

## Antibiotic Assay Medium No.12 (Nystatin Assay Agar),

**GM280**

### Granulated

Antibiotic Assay Medium No.12 (Nystatin Assay Agar) is used for microbiological assay of Amphotericin B and Nystatin using *Saccharomyces cerevisiae* .

#### Composition\*\*

Ingredients	Gms / Litre
Peptic digest of animal tissue (Peptone)	10.000
Sodium chloride	10.000
Dextrose	10.000
Beef extract	2.500
Yeast extract	5.000
Agar	25.000
Final pH ( at 25°C)	6.1±0.2

\*\*Formula adjusted, standardized to suit performance parameters

#### Directions

Suspend 62.5 grams in 1000 ml 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 or as desired.

#### Principle And Interpretation

This medium is prepared from the Groove and Randall formula (1)Antifungal antibiotics like Amphotericin B and Nystatin can be assayed using this medium.

Ingredients like peptic digest of animal tissue, yeast and beef extract supplements essential nutrients, minerals and growth factors for the growth of test organism. Dextrose in the medium provides enhanced source of carbon and energy. Osmotic equilibrium in the medium is by sodium chloride which maintain the cell integrity and viability.

Freshly prepared plates should be used for antibiotic assays. Test organisms are inoculated in sterilised agar pre-cooled to 40-45°C and spread evenly over the surface of solidified base agar. Prediffusion of antibiotics for 10-20 minutes in the agar by incubating at temperature below the optimal growth temperature for microorganism would facilitate better diffusion of antibiotics followed by incubation of plates for microbial growth.

#### Quality Control

##### Appearance

Cream to yellow coloured granular media

##### Gelling

Firm, comparable with 2.5% Agar gel.

##### Colour and Clarity of prepared medium

Yellow coloured clear to slightly opalescent gel forms in Petri plates

##### Reaction

Reaction of 6.25% w/v aqueous solution at 25°C. pH : 6.1±0.2

##### pH

5.90-6.30

##### Cultural Response

Cultural characteristics observed after an incubation at 25-30°C for 18-24 hours

## Cultural Response

Organism	Inoculum (CFU)	Growth	Recovery	Antibiotics assayed
<i>Saccharomyces cerevisiae</i> ATCC 2601	50-100	luxuriant	>=70%	Amphotericin B, Nystatin

## Storage and Shelf Life

Store below 30°C in tightly closed container and use freshly prepared medium . Use before expiry date on the label

## Reference

1. Grove and Randall, 1955, Assay Methods of Antibiotics Medical Encyclopedia, Inc. New York.

Revision : 00 / 2014



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