



Antibiotic Assay Medium F

M923

Intended Use:

Recommended for microbiological assay of Amphotericin B and Nystatin using *Saccharomyces cerevisiae* & *Candida tropicalis* respectively.

Composition**

Ingredients	Gms / Litre
Peptone	9.400
Yeast extract	4.700
HM peptone B #	2.400
Sodium chloride	10.000
Dextrose (Glucose)	10.000
Agar	23.500
Final pH (at 25°C)	6.0±0.2

**Formula adjusted, standardized to suit performance parameters

Equivalent to Beef extract

Directions

Suspend 60 grams in 1000 ml purified / distilled water. Heat to boiling 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.

Principle And Interpretation

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

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.

Peptone, yeast extract and HM peptone B provides nitrogenous source and other essential nutrients. Sodium chloride maintains the osmotic equilibrium. Dextrose is supplemented as a carbon and energy source.

Type of specimen

Pharmaceutical sample

Specimen Collection and Handling:

For pharmaceutical sample samples follow appropriate techniques for handling specimens as per established guidelines (1). 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 :

1. Freshly prepared medium plates must be used or it may result in erroneous results.
2. Use of this method is appropriate only when test samples are clear.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

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

pH

5.80-6.20

Growth Promotion Test

In accordance with the harmonized method of EP

Cultural response

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

Organism	Inoculum (CFU)	Growth	Recovery	Antibiotics assayed
<i>Saccharomyces cerevisiae</i> ATCC 9763 (00058*)	50-100	luxuriant	≥70%	Amphotericin B , Nystatin
<i>Candida albicans</i> CIP1433-83	50-100	luxuriant	≥70%	Nystatin

Key : * Corresponding WDCM numbers.

Disclaimer :

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Reference

Revision : 1 / 2011

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