



Dehydrated Culture Media
Bases / Media Supplements

Technical Information

Antibiotic Assay Medium F

Product Code: DM 1923

Application: - Antibiotic Assay Medium F is used for microbiological assay of Amphotericin B and Nystatin using *Saccharomyces cerevisiae* and *Candida tropicalis*.

Composition**

Ingredients	Gms / Litre
Peptic digest of animal tissue (Peptone)	9.400
Yeast extract	4.700
Beef extract	2.400
Sodium chloride	10.000
Dextrose	10.000
Agar	23.500
Final pH (at 25°C)	6.0±0.2

**Formula adjusted, standardized to suit performance parameters

Principle & Interpretation

Grove and Randall have elucidated those antibiotic assays and media in their comprehensive treatise on antibiotic assays ⁽¹⁾. Using *Saccharomyces cerevisiae* and *Candida tropicalis* antibiotic assay Medium F is recommended for the microbiological assay of Nystatin and Amphotericin B. European Pharmacopoeia and British Pharmacopoeia (2, 3) also recommend this media for the same.

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. After incubation the concentration of the antibiotic being assayed is determined by measuring the zone of inhibition obtained, with that of reference standard antibiotic. All conditions in the microbiological assay must be carefully controlled. The use of standard culture media in the test is one of the important steps for good results.

Peptic digest of animal tissue, yeast extract and beef extract provides nitrogenous source and other essential nutrients. Sodium chloride maintains the osmotic equilibrium. Dextrose is supplemented as a carbon and energy source.

Methodology

Suspend 60 grams of powder media in 1000 ml distilled water. Shake well & heat to dissolve the medium completely. Dispense and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Advice: Recommended for the microbiological assay of Amphotericin B and Nystatin.

Quality Control

Physical Appearance

Cream to yellow homogeneous free flowing powder

Gelling

Firm, comparable with 2.35% Agar gel.

Colour and Clarity of prepared medium

Light yellow coloured clear to slightly opalescent gel forms in Petri plates

Reaction

Reaction of 5.9% w/v aqueous solution at 25°C. pH : 6.0±0.2

pH range 5.80-6.20





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Growth Promotion Test

In accordance with the harmonized method of EP

Cultural Response/ characteristics

DM: 1923 Cultural characteristics observed after an incubation at 30-37°C for 18-24 hours.

Organism	Inoculum (CFU)	Growth	Recovery	Antibiotics assayed
Saccharomyces cerevisiae ATCC 9763	50-100	luxuriant	>=70%	Amphotericin B , Nystatin
Candida albicans CIP1433-83	50-100	luxuriant	>=70%	Nystatin

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. Grove and Randall, 1955, Assay Methods of Antibiotics Medical Encyclopedia, Inc, New York.
2. European Pharmacopoeia, 2009, European Department, for the Quality of Medicines
3. British Pharmacopoeia, 2009, The Stationery office British Pharmacopoeia

Disclaimer :

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