Antibiotic Assay Medium E

M1347B

Intended Use:

Recommended for microbiological assay of Neomycin sulphate and Framycetin sulphate using *Bacillus subtilis* and *Bacillus pumilus* in accordance with BP

Composition**

Ingredients	Gms / Litre
Peptone	5.000
Disodium hydrogen phosphate,12H2O	26.900
HM extract #	3.000
Agar	10.000
pH after sterilization	7.9±0.1

**Formula adjusted, standardized to suit performance parameters
Equivalent to Meat extract

Directions

Suspend 28.67 grams of dehydrated powder in 1000 ml R-water/ purified / distilled water. Heat to boiling 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.
Advice : Recommended for the microbiological assay of Framycetin sulphate and Neomycin sulphate.

Principle And Interpretation

This medium is formulated in accordance to British Pharmacopoeia (1). This medium is widely used for as seed agar in plate assay of Framycetin sulphate and Neomycin sulphate using *Bacillus subtilis* and/or *Bacillus pumilus* as test organism.
Peptone and HM extract supplies nutrients essential for microbial growth. Phosphates are incorporated in the medium to provide good buffering action. The low concentration of agar facilitates proper diffusion of antibiotic in the seed agar.
Freshly prepared plates should be used for antibiotic assays. Test organisms are inoculated in sterile seed agar cooled to 40-45°C and spread evenly over the surface of solidified base agar. Zones of inhibition around the antibiotic are then measured. All conditions in the microbiological assay must be controlled carefully. The use of standard culture media in the test is one of the important step for the good results.

Type of specimen

Pharmaceutical sample

Specimen Collection and Handling

For pharmaceutical sample samples follow appropriate techniques for handling specimens as per established guidelines (,4). fter use, contaminated materials must be sterili ed b autocla ing before discarding.

arning and recautions

ead the label before opening the container. ear protecti e glo es protecti e clothing e e protection face protection. Follow good microbiological lab practices while handling specimens and culture. tandard precautions as per established guidelines should be followed while handling specimens. afet guidelines ma be referred in indi idual safet data sheets.

Limitations

es y p epa e me i m p ates m st e **s** r it may result in erroneous results-

Performance and Evaluation

Performance of t e medium i e ected en u ed a er t e direction on t e la el it in t e e ir eriod en tored at recommended tem erature

Quality Control

Appearance
Cream to yellow coloured homogeneous free flowing powder

Gelling
Firm, comparable with 1.0% Agar gel.

Colour and Clarity of prepared medium
Light yellow coloured clear to slightly opalescent gel forms in Petri plates.

pH
7.80-8.00

Cultural Response
Cultural characteristics observed after an incubation at 30-37°C for 18- 24 hours.

Organism	Inoculum (CFU)	Growth	Recovery	Antibiotics assayed
Bacillus pumilus NCTC 8241	50-100	luxuriant	>=70%	Neomycin sulphate and Framycetin sulphate
Bacillus subtilis ATCC 6633	50-100	luxuriant	>=70%	Neomycin sulphate and Framycetin sulplhate

Reference

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

Revision : 1 / 2011