

PRODUCT SPECIFICATION SHEET



Sabouraud Dextrose Agar (DM232)

Intended Use

Sabouraud Dextrose Agar (DM232) is used for the cultivation of yeast, mold and aciduric microorganisms.

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) The high dextrose concentration and low pH of 5.6 of this medium is favorable for the growth of fungi especially dermatophytes, and slightly inhibitory to contaminating bacteria in clinical specimen.^(3, 4) Sabouraud Dextrose Agar is used for determining the microbial content of cosmetics,⁽⁵⁾ in the mycological evaluation of food.^(6, 7) This medium can also be used, clinically to aid in the diagnosis of yeast and fungal infections.^(8, 9)

General Chapters <61> and <62> of the USP describe test methods for using Sabouraud Dextrose Agar when performing the microbial enumeration tests and tests for isolating *Candida albicans* from non-sterile pharmaceutical products.⁽¹⁰⁾ The medium is rendered more selective by the addition of, a modification designed to increase bacterial inhibition.

Principles of the Procedure

Mycological peptone provides nitrogenous compounds. Dextrose provides an energy source for the growth of microorganisms. High dextrose concentration and low pH favours fungal growth and inhibits contaminating bacteria from test samples. Chloramphenicol is inhibitory to a wide range of gram-negative and gram-positive bacteria, and Cycloheximide is an antifungal agent that is primarily active against saprophytic fungi and does not inhibit yeasts or dermatophytes.⁽¹⁰⁾

Formula / Liter

Ingredients	Gms / Liter
Dextrose	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 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.

Quality Control Specifications

Dehydrated Appearance	Cream to yellow colored, 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

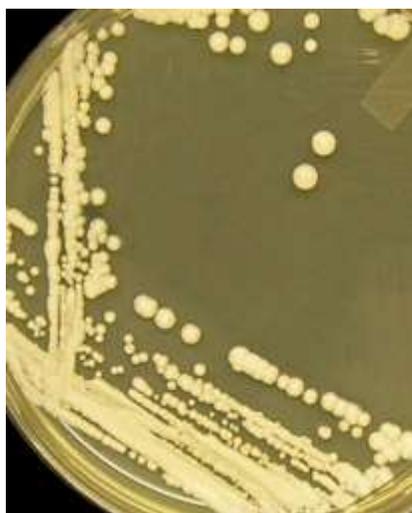


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Expected Cultural Response: Cultural characteristics observed on Sabouraud Dextrose Agar after an incubation at 20-25 °C for 24-48 hours. Recovery rate is considered as 100% for bacteria growth on Soybean Casein Digest Agar and fungus growth on Sabouraud Dextrose Agar

Sr. No.	Organisms	Results to be achieved			
		Inoculum (CFU)	Growth	Observed Lot value (CFU)	Recovery
1.	<i>Candida albicans</i> ATCC 10231	50 -100	good-luxuriant	35 - 100	≥70%
2.	<i>Aspergillus brasiliensis</i> ATCC 16404	50 -100	good-luxuriant	50 - 100	≥70%
3.	<i>Candida albicans</i> ATCC 2091	50 -100	good-luxuriant	35 - 100	≥70%
4.	<i>Saccharomyces cerevisiae</i> ATCC 9763	50-100	good-luxuriant	35 - 100	≥70%
5.	<i>Escherichia coli</i> ATCC 25922	50-100	good-luxuriant	35 - 100	≥70%
6.	<i>Escherichia coli</i> ATCC 8739	50-100	good-luxuriant	35 - 100	≥70%
7.	<i>Escherichia coli</i> NCTC 9002	50-100	good-luxuriant	35 - 100	≥70%
8.	<i>Trichophyton rubrum</i> ATCC 28191	50-100	good-luxuriant	35 - 100	≥70%
9.	<i>Lactobacillus casei</i> ATCC 334	50-100	good-luxuriant	35 - 100	≥70%

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



Candida albicans ATCC 10231



Aspergillus brasiliensis ATCC 16404

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 to obtain isolated colonies.

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 and performing microbial enumeration tests and the isolation of *Candida albicans*.⁽¹⁰⁾

4. For isolating fungi from potentially contaminated specimens, a selective medium should be inoculated along with the non-selective medium.

5. Incubate the plates at 25-30°C in an inverted position (agar side up) with increased humidity.

6. All cultures should be examined at least weekly for fungal growth.

Results

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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 2 - 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.

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 Agar.

Product Code : DM232

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. Emmons C., Binford C, Uty J. and Kwon-Chung, 1970, *Medical Mycology*, 2nd Ed, Philadelphia: Lea and febiger.
4. Ajello, George, Kaplan and Kaufman, 1963. CDC laboratory manual for medical mycology. PNS Publication No.994 U. S Government Printing office, Washington, D.C
5. Curry, A. S., J. G. Graf, and G. N. McEwen, Jr. (eds.). 1993. CTFA Microbiology Guidelines. The Cosmetic, Toiletry, and Fragrance Association, Washington, D.C.
6. Marshall, R. T. (ed.). 1993. Standard methods for the microbiological examination of dairy products, 16th ed. American Public Health Association, Washington, D.C.
7. www.fda.gov/Food/ScienceResearch/LaboratoryMethods/BacteriologicalAnalyticalmanualBAM/default.htm.
8. Murray, P.R., E. J. Baron, M. A. Pfaller, F. C. Tenover, and R. H. Tenover (eds.). Manual of clinical microbiology, 6th ed. American Society for Microbiology, Washington, D.C.
9. MacFaddin, J. F. 1985. Media for isolation-cultivation-identification-maintenance of medical bacteria, vol.1. Williams & Wilkins, Baltimore, MD.
10. The United States Pharmacopoeia, 2011, The United States Pharmacopoeial Convention. Rockville, MD.
11. Lorian (ed.). 2005. Antibiotics in laboratory medicine: making a difference, 5th ed. Lippincott Williams & Wilkins, Baltimore, Md.

Further Information

For further information please contact your local MICROMASTER Representative.



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