SABHI Agar Base

M409

SABHI Agar Base with chloramphenicol supplementation is used for cultivation and isolation of pathogenic fungi especially dermatophytes.

Composition**

Ingredients	Gms / Litre
Calf brain, infusion from	100.000
Beef heart, infusion from	125.000
Proteose peptone	5.000
Peptone, special	5.000
Dextrose	21.000
Sodium chloride	2.500
Disodium phosphate	1.250
Agar	15.000
Final pH (at 25°C)	7.0±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 29.5 grams in 500 ml of distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 50-55°C and aseptically add rehydrated contents of 1 vial of Chloramphenicol Selective Supplement (FD033). Mix well and pour into sterile Petri plates. To prepare blood agar, add and mix 10% v/v sterile sheep or human blood before dispensing into sterile Petri plates.

Principle And Interpretation

Sabouraud Dextrose Agar, formulated by Sabouraud (1) is the medium of choice for cultivation of fungi. Majority of dermatophytes can be isolated on Sabouraud Dextrose Agar. Brain Heart Infusion Agar is a highly nutritious media used for the isolation of fastidious organisms. SABHI Agar Base, formulated by Gorman (2) is a combination of Sabouraud Dextrose Agar and Brain Heart Infusion Agar. This nutritious medium is used for the cultivation and isolation of pathogenic fungi like dermatophytes and also non-pathogenic fungi from clinical and non-clinical specimens (3). It is useful for maximum recovery of *Blastomyces dermatidis* and *Histoplasma capsulatum* from body tissues and fluids. Addition of blood improves recovery of *H. capsulatum* and helps conversion of *H. capsulatum* and *B. dermatidis* to yeast phase (4). While handling *H. capsulatum* extreme care should be taken to avoid dissemination of its infective spores. The culture should be examined in closed filtered air cabinet.

Calf brain infusion, beef heart infusion, proteose peptone, peptone special provide nitrogenous nutrients, carbon, sulphur and trace elements essential for fungal growth. Dextrose provides energy to the microorganisms. Sodium chloride maintains osmotic balance. Incorporation of a broad spectrum antibiotic like chloramphenicol inhibits many gram-negative bacteria. Some fungi may be inhibited by the antibiotics in the selective medium (4).

Quality Control

Appearance
Cream to yellow homogeneous free flowing powder

Gelling
Firm, comparable with 1.5% Agar gel

Colour and Clarity of prepared medium
Basal medium forms yellow coloured, clear gel. With the addition of 10% v/v sterile defibrinated blood cherry red coloured opaque gel forms in Petri plates

Reaction
Reaction of 5.9% w/v aqueous solution at 25°C. pH : 7.0±0.2

pH
6.80-7.20

Cultural Response
M409: Cultural characteristics observed after an incubation at 25-30°C for 40-48 hours with added 10%w/v sterile defibrinated blood and Chloramphenicol Selective Supplement (FD033).

Organism	Growth w/o blood	Growth w/ blood
**Aspergillus brasiliensis ATCC 16404*	good	luxuriant
Candida albicans ATCC 10231	good-luxuriant	luxuriant
Escherichia coli ATCC 25922	inhibited	inhibited
Saccharomyces cerevisiae ATCC 9763	good-luxuriant	luxuriant
Saccharomyces uvarum ATCC 28098	good-luxuriant	luxuriant
Staphylococcus aureus ATCC 25923	inhibited	inhibited
Blastomyces dermatidis ATCC14112	good	good
Histoplasma capsulatum ATCC 10230	good	good

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. Sabouraud R., 1982, Ann. Dermatol. Syphilol. 3:1061
2. Gorman, 1967, Am. J. Med. Technol., 33:151.
3. Murray P. R., Baron J. H., Pfaller M. A., Jorgensen J. H. and Yolken R. H., (Ed.), 2003, Manual of Clinical Microbiology, 8th Ed., American Society for Microbiology, Washington, D.C.
4. MacFaddin J. F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. 1, Williams and Wilkins, Baltimore

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