Fungobiotic Agar (Mycobio Agar), Granulated GM475

Fungobiotic Agar (Mycobio Agar),granulated is recommended for the isolation of dermatophytes and many other pathogenic fungi.

Composition**

Ingredients	Gms / Litre
Papaic digest of soyabean meal	10.000
Dextrose	10.000
Cycloheximide	0.500
Chloramphenicol	0.050
Agar	15.000
Final pH (at 25°C)	6.5±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 35.55 grams in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Distribute in tubes as desired. Sterilize by autoclaving at 15 lbs pressure (121°C) for 10 minutes. Cool the tubes in a slanted position. DO NOT REMELT OR OVERHEAT THE MEDIUM.

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

Principle And Interpretation

Fungi that multiply on skin are called dermatophytes. Dermatomycosis is a general term for mycotic parasitism of the skin. These can be isolated on differential selective media containing generous amounts of glucose and antibiotics to suppress bacterial growth (1).

Fungobiotic Agar is used for isolation of pathogenic fungi from mixed microbial flora. Georg et al (2) recommended addition of two antibiotics cycloheximide and chloramphenicol for the primary isolation of dermatophytes and fungi which cause systemic disease as none of the dermatophytes are sensitive to these antibiotics but some fungi causing systemic disease may be inhibited by one or the other antibiotic (3). For this reason media without antibiotics must be used in parallel with Fungobiotic Agar.

Papaic digest of soyabean meal and dextrose provide essential nutrients for fungal growth. Cycloheximide inhibits saprophytic fungi, certain yeasts and moulds (4, 5) while chloramphenicol has an inhibitory action on the accompanying bacteria (6, 7). Temperature of incubation affects the sensitivity of certain systemic pathogenic fungi to cycloheximide and chloramphenicol (8). It is therefore recommended that incubation should be carried out at 25-30°C.

Quality Control

Appearance
Cream to yellow coloured granular medium

Gelling
Firm,comparable with 1.5% Agar gel

Colour and Clarity of prepared medium
Medium amber coloured, clear to slightly opalescent gel forms in tubes as slants

Reaction
Reaction of 3.5% w/v aqueous solution at 25°C. pH : 6.5±0.2

pH
6.30-6.70

Cultural Response
Cultural characteristics observed after an incubation at 25-30°C for 4-7 days .

Organism	Inoculum (CFU)	Growth	Cultural Response

Aspergillus brasiliensis ATCC 16404	>=10^3	inhibited
Candida albicans ATCC 10231	50-100	luxuriant
Candida tropicalis ATCC 1369	>=10^3	inhibited
Escherichia coli ATCC 25922	>=10^3	inhibited
Staphylococcus epidermidis ATCC 12228	>=10^3	inhibited
Trichophyton equinum ATCC 22443	50-100	luxuriant
Trichophyton verrucosum ATCC 36058	50-100	luxuriant

Storage and Shelf Life

Store between 15-25°C in tightly closed container and prepared medium at 2-8°C. Use before expiry date on the label.

Reference

1. Norton C. F.,1986, Microbiology, 2nd Ed., Addison-Wesley Publishing Company
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3. Georg et al, 1954, J. Lab. and Clin. Med., 42:422.
4. Leach, Ford and Whitten, 1947, J. Am. Chem. Soc., 69:474.
5. Whitten, 1948, J. Bacteriol., 56:283.6. Cooke, 1954, Antibiotics and Chemother., 4:657.
7. Robinson, Coken, Robinson and Bereston, 1956, J. Am. Med. Assoc., 16 0:537.
8. McDonough et al, 1960, Mycopath et. Mycolog. Appl., 13:113.

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