ANTIBIOTIC ASSAY MEDIUM NO. 5 (STREPTOMYCIN ASSAY AGAR W/ YEAST EXTRACT) (as per IP/ USP) TM 017

For microbiological assay of Streptomycin using *Bacillus subtilis.*

COMPOSITION

Ingredients	g/L
Agar	15.000
Peptic digest of animal tissue	6.000
Yeast extract	3.000
Beef extract	1.500

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers below 25°C and protect from direct Sunlight.

INSTRUCTIONS FOR USE

Dissolve 25.50 g in 1000 ml distilled water. Gently heat to boil with gentle swirling and dissolve the medium completely. Sterilize by autoclaving at 15 psi (121°C) for 15 minutes. Cool to 45 - 50°C and mix well before pouring into sterile Petri plates.

Appearance: Medium amber colour, clear to slightly opalescent gel
pH (at 25°C): 7.9 ± 0.2

PRINCIPLE

ANTIBIOTIC ASSAY MEDIUM NO. 5 is used for microbiological assay of Streptomycin using *Bacillus subtilis*. Plates are prepared and incubated following the FDA and the USP guidelines. The use of standardized culture media and strict control of all test conditions are essential requirements in the microbiological assay of antibiotics in order to obtain satisfactory test results.

The pH-7.9 maintained in this medium- provides optimum growth conditions for *Bacillus subtilis*. This medium is used to prepare the base as well as seed layer in the microbiological assay of antibiotics such as Dihydrostreptomycin.

Peptic digest of animal tissue, yeast and beef extract provides necessary growth nutrients for *Bacillus subtilis*. Bacteriological Agar is the solidifying agent. Medium provides solidified substratum and pH-7.9 provides optimum growth conditions for *Bacillus subtilis*. Freshly prepared plates should be used for antibiotic assays.

MICROBIOLOGICAL PARAMETERS (GROWTH PROMOTION TEST)

Cultural characteristics observed after inoculation (10^3 CFU/ml) and incubation at 35-37^{0}C for 18-24 hours.

Test strain	ATCC	Inoculum (CFU/ml)	Growth	Antibiotic assayed
Bacillus subtilis	6633	10^3	Good-Luxuriant	Streptomycin, Kanamycin B

REFERENCES

1. Stearn and Stearn, J Bacteriol. 1933. 26(1): 37-55.
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, p. 242-259, (April 1).