2.500
Dipotassium phosphate	2.500
Agar	12.000

PRINCIPLE

Nutrients and growth factors are supplied by the ingredients like casein enzymic Veg hydrolysate and papaic digest of soyabean meal. Sodium chloride maintains the osmotic equilibrium. Dipotassium phosphate provides the buffering system. Dextrose serves as the source of energy.

INSTRUCTION FOR USE

- Dissolve 42 grams in 1000 ml purified/distilled water containing 10 ml of Polysorbate 80.
- Heat to boiling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Cream to yellow homogeneous free flowing powder.
Appearance of prepared medium : Medium amber coloured clear to slightly opalescent gel forms in Petri plates.
pH (at 25°C) : 7.2±0.2

INTERPRETATION

Cultural characteristics observed after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Antibiotics assayed	Incubation Temperature	Incubation Period
Bordetella bronchiseptica	4617	50-100	Luxuriant	>=70%	Polymyxin B,Colistimethate sodium, Colistin	35-37°C	18-24 Hours
Pseudomonas aeruginosa	25619	50-100	Luxuriant	>=70%	Carbenicillin	35-37°C	18-24 Hours

PACKAGING:

In pack size of 500 gm bottles.

STORAGE

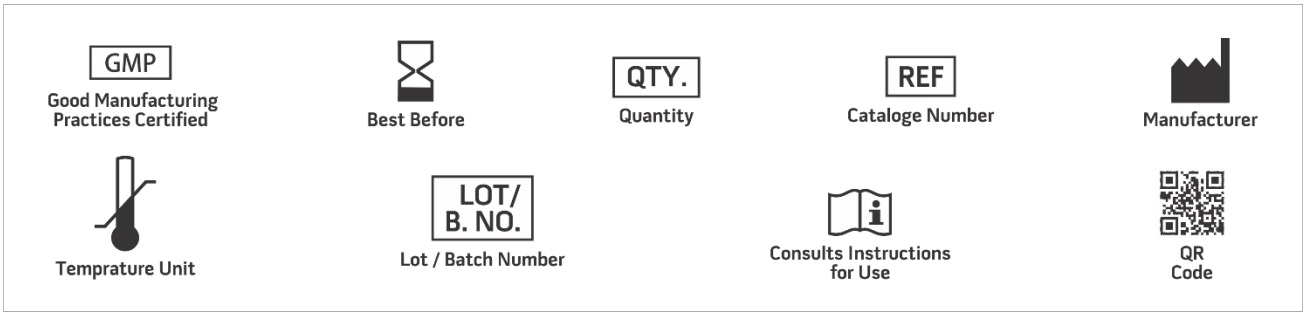
Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided 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. Schmidt and Moyer, 1944; J. Bact, 47:199.
3. Barry, 1991, Antibiotics in Laboratory Medicine, New York pp3. 4. Brown & Wesley 1968, J. Gen. Microbiology, 1968,50(3) Suppix.



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

Revision: 08 Nov., 2019