MYCOBIOTIC AGAR (7419)

Intended Use
Mycobiotic Agar is used for the selective isolation of pathogenic fungi from clinical materials.

Product Summary and Explanation
The value of selective media for initial cultivation of pathogenic fungi has been demonstrated by numerous investigators.[1-3] Historically, media for fungi generally relied on an acid pH to make the media less suitable for growth of many bacteria.[4] Recently developed media use neutral or slightly alkaline reactions, antibiotics, bile salts, and dyes as selective agents against bacteria.[5,6] Mycobiotic Agar is an excellent basal medium and antifungal agents, cycloheximide and chloramphenicol, are added to study their affect on fungi. This medium is proven useful in the isolation of dermatophytes and other pathogenic fungi from clinical specimens.[7]

Georg recommends the use of Mycobiotic Agar exclusively for isolating dermatophytes (dermatophytes are not sensitive to cycloheximide or chloramphenicol) and in parallel to media without antibiotics for isolating fungi which cause systemic disease.[8]

Principles of the Procedure
The nitrogen, vitamin, and carbon sources are provided by Enzymatic Digest of Soybean Meal in Mycobiotic Agar. Dextrose is the carbohydrate source. Cycloheximide suppresses the growth of saprophytic fungi. Chloramphenicol inhibits bacterial growth. Agar is the solidifying agent.

Formula / Liter
Enzymatic Digest of Soybean Meal ..... 10 g
Dextrose..... 10 g
Agar ..... 15 g
Cycloheximide..... 0.5 g
Chloramphenicol..... 0.05 g
Final pH: 6.5 ± 0.2 at 25°C
Formula may be adjusted and/or supplemented as required to meet performance specifications.

Precautions
1. For Laboratory Use.
2. TOXIC. Toxic if swallowed, inhaled, or absorbed through the skin. Irritating to eyes, respiratory system, and skin. Possible risk of harm to unborn child. Possible carcinogen.

Directions
1. Suspend 35.5 g of the medium in one liter of purified water.
2. Heat with frequent agitation and boil for one minute to completely dissolve the medium.
3. Autoclave at 121°C for 10 minutes.

Quality Control Specifications
Dehydrated Appearance: Powder is homogeneous, free flowing, and light beige.

Prepared Appearance: Prepared medium is trace to slightly hazy and light to medium yellow.

Expected Cultural Response: Cultural response on Mycobiotic Agar at 25 - 30°C after 2 - 7 days of incubation.

Microorganism	Response
Aspergillus niger ATCC® 16404	partial to complete inhibition
Candida albicans ATCC® 10231	growth
Microsporum audouinii ATCC® 42558	growth
Penicillium roquefortii ATCC® 10110	marked to complete inhibition
Trichophyton mentagrophytes ATCC® 9533	growth

The organisms listed are the minimum that should be used for quality control testing.

Test Procedure
Refer to appropriate references for specific procedures on the isolation and identification of fungi.

Results
Refer to appropriate references and procedures for results.

Storage
Store sealed bottle containing the dehydrated medium at 2 - 30°C. Once opened and recapped, place container in a low humidity environment at the same storage temperature. Protect from moisture and light by keeping container tightly closed.

Expiration
Refer to expiration date stamped on the container. The dehydrated medium should be discarded if not free flowing, or if appearance has changed from the original color. Expiry applies to medium in its intact container when stored as directed.

Limitations of the Procedure
1. Due to nutritional variation, some strains may be encountered that grow poorly or fail to grow on this medium.
2. Non-selective fungal media should be used concurrently with selective media when isolating fungi due to the sensitivity of some strains to cycloheximide and chloramphenicol.[8]

Packaging

Mycobiotic Agar	**Code No.**	**7419A**	**500 g**
		7419B	**2 kg**
		7419C	**10 kg**

References

1. **Am. J. Public Health.** 1951. **41:**292.
2. **Bull. D. Inst.** Sieroteropl., Melan. 1926. **5:**173.
3. **Am. Rev. Resp. Dis.** 1967. **95:**1041.
4. **Am. J. Clin. Pathol.** 1951. **21:**684.
5. **Am. J. Clin. Pathol.** 1954. **24:**621.
6. **Rev. Latinoam Microbiol.** 1958. **1:**125.
7. **Land, G. A.** 1992. Culture media. *In* H. D. Isenberg, (ed.). Clinical microbiology procedures handbook, vol. 1. American Society for Microbiology, Washington, D.C.
8. **Georg, L. K., E. S. McDonough, L. Ajello, and S. Brinkman.** 1960. In vitro effects of antibiotics on yeast phase of *Blastomyces dermatitidis* and other fungi. J. Lab. & Clin. Med. **55:**116-19.

Technical Information
Contact Acumedia Manufacturers, Inc. for Technical Service or questions involving dehydrated culture media preparation or performance at (517)372-9200 or fax us at (517)372-2006.

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