



## 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, 12H <sub>2</sub> O	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). 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.

### Limitations

Does not replace the impact of the test as it may result in erroneous results/

### Performance and Evaluation

Performance of the medium is expected as per the direction on the label in the entire period mentioned at recommended temperature

## 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
<i>Bacillus pumilus</i> NCTC 8241	50-100	luxuriant	>=70%	Neomycin sulphate and Framycetin sulphate
<i>Bacillus subtilis</i> ATCC 6633	50-100	luxuriant	>=70%	Neomycin sulphate and Framycetin sulphate

## Reference

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

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### Disclaimer :

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