PRODUCT SPECIFICATION SHEET

Sabouraud Maltose Agar (DM234)

Intended Use
Sabouraud Maltose Agar (DM234) is recommended for propagation of yeast and mould, especially parasitic fungi concerned with skin and scalp lesions.

Product Summary and Explanation
Fungi were among the first microorganisms recognized because some of the fruiting structures, such as the mushrooms, are large enough to be seen without a microscope. Fungi can be grouped simply on the basis of morphology as either yeasts or moulds.[1] Sabouraud Maltose Broth was formulated by Sabouraud[2] and is used for the isolation and differentiation of yeast and moulds.[3, 4, 5] Sabouraud Maltose Agar is a modification of Sabouraud Dextrose Agar with maltose substituted for the dextrose. It is a selective medium due to the acid pH and is used for the detection of fungi.
Davidson et al. reported that Sabouraud Maltose Agar was a satisfactory medium in their studies of infections caused by *Microsporum audouini, M. lanosum and Trichophyton gypseum.* Davidson and Dowding also used this medium in isolating *T. gypseum*[6] from a case of tinea barbae.[7] Sabouraud Maltose Agar may be modified to form a selective indicator medium for the isolation of *Candida albicans* by the addition of Tergitol-7, bromocresol purple, potassium tellurite and triphenyltetrazolium chloride.[8]

Principles of the Procedure
Sabouraud Maltose Agar contains mycological peptone which provides nitrogenous compounds. Maltose provides an energy source for the growth of microorganisms. The low pH favours fungal growth and inhibits contaminating bacteria from clinical specimens. The acid reaction of the final medium is inhibitory to a large number of bacteria making it particularly useful for cultivating fungi and aciduric microorganisms.

Formula / Liter

Ingredients	Gms / Liter
Maltose	40.00
Mycological, peptone	10.00
Agar	15.00
Final pH: 5.6 ± 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 65 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.

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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 6.5% solution	pH 5.6 ± 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. (Incubate Trichophyton species for 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.	*Escherichia coli ATCC 25922*	50-100	good-luxuriant (inhibited on media with lower pH)	>=70%
4.	*Lactobacillus casei ATCC 9595*	50-100	good-luxuriant	>=70%
5.	*Saccharomyces cerevisiae ATCC 9763*	50-100	good-luxuriant	>=70%
6.	*Trichophyton rubrum ATCC 28191*	50-100	good-luxuriant	

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

Test Procedure

1. **For clinical specimens**
   Refer to laboratory procedures for details on specimen collection and handling.
   Refer to appropriate standard references for details on testing protocol.
2. **For cosmetic, food or environmental monitoring samples**
   Refer to appropriate standard methods for details on sample collection and preparation according to sample type and geographic location.
   Refer to appropriate standard references for details on testing methods.
3. **For pharmaceutical samples**
   Refer to USP General Chapters for details on sample collection and preparation for testing of non sterile products.
   Refer to USP General Chapters <61> and <62> for details on examination of nonsterile products.
4. For isolation of fungi from potentially contaminated specimens, a selective medium should be inoculated along with the nonselective medium. Incubate the containers at 25-30°C with increased humidity. 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

Refer to appropriate references and procedures for interpretation of results.

Storage

Store the 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.

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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.

Limitations of the Procedure

1. Some fungi may be inhibited by the acidic pH of the medium.
2. For identification, organisms must be in pure culture. Morphological, biochemical and/or serological tests should be performed for final identification.
3. Consult appropriate texts for detailed information and recommended procedures.

Packaging

Product Name : Sabouraud Maltose Agar

Product Code : DM234

Available Pack sizes : 500gm

References

1. 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.
2. Sabouraud R., 1892, Ann. Dermatol. Syphil. 3 : 1061.
3. Davidson, Dowding and Buller. 1932. Can. J. Res. 6:1.
4. Davidson and Dowding, 1932, Arch. Dermatol. Syphilol. 26:660.
5. Frank L. S., 1932, Arch. Dermatol. Syphilol., 26: 457.
6. Davidson, Dowding and Buller. 1932. Can. J. Res. *6*:1.
7. Davidson and Dowding. 1932. Arch. Dermatol. Syphilol. *26*:660.
8. Chapman G. H. (1952) Trans. New York Acad. Sci., Series II 14(6). 254.

Further Information

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