



Dehydrated Culture Media
Bases / Media Supplements

Technical Information

Antibiotic Assay Medium D

Product Code: DM 1556B

Application: - Antibiotic Assay Medium D is recommended for the microbiological assay of Erythromycin estolate using *Klebsiella pneumoniae* ATCC 10031 as a test organism in accordance with British Pharmacopoeia.

Composition**

Ingredients	Gms / Litre
Heart extract	1.500
Yeast extract	1.500
Peptone casein	5.000
Glucose monohydrate	1.000
Sodium chloride	3.500
Dipotassium hydrogen phosphate	3.680
Potassium dihydrogen phosphate	1.320
Potassium nitrate	2.00
pH after sterilization	7.0±0.1

**Formula adjusted, standardized to suit performance parameters

Principle & Interpretation

Antibiotic Assay Medium D is formulated in accordance to British Pharmacopoeia (1). This medium is widely used for turbidimetric assay of erythromycin esolate using *Klebsiella pneumoniae* as test organism. Turbidimetric methods for determining the potency of antibiotics are inherently more accurate and more precise than comparable agar diffusion procedures.

Combination of peptone-casein, heart extract and yeast extract supply nutrients and 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.

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.

Methodology

Suspend 19.4 grams of dehydrated medium powder in 1000 ml distilled water. Mix thoroughly and heat with frequent agitation to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Adjust the pH of the medium, using freshly prepared buffer solution as recommended by the British pharmacopoeia for the antibiotic assayed.

Quality Control

Appearance

Cream to yellow coloured homogeneous free flowing powder.

Colour and Clarity

Light yellow coloured clear solution without any precipitate.

Reaction

Reaction of 1.94% w/v aqueous solution. pH : 7.0±0.1





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pH Range

6.90-7.10

Cultural Response

DM 1556B: Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

Organism	Inoculum (CFU)	Growth	Serial dilution with
<i>Klebsiella pneumonia ATCC 10031</i>	50-100	luxuriant	Erythromycin estolate

Storage and Shelf Life

Dried Media: Store below 30°C in tightly closed container and use freshly prepared medium. Use before expiry date on the label.

Prepared Media: 2-8° in sealable plastic bags for 2-5 days.

Further Reading

1. British Pharmacopoeia, 2011, The Stationery Office, British Pharmacopoeia

Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
- The product conform solely to the technical information provided in this booklet and to the best of knowledge research and development work carried at CDH is true and accurate
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