Antibiotic Assay Medium No. 39

M1142

Antibiotic Assay Medium No. 39 is used for the microbiological assay of Neomycin using *Klebsiella pneumoniae* and Tylosin using *Staphylococcus aureus* as the test organism

Composition**

Ingredients	Gms / Litre
Peptic digest of animal tissue (Peptone)	5.000
Beef extract	1.500
Yeast extract	1.500
Dextrose	1.000
Sodium chloride	3.500
Dipotassium phosphate	3.680
Potassium dihydrogen phosphate	1.320
Final pH (at 25°C)	7.9±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 17.5 grams in 1000 ml distilled water. Heat if necessary to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Principle And Interpretation

Antibiotic Assay media are used in the performance of antibiotic assays. Grove and Randall have elucidated those antibiotic assays and media in their comprehensive treatise on antibiotic assays (1). Schmidt and Moyer have reported the use of antibiotic assay medium for the liquid formulation used in the performance of antibiotic assay (2). This medium is prepared in accordance with the USP (3) and the FDA (4).

Nutrients and growth factors are provided by ingredients like peptone, beef extract and yeast extract. Dextrose is the source of energy. Sodium chloride maintains the osmotic equilibrium whereas the phosphates act as the buffering system.

Quality Control

Appearance
Cream to yellow homogeneous free flowing powder

Colour and Clarity of prepared medium
Yellow coloured clear solution

Reaction
Reaction of 1.75% w/v aqueous solution at 25°C. pH : 7.9±0.2

pH
7.70-8.10

Cultural Response
M1142: Cultural characteristics observed after an incubation at 35 - 37°C for 18 - 24 hours.

Organism	Inoculum (CFU)	Serial dilution with
Klebsiella pneumoniae ATCC 10031	50-100	Neomycin
Staphylococcus aureus ATCC 9144	50-100	Tylosin

Storage and Shelf Life

Store below 30°C in tightly closed container and use freshly prepared medium. Use before expiry date on the label

Reference

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 2009, 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).

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