Antibiotic Assay Medium D

M556

Intended Use:

Recommended for microbiological assay of Erythromycin using *Klebsiella pneumoniae.*

Composition**

Ingredients	Gms / Litre
HMH extract #	1.500
Yeast extract	1.500
Casitose##	5.000
Glucose monohydrate	1.000
Sodium chloride	3.500
Dipotassium hydrogen phosphate	3.680
Potassium dihydrogen phosphate	1.320
Potassium nitrate	2.000
Final pH (at 25°C)	7.0±0.2

**Formula adjusted, standardized to suit performance parameters
Equivalent to Heart extract
Equivalent to Peptone-Casein

Directions

Suspend 19.40 grams (the equivalent weight of dehydrated medium per litre) in 1000 ml purified /distilled water. Heat if necessary to dissolve the medium completely. Dispense and sterilize by autoclaving at 15lbs pressure (121°C) for 15 minutes.

Adjust the pH of the medium, using freshly prepared buffer solution as recommended by the European/British Pharmacopoeia for the antibiotic assayed.

Principle And Interpretation

Antibiotic Assay Medium D is used for the microbiological assay of Erythromycin estolate using *Klebsiella pneumoniae*. Grove and Randall have elucidated the antibiotic assays and media in their comprehensive treatise on antibiotic assays.(1). Turbidimetric methods for determining the potency of antibiotics are inherently more accurate and more precise than comparable agar diffusion procedures. Combination of peptone, HMH extract and yeast extract supplies 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.

Type of specimen

Pharmaceutical sample

Specimen Collection and Handling:

For pharmaceutical sample samples follow appropriate techniques for handling specimens as per established guidelines (1,3). After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions :

Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling specimens. Safety guidelines may be referred in individual safety data sheets.

.KOKVCVKQPU

1. Freshly prepared medium plates must be used or it may result in erroneous results.
2. Use of this method is appropriate only when test samples are clear.

2GTHQTOCPEG CPF 'XCNWCVKQP

2GTHQTOCPEG QH VJG OGFKWO KU GZRGEVGF YJGP WUGF CU RGT VJG FKTG YJGP UVQTGF CV TGEQOOGPFGF VGORGTCVWTG

Quality Control

Appearance
Cream to yellow homogeneous free flowing powder

Colour and Clarity of prepared medium
Light yellow coloured clear solution without any precipitate

Reaction
Reaction of 1.94% w/v aqueous solution at 25°C. pH : 7.0±0.2

pH
6.80-7.20

Cultural Response
Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours

Organism	Inoculum (CFU)	Growth	Serial dilution with
Klebsiella pneumoniae ATCC 10031	50-100	luxuriant	Erythromycin stearate

Reference

1. Grove and Randall,1955; Assay methods of Antibiotics, Medical Encyclopedia,Inc. New York.

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