Antibiotic Assay Medium No. 10 (Polymyxin Seed Agar)

Intended Use
Antibiotic Assay Medium No.10 for determining antibiotic potency by microbiological assay techniques as per USP.

Summary
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. Schmidt and Moyer have reported the use of antibiotic assay medium for the liquid formulation used in the performance of antibiotic assay. Freshly prepared plates should be used for antibiotic assays. Test organisms are inoculated in sterile seed agar cooled to 40ºC -45ºC and spread evenly over the surface of solidified base agar. After incubation the concentration of the antibiotic being assayed is determined by measuring the zone of inhibition obtained, with that of reference standard antibiotic. All conditions in the microbiological assay must be carefully controlled. The use of standard culture media in the test is one of the important steps for good results.

Principle
Nutrients and growth factors are supplied by the ingredients like pancreatic digest of casein and papaic digest of soyabean. Sodium chloride maintains the osmotic equilibrium. Dibasic potassium phosphate provides the buffering system. Dextrose serves as the source of energy.

Formula*

Ingredients	**g/L**
Tryptone	17.0
Soya Peptone	3.0
Dextrose	2.5
Sodium chloride	5.0
Dibasic potassium Phosphate	2.5
Agar	12.0
Final pH (at 25°C)	7.2 ± 0.1

*Adjusted to suit performance parameters

Storage and Stability
Store dehydrated medium below 30°C in tightly closed container and the prepared medium at 2°C-8°C. Avoid freezing and overheating. Use before expiry date on the label. Once opened keep powdered medium closed to avoid hydration.

Type of Specimen
Pharmaceutical sample

Specimen Collection and Handling
Ensure that all samples are properly labelled.
Follow appropriate techniques for handling samples as per established guidelines.
Some samples may require special handling, such as immediate refrigeration or protection from light, follow the standard procedure The samples must be stored and tested within the permissible time duration.
After use, contaminated materials must be sterilized by autoclaving before discarding.

Directions
1. Suspend 42.00 g of the powder in 1000 mL purified / distilled water containing 10 mL of Polysorbate 80 (204160700500).
2. Mix thoroughly.
3. Heat to boiling to dissolve the powder completely.
4. Sterilize by autoclaving at 121°C (15 psi) for 15 minutes as per validated cycle.

Quality Control

Dehydrated Appearance: Cream to yellow coloured, homogeneous free flowing powder.
Prepared Appearance: Medium amber coloured, clear to slightly opalescent gel forms in petridishes.
Cultural Response: Cultural characteristics observed after incubation at 35°C-37°C for 18-24 hours.

Organism (ATCC)	Growth	Antibiotics Assayed by Cylinder Plate Method
Bordetella bronchiseptica (4617)	Good	Polymyxin B, Colistin Colistimethate
Pseudomonas aeruginosa (25619)	Good	Carbenicillin

Performance and Evaluation

Performance of the product is dependent on following parameters as per product label claim:

1. Directions
2. Storage
3. Expiry

Warranty

This product is designed to perform as described on the label and package insert. The manufacturer disclaims any implied warranty of use and sale for any other purpose.

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. Data on file: Microxpress®, A Division of Tulip Diagnostics (P) Ltd.

Product Presentation:

Cat No.	Product description	Pack Size
201010230100	Dehydrated Culture Media	100 g
201010230500	Dehydrated Culture Media	500 g