



Dehydrated Culture Media  
Bases / Media Supplements

## Technical Information

### Antibiotic Assay Medium No.19

#### Product Code: DM 1101

**Application:-** Antibiotic Assay Medium No.19 is used for the microbiological assay of Amphotericin B, Candicidin and Nystatin using *Saccharomyces cerevisiae*

#### Composition\*\*

| Ingredients                              | Gms / Litre |
|--|-------------|
| Peptic digest of animal tissue (Peptone) | 9.400       |
| Yeast extract                            | 4.700       |
| Beef extract                             | 2.400       |
| Dextrose                                 | 10.000      |
| Sodium chloride                          | 10.000      |
| Agar                                     | 23.500      |
| Final pH (at 25°C)                       | 6.1±0.2     |

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

#### Principle & Interpretation

Antibiotic Assay media are used in for of antibiotic assays. Grove and Randall have elucidated antibiotic assays and media in their comprehensive treatise on antibiotic assays <sup>(1)</sup>. Schmidt and Moyer have reported the use of antibiotic assay medium for the liquid formulation used in the performance of antibiotic assay <sup>(2)</sup>. This media is prepared according to USP <sup>(3)</sup> and by FDA <sup>(4)</sup>. This medium is as per specification of Krishbaum and Arett <sup>(5)</sup>.

Peptic digest of animal tissue (Peptone), yeast extract and beef extract provides nutrients and growth factor. Dextrose provides the energy source and sodium chloride maintains the osmotic equilibrium of the medium.

Freshly prepared plates should be used for antibiotic assays. Test organisms are inoculated in sterile seed agar precooled to 40-45°C and spread evenly over the surface of solidified base agar.

#### Methodology

Suspend 60.0 grams of powder media in 1000 ml distilled water. Shake well and heat to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (12 1°C) for 15 minutes.

*Advice : Recommended in the microbiological assay of Amphotericin B, Candicidin 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

Yellow coloured clear to slightly opalescent gel forms in Petri plates





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#### Reaction

Reaction of 6.0% w/v aqueous solution at 25°C. pH : 6.1±0.2

**pH Range** 5.90-6.30

#### Cultural Response/ characteristics

DM 1101: Cultural characteristics observed after an incubation at 29-31°C for 24-48 hours.

| Organism                                  | Inoculum (CFU) | Growth    | Recovery | antibiotics assayed        |
|---|----------------|-----------|----------|----------------------------|
| <i>Saccharomyces cerevisiae</i> ATCC 2601 | 50-100         | luxuriant | >=70%    | Nystatin                   |
| <i>Saccharomyces cerevisiae</i> ATCC 9763 | 50-100         | luxuriant | >=70%    | Amphotericin B, Candicidin |

## 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. Schmidt and Moyer, 1944; J. Bact, 47:199.
3. United States Pharmacopoeia 2009. US Pharmacopoeial Convention Inc, Rockville, MD.
4. Tests and Methods of Assay of Antibiotics and Antibiotic containing Drugs, FDA, CFR, 1983. Title 21, part 436, Subpart D, Washington, D.C. U.S Government printing office, paragraphs 436, 100-436, 106 pg 242-259 (April 1).
5. Krishbaum A and Areet B, 1967, J. Pharm Sci, 56: 512.

## Disclaimer :

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