



Sabouraud Cycloheximide Chloramphenicol Agar

M664

Sabouraud Cycloheximide Chloramphenicol Agar is used for selective isolation and cultivation of fungi.

Composition**

Ingredients	Gms / Litre
Peptic digest of animal tissue	10.000
Dextrose	20.000
Chloramphenicol	0.040
Cycloheximide	0.500
Agar	15.000
Final pH (at 25°C)	6.8±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 45.54 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. Mix well and pour into sterile Petri plates.

Caution : Cycloheximide is very toxic. Avoid skin contact or aerosol formation and inhalation.

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

Principle And Interpretation

Sabouraud Dextrose Agar was originally formulated by Sabouraud (1) and further modified by Emmons (2) by reducing dextrose content and adjusting the pH close to neutral.

Peptic digest of animal tissue is the source of nitrogenous growth factors while dextrose provides an energy source for the growth of microorganisms. The media can be rendered selective for fungi by antibiotics such as Chloramphenicol (4) and Cycloheximide (5), which inhibit some bacteria as well as some saprophytic and pathogenic fungi. This medium inhibits fungi like *Cryptococcus neoformans*, *Aspergillus*, *Nocardia*, certain *Candida* species but allow the dermatophytes to grow well.

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

Reaction

Reaction of 4.5% w/v aqueous solution at 25°C. pH : 6.8±0.2

pH

6.60-7.00

Cultural Response

M664: Cultural characteristics observed after an incubation at 25-30°C for 2-3 weeks.

Organism	Inoculum (CFU)	Growth	Recovery
Cultural Response			
* <i>Aspergillus brasiliensis</i> ATCC 16404	50-100	none-poor	
<i>Candida albicans</i> ATCC 10231	50-100	poor-fair	<=20%

<i>Escherichia coli</i> ATCC 25922	>=10 ³	inhibited	0%
<i>Saccharomyces cerevisiae</i> ATCC 9763	50-100	none-poor	<=20%
<i>Trichophyton mentagrophytes</i> ATCC 9533	50-100	luxuriant	
<i>Trichophyton rubrum</i> ATCC 28191	50-100	luxuriant	

*Key: Formerly known as *Aspergillus niger*

Storage and Shelf Life

Store dehydrated medium and the prepared medium at 2 - 8°C. Use before expiry date on the label

Reference

1. Sabouraud R., 1892, Ann. Dermatol. Syphilol., 3:1061.
2. Emmons C., Binford C., Uty J. and Kwon-Chung, 1970, Medical Mycology, 2nd ed., Philadelphia: Lea and Febiger.
3. Diagnostic Procedures, 1963, 4th ed., APHA
4. Ajello L., 1957, J. Chron. Dis., 5:545.,,
5. MacFaddin J. F., 1985, Media For Isolation-Cultivation Identification - Maintenance of Medical Bacteria, Vol. 1, Williams and Wilkins, Baltimore. ,,

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