# Antibiotic Assay Medium D

## Intended Use
Antibiotic Assay Medium D is used for the microbiological assay of Erythromycin estolate using *Klebsiella pneumoniae*.

## Summary
The antibiotic assays and media on antibiotic assays have been elucidated by Grove and Randall in their comprehensive treatise. Antibiotic Assay Medium D is used for the microbiological assay of Erythromycin estolate using Klebsiella pneumoniae Turbidimetric antibiotic assay is based on the change or inhibition of growth of a test microorganism in a liquid medium containing a uniform concentration of an antibiotic. Use of this method is appropriate only when test samples are clear. Turbidimetric methods are used for determining the potency of antibiotics since they are inherently more accurate and more precise than comparable agar diffusion procedures.

## Principle
Combination of peptone, heart extract and yeast extract supplies nutrients, essential mineral and growth factors for enhanced microbial growth. Potassium nitrate serves as inorganic source of nitrogen for the growth of test organism. Sodium chloride maintains the osmotic equilibrium while phosphates are incorporated in the medium to provide good buffering action. Glucose monohydrate serves as the carbon and energy source for faster growth.

## Formula*
| **Ingredients** | **g/L** |
|---|---|
| Heart extract | 1.5 |
| Yeast extract | 1.5 |
| Peptone-Casein | 5.0 |
| Glucose monohydrate | 1.0 |
| Sodium chloride | 3.5 |
| Dipotassium hydrogen phosphate | 3.68 |
| Potassium dihydrogen phosphate | 1.32 |
| Potassium nitrate | 2.0 |
| Final pH (at 25°C) | 7.0 ± 0.2 |

*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 samples

## 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 19.40 g of the powder in 1000 mL purified / distilled water.
2. Heat if necessary, to dissolve the powder completely. Dispense as desired.
3. 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**: Light yellow coloured, clear solution without any precipitate.
**Growth Promotion Test:** Growth promotion is carried out in accordance with the harmonized method of USP/EP/JP/IP and growth is observed after an incubation at 18-24 hours at 30°C-35°C.
**Growth Promoting Properties:** The test results observed are within the specified temperature and shortest period of time specified in the test, inoculating ≤ 100 cfu of appropriate microorganism at 30°C-35° C for 18 hours.

| Organism (ATCC) | Growth | Antibiotics Assayed by Turbidimetric Method |
|---|---|---|
| *Klebsiella pneumoniae* (10031) | Good | Erythromycin stearate |

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


## Product Presentation:

| Cat No. | Product description | Pack Size |
|---|---|---|
| 201010150500 | Dehydrated Culture Media | 500 g |