CM 20143 - STREPTOMYCIN ASSAY AGAR W/ YEAST EXTRACT (ANTIBIOTIC ASSAY MEDIUM NO. 5) (as per IP/USP)

INTENDED USE

For microbiological assay of Streptomycin using Bacillus subtilis.

PRODUCT SUMMARY AND EXPLANATION

Thismedium is commonlyused for assaying Streptomycin by cylinder plate method using Bacillus subtilis as test organism. This method is used in the assay of commercial preparations of antibiotics, as well as for antibiotics in body fluids, feeds etc. Medium composition is in accordance to the specifications detailed in the FDA and numerically identical to the name assigned by Grove and Randall.

This medium is used to prepare the base as well as seed layer in the microbiological assay of antibiotics such as Dihydrostreptomycin, Framycetin and Kanamycin B.

Toperform the antibiotic assay, the Base Agar should be prepared on the same day as the test. For the cylinder method, abase layer of 21 ml is required. Once the base medium has solidified, seed layer inoculated with the standardized test culture can be overlaid. Even distribution of the layer is important.

COMPOSITION

Ingredients	Gms / Ltr
Peptone	6.000
Beef extract	1.500
Yeast extract	3.000
Agar	15.000

PRINCIPLE

Peptone, yeast and Beef extract provides nitrogenous and carbonaceous compounds, long chain amino acids, vitamins and other necessary growth nutrients for the test organism like Bacillus subtilis. The medium provides solidified substratum for growth of organims. The pH-7.9 maintained in this medium- provides optimum growth conditions for Bacillus subtilis.

INSTRUCTION FOR USE

Dissolve 25.50 gramsin 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.
Cool to 45-50°C. Mix well and pour into sterile Petri plates.

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) : 7.9±0.2

INTERPRETATION

Culturalcharacteristics observed after an incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Antibiotics assayed	Incubation Temperature	Incubation Period
Bacillus subtilis subsp. spizizenii	6633	50-100	Good-luxuriant	>=50%	Dihydrostreptmycin , Framycetin, Kanamycin B	35-37°C	18-24 Hours

PACKAGING:

Inpacksizeof500 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.

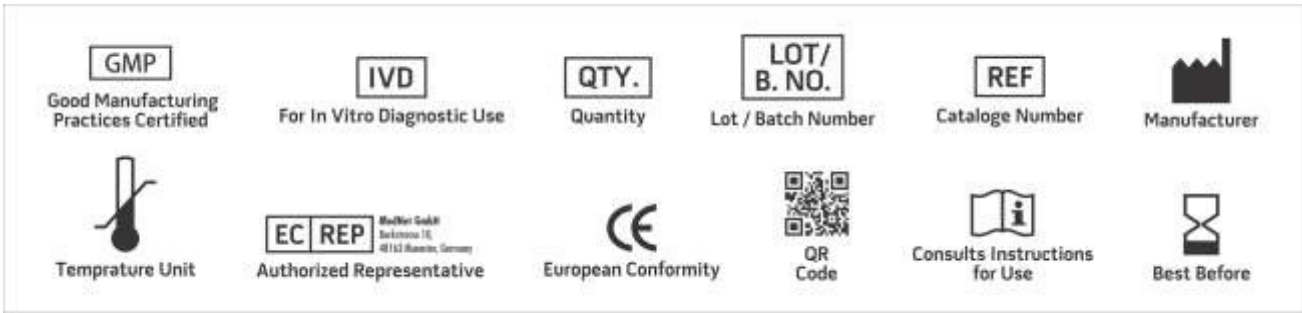
Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL

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

REFERENCES

1. Groveand Randall, 1955, Assay Methods of Antibiotics Medical Encyclopedia, Inc. New York. Isenberg, H.D. Clinical Microbiology Procedures Handbook secondEdition.
2. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015)
3. Manual of Clinical Microbiology, 11th Edition. Vol. 1.
4. Stearn and Stearn, J Bacteriol. 1933. 26(1): 37-55.
5. 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, p. 242-259, (April).
6. The United States Pharmacopoeia, 2019, The United States Pharmacopoeial Convention, Rockville, MD.



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

*For LabUse Only