



Antibiotic Assay Medium No. 39

MU1142

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 in accordance with United States Pharmacopoeia.

Composition**

Ingredients	Gms / Litre
Peptone	5.000
Yeast extract	1.500
Beef extract	1.500
Dextrose	1.000
Sodium chloride	3.500
Dibasic potassium phosphate	3.680
Monobasic potassium phosphate	1.320
pH after sterilization	7.9±0.1

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 17.5 grams in 1000 ml purified/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 coloured homogeneous free flowing powder

Colour and Clarity of prepared medium

Light yellow coloured clear solution without any precipitate

Reaction

Reaction of 1.75% w/v aqueous solution (after sterilization). pH : 7.9±0.1

pH

7.80-8.00

Cultural Response

MU1142: Cultural characteristics observed after an incubation at specified temperature for specified time

Organism	Inoculum (CFU)	Growth	Serial dilution with	Incubation temp/ period
<i>Klebsiella pneumoniae</i> ATCC 10031	50-100	luxuriant	Neomycin	36-37.5°C/ 16-24 hours
<i>Staphylococcus aureus</i> ATCC 9144	50-100	luxuriant	Tylosin	36-37.5°C/ 16-18 hours

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 Encyclopaedia, Inc, New York.
2. Schmidt and Moyer, 1944; J. Bact, 47:199.
3. United States Pharmacopoeia/ National Formulary (USP 34/NF 29), 2011. 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).

Revision : 2 / 2015

Disclaimer :

User must ensure suitability of the product(s) in their application prior to use. Products conform solely to the information contained in this and other related HiMedia™ publications. The information contained in this publication is based on our research and development work and is to the best of our knowledge true and accurate. HiMedia™ Laboratories Pvt Ltd reserves the right to make changes to specifications and information related to the products at any time. Products are not intended for human or animal or therapeutic use but for laboratory, diagnostic, research or further manufacturing use only, unless otherwise specified. Statements contained herein should not be considered as a warranty of any kind, expressed or implied, and no liability is accepted for infringement of any patents.