PRODUCT SPECIFICATION SHEET

Fungal Agar (Mycological Agar) (DM109)

Intended Use
Fungal Agar (Mycological Agar) (DM109) is recommended for cultivation and maintenance of fungi.

Product Summary and Explanation
Many investigators have demonstrated the value of selective media for initial cultivation of pathogenic fungi.[1-3] Earlier, media for fungi generally relied on an acidic pH to make the media less suitable for growth of many bacteria.[4] Lately, media have been developed using neutral or slightly alkaline reactions, antibiotics, bile salts, and dyes as selective agents against bacteria.[5, 6]
Mycological media are basal media to which antifungal agents may be added for checking their effect on fungi or bacteria to render them selective for isolation and cultivation of fungi. Mycological Agar is used while working with pathogenic fungi. Mycological Agar is prepared according to the formulation suggested by Huppert and Walker.[7] Mycological Agar has a lower dextrose content than Sabouraud Dextrose Agar, and recommended for the isolation and cultivation of fungi from clinical specimens, foods,[8] and cosmetics.[9] This medium may be adjusted to pH 4.0 after autoclaving by adding sterile lactic acid or acetic acid.

Principles of the Procedure
Fungal Agar contains papaic digest of soyabean meal in the medium which provides nitrogen, vitamins and minerals necessary to support bacterial growth. Dextrose is a carbon source required for the growth of fungi. The pH may be adjusted to 4.0 after autoclaving by adding sterile 10% lactic acid sodium (MS045) / acetic acid and used for determining yeast and mould counts of carbonated beverages and food products.

Formula / Liter

Ingredients	Gms / Liter
Papaic digest of soyabean meal	10.00
Dextrose	10.00
Agar	15.00
Final pH: 7.0 ± 0.2 at 25°C	
Formula may be adjusted and/or supplemented as required to meet performance specifications	

Precautions
1. For Laboratory Use only.
2. IRRITANT. Irritating to eyes, respiratory system, and skin.

Directions
1. Suspend 35 grams of the medium in one liter of distilled water.
2. Heat to boiling, to dissolve the medium completely.
3. Autoclave at 121°C, 15 psi pressure, for 15 minutes / validated cycle.
4. Mix well and pour into sterile petri plates.
5. For preparing selective media, acidify the media upto pH 3.0-4.0 by the addition of two vials of 10% Lactic Acid Solution (MS045).

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Quality Control Specifications

Dehydrated Appearance	Cream to yellow homogeneous free flowing powder
Prepared Medium	Light amber coloured, clear to slightly opalescent gel forms in Petri plates
Reaction of 3.5% solution	pH 7.0 ± 0.2 at 25°C
Gel Strength	Firm, comparable with 1.5% Agar gel

Expected Cultural Response: Cultural characteristics observed after an incubation at 25 - 30°C for 48 - 72 hours (For Trichophyton species longer incubation may be required for upto 7 days).

Sr. No.	Organisms	Results to be achieved		
		Inoculum (CFU)	Growth	Recovery
1.	*Aspergillus brasiliensis ATCC 16404*	50-100	good-luxuriant	
2.	*Candida albicans ATCC 10231*	50-100	good-luxuriant	>=70%
3.	*Lactobacillus acidophilus ATCC 11506*	50-100	good-luxuriant	>=70%
4.	*Saccharomyces cerevisiae ATCC 9763*	50-100	good-luxuriant	>=70%
5.	*Saccharomyces uvarum ATCC 28098*	50-100	good-luxuriant	>=70%
6.	*Staphylococcus aureus ATCC 25923*	50-100	good-luxuriant	>=70%
7.	*Trichophyton mentagrophytes ATCC 9533*	50-100	good-luxuriant	

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

Test Procedure

1. Inoculate plated media with test specimens or materials so as to obtain isolated colonies. Consult appropriate references for information about the processing and inoculation of specimens.
2. For isolation of fungi from potentially contaminated specimens, also inoculate a selective medium. Incubate plates at 25-30°C in an inverted position (agar side up) with increased humidity.
3. For isolation of fungi causing systemic mycoses, two sets of media should be inoculated, with one set incubated at 25-30°C and a duplicate set at 35 ± 2°C.
4. All cultures should be examined at least weekly for fungal growth and should be held for 4-6 weeks before being reported as negative.

Results

1. After sufficient incubation, the plates should show isolated colonies in streaked areas and confluent growth in areas of heavy inoculation.
2. Examine plates for fungal colonies exhibiting typical color and morphology. Yeast and mold colonies can be counted to determine the level of contamination in the test sample.
3. Biochemical tests and serological procedures should be performed to confirm findings.
4. Refer to appropriate references and test procedures for interpretation of results.

Storage

Store the sealed bottle containing the dehydrated medium at 10 - 30°C. Once opened and recapped, place container in a low humidity environment at the same storage temperature. Protect from moisture and light.

Expiration

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

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Limitations of the Procedure

1. For identification, organisms must be in pure culture. Morphological, biochemical and/or serological tests should be performed for final identification.
2. Consult appropriate texts for detailed information and recommended procedures.

Packaging

Product Name : Fungal Agar (Mycological Agar)
Product Code : DM109
Available Pack sizes : 500gm

References

1. American Journal of Public Health. 1951. 41:292.
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6. Rev. Latinoam Microbiol. 1958. 1:125.
7. Huppert, M., and L. J. Walker. 1958. The selective and differential effects of cycloheximide on many strains of *Coccidioides immitis*. Am. J. Clin. Pathol. 29:291.
8. MacFaddin, J. D. 1985. Media for isolation-cultivation-identification-maintenance of medical bacteria, vol. 1, p. 65-68. Williams & Wilkins, Baltimore, MD.
9. Curry, A. S., J. G. Graf, and G. N. McEwen, Jr. 1993. CTFA Microbiology Guidelines. The Cosmetic, Toiletry, and Fragrance Association, Washington, D.C.

Further Information

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