TMV 022 – NEOMYCIN, ERYTHROMYCIN ASSAY AGAR (ANTIBIOTIC ASSAY MEDIUM NO. 11) (as per USP) (VEG.)

INTENDED USE

For microbiological assay of antibiotics.

PRODUCT SUMMARY AND EXPLANATION

Neomycin, Erythromycin Assay Agar (Antibiotic Assay Medium NO. 11) (VEG.) is prepared using vegetable peptones in place of animal peptones, making the medium BSE, TSE risks free. It can be used for the same purpose of Neomycin, Erythromycin Assay Agar (Antibiotic Medium No.11). Grove and Randall have elaborately elucidated the methods to perform Antibiotic Assay assays and various medias used for estimating the antibiotic concentrations of various formulations. 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 in accordance with USP (3) and FDA (4). This media can be used as a seed layer or base layer for various assays. It is often used as inoculum medium for Staphylococcus aureus. It is used for antibiotic plate assay of Ampicillin, Carbomycin, Erythromycin, Clindamycin and Gentamycin with Micrococcus luteus, of Oleandomycin, Paromomycin, Neomycin, Netilmycin, Sisomycin with Staphylococcus epidermidis. It can also be used for plate assay of Kanamycin and Neomycin with either Staphylococcus auerus or Bacillus pumilus and for plate assay of Framycetin with Bacillus pumilus.

COMPOSITION

Ingredients	Gms / Ltr
Veg Peptone	6.000
Veg Hydrolysate	4.000
Yeast extract	3.000
Veg extract	1.500
Dextrose	1.000
Agar	15.000

PRINCIPLE

The medium consists of Veg Peptone, veg extract, yeast extract and Veg Hydrolysate that provide the necessary nutrients and growth factors. Dextrose provides the carbon and energy source. Agar provides excellent medium for antibiotic diffusion and gives well-defined zones of inhibition. Higher pH provides the optimal conditions for activity of antibiotic and also supports the growth of the test organisms.

Freshly prepared plates should be used for antibiotic assays. Test organisms are inoculated in sterile seed agar pre-cooled to 40-45°C and spread evenly over the surface of solidified base agar. All conditions in the microbiological assay must be controlled carefully.

INSTRUCTION FOR USE

- Dissolve 30.5 grams in 1000 ml purified/distilled water.
- 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 : Light yellow coloured clear to slightly opalescent gel forms in Petri plates.
pH (at 25°C) : 8.3 ± 0.2

INTERPRETATION

Cultural characteristics observed after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Antibiotic assayed	Incubation Temperature	Incubation Period
Staphylococcus aureus	6538	50-100	Luxuriant	>=70%	Kanamycin monosulphate, Kanamycin acid sulphate, Netilmicin sulphate	35-37°C	18-24 Hours
Staphylococcus epidermidis	12228	50-100	Luxuriant	>=70%	Gentamicin, Neomycin, Netilmicin, Paromomycin, Sisomycin	35-37°C	18-24 Hours
Micrococcus luteus	9341	50-100	Luxuriant	>=70%	Erythromycin While assaying Tylosin, Tylosin tartarate, Vancomycin hydrochloride, adjust the pH to 8.0±.0.2	35-37°C	18-24 Hours
Bacillus pumilis	14884	50-100	Luxuriant	>=70%	Chlortetracycline ,Framycetin, Kanamycin sulphate	35-37°C	18-24 Hours
Bacillus subtilis	6633	50-100	Luxuriant	>=70%	Dihydrostreptomycin sulphate, Erythromycin estolate, Kanamycin monosulphate, Kanamycin acid sulphate, Spiramycin, Streptomycin sulphate	35-37°C	18-24 Hours

PACKAGING:

In pack size of 100 gm and 500 gm bottles.

STORAGE

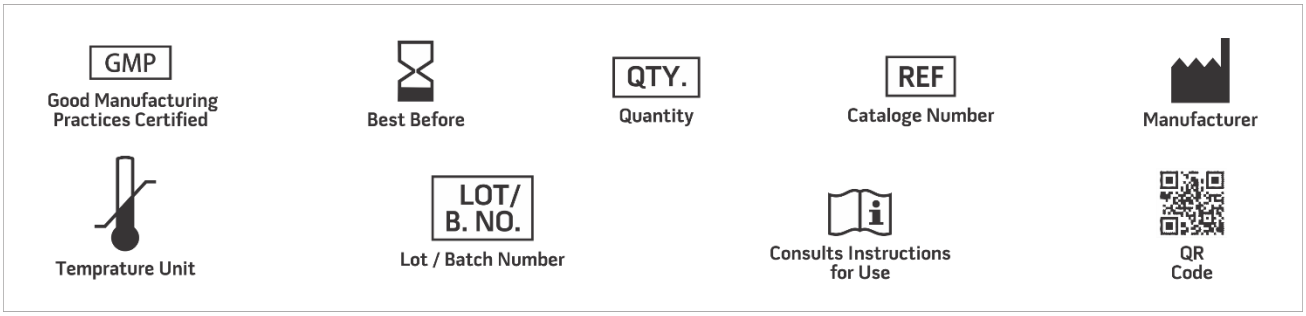
Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided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



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

***For Lab Use Only**

Revision: 08 Nov., 2019