



PRODUCT SPECIFICATION SHEET

Sabouraud Dextrose Agar Plate (RPO20)

Intended Use

Sabouraud Dextrose Agar Plate (RPO20) medium is recommended for cultivation of wide variety of microorganisms and for Sterility testing in pharmaceuticals.

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⁾ Fungal diseases that occur on the skin, hair and mucous membrane are called superficial mycoses, and the organism that cause them, the dermatophytes.⁽²⁾ It is good practice to use a medium that favors the growth of fungi but is not optimal for the growth of bacteria, when fungi are to be isolated.

Sabouraud Dextrose Agar is a modified medium by Carliers, for the cultivation of fungi, particularly dermatophytes and aciduric microorganisms, based on the original formulation of Dextrose Agar described by Sabouraud.^(2,4) 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.^(5,6) Sabouraud Dextrose Agar is used for determining the microbial content of cosmetics,⁽⁷⁾ in the mycological evaluation of food.^(8,9) This medium can also be used, clinically to aid in the diagnosis of yeast and fungal infections.^(10,11)

Principles of the Procedure

Sabouraud dextrose Agar contains peptic digest of animal tissue and pancreatic digest of casein which provides nitrogenous compounds. Dextrose provides an energy source for the growth of microorganisms. High dextrose concentration and low pH favors fungal growth and inhibits contaminating bacteria from test samples.

Formula / Liter

Ingredients	Gms / Liter
Dextrose	40.00
Mixture of Peptic digest of animal tissue and Pancreatic digest of casein (1:1)	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. Prepared plated media are For *in vitro* Diagnostic Use or For Laboratory Use as labeled.
2. Directions for use should be read and followed carefully.
3. If excessive moisture is observed, invert the bottom over an off-set lid and allow to air dry in order to prevent formation of a seal between the top and bottom of the plate during incubation.
4. Observe aseptic techniques and established precautions against microbiological hazards throughout all procedures, since it must be assumed that all specimens/samples collected might contain infectious microorganisms.

Product Deterioration

Do not use plates if they show evidence of microbial contamination, discoloration, drying, cracking or other signs of deterioration.

Directions

Either streak, inoculate or surface spread the test inoculum (50-100 CFU) aseptically on the plate.





PRODUCT SPECIFICATION SHEET

Quality Control Specifications

Appearance	Sterile Sabouraud Dextrose Agar in 90mm plates
Colour	Light amber coloured clear to slightly opalescent gel forms in Petri plates
Reaction	5.40-5.80
Quantity of medium	25ml of medium in 90mm plates

Sterility Check: Passes release criteria.

Cultural Response

Recovery rate is considered 100% for bacteria growth on Blood Agar and fungus growth on Sabouraud Dextrose Agar.

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.

Test Procedure

Refer appropriate references for standard test procedures.

Results

Refer appropriate references and procedures for interpretation of results.

Storage

On receipt, store plates at 20-25°C.

Expiration

Refer to the expiration date stamped on the pack. Prepared plates stored in their original sleeve wrapping at 15-25°C until just prior to use may be inoculated up to the expiration date and incubated for recommended incubation times.

Product Disposal

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.





PRODUCT SPECIFICATION SHEET

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 Plate

Product Code : RPO20

Available Pack sizes : Pack of 10 plates

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 Edi, 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.



MICROMASTER LABORATORIES PRIVATE LIMITED

RP020PSS, Rev.00, Ver.00/ 01.01.2019

Unit 38/39, Kalpataru Industrial Estate,
Off G.B. Road, Near 'R-Mall' , Thane (W) - 400607. M.S. INDIA.
Ph: +91-22-25895505, 4760, 4681. Cell: 9320126789.

Email: micromaster@micromasterlab.com

Prepared By	Checked By	Approved By
		
Microbiologist	Head Quality Control	Head Quality Assurance





PRODUCT SPECIFICATION SHEET

Disclaimer :

All Products conform exclusively to the information contained in this and other related Micromaster Publications. Users must ensure that the product(s) is appropriate for their application, prior to use. The information published in this publication is based on research and development work carried out in our laboratory and is to the best of our knowledge true and accurate. Micromaster Laboratories Pvt Ltd reserves the right to make changes to specifications and information related to the products at any time. Products are intended for laboratory, diagnostic, research or further manufacturing use only and not for human or animal or therapeutic use, unless otherwise specified. Statements included herein should not be considered as a warranty of any kind, expressed or implied, and no liability is accepted for infringement of any patents.

