PRODUCT SPECIFICATION SHEET

Sabouraud Dextrose Maltose Agar (DM1386)

Intended Use
Sabouraud Dextrose Maltose Agar (DM1386) is recommended for cultivation of *mould, yeast* and for testing antimycotic substances.

Product Summary and Explanation
Sabouraud Dextrose Agar is a modified medium by Carliers, for the cultivation of fungi, particularly dermatophytes, based on the original formulation of Dextrose Agar described by Sabouraud.[1, 2] 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. 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*.[3] Davidson and Dowding also used this medium in isolating *T.gypseum* from a case of tinea barbae.[4]

Principles of the Procedure
Sabouraud dextrose media are peptone media supplemented with dextrose to support the growth of fungi. Casein enzymic hydrolysate and peptic digest of animal tissue present in the medium provide nitrogen, vitamins, minerals, amino acids and growth factors. Dextrose and maltose provide an energy source for the growth of microorganisms. The low pH of 5.4, 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. If fungi are to be isolated from contaminated specimens, a selective medium should be inoculated simultaneously. Incubate cultures for 4 to 6 weeks before reporting as negative.

Formula / Liter

Ingredients	Gms / Liter
Casein enzymic hydrolysate	5.00
Peptic digest of animal tissue	5.00
Dextrose	10.00
Maltose	10.00
Agar	15.00
Final pH: 5.4 ± 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 45 grams of the medium in one liter of distilled water.
2. Heat if necessary, 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. DO NOT OVERHEAT.

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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 4.5% Solution	pH : 5.4 ± 0.2 at 25°C
Gel Strength	Firm, comparable with 1.5% Agar gel

Expected Cultural Response: Cultural characteristics observed after an incubation 25 - 30°C for upto 5 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 low 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	--
7.	*Penicillium notatum ATCC 10108*	50 -100	good-luxuriant	--
8.	*Trichophyton gallinae ATCC 22243*	50 -100	good-luxuriant	--
9.	*Trichophyton mentagrophytes ATCC 9533*	50 -100	good-luxuriant	--
10.	*Trichophyton ajelloi ATCC 24885*	50 -100	good-luxuriant	--

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

Test Procedure

1. Refer to appropriate standard references for details on testing protocol to obtain isolated colonies.
2. For isolating fungi from potentially contaminated specimens, a selective medium should be inoculated along with the non-selective medium.
3. Incubate the plates at 25-30°C in an inverted position (agar side up) with increased humidity.
4. All cultures should be examined at least weekly for fungal growth.

Results

1. Count the number of colonies and consider the dilution factor (if test sample was diluted) to determine the yeast and/or mold counts per gram or milliliter of material.
2. Yeasts grow creamy to white colonies. Molds will grow as fuzzy colonies of various colors.
3. Biochemical tests and serological procedures should be performed to confirm findings.

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.
3. Some fungi may be inhibited by the acidic pH of the medium.

Packaging

Product Name : Sabouraud Dextrose Maltose Agar.
Product Code : DM1386
Available Pack sizes : 100gm / 500gm

References

1. Carlier G. I. M., 1984, Brit. J. Derm. Syph., 60:61
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.

Further Information

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