

TECHNICAL DATA SHEET

Antibiotic Assay Medium No.39

Principle

The media is composed according to the USP, recommended as antibiotic assay medium. It is composed of peptone, yeast extract, meat extract (equivalent to beef extract), dextrose, sodium chloride and phosphates. Peptone, yeast extract and meat peptone provide nitrogen, carbon, long chain amino acids, vitamins and essential nutrients for the growth of microorganisms. Dextrose serves as energy source. Sodium chloride maintains osmotic equilibrium and phosphates act as buffering agent.

Use: For microbiological assay of Neomycin as well as Streptomycin using *Klebsiella pneumoniae* as the test organism.

Contents*

Ingredients	Gram/Litre
Peptone	5.000
Yeast Extract	1.500
Meat Extract#	1.500
Dextrose	1.000
Dipotassium phosphate	3.500
Potassium phosphate	3.680
pH at 25°C	7.9 ±0.2

* Formula adjusted for optimum performance and parameters # Equivalent of Beef Extract

Directions: Dissolve 17.50 grams in 1000 ml distilled water. Boil to dissolve the medium completely and sterilize by autoclaving at 15 lbs. pressure (121°C) for 15 min, cool it to 42-45 °C, and inoculate test organisms aseptically.

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Regd Office: Unit no 12, 1st Floor,
Neminath Industrial Estate No.6,
Navghar, Vasai (East), Palghar - 410210.
Maharashtra, INDIA.

Tel: +91 250 2390032 / 2390989 / 2390990
Email: sales@oxfordlabchem.com /
info@oxfordlabchem.com
Web: www.oxfordlabchem.com



Precautions to be taken

These microbial media are intended for the in-vitro use only. All the handling, experiments, storage, and discarding should be performed with the help of skilled and knowledgeable technicians and as per the established guidelines. The material should be disposed only after proper sterilization by autoclaving. Please go through the MSDS of the media to avoid any accidents or in emergency.

Performance and Evaluation

The expected performance of the medium is liable to use as per the direction on the label when stored at optimum conditions and within expiry date.

Quality Control

Appearance	Light beige colored free flowing, homogeneous powder
Reaction of 1.75% solution	7.9 ±0.2 at 25 °C
pH	7.70- 8.10
Color and clarity of ready medium	Light amber colored opalescent solution
Growth Promotion properties	Best at ≤ 100 CFU at 33-37 °C for 18-72 h
Indicative properties	Optimum at ≤ 100 CFU at 33-37 °C for 18-48 h
Negative control	Performed using sterile distilled water

Different Microbial Response

Cultural characteristics observed after incubation at 33-37°C for 18-48 hours.

Organism	ATCC no.	Inoculum	Growth	Antibiotic assayed
<i>Staphylococcus aureus</i>	9144	50-100	Luxurious	Tylosin
<i>Klebsiella pneumoniae</i>	10031	50-100	Luxurious	Neomycin

Storage and Shelf Life: The product is highly hygroscopic; keep the container tightly closed at all times and store it properly as per the conditions mentioned on the label. The declared expiry is valid only when stored as per the conditions mentioned on the label. Note: Sterilize media immediately after reconstitution.

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Disposal: To avoid the contamination or propagation of any hazardous microbes the used, unusable or modified preparation of this product must be disposed after autoclaving after completion of task.

Reference

1. Atlas, R. M. (2005). *Handbook of media for environmental microbiology*. CRC press.
2. *Difco Manual* (1998). 11th Edition. Difco Laboratories., Division of Becton Dickinson and Company, Sparks, Maryland, USA.
3. *The United States Pharmacopoeia*, (2014), The United States Pharmacopeial Convention. 12601 Twinbrook Parkway, Rockville, MD 20852.

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