Dehydrated Culture Media
Bases / Media Supplements

Technical Information

Antibiotic Assay Medium E

Product Code: DM 2347

Application: - Antibiotic Assay Medium E is used in the microbiological assay of Neomycin sulphate and Framycetin sulphate using *Bacillus subtilis* and *Bacillus pumilu*.

Composition**

Ingredients	Gms / Litre
Peptic digest of animal tissue (Peptone)	5.000
Meat extract	3.000
Disodium hydrogen phosphate.12H2O	26.900
Agar	10.000
Final pH (at 25°C)	7.7±0.4

**Formula adjusted, standardized to suit performance parameters

Principle & Interpretation

Antibiotic Assay Medium E is widely used as seed agar in the plate assay for microbiological assay of Framycetin sulphate and Neomycin sulphate using *Bacillus subtilis* and *Bacillus pumilus* as test organism.

Peptic digest of animal tissue (Peptone) and meat 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 composition of medium is according 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 which is 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.

Methodology

Suspend 28.67 grams of dehydrated medium in 1000 ml distilled water. Shake well and heat to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Advice : Recommended for the microbiological assay of Framycetin sulphate and Neomycin sulphate

Quality Control

Physical 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 : 7.7±0.4

pH range 7.29-8.10

Cultural Response/ characteristics
DM 2347: 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

Storage and Shelf Life

Dried Media: Store below 30°C in tightly closed container and use before expiry date as mentioned on the label.
Prepared Media: 2-8° in sealable plastic bags for 2-5 days.

Further Reading

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

Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
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