



## Medium3.Sabouraud Dextrose Agar Medium w/ Antibiotics

MM1472

Sabouraud Dextrose Agar Medium with antibiotics is recommended for selective cultivation of yeasts and moulds in accordance with Indian Pharmacopoeia, 2010.

### Composition\*\*

Ingredients	Gms / Litre
Peptones (meat and casein)	10.000
Dextrose monohydrate	40.000
Agar	15.000
pH after sterilization ( at 25°C)	5.6±0.2

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

### Directions

Suspend 61.36 grams (the equivalent weight of dehydrated medium ) in 995 ml purified/distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Aseptically add rehydrated contents of one vial of Tetracycline Selective Supplement (FD196). Mix well before pouring into sterile Petri plates.

### Principle And Interpretation

Sabouraud Dextrose Agar Medium w/ antibiotics is recommended for cultivation of yeasts and moulds by Indian Pharmacopoeia (1). This medium was described originally by Sabouraud (2) for the cultivation of fungi, particularly useful for the fungi associated with skin infections. The medium is used with antibiotics such as tetracycline and benzylpenicillin (3) for the isolation of pathogenic fungi from materials containing large numbers of fungi or bacteria. Peptic digest of animal tissue and pancreatic digest of casein provide nitrogenous compounds. Dextrose provides an energy source. Tetracycline and benzyl penicillin inhibits a wide range of Gram-positive and Gram-negative bacteria which makes the medium selective for fungi (4). The low pH favours fungal growth and inhibits contaminating bacteria from clinical specimens (5).

Some pathogenic fungi may produce infective spores which are easily dispersed in air, so examination should be carried out in safety cabinet.

### Quality Control

#### Appearance

Cream to yellow homogeneous free flowing powder

#### Gelling

Firm, comparable with 1.5% Agar gel

#### Colour and Clarity of prepared medium

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

#### pH

5.40-5.80

#### Growth Promotion Test

Cultural response was carried out in accordance with IP, with added Tetracycline Selective Supplement (FD196), after an incubation at 20-25°C for <=5 days. Recovery rate is considered as 100% for bacteria growth on Soybean Casein Digest Agar and fungus growth on Sabouraud Dextrose Agar

#### Cultural Response

Organism	Inoculum (CFU)	Growth	Observed Lot value (CFU)	Recovery	Incubation temperature	Incubation period
<b>Cultural response</b> <i>Candida albicans</i> ATCC 10231	50 -100	Luxuriant (white colonies)	25 -100	>=50 %	20 -25 °C	<=5 d

* <i>Aspergillus brasiliensis</i> ATCC 16404	50 -100	luxuriant	25 -100	>=50 %	20 -25 °C	<=5 d
<i>Candida albicans</i> ATCC 2091	50 -100	luxuriant	25 -100	>=50 %	20 -25 °C	<=5 d
<i>Saccharomyces cerevisiae</i> ATCC 9763	50 -100	luxuriant	35 -100	>=50 %	20 -25 °C	<=5 d
<i>Escherichia coli</i> ATCC 25922	>=10 <sup>3</sup>	inhibited	0	0 %	20 -25 °C	<=5 d
<i>Escherichia coli</i> ATCC 8739	>=10 <sup>3</sup>	inhibited	0	0 %	20 -25 °C	<=5 d
<i>Escherichia coli</i> NCTC 9002	>=10 <sup>3</sup>	inhibited	0	0 %	20 -25 °C	<=5 d
<i>Trichophyton rubrum</i> ATCC 28191	50-100	good			20 -25 °C	<=7 d
<i>Lactobacillus casei</i> ATCC 334	>=10 <sup>3</sup>	inhibited	0	0 %	20 -25 °C	<=5 d

## Storage and Shelf Life

Store below 30°C in tightly closed container and the prepared medium at 2 - 8°C. Use before expiry date on the label.

## Reference

1. Indian Pharmacopoeia 2010, Ministry of Health and Family welfare, Government of India, New Delhi
2. Sabouraud K., 1892, Ann. Dermatol. Syphilol, 3:1061.
3. Ajello L., 1957, J. Chron. Dis., 5:545.
4. Lorian (Ed.), 1980, Antibiotics In Laboratory Medicine, Williams and Wilkins, Baltimore.
5. Murray, P. R 2005, In Manual of Clinical Microbiology, 7th ed., ASM, Washington, D.C.

Revision : 02 / 2015

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