

TECHNICAL DATA SHEET

Antibiotic Assay Medium No. 10 (Polymyxin Seed Agar)

Principle

The media is composed according to the USP, recommended as antibiotic assay medium. It is composed of pancreatic digest of casein, papaic digest of soybean, sodium chloride, dibasic potassium phosphate, dextrose and agar. Pancreatic digest of casein and papaic digest of soybean provide nitrogen, carbon and other essential nutrients. Sodium chloride maintain osmotic equilibrium. Dibasic potassium phosphate resist change in pH. Dextrose serves as energy source. Agar is solidifying agent. The agar concentration is reduced for the proper diffusion of the antibiotic. The Polysorbate 80 enhances the penetration of antibiotic to the cytoplasmic membrane. The AAM-10 used as base agar for the antibiotic assay against the *Pseudomonas aeruginosa* and *Bordetella bronchiseptica*.

Use: As a seed layer medium for assaying the products containing Polymyxin-B, Carbenicillin, Colistin & Colistimethate sodium.

Contents*

Ingredients	Gram/Litre
Pancreatic Digest of Casein	17.000
Papaic Digest of Soybean	3.000
Sodium Chloride	5.000
Dibasic Potassium Phosphate	2.500
Dextrose	2.500
Agar	12.000
pH at 25°C	7.2 ±0.2

* Formula adjusted for optimum performance and parameters

Directions: Dissolve 42.00 grams in 1000 ml distilled water. Boil to dissolve the medium completely add 10 ml of Polysorbate 80. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 min, cool it to 42-45 °C and distribute aseptically in petri plates. Ensure complete solidification and inoculate test sample aseptically.

OXFORD LAB FINE CHEM LLP

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Precautions to be taken

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	Beige colored free flowing, homogeneous powder
Reaction of 4.2% solution and 1% polysorbate 80	7.2 ±0.2 at 25 °C
pH	7.00- 7.40
Gelling	Firm comparable with 1.2% agar gel
Color and clarity of ready medium	Light amber colored opalescent gel
Growth Promotion properties	Best at ≤ 100 CFU at 32-37 °C for 18-72 h
Indicative properties	Optimum at ≤ 100 CFU at 32-37 °C for 18-48 h
Negative control	Performed using sterile distilled water

Different Microbial Response: Cultural characteristics observed after an incubation at 35±2°C for 18-24 hours. Inoculum 50-100 CFU.

Organism	ATCC	Growth	Recovery	Antibiotic Assayed
<i>Pseudomonas aeruginosa</i>	27853	Luxuriant	≥ 70%	Polymyxin B

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 Pharmacopoeial Convention. 12601 Twinbrook Parkway, Rockvukke, MD 20852.

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