TMV 026 – ANTIBIOTIC ASSAY MEDIUM NO. 20 (YEAST BEEF BROTH) (VEG.)

INTENDED USE

For microbiological assay of Amphotericin B using *Candida tropicalis.*

PRODUCT SUMMARY AND EXPLANATION

Antibiotic Veg Assay Medium No. 20 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. 20 (Yeast beef broth), used in 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 prepared according by the FDA. Antibiotic Assay Medium No. 20 is used for turbidometric assay of Amphotericin B using *Candida tropicalis* ATCC 13803 as test organism. This medium is also known as Yeast beef broth. This medium is also used in assaying mycostatic activity in pharmaceutical related preparations.

Turbidimetric antibiotic assay is based on the change or inhibition of growth of a test microorganims in a liquid medium containing a uniform concentration of an antibiotic. After incubation of the test orgainism in the working dilutions of the antibiotics, the amount of growth is determined by measuring the light transmittance using spectophotometer. 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 hydrolysate	10.000
Veg Peptone	5.000
Yeast extract	6.500
Veg extract	1.500
Dextrose	11.000
Sodium chloride	3.500
Dipotassium hydrogen phosphate	3.680
Potassium dihydrogen phosphate	1.320

PRINCIPLE

High nutritional content like Veg peptone, yeast extract, Veg extract and Veg hydrolysate provides excellent medium for growth of *Candida tropicalis*. Dextrose provides carbon and energy for growth of the organism. Osmotic equilibrium to maintain cell intergrity and viability is provided by sodium chloride, while phosphate functions to provide proper buffering action.

INSTRUCTION FOR USE

- Dissolve 42.5 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.
- Cool and dispense as desired.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Cream to yellow homogeneous free flowing powder.
Appearance of prepared medium : Medium amber coloured clear solution.
pH (at 25°C) : 6.6±0.2

INTERPRETATION

Cultural characteristics observed after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Serial dilution with	Incubation Temperature	Incubation Period
Candida tropicalis	13803	50-100	Luxuriant	Amphotericin B	35-37°C	18-48 Hours

PACKAGING:

In pack size of 500 gm bottles.

STORAGE

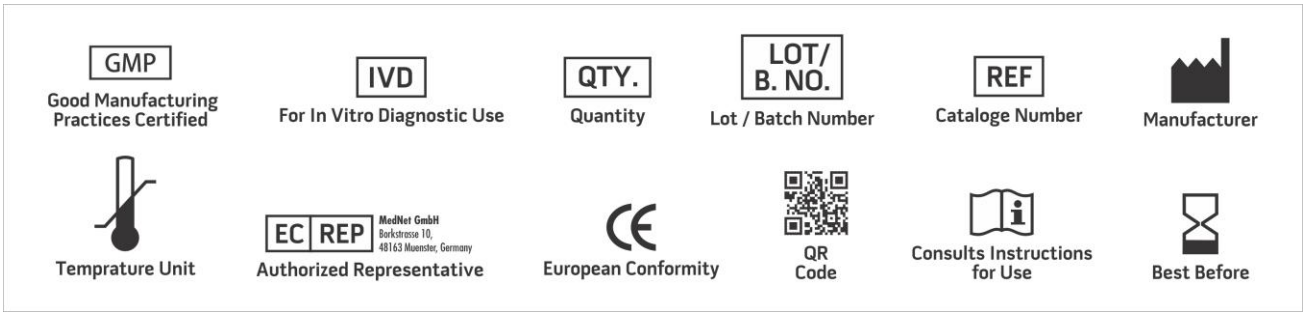
Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided 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. 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).
3. Schmidt and Moyer, 1944; J. Bact, 47:199.
4. United States Pharmacopoeia 2011, USP 34/NF 29, US Pharmacopoeial Convention Inc, Rockville, MD.



NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.
***For Lab Use Only**
Revision: 08 Nov., 2019