Antibiotic Assay Medium E

M1347

Intended Use:

Recommended for microbiological assay of Neomycin sulphate and Framycetin sulphate using *Bacillus subtilis* and *Bacillus pumilus.*

Composition**

Ingredients	Gms / Litre
Peptone	5.000
HM extract #	3.000
Disodium hydrogen phosphate.12H2O	26.900
Agar	10.000
Final pH (at 25°C)	7.9±0.2

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

Directions

Suspend 28.67 grams of dehydrated medium in 1000 ml purified /distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C. Mix well and pour into sterile Petri plates.

Principle And Interpretation

Antibiotic Assay Medium E is widely used as seed agar in the plate assay of Framycetin sulphate and Neomycin sulphate using *Bacillus subtilis* and *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. This medium is formulated in accordance to British Pharmacopoeia (1) and European Pharmacopoeia (2).

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 steps for good results.

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Specimen Collection and Handling

p a mac utical sampl sampl s ll app p iat t c i u s a li sp cim s as p stablis ui li s . After use, contaminated materials must be sterilized by autoclaving before discarding.

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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.

Quality Control

Appearance
Cream to yellow 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

Reaction
Reaction of 2.87 % w/v aqueous solution after sterilization. pH : 7.9±0.2

pH
7.70 - 8.10

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

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

Reference

1. British Pharmacopoeia, 2009, The Stationery office British Pharmacopoeia
2. European Pharmacopoeia, 2009, European Department, for the Quality of Medicines.

Revision : 1 / 2011